

STATEMENT OF WORK
Irrigation Pipeline (430)
Wyoming

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

Items that are marked **(TSP or Non-NRCS Engineer)** need to be completed only if design is provided by a TSP or Non-NRCS Engineer. Items that are marked **(NRCS Employee)** need to be completed only if design is provided by an NRCS Employee. All other items are required by all designers.

DESIGN

Deliverables and Documentation Requirements:

1. Design Surveys
 - a. Profile along centerline of conveyance.
 - b. Cross sections at critical locations.
 - c. Detailed topography at structure locations.
 - d. Pertinent water surface elevations.
 - e. Soils investigation.
2. Design documentation that will demonstrate that the criteria in 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. Verify with the Field Office conservation planner that all concerns under the National Environmental Policy Act (NEPA) and the National Historic Preservation Act (NHPA) have been adequately addressed.
 - d. 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)
 - e. Practice standard criteria related computations and analyses to develop plans and specifications including but not limited to:
 - i. Capacity
 - ii. Hydraulics and Appurtenance Design
 - iii. Structural design (pipe and structures).
 - iv. Pipeline design (consideration of internal pressure and external loading).
 - v. Trench and Backfill Requirements
 - vi. Materials
 - vii. Vegetation
 - viii. Quantity computations.
3. Written plans and specifications including sketches and drawings shall be provided to the client that adequately describes the requirements to install the practice and obtain necessary permits including but not limited to:
 - a. Plan view of the layout of the pipeline and area to be served.
 - b. Location map with legal description and north arrow.
 - c. Profile of the irrigation pipeline showing ground surface and pipeline design grade(s).
 - d. Pipe material, size, and class or pressure rating.
 - e. Pipe joint requirements.
 - f. Locations and details for pipe inlet and outlet structures and control structures, if needed.
 - g. Locations and details for all appurtenances.
 - h. Locations and specifications for all thrust blocks.
 - i. Depth of cover and backfill requirements including special requirements for pipe bedding.
 - j. Site specific construction specifications that describe in writing the installation of the irrigation pipeline. Include the specification for pressure testing of the irrigation pipeline.
 - k. Table of quantities.
 - l. Disposal requirements for excess soil material.
 - m. Vegetative establishment requirements.
 - n. Cooperator's signature of review and acceptance to construct the irrigation pipeline according to the plans and specifications.
4. Design Report as appropriate (NEM Part 511, Subpart B Documentation, 511.10 and 511.11).
5. Quality Assurance Plan (NEM Part 512 – Construction, Subpart D – Quality Assurance Activities, 512.30 through 512.33).
6. Operation and Maintenance Plan

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7. Certification that the design meets practice standard criteria and comply with applicable laws and regulations (NEM Part 505 – Non-NRCS Engineering Services, Subpart A – Introduction, - 505.0 and 505.3). **(TSP or Non-NRCS Engineer)**
8. Engineering job classification is shown and proper engineering approval is obtained. **(NRCS Employee)**
9. Design modifications during installation as required.

INSTALLATION

Deliverables and Documentation Requirements

1. 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.
 - a. Centerline alignment stakes with offset grade stakes.
 - b. Appurtenance locations.
 - c. Structure layout, alignment and reference stakes.
 - d. Verify with the Field Office conservation planner that the location of the staked practice is within the original scope of the practice and is still in compliance with the National Environmental Policy Act (NEPA) and the National Historic Preservation Act (NHPA).
4. Installation inspection (according to inspection plan as appropriate).
 - a. Actual materials used (NEM Part 512, - Construction, Subpart C – Evaluation of Construction Materials, 512.20 through 512.33; 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.

CHECK OUT

Deliverables

1. As-Built documentation.
 - a. Extent of practice units applied
 - i. Pipeline grade(s).
 - ii. Adequacy of bedding and backfill.
 - iii. Depth of cover over pipe.
 - iv. Pipe diameters, lengths, and class or pressure rating.
 - v. Size and location of appurtenances and thrust blocks.
 - vi. Dimensions and elevation of structures.
 - vii. Results of pressure test if required.
 - b. Drawings
 - 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). **(TSP or Non-NRCS Engineer)**
3. Statement of compliance signed by NRCS personnel with applicable job approval authority that the work meets the plans and specifications. **(NRCS Employee)**
4. Progress reporting.

REFERENCES

- NRCS Field Office Technical Guide (eFOTG), Section IV, Conservation Practice Standard - Irrigation Pipeline, 430
- NRCS National Engineering Manual (NEM).
- NRCS National Environmental Compliance Handbook
- NRCS Cultural Resources Handbook