



Summit County Engineering Department
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Commercial Project Engineering Review Checklist

The Summit County Engineering Division will be checking your plans for the following. This is a general review list, and projects may require additional information.

There are a few items that are different for the [Basin and the East side](#) of the county

Each submittal should include a Site Plan with the following:

1. Title Report or ALTA Survey Map
2. **Roadway and Parking Design:**
 - a. Show existing features indicated with dashed lines.
 - b. Show proposed features shown using solid lines.
 - c. Show driveway dimensions and width (including slopes).
 - d. Show an [ADA](#) van accessible stall if more than 15 spaces.
 - e. Show ADA ramps are APWA compliant (slopes).
 - f. Show parking lot grade (minimum of 1% and maximum of 5%).
 - g. Show pedestrian/ADA access route to building entrance.
 - h. Show location and dimensions of trash enclosure.
 - i. Show existing and proposed roads and driveways.
 - j. Show all sight distance triangles and Stopping Sight Distance(SSD).
 - k. Show all proposed striping according to the MUTCD.
 - l. Show all proposed signing according to the MUTCD.
 - m. Show the road centerline design according to AASHTO with stationing.
 - n. Show the road design speed according to AASHTO.
 - o. All cul-de-sacs must include signage indicating that the road is a dead-end road within fifty feet (50') of the outlet.
 - p. The maximum length of a cul-de-sac on a rural designated road are based on wildfire hazard rating are as follows; moderate = 1,200', high = 900', and extreme = 500'.
 - q. Cul-de-sac minimum diameter is 60' and public road minimum diameter is 90'.
 - r. Include a typical road cross section showing dimensions according to Geotechnical Report or Development Agreement.
 - s. Intersections avoid curves and crests of hills
 - t. Intersection alignment of 10% of perpendicular for 100'
 - u. Intersection spacing meets minimum in Table 1:

Road Classification	Offset
Local	125 feet
Collector	330 feet
Arterials	600 feet

Table 1: Intersection spacing-- Road Classification map may be found at:

<https://summitcounty.maps.arcgis.com/apps/mapviewer/index.html?webmap=af4701cf8cac4fdbb3bc4bb938dda59f>

- v. Intersections with nonstop sign road have a max of 8% grade
- w. Roadway retaining walls used when cut or fill exceeds 10'
- x. Do the intersections meet a minimum slope of 3% for 100' (Basin) and 4% for 100' (East).
- y. Show K-value and vertical curve lengths per AASHTO.
- z. Show slopes at the centerline of driveways.
- aa. Do road grades of 10% max with 12.5% for short distance (Basin) and 8% max with 10% short distance (East)
- bb. Driveway location according to [County Standards](#) (page 13-14)

STREET TYPE	MINIMUM SPACING	MINIMUM DISTANCE FROM INTERSECTIONS
Local	35 feet apart and a minimum of 10 feet from the property line	50 feet
Collector	50 feet apart	75 feet
Arterials	75 feet from apart	115 feet

Table 2: Driveway spacing requirements

- cc. Driveways shall meet the minimum stopping sight distances listed in Table 3.

Design Speed (mph)	Assumed Speed for Condition (mph)	Stopping Sight Distance (Rounded for Design) (ft)
20	20-20	125-125
25	24-25	150-150
30	28-30	200-200
35	32-35	225-250
40	36-40	275-325
45	40-45	325-400
50	44-50	400-475
55	48-55	450-550
60	52-60	525-650

Table 3: Driveway stopping sight distances

- dd. Show the ROW line to ROW width labeled (call out ROW width and limits)

3. Utility Design:

- a. Show existing underground utilities using dashed lines.
- b. Show existing underground utilities labeled by pipe size and type.
- c. Show proposed underground utilities using solid lines.
- d. Show proposed underground utilities labeled by pipe size and type.
- e. Show the location of the proposed dry utilities.
- f. Show an elevation of profile view of all pipe crossings.

4. Grading Design:

- a. Show existing contour lines at 2-foot intervals shown as dashed fine lines with contour labels.
 - b. Show final grade contour lines at 2-foot intervals shown with solid thick lines and contour labels.
 - c. Show existing and proposed top back of curb (TBC) elevations.
 - d. Show existing and proposed slopes including a percentage and directional arrow.
 - e. Show all existing natural streams/rivers located within 100 feet of the project.
 - f. Show the FEMA SFHA 100-year Flood Plain Zone A and AE.
 - i. Type the project address into <https://msc.fema.gov/portal/home> to check if your project is in the flood plain. If your project is in the Flood Plain zone you will need a flood plain permit.
 - g. Show the proposed building Finished Floor Elevation (FFE).
 - h. Indicated where excavated material will be taken.
 - i. The final grade must be 2 feet inside or half the vertical cut or fill setback from property line
 - j. All slopes 3:1 and steeper called out with erosion control blankets with specification notes
 - k. All slopes 2:1 and steeper require a Geotechnical or Geological Eng. Report
5. Drainage Design: (County Code Section 9-3-11)
- a. Pre-development drainage calculations for a 100-year time of concentration storm event
 - b. Post-development drainage calculations for a 100-year time of concentration storm event
 - c. TSS removal calculations
 - d. Detention/retention pond storage volume calculations for a 100-year
 - e. Storm drainpipes volume calculations for a 10-year storm event
 - f. Calculations for the sizing of orifice plate and storm drainage release rate (must be equal to pre-development rate)
 - g. 80th percentile storm event (Retention)
 - h. Calculations for the C value for pre and post construction conditions
 - i. Existing and proposed storm drain system
 - j. All proposed pipes to be labeled showing material, diameter, slope, and length
 - k. Energy grade line (EGL) is shown for storm drain system
6. Erosion Control and SWPPP:
- a. Please show erosion control (silt fence, straw wattle) on plans with specification notes.
 - b. Please show a stabilized construction entrance on plans with specification notes.
 - c. Please show the location of construction mitigation items on plans:
 - i. Dumpster
 - ii. Portable toilet
 - iii. Construction staging area
 - iv. Concrete washout
 - v. Construction parking

- d. Projects that disturb over 1 acre will need to contact the Stormwater Department to determine if a Long-Term Stormwater Management Plan is required. Please contact Kelsey Christiansen at 435-400-0016 or kchristiansen@summitcounty.org
 - e. If your project disturbs more than a quarter acre (10,890 ft²), imports soil, and/or exports more than 10 cubic yards of soil, then your project requires a [Noxious Weed Plan](#). Please contact Dave Bingham at 435-336-3979 or dbingham@summitcounty.org
 - f. Plans should be prepared by a Licensed Surveyor, Engineer, or Architect
 - g. Plans include a Graphic Scale and North Arrow
 - h. [Specifications Sheet](#), or equivalent, including inspection table, shall be included.
7. Use the provided template to submit a [Construction Mitigation Plan](#).
 8. Submit a civil construction cost estimate based on the [County unit rates](#).
 9. A separate right-of-way permit is required for work (closures, excavations, structures) in County rights-of-way. Applications shall be through Summit County's [online permit portal](#).