Valley County

PO Box 1350 • 219 North Main Street
Cascade, ID 83611-1350

Phone: 208-382-7100

Valley County Conditional Use Permits (CUP)
Parametrix Engineering Review of Site Grading Plans and Drainage Calculations

Purpose -This memo was prepared at the request of Valley County to summarize the approach Parametrix takes in reviewing individual Conditional Use Permit (CUP) applications within Valley County which qualify for a review of the site grading and drainage plans, along with the drainage calculations.

STEP 1) PARAMETRIX INITIAL PLAN REVIEW AND DRAINAGE CALCULATION REVIEW

Apply the appropriate review criteria depending on the application conditions. For the purposes of this memo, we will outline the engineering review process for a residential or commercial development of sufficient size to warrant the site grading and drainage plan review. These sections are covered in detail on the following pages and include:

- Minimum Standards for Public Road Design and Construction (Adopted April 16, 2008)
  - Roadway Design Standards, Design Criteria, and Classification
  - Roadway Geometry, Alignment, Cross Section, Structural Section, Utility Improvements, Structures (Bridges and Retaining Walls), Signing, Pavement Markings, and General Site Grading Plan Submittal Requirement
  - Roadway Right-of-Way Requirements
  - Drainage Design Standards and Criteria
  - Erosion and Sedimentation Control
  - Maintenance and Operation of Drainage Facilities
  - Construction Specifications
- Minimum Standards for Private Road Design and Construction (Adopted November 28, 2005)
  - Roadway Design Standards, Design Criteria, and Classification
  - Roadway Geometry, Alignment, Cross Section, Structural Section, Utility Improvements, Structures (Bridges and Retaining Walls), Signing, and General Site Grading Plan Submittal Requirement
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  - Maintenance and Operation of Drainage Facilities
  - Construction Specifications

STEP 2) PARAMETRIX INITIAL REVIEW LETTER TO VALLEY COUNTY

Send a draft review letter to Valley County either approving the provided Information or requesting the applicant address specific comments and resubmit the site grading and drainage plans, and drainage calculations.

STEP 3) PARAMATRIX REVIEW OF RESUBMITTAL

Review revised plans and calculations for responses to comments and revisions.

STEP 4) PARAMETRIX RESUBMITTAL LITTER TO VALLEY COUNTY

Send a revised review or approval letter stating whether the comments have been addressed and include any further comments. If all comments have been addressed and there are no further comments, recommend approval of the documents. Steps 3 & 4 are repeated until approval has been recommended to Valley County.

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GENERAL OUTLINE OF DRAINAGE / EROSION CONTROL ITEMS REVIEWED WITH EACH APPLICATION

1. Drainage Peak Flow Calculations
   - The Soil Conservation Service (SCS) method is preferred but the Rational Method is acceptable for smaller areas (generally 100 acres or less)
     - Public Roads Require: 100-yr storm event for major roads, bridges, etc. and 50-year for all other facilities
     - Private Roads Require: 100-yr storm event for major roads, bridges, etc. and 25-year for all other facilities
     - Site Development: Not directly specified so we use standard adopted practices and engineering judgement which often incorporates the 25-year storm event
     - The storm duration is generally a 1-hour event when using the Rational Method, or a 24-hour event when using the SCS method
2. Storage/Detention Requirements
   - Downstream drainage systems shall not be adversely affected by upstream development
   - The preliminary site grading plans should **clearly showing the existing site topography and the proposed final grades with elevations or contour lines and specifications for materials** and their placement
   - Ensure the runoff from a development/project do not exceed pre-development conditions flow rates/volumes
   - Check for Shallow Injection Wells -> Development will have to file with IDWR
     - Any feature that is operated to allow injection which also meets at least one (1) of the following criteria:
       a) A bored, drilled or driven shaft whose depth is greater than the largest surface dimension
       b) A dug hole whose depth is greater than the largest surface dimension
       c) An improved sinkhole; or
       d) A subsurface fluid distribution system
3. Water Quality Requirements
   - Road standards state: "It is the developer's responsibility to ensure the runoff from a development does not contain pollutants."
     - Clean Water Act creates NPDES Permits governed/managed by IDEQ
     - Small MS4 communities are regulated (defined as urbanized areas by US Census Bureau). McCall is only community in Valley County that qualifies as a Small MS4. There are no *regulatory or statutory* requirements for treatment. We called and confirmed this with IDEQ [James Craft (208)373-0144]. Idaho Code Section 39-118 prevents IDEQ from overstepping their boundaries regarding water quality.
4. Erosion and Sediment Control (ESC) / Best Management Practices (BMP) / Storm Water Pollution Prevention Plan (SWPPP)
   - Disturbing over 1-acre of land, with a discharge to Waters of the US (SWPPP required, with IDEQ)

- The plan shall demonstrate compliance with **best management practices for surface water management** for permanent management and the methods that will be used during construction to control or prevent the erosion, mass movement, siltation, sedimentation, and blowing of dirt and debris caused by grading, excavation, open cuts, side slopes, and other site preparation and development
- Show stormwater BMP / ESC items on the plans
    - Confirm temporary ESC measures are identified for construction duration
        - Silt fence/wattles are commonly used
        - Inlet protection for stormwater structures is commonly used
    - Confirm permanent ESC measures are identified where warranted for post construction
        - Riprap and/or other energy dissipation are commonly used
        - Seeding/planting/soil stabilization are commonly used

5. Floodway / Floodplain Impact Considerations
    - Check FEMA to see if the project is located in or near a mapped floodplain and/or floodway (https://msc.fema.gov/portal/search)
    - Note that FEMA has not mapped *ALL* floodplains and floodways. FEMA requirements still apply adjacent to rivers/streams without mapped boundaries
    - Check whether Floodplain Development Permit is required from Valley County
    - Anything that may alter floodway will need FEMA approval (inform applicant)

6. Waters of the US / Wetlands
    - Check National Wetland Inventory Maps for wetlands in project area (https://www.fws.gov/wetlands/data/mapper.html)
    - Reference aerial imagery for additional evidence of potential wetlands
    - Valley County is not responsible to ensure property owner acquires approved appropriate 404-permits, but it is a best practice to provide guidance to the applicant where 404-permits are required
    - US Army Corps of Engineers (IDL and IDWR) permit 'Waters of the US, including Wetlands', so a project may require additional permitting without having wetlands. Check and inform applicant where applicable

7. Check Proposed Culvert and Drainage Conveyance Pipe Networks
    - Ensure all drainage structures are accommodated within R/W or easements
    - Culvert Size and Material
        - Size: Design Flow Shall Not Exceed 80% Capacity
            a) Private Roadway: 12" Minimum Diameter Culvert Size and 12" Minimum Cover
            b) Public Roadway: 15" Minimum Diameter Culvert Size and 12" Minimum Cover
            c) Culvert Materials:
                a) Corrugated steel (16 ga)
                b) Aluminum (14 ga)
                c) HDPE (0.05 @ 12", 0.175 @ 36")

RESOURCES:

- Valley County Code of Ordinances
  - Website for most current Valley County Code of Ordinances https://codelibrary.amlegal.com/codes/valleycountyid/latest/overview
  - Ordinance Titles 5, 6, 7, 9, 10, 11, 12, 13 are saved as PDFs to the PMX server (as of July 2020)
  - Title 9 – Valley County Land Use and Development Ordinance or "LUDO" (Ord. 10-06, 8-23-2010)
    a) 9-1-7 - Applicability of Title
       I. Code is not retro-active but is applied to anyone changing land use
    b) 9-1-9 - Related County Ordinances, Policies, etc
       I. Valley County Flood Damage Prevention Ordinance & Road Standards may be applicable.
    c) 9-5 - Conditional Use Permit Requirements
       I. 9-5-3-A-2 - Lot Size Sufficient to accommodate "stormwater containment"
       II. 9-5-3-B-3 - Setback from high water lines, if applicable
       III. 9-5-3-D-2-k - Impact Report – Site Grading and Improvements, including cuts and fills, drainage courses and impoundments, sound and sight buffers, landscaping, fencing, utilities, and open areas
    d) 9-5A-1 – Site Grading
       I. C – Flood Prone Areas: Are there any floodplains/floodways? Check FEMA maps: https://msc.fema.gov/portal/search
       II. D – Wetlands: Check National Wetland Inventory Maps for wetlands in project area: https://www.fws.gov/wetlands/data/mapper.html
       Reference aerial imagery for wetlands
       III. E – Site Grading Plans
       - The preliminary site grading plans should **clearly showing the existing site topography and the proposed final grades with elevations or contour lines and specifications for materials** and their placement
       - The plan shall demonstrate compliance with **best management practices for surface water management** for permanent management and the methods that will be used during construction to control or prevent the erosion, mass movement, siltation, sedimentation, and blowing of dirt and debris caused by grading, excavation, open cuts, side slopes, and other site preparation and development. Show stormwater BMPs on the plans
    e) 9-5A-3 - Parking & Off-Street Loading
       I. A – Site Plan: The site plan for a conditional use permit shall include a detailed scale drawing showing the.... snow storage, and drainage
       II. 9-5A-3-D.3.f - Surface Water Drainage: Drainage of surface water shall be provided that will be adequate to drain the surface of the parking area while preventing flows of water onto adjacent properties. Surface waters shall be managed in accordance with best management practices to protect or improve water quality
    f) 9-5A-6-F – Utilities
       I. A utility plan showing the schedule of construction or installation of proposed utilities shall be a part of the conditional use permit. (Ord. 10-06, 8-23-2010)
    g) 9-6-2 - Flood Prone Areas
       I. Check FEMA mapping to determine if development is located in a flood prone area. If so, these requirements apply

- Valley County Minimum Standards for Road Design and Construction
  - Public Roads (Adopted April 16, 2008)
    http://www.co.valley.id.us/images/pdf/2008_VC_Adopted_Public_Rd_Stds_041608.pdf
  - Private Roads (Adopted November 28, 2005)
    http://www.co.valley.id.us/images/pdf/VC_2005_Private_Rd_Stds_&_Specs.pdf
- Valley County GIS (http://www.co.valley.id.us/departments/information-technology/gis-maps/)
  - Land Use Database
  - Road Assets Dashboard
  - Assessors Map
  - Planning & Zoning
- US Fish & Wildlife Service (FWS) National Wetlands Inventory
  - https://www.fws.gov/wetlands/data/mapper.html
- FEMA Maps
  - https://msc.fema.gov/portal/search
- ITD Roadway Design Manual (Drainage -> Section 600 and Appendix B)
  - https://apps.itd.idaho.gov/apps/manuals/RoadwayDesign/files/RoadwayDesign600.pdf
  - https://apps.itd.idaho.gov/apps/manuals/RoadwayDesign/files/RoadwayDesignAppendixB.pdf
- IDEQ BMP Manuals
  - https://www2.deq.idaho.gov/admin/LEIA/api/document/download/14968
  - Valley County Amendments (to 2005 outdated version):
    https://www.co.valley.id.us/departments/PlanningZoning/StormwaterAddendum