

DRAFT CET-Public Safety Ordinance

Proposed by *The Maverick Observer* and *Westside Watch*

**AN ORDINANCE CREATING A NEW PART 8 CLEARANCE
EVACUATION TIMES AND PUBLIC SAFETY STANDARDS TO
ARTICLE 4 (SITE DEVELOPMENT STANDARDS) OF CHAPTER 7
(PLANNING, DEVELOPMENT AND BUILDING) OF THE CODE OF
THE CITY OF COLORADO SPRINGS, 2001, AS AMENDED,
RELATING TO THE STUDY, IDENTIFICATION AND MITIGATION
OF PUBLIC SAFETY HAZARDS AND CREATING A NEW SECTION
108 APPLICABILITY TO DEVELOPMENT IN PART 1 (PURPOSE
AND POWERS; CONTINUITY) TO ARTICLE 7 EMERGENCY
MANAGEMENT IN CHAPTER 8 PUBLIC SAFETY**

WHEREAS, on November 24, 2020, by Resolution No. 109-20 the City of Colorado Springs approved the Pikes Peak Regional Multi-Hazard Mitigation Plan Update 2020, which identified hazards impacting the Pikes Peak Region;

WHEREAS, the purpose of the Plan is to assess risk and identify actions which can help Pikes Peak Regional Office of Emergency Management reduce or eliminate risk for injury, loss of life, property damage, and/or property loss due to natural disasters;

WHEREAS, hazard events or conditions may pose a risk to public and life safety negatively impacting evacuation capabilities of homes, businesses, healthcare facilities, public areas, schools, visitors and residents, and

WHEREAS, the risk posed by hazard events and the clearance evacuation times for businesses, healthcare facilities, public areas, schools visitors and residents may be reduced through the study and identification of said hazards, as well through the use of analysis of ingress and egress into both the project in question and the impact on the larger district zone in emergency evacuation conditions.

NOW, THEREFORE BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF COLORADO SPRINGS:

Section 1. that Article 4 (*Site Development Standards*) of Chapter 7 (Planning, Development and Building) of the Code of the City of Colorado Springs, 2001 as amended, is hereby amended with the addition of the following Part 8: Clearance Evacuation Times and Public Safety Standards.

Section 2. that Article 7 (Emergency Management) of Chapter 8 (Public Safety) of the Code of the City of Colorado Springs, 2001 as amended, is hereby amended with the addition of the following Section 108: Applicability to Development to Part 1 (Purpose and Powers; Continuity).

ARTICLE 4: SITE DEVELOPMENT STANDARDS

PART 8: CLEARANCE EVACUATION TIMES AND PUBLIC SAFETY STANDARDS

SECTION 801: PURPOSE

A. The purpose of this part is to identify rezoning and development conditions which may pose hazards to public safety in order that appropriate mitigation or avoidance techniques may be implemented. The metrics of public safety standards to be identified and addressed in a public safety hazards study shall include, but not be limited to, the following:

1. **Ingress/Egress:** The ingress and egress of the proposed rezone and/or development. The number of roads and lanes that exist for both emergency evacuation of the public and for emergency vehicles to access the hazard (fire, flood, etc). The number of egress portals in separate directions. The number of evacuation routes and lanes that connect to those egress portals.
2. **Clearance Evacuation Times (CET):** Clearance Evacuation Time is the time from the start of an evacuation until the last evacuee is out of the evacuation area. The impact of the proposed rezone and/or development shall be determined on current clearance evacuation times for that specific area as well as a larger emergency evacuation across the entire emergency district in a fire, flood or other hazard (for example, evacuating all of District 1 as identified in the Colorado Springs Wildfire Evacuation Planning Study March 2010 used in the 2012 Waldo Canyon Fire).
3. **Target Evacuation Time:** An target evacuation time of 1 hour must be met when adding new development to a fire-prone, low-egress community.
4. **Dead-end Access:** There are identified emergency vehicle ingress/egress for any cul-de-sacs and open spaces.
5. **Road Blockage Impacts:** The clearance evacuation time calculation must include a scenario if all lanes are blocked.
6. **Transparency/Credibility of CET Analysis:** The project clearance evacuation time has been objectively conducted using validated emergency planning or evacuation software tools (e.g RtePM, FLEET) or an equivalent simulation tool and the assumptions and method of the modeling is disclosed to the public for review.
7. **District:** There are 8 defined Fire Evacuation Districts within the WUI. The

remaining portion of the City will be identified in Districts by the boundaries of the applicable fire stations or fire response boundaries.

SECTION 802: APPLICABILITY

A. A Public Safety Hazards Study shall be required in conjunction with the City's review of the following type of land development proposals:

1. New or updated Master Plans;
2. Rezoning requests;
3. Preliminary Plats;
4. Final Plats – A Public Safety Hazards Study is required if no report was reviewed in conjunction with the Preliminary Plat or Development Plan. Not required for replats of previous subdivisions in which buildings exist on each of the proposed lots, and no new building sites are being created.
5. Development Plans (including expired Development Plans which are being reconsidered) - A Final study is required if no report was previously reviewed in conjunction with the original Plat or Development Plan.

SECTION 803: PREPARATION OF PUBLIC SAFETY STUDIES

Public Safety Hazard Studies, or exemption letters, shall be prepared by, or under the direction of, a professional engineer as defined by the Colorado Revised Statutes Title 12 Professions and Occupations, Article 120, Part 2 Engineers.

SECTION 804: SCOPE OF STUDY

A. In general the Public Safety Hazard Study shall be of sufficient detail and scope to:

1. Identify the public safety hazards affecting the rezone and/or development site, the District, and adjacent Districts if within one mile from the site.
2. Analyze the potential negative impacts the public safety hazards will have upon the proposed project, the District, and adjacent District if within one mile of the site.
3. Suggest mitigation techniques which will minimize the risk posed to the development by any identified public safety hazards.

B. The conclusions and recommendations of the study shall be based upon:

1. Site, District, and adjacent Districts if within one mile of the site specific road network carrying capacity and clearance evacuation time analyses.
2. Site, District, and adjacent Districts if within one mile from the site reconnaissance to identify the public safety hazards of the site and surrounding property.
3. A review of previous public safety studies within two miles of the subject site and not older than one year.
4. Review of past evacuation modeling of the area.
5. Conclusions drawn from the experience of the reviewing public safety engineer.

SECTION 805: PUBLIC SAFETY HAZARD REPORT GUIDELINES

The following guidelines generally reflect the type of information to be included in a public safety hazard report. These guidelines are not intended to be a rigid framework of requirements, nor a specific format for all reports. Specific information listed may be deleted or may require emphasis because of unique or particular public safety conditions or due to the type of project proposed. These guidelines should be considered as a general list of public safety information commonly evaluated and provided in a public safety hazard investigation.

A. GENERAL PROJECT INFORMATION

1. Size and location of the project.
2. Existing and proposed zoning and land use.
3. A statement regarding the types of land uses the report assumes will be built within the project.
4. Identification of the person who prepared the study and his/her qualifications for conducting the study per Section 803.

B. STUDY OVERVIEW

1. State the objective(s) and level of investigation for the study.
2. The modeling tool shall utilize standard industry parameters such as PPV (people per vehicle) contraflow, and seasonal populations. Standard Industry Parameters can only deviate from the standards when the data can justify the modification.
3. Cite previous publicly available public safety and clearance evacuation reports which were reviewed or referenced in the course of preparing the public safety hazard study and indicate the author(s), firm, and dates of each report.

4. List all the methods of investigation as well as professional firm(s) and individuals who participated.
5. If the level of investigation varies within the subject area, describe in the text and show on the maps areas of concentration or exclusion.
- 6 Describe the general physiographic setting of the project and its relationship to local topographic features.
7. Describe the general setting of the project and indicate any public safety and clearance evacuation hazards to the area.
8. Describe the ingress/egress of the specific site and the impact to the overall larger emergency District as defined by the 2010 PPACG Emergency District Zones.

C. SITE EVALUATION TECHNIQUES

1. State the extent and method of public safety and clearance evacuation studies.
2. Traffic Evacuation modeling
 - a. Prepare evacuation map(s) on the project map to show important details corresponding to the size, extent and degree of the investigation;
 - b. Show the ingress/egress of the project including emergency evacuation routes and the clearance evacuation times; and
 - c. Use evacuation modeling tools like RtePM/FLEET or custom studies to calculate clearance evacuation times for the area as well as changes to the District times.
3. Aerial Photographs which show the current road network
 - a. Describe type(s) of photographs or images including instrumentation, processing techniques, and final product;
 - b. Indicate data and scale of photographs or imagery used in the investigation; and
 - c. Indicate usefulness and general relationships observed on the images.
4. Field Tests
 - a. Describe the type of any tests conducted in the field or computer simulations;
 - b. Describe the sample method and test procedures; and
 - c. Show the test results on data worksheets or on summary tables.
5. Monitoring Programs
 - a. Describe the type, objectives, and location of all monitoring programs in the subject area;
 - b. State the monitoring period, the firm(s) or individuals responsible for the care and disposal of the installations.

6. Modeling/Study Assumptions

- a. Disclose all assumptions and methodology in models to the public for review;
- b. Include seasonal adjustments in the study area if applicable; and
- c. Define selection of endpoints in the model. Clearance End Points must be set on or beyond the borders of the district/area which is evacuated.

D. PUBLIC SAFETY DESCRIPTIONS

1. **WILDLAND URBAN INTERFACE:** A zone of transition between wilderness and land developed by human activity – an area where a built environment meets or intermingles with a natural environment. Human settlements in the WUI are at a greater risk of catastrophic wildfire.

2. **ROAD NETWORK DESCRIPTIONS:** A system of interconnecting lines and points that represent a system of streets or roads for a given area. A street network provides the foundation for network analysis; for example, finding the best route or creating service areas. They greatly affect in-town movement and traffic.

3. **INGRESS:** The entrance access of the road(s) in an area.

4. **EGRESS:** The exit access of the road(s) in an area.

5. **CLEARANCE EVACUATION TIME:** Clearance Evacuation Time is the time from the start of an evacuation until the last evacuee is out of the evacuation area.

6. **ROAD CAPACITY:** The maximum traffic flow obtainable on a given roadway, using all available lanes, usually expressed in vehicles per hour or vehicles per day.

7. **SEASON ADJUSTMENTS:** Seasonal Population shall be used in known areas of tourism or other high activity areas. Area of tourism is defined by the presence of local and non-local persons. Seasonal Populations are calculated by the average number of people per day during the specified tourist season, which is typically Memorial Day weekend through Labor Day weekend.

8. **CLEARANCE END POINTS:** These points must be set on or beyond the borders of the district/area which is evacuated.

E. PUBLIC SAFETY INTERPRETATION

1. PUBLIC SAFETY HAZARDS as defined in the Multi-Hazard Plan Mitigation Update Plan 2020:

<u>Hazard Category</u>	<u>Hazard Impacts or Variations</u>
Flood	Flood, Mud or Debris Flow, Dam/Levee Failure
Severe Weather	Hail, Drought & Extreme Heat, Lightning, Tornado, Wind, Winter Storm
Avalanche	Avalanche
Geologic	Earthquake, Subsidence & Sinkholes, Landfall or Rockfall
Wildfire	Wildfire
Human-caused	Hazardous Materials, Extreme Acts of Violence, Cyber Attack, Pandemic/Epidemic, Major Aircraft Incident

- a. The environmental factors of the area that contribute to a risk to public safety;
- b. Man-induced features/processes;
- c. Age and activity of the features/processes;
- d. Natural conditions affecting the features/processes;
- e. Susceptibility to man-induced changes;
- f. Potential impact of hazard(s) and risk to project; and
- g. Amenability of adverse conditions for adequate mitigation.

2. ROAD NETWORK CONSTRAINTS:

- a. Number of lanes;
- b. Roundabouts to slow traffic;
- c. Overhanging and adjacent roadway fuels;
- d. Curvature/visibility; and
- e. Number of ingress/egress points.

F. THE BEARING OF PUBLIC SAFETY FACTORS UPON THE INTENDED LAND USE

This topic normally constitutes the principal contribution of the report. It involves both the effects of public safety factors upon the proposed rezoning, grading, construction, and land use; and the effects of these proposed modifications upon future public safety factors in the area. The following checklist includes the topics that ordinarily should be considered as part of the findings, conclusions, and recommendations of the public safety reports:

1. General compatibility of natural features with proposed rezone and/or land use:
 - a. Topography.
 - b. Fuels.
 - c. Problems of fire, flood inundation, erosion, and deposition.
 - d. Problems caused by features or conditions in adjacent properties.
 - e. Problems potentially caused to adjacent properties.
 - f. Other general problems.

2. General compatibility of manmade features with proposed rezone and/or land use:
 - a. Road network capacity.
 - b. Ingress/Egress.
 - c. Density of development.
 - d. Hazardous materials added to the area.

G. CONCLUSIONS

1. State whether the intended use of the land is compatible with any identified or potential public safety hazards or constraints; and if mitigation measures are necessary or possible.

2. Discuss the critical planning and construction aspects to eliminate public safety hazards of the project including the parameters for the design of the features.

3. Clearly state the public safety basis for all conclusions.

H. RECOMMENDATIONS

1. Discuss the development of mitigation procedures or design changes necessary to minimize or abate any hazardous condition. Each hazardous condition requires a recommendation.

2. The recommendation should focus upon the long-term stability and safety of the proposed project.

SECTION 806: REVIEW OF PUBLIC SAFETY HAZARD STUDIES

A. Public Safety Hazard Studies will be reviewed concurrently by the City's Planning and City Engineering staff in conjunction with the City's normal review of the land development proposal. The City's review shall determine whether the findings, conclusions and recommendations of the Public Safety Hazard Study have been incorporated into the design of the Development Plan, Subdivision Plat, Drainage Plan, Grading Plan and Street construction documents. If the review by the City determines that the Study submitted is incomplete or fails to comply with the guidelines set forth in this part 8, the Study may be rejected and a new or supplemental Study may be required. In cases where significant public safety hazards are identified, appropriate mitigation measures shall be required in conjunction with the approval of the project. Said mitigation measures shall include, but not be limited to:

- 1. Changes to the proposed land use configuration;
- 2. Modification of land use types;
- 3. Modification of lot boundaries or building envelopes;
- 4. Addition of ingress/egress roads;
- 5. Public safety engineering solutions;
- 6. WUI Building codes;
- 7. Removal of traffic flow obstacles (roundabouts and circles); and
- 8. Natural fuel mitigation.

B. City staff, Planning Commission or City Council may, at their discretion, have public safety hazard studies independently reviewed by public safety experts and independent professional evacuation modeling experts or qualified evacuation modeling consultants. This separate review shall be completed within a twenty-one (21) working day time frame, shall supplement the City's review and will be considered by the City in making a final determination on the rezone and/or land development proposal. The cost of having independent review and analysis of public safety hazard reports shall be borne by the City.

SECTION 807: DISCLOSURE STATEMENT

The following disclosure statement shall be placed upon each Subdivision Plat and Development Plan which is subject to a Public Safety Hazard Study:

"This property is subject to the findings summary and conclusions of a Public Safety Hazard Report prepared by _____

dated _____

A copy of said report for your review is on file with the City of Colorado Springs Planning and Community Development, 30 South Nevada Avenue, Colorado Springs, CO 80903."

Section 808: CITY PUBLIC SAFETY WEBSITE

By December 30, 2022, the City or its agent will develop and maintain a public safety website in which the user can enter a specific location or address and retrieve Evacuation Route Maps.

CHAPTER 8: PUBLIC SAFETY

PART 1 PURPOSE AND POWERS; CONTINUITY

SECTION 108 APPLICABILITY TO DEVELOPMENT

Add a new Section 108 Applicability to Development to Part 1 (Purpose and Powers; Continuity) Article 7 (Emergency Management):

1. No rezone or development shall risk life or public safety. All rezones and development proposals shall be in compliance with the newly created above PART 8 Clearance Evacuation Times and Public Safety Standards to Article 4 (Site Development Standards) of Chapter 7 (Planning, Development and Building) of the Code of the City of Colorado Springs, 2001, as amended, relating to the Study, Identification and Mitigation of Public Safety Hazards.

Section 3. This ordinance shall be in full force and effect from and after its passage and publication as provided by the Charter.

Section 4. Council deems it appropriate that this ordinance be published by title and summary prepared by the City Clerk and that this ordinance shall be available for inspection and acquisition in the Office of the City Clerk.