EL PASO COUNTY
COLORADO

MEGGAN HERINGTON, AICP, EXECUTIVE DIRECTOR

PLANNING AND COMMUNITY DEVELOPMENT

TO: **El Paso County Planning Commission**
Jay Carlson, Chair

FROM: **Mindy Schulz, Deputy Executive Director**

RE: **Project File Number: LDC263**
Amendments to the Land Development Code Related to Fire Protection and Wildfire Mitigation

Commissioner District: All Commissioner Districts

Planning Commission Hearing Date:	May 21, 2026
Board of County Commissioners' Hearing Date:	June 23, 2026

EXECUTIVE SUMMARY

A request by El Paso County Planning and Community Development to amend Chapter 1, Section 15, Definitions, Chapter 6, Section 6.3.3, Fire Protection and Wildfire Mitigation and Chapter 6, Section 6.3.4, Forestry, of the El Paso County Land Development Code (LDC) and, pursuant to, C.R.S. § 24-33.5-1236, add Appendix E, Wildfire Resiliency Requirements to the LDC. The purpose of the amendments is to update the requirements for fire protection and wildfire mitigation and comply with State of Colorado requirements.

BACKGROUND

On May 12, 2023, State Senate Bill 23-166 (SB23-166) was approved to establish a Wildfire Resiliency Code Board within the Division of Fire Prevention and Control. The purpose of the Wildfire Resiliency

Code Board is to adopt rules and standards relating to hardening of structures and site area requirements for development located in the wildland-urban interface (WUI) in Colorado. On July 1, 2025, the Colorado Wildfire Resiliency Code (WRC) was adopted. The codes and standards of the WRC apply to construction, alteration, movement, repair, maintenance, and use of any building, structure, or premises that contain occupiable and/or habitable space within the WUI. Per SB23-166, a governing body with jurisdiction in an area that is located within the WUI is required to adopt and enforce a code that meets or exceeds the minimum standards of the WRC. The statutory deadline for governing bodies to adopt and implement the codes and standards of the WRC is June 30, 2026.

A governing body includes the Board of County Commissioners with respect to the area within a county that is outside the corporate limits of a city or town and outside the boundaries of a fire protection district, the board of directors of a fire protection district, or the governing body of an improvement district that provides fire protection services. For properties located within a fire district, the fire district is responsible for adopting and enforcing the WRC and, as of April 1, 2026, the eighteen (18) fire districts within unincorporated El Paso County have adopted the WRC. The Board of County Commissioners is responsible for adopting and enforcing the WRC for unincorporated areas of the County that are not within the boundaries of a fire district. Less than 1% of parcels in unincorporated El Paso County are not within a fire district. Of the 1%, there are approximately 400 parcels located within the WUI.

The Wildfire Resiliency Code Board also adopted the Fire Intensity Classification layer for the 2025 Colorado Wildfire Resiliency Code Map (WRC Map). The WRC Map is used to determine the fire intensity classification for a given location. The fire intensity classifications consist of low, moderate, and high intensities. Low intensity areas must meet Class I requirements of the WRC and moderate and high intensity areas must meet Class I and Class II requirements of the WRC. Governing bodies are to adopt the WRC Map or create a local map designating WUI areas and identifying fire intensity classifications. Locally developed maps are subject to approval by the Wildfire Resiliency Code Board. Staff currently utilize a Vegetation Map created in 1997 to determine wildland/forestry fire areas. Upon adoption of the codes and standards of the WRC, the WRC Map will replace the Vegetation Map.

To comply with C.R.S. § 24-33.5-1236, Appendix E, Wildfire Resiliency Requirements, is proposed to be added to the LDC and will include the minimum codes and standards of the WRC for structure hardening

and site area requirements. In addition to Appendix E, other modifications to the LDC are being requested. The proposed amendments to the LDC include:

- Add definitions for Alternative Fire Protection Water Supply, Cistern, Dry Hydrant, Emergency Access Lane, Emergency Vehicle Access Roads, Fire Protection Report, and Recognized Water Supply to Chapter 1, Section 15, Definitions to define new and existing terms used in Section 6.3.3.
- Modified Section 6.3.3.A.1 Purpose, to combine language into one paragraph.
- Modified Section 6.3.3.A.2 Applicability, to remove language pertaining to wildland areas, the Vegetation map, and the wildland fire risk and hazard mitigation plan, clarify development located within the boundaries of a Fire District shall be reviewed by the Fire District for compliance with their adopted fire code, and include exemptions from Resolution No. 26-138 to approve the 2021 International Fire Code.
- Removed Section 6.3.3.A.3 Relationship to Other Standards. Requests for alternative designs to be included in the final application to the Board of County Commissioners; a separate request to the BOCC not required.
- Removed Section 6.3.3.A.6 Wildfire Hazard Maps/Vegetation Maps. Adoption of the 2025 Colorado Wildfire Resiliency Code Map is proposed to replace the Vegetation Map.
- Relocated Section 6.3.3.D.7 Combustible Materials, from “Construction in Wildland Fire Areas” to Section 6.3.3.A General. Revised requirement to apply only to commercial use.
- Modified Section 6.3.3.B.1 Fire Protection Report. Added information/details on what information is to be included within a Fire Protection Report.
- Modified Section 6.3.3.B.2 Fire Protection Commitment, to apply to development located outside the boundaries of a fire district.
- Removed Section 6.3.3.B.3 Mitigation Costs, included in Construction Financial Assurance.
- Relocated Section 6.3.3.B.5 Plat Notes, Required to new Section 6.3.4 Wildland Urban Interface Areas.
- Modified Section 6.3.3.C.1.b Automatic Fire Protection, to reference NFPA 13, 13R, and 13D Standard for the Installation of Sprinkler Systems and not the Pikes Peak Regional Building Code. Added new language that the required water supply may be reduced for structures with automatic fire protection.
- Modified Section 6.3.3.C.1.c.iii Fire Hydrant Spacing, to replace language “nonresidential structures are within 150 ft” with “commercial structures are within 400 ft”. Removed “spacing not to exceed 660 ft. of vehicle travel distance”.

- Modified Section 6.3.3.C.1.c.ix Financial Assurance for Water Supply Systems, to remove testing requirements for release of assurance and instead require a letter of acceptance from the water provider required.
- Modified Section 6.3.3.C.1.d.i Fire Cisterns, to add new language that all currently recognized water supplies may be considered when determining the need for and the placement of new water storage sites and require alternative fire protection water supply to comply with NFPA.
- Modified Section 6.3.3.C.1.d.ii Access to Hydrants, to include the common weight of fire apparatuses.
- Removed Section 6.3.3.C.1.d.ii Maps and Location/Detail Drawings.
- Removed Section 6.3.3.C.1.d.ii Maintenance of Dry Hydrants.
- Added new Section 6.3.3.C.1.d.iii Maintenance, for maintenance of dry hydrants and cisterns.
- Added new Section 6.3.3.C.1.d.iv Alternative Fire Protection Water Supply, to provide alternate options to a cistern or dry hydrant.
- Added new Section 6.3.3.C.1.d.v Water Use Agreements, to require a legal agreement establishing access to and use of the water source if a private water supply source is to be used.
- Added new Section 6.3.3.C.1.d.vi Qualified Professional, the PCD Director may require any reports, plans, specifications, etc. required for water supply to be completed by a qualified professional.
- Added new Section 6.3.3.C.1.d.vii Plat Notes Required, to require cisterns and dry hydrants to be identified on the final plat, and/or site development plans.
- Modified Section 6.3.3.C.2.b Roads Within 150 Feet of Development, to clarify what portion of a structure must be within 150 ft of a road or emergency access lane.
- Modified Section 6.3.3.c.2.C Two Access Routes Required, to add distance requirements between two access routes.
- Moved Section 6.3.3.C.2.e Road Grades in Wildland Fire Areas, to new Section 6.3.4 Wildland Urban Interface Areas.
- Modified Section 6.3.3.C.3.i Emergency Access Lanes Connecting to Roads to add other alternatives to curb cuts may be acceptable.
- Modified Section 6.3.3.C.3.k Load Design to include common weight of fire apparatuses.
- Modified Section 6.3.3.C.3.k Bridges and Drainage Crossings, to include common weight of fire apparatuses.
- Modified Section 6.3.3.C.4.a Gate Location and Dimensions, requiring clear openings provided through a gate shall be a minimum of 16 ft. in width.

- Deleted Section 6.3.3.D Construction in Wildland Fire Areas with the exception of the following:
    - Moved Section 6.3.3.D.2 Wildland Fire and Hazard Mitigation Plan Required, to new Section 6.3.4 Wildland-Urban Interface Areas. A Wildland Fire and Hazard Mitigation Plan is only required for commercial uses that are otherwise not subject to the requirements of Appendix E.
    - Moved Sections 6.3.3.D.1.g-j *Access to Structures, Access to Structures Not Protected by Automatic Sprinklers, Access to Structures Protected by Automatic Sprinklers, and Separation Between Structures* to new Section 6.3.4 Wildland-Urban Interface Areas.
- Deleted Section 6.3.4 Forestry.
- Added new Section 6.3.4 Wildland-Urban Interface Areas.
    - References Appendix E (WRC) and that it applies to areas of the County outside the boundaries of a Fire District.
    - A Wildland Fire and Hazard Mitigation Plan may still be required for commercial development located within a WUI area that is not subject to the WRC requirements (campgrounds, shooting ranges, etc.).
- Add new Appendix E Wildfire Resiliency Requirements.

ATTACHMENTS

Presentation slides

Redlines of LDC amendments

Clean version of LDC amendments

Summary of LDC amendments

Appendix E Wildfire Resiliency Requirements

Planning Commission Resolution

EL PASO COUNTY
COLORADO

Planning Commission- May 21, 2026

Colorado Wildfire Resiliency Code/Land Development Code Amendments

Colorado Wildfire Resiliency Code Overview

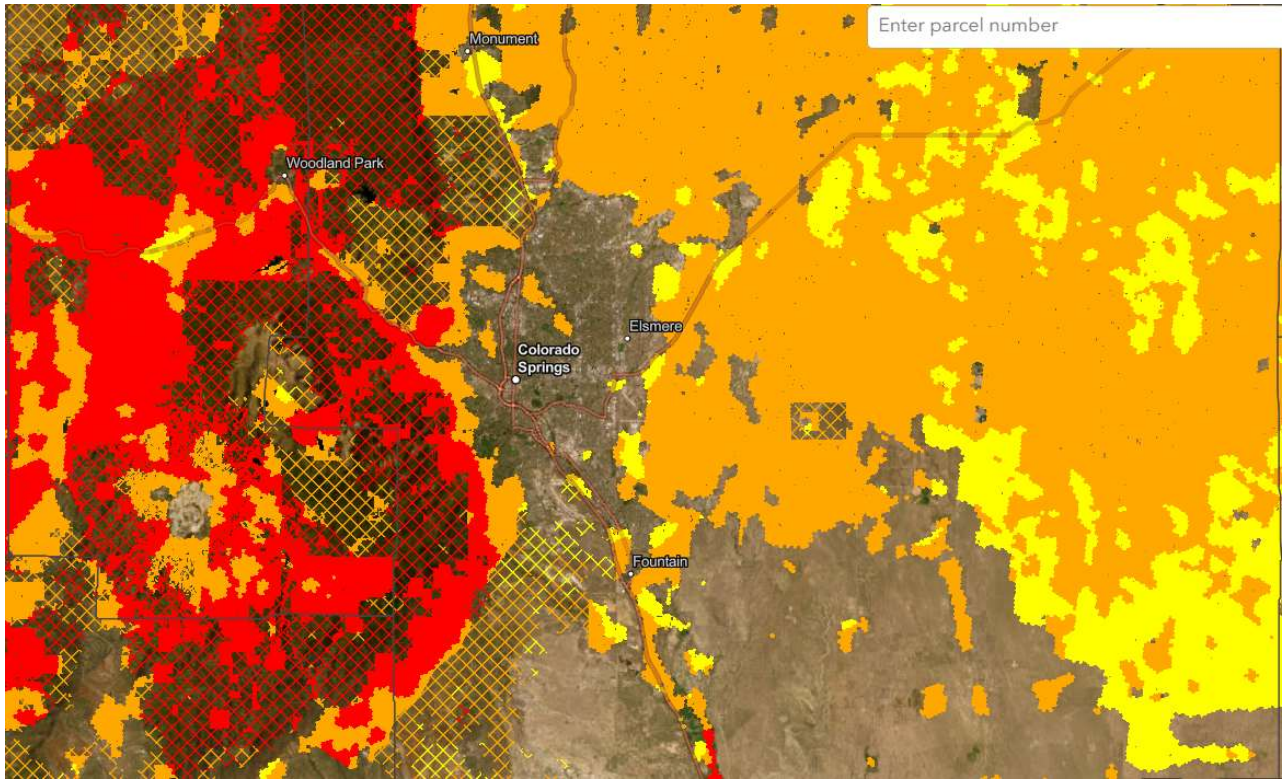
- Senate Bill 23-166 established a Wildfire Resiliency Code Board (WRCB) to adopt minimum statewide codes and standards for hardening of structures and defensible space for structures located in the wildland-urban interface (WUI).
- The Colorado Wildfire Resiliency Code (WRC) was established on July 1, 2025, and applies to construction, alteration, movement, repair, maintenance, and use of any building, structure, or premises that contains occupiable and/or habitable space within the WUI areas.
  - Buildings, structures, etc. in legal existence prior to the adoption of the WRC may continue without change.
- Implementation and enforcement of the WRC falls to the Governing Body, which includes:
  - The Board of County Commissioners with respect to the area within a County that is outside the corporate limits of a City or Town and outside the boundaries of a Fire Protection District.

WRC Statutory Deadlines

July 1, 2026: Effective Date Deadline

*The period to comply with an adopted code shall be in accordance with the rules and regulations of the governing body or within three months of the date the code is adopted by the governing body, whichever is sooner.

Map and Application



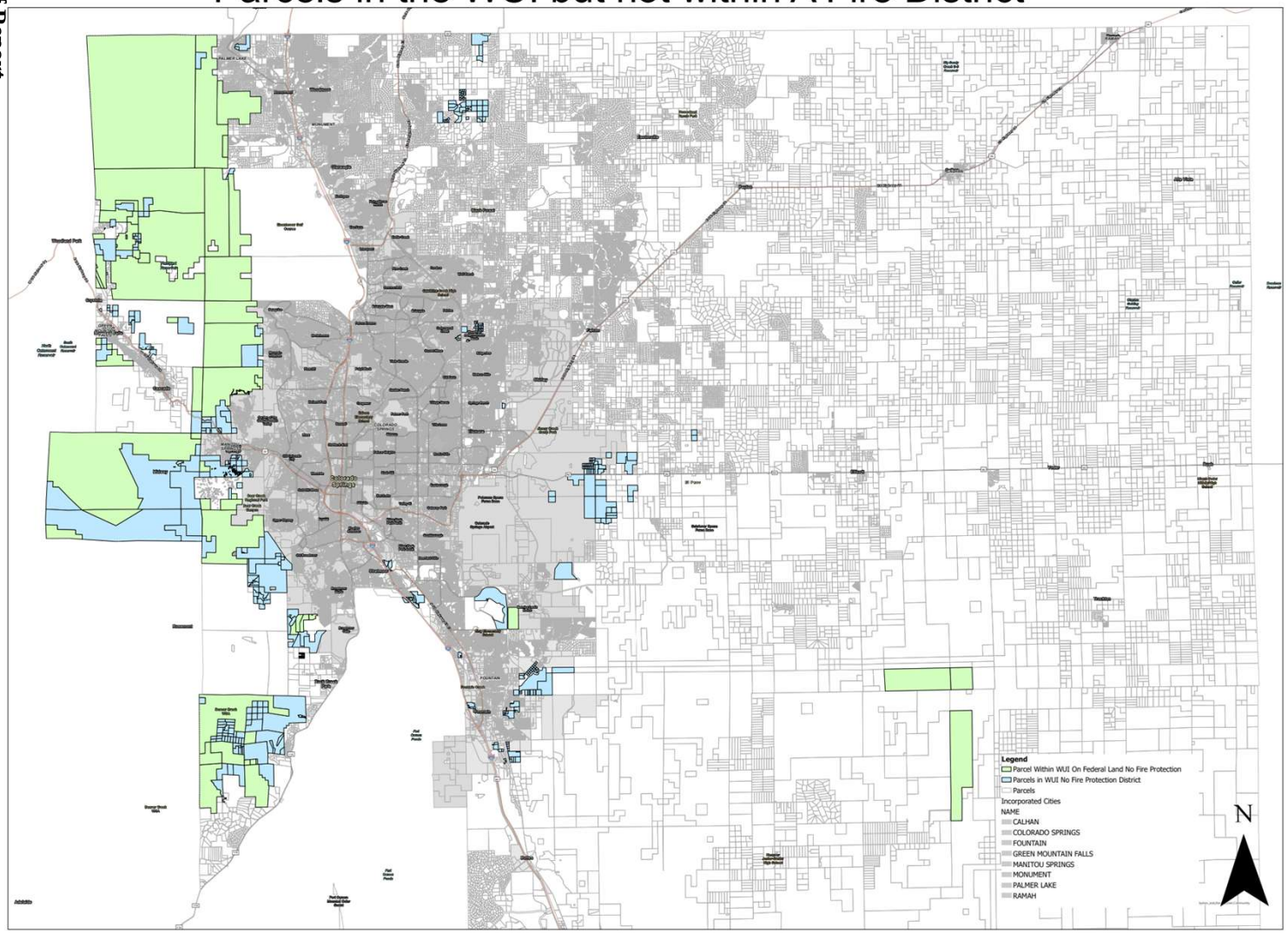
[2025 Colorado Wildfire Resiliency Code Map]

Wildfire Resiliency Code - Fire Intensity Classification

Class 1
- Low Intensity
- Low Intensity Federal/Tribal

Class 2
- High Intensity
- High Intensity Federal/Tribal
- Moderate Intensity
- Moderate Intensity Federal/Tribal

Parcels in the WUI but not within A Fire District



Less than 1% of parcels in the County are not within a Fire District.

- Approx. 400 parcels are within a WUI area.

**Green- parcels within Federal Land in the WUI/no Fire District

**Blue- parcels in the WUI/no Fire District

Structure Hardening Requirements

Class I- Low Fire Intensity (Yellow)

- **Roofing**
  - Class A rated roofing (asphalt shingles, clay or concrete tiles, metal panels, etc.).
  - Flame and ember protection.
  - Roof valley flashings.

- **Gutters & Downspouts:** Constructed of noncombustible material.

- **Ventilation openings:** Ventilation openings for enclosed attics, enclosed rafter spaces, and underfloor spaces covered with noncombustible corrosion-resistant mesh with openings not to exceed 1⁄8-inch.

Structure Hardening Requirements

Class II: Moderate and High Fire Intensity (Orange and Red)

Class I requirements and the following additional requirements:

- **Eaves/Soffits:** Exposed underside must be protected by noncombustible material, ignition-resistant materials.
- **Exterior Wall Coverings:** must be constructed with minimum 1-hour fire resistance rating, noncombustible material, heavy timber or log construction, fire-retardant treated wood, or ignition-resistant building materials.
- **Underfloor Enclosures:** Underfloor areas must be enclosed to the ground.
- **Appendages & Projections:** Same requirements as exterior walls.
- **Detached Accessory Structures:** when located less than 50 feet from a building containing habitable or occupiable space, must meet exterior wall requirements.

Structure Hardening Requirements

Class II: Moderate and High Fire Intensity (Orange and Red) continued:

- **Decking:** Walking surface must be constructed of noncombustible material, fire-retardant treated wood, ignition resistant building materials, or Class A rated material.
  - Exception: composite decking material with a minimum of Class B rating.

- **Windows:** Exterior windows, window walls, skylights, etc. shall be tempered glass, multilayered glazed panels, glass block or have a fire protection rating of not less than 20 minutes.

- **Doors:** constructed of noncombustible construction, solid core wood not less than 1 3⁄4-inches thick or have a fire protection rating of not less than 20 minutes.
  - Exception: vehicle access doors.

Additional Requirements

- If a roof existing prior to the adoption of the WRC has 25% or more of its surface area replaced or altered, the entire roof covering must be replaced to comply with the WRC.

- If exterior walls existing prior to the adoption of the WRC has 25% or more of its surface area replaced or altered, the entire surface area of the exterior walls must be replaced to comply with the WRC.

- When an addition and alternation increases the footprint of a building or structure that is existing prior to the adoption of the WRC by 500 sq. ft. or more, the addition or alteration, but not the existing building or structure must comply with the WRC.

***An alternative design, material, or method may be approved if it meets the approval criteria of the WRC.

Site Management Requirements

Structure Ignition Zones

- Immediate Zones (0-5 feet)
- Intermediate Zones (5-30 feet)
- Expanded Zones (30-100 feet)

Site Management Requirements

Class I: Low Fire Intensity (Yellow): Structure Ignition Zone 1 (0-5 feet): Immediate Zone

- Noncombustible materials such as rock, gravel, sand, concrete, or stone/concrete pavers.
- Remove all plantings including shrubs, slash, combustible mulch and other woody debris, except for ignition-resistant vegetation.
- Planting of new trees not allowed. Mature trees not less than 10-inch diameter at 4.5 feet above ground level may be maintained.
- Tree crowns extending to within 10 feet of any structure are to be pruned to maintain a minimum clearance of 10 feet. Tree branches to be pruned a height of 6-10 feet from the ground or a third of the total height of the tree, whichever is less.

Site Management Requirements

Class II: Moderate and High Fire Intensity (Orange and Red)- must comply with Class I requirements and the following additional requirements:

Structure Ignition Zone 2 (5-30 feet) Intermediate Zone

- Dead plant material removed. Avoid large accumulations of fuels such as logs, branches, slash and combustible mulch.
- Tree crowns extending to within 10 feet of any structure shall be pruned to maintain a minimum clearance of 10 feet. Prune tree branches to a height of 6-10 feet from the ground or a third of the total height of the tree, whichever is less.
- Shrub groups shall be spaced to prevent structure ignition and be at least 10 feet away from the edge of tree branches.

Structure Ignition Zone 3 (30-100 feet) Intermediate Zone

- Tree crowns within this zone shall be spaced at a minimum of 6-10 feet.

Additional Requirements

Class I and Class II

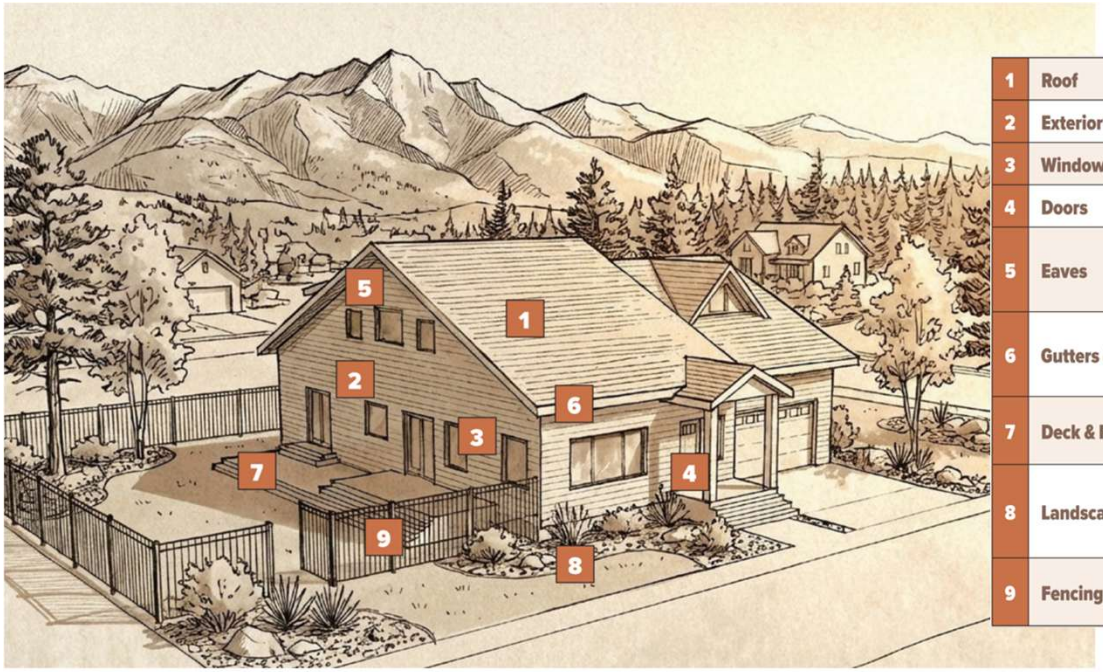
- **Site signage requirements**
  - Marking of roads: Requires signs/notices to identify access roads and driveways and prohibit obstruction.
  - Marking of fire protection equipment: Requires identifying markers on hydrants and fire protection equipment to prevent obstruction.
  - Address markers: Requires permanently posted address markers that must be visible from both directions of travel.

- **Retaining Walls**
  - Constructed with noncombustible or ignition-resistant materials when certain conditions exist.

- **Fencing**
  - Constructed with noncombustible or ignition-resistant materials when located within 8ft of a structure. Vinyl fencing allowed.

***An alternative design, material, or method may be approved if it meets the approval criteria of the WRC.

Summary of WRC Requirements



1	Roof	Install a Class A-rated roof such as asphalt shingles or metal panels	Class 1 & Class 2
2	Exterior Walls	Use non-combustible siding, such as fiber-cement cladding	Class 2
3	Windows	Use dual-paned, tempered glass in windows and exterior doors	Class 2
4	Doors	Use fiberglass or metal exterior doors	Class 2
5	Eaves	Enclose open eaves with noncombustible soffit material	Class 2
		Install metal soffit vents backed by 1/8 or smaller wire mesh	
6	Gutters & Vents	Install metal gutters	Class 1 & Class 2
		Install metal gutters and downspouts.	
7	Deck & Porch	Use ignition-resistant or non-combustible decking material; if exposed, under decking must follow exterior wall guidelines.	Class 2
8	Landscaping	Use rock, gravel, sand, concrete or stone/concrete pavers to create a 5-foot buffer zone around the home. Prune trees and maintain defensible space up to 100 feet around a home.	Class 1 & Class 2
9	Fencing	Use noncombustible or ignition resistant fencing within the 8 feet surrounding a structure.	Class 1 & Class 2

CPAW
Community Planning Assistance for Wildfire

WRC Exemptions

The WRC does not apply to:

- Interior alterations of existing structures.
- Maintenance or restorative work (painting, staining, etc.).
- Accessory structures (Group U occupancy) located more than 50 ft. from an occupied or habitable space.
- One story detached accessory, non-habitable structures 120 sq. ft. or less in size and when located 10 ft. or more from the nearest occupied structure.
- Exterior alterations and repairs, including roofs, when less than 25% of the exterior of the structure is affected.
- Fences located more than 8 feet from a habitable structure.
- Any thirty-five-acre parcel with only one residential structure on it that does not abut a residential or commercial area.

WRC Appendices

- Appendix A: Permits:
  - Requires permit applications for building and structures subject to the WRC.
- Appendix B: Construction Documents:
  - Requires plans and drawings for buildings, structures, and defensible space to be submitted.
- Appendix C: Inspection and Enforcement:
  - Requires inspections of construction/work and provides enforcement action for noncompliance.

Staff recommends not adopting the appendices. Pikes Peak Regional Building and/or Planning and Community Development have existing processes and regulations in place.

Implementation and Reporting

Affidavit

- Affidavit required prior to approval of building permit, site plan, etc.
  - Property owners acknowledge the requirements of the WRC. Completed affidavit attached to building permit application.

Enforcement

- LDC provides enforcement procedures and due process which includes an appeal hearing before the BOCC.
    - WRC applies to less than 1% of the County (approx. 400 parcels).
    - Enforcement action is complaint based.

Reporting

- Annual reporting to the State required; first reporting due by 7/31/26.
  - Annual reporting includes copies of Resolution to adopt and completed affidavits.

Land Development Code Revisions

6.3.3. Fire Protection and Wildfire Mitigation- Codes and standards in place since 2007 and has remained largely unchanged.

General summary of proposed revisions:

- Updating and/or clarifying general language and requirements.
- Removing outdated requirements and/or language.
- Adding alternatives to water supply requirements.
- Removal of wildland fire/forestry requirements.
- Addition of Appendix E- WRC.

Proposed Revisions

6.3.3(C)(1)Water Supply

- Reduction of required water supply may be approved for structures with automatic fire protection.
- Other water supplies may be considered when determining the need for new water storage.
- Maintenance plan required for cisterns and dry hydrants.
- Cistern or dry hydrant may not be required if an alternative water supply is identified.

6.3.3 (C)(2) Roads and Non-Road Access

- Clarification added on distance between two required access routes.
- Added weight of common weight fire apparatuses to load design and bridge/drainage crossings.
- Clarified what portion of a structure must be within 150ft of a road or emergency access lane.
- Added alternatives to curb cuts may be acceptable.
- Gates must have a clear opening of a minimum of 16ft in width.

Proposed Revisions Cont.

Other

- Exemptions from 2026 Resolution to approve the 2021 IFC added.
- Seven new definitions added to define new and existing terms used in Section 6.3.
- Simplified the process for financial assurance related to central water systems to be release
- New sections added
  - Agreement required when a private water supply is to be used
  - The PCD Director may require any reports/plans relating to fire protection to be completed by a qualified professional
- Section 6.3.4 Forestry removed

Wildland Urban Interface

- New section references Appendix E
- Existing language for Road Grades and Access to Structures moved to this section.
- Wildland Hazard and Mitigation Plan only required for commercial use when not subject to the WRC.

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Questions?

6.3.3. Fire Protection and Wildfire Mitigation

(A) General.

(1) Purpose and Intent. The purpose of this section is to ensure that proposed development is reviewed in consideration of the need to provide adequate fire protection, minimize the hazard to public health, safety, and welfare, and provide requirements for the protection of structures and facilities.

~~To ensure that proposed development is reviewed in consideration of the wildfire risks and need to provide adequate fire protection in order to:~~

- ~~Regulate development, buildings, and structures so as to minimize the hazard to public health, safety, and welfare;~~
- ~~Ensure that adequate fire protection is available for new development;~~
- ~~Implement wildfire hazard reduction in new development;~~
- ~~Encourage voluntary efforts to reduce wildfire hazards; and~~
- ~~Reduce the demands from the public for relief and protection of structures and facilities.~~

(2) Applicability. This s~~S~~ection shall apply to all development applications and permits within the unincorporated areas of El Paso County. Unless otherwise exempted, all development located within the boundaries of a Fire District shall be reviewed by the Fire District for compliance with their adopted fire code. ~~The standards and requirements related to construction in wildland areas are applicable on land that is shown as forested on the Vegetation Map or to areas identified in the wildland fire risk and hazard mitigation plan, if required by the approval of that plan.~~ Development within the boundaries of a Fire District that has been exempted from the adopted fire code shall be reviewed under this section by the County. These exemptions include the following:

- Detached one- or two-family dwellings or townhomes that are constructed on an unplatted parcel (legal lot), on a lot platted as part of a subdivision containing four or fewer such platted lots, or on a lot platted as part of a subdivision recorded before December 10, 2013
- Factory-built units certified by the State of Colorado
- Factory-built units constructed to federal standards
- Accessory use structures

~~**(3) Relationship to Other Standards.** Where a conflict exists between adopted fire district or fire department standards and this Code, the Board of County Commissioners may choose to approve an alternative design which accomplishes the purpose of this section and provides an equivalent benefit to the development. The Fire Authority should provide a recommendation regarding whether the alternative design accomplishes the intent of this section and whether it provides an equivalent benefit to the development.~~

(34) Responsibility of Fire Authority. It is the responsibility of the Fire Authority to provide recommendations as to whether a new development meets the applicable fire code standards for the respective area. If a new development does not meet the applicable standards, then the Ffire Aauthority should provide comments regarding areas of non-compliance and recommendations for achieving compliance.

(45) Basis of Standards. Where this section references specific standards from an organization, the most current edition of referenced standards applies. ~~The basis of the standards in this Section is the most current standards adopted by the National Fire Protection Agency (NFPA) and the Colorado State Forest Service (CSFS).~~

~~**(6) Wildfire Hazard Maps/Vegetation Map.** El Paso County shall maintain a Vegetation Map depicting wildfire hazard areas of the County either based on vegetation type or wildfire hazard analysis, which shall be the official map for the purposes of applying this Section.~~

(5) Combustible Materials for Commercial Use. Propane tanks and other combustible liquids storage shall conform to NFPA 30: Flammable and Combustible Liquids Code and NFPA 58: Liquefied Petroleum Gas Code. A Fire Protection Report and/or Wildland Fire and Mitigation Report may be required.

(B) Reports and Commitments for Subdivisions.

(1) Fire Protection Report. A Fire Protection Report is required for any subdivision application and shall include ~~the Fire Authority's capabilities, including existing and proposed equipment, facilities, services, response time to provide fire protection for the proposed subdivision, an analysis of compliance with the Fire Protection and Wildfire Mitigation Section of this Code, and an analysis of compliance with the applicable fire code.~~an analysis of compliance with this Code, the applicable fire code, and at a minimum the following:

- Description of proposed development to include acreage, number of lots/dwelling units, etc.

- Water supply to be used for fire suppression (fire hydrants, dry hydrants, cisterns, automatic sprinkler system, etc.)
- Maintenance plan if cisterns and dry hydrants will be used.
- Information regarding the internal and external roadways and if an emergency vehicle can utilize those roadways.
- Information on any emergency access roads and/or gates.
- The fire intensity classification when located within the wildland urban interface area and an analysis of compliance with Appendix E (when applicable)

(2) Fire Protection Commitment~~. A written commitment to provide structural fire protection may be required for any proposed subdivision and the PCD Director may be requested for other development applications.~~ A written commitment to provide structural fire protection may be required for any proposed subdivision located outside the boundaries of a Fire District or otherwise exempt from the adopted fire code. The PCD Director may require a written commitment for other development applications.

~~**(3) Mitigation Costs Included in Construction Financial Assurance.** If the Board of County Commissioners determines that wildfire mitigation issues are significant enough to require mitigation associated with development construction activities, the cost of the mitigation shall be included in the construction financial assurance. The Fire Authority may, at its discretion, choose to provide a recommendation to the Board of County Commissioners regarding whether the cost associated with performing wildfire mitigation is appropriate and should be secured and accounted for within the financial assurance estimate and associated collateral for the overall development.~~

(34) Development Outside Fire District or Fire Department Boundaries. Proposed subdivisions outside the boundaries of a ~~fire district or fire department~~Fire District shall annex into a district ~~into a department~~ or provide evidence of a contract for service from a Fire District or Fire Department. Waivers of this requirement may only be approved by the Board of County Commissioners. An applicant's waiver request shall, at a minimum, include the following:

- A letter from the nearest fire district or fire department demonstrating that annexation is not economically feasible.

• A letter or report from a Third Party Fire Reviewer providing a recommendation to the Board of County Commissioners that the proposed development complies with the Fire Protection and Wildfire Mitigation Section of this Code. In the case of a conflict between adopted standards and this Code, the Third Party Fire Reviewer may recommend an alternative design which accomplishes the purposes of this section and provides an equivalent benefit to the development.

~~**(5) Plat Notes Required.** Notice of any wildfire mitigation issues or obligations may be required by the County through conditions of approval or notes placed on the face of the plat.~~

(C) Design Standards.

(1) Water Supply.

(a) General. Water supply systems used for fire protection purposes shall be calculated, installed and maintained in accordance with NFPA standards. The required fire flow for one or more buildings shall be calculated per the following conditions: ~~The required fire flow for one or more buildings of a planned building area (also referred to as the planned building group by the NFPA) shall be determined by the Fire Authority using locally adopted codes, or as specified per the following conditions:~~

• For areas without municipal-type water systems, NFPA 1142, Standard on Water Supplies for Suburban and Rural Fire Fighting, shall be applied.

• For those areas with municipal-type water systems, nationally recognized criteria such as NFPA, National Fire Academy (NFA), or International Organization for Standardization (ISO) standards, shall be applied.

(b) Automatic Fire Protection.

~~(i) Automatic fire protection shall be in compliance with the applicable adopted fire code. If a property is not within an area of the County having an adopted fire code, then the design for automatic fire protection shall be in compliance with the adopted Pikes Peak Regional Building Code.~~ Design for automatic fire protection shall comply with the NFPA 13, 13R, and/or 13D Standard for the Installation of Sprinkler Systems. The PCD Director, or Fire District when located within the boundaries of a Fire District, may approve a reduction of required water supply for structures with automatic fire protection.

(c) Areas with Central Water Systems.

(i) Water Distribution System Pressure. The water distribution system shall be capable of delivering fire flow at a minimum rating of 20 pounds per square inch for each hydrant connected to the distribution system within the proposed subdivision.

(ii) Dead-End Mains. Dead-end mains shall not exceed 600 feet in length for main sizes less than 10 inches in diameter.

(iii) Fire Hydrant Spacing. Fire hydrants shall be located so that all residential structures are within 500 feet, and all ~~nonresidential structures are within 150~~commercial structures are within 400 feet of a hydrant. ~~Fire hydrants shall be installed adjacent to a road or emergency vehicle lane at a spacing not to exceed 660 feet of vehicle travel distance.~~ Where the proposed buildings warrant, the Fire Authority may recommend a greater spacing distance or require additional hydrants and closer spacing based upon the applicable f~~F~~ire c~~C~~ode or NFPA standards.

(iv) Fire Hydrant Accessibility. Fire hydrants shall be accessible to fire district or fire department apparatus from a road (i.e., maintained public roads, ~~privately-maintained~~privately maintained roads, or emergency vehicle access roads) or unobstructed emergency ~~vehicle~~ access lanes (i.e., driveway, parking drive aisle, or emergency ~~vehicle~~ access lane).

(v) Fire Hydrant Supply Lines. Fire hydrants shall be supplied by not less than a 6 inch diameter main installed on a looped system, or by not less than an 8 inch diameter main if the system is not looped or the fire hydrant is installed on a dead-end main exceeding 300 feet in length.

(vi) Fire Hydrants in Parking Areas. Fire hydrants located in parking areas shall be protected by barriers that will prevent physical damage from vehicles without obstructing hydrant operation.

(vii) Fire Hydrant Relationship to Roads. Fire hydrants shall be located within 6 feet of the edge of the pavement unless there is a conflict with the ECM or the Fire Authority recommends another location is more acceptable for fire district or fire department use. All roads and emergency vehicle lanes shall be designed to maintain a minimum unobstructed clearance of 3 feet around fire hydrants.

(viii) Fire Hydrant Easements. Easements for fire hydrants shall be provided and dedicated to the appropriate fire or water authority when the hydrants

are not within a public road right-of-way. The easement shall afford accessibility to the hydrant from the right-of-way.

(ix) Release of Financial Assurance for Water Supply Systems. The contractor, installer, or owner of water supply systems shall provide a letter of acceptance from the water district or public utility prior to release of construction financial assurance for the system. ~~demonstrate by testing that the capacity of the water supply system will meet fire protection design requirements prior to release of construction financial assurance for the system. The testing shall be certified by a qualified professional. The tests may be provided to the Fire Authority if requested.~~

(d) Areas without Central Water Systems.

(i) Fire Cisterns.

- Fire Cisterns Required: ~~Fire cisterns shall be provided in planned building areas which are not served by hydrants, unless the Fire Authority has recommended and the approval authority has approved an alternative fire protection water supply system.~~ Fire cisterns shall be provided in areas which are not served by hydrants, unless an alternative fire protection water supply that complies with NFPA standards is approved. All currently recognized water supplies may be considered when determining the need for and the placement of new water storage sites.

- Construction Standards: Construction of fire cisterns shall ~~be in accordance~~ comply with the approved plans and ~~conform to the requirements of the NFPA standard on water supplies for suburban and rural fire fighting~~.the requirements of NFPA 1142.

- Design Standards for Subdivisions with More than One Cistern: For subdivisions where more than one fire cistern is required, fire cisterns shall meet the requirements of ~~the~~ NFPA 1142.~~standards for water supplies for suburban and rural fire fighting.~~ For this type of subdivision, fire cisterns shall be designed for the largest building allowed by zoning in the worst case hazard and construction class.

- Design Standards for Subdivisions with One Cistern: For subdivisions where only one fire cistern is required, the minimum capacity of the fire cistern shall meet the requirements of ~~the~~ NFPA ~~standards on water supplies for suburban and rural fire fighting~~1142,~~ ~~or shall have a total capacity equal

to 300 gallons for each acre within the subdivision plus 3,000 gallons per dwelling unit, whichever is greater.

- Cistern Turnaround: A dedicated turnaround shall be placed no more than 50 feet from a fire cistern, and the standpipe shall be within 8 feet of the nearest usable portion of the dedicated right-of-way or approved easement, unless otherwise recommended by the ~~applicable~~ Fire Authority~~. and approved by the approval authority.~~

- Easements Required: ~~Fire cistern easements shall be provided and dedicated to the appropriate fire department to afford accessibility of the cistern from a public road. Easements shall be of sufficient size to facilitate maintenance.~~ Cistern easements shall be provided and dedicated to the appropriate Fire District at the time of platting to afford accessibility of the cistern from a public road. Easements shall be of sufficient size to facilitate maintenance.

(ii) Dry Hydrants.

- Use of Dry Hydrants: Dry hydrants may be provided in combination with fire cisterns or other approved fire protection water supply systems. Plans for dry hydrants shall be submitted to the Fire District, or the County when located outside the boundaries of a Fire District, ~~Authority~~ for ~~recommendation and approved by the approval authority.~~approval and be identified on the final plat and/or site development plan.

- Construction Standards: ~~Construction and installation of dry hydrants shall be in accordance with the approved plans and conform to the requirements of the NFPA standards on water supplies for suburban and rural fire fighting.~~ Construction and installation of dry hydrants shall comply with the approved plans and requirements of NFPA 1142.

- Accessible: Dry hydrants shall be located to be accessible under all weather conditions.

- Clearance: Dry hydrants shall have a minimum clearance of 20 feet on each side and be located a minimum of 100 feet from any structure. Highway or road traffic shall not be impaired during the use of the dry hydrant.

- Protected: Dry hydrants shall be protected from damage by ~~vehicular~~vehicles and other perils, including freezing and damage from ice and other objects.

- Visible: Dry hydrant locations shall be made visible from the main roadway during emergencies by reflective marking and signage and shall be in conformance with ~~the~~ NFPA 1142 requirements. All identification signs located within public right-of-way or subject to Colorado law shall be approved by the ~~highway~~ appropriate authority prior to installation. ~~if they are to be located on the right-of-way or are subject to State laws.~~

- Access to Hydrant: Vehicle access shall be designed and constructed to support the imposed load of fire apparatus weighing up to 75,000 pounds with a minimum single axle weight of 27,000 pounds. ~~heaviest vehicle.~~

~~• Maintenance of Dry Hydrant: Dry hydrants shall be checked and maintained at least quarterly. Thorough surveys shall be conducted, to reveal any deterioration in the water supply situation in ponds, streams, or cisterns. Grass, brush, and other vegetation shall be kept trimmed and neat. Vegetation shall be cleared for a minimum 3 foot radius from around hydrants. The hydrant shall be painted as needed, with reflective material to maintain visibility during emergencies. The Fire Authority may make a recommendation regarding the ownership and maintenance responsibilities for the facilities per the NFPA 1142 Standards. The approval authority will approve the ownership and maintenance responsibilities for the facilities.~~

~~• Maps and Location/Detail Drawings: The Fire Authority and El Paso County Sherriff's Office shall maintain in a safe location, the maps and records of dry hydrant system locations, installation, tests, inspections, maintenance and repairs. When the property is not within a Fire Protection District it is the responsibility of the property owner and El Paso County Sherriff's Office to maintain in a safe location, the maps and records of dry hydrant system locations, installation, tests, inspections, maintenance and repairs.~~

- Easements Required: ~~Dry hydrant easements shall be provided and dedicated to the appropriate fire department (or County where there is no fire department) to afford accessibility of the dry hydrant from a public road. Easements shall be of sufficient size to facilitate maintenance.~~ Dry hydrant easements shall be provided and dedicated to the appropriate Fire District at the time of platting to afford accessibility of the dry hydrant from a public road. Easements shall be of sufficient size to facilitate maintenance.

~~(iii) Water Supply Requirements. The owner of the cistern or dry hydrant is responsible for planning, developing, permitting, and continual provision of a~~

~~sufficient water supply necessary to maintain the fire protection requirements of a cistern system, to the satisfaction of the approval authority with recommendation by the Fire Authority~~.

(iii) Maintenance. Cisterns and dry hydrants shall be inspected, tested, and maintained at least quarterly and in accordance with NFPA 1142. Any owner of a cistern and/or dry hydrant is responsible for the planning, developing, permitting, and continual maintenance and provision of a sufficient water supply necessary to maintain the fire protection requirements of a cistern or dry hydrant system.

- A maintenance plan is required for cisterns and/or dry hydrants and shall be submitted with the Fire Protection Report. The plan shall include at a minimum the location of cisterns and/or dry hydrants, owner(s) name and contact information, and inspection and testing schedule.
- Inspection and maintenance reports shall be made available to the County and Fire District upon request.

e. Alternative Fire Protection Water Supply. The County or Fire District, when located within the boundaries of a Fire District, may determine that a cistern or dry hydrant is not required upon an evaluation of recognized water supplies from a qualified professional, including the applicable Fire District. Alternative water supply must be capable of providing 250 gpm fire flow, and maintain the fire flow, without interruption, for 2 hours. The water supply shall not be more than two (2) miles travel distance from any vehicle entrance to a parcel that is served by the water supply.

f. Water Use Agreements. If a private water supply source is to be used, a legal agreement establishing access to and use of the water source is required.

g. Qualified Professional. The PCD Director may require any reports, plans, specifications, etc. required for water supply to be completed by a qualified professional.

h. Plat Notes Required. Plans for cisterns and dry hydrants shall be identified on the final plat and/or site development plan.

(2) Roads. This Section shall apply to all roads providing access to a ~~planned building area~~development whether or not they are dedicated as public roads.

(a) Roads Constructed to County Standards. All roads, including private roads and emergency vehicle access roads, shall be designed and constructed according to this Code and the ECM.

(b) Emergency Vehicle Access Roads. Emergency vehicle access roads shall, at a minimum, be constructed to the County's gravel road standard if open to the public. Emergency vehicle access roads which are not open to public travel shall meet the non-road access standards

(cb) Roads within 150 Feet of Development. Roads or emergency access ~~vehicle~~ lanes shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is within 150 feet as measured by an approved route around the exterior of the building or facility. ~~of all development except~~ Ssingle family residential development excepted. ~~.~~

(dc) Two Access Routes Required. Access to a ~~planned building area~~development shall be provided by a minimum of 2 separate routes in accordance with the requirements of this Code and the ECM if the cul-de-sac exceeds the length allowed by the ECM. Access routes shall be placed a distance apart equal to not less than one-half the length of the maximum overall diagonal dimension of the property, measured in a straight line between accesses unless a greater distance is required by the ECM.

(ed) Turnaround Required on Dead-End Roads. Every dead-end road more than 300 feet in length shall be provided with a roadway termination meeting ECM standards.

~~**(e) Road Grades in Wildland Fire Areas.** Within wildland fire areas, road grades steeper than 10 percent may be permitted where the Fire Authority and ECM Administrator recommend that the mitigation measures are adequate and the approval authority approves the mitigation measure.~~

(3) Non-Road Access.

The following minimum standards shall apply to emergency vehicle lanes, driveways, and parking lot drive lanes serving as emergency ~~vehicle~~ access lanes.

(a) Emergency Access Provided. Access for emergency responders, ingress, egress, and evacuation shall be provided for all buildings.

(b) Driveways Required. Where any point of a building is greater than 150 feet from a road, a driveway meeting the~~se~~ standards of this Code shall be provided to within 150 feet of the furthest point on the building.

(c) Emergency ~~Vehicle~~ Access Lanes Required. The ~~Fire Authority~~County may ~~recommend~~ require emergency ~~vehicle~~ access lanes be provided. ~~Emergency vehicle lanes shall be provided as required by the approval authority.~~

(d) Emergency Access Lane Design. An emergency ~~vehicle~~ access lane shall be designed and constructed to enable fire-fighting apparatus to maneuver broadside or directly forward within a minimum of 5 feet and a maximum of 25 feet of structures.

(e) Width of Driveway and Emergency ~~Vehicle~~ Access Lanes. Where the driveway is greater than 150 feet in length, it shall be not less than 10 feet in unobstructed width. Emergency ~~vehicle~~ access lanes shall have a minimum unobstructed width of 16 feet for approved one-way travel and 24 feet for two-way travel. ~~providing one-way travel shall be a minimum of 16 feet in width, and fire lanes with two-way travel shall be a minimum of 24 feet in width.~~

(f) Vertical Clearance. At least 13 feet 6 inches of vertical clearance shall be provided and maintained over the full width of an emergency ~~vehicle~~ access lane or driveway.

(g) Turns. Required driveways shall be designed, constructed, and maintained to accommodate the turning radius of the largest apparatus typically used to respond to that location. A turn in an emergency ~~vehicle~~ access lane shall be constructed with a minimum inside turning radius of 25 feet ~~at the inside curb line~~ and a minimum outside radius of 50 feet. ~~at the outside curb line.~~

(h) Grades. ~~Road grades steeper than 10 percent may be permitted where the Fire Authority and ECM Administrator recommend that the mitigation measures are adequate and the approval authority approves the mitigation measure.~~ Emergency vehicle access roads shall not exceed 10 percent grade unless mitigation measures are approved.

(i) Emergency ~~Vehicle~~ Access Lanes Connecting to Roads. Emergency ~~vehicle~~ access lanes connecting to roads shall be provided with curb cuts, or other acceptable alternative, extending at least 2 feet beyond each edge of the ~~fire~~ emergency access lane.

(j) Turnouts and Turnarounds Required.

(i) Driveways. Where the required driveway is greater than 300 feet, it shall be provided with turnouts or turnarounds at approved locations ~~approved by the approval authority with~~based on recommendation from the Fire Authority.

(ii) Turnarounds Required. ~~The fire authority may provide a recommendation regarding turnarounds. Dead-end emergency vehicle lanes in excess of 300 feet in length shall be provided with turnouts and turnarounds as approved by the approval authority. The turnaround at the terminus shall have a minimum radius of 50 feet. The approval authority shall be authorized to approve, as an alternative, a "hammerhead" turnaround to provide emergency vehicles with a three-point turnaround.~~ Dead-end emergency access lanes exceeding 300 feet in length shall be provided with turnouts or turnarounds in one of the following minimum configurations:

- A circular turnaround having a minimum 50-foot outside radius; or
- A "T" or hammerhead turnaround providing a three-point turn; or
- An alternative turnaround configuration that provides equivalent maneuverability and accommodates fire apparatus.

(k) Load Design. Emergency ~~vehicle~~ access lanes and required driveways ~~shall~~ must be designed, constructed, and maintained to accommodate the imposed load of fire apparatus weighing up to 75,000 pounds with a minimum single axle weight of 27,000 pounds.~~load of the largest apparatus typically used to respond to that location.~~

(l) Bridges or Drainage Crossings. A bridge or drainage crossing on an emergency vehicle lane or required driveway shall be designed to accommodate the imposed load of fire apparatus weighing up to 75,000 pounds with a minimum single axle weight of 27,000 pounds. ~~the load of the largest apparatus typically used to respond to that location.~~ The load limit shall be clearly posted at the approaches to the bridge.

(m) Landscaping Maintained. Landscaping or other obstructions shall be maintained in a manner that provides unobstructed access for fire department operations.

(4) Gates.

(a) Gate Location and Dimensions. Gates shall be located a minimum of 30 feet from the public right-of-way and shall not open outward. ~~The opening provided through a gate shall be 2 feet wider than the traveled way.~~ The clear opening provided through a gate shall be a minimum of 16 feet in width.

(b) Locks. Fire department personnel shall have ready access to locking mechanisms on a gate restricting access to a fire line. ~~Proposed changes to access shall be approved by the Fire Authority.~~ Use of Knox products shall be coordinated with the applicable Fire Authority.

~~**(D) Construction in Wildland Fire Areas.**~~

~~(1) **General.**~~

~~(a) **Applicability.** All structures potentially threatened by wildland fire shall be designed, located, and constructed to comply with this Section.~~

~~(b) **Risk Assessment Required.** A wildland fire risk and hazard severity assessment shall be performed for all structures and groups of structures adjacent to wildland fuels.~~

~~(c) **Maintenance of Property.** After construction, continued maintenance of the grounds and storage of combustible materials shall be performed to maintain these requirements.~~

~~(d) **Location of Buildings and Building Envelopes.** Buildings located closer than 30 feet to a vegetated slope shall require special mitigation measures in accordance with NFPA 1144, Standard for Protection of Life and Property from Wildfire. Building envelopes shall not include gullies, fire chimneys, saddles, or other terrain conducive to wildfire spread.~~

~~(e) **Roof Design and Materials.** Only roof covering assemblies rated Class A shall be used in a wildland area. The specific class shall be consistent with the wildland fire risk and hazard severity assessment.~~

~~(f) **Accessory Structures.** Outbuildings, patio covers, gazebos, and other accessory structures shall be separated from the main structure by a minimum of 30 feet.~~

~~(g) **Access to Structures.** At least one approved means of vehicular access shall be provided to each structure or other nonstructural fire hazard in accordance with the following:~~

~~(i) For structures or nonstructural fire hazards exceeding two stories or 30 feet in height above average adjacent ground level, or 12,000 square feet of gross floor area, no less than 2 separate approved means of access shall be provided.~~

~~(ii) Approved vehicular access shall be provided to within 150 ft of any point of the exterior wall of each structure.~~

(h) **Access to Structures Not Protected by Automatic Sprinklers.** An approved means of vehicular access shall be provided to within 30 feet of all points of at least 2 exterior walls for any structure not protected by automatic sprinklers that exceeds 2 stories or 30 feet in height above average adjacent ground elevation. Single and two-family dwellings are exempt from this requirement.

(i) **Access to Structures Protected by Automatic Sprinklers.** For any structure protected by an automatic sprinkler system, an approved means of vehicular access shall be provided to within 400 feet of any point of the exterior wall. For any structure exceeding 3 stories or 35 feet in height above average adjacent ground elevation and protected by an automatic sprinkler system, an approved means of vehicular access shall be provided to within 30 feet of all points of at least 2 exterior walls.

(j) **Separation Between Structures.** A structure in a planned building area shall be separated from another structure by at least 30 feet and shall be located at least 25 feet from a lot, parcel, or tract line. A structure in a planned building area that exceeds 2 stories or 30 feet in height above average adjacent ground elevation and is not protected by an automatic sprinkler system shall be separated from other structures by at least 50 feet and shall be located at least 25 feet from a lot, parcel, or tract line.

(2) **Wildland Fire and Hazard Mitigation Plan Required.**

(a) **General Plan Standards and Requirements.**

When a subject lot, parcel, or tract falls within a wildland fire area, a wildland fire risk and hazard mitigation plan shall be prepared by a qualified professional and shall be tailored to the stage of development application and the stage of subdivision-related construction. A higher level of plan may be submitted at any stage of the process so long as it is implemented at the final stage of development. Plans shall utilize the Colorado State University (CSU) Guidelines and NFPA standards, as applicable. Additional fire precaution measures may be required because of fire hazard in the following areas:

(i) Areas depicted as forested on the Vegetation Map;

(ii) Areas rated as fire hazards by the CSFS;

(iii) Where slopes in or adjacent to proposed development are in excess of 20%; or

(iv) Where the local fire protection agency identifies a specific fire danger.

(b) **Development of Plan.**

(i) General Mitigation Plan Requirements. This plan shall include, but not be limited to, the following:

- Access, ingress, egress, and evacuation;
- Fuel modification;
- Water supply;
- Construction, location, and design of structures; and
- Ignition potential.

(ii) Approval of Wildland Fire and Hazard Mitigation Plan. The Approval Authority shall approve the mitigating measures relative to access, defensible space, water supply, and construction based on the relative risk and hazard rating.

(3) **Wildland Fire Risk and Hazard Severity Analysis Required.**

(a) Risk Assessment to be Performed. A risk and hazard rating analysis shall be performed to determine the level of the wildland fire threat to life and values at risk prior to building permit authorization in high hazard areas unless completed as part of the wildland fire and hazard mitigation plan.

(b) Basis for Mitigation Measures. The risk and hazard ratings shall be the basis for the implementation of mitigation measures relative to vegetation, other combustibles, and construction criteria.

(c) Analysis Rating Factors. The following shall be considered in analyzing the risk factors:

- The history of local wind, relative humidity, temperature, and fine fuel moisture content shall be considered in determining defensible space.
- All vegetative fuels and other combustible materials shall be evaluated for their potential to contribute to the intensity and spread of wildland fire.
- Slope and aspect shall be evaluated as to their potential to increase the threat of wildland fire to life or improved lot, parcel, or tract.
- The factors determining required defensible space shall include the history of wildland fire for the area.

- Fire-safe routes for emergency service apparatus and for egress shall be evaluated.

- Other factors that can affect the risk of ignition or the spread of wildland fire on improved lot, parcel, or tract, including the risk of structure fires spreading to vegetation, shall be part of the analysis.

(d) **Recommendation of Wildland Fire Risk and Hazard Rating.** The rating assignments developed to meet the requirements of this Code may be reviewed by the Fire Authority who may provide a recommendation regarding the rating.

(4) **No Permit or Approval Granted without Compliance.** No permit or approval associated with development, construction or occupancy shall be approved or issued until the provisions of this standard are satisfied. Notwithstanding the foregoing, the Planning and Community Development Director shall have the authority to grant administrative variances to the design standards of this Section upon the finding of two or more of the following criteria:

- The fire authority responsible for providing fire protection services, as applicable, to the project has adopted a fire code with a more stringent design standard from that contained herein;

- The application of a design standard will cause undue hardship or practical exceptional difficulties; or

- An alternate design standard will satisfy the intent and meet the goals of these Fire Protection and Wildfire Mitigation Regulations.

(5) **Defensible Space Requirements.**

(a) **General.** The Defensible Space Requirements in Table 6.8 shall be implemented as minimum requirements in association with development in any Wildland Fire Area.

Table 6-8. Defensible Space Clearing and Structural Summary (Recommendations from NFPA by Wildland Fire Hazard Severity Analysis)

Low Hazard	High Hazard
9.14 m (30 ft) clearance. Class A roof. No portion of trees or other vegetation within 3.048 m (10 ft) of chimney	9.14 m (30 ft) irrigated. Class A roof. 30.48 m (100 ft) fuel treatment.

Low Hazard	High Hazard
outlets. Trees within defensible space shall be pruned to minimize ladder fuels.	Noncombustible siding/decks, and boxed eaves. Selected fire-resistant trees within 9.1 m (30 ft) of structures. Selected thinning of trees and shrubs. Trees within defensible space shall be pruned to minimize ladder fuels. All trees and shrubs pruned of dead material. No portion of trees or other vegetation within 3.48 m (10 ft) of chimney outlets.

(b) **Maintenance of Defensible Space and Associated Fuel Break Thinning.** Defensible space and fuel break thinning work shall be completed and maintained to the standards described in the Colorado State University's Cooperative Extension Fact Sheet 6.302. The responsibility for maintaining defensible space and associated fuel break thinning lies with the landowner. Noncompliance with defensible space maintenance standards will be enforced as a zoning violation.

(6) **Fuels Modification During Development and After Construction.**

(a) **Identification of Modification Required.** Identification of fuel modification measures may be required in order to reduce the threat of wildfire. If fuel modification is determined to be necessary, the plan shall be prepared by a qualified professional. A fuel modification plan shall comply with NFPA requirements. Required elements shall include but are not limited to the following:

- Identification of fuel type, volume and loading, in conjunction with an assessment of slope and aspect, to determine the ability for a wildfire to spread;
- Reduction of fuel loading and modification of fuel types to reduce the risk to structures or adjacent vegetation, including the creation of fuel breaks; and
- Creation of defensible space to protect structures from approaching wildfire and reduce the potential for turning a structure fire into a wildfire.

(b) **Fuel Modification Standards.** When the Wildland Fire Risk and Hazard Mitigation Plan requires establishment of a fuel modification area:

- The modifications shall extend at least 30 feet from structures;

- Ground fuels within the defined defensible space shall be treated or removed;

- Live vegetation within the defensible space shall have dead material removed and shall be thinned and pruned;

- Dead or downed fuels within the defensible space of buildings shall be removed or treated to maintain the fuel modification area;

- Vegetation under trees within the fuel modification area shall be maintained at a height that will preclude ground fire from spreading in the tree crown;

- The fuel modification plan shall include a maintenance element with the responsibility for maintenance defined;

- In these areas all slash (fallen trees, shrubs, pulled stumps, and other combustible materials) may be required to be disposed of from an area extending to at least 150 feet from the road centerline prior to the acceptance of any roads;

- All slash shall also be removed from the vicinity of the home sites prior to final building inspection; and

- Continuous proper forest management to maintain a low wildfire danger shall be guaranteed.

(7) **Combustible Materials.** Propane tanks and other combustible liquids storage shall conform to NFPA 30, Flammable and Combustible Liquids Code, NFPA 58, Liquefied Petroleum Gas Code, and the Wildland Fire Risk and Hazard Mitigation Plan. Other combustible materials shall be removed from the defensible space or stored in conformance with the fire protection plan.

6.3.4. Forestry

(A) **General.**

(1) **Purpose.** To ensure that proposed development is reviewed in consideration of forestry issues to:

- Identify forest health concerns and inform purchasers of developed lot, parcel, or tract;

- Improve overall forest health; and

- Implement wildfire hazard reduction.

(2) **Applicability.** The provisions of this Section shall apply to the review and approval of all development applications and permits on land that is forested.

(3) **Vegetation Map of Forested Areas.** El Paso County shall maintain a Vegetation Map depicting forested areas of the County, which shall be the official map for purposes of this Chapter. Additional mapping of infected and diseased tree locations may be maintained by the ESD.

(B) Forestry Management Standards.

(1) **Forestry Management to Conform to ESD Recommendations.** The applicant should consult with the ESD prior to submission of the development application. ESD input should be reflected in design of the project.

(2) **Forestry Management to Conform to CSU Guidelines.** Development applications and permits should utilize the CSU Guidelines with respect to forest management including wildfire mitigation and pest control.

(3) **Maintenance Responsibilities.** Forestry management begins at the time of development, but extends as an obligation of the HOA and property owners into perpetuity. Categories of responsibility that should be addressed in the development include: (1) homeowner (responsibility to maintain, etc.); (2) HOA (Common areas, HOA enforcement against homeowners, obligation to maintain in private road tracts, etc.); (3) builder (what to be shown on site, existing vegetation, vegetation which is to be removed or thinned, etc.); and (4) developer (responsibility to complete requirements of the plan, relationship to financial assurance, relationship to warranty/maintenance bond, relationship to future filings, relationship to buildings, etc.).

(4) **Forestry Management Plan.**

(a) **Forestry Management Plan Required.** A forestry management plan shall be developed and submitted with the development application. The plan should describe the overall forestry management program for the subject property in conformance with the standards identified.

(b) **Recording of Plan.** Implementation of the forestry management plan shall be accomplished by the recording of the development guide (in the case of a PUD) or the final plat and related documents (in the case of a subdivision).

(c)**Mitigation Costs Included in Construction Financial Assurance.** If the forest health issues are significant enough in the determination of the PCD Director to

~~require mitigation associated with development construction activities, the cost of the mitigation shall be included in the construction financial assurance.~~

~~(d) **Plat Notes Required.** Notice of any forest health issues may be required by the County through conditions of approval or notes placed on the face of the plat.~~

6.3.4. WILDLAND-URBAN INTERFACE AREAS

A. Applicability. This section applies to areas within unincorporated El Paso County that are not located within a Fire District and are located within the Wildland-Urban Interface as defined in Appendix E to the Code. Where there is a conflict between Appendix E and other provisions of this Code, Appendix E shall govern.

B. General

1. Wildland-Urban Interface Requirements. Properties within the Wildland-Urban Interface shall comply with Appendix E and the requirements of this section.

2. Road Grades. Within Wildland-Urban Interface Areas, road grades may not exceed 10 percent unless mitigation measures are approved.

3. Access to Structures. At least one approved means of vehicular access shall be provided to each structure or other nonstructural fire hazard in accordance with the following:

i. For structures or nonstructural fire hazards exceeding two stories or 30 feet in height above average adjacent ground level, or 12,000 square feet of gross floor area, no less than 2 separate approved means of access shall be provided.

ii. Approved vehicular access shall be provided to within 150 ft of any point of the exterior wall of each structure.

4. Access to Structures Not Protected by Automatic Sprinklers. An approved means of vehicular access shall be provided to within 30 feet of all points of at least 2 exterior walls for any structure not protected by automatic sprinklers that exceeds 2 stories or 30 feet in height above average adjacent ground elevation. Single and two-family dwellings are exempt from this requirement.

5. Access to Structures Protected by Automatic Sprinklers. For any structure protected by an automatic sprinkler system, an approved means of vehicular access shall be provided to within 400 feet of any point of the exterior wall. For

any structure exceeding 3 stories or 35 feet in height above average adjacent ground elevation and protected by an automatic sprinkler system, an approved means of vehicular access shall be provided to within 30 feet of all points of at least 2 exterior walls.

6. **Separation Between Structures.** A structure in a development shall be separated from another structure by at least 30 feet and shall be located at least 25 feet from a lot, parcel, or tract line. A structure in a development that exceeds 2 stories or 30 feet in height above average adjacent ground elevation and is not protected by an automatic sprinkler system shall be separated from other structures by at least 50 feet and shall be located at least 25 feet from a lot, parcel, or tract line.

7. **Plat Notes Required.** Notice of any wildfire mitigation issues or obligations may be required by the County through conditions of approval or notes placed on the face of the plat.

C. Wildland Hazard and Mitigation Plan. A wildland fire risk and hazard mitigation plan prepared by a qualified professional shall be required for commercial use of any property located within the Wildland Urban Interface area that is not subject to the standards for structure hardening and site and area requirements of Appendix E. A Wildland Hazard Mitigation Plan shall include at a minimum the following:

- Access, ingress, egress, and evacuation.
- Water supply for fire protection.
- Structure location and construction.
- Ignition potential.
- Vegetation management and defensible space.
- Structure hardening and defensible space requirements
- Historical wildfire behavior patterns and environmental conditions.
- Potential for structure-to-structure and vegetation-to-structure fire spread. Slope and aspect shall be evaluated as to their potential to increase the threat of wildland fire to life or improved lot, parcel, or tract.
- Other site-specific factors affecting wildfire.

1.15 Definitions

- **Alternative Fire Protection Water Supply:** Water supplies provided to meet the minimum fire flow/duration requirements where no municipal-type water system exists or to supplement an inadequate municipal-type water supply.
- **Cistern.** A water storage tank, usually underground and designed with positive pressure, designed to contain a designated volume of water and to permit the removal of water at no less than 1,000 gallons per minute ("gpm").
- **Dry Hydrant.** An outlet for suction supply of fire protection water connected to a natural body of water or cistern, which is designed without positive pressure or does not require freeze protection.
- **Emergency Access Lane.** An emergency vehicle access road or portion thereof designated and maintained to provide unobstructed access for fire department operations. A, emergency access lane is intended to allow the passage, positioning, staging, and operation of fire apparatus, including the deployment of aerial apparatus outriggers, hose lines, and other emergency equipment.
- **Emergency Vehicle Access Roads:** Any road, driveway, lane, or other route, whether public or private, that provides fire department access to one or more buildings, structures, fire protection water supplies, or fire department connections.
- **Fire Protection Report:** An analysis of compliance with the Fire Protection and Wildfire Mitigation sections of this Code. May also include an analysis of compliance with the IFC as applicable.
- **Recognized Water Supply:** A legally and physically accessible water source demonstrated to furnish a minimum flow rate of 250 gpm (950 L/m) for a two-hour duration from a defined usable volume, as demonstrated by means of an availability study.

6.3.3 FIRE PROTECTION

A. General

1) **Purpose.** The purpose of this section is to ensure that proposed development is reviewed in consideration of the need to provide adequate fire protection, minimize the hazard to public health, safety, and welfare, and provide requirements for the protection of structures and facilities.
2) **Applicability.** This section shall apply to all development applications and permits within the unincorporated areas of El Paso County. Unless otherwise exempted, all development located within the boundaries of a Fire District shall be reviewed by the Fire District for compliance with their adopted fire code. Development within the boundaries of a Fire District that has been exempted from the adopted fire code shall be reviewed under this section by the County. These exemptions include the following:
    - **i.** Detached one- or two-family dwellings or townhomes that are constructed on an unplatted parcel (legal lot), on a lot platted as part of a subdivision containing four or fewer such platted lots, or on a lot platted as part of a subdivision recorded before December 10, 2013
    - **ii.** Factory-built units certified by the State of Colorado
    - **iii.** Factory-built units constructed to federal standards
    - **iv.** Accessory use structures
3) **Responsibility of Fire Authority.** It is the responsibility of the Fire Authority to provide recommendations as to whether a new development meets the applicable fire code standards for the respective area. If a new development does not meet the applicable standards, then the Fire Authority should provide comments regarding areas of non-compliance and recommendations for achieving compliance.
4) **Basis of Standards.** Where this section references specific standards from an organization, the most current edition of referenced standards applies.
5) **Combustible Materials for Commercial Use.** Propane tanks and other combustible liquids storage shall conform to NFPA 30: Flammable and Combustible Liquids Code

and NFPA 58: Liquefied Petroleum Gas Code. A Fire Protection Report and/or a report detailing mitigation of wildland fuels may be required.

B. Reports and Standards for Subdivisions

1) Fire Protection Report.

A Fire Protection Report is required for any subdivision application and shall include an analysis of compliance with this Code, the applicable fire code, and at a minimum the following:

i. Description of proposed development to include acreage, number of lots/dwelling units, etc.

ii. Water supply to be used for fire suppression (fire hydrants, dry hydrants, cisterns, automatic sprinkler system, etc.).

iii. Maintenance plan if cisterns and dry hydrants will be used.

iv. Information regarding the internal and external roadways and if an emergency vehicle can utilize those roadways.

v. Information on any emergency access roads and/or gates.

vi. The fire intensity classification when located within the wildland urban interface area and an analysis of compliance with Appendix E (when applicable).

2) Fire Protection Commitment. A written commitment to provide structural fire protection may be required for any proposed subdivision located outside the boundaries of a Fire District or otherwise exempt from the adopted fire code. The PCD Director may require a written commitment for other development applications.

3) Development Outside Fire Authority Boundaries. Proposed subdivisions outside the boundaries of a Fire District shall annex into a district or provide evidence of a contract for service from a Fire District or Fire Department. Waivers of this requirement may only be approved by the Board of County Commissioners. An applicant's waiver request shall, at a minimum, include the following:

• A letter from the nearest fire district or fire department demonstrating that annexation is not economically feasible.

• A letter or report from a Third Party Fire Reviewer providing a recommendation to the Board of County Commissioners that the proposed development complies with the Fire Protection and Wildfire Mitigation Section of this Code. In the case of a conflict between adopted standards and this Code, the Third Party Fire Reviewer may recommend an alternative design which accomplishes the purposes of this section and provides an equivalent benefit to the development.

C. Design Standards

1) Water Supply

a) General. Water supply systems used for fire protection purposes shall be calculated, installed, and maintained in accordance with NFPA standards. The required fire flow for one or more buildings shall be calculated per the following conditions:

i. For areas without municipal-type water systems, NFPA 1142, Standard on Water Supplies for Suburban and Rural Fire Fighting, shall be applied.

ii. For those areas with municipal-type water systems, nationally recognized criteria, such as NFPA, National Fire Academy (NFA), or International Organization for Standardization (ISO) standards, shall be applied.

b) Automatic Fire Protection. Design for automatic fire protection shall comply with the NFPA 13, 13R, and/or 13D Standard for the Installation of Sprinkler Systems. The PCD Director, or Fire District, when located within the boundaries of a Fire District, may approve a reduction of required water supply for structures with automatic fire protection.

c) Areas with Central Water Systems.

i. Water Distribution System Pressure. The water distribution system shall be capable of delivering fire flow at a minimum rating of 20 pounds per square inch for each hydrant connected to the distribution system within the proposed subdivision.

ii. Dead-End Mains. Dead-end mains shall not exceed 600 feet in length for main sizes less than 10 inches in diameter.

iii. Fire Hydrant Spacing. Fire hydrants shall be located so that all residential structures are within 500 feet, and all commercial structures are within 400 feet of a hydrant. Where the proposed buildings warrant, the Fire Authority may recommend a greater spacing distance or require additional hydrants and closer spacing based upon the applicable fire code or NFPA standards.

iv. Fire Hydrant Accessibility. Fire hydrants shall be accessible to fire district or fire department apparatus from a road (i.e., maintained public roads, privately maintained roads, or emergency vehicle access roads) or unobstructed emergency access lanes (i.e., driveway, parking drive aisle, or emergency access lane).

v. Fire Hydrant Supply Lines. Fire hydrants shall be supplied by not less than a 6-inch diameter main installed on a looped system, or by not less than an 8-inch diameter main if the system is not looped or the fire hydrant is installed on a dead-end main exceeding 300 feet in length.

vi. Fire Hydrants in Parking Areas. Fire hydrants located in parking areas shall be protected by barriers that will prevent physical damage from vehicles without obstructing hydrant operation.

vii. Fire Hydrant Relationship to Roads. Fire hydrants shall be located within 6 feet of the edge of the pavement unless there is a conflict with the ECM or the Fire Authority recommends another location is more acceptable for fire district or fire department use. All roads and emergency vehicle lanes shall be designed to maintain a minimum unobstructed clearance of 3 feet around fire hydrants.

viii. Fire Hydrant Easements. Easements for fire hydrants shall be provided and dedicated to the appropriate fire or water authority when the hydrants are not within a public road right-of-way. The easement shall afford accessibility to the hydrant from the right-of-way.

ix. Release of Financial Assurance for Water Supply Systems. The contractor, installer, or owner of water supply systems shall provide a letter of acceptance from the water district or public utility prior to release of construction financial assurance for the system.

d) Areas without Central Water Systems

i. Fire Cisterns.

- **Fire Cisterns Required.** Fire cisterns shall be provided in areas which are not served by hydrants, unless an alternative fire protection water supply that complies with NFPA standards is approved. All currently recognized water supplies may be considered when determining the need for and the placement of new water storage sites.
- **Construction Standards.** Construction of fire cisterns shall comply with the approved plans and the requirements of NFPA 1142.
- **Design Standards for Subdivisions with More than One Cistern:** For subdivisions where more than one fire cistern is required, fire cisterns shall meet the requirements of NFPA 1142. For this type of subdivision, fire cisterns shall be designed for the largest building allowed by zoning in the worst-case hazard and construction class.
- **Design Standards for Subdivisions with One Cistern:** For subdivisions where only one fire cistern is required, the minimum capacity of the fire cistern shall meet the requirements of NFPA 1142 or shall have a total capacity equal to 300 gallons for each acre within the subdivision plus 3,000 gallons per dwelling unit, whichever is greater.
- **Cistern Turnaround.** A dedicated turnaround shall be placed no more than 50 feet from a fire cistern, and the standpipe shall be within 8 feet of the nearest usable portion of the dedicated right-of-way or approved easement, unless otherwise recommended by the Fire Authority.

- **Easements Required.** Cistern easements shall be provided and dedicated to the appropriate Fire District at the time of platting to afford accessibility of the cistern from a public road. Easements shall be of sufficient size to facilitate maintenance.

ii. Dry Hydrants

- **Use of Dry Hydrants.** Dry hydrants may be provided in combination with fire cisterns or other approved fire protection water supply systems. Plans for dry hydrants shall be submitted to the Fire District, or the County when located outside the boundaries of Fire District, for approval and be identified on the final plat and/or site development plan.
- **Construction Standards.** Construction and installation of dry hydrants shall comply with the approved plans and requirements of NFPA 1142.
- **Accessible.** Dry hydrants shall be located to be accessible under all weather conditions.
- **Clearance.** Dry hydrants shall have a minimum clearance of 20 feet on each side and be located a minimum of 100 feet from any structure. Highway or road traffic shall not be impaired during the use of the dry hydrant.
- **Protected.** Dry hydrants shall be protected from damage by vehicles and other perils, including freezing and damage from ice and other objects.
- **Visible.** Dry hydrant locations shall be made visible from the main roadway during emergencies by reflective marking and signage and shall be in conformance with NFPA 1142 requirements. All identification signs located within public right-of-way or subject to Colorado law shall be approved by the appropriate authority prior to installation.

- **Access to Hydrant.** Vehicle access shall be designed and constructed to support the imposed load of fire apparatus weighing up to 75,000 pounds with a minimum single axle weight of 27,000 pounds.
- **Easements Required.** Dry hydrant easements shall be provided and dedicated to the appropriate Fire District at the time of platting to afford accessibility of the dry hydrant from a public road. Easements shall be of sufficient size to facilitate maintenance.

iii. **Maintenance**. Cisterns and dry hydrants shall be inspected, tested, and maintained at least quarterly and in accordance with NFPA 1142. Any owner of a cistern and/or dry hydrant is responsible for the planning, developing, permitting, and continual maintenance and provision of a sufficient water supply necessary to maintain the fire protection requirements of a cistern or dry hydrant system.

- A maintenance plan is required for cisterns and/or dry hydrants and shall be submitted with the Fire Protection Report. The plan shall include at a minimum the location of cisterns and/or dry hydrants, owner(s) name and contact information, and inspection and testing schedule.
- Inspection and maintenance reports shall be made available to the County and Fire District upon request.

iv. **Alternative Fire Protection Water Supply**. The County or Fire District, when located within the boundaries of a Fire District, may determine a cistern or dry hydrant is not required upon an evaluation of recognized water supplies from a qualified professional, including the applicable Fire District. Alternative water supply must be capable of providing 250 gpm fire flow, and maintain the fire flow, without interruption, for 2 hours. The water supply shall not be more than two (2) miles travel distance from any vehicle entrance to a parcel that is served by the water supply.

v. **Water Use Agreements.** If a private water supply source is to be used, a legal agreement establishing access to and use of the water source is required.

vi. **Qualified Professional.** The PCD Director may require any reports, plans, specifications, etc. required for water supply to be completed by a qualified professional.

vii. **Plat Notes Required.** Plans for cisterns and dry hydrants shall be identified on the final plat and/or site development plan.

2) **Roads.** This Section shall apply to all roads providing access to a development whether or not they are dedicated as public roads.

a) **Roads Constructed to County Standards.** All roads, including private roads and emergency vehicle access roads, shall be designed and constructed according to this Code and the ECM.

b) **Emergency Vehicle Access Roads.** Emergency vehicle access roads shall, at a minimum, be constructed to the County's gravel road standard if open to public travel. Emergency vehicle access roads which are not open to public travel shall meet the non-road access standards.

c) **Roads within 150 Feet of Development.** Roads or emergency access lanes shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is within 150 feet as measured by an approved route around the exterior of the building or facility. Single family residential development excepted.

d) **Two Access Routes Required.** Access to a development shall be provided by a minimum of two separate routes in accordance with the requirements of this Code and the ECM if a single access exceeds the cul-de-sac length allowed by the ECM. Access routes shall be placed a distance apart equal to not less than one-half the length of the maximum overall diagonal dimension of the property, measured in a straight line between accesses unless a greater distance is required by the ECM.

e) **Turnaround Required on Dead-End Roads.** Dead-end roads more than 300 feet in length shall be provided with a roadway termination meeting ECM standards.

3) **Non-Road Access.**

The following minimum standards apply to any access, driveway, lane, etc. serving as emergency access lanes.

a) **Emergency Access Provided.** Access for emergency responders, ingress, egress, and evacuation shall be provided for all buildings.

b) **Driveways Required.** Where any point of a building is greater than 150 feet from a road, a driveway meeting the standards of this Code shall be provided to within 150 feet of the furthest point on the building.

c) **Emergency Access Lanes Required.** The County may require emergency access lanes be provided.

d) **Emergency Access Lane Design.** An emergency access lane shall be designed and constructed to enable fire-fighting apparatus to maneuver broadside or directly forward within a minimum of 5 feet and a maximum of 25 feet of structures.

e) **Width of Driveway and Emergency Access Lanes.** Where the driveway is greater than 150 feet in length, it shall be not less than 10 feet in unobstructed width. Emergency access lanes shall have a minimum unobstructed width of 16 feet for approved one-way travel and 24 feet for two-way travel.

f) **Vertical Clearance.** A minimum vertical clearance of 13 feet 6 inches shall be provided and maintained over the full width of the emergency access lane or driveway.

g) **Turns.** Required driveways shall be designed, constructed, and maintained to accommodate the turning radius of the largest apparatus typically used to respond to that location. A turn in an emergency access lane shall have a minimum inside turning radius of 25 feet and a minimum outside turning radius of 50 feet.

h) Grade. Emergency vehicle access roads shall not exceed 10 percent grade unless mitigation measures are approved.

i) Emergency Access Lanes Connecting to Roads. Emergency access lanes connecting to roads shall be provided with curb cuts, or other acceptable alternatives, extending at least 2 feet beyond each edge of the emergency access lane.

j) Turnouts and Turnarounds Required.

i. Driveways. Where the required driveway is greater than 300 feet, it shall be provided with turnouts or turnarounds at approved locations based on recommendation from the Fire Authority.

ii. Turnarounds Required. Dead-end emergency access lanes exceeding 300 feet in length shall be provided with turnouts or turnarounds in one of the following minimum configurations:

- A circular turnaround having a minimum 50-foot outside radius; or
- A "T" or hammerhead turnaround providing a three-point turn; or
- An alternative turnaround configuration that provides equivalent maneuverability and accommodates fire apparatus.

k) Load Design. Emergency access lanes and required driveways must be designed, constructed, and maintained to accommodate the imposed load of fire apparatus weighing up to 75,000 pounds with a minimum single axle weight of 27,000 pounds.

l) Bridges or Drainage Crossings. A bridge or drainage crossing on an emergency vehicle access road shall be designed to accommodate the imposed load of fire apparatus weighing up to 75,000 pounds with a minimum single axle weight of 27,000 pounds. The load limit shall be clearly posted at the approaches to the bridge.

m) Landscaping Maintained. Landscaping or other obstructions shall be maintained in a manner that provides unobstructed access for fire department operations.

4) **Gates.**

a) **Gate Location and Dimensions.** Gates shall be located at a minimum of 30 feet from the public right-of-way and shall not open outward. The clear opening provided through a gate shall be a minimum of 16 feet in width.

b) **Locks.** Fire District personnel shall have ready access to locking mechanisms on a gate restricting access to a fire lane. Use of Knox products shall be coordinated with the applicable Fire Authority.

6.3.4. WILDLAND-URBAN INTERFACE AREAS

A. Applicability. This section applies to areas within unincorporated El Paso County that are not located within a Fire District and are located within the Wildland-Urban Interface as defined in Appendix E to the Code. Where there is a conflict between Appendix E and other provisions of this Code, Appendix E shall govern.

B. General

1) **Wildland-Urban Interface Requirements.** Properties within the Wildland-Urban Interface shall comply with Appendix E and the requirements of this section.

2) **Road Grades.** Within Wildland-Urban Interface Areas, road grades may not exceed 10 percent unless mitigation measures are approved.

3) **Access to Structures.** At least one approved means of vehicular access shall be provided to each structure or other nonstructural fire hazard in accordance with the following:

i. For structures or nonstructural fire hazards exceeding two stories or 30 feet in height above average adjacent ground level, or 12,000 square feet of gross floor area, no less than 2 separate approved means of access shall be provided.

ii. Approved vehicular access shall be provided to within 150 ft of any point of the exterior wall of each structure.

4) **Access to Structures Not Protected by Automatic Sprinklers.** An approved means of vehicular access shall be provided to within 30 feet of all points of at least 2 exterior

walls for any structure not protected by automatic sprinklers that exceed 2 stories or 30 feet in height above average adjacent ground elevation. Single and two-family dwellings are exempt from this requirement.

5) **Access to Structures Protected by Automatic Sprinklers.** For any structure protected by an automatic sprinkler system, an approved means of vehicular access shall be provided to within 400 feet of any point of the exterior wall. For any structure exceeding 3 stories or 35 feet in height above average adjacent ground elevation and protected by an automatic sprinkler system, an approved means of vehicular access shall be provided to within 30 feet of all points of at least 2 exterior walls.

6) **Separation Between Structures.** A structure in a development shall be separated from another structure by at least 30 feet and shall be located at least 25 feet from a lot, parcel, or tract line. A structure in a development that exceeds 2 stories or 30 feet in height above average adjacent ground elevation and is not protected by an automatic sprinkler system shall be separated from other structures by at least 50 feet and shall be located at least 25 feet from a lot, parcel, or tract line.

7) **Plat Notes Required.** Notice of any wildfire mitigation issues or obligations may be required by the County through conditions of approval or notes placed on the face of the plat.

C. **Wildland Hazard and Mitigation Plan.** A wildland fire risk and hazard mitigation plan prepared by a qualified professional shall be required for commercial use of any property located within the Wildland Urban Interface area that is not subject to the standards for structure hardening and site and area requirements of Appendix E. A Wildland Hazard Mitigation Plan shall include at a minimum the following:

- Access, ingress, egress, and evacuation.
- Water supply for fire protection.
- Structure location and construction.
- Ignition potential.

- Vegetation management and defensible space.
- Structure hardening and defensible space requirements
- Historical wildfire behavior patterns and environmental conditions.
- Potential for structure-to-structure and vegetation-to-structure fire spread. Slope and aspect shall be evaluated as to their potential to increase the threat of wildland fire to life or improved lot, parcel, or tract.
- Other site-specific factors affecting wildfire.

1.15 DEFINITIONS

Alternative Fire Protection Water Supply: Water supplies provided to meet the minimum fire flow/duration requirements where no municipal-type water system exists or to supplement an inadequate municipal-type water supply.

Cistern. A water storage tank, usually underground and designed with positive pressure, designed to contain a designated volume of water and to permit the removal of water at no less than 1,000 gallons per minute ("gpm").

Dry Hydrant. An outlet for suction supply of fire protection water connected to a natural body of water or cistern, which is designed without positive pressure or does not require freeze protection.

Emergency Access Lane. An emergency vehicle access road or portion thereof designated and maintained to provide unobstructed access for fire department operations. A, emergency access lane is intended to allow the passage, positioning, staging, and operation of fire apparatus, including the deployment of aerial apparatus outriggers, hose lines, and other emergency equipment.

Emergency Vehicle Access Roads: Any road, driveway, lane, or other route, whether public or private, that provides fire department access to one or more buildings, structures, fire protection water supplies, or fire department connections.

Fire Protection Report: An analysis of compliance with the Fire Protection and Wildfire Mitigation sections of this Code. May also include an analysis of compliance with the IFC as applicable.

Recognized Water Supply: A legally and physically accessible water source demonstrated to furnish a minimum flow rate of 250 gpm (950 L/m) for a two-hour duration from a defined usable volume, as demonstrated by means of an availability study.

Project File No. LDC263

Re: Summary of Amendments to the Land Development Code (LDC263)

- Add seven new definitions to define new and existing terms used in Section 6.3.3.
- Revise Purpose and Intent section to combine language into one paragraph.
- Revise Applicability section:
    - Removed language pertaining to wildland areas, the Vegetation map, and wildland fire risk and hazard mitigation plan.
    - Added development located within the boundaries of a Fire District shall be reviewed by the Fire District for compliance with their adopted fire code.
    - Added exemptions from Resolution No. 26-139 to approve the 2021 International Fire Code.
- Delete Relationship to Other Standards section. A separate approval for an alternative design is not required.
- Delete Wildfire Hazard Maps/Vegetation Maps. The State's 2025 Colorado Wildfire Resiliency Code Map will apply when determining wildfire hazard areas.
- Relocate Combustible Materials for Commercial Use from "Construction in Wildland Fire Areas" to "General" section. Revised to apply only to commercial use.
- Add information/details on what information is required on a Fire Protection Report.
- Revise Fire Protection Commitment section to apply to development located outside the boundaries of a Fire Protection District or otherwise exempt from the adopted fire code.
- Remove Mitigation Costs included in Construction Financial Assurance as it relates to financial assurance for wildfire mitigation.
- Relocate Plat Notes Required to new Section 6.3.4 Wildland Urban Interface areas.
- Modify section Automatic Fire Protection.
    - Revised to reference NFPA 13, 13R, and 13D Standard for the Installation of Sprinkler Systems and not Pikes Peak Regional Building Code.
        - The Pikes Peak Regional Building Code references Sections 903.3.1.1 and 903.3.1.2 of the IBC for installation of automatic sprinkler systems. The IBC refers to NFPA 13 for design and installation standards.

    - Added new language that the required water supply may be reduced for structures with automatic fire protection. Language is from NFPA.
- Modify Fire Hydrant Spacing section to remove “nonresidential strictures are within 150 ft” and replace with “commercial structures are within 400 ft”. Removed “spacing not to exceed 660 ft. of vehicle travel distance”. Language matches IFC.
- Modify section Financial Assurance for Water Supply Systems to remove testing requirement for release of assurance. Letter of acceptance from water provider required instead.
- Modify Fire Cisterns section:
    - Alternative fire protection water supply must comply with NFPA.
    - Added new language that all currently recognized water supplies may be considered when determining the need for and the placement of new water storage sites. Language is from NFPA.
- Delete section Maintenance of Dry Hydrants.
- Add new section for maintenance of dry hydrants and cisterns.
- Modify section Access to Hydrant to include common weight of fire apparatuses. Matches the IFC.
- Delete section Maps and Location/Detail Drawings. The Sheriff’s Office or the Fire Districts cannot be required under the Land Development Code to be the keeper of the maps.
- Add new Section for Alternative Fire Protection Water Supply to provide alternative options to a cistern or dry hydrant is not required. Language is from NFPA and Douglas County rural water supply regulations.
- Add new section Water Use Agreements. If a private water supply source is to be used, a legal agreement establishing access to and use of the water source is required. Language is from NFPA.
- Add new section Qualified Professional. The PCD Director may require any reports, plans, specifications, etc. required for water supply to be completed by a qualified professional.
- Add new section Plat Notes Required. Plans for cisterns and dry hydrants shall be identified on the final plat and/or site development plans.
- Modify section Roads Within 150 Feet of Development to clarify what portion of the structure must be within 150 ft of a road or emergency access lane. Language matches IFC and NFPA.
- Modify section Two Access Routes Required to add distance requirements between two access routes. Matches IFC requirement. A greater distance between two access routes may be required by the ECM.
- Relocate section Road Grades in Wildland Fire Areas under new Wildland Urban Interface section.
- Modify section Emergency Access Lanes Connecting to Roads to add other alternatives to curb cuts may be acceptable.
- Modify section Load Design to include the most common weight of fire apparatuses. Matches the IFC.
- Modify section Bridges and Drainage Crossings to include most common weight of fire apparatuses. Matches the IFC.
- Modify section Gate Location and Dimensions to include clear opening provided through a gate shall be a minimum of 16 ft. in width.

- Delete section Construction in Wildland Fire Areas with the exception of the following:
    - Moved Wildland Fire and Hazard Mitigation Plan Required moved under new Wildland Urban Interface section.
    - Sections *Access to Structures, Access to Structures Not Protected by Automatic Sprinklers, Access to Structures Protected by Automatic Sprinklers, and Separation Between Structures* moved under new Wildland Urban Interface section.
    - Moved Combustible Materials from this section and added under 6.3.3 (A) General. Changed to be applicable only to commercial uses and a fire protection report or wildland fire and mitigation report may be required.
- Removed Section 6.3.4 Forestry in its entirety. Forested/fire hazard areas regulated by the WRC.
- Created new section 6.3.4 Wildland Urban Interface Areas
    - References Appendix E (WRC) and that it applies to areas of the County outside the boundaries of a Fire District.
    - Moved existing language under this section *Road Grades, Access to Structures, Access to Structures Not Protected by Automatic Sprinklers, Access to Structures Protected by Automatic Sprinklers, and Separation Between Structures, and Plat Notes Required.*
    - A Wildland Fire and Hazard Mitigation Plan may still be required for commercial development located within a WUI area that is not subject to the WRC requirements (campgrounds, shooting ranges, etc.).
- Add new Appendix E- Wildfire Resiliency Code
    - Required minimum code and standards of the WRC.

APPENDIX E – WILDFIRE RESILIENCY REQUIREMENTS

E.1 GENERAL

E.1.1 Purpose

The purpose of this Appendix E is to establish minimum regulations for the safeguarding of life and protection of property. These regulations are intended to mitigate the risk to life and structures from fire resulting from wildland fire exposure and fire exposure to adjacent structures and to inhibit structure fires from spreading to wildland fuels.

E.1.2 Applicability

The provisions of this Appendix E apply to all areas of unincorporated El Paso County that lie within the Wildland-Urban Interface but outside the boundaries of any Fire District.

E.1.3 Ground-truthing

A property owner may request a ground-truthing review of the fire intensity classification applied to their property as determined by reference to the maps produced by the Colorado Wildfire Resiliency Board.

E.1.3.1 Request for Review

A property owner requesting a ground-truthing review shall submit the following documentation, as required by the PCD Director:

- A written request justifying in detail the basis for a change in fire intensity application
- Technical documentation prepared by an approved qualified wildfire professional that describes and evaluates vegetative fuels on and within 300 feet of the property, topography, local weather patterns, and fire behavior modeling data.

E.1.3.2 PCD Director Determination

The PCD Director may assign a fire intensity classification other than that determined by the maps produced by the Colorado Wildfire Resiliency Board following review of the submitted materials and based upon the

criteria and characteristics set forth in Section 303.2 of the Colorado Wildfire Resiliency Code.

E.1.4 Scope

Compliance with this Appendix E is required for any construction, alteration, movement, repair, maintenance, or use of any building, structure, or premises that contain occupiable and/or habitable space, or for any change in use resulting in an occupiable and/or habitable space, unless excepted.

E.1.4.1 Existing Conditions

The legal occupancy or use of any property, building, structure, or condition existing on the date of adoption of this Appendix E may continue without change unless otherwise provided herein.

E.1.4.2 Additions or Alterations

If an addition or alteration increases the footprint of a building or structure existing as of the date of adoption of this Appendix E by 500 square feet or more, the addition or alteration, but not the existing building or structure, must comply with this Appendix E.

E.1.4.3 Exceptions

(A) Accessory Structures. The following accessory structures do not need to comply with this Appendix E:

- One-story, detached, accessory, nonhabitable structures such as tool and storage sheds, playhouses, and similar structures, if the floor area is 120 square feet or less and the structure is located 10 feet or more from the nearest habitable or occupiable structure.
- Accessory structures and buildings of an accessory character classified as Utility and Miscellaneous Group U (including Agricultural Structures), as defined in the Pikes Peak Regional Building Code, located more than 50 feet from a structure containing occupiable or habitable space.

(B) 35-Acre Parcels. Compliance with this Appendix E is not required for a parcel 35 acres or more in size that has only one residential structure and does not abut a residential or commercial area.

(C) Other Exceptions. The following activities do not require compliance with this Appendix E:

- Interior alterations of existing structures
- Alterations or repairs to the exterior of an existing structure, or an attachment to it, when less than 25 percent of the exterior is affected
- Painting, staining, and similar maintenance or restorative work
- Fences located more than 8 feet from a habitable structure

E.1.4.4 Maintenance

Property owners shall maintain buildings, structures, approved landscape materials and vegetation, defensible space and other requirements in compliance with this Appendix E on all parcels for which initial compliance is required.

E.1.5 Definitions

The following definitions apply only to those terms as used in this Appendix E and, in the event of a conflict, supersede definitions of the same terms found in Section 1.15 of this Code.

Agricultural Building – a structure designed and constructed to house farm implements, hay, grain, poultry, livestock, or other horticultural products. It may not be a place of human habitation or a place of employment where agricultural products are processed, treated, or packaged, nor may it be a place used by the public.

Approved – acceptable to the PCD Director.

Building – any structure intended for supporting or sheltering any occupancy.

Class A Tests – tests applicable to roof coverings that are expected to be effective against severe fire exposure, afford a high degree of protection to the roof deck, not slip from position, and not present a flying brand hazard.

Defensible Space – an area, either natural or man-made, where material capable of allowing a fire to spread unchecked has been treated, cleared, or

modified to slow the rate and intensity of an advancing wildfire and to create an area for fire suppression operations to occur.

Embellishments – elements incorporated into design and construction for ornamental or decorative purpose that are not integral to the structure or structural support.

Fire Intensity Classification – the level of fire intensity identified for areas where significant fuel hazards and associated dangerous fire behavior may exist, based upon vegetative fuels, topography, weather conditions, and flame length value. The Colorado Wildfire Resiliency Code Board has created three fire intensity classifications, low, moderate, and high, and has produced maps identifying the areas within the Wildland-Urban Interface to which the classifications apply.

Fire-Resistance-Rated Construction – the use of materials and systems in the design and construction of a building or structure to safeguard against the spread of fire within a building or structure and the spread of fire to or from buildings or structures to the Wildland-Urban interface area.

Fire-Retardant-Treated Wood – any wood product that, when impregnated with chemicals by a pressure process or other means during manufacture, shall have, when tested in accordance with ASTM E84 or UL 723, a listed flame spread index of 25 or less. The ASTM E84 or UL 723 test shall be continued for an additional 20-minute period and the flame front shall not progress more than 10.5 feet beyond the centerline of the burners at any time during the test.

Flame Spread Index – a comparative measure, expressed as a dimensionless number, derived from visual measurements of the spread of flame versus time for a material tested in accordance with ASTM E84.

Fuel Modification – a method of modifying fuel load by reducing the amount of nonfire-resistive vegetation or altering the type of vegetation to reduce the fuel load.

Habitable Space – a space in a building for living, sleeping, eating, or cooking.

Heavy Timber Construction – as described in Section 602.4 of the 2024 International Building Code.

Ignition-Resistant Material – building material that meets the requirements of Section E.2.1.3.

Ignition-Resistant Vegetation – plants that are less likely to readily ignite from a flame or other ignition source and produce fewer embers. While they can still be damaged by fire, their foliage and stems don't significantly contribute to the intensity of the fire. These plants are limited to those with an ignitability rating of 8 or higher identified in Fact Sheet 6.305 created by the Colorado State University Extension and Colorado State Forest Service.

Log Wall Construction – a type of construction in which exterior walls are constructed of solid wood members and where the smallest horizontal dimension of each solid wood member is not less than 6 inches. Log wall construction shall follow requirements of ICC 400.

Multilayered Glaze Panels – window or door assemblies that consist of two or more independently glazed panels installed parallel to each other, having a sealed air gap in between, within a frame designed to fill completely the window or door opening in which the assembly is intended to be installed.

Noncombustible – as applied to building construction material, a material that, in the form in which it is used, is one of the following:

- Material of which no part will ignite and burn when subjected to fire,
- Material conforming to ASTM E136, or
- Fire-rated gypsum board tested in accordance with ASTM C1396 with no less than a 1-hour fire-resistance rating with fire exposure from the outside only.

Occupiable Space – a room or enclosed space designed for human occupancy in which individuals congregate for amusement, education, or similar purposes or in which occupants are engaged at labor.

Roof Assembly – a system designed to provide weather protection and resistance to design loads. The system consists of a roof covering and roof deck or a single component serving as both. A roof assembly can include an underlayment, thermal barrier, ignition barrier, insulation, or a vapor retarder.

Roof Covering – the covering applied to the roof deck for weather resistance, fire classification, or appearance.

Roof Deck – the flat or sloped surface not including its supporting members or vertical supports.

Slope – the variation of terrain from the horizontal; the number of feet rise or fall per 100 feet measured horizontally, expressed as a percentage.

Structure – that which is built or constructed.

Structure Ignition Zone- the structure and the area around the structure (or home). The SIZ takes into account both the potential of the structure to ignite and the quality of defensible space surrounding it.

Tree Crown – the primary and secondary branches growing out from the main stem, together with twigs and foliage.

Wildland-Urban Interface – that geographical area where structures and other human development meet or intermingle with wildland or vegetative fuels, determined by reference to maps produced by the Colorado Wildfire Resiliency Code Board.

E.2 STRUCTURE HARDENING REQUIREMENTS

Exterior design and construction of new buildings and structures within the Wildland-Urban Interface areas of Colorado shall be constructed in accordance with this Section E.2, except as otherwise provided in this Appendix E.

Exception: Homes built to the HUD Manufactured Home Construction and Safety Standards are exempt from structure hardening requirements on their first installation.

E.2.1 Building Material

Building materials shall comply with any one of the requirements in Sections E.2.1.1 through E.2.1.3.

E.2.1.1 Noncombustible material

Noncombustible material shall comply with the definition of noncombustible materials found in Section E.1.4.

E.2.1.2 Fire-retardant-treated wood

Fire-retardant-treated wood shall be identified for exterior use and shall meet the requirements of Section 2303.2 of the 2024 International Building Code.

E.2.1.3 Ignition-resistant material

Ignition-resistant material shall be tested on the front and back faces in accordance with the extended ASTM E84 or UL 723 test for a total test period of 30 minutes, or with the ASTM E2768 test. The material shall bear identification showing the fire test results. Panel products shall be tested with a ripped or cut longitudinal gap of 1/8 inch. The material, when tested in accordance with the test procedures set forth in ASTM E84 or UL 723 for a test period of 30 minutes, or with ASTM E2768, shall comply with Sections E.2.1.3.(A) through E.2.1.3.(C). Material or products which melt, drip, or delaminate to the extent that the flame front is interrupted are not permitted.

Exception: Material composed of a combustible core and a noncombustible exterior covering made from either aluminum at a minimum 0.019-inch thickness or corrosion-resistant steel at a minimum 0.0149-inch thickness are not required to be tested with a ripped or cut longitudinal gap.

(A) Flame spread. The material shall exhibit a flame spread index not exceeding 25.

(B) Flame front. The material shall exhibit a flame front that does not progress more than 10 feet 6 inches beyond the centerline of the burner at any time during the test.

(C) Weathering. Ignition-resistant material shall maintain its performance in accordance with this Section E.2.1.3 under conditions of use. The material shall meet the performance requirements for weathering (including exposure to temperature, moisture, and ultraviolet radiation) below, as applicable to the material and conditions of use.

(1) Evaluation requirements for weathering. Fire-retardant-treated wood, wood-plastic composite materials, and plastic lumber materials shall be evaluated after weathering in accordance with Method A "Test Method for Accelerated Weathering of Fire-Retardant-Treated Wood for Fire Testing" in ASTM D2898.

(2) Wood-Plastic composite materials. Wood-plastic composite materials shall also demonstrate acceptable fire performance after weathering by the following procedure: first, testing in accordance with ASTM E1354 at an incident heat flux of 50 kW/m2 in the horizontal orientation, then, weathering in accordance with ASTM D7032, and then retesting in accordance with ASTM E1354 and exhibiting an increase of no more than 10 percent in peak rate of heat release when compared to the peak heat release rate of the nonweathered material.

(3) Plastic lumber materials. Plastic lumber materials shall also demonstrate acceptable fire performance after weathering by the following procedure: first, testing in accordance with ASTM E1354 at an incident heat flux of 50 kW/m2 in the horizontal orientation, then, weathering in accordance with ASTM D6662, and then retesting in accordance with ASTM E1354 and exhibiting an increase of no more than 10 percent in peak rate of heat release when compared to the peak heat release rate of the nonweathered material.

E.2.2. Class 1 Requirements

Buildings and structures constructed, modified, or relocated into or within areas having a low fire intensity classification shall comply with the Class 1 Requirements.

E.2.2.1 Roofing

(A) Roofs shall have a roof covering or roof assembly classified as Class A when tested in accordance with ASTM E108 or UL 790.

(1) Flame and ember protection. For roof assemblies where the roof covering profile creates a space between the roof covering and roof deck, the space shall resist the entry of flames and embers by one or more of the following methods:

- Firestopping with noncombustible material of the space between the roof covering and the roof deck.
- Installation of one layer of cap sheet complying with ASTM D3909 over the combustible roof deck.
- Installation of a listed Class A classified roof assembly.

(2) Roof valley flashings. Valley flashings shall be not less than 0.019-inch (No. 26 galvanized sheet gage) of corrosion-resistant metal installed over a minimum 36-inch-wide underlayment consisting of one layer of cap sheet complying with ASTM D3909 running the full length of the valley.

(B) If a roof covering existing at the time of adoption of this Appendix E has 25 percent or more of its surface area replaced, or if work to reconstruct, alter, or repair the roof covering effectively replaces such material, the entire roof covering must be replaced with one that complies with this Section E.2.2.1.

E.2.2.2 Gutters and Downspouts

Gutters and downspouts shall be constructed of noncombustible material.

E.2.2.3 Ventilation Openings

Ventilation openings for enclosed attics, enclosed rafter spaces, and underfloor spaces shall be in accordance with the following, as applicable.

(A) Performance requirements. Ventilation openings shall be fully covered with listed vents, tested in accordance with ASTM E2886, to demonstrate compliance with all the following:
- There shall be no flaming ignition of the cotton material during the Ember Intrusion Test.
- There shall be no flaming ignition during the Integrity Test portion of the Flame Intrusion Test.
- The maximum temperature of the unexposed side of the vent shall not exceed 662°F (350°C).

(B) Prescriptive requirements. Ventilation openings shall be covered with noncombustible corrosion-resistant mesh with openings not to exceed 1/8-inch.

E.2.3 Class 2 Requirements

Buildings and structures constructed, modified, or relocated into or within areas having a moderate or high fire intensity classification shall comply with the Class 1 Requirements in Section E.2.2 and the Class 2 Requirements.

E.2.3.1 Protection of Eaves

Eaves and soffits shall be protected on the exposed underside by noncombustible material, ignition-resistant material, material approved for not less than 1-hour fire-resistance-rated construction, 5/8-inch Type X drywall, 2-inch nominal dimension lumber, 1-inch nominal fire-retardant-treated wood, or 3/4-inch nominal fire-retardant-treated plywood, all identified for exterior use and meeting the requirements of Section 2303.2 of the 2024 International Building Code. Fascias are required and shall be protected on the backside by noncombustible material, ignition-resistant materials, materials approved for not less than 1-hour fire-resistance-rated construction, 5/8-inch Type X drywall, or 2-inch nominal dimension lumber.

E.2.3.2 Exterior Walls

(A) Exterior walls of buildings or structures shall be constructed with one of the following methods:

- Exterior wall assemblies with a minimum of 1-hour fire-resistance rating, rated for exposure on the exterior side,
- Approved noncombustible material,
- Heavy timber or log wall construction,
- Noncombustible material complying with Section E.2.1.1 on the exterior side,
- Fire-retardant-treated wood complying with Section E.2.1.2 on the exterior side, labeled for exterior use, and meeting the requirements of Section 2303.2 of the 2024 International Building Code, or
- Ignition-resistant material complying with Section E.2.1.3 on the exterior side.

(B) Such material shall extend from the top of the foundation to the underside of the eave or the underside of the roof sheathing.

Exceptions:

- Exterior wall embellishments and architectural trim (exclusive of trim on exterior windows and doors), not to exceed 5 percent of the square footage of the exterior wall.
- Roof or wall top cornice projections and similar assemblies.
- Solid wood rafter tails and solid wood blocking installed between rafters having minimum dimension 2-inch nominal.

(C) Exterior Wall Coverings. Exterior wall coverings shall be limited to the following:

- Noncombustible material
- Fire-retardant-treated wood
- Ignition-resistant building material

Exception: Where one of the first two options listed in Section E.2.3.2 (A) is used, vinyl siding may be used as an exterior covering.

(D) Flashing. A minimum of 6 inches of metal flashing or noncombustible material applied vertically between the wall sheathing and the exterior cladding shall be installed at the ground, decking, and roof intersections. Combustible sheathing products exposed by the gap created at the base of the exterior walls, posts, or columns must be protected with noncombustible material or ignition-resistant material while still permitting drainage and moisture control from behind exterior cladding.

(E) If the exterior walls existing at the time of adoption of this Appendix E have 25 percent or more of their total surface area replaced, or if work to reconstruct, alter, or repair the exterior walls effectively replaces such material, the entire surface area of the exterior walls, including attachments, must be replaced with materials that comply with this Section E.2.3.2, and the Immediate Zone within 5 feet of the building or structure shall be made to comply with Section E.3.1.1.

E.2.3.3 Underfloor Enclosure

Buildings or structures shall have underfloor areas enclosed to the ground or comply with exterior walls in accordance with Section E.2.3.2.

E.2.3.4 Decking

Unenclosed decks shall have the deck walking surface constructed of one of the following:

- Approved noncombustible material
- Class A rated material, except that composite decking material with a minimum Class B rating shall be allowed
- Fire-retardant-treated wood identified for exterior use and meeting the requirements of Section 2303.2 of the 2024 International Building Code
- Ignition-resistant material

E.2.3.5 Appendages and Projections

Appendages and projections shall be constructed in accordance with Section E.2.3.2.

E.2.3.6 Exterior Glazing

Exterior windows, window walls and glazed doors, windows within exterior doors, and skylights shall be tempered glass, multilayered glazed panels, glass block, or have a fire protecting rating of not less than 20 minutes. This requirement does not apply to vehicle access doors.

E.2.3.7 Exterior Doors

Exterior doors, except vehicle access doors, shall be approved noncombustible construction, solid core wood not less than 1 ¾-inch thick, or have a fire protection rating of not less than 20 minutes.

E.2.3.8 Vehicle Access Door Perimeter Gap

Exterior vehicle access doors shall resist the intrusion of embers by preventing gaps between doors and door openings at the head, sill, and jamb of doors from exceeding 1/8 inch. Gaps between doors and door openings shall be controlled by one of the following methods:

- Weather-stripping products made of materials that (A) have been tested for tensile strength in accordance with ASTM D638 after exposure to ASTM G155 for a period of 2,000 hours, when the

maximum allowable difference in tensile strength values between exposed and non-exposed samples does not exceed 10 percent, and (B) exhibit a V-2 or better flammability rating when tested to UL 94 standards;
- Door overlaps onto jambs and headers; or
- Garage door jambs and headers covered with metal flashing.

E.2.3.9 Detached Accessory Structures

(A) Detached accessory structures located less than 50 feet from a building containing habitable or occupiable space shall comply with Section E.2.3.2.

(B) Underfloor areas. Where the detached accessory structure is located and constructed so that the structure or any portion thereof projects over a descending slope surface greater than 10 percent, the area below the structure shall have underfloor areas enclosed to within 6 inches of the ground with one of the following:

- exterior wall construction in accordance with Section E.2.3.2;
- underfloor protection in accordance with Section E.2.3.3; or
- 1/8-inch metal corrosion-resistant screen, plus an area within 5 feet of the detached accessory structure that meets the requirements of Section E.3.1.1.

Exception: The enclosure shall not be required where the underside of exposed floors and exposed structural columns, beams, and supporting walls are protected as required for exterior 1-hour fire-resistance-rated construction, heavy timber construction, noncombustible material on the exterior side, or fire-retardant-treated wood on the exterior side. The fire-retardant-treated wood shall be labeled for exterior use and meet the requirements of Section 2303.2 of the 2024 International Building Code.

E.3 SITE AND AREA REQUIREMENTS

E.3.1 Class 1 Requirements

Areas having a low fire intensity classification shall comply with the Class 1 Requirements.

E.3.1.1 Structure Ignition Zone 1 (0-5 feet): Immediate Zone

(A) Materials. Use noncombustible, hard surface materials in this zone, such as rock, gravel, sand, concrete, bare earth, or stone/concrete pavers.

(B) Plantings. Remove all plantings, including shrubs, slash, combustible mulch and other woody debris, with the exception of ignition-resistant vegetation.

(C) Trees. There shall be no planting of new trees in the Immediate Zone.

(1) Mature trees of no less than a 10-inch diameter at 4.5 feet above ground level may be maintained.
(2) Tree crowns extending to within 10 feet of any structure shall be pruned to maintain a minimum clearance of 10 feet.
(3) Prune tree branches to a height of 6-10 feet from the ground or a third of the total height of the tree, whichever is less.

E.3.1.2 Site Signage

(A) Marking of Roads. Approved signs or other approved notices shall be provided and maintained for access roads and driveways to identify such roads and prohibit the obstruction thereof.

(B) Marking of Fire Protection Equipment. Fire protection equipment and fire hydrants shall be clearly identified in a manner approved to prevent obstruction.

(C) Address Markers. Buildings shall have a permanently posted address, which shall be placed at each driveway entrance and be visible from both directions of travel along the road. In all cases, the address shall be posted at the beginning of construction and shall be maintained thereafter, and the address shall be visible and legible from the road on which the address is located in an approved manner.

E.3.1.3 Retaining Walls

Retaining walls shall be constructed with either noncombustible or ignition-resistant material when any of the following conditions exist:

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- The retaining wall is within 8 feet of a structure regulated by this Appendix E or up to the property line when the property line is less than 8 feet away from the structure;
- The retaining wall is integral to the support of a structure regulated by this Appendix E; or
- The retaining wall is integral to the egress from a structure regulated by this Appendix E to a public way, easement, or private road.

E.3.1.4 Fencing

Fencing within 8 feet of a structure regulated by this Appendix E or up to the property line when the property line is less than 8 feet away from the structure shall be constructed with noncombustible or ignition-resistant material, except that vinyl fencing is allowed.

E.3.2 Class 2 Requirements

Areas having a moderate or high fire intensity classification shall comply with the Class 1 Requirements in Section E.3.1 and the Class 2 Requirements.

E.3.2.1 Structure Ignition Zone 2 (5-30 feet): Intermediate Zone

(A) Dead Materials. Within the fuel modification area, hazardous dead plant material must be removed from live vegetation.

(B) Fuels Accumulation. Avoid large accumulations of surface fuels, such as logs, branches, slash, and combustible mulch.

(C) Trees.

(1) Tree crowns extending to within 10 feet of any structure shall be pruned to maintain a minimum clearance of 10 feet.
(2) Prune tree branches to a height of 6-10 feet from the ground or a third of the total height of the tree, whichever is less.
(3) Tree crowns shall be spaced to prevent structure ignition and promote fuel discontinuity to limit fire spread.

(D) Shrubs. Shrub groups shall be spaced to prevent structure ignition. Shrubs shall be at least 10 feet away from the edge of tree branches.

E.3.2.2 Structure Ignition Zone 3 (30-100 feet): Expanded Zone

(A) Trees. Tree crowns shall be spaced at a minimum of 6-10 feet.

E.4 TECHNICAL ASSISTANCE

To determine compliance with this Appendix E, the PCD Director is authorized to require the owner or applicant to provide a technical opinion and report at their own expense.

E.4.1 Preparer Qualifications

The technical opinion and report shall be prepared by an approved qualified engineer, specialist, laboratory, or fire safety specialty organization. The PCD Director is authorized to require design submittals to be prepared by and bear the stamp of a registered design professional.

E.4.2 Content

The technical opinion and report shall analyze the properties of the design, operation, or use of the building or premises, the facilities and appurtenances situated thereon, and fuel management to identify and propose necessary recommendations.

E.4.3 Tests

Where there is insufficient evidence of compliance with this Appendix E, the PCD Director may require tests as evidence of compliance. Test methods shall be as specified in this Appendix E or by other recognized test standards. In the absence of recognized test standards, the PCD Director may approve the testing procedures. Tests shall be performed by an approved party.

E.5 ALTERNATIVE DESIGN, MATERIALS, AND METHODS

A design, material, or method other than those described in this Appendix E may be approved if it meets the requirements set forth in this Section E.5.

E.5.1 Approval Criteria

E.5.1.1 Compliance with Purpose

An alternative design, material, or method of construction shall comply with the purpose of this Appendix E.

E.5.1.2 Equivalency Criteria

An alternative design, material, or method of construction shall, for the purposes intended, be not less than the equivalent of that prescribed in this Appendix E with respect to all of the following as applicable:

- Quality
- Strength
- Effectiveness
- Durability
- Safety, other than fire safety
- Fire safety

E.5.2 Process

Requests to use an alternative, design, material, or method of construction must be submitted in writing and accompanied by a report that contains the following, as required by the PCD Director:

- Tests conducted to demonstrate equivalency of a scale sufficient to predict performance of the end use configuration, performed by an approved party
- Evaluations issued by an approved agency that contain the criteria used for the evaluation
- Reports other than evaluations described above that are prepared by an approved qualified engineer, specialist, laboratory, or fire safety specialty organization and that describe criteria, including but not limited to any referenced testing or analysis, used to determine compliance with Appendix E purpose and equivalency
- Designs designed by and bearing the stamp of a registered design professional
- Peer review reports prepared by an approved peer reviewer

E.6 MODIFICATIONS

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Where there are practical difficulties involved in carrying out the provisions of this Appendix E, modifications may be granted in individual cases, provided the PCD Director finds all of the following:

- One or more special individual reasons make compliance with the strict letter of Appendix E impractical;
- The proposed modification is in conformance with the purpose of this Appendix E; and
- The proposed modification does not lessen health, life, and safety requirements.

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AMENDMENT TO THE LAND DEVELOPMENT CODE (RECOMMEND APPROVAL)

_____ moved that the following Resolution be adopted:

BEFORE THE PLANNING COMMISSION

OF THE COUNTY OF EL PASO

STATE OF COLORADO

RESOLUTION NO. LDC263
FIRE PROTECTION AND WILDFIRE RESILIENCY CODE

WHEREAS, the Planning and Community Development Department of El Paso County, Colorado, requests approval of Amendments to the Land Development Code as represented within the attached Exhibit A and summarized below:

- Amend Chapter 1, Section 15, Definitions
- Amend Chapter 6, Section 6.3.3 Fire Protection and Wildfire Mitigation
- Remove Chapter 6, Section 6.3.4 Foresty
- Add Appendix E, the Wildfire Resiliency Code

WHEREAS, a public hearing was held by this Commission on May 21, 2026; and

WHEREAS, based on the evidence, testimony, exhibits, consideration of the Master Plan for the unincorporated area of the County, presentation and comments of the El Paso County Planning and Community Development Department and other County representatives, comments of public officials and agencies, comments from all interested persons, comments by the general public, and comments by the Planning Commission members during the hearing, this Commission finds as follows:

1. The proposed Amendments to the El Paso County Land Development Code were properly submitted for consideration by the Planning Commission;

2. Proper publication and public notice were provided as required by law for the hearing before the Planning Commission;

3. The hearing before the Planning Commission was extensive and complete, that all pertinent facts, matters, and issues were submitted and that all interested persons were heard at that hearing;

4. All data, surveys, analyses, and studies, as are required by the State of Colorado and El Paso County have been submitted, reviewed, and were recieved into evidence and found to meet the intent of the Introductory Provisions of the Land Development Code.
5. Senate Bill 23-166 requires local jurisdictions to adopt the minimum standards of the Colorado Wildfire Resiliency Code.

6. For the above-stated and other reasons, the proposed Amendments are in the best interest of the health, safety, morals, convenience, order, prosperity, and welfare of the citizens of El Paso County.

NOW, THEREFORE, BE IT RESOLVED that the El Paso County Planning Commission recommends that the proposed Amendments of the El Paso County Land Development Code, as described above and including any other conforming amendments throughout the Code as presented at the public hearing, represented within the attached Exhibit A, be approved by the Board of County Commissioners.

BE IT FURTHER RESOLVED that, in the case of any inconsistency with these Amendments and any previous Zoning Regulations, these revision(s) shall prevail.

BE IT FURTHER RESOLVED that this Resolution and the recommendations contained herein shall be forwarded to the El Paso County Board of County Commissioners for its consideration.

_____ seconded the adoption of the foregoing Resolution.

The roll having been called, the vote was as follows: (circle one)

Blaine Brew	aye / no / non-voting / recused / absent
Michael Brewer	aye / no / non-voting / recused / absent
Sarah Brittain Jack	aye / no / non-voting / recused / absent
Jim Byers	aye / no / non-voting / recused / absent
Jay Carlson	aye / no / non-voting / recused / absent
Suzanne Casagrande	aye / no / non-voting / recused / absent
Maribeth Emrick	aye / no / non-voting / recused / absent
Becky Fuller	aye / no / non-voting / recused / absent
Eric Moraes	aye / no / non-voting / recused / absent

Bryce Schuettpelz	aye / no / non-voting / recused / absent
Tim Trowbridge	aye / no / non-voting / recused / absent
Christopher Whitney	aye / no / non-voting / recused / absent
Jason Wulf	aye / no / non-voting / recused / absent

The Resolution was adopted by a vote of _____ to _____ by the El Paso County Planning Commission, State of Colorado.

DONE THIS 21 day of May 2026 at Colorado Springs, Colorado.

EL PASO COUNTY PLANNING COMMISSION

By: _____
Chair

EXHIBIT A

6.3.3. Fire Protection and Wildfire Mitigation

(A) General.

(1) Purpose and Intent. The purpose of this section is to ensure that proposed development is reviewed in consideration of the need to provide adequate fire protection, minimize the hazard to public health, safety, and welfare, and provide requirements for the protection of structures and facilities.

~~To ensure that proposed development is reviewed in consideration of the wildfire risks and need to provide adequate fire protection in order to:~~

- ~~Regulate development, buildings, and structures so as to minimize the hazard to public health, safety, and welfare;~~
- ~~Ensure that adequate fire protection is available for new development;~~
- ~~Implement wildfire hazard reduction in new development;~~
- ~~Encourage voluntary efforts to reduce wildfire hazards; and~~
- ~~Reduce the demands from the public for relief and protection of structures and facilities.~~

(2) Applicability. This s~~S~~ection shall apply to all development applications and permits within the unincorporated areas of El Paso County. Unless otherwise exempted, all development located within the boundaries of a Fire District shall be reviewed by the Fire District for compliance with their adopted fire code. ~~The standards and requirements related to construction in wildland areas are applicable on land that is shown as forested on the Vegetation Map or to areas identified in the wildland fire risk and hazard mitigation plan, if required by the approval of that plan.~~ Development within the boundaries of a Fire District that has been exempted from the adopted fire code shall be reviewed under this section by the County. These exemptions include the following:

- Detached one- or two-family dwellings or townhomes that are constructed on an unplatted parcel (legal lot), on a lot platted as part of a subdivision containing four or fewer such platted lots, or on a lot platted as part of a subdivision recorded before December 10, 2013
- Factory-built units certified by the State of Colorado
- Factory-built units constructed to federal standards
- Accessory use structures

~~**(3) Relationship to Other Standards.** Where a conflict exists between adopted fire district or fire department standards and this Code, the Board of County Commissioners may choose to approve an alternative design which accomplishes the purpose of this section and provides an equivalent benefit to the development. The Fire Authority should provide a recommendation regarding whether the alternative design accomplishes the intent of this section and whether it provides an equivalent benefit to the development.~~

(34) Responsibility of Fire Authority. It is the responsibility of the Fire Authority to provide recommendations as to whether a new development meets the applicable fire code standards for the respective area. If a new development does not meet the applicable standards, then the Ffire Aauthority should provide comments regarding areas of non-compliance and recommendations for achieving compliance.

(45) Basis of Standards. Where this section references specific standards from an organization, the most current edition of referenced standards applies. ~~The basis of the standards in this Section is the most current standards adopted by the National Fire Protection Agency (NFPA) and the Colorado State Forest Service (CSFS).~~

~~**(6) Wildfire Hazard Maps/Vegetation Map.** El Paso County shall maintain a Vegetation Map depicting wildfire hazard areas of the County either based on vegetation type or wildfire hazard analysis, which shall be the official map for the purposes of applying this Section.~~

(5) Combustible Materials for Commercial Use. Propane tanks and other combustible liquids storage shall conform to NFPA 30: Flammable and Combustible Liquids Code and NFPA 58: Liquefied Petroleum Gas Code. A Fire Protection Report and/or Wildland Fire and Mitigation Report may be required.

(B) Reports and Commitments for Subdivisions.

(1) Fire Protection Report. A Fire Protection Report is required for any subdivision application and shall include ~~the Fire Authority's capabilities, including existing and proposed equipment, facilities, services, response time to provide fire protection for the proposed subdivision, an analysis of compliance with the Fire Protection and Wildfire Mitigation Section of this Code, and an analysis of compliance with the applicable fire code.~~an analysis of compliance with this Code, the applicable fire code, and at a minimum the following:

- Description of proposed development to include acreage, number of lots/dwelling units, etc.

- Water supply to be used for fire suppression (fire hydrants, dry hydrants, cisterns, automatic sprinkler system, etc.)
- Maintenance plan if cisterns and dry hydrants will be used.
- Information regarding the internal and external roadways and if an emergency vehicle can utilize those roadways.
- Information on any emergency access roads and/or gates.
- The fire intensity classification when located within the wildland urban interface area and an analysis of compliance with Appendix E (when applicable)

(2) Fire Protection Commitment~~. A written commitment to provide structural fire protection may be required for any proposed subdivision and the PCD Director may be requested for other development applications.~~ A written commitment to provide structural fire protection may be required for any proposed subdivision located outside the boundaries of a Fire District or otherwise exempt from the adopted fire code. The PCD Director may require a written commitment for other development applications.

~~**(3) Mitigation Costs Included in Construction Financial Assurance.** If the Board of County Commissioners determines that wildfire mitigation issues are significant enough to require mitigation associated with development construction activities, the cost of the mitigation shall be included in the construction financial assurance. The Fire Authority may, at its discretion, choose to provide a recommendation to the Board of County Commissioners regarding whether the cost associated with performing wildfire mitigation is appropriate and should be secured and accounted for within the financial assurance estimate and associated collateral for the overall development.~~

(34) Development Outside Fire District or Fire Department Boundaries. Proposed subdivisions outside the boundaries of a ~~fire district or fire department~~Fire District shall annex into a district ~~into a department~~ or provide evidence of a contract for service from a Fire District or Fire Department. Waivers of this requirement may only be approved by the Board of County Commissioners. An applicant's waiver request shall, at a minimum, include the following:

- A letter from the nearest fire district or fire department demonstrating that annexation is not economically feasible.

• A letter or report from a Third Party Fire Reviewer providing a recommendation to the Board of County Commissioners that the proposed development complies with the Fire Protection and Wildfire Mitigation Section of this Code. In the case of a conflict between adopted standards and this Code, the Third Party Fire Reviewer may recommend an alternative design which accomplishes the purposes of this section and provides an equivalent benefit to the development.

~~**(5) Plat Notes Required.** Notice of any wildfire mitigation issues or obligations may be required by the County through conditions of approval or notes placed on the face of the plat.~~

(C) Design Standards.

(1) Water Supply.

(a) General. Water supply systems used for fire protection purposes shall be calculated, installed and maintained in accordance with NFPA standards. The required fire flow for one or more buildings shall be calculated per the following conditions: ~~The required fire flow for one or more buildings of a planned building area (also referred to as the planned building group by the NFPA) shall be determined by the Fire Authority using locally adopted codes, or as specified per the following conditions:~~

• For areas without municipal-type water systems, NFPA 1142, Standard on Water Supplies for Suburban and Rural Fire Fighting, shall be applied.

• For those areas with municipal-type water systems, nationally recognized criteria such as NFPA, National Fire Academy (NFA), or International Organization for Standardization (ISO) standards, shall be applied.

(b) Automatic Fire Protection.

~~(i) Automatic fire protection shall be in compliance with the applicable adopted fire code. If a property is not within an area of the County having an adopted fire code, then the design for automatic fire protection shall be in compliance with the adopted Pikes Peak Regional Building Code.~~ Design for automatic fire protection shall comply with the NFPA 13, 13R, and/or 13D Standard for the Installation of Sprinkler Systems. The PCD Director, or Fire District when located within the boundaries of a Fire District, may approve a reduction of required water supply for structures with automatic fire protection.

(c) Areas with Central Water Systems.

(i) Water Distribution System Pressure. The water distribution system shall be capable of delivering fire flow at a minimum rating of 20 pounds per square inch for each hydrant connected to the distribution system within the proposed subdivision.

(ii) Dead-End Mains. Dead-end mains shall not exceed 600 feet in length for main sizes less than 10 inches in diameter.

(iii) Fire Hydrant Spacing. Fire hydrants shall be located so that all residential structures are within 500 feet, and all ~~nonresidential structures are within 150~~commercial structures are within 400 feet of a hydrant. ~~Fire hydrants shall be installed adjacent to a road or emergency vehicle lane at a spacing not to exceed 660 feet of vehicle travel distance.~~ Where the proposed buildings warrant, the Fire Authority may recommend a greater spacing distance or require additional hydrants and closer spacing based upon the applicable f~~F~~ire c~~C~~ode or NFPA standards.

(iv) Fire Hydrant Accessibility. Fire hydrants shall be accessible to fire district or fire department apparatus from a road (i.e., maintained public roads, ~~privately-maintained~~privately maintained roads, or emergency vehicle access roads) or unobstructed emergency ~~vehicle~~ access lanes (i.e., driveway, parking drive aisle, or emergency ~~vehicle~~ access lane).

(v) Fire Hydrant Supply Lines. Fire hydrants shall be supplied by not less than a 6 inch diameter main installed on a looped system, or by not less than an 8 inch diameter main if the system is not looped or the fire hydrant is installed on a dead-end main exceeding 300 feet in length.

(vi) Fire Hydrants in Parking Areas. Fire hydrants located in parking areas shall be protected by barriers that will prevent physical damage from vehicles without obstructing hydrant operation.

(vii) Fire Hydrant Relationship to Roads. Fire hydrants shall be located within 6 feet of the edge of the pavement unless there is a conflict with the ECM or the Fire Authority recommends another location is more acceptable for fire district or fire department use. All roads and emergency vehicle lanes shall be designed to maintain a minimum unobstructed clearance of 3 feet around fire hydrants.

(viii) Fire Hydrant Easements. Easements for fire hydrants shall be provided and dedicated to the appropriate fire or water authority when the hydrants

are not within a public road right-of-way. The easement shall afford accessibility to the hydrant from the right-of-way.

(ix) Release of Financial Assurance for Water Supply Systems. The contractor, installer, or owner of water supply systems shall provide a letter of acceptance from the water district or public utility prior to release of construction financial assurance for the system. ~~demonstrate by testing that the capacity of the water supply system will meet fire protection design requirements prior to release of construction financial assurance for the system. The testing shall be certified by a qualified professional. The tests may be provided to the Fire Authority if requested.~~

(d) Areas without Central Water Systems.

(i) Fire Cisterns.

- Fire Cisterns Required: ~~Fire cisterns shall be provided in planned building areas which are not served by hydrants, unless the Fire Authority has recommended and the approval authority has approved an alternative fire protection water supply system.~~ Fire cisterns shall be provided in areas which are not served by hydrants, unless an alternative fire protection water supply that complies with NFPA standards is approved. All currently recognized water supplies may be considered when determining the need for and the placement of new water storage sites.

- Construction Standards: Construction of fire cisterns shall ~~be in accordance~~ comply with the approved plans and ~~conform to the requirements of the NFPA standard on water supplies for suburban and rural fire fighting~~.the requirements of NFPA 1142.

- Design Standards for Subdivisions with More than One Cistern: For subdivisions where more than one fire cistern is required, fire cisterns shall meet the requirements of ~~the~~ NFPA 1142.~~standards for water supplies for suburban and rural fire fighting.~~ For this type of subdivision, fire cisterns shall be designed for the largest building allowed by zoning in the worst case hazard and construction class.

- Design Standards for Subdivisions with One Cistern: For subdivisions where only one fire cistern is required, the minimum capacity of the fire cistern shall meet the requirements of ~~the~~ NFPA ~~standards on water supplies for suburban and rural fire fighting~~1142, ~~or~~ shall have a total capacity equal

to 300 gallons for each acre within the subdivision plus 3,000 gallons per dwelling unit, whichever is greater.

- Cistern Turnaround: A dedicated turnaround shall be placed no more than 50 feet from a fire cistern, and the standpipe shall be within 8 feet of the nearest usable portion of the dedicated right-of-way or approved easement, unless otherwise recommended by the ~~applicable~~ Fire Authority~~. and approved by the approval authority.~~

- Easements Required: ~~Fire cistern easements shall be provided and dedicated to the appropriate fire department to afford accessibility of the cistern from a public road. Easements shall be of sufficient size to facilitate maintenance.~~ Cistern easements shall be provided and dedicated to the appropriate Fire District at the time of platting to afford accessibility of the cistern from a public road. Easements shall be of sufficient size to facilitate maintenance.

(ii) Dry Hydrants.

- Use of Dry Hydrants: Dry hydrants may be provided in combination with fire cisterns or other approved fire protection water supply systems. Plans for dry hydrants shall be submitted to the Fire District, or the County when located outside the boundaries of a Fire District, ~~Authority~~ for ~~recommendation and approved by the approval authority.~~approval and be identified on the final plat and/or site development plan.

- Construction Standards: ~~Construction and installation of dry hydrants shall be in accordance with the approved plans and conform to the requirements of the NFPA standards on water supplies for suburban and rural fire fighting.~~ Construction and installation of dry hydrants shall comply with the approved plans and requirements of NFPA 1142.

- Accessible: Dry hydrants shall be located to be accessible under all weather conditions.

- Clearance: Dry hydrants shall have a minimum clearance of 20 feet on each side and be located a minimum of 100 feet from any structure. Highway or road traffic shall not be impaired during the use of the dry hydrant.

- Protected: Dry hydrants shall be protected from damage by ~~vehicular~~vehicles and other perils, including freezing and damage from ice and other objects.

- Visible: Dry hydrant locations shall be made visible from the main roadway during emergencies by reflective marking and signage and shall be in conformance with ~~the~~ NFPA 1142 requirements. All identification signs located within public right-of-way or subject to Colorado law shall be approved by the ~~highway~~ appropriate authority prior to installation. ~~if they are to be located on the right-of-way or are subject to State laws.~~

- Access to Hydrant: Vehicle access shall be designed and constructed to support the imposed load of fire apparatus weighing up to 75,000 pounds with a minimum single axle weight of 27,000 pounds. ~~heaviest vehicle.~~

~~• Maintenance of Dry Hydrant: Dry hydrants shall be checked and maintained at least quarterly. Thorough surveys shall be conducted, to reveal any deterioration in the water supply situation in ponds, streams, or cisterns. Grass, brush, and other vegetation shall be kept trimmed and neat. Vegetation shall be cleared for a minimum 3 foot radius from around hydrants. The hydrant shall be painted as needed, with reflective material to maintain visibility during emergencies. The Fire Authority may make a recommendation regarding the ownership and maintenance responsibilities for the facilities per the NFPA 1142 Standards. The approval authority will approve the ownership and maintenance responsibilities for the facilities.~~

~~• Maps and Location/Detail Drawings: The Fire Authority and El Paso County Sherriff's Office shall maintain in a safe location, the maps and records of dry hydrant system locations, installation, tests, inspections, maintenance and repairs. When the property is not within a Fire Protection District it is the responsibility of the property owner and El Paso County Sherriff's Office to maintain in a safe location, the maps and records of dry hydrant system locations, installation, tests, inspections, maintenance and repairs.~~

- Easements Required: ~~Dry hydrant easements shall be provided and dedicated to the appropriate fire department (or County where there is no fire department) to afford accessibility of the dry hydrant from a public road. Easements shall be of sufficient size to facilitate maintenance.~~ Dry hydrant easements shall be provided and dedicated to the appropriate Fire District at the time of platting to afford accessibility of the dry hydrant from a public road. Easements shall be of sufficient size to facilitate maintenance.

~~(iii) Water Supply Requirements. The owner of the cistern or dry hydrant is responsible for planning, developing, permitting, and continual provision of a~~

~~sufficient water supply necessary to maintain the fire protection requirements of a cistern system, to the satisfaction of the approval authority with recommendation by the Fire Authority~~.

(iii) Maintenance. Cisterns and dry hydrants shall be inspected, tested, and maintained at least quarterly and in accordance with NFPA 1142. Any owner of a cistern and/or dry hydrant is responsible for the planning, developing, permitting, and continual maintenance and provision of a sufficient water supply necessary to maintain the fire protection requirements of a cistern or dry hydrant system.

- A maintenance plan is required for cisterns and/or dry hydrants and shall be submitted with the Fire Protection Report. The plan shall include at a minimum the location of cisterns and/or dry hydrants, owner(s) name and contact information, and inspection and testing schedule.
- Inspection and maintenance reports shall be made available to the County and Fire District upon request.

e. Alternative Fire Protection Water Supply. The County or Fire District, when located within the boundaries of a Fire District, may determine that a cistern or dry hydrant is not required upon an evaluation of recognized water supplies from a qualified professional, including the applicable Fire District. Alternative water supply must be capable of providing 250 gpm fire flow, and maintain the fire flow, without interruption, for 2 hours. The water supply shall not be more than two (2) miles travel distance from any vehicle entrance to a parcel that is served by the water supply.

f. Water Use Agreements. If a private water supply source is to be used, a legal agreement establishing access to and use of the water source is required.

g. Qualified Professional. The PCD Director may require any reports, plans, specifications, etc. required for water supply to be completed by a qualified professional.

h. Plat Notes Required. Plans for cisterns and dry hydrants shall be identified on the final plat and/or site development plan.

(2) Roads. This Section shall apply to all roads providing access to a ~~planned building area~~development whether or not they are dedicated as public roads.

(a) Roads Constructed to County Standards. All roads, including private roads and emergency vehicle access roads, shall be designed and constructed according to this Code and the ECM.

(b) Emergency Vehicle Access Roads. Emergency vehicle access roads shall, at a minimum, be constructed to the County's gravel road standard if open to the public. Emergency vehicle access roads which are not open to public travel shall meet the non-road access standards

(cb) Roads within 150 Feet of Development. Roads or emergency access ~~vehicle~~ lanes shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is within 150 feet as measured by an approved route around the exterior of the building or facility. ~~of all development except~~ Ssingle family residential development excepted. ~~.~~

(dc) Two Access Routes Required. Access to a ~~planned building area~~development shall be provided by a minimum of 2 separate routes in accordance with the requirements of this Code and the ECM if the cul-de-sac exceeds the length allowed by the ECM. Access routes shall be placed a distance apart equal to not less than one-half the length of the maximum overall diagonal dimension of the property, measured in a straight line between accesses unless a greater distance is required by the ECM.

(ed) Turnaround Required on Dead-End Roads. Every dead-end road more than 300 feet in length shall be provided with a roadway termination meeting ECM standards.

~~**(e) Road Grades in Wildland Fire Areas.** Within wildland fire areas, road grades steeper than 10 percent may be permitted where the Fire Authority and ECM Administrator recommend that the mitigation measures are adequate and the approval authority approves the mitigation measure.~~

(3) Non-Road Access.

The following minimum standards shall apply to emergency vehicle lanes, driveways, and parking lot drive lanes serving as emergency ~~vehicle~~ access lanes.

(a) Emergency Access Provided. Access for emergency responders, ingress, egress, and evacuation shall be provided for all buildings.

(b) Driveways Required. Where any point of a building is greater than 150 feet from a road, a driveway meeting the~~se~~ standards of this Code shall be provided to within 150 feet of the furthest point on the building.

(c) Emergency ~~Vehicle~~ Access Lanes Required. The ~~Fire Authority~~County may ~~recommend~~ require emergency ~~vehicle~~ access lanes be provided. ~~Emergency vehicle lanes shall be provided as required by the approval authority.~~

(d) Emergency Access Lane Design. An emergency ~~vehicle~~ access lane shall be designed and constructed to enable fire-fighting apparatus to maneuver broadside or directly forward within a minimum of 5 feet and a maximum of 25 feet of structures.

(e) Width of Driveway and Emergency ~~Vehicle~~ Access Lanes. Where the driveway is greater than 150 feet in length, it shall be not less than 10 feet in unobstructed width. Emergency ~~vehicle~~ access lanes shall have a minimum unobstructed width of 16 feet for approved one-way travel and 24 feet for two-way travel. ~~providing one-way travel shall be a minimum of 16 feet in width, and fire lanes with two-way travel shall be a minimum of 24 feet in width.~~

(f) Vertical Clearance. At least 13 feet 6 inches of vertical clearance shall be provided and maintained over the full width of an emergency ~~vehicle~~ access lane or driveway.

(g) Turns. Required driveways shall be designed, constructed, and maintained to accommodate the turning radius of the largest apparatus typically used to respond to that location. A turn in an emergency ~~vehicle~~ access lane shall be constructed with a minimum inside turning radius of 25 feet ~~at the inside curb line~~ and a minimum outside radius of 50 feet. ~~at the outside curb line.~~

(h) Grades. ~~Road grades steeper than 10 percent may be permitted where the Fire Authority and ECM Administrator recommend that the mitigation measures are adequate and the approval authority approves the mitigation measure.~~ Emergency vehicle access roads shall not exceed 10 percent grade unless mitigation measures are approved.

(i) Emergency ~~Vehicle~~ Access Lanes Connecting to Roads. Emergency ~~vehicle~~ access lanes connecting to roads shall be provided with curb cuts, or other acceptable alternative, extending at least 2 feet beyond each edge of the ~~fire~~ emergency access lane.

(j) Turnouts and Turnarounds Required.

(i) Driveways. Where the required driveway is greater than 300 feet, it shall be provided with turnouts or turnarounds at approved locations ~~approved by the approval authority with~~based on recommendation from the Fire Authority.

(ii) Turnarounds Required. ~~The fire authority may provide a recommendation regarding turnarounds. Dead-end emergency vehicle lanes in excess of 300 feet in length shall be provided with turnouts and turnarounds as approved by the approval authority. The turnaround at the terminus shall have a minimum radius of 50 feet. The approval authority shall be authorized to approve, as an alternative, a "hammerhead" turnaround to provide emergency vehicles with a three-point turnaround.~~ Dead-end emergency access lanes exceeding 300 feet in length shall be provided with turnouts or turnarounds in one of the following minimum configurations:

- A circular turnaround having a minimum 50-foot outside radius; or
- A "T" or hammerhead turnaround providing a three-point turn; or
- An alternative turnaround configuration that provides equivalent maneuverability and accommodates fire apparatus.

(k) Load Design. Emergency ~~vehicle~~ access lanes and required driveways ~~shall~~ must be designed, constructed, and maintained to accommodate the imposed load of fire apparatus weighing up to 75,000 pounds with a minimum single axle weight of 27,000 pounds.~~load of the largest apparatus typically used to respond to that location.~~

(l) Bridges or Drainage Crossings. A bridge or drainage crossing on an emergency vehicle lane or required driveway shall be designed to accommodate the imposed load of fire apparatus weighing up to 75,000 pounds with a minimum single axle weight of 27,000 pounds. ~~the load of the largest apparatus typically used to respond to that location.~~ The load limit shall be clearly posted at the approaches to the bridge.

(m) Landscaping Maintained. Landscaping or other obstructions shall be maintained in a manner that provides unobstructed access for fire department operations.

(4) Gates.

(a) Gate Location and Dimensions. Gates shall be located a minimum of 30 feet from the public right-of-way and shall not open outward. ~~The opening provided through a gate shall be 2 feet wider than the traveled way.~~ The clear opening provided through a gate shall be a minimum of 16 feet in width.

(b) Locks. Fire department personnel shall have ready access to locking mechanisms on a gate restricting access to a fire line. ~~Proposed changes to access shall be approved by the Fire Authority.~~ Use of Knox products shall be coordinated with the applicable Fire Authority.

~~**(D) Construction in Wildland Fire Areas.**~~

~~(1) **General.**~~

~~(a) **Applicability.** All structures potentially threatened by wildland fire shall be designed, located, and constructed to comply with this Section.~~

~~(b) **Risk Assessment Required.** A wildland fire risk and hazard severity assessment shall be performed for all structures and groups of structures adjacent to wildland fuels.~~

~~(c) **Maintenance of Property.** After construction, continued maintenance of the grounds and storage of combustible materials shall be performed to maintain these requirements.~~

~~(d) **Location of Buildings and Building Envelopes.** Buildings located closer than 30 feet to a vegetated slope shall require special mitigation measures in accordance with NFPA 1144, Standard for Protection of Life and Property from Wildfire. Building envelopes shall not include gullies, fire chimneys, saddles, or other terrain conducive to wildfire spread.~~

~~(e) **Roof Design and Materials.** Only roof covering assemblies rated Class A shall be used in a wildland area. The specific class shall be consistent with the wildland fire risk and hazard severity assessment.~~

~~(f) **Accessory Structures.** Outbuildings, patio covers, gazebos, and other accessory structures shall be separated from the main structure by a minimum of 30 feet.~~

~~(g) **Access to Structures.** At least one approved means of vehicular access shall be provided to each structure or other nonstructural fire hazard in accordance with the following:~~

~~(i) For structures or nonstructural fire hazards exceeding two stories or 30 feet in height above average adjacent ground level, or 12,000 square feet of gross floor area, no less than 2 separate approved means of access shall be provided.~~

~~(ii) Approved vehicular access shall be provided to within 150 ft of any point of the exterior wall of each structure.~~

(h) **Access to Structures Not Protected by Automatic Sprinklers.** An approved means of vehicular access shall be provided to within 30 feet of all points of at least 2 exterior walls for any structure not protected by automatic sprinklers that exceeds 2 stories or 30 feet in height above average adjacent ground elevation. Single and two-family dwellings are exempt from this requirement.

(i) **Access to Structures Protected by Automatic Sprinklers.** For any structure protected by an automatic sprinkler system, an approved means of vehicular access shall be provided to within 400 feet of any point of the exterior wall. For any structure exceeding 3 stories or 35 feet in height above average adjacent ground elevation and protected by an automatic sprinkler system, an approved means of vehicular access shall be provided to within 30 feet of all points of at least 2 exterior walls.

(j) **Separation Between Structures.** A structure in a planned building area shall be separated from another structure by at least 30 feet and shall be located at least 25 feet from a lot, parcel, or tract line. A structure in a planned building area that exceeds 2 stories or 30 feet in height above average adjacent ground elevation and is not protected by an automatic sprinkler system shall be separated from other structures by at least 50 feet and shall be located at least 25 feet from a lot, parcel, or tract line.

(2) **Wildland Fire and Hazard Mitigation Plan Required.**

(a) **General Plan Standards and Requirements.**

When a subject lot, parcel, or tract falls within a wildland fire area, a wildland fire risk and hazard mitigation plan shall be prepared by a qualified professional and shall be tailored to the stage of development application and the stage of subdivision-related construction. A higher level of plan may be submitted at any stage of the process so long as it is implemented at the final stage of development. Plans shall utilize the Colorado State University (CSU) Guidelines and NFPA standards, as applicable. Additional fire precaution measures may be required because of fire hazard in the following areas:

(i) Areas depicted as forested on the Vegetation Map;

(ii) Areas rated as fire hazards by the CSFS;

(iii) Where slopes in or adjacent to proposed development are in excess of 20%; or

(iv) Where the local fire protection agency identifies a specific fire danger.

(b) **Development of Plan.**

(i) General Mitigation Plan Requirements. This plan shall include, but not be limited to, the following:

- Access, ingress, egress, and evacuation;
- Fuel modification;
- Water supply;
- Construction, location, and design of structures; and
- Ignition potential.

(ii) Approval of Wildland Fire and Hazard Mitigation Plan. The Approval Authority shall approve the mitigating measures relative to access, defensible space, water supply, and construction based on the relative risk and hazard rating.

(3) **Wildland Fire Risk and Hazard Severity Analysis Required.**

(a) Risk Assessment to be Performed. A risk and hazard rating analysis shall be performed to determine the level of the wildland fire threat to life and values at risk prior to building permit authorization in high hazard areas unless completed as part of the wildland fire and hazard mitigation plan.

(b) Basis for Mitigation Measures. The risk and hazard ratings shall be the basis for the implementation of mitigation measures relative to vegetation, other combustibles, and construction criteria.

(c) Analysis Rating Factors. The following shall be considered in analyzing the risk factors:

- The history of local wind, relative humidity, temperature, and fine fuel moisture content shall be considered in determining defensible space.
- All vegetative fuels and other combustible materials shall be evaluated for their potential to contribute to the intensity and spread of wildland fire.
- Slope and aspect shall be evaluated as to their potential to increase the threat of wildland fire to life or improved lot, parcel, or tract.
- The factors determining required defensible space shall include the history of wildland fire for the area.

- Fire-safe routes for emergency service apparatus and for egress shall be evaluated.

- Other factors that can affect the risk of ignition or the spread of wildland fire on improved lot, parcel, or tract, including the risk of structure fires spreading to vegetation, shall be part of the analysis.

(d) **Recommendation of Wildland Fire Risk and Hazard Rating.** The rating assignments developed to meet the requirements of this Code may be reviewed by the Fire Authority who may provide a recommendation regarding the rating.

(4) **No Permit or Approval Granted without Compliance.** No permit or approval associated with development, construction or occupancy shall be approved or issued until the provisions of this standard are satisfied. Notwithstanding the foregoing, the Planning and Community Development Director shall have the authority to grant administrative variances to the design standards of this Section upon the finding of two or more of the following criteria:

- The fire authority responsible for providing fire protection services, as applicable, to the project has adopted a fire code with a more stringent design standard from that contained herein;

- The application of a design standard will cause undue hardship or practical exceptional difficulties; or

- An alternate design standard will satisfy the intent and meet the goals of these Fire Protection and Wildfire Mitigation Regulations.

(5) **Defensible Space Requirements.**

(a) **General.** The Defensible Space Requirements in Table 6.8 shall be implemented as minimum requirements in association with development in any Wildland Fire Area.

Table 6-8. Defensible Space Clearing and Structural Summary (Recommendations from NFPA by Wildland Fire Hazard Severity Analysis)

Low Hazard	High Hazard
9.14 m (30 ft) clearance. Class A roof. No portion of trees or other vegetation within 3.048 m (10 ft) of chimney	9.14 m (30 ft) irrigated. Class A roof. 30.48 m (100 ft) fuel treatment.

Low Hazard	High Hazard
outlets. Trees within defensible space shall be pruned to minimize ladder fuels.	Noncombustible siding/decks, and boxed eaves. Selected fire-resistant trees within 9.1 m (30 ft) of structures. Selected thinning of trees and shrubs. Trees within defensible space shall be pruned to minimize ladder fuels. All trees and shrubs pruned of dead material. No portion of trees or other vegetation within 3.48 m (10 ft) of chimney outlets.

(b) **Maintenance of Defensible Space and Associated Fuel Break Thinning.** Defensible space and fuel break thinning work shall be completed and maintained to the standards described in the Colorado State University's Cooperative Extension Fact Sheet 6.302. The responsibility for maintaining defensible space and associated fuel break thinning lies with the landowner. Noncompliance with defensible space maintenance standards will be enforced as a zoning violation.

(6) **Fuels Modification During Development and After Construction.**

(a) **Identification of Modification Required.** Identification of fuel modification measures may be required in order to reduce the threat of wildfire. If fuel modification is determined to be necessary, the plan shall be prepared by a qualified professional. A fuel modification plan shall comply with NFPA requirements. Required elements shall include but are not limited to the following:

- Identification of fuel type, volume and loading, in conjunction with an assessment of slope and aspect, to determine the ability for a wildfire to spread;
- Reduction of fuel loading and modification of fuel types to reduce the risk to structures or adjacent vegetation, including the creation of fuel breaks; and
- Creation of defensible space to protect structures from approaching wildfire and reduce the potential for turning a structure fire into a wildfire.

(b) **Fuel Modification Standards.** When the Wildland Fire Risk and Hazard Mitigation Plan requires establishment of a fuel modification area:

- The modifications shall extend at least 30 feet from structures;

- Ground fuels within the defined defensible space shall be treated or removed;

- Live vegetation within the defensible space shall have dead material removed and shall be thinned and pruned;

- Dead or downed fuels within the defensible space of buildings shall be removed or treated to maintain the fuel modification area;

- Vegetation under trees within the fuel modification area shall be maintained at a height that will preclude ground fire from spreading in the tree crown;

- The fuel modification plan shall include a maintenance element with the responsibility for maintenance defined;

- In these areas all slash (fallen trees, shrubs, pulled stumps, and other combustible materials) may be required to be disposed of from an area extending to at least 150 feet from the road centerline prior to the acceptance of any roads;

- All slash shall also be removed from the vicinity of the home sites prior to final building inspection; and

- Continuous proper forest management to maintain a low wildfire danger shall be guaranteed.

(7) **Combustible Materials.** Propane tanks and other combustible liquids storage shall conform to NFPA 30, Flammable and Combustible Liquids Code, NFPA 58, Liquefied Petroleum Gas Code, and the Wildland Fire Risk and Hazard Mitigation Plan. Other combustible materials shall be removed from the defensible space or stored in conformance with the fire protection plan.

6.3.4. Forestry

(A) **General.**

(1) **Purpose.** To ensure that proposed development is reviewed in consideration of forestry issues to:

- Identify forest health concerns and inform purchasers of developed lot, parcel, or tract;

- Improve overall forest health; and

- Implement wildfire hazard reduction.

(2) **Applicability.** The provisions of this Section shall apply to the review and approval of all development applications and permits on land that is forested.

(3) **Vegetation Map of Forested Areas.** El Paso County shall maintain a Vegetation Map depicting forested areas of the County, which shall be the official map for purposes of this Chapter. Additional mapping of infected and diseased tree locations may be maintained by the ESD.

(B) Forestry Management Standards.

(1) **Forestry Management to Conform to ESD Recommendations.** The applicant should consult with the ESD prior to submission of the development application. ESD input should be reflected in design of the project.

(2) **Forestry Management to Conform to CSU Guidelines.** Development applications and permits should utilize the CSU Guidelines with respect to forest management including wildfire mitigation and pest control.

(3) **Maintenance Responsibilities.** Forestry management begins at the time of development, but extends as an obligation of the HOA and property owners into perpetuity. Categories of responsibility that should be addressed in the development include: (1) homeowner (responsibility to maintain, etc.); (2) HOA (Common areas, HOA enforcement against homeowners, obligation to maintain in private road tracts, etc.); (3) builder (what to be shown on site, existing vegetation, vegetation which is to be removed or thinned, etc.); and (4) developer (responsibility to complete requirements of the plan, relationship to financial assurance, relationship to warranty/maintenance bond, relationship to future filings, relationship to buildings, etc.).

(4) **Forestry Management Plan.**

(a) **Forestry Management Plan Required.** A forestry management plan shall be developed and submitted with the development application. The plan should describe the overall forestry management program for the subject property in conformance with the standards identified.

(b) **Recording of Plan.** Implementation of the forestry management plan shall be accomplished by the recording of the development guide (in the case of a PUD) or the final plat and related documents (in the case of a subdivision).

(c)**Mitigation Costs Included in Construction Financial Assurance.** If the forest health issues are significant enough in the determination of the PCD Director to

~~require mitigation associated with development construction activities, the cost of the mitigation shall be included in the construction financial assurance.~~

~~(d) **Plat Notes Required.** Notice of any forest health issues may be required by the County through conditions of approval or notes placed on the face of the plat.~~

6.3.4. Wildland-Urban Interface Areas

A. Applicability. This section applies to areas within unincorporated El Paso County that are not located within a Fire District and are located within the Wildland-Urban Interface as defined in Appendix E to the Code. Where there is a conflict between Appendix E and other provisions of this Code, Appendix E shall govern.

B. General

1. **Wildland-Urban Interface Requirements.** Properties within the Wildland-Urban Interface shall comply with Appendix E and the requirements of this section.

2. **Road Grades.** Within Wildland-Urban Interface Areas, road grades may not exceed 10 percent unless mitigation measures are approved.

3. **Access to Structures.** At least one approved means of vehicular access shall be provided to each structure or other nonstructural fire hazard in accordance with the following:
    i. For structures or nonstructural fire hazards exceeding two stories or 30 feet in height above average adjacent ground level, or 12,000 square feet of gross floor area, no less than 2 separate approved means of access shall be provided.
    ii. Approved vehicular access shall be provided to within 150 ft of any point of the exterior wall of each structure.

4. **Access to Structures Not Protected by Automatic Sprinklers.** An approved means of vehicular access shall be provided to within 30 feet of all points of at least 2 exterior walls for any structure not protected by automatic sprinklers that exceeds 2 stories or 30 feet in height above average adjacent ground elevation. Single and two-family dwellings are exempt from this requirement.

5. **Access to Structures Protected by Automatic Sprinklers.** For any structure protected by an automatic sprinkler system, an approved means of vehicular access shall be provided to within 400 feet of any point of the exterior wall. For

any structure exceeding 3 stories or 35 feet in height above average adjacent ground elevation and protected by an automatic sprinkler system, an approved means of vehicular access shall be provided to within 30 feet of all points of at least 2 exterior walls.

6. **Separation Between Structures.** A structure in a development shall be separated from another structure by at least 30 feet and shall be located at least 25 feet from a lot, parcel, or tract line. A structure in a development that exceeds 2 stories or 30 feet in height above average adjacent ground elevation and is not protected by an automatic sprinkler system shall be separated from other structures by at least 50 feet and shall be located at least 25 feet from a lot, parcel, or tract line.

7. **Plat Notes Required.** Notice of any wildfire mitigation issues or obligations may be required by the County through conditions of approval or notes placed on the face of the plat.

C. Wildland Hazard and Mitigation Plan. A wildland fire risk and hazard mitigation plan prepared by a qualified professional shall be required for commercial use of any property located within the Wildland Urban Interface area that is not subject to the standards for structure hardening and site and area requirements of Appendix E. A Wildland Hazard Mitigation Plan shall include at a minimum the following:

- Access, ingress, egress, and evacuation.
- Water supply for fire protection.
- Structure location and construction.
- Ignition potential.
- Vegetation management and defensible space.
- Structure hardening and defensible space requirements
- Historical wildfire behavior patterns and environmental conditions.
- Potential for structure-to-structure and vegetation-to-structure fire spread. Slope and aspect shall be evaluated as to their potential to increase the threat of wildland fire to life or improved lot, parcel, or tract.
- Other site-specific factors affecting wildfire.

1.15 Definitions

- **Alternative Fire Protection Water Supply:** Water supplies provided to meet the minimum fire flow/duration requirements where no municipal-type water system exists or to supplement an inadequate municipal-type water supply.
- **Cistern.** A water storage tank, usually underground and designed with positive pressure, designed to contain a designated volume of water and to permit the removal of water at no less than 1,000 gallons per minute ("gpm").
- **Dry Hydrant.** An outlet for suction supply of fire protection water connected to a natural body of water or cistern, which is designed without positive pressure or does not require freeze protection.
- **Emergency Access Lane.** An emergency vehicle access road or portion thereof designated and maintained to provide unobstructed access for fire department operations. A, emergency access lane is intended to allow the passage, positioning, staging, and operation of fire apparatus, including the deployment of aerial apparatus outriggers, hose lines, and other emergency equipment.
- **Emergency Vehicle Access Roads:** Any road, driveway, lane, or other route, whether public or private, that provides fire department access to one or more buildings, structures, fire protection water supplies, or fire department connections.
- **Fire Protection Report:** An analysis of compliance with the Fire Protection and Wildfire Mitigation sections of this Code. May also include an analysis of compliance with the IFC as applicable.
- **Recognized Water Supply:** A legally and physically accessible water source demonstrated to furnish a minimum flow rate of 250 gpm (950 L/m) for a two-hour duration from a defined usable volume, as demonstrated by means of an availability study.

6.3.3 Fire Protection

A. General

1) **Purpose.** The purpose of this section is to ensure that proposed development is reviewed in consideration of the need to provide adequate fire protection, minimize the hazard to public health, safety, and welfare, and provide requirements for the protection of structures and facilities.
2) **Applicability.** This section shall apply to all development applications and permits within the unincorporated areas of El Paso County. Unless otherwise exempted, all development located within the boundaries of a Fire District shall be reviewed by the Fire District for compliance with their adopted fire code. Development within the boundaries of a Fire District that has been exempted from the adopted fire code shall be reviewed under this section by the County. These exemptions include the following:
    - **i.** Detached one- or two-family dwellings or townhomes that are constructed on an unplatted parcel (legal lot), on a lot platted as part of a subdivision containing four or fewer such platted lots, or on a lot platted as part of a subdivision recorded before December 10, 2013
    - **ii.** Factory-built units certified by the State of Colorado
    - **iii.** Factory-built units constructed to federal standards
    - **iv.** Accessory use structures
3) **Responsibility of Fire Authority.** It is the responsibility of the Fire Authority to provide recommendations as to whether a new development meets the applicable fire code standards for the respective area. If a new development does not meet the applicable standards, then the Fire Authority should provide comments regarding areas of non-compliance and recommendations for achieving compliance.
4) **Basis of Standards.** Where this section references specific standards from an organization, the most current edition of referenced standards applies.
5) **Combustible Materials for Commercial Use.** Propane tanks and other combustible liquids storage shall conform to NFPA 30: Flammable and Combustible Liquids Code

and NFPA 58: Liquefied Petroleum Gas Code. A Fire Protection Report and/or a report detailing mitigation of wildland fuels may be required.

B. Reports and Standards for Subdivisions

1) Fire Protection Report.

A Fire Protection Report is required for any subdivision application and shall include an analysis of compliance with this Code, the applicable fire code, and at a minimum the following:

- **i.** Description of proposed development to include acreage, number of lots/dwelling units, etc.
- **ii.** Water supply to be used for fire suppression (fire hydrants, dry hydrants, cisterns, automatic sprinkler system, etc.).
- **iii.** Maintenance plan if cisterns and dry hydrants will be used.
- **iv.** Information regarding the internal and external roadways and if an emergency vehicle can utilize those roadways.
- **v.** Information on any emergency access roads and/or gates.
- **vi.** The fire intensity classification when located within the wildland urban interface area and an analysis of compliance with Appendix E (when applicable).

2) Fire Protection Commitment. A written commitment to provide structural fire protection may be required for any proposed subdivision located outside the boundaries of a Fire District or otherwise exempt from the adopted fire code. The PCD Director may require a written commitment for other development applications.

3) Development Outside Fire Authority Boundaries. Proposed subdivisions outside the boundaries of a Fire District shall annex into a district or provide evidence of a contract for service from a Fire District or Fire Department. Waivers of this requirement may only be approved by the Board of County Commissioners. An applicant's waiver request shall, at a minimum, include the following:

• A letter from the nearest fire district or fire department demonstrating that annexation is not economically feasible.

• A letter or report from a Third Party Fire Reviewer providing a recommendation to the Board of County Commissioners that the proposed development complies with the Fire Protection and Wildfire Mitigation Section of this Code. In the case of a conflict between adopted standards and this Code, the Third Party Fire Reviewer may recommend an alternative design which accomplishes the purposes of this section and provides an equivalent benefit to the development.

C. Design Standards

1) Water Supply

a) General. Water supply systems used for fire protection purposes shall be calculated, installed, and maintained in accordance with NFPA standards. The required fire flow for one or more buildings shall be calculated per the following conditions:

i. For areas without municipal-type water systems, NFPA 1142, Standard on Water Supplies for Suburban and Rural Fire Fighting, shall be applied.

ii. For those areas with municipal-type water systems, nationally recognized criteria, such as NFPA, National Fire Academy (NFA), or International Organization for Standardization (ISO) standards, shall be applied.

b) Automatic Fire Protection. Design for automatic fire protection shall comply with the NFPA 13, 13R, and/or 13D Standard for the Installation of Sprinkler Systems. The PCD Director, or Fire District, when located within the boundaries of a Fire District, may approve a reduction of required water supply for structures with automatic fire protection.

c) Areas with Central Water Systems.

i. Water Distribution System Pressure. The water distribution system shall be capable of delivering fire flow at a minimum rating of 20 pounds per square inch for each hydrant connected to the distribution system within the proposed subdivision.

ii. Dead-End Mains. Dead-end mains shall not exceed 600 feet in length for main sizes less than 10 inches in diameter.

iii. Fire Hydrant Spacing. Fire hydrants shall be located so that all residential structures are within 500 feet, and all commercial structures are within 400 feet of a hydrant. Where the proposed buildings warrant, the Fire Authority may recommend a greater spacing distance or require additional hydrants and closer spacing based upon the applicable fire code or NFPA standards.

iv. Fire Hydrant Accessibility. Fire hydrants shall be accessible to fire district or fire department apparatus from a road (i.e., maintained public roads, privately maintained roads, or emergency vehicle access roads) or unobstructed emergency access lanes (i.e., driveway, parking drive aisle, or emergency access lane).

v. Fire Hydrant Supply Lines. Fire hydrants shall be supplied by not less than a 6-inch diameter main installed on a looped system, or by not less than an 8-inch diameter main if the system is not looped or the fire hydrant is installed on a dead-end main exceeding 300 feet in length.

vi. Fire Hydrants in Parking Areas. Fire hydrants located in parking areas shall be protected by barriers that will prevent physical damage from vehicles without obstructing hydrant operation.

vii. Fire Hydrant Relationship to Roads. Fire hydrants shall be located within 6 feet of the edge of the pavement unless there is a conflict with the ECM or the Fire Authority recommends another location is more acceptable for fire district or fire department use. All roads and emergency vehicle lanes shall be designed to maintain a minimum unobstructed clearance of 3 feet around fire hydrants.

viii. Fire Hydrant Easements. Easements for fire hydrants shall be provided and dedicated to the appropriate fire or water authority when the hydrants are not within a public road right-of-way. The easement shall afford accessibility to the hydrant from the right-of-way.

ix. Release of Financial Assurance for Water Supply Systems. The contractor, installer, or owner of water supply systems shall provide a letter of acceptance from the water district or public utility prior to release of construction financial assurance for the system.

d) Areas without Central Water Systems

i. Fire Cisterns.

- **Fire Cisterns Required.** Fire cisterns shall be provided in areas which are not served by hydrants, unless an alternative fire protection water supply that complies with NFPA standards is approved. All currently recognized water supplies may be considered when determining the need for and the placement of new water storage sites.
- **Construction Standards.** Construction of fire cisterns shall comply with the approved plans and the requirements of NFPA 1142.
- **Design Standards for Subdivisions with More than One Cistern:** For subdivisions where more than one fire cistern is required, fire cisterns shall meet the requirements of NFPA 1142. For this type of subdivision, fire cisterns shall be designed for the largest building allowed by zoning in the worst-case hazard and construction class.
- **Design Standards for Subdivisions with One Cistern:** For subdivisions where only one fire cistern is required, the minimum capacity of the fire cistern shall meet the requirements of NFPA 1142 or shall have a total capacity equal to 300 gallons for each acre within the subdivision plus 3,000 gallons per dwelling unit, whichever is greater.
- **Cistern Turnaround.** A dedicated turnaround shall be placed no more than 50 feet from a fire cistern, and the standpipe shall be within 8 feet of the nearest usable portion of the dedicated right-of-way or approved easement, unless otherwise recommended by the Fire Authority.

- **Easements Required.** Cistern easements shall be provided and dedicated to the appropriate Fire District at the time of platting to afford accessibility of the cistern from a public road. Easements shall be of sufficient size to facilitate maintenance.

ii. Dry Hydrants

- **Use of Dry Hydrants.** Dry hydrants may be provided in combination with fire cisterns or other approved fire protection water supply systems. Plans for dry hydrants shall be submitted to the Fire District, or the County when located outside the boundaries of Fire District, for approval and be identified on the final plat and/or site development plan.
- **Construction Standards.** Construction and installation of dry hydrants shall comply with the approved plans and requirements of NFPA 1142.
- **Accessible.** Dry hydrants shall be located to be accessible under all weather conditions.
- **Clearance.** Dry hydrants shall have a minimum clearance of 20 feet on each side and be located a minimum of 100 feet from any structure. Highway or road traffic shall not be impaired during the use of the dry hydrant.
- **Protected.** Dry hydrants shall be protected from damage by vehicles and other perils, including freezing and damage from ice and other objects.
- **Visible.** Dry hydrant locations shall be made visible from the main roadway during emergencies by reflective marking and signage and shall be in conformance with NFPA 1142 requirements. All identification signs located within public right-of-way or subject to Colorado law shall be approved by the appropriate authority prior to installation.

- **Access to Hydrant.** Vehicle access shall be designed and constructed to support the imposed load of fire apparatus weighing up to 75,000 pounds with a minimum single axle weight of 27,000 pounds.
- **Easements Required.** Dry hydrant easements shall be provided and dedicated to the appropriate Fire District at the time of platting to afford accessibility of the dry hydrant from a public road. Easements shall be of sufficient size to facilitate maintenance.

iii. **Maintenance**. Cisterns and dry hydrants shall be inspected, tested, and maintained at least quarterly and in accordance with NFPA 1142. Any owner of a cistern and/or dry hydrant is responsible for the planning, developing, permitting, and continual maintenance and provision of a sufficient water supply necessary to maintain the fire protection requirements of a cistern or dry hydrant system.

- A maintenance plan is required for cisterns and/or dry hydrants and shall be submitted with the Fire Protection Report. The plan shall include at a minimum the location of cisterns and/or dry hydrants, owner(s) name and contact information, and inspection and testing schedule.
- Inspection and maintenance reports shall be made available to the County and Fire District upon request.

iv. **Alternative Fire Protection Water Supply**. The County or Fire District, when located within the boundaries of a Fire District, may determine a cistern or dry hydrant is not required upon an evaluation of recognized water supplies from a qualified professional, including the applicable Fire District. Alternative water supply must be capable of providing 250 gpm fire flow, and maintain the fire flow, without interruption, for 2 hours. The water supply shall not be more than two (2) miles travel distance from any vehicle entrance to a parcel that is served by the water supply.

v. **Water Use Agreements.** If a private water supply source is to be used, a legal agreement establishing access to and use of the water source is required.

vi. **Qualified Professional.** The PCD Director may require any reports, plans, specifications, etc. required for water supply to be completed by a qualified professional.

vii. **Plat Notes Required.** Plans for cisterns and dry hydrants shall be identified on the final plat and/or site development plan.

2) **Roads.** This Section shall apply to all roads providing access to a development whether or not they are dedicated as public roads.

a) **Roads Constructed to County Standards.** All roads, including private roads and emergency vehicle access roads, shall be designed and constructed according to this Code and the ECM.

b) **Emergency Vehicle Access Roads.** Emergency vehicle access roads shall, at a minimum, be constructed to the County's gravel road standard if open to public travel. Emergency vehicle access roads which are not open to public travel shall meet the non-road access standards.

c) **Roads within 150 Feet of Development.** Roads or emergency access lanes shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is within 150 feet as measured by an approved route around the exterior of the building or facility. Single family residential development excepted.

d) **Two Access Routes Required.** Access to a development shall be provided by a minimum of two separate routes in accordance with the requirements of this Code and the ECM if a single access exceeds the cul-de-sac length allowed by the ECM. Access routes shall be placed a distance apart equal to not less than one-half the length of the maximum overall diagonal dimension of the property, measured in a straight line between accesses unless a greater distance is required by the ECM.

e) **Turnaround Required on Dead-End Roads.** Dead-end roads more than 300 feet in length shall be provided with a roadway termination meeting ECM standards.

3) **Non-Road Access.**

The following minimum standards apply to any access, driveway, lane, etc. serving as emergency access lanes.

a) **Emergency Access Provided.** Access for emergency responders, ingress, egress, and evacuation shall be provided for all buildings.

b) **Driveways Required.** Where any point of a building is greater than 150 feet from a road, a driveway meeting the standards of this Code shall be provided to within 150 feet of the furthest point on the building.

c) **Emergency Access Lanes Required.** The County may require emergency access lanes be provided.

d) **Emergency Access Lane Design.** An emergency access lane shall be designed and constructed to enable fire-fighting apparatus to maneuver broadside or directly forward within a minimum of 5 feet and a maximum of 25 feet of structures.

e) **Width of Driveway and Emergency Access Lanes.** Where the driveway is greater than 150 feet in length, it shall be not less than 10 feet in unobstructed width. Emergency access lanes shall have a minimum unobstructed width of 16 feet for approved one-way travel and 24 feet for two-way travel.

f) **Vertical Clearance.** A minimum vertical clearance of 13 feet 6 inches shall be provided and maintained over the full width of the emergency access lane or driveway.

g) **Turns.** Required driveways shall be designed, constructed, and maintained to accommodate the turning radius of the largest apparatus typically used to respond to that location. A turn in an emergency access lane shall have a minimum inside turning radius of 25 feet and a minimum outside turning radius of 50 feet.

h) **Grade.** Emergency vehicle access roads shall not exceed 10 percent grade unless mitigation measures are approved.

i) **Emergency Access Lanes Connecting to Roads.** Emergency access lanes connecting to roads shall be provided with curb cuts, or other acceptable alternatives, extending at least 2 feet beyond each edge of the emergency access lane.

j) **Turnouts and Turnarounds Required.**

i. Driveways. Where the required driveway is greater than 300 feet, it shall be provided with turnouts or turnarounds at approved locations based on recommendation from the Fire Authority.

ii. Turnarounds Required. Dead-end emergency access lanes exceeding 300 feet in length shall be provided with turnouts or turnarounds in one of the following minimum configurations:

- A circular turnaround having a minimum 50-foot outside radius; or
- A "T" or hammerhead turnaround providing a three-point turn; or
- An alternative turnaround configuration that provides equivalent maneuverability and accommodates fire apparatus.

k) **Load Design.** Emergency access lanes and required driveways must be designed, constructed, and maintained to accommodate the imposed load of fire apparatus weighing up to 75,000 pounds with a minimum single axle weight of 27,000 pounds.

l) **Bridges or Drainage Crossings.** A bridge or drainage crossing on an emergency vehicle access road shall be designed to accommodate the imposed load of fire apparatus weighing up to 75,000 pounds with a minimum single axle weight of 27,000 pounds. The load limit shall be clearly posted at the approaches to the bridge.

m) **Landscaping Maintained.** Landscaping or other obstructions shall be maintained in a manner that provides unobstructed access for fire department operations.

4) **Gates.**

   a) **Gate Location and Dimensions.** Gates shall be located at a minimum of 30 feet from the public right-of-way and shall not open outward. The clear opening provided through a gate shall be a minimum of 16 feet in width.

   b) **Locks.** Fire District personnel shall have ready access to locking mechanisms on a gate restricting access to a fire lane. Use of Knox products shall be coordinated with the applicable Fire Authority.

6.3.4. WILDLAND-URBAN INTERFACE AREAS

A. **Applicability.** This section applies to areas within unincorporated El Paso County that are not located within a Fire District and are located within the Wildland-Urban Interface as defined in Appendix E to the Code. Where there is a conflict between Appendix E and other provisions of this Code, Appendix E shall govern.

B. **General**

1) **Wildland-Urban Interface Requirements.** Properties within the Wildland-Urban Interface shall comply with Appendix E and the requirements of this section.

2) **Road Grades.** Within Wildland-Urban Interface Areas, road grades may not exceed 10 percent unless mitigation measures are approved.

3) **Access to Structures.** At least one approved means of vehicular access shall be provided to each structure or other nonstructural fire hazard in accordance with the following:

   i. For structures or nonstructural fire hazards exceeding two stories or 30 feet in height above average adjacent ground level, or 12,000 square feet of gross floor area, no less than 2 separate approved means of access shall be provided.

   ii. Approved vehicular access shall be provided to within 150 ft of any point of the exterior wall of each structure.

4) **Access to Structures Not Protected by Automatic Sprinklers.** An approved means of vehicular access shall be provided to within 30 feet of all points of at least 2 exterior

walls for any structure not protected by automatic sprinklers that exceed 2 stories or 30 feet in height above average adjacent ground elevation. Single and two-family dwellings are exempt from this requirement.

5) **Access to Structures Protected by Automatic Sprinklers.** For any structure protected by an automatic sprinkler system, an approved means of vehicular access shall be provided to within 400 feet of any point of the exterior wall. For any structure exceeding 3 stories or 35 feet in height above average adjacent ground elevation and protected by an automatic sprinkler system, an approved means of vehicular access shall be provided to within 30 feet of all points of at least 2 exterior walls.
6) **Separation Between Structures.** A structure in a development shall be separated from another structure by at least 30 feet and shall be located at least 25 feet from a lot, parcel, or tract line. A structure in a development that exceeds 2 stories or 30 feet in height above average adjacent ground elevation and is not protected by an automatic sprinkler system shall be separated from other structures by at least 50 feet and shall be located at least 25 feet from a lot, parcel, or tract line.
7) **Plat Notes Required.** Notice of any wildfire mitigation issues or obligations may be required by the County through conditions of approval or notes placed on the face of the plat.

C. **Wildland Hazard and Mitigation Plan.** A wildland fire risk and hazard mitigation plan prepared by a qualified professional shall be required for commercial use of any property located within the Wildland Urban Interface area that is not subject to the standards for structure hardening and site and area requirements of Appendix E. A Wildland Hazard Mitigation Plan shall include at a minimum the following:

- Access, ingress, egress, and evacuation.
- Water supply for fire protection.
- Structure location and construction.
- Ignition potential.

- Vegetation management and defensible space.
- Structure hardening and defensible space requirements
- Historical wildfire behavior patterns and environmental conditions.
- Potential for structure-to-structure and vegetation-to-structure fire spread. Slope and aspect shall be evaluated as to their potential to increase the threat of wildland fire to life or improved lot, parcel, or tract.
- Other site-specific factors affecting wildfire.

1.15 DEFINITIONS

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Fire Protection Report: An analysis of compliance with the Fire Protection and Wildfire Mitigation sections of this Code. May also include an analysis of compliance with the IFC as applicable.

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