

**STATEMENT OF WORK**  
Grade Stabilization Structure (410)  
Iowa

**These deliverables are the minimum requirements that apply to this individual practice. For other planned practice deliverables refer to those specific Statements of Work.**

## **DESIGN**

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### **Deliverables:**

1. Conduct a pre-design meeting with client.
2. Survey notes which show that a thorough and detailed site survey was completed.
  - a. Survey notes shall be in accordance with NRCS Technical Release 62, Engineering Field Handbook, Chapter 1 and/or standard industry practice.
    - i. Channel Profile.
    - ii. Cross – Sections.
  - b. If survey equipment with automatic / electronic data collection devices is used, a print out of the data or an electronic copy, on a nonvolatile media (CD), shall be included in the file.
  - c. Rod Readings or Elevations shall be referenced to a bench mark. A temporary bench mark is acceptable. Examples of a TBM could be a nail in a post, the top of a post, or a wooden hub in the ground.
3. Design documents that demonstrate criteria in practice standard have been met and are compatible with planned and applied practices.
  - a. Practice purpose(s) as identified in the conservation plan.
  - b. NEPA requirements have been met and documented on the IA CPA52 (i.e. cultural resources and T&E species).
  - c. Documentation that adequate land rights have been obtained if needed.
  - d. List of required permits to be obtained by the client, including, but not limited to the following for embankment structures:
    - i. Iowa DNR Storage Permit (Iowa Administrative Code 567-51.2):
      1. A dam with permanent storage of 18 acre feet or more of water;
    - ii. Iowa DNR Construction Permit (Iowa Administrative Code 567-71.3):
      1. Any dam designed to provide a sum of permanent and temporary storage exceeding 50 acre-feet at the top of dam elevation or
      2. Any dam designed to provide a sum of permanent and temporary storage exceeding 25 acre-feet if the dam does not have an auxiliary spillway and has a height of 5 feet or more; or
      3. A dam providing permanent storage of 18 acre-feet or more and overall height of 5 feet or more; or
      4. Any dam across a stream draining more than 10 square miles.
      5. Any dam located within 1 mile of an incorporated municipality, if the dam has a height of 10 feet or more, stores 10 acre-feet or more at the top of dam elevation, and is situated such that the discharge from the dam will flow through the incorporated area.
    - iii. U.S. Army Corps of Engineers Section 404 permit. See Regional Permit 33 for guidance.
  - e. List of facilitating practices.
  - f. Compliance with NRCS national and state utility safety policy (NEM Part 503 – Safety, Subpart A – Engineering Activities Affecting Utilities, Section 503.00 through 503.22 and NEM 503.06).
    - i. A note on the drawings stating that the contractor is responsible for calling Iowa One Call at 1-800-292-8989 at least 48 hours prior to beginning any excavation work.
  - g. Practice standard substantiating data, computations, and analyses to develop plans and specifications including but not limited to:
    - i. Geology and Soil Mechanics (NEM Part 531 – Geology, Subpart 531A)
    - ii. Hydrology/Hydraulics
    - iii. Structural
    - iv. Hazard Class, as appropriate
    - v. Environmental Considerations
    - vi. Erosion Control/Seeding Plan

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- vii. Safety Considerations (NEM Part 503-Safety, Subpart A, 503.10 through 503.12)
4. Written plans and specifications (location map, plan view, profiles, cross-sections, and details) shall be provided to the client that adequately describes the requirements to install the practice and obtain necessary permits.
  - a. IA-5 Pollution Control Construction Specification is to be included on all projects.
  - b. Bill of Materials and Itemized Cost Estimate.
5. Design Report and Inspection Plan as appropriate (NEM Part 511, Subpart B Design Documentation, 511.11 and Part 512, Subpart D Quality Assurance Activities, 512.30 through 512.32).
  - a. The design report shall include, but not be limited to the following: summary of project objectives, site assessment, and design documentation from item 3 listed above.
  - b. The inspection plan must describe the type and frequency of testing, items requiring inspection, the documentation required, and the qualifications of the person doing the work.
6. Operation and maintenance plan.
7. Provide an anticipated installation schedule.
8. All design documentation is shown as checked.
9. Engineering job class is shown on the drawings.
10. Certification that the design meets practice standard criteria and complies with applicable laws and regulations (NEM Subpart A, 505.3) or approved by an employee with the appropriate delegated engineering job approval authority (NEM Subpart A, 501).
11. Design modifications required during installation are properly documented.

## **INSTALLATION**

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### **Deliverables**

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.
4. Installation inspection documented in the case file.
  - a. Actual materials used.
  - b. Inspection records.
  - c. Maintain a job diary with the dates and record of inspections made, testing completed, instruction provided to the contractor, etc., to document compliance with standards and specifications.
5. Facilitate and implement required design modifications with client, original designer, and permitting and funding agencies.
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).

## **CHECK OUT**

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### **Deliverables**

1. Survey for Checkout.
  - a. Cross Sections.
2. As-built documentation (450-GM, IA407).
  - a. Extent of practice units applied.
  - b. Drawings with changes from the original construction plans clearly shown.
  - c. Materials documentation including final quantities
  - d. Testing reports
  - e. Maintain survey and construction notes for layout, inspections, and final checkout documenting compliance with standards and specifications.
3. Certification that the practice meets NRCS standards and specifications and is in compliance with permits (NEM Part 505, Non-NRCS Engineering Services, 505.03).
4. Submission of completed NRCS Form IA-ENG-40 to the State Conservation Engineer for dams meeting the following criteria for embankment structures:

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- a. Dams with more than 6 feet in overall embankment height and with a storage capacity of 50 acre-feet or more;
5. Dams with an overall embankment height of 25 feet or more and a storage capacity of more than 15 acre-feet.
6. Progress reporting.

**REFERENCES**

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- Field Office Technical Guide (eFOTG), Section IV, Conservation Practice Standard – Grade Stabilization Structure, 410.
- NRCS National Engineering Manual (NEM)
- NRCS National Environmental Compliance Handbook
- NRCS Cultural Resources Handbook
- Engineering Field Handbook
- NRCS Technical Release 60, Earth Dams and Reservoirs

**STATE CONTACT**

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