

Date Jan 18 1985

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Blow & Cote Inc.

Contractor

Signature

Title

Transportation Secretary's Signature

## STATE OF VERMONT AGENCY OF TRANSPORTATION



### PROPOSED IMPROVEMENT BRIDGE PROJECT

TOWN OF HARTFORD  
COUNTY OF WINDSOR

ROUTE NO. 191 BRIDGE NO. 44NCS

PROJECT LOCATION: BEGINNING AT A POINT APPROXIMATELY 0.60 MILES  
NORTH OF THE WHITE RIVER, U.S. RT. 4, INTERCHANGE AND  
EXTENDING NORTHERLY 0.23 MILES.

PROJECT DESCRIPTION: REHABILITATION OF THE EXISTING BRIDGES.  
SEE GENERAL NOTE #1 ON S.D. 2.

LENGTH OF STRUCTURE: 1178' NB + 1178' SB = 2,376. FEET  
LENGTH OF PARTICIPATION ROADWAY: FEET  
LENGTH OF NON-PARTICIPATION ROADWAY: FEET  
LENGTH OF PROJECT: 2,376. FEET

#### REFERENCE STANDARDS

|                 |                                     |            |
|-----------------|-------------------------------------|------------|
| STD. DWG. E-2   | ROAD CONSTRUCTION APPROACH SIGNS    | 3/4/81 R   |
| STD. DWG. E-6   | ON-PROJECT CONSTRUCTION SIGNS       | 4/1/80 R   |
| STD. DWG. E-7   | DELINERATION, BARRICADES AND        |            |
| STD. DWG. E-7A  | DETOURS FOR CONSTRUCTION AREAS      | 2/2/83     |
| STD. DWG. E-8   | BREAKAWAY BARRICADE DETAILS         | 1/8/82 R   |
| STD. DWG. E-15A | TYPICAL MAJOR MAINTENANCE OPERATION | 6/15/83 R  |
| STD. DWG. E-15B | REGULATORY SIGNS                    | 7/15/84    |
| STD. DWG. E-15C | REGULATORY SIGNS                    | 7/15/84    |
| STD. DWG. E-15D | REGULATORY SIGNS                    | 7/15/84    |
| STD. DWG. E-15E | WARNING SIGNS                       | 7/15/84    |
| STD. DWG. E-15F | ALPHA BRIDGE RAILING DETAILS        | 7/15/84    |
| STD. DWG. E-15G | DETAILS OF W-BEAM BRIDGES           | 1/8/76     |
| STD. DWG. E-15H | DETAILS OF W-BEAM BRIDGES           | 1/3/79 R   |
| STD. DWG. E-15I | DETAILS OF W-BEAM BRIDGES           | 12/15/76 R |

#### TRAFFIC DATA

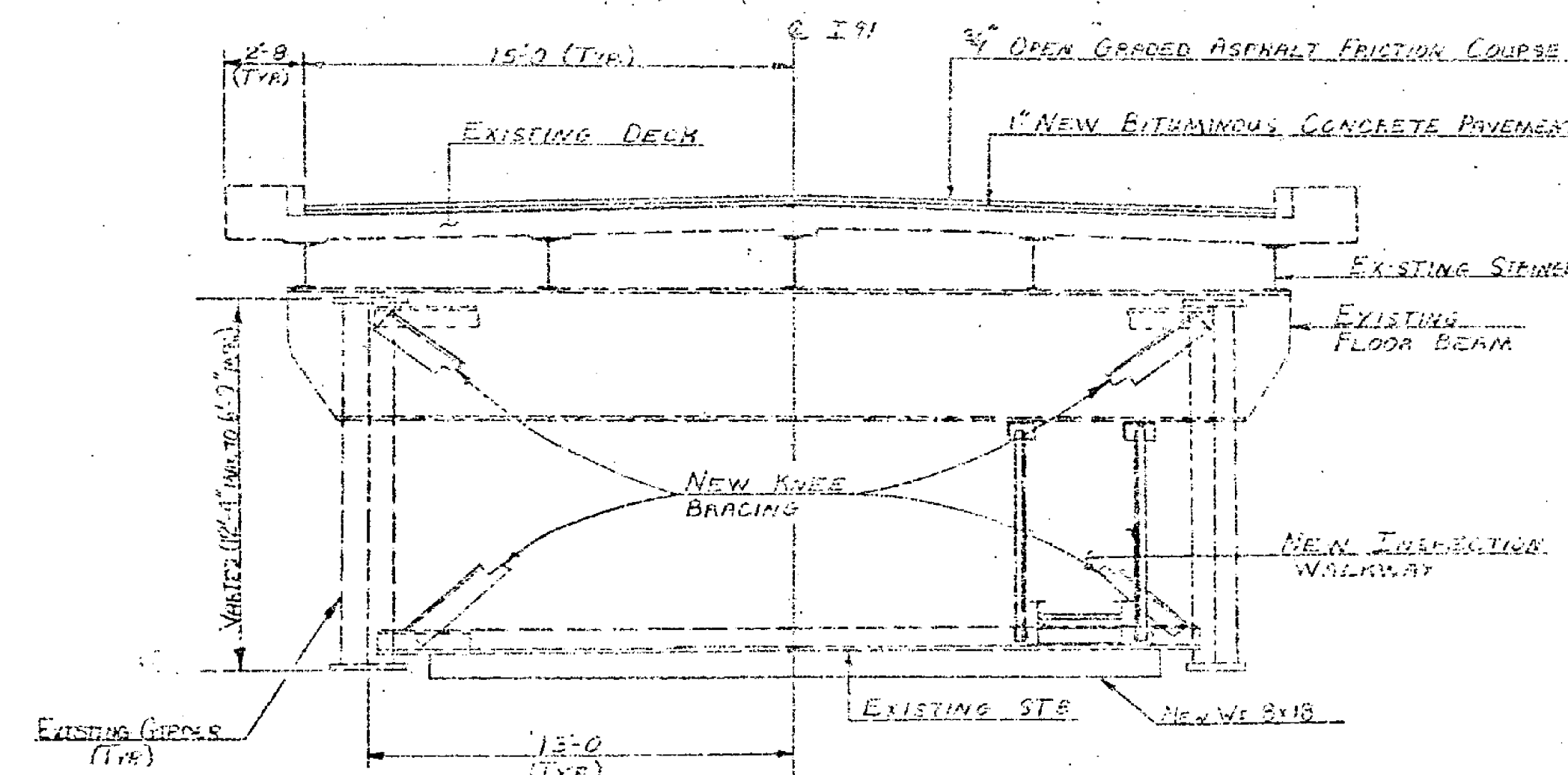
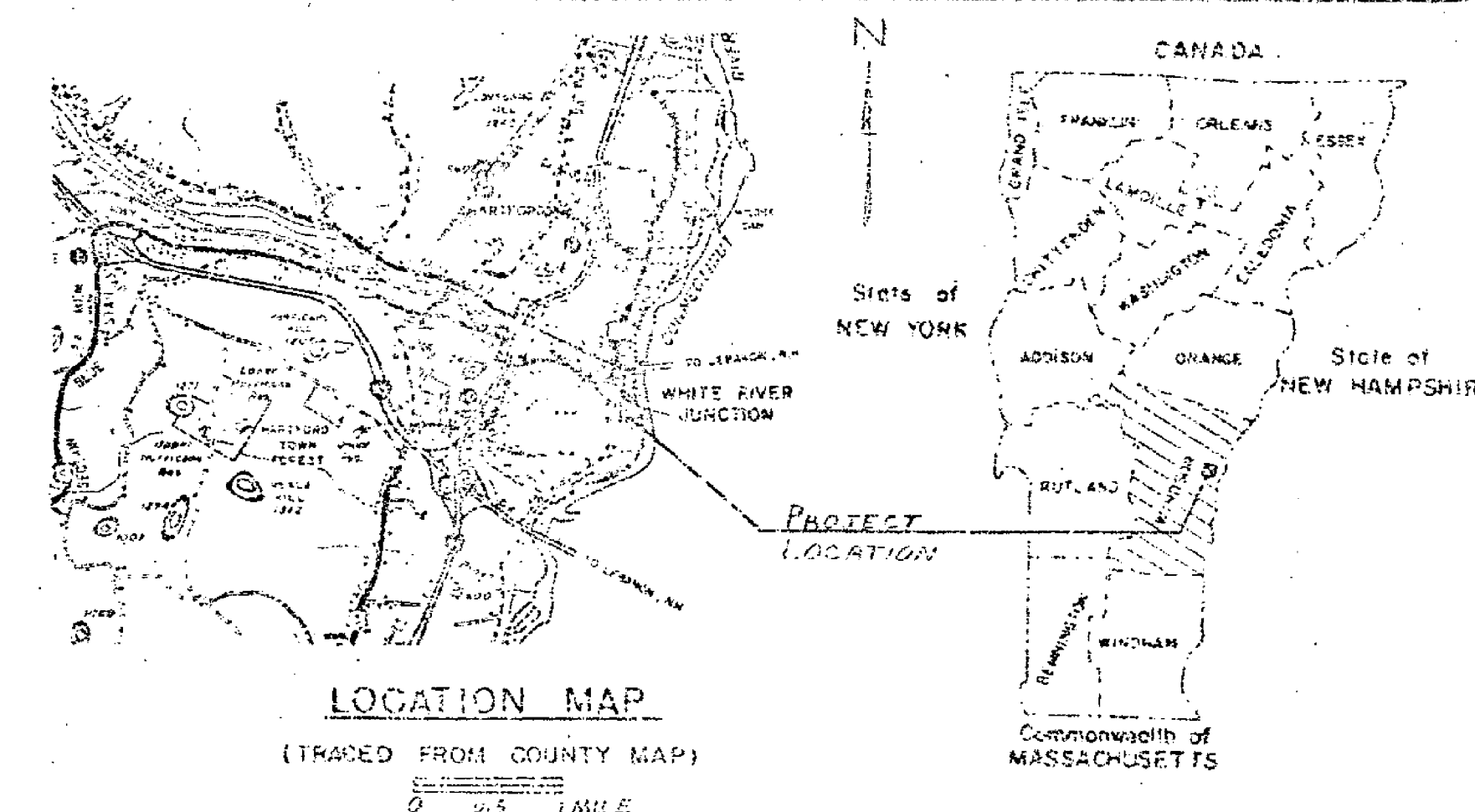
1985 ADT 9600  
1985 DHV 1225  
D = 52'  
T = 7' (ADT)  
T = 5' (DHV)

#### CONVENTIONAL SIGNS

- COUNTY LINE
- TOWN LINE
- LIMITS OF ACCESS
- POINT OF ACCESS
- FENCE LINE
- STONE WALL
- TRAVELED 42'
- GUARD RAIL
- RAILROAD
- SURVEY LINE
- CULVERT
- POWER POLE
- TELEPHONE POLE
- TREES
- CONTROL OF ACCESS
- PROPERTY LINE
- ROW TAKING LINE
- SLOPE RIGHTS
- TOP OF CUT
- TOE OF SLOPE

DATUM  
VERTICAL: N/A  
HORIZONTAL: N/A

PLAN  
SCALE 1" = 60'



These plans are subject to such engineering  
changes as may be required by the Federal Highway  
Administration or the Director of Engineering and  
Construction.  
Construction is to be carried on in accordance  
with these plans and the Standard Specifications  
for Highway and Bridge Construction dated  
March, 1976, as approved by the Federal Highway  
Administration on October 27, 1976 for use on  
this project, including all subsequent revisions and  
such revised specifications and special provisions as  
are incorporated in these plans.

|                                                                |                        |
|----------------------------------------------------------------|------------------------|
| APPROVED BY ORDER OF THE STATE TRANSPORTATION BOARD            |                        |
| APPROVED: [Signature] DIRECTOR OF ENGINEERING AND CONSTRUCTION |                        |
| PROJECT: HARTFORD                                              | PROJECT NO. JR-91-2(1) |
| SHEET OF 20 SHEETS                                             |                        |

# QUANTITIES

| NO.   | ITEM                                               | UNIT  | ESTIMATE    |             |         | FINAL       |             |       |
|-------|----------------------------------------------------|-------|-------------|-------------|---------|-------------|-------------|-------|
|       |                                                    |       | N.B. BRIDGE | S.B. BRIDGE | TOTAL   | N.B. BRIDGE | S.B. BRIDGE | TOTAL |
| 20216 | REMOVAL OF BRIDGE PAVEMENT                         | S.Y.  | 3,978       | 3,912       | 7,890   |             |             |       |
| 20235 | REMOVAL OF EXISTING CONCRETE OR MASONRY            | C.Y.  | 61          | 61          | 122     |             |             |       |
| 40465 | EMULSIFIED ASPHALT                                 | CWT   | 18          | 18          | 36      |             |             |       |
| 40625 | BITUMINOUS CONCRETE PAVEMENT (TYPE IV)             | TON   | 216         | 213         | 429     |             |             |       |
| 40925 | OPEN GRADED ASPHALT FRICTION COURSE                | TON   | 162         | 160         | 322     |             |             |       |
| 50119 | CONCRETE, CLASS AA                                 | C.Y.  | 111         | 109         | 220     |             |             |       |
| 50120 | CONCRETE, CLASS A                                  | C.Y.  | 52          | 52          | 104     |             |             |       |
| 50680 | DRAIN TROUGH                                       | L.F.  | 63          | 63          | 126     |             |             |       |
| 50693 | STRUCTURAL STEEL (ASTM A36)                        | LBS.  | 219,360     | 216,640     | 436,000 |             |             |       |
| 50693 | STRUCTURAL STEEL (ASTM A572 OR A588)               | LBS.  | 21,090      | 21,090      | 42,180  |             |             |       |
| 50715 | REINFORCING STEEL                                  | LBS.  | 13,800      | 13,800      | 27,600  |             |             |       |
| 50920 | STEEL GRID FLOORING - GALVANIZED                   | S.F.  | 3,055       | 3,005       | 6,060   |             |             |       |
| 51335 | PAINTING, BLAST CLEANING (2,467 TONS)              | LS.   | 0.5         | 0.5         | 1       |             |             |       |
| 51410 | WATER REPELLANT                                    | GAL.  | 136         | 134         | 270     |             |             |       |
| 51632 | ELASTOMERIC EXPANSION DAM (2" MOVEMENT)            | L.F.  | 36          | 36          | 72      |             |             |       |
| 51821 | PREPARATION OF CONCRETE SURFACE, CLASS I           | S.Y.  | 200         | 195         | 395     |             |             |       |
| 51822 | PREPARATION OF CONCRETE SURFACE, CLASS II          | S.Y.  | 795         | 780         | 1,575   |             |             |       |
| 51920 | SHEET MEMBRANE WATERPROOFING                       | S.Y.  | 3,972       | 3,905       | 7,877   |             |             |       |
| 61530 | EPOXY BONDING COMPOUND                             | GAL.  | 20          | 20          | 40      |             |             |       |
| 62156 | TEMPORARY BARRIER RAIL                             | L.F.  | 2,600       | 2,600       | 5,200   |             |             |       |
| 63010 | UNIFORMED TRAFFIC OFFICERS                         | HOURL | 250         | 250         | 500     |             |             |       |
| 63015 | FLAGPERSONS                                        | HOURL | 100         | 100         | 200     |             |             |       |
| 63410 | EMPLOYEE TRAINEESHIP                               | HOURL | 1,040       | 1,040       | 2,080   |             |             |       |
| 63510 | MOBILIZATION                                       | LS.   | 0.5         | 0.5         | 1       |             |             |       |
| 64110 | TRAFFIC CONTROL                                    | LS.   | 0.5         | 0.5         | 1       |             |             |       |
| 67520 | TRAFFIC SIGNS, TYPE A                              | S.F.  | 0.5         | 0.5         | 1       |             |             |       |
| 67525 | TRAFFIC SIGNS, TYPE B                              | S.F.  | 0.5         | 0.5         | 1       |             |             |       |
| 67615 | REMOVE AND REPLACE DELINEATOR UNITS (INSTALL ONLY) | EACH  | 90          | 90          | 180     |             |             |       |

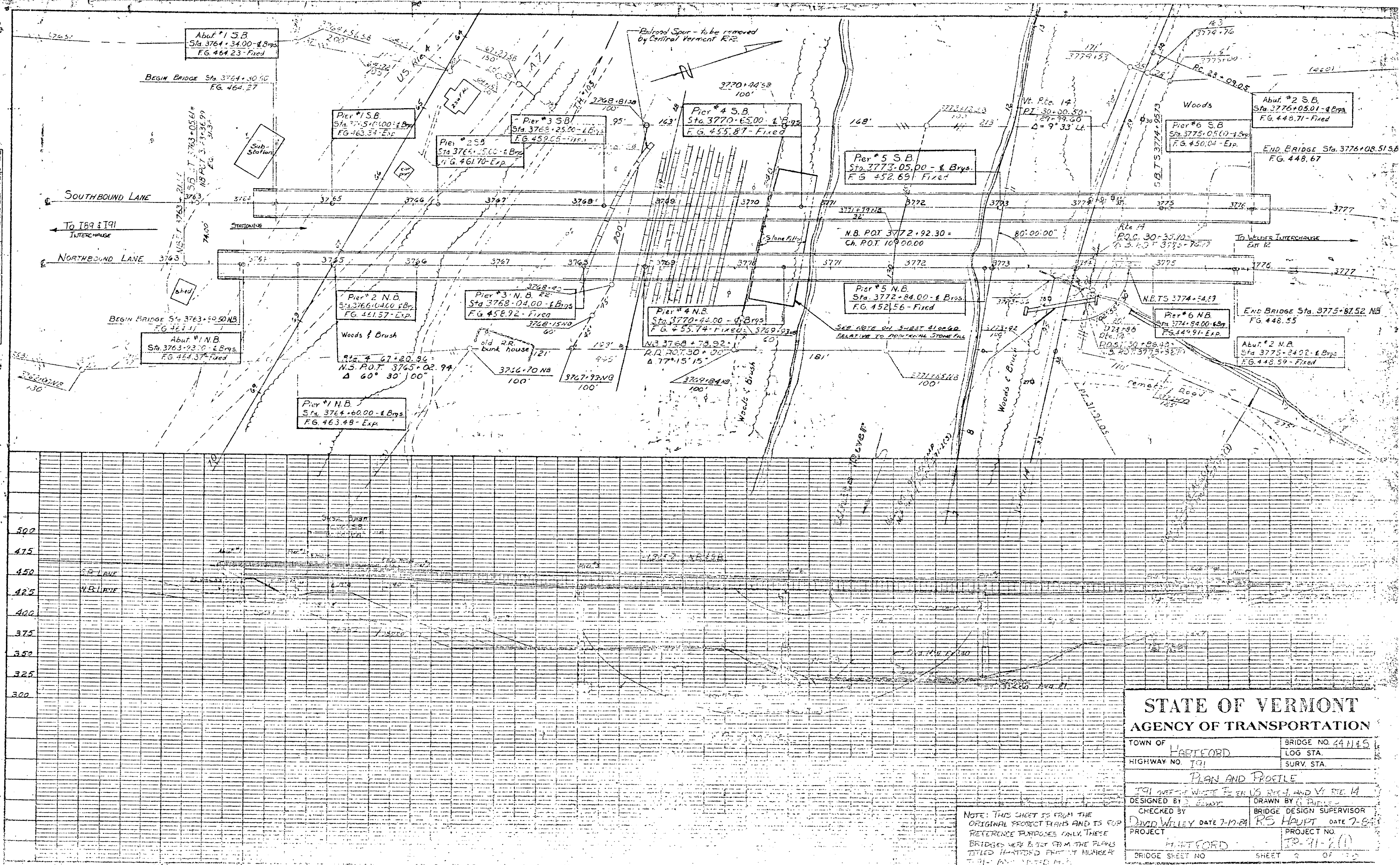
## NOTES

- THIS PROJECT INCLUDES THE FOLLOWING:
  - CONSTRUCTION OF A TEMPORARY TRAFFIC CONTROL SYSTEM.
  - INSTALLATION OF A SECONDARY SUPPORT SYSTEM AT THE PIN HANGER CONNECTIONS.
  - REVISIONS AND REPLACEMENT OF DRAINAGE SYSTEM.
  - STABILIZATION OF CROSS FRAMES AND LATERAL BRACING.
  - REPAIR AND REPLACEMENT OF DECK JOINTS.
  - DECK REHABILITATION, INCLUDING REMOVAL OF PAVEMENT, DECK PATCHING, PLACEMENT OF NEW MEMBRANE AND PAVEMENT.
  - BLAST CLEANING AND PAINTING THE STEEL.
  - INSTALLATION OF AN INSPECTION WALKWAY.
- ALL STRUCTURAL STEEL SHALL BE CLEANED AND PAINTED. THE UNIT BID PRICE FOR PAY ITEM 51335, "PAINTING, BLAST CLEANING" WILL BE FULL COMPENSATION FOR CLEANING AND PAINTING THE EXISTING BRIDGES. THE UNIT BID PRICE FOR PAY ITEM 50693, "STRUCTURAL STEEL", WILL INCLUDE THE COST OF PAINTING STEEL WHICH IS BEING ADDED TO THE BRIDGES. THE FINAL COAT OF PAINT SHALL BE GREEN.
- ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 68 DEGREES F UNLESS OTHERWISE NOTED. BOTH NORTHBOUND AND SOUTHBOUND BRIDGES ARE ON A GRADE. NO SURVEY WAS TAKEN OF THIS PROJECT. ALL DIMENSIONS WERE TAKEN FROM THE EXISTING BRIDGE PLANS OF HARTFORD 191-2(3) (22), DATED 1963. SOME OF THE EXISTING PLAN SHEETS HAVE BEEN INCLUDED WITH THIS PROJECT FOR REFERENCE. COPIES OF OTHER SHEETS FROM THE EXISTING BRIDGE PLANS ARE AVAILABLE FROM THE STRUCTURES DIVISION UPON REQUEST.
- THE CONTRACTOR SHALL FIELD CHECK ALL DIMENSIONS BEFORE BEGINNING FABRICATION.
- ALL EXISTING ROD ASSEMBLIES THAT ARE BETWEEN THE TOP AND BOTTOM LATERAL BRACING SHALL BE REMOVED. THE EXISTING DRAINAGE FACILITIES AT THE HINGE JOINTS, INCLUDING HORIZONTAL TUBES TO PIERS AND DOWN THE PIERS, SHALL BE REMOVED. ANY EXISTING MATERIAL REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR. PAYMENT FOR COST OF LABOR, EQUIPMENT, AND INCIDENTALS NECESSARY TO REMOVE EXISTING MATERIALS SHALL BE SUBSIDIARY TO OTHER ITEMS.
- ALL NEW STRUCTURAL STEEL SHALL BE ASTM A-36 UNLESS OTHERWISE NOTED.
- PAY ITEM 50693, "STRUCTURAL STEEL" (A-572 OR A-588) IS HEREBY CLASSIFIED AS BEING FRACTURE CRITICAL MEMBERS. IF THE CONTRACTOR ELECTS TO SUPPLY ASTM A-572, IT SHALL MEET THE PHYSICAL PROPERTIES OF A-588. WELDING ON THIS STEEL SHALL CONFORM TO THE REQUIREMENTS OF THE 1981 AASHTO STANDARD SPECIFICATIONS, INCLUDING THE PROVISIONS OF THE STRUCTURAL WELDING CODE, AWS D11-80, AND THE AASHTO GUIDE SPECIFICATIONS FOR FRACTURE CRITICAL NON-REDUNDANT STEEL BRIDGE MEMBERS, DATED SEPTEMBER 1978. MATERIAL AND WELDING WILL CONFORM TO TEMPERATURE ZONE 3. THE WELDED FABRICATED FRACTURE CRITICAL MEMBER SHALL BE 100% ULTRASONICALLY TESTED. THE STEEL FABRICATOR SHALL IN ADDITION TO THE ABOVE REQUIREMENTS, SUBMIT THE FOLLOWING TO THE STRUCTURES ENGINEER FOR APPROVAL:
  - QUALIFICATIONS OF WELDER;
  - WELDING PROCEDURES;
  - PREQUALIFICATION TESTS PROCEDURES AND RESULTS FOR EACH WELD.
- TRAFFIC SHALL BE MAINTAINED ON I-91, U.S. 4, VT. 14, T.H. 103, AND THE RAILROAD AT ALL TIMES. UNLESS OTHERWISE PROVIDED FOR, ALL COST ASSOCIATED WITH MAINTAINING TRAFFIC SHALL BE SUBSIDIARY TO PAY ITEM 64110, "TRAFFIC CONTROL".
- WATER REPELLENT SHALL BE APPLIED TO ALL CONCRETE CURBS, FASCIAS, AND BOTTOM OF DECK FROM THE FASCIA TO THE FASCIA STRINGER.
- THE EXISTING BRIDGE SURFACES SHALL NOT BE DISTURBED BEFORE THE TEMPORARY TRAFFIC SYSTEM IS OPEN. THE TEMPORARY TRAFFIC SYSTEM SHALL NOT BE USED UNTIL THE CONTRACTOR HAS WRITTEN APPROVAL FROM THE ENGINEER. APPROVAL WILL NOT BE GRANTED BEFORE APRIL 1, 1985.

| STATE OF VERMONT<br>AGENCY OF TRANSPORTATION           |                              |                                                              |  |
|--------------------------------------------------------|------------------------------|--------------------------------------------------------------|--|
| Town of <b>HARTFORD</b>                                |                              | Bridge No. <b>44N&amp;S</b>                                  |  |
| Highway No. <b>191</b>                                 |                              | Log. Stc.                                                    |  |
|                                                        |                              | Surv. Stc.                                                   |  |
| QUANTITIES AND GENERAL NOTES                           |                              |                                                              |  |
| 191 OVER THE WHITE RIVER, U.S. RTE. 4, AND VT. RTE. 14 |                              |                                                              |  |
| Designed By <b>A. ELWOOD</b>                           | Drawn By <b>D. C. WILLEY</b> |                                                              |  |
| Checked By <b>G. SPILAK</b>                            | Date <b>9-84</b>             | Bridge Design Supervisor <b>R. S. HAUPT</b> Date <b>9-84</b> |  |
| PROJECT <b>HARTFORD</b>                                |                              | PROJECT NO. <b>1R-91-2 (1)</b>                               |  |
| Log. Info. <b>QSA1130.25182A1150UADGN</b>              |                              |                                                              |  |
| Bridge Sheet No.                                       |                              | Sheet <b>2</b> of <b>30</b>                                  |  |

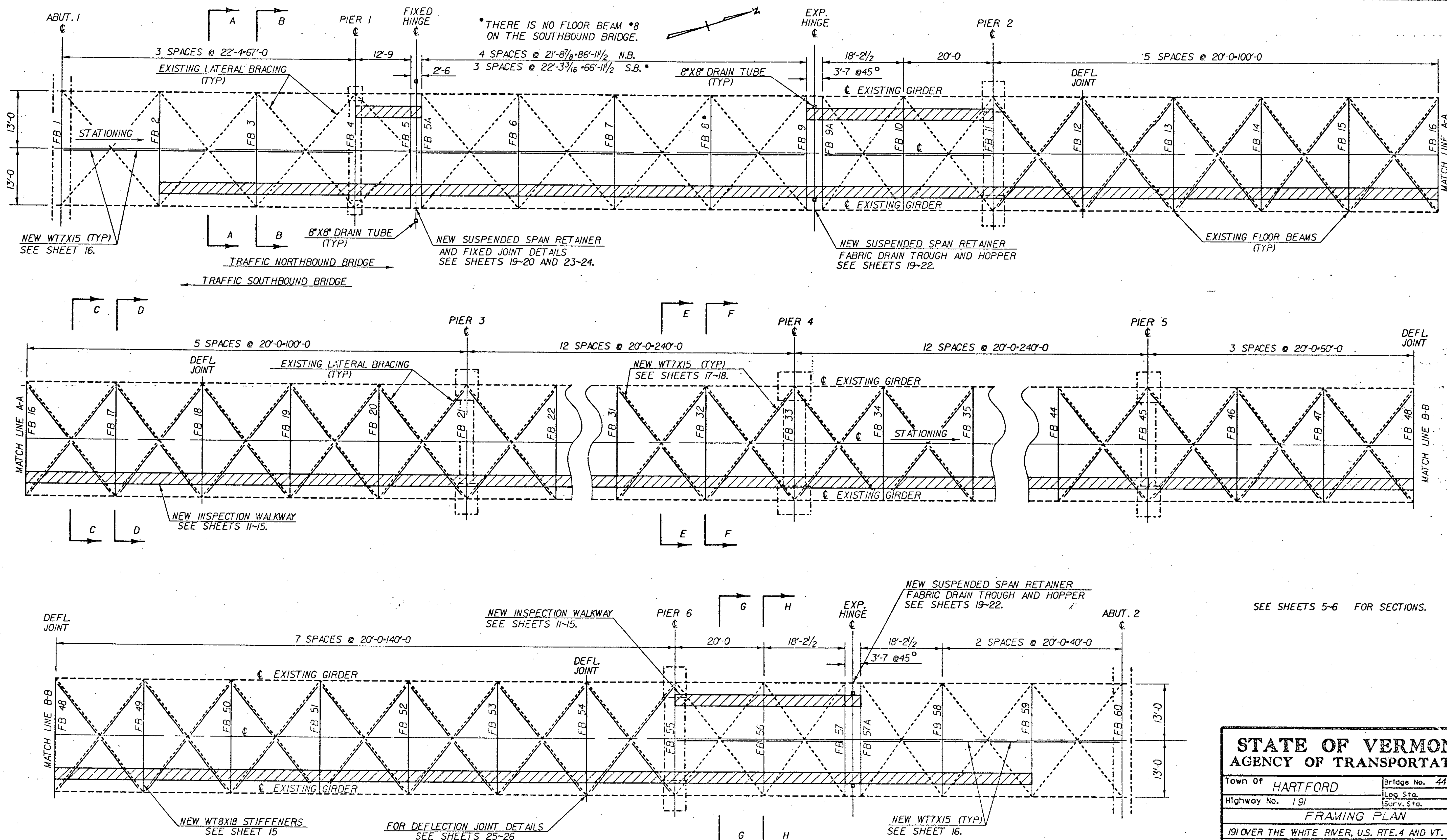
DATE: 7-1-74  
 BY: J. L. GILBERT  
 CHECKED: J. L. GILBERT  
 NO. 1

NO. 1  
 AS DRAWN  
 NO. 1  
 STRUCTURE NO. 44115



|                                              |                                         |
|----------------------------------------------|-----------------------------------------|
| STATE OF VERMONT<br>AGENCY OF TRANSPORTATION |                                         |
| TOWN OF <u>HARTFORD</u>                      | BRIDGE NO. <u>44115</u>                 |
| HIGHWAY NO. <u>191</u>                       | LOG STA. <u>3776+08.51</u>              |
| PLAN AND PROFILE                             |                                         |
| TOL. OVER THE WHITE RIVER AND VT. R.R. 14    |                                         |
| DESIGNED BY <u>J. L. GILBERT</u>             | DRAWN BY <u>J. L. GILBERT</u>           |
| CHECKED BY <u>DAVID WILEY</u>                | BRIDGE DESIGN SUPERVISOR <u>RS HAYT</u> |
| DATE <u>7-1-74</u>                           | DATE <u>7-9-74</u>                      |
| PROJECT <u>HARTFORD</u>                      | PROJECT NO. <u>19-91-2(1)</u>           |
| BRIDGE SHEET NO. <u>3</u>                    | SHEET <u>3</u> OF <u>3</u>              |

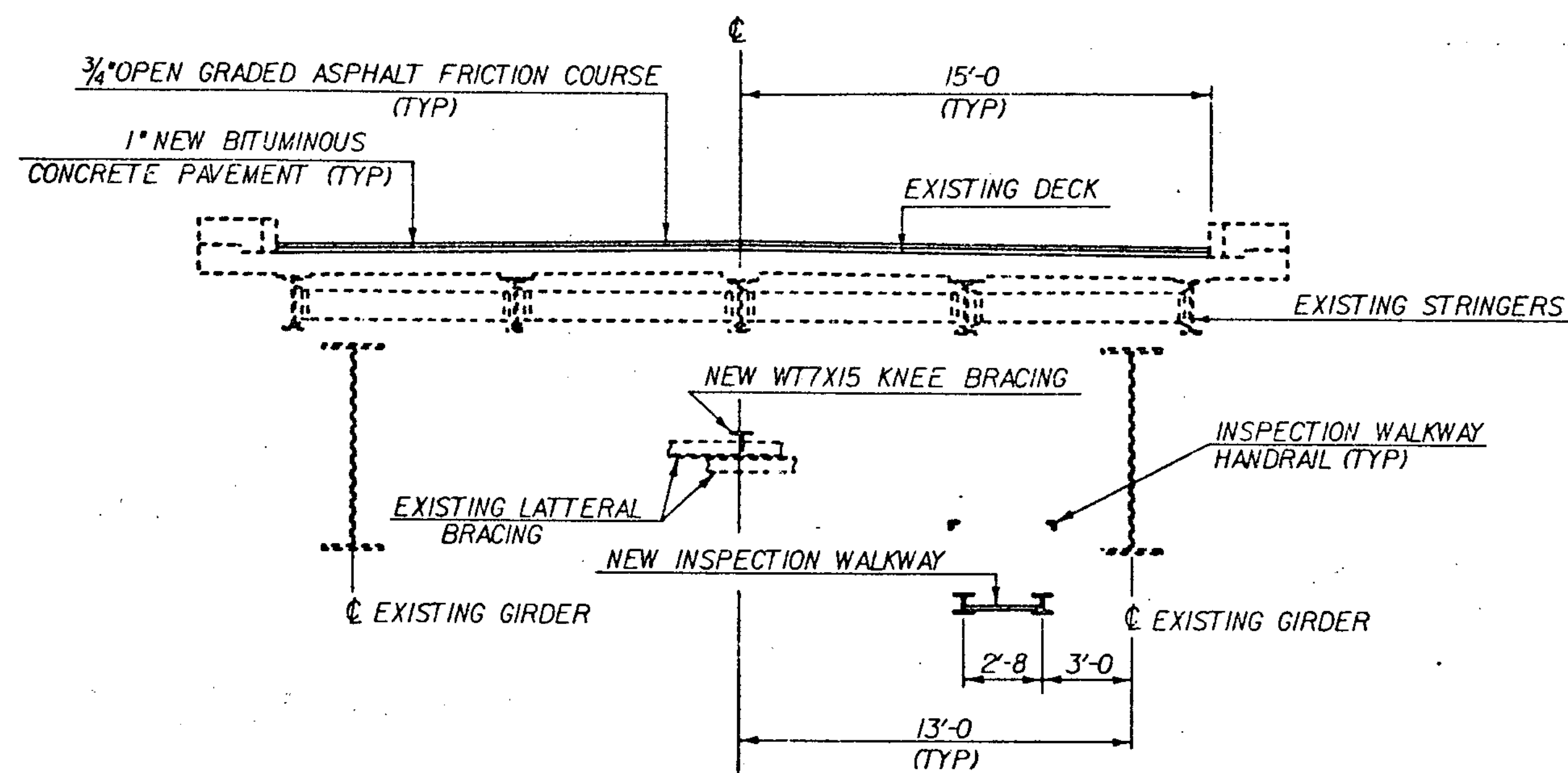
NOTE: THIS SHEET IS FROM THE ORIGINAL PROJECT PLANS AND IS FOR REFERENCE PURPOSES ONLY. THESE BRIDGES WERE BUILT FROM THE PLANS TITLED HARTFORD PROJECT NUMBER 19-91-2(1).



SEE SHEETS 5-6 FOR SECTIONS.

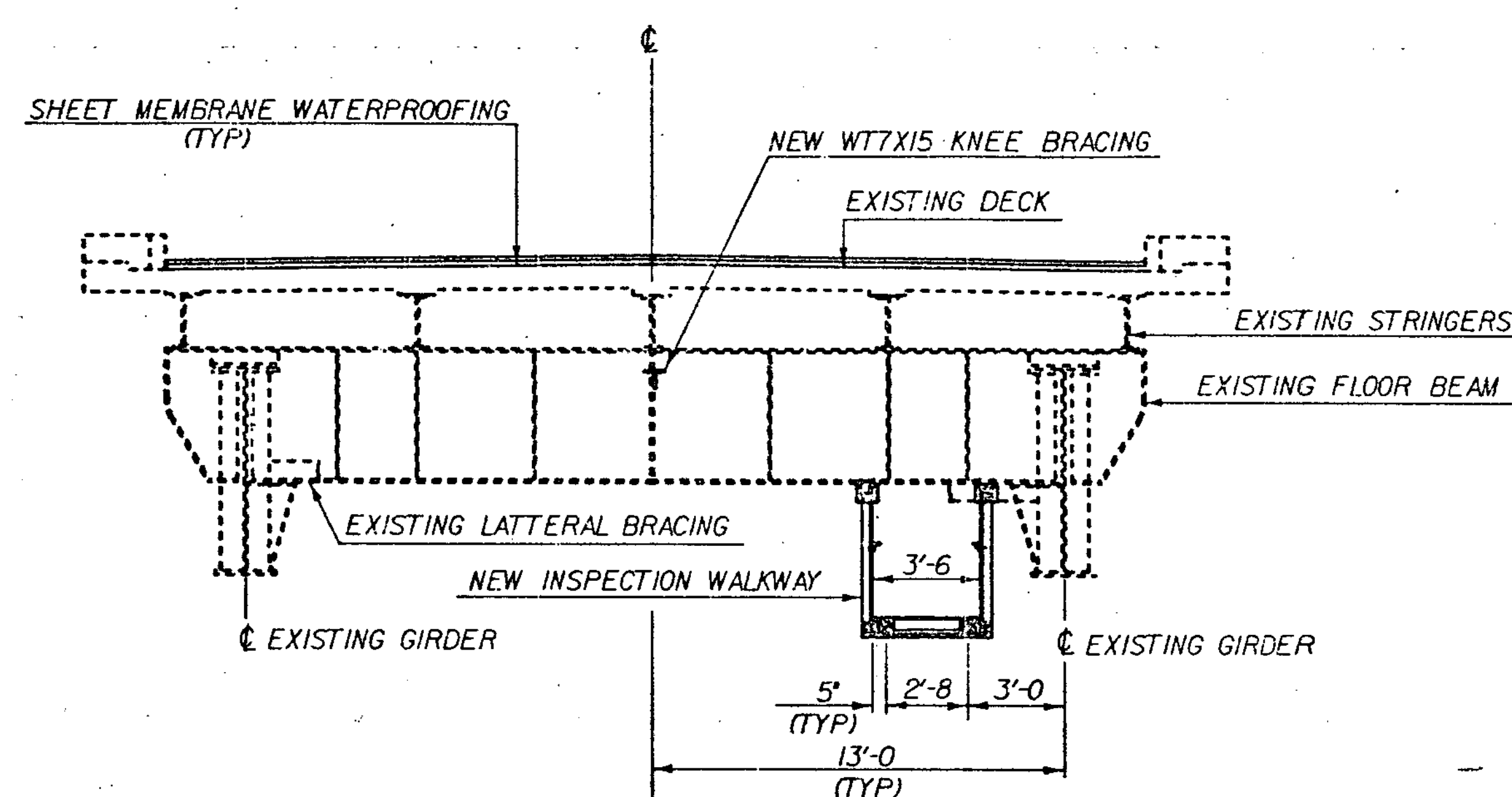
# STATE OF VERMONT AGENCY OF TRANSPORTATION

|                                                       |                       |                          |              |
|-------------------------------------------------------|-----------------------|--------------------------|--------------|
| Town Of                                               | HARTFORD              | Bridge No.               | 44 N&S       |
| Highway No.                                           | 191                   | Log Sta.                 |              |
|                                                       |                       | Surv. Sta.               |              |
| FRAMING PLAN                                          |                       |                          |              |
| 191 OVER THE WHITE RIVER, U.S. RTE. 4 AND VT. RTE. 14 |                       |                          |              |
| Designed By                                           | A. ELWOOD             | Drawn By                 | D. C. WILLEY |
| Checked By                                            | A. ELWOOD             | Bridge Design Supervisor | R. S. HAUPT  |
| Date                                                  | 7-27-84               | Date                     | 7-84         |
| PROJECT                                               | HARTFORD              | PROJECT NO.              | 1R-91-2 (1)  |
| Log. Info.                                            | 05A1E3025382A15FP.DGN |                          |              |
| Bridge Sheet No.                                      |                       | Sheet                    | 4 of 30      |



SECTION A - A  
SCALE 1/4"=1'-0"

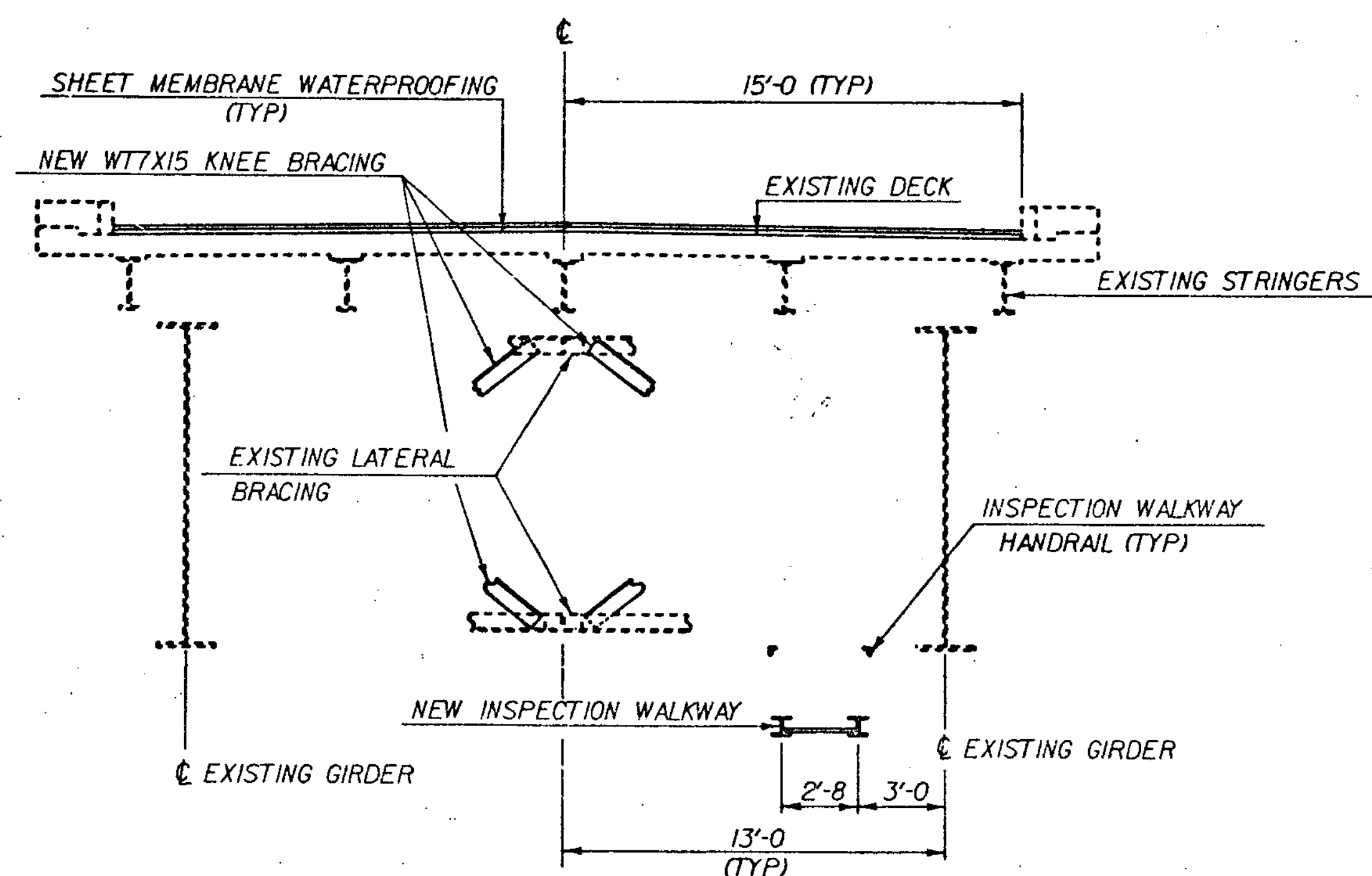
THESE SECTIONS TYPICAL FROM F.B.\*1-10 AND F.B.\*56-60 FOR THE INSPECTION WALKWAY.  
THESE SECTIONS TYPICAL FROM F.B.\*1-11 AND F.B.\*55-60 FOR THE NEW KNEE BRACING.



SECTION B - B  
SCALE 1/4"=1'-0"

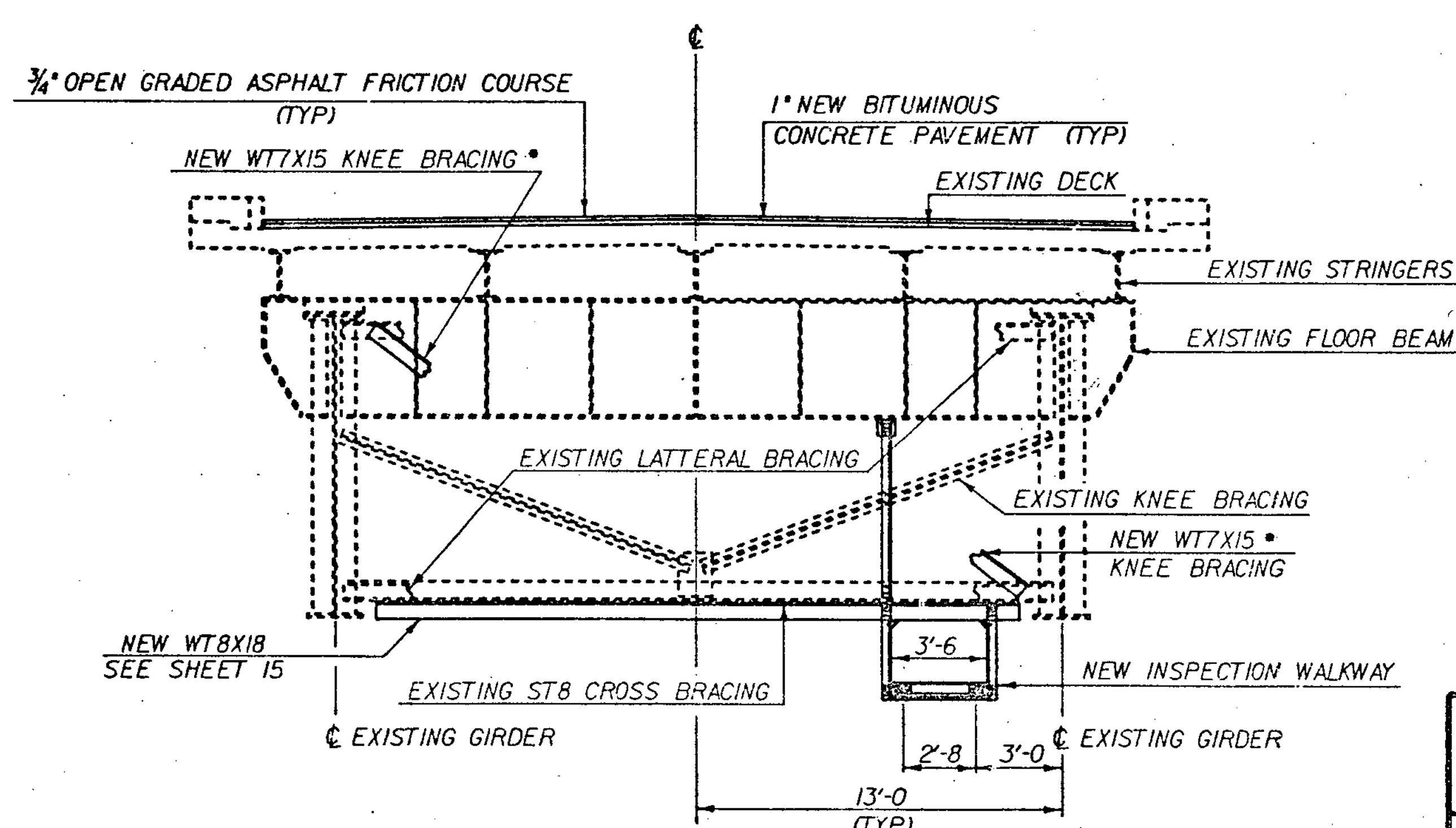
#### NOTES

1. SEE SHEET 4 FOR LOCATION OF SECTIONS.
2. FOR INSPECTION WALKWAY DETAILS SEE SHEETS 11-15.
3. FOR KNEE BRACING DETAILS SEE SHEETS 16-18.



SECTION C - C  
SCALE 1/4"=1'-0"

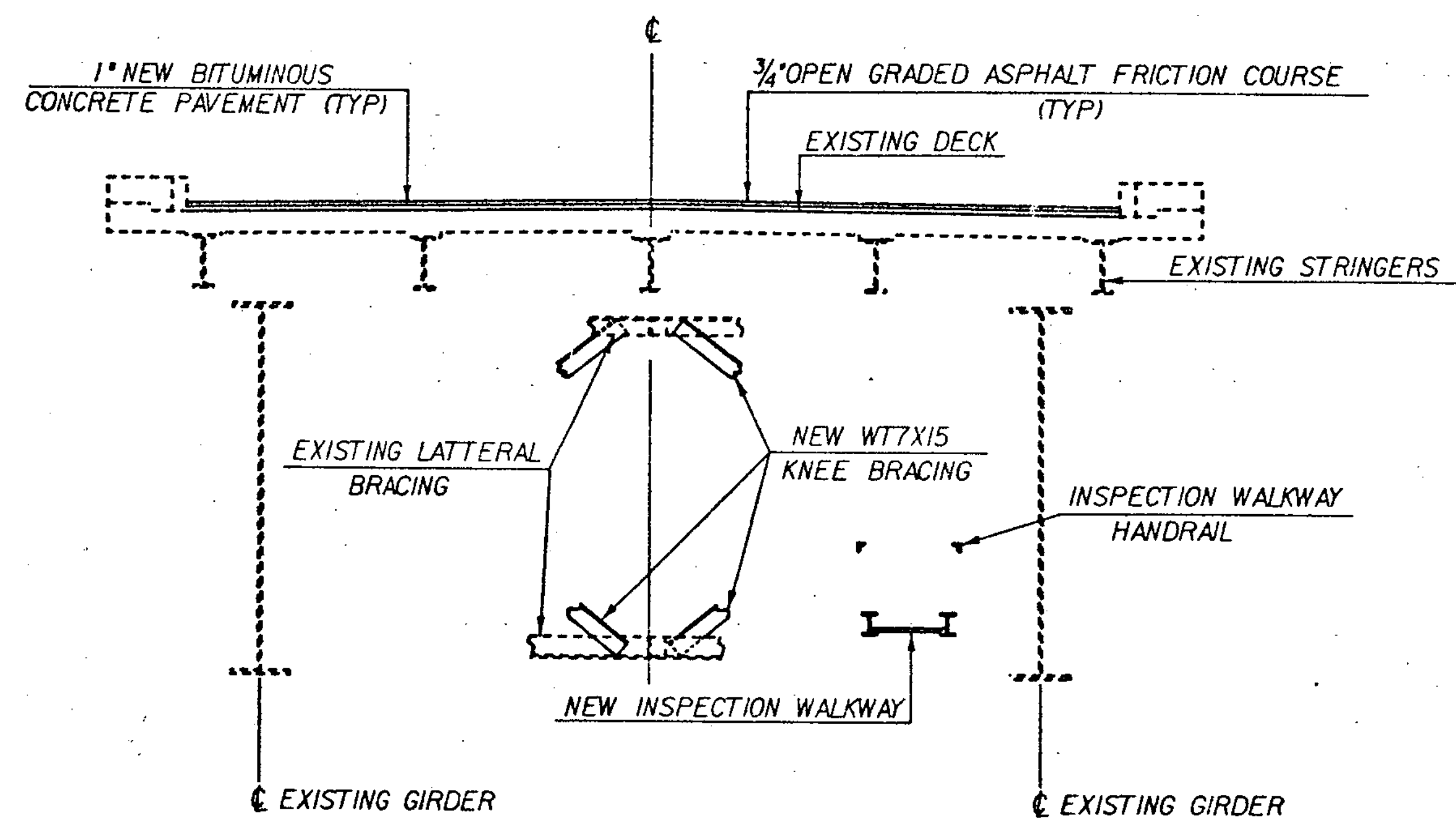
THESE SECTIONS TYPICAL FROM F.B.\*11-21 AND F.B.\*45-55 FOR THE INSPECTION WALKWAY.  
THESE SECTIONS TYPICAL FROM F.B.\*11-20 AND F.B.\*46-55 FOR THE NEW KNEE BRACING.



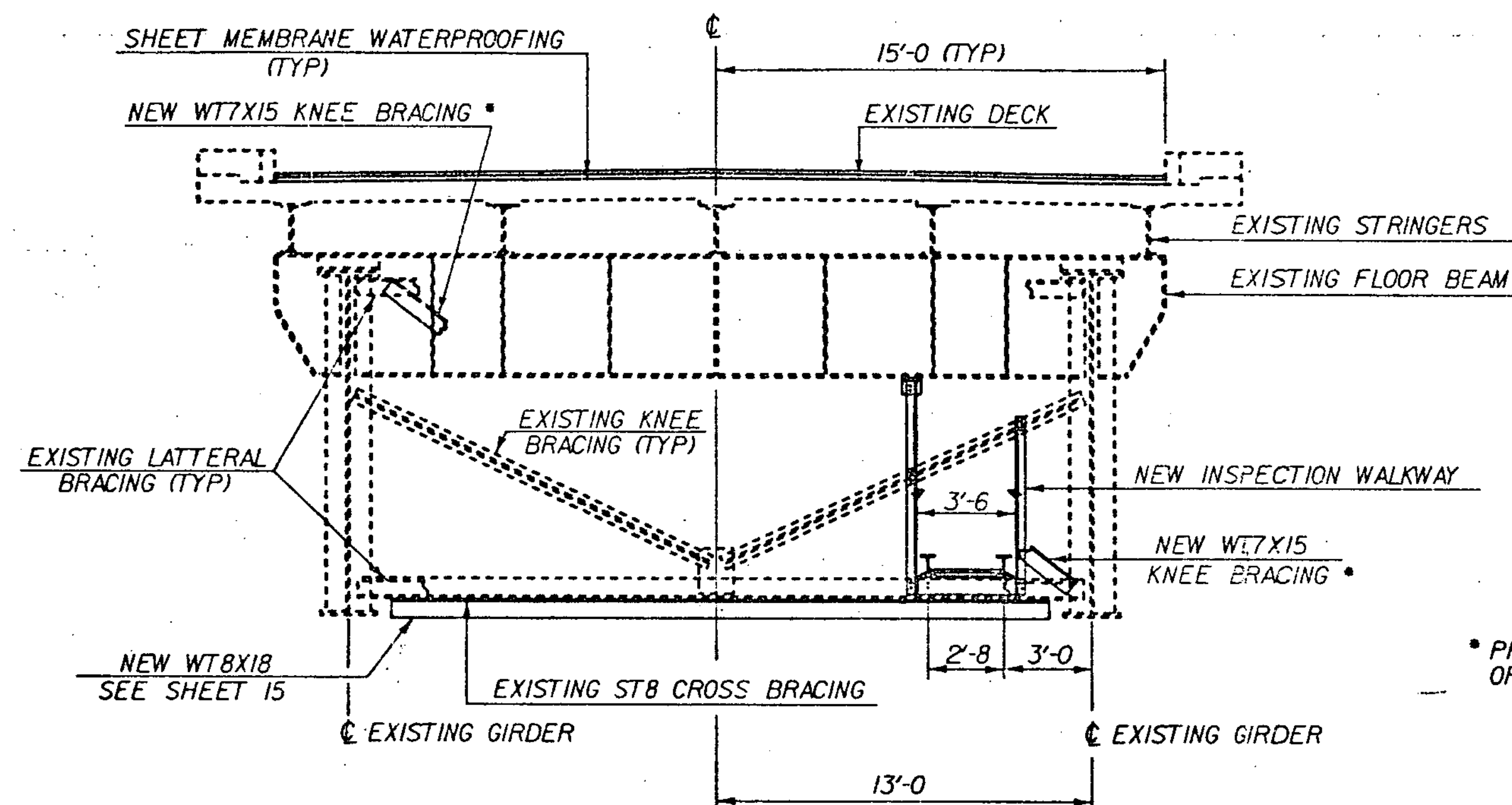
SECTION D - D  
SCALE 1/4"=1'-0"

\* PRECEEDING FLOOR BEAM SIMILAR EXCEPT  
OPPOSITE HAND FOR KNEE BRACING ONLY.

| STATE OF VERMONT<br>AGENCY OF TRANSPORTATION          |           |                          |              |
|-------------------------------------------------------|-----------|--------------------------|--------------|
| Town Of                                               | HARTFORD  | Bridge No.               | 44 N&S       |
| Highway No.                                           | 191       | Log Sta.                 |              |
|                                                       |           | Surv. Sta.               |              |
| TYPICAL SECTIONS                                      |           |                          |              |
| 191 OVER THE WHITE RIVER, U.S. RTE. 4 AND VT. RTE. 14 |           |                          |              |
| Designed By                                           | A. ELWOOD | Drawn By                 | D. C. WILLEY |
| Checked By                                            | A. ELWOOD | Bridge Design Supervisor | R. S. HAUPT  |
|                                                       | 7-27-84   | Date                     | 7-84         |
| PROJECT                                               | HARTFORD  | PROJECT NO.              | 1R-91-2 (1)  |
| I.C.C. Info. 05423025182A157 P100N                    |           |                          |              |
| Bridge Sheet No.                                      |           | Sheet 5 of 30            |              |



SECTION E - E  
SCALE 1/4"=1'-0"



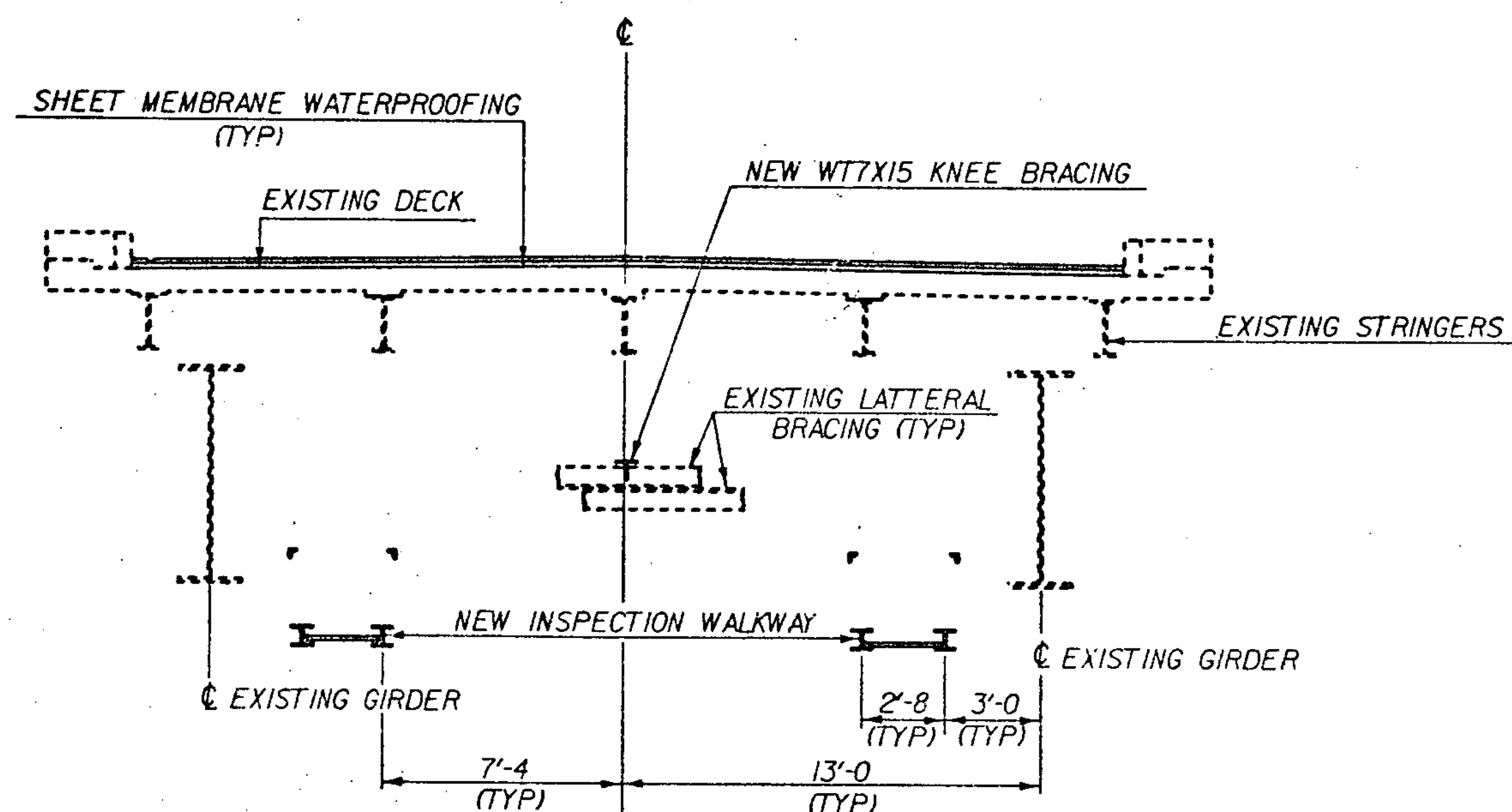
SECTION F - F  
SCALE 1/4"=1'-0"

\* PRECEEDING FLOOR BEAM SIMILAR EXCEPT OPPOSITE HAND FOR KNEE BRACING ONLY.

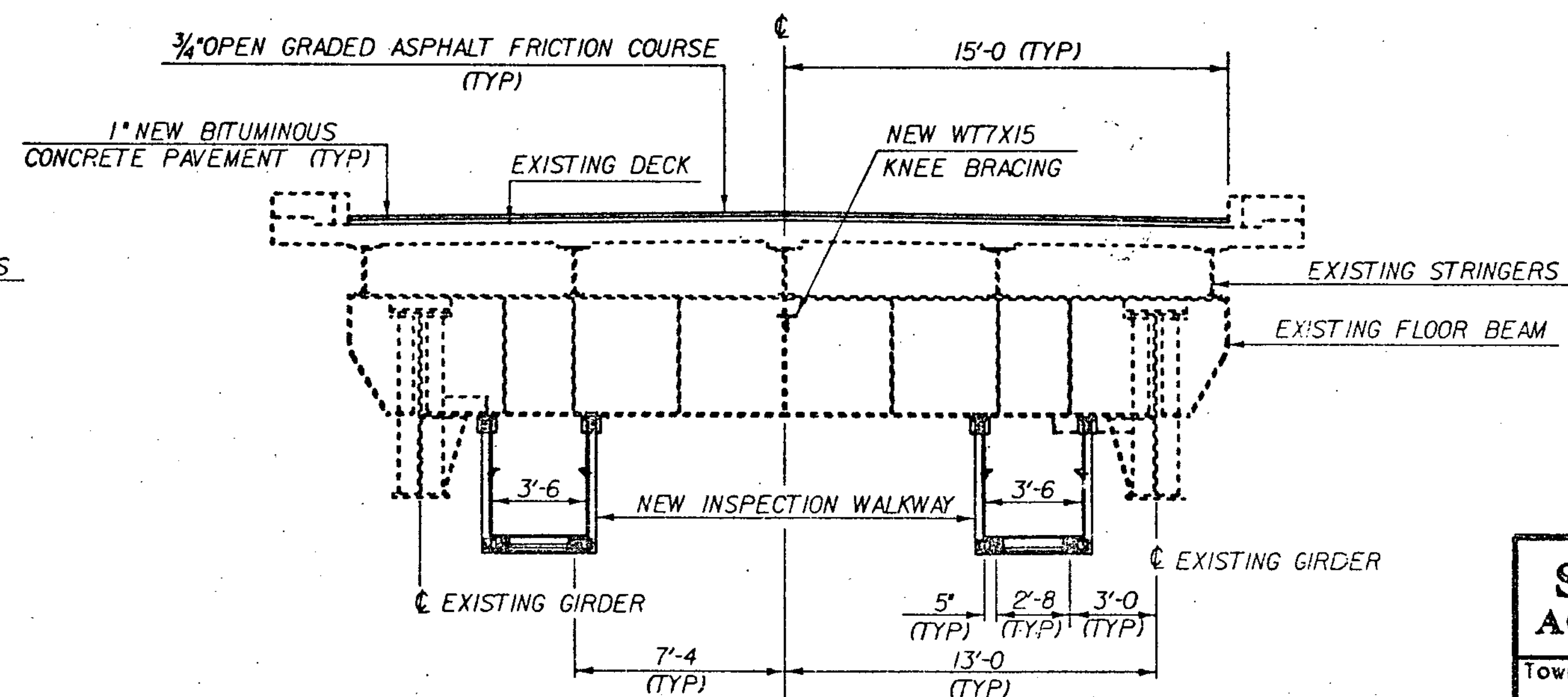
THESE SECTIONS TYPICAL FROM F.B.\*21-45 FOR THE INSPECTION WALKWAY.  
THESE SECTIONS TYPICAL FROM F.B.\*20-46 FOR THE NEW KNEE BRACING.

#### NOTES

1. SEE SHEET 4 FOR LOCATION OF SECTIONS.
2. FOR INSPECTION WALKWAY DETAILS SEE SHEETS 11-15.
3. FOR KNEE BRACING DETAILS SEE SHEETS 16-18.



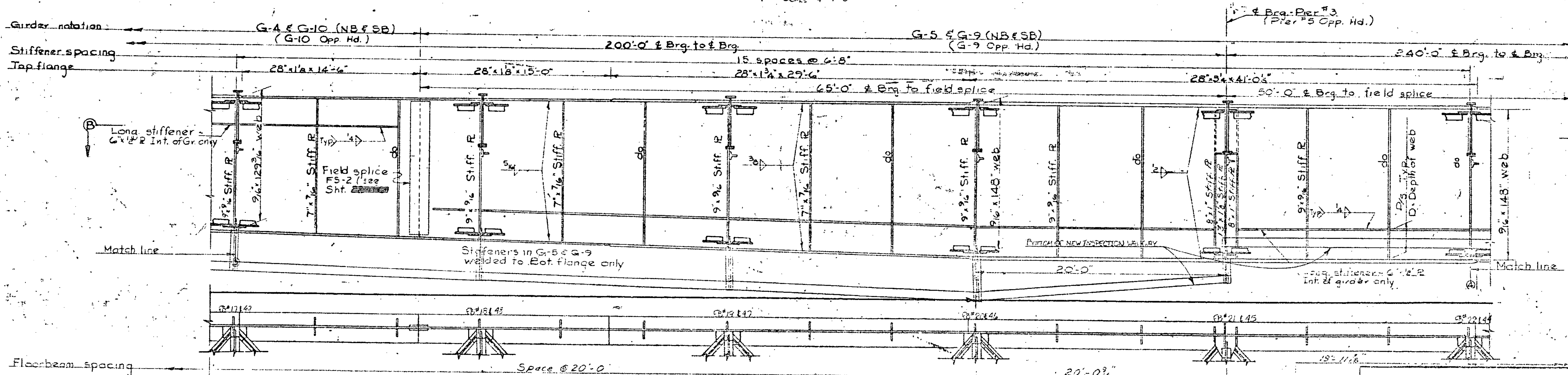
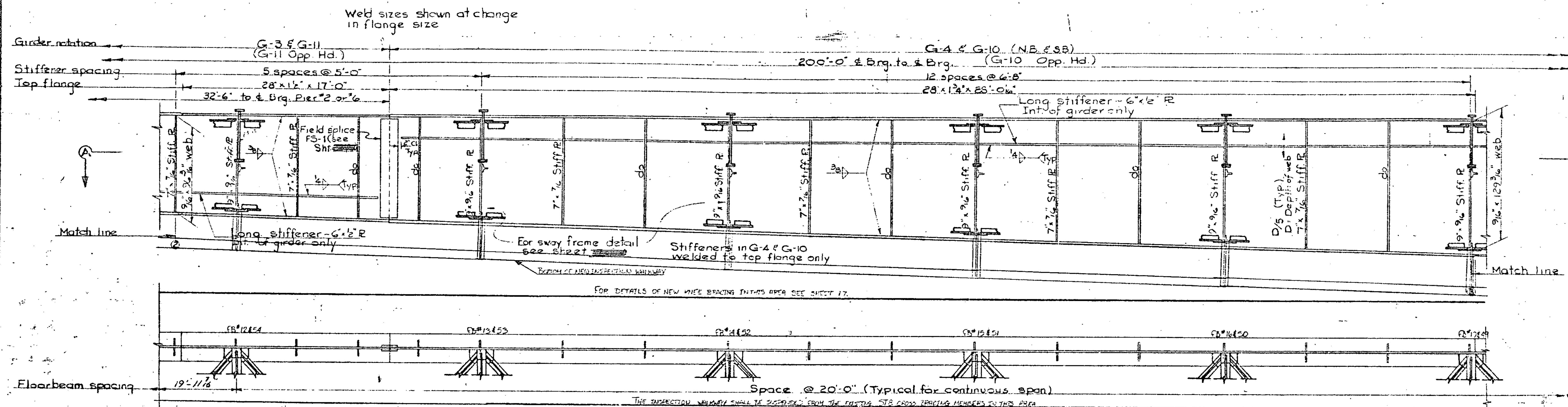
SECTION G - G  
SCALE 1/4"=1'-0"



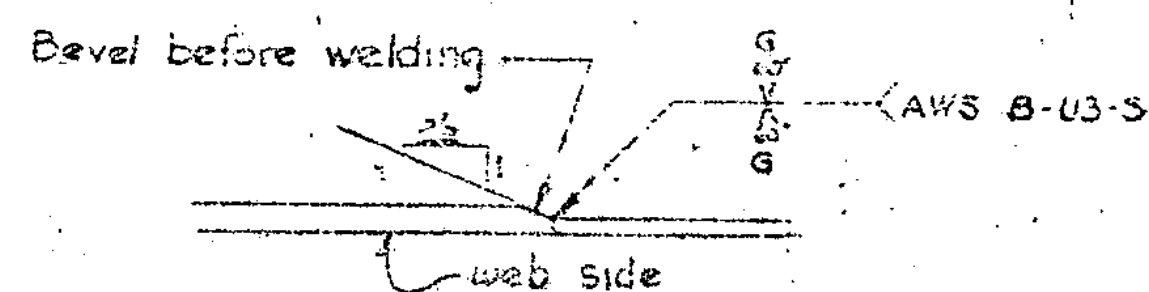
SECTION H - H  
SCALE 1/4"=1'-0"

| STATE OF VERMONT<br>AGENCY OF TRANSPORTATION          |                         |                          |              |
|-------------------------------------------------------|-------------------------|--------------------------|--------------|
| Town Of                                               | HARTFORD                | Bridge No.               | 44 N&S       |
| Highway No.                                           | 191                     | Log Sta.                 |              |
|                                                       |                         | Surv. Sta.               |              |
| TYPICAL SECTIONS                                      |                         |                          |              |
| 191 OVER THE WHITE RIVER, U.S. RTE. 4 AND VT. RTE. 14 |                         |                          |              |
| Designed By                                           | A. ELWOOD               | Drawn By                 | D. C. WILLEY |
| Checked By                                            | A. ELWOOD               | Bridge Design Supervisor | R. S. HAUP   |
| Date                                                  | 7-27-84                 | Date                     | 7-84         |
| PROJECT                                               | HARTFORD                | PROJECT NO.              | 1R-91-2 (1)  |
| I.G.C. Info.                                          | QSAI(3025)82AI15F.P.DGN |                          |              |
| Bridge Sheet No.                                      |                         | Sheet                    | 6 of 30      |

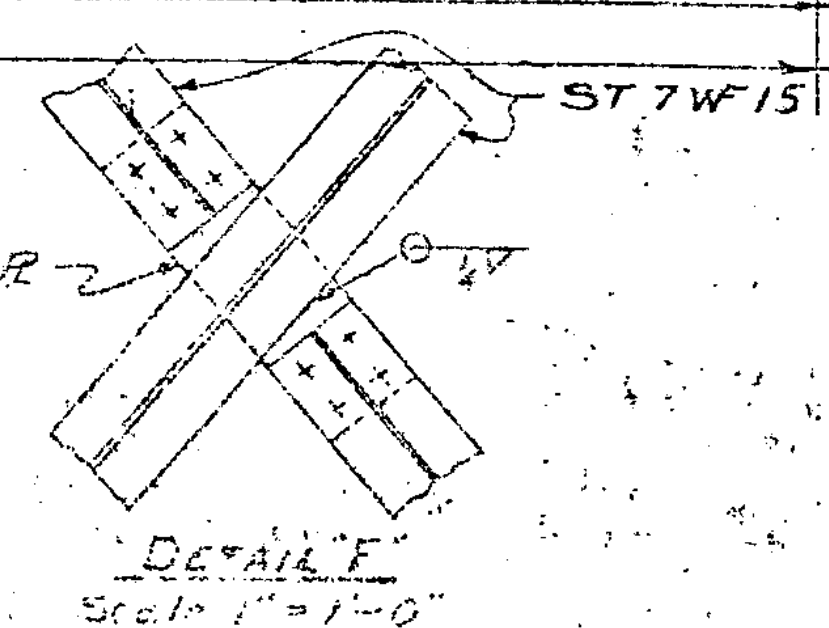




SECTION BB  
Scale 1/4"=1'-0"



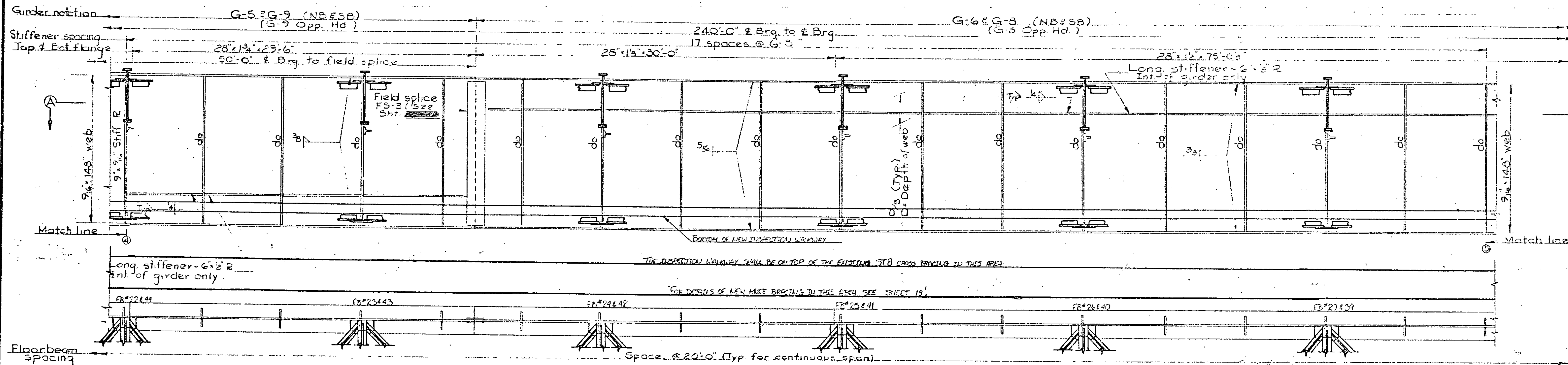
Web splices to be located by the Contractor. Splices shall be built with welds extending full height of web.



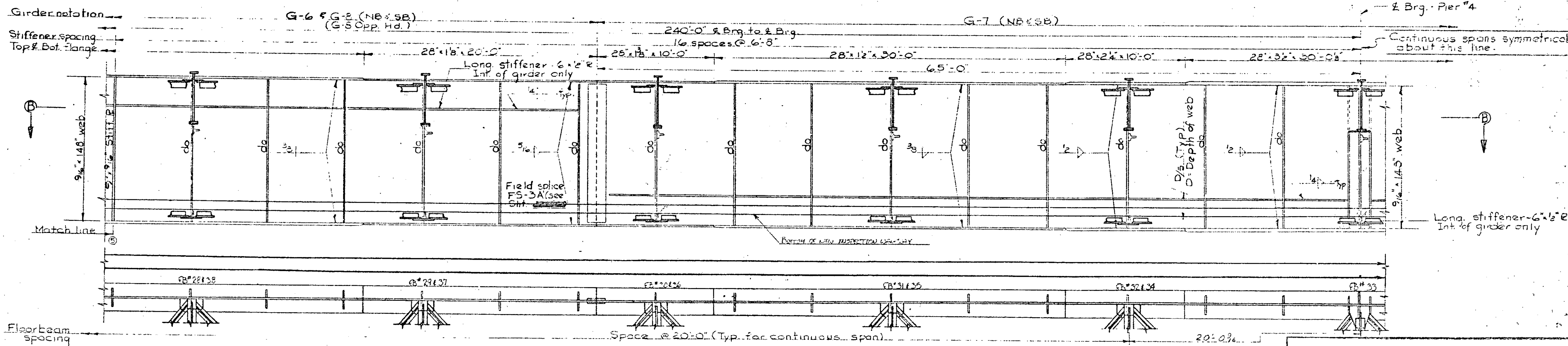
NOTE: THIS SHEET IS FROM THE ORIGINAL PROJECT PLANS, AND IS FOR REFERENCE PURPOSES ONLY. THESE BRIDGES WERE BUILT TO HARTFORD PROJECT NUMBER T-91-2(1)(2), PLAN 1000 N.B.S.

| STATE OF VERMONT<br>AGENCY OF TRANSPORTATION         |           |                          |            |
|------------------------------------------------------|-----------|--------------------------|------------|
| TOWN OF                                              | HARTFORD  | BRIDGE NO                | 44 N.E.S   |
| HIGHWAY NO.                                          | T91       | LOG STA.                 |            |
|                                                      |           | SURV. STA.               |            |
| EXISTING GIRDER DETAILS                              |           |                          |            |
| T91 OVER THE WHITE RIVER, U.S. RTE 4, AND VT. RTE 14 |           |                          |            |
| DESIGNED BY                                          | A. ELWOOD | DRAWN BY                 | NBT        |
| CHECKED BY                                           | DC VALLEY | BRIDGE DESIGN SUPERVISOR |            |
| PROJECT                                              | HARTFORD  | PROJECT NO.              | IR-91-2(1) |
| BRIDGE SHEET NO                                      |           | SHEET                    | 9 OF 10    |

Weld sizes shown at change  
in flange size

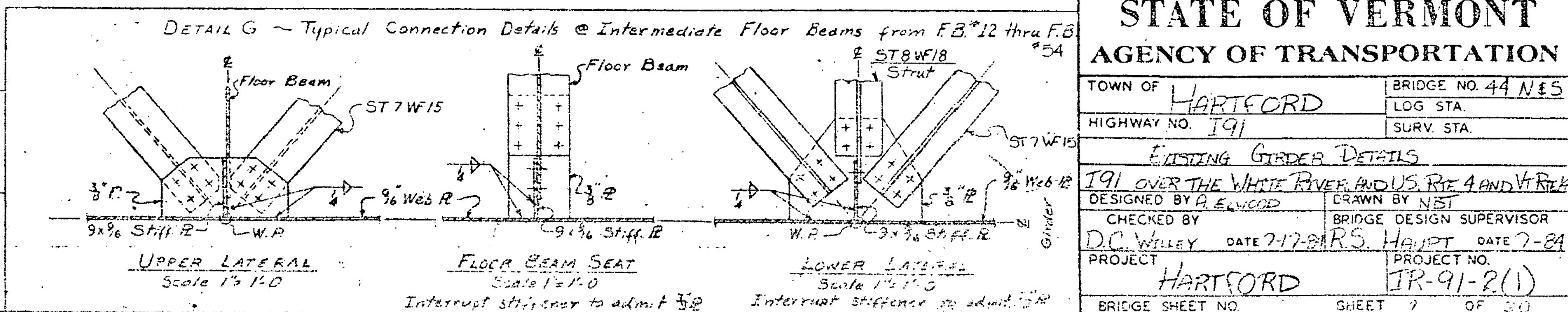


SECTION A-A

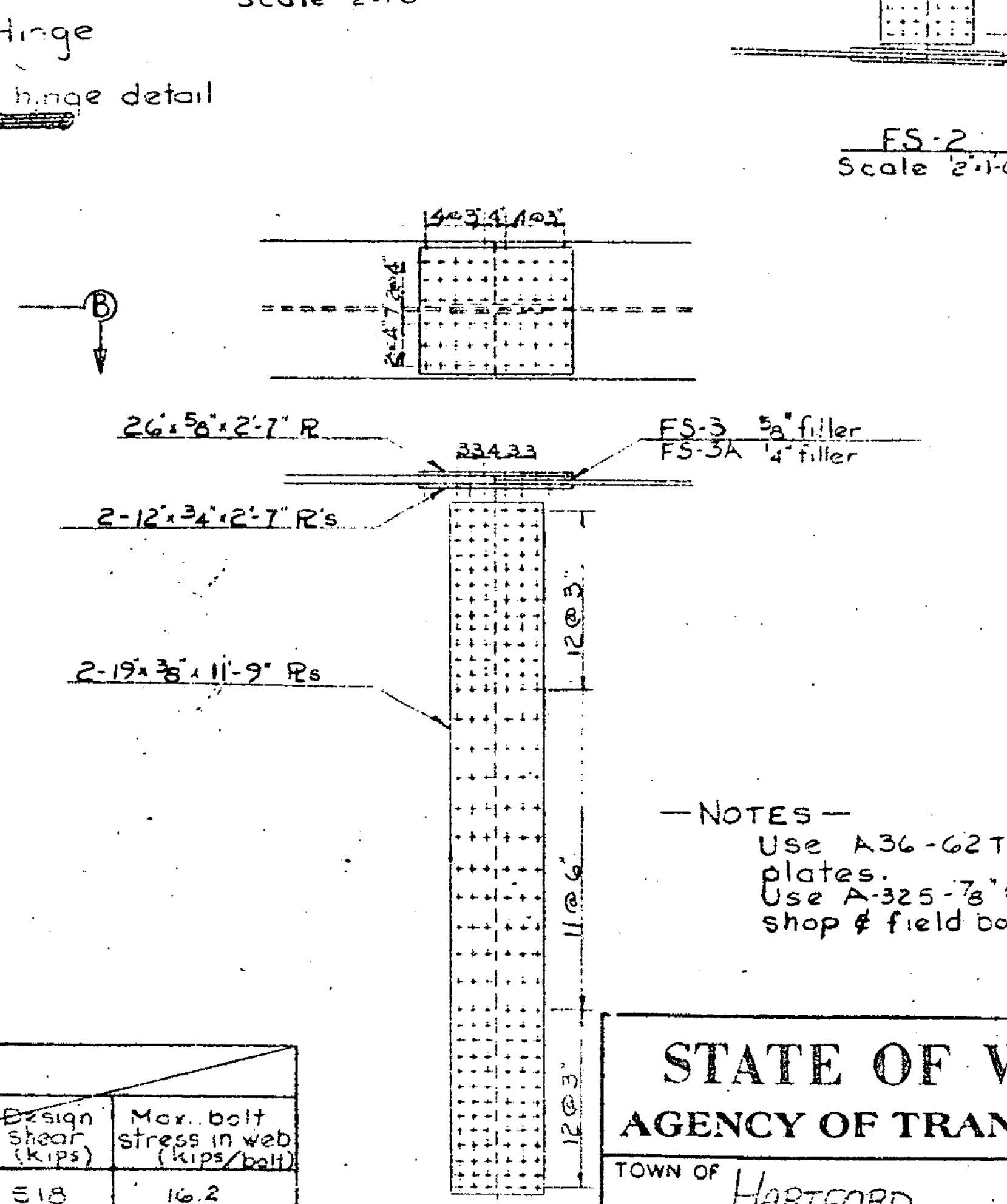
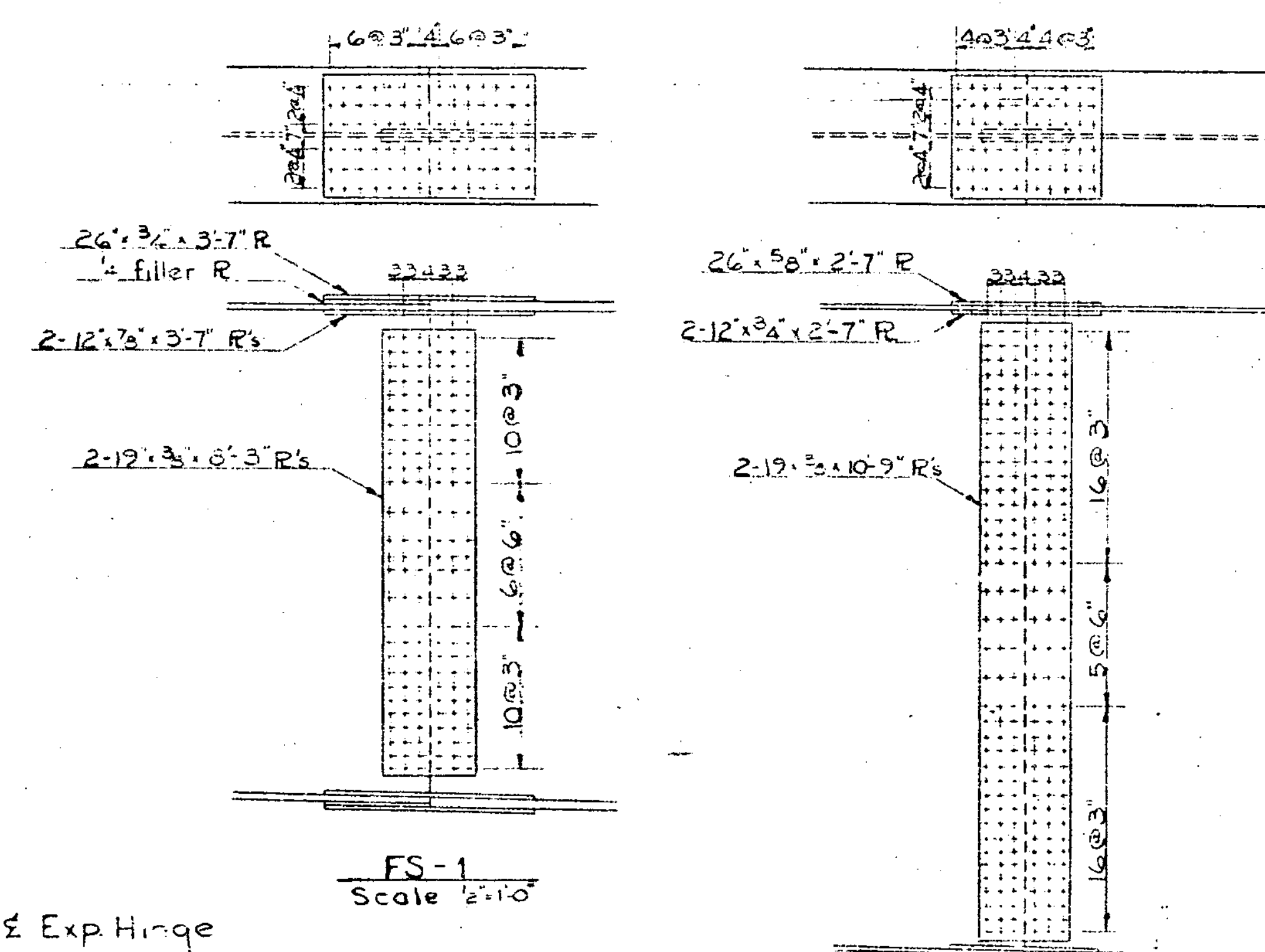
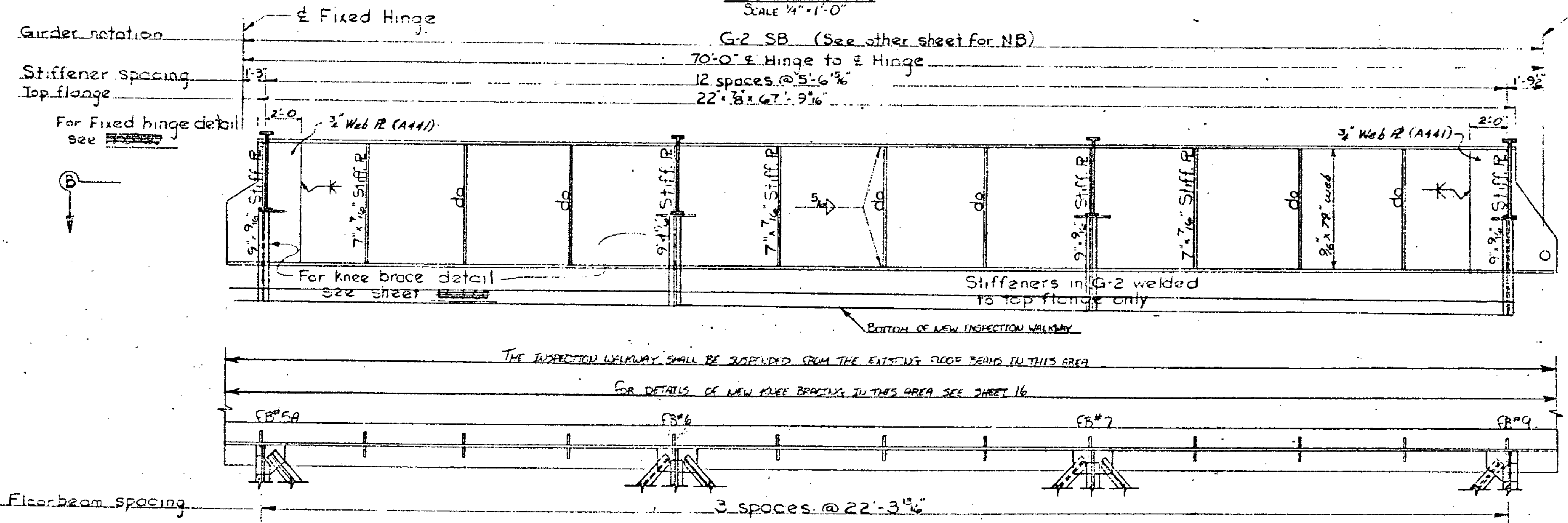
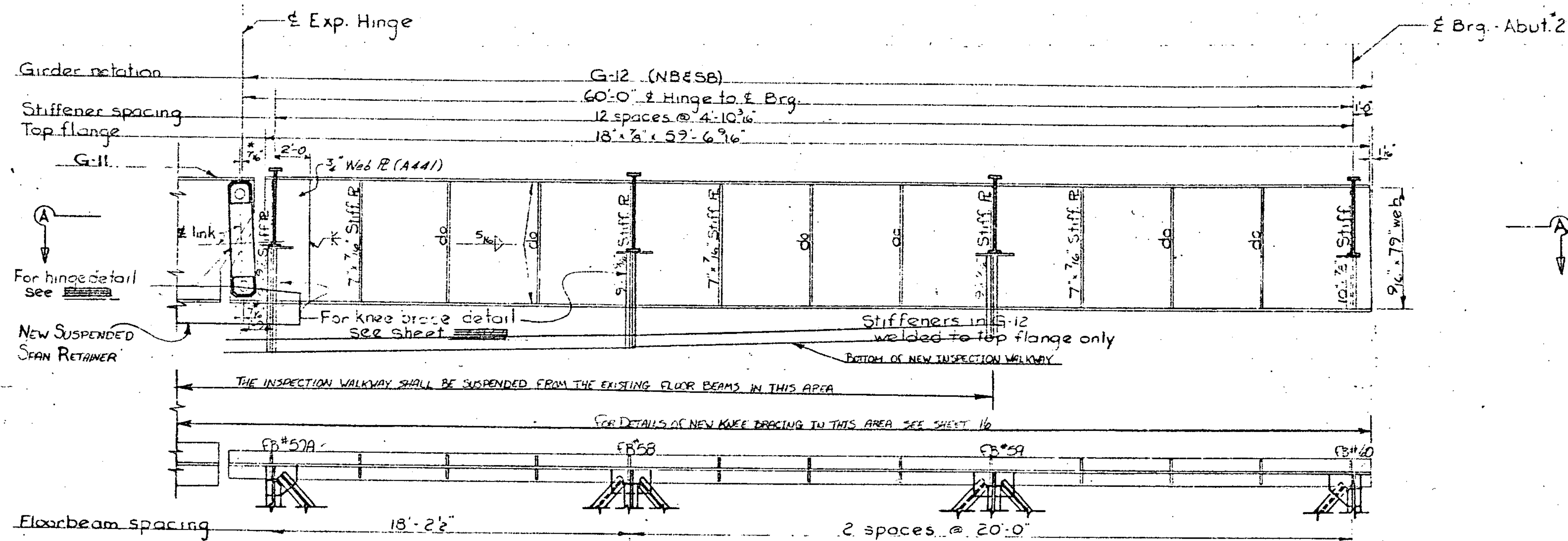


SECTION B-B

NOTE: THIS SHEET IS FROM THE ORIGINAL PROJECT PLANS,  
AND IS FOR REFERENCE PURPOSES ONLY. THESE BRIDGES  
WERE BUILT AS HARTFORD PROJECT NUMBER I-91-2(3)(22),  
PLANS DATED 1963.



|                                                                 |                               |
|-----------------------------------------------------------------|-------------------------------|
| <b>STATE OF VERMONT</b>                                         |                               |
| <b>AGENCY OF TRANSPORTATION</b>                                 |                               |
| TOWN OF <b>HARTFORD</b>                                         | BRIDGE NO. <b>44 N.E.5</b>    |
| HIGHWAY NO. <b>191</b>                                          | LOG STA. _____                |
|                                                                 | SURV. STA. _____              |
| <b>EXISTING GIRDER DETAILS</b>                                  |                               |
| <b>I-91 OVER THE WHITE RIVER AND U.S. Rte 4 AND Vt. Rte 100</b> |                               |
| DESIGNED BY <b>D.C. WILLEY</b>                                  | DRAWN BY <b>NET</b>           |
| CHECKED BY <b>D.C. WILLEY</b>                                   | BRIDGE DESIGN SUPERVISOR      |
| PROJECT <b>HARTFORD</b>                                         | DATE <b>7-17-84</b>           |
|                                                                 | DATE <b>7-84</b>              |
|                                                                 | PROJECT NO. <b>IR-91-2(1)</b> |
| BRIDGE SHEET NO. _____                                          | SHEET <b>9</b> OF <b>30</b>   |



— NOTES —  
Use A36-G2T steel for splice plates.  
Use A-325-7/8" high strength shop & field bolts.

| SPlice STRESS TABLE |                                   |                                      |                          |                         |                     |                                     |
|---------------------|-----------------------------------|--------------------------------------|--------------------------|-------------------------|---------------------|-------------------------------------|
| Splice notation     | Girder Resisting moment (ft-kips) | Actual Max. bending moment (ft-kips) | Actual Max. shear (kips) | Design moment (ft-kips) | Design shear (kips) | Max. bolt stress in web (kips/bolt) |
| FS-1                | 9500                              | 4500                                 | 213                      | 7130                    | 518                 | 16.2                                |
| FS-2                | 9800                              | 5200                                 | 262                      | 7500                    | 677                 | 13.2                                |
| FS-3                | 11,100                            | 5300                                 | 310                      | 8300                    | 750                 | 14.2                                |
| FS-3A               | 11,100                            | 4500                                 | 448                      | 8300                    | 750                 | 14.2                                |

Note: Splices are designed as friction type connections.

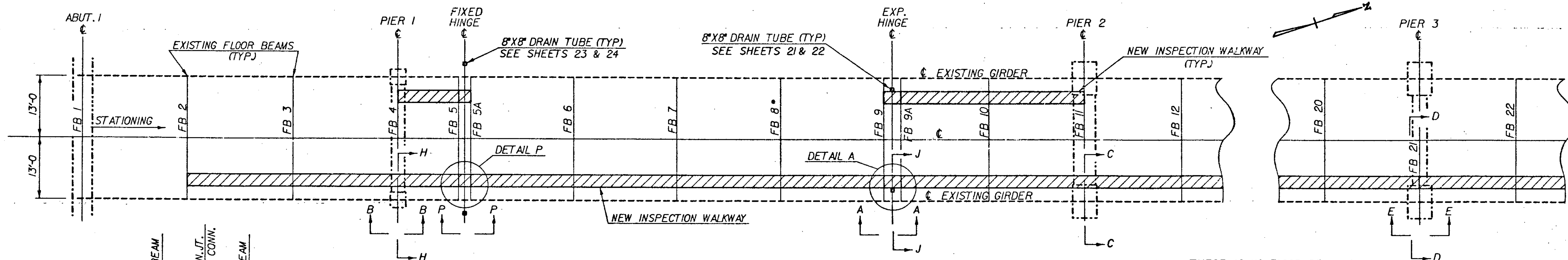
NOTE: THIS SHEET IS FROM THE ORIGINAL PROJECT PLANS AND IS FOR REFERENCE PURPOSES ONLY. THESE BRIDGES WERE BUILT FROM THE PLANS TITLED HARTFORD BRIDGE NUMBER T-41-2 (1982) DATED 1983.

**STATE OF VERMONT**  
**AGENCY OF TRANSPORTATION**

TOWN OF HARTFORD BRIDGE NO. 44 N & S  
HIGHWAY NO. 191 LOG STA. \_\_\_\_\_ SURV. STA. \_\_\_\_\_

EXISTING GIRDER DETAILS  
191 OVER THE WHITE RIVER, 1/3 BYE 4 AND VT. Rte 14

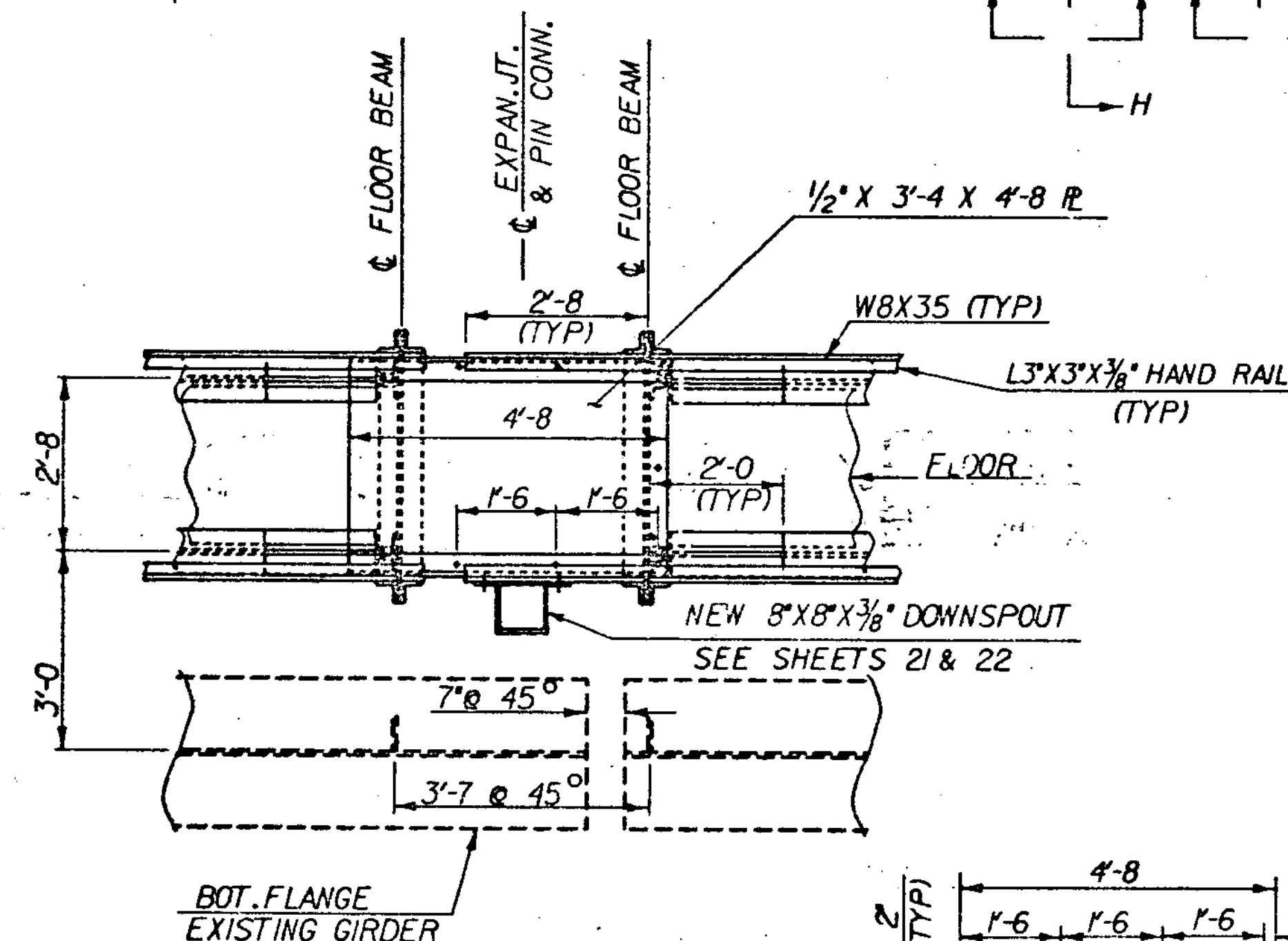
DESIGNED BY A. G. WOOD DRAWN BY NBT  
CHECKED BY D. C. WILEY DATE 7-11-84 BRIDGE DESIGN SUPERVISOR RS. HAUPT DATE 7-84  
PROJECT HARTFORD PROJECT NO. IR-91-2(1)  
BRIDGE SHEET NO. \_\_\_\_\_ SHEET 10 OF 50



• THERE IS NO FLOOR BEAM \*8 ON THE SOUTHBOUND BRIDGE.

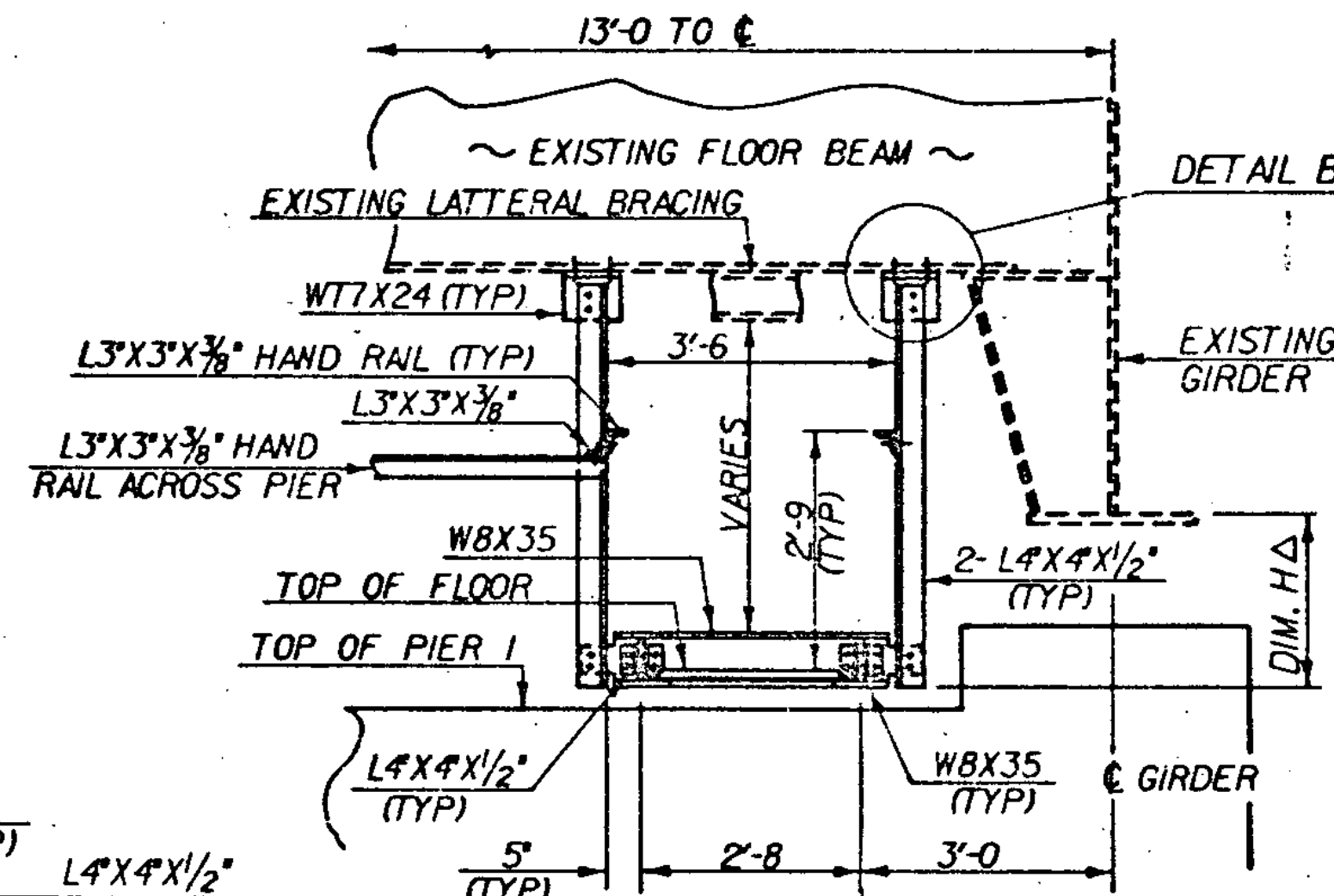
### INSPECTION WALKWAY PLAN

SCALE 1"=10'-0"



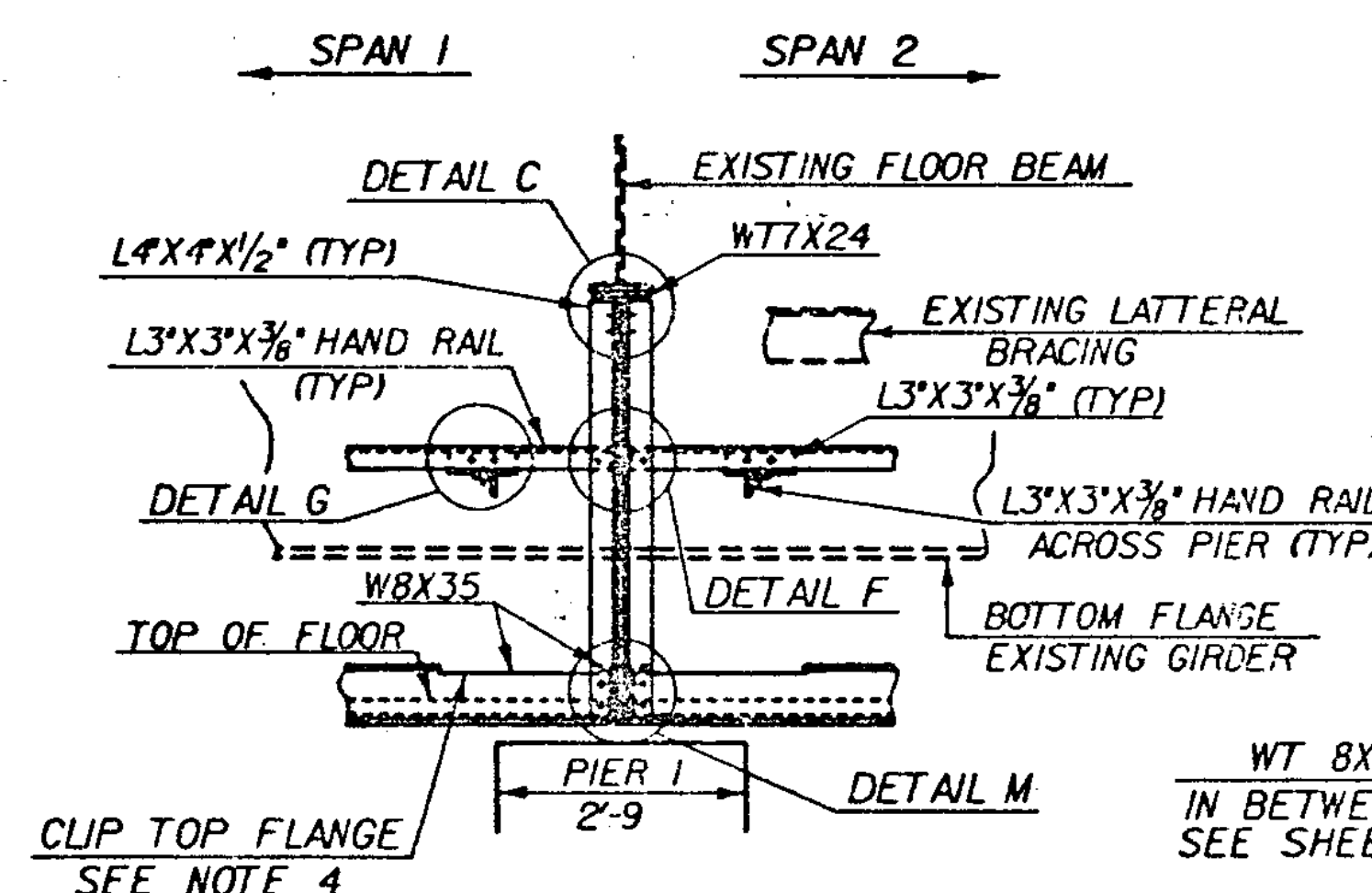
DETAIL A

SCALE 1/2"=1'-0"



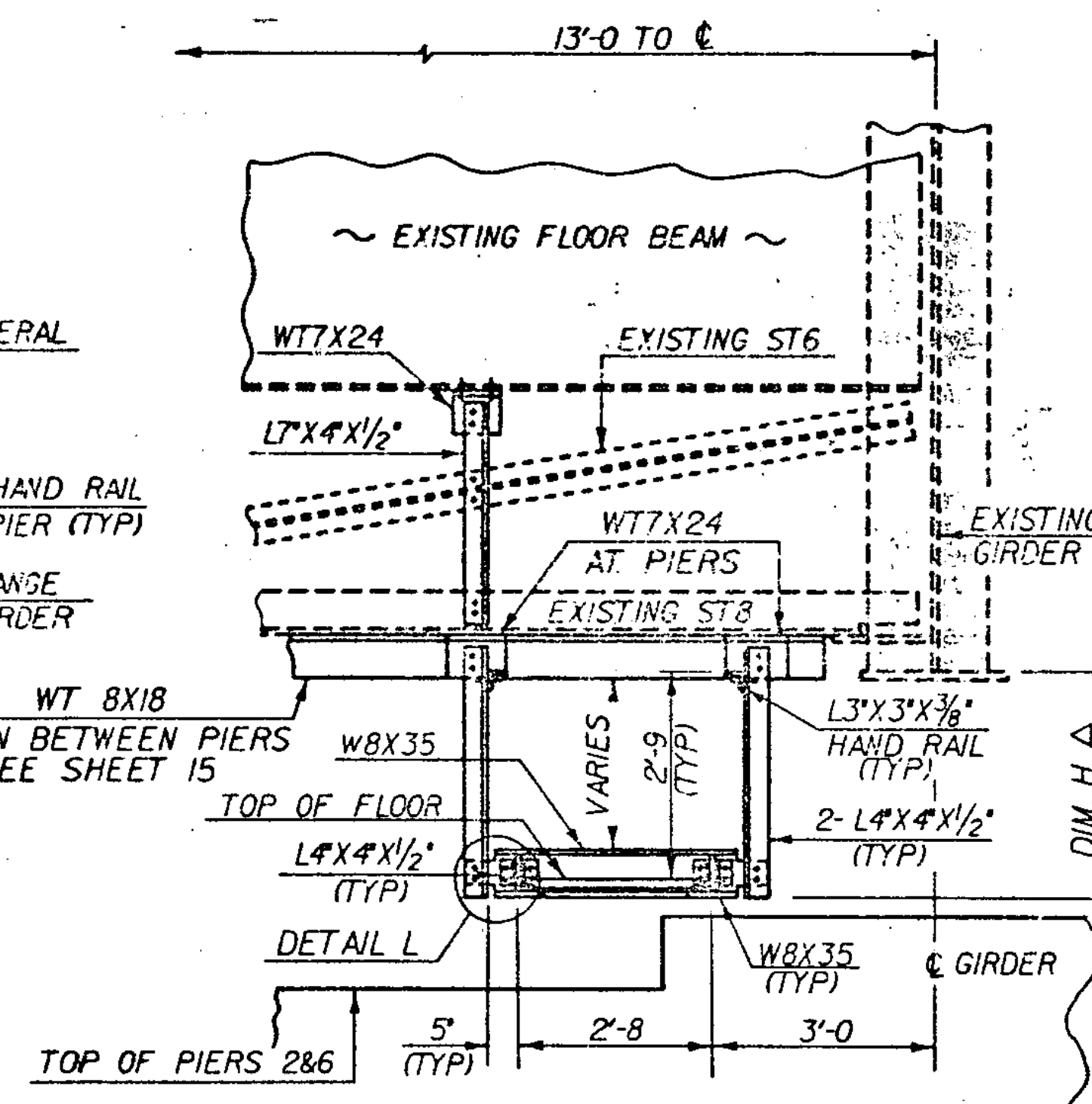
SECTION H - H

SCALE 1/2"=1'-0"



SECTION B - B

SCALE 1/2"=1'-0"



SECTION C - C

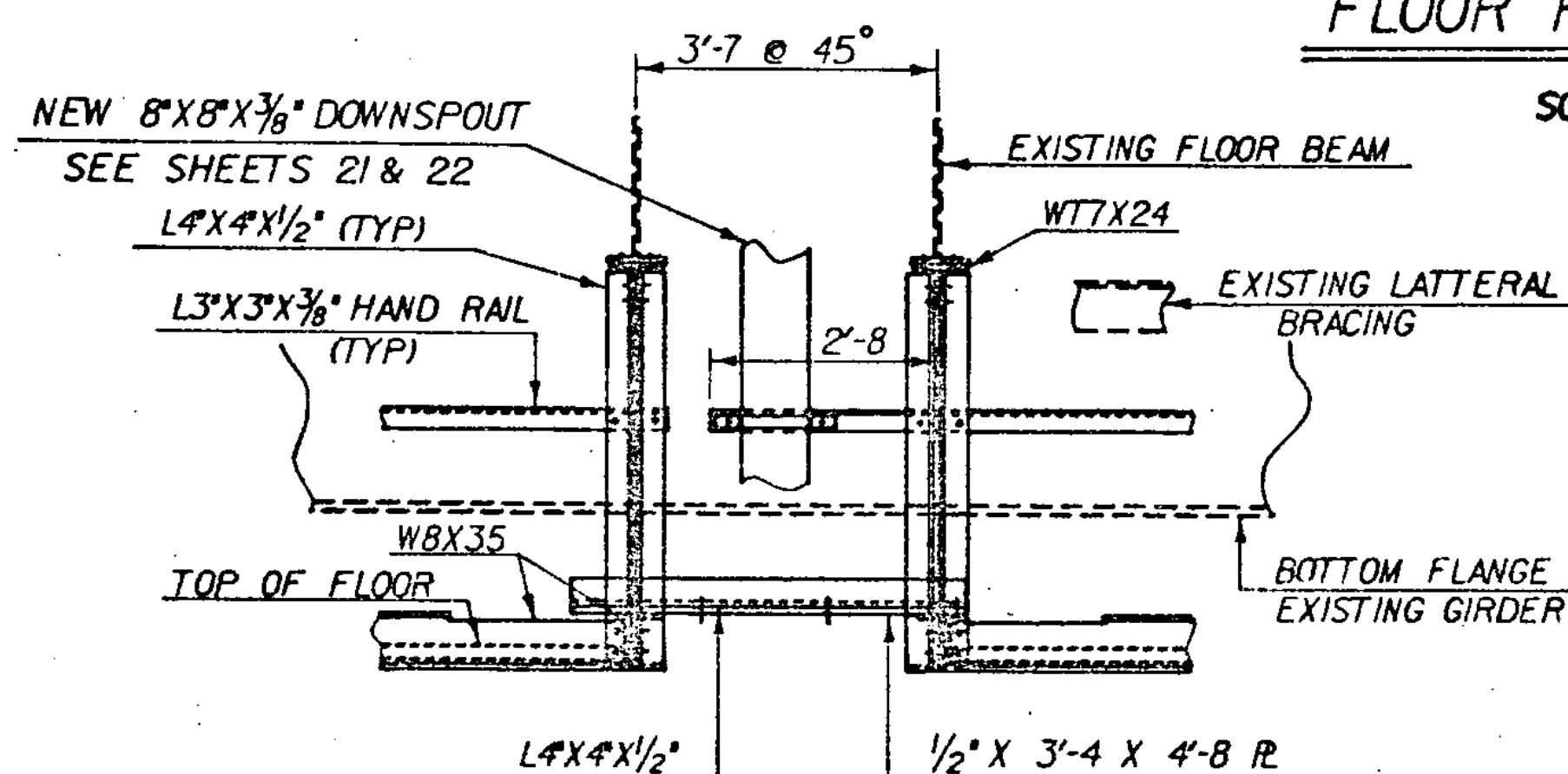
SCALE 1/2"=1'-0"

### NOTES

1. THE INSPECTION WALKWAY PLAN IS CONTINUED ON SHEET 12.
2. SEE SHEET 13 FOR SECTIONS D-D, E-E, P-P AND DETAIL P.
3. SEE SHEET 14 FOR BOLTED CONNECTION DETAILS.
4. THE TOP FLANGE OF THE W8X35 STRINGERS SHALL BE CUT BACK 1'-8" FROM EACH END TO FACILITATE INSTALLATION OF THE FLOOR.
5. SEE SHEET 15 FOR FLOOR SYSTEM DETAILS.
6. DETAIL A, SECTION A-A AND SECTION J-J ARE APPLICABLE FOR BOTH EXPANSION HINGE JOINTS.
7. THE SECTIONS ARE SHOWN AT THE PIERS, THE AREAS IN BETWEEN THE PIERS SHALL BE SIMILAR EXCEPT THERE WILL BE NO LADDERS.
8. THE INSPECTION WALKWAY SHALL BE SUSPENDED FROM THE EXISTING FLOOR BEAMS, FROM FLOOR BEAMS \*2-10 AND \*56-59, AS SHOWN IN SECTIONS B-B AND H-H.
9. THE INSPECTION WALKWAY SHALL BE SUSPENDED FROM THE EXISTING ST6 CROSS BRACING MEMBERS AND FLOOR BEAMS, FROM FLOOR BEAM \*11-21 AND \*45-55, AS SHOWN IN SECTION C-C.
10. THE INSPECTION WALKWAY SHALL BE ON TOP OF THE EXISTING ST6 CROSS BRACING MEMBERS, FROM FLOOR BEAMS \*21-45, AS SHOWN IN SECTIONS F-F AND G-G.
11. THE WALKWAY SHALL BE LEVEL IN THE TRANSVERSE DIRECTION.

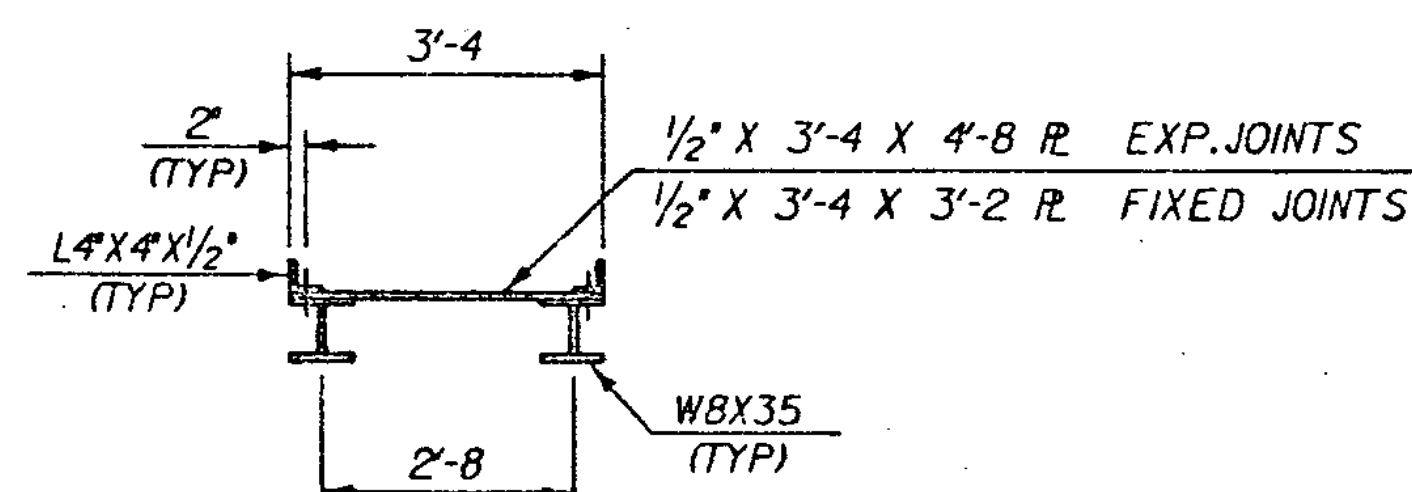
### FLOOR PLATE DETAIL

SCALE 1/2"=1'-0"



SECTION A - A

SCALE 1/2"=1'-0"

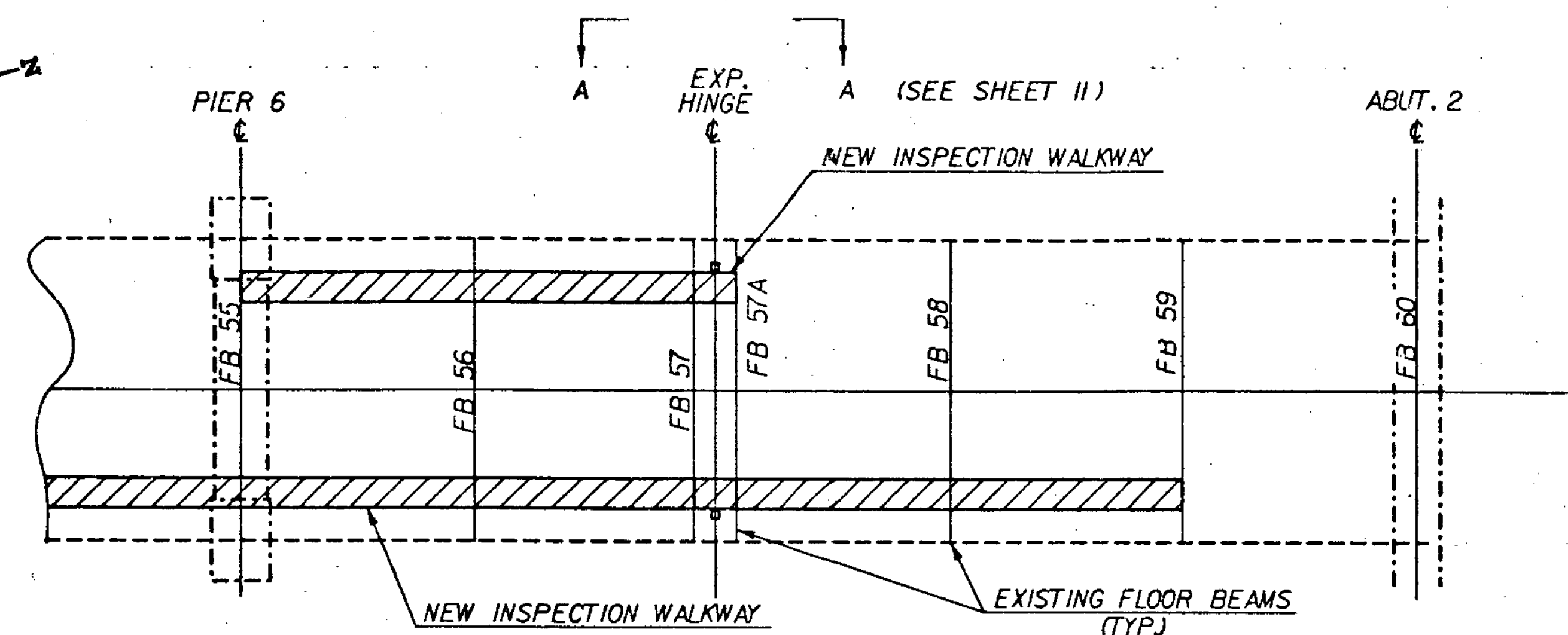
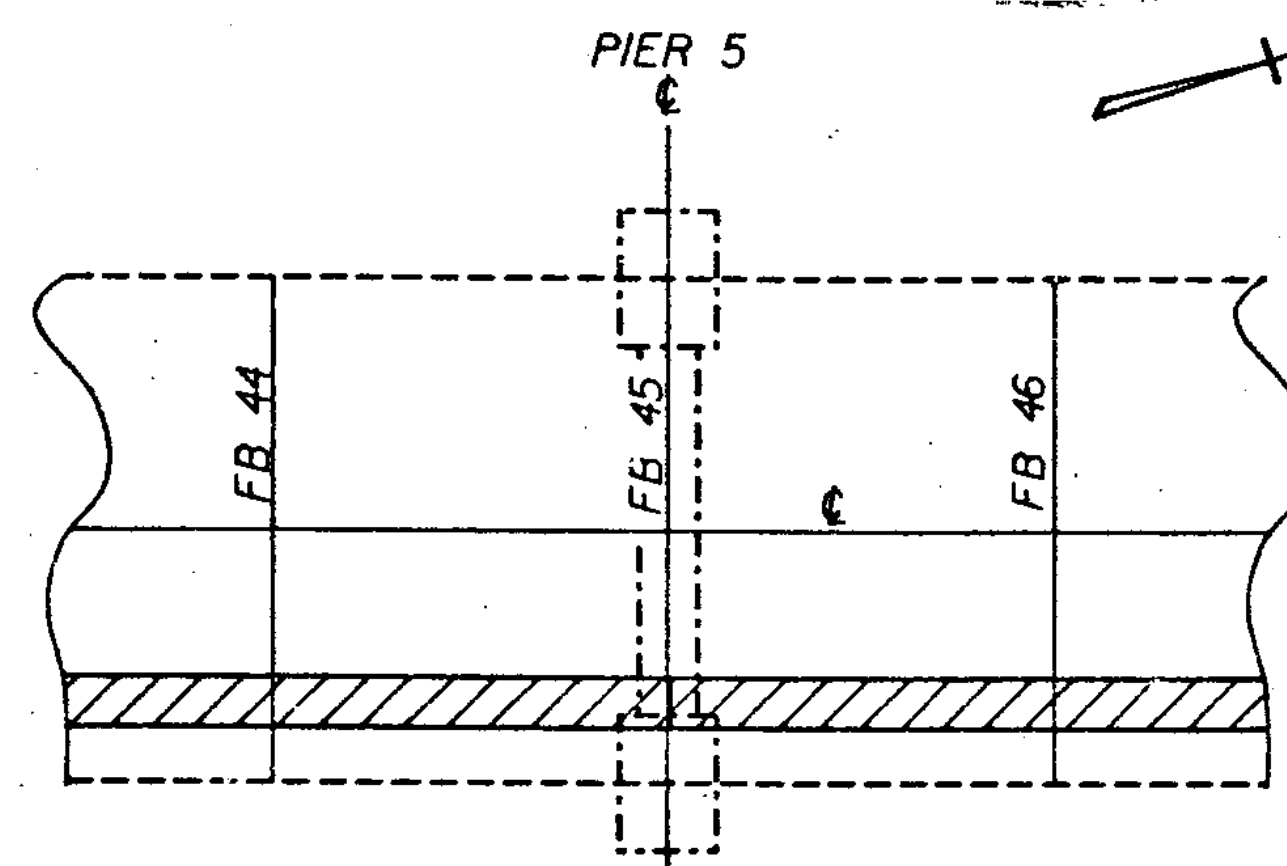
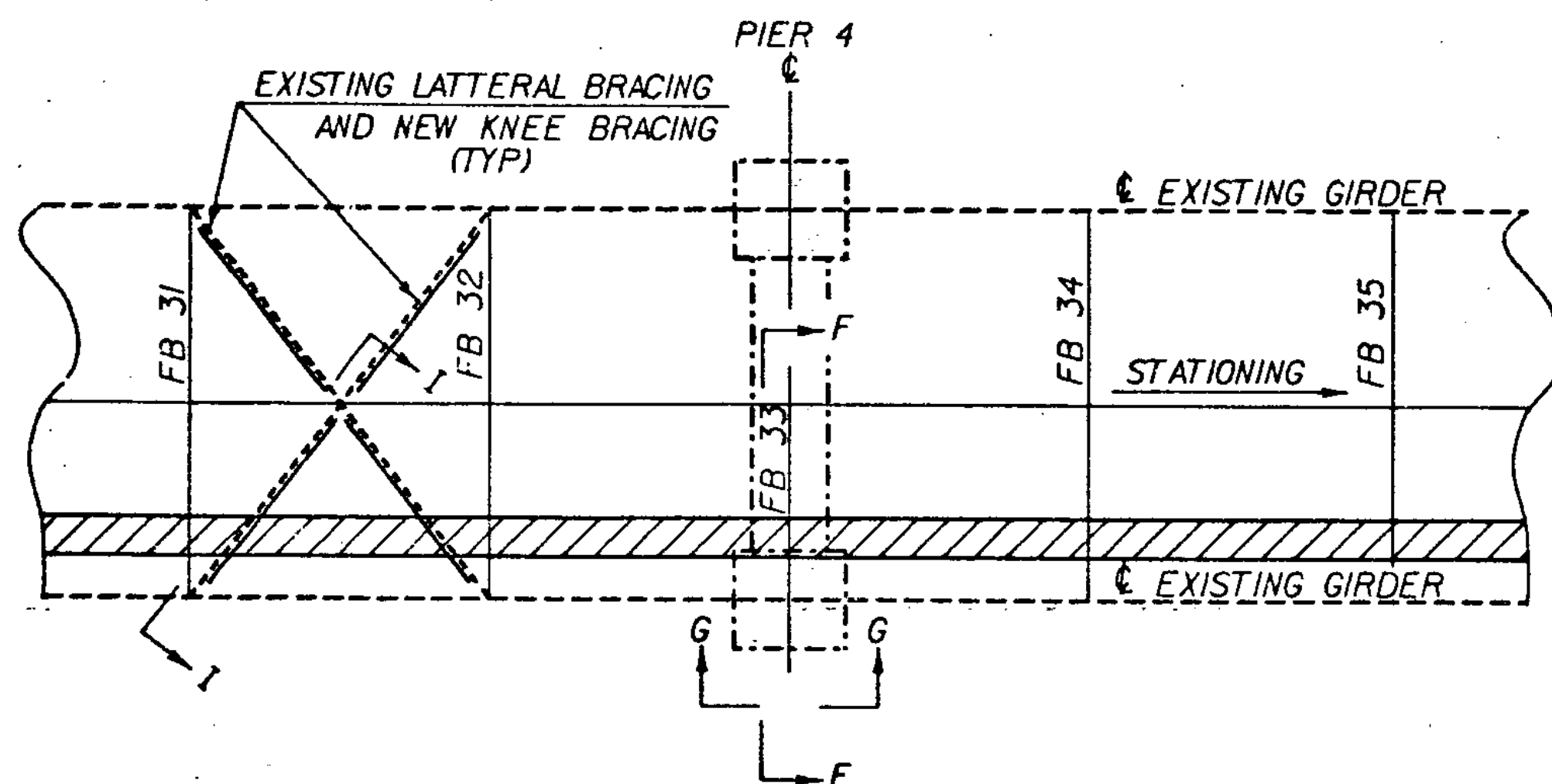


SECTION J - J

SCALE 1/2"=1'-0"

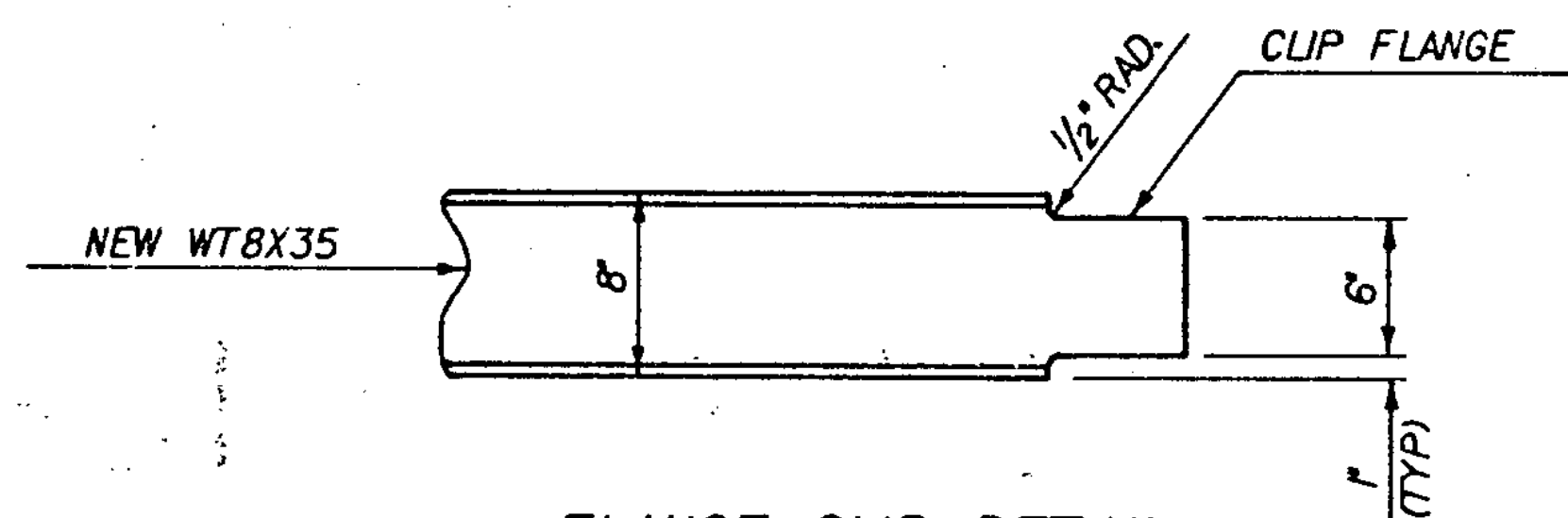
### STATE OF VERMONT AGENCY OF TRANSPORTATION

|                                                       |           |                          |
|-------------------------------------------------------|-----------|--------------------------|
| Town of                                               | HARTFORD  | Bridge No. 44 N & S      |
| Highway No.                                           | 191       | Log Sta.                 |
| INSPECTION WALKWAY DETAILS                            |           |                          |
| 191 OVER THE WHITE RIVER, U.S. RTE. 4 AND VT. RTE. 14 |           |                          |
| Designed By                                           | A. ELWOOD | Drawn By                 |
| Checked By                                            | A. ELWOOD | Date                     |
| PROJECT                                               |           | PROJECT NO.              |
| HARTFORD                                              |           | IR-91-2 (1)              |
| LOG. INFO.                                            |           | 05A1130,25182A115WLK.DGN |
| Bridge Sheet No.                                      |           | Sheet 11 of 30           |



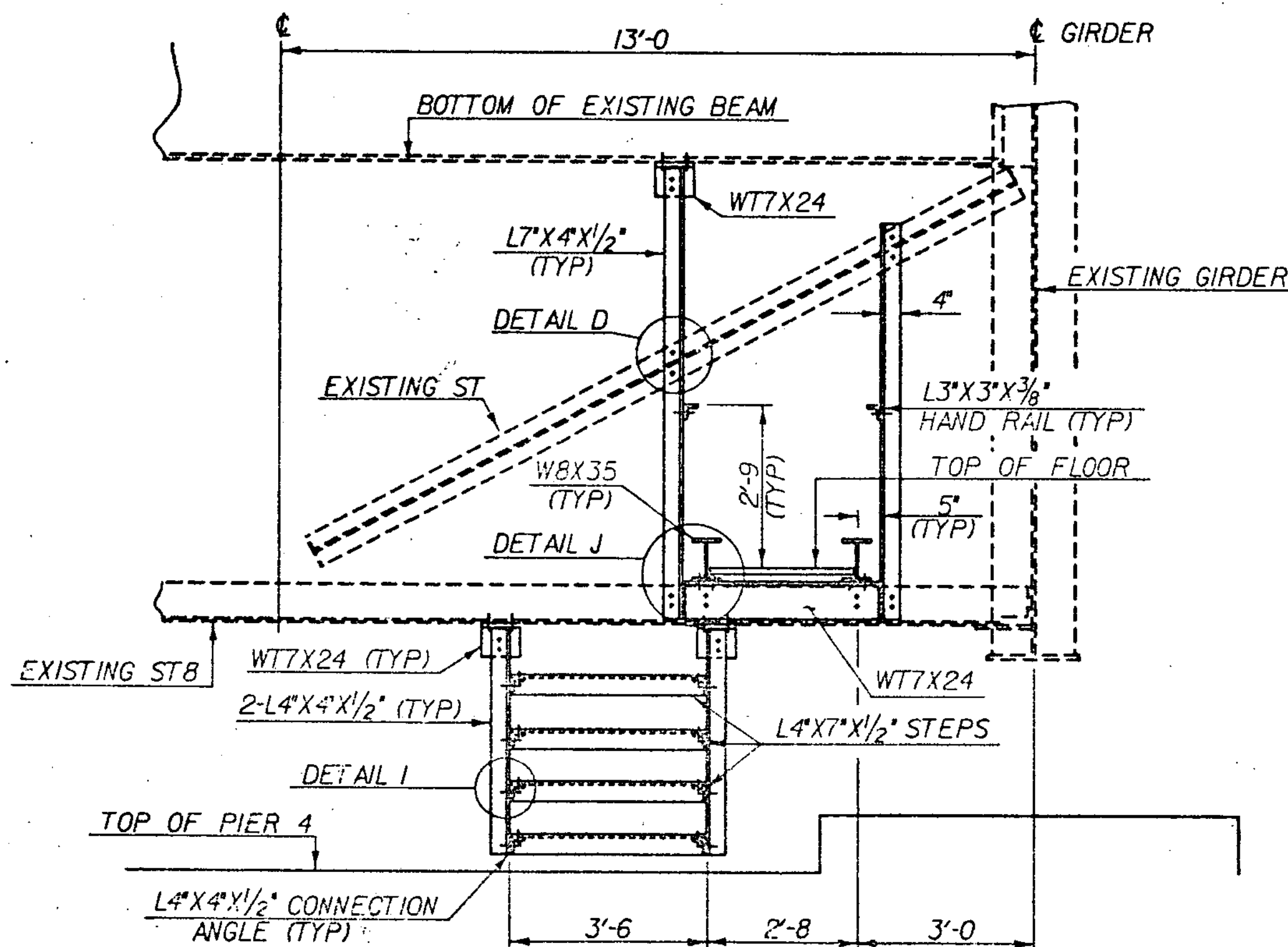
### INSPECTION WALKWAY PLAN

SCALE 1"=10'-0"



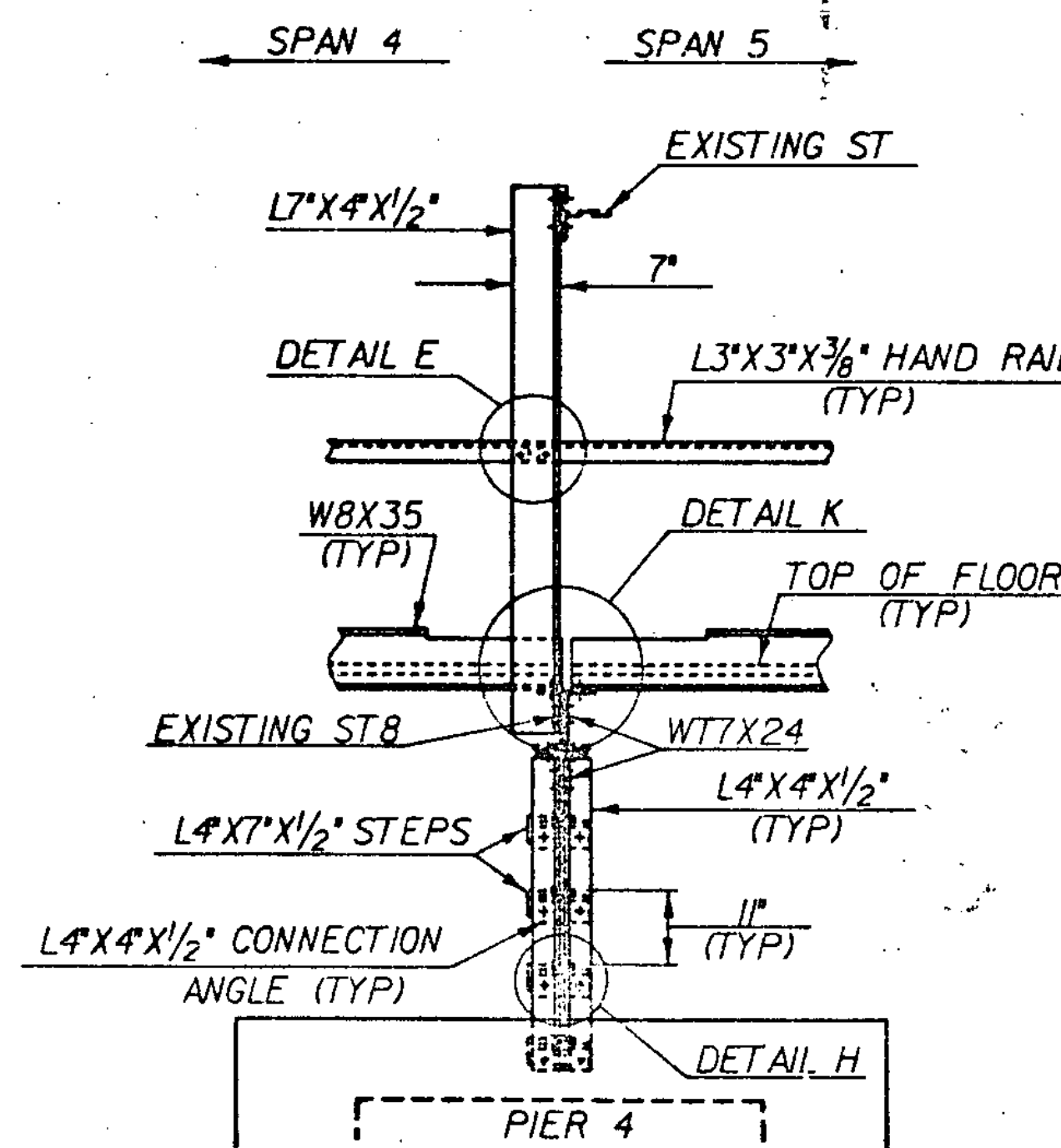
### FLANGE CLIP DETAIL

SCALE 1/2"=1'-0"



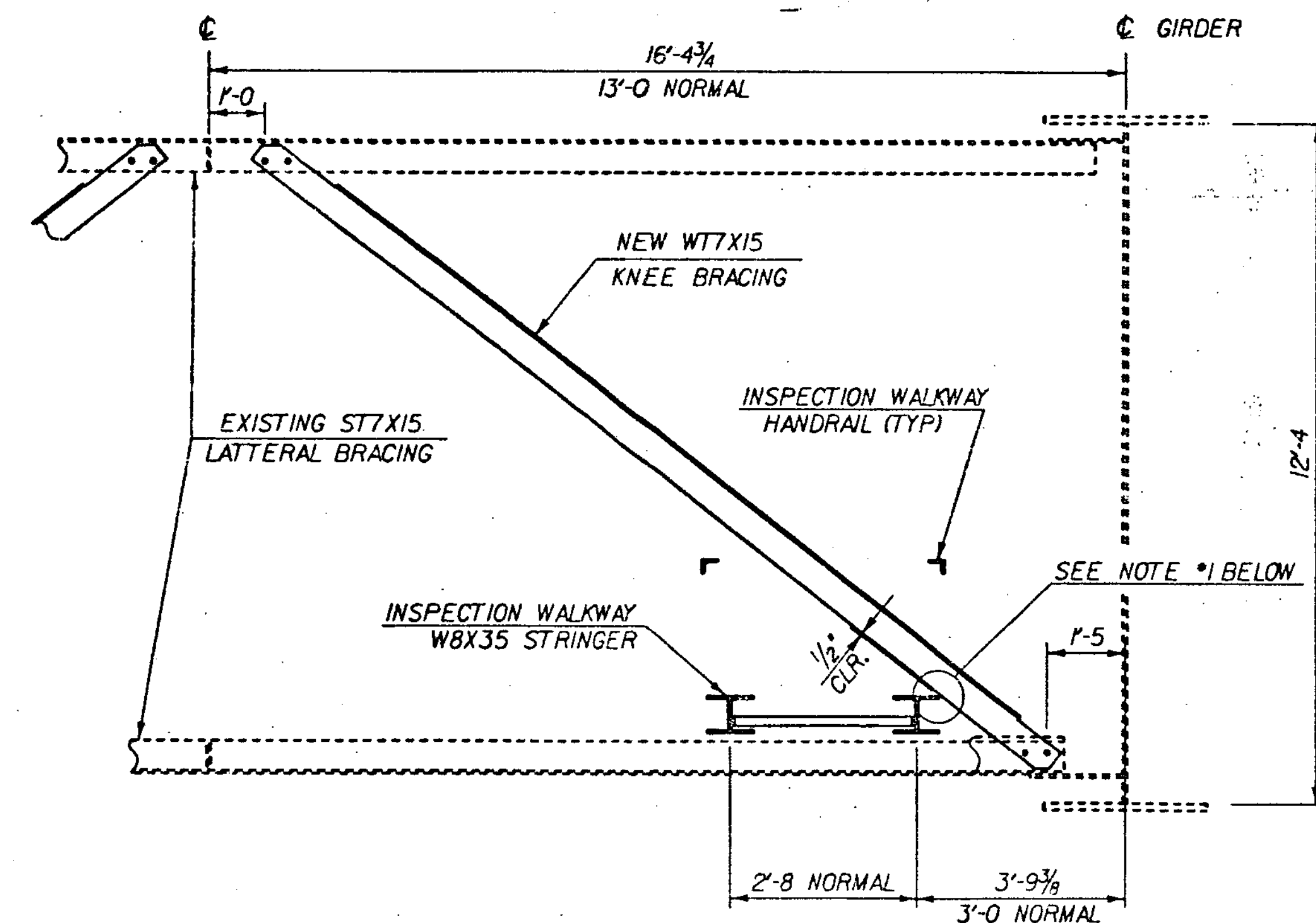
### SECTION F - F

SCALE 1/2"=1'-0"



### SECTION G - G

SCALE 1/2"=1'-0"



### SECTION I - I

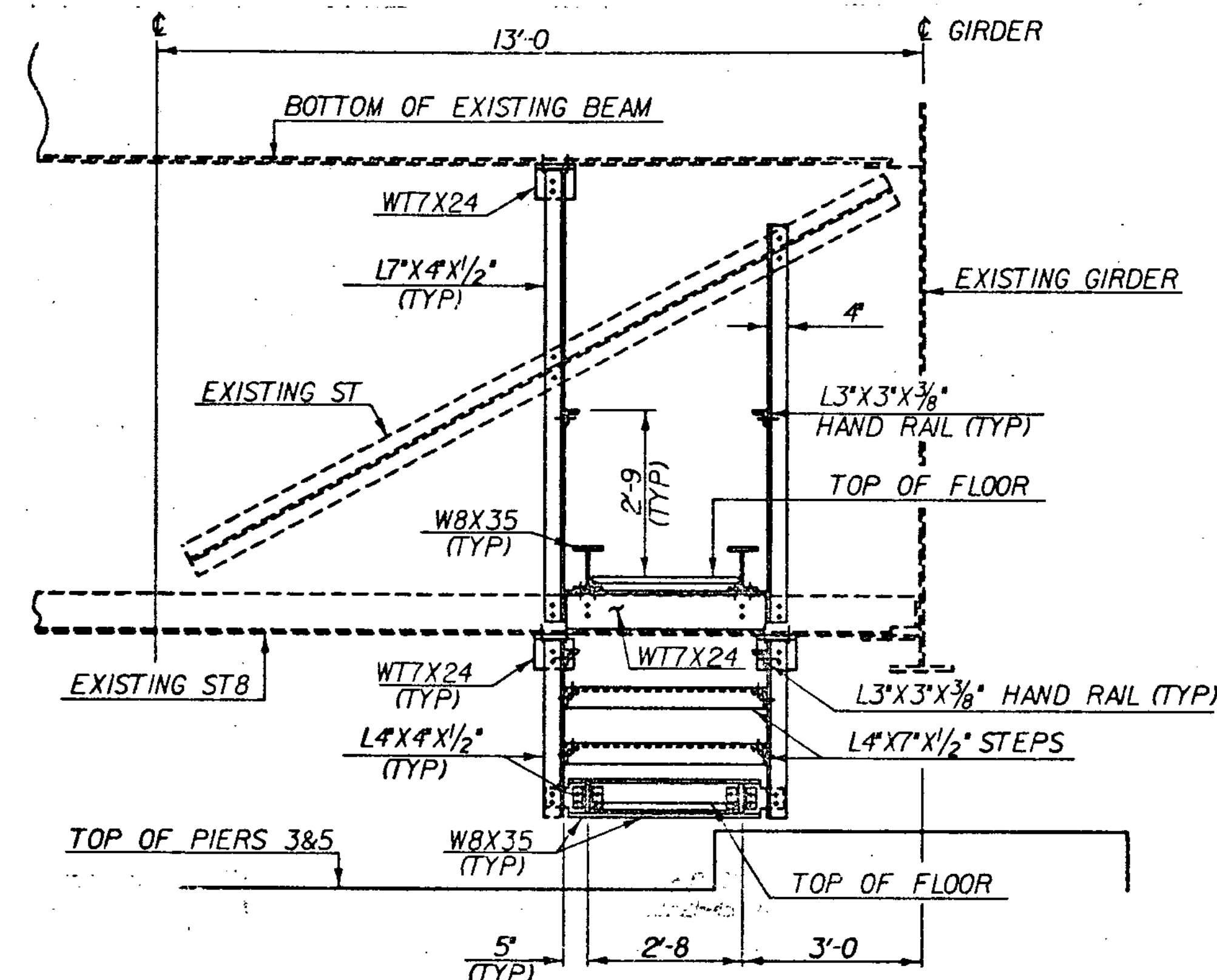
SCALE 1/2"=1'-0"

### NOTES

- CLEARANCE MAY BE TIGHT BETWEEN NEW INSPECTION WALKWAY MEMBERS AND THE NEW KNEE BRACING MEMBERS AS SHOWN IN SECTION I-I. INSTALL THE WALKWAY FIRST THEN INSTALL THE BRACING, ADJUSTING IT AS NECESSARY, TO FIT AROUND THE WALKWAY. THE WEB OF THE NEW WT7X15 KNEE BRACING MAY BE CLIPPED IN THE FIELD, TO FIT AROUND THE W8X35 WALKWAY STRINGER. INSTALL THE WALKWAY HANDRAIL AFTER THE KNEE BRACING MEMBERS ARE INSTALLED ADJUSTING THE HANDRAIL HEIGHT AS NECESSARY, TO FIT AROUND THE KNEE BRACING.
- SEE SHEET 14 FOR BOLTED CONNECTION DETAILS.

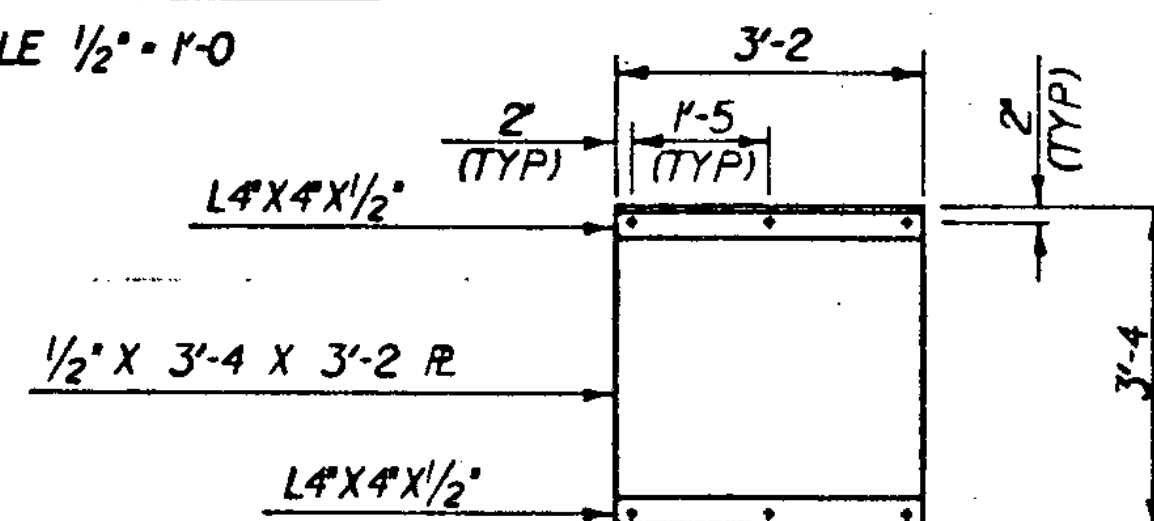
### STATE OF VERMONT AGENCY OF TRANSPORTATION

|                                                       |           |                          |              |
|-------------------------------------------------------|-----------|--------------------------|--------------|
| Town Of                                               | HARTFORD  | Bridge No.               | 44 N & S     |
| Highway No.                                           | 191       | Log Sta.                 |              |
|                                                       |           | Surv. Sta.               |              |
| INSPECTION WALKWAY DETAILS                            |           |                          |              |
| 191 OVER THE WHITE RIVER, U.S. RTE. 4 AND VT. RTE. 14 |           |                          |              |
| Designed By                                           | A. ELWOOD | Drawn By                 | D. C. WILLEY |
| Checked By                                            | A. ELWOOD | Date                     | 5-84         |
|                                                       |           | Bridge Design Supervisor | R. S. HAUP   |
| PROJECT                                               | HARTFORD  | PROJECT NO.              | IR-91-2 (1)  |
| I.C.C. Info. QSA1(30,25)82A115WLK.DGN                 |           |                          |              |
| Bridge Sheet No.                                      |           | Sheet                    | 12 of 30     |



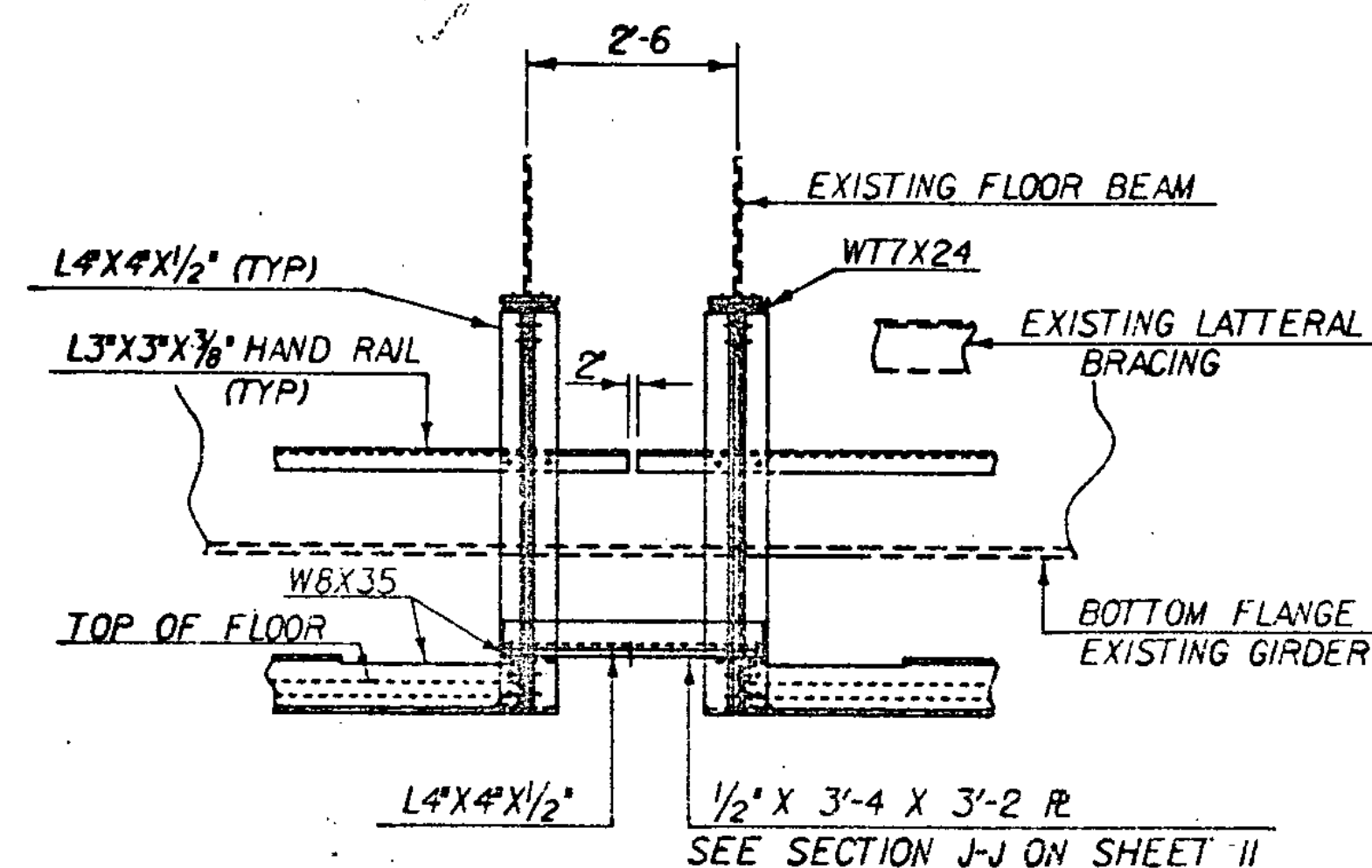
SECTION D - D

SCALE 1/2" = 1'-0"



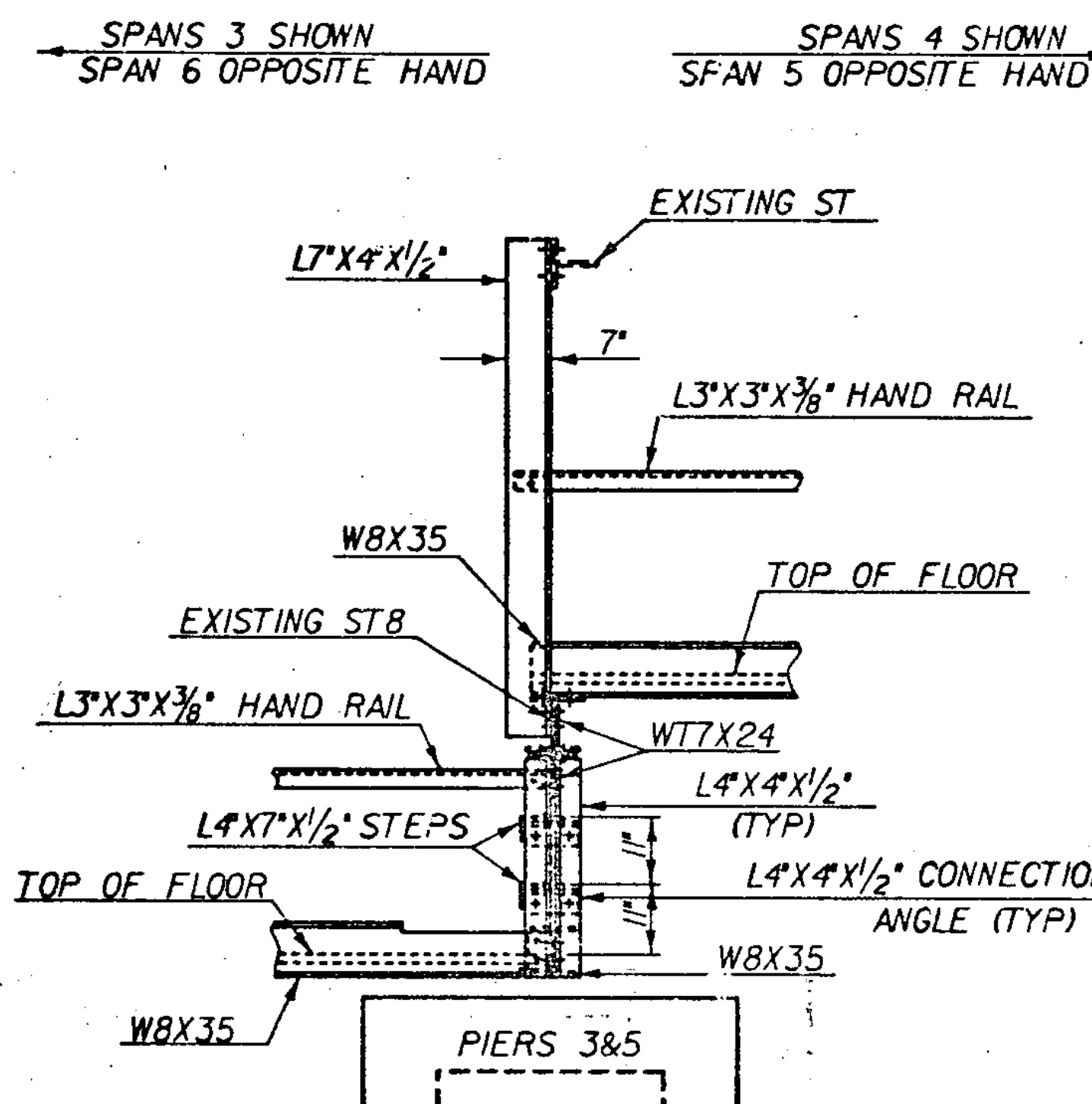
FLOOR PLATE DETAIL

SCALE 1/2" = 1'-0"



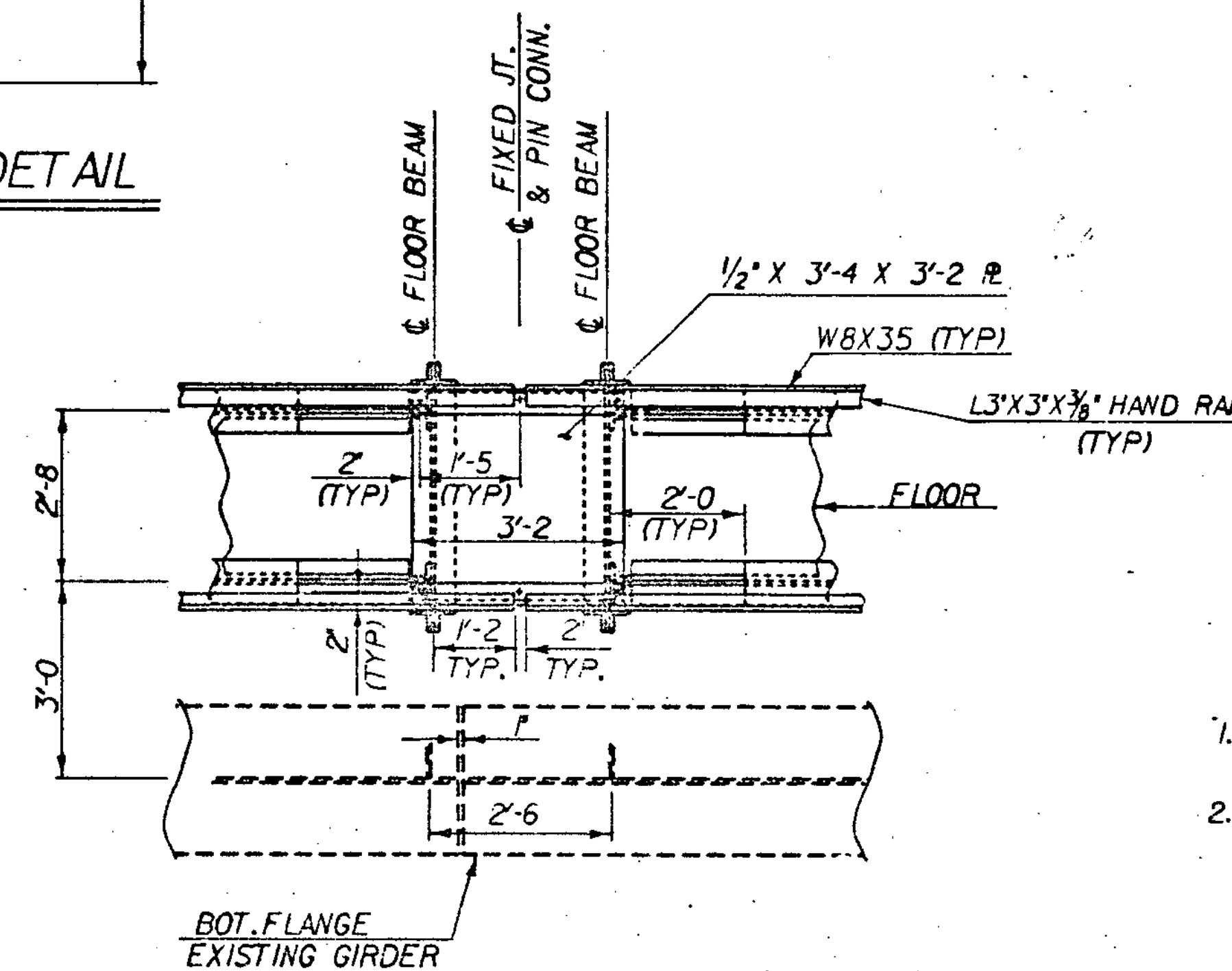
SECTION P - P

SCALE 1/2" = 1'-0"



SECTION E - E

SCALE 1/2" = 1'-0"



DETAIL P

SCALE 1/2" = 1'-0"

| NORTH BOUND LOCATION                                 | DIMENSION H * | EXISTING FLOOR BEAM SPACING  | SOUTH BOUND LOCATION                                 | DIMENSION H * | EXISTING FLOOR BEAM SPACING  |
|------------------------------------------------------|---------------|------------------------------|------------------------------------------------------|---------------|------------------------------|
| F.B.*1                                               | NO WALKWAY    | 22'-4"                       | F.B.*1                                               | NO WALKWAY    | 22'-4"                       |
| F.B.*2                                               | 2'-0"         | 22'-4"                       | F.B.*2                                               | 2'-0"         | 22'-4"                       |
| F.B.*3                                               | 2'-0"         | 22'-4"                       | F.B.*3                                               | 2'-0"         | 22'-4"                       |
| F.B.*4                                               | 2'-0"         | 22'-4"                       | F.B.*4                                               | 2'-0"         | 22'-4"                       |
| F.B.*5                                               | 2'-0 1/8"     | 12'-9" Δ                     | F.B.*5                                               | 2'-0 1/8"     | 12'-9" Δ                     |
| F.B.*5A                                              | 2'-0 1/8"     | 2'-6" Δ                      | F.B.*5A                                              | 2'-1 1/8"     | 2'-6" Δ                      |
| F.B.*6                                               | 2'-2"         | 2'-8 1/2"                    | F.B.*6                                               | 2'-2 1/2"     | 22'-3 1/16"                  |
| F.B.*7                                               | 2'-3 1/8"     | 2'-8 1/2"                    | F.B.*7                                               | 2'-4"         | 22'-3 1/16"                  |
| F.B.*8                                               | 2'-4 1/4"     | 2'-8 1/2"                    | **                                                   |               |                              |
| F.B.*9                                               | 2'-5 1/2"     | 2'-8 1/2"                    | F.B.*9                                               | 2'-5 1/2"     | 22'-3 1/16"                  |
| F.B.*9A                                              | 2'-6"         | 3'-7" @ 45° Δ                | F.B.*9A                                              | 2'-6"         | 3'-7" @ 45° Δ                |
| F.B.*10                                              | 2'-9"         | 18'-2 1/2" Δ                 | F.B.*10                                              | 2'-9"         | 18'-2 1/2" Δ                 |
| F.B.*11                                              | 3'-0"         | 20'-0"                       | F.B.*11                                              | 3'-0"         | 20'-0"                       |
| F.B.*12                                              | 3'-6"         | 20'-0"                       | F.B.*12                                              | 3'-6"         | 20'-0"                       |
| F.B.*13                                              | 3'-6"         | 20'-0"                       | F.B.*13                                              | 3'-6"         | 20'-0"                       |
| F.B.*14                                              | 3'-6"         | 20'-0"                       | F.B.*14                                              | 3'-6"         | 20'-0"                       |
| F.B.*15                                              | 3'-6"         | 20'-0"                       | F.B.*15                                              | 3'-6"         | 20'-0"                       |
| F.B.*16                                              | 3'-6"         | 20'-0"                       | F.B.*16                                              | 3'-6"         | 20'-0"                       |
| F.B.*17                                              | 3'-6"         | 20'-0"                       | F.B.*17                                              | 3'-6"         | 20'-0"                       |
| F.B.*18                                              | 3'-6"         | 20'-0"                       | F.B.*18                                              | 3'-6"         | 20'-0"                       |
| F.B.*19                                              | 3'-6"         | 20'-0"                       | F.B.*19                                              | 3'-6"         | 20'-0"                       |
| F.B.*20                                              | 3'-6"         | 20'-0"                       | F.B.*20                                              | 3'-6"         | 20'-0"                       |
| F.B.*21                                              | 2'-0"         | 20'-0"                       | F.B.*21                                              | 2'-0"         | 20'-0"                       |
| F.B.*21-45 WALKWAY STRINGERS ON TOP OF EXISTING STB. |               | 24 SPACES @ 20'-0" = 480'-0" | F.B.*21-45 WALKWAY STRINGERS ON TOP OF EXISTING STB. |               | 24 SPACES @ 20'-0" = 480'-0" |
| F.B.*45                                              | 2'-0"         | 20'-0"                       | F.B.*45                                              | 2'-0"         | 20'-0"                       |
| F.B.*46                                              | 3'-6"         | 20'-0"                       | F.B.*46                                              | 3'-6"         | 20'-0"                       |
| F.B.*47                                              | 3'-6"         | 20'-0"                       | F.B.*47                                              | 3'-6"         | 20'-0"                       |
| F.B.*48                                              | 3'-6"         | 20'-0"                       | F.B.*48                                              | 3'-6"         | 20'-0"                       |
| F.B.*49                                              | 3'-6"         | 20'-0"                       | F.B.*49                                              | 3'-6"         | 20'-0"                       |
| F.B.*50                                              | 3'-6"         | 20'-0"                       | F.B.*50                                              | 3'-6"         | 20'-0"                       |
| F.B.*51                                              | 3'-6"         | 20'-0"                       | F.B.*51                                              | 3'-6"         | 20'-0"                       |
| F.B.*52                                              | 3'-6"         | 20'-0"                       | F.B.*52                                              | 3'-6"         | 20'-0"                       |
| F.B.*53                                              | 3'-6"         | 20'-0"                       | F.B.*53                                              | 3'-6"         | 20'-0"                       |
| F.B.*54                                              | 3'-6"         | 20'-0"                       | F.B.*54                                              | 3'-0 1/2"     | 20'-0"                       |
| F.B.*55                                              | 3'-0"         | 20'-0"                       | F.B.*55                                              | 3'-0"         | 20'-0"                       |
| F.B.*56                                              | 2'-11"        | 18'-2 1/2" Δ                 | F.B.*56                                              | 2'-11"        | 18'-2 1/2" Δ                 |
| F.B.*57                                              | 2'-10 1/8"    | 18'-2 1/2" Δ                 | F.B.*57                                              | 2'-10 1/8"    | 18'-2 1/2" Δ                 |
| F.B.*57A                                             | 2'-9 5/8"     | 3'-7" @ 45° Δ                | F.B.*57A                                             | 2'-9 5/8"     | 3'-7" @ 45° Δ                |
| F.B.*58                                              | 2'-3 3/8"     | 18'-2 1/2"                   | F.B.*58                                              | 2'-3 3/8"     | 18'-2 1/2"                   |
| F.B.*59                                              | 1'-8 3/8"     | 20'-0"                       | F.B.*59                                              | 1'-8 3/8"     | 20'-0"                       |
| F.B.*60                                              | NO WALKWAY    | 20'-0"                       | F.B.*60                                              | NO WALKWAY    | 20'-0"                       |

NOTE: THE INSPECTION WALKWAYS SHALL BE INSTALLED THE FULL LENGTH OF BOTH BRIDGES ON THE RIGHT (EAST) SIDE AND SHALL BE INSTALLED WHERE INDICATED BY A Δ ON THE LEFT (WEST) SIDE.

\* DIMENSION H IS THE VERTICAL DISTANCE FROM THE TOP OF THE EXISTING GIRDERS BOTTOM FLANGE TO THE BOTTOM OF THE NEW W8X35 WALKWAY STRINGERS.

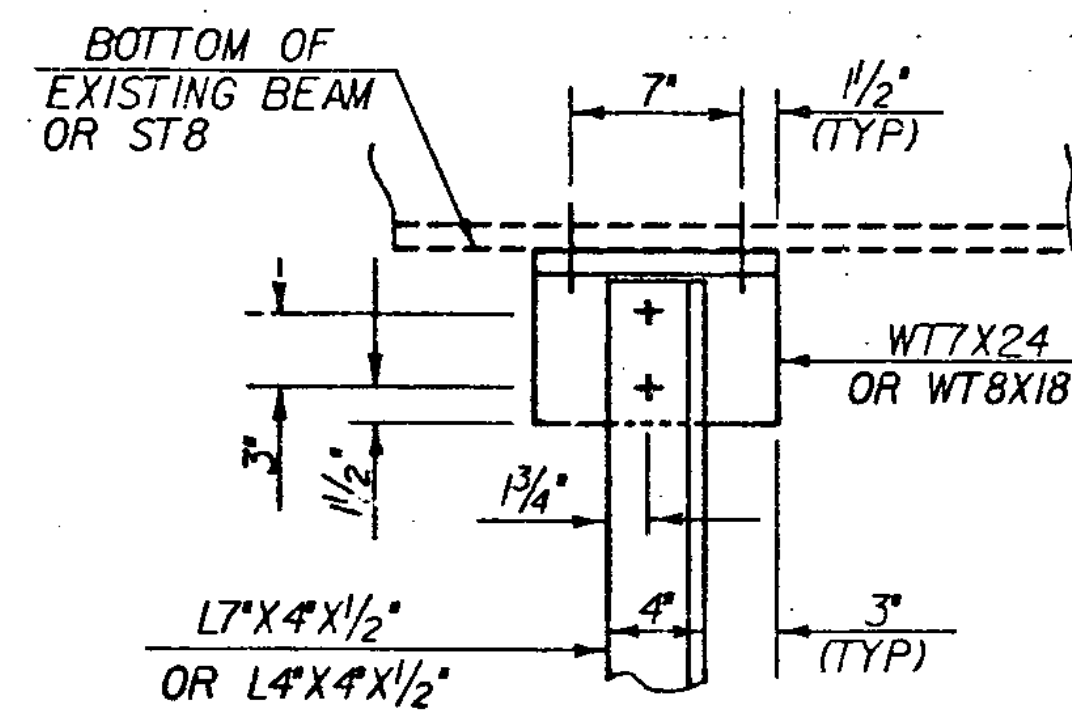
\*\* THERE IS NO FLOOR BEAM \*8 ON THE SOUTH BOUND BRIDGE.

## NOTES

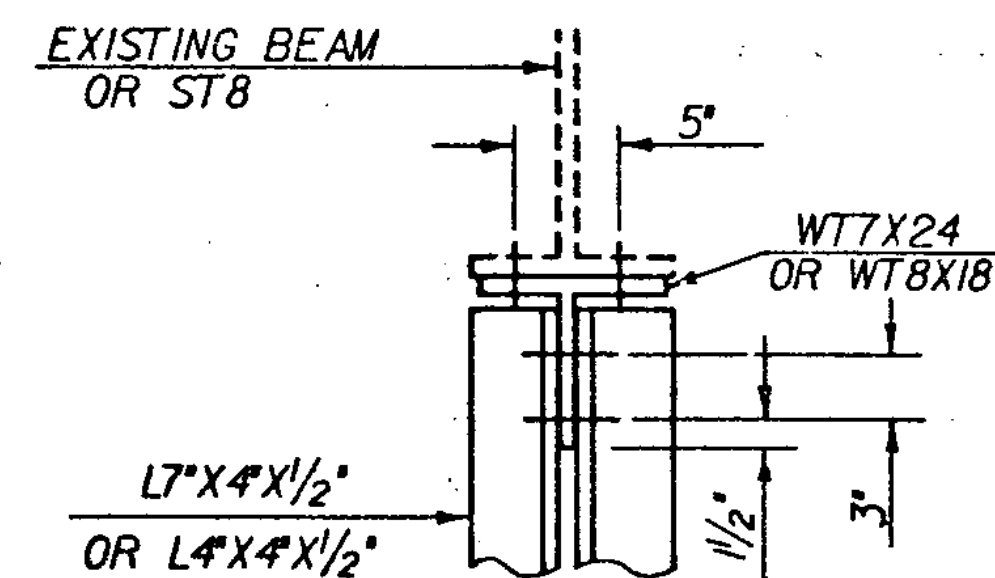
1. FOR LOCATION OF SECTIONS D-D, E-E, P-P AND DETAIL P, SEE SHEET II.
2. ALL DIMENSIONS SHOWN ON THESE PLANS ARE HORIZONTAL OR VERTICAL, AND ARE GIVEN AT 68°, UNLESS OTHERWISE NOTED. BOTH THE NORTHBOUND AND SOUTHBOUND BRIDGES ARE ON A -1.325% GRADE.

## STATE OF VERMONT AGENCY OF TRANSPORTATION

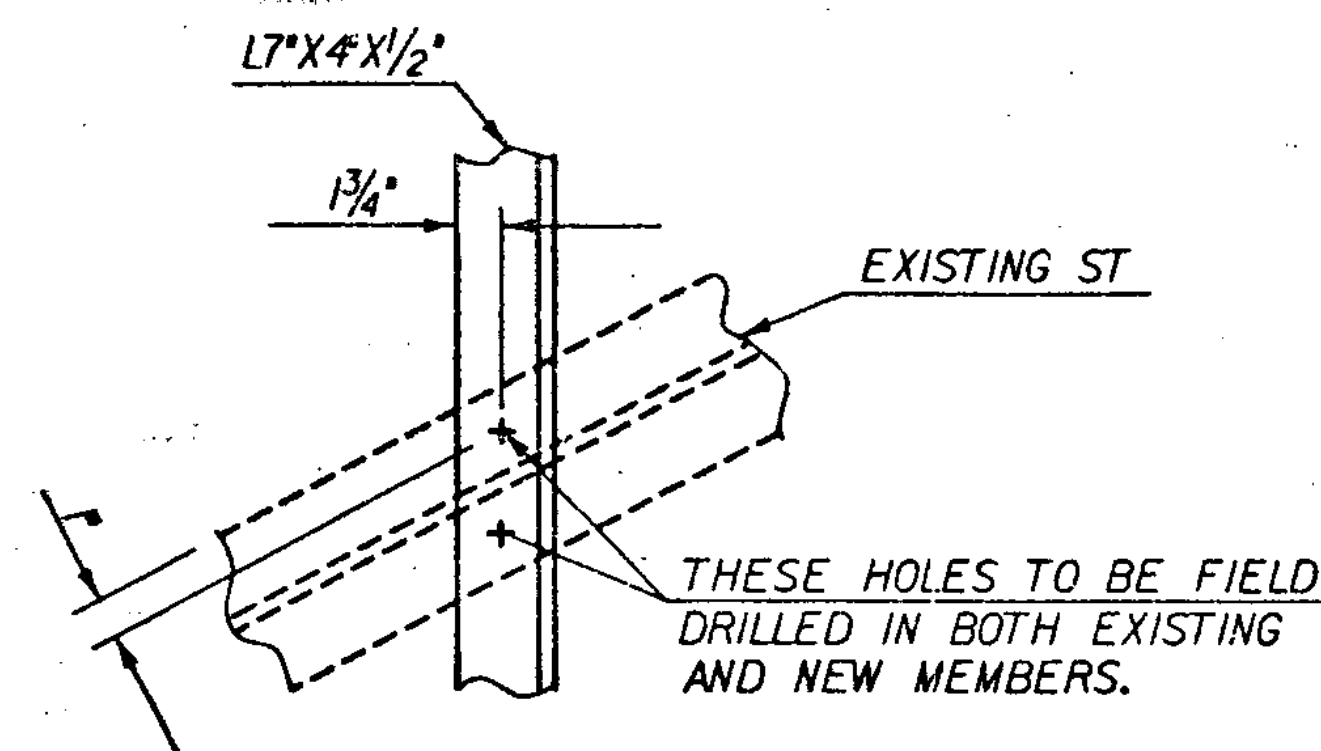
|                                                       |           |                          |                      |
|-------------------------------------------------------|-----------|--------------------------|----------------------|
| Town Of                                               | HARTFORD  | Bridge No.               | 44 N & S             |
| Highway No.                                           | 191       | Log Sta.                 |                      |
|                                                       |           | Surv. Sta.               |                      |
| INSPECTION WALKWAY DETAILS                            |           |                          |                      |
| 191 OVER THE WHITE RIVER, U.S. RTE. 4 AND VT. RTE. 14 |           |                          |                      |
| Designed By                                           | A. ELWOOD | Drawn By                 | D. C. WILLEY         |
| Checked By                                            | A. ELWOOD | Date                     | 5-84                 |
|                                                       |           | Bridge Design Supervisor | R. S. HAUT Date 5-84 |
| PROJECT                                               | HARTFORD  | PROJECT NO.              | IR-91-2 (1)          |
| I.G.C. Info. QSA1130,25182A115WLK.DGN                 |           |                          |                      |
| Bridge Sheet No.                                      |           | Sheet                    | 13 of 30             |



DETAIL B

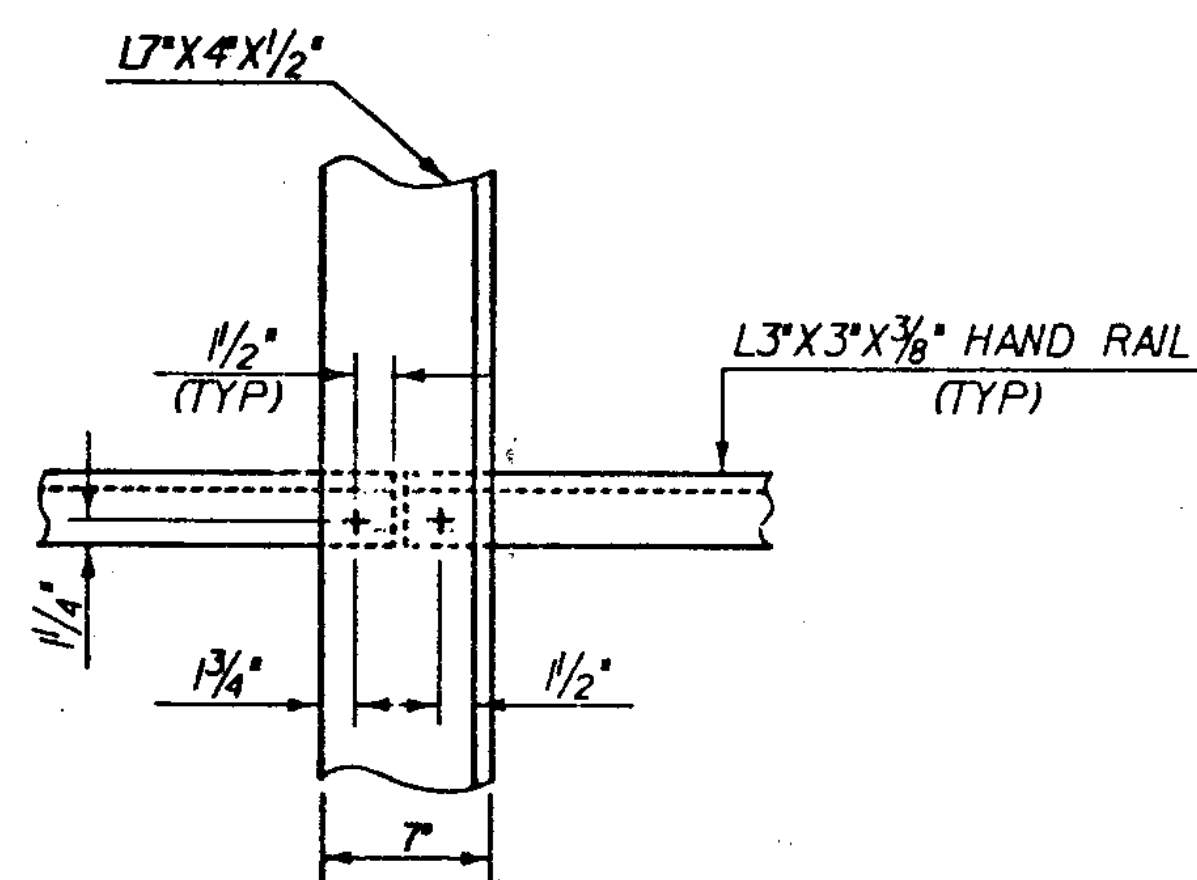


DETAIL C

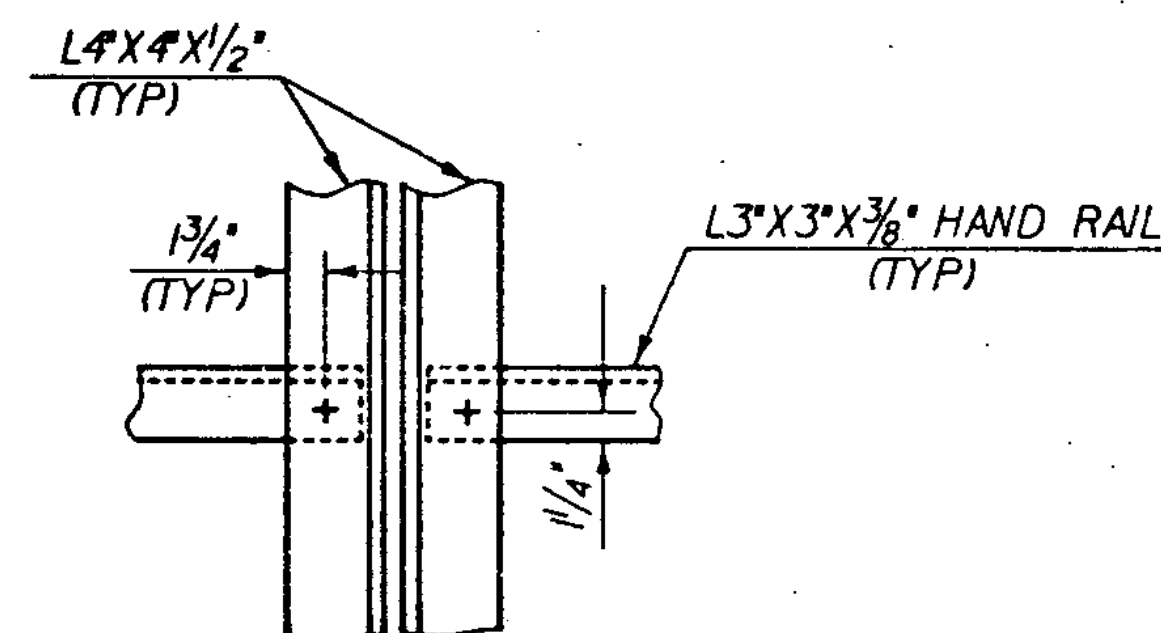


DETAIL D

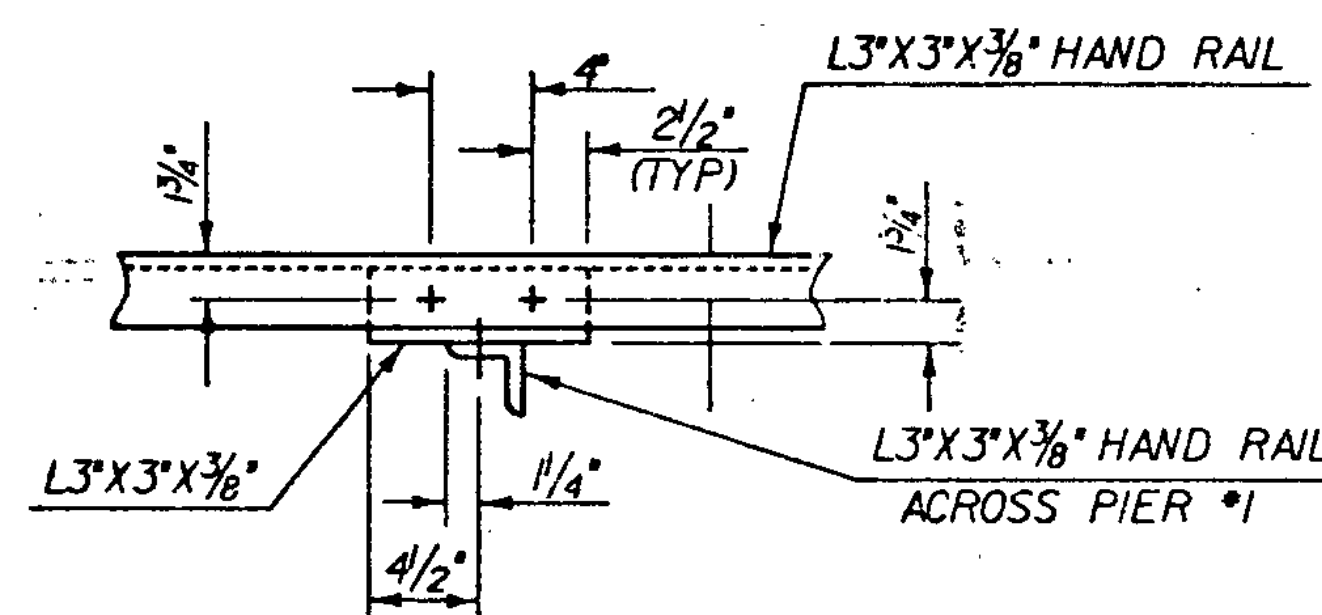
- NOTES**
1. SHOP DRILL  $1\frac{5}{16}$ " DIA. HOLES IN ALL NEW MEMBERS, UNLESS OTHERWISE NOTED. FIELD DRILL  $1\frac{5}{16}$ " DIA. HOLES IN ALL EXISTING MEMBERS. USE  $\frac{7}{8}$ " DIA. HIGH STRENGTH (ASTM A325) BOLTS FOR CONNECTIONS.
  2. SEE SHEETS 11 THRU 13 FOR LOCATION OF BOLTED CONNECTION DETAILS.



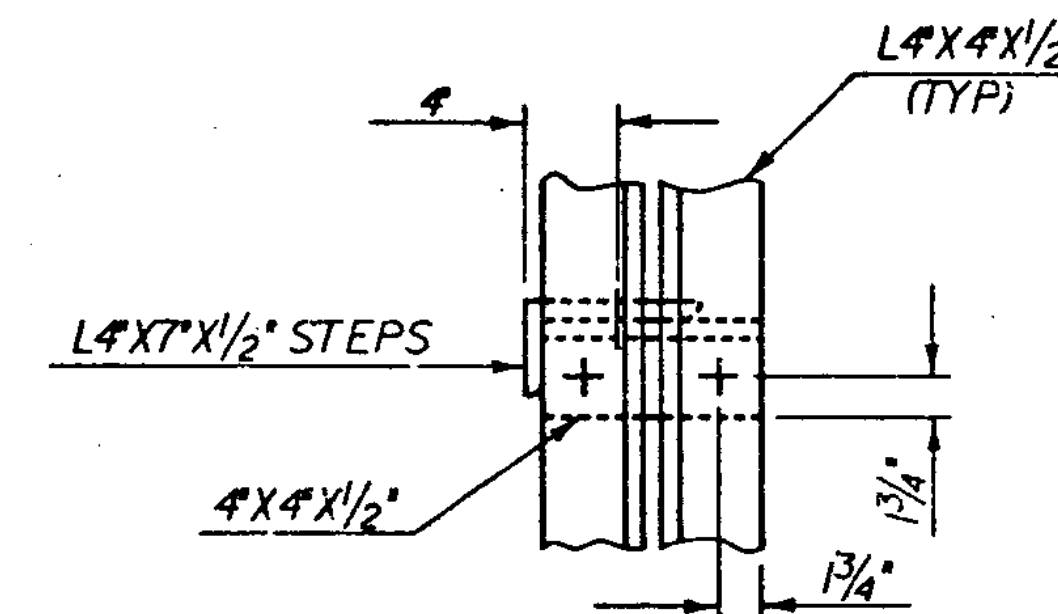
DETAIL E



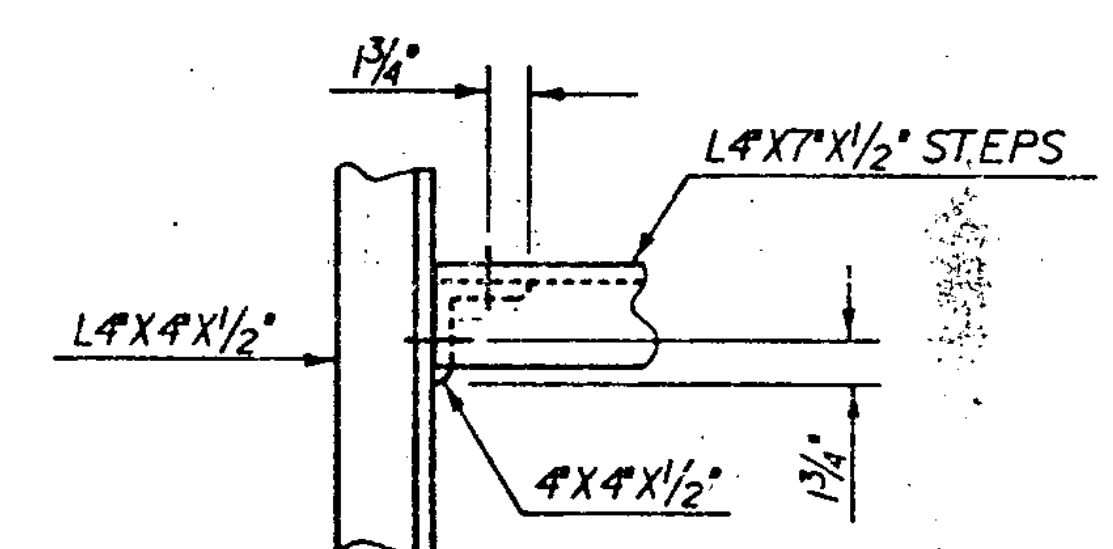
DETAIL F



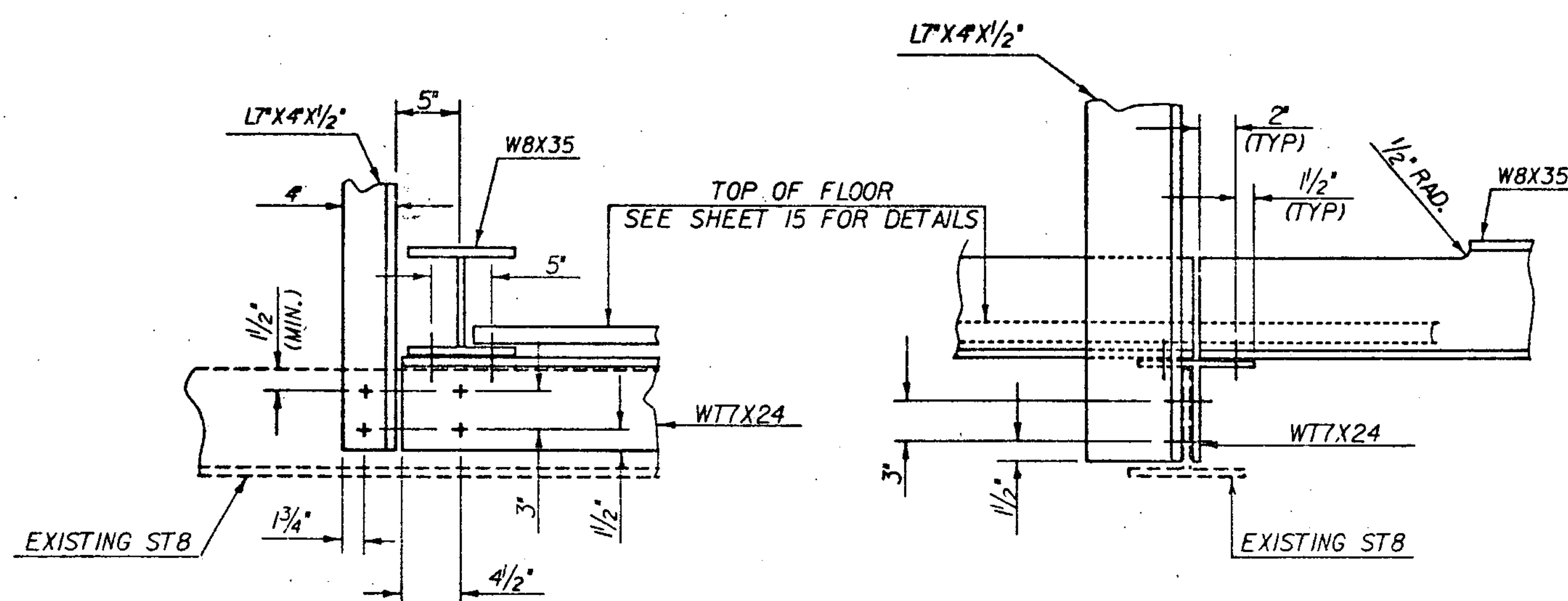
DETAIL G



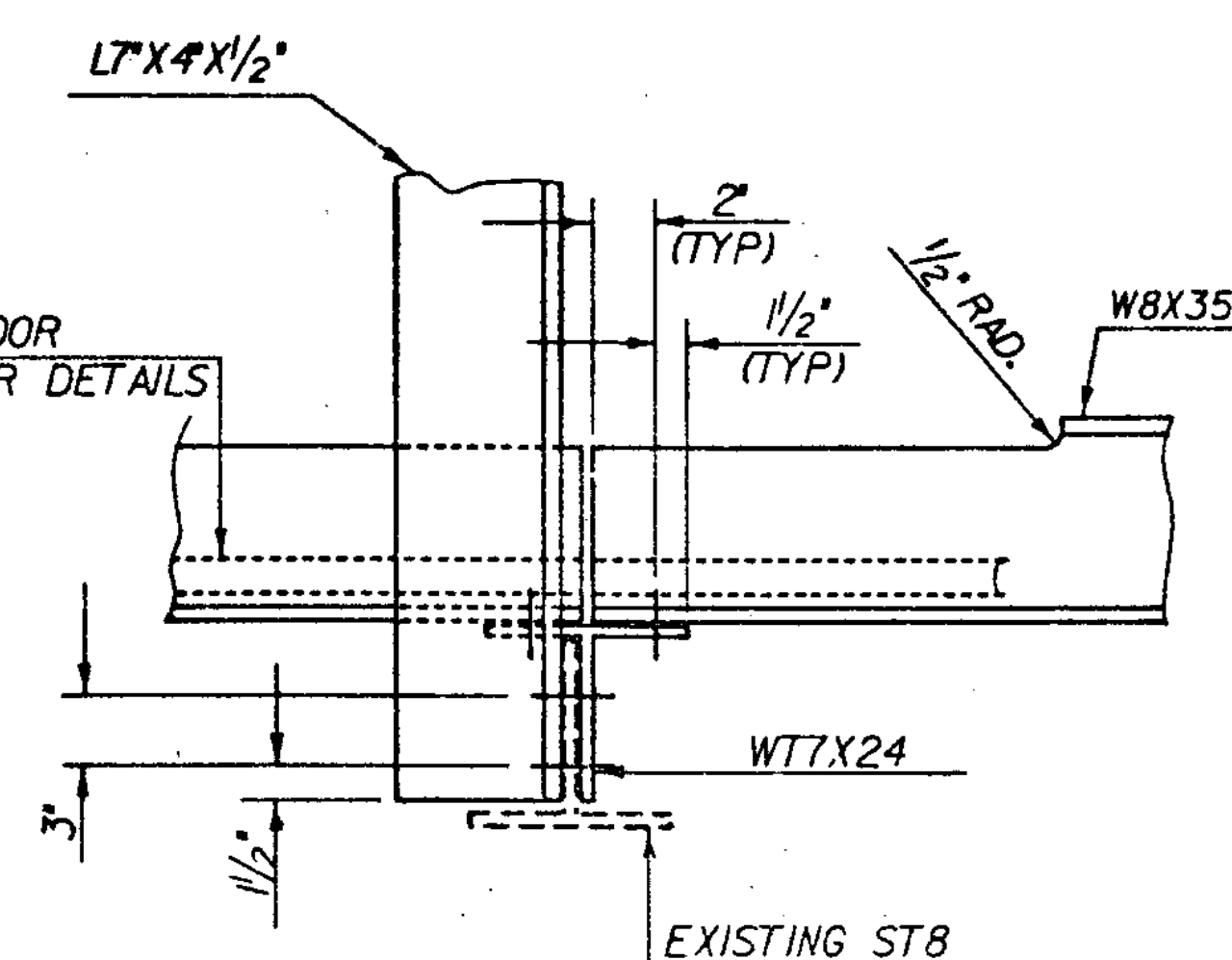
DETAIL H



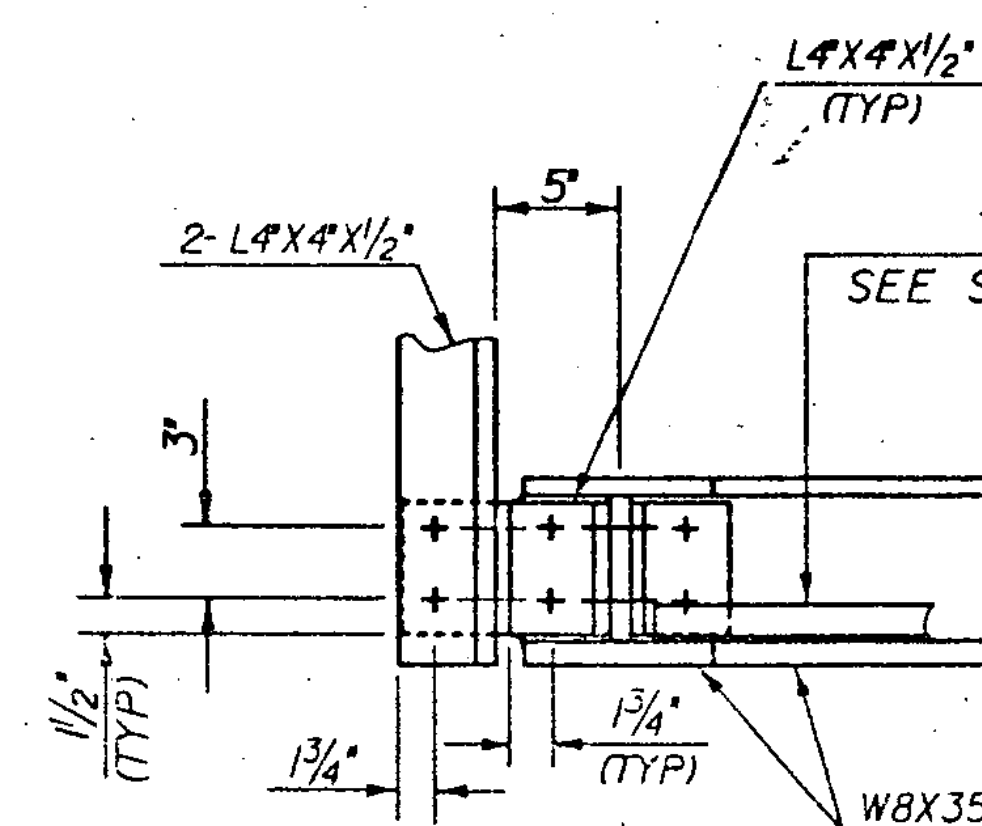
DETAIL I



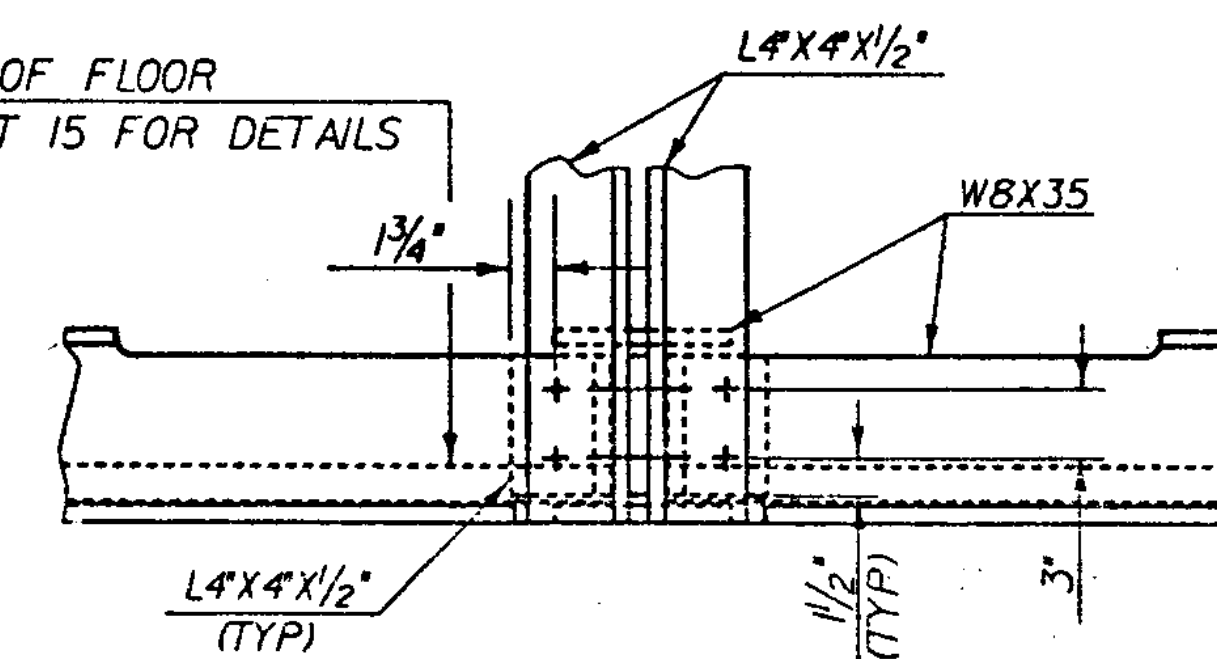
DETAIL J



DETAIL K



DETAIL L



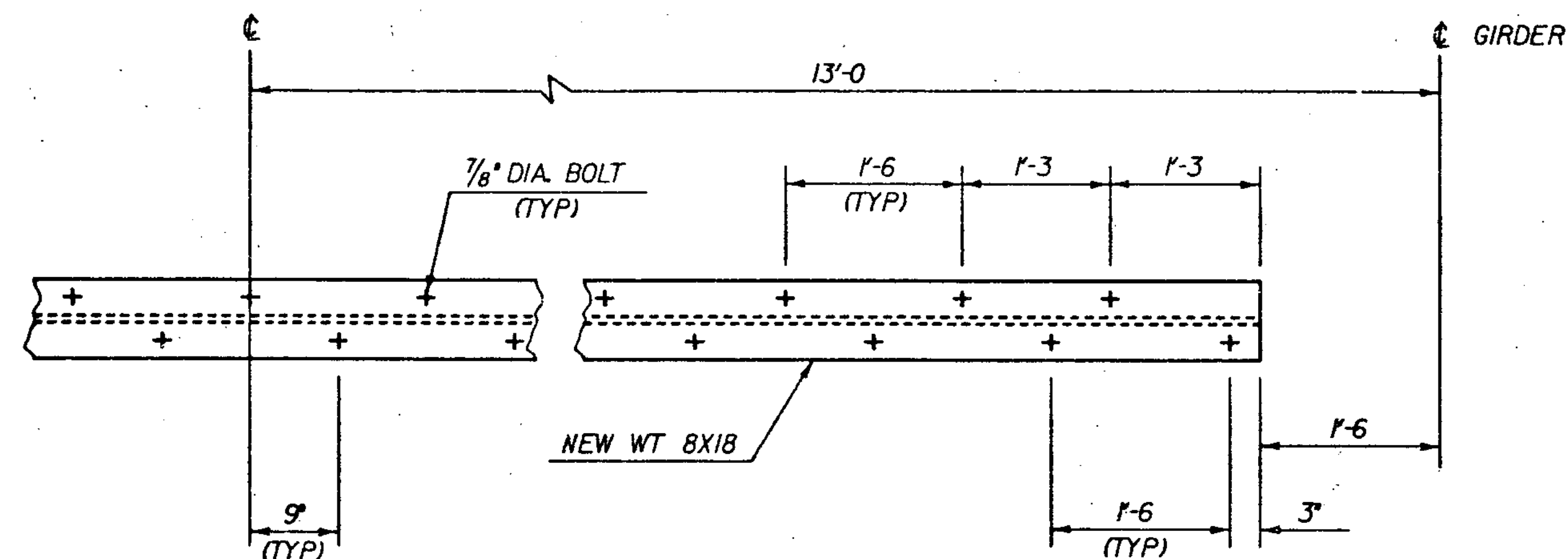
DETAIL M

**BOLTED CONNECTION DETAILS**

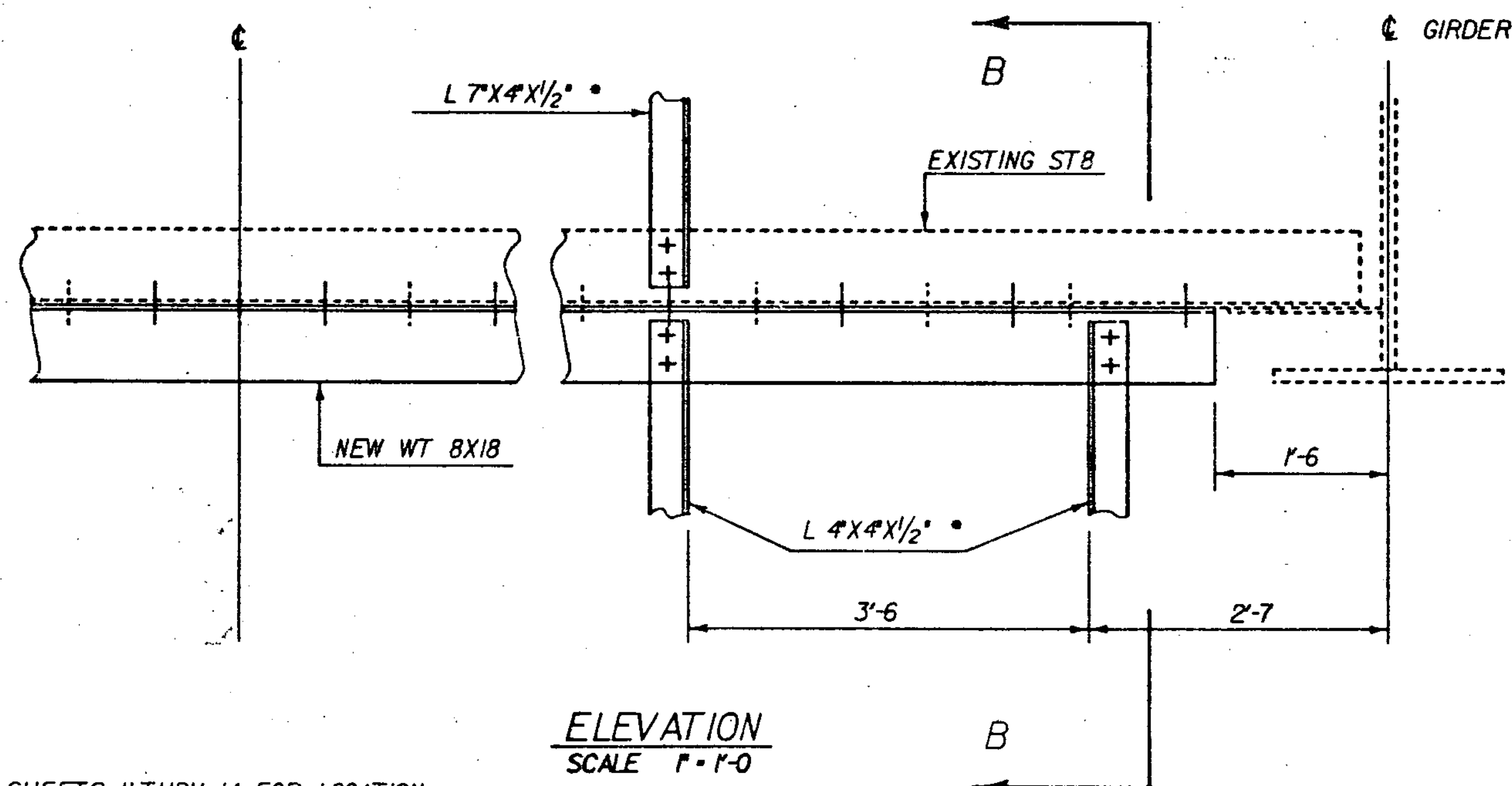
SCALE:  $1\frac{1}{2}$ "=1'-0"

| STATE OF VERMONT<br>AGENCY OF TRANSPORTATION           |           |                          |              |
|--------------------------------------------------------|-----------|--------------------------|--------------|
| Town Of                                                | HARTFORD  | Bridge No.               | 44 N & S     |
| Highway No.                                            | 191       | Log Sta.                 |              |
|                                                        |           | Surv. Sta.               |              |
| INSPECTION WALKWAY CONNECTION DETAILS                  |           |                          |              |
| 191 OVER THE WHITE RIVER, U.S. RTE. 4, AND VT. RTE. 14 |           |                          |              |
| Designed By                                            | A. ELWOOD | Drawn By                 | D. C. WILLEY |
| Checked By                                             | A. ELWOOD | Bridge Design Supervisor | R. S. HAUPT  |
|                                                        | Date 6-84 |                          | Date 5-84    |
| PROJECT                                                | HARTFORD  | PROJECT NO.              | IR-91-2 (1)  |
| I.G.C. info. CSA1130, 25182A115WLR.DCN                 |           |                          |              |
| Bridge Sheet No.                                       |           | Sheet 14 of 30           |              |

## WT 8X18 STIFFENER DETAILS



PLAN  
SCALE 1"=1'-0"

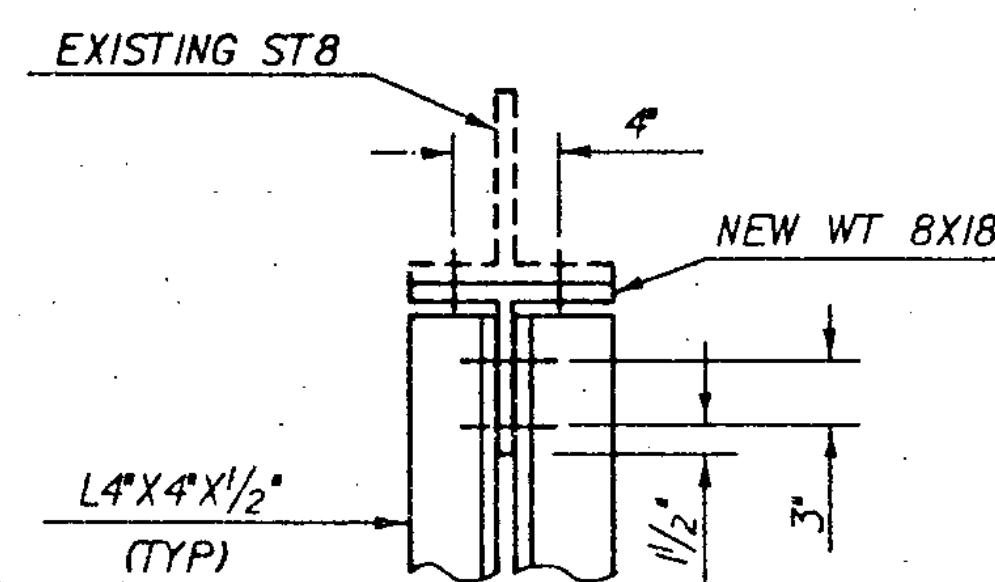


ELEVATION  
SCALE 1"=1'-0"

• SEE SHEETS 11 THRU 14 FOR LOCATION OF INSPECTION WALKWAY MEMBERS.

## NOTES

1. THE NEW WT 8X18 STIFFENERS SHALL BE ATTACHED AS SHOWN, TO THE EXISTING ST8 MEMBERS UNDER FLOOR BEAMS 12 THRU 20, 22 THRU 32, 34 THRU 44 AND 46 THRU 54.
2. SHOP DRILL 15/16" DIA. HOLES IN ALL NEW MEMBERS, UNLESS OTHERWISE NOTED. FIELD DRILL 15/16" DIA. HOLES IN ALL EXISTING MEMBERS. USE 7/8" DIA. HIGH STRENGTH (ASTM A325) BOLTS FOR CONNECTIONS.

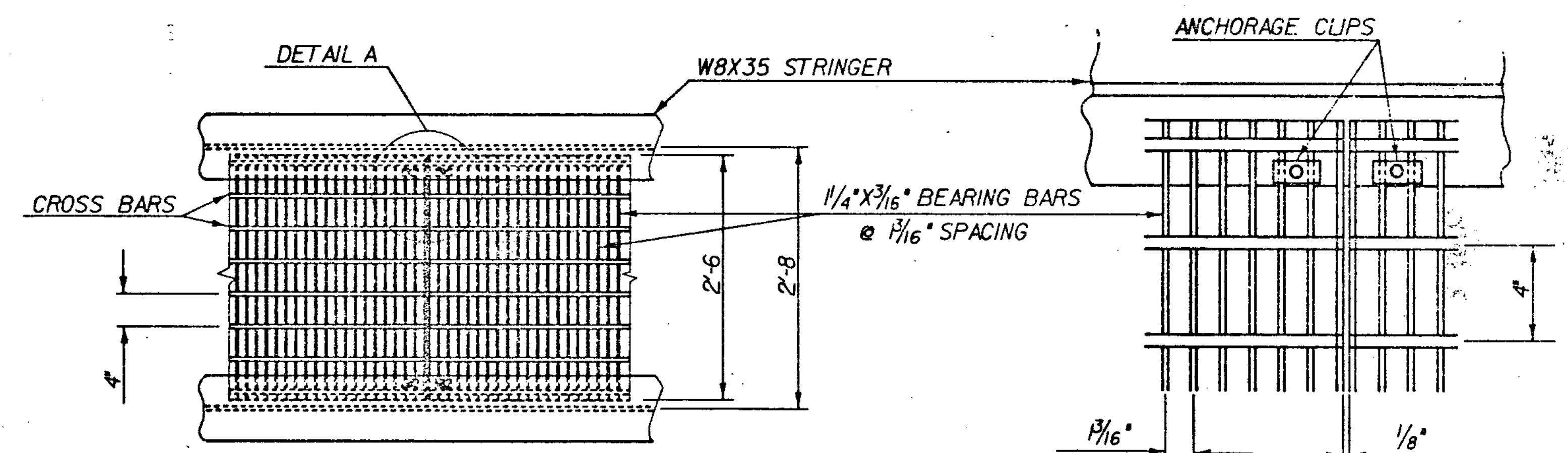


SECTION B - B  
SCALE 1/2"=1'-0"

## INSPECTION WALKWAY FLOOR DETAILS GALVANIZED STEEL GRATING

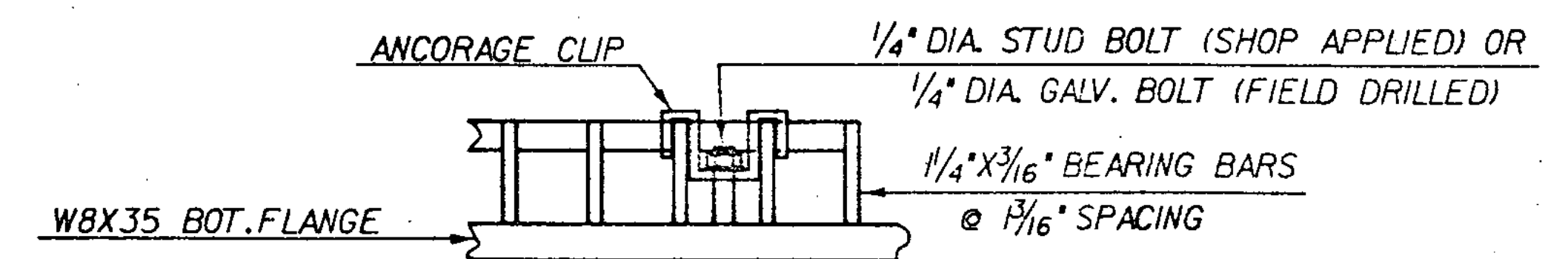
## NOTES

1. THE STEEL GRATING FLOOR SHALL BE GALVANIZED TO ASTM A123, IT SHALL BE AN UNFILLED GRATING AND PAID FOR UNDER THE ITEM 'STEEL GRID FLOORING-GALVANIZED'. ALL BOLTS, CLIPS AND HARDWARE REQUIRED TO ATTACH THE STEEL GRATING FLOOR SYSTEM SHALL BE GALVANIZED TO ASTM A153 AND SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE ITEM 'STEEL GRID FLOORING-GALVANIZED'. SUBMIT SHOP DRAWINGS IN ACCORDANCE WITH SECTION 506.04.
2. THE STEEL GRATING SHALL BE IN SECTIONS 3'-0, MAXIMUM, LONG. EACH CORNER OF THE STEEL GRATING SECTIONS SHALL BE ATTACHED TO THE BOTTOM FLANGE OF THE W8X35 STRINGERS. CENTER 1/4" DIA. STUD BOLTS BETWEEN GRATING BEARING BARS AND ARC WELD TO THE BOTTOM FLANGE, THEN INSTALL THE U-SHAPED CLIP, WASHER AND HEXAGONAL NUT AS SHOWN.
3. A GAP OF 1/8" SHALL BE LEFT BETWEEN THE STEEL GRATING FLOOR SECTIONS.

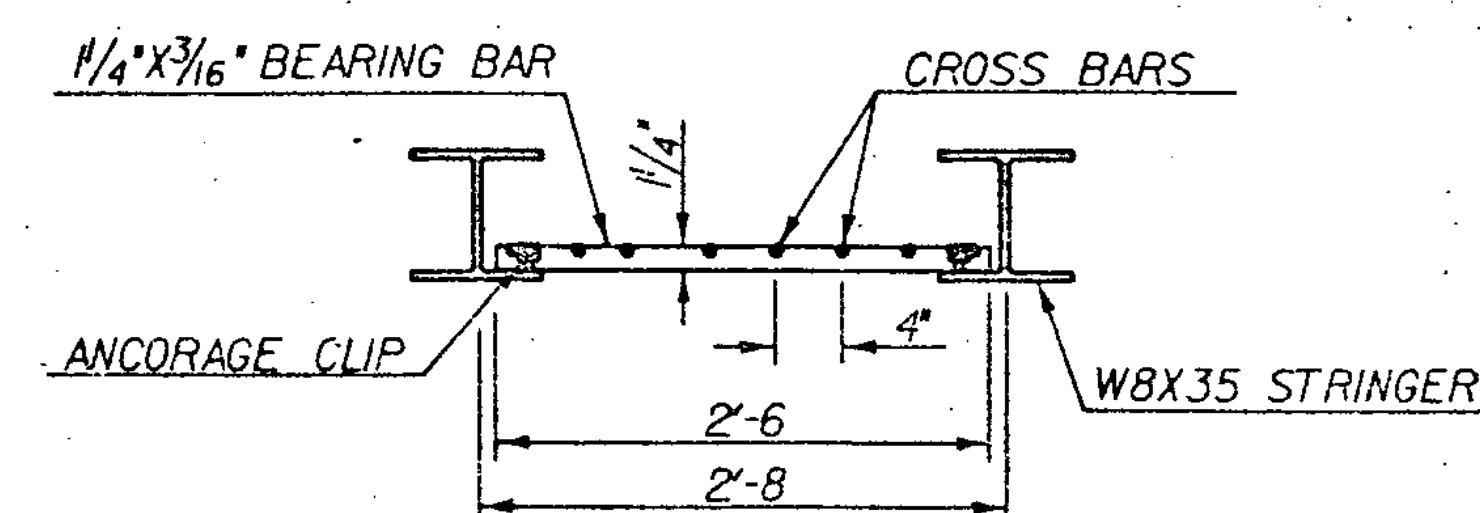


PLAN  
SCALE 1"=1'-0"

DETAIL A  
SCALE 3"=1'-0"

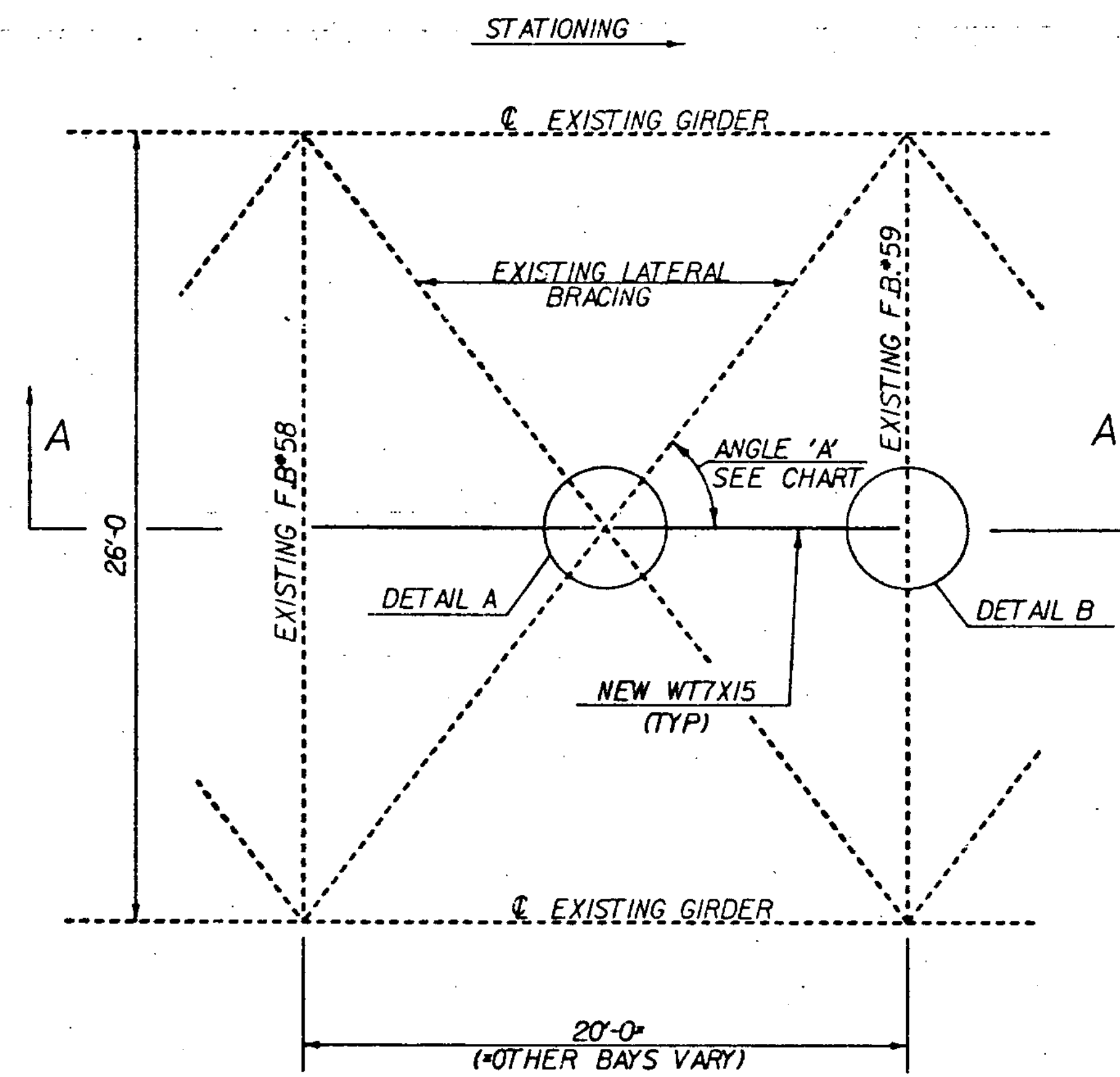


ANCHORAGE CLIP DETAIL  
SCALE 1/2"=1'-0"



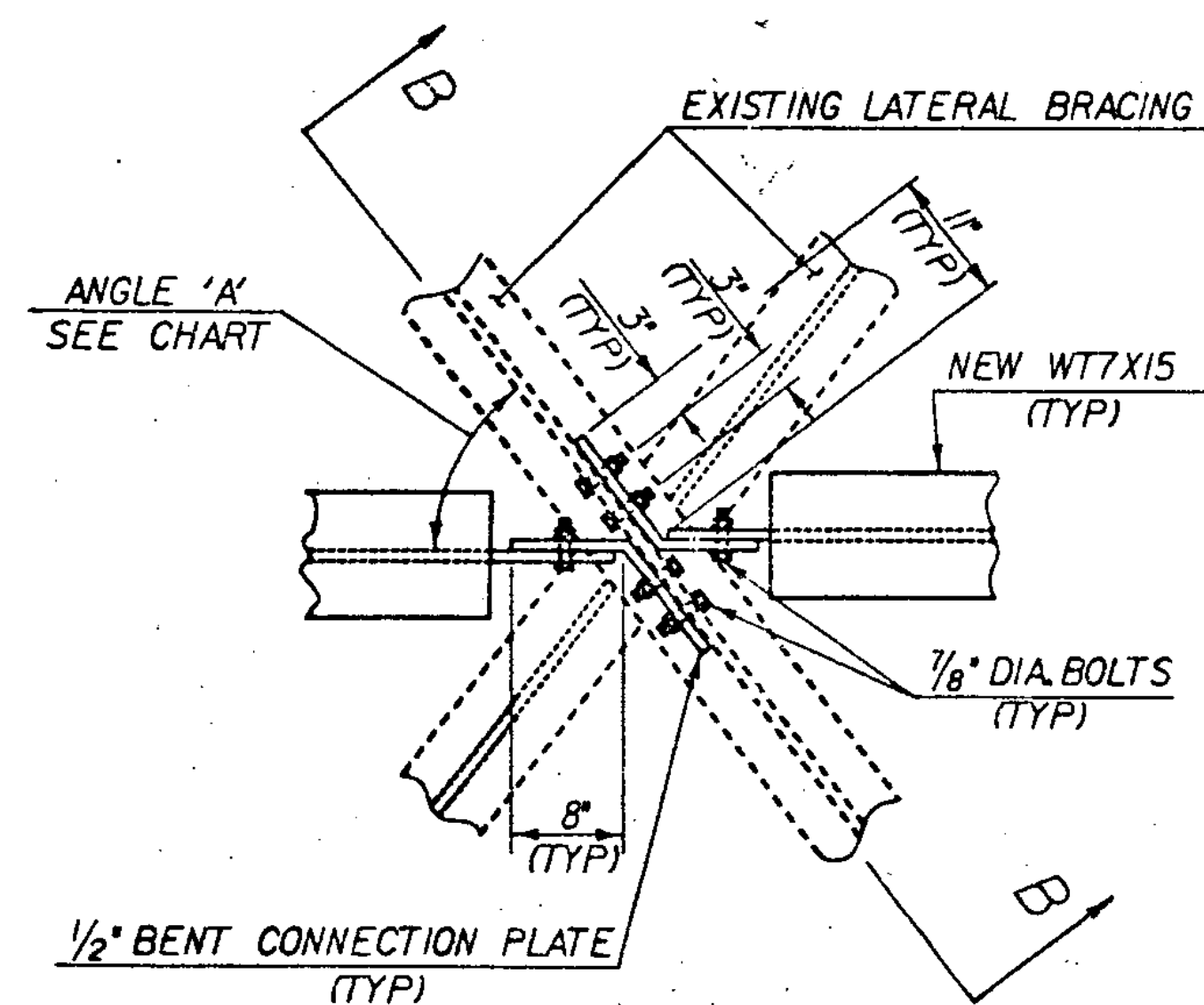
TYPICAL SECTION  
SCALE 1"=1'-0"

|                                                        |                                                             |
|--------------------------------------------------------|-------------------------------------------------------------|
| <b>STATE OF VERMONT<br/>AGENCY OF TRANSPORTATION</b>   |                                                             |
| Town Of <b>HARTFORD</b>                                | Bridge No. 44 N & S                                         |
| Highway No. <b>191</b>                                 | Log Sta. <b>Surv. Sta.</b>                                  |
| INSPECTION WALKWAY FLOOR DETAILS                       |                                                             |
| 191 OVER THE WHITE RIVER, U.S. RTE. 4, AND VT. RTE. 14 |                                                             |
| Designed By <b>A. ELWOOD</b>                           | Drawn By <b>D. C. WILLEY</b>                                |
| Checked By <b>A. ELWOOD</b>                            | Bridge Design Supervisor <b>R. S. HAUT</b> Date <b>5-84</b> |
| PROJECT <b>HARTFORD</b>                                | PROJECT NO. <b>IR-91-2 (1)</b>                              |
| I.C.C. Info. <b>QSA1:30,25182A115WLK.DGN</b>           |                                                             |
| Bridge Sheet No. <b>15</b>                             | Sheet <b>15</b> of <b>30</b>                                |

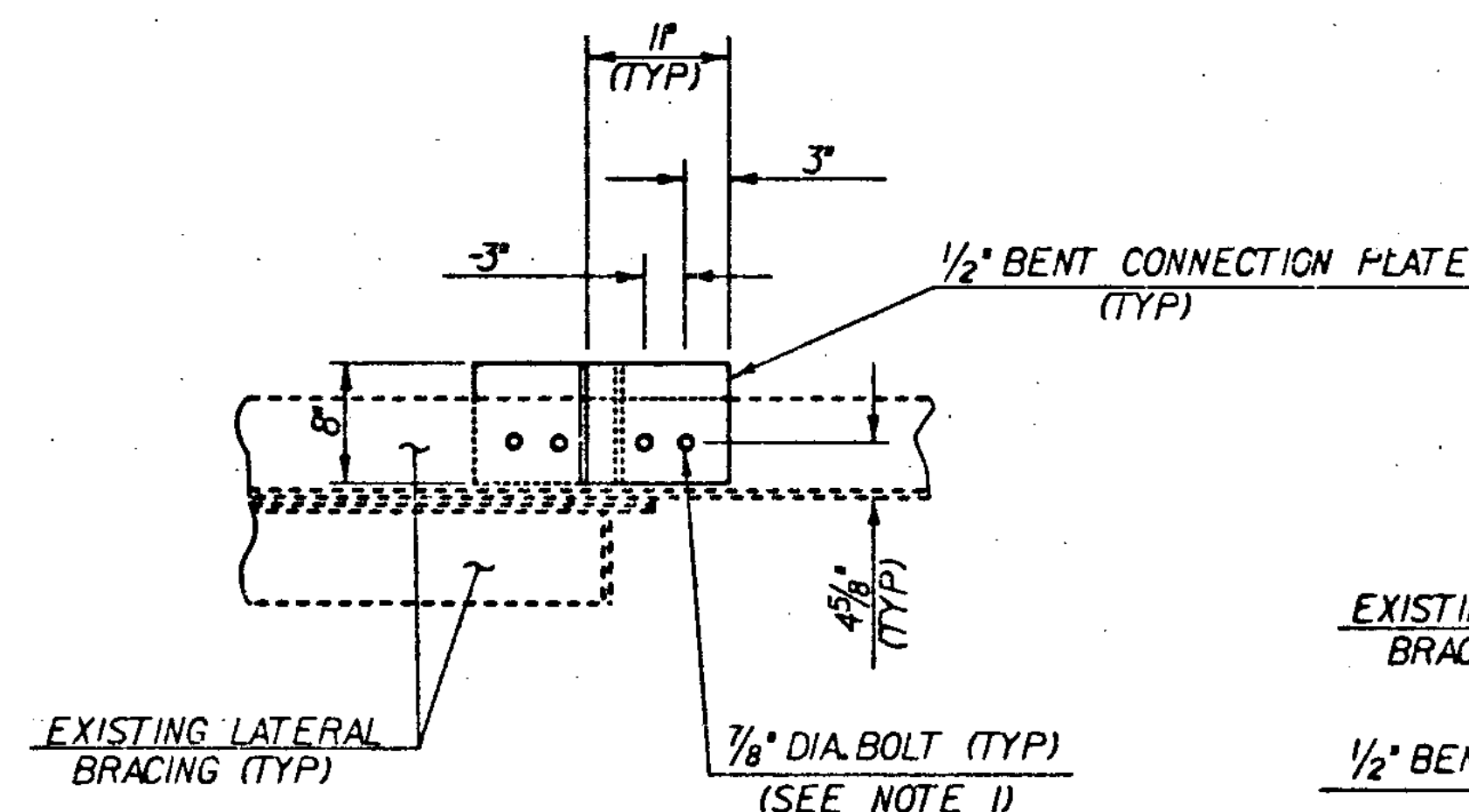


**PLAN**  
SCALE 1/4"=1'-0"

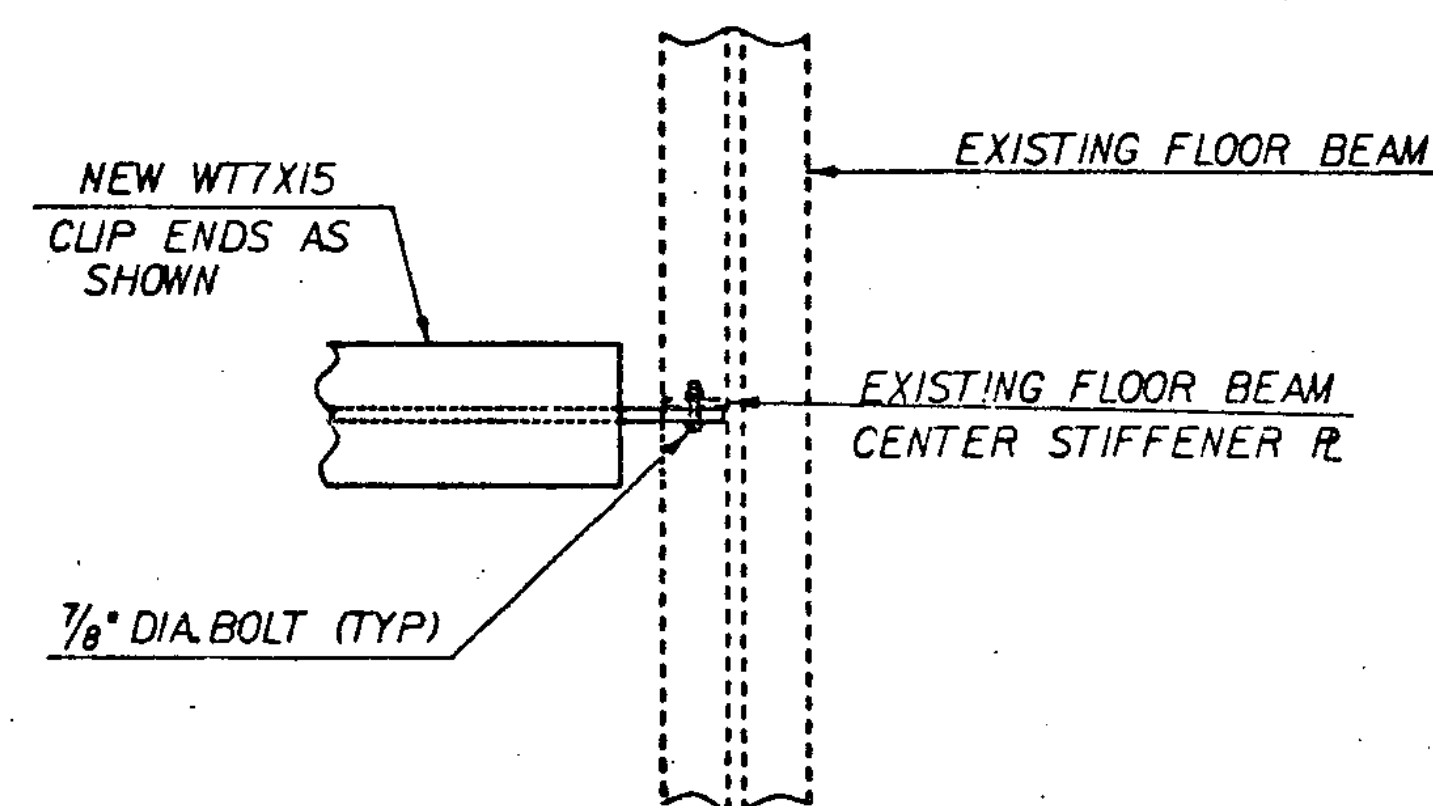
NOTE: PLAN OF BAY FROM FLOOR BEAM #58 TO #59 SHOWN, BAYS FROM FLOOR BEAM #10 TO #4 AND #5A TO #11 AND #55 TO #60, ARE SIMILAR.



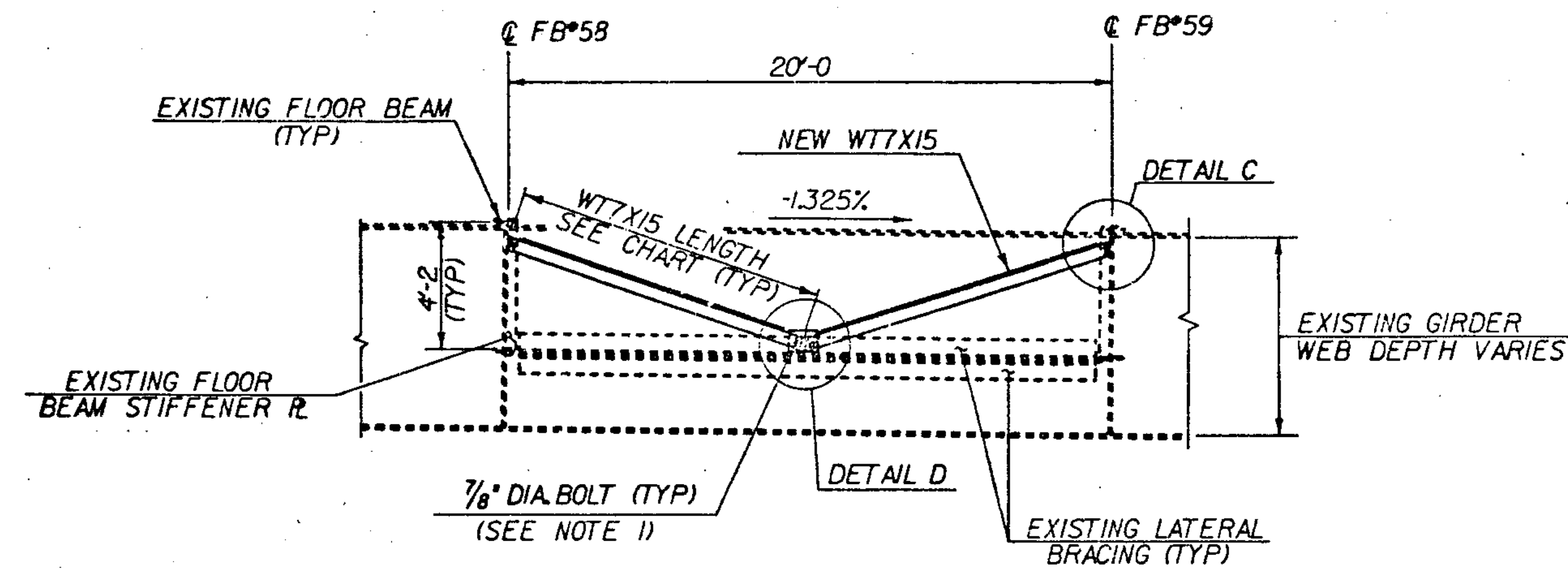
**DETAIL A**  
SCALE 1"=1'-0"



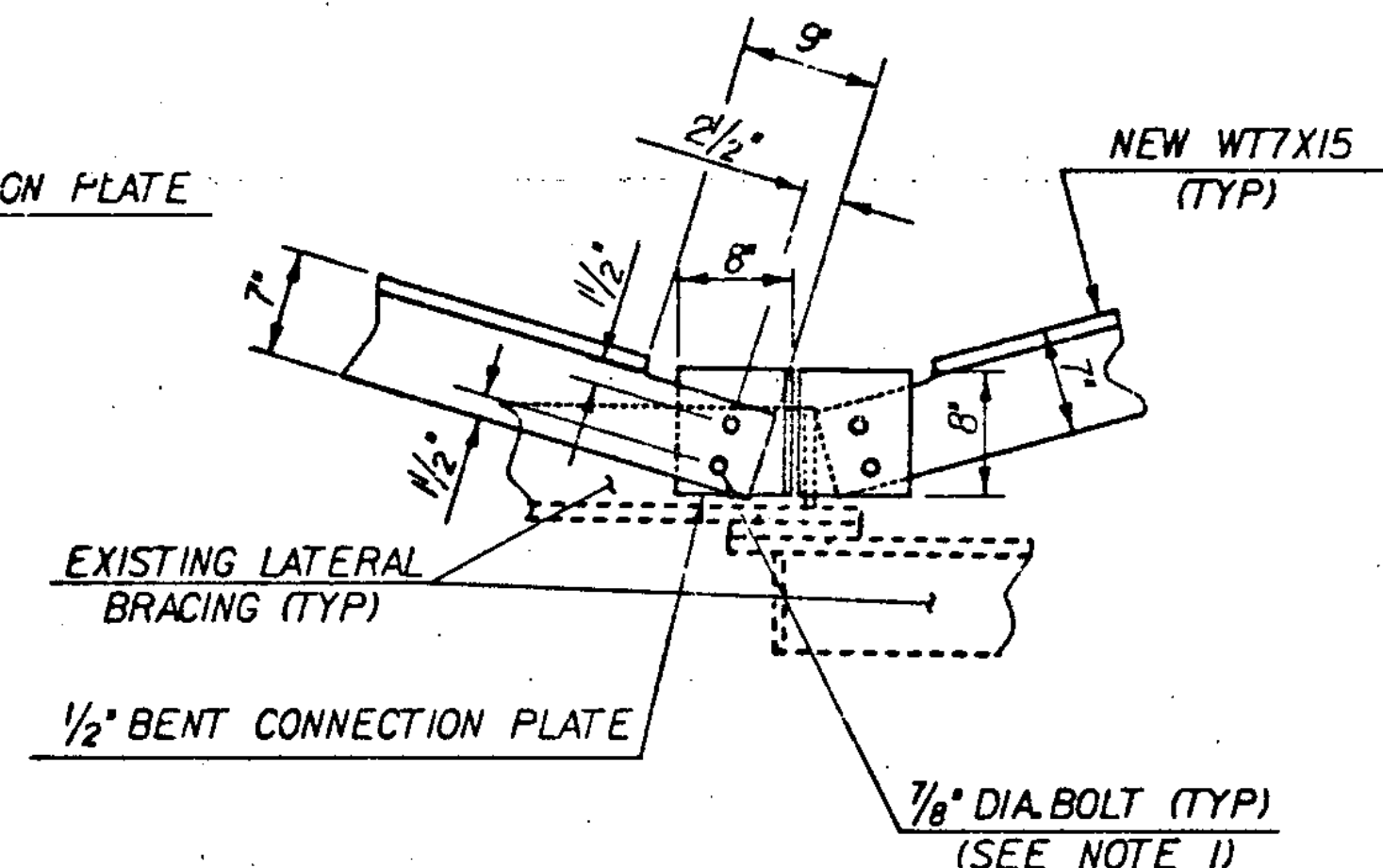
**SECTION B - B**  
SCALE 1"=1'-0"



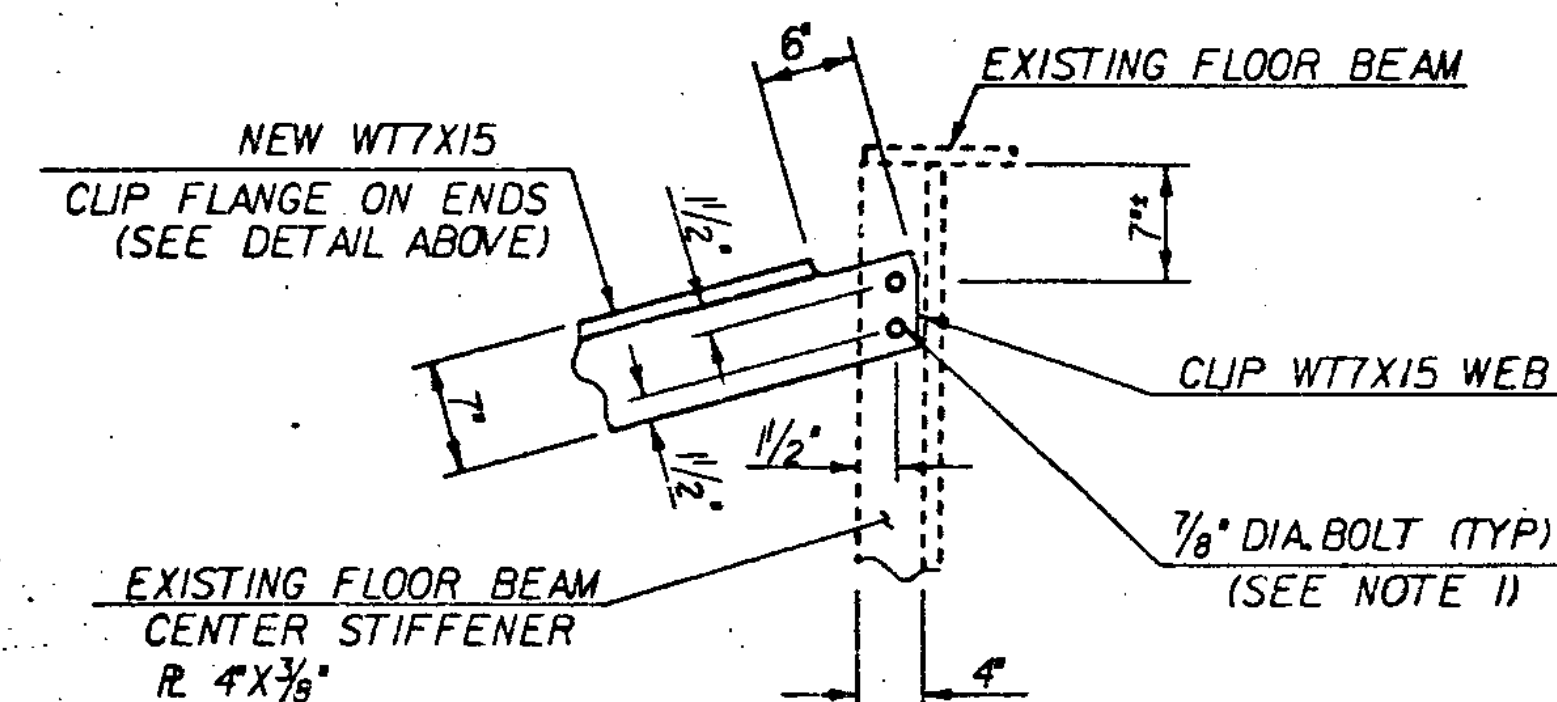
**DETAIL B**  
SCALE 1"=1'-0"



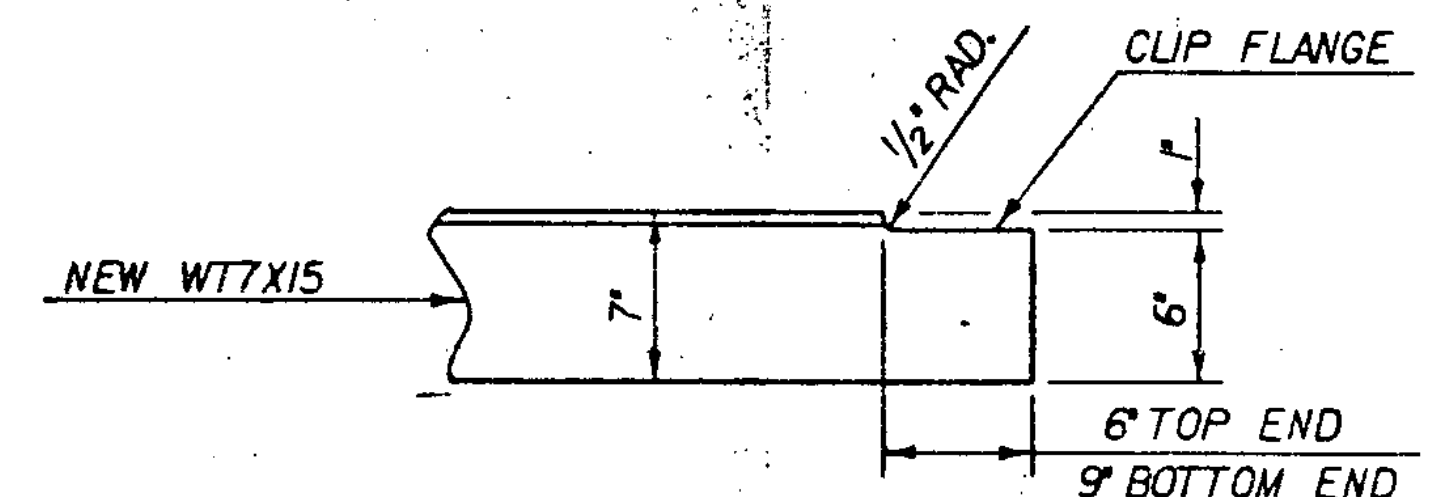
**SECTION A - A**  
SCALE 1/4"=1'-0"



**DETAIL D**  
SCALE 1"=1'-0"



**DETAIL C**  
SCALE 1"=1'-0"



**FLANGE CLIP DETAIL**  
SCALE 1/2"=1'-0"

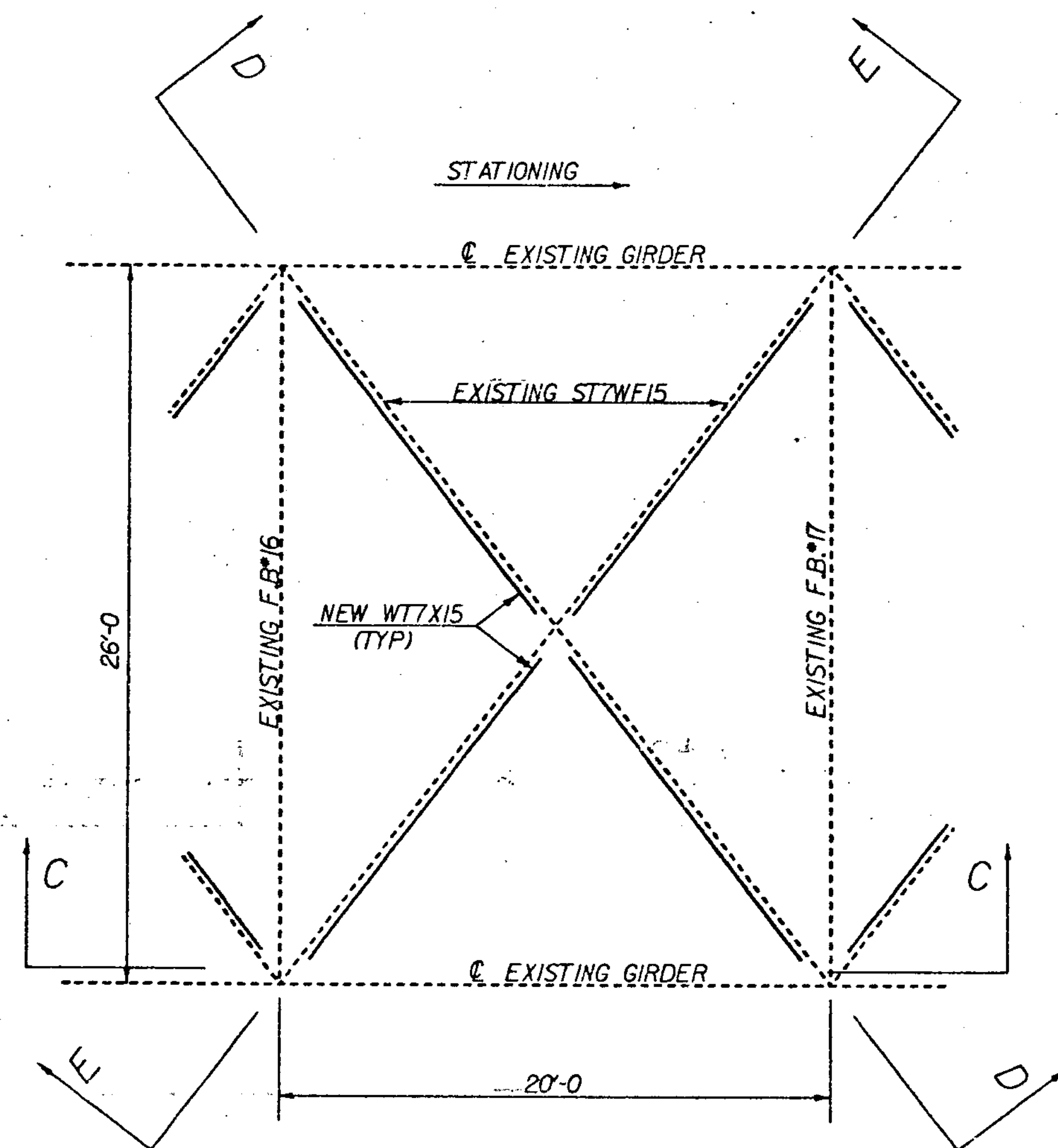
| BAY LOCATION                       | APPROXIMATE LENGTH OF W7X15 | ANGLE 'A'   |
|------------------------------------|-----------------------------|-------------|
| F.B.#1-F.B.#2                      | 11'-2"                      | 30°-12'-12" |
| F.B.#2-F.B.#3                      | 11'-2"                      | 30°-12'-12" |
| F.B.#3-F.B.#4                      | 11'-2"                      | 30°-12'-12" |
| F.B.#4-F.B.#5                      | —                           | 45°-33'-5"  |
| F.B.#5A-F.B.#6 S.B.                | 11'-2"                      | 30°-13'-14" |
| F.B.#5A-F.B.#6 N.B.                | 10'-11"                     | 30°-52'-44" |
| F.B.#6-F.B.#7 S.B.                 | 11'-2"                      | 30°-13'-14" |
| F.B.#6-F.B.#7 N.B.                 | 10'-11"                     | 30°-52'-44" |
| F.B.#7-F.B.#8 S.B.                 | 11'-2"                      | 30°-13'-14" |
| F.B.#7-F.B.#8 N.B.                 | 10'-11"                     | 30°-52'-44" |
| F.B.#8-F.B.#9 N.B.                 | 10'-11"                     | 30°-52'-44" |
| F.B.#9A-F.B.#10                    | 9'-3"                       | 35°-31'-31" |
| F.B.#10-F.B.#11                    | 10'-1"                      | 33°-1'-26"  |
| F.B.#11-F.B.#55 SEE SHEETS 17 & 18 | —                           | 33°-1'-26"  |
| F.B.#55-F.B.#56                    | 10'-1"                      | 33°-1'-26"  |
| F.B.#56-F.B.#57                    | 9'-3"                       | 35°-31'-31" |
| F.B.#57A-F.B.#58                   | 9'-3"                       | 35°-31'-31" |
| F.B.#58-F.B.#59                    | 10'-1"                      | 33°-1'-26"  |
| F.B.#59-F.B.#60                    | 10'-1"                      | 33°-1'-26"  |

\* THERE IS NO FLOOR BEAM #8 ON THE SOUTH BOUND BRIDGE.

NOTE: UNLESS OTHERWISE NOTED NORTH BOUND (N.B.) AND SOUTH BOUND (S.B.) BRIDGES ARE THE SAME.

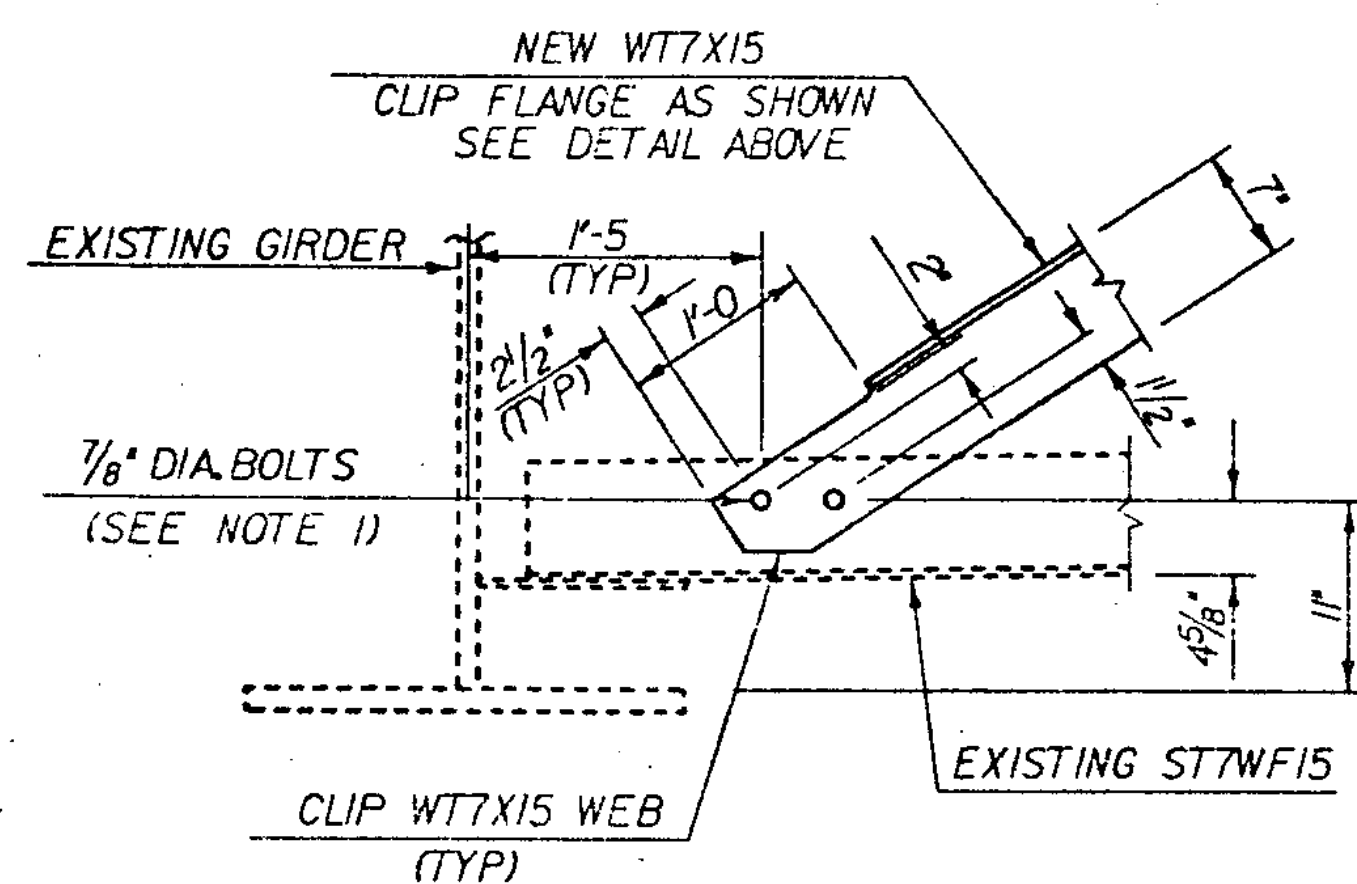
**STATE OF VERMONT  
AGENCY OF TRANSPORTATION**

|                                                        |                         |                          |             |
|--------------------------------------------------------|-------------------------|--------------------------|-------------|
| Town Of                                                | HARTFORD                | Bridge No.               | 44 N & S    |
| Highway No.                                            | 191                     | Log Sta.                 |             |
|                                                        |                         | Surv. Sta.               |             |
| KNEE BRACING DETAILS FROM F.B. #1-11 AND #55-60        |                         |                          |             |
| 191 OVER THE WHITE RIVER, U.S. RTE. 4, AND VT. RTE. 14 |                         |                          |             |
| Designed By                                            | A. ELWOOD               | Drawn By                 | DAVE WILLEY |
| Checked By                                             | J. POTTER               | Date                     | 3-84        |
|                                                        |                         | Bridge Design Supervisor | R. S. HAUP  |
|                                                        |                         | Date                     | 5-84        |
| PROJECT                                                | HARTFORD                | PROJECT NO.              | IR-91-2 (1) |
| U.G.C. Info.                                           | 05A1:38,25182A115LB.DGN |                          |             |
| Bridge Sheet No.                                       |                         | Sheet                    | 16 of 30    |

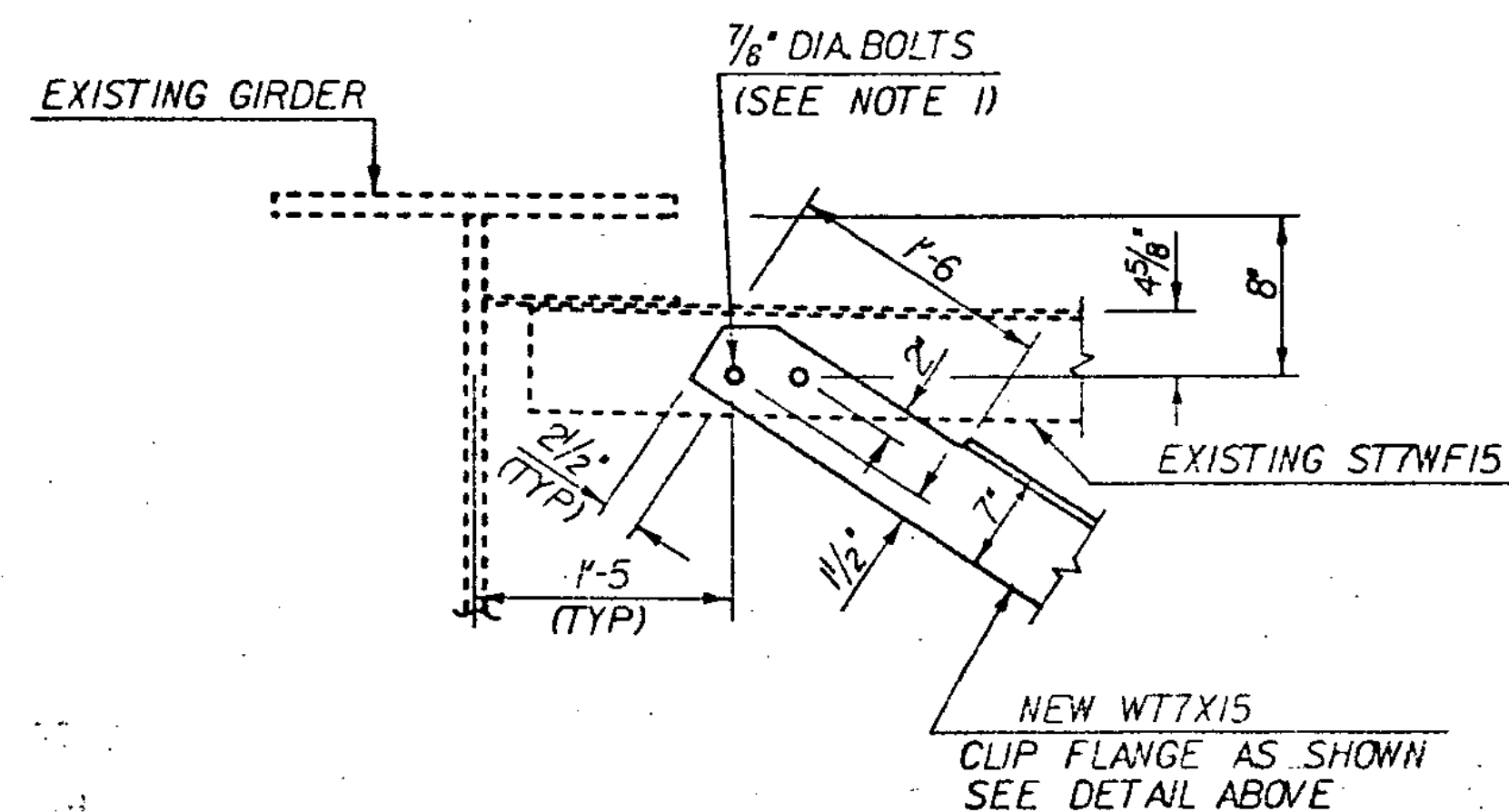


**PLAN**  
SCALE 1/4"=1'-0"

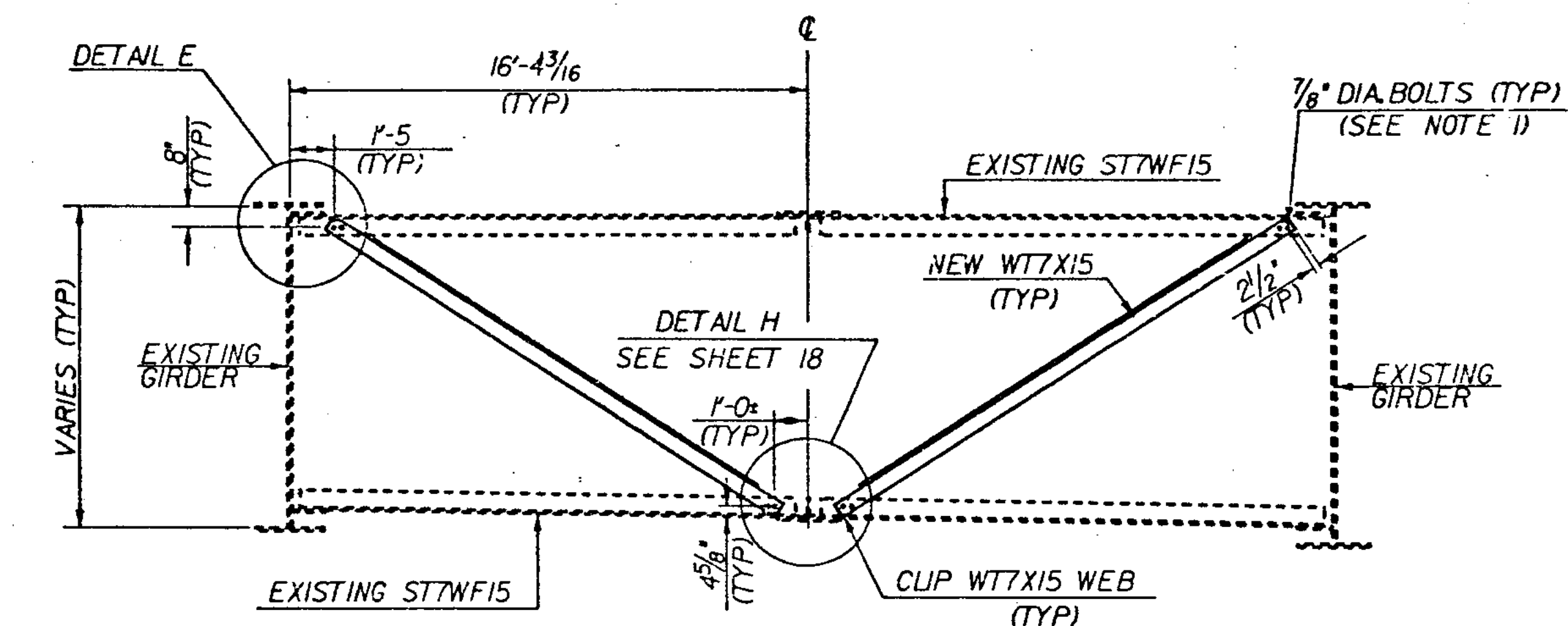
NOTE: PLAN OF BAY FROM FLOOR BEAM #16 TO #17 SHOWN, BAYS FROM FLOOR BEAM #11 TO #20 AND #46 TO #55 ARE SIMILAR.



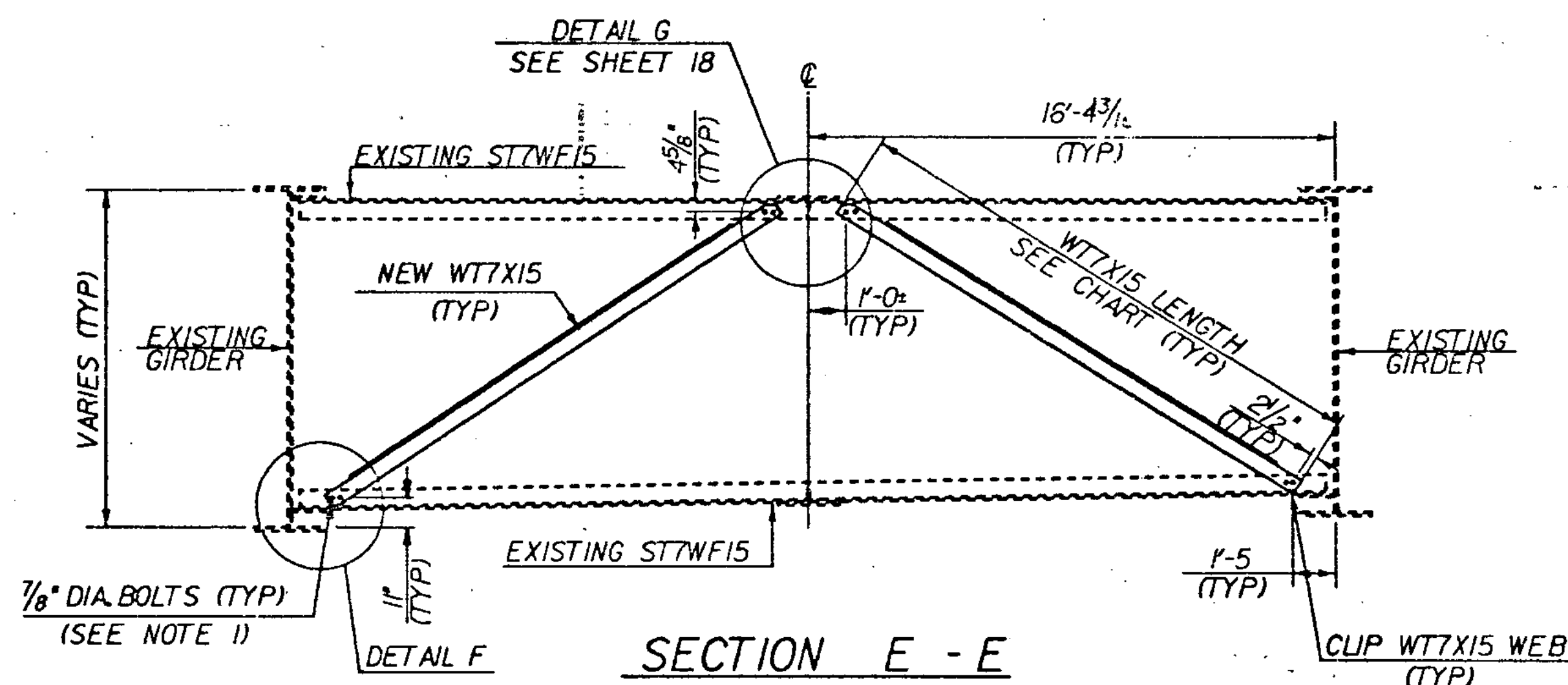
**DETAIL F**  
SCALE 1"=1'-0"



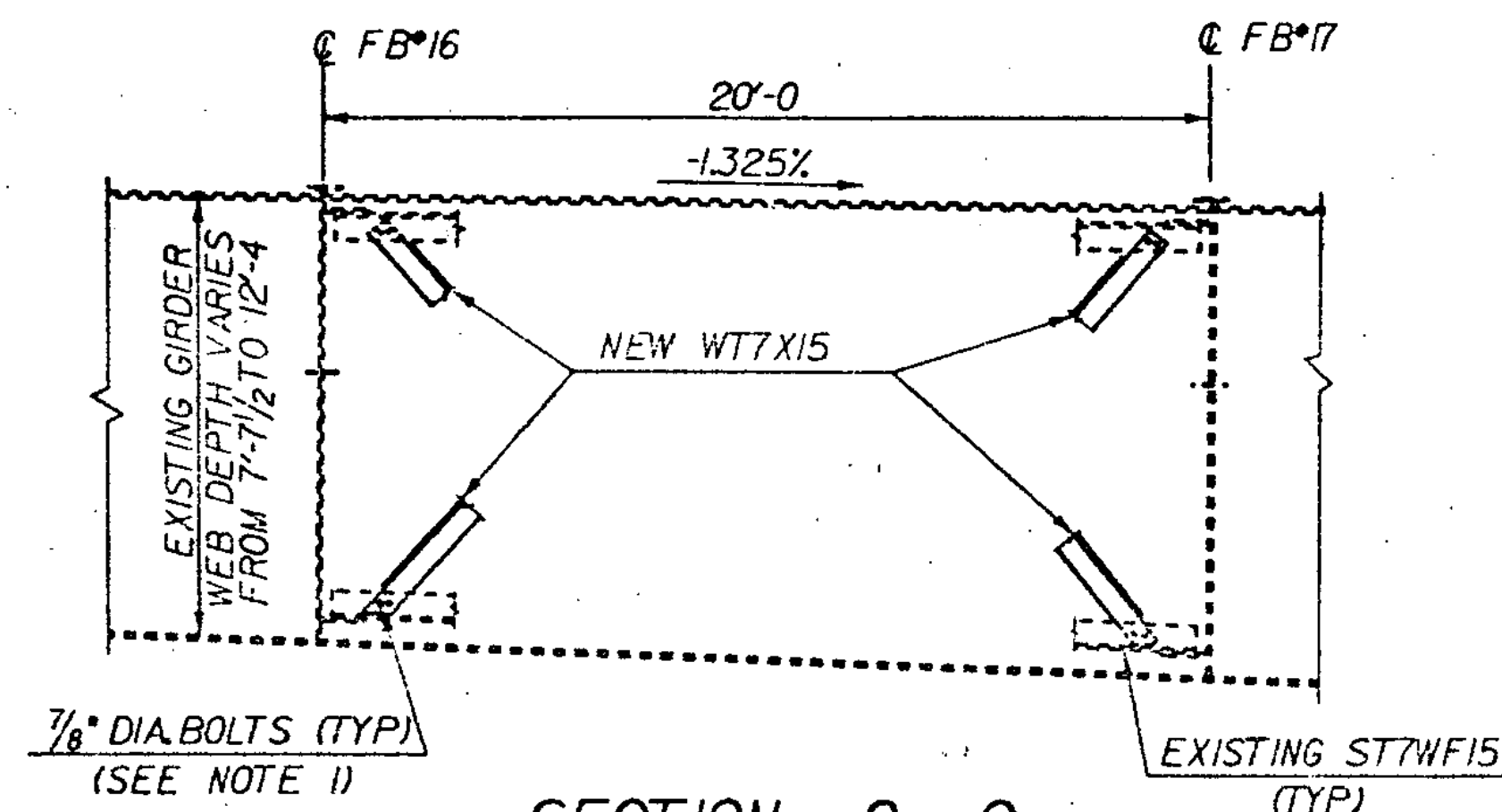
**DETAIL E**  
SCALE 1"=1'-0"



**SECTION D - D**  
SCALE 1/4"=1'-0"



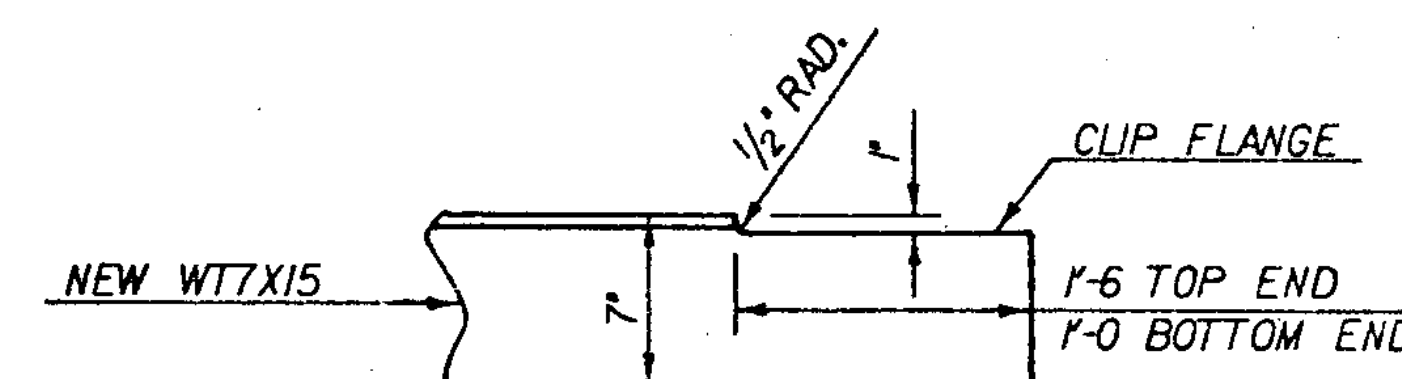
**SECTION E - E**  
SCALE 1/4"=1'-0"



**SECTION C - C**  
SCALE 1/4"=1'-0"

# **NOTES**

1. SHOP DRILL 1 5/16" DIA. HOLES IN NEW WT7X15'S. FIELD DRILL HOLES IN EXISTING ST7WF15'S. USE 7/8" DIA. HIGH STRENGTH BOLTS (ASTM A325) FOR CONNECTIONS.
2. DETAILS ON THIS SHEET ARE FOR BAYS FROM FLOOR BEAM #11 TO FLOOR BEAM #20 AND FROM FLOOR BEAM #46 TO FLOOR BEAM #55.

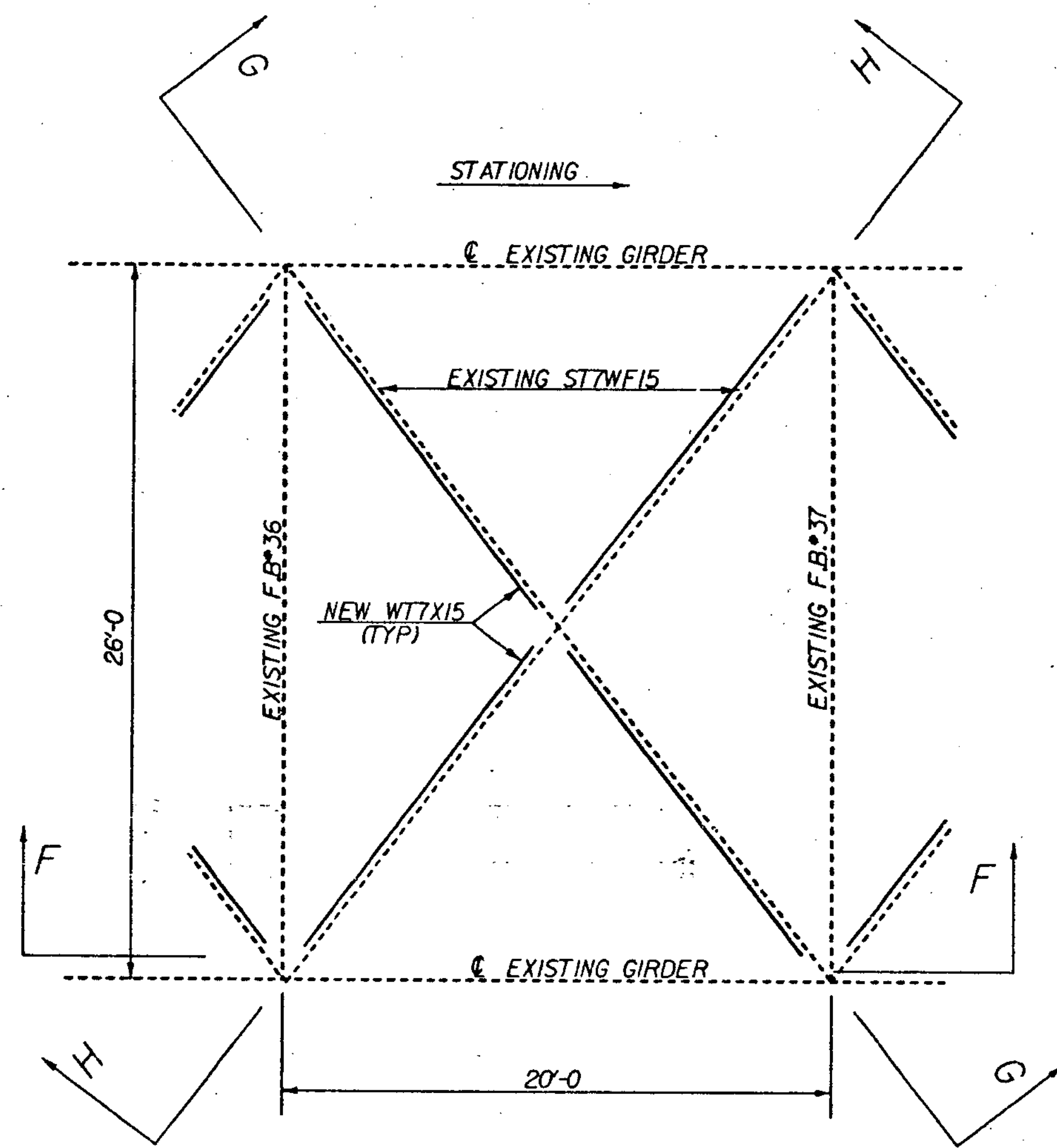


**FLANGE CLIP DETAIL**  
SCALE 1/2"=1'-0"

| BAY LOCATION                 | APPROXIMATE LENGTH OF WT7X15 |
|------------------------------|------------------------------|
| F.B.#11-F.B.#12              | 15'-9"                       |
| F.B.#12-F.B.#13              | 16'-0"                       |
| F.B.#13-F.B.#14              | 16'-3"                       |
| F.B.#14-F.B.#15              | 16'-6"                       |
| F.B.#15-F.B.#16              | 16'-9"                       |
| F.B.#16-F.B.#17              | 17'-0"                       |
| F.B.#17-F.B.#18              | 17'-3"                       |
| F.B.#18-F.B.#19              | 17'-7"                       |
| F.B.#19-F.B.#20              | 17'-11"                      |
| F.B.#20-F.B.#46 SEE SHEET 18 |                              |
| F.B.#46-F.B.#47              | 17'-11"                      |
| F.B.#47-F.B.#48              | 17'-7"                       |
| F.B.#48-F.B.#49              | 17'-3"                       |
| F.B.#49-F.B.#50              | 17'-0"                       |
| F.B.#50-F.B.#51              | 16'-9"                       |
| F.B.#51-F.B.#52              | 16'-6"                       |
| F.B.#52-F.B.#53              | 16'-3"                       |
| F.B.#53-F.B.#54              | 16'-0"                       |
| F.B.#54-F.B.#55              | 15'-9"                       |

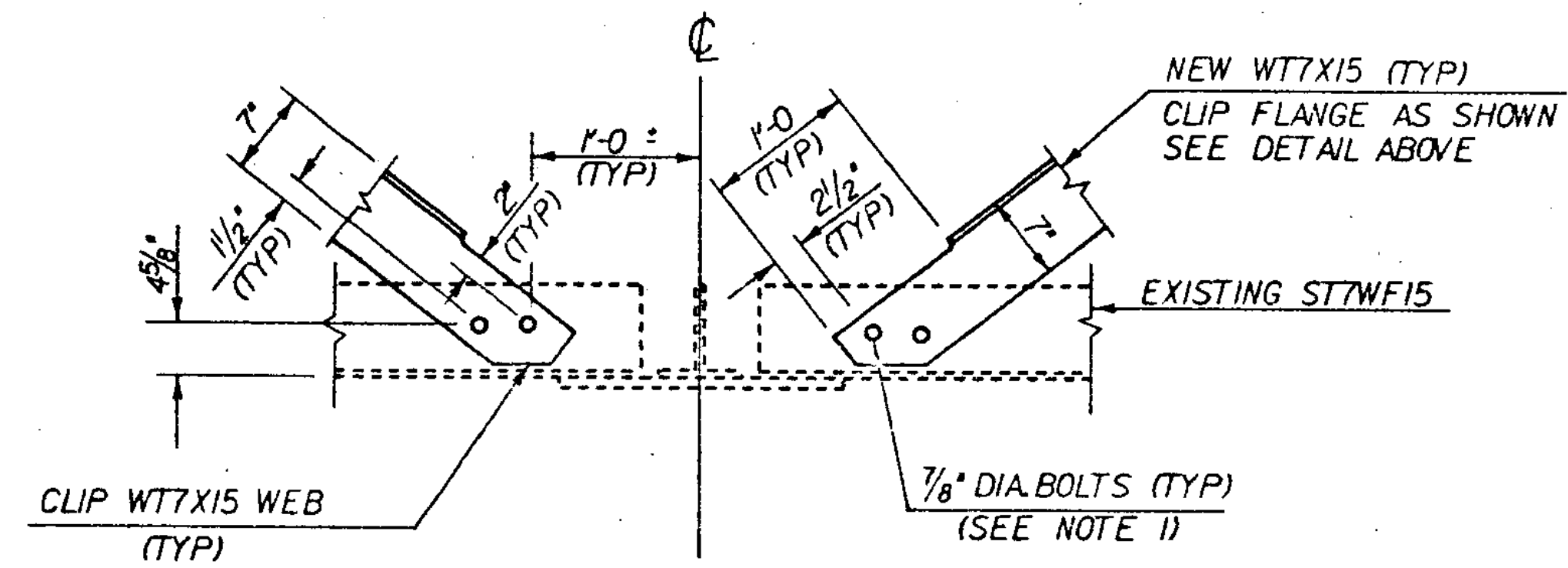
## **STATE OF VERMONT AGENCY OF TRANSPORTATION**

|                                                        |           |                          |             |
|--------------------------------------------------------|-----------|--------------------------|-------------|
| Town Of                                                | HARTFORD  | Bridge No.               | 44 N & S    |
| Highway No.                                            | 191       | Log Sta.                 |             |
|                                                        |           | Surv. Sta.               |             |
| KNEE BRACING DETAILS FROM F.B. #11-20 AND #46-55       |           |                          |             |
| 191 OVER THE WHITE RIVER, U.S. RTE. 4, AND VT. RTE. 14 |           |                          |             |
| Designed By                                            | A. ELWOOD | Drawn By                 | DAVE WILLEY |
| Checked By                                             | J. POTTER | Bridge Design Supervisor | R. S. HAUP  |
|                                                        | Date 3-84 |                          | Date 5-84   |
| PROJECT                                                | HARTFORD  | PROJECT NO.              | IR-91-2 (1) |
| I.G.C. Info. 05A1130.25182A111519.CGN                  |           |                          |             |
| Bridge Sheet No.                                       |           | Sheet                    | 17 of 30    |

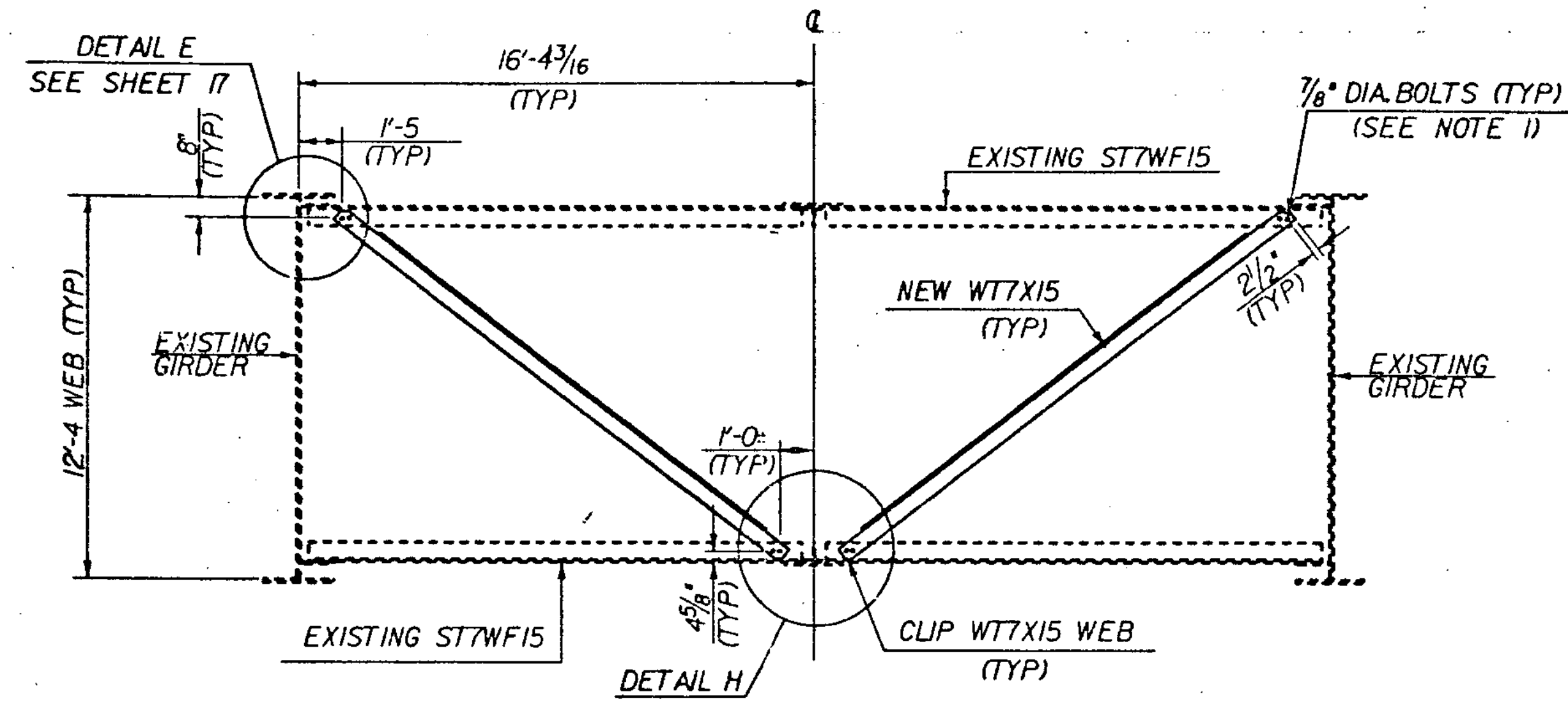


**PLAN**  
SCALE 1/4"=1'-0"

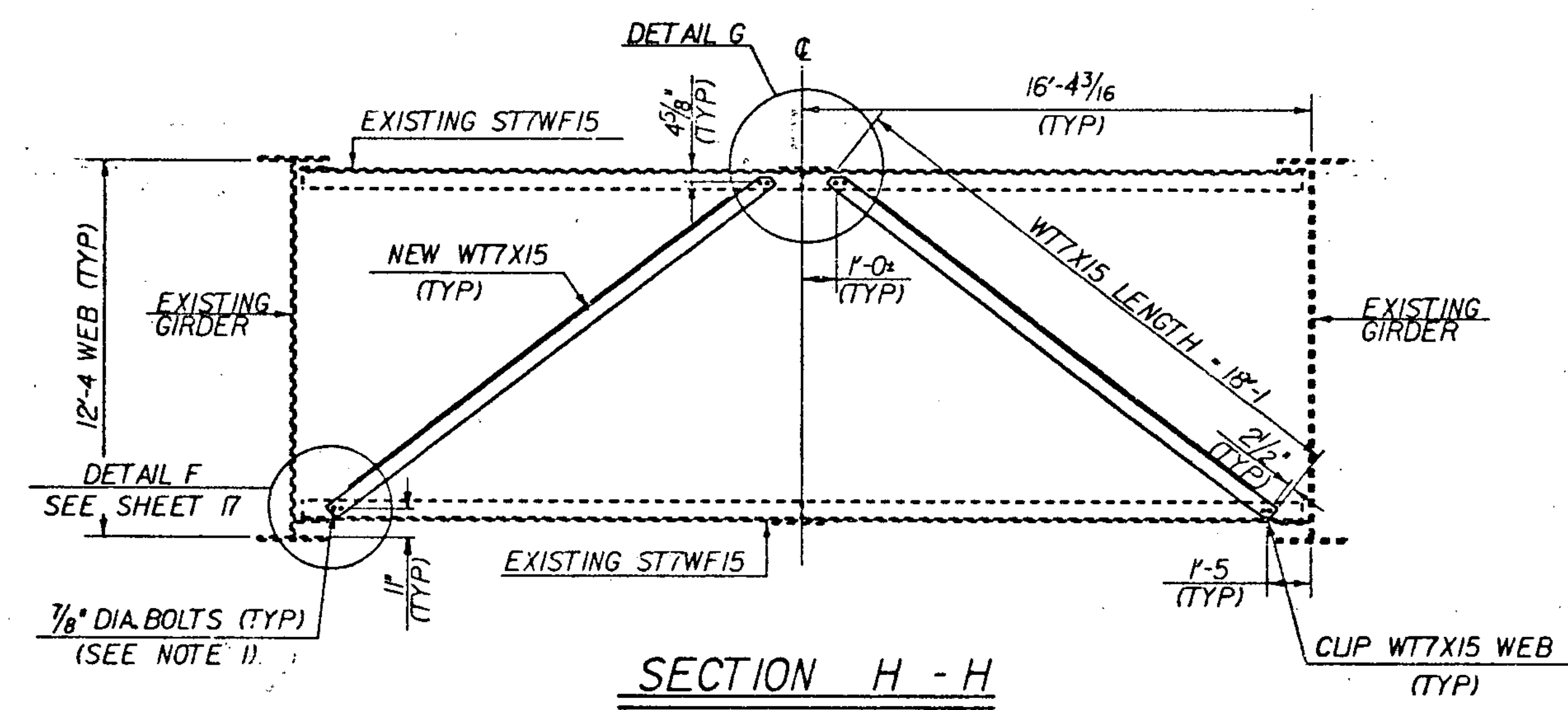
NOTE: PLAN OF BAY FROM FLOOR BEAM \*36 TO \*37 SHOWN. BAYS FROM FLOOR BEAM \*20 TO \*46 ARE THE SAME AS SHOWN.



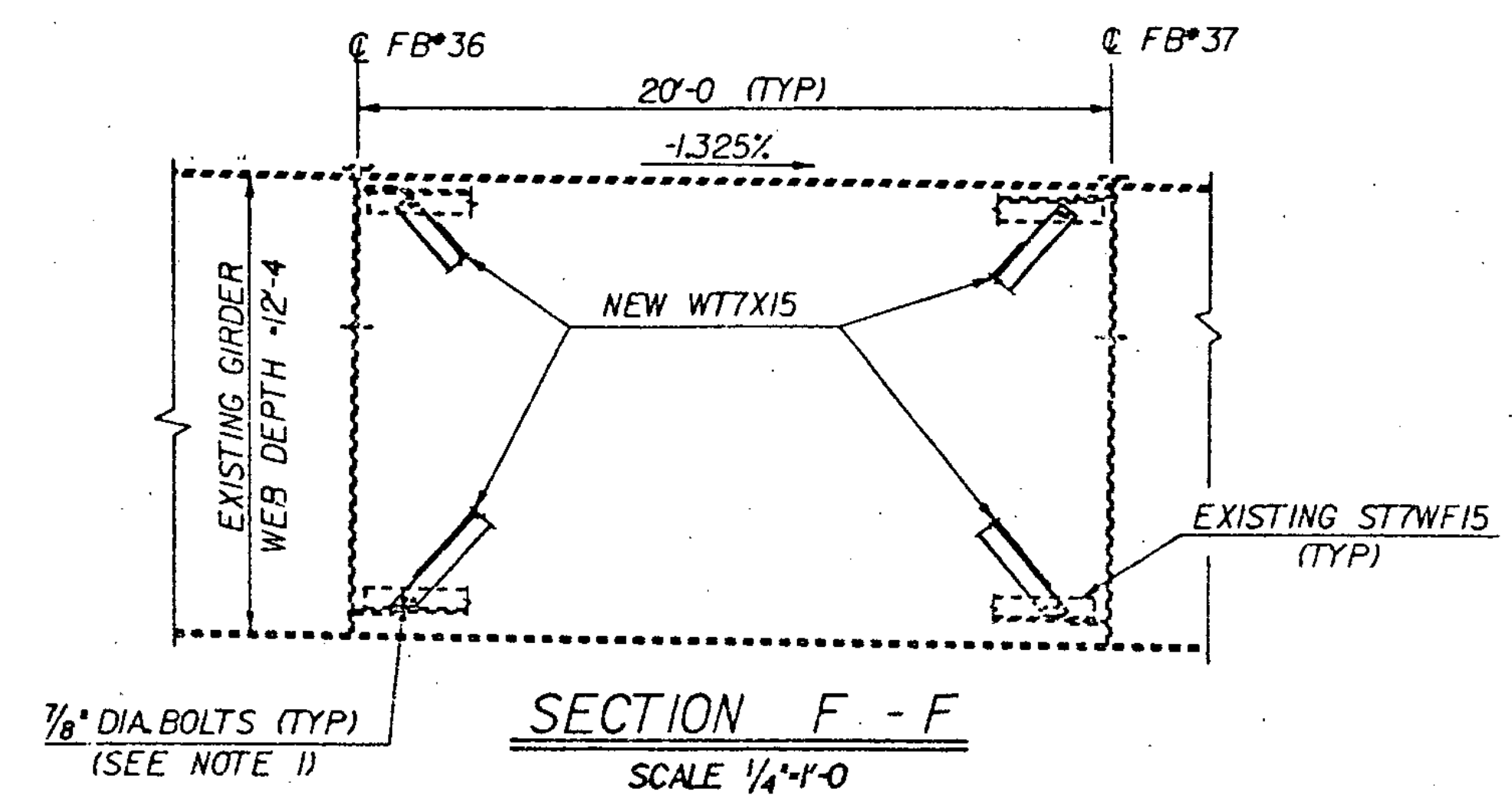
**DETAIL H**  
SCALE 1"=1'-0"



**SECTION G - G**  
SCALE 1/4"=1'-0"



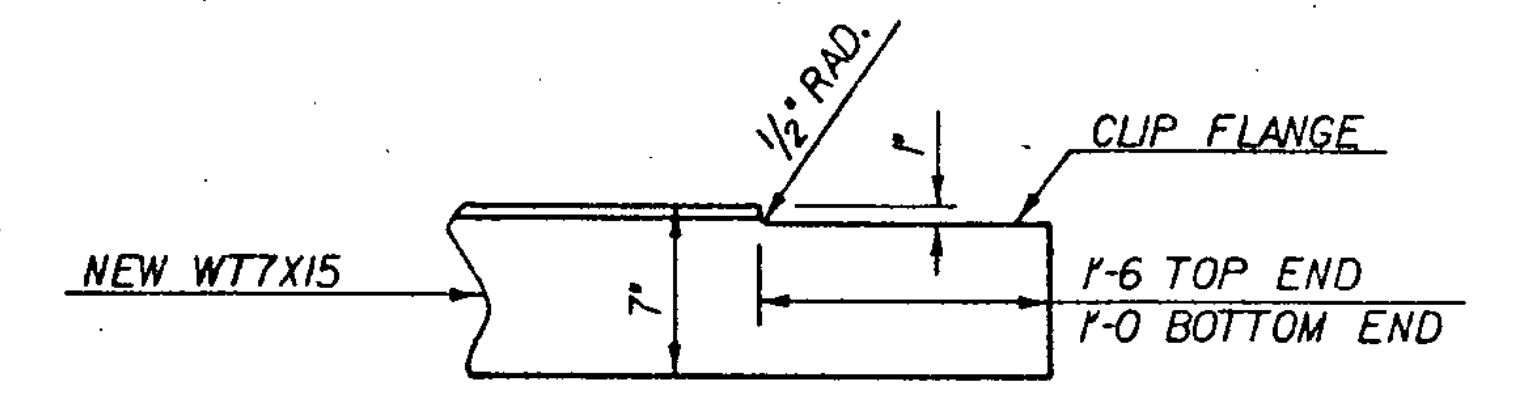
**SECTION H - H**  
SCALE 1/4"=1'-0"



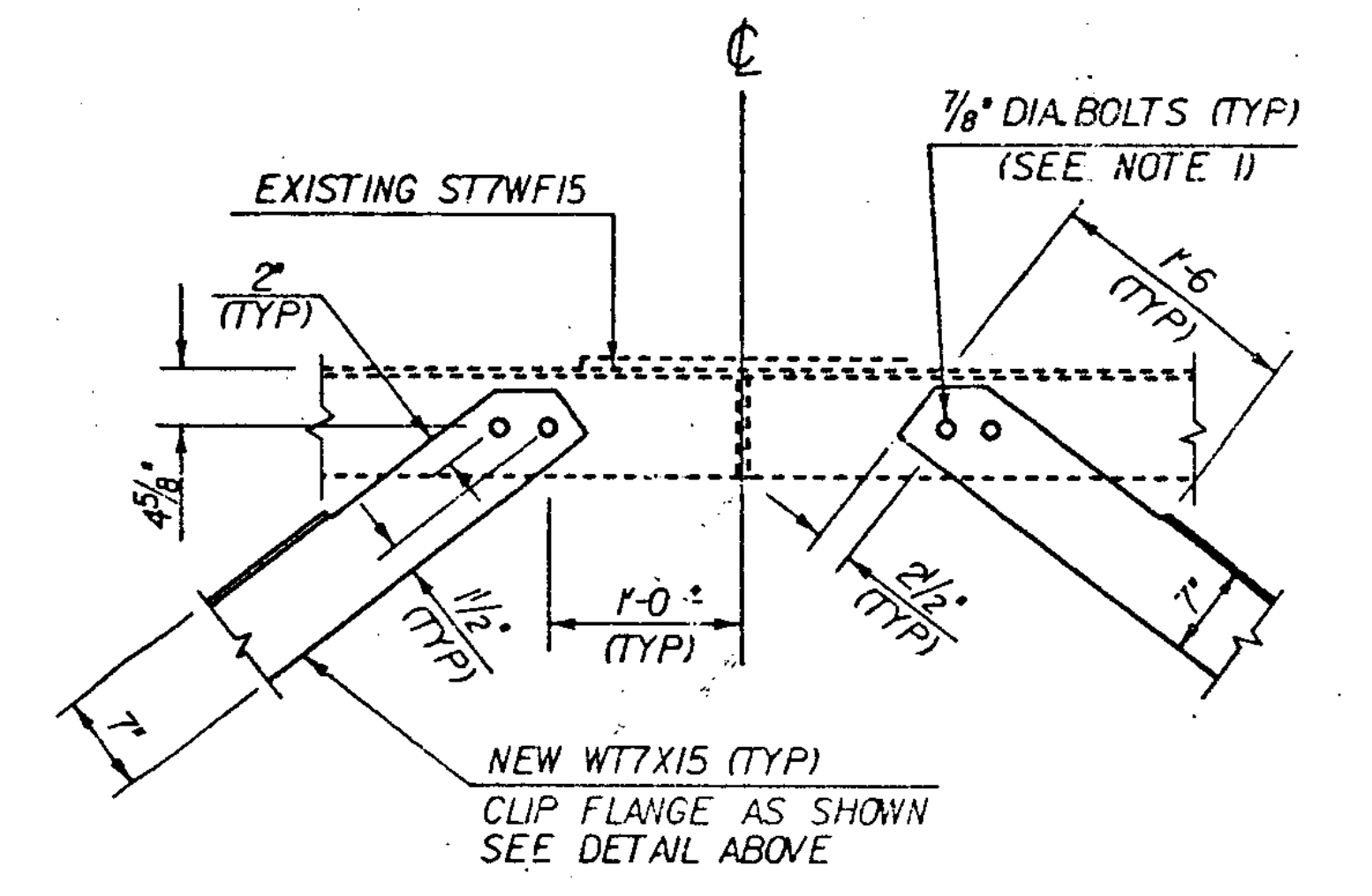
**SECTION F - F**  
SCALE 1/4"=1'-0"

**NOTES**

1. SHOP DRILL 1 5/16" DIA. HOLES IN NEW WT7X15'S. FIELD DRILL HOLES IN EXISTING ST7WF15'S. USE 7/8" DIA. HIGH STRENGTH BOLTS (ASTM A325) FOR CONNECTIONS.
2. THE NEW WT7X15'S IN EACH BAY SHALL BE APPROXIMATELY 18'-1" LONG.
3. DETAILS ON THIS SHEET ARE FOR BAYS FROM FLOOR BEAM \*20 TO FLOOR BEAM \*46.

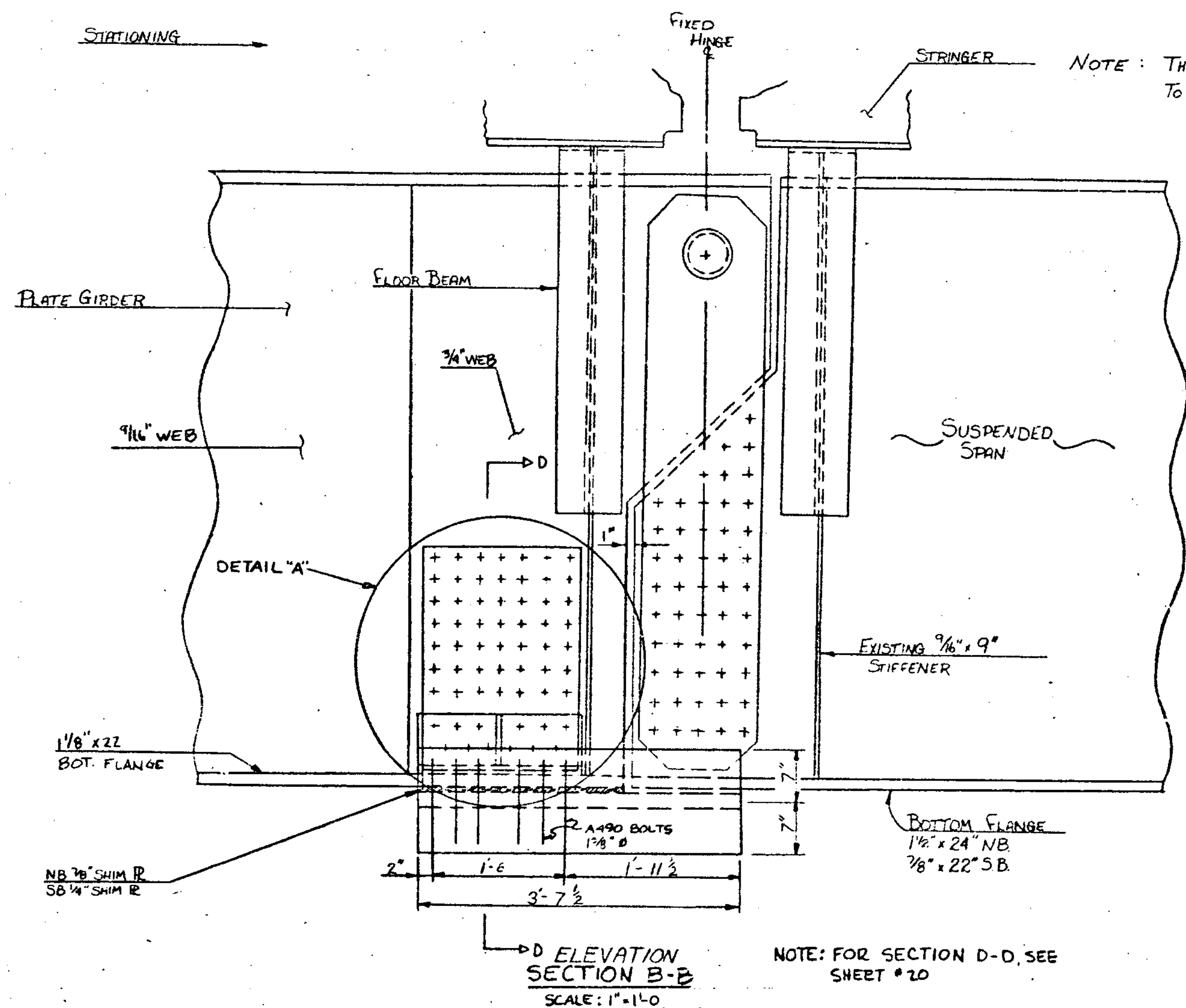


**FLANGE CLIP DETAIL**  
SCALE 1/2"=1'-0"

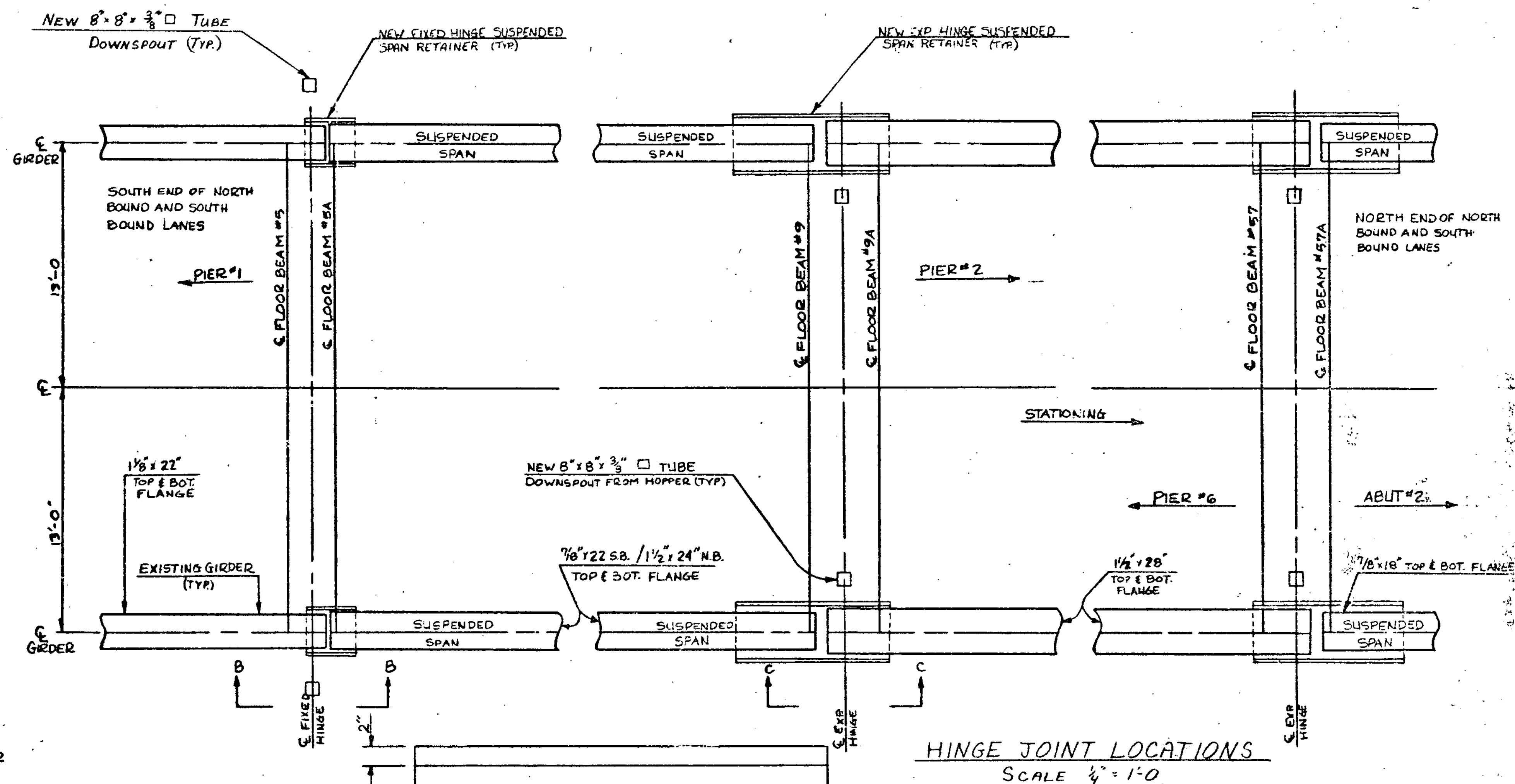


**DETAIL G**  
SCALE 1"=1'-0"

| STATE OF VERMONT<br>AGENCY OF TRANSPORTATION           |                         |                          |               |
|--------------------------------------------------------|-------------------------|--------------------------|---------------|
| Town Of                                                | HARTFORD                | Bridge No.               | 44 N & S      |
| Highway No.                                            | 191                     | Log Sta.                 |               |
|                                                        |                         | Surv. Sta.               |               |
| KNEE BRACING DETAILS FROM F.B. *20-46                  |                         |                          |               |
| 191 OVER THE WHITE RIVER, U.S. RTE. 4, AND VT. RTE. 14 |                         |                          |               |
| Designed By                                            | A. ELWOOD               | Drawn By                 | DAVE WILLEY   |
| Checked By                                             | J. POTTER               | Date                     | 3-84          |
|                                                        |                         | Bridge Design Supervisor | R. S. HAUP    |
| PROJECT                                                | HARTFORD                | PROJECT NO.              | IR-91 - 2 (1) |
| LOG. Info.                                             | QSAH\30,25\82A115L3.DGN |                          |               |
| Bridge Sheet No.                                       |                         | Sheet                    | 18 of 30      |



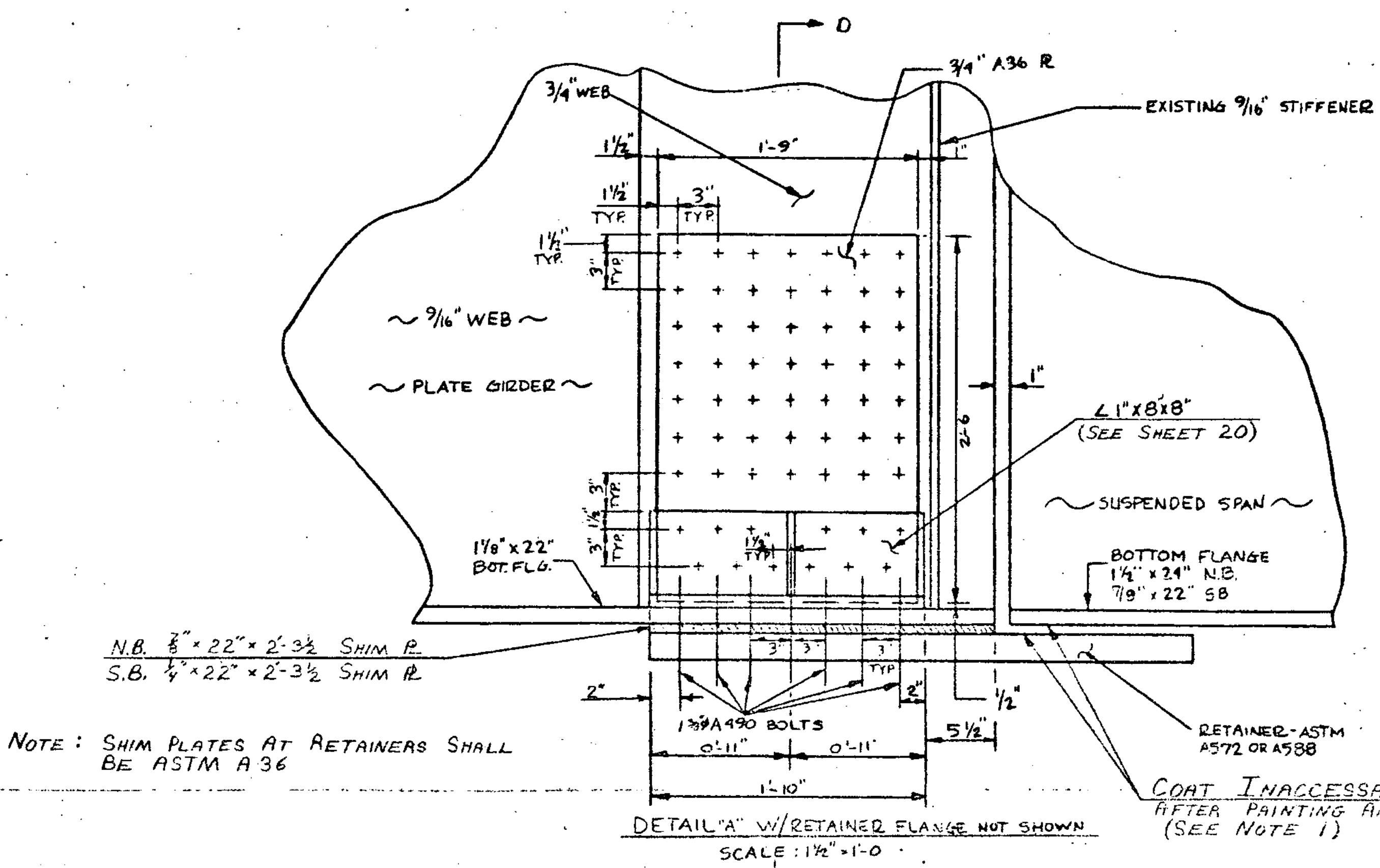
NOTE: THE FIXED HINGE JOINT IN SPAN #2, SHOWN BELOW, IS SIMILAR TO THE EXPANSION HINGE JOINTS. FOR MORE DETAILS SEE SHEET 20



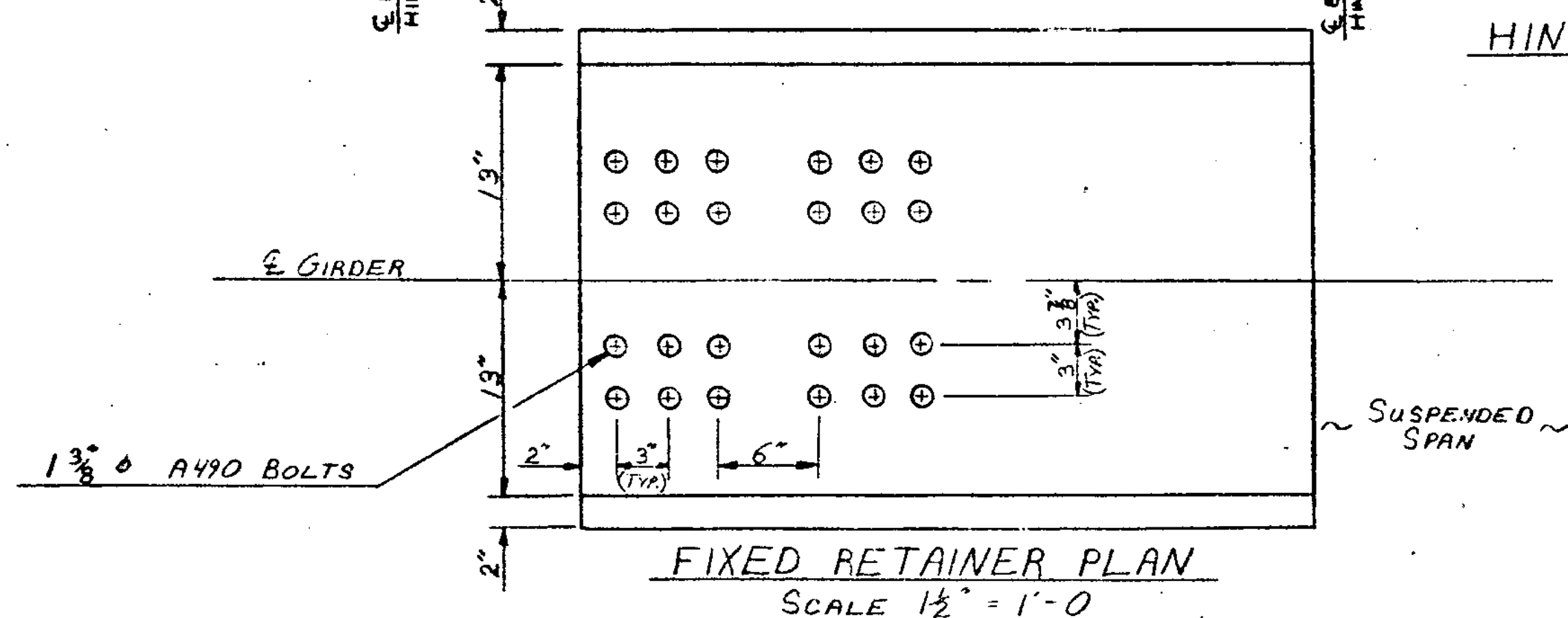
HINGE JOINT LOCATIONS  
SCALE 1/4" = 1'-0"

#### NOTES

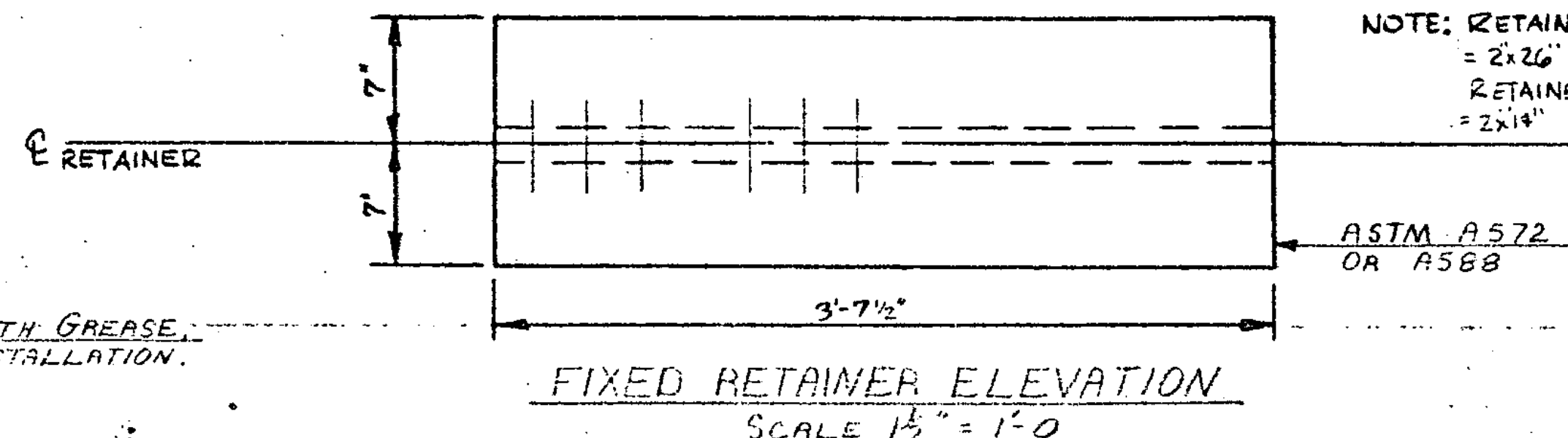
1. THE RETAINERS, AND GIRDER SURFACES IN THE AREAS OF THE RETAINERS, SHALL BE COMPLETELY PAINTED WITH ALL COATS OF PAINT PRIOR TO INSTALLATION OF THE RETAINERS.



DETAIL "A" W/RETAINED FLANGE NOT SHOWN  
SCALE 1 1/2" = 1'-0"



FIXED RETAINER PLAN  
SCALE 1 1/2" = 1'-0"



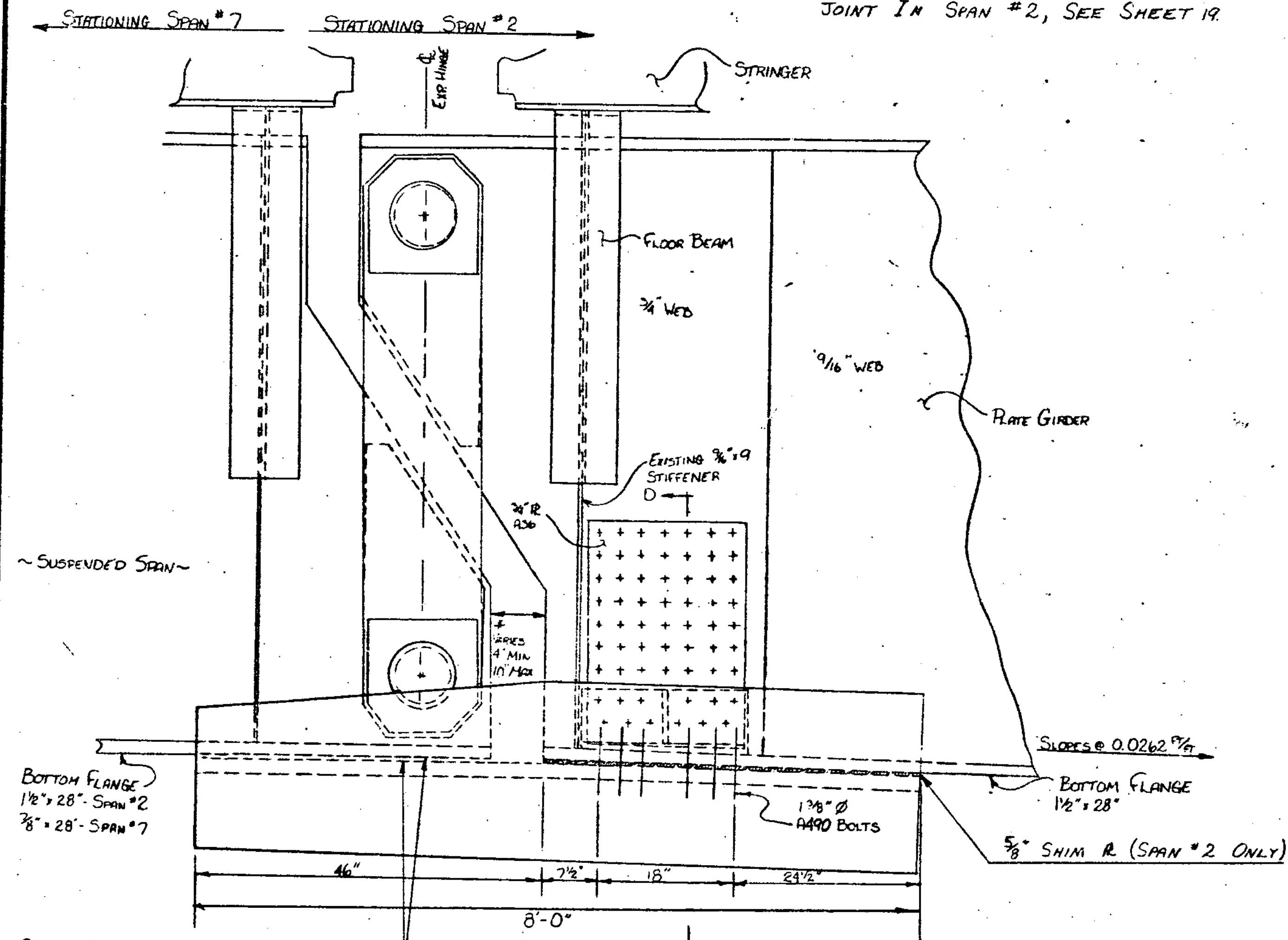
FIXED RETAINER ELEVATION  
SCALE 1 1/2" = 1'-0"

NOTE: RETAINER WEB = 2x26"  
RETAINER FLANGE = 2x18"

ASTM A572 OR A588

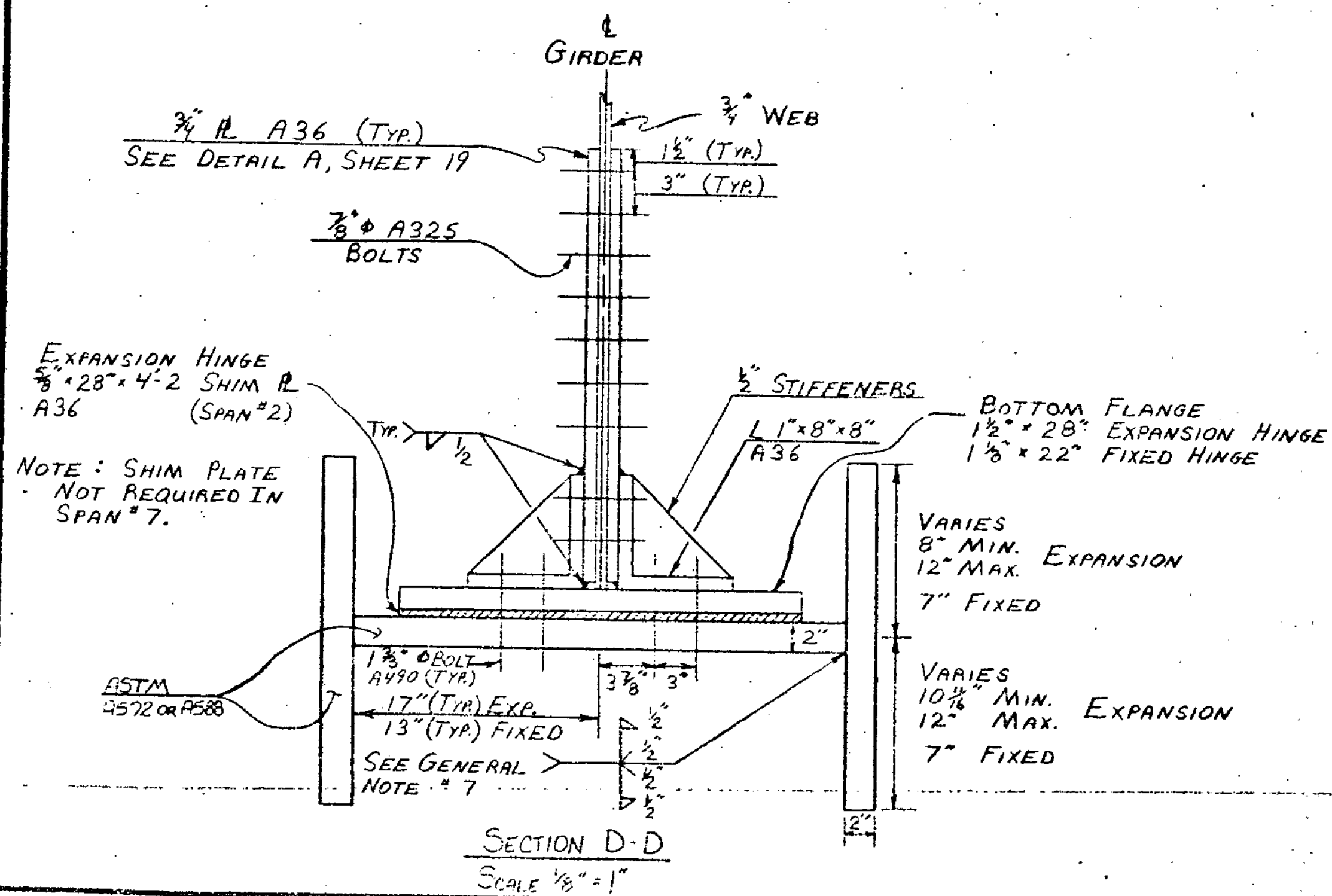
| STATE OF VERMONT<br>AGENCY OF TRANSPORTATION |                                                             |
|----------------------------------------------|-------------------------------------------------------------|
| TOWN OF <b>HARTFORD</b>                      | Bridge No. 44 1115                                          |
| HIGHWAY NO. <b>191</b>                       | Log Sta.                                                    |
| Surv. Sta.                                   |                                                             |
| FIXED HINGE RETAINER DETAILS                 |                                                             |
| 191 OVER THE WHITE RIVER AND U.S. RTE. 4     |                                                             |
| Designed by <b>A. ELWOOD</b>                 | Drawn by <b>K. LYONS</b>                                    |
| Checked by <b>A. ELWOOD</b> date <b>8-84</b> | Bridge Design Supervisor <b>R.S. HAUPT</b> date <b>7-84</b> |
| PROJECT <b>HARTFORD</b>                      | PROJECT NO. <b>IR-91-2(1)</b>                               |
| Bridge Sheet No.                             | Sheet <b>19</b> of <b>30</b>                                |

- NOTES 1. FOR LOCATION OF SECTION C-C, SEE SHEET 19.  
2. EXPANSION HINGE JOINT IN SPAN #2 SHOWN BELOW.  
EXPANSION HINGE JOINT IN SPAN #7 IS SIMILAR EXCEPT  
OPPOSITE HAND. FOR DETAILS OF THE FIXED HINGE  
JOINT IN SPAN #2, SEE SHEET 19.

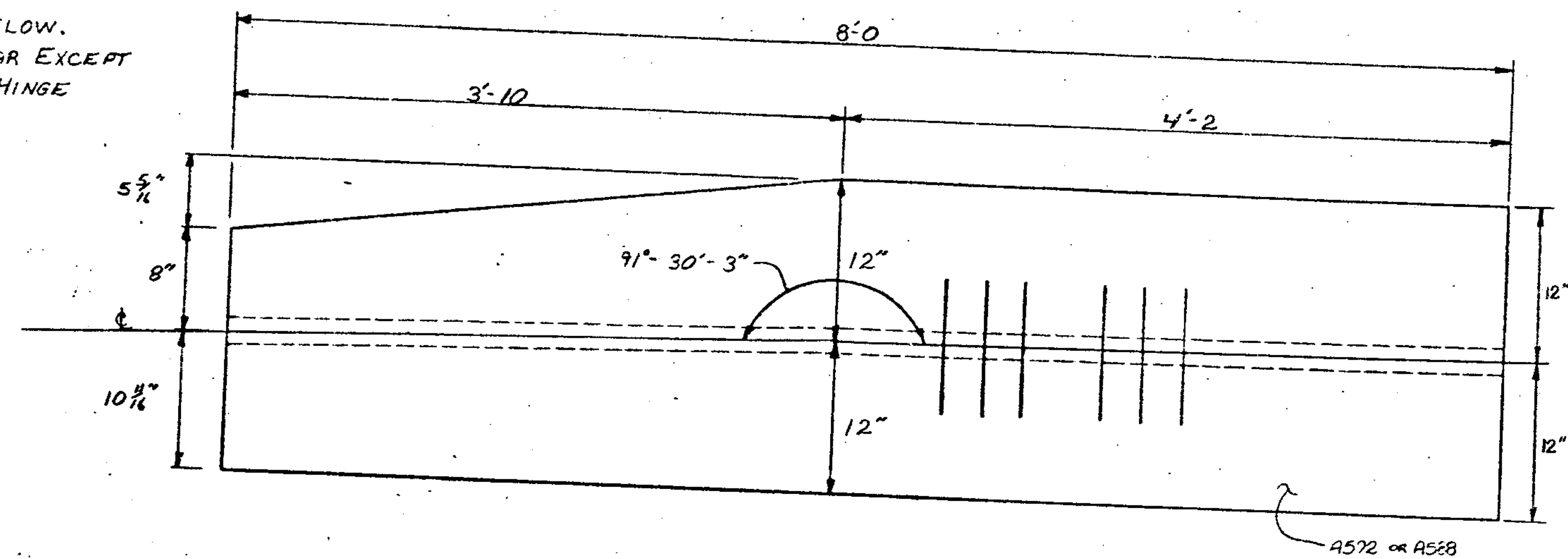


COAT INACCESSIBLE AREAS WITH  
GREASE, AFTER PAINTING AND PRIOR  
TO INSTALLATION. (SEE NOTE #1  
ON SHEET 19.)

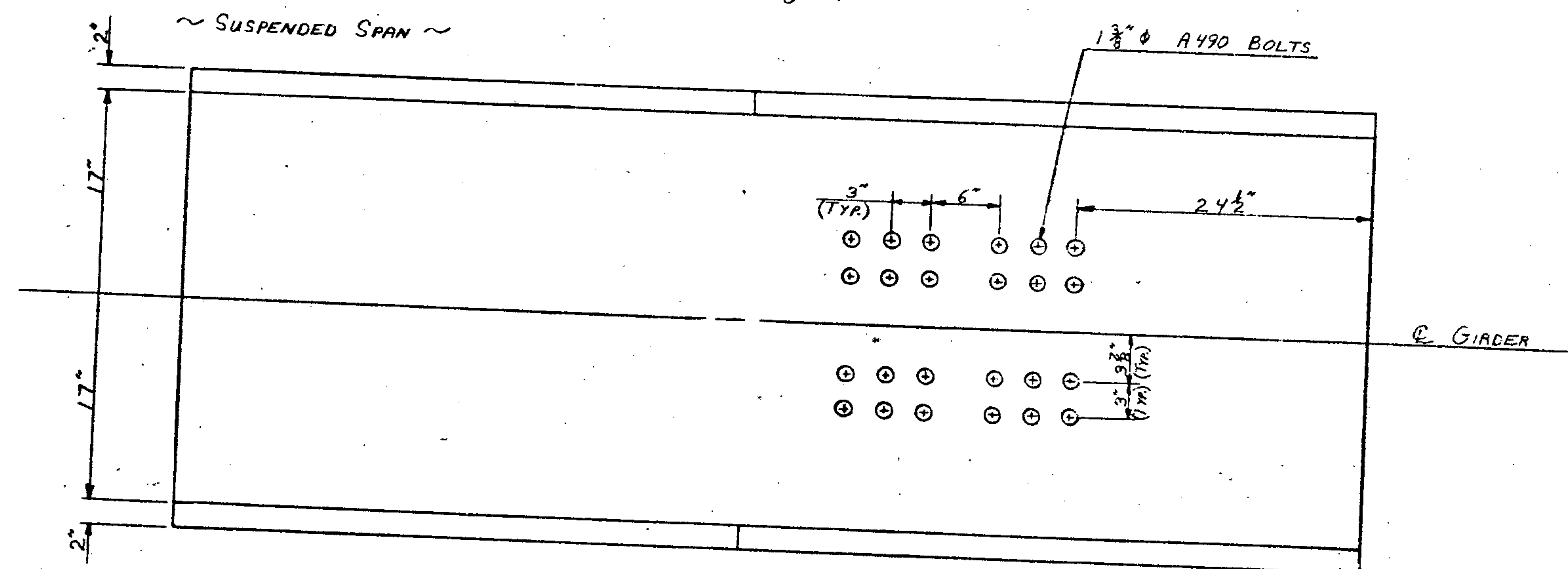
SECTION C-C  
SCALE 1" = 1'-0"



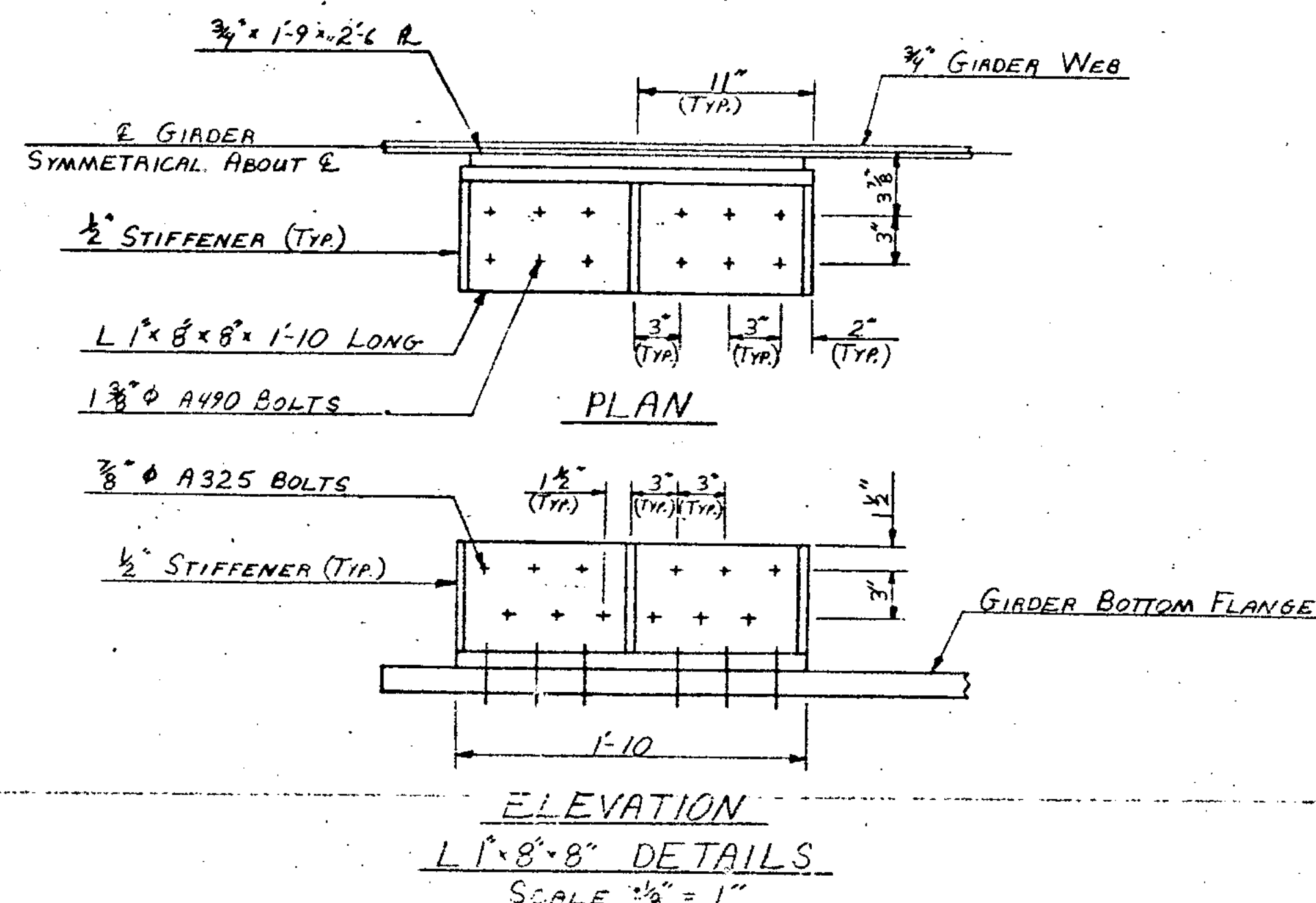
SECTION D-D  
SCALE 1/8" = 1"



EXPANSION RETAINER ELEVATION  
SCALE 1/8" = 1"

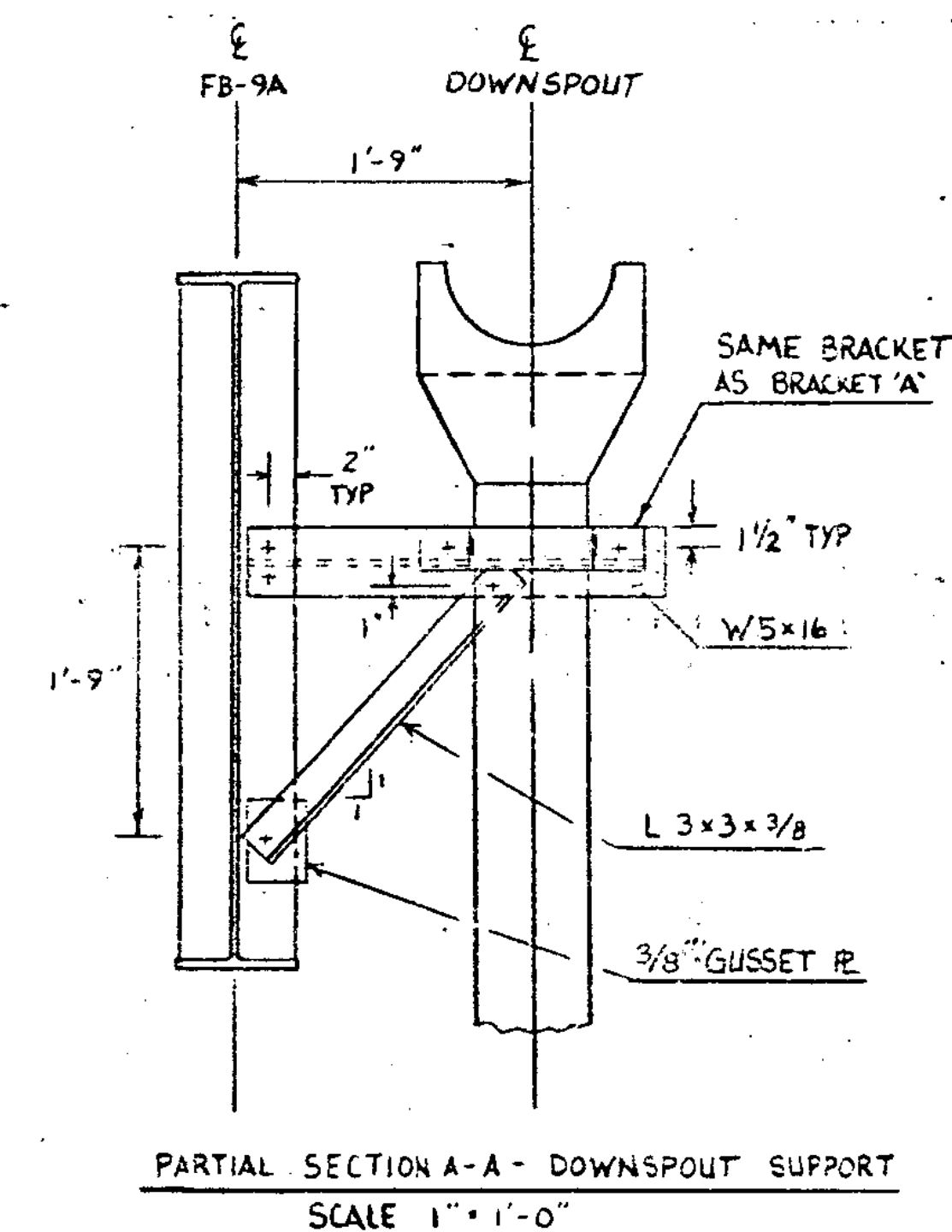
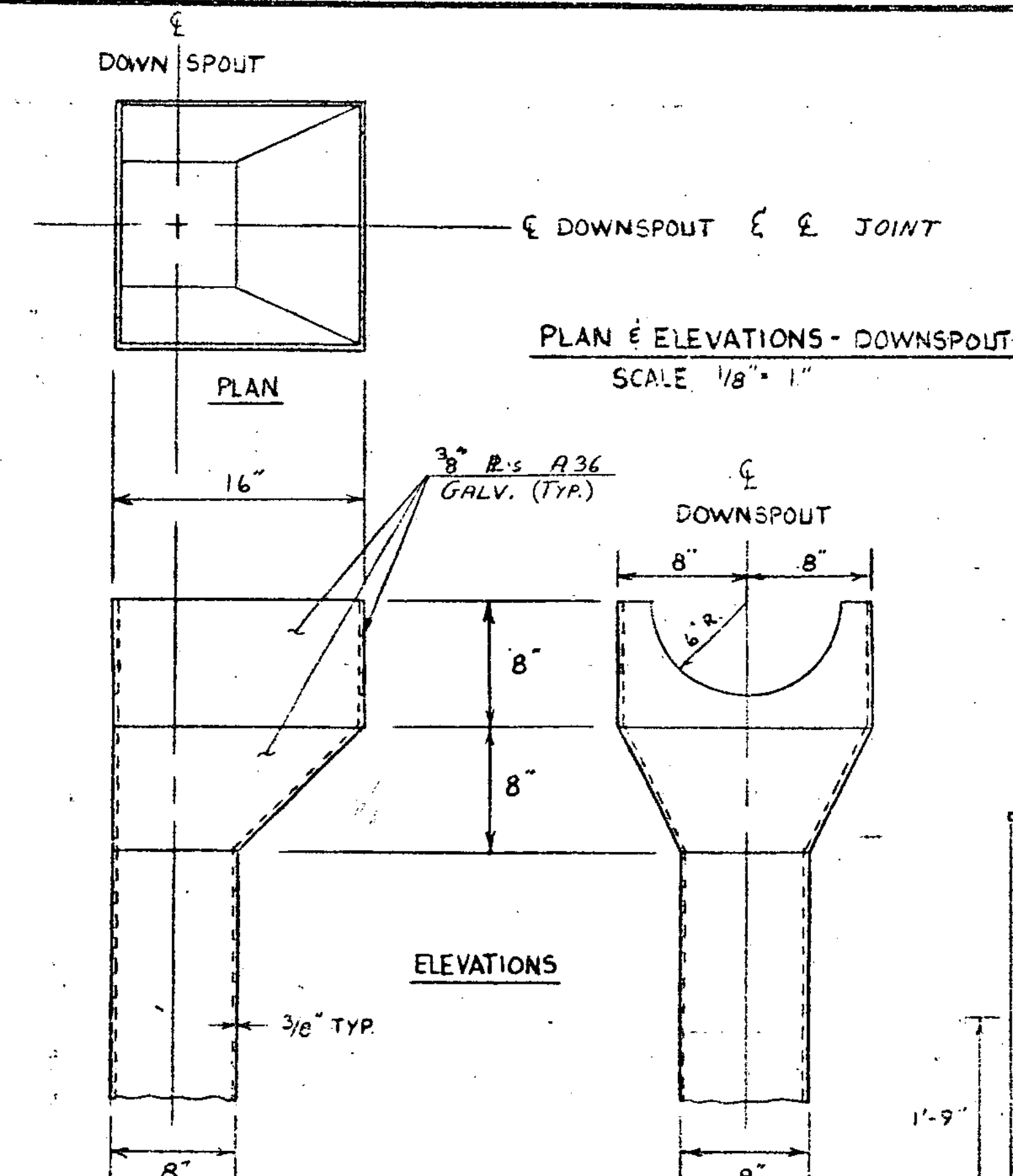
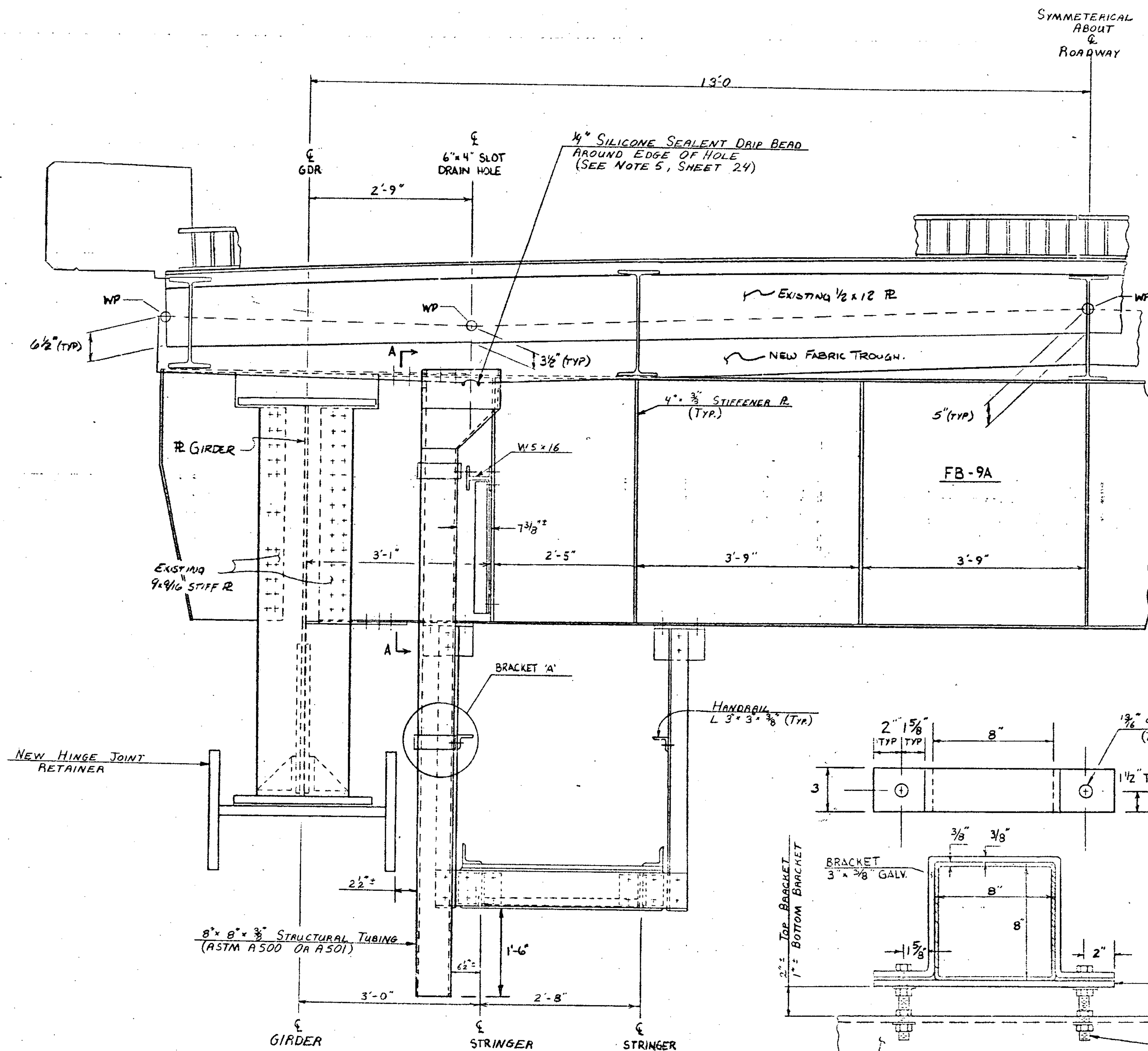


EXPANSION RETAINER PLAN  
SCALE 1/8" = 1"



ELEVATION  
L 1'-8\"/>

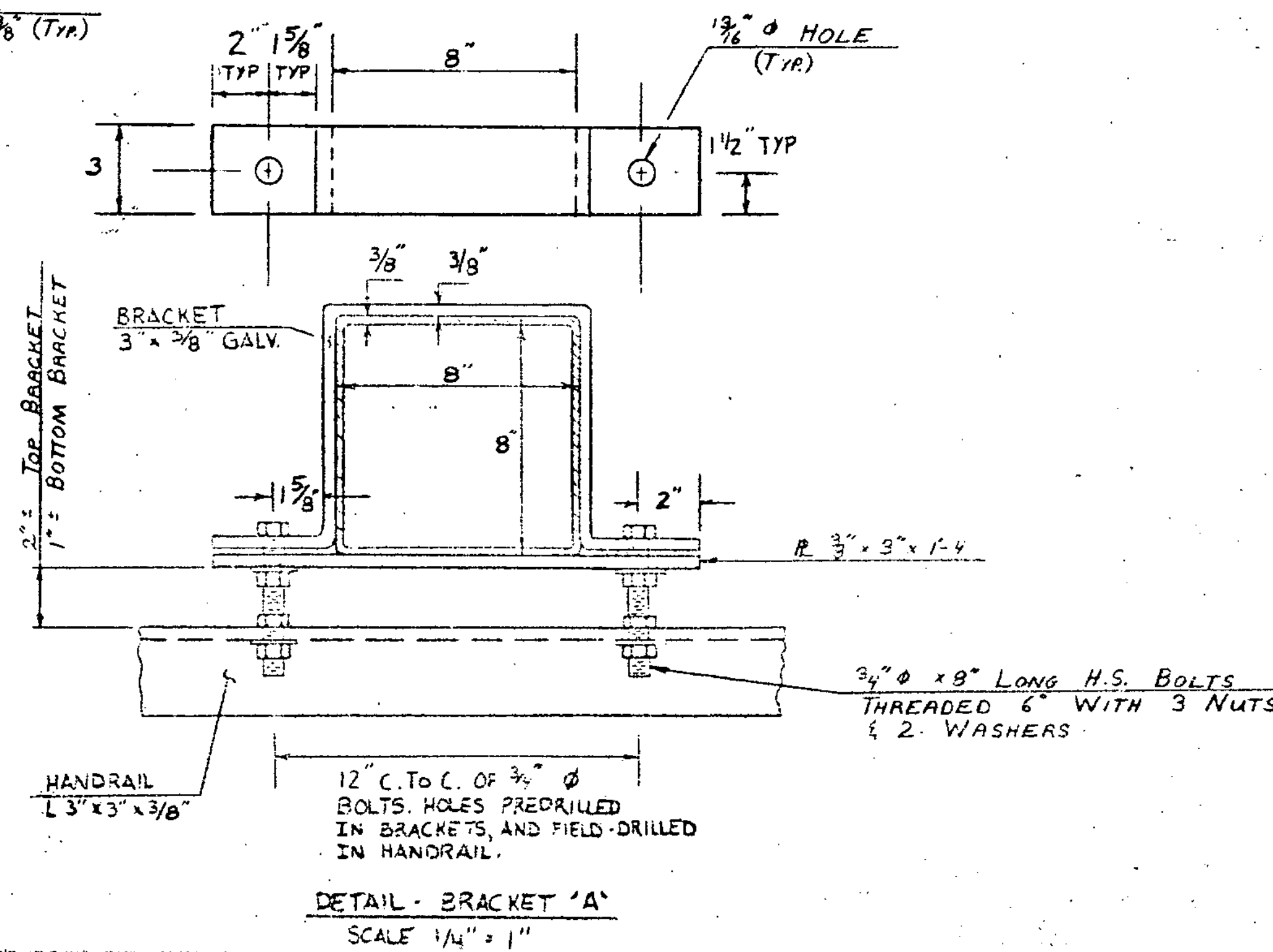
| STATE OF VERMONT<br>AGENCY OF TRANSPORTATION |           |                          |             |
|----------------------------------------------|-----------|--------------------------|-------------|
| TOWN OF                                      | HARTFORD  | Bridge No.               | 44 N45      |
| HIGHWAY NO.                                  | 191       | Log Sta.                 |             |
| EXPANSION HINGE RETAINERS DETAILS            |           |                          |             |
| 191 OVER THE WHITE RIVER AND US RTE 4        |           |                          |             |
| Designed by                                  | A. ELWOOD | Drawn by                 | V. LYONS    |
| Checked by                                   | A. ELWOOD | Bridge Design Supervisor | P. S. HEURT |
| PROJECT                                      | HARTFORD  | PROJECT NO.              | 19-91-2(1)  |
| Bridge Sheet No.                             |           | Sheet                    | 20 of 30    |



#### NOTES

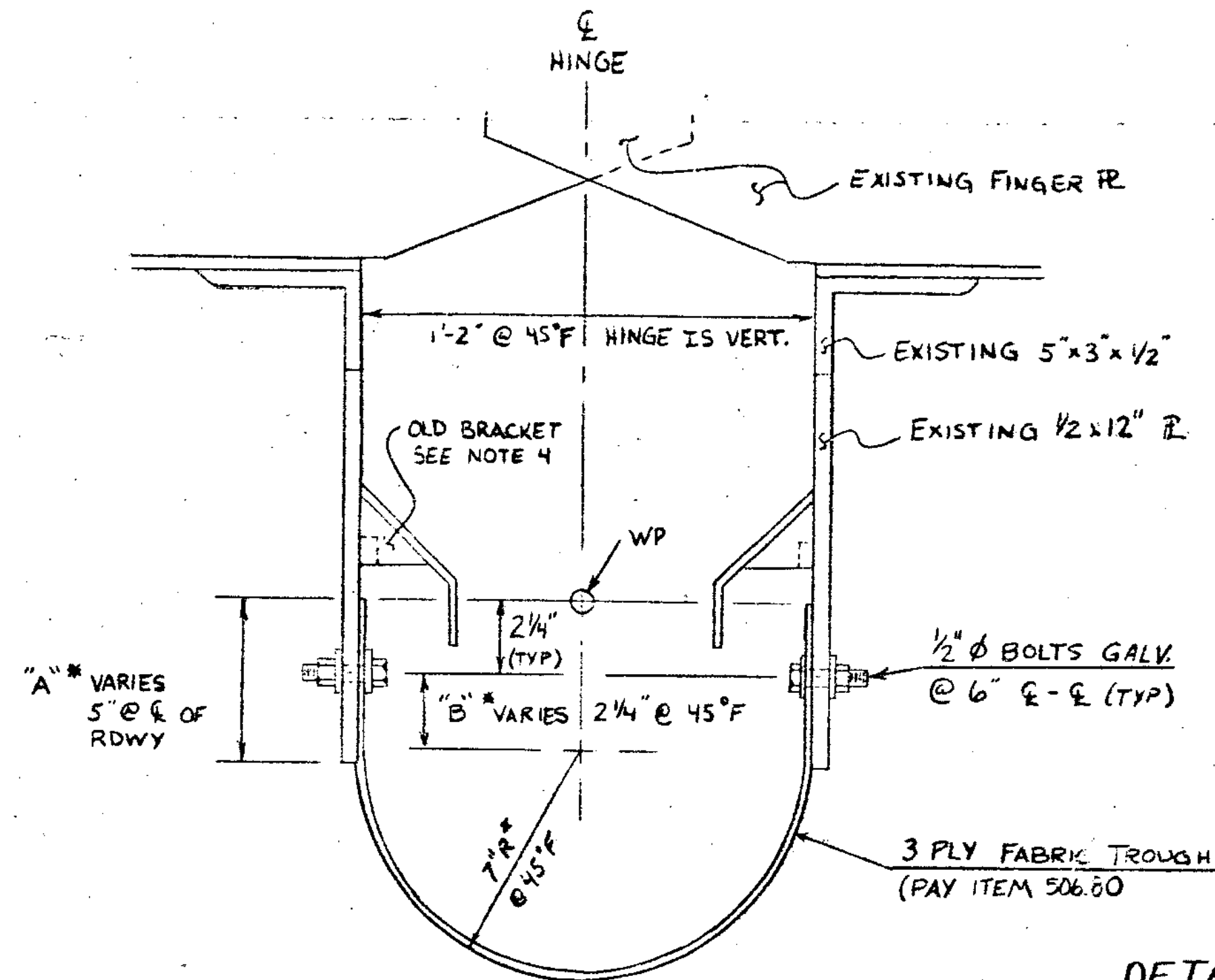
1. DETAILS SHOWN ARE FOR THE EXPANSION HINGE JOINT IN SPAN 2. DETAILS FOR EXPANSION HINGE JOINT IN SPAN 6 ARE SIMILAR EXCEPT OPPOSITE HAND. NORTHBOUND AND SOUTHBOUND BRIDGE DETAILS ARE THE SAME.
2. HOPPER AND ATTACHMENTS SHALL BE ASTM A36, GALVANIZED. DOWNSPOUTS SHALL BE ASTM A500 OR A501 STRUCTURAL TUBING, GALVANIZED.
3. FOR DETAILS OF NEW FABRIC TROUGH, SEE SHEET 22.

PARTIAL SECTION @ EXPANSION JOINT  
LOOKING AHEADSTATION  
SCALE 1" = 1'-0"



### STATE OF VERMONT AGENCY OF TRANSPORTATION

|                                      |                          |
|--------------------------------------|--------------------------|
| TOWN OF HARTFORD                     | Bridge No. 44 NES        |
| HIGHWAY NO. I-91                     | Log Sta.                 |
|                                      | Surv. Sta.               |
| EXPANSION HINGE DRAINAGE DETAILS     |                          |
| I-91 OVER THE WHITE RIVER AND U.S. 4 |                          |
| Designed by A. POTTER                | Drawn by T.H. LACEY      |
| Checked by A.W. ELWOOD               | Bridge Design Supervisor |
| A.W. ELWOOD date 8-84                | RS HALPT date 4-84       |
| PROJECT HARTFORD                     | PROJECT NO. IR-91-2(1)   |
| Bridge Sheet No.                     | Sheet 21 of 30           |



ELEVATION - TROUGH  
SCALE 1/4" = 0'-1"

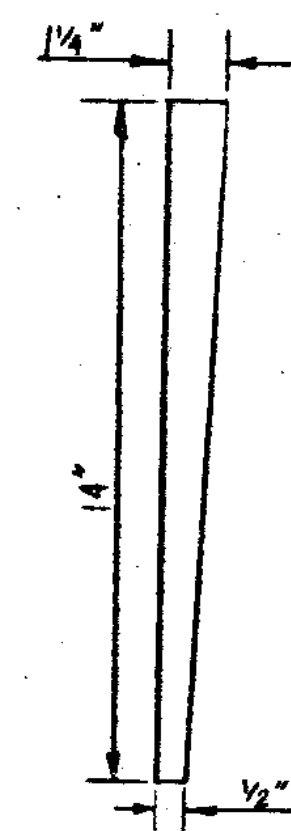
"A" VARIES WITH LOCATION.  
"B" VARIES WITH TEMPERATURE.

| DIMENSION | LOCATION |               |                  |
|-----------|----------|---------------|------------------|
|           | E RDWY   | LOW PT TROUGH | END 1/2" x 12" R |
| "A"       | 5"       | 3 1/2"        | 6 1/2"           |

NOTES:

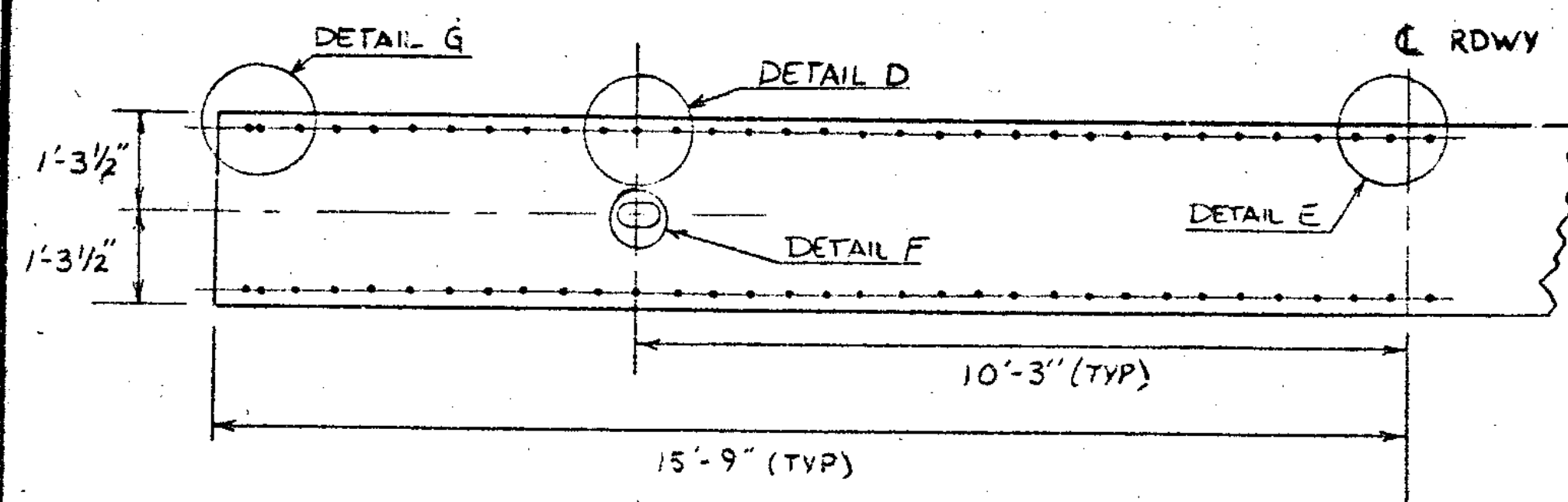
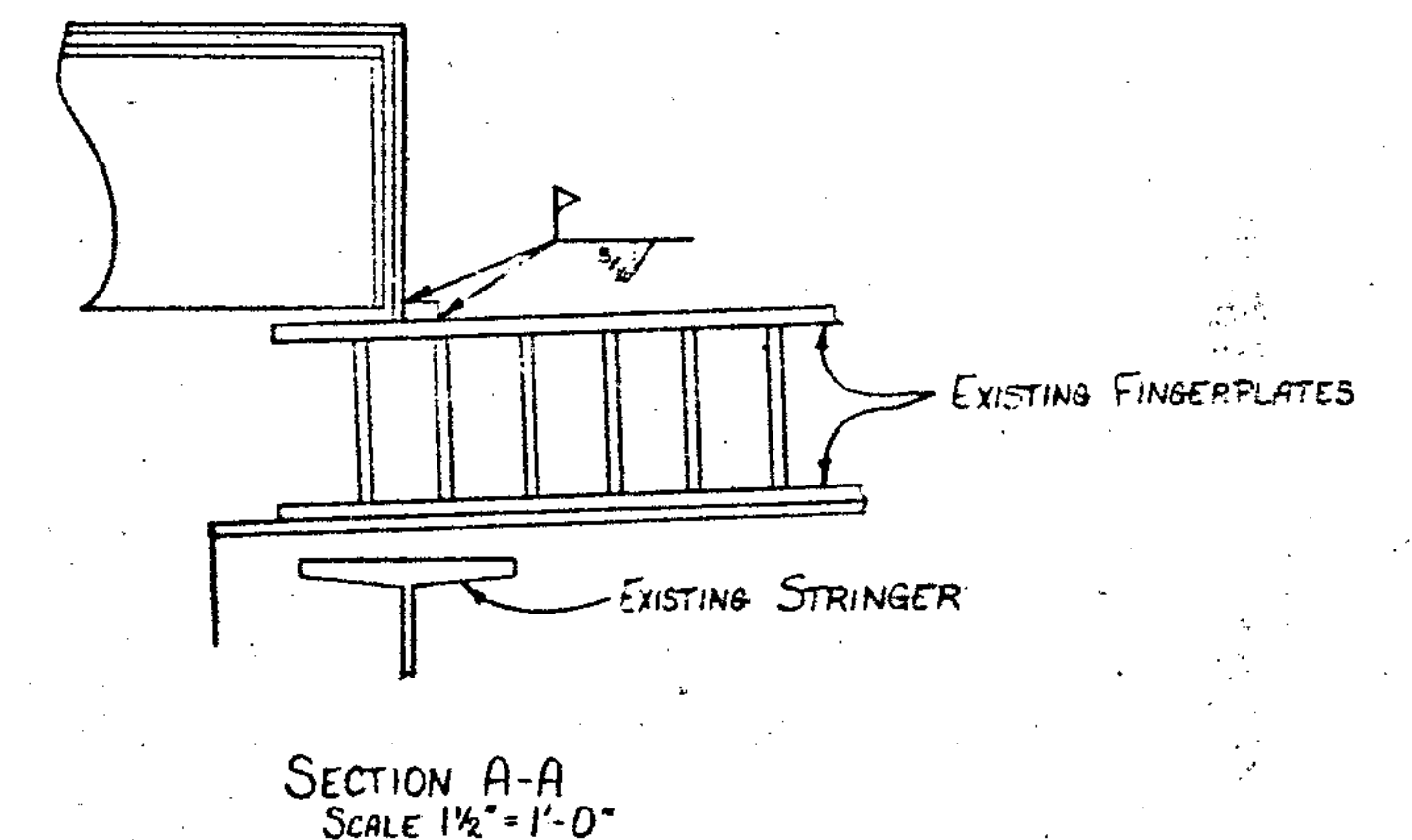
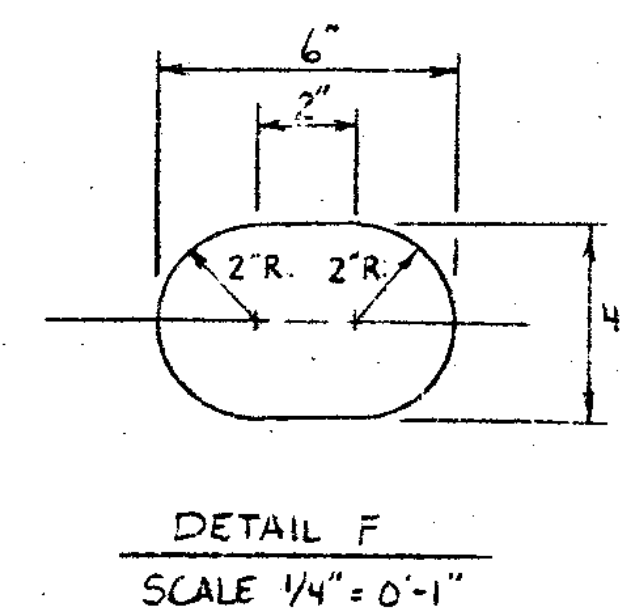
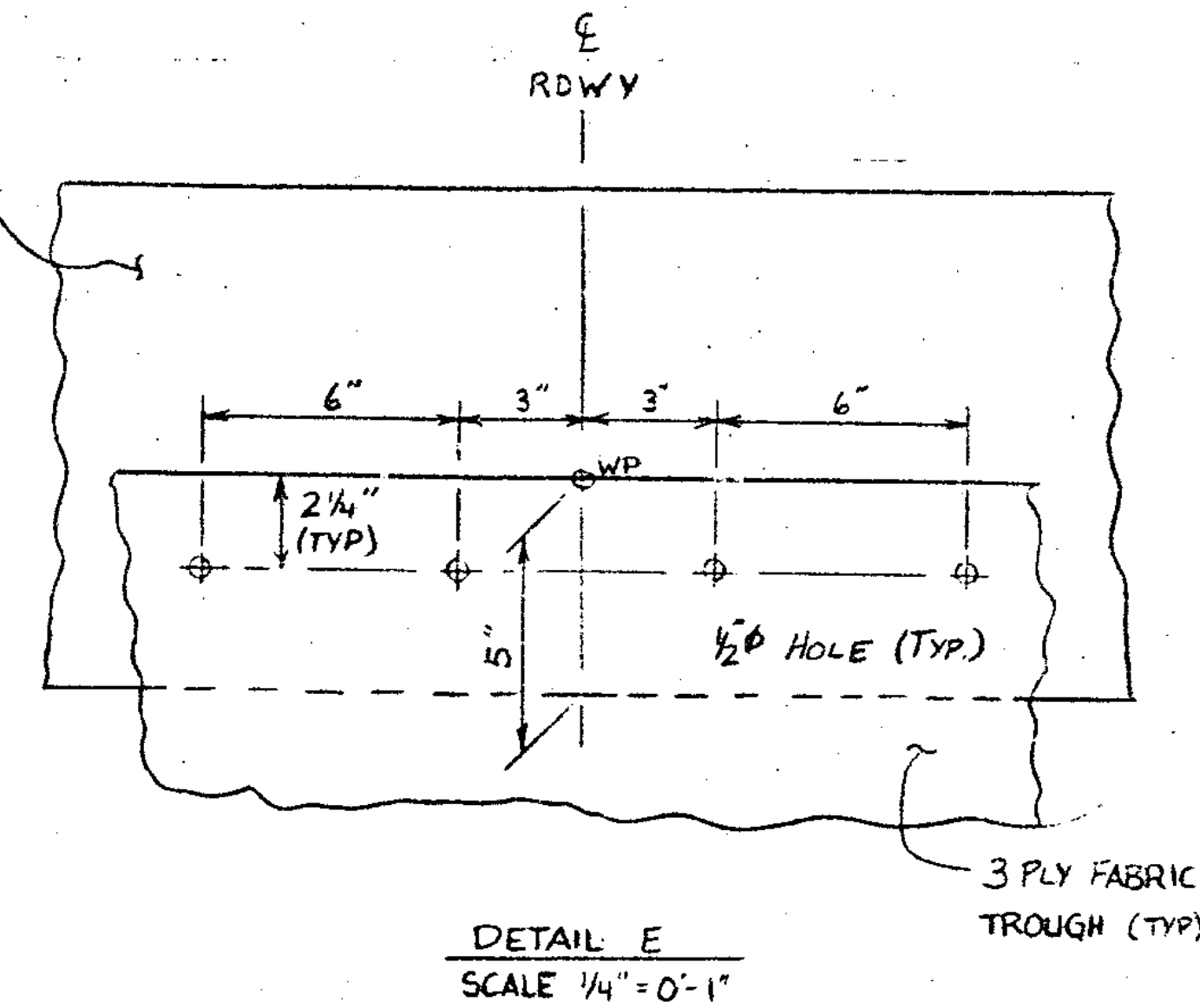
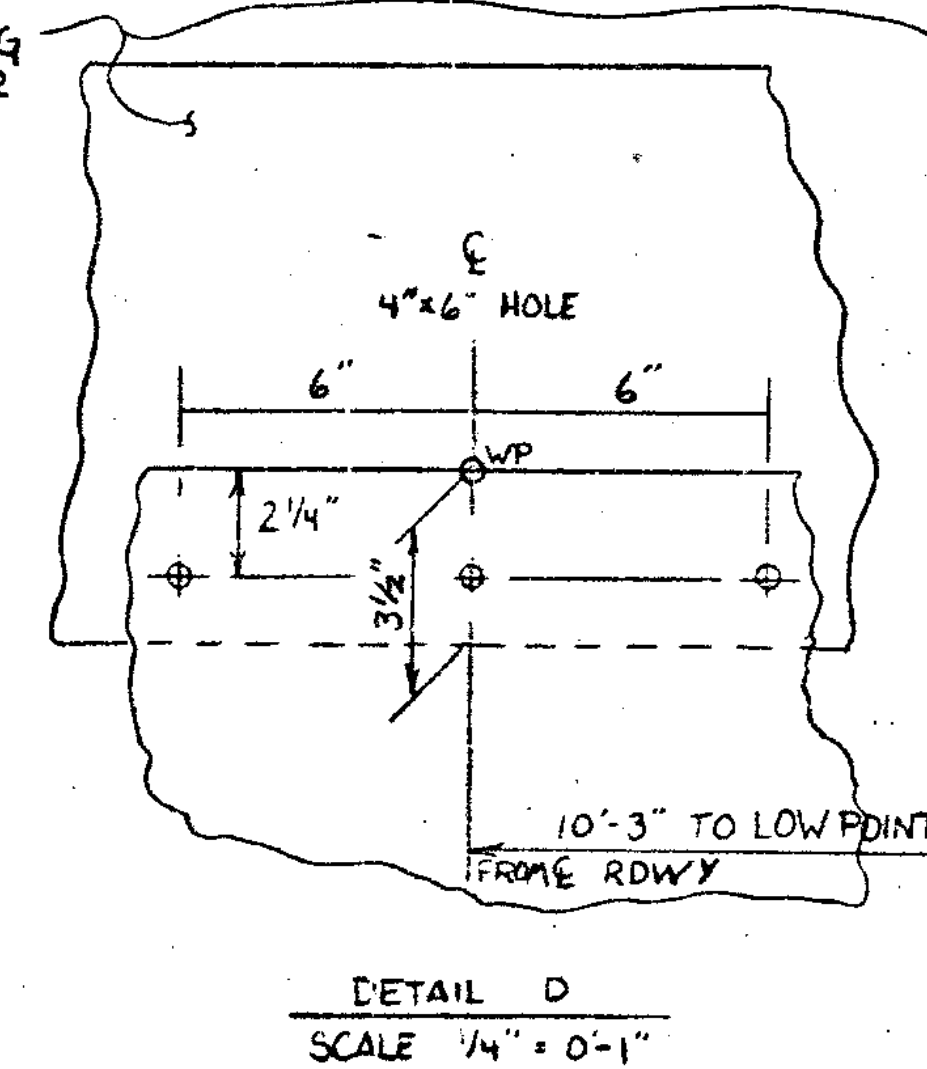
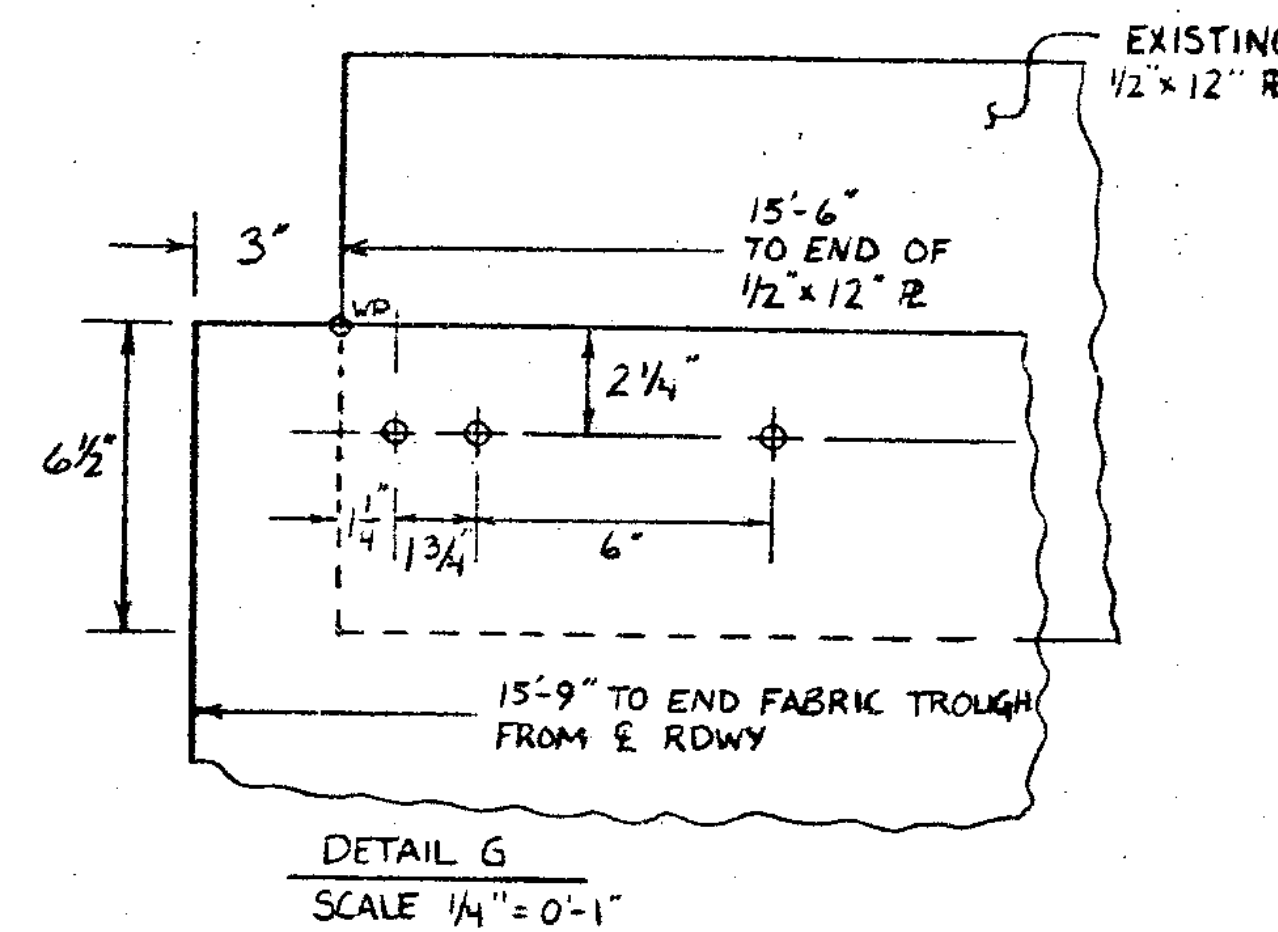
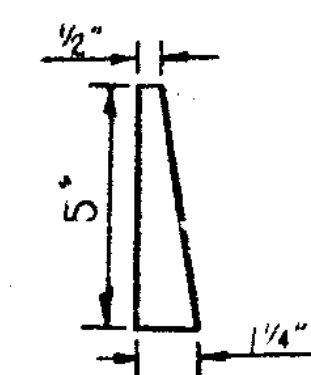
1. WIDTH OF FABRIC IS 31".
2. MAINTAIN 2 1/4" FROM TOP OF FABRIC (WP) TO E OF 1/2" Ø BOLT.
3. BOLTS TO BE SPACED AT 6" E-E.
4. LOCATION OF OLD BRACKET VARIES, CUT GUSSET R WHERE NECESSARY.
5. FABRIC TROUGH IS SYMMETRIC ABOUT E ROADWAY.

DETAIL I

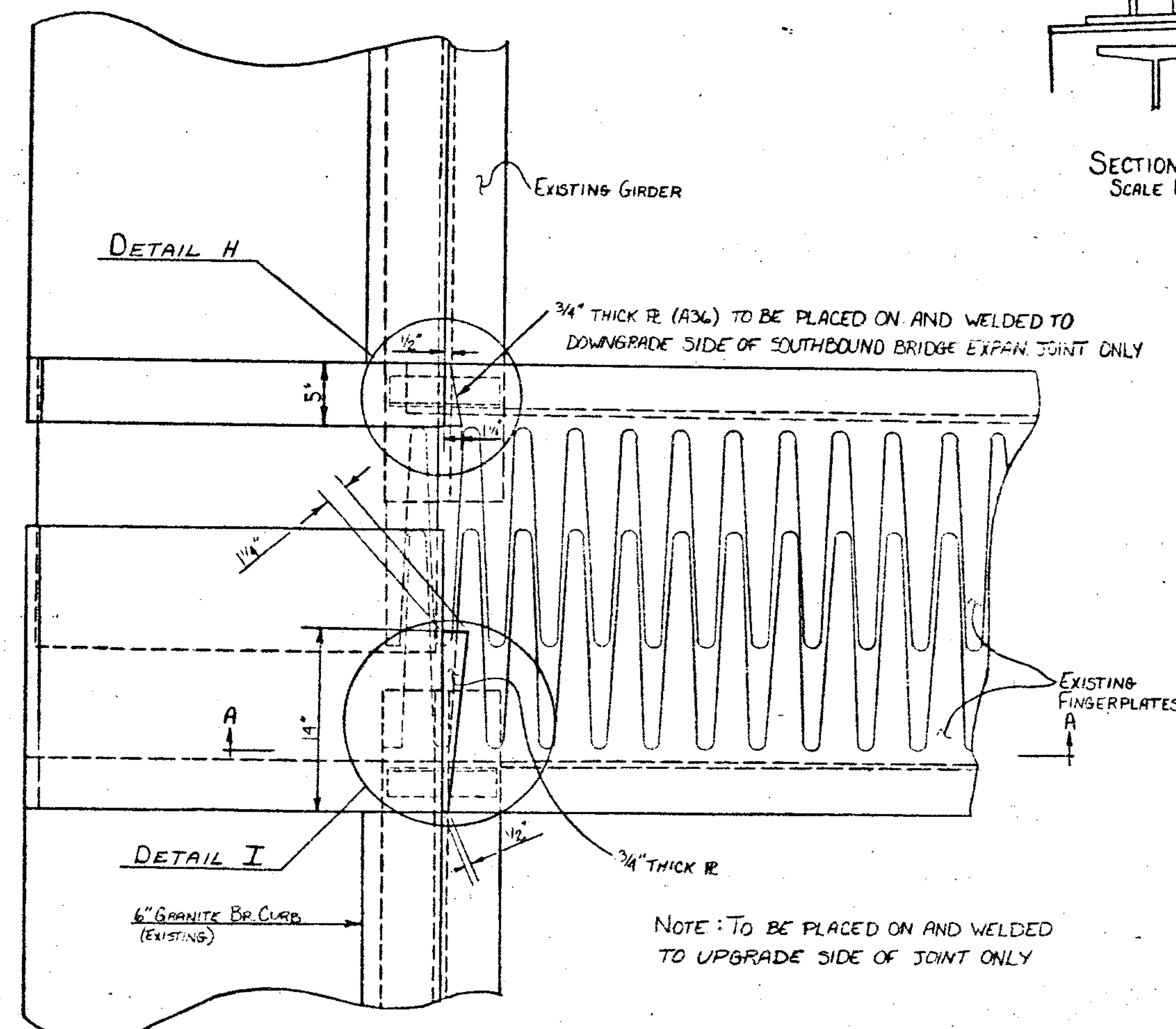


DETAILS 3/4" R OVER EXISTING FINGERPLATES  
SCALE 3" = 1'-0"

DETAIL H



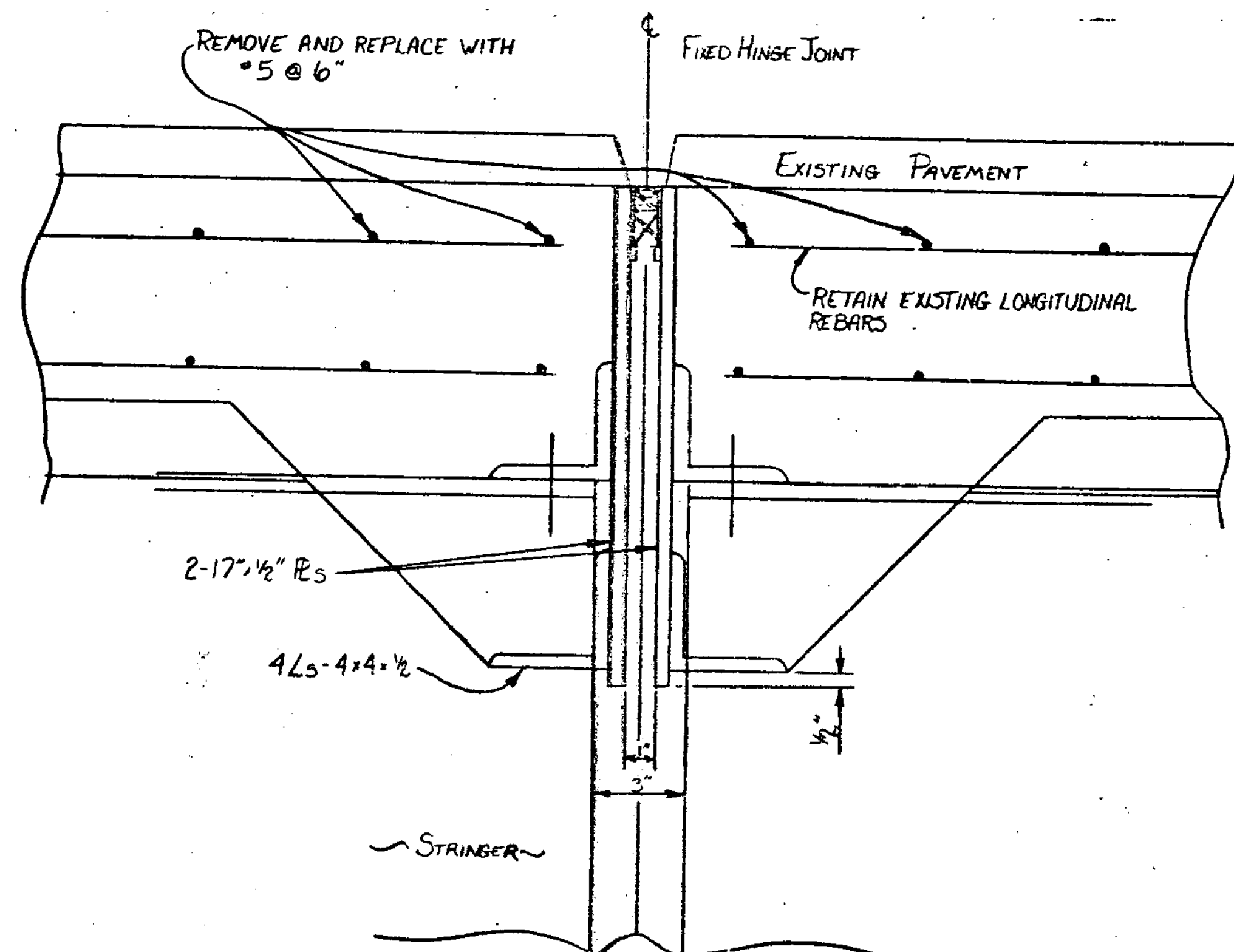
DETAILS - FABRIC TROUGH  
SCALE 1/20" = 0'-1"



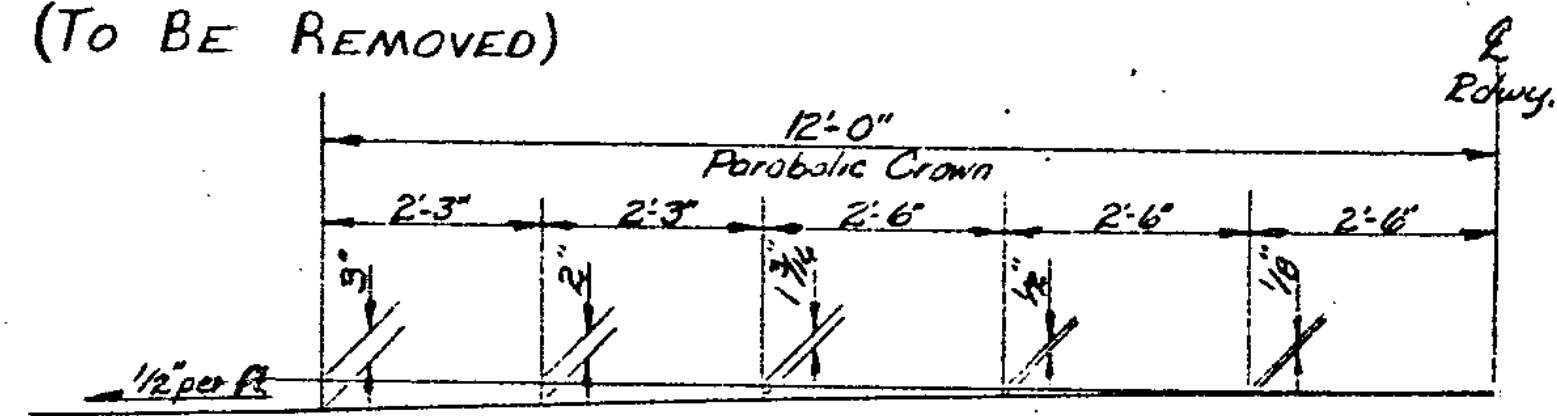
PLAN - NEW 3/4" R OVER EXISTING FINGERPLATES  
SCALE 1 1/2" = 1'-0"

NOTE: TO BE PLACED ON AND WELDED TO UPGRADE SIDE OF JOINT ONLY

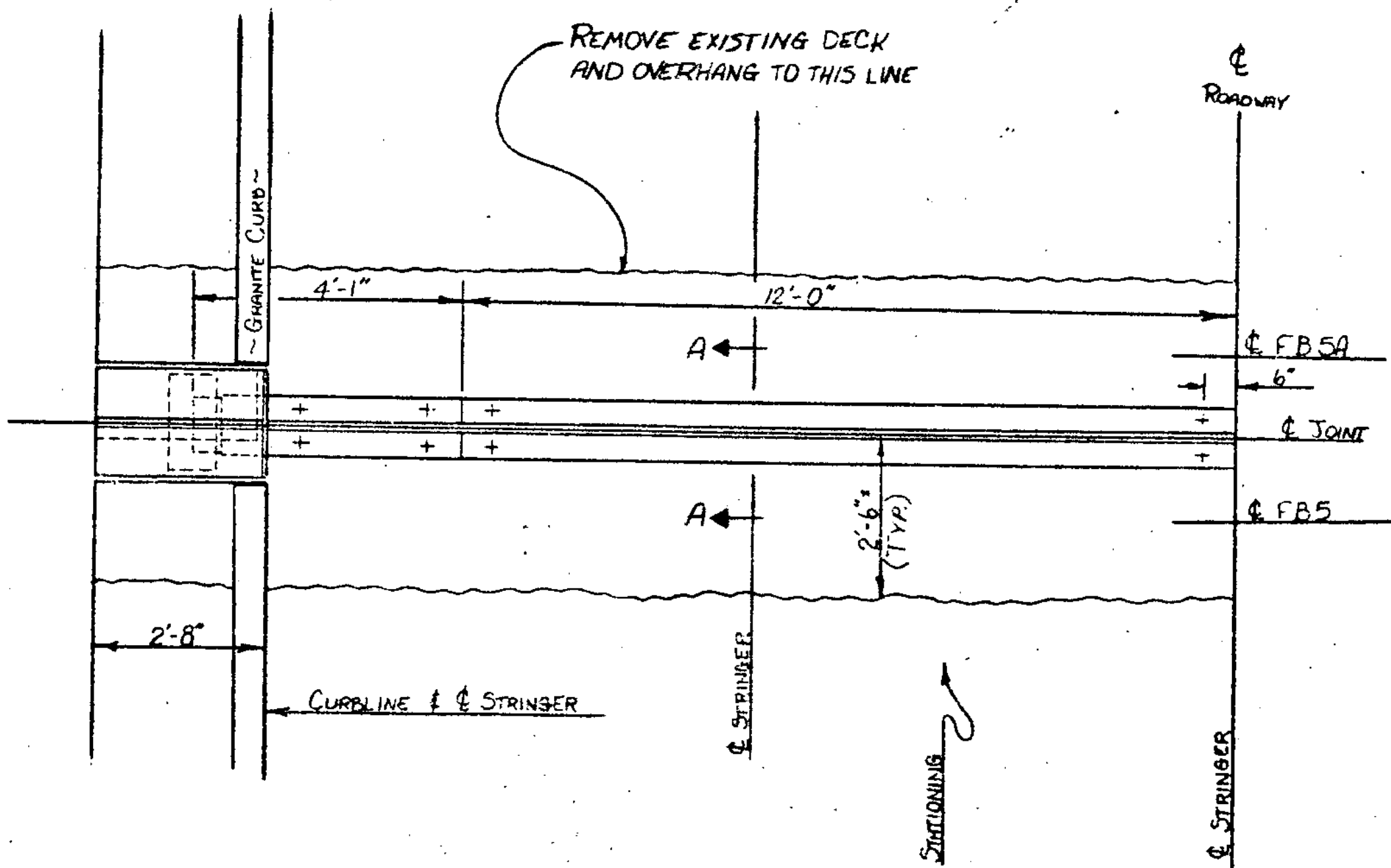
|                                                  |                          |
|--------------------------------------------------|--------------------------|
| <b>STATE OF VERMONT</b>                          |                          |
| <b>AGENCY OF TRANSPORTATION</b>                  |                          |
| TOWN OF HARTFORD                                 | Bridge No. 44 N.E.S.     |
| HIGHWAY NO. I 91                                 | Log Sta.                 |
|                                                  | Surv. Sta.               |
| FABRIC DRAINAGE TROUGH DETAILS @ EXPANSION JOINT |                          |
| I 91 OVER THE WHITE R., US RTE. 4 & VT RTE. 14   |                          |
| Designed by A. ELWOOD                            | Drawn by T.H. LACKEY     |
| Checked by AWE                                   | Bridge Design Supervisor |
| date 8-84                                        | date 7-84                |
| PROJECT HARTFORD                                 | PROJECT NO. IR-91-2(1)   |
| Bridge Sheet No.                                 | Sheet 22 of 30           |



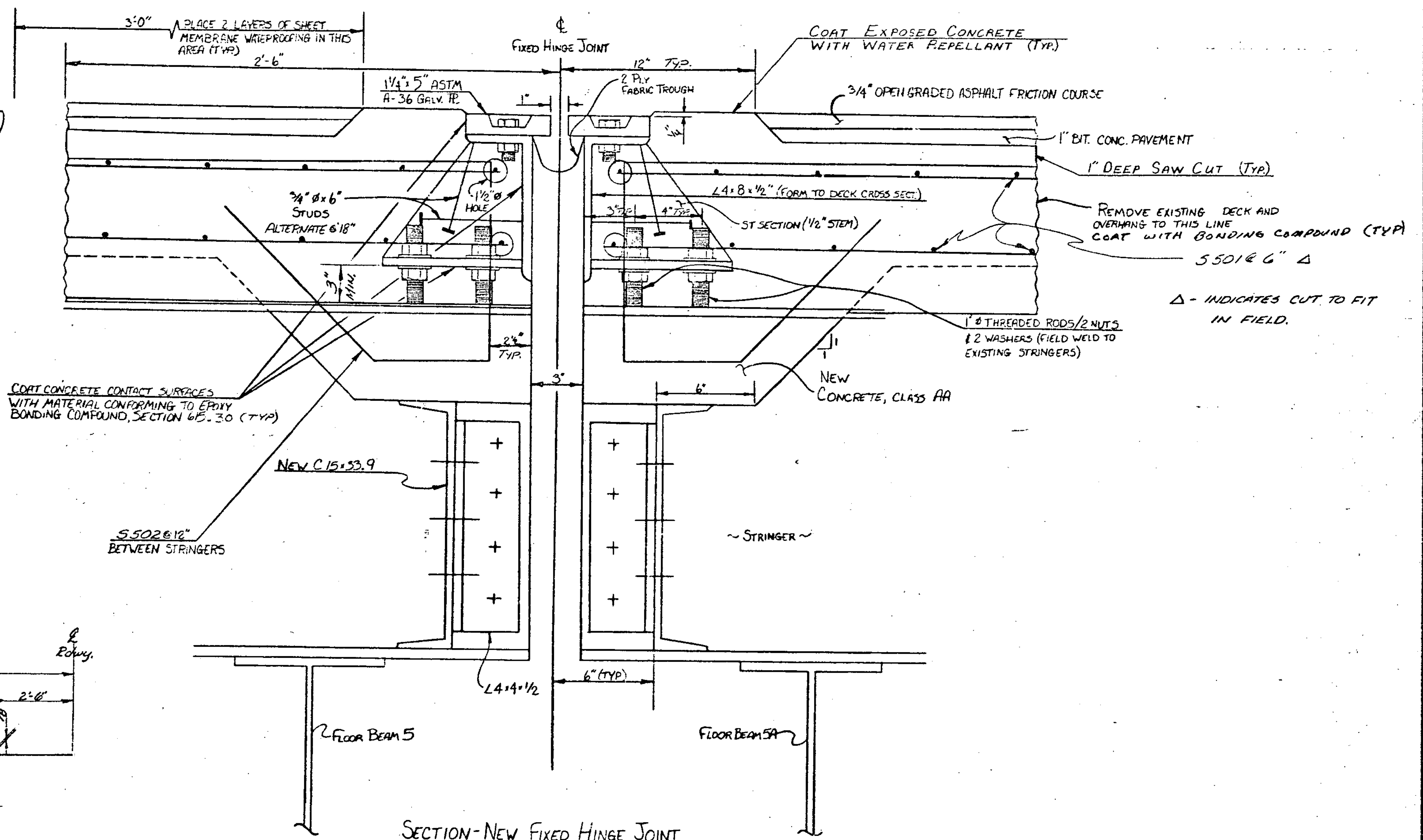
SECTION-EXISTING FIXED HINGE JOINT  
SCALE 1/4" = 1"  
(TO BE REMOVED)



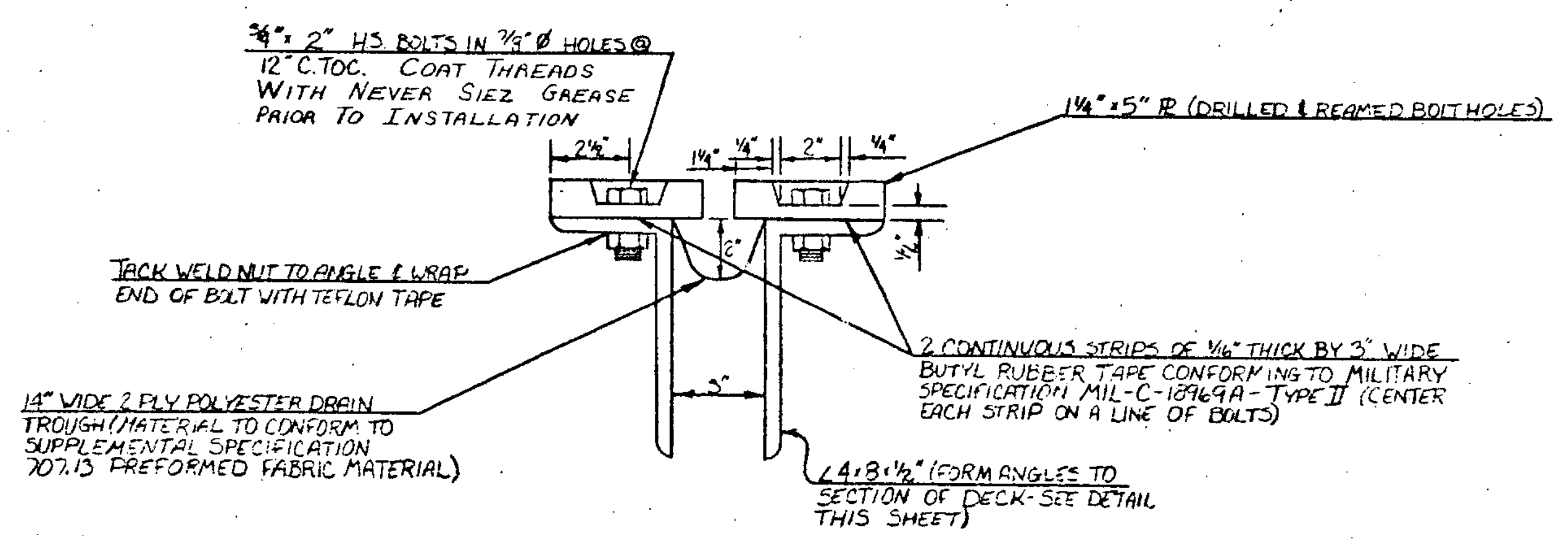
DECK CROWN DETAILS  
SCALE 1/2" = 1'-0"



PLAN-NEW FIXED HINGE JOINT  
SCALE 1/2" = 1'-0"



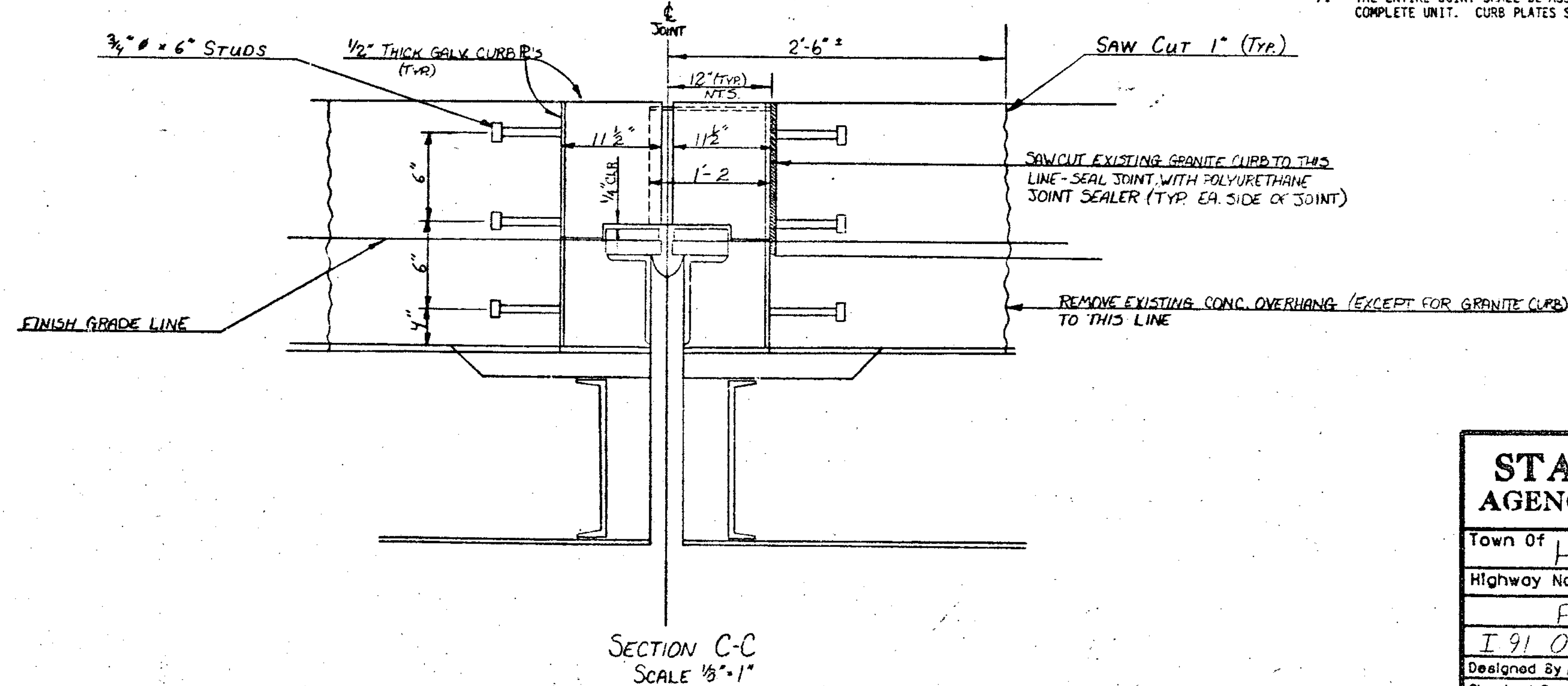
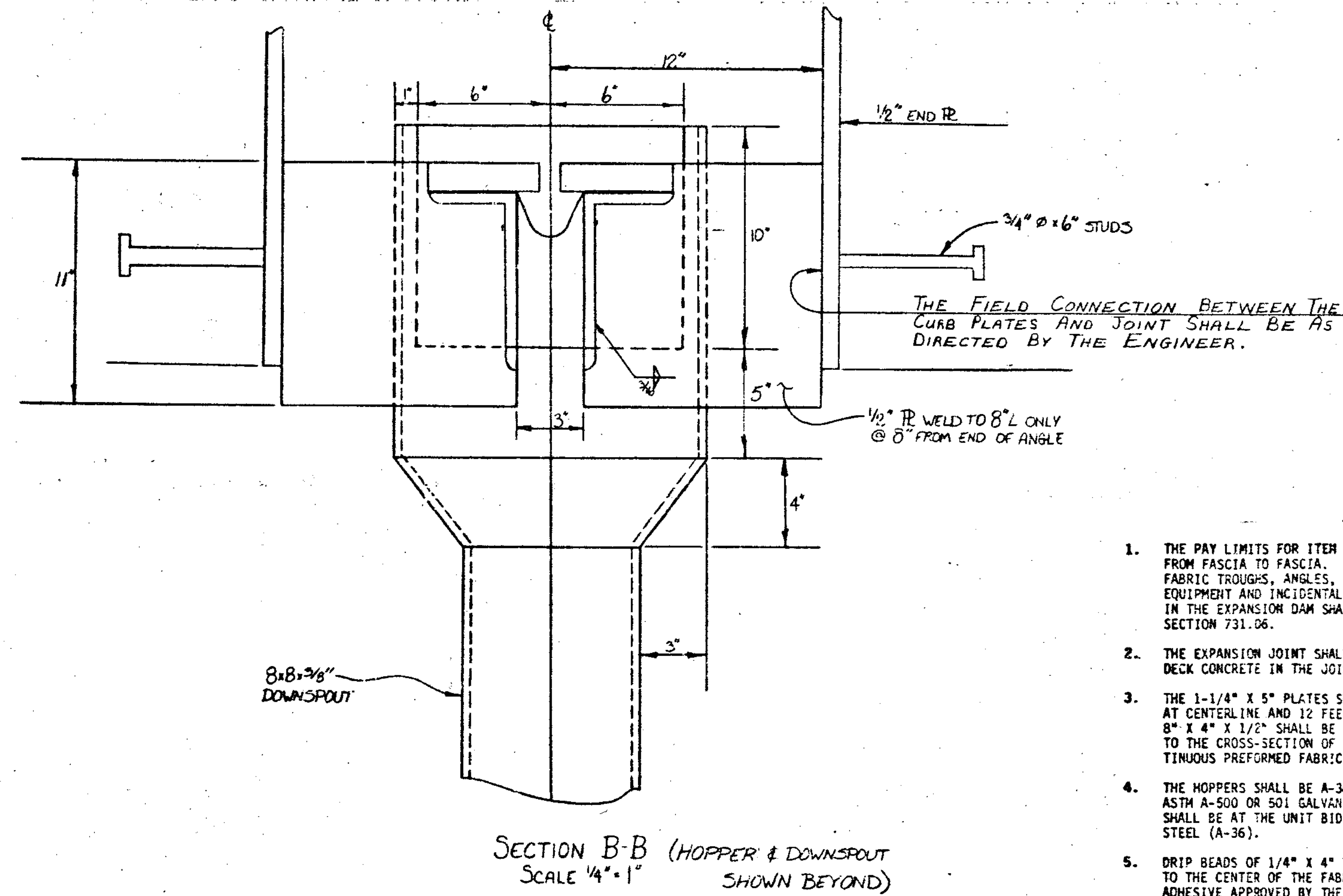
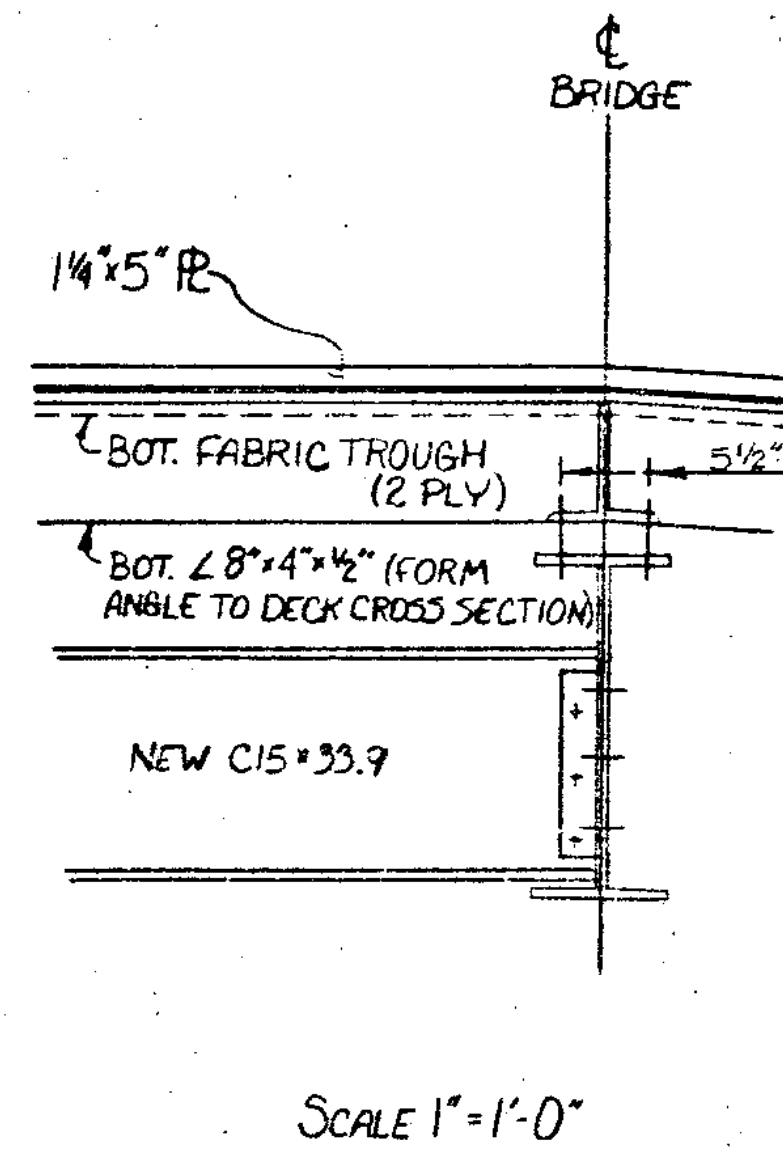
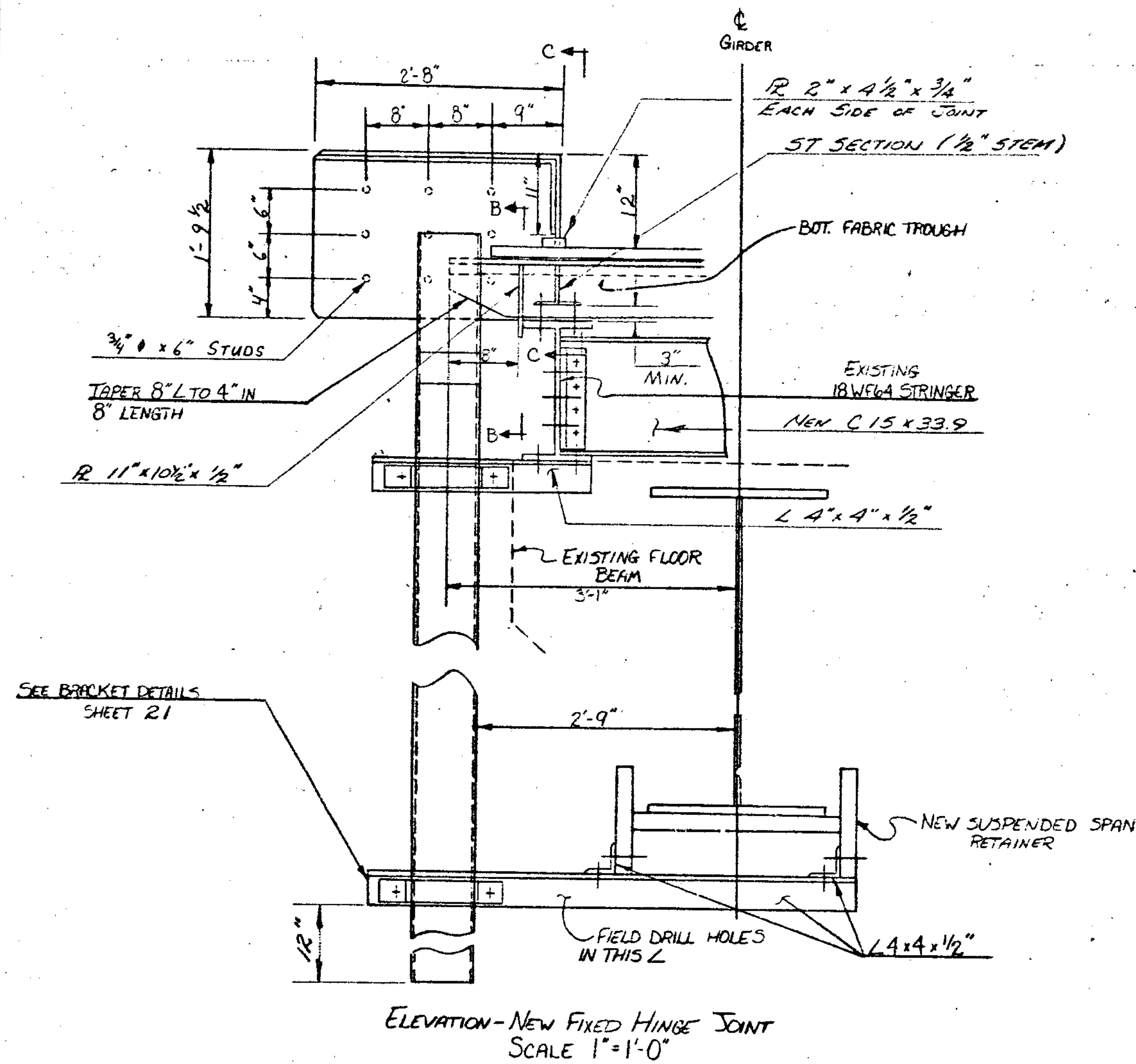
SECTION-NEW FIXED HINGE JOINT  
SCALE 1/4" = 1"



SECTION A-A  
SCALE 1/4" = 1"

| STATE OF VERMONT<br>AGENCY OF TRANSPORTATION |           |                          |            |
|----------------------------------------------|-----------|--------------------------|------------|
| Town Of                                      | HARTFORD  | Bridge No.               | 44 N.E.S.  |
| Highway No.                                  | I 91      | Log Sta.                 |            |
|                                              |           | Surv. Sta.               |            |
| FIXED HINGE JOINT DETAILS                    |           |                          |            |
| I 91 OVER THE WHITE RIVER AND U.S. 4         |           |                          |            |
| Designed By                                  | A. ELWOOD | Drawn By                 | K. LYONS   |
| Checked By                                   | AWE       | Date                     | 8-84       |
|                                              |           | Bridge Design Supervisor | R.S. HAUPT |
|                                              |           | Date                     | 8-84       |
| PROJECT                                      | HARTFORD  | PROJECT NO.              | IR91-2(1)  |
| I.G.C. Info.                                 |           |                          |            |
| Bridge Sheet No.                             |           | Sheet 23 of 30           |            |

BR-6

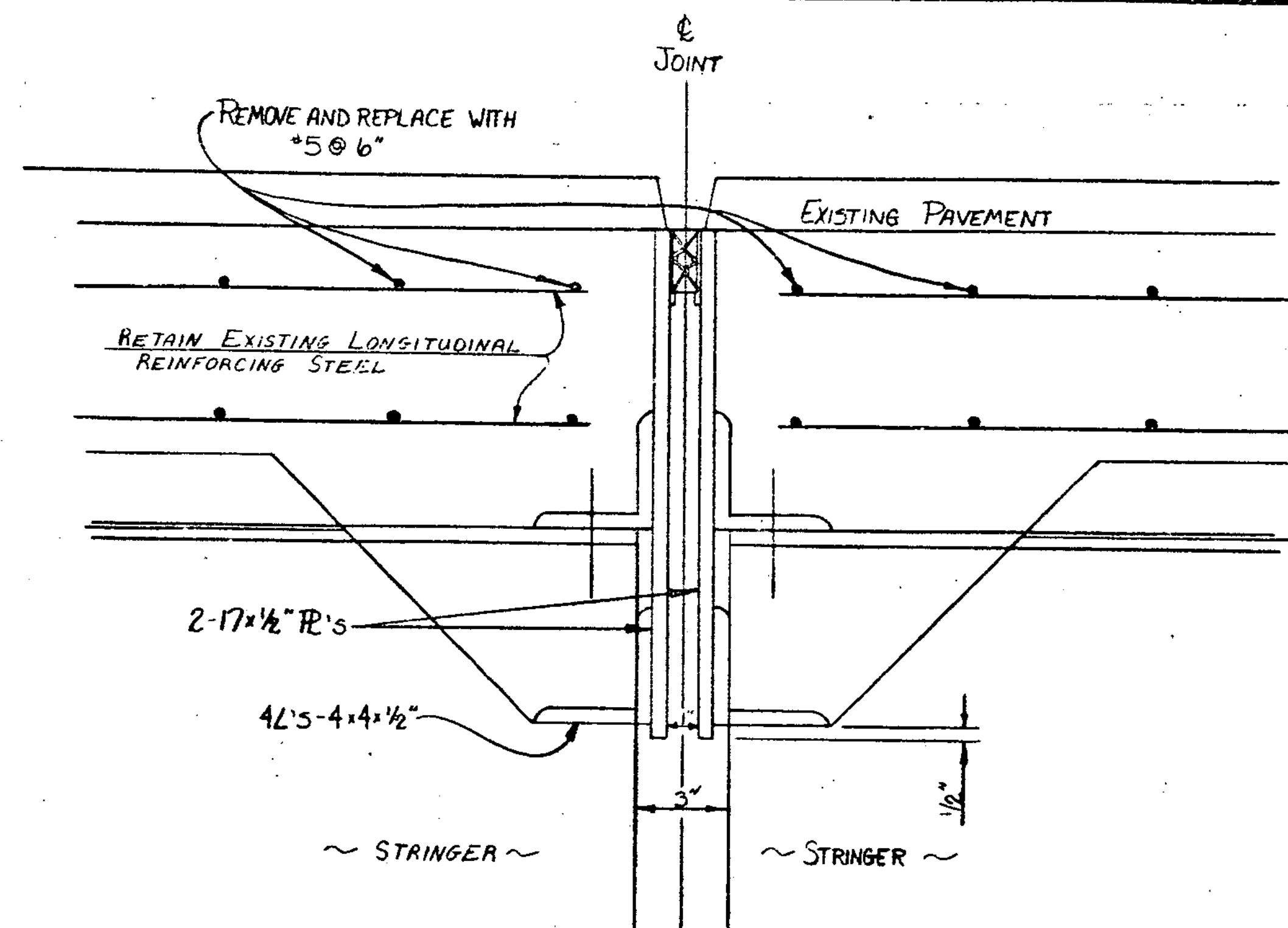


#### NOTES

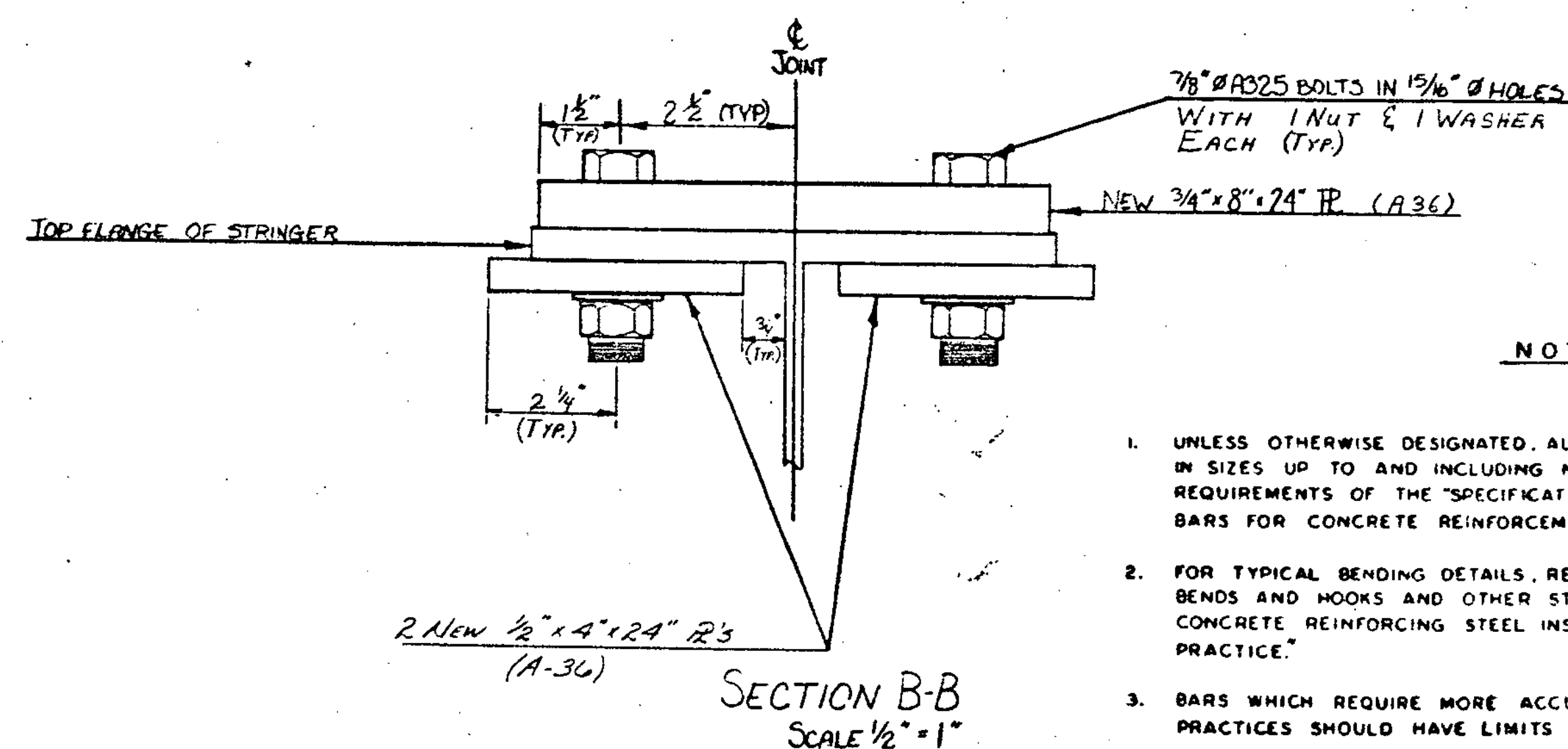
1. THE PAY LIMITS FOR ITEM 516.32, ELASTOMERIC EXPANSION DAM, SHALL BE FROM FASCIA TO FASCIA. THE UNIT BID PRICE SHALL INCLUDE ALL PLATES, FABRIC TROUGHS, ANGLES, FASTENERS, FABRICATION, TRANSPORTATION, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. ALL STEEL IN THE EXPANSION DAM SHALL BE ASTM A-36 GALVANIZED/METALIZED, AS PER SECTION 731.06.
2. THE EXPANSION JOINT SHALL BE COVERED DURING THE PLACING OF THE BRIDGE DECK CONCRETE IN THE JOINT AREA.
3. THE 1-1/4" X 5" PLATES SHALL BE FURNISHED IN 4 LENGTHS, WITH BREAKS AT CENTERLINE AND 12 FEET LEFT AND RIGHT OF CENTERLINE. THE ANGLES 8" X 4" X 1/2" SHALL BE FURNISHED IN CONTINUOUS LENGTHS AND CONFORM TO THE CROSS-SECTION OF THE DECK. THE FABRIC TROUGH SHALL BE CONTINUOUS PREFORMED FABRIC MATERIAL CONFORMING TO SECTION 707.13.
4. THE HOPPERS SHALL BE A-36 GALVANIZED. THE DOWNSPOUTS SHALL BE ASTM A-500 OR 501 GALVANIZED. PAYMENT FOR HOPPERS AND DOWNSPOUTS SHALL BE AT THE UNIT BID PRICE PER POUND FOR ITEM 506.93, STRUCTURAL STEEL (A-36).
5. DRIP BEADS OF 1/4" X 4" TWO-PLY POLYESTER MATERIAL SHALL BE CEMENTED TO THE CENTER OF THE FABRIC TROUGH AT EACH END OF THE TROUGH WITH AN ADHESIVE APPROVED BY THE FABRIC MANUFACTURER.
6. EPOXY BONDING COMPOUND, PAY ITEM 615.30, SHALL BE APPLIED TO THE VERTICAL CONCRETE SURFACES.
7. THE ENTIRE JOINT SHALL BE ASSEMBLED, SHIPPED AND INSTALLED AS A COMPLETE UNIT. CURB PLATES SHALL NOT BE SHOP ATTACHED TO THE JOINT.

### STATE OF VERMONT AGENCY OF TRANSPORTATION

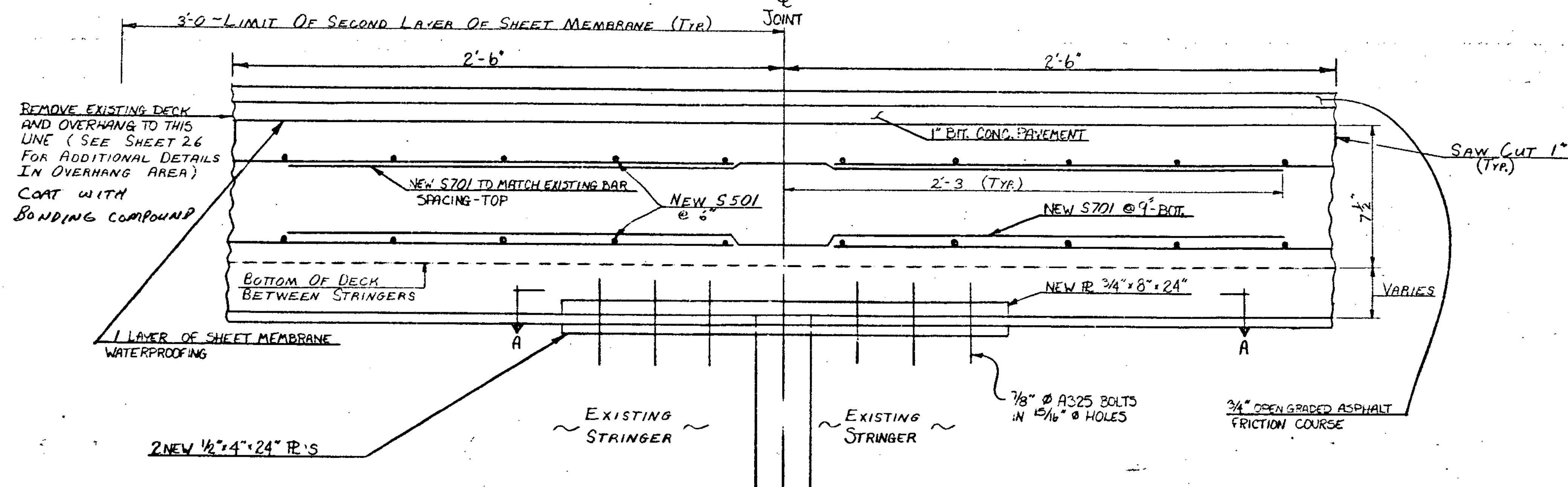
|                                             |                               |
|---------------------------------------------|-------------------------------|
| Town of <b>HARTFORD</b>                     | Bridge No. <b>44 N.E.S.</b>   |
| Highway No. <b>191</b>                      | Log Sta.                      |
|                                             | Surv. Sta.                    |
| <b>FIXED HINGE JOINT DETAILS</b>            |                               |
| <b>I 91 OVER THE WHITE RIVER AND U.S. 4</b> |                               |
| Designed By <b>A. ELWOOD</b>                | Drawn By <b>K. LYONS</b>      |
| Checked By <b>A. ELWOOD</b>                 | Bridge Design Supervisor      |
| Date <b>8-84</b>                            | Date <b>8-84</b>              |
| PROJECT <b>HARTFORD</b>                     | PROJECT NO. <b>IR-91-2(1)</b> |
| L.G.C. Info.                                |                               |
| Bridge Sheet No.                            | Sheet <b>24</b> of <b>30</b>  |



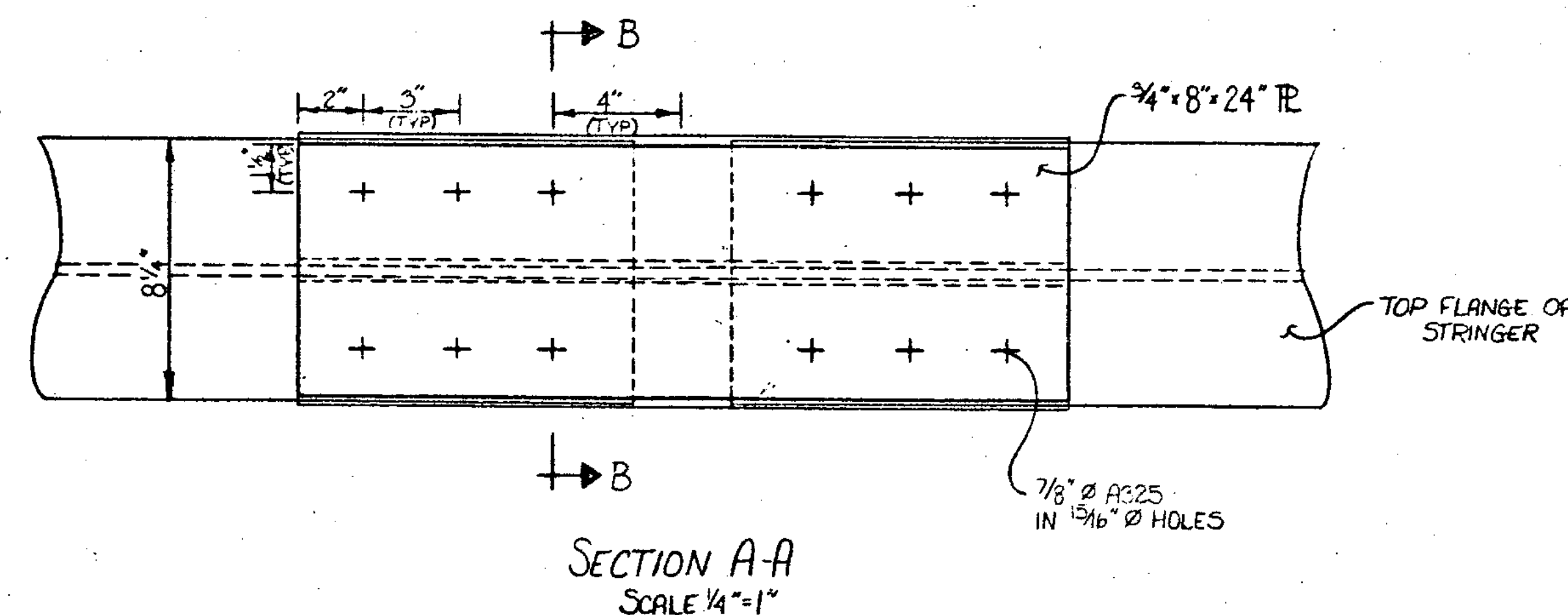
SECTION-EXISTING DEFLECTION JOINT  
SCALE 1/4"=1"  
(TO BE REMOVED)



SECTION B-B  
SCALE 1/2"=1"



SECTION - NEW DETAIL  
AT OLD DEFLECTION JOINT  
SCALE 1/4"=1"



SECTION A-A  
SCALE 1/4"=1"

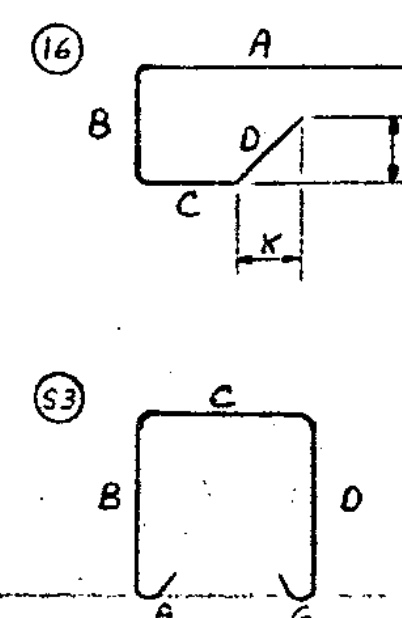
#### NOTES

1. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING NO. 18 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT," AASHTO M 31 (ASTM A 615), GRADE 60.
2. FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS AND OTHER STANDARD PRACTICE SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE."
3. BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "M" AND "G" ON STANDARD 180° AND 135° HOOKS.
5. S502 AND S504 BARS TO BE GRADE 40.

#### NOTES

1. DEFLECTION JOINTS ARE LOCATED IN THE DECK AT THE FOLLOWING LOCATIONS, ON BOTH THE NORTHBOUND AND SOUTHBOUND BRIDGES: ABOVE FLOOR BEAMS 12, 18, 24, 30, 36, 42, 48 AND 54.

#### BENT BARS

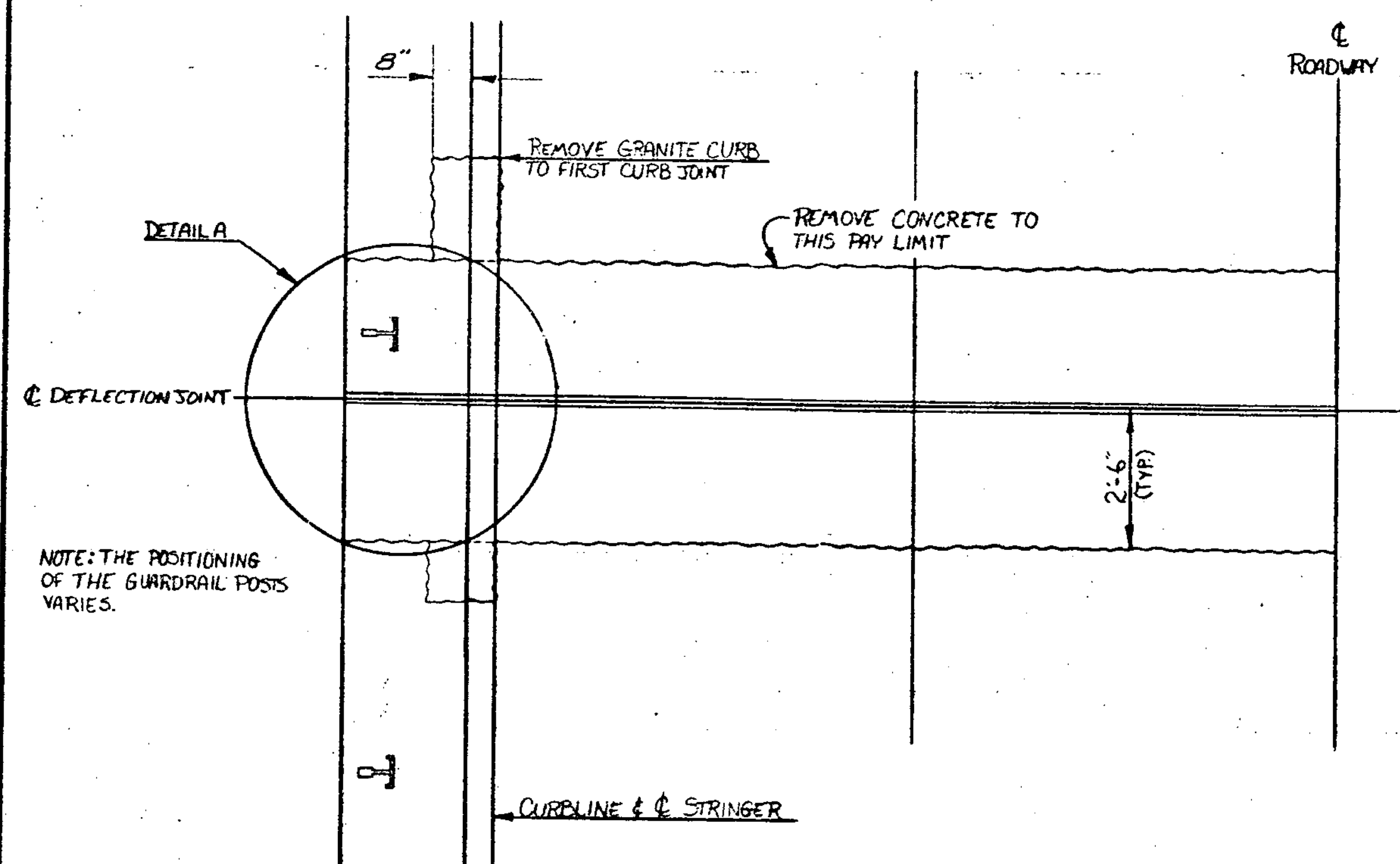


\* DENOTES TWO EXTRA BAR ADDED FOR TESTING PURPOSES.

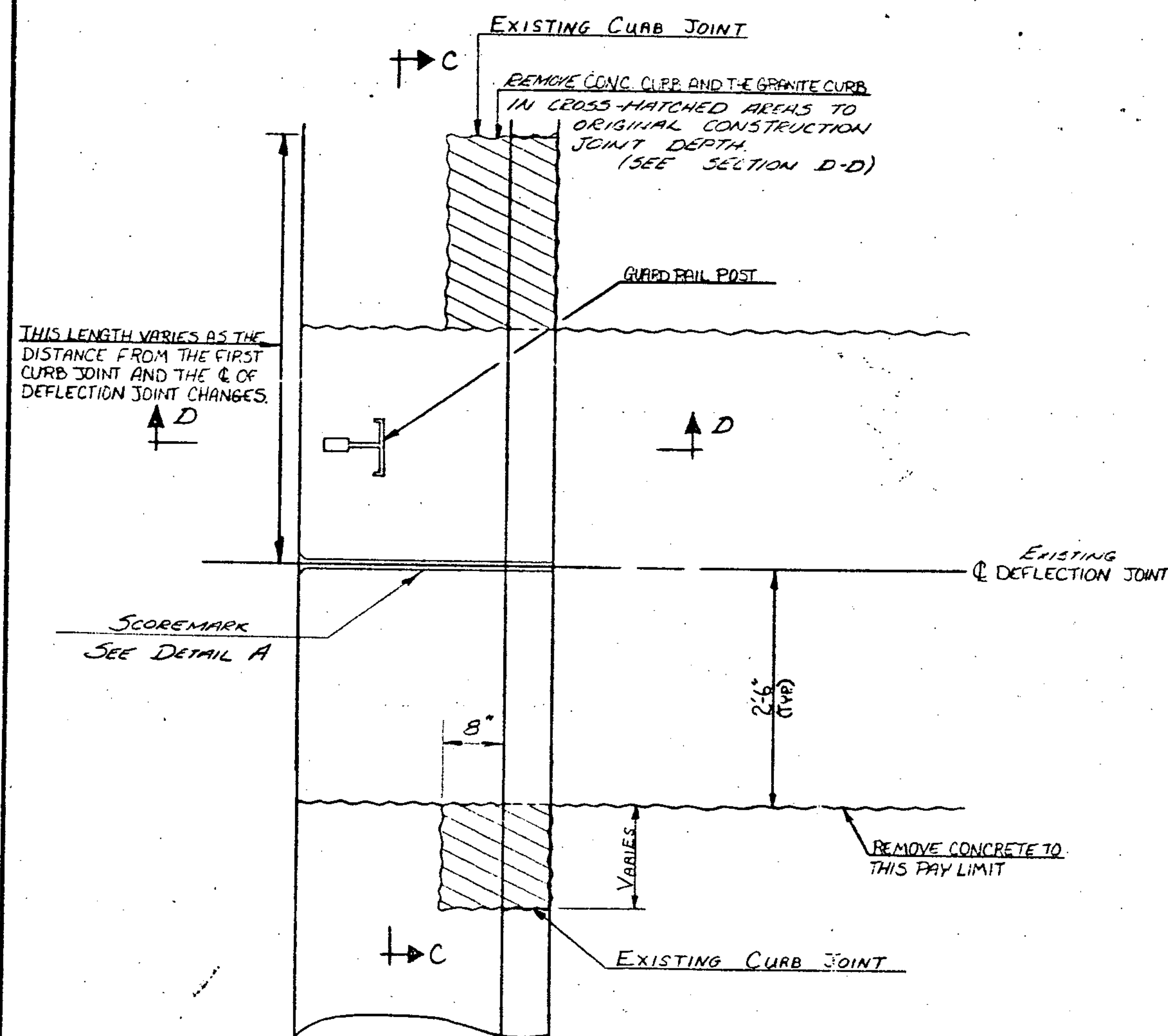
| REINFORCING STEEL SCHEDULE |      |        |      |      |         |     |     |     |   |   |   |   |
|----------------------------|------|--------|------|------|---------|-----|-----|-----|---|---|---|---|
| No. OF<br>PIECES           | SIZE | LENGTH | MARK | TYPE | A       | B   | C   | D   | E | F | G | H |
| 360                        | 5    | 34-10  | S501 | STR. |         |     |     |     |   |   |   |   |
| * 98                       | 5    | 8-6    | S503 | STR. |         |     |     |     |   |   |   |   |
| * 114                      | 5    | 4-8    | S502 | 16   | 2-0     | 1-0 | 0-7 | 1-1 |   |   |   |   |
| 208                        | 5    | 5-3    | S504 | S3   | 0-5 1/2 | 1-4 | 1-8 | 1-4 |   |   |   |   |
| * 1298                     | 7    | 4-6    | S701 | STR. |         |     |     |     |   |   |   |   |

#### STATE OF VERMONT AGENCY OF TRANSPORTATION

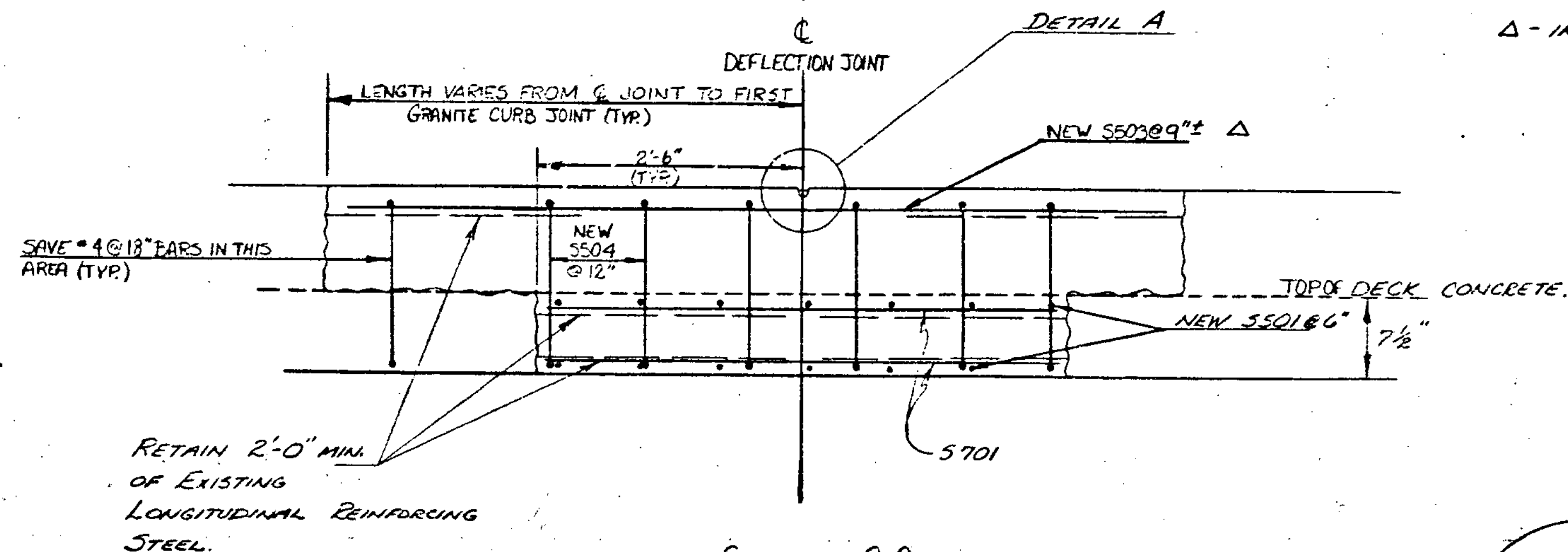
|                                      |           |                          |            |
|--------------------------------------|-----------|--------------------------|------------|
| Town Of                              | HARTFORD  | Bridge No.               | 44 N1S     |
| Highway No.                          | 191       | Log Sta.                 |            |
|                                      |           | Surv. Sta.               |            |
| DEFLECTION JOINT DETAILS             |           |                          |            |
| I-91 OVER THE WHITE RIVER AND U.S. 4 |           |                          |            |
| Designed By                          | A. ELWOOD | Drawn By                 | K. LYONS   |
| Checked By                           | A. ELWOOD | Bridge Design Supervisor | R.S. HAUPT |
| PROJECT                              | HARTFORD  | PROJECT NO.              | 19-91-2(1) |
| I.G.C. Info.                         |           | Sheet 25 of 30           |            |



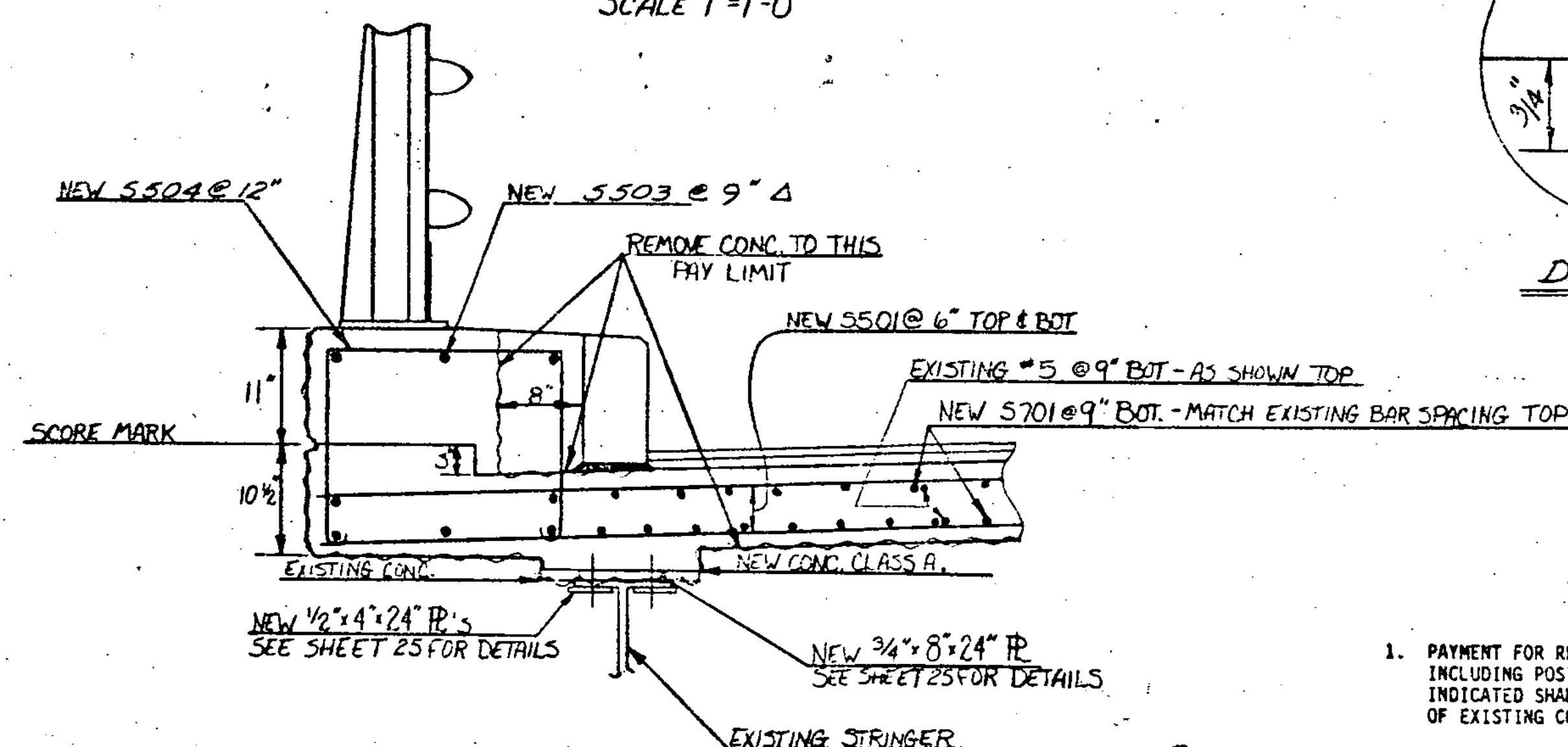
PLAN-EXISTING DEFLECTION JOINT  
SCALE 1/2"=1'-0"



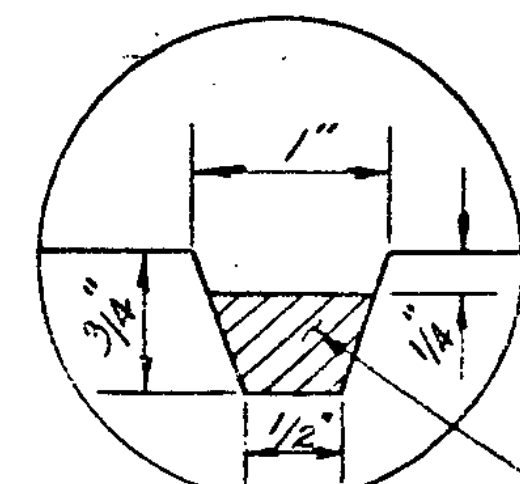
DETAIL A  
SCALE 1"=1'-0"



SECTION C-C  
SCALE 1"=1'-0"



SECTION D-D  
SCALE 1"=1'-0"



DETAIL A

JOINT SEALER, POLYURETHANE.  
COST TO BE SUBSIDIARY  
TO THE UNIT BID PRICE  
FOR CONCRETE CLASS A.

NOTES

1. PAYMENT FOR REMOVAL OF EXISTING CONCRETE, GRANITE CURB, AND GUARD RAIL, INCLUDING POSTS AS REQUIRED, AT DEFLECTION JOINT LOCATIONS TO LIMITS AS INDICATED SHALL BE AT THE UNIT BID PRICE PER CUBIC YARD FOR "REMOVAL OF EXISTING CONCRETE OR MASONRY".
2. GRANITE CURB REMOVED SHALL BE MATCH MARKED FOR LOCATION AND RESET WITH NEW ANCHORS AS REQUIRED. PAYMENT SHALL BE SUBSIDIARY TO "CONCRETE, CLASS A".
3. GUARD RAIL REMOVED SHALL BE RESET, INCLUDING NEW POST ANCHORS AS REQUIRED. PAYMENT SHALL BE SUBSIDIARY TO "CONCRETE, CLASS A".

NOTE

ANY CUTS IN EXISTING CONCRETE SHALL HAVE A 1" DEEP SAW CUT ON ALL SURFACES.

|                                             |                                           |
|---------------------------------------------|-------------------------------------------|
| <b>STATE OF VERMONT</b>                     |                                           |
| <b>AGENCY OF TRANSPORTATION</b>             |                                           |
| Town of <b>HARTFORD</b>                     | Bridge No. <b>44 N&amp;S</b>              |
| Highway No. <b>191</b>                      | Log Sta.                                  |
|                                             | Surv. Sta.                                |
| <b>DEFLECTION JOINT DETAILS</b>             |                                           |
| <b>I 91 OVER THE WHITE RIVER AND U.S. 4</b> |                                           |
| Designed By <b>A. ELWOOD</b>                | Drawn By <b>K. LYONS</b>                  |
| Checked By <b>A. ELWOOD</b>                 | Bridge Design Supervisor <b>R.S. HAUP</b> |
| Date <b>9/84</b>                            | Date <b>8-84</b>                          |
| PROJECT <b>HARTFORD</b>                     | PROJECT NO. <b>IR 91-2(1)</b>             |
| I.G.C. Info.                                |                                           |
| Bridge Sheet No.                            | Sheet <b>25</b> of <b>30</b>              |

# NOTES:

When working at or near the exit or entrance ramps, Uniform Traffic Officers shall be used to assist in controlling traffic. Lane closure signs shall be installed on entrance ramps.

Exit ramps shall have traffic lanes delineated with 25" cones to indicate desired vehicle path. Taper lengths shall be at least 320 feet. Cone spacing shall be 40 feet.

Cones shall be weighted at the base to prevent overturning and kept clean. Signs H-1 and H-3 will be in conformity with Standard E-2. All others will be moveable and will be removed during non-working hours.

\* During periods of poor visibility, steady burn yellow lights mounted on Type III Barricades (Mod.) will be used in place of cones.

All signs will be placed before any work is begun or equipment put on roadway.

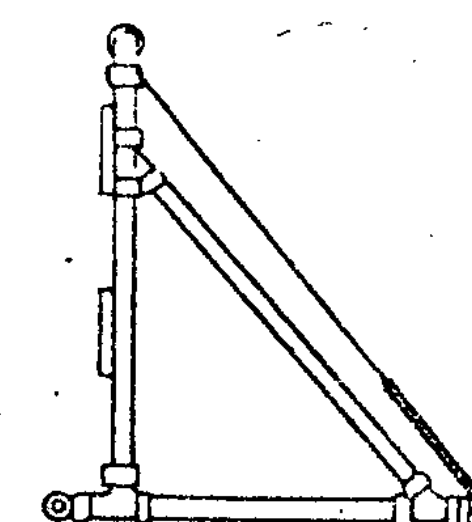
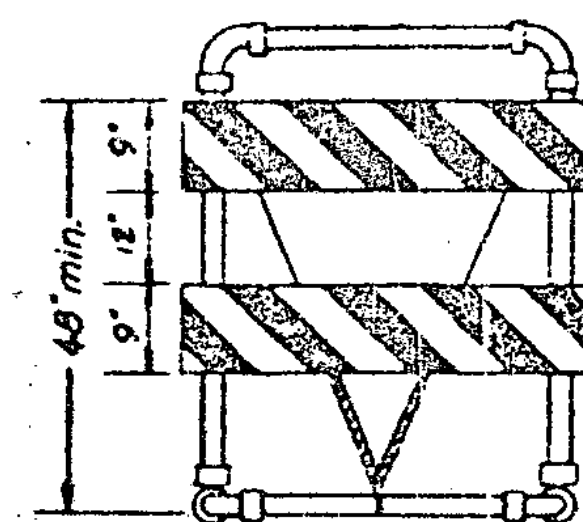
Contractor shall have barricades and signs for left side closure and right side closure on project before starting construction.

Work crews' private vehicles will not be parked in or around working area. Contractor will provide parking for work crews' vehicles off project.

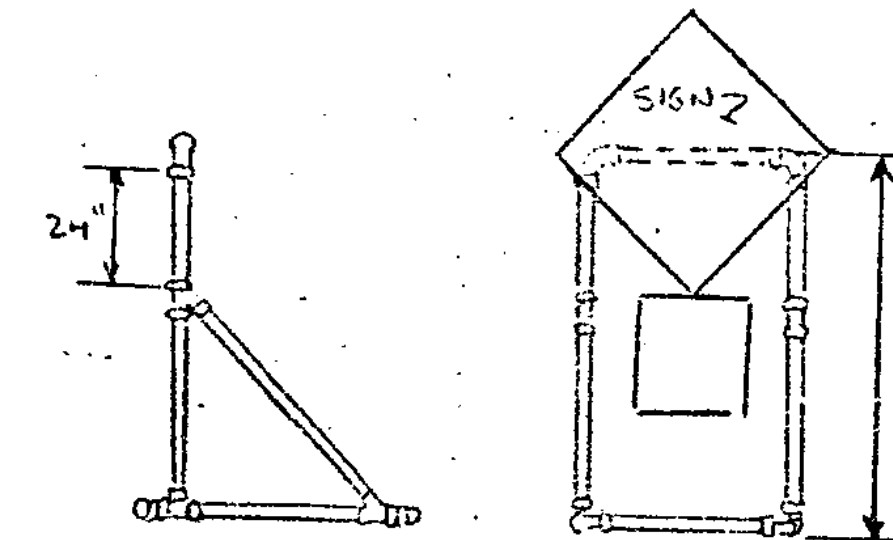
Uniformed Traffic Officers will park their vehicles on the shoulder away from traffic.

Existing speed limit signs in reduced speed area will be covered during construction.

Channelizing devices other than cones or type III barricades (mod.) will be allowed as long as they conform to the MUTCD and are approved for use by the Resident Engineer.



TYPE III (Breakaway) BARRICADE MODIFIED  
SEE STANDARD E-7A FOR DETAILS

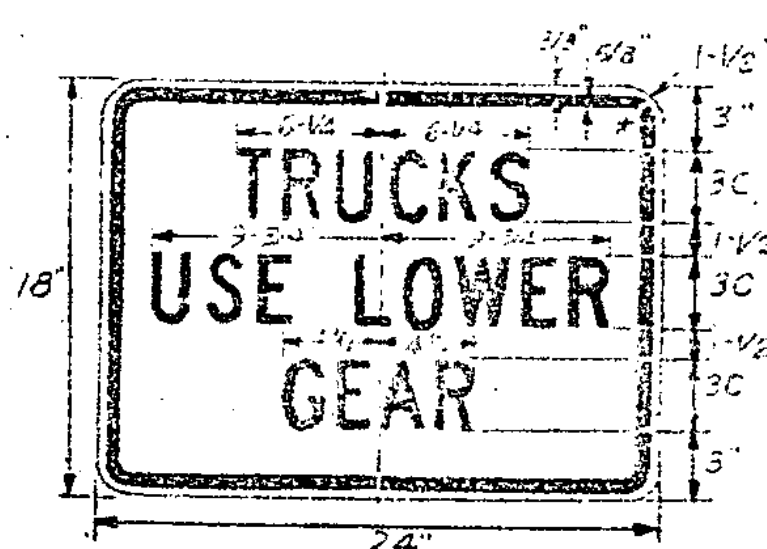
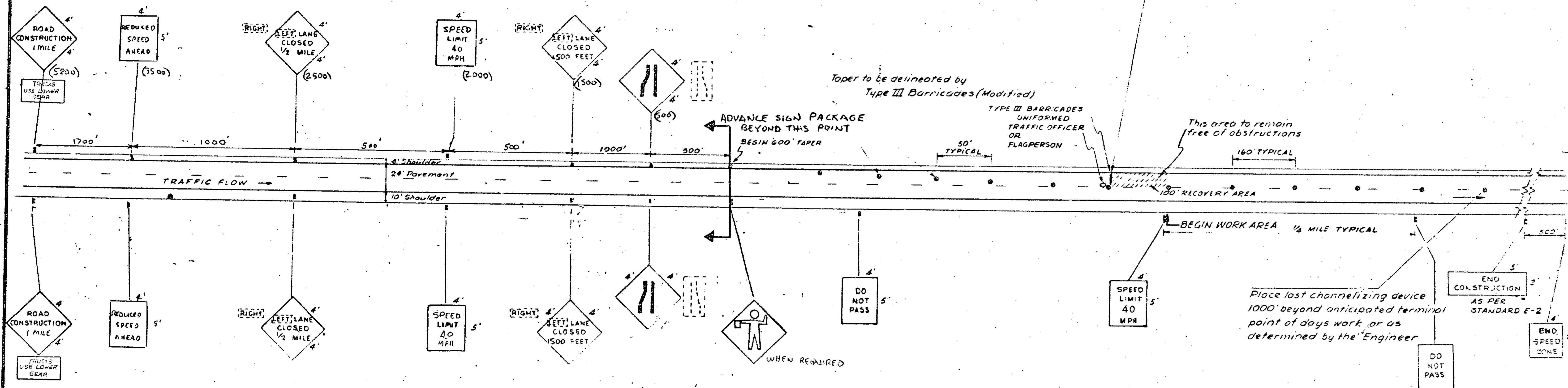


TEMPORARY SIGN SUPPORT DETAIL

Flashing Arrow Board (48" x 96" minimum size)  
To be placed at end of 600' taper. The flashing arrow shall be mounted on a breakaway or yielding system.

\* In lieu of steady burn lights yellow delineators, 5x10w reflective sheeting (high intensity) may be used. Delineators shall be placed on the top right corner of each barricade and aligned for maximum visibility.

See Special Provisions for additional information on flashing arrow board.



COLORS  
LEGEND: - BLACK (NON-REFL)  
BACKGROUND - ORANGE (REFL - REFINT)

"SPEED LIMIT 40" to be installed at 1/2 mile increments for entire work area. "DO NOT PASS" signs will be erected immediately in advance of, and throughout, the length of the work area, halfway between adjacent speed limit signs.

Refer to Project Special Provisions for speed zone enactment. Refer to Uniform Traffic Control Devices Manual for tapers not in the speed zone area.

The "SPEED LIMIT 40", "DO NOT PASS" and "END SPEED ZONE" signs shall be located to the left hand side of the road when work is being done on the right-hand lane.

The "SPEED LIMIT 40" and other related signs shall be removed or covered when work is not in progress.

NOT TO SCALE

DATUM  
VERTICAL  
HORIZONTAL

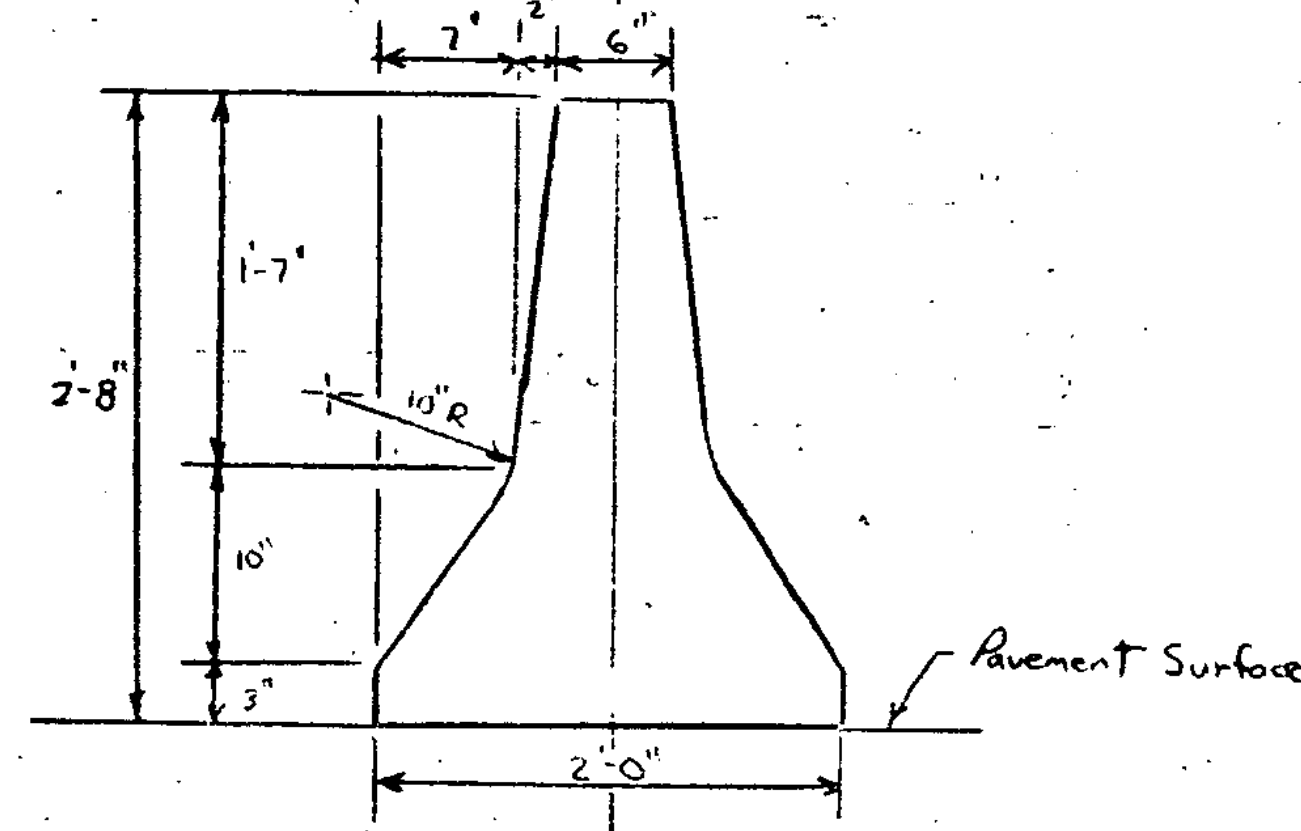
( ) DENOTES DISTANCE FROM POINT OF TAPER

MAINLINE  
TRAFFIC CONTROL PLAN  
ONE LANE  
CLOSED

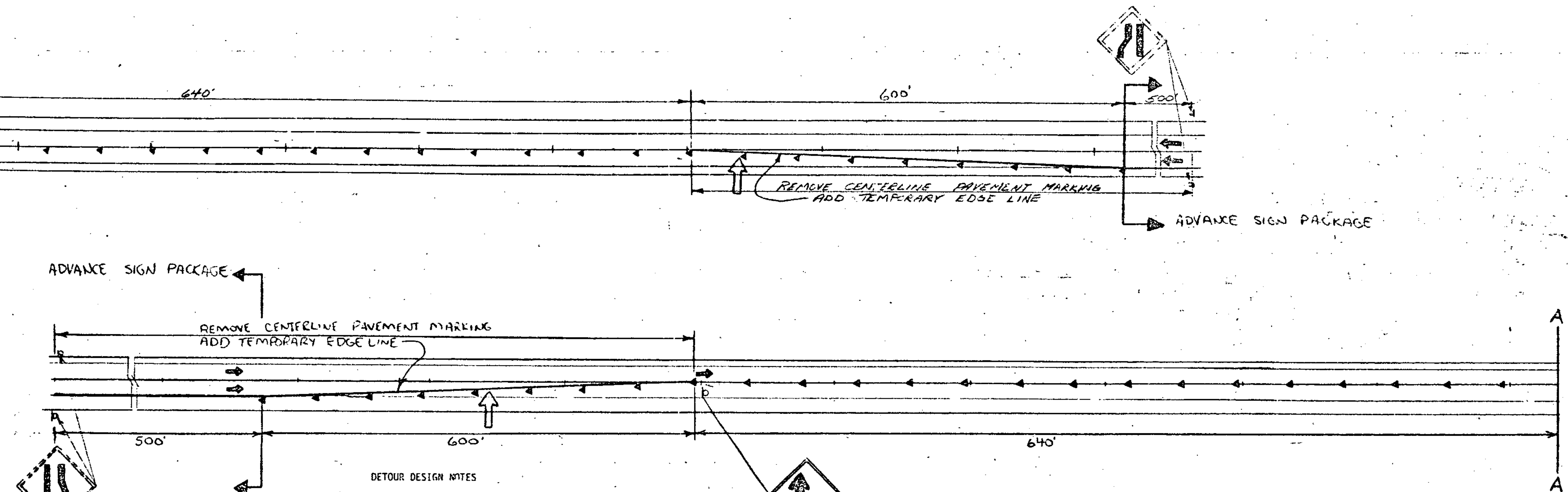
SURVEYED BY \_\_\_\_\_ DATE \_\_\_\_\_  
DRAWN BY SHM DATE 2/1/82  
TRACED BY \_\_\_\_\_ DATE \_\_\_\_\_  
HARTFORD  
PROJ. 12 NO. 91-2(1)  
SHEET 27 OF 30

REV. 3/27/84

Yellow delineators, 3 inch minimum dimension shall be placed on top of the median barrier @ 40 foot spacing for both directions and placed for maximum visibility. Payment subsidiary to 601.50.8



Concrete Median Barrier  
Standard Shape Dimensions



DETOUR DESIGN NOTES

The Contractor shall submit details for the detour. The alignment shall be the smoothest cross-over possible. The detour shall be constructed in the vicinity of NB mm 70.69 and NB mm 71.10. The detour shall include a street light on each crossover. The pole shall be 40' high with a 14' or longer mast arm and 400 watt luminaire. The pole shall be located 10' behind existing guardrail or 20' beyond edge of traveled way. The Contractor shall be responsible for the removal and replacement of existing guardrail and/or new guardrail installed as directed by the Engineer, and the repair or required cleaning of any median drainage systems that is damaged as a result of the detour placement. The detour shall be paved, 2" depth. Signs, markings, street lighting and detour construction shall be subsidiary to 601.10, Traffic Control. Barrier placement to be paid per linear foot.

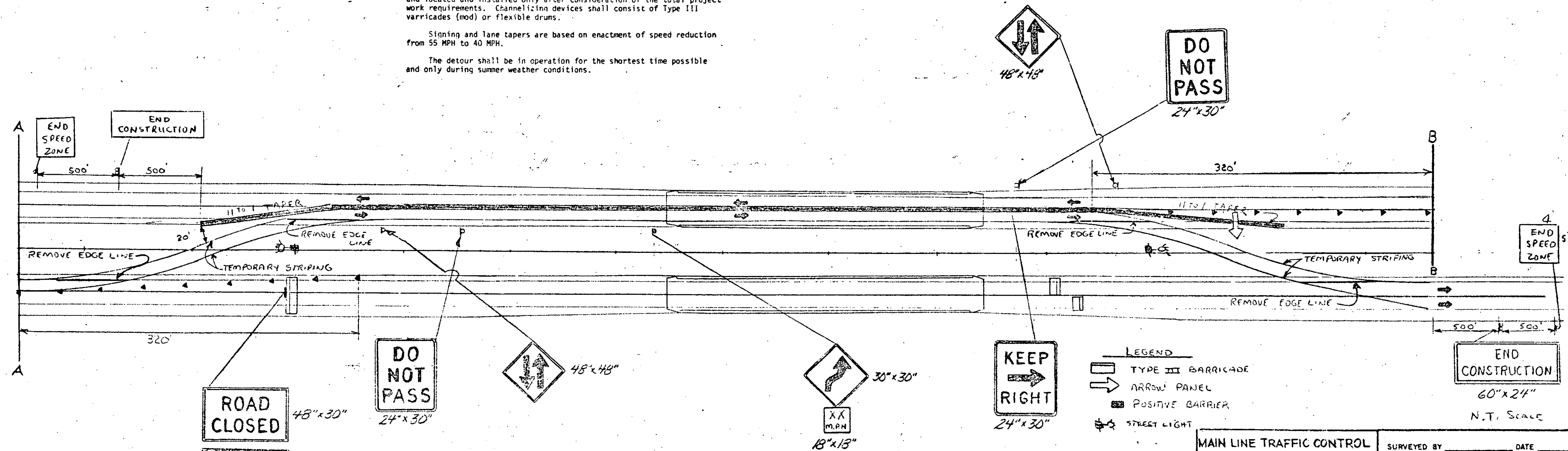
Pavement marking material shall be pressure sensitive tape. All signs shall be new.

Advance sign placement should reflect contractor's work plans and located and installed only after consideration of the total project work requirements. Channelizing devices shall consist of Type III barricades (mod) or flexible drums.

Signing and lane tapers are based on enactment of speed reduction from 55 MPH to 40 MPH.

The detour shall be in operation for the shortest time possible and only during summer weather conditions.

N.T. SCALE



ROAD CLOSED  
48"x30"

DO NOT PASS  
24"x30"

48"x48"

30"x30"

KEEP RIGHT  
24"x30"

LEGEND  
TYPE III BARRICADE  
ARROW PANEL  
POSITIVE BARRIER  
STREET LIGHT  
CHANNELIZING DEVICE

END CONSTRUCTION  
60"x24"

N.T. SCALE

DATUM  
VERTICAL N/A  
HORIZONTAL N/A

MAIN LINE TRAFFIC CONTROL  
DIVIDED HIGHWAY  
ONE ROADWAY  
CLOSED

SURVEYED BY DATE  
DRAWN BY D. ROSS DATE 2/82  
TRACED BY DATE  
HARTFORD  
PROJ. IR NO. 91-2(1)  
SHEET 28 OF 30

# SECTION 641 TRAFFIC SIGNS SUMMARY SHEET

MAINLINE                      PAVING

| IDENTIFICATION | NUMBER OF SIGNS            | SIZE                  |        | TEXT                                                                                |                             | FOR SIGN DETAIL SEE STANDARD OR SHEET NUMBER |
|----------------|----------------------------|-----------------------|--------|-------------------------------------------------------------------------------------|-----------------------------|----------------------------------------------|
|                |                            | WIDTH                 | HEIGHT |                                                                                     |                             |                                              |
|                |                            |                       |        |                                                                                     |                             |                                              |
|                |                            | 18"<br>OR AS REQUIRED | 8"     | RIGHT                                                                               |                             | E-8                                          |
|                | 2<br>(4)                   | 4                     | 4      | LEFT LANE<br>CLOSED<br>1/2 MILE                                                     |                             | E-8                                          |
|                | 2                          | 4                     | 5      | REDUCED<br>SPEED<br>AHEAD                                                           |                             |                                              |
|                | (4)<br>2<br>OR AS REQUIRED | 4                     | 4      | LEFT LANE<br>CLOSED<br>1500 FEET                                                    |                             | E-8                                          |
|                | 2                          | 4                     | 4      |    |                             | E-8                                          |
|                | 2                          | 4                     | 4      |   |                             | E-8                                          |
|                | AS<br>REQUIRED             | 4                     | 5      | DO<br>NOT<br>PASS                                                                   |                             |                                              |
|                | AS<br>REQUIRED             | 4                     | 5      | SPEED<br>LIMIT<br>40                                                                |                             | E-16B                                        |
|                | 1<br>(2)                   | 4                     | 5      | END<br>SPEED<br>ZONE                                                                |                             |                                              |
|                | AS<br>REQUIRED             | 4                     | 4      | CAUTION<br>PAVEMENT<br>CHANGE                                                       | SEE E-6 FOR MATERIALS, ETC. |                                              |
|                | AS<br>REQUIRED             | 4                     | 4      | BUMP                                                                                | SEE E-6 FOR MATERIALS, ETC. |                                              |
|                | 2<br>(4)                   | 4                     | 4      | ROAD<br>CONSTRUCTION<br>1 MILE                                                      |                             | E-2                                          |
|                | 2                          | 24                    | 18     | TRUCKS<br>USE LOWER<br>GRADE                                                        |                             |                                              |
|                | AS<br>REQUIRED             | 4                     | 4      |  |                             | E-6                                          |
|                | AS<br>REQUIRED             | 4                     | 4      | HIGH OR LOW<br>SHOULDER                                                             | " " " " " "                 |                                              |

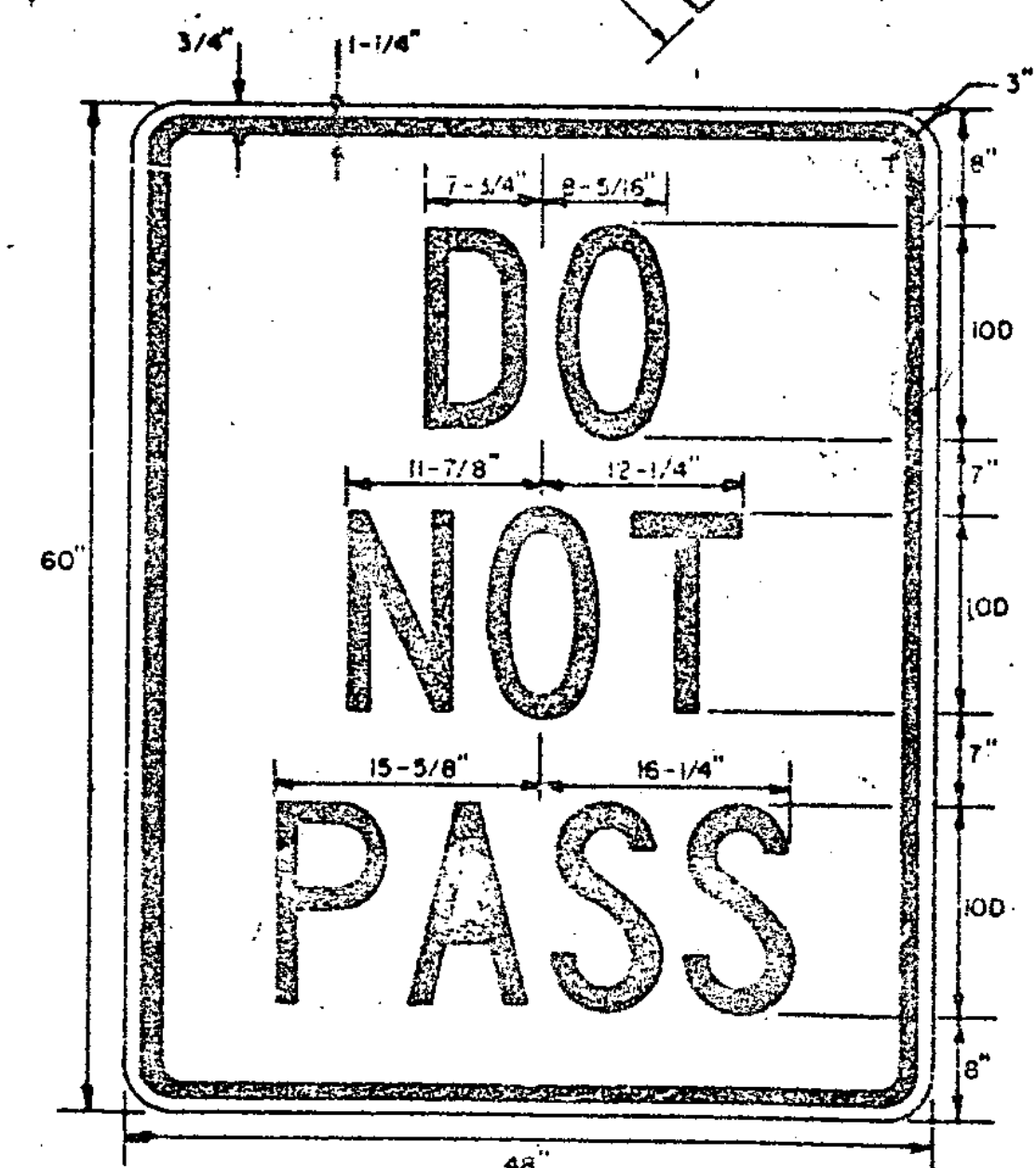
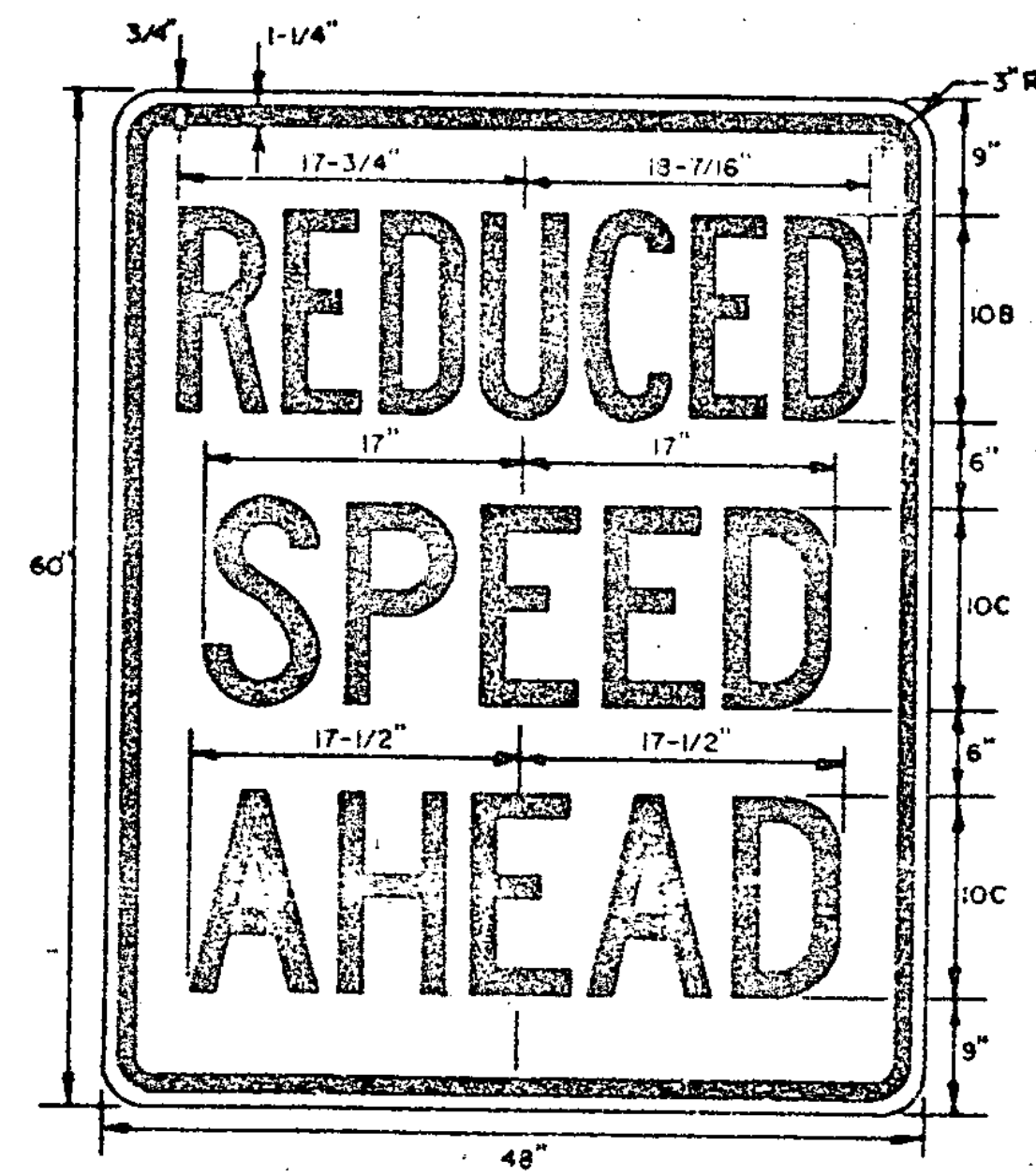
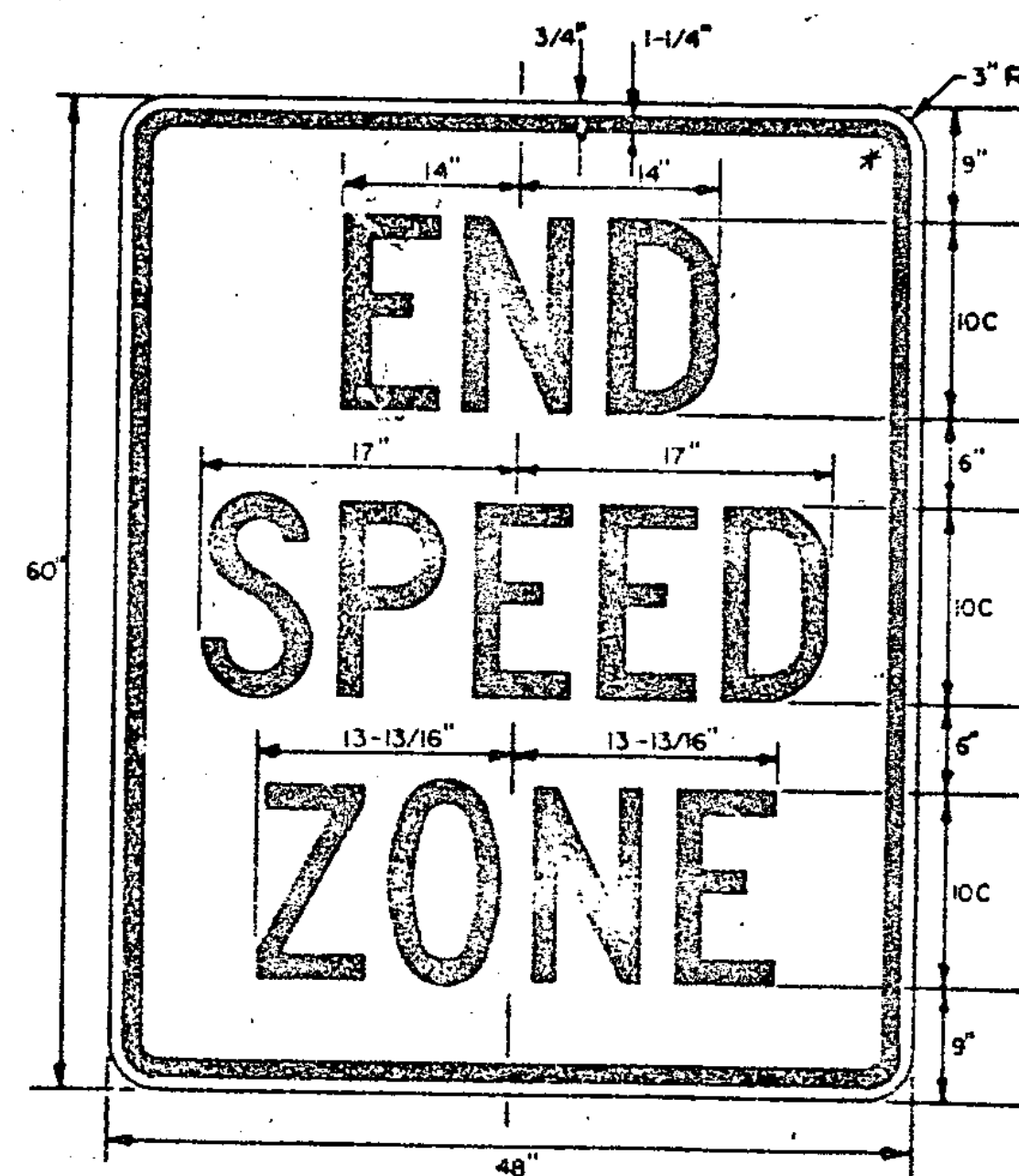
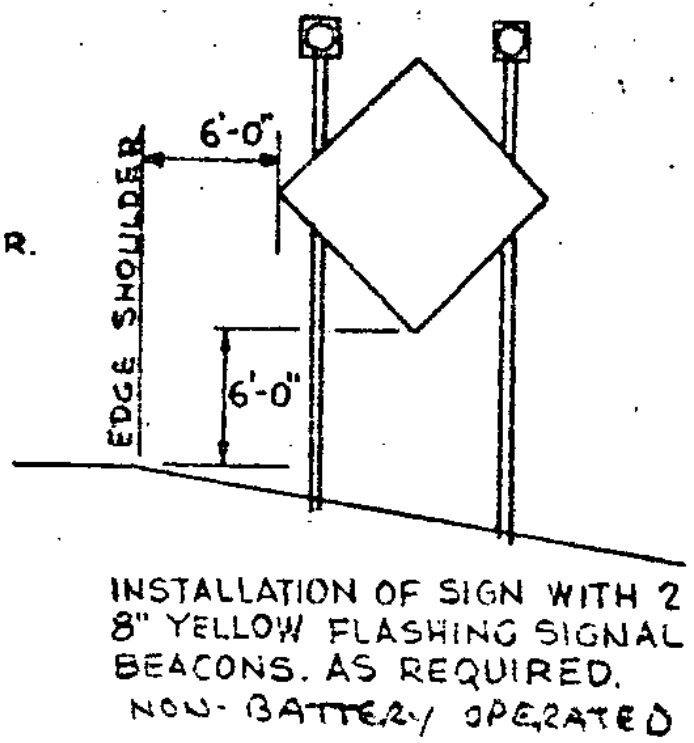
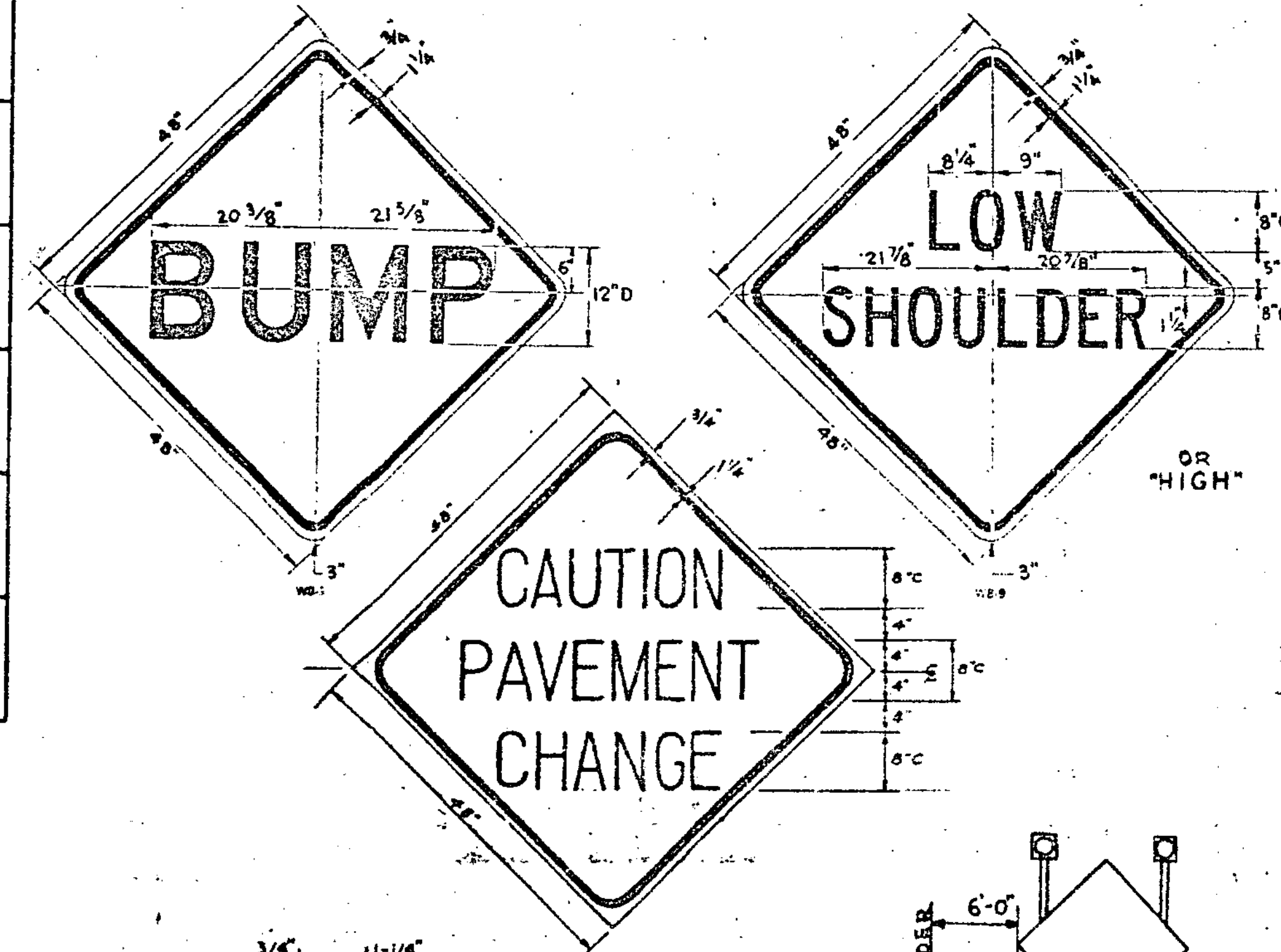
[illegible]

SIGN NOTES: TRAFFIC SIGNS SHOWN ON THIS SHEET ARE TO BE SUBSIDIARY TO ITEM 641, TRAFFIC CONTROL. ADDITIONAL SIGNS, IF REQUIRED, THAT ARE NOT DETAILED WILL BE PAID AS ITEM 673.20 OR 673.25 AS DIRECTED BY THE ENGINEER.

PROJECT SIGNS AS PER STANDARD E-2 AND E-6 WILL BE REQUIRED TO ESTABLISH PROJECT LIMITS AND AS RAMP SINGING.

SIGNS MAY BE ERECTED ON FLANGED CHANNEL STEEL POSTS\* OR BREAKAWAY WOODEN POSTS.

\* SIZE = 3 LBS/FT - MAXIMUM



COLORS; LEGEND-BLACK (NON-REFLECTORIZED)  
BACKGROUND-WHITE (REFLECTORIZED)  
(SEE STANDARD SHEET E-58 FOR MATERIAL SPECIFICATIONS)

( ) INDICATE SIGNS REQUIRED CLOSING NB & SB LANE

REV. 3/27/84

SECTION 641  
TRAFFIC SIGN  
SUMMARY SHEET  
MAIN LINE  
TRAFFIC CONTROL  
PLAN

SURVEYED BY \_\_\_\_\_ DATE \_\_\_\_\_  
DRAWN BY APR DATE 2-82  
TRACED BY LCG DATE 6-82

HARTFORD

PROJ. 1R HQ 91-2(1)

SHEET 23 OF 30

MAIN LINE TRAFFIC CONTROL  
DIVIDED HIGHWAY  
ONE ROADWAY  
CLOSED

COLUMN TOTAL =

COLUMN TOTAL = -

WHITE RIVER INTERCHANGE  
NO. 10



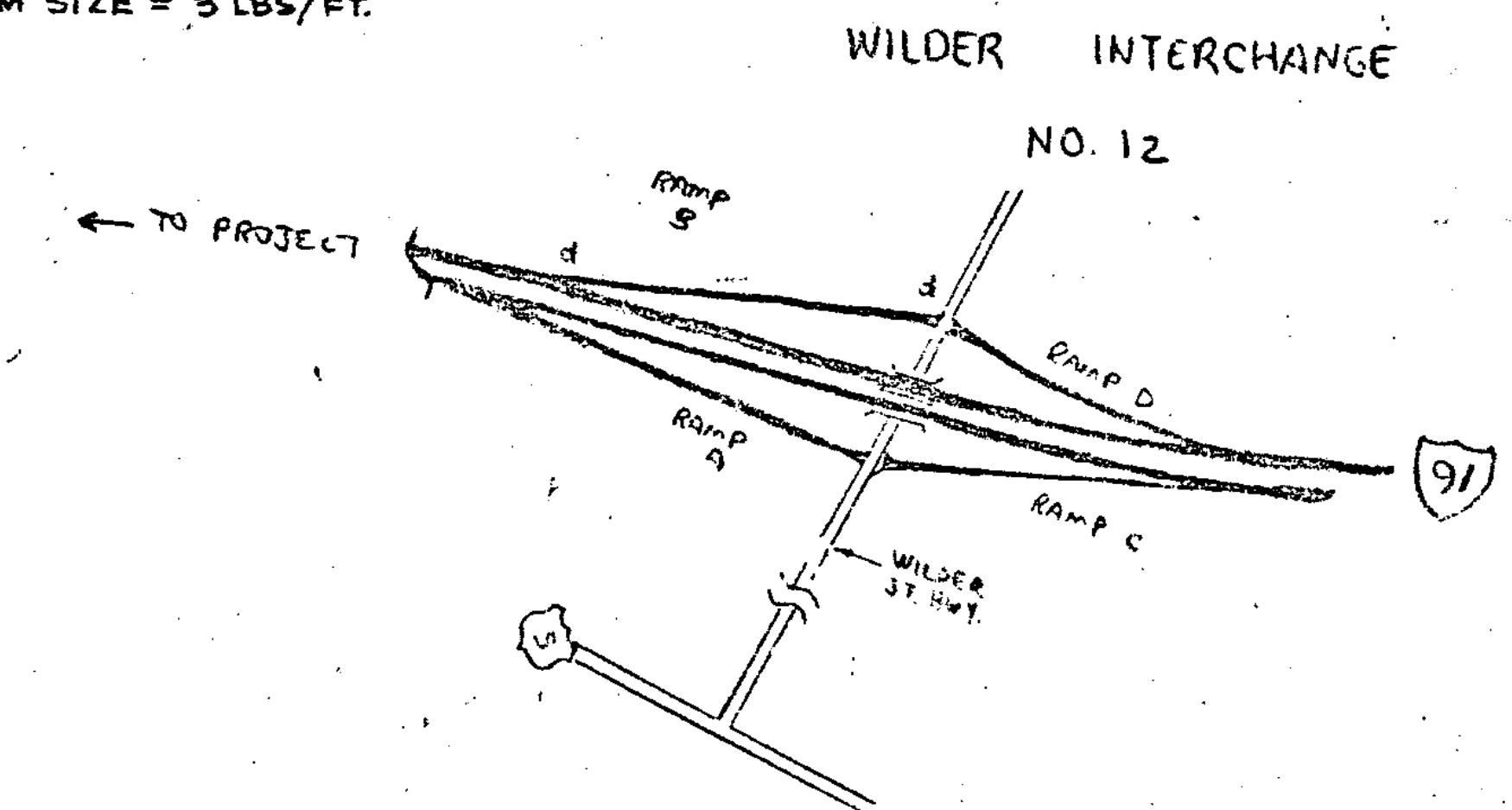
TRAFFIC SIGNS SHOWN ON THIS SHEET ARE TO BE SUBSIDIARY TO ITEM 641, TRAFFIC CONTROL. ADDITIONAL SIGNS, IF REQUIRED, THAT ARE NOT DETAILED WILL BE PAID AS ITEM 675.20 OR 675.25 AS DIRECTED BY THE ENGINEER.

PROJECT SIGNS AS PER STANDARD E-2 AND E-6 WILL BE REQUIRED TO ESTABLISH PROJECT LIMITS AND AS RAMP SIGNING.

SIGNS MAY BE ERECTED ON FLANGED CHANNEL STEEL POSTS \* OR BREAKAWAY WOODEN POSTS.

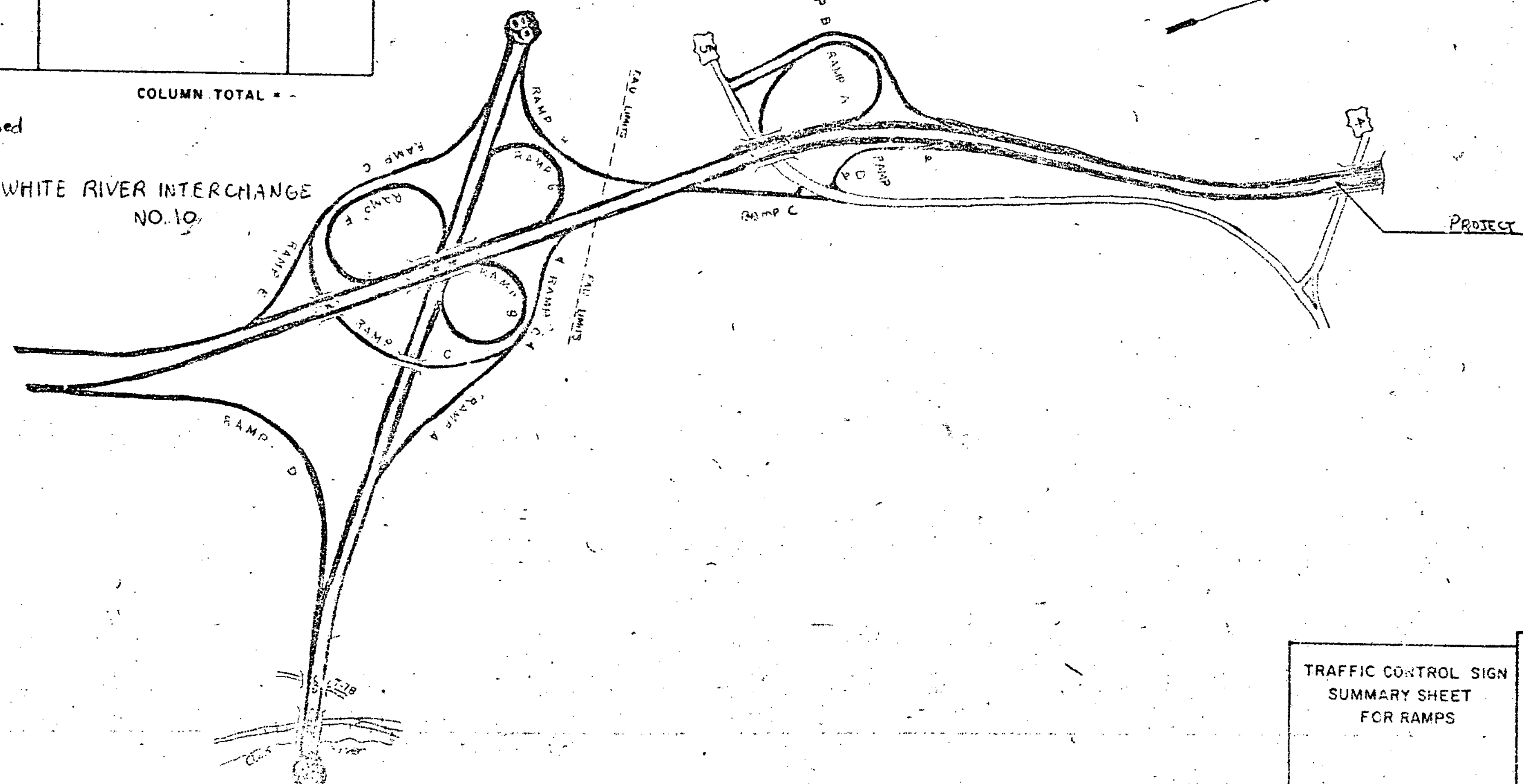
\* MAXIMUM SIZE = 3 LBS/FT.

\* INTERCHANGES AND RAMP SIGNING  
SHOULD TO INDICATE AREAS FOR  
SIGNING NOT DETAILED ON MAINLINE.  
RAMP SIGNING SHOULD SUPPLEMENT  
MAINLINE SIGNING



HARTFORD INTERCHANGE

No. 11



TRAFFIC CONTROL SIGN  
SUMMARY SHEET  
FOR RAMPS

SURVEYED BY \_\_\_\_\_ DATE \_\_\_\_\_  
DRAWN BY \_\_\_\_\_ DATE \_\_\_\_\_  
TRACED BY \_\_\_\_\_ DATE \_\_\_\_\_

HARTFORD  
PROJ. NO. IR-91-2 (1)  
SHEET 30 OF 30

REV. 3/27/84