

STATEMENT OF WORK Aquatic Organism Passage (396) Vermont

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

DESIGN

Deliverables:

- 1. 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. 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. Practice standard criteria related computations and analyses to develop plans and specifications including but not limited to:
 - i. Hydrology/Hydraulics
 - ii. Structural
 - iii. Environmental Considerations (GM 190 ECS-Part 410.22)
- 2. 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...
- 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. Operation and Maintenance Plan
- 5. Certification that the design meets practice standard criteria and comply with applicable laws and regulations (NEM Subpart A, 505.03 (a) (3)).
- 6. Design modifications during installation as required.

INSTALLATION

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 (according to inspection plan as appropriate).
 - a. Actual materials used (Part 512, Subchapter D Quality Assurance Activities, 512.33)
 - b. Inspection 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. 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

- b. Drawings
- c. Final quantities
- 2. Certification that the installation meets NRCS standards and specifications and is in compliance with permits (NEM Subpart A, 505.03 (c) (1)).
- 3. Progress reporting.

REFERENCES

- <u>Aquatic Nuisance Species Information.</u> 2006. (per Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 [16 U.S.C. 4701]).
- Bell, M.C. 1990. Fisheries Handbook of Engineering Requirements and Biological Criteria. United States Army Corps of Engineers, Fish Passage Development and Evaluation Program, Portland, OR. 290 p.
- Clay, C.H. 1995. Design of Fishways and Other Fish Facilities. Second Edition. CRC Press, Inc. Boca Raton, FL. 248 pp.
- Jungwirth, M., S. Schmutz, and S. Weiss, editors. 1998. Fish Migration and Fish Bypasses. Fishing News Books, Oxford, UK. 438 pp.
- NRCS. 2006. Fish passage and screening designs. Technical Supplement 14-N to NEH-654 Stream Restoration Design Handbook.
- Taylor, R.N. and M. Love. 2003. <u>Fish passage evaluation at stream crossings</u>. Part IX in: California Stream Habitat Restoration Manual, 3rd edition, 1998. Prepared by G. Flosi, S. Downie, J. Hopelain, M. Bird, R. Coey, and B. Collins. Sacramento, CA. 100 electronic pp.
- United States Forest Service (USFS). 2006. Low water crossings: Geomorphic, biological, and engineering design considerations. 0625 1808, SDTDC, San Dimas, CA.
- USFS. 2008. Stream Simulation: An ecological approach to providing passage for aquatic organisms at roadstream crossings. 0877 1801P, NTDP, San Dimas, CA.
- Washington Department of Fish and Wildlife (WDFW). 2000. <u>Fishway guidelines for Washington State</u>. Olympia, WA. 57 pp.
- WDFW. 2000. <u>Fish passage barrier and surface water diversion screening and prioritization manual</u>. WDFW Habitat Program, Environmental Restoration Division, Salmon Screening, Habitat Enhancement and Restoration Section, Olympia, WA. 158 pp.