

WATER PERMIT NO. 5866-3

Phone: 773-3658

Name of Applicant: SD Dept. of Game, Fish and Parks

Post Office Address: 523 E Capitol, Pierre SD 57501

Amount of Water Claimed: 41 acre-feet Total Acres: _____

Source of Water Supply: unnamed tributary to Lake Florence

Water to be used for: fish & wildlife and recreational County: Hamlin

Location: 4 miles south and 1 mile west of Castlewood

PRIORITY Date Received: 5-15-95 Fee: NA

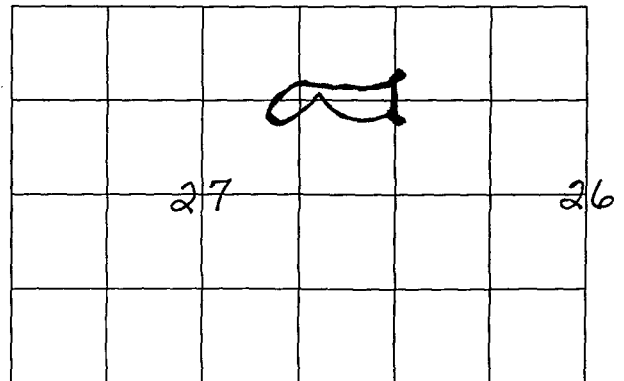
Corrected Application Received: _____ Period of Annual Use: Jan 1 - Dec 31

Remarks: _____

Diversion Point: section line between NE 1/4

Sec 27 & NW 1/4 Sec 26; all in T114N-R52W

Water Impounded: NE 1/4 Sec 27-T114N-R52W



Well Log: Driller: _____ Licensed: YES ____ NO ____

Depth of Well: _____ REMARKS: _____

Map of Map: aerial Prepared By: Don McCrea, G.F & P Reviewed and the Number

dated on: 5-22-95 By: Karen Schlaak

FORM 2: Application for uses other than irrigation
(type or print)

Mail to:
Water Rights Division
Joe Foss Building
523 E Capitol
Pierre SD 57501-3181
605 773-3352

No. 5866-3 Hydrologic Unit 10170202
Basin Big Sioux River
Newspaper Hamlin Co Republican, Box 50, Castlewood
(office use only)



Application For Permit To Appropriate Water Within The State Of South Dakota

Check use of water:

☐ Municipal ☐ Suburban Housing ☒ Recreational ☐ Institutional
☐ Rural Water System ☐ Commercial ☒ Fish & Wildlife ☐ Geothermal Heat
☐ Domestic ☐ Industrial ☐ Other _____
(over 18 gpm)

Type of Application: ☒ New ☐ Vested Right (Use predates Mar 2, 1955) ☐ Future Use Reservation
(check one) ☐ Place to Beneficial Use Water Reserved by Future Use Permit No. _____
☐ Amendment/Correction to Permit No. _____

Description of amendment/correction: (i.e. change diversion point(s), add diversion point(s), change use, etc.) _____

- Name of Applicant S.D. Dept. of Game, Fish, & Parks (Wildlife Div.) Phone 773-3658
(check one) ☐ Owner ☐ Tenant/lessee
Mailing Address 523 E. Capitol Pierre SD State 57501
(Street, RR, or Box) (City) (Zip Code)
- Amount of water claimed _____ *CFS or _____ **GPM 41 ***AF
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)
- Source of water supply Unnamed tributary that feeds Lake Florence
- Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) section line between
NE1/4 Sec 27 and NW1/4 Sec 26; all in T114N-R52W. Water impounded in
NE1/4 Sec 27-T114N-R52W County Hamlin
- County or counties where water will be used HAMLIN
- Annual period during which water is to be used JAN. 1 - Dec. 31
- Give a description of the 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)

Create an impoundment on an intermittent drainage to create waterfowl habitat.

Attachments: Attach Form 2A if diversion is from a well or dugout, or if storage of water is proposed. Attach map and any other technical information. (see instructions)

STATE OF SOUTH DAKOTA)

County of Hughes)^{SS}

I, Don McCrea, 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 Don McCrea

Subscribed and sworn to before me this 18th day of July 19 95

Daryl S. Richter
Notary Public

Permit expires on July 18, 2001.

**SOUTH DAKOTA
WATER PERMIT NO. 5866-3**

Date of first receipt of application May 15, 1995.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 5866-3 to the 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. 5866-3 authorizes impoundment of 41 acre-feet of water from runoff from an unnamed tributary to Lake Florence by constructing a dam located on the section line between the NE 1/4 Section 27 and the NW 1/4 Section 26 with water impounded in the NE 1/4 Section 27; all in T114N-R52W. This permit authorizes impoundment of sufficient water annually to maintain the water level in the dam at the primary spillway elevation of 1661.0 feet mean sea level.
2. The water appropriated shall be used for the purpose of supplying water for fish and wildlife production and recreational use and may not exceed the amount of water needed for beneficial use.
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. 5866-3 is August 10, 1995.
5. The date from which applicant may claim right is May 15, 1995.
6. One-fifth of the construction is to be completed on or before February 10, 1998.
7. All construction is to be completed on or before August 10, 2000.
8. Water is to be put to beneficial use on or before August 10, 2004.
9. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATION

Water Permit No. 5866-3 authorizes a dam with a storage capacity of 41 acre-feet of water and sufficient water annually to maintain the water level to the outlet elevation of 1661.0 feet mean sea level.

WATER MANAGEMENT BOARD

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

AUG 28 1995

date

Form 2A

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 of 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) _____

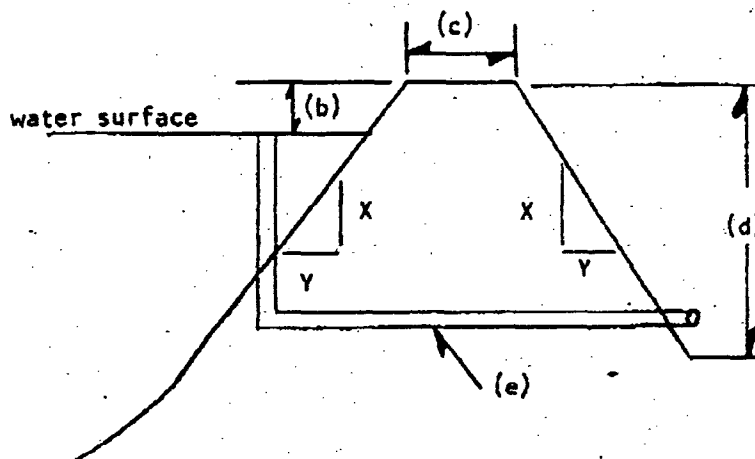
3. Water Storage Dams*SIOUX POWSETT GPA*

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

DICKS UNLIMITED, INC.
3502 FRANKLIN AVE.
DISMANT, ND 58501

- b) Freeboard 4.0'
- c) Crest Width 12'
Crest Length 402'
- d) Height 11'
- e) Outlet Dimensions:
Pipe diameter 60" Ø
Spillway width 72" Ø RISER
- f) X & Y Slope
Upstream 3H:1V
Downstream 3H:1V
- Surface Area of Impoundment 15 AC.
- Storage 41 acre feet
- Drainage area above dam 3031 AC.



Signature of Applicant _____

Sioux Poinsett GPA
SD Dept. of GF&P
Hamlin County

Top of Dam Elev. - 1665
Primary Spillway - 1661
2nd Spillway - 1663
Bottom - 1654

} Height = 11 ft.

Cat. 3 Low Hazard Dam

Normal Storage Capacity - 41 Ac.-Ft.
Intermediate Capacity - 77 Ac.-Ft.
Maximum Storage Capacity - 125 Ac.-Ft.

Int. Storage Capacity (77 Ac.-Ft.) $\times$ Eff. Ht. (9 ft) = 693 $<$ 3000 $\therefore$ 25 year
Minimum Spillway Design

Using USGS Tech. for Est. Flood Peaks in SD (WRI 80-80)

$$\begin{aligned} DA &= 4.7 \text{ mi.}^2 \\ \text{Slope} &= 15' / \text{mile} \\ S_i &= 3.16 \end{aligned} \quad \begin{aligned} Q_{25} &= 83.4 A^{.6} S^{.44} S_i^{-.72} \\ &= 83.4 (4.7)^{.6} (15)^{.44} (3.16)^{-.72} \\ &= 83.4 (2.53) (3.29) (0.44) \\ &= \underline{305 \text{ cfs}} \times 1.25 = \underline{382 \text{ cfs}} \end{aligned} \quad \begin{aligned} Q_{100} &= 132(A)^{.65} S^{.46} S_i^{-.67} \\ &= 132(4.7)^{.65} (15)^{.46} (3.16)^{-.67} \\ &= 132(2.73) (3.47) (0.46) \\ &= \underline{578 \text{ cfs}} \times 1.39 = \underline{804 \text{ cfs}} \end{aligned}$$

Primary Spillway Flow - Weir flow to Elev. 1662.52 then Orifice flow to Top of Dam

Wiev. Lsg.

$$Q = CHH^{3/2} \quad L = 2-72'' \text{ Dia. Circle}$$

$$= 2(2\pi r) = 37.68'$$

$$= 3(37.68)(1.52)^{3/2}$$

$$= 212 \text{ cfs}$$

Orifice Eq.

$$Q_p = C A \sqrt{2gh} \quad h \text{ from Center Outlet}$$

$$A = 19.6 \text{ ft}^2$$

$$= .6(19.6) \sqrt{2(32.2)(6.5)}$$

$$= 240 \text{ cfs} \quad \text{OK}$$

$$Q = C A \sqrt{2gh} \quad h = 9 \text{ ft to Top of Dam}$$

$$= .6(19.6) \sqrt{2(32.2)(9)}$$

$$= 28.5 \text{ cfs}$$

2nd Spillway Flow - $Q = CLH^{3/2}$ $L = 100'$ Total $Q = 790 + 285$
 $= 2.8(100)(2)^{1.5}$ $= 1075 \text{ cfs}$
 $= 790 \text{ cfs}$

Section 74:02:08:09

SCS Annual Yield Assume CN=70

$$ISO = 2\frac{1}{2} \quad OA = 4.7 m^2 \times 640 = 3008 Ac$$

50% chance = $0.27 \times 3008/12 = 68 \text{ A.C.-Ff.}$

10% chance = $1.6 \times 3008/12 = 400 \text{ Ac-Ft.}$

1. Topo Map - OK
2. Dam Axis Profile - OK
3. Max X-Sec. - OK
4. Area Capacity - OK
5. Outlet Detail - OK
6. Spillway Rating - OK
7. Spillway Detail - OK
8. Specs - Std. - OK
9. SEPP - Cat. 3 - OK

DESIGN REPORT

April 20, 1995



PROJECT: SIOUX POINSETT GPA
SD-0073-003

LOCATION: Section 27, T 114 N, R 52 W
4 miles south, 1 mile west of Castlewood
Hamlin County, South Dakota

MARSH DATA: Full Service Level (FSL) @ 1661.0
15 Surface Acres @ FSL
41 Acre-Feet Capacity @ FSL

Emergency Spillway Crest @ 1663.0
21 Surface Acres @ E.S. Crest
77 Acre-Feet Capacity @ E.S. Crest

Top of Compacted Embankment @ 1665.0
27 Surface Acres @ Top of Dam
125 Acre-Feet Capacity @ Top of Dam

PROJECT DESCRIPTION:

The project as proposed involves the construction of a small dam located on recently acquired State land to be managed by the South Dakota Department of Game, Fish & Parks. No other private or public land will be affected by the project. The proposed embankment is on an unnamed drainage that discharges directly into Lake Florence. The contributing watershed for this project consists of approximately 3031 acres or 4.7 square miles.

PRELIMINARY RISK ASSESSMENT:

The project site is located in a rural area of Hamlin County. No residences or other buildings are located directly downstream adjacent to the outlet channel. Upon leaving the outlet structure, flows will enter Lake Florence as they currently do.

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, per the classification criteria outlined in South Dakota Code Chapter 74:02:08 "Safety of Dams," it is recommended that the proposed dam be classified as a low hazard, small, Category 3 dam.

The product of the intermediate storage capacity (77 acre-feet) times the effective height (9 feet) is 693 which is less than 3000. Therefore, in accordance with 74:02:08:07.01 of the South Dakota rules, the minimum spillway design flood is a 25-year frequency and must be passed through the spillways without overtopping the embankment.

DESIGN:

As designed, the primary spillway will pass flows in excess of those produced by a 10-year, 24-hour rainfall without using the emergency spillway. In addition, the combination of the primary and emergency spillways will pass flows produced by a 100-year, 24-hour rainfall event without overtopping the embankment.

Dual 72" diameter CMP risers connected in series with a 60" diameter CMP outlet barrel is proposed as the primary spillway. The structure is equipped with removable stoplogs to provide variable control and drawdown capability. The maximum stoplog overflow elevation or full service level (FSL) is proposed at elevation 1661.0. The emergency spillway crest will be at elevation 1663.0 with the spillway being 100' feet wide.

Regression equations provided in *Techniques for Estimating Flood Peaks, Volumes, and Hydrographs on Small Streams in South Dakota*¹ were used to develop flood peaks for design purposes. The Natural Resource Conservation Service (formerly SCS) TR-20 Hydrology program was then calibrated by adjusting the curve number to produce a peak inflow for the various design events similar to

¹Becker, Lawrence D., U.S. Geological Survey, Water Resources Investigations 80-80, September 1980.

those determined using the regression equations. The curve numbers were reviewed to ensure they were realistic for the runoff event. The calibrated TR-20 model was then 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 by comparing discharges developed by the weir flow formula and formulas for calculating head loss through corrugated metal pipe. Estimated flows through the emergency spillway were determined using Technical Release No. 39 *Hydraulics of Broad-Crested Spillways* developed by the SCS. A total discharge curve for the proposed dam is attached.

The following is a relationship between peak inflows, corresponding outflows, and reservoir elevations using the previously-mentioned methods of analysis.

HYDRAULIC SUMMARY

<u>EVENT</u>	<u>PEAK INFLOWS</u>	<u>MAXIMUM WATER SURFACE ELEVATION</u>	<u>FREEBOARD AVAILABLE*</u>	<u>TOTAL DISCHARGE</u>
5 YR	139 CFS	1662.07	3.26 FT	133 CFS
10 YR	249 CFS	1662.79	2.54 FT	219 CFS
25 YR	433 CFS	1664.05	1.28 FT	402 CFS
50 YR	653 CFS	1664.65	0.68 FT	634 CFS
100 YR	830 CFS	1665.04	0.29 FT	811 CFS

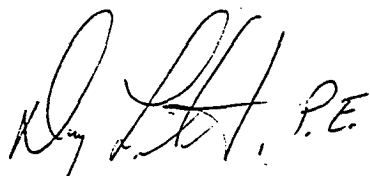
Primary Spillway (Riser) FSL Elevation . . . @ 1661.0
 100' Wide Emergency Spillway Crest @ 1663.0
 Top of Compacted Embankment Elevation. . . . @ 1665.0
 Top of Embankment After 4" Topsoil @ 1665.33*

As indicated by the results in the previous table, the project as designed will easily meet the requirements of 74:02:08:07.01 of the South Dakota rules and pass the 25-year design flood without overtopping the embankment.

A set of plans is submitted with the Design Report. Ducks Unlimited's standard construction specifications have previously been submitted to the Division of Water Rights.

Dated: April 20, 1995

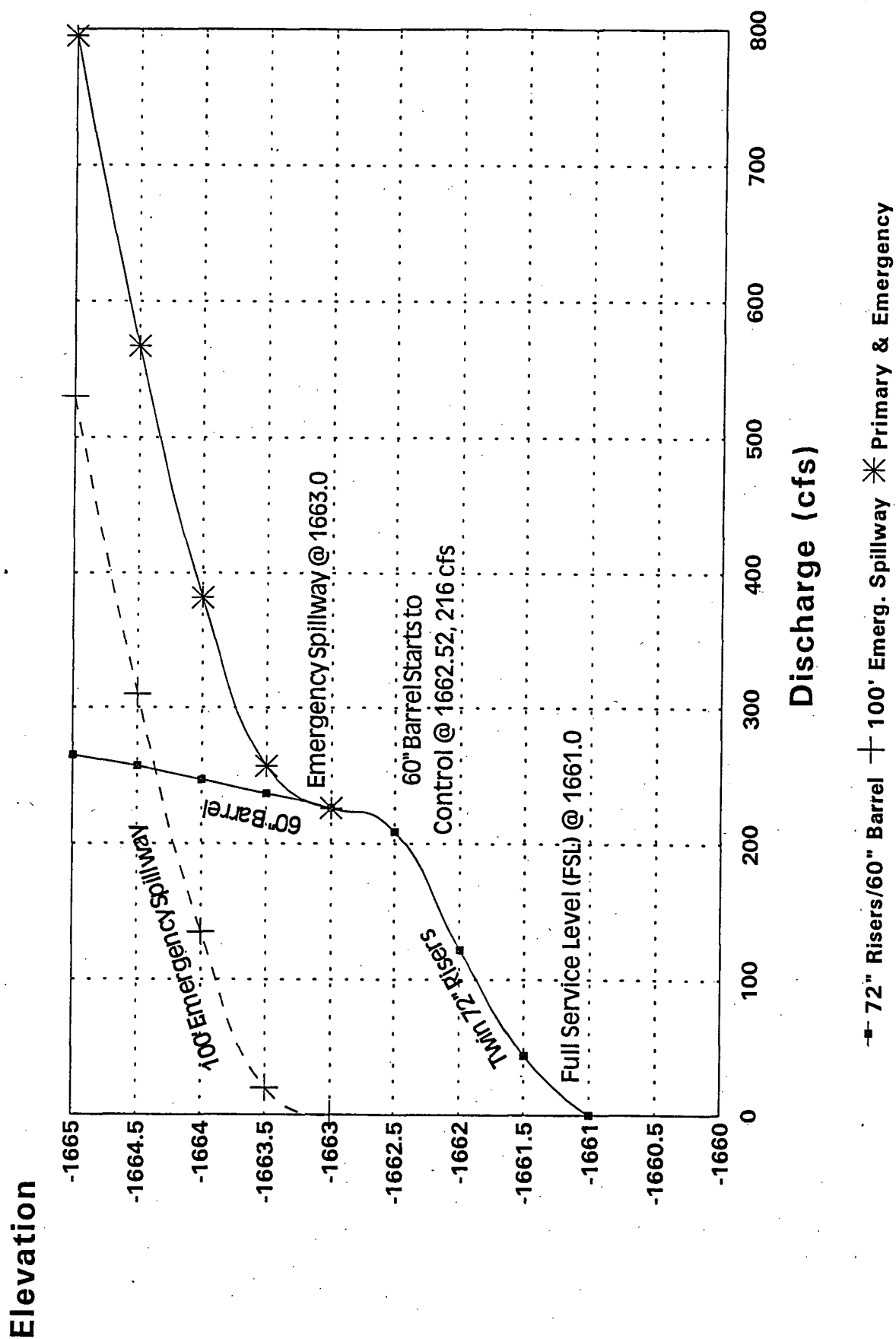
Submitted By:

A handwritten signature in dark ink, appearing to read "Doug Lipetzky, P.E.", with a stylized, cursive script.

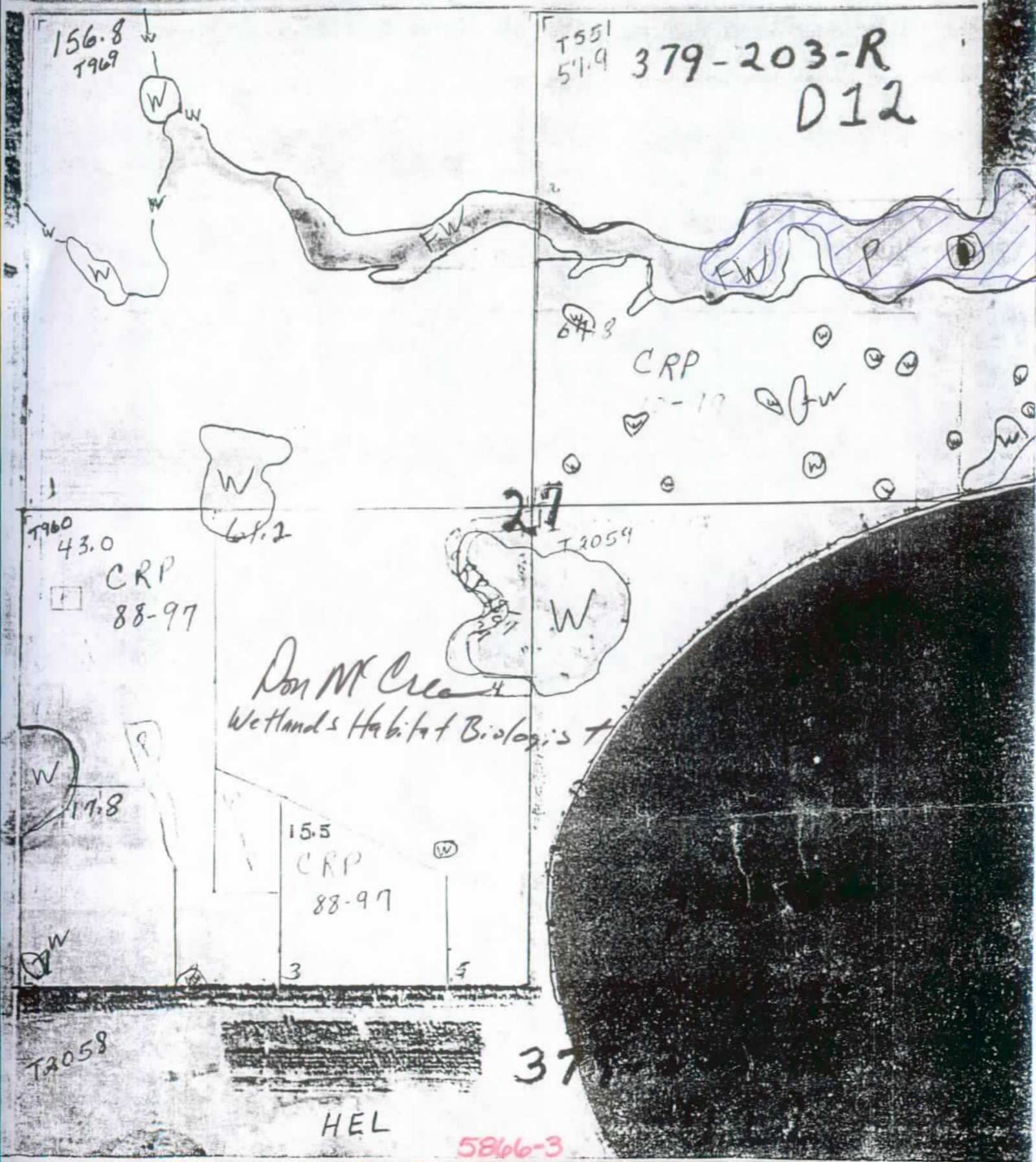
Doug Lipetzky, P.E.
PE-4499

SIoux POINsett GPA

Discharge Curve

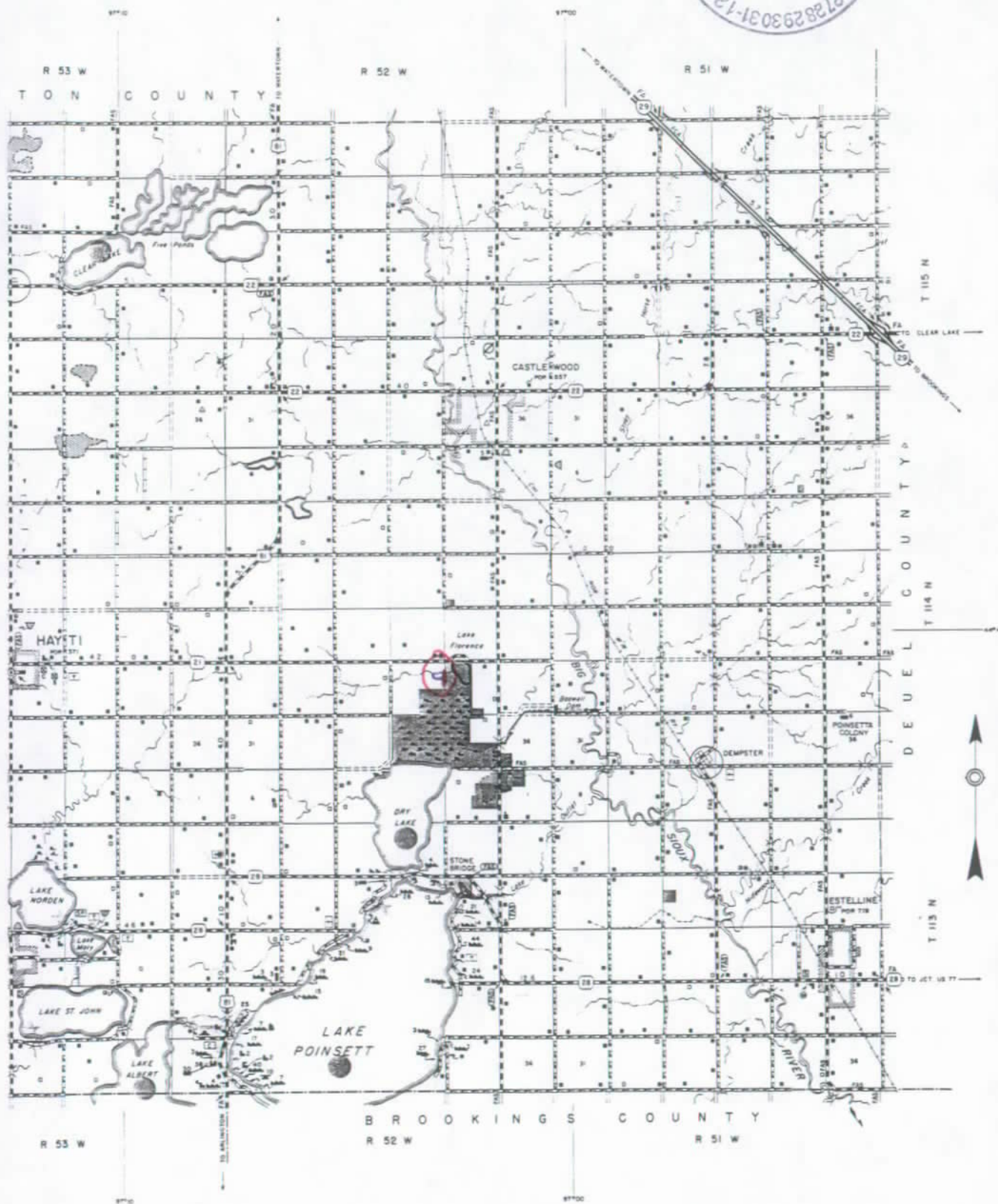


(W) Wetland
(FW) Ditched or tilled prior to 12-23-85 but still wetland
(PC) Converted Wetland prior to 12-23-85
(CW) Converted Wetland after 12-23-85
(————) Ditched prior to 12-23-85
(————) Tilled prior to 12-23-85
(———— W ————) Wetland in a channel



EAST HALF
HAMLIN

HAMLIN—49





DEPARTMENT OF GAME, FISH AND PARKS

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



5-15-95

Tim Schaal
DENR
Pierre, SD 57501

Dear Tim,

Enclosed you will find a water right application for a GFP/DU project we are planning at the Sioux Poinsett GPA in Hamlin County. The impoundment will store 41 acre feet at FSL, and will cover approximately 15 acres. A design report and preliminary design information are included. If any additional information is needed, please give me a call. Thanks.

Sincerely,

Don McCrea
Wetlands Habitat Biologist



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

June 7, 1995

Doug Lipetzky, P.E.
Regional Engineer
Ducks Unlimited, Inc.
3502 Franklin Avenue
Bismarck, ND 58501-0761

Dear Mr. Lipetzky:

We have reviewed the plans and specifications for the Sioux Poinsett GPA Dam located in the NE 1/4 of Section 27-T114N-R52E, in Hamlin County. The plans and specifications as submitted are approved. Approval of the plans and specifications does not authorize construction of the project. No construction may begin until Water Permit Application No. 5866-3 is approved.

Our review was to determine compliance with the requirements of 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 ensure the safety of the dam.

The Sioux Poinsett GPA Dam will be classified as a small size Category 3, Low Hazard Dam with an embankment height of 11 feet, a normal storage capacity of 41 acre-feet and a maximum storage capacity of 125 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

c: Don McCrea, Department of Game, Fish & Parks
Tim Olson, Department of Game, Fish & Parks

REPORT ON
WATER PERMIT APPLICATION NO. 5866-3
SOUTH DAKOTA DEPARTMENT OF GAME, FISH & PARKS
June 6, 1995

Water Permit Application No. 5866-3 has been filed by the South Dakota Department of Game, Fish and Parks to impound 41 acre-feet of water by constructing a dam. The application requests appropriation of sufficient water to maintain the water level in the dam at the primary spillway elevation of 1661.0 feet mean sea level. The dam will be located in the NE 1/4 of Section 27-T114N-R52W on an unnamed tributary that discharges directly into Lake Florence, in Hamlin County. The impounded water will be used for recreation and to provide habitat for fish and wildlife production.

Discussion:

The Sioux Poinsett GPA Dam will be classified as a Category 3, Low Hazard dam. The dam has been designed by Ducks Unlimited, Inc. and the plans and specifications have been reviewed and approved; however, construction cannot start until Water Permit Application No. 5866-3 is approved.

The dam will be 11 feet high with a normal storage capacity of 41 acre-feet with a reservoir level at the primary spillway elevation, and a maximum storage capacity of 125 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 capable of passing a 25-year frequency event.

The Sioux Poinsett GPA Dam is designed to have a CMP drop inlet spillway with two 72-inch diameter risers and a 60-inch diameter barrel. The spillway crest will be at elevation 1661.0, giving it 4 feet of available head. The dam will also have a 100 foot wide earthcut secondary spillway with a crest elevation of 1663, giving it 2 feet of available head. The Sioux Poinsett GPA Dam will have a drainage area of 4.7 square miles. Ducks Unlimited uses the Soil Conservation Service TR-20 model to route a 25-year frequency event peak of 433 cfs through the dam with 1.28 feet of freeboard remaining. A 100-year frequency event with a peak of 830 cfs is routed through the dam with 0.29 feet of freeboard remaining.

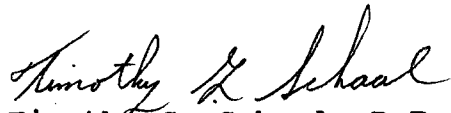
The annual yield for this drainage area with a 50 percent chance of occurrence, or 1 out of 2 years, is expected to be approximately 68 acre-feet. The annual yield for this basin with a 10 percent chance of occurrence, or 1 out of 10 years, is expected to be 400 acre-feet.

The Sioux Poinsett GPA Dam is located on an unnamed tributary that discharges directly into Lake Florence and then eventually

into the Dry Lake/Lake Poinsett drainage and then into the Big Sioux River. The Department of Game, Fish and Parks holds Water Right Nos. 28-3 and 1595-3 for these lakes. Approval of Water Permit Application No. 5866-3 should have no adverse effects on these Water Rights.

Conclusion:

1. Water permit Application No. 5866-3 should be approved since unappropriated water is available and approval should not have any adverse effects on existing Water Permits/Rights.



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

Approved by:



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

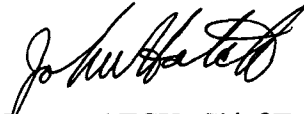
**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 5866-3, SD Department of Game, Fish & Parks**

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. 5866-3, South Dakota Department of Game, Fish and Parks, c/o Don McCrea, 523 E. Capitol, Pierre, SD 57501.

The Chief Engineer is recommending APPROVAL of Application No. 5866-3 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) in the public interest with the following qualification:

Water Permit No. 5866-3 authorizes a dam with a storage capacity of 41 acre-feet of water and sufficient water annually to maintain the water level to the outlet elevation of 1661.0 feet mean sea level.

See report on application for additional information.

A handwritten signature in black ink, appearing to read "John Hatch", is positioned above the printed name.

JOHN HATCH, Chief Engineer
June 14, 1995



**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.

June 15, 1995

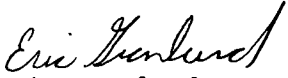
Don McCrea
SD Department of Game, Fish & Parks
523 East Capitol
Pierre, SD 57501

Dear Mr. McCrea:

Water Permit Application No. 5866-3 for fish & wildlife and recreational 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 Hamlin County Republican printed at Castlewood, SD (Ph # 605-793-2293). For your information, a copy of the notice, the recommendation of the Chief Engineer and a report on the application 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 application.

Sincerely,


Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

NOTE: If you plan to contest any part of the Chief Engineer's recommendation, 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 application.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

June 15, 1995

Hamlin Co. Republican
Box 50
Castlewood, SD 57223-0050

ATTENTION: Legal Department

Enclosed is a Notice of Hearing on Application No. 5866-3 to be published twice. Please publish the first notice on June 21, 1995, 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 the South Dakota Department of Game, Fish and Parks, c/o Don McCrea, 523 East Capitol, Pierre, SD 57501 (Ph # 605-773-3658).

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 application until proof of publication has been received.

Sincerely,

Eric Gronlund
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 June 21, 1995, with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF APPLICATION NO. 5866-3 to Appropriate Water

Notice is given that the South Dakota Department of Game, Fish and Parks, 523 East Capitol, Pierre, SD 57501 has filed an application for a water permit to impound 41 acre-feet of water from runoff from an unnamed tributary to Lake Florence by constructing a dam located on the section line between the NE 1/4 Section 27 and the NW 1/4 Section 26 with water impounded in the NE 1/4 Section 26; all in T114N-R52W. This application requests appropriation of sufficient water to maintain the water level in the dam at the primary spillway elevation of 1661.0 feet mean sea level. The water will be used for fish and wildlife production and recreational purposes.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 5866-3 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. In accordance with SDCL 46-2A-23, the chief engineer will act on the application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the chief engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider the application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and chief engineer. The applicant must file a petition if contesting the chief engineer's recommendation. 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 July 10, 1995.

The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained. Contact Eric Gronlund at the above Water Rights Division address to request copies of information pertaining to this application. Nettie H. Myers, Secretary, Department of Environment and Natural Resources.



in error
was readvertised

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)

County of Hamlin) SS

I, Leanne Archer

certify that the attached printed Notice was

taken from the Hamlin Co.

Republican

printed and published in Castlerood

County of Hamlin and State of

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

June 21, 1995

June 28, 1995

Cost of Printing: 38.16

APPLICATION #5866-3 TO APPROPRIATE WATER

Notice is given that the South Dakota Department of Game, Fish and Parks, 523 East Capitol, Pierre, SD 57501 has filed an application for a water permit to impound 41 acre-feet of water from runoff from an unnamed tributary to Lake Florence by constructing a dam located on the section line between the NE 1/4 Section 27 and the NW 1/4 Section 26 with water impounded in the NE 1/4 Section 26; all in T114N-R52W. This application requests appropriation of sufficient water to maintain the water level in the dam at the primary spillway elevation of 1661.0 feet mean sea level. The water will be used for fish and wildlife production and recreational purposes.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 5866-3 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. In accordance with SDCL 46-2A-23, the chief engineer will act on the application, as recommended, unless a petition is filed opposing the applications or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will con-

sider the application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interest in opposing or supporting or recommendation must file a written petition with BOTH the applicant and chief engineer. The applicant must file a petition if contesting the chief engineer's recommendation. The Chief Engineer's address is "Water Rights Division, Foss Building, 523 East 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 July 10, 1995.

The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained. Contact Eric Gronlund at the above Water Rights Division address to request copies of information pertaining to this application. Nettie H. Myers, Secretary, Department of Environment and Natural Resources.

(published June 21 and 28, 1995)

Leanne Archer
(Signature)

Owner
(Title)

(Date Signed)



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

July 17, 1995

Don McCrea
SD Dept. of Game, Fish and Parks
523 E Capitol
Pierre SD 57501

Dear Mr. McCrea:

The legal notice of hearing on Water Permit Application No. 5866-3 published in the Hamlin County Republican was not correct. The location of the area where water will be impounded was incorrectly published as the NE 1/4 Section 26. The correct location is the NE 1/4 Section 27.

As a result of the error, the notice of hearing needs to be readvertised in the Hamlin County Republican. The readvertisement is needed to ensure the permit is free from legal problems due to inaccurate public notice. The information needed to readvertise the notice is enclosed. The Water Rights Program will pay the cost of this publication.

We are sorry for any inconvenience this delay may cause. If you have questions, please contact me.

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

c: Hamlin County Republican



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

July 17, 1995

Hamlin Co. Republican
Box 50
Castlewood, SD 57223-0050

ATTENTION: Legal Department

Enclosed is a Notice of Hearing on Application No. 5866-3 to be published twice. Please publish the first notice on July 26, 1995, 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 WATER RIGHTS PROGRAM at the above address for the cost of the publication.

A copy of BOTH publications must be SENT to the WATER RIGHTS PROGRAM. 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 application 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 Program
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

NOTICE OF APPLICATION NO. 5866-3 to Appropriate Water

Notice is given that the South Dakota Department of Game, Fish and Parks, 523 East Capitol, Pierre, SD 57501 has filed an application for a water permit to impound 41 acre-feet of water from runoff from an unnamed tributary to Lake Florence by constructing a dam located on the section line between the NE 1/4 Section 27 and the NW 1/4 Section 26 with water impounded in the NE 1/4 Section 27; all in T114N-R52W. This application requests appropriation of sufficient water to maintain the water level in the dam at the primary spillway elevation of 1661.0 feet mean sea level. The water will be used for fish and wildlife production and recreational purposes.

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The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application. Nettie H. Myers, Secretary, Department of Environment and Natural Resources.

Affidavit of Publication

STATE OF SOUTH DAKOTA, County of Hamlin, ss

Gregory A. Archer of said County and State being first duly sworn, on his oath says: That the Hamlin County Republican is a weekly newspaper of general circulation, printed and published in Castlewood in said County and State by Gregory A. Archer, that the said newspaper is a legal newspaper and has a bona-fide circulation of at least two hundred copies weekly, and has been published within said County for fifty-two successive weeks prior to the publication of the notice herein mentioned, and was and is printed wholly or in part in an office maintained at said place of publication; and has been such newspaper during the time hereinafter mentioned; and that I, Gregory A. Archer, the undersigned, am publisher of said newspaper, in charge of the advertising department thereof and have personal knowledge of all facts stated in this affidavit; and that the advertisement headed:

Notice to Appropriate Water,
a printed copy of which is hereto attached, was printed and published in the regular and entire issue of said newspaper and not in supplement, once each week for 2 successive weeks, the first publication made on the 26 day of July, 19 95, and the last publication on the 2 day of August, 19 95.

The 1st publication made on the 26 day of July, 19 95
The 2nd publication made on the 2 day of Aug, 19 95
The 3rd publication made on the ___ day of ___ 19 ___
The 4th publication made on the ___ day of ___ 19 ___
The 5th publication made on the ___ day of ___ 19 ___
The 6th publication made on the ___ day of ___ 19 ___
The 7th publication made on the ___ day of ___ 19 ___
The 8th publication made on the ___ day of ___ 19 ___
The 9th publication made on the ___ day of ___ 19 ___
The 10th publication made on the ___ day of ___ 19 ___

That the full amount of the fees for publication of the annexed notice is \$ 40.37 and insures solely to the benefit of said publisher; that no agreement or understanding for a division thereof has been made with any other person and that no part thereof has been agreed to be paid to any person whomsoever.

Subscribed and sworn to before me this 26 day of July, 19 95

Mauda Lyda

Notary Public

My commission expires 2-22-98

NOTICE OF APPLICATION NO. 5866-3 TO APPROPRIATE WATER

Notice is given that the South Dakota Department of Game, Fish and Parks, 523 East Capitol, Pierre, SD 57501 has filed an application for a water permit to impound 41 acre-feet of water from runoff from an unnamed tributary to Lake Florence by constructing a dam located on the section line between NE 1/4 Section 27 and the NW 1/4 Section 26 with water impounded in the NE 1/4 Section 27; all in T114N-R52W. This application requests appropriation of sufficient water to maintain the water level in the dam at the primary spillway elevation of 1661.0 feet mean sea level. The water will be used for fish and wildlife production and recreational purposes.

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The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application. Nettie H. Myers, Secretary, Department of Environment and Natural Resources.

(published July 26 and Aug. 2, 1995)



PAYMENT REQUEST FORM

PAYEE: Hamlin County Republican
P.O. Box 50
Castlewood, SD 57223

FROM: Water Rights Program
523 E. Capitol
Pierre, SD 57501-3181

DESCRIPTION OF SERVICE, PRODUCE OR TRANSFER

Publication of Notice of Application No. 5866-3 to Appropriate Water.
Notice had to be republished because of error in the legal description
of the first Notice.

AMOUNT: \$40.37

FUNDING SOURCE:

GENERAL: X

FEDERAL:

COMMENTS:

AUTHORIZATION:

John W. Hartsch

8-7-95

I declare and affirm under the penalties of perjury that this claim is
in all things, true and correct. I further agree to comply with the
provisions of the Civil Rights Act of 1964 and regulations issued
thereunder relating to nondiscrimination in federal assisted programs.



AUG 28 1995

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

Don McCrea
SD Department of Game, Fish & Parks
523 East Capitol
Pierre, SD 57501

Dear Mr. McCrea:

Enclosed is Water Permit No. 5866-3 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

Also enclosed is Form 10, 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 system and/or have put the water to beneficial use. An inspection can then be scheduled so that the Water License may be issued, thus completing your acquisition of a Water Right.

Very truly yours,

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

enclosures

PLEASE NOTE: Certain changes can be made in your permit within the five year construction period, usually without affecting the priority date provided an application to amend your permit 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 12-12-95

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

FROM: Don McCrea Game, Fish, & Parks Foss Bldg. Pierre, SD
(name) (address)
Pierre SD 57501 605-773-3658
(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. 5866-3.

Water Permit No. 5866-3 states that the diversion system is to be constructed by GF+P, and that the water is put to beneficial use by Aug. 10, 2004.
(date) (date)

The diversion system was completed on 11-15-95.
(date)

Applying the water to beneficial use was completed on 11-15-95.
(date)

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

Don McCrea
(signature)

Permit No. 5866-3
Big Sioux River - Water District

Report Of Examination Of Works And/Or Application of Water To Beneficial Use

TO: Chief Engineer, Water Rights Program, DENR, Foss Bldg., Pierre, SD 57501

I have this day, August 24, 2004, made a thorough examination of the water use system constructed by SD Department of Game, Fish & Parks of 523 E. Capitol, Pierre SD 57501 holder of Permit No. 5866-3, bearing the priority of May 15, 1995 authorizing the storage of 41 acre-feet of the waters of runoff for fish & wildlife production and recreational use purposes, in Hamlin County.

I have to report on the conditions of the same as follows:

A. Works used to divert the water:

An 11 ft. high earthen dam with a normal storage capacity of 41 acre-feet

B. Works used to transport water to place of use:

N/A

C. Works used to apply water to beneficial use:

An 11 ft. high earthen dam with a normal storage capacity of 41 acre-feet

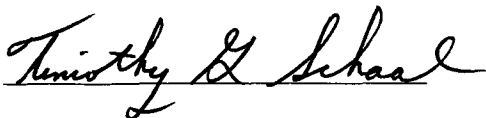
The system is in the following condition good. The point of diversion is located 1200 ft. south of the NE corner of Sec. 27-T114N-R52W (NE ¼ NE ¼) (Lat. 44.65618, Long. -97.04749). The works are capable of storing 41 acre-feet of water which is to be used for fish & wildlife production and recreational use. Water has been put to beneficial use to the maximum extent as follows:

An 11 ft. high earthen dam with a normal storage capacity of 41 acre-feet

and the license should be issued for 41 acre-feet of storage.

Applicable permit qualifications have been complied with: Yes X

Exceptions to compliance are: none Date Report Completed: January 18, 2005



Timothy G. Schaal, P.E.
Natural Resources Engineer Specialist
DENR, Water Rights Program

REPORT ON INSPECTION OF PERMIT NO. 5866-3

DATE OF INSPECTION: August 24, 2004

NAME & ADDRESS OF PERMIT HOLDER: SD Department of Game, Fish & Parks, 523 E. Capitol,
Pierre, SD 57501

DIVERSION POINT LEGAL LOCATION: 1200 ft. south of the NE corner of Sec. 27-T114N-52W
(NE ¼ NE ¼) (Lat. 44.65618, Long. -97.04749).

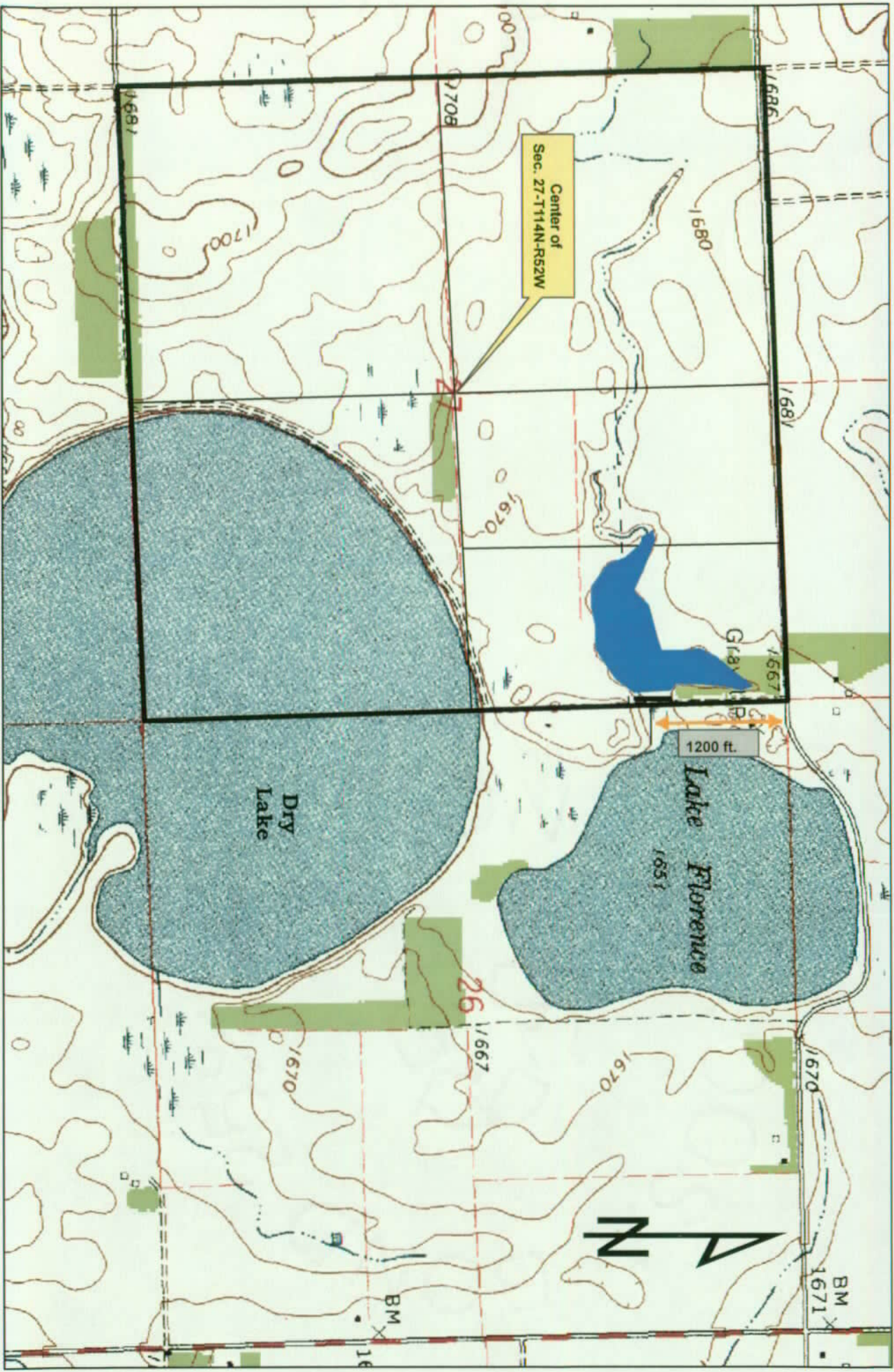
DAM INFORMATION:

- 1) Height to crest 11 feet
- 2) Height to primary spillway 7 feet
- 3) Height to secondary spillway 9 feet
- 4) Crest width 12 feet
- 5) Crest length 402 feet
- 6) Spillway length XXX feet
- 7) Spillway width 100 feet
- 8) Approx. storage (Normal) 41 acre-feet
- 9) Approx. storage (Maximum) 125 acre-feet
- 10) Date constructed: 1995

PERMIT QUALIFICATIONS AND REGULATIONS:

- 1) Soil and water permit lands agree with lands being irrigated and lands listed on permit N/A
- 2) Special qualifications to permit being abided by yes
- 3) All structures, wells and lands on map yes
- 4) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period N/A

Water Permit Application No. 5866-3



Timothy G. Schaal
 Timothy G. Schaal, P.E.
 Natural Resources Engineer Specialist
 DENR, Water Rights Program
 1/18/05

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 5866-3

(1) The South Dakota Department of Game, Fish and Parks, 523 E Capitol, Pierre SD 57501 made Application No. 5866-3, May 15, 1995 for a water permit to impound 41 acre feet of water from runoff (an unnamed tributary to Lake Florence), Hamlin County, South Dakota for fish and wildlife propagation and recreational use purposes. Permit No. 5866-3, with a priority date of May 15, 1995 was approved August 10, 1995 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before August 10, 2000 and for the application to beneficial use of water on or before August 10, 2004.

(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. 5866-3 is issued a license, bearing a priority date of May 15, 1995, to impound 41 acre feet of water for fish and wildlife propagation and recreational use purposes.

The location of the storage dam (spillway) is 1,200 feet south of the northeast corner of Section 27-T114N-R52W (NE ¼ NE ¼)

(3) This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Permit No. 5866-3, including the following now applicable qualification:

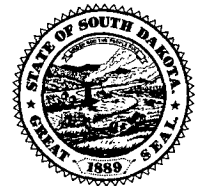
- Water Permit No. 5866-3 authorizes a dam with a storage capacity of 41 acre-feet of water and sufficient water annually to maintain the water level to the outlet elevation of 1661.0 feet means sea level.



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

APR 19 2005

date





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

APR 19 2005

5866-3

The SD Dept of Game Fish & Parks
%Tim Olson
523 E Capitol
Pierre SD 57501

Dear Mr. Olson:

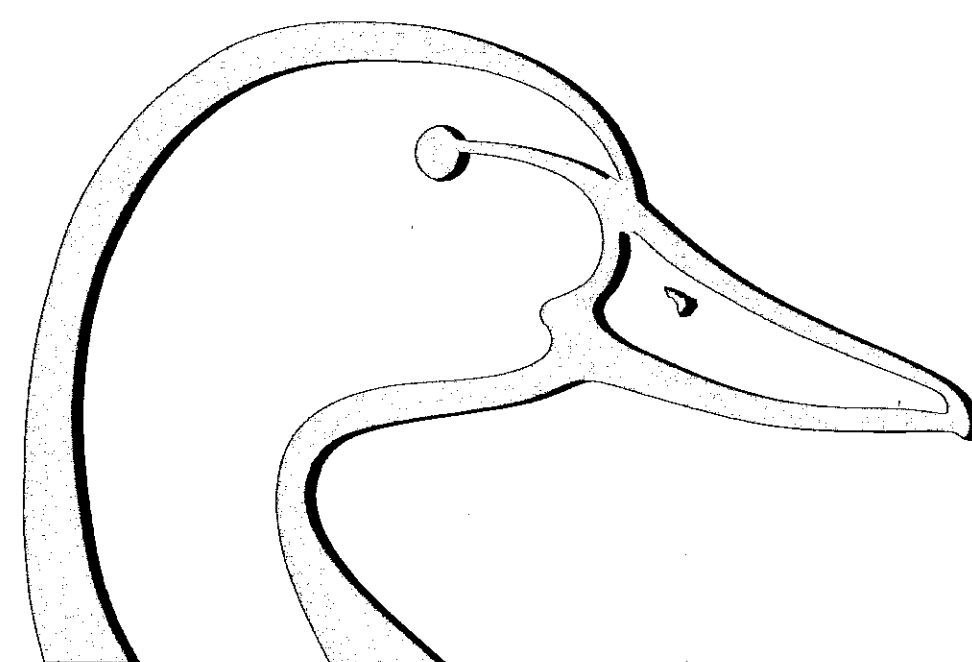
Enclosed is Water License No. 5866-3. This is the final water right document completing your process of obtaining a Water Right.

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



DUCKS UNLIMITED

DUCKS UNLIMITED

PROJECT

SIOUX POINSETT GPA

SECTION 27, T 114 N, R 52 W,
HAMLIN COUNTY, SOUTH DAKOTA

IN COOPERATION WITH

SOUTH DAKOTA DEPT. OF GAME, FISH & PARKS

SPECIFICATIONS

GENERAL CONDITIONS	101
MOBILIZATION	201
SITE PREPARATION	202
EXCAVATION	203
EMBANKMENT CONSTRUCTION	204
WATER	205
WATER CONTROL	
STRUCTURE INSTALLATION	206
WATER CONTROL STRUCTURE	
& CULVERT APPURTENANCES	206A
CULVERT INSTALLATION	207
CAST-IN-PLACE	
REINFORCED CONCRETE	208
RIPRAP PLACEMENT	209

PLAN INDEX

COVER SHEET	1
PROJECT TOPOGRAPHY/SOILS	2
PROJECT SITE PLAN	3
PROFILES & X-SECTIONS	4
STRUCTURE PLAN & PROFILE	5
STRUCTURE DETAILS	6
MISCELLANEOUS DETAILS	7

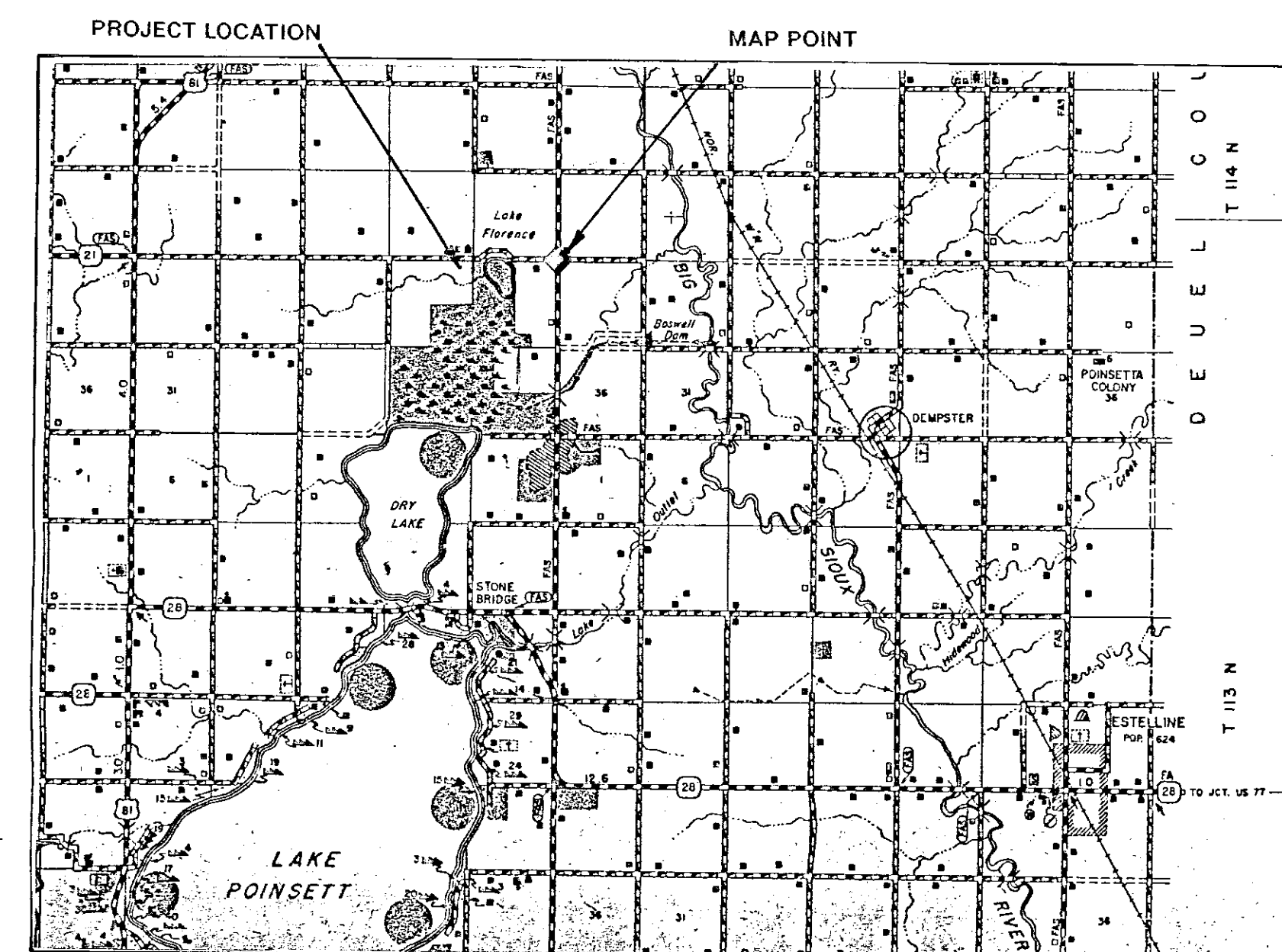
QUANTITIES

MOBILIZATION	1 L.S.
SITE PREPARATION	472 C.Y.-P
EXCAVATION	INC.
EMBANKMENT	3870 C.Y.-S*
WATER	8 M-GAL.**
WATER CONTROL STRUCTURE	
(2 - 72"Ø RISERS)	1 L.S.
APPURTENANCES	1 INC.
CULVERT INSTALLATION	
60"Ø CMP	58 L.F.
24"Ø CMP	18 L.F.
CAST-IN-PLACE	
REINFORCED CONCRETE	INC.
RIPRAP	
CLASS II	36 C.Y.-P
6"-12"Ø	6 C.Y.-P

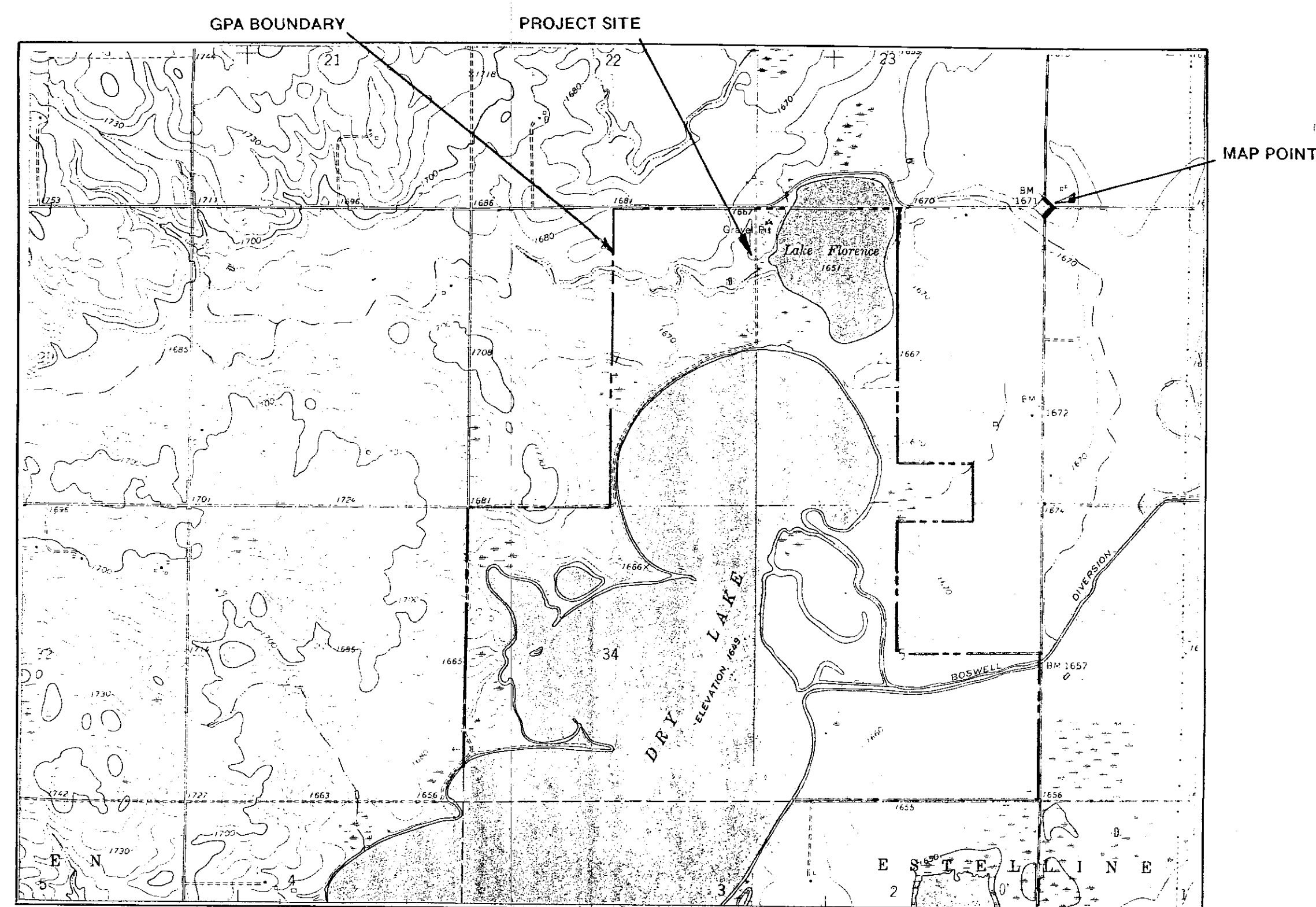
* INCLUDES 10% FOR SHRINKAGE

**BASED ON 2 GAL./C.Y., HOWEVER, ONLY
ACTUAL AMOUNT PAID FOR.

SOUTH DAKOTA



HAMLIN COUNTY

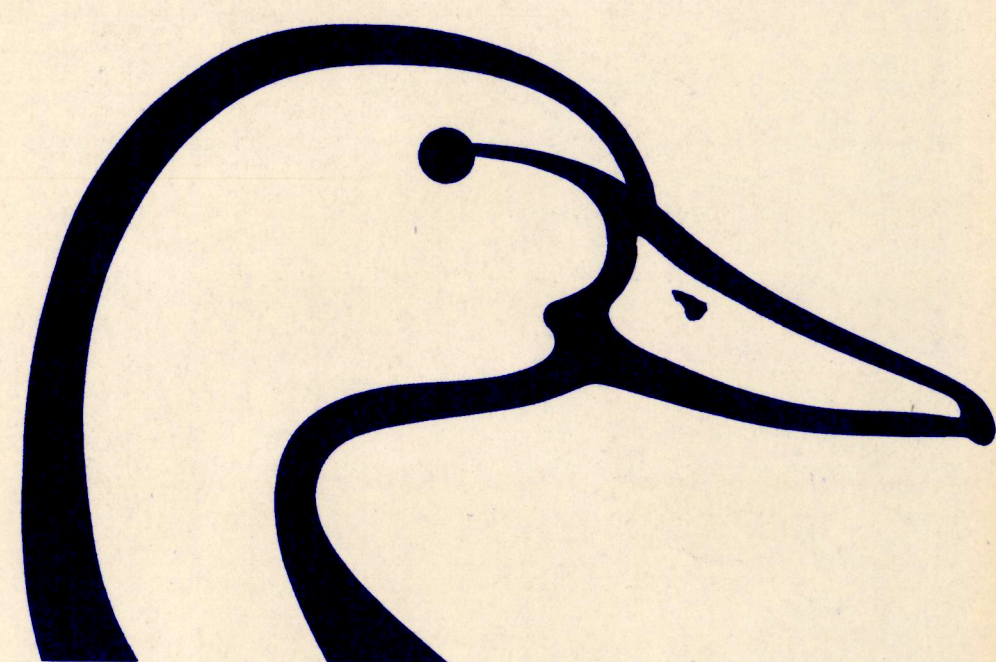
VICINITY MAP
SCALE 1"=2000'

AGENCY CONTACT:
STAN LUNDQUIST
SD GAME, FISH & PARKS
ESTELLINE, SD
605/873-2462

PROJECT SIGNING	
SIGN 'A' 24"x36"	SIGN 'B' 11"x14"
1 SIGN 'A' AND 1 SIGN 'B' WILL BE PROVIDED BY DUCKS UNLIMITED AND DELIVERED TO THE COOPERATING AGENCY. THE AGENCY IS RESPONSIBLE FOR INSTALLING THE SIGN(S) AT THE LOCATION(S) DESIGNATED ON THE PLANS.	

 DUCKS UNLIMITED INC. GREAT PLAINS REGIONAL OFFICE	PROJECT NO. SD-0073-003	DESIGNED BY: D.J.L.
	SIOUX POINSETT GPA	DRAWN BY: KB
DATE: 5-19-95	SHEET NO. 1 OF 7	SURVEYED BY:
APPROVED BY:	APPROVED BY:	CHECKED BY:

5866-3



DUCKS UNLIMITED

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**BASED ON 2 GAL./C.Y., HOWEVER, ONLY
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DUCKS UNLIMITED

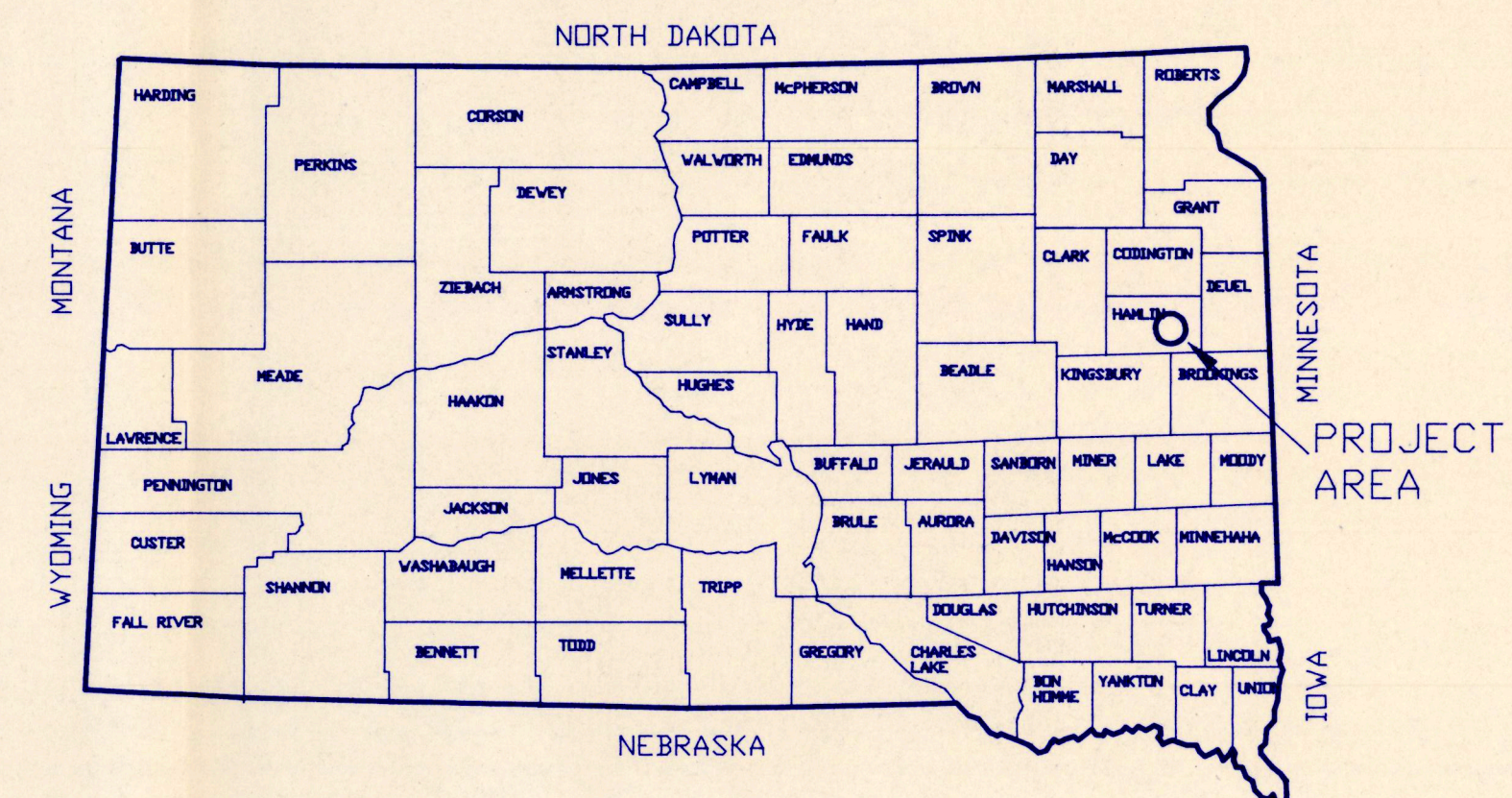
PROJECT

SIOUX POINSETT GPA

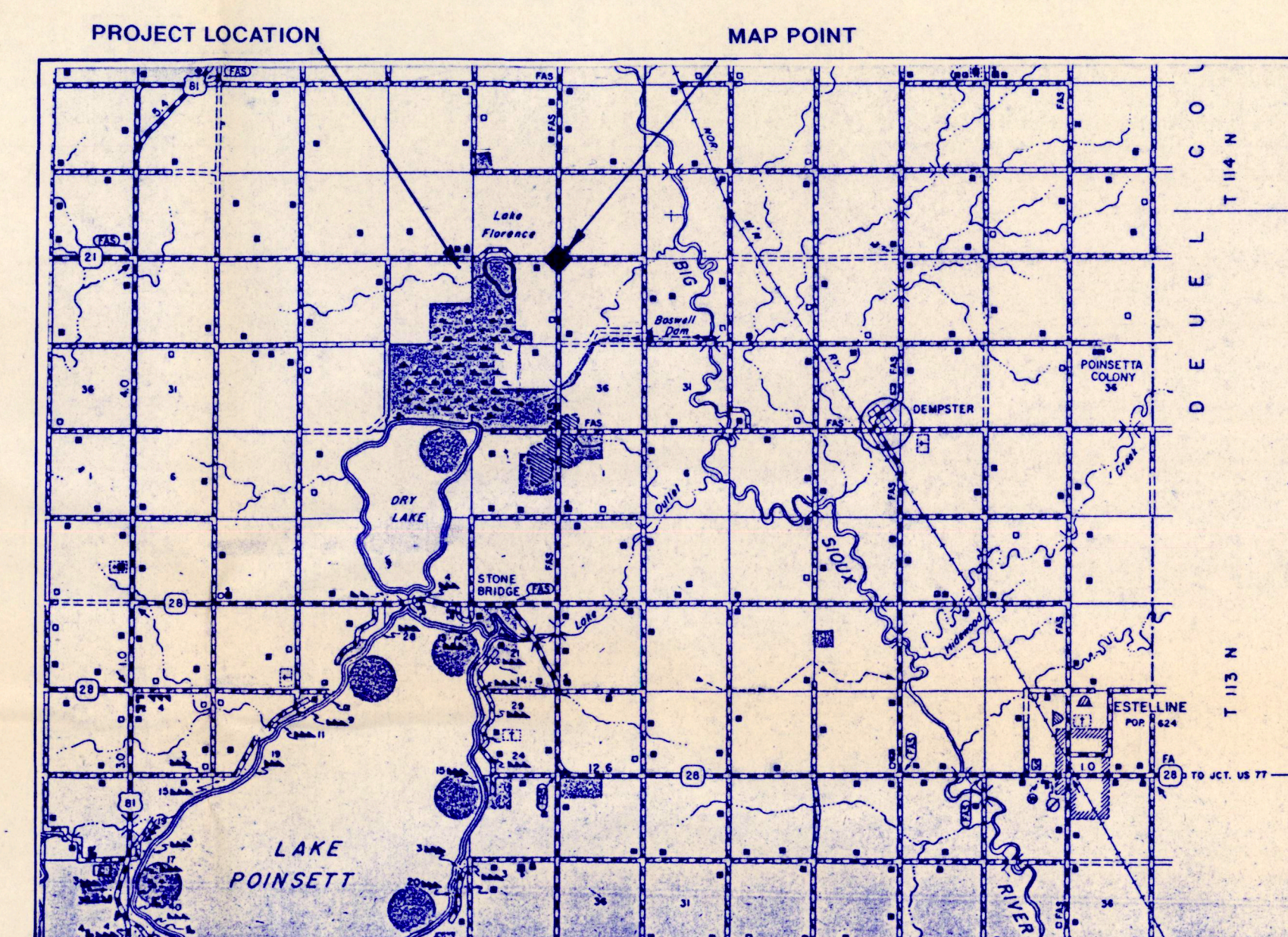
SECTION 27, T 114 N, R 52 W,
HAMLIN COUNTY, SOUTH DAKOTA

IN COOPERATION WITH

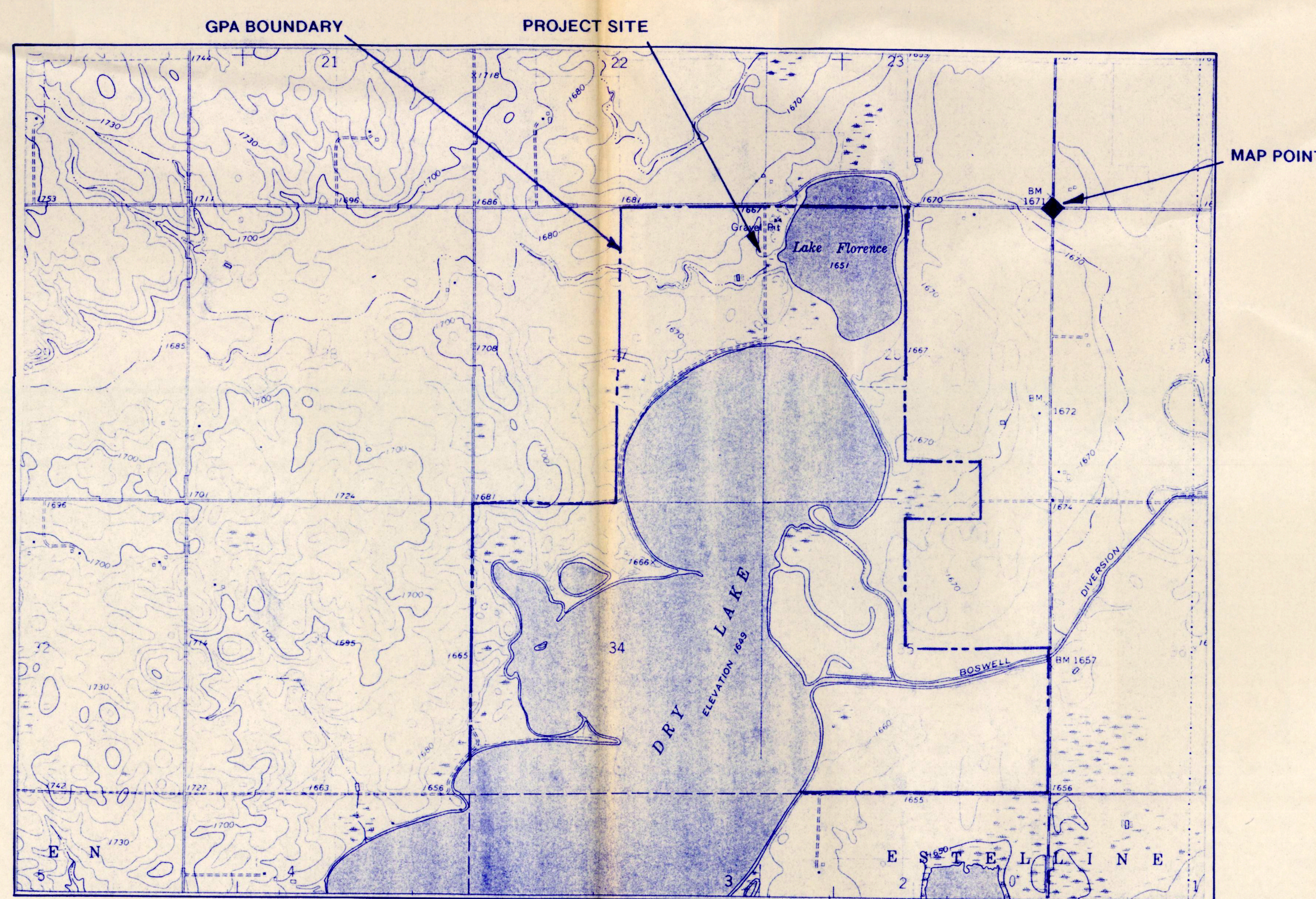
SOUTH DAKOTA DEPT. OF GAME, FISH & PARKS



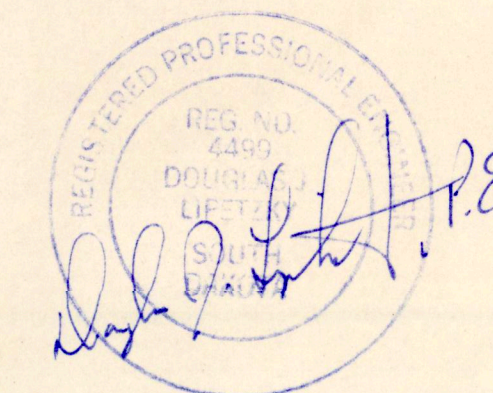
SOUTH DAKOTA



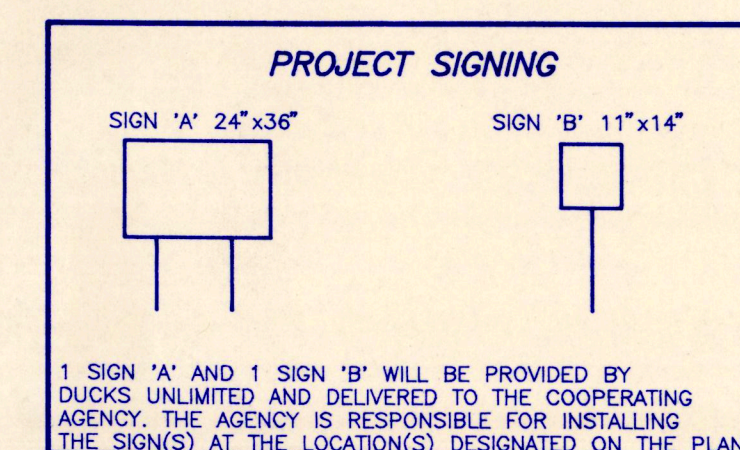
HAMLIN COUNTY



VICINITY MAP
SCALE: 1"=2000'

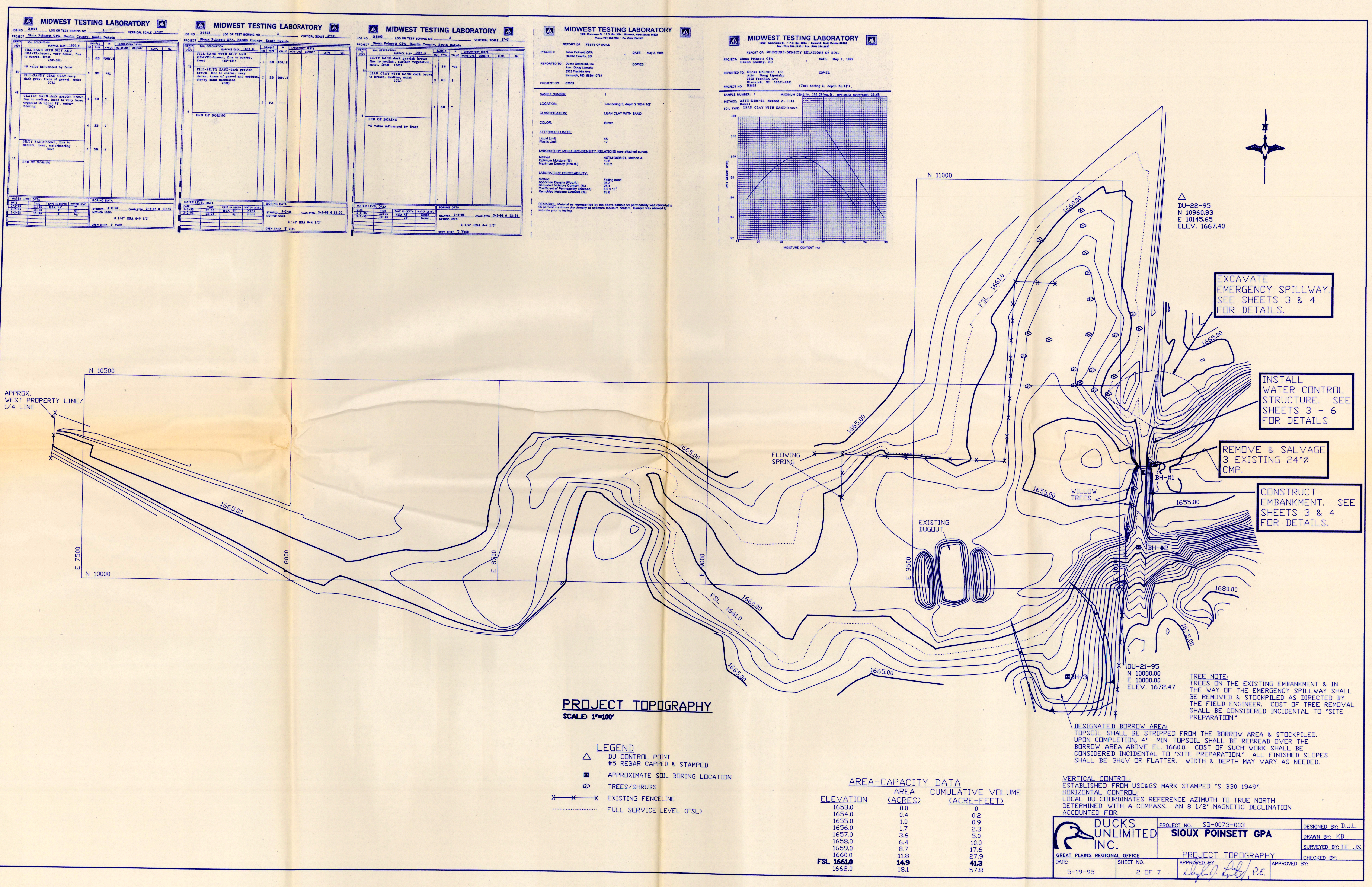


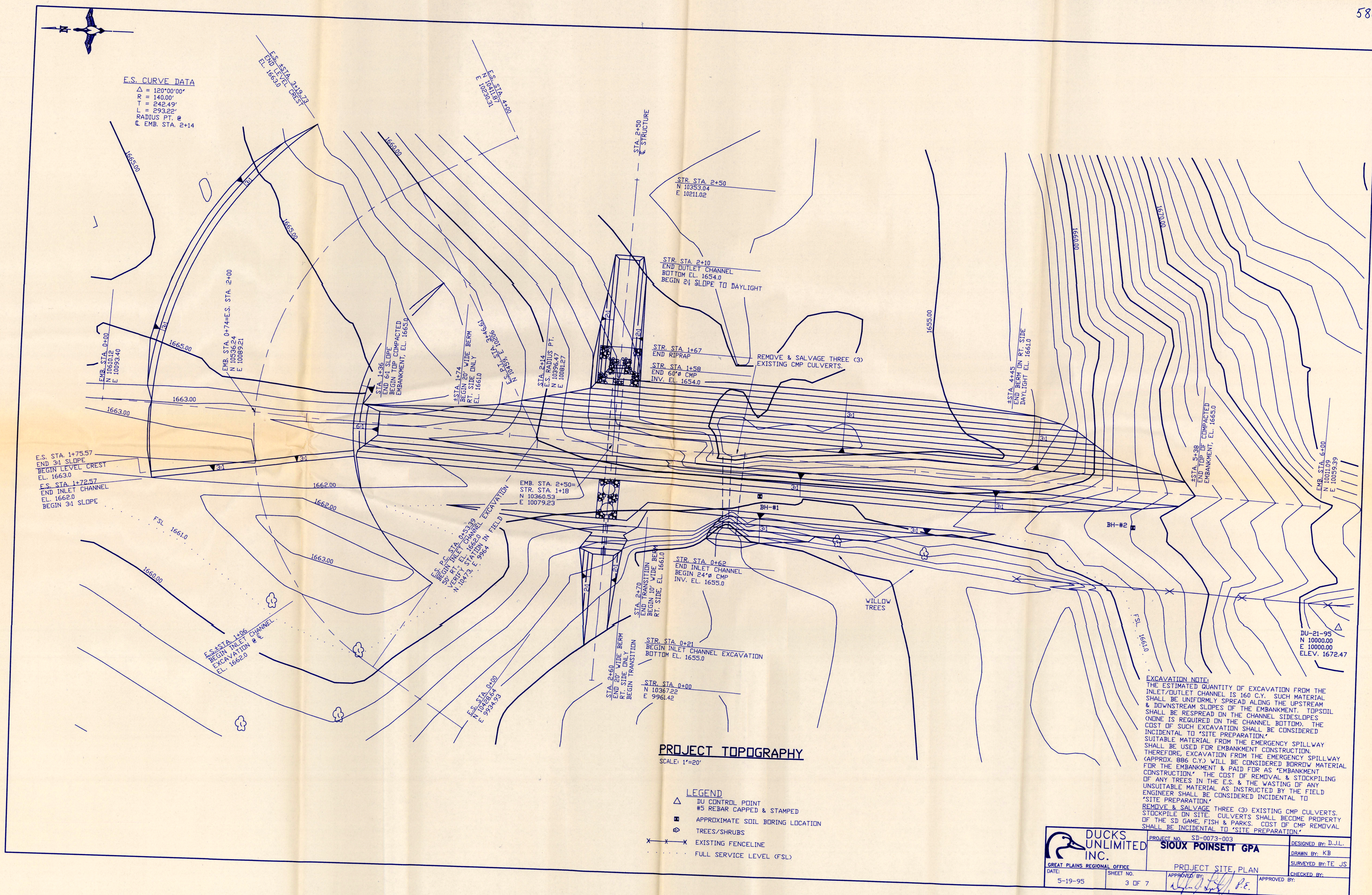
AGENCY CONTACT:
STAN LUNDQUIST
SD GAME, FISH & PARKS
ESTELLINE, SD
605/873-2462

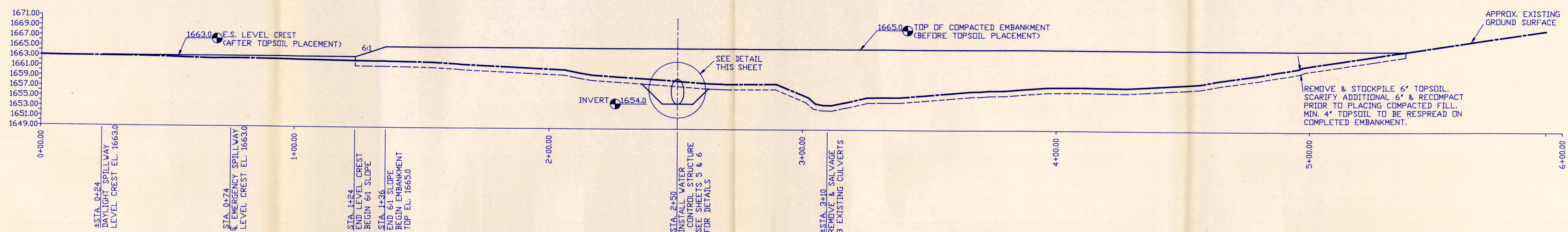


	PROJECT NO. SD-0073-003	DESIGNED BY: D.J.L.
	SIOUX POINSETT GPA	DRAWN BY: K.B.
GREAT PLAINS REGIONAL OFFICE	VICINITY MAP	SURVEYED BY:
DATE: 5-19-95	SHEET NO. 1 OF 7	CHECKED BY:
	APPROVED BY: <i>[Signature]</i>	APPROVED BY:

586-3

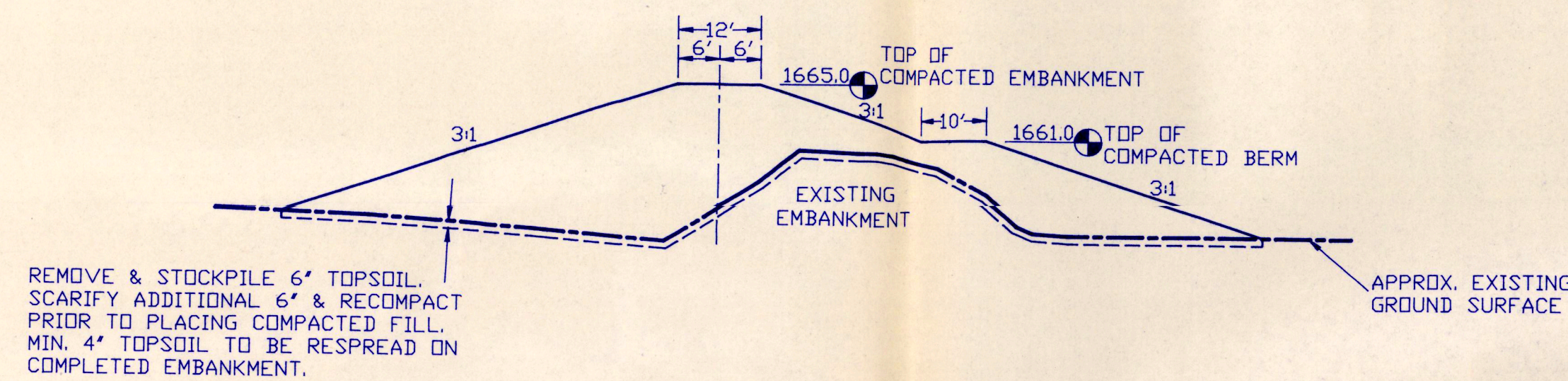






EMBANKMENT C PROFILE

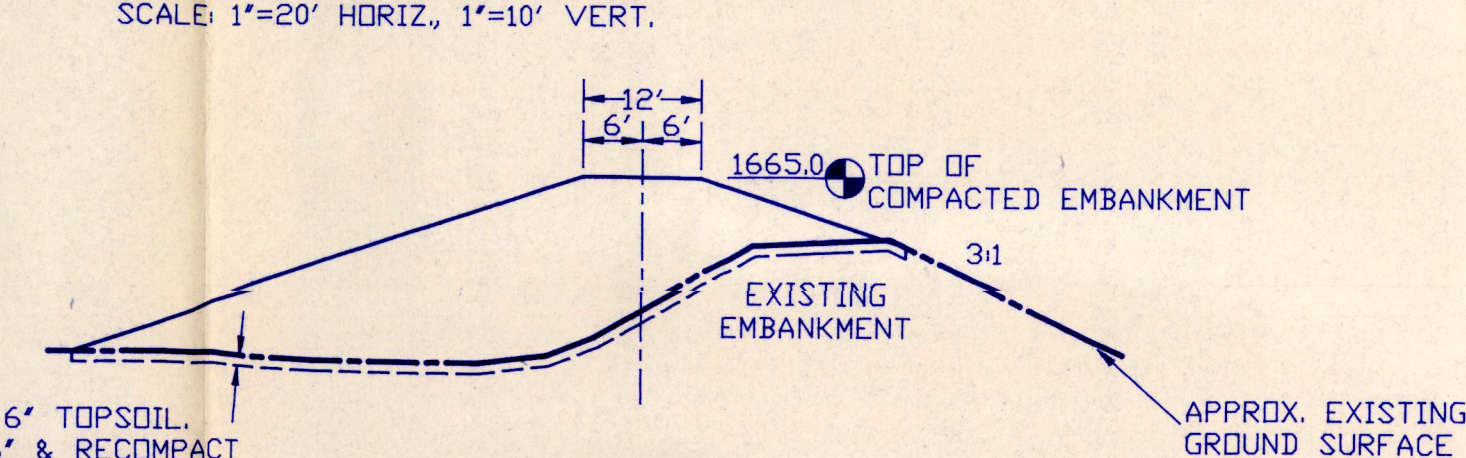
SCALE: 1"=20' HORIZ., 1"=10' VERT.



EMBANKMENT X-SECTION WITH BERM

STA. 2+70 TO STA. 4+45
NOT TO SCALE

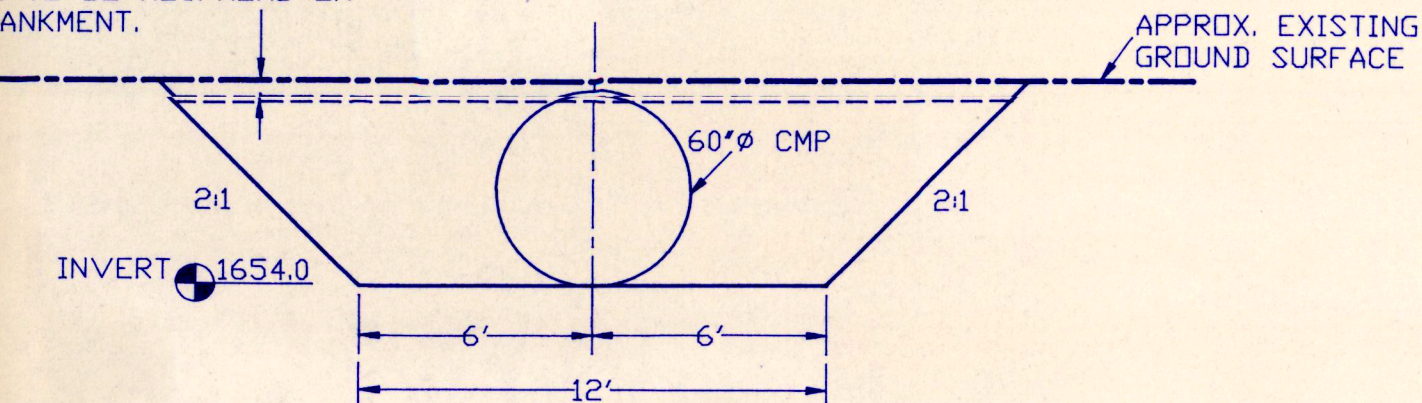
REMOVE & STOCKPILE 6' TOPSOIL. SCARIFY ADDITIONAL 6' & RECOMPACT PRIOR TO PLACING COMPACTED FILL. MIN. 4' TOPSOIL TO BE RESPAID ON COMPLETED EMBANKMENT.



EMBANKMENT X-SECTION WITH OUT BERM

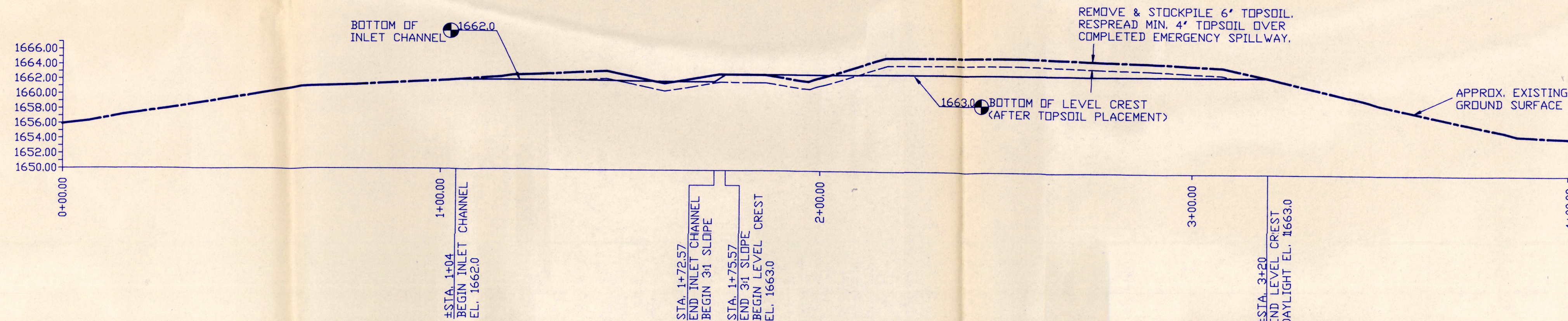
STA. 4+45 TO STA. 5+38
NOT TO SCALE

REMOVE & STOCKPILE 6' TOPSOIL. SCARIFY ADDITIONAL 6' & RECOMPACT PRIOR TO PLACING COMPACTED FILL. MIN. 4' TOPSOIL TO BE RESPAID ON COMPLETED EMBANKMENT.



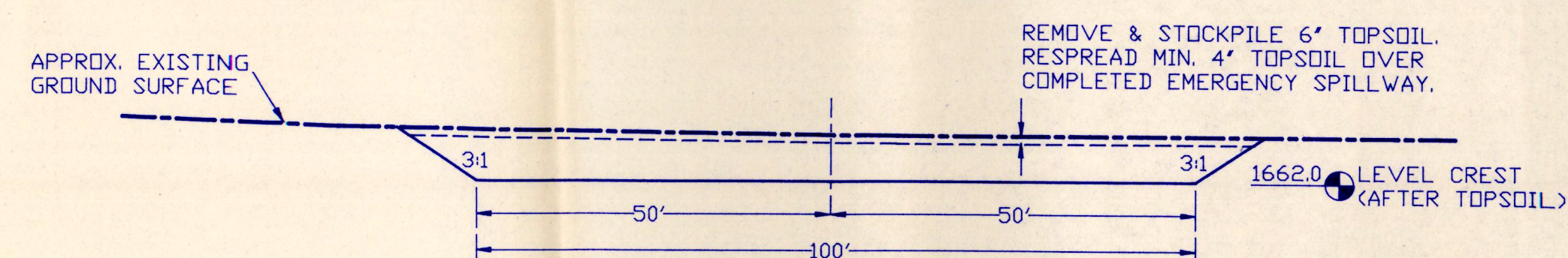
PIPE EXCAVATION X-SECTION

NOT TO SCALE



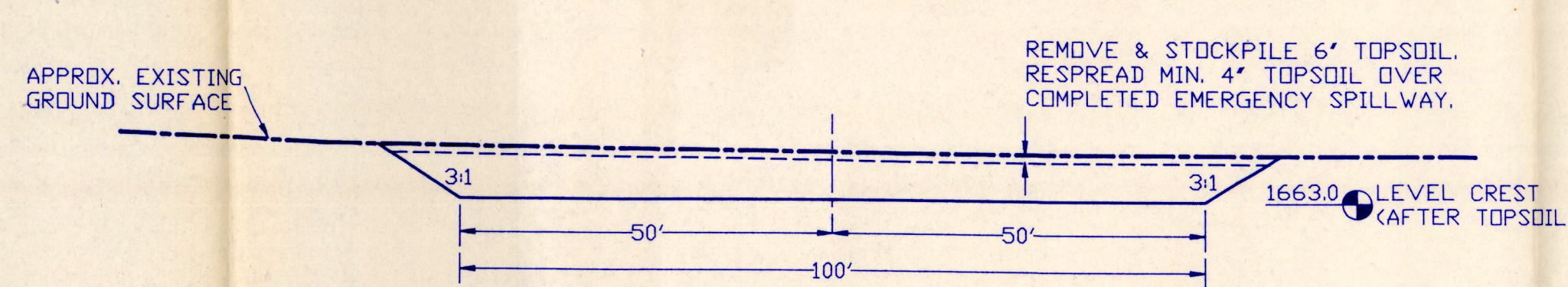
EMERGENCY SPILLWAY C PROFILE

SCALE: 1"=20' HORIZ., 1"=10' VERT.



EMERGENCY SPILLWAY INLET CHANNEL X-SECTION

NOT TO SCALE

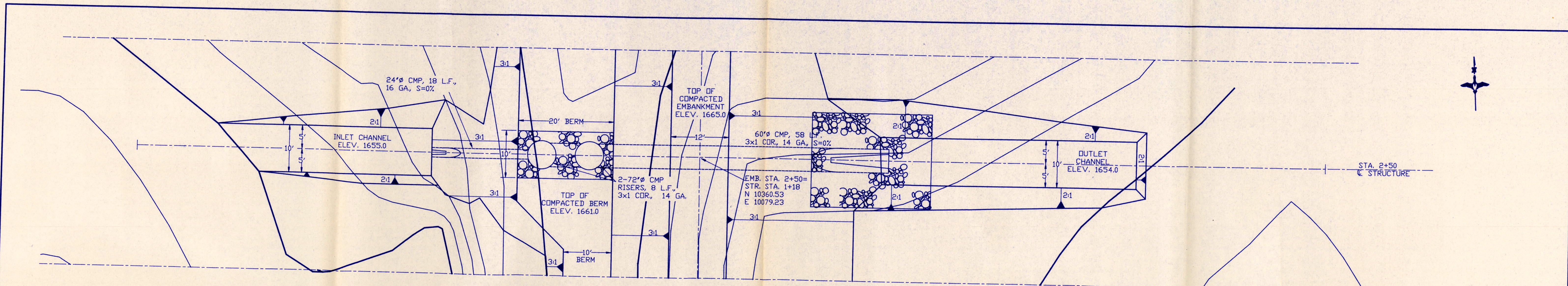


EMERGENCY SPILLWAY LEVEL CREST X-SECTION

NOT TO SCALE

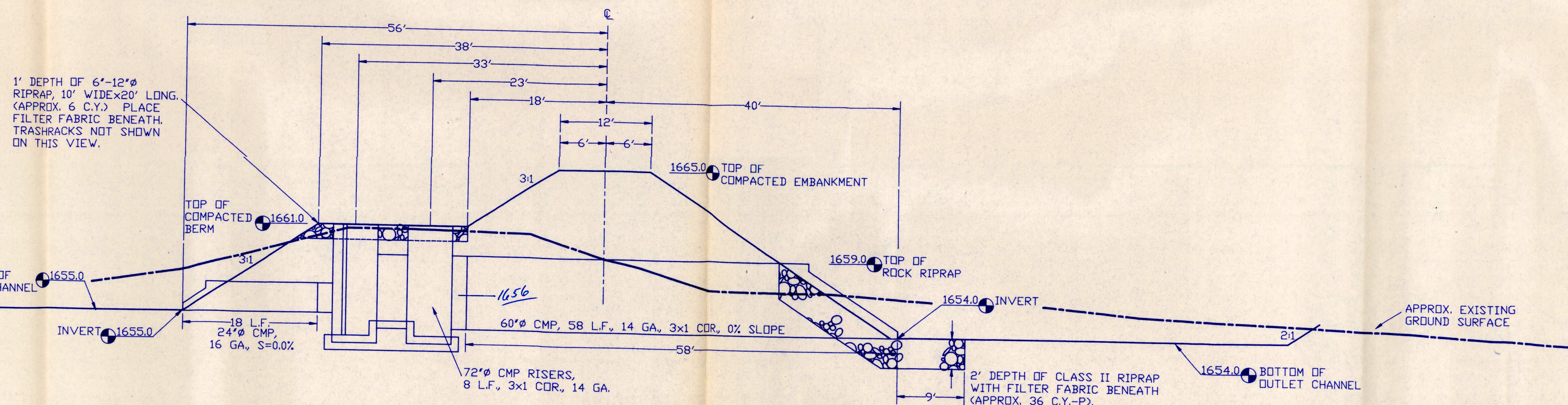
	PROJECT NO. SD-0073-003 SIoux POINSETT GPA	DESIGNED BY: D.J.L. DRAWN BY: KB SURVEYED BY:
	PROFILES & X-SECTIONS APPROVED BY: <i>[Signature]</i> P.E. DATE: 5-19-95	SHEET NO. 4 OF 7 CHECKED BY:

5866-3



STRUCTURE PLAN

SCALE: 1"=10'



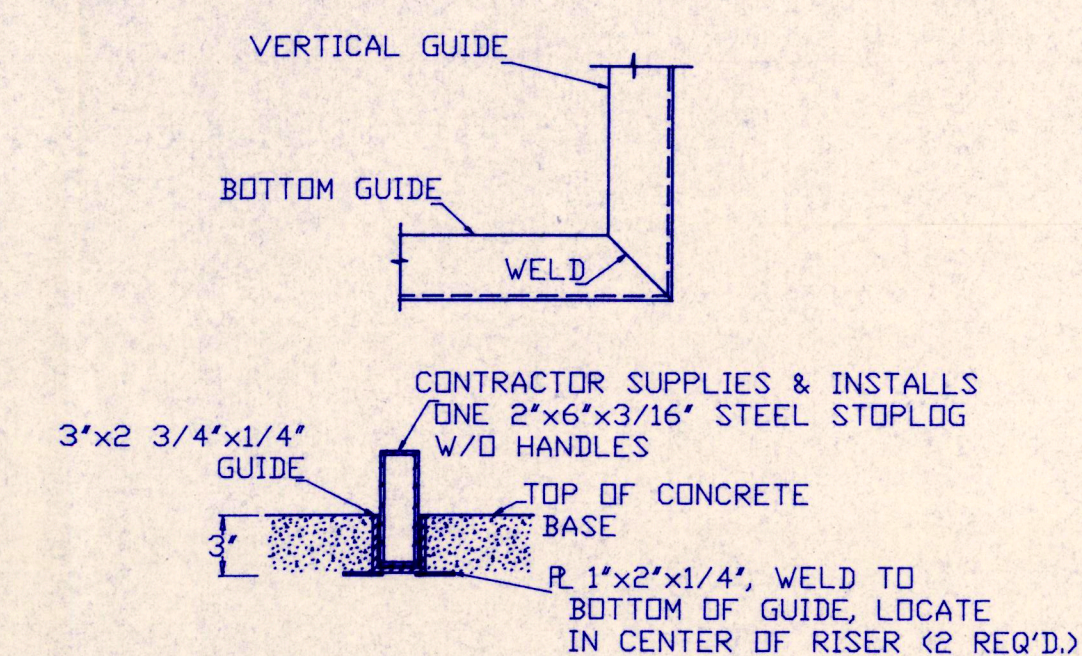
STRUCTURE C PROFILE

SCALE: 1"=10' HORIZ., 1"=5' VERT.

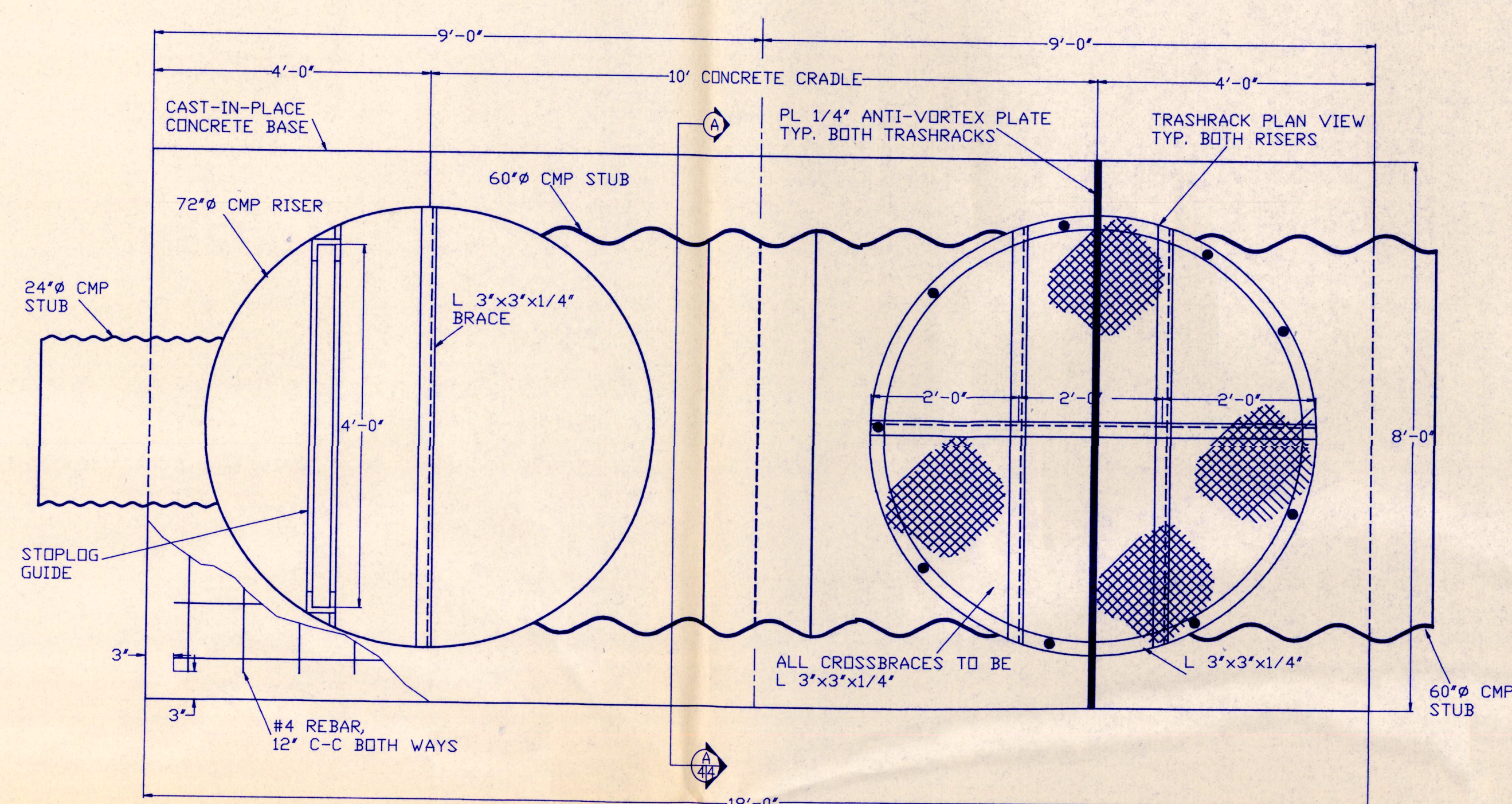
PIPE EXCAVATION NOTE:
EXCAVATION REQUIRED FOR PIPE INSTALLATION (SEE SHEET 4 FOR DETAILS). EXCAVATION WORK SHALL BE CONSIDERED INCIDENTAL TO "CULVERT INSTALLATION".

DUCKS UNLIMITED INC. GREAT PLAINS REGIONAL OFFICE	PROJECT NO. SD-0073-003	DESIGNED BY: D.J.L.
	SIoux POINSETT GPA	DRAWN BY: KB
DATE: 5-19-95	SHEET NO. 5 OF 7	SURVEYED BY: TE JS
APPROVED BY:		CHECKED BY:

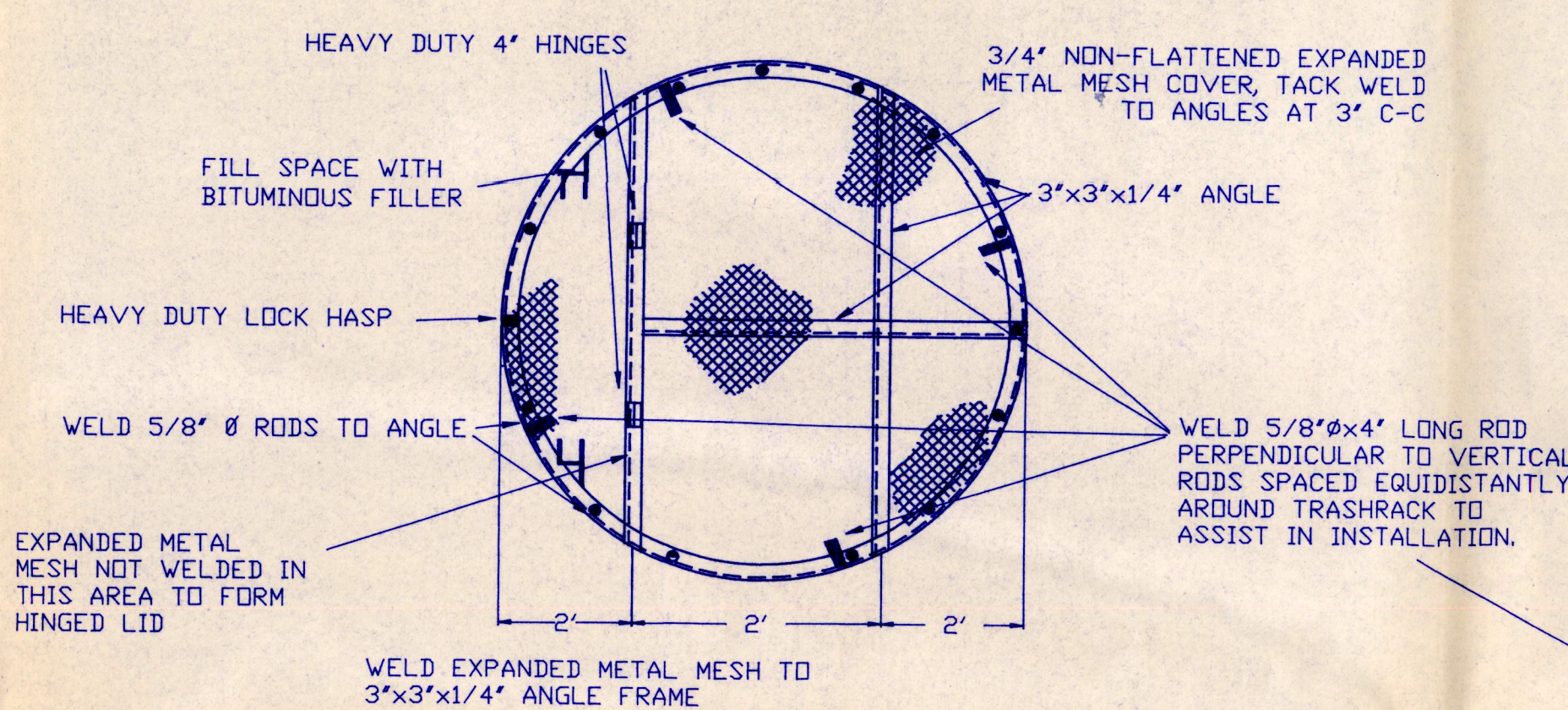
NOT TO SCALE
2 REQ'D.



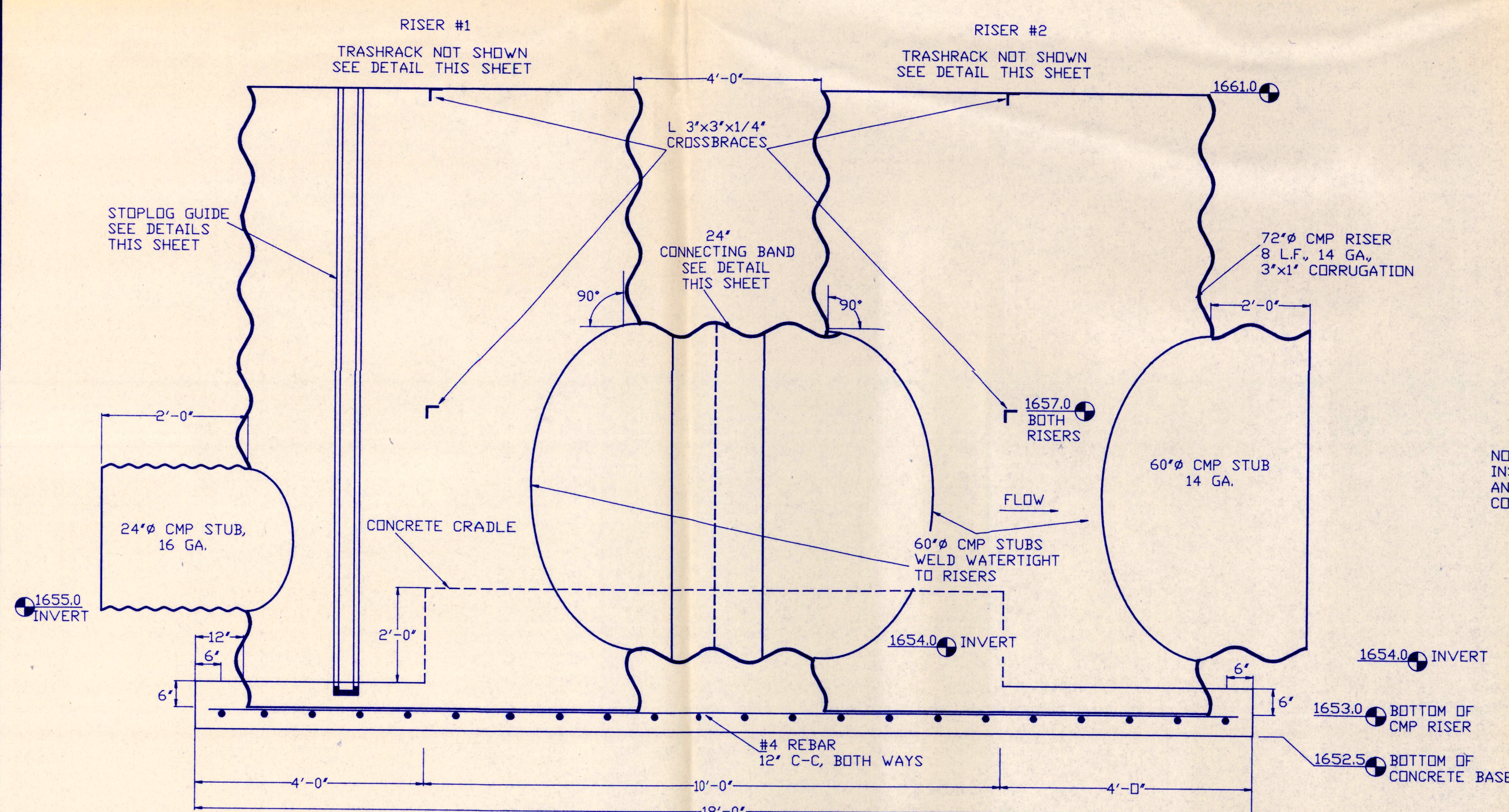
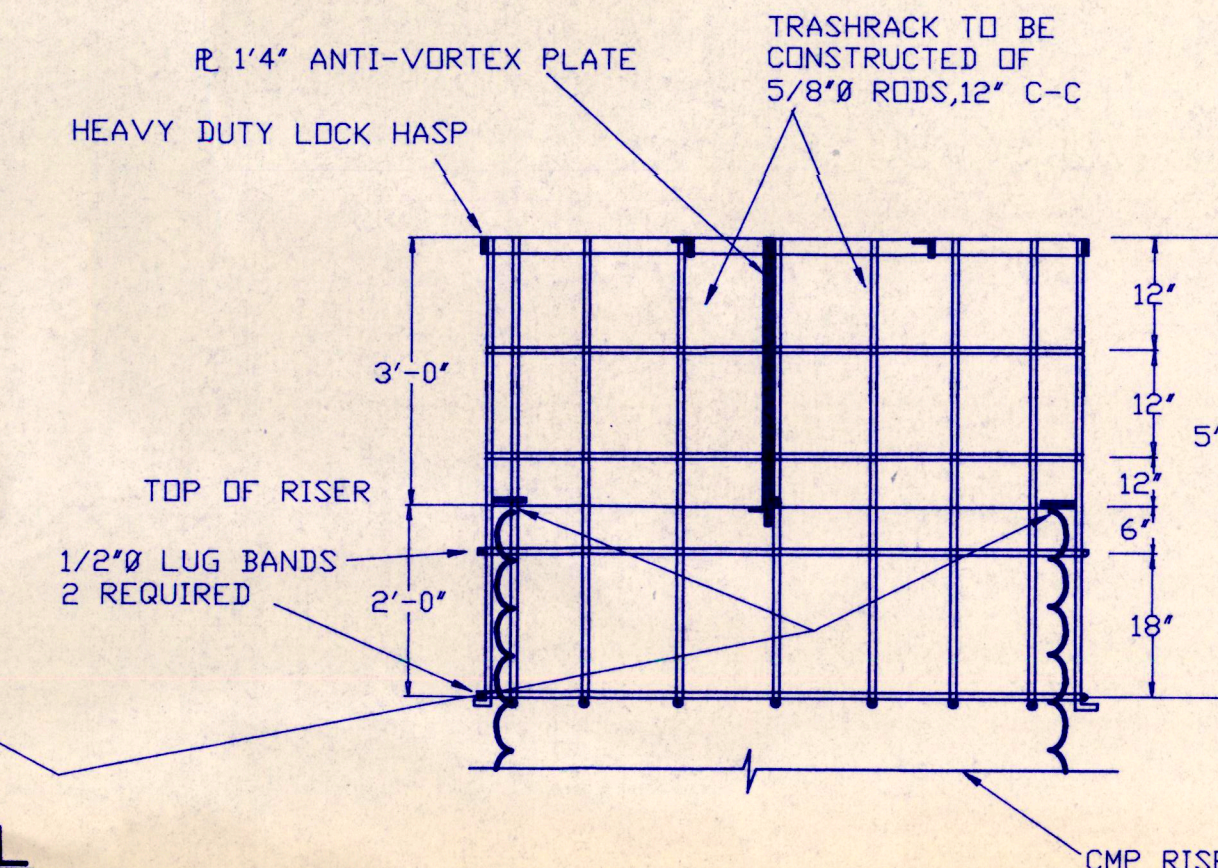
NOT TO SCALE



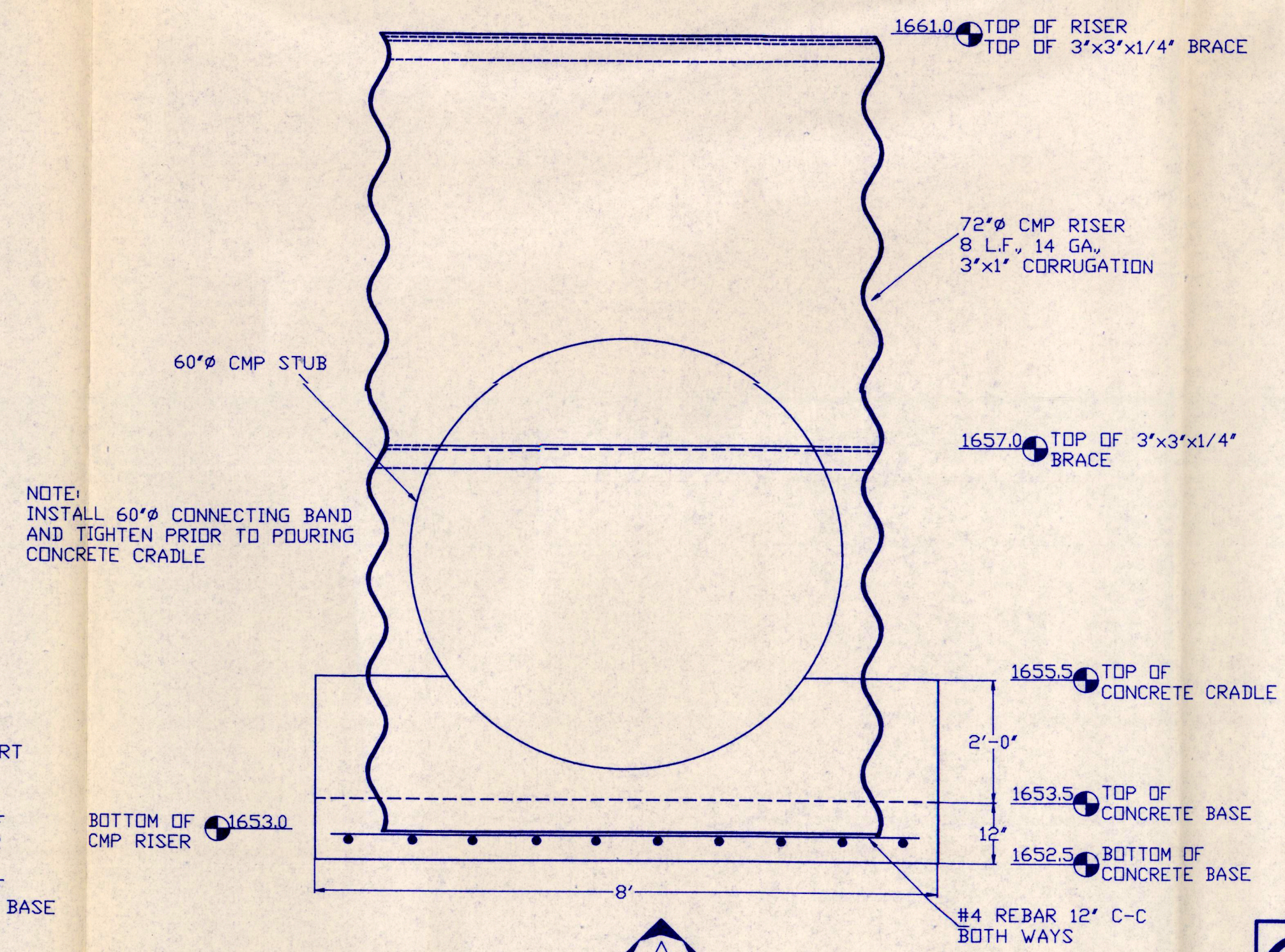
NOT TO SCALE



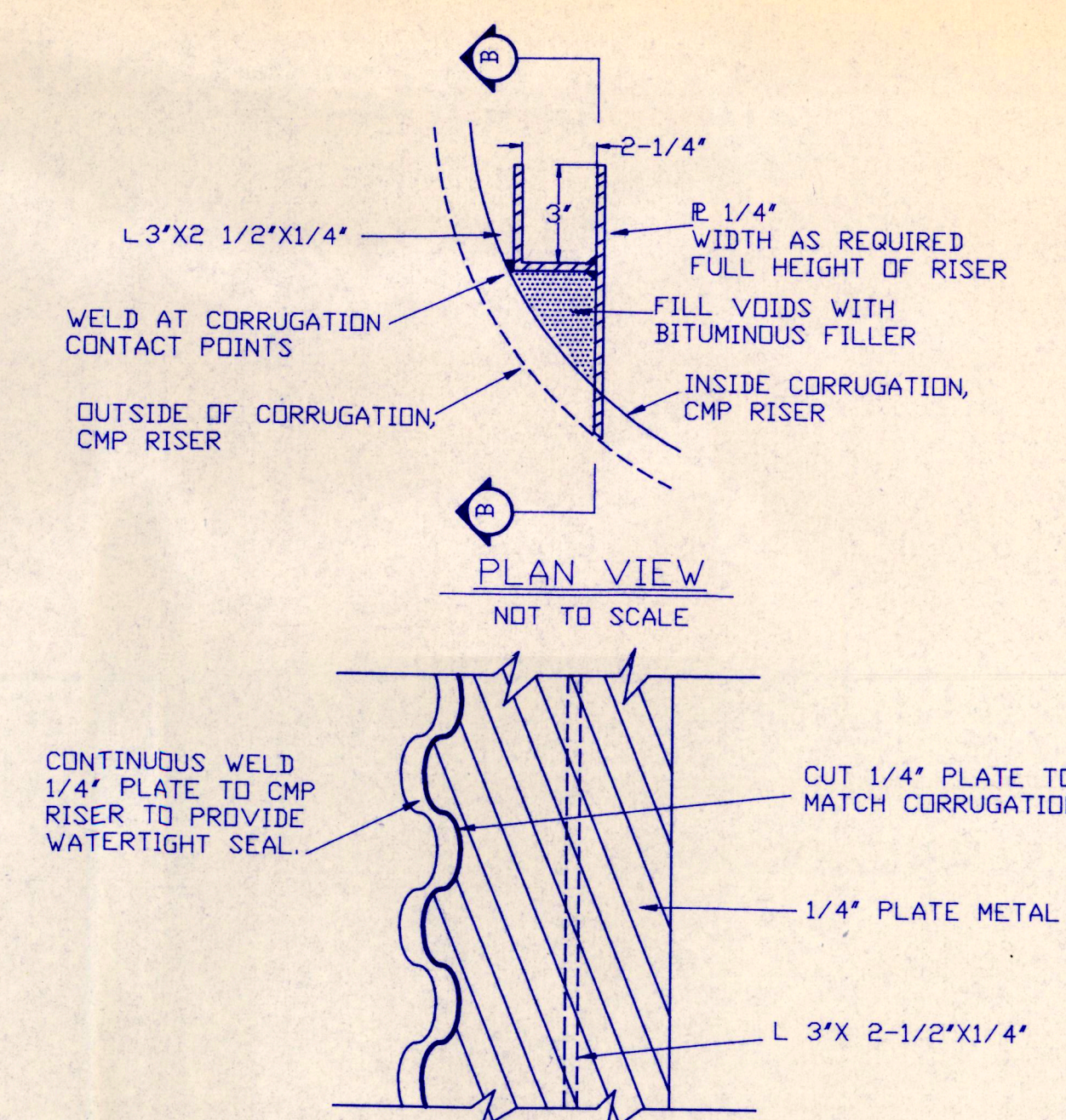
NOT TO SCALE
(THIS DETAIL IS FOR RISER #1. RISER #2
TRASHRACK DOES NOT HAVE A HINGED LID
AS SHOWN ON THE STRUCTURE PLAN VIEW
ON THIS SHEET.)



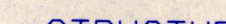
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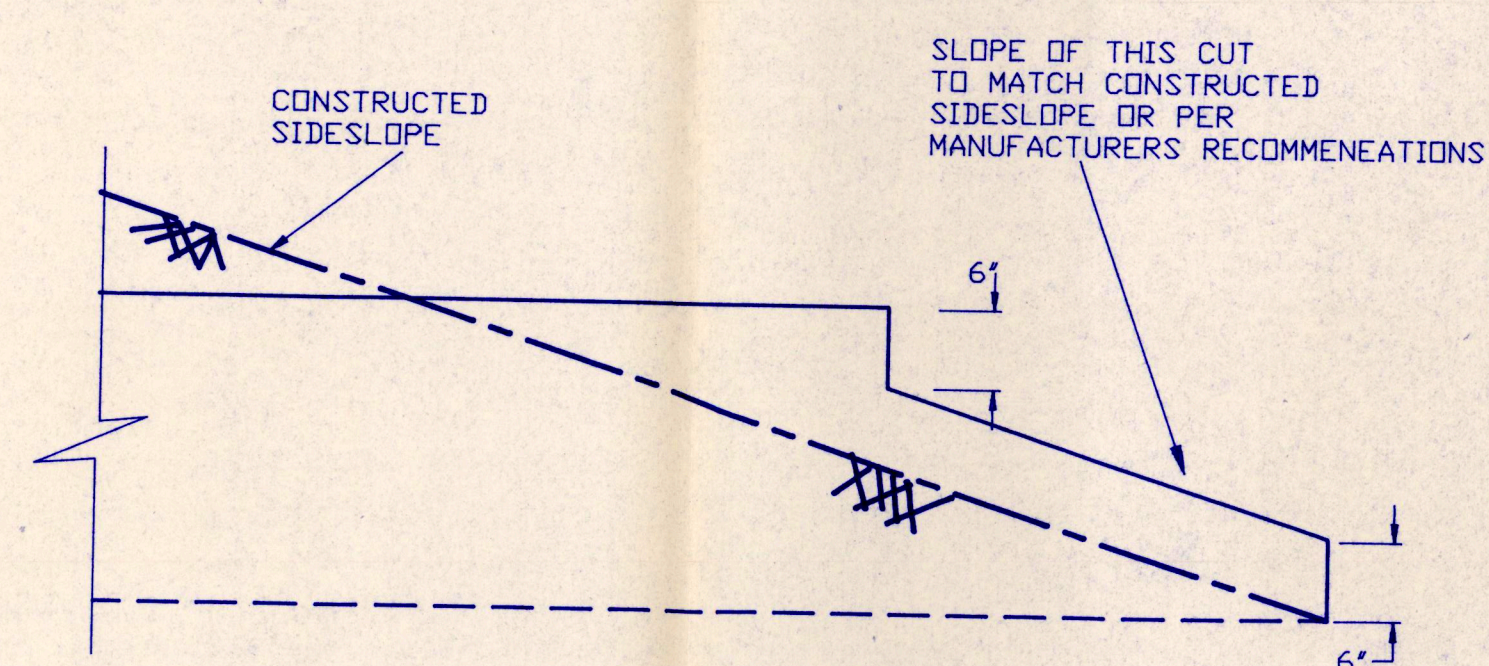


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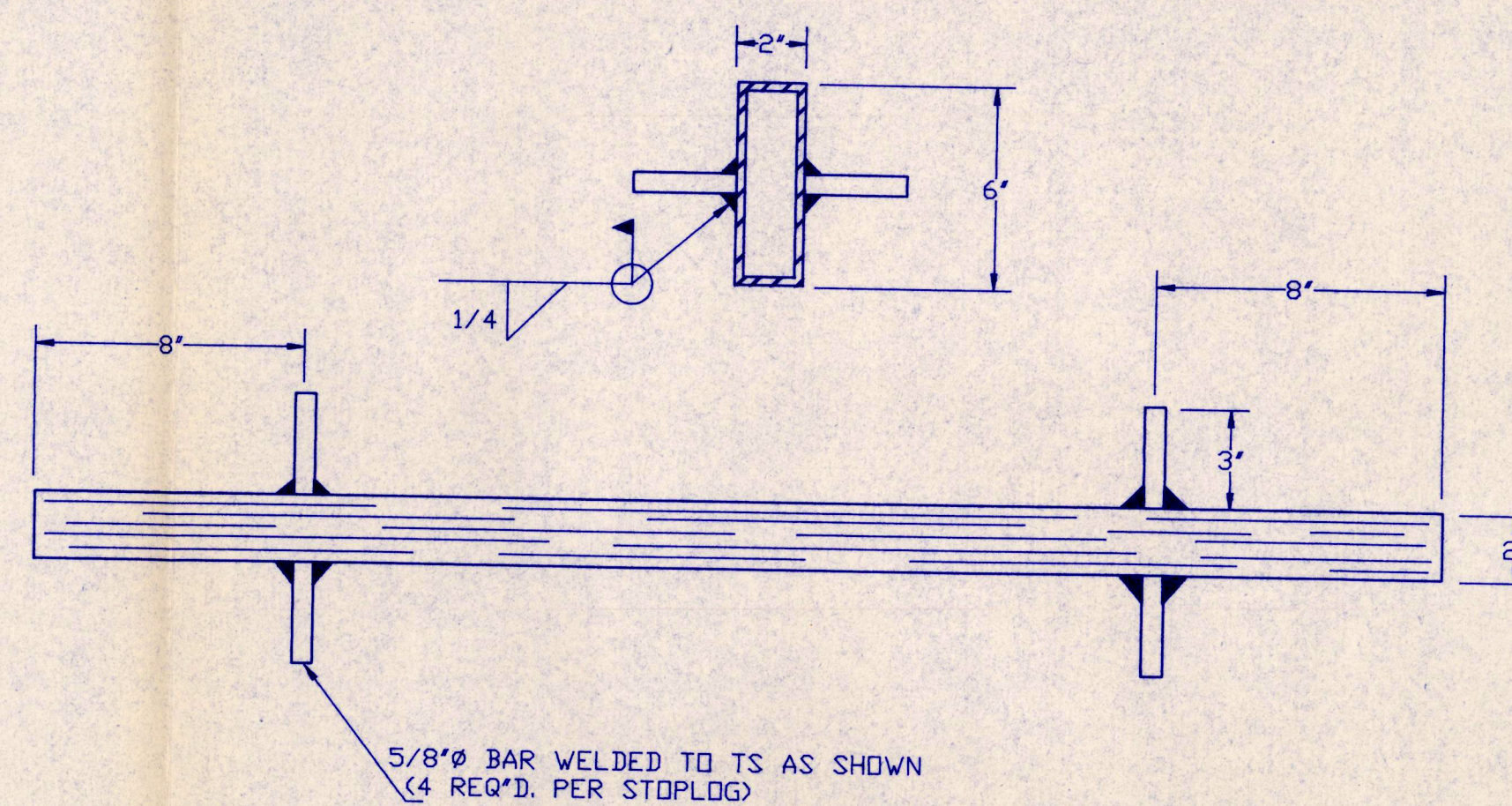


NOT TO SCALE

 DUCKS UNLIMITED INC.	PROJECT NO. SD-0073-003		DESIGNED BY: D.J.L.
	SIoux POINSETT GPA		DRAWN BY: B
GREAT PLAINS REGIONAL OFFICE	STRUCTURE DETAILS		SURVEYED BY:
DATE: 5-19-95	SHEET NO. 6 OF 7	APPROVED BY:  P.S.	CHECKED BY:

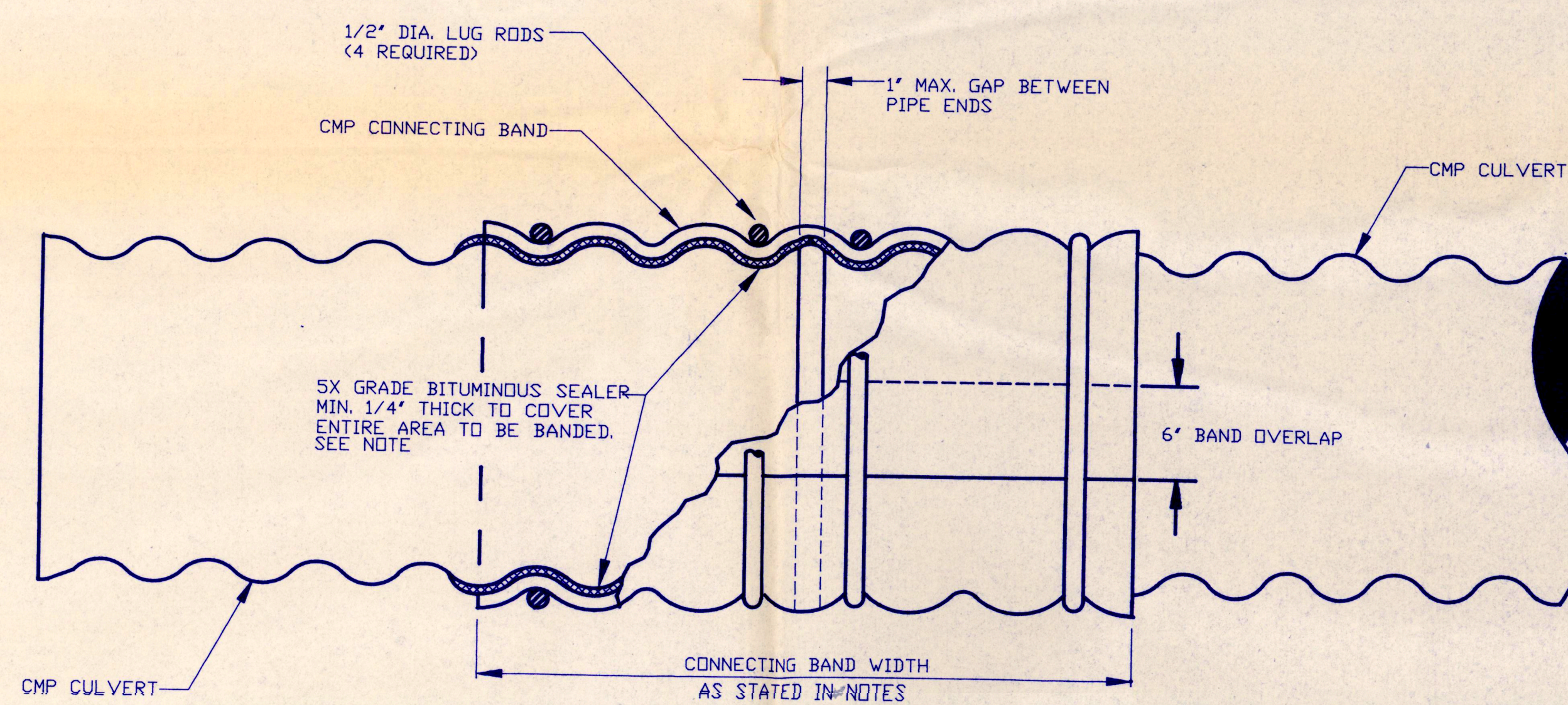


STEP BEVEL DETAIL
NOT TO SCALE



NOTE: STEEL STOPLOGS, EXCEPT BOTTOM ONE, FURNISHED BY DUCKS UNLIMITED. CONTRACTOR SHALL SUPPLY & WELD ON 5/8" BARS & DELIVER LOGS TO PROJECT SITE.

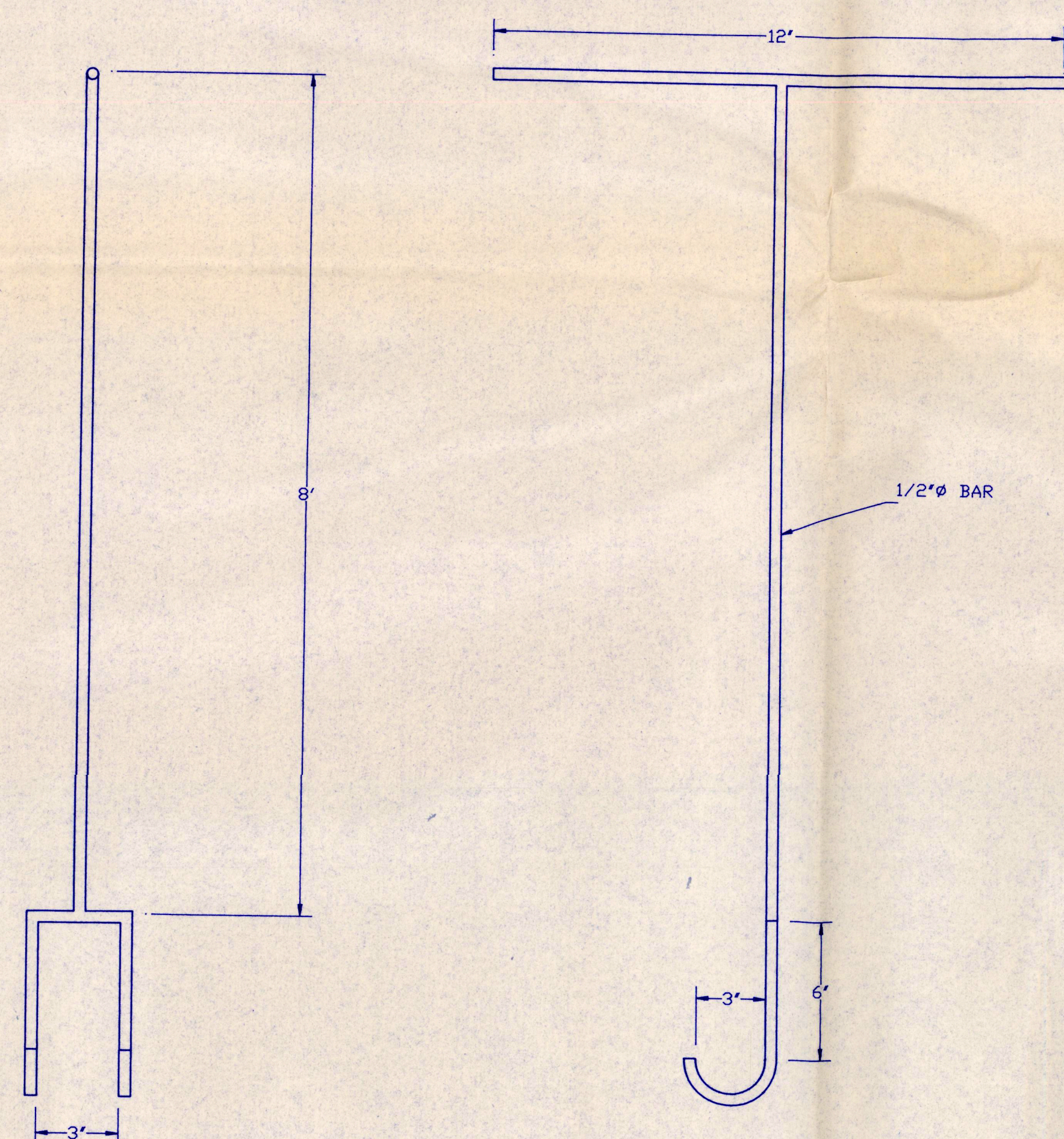
STEEL STOPLOG DETAIL
NOT TO SCALE



AFTER BANDS HAVE BEEN TIGHTENED, A COAT OF 5X SEALER SHALL BE APPLIED AROUND THE CULVERT AT THE ENDS OF THE CONNECTING BAND AND ALONG THE SEAM OF THE BAND OVERLAP.

NOTE TO SUPPLIERS:
IF ANNULAR PIPE IS USED, USE A 2 FT. WIDE ANNULAR BAND. IF HELICAL PIPE WITH 4 CORRUGATIONS REROLLED TO ANNULAR IS USED, USE A 21 INCH WIDE ANNULAR BAND. SEE SPECIFICATION 207.2.

CONNECTING BAND DETAIL
NOT TO SCALE



STOPLOG LIFTING HOOK DETAIL
NTS 2 REQ'D.

DUCKS UNLIMITED INC. GREAT PLAINS REGIONAL OFFICE	PROJECT NO. SD-0073-003	DESIGNED BY: D.J.L.
	SIoux POINSETT GPA	DRAWN BY: B
DATE: 5-19-95	SHEET NO. 7 OF 7	SURVEYED BY:
APPROVED BY: <i>[Signature]</i> P.E.		CHECKED BY: