

**ILLINOIS STATEMENT OF WORK
GRADE STABILIZATION STRUCTURE (410)**

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

DESIGN

Deliverables:

1. Provide design documentation demonstrating compliance with the criteria in NRCS practice standard and compatibility with other planned and applied practices.
 - a. Identify practice purpose(s) in accordance with the conservation plan
 - b. Provide a list of required permits to be obtained by the client
 - c. Assure compliance with NRCS national and state utility safety policy (NEM Part 503-Safety, Subpart A - Engineering Activities Affecting Utilities 503.00 through 503.06)
 - d. Provide practice standard criteria related computations and analyses to develop plans and specifications including but not limited to:
 - i. Hazard Class (NEM Part 520; Subpart C-Dams)
 - ii. Geology and Soil Mechanics (NEM Part 531-Geology; NEM Part 533 – Soil Engineering)
 - iii. Hydrology/Hydraulics (NEM Part 530-Hydrology), including but not limited to:
 1. Drainage area, runoff curve number, watershed slope and hydraulic length
 2. Runoff hydrologic analysis
 3. Design storm requirements
 4. Principal and auxiliary spillway hydraulics
 5. Stage-storage and flood routing, if applicable
 - iv. Structural (NEM Part 536-Structural Design)
 - v. Design Survey
 1. Field survey notes must conform to NEM Part 540 and present legible, clear and concise data. Include a hard copy of the raw data and reduced survey if using an electronic data collector.
 2. Include temporary benchmark elevations, descriptions, and locations.
 - vi. Vegetation
 - vii. Environmental Considerations
 - viii. Safety Considerations (NEM Part 503-Safety, Subpart A, 503.10 through 503.12)
2. Provide written plans and specifications, including sketches and drawings, to the client that adequately describes the requirements to install the practice and obtain necessary permits, including but not limited to:
 - a. Location map with legal description
 - b. Plan view drawing, to scale, showing the location of the practice to be constructed, along with relevant benchmark elevations and descriptions. Include borrow and spoil areas as needed.
 - c. Profile and cross section of embankment, including relevant constructed elevations (example – top of dam, auxiliary spillway, pipe inlet, etc.)
 - d. Detail drawings of structure and appurtenances
 - e. Construction and material specifications, including vegetative establishment
 - f. Construction notes as needed to clarify components and provide directions for installation
 - g. Utility safety statement requiring notification of the Illinois One-Call System prior to construction.
 - h. Additional notes as necessary to identify avoidance and protection areas and boundaries associated with cultural resources, threatened or endangered species, or other resources needing temporary protection during installation.
 - i. Signature/initials and date for design and design check. Design check to be completed by an individual other than the designer.

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3. Provide Design Report and Quality Assurance Plan as appropriate (NEM Part 511, Subpart B Documentation, 511.11 and Part 512-Construction, Subpart D-Quality Assurance Activities, 512.30 through 512.32).
4. Provide Operation and Maintenance Plan developed in accordance with the requirements of IL NRCS Conservation Practice Standard 410, Grade Stabilization Structure.
5. Provide certification that the design meets practice standard criteria and complies with applicable laws and regulations (NEM Part 501- Authorizations, Subpart A-Review and Approval, 501.3).
6. Provide design modifications during installation as required.

INSTALLATION

Deliverables

1. Conduct a preconstruction conference with client and contractor(NEM Part 512, Subpart B, IL 512.13(d)).
2. Verify that client has obtained required permits.
3. Stake and layout the practice according to plans and specifications, including applicable layout notes.
4. Provide quality assurance of installation (according to Quality Assurance plan as appropriate).
 - a. Actual materials used (Part 512, Subchapter D Quality Assurance Activities, 512.33)
 - b. Quality Assurance records
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. Provide certification that the installation process and materials meets design and permit requirements.

CHECK OUT

Deliverables

1. Provide as-Built documentation.
 - a. Extent of practice units applied
 - b. Documentation of materials installed (i.e. concrete tickets, seed tags, etc.)
 - c. As-built plan is required when a significant change in design occurs during construction or when the job is designated Class V or higher. Identify "As Built" on plan. Superimpose changes on the as-built plan using a different color or otherwise clearly differentiating the as-built dimensions.
 - d. For practices not requiring an as-built plan, survey notes documenting critical dimensions, elevations, and materials are sufficient.
 - e. Final quantities
2. Provide certification that the installation meets NRCS standards and specifications and complies with permits (NEM Part 501-Authorizations, Subpart A-Review and Approval, 501.3).
3. Report progress.

REFERENCES

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