

STATEMENT OF WORK
Diversion (362)
Oklahoma

These deliverables apply to this individual practice. For other planned practice deliverables refer to those specific Statements of Work.

DESIGN

Deliverables:

1. Design documentation that will demonstrate that the criteria in the NRCS practice standard have been met and are compatible with other planned and applied practices
 - a. Practice purpose(s) as identified in the conservation plan
 - b. List of required permits to be obtained by the client
 - c. Compliance with NRCS national and state utility safety policy (National Engineering Manual (NEM) Part 503-Safety, Subpart A - Engineering Activities Affecting Utilities 503.00 through 503.06 and NEM Oklahoma Supplement Part 503-Safety, Subpart A - Engineering Activities Affecting Utilities, OK503.02)
 - Oklahoma engineering worksheet *OK-ENG-45 Utilities Inventory Form* will be used to document utilities.
 - d. Practice standard criteria related computations and analyses to develop plans and specifications including but not limited to:
 - i. Survey notes which show that a thorough and detailed site survey was completed
 - A plot of the survey data shall be maintained in the file attached to or documented on the appropriate design worksheet or equivalent (*OK-ENG-04, OK-ENG-04a, OK-ENG-04b*)
 - ii. Hydrology/Hydraulics
 - Drainage area
 - Rainfall and runoff volumes
 - Elevation-storage volume relationships (level blocked)
 - Earthfill and excavation quantities
 - Add additional volume of extra fills or channel cuts where applicable
 - Volume will be computed to the nearest cubic yard
 - iii. Outlet condition, capacity and stability documentation
 - iv. Vegetation requirements
 - See Critical Area Planting 342 Statement of Work
 - v. Environmental Considerations (NRCS-CPA-52)
2. Written plans and specifications including sketches and/or drawings shall be provided to the client that adequately describes the requirements to install the practice and obtain necessary permits
 - Oklahoma standard drawing *OK-DWG-503 Diversion* or equivalent will be used for all gradient diversion terraces designed in Oklahoma
 - Oklahoma standard drawing *OK-DWG-503a* or equivalent will be used for all level blocked diversion terraces designed in Oklahoma
3. Design Report and Inspection Plan as appropriate (NEM Part 511, Subpart B Documentation, 511.11 and Part 512, Subpart D Quality Assurance Activities, 512.30 through 512.32)
4. Certification that the design meets practice standard criteria and comply with applicable laws and regulations will be signed by an employee with appropriate approval authority for design assigned on Form OK-ENG-1 or OK-ENG-1 (NEM Subpart A, 505.3)
 - Oklahoma engineering worksheet *OK-ENG-04 Diversion Data Sheet, OK-ENG-04a Level Blocked Diversion Data Sheet or OK-ENG-04b Cropland Diversion Data Sheet* or equivalent will be used to document diversion terrace design data and information
5. Operation and Maintenance Plan
6. Design modifications during installation as required

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INSTALLATION

Deliverables

1. Documentation of pre-Installation conference with client and contractor
2. Verification that client has obtained required permits
3. Staking and layout according to plans and specifications including applicable layout notes
4. Installation inspection (according to inspection plan as appropriate)
 - a. Actual materials used
 - b. Maintaining a job diary with dates and record of inspections made, testing completed, instructions provided to the contractor, etc., to document compliance with standards and specifications. Documenting in the assistance notes in the plan is acceptable up to and including engineering job class V
5. Facilitate, implement and document required design modifications with client, original designer and funding agency
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

CHECK OUT

Deliverables

1. Supporting documentation
 - a. Completed job diary or assistance notes documenting inspections made, testing completed, materials used, etc.
 - b. Survey notes for layout, inspections, and final checkout documenting compliance with standards and specifications
 - i. Layout survey
 - Establish the alignment referenced to a temporary bench mark
 - Set temporary markers such as flags or stakes along the alignment of the terrace channel
 - Maximum spacing between temporary markers should not exceed 100 feet
 - Identify the required cut or fill on each marker as appropriate
 - ii. Construction checks and inspections as needed to insure installation is in compliance with standards and specifications
 - iii. Final checkout survey
 - Profile the entire channel and ridge recording the profile of the channel and ridge for the entire length of the terrace
 - Cross section the weakest section(s) of the diversion terrace. Do not select a fill section. The cross section shall extend from normal ground above the diversion channel to normal ground below the diversion ridge
 - The freeboard will be measured below the elevation at which the diversion has the designed top width, and the datum line shall be set at the base of the freeboard. The required cross sectional area of channel shall be below the datum
 - The constructed length will be measured by chain, wheel, or other methods of accurate measurement to the nearest one foot, unless length is measured by these means during layout and no changes were made during construction

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- If minor cuts or fills are needed to complete the diversion, show on the profile the section needing additional work. Initial and date when the work has been done
 - Show any pertinent remarks on vegetation needs, outlets, etc.
 - Document on *Oklahoma engineering worksheet OK-ENG-04 Diversion Data Sheet, OK-ENG-04a Level Blocked Diversion Data Sheet or OK-ENG-04b Cropland Diversion Data Sheet* or equivalent
- c. As-built drawings with changes from the original drawing clearly shown
- d. Extent of practice units applied and location identified on a map
- e. Vegetation certification or schedule documented on OK-ECS-04 – Vegetative Data Worksheet
- f. Final quantities
2. Certification that the installation meets NRCS standards and specifications and is in compliance with permits will be signed by an employee with appropriate approval authority for construction assigned on Form OK-ENG-1, OK-ENG-1 a, or by special letter. (NEM Subpart A, 505.39(c)(1)) Document on *Oklahoma engineering worksheet OK-ENG-04 Diversion Data Sheet, OK-ENG-04a Level Blocked Diversion Data Sheet, OK-ENG-04b Cropland Diversion Data Sheet, Oklahoma Standard Drawing OK-DWG-503, Oklahoma Standard Drawing OK-DWG-503a* or equivalent
3. Progress reporting

REFERENCES

- NRCS Field Office Technical Guide (eFOTG), Section IV, Conservation Practice Standard - Diversion, 362
- NRCS National Engineering Manual (NEM)
- NRCS National Engineering Handbook, Part 650 – Engineering Field Handbook, Chapter 9 - Diversions
- NRCS National Environmental Compliance Handbook
- NRCS Cultural Resources Handbook