

WATER PERMIT NO. 1621-1

Phone: 605 985-5241

Name of Applicant: Dale Timmons

Post Office Address: Box 54, Marcus SD 57757

Amount of Water Claimed: 89.1 acre-feet Total Acres: NA

Source of Water Supply: runoff from tributary to Red Owl Creek

Water to be used for: recreational and fish/wildlife production County: Meade

Location: 25 south and 12 west of Faith

PRIORITY Date Received: 6-5-95 Fee: \$150.00

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

Remarks: _____

Diversion Point: NE 1/4 NW 1/4 Sec 22-T8N-R15E

Water Impounded: E 1/2 NW 1/4 Sec 22-T8N-R15E

			22		

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

Depth of Well: _____ REMARKS: _____

Type of Map: topo Prepared By: Roger C. Smith, PE Reviewed and the Number

Assigned on: 5-6-95 By: Karen Schlaak

**SOUTH DAKOTA
WATER PERMIT NO. 1621-1**

Date of first receipt of application June 5, 1995.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 1621-1 to Dale Timmons, Box 54, Marcus SD 57757 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. 1621-1 impounds 89.1 acre-feet of runoff water from a tributary of Red Owl Creek by constructing a dam located in the NE 1/4 NW 1/4 Section 22 with water impounded in the E 1/2 NW 1/4 Section 22; all in T8N-R15E. This permit authorizes impoundment of sufficient water to maintain the outlet elevation of 2508.0 feet mean sea level.
2. The water appropriated shall be used for the purpose of domestic and recreational purposes and to provide habitat for fish and wildlife production 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. 1621-1 is September 5, 1995.
5. The date from which applicant may claim right is June 5, 1995.
6. One-fifth of the construction is to be completed on or before March 5, 1998.
7. All construction is to be completed on or before September 5, 2000.
8. Water is to be put to beneficial use on or before September 5, 2004.
9. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. Water Permit No. 1621-1 authorizes a dam with storage capacity of 89.1 acre-feet of water and sufficient water annually to maintain the water level to the outlet elevation of 2508.0 feet mean sea level.
2. Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed.

WATER MANAGEMENT BOARD

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

DEC 18 1995

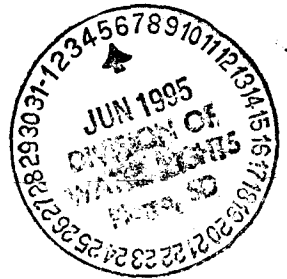
date



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. 1621-1 Hydrologic Unit 10/20113
Basin Lower Cheyenne
Newspaper Faith Independent, Box 38, Faith
(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 Dale Timmons Phone 605-985-5241
(check one) ☒ Owner ☐ Tenant/lessee
Mailing Address Box 54 MARCUS State SD 57757
(Street, RR, or Box) (City) (Zip Code)
- Amount of water claimed _____ *CFS or _____ **GPM 89.1 ***AF
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)
- Source of water supply Runoff from tributary to Red Owl Creek
- Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) _____
NE1/4 NW1/4 Sec 22-T8N-R15E; Water Impounded: E1/2 NW1/4 Sec 22-T8N-R15E
County Meade
- County or counties where water will be used Meade
- 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)

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 Meade ss

I, Dale Timmons, 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 Dale Timmons

Subscribed and sworn to before me this 1 day of June 1995

June A. [Signature]
Notary Public

~~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) _____~~

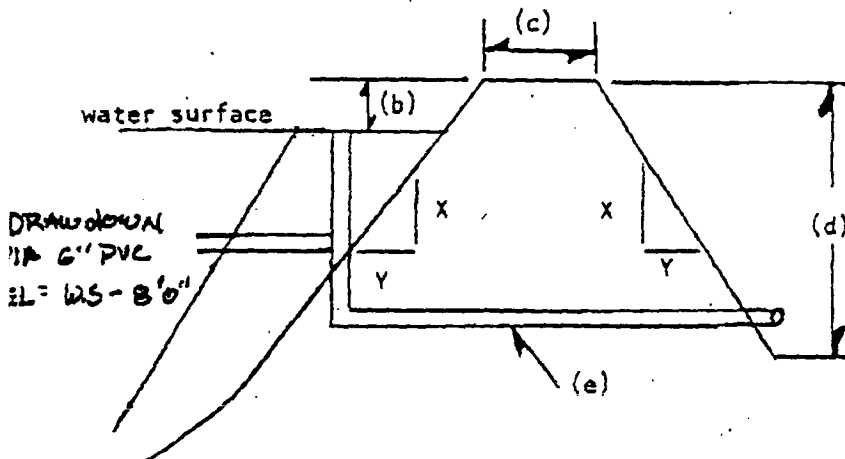
3. ~~Water Storage Dams~~

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~~

Roger Smith, P.E. (#4325)

Ducks Unlimited, 3502 Franklin Ave
Bismarck, N.D. 58501 (701) 258-5599



- b) Freeboard 5'
- c) Crest Width 12'
Crest Length 544'
- d) Height 22'
- e) Outlet Dimensions:
Pipe diameter 60\" Riser 36\" BARS
Spillway width Crest Length = 170'
Crest width = 100'
- f) X & Y Slope
Upstream 5:1 To 10' BEAM, 3:1 to TD
Downstream 3:1

Surface Area of Impoundment 17 1/2 ACRES

Storage 89.1 acre feet

Drainage area above dam 2.05 Sq miles

X Dale Timmons
Signature of Applicant

RECEIPT

414513

Division of Water Rights

South Dakota Department of Environment and Natural Resources

Pierre, _____, June 1, 19 95

RECEIVED OF Dale Timmons, Box 54, Marcus, SD 57757

the following amount in fees for services rendered as provided for by law:

Fee for Application for Permit No. <u>1621-1</u> to Appropriate Water, to construct and to put water to beneficial use _____	150	00
Fee for Application for Permit No. _____ to Appropriate Water, for Future Use _____		
Fee to retain Future Use Permit No. _____ after period of seven years.		
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. _____		
Fee for Filing Transfer Form _____		
Fee for Filing Extension Request _____		
Fee for _____		

(Any Other Work Provided by Law)	Total	150 00

By John Hatch
Chief Engineer

Water Permit Application #1621-1

Date Timmons

Top of Dam Elev. - 2513
 Primary Spillway - 2508
 2nd Spillway - 2510.5
 Bottom - 2491

Height = 22 ft.

Cat. 3 - Low Hazard

Normal Storage Capacity - 89.1 Ac.-Ft.
 Int. Storage Capacity - 117 Ac.-Ft.
 Maximum Storage Capacity - 200 Ac.-Ft.

Int. Capacity x Eff. Height (117 x 19.5) = 2281 < 3000 ∴ 25 year
Minimum Spillway Design

DV used Max. Capacity x Eff. Ht. (200 x 19.5) = 3900 - OK

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

$$\begin{aligned}
 DA &= 2.05 \text{ mi.}^2 & Q_{25} &= 83.4 (2.05)^{.6} (60)^{.44} (2.50)^{-.72} & Q_{100} &= 132 (2.05)^{.65} (60)^{.46} (2.50)^{-.67} \\
 \text{Slope} &= 60 \text{ ft/mi} & &= 83.4 (1.54) (6.06) (0.52) & &= 132 (1.59) (6.58) (0.54) \\
 S &= 2.50 & &= \underline{405 \text{ cfs}} & &= \underline{745 \text{ cfs}}
 \end{aligned}$$

Primary Spillway Flow

$$\begin{aligned}
 Q &= CA \sqrt{2gh} & C &= .6 \\
 & & A &= 7.07 \\
 &= (.6)(7.07) \sqrt{2(32.2)(20.5)} & h &= 20.5 \\
 &= \underline{154 \text{ cfs}}
 \end{aligned}$$

2nd Spillway Flow

$$\begin{aligned}
 Q &= CLH^{3/2} & L &= 100' \\
 & & H &= 2.5 \\
 &= 2.6(100)(2.5)^{3/2} & C &= 2.6 \\
 &= \underline{1028 \text{ cfs}} & \text{Total} &= \underline{1181 \text{ cfs}}
 \end{aligned}$$

Section 74:02:08:09

1. Topo Map - OK
2. Dam Axis Profile - OK
3. Max. X-See. - OK
4. Area-Capacity - OK
5. Outlet Details - OK
6. Spillway Discharge - OK
7. Spillway Details - OK
8. Specs - Std. - OK
9. EPP - N/A - OK

SCS Annual Yield CN = 78

50% Chance - 30 Ac.-Ft. Iso = 1 1/2

20% Chance - 70 Ac.-Ft.

10% chance = $\frac{1.8}{2.2}$ Ac.-In/Ac.

$$1.8 \times 2.05 \times 640 / 12 = \underline{196 \text{ Ac.-Ft.}}$$

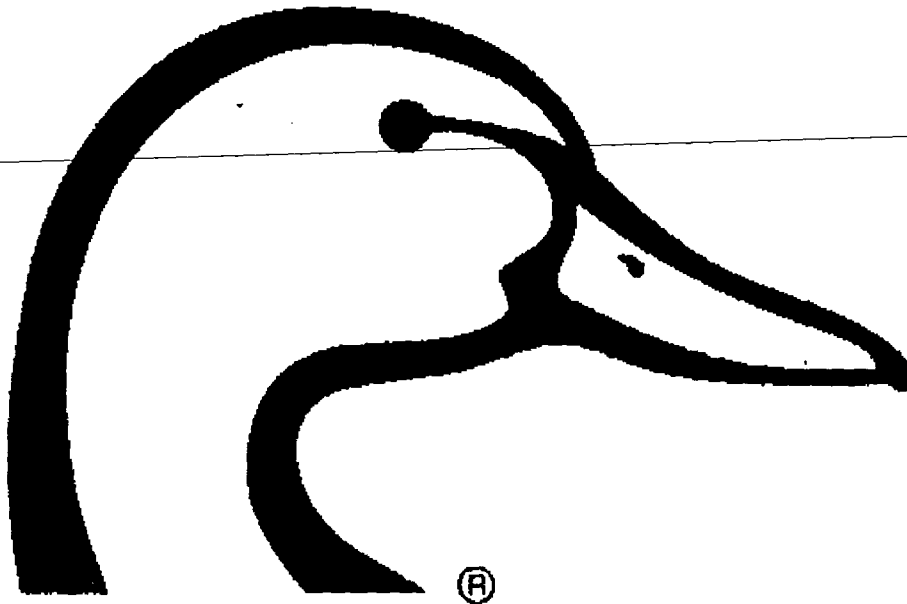
DESIGN REPORT

for

TIMMONS WETLAND CREATION

Marcus, SD (SD-0175-001)

May 15, 1995



Prepared by:

Ducks Unlimited, Inc.
3502 Franklin Avenue
Bismarck, ND 58501



DESIGN REPORT

PROJECT: TIMMONS WETLAND CREATION
SD-175-01

LOCATIONS: NE¼, NW¼ SECTION 22 TWP. 08N RGE. 15E
Meade County, South Dakota

MARSH DATA: Full Service Level (FSL) @ 2508.0 (MSL)
17.6 Surface Acres @ FSL
89.1 Acre-Feet Capacity @ FSL

PRIMARY SPILLWAY: 60" coated corrugated metal riser with fixed level control @ el. 2508.0 in conjunction with a 36" coated corrugated metal pipe; drawdown capabilities to el. 2500.0 via 6" gate valve.

EMERGENCY SPILLWAY: Excavated spillway having a crest length on centerline of 170 feet and minimum bottom width of 100 feet at elevation 2510.5.

DAM: Earth fill to el. 2513.0; side slopes - 3:1; Upstream berm @ el. 2508.0; Compaction to 95% of standard proctor @ +3% to (-)1% of optimum moisture content.

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 economic loss is expected should failure occur. The product of the "maximum storage capacity" times the "effective height" is 3900. ($200 \times 19.5 = 3900$)

PRELIMINARY RISK ASSESSMENT:

The proposed impoundment would be constructed approximately 1.7 river miles from the nearest downstream roadway crossing. The downstream structure is an unimproved county road containing one 48" corrugated metal pipe and one 72" multi-plate pipe. Available freeboard is 6.6' and 8.1' respectively. It appears the roadway has been overtopped in the past as evidenced by the local erosion. Determining impacts to the roadway due to a clear weather breach of the proposed impoundment was not deemed necessary due to the distance downstream.

HYDROLOGY/HYDRAULICS:

HYDROLOGY - A hydrologic analysis of surface water runoff was performed using two methods. A peak discharge was determined from regression equations developed in WATER-RESOURCE INVESTIGATIONS REPORT 80-80 U.S. GEOLOGICAL SURVEY.

The SCS METHOD was used to determine the inflow hydrograph. The curve number used in the SCS METHOD was manipulated to create peak discharges similar to those developed from the regression equation. In this way credibility is established in the curve number choice. Other assumptions made in developing inflow hydrographs by SCS METHOD were:

Rain Duration = 1.00
Rain Table # = 1
Antecedent moisture condition = 2
Rainfall from SCS charts

Inflow hydrographs developed from the SCS METHOD were routed through the primary and emergency spillways. This yielded outflow hydrographs revealing peak discharges at maximum reservoir elevations corresponding to various runoff events. The following table is a summary of that printout:

PARAMETERS:

WATERSHED - 2.05 SQ MI

TIME OF CONCENTRATION - 3.3 HOURS

SCS CURVE #'S 5 YR-78 10 YR - 80 100 YR - 88

EVENT	RAIN (IN)	RUNOFF (AC-FT)	PEAK INFLOW (CFS)	PEAK OUTFLOW (CFS)	MAX RESERVOIR ELEVATION	FREE- BOARD (FT)	FLOW IN E.S. (CFS)
5 YR	2.6	93	143	78	2509.44	3.56	0
10 YR	3.00	136	228	106	2510.18	2.82	0
25 YR	3.6	161	402	223	2511.4	1.6	80
100 YR	4.5	349	661	499	2412.21	0.88	230

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. The emergency spillway capacity was calculated using Technical Release No. 39 Hydraulics of Broad-Crested Spillways developed by the SCS. A "Spillway Rating Curve" is attached to this report.

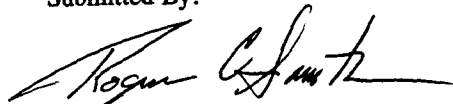
DROUGHT ANALYSIS: It is difficult to determine the frequency in which there will be adequate runoff to sustain the marsh through the brood-rearing period, a criteria important to project sponsors. Using SCS methods, the 80% and 50% annual runoff will generate 70 and 30 acre-feet respectively. The annual requirement assuming an evaporative loss of approximately 3 feet is 45 acre-feet.

SOIL INVESTIGATION: The geotechnical analysis and report was completed by Zeltinger Geotechnical Services. The report summarizes the investigation in detail. In general, the soil encountered is acceptable material for dam construction.

IMPACTS TO SURROUNDING PROPERTY: The planned construction and subsequent reservoir will be contained within the Timmons Ranch. In years of little or no runoff the project may capture a majority of water yielded from the watershed.

Dated: May 15, 1995

Submitted By:



Roger Smith, P.E (PE-4325)

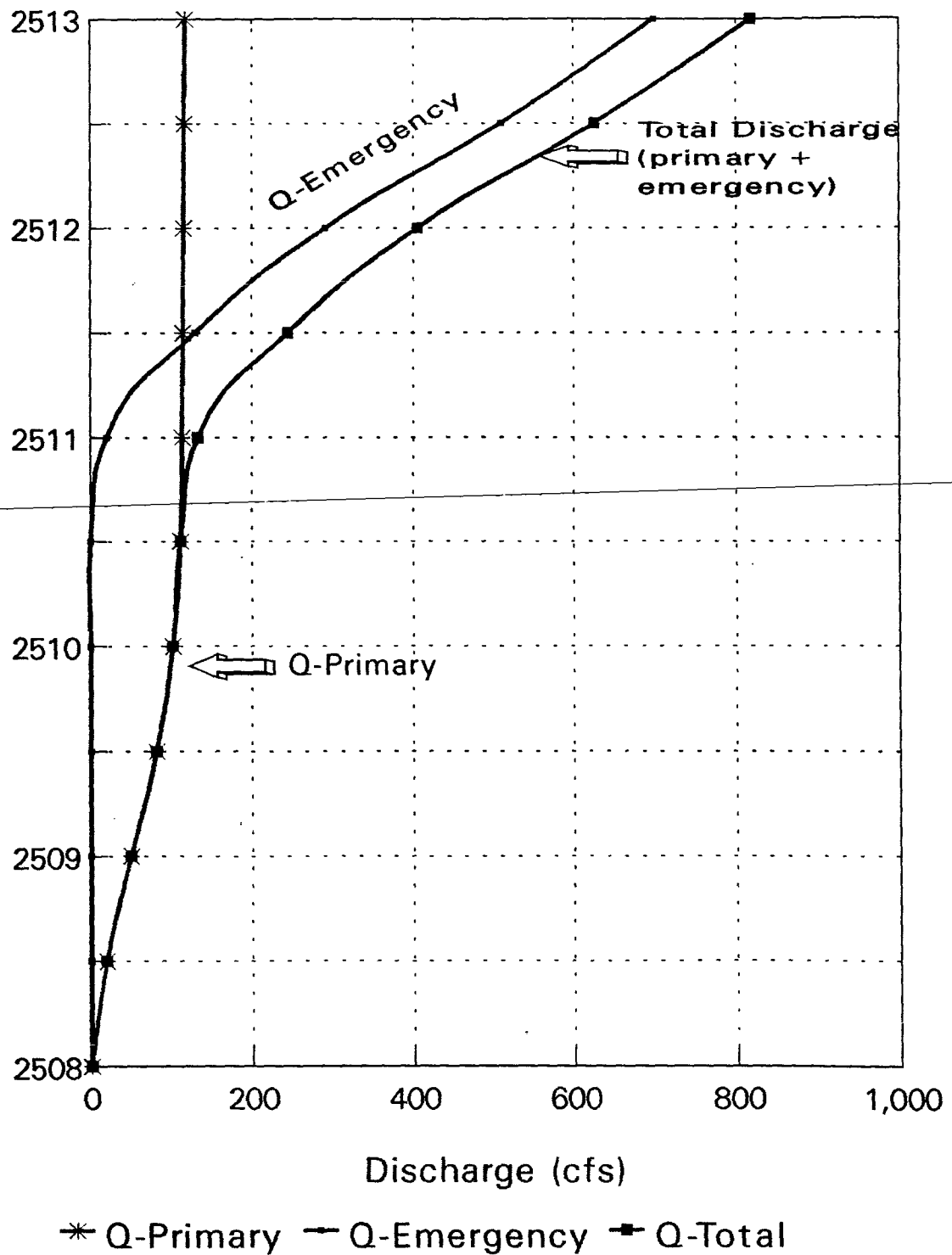
Regional Engineer

Ducks Unlimited

Great Plains Regional Office

Timmons Wetland Creation Spillway Discharge Curve

Reservoir El.



REPORT ON
WATER PERMIT APPLICATION NO. 1621-1
DALE TIMMONS
July 21, 1995

Water Permit Application No. 1621-1 has been filed by Dale Timmons to appropriate 89.1 acre-feet of water annually by constructing a dam. The dam will be located in the NW 1/4 of Section 22-T8N-R15E on an unnamed tributary to Red Owl Creek, in Meade County. The impounded water will be used for recreation and domestic use purposes and to provide habitat for fish and wildlife production.

Discussion:

The Timmons Wetland Creation 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. 1621-1 is approved.

The dam will be 22 feet high with a normal storage capacity of 89.1 acre-feet with a reservoir level at the primary spillway elevation, and a maximum storage capacity of 200 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.

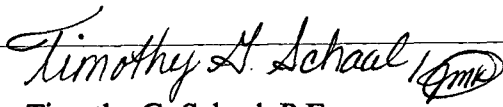
The Timmons Wetland Creation Dam is designed to have a CMP drop inlet spillway with a 60-inch diameter riser and a 36-inch diameter barrel. The spillway crest will be at elevation 2508.0, giving it 5 feet of available head. The dam will also have a 100 foot wide earthcut secondary spillway with a crest elevation of 2510.5, giving it 2.5 feet of available head. The Timmons Wetland Creation Dam will have a drainage area of 2.05 square miles. Ducks Unlimited uses the Soil Conservation Service TR-20 model to route a 25-year frequency event peak of 402 cfs through the dam with 1.6 feet of freeboard remaining. A 100-year frequency event with a peak of 661 cfs is routed through the dam with 0.88 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 30 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 196 acre-feet.

The Timmons Wetland Creation Dam is located on an unnamed tributary to Red Owl Creek about 1.5 miles upstream of the confluence of the tributary and Red Owl Creek. There are no existing Water Permits/Rights between the proposed dam and Red Owl Creek.

Conclusion:

1. Water permit Application No. 1621-1 should be approved since unappropriated water is available and approval should not have any adverse effects on existing Water Permits/Rights.
2. If approved, the low flow bypass requirement for downstream domestic use should be a qualification on Water Permit Application No. 1621-1.


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

Approved by:


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



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

August 9, 1995

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

Dear Mr. Smith:

We have reviewed the plans and specifications for the Timmons Wetland Creation Dam located in the NW 1/4 of Section 22-T8N-R15E, in Meade 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. 1621-1 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 Mr. Timmons, 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 Timmons Wetland Creation Dam will be classified as a small size Category 3, Low Hazard Dam with an embankment height of 22 feet and a normal storage capacity of 89.1 acre-feet and a maximum storage capacity of 200 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 Program
(605) 773-3352

c: Dale Timmons, landowner
Box 54
Marcus, SD 57757

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 1621-1, Dale Timmons**

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit Application No. 1621-1, Dale Timmons, Box 54, Marcus, SD 57757.

The Chief Engineer is recommending APPROVAL of Application No. 1621-1 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 qualifications:

1. Water Permit No. 1621-1 authorizes a dam with storage capacity of 89.1 acre-feet of water and sufficient water annually to maintain the water level to the outlet elevation of 2508.0 feet mean sea level.
2. Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed.

See report on application for additional information.



JOHN HATCH, Chief Engineer
July 25, 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.

August 9, 1995

Dale Timmons
Box 54
Marcus, SD 57757

Dear Mr. Timmons:

967-2161
Water Permit Application No. 1621-1 for domestic and recreational use and to provide habitat for fish and wildlife production 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 Faith Independent printed at Faith, SD (Ph # 605-985-5241). 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

August 9, 1995

Faith Independent
Box 38
Faith, SD 57626-0038

ATTENTION: Legal Department

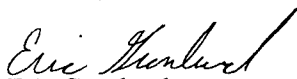
Enclosed is a Notice of Hearing on Application No. 1621-1 to be published twice. Please publish the first notice on September 5, 1995, with the second publication 7 days later.

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 Dale Timmons, Box 54, Marcus, SD 57757 (Ph # 605-985-5241).

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

Instruction to Newspaper - Publish first Notice on August 16, 1995, with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF APPLICATION NO. 1621-1 to Appropriate Water

Notice is given that Dale Timmons, Box 54, Marcus, SD 57757 has filed an application for a water permit to impound 89.1 acre-feet of runoff water from a tributary of Red Owl Creek by constructing a dam located in the NE 1/4 NW 1/4 Section 22 with water impounded in the E 1/2 NW 1/4 Section 22; all in T8N-R15E. This application requests impoundment of water sufficient to maintain water at the outlet elevation of 2508.0 feet mean sea level and is to be used for domestic and recreational purposes and to provide habitat for fish and wildlife production.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 1621-1 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 Program, 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 September 5, 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 Program address to request copies of information pertaining to this application. Nettie H. Myers, Secretary, Department of Environment and Natural Resources.

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)

County of Meade) SSI, John W. Higgs

certify that the attached printed Notice was

taken from the Faith Independentprinted and published in Faith, SDCounty of Meade and State ofSouth Dakota. The notice was published in
the newspaper on the following two dates:August, 16 1995

Cost of Printing: _____

John W. Higgs
(Signature)Publisher
(Title)9-15-95
(Date Signed)**NOTICE OF APPLICATION NO.****1621-1 to Appropriate Water**

Notice is given that Dale Timmons, Box 54, Marcus, SD 57757 has filed an application for a water permit to impound 89.1 acre-feet of runoff water from a tributary of Red Owl Creek by constructing a dam located in the NE 1/4 NW 1/4 Section 22 with water impounded in the E 1/2 NW 1/4 Section 22; all in T8N-R15E. This application requests impoundment of water sufficient to maintain water at the outlet elevation of 2508.0 feet mean sea level and is to be used for domestic and recreation purposes and to provide habitat for fish and wildlife production.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends **APPROVAL** of Application No. 1621-1 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 Program, 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 September 5, 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 Program address to request copies of information pertaining to this application. Nettie H. Myers, Secretary, Department of Environment and Natural Resources.

The Faith Independent**August 16, 1995**



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

DEC 18 1995

Dale Timmons
Box 54
Marcus SD 57757

Dear Mr. Timmons:

Enclosed is Water Permit No. 1621-1 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 Jan 12, 1996

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

FROM: DALE TIMMONS Box 54
(name) (address)
MARCUS SD 57757 985-5241
(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. 1621-1.

Water Permit No. 1621-1 states that the diversion system is to be constructed by MARCH 5, 1998, and that the water is put to beneficial use by SEPTEMBER 5, 2004.
(date) (date)

The diversion system was completed on 11/9/95.
(date)

Applying the water to beneficial use was completed on 11/9/95.
(date)

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

Dale Timmons
(signature)

DAM CONSTRUCTION IS COMPLETE, HOWEVER THERE IS NO WATER IN THE DAM AT THIS TIME. HOPEFULLY SPRING 1996 RUNOFF WILL FILL IT.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181
www.state.sd.us/denr

March 15, 2000

1621-1

John Timmons
HCR 77, Box 56
White Owl SD 57792

Dear Mr. Timmons:

The investigation of the water use system, including the extent of application of water to beneficial use, as developed under Water Permit No. 1621-1, was completed by Tim Schaal on September 16, 1999. The final water right document, the Water License, can now be issued.

Statutes require that we charge a \$50.00 fee for the investigation and issuance of the Water License. Upon receipt of the \$50.00 fee, we will begin processing the Water License.

Also, enclosed is a *Notice of Transfer of Ownership* form. The form needs to be completed, signed by the owner, notarized and returned with a \$2.50 filing fee.

**Please submit \$52.50 to: Department of Environment & Natural Resources
Water Rights Program
523 E. Capitol
Pierre, SD 57501-3181**

Sincerely,

Karen Schlaak
Water Rights Program
(605) 773-3352

NOTE: On check or money order, please specify the permit number. This insures proper handling of the fee.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181
www.state.sd.us/denr

June 23, 2000

REMINDER NOTICE

1621-1

John Timmons
HCR 77 Box 56
White Owl, SD 57792

Dear Mr. Timmons:

On March 15, 2000, we advised you that a \$50.00 fee was due for the completed investigation of Water Permit No. 1621-1. The fee also covers issuance of your water license which is the final document in obtaining and perfecting a water permit.

To date, we have not received the fee and therefore can not issue the water license. Your licensed water right will be similar to a property right that can not be lost as long as the water use continues and you abide by any permit requirements.

It is our understanding that you now own the land described in the permit. Prior to licensing, the water permit needs to be transferred from Dale Timmons to your name. Enclosed is a partially completed "Notice of Transfer of Ownership" form. Please review the form and complete as needed. The form will need to be signed in the presence of a notary and returned to us with a required fee of \$2.50.

A total fee for licensing and transfer of the water permit is \$52.50. If you have any questions regarding the water permit, investigation of your water use system, the transfer of the water permit or payment of the fee, please contact Genny McMath with our program at (605) 773-3352. The check or money order for the fee (\$52.50) should be made payable to the "Water Rights Program".

Sincerely,

Garland Erbele, Chief Engineer
Water Rights Program

RECEIPT

Water Rights Program

South Dakota Department of Environment and Natural Resources

Nº 416560

Pierre, **June 28, 2000**

RECEIVED OF John Tolmans, HC 77, Box 56, White Owl, SD 57792
the following amount in fees for services rendered as provided for by law:

Fee for Application for Permit No. _____ to Appropriate Water, to construct
and to put water to beneficial use _____

Fee for Application for Permit No. _____ to Appropriate Water, for Future
Use _____

Fee to retain Future Use Permit No. _____ after period of seven years.

Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water
License No. 1621-1

Fee for Filing Transfer Form Water Permit No. 1621-1

Fee for Filing Extension Request _____

Fee for _____

(Any Other Work Provided by Law)

Total

50 00

2 50

52 50

By Harold Enble
Chief Engineer

NOTICE OF TRANSFER OF OWNERSHIP

To: Chief Engineer
Water Rights Program, DENR
523 E. Capitol
Pierre, SD 57501-3181

No. 1621-1

Date: June 27 2000



I/We request that Water Permit No. 1621-1

formerly owned by: Dale Timmons

be transferred to: (name & address) John Timmons PCL77 Box 56
White Oak SD 57792 Telephone No. 605 985 5335

Title to the following described land(s)/property has been transferred as described above:

89.1 acre-feet dam located in the NE 1/4 NW 1/4 Section 22-T8N-R15E

I/We understand that the validity of Water Permit No. 1621-1 has not been determined by this transfer action. If I/We have any questions on validity, I/We understand that only the Water Management Board has the authority to determine if a water permit/right is valid (see note).

You are requested to file this "Notice of Transfer" in the appropriate file with the Water Rights Program, as evidence of the change of ownership.

A fee of Two Dollars and Fifty Cents (\$2.50) is attached to cover the filing fees as required under SDCL 46-2-13.

STATE OF SOUTH DAKOTA)

County of Meade)

I/We John Timmons being first duly sworn on my oath depose and say that my relation to the above described undertaking is that of Owner, that I have read the above foregoing statement, and that I know of my own personal knowledge that the information herein stated is true.

John Timmons
(Signed)

Subscribed and sworn to before me this 27 day of June, 2000.

Karl W. Buckner
(Notary Public)

NOTE: Water permits may be cancelled for nonconstruction within the five year construction period. Once a water permit is developed and the water used, the permit becomes a right. A water right may be lost for three reasons:

1. Abandonment - no intent to use water and use is abandoned.
2. Forfeiture - no use of water for three year period without legal excuse.
3. For a third violation of a condition of a water permit/right.

Permit No. 1621-1
Lower Cheyenne 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, **September 16, 1999**, made a thorough examination of the water use system constructed by **John Timmons** of **HCR 77, Box 56 White Owl, SD 57792** holder of Permit No. **1621-1**, bearing the priority of **June 6, 1995** authorizing the storage of **89.1** acre-feet of the waters of **runoff** for **recreation, livestock and fish & wildlife** purposes, in **Meade**. I have to report on the conditions of the same as follows:

A. Works used to divert the water:

22 foot high earth dam with normal capacity of 89.1 acre-feet
(Ducks Unlimited Project)

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

N/A

C. Works used to apply water to beneficial use:

22 foot high earth dam with normal capacity of 89.1 acre-feet
(Ducks Unlimited Project)

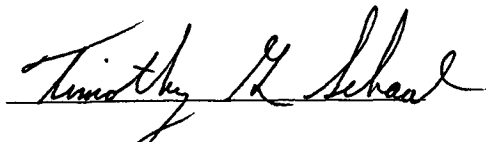
The system is in the following condition **Good**. The point of diversion is located **660 ft. south & 3000 ft. west of the NE corner of Sec. 22-T8N-R15E (NE 1/4 NW 1/4)**. The works are capable of storing **89.1** acre-feet of water which is to be used for **recreation, livestock and fish & wildlife use**. Water has been put to beneficial use to the maximum extent as follows:

22 foot high earth dam with normal capacity of 89.1 acre-feet
(Ducks Unlimited Project)

and the license should be issued for **89.1** acre-feet of storage.

Applicable permit qualifications have been complied with: Yes **X**

Exceptions to compliance are: **None** Date Report Completed: **December 14, 1999**



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

REPORT ON INSPECTION OF PERMIT NO. 1621-1

Other permit(s) associated with the project: XXXX

DATE OF INSPECTION: September 16, 1999

NAME & ADDRESS OF INSPECTION CONTACT/ John Timmons

RELATIONSHIP TO PERMIT HOLDER, IF APPLICABLE: owner

NAME & ADDRESS OF PERMIT HOLDER: John Timmons, HCR 77 Box 56 White Owl, SD 57792

DIVERSION POINT LEGAL LOCATION: 660 feet south & 3000 feet west of the NE corner of Section 22-T8N-R15E (NE 1/4 NW 1/4).

DAM INFORMATION:

- 1) Height to crest 22 feet
- 2) Height to primary spillway 17 feet
- 3) Height to secondary spillway 19.5 feet
- 4) Crest width 12 feet
- 5) Crest length 544 feet
- 6) Spillway length XXX feet
- 7) Spillway width 100 feet
- 8) Approx. storage (Normal) 89.1 acre-feet
- 9) Approx. storage (Maximum) 200 acre-feet
- 10) Date constructed: Fall 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

T2822
26904

T2148

660'
3000'

22

R 30
(8-15)

Water Permit No. 1621-1

Timothy H. Schaal
December 14, 1999

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 1621-1

(1) Dale Timmons, Box 54, Marcus SD 57757 made Application No. 1621-1, June 5, 1995 for a water permit to impound 89.1 acre-feet of water from runoff (tributary to Red Owl Creek), Meade County, South Dakota for fish & wildlife propagation, recreation and domestic purposes. Permit No. 1621-1, with a priority date of June 5, 1995 was approved September 5, 1995 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before September 5, 2000 and for the application to beneficial use of said water on or before September 5, 2004.

The permit holder submitted a *Notice of Completion of Works and Application of Water to Beneficial Use* on January 19, 1996. The *Notice* stated the diversion system was completed and the water placed to beneficial use on November 9, 1995.

On June 28, 2000, Water Permit No. 1621-1 was transferred to John Timmons.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the construction of the storage dam and is entitled to impound 89.1 acre-feet of water for beneficial use with sufficient water annually to maintain the water level to the outlet elevation of 2508.0 feet mean sea level. The location of the storage dam (spillway) is 600 feet south and 3,000 feet west of the northeast corner of Section 22-T8N-R15E (NE 1/4 NW 1/4).

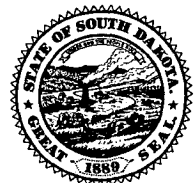
(3) The permit holder has complied with the provisions of South Dakota State Law relating to the application of water to beneficial use.

(4) Pursuant to South Dakota Water Law 46-5-30.1 John Timmons, HCR 77 Box 56, White Owl SD 57792 the holder and/or owner of Water Right No. 1621-1 is issued a license to appropriate water, the right to impound 89.1 acre-feet of water from runoff (tributary to Red Owl Creek) with sufficient water annually to maintain the water level to the outlet elevation of 2508.0 feet mean sea level with a priority date of June 5, 1995 from the location specified in (2) of this license for fish & wildlife propagation, recreation and domestic purposes. This license is subject to any limitations or qualifications listed in Water Right No. 1621-1 and subject to South Dakota State Law.


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

JUL 10 2000

date





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

JUL 10 2000

1621-1

John Timmons
HCR 77, Box 56
White Owl, SD 57792

Dear Mr. Timmons:

Enclosed is Water License No. 1621-1 and Receipt No. 416560 for \$52.50 which was assessed for an investigation and issuance of the license, and for transfer of the Water License into your name. Water License No. 1621-1 is the final document which completes the 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.

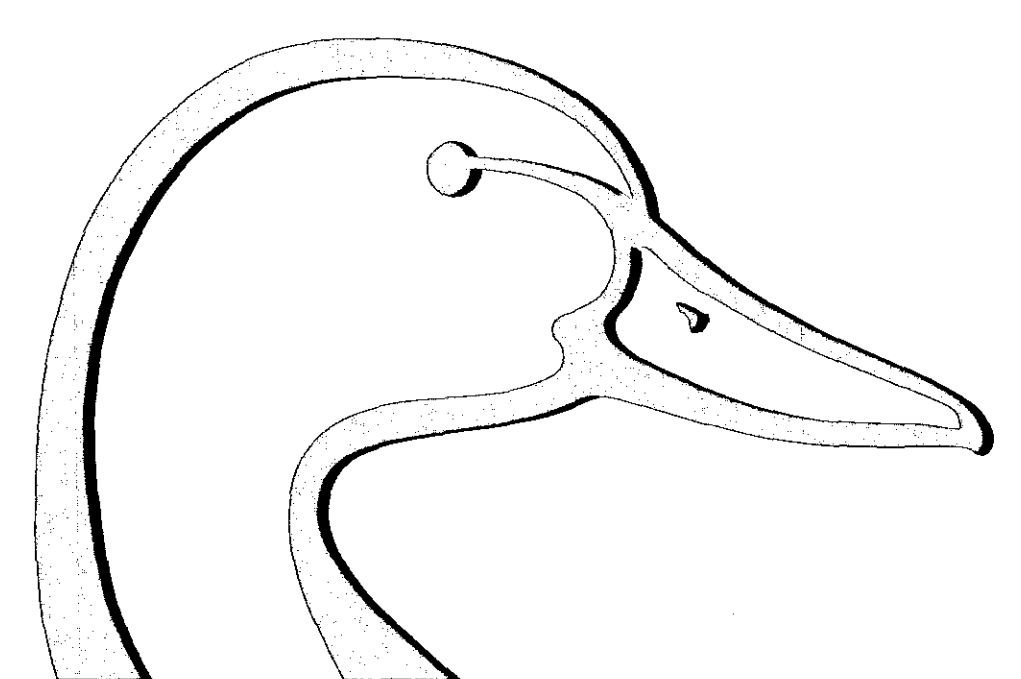
Sincerely,

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

ks
enclosures



1-1001

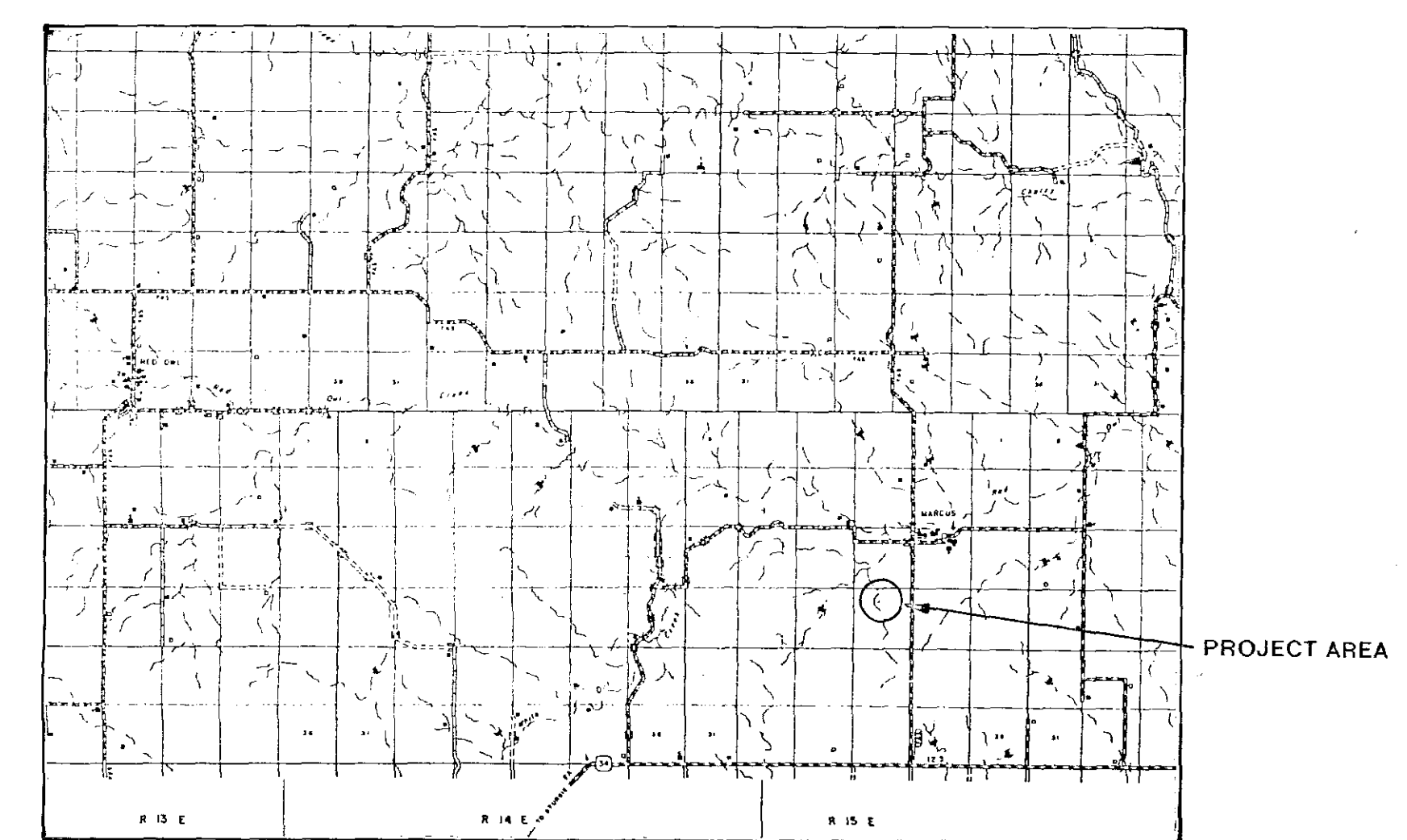
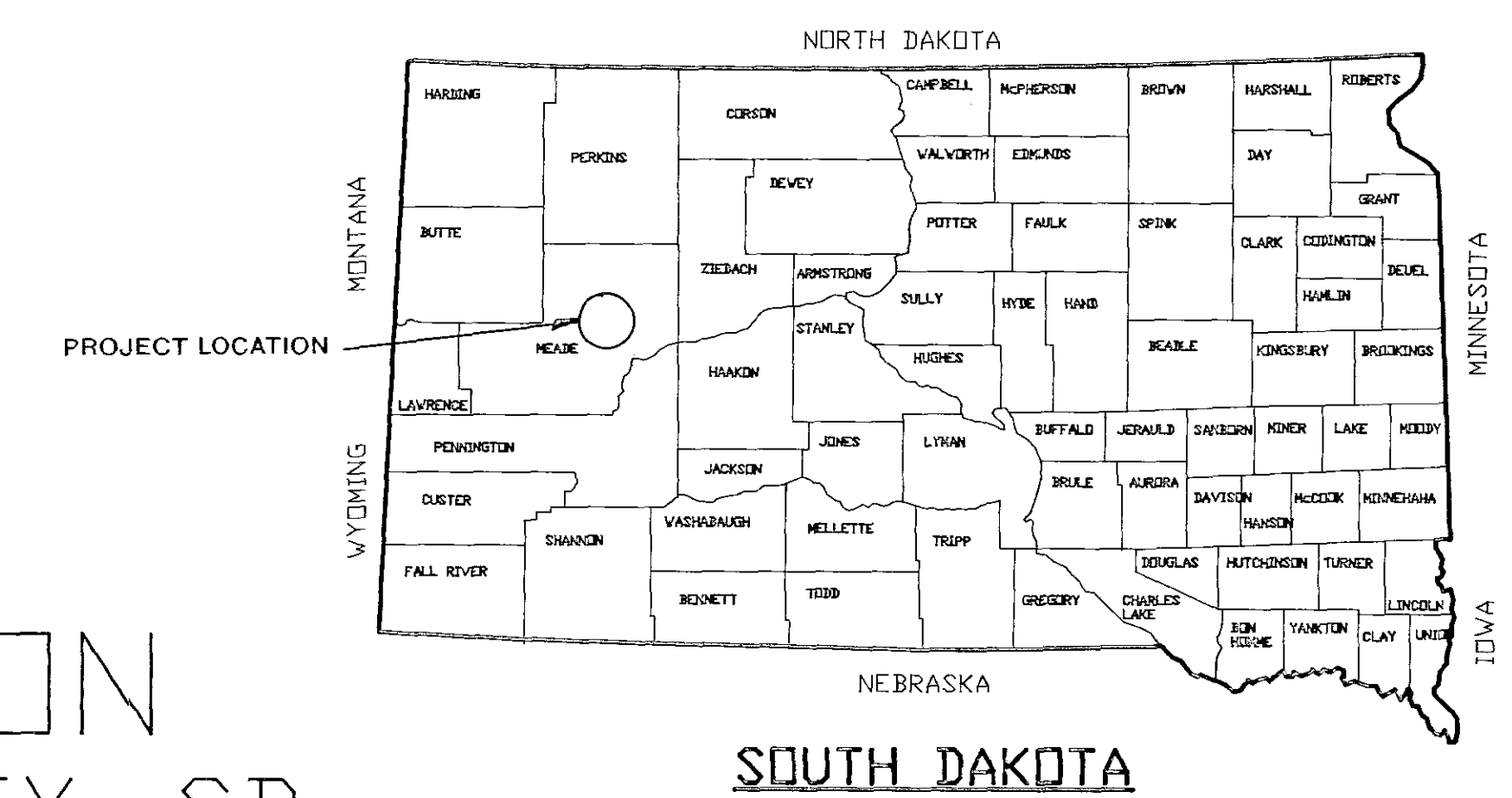


DUCKS UNLIMITED

DUCKS UNLIMITED

PROJECT

TIMMONS WETLAND CREATION SECTION 22, T 8 N, R 15 E, MEADE COUNTY, SD



MEADE COUNTY

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

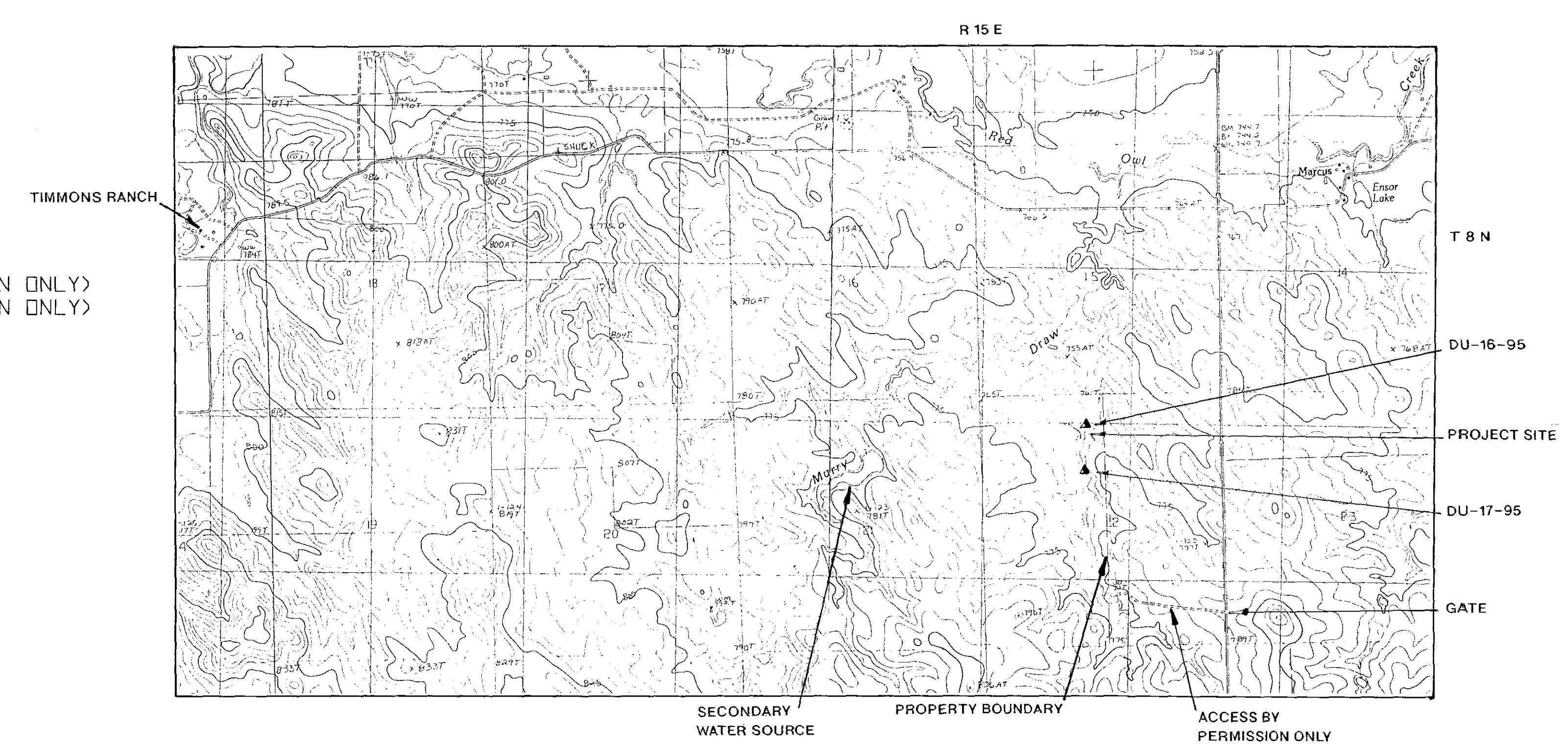
PLAN INDEX

VICINITY MAP	1
PROJECT TOPOGRAPHY/ SOILS INFORMATION	2
PROJECT SITE PLAN	3
STRUCTURE PLAN & PROFILE	4
STRUCTURE DETAILS	5

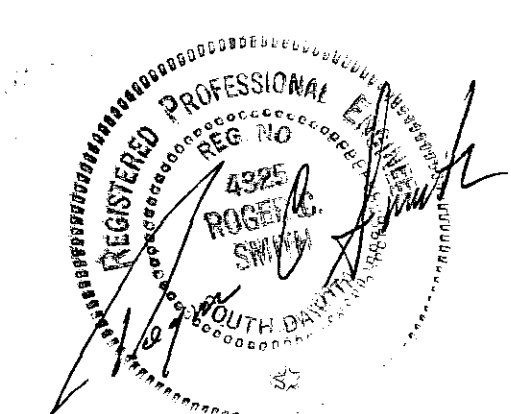
QUANTITIES

MOBILIZATION	1 L.S.
SITE PREPARATION	1381 C.Y.-P
EXCAVATION	
STRUCTURE EXCAVATION	426 C.Y.-INC. (INFORMATION ONLY)
EMERGENCY SPILLWAY	1087 C.Y.-INC. (INFORMATION ONLY)
EMBANKMENT CONSTRUCTION	17460 C.Y.-S*
WATER	
PRIMARY SOURCE	179 M-GAL.**
SECONDARY SOURCE***	
WATER CONTROL	
STRUCTURE INSTALLATION	1 EA.
APPURTENANCES	1 INC.
CULVERT INSTALLATION	
36"Ø CMP	90 L.F.
6"Ø PVC (SDR-35)	24 L.F.
RIPRAP PLACEMENT	
CLASS I	8 C.Y.-P
CLASS II	33 C.Y.-P

* INCLUDES 15% FOR SHRINKAGE
** BASED ON 10 GAL./C.Y.
*** AND QUANTITY IS GIVEN FOR WATER FROM THE SECONDARY SOURCE.
CONTRACTOR MUST PUT A PRICE IN THE APPROPRIATE SPACE ON THE BID FORM
SHOULD SOME OR ALL WATER REQUIREMENTS COME FROM THIS OR OTHER SOURCES.



VICINITY MAP
SCALE: 1"=2000'



AGENCY CONTACT:
TODD CROWNOVER
FAITH, SD
605/739-3411
LANDOWNER CONTACT:
DALE TIMMONS
MARCUS, SD
605/985-5241
ACCESS CONTACT:
WARREN PELLEGRINI
MARCUS, SD
605/985-5907
PERMISSION TO ACCESS IS THE
RESPONSIBILITY OF THE CONTRACTOR.

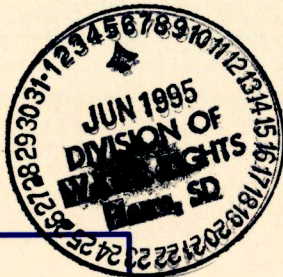
PROJECT SIGNING

SIGN "A" 24"x36"

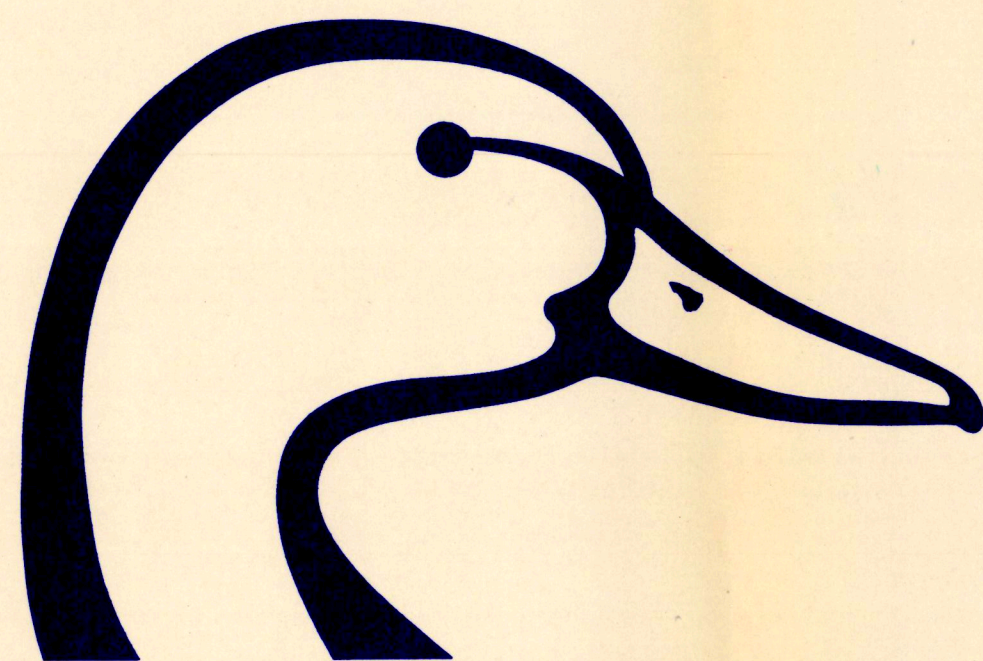
SIGN "B" 11"x14"

1 SIGN "A" AND 0 SIGN "B" WILL BE PROVIDED BY
DUCKS UNLIMITED AND DELIVERED TO THE COOPERATING
AGENCY. THE AGENCY IS RESPONSIBLE FOR INSTALLING
THE SIGNS AT THE LOCATION(S) DESIGNATED ON THE PLANS.

 GREAT PLAINS REGIONAL OFFICE DATE: 5-12-95	PROJECT NO. SD-0175-001 TIMMONS WETLAND CREATION VICINITY MAP	DESIGNED BY: R.C.S. DRAWN BY: KB SURVEYED BY: CHECKED BY: B.R.K.
	SHEET NO. 1 OF 5 APPROVED BY: <i>[Signature]</i> DATE: 5-12-95	APPROVED BY: <i>[Signature]</i> DATE: 5-12-95



1-1891



DUCKS UNLIMITED

DUCKS UNLIMITED

PROJECT

TIMMONS WETLAND CREATION SECTION 22, T 8 N, R 15 E, MEADE COUNTY, SD

IN COOPERATION WITH

S.D. DEPT. OF GAME, FISH & PARKS

SPECIFICATIONS

GENERAL CONDITIONS	101
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EMBANKMENT CONSTRUCTION	204
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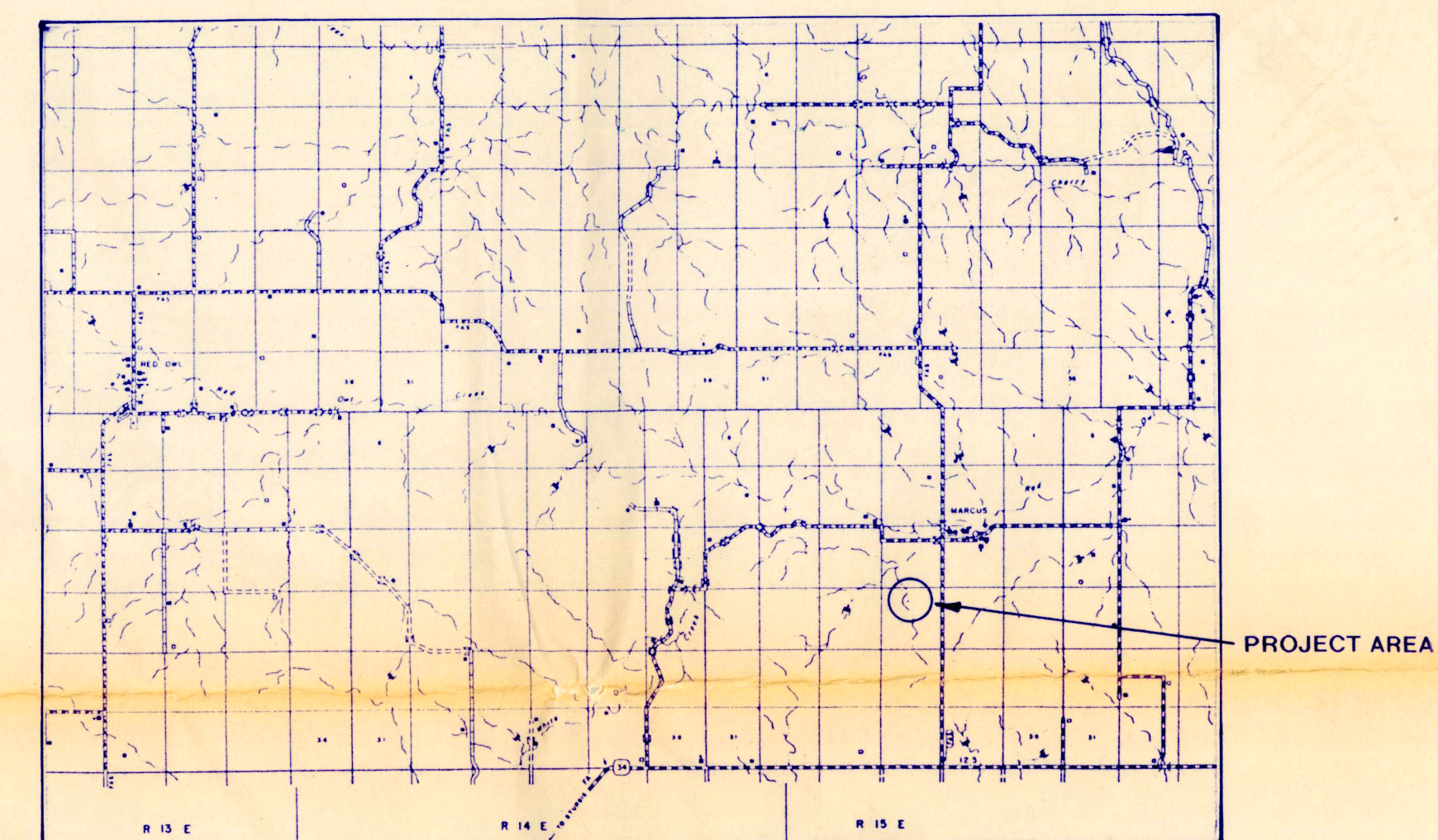
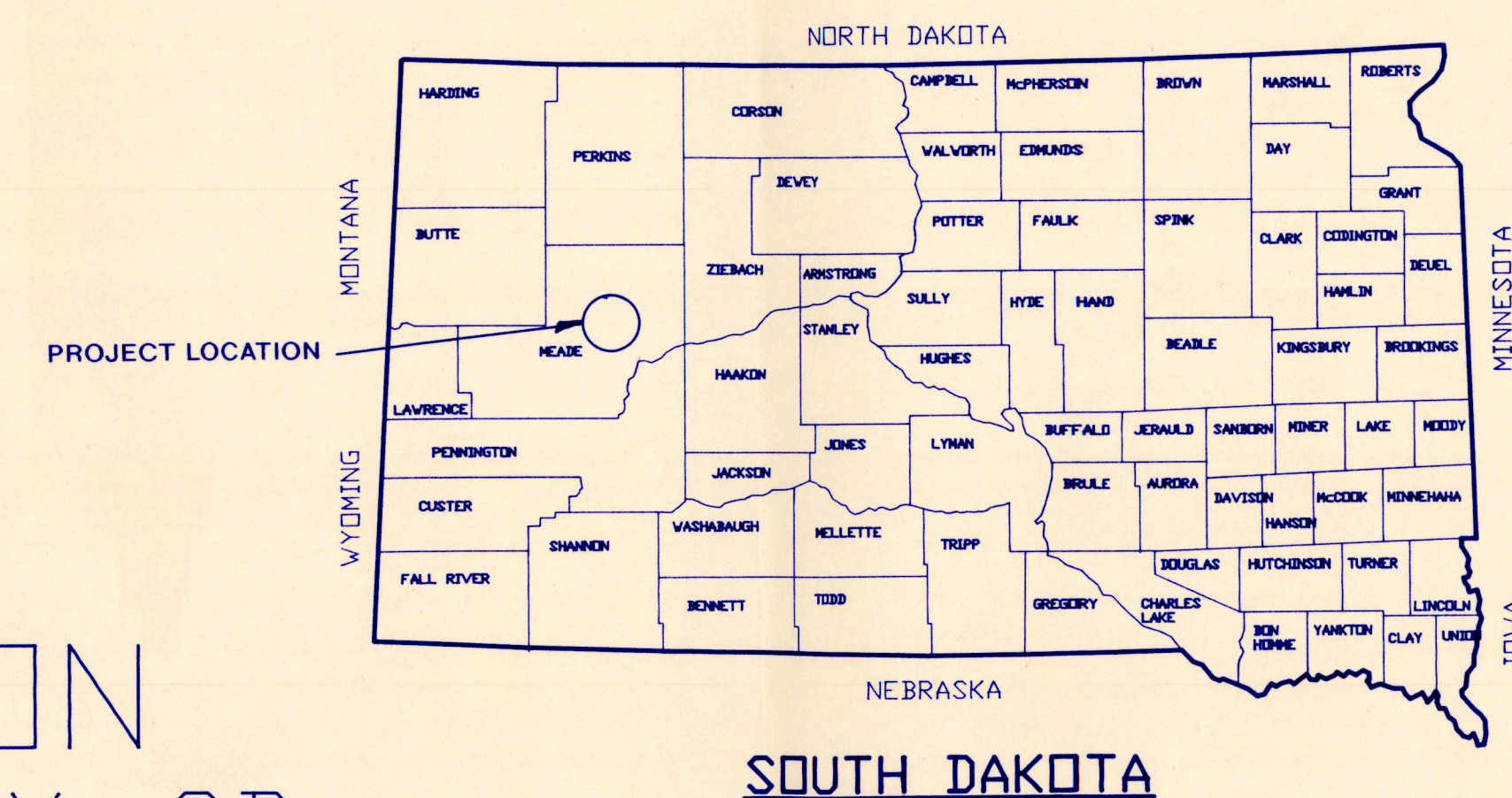
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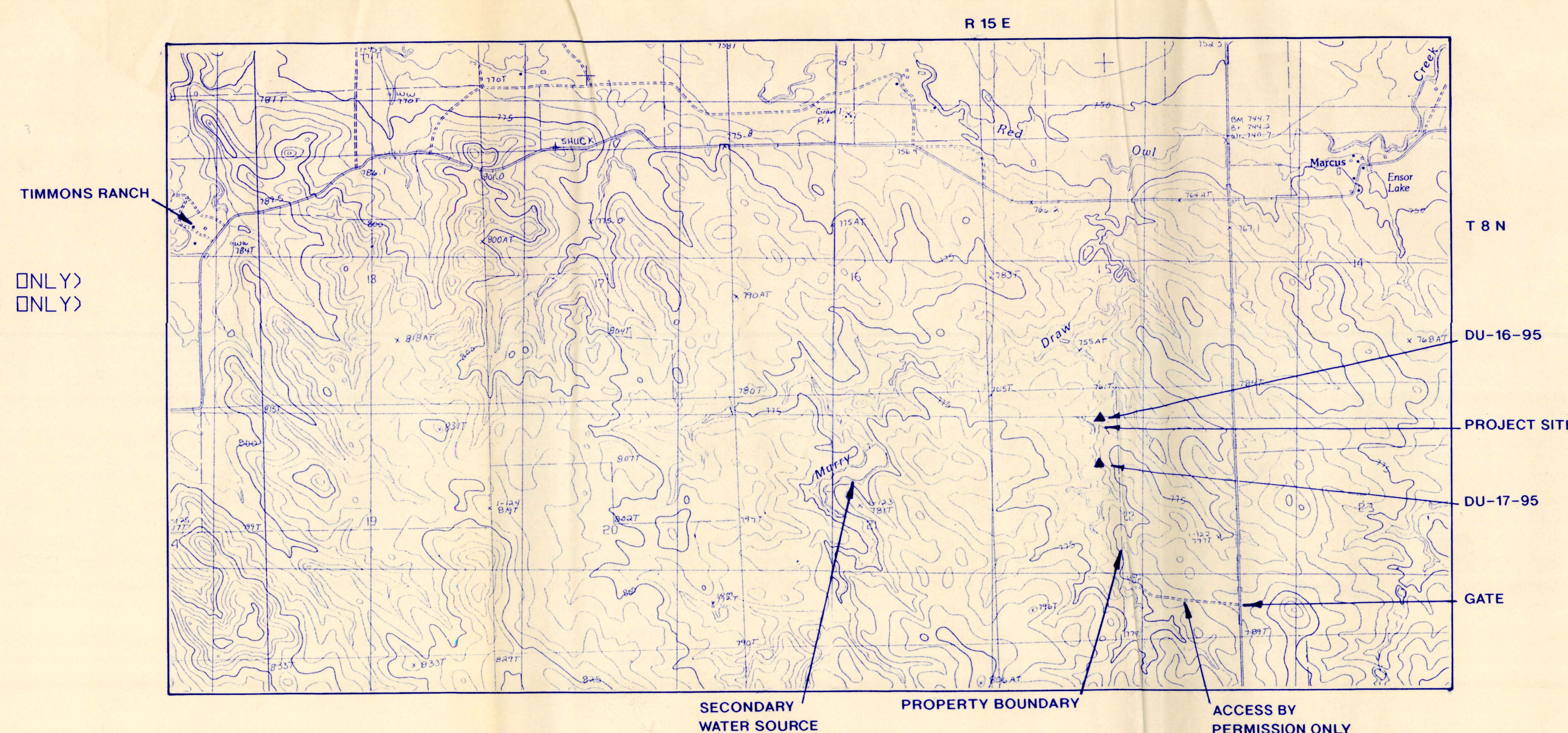
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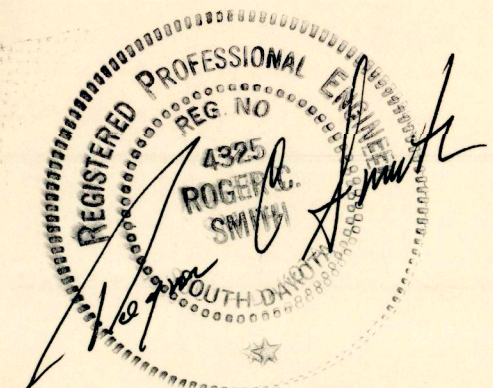
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CONTRACTOR MUST PUT A PRICE IN THE APPROPRIATE SPACE ON THE BID FORM
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MEADE COUNTY



VICINITY MAP
SCALE: 1"=2000'

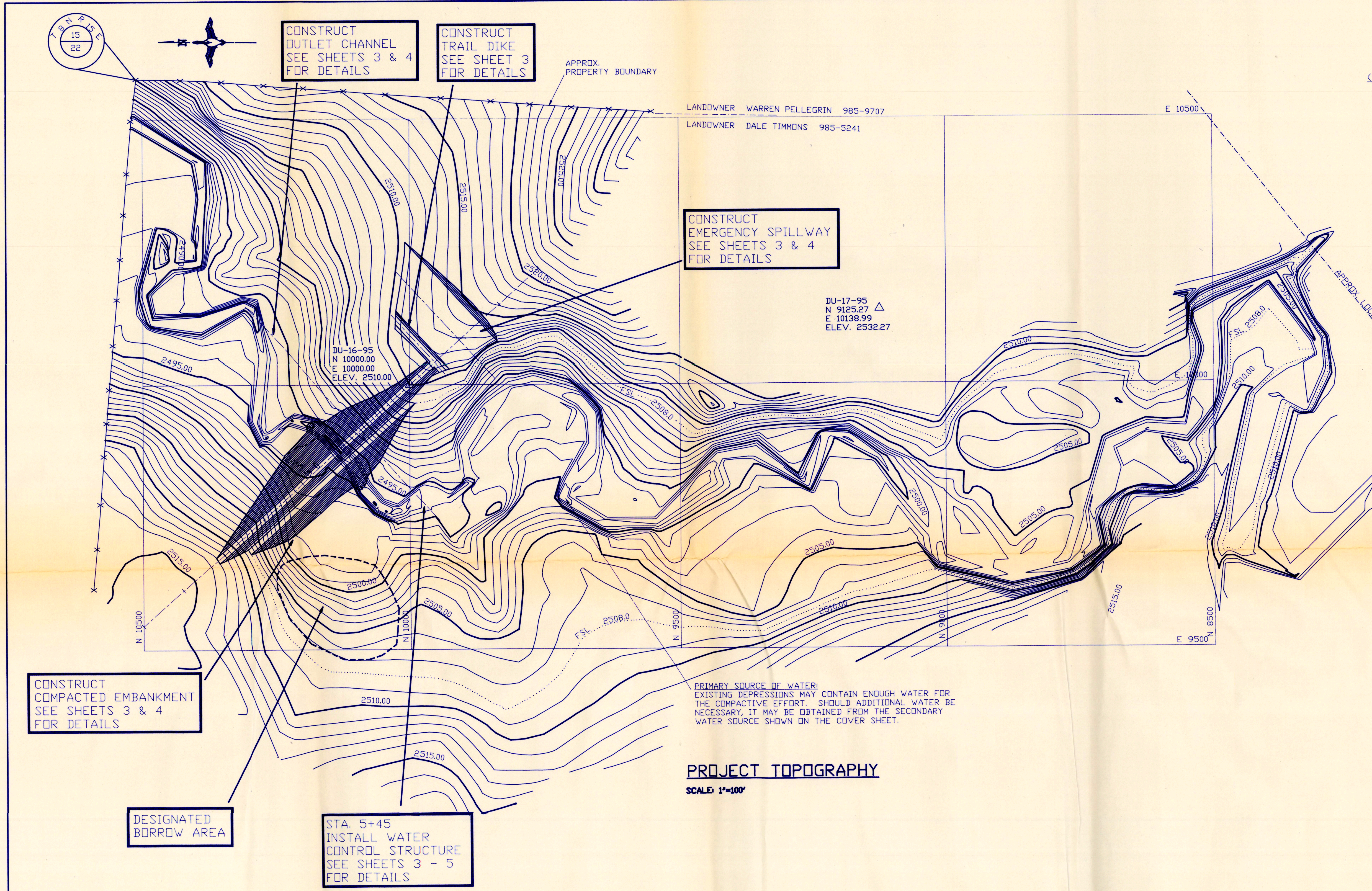
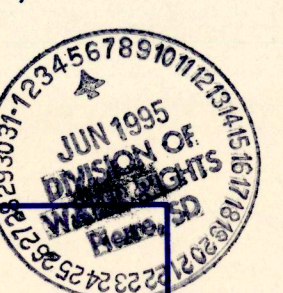


AGENCY CONTACT:
TODD CROWNOVER
FAITH, SD
605/739-3411
LANDOWNER CONTACT:
DALE TIMMONS
MARCUS, SD
605/985-5241
ACCESS CONTACT:
WARREN PELLEGRIN
MARCUS, SD
605/985-5907
PERMISSION TO ACCESS IS THE
RESPONSIBILITY OF THE CONTRACTOR.

PROJECT SIGNING	
SIGN 'A' 24"x36"	SIGN 'B' 11"x14"
1. SIGN 'A' AND '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.	

 GREAT PLAINS REGIONAL OFFICE DATE: 5-12-95	PROJECT NO. SD-0175-001 TIMMONS WETLAND CREATION VICINITY MAP SHEET NO. 1 OF 5	DESIGNED BY: R.C.S. DRAWN BY: KB SURVEYED BY: CHECKED BY: B.R.K. APPROVED BY: David J. Thompson, P.E.
---	--	---

1621-1



AREA CAPACITY DATA		
ELEVATION (MEAN SEA LEVEL)	AREA (ACRES)	CAPACITY (ACCUMULATIVE ACRE-FEET)
2491.0	0	0
2492.0	.08	0.04
2493.0	0.1	0.13
2494.0	0.2	0.28
2495.0	0.4	0.58
2496.0	0.7	1.13
2497.0	1.5	2.23
2498.0	2.7	4.33
2499.0	3.4	7.38
2500.0	4.1	11.3
2501.0	4.8	15.58
2502.0	5.8	20.88
2503.0	7.1	27.33
2504.0	9.2	35.48
2505.0	10.8	45.48
2506.0	13.6	57.68
2507.0	15.8	72.38
FSL 2508.0	17.6	89.08
2509.0	19.4	107.58
2510.0	21.2	127.88
2511.0	23.1	150.03
2512.0*	25	174.08
2513.0*	27	200.08
2514.0*	29	228.08

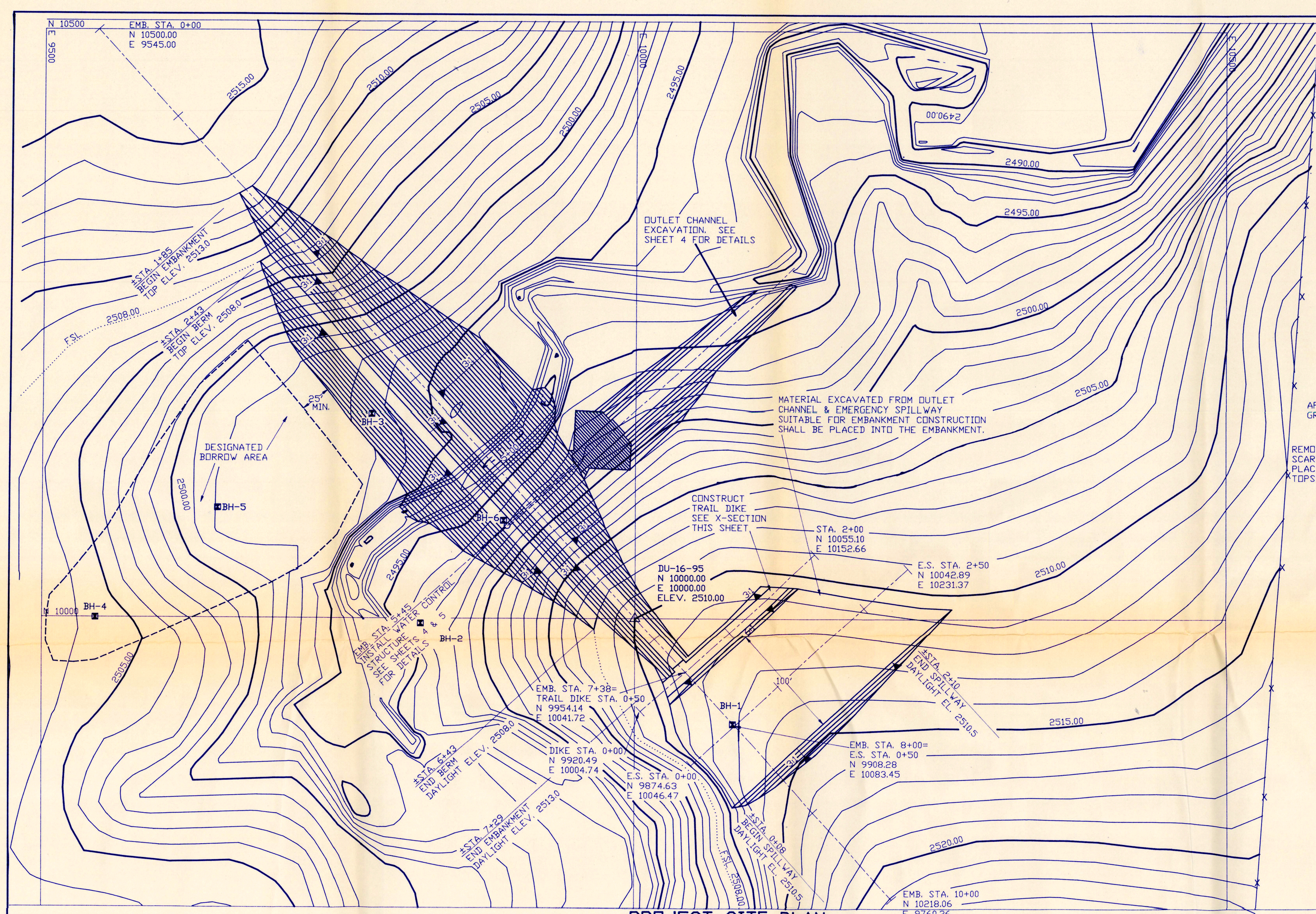
*AREAS ABOVE ELEVATION 2511.0 ARE ESTIMATED FROM CURVE

VERTICAL CONTROL:
ESTABLISHED FROM A QUADRANGLE SPOT ELEVATION FROM THE 7 1/2 MINUTE
USGS TOPO MAP AT THE N 1/4 CORNER OF SECTION 22. THE MEAN ELEVATION
AT A DOUBLE FENCE 'T' AS 761 METERS OR 2496.7 FEET.

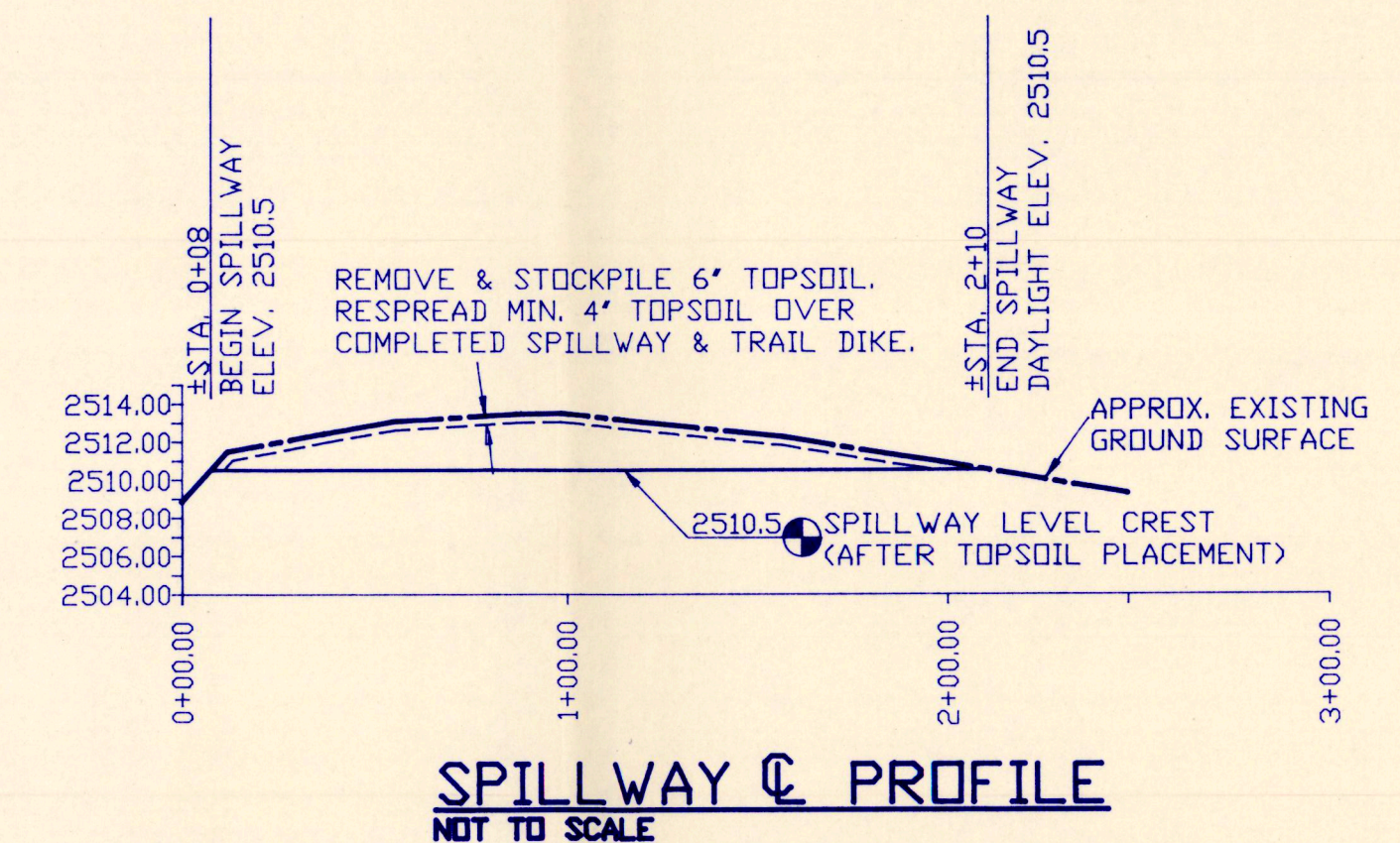
HORIZONTAL CONTROL:
LOCAL DU COORDINATES WITH REFERENCE TO TRUE NORTH WITH A BRUNTON
COMPASS WITH 13° OF MAGNETIC DECLINATION ACCOUNTED FOR.

DUCKS UNLIMITED INC. GREAT PLAINS REGIONAL OFFICE	PROJECT NO. SD-0175-001	DESIGNED BY: R.C.S.
	TIMMONS WETLAND CREATION	DRAWN BY: KB
DATE: 5-12-95	SHEET NO. 2 OF 5	CHECKED BY: B.R.K.
APPROVED BY:		APPROVED BY:

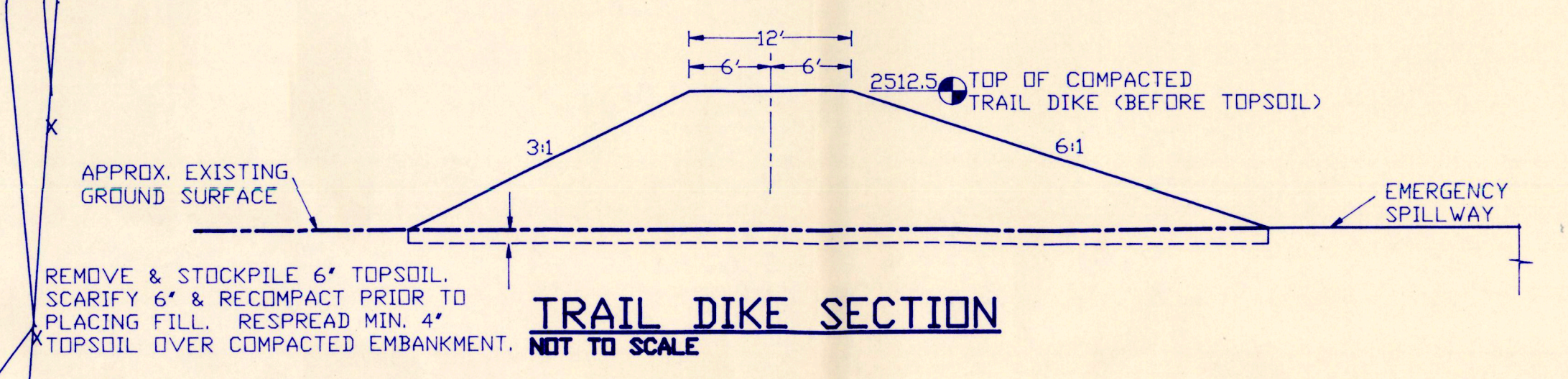
1621-1



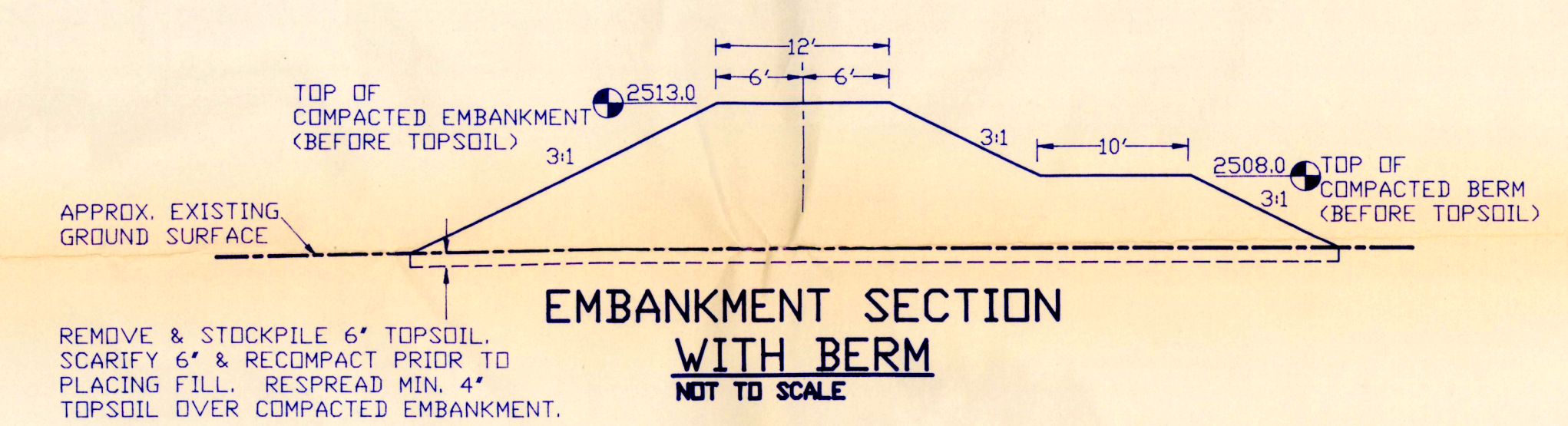
PROJECT SITE PLAN
SCALE: 1"=50'



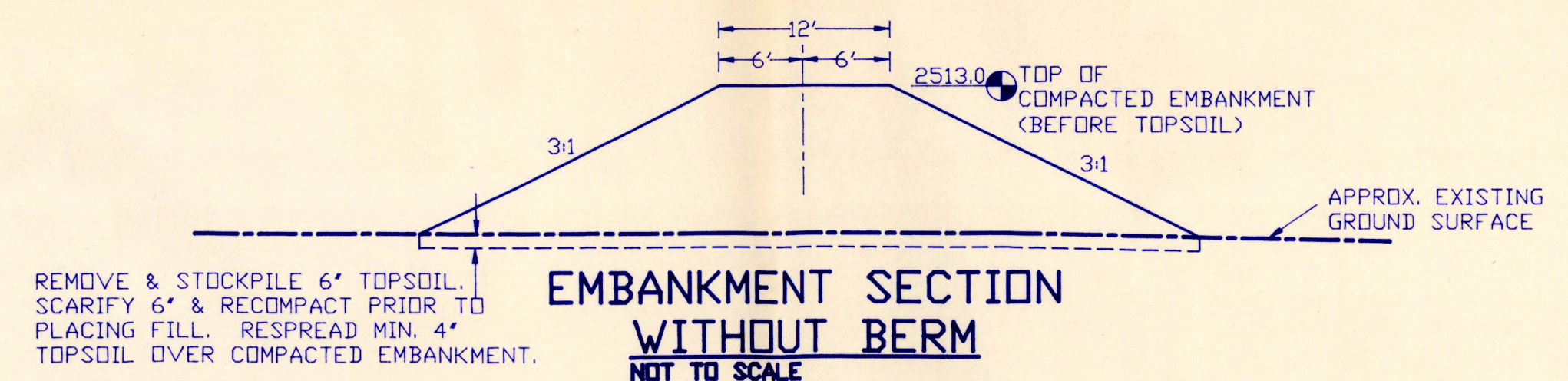
SPILLWAY C PROFILE
NOT TO SCALE



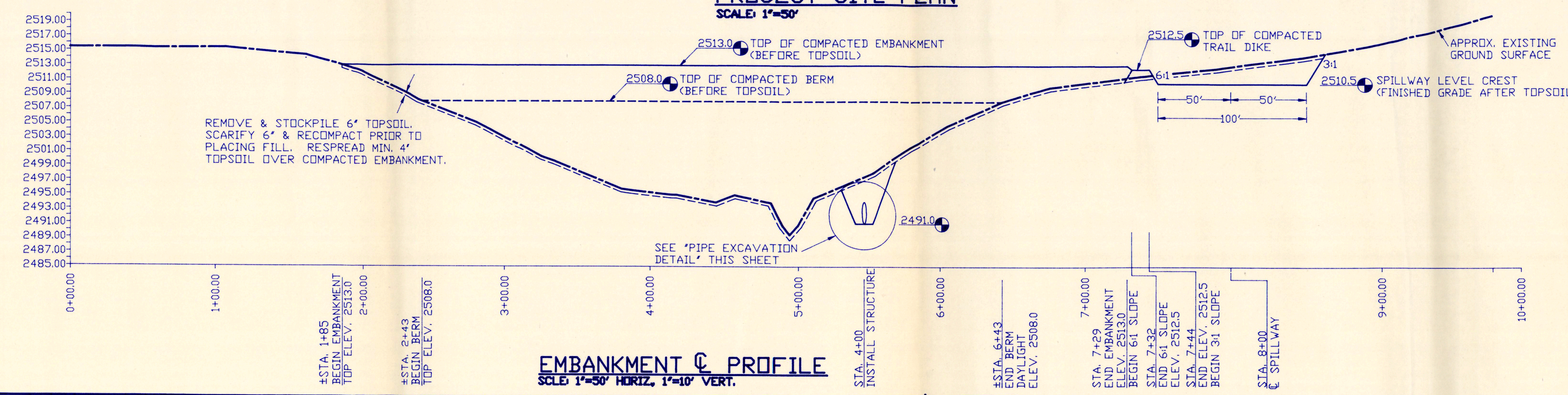
TRAIL DIKE SECTION
NOT TO SCALE



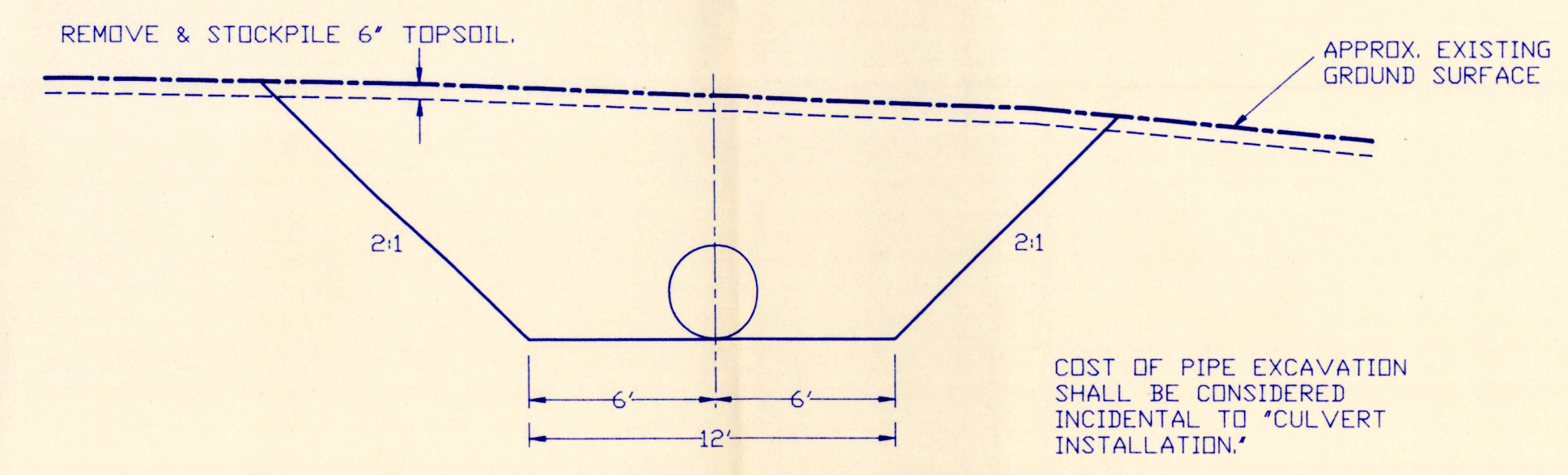
EMBANKMENT SECTION WITH BERM
NOT TO SCALE



EMBANKMENT SECTION WITHOUT BERM
NOT TO SCALE



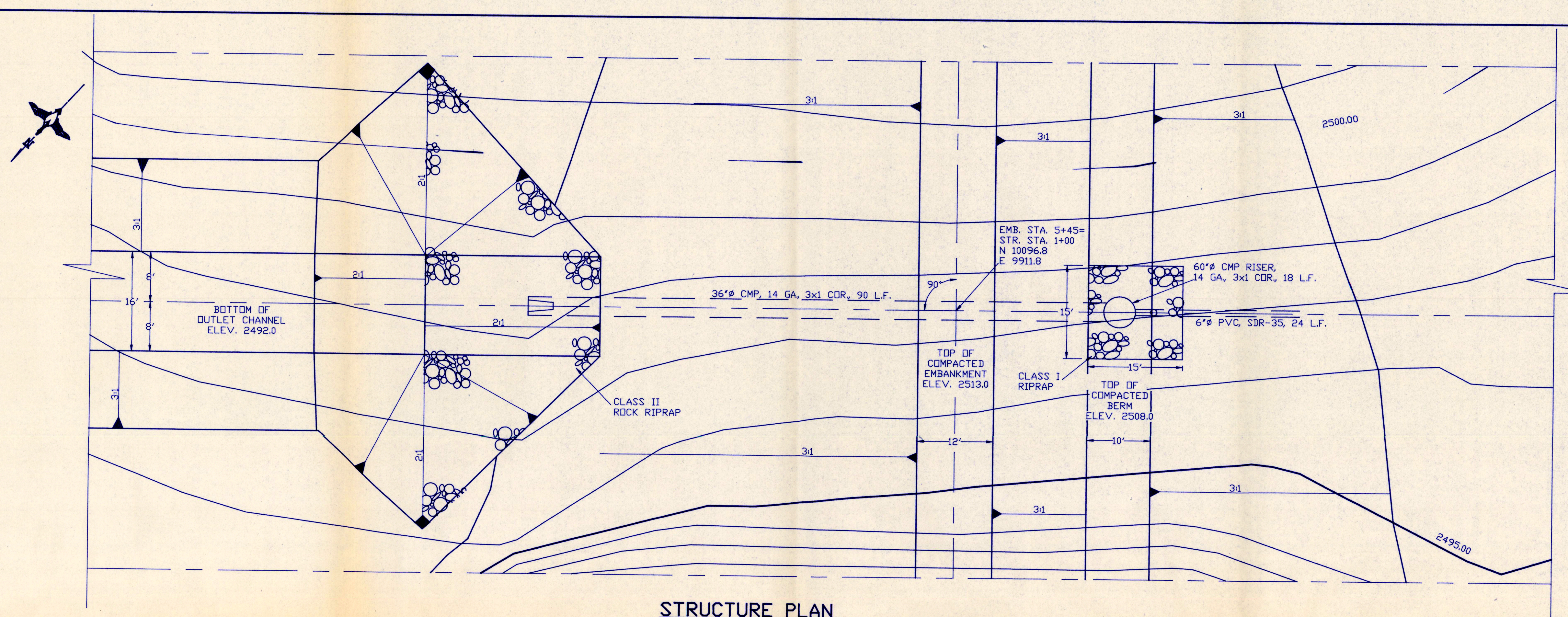
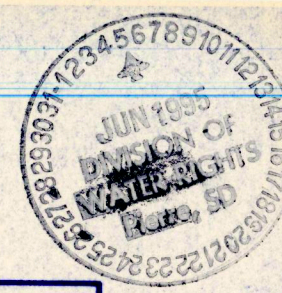
EMBANKMENT C PROFILE
SCALE: 1"=50' HORIZ, 1"=10' VERT.



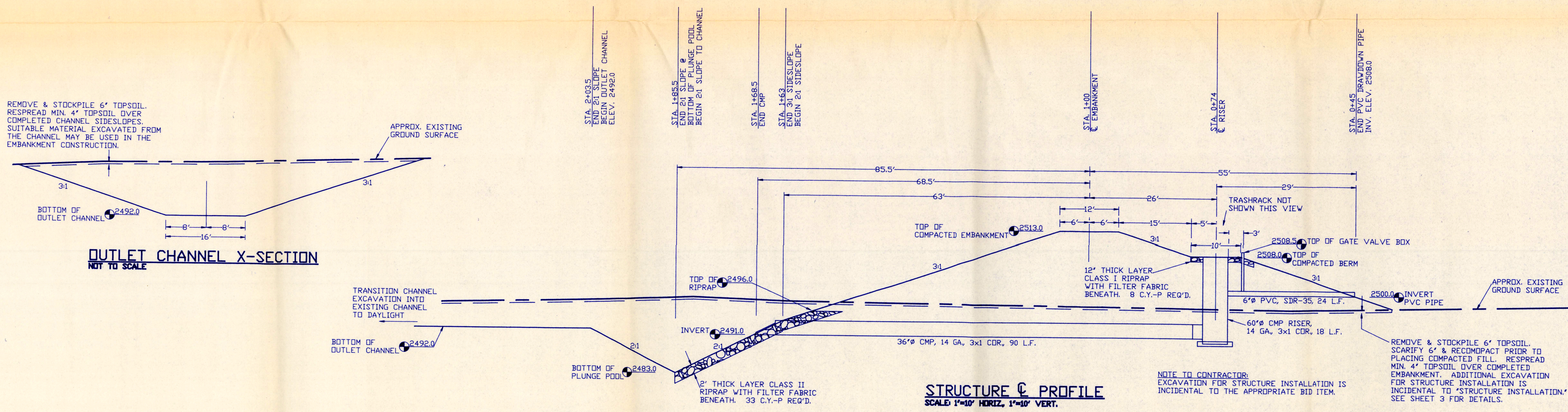
PIPE EXCAVATION DETAIL
NOT TO SCALE

 GREAT PLAINS REGIONAL OFFICE DATE: 5-12-95	PROJECT NO. SD-0175-001 TIMMONS WETLAND CREATION PROJECT SITE PLAN	DESIGNED BY: R.C.S. DRAWN BY: KB SURVEYED BY: CHECKED BY: B.R.K.
	SHEET NO. 3 OF 5 APPROVED BY:	APPROVED BY:

1621-1



STRUCTURE PLAN
SCALE: 1"=10'



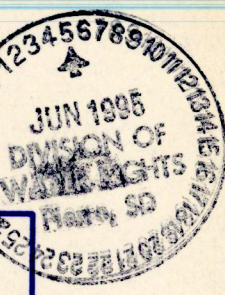
STRUCTURE C PROFILE
SCALE: 1"=10' HORIZ., 1"=10' VERT.

OUTLET CHANNEL X-SECTION
NOT TO SCALE

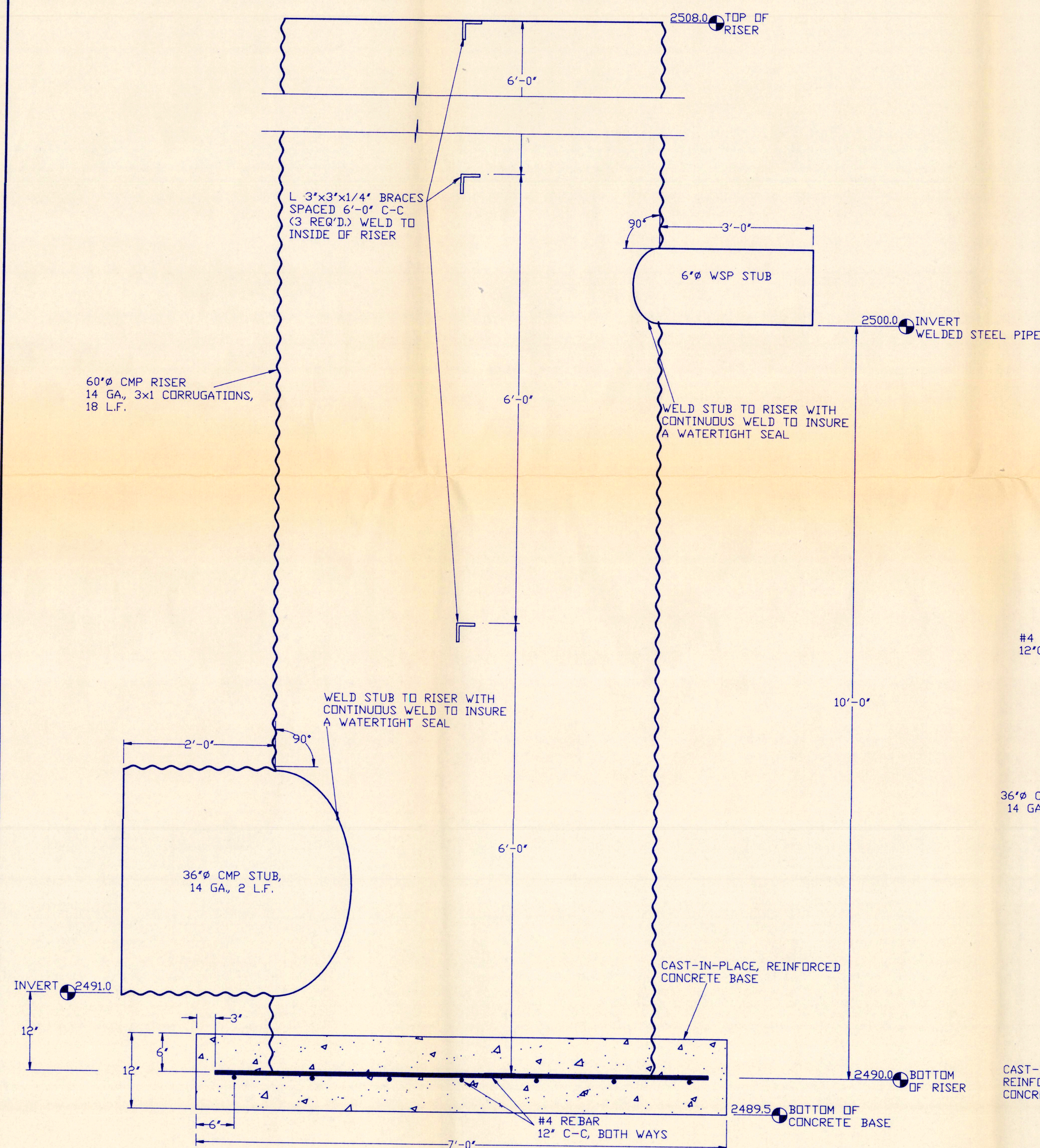
NOTE TO CONTRACTOR:
EXCAVATION FOR STRUCTURE INSTALLATION IS INCIDENTAL TO THE APPROPRIATE BID ITEM.

 GREAT PLAINS REGIONAL OFFICE DATE: 5-12-95	PROJECT NO. SD-0175-001 TIMMONS WETLAND CREATION STRUCTURE PLAN & PROFILE SHEET NO. 4 OF 5	DESIGNED BY: R.C.S. DRAWN BY: KB SURVEYED BY: CHECKED BY: B.R.K. APPROVED BY:

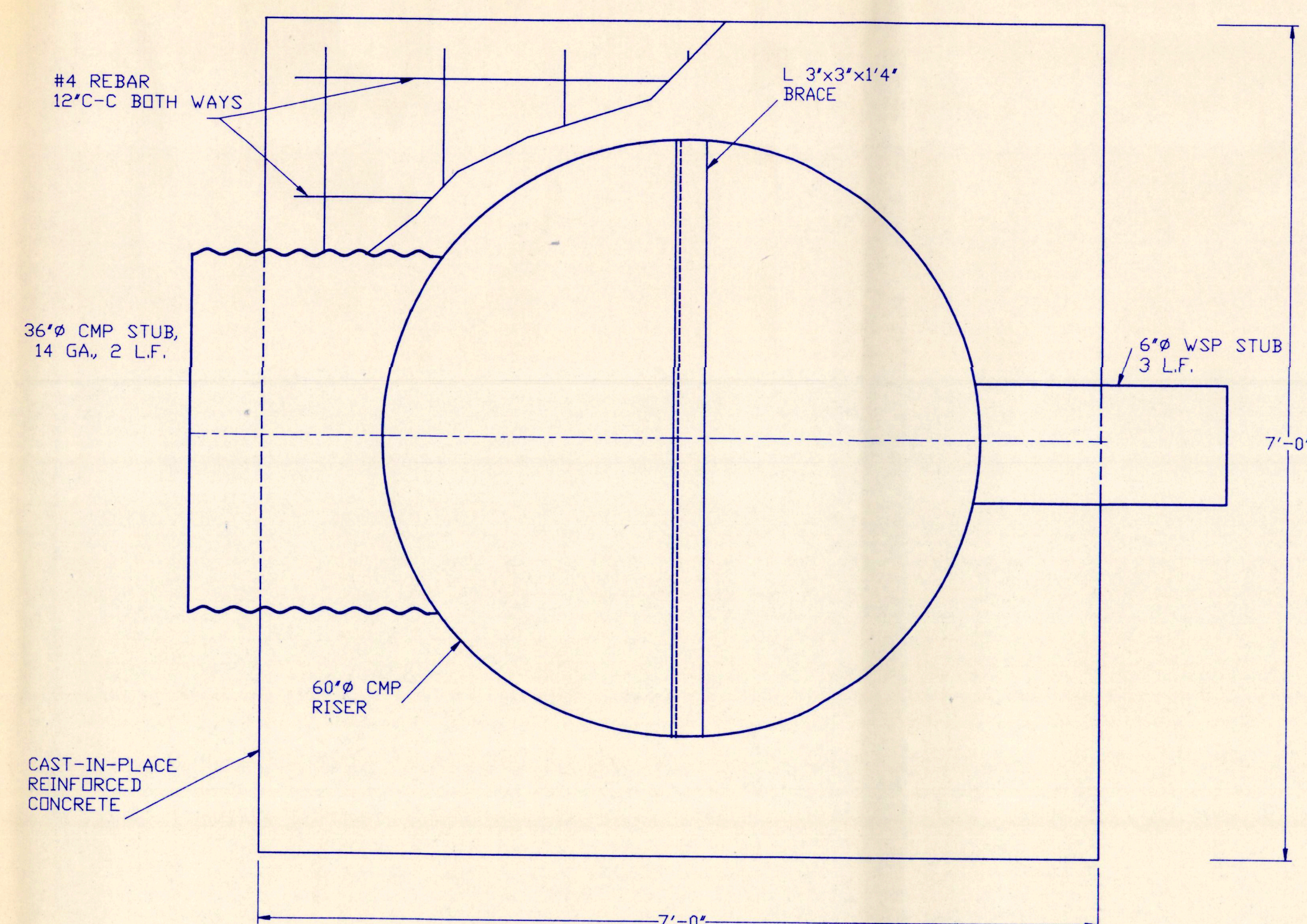
1621-1



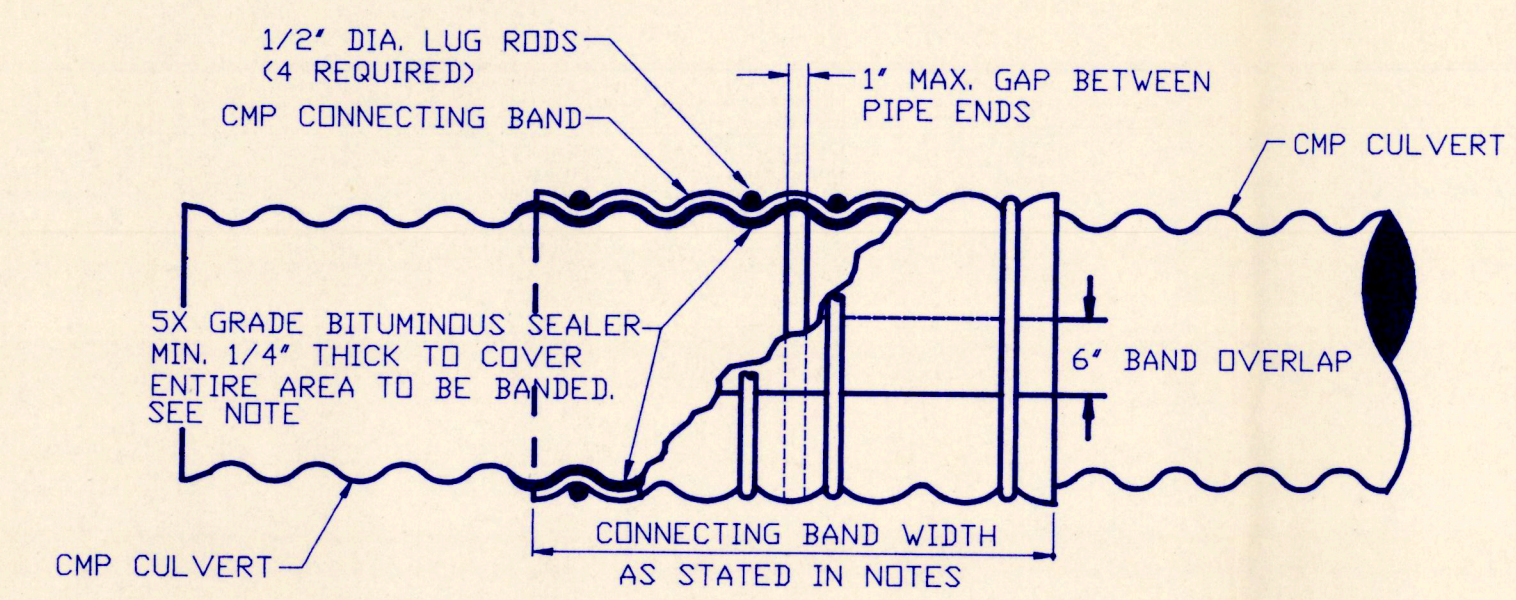
TRASHRACK NOT SHOWN ON THIS DETAIL.
SEE TRASHRACK DETAIL THIS SHEET.



RISER DETAIL
SCALE: 1"=1'-0"



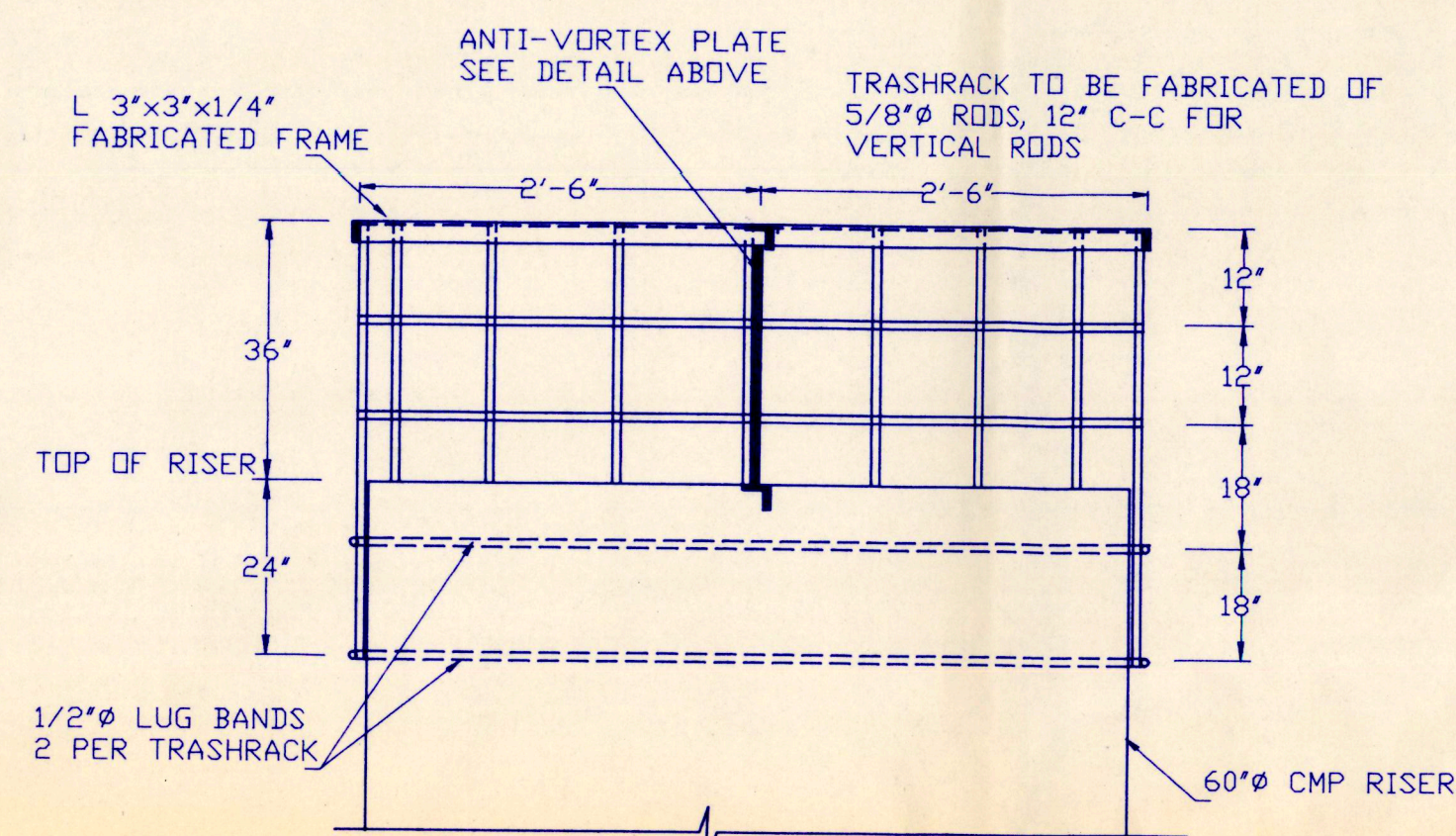
CONTROL STRUCTURE PLAN
NOT TO SCALE



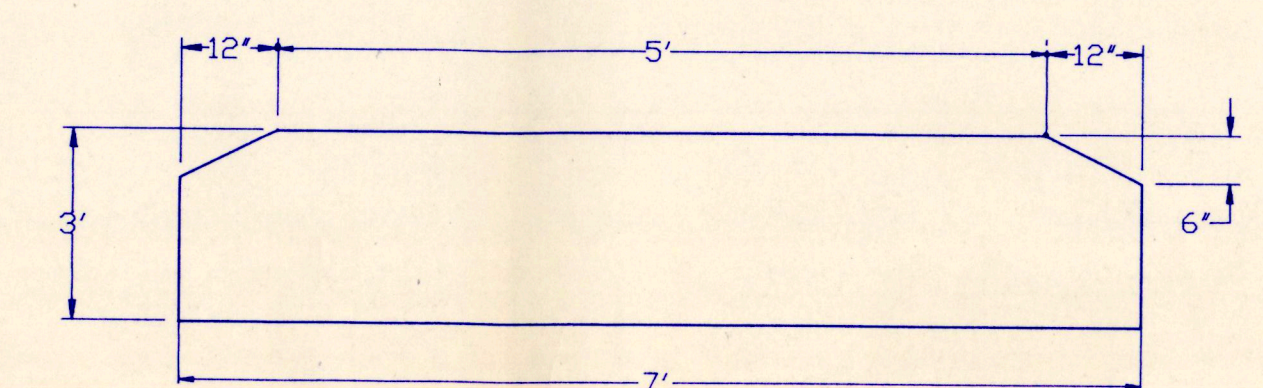
AFTER BANDS HAVE BEEN TIGHTENED, A COAT OF 5X SEALER SHALL BE APPLIED AROUND THE CULVERT AT THE ENDS OF THE CONNECTING BAND AND ALONG THE SEAM OF THE BAND OVERLAP.

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.

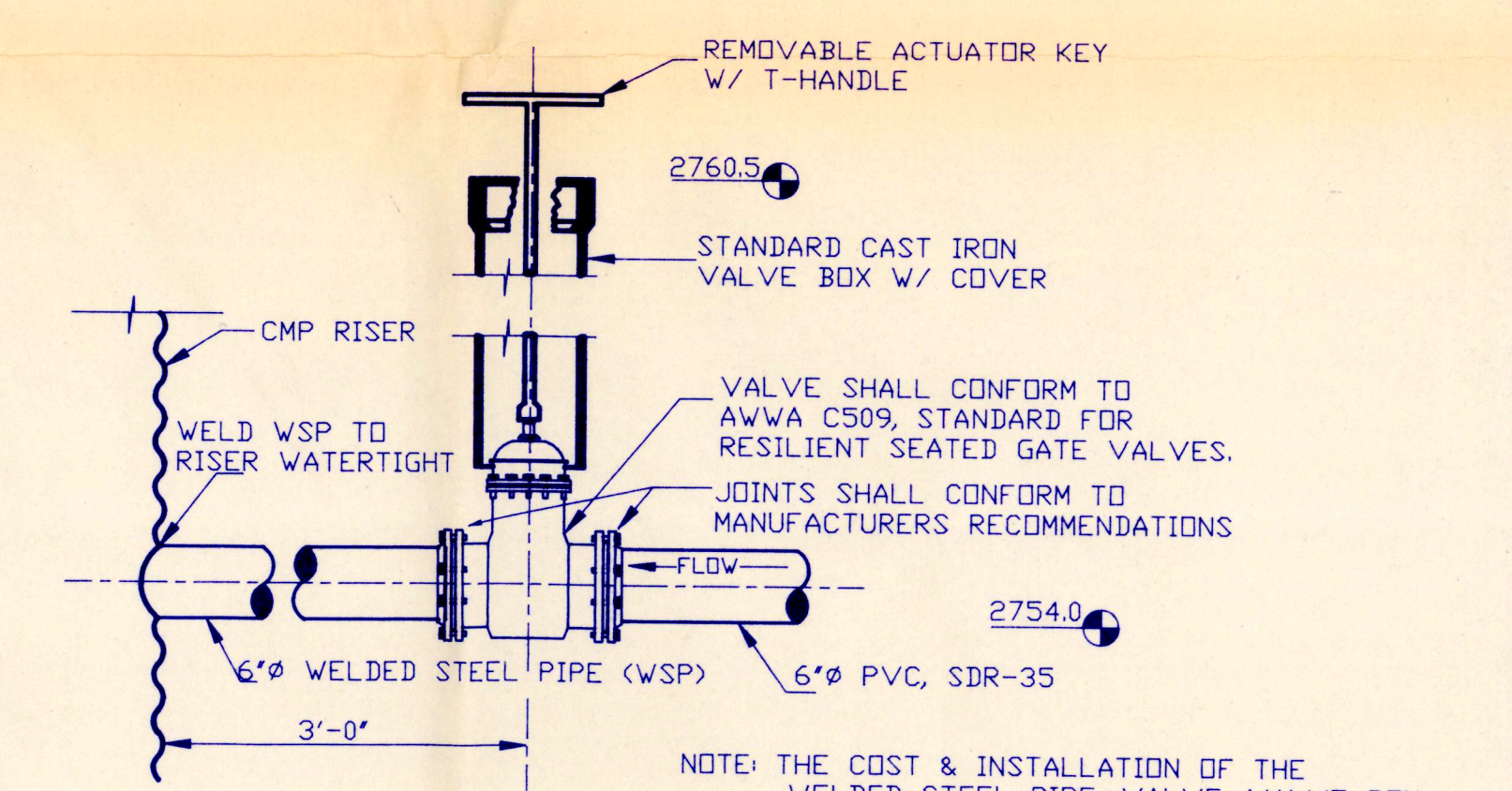
CONNECTING BAND DETAIL
NOT TO SCALE



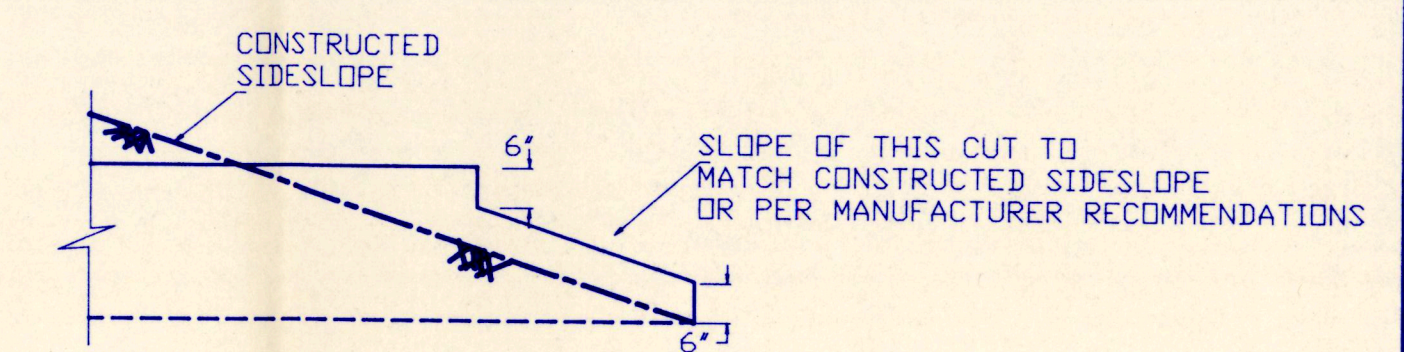
TRASHRACK DETAIL
NOT TO SCALE



ANTI-VORTEX PLATE DETAIL
NOT TO SCALE



DRAWDOWN VALVE DETAIL
NOT TO SCALE



STEP BEVEL DETAIL
NOT TO SCALE

GREAT PLAINS REGIONAL OFFICE	PROJECT NO. SD-0175-001	DESIGNED BY: R.C.S.
	TIMMONS WETLAND CREATION	DRAWN BY: B
DATE: 5-12-95	SHEET NO. 5 OF 5	CHECKED BY: B.R.K.
APPROVED BY:	APPROVED BY:	APPROVED BY: