

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~~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. 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 Fire Authority 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~~Fire ~~c~~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~~ 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~~ ~~are 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 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~~ Single family residential development ~~excepted.~~ . :

(dc) Two Access Routes Required. Access to a ~~planned building are a 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 these 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 EGM 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
<p>outlets: Trees within defensible space shall be pruned to minimize ladder fuels:</p>	<p>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:</p>

(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.

(c) 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.