

Section 6 – Report, Site Plan and Design Document

1. Report and Site Plan Minimum Requirements

- a. A written report describing the results of the preliminary investigation, reconnaissance, and detailed evaluations must be submitted at the time of permit application.
- b. The report must be reviewed and stamped by a Colorado licensed professional engineer.
- c. The report may be in text and/or tabular form and must include a drawing locating features relative to the proposed OWTS location and test locations.
- d. The report must accompany the Design Document, see Section 6.2 for requirements.
- e. The report must include, but is not limited to:
 - i. Company name, address, telephone number, e-mail address, and name of individual, credentials and qualifications of the individual conducting the site evaluation;
 - ii. Preliminary and detailed evaluations, providing information from the surface site characteristics assessment and soils investigation;
 - iii. Dates of preliminary and detailed evaluations;
 - iv. A graphic soil log, to scale, indicating depth of the soil test pit excavation, soil description and classification, depth to any limiting layer encountered, type of equipment used to excavate the soil profile test pit and date of soils investigation.
 - v. Setback distances to features listed in Table 8-2
 - vi. Setback distances to features listed in Table 8-1 existing on the site or within applicable setback limits, whichever is greater;
 - vii. A drawing created to a scale that provides the complete property boundary lines. The minimum drawing size is 8.5-inches by 11-inches. If the property is too large to adequately indicate and label the profile test pits and percolation test holes, a detail of the portion of the site containing the soil profile test pits and percolation test holes must be submitted. If the property is too large to adequately show site evaluation information, a detail drawing that includes the information required from the site and soil evaluation that will impact the location of the OWTS must be submitted. Drawings must indicate dimensions, have a north arrow and graphic scale and include:
 1. Fixed, non-degradable temporary or permanent benchmark, horizontal and vertical reference points of the proposed soil treatment area; soil observations; percolation testing results and pertinent distances from the proposed OWTS to all required setbacks, lot improvements, easements; ordinary high water mark of a pond, creek, stream, lake, wetland or other surface waters, and detention or retention ponds; and property lines;

2. Contours or slope direction and percent slope;
 3. The location of any visible or known unsuitable, disturbed or compacted soils;
 4. The estimated depth of periodically saturated soils and bedrock, or flood elevation, if applicable; and
 5. The proposed elevation of the infiltrative surface of the soil treatment area, from an established datum (either ground surface or a benchmark);
- viii. Anticipated construction-related issues, if applicable;
1. An assessment of how known or reasonably foreseeable land use changes are expected to affect the system performance, including, but not limited to, changes in drainage patterns, increased impervious surfaces and proximity of new water supply wells, if applicable; and
 2. A narrative explaining difficulties encountered during the site evaluation, including but not limited to identifying and interpreting soil and landform features and how the difficulties were resolved, if applicable.

2. Design Document Minimum Requirements

- a. The design document must be reviewed and stamped by a Colorado licensed professional engineer.
- b. The report and site plan may be attached to the design document or the report and site plan may be combined with the design information as a single document.
- c. The design document must include a brief description of the facility and its proposed use, basis and calculations of design flow, and influent strength.
- d. The design document must contain all plan details necessary for permitting, installation and maintenance, including, but not limited to:
 - i. Assumptions and calculations for each component, including total dynamic head (TDH) and gallons per minute (GPM) for all dosing systems;
 - ii. A fixed, non-degradable temporary or permanent benchmark, (North America Vertical Datum or assumed elevation is acceptable);
 - iii. A scale drawing showing location of each OWTS component and distances to water supplies, surface water, physical and health impact features on both the subject and adjacent properties requiring setbacks;
 - iv. Layout of soil treatment area, dimensions of trenches or beds, distribution method and equipment, distribution boxes, drop boxes, valves, or other components used;

- v. Elevation or depth of infiltrative surface of the soil treatment area, the septic tank invert, and all other components of the OWTS;
- vi. Special structural design considerations, as applicable to ensure the long-term integrity of each component;
- vii. References to design manuals or other technical materials used;
- viii. Installation procedures, as applicable;
- ix. Operation and maintenance manuals or instructions; and
- x. Other information that may be useful such as photos and cross-section drawings.