Iowa Department of Natural Resources Manchester Fish Management Area, Delaware County 24-03-28-02 Fisheries-Manchester FMU-Spring Branch 319 Project Project Description:

Work consists of clearing and grubbing along stream and east of existing structure. Streambank reshaping and rock revetment. Removal of existing ag fence and installing new ag fence. Removing and installing new CMP. Grading for drainage.

GENERAL NOTES:

Verify actual locations and elevations with DNR Engineer.

2 week notification required for construction staking and tree flagging.

No work on holidays. Approval may be allowed per the Iowa DNR Engineer.

All work shall conform to and be performed in accordance with all applicable codes and ordinances

The contractor shall visit the site and inspect the project area and thoroughly familiarize themselves with the actual job conditions prior to bidding and start of work. Failure to visit the project site shall not relieve contractor from performing the work in accordance to the plans, specifications, special provisions and contract.

The contractor shall verify, at the site, all dimension and conditions shown on the plans and shall notify the DNR Engineer of any discrepancies, omissions, and/or conflicts prior to proceeding with the work.

It shall be the contractor's responsibility to provide waste areas or disposal sites for excess material (excavated material or broken asphalt/concrete) which is not desirable to be incorporated into the work involved on this project. No material shall be placed within the right-of-way, unless specifically stated in the plans or approved by the DNR Engineer.

The contractor shall not disturb desirable grass areas or desirable trees outside the construction limits. The contractor shall not be permitted to park or service vehicles and equipment or use these areas for storage of materials. Storage, parking and service areas will be subject to the approval of the DNR Engineer.

Where utilities and fixtures are encountered within the construction area, it shall be the responsibility of the contractor to notify DNR Engineer of those utilities prior to the beginning of any construction. No claims for additional compensation will be allowed to the contractor for any interference or delay.

| Estimated Project Quantities | | | |
|------------------------------|------------------------------------|------|-------|
| ITEM NO. | ITEM | UNIT | TOTAL |
| 1 | Mobilization | L.S. | 1 |
| 2 | Safety Fence | L.F. | 250 |
| 3 | Ag Fence Demolition | L.F. | 1200 |
| 4 | Ag Fence Installation | L.F. | 1200 |
| 5 | Clearing and Grubbing | Acre | 0.7 |
| 6 | Bank Reshaping-Class 10 Excavation | C.Y. | 575 |
| 7 | Class E Revetment | Tons | 375 |
| 8 | Top Soil-Remove and Place | C.Y. | 150 |
| 9 | Remove and Dispose-12 Inch CMP | L.S. | 1 |
| 10 | Install 24 Inch CMP | L.F. | 15 |
| 11 | SWPPP Preparation and Management | L.S. | 1 |
| 12 | 9 Inch Filter Sock Installation | L.F. | 2500 |
| 13 | 9 Inch Filter Sock Removal | L.F. | 2500 |
| 14 | Seeding, Fertilizer and Mulching | Acre | 0.95 |

| Estimate Reference Information | | | |
|--------------------------------|--|--|--|
| ITEM No. | DESCRIPTION | | |
| 2 | Place Protective Snow Fence around 0.2-acre Historic Site location for duration of project | | |
| 3 | Remove 1200' of existing perimeter barbed fencing including posts, wire, and bracing (save two existing 16' hanging gates). | | |
| 4 | Grade "earthen hump" under existing fence-line to flat slope. Install 1200' of 5 barb fence with 3 and 1 layout. Install and brace two 16' hanging gates (recycle existing gates) at existing location. | | |
| 5 | Clear and grub trees and understory from 0.65 acres along east and west bank of Spring Branch Creek. Contractor is responsible for tree and stump removal from the project location. Trees are predominately small (3-6 diameter) boxelder, silver maple, cottonwood, and black locust with one large (18-22 DBH) cottonwood present. Understory is predominately honeysuckle, black raspberry, gooseberry, and elderberry. | | |
| | Remove eight standing "hazard trees" from around "spring house" ranging in size from 10 – 34 inch DBH. Contractor is responsible for tree removal from the project location. DNR is responsible to marking hazard trees. Stump removal is not required for hazard trees. | | |
| 6,7 | Install stone toe protection (Class B revetment stone) along 315' of the east streambank of Spring Branch Creek sloped at 4:1 on 5' vertical (toe to top of bank) streambank. Rock quantity = 315'-long x 13'-wide x 2'-thick = 300 cubic yards or about 375 Tons of rock (1.2 tons/foot). Terminal elevation of rock revetment will be approximately 3.0' above the water surface elevation at this location (rock does not extend to top of bank). Note: about 75 tons of existing stone on streambank will be recycled. Friable topsoil from project location will be backfilled over stone revetment and graded to allow seeding with prairie seed mix provided by lowa DNR. | | |
| | Slope 260' of west streambank of Spring Branch Creek to 3:1 slope from 1' above water surface elevation to top of bank (about 12'). Grade west bank with friable topsoil from the project location to allow seeding with prairie seed mix. | | |
| 8 | Grade approximately 0.15-acre vegetative buffer including 0.08-acres excavation (cut) at 1'-1.5' thickness (-150 cubic yards) and 0.7 acres fill (+ 150 cubic yards). Cut and fill areas will be marked by DNR construction services. Cut will be graded to allow water drainage (water should not pond). | | |
| 9,10 | Replace 1'-diameter by 15'-long corrugated metal pipe at downstream end of vegetative buffer and replace with 2'-diameter by 15' long corrugated metal pipe. Approximately 1/3 of pipe diameter will be placed under earthen grade elevation. | | |
| | | | |

Seed and straw mulch approximately 0.94 acres of disturbed area with native prairie seed and cover crop seed provided to the contractor by Iowa DNR. Seeding rate will be 15 pounds PLS/acre of prairie seed and 50 pounds/acre oats (or equivalent).

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