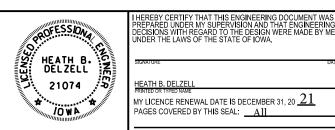
IOWA DEPARTMENT OF NATURAL RESOURCES

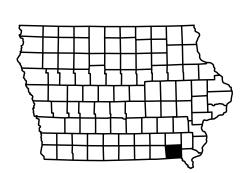
CONSTRUCTION DOCUMENTS FOR LAKE SUGEMA WMA JETTY AND SHORELINE REPAIRS

VAN BUREN COUNTY, IOWA

PROJECT # 20-06-89-02



| DIRECTORY | | | | | |
|-----------------|------------------------|-------------------|------------------------|--------------------------------------|--|
| PROJECT MANAGER | | | CONSTRUCTION INSPECTOR | | |
| COMPANY | IOWA DEPARTMENT OF | NATURAL RESOURCES | COMPANY | IOWA DEPARTMENT OF NATURAL RESOURCES | |
| ADDRESS | 502 EAST 9TH STREET | | ADDRESS | | |
| CITY,STATE,ZIP | DES MOINES, IA, 50319 | | CITY,STATE,ZIP | | |
| CONTACT | TROY DUFF | | CONTACT | MIKE DUFOE | |
| TELEPHONE | 515-250-3715 | | TELEPHONE | 515-985-9196 | |
| FAX | 515-725-8458 | | FAX | | |
| EMAIL | troy.duff@dnr.iowa.gov | | EMAIL | michael.dufoe@dnr.iowa.gov | |



PROJECT DESCRIPTION

This project consists of repairing wind and wave erosion to 10 fishing jetties and 950 feet of shore ine at 5 sites by placing revetment on the side slopes, crushed rock surfacing on the tops of the jetties, and other incidental work as required by the DNR Field Engineer.



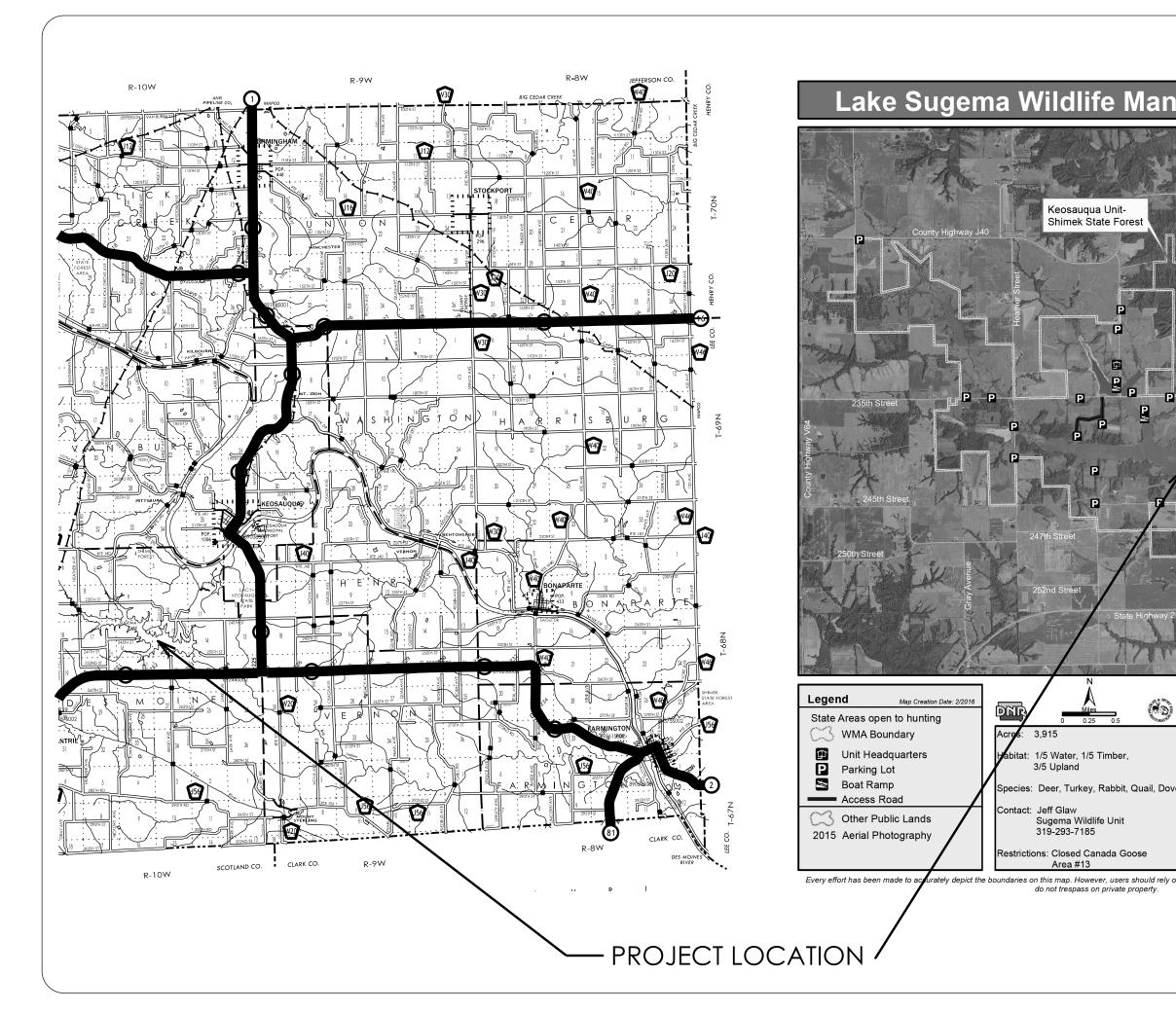
AUTHORIZATION TO BID

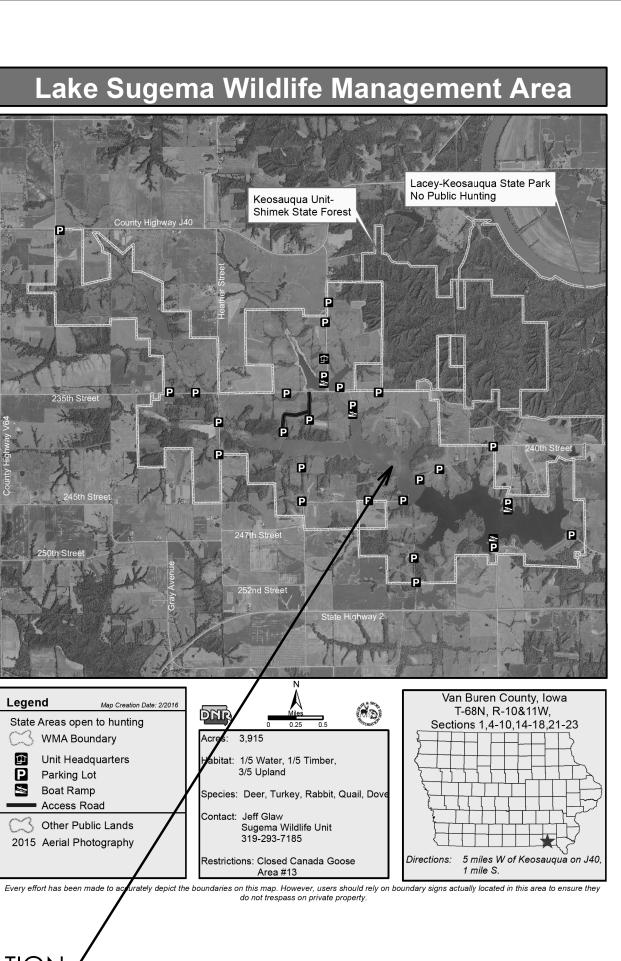
| AUTHORIZATION - PARKS WILDLIFE FISHERIES LAW ENFORCEMENT FORESTRY | DATE |
|---|------|

| ENGINEERING | BUREAU | CHIE |
|-------------|--------|------|

DATE

| | SHEET INDEX | | | | | |
|--------------------------------------|--|-------------|-------------------------------|----------------------------------|--|--|
| A.01 A.02 B.01 C.01 D.01 | COVER SHEET LOCATION MAP TYPICAL SECTIONS AND DETAILS QUANTITIES AND GENERAL INFORMATION SITE PLAN | CONSULTANT: | | | | |
| | | | IOWA DEPARTMENT OF | NATURAL RESOURCES | ENGINEERING SERVICES - WALLACE BUILING | 502 E. YIH SI., DES MOINES, IA 503 19-0034 |
| | | | | | | |
| | | | | JETTY AND SHORELINE REPAIRS FOR: | LAKE SUGEMA WMA | VAN BUREN COUNTY |
| | | | BY DATE WN BY: D BY: | PROJECT I 20-06- DATE: | NUMBER: | |



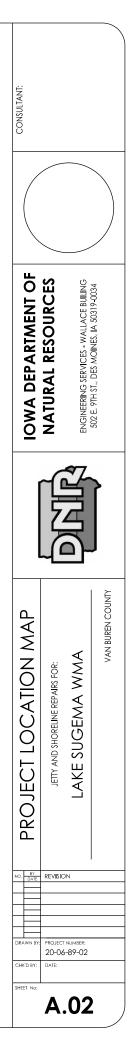


Keosauqua Unit-

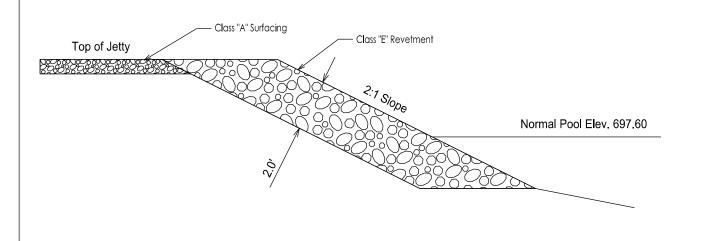
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Area #13

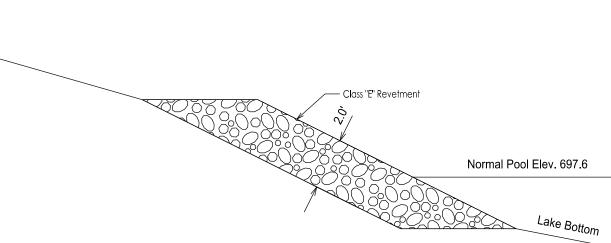


| Jetty No. | Repair Length | Height | Class 'E' Revetment | Class 'A' Surfacing |
|-----------|------------------|--------|------------------------|------------------------|
| 1 | 75' | 5' | 101 Tons | 20 Tons |
| 2 | 40' | 5' | 54 Tons | 15 Tons |
| 3 | 65' | 5' | 87 Tons | 15 Tons |
| 4 | 35' | 5' | 47 Tons | 10 Tons |
| 5 | 120' | 5' | 161 Tons | 15 Tons |
| 6 | 85' | 5' | 114 Tons | 20 Tons |
| 7 | 140' | 5' | 188 Tons | 15 Tons |
| 8 | 180' | 5' | 242 Tons | 20 Tons |
| 9 | 130' | 5' | 175 Tons | 15 Tons |
| 10 | 55' | 5' | 74 Tons | 15 Tons |



Notes:

- 1. Partial disassembly and re-assembly of barrier cables for access at jetties 2, 3, 4, and 5 incidental to Class "E" Revetment.
- 2. Trimming of trees and brush for access is incidental to Class "E" Revetment.
- 3. Seeding, fertilizing, and mulching to include all disturbed areas. Seeding mixture to be fine lawns.
- 4. Materials allocated for a site or jetty may be reallocated to another site or jetty at the DNR Field Engineer's discretion.
- 5. See sheet D.01 for Jetty locations.



| Shoreline Site | Repair Length | Height | Class 'E' Revetment |
|----------------|------------------|--------|---------------------|
| А | 170' | 3' | 137 Tons |
| В | 120' | 5' | 161 Tons |
| С | 360' | 5' | 484 Tons |
| D | 120' | 3' | 97 Tons |
| E | 180' | 4' | 193 Tons |

Notes:

 Any clearing and grubbing for access or placement of revetment shall be incidental to Class "E" Revetment.
 Target slope for revetment is 2:1, but may be adjusted by DNR Field Engineer due to site conditions. Any grading necessary for placement of revetment shall be incidental to Class "E" Revetment.
 Seeding, fertilizing, and mulching to include all disturbed areas. Seeding mixture to be rural mix.

5. See sheet D.01 for shoreline site locations.

6. Contractor must avoid guy lines, anchors, and any utilities at Shoreline Site B.

| CONSULTANT: | | | |
|------------------------------|----------------------------------|--|--|
| | | | |
| IOWA DEPARTMENT OF | NATURAL RESOURCES | ENGINEERING SERVICES - WALLACE BUILING | 302 E. YITI 31., LES MOINES, IA 30317-0034 |
| | | | |
| TYPICAL SECTIONS AND DETAILS | JETTY AND SHORELINE REPAIRS FOR: | LAKE SUGEMA WMA | VAN BUREN COUNTY |
| NO. BY DATE | | | |
| NO: BY DATE | PROJECT 20-06 DATE: | NUMBER: | |

ESTIMATED PROJECT QUANTITIES

| ITEM NO. | ITEM | UNIT | TOTAL |
|----------|-----------------------------------|------|-------|
| 1 | Mobilization | L.S. | 1 |
| 2 | Revetment, Class "E" | Tons | 2,315 |
| 3 | Class "A" Crushed Stone Surfacing | Tons | 160 |
| 4 | Site Restoration | L.S. | 1 |
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| | ESTIMATE REFERENCE INFORMATION | | |

 ITEM NO.
 DESCRIPTION

 2
 A. Contractor shall place revetment on jetties as directed by DNR Field Engineer. B. Partial disassembly and re-assembly of barrier cables for access at jetties 2, 3, 4, and 5 shall be incidental to this bid item. C. Trimming of trees and brush for access shall be incidental to this bid item.

3 A. Class 'A' crushed stone shall be placed as directed by DNR Field Engineer.

4 A. Site restoration to include seeding, fertilizing and mulching of all disturbed areas as directed by DNR Field Engineer.

GENERAL NOTES

Verify actual locations and elevations with DNR Engineer.

All work shall conform to and be performed in accordance with al ordinances.

The contractor shall visit the site and inspect the project area and themselves with the actual job conditions prior to bidding and the visit the project site shall not relieve the contractor from performing to the plans, specification, special provisions and contract.

The contractor shall verify, at the site, all dimensions and condition shall notify the DNR Engineer of any discrepancies, omissions, and, proceeding with the work.

It shall be the contractor's responsibility to provide waste areas or material (excavated material or broken concrete) which is not desi into the work involved on this project. No payment for overhaul w hauled to these sites. No material shall be placed within the rightstated in the plans or approved by the DNR Engineer.

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

Where utilities and fixtures are shown as Existing on the plans or e construction area, it shall be the responsibility of the contractor to of those utilities prior to the beginning of any construction. The co access to these facilities for necessary modification of services. Un structures and utilities have been plotted from available surveys ar their locations must be considered approximate only. It is possible existence of which is presently not known or shown. It is the contracter determine their existence and exact location and to avoid damage additional compensation will be allowed to the contractor for any i caused by such work.

The contractor shall shape graded area to maintain surface drainage finish grade.

The contractor is expected to have materials, equipment, and labor to install and maintain erosion control features on the project. Th fence, rock ditch checks, silt basins or silt dikes.

| | ANT: |
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| | CONSULTANT |
| II applicable codes and | 0 |
| I thoroughly familiarize | |
| e start of work. Failure to ing the work in accordance | |
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| ons shown on the plans and | |
| d/or conflicts prior to | ш. |
| r disposal sites for excess | OWA DEPARTMENT OF NATURAL RESOURCES ENGINEERING SERVICES - WALLACE BUILING 502 E. 9TH ST., DES MOINES, IA 50319-0034 |
| sirable to be incorporated will be allowed for material | IEN UR 50319 |
| t-of-way, unless specifically | |
| | OWA DEPARTMENT O NATURAL RESOURCES ENGINERING SERVICES - WALLACE BUILING 502 E. 9TH ST., DES MOINES, IA 50319-2034 |
| le trees outside the or service vehicles and | DE JRA IRAG SE RING SE |
| parking and service areas | OWA DEP NATURAL ENGINEERING SERVI 502 E. 9TH ST., DES |
| encountered within the | |
| o notify the DNR Engineer contractor shall be afforded | |
| Inderground facilities, | |
| and records and therefore le there may be others, the | 74 |
| tractor's responsibility to e thereto. No claims for | |
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| age. All elevations are to | FORMATIO |
| or available on a daily basis | QUANTITIES AND GENERAL INFORMA Jetty and shoreline repairs for: LAKE SUGEMA WMA van buren co |
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| | DRAWN BY: PROJECT NUMBER: 20-06-89-02 CHK/D BY: DATE: |
| | CHK'D BY: DATE: SHEET NO: |
| | C.01 |
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