

CERTIFICATE OF AUTHORITY
 This is to certify that the undersigned, being duly sworn, has examined the plans and specifications for the above-entitled project and has approved the same for the purpose of advertising for bids and for the execution of the same in accordance with the provisions of the laws of the State of Nebraska.

W. H. ...
 State Engineer

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STATE OF NEBRASKA
 DEPARTMENT OF ROADS
 PLANS FOR CONSTRUCTION
BIG SPRINGS - BRULE
DEUEL & KEITH COUNTIES

21 AUG 91

| | |
|-------------|-----------|
| PROJECT NO. | SHEET NO. |
| 18-80-3(89) | 1 |
| CONTROL NO. | |
| CONTROL NO. | |

THIS PROJECT LET AS
 EACR-80-3(89)

THE NEBRASKA 1985 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION, AND THE SPECIAL PROVISIONS APPLY TO THIS PROJECT.

THE WORK ON THIS PROJECT CONSISTS OF GROUPS

7-4WARD RAIL & 9-BITUMINOUS

L GROUPS 7 & 9 ARE INCLUDED IN THE LETTING OF JANUARY 11, 1991

A GROUPS ARE INCLUDED IN THE LETTING OF

B GROUPS ARE INCLUDED IN THE LETTING OF

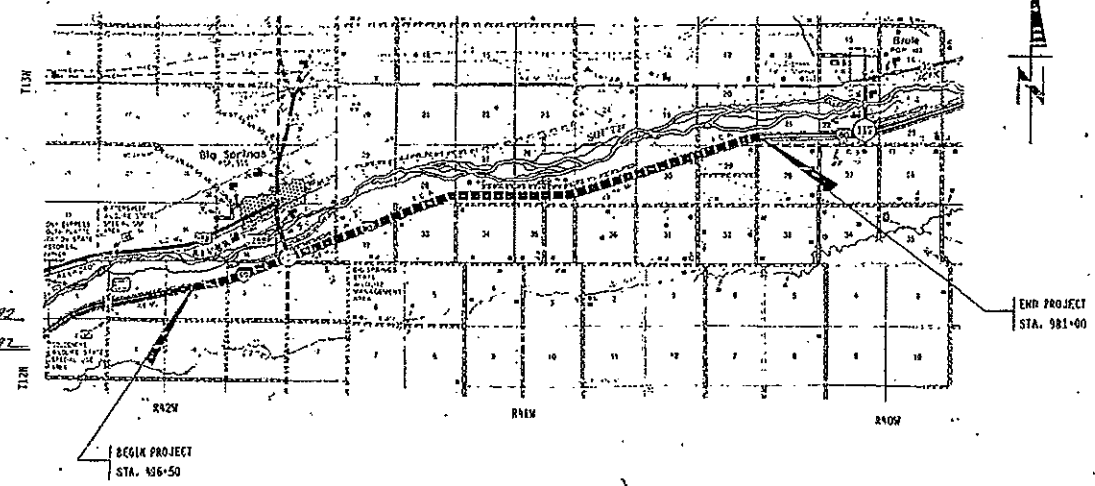
DESIGN DESIGNATION
 IN RURAL
 TRAFFIC

YEAR: 1989 - 2001
 ADI: 8,950 32,000
 DWI: 1,255 1,775
 T-31 2' D-1
 LEVEL OF IMPROVEMENT

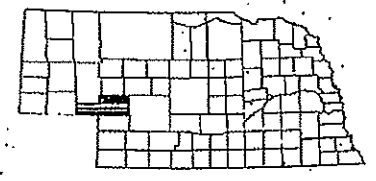
- STD. PLAN NO. 808 PRECAST CONCRETE R.O.W. MARKER
 901-R7 HIGHWAY DELINEATORS
 920-R3 TRAFFIC CONTROL
 922-R1 TRAFFIC CONTROL DEVICES

AS BUILT PLANS

Guard Rail work performed by *Omni Engineering Inc.*
 Bituminous work performed by *Omni Engineering Inc.*
 Prepared by *Omni Eng. Inc.* Title: EA Date: 4-21-92
 Approved by *W. H. ...* Title: HPM Date: 4-21-92



WORK ON THIS PROJECT IS AUTHORIZED PURSUANT TO THE PERMIT TO CONSTRUCT IN THE COUNTY OF DEUEL FOR PERMIT NO. 18-255-001-2-1991



CONVENTIONAL SIGNS

FENCE LINE
 GUARD RAIL
 TRAVELED WAY
 DIRT
 CULVERTS
 RAILROAD RIGHT OF WAY
 POWER POLE
 TELEPHONE OR TELEGRAPH POLE
 MARSH
 HEDGE
 TREES

ROW LEGEND

LIMITS OF CONSTRUCTION
 PREVIOUS ROW
 NEW ROW
 PERMANENT CHANNEL EASEMENT
 PERMANENT FILL EMBANKMENT
 TEMPORARY EASEMENT
 EXCESS TAKING
 PERMANENT EASEMENT EXCEPT CHANNEL
 EXISTING RAILROAD EASEMENT
 NEW RAILROAD PERMANENT EASEMENT
 NEW RAILROAD TEMPORARY EASEMENT



REFERENCE POST NO. 105+36 TO REFERENCE POST NO. 115+93

EXCEPTIONS: FROM STA. TO STA.

TOTAL LENGTH OF EXCEPTIONS FEET

TOTAL NET LENGTH OF PROJECT 48,450.00 FEET 9.176 MILES



APPROVED 6-6 19 90

Wayne E. ...
 DEPUTY DIRECTOR - ENGINEERING



W. H. ...
 DIRECTOR - STATE ENGINEER

U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION

APPROVED

For DIVISION ADMINISTRATOR DATE

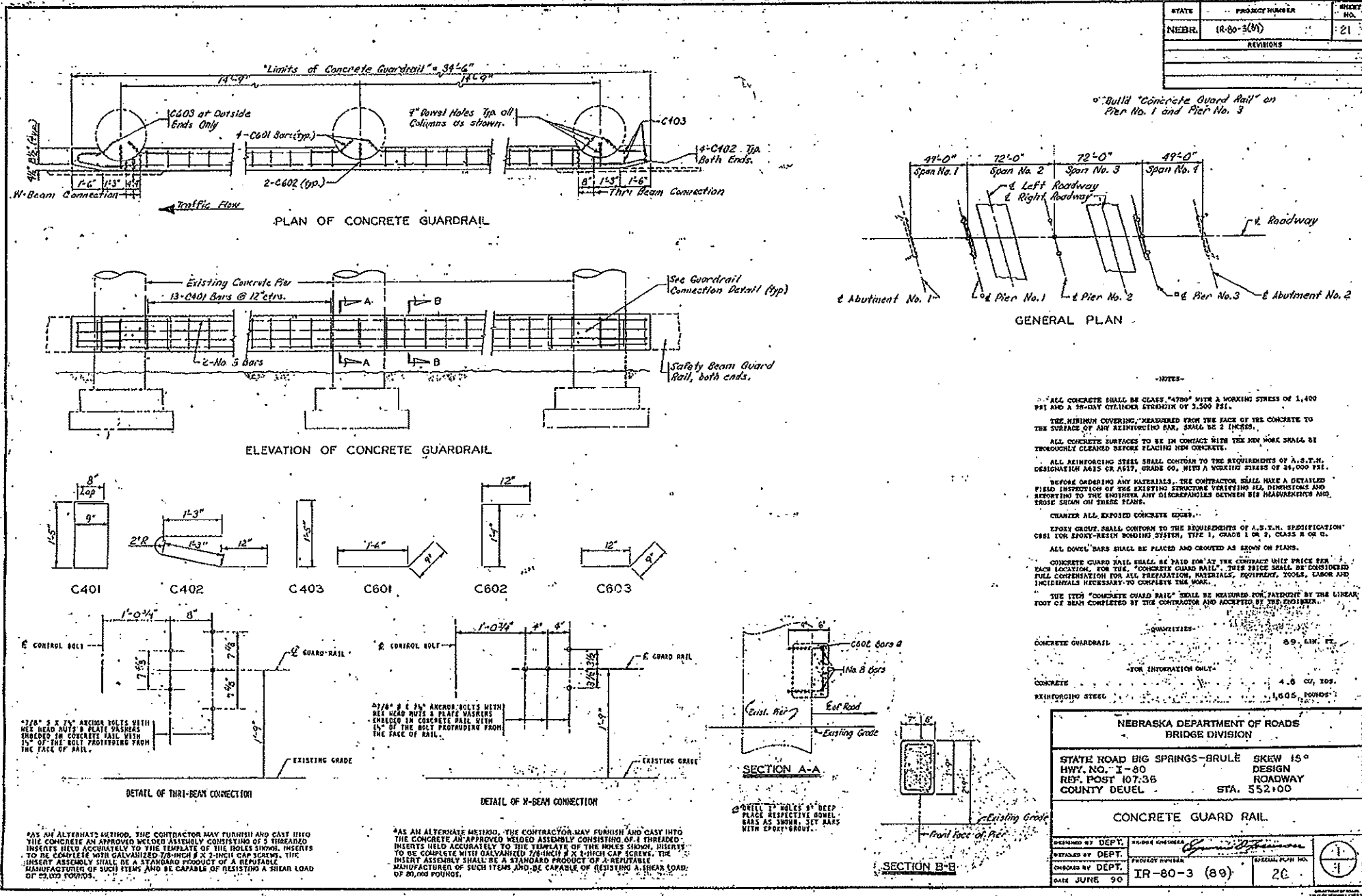
CERTIFICATE OF AUTHENTICITY

This is to certify that the microphotographs appearing on this set are true and accurate reproductions of the original records preserved in the regular course of business.

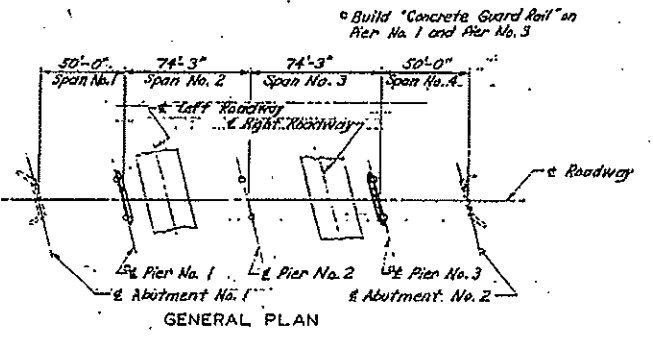
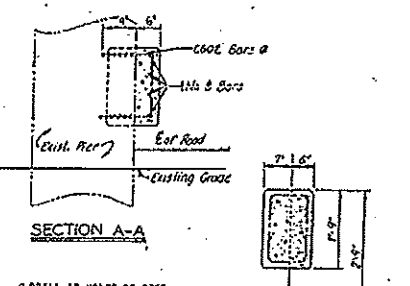
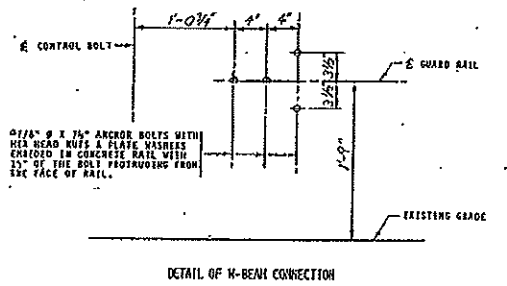
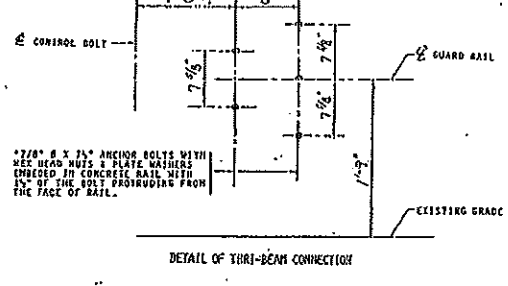
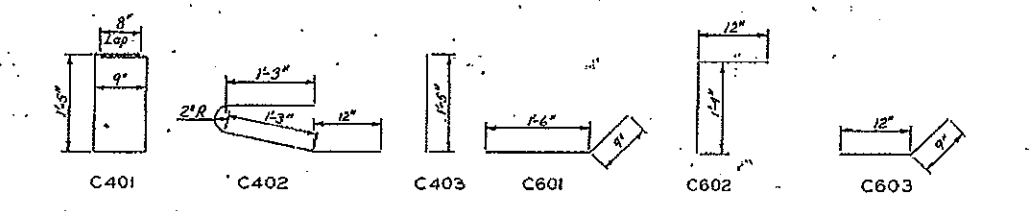
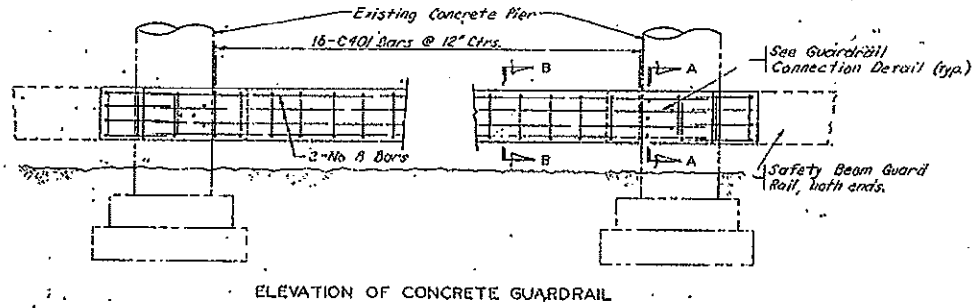
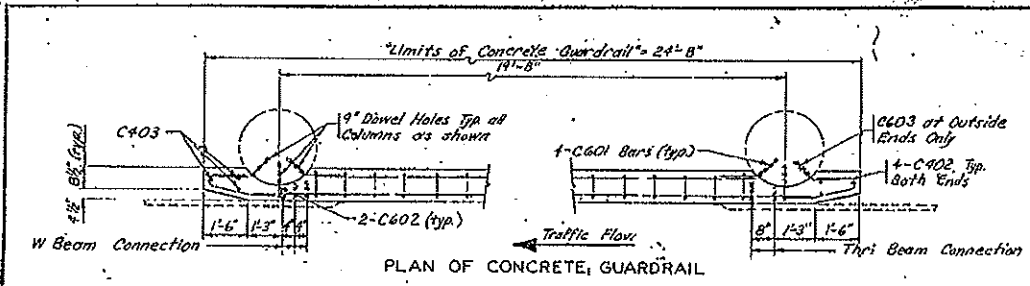
It is further certified that records on this set are maintained in conformity with the Rules and Regulations of the State Records Administrator and the Division of State Records, and that the microphotography process accurately reproduces the original and that the records are available for reproducing the original.

[Signature]
 June 20, 1980

| | | |
|-----------|----------------|-----------|
| STATE | PROJECT NUMBER | SHEET NO. |
| NEBR. | IR-80-3(M) | 21 |
| REVISIONS | | |



CERTIFICATE OF AUTHENTICITY
 This is to certify that the drawings appearing on this set are the true and accurate reproduction of the original drawings produced by the office of the Engineer.
 It is further certified that the work on this set is in accordance with the plans and specifications of the State Road Commission and the Division of the State Engineer, and that the manufacturer of the material used in the construction of the work is a duly licensed manufacturer and that the work is in accordance with the plans and specifications of the State Road Commission and the Division of the State Engineer.
 B. J. ...
 State Engineer



NOTES

ALL CONCRETE SHALL BE CLASS "HIGH" WITH A WORKING STRESS OF 1,400 PSI AND A 28-DAY CYLINDER STRENGTH OF 3,500 PSI.

THE MINIMUM COVERING, MEASURED FROM THE FACE OF THE CONCRETE TO THE SURFACE OF ANY REINFORCING BAR, SHALL BE 2 INCHES.

ALL CONCRETE SURFACES TO BE IN CONTACT WITH THE NEW WORK SHALL BE THOROUGHLY CLEANED BEFORE PLACING NEW CONCRETE.

ALL REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. DESIGNATION A617, GRADE 60, WITH A WORKING STRESS OF 24,000 PSI.

BEFORE ORDERING ANY MATERIALS, THE CONTRACTOR SHALL MAKE A RETAINED FIELD INSPECTION OF THE EXISTING STRUCTURE VERIFYING ALL DIMENSIONS AND REPORTING TO THE ENGINEER ANY DISCREPANCIES BETWEEN HIS MEASUREMENTS AND THOSE SHOWN ON THESE PLANS.

CHAMFER ALL EXPOSED CONCRETE EDGES.

SPRY GROUT SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. SPECIFICATION C881 FOR EPOXY-BASED BONDING SYSTEM, TYPE I, GRADE 1 OR 2; CLASS B OR C.

ALL DOWEL BARS SHALL BE PLACED AND GRouted AS SHOWN ON PLANS.

CONCRETE GUARD RAIL SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH LOCATION, FOR THE "CONCRETE GUARD RAIL". THIS PRICE SHALL BE CONSIDERED FULL COMPENSATION FOR ALL PREPARATION, MATERIALS, EQUIPMENT, TOOLS, LABOR AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

THE ITEM "CONCRETE GUARD RAIL" SHALL BE MEASURED FOR PAYMENT BY THE LINEAR FOOT OF BEAM COMPLETED BY THE CONTRACTOR AND ACCEPTED BY THE ENGINEER.

| | |
|--------------------|---------------|
| CONCRETE GUARDRAIL | 49.3 LIN. FT. |
| CONCRETE | 3.3 CU. YDS. |
| REINFORCING STEEL | 1,125 POUNDS |

NEBRASKA DEPARTMENT OF ROADS
 BRIDGE DIVISION

STATE ROAD BIG SPRINGS-BRULE SKEW 20° 47'
 HWY. NO. 1-80 DESIGN
 REF. POST 109.32 ROADWAY
 COUNTY KEITH STA. 653+36

CONCRETE GUARD RAIL

DESIGNED BY DEPT. BRIDGE ENGINEER
 CHECKED BY DEPT. PROJECT NUMBER IR-80-3 (89) SPECIAL PLAN NO. 3C
 DATE JUNE 90

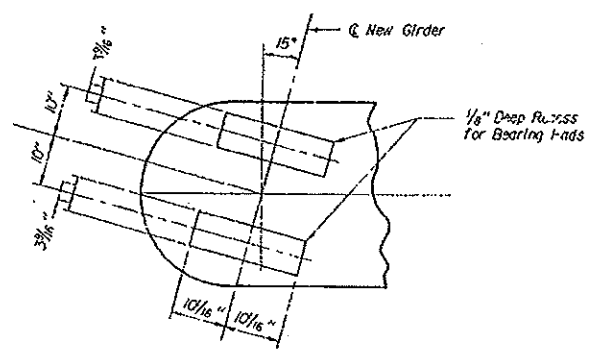
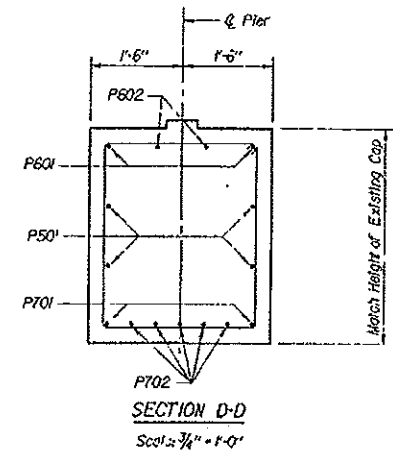
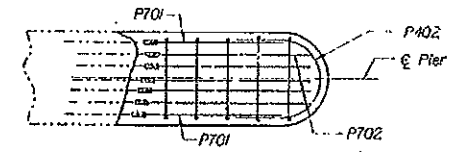
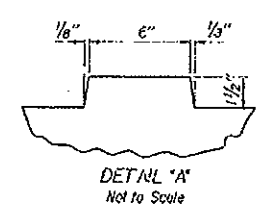
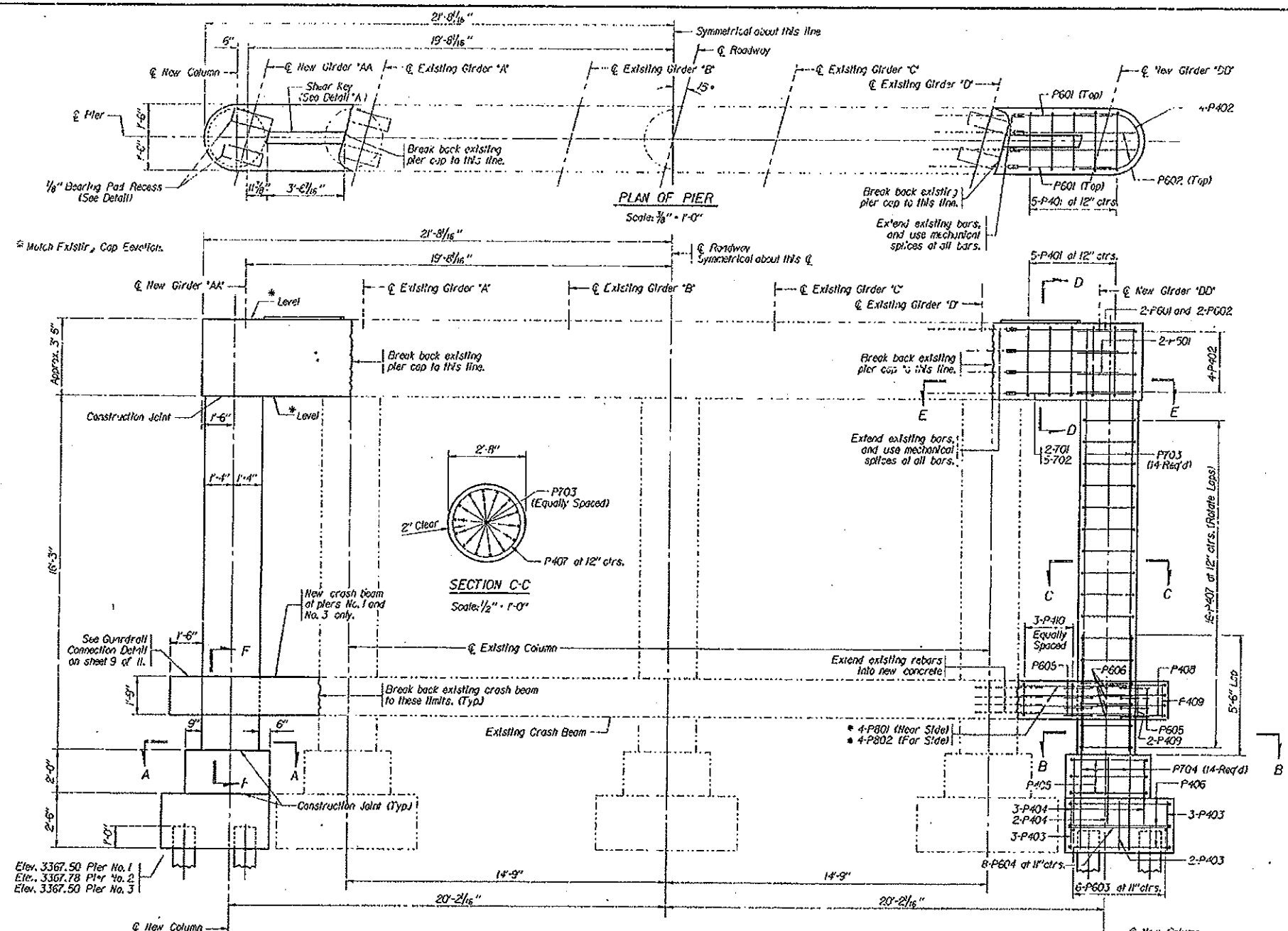
06.05.20

Sep. 20, 1993

BRG13 L25B102R.DWG

Sheet B

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|-----------|----------------|-----------|
| STATE | PROJECT NUMBER | SHEET NO. |
| NEBR. | L25B(102) | 3 |
| REVISIONS | | |
| | | |
| | | |



SECTION E-E

NOTES

- Mechanical splices shall develop a minimum of 125% of reinforcing bar yield strength, and shall be installed in accordance with the manufacturer's recommendations.
- Mechanical splices shall not be paid for directly, but shall be considered subsidiary to other items for which payment is made.
- Apply epoxy compound to existing concrete before pouring new concrete.

NEBRASKA DEPARTMENT OF ROADS
BRIDGE DIVISION

STATE ROAD BIG SPRINGS INTERCHANGE SKEW 15'
HWY. NO. 1-80 DESIGN HS25
REF. POST 107.36 ROADWAY 10'-0"
COUNTY DEUEL STA. 15+00

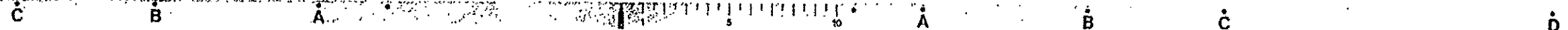
2-49'-0" AND 2-72'-0" SPANS PRESTRESSED
CONCRETE GIRDER BRIDGE
WIDENING AND REHABILITATION

DESIGNED BY FS
CHECKED BY MRM
DATE SEPT. 1993

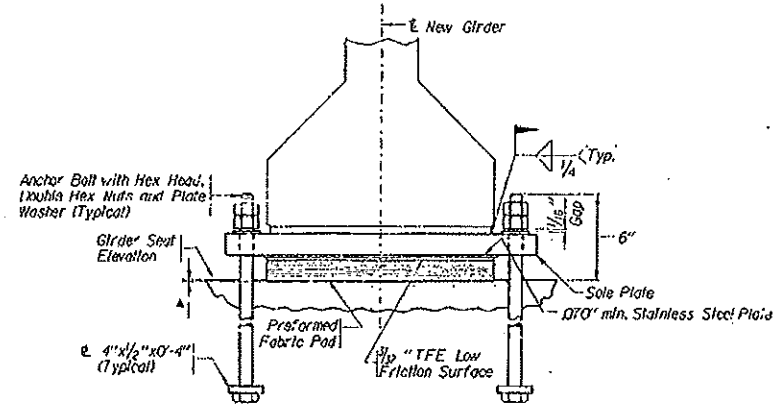
SPECIAL ENGINEER
PROJECT NUMBER
L25B (102)

SPECIAL PAY NO.
1

4
11

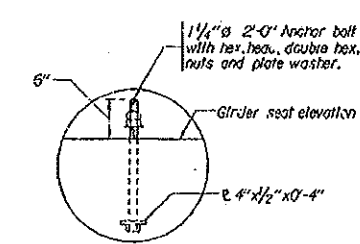


| | | |
|-----------|----------------|-----------|
| STATE | PROJECT NUMBER | SHEET NO. |
| NEBR. | 25B(102) | 21 |
| REVISIONS | | |



SECTION AT EXPANSION BEARING (TFE TYPE)
Not to Scale

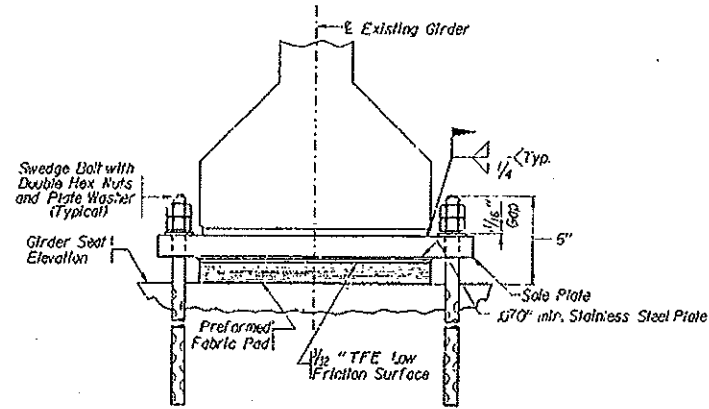
▲ Embed Preformed Fabric Pad 1/8" into Girder Seal.



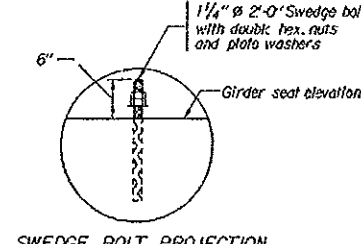
ANCHOR BOLT PROJECTION
Not to Scale
(at New Girders)

BEARING DETAILS AT NEW GIRDERS

(AT ABUTMENTS)



SECTION AT EXPANSION BEARING (TFE TYPE)
Not to Scale



SWEDGE BOLT PROJECTION
Not to Scale
(at Existing Girders)

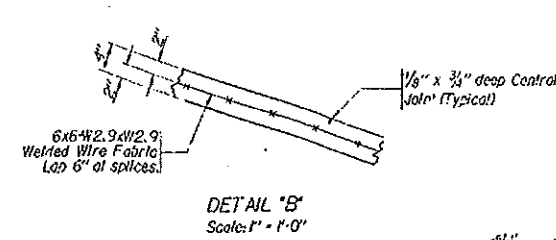
BEARING DETAILS AT EXISTING GIRDERS

(AT ABUTMENTS)

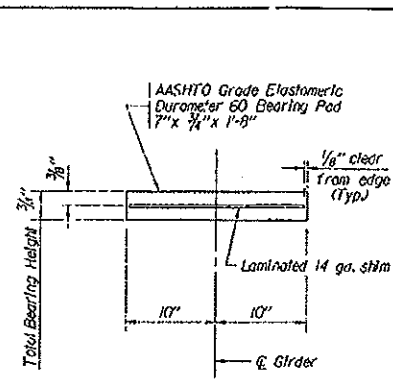
Sequence of removal and installation of bearing devices

1. Raise existing girders 1/4" maximum.
2. Torch cut existing rocker plates along @ slots and slip rocker plates out.
3. Torch cut existing anchor bolts at top of bearing plates.
4. Remove existing bearing plates.
5. Drill 1 1/2" dia x 7'-6" holes at location shown for swedge bolts.
6. Place new bearing device, fill holes with epoxy compound and place swedge bolt.

Note: Fabric pad has to sit on a smooth level surface. Smooth out rough concrete.

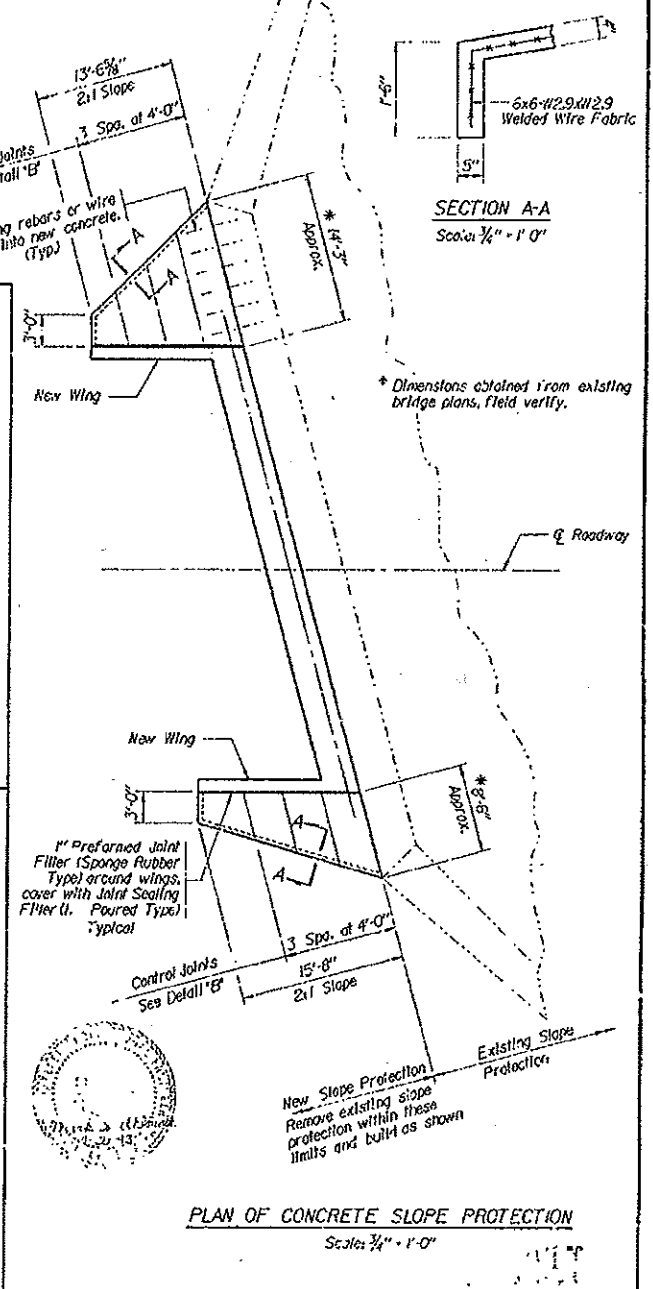


DETAIL 'B'
Scale: 1" = 1'-0"



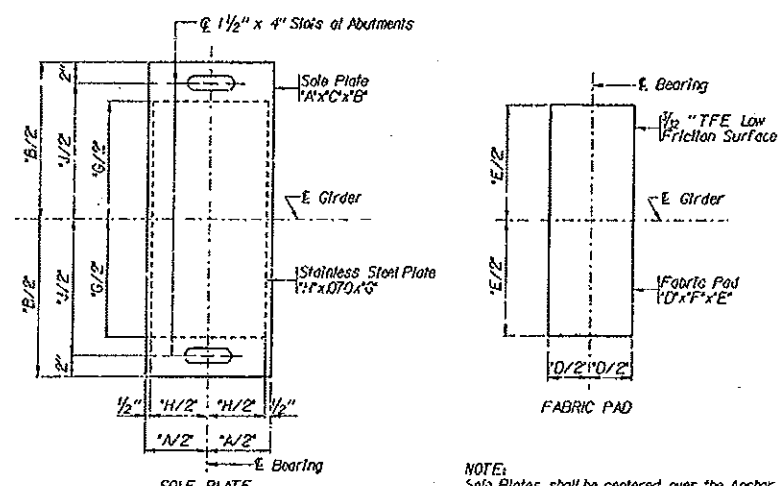
BEARING DETAILS AT NEW GIRDERS

(AT PIERS)



PLAN OF CONCRETE SLOPE PROTECTION

Scale: 1/4" = 1'-0"

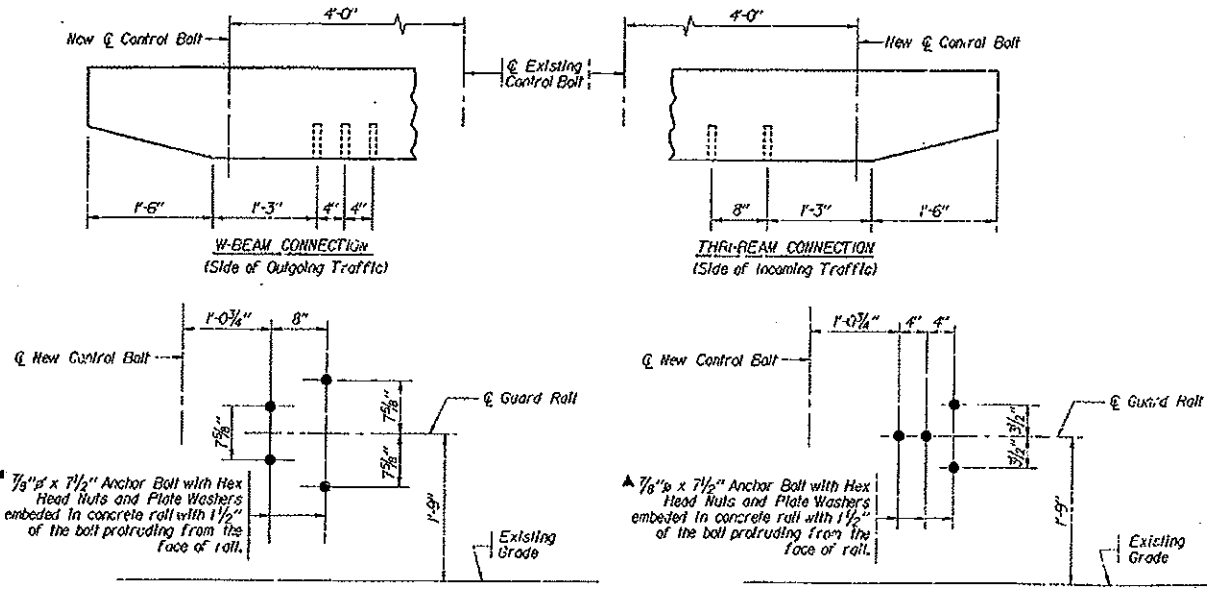


EXPANSION BEARING DETAILS (TFE TYPE)
Not to Scale

NOTE:
Sole Plates shall be centered over the Anchor Bolts at 50°F.
For every 1° increase in temperature the Sole Plate shall be moved 1/8" upwards.
For every 1° decrease in temperature the Sole Plate shall be moved 1/8" downwards.
1" = 14°F at Abutments

| DIMENSIONS FOR BEARING DEVICES | | | | | | | |
|--------------------------------|----|-------|--------|----|-------|--------|--------|
| LOCATION | A | B | C | D | E | F | G |
| Abutments No. 1 and 2 | 9" | 3'-0" | 1 1/4" | 8" | 1'-0" | 1 1/4" | 1'-11" |
| | | | | | | 8" | 2'-8" |

AT ALL GIRDERS AT ABUTMENTS



DETAIL OF THRI-BEAM CONNECTION

DETAIL OF W-BEAM CONNECTION

▲ As an alternate method, the Contractor may furnish and cast into the concrete an approved welded assembly consisting of 5 threaded inserts held accurately to the template of the holes shown. Inserts to be complete with galvanized 1/8" dia x 0'-2" cap screws. The insert assembly shall be a standard product of a reputable manufacturer of such items and be capable of resisting a shear load of 80,000 pounds.

▲ As an alternate method, the Contractor may furnish and cast into the concrete an approved welded assembly consisting of 4 threaded inserts held accurately to the template of the holes shown. Inserts to be complete with galvanized 1/8" dia x 0'-2" cap screws. The insert assembly shall be a standard product of a reputable manufacturer of such items and be capable of resisting a shear load of 80,000 pounds.

GUARD RAIL CONNECTION DETAILS

NEBRASKA DEPARTMENT OF ROADS
BRIDGE DIVISION

STATE ROAD BIG SPRINGS INTERCHANGE SKEW 15'
HWY. NO. 1-80 DESIGN HS25
REF. POST 107.36 ROADWAY 40'-0"
COUNTY DEUEL STA. 15+00

2-49'-0" AND 2-72'-0" SPANS PRESTRESSED
CONCRETE GIRDER BRIDGE
WIDENING AND REHABILITATION

| | | |
|-----------------|------------------|---------|
| DESIGNED BY FS | BRIDGE ENGINEER | 9 11 |
| DRAWN BY RDS | PROJECT NUMBER | |
| CHECKED BY NRM | SPECIAL PLAN NO. | |
| DATE SEPT. 1993 | L25B (102) 1 | |

Sheet C
 BRG13 L25B102R.DGN
 Sep. 20, 1993
 08:12:36