

STATEMENT OF WORK

Watering Facility

CODE 614

DESIGN

Deliverables:

1. Design documentation that demonstrates that the criteria in the NRCS conservation practice standard have been met and are compatible with other planned and applied practices. Include:
 - a. Identification of client needs, documentation of discussion with client, and a recommended method of resolution.
 - b. Practice purpose(s) as identified in the conservation plan.
 - c. Location of planned practice installation shown on a farm or ranch plan map.
 - d. List of required permits to be obtained by the client along with other participant (client) responsibilities (Reference Form CO-ENG-13, Notification of Participant Responsibilities).
 - e. Impacts on adjacent properties and structures.
 - f. Certification of compliance with NRCS national and state utility safety policy (NEM Part 503 - Safety, Subpart A - Engineering Activities Affecting Utilities, 503.0 through 503.6).
 - g. Practice standard criteria-related computations and analyses to develop plans and specifications including but not limited to:
 - i. Capacity
 - ii. Materials
 - iii. Climatic Considerations (e.g. freezing)
2. Written plans and specifications, including sketches and drawings, that adequately describe the requirements to install the practice and to obtain necessary permits. All applicable State and Federal (OSHA) safety requirements shall be addressed in the plans and specifications where appropriate.
3. Design Report as appropriate (NEM Part 511 - Design, Subpart B - Documentation, 511.10 and 511.11).
4. Quality Assurance Plan (NEM Part 512 - Construction, Subpart D - Quality Assurance Activities, 512.30 through 512.33, where appropriate, to include, but not limited to, the following items:
 - a. General description of work
 - b. Items of work requiring inspection or testing
 - c. Timing of inspections or tests
 - d. Skills or certifications required by inspectors
4. Operation and Maintenance Plan.
5. Certification that the design meets NRCS standards and specifications and is in compliance with applicable laws and regulations (NEM Part 505 - Non-NRCS Engineering Services, Subpart A - Introduction, 505.0 and 505.3). For jobs completed by NRCS employees, affix the approval signature of the individual with delegated engineering job approval authority to the drawings. For jobs completed by non-NRCS employees, affix a Colorado Professional Engineer's seal to design and construction documents, when required by state laws and
6. Itemized cost estimate and list of materials.
7. Design modifications during installation as required.

INSTALLATION

Deliverables

1. Pre-installation conference with client and contractor. (Reference Form CO-ENG-13, Notification of Participant Responsibilities).
2. Verification that client has obtained required permits.
3. Staking and layout according to plans and specifications including applicable layout notes.
4. Installation inspection.

- a. Actual materials used (NEM Part 512 - Construction, Subpart C – Evaluation of Construction Materials, 512.20 through 512.23; Subpart D - Quality Assurance Activities, 512.33).
 - b. Inspection records
 - c. Document compliance with Quality Assurance Plan.
5. Facilitate and implement required design modifications with client and original designer.
 6. Advise client/NRCS on compliance issues with all federal, state, tribal, and local laws, regulations and NRCS policies during installation.
 7. Certification that the installation process and materials meets design and permit requirements (NEM Subpart A, 505.03(c) (1)). Form CO-ENG-1 may be used for this certification.

CHECK OUT

Deliverables

1. As-Built documentation.
 - a. Extent of practice units applied
 - b. “Red-line” drawings (NEM Part 512, Construction, Subpart F – As-builts, 512.50 through 512.52)
 - c. Final quantities
2. Certification that the installation meets NRCS standards and specifications and is in compliance with permits (NEM Part 505 – Non-NRCS Engineering Services, Subpart A - Introduction, 505.3). Form CO-ENG-12 may be used for this certification.
3. Progress reporting.

REFERENCES

- NRCS Field Office Technical Guide (eFOTG), Section IV, Conservation Practice Standard – Watering Facility, 614.
- CO-ENG Forms: eFOTG Section IV, Tools
- NRCS National Engineering Manual (NEM)
- NRCS National Environmental Compliance Handbook
- NRCS Cultural Resources Handbook