

WATER PERMIT NO. 5732-3

Phone: 773-3391

Name of Applicant: South Dakota Department of Game, Fish and Parks

Post Office Address: 523 E Capitol, Pierre SD 57501

Amount of Water Claimed: 75 ac-ft Total Acres: NA

Source of Water Supply: tributaries of Red Iron Lake

Water to be used for: fish & wildlife enhancement County: Marshall

About 12 miles west of Sisseton

PRIORITY Date Received: 11-13-92 Fee: NA Remarks: _____

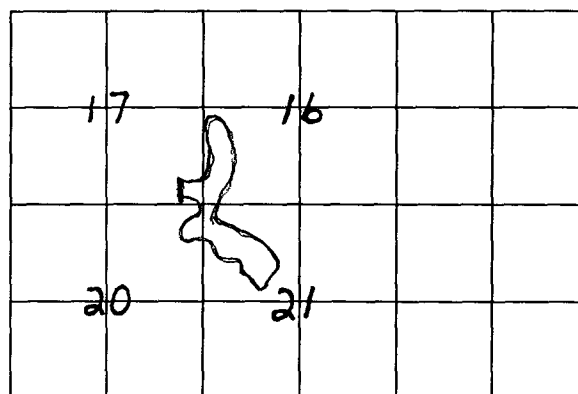
Corrected Application Received: 12-11-92 Period of Annual Use: Jan 1 - Dec 31

WATER QUALITY APPROVAL RECEIVED: NA APPROVED/CONDITIONAL (Circle one)

WI-1 Description same as Application YES ____ NO ____ REMARKS: _____

Diversion Point: SE 1/4 SE 1/4 Sec 17-T126N-R53W

Land to be Irrigated: _____



Well Log: Driller: _____ Licensed YES ____ NO ____

Depth of Well: _____ REMARKS: _____

Type of Map: topo PREPARED BY: Tim Olson Reviewed and the Number

Assigned on: 12-11-92 By: Karen Schlaak

SEP 17 1992

Mail to: Water Rights Div.
523 E. Capitol
Pierre, SD 57501
(605) 773-3352
 No. 5732-3 Hydrologic Unit 10160010
 Map No. _____ Basin James River
 Newspaper The Britton Journal, Box 69, Britton

57430-0069

Application For Permit To Appropriate Water Within The State Of South Dakota
 Use of water: Industrial ☐ Commercial ☐ Municipal ☐ Other Common Distribution System ☐
 Water System ☐ Suburban Housing ☐ Geothermal Heat ☐ Institutional ☐ Recreational ☐
 Domestic ☐ (above 18gpm) Other ☒

Type of Application: Check one or more of the following

New ☒ Vested Right ☐ Future Use ☐ Change Use ☐☐ Amend Permit No. _____ with old priority date retainedChange diversion point(s) ☐ Add diversion point(s) ☐ Other ☐ _____☐ Application to: Change diversion point(s) ☐ Add diversion point(s) ☐ on Permit No. _____☐ Construction to use water reserved by Future Use Permit No. _____1. Name of Applicant South Dakota Dept. of Game, Fish and Parks Phone No. 773-3391Post Office Address 523 East Capitol Pierre State SD 57501
(Street, RR or Box) (City) Zip Code2. Amount of water claimed (c.f.s) 75 acre-feet Full Storage Level to maintain water level
at 1838.0 feet msl3. Source of water supply Unnamed tributaries of Red Iron Lake4. Location of point of diversion SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 17, T. 126 N., R. 53 W.Water Impounded: W $\frac{1}{2}$ SW $\frac{1}{4}$ Sec 16; NW $\frac{1}{4}$ Sec 21; NE $\frac{1}{4}$ NE $\frac{1}{4}$
Sec 20; all in T126N-R53W County Marshall5. Counties where water will be used Marshall6. Annual period during which water is to be used January 1 - December 31

7. Give a brief description of proposed project. When available include any preliminary engineering report or other reports or information that will help explain the project. (Attach sheet if more space is needed)

SDGFP and US Fish and Wildlife Service would like to enhance an existing wetland by placing a embankment/stop log weir in flowage. Structure would allow agencies to manipulate water levels to control desirable and undesirable vegetation.

Attachments: (1) Attach Form 2A if diversion from a well or dugout, or if storage of water, is proposed. Attach map (see instruction)

STATE OF SOUTH DAKOTA)
County of DeWitt) ssI, Richard Beringson the applicant, certify that I have read this application, have examined the attached map and that the matters stated are true and that I intend, and am able to complete the necessary construction.Signed Richard BeringsonSubscribed and sworn to before me this 13th day of November 1992Sandra K. Kumm
Notary Public

**SOUTH DAKOTA
WATER PERMIT NO. 5732-3**

Date of first receipt of application November 13, 1992.

Date of return to applicant for corrections, amendments or changes November 16, 1992.

Date of receipt of corrected application December 11, 1992.

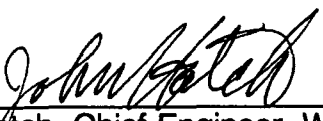
The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 5732-3 to South Dakota Department of Game, Fish and Parks, 523 E Capitol, Pierre SD 57501 authorizing the construction of the water use system and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 5732-3 is to impound 75 acre-feet of water in an existing wetland. The dam site is to be located in the SE 1/4 SE 1/4 Section 17 and water will be impounded in portions of the W 1/2 SW 1/4 Section 16; SE 1/4 SE 1/4 Section 17; NW 1/4 Section 21 and NE 1/4 NE 1/4 Section 20; all in T126N-R53W. Water is to be stored annually to an approximate elevation of 1834 feet mean sea level.
2. The water appropriated shall be used for the purpose of providing habitat for fish and wildlife production and may not exceed the amount of water needed for beneficial use for fish and wildlife production purposes.
3. The water is to be used during the following described annual period: January 1 - December 31.
4. The date of approval of Permit No. 5732-3 is March 3, 1993.
5. The date from which applicant may claim right is November 13, 1992.
6. One-fifth of the construction is to be completed on or before September 3, 1995.
7. All construction is to be completed on or before March 3, 1998.
8. Water is to be put to beneficial use on or before March 3, 2002.
9. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATION

Approval of Water Permit No. 5732-3 authorizes storage of up to 75 acre-feet of water annually.

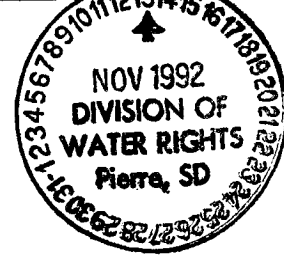
WATER MANAGEMENT BOARD

By: 
John Hatch, Chief Engineer, Water Rights Division
Department of Environment and Natural Resources

MAR 11 1993
date

Supplemental Information

(type or print in ink)



1. Well Information - Proposed construction

- a) Drill Hole Diameter _____ Depth _____
- b) Casing Type _____ Diameter _____ Thickness _____
- c) Screen Type _____ Diameter _____ Thickness _____
- d) Gravel Pack Thickness _____ Length of Gravel Pack _____
- e) Depth to Top of Water Bearing Material _____
- f) Depth to Water (ground surface to water level) _____
- g) Distance to nearest existing domestic well: _____
- On applicants property _____ On property owned by others _____

2. Dugout Information Estimates

- a) Surface Dimensions _____ Depth _____
- b) Depth to water (ground surface to water level) _____

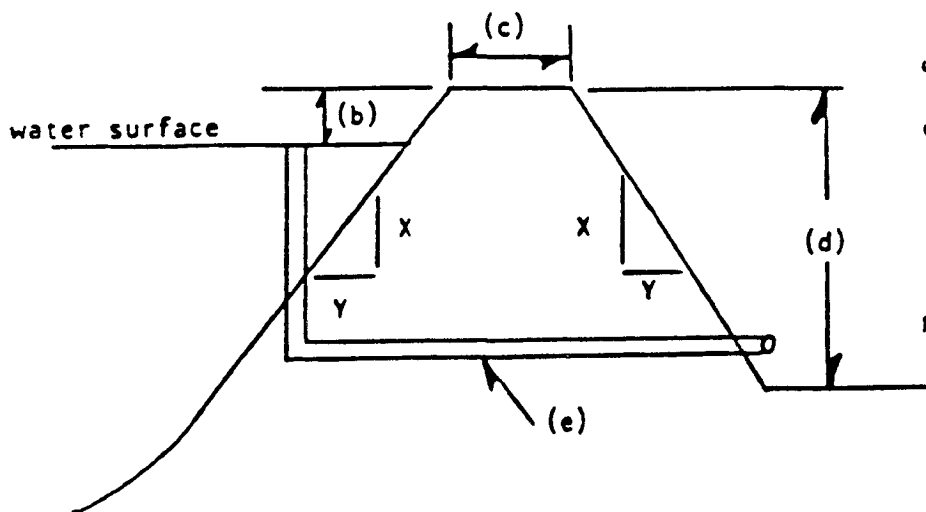
3. Water Storage Dams

If the proposed water use system contains one or more storage dams, please furnish the information requested below. The locations of each dam should be shown on the map submitted with the application.

- a) If a private engineering firm or government agency was involved in the design of this dam please give their name and address

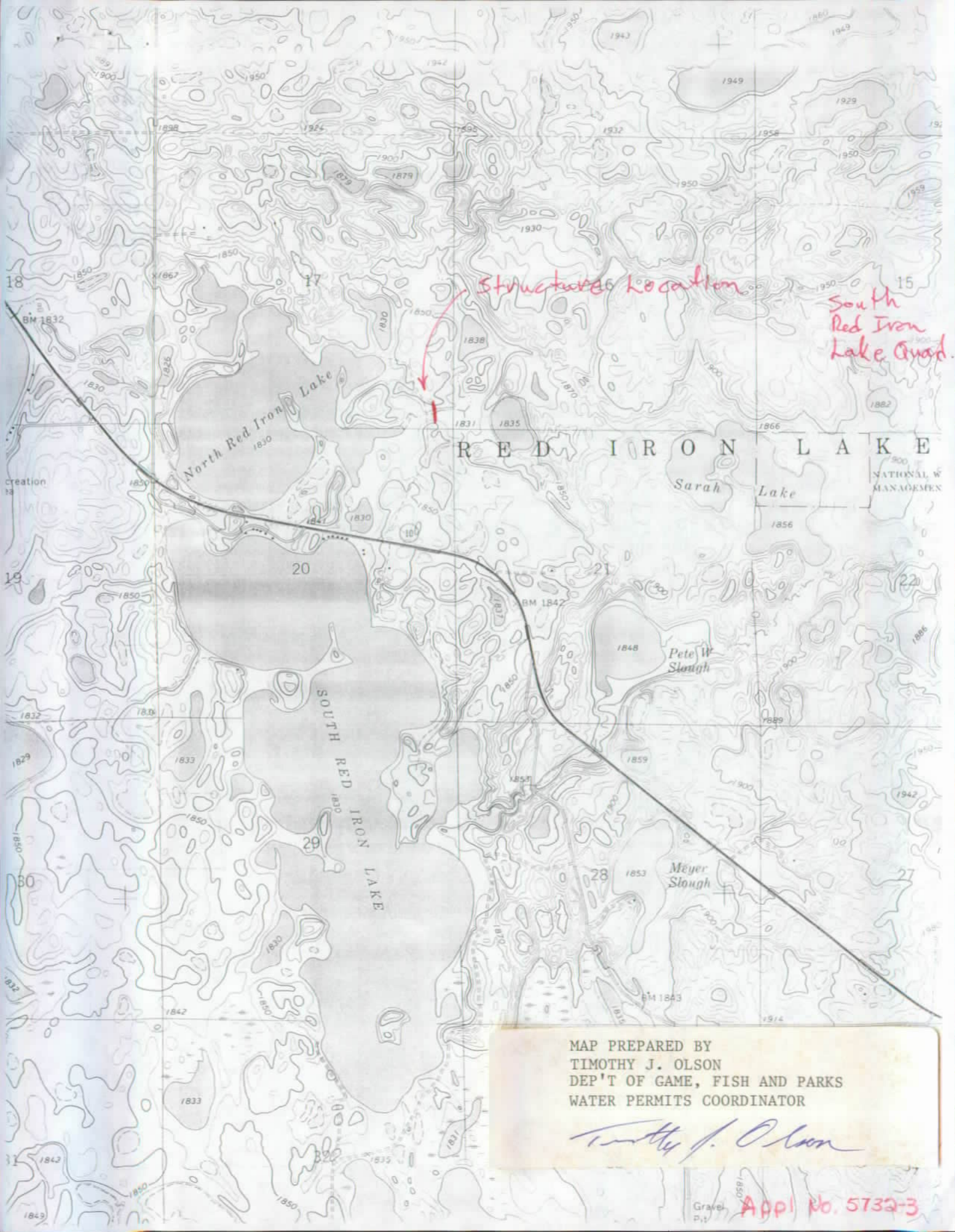
Ducks Unlimited Inc.
6115 East Main
Bismarck, North Dakota 58501

- b) Freeboard 2.44 feet
- c) Crest Width 12 feet
Crest Length 205 feet
- d) Height 8.5 feet
- e) Primary Outlet Capacity _____
If Pipe, diameter 48 inches
- f) Secondary Spillway Capacity _____
Spillway width 44 feet
- g) X & Y Slope
Upstream 1:3
Downstream 1:3



Surface Area of Impoundment 45.0
Storage 75.0 acre feet
Drainage area above dam 1440

Signature of Applicant _____



Structure Location

South Red Iron Lake Quad.

RED IRON LAKE

North Red Iron Lake

Sarah Lake

NATIONAL WILDLIFE MANAGEMENT

SOUTH RED IRON LAKE

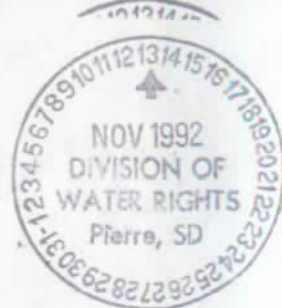
Pete W Slough

Meyer Slough

MAP PREPARED BY
TIMOTHY J. OLSON
DEPT OF GAME, FISH AND PARKS
WATER PERMITS COORDINATOR

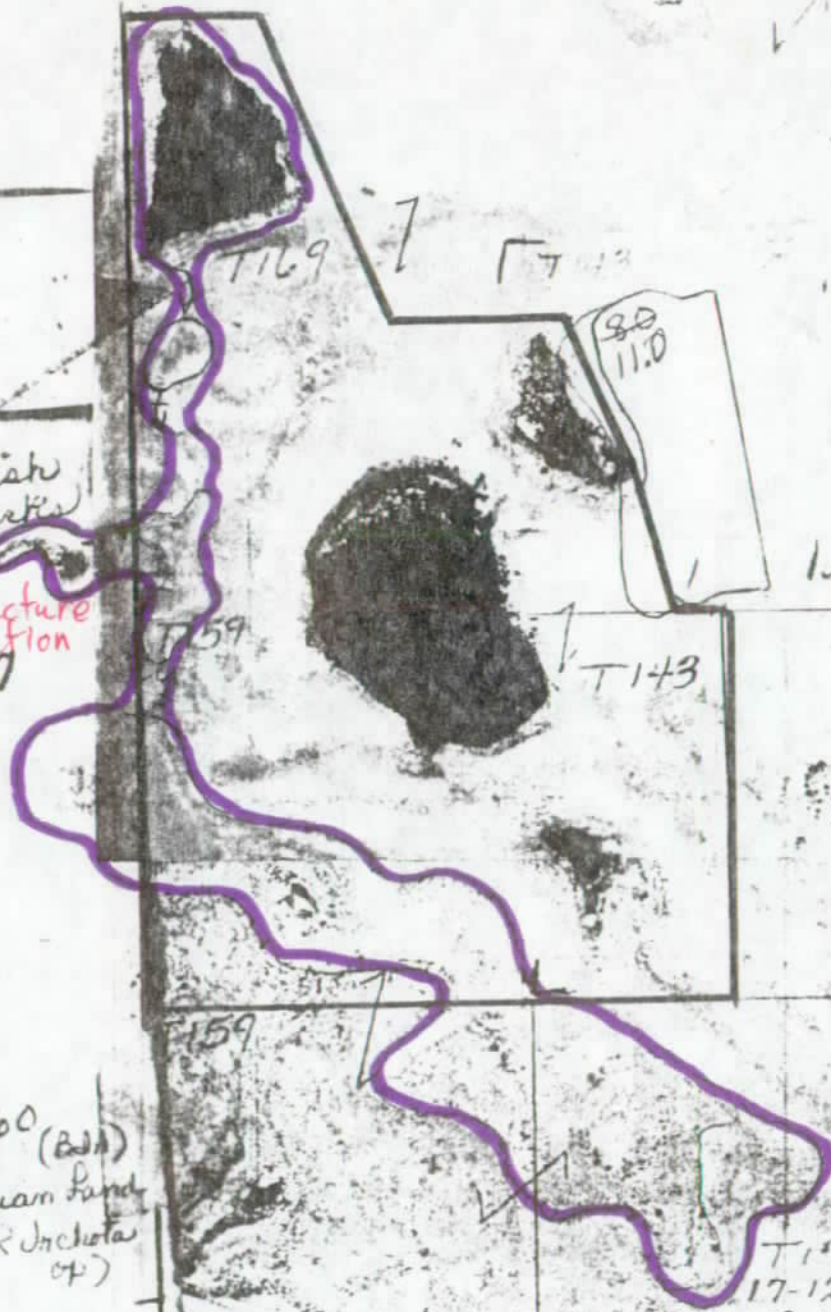
Timothy J. Olson

Gravel
Appl No. 5732-3



LE

5-144
Game, Fish
& Parks
126-53
T160
135R-E17
Structure
Location



120-53

130R-E18

HEL

T160
17-119 (BIA)
Indian Land
(John K. Inchelet
op)

T139
17-170
BIA

21

17-5
water
filling
4

T3020
T116
17-167
Indian
Land
BIA

MAP PREPARED BY
TIMOTHY J. OLSON
DEP'T OF GAME, FISH AND PARKS
WATER PERMITS COORDINATOR

Timothy J. Olson

T122
17-129
BIA

Red Iron Lake Project

WE AGREEMENT NO.
SD-64590-90-327
DCN: 64590-0-0128
64120 1120 6B \$260.00

WILDLIFE EXTENSION AGREEMENT

THIS AGREEMENT DATED March 30, 1990 BETWEEN Shirley E. Johnson
WILDLIFE COOPERATOR(S), AND THE U.S. FISH AND WILDLIFE SERVICE (FWS) IS ENTERED INTO PURSUANT TO
AUTHORITY CONTAINED IN SECTION 1 OF THE FISH AND WILDLIFE COORDINATION ACT, 16 U.S.C. 661 AND SECTION
7 OF THE FISH AND WILDLIFE ACT OF 1956, 16 U.S.C. 742(a)(4).

Shirley E. Johnson Box 317 Sisseton, South Dakota 57262

HEREBY AGREE TO OR PARTICIPATE WITH THE FWS IN CONDUCTING CERTAIN WILDLIFE MANAGEMENT PRACTICES
ON LANDS OWNED BY THEM IN Marshall COUNTY, STATE OF SD DESCRIBED AS FOLLOWS:

S $\frac{1}{2}$ NW $\frac{1}{4}$ of Section 21 located in T. 126 N., R. 53 W. 5th P.M.

THE WILDLIFE COOPERATORS IN SIGNING THIS AGREEMENT JOIN AS PARTICIPANTS IN A WILDLIFE MANAGEMENT
PROGRAM AND GRANT TO THE FWS THE AUTHORITY TO COMPLETE WILDLIFE HABITAT DEVELOPMENT, OR TO
PERSONALLY CARRY OUT WILDLIFE MANAGEMENT ACTIVITIES WITH FINANCIAL OR MATERIAL SUPPORT, AS
DESCRIBED IN THE ATTACHED SPECIAL PROVISIONS (EXHIBIT A). ANY DONATION OF SUPPLIES OR EQUIPMENT, OR
DIRECT PAYMENT FROM THE FWS TO THE WILDLIFE COOPERATORS FOR CARRYING OUT THE WILDLIFE HABITAT
DEVELOPMENTS, ARE ALSO INCLUDED IN THE ATTACHED SPECIAL PROVISIONS (EXHIBIT A).

THE TERMS OF THIS AGREEMENT WILL BE FOR 10 YEARS BEGINNING March 30, 1990, AND ENDING
Sept. 30, 1999. PAYMENT AS APPROPRIATE WILL BE MADE AS DESCRIBED AND AGREED TO IN EXHIBIT A.

THIS AGREEMENT MAY BE MODIFIED AT ANY TIME BY MUTUAL WRITTEN CONSENT. IT MAY ALSO BE TERMINATED IN
WRITING BY EITHER PARTY THIRTY (30) DAYS IN ADVANCE. IF TERMINATED BY THE COOPERATOR, COOPERATOR
WILL REIMBURSE FWS FOR THE COST OF THE WILDLIFE HABITAT DEVELOPMENTS. IF THIS AGREEMENT IS
TERMINATED IN WRITING BY THE FWS, THEN FWS MAY AT ITS OPTION REMOVE ANY WILDLIFE DEVELOPMENTS
PLACED ON THE LAND.

AT THE END OF THE TERM, THE WILDLIFE HABITAT DEVELOPMENT WILL BECOME THE PROPERTY OF THE WILDLIFE
COOPERATOR.

THE FWS DOES NOT ASSUME JURISDICTION OVER THE PREMISES BY THIS AGREEMENT. THE WILDLIFE COOPERATOR
RETAINS ALL RIGHTS TO CONTROL TRESPASS AND RETAINS ALL RESPONSIBILITY FOR TAXES, ASSESSMENTS, AND
DAMAGE CLAIMS.

THE FWS, ITS AGENTS, OR ASSIGNEES RESERVE THE RIGHT TO ENTER THE LAND AT REASONABLE TIMES FOR
WILDLIFE HABITAT DEVELOPMENT AND MANAGEMENT PURPOSES AND TO INSPECT COMPLETED WORK.

THE SERVICE ASSUMES NO LIABILITY FOR DAMAGE OR INJURY OTHER THAN THAT CAUSED BY ITS OWN
NEGLIGENCE, ON THE ABOVE ACREAGE.

SPECIFIC WORK COMPLETED WILL BE DOCUMENTED ON EXHIBIT A.

A CHANGE IN OWNERSHIP SHALL NOT CHANGE THE TERMS OF THIS AGREEMENT. THE AGREEMENT AND TERMS
SHALL BE IN EFFECT ON THE DESCRIBED LAND FOR THE PERIOD OF THE AGREEMENT. THE WILDLIFE COOPERATOR
WILL NOTIFY THE FWS OF PLANNED OR PENDING CHANGES IN OWNERSHIP.



March 16, 1993

AT THE END OF THIS AGREEMENT, THE COOPERATOR ASSUMES FULL AND COMPLETE RESPONSIBILITY FOR ALL WILDLIFE HABITAT DEVELOPMENTS MADE DURING THIS AGREEMENT ON THE PROJECT TRACT. THERE SHALL BE NO OBLIGATION TO ANY OF THE AGENCIES OF THE AGREEMENT AFTER THE TERM OF THE AGREEMENT HAS EXPIRED.

THE LANDOWNER WILL BE RESPONSIBLE FOR SECURING ANY NECESSARY PERMITS. TECHNICAL ADVICE AND SUPPORT WILL BE PROVIDED BY PARTICIPATING AGENCIES IN THE APPLICATION FOR THE PERMIT.

THE FWS IS PROHIBITED BY LAW FROM MAKING OBLIGATIONS THAT EXCEED AVAILABLE FUNDS AND, THEREFORE, THE FWS CAN DO ONLY THAT WORK WHICH IS FUNDED. IN THE EVENT FUNDS ARE NOT AVAILABLE TO DO THE WILDLIFE HABITAT DEVELOPMENT WORK WITHIN THE PERIOD OF TIME OR IN THE MANNER PRESCRIBED IN THE SPECIAL PROVISIONS, THE FWS WILL ADVISE THE WILDLIFE COOPERATOR OF THAT FACT.

WILDLIFE COOPERATOR GUARANTEES OWNERSHIP OF THE ABOVE-DESCRIBED LAND AND WARRANTS THAT THERE ARE NO OUTSTANDING RIGHTS WHICH INTERFERE WITH THE WILDLIFE MANAGEMENT AGREEMENT.

Shirley Johnson
WILDLIFE COOPERATOR

X 534-26-1031
SOCIAL SECURITY NUMBER*

Brian D. Kietzman
FWS, REFUGE MANAGER Bio-tech

Shirley Hall
FWS, ASSISTANT REGIONAL DIRECTOR,
REFUGES AND WILDLIFE

- **PRIVACY ACT NOTICE:** THE FWS IS REQUIRED TO OBTAIN THIS INFORMATION TO PROCESS ANY PAYMENT(S) TO THE WILDLIFE COOPERATOR AS A RESULT OF THIS AGREEMENT. THIS INFORMATION WILL BE FURNISHED TO THE INTERNAL REVENUE SERVICE AS REQUIRED BY THE TAX REFORM ACT OF 1986 AND MAY BE SHARED WITH THE DEPARTMENT OF JUSTICE FOR CRIMINAL OR CIVIL LITIGATION. FURNISHING A SOCIAL SECURITY NUMBER IS VOLUNTARY, BUT FAILURE TO DO SO MAY RESULT IN DISQUALIFICATION FROM THIS PROGRAM.

March 16, 1988

EXHIBIT A
SPECIAL PROVISIONS

The wildlife habitat developments described below are agreed to by Shirley E. Johnson and the FWS in a Wildlife Management Agreement dated March 30, 1990.

Planned work: The cooperator agrees to allow the U.S. Fish and Wildlife Service, or its designee, to place ditch plugs in wetland drainage ditches to restore wetlands (see attached map for locations of wetlands to be restored). The wildlife cooperator is responsible for reseeding of disturbed sites. The service will provide seed if so desired for disturbed sites. Upon completion of work the landowner will send an invoice to: Waubay National Wildlife Refuge, RR 1, Box 79, Waubay, SD 57273.

Itemized costs of payments, materials, supplies, completed work, and schedule of payments. (If applicable, however, any payments will be for only one fiscal year.)

Wetland restoration:

Bonus payment (\$10.00 per wetland acre restored or a minimum of \$50.00 per wetland).

Wetland No. 1: 26.0 acres-----	\$260.00
Total amount due	<u>\$260.00</u>

Completed work(as modified by mutual agreement).

WE AGREEMENT NO.

SD-64590-90-328

DCN: 64590-0-0129

64120 1120 6B \$60.00

WILDLIFE EXTENSION AGREEMENT

THIS AGREEMENT DATED March 30, 1990 BETWEEN Superintendent of Bureau of Indian Affairs WILDLIFE COOPERATOR(S), AND THE U.S. FISH AND WILDLIFE SERVICE (FWS) IS ENTERED INTO PURSUANT TO AUTHORITY CONTAINED IN SECTION 1 OF THE FISH AND WILDLIFE COORDINATION ACT, 16 U.S.C. 661 AND SECTION 7 OF THE FISH AND WILDLIFE ACT OF 1956, 16 U.S.C. 742(a)(4).

Superintendent Bureau of Indian Affairs Box 688 Agency Village, South Dakota 57262

HEREBY AGREE TO OR PARTICIPATE WITH THE FWS IN CONDUCTING CERTAIN WILDLIFE MANAGEMENT PRACTICES ON LANDS OWNED BY THEM IN Marshall COUNTY, STATE OF SD DESCRIBED AS FOLLOWS:

E $\frac{1}{2}$ NE $\frac{1}{4}$ of Section 20 located in T. 126 N., R. 53 W. 5th P.M.

THE WILDLIFE COOPERATORS IN SIGNING THIS AGREEMENT JOIN AS PARTICIPANTS IN A WILDLIFE MANAGEMENT PROGRAM AND GRANT TO THE FWS THE AUTHORITY TO COMPLETE WILDLIFE HABITAT DEVELOPMENT, OR TO PERSONALLY CARRY OUT WILDLIFE MANAGEMENT ACTIVITIES WITH FINANCIAL OR MATERIAL SUPPORT, AS DESCRIBED IN THE ATTACHED SPECIAL PROVISIONS (EXHIBIT A). ANY DONATION OF SUPPLIES OR EQUIPMENT, OR DIRECT PAYMENT FROM THE FWS TO THE WILDLIFE COOPERATORS FOR CARRYING OUT THE WILDLIFE HABITAT DEVELOPMENTS, ARE ALSO INCLUDED IN THE ATTACHED SPECIAL PROVISIONS (EXHIBIT A).

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AT THE END OF THE TERM, THE WILDLIFE HABITAT DEVELOPMENT WILL BECOME THE PROPERTY OF THE WILDLIFE COOPERATOR.

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March 16, 1990

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WILDLIFE COOPERATOR GUARANTEES OWNERSHIP OF THE ABOVE-DESCRIBED LAND AND WARRANTS THAT THERE ARE NO OUTSTANDING RIGHTS WHICH INTERFERE WITH THE WILDLIFE MANAGEMENT AGREEMENT.

X *[Signature]*
WILDLIFE COOPERATOR

X BIA-90-0197-413
SOCIAL SECURITY NUMBER*

Brian D. Kietzman
FWS, REFUGE MANAGER Bio-tech

[Signature]
FWS, ASSISTANT REGIONAL DIRECTOR,
REFUGES AND WILDLIFE

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SPECIAL PROVISIONS

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Planned work: The cooperator agrees to allow the U.S. Fish and Wildlife Service, or its designee, to place ditch plugs in wetland drainage ditches to restore wetlands (see attached map for locations of wetlands to be restored). The wildlife cooperator is responsible for reseeding of disturbed sites. The service will provide seed if so desired for disturbed sites. Upon completion of work the landowner will send an invoice to: Waubay National Wildlife Refuge, RR 1, Box 79, Waubay, SD 57273.

Itemized costs of payments, materials, supplies, completed work, and schedule of payments. (If applicable, however, any payments will be for only one fiscal year.)

Wetland restoration:

Bonus payment (\$10.00 per wetland acre restored or a minimum of \$50.00 per wetland).

Wetland No. 1:	6.0 acres-----	\$ 60.00
	Total amount due	\$ 60.00

Completed work(as modified by mutual agreement).

LE

Game, Fish, 5-14-4
Parker Game, Fish
120-53

T160 Dam
135R-E17

Bureau of
Indian
Affairs

T160 (BIA)
17-119
Indian Park
(Hunk Jackson
op)

U.S.
Fish &
Wildlife
Service

WPA

Shirley
Johnson

17-170
BIA

T3020
T3026
17-167
Indian
Land
BIA

T122
17-129

80
11.0

120-53

36R-E18

HEL

T14
17-
Lester
J. Allen

T140



DUCKS
UNLIMITED
INC.



DUCKS UNLIMITED, INC.
GREAT PLAINS REGIONAL OFFICE
6115 East Main Avenue
Bismarck, North Dakota, 58501
(701) 258-5599

September 19, 1991

Brian Kietzman
Waubay NWR
RR 1, Box 79
Waubay, SD 57273

RE: Schultz-Ringer WPA Project

Dear Brian:

I've just completed a preliminary review of the Schultz-Ringer WPA project near Lake City. Enclosed is a copy of the topographic map plotted out by our survey crew. I had instructed them to completely topo the north marshes and get a centerline profile of the south marsh on private land, which is what they did. We enlarged the USGS quadrangular map and traced the 1840.0 contour onto the topo map as shown. That provides a pretty good indication of how the south marsh lays.

Upon reviewing the topo map and discussing it with Rick Warhurst, it appears the best option would be to construct one structure at the location indicated on the map. That structure, with a full service level (FSL) at elevation 1834.0, would back water up through all of the little marsh areas to the north which consists of about 20 surface acres and also put water into the 25 acre south marsh. Another reason I like this alternative is because we can provide a better water supply for the south marsh. The watershed for the south marsh is relatively small as compared to the basin size, and with the one structure in place, we can force inflows from the north back into the south marsh. As Rick indicated to me, the south marsh will not be as deep as we would like and will probably have a fair amount of cattail areas, however, there are a few deeper holes that should provide some open water. If we were to raise the FSL on the structure, we would be putting too much water in the north marshes so we determined the 1834.0 level is probably the best alternative.

The steel sheet pile weir structure would be located on State GPA land about 70-100' east of the dirt trail that crosses the outlet channel. We would not be affecting the crossing other than that it may be useable more often after the project than it is now. I suspect either your office or our office will need to contact Jerry Streckfuss in Aberdeen to work out the approvals, who's responsible for maintenance, etc.

Brian Kietzman
September 19, 1991
Page Two

With the 20' weir in place, the following water surface elevations, inflows and outflows are predicted:

<u>EVENT</u>	<u>PEAK INFLOW</u>	<u>MAX. WATER SURFACE ELEVATION IN MARSH</u>	<u>PEAK DISCHARGE</u>
10-YR	397 CFS	1835.27	91 CFS
25-YR	555 CFS	1835.56	127 CFS
50-YR	737 CFS	1835.87	169 CFS
100-YR	907 CFS	1836.17	211 CFS

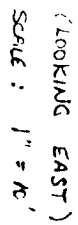
As you can see based on these predictions, the water in the farthest north marsh will bounce beyond the west WPA fence line for all of the events analyzed. It appears it could be 3-4 days from when the event starts until the water is back to elevation 1834.0. It would take about 30 hours to get back to elevation 1834.5. The affected area looks to be about 0.5 acre.

Give me a call if you wish to discuss any of this. I'll wait to hear from you before we proceed with the soils investigation or drawing up the plans. Also, I'll check with Rick on who our Site Specific Agreement (SSA) would be with. If you have any questions, please give Rick or me a call. Thanks for your help, Brian.

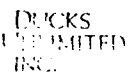
Sincerely,


Doug Lipetzky, P.E.
Regional Engineer

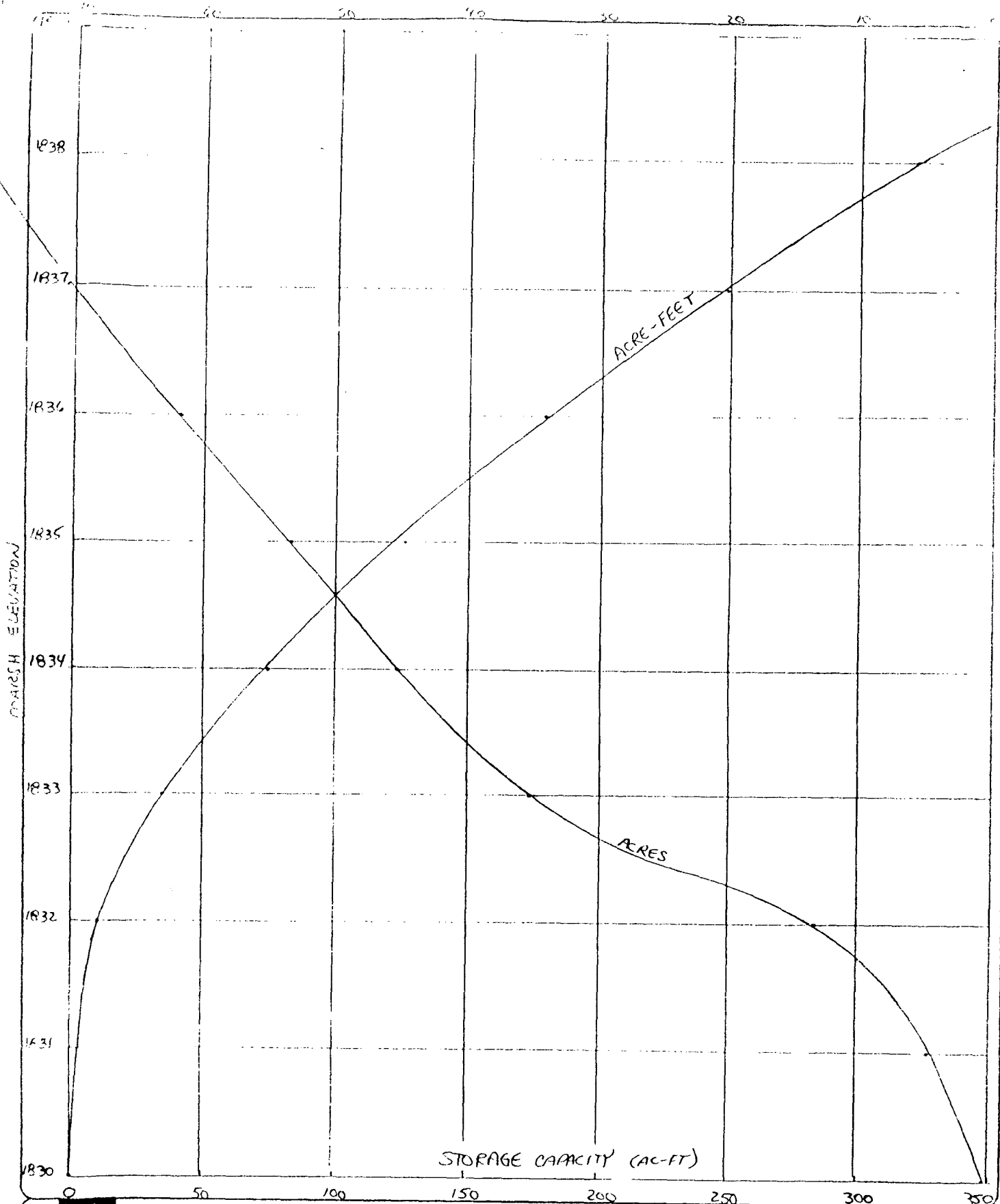
Enclosures



NOTE: STRIPLOG BAR WOULD
BE ON SOUTH SIDE
OF CHANNEL.



PROJECT: SCHULTZ - RINGER WPA
SUBJECT: PROPOSED STRUCTURE
FILE NO.: _____ DATE: 9-19-91
BY: DJL CHECKED: _____ SHEET: _____ OF: _____



DUCKS
UNLIMITED
INC.

DESIGN NOTES

PROJECT: _____
 SUBJECT: SCHULTZ - RINGER WPA "ENTIRE MARSH"
 FILE NO.: _____ DATE: 9-18-91
 BY: DJL CHECKED: _____ SHEET: _____ OF: _____



DEPARTMENT OF GAME, FISH AND PARKS

Foss Building
523 East Capitol
Pierre, South Dakota 57501-3182



November 13, 1992

Mr. John Hatch, Chief Engineer
Division of Water Rights
S.D. Department of Environment & Natural Resources
Foss Building, 523 E. Capitol
Pierre, SD 57501

Dear Mr. Hatch:

Attached is an application to appropriate water and supplemental materials for a project to store additional water along a drainage way and in a series of wetlands near North Red Iron Lake in Marshall County. The project is a joint effort between a private landowner, the U.S. Fish and Wildlife Service, the Bureau of Indian Affairs, Ducks Unlimited and Game, Fish and Parks. GF&P is applying for the water right since the structure will be located on our land.

A copy of the Wildlife Extension Agreements between the Service the cooperators are also attached.

I will forward complete plans for the structure when I receive them from Ducks Unlimited.

Thank you for your assistance on this matter and if you have any questions please call me at 773-6208.

Sincerely,

Timothy J. Olson
Water Permits Coordinator



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

November 16, 1992

Timothy J Olson
Dept. of Game, Fish and Parks
523 E Capitol
Pierre SD 57501

Dear Mr. Olson:

In regard to the two water permit applications received on November 13, 1992, the following information needs to be submitted in order to process each application.

Enclosed are the maps submitted with each application. The maps must be signed by one of the following: Registered Land Surveyor, Registered Professional Engineer or by any other government employee who normally prepares maps as a part of his assigned duties.

Regarding the application to store additional water in a series of wetlands near North Red Iron Lake, the following information is required since the height of the proposed structure is over six feet. A written preliminary risk assessment of the downstream hazard potential needs to be provided to aid in determining the hazard classification for the proposed structure. Plans and specifications will also be needed for the proposed structure.

Upon receipt of the above, further processing of the two applications will continue. If you have any questions, please contact this office.

Sincerely,

Karen Schlaak

Karen Schlaak
Natural Resources Analyst
605 773-3352

enclosure



DEPARTMENT OF GAME, FISH AND PARKS

Foss Building
523 East Capitol
Pierre, South Dakota 57501-3182

December 8, 1992

Ms. Karen Schlaak
Natural Resources Analyst
Division of Water Rights
S.D. Department of Environment & Natural Resources
Foss Building, 523 E. Capitol
Pierre, SD 57501

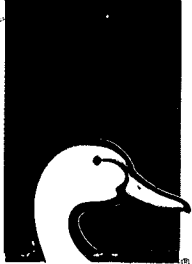
Dear Ms. Schlaak:

In response to your November 16th letter regarding the applications for water permits submitted to your office on November 13th, we submit the attached signed maps, plans and specifications for the North Red Iron Lake project and a hydrologic assessment of the North Red Iron project. This assessment addresses peak inflows and outflows into and from the project marsh as well as water elevations in the marsh during the 10, 25, 50 and 100 year runoff events. Flooding risks associated with the project should be no different than the existing natural conditions since the marsh will still discharge to North Red Iron Lake and maximum water surface elevation during the 100 year event will be approximately 1836 feet, well below any nearby structures or highways.

Please let me know if any more information is necessary for your review of these two projects. Thank you for your assistance on this matter and if you have any questions please call at 773-6208.

Sincerely,

Timothy J. Olson
Water Permits Coordinator



DUCKS
UNLIMITED
INC.



DUCKS UNLIMITED, INC.
GREAT PLAINS REGIONAL OFFICE

6115 East Main Avenue
Bismarck, North Dakota, 58501
(701) 258-5599

December 9, 1992

Tim Schaal
SD Dept. of Water & Natural Resources
Division of Water Rights
Joe Foss Building
523 East Capitol Avenue
Pierre, SD 57501

RE: Schultz-Ringer WPA Project
Marshall County

Dear Tim:

Per your request, enclosed a copy of my Design Report for the above-referenced project. A preliminary risk assessment is included in the Report. Since the structure is located on State GPA land and the outlet channel prior to entering North Red Iron Lake is entirely on the GPA, there would appear to be no danger to the public in the unlikely event of a dam failure. Also, the quantity of water stored behind the proposed dam (75 acre-feet) as compared to the quantity in North Red Iron Lake is minimal. Therefore, the risks to the public downstream of North Red Iron Lake would appear minimal.

I have also included a final, signed set of plans for the proposed project. If you have any questions or need additional information, please contact me at (701) 258-5599. Thank you.

Sincerely,

Doug Lipetzky, P.E.
Regional Engineer

cc: Tim Olson, SD Dept. of Game, Fish & Parks

Conversation or File Documentation

NAME OF PERSON OR FILE: GFP / DU Schultz - Ringer WPA ProjectADDRESS: _____ COUNTY MarshallDATE: December 9, 1992 TELEPHONE _____

RE: _____

COMMENTS:

I talked to Doug Lipetzky from Ducks Unlimited about the P's for the Schultz - Ringer WPA project in Marshall County. Told him we needed a Preliminary Risk Assessment for this project. He said he would send us a copy of his Design Report, which would include the Preliminary Risk Assessment.

File in Permit or other file as necessary. Use to document conversations and what the other party was told; why action or decision was made.

NAME: Teri Schaal



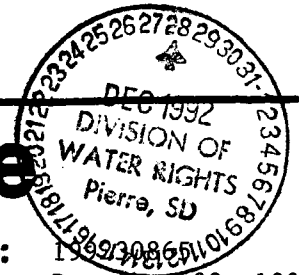
**US Army Corps
of Engineers**
Omaha District

Public Notice

Reply to:
Pierre Regulatory Branch
Federal Building, Room 317
Pierre, South Dakota 57501

Application No:
Date:
Expiration Date:

December 22, 1992
January 11, 1993



CEMRO-OP-R

SD Department of Game, Fish and Parks
Embankment/Stop Log Weir
Wetlands

21-DAY NOTICE

NOTICE OF PERMIT PENDING

The application of the South Dakota Department of Game, Fish and Parks, 523 East Capitol Avenue, Pierre, South Dakota 57501, for approval of plans and issuance of a permit under authority of the Secretary of the Army is being considered by the District Engineer, US Army Engineer District, Omaha, Nebraska.

Water Permit { The applicant requests authorization to construct an embankment/stop log weir project in a wetland near North Red Iron Lake to hold water. The project is located in the wetlands in Sections 16, 17, 20 and 21, Township 126 North, Range 53 West, Marshall County, South Dakota.

The proposed project will consist of excavation of earth material from a near by hill side, deposition and compaction of the material in/across the wetland in the form of an embankment (eight and one-half (8½ or 8.5) foot height, twelve (12) foot crest width and two hundred five (205) foot crest length) and construction of the stop log weir (concrete water control structure) in the embankment. The project is designed to produce an optimum wetland water surface area of forty-five (45) acres with allowance for stop log water level control and overflow. The project plans include the lining of the weir channel with a layer of rock/riprap.

The purpose of the project is to enhance existing wetlands by construction of a control structure that would allow the manipulation/management of water levels within the wetlands.

Certification that the proposed project will not violate applicable water quality standards has been requested from the Regional Administrator, US Environmental Protection Agency, Region VIII, One Denver Place, Suite 1300, 999 - 18th Street, Denver, Colorado.

In compliance with the Endangered Species Act, our review indicates that the proposed activity will not affect species designated as threatened or endangered pursuant to the Endangered Species Act or their critical habitat.

The decision whether to issue a permit will be based on an evaluation of the probable impacts including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposals must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the activity will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food production, and, in general the needs and welfare of the people.

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

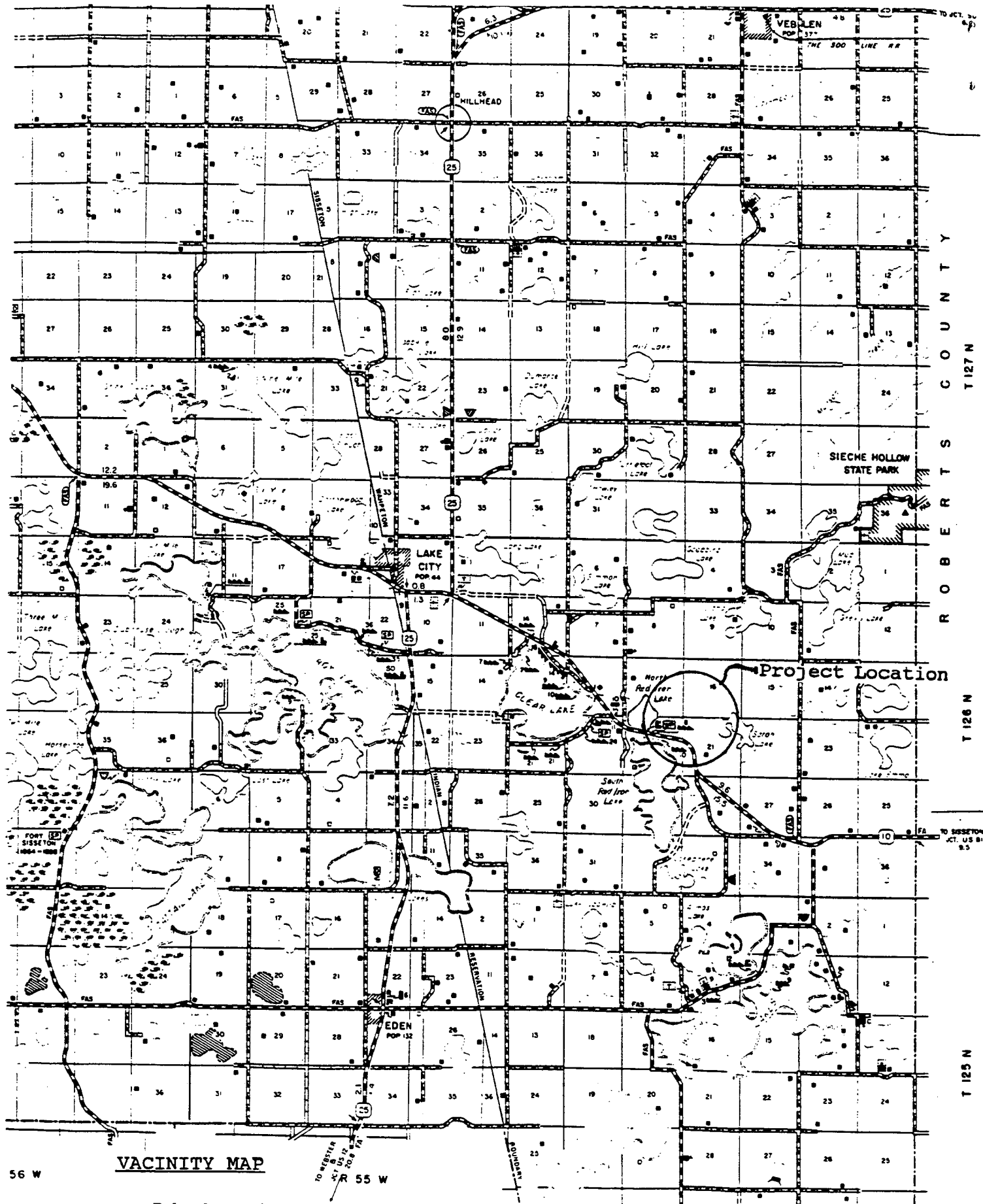
Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reason for holding a public hearing. The request must be submitted to the US Army Corps of Engineers, Pierre Regulatory Office, Federal Building, Room 317, Pierre, South Dakota 57501.

Any interested party (particularly officials of any town, city, county, state, Federal agency, or local association whose interests may be affected by the proposed work) is invited to submit to this office, written facts, arguments, or objections on or before January 11, 1993. Any agency or individual having an objection to the proposed work should specifically identify it as an objection with clear and specific reasons. Comments, both favorable and unfavorable, will be accepted, made a part of the record and will receive full consideration in subsequent actions on this permit application. All replies to the public notice should be addressed to the address listed in the previous paragraph. Thomas A. Lowin, telephone number (605) 224-8531, may be contacted for additional information.

Comments received after the close of the business day on the expiration date of this public notice will not be considered.

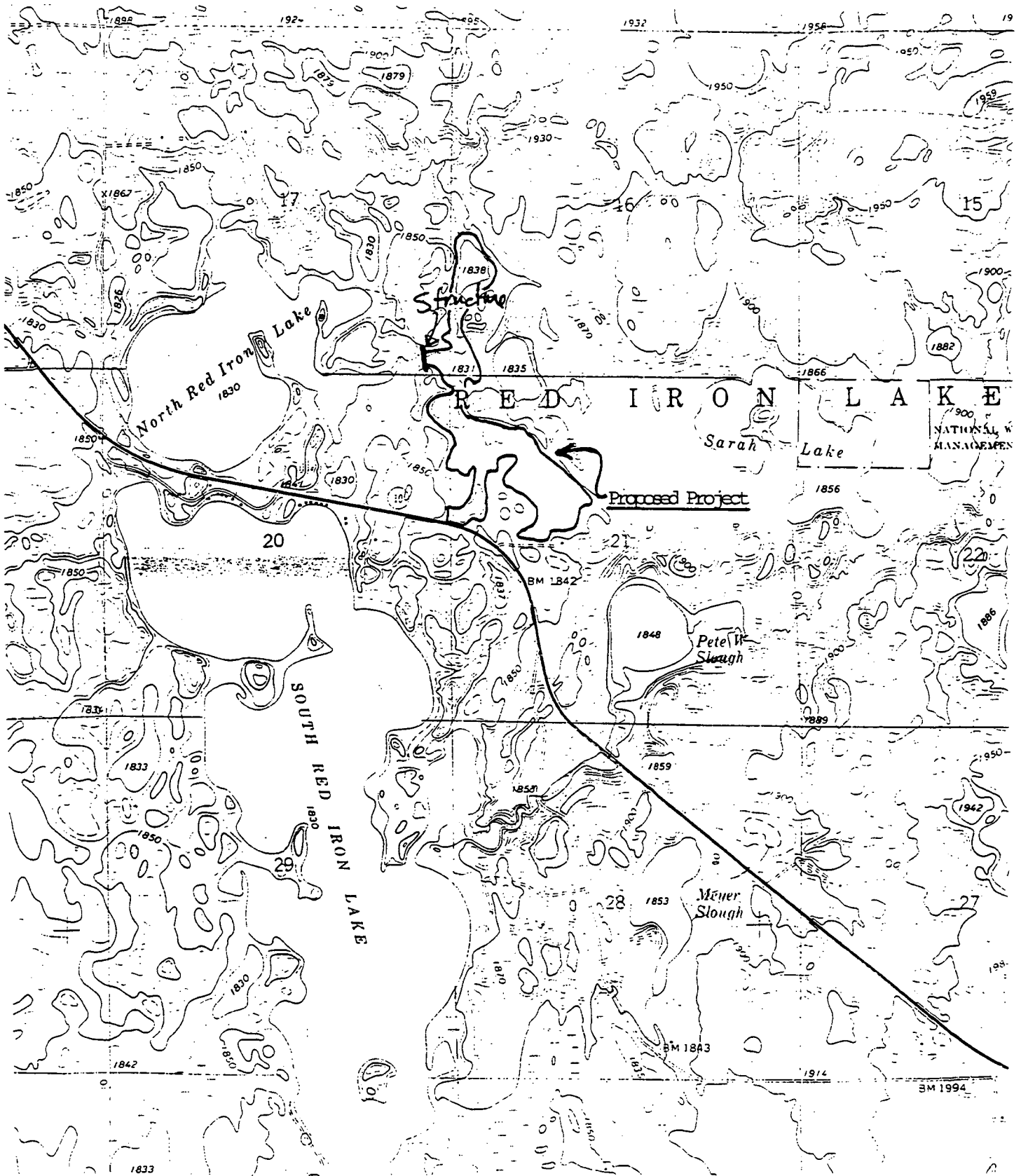
This project, if authorized, will be under the provisions of Section 404 of the Clean Water Act.

Drawings showing the location and extent of the work are attached to this notice.



PURPOSE: Embankment/Stop Log Weir
DATUM
ADJACENT PROPERTY OWNERS:
 1 USFWS, Waubay NWR
 2 Shirley E. Johnson
 3. Bureau of Indian Affairs

IN Wetlands
 ATSec. 16,17,20 &21, T126N, R53W
 COUNTY OF Marshall STATE SD
 APPLICATION BY
 1 SHEET 3 OF DATE 12/17/92



PURPOSE: Embankment/Stop Log Weir
 DATUM
 ADJACENT PROPERTY OWNERS:
 1 USFWS, Waubay NWR
 2 Shirley E. Johnson
 3. Bureau of Indian Affairs

IN Wetlands
 AT Sec. 16, 17, 20 & 21, T126N, R53W
 COUNTY OF Marshall STATE SD
 APPLICATION BY
 2 SHEET 3 OF DATE 12/17/92

A.) Original Wetland Acres:

1.) Temporarily Flooded	05.0
2.) Semipermanent or Seasonally Flooded	40.0
3.) Permanently Flooded	0.0
Total Acres =	45.0

Wetland Creation Designed By: Ducks Unlimited Inc.

6115 East Main Ave.

Bismarck, ND 58501

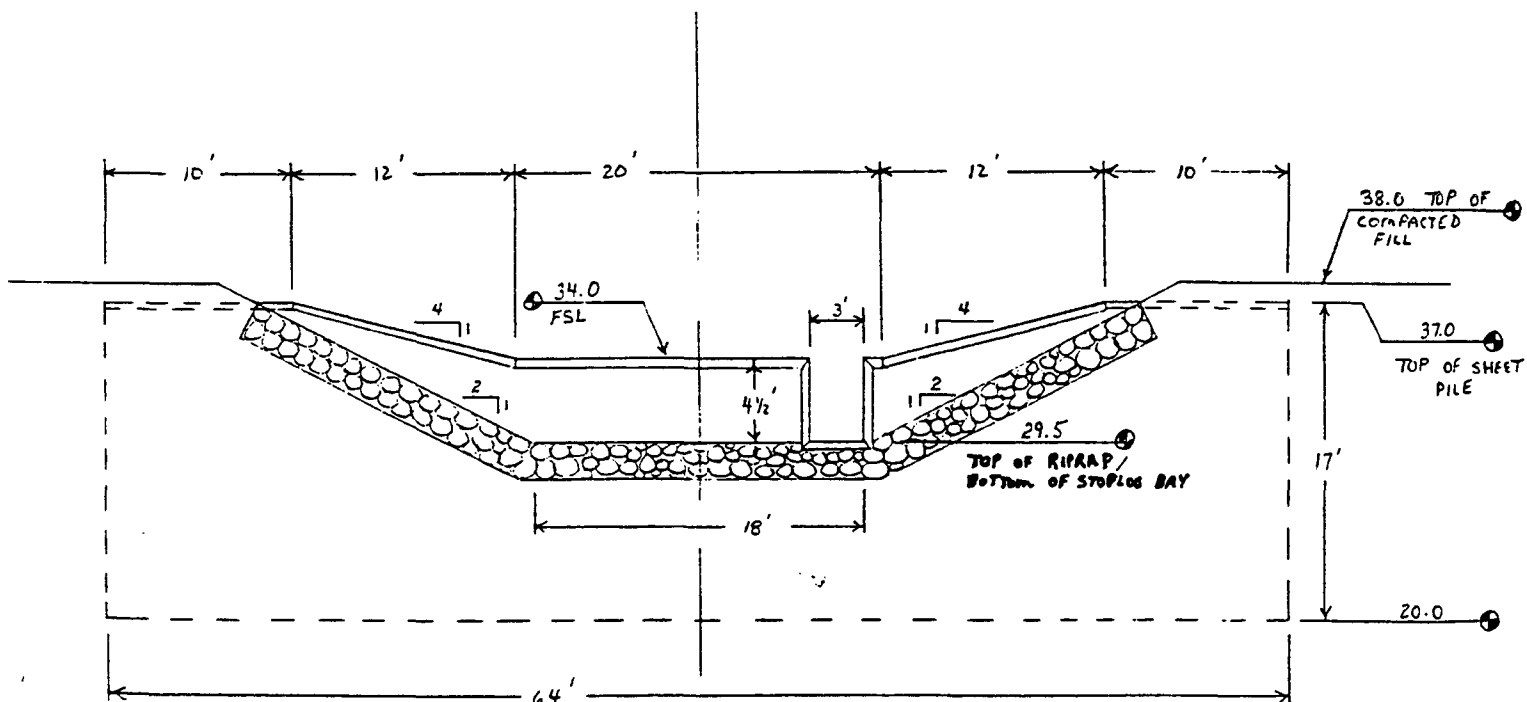
B.) Project Impacts:

- 1.) Fill -0.3
- 2.) Inundation -45.0
- 3.) De-water -0.0

- 1.) Freeboard 2.44 ft.
- 2.) Crest Width 12 ft.
Crest Length 205 ft.
- 3.) Height 8.5 ft.
Depth, if dugout 8.5 ft.
- 4.) Outlet Dimensions:
Pipe Diameter _____
Spillway Width 44 ft.
- 5.) X & Y Slope:
Upstream 1:3
Downstream 1:3
- 6.) Water Surface Area(acres)
45.0 Acres
- 7.) Storage At Spillway Crest
(acre feet) 75 AF
- 8.) Maximum Storage To Top
Dam 75 Acres
- 9.) Drainage Area Above dam
Dugout 1440 Acres

C.) Project Benefits:

1.) Wetland Acres Enhancement	
A.) Temporarily Flooded	5.0
B.) Semipermanent or Seasonally Flooded	30.0
C.) Permanently Flooded	10.0
Total Acres =	45.0



STRUCTURE ELEVATION

(LOOKING EAST)

SCALE: 1" = 10'

NOTE: STOPLOG BAY would
BE ON SOUTH SIDE
OF CHANNEL.

PURPOSE: Embankment/Stop Log Weir

DATUM

ADJACENT PROPERTY OWNERS:

1 USFWS, Waubay NWR

2 Shirley E. Johnson

3. Bureau of Indian Affairs

IN Wetlands

AT Sec. 16,17,20 & 21, T126N, R53W

COUNTY OF Marshall STATE SD

APPLICATION BY

SHEET 3 OF 3 DATE 12/17/92

DESIGN REPORT



PROJECT: SCHULTZ-RINGER WPA
SD-118-01

LOCATION: Sections 16, 17 & 21, T126N, R53W
Marshall County, South Dakota

MARSH DATA: Full Service Level (FSL) @ 1834.0
45 Surface Acres @ FSL
75 Acre-Feet Capacity @ FSL

PROJECT DESCRIPTION:

The proposed dam will be located on a State Game Production Area (GPA) and will back water up on a Federal Waterfowl Production Area (WPA) as well as onto private land. The private landowners have signed Wildlife Extension Agreements with the U.S. Fish and Wildlife Service. The dam will be constructed on an unnamed drainage that discharges directly into North Red Iron Lake near Lake City, South Dakota. The watershed consists of approximately 2.25 square miles.

CLASSIFICATION OF PROPOSED DAM:

Based on the classification criteria outlined in Chapter 74:02:08 "Safety of Dams," it is recommended that the proposed dam be classified as a small, Category 3 dam. No loss of life and minimal or no economic loss is expected should failure occur. The product of the maximum storage capacity times the effective height is 2728 which is less than 3000. Therefore, the minimum spillway design flood is a 25-year frequency per 74:02:08:07.01 and must be passed through the spillway without overtopping the embankment.

PRELIMINARY RISK ASSESSMENT

The proposed dam will be located in a rural area. No residences or other buildings are located downstream adjacent to the outlet channel. The outlet channel is located entirely on the State GPA prior to entering North Red Iron Lake approximately 600 feet downstream from the proposed structure.

Based on information obtained in the field, data present on the U.S.G.S. quadrangular maps, and the relative small size and capacity of the created marsh, the general public would be in no danger in the unlikely event of a dam failure. No loss of life and minimal or no economic loss would be expected. Therefore, it appears reasonable to classify the dam as a small, low hazard, Category 3 dam.

DESIGN:

In accordance with South Dakota requirement 74:02:08:07.01, the minimum spillway design flood for the proposed dam is a 25 year frequency event. The proposed dam is designed to exceed the South Dakota requirements. The primary spillway will pass flows in excess of those produced by a 100 year 24 hour rainfall without overtopping the embankment.

A steel sheet pile weir with a crest length of 20 feet is proposed as the primary spillway. The structure will have removable stoplogs to provide variable control and drawdown capability.

The Soil Conservation Service (SCS) TR-20 Hydrology program was used to determine the discharge at various reservoir stages with respect to time. The program uses accepted procedures to develop inflow and outflow hydrographs. The primary spillway capacity was calculated using the weir flow formula. A discharge curve for the proposed structure is attached.

The following is a relationship between peak inflows, corresponding outflows, and reservoir elevations:

<u>EVENT</u>	<u>PEAK INFLOWS</u>	<u>MAXIMUM WATER SURFACE ELEVATION</u>	<u>FREEBOARD AVAILABLE</u>	<u>TOTAL DISCHARGE</u>
10 YR	397 CFS	1835.27	2.73 FT	91 CFS
25 YR	555 CFS	1835.56	2.44 FT	127 CFS
50 YR	737 CFS	1835.87	2.13 FT	169 CFS
100 YR	907 CFS	1836.17	1.83 FT	211 CFS

A preliminary set of plans is submitted with the Design Report. A set of standard construction specifications has previously been submitted to the Division of Water Rights for the purposes of permit review.

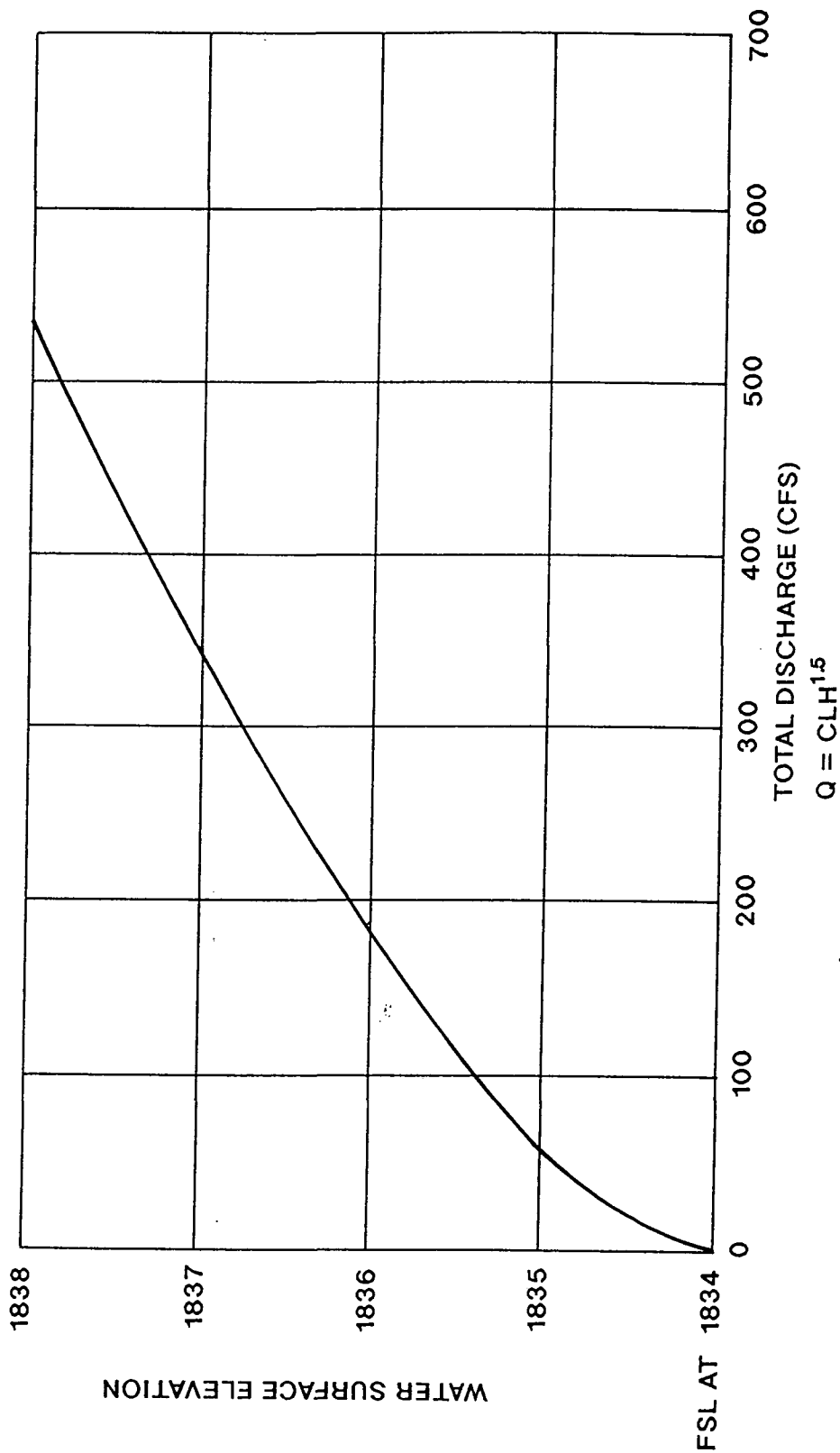
Dated: October 8, 1991

Submitted By:



Doug Lipetzky, P.E
PE-4499

DISCHARGE CURVE



DISCHARGE VS. ELEVATION
20' STEEL SHEETPILE WEIR

SCHULTZ-RINGER WPA
SD-118-01

REPORT ON
WATER PERMIT APPLICATION NO. 5732-3
DEPARTMENT OF GAME, FISH & PARKS
JANUARY 6, 1993

The South Dakota Department of Game, Fish and Parks has filed Water Permit Application No. 5732-3 to impound 75 acre-feet of water in an existing wetland by constructing a dam and stop log structure. The dam is to be located in the SE 1/4 SE 1/4 of Section 17-T126N-R53W. The water is to be stored annually to an approximate elevation of 1834 feet msl and is to be used to provide habitat for fish and wildlife production.

Discussion:

The Schultz-Ringer WPA dam will be classified as a Small size Category 3, Low Hazard dam. It has been designed by Ducks Unlimited, Inc. The plans and specifications for the Schultz-Ringer WPA dam have been reviewed and accepted, and will be officially approved when Water Permit Application No. 5732-3 is approved.

The dam will be 8.5 feet high with a normal storage capacity of 75 acre-feet with a reservoir level at the spillway elevation, and a maximum storage capacity of 325 acre-feet with a reservoir level at the top of dam elevation. A dam of this size and hazard classification is required to have a minimum spillway design capably of passing a 25 year frequency event.

The Schultz-Ringer WPA dam has a drainage area of 2.25 square miles. The dam is designed to have a 20 foot wide sheet pile stop log structure as the spillway with 4 feet of available head. The capacity of this structure is approximately 530 cfs.

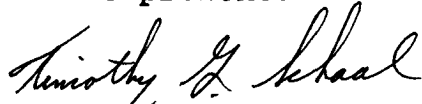
Ducks Unlimited used the Soil Conservation Service (SCS) TR-20 Hydrology program to route the inflow hydrograph through the structure. This program routes the 25 year event of 555 cfs through the spillway at a depth of 1.6 feet and the 100 year event of 907 cfs through the spillway at a depth of 2.2 feet.

The annual yield for this drainage with a 50 percent chance of occurrence, or 1 out of 2 years, is expected to be approximately 84 acre-feet.

The Schultz-Ringer WPA dam will be located on an unnamed tributary of North Red Iron Lake approximately 1/4 mile upstream of the lake. The Department of Game, Fish and Parks holds Vested Right Claim No. 923-3 for North Red Iron Lake and Vested Right Claim No. 922-3 for South Red Iron Lake.

Conclusions:

1. Water Permit Application No. 5732-3 should be approved since approval should not have any adverse effects on the existing downstream Vested Right Claims held by the Department of Game, Fish and Parks.
2. The low flow bypass requirement for downstream domestic use will not be necessary, since the Department of Game, Fish and Parks owns the downstream property and livestock should not be present.



Timothy G. Schaal, P.E.
Natural Resources Engineer III

Approved by:



Gale N. Selken, P.E.
Natural Resources Engineer IV

RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 5732-3, South Dakota Department of
Game, Fish and Parks

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Division, Department of Environment and Natural Resources concerning Water Permit Application No. 5732-3, South Dakota Department of Game, Fish and Parks, c/o Richard Beringson, 523 East Capitol, Pierre, SD 57501.

The Chief Engineer is recommending APPROVAL of Application No. 5732-3 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use, and 4) it is in the public interest with the following qualification:

Approval of Water Permit No. 5732-3 authorizes storage of up to 75 acre-feet of water annually.

See report on application for additional information.



JOHN HATCH, Chief Engineer
January 27, 1993



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

NOTE: TO BE SURE OF PUBLICATION ON
THE CORRECT DATES, CONTACT
THE NEWSPAPER RIGHT AWAY.

January 28, 1993

Richard Beringson, Secretary
SD Department of Game, Fish and Parks
523 E Capitol
Pierre, SD 57501

Dear Mr. Beringson:

Water Permit Application Nos. 5732-3 and 5733-3 for fish and wildlife enhancement use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice of hearing has been sent to the Publisher of The Britton Journal printed at Britton, SD (Ph # 448-2281). For your information, a copy of the notice, the recommendations of the Chief Engineer and reports on the applications are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

Be sure to contact the above newspaper to authorize publication of your Notice of Hearing and to arrange for payment. Early contact with the paper can eliminate delays. The publisher has been instructed to publish your notice once each week for two consecutive weeks with the last publication to occur twenty days before the board meeting. The newspaper has been instructed to send us the Proof of Publication. We must receive Proof of Publication before action can be taken on the applications.

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

NOTE: If you plan to contest any part of the Chief Engineer's recommendations, you must file a petition pursuant to the procedures outlined in the attached notice of hearing. The Water Management Board will then consider your concerns during a hearing on the applications.

cc: Tim Olson, SD Dept. of Game, Fish and Parks



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

January 28, 1993

The Britton Journal
Box 69
Britton, SD 57430-0069

ATTENTION: Legal Department

Enclosed is a Notice of Hearing on Application Nos. 5732-3 and 5733-3 to be published twice. Please publish the first notice on February 3, 1993, with the second publication 7 days later.

The APPLICANT MUST VERIFY TO YOU THAT THE NOTICE IS TO BE PUBLISHED, before you make the first publication. Please BILL the APPLICANT for the cost of publication. The APPLICANT is South Dakota Department of Game, Fish and Parks, 523 East Capitol, Pierre, SD 57501 (Ph # 773-3391).

A copy of BOTH publications must be SENT to the WATER RIGHTS DIVISION. IMMEDIATELY return the FIRST publication with the FIRST Transmittal form on the bottom of this page. The first copy is needed to check the publication for errors so any corrections can be made in the second publication. Publication errors can invalidate the public notice and cause the applicant costly delays.

Please be sure the SECOND publication is returned IMMEDIATELY with the enclosed Proof of Publication form. DO NOT WAIT until the end of the month or the billing cycle. No action may be taken on the permit applications until proof of publication has been received.

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

-----CUT HERE-----

FIRST TRANSMITTAL NOTICE

TO: Eric Gronlund
Water Rights Division
Joe Foss Building
Pierre SD 57501-3181

No. _____

Date _____

We are in receipt of your letter of _____ enclosing Notice of Hearing to
Appropriate Water by Application No. _____ which was first published in our issue
of _____. ENCLOSED IS A COPY OF THIS FIRST PUBLICATION.

Name _____

Newspaper _____

Instruction to Newspaper - Publish first Notice on February 3, 1993, with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF HEARING on Application Nos. 5732-3 and 5733-3 to Appropriate Water

Notice is given that the South Dakota Department of Game, Fish and Parks, 523 E Capitol, Pierre, SD 57501 has filed applications for water permits.

Water Permit Application No. 5732-3 is to impound 75 acre-feet of water in an existing wetland. The dam site is to be located in the SE 1/4 SE 1/4 Section 17 and water will be impounded in portions of the W 1/2 SW 1/4 Section 16; SE 1/4 SE 1/4 Section 17; NW 1/4 Section 21 and NE 1/4 NE 1/4 Section 20; all in T126N-R53W. Water is to be stored annually to an approximate elevation of 1834 feet mean sea level and is to be used to provide habitat for fish and wildlife production.

Water Permit Application No. 5733-3 is to impound 54.5 acre-feet of water. The dam site is to be located in the SE 1/4 SW 1/4 Section 33 with water impounded in the S 1/2 SW 1/4 Section 33; all in T126N-R55W. Water is to be stored annually to an approximate elevation of 1800 feet mean sea level and is to be used to provide habitat for fish and wildlife production.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application Nos. 5732-3 and 5733-3 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. Unless a petition is filed opposing the applications or the applicant files a petition contesting the chief engineer's recommendations, the Water Management Board will NOT CONDUCT a HEARING to consider the applications and the chief engineer will issue the permit as recommended. Petitions filed in support of the applications will NOT require the Board to hear the applications.

Any person interested in opposing or supporting the applications must file a written petition with BOTH the applicant and Chief Engineer. The applicant must also file a petition if opposed to the Chief Engineer's recommendations. The Chief Engineer's address is "Water Rights Division, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by February 22, 1993. The petition may be informal, but must include a statement describing the petitioner's interest in the applications, the petitioner's reasons for opposing or supporting the applications, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

If a petition is filed opposing the applications or the applicant files a petition contesting the chief engineer's recommendations, the Board will consider the applications at 10:00 a.m., March 3, 1993, Floyd Matthew Training Center, Joe Foss Building, 523 East Capitol, Pierre, SD. If a hearing is held, the Chief Engineer's recommendations are not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny the applications based on the facts presented at the public hearing. The March 3, 1993, hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any interested person opposing the applications. The request for an automatic delay must be filed by February 22, 1993.

Any hearing will be an adversary proceeding. Any person filing a petition and/or the applicant have the right to be represented by a lawyer and may present evidence or cross-examine witnesses according to SDCL 1-26. These and other due process rights will be forfeited if not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law. Contact Eric Gronlund by February 22, 1993, at the above Water Rights Division address to request copies of information pertaining to this application, to assure access to the hearing by the handicapped or to obtain an interpreter for the hearing impaired.

These applications are made pursuant to SDCL 46-1-1 thru 46-1-9, 46-1-12 thru 46-1-16; 46-2-3.1, 46-2-9, 46-2-11, 46-2-13, 46-2-17; 46-2A-1 thru 46-2A-10, 46-2A-12, 46-2A-14, 46-2A-15, 46-2A-20, 46-2A-21; 46-5-1 thru 46-5-11, 46-5-13 thru 46-5-15, 46-5-24, 46-5-25, 46-5-30.2, 46-5-30.4, 46-5-31; and Board Rules ARSD 74:02:01:01 thru 74:02:01:15. Robert E. Roberts, Secretary, Department of Environment and Natural Resources.

2T(Feb. 3-10)

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
County of Marshall) ss

I, Charles L. Card

certify that the attached printed Notice was

taken from the Britton Journal

printed and published in City of Britton

County of Marshall and State of

South Dakota. The notice was published in
the newspaper on the following two dates:

Feb. 3, 1993

Feb. 10, 1993

Cost of Printing: \$56.13

Charles L. Card
(Signature)

publisher
(Title)

Feb. 10, 1993
(Date Signed)



NOTICE OF HEARING
on Applications No. 5732-3
and 5733-3 to Appropriate Water

Notice is given that the South Dakota Department of Game, Fish and Parks, 523 E. Capitol, Pierre, SD 57501 has filed applications for water permits.

Water Permit Application No. 5732-3 is to impound 75 acre-feet of water in an existing wetland. The dam site is to be located in the SE1/4SE1/4, Section 17 and water will be impounded in portions of the W1/2SW1/4, Section 16; SE1/4SE1/4, Section 17; NW1/4, Section 21 and NE1/4NE1/4, Section 20; all in T126N-R53W. Water is to be stored annually to an approximate elevation of 1834 feet mean sea level and is to be used to provide habitat for fish and wildlife production.

Water Permit Application No. 5733-3 is to impound 54.5 acre-feet of water. The dam site is to be located in the SE1/4SW1/4, Section 33 with water impounded in the S1/2SW1/4, Section 33; all in T126N-R55W. Water is to be stored annually to an approximate elevation of 1800 feet mean sea level and is to be used to provide habitat for fish and wildlife production.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 5732-3 and 5733-3 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. Unless a petition is filed opposing the applications or the applicant files a petition contesting the chief engineer's recommendations, the Water Management Board will NOT CONDUCT a HEARING to consider the applications and the chief engineer will issue the permit as recommended. Petitions filed in support of the applications will NOT require the Board to hear the applications.

Any person interested in opposing or supporting the applications must file a written petition with BOTH the applicant and Chief Engineer. The applicant must also file a petition if opposed to the Chief Engineer's recommendations. The Chief Engineer's address is "Water Rights Division, Foss Building, 523 E. Capitol, Pierre, SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by February 22, 1993. The petition may be informal, but must include a statement describing the petitioner's interest in the applications, the petitioner's reasons for opposing or supporting the applications, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

If a petition is filed opposing the applications or the applicant files a petition contesting the chief engineer's recommendations, the Board will consider this application at 10:00 a.m., March 3, 1993, Floyd Matthew Training Center, Joe Foss Building, 523 East Capitol, Pierre, SD. If a hearing is held, the Chief Engineer's recommendations are not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny the applications based on the facts presented at the public hearing. The March 3, 1993, hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any interested person opposing the applications. The request for an automatic delay must be filed by February 22, 1993.

Any hearing will be an adversary proceeding. Any person filing a petition and/or the applicant have the right to be represented by a lawyer and may present evidence or cross-examine witnesses according to SDCL 1-26. These and other due process rights will be forfeited if not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law. Contact Eric Gronlund by February 22, 1993, at the above Water Rights Division address to request copies of information pertaining to this application, to assure access to the hearing by the handicapped or to obtain an interpreter for the hearing impaired.

These applications are made pursuant to SDCL 46-1-1 thru 46-1-9, 46-1-12 thru 46-1-16; 46-2-3.1, 46-2-9, 46-2-11, 46-2-13, 46-2-17; 46-2A-1 thru 46-2A-10, 46-2A-12, 46-2A-14, 46-2A-15; 46-2A-20, 46-2A-21; 46-5-1 thru 46-5-11, 46-5-13 thru 46-5-15, 46-5-24, 46-5-25, 46-5-30.2, 46-5-30.4, 46-5-31; and Board Rules ARSD 74:02:01:01 thru 74:02:01:15. Robert E. Roberts, Secretary, Department of Environment and Natural Resources.

Application No. 5732-3
Schulte-Ringer WPA Project

Step Log Structure

Embankment Height = 8.5 ft

Top of Dam Elev. - 1838 Max. Capacity = 325 Ac.-Ft.
FSL - 1834 Nov. Capacity = 75 Ac.-Ft.

Category 3 - Small Size Dam

Max. Storage x Eff Ht.

$$325 \times 8.5 = 2762 < 3000 \therefore Q_{25} \text{ Minimum}$$

From USGS "Techniques for Est. Floods in SD"

$$SI = 3.89$$

$$DA = 1440 \text{ Ac.} = 2.25 \text{ mi.}^2$$

S = Approx 40 mi/hr

$$Q_{25} = 83.4 A^{.6} S^{.44} SI^{-.72}$$

$$= 83.4 (2.25)^{.6} (40)^{.44} (3.89)^{-.72}$$

$$= 83.4 (1.6267) (5.0688) (0.3760)$$

$$= \underline{258 \text{ cfs}}$$

SCS TR-20 Hydro.

$$Q_{25} = 555 \text{ cfs}$$

$$Q_{100} = 907 \text{ cfs}$$

$$Q_{100} = 132 A^{.65} S^{.46} SI^{-.67}$$

$$= 132 (2.25)^{.65} (40)^{.46} (3.89)^{-.67}$$

$$= 132 (1.6940) (5.4569) (0.4025)$$

$$= \underline{491 \text{ cfs}}$$

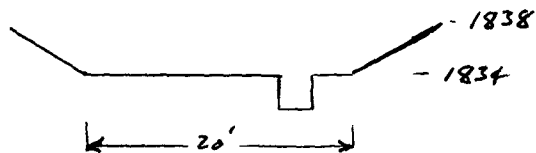
Spillway Discharge

Broad Crested Weir

$$Q = CLH^{3/2}$$

$$= 3.3 (20) (4)^{1.5}$$

$$= \underline{530 \text{ cfs}}$$



Section 74:02:08:09

1. Topo - OK
2. Dam Axis Profile - OK
3. Dam X-Section - OK
4. Area Capacity Curve - OK
5. Outlet Drawing - NA - OK
6. Spillway Rating Curve - OK
7. Spillway Drawing - OK
8. Specs. - Std. D-0 - OK
9. EPP - NA - OK

Annual Yield

ISDGRAM - 2 1/2

Soil Group B

Pasture - Range Land / Poor - CN = 79

$$50\% = 0.70 \times 1440 \text{ Ac} = 1008 \text{ Ac-in}$$

$$1008 / 12 = \underline{84 \text{ Ac.-Ft.}}$$



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

January 28, 1993

Doug Lipetzky, P.E.
Regional Engineer
Ducks Unlimited, Inc.
6115 East Main Avenue
Bismarck, North Dakota 58501

Dear Mr. Lipetzky:

We have reviewed the plans and specifications for the Schultz-Ringer WPA Project in Marshall County. The plans and specifications as submitted are acceptable; however, they will not be officially approved until Water Permit Application No. 5732-3 is approved.

The review was to determine compliance with the Water Management Board Safety of Dams Rules, Chapter 74:02:08. Approval of these plans and specifications does not release the Department of Game, Fish and Parks, as owner of the dam, from the responsibility for operating and maintaining the dam in good repair to assure the safety of the dam.

The Schultz-Ringer WPA dam will be classified as a small size Category 3 dam with a dam height of 8.5 feet and a normal storage capacity of 75 acre-feet and a maximum storage capacity of 325 acre-feet.

If you have any questions, please feel free to contact us.

Sincerely,

Gale N. Selken, P.E.
Natural Resources Engineer IV
for John Hatch, Chief Engineer
Water Rights Division
605 773-3352

cc: Tim Olson, Dept. Game, Fish & Parks



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

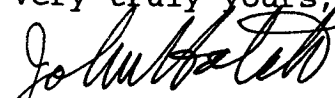
MAR 11 1993

Richard Beringson, Secretary
South Dakota Department of Game, Fish & Parks
523 East Capitol
Pierre, SD 57501

Dear Mr. Beringson:

Enclosed are Water Permit Nos. 5732-3 and 5733-3 authorizing construction of your water diversion systems and beneficial use of the water, not exceeding the limits as specified in the Water Permits.

Also enclosed are two Form 10's, Notice of Completion of Works and Application of Water to Beneficial Use, which you are to complete and submit to the Chief Engineer when you have completed the systems and/or have put the water to beneficial use. An inspection can then be scheduled so that the Water Licenses may be issued, thus completing your acquisition of a Water Right.

Very truly yours,


JOHN HATCH, Chief Engineer
Water Rights Division
605 773-3352

enclosures

PLEASE NOTE: Certain changes can be made in your permits within the five year construction period, usually without affecting the priority dates provided an application to amend your permits is made within the five year period - i.e. changes in location or number of diversion points (wells) or location of land to be irrigated. Well locations for wells into the same aquifer can be moved up to 660 feet without application.

Applications to amend a permit after the five year construction period will be assigned a new priority date. Applications to change water sources, to add lands or increase original diversion rates, if approved will usually receive the date of the new application as a priority date regardless of the five year construction period.

**NOTICE OF COMPLETION OF WORKS AND
APPLICATION OF WATER TO BENEFICIAL USE**Date 10/7/93

TO: Water Rights Division, DENR
523 E. Capitol
Pierre, SD 57501-3181

FROM: Richard Beringson, Sec. Dept. of Game, Fish & Parks
(name) (address)
Pierre, SD 57501 773-3381
(city) (state) (zip) (phone)

I have completed the construction of the water diversion system and I have put the water to beneficial use to the maximum extent it is going to be used. I have not exceeded the amounts specified in Water Permit No. 5732-3.

Water Permit No. 5732-3 states that the diversion system is to be constructed by March 3, 1998, and that the water is put to beneficial use by March 3, 2002.
(date) (date)

The diversion system was completed on August 27, 1993.
(date)

Applying the water to beneficial use was completed on October 6, 1993.
(date)

You may schedule an inspection so that the Water License may be issued.

(signature)

Local contact: Connie Miller
Waubay NWF
Ph. 947-4521

Permit No. 5732-3
James River - Water District

Other permit/license(s) associated with project: none

Contact Person & Address: Aaron Kahre, PO Box 1078, Britton SD 57430

Report Of Examination Of Works

On, October 7, 2002, I made a thorough examination of the water use system constructed by South Dakota Game, Fish, and Parks of 523 E Capitol, Pierre SD 57501 holder of Permit No. 5732-3, bearing the priority of November 13, 1992, authorizing the storage of 75 acre-feet of the waters of tributaries of Red Iron Lake for fish and wildlife production purposes, in Marshall County.

The system is in the following condition good. The point of diversion is located from the SE corner it is 788 feet west and 217 feet north in Section 17 T126N-R53W with a longitude of -97.313288 and a latitude of 45.690498.

The works are capable of diverting and conveying to the place of storing 75 acre-feet of water that is to be used for fish and wildlife production purposes. The license should be issued for 75 acre-feet of storage.

Review of Permit Qualifications And Regulations:

- 1) Special qualifications to permit being abided by yes
- 2) All structures, wells and lands on map yes
- 3) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period NA
- 4) Exceptions to compliance are: none

Report On the Specifics of the System

Dam Information:

- | | |
|--|--|
| 1) Height to crest <u>8.5</u> feet | 2) Height to primary spillway or outlet <u>6.06</u> feet |
| 3) Height to secondary spillway <u>NA</u> ft | 4) Crest width <u>12</u> feet |
| 5) Crest length <u>205</u> feet | 6) Spillway length <u>NA</u> feet |
| 7) Spillway width <u>NA</u> feet | 8) Approx. storage <u>75</u> ac-ft |

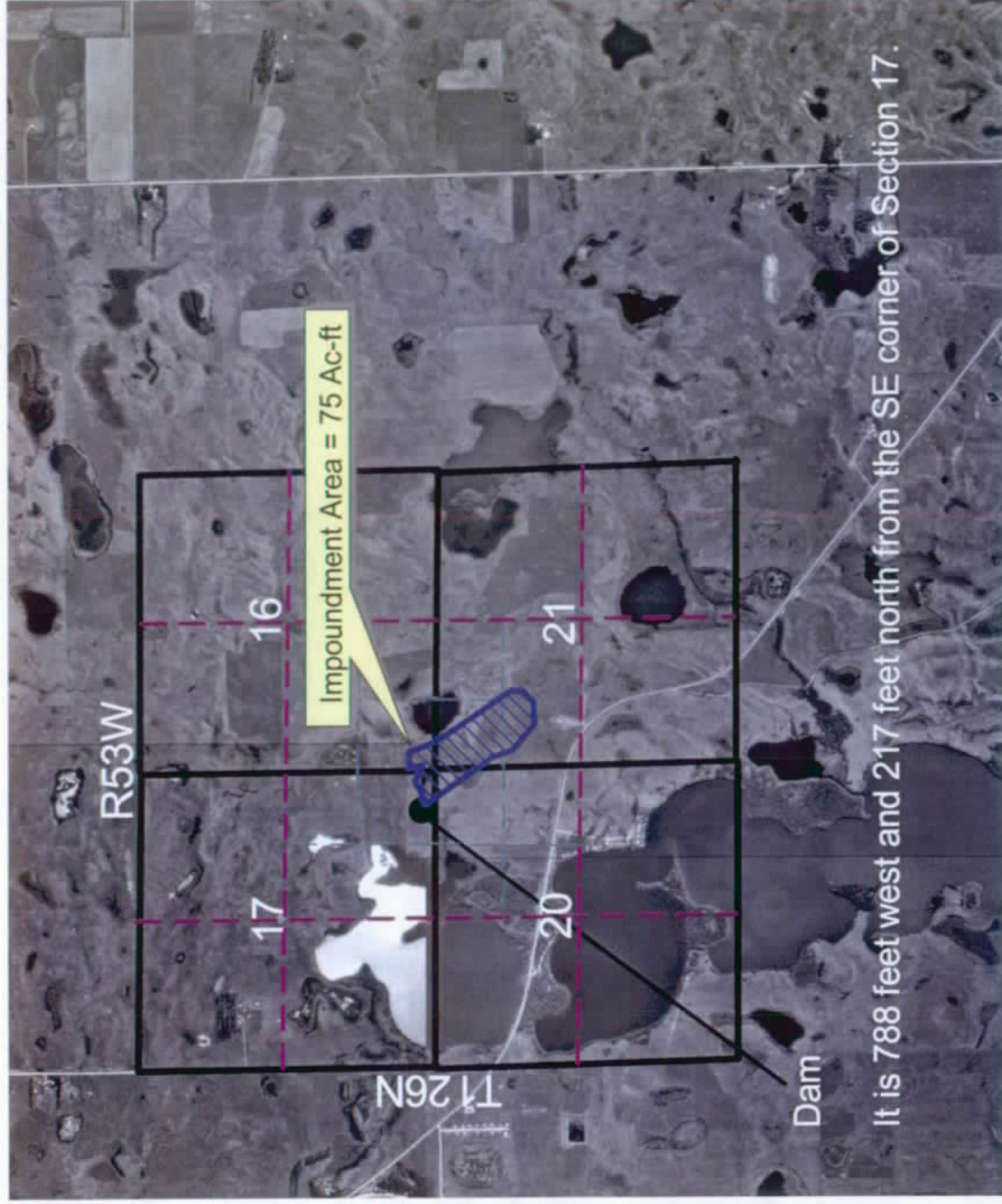
COMMENTS: Riprap rocks located by the control structure.

Stacy J. Johnson
Stacy J. Johnson

Natural Resources Project Engineer
DENR, Water Rights Program

11-12-02
Date

Water Permit No. 5732-3



South Dakota



South Dakota Department of
Environment and Natural Resources



Protecting South Dakota's Tomorrow... Today

Stacy J. Johnson 10-28-02

Stacy J. Johnson

Natural Resources Project Engineer

SD DENR Water Rights Program

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 5732-3

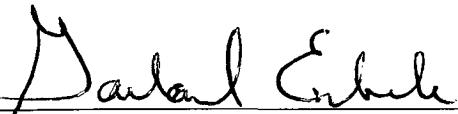
(1) The South Dakota Department of Game, Fish and Parks, 523 E Capitol, Pierre SD 57501 made Application No. 5732-3, November 13, 1992 for a water permit to impound 75 acre feet of water from a tributary of North Red Iron Lake, Marshall County, South Dakota for fish and wildlife propagation purposes. Permit No. 5732-3, with a priority date of November 13, 1992 was approved March 3, 1993 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before March 3, 1998 and for the application to beneficial use of water on or before March 3, 2002.

(2) The water supply system has been completed and water applied to beneficial use in accordance with South Dakota State Law. Pursuant to South Dakota Codified Law 46-5-30.1, the holder and/or owner of Water Right No. 5732-3 is issued a license, bearing a priority date of November 13, 1992 to impound 75 acre feet of water annually to an approximate elevation of 1834 feet mean sea level.

The location of the storage dam (spillway) is 788 feet west and 217 feet north of the southeast corner of Section 17-T126N-R53W (SE ¼ SE ¼).

(3) This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Permit No. 5732-3, including the following qualification:

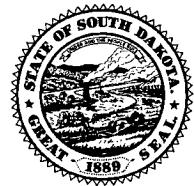
Approval of Water Permit No. 5732-3 authorizes storage of up to 75 acre-feet of water annually.



Garland Erbele, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

NOV 26 2002

date





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

NOV 26 2002

5732-3

South Dakota Dept of Game Fish & Parks
% John Cooper
523 E Capitol
Pierre SD 57501

Dear Mr. Cooper:

Enclosed is Water License No. 5732-3. This is the final water right document completing your process of obtaining a Water Right.

As long as you use the water beneficially, as stated in the Water License, State Water Laws provide that you have a continuing right to use the water.

Sincerely,

Garland Erbele, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures

c: Aaron Kahre, PO Box 1078, Britton SD 57430



Appl. 5732-3
DUCKS UNLIMITED

PROJECT

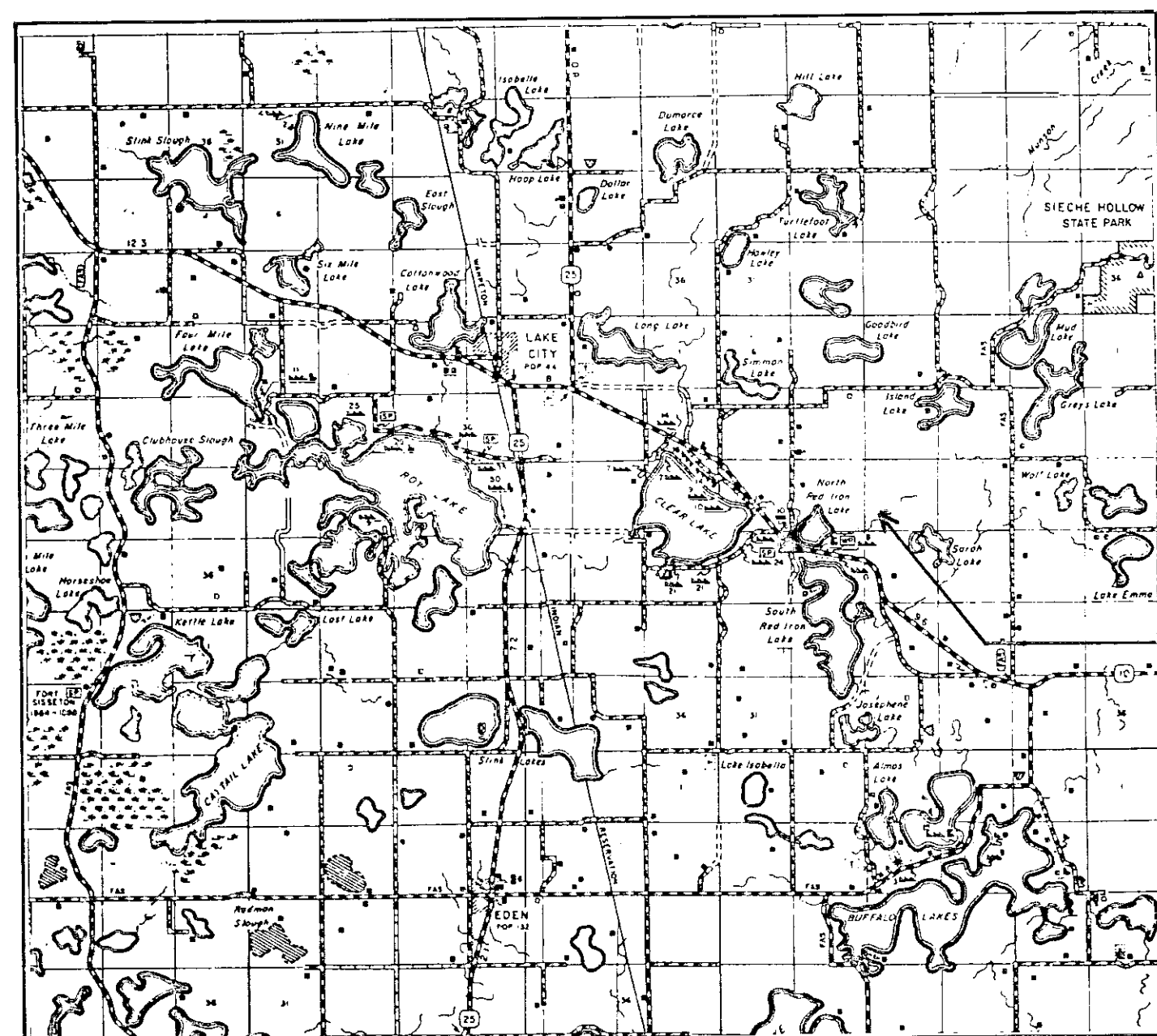
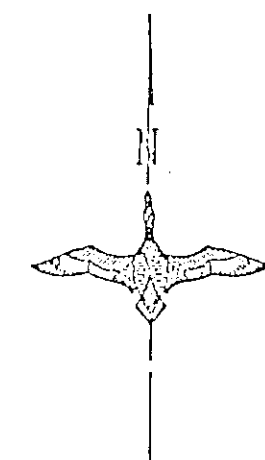
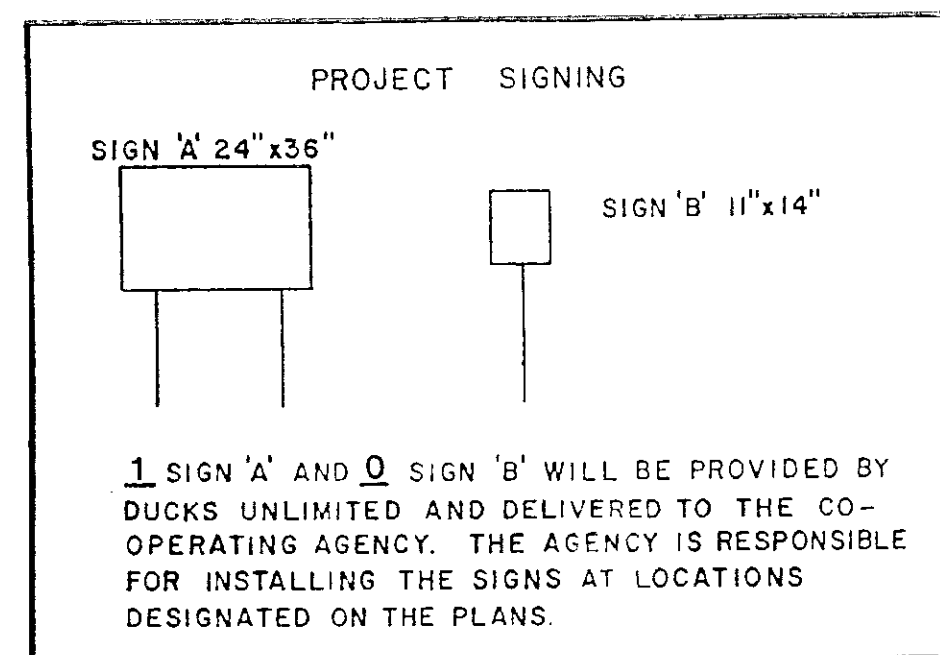
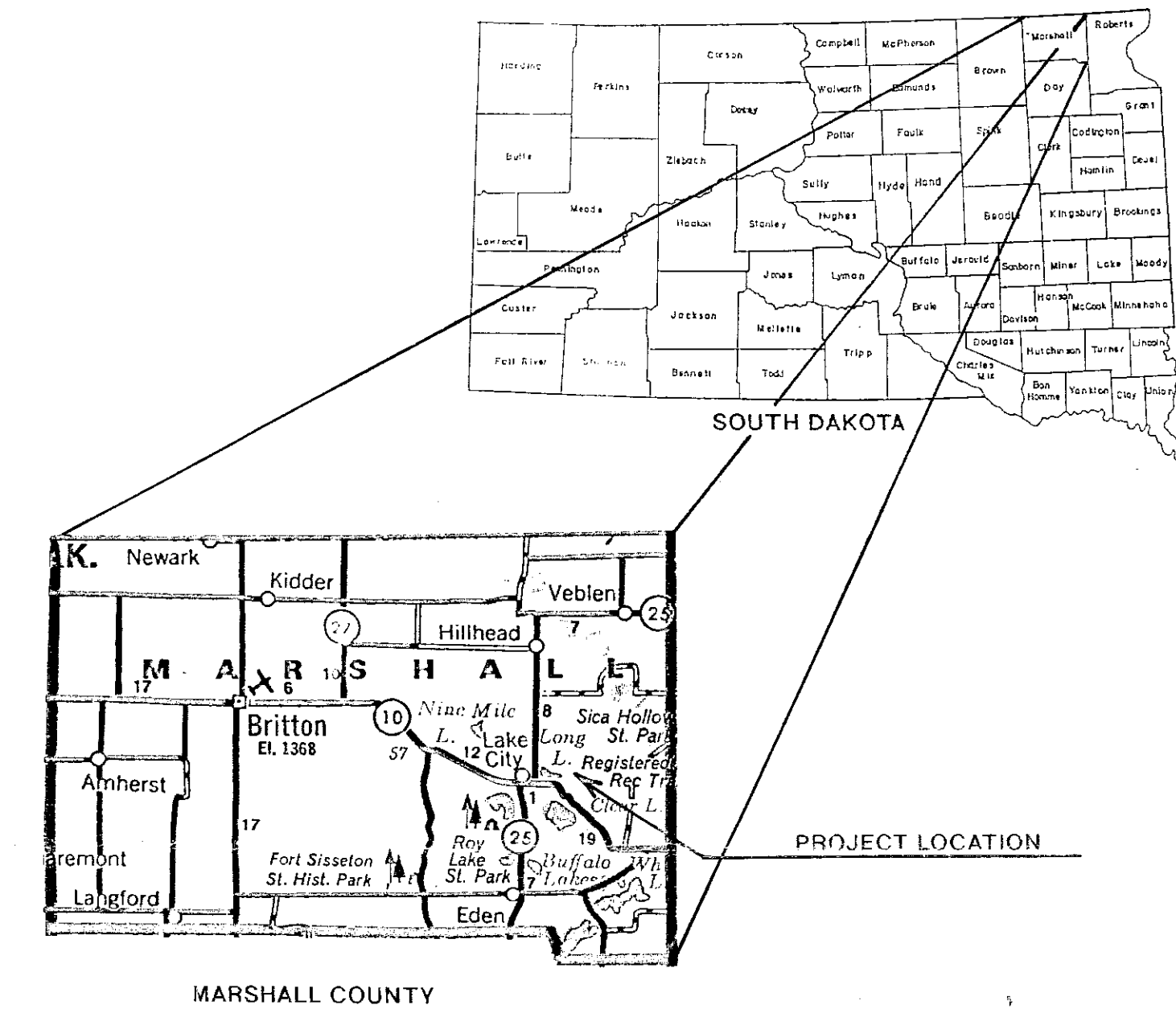
SCHULTZ-RINGER WPA

SEC. 16, 17, 20, & 21, TWP. 126 N., RGE. 53 W.

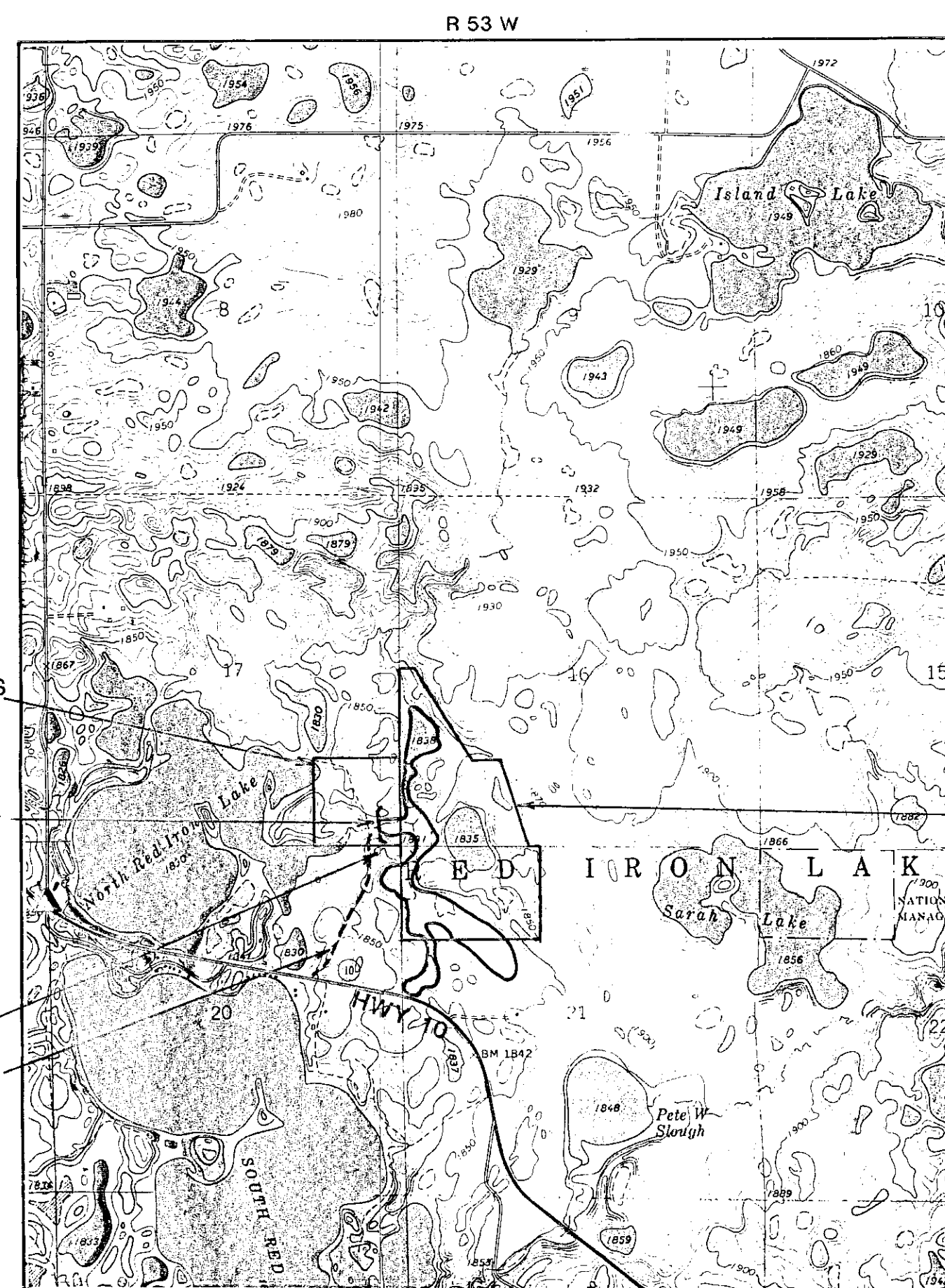
MARSHALL COUNTY, SOUTH DAKOTA

IN COOPERATION WITH

**U.S. FISH & WILDLIFE SERVICE
& S.D. GAME, FISH, & PARKS**



LOCATION MAP



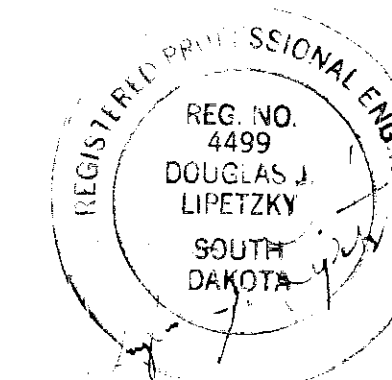
IS LOCATED 4.4 MILES SOUTHEAST OF LAKE CITY

VICINITY MAP
SCALE: 1" = 2,000'

INDEX

1. VICINITY MAP
2. SITE TOPOGRAPHY
3. PLAN VIEW
4. SHEET PILE WEIR
5. SOILS INFORMATION

AGENCY CONTACT: TOM WICKSTROM
WAUBAY NWR
TELEPHONE: 605-947-4521



SPECIFICATIONS

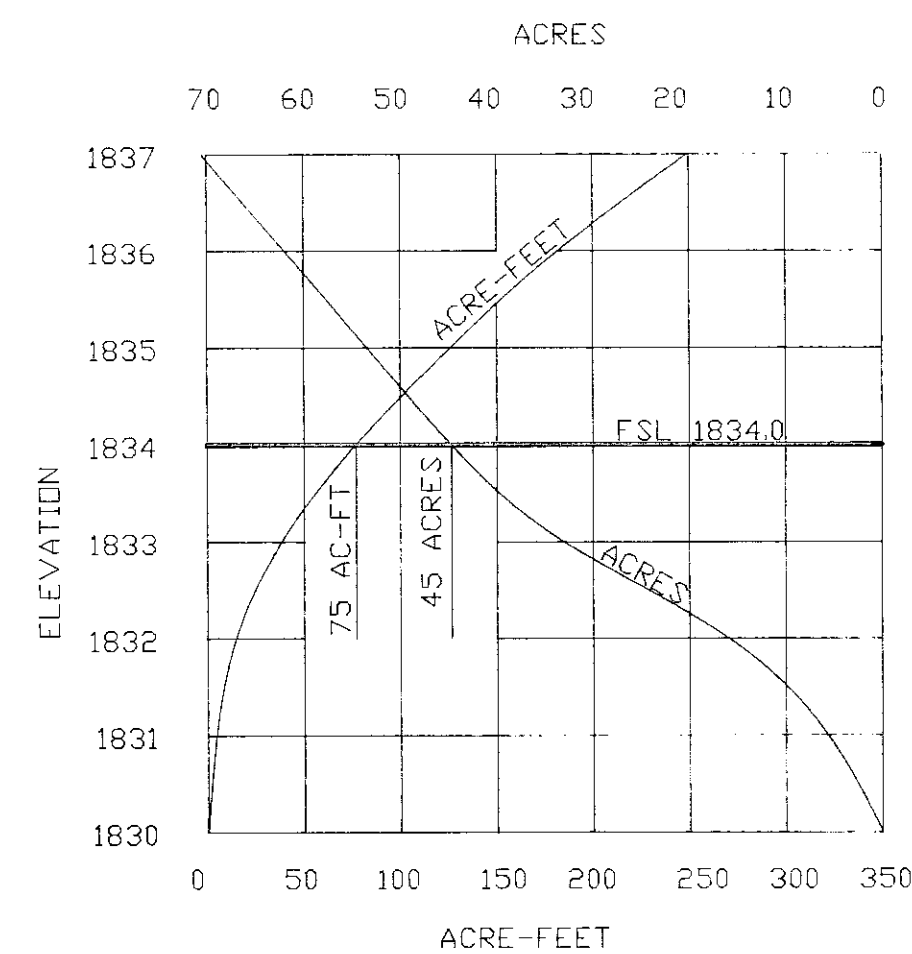
GENERAL CONDITIONS	101
MOBILIZATION	201
SITE PREPARATION	202
EXCAVATION	203
EMBANKMENT CONSTRUCTION	204
WATER	205
RIPRAP PLACEMENT	209
SHEET PILE MATERIAL	214
SHEET PILE INSTALLATION	215
STRUCTURAL STEEL	216

ESTIMATED QUANTITIES

MOBILIZATION	1 L.S.
SITE PREPARATION	249 C.Y.-P*
EXCAVATION	360 C.Y.-P**
EMBANKMENT	1555 C.Y.-S***
WATER	XXXX M-GAL.
RIPRAP	150 C.Y.-P
SHEET PILE MATERIAL	978.5 S.F.-P
SHEET PILE INSTALLATION	978.5 S.F.-P
STRUCTURAL STEEL	1 L.S.

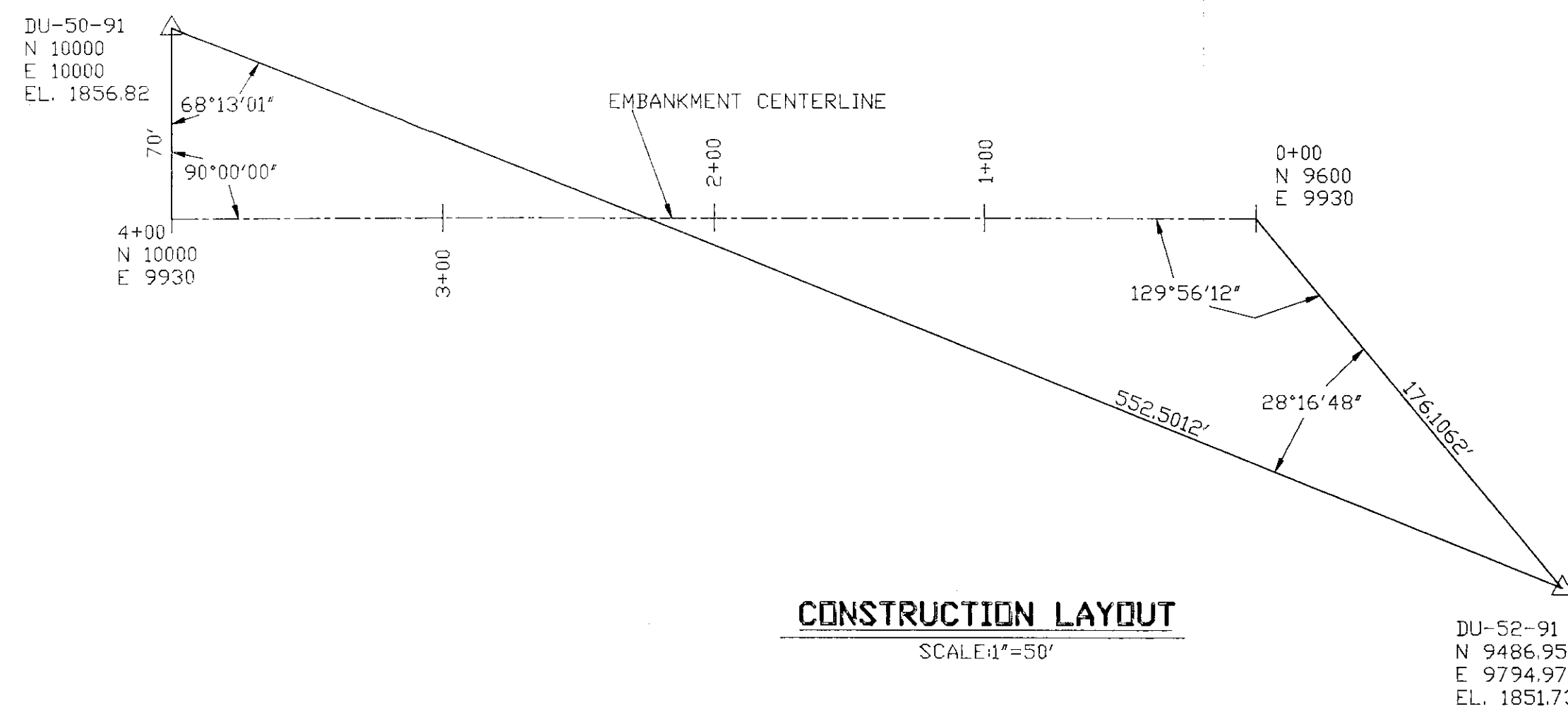
* QUANTITY REPRESENTS 12" STRIPPING UNDER EMBANKMENT ONLY. IT DOES NOT INCLUDE STRIPPING UNDER DESIGNATED WASTE AREA OR ON BORROW AREA.
** QUANTITY REPRESENTS CORE TRENCH VOLUME BELOW SITE PREPARATION STRIPPING.
*** INCLUDES 15% FOR SHRINKAGE.

	DUCKS UNLIMITED INC.	PROJECT NO. SD-118-01	DESIGNED BY: DJL
	GREAT PLAINS REGIONAL OFFICE	SCHULTZ-RINGER WPA VICINITY MAP	DRAWN BY: TD
DATE: 11-5-92	SHEET NO. 1 OF 5	APPROVED BY:	CHECKED BY: BRK



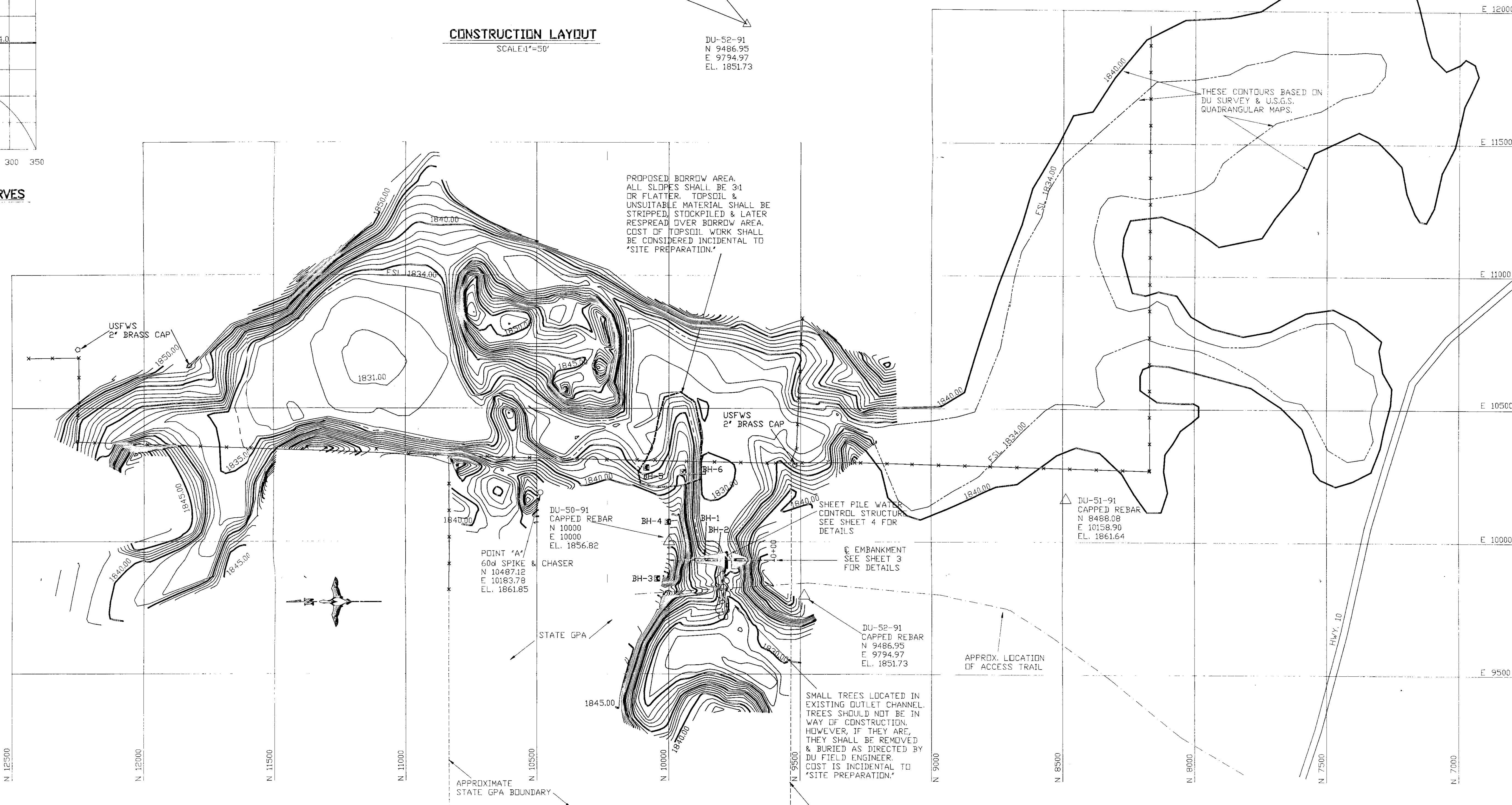
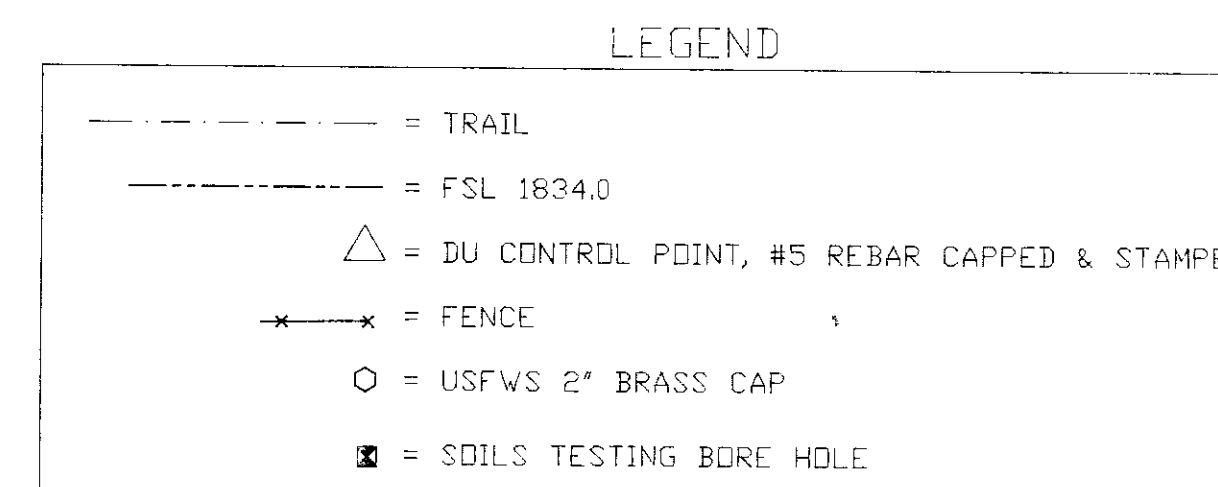
MARSH DATA	
FULL SERVICE LEVEL (F.S.L.)	1834.0
FLOODED AREA AT F.S.L.	45 ACRES
CAPACITY AT F.S.L.	75 AC-FT

CONSTRUCTION INFORMATION	
ITEM	SHEET
EMBANKMENT	2 & 3
SHEET PILE WEIR	4
SOILS	5



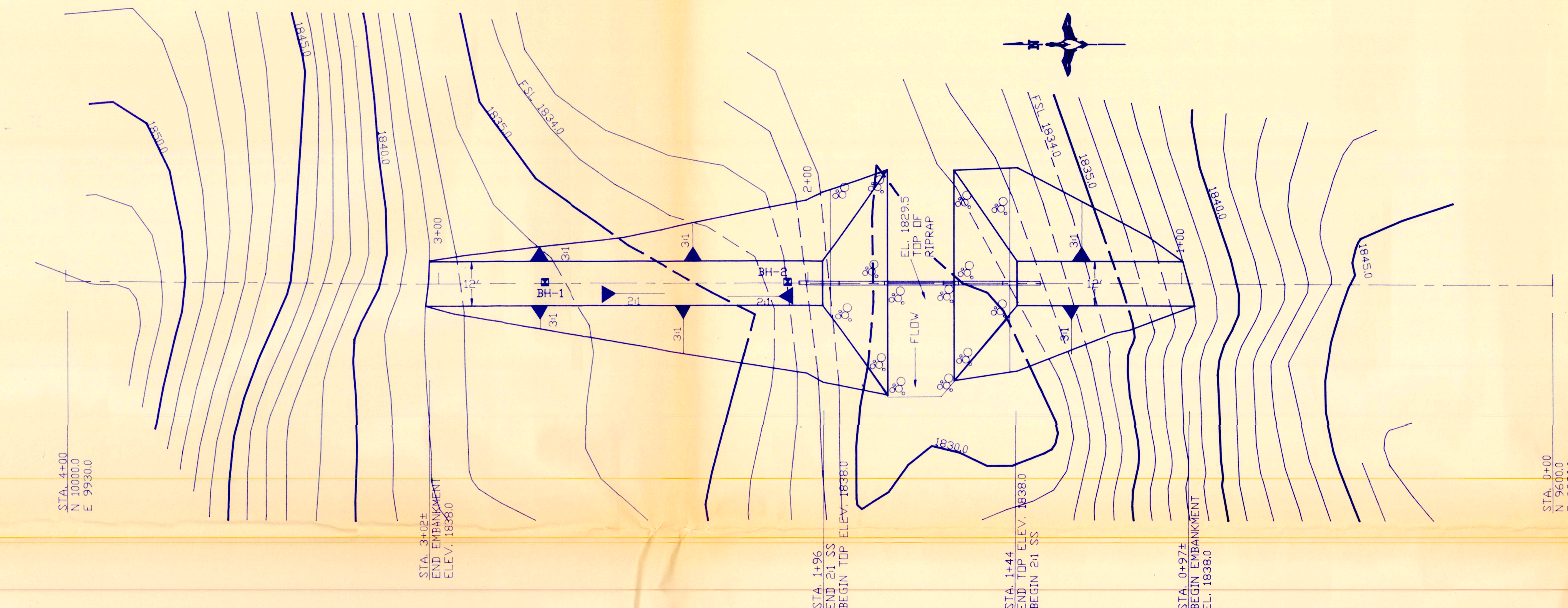
VERTICAL CONTROL
SHOT IN THROUGH TRIGONOMETRIC LEVELS
FROM USGS BRASS CAP "Q 62 1934"

HORIZONTAL CONTROL
LOCAL DU COORDINATES AZIMUTH BASE IS
FROM TRUE NORTH BASED ON A 8 1/2"
MAGNETIC DECLINATION

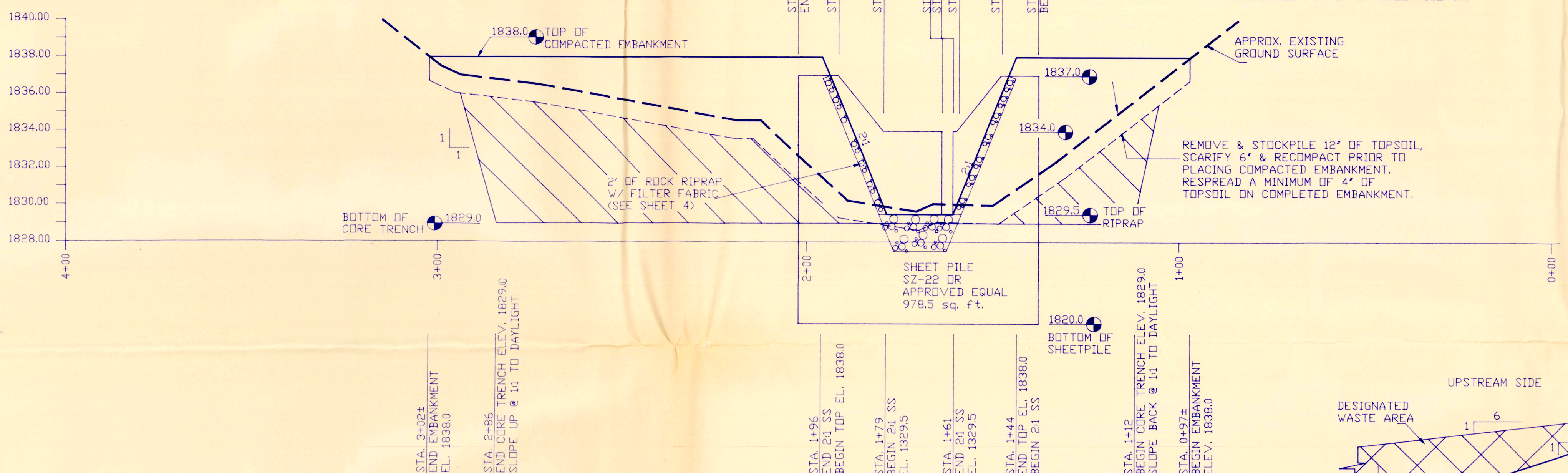


APPROXIMATE BOUNDARY LINE
PRIVATE LAND ON SOUTH SIDE
& STATE GPA LAND ON NORTH SIDE.
CONTRACTOR SHALL PARK EQUIPMENT
& VEHICLES ON STATE LAND &
SHALL STAY ON THE ACCESS TRAIL
ONLY ON PRIVATE LAND.

DUCKS UNLIMITED INC. GREAT PLAINS REGIONAL OFFICE	PROJECT NO. SD-118	DESIGNED BY: D.J.L.
	SCHULTZ - RINGER WPA	DRAWN BY: 18
PROJECT TOPOGRAPHY	SHEET NO. 2 OF 5	SURVEYED BY:
DATE: 11-5-92	APPROVED BY:	CHECKED BY:

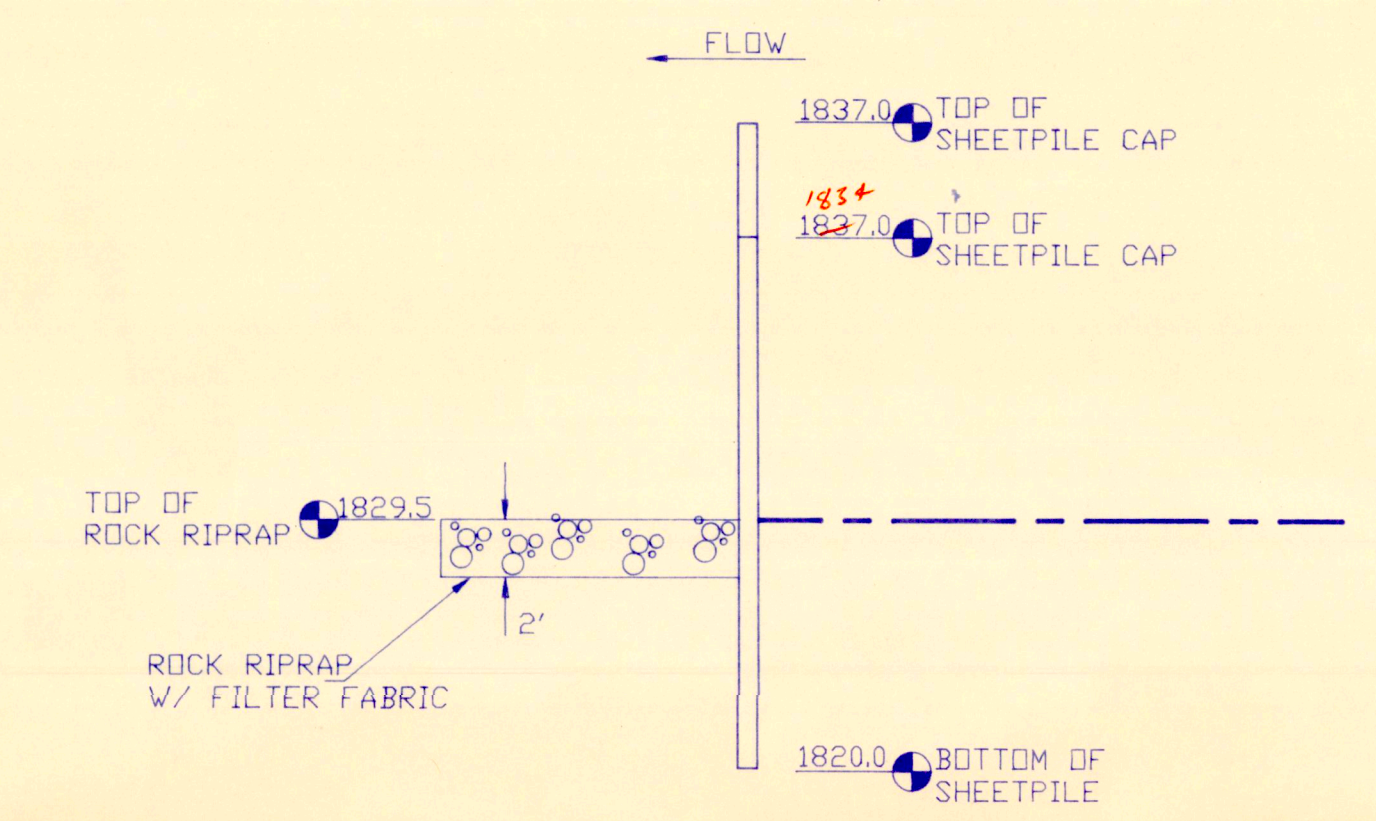


SITE PLAN
SCALE: 1"=20'



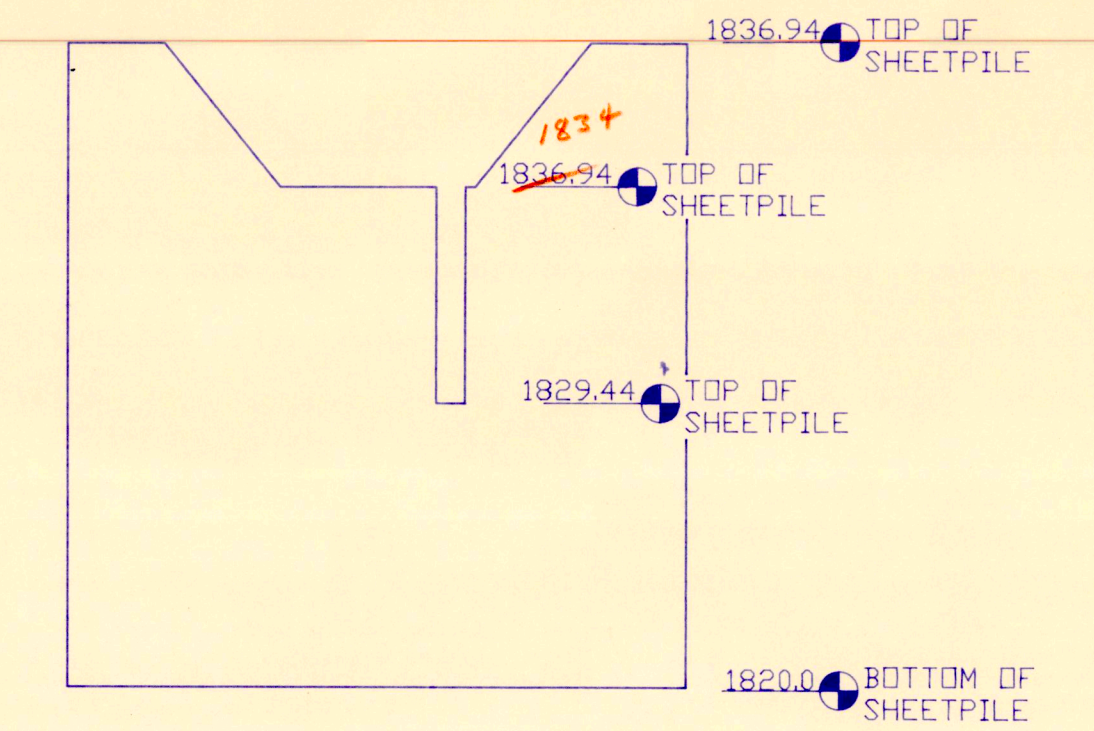
EMBANKMENT C PROFILE
SCALE: 1"=4' VERT.
1"=20' HORIZ.
(VIEW LOOKING UPSTREAM TO THE EAST)

CORE TRENCH NOTE:
A SANDY LEAN CLAY (CL) MATERIAL EXISTS AT APPROXIMATE ELEV. 1829.0.
CONTRACTOR SHALL EXCAVATE SILTY SAND (SM) MATERIAL ABOVE ELEV. 1829.0
& WASTE IT ON THE EMBANKMENT SLOPES AS SHOWN. "EXCAVATION" QUANTITY
REPRESENTS THE CORE TRENCH VOLUME BELOW THE 12" STRIPPING/SITE
PREPARATION. IF ADDITIONAL TRENCHING IS REQUIRED BY THE FIELD ENGINEER,
IT WILL BE PAID FOR AS EXTRA WORK.

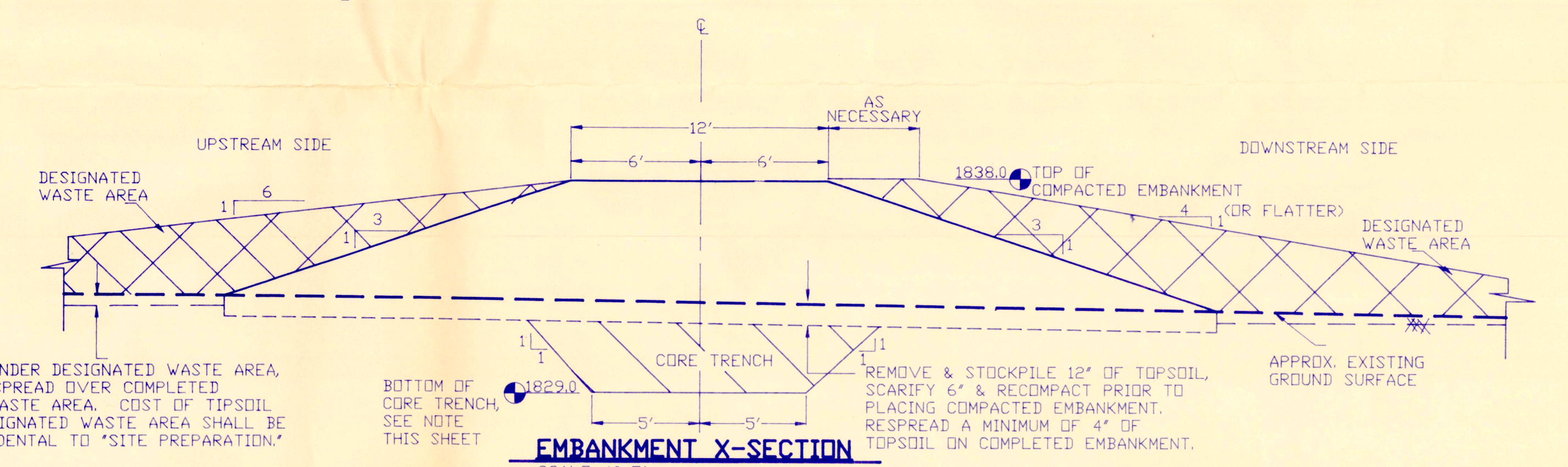


STRUCTURE X-SECTION
SCALE: 1"=4' VERT.
1"=20' HORIZ.

SEE SHEET 4 OF 5
FOR ADDITIONAL
SHEET PILE DETAILS.



SHEETPILE INSTALLATION ELEVATION
SCALE: 1"=4' VERT.
1"=20' HORIZ.

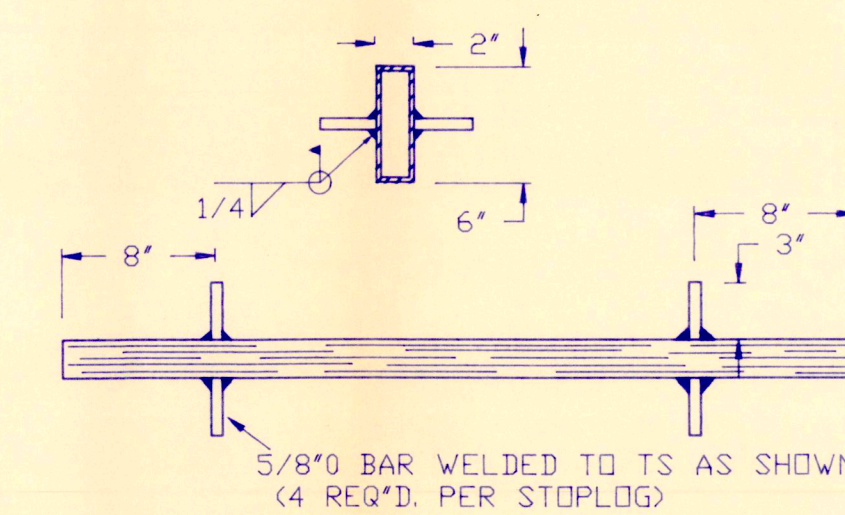
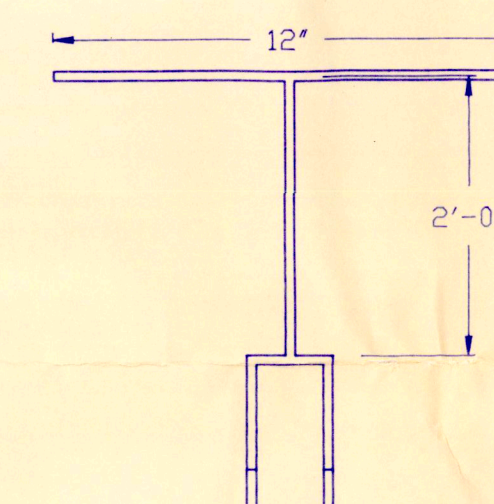
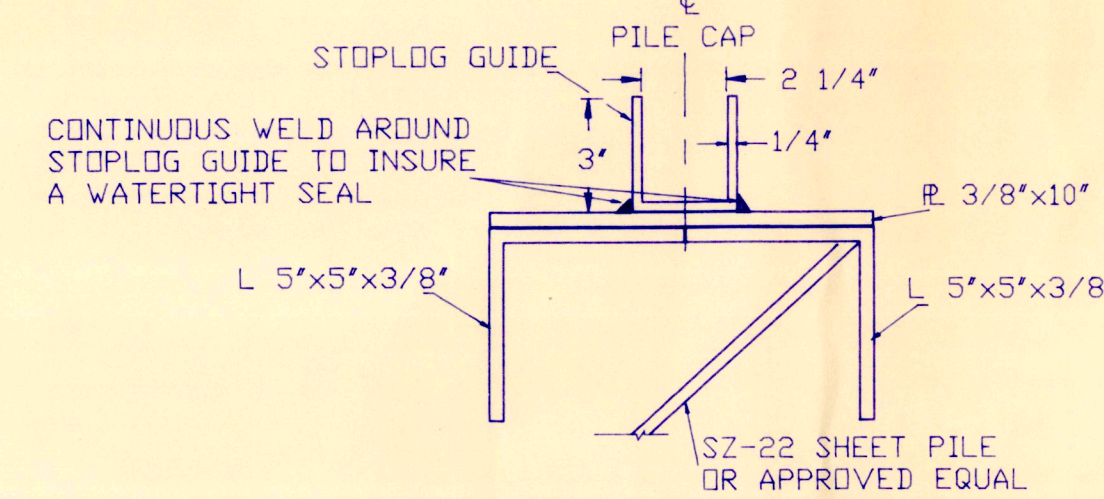
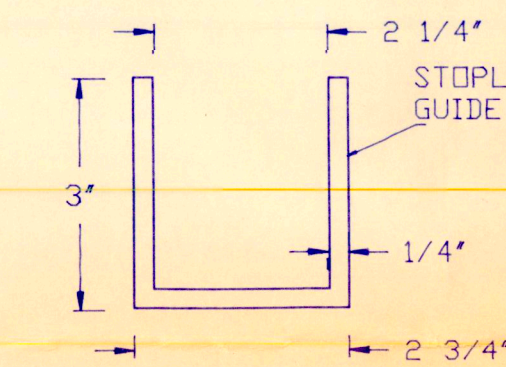
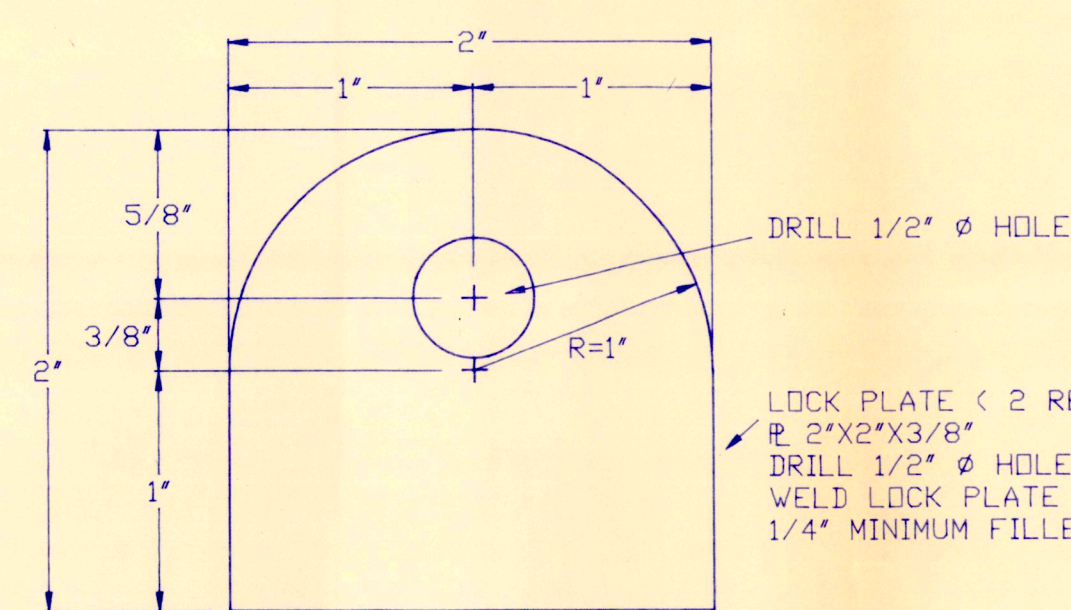
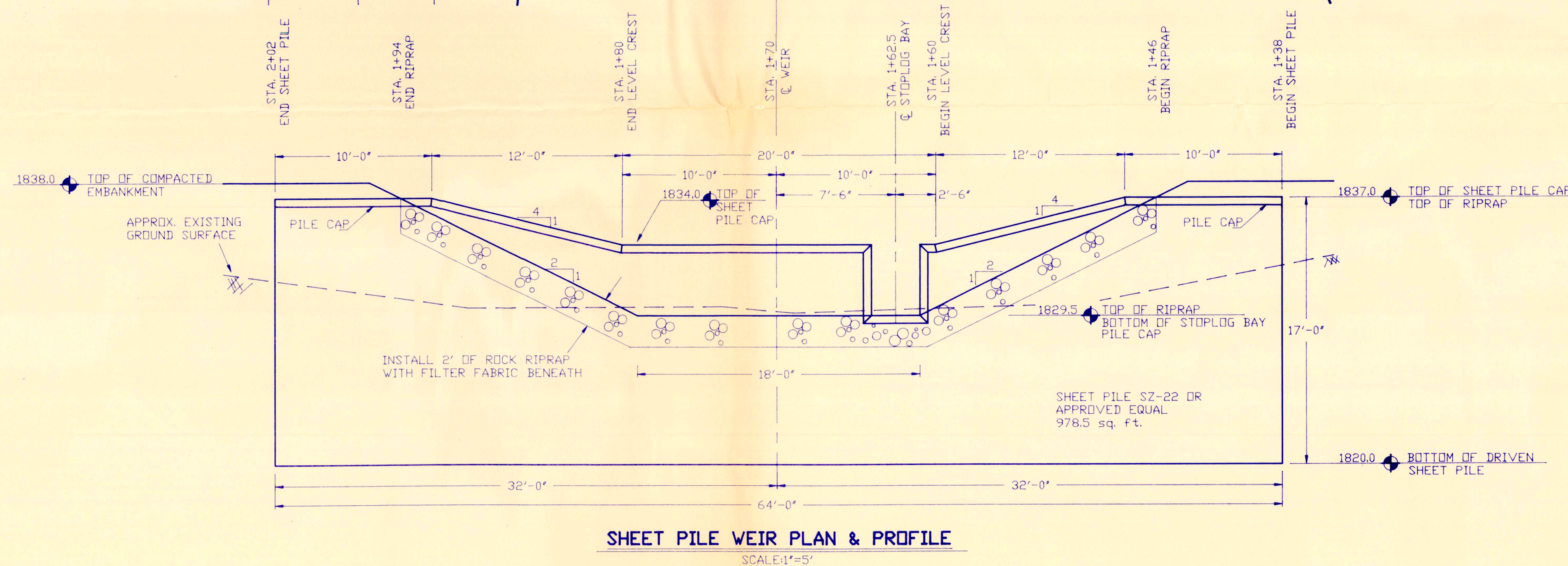
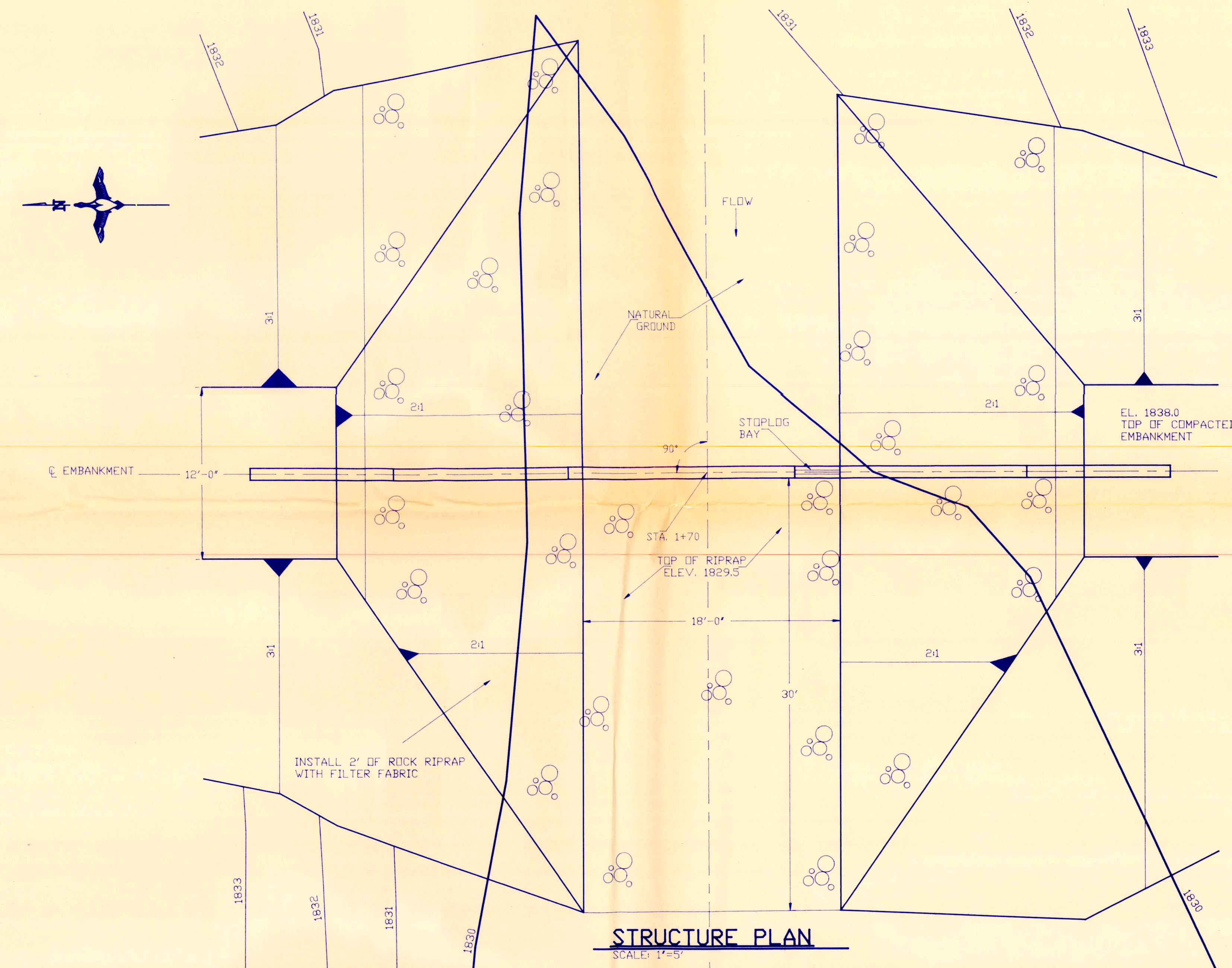


EMBANKMENT X-SECTION
SCALE: 1"=5'

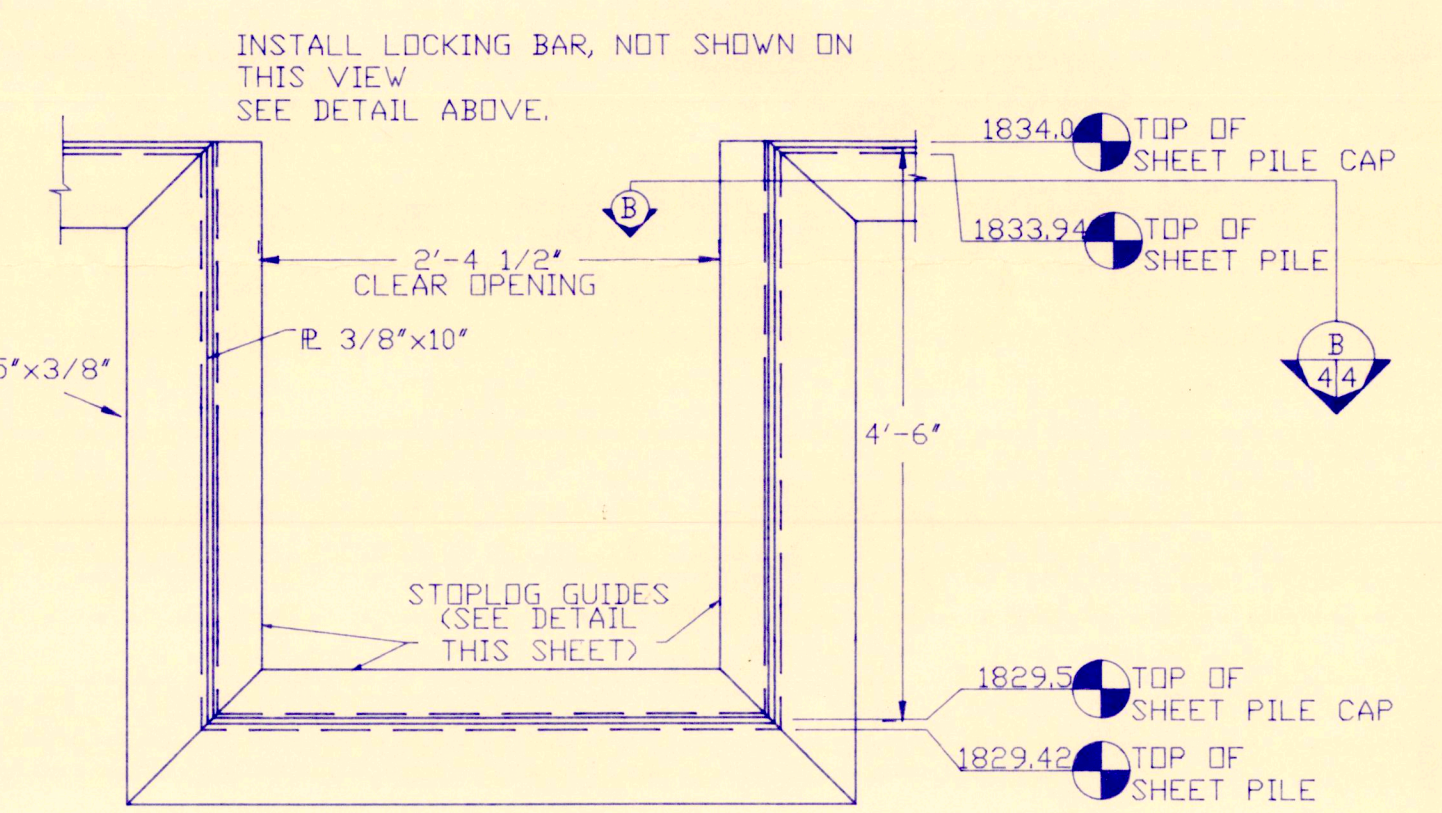
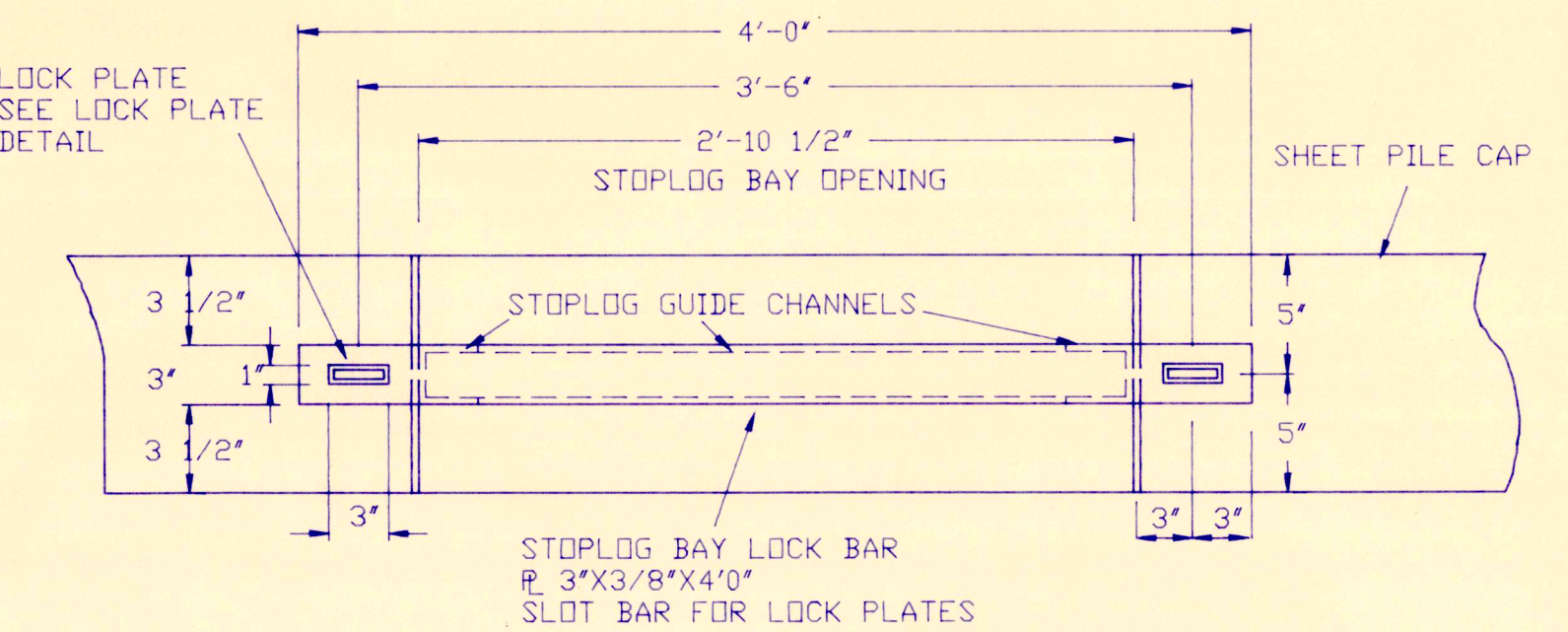
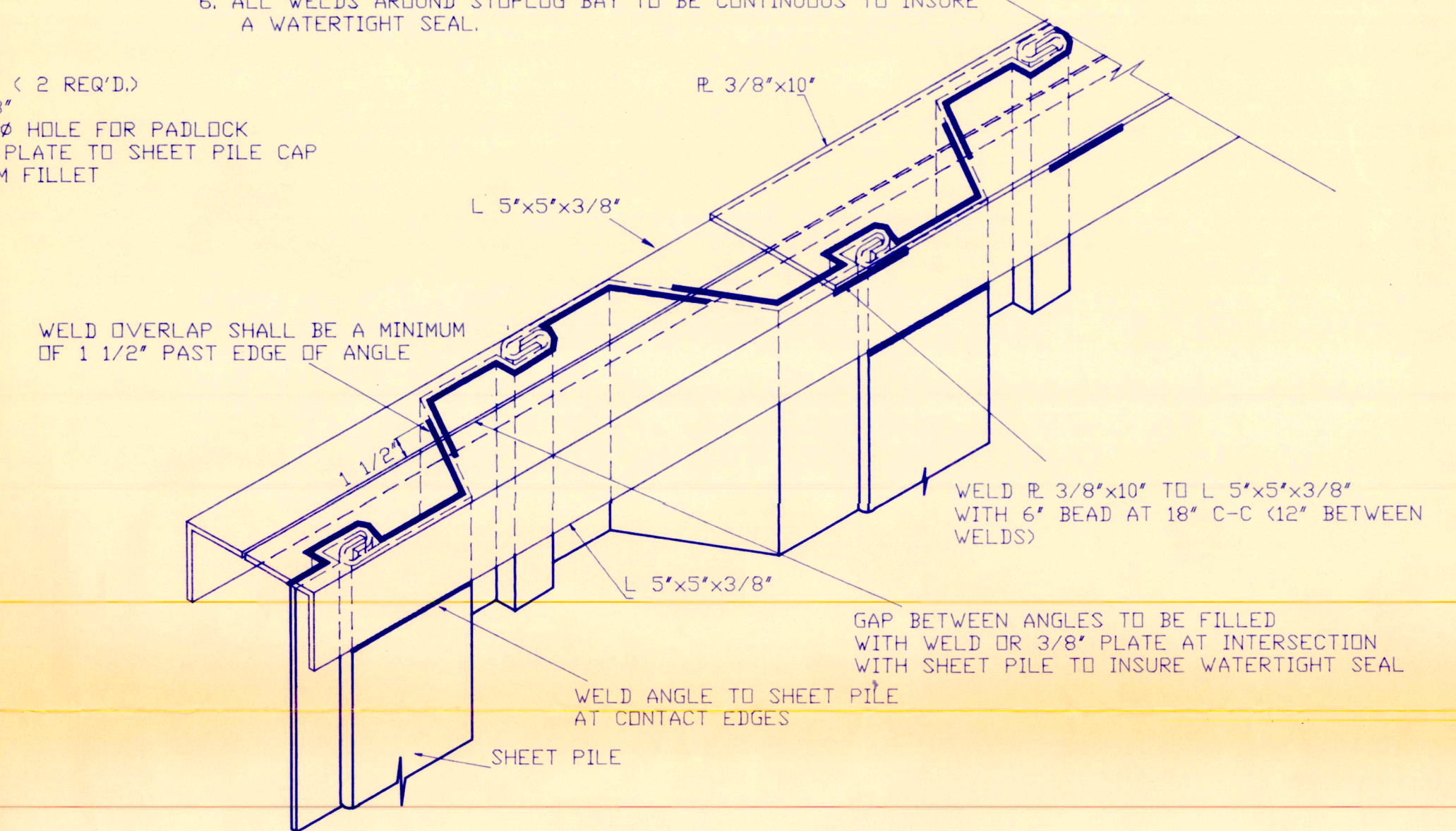
STRIP TOPSOIL UNDER DESIGNATED WASTE AREA,
STOCKPILE & RESPREAD OVER COMPLETED
EMBANKMENT & WASTE AREA. COST OF TOPSOIL
WORK UNDER DESIGNATED WASTE AREA SHALL BE
CONSIDERED INCIDENTAL TO "SITE PREPARATION."

APPROX. SOIL BORING LOCATIONS.
SEE SHEET 5 FOR SOILS INFORMATION.

DUCKS UNLIMITED INC. GREAT PLAINS REGIONAL OFFICE	PROJECT NO.: SD-118-1 SCHULTZ-RINGER WPA SITE PLAN	DESIGNED BY: D.J.L. DRAWN BY: [Signature] CHECKED BY: [Signature]
DATE:	SHEET NO:	APPROVED BY:
11-5-92	3 OF 5	



- NOTES:
1. ALL WELDS TO BE 1/4" FILLET WELDS (SEE D.U. SPECIFICATIONS).
 2. ALL WELDS WILL BE SUBJECT TO LAMPING. ANY AREAS FAILING WILL BE REWELDED BEFORE ACCEPTANCE OF PROJECT.
 3. TOP OF SHEET PILE SHALL BE TRIMMED TO GRADES INDICATED ON PLANS TO REMOVE ANY DAMAGE CAUSED BY DRIVING. ANY TRIMMING OVER 3" SHALL BE CONSIDERED CUT-OFF AND WILL BE DEDUCTED FROM THE COST OF SHEET PILE INSTALLATION.
 4. ABOVE F.S.L. PILE CAP NEED NOT BE WATERTIGHT. WELDS SHALL CONSIST OF A 6" BEAD AT 18" C-C (12" BETWEEN WELDS).
 5. LENGTH OF PILE CAP AS SHOWN ON PLANS.
 6. ALL WELDS AROUND STOPLOG BAY TO BE CONTINUOUS TO INSURE A WATERTIGHT SEAL.



	DUCKS UNLIMITED INC. GREAT PLAINS REGIONAL OFFICE	PROJECT NO. SD-118-1 SCHULTZ-RINGER WPA	DESIGNED BY: D.J.L. DRAWN BY: 16
DATE 11.5.92	SHEET NO. 4 OF 5	APPROVED BY:	CHECKED BY:

STANDARD TEST METHOD

JOB NO. 5183 LOG OR TEST BORING NO. 5

PROJECT Proposed Schultz-Ringer WPA, Near Glasston, South Dakota

VERTICAL SCALE 1"=3'

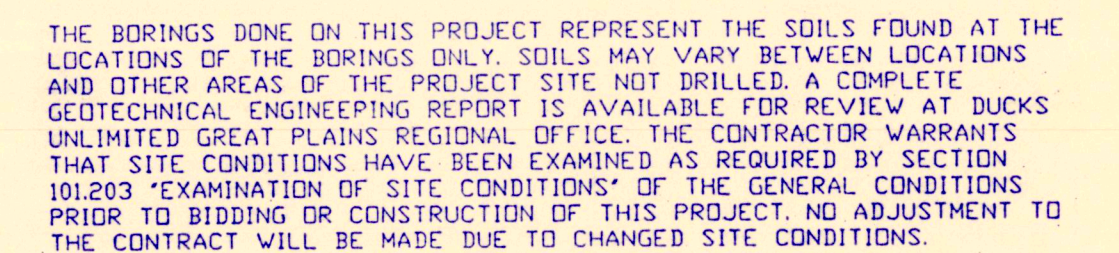
DEPTH FEET	SOIL DESCRIPTION	SURFACE ELEV. <u>1833.7</u>	SAMPLE NO.	TEST VALUE	LABORATORY TESTS		DATE	REMARKS
					METHOD	PERCENT		
11	TOPSOIL, ORGANIC CLAY-BLACK, soft (OL)		-1	SS	3			
	CLAYEY SAND-gray to brownish gray, soft to rather stiff, with a little gravel (SC)		-2	SS	4			
			3	DIAG	13-8's			25/27
			-4	SS	14			
6	(may be fill) END OF BORING							

WATER LEVEL DATA

DATE	TIME	CAVE IN DEPTH	WATER LEVEL
10-1-92	11:19	85A 41'	None
10-1-92	11:20	9-8'	2-1'

BORING DATA

STARTED	STOPPED	COMPLETED
10-1-92	10-8-92	11-10-92
METHOD USED 3-21/8" HSA 0-41"		
CREW UNDER D. Wyrupph		

[illegible]

 DUCKS UNLIMITED INC. GREAT PLAINS REGIONAL OFFICE	PROJECT NO. SD-118-1 SCHULTZ-RINGER WPA		DESIGNED BY: D.J.L. DRAWN BY: S SURVEYED BY: CHECKED BY:
	SOILS INFORMATION		
DATE: 11-5-92	SHEET NO: 5 OF 5	APPROVED BY:	APPROVED BY: