

**707 ALTERNATIVE ANALYSIS REVIEW**

**707-1** Prior to, or in conjunction with, review of the design of any project below, the applicant shall submit an alternative analysis report demonstrating that the applicant has evaluated alternative alignments and provided an opportunity for citizen input into the selection of the proposed alignment.

- A. Any Category C project authorized by Section 705-1.1 or Section 705-2.1.A.
- B. Any Category B project authorized by Section 704-1.1, Section 704-2.1.B. or Section 704-2.2 A.
- C. Any Category B project authorized by Section 704-1.2 (New Road or Road Extension) excepting projects where the centerline has been established by right-of-way dedications obtained as a condition of development approval.
- D. Any Category A project identified in Section 703-1.2 that the Director elevates to a Category B project pursuant to Section 701-5.1 and the Director requires an Alternative Analysis review.

**707-2** Alternative alignment analysis may be conceptual and based on generalized alignment descriptions or maps. The report shall consist of:

707-2.1 A description of the citizen involvement program;

707-2.2 The criteria or rationale used to select the alignment alternatives;

707-2.3 A brief description of anticipated impacts, where there are significant differences in impacts between the alignment alternatives, of each alignment alternative as relates to the following:

- A. Transportation System Operations
- B. Built and Planned Environment
  - (1) Existing and Proposed Land Uses
  - (2) Air Quality
  - (3) Noise
  - (4) Hazardous Materials
  - (5) Historic and Cultural Resources
  - (6) Recreational Resources
  - (7) Visual Resources
- C. Natural Environment
  - (1) Wetlands

- (2) Aquatic Resources
- (3) Terrestrial Ecology
- (4) Hydrology and Hydraulics
- (5) Water Quality

The report need not address each of the topics listed above for each alternative if it is concluded that adverse impacts relating to one topic are so significant that further consideration of the alternative is not warranted; and

**707-2.4** A description of how the anticipated significant impacts were weighed and balanced, the rationale for selection of the proposed alignment and potential mitigation measures for the proposed alignment.

**707-3** The Review Authority shall determine whether the alternative analysis report complies with the requirements of this section, but shall not consider whether alternative alignments might better or more clearly meet the standards of this Article. Acceptance of the alternative analysis report establishes the alignment upon which the applicant may make more specific right-of-way determinations for final design.

## **708 SUBMITTAL REQUIREMENTS**

An applicant for a Category A, B or C project authorized by this Article shall prepare plans and documentation necessary to demonstrate how the project will comply with the standards of this Article.

### **708-1 Site Analysis of Proposed Project**

For all Category A, B and C projects a site analysis shall be prepared that includes:

- A. A statement that describes the proposed project; and
- B. Project plans that show the proposed transportation improvement, including roadways, bridges, traffic signals, pedestrian facilities, bicycle facilities, transit facilities, landscaped areas, retaining walls and noise walls, illumination, and drainage facilities. Plans will typically be preliminary or final plans prepared by a registered civil engineer.
- C. Additionally, the following information shall be shown on project plans or on accompanying site plans:
  - (1) Existing and proposed right-of-way;
  - (2) Proposed areas of access control, if any;
  - (3) When applicable, the location and proposed treatment or proposed alteration of the following:
    - (a) Flood Plains and Floodways;
    - (b) Drainage Hazard Areas and Drainageways; and
    - (c) Significant Natural Resource Areas.
  - (4) Existing conditions within the limits of the proposed project and within fifty (50) feet of the project limits, including but not limited to:
    - (a) Location and type of structures, showing proposed removal of structures if applicable;
    - (b) Lot area, building setbacks and property dimensions;
    - (c) Proposed alterations, if any, to existing improvements, including parking and access; and
    - (d) Trees six inches or greater in caliper DBH (diameter breast height) proposed to be removed.
  - (5) Cross sections of retaining and noise walls; and
  - (6) Other plans or documentation needed to demonstrate that the project meets the applicable standards of Sections 709 through 714.

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**709 ALTERATIONS TO FLOOD PLAIN AND DRAINAGE HAZARD AREAS**

Category B alterations of a flood plain or drainage hazard area shall comply with following standards:

**709-1** The maps entitled "Flood Plain Series, Washington County, Oregon" Revision 5/10/74, 1/03/78, 1/81 and 5/25/83 and 12/12/83 based upon data from the U.S. Army Corps of Engineers; U.S.G.S.; U.S.B.; S.C.S.; and Washington County, together with the Flood Insurance Rate Maps, with amendments, and the "Flood Insurance Study for Washington County," with amendments, including the Flood Boundary and Floodway Map, as provided for in the regulations of the Federal Emergency Management Agency (FEMA) (44 CFR part 59-60) are adopted by reference as setting forth the flood plain, floodway and drainage hazard areas of Washington County. But where the maps are not available, the Director may use any base flood elevation and floodway data available from a federal or state source, or any other authoritative source, to determine the boundaries of the flood plain, floodway and drainage hazard areas of Washington County.

**709-2** Recognizing that the scale may be such that the true and accurate flood plain or drainage hazard area cannot be determined from the maps referenced in Section 709-1 alone, an applicant for lands within said areas and two-hundred-fifty (250) feet of the map boundary of a flood plain or drainage hazard area identified in Section 709-1, shall submit with the Development Permit application:

A. A delineation of the flood plain and the floodway boundaries, established by a registered engineer or a registered surveyor from the surface elevations prepared by the County for the flood plain based upon maps referenced in Section 709-1, and upon any other available authoritative flood plain data approved by the Director, including but not limited to high water marks, photographs of past flooding or historical flood plain data; and

B. A delineation of the drainage hazard area and drainageway by a registered surveyor or a registered engineer from surface elevations prepared by a registered engineer. Such delineation shall be based on mean sea level datum and be field located from recognized landmarks.

**709-3** A project proposed to encroach into a regulatory floodway adopted and designated pursuant to FEMA regulations shall demonstrate through hydrologic and hydraulic analysis, performed in accordance with standard engineering practice by a registered civil engineer, that the use will not result in any increase in flood levels within the community during the occurrence of the base (regional) flood discharge. Notwithstanding this provision, a project that would result in such an increase may be approved if the County, at the sole expense of the applicant, first obtains FEMA approval in accordance with 44 CFR Ch. 1, Part 65 (October 1, 1990 edition, or its successor). No increase to the flood plain elevation shall be permitted unless the area in which the rise will occur contains no structures and the owner of such property signs a written acceptance of any increase in the flood plain elevation. These properties are not required to be part of the application for the proposed development.

**709-4** A project proposed on a flood plain site where the use does not encroach into an adopted FEMA regulatory floodway shall demonstrate through hydrologic and

hydraulic analysis, performed in accordance with standard engineering practice by a registered civil engineer, that the use will not increase the flood plain elevation more than one (1) foot at any point in the community. Notwithstanding this provision, an increase in excess of one (1) foot may be approved if the County, at the sole expense of the applicant, first obtains FEMA approval in accordance with 44 CFR Ch. 1, Part 65 (October 1, 1990 edition, or its successor). No increase to the flood plain elevation shall be permitted unless the area in which the rise will occur contains no structures and the owner of such property signs a written acceptance of any increase in the flood plain elevation.

- 709-5** A project proposed on a drainage hazard area site shall demonstrate through hydrologic and hydraulic analysis, performed in accordance with standard engineering practice by a registered civil engineer, that the use will not result in any increase to the drainage hazard area elevation at any point in the community. Notwithstanding this provision, an increase may be approved if the area in which the rise will occur contains no structures and the owner of such property signs a written acceptance of any increase in the drainage hazard area elevation.
- 709-6** To minimize the risk that an encroachment will catch substantial debris or otherwise significantly impede floodwater flows, encroachment into a floodway shall include design features such as, but not limited to, openings sized to achieve this purpose, secured breakaway bridges, diverters or spacing of supports.
- 709-7** A project shall not increase the existing velocity of flood flows so as to exceed the erosive velocity limits of soils in the flood area. Energy dissipation devices or other measures to control the mean velocity so as not to cause erosion of the flood area may be used to meet this standard.
- 709-8** All cut and fill shall be done in accordance with best management practices.
- 709-9** All cut and fill shall be structurally sound and designed to minimize erosion. All fill below the flood surface elevation shall be accompanied by an equal or greater amount of cut or storage within the boundary of the development site unless:
- A. The proposed cut and fill is found to be in compliance with an adopted Drainage Master Plan; or
  - B. Off-site excavation will be utilized to balance a fill, provided:
    - (1) The off-site excavation area will be part of the application for the development proposing to place the fill;
    - (2) The off-site excavation area will be located in the same drainage basin as the proposed fill area;
    - (3) The off-site excavation area will be located within points of constriction on the drainage system, if any, and as close to the fill site as practicable. The applicant's registered civil engineer may be required to conduct a storage routing analysis to determine the location of the excavation area;
    - (4) The off-site excavation area will be constructed as part of the development placing the fill;

- (5) Any use or future development of the excavated area shall comply with the standards of Section 710 if the area is designated as a Significant Natural Resource; and
- (6) Ownership of the excavated area shall be by one of the following mechanisms:
  - (a) Dedication of the area to an appropriate public agency when a public agency is willing to accept the dedication;
  - (b) Ownership of the area by the applicant of the proposed development;
  - (c) Dedication of the development rights of the area to an appropriate public agency with ownership remaining with the property owner. Maintenance of the area shall be the responsibility of the applicant or property owner; and
  - (d) Deed or easement-restricted private ownership that prevents any use or future development of the area as specified by Section 421-7.6 B. (5). Maintenance of the area shall be the responsibility of the applicant or property owner. A contract for conditions shall be required as specified by Section 207-5.3. The contract for conditions shall be recorded in the Washington County Deed Records.

**709-10** Drainage systems shall be designed and constructed according to the adopted Drainage Master Plan for the area, if one exists.

**709-11** There shall be no dumping of fill in a flood area or drainage hazard area without a flood plain or drainage hazard area alteration permit.

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**710 ALTERATIONS TO SIGNIFICANT NATURAL RESOURCES**

- 710-1** Alteration of an area designated as a Significant Natural Resource by the Rural/Natural Resource Plan or the applicable community plan shall be allowed for the following:
- A. Crossings for public transportation facilities, including streets, roads, bridges, and culverts, and bicycle, pedestrian, and transit facilities.
  - B. Construction or reconstruction of public transportation facilities, including streets, roads, bridges, and culverts, and bicycle, pedestrian, and transit facilities.
- 710-2** Category B alterations of an area designated as a Significant Natural Resource shall comply with the following standards:
- 710-2.1 The design elements of the applicable Community Plan; or the applicable implementing strategies of the Rural/Natural Resource Plan Element, Policy 10, Implementing Strategy E which states:
- “Implement the recommendations of the Oregon Department of Fish and Wildlife Habitat Protection Plan for Washington County and to mitigate the effects of development in the Big Game Range within the EFU, EFC and AF-20 land use designations.”
- 710-2.2 Any proposed project in a Significant Natural Area, as identified by the applicable Community Plan or the Rural/Natural Resource Area Plan Element, shall reduce its impact, to the maximum extent feasible, on the unique or fragile character or features of the Significant Natural Area.
- 710-2.3 Any proposed project in a Significant Natural Resource Area shall not seriously interfere with the preservation of fish and wildlife areas and habitat identified in the Washington County Comprehensive Plan, or shall identify how the interference can be mitigated.

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**711 HISTORICAL AND CULTURAL RESOURCES**

**711-1** Alteration of a property or structure in an area designated as a Historic or Cultural Resource by the Rural/Natural Resource Plan or the applicable community plan shall be allowed for the following:

- A. Crossings for public transportation facilities, including streets, roads, bridges, and culverts, and bicycle, pedestrian, and transit facilities.
- B. Construction or reconstruction of streets, roads, bridges, and culverts, and bicycle, pedestrian, and transit facilities.

**711-2** Alterations permitted under this section shall be reviewed in a separate land use proceeding in accordance with Section 373.

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**712 PEDESTRIAN, BICYCLE AND TRANSIT FACILITIES**

- 712-1** Inside an urban growth boundary, pedestrian facilities shall be provided along the sides of roads, excluding freeways, that are constructed as ultimate improvements, except when the standards of Section 712-3 are met.
- 712-2** Inside an urban growth boundary, pedestrian facilities shall be provided along the sides of roads, excluding freeways, that are constructed as interim improvements, when sufficient right-of-way is available except when the standards of 712-3 are met. Otherwise this requirement may be satisfied by improvements required by Section 712-5.
- 712-3** An exemption to the requirement to construct pedestrian facilities may be granted by the Review Authority upon findings that they are unnecessary at the time of project construction due to the following:
- 712-3.1 Pedestrian facilities are assured by others to be provided within three (3) years of project completion; or
- 712-3.2 Abutting land is undeveloped; and
- 712-3.3 There is a lack of pedestrian oriented activity and the project does not abut a school, park, transit stop, recreation center or commercial center.
- 712-4** For ultimate capital improvements on facilities designated to accommodate bikeways, as identified on the Planned Bicycle System Map in the Transportation Plan, bikeways shall be constructed. Bikeways include striped and stenciled lanes, 5 to 6 feet in width, paved shoulders at least 4 feet in width and 14 foot wide outside travel lanes in areas where constraints limit roadway width; these 14 foot wide shared, outside travel lanes shall transition to either paved shoulders or bikeways when the constraint ends.
- 712-5** For those road construction or reconstruction projects located within Pedestrian Districts or Streetscape Improvement Areas identified in the Pedestrian Element of the 2020 Transportation Plan, pedestrian enhancements such as those amenities described in the county's Pedestrian Enhancements Design Guideline Booklet shall be considered as part of the project development process.
- 712-6** For interim capital improvements on roadways identified for bikeways on the Planned Bicycle System Map in the Transportation Plan, a minimum of a five (5) foot paved shoulder for each outside travel lane shall be provided.
- 712-7** Provision of transit improvements, including bus pullouts, bus shelters and benches, shall be coordinated with the local transit authority.

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**713 FARM AND FOREST IMPACTS**

**713-1 Category C projects located within the AF-20, EFU, and EFC Districts shall not:**

- A. Force a significant change in accepted farm or forest practices on surrounding lands located in the AF-20, EFU and EFC Districts; nor
- B. Significantly increase the cost of accepted farm or forest practices on surrounding lands located in the AF-20, EFU and EFC Districts.

An applicant may demonstrate that these standards for approval will be satisfied through the imposition of conditions. Any conditions so imposed shall be clear and objective.

**713-2 Projects identified in Section 705-2.1 A. – E. within the AF-20, EFU, and EFC Districts shall:**

- A. Identify reasonable build design alternatives, such as alternative alignments, that are safe and can be constructed at a reasonable cost, not considering raw land costs, with available technology. Design and operations alternatives need not be considered if they are inconsistent with applicable standards or not approved by a registered professional engineer.
- B. Assess the effects of the identified alternatives on farm and forest practices considering:
  - (1) The impacts to farm and forest lands, structures and facilities;
  - (2) The effects of traffic on the movement of farm and forest vehicles and equipment; and
  - (3) The effects of access to parcels created on farm and forestlands.
- C. Select from the identified alternatives, the one, or combination of identified alternatives that has the least impact on lands in the immediate vicinity devoted to farm or forest use, unless that alternative has a significant adverse impact on resources regulated by CDC Sections 373 (Historic and Cultural Resource Overlay District), 379 (Mineral and Aggregate Overlay District), 709 (Alterations to Flood Plain and Drainage Hazard Areas), or 710 (Alternations to Significant Natural Resources), in which case the review authority may choose a different alternative that balances impacts to lands devoted to farm or forest use with impacts to resources regulated by CDC Sections 373, 379, 709, or 710.

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**714 ADDITIONAL STANDARDS FOR CATEGORY A, B AND C PROJECTS**

- 714-1** Interim improvements shall be designed to not impede future improvement of the facility to ultimate standards.
- 714-2** For a project that has received preliminary or final approval, the length of the project may be reduced through a Type I procedure when sufficient funds have not been appropriated to construct the entire project.
- 714-3** On those roadways that are designated as 'Boulevard Intersections', 'Boulevards' or 'Streets' on the Regional Street Design Overlay Map in the Transportation Plan, consider the street design characteristics set forth in the Regional Transportation Plan and Metro's publication entitled 'Creating Livable Streets – Street Design Guidelines for 2040' during development review and project development, when construction or reconstruction is proposed.
- 714-4** For those roadway construction or reconstruction projects located within Pedestrian Districts or Streetscape Improvement Areas identified in the Pedestrian Element of the 2020 Transportation Plan, pedestrian enhancements such as those described in the county's Pedestrian Enhancements Design Guideline Booklet shall be considered as part of the project development process.

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