

COVER  
STOCK  
8½ x 11

WYC  
DRAWING BOOK 6  
CHAPTER 2-4

## SKILLING, HELLE, CHRISTIANSEN, ROBERTSON

## Structural &amp; Civil Engineers

| PROJECT                | TITLE                      | DATE    |
|------------------------|----------------------------|---------|
| THE WORLD TRADE CENTER | CONNECTION DETAILS - INDEX | 4/ 1/69 |

## REVISIONS

ed 5-1-69

WTCI-22-LERA

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## SKILLING, HELLE, CHRISTIANSEN, ROBERTSON

## Structural &amp; Civil Engineers

PROJECT

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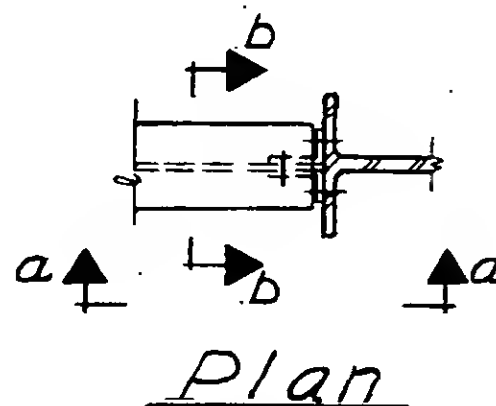
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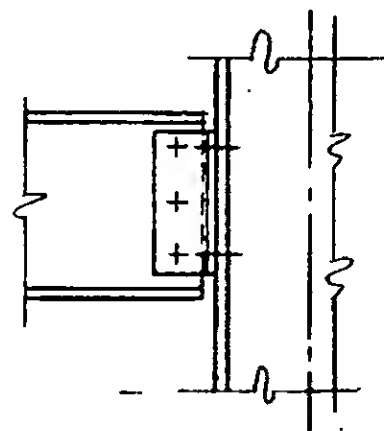
DATE **5-22-67**

REVISIONS

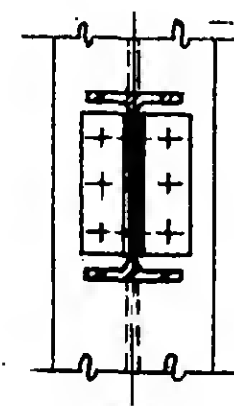
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| SCHEDULE                 |                  |
|--------------------------|------------------|
| BM SIZE                  | DESIGN REACTION* |
| B 8, 10<br>W 12, 10, 8   | 26.5 K           |
| B 12, 14, 16<br>W 16, 14 | 39.8 K           |
| W 18                     | 53.0 K           |
| W 24, 21                 | 66.3 K           |
| W 30, 27                 | 79.5 K           |
| W 36, 33                 | 92.8 K           |



Section a-a



Section b-b

GENERAL NOTES:

For angle size, and bolt size, number, and spacing, see AISC part 4.

\* Use Design Reaction unless otherwise noted in beam schedule.



6-AB2-2

PROJECT

THE WORLD TRADE CENTER

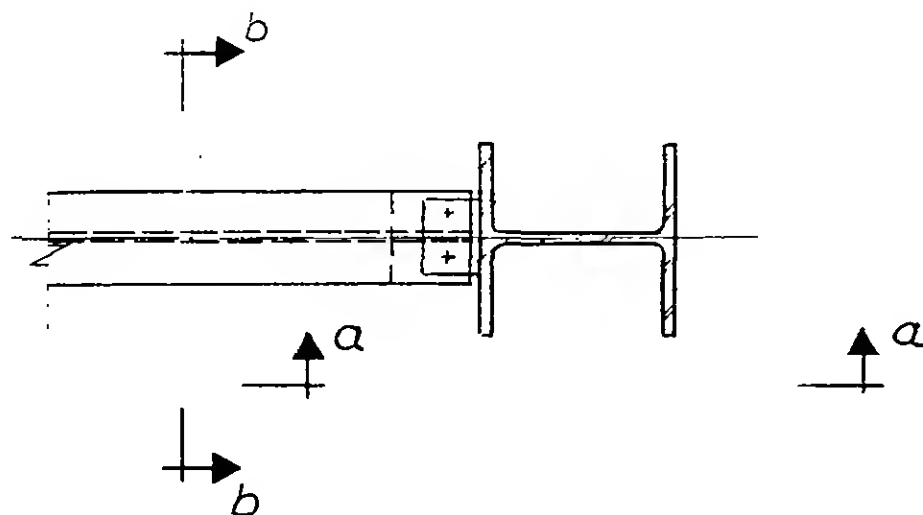
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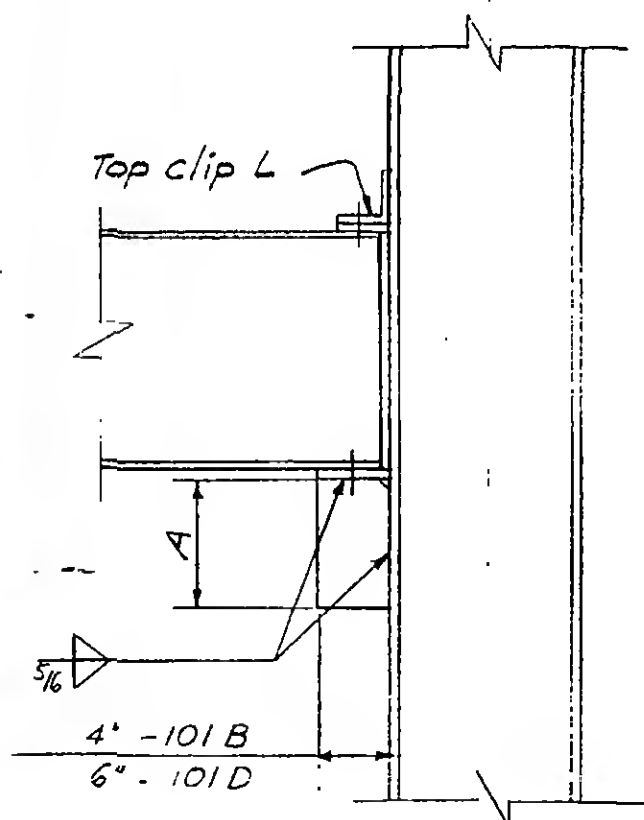
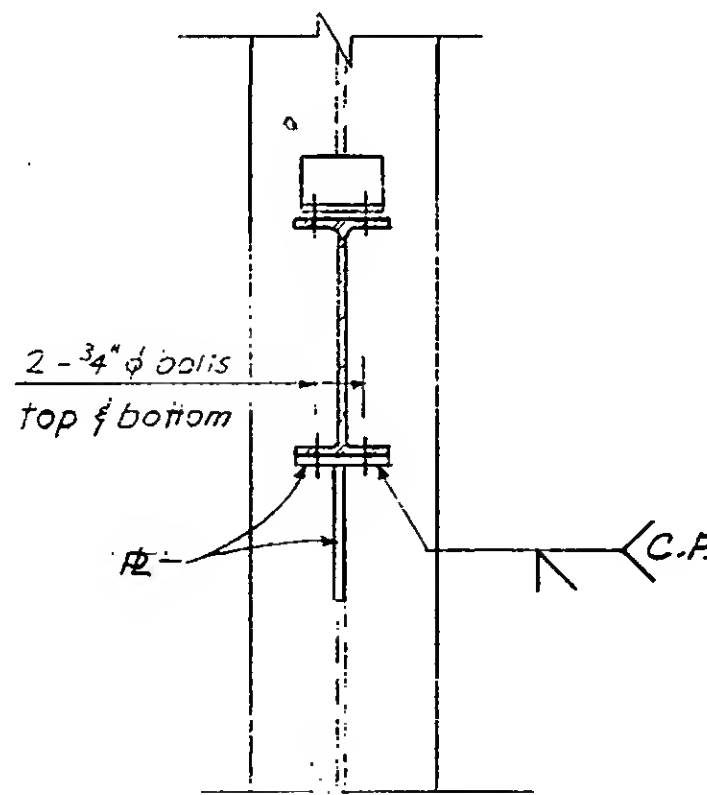
DATE

3-14-67

REVISIONS

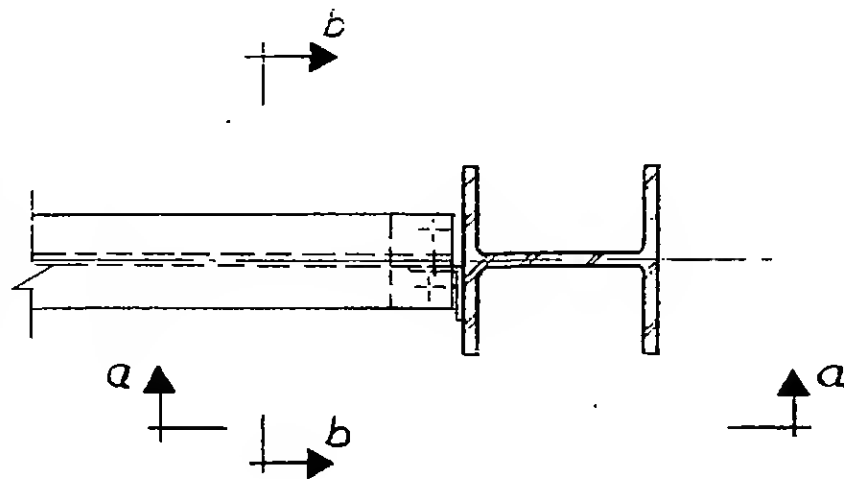
Plan

| SCHEDULE |                       |       |        |
|----------|-----------------------|-------|--------|
| DETAIL   | BEAM SIZE             | R (") | A (")  |
| 101 B    | 10 WF 21 to 10 WF 72  | 1/2   | 0'-6"  |
|          | 10 WF 77 to 10 WF 100 | 5/8   | 0'-9"  |
|          | 12 WF 27 to 12 WF 50  | 1/2   | 0'-8"  |
|          | 12 WF 53 to 12 WF 72  | 1/2   | 0'-10" |
|          | 12 WF 79 to 12 WF 106 | 5/8   | 1'-2"  |
| 101 D    | 12 WF 65 to 12 WF 106 | 5/8   | 1'-4"  |

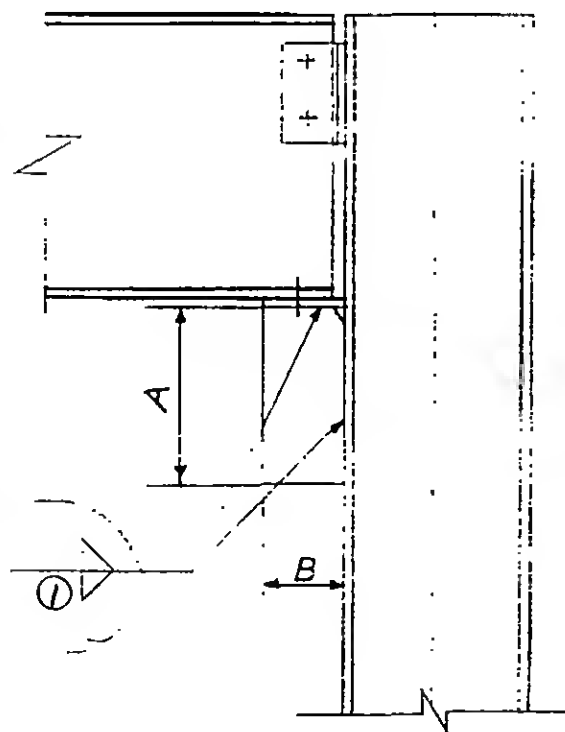
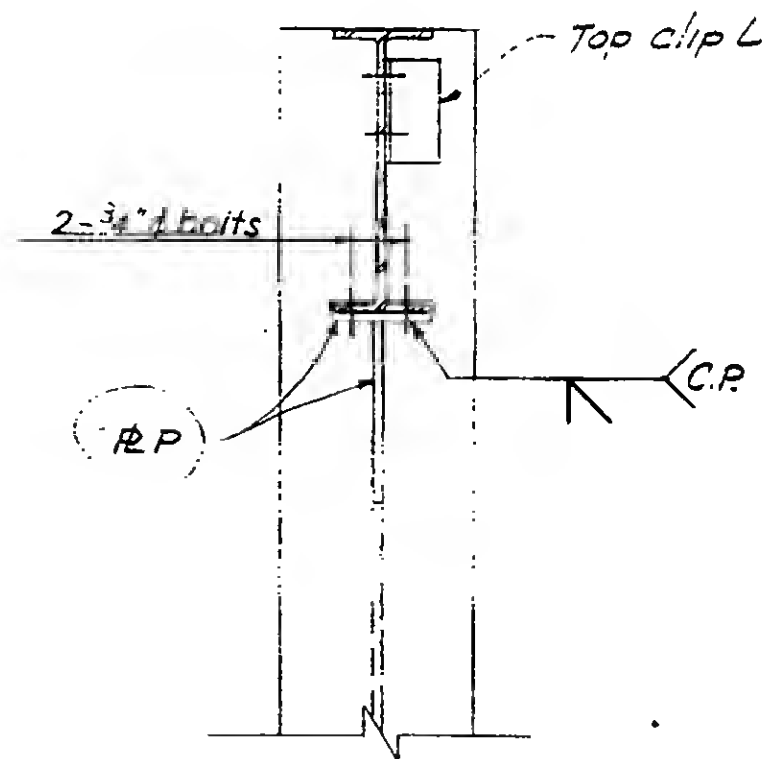
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## REVISIONS

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Plan

| SCHEDULE         |        |           |      |        |
|------------------|--------|-----------|------|--------|
| BEAM SIZE        | A      | B         | RP   | WELD ① |
| 10 W             | 0'-6"  | 0'-4"     | 1/2" | 5/16   |
| 12 W, 14 W, 16 W | 0'-9"  | 0'-4"     | 1/2" | 5/16   |
| 21 W             | 0'-10" | 0'-6"     | 1/2" | 5/16   |
| 24 W             | 1'-4"  | 0'-6"     | 1/2" | 5/16   |
| 27 W             | 1'-6"  | 0'-7"     | 5/8" | 3/8    |
| 33 W             | 1'-8"  | 0'-7 1/2" | 3/4" | 1/2    |

Section a-aSection b-b

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

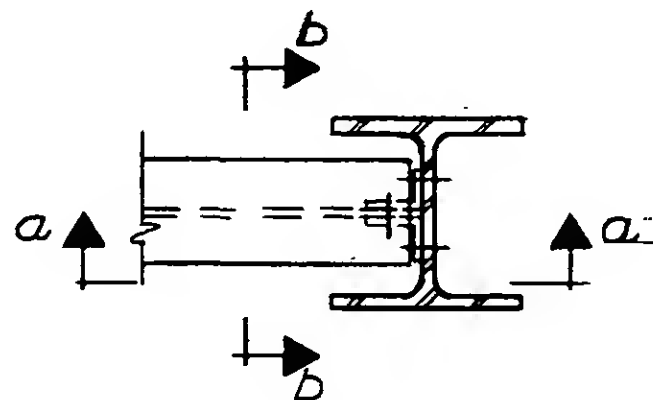
PROJECT *THE WORLD TRADE CENTER*

TITLE *CONNECTION DETAIL 102 A*

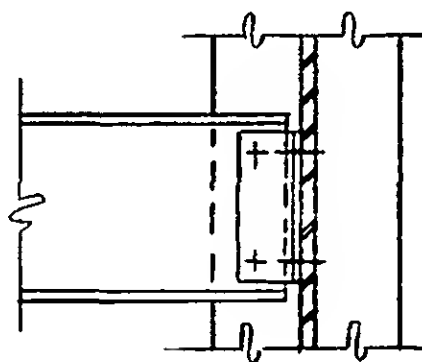
DATE *5-22-67*

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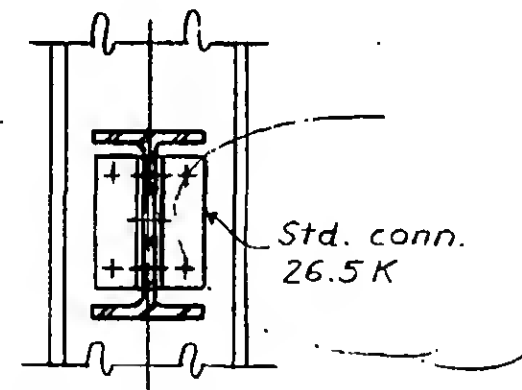
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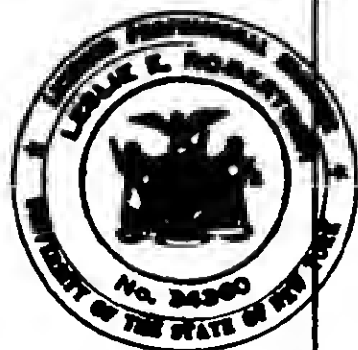
Plan



Section a-a



Section b-b



6-AB2-3

PROJECT

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TITLE

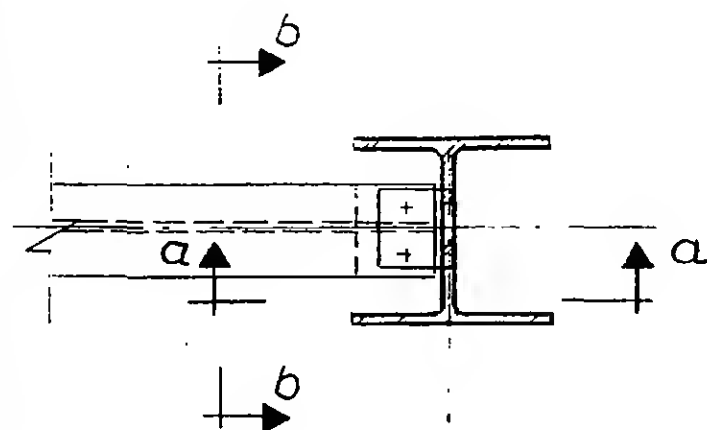
CONNECTION DETAIL 102 B

DATE

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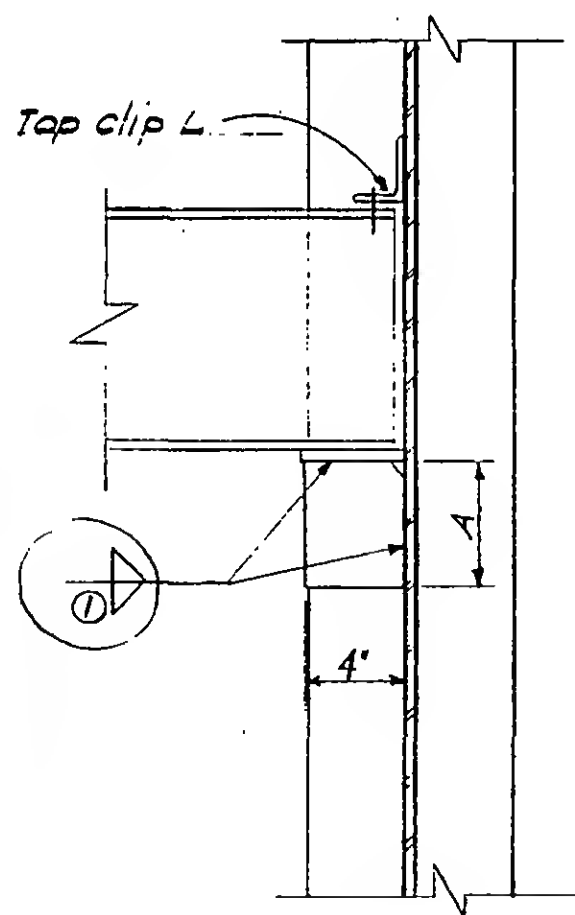
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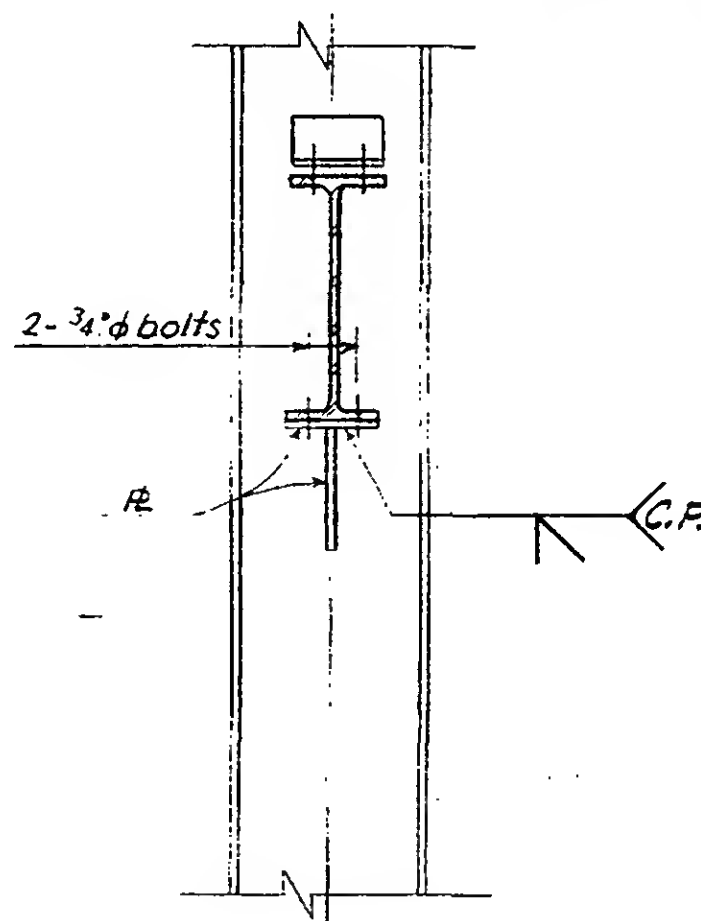
Plan

## SCHEDULE

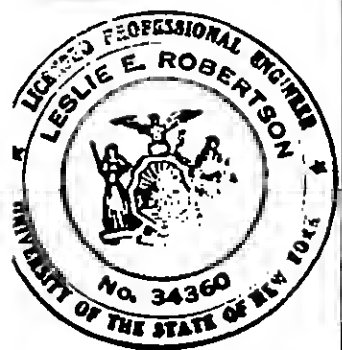
| BEAM SIZE              | R (") | A (")  | WELD 1 |
|------------------------|-------|--------|--------|
| 10 WF 21 to 10 WF 72   | 1/2   | 0'-6"  | 5/16   |
| 10 WF 77 to 10 WF 100  | 5/8   | 0'-9"  | 5/16   |
| 12 WF 27 to 12 WF 50   | 1/2   | 0'-8"  | 5/16   |
| 12 WF 53 to 12 WF 72   | 1/2   | 0'-10" | 5/16   |
| 12 WF 79 to 12 WF 106  | 5/8   | 1'-2"  | 5/16   |
| 12 WF 120 to 12 WF 190 | 3/4   | 1'-6"  | 3/8    |



Section a-a



Section b-b



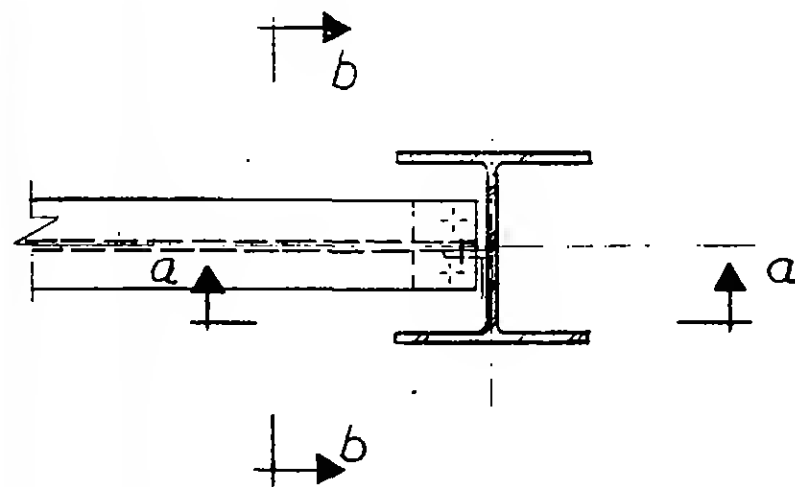
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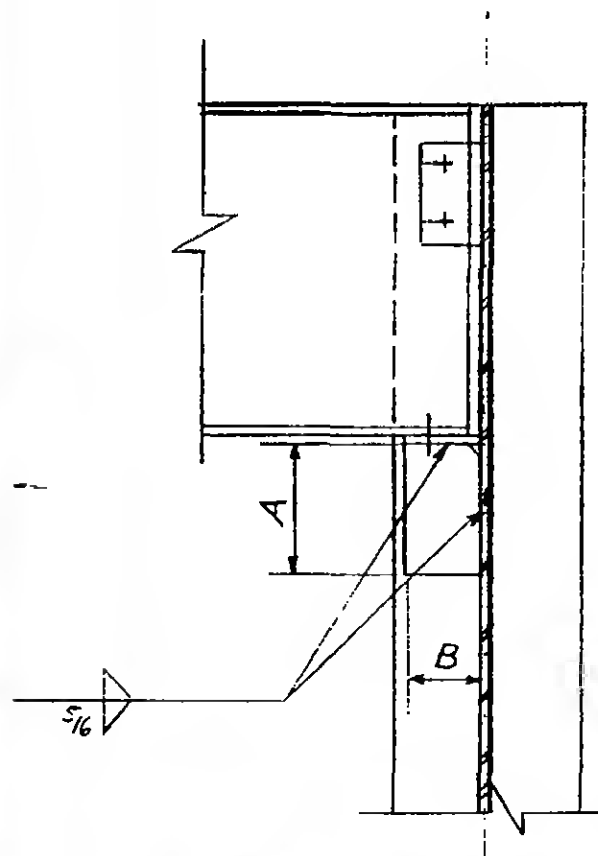
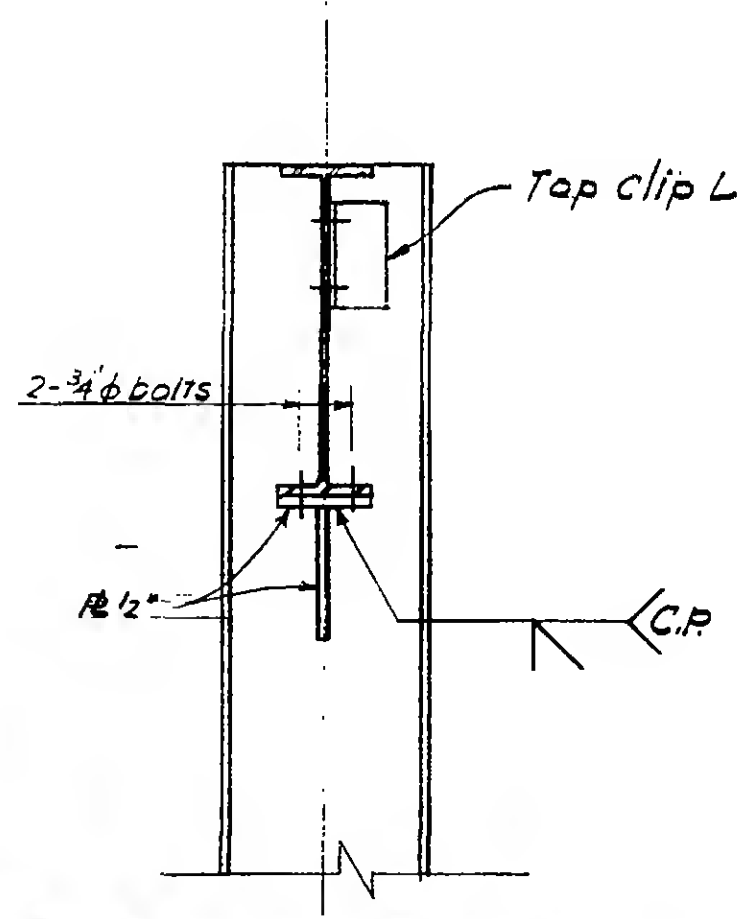
TITLE CONNECTION DETAIL 102 C

DATE 3-14-67

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Plan

| SCHEDULE            |        |       |
|---------------------|--------|-------|
| BEAM SIZE           | A      | B     |
| 10 WF               | 0'-6"  | 0'-4" |
| 12 WF, 14 WF, 16 WF | 0'-9"  | 0'-4" |
| 21 WF               | 0'-10" | 0'-6" |
| 24 WF               | 1'-4"  | 0'-6" |

Section a-aSection b-b

6-AB2-3.2

PROJECT

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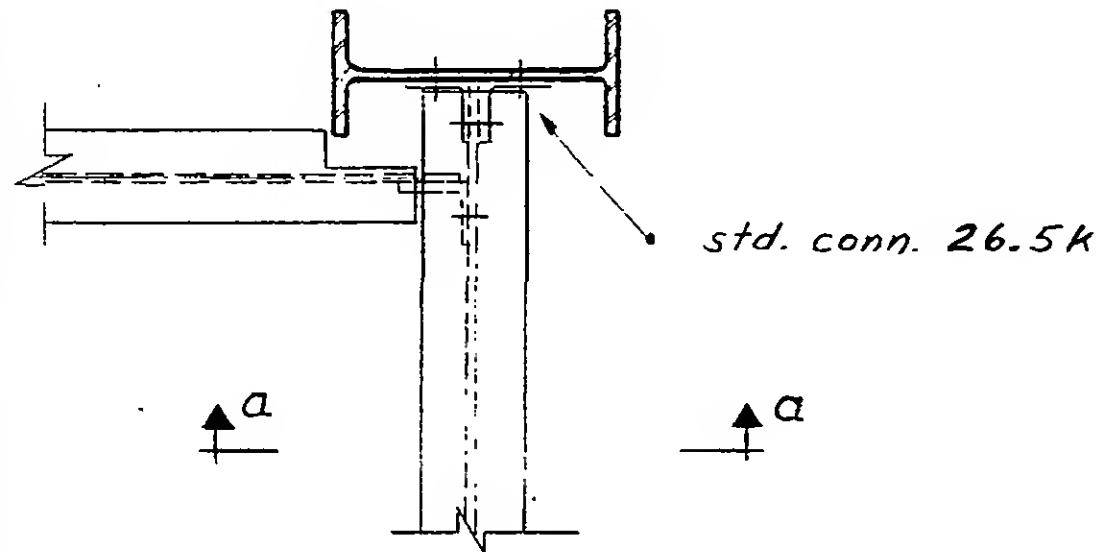
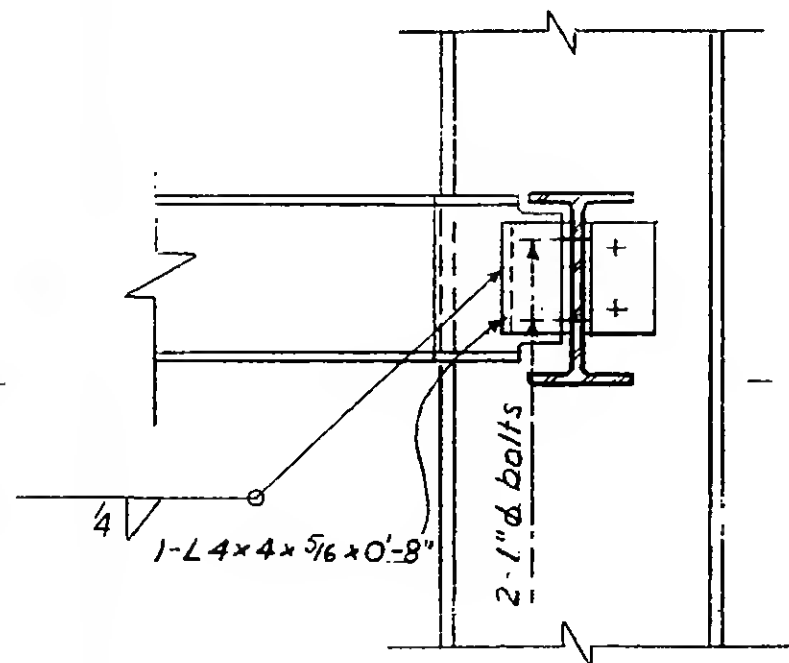
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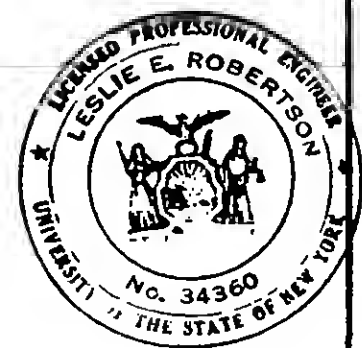
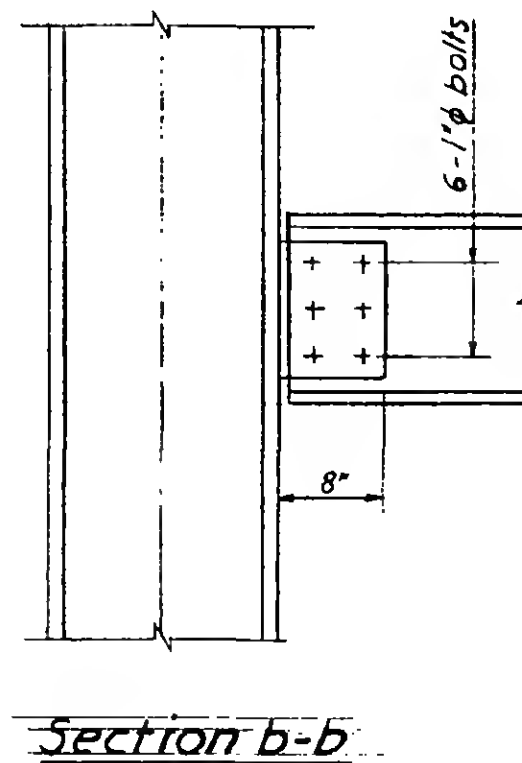
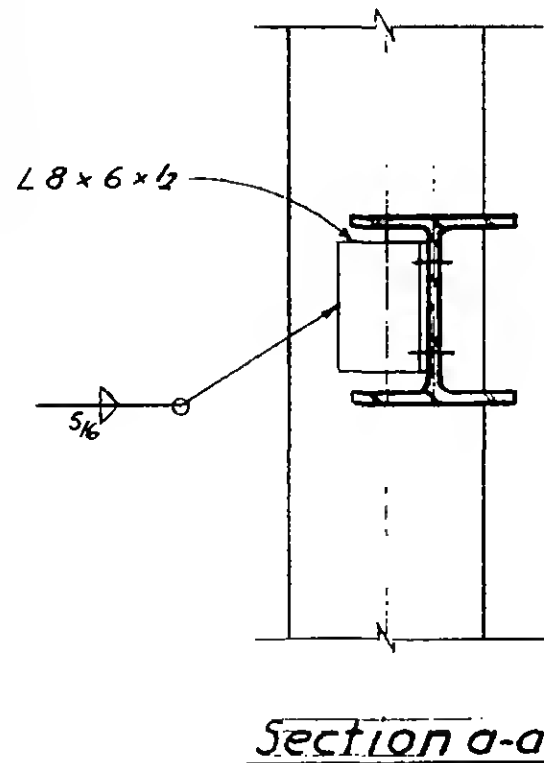
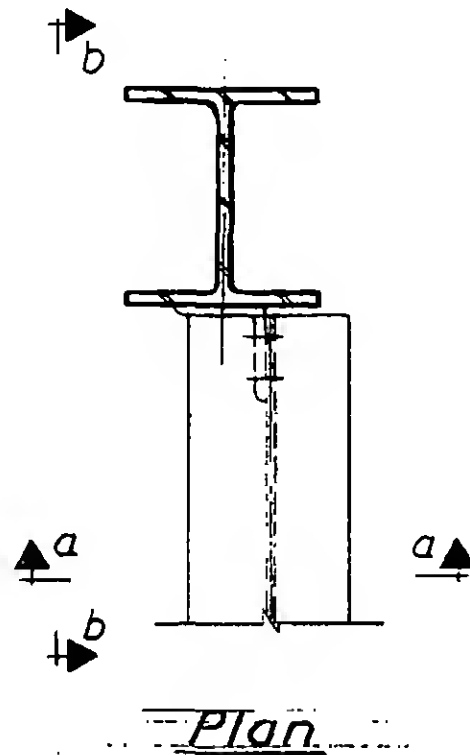
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PlanSection a-a

6-AB2-4



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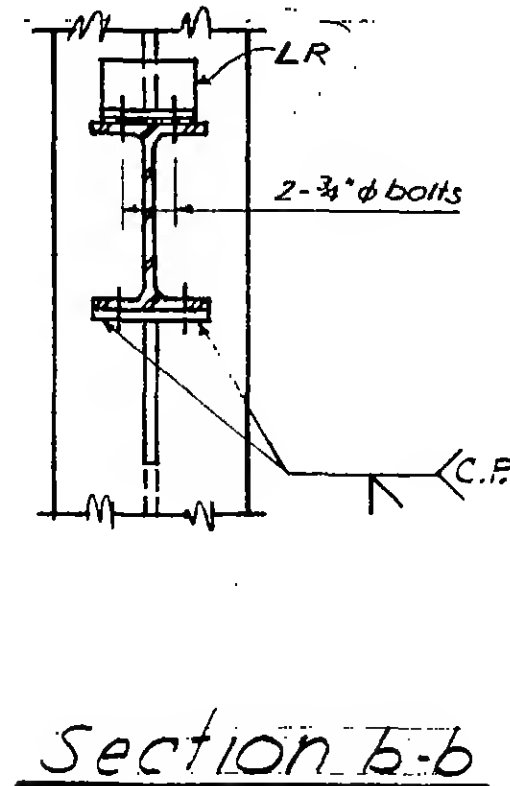
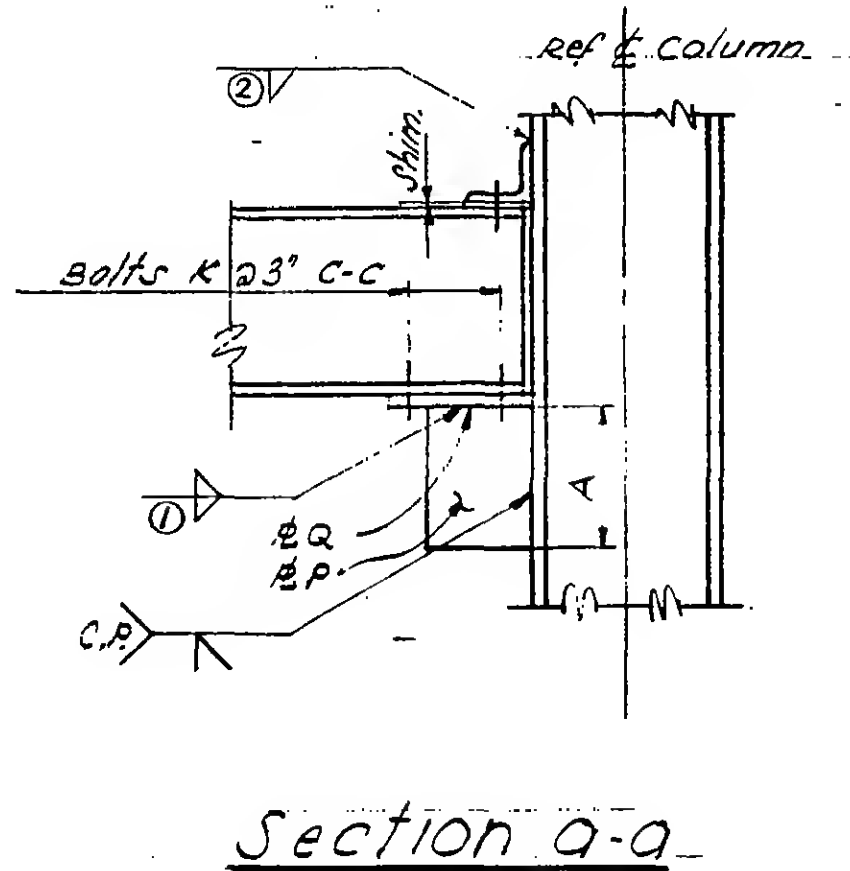
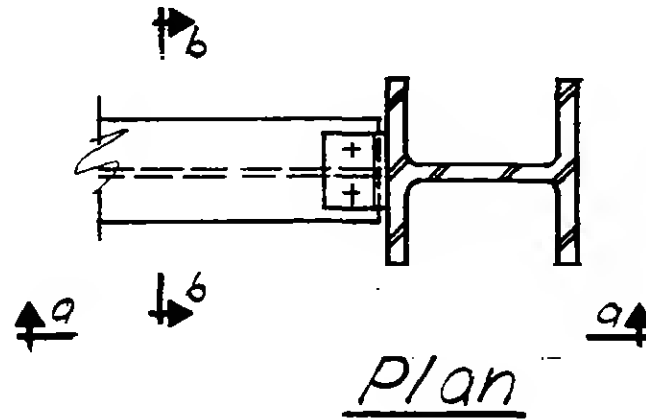
TITLE CONNECTION DETAIL 105 N

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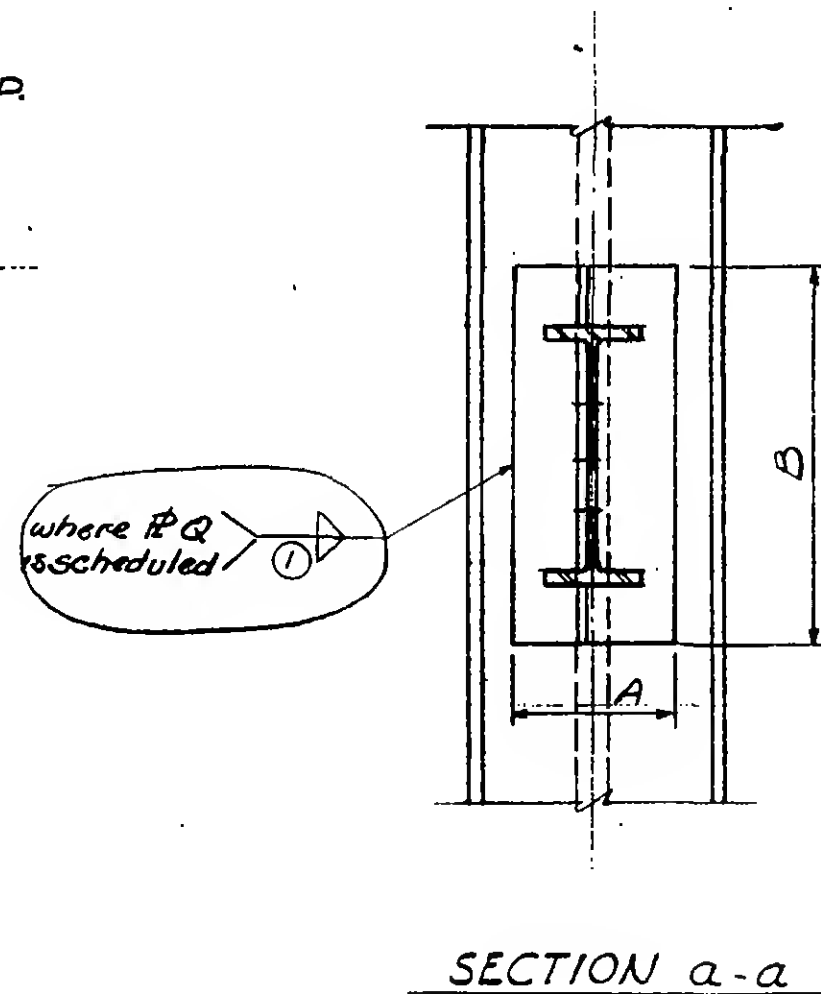
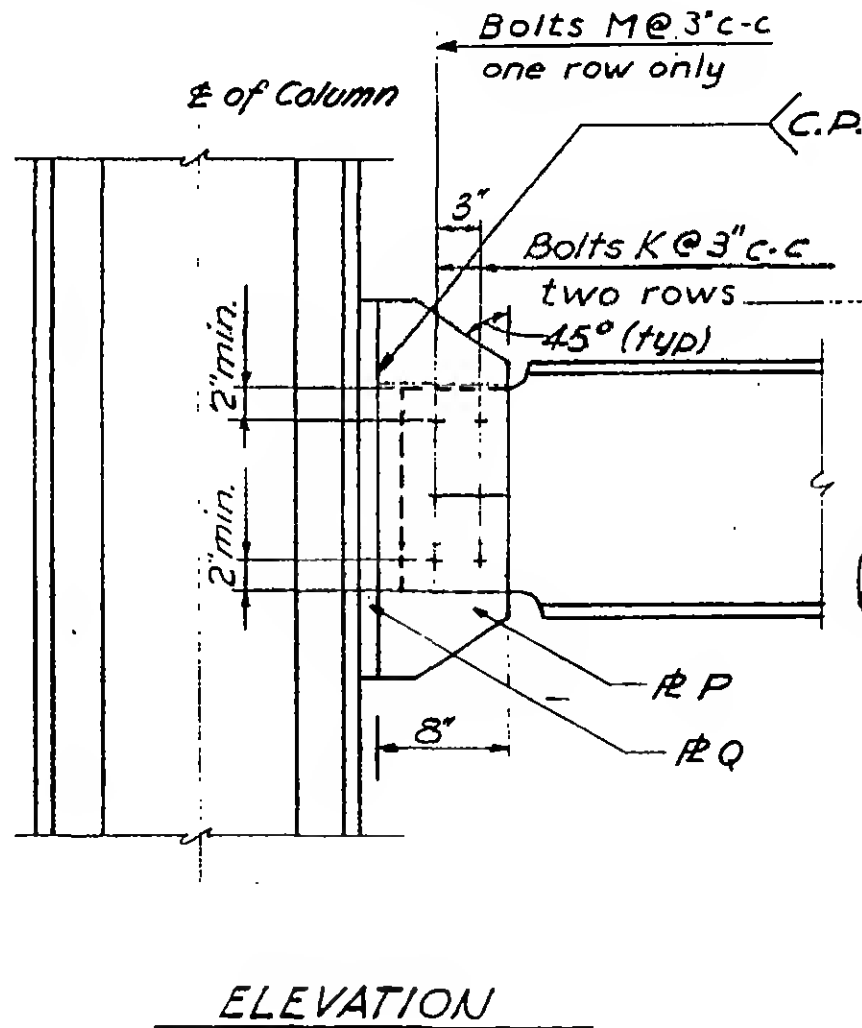
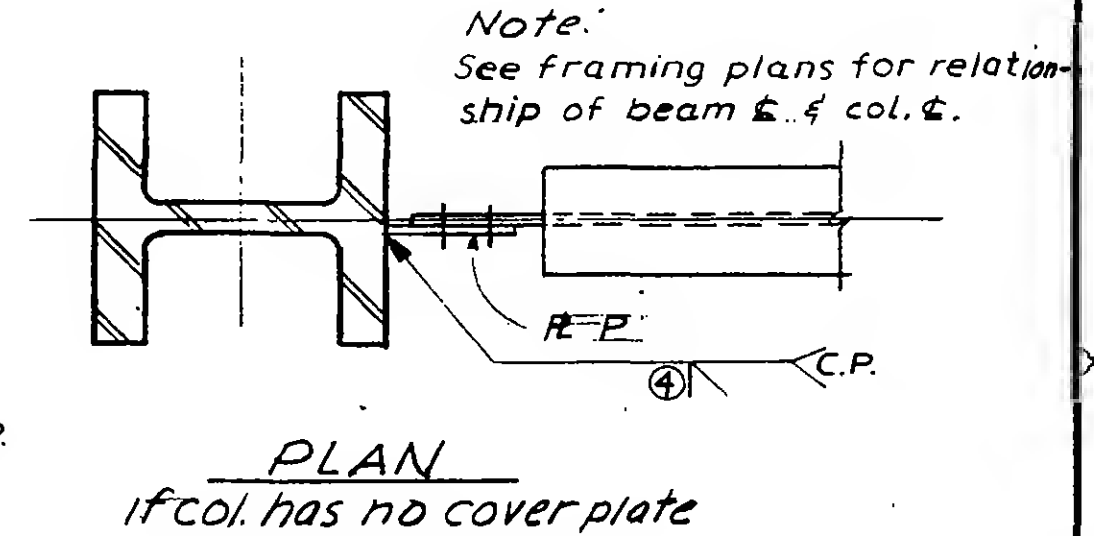
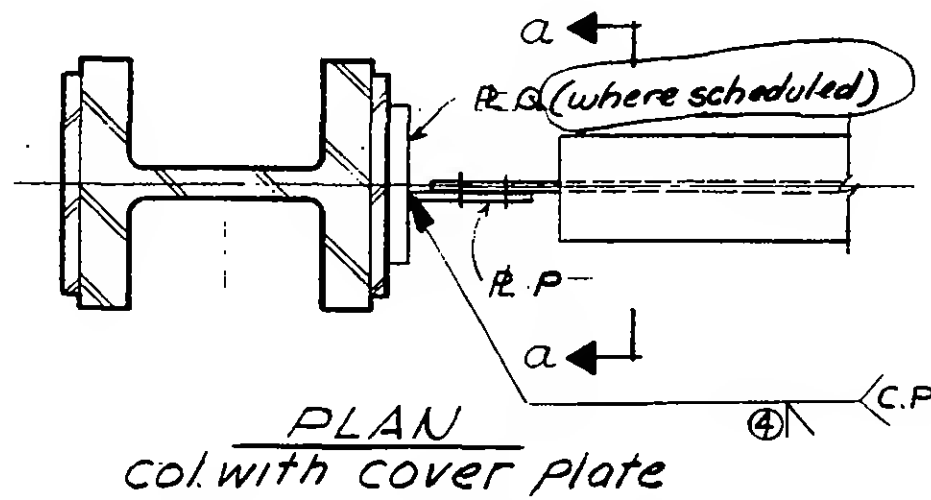
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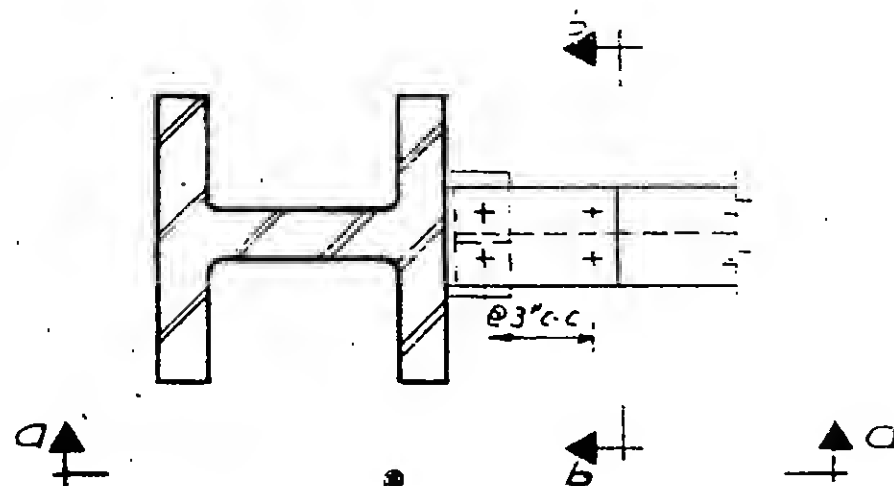
105 C, D, F, K, M

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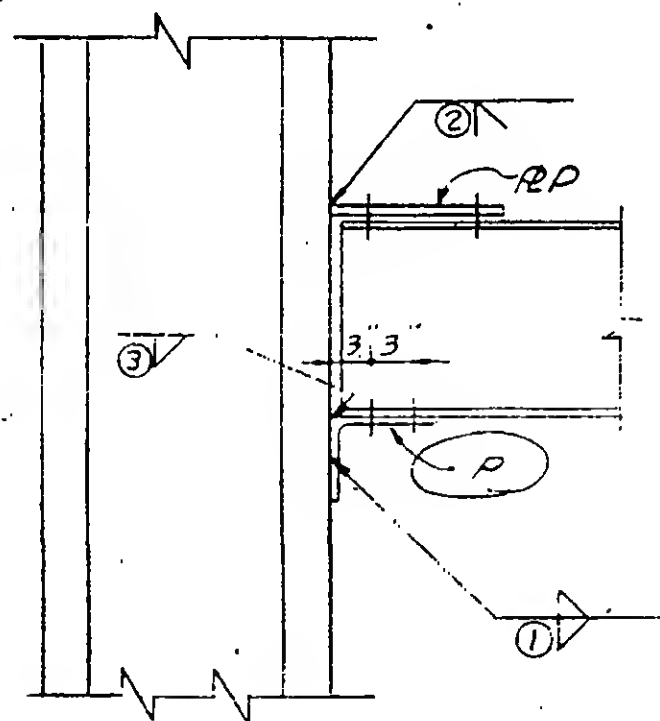
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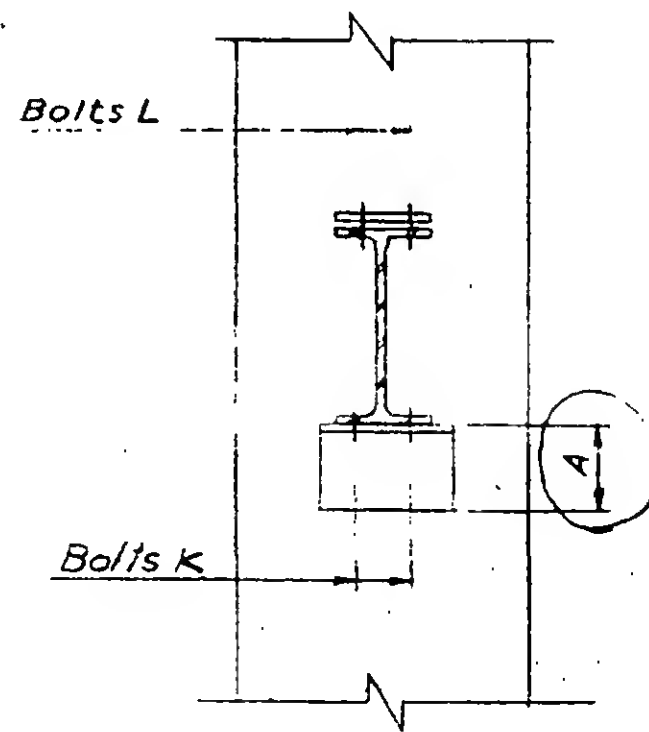
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Plan



Section a-a



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TITLE CONNECTION DETAIL

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DATE 7-28-67

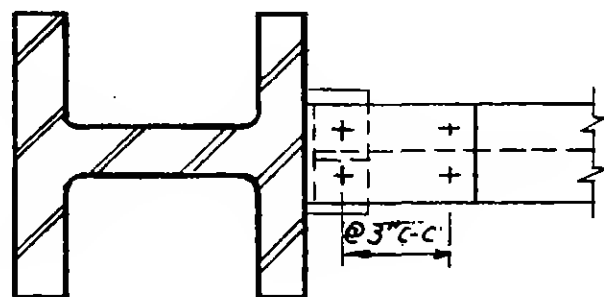
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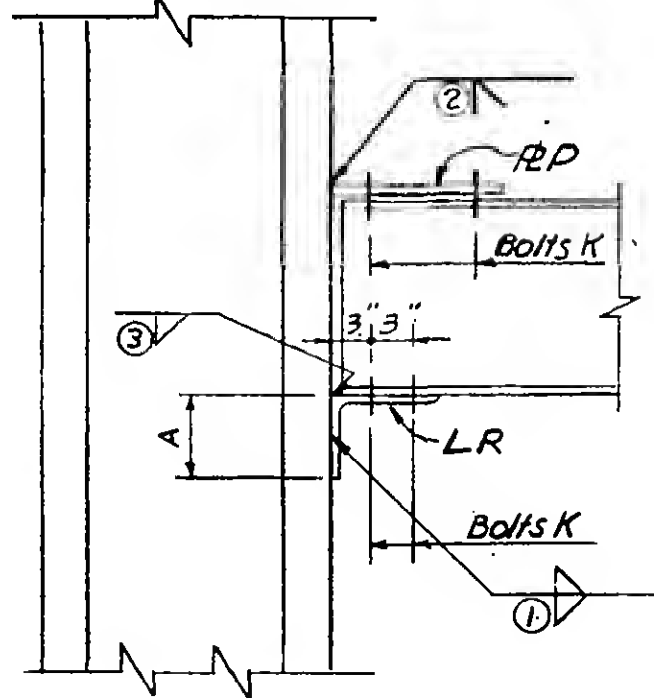
12-13-67

12-21-67



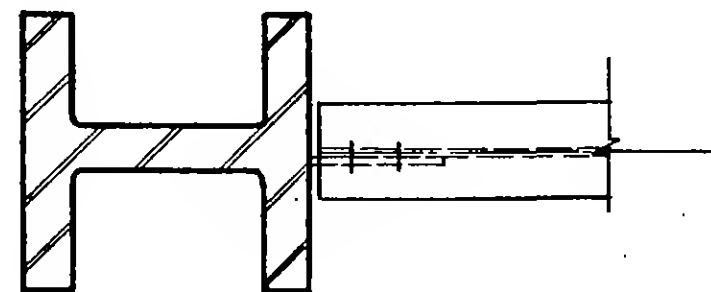
Plan

105 F, & M



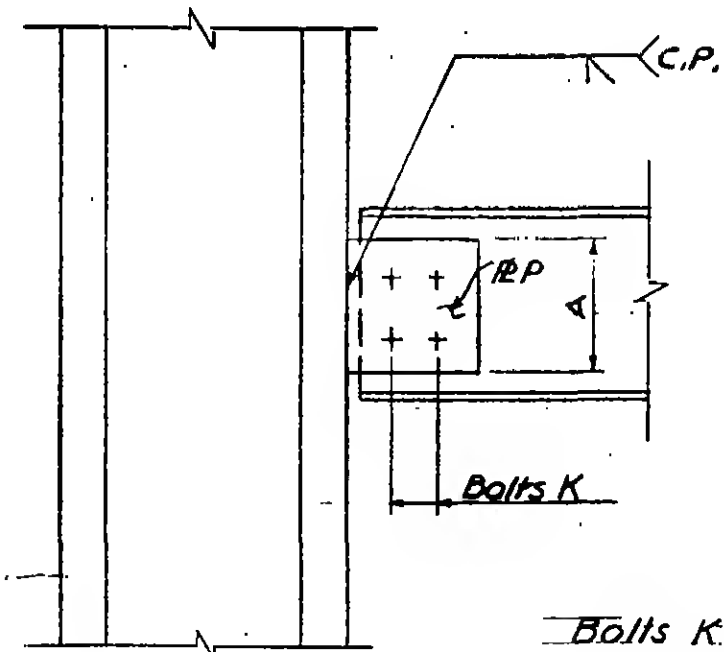
Section a-a

6-AB2-7.4 for Schedule 105 C, D & F  
6-AB2-7.5 for Schedule 105 K & M



Plan

105 C, D & K

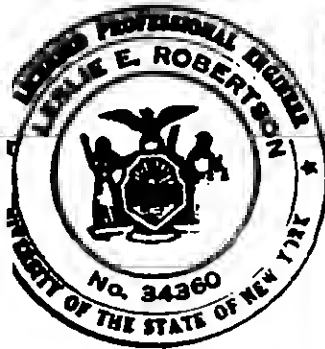


Bolts K w/washers  
on beam web.

Section a-a

Note:  
Use all of all scheduled  
Details, except 10 and above

6-AB2-7.4



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE CONNECTION DETAIL 105 A, H, L

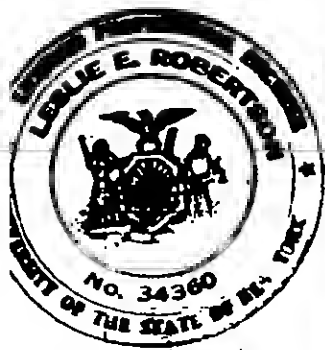
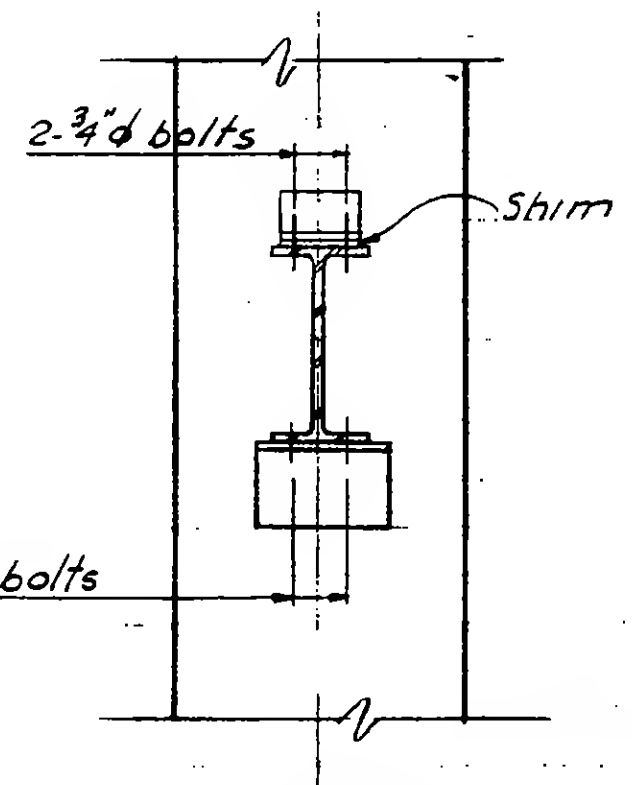
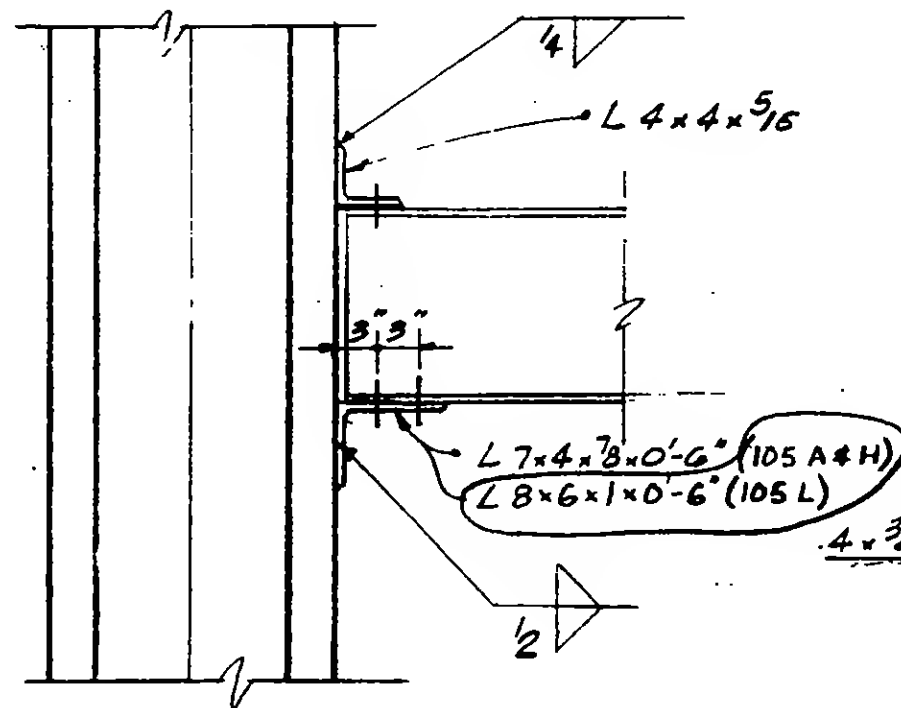
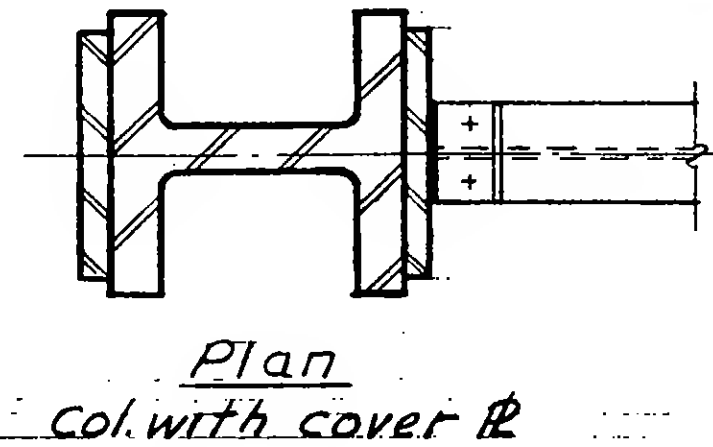
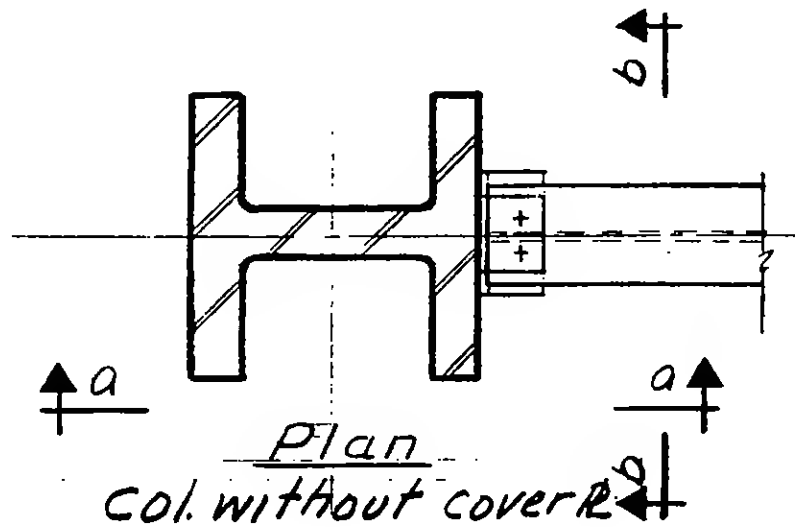
DATE 7-5-67

REVISIONS

7-23-67

9-15-67

9-18-67



## SKILLING - HELLE - CHRISTIANSEN - ROBERTSON

Structural &amp; Civil Engineers

PROJECT THE WORLD TRADE CENTER

TITLE SCHEDULE FOR DETAIL 1-5-6-6

DATE 7-25-67

## REVISIONS

3-15-67

9-18-67

11-10-67

| REV. DWYS. | 6-APR-71 | 6-APR-72      | 3-28-72       | 6-APR-71 | 6-APR-72       | 6-APR-71 |
|------------|----------|---------------|---------------|----------|----------------|----------|
|            | 105F     | 105C          | 105C          | 105E     | 105F           | 105G     |
| PLATES     |          |               |               |          |                |          |
| P          | 1/2"     | 3/8"          | 1/2"          | 1/2"     | 1/2"           | 3/8"     |
| Q          | 1/8"     | —             | —             | —        | —              | —        |
| ANGLE      |          |               |               |          |                |          |
| R          | —        | 7'-4" x 7'-5" | 7'-4" x 7'-5" | —        | 8'-4" x 11'-5" | —        |
| DIMENSIONS |          |               |               |          |                |          |
| A          | 0'-10"   | 0'-4"         | 0'-4"         | —        | 0'-6"          | —        |
| B          | 1'-3"    | —             | —             | 1'-10"   | —              | 1'-10"   |
| 50-LT.     |          |               |               |          |                |          |
|            | 6'-1"    | 1'-4"         | 1'-6"         | —        | 4'-3"          | —        |
|            | —        | 4'-3"         | 4'-7"         | —        | 1'-3"          | —        |
|            | —        | —             | —             | 7'-1/5"  | —              | 7'-1/5"  |
| 1/5"       |          |               |               |          |                |          |
| (1)        | —        | —             | —             | —        | 1/2            | —        |
| (2)        | —        | —             | —             | —        | C.P.           | —        |
| (3)        | —        | —             | —             | —        | 1/2            | —        |
| (4)        | C.P.     | —             | —             | —        | —              | C.P.     |

3-APR-72



## SKILLING - HELLE - CHRISTIANSEN - ROBERTSON

Structural &amp; Civil Engineers

PROJECT

THE WORLD TRADE CENTER

TITLE

SCHEDULE FOR DETAIL 105 B-G

DATE

7-28-67

## REVISIONS

9-15-67

9-18-67

11-10-67

12-13-67

| Ref. DWGS. | 6-AB2-7.1 | 6-AB2-7.2 | 6-AB2-7.2 | 6-AB2-7.1 | 6-AB2-7.2     | 6-AB2-7.1 |
|------------|-----------|-----------|-----------|-----------|---------------|-----------|
|            | 105B      | 105C      | 105D      | 105E      | 105F          | 105G      |
| PLATES     |           |           |           |           |               |           |
| P          | 1/2"      | 5/8"      | 5/8"      | 1/2"      | 1/2"          | 3/8"      |
| Q          | 1/8"      | —         | —         | —         | —             | —         |
| ANGLE      |           |           |           |           |               |           |
| R          | —         | —         | —         | —         | 8"x6"x1"x0.6" | —         |
| DIMENSIONS |           |           |           |           |               |           |
| A          | 0'-10"    | 0'-6 1/2" | 0'-6 1/2" | —         | 0'-6"         | —         |
| B          | 2'-0"     | —         | —         | 1'-10"    | —             | 1'-10"    |
| BOLTS      |           |           |           |           |               |           |
| K          | 6-1"φ     | 4-1"φ     | 4-1"φ     | —         | 4-7/8"φ       | —         |
| L          | —         | —         | —         | —         | 4-7/8"φ       | —         |
| M          | —         | —         | —         | 7-1 1/8"φ | —             | 7-1"φ     |
| WELDS      |           |           |           |           |               |           |
| ①          | 1/2       | —         | —         | —         | 1/2           | —         |
| ②          | —         | —         | —         | —         | C.P.          | —         |
| ③          | —         | —         | —         | —         | 1/2           | —         |
| ④          | C.P.      | —         | —         | C.P.      | —             | C.P.      |



Note: Use alt. for all scheduled  
Detail 105 B-G

6-AB2-7.1

## SKILLING - HELLE - CHRISTIANSEN - ROBERTSON

Structural &amp; Civil Engineers

PROJECT

THE WORLD TRADE CENTER

TITLE

SCHEDULE FOR DETAIL 105 I.V.K.N.V.

DATE

7-5-67

## REVISIONS

2-15-67

9-18-67

10-2-67

11-10-67

REF. C.I.G.S.

6-AB2-7.1

6-AB2-7.1

6-AB2-7.2

6-AB2-7.2

6-AB2-7

105I

105J

105K

105M

105N

## PLATES

P

3"

3"

1/2"

1"

6" x 58"

Q

3/4"

3/4"

—

—

58"

## ANGLE

R

—

—

1/2" x 1/2" x 1/2"

8 x 6 x 1/2" (0'-6")

4 x 3/2 x 5/16 x 0'-6"

## DIMENSIONS

A

2'-10"

2'-10"

2'-2"

0'-6"

1'-2"

B

1'-5"

1'-10"

—

—

—

## BOLTS

K

6 - 3/4"

—

4 - 1/2" φ

4 - 3/4" φ

4 - 3/4" φ

L

—

—

4 - 1/2" φ

8 - 3/4" φ

—

M

—

1 - 3/4" φ

—

—

—

## WELDS

1

3"

3"

3"

5/8"

2

—

—

C.P.

4"

3

—

1/2"

1/2"

—

4

3/4"

—

—

—

6-AB2-7.5



## SKILLING - HELLE - CHRISTIANSEN - ROBERTSON

Structural &amp; Civil Engineers

PROJECT THE WORLD TRADE CENTER

TITLE SCHEDULE FOR DETAIL '05 I, J, K, M, N

DATE 7-28-67

## REVISIONS

9-15-67

9-18-67

10-2-67

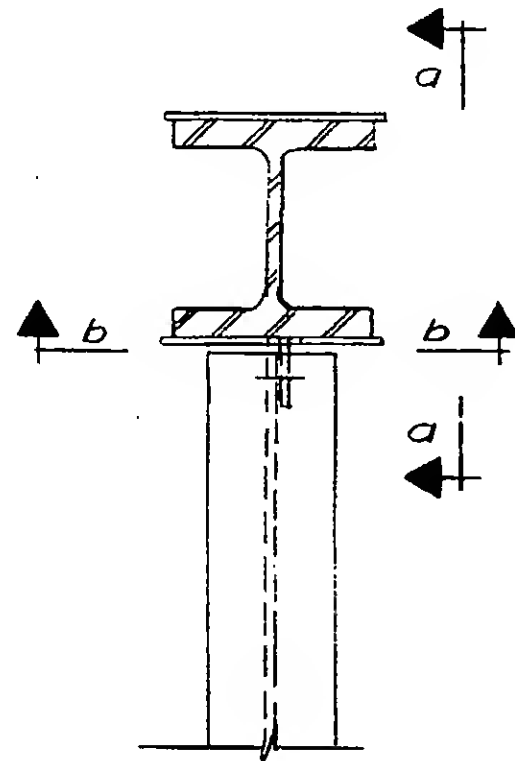
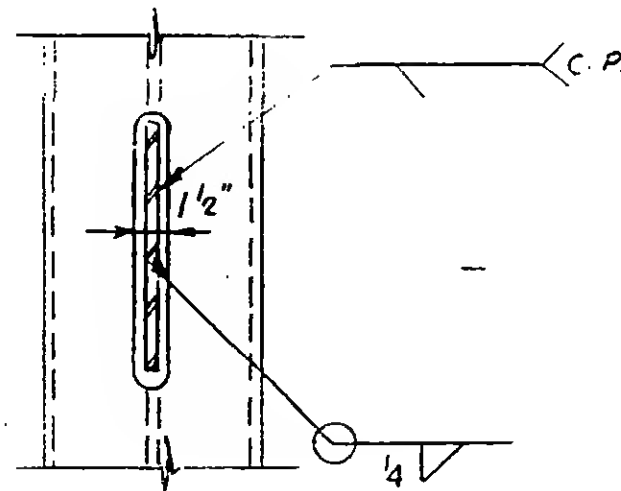
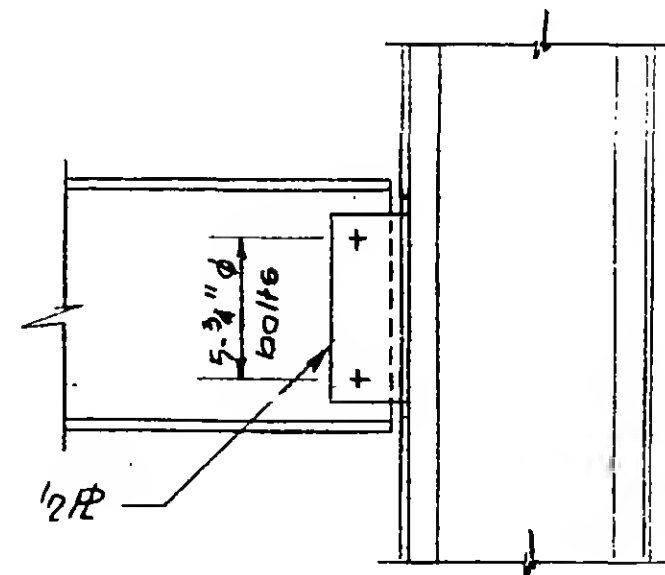
11-10-67

12-21-67

| Ref. Dwg.  | 6-AB2-7.1 | 6-AB2-7.1 | 6-AB2-7.2 | 6-AB2-7.2   | 6-AB2-7            |
|------------|-----------|-----------|-----------|-------------|--------------------|
|            | 105I      | 105J      | 105K Alt. | 105M        | 105N               |
| PLATES     |           |           |           |             |                    |
| P          | 3/8"      | 3/8"      | 5/8"      | 1"          | 6" x 5/8"          |
| Q          | 3/4"      | 3/4"      | —         | —           | 5/8"               |
| ANGLE      |           |           |           |             |                    |
| R          | —         | —         | —         | 8x6x1x0'-6" | 4x3 1/2x5/16x0'-6" |
| DIMENSIONS |           |           |           |             |                    |
| A          | 0'-10"    | 0'-10"    | 0'-9 1/2" | 0'-6"       | 1'-2"              |
| B          | 1'-8"     | 1'-10"    | —         | —           | —                  |
| BOLTS      |           |           |           |             |                    |
| K          | 6-3/4"φ   | —         | 6-7/8"φ   | 4-3/4"φ     | 4-3/4"φ            |
| L          | —         | —         | —         | 8-3/4"φ     | —                  |
| M          | —         | 7-7/8"φ   | —         | —           | —                  |
| WELDS      |           |           |           |             |                    |
| ①          | 3/8       | 3/8       | —         | 3/4         | 5/16               |
| ②          | —         | —         | —         | C.P.        | 4                  |
| ③          | —         | —         | —         | 1/2         | —                  |
| ④          | C.P.      | C.P.      | —         | —           | —                  |



## REVISIONS

PlanSection b-bSection a-a

PROJECT THE WORLD TRADE CENTER

TITLE CONNECTION DETAIL 106 A,B,D,E,F,G,H,I,J,M,N

DATE 5-1-67

REVISIONS

7-28-67

9-15-67

10-2-67

10-31-67

106 P,Q & R

Detail 106 R : See G-AB5-97 for bracing elevation.

Detail 106 I : See G-AB5-97 or G-AB5-98

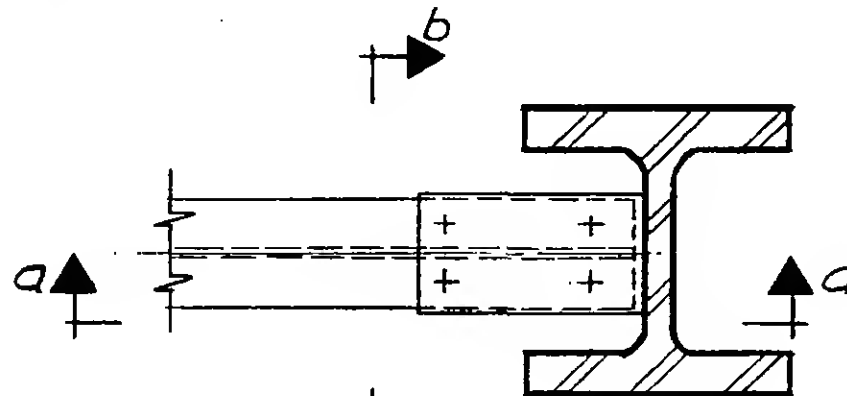
for bracing elevation

Detail 106 N : See G-AB5-97, G-AB5-98 or

G-AB5-100 for bracing elevation

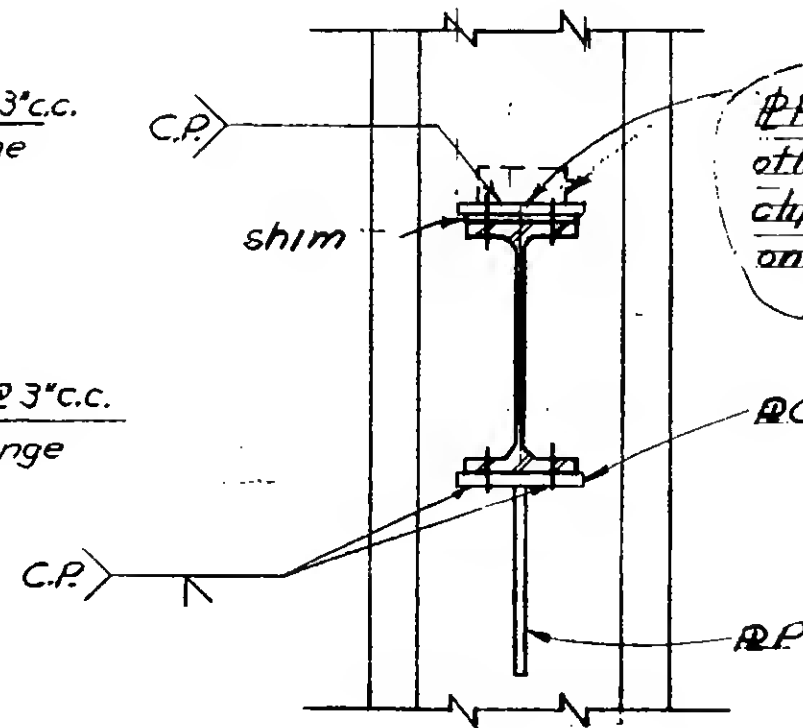
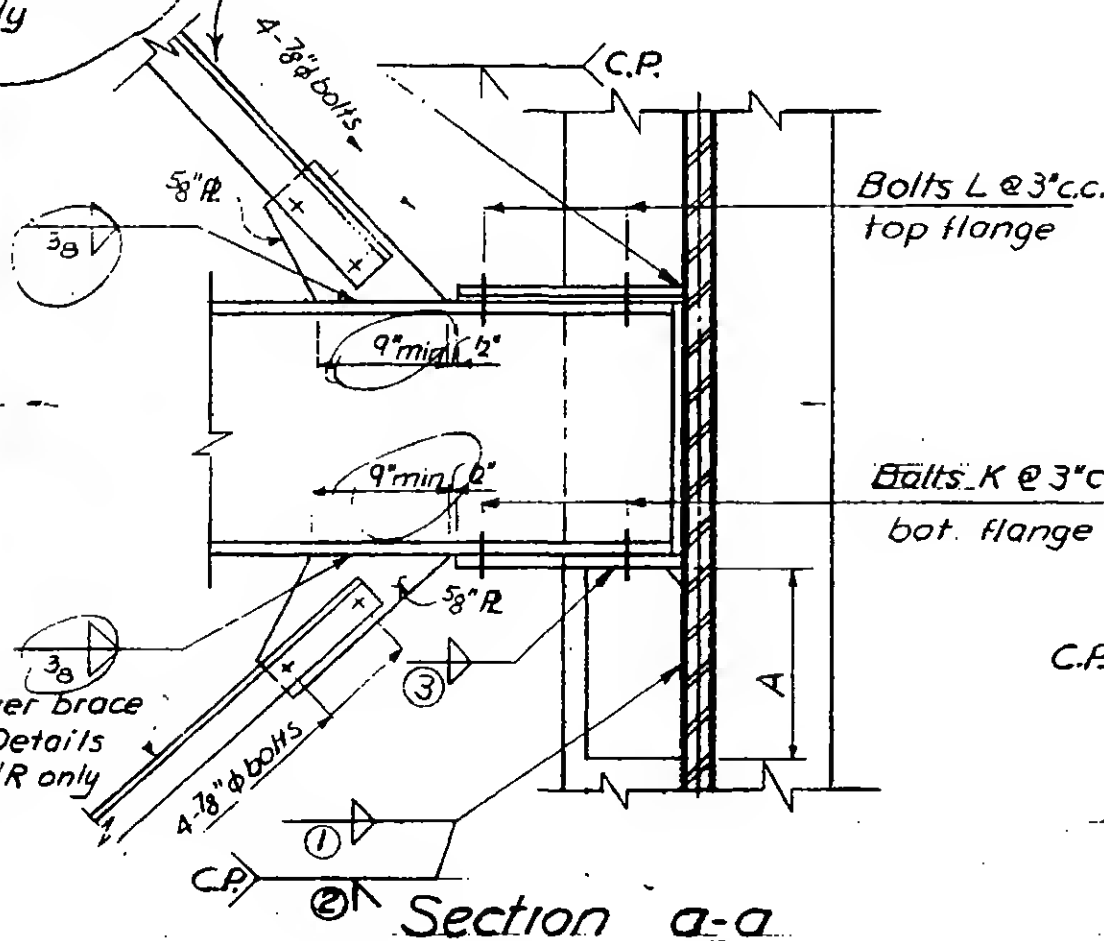
Detail 106 M,J: See G-AB5-100 for bracing elevation

Detail 106 Q : See G-AB5-101 for bracing elevation



PLAN

Upper brace  
for Details  
Q, R, I & J  
only



RP where scheduled  
otherwise use top  
clip angle as shown  
on G-AB2-8.3.

Section b-b

G-AB2-8



## Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER

TITLE SCHEDULE FOR DETAIL : 26 A, B, D, E, F, G

DATE 7-28-67

## REVISIONS

2-15-67

11-10-67

|            | 106A        | 106B        | 106D    | 106E     | (106F)  | 106G    |
|------------|-------------|-------------|---------|----------|---------|---------|
| PLATES     |             |             |         |          |         |         |
| P          | 6"x5/8"     | 6"x5/8"     | 5"x1/2" | 5"x7/16" | 5"x1/2" | 7"x5/8" |
| Q          | 7 1/2"x5/8" | 7 1/2"x5/8" | 1/2"    | 7/16"    | 1/2"    | 5/8"    |
| R          | 7 1/2"x5/8" | —           | —       | —        | —       | —       |
| DIMENSIONS |             |             |         |          |         |         |
| A          | 1'-0"       | 1'-0"       | 0'-10"  | 0'-11"   | 0'-10"  | 1'-2"   |
| BOLTS      |             |             |         |          |         |         |
| K          | 4-7/8"φ     | 4-3/4"φ     | 4-3/4"φ | 4-3/4"φ  | 6-3/4"φ | 4-3/4"φ |
| L          | 4-7/8"φ     | —           | —       | —        | —       | —       |
| WELDS      |             |             |         |          |         |         |
| (1)        | —           | —           | 3/8     | 5/16     | 3/8     | —       |
| (2)        | C.P.        | C.P.        | —       | —        | —       | C.P.    |
| (3)        | 5/16        | 5/16        | 5/16    | 5/16     | 5/16    | 5/16    |

6-ABZ-B.1



## Structural & Civil Engineers

PROJECT

THE WORLD TRADE CENTER

| TITLE |
|-------|
|-------|

SCHEDULE FOR DETAIL 106 H, I, J, M, N, P

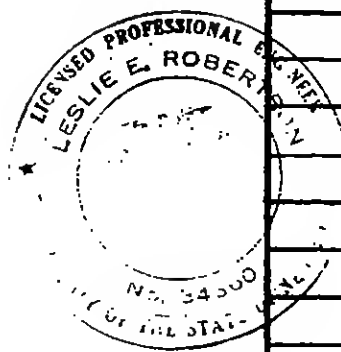
DATE \_\_\_\_\_

10-2-67

## REVISIONS

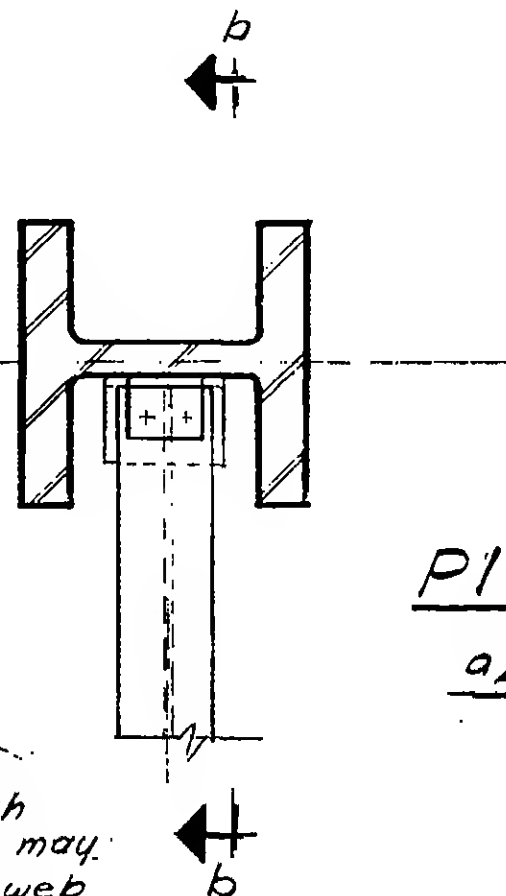
|            | 106 H     | 106 I     | 106 J     | 106 M     | 106 N     | 106 P     |
|------------|-----------|-----------|-----------|-----------|-----------|-----------|
| PLATES     |           |           |           |           |           |           |
| P          | 9"x78"    | 9"x78"    | 7"x58"    | 5"x34"    | 5"x34"    | 5"x58     |
| Q          | 78"       | 78"       | 58"       | 34"       | 34"       | 58        |
| R          | 38"       | 38"       | 38"       | 12"       | 12"       | —         |
| DIMENSIONS |           |           |           |           |           |           |
| A          | 1'-5"     | 1'-4"     | 1'-1"     | 1'-2"     | 1'-2"     | 1'-2"     |
| BOLTS      |           |           |           |           |           |           |
| K          | 4- 3/4" φ | 4- 3/4" φ | 4- 3/4" φ | 4- 3/4" φ | 4- 3/4" φ | 4- 3/4" φ |
| L          | 4- 3/4" φ | 4- 3/4" φ | 4- 3/4" φ | 4- 3/4" φ | 4- 3/4" φ | —         |
| WELDS      |           |           |           |           |           |           |
| ①          | —         | —         | —         | —         | —         | —         |
| ②          | C.P.      | C.P.      | C.P.      | C.P.      | C.P.      | C.P.      |
| ③          | 5/16      | 5/16      | 5/16      | 5/16      | 5/16      | 5/16      |

6-AB2-8.2

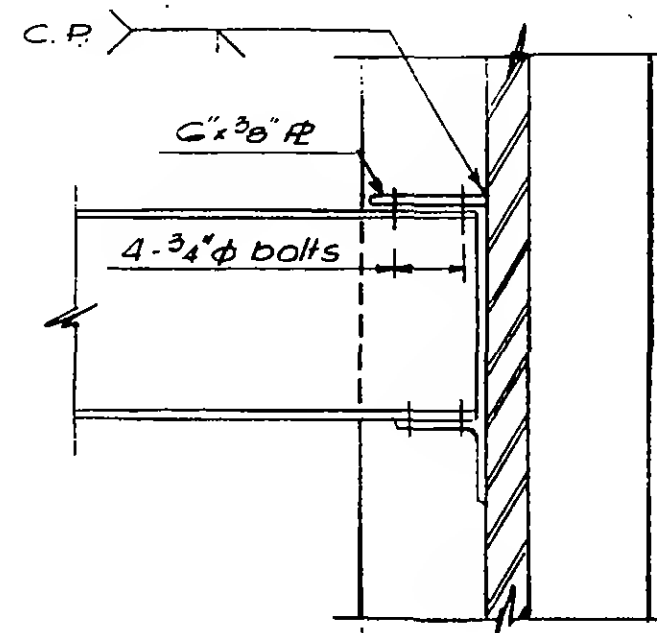


REVISIONS

10-5-67  
10-31-67



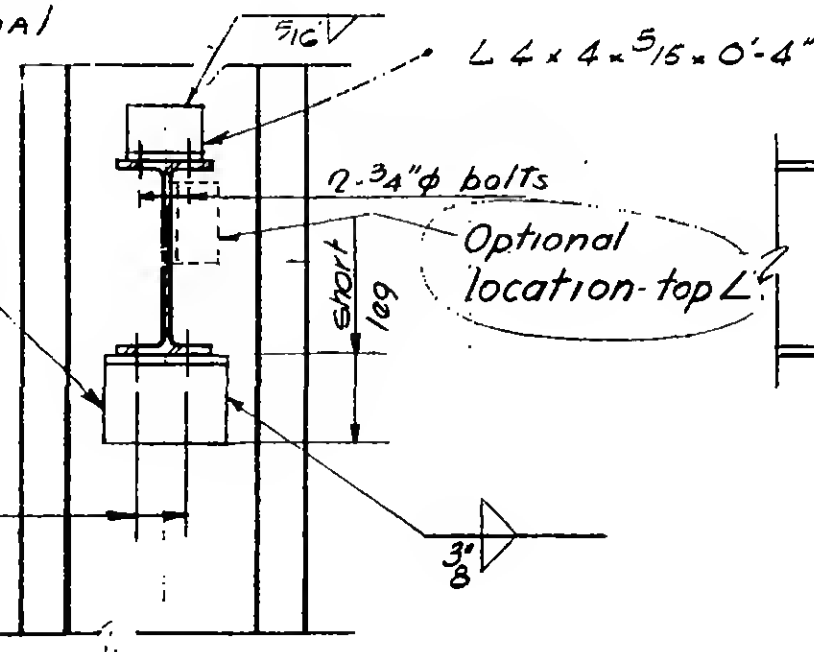
Plan



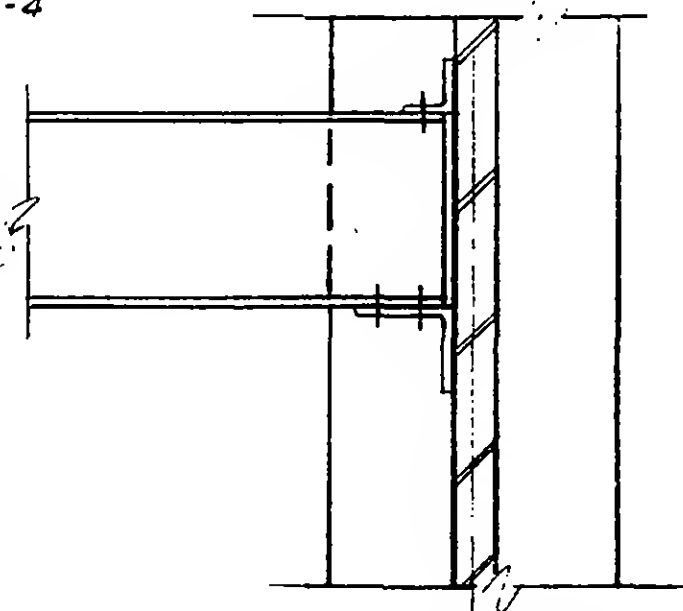
Section b-b  
106 L only

Note: If beam is scheduled for detail 106 on both ends top clip angle may be bolted to column web or fitted into optional location.

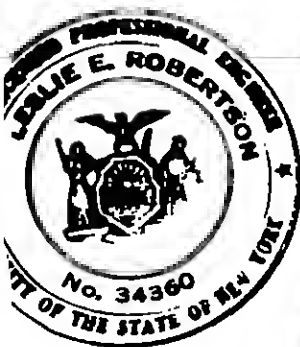
L-7x4x7/8x0'-6" detail C  
L 8x6x1x0'-8" detail K.L



Section a-a

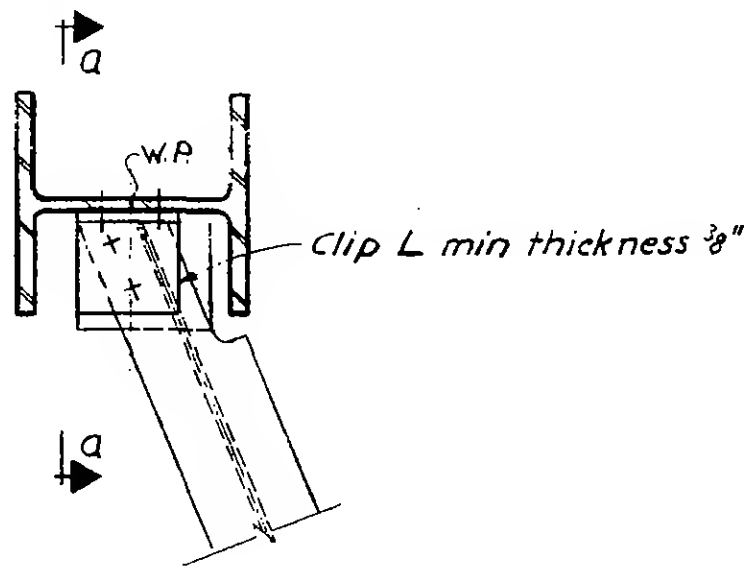
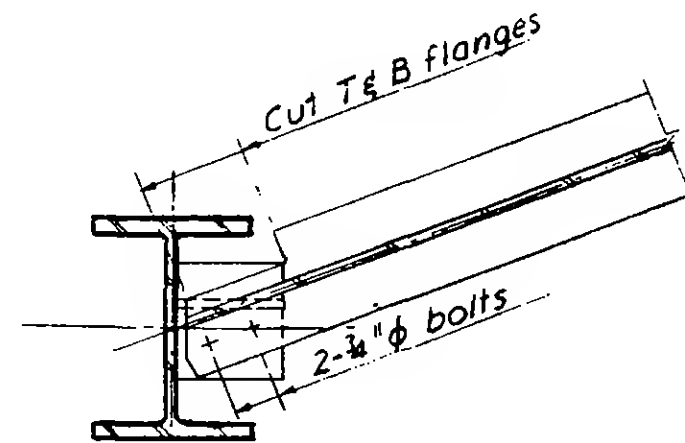
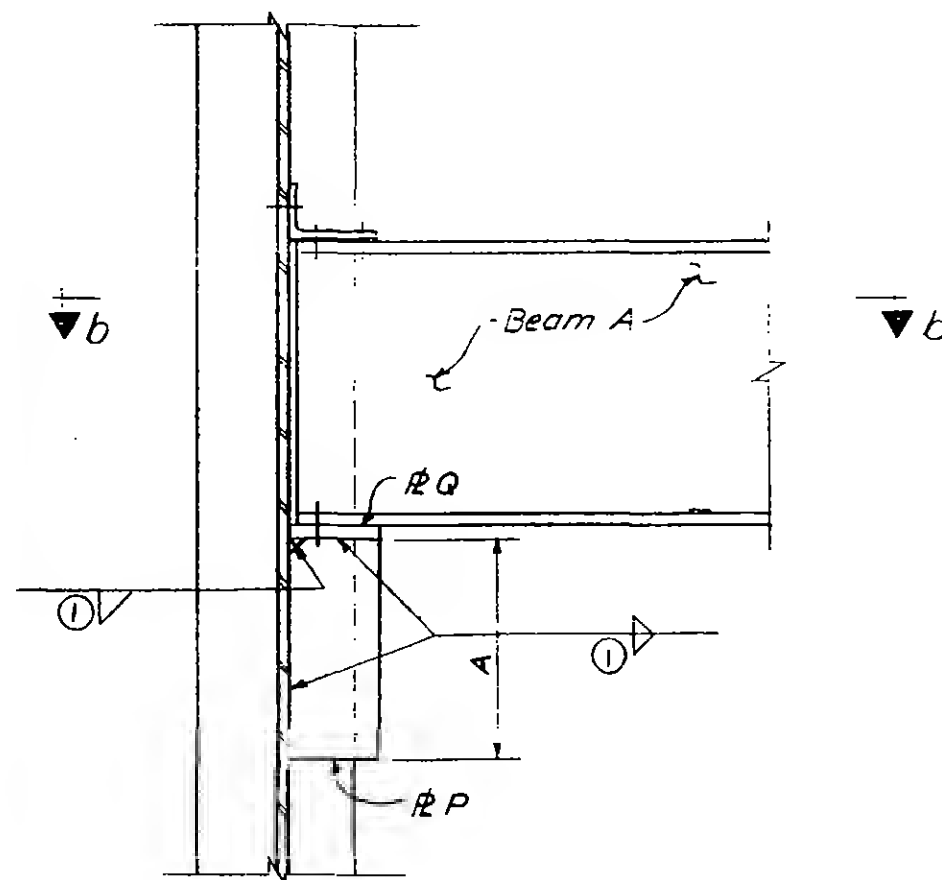


Section b-b





## REVISIONS

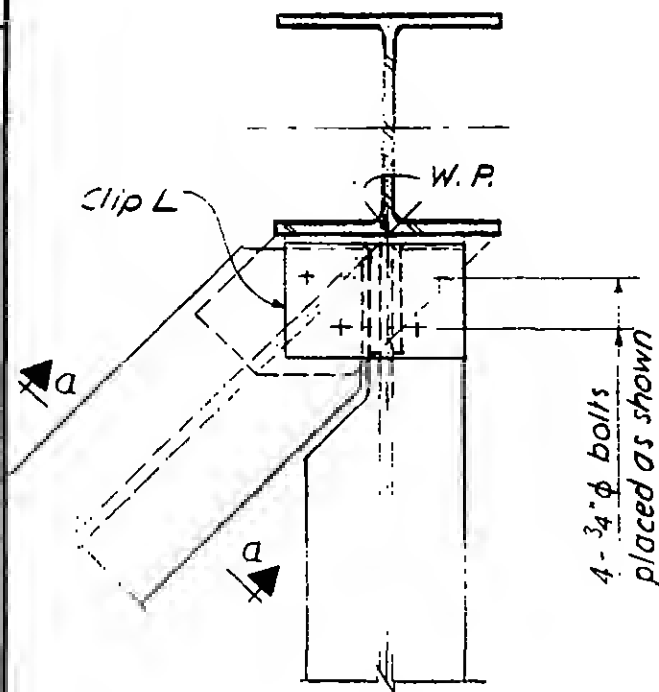
PlanSection b-bSection a-a

## SCHEDULE

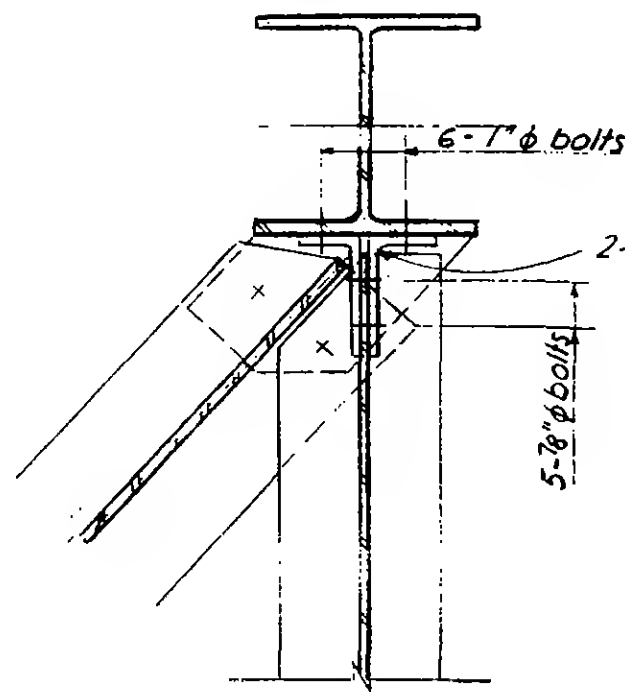
| BEAM A     | DIM. A | R P             | R Q             | WELD ①        |
|------------|--------|-----------------|-----------------|---------------|
| 10WF       | 0'-9"  | $\frac{5}{8}$ " | $\frac{3}{4}$ " | $\frac{3}{8}$ |
| 12WF31, 40 | 1'-0"  | $\frac{5}{8}$ " | $\frac{3}{4}$ " | $\frac{3}{8}$ |
| 12 W 50    | 1'-1"  | $\frac{5}{8}$ " | $\frac{3}{4}$ " | $\frac{3}{8}$ |
| 12 W 53    | 1'-0"  | $\frac{5}{8}$ " | $\frac{3}{4}$ " | $\frac{3}{8}$ |
| 12 W 92    | 1'-4"  | $\frac{5}{8}$ " | $\frac{3}{4}$ " | $\frac{3}{8}$ |
| 16 W 78    | 1'-2"  | $\frac{5}{8}$ " | $\frac{3}{4}$ " | $\frac{3}{8}$ |
| 24 W 84    | 1'-8"  | $\frac{3}{4}$ " | 1"              | $\frac{3}{8}$ |



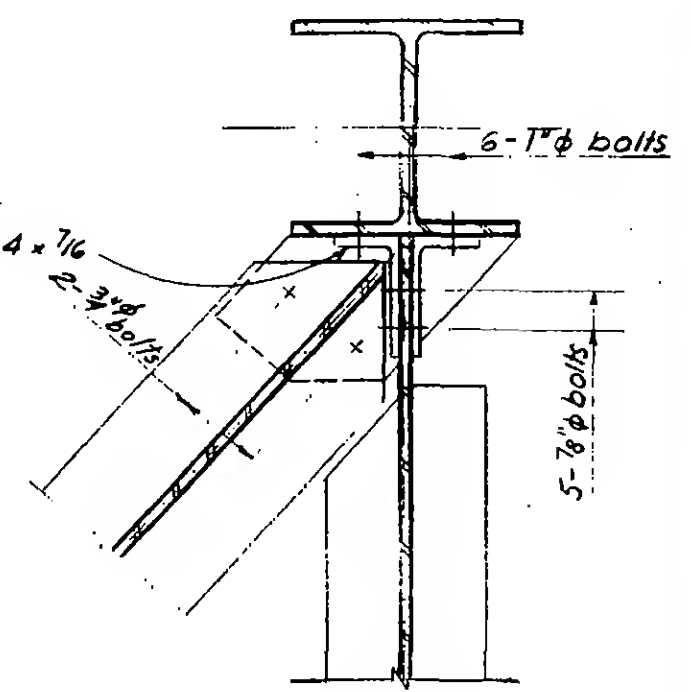
## REVISIONS



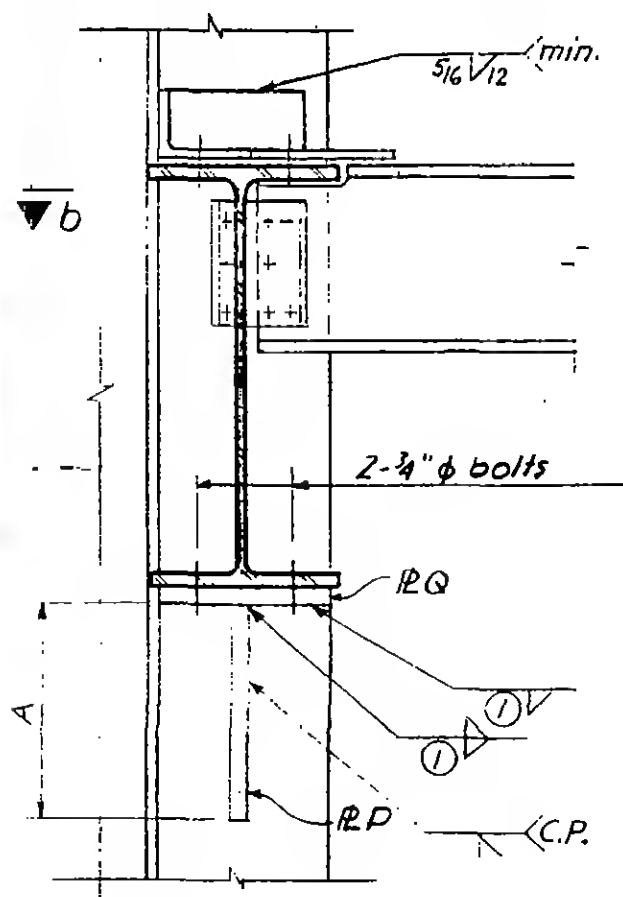
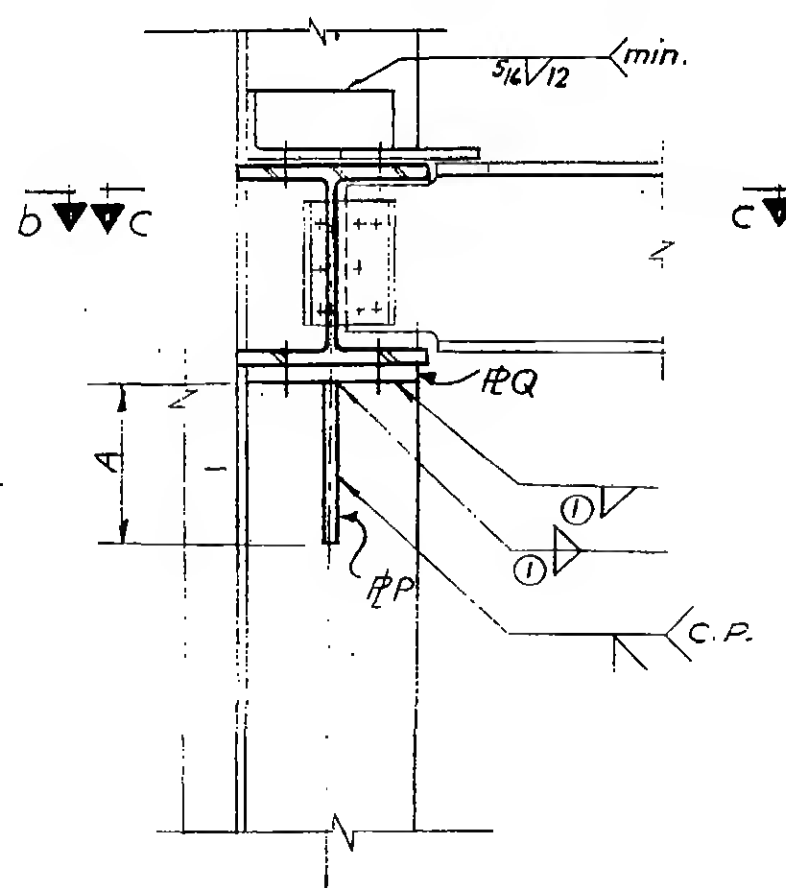
Plan 108A &amp; B



Section b-b



Section c-c

Section a-a  
(108A)Section a-a  
(108B)

## SCHEDULE

|        | 108A              | 108B                |
|--------|-------------------|---------------------|
| RP     | 7/2" x 1" x 1'-8" | 7/2" x 3/4" x 1'-2" |
| RQ     | 1"                | 3/4"                |
| DIM. A | 1'-8"             | 1'-2"               |
| WELD ① | 1/2               | 1/2                 |

6-AB2-10

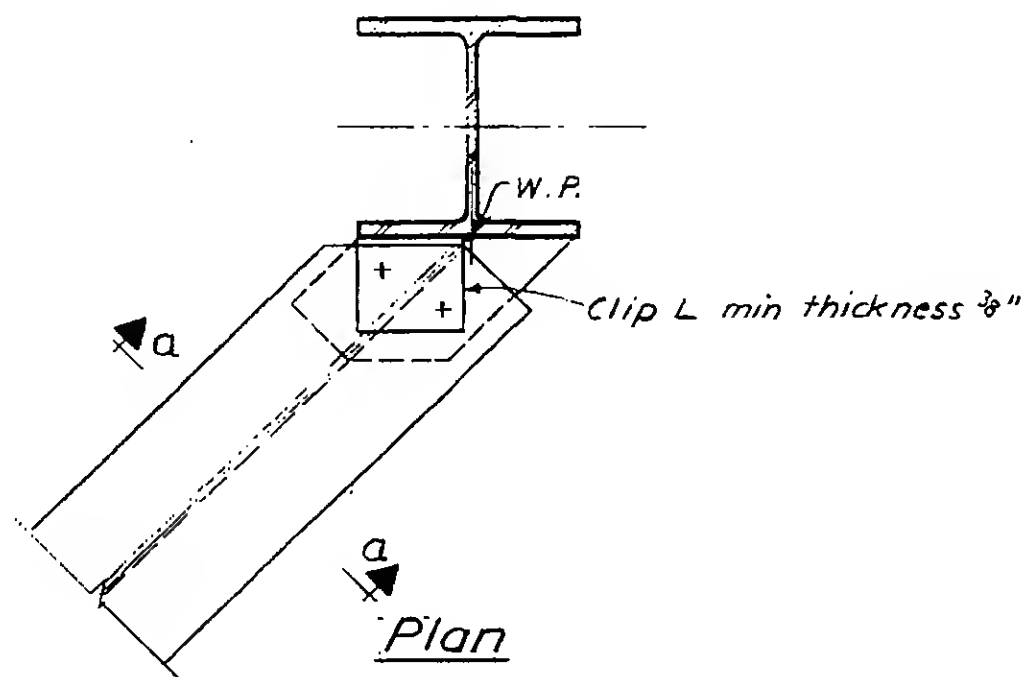


PROJECT THE WORLD TRADE CENTER

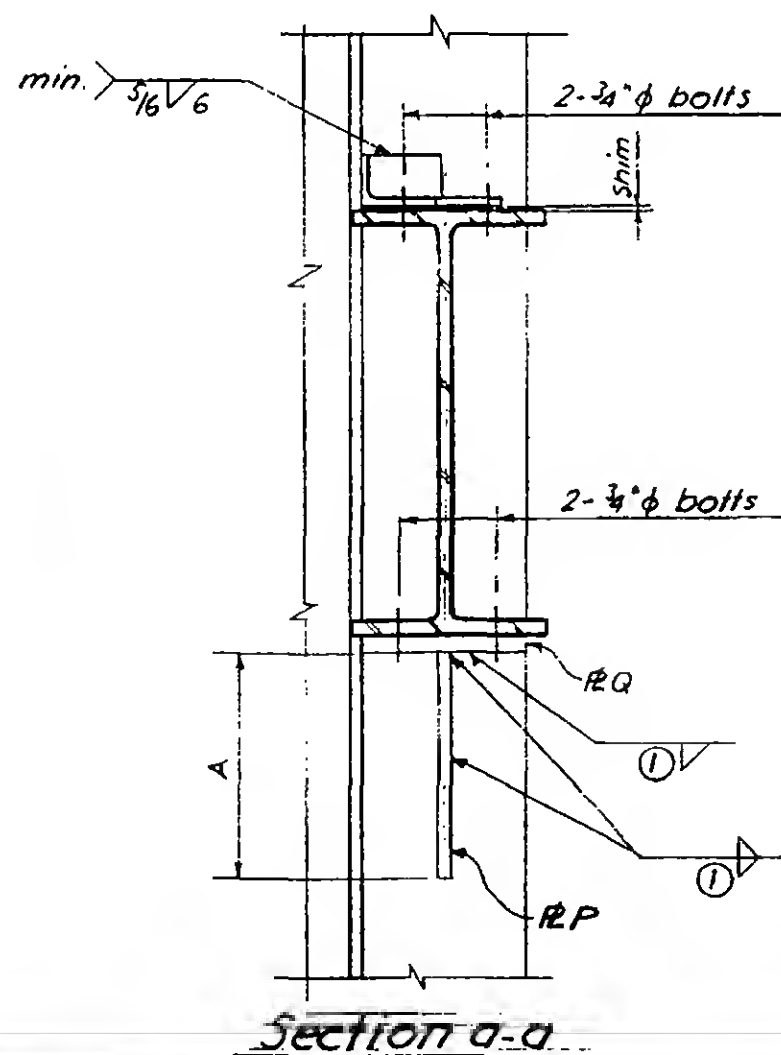
TITLE CONNECTION DETAIL 109 A

DATE 2-9-68

## REVISIONS



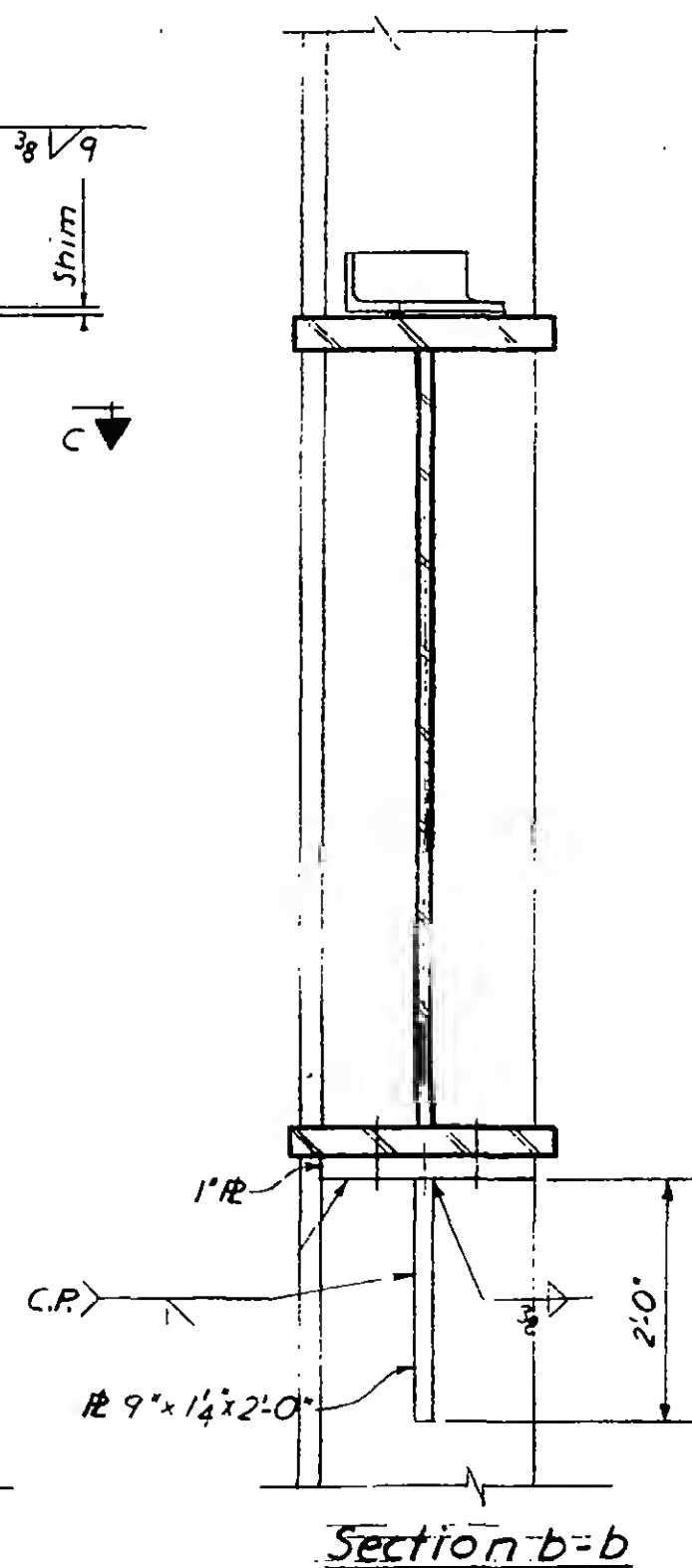
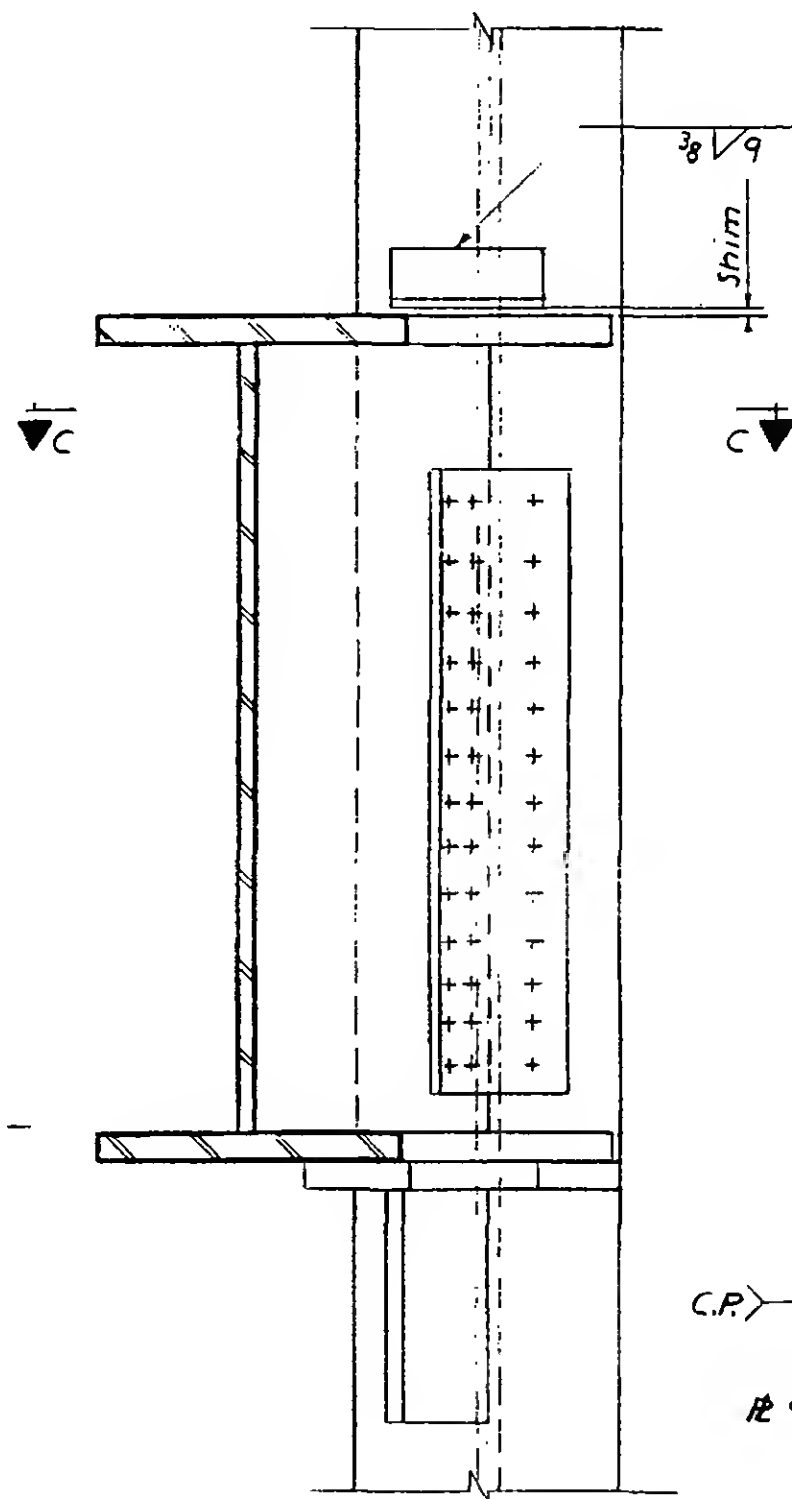
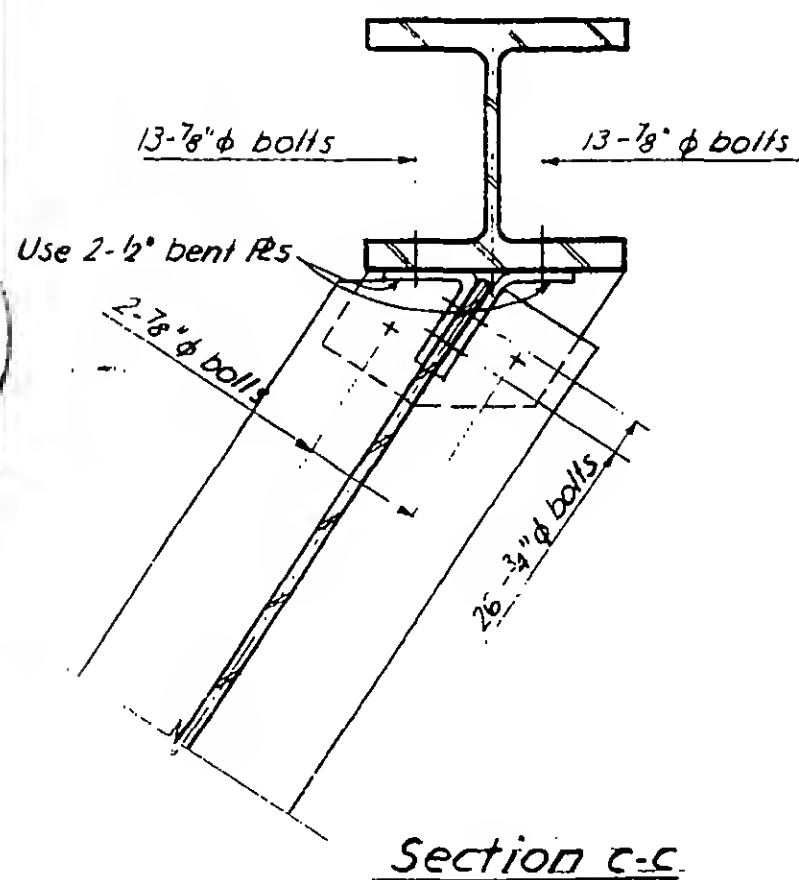
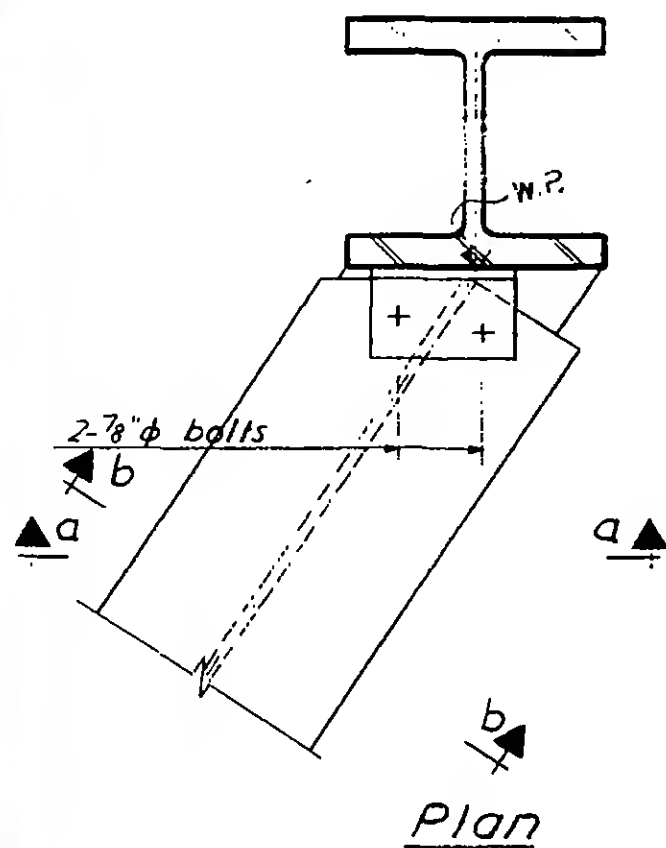
| SCHEDULE  |                                                  |                |        |               |
|-----------|--------------------------------------------------|----------------|--------|---------------|
| BEAM SIZE | R P                                              | R Q            | DIM. A | WELD ①        |
| 12 WF     | $7\frac{1}{2}" \times \frac{3}{4}" \times 1'-2"$ | $\frac{3}{4}"$ | 1'-2"  | $\frac{1}{2}$ |
| 16 WF     | $7\frac{1}{2}" \times \frac{3}{4}" \times 1'-2"$ | $\frac{3}{4}"$ | 1'-3"  | $\frac{1}{2}$ |
| 30 WF     | $7\frac{1}{2}" \times 1" \times 1'-10"$          | 1"             | 1'-10" | $\frac{1}{2}$ |
| 33 WF     | $7\frac{1}{2}" \times 1" \times 1'-8"$           | 1"             | 1'-8"  | $\frac{1}{2}$ |
|           |                                                  |                |        |               |
|           |                                                  |                |        |               |
|           |                                                  |                |        |               |



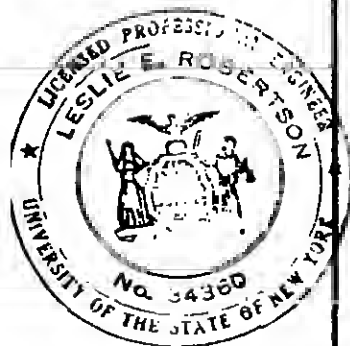
6-AB2-11



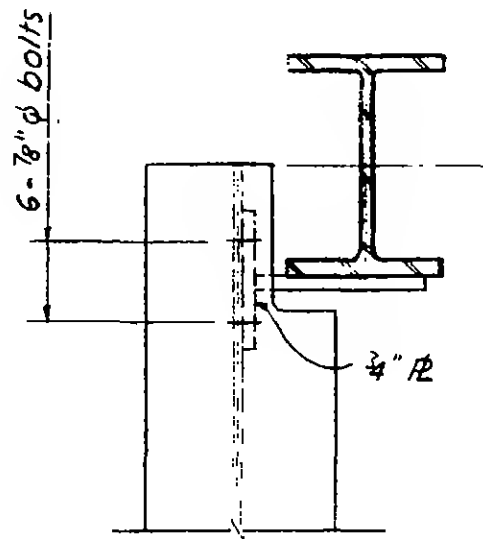
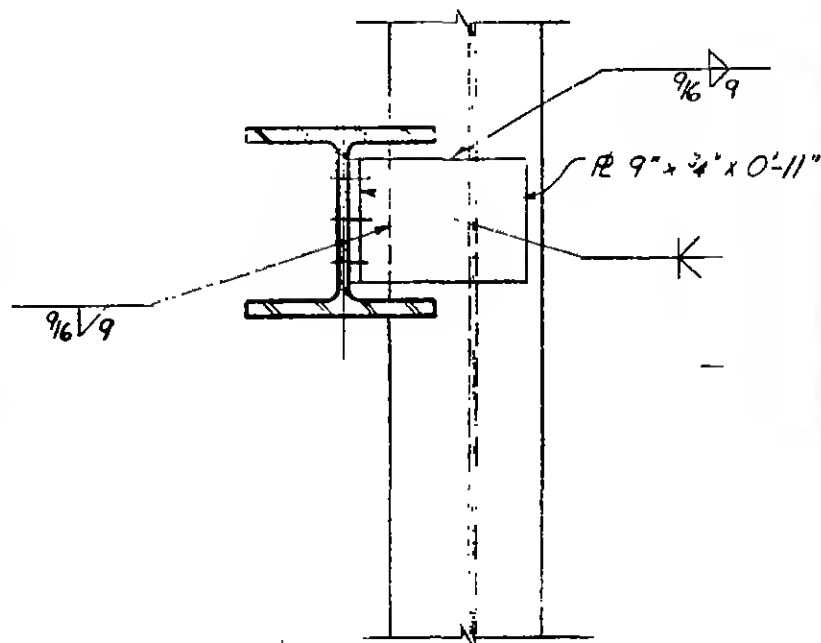
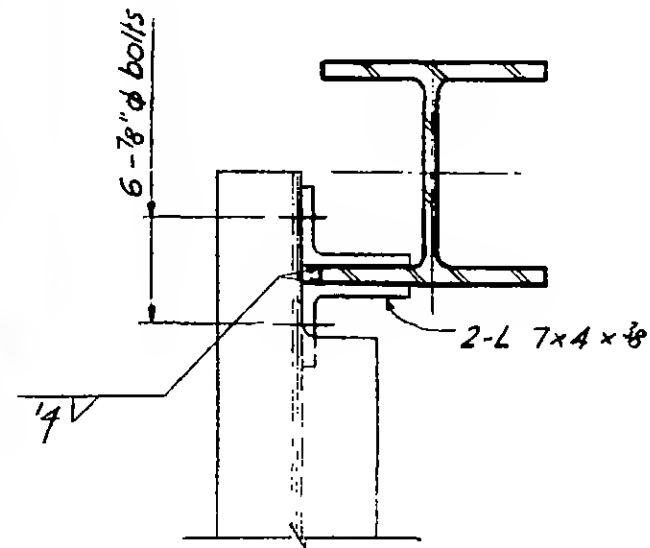
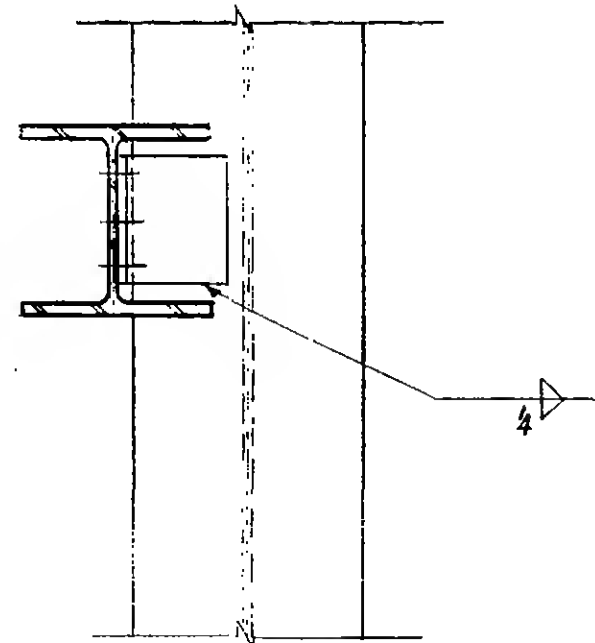
REVISIONS



6-AB2-11.1

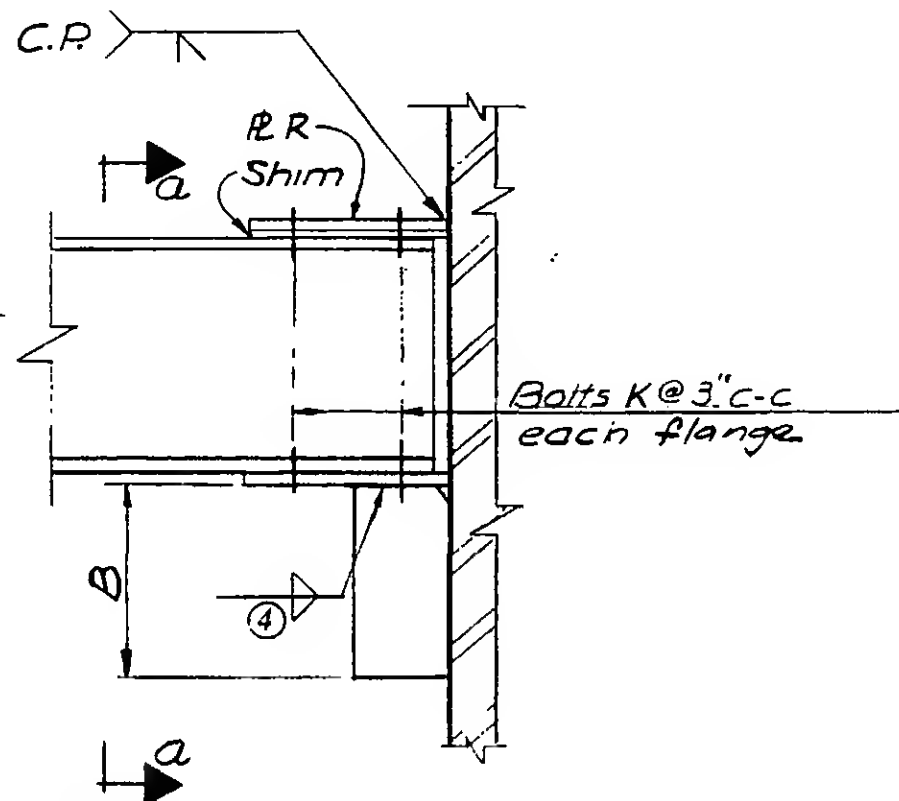


REVISIONS

PlanSection a-aDetail 110APlanSection a-aDetail 110B

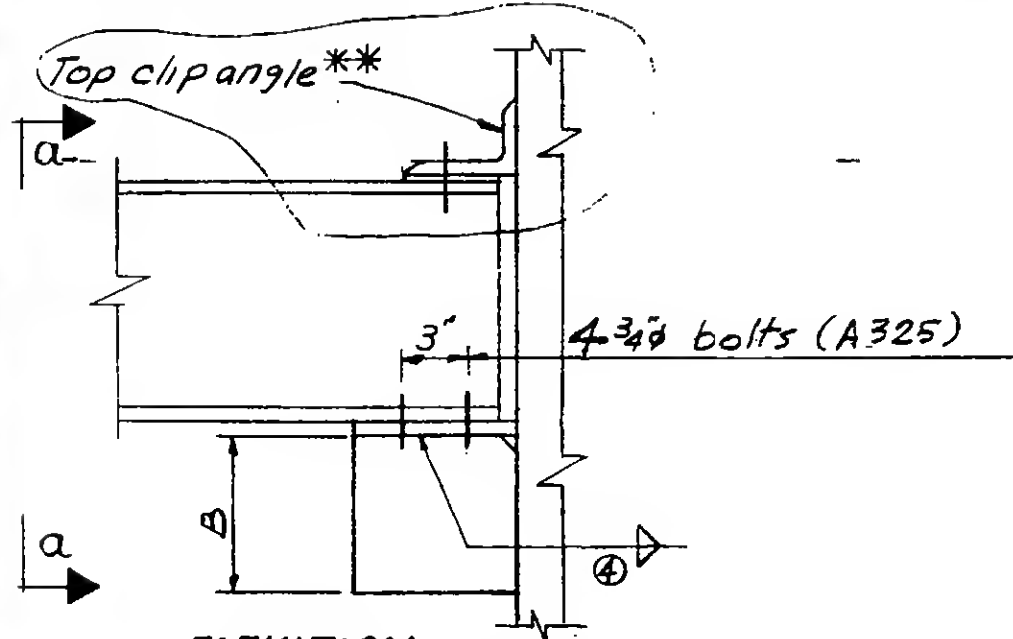
REVISIONS

5-9-67  
6-30-67  
7-28-67



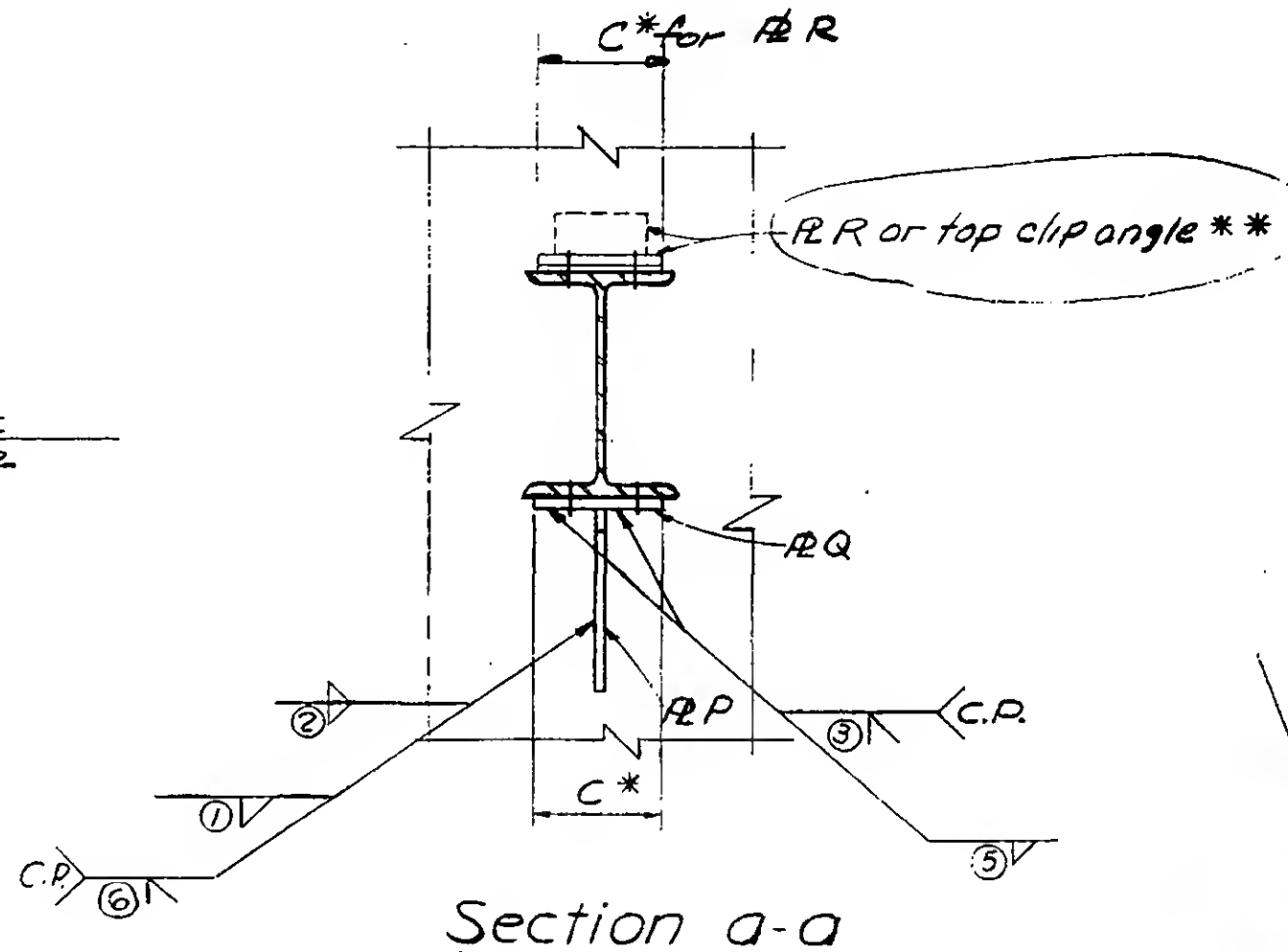
ELEVATION

Where R.R. is used



ELEVATION

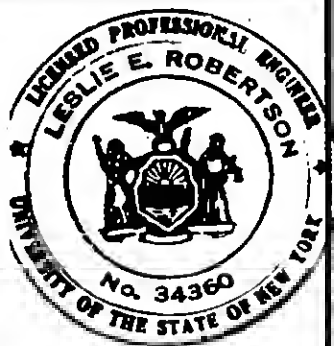
Where top clip angle is used



Section a-a

\* Where dimension C is not scheduled it shall be minimum required for bolt edge distance.

\*\* Top clip angle is used where R.R. is not scheduled. See Dwg. G-AB1-1 for detail of top clip angle.



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT

THE WORLD TRADE CENTER

TITLE

SCHEDULE FOR DETAIL III

DATE

6-30-67

REVISIONS

12-21-67

1-24-68

|                   | III A                | III B                | III C            | IIID             | IIIE                 | IIIF                 | IIIG           |
|-------------------|----------------------|----------------------|------------------|------------------|----------------------|----------------------|----------------|
| <b>PLATES</b>     |                      |                      |                  |                  |                      |                      |                |
| P                 | 5" x 5/8"            | 6" x 3/4"            | 6" x 5/8"        | 6" x 1"          | —                    | 8" x 3/4"            | 6" x 5/8"      |
| Q                 | 7" x 5/8"            | 7" x 3/4"            | 18" x 7/8"       | 24" x 1 1/2"     | 7" x 1 3/4"          | 7" x 3/4"            | 19" x 3/4"     |
| R                 | —                    | —                    | 18" x 7/8"       | 24" x 1 1/2"     | —                    | —                    | 19" x 3/4"     |
| <b>ANGLES</b>     |                      |                      |                  |                  |                      |                      |                |
| S                 | 4 x 3 x 5/16 x 0'-6" | 4 x 3 x 5/16 x 0'-6" | —                | —                | 4 x 3 x 5/16 x 0'-4" | 4 x 3 x 5/16 x 0'-6" | —              |
| <b>DIMENSIONS</b> |                      |                      |                  |                  |                      |                      |                |
| B                 | 0'-10"               | 1'-2"                | 1'-0"            | 1'-4"            | —                    | 0'-10"               | 0'-10"         |
| C                 | —                    | —                    | —                | —                | 0'-4"                | —                    | —              |
| <b>BOLTS</b>      |                      |                      |                  |                  |                      |                      |                |
| K                 | —                    | —                    | 10-1/8" φ (A325) | 14-1/8" φ (A490) | —                    | —                    | 12-1" φ (A325) |
| <b>WELDS</b>      |                      |                      |                  |                  |                      |                      |                |
| ①                 | —                    | —                    | —                | —                | —                    | —                    | —              |
| ②                 | 3/8                  | 1/2                  | 1/2              | —                | —                    | 1/2                  | 1/2            |
| ③                 | —                    | —                    | C.P.             | C.P.             | C.P.                 | —                    | C.P.           |
| ④                 | 5/16                 | 5/16                 | 5/16             | 1/2              | —                    | 1/2                  | 5/16           |
| ⑤                 | 3/8                  | 1/2                  | —                | —                | —                    | 1/2                  | —              |
| ⑥                 | —                    | —                    | —                | C.P.             | —                    | —                    | —              |

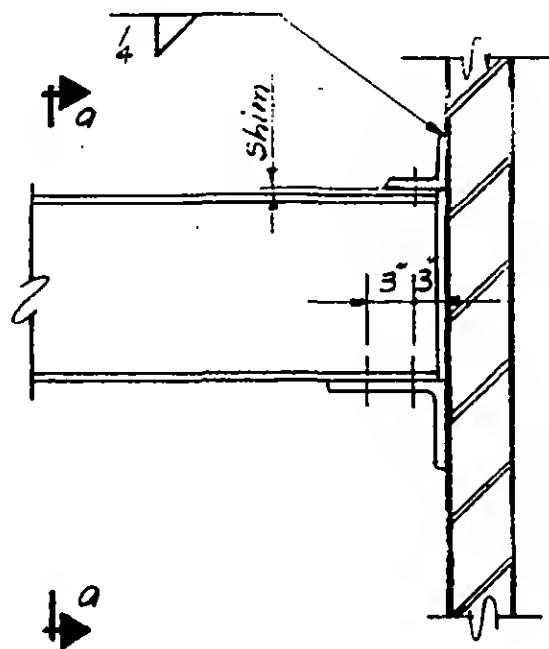
G-AB2-13.1



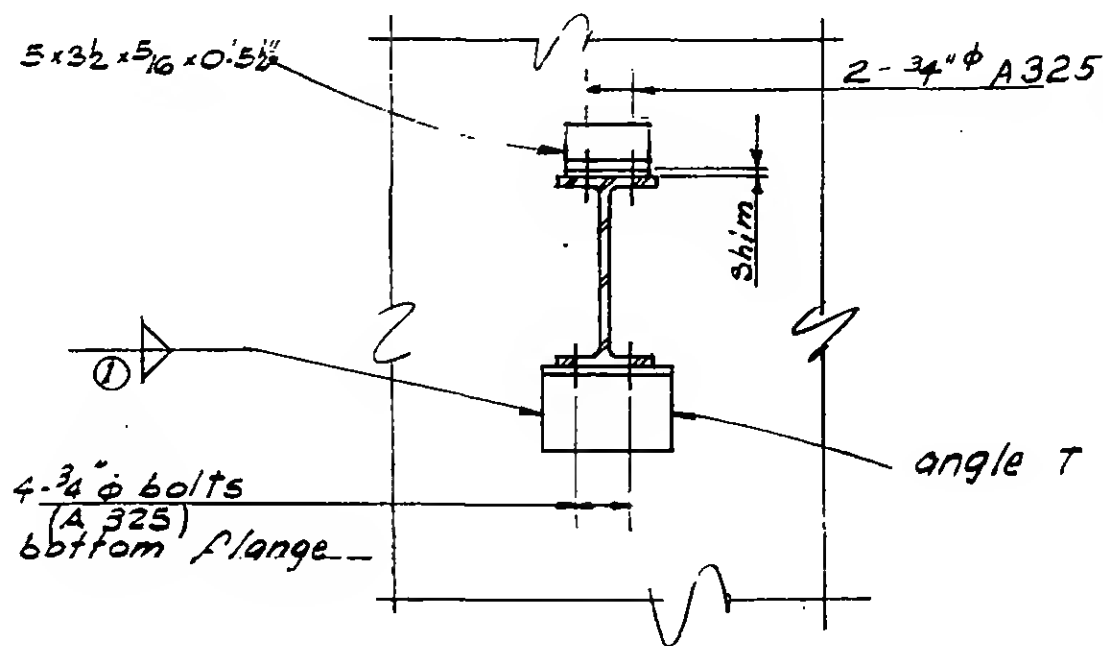
REVISIONS

7-25-67

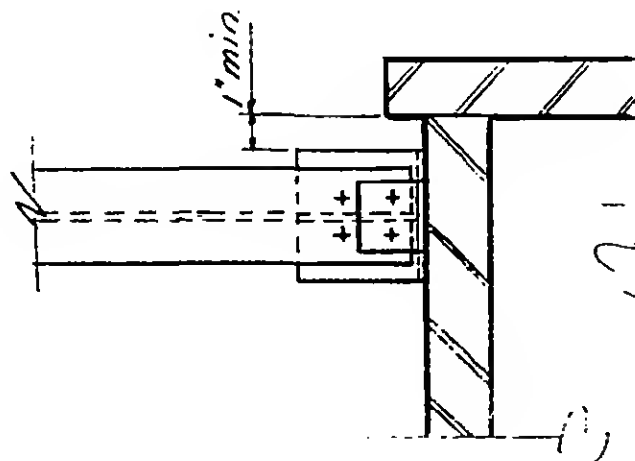
3-15-67



Elevation



Section a-a



Plan

|        |       |                           |                                                 |               |
|--------|-------|---------------------------|-------------------------------------------------|---------------|
|        |       | 8B<br>8W17 to 8W20<br>12B | 8W24 to 8W28<br>10W, 12W, 14W<br>16W36 to 16W50 | 14B           |
| ANGLES | III I | L8"x4"x1"x0.5             | L8"x6"x1"x0.8                                   | L8"x6"x1"x0.8 |
| T      | III H | L8"x4"x1"x0.5             | L8"x4"x1"x0.8                                   | L8"x6"x1"x0.5 |
| WELDS  | ①     | 5/8"                      | 1/2"                                            | 1/2"          |

G-AB2-13.8



PROJECT

THE WORLD TRADE CENTER

TITLE

CONNECTION

DETAIL III K, P, Q, U, W

DATE

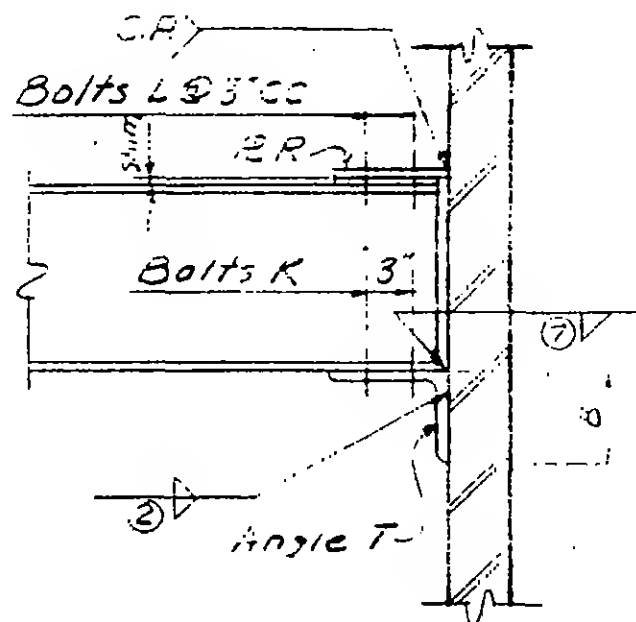
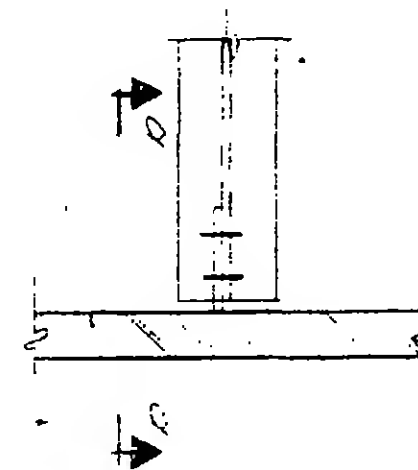
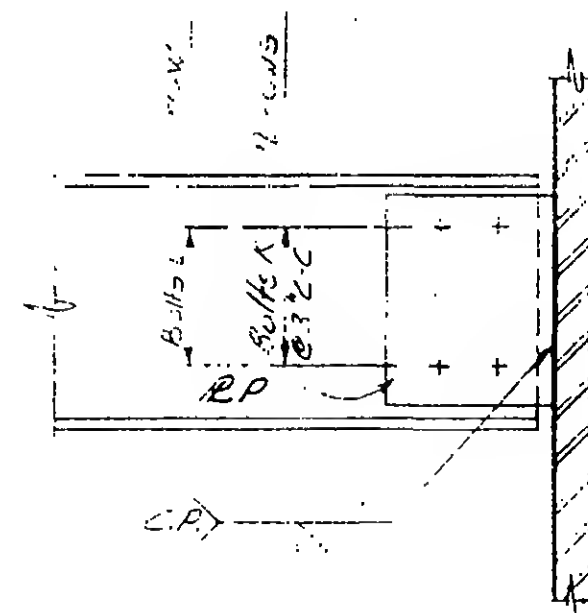
7-28-67

## REVISIONS

3-15-67

10-5-67

11-16-67

ElevationDetail III K & N & PPlanDetail III Q, U, WSection a-a

G-AB2-13.3



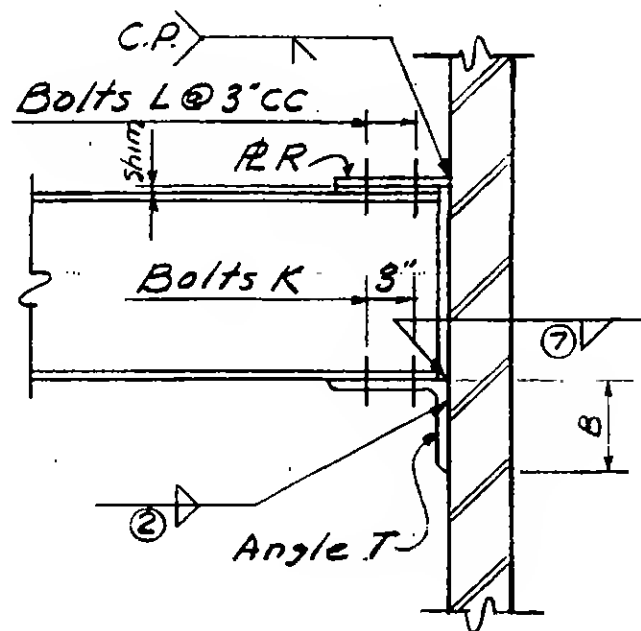
## REVISIONS

9-15-67

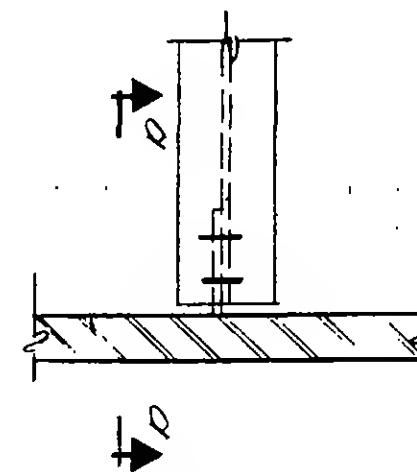
10-5-67

11-16-67

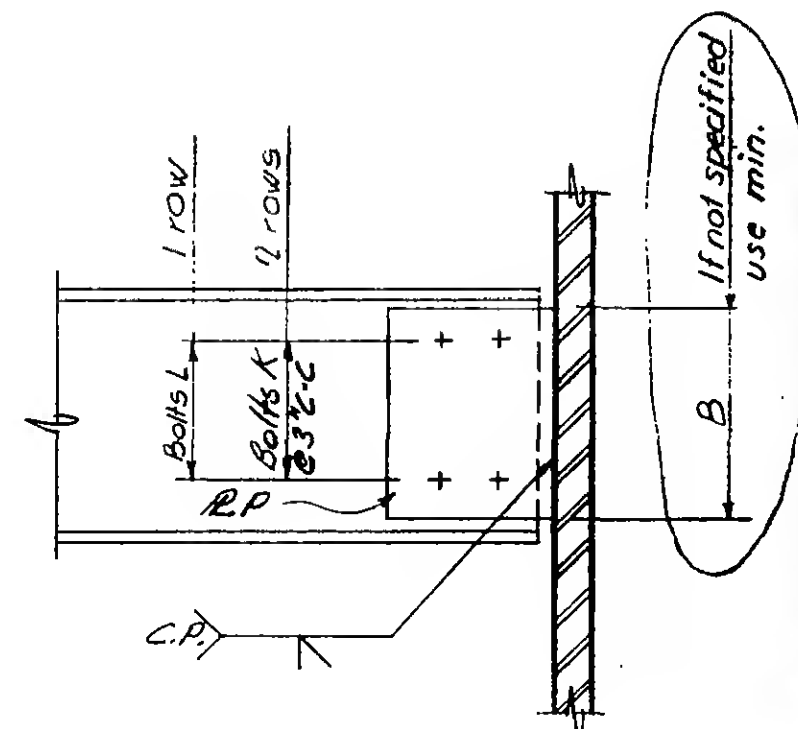
12-13-67



### Elevation



*Ptan*

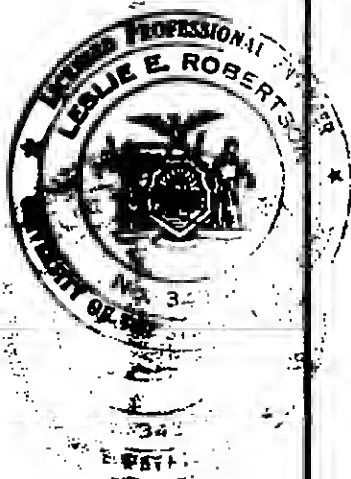


Section a-a

Note: Use alt. for all scheduled Details, floor 10 and above

Detail III (K, P, Q, U, W)

**G-ABZ-1331**



SKILLING - HELLE - CHRISTIANSEN - ROBERTSON

PROJECT THE WORLD TRADE CENTER

TITLE SCHEDULE FOR DETAIL III J - P

REVISIONS

15-67

11-10-67

| REF. DWG. | G-AB-13 | G-AB2-13.3     | G-AB3-13 | G-AB2-13 | G-AB2-13.3     | G-AB2-13.3 |
|-----------|---------|----------------|----------|----------|----------------|------------|
|           | IIIJ    | IIIK           | IIIL     | IIIM     | IIIN           | IIIO       |
| PLATES    |         |                |          |          |                |            |
| P         | 3/4"    | —              | 7/8"     | 7/8"     | —              | —          |
| Q         | 4"      | —              | 7/8"     | 3/4"     | —              | —          |
| R         | —       | 3"             | 7/8"     | 3/4"     | 3/8"           | —          |
| ANGLE     |         |                |          |          |                |            |
|           |         | 8"x4"x1"x10-5" | —        | —        | 8"x4"x1"x10-5" | —          |
| MEMBERS   |         |                |          |          |                |            |
| B         | 1/3"    | 0.4"           | 1/3"     | 1/3"     | 0.4"           | —          |
| C         | —       | —              | 0.3"     | —        | —              | —          |
| BOLTS     |         |                |          |          |                |            |
| K         | —       | 4-3/4"         | 4-1"     | 4-3/4"   | 4-3/4"         | —          |
| L         | —       | 4-3/4"         | 4-1"     | —        | 4-3/4"         | —          |
| WELDS     |         |                |          |          |                |            |
| 1)        | —       | —              | —        | —        | —              | —          |
| 2)        | —       | 3              | —        | —        | —              | —          |
| 3)        | C.F.    | —              | C.P.     | C.P.     | —              | —          |
| 4)        | 5/16"   | —              | 3/8"     | 5/16"    | —              | —          |
| 5)        | —       | —              | —        | —        | —              | —          |
| 6)        | C.F.    | —              | —        | C.P.     | —              | —          |
| 7)        | —       | —              | —        | —        | —              | —          |



## SKILLING - HELLE - CHRISTIANSEN - ROBERTSON

Structural &amp; Civil Engineers

PROJECT

THE WORLD TRADE CENTER

TITLE

SCHEDULE FOR DETAIL III J - P

DATE

7-28-67

## REVISIONS

5-15-67

11-10-67

12-13-67

| Ref. Dwg.  | 6-AB2-13 | 6-AB2-13.3 | 6-AB2-13 | 6-AB2-13 | 6-AB2-13.3    | 6-AB2-13.3 |
|------------|----------|------------|----------|----------|---------------|------------|
| IIIJ       | IIIK     | IIIL       | IIIM     | IIIN     | IIIP          |            |
| PLATES     |          |            |          |          |               |            |
| P          | 3/4"     | 3/4"       | 7"x3/4"  | 7"x3/8"  | —             | 5/8"       |
| Q          | 3/4"     | —          | 7/8"     | 3/4"     | —             | —          |
| R          | —        | —          | 7/8"     | 3/4"     | 3/8"          | —          |
| ANGLE      |          |            |          |          |               |            |
| T          | —        | —          | —        | —        | 8"x4"x1"x0-5" | —          |
| DIMENSIONS |          |            |          |          |               |            |
| B          | 1-3"     | 0-6 1/2"   | 1-3"     | 1-0"     | 0-4"          | 0-9"       |
| C          | —        | —          | 0-8"     | —        | —             | —          |
| BOLTS      |          |            |          |          |               |            |
| K          | —        | 4-1"φ      | 4-1"φ    | 4-7/8"φ  | 4-3/4"φ       | 6-1"φ      |
| L          | —        | —          | 4-1"φ    | —        | 4-3/4"φ       | —          |
| WELDS      |          |            |          |          |               |            |
| (1)        | —        | —          | —        | —        | —             | —          |
| (2)        | —        | —          | —        | —        | 5/8"          | —          |
| (3)        | C.P.     | —          | C.P.     | C.P.     | —             | —          |
| (4)        | 5/16"    | —          | 3/8"     | 5/16"    | —             | —          |
| (5)        | —        | —          | —        | —        | —             | —          |
| (6)        | C.P.     | —          | C.P.     | C.P.     | 1/2"          | —          |
| (7)        | —        | —          | —        | —        | —             | —          |

Note: Use g.l.f. for all sch.  
Details floor 10 and above

6-AB2-13.4



## Structural & Civil Engineers

**PROJECT**

THE WORLD TRADE CENTER

**TITLE**

SCHEDULE FOR DETAIL III Q, R, S, T, U, V.

DATE \_\_\_\_\_

9-15-67

## REVISIONS

10-2-67

10-5-67

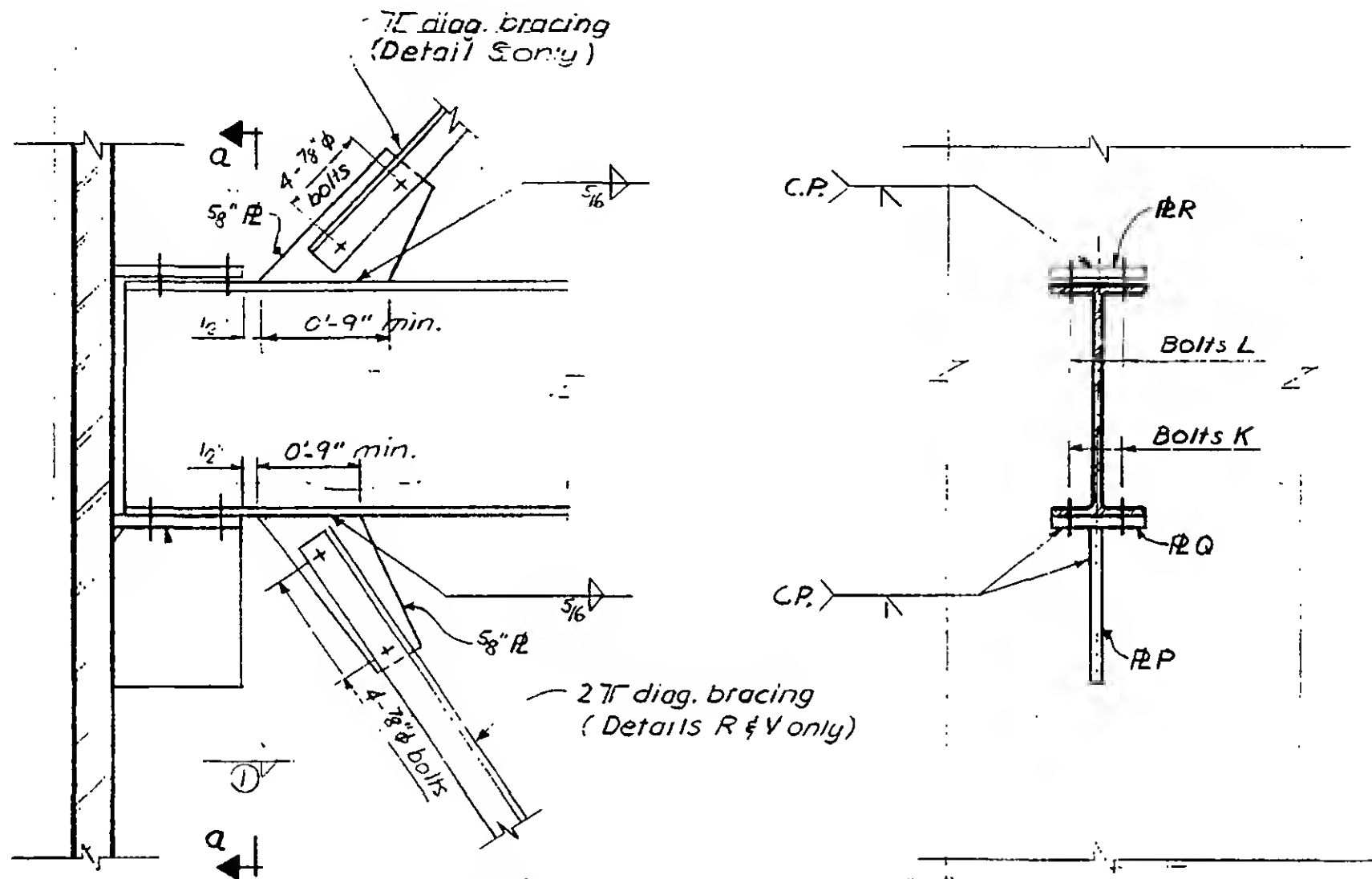
[illegible]

6-ABZ-13-5

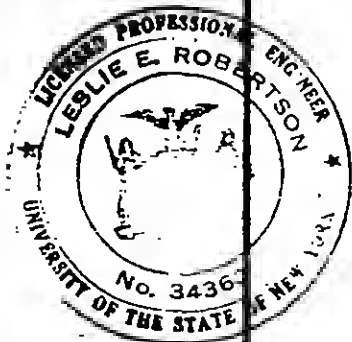


## REVISIONS

10-31-67



Detail III R: See G-AB5-97 for bracing elevation

Detail III S, V: See G-AB5-97 or G-AB5-98  
for bracing elevationElevationSection a-a

PROJECT

THE WORLD TRADE CENTER

TITLE

SCHEDULE FOR DETAIL III W

DATE

11-16-67

REVISIONS

REF. DWGS.

6-AB2-13.3

III W

PLATES

P

3/8"

BOLTS

K

4-3/4"  $\phi$ 

6-AB2-13.7



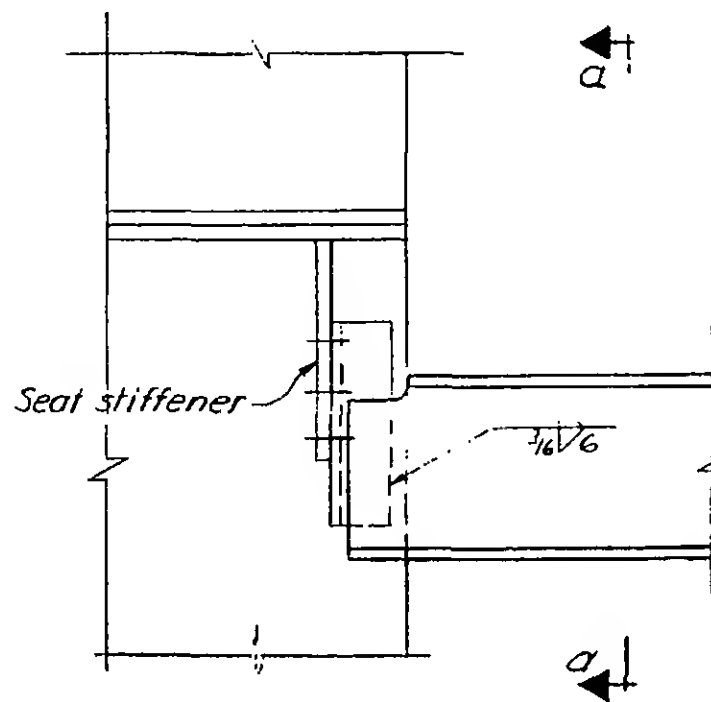
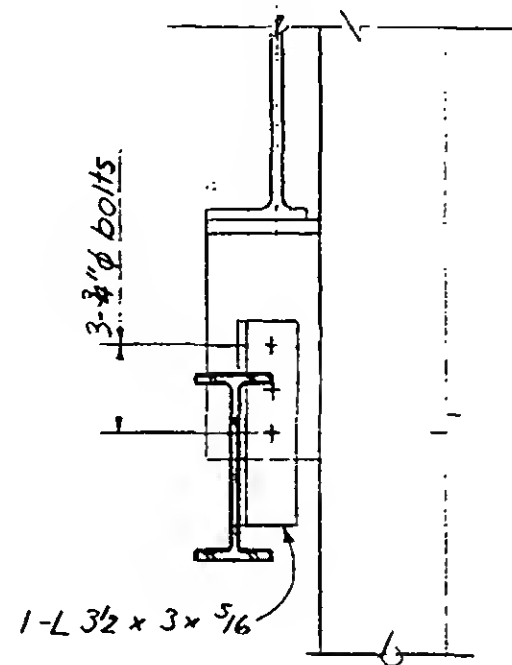
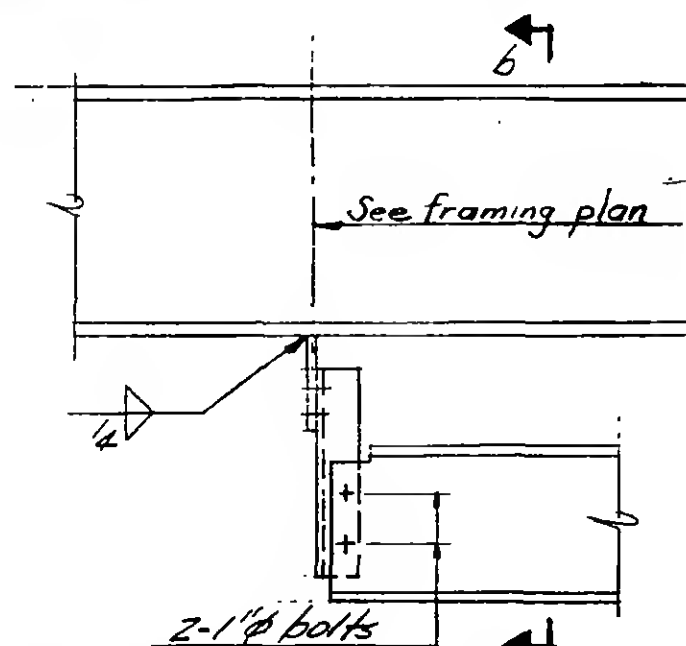
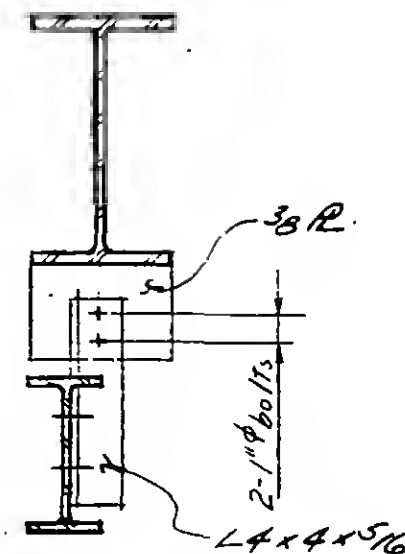
PROJECT THE WORLD TRADE CENTER

TITLE CONNECTION DETAIL 113 A, 113 B

DATE 12-21-67

## REVISIONS

1 - 10 - 69

ELEVATION 113ASection a-aELEVATION 113BSection b-b

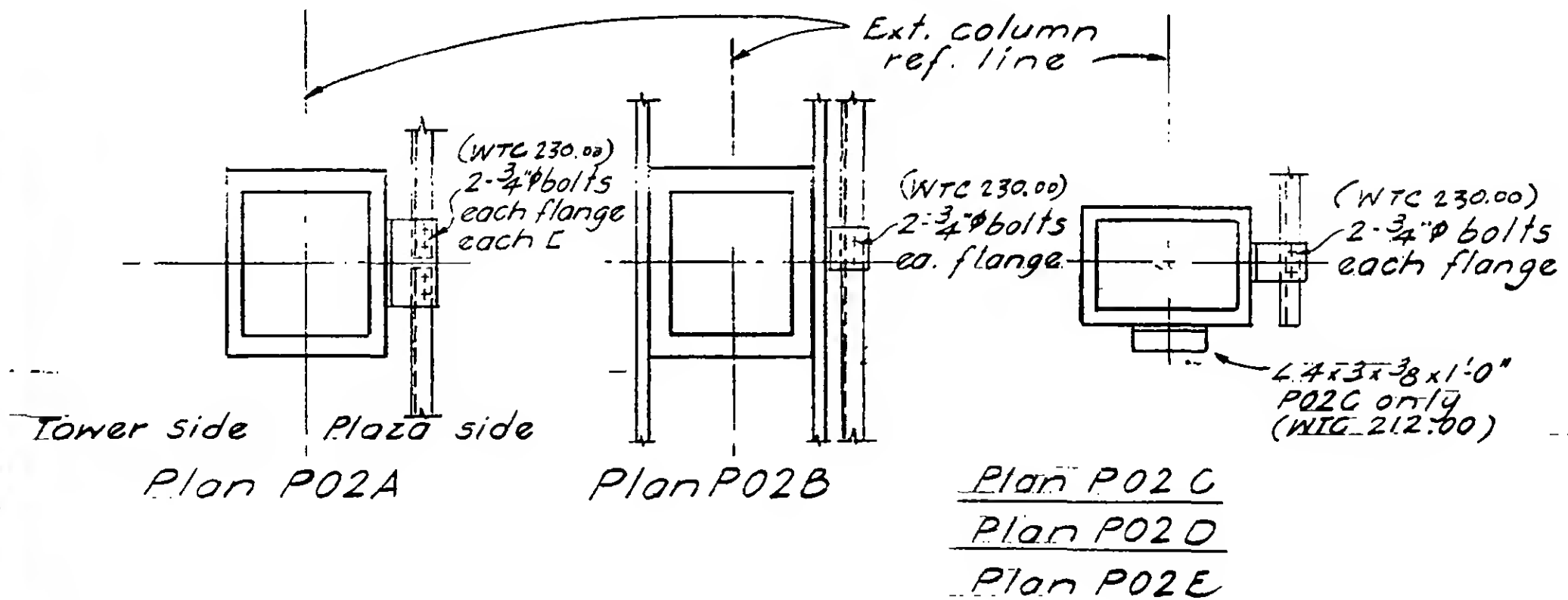
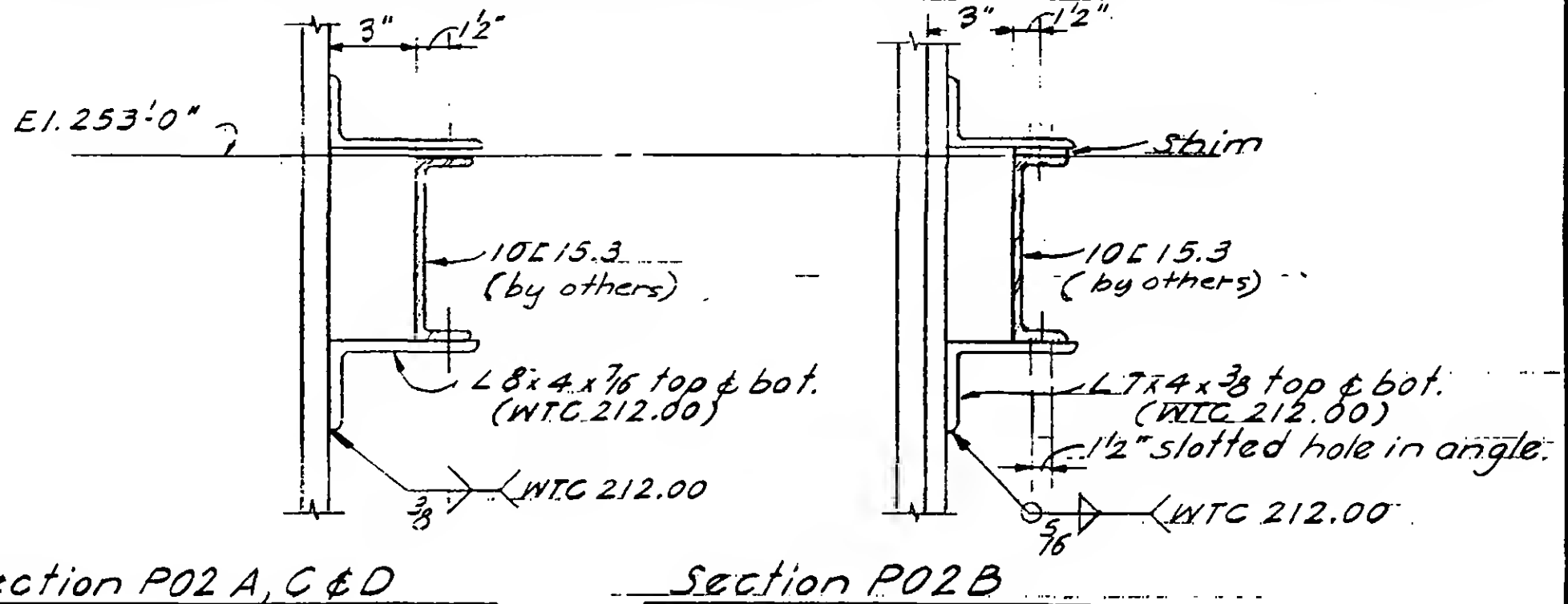
6 - AB2-15

PROJECT THE WORLD TRADE CENTER

TITLE CONNECTION DETAIL P02A-E

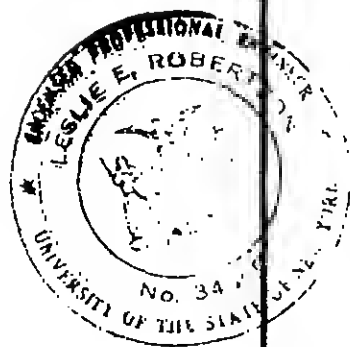
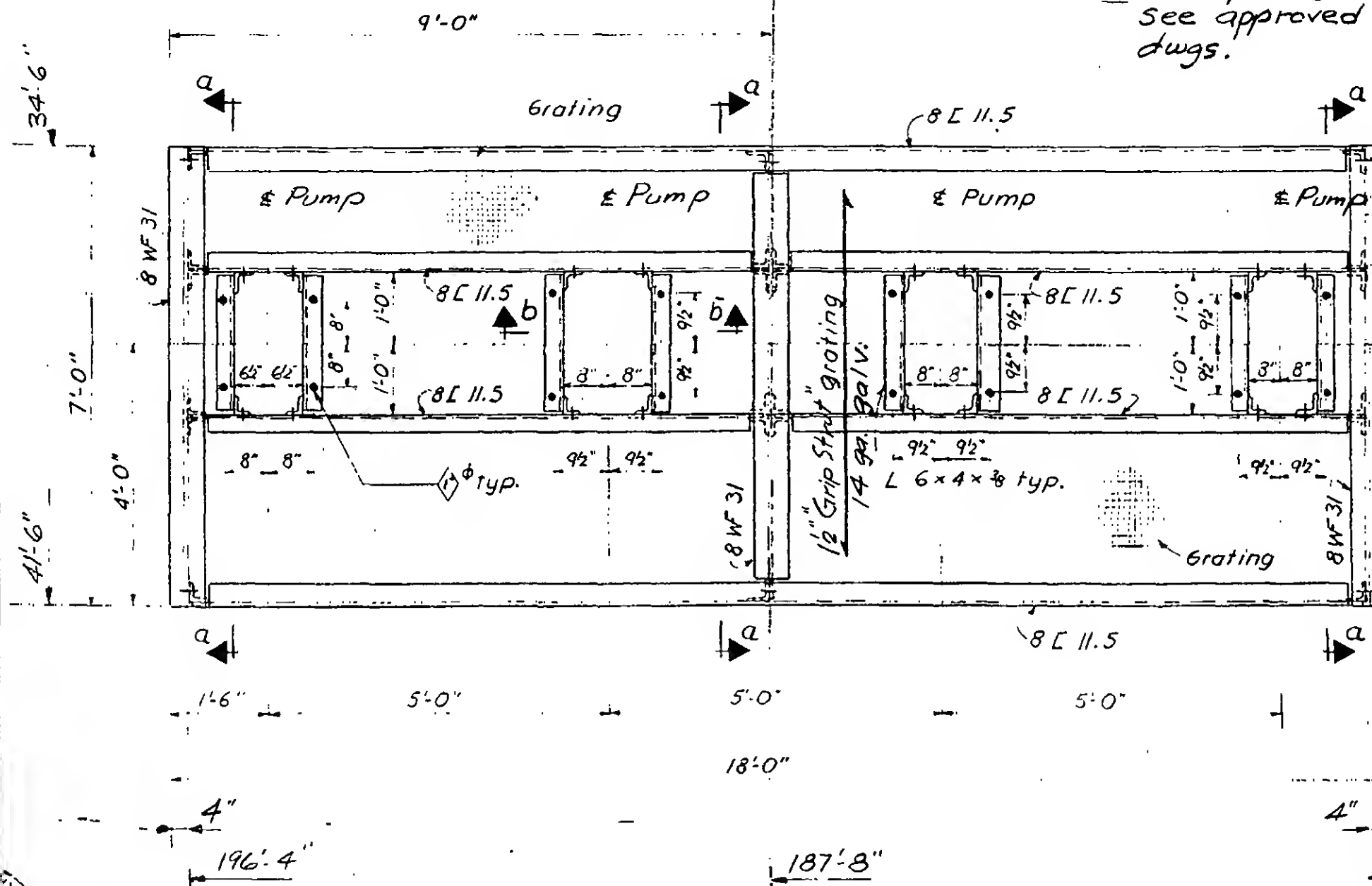
DATE 11-7-67

REVISIONS



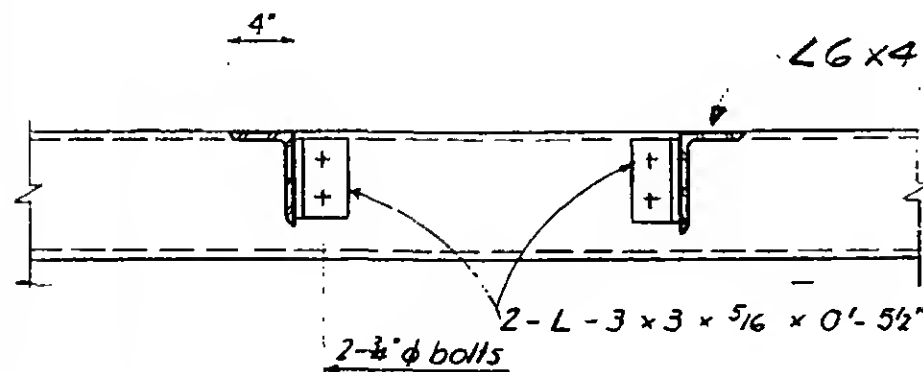
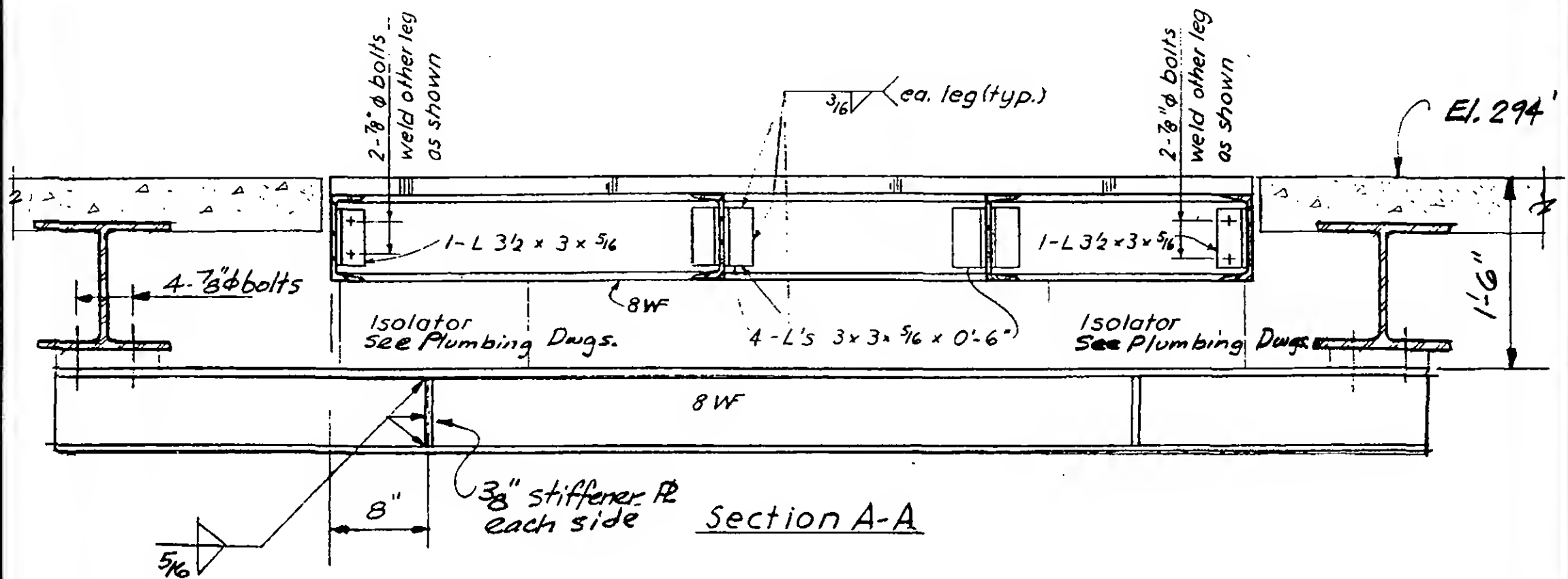
## EVISIONS

— For opening in grating  
See approved pump shop  
dwgs.



6-AB2-30

REVISIONS

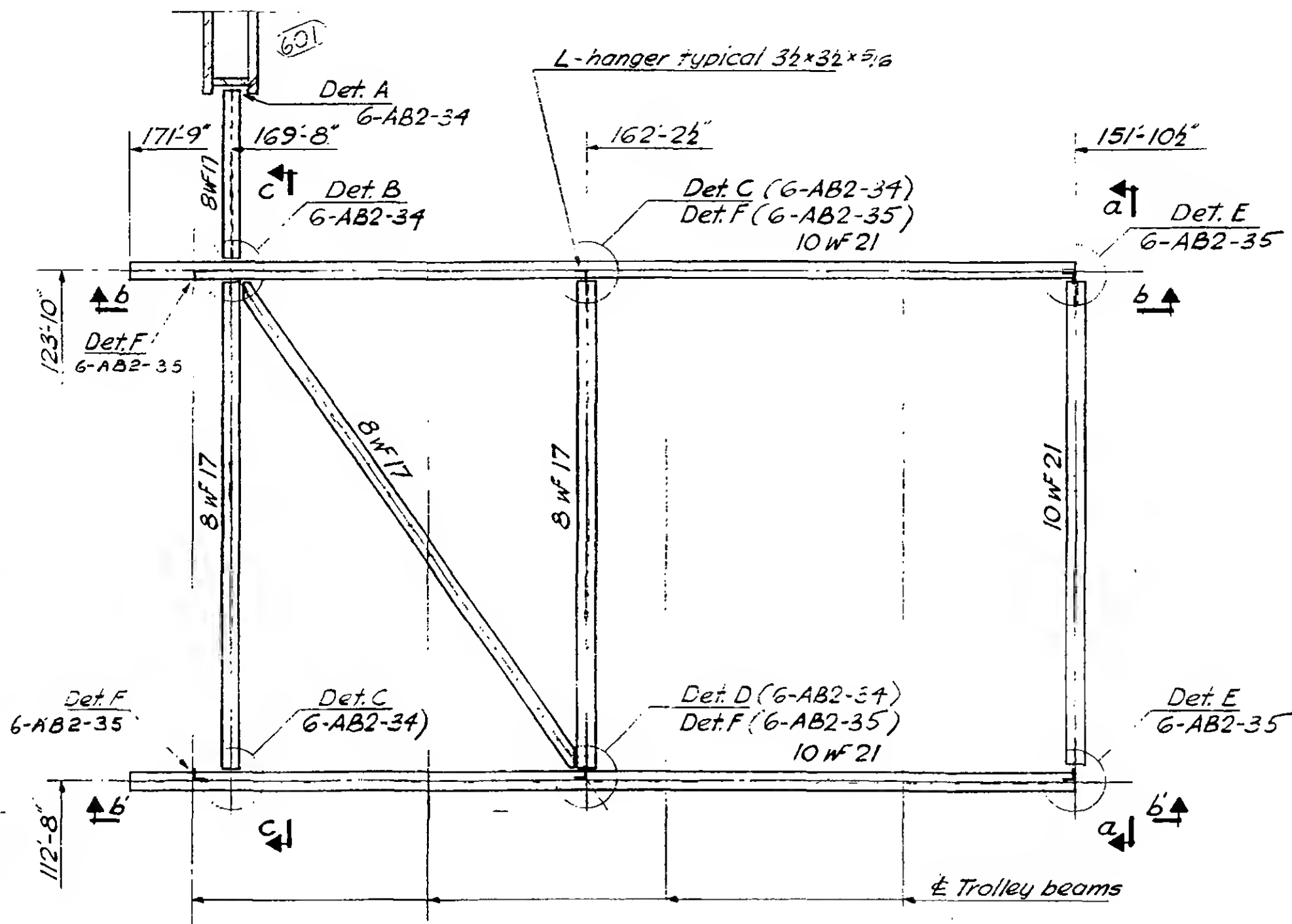
Section B-B (typ.)

PROJECT THE WORLD TRADE CENTER

TITLE PUMP PLATFORM TROLLEY SUPPORT

DATE 1-24-68

REVISIONS

Plan

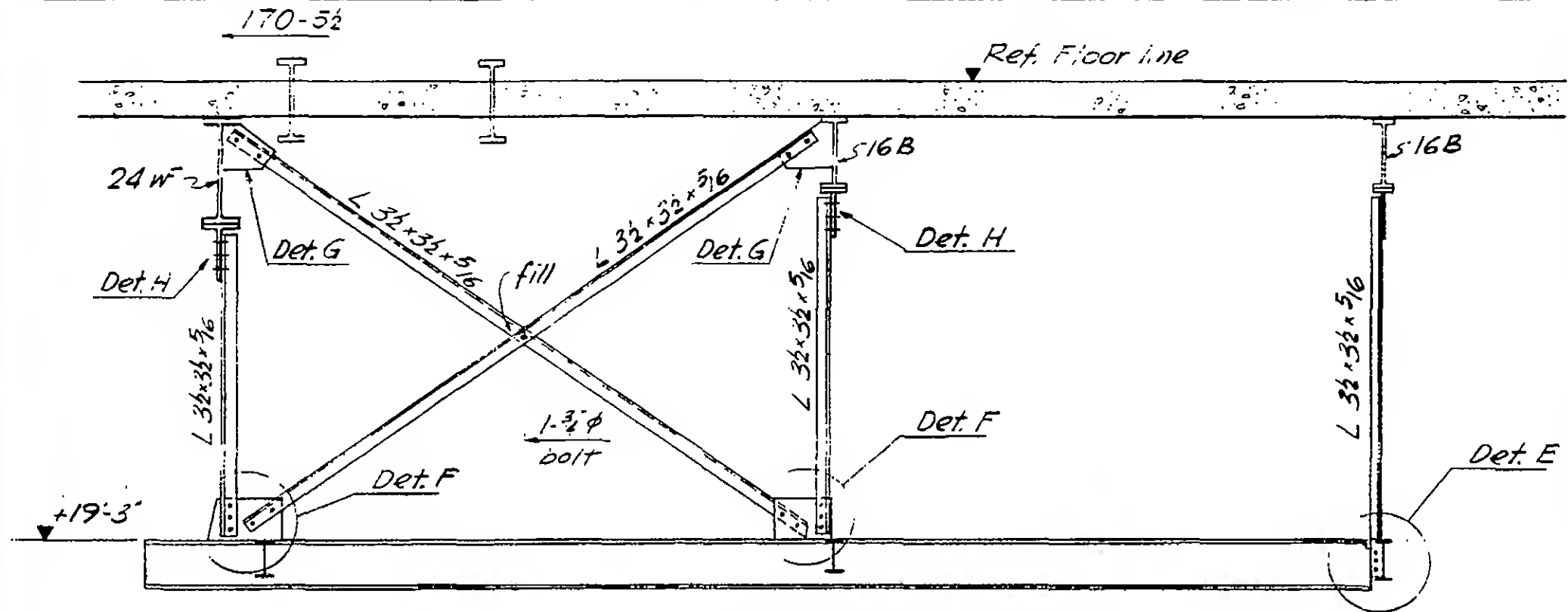
All steel @ (-8'-9") below reference floor 43

For Sections a-a, b-b, b'-b' see 6-AB2-33



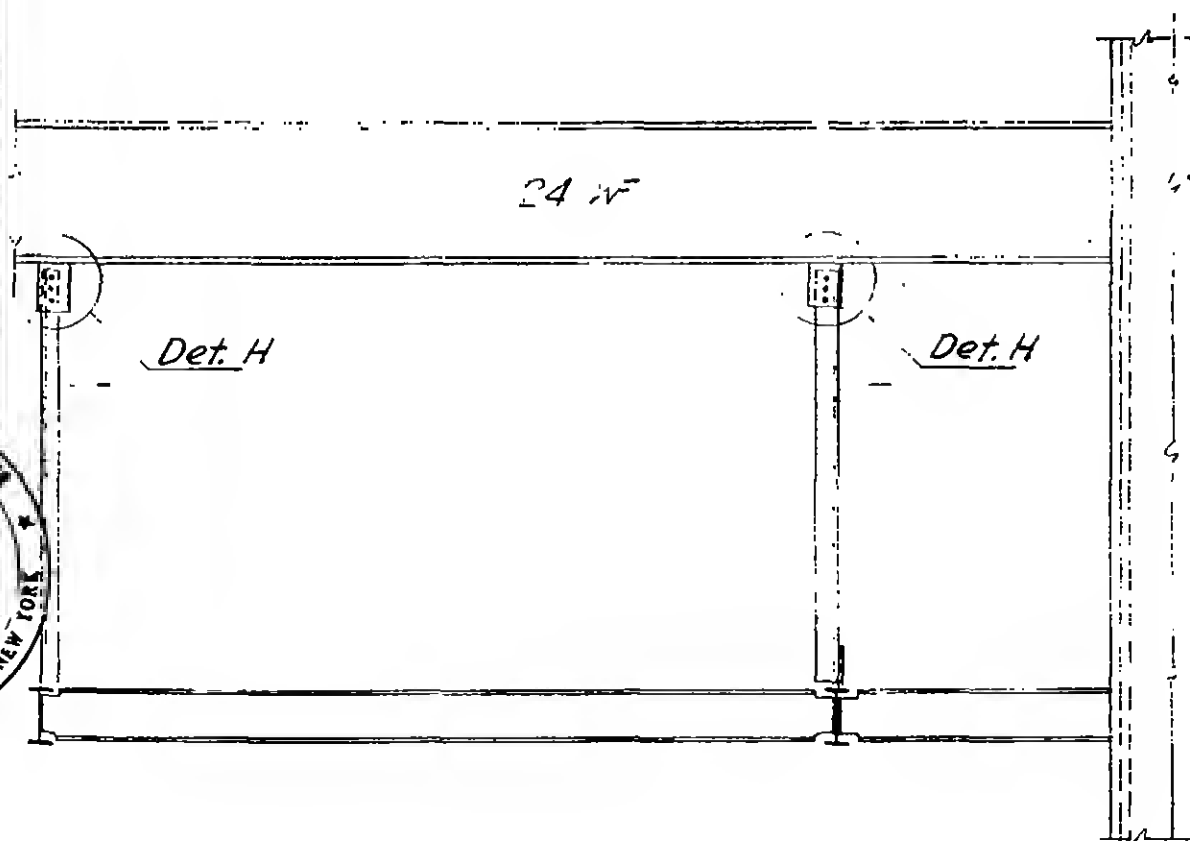
6-AB2-32

REVISIONS

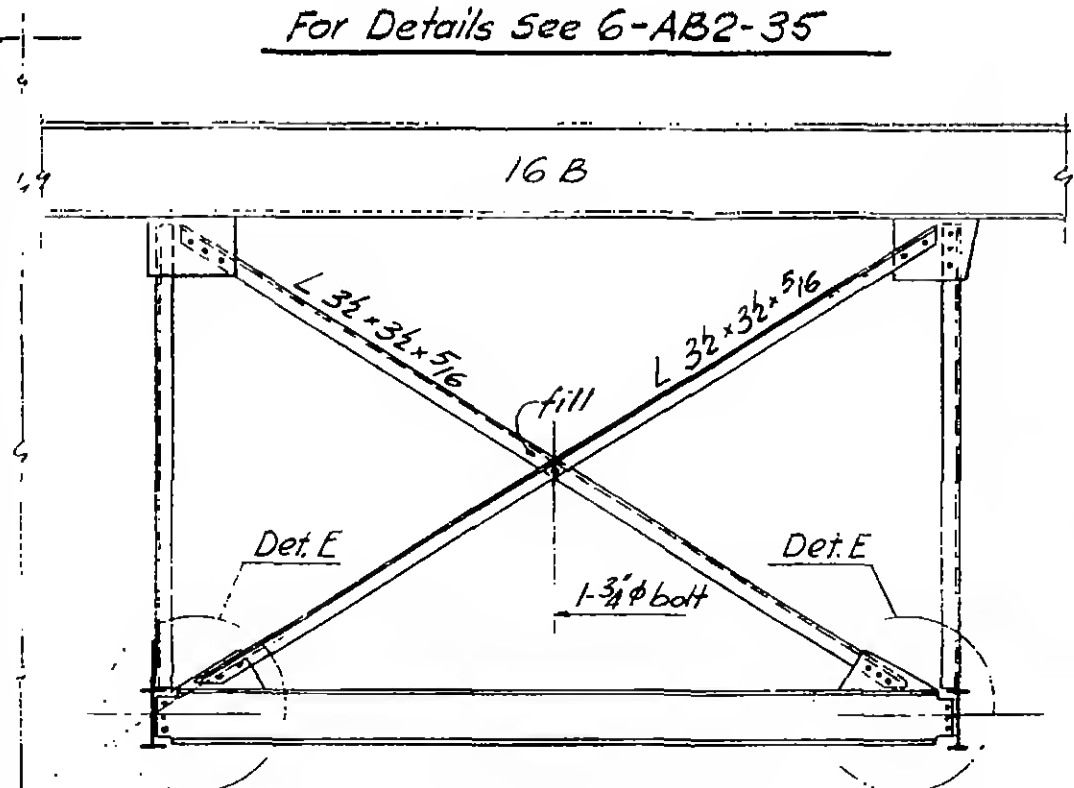


Section b-b (b-b similar)

For Details See G-AB2-35

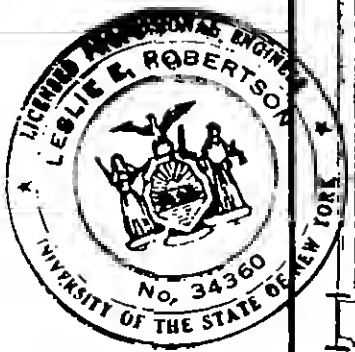


Section c-c

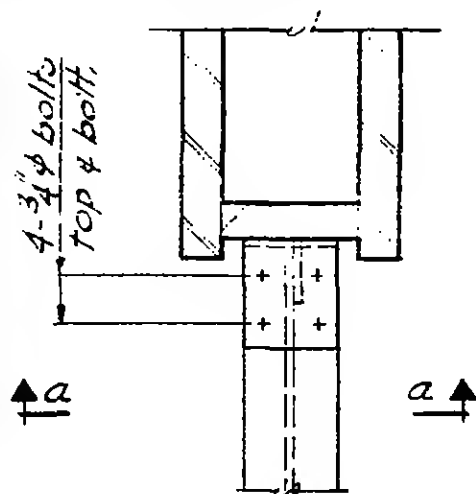


Section a-a

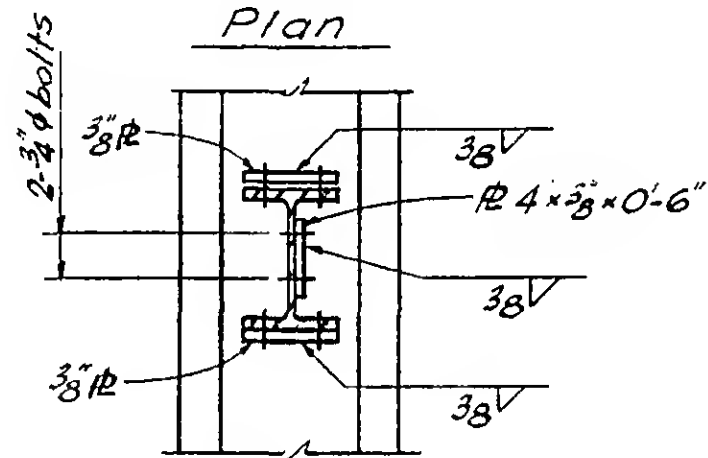
G-AB2-331



REVISIONS



Plan



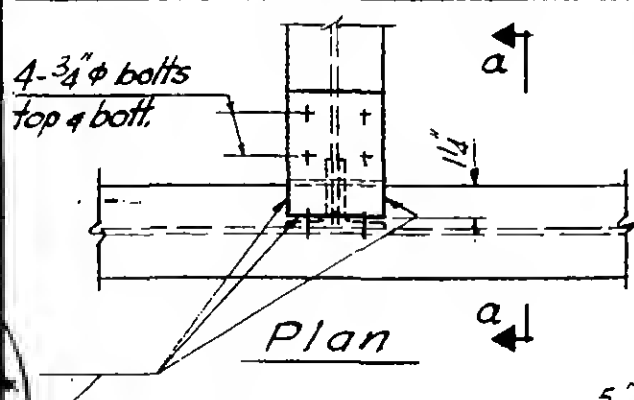
Section a-a

DETAIL A

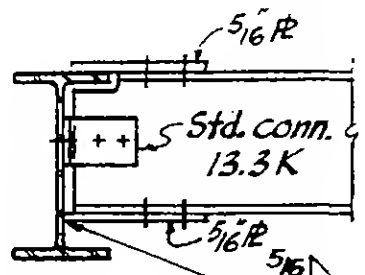
DETAIL B

DETAIL C

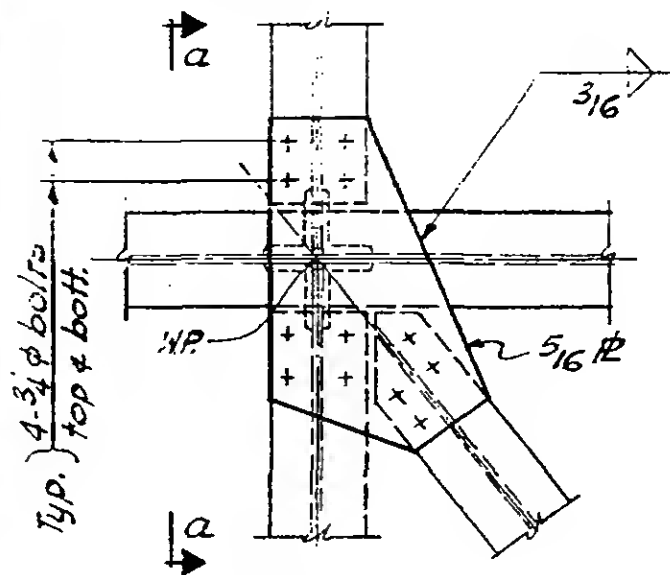
DETAIL D



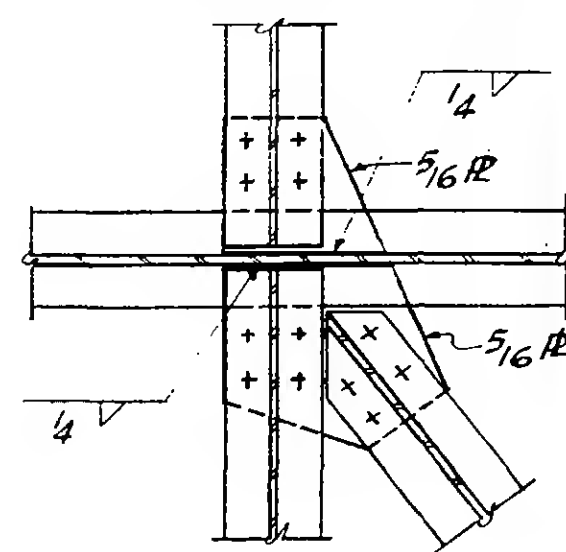
Plan



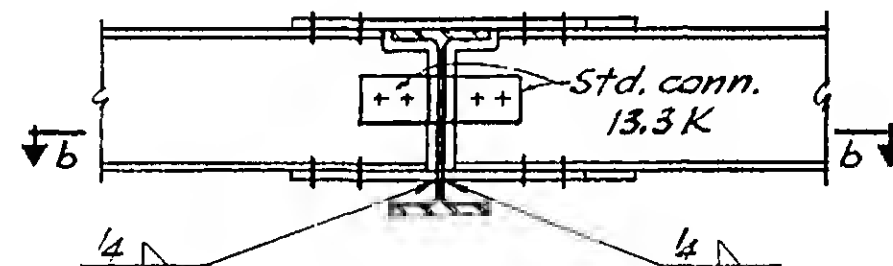
Section a-a



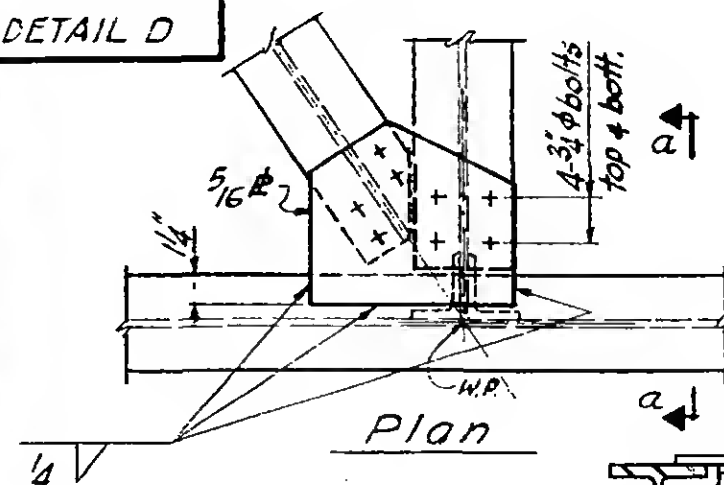
Plan



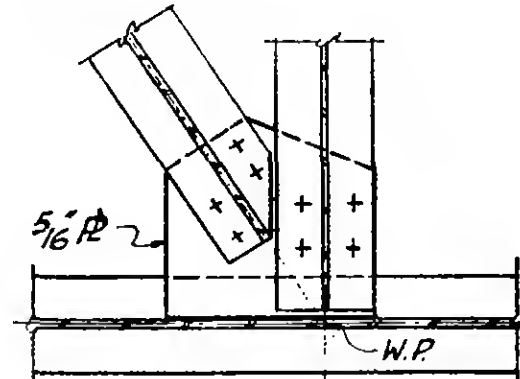
Section b-b



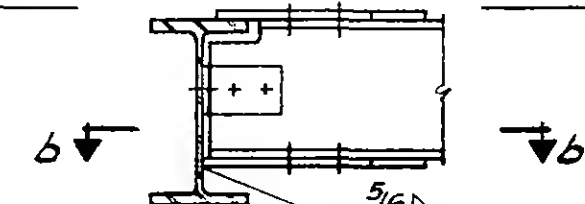
Section a-a



Plan

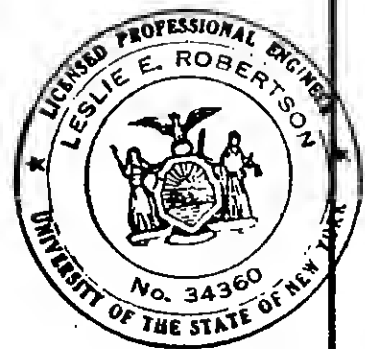


Section b-b



Section a-a

6-AB2-34

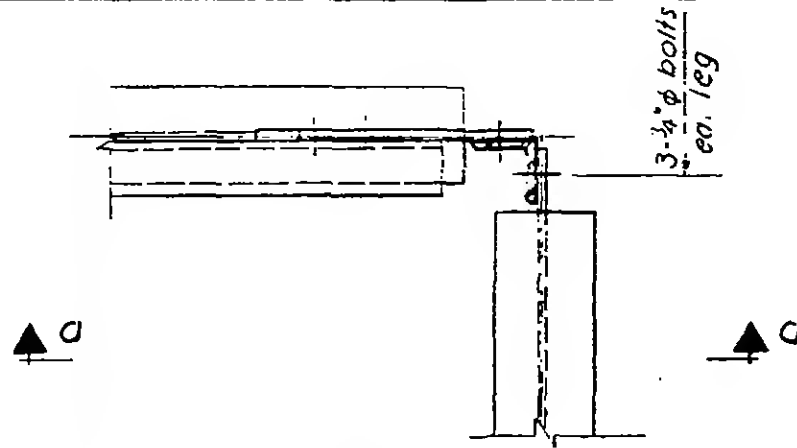


PROJECT THE WORLD TRADE CENTER

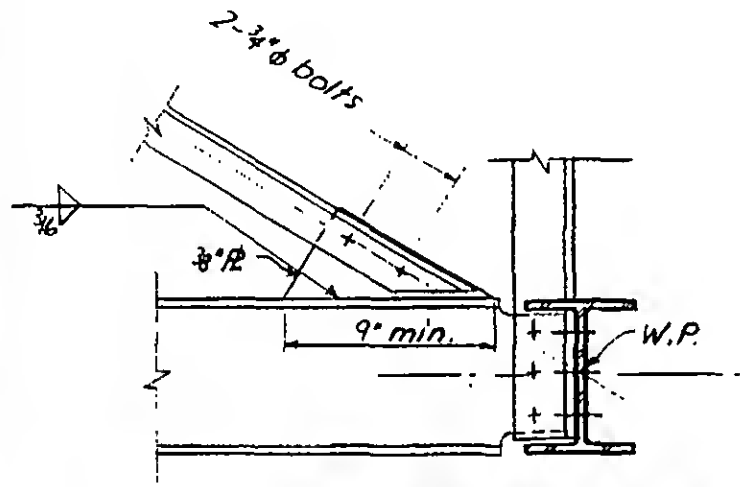
TITLE PUMP PLATFORM TROLLEY SUPPORT DETAILS

DATE 1-24-68

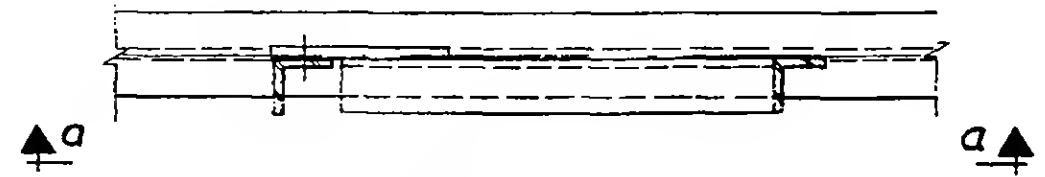
REVISIONS



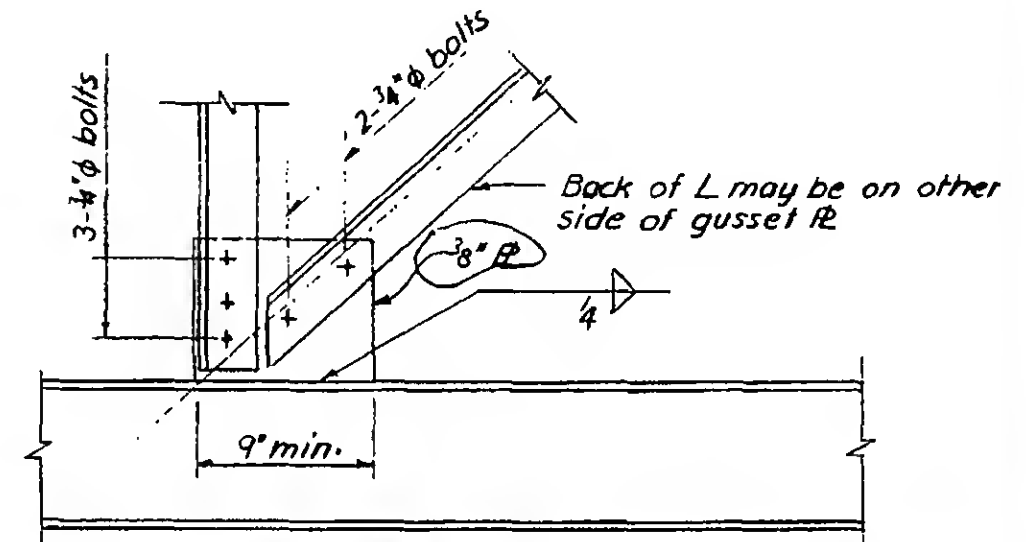
Plan



Section a-a



Plan



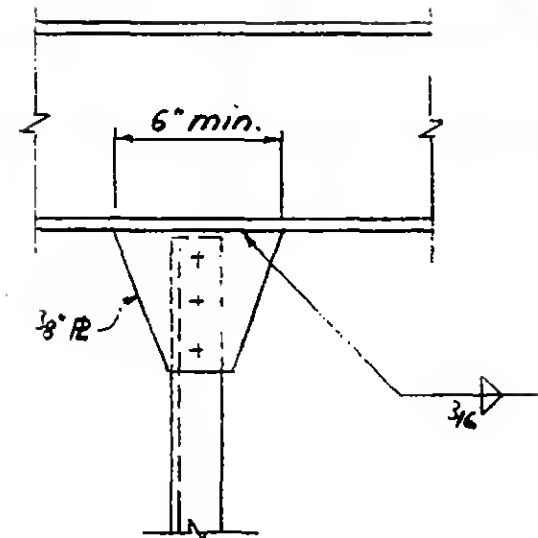
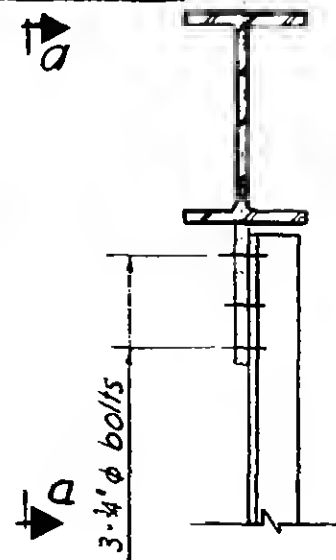
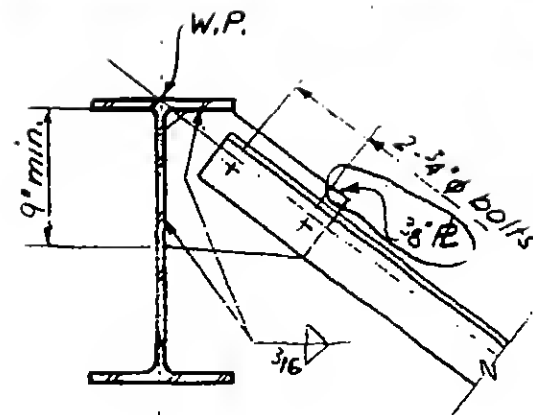
Section a-a

DETAIL E

DETAIL F

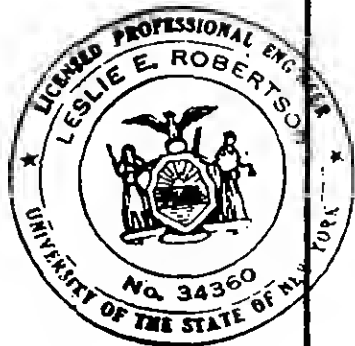
DETAIL G

DETAIL H

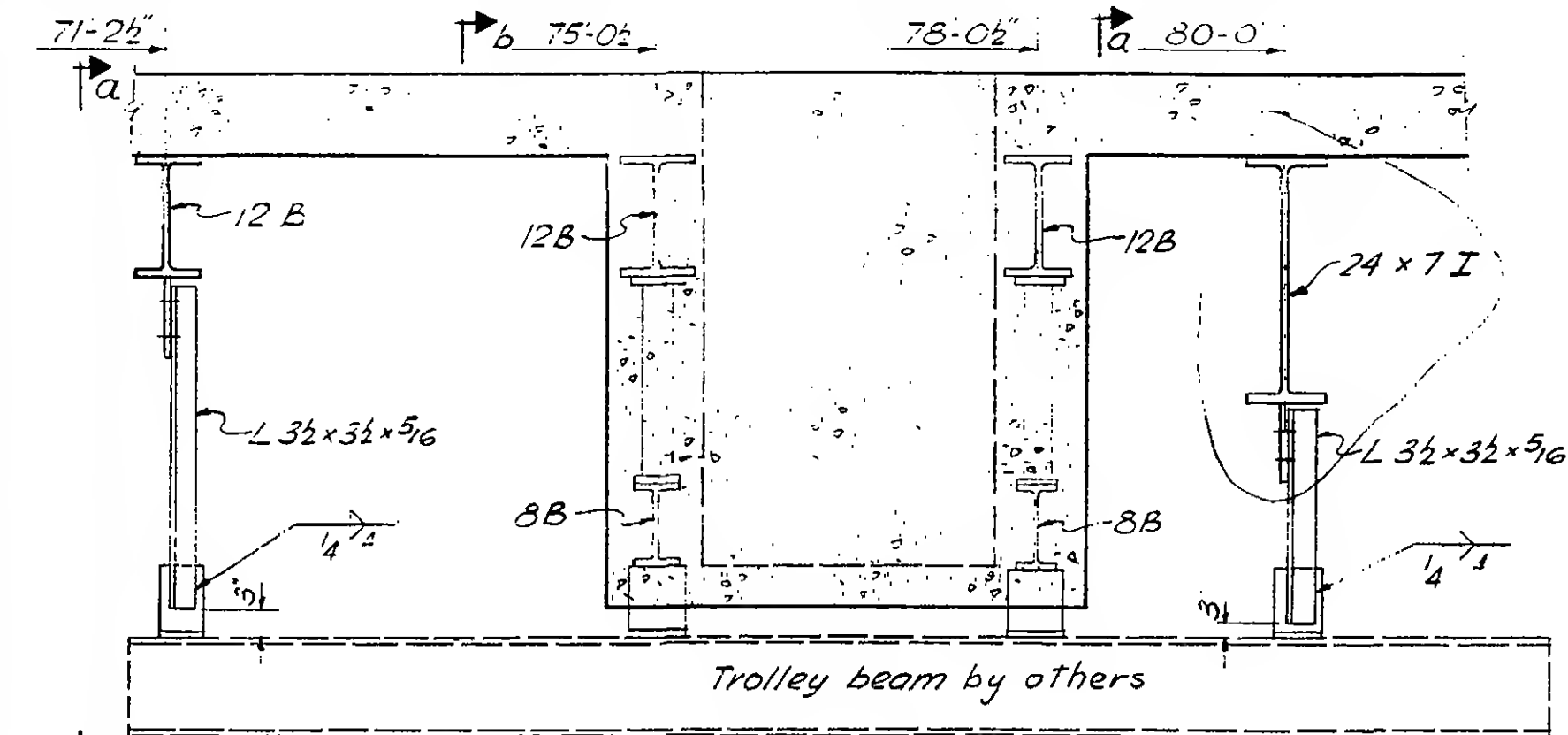


Section a-a

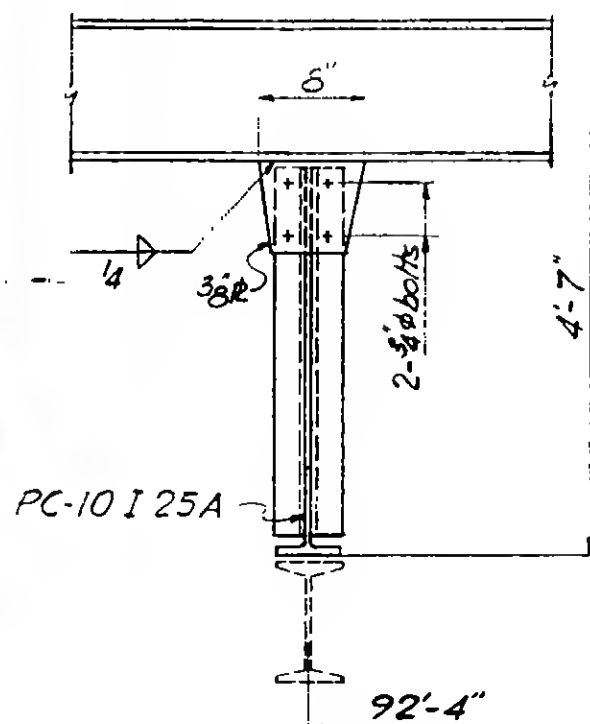
6-AB2-35



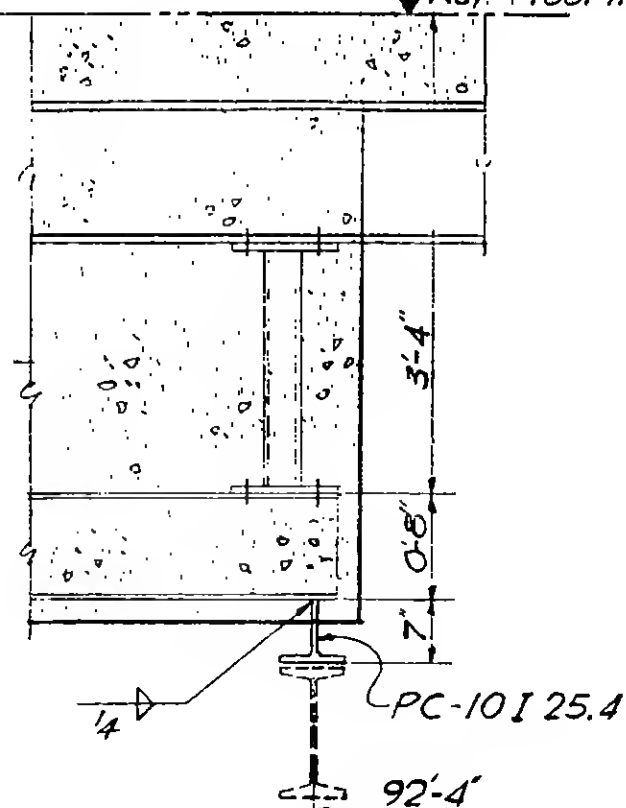
REVISIONS



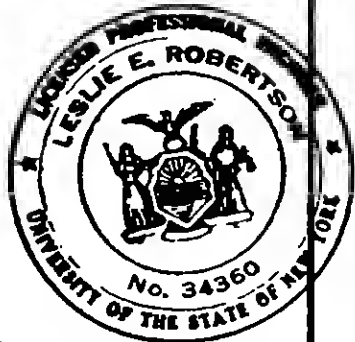
Elevation



Section a-a



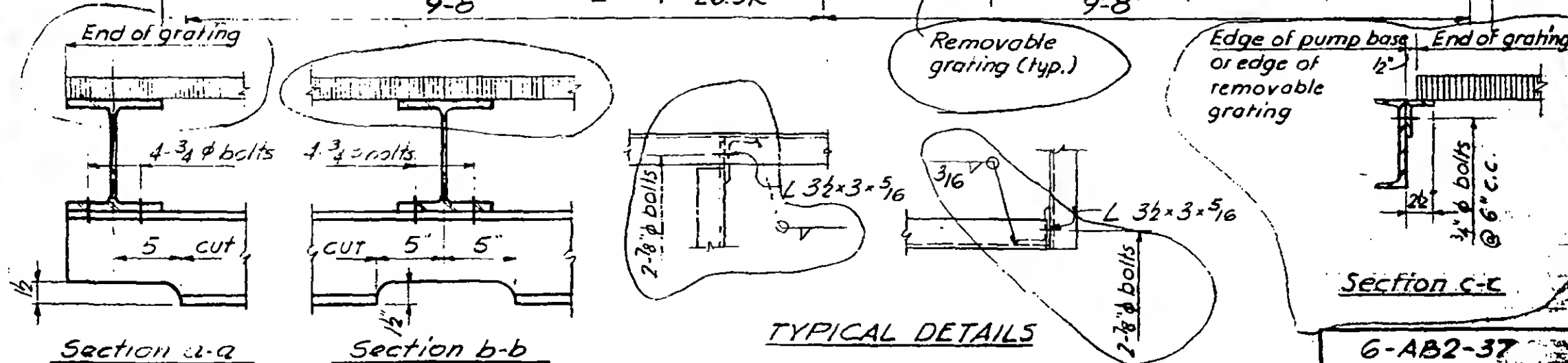
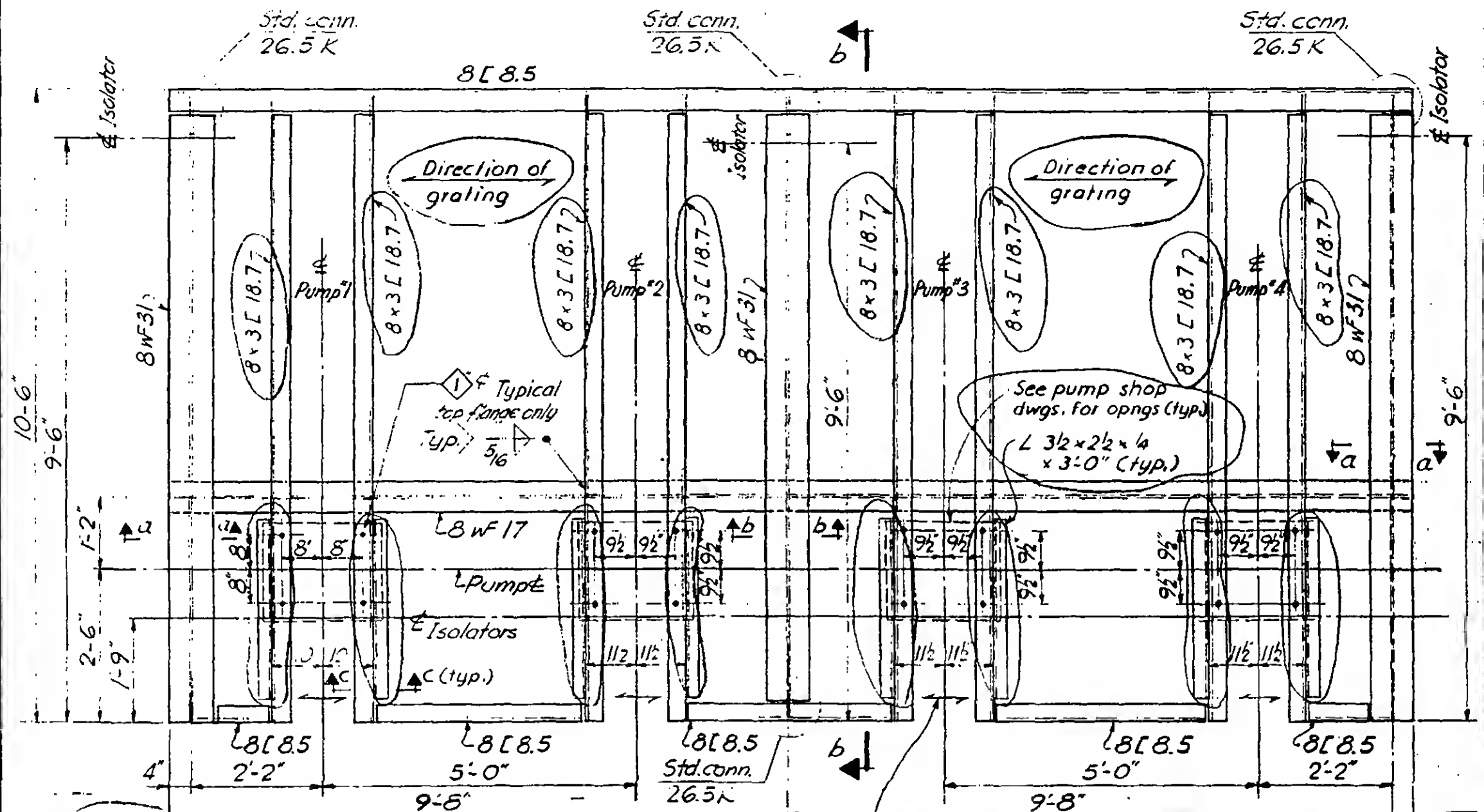
Section b-b



6-AB2-36

## REVISIONS

3-29-68

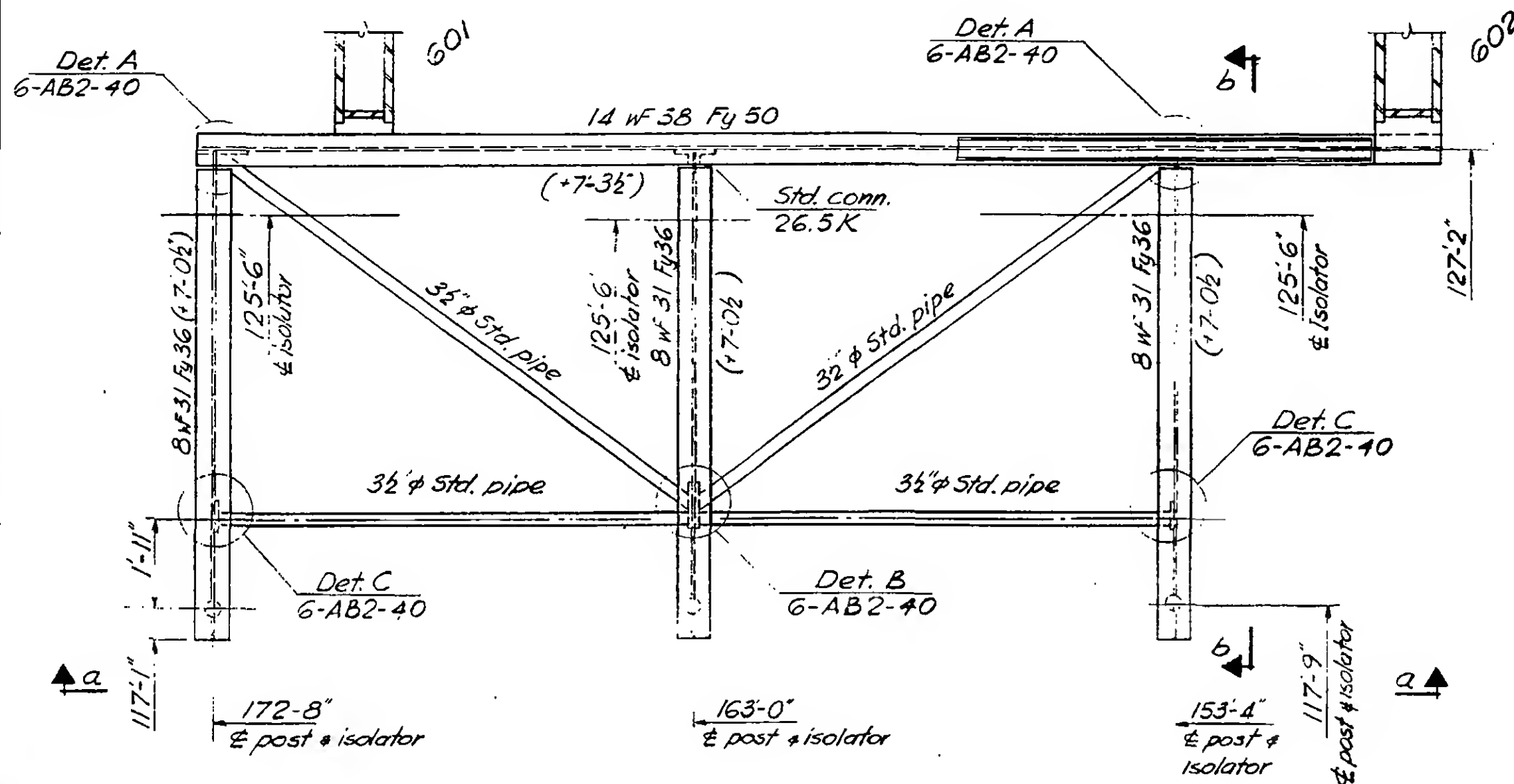


PROJECT THE WORLD TRADE CENTER

TITLE PUMP PLATFORM SUPPORT 41<sup>ST</sup> FLOOR

DATE 1-24-68

## REVISIONS

Plan

6-AB2-38



SKILLING - HELLE - CHRISTIANSEN - ROBERTSON

Structural &amp; Civil Engineers

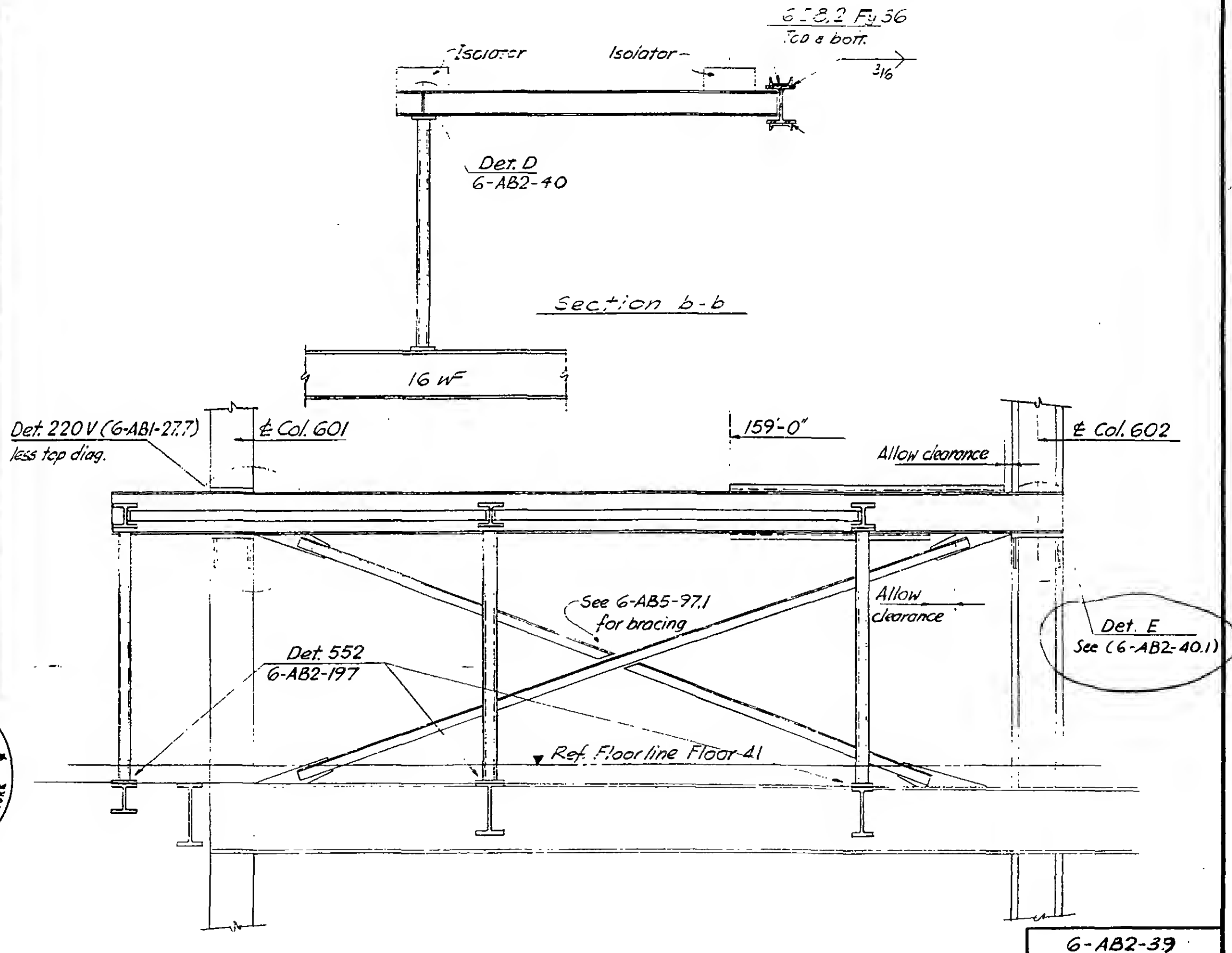
PROJECT THE WORLD TRADE CENTER

TITLE PUMP PLATFORM SUPPORT @ 41<sup>ST</sup> FLOOR

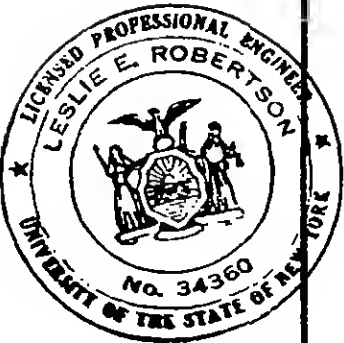
DATE 1-24-68

REVISIONS

- 29 - 68



6-AB2-39

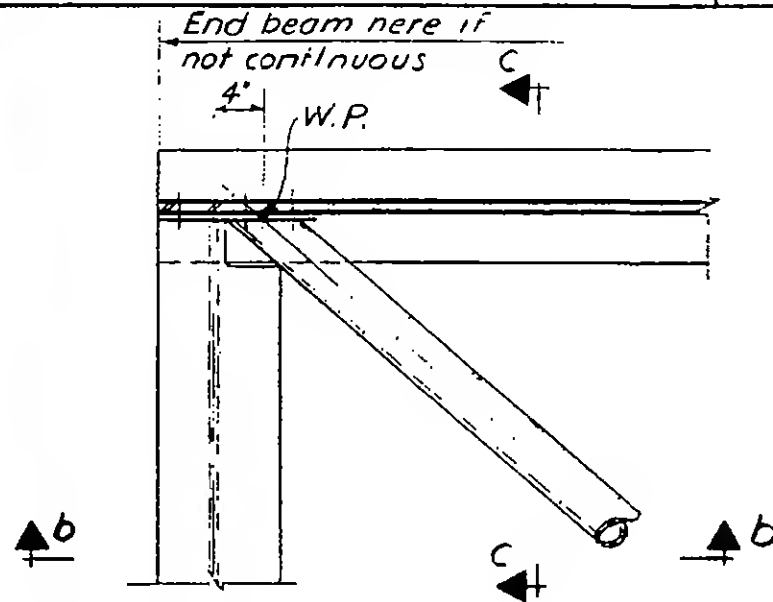


PROJECT THE WORLD TRADE CENTER

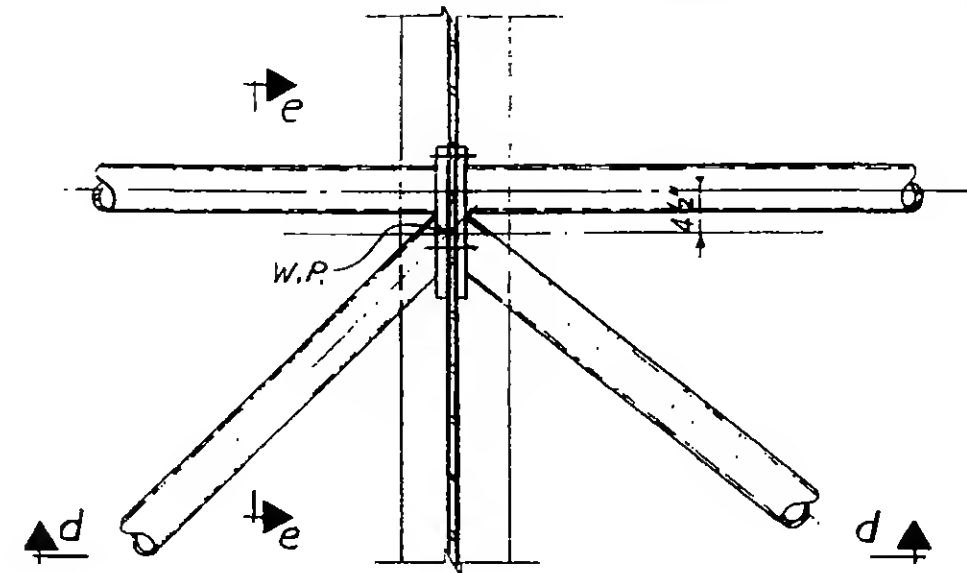
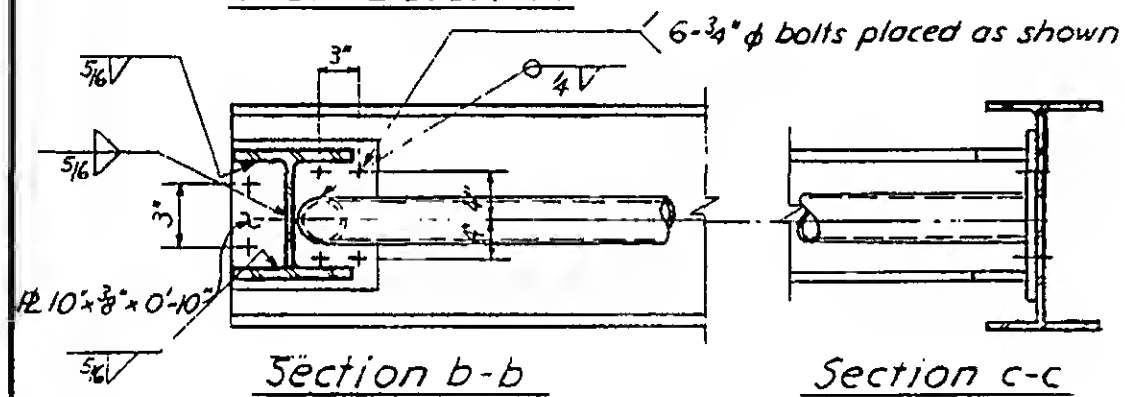
TITLE PUMP PLATFORM SUPPORT DETAILS AT 41ST. FLOOR

DATE 1-24-68

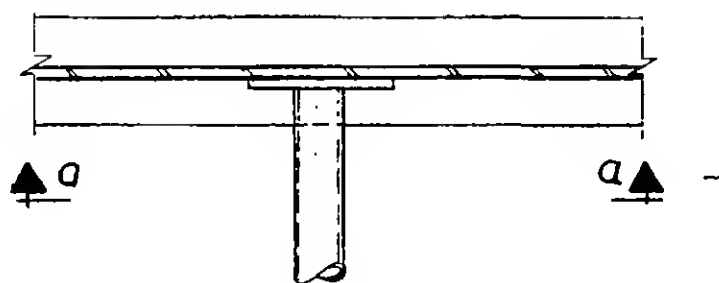
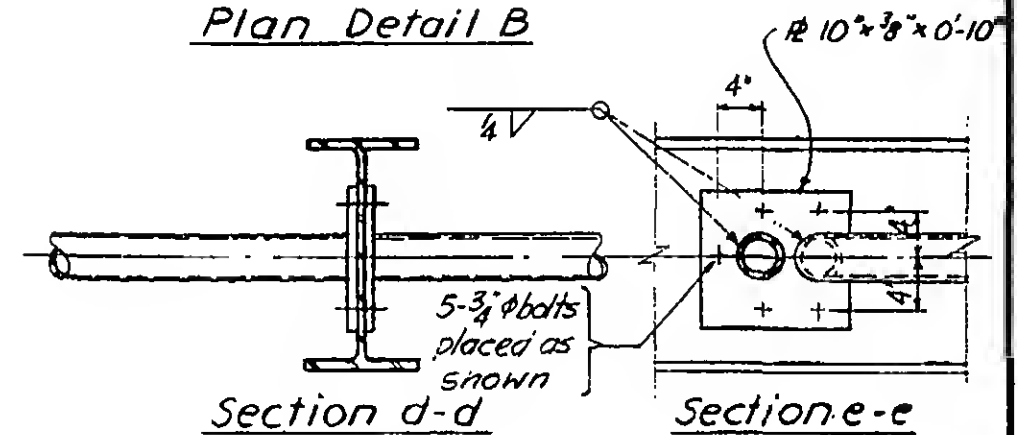
REVISIONS



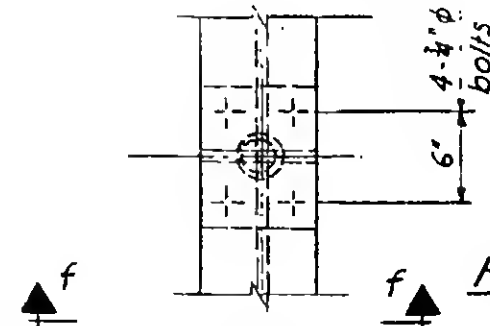
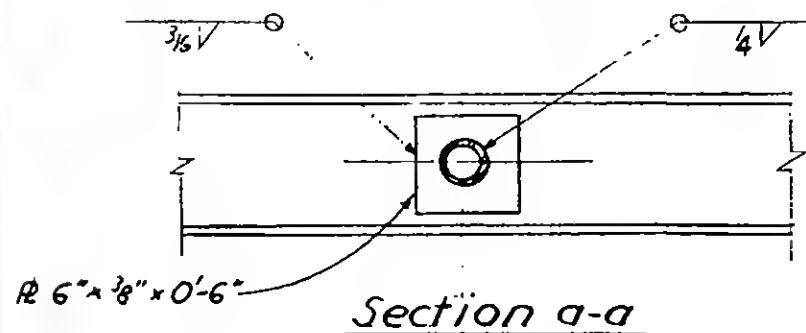
Plan Detail A



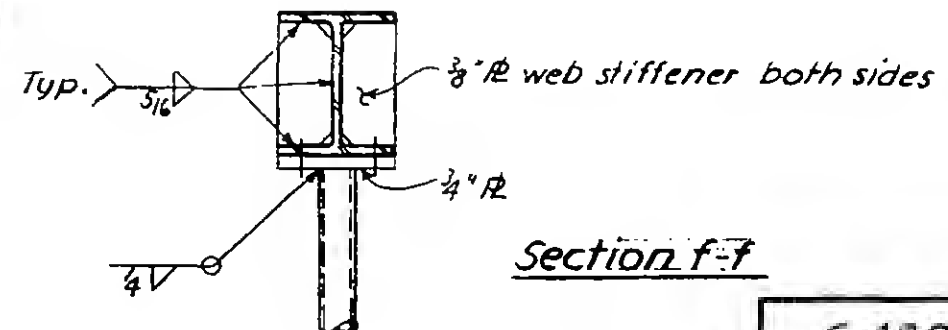
Plan Detail B



Plan Detail C



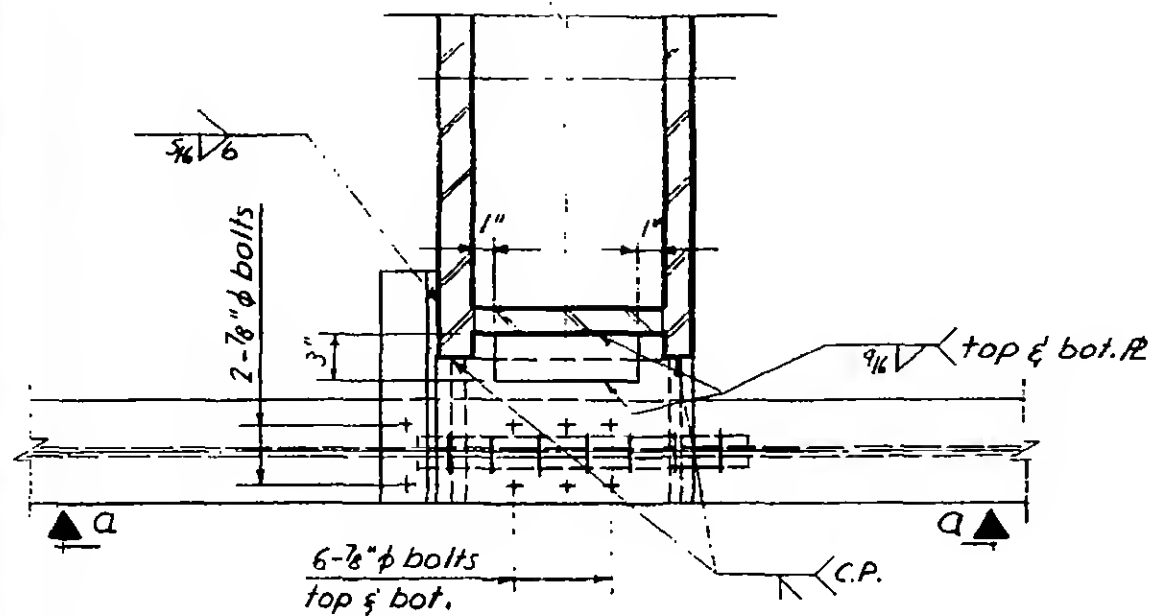
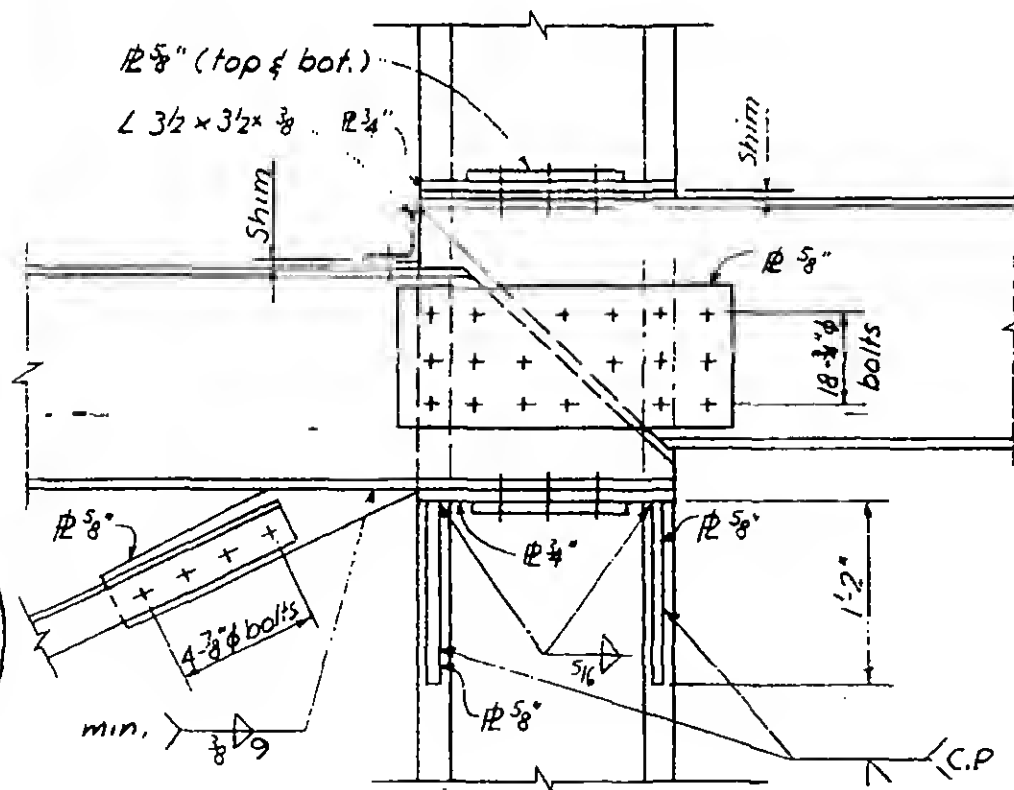
Plan Detail D



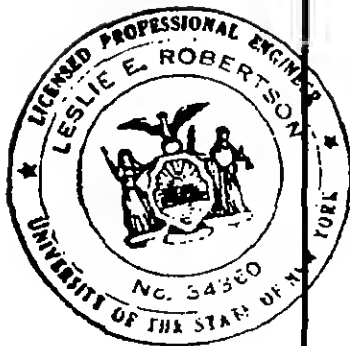
6-AB2-10



## REVISIONS

Plan

Section a-a



6-AB2-40.1

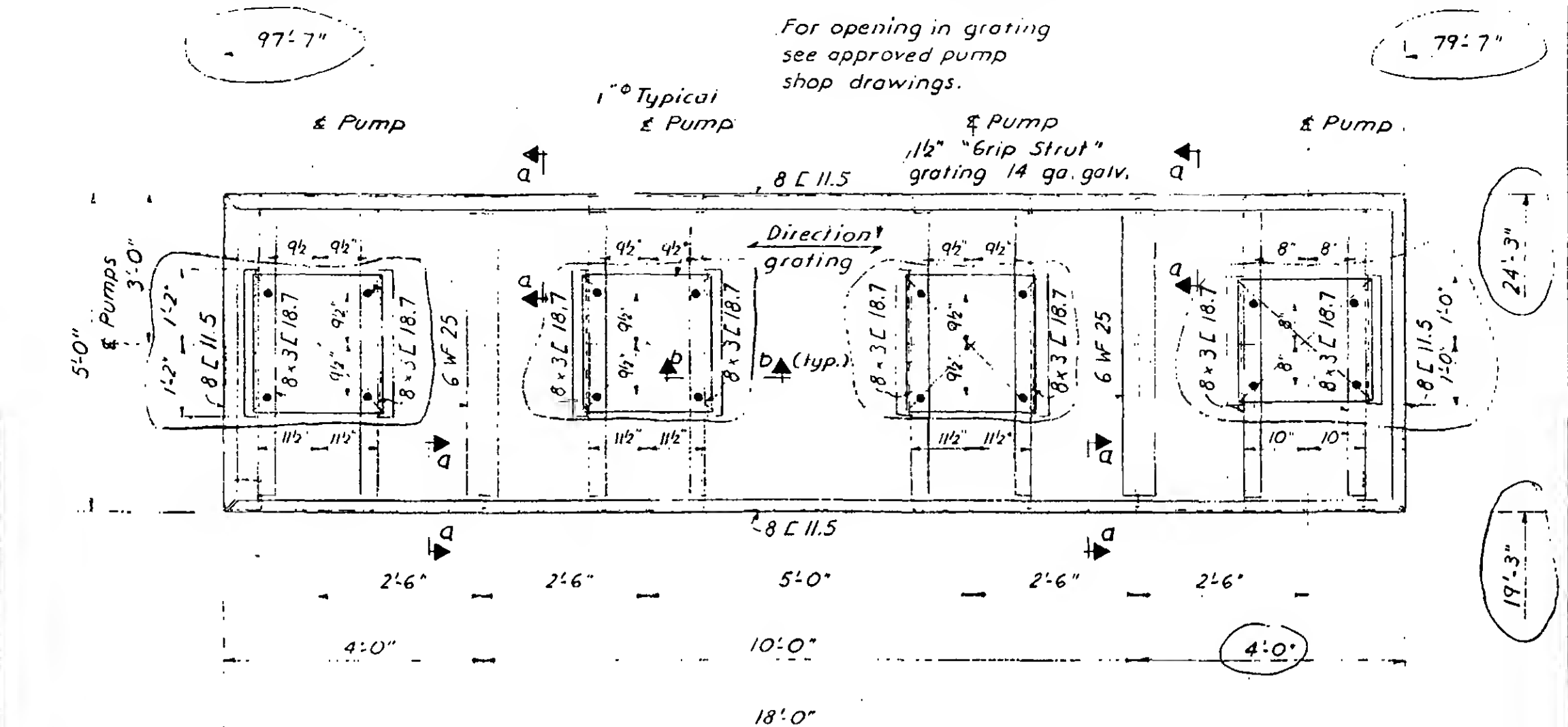
PROJECT THE WORLD TRADE CENTER

TITLE PUMP PLATFORM EL. 294 TOWER B

DATE 2-12-68

REVISIONS

-11-68



3/8" R web stiff. both sides

Isolator

1'-0"

Std. conn. 18.0K

Typ. 3/16"

Isolator

8'6" EL. 294

Section a-a

2-7/8" φ bolts

2-7/8" φ bolts

Edge of Pump base End of grating

L 3 1/2 x 3 x 5/16

L 3 1/2 x 2 1/2 x 4"

3/4" φ bolts @ 6" c.c.

Typical Details

Section b-b

6-AB2-41



PROJECT

THE WORLD TRADE CENTER

TITLE

PUMP PLATFORM AT 75TH FLOOR

DATE

2-21-68

REVISIONS

- 29 - 68

Std. conn.

26.5 k

± Posts &amp; isolators

Std. conn.

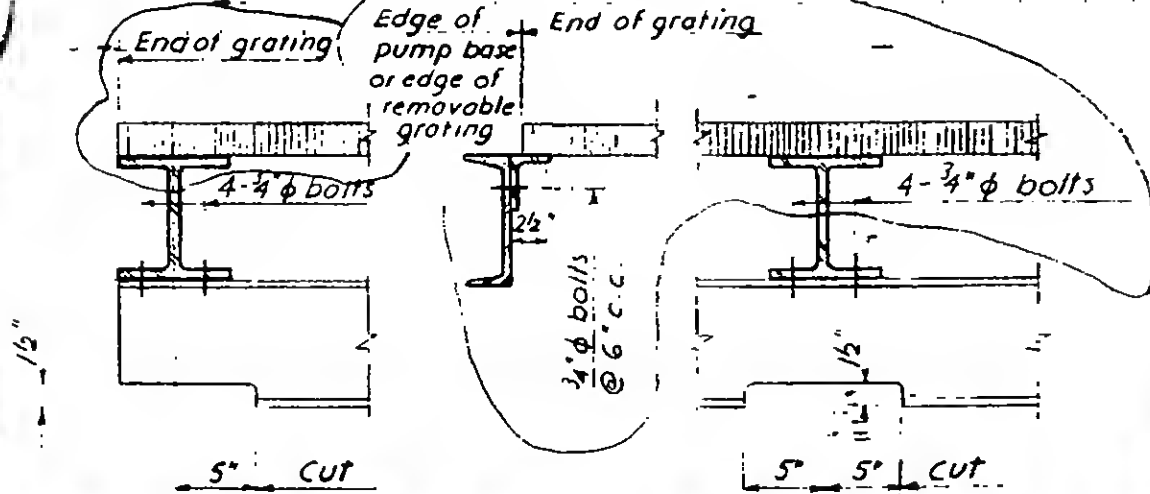
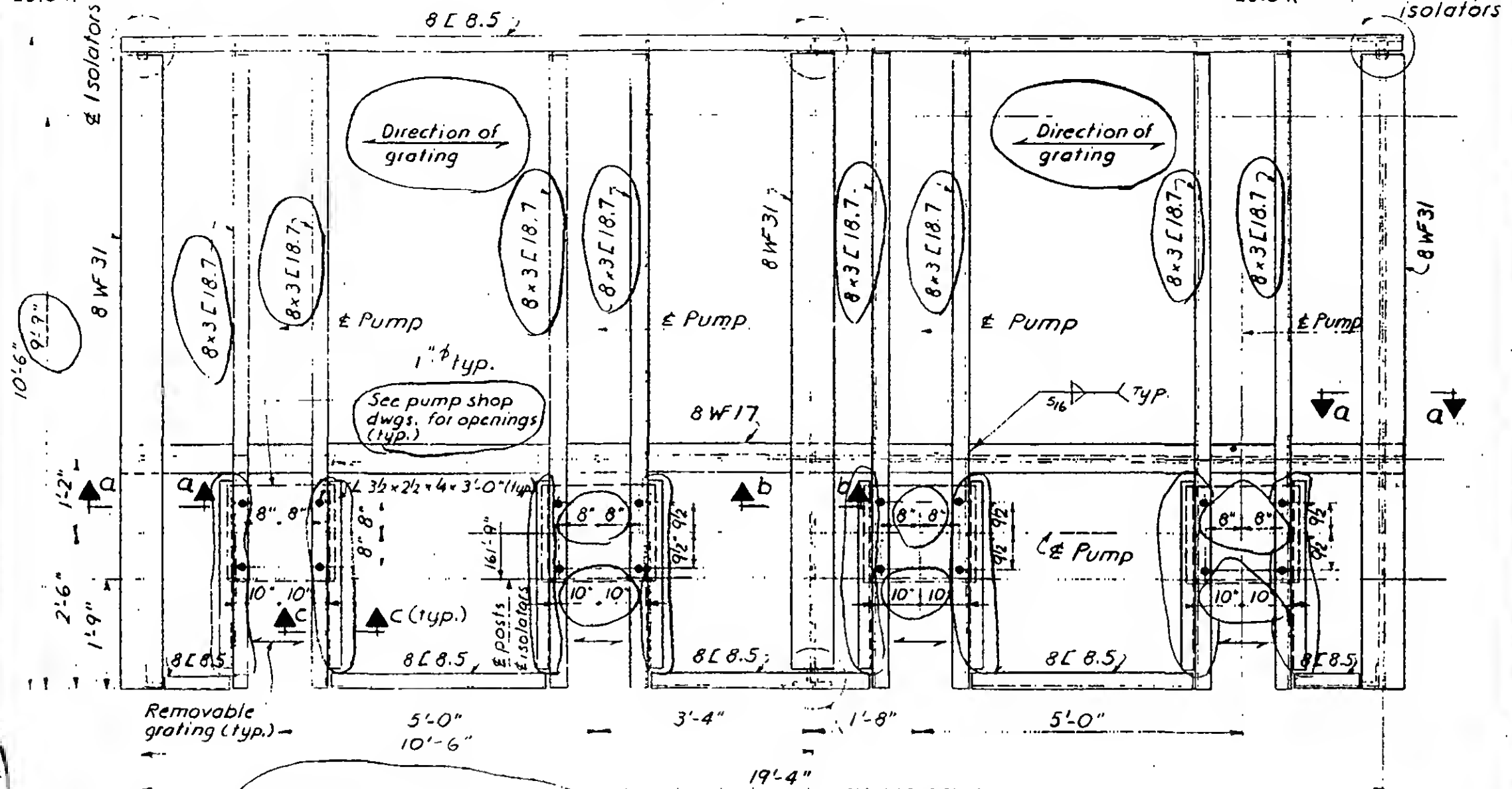
26.5 k

± Isolators

Std. conn.

26.5 k

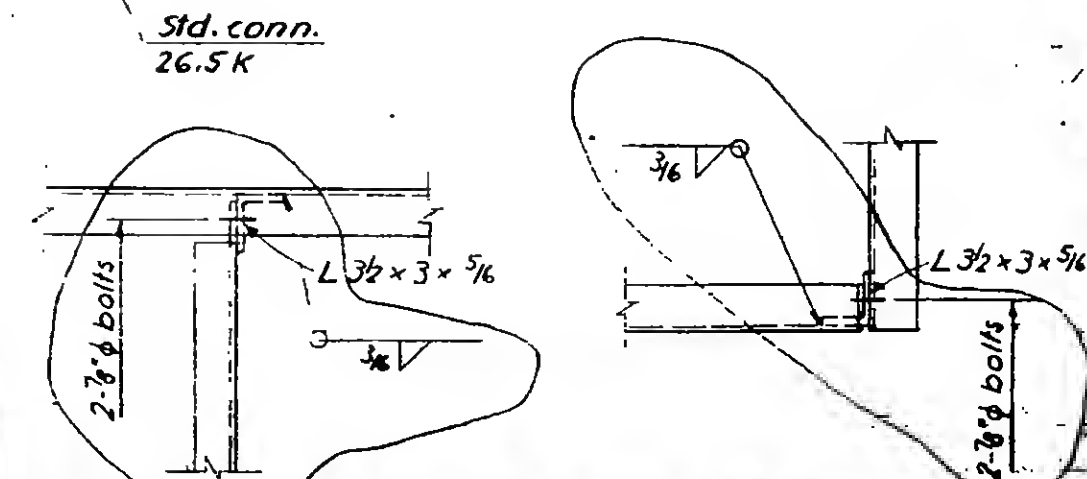
± Posts &amp; isolators



Section a-a

Section c-c

Section b-b



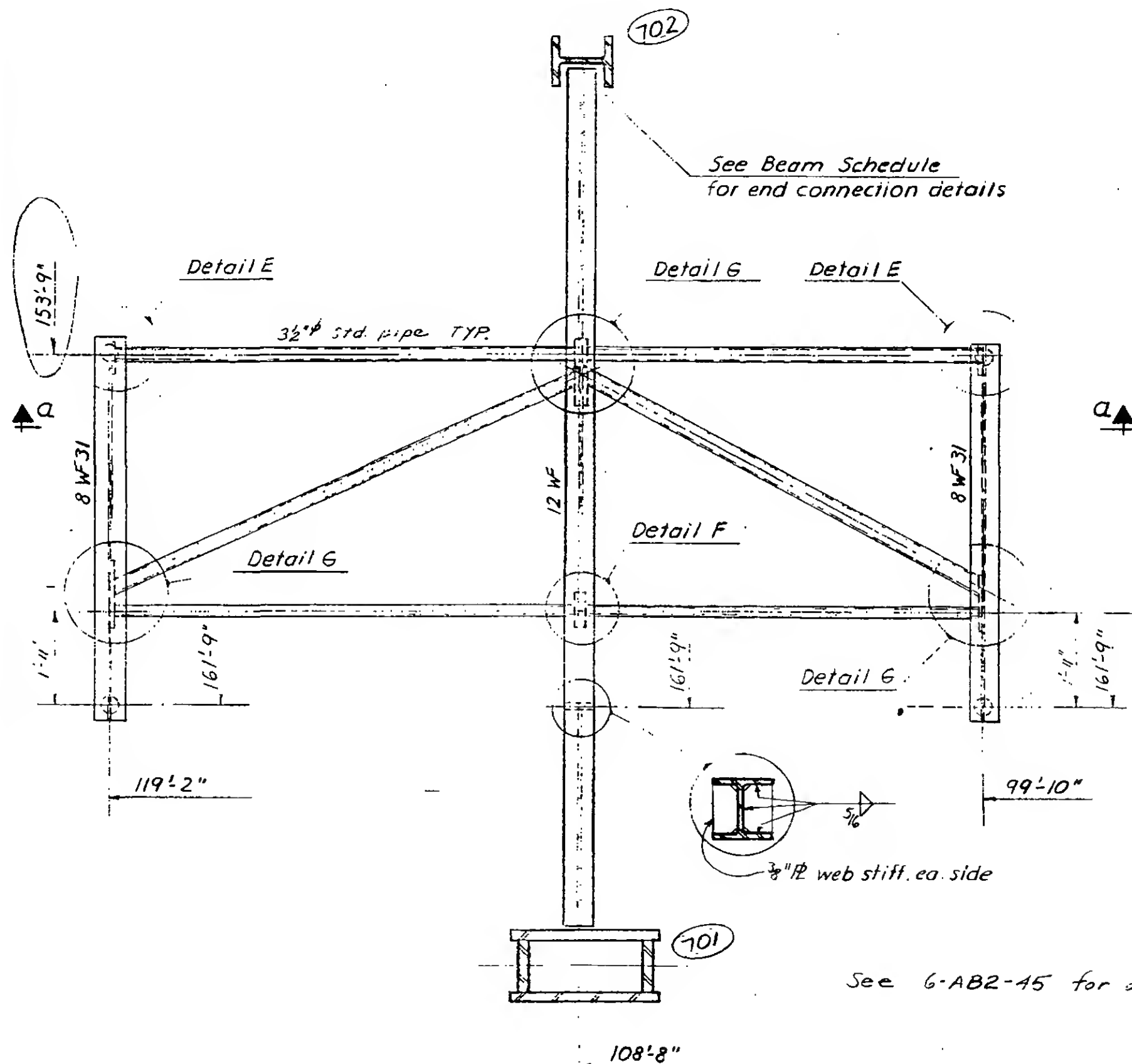
Typical Details

6-AB2-42



## REVISIONS

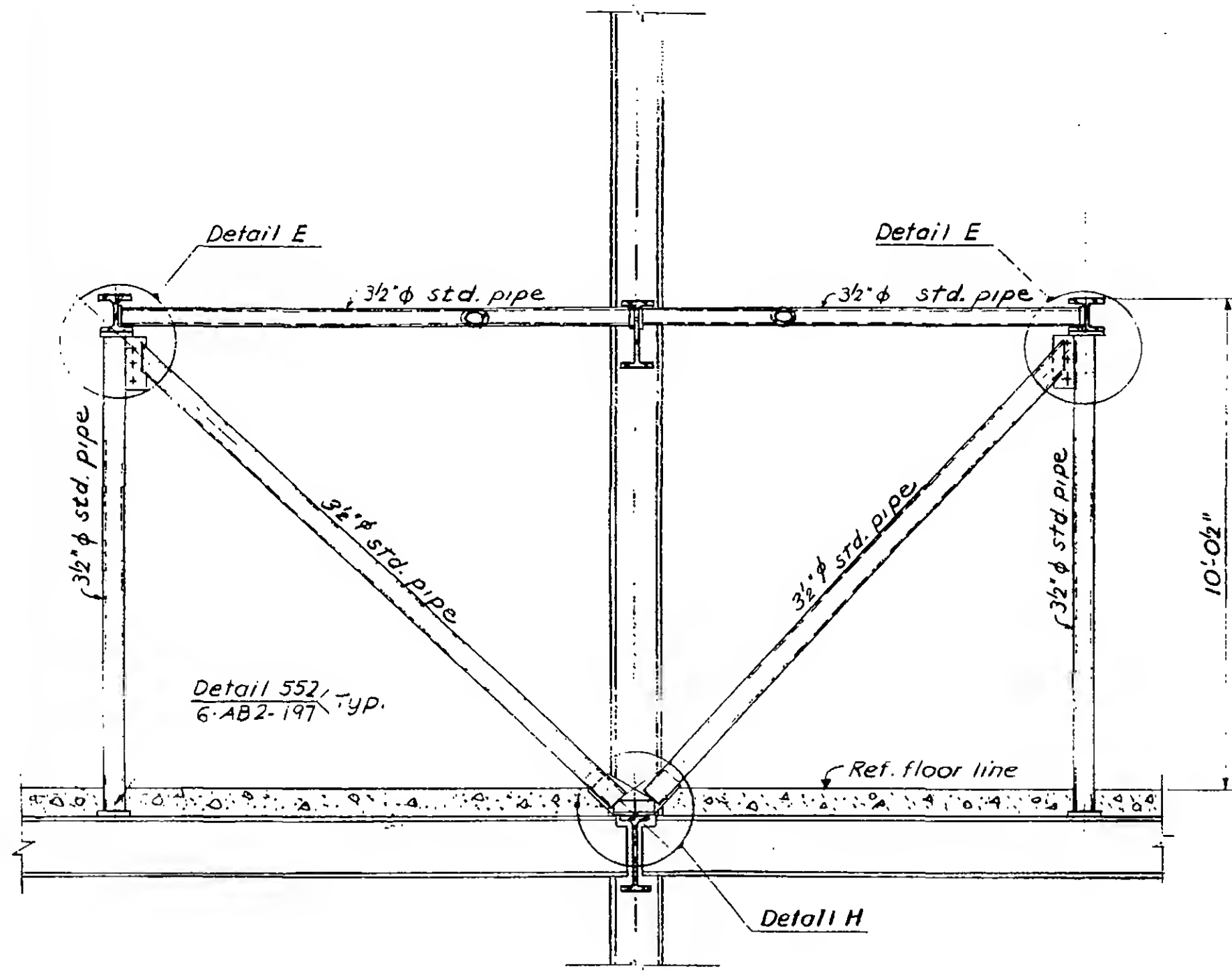
- 29 - 68



6-AB2-43



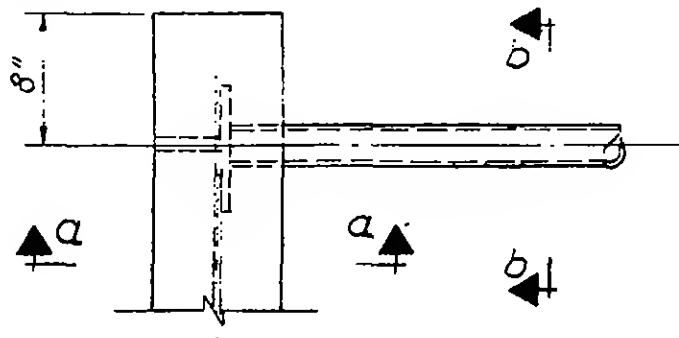
## REVISIONS



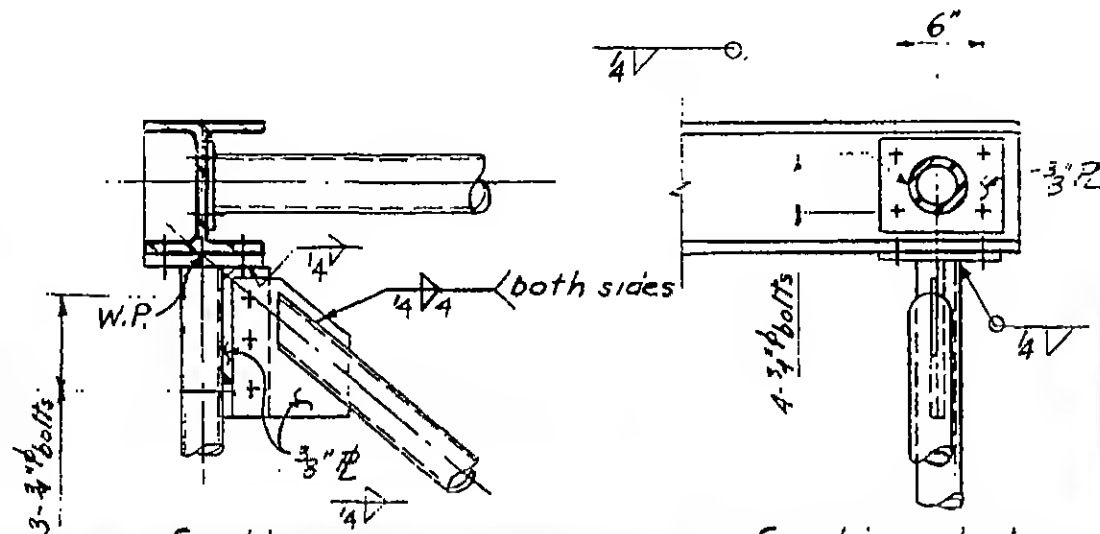
see 6-AB2-45 for details E &amp; H

Section a-a

REVISIONS

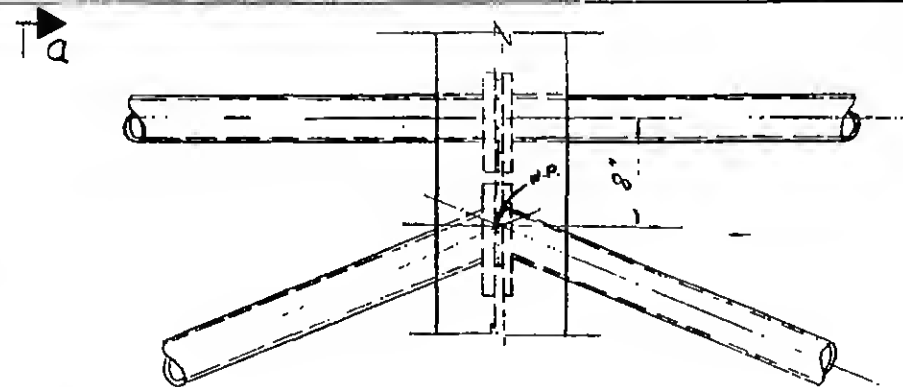


Detail E

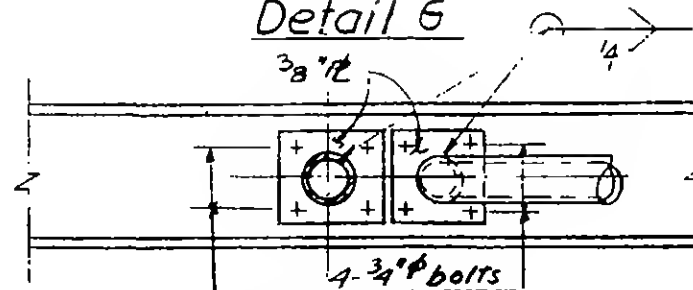


Section a-a

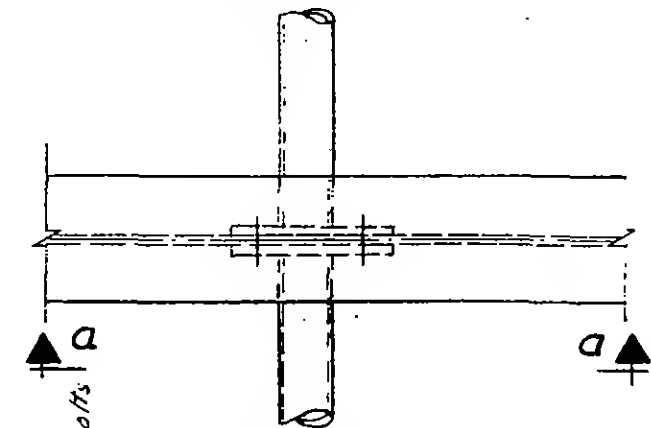
Section b-b



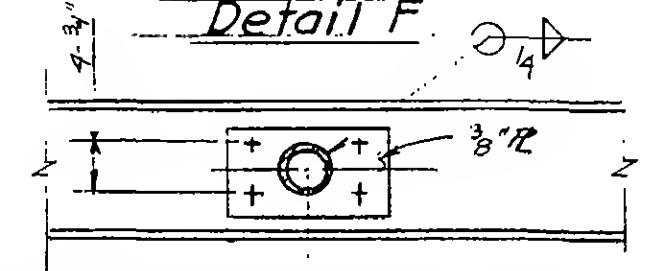
Detail G



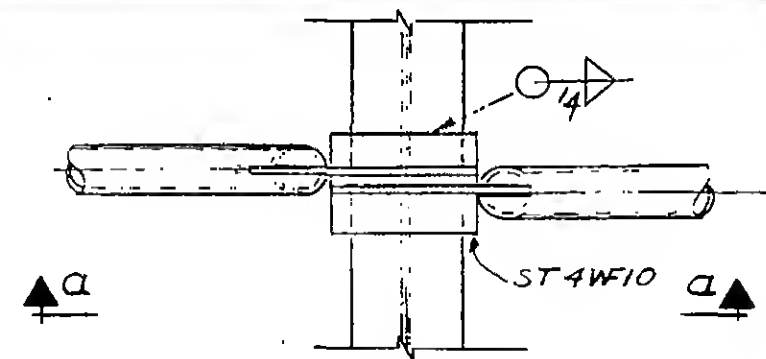
Section a-a



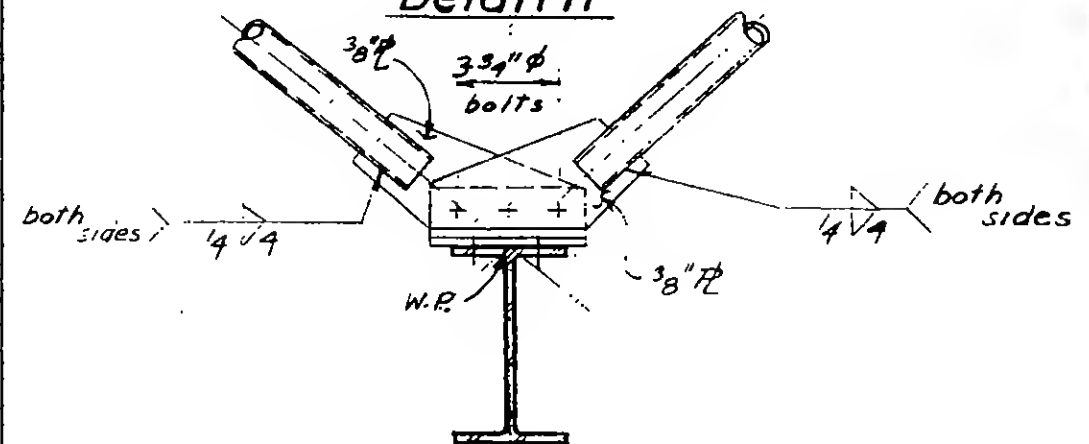
Detail F



Section a-a



Detail H

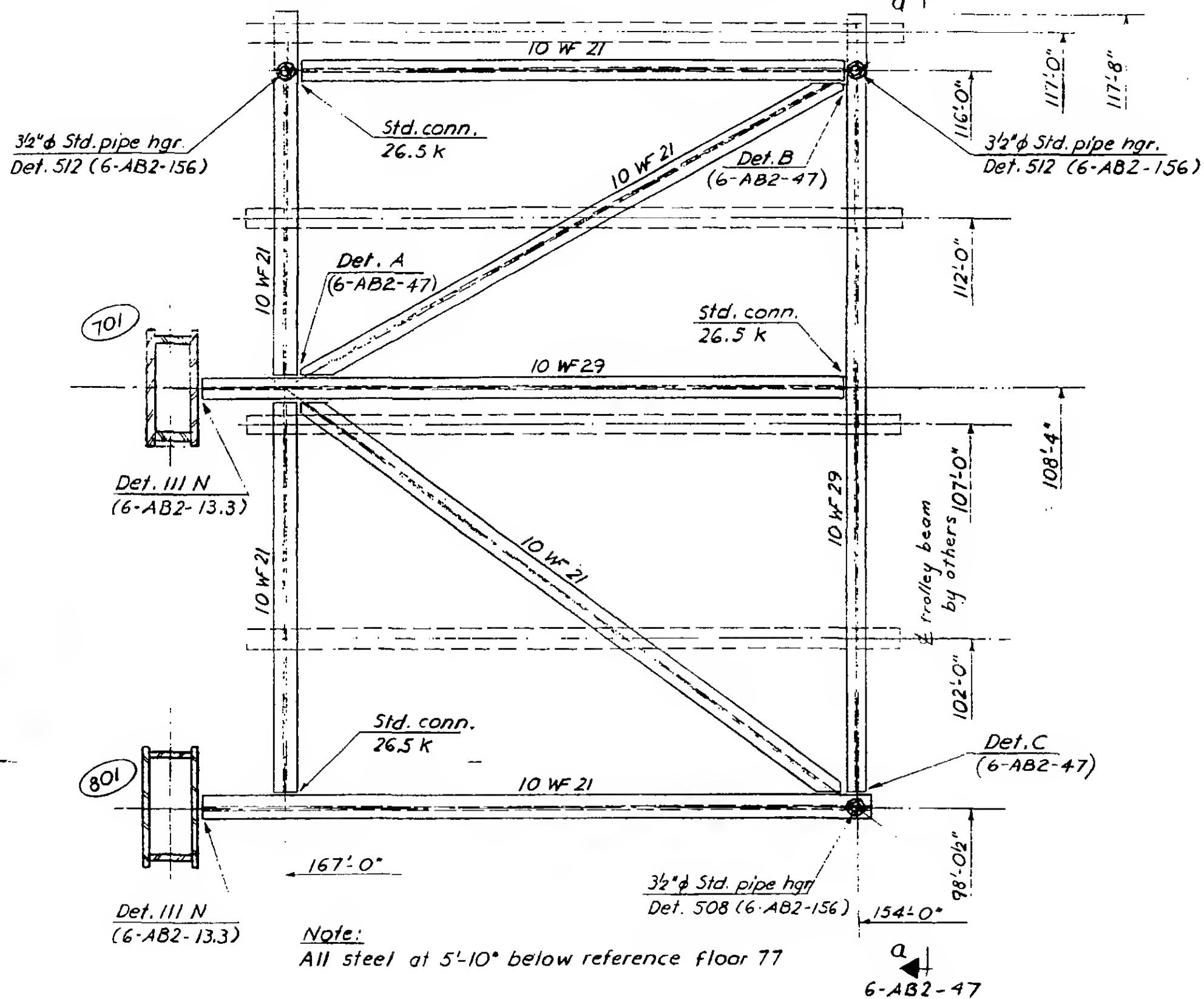


Section a-a

6-AB2-45



## REVISIONS



PROJECT

THE WORLD TRADE CENTER

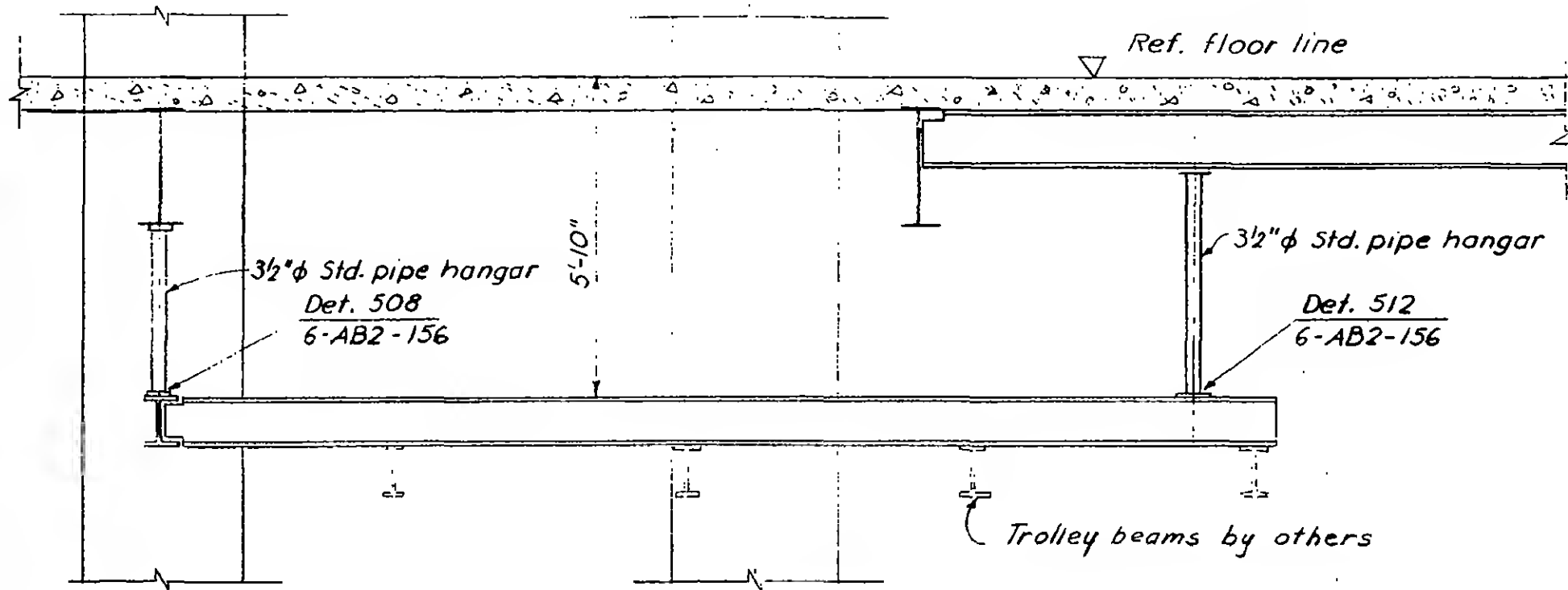
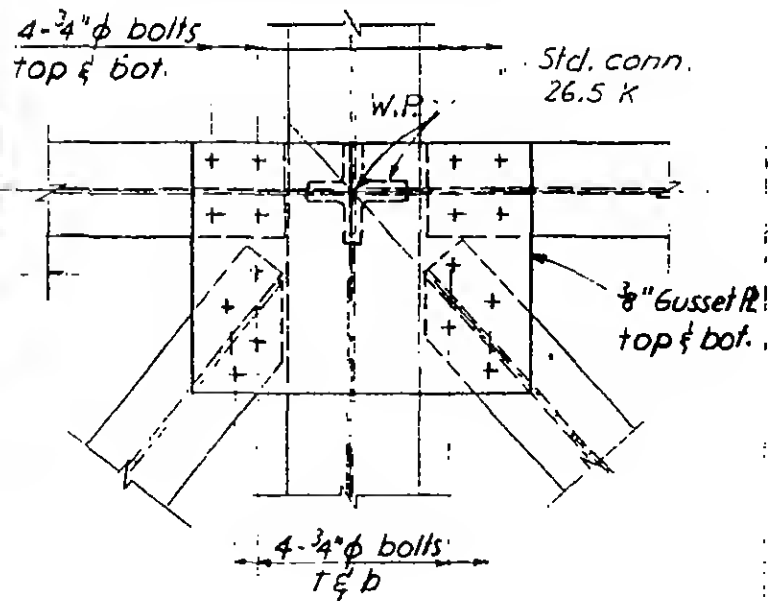
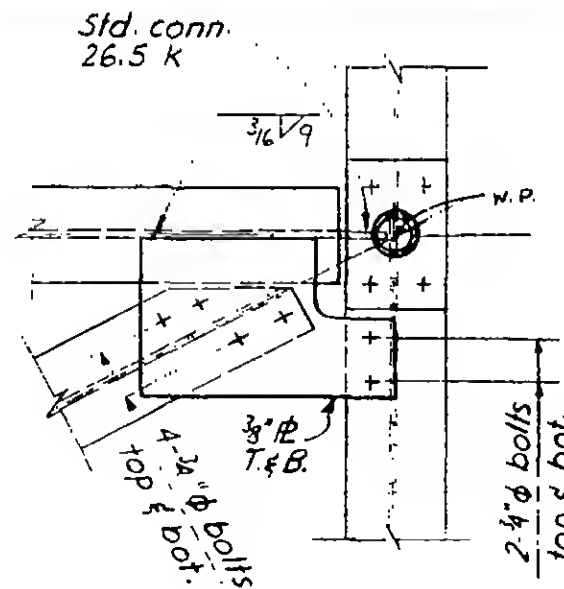
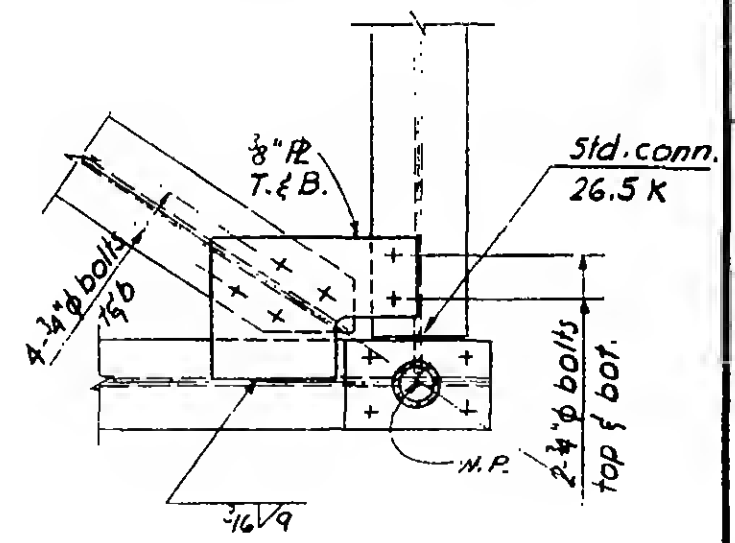
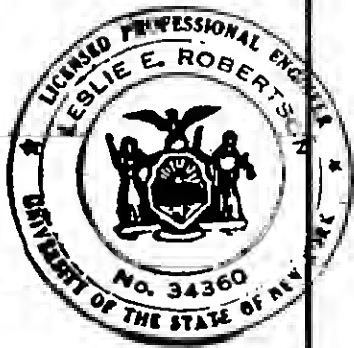
TITLE

PUMP PLATFORM TROLLEY SUPPORT

DATE

2-21-68

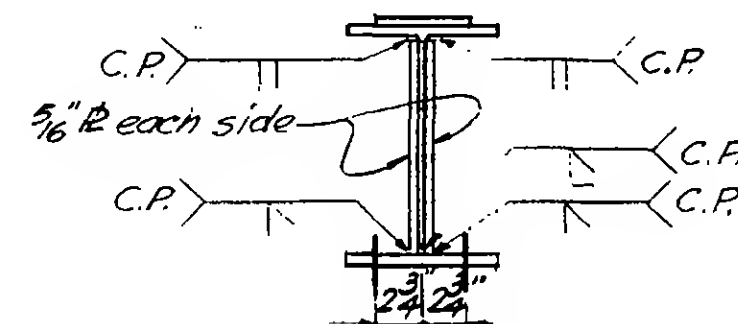
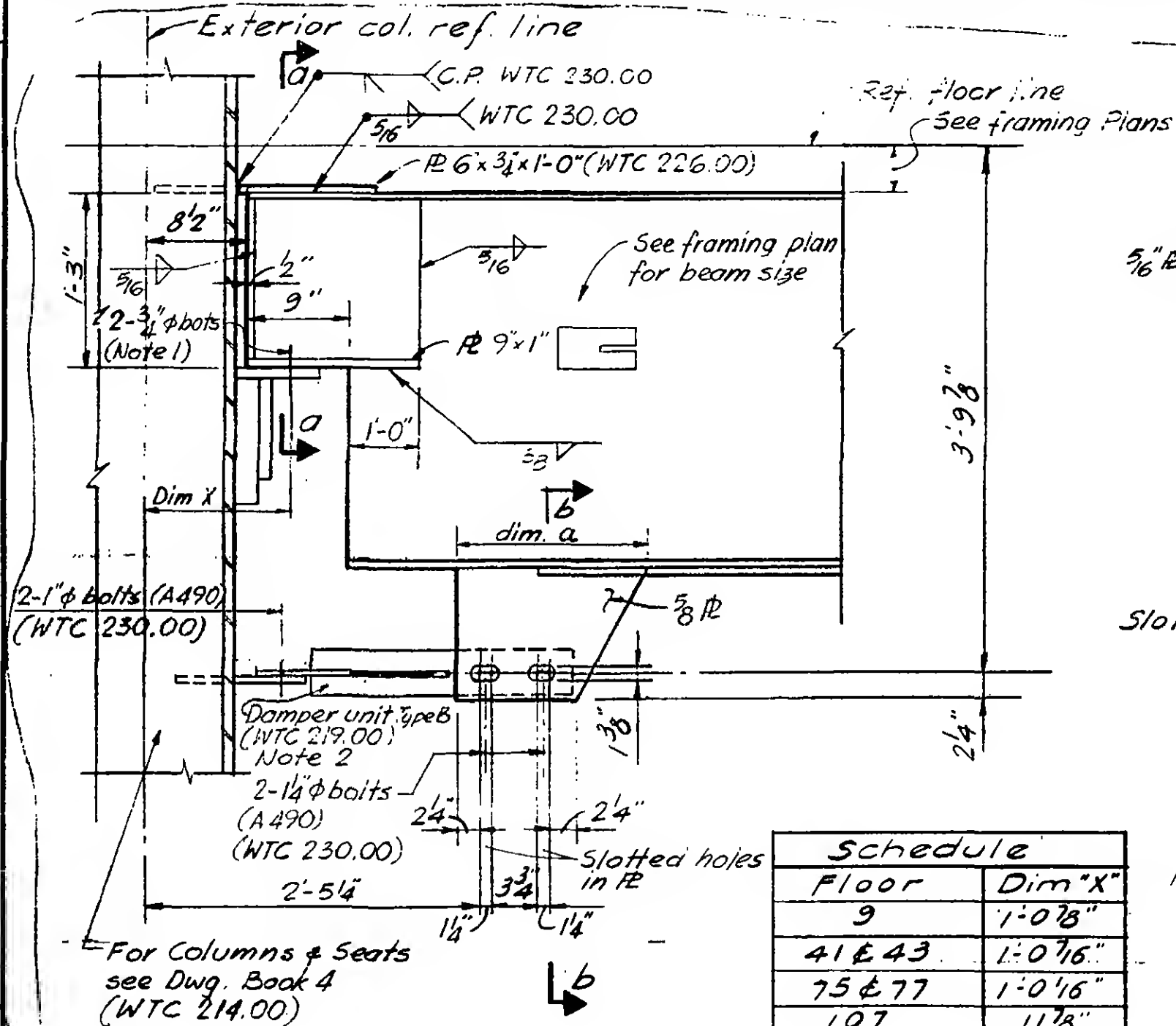
## REVISIONS

Section a-aDetail ADetail BDetail C

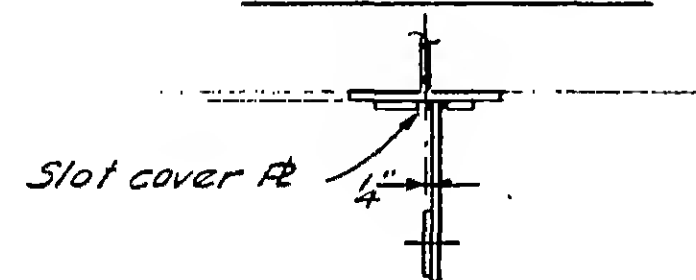
6-AB2-47

## REVISIONS

11-21-67



Section a-a



Section b-b

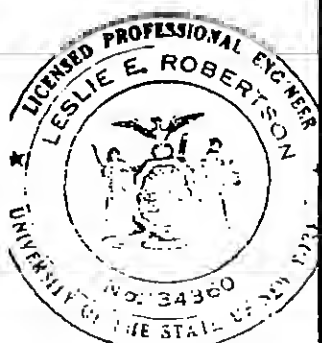
| Schedule |            |
|----------|------------|
| Floor    | Dim"x      |
| 9        | 1'-0 7/8"  |
| 41 & 43  | 1'-0 7/16" |
| 75 & 77  | 1'-0 1/16" |
| 107      | 11'8"      |

Note: 1. (Bolts by WTC 230.00)  
Bolts to be A 307 or  
A 325 hand tightened.  
If A 325 are torqued  
loosen after top flt is  
welded & before concrete  
is cast.

Note: 2. Damping unit to be installed after slab has been cast.

| DETAIL | DIM. a |
|--------|--------|
| 150    | 11"    |
| 151    | 1'-1"  |
| 152    | 1'-4"  |
| 153    | 1'-6"  |

6-AB2-52



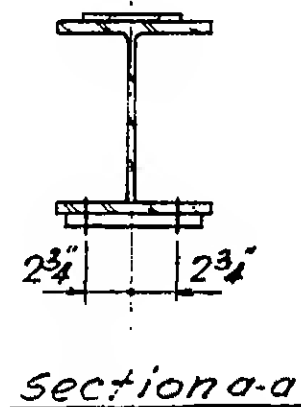
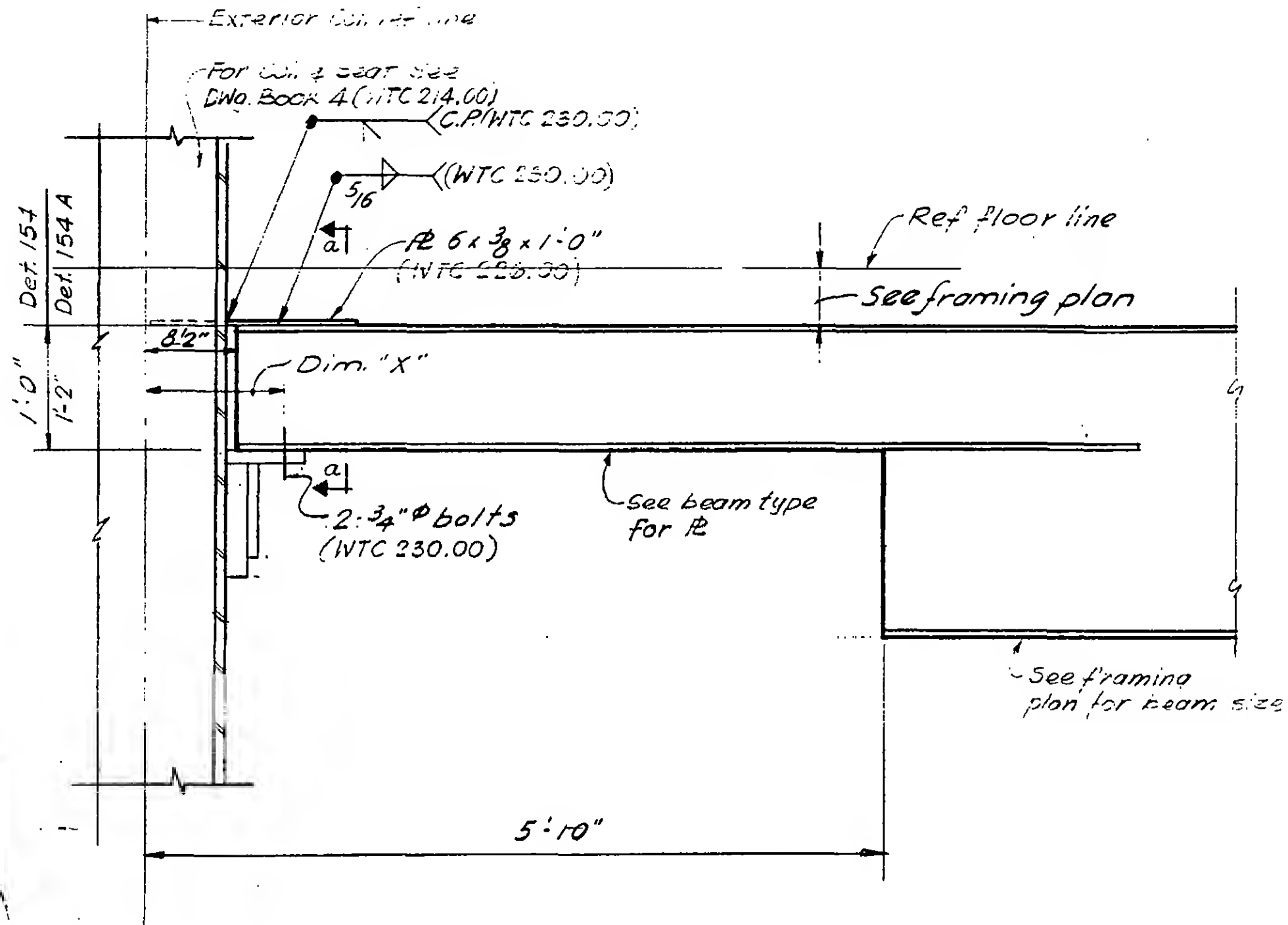
PROJECT THE WORLD TRADE CENTER

TITLE CONNECTION DETAIL 154

DATE 6-5-67

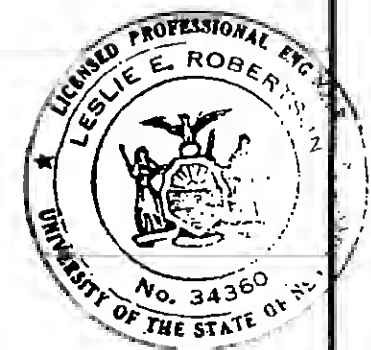
## REVISIONS

11-21-67



| Schedule       |            |
|----------------|------------|
| Floors         | Dim "X"    |
| 44, 46, 47, 48 | 1'-0 3/8"  |
| 49             | 1'-0 5/16" |
| 78, 80, 83     | 11' 5/16"  |

6-AB2-53



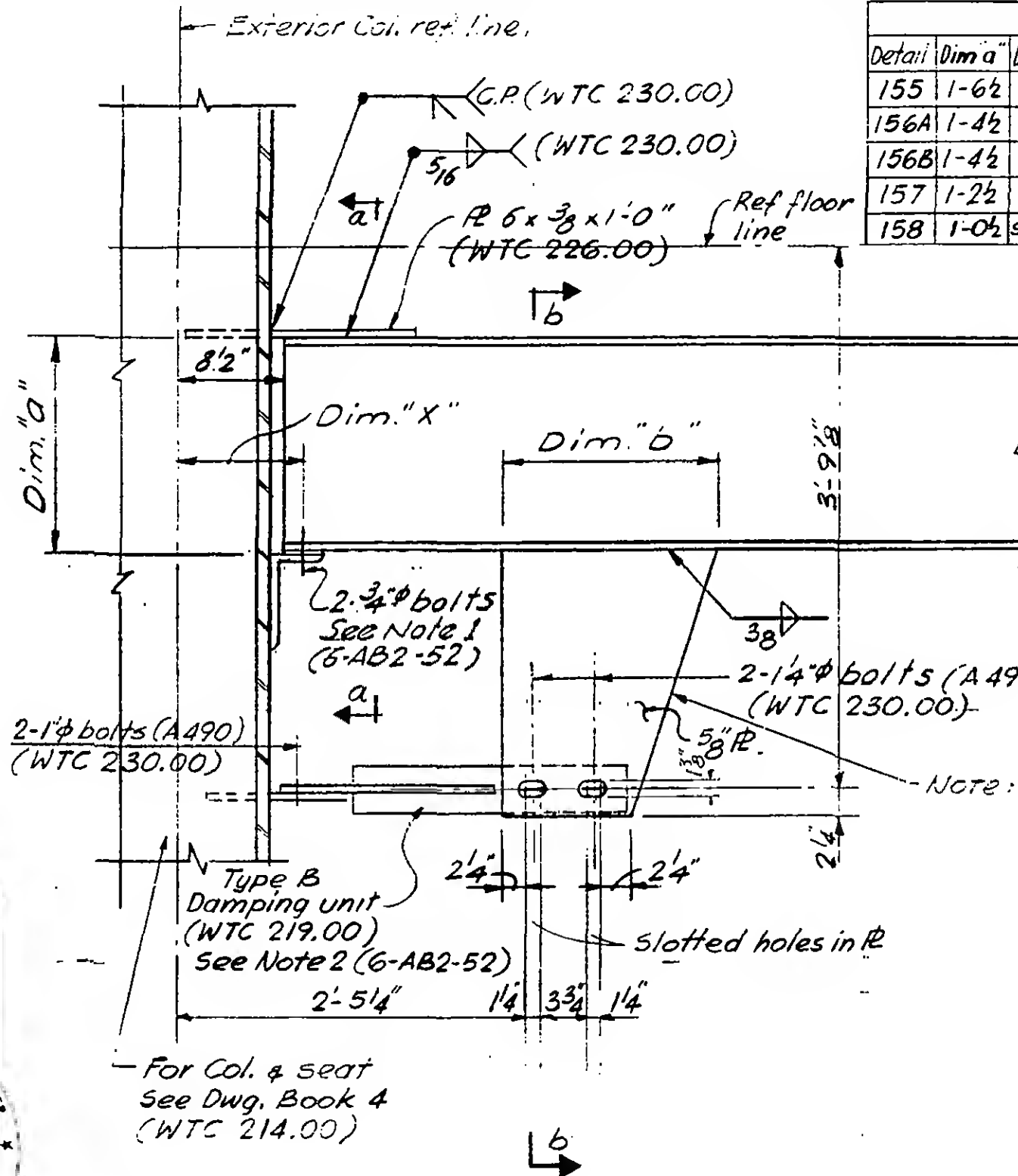
PROJECT THE WORLD TRADE CENTER

TITLE CONNECTION DETAIL 155-158

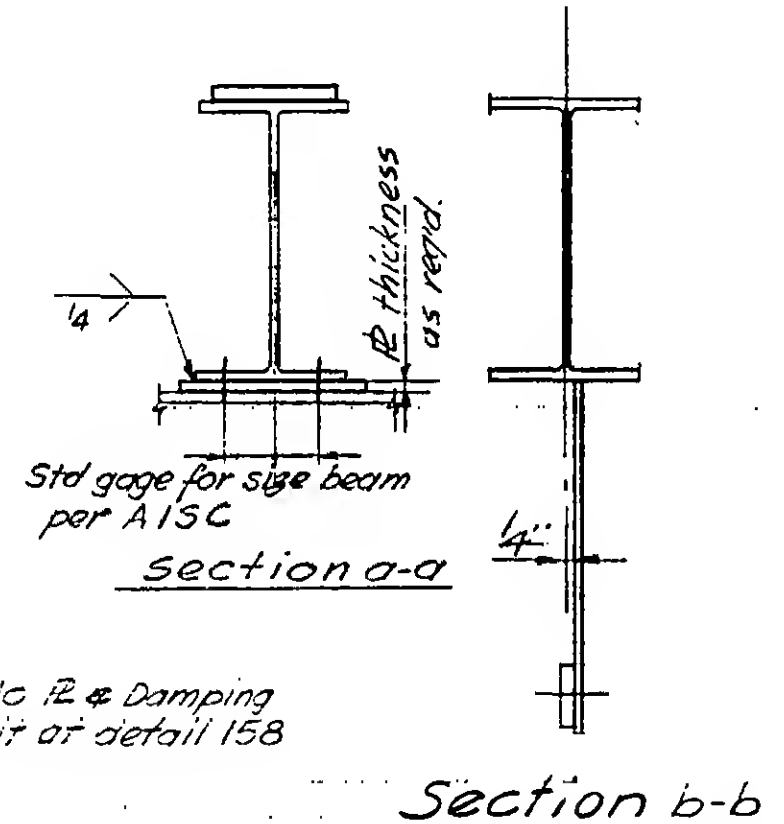
DATE 5-22-67

## REVISIONS

11-21-67



| Detail | Dimension X |          |          |           |           |          |
|--------|-------------|----------|----------|-----------|-----------|----------|
|        | Dim a       | Dim b    | FLR 9    | FLRS41,43 | FLRS75,77 | FLR107   |
| 155    | 1-6 1/2     | 1-6      | 1-0 7/8  | 1-0 7/16  | 1-0 1/16  | 0-11 7/8 |
| 156A   | 1-4 1/2     | 1-8      | 1-0 7/8  | 1-0 7/16  | 1-0 1/16  | 0-11 7/8 |
| 156B   | 1-4 1/2     | 1-8      | 0-10 7/8 | 0-10 7/16 | 0-10 1/16 | 0-9 7/8  |
| 157    | 1-2 1/2     | 1-10     | 0-10 7/8 | 0-10 7/16 | 0-10 1/16 | 0-9 7/8  |
| 158    | 1-0 1/2     | See Note | 0-10 7/8 | 0-10 7/16 | 0-10 1/16 | 0-9 7/8  |



Note: No P & Damping unit at detail 158

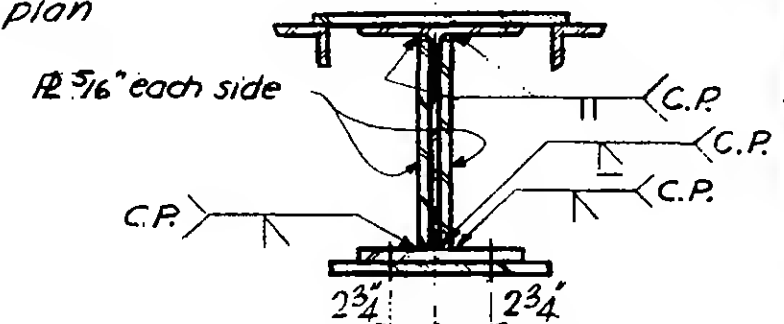
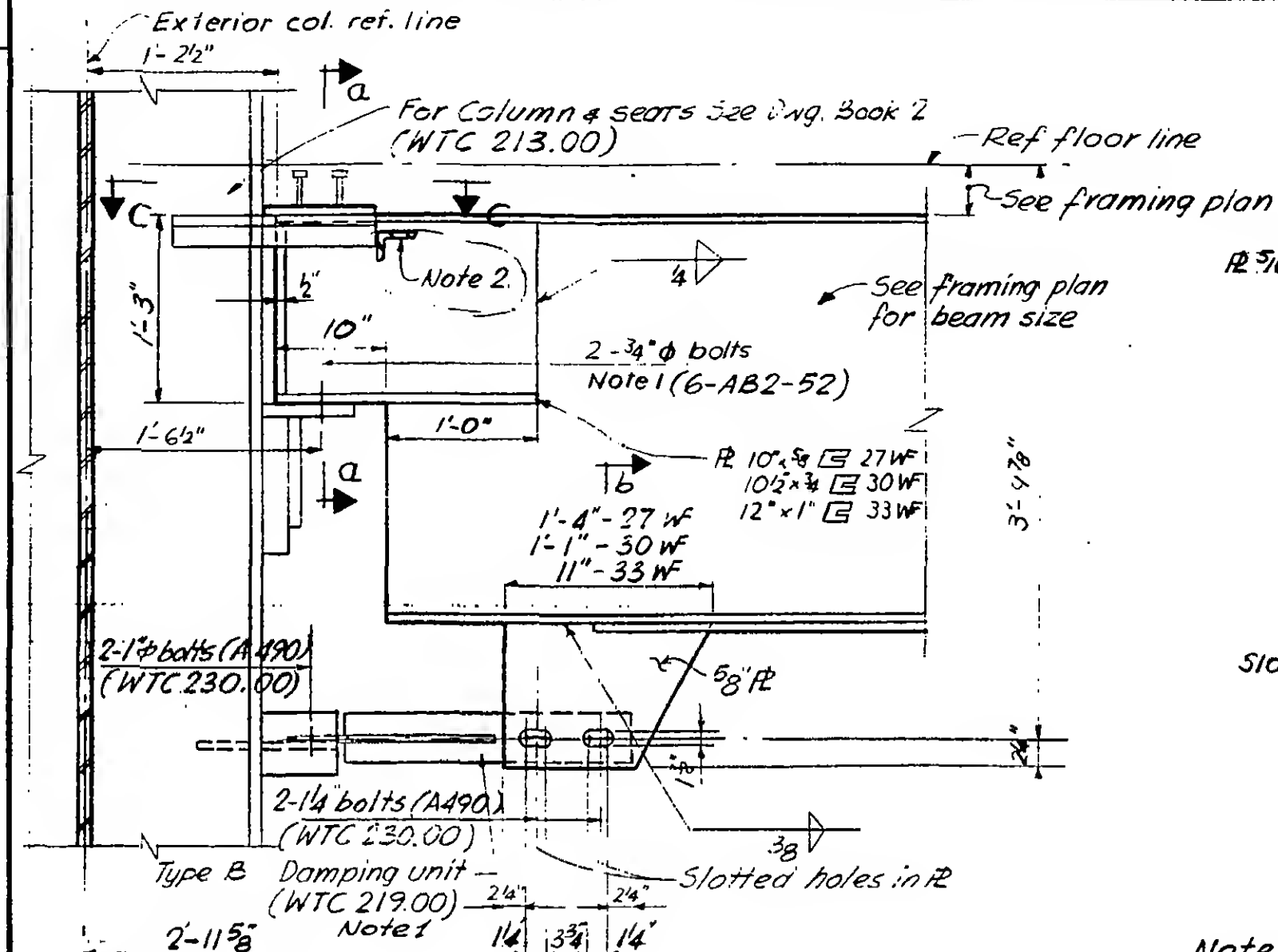
6-AB2-54



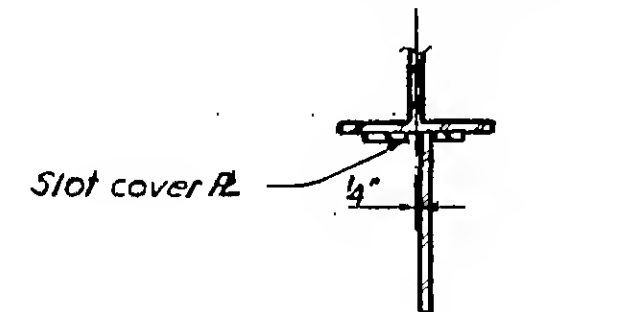
## REVISIONS

12-21-67

8-29-68

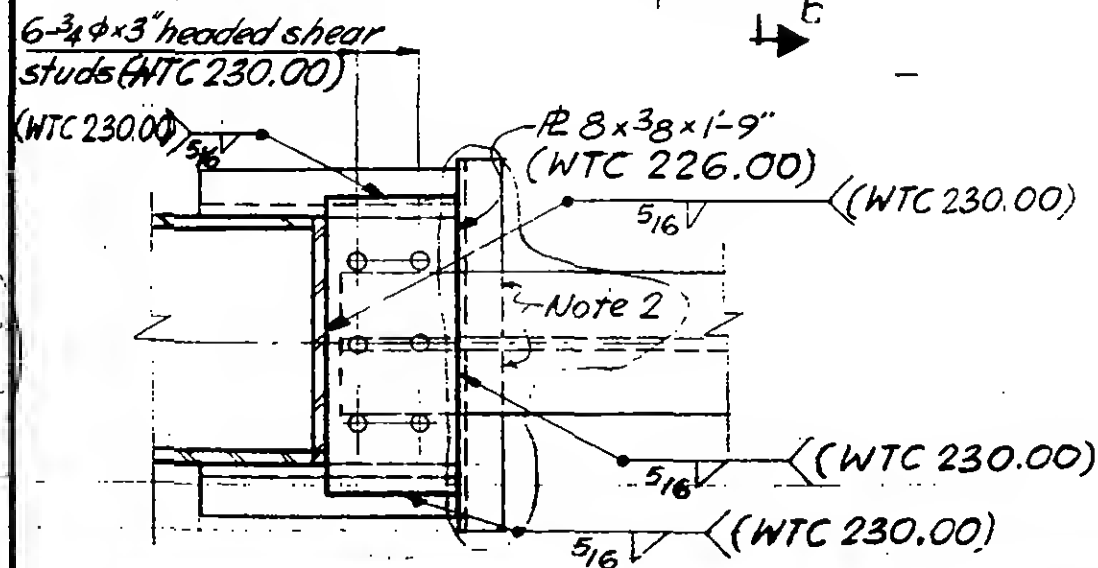


Section a-a



Section b-b

Note: 1. Damping unit to be installed after slab has been cast.  
2. Dock shelf L 3x2 for details, see Det. WW 6-AB3-25.

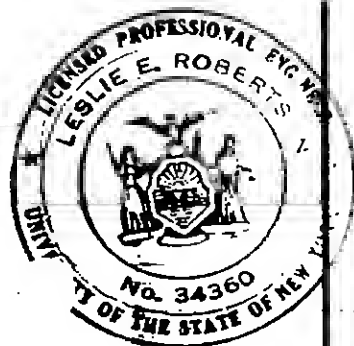
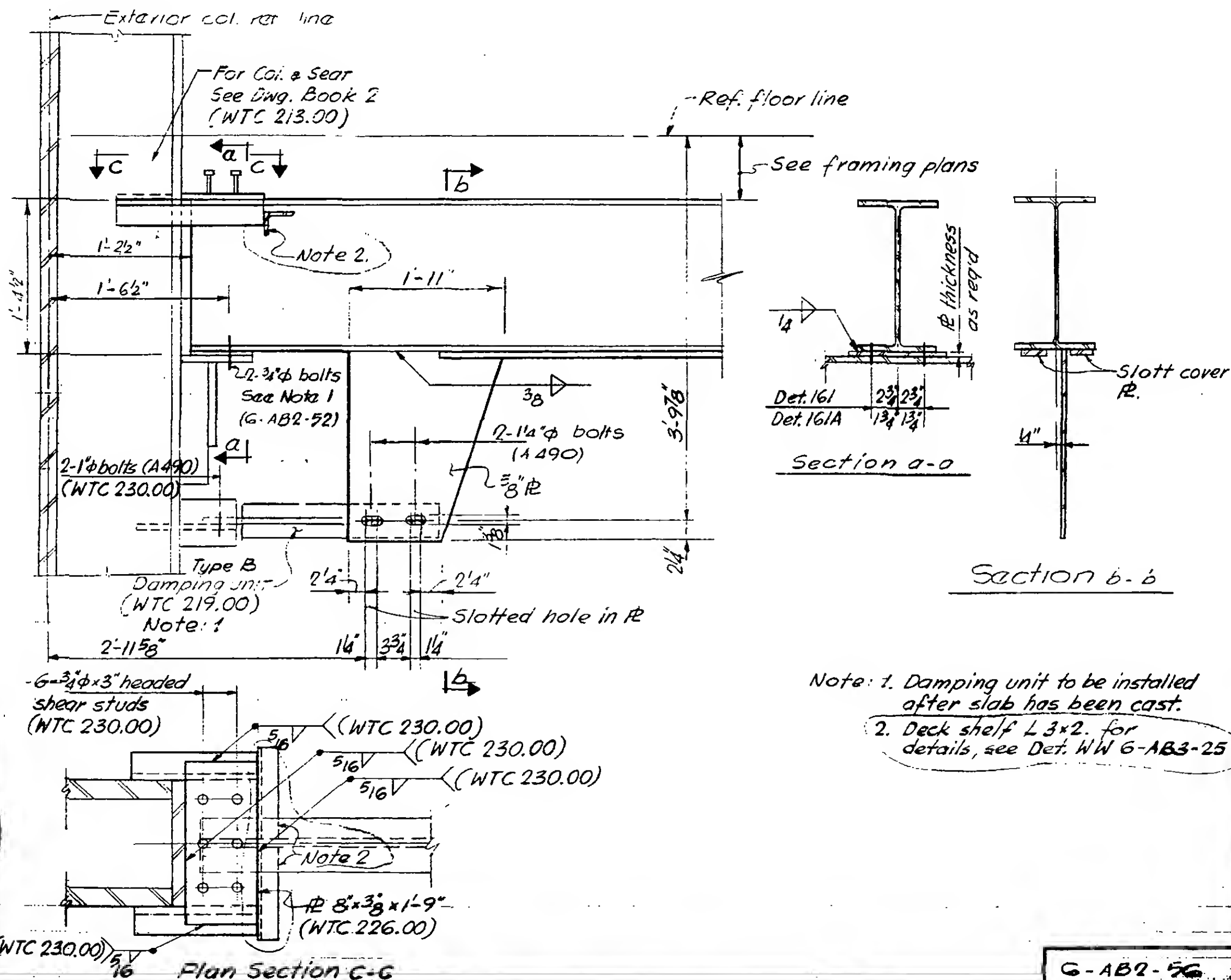


Plan Section C-C

6-AB2-55

## REVISIONS

12-20-67  
8-29-68



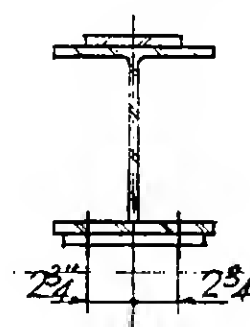
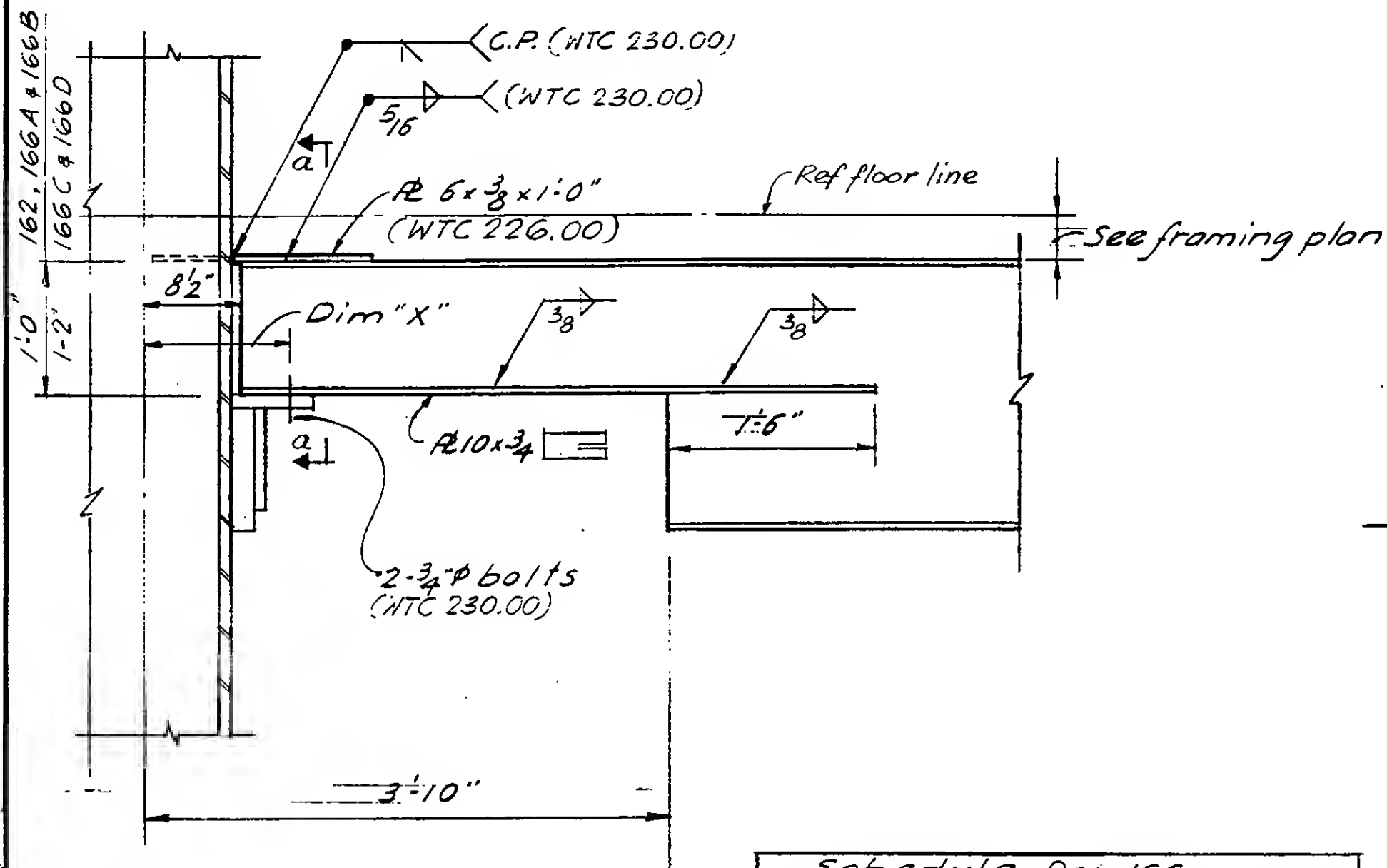
G-AB2-56

PROJECT THE WORLD TRADE CENTER

TITLE CONNECTION DETAIL 162 &amp; 166 A - D

DATE 11-21-67

REVISIONS



Section a-a

Schedule Det. 166

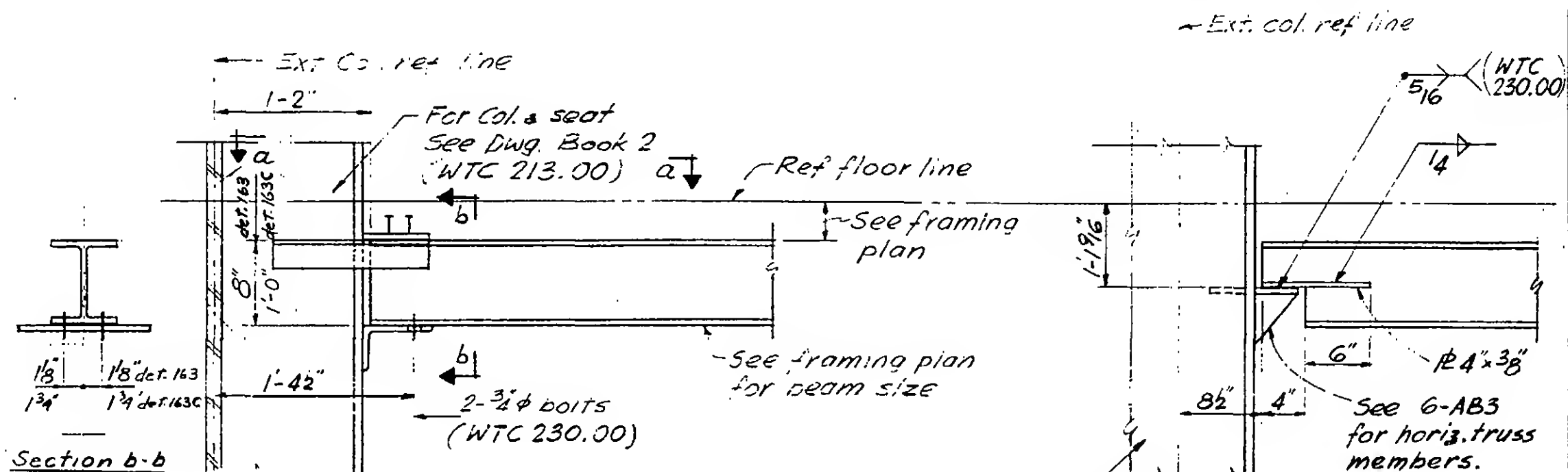
| Floor          | Dim. X' (166 A & C) | Dim. X' (166 B & D) |
|----------------|---------------------|---------------------|
| 44, 46, 47, 48 | 1'-0 3/8"           | 10 3/8"             |
| 49             | 1'-0 5/16"          | 10 5/16"            |
| 78, 80 - 83    | 11 5/16"            | 9 5/16"             |
|                |                     |                     |
|                |                     |                     |

6-AB2-57



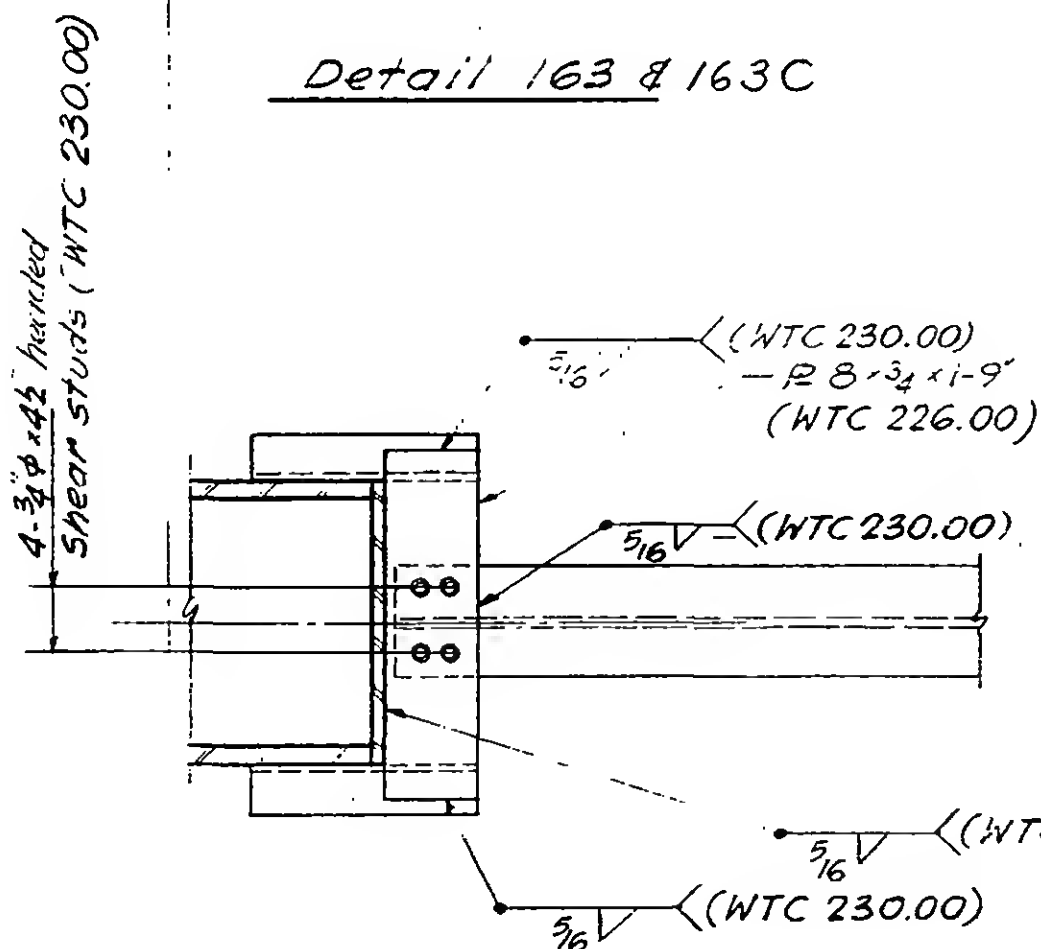
## REVISIONS

12/21/67

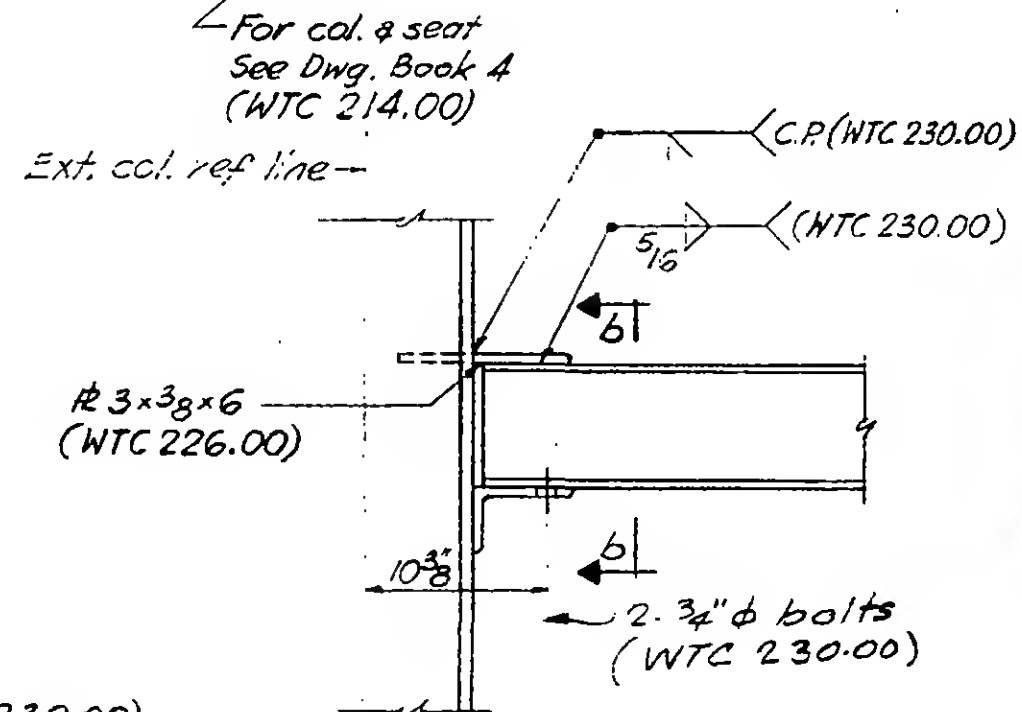


Detail 163 & 163C

Detail 163 A



Section a-a



Detail 163B



6-AB2-58-

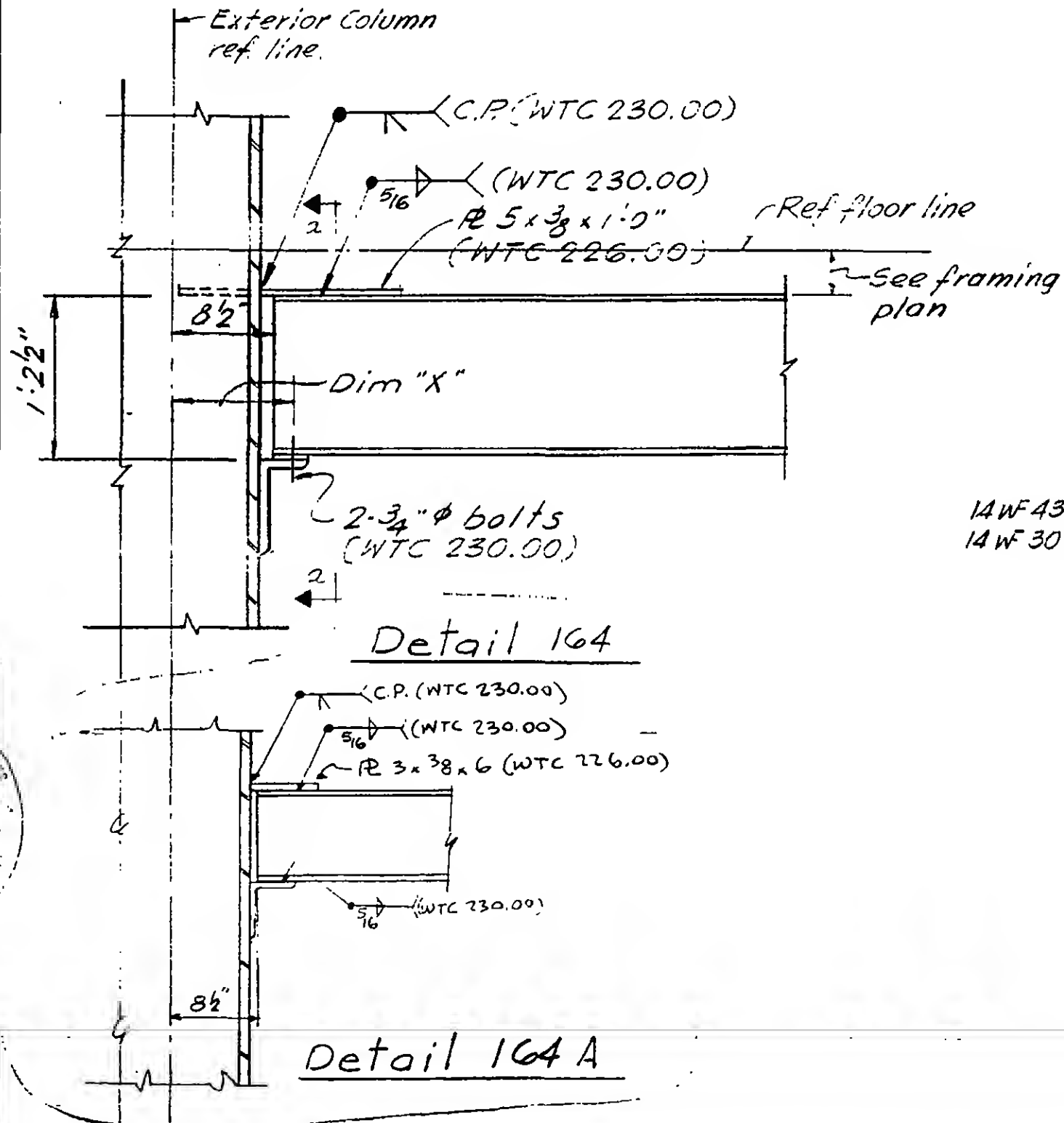
PROJECT THE WORLD TRADE CENTER

TITLE CONNECTION DETAIL 164, 164 A

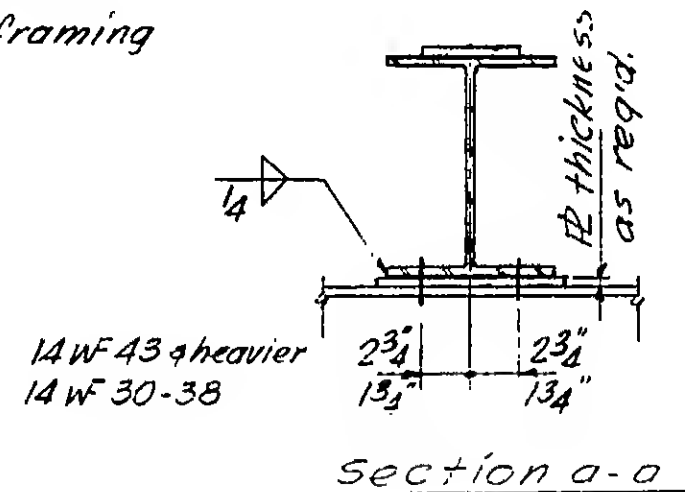
DATE 11-21-67

## REVISIONS

8-17-68



| Schedule |           |
|----------|-----------|
| Floors   | Dim. "X"  |
| 44       | 10'3 3/8" |
| 78       | 9'5 1/16" |
|          |           |
|          |           |



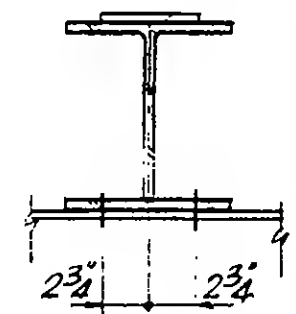
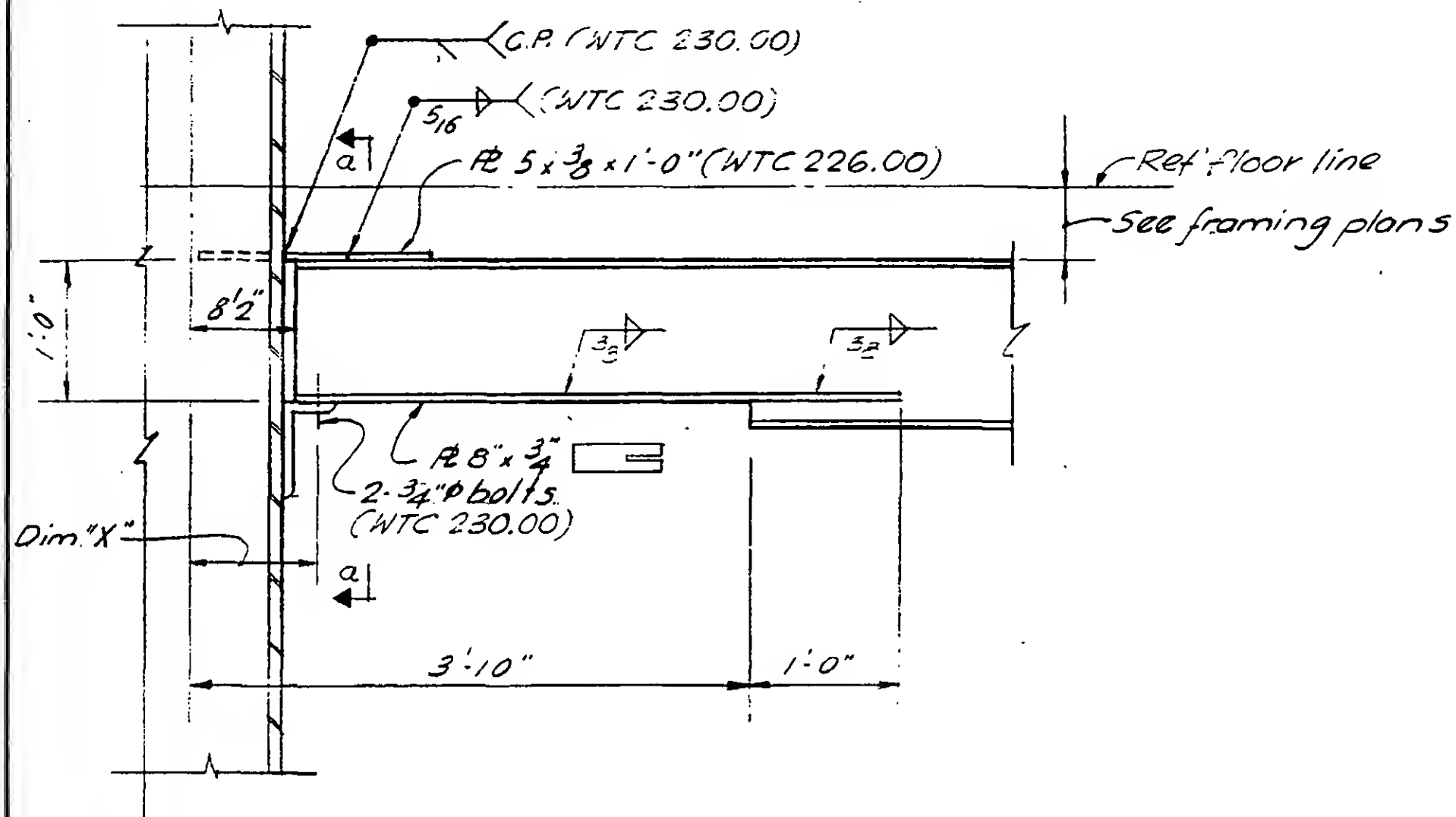
6-AB2-59

PROJECT THE WORLD TRADE CENTER

TITLE CONNECTION DETAIL 165

DATE 11-21-67

REVISIONS



Section a-a

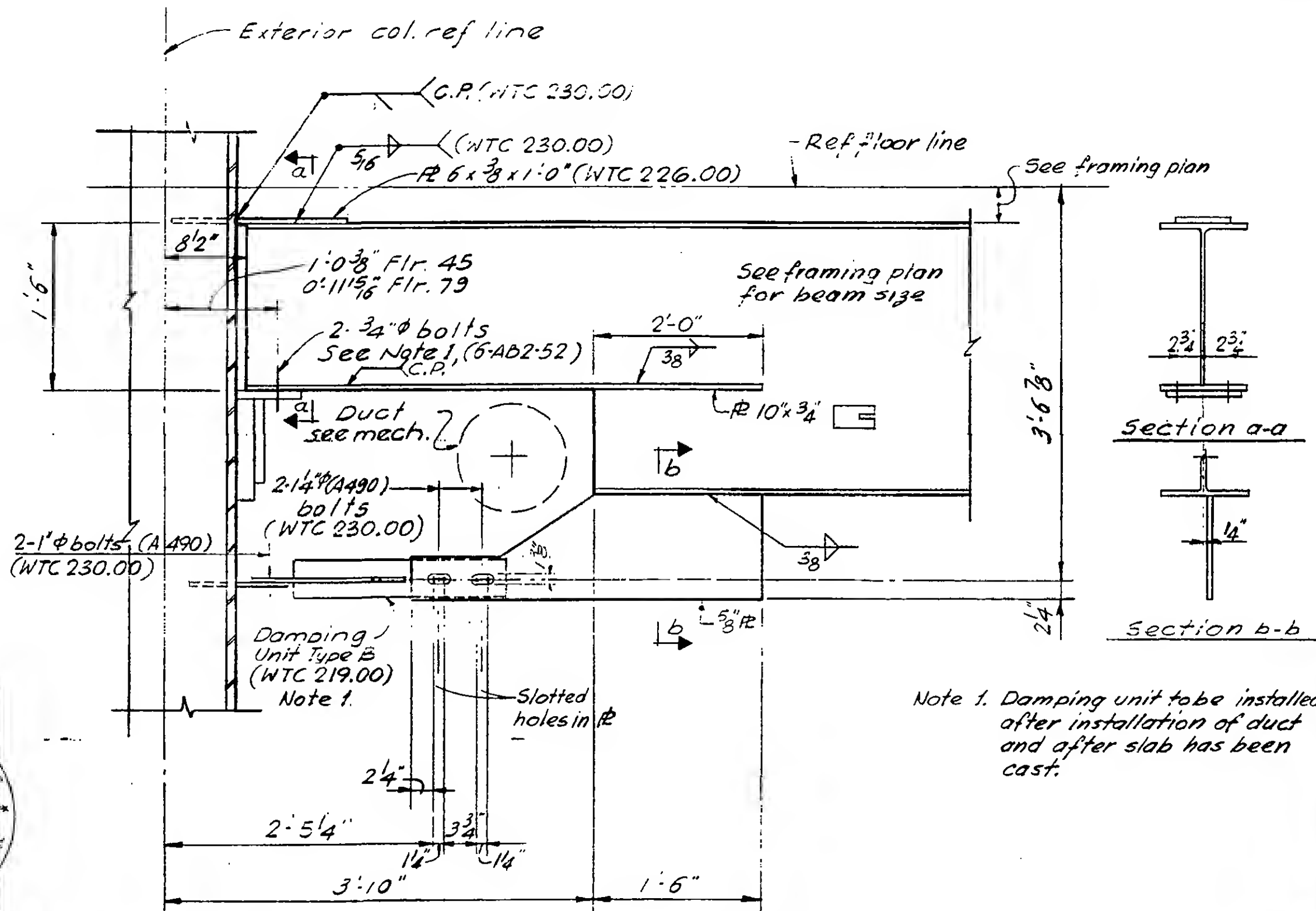
## Schedule

| Floors         | Dim. "X" |
|----------------|----------|
| 44, 46, 47, 48 | 10 3/8"  |
| 49             | 10 5/16" |
| 78, 80 - 83    | 9 15/16" |

6-AB2-60

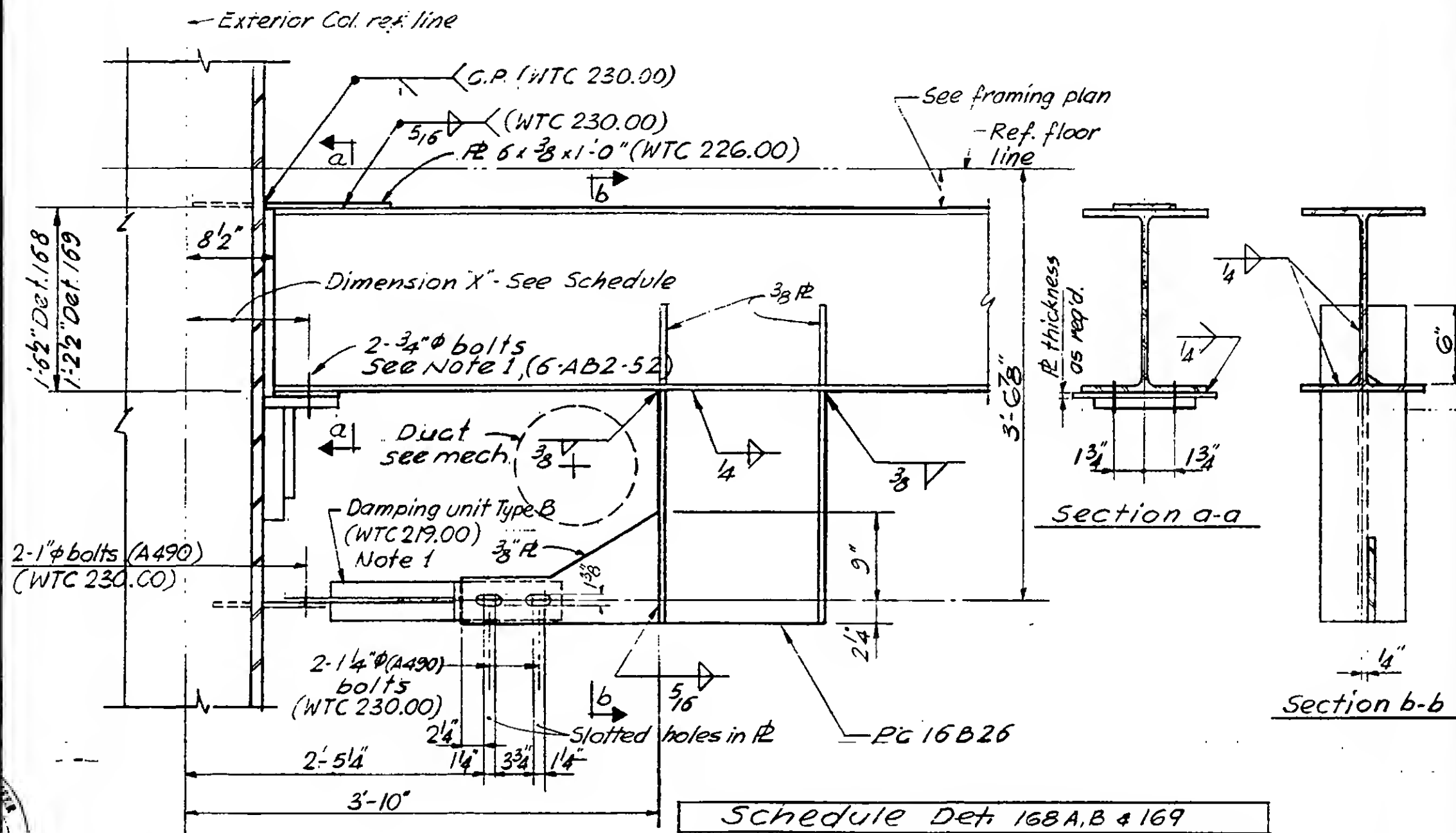


## REVISIONS

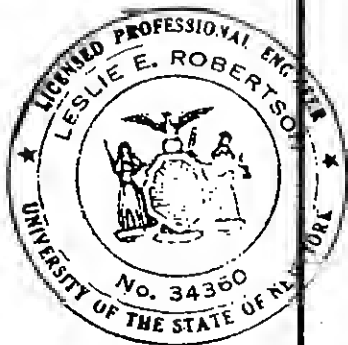


6-ABZ-61

REVISIONS



Note 1.  
Damping unit to be installed  
after installation of duct and  
after slab has been cast.



6-AB2-62

PROJECT THE WORLD TRADE CENTER

TITLE CONNECTION DETAIL 170 A thru G

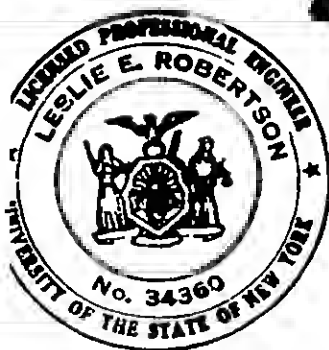
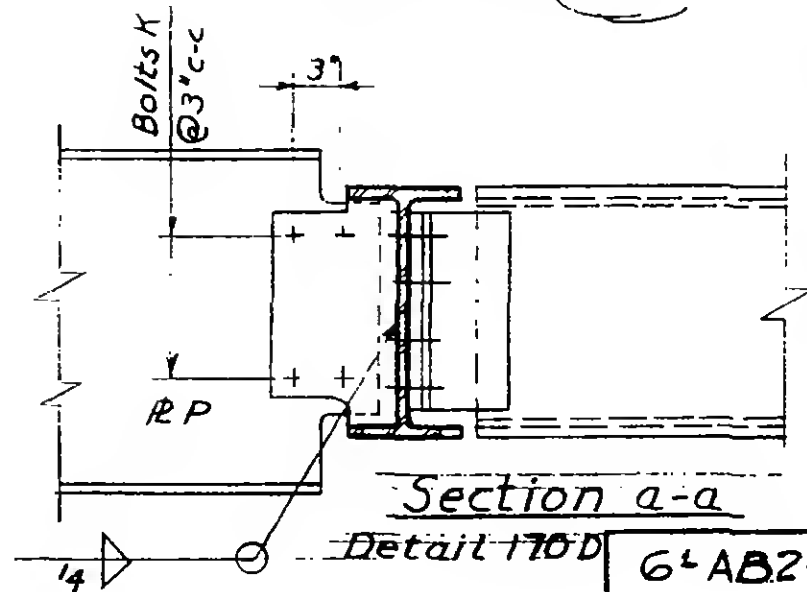
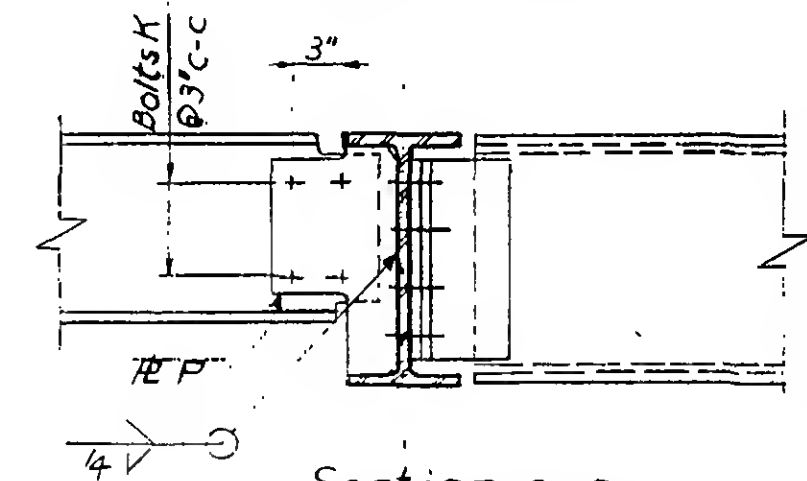
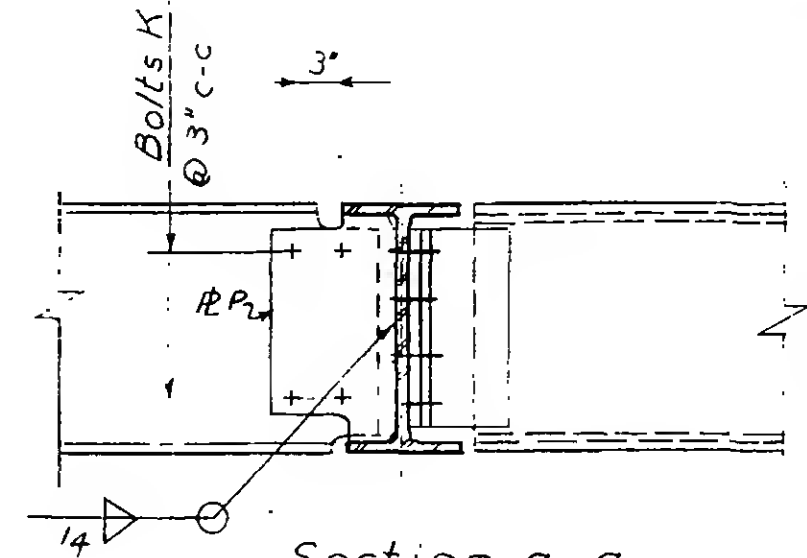
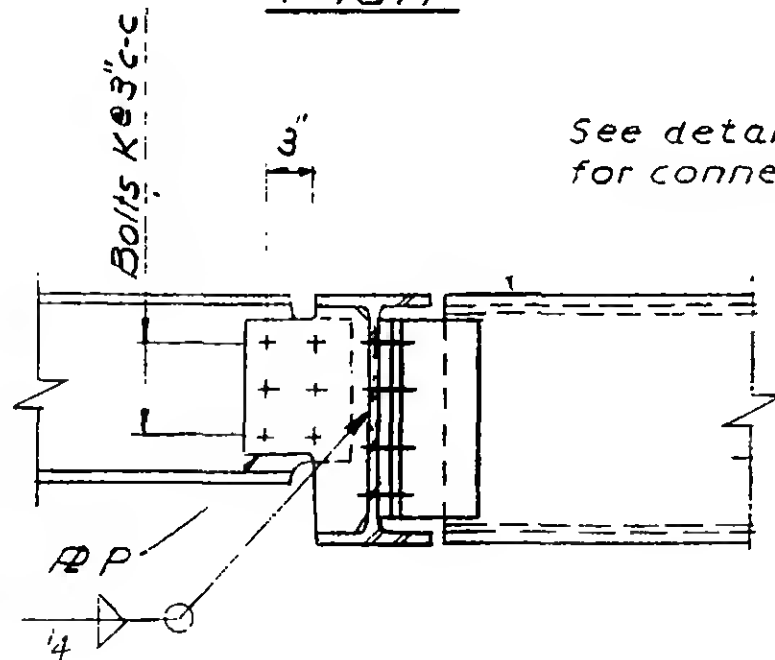
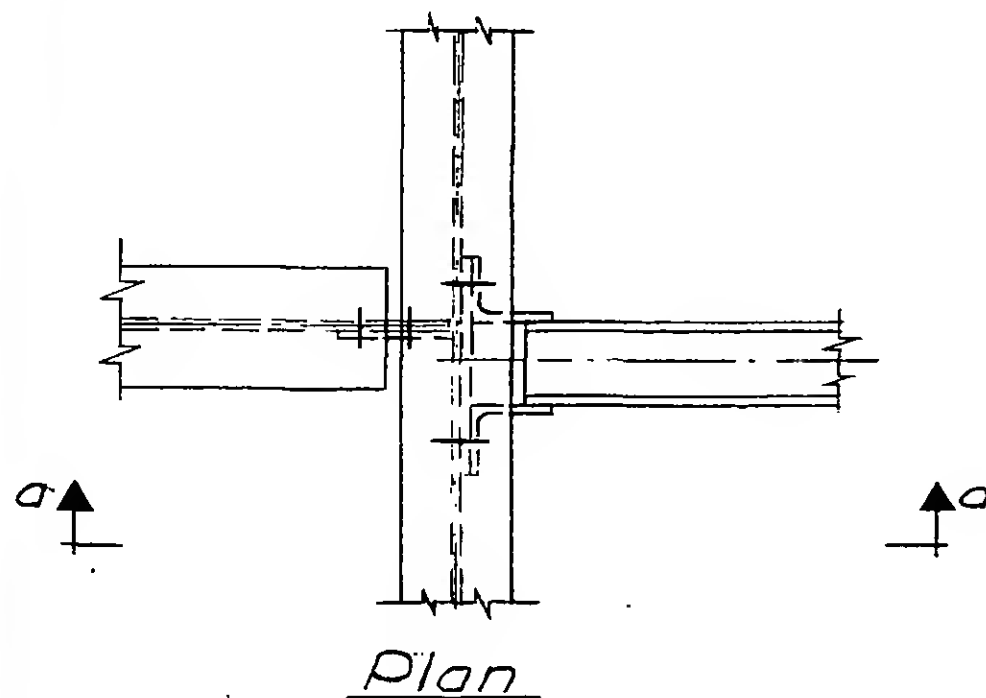
DATE 6-30-67

REVISIONS

7-28-67

8-5-67

8-14-67



6-AB2-73

**Civil & Structural Engineers**

TITLE SCHEDULE FOR DETAIL 170 A - F

DATE 6-30-67

7-28-67

8-5-67

## PLATES

$\rho$

170 A

1702

170 C

1700

170 E

170 F

38

382

94

2.

 $7/16''$ 

7/6'

**BOLTS**

K

6-78"  $\phi$  (A 325)

 $6.78 \times 10^8$ 

6.78"  $\phi$

3-73'φ

8-34<sup>1</sup> ϕ

8-34\* 6



6-AB2-733

SKILLING - HELLE - CHRISTIANSEN - ROBERTSON

Structural &amp; Civil Engineers

PROJECT THE WORLD TRADE CENTER

TITLE SCHEDULE FOR DETAIL 170 G

DATE 8-14-67

REVISIONS

REF. DWG G-AB2-73

170 G

PLATES

P

3/8"

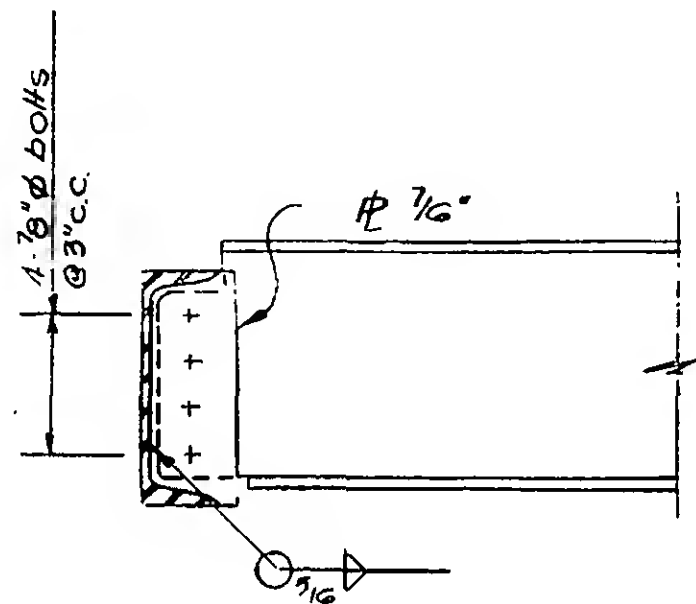
BOLTS

4-3/4"  $\phi$ 

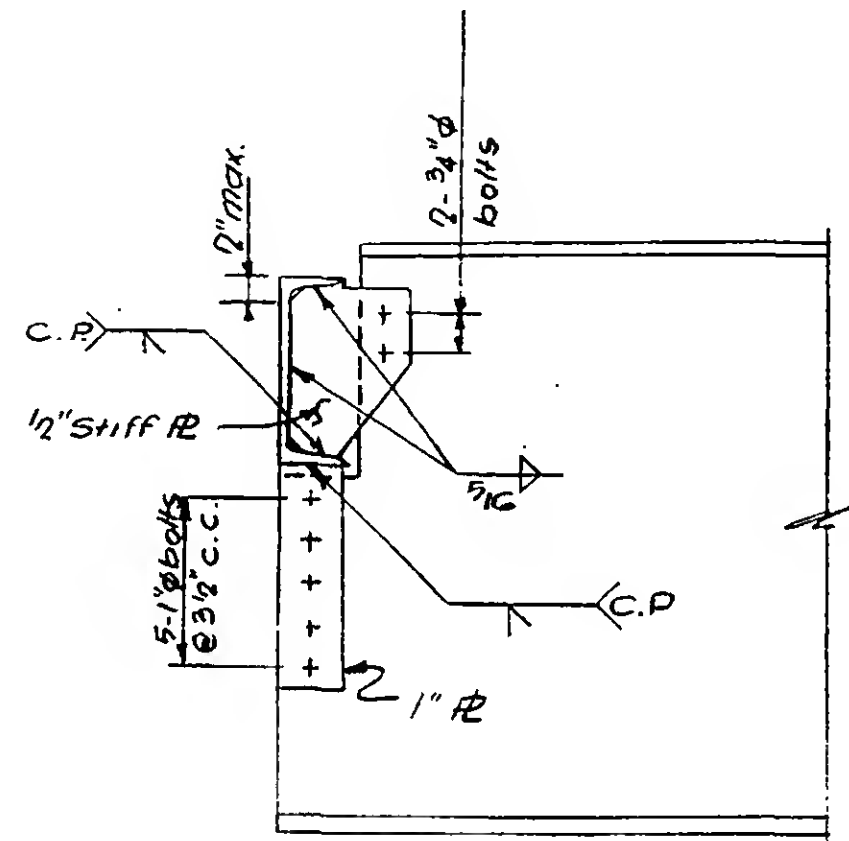
G-AB2-73.2



## REVISIONS



Elevation  
Det. 171 A



Elevation  
Det 171 B



PROJECT THE WORLD TRADE CENTER

TITLE CONNECTION DETAIL 172 A, B & C

DATE 5.9.67

REVISIONS

7.28-67

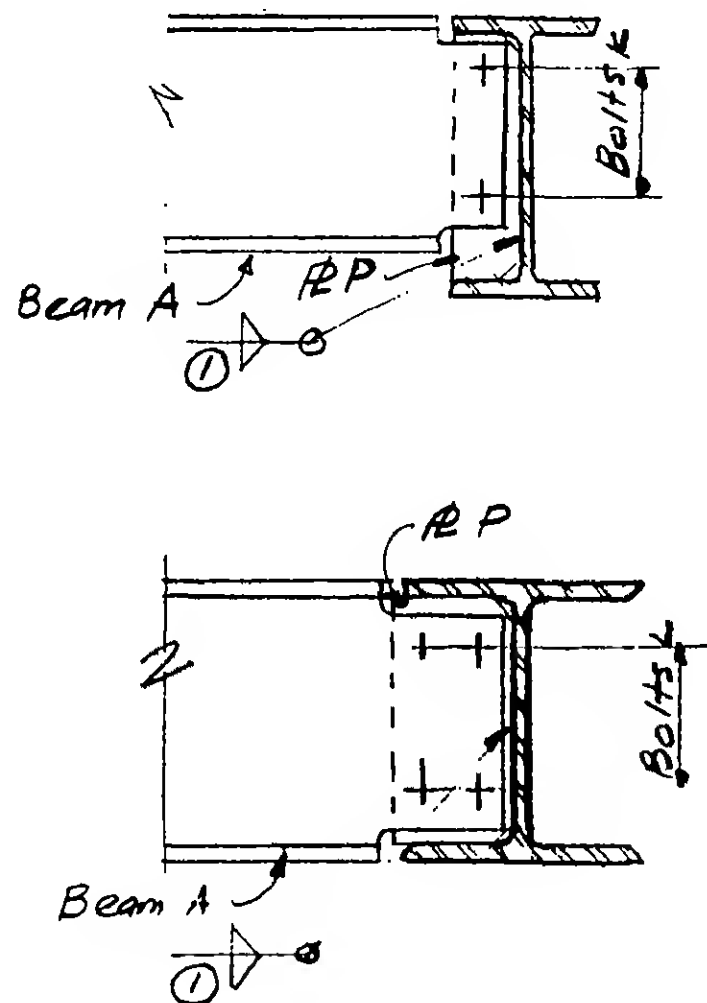
8.5-67

9.15-67

10-2-67

10-5-67

11-17-67



SCHEDULE

| Detail | Beam A                | Plate P   | Bolts  |        | Weld ① |
|--------|-----------------------|-----------|--------|--------|--------|
|        |                       |           | K      | L      |        |
| 172 A  | 24 WF, 24 x 6 I       | 4" x 1/2" | 7-1φ   | -      | 3/8    |
| 172 A  | 16 WF, 18 WF          | 4" x 1/2" | 4-3/8φ | -      | 3/8    |
| 172 A  | 12 WF 58 & lighter    | 7" x 1/2" | -      | 6-3/4φ | 3/8    |
| 172 A  | 12 WF 65 & heavier    | 7" x 3/4" | -      | 6-1"φ  | 1/2    |
| 172 B  | 14 B                  | 4" x 1/2" | 4-3/4φ | -      | 5/16   |
| 172 B  | 10 WF, 12 B           | 4" x 3/8" | 3-3/4φ | -      | 1/4    |
| 172 B  | 12 WF, 14 WF          | 4" x 3/8" | 3-7/8φ | -      | 1/4    |
| 172 B  | 16 WF & 16 B          | 4" x 3/8" | 4-3/4φ | -      | 1/4    |
| 172 B  | 30 x 7 BU (38 x 7 BU) | 4" x 1/2" | 5-7/8φ | -      | 3/8    |
| 172 C  | 12 B                  | 7" x 3/8" | -      | 4-3/8φ | 5/16   |
| 172 C  | 8 B                   | 7" x 3/8" | -      | 4-3/4φ | 1/4    |
| 172 C  | 18 x 7 1/2 WF         | 4" x 1/2" | 4-1"φ  | -      | 3/8    |

\* Except as otherwise shown above

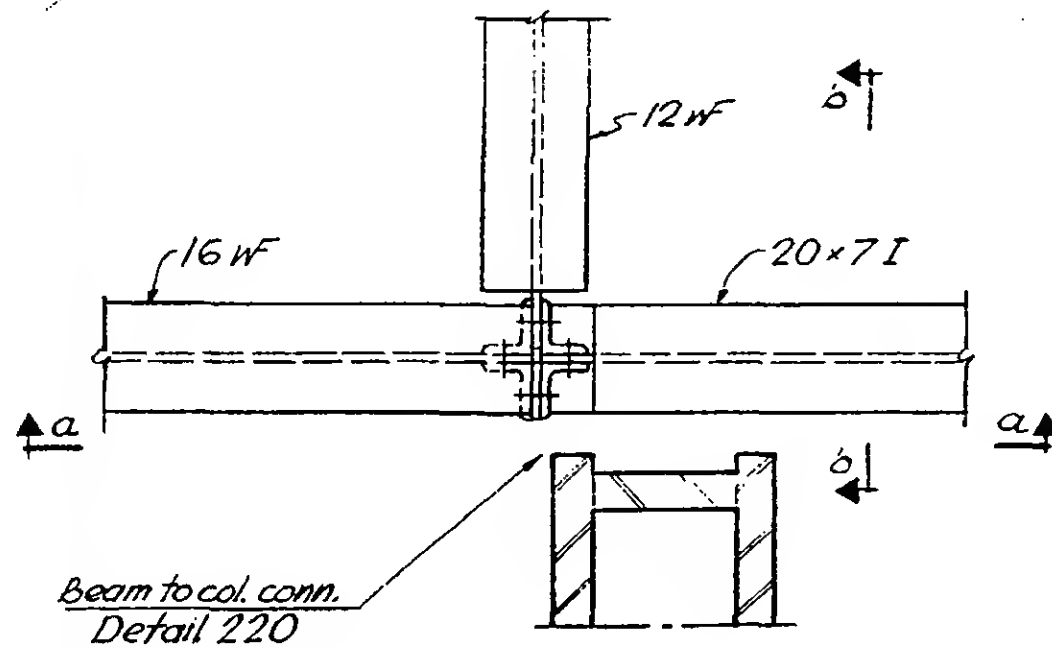
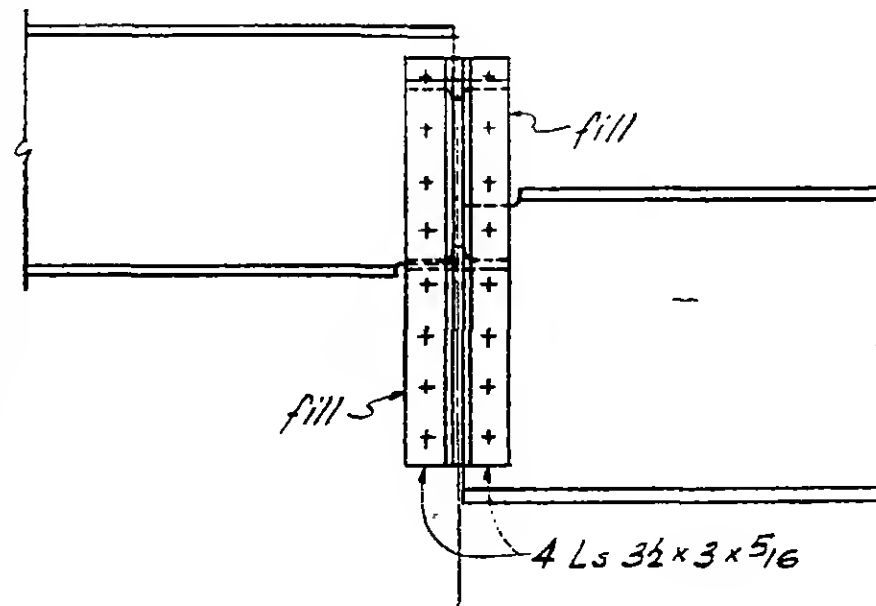
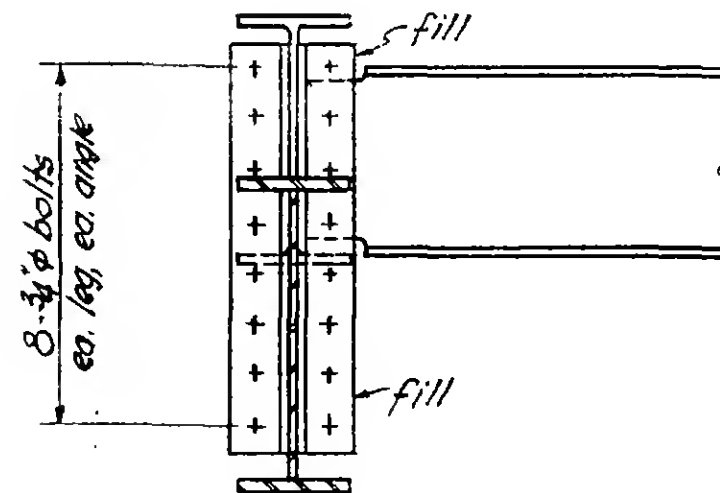


G-AB2-74

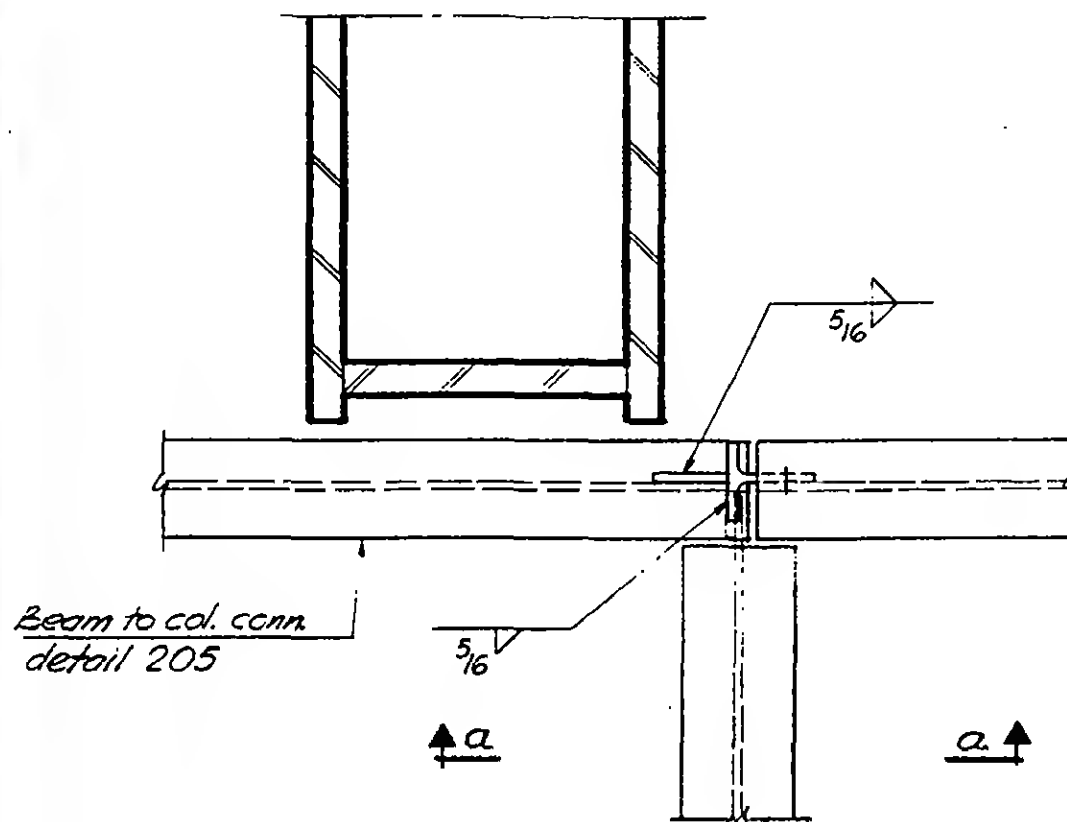
## REVISIONS

10-2-67

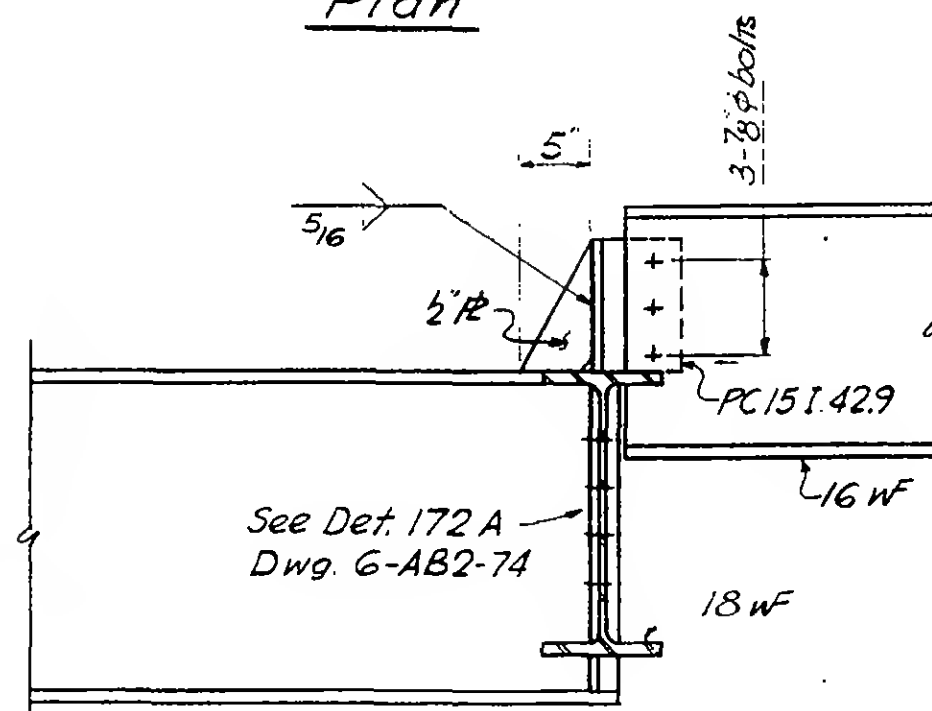
1-24-68

PlanSection a-aSection b-b

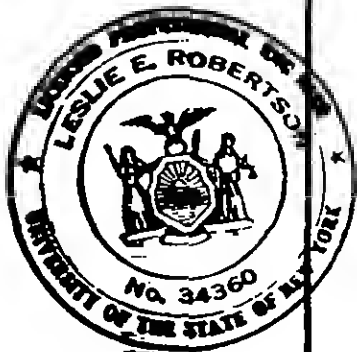
## REVISIONS



## Plan



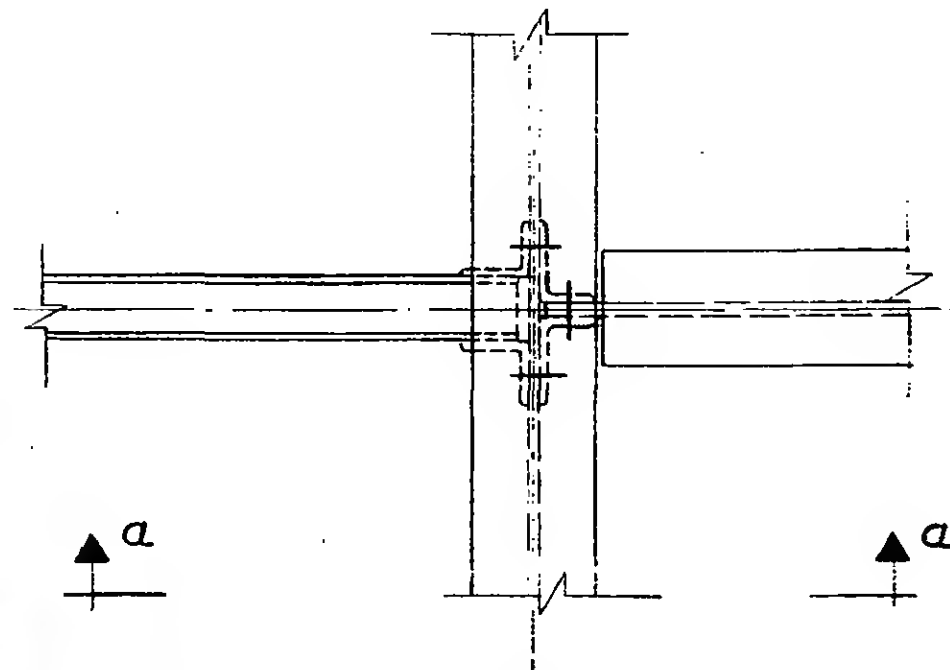
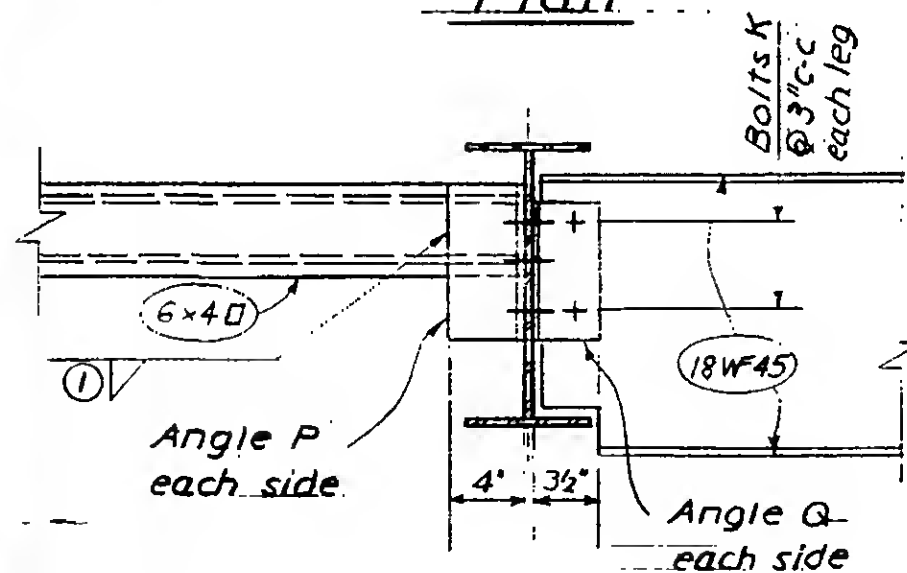
Section a-a



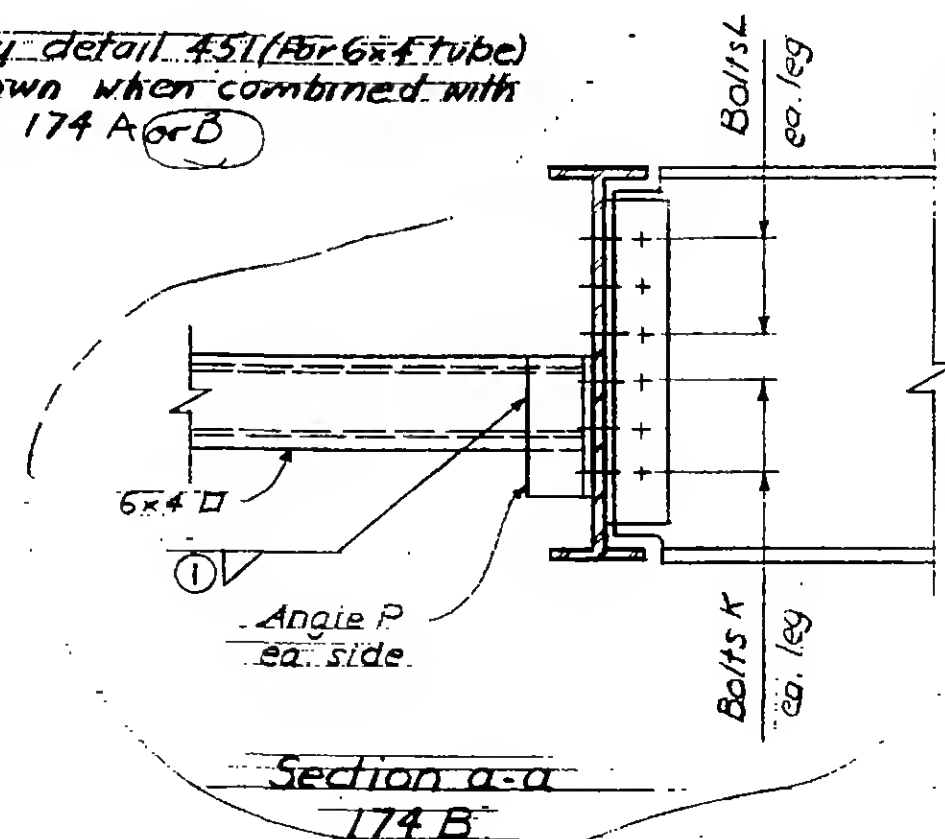
6-AB2-75.1

## REVISIONS

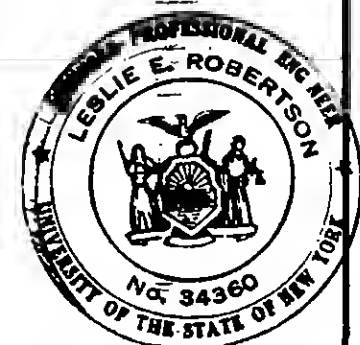
9-15-67

PlanSection a-a  
174 A

Modify detail 451 (for 6x4 tube)  
as shown when combined with  
detail 174 A or B

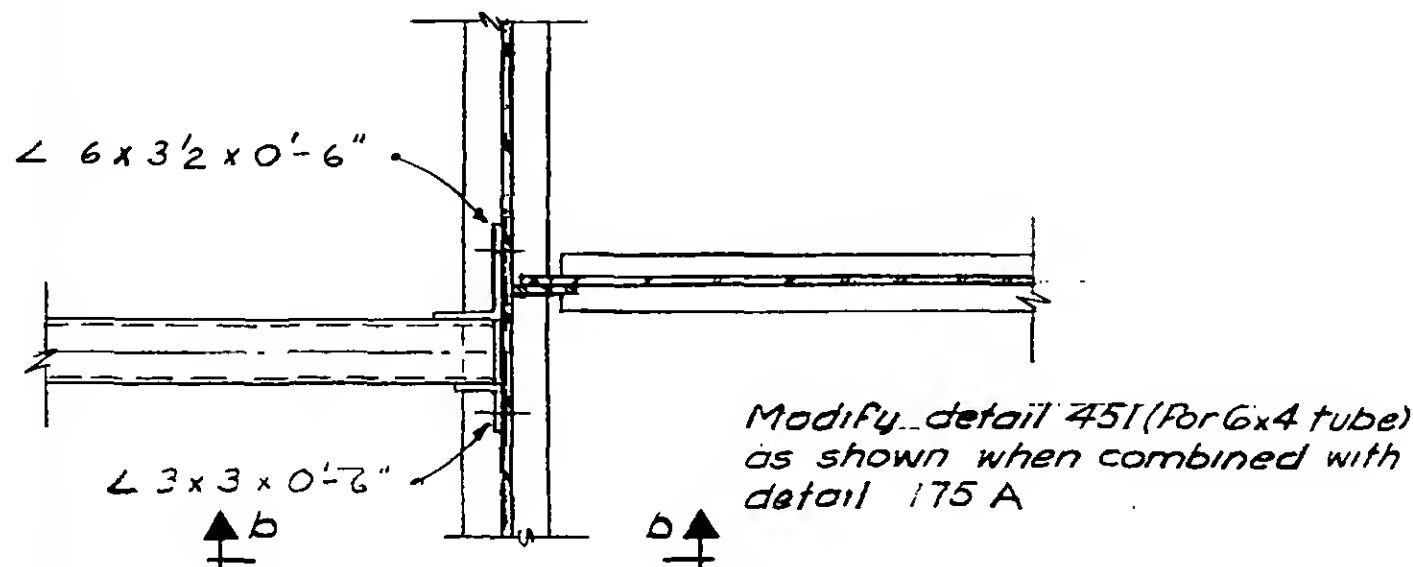
Section a-a  
174 B

| SCHEDULE |                 |                 |
|----------|-----------------|-----------------|
|          | 174 A           | 174 B           |
| ANGLES   |                 |                 |
| P        | 4 x 3 1/2 x 3/8 | 4 x 3 1/2 x 3/8 |
| Q        | 6 x 3 1/2 x 3/8 | 6 x 3 1/2 x 3/8 |
| BOLTS    |                 |                 |
| K        | 3 - 3/4" φ      | 3 - 3/4" φ      |
| L        | —               | 3 - 3/4" φ      |
| WELDS    |                 |                 |
| ①        | 1/4             | 1/4             |



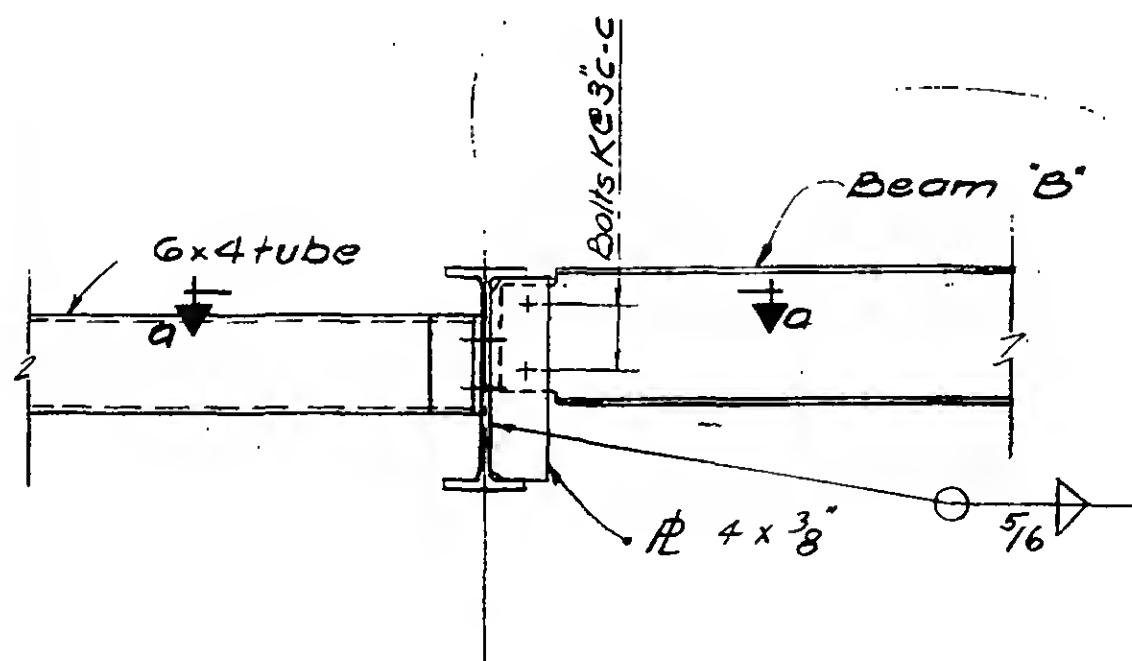
REVISIONS

8-5-67



Plan a-a

| BEAM 'B' | Bolts K   |
|----------|-----------|
| 8B       | 2-8" AB25 |
| 12B      | 3-8" AB25 |
|          |           |
|          |           |

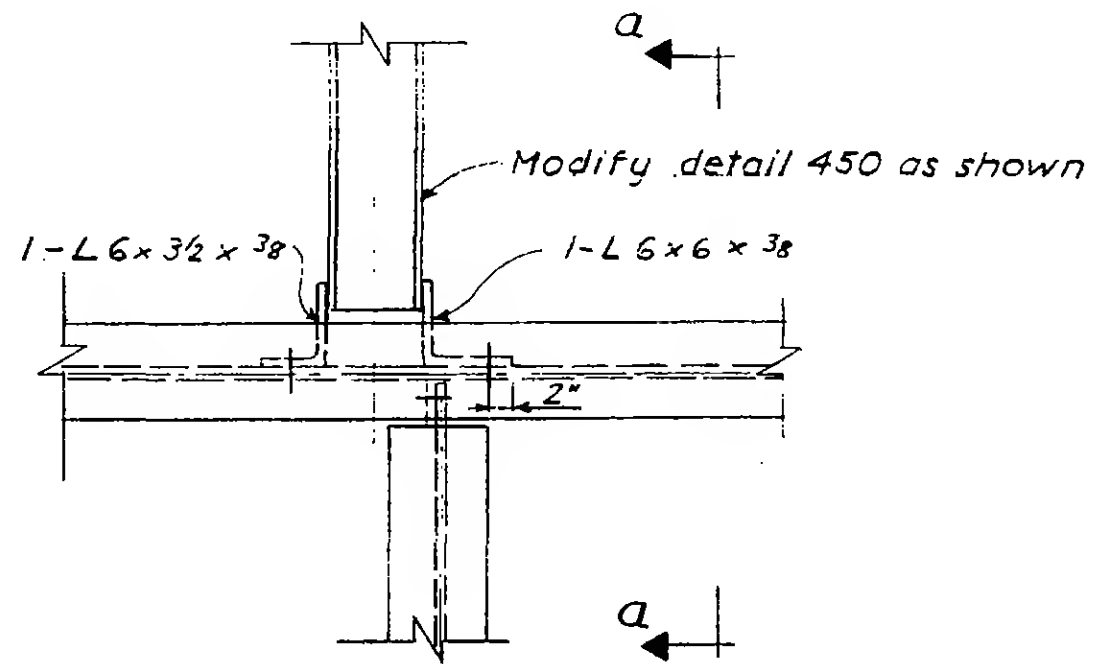
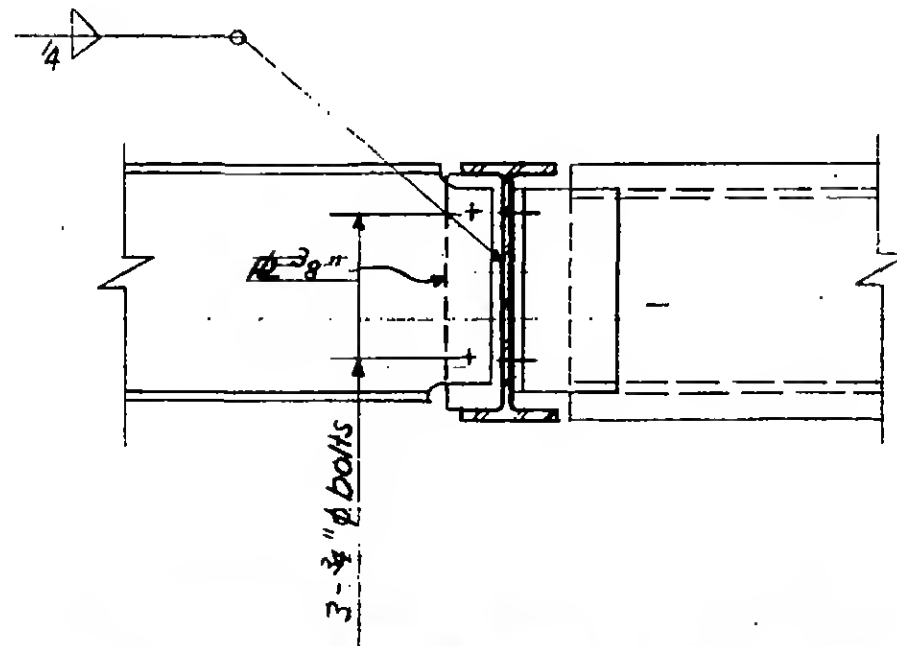


Section b-b



6-AB2-77

REVISIONS

PlanSection a-a

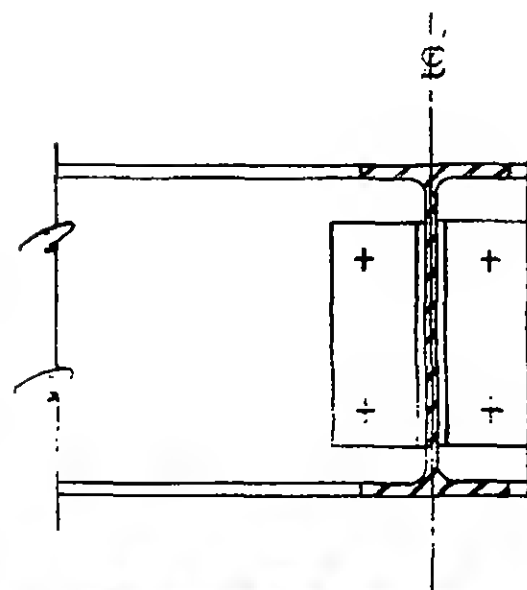
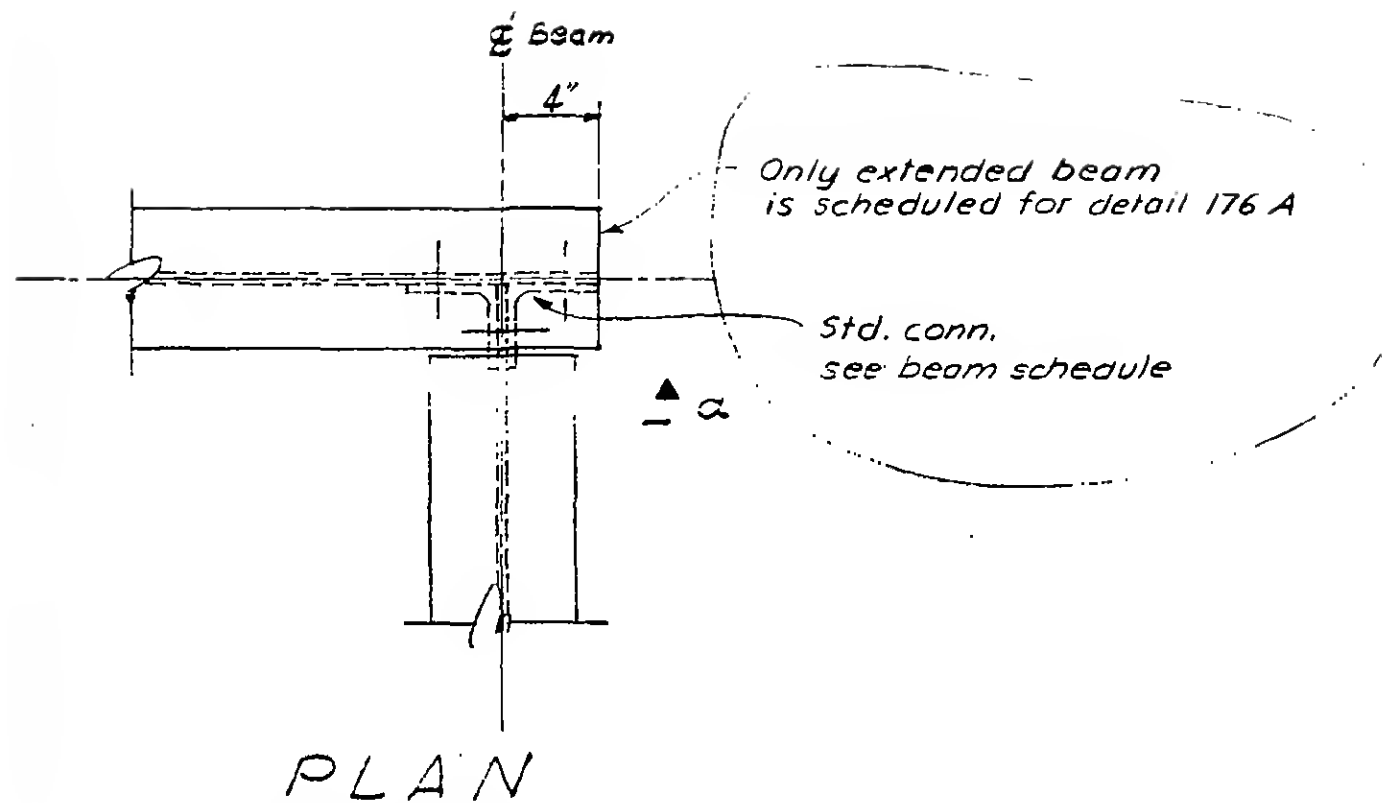
PROJECT THE WORLD TRADE CENTER

TITLE CONNECTION DETAIL 176A

DATE 6-5-67

REVISIONS

0-2-67



Section a-a



6-AB2-78

PROJECT THE WORLD TRADE CENTER

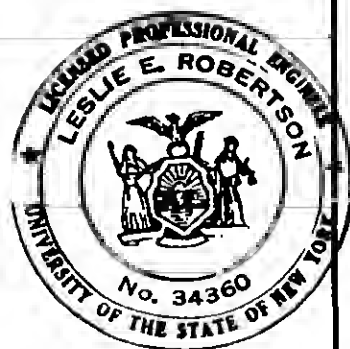
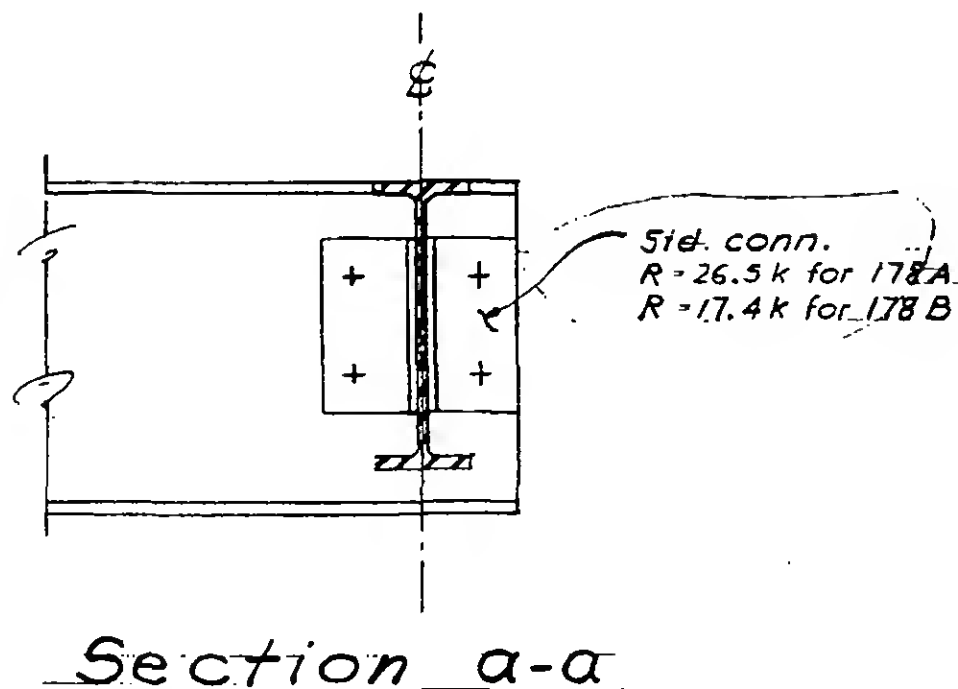
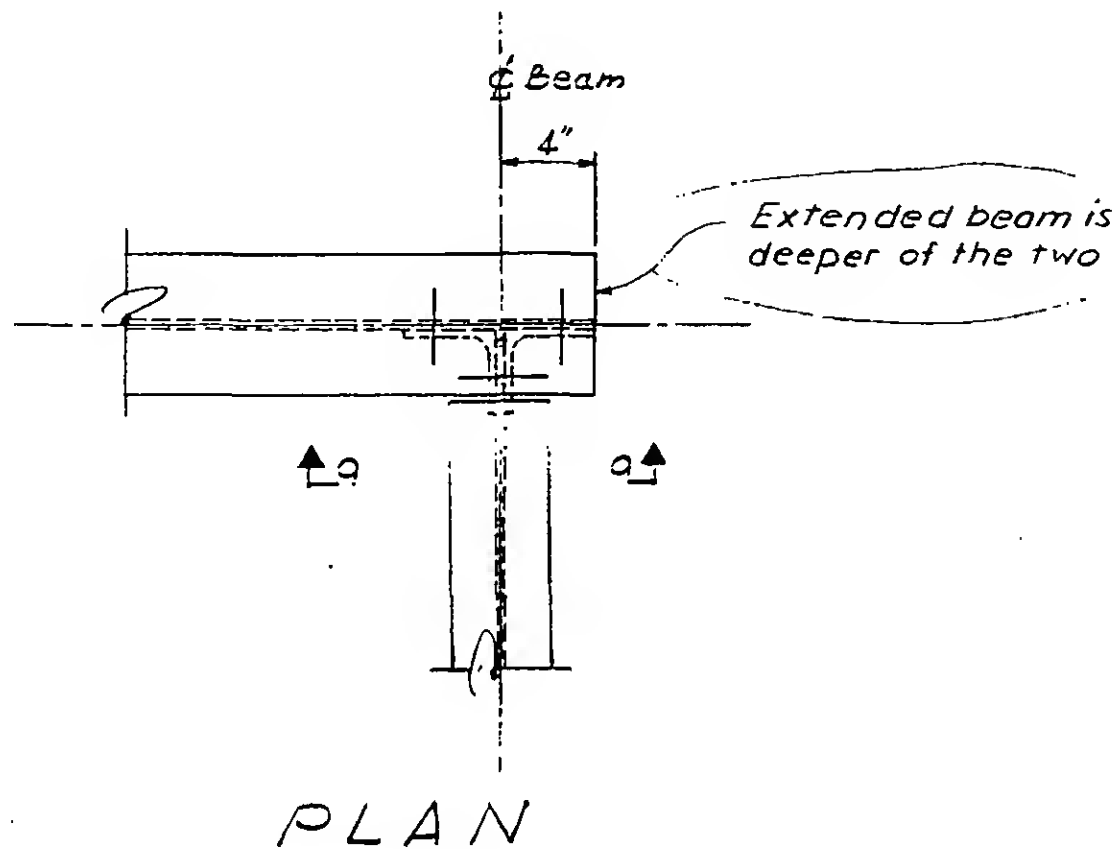
TITLE CONNECTION DETAIL 178 A, B

DATE 6-5-67

REVISIONS

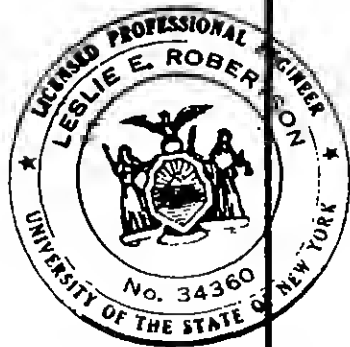
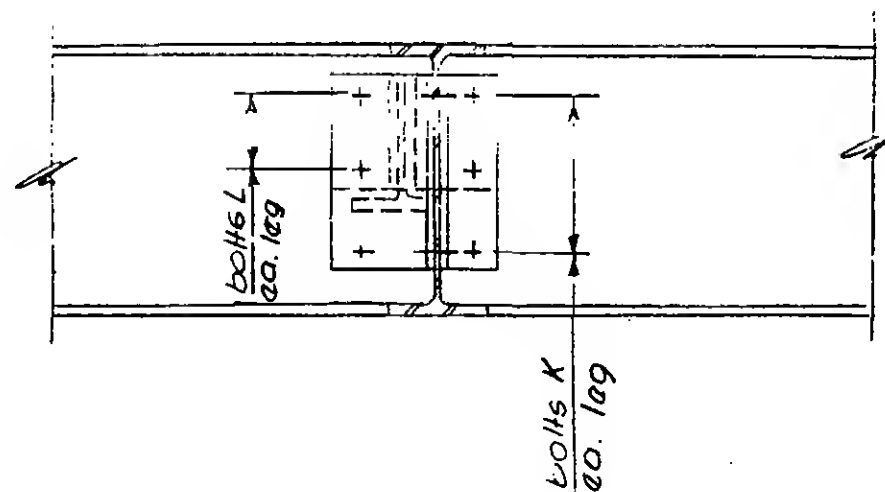
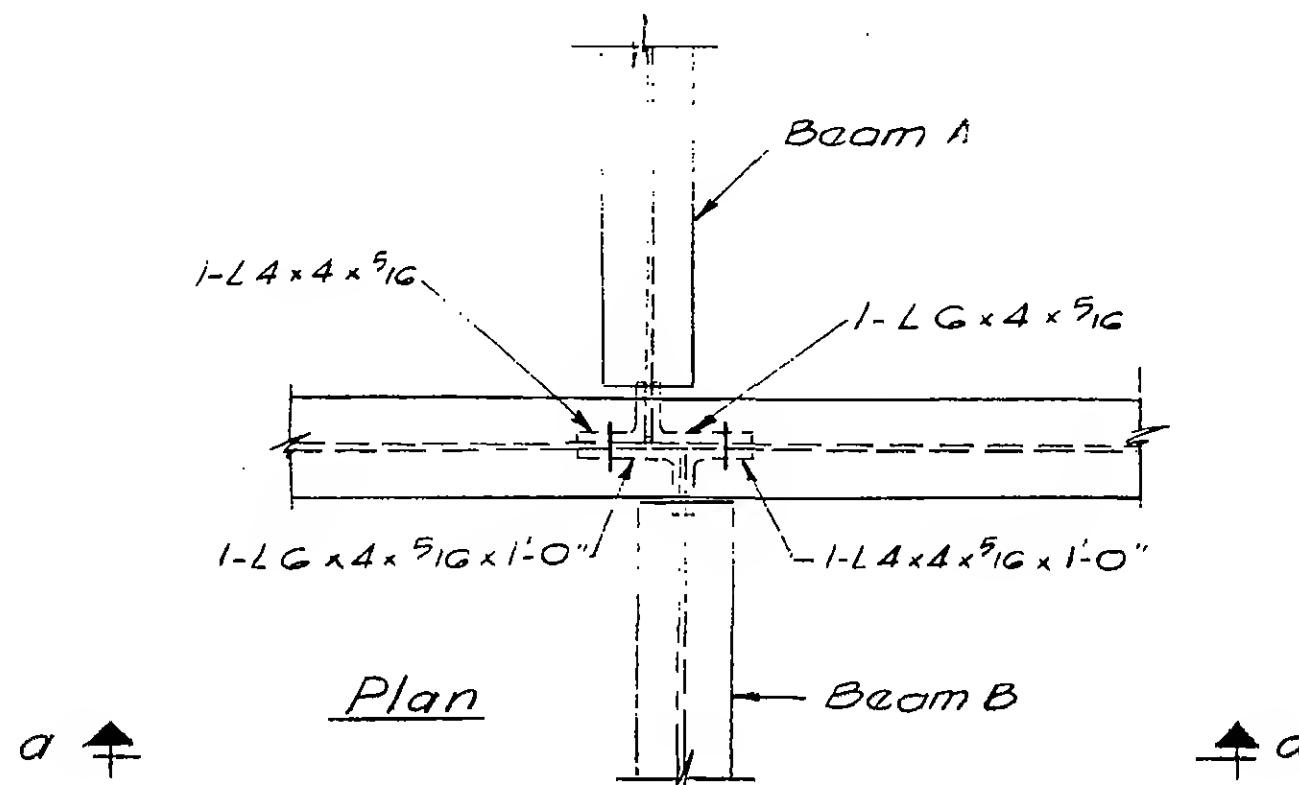
2-5-67

10-2-67



6-AB2-80

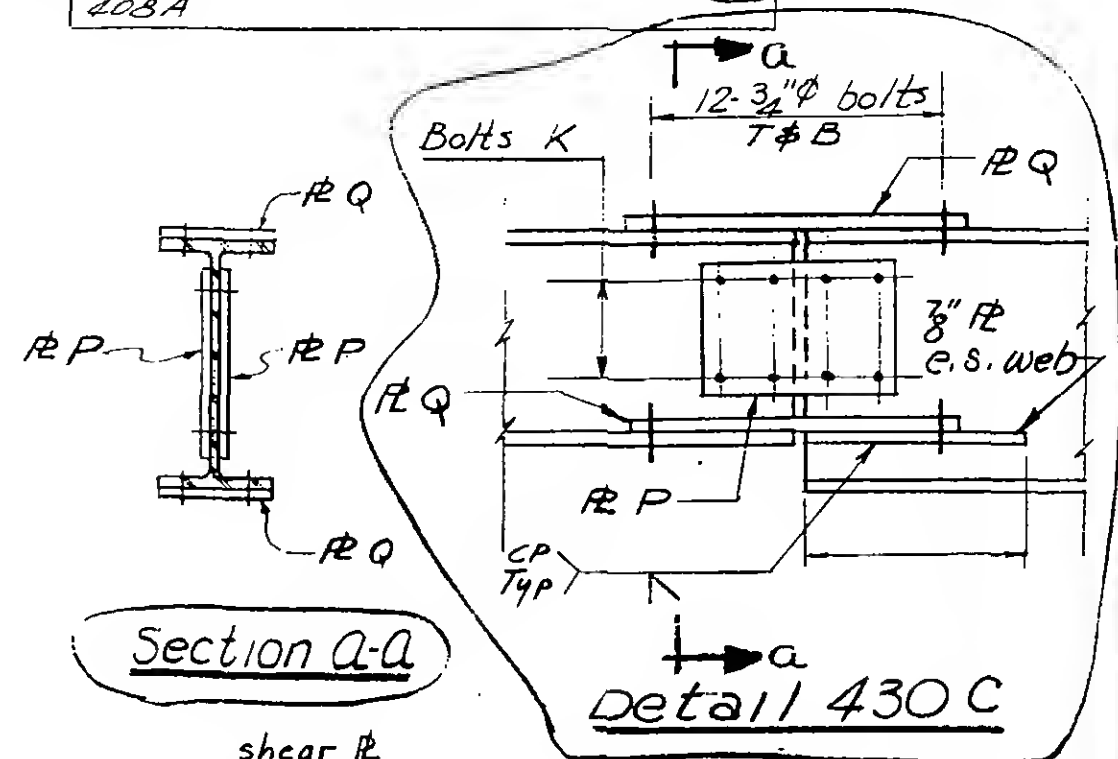
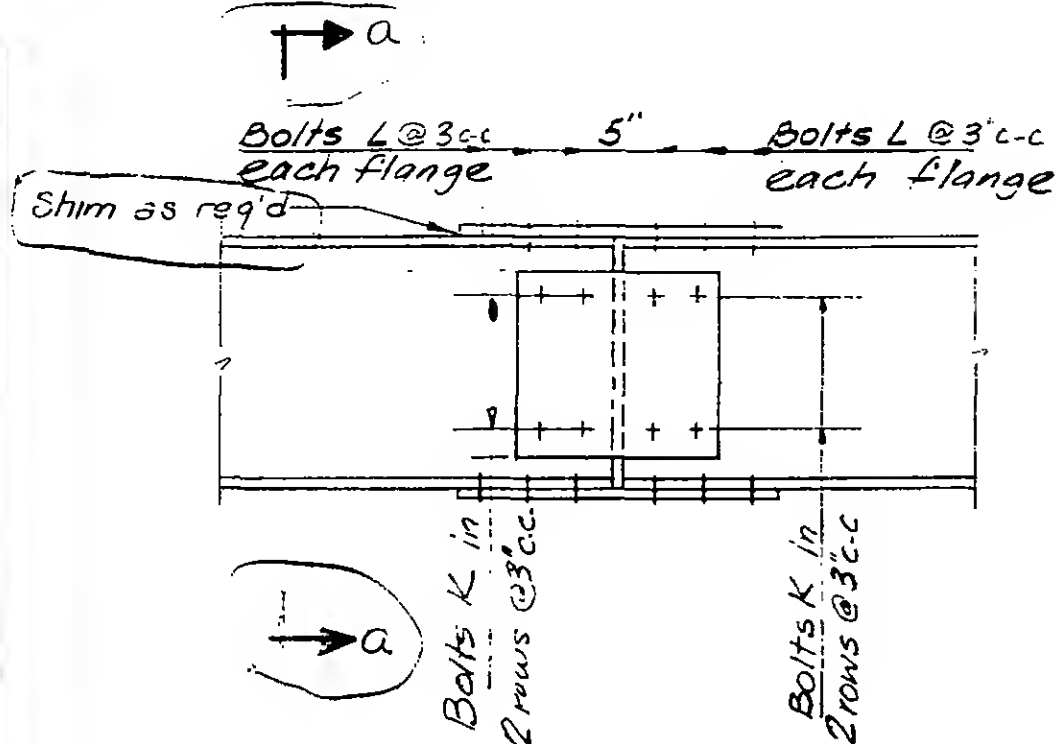
REVISIONS



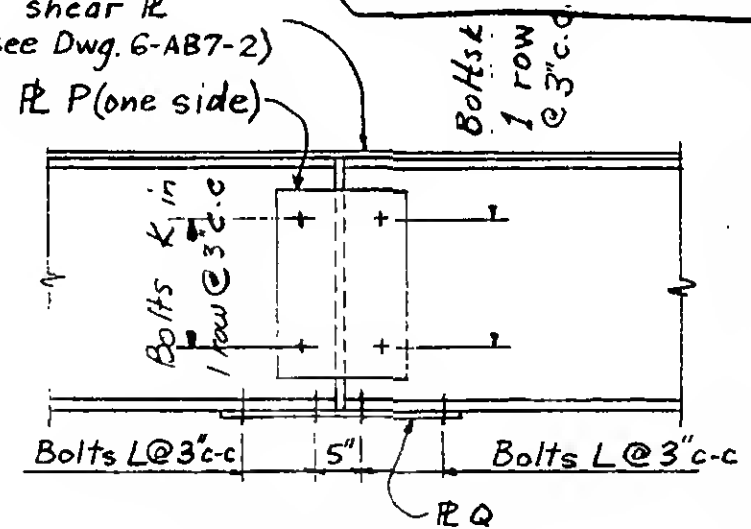
| Detail | Beam A   | Beam B | bolts K  | bolts L  |
|--------|----------|--------|----------|----------|
| A      | 12B, 14B | 16WF   | 4-3/4" φ | 3-3/4" φ |
| B      | 10B      | 20x6 I | 4-7/8" φ | 2-7/8" φ |

REVISIONS

9-18-68



shear  $\phi$   
(see Dwg. 6-AB7-2)  
 $\phi$  P (one side)



| Detail  | Bolts K        | Bolts L       | $\phi$ P | $\phi$ Q |
|---------|----------------|---------------|----------|----------|
| 401A,B  | 6-7/8" $\phi$  | 6-7/8" $\phi$ | 1/2      | 1/2      |
| 402 A   | 6-7/8" $\phi$  | 6-7/8" $\phi$ | 1/2      | 1/2      |
| 405     | 6-7/8" $\phi$  | 6-7/8" $\phi$ | 1/2      | 1/2      |
| 406     | 4-3/4" $\phi$  | 4-3/4" $\phi$ | 3/8      | 1/2      |
| 414 A,B | 8-1" $\phi$    | 6-1" $\phi$   | 3/8      | 1/2      |
| 401 C   | 6-1/8" $\phi$  | 8-1/8" $\phi$ | 1/2      | 3/4      |
| 430A    | 14-7/8" $\phi$ | 6-1/8" $\phi$ | 1/2      | 5/8      |
| 408 A   | 8-1" $\phi$    | 6-1" $\phi$   | 3/8      | 1/2      |
| 430B    | 16-3/8" $\phi$ | 8-1/8" $\phi$ | 1/2      | 7/8      |
| 430C    | 16-7/8" $\phi$ | 8-1/8" $\phi$ | 1/2      | 7/8"     |



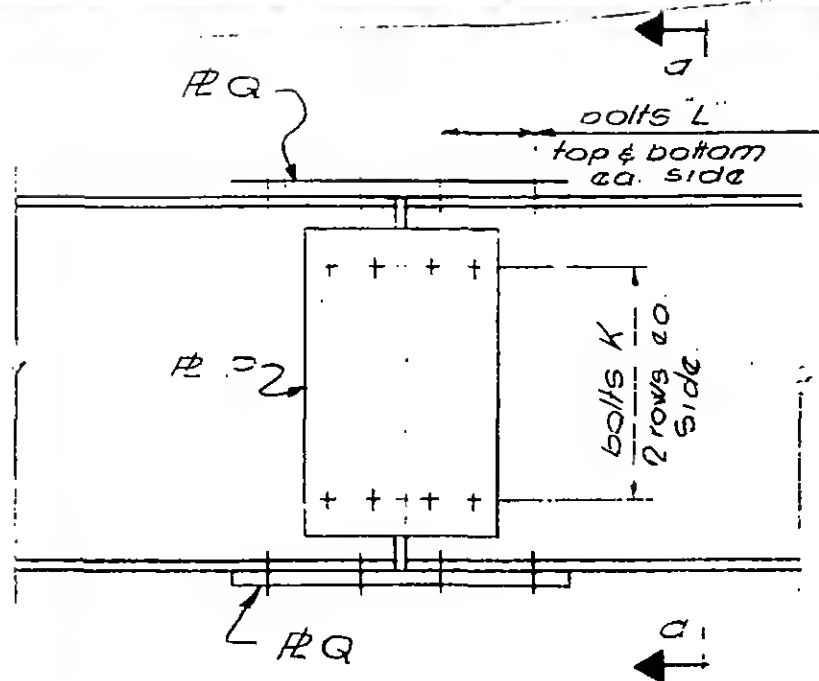
PROJECT THE WORLD TRADE CENTER

TITLE SPLICE DETAILS 403 A, 404 A, 409 A, B, C, D

DATE 8-5-67

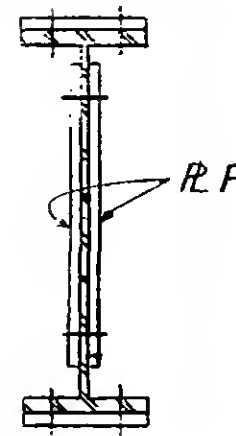
REVISIONS

2-67



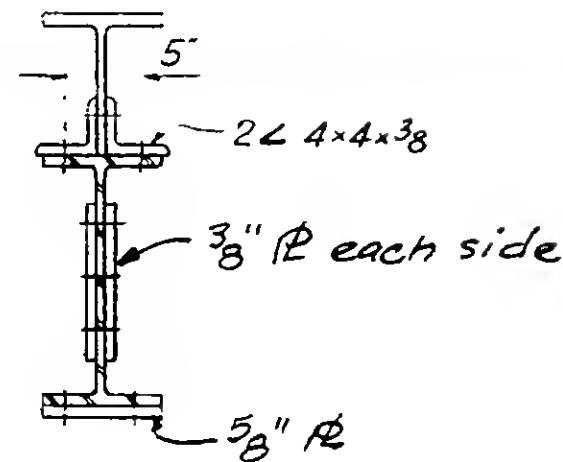
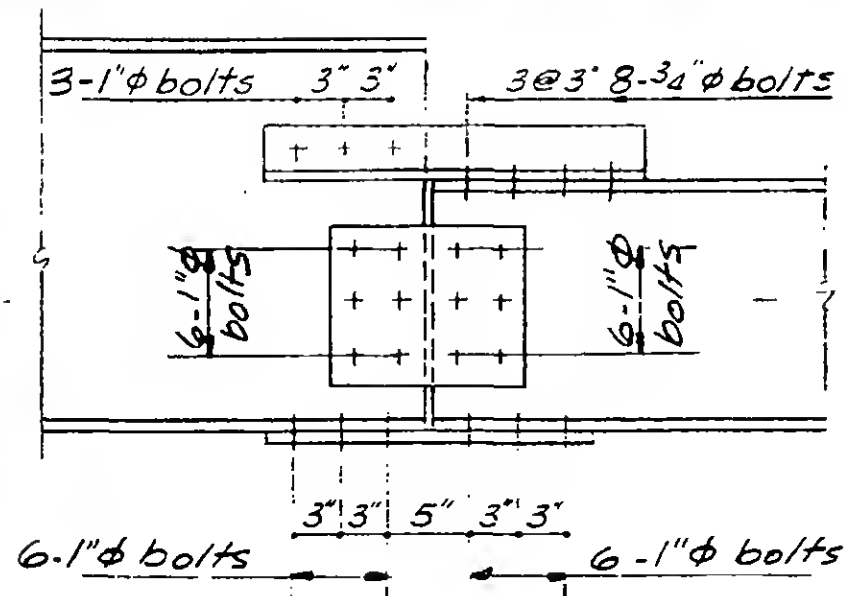
Elevation

403 A & 409 A, B, C, D



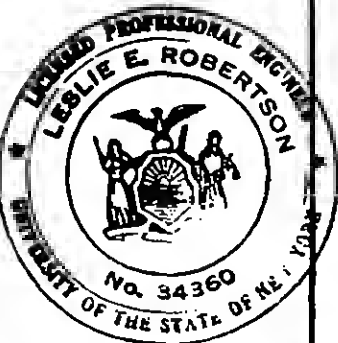
Section a-a

| Detail | bolts K        | bolts L       | RP   | RQ   |
|--------|----------------|---------------|------|------|
| 403 A  | 12-1" $\phi$   | —             | 1/2" | —    |
| 409 A  | 12-1" $\phi$   | —             | 1/2" | —    |
| 409 B  | 12-1" $\phi$   | 6-7/8" $\phi$ | 5/8" | 1/2" |
| 409 C  | 12-7/8" $\phi$ | —             | 1/2" | —    |
| 409 D  | 12-3/4" $\phi$ | —             | 1/2" | —    |
|        |                |               |      |      |
|        |                |               |      |      |
|        |                |               |      |      |
|        |                |               |      |      |



404 A

6-AB2-82

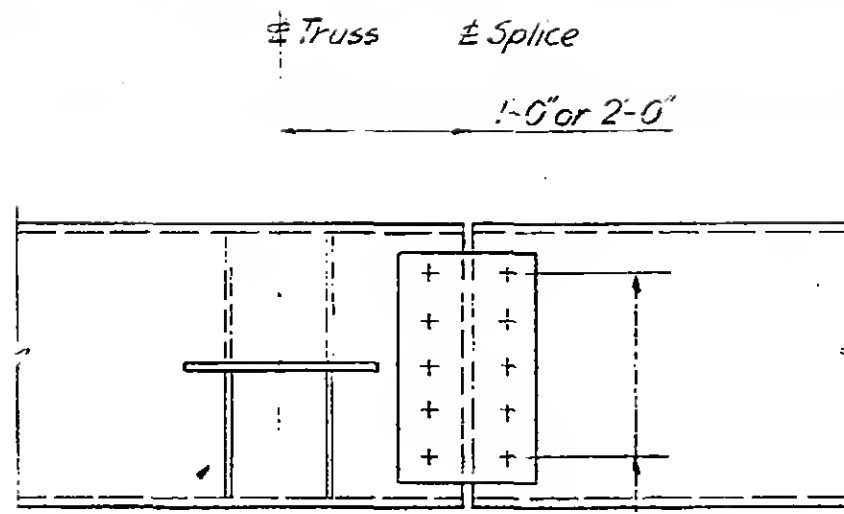


PROJECT THE WORLD TRADE CENTER

TITLE SPLICE DETAILS 410A - 412A, 420A - 425A

DATE 8-5-67

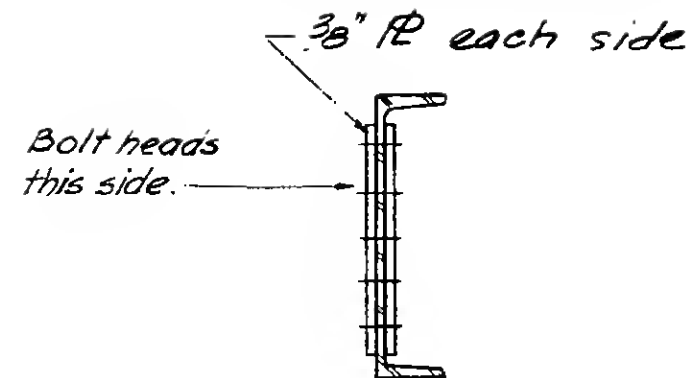
REVISIONS



- See 5-AB for  
truss seat detail

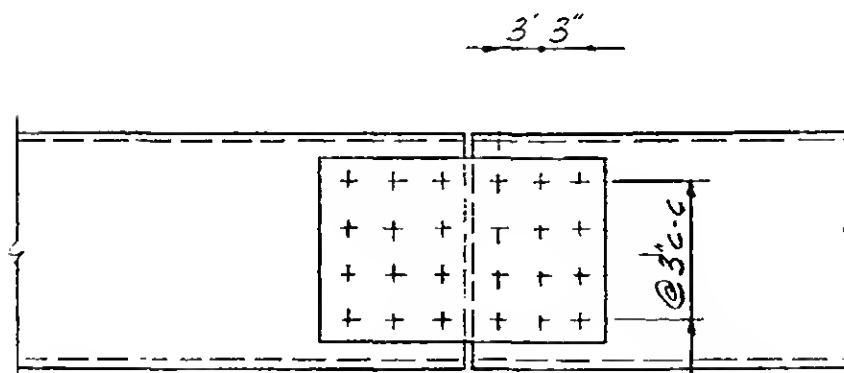
5-1"  $\phi$  bolts  
@ 3" c-c  
each side

410A, 411A, 412A



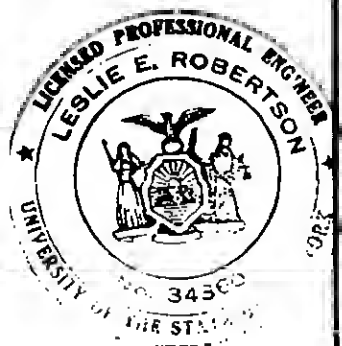
Bolt heads  
this side

- 1/2"  $\phi$  each side



420A, 421A, 422A, 423A, 424A, 425A

12-3/4"  $\phi$  bolts  
each side

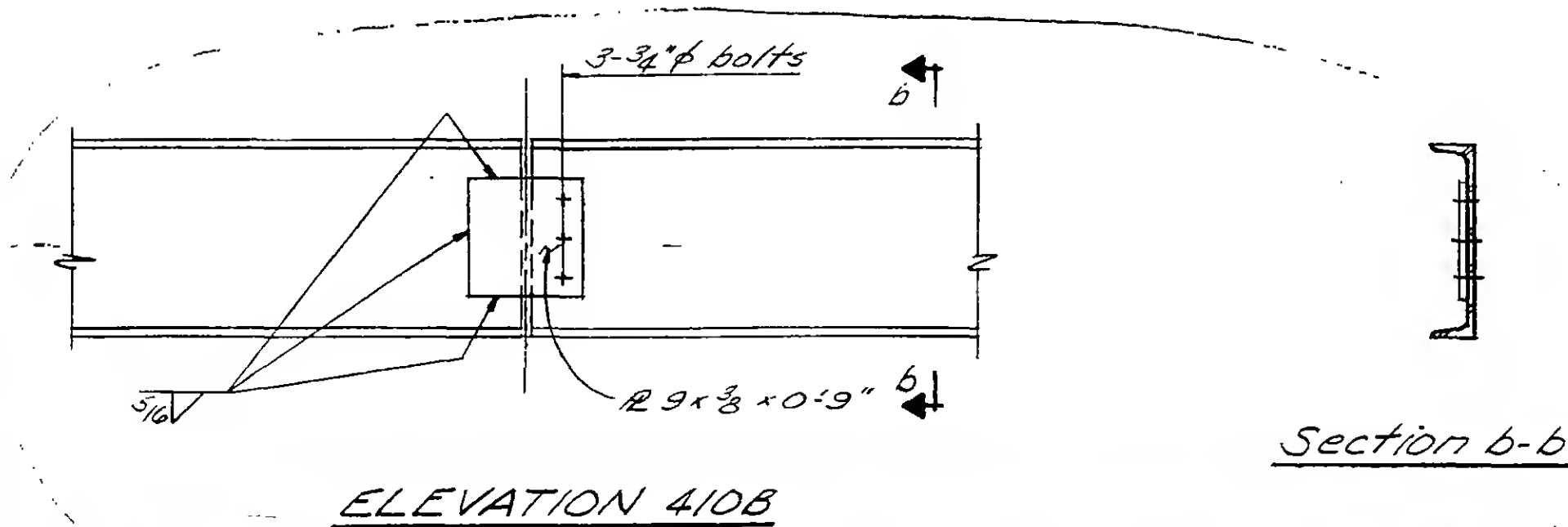
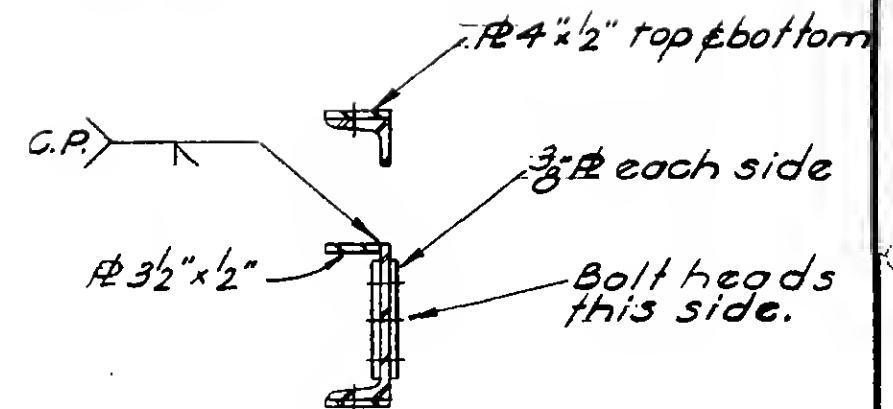
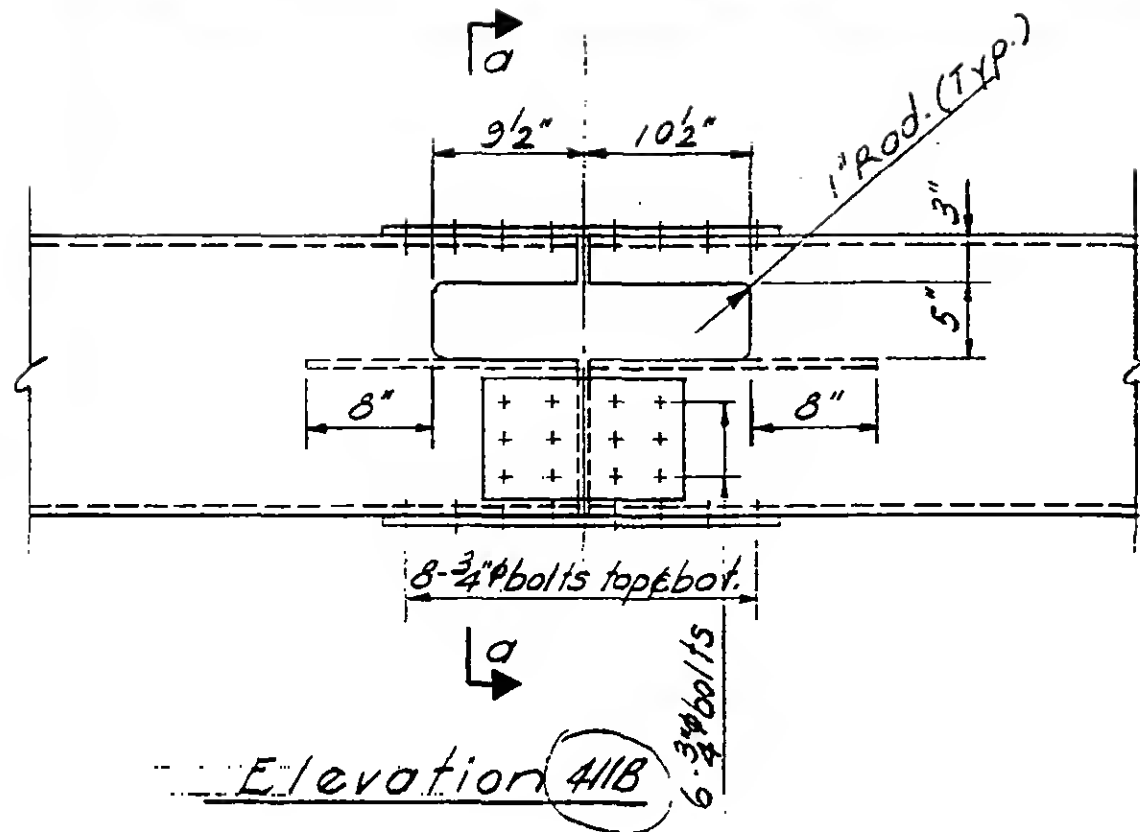
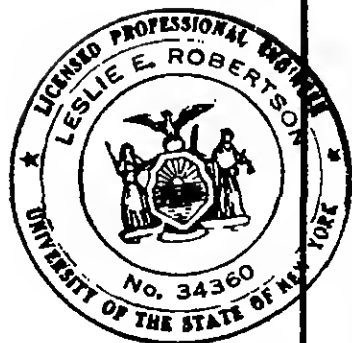


6-AB2-83

PROJECT THE WORLD TRADE CENTERTITLE SPLICE DETAIL 411B, 410BDATE 1-24-68

## REVISIONS

7-17-68

Section b-b

6-AB2-83.1

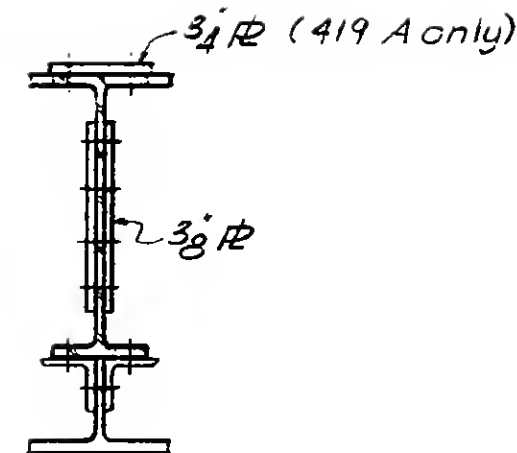
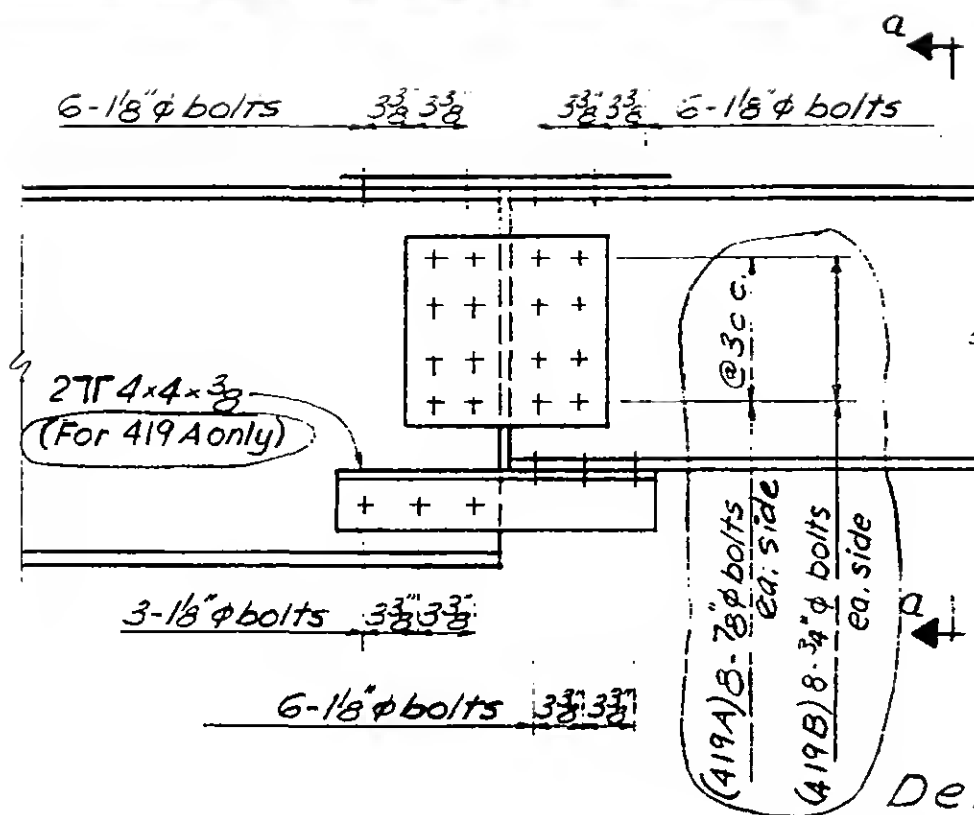
PROJECT THE WORLD TRADE CENTER

TITLE SPLICE DETAIL 419A(B), 449A

DATE 8-5-67

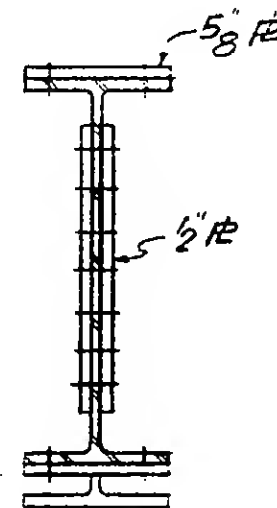
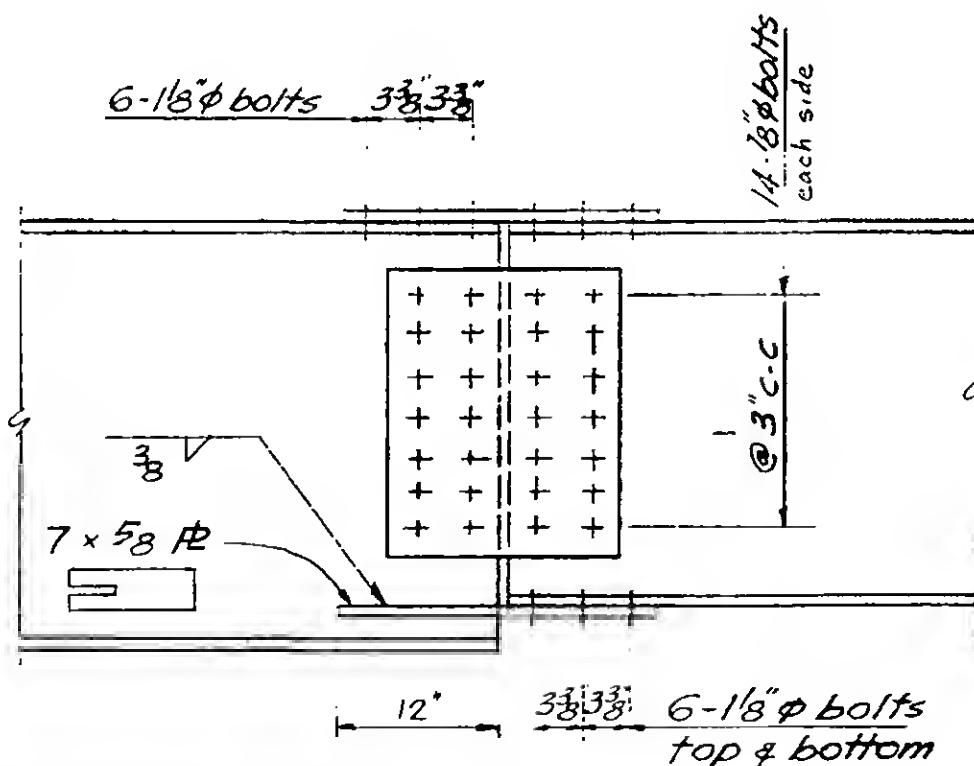
REVISIONS

0-2-67



Section a-a

Detail 419A(B)



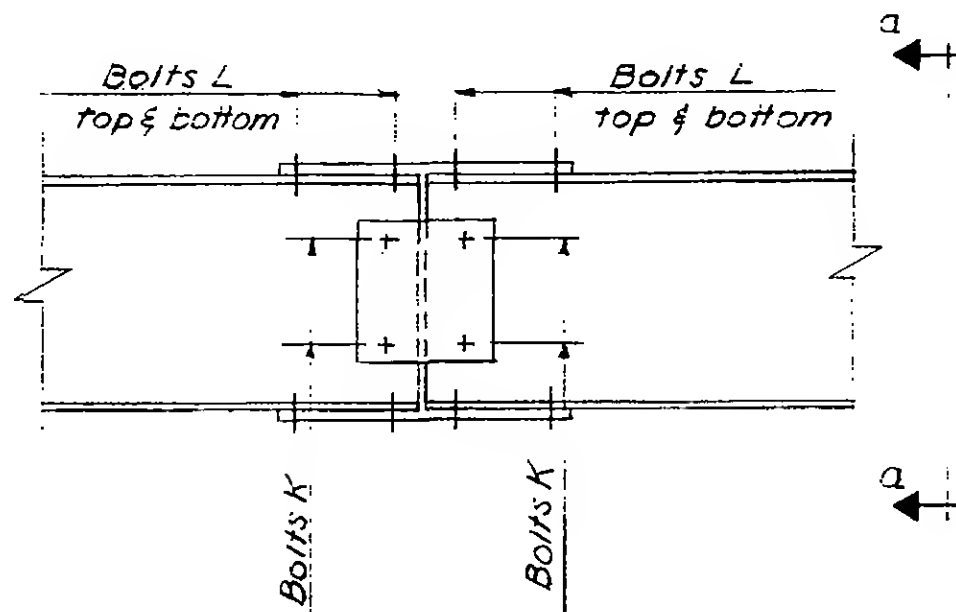
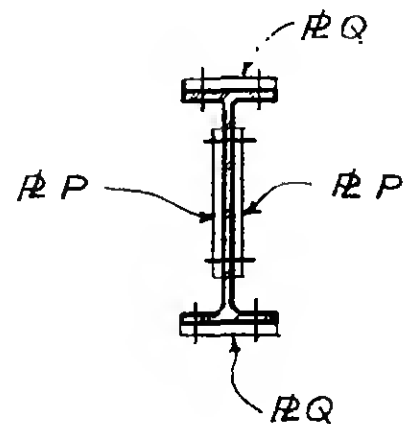
Detail 449A

6-AB2-84



PROJECT *THE WORLD TRADE CENTER*TITLE *SPLICE DETAIL 418A, B.*DATE *8-14-67*

## REVISIONS

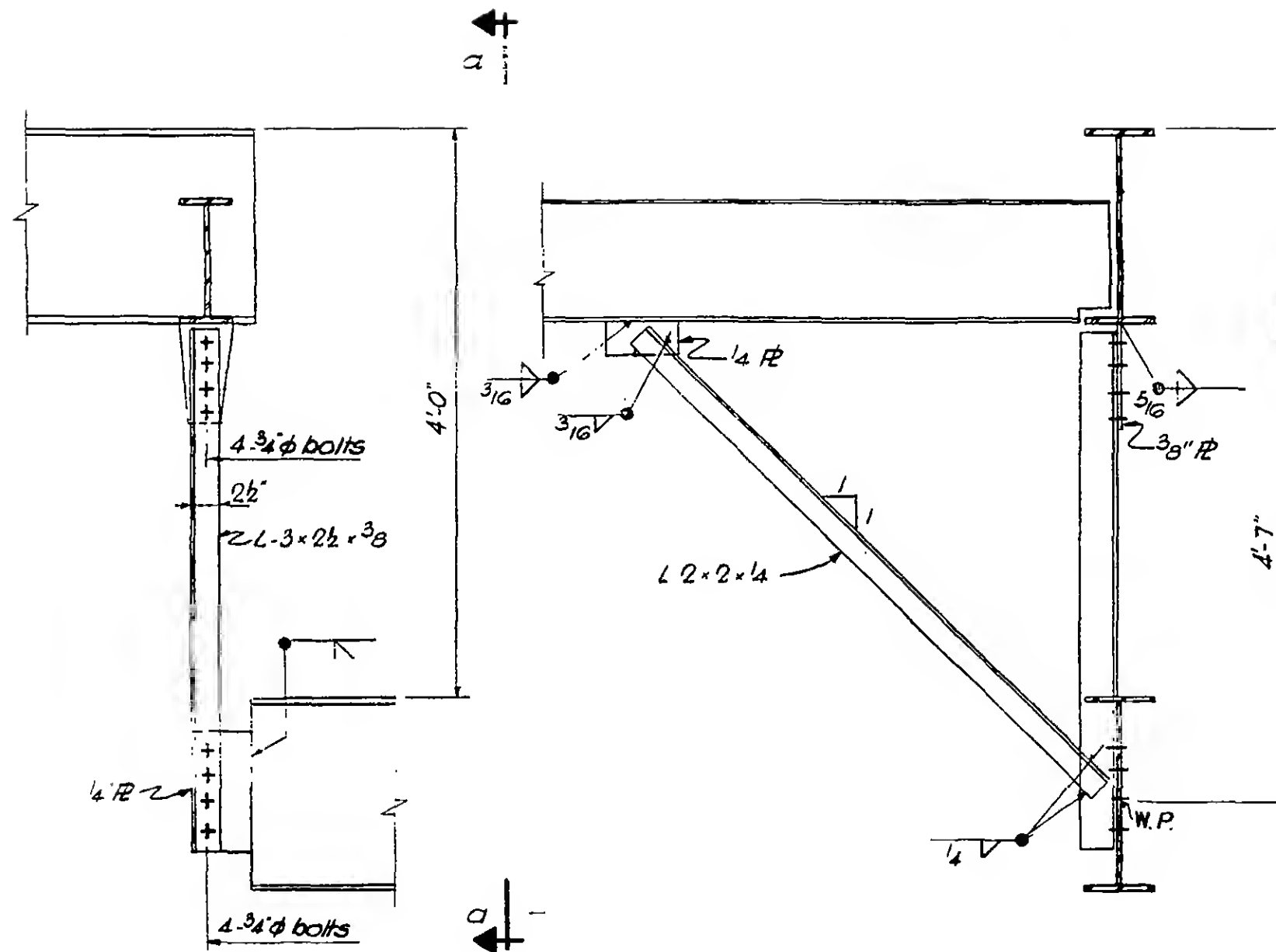
*0-2-67*ElevationSection a-a

## SCHEDULE

|        | 418A                      | 418B                      |
|--------|---------------------------|---------------------------|
| BOLTS  |                           |                           |
| K      | 3- $\frac{7}{8}$ " $\phi$ | 4- $\frac{3}{4}$ " $\phi$ |
| L      | 6- $\frac{7}{8}$ " $\phi$ | —                         |
| PLATES |                           |                           |
| P      | $\frac{3}{8}$ "           | $\frac{3}{8}$ "           |
| Q      | $\frac{5}{8}$ "           | —                         |



## REVISIONS

ElevationSection a-a

DESIGNED

DRAWN

G.T.H.

REVIEWED

6-AB2-85.1

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON

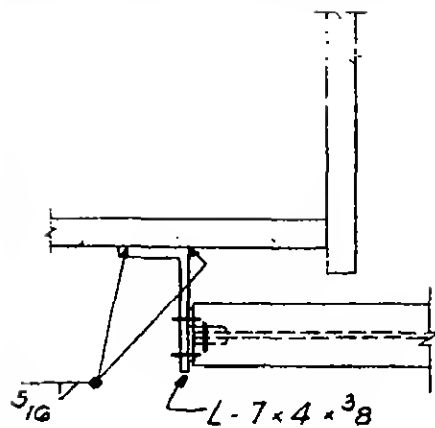
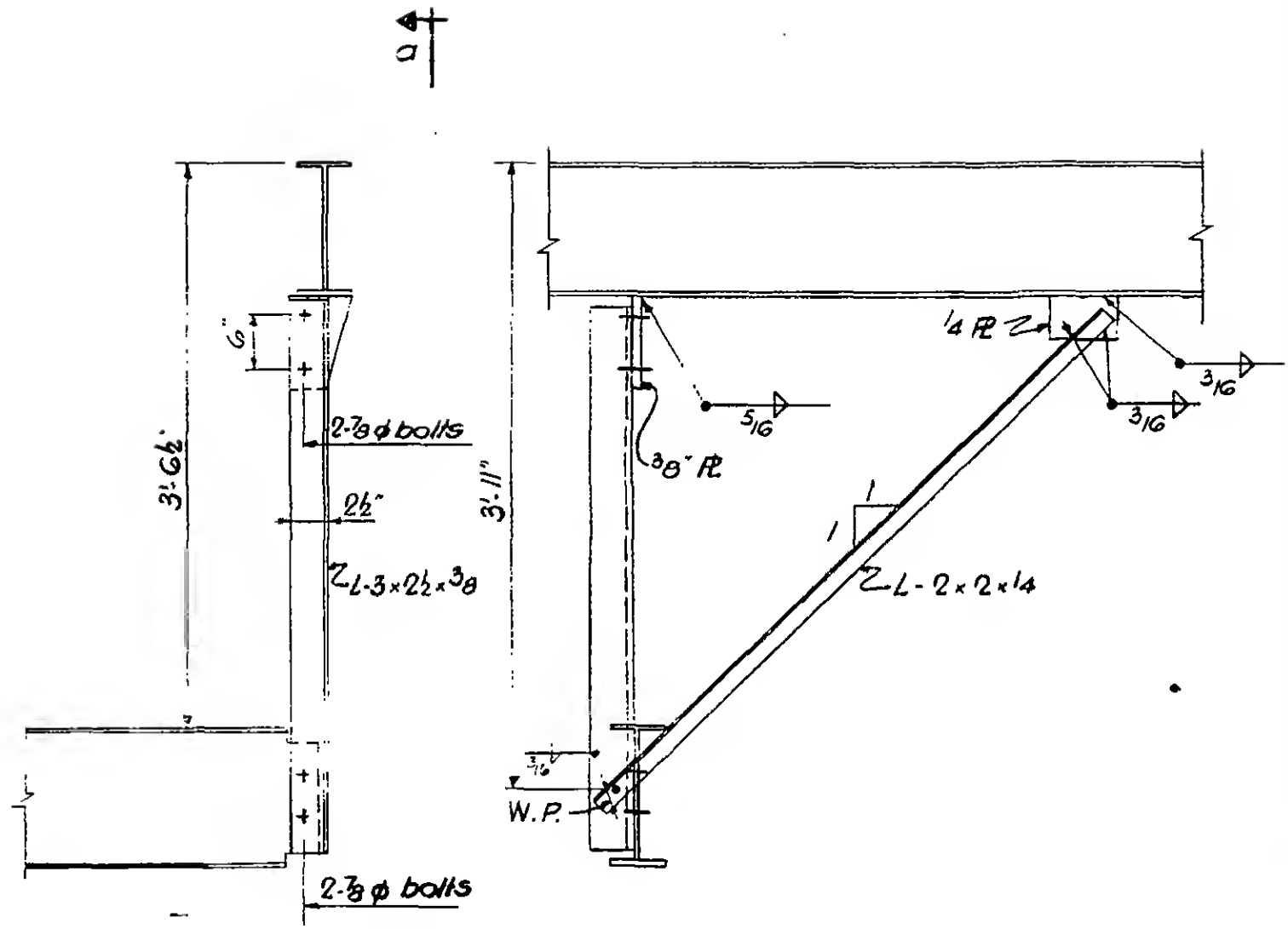
Structural &amp; Civil Engineers

PROJECT THE WORLD TRADE CENTER

TITLE DETAILS 418 D, E

DATE 9.25.68.

REVISIONS

PlanDetail 418 DElevationSection a-aDetail 418 E

DESIGNED

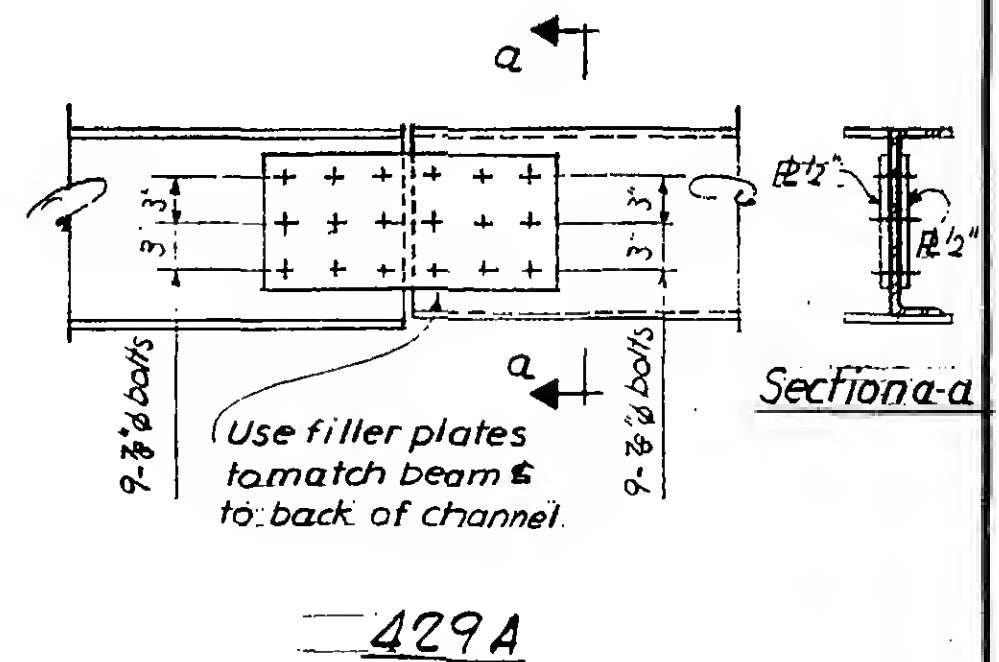
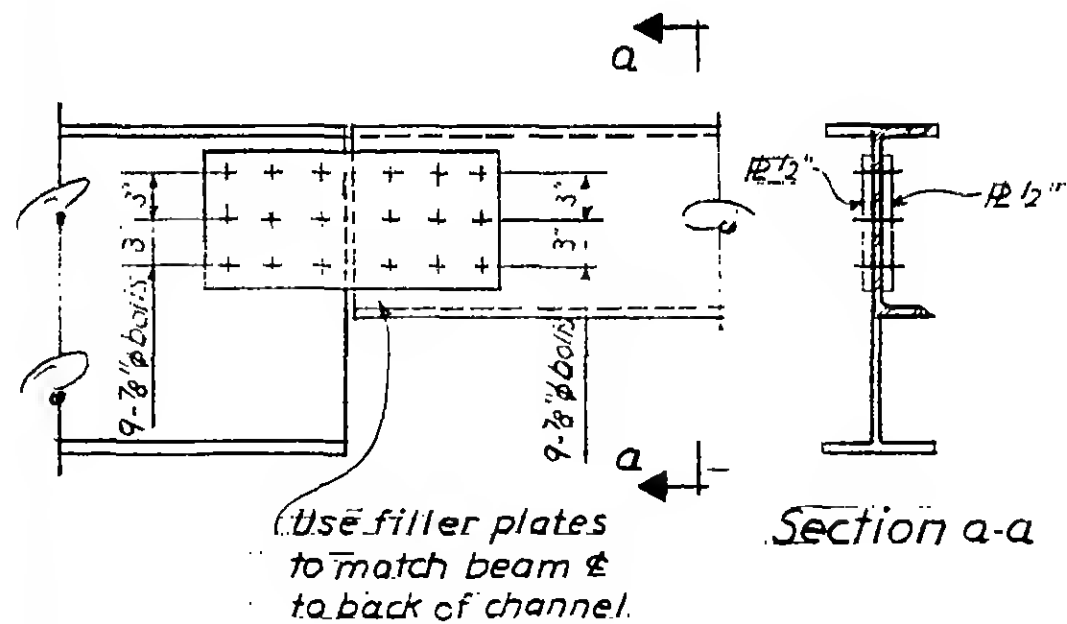
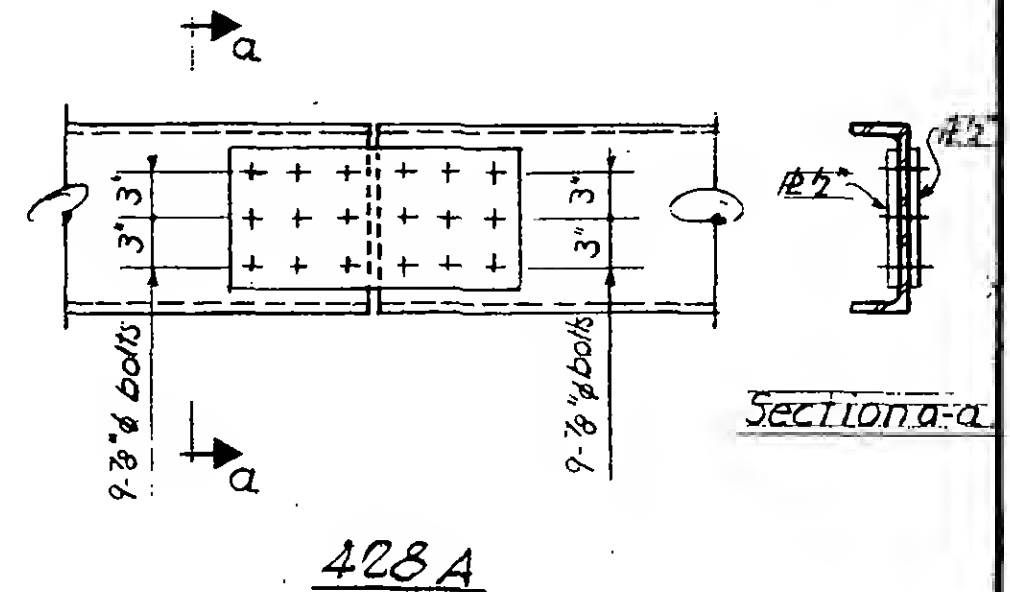
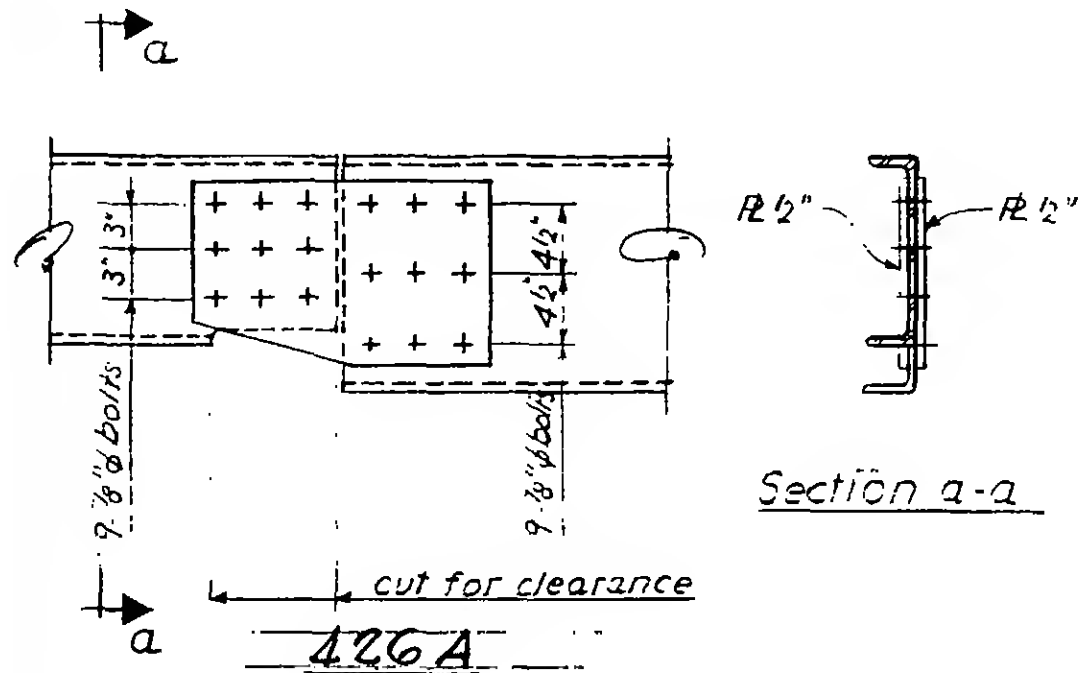
DRAWN

G.T.H.

REVIEWED

G-AB2-85.2

## REVISIONS



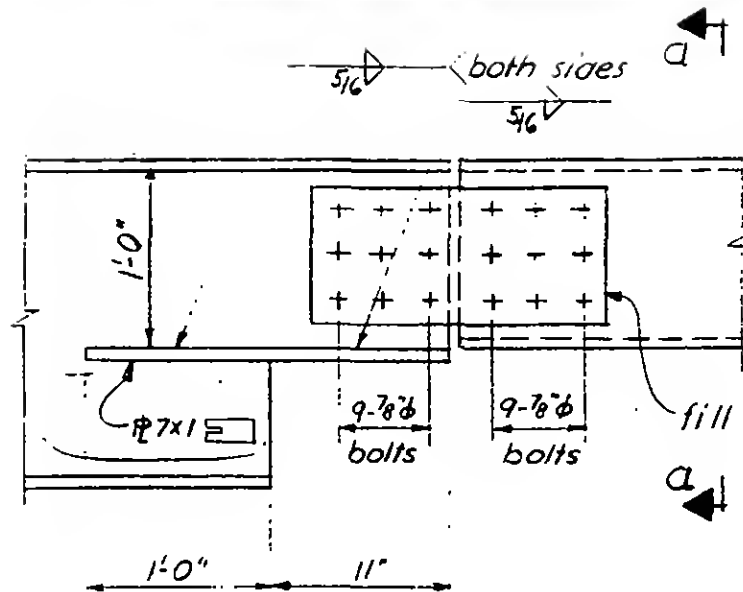
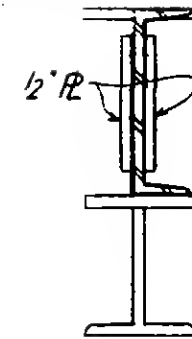
PROJECT THE WORLD TRADE CENTER

TITLE SPLICE CONNECTION 427 B

DATE 12-21-67

## REVISIONS

2-12-68

427 BSection a-a

SKILLING - HELLE - CHRISTIANSEN - ROBERTSON

Structural &amp; Civil Engineers

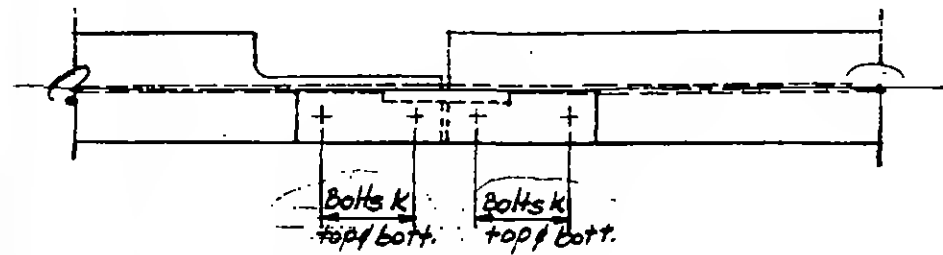
PROJECT THE WORLD TRADE CENTER

TITLE SPLICE CONNECTION 407A,B

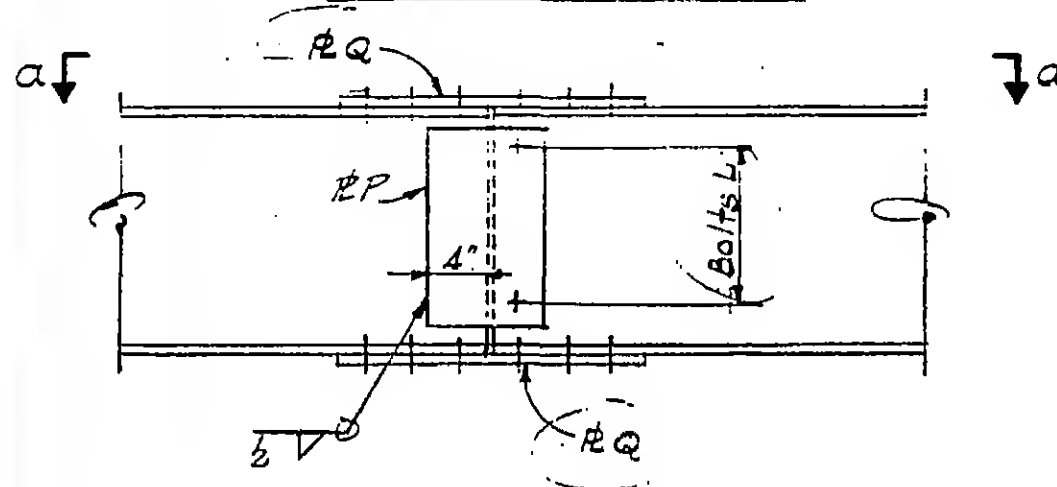
DATE 9-15-67

REVISIONS

10-2-67



Section a-a



ELEVATION

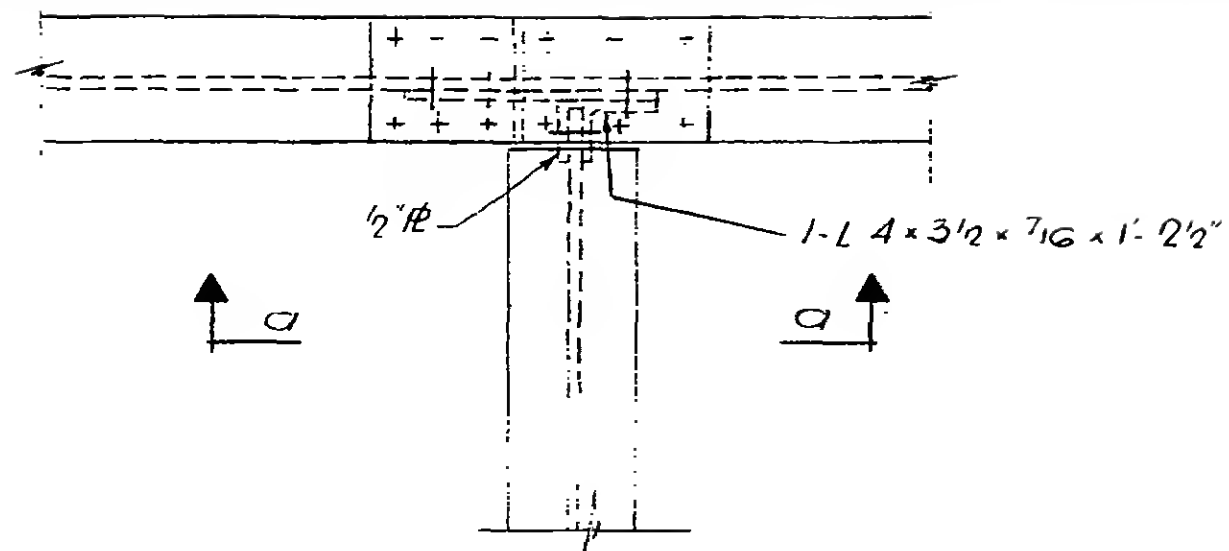
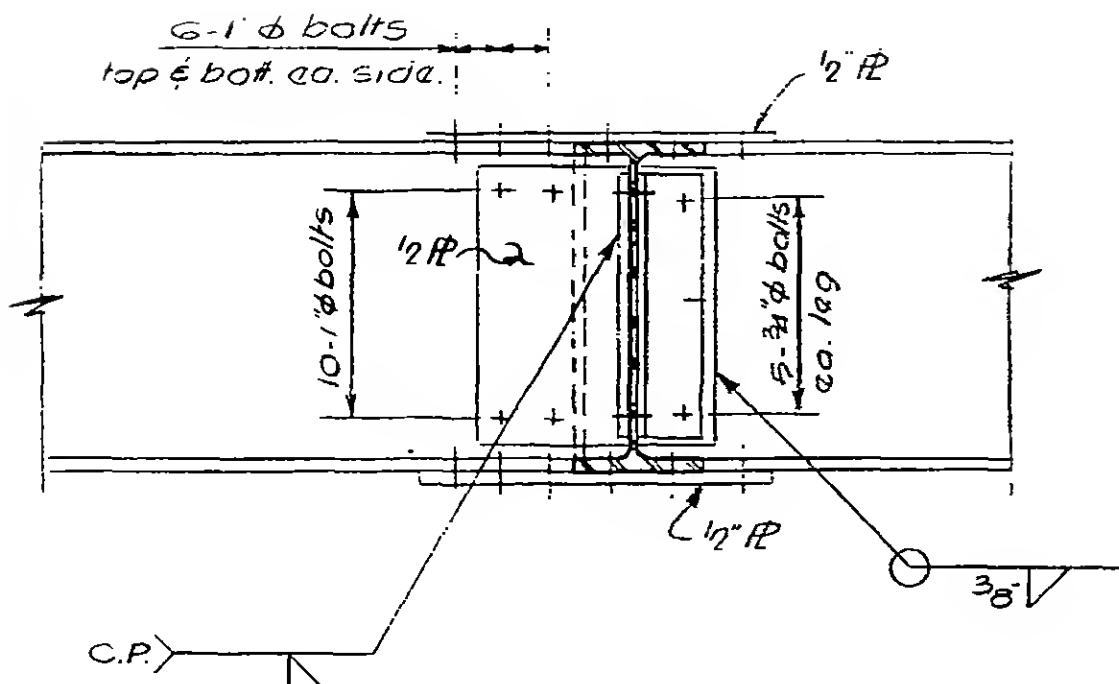
## SCHEDULE

|        | 407A          | 407B          |
|--------|---------------|---------------|
| BOLTS  |               |               |
| K      | 3-7/8 $\phi$  | 4-1" $\phi$   |
| L      | 5-7/8" $\phi$ | 7-7/8" $\phi$ |
| PLATES |               |               |
| P      | 2"            | 2"            |
| Q      | 2"            | 3/4"          |



G-AB2-87

## REVISIONS

PlanSection a-a

PROJECT

THE WORLD TRADE CENTER

TITLE

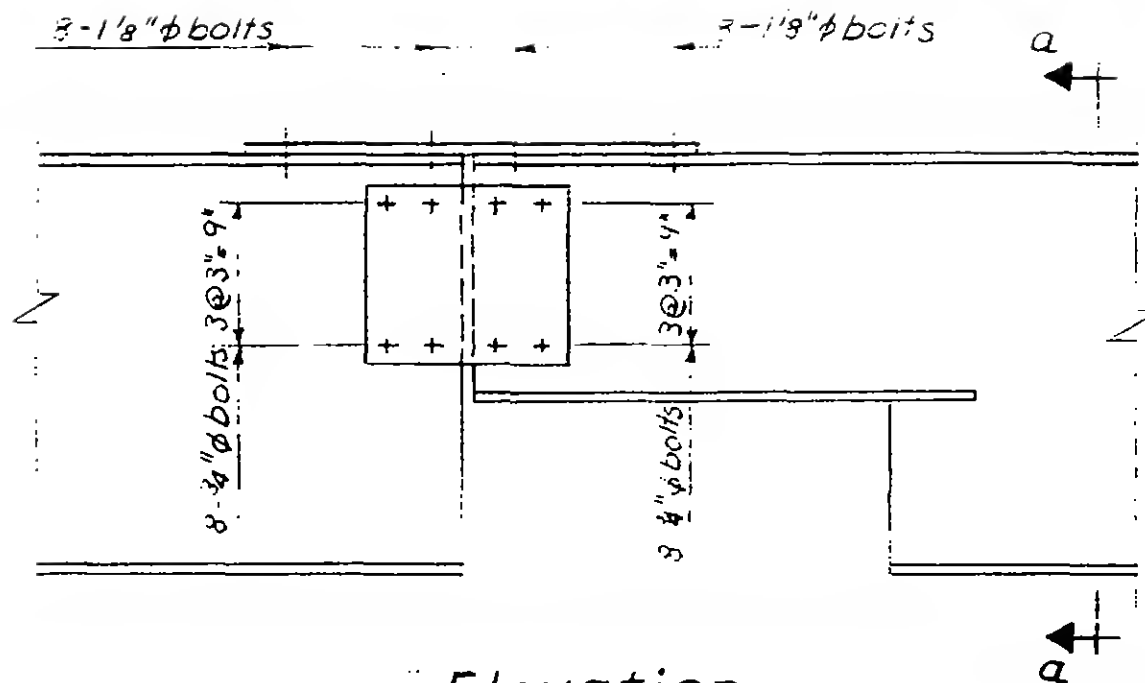
SPICES DETAIL 433 A &amp; B

DATE

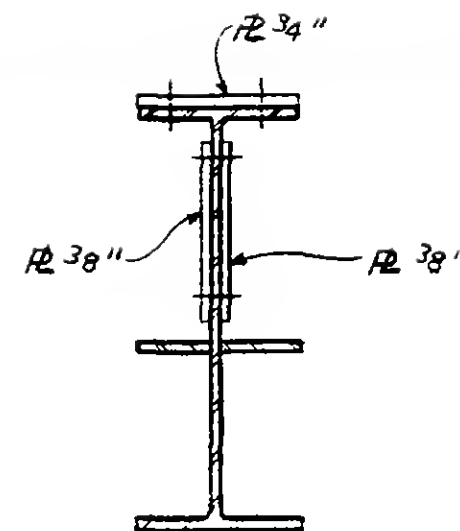
8-14-57

## REVISIONS

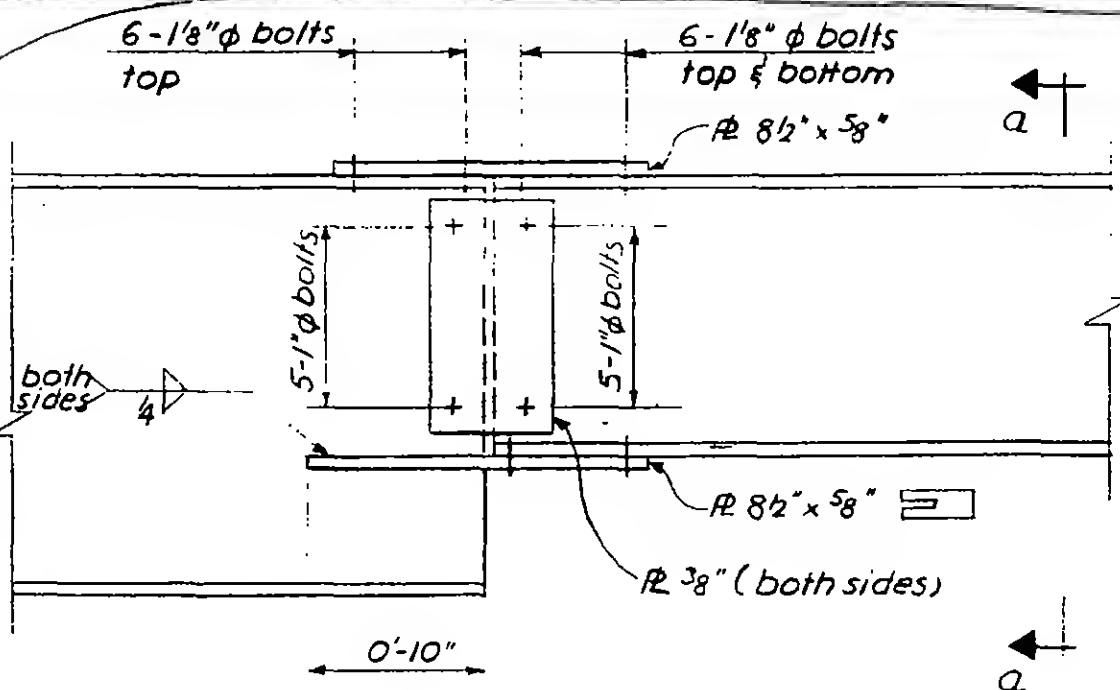
0-2-67



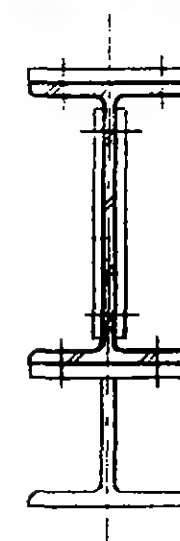
Elevation  
Detail 433 A



Section a-a



Elevation  
Detail 433 B



Section a-a



6-AB2-89

PROJECT THE WORLD TRADE CENTER

TITLE SPLICE DETAILS 431A, 435A, B, 436A, 437A 439A

DATE 6-30-67

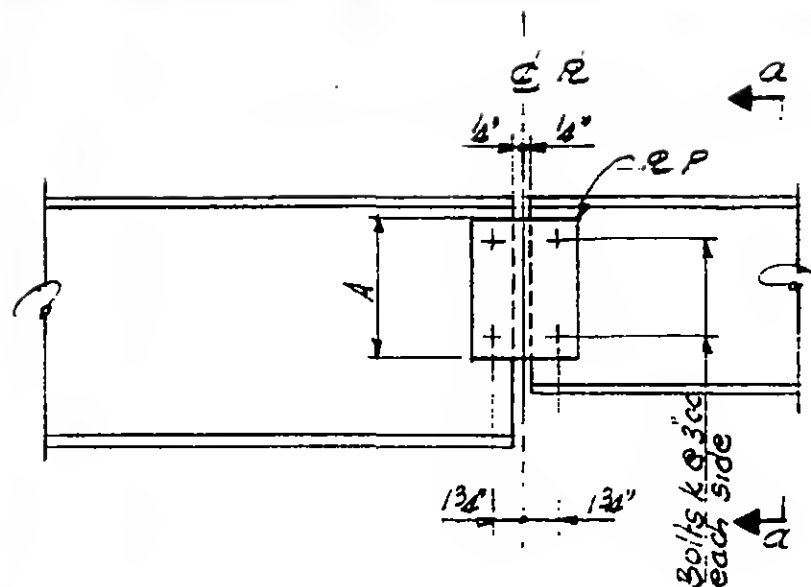
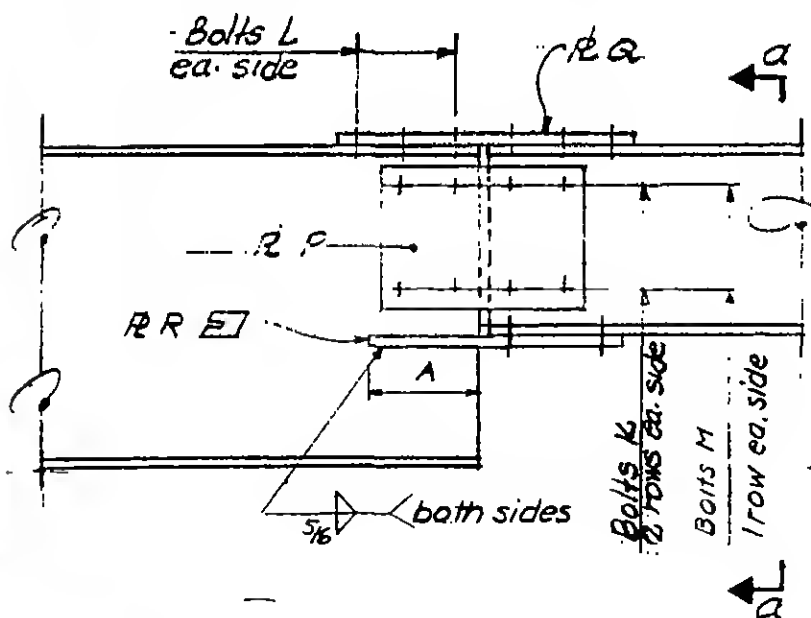
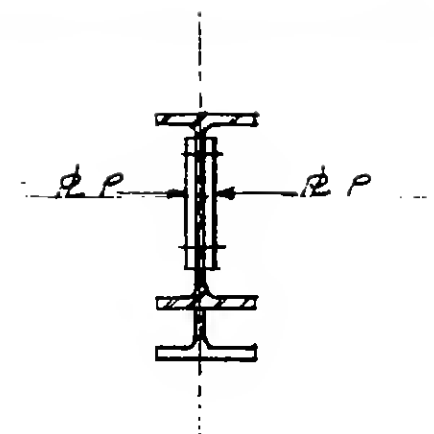
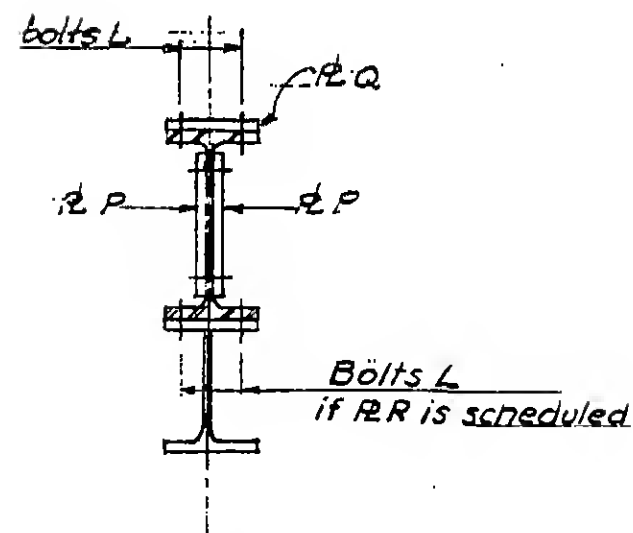
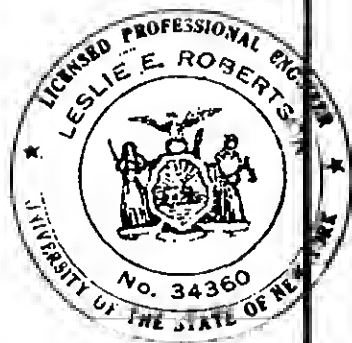
## REVISIONS

8-5-67

9-15-67

10-2-67

10-5-67

435A, 436A & 439A431A, 435B, 437ASection a-aSection a-a

## Structural & Civil Engineers

TITLE SCHEDULE FOR DETAIL 436 A, 435 A, 435E & 439A

DATE 6-30-67

## REVISIONS

3 - 5 - 67

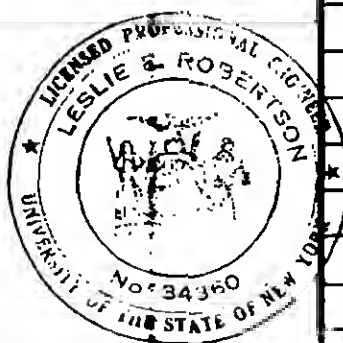
10-2-67

10-5-67

437A 431A

|            | 436 A              | 435 A             | 435 B                    | 439 A      | 437 A      | 431A         |
|------------|--------------------|-------------------|--------------------------|------------|------------|--------------|
| PLATES     |                    |                   |                          |            |            |              |
| P          | 5'2" x 38" x 0'-6" | 6' x 38" x 0'-9"  | 38"                      | 38"        | 38"        | 38"          |
| Q          | —                  | —                 | 1/2"                     | —          | 1/2"       | 3/4"         |
| R          | —                  | —                 | —                        | —          | 1/2"       | 3/4"         |
| DIMENSIONS |                    |                   |                          |            |            |              |
| A          | 5 1/2"             | 0'-9"             | —                        | —          | 0'-10"     | 1'-0"        |
| BOLTS      |                    |                   |                          |            |            |              |
| K          | 2 - 3/4" φ (A325)  | 3 - 3/4" φ (A325) | 6 - 7/8" φ<br>6 - 7/8" φ | 6 - 3/4" φ | —          | —            |
| L          | —                  | —                 | —                        | —          | 6 - 1" φ   | 6 - 1 1/8" φ |
| M          | —                  | —                 | —                        | —          | 5 - 3/4" φ | 8 - 3/4" φ   |

6-AB2-90.1

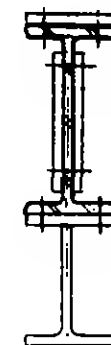
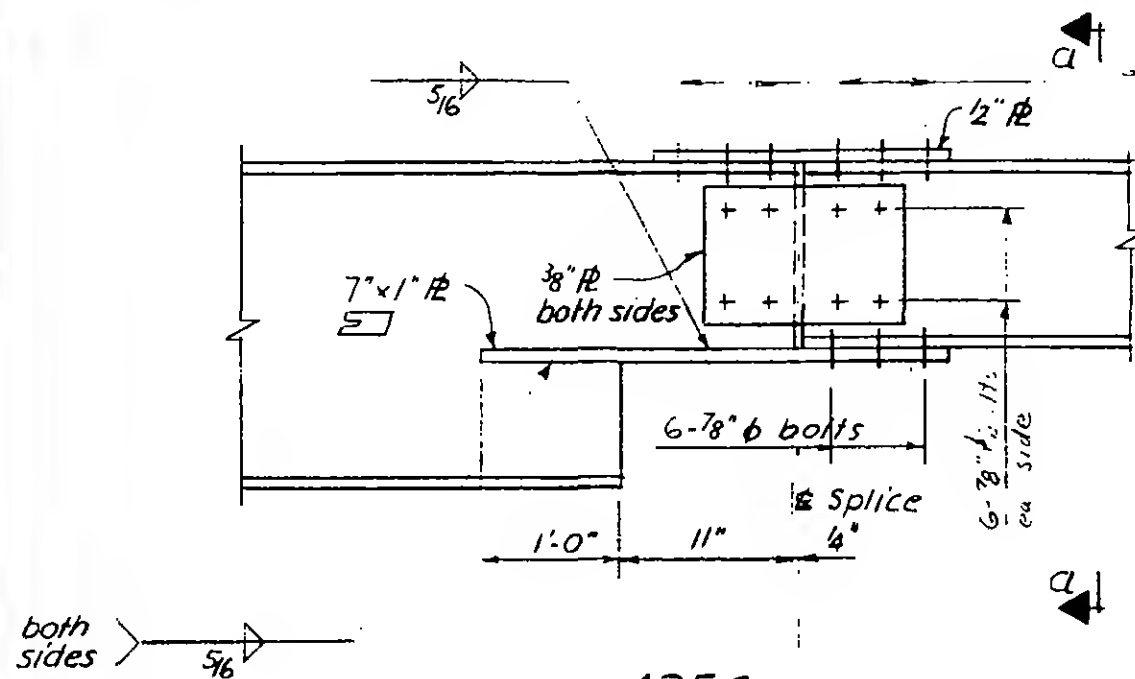


PROJECT THE WORLD TRADE CENTER

TITLE SPLICE DETAIL 435C

DATE 12-21-67

REVISIONS



Section a-a



PROJECT

THE WORLD TRADE CENTER

TITLE

SPlice CONNECTION 440A, 441A, 442A, 443A

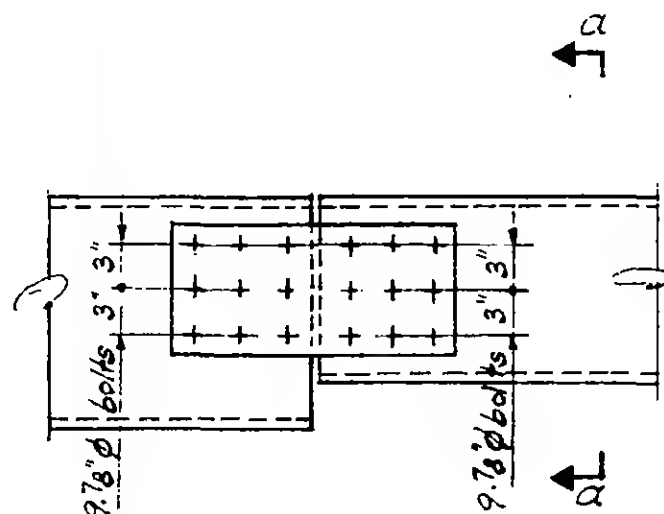
DATE

9-15-67

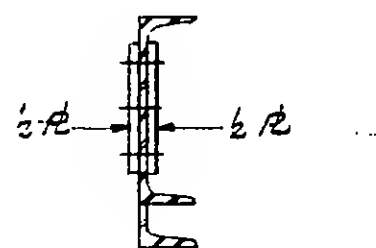
## REVISIONS

10-5-67

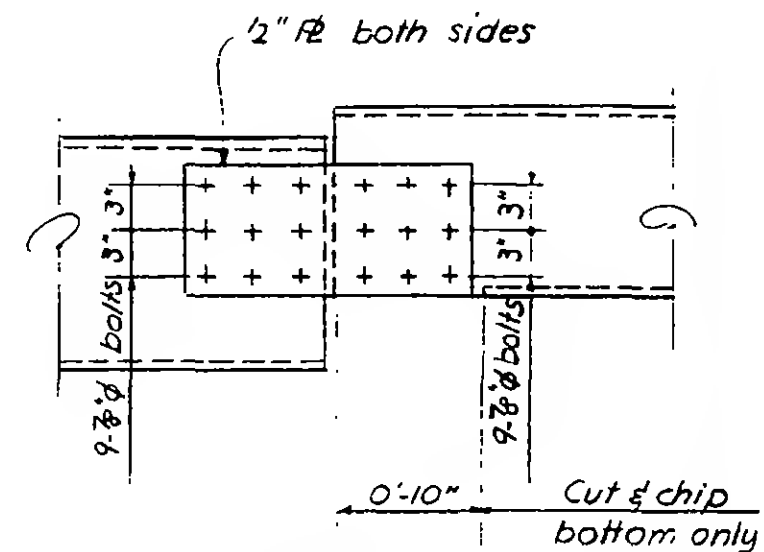
11-17-67



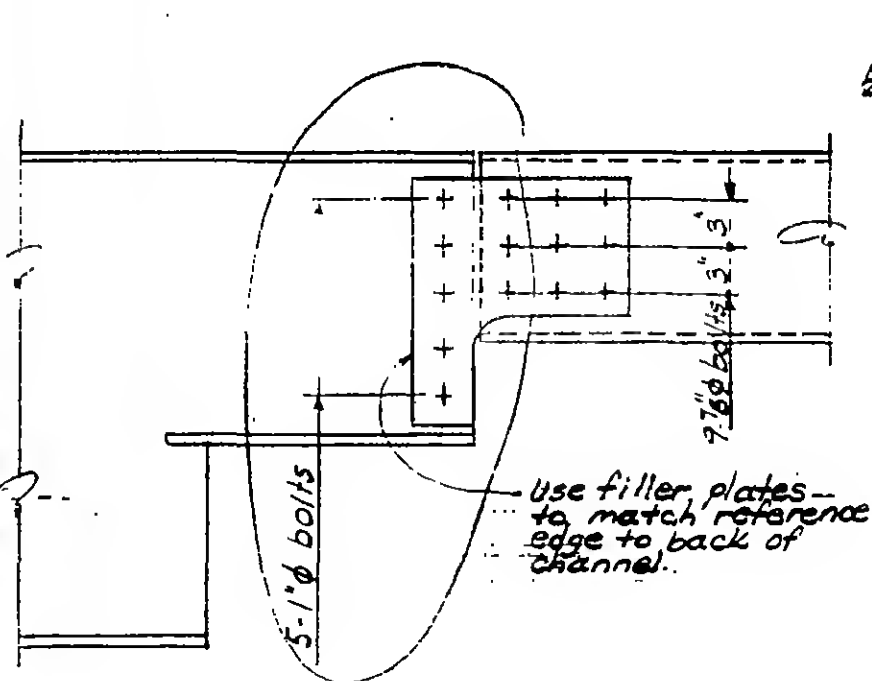
442 A



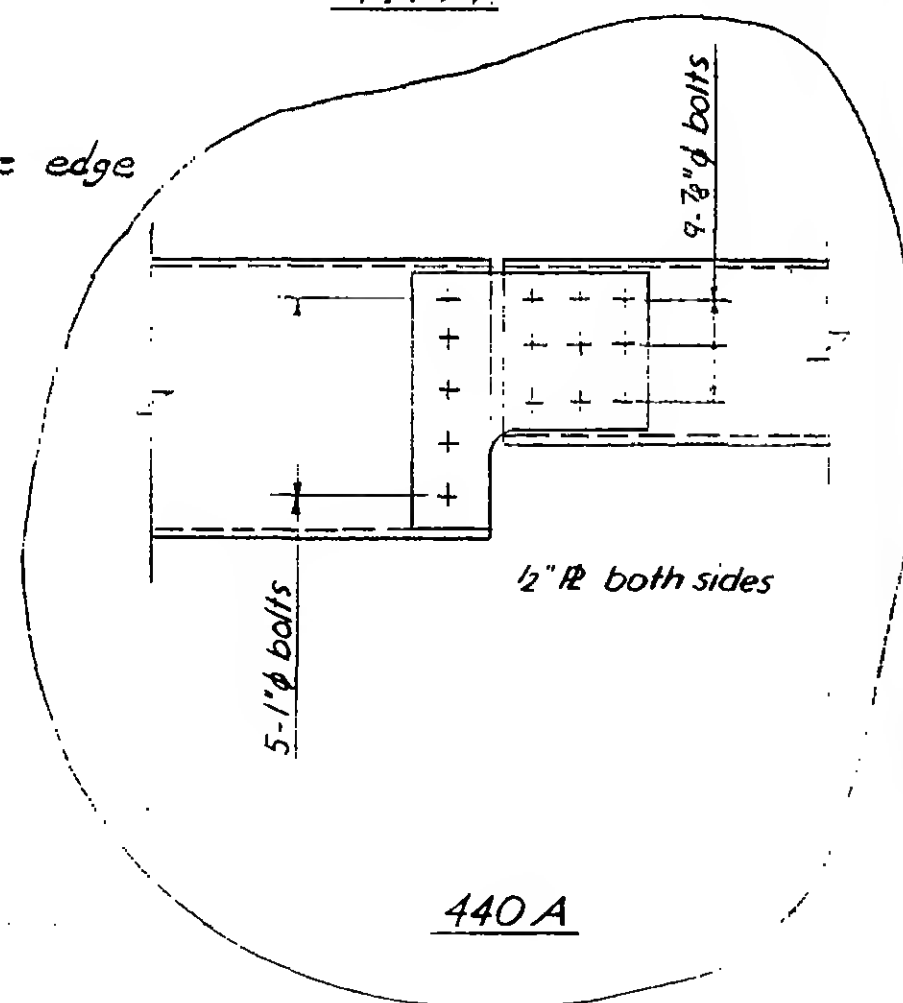
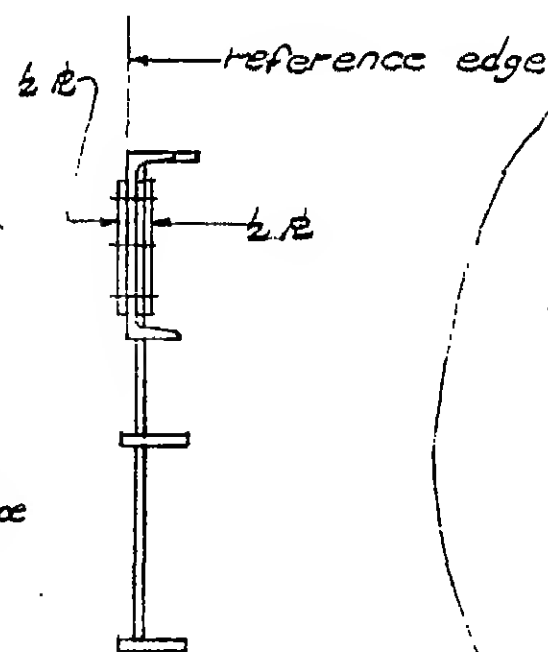
Section a-a



441 A



443 A



440 A



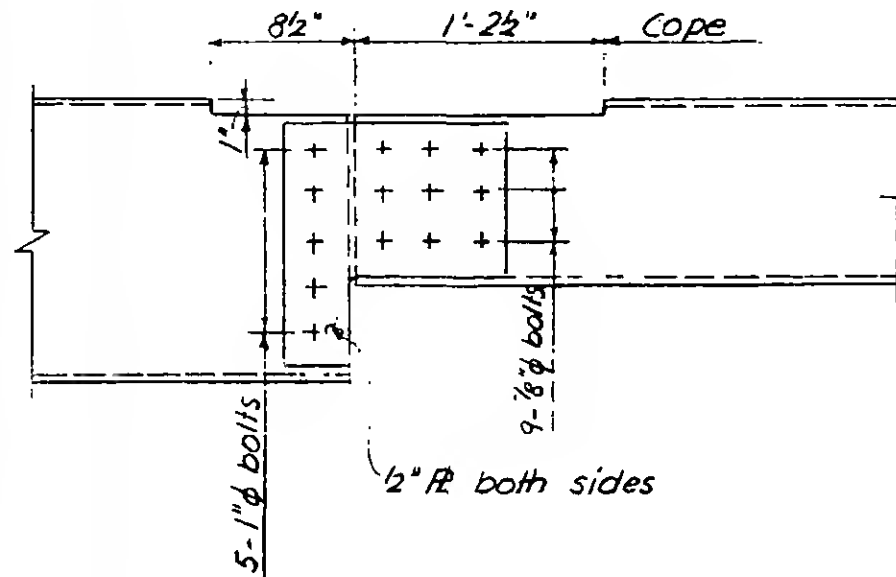
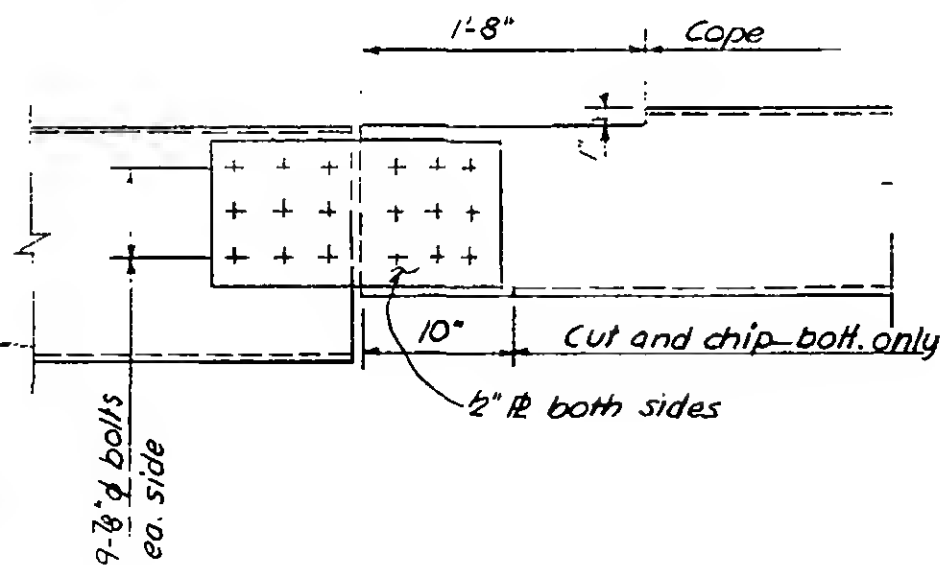
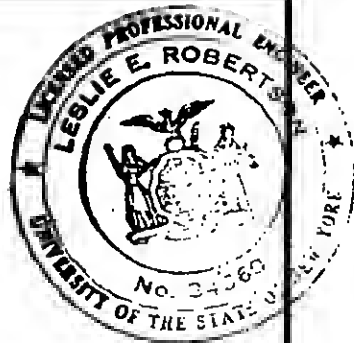
6-ABZ-91

PROJECT THE WORLD TRADE CENTER

TITLE SPLICE CONNECTION DETAIL 440B, 441B

DATE 11-17-67

## REVISIONS

Detail 440BDetail 441B

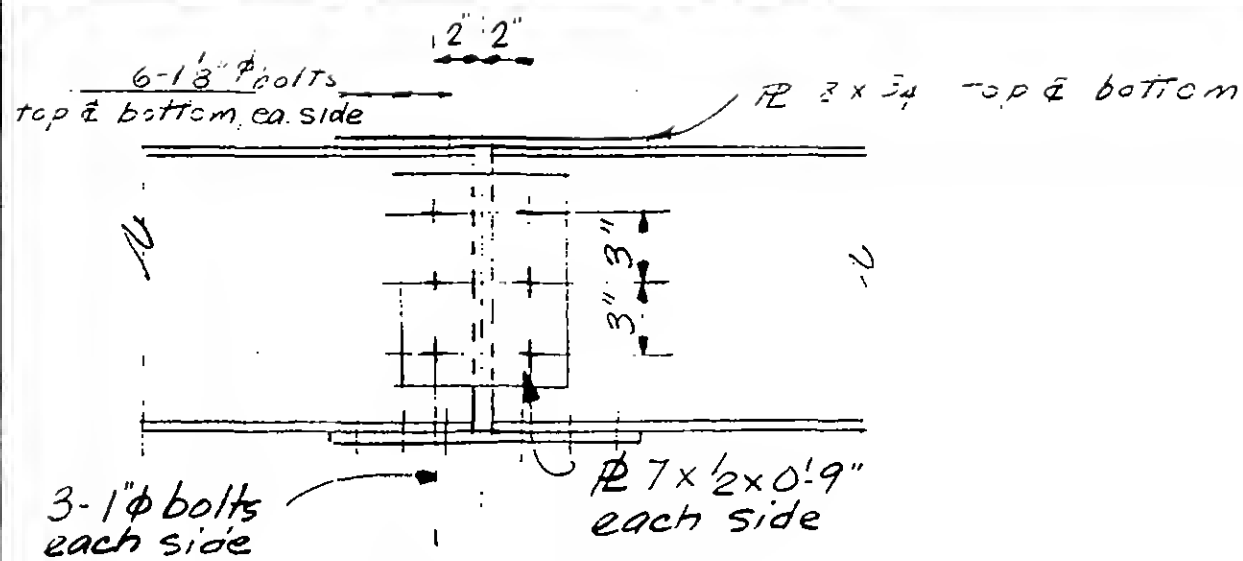
PROJECT THE WORLD TRADE CENTER

TITLE CONNECTION DETAIL 445 A

DATE 7-5-67

REVISIONS

8-5-67



DETAIL 445 A

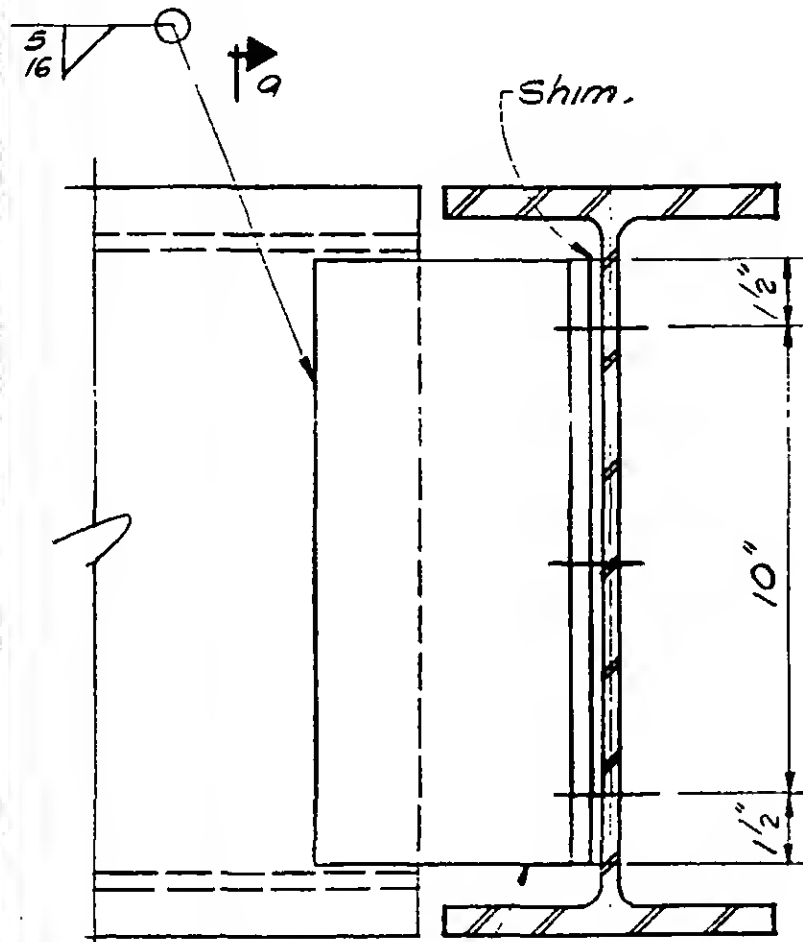


6-AB2-92

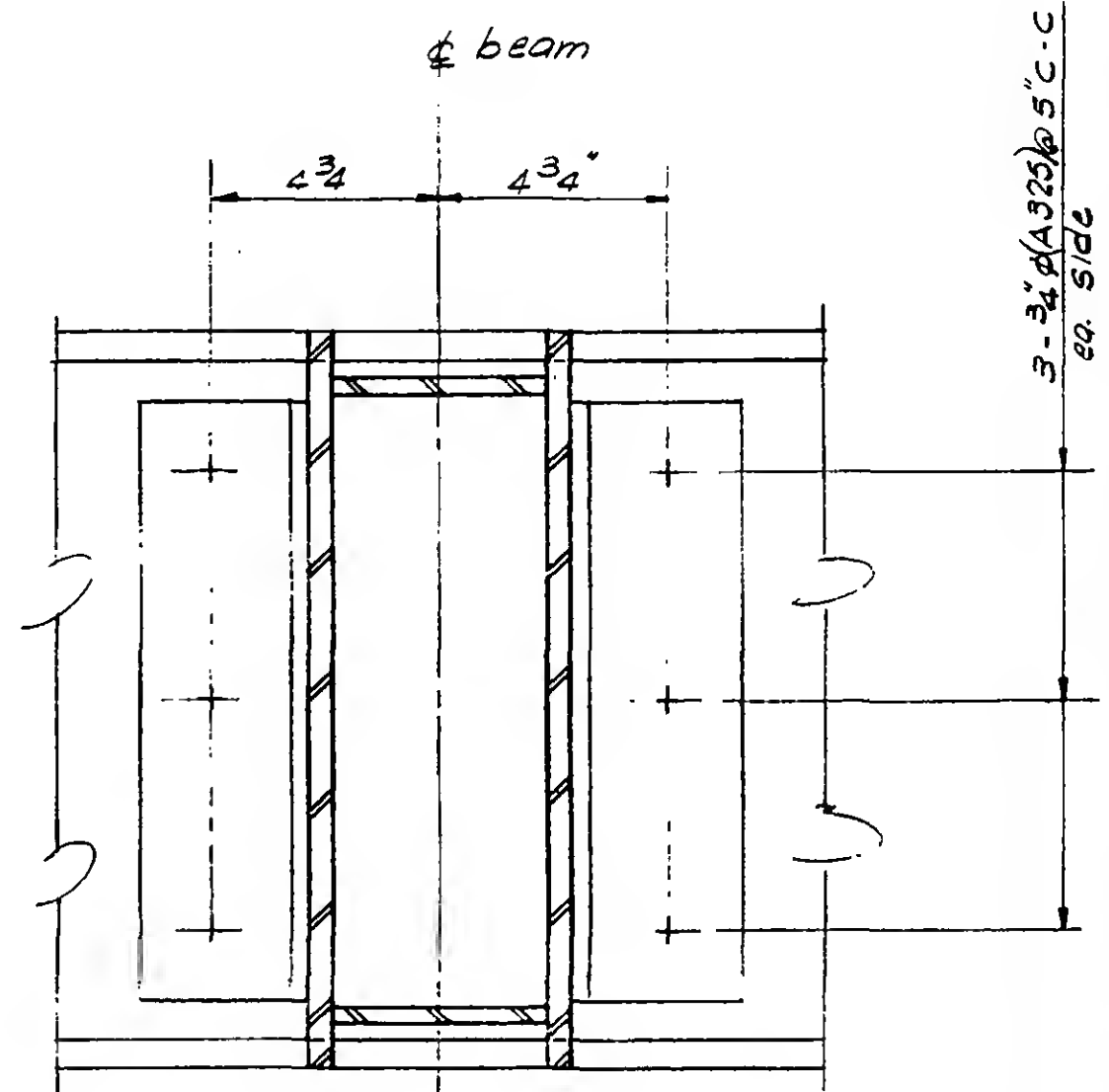
## REVISIONS

6-30-67

8-5-67

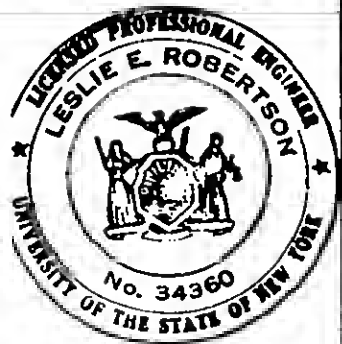


$6 \times 3\frac{1}{2} \times 3$  each side (Note 1.)



SECTION a-a'

Note 1. These angles are modified where detail 175 B is scheduled for far side of beam.  
(See 6-AB2-77)



G-AB2-101

PROJECT *THE WORLD TRADE CENTER*

TITLE *CONNECTION DETAIL 451, 451A*

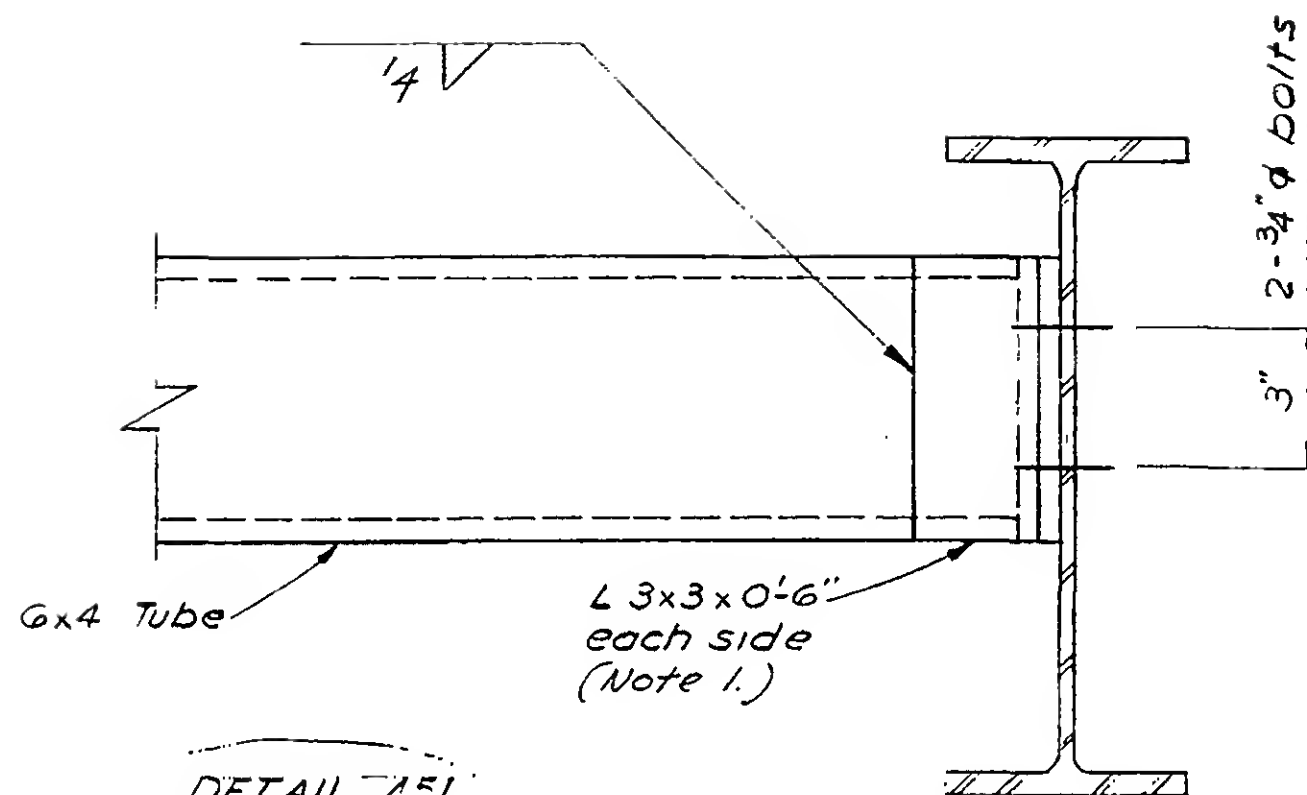
DATE *5-1-67*

REVISIONS

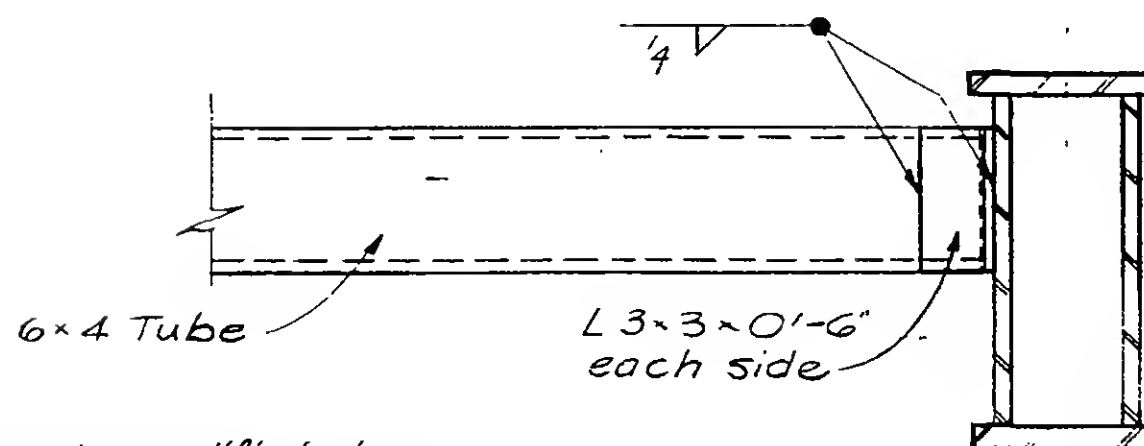
*6-19-67*

*8-5-67*

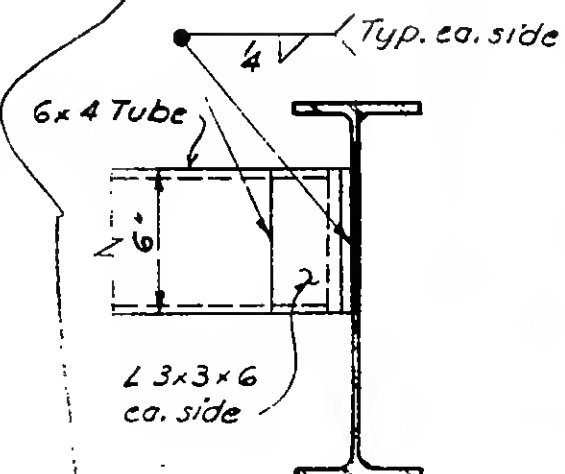
*1-10-69*



DETAIL 451



DETAIL 451



DETAIL 451A

*Note 1. These angles modified where details 174 & 175 are scheduled for far side of beam. (See G-AB2-76 & 77)*

*G-AB2-102*



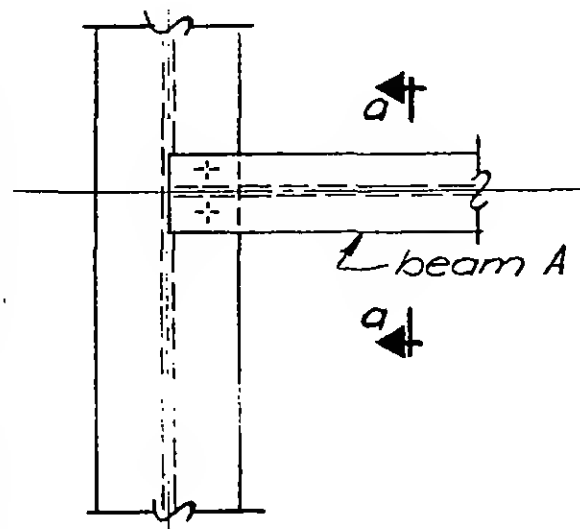
REVISIONS

2-2-67

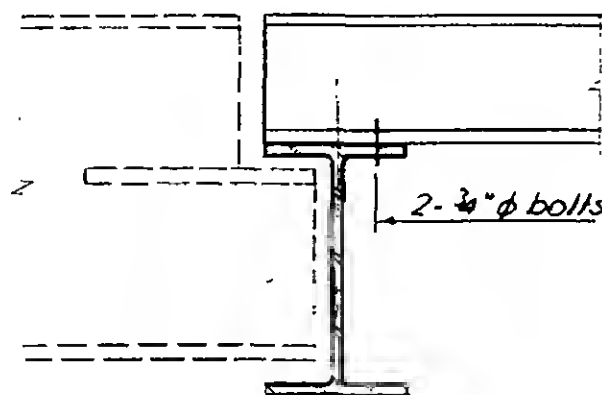
10-31-67

3-11-68

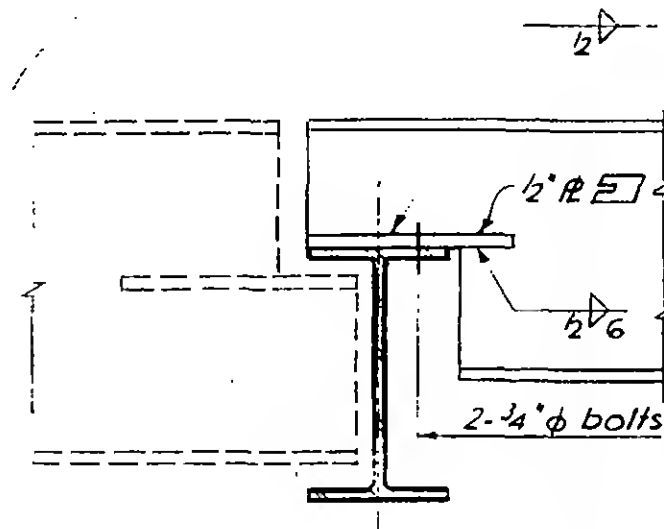
5-7-68



PLAN

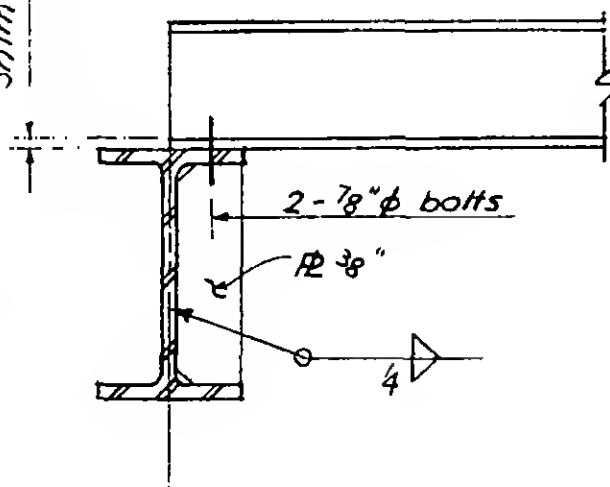


452 B only

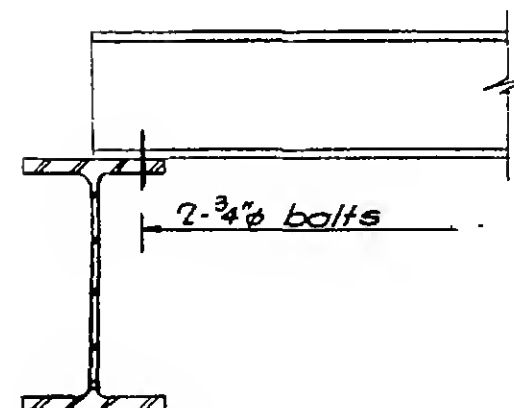


452 C

Shim if req'd



Section a-a beam A-16WF



Section a-a beam A-8B



PROJECT

THE WORLD TRADE CENTER

TITLE

CONNECTION

DETAIL

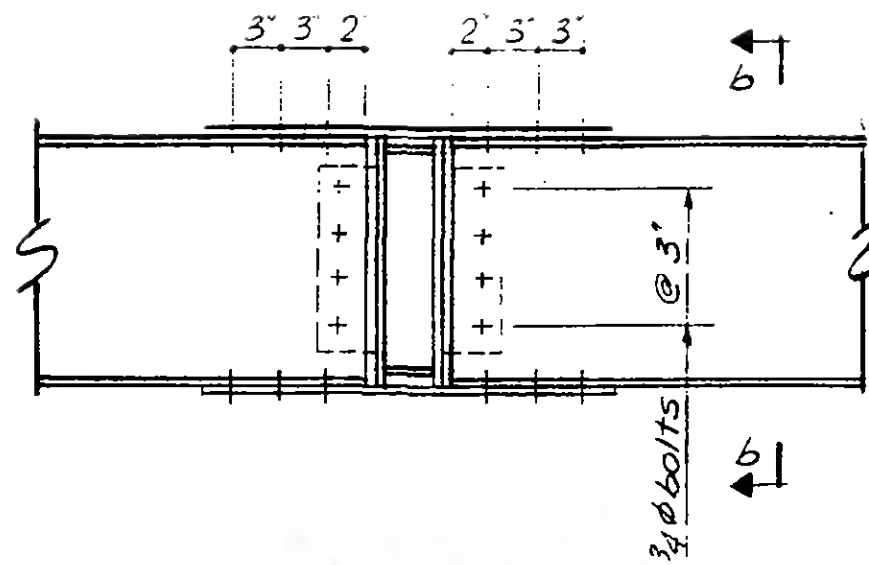
453A C

DATE

6-5-67

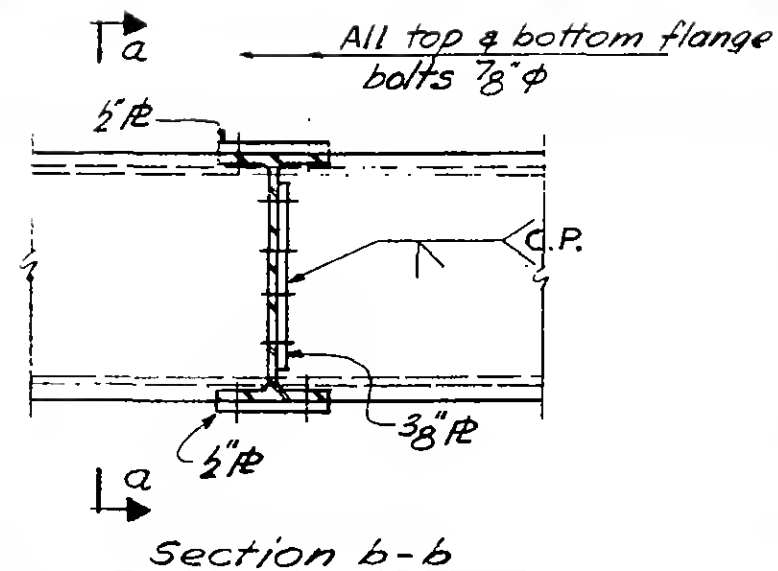
REVISIONS

- 5 - 67  
10 - 2 - 67

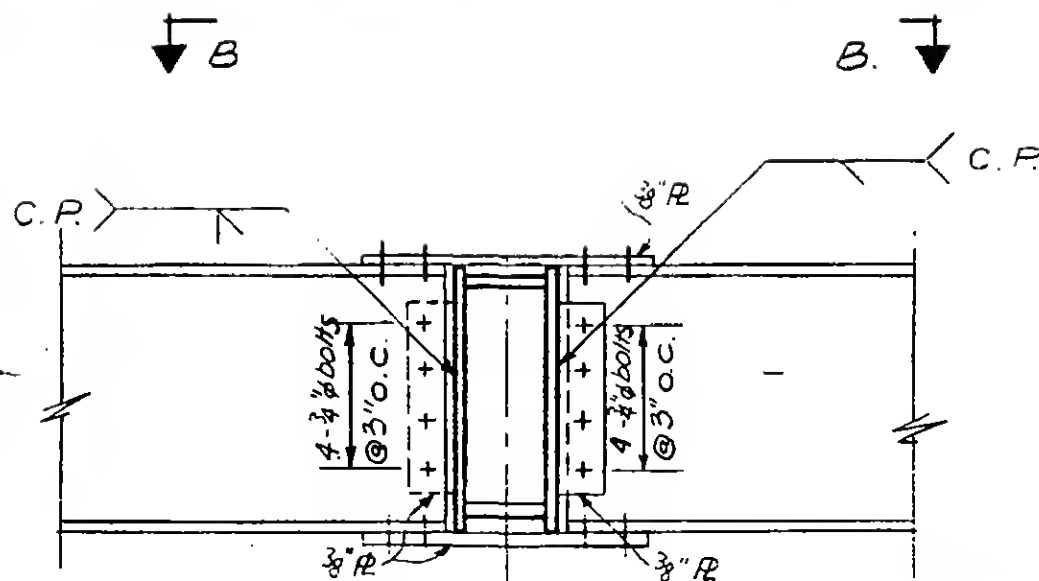


Section a-a

453 A

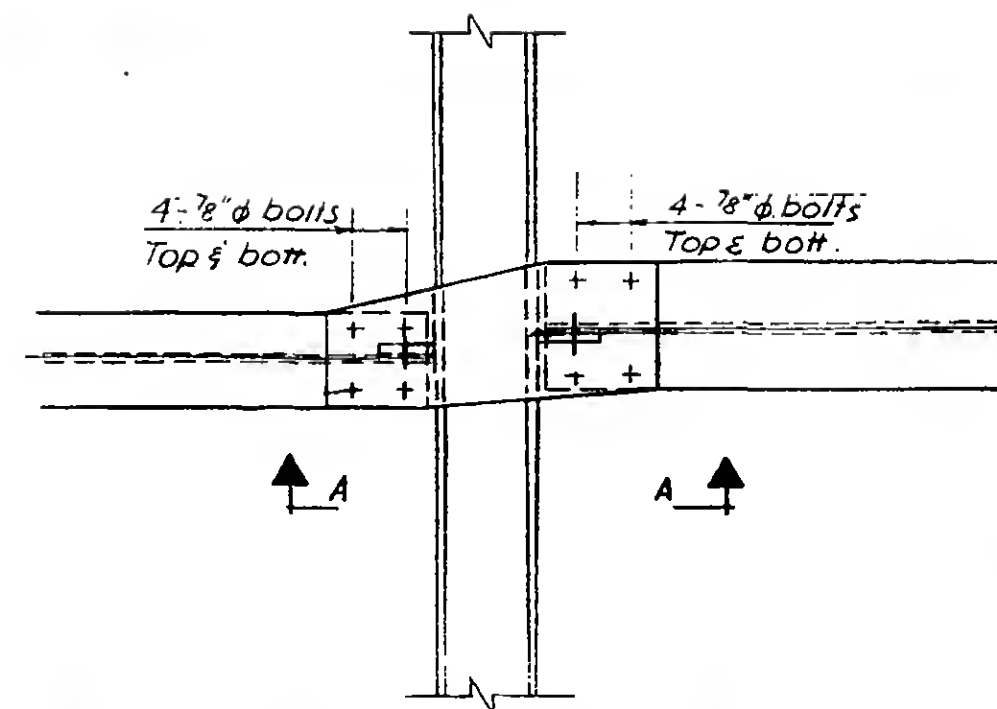


Section b-b



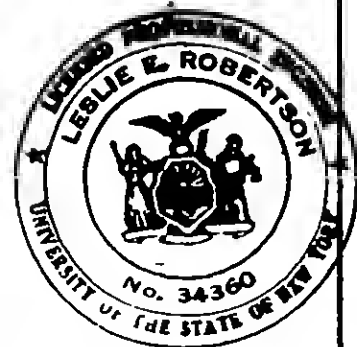
Section A-A

453 C



Section B-B

6-AB2-104



PROJECT THE WORLD TRADE CENTER

TITLE CONNECTION DETAIL 454 A, B, C

DATE 6-5-67

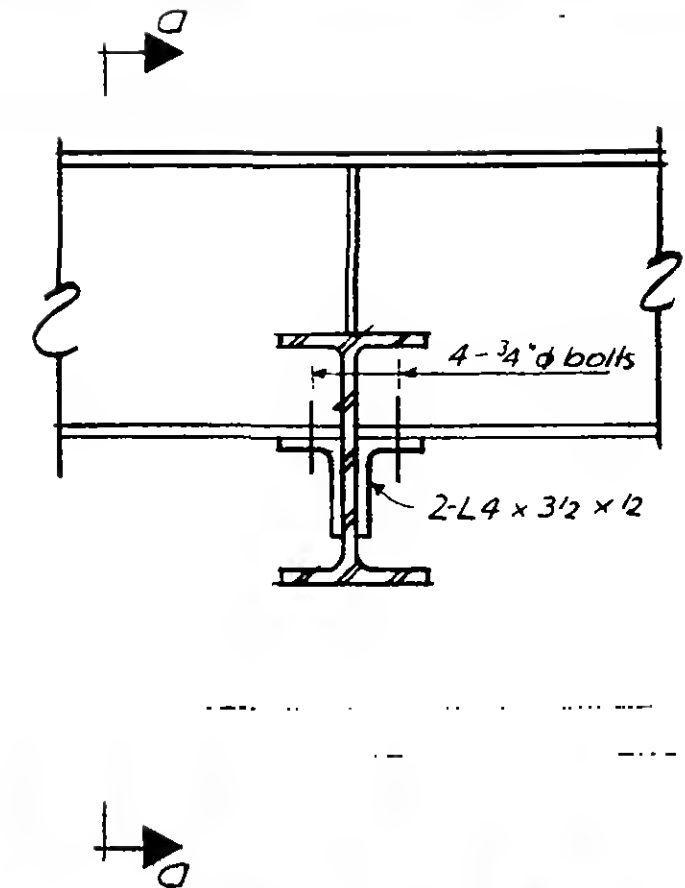
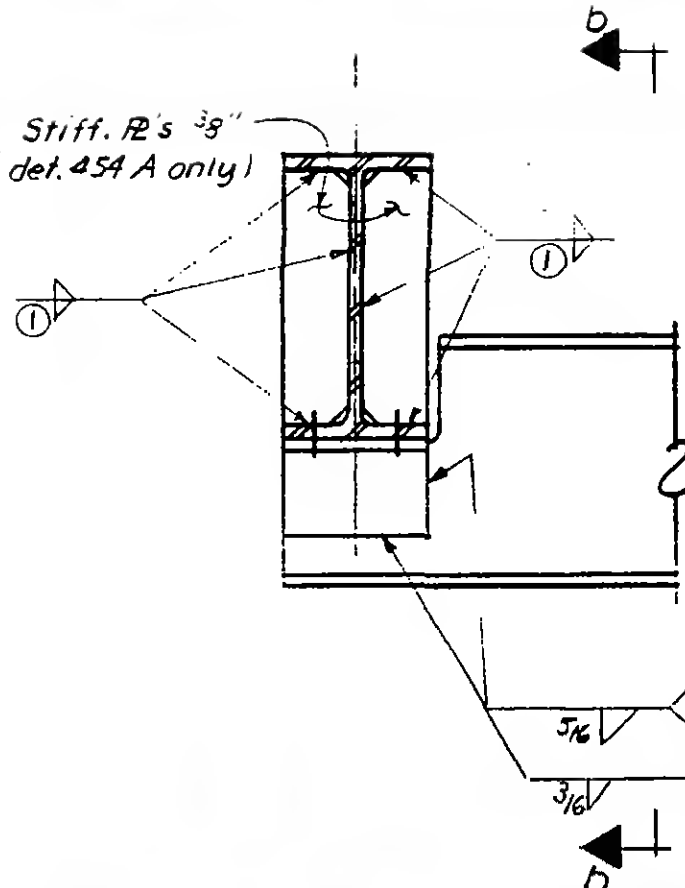
REVISIONS

10-2-67

12-21-67

1-24-68

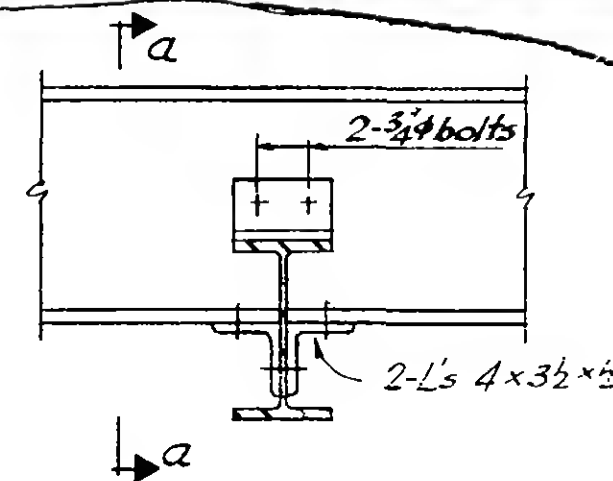
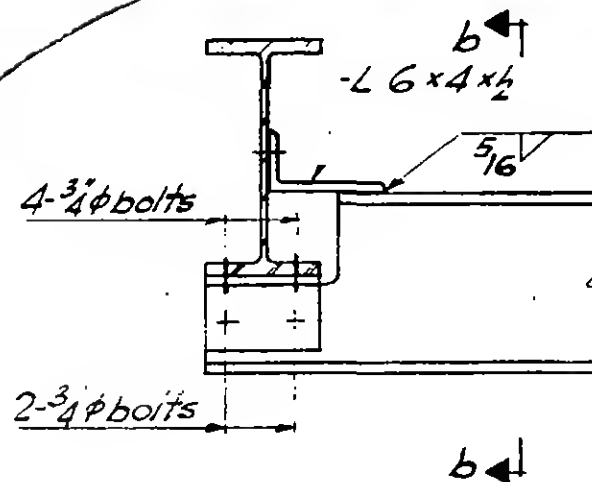
Stiff. Pl's 3/8"  
(det. 454 A only)



Section a-a

454 A & B

Section b-b



Section a-a

454 C

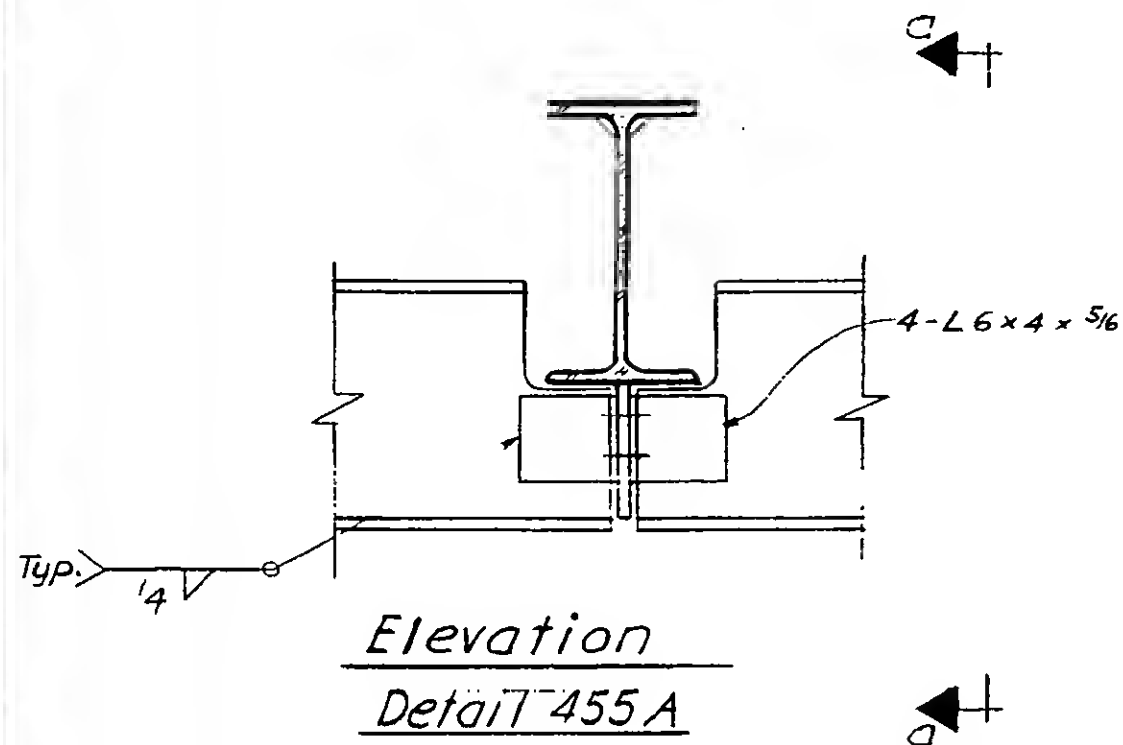
Section b-b

6- AB2-105

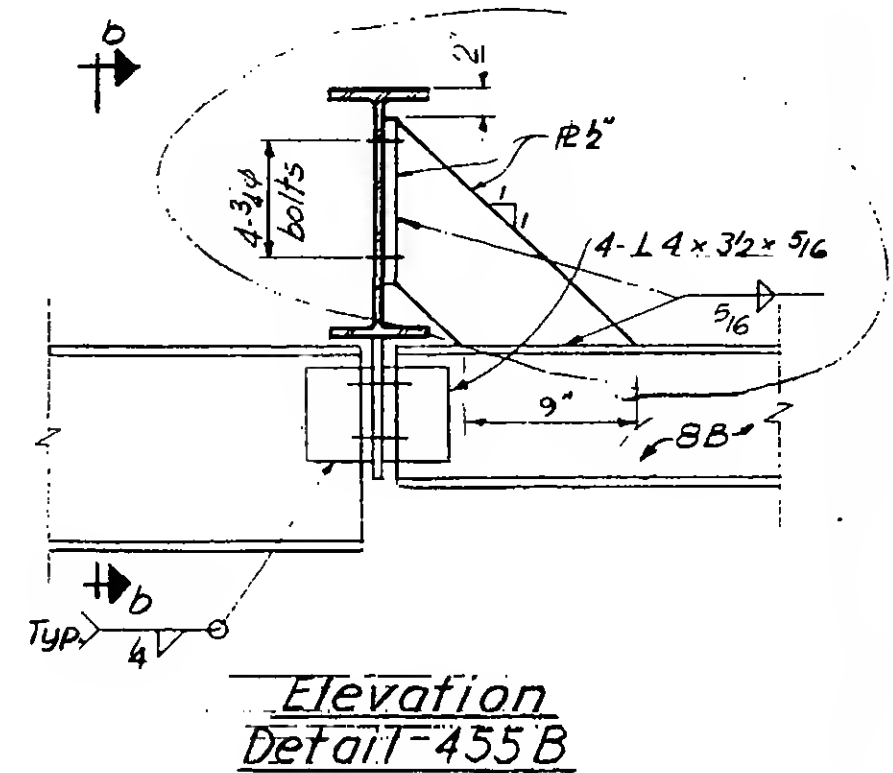


REVISIONS

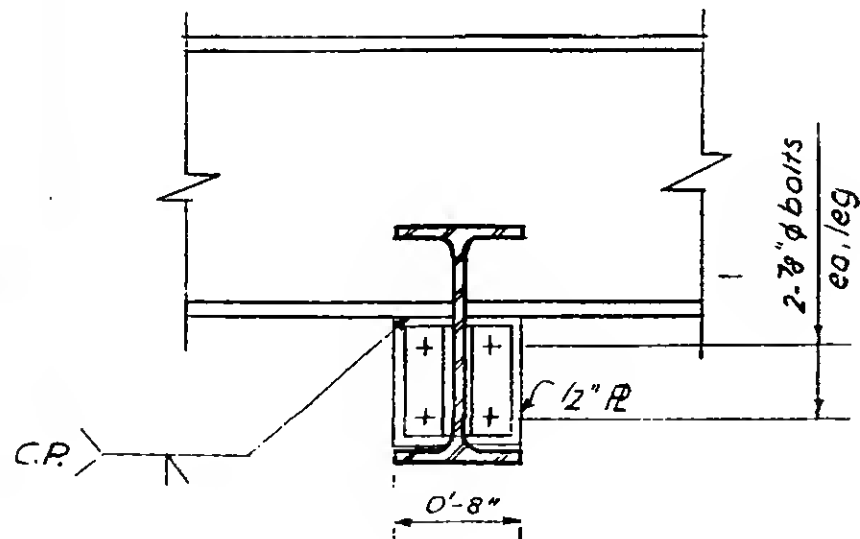
10-2-67  
11-23-67  
1-24-68



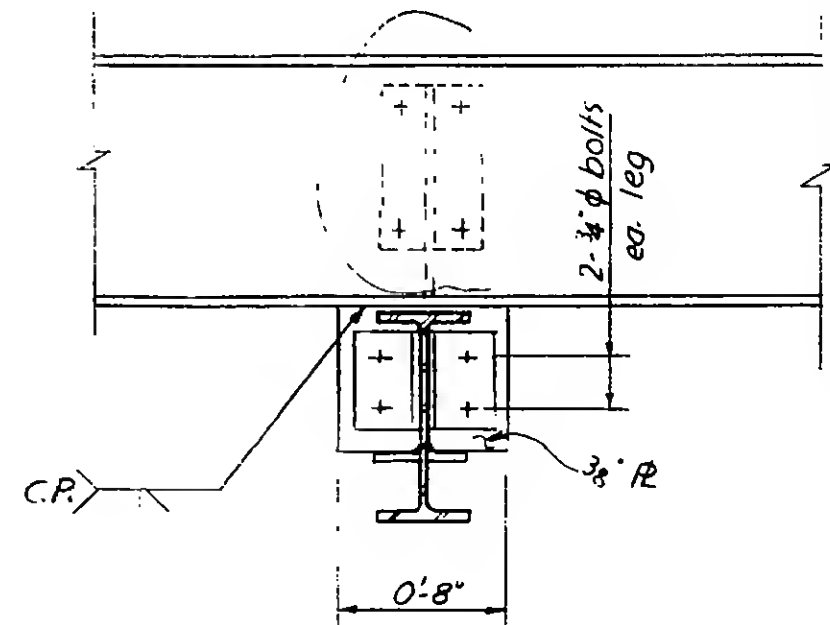
Elevation  
Detail 455 A



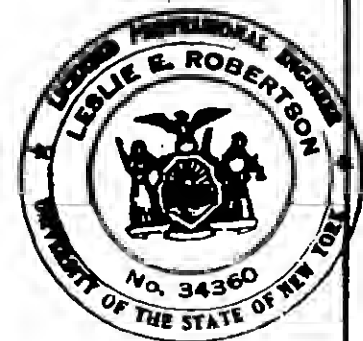
Elevation  
Detail 455 B



Section a-a



Section b-b

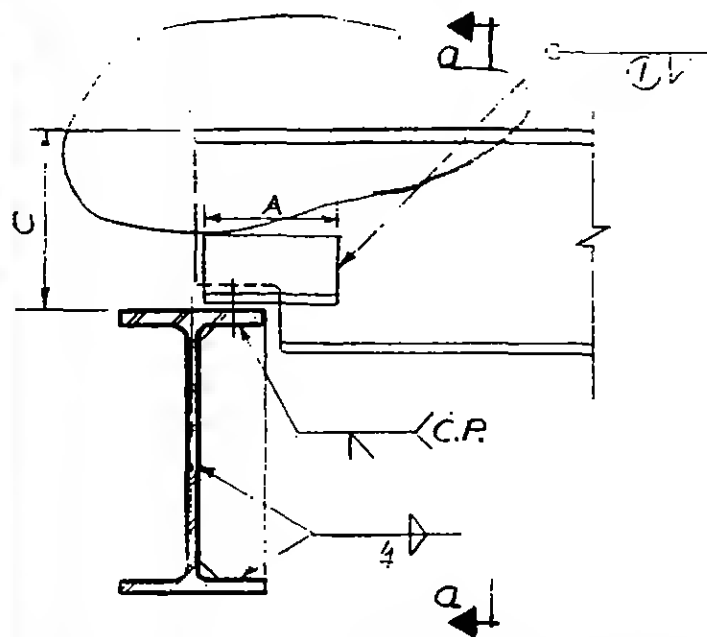
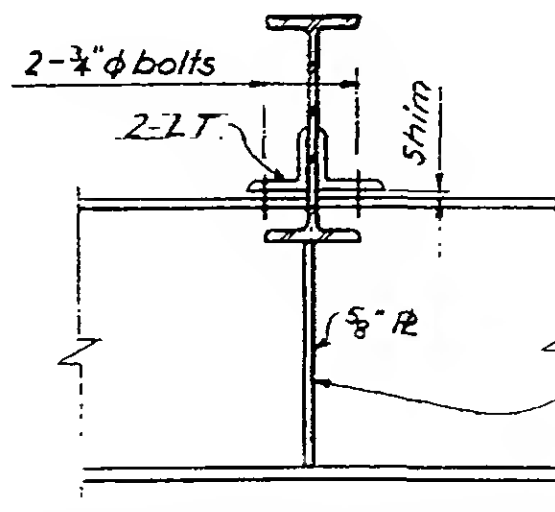


## REVISIONS

8-5-67

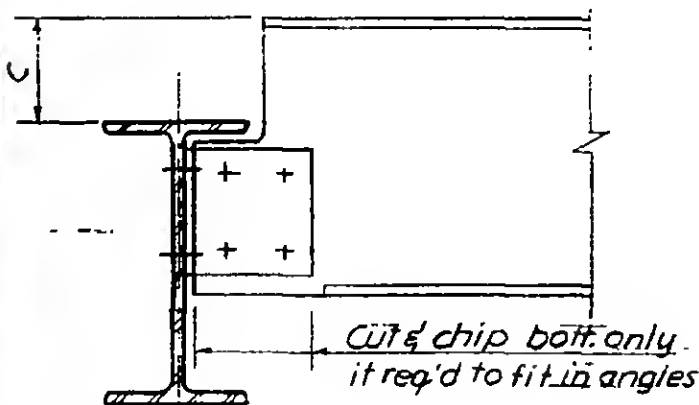
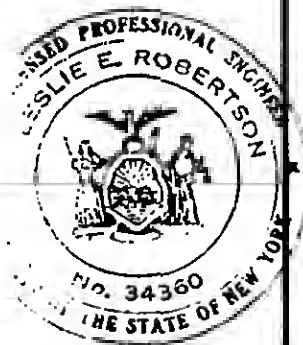
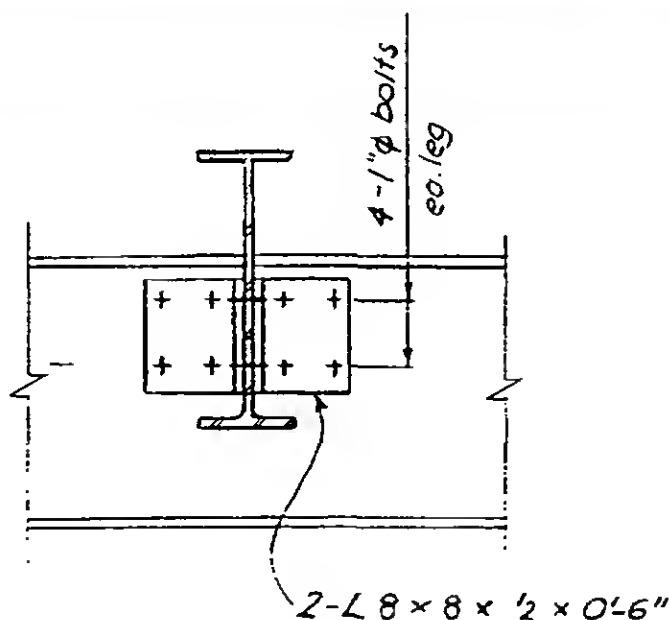
10-2-67

2-21-68

ElevationSection a-a

## SCHEDULE

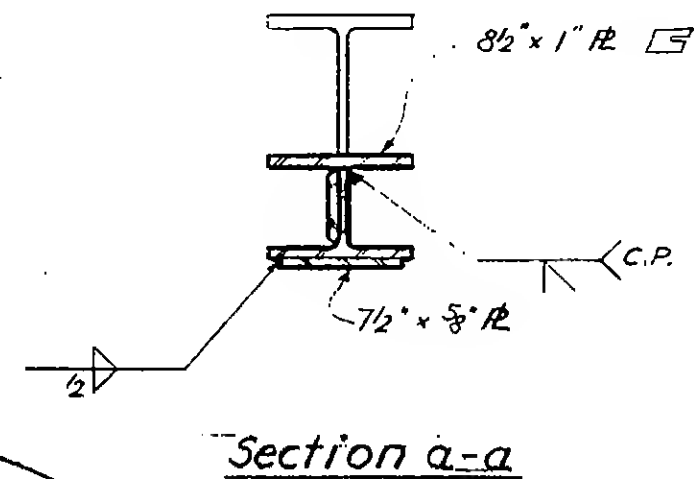
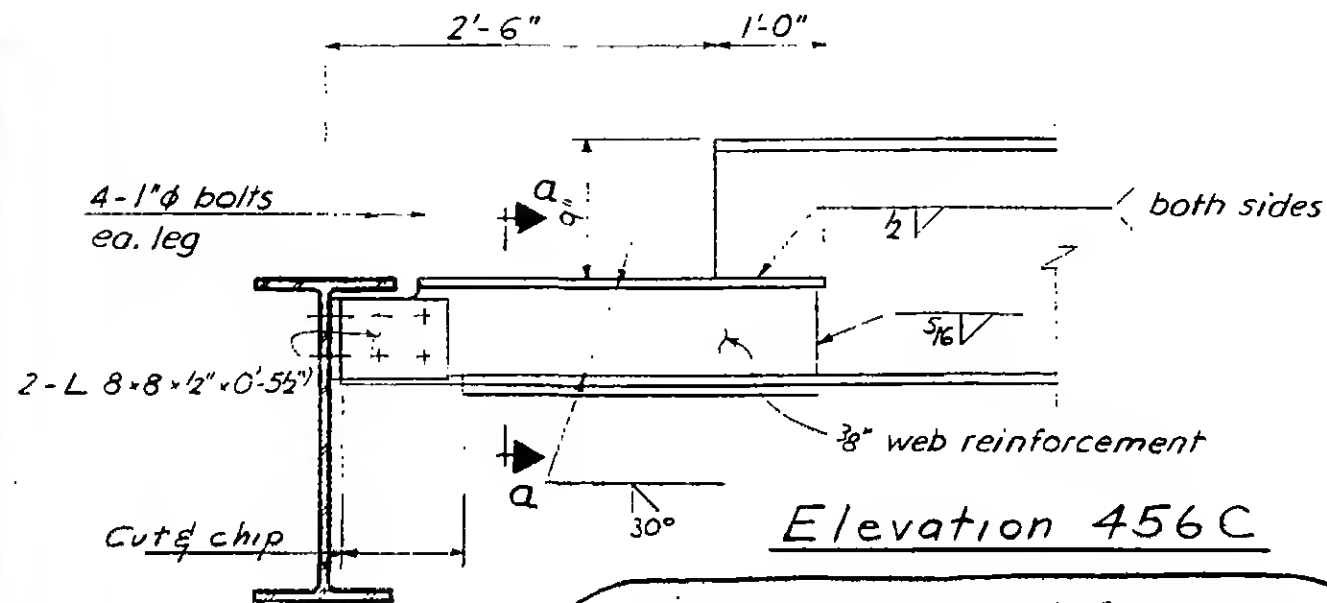
| DETAIL | L T             | DIM. A | WELD ① |
|--------|-----------------|--------|--------|
| 456 A  | 4x4x1/2x0'-6"   | 0'-6"  | 3/8    |
| 456 B  | 9x4x9/16x0'-10" | 0'-9"  | 5/16   |

Detail 456 A & B (C ≥ 8")ElevationSection a-aDetail 456 B (C < 8")

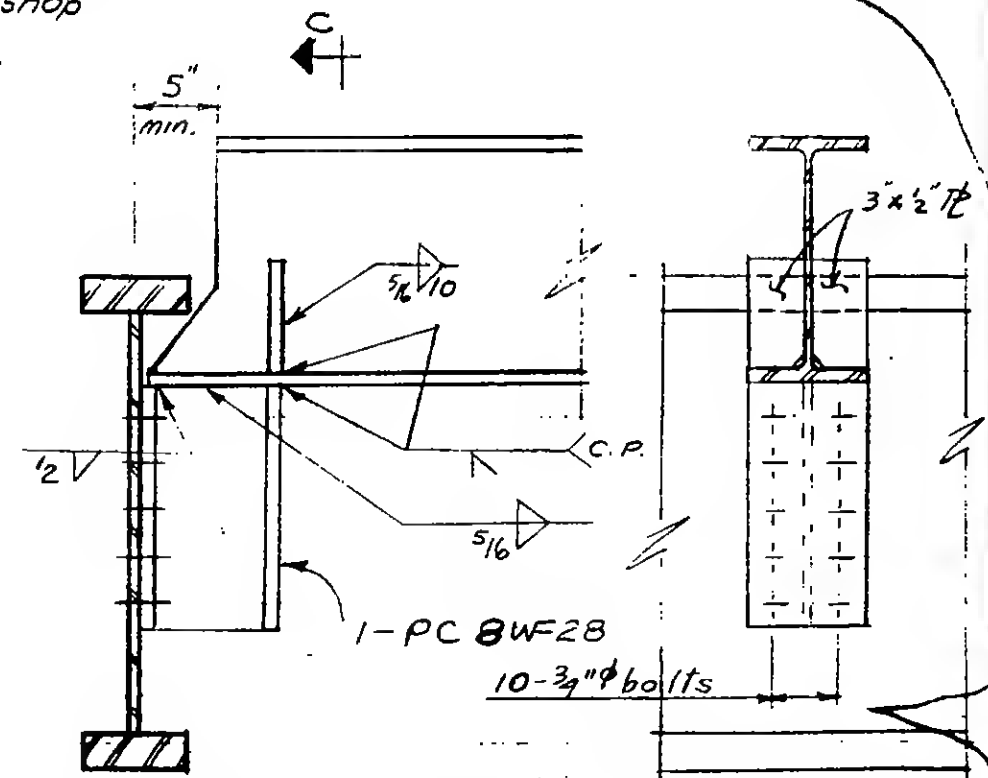
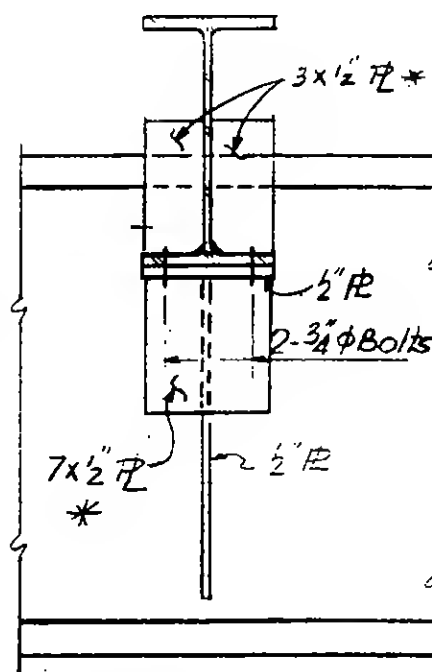
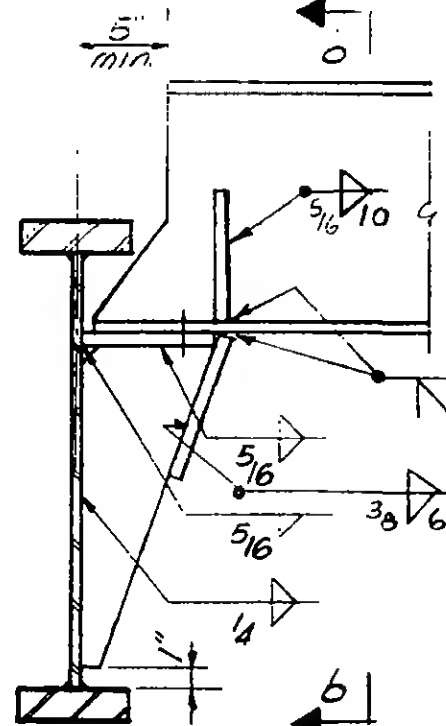
## REVISIONS

12-4-67

10-9-68



Use 456 E only of Towers A & B, Floors 18, 26, 34, and Tower A floor 56. Plates marked (\*) are Revisions after Fabrication, field installed. All others materials shop fabricated.

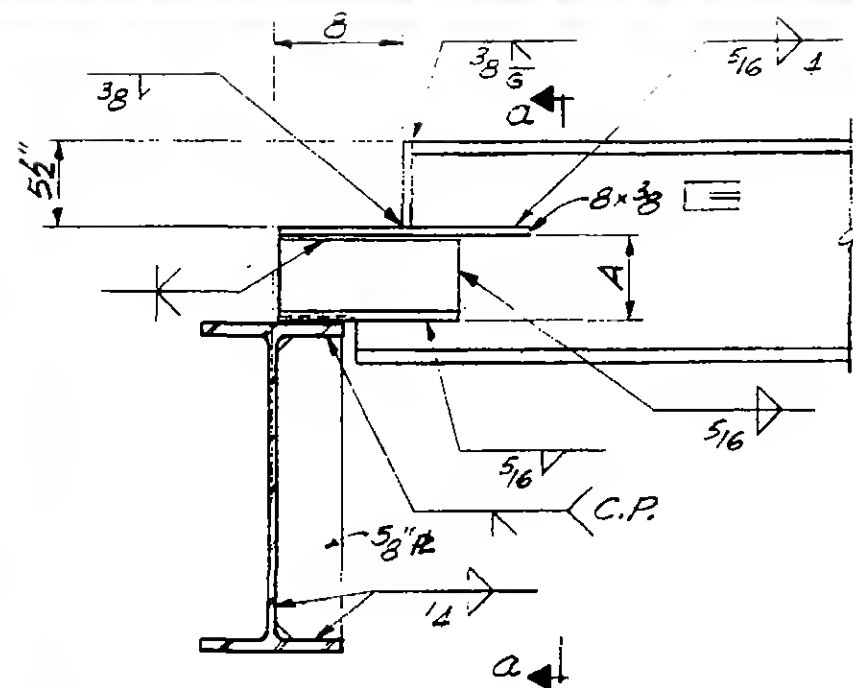


Section c-c

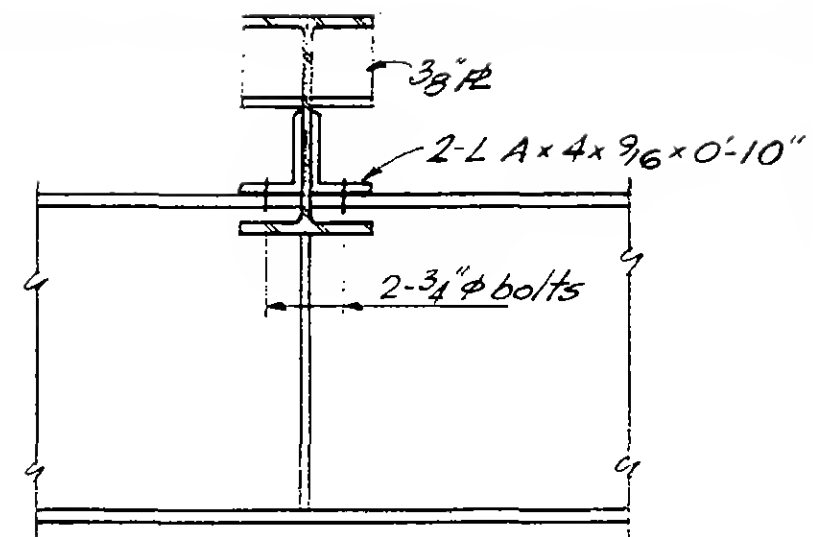
6-AB2-107.1



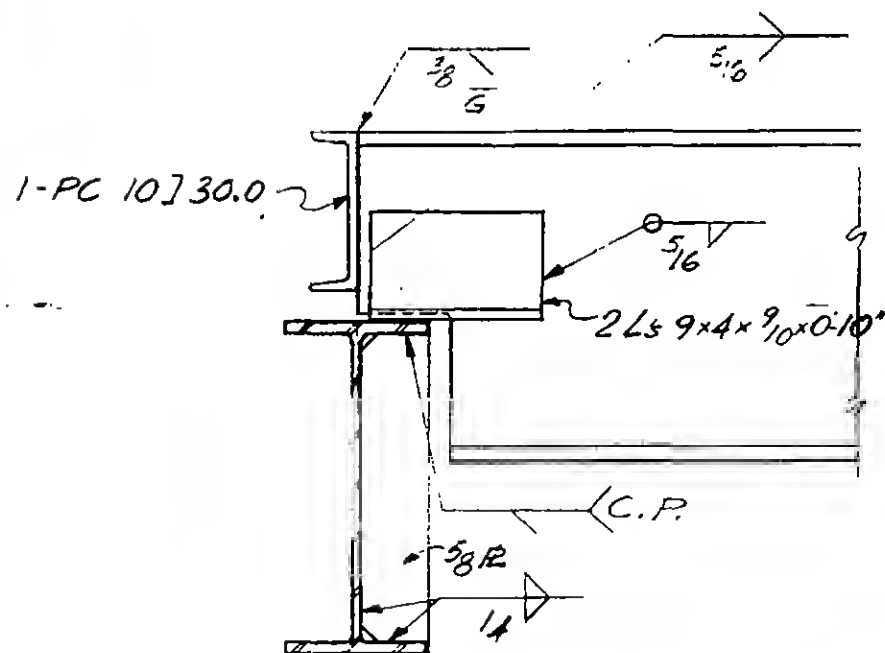
## REVISIONS



ELEVATION 456 F



Section a-a



ELEVATION 456 G



**DESIGNED**

**DRAWN**

REVIEWED

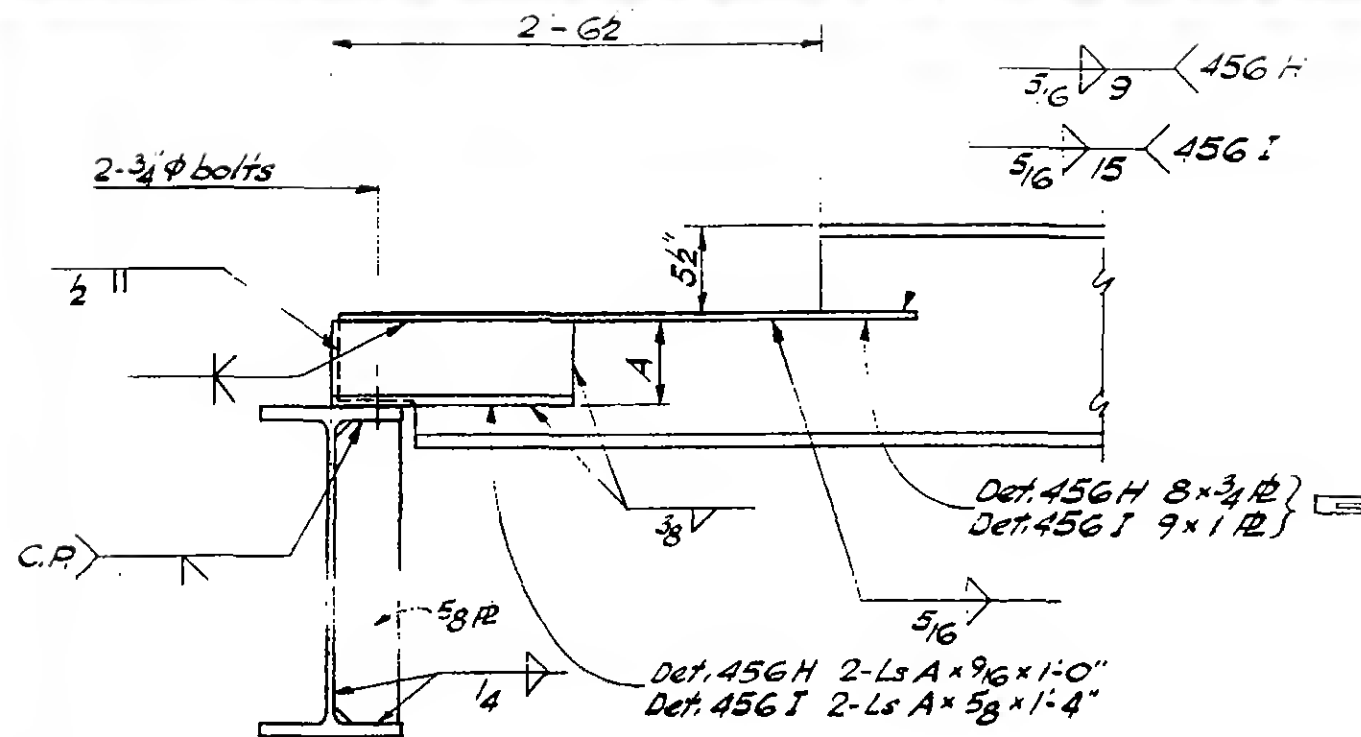
6-AB2-107.2

PROJECT THE WORLD TRADE CENTER

TITLE CONNECTION DETAIL 456 H I, J

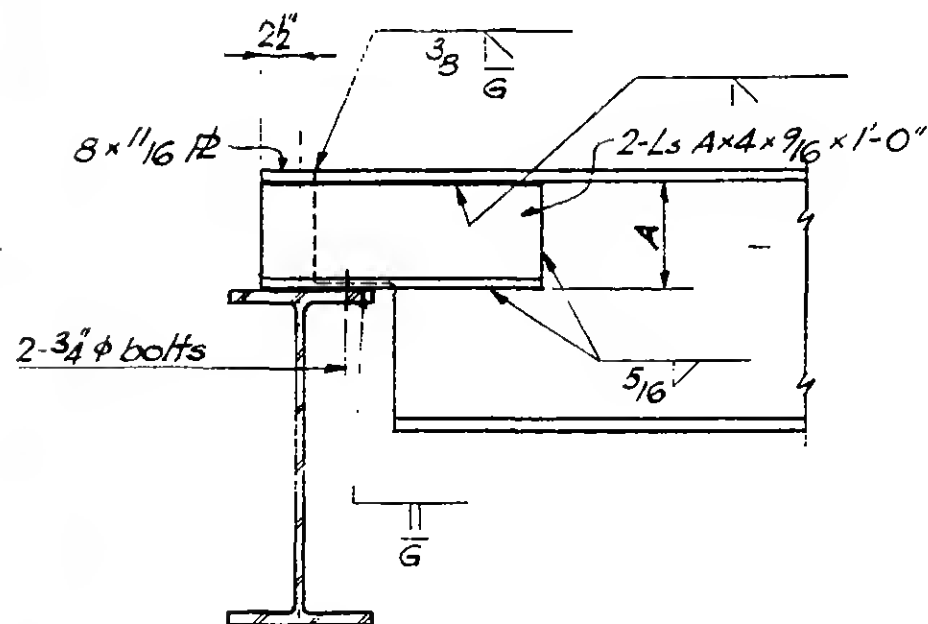
DATE 9-25-68

## REVISIONS



456 H

456 I



456 J



DESIGNED

DRAWN

REVIEWED

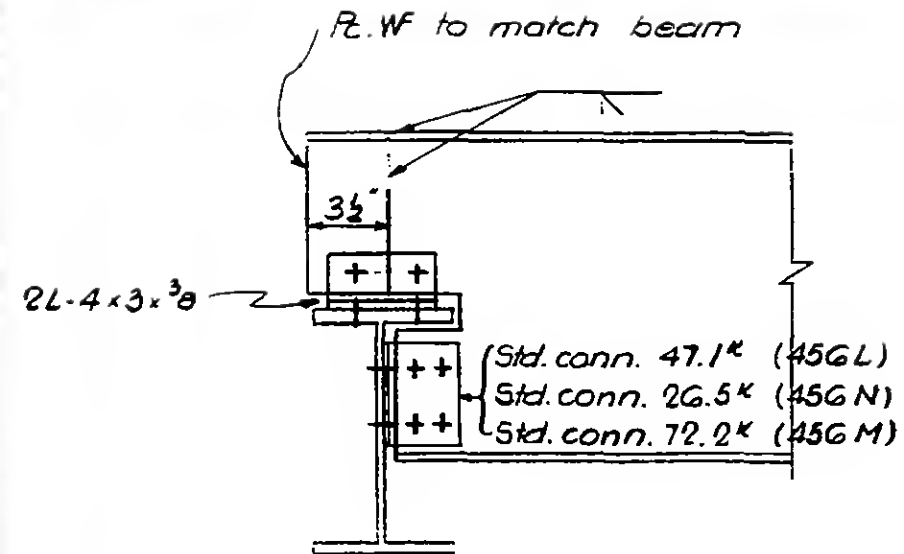
6-AB2-107.3

PROJECT THE WORLD TRADE CENTER

TITLE DETAIL 45G L, M, N

DATE 9-25-68

## REVISIONS

Detail 45G L, M, N

DESIGNED

DRAWN

G.T.H.

REVIEWED

G-AB2-107.4

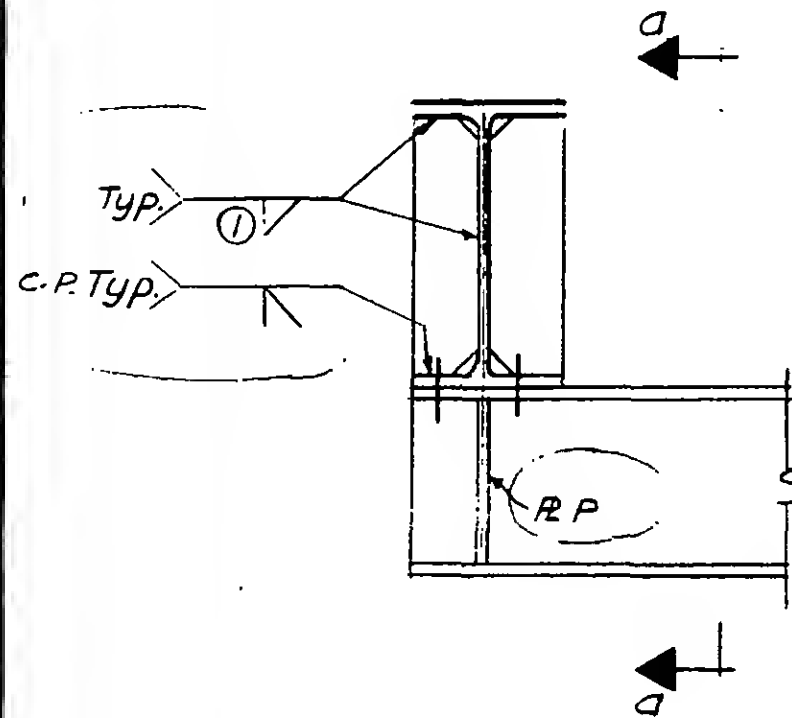
PROJECT THE WORLD TRADE CENTER

TITLE CONNECTION DETAIL 457 A

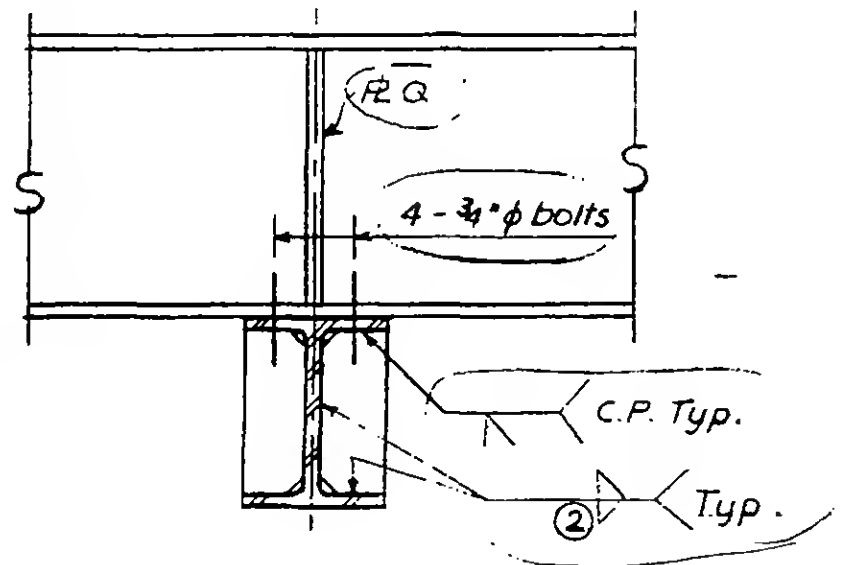
DATE 6-5-67

REVISIONS

8-14-67



| SCHEDULE |      |
|----------|------|
| PLATES   |      |
| P        | 3/8" |
| Q        | 3/8" |
| WELDS    |      |
| ①        | 3/16 |
| ②        | 3/16 |



Section a-a



G-AB2-108

SKILLING - HELLE - CHRISTIANSEN - ROBERTSON

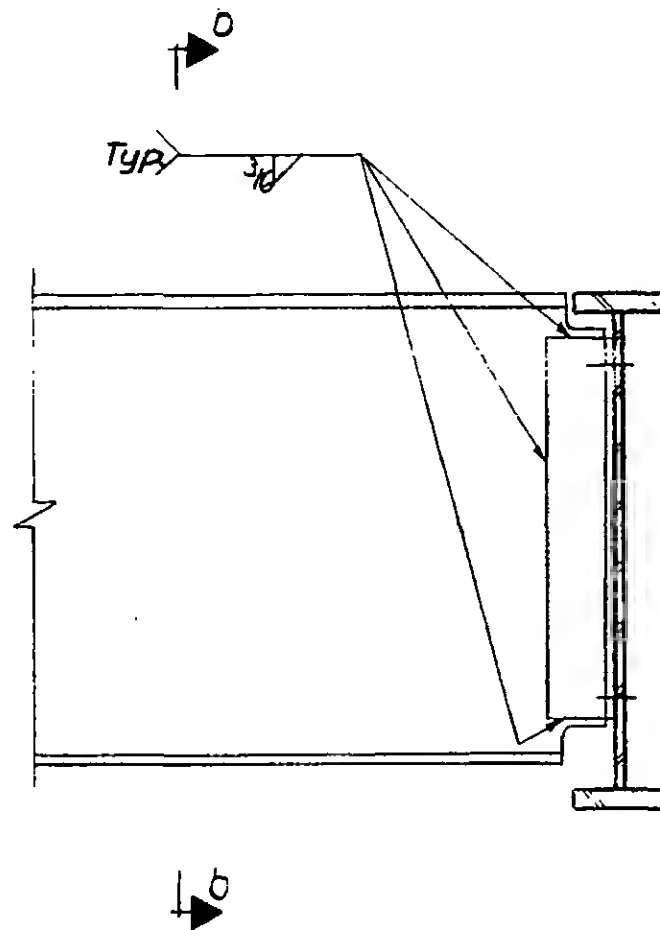
Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER

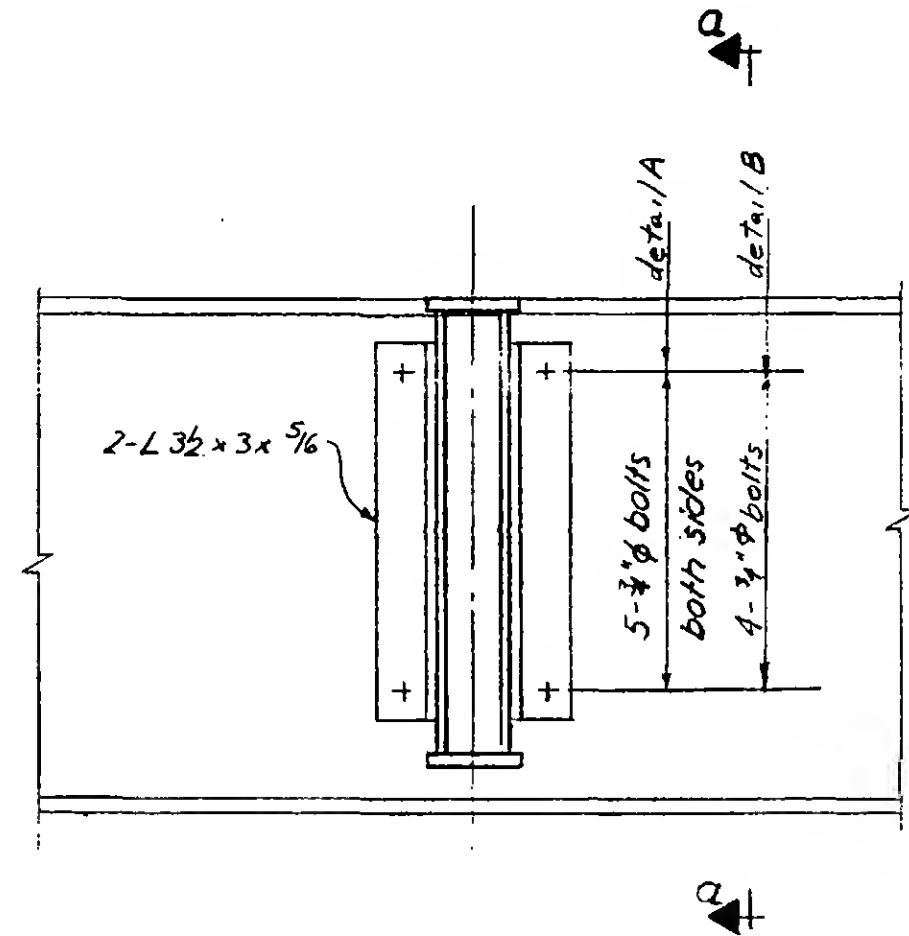
TITLE CONNECTION DETAIL 458 A, B

DATE 12-21-67

REVISIONS



Section a-a



Section b-b



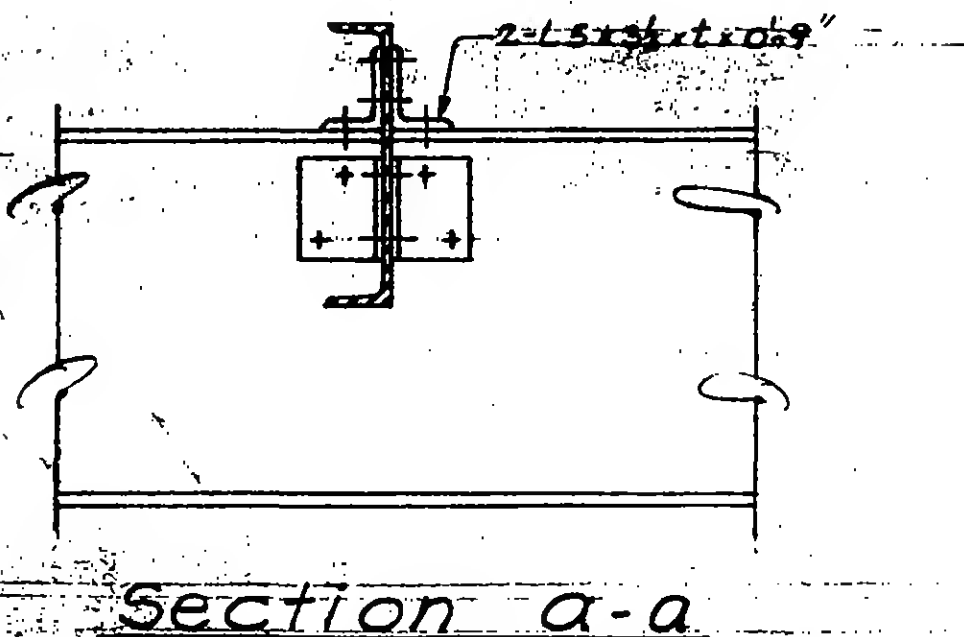
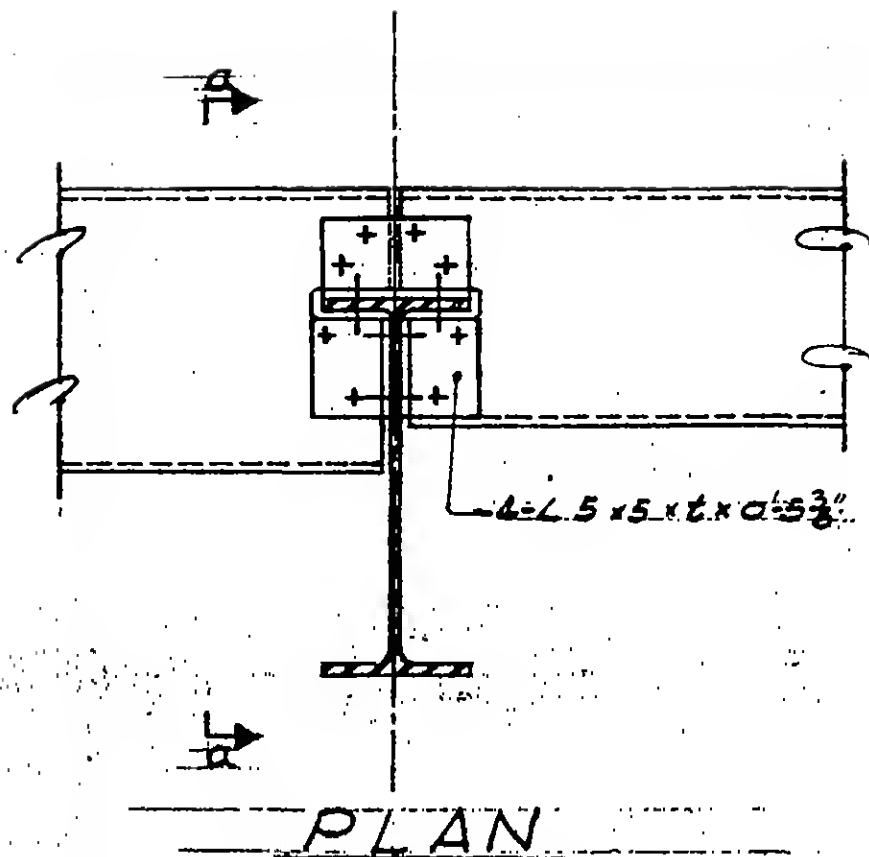
6-AB2-109

PROJECT THE WORLD TRADE CENTER

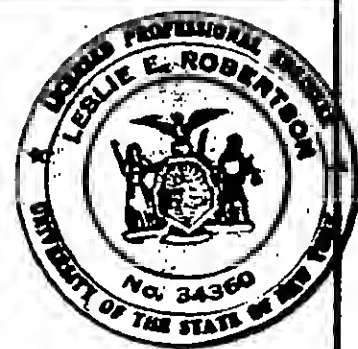
TITLE CONNECTION DETAIL 459

DATE 6-5-67

REVISIONS



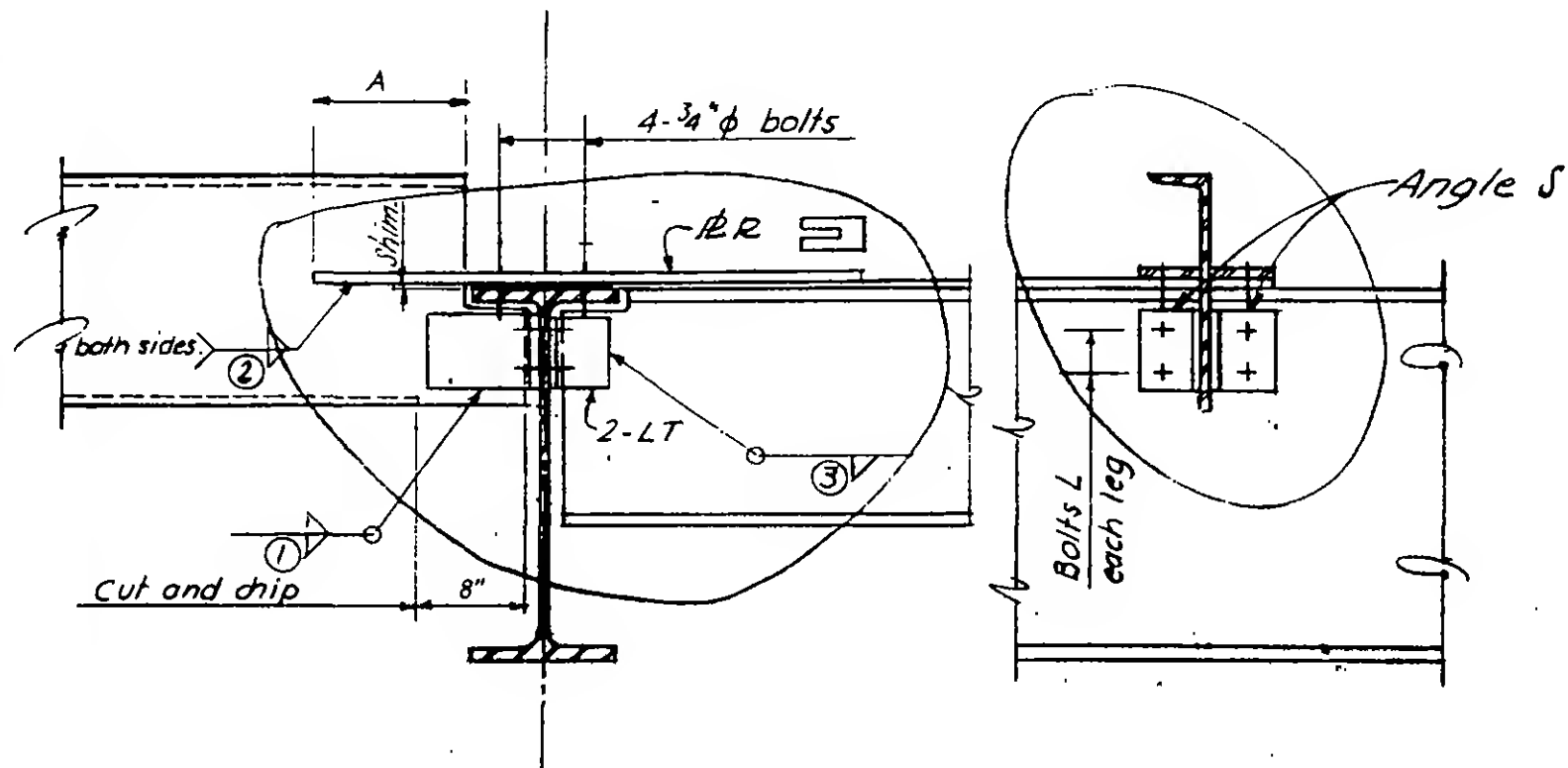
6-AB2-11



REVISIONS

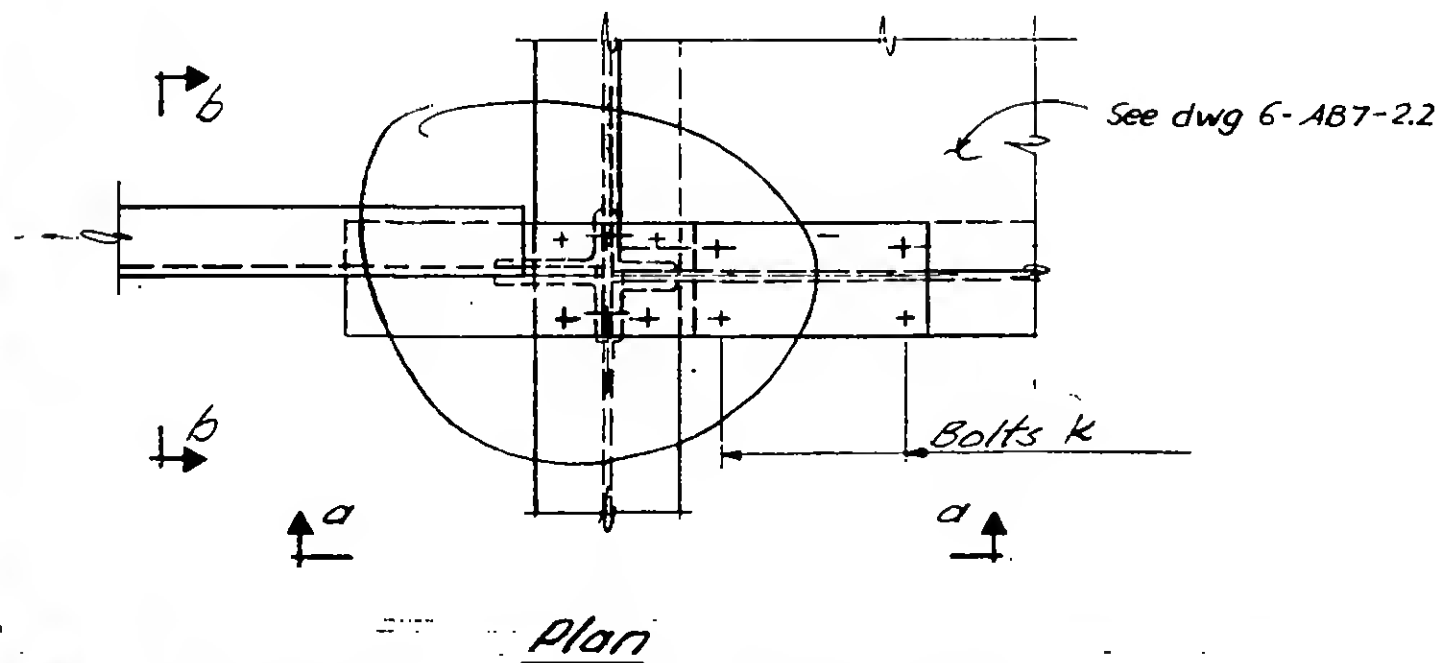
9-15-67

11-10-67

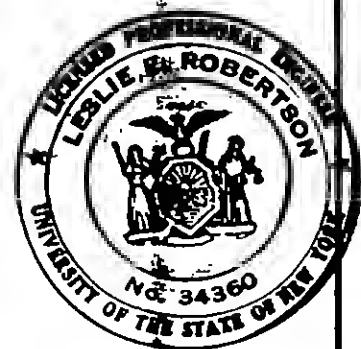


Section a-a

Section b-b



Plan



PROJECT

THE WORLD TRADE CENTER

TITLE

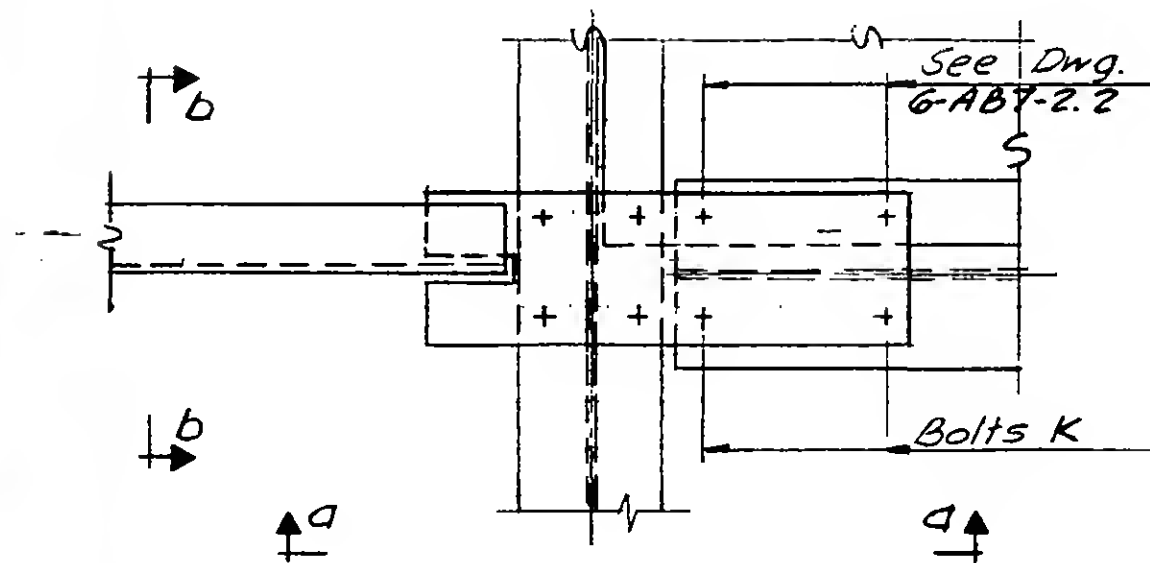
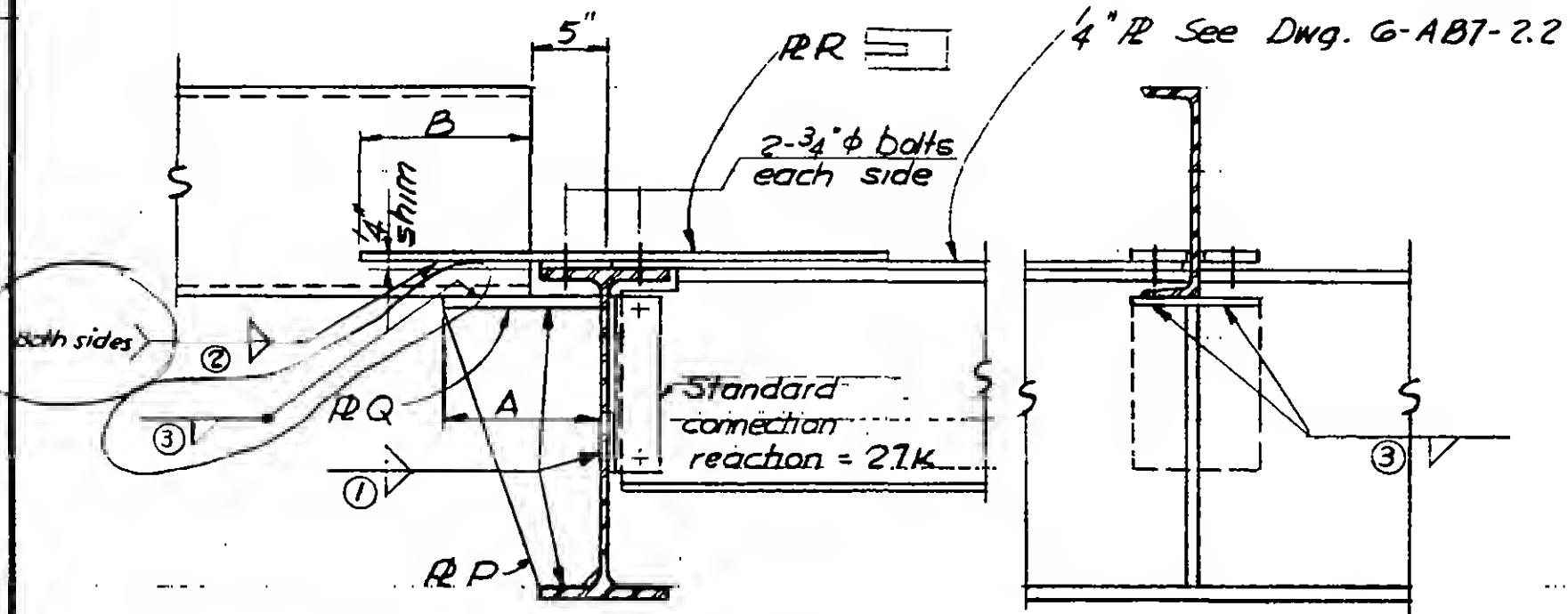
CONNECTION DETAIL 460 B

DATE

9-15-67

## REVISIONS

11-10-67

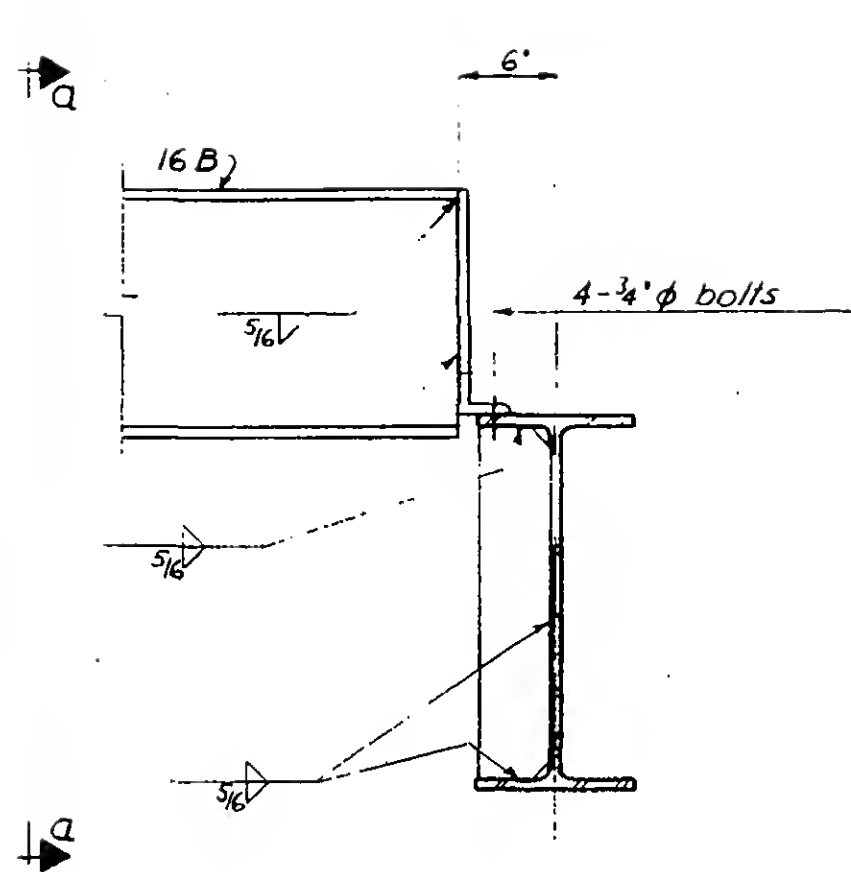
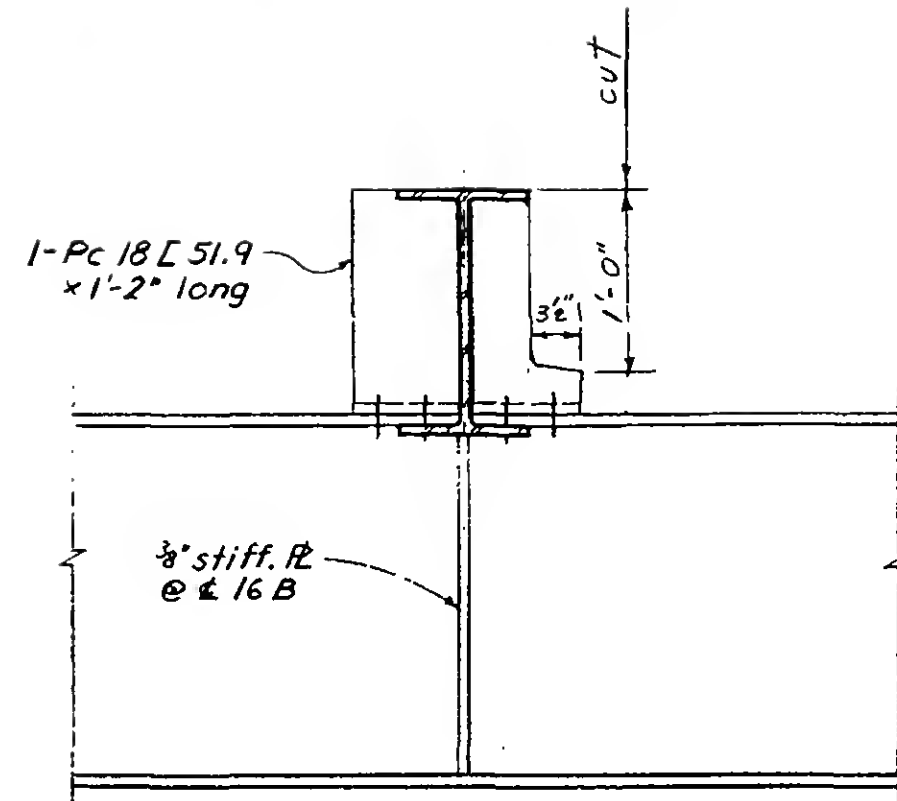
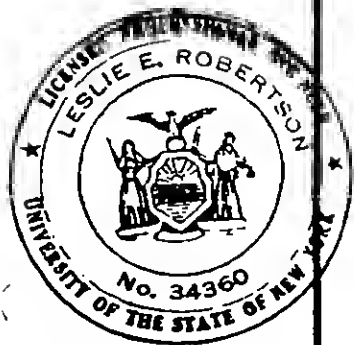


G-AB2-1161

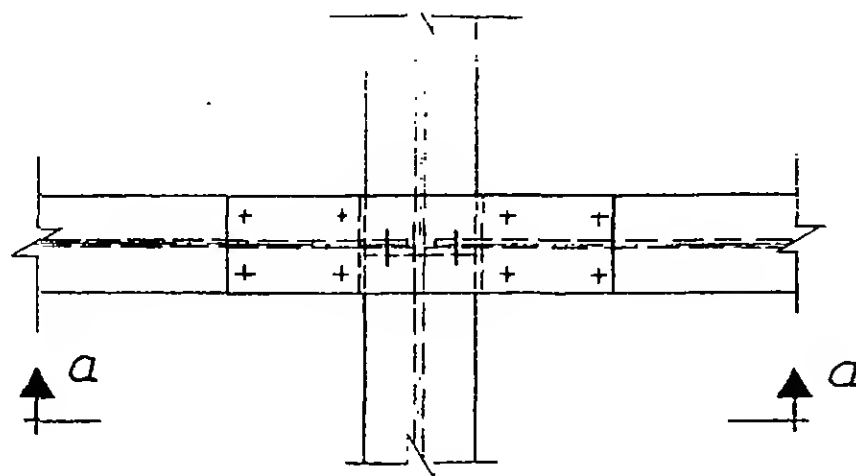
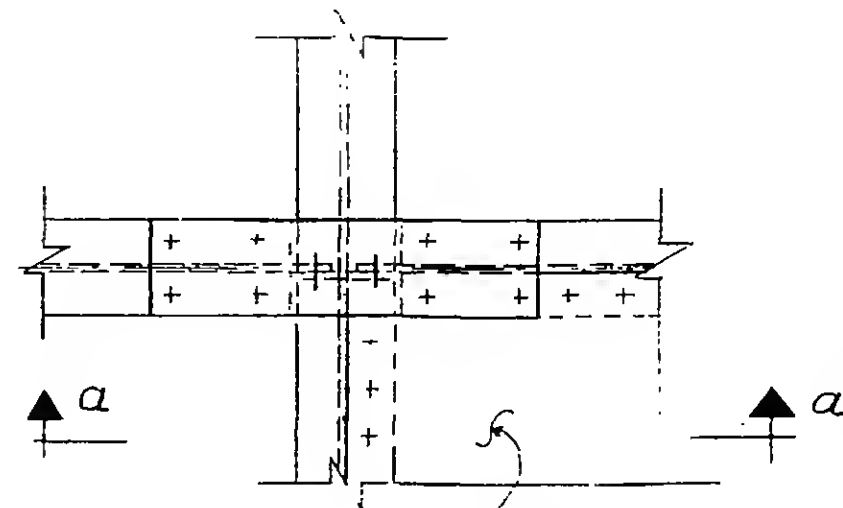
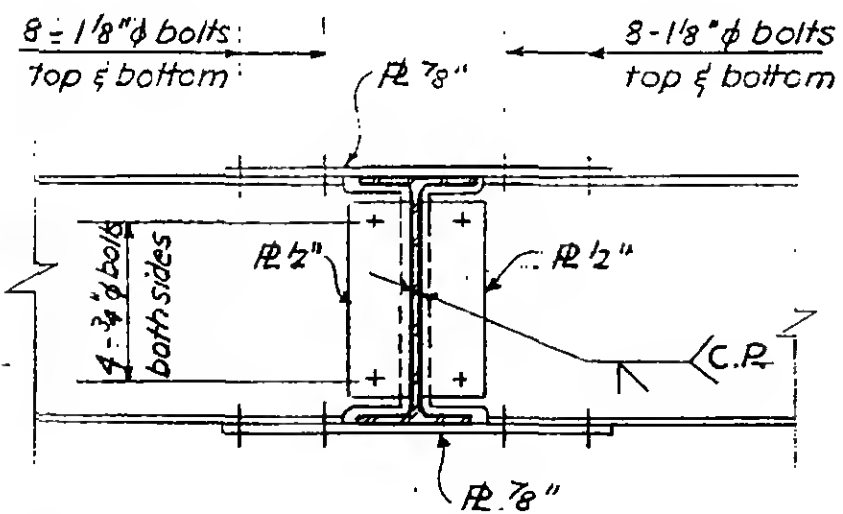
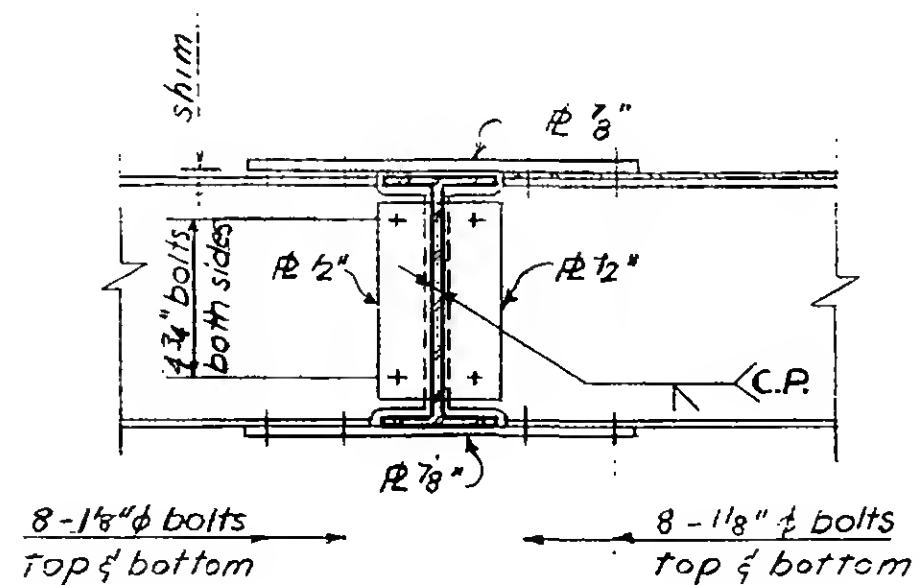




## REVISIONS

ElevationSection a-a

REVISIONS

PlanPlanSee 6-AB7-3  
& 6-AB7-4Section a-aDETAIL 463 ASection a-aDETAIL 463 B

PROJECT THE WORLD TRADE CENTER

TITLE CONNECTION DETAIL 463 C, E &amp; F

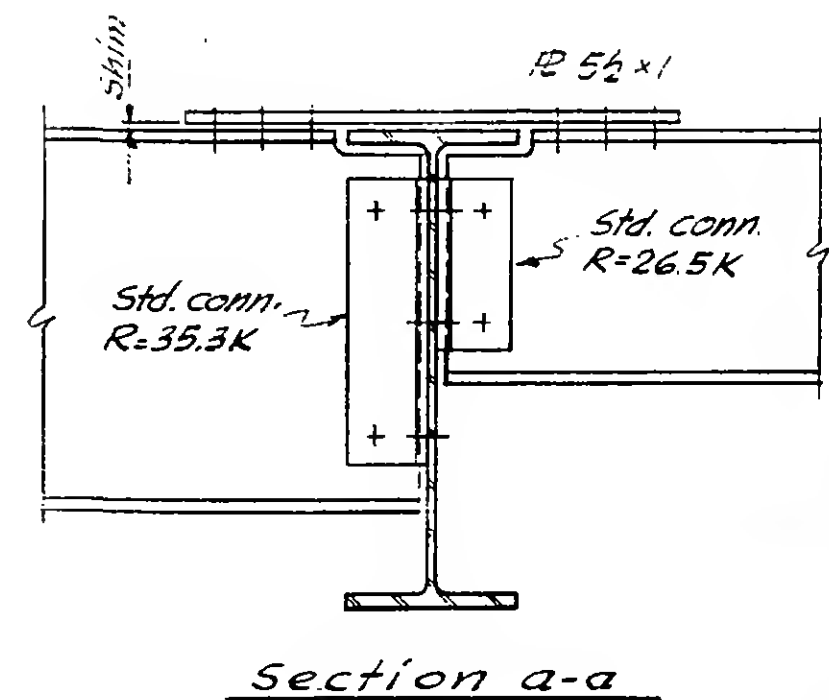
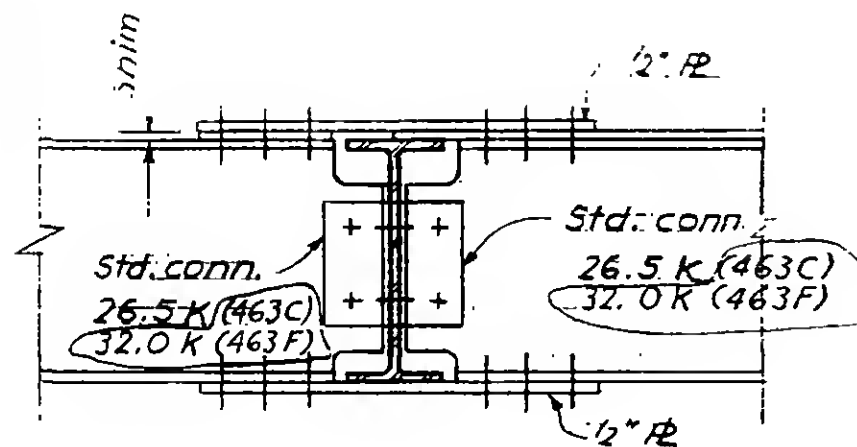
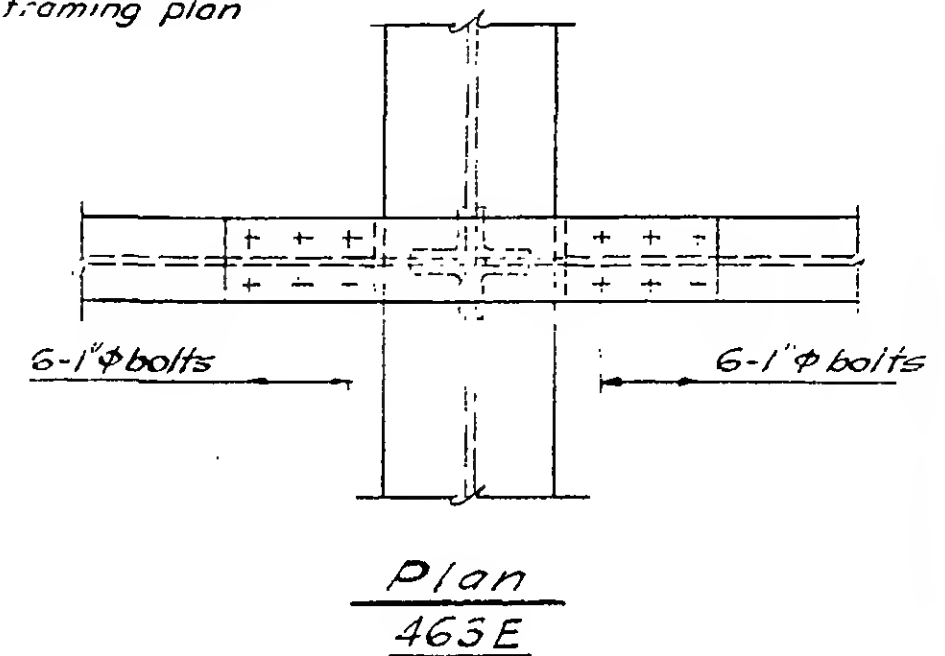
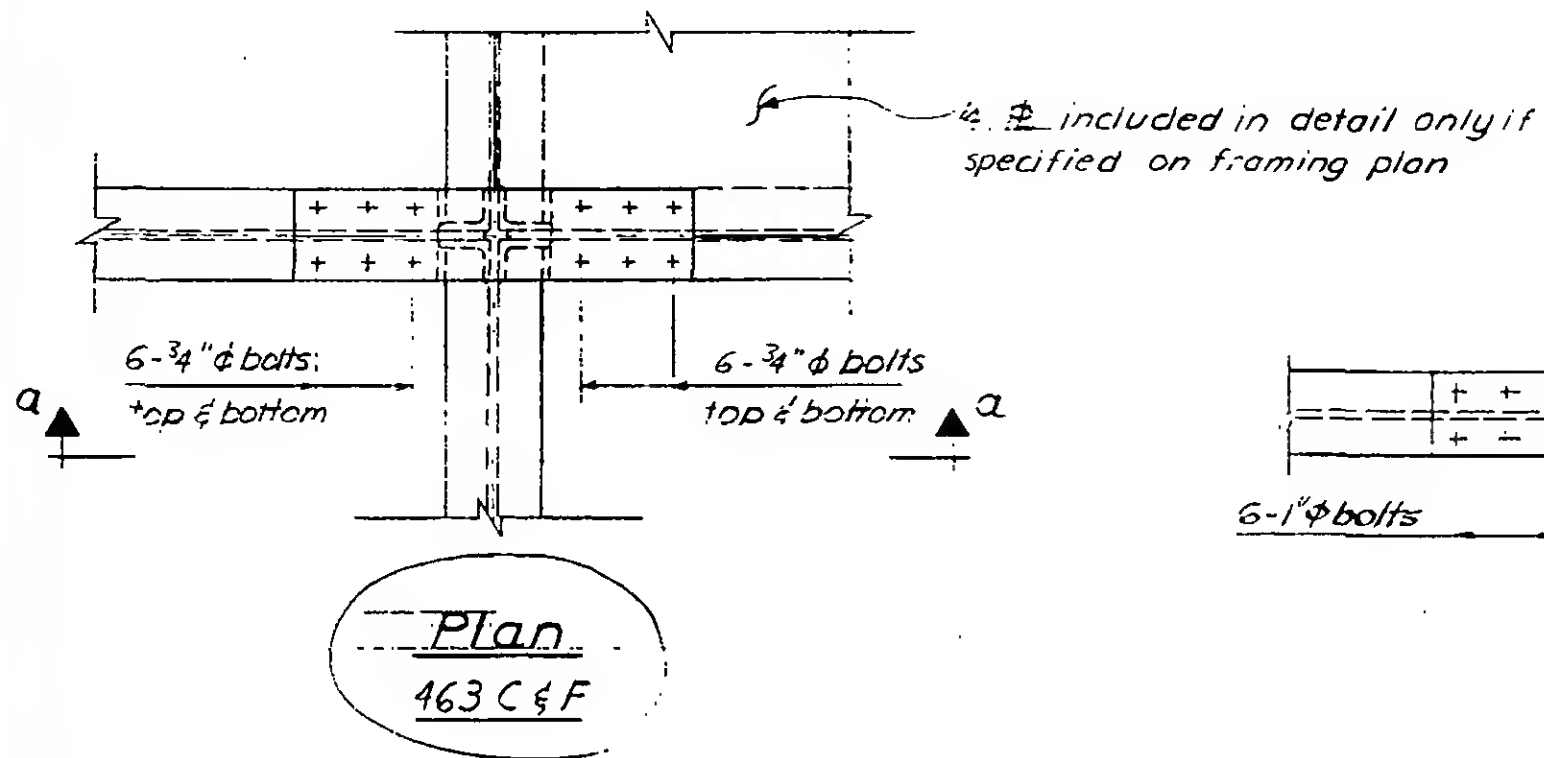
DATE 7-15-67

## REVISIONS

11-10-67

1-24-68

2-9-68



PROJECT THE WORLD TRADE CENTER

TITLE CONNECTION DETAIL 465 A

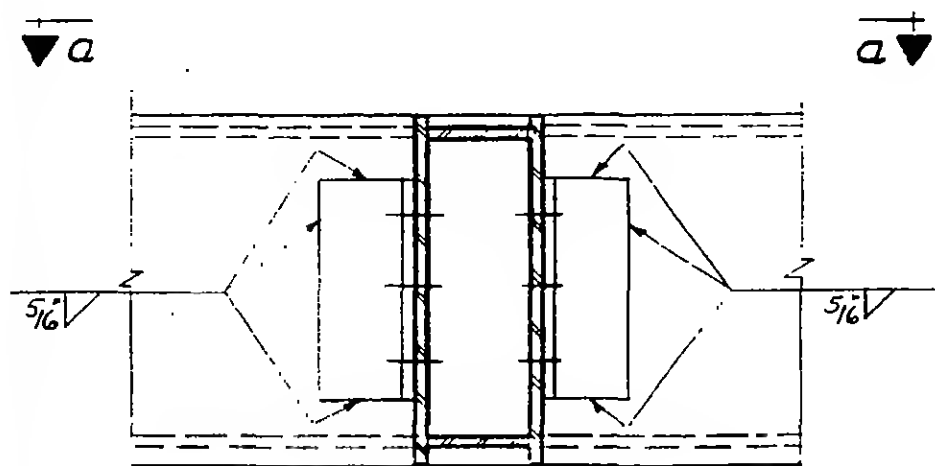
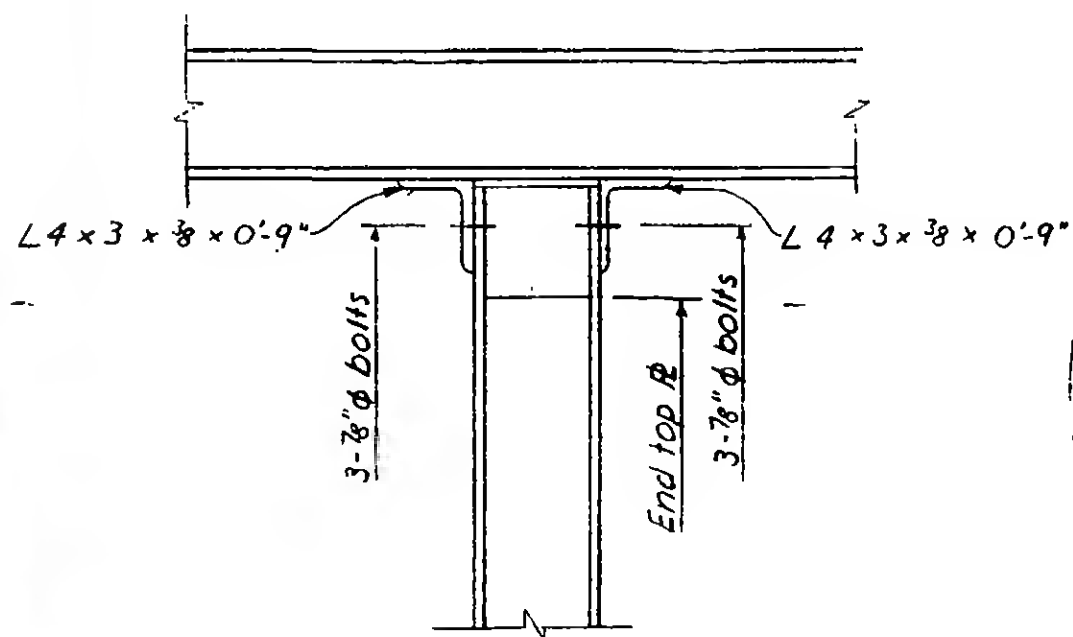
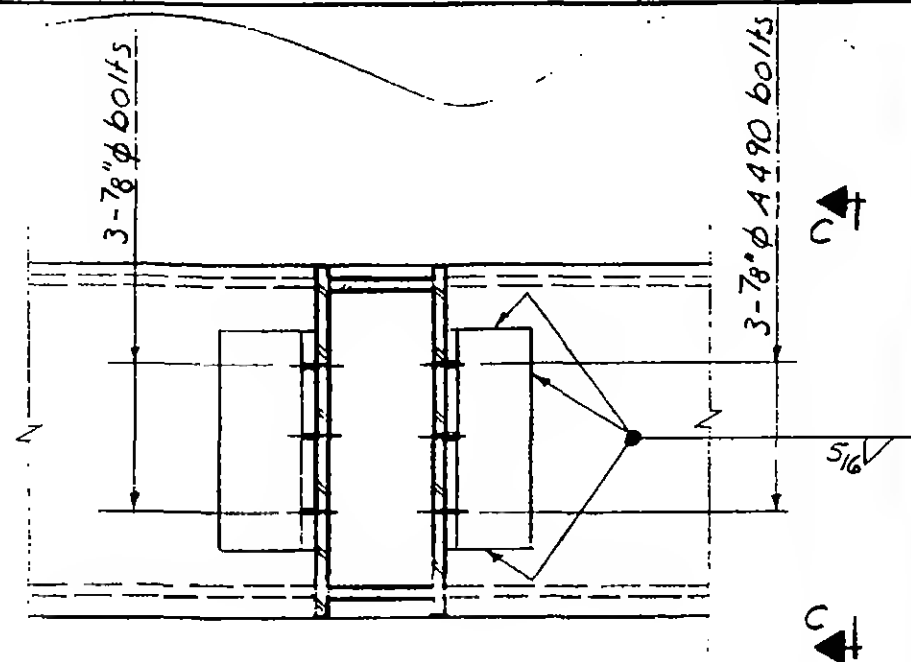
DATE 6-5-67

## REVISIONS

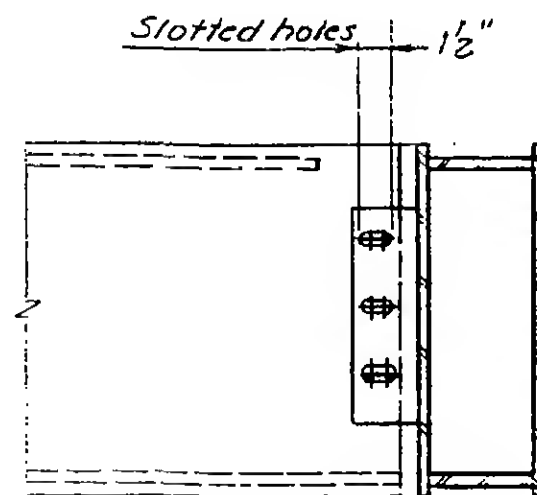
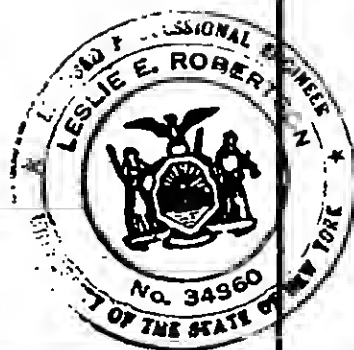
11-23-67

10-24-68

11-22-68

ElevationSection a-a465 A (Alternate)

Use where detail 450 is used as  
opposite end support

Section c-c (Alt.)

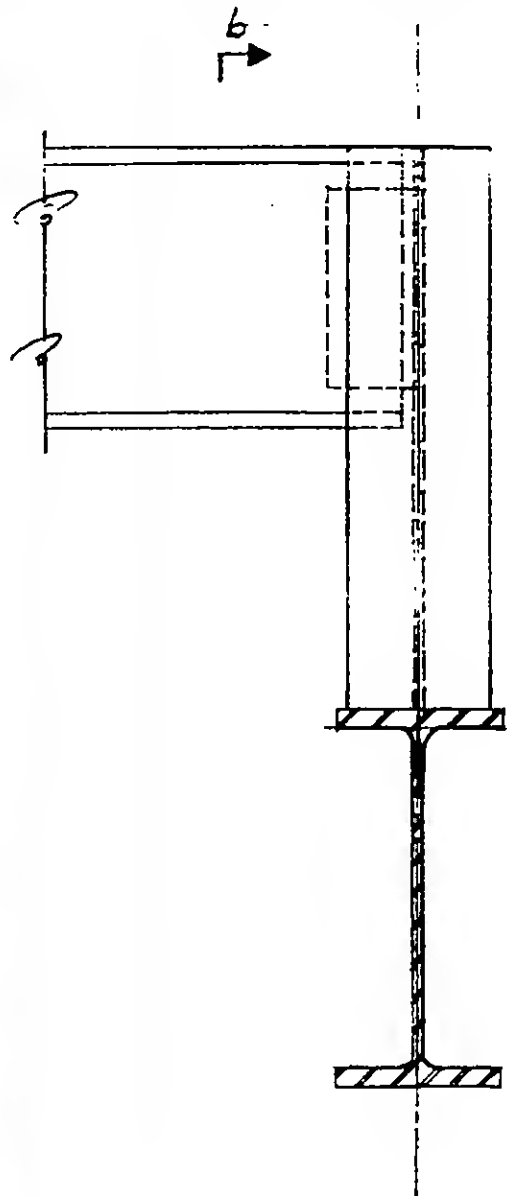
PROJECT THE WORLD TRADE CENTER

TITLE CONNECTION DETAIL 466 A.B

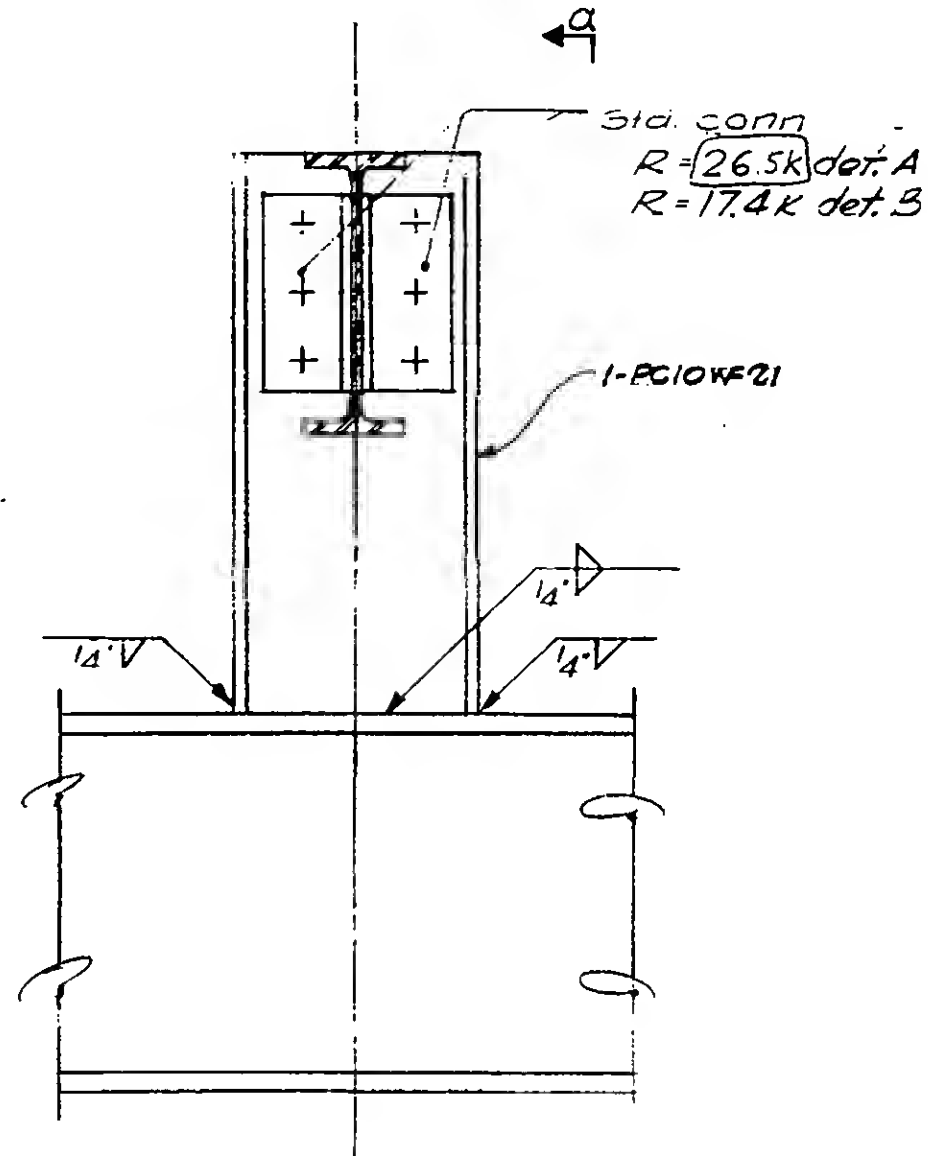
DATE 6-5-67

REVISIONS

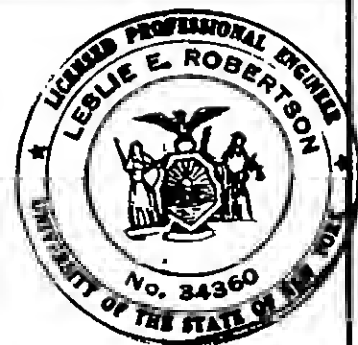
10-5-67  
1-24-68  
2-21-68



Section a-a



Section b-b



6-AB2-117

PROJECT

THE WORLD TRADE CENTER

TITLE

CONNECTION DETAIL 467 A,B,C

DATE

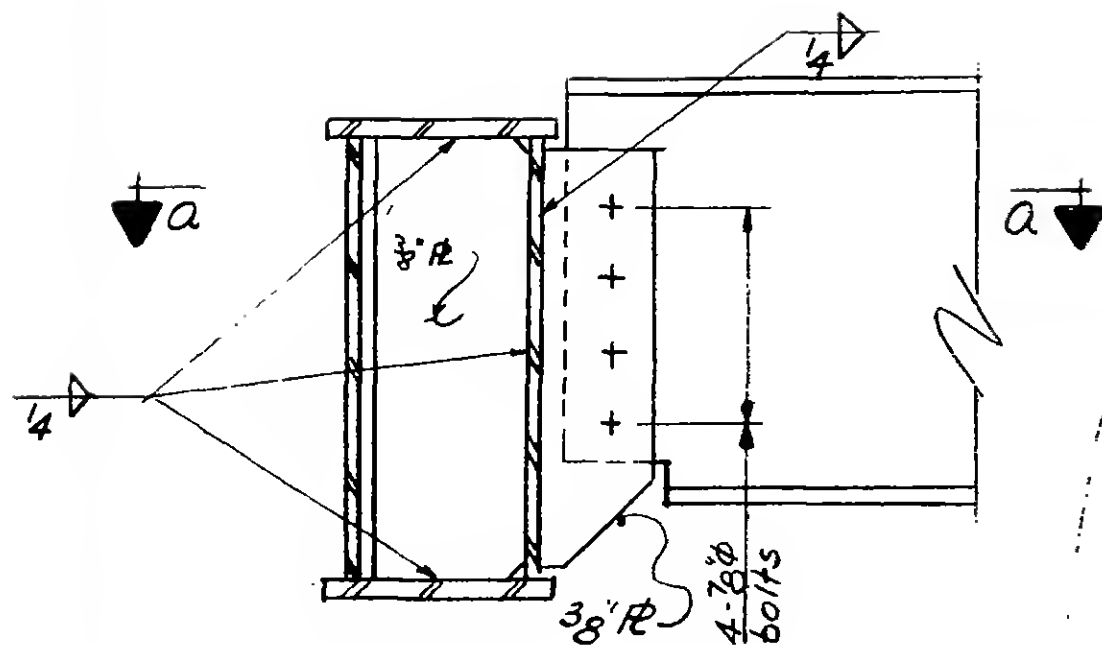
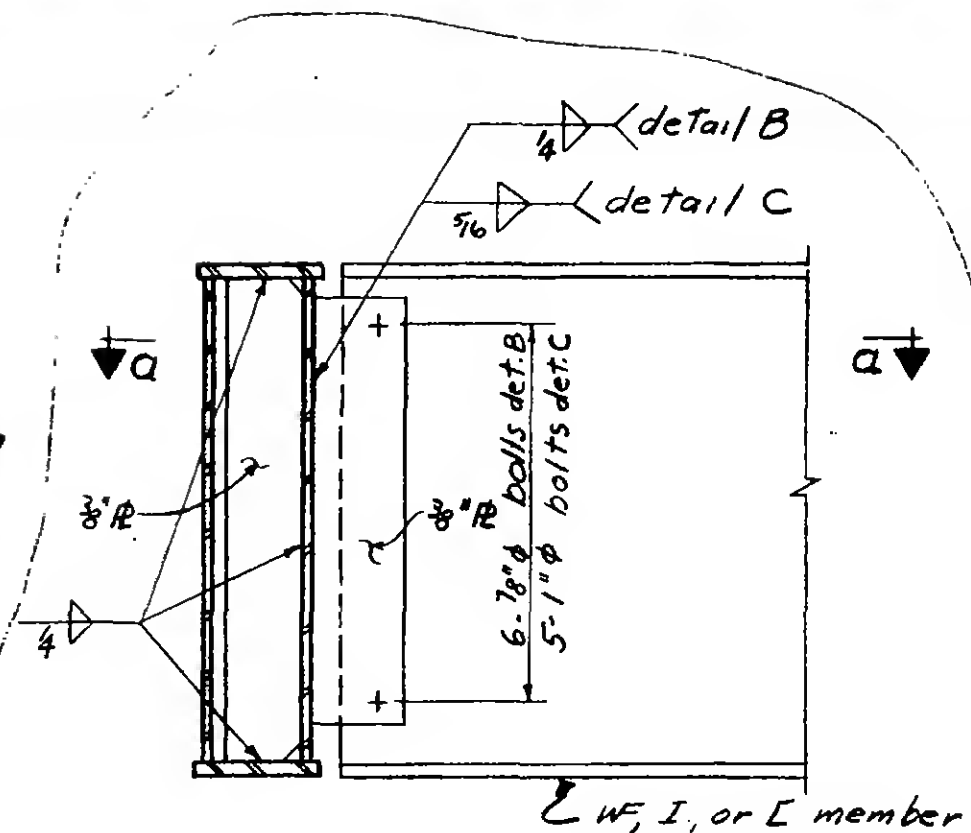
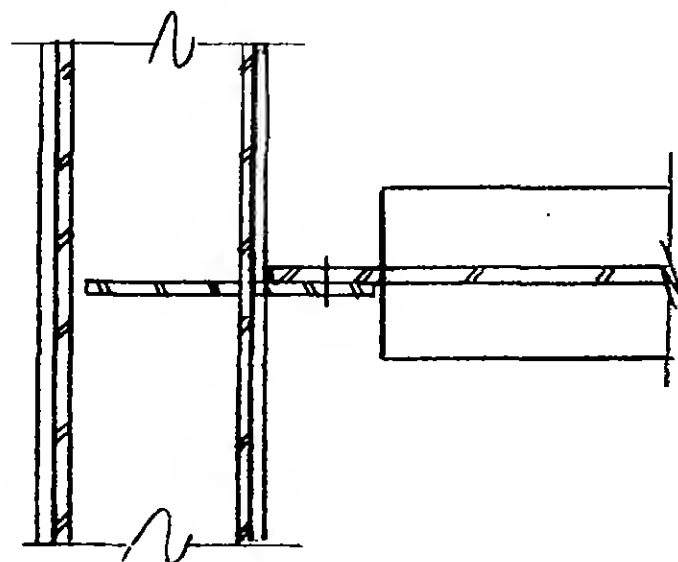
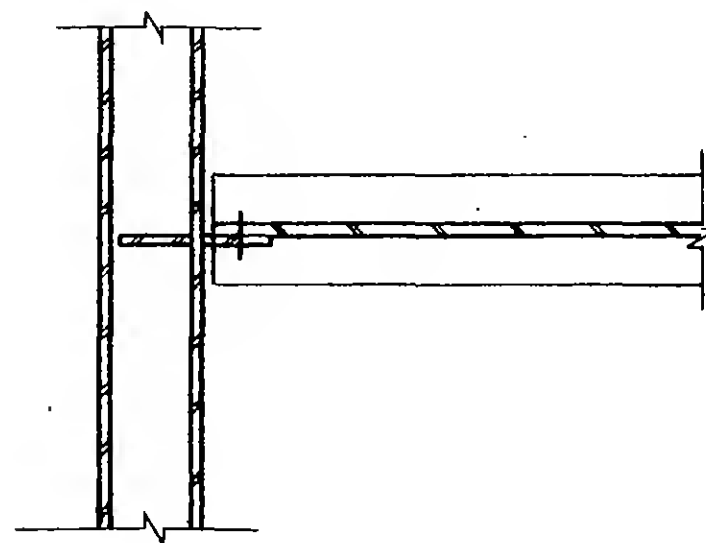
6-5-67

## REVISIONS

7-15-67

11-10-67

12-21-67

Elevation (467 A)Elevation (467 B & C)Section a-aSection a-a

G-AB2-118

PROJECT THE WORLD TRADE CENTER

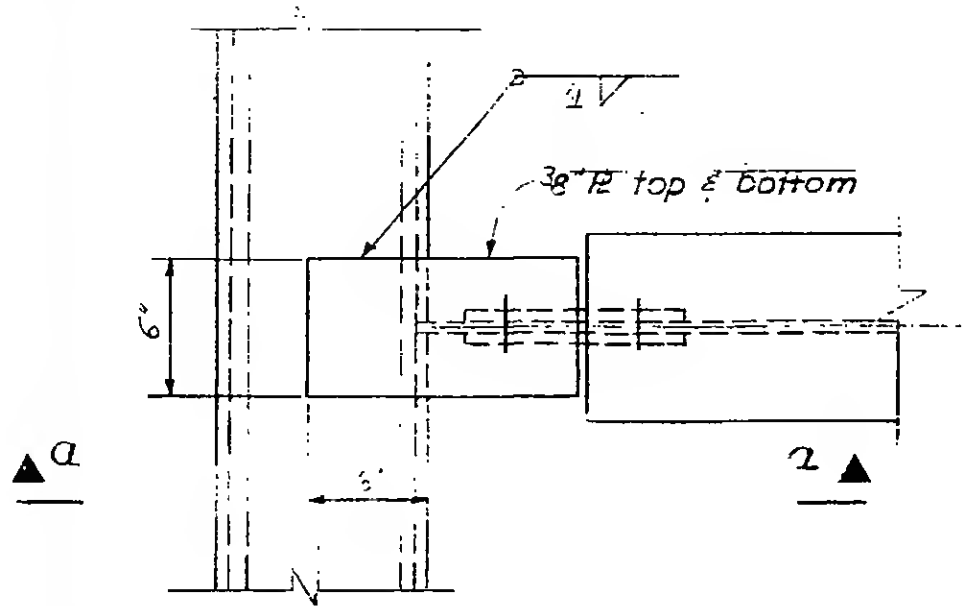
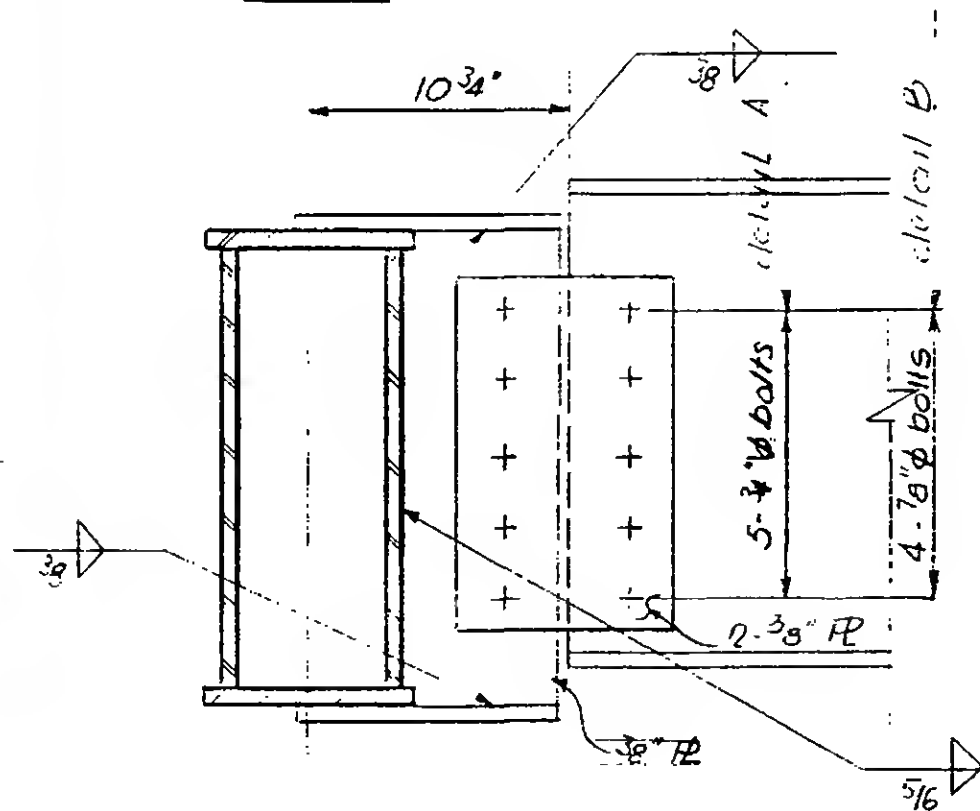
TITLE CONNECTION DETAIL 469A.B

DATE 6-5-67

## REVISIONS

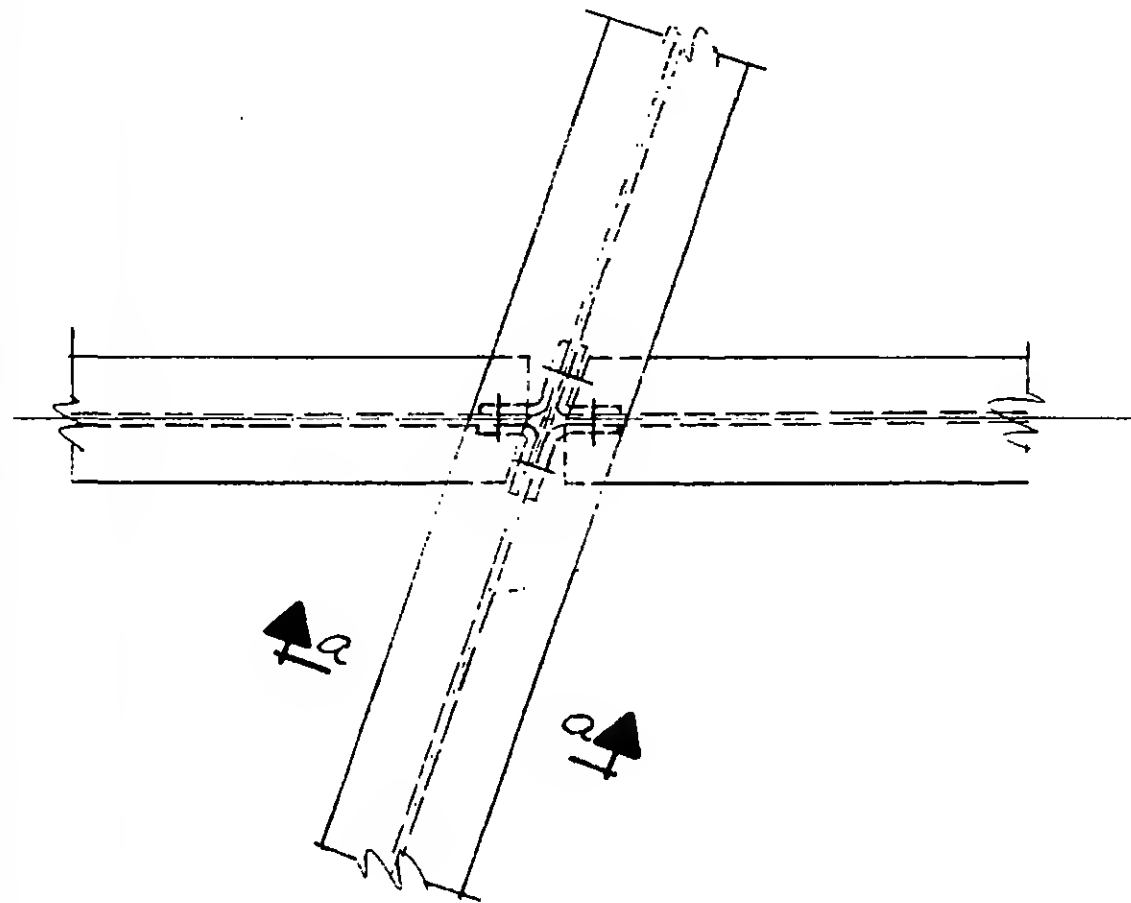
7-15-67

10-5-67

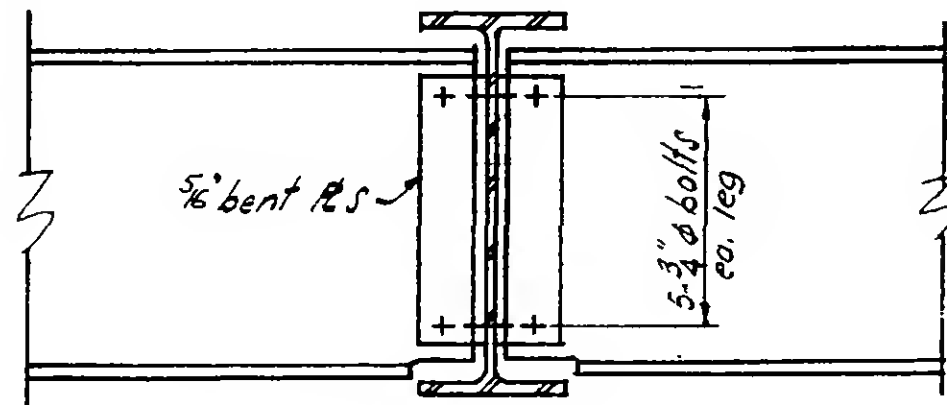
PlanSection a-a

REVISIONS

11-10-67

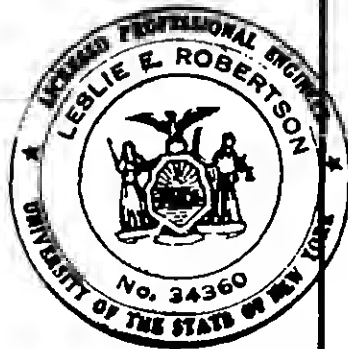


PLAN



Section a-a

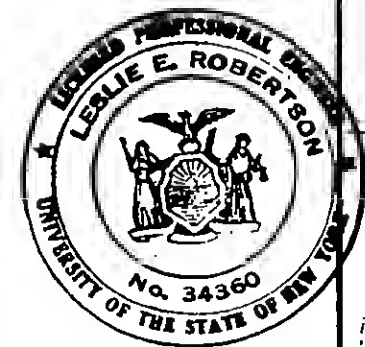
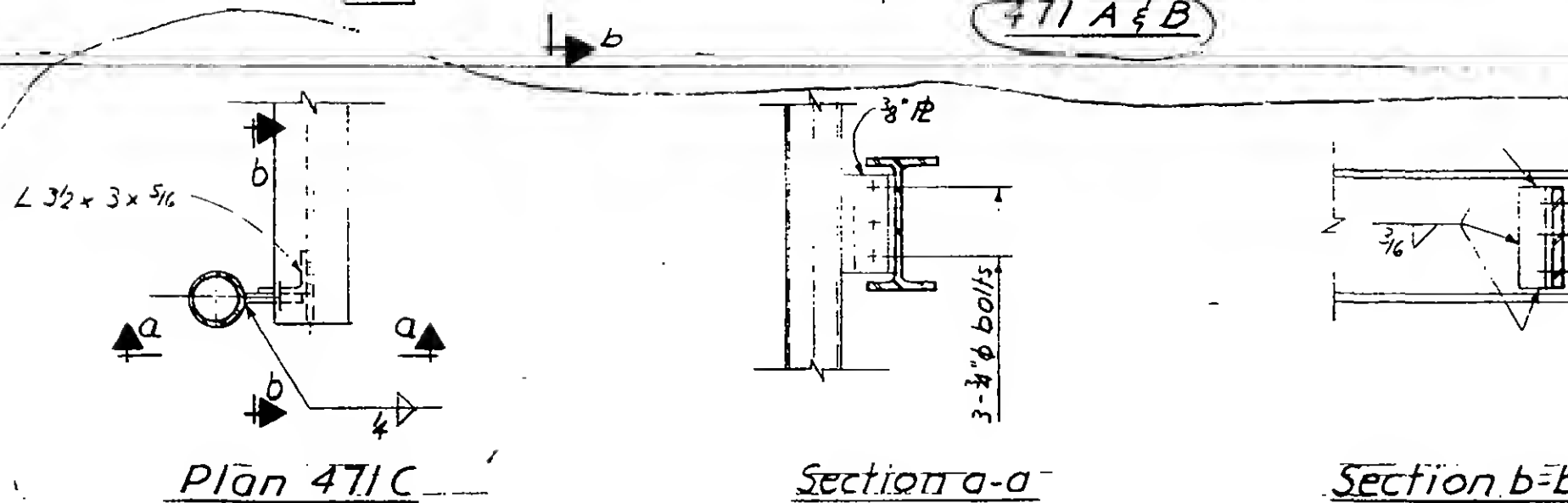
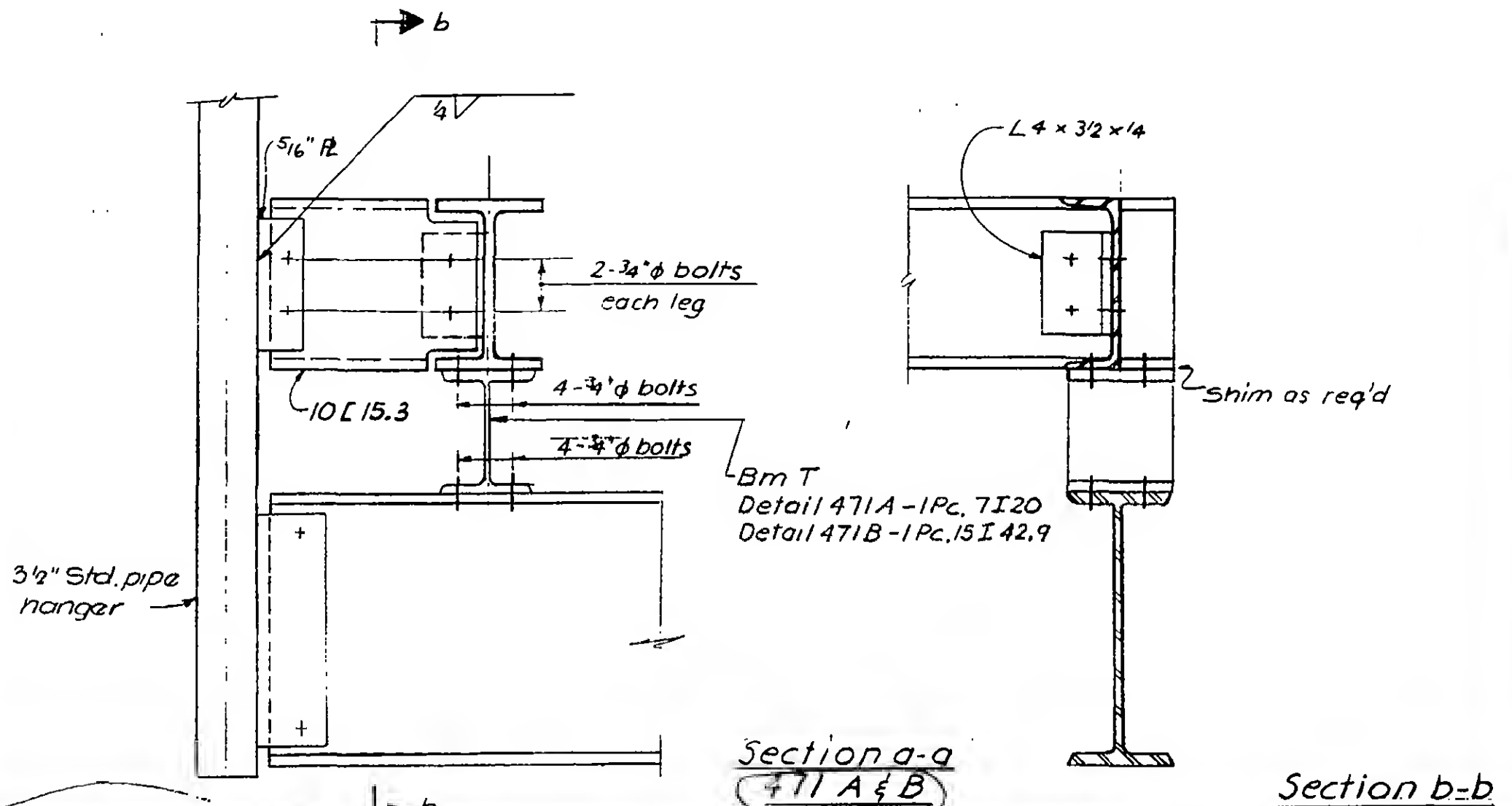
G-AB2-121



REVISIONS

10-2-67

2-21-68



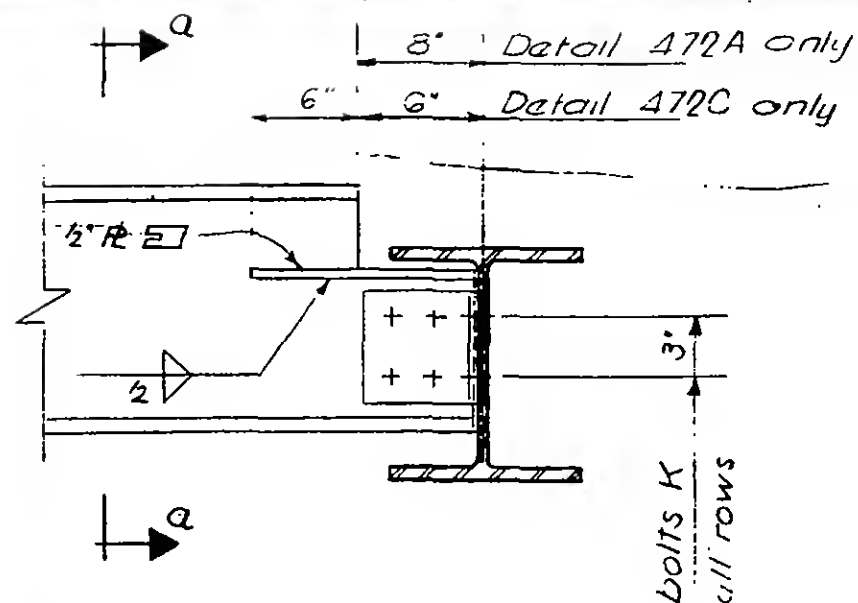
PROJECT THE WORLD TRADE CENTER

TITLE CONNECTION DETAIL 472 A, B, C, D, E, F & G

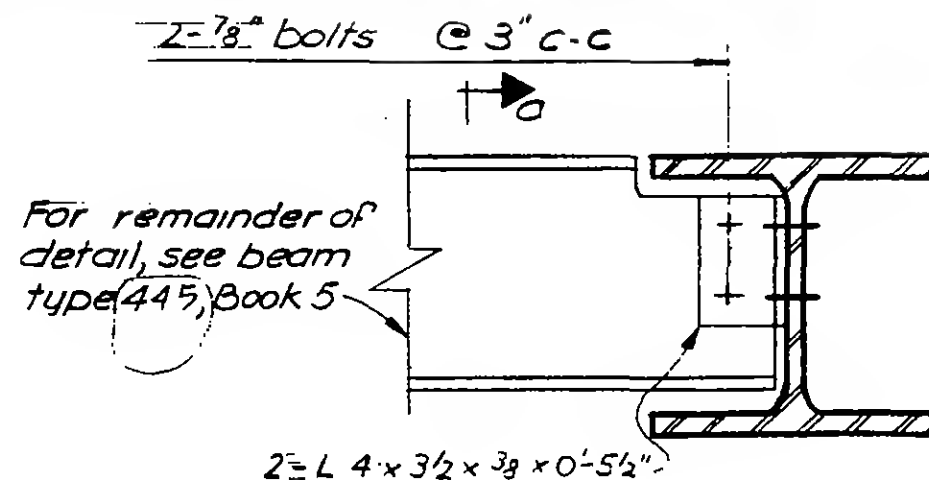
DATE 8-5-67

REVISIONS

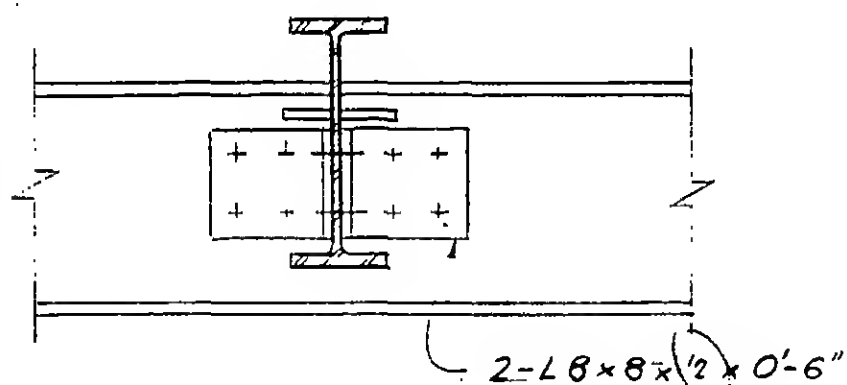
10-23-67  
10-31-67



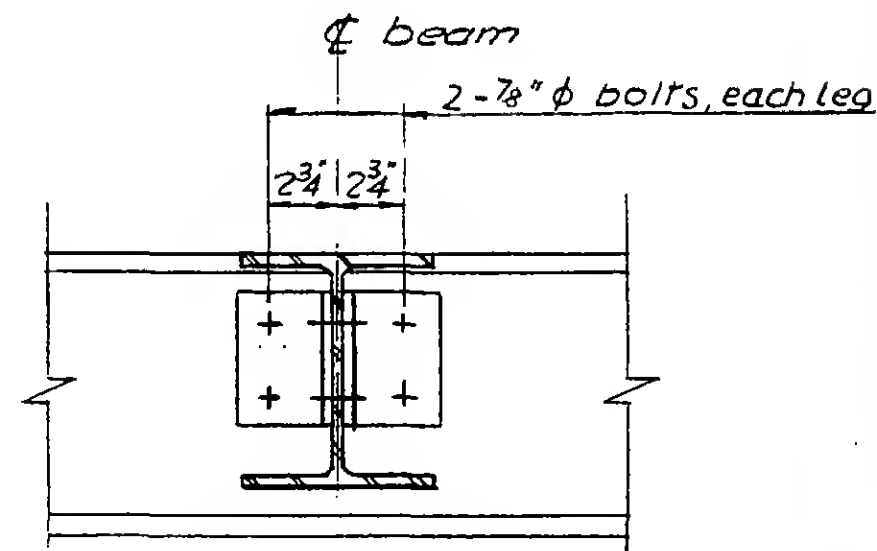
DETAIL A, B, C, D, E & G



DETAIL 472 F



Section a-a



Section a-a

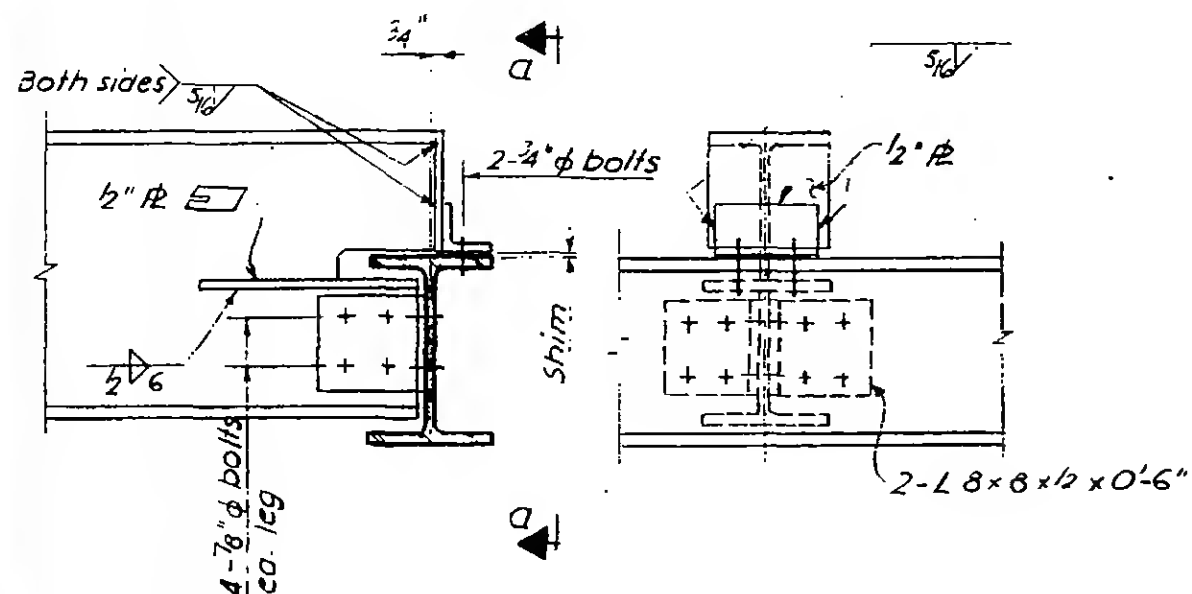
DETAIL A, B, C, D, E - bolts K - 7/8" phi bolts  
DETAIL G - bolts K - 1" phi bolts

G-AB2-123



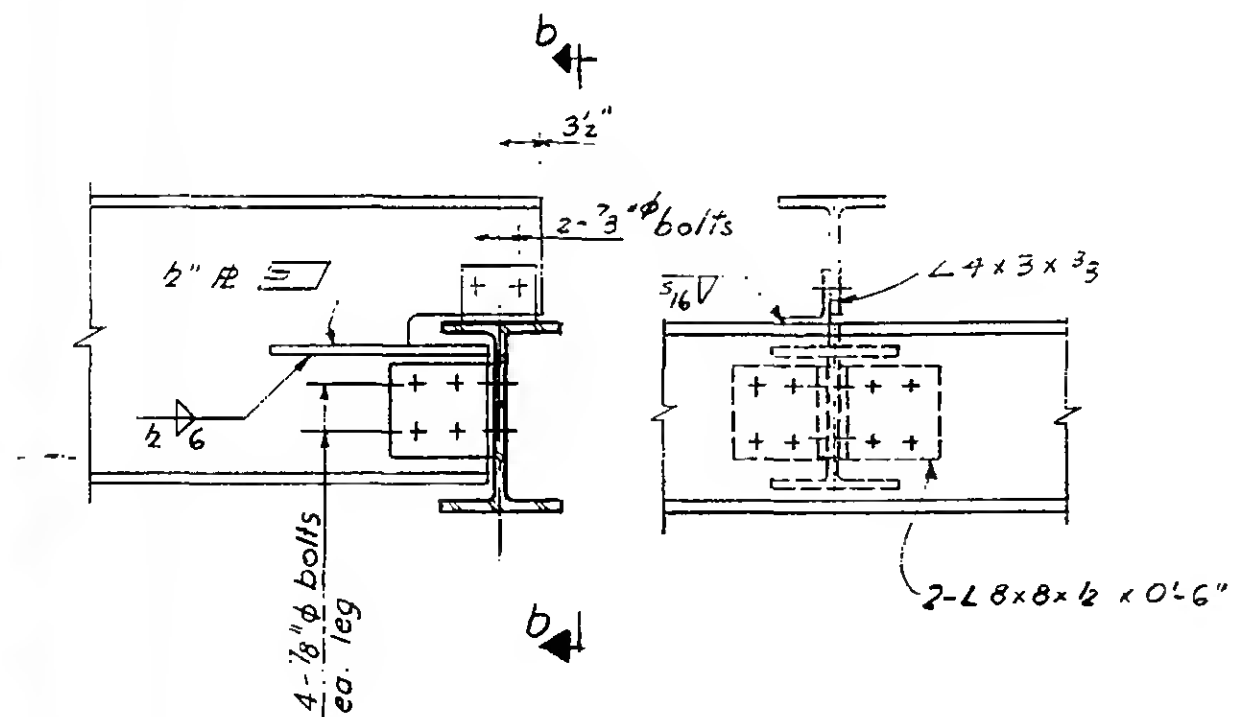
## REVISIONS

7-17-68



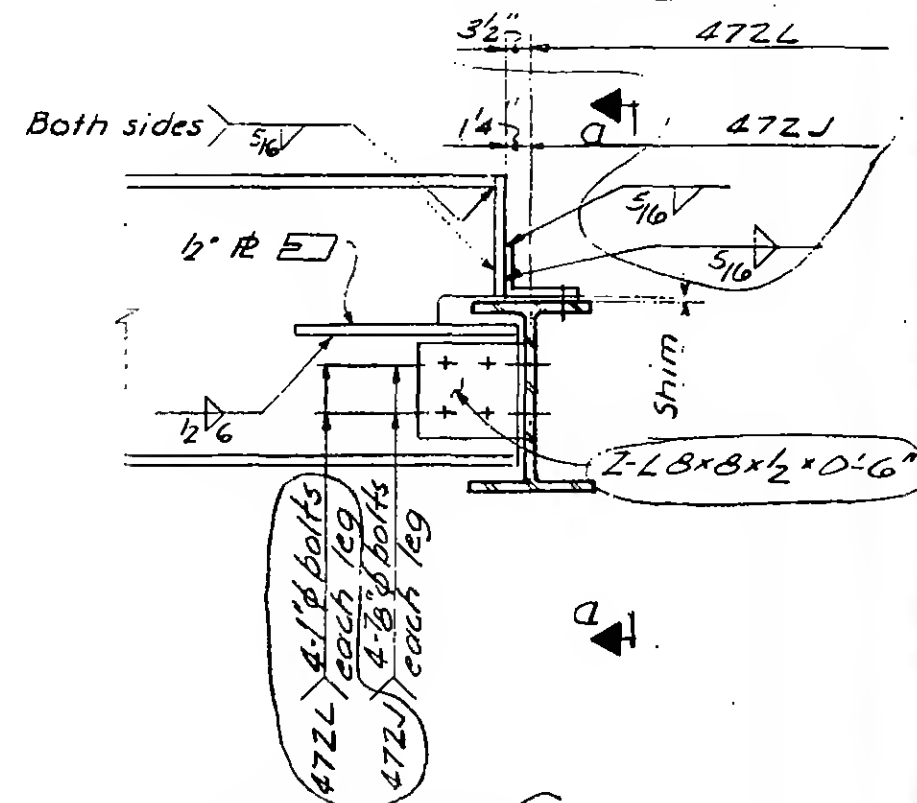
Section a-a

Detail 472 H

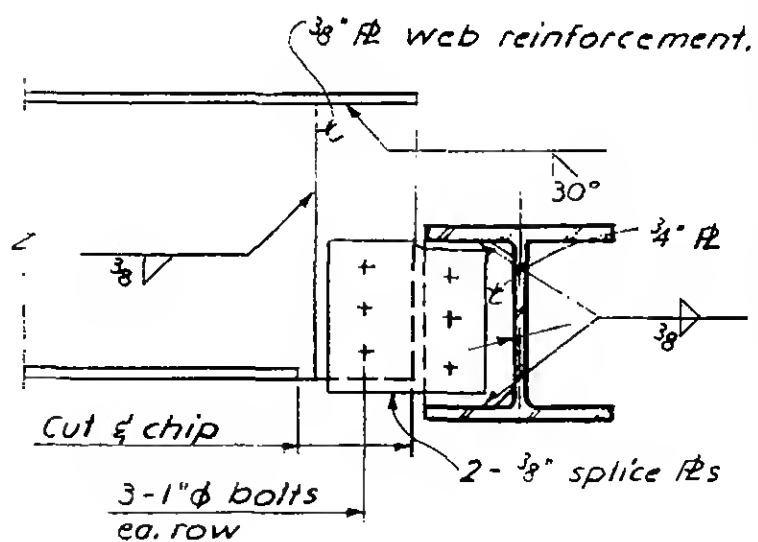


Section b-b

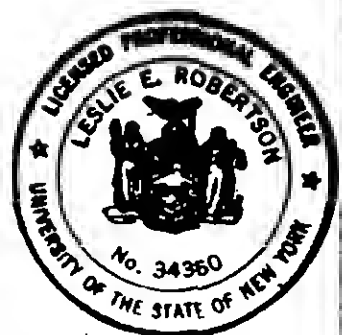
Detail 472 I



Detail 472 J (L)

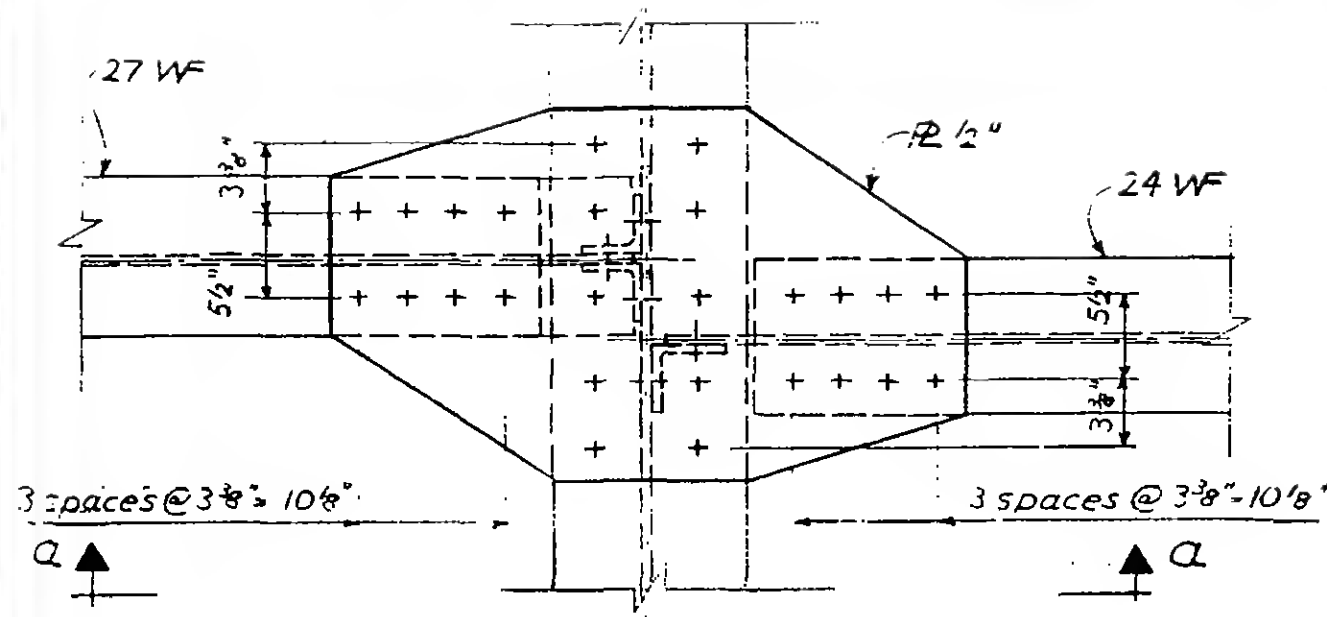


Detail 472 K

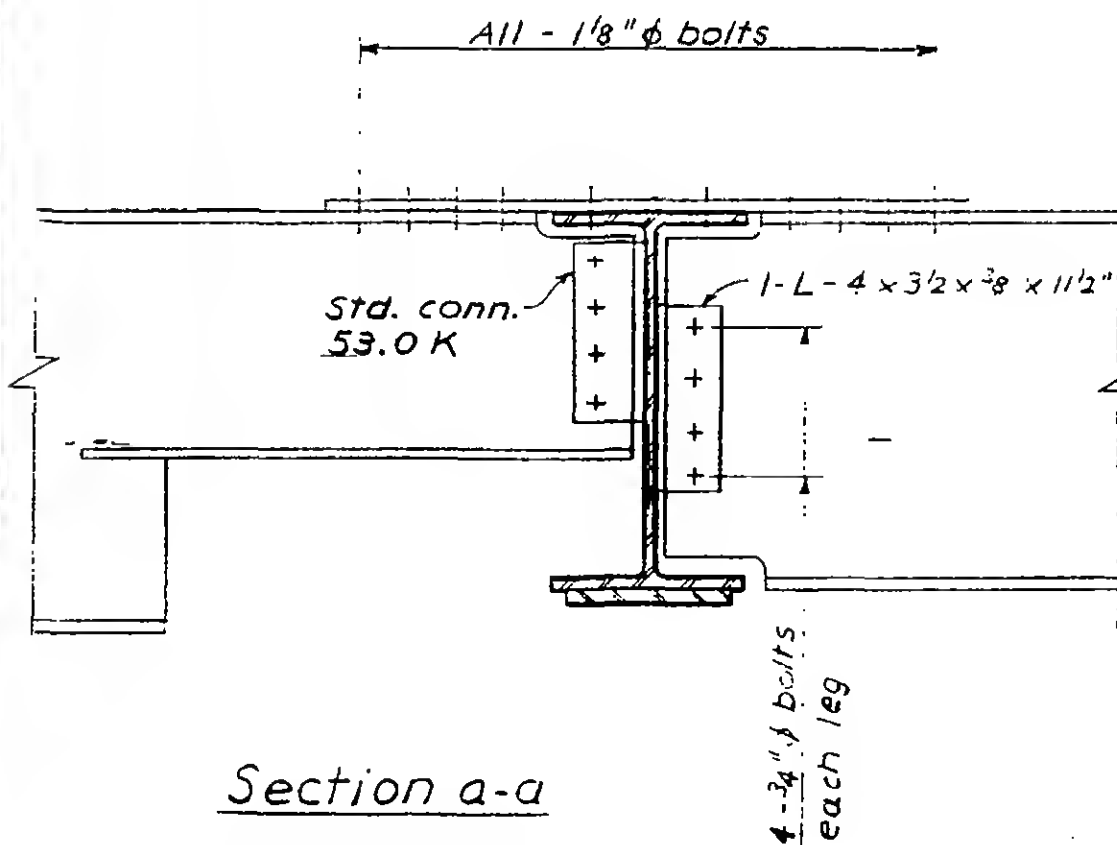


## REVISIONS

10-2-67

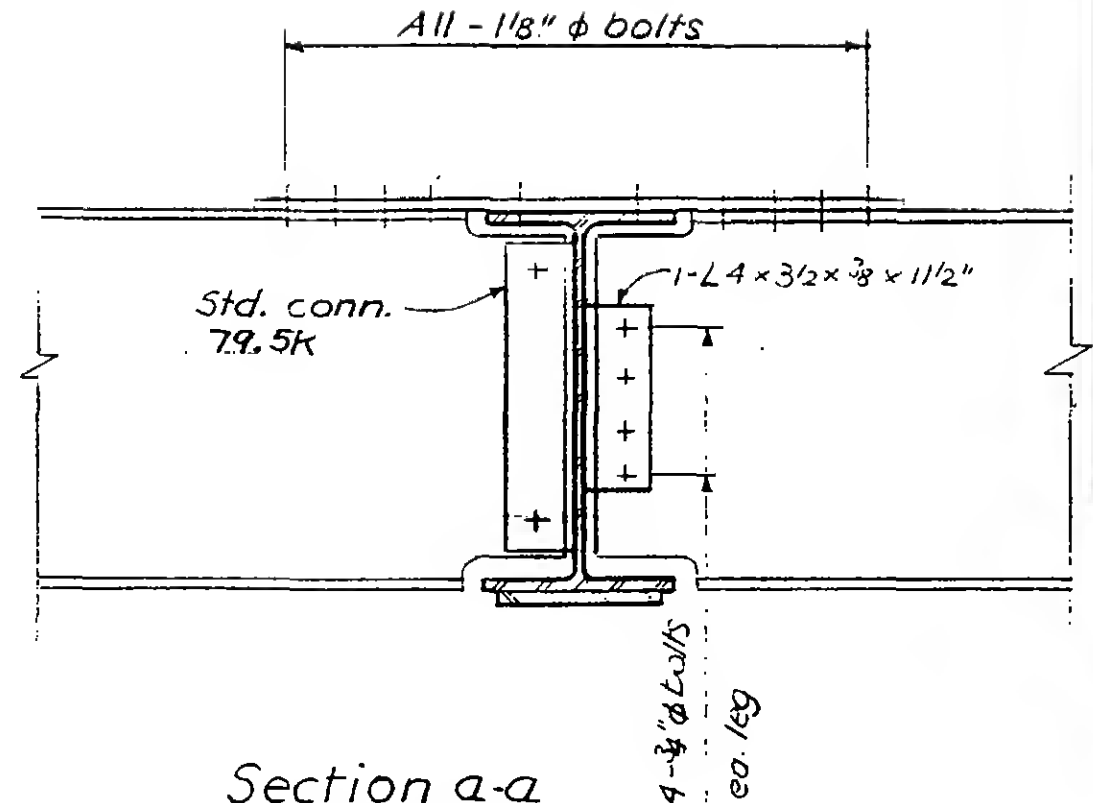


Plan



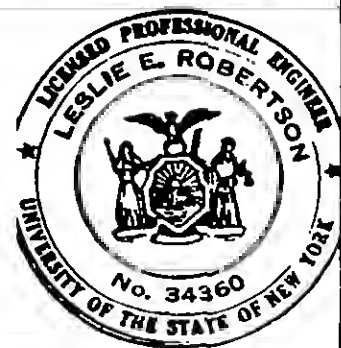
Section a-a

Detail 473 A

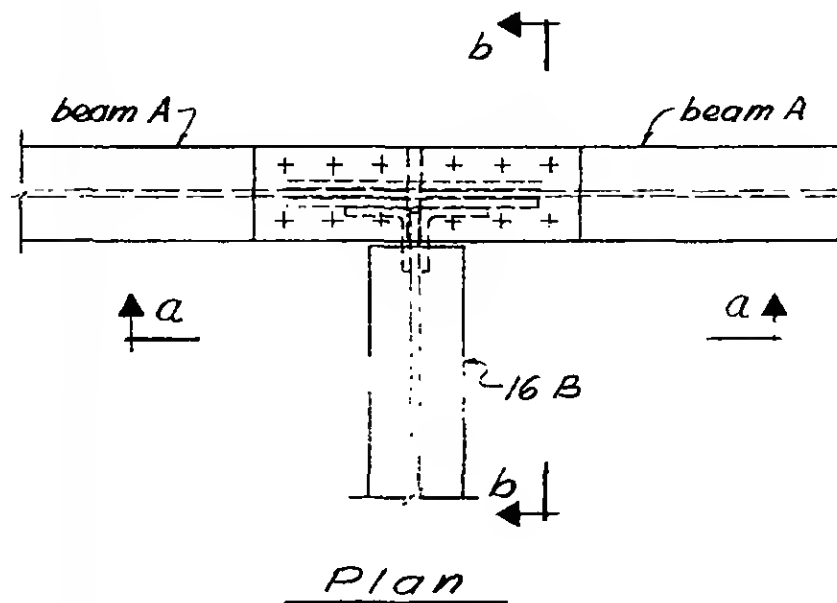


Section a-a

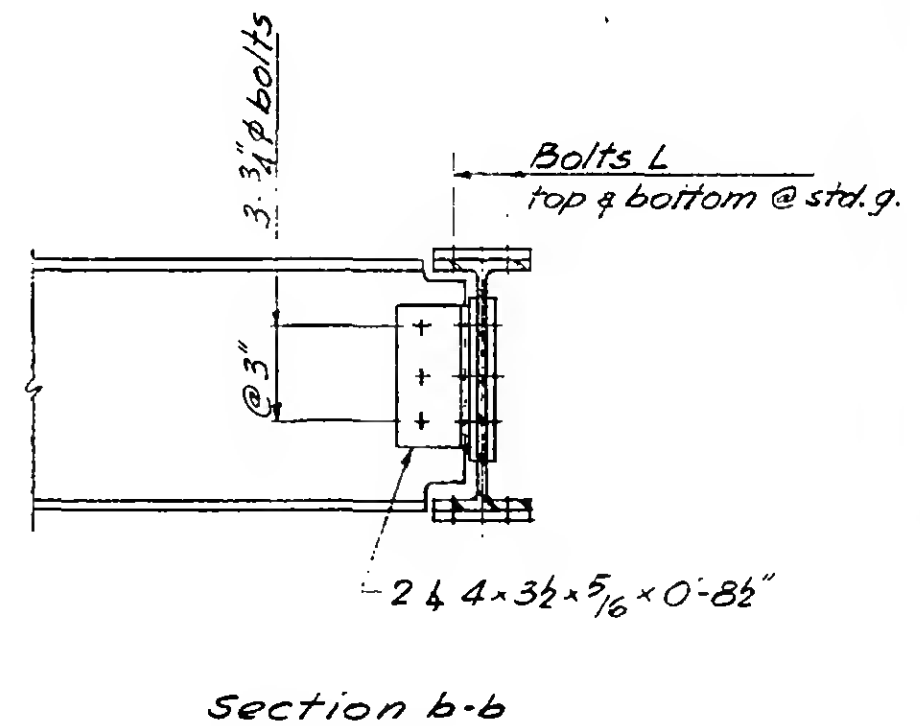
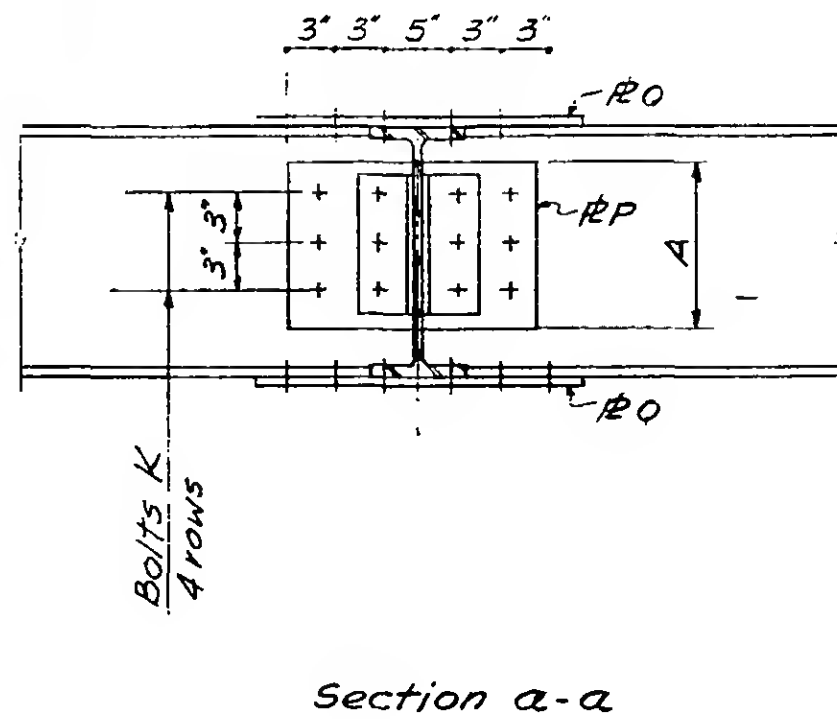
Detail 473 B



REVISIONS

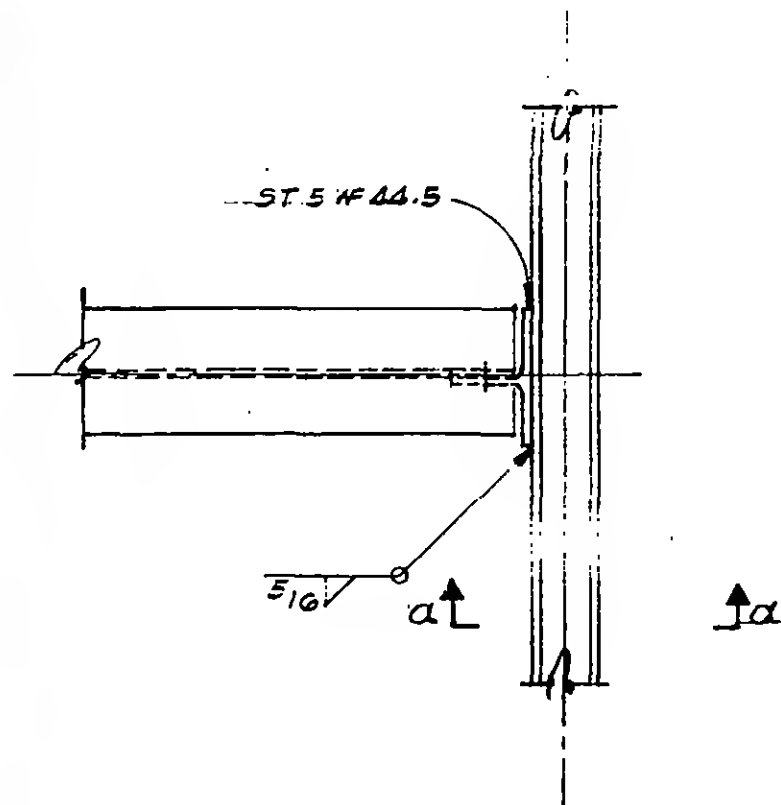


| beams A | bolts K | bolts L | # P | # Q | Dim A  |
|---------|---------|---------|-----|-----|--------|
| 16 B    | 1"φ     | 3/4"φ   | 2   | 2   | 0'-10" |
| 16 WF   | 1 1/8"φ | 1"φ     | 5/8 | 2   | 0'-10" |

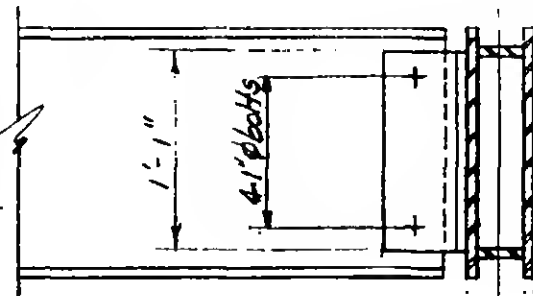


REVISIONS

1-23-67

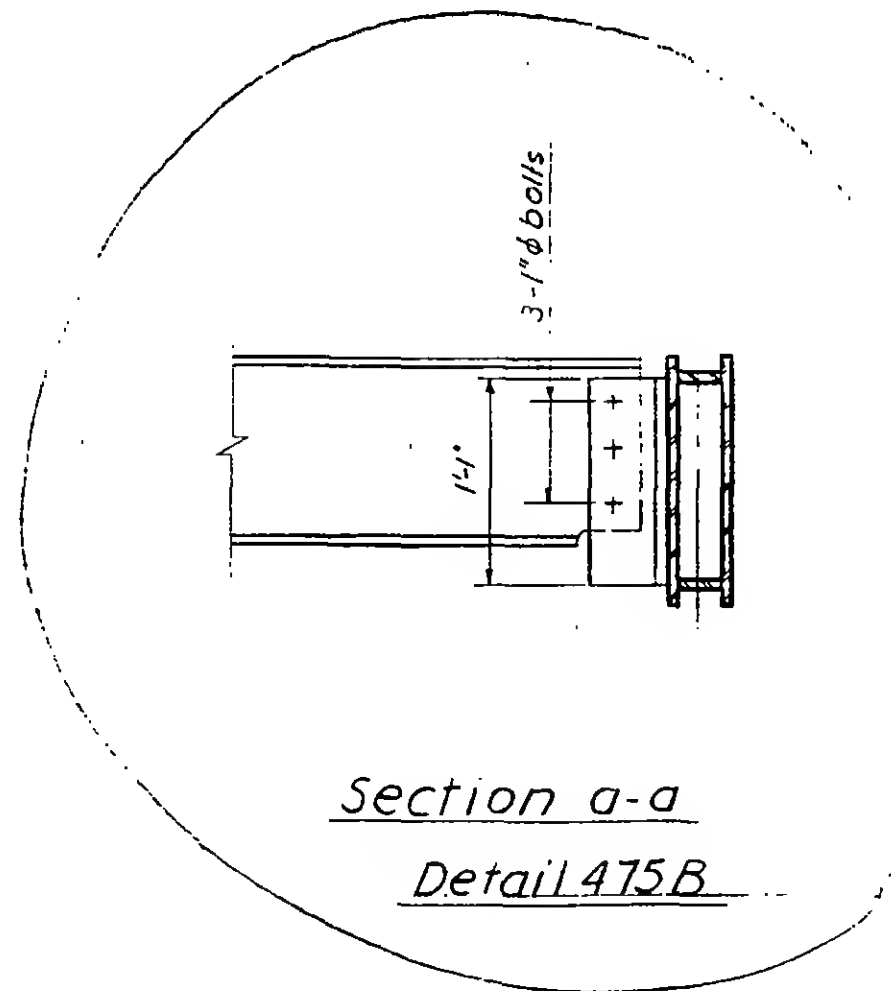


PLAN



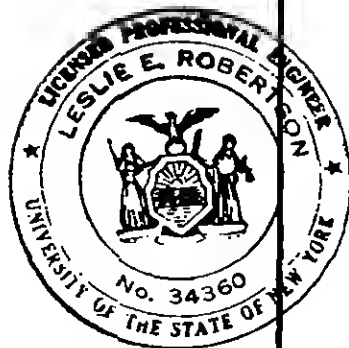
Section a-a

Detail 475 A

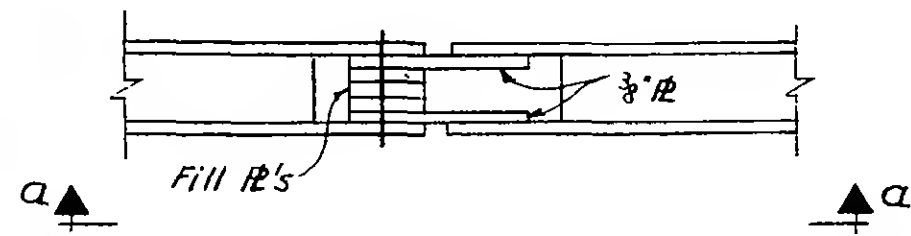
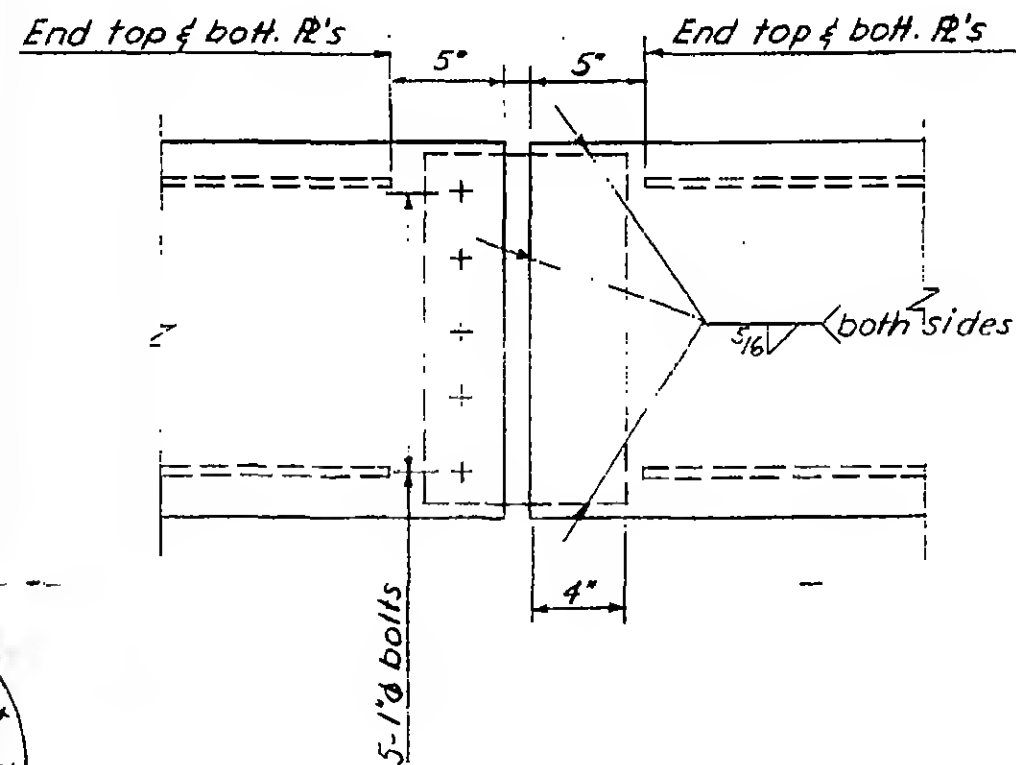


Section a-a

Detail 475 B



## REVISIONS

PlanSection a-a

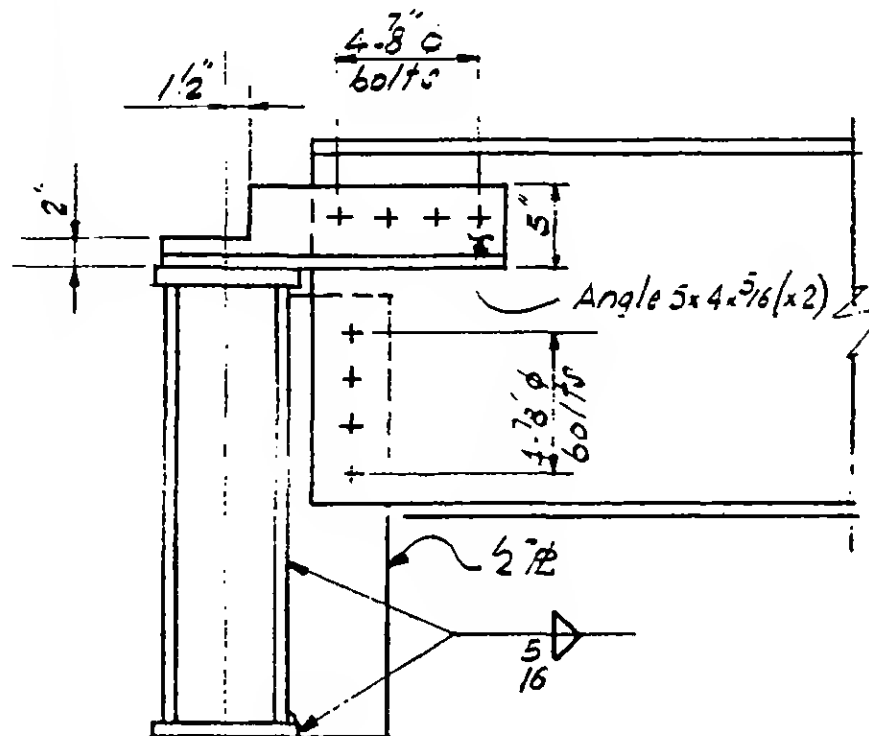
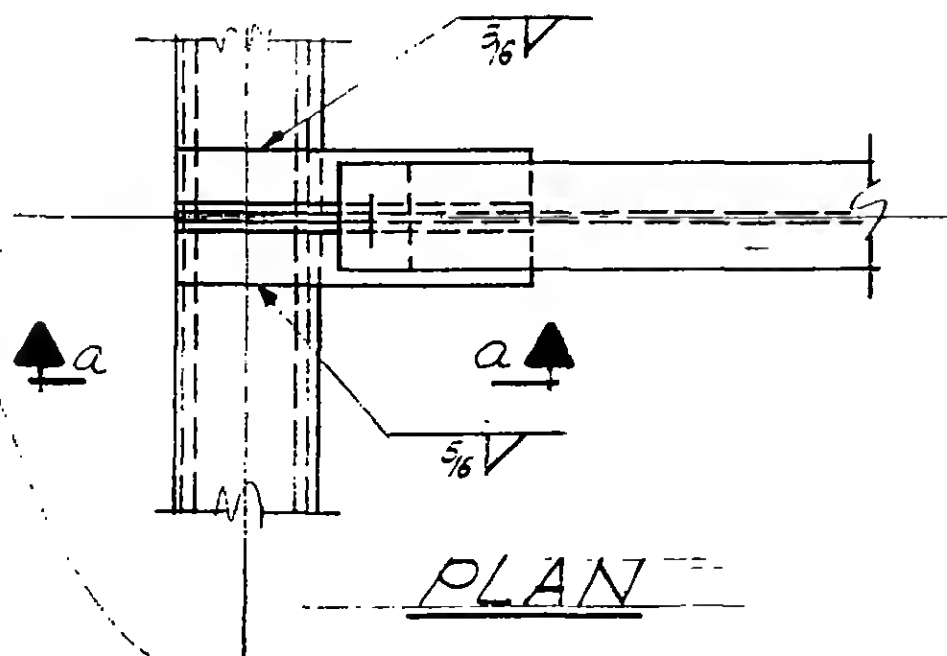
PROJECT THE WORLD TRADE CENTER

TITLE CONNECTION DETAIL 479 A

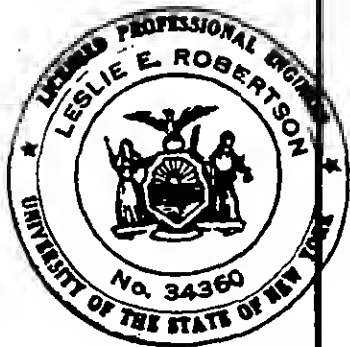
DATE 6-30-67

## REVISIONS

9-15-67

Section a-aPLAN

G-AB2-130

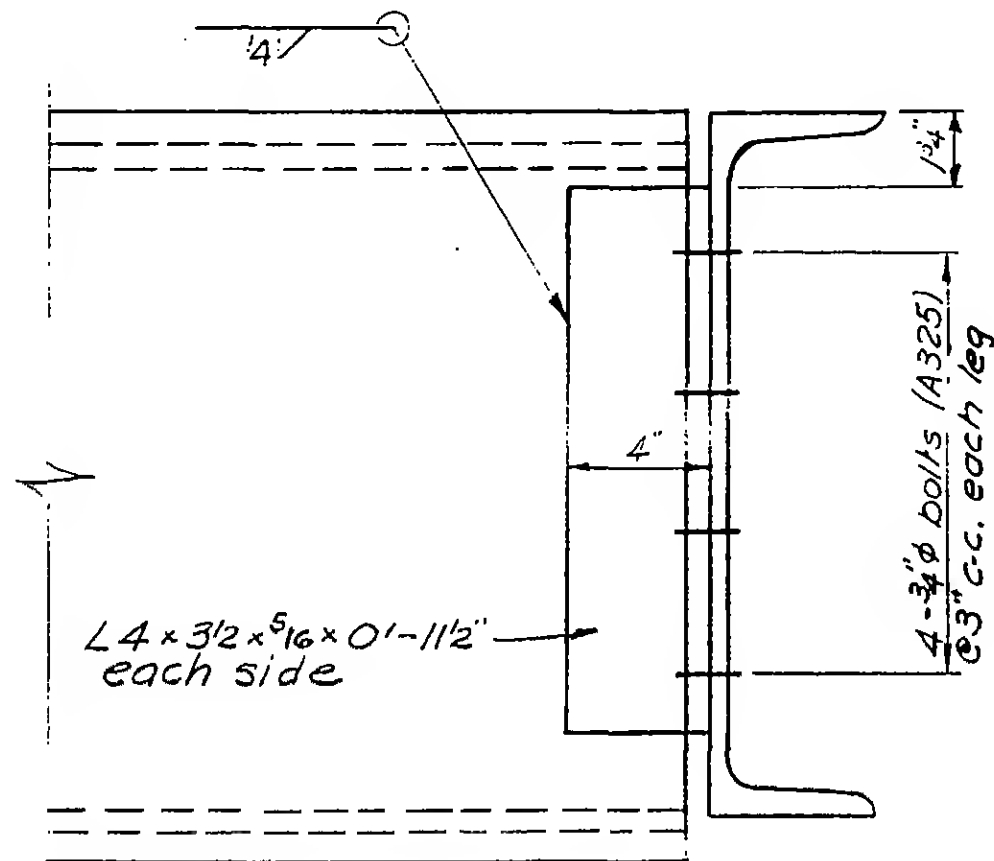


**Civil & Structural Engineers**

TITLE CONNECTION DETAIL 480

DATE 6-19-67

8-5-67



6-ABZ-131

PROJECT

THE WORLD TRADE CENTER

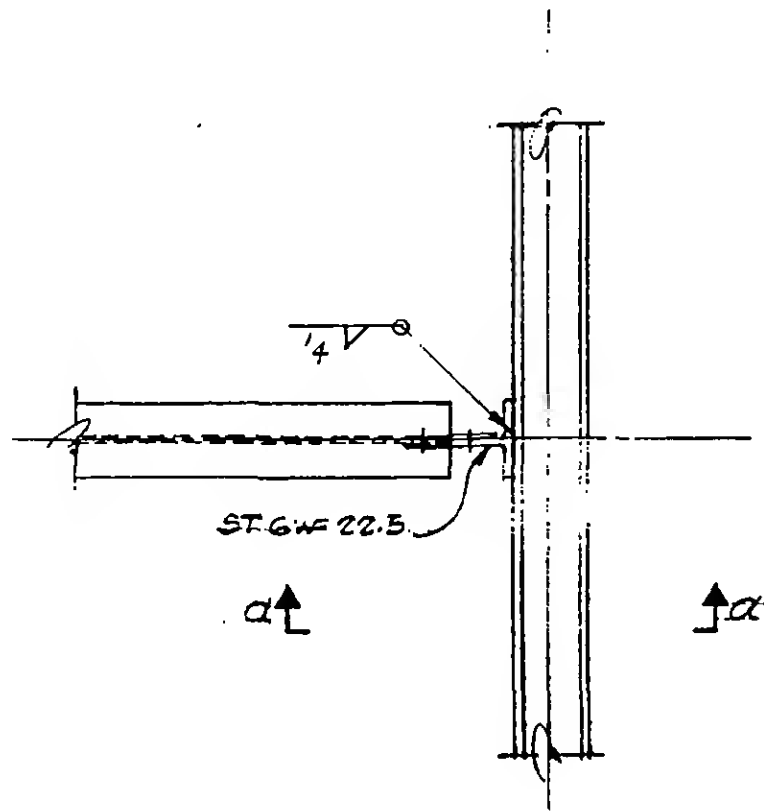
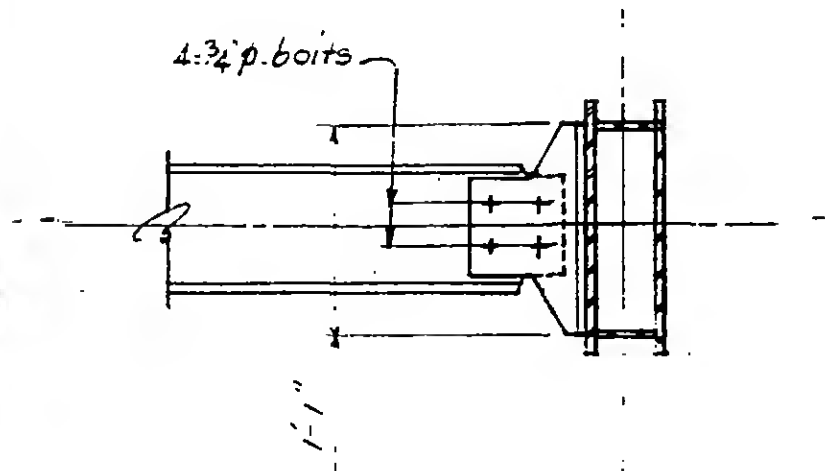
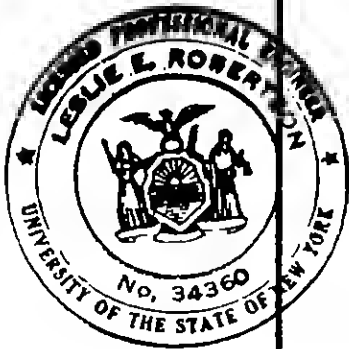
TITLE

CONNECTION DETAIL 481A

DATE

10-5-67

REVISIONS

PLANSection a-a

PROJECT

THE WORLD TRADE CENTER

TITLE

CONNECTION DETAIL 482 A, B, C

DATE

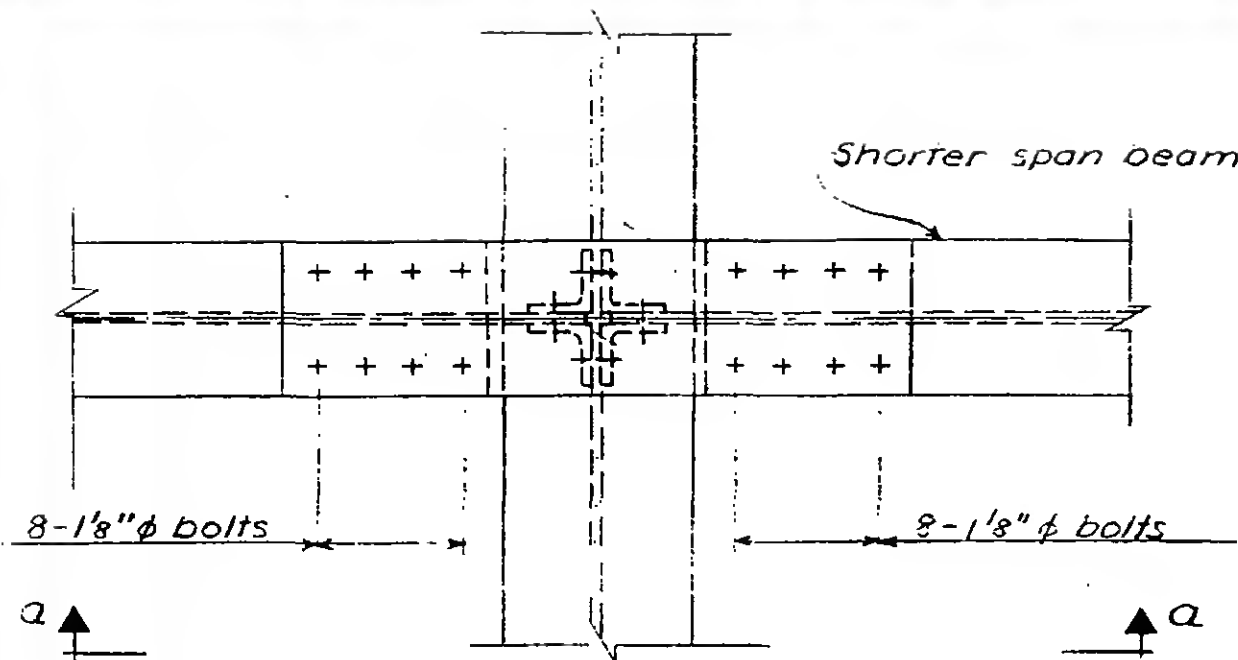
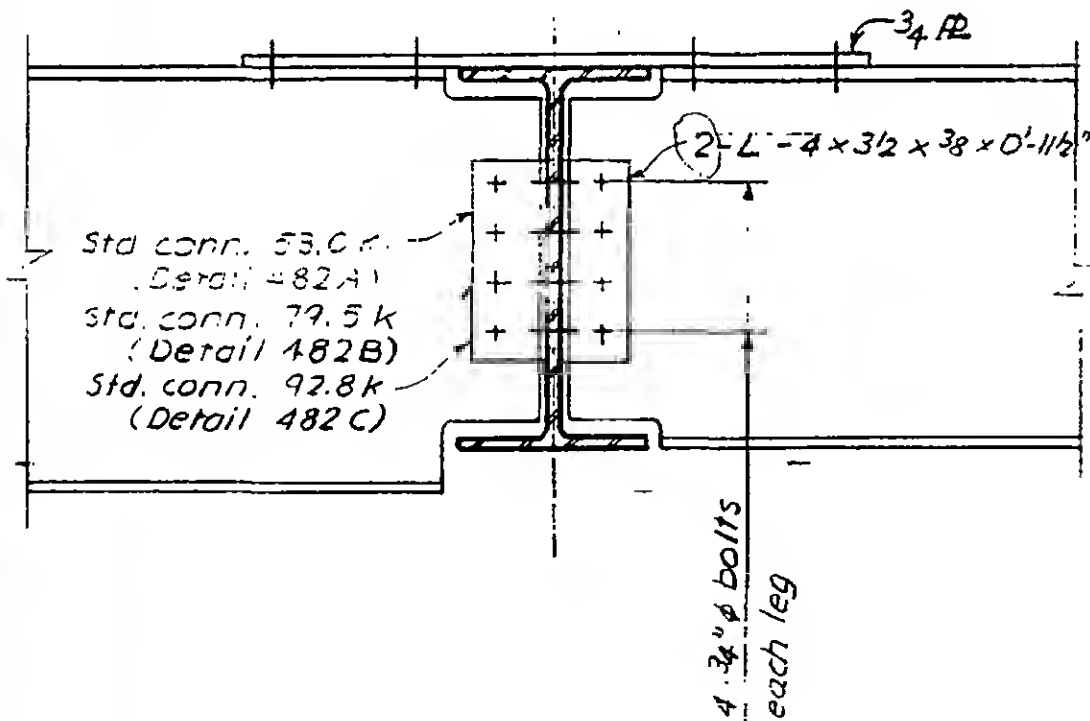
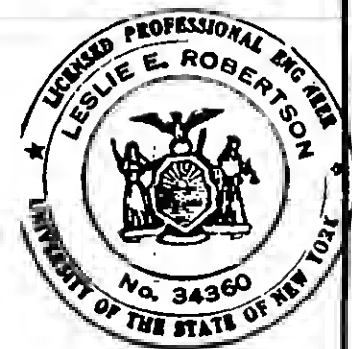
3-14-67

## REVISIONS

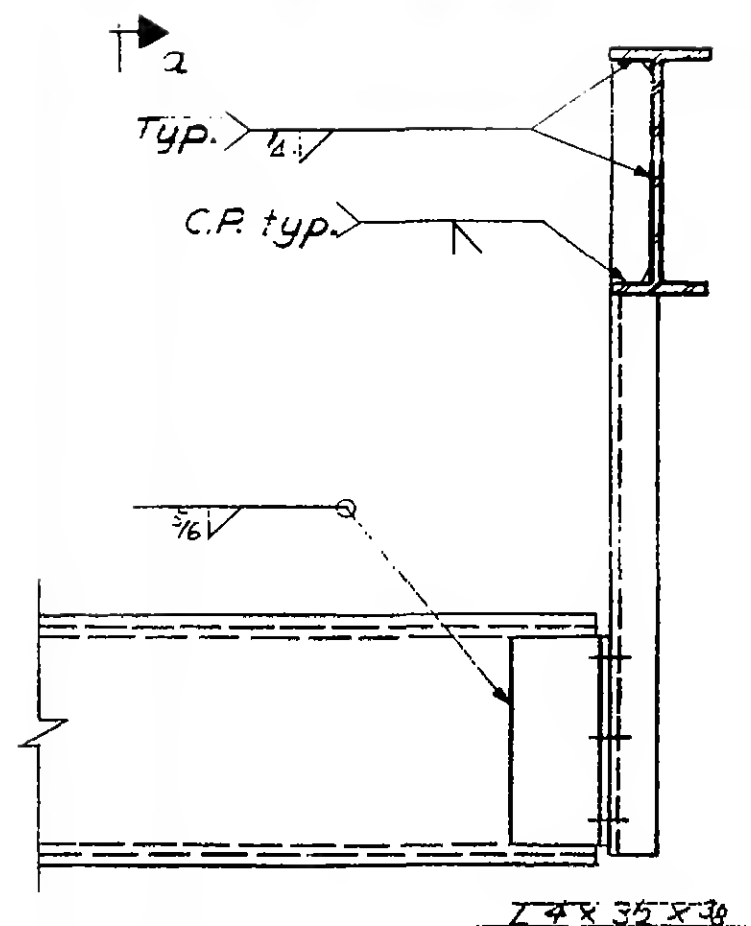
10-2-67

12-21-67

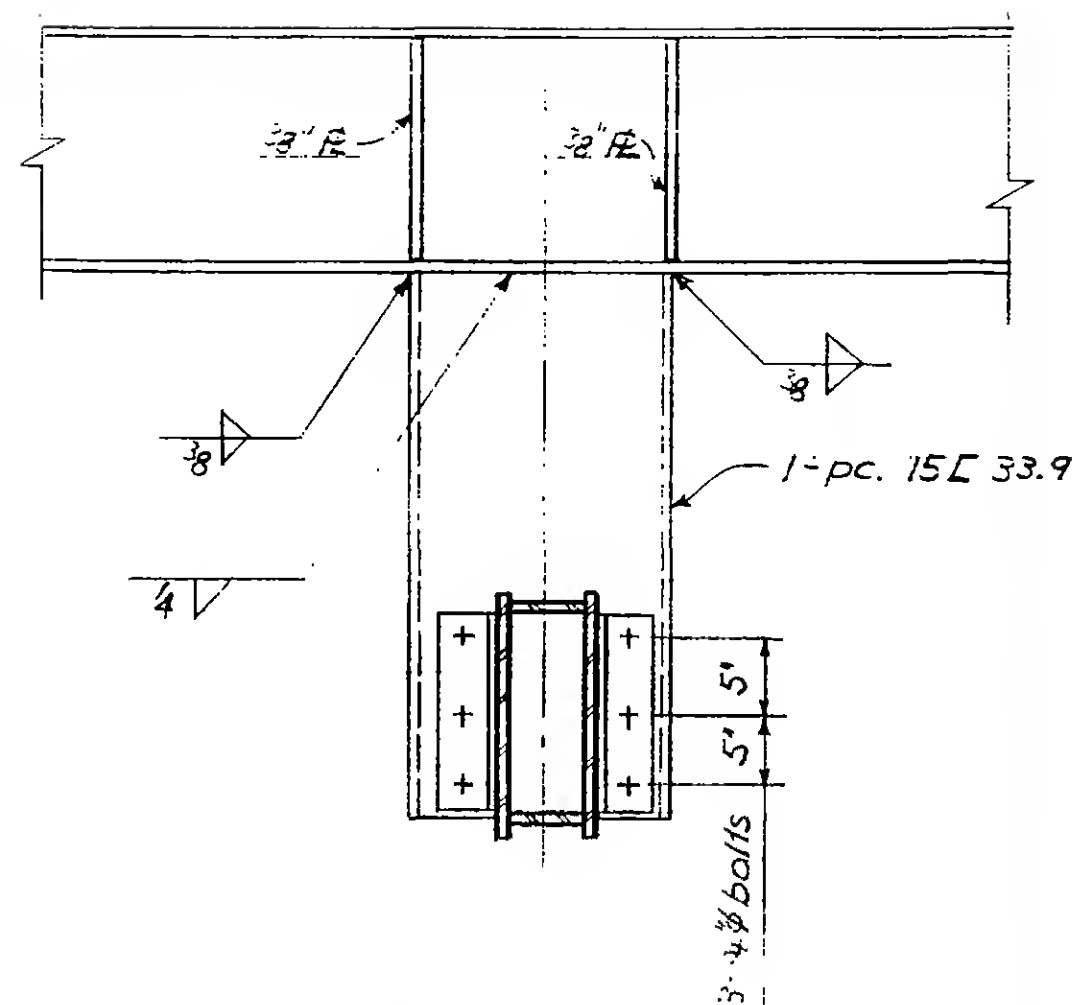
1-24-68

PlanSection a-a

## REVISIONS



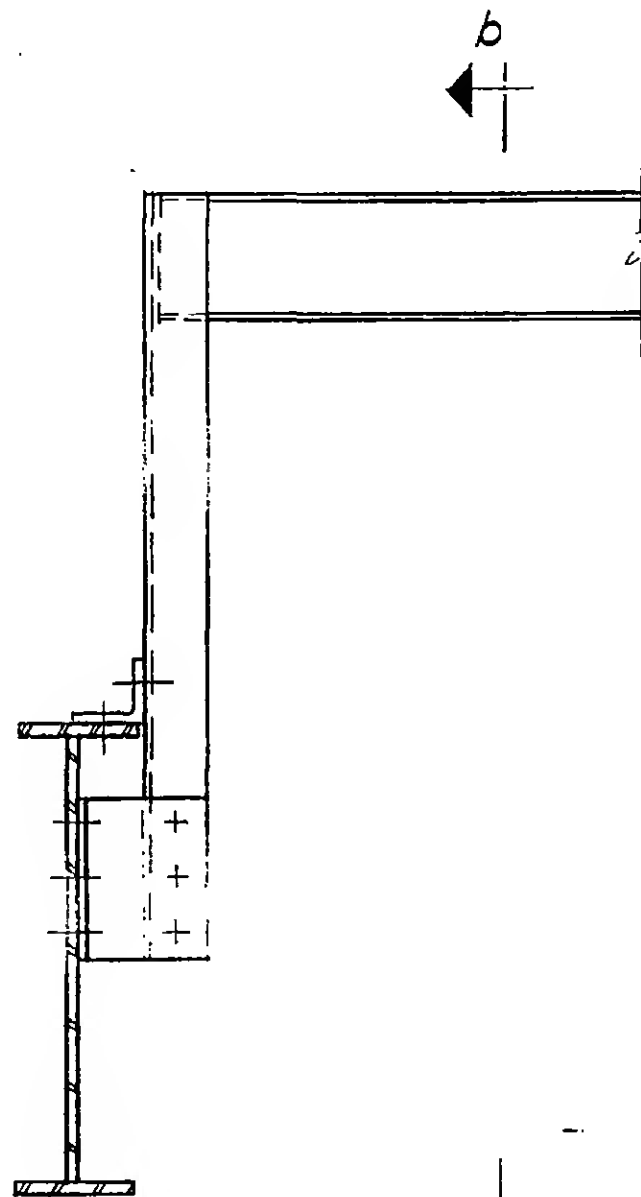
Elevation



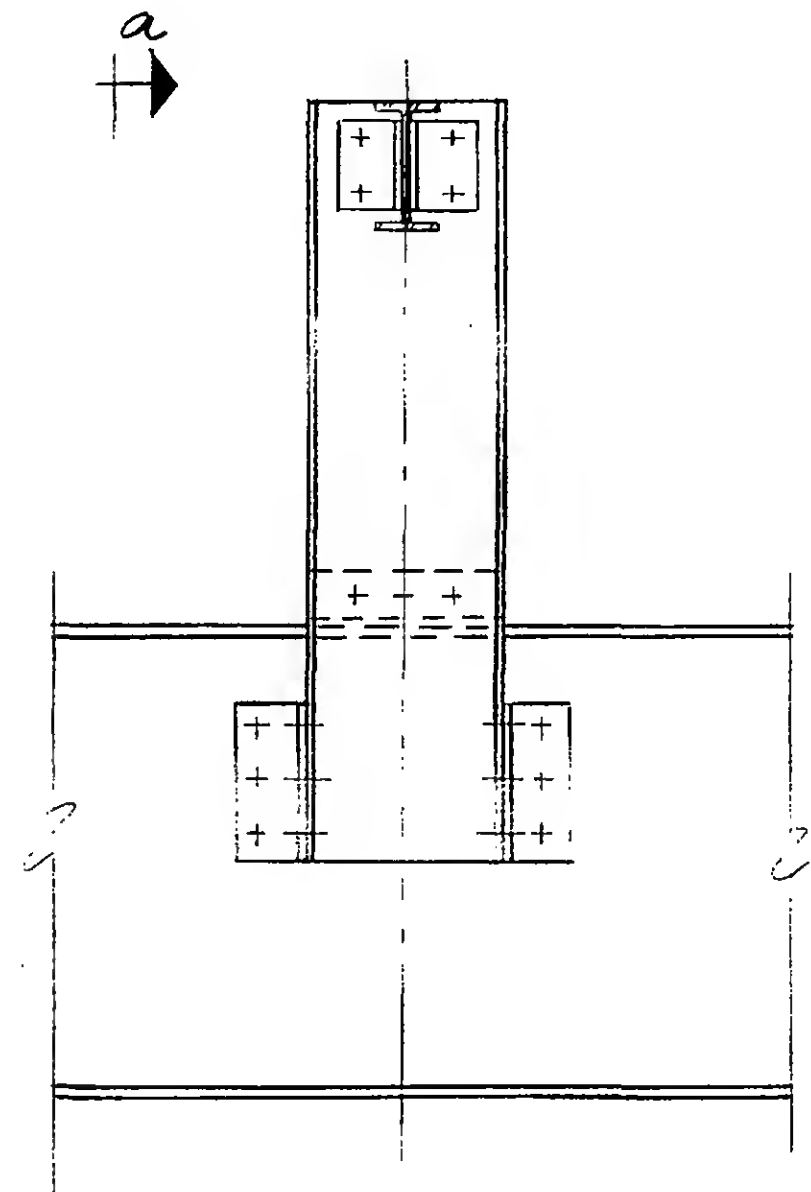
Section a-a



REVISIONS



Section a-a



Section b-b



SKILLING - HELLE - CHRISTIANSEN - ROBERTSON

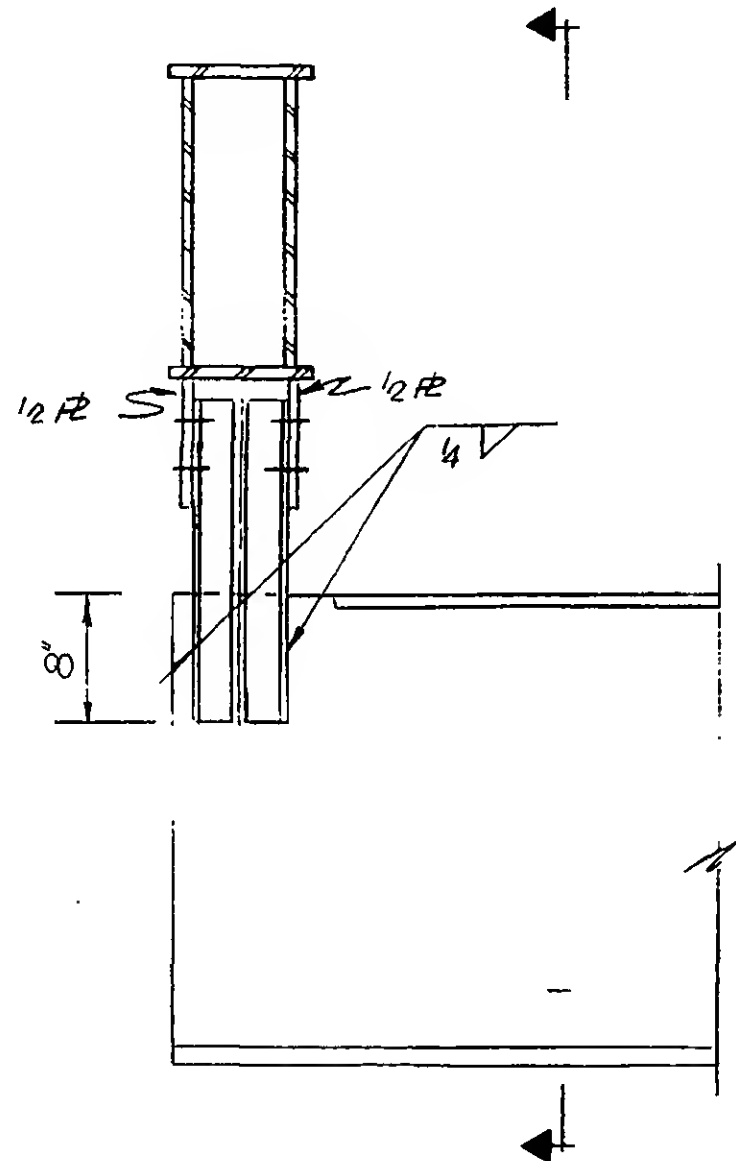
Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER

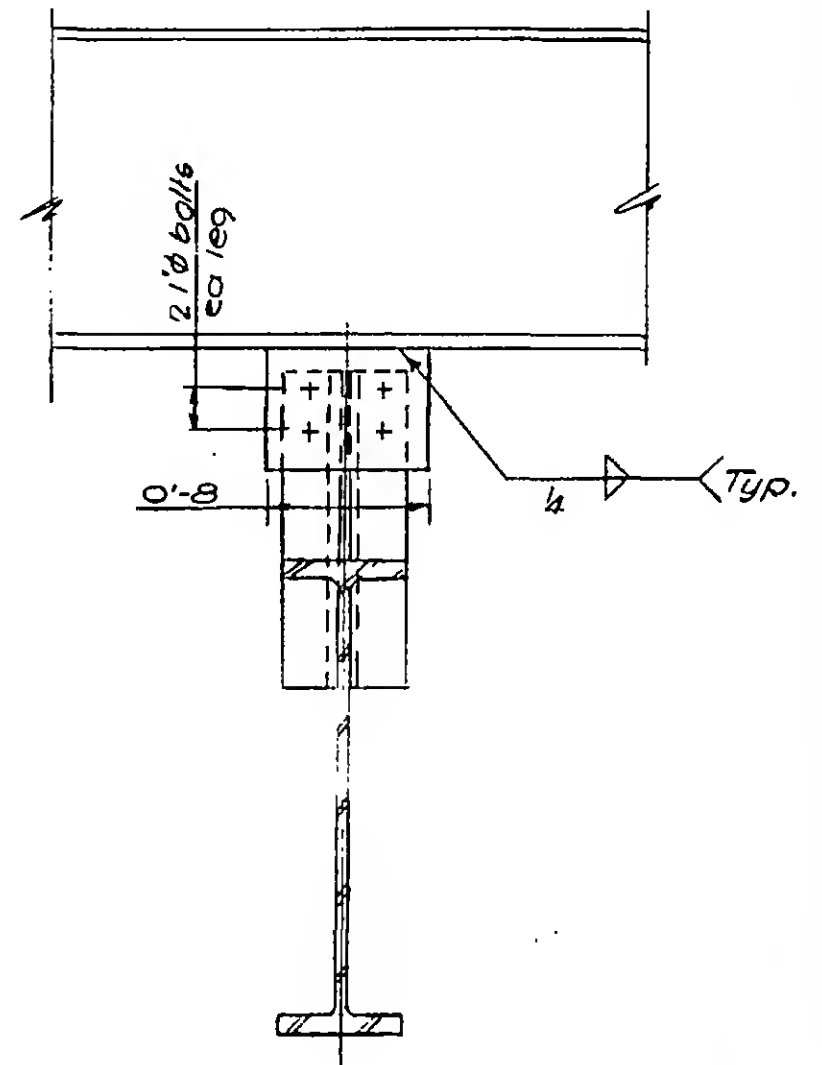
TITLE CONNECTION DETAIL 485 A

DATE 10-5-67

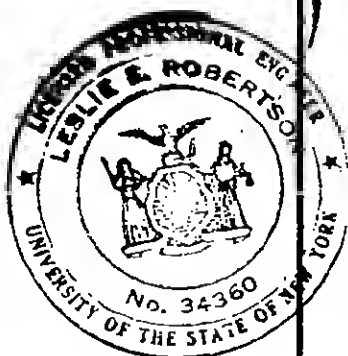
REVISIONS



Elevation

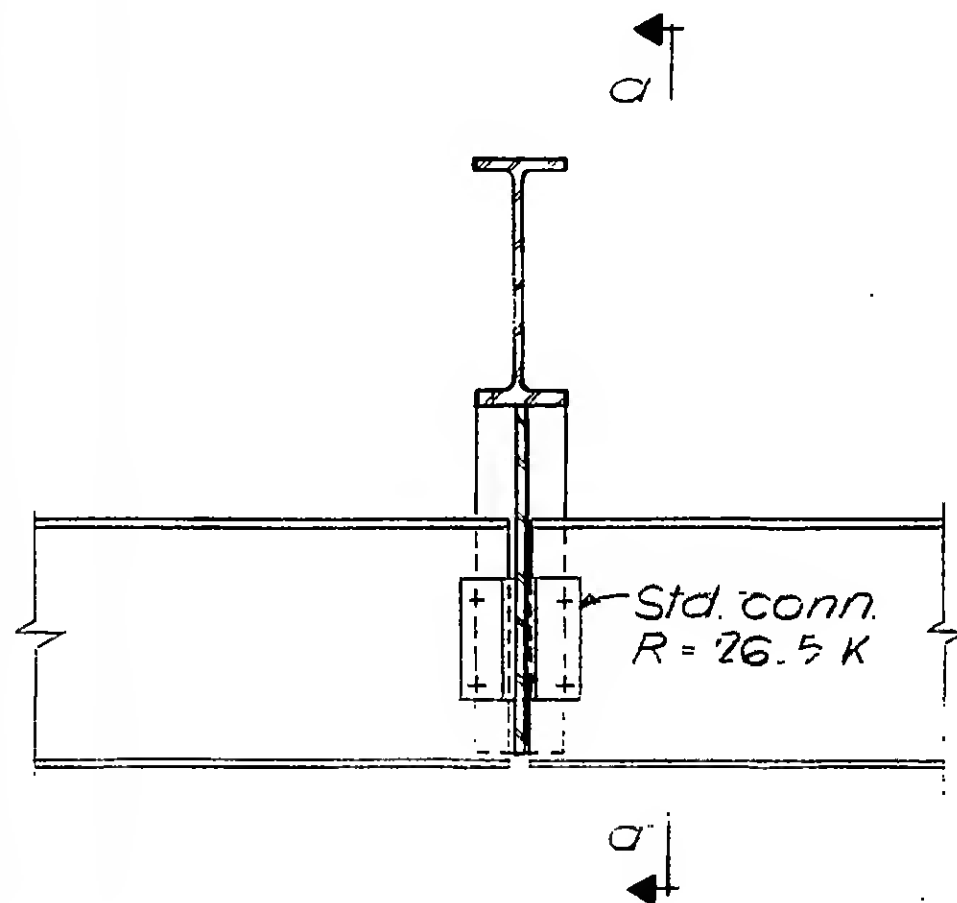


Section a-a

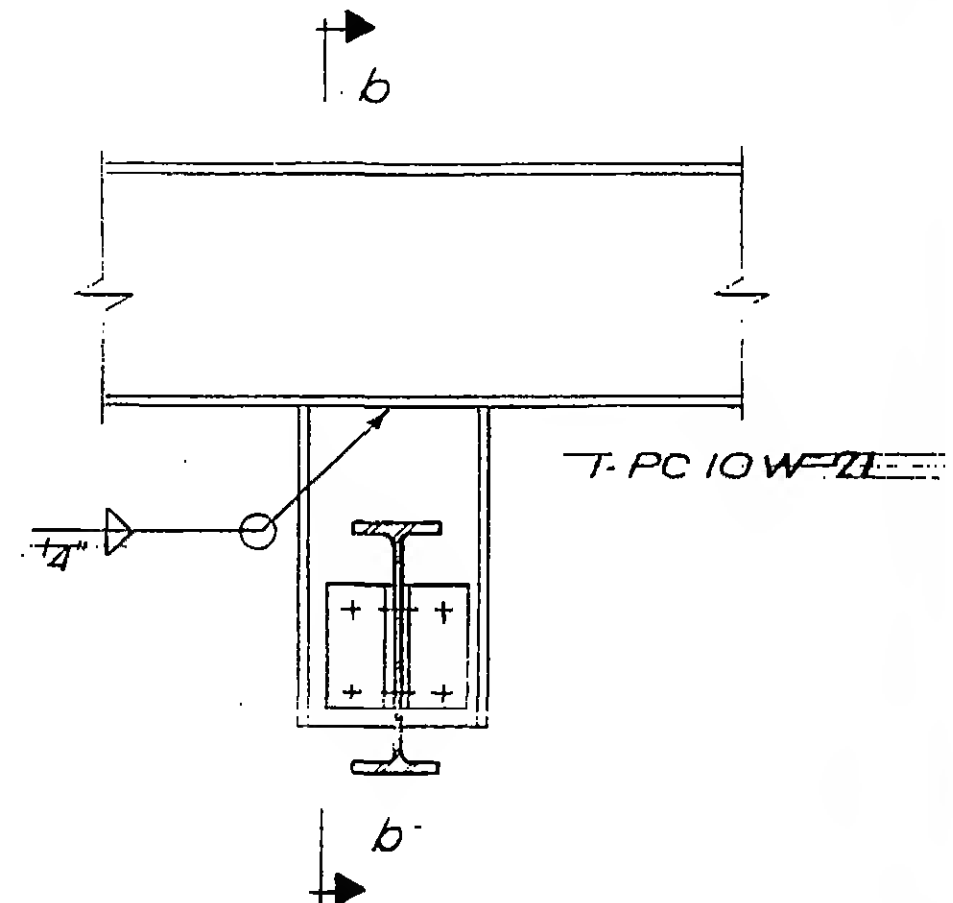


G-AB2-136

REVISIONS



Elevation b-b



Section a-a



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

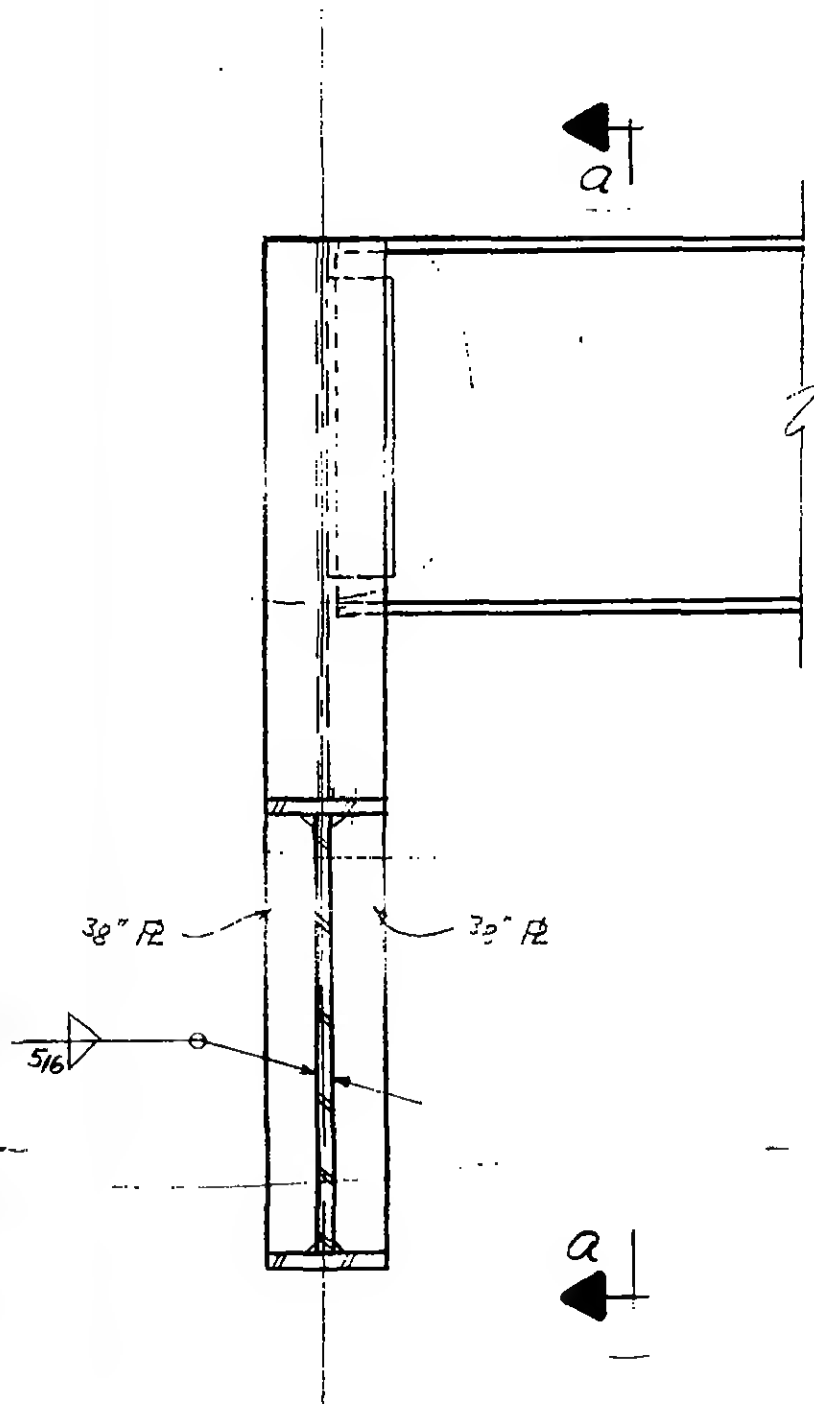
PROJECT THE WORLD TRADE CENTER

TITLE CONNECTION DETAIL 487 A

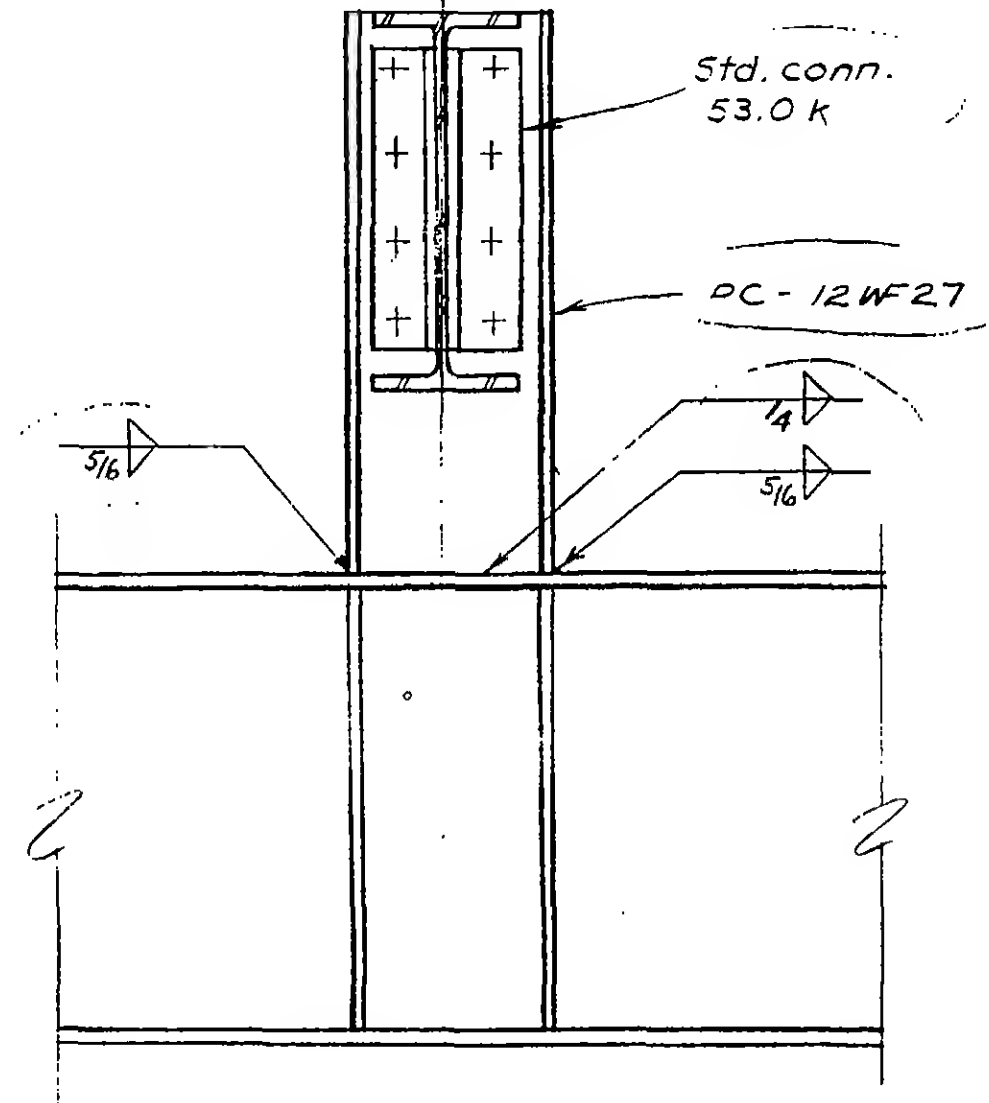
DATE 6-30-67

REVISIONS

9-15-67



Elevation

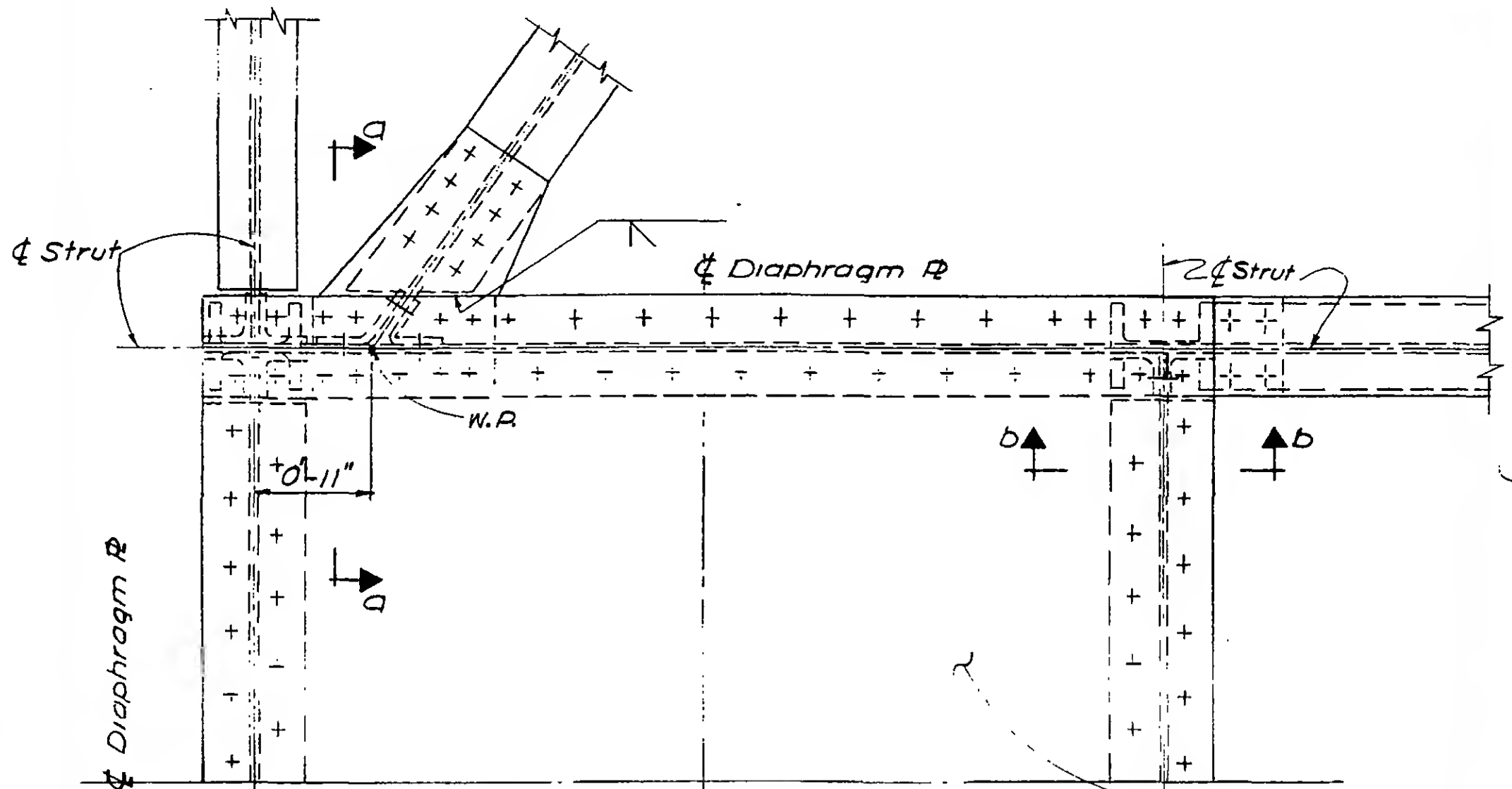


Section a-a



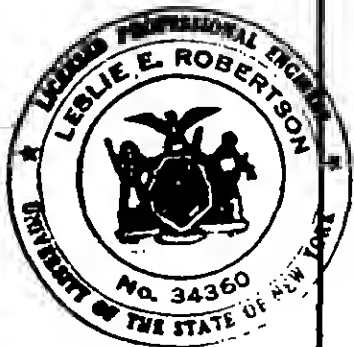
6-AB2-138

REVISIONS



PLAN

Note:  
For Sections a-a & b-b  
see G-AB2-139.1



WORTHINGTON, SKILLING, HELLE & JACKSON

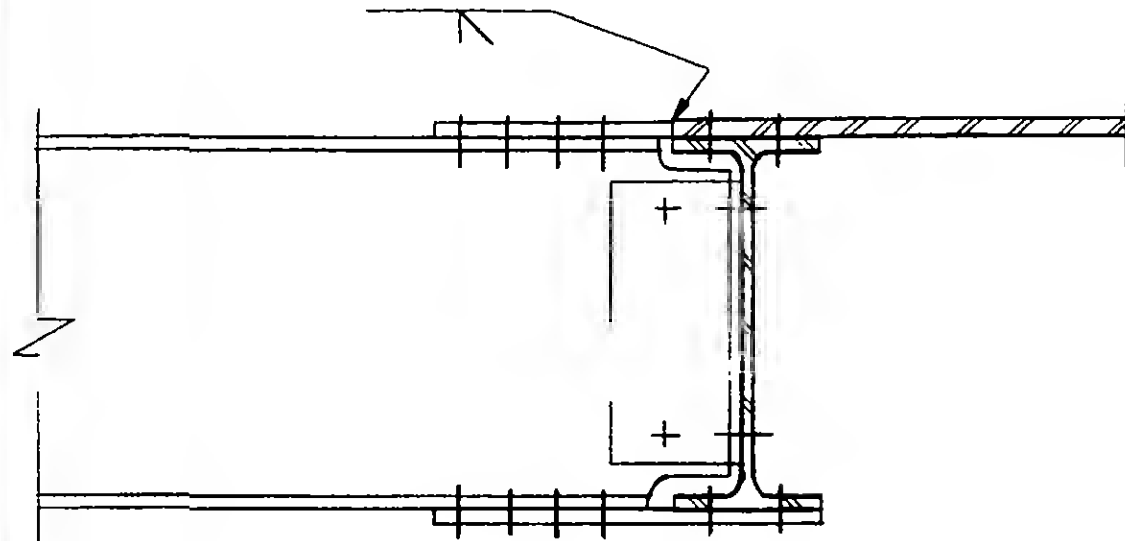
Civil & Structural Engineers

PROJECT *THE WORLD TRADE CENTER*

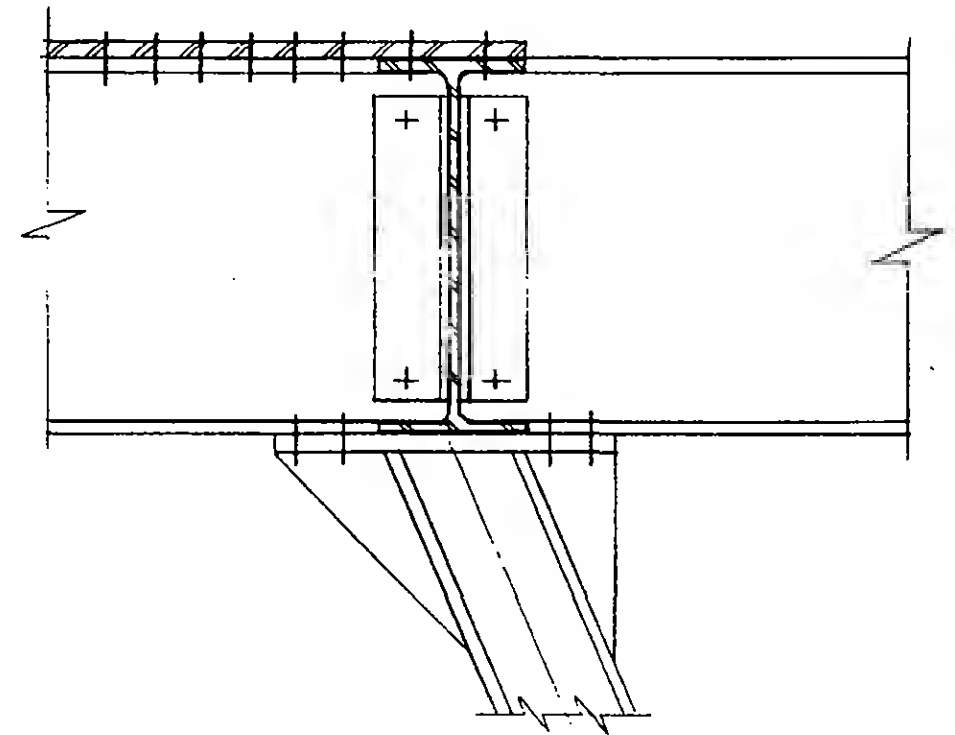
TITLE *CONNECTION DETAIL-SECTIONS a-a & b-b*

DATE *7/20/67*

REVISIONS



Section a-a

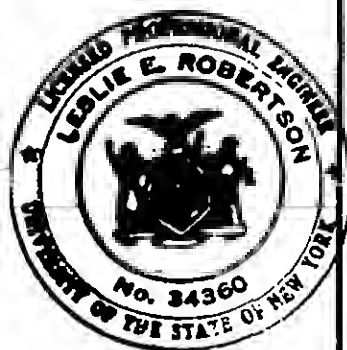
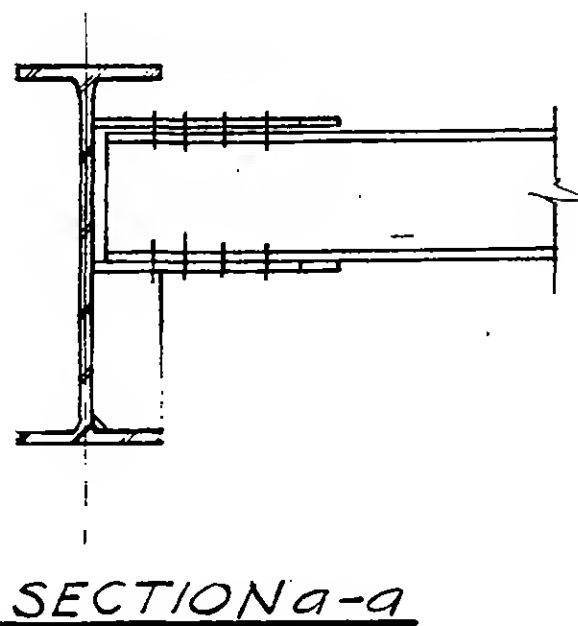
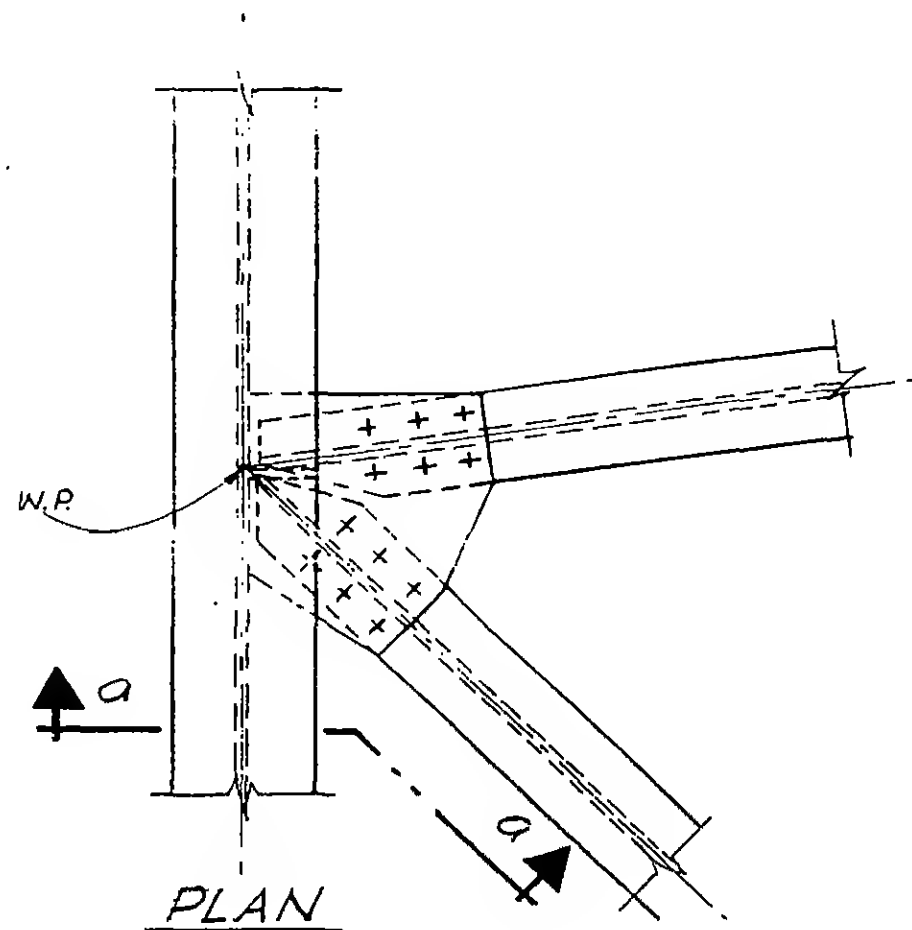


Section b-b



6-AB2-139.1

REVISIONS



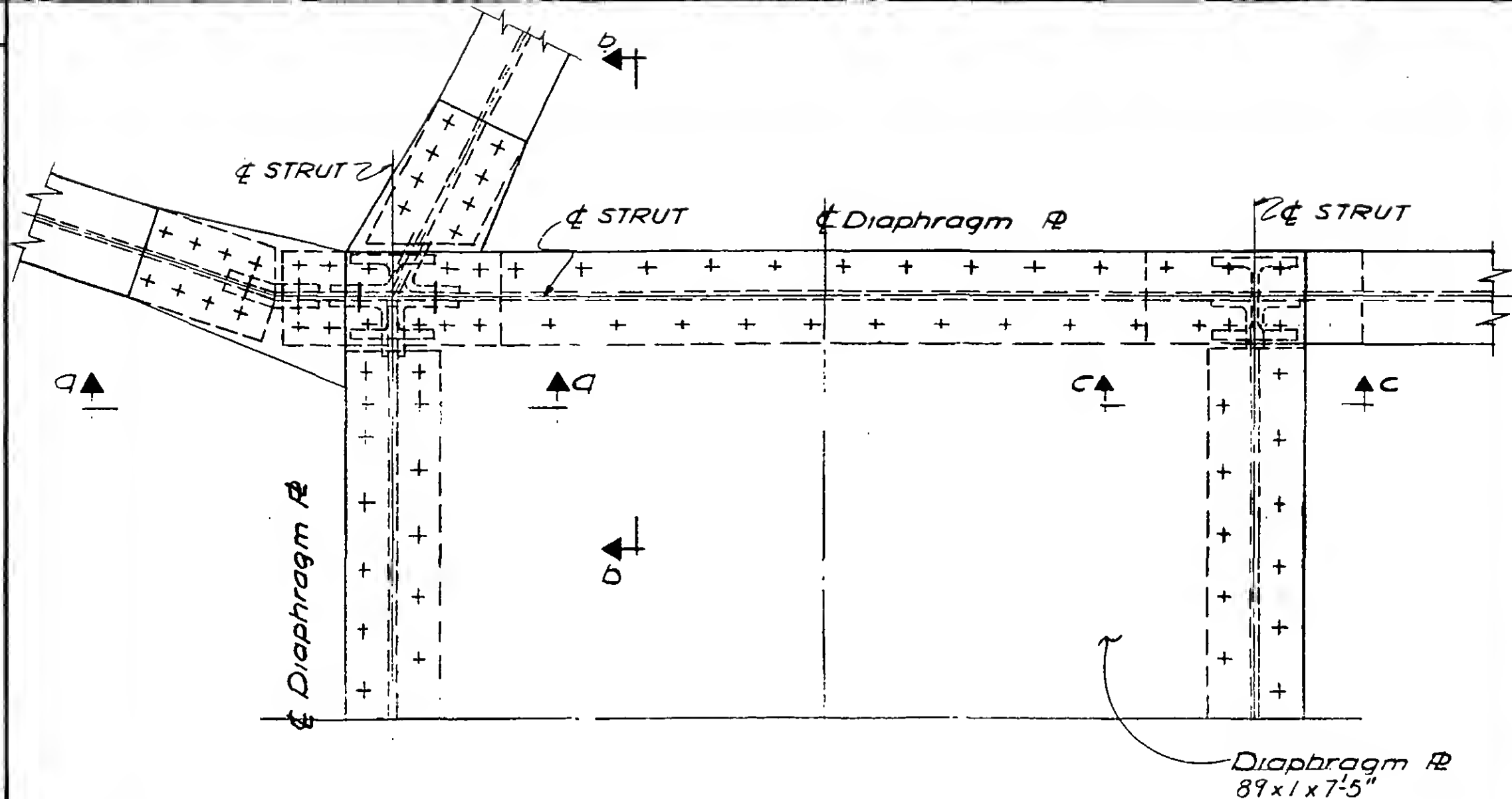
G-AB2-140

PROJECT THE WORLD TRADE CENTER

TITLE CONNECTION DETAIL 491

DATE 7/20/67

REVISIONS



PLAN

Note:  
For Sections a-a  
b-b & c-c see G-AB2-142.1



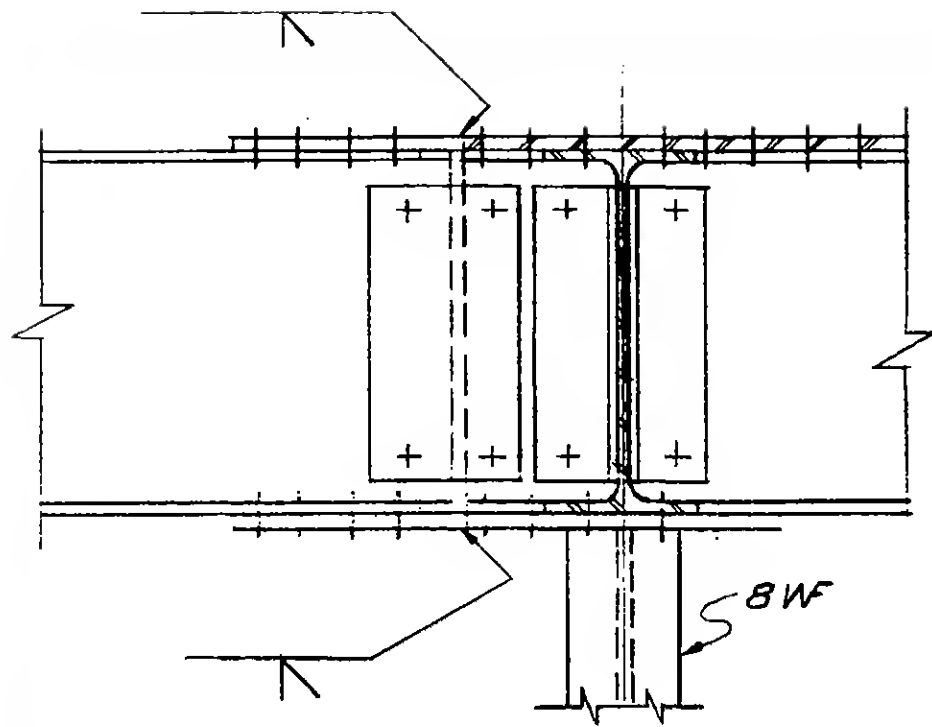
G-AB2-142

PROJECT *THE WORLD TRADE CENTER*

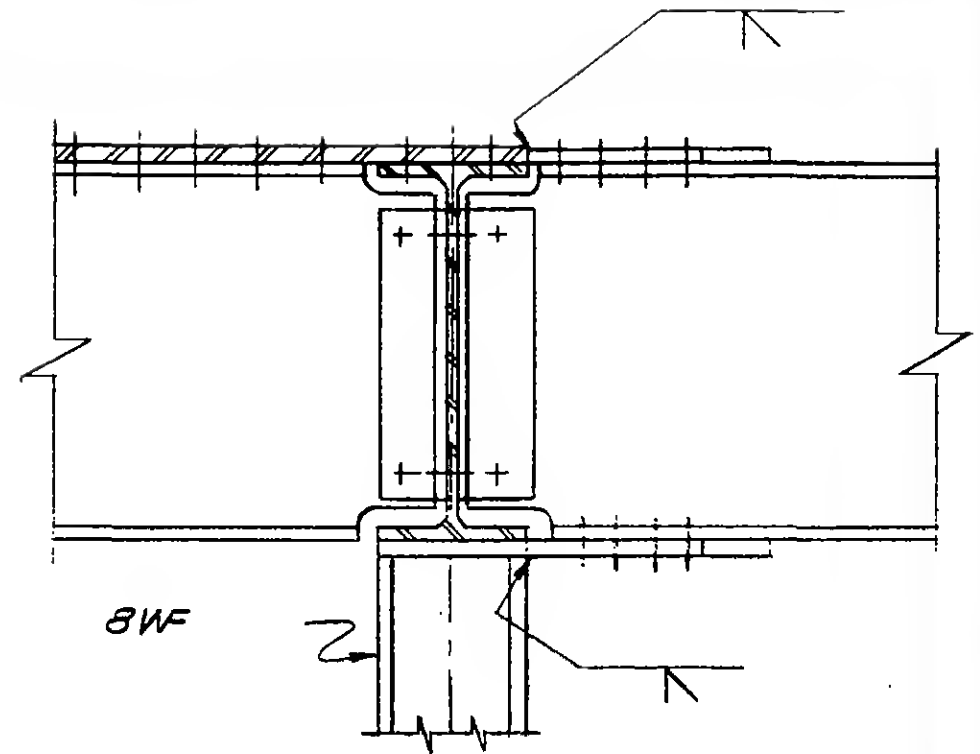
TITLE *CONNECTION DETAILS - SECTIONS a-a; b-b; c-c*

DATE *7/20/67*

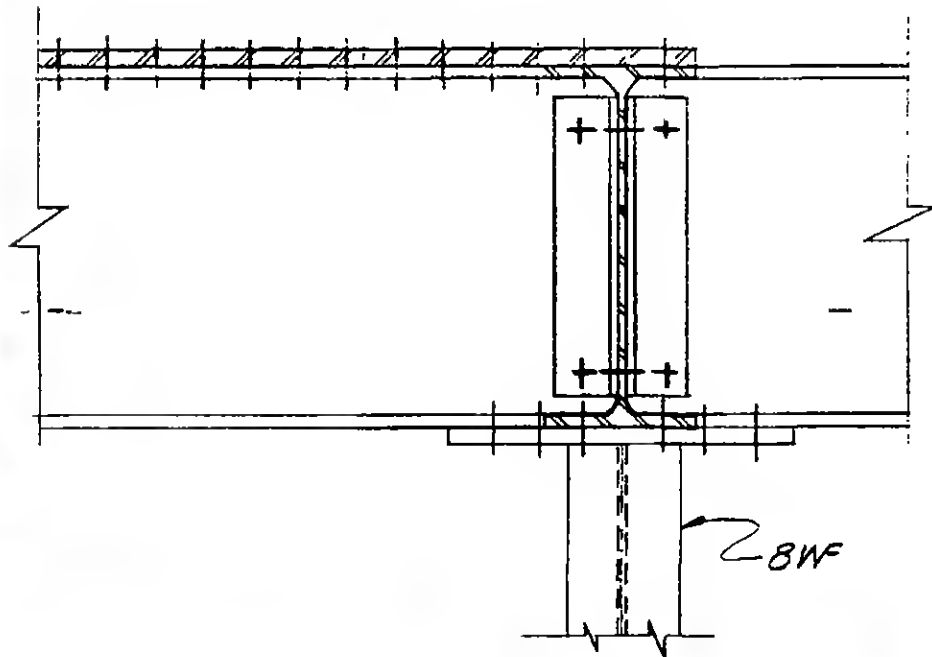
REVISIONS



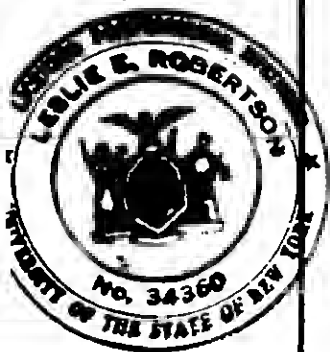
Section a-a



Section b-b



Section c-c



6-AB2-142.1

PROJECT

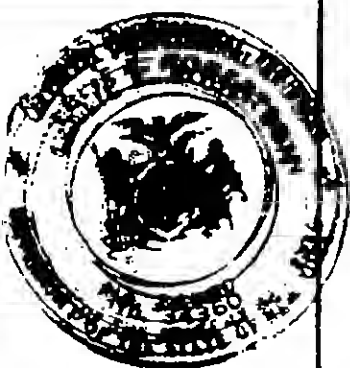
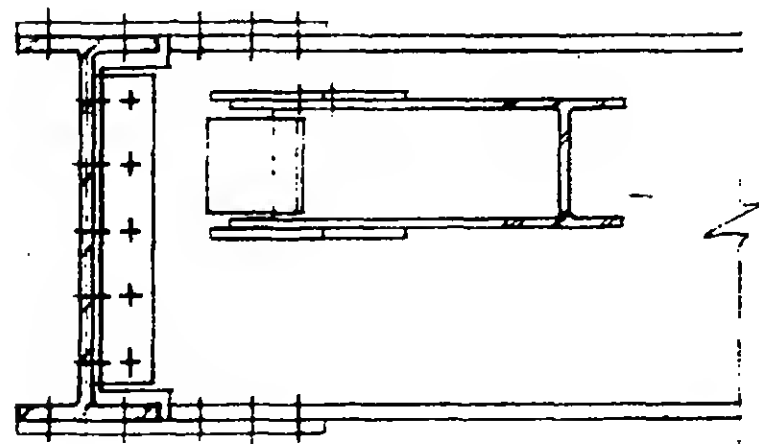
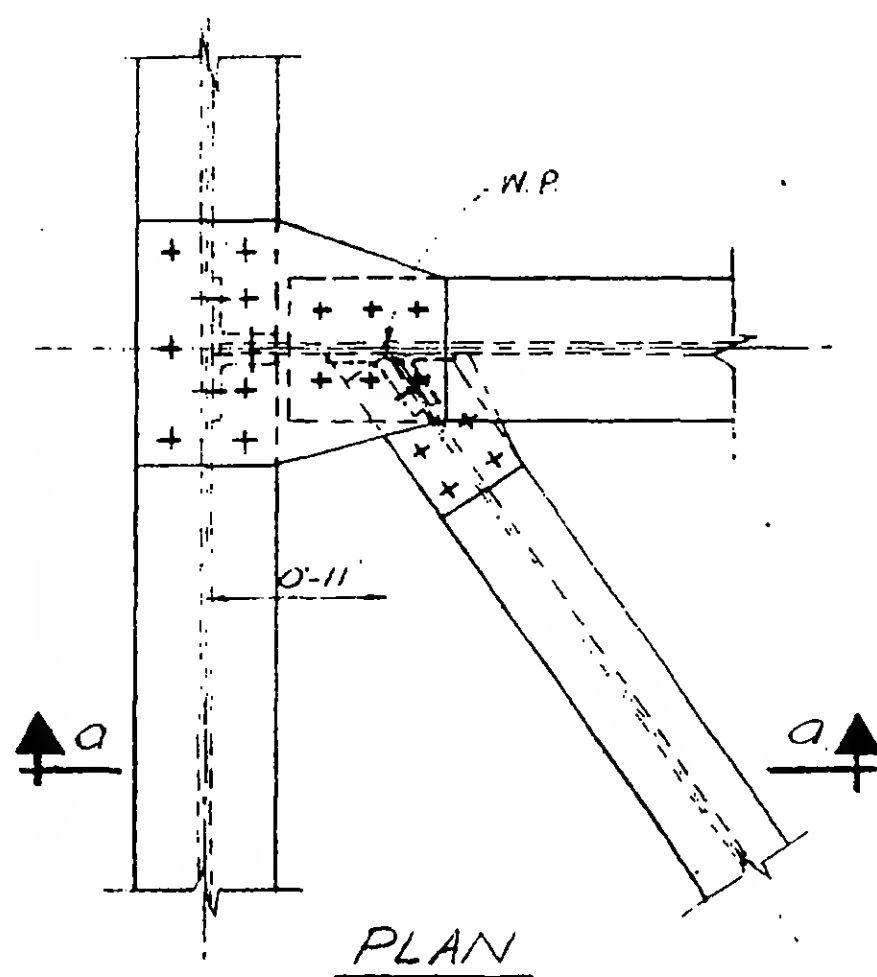
WORLD TRADE CENTER

TITLE

CONNECTION DETAIL 492

DATE 7/20/67

REVISIONS



PROJECT

THE WORLD TRADE CENTER

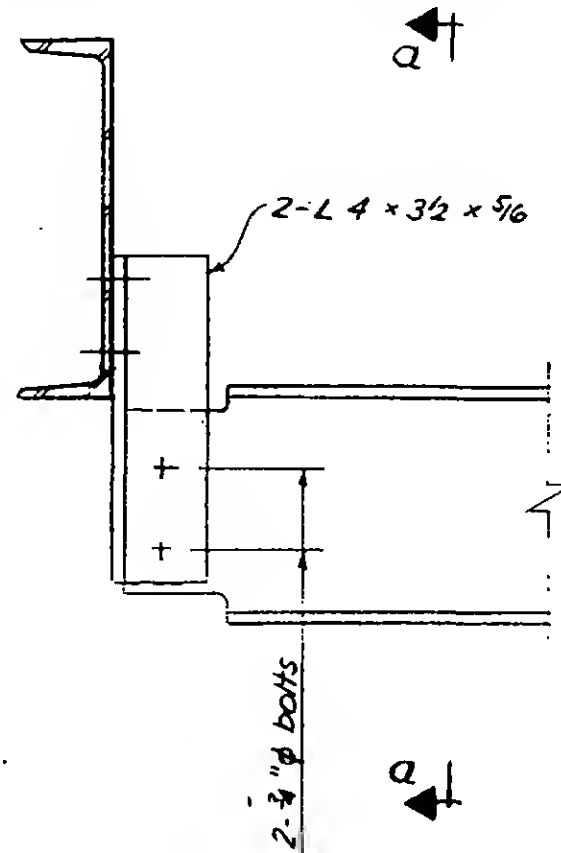
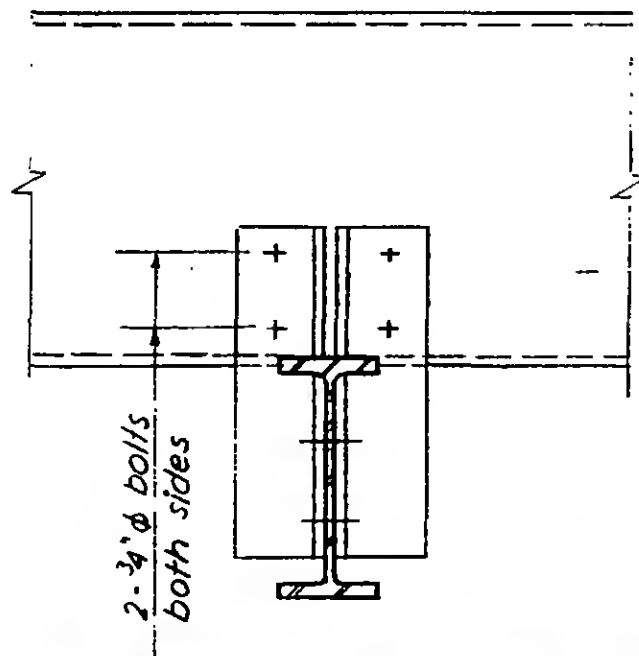
TITLE

CONNECTION DETAIL 493 A

DATE

11-10-67

REVISIONS

ELEVATIONSection a-a

PROJECT

THE WORLD TRADE CENTER

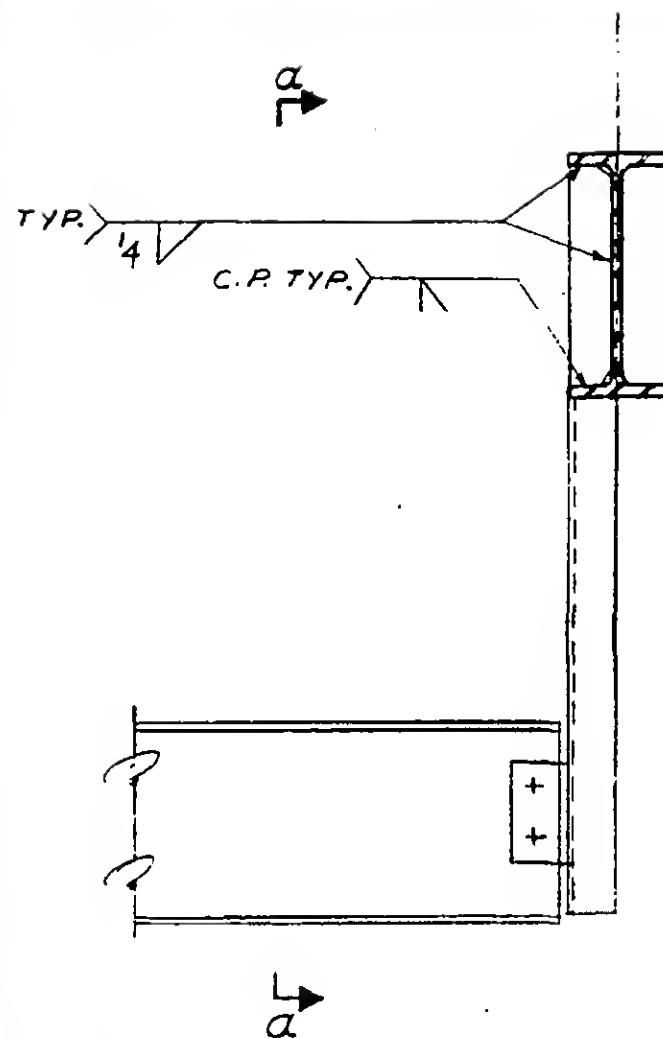
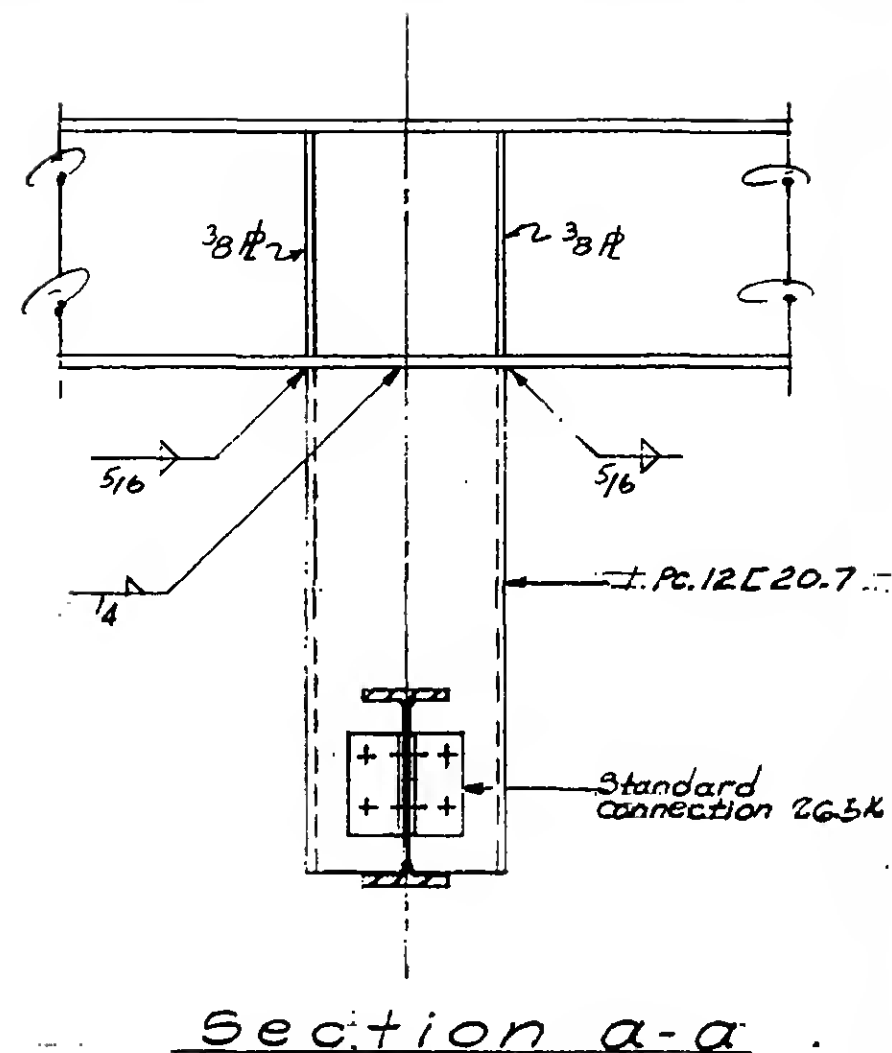
TITLE

CONNECTION DETAIL 494A

DATE

9-29-67

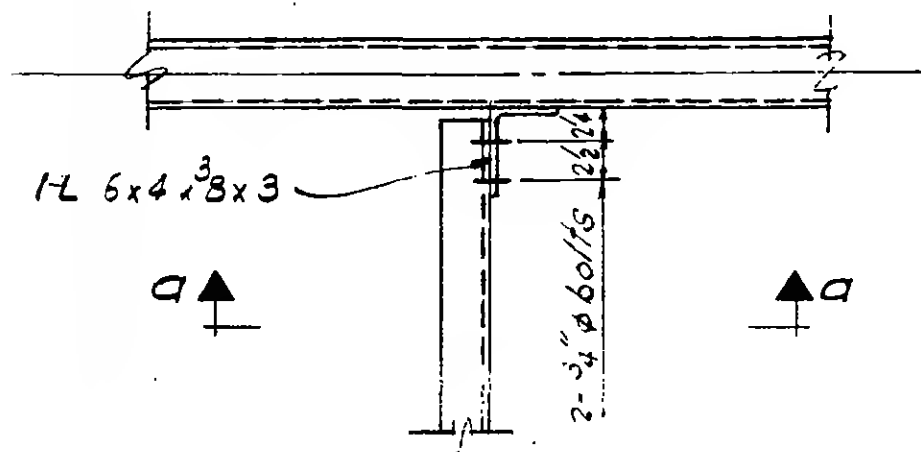
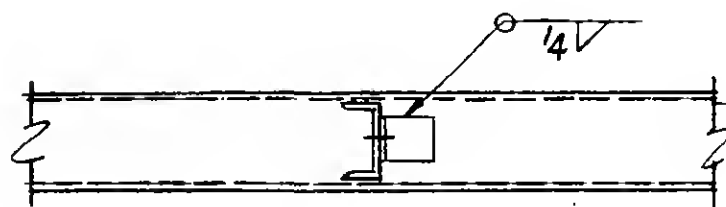
REVISIONS

ELEVATIONSection a-a

G-ABZ-145

PROJECT *THE WORLD TRADE CENTER*TITLE *CONNECTION DETAIL 496*DATE *3-5-67*

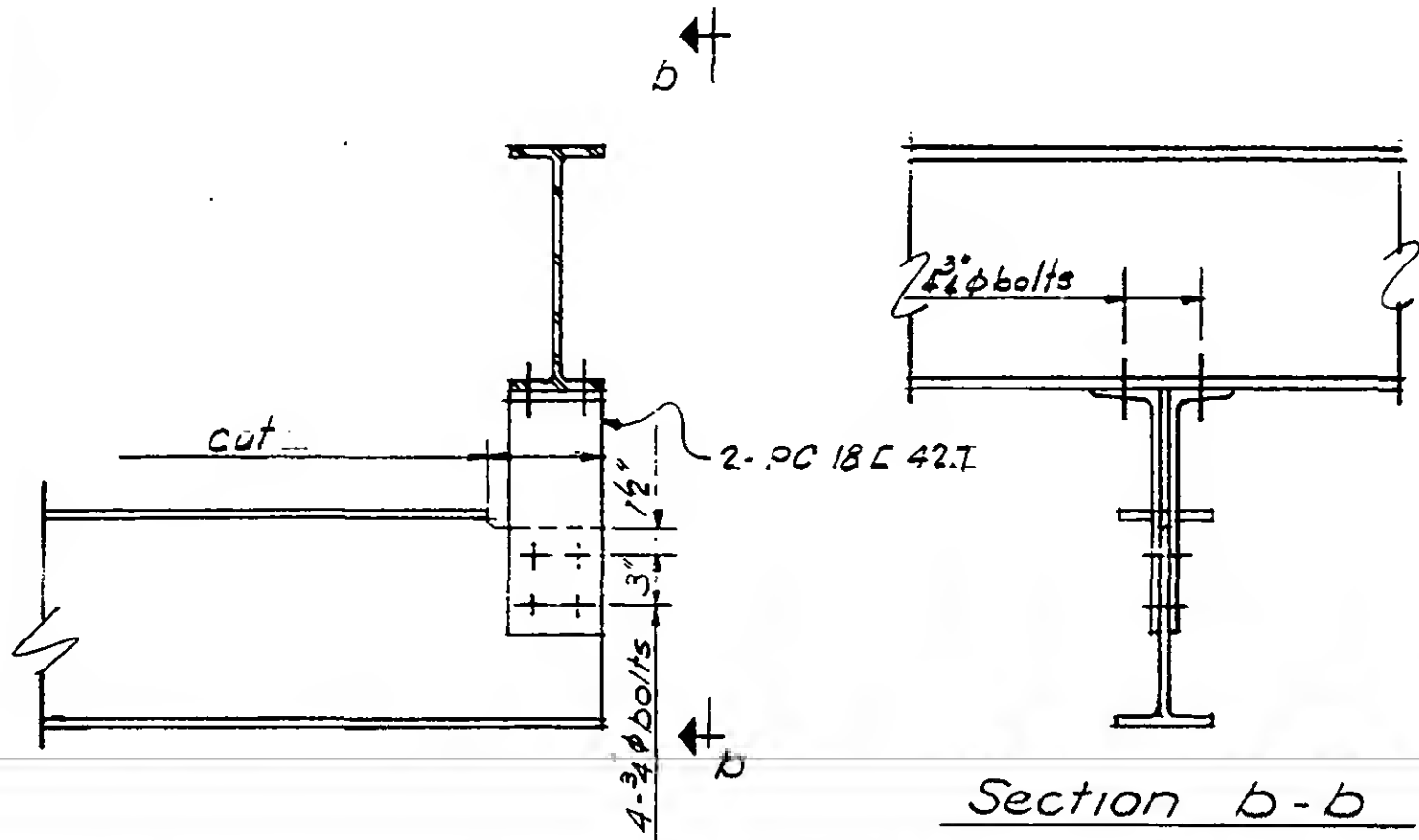
## REVISIONS

PlanSection a-a

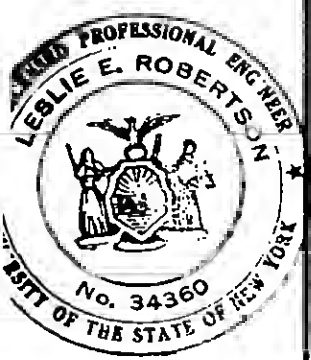
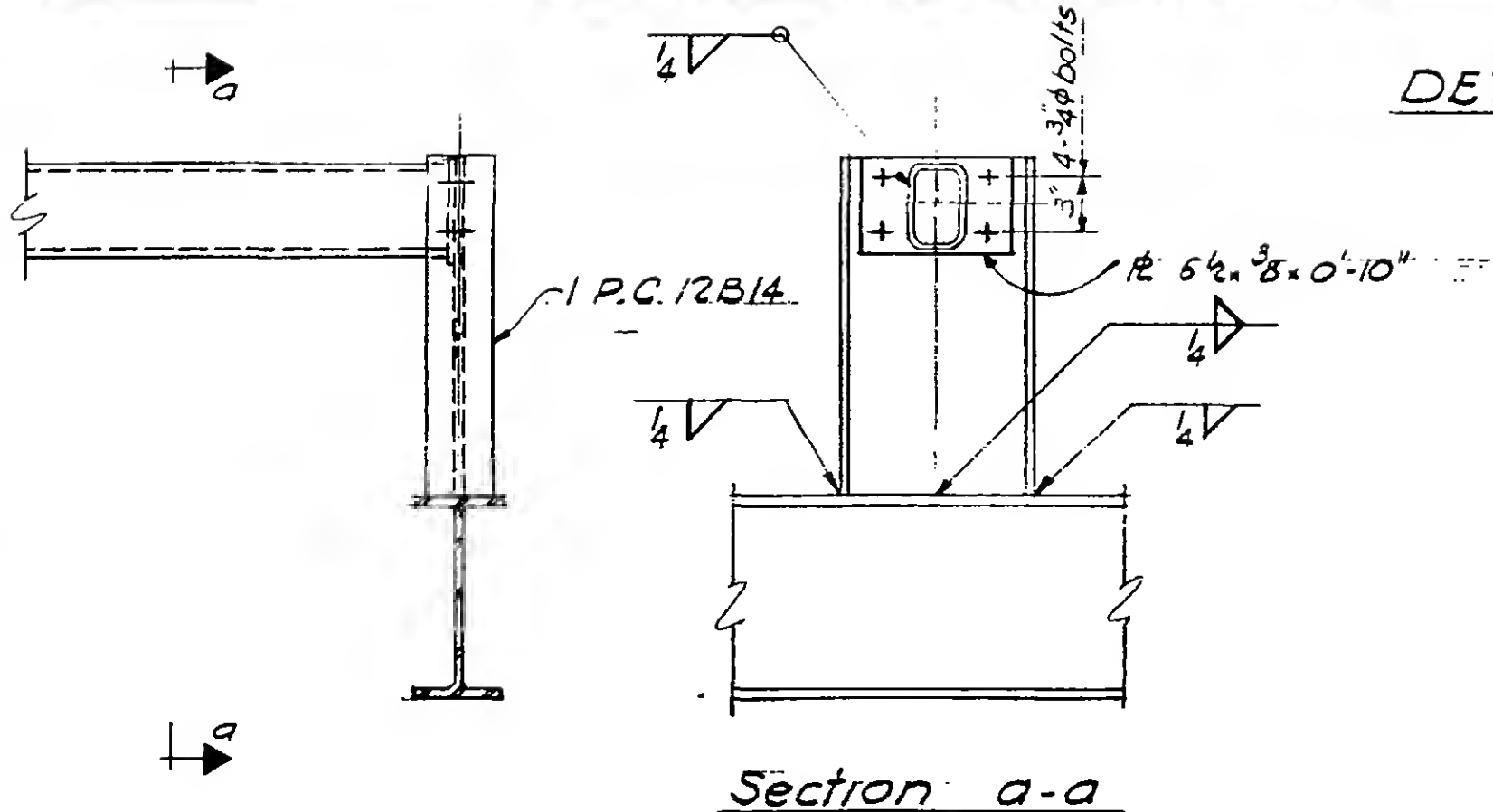
6-AB2-147

REVISIONS

DETAIL 497



DETAIL 498

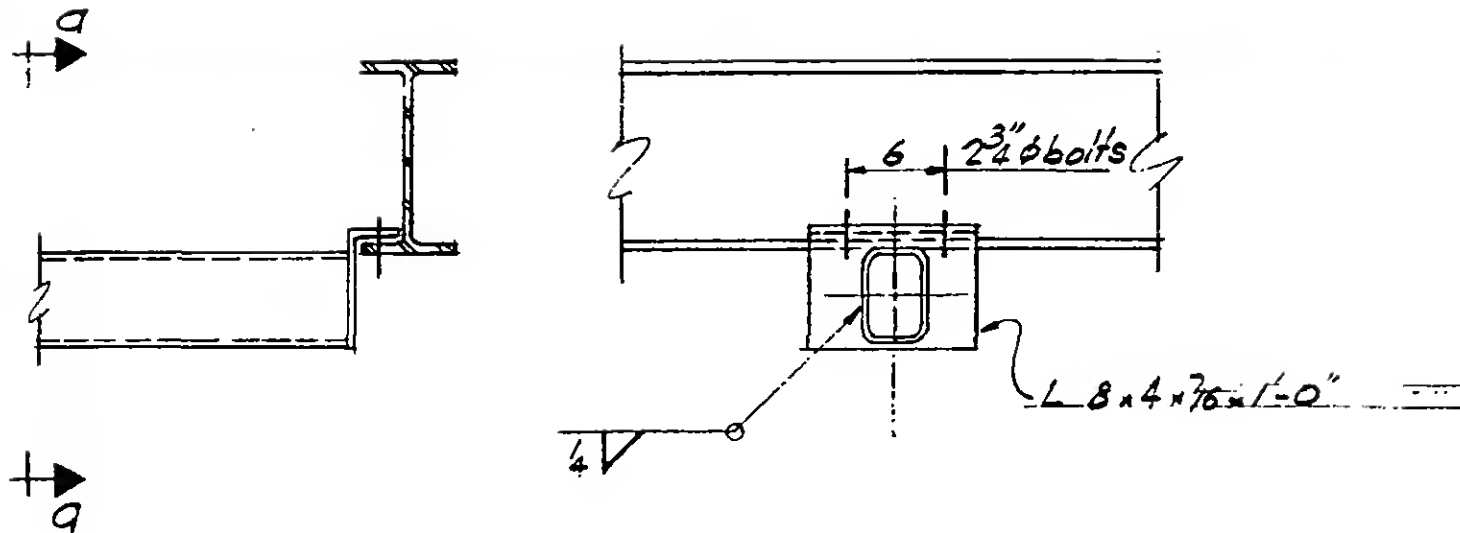


PROJECT THE WORLD TRADE CENTER

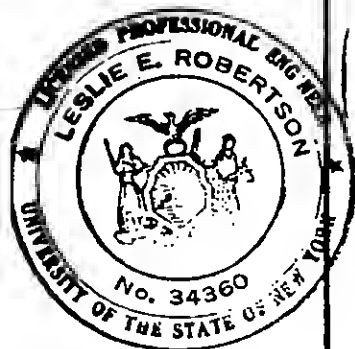
TITLE CONNECTION DETAIL 499

DATE 3-5-67

REVISIONS



Section a-a



6-AB2-150

SKILLING - HELLE - CHRISTIANSEN - ROBERTSON

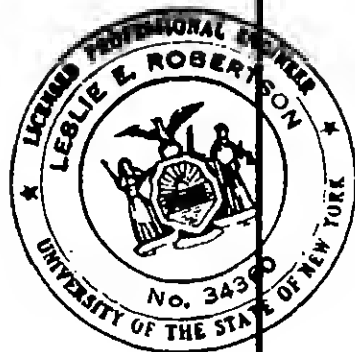
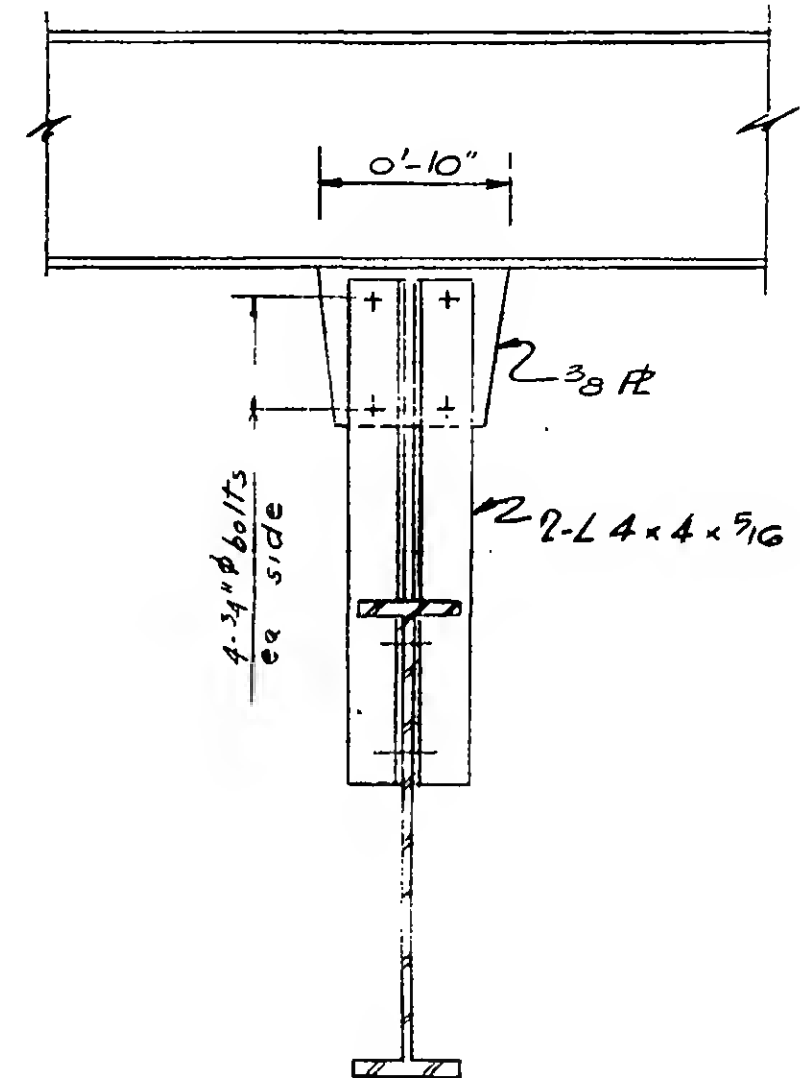
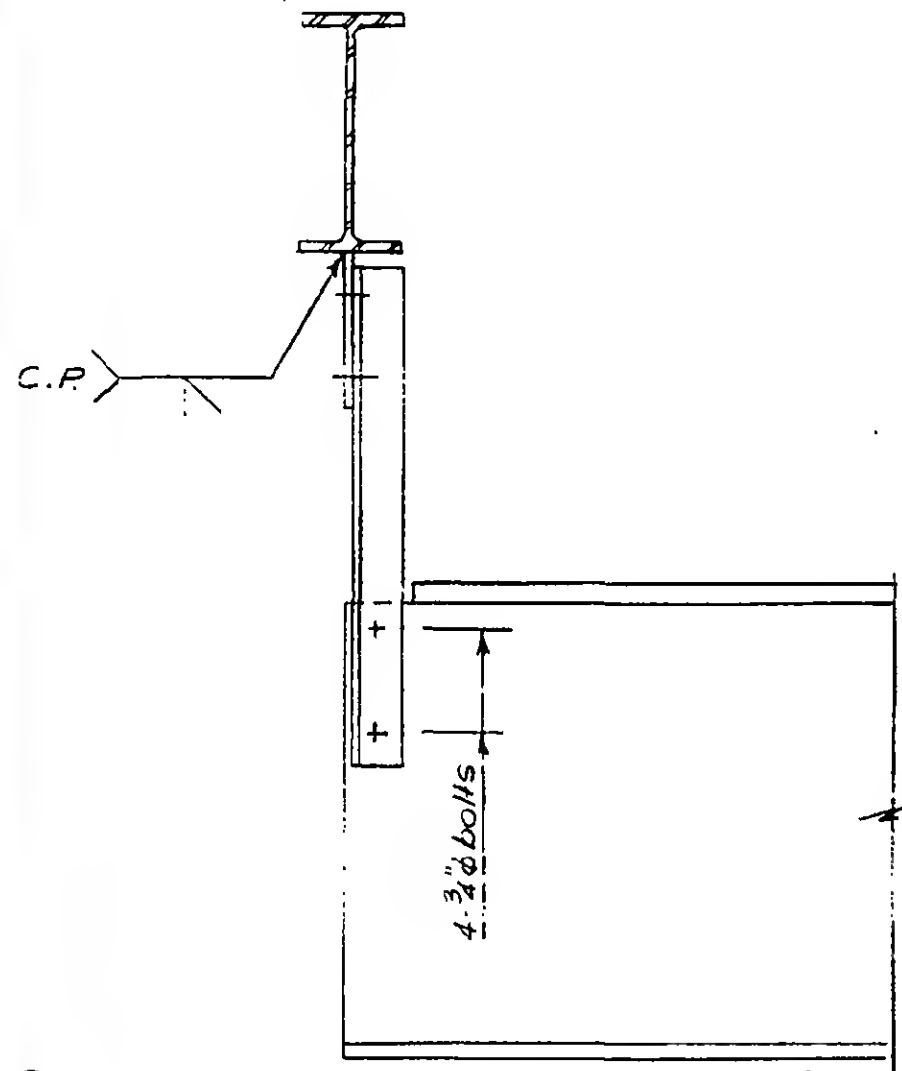
Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER

TITLE CONNECTION DETAIL 500 A

DATE 10-5-67

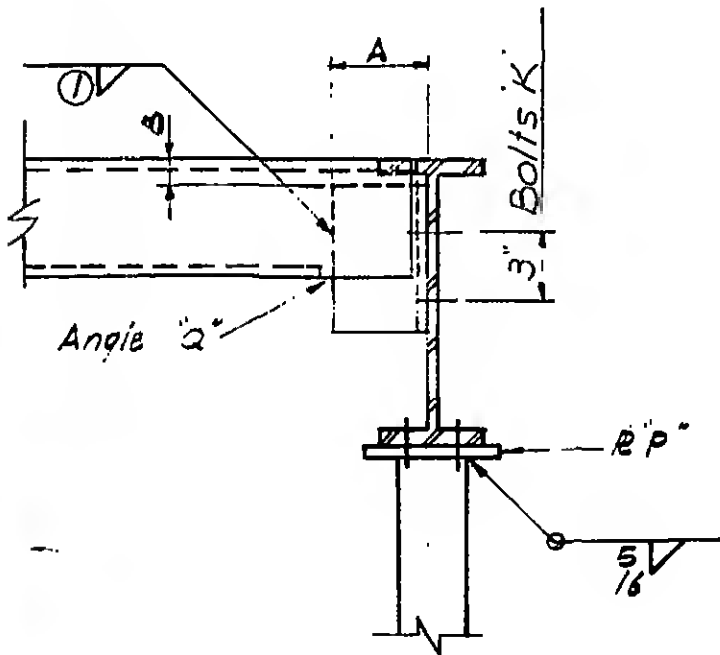
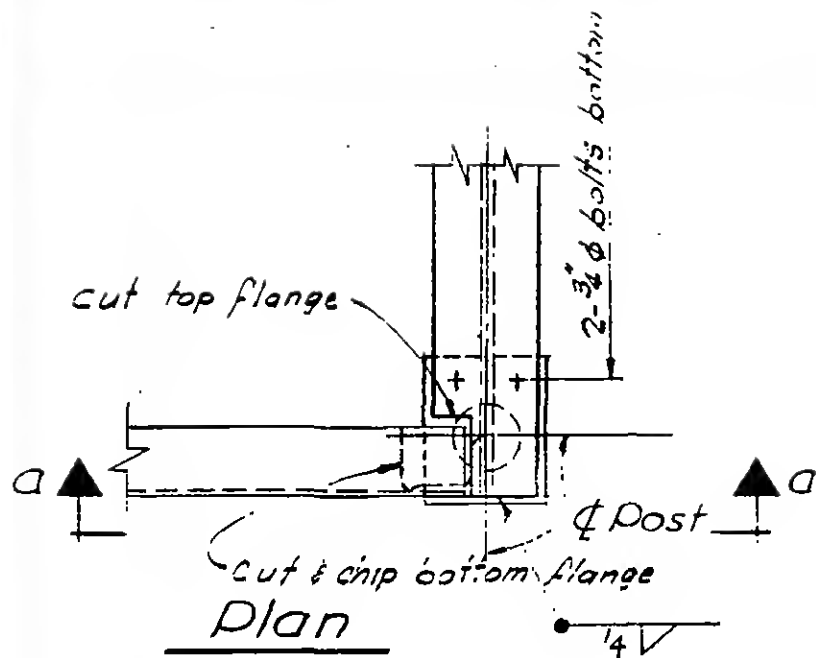
REVISIONS



G-AB2-15L

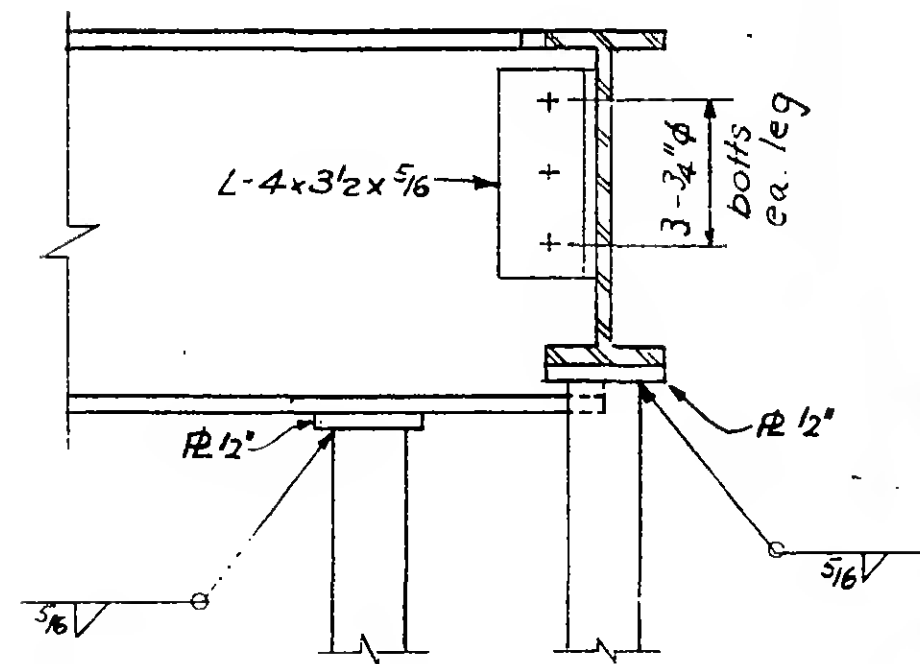
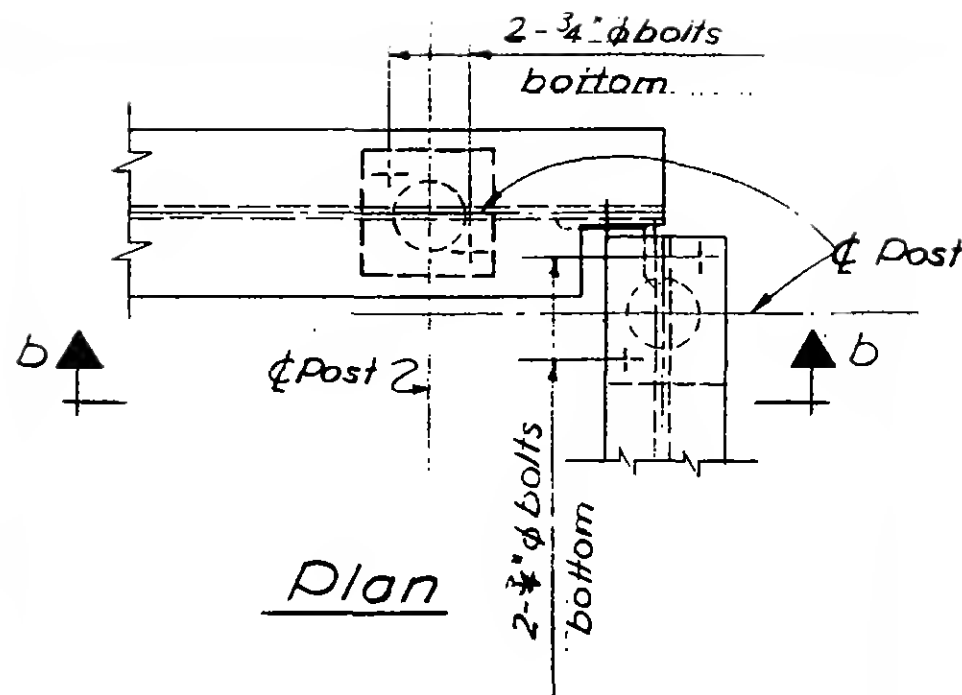
REVISIONS

5-67  
10-2-67



Section a-a

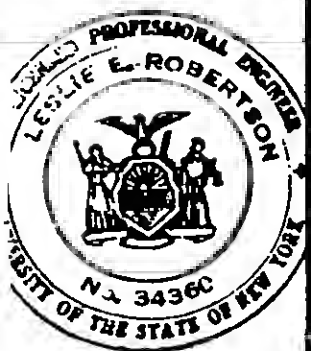
DETAIL 501A



Section b-b

DETAIL 502A

G-AB2-152





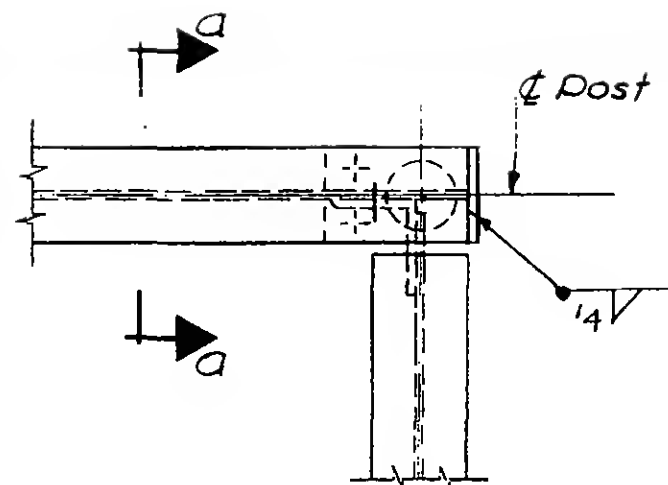
PROJECT THE WORLD TRADE CENTER

TITLE CONNECTION DETAILS 503 A,B, & 504 A

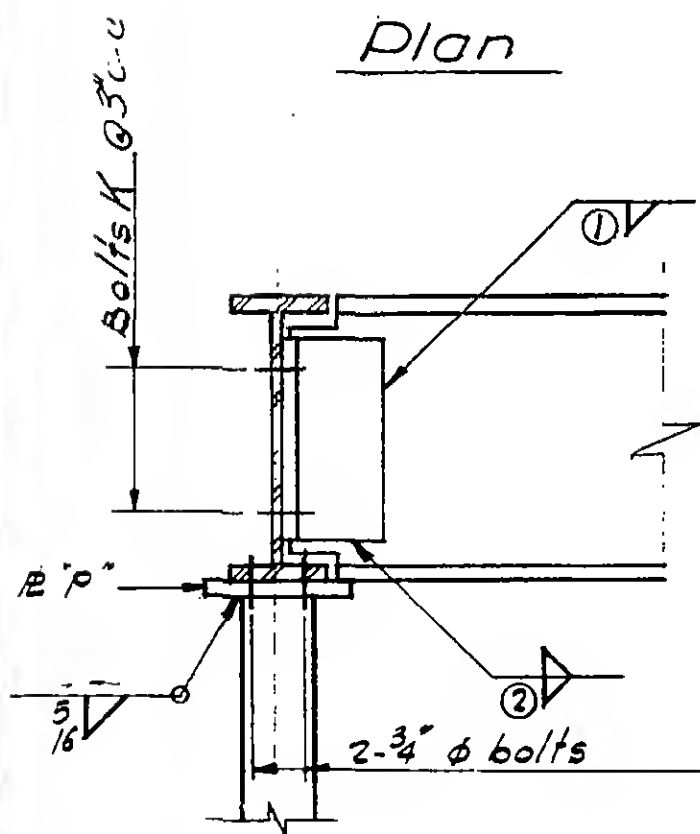
DATE 5-9-67

REVISIONS

5-67  
8-14-67



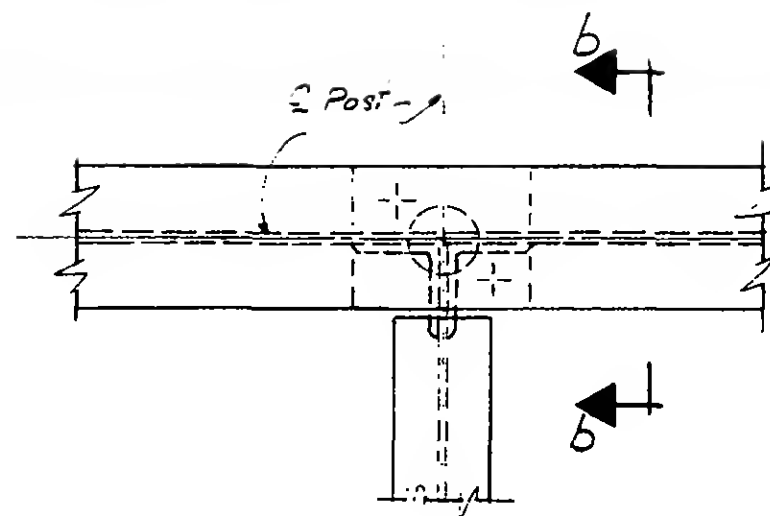
Plan



Section a-a

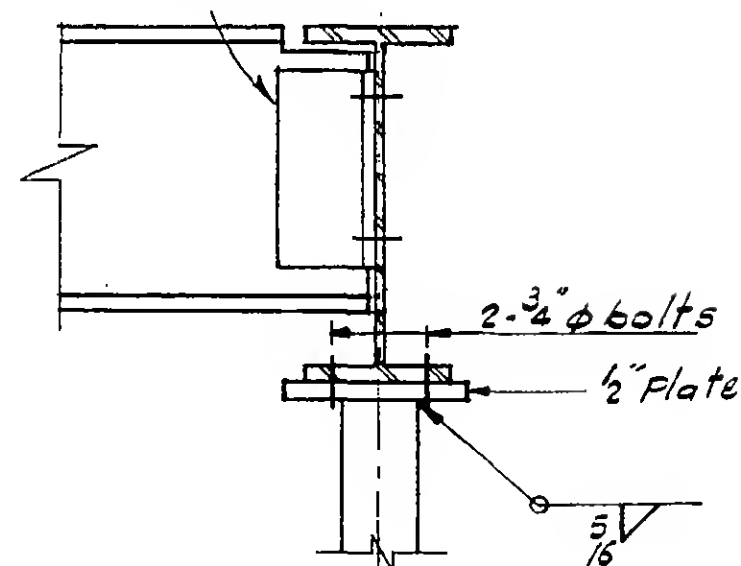
Deeper of two beams sits on post. If two beams of same depth see beam schedule

DETAIL 503 A,B



Plan

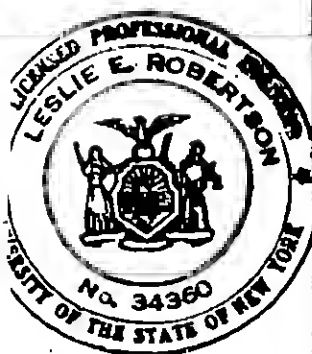
std. conn. 18.0K



Section b-b

DETAIL 504 A

6-AB2-153



## Structural & Civil Engineers

DATE 2-5-67

- 4-67

6-AB2-153

G-AB2-53

503B

P

12"

58"

Q

$$4 \times 4 \times 7_{10}$$
$$4 \times 4 \times 7_{10}$$

K

3-1  $\phi$

2- $\frac{3}{8}$ "  $\phi$



30"

38

②

28

30



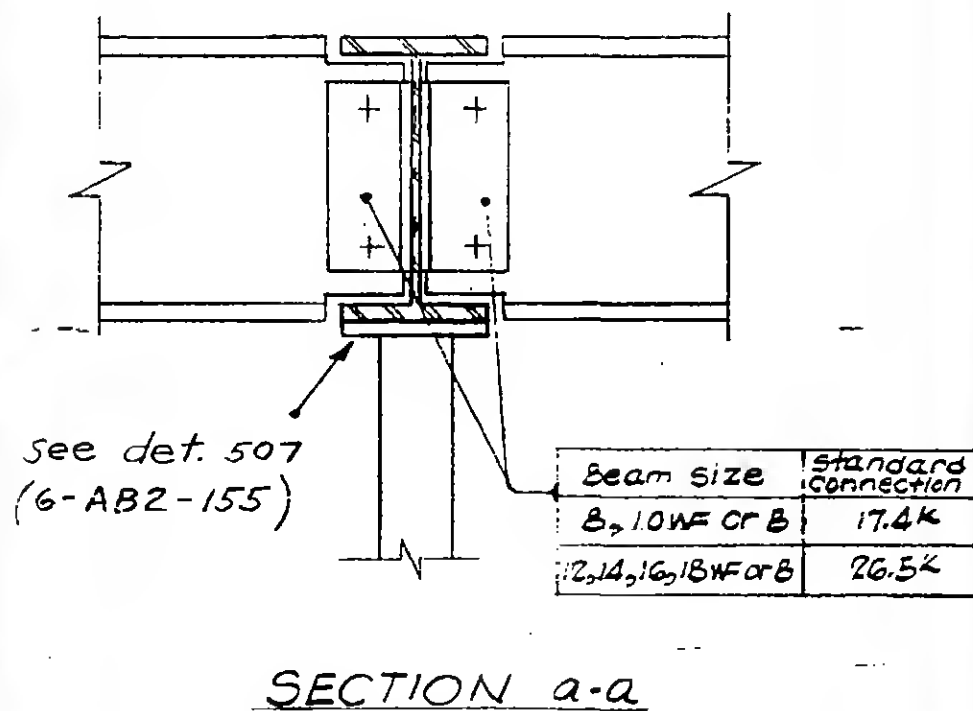
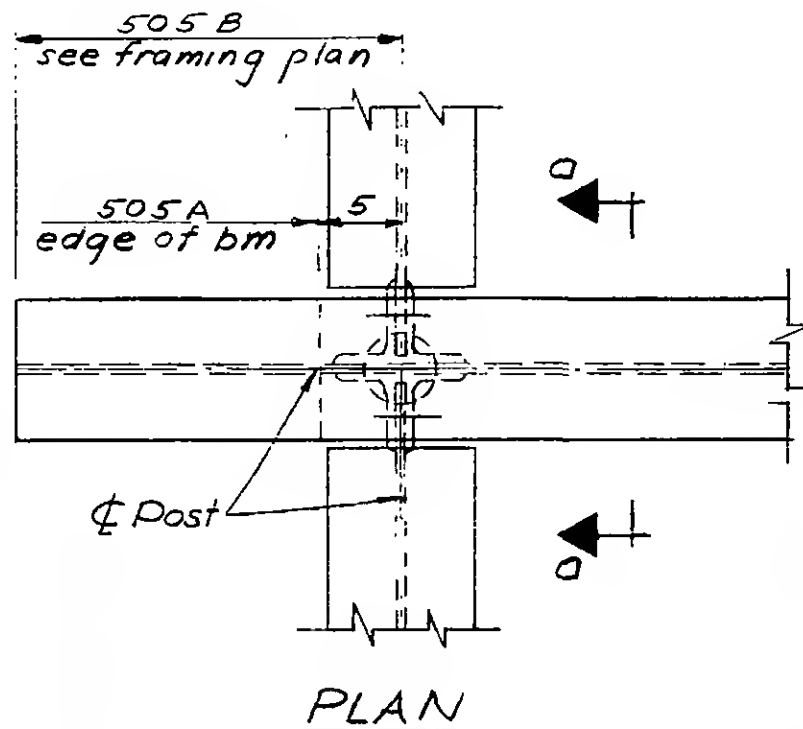
PROJECT *THE WORLD TRADE CENTER*

TITLE *CONNECTION DETAILS 505 A,B & 506 A,B*

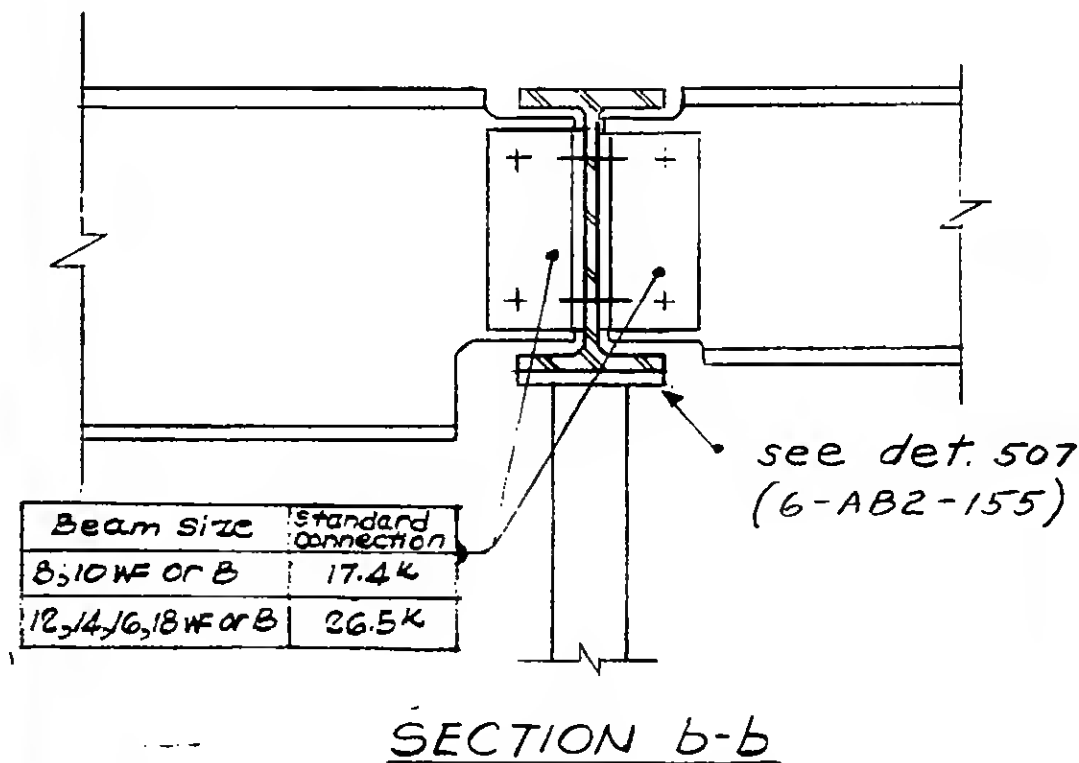
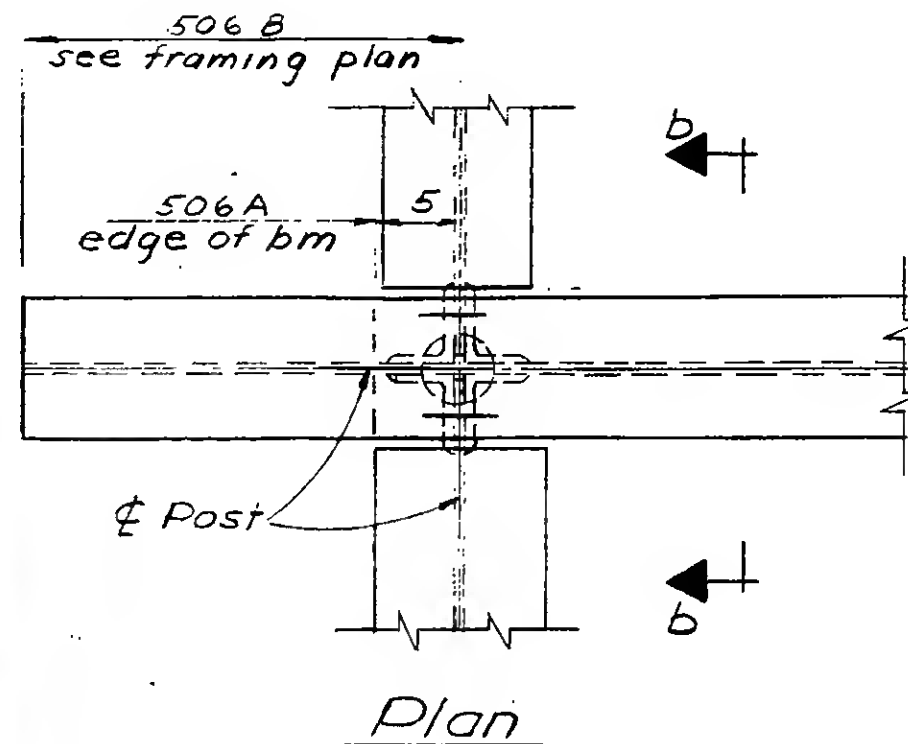
DATE *5-9-67*

REVISIONS

*1-19-67*  
*8-14-67*  
*10-2-67*

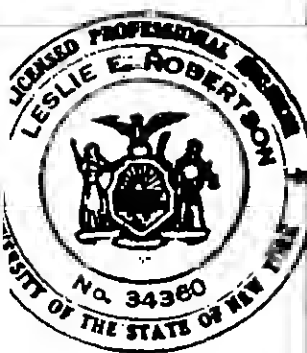


*DETAIL 505*



*DETAIL 506*

*6-AB2-154*

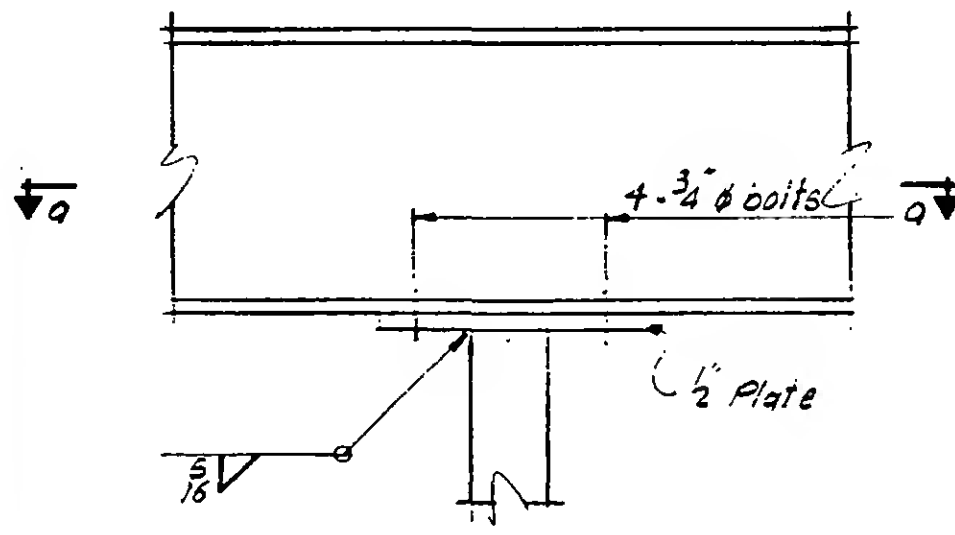


PROJECT THE WORLD TRADE CENTER

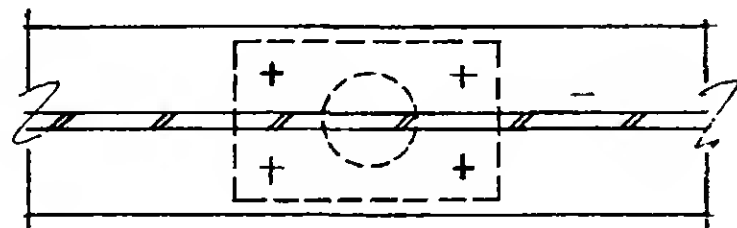
TITLE CONNECTION DETAIL 507

DATE 8-5-67

REVISIONS



Elevation



Section a-a



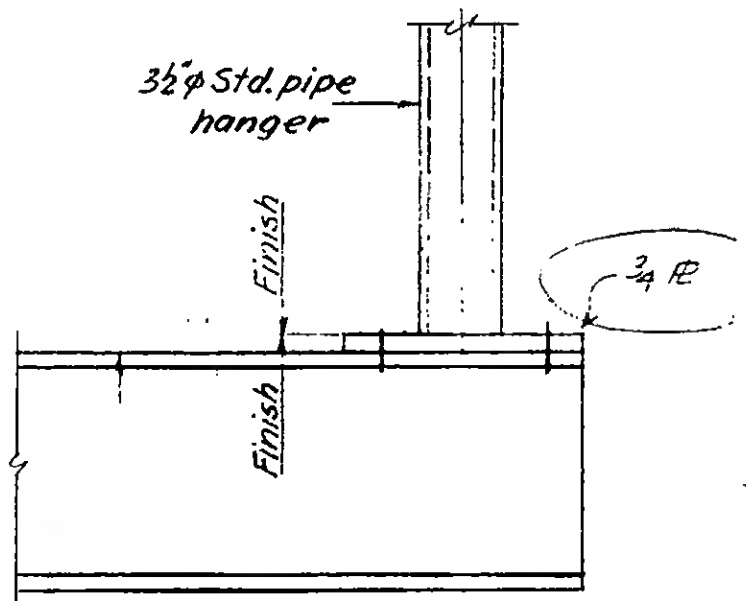
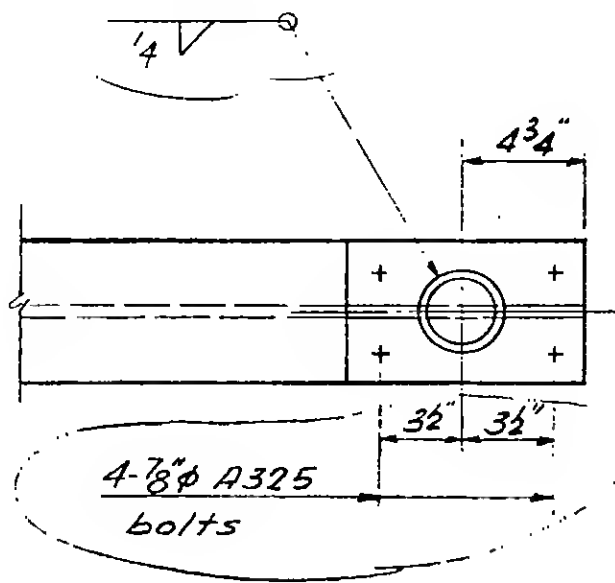
G-AB2-155

PROJECT THE WORLD TRADE CENTER

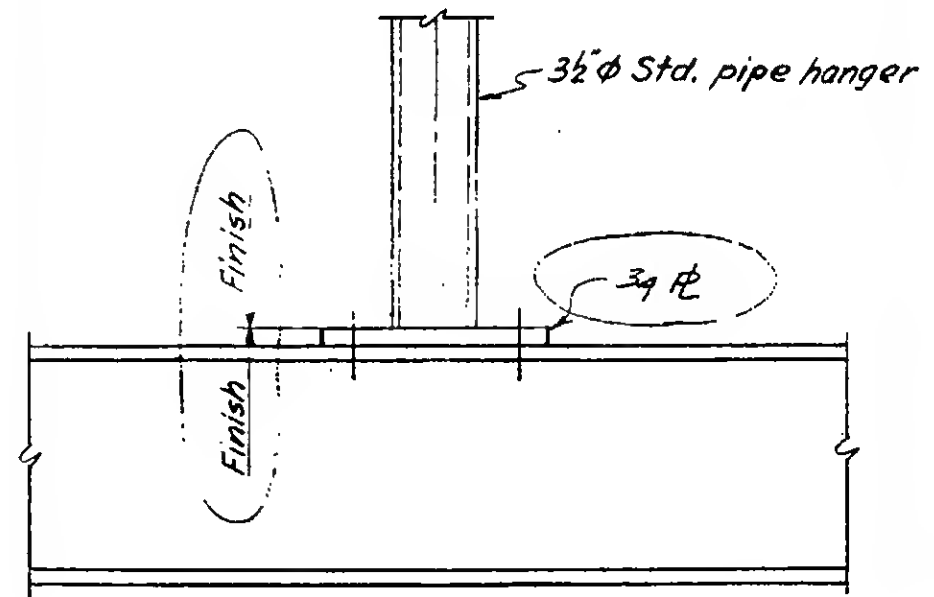
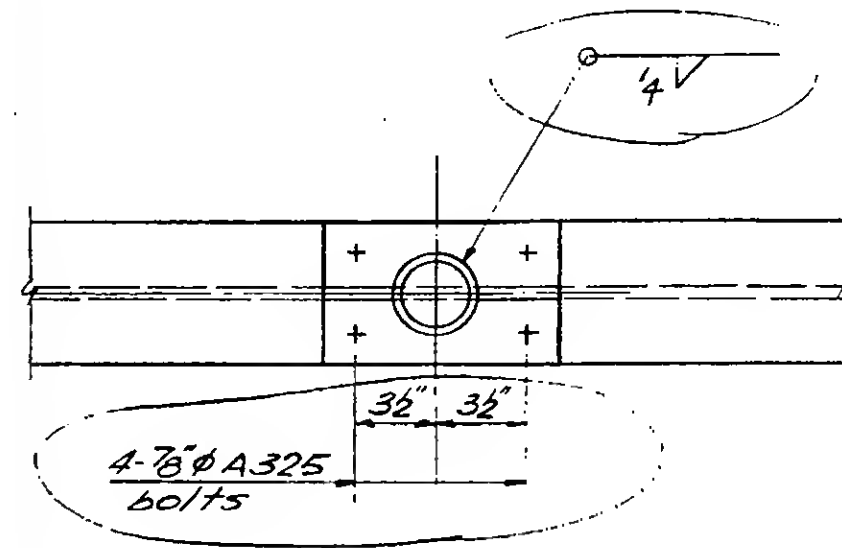
TITLE CONNECTION DETAILS 508 & 512

DATE 6-5-67

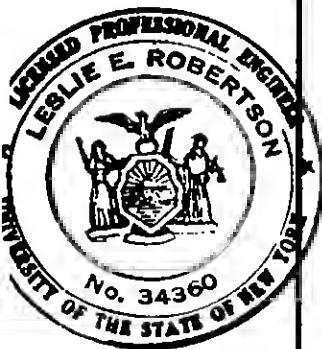
REVISIONS



Detail 508



Detail 512



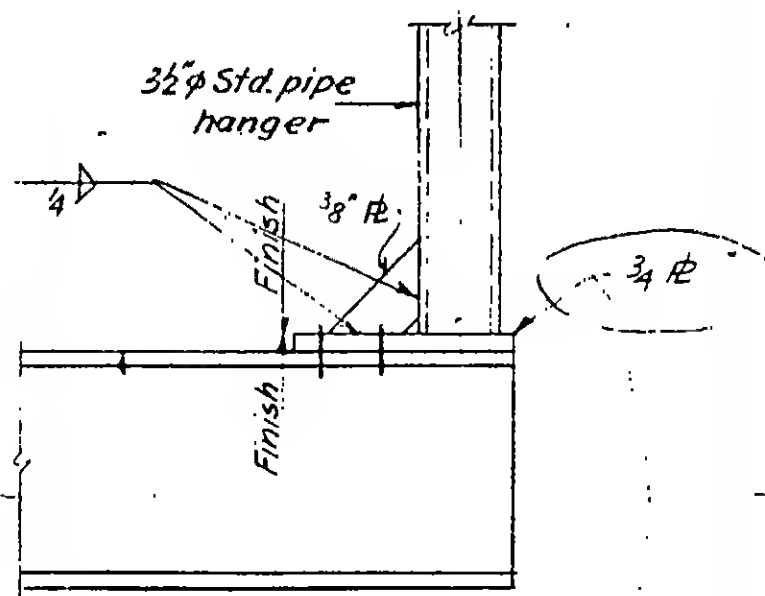
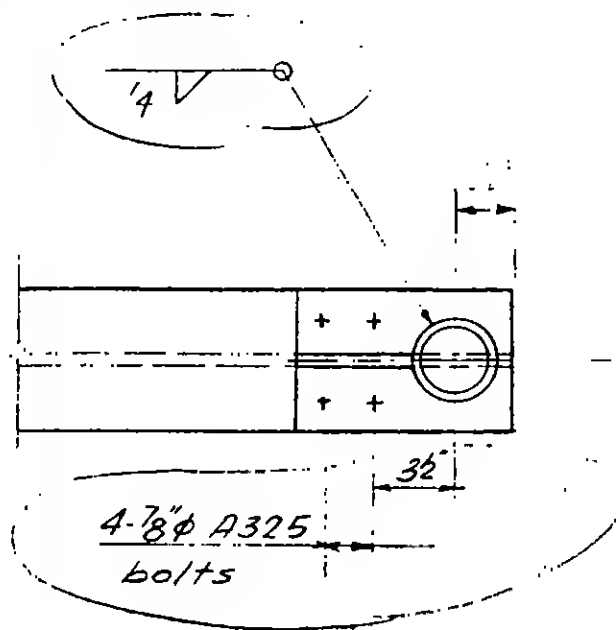
PROJECT THE WORLD TRADE CENTER

TITLE CONNECTION DETAILS 508 & 512

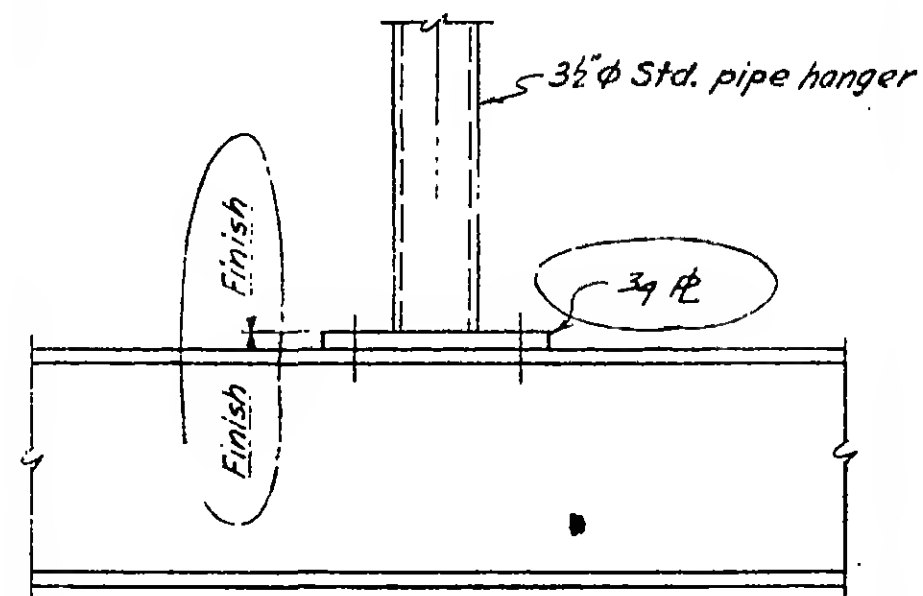
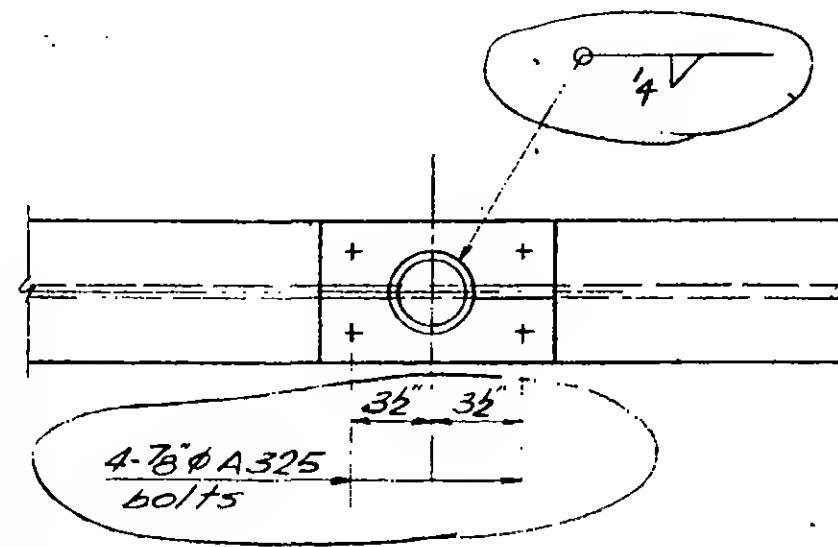
DATE 6-5-67

REVISIONS

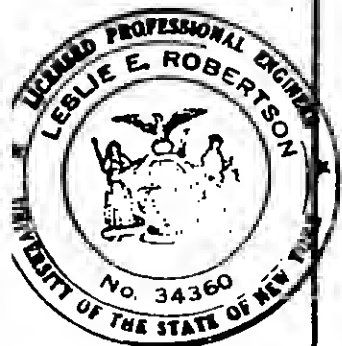
17-67



Detail 508



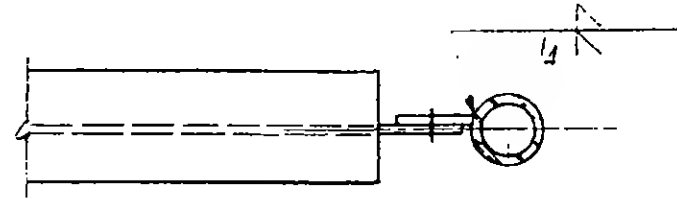
Detail 512



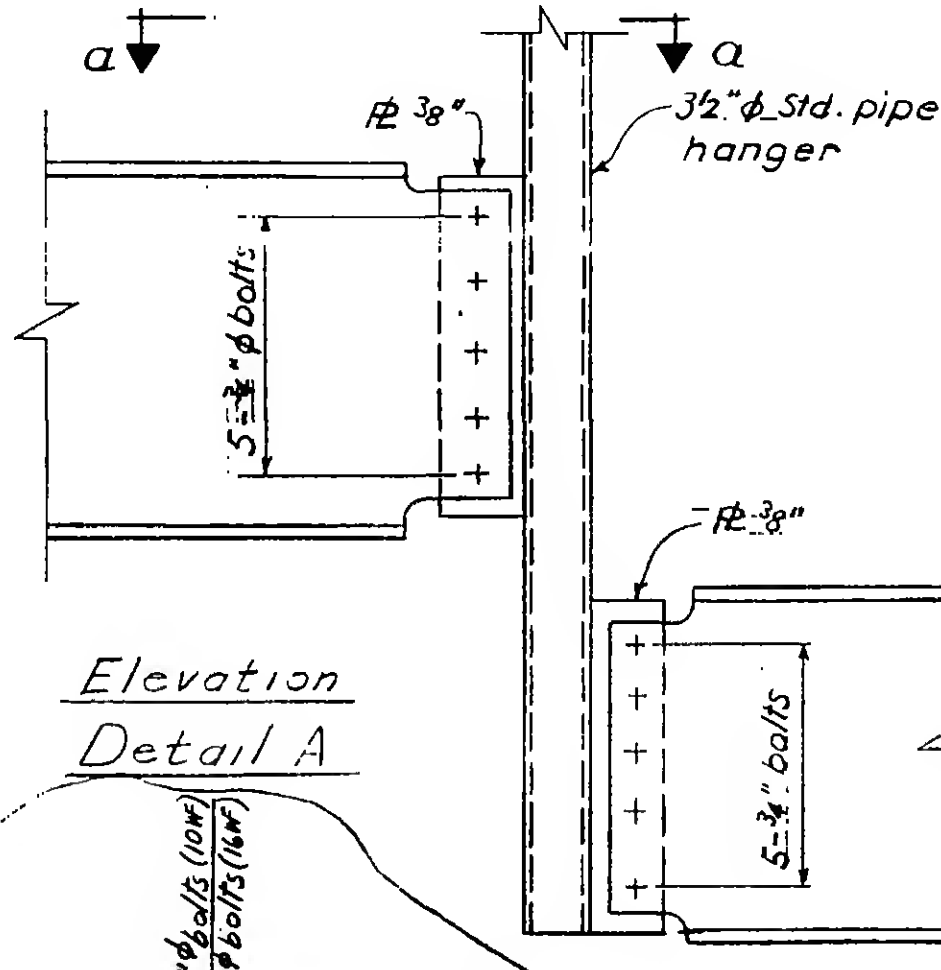
6-AB2-156 ALT

REVISIONS

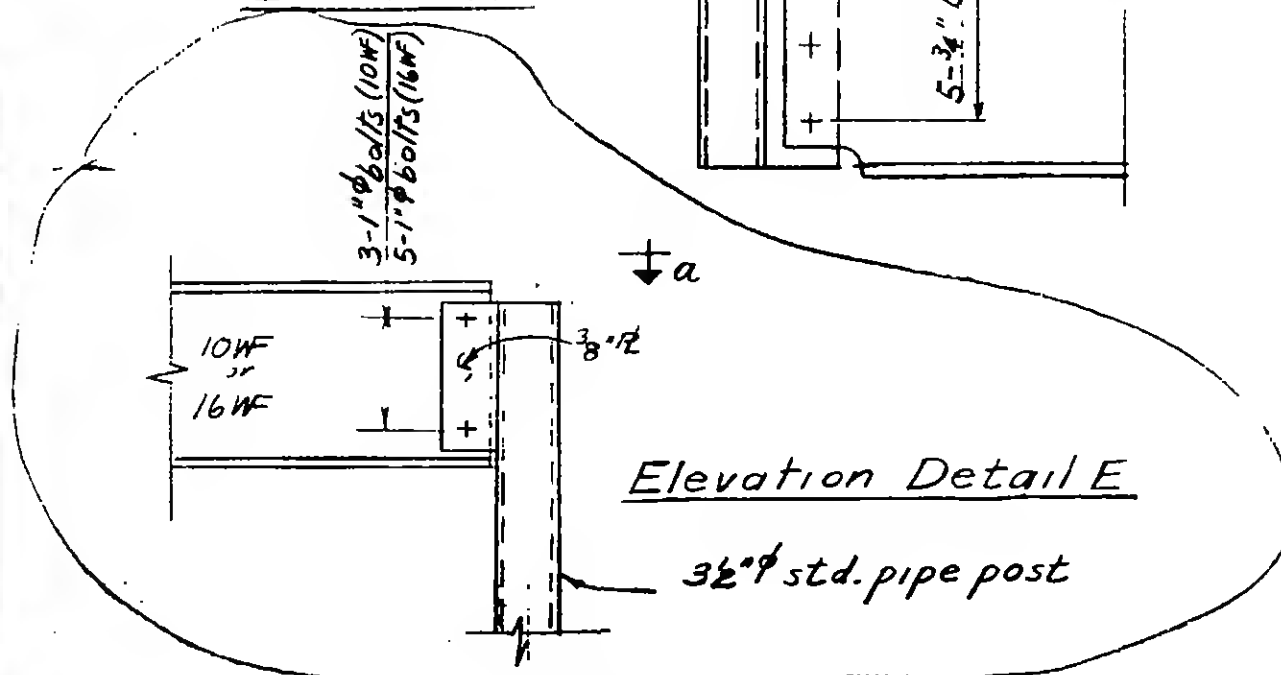
8-14-67  
10-2-67  
1-24-68  
2-9-68



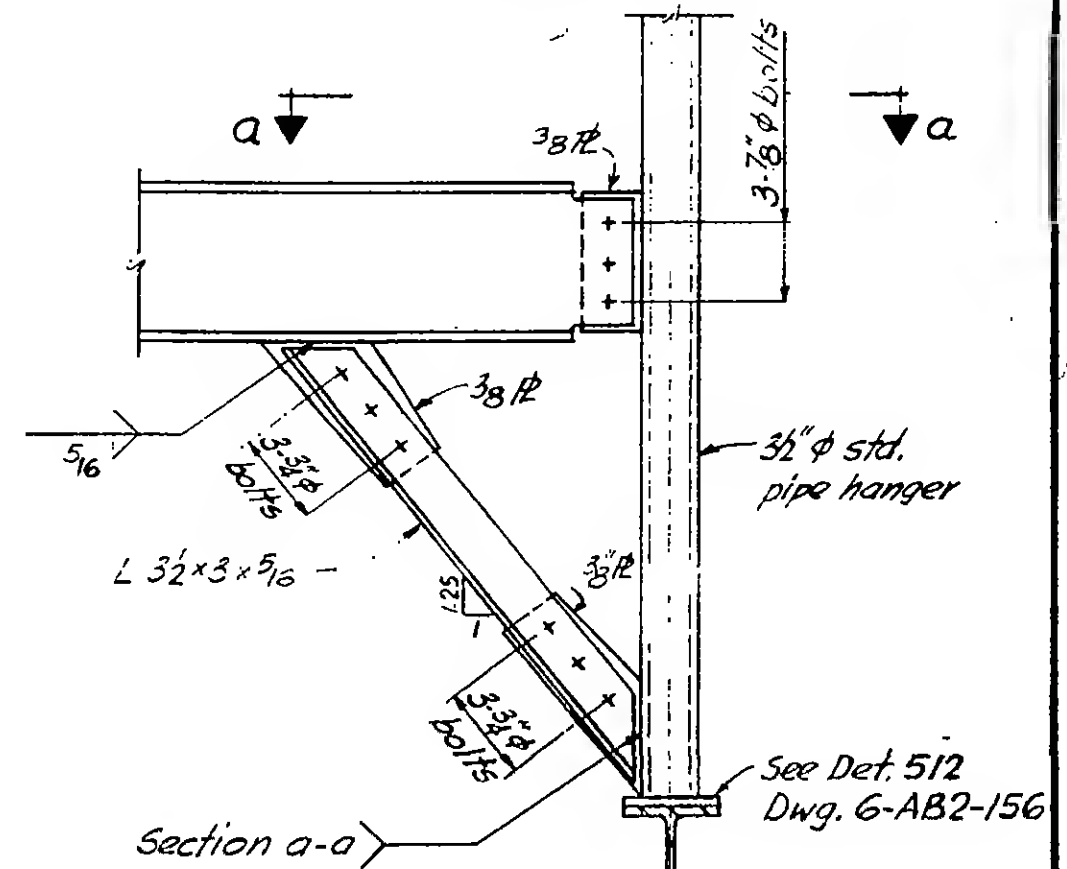
Section a-a (typ.)



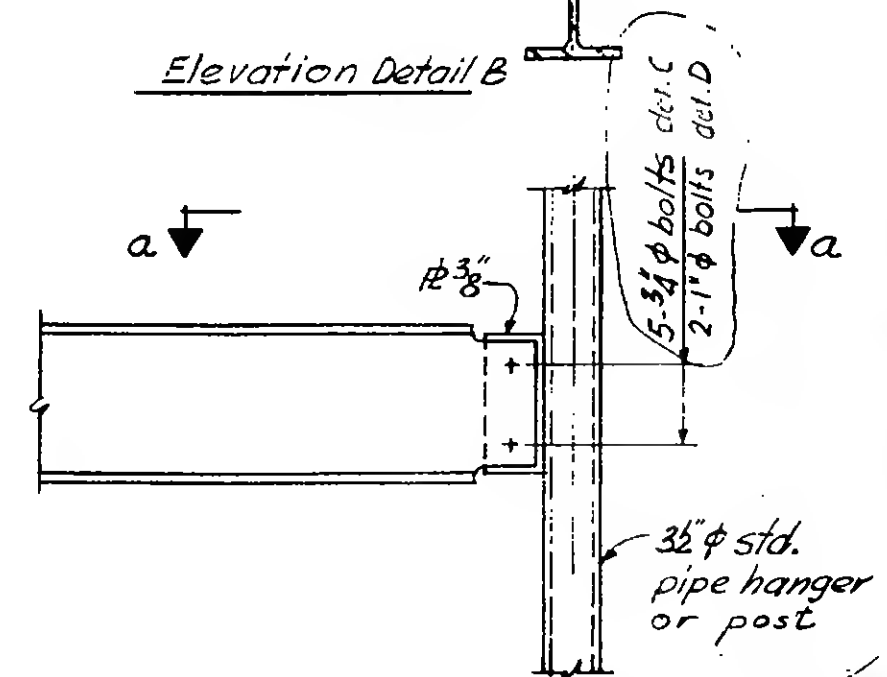
Elevation Detail A



Elevation Detail E



Elevation Detail B



Elevation Detail C & D

6-AB2-156



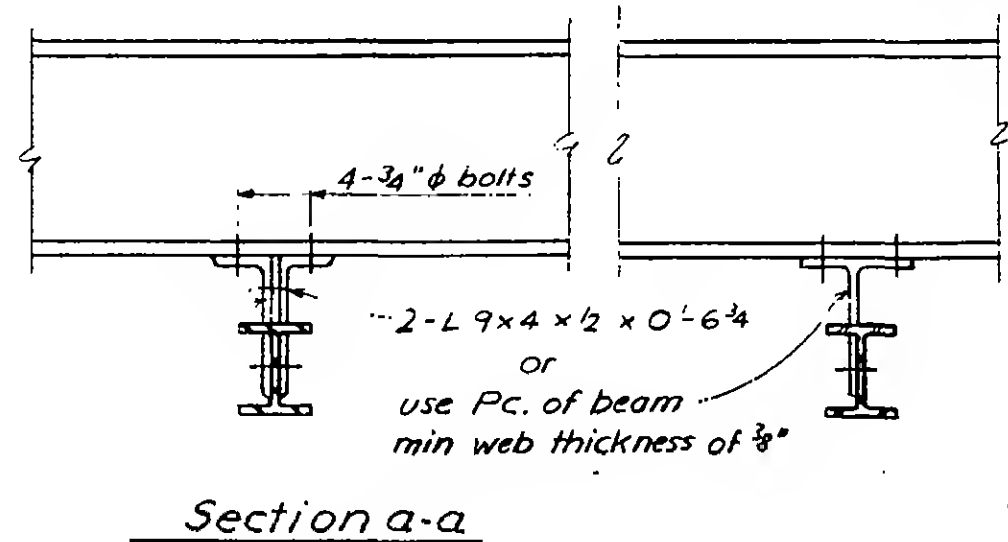
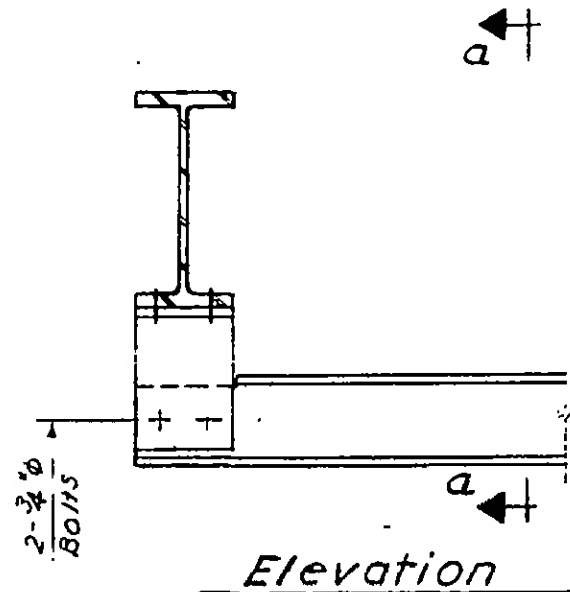
REVISIONS

10-2-67

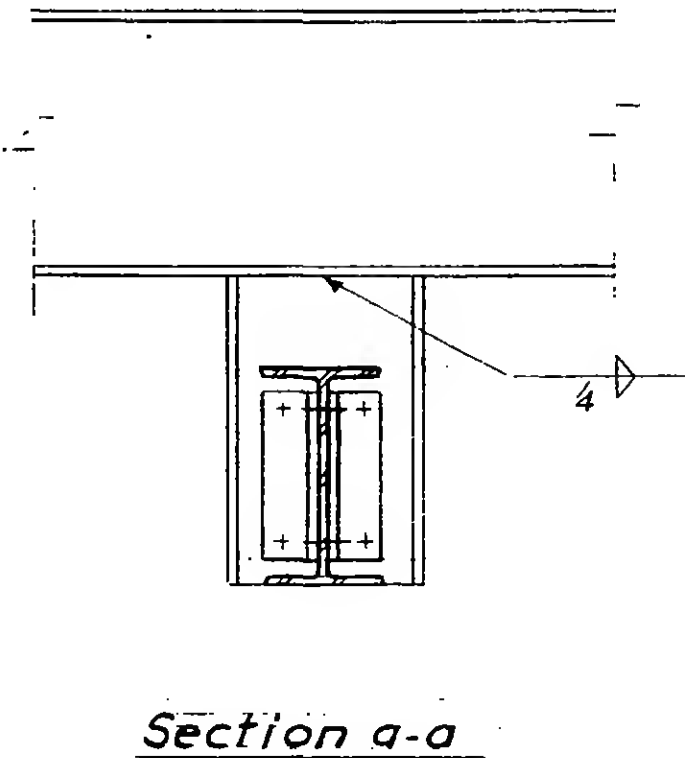
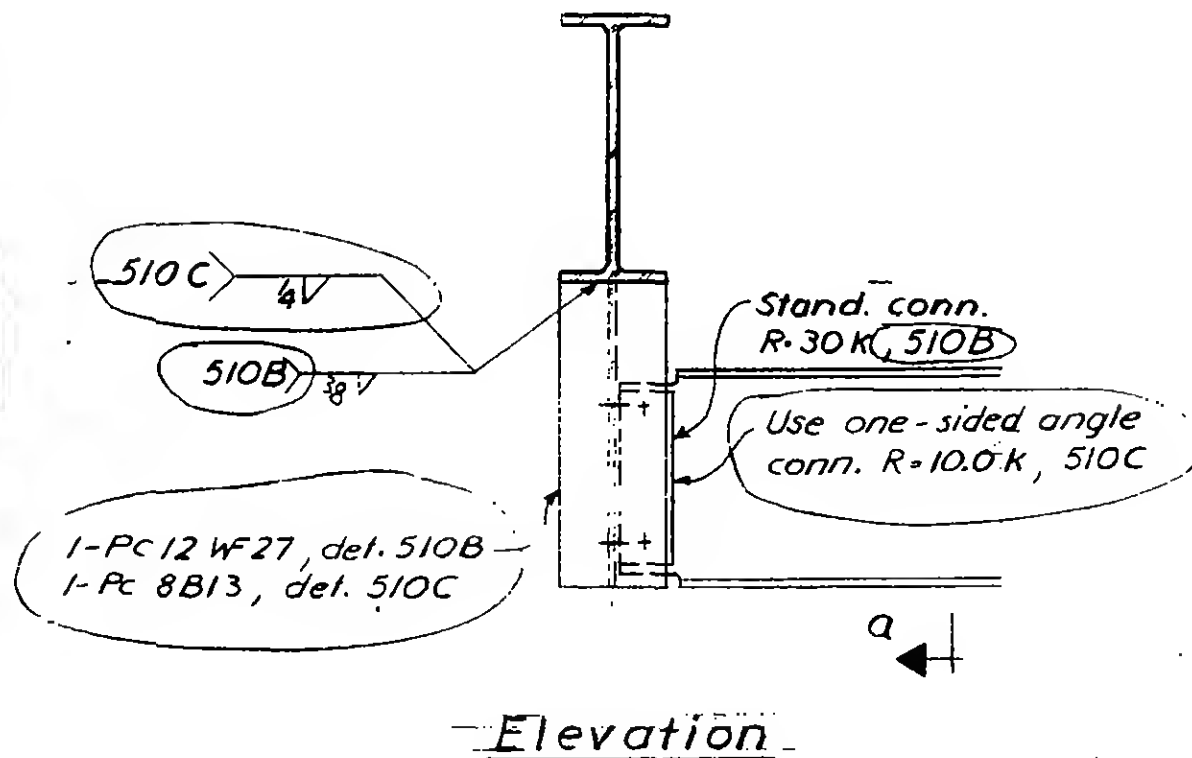
12-21-67

5-7-68

Detail 510 A



Detail 510 B, C



PROJECT

THE WORLD TRADE CENTER

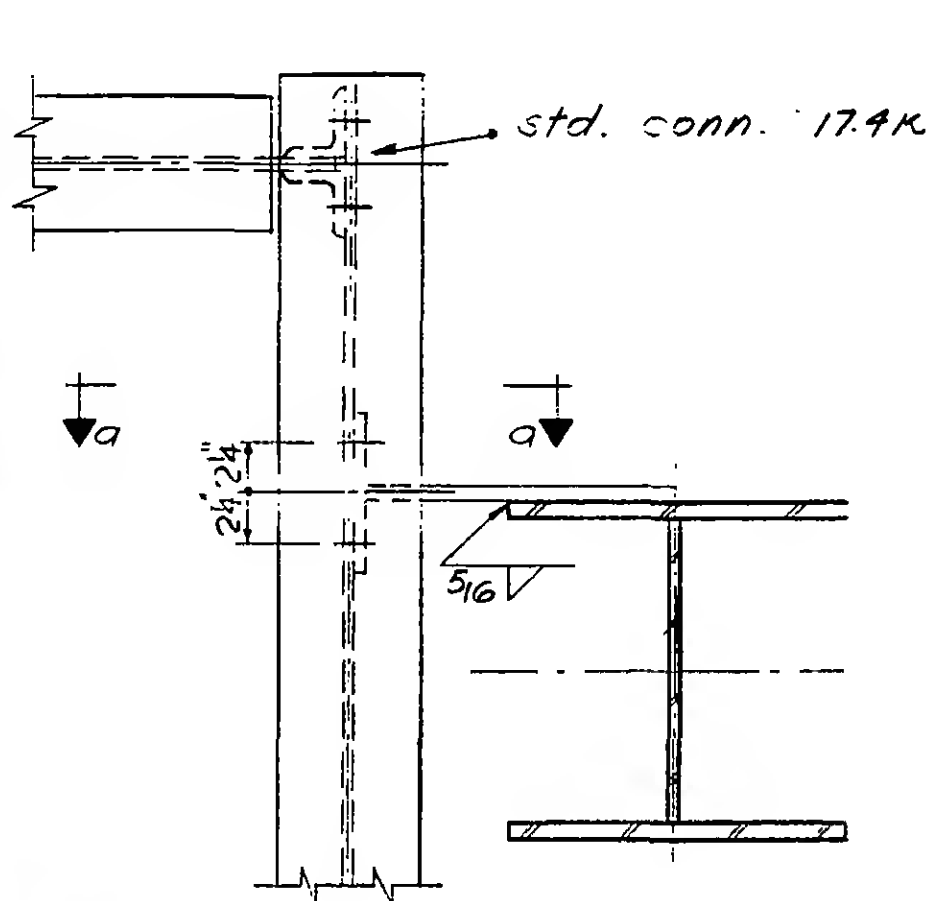
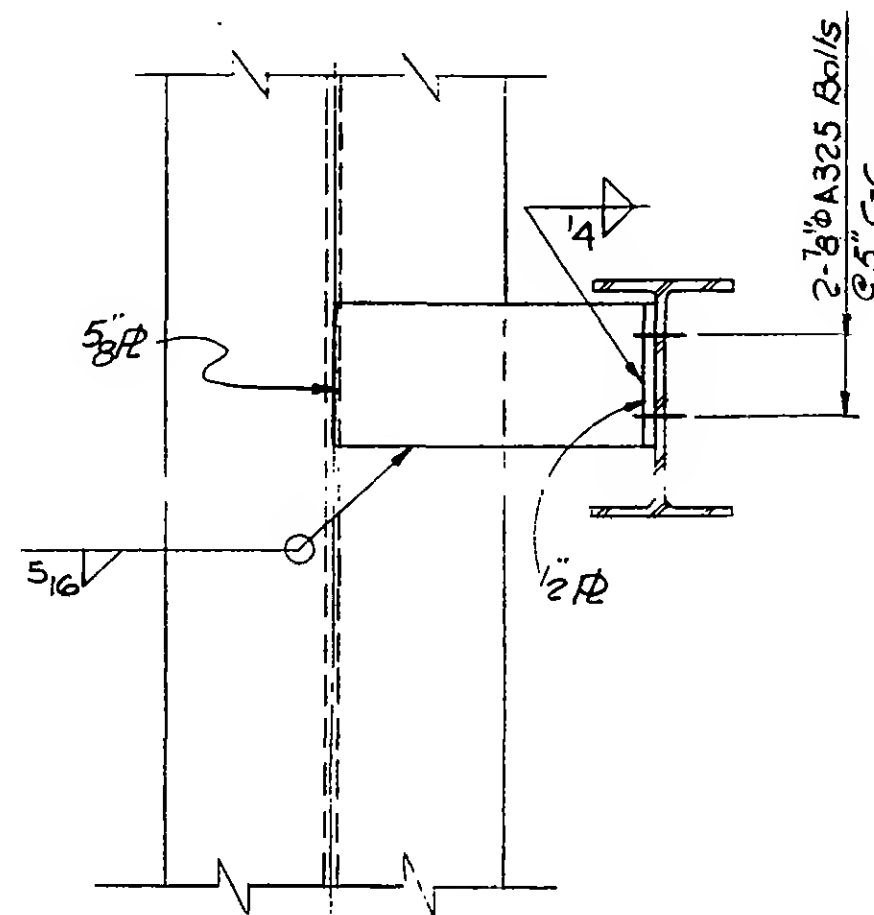
TITLE

CONNECTION DETAIL 513 A

DATE

8-14-67

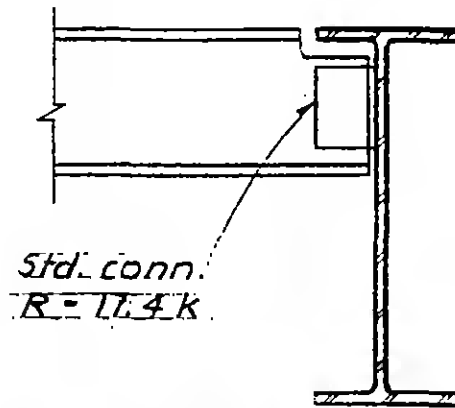
REVISIONS

PlanSection a-a

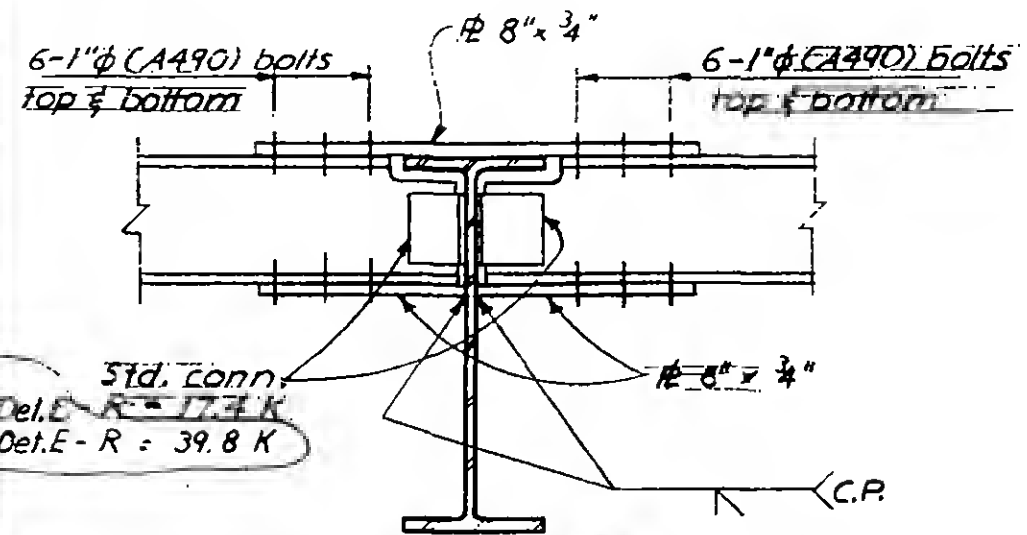
6-AB2-160

## REVISIONS

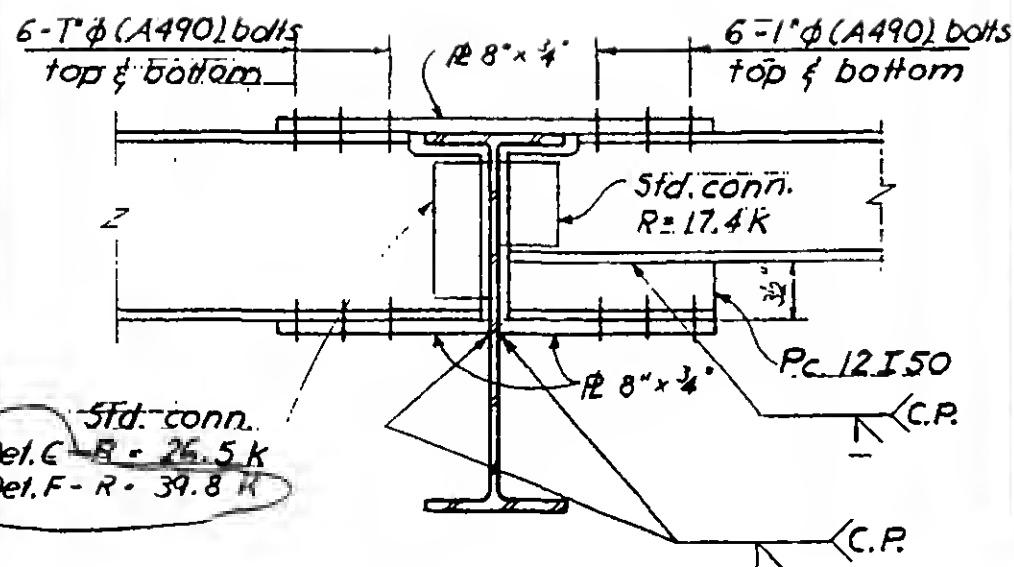
2-9-68



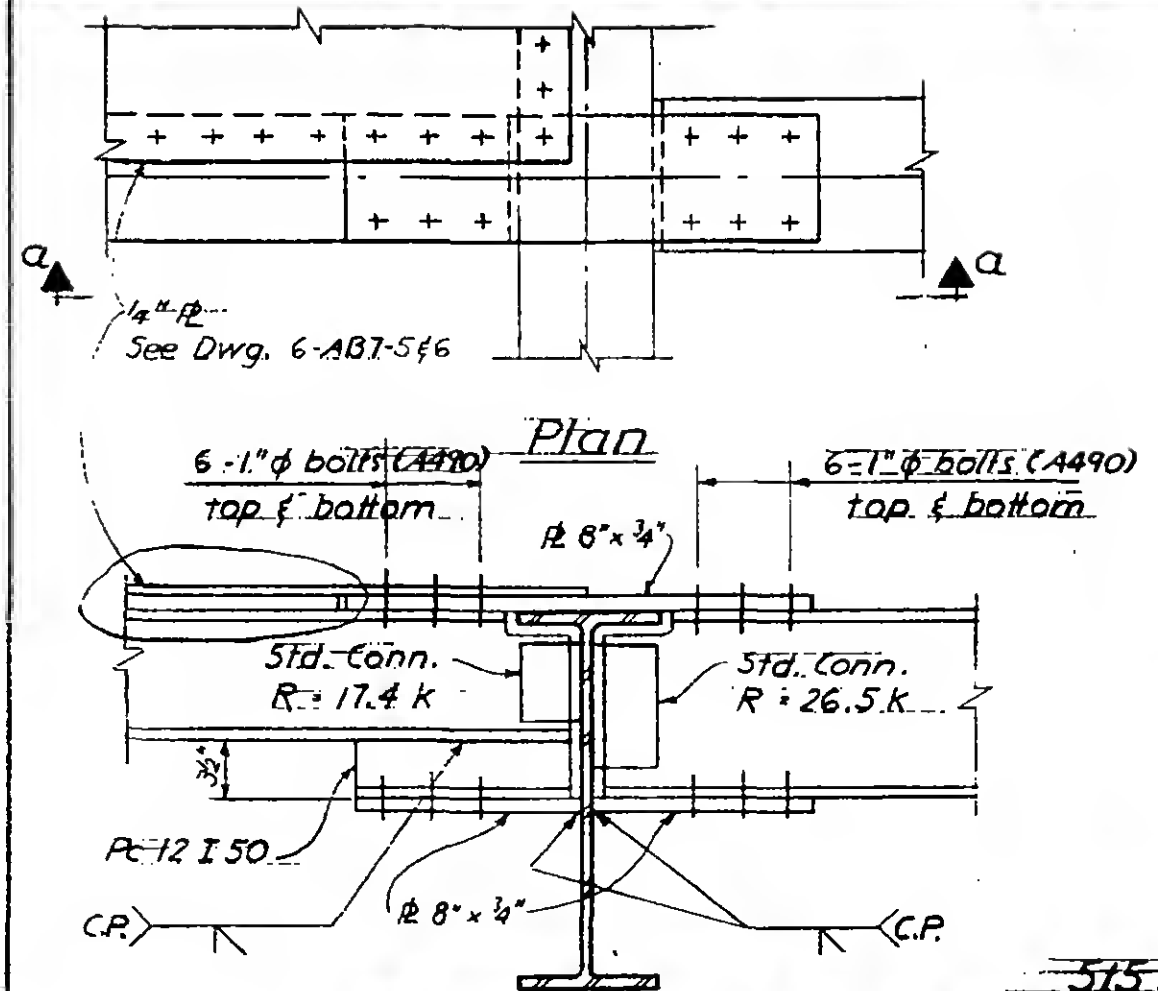
515 A



515 B/E



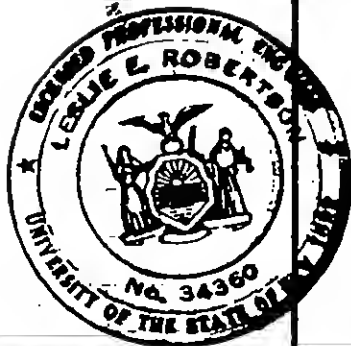
515 C/F



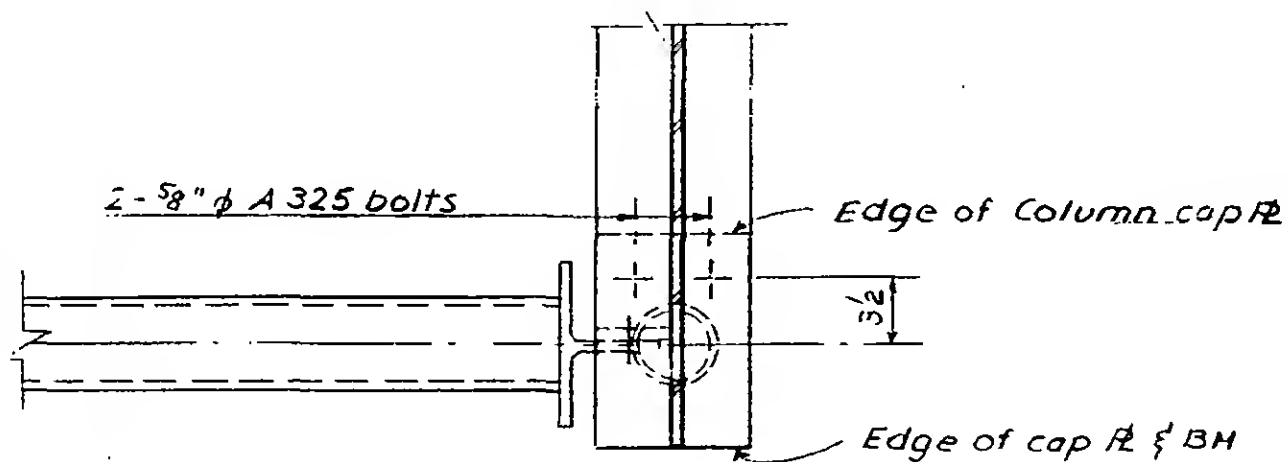
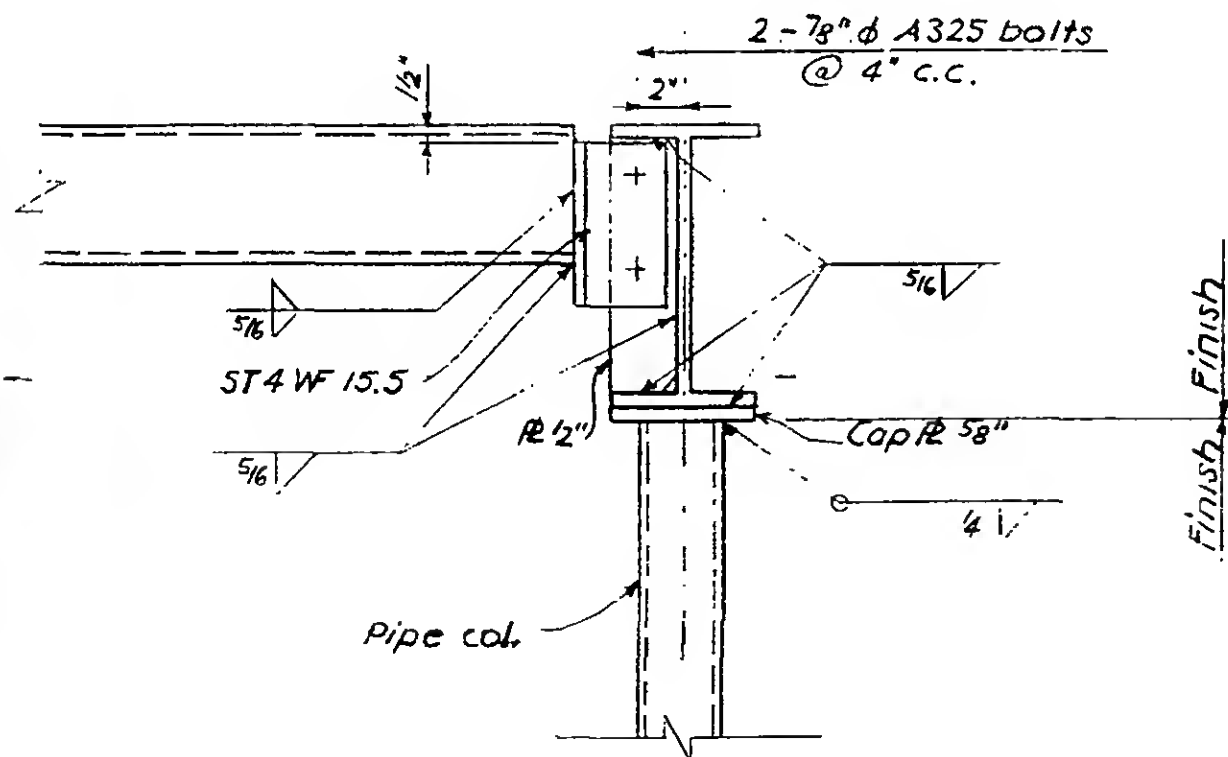
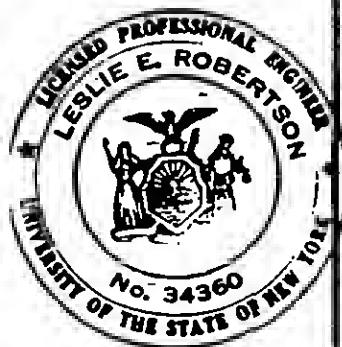
Section a-a

515 D

6-AB2-162



## REVISIONS

PlanElevation

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

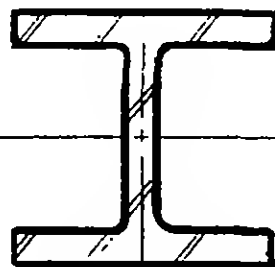
TITLE CONNECTION DETAIL 517A,B

DATE 6-30-67

REVISIONS

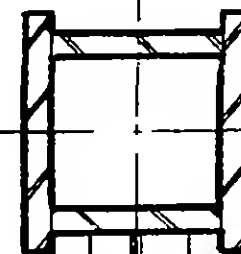
10-5-67

a  
→



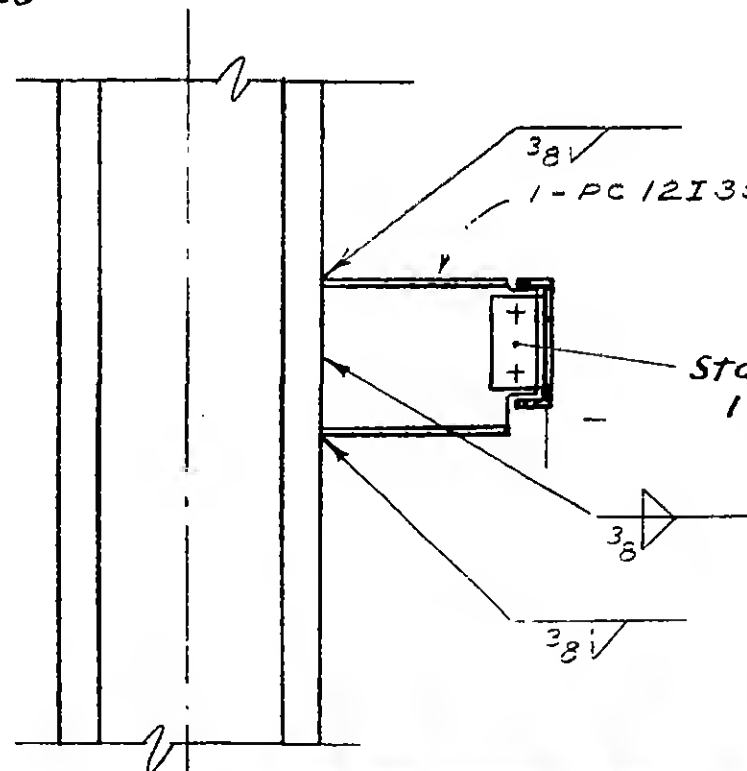
Plan 517A

b  
←



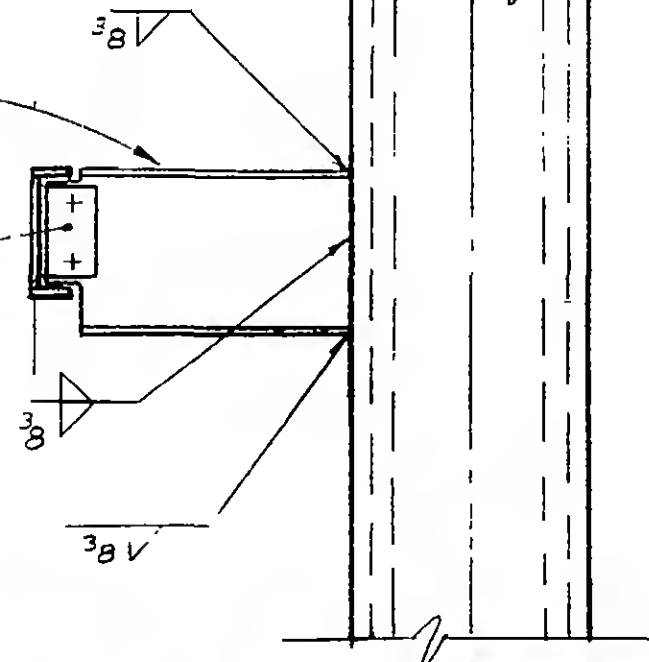
Plan 517B

a  
→

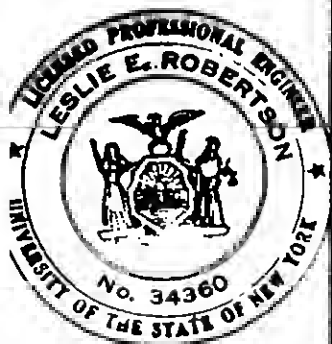


Section a-a

b  
←



Section b-b



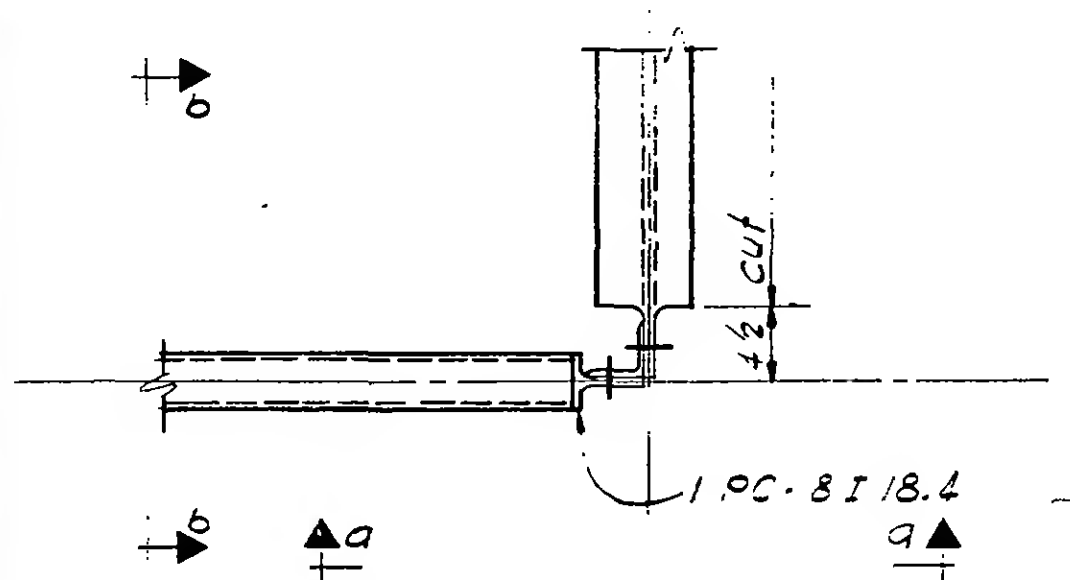
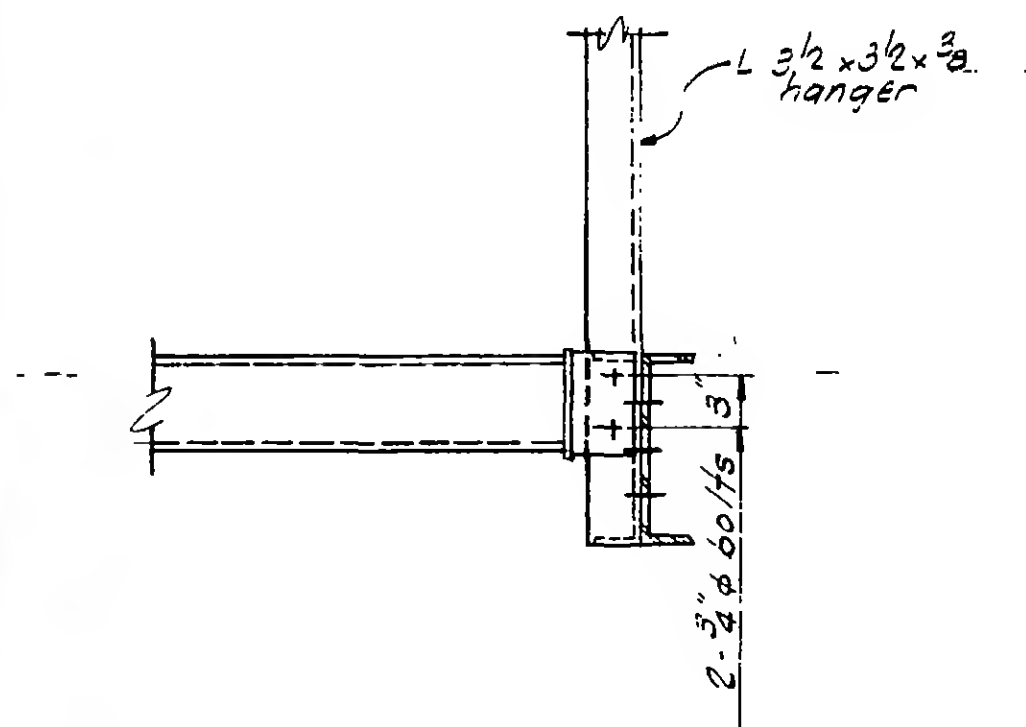
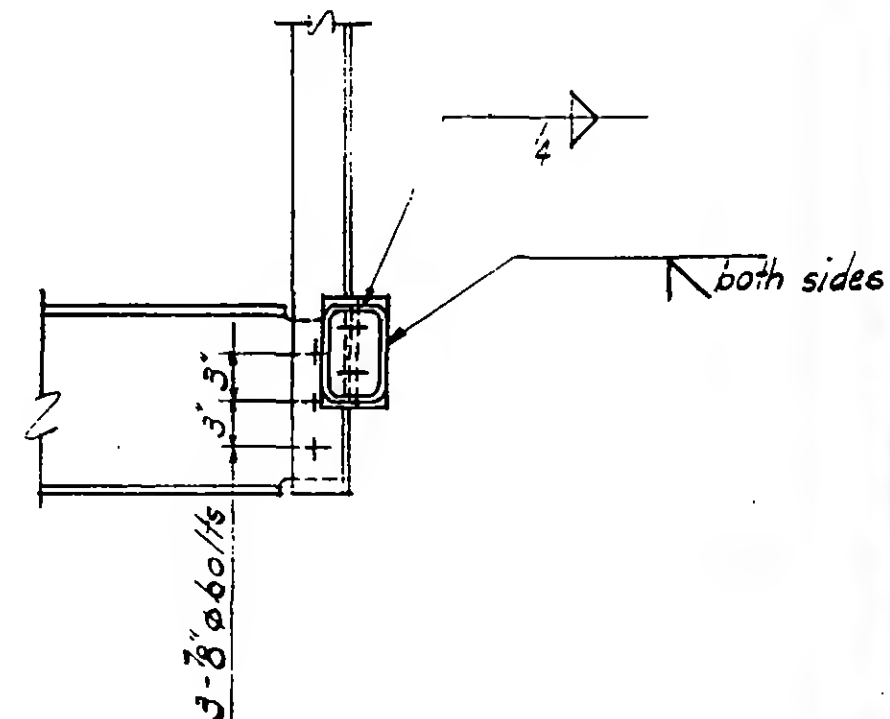
6-AB2-164

PROJECT THE WORLD TRADE CENTER

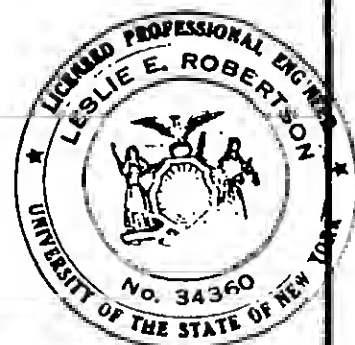
TITLE CONNECTION DETAIL 318

DATE 8-5-67

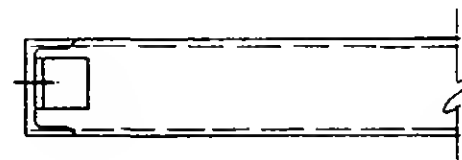
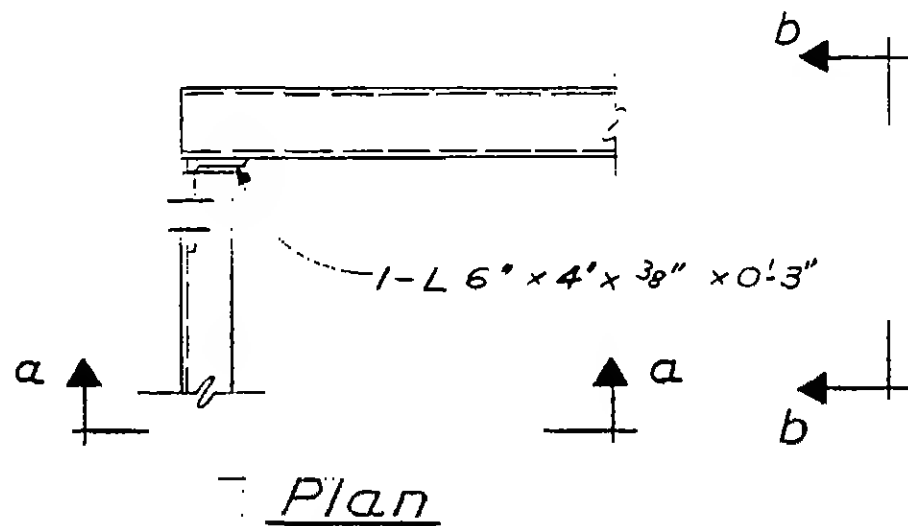
REVISIONS

PlanSection a-aSection b-b

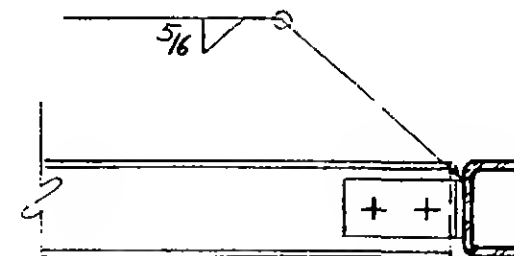
6-AB2-165



REVISIONS



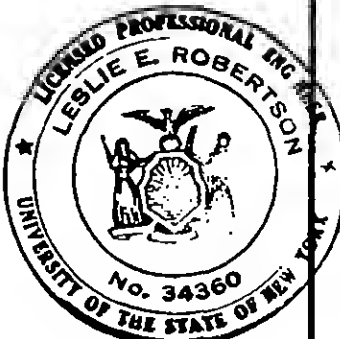
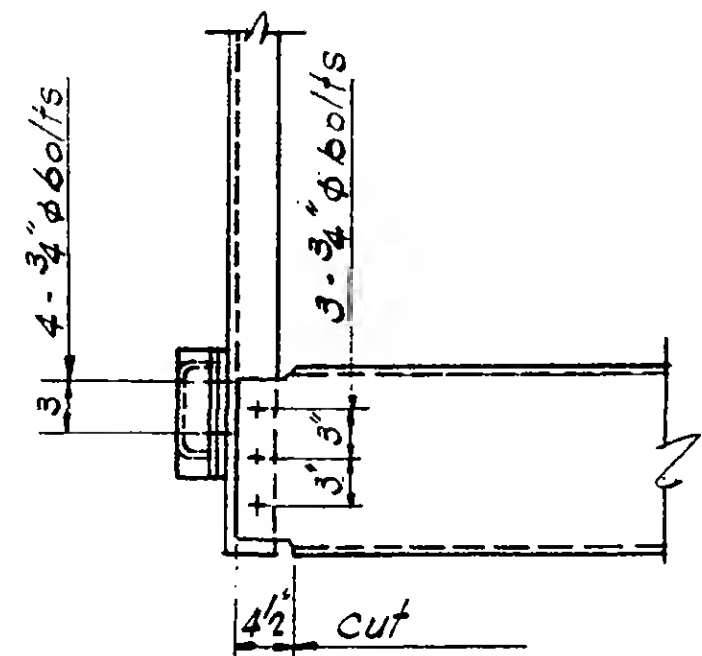
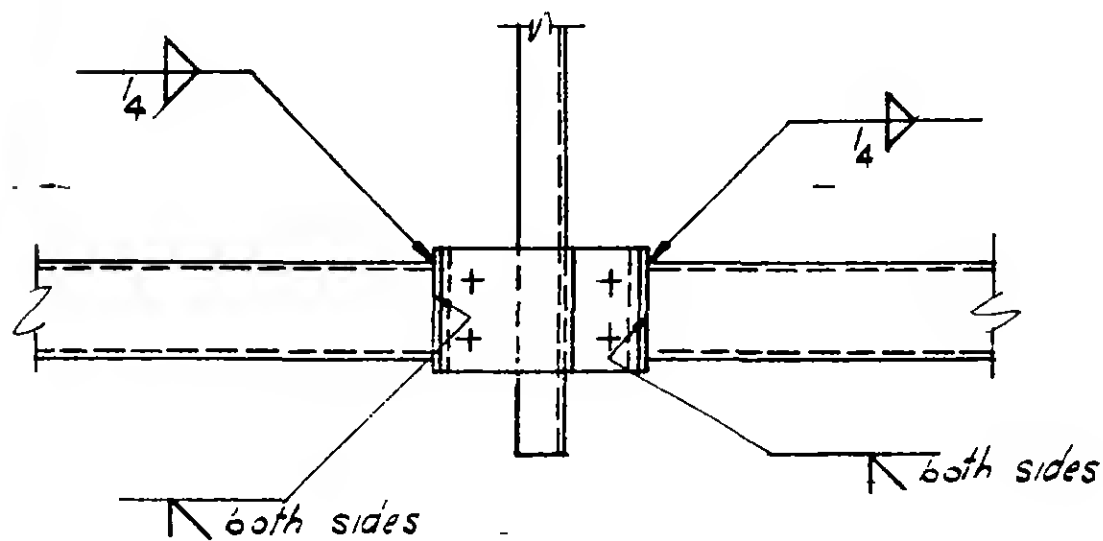
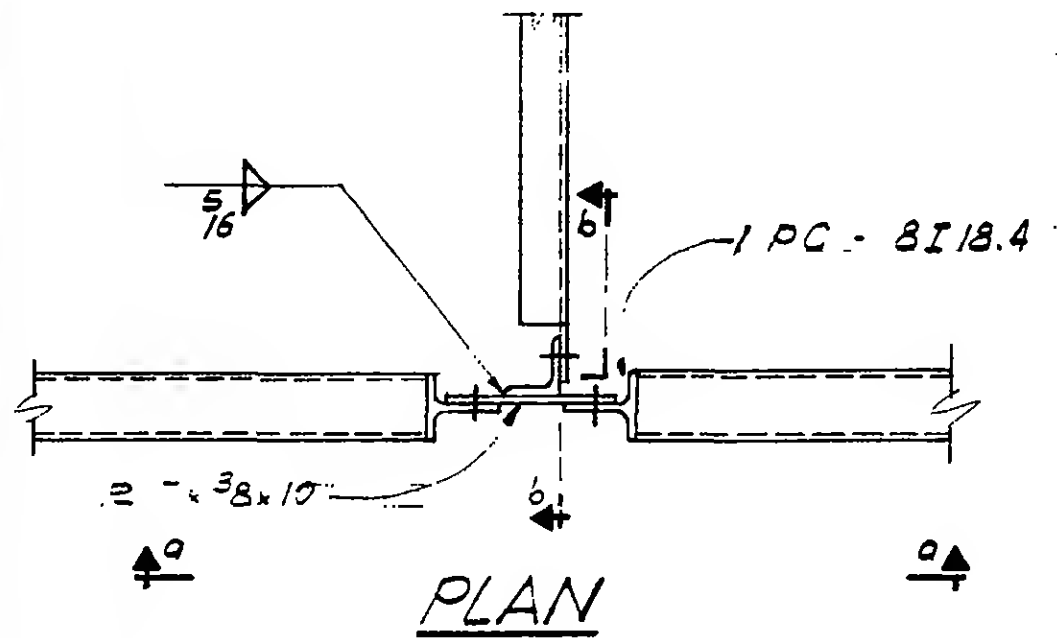
Section a-a



Section b-b



REVISIONS



PROJECT

THE WORLD TRADE CENTER

TITLE

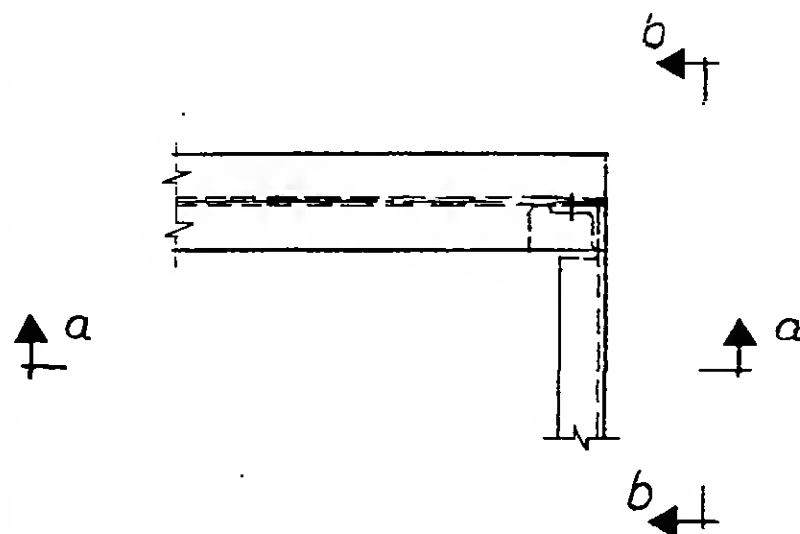
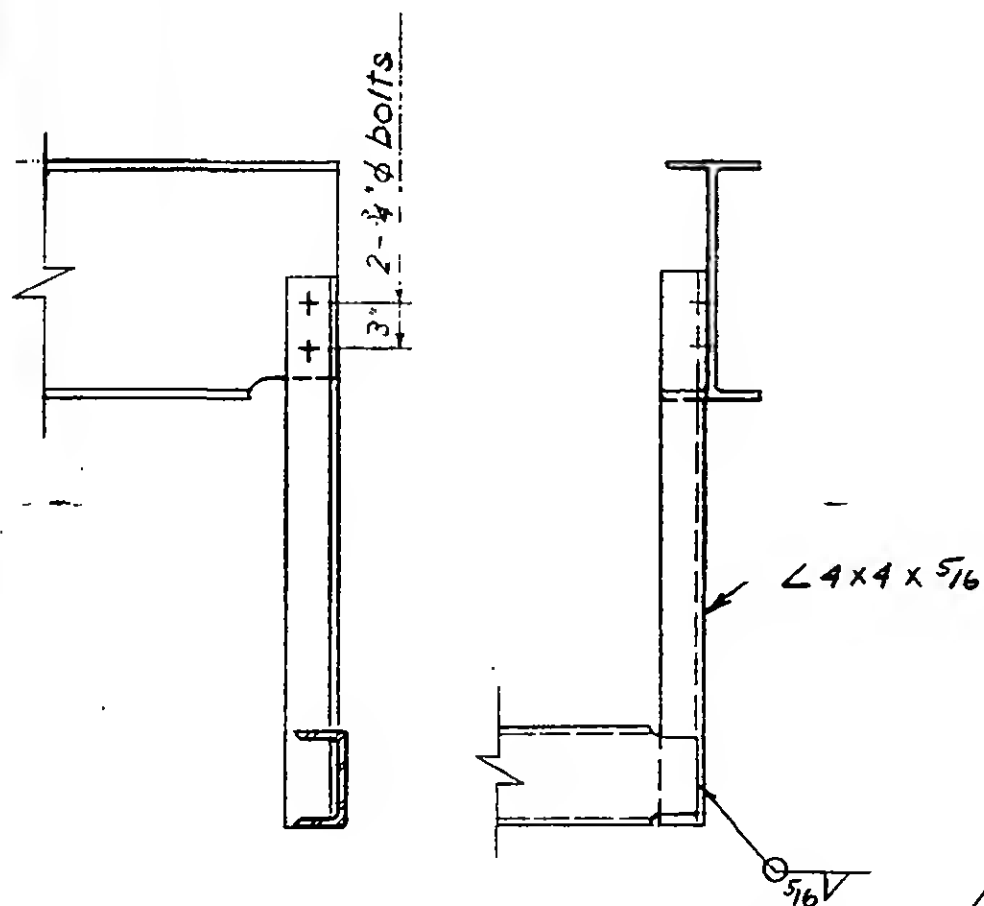
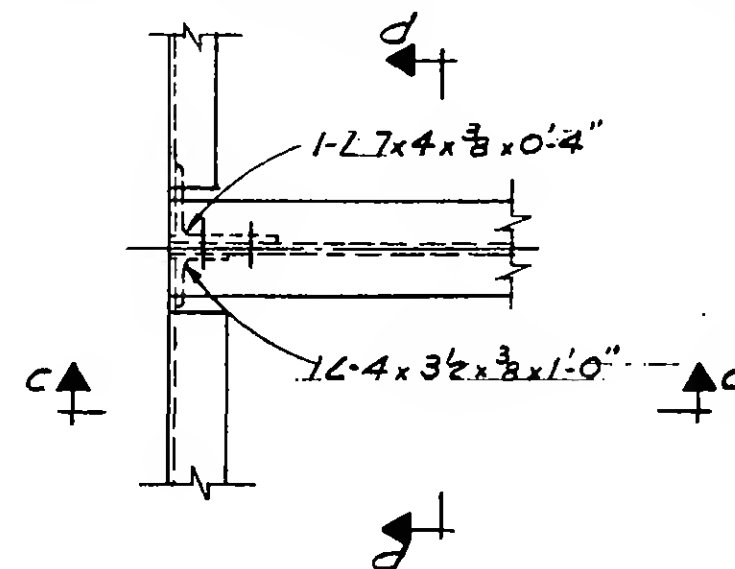
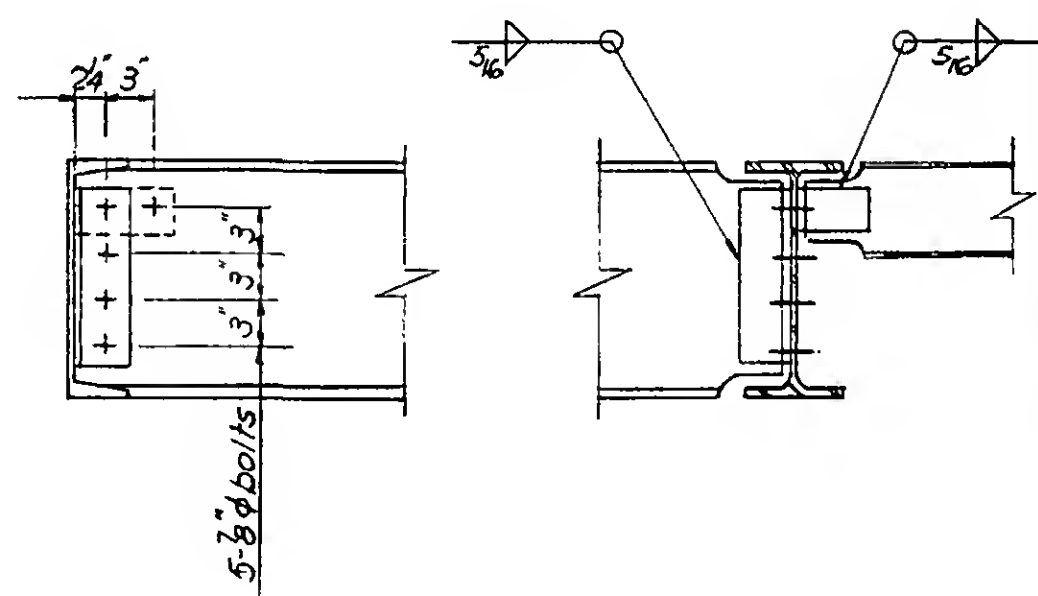
CONNECTION DETAILS 521 &amp; 522

DATE

8-5-67

REVISIONS

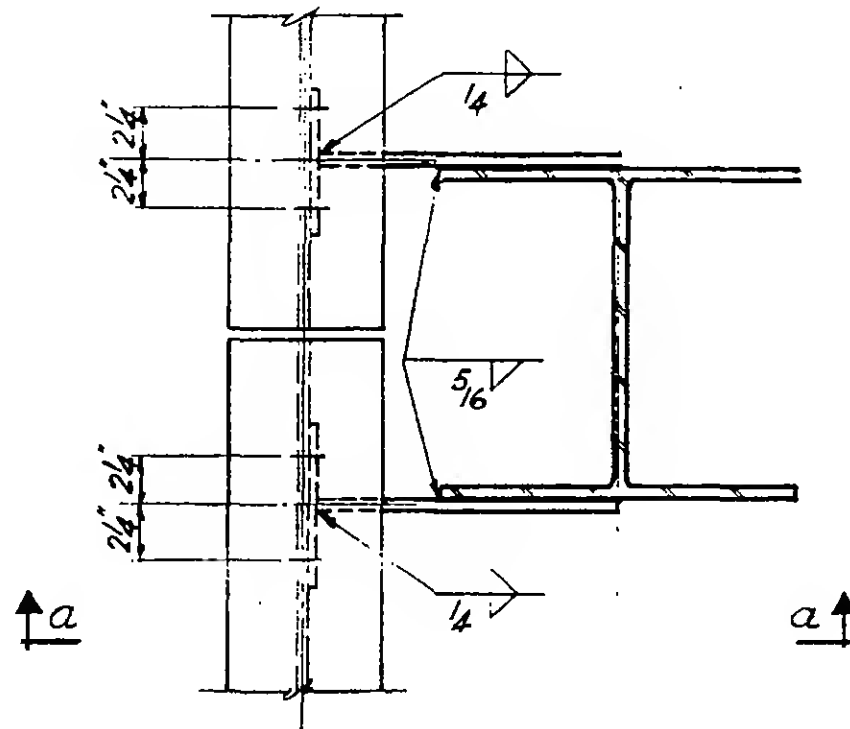
9-29-67

PlanSection a-aSection b-bDETAIL 521PlanSection c-cSection d-dDETAIL 522

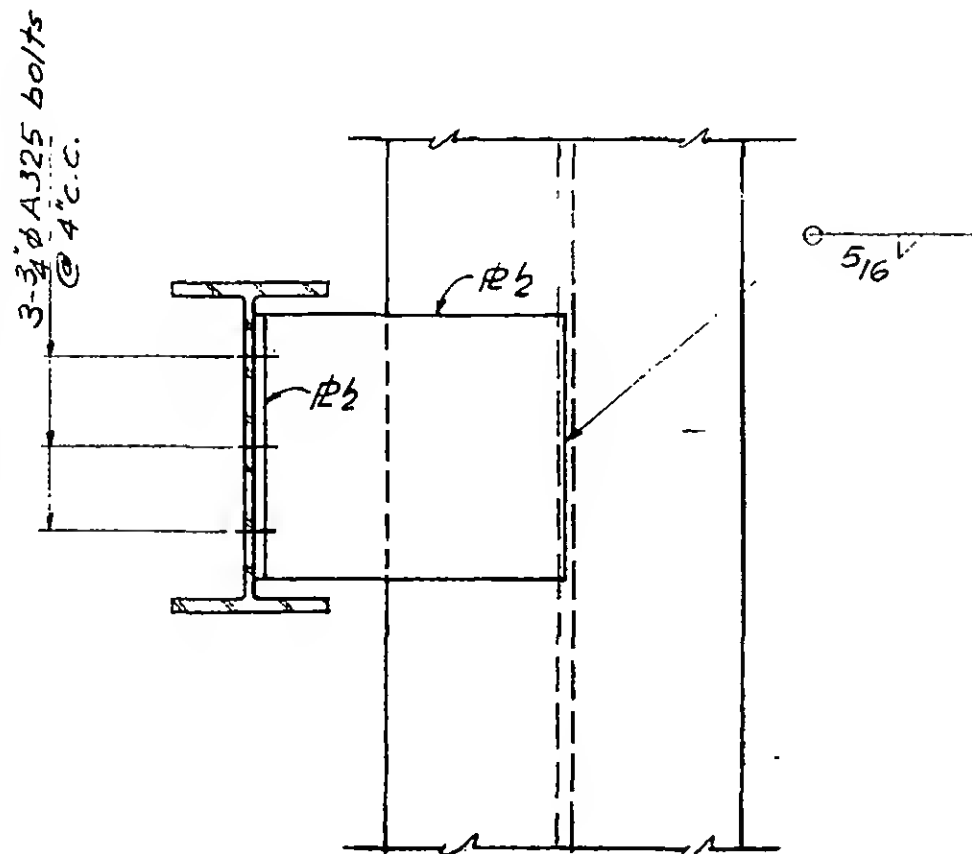
6-AB2-168



REVISIONS



Plan



Section a-a



PROJECT

THE WORLD TRADE CENTER

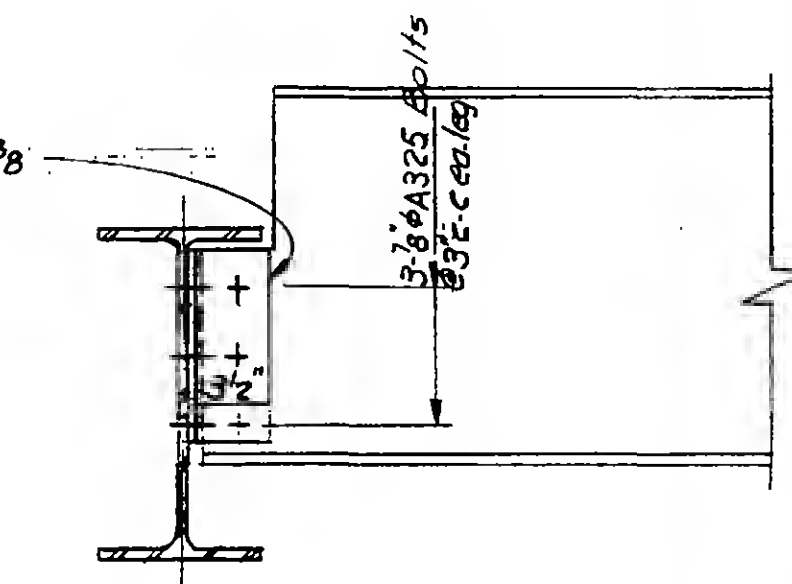
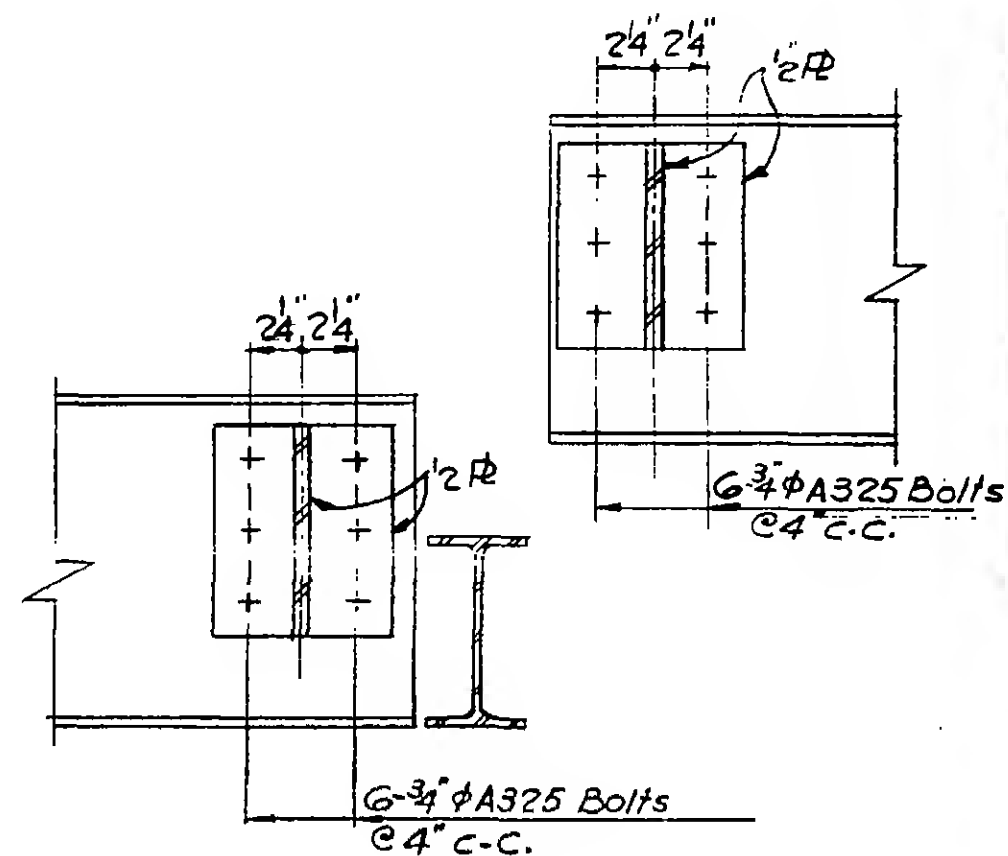
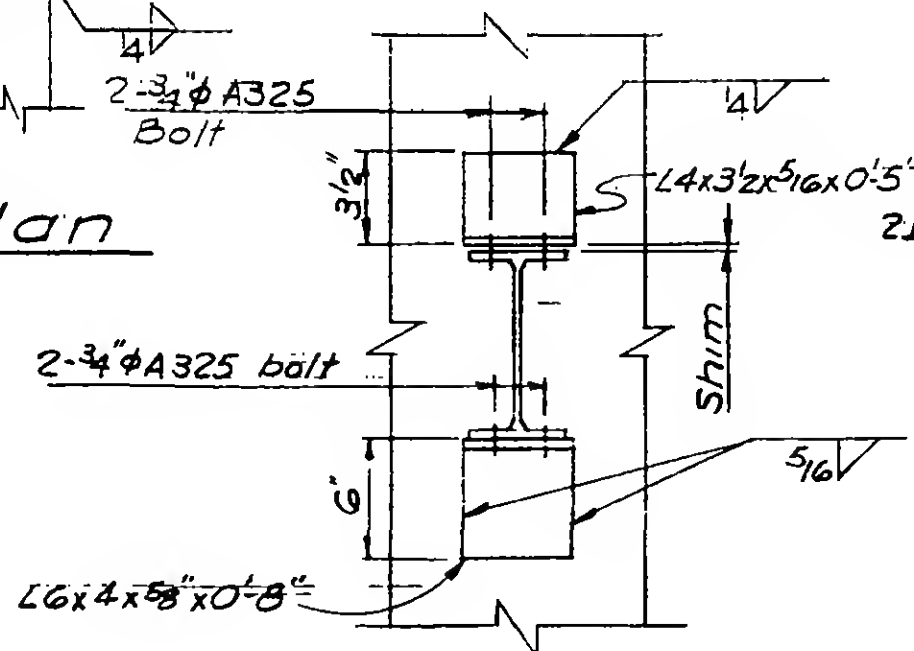
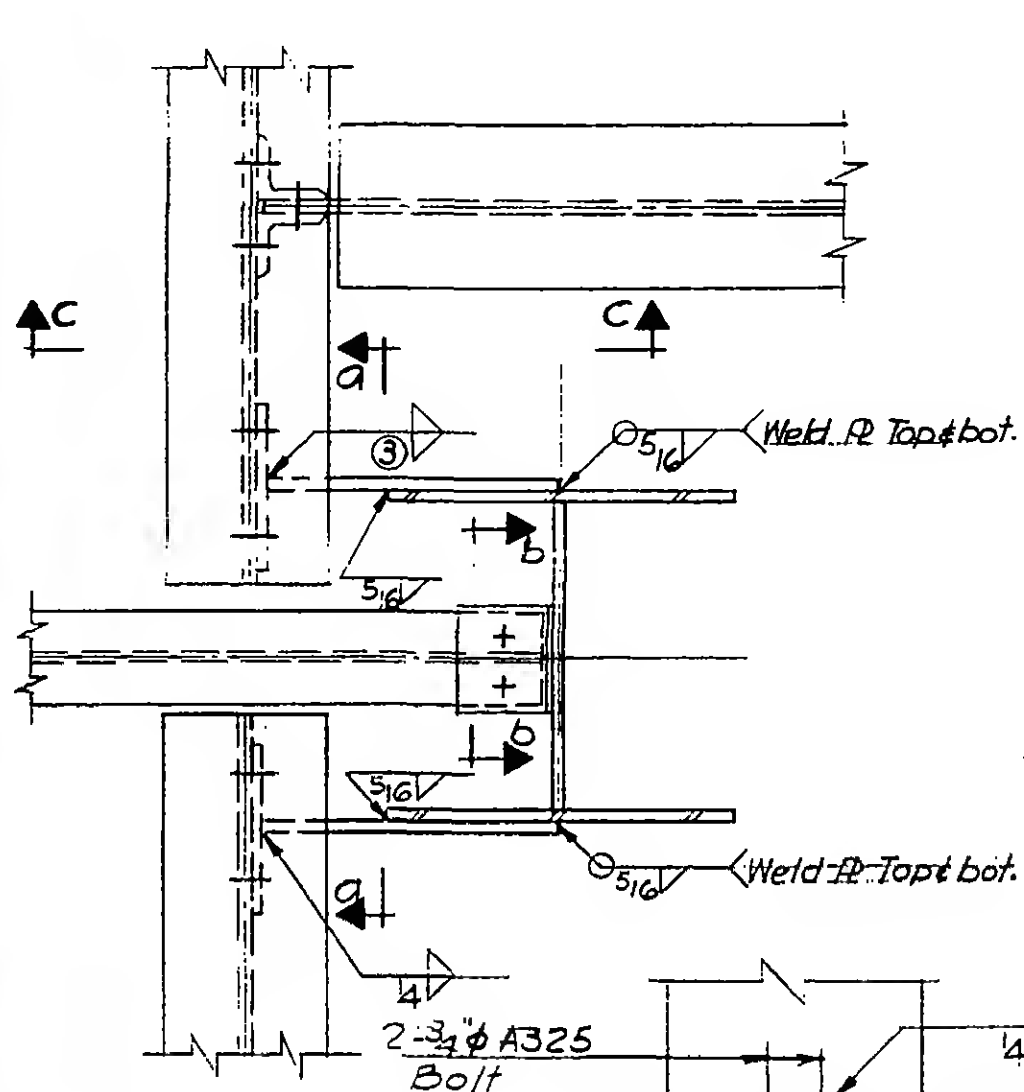
TITLE

CONNECTION DETAIL 525 A

DATE

8-14-67

REVISIONS



6-AB2-170

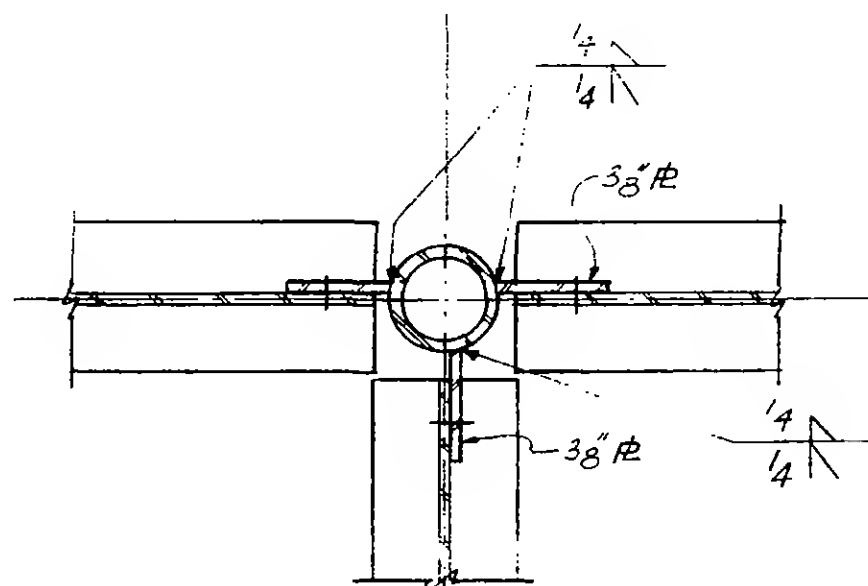
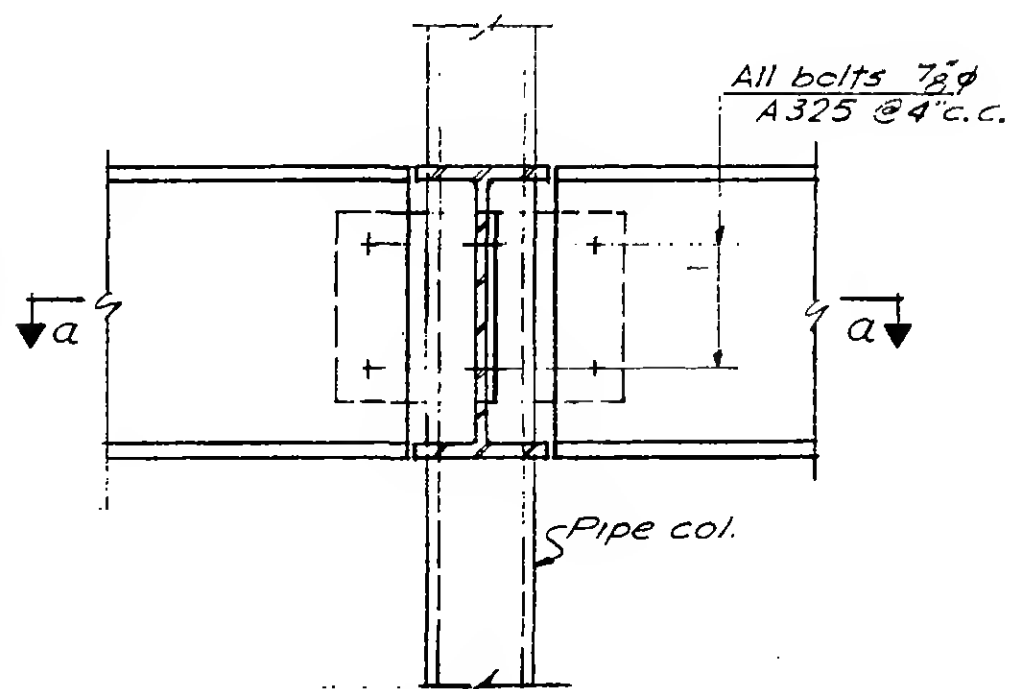


PROJECT THE WORLD TRADE CENTER

TITLE CONNECTION DETAIL 526 A

DATE 8-14-67

REVISIONS

Section a-aElevation

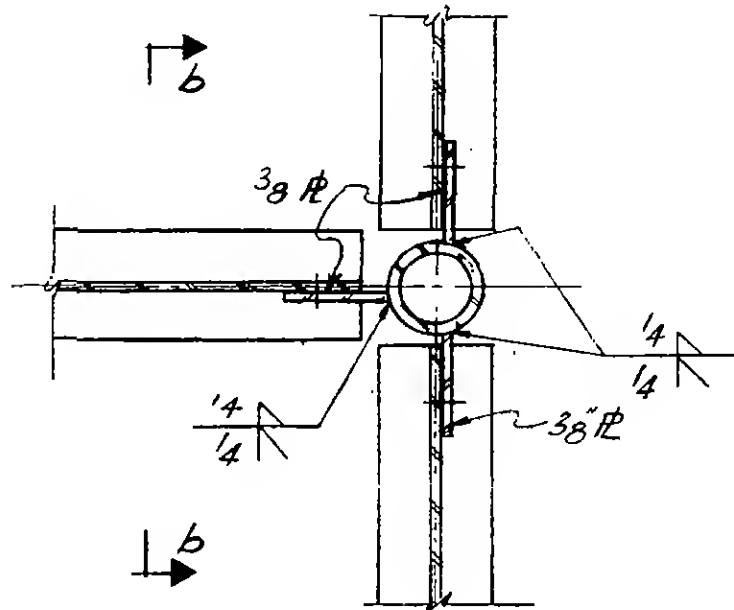
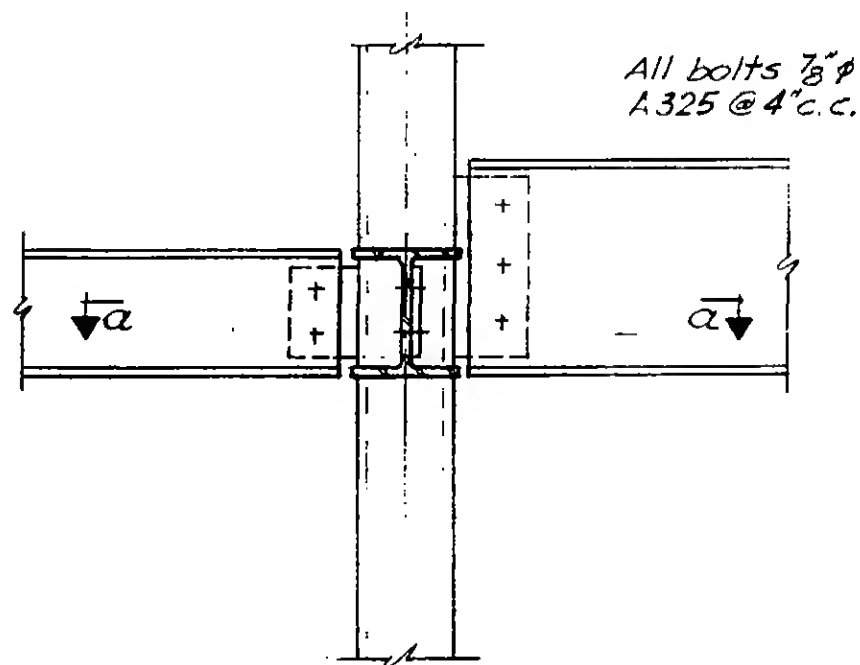
G-AB2-171

PROJECT THE WORLD TRADE CENTER

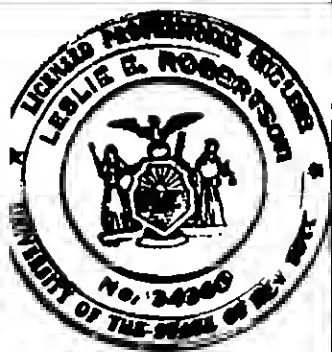
TITLE CONNECTION DETAIL 527A

DATE 8-14-67

REVISIONS

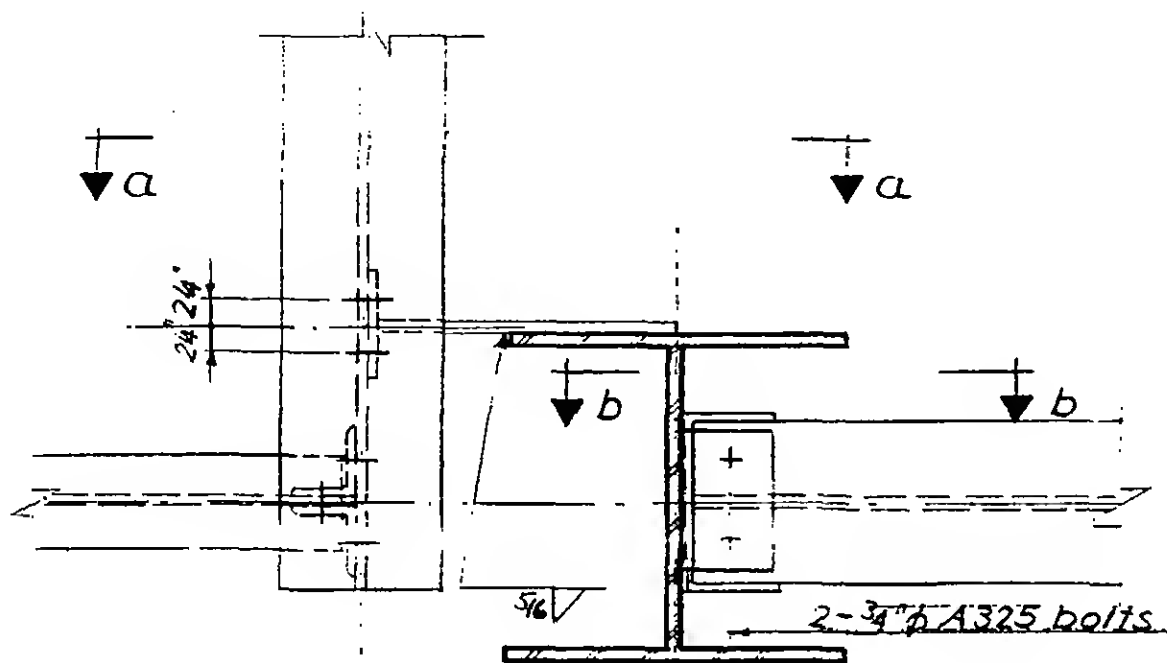
Plan a-aSection b-b

All bolts  $\frac{7}{8}'' \phi$   
A325 @ 4" c.c.

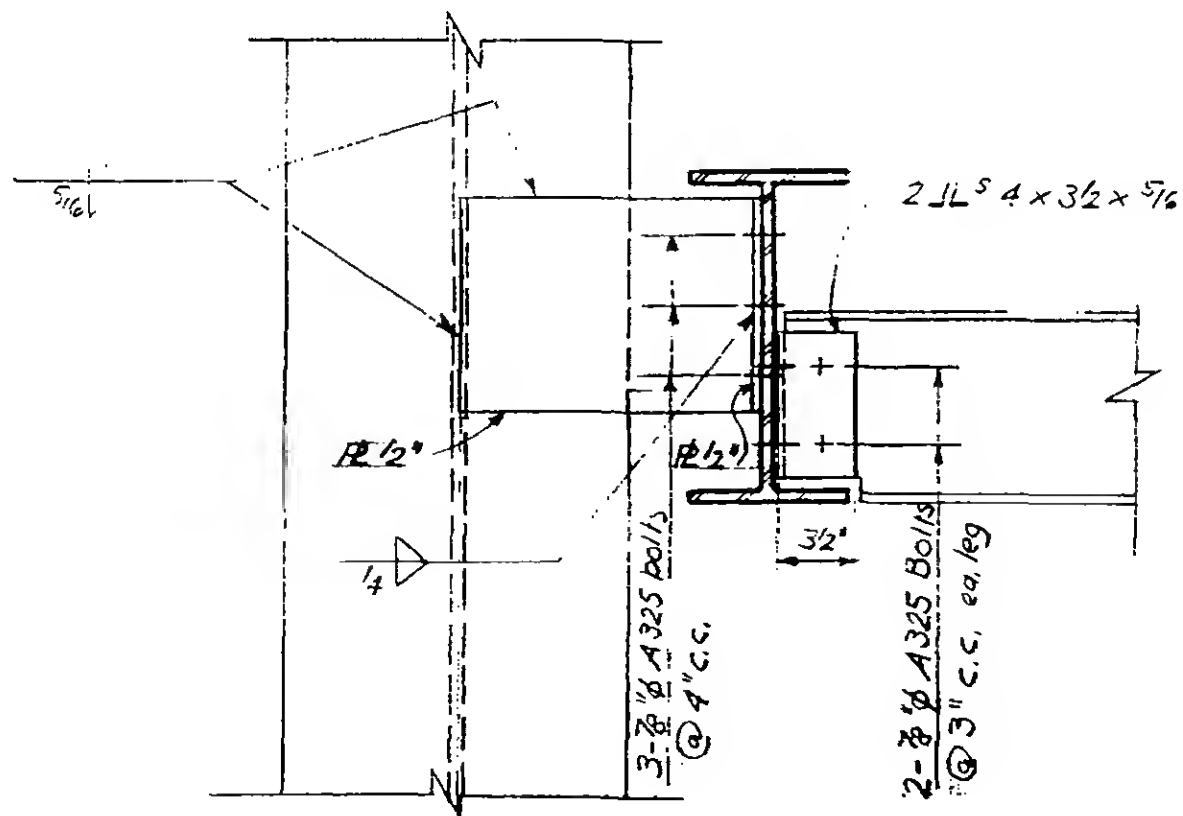


6-AB2-172

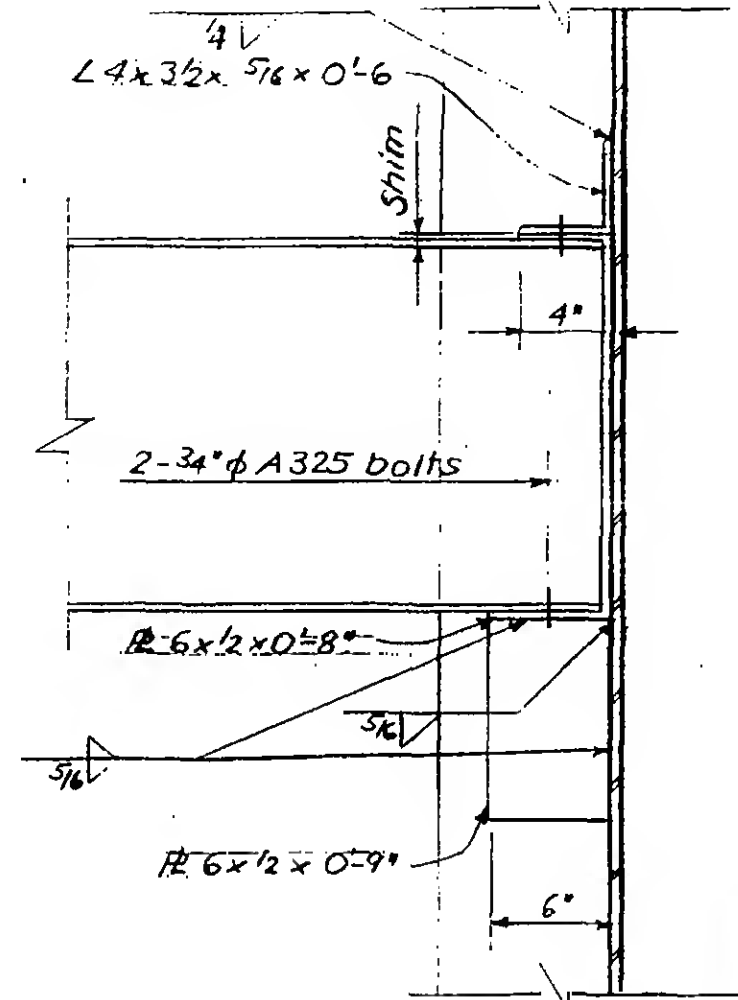
REVISIONS



Plan



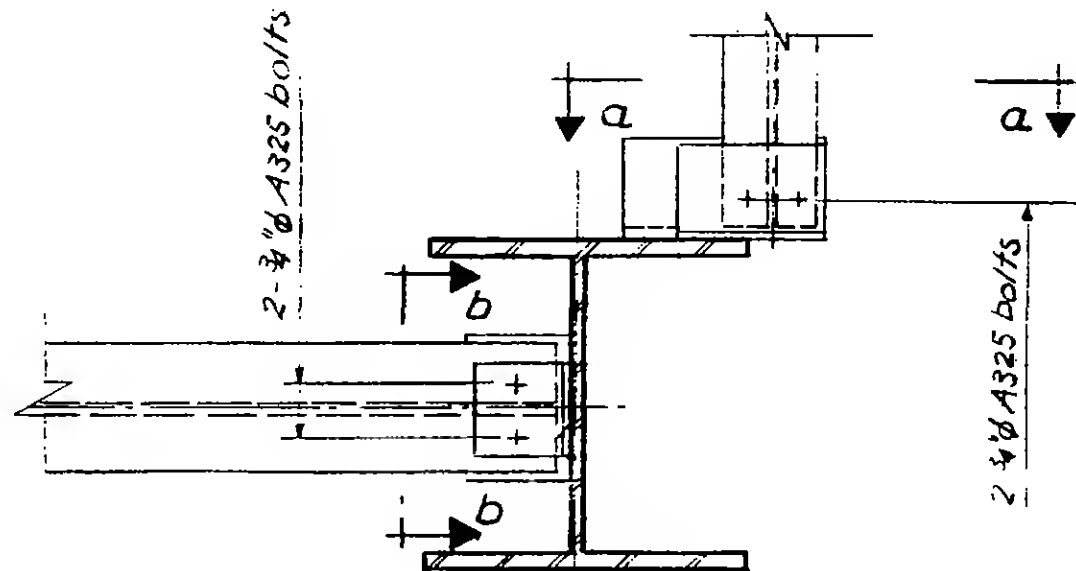
Section a-a



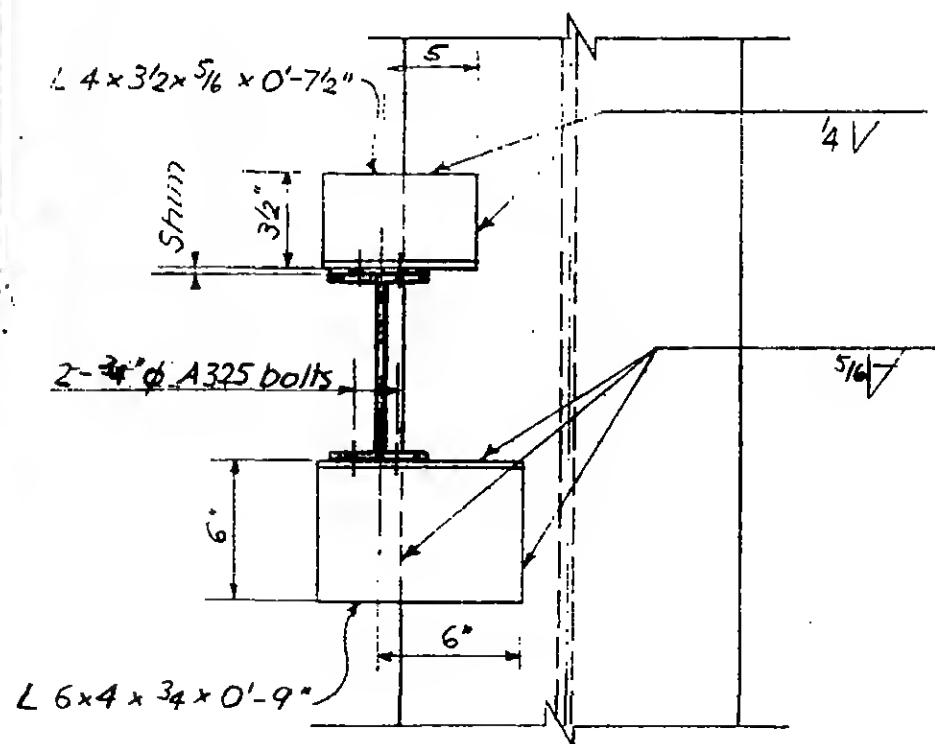
Section b-b



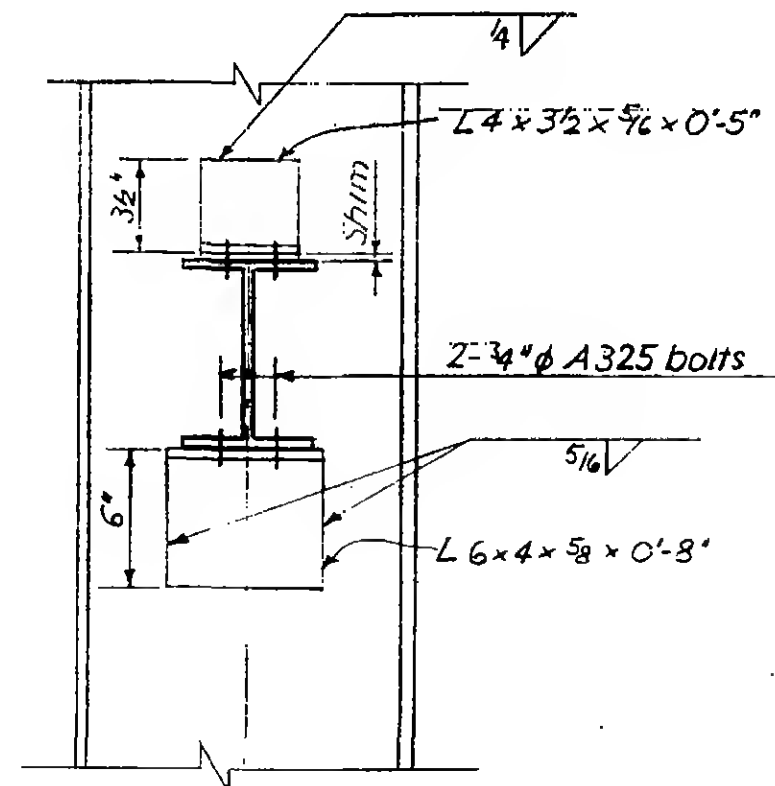
REVISIONS



Plan



Section a-a



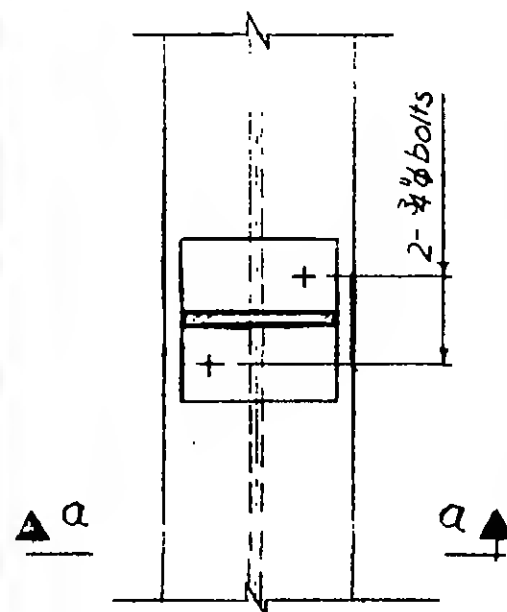
Section b-b



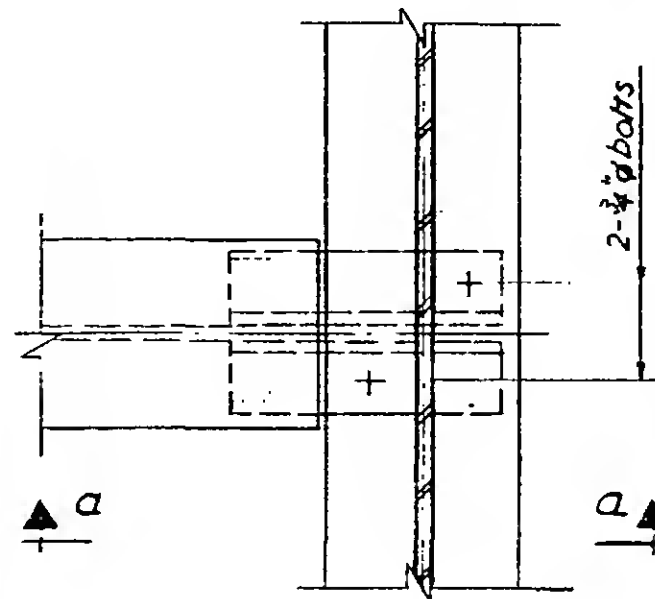
## REVISIONS

7-21-68

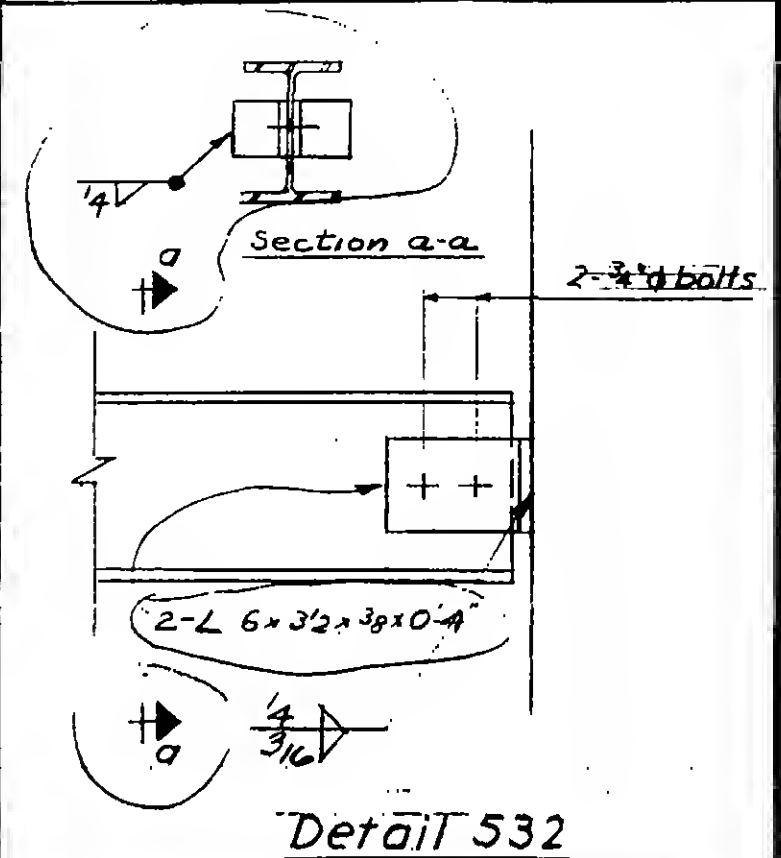
7-17-68



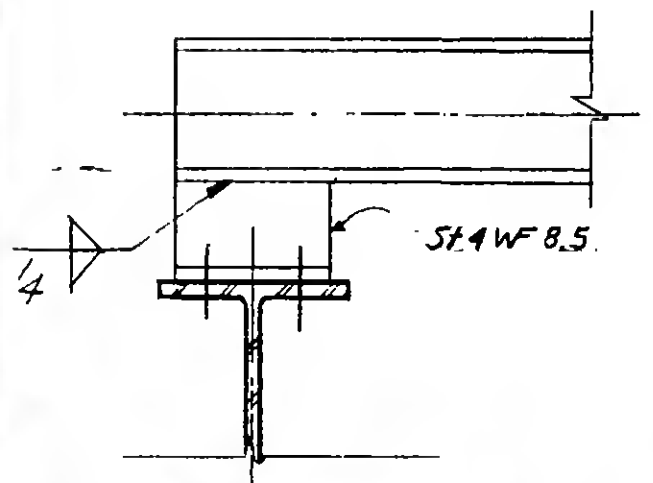
Plan  
Detail 530



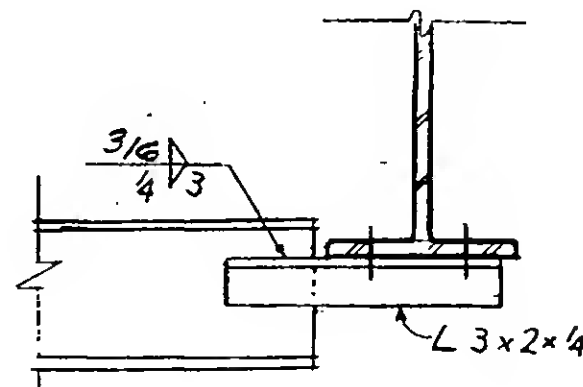
Plan  
Detail 531



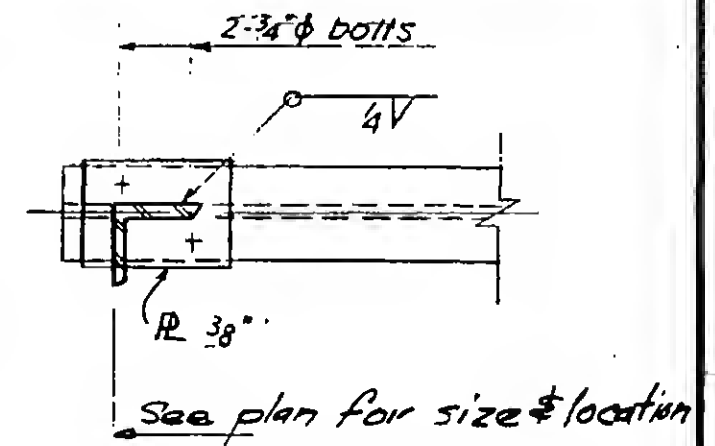
Detail 532



Section a-a



Section a-a

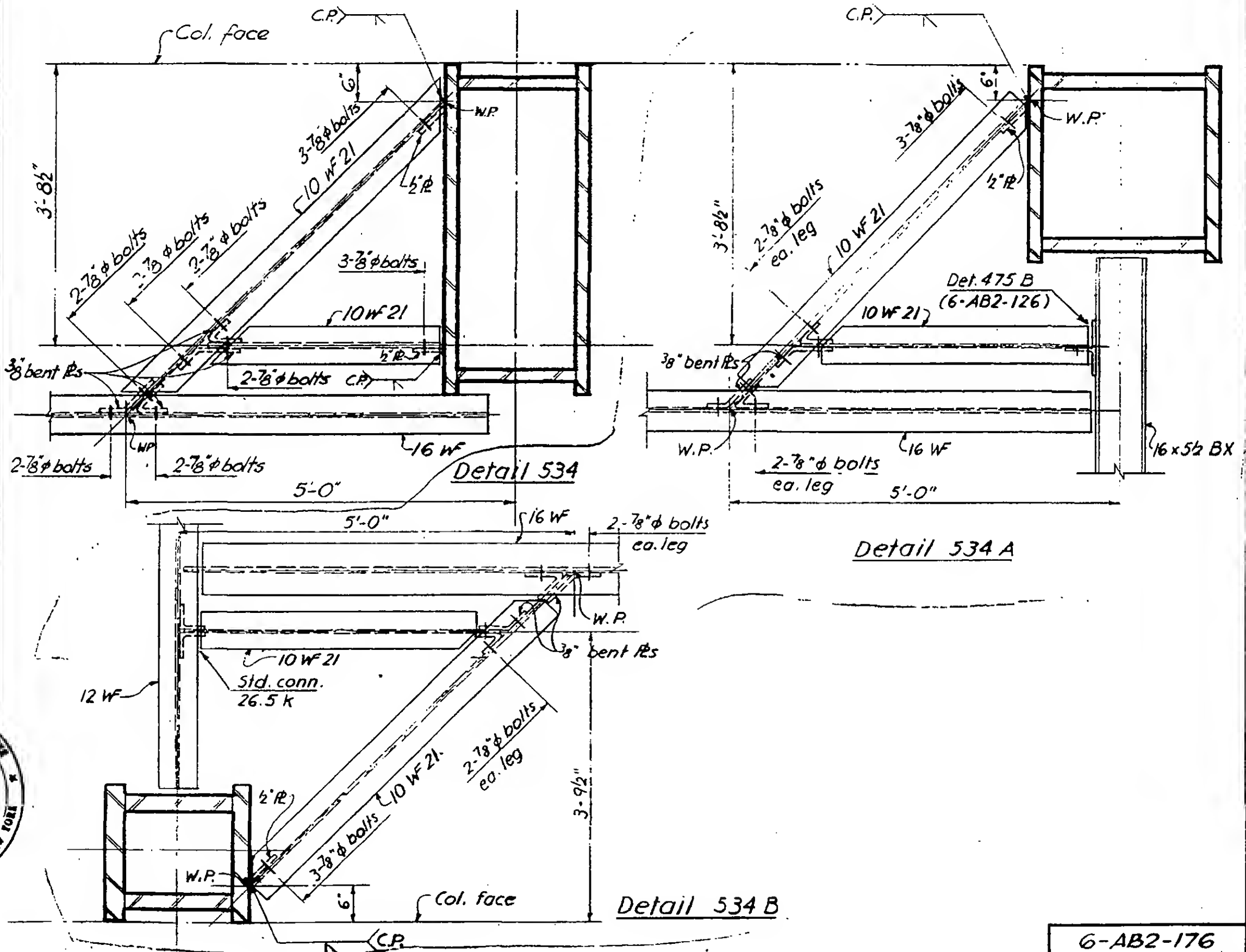


Detail 533



## REVISIONS

2-21-68

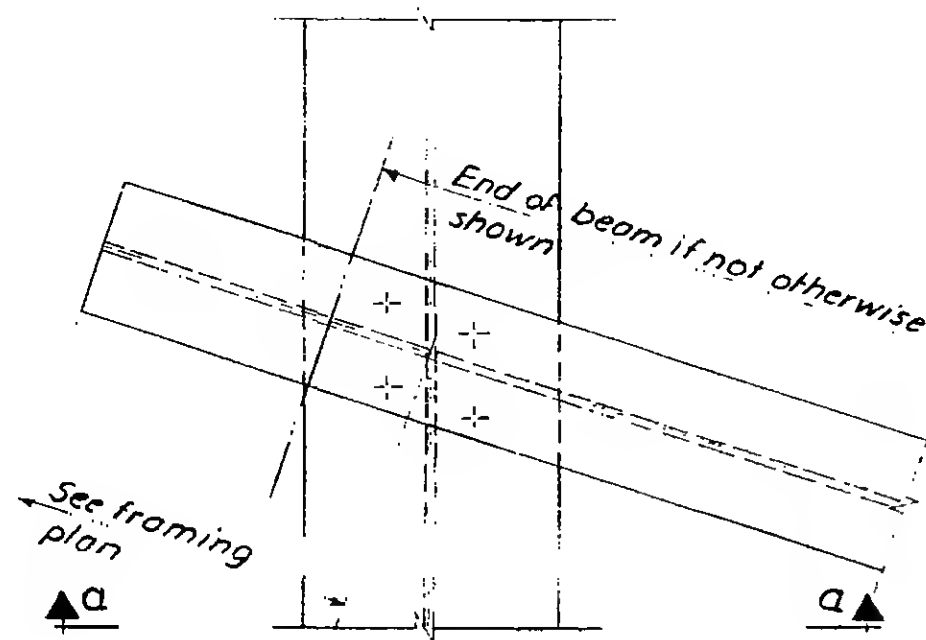
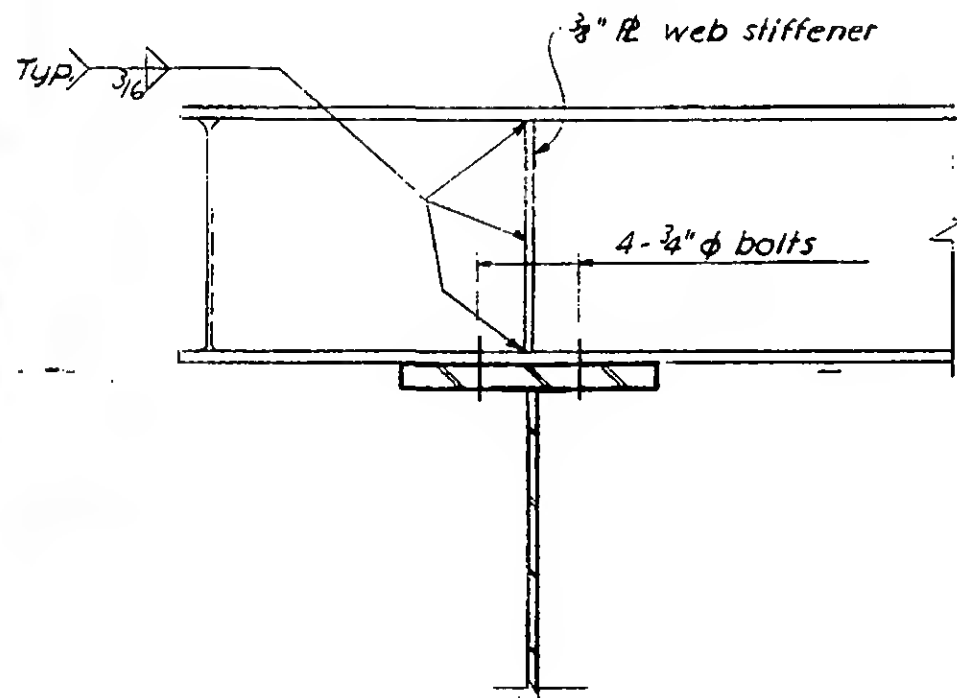
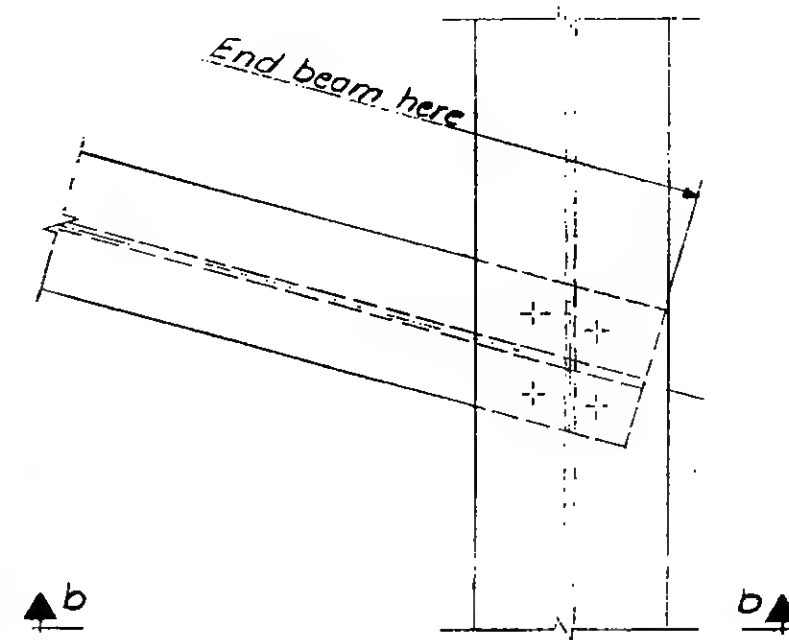
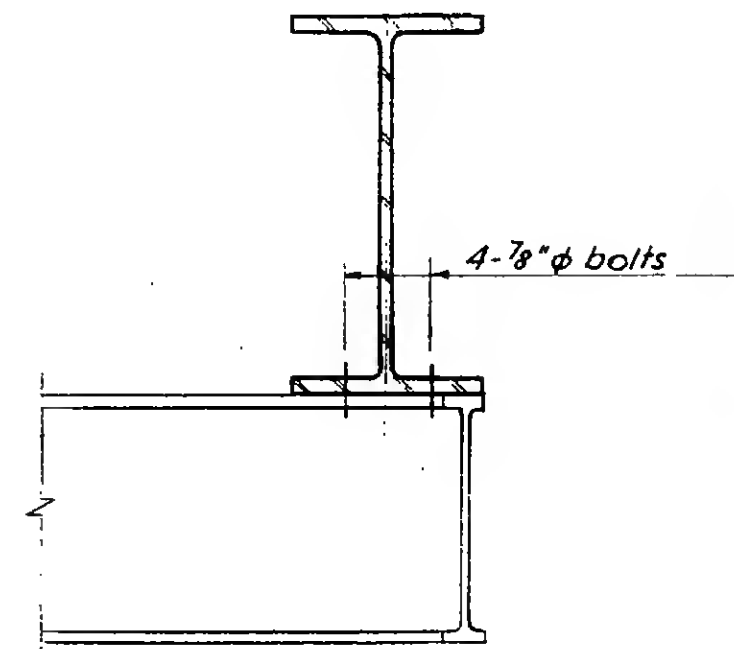


PROJECT THE WORLD TRADE CENTER

TITLE CONNECTION DETAIL 535 A, 536 A

DATE 2-9-68

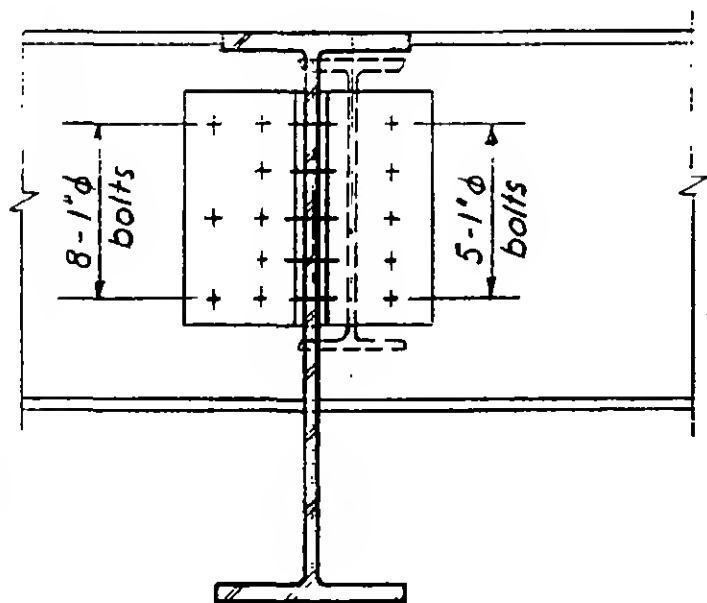
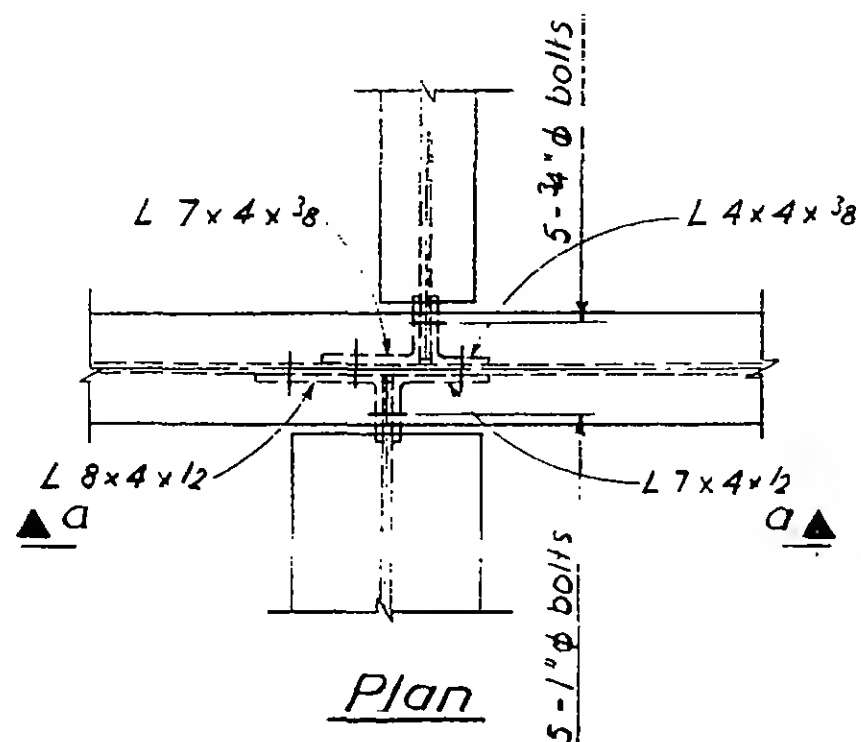
REVISIONS

PlanSection a-aDetail 535 APlanSection b-bDetail 536 A

6-AB2-177



REVISIONS

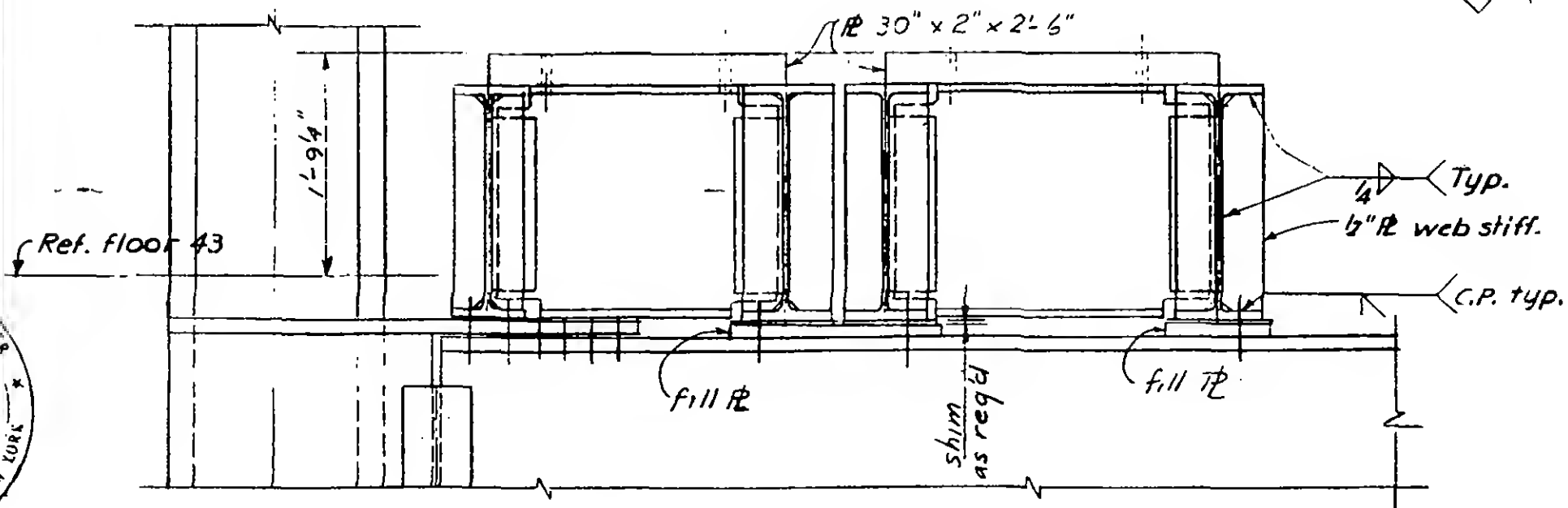
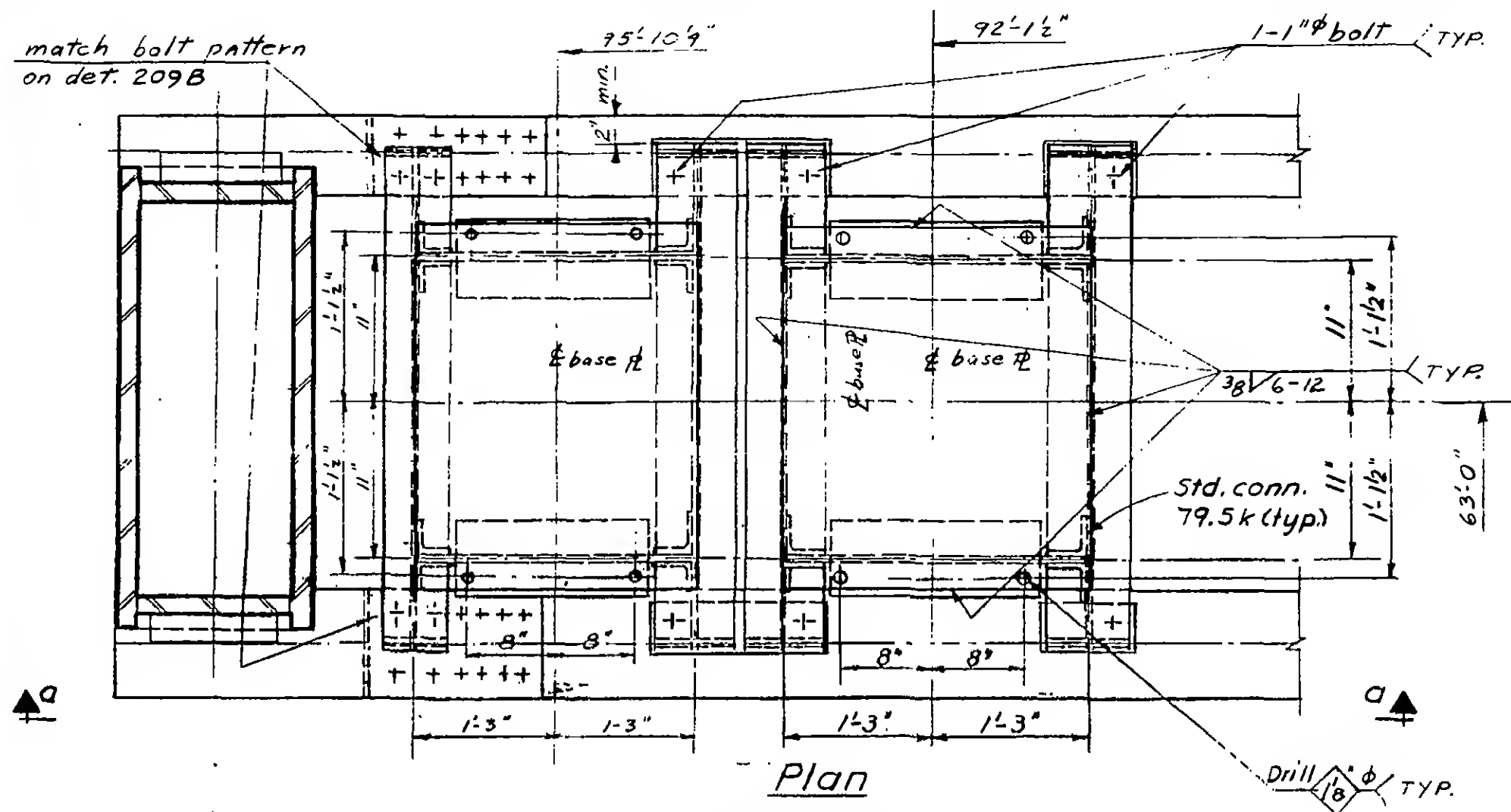
Section a-a

PROJECT THE WORLD TRADE CENTER

TITLE CONNECTION DETAIL 538 A

DATE 4-17-68

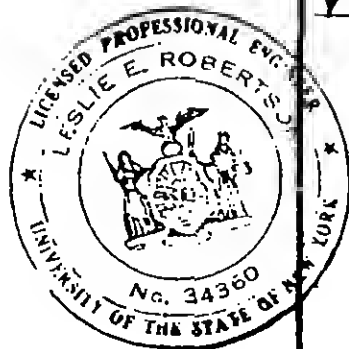
REVISIONS

match bolt pattern  
on det. 209B

All steel Fy 36

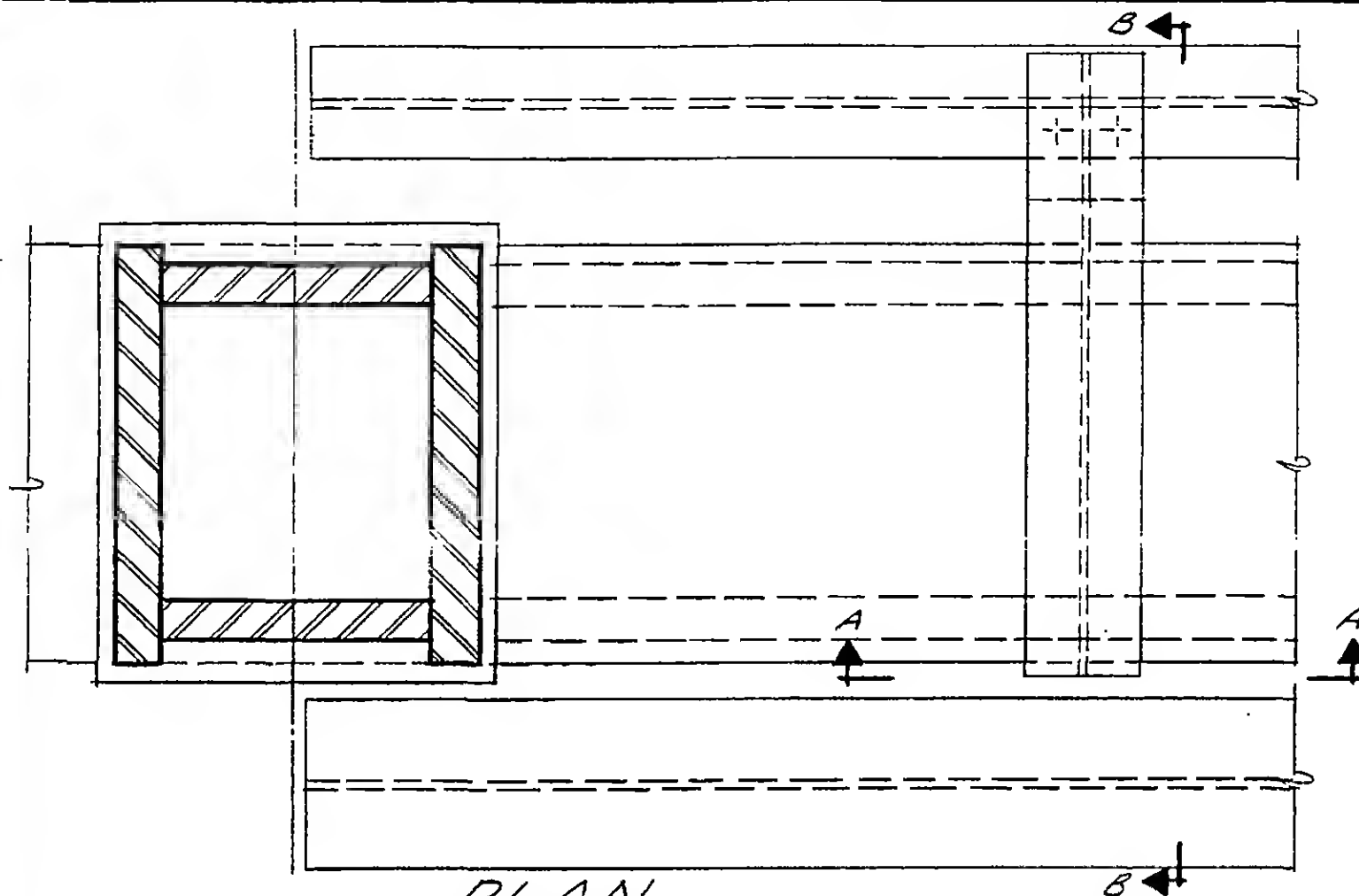
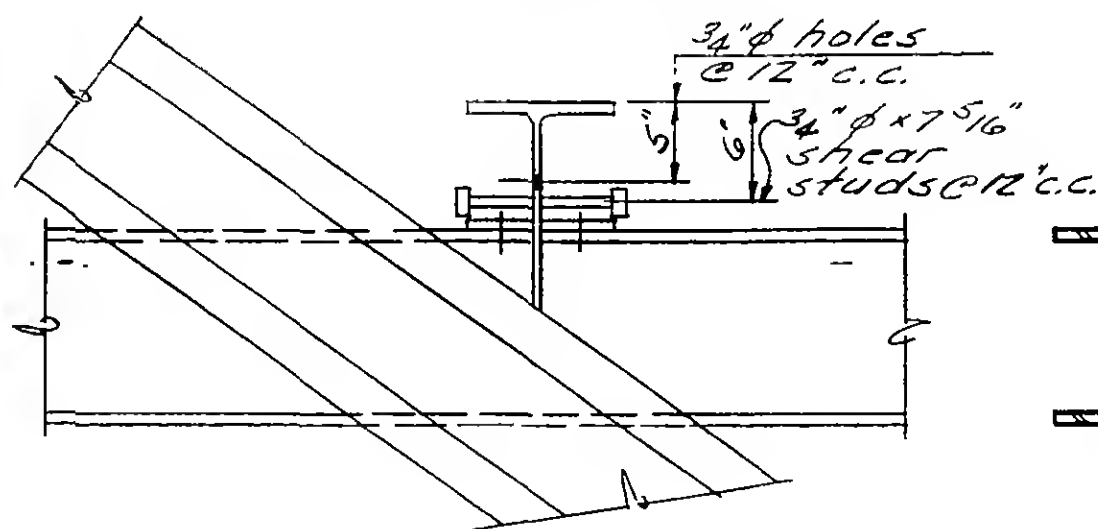
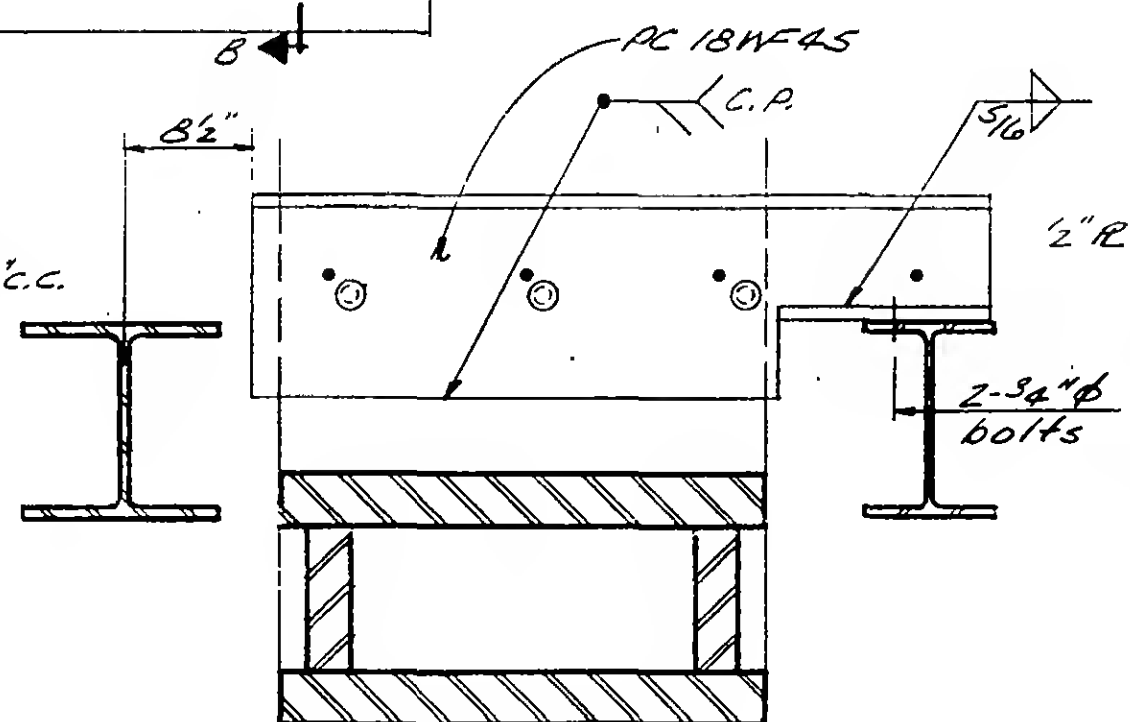
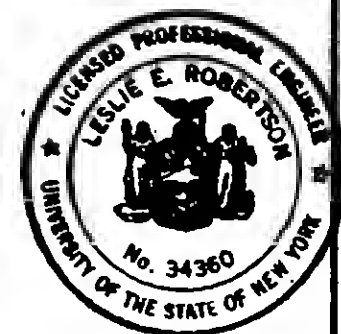
Section a-a

6-AB2-179



PROJECT *THE WORLD TRADE CENTER*TITLE *CONNECTION DETAIL 539*DATE *7-17-68*

REVISIONS

PLANSection a-aSection b-b

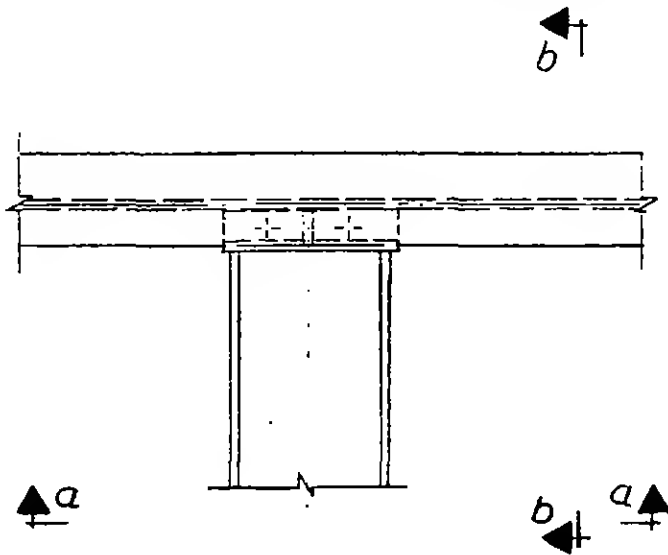
DESIGNED

DRAWN

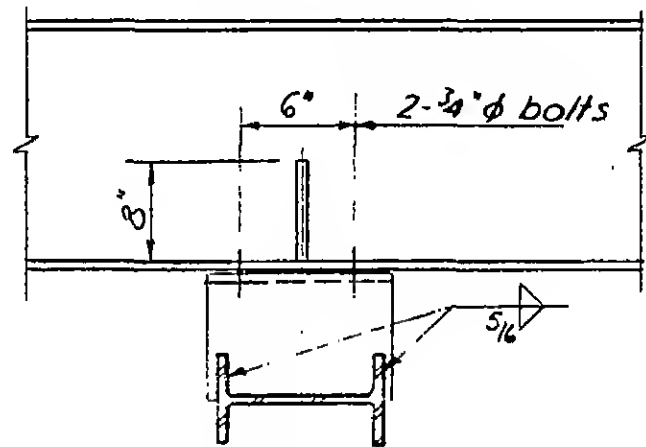
REVIEWED

G-AB2-180

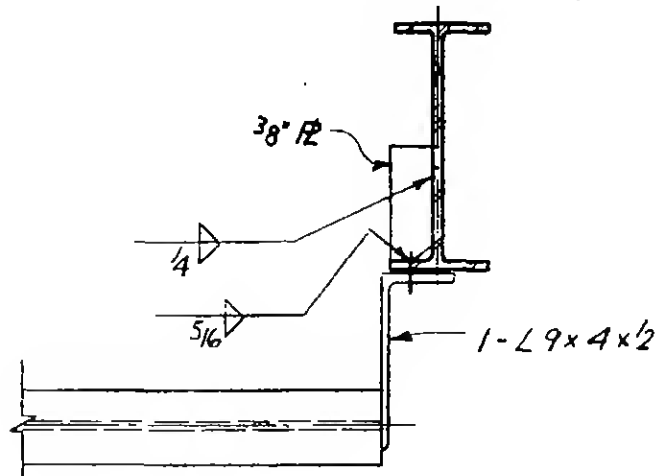
REVISIONS



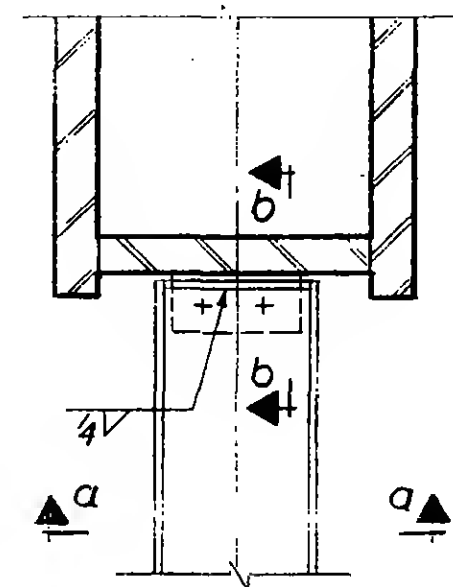
Plan 540 A



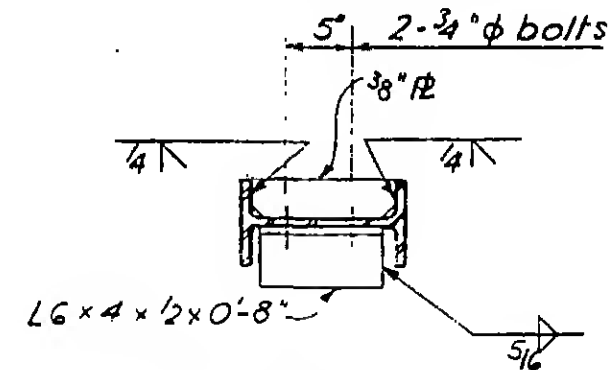
Section a-a



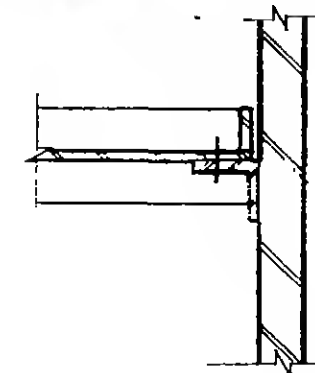
Section b-b



Plan 541 A



Section a-a



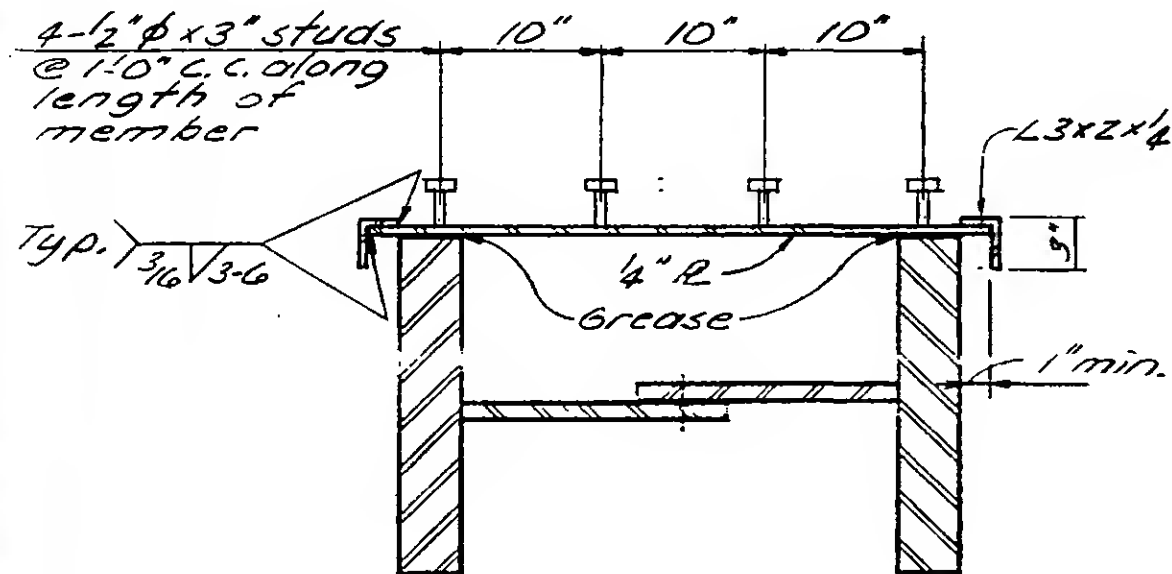
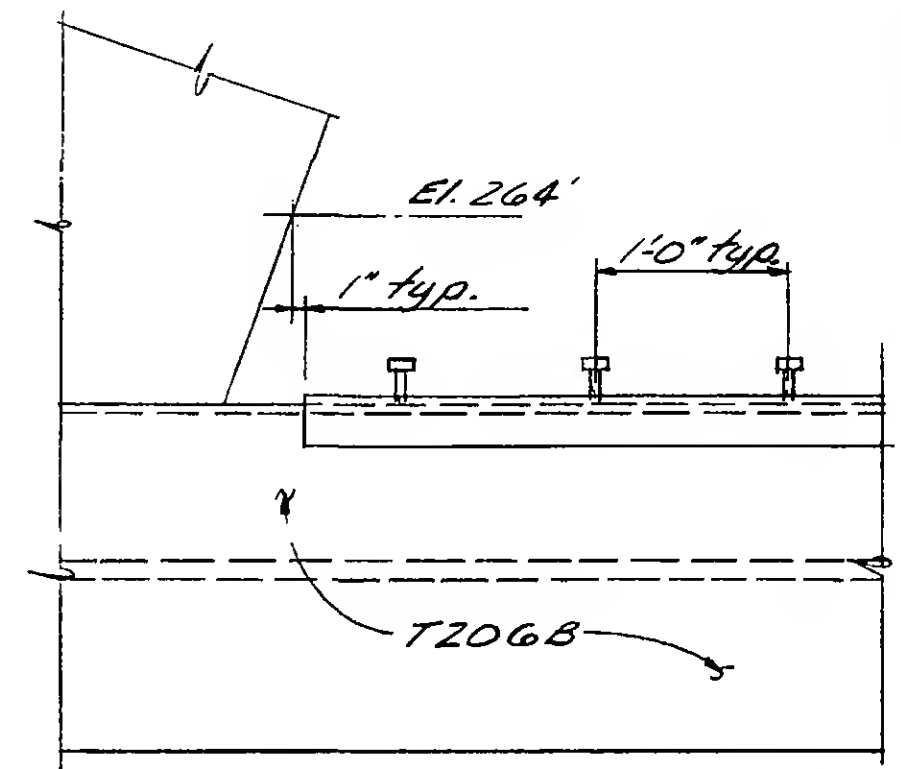
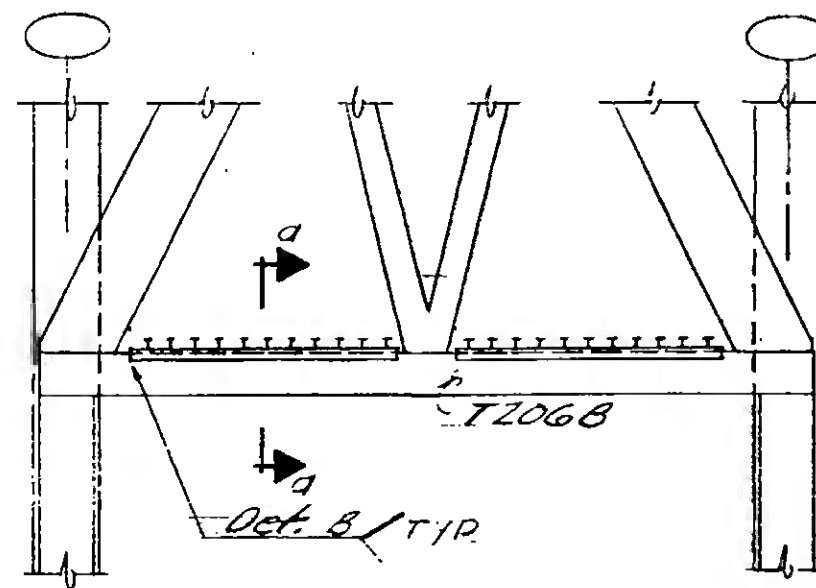
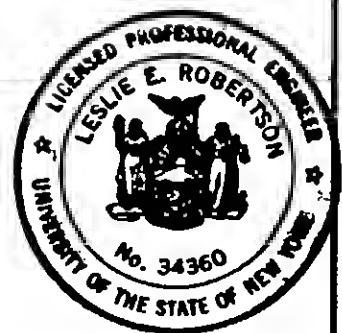
Section b-b

PROJECT THE WORLD TRADE CENTER

TITLE SIDE PLATE ON SPANDREL T206B-DET. 542

DATE 7-17-68

## REVISIONS

Section a-aDet. BELEVATION

DESIGNED

DRAWN

REVIEWED

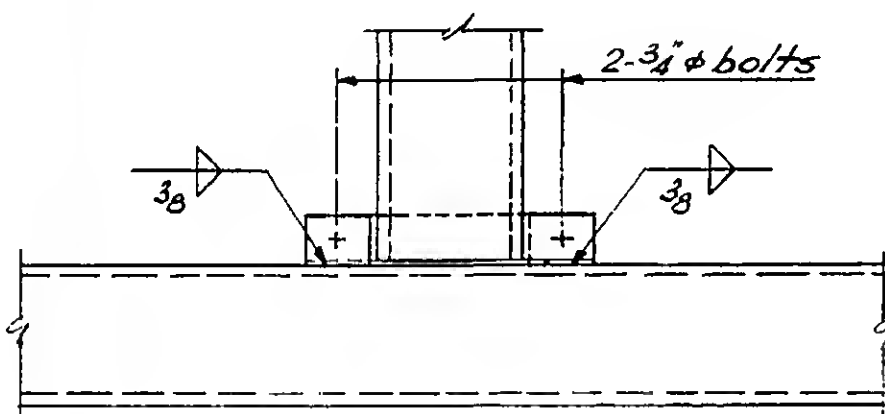
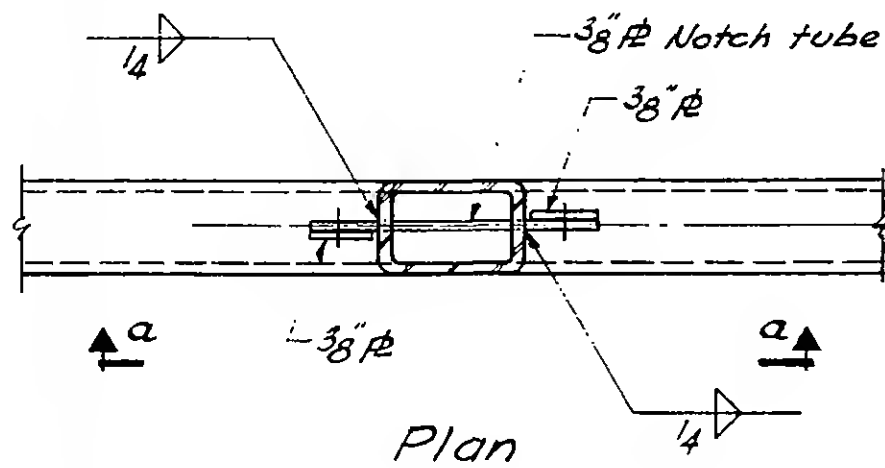
6-AB2-1B3

PROJECT *THE WORLD TRADE CENTER*

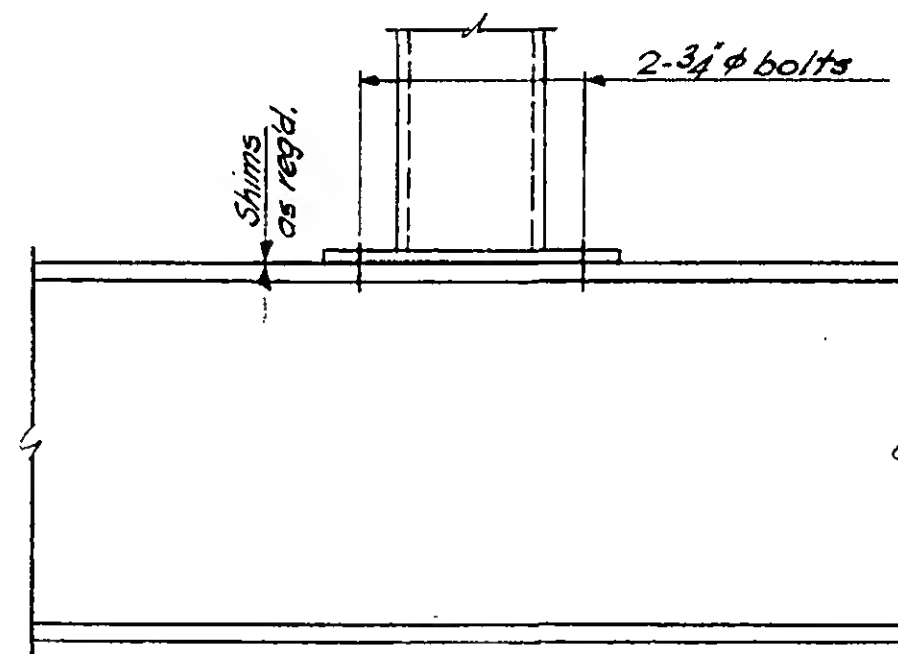
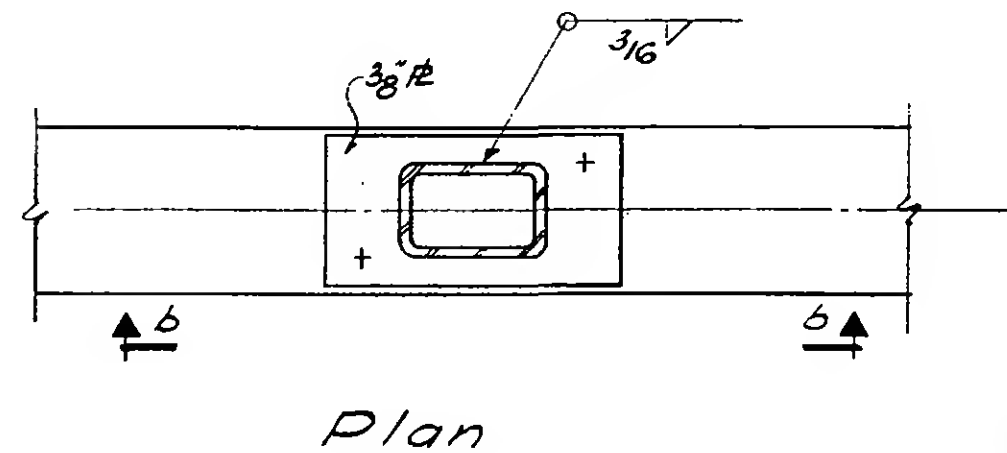
TITLE

*DETAIL 543, 544*DATE *11-22-68*

## REVISIONS

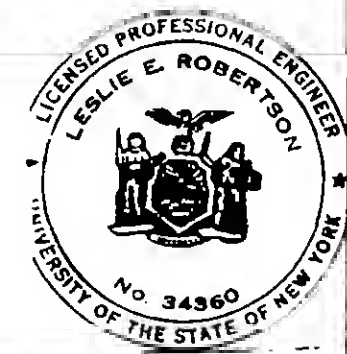


*DETAIL 543*  
*Connection to tube sections*



*DETAIL 544*  
*Connection to wf sections*

G-AB2-184



DESIGNED

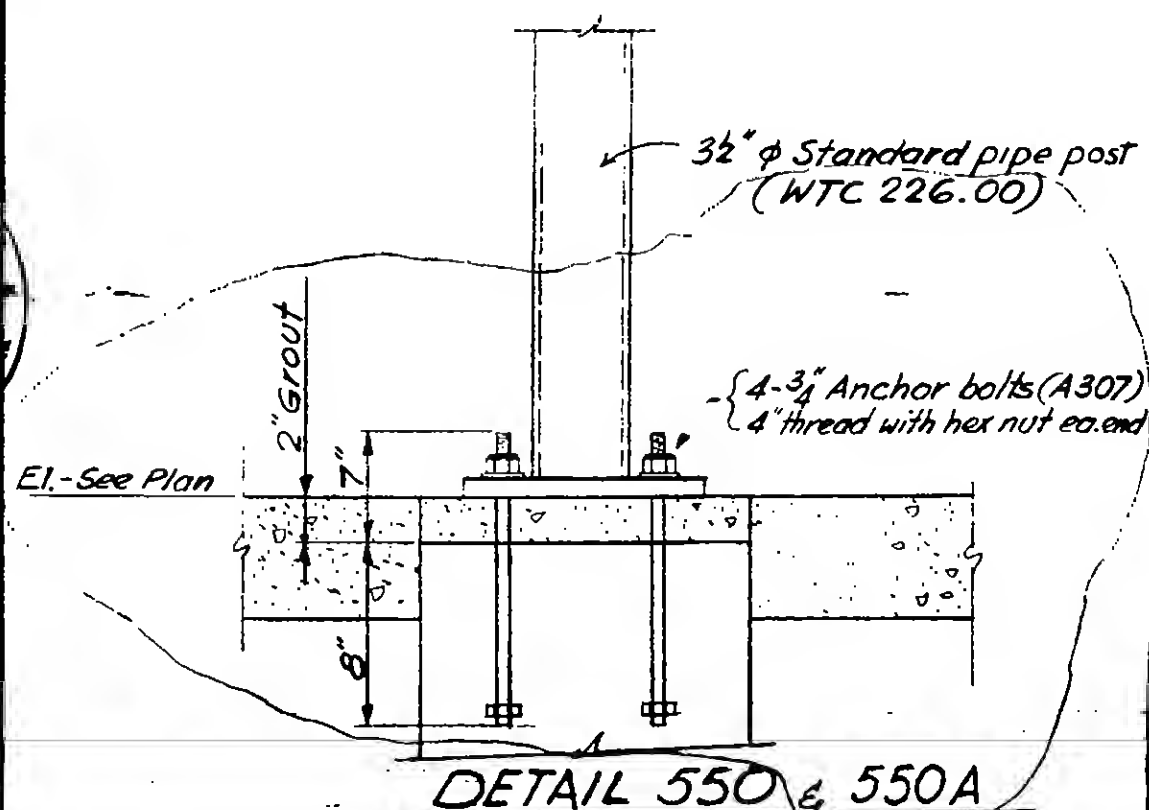
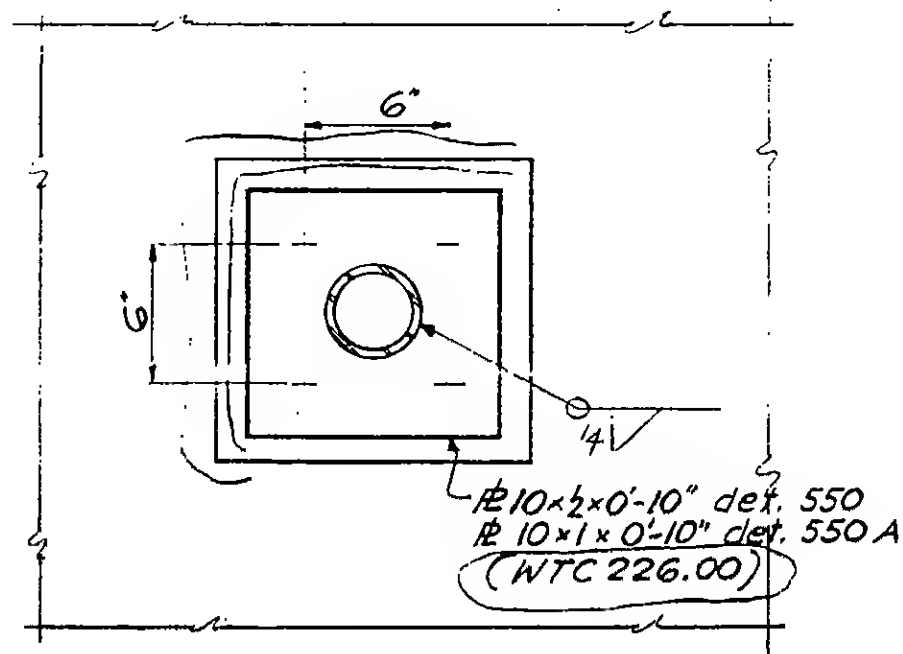
DRAWN

REVIEWED

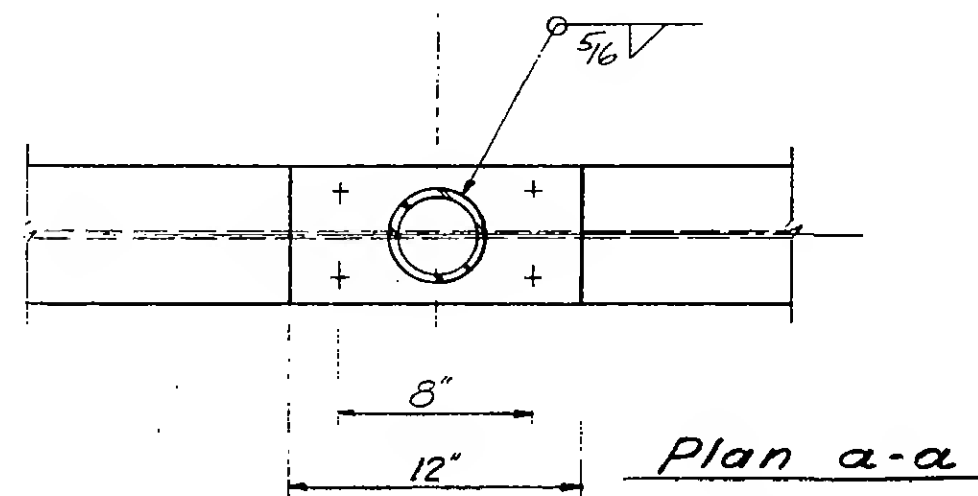
## REVISIONS

2-9-68

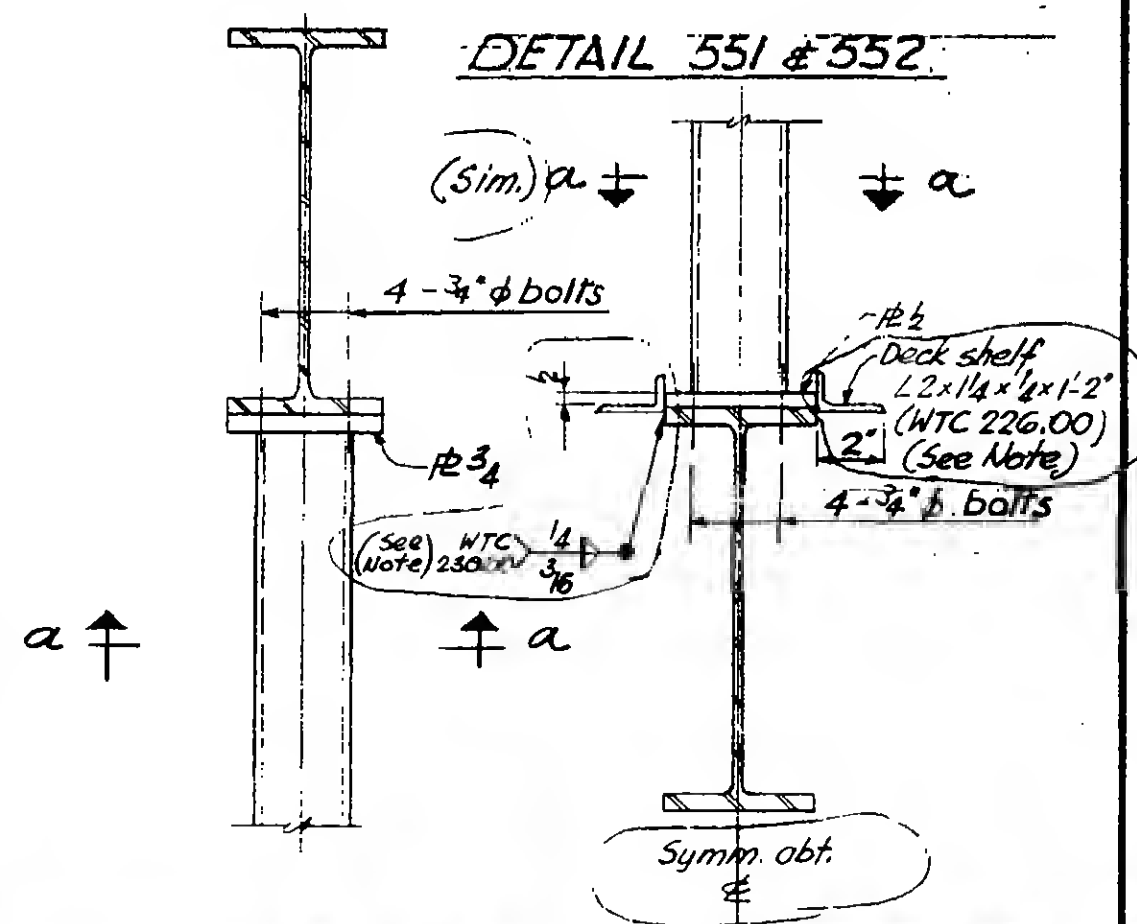
8-29-68



Note: Detail 552. Deck sheff, L to be provided only for posts lying outside of core and @ floors 7, 41, 75 & 108.



DETAIL 551 & 552



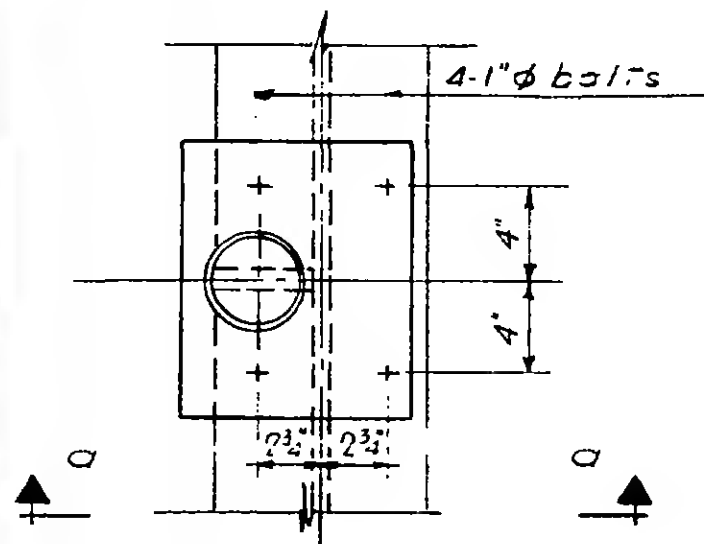
DETAIL 551 (hanger)

~~DETAIL 552 (Post)~~

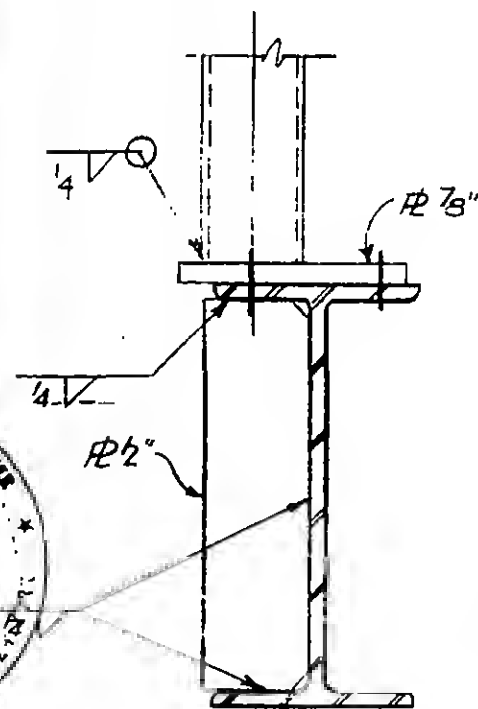
6-ABZ-107



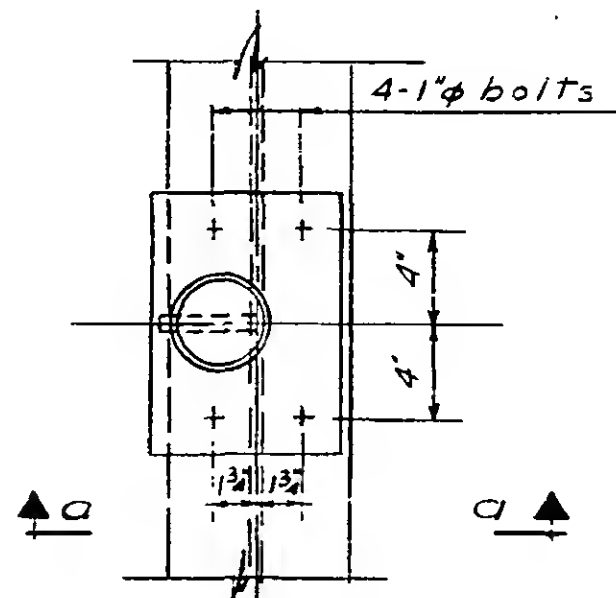
REVISIONS



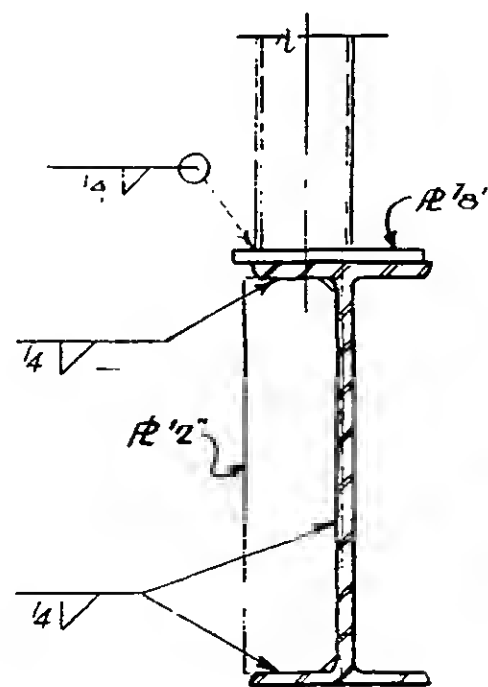
Plan



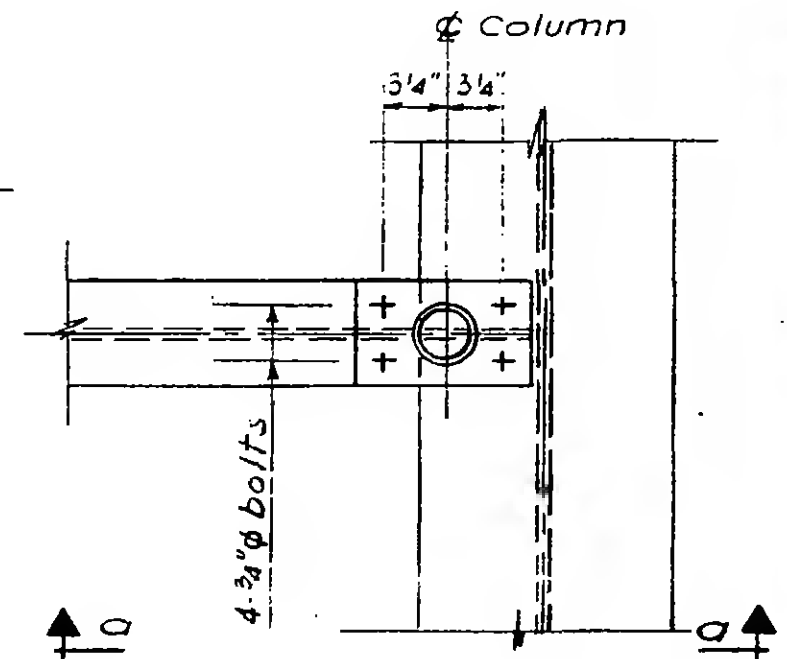
Section a-a



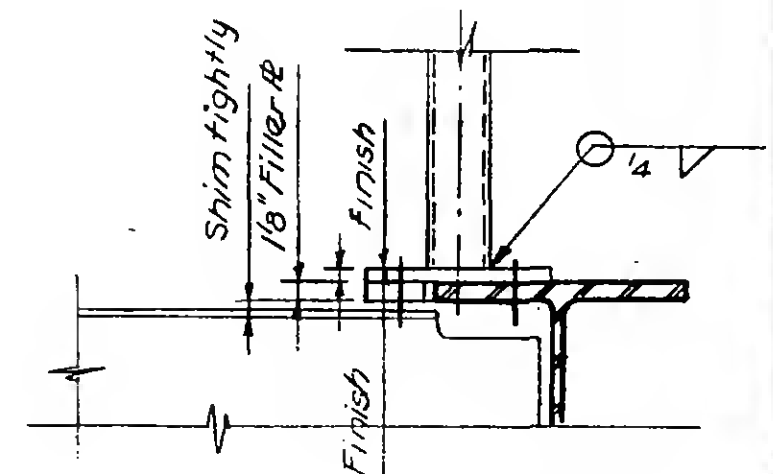
Plan



Section a-a



Plan



Section a-a



## REVISIONS

nted 5-1-69

|            |                                                   |
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| 6-A83- 1   | GENERAL NOTES & INDEX                             |
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| 6-A83- 9   | HORIZONTAL TRUSS DETAILS F, G, H, & J             |
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| 6-A83-13   | HORIZONTAL TRUSS DETAILS EE, FF                   |
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| 6-A83-16   | HORIZONTAL TRUSSES H25, H26                       |
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| 6-A83-18   | HORIZONTAL TRUSSES H30, H34 - H37                 |
| 6-A83-19   | HORIZONTAL TRUSSES H32, H33                       |
| 6-A83-20   | HORIZONTAL TRUSSES H38                            |
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| 6-A83-33   | BRIDGING DETAILS X, Y, Z, YY                      |
| 6-A83-34   | HORIZONTAL TRUSSES H11, H13                       |
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| 6-A83-36   | HORIZONTAL TRUSSES H18, H19                       |
| 6-A83-37   | HORIZONTAL TRUSSES H40, H41                       |
| 6-A83-38   | HORIZONTAL TRUSS DETAILS A1, B1, C1               |

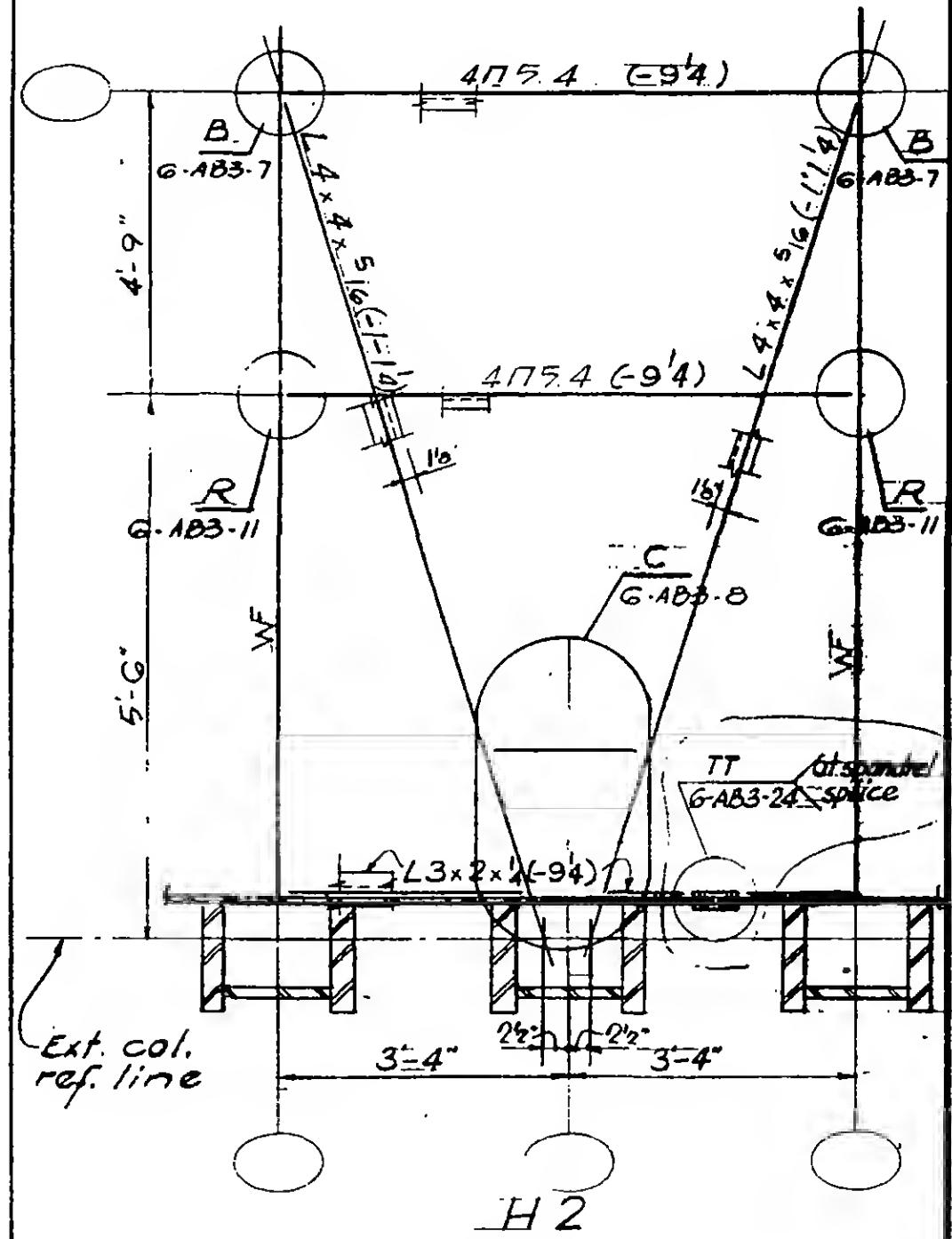
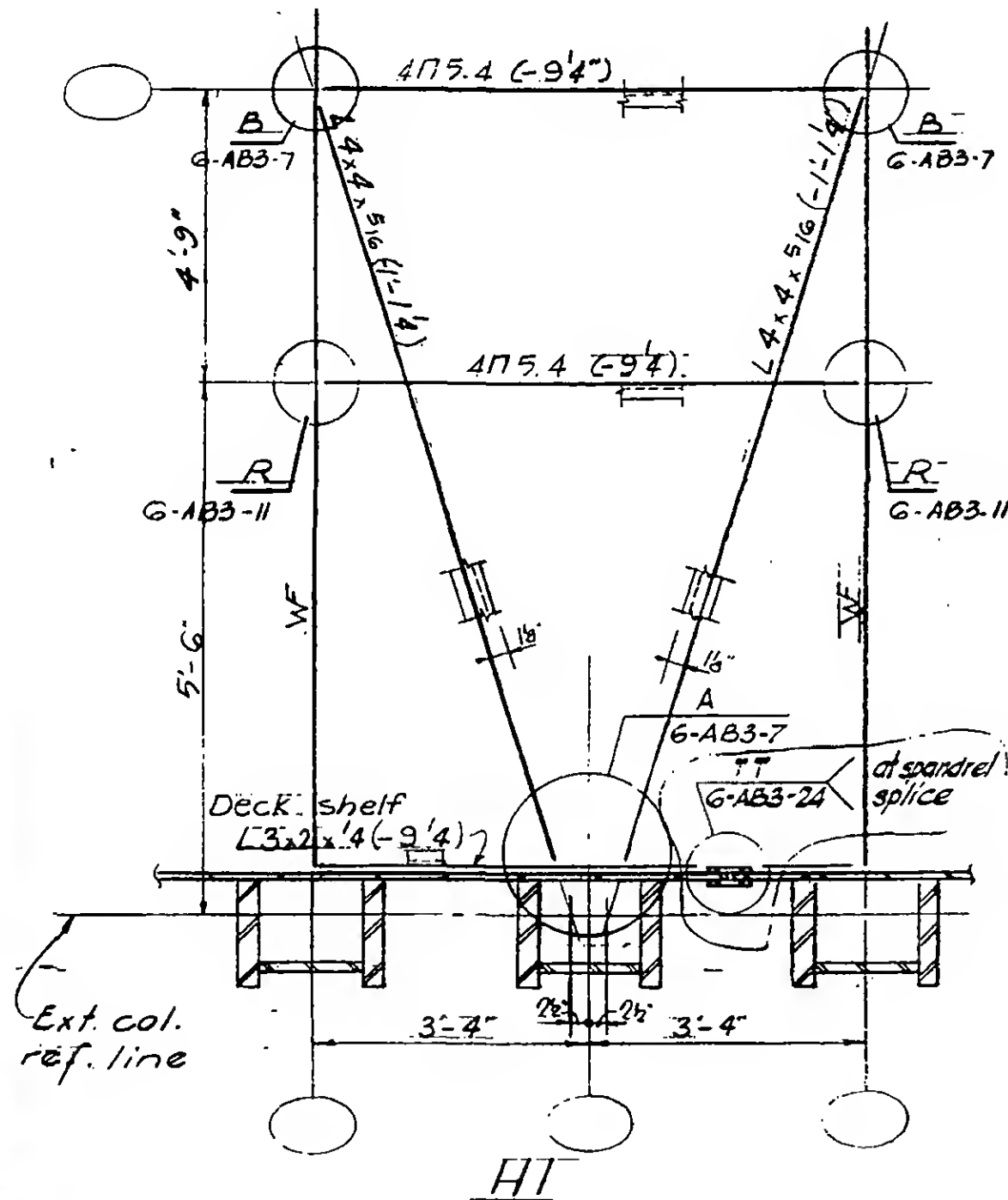
## GENERAL NOTES.

1. ALL MATERIAL AND LABOR CONTRACT WTC 226.00 EXCEPT AS NOTED.
2. FOR EXTERIOR WALL COLUMNS, SPANDRELS AND SEATS SEE DRAWING BOOK 2 (FLOORS 7 & 9) WTC 213.00 AND DRAWING BOOK 4 (FLOORS 10 TO 110) WTC 214.00.



REVISIONS

8-29-68



6-AB3-2

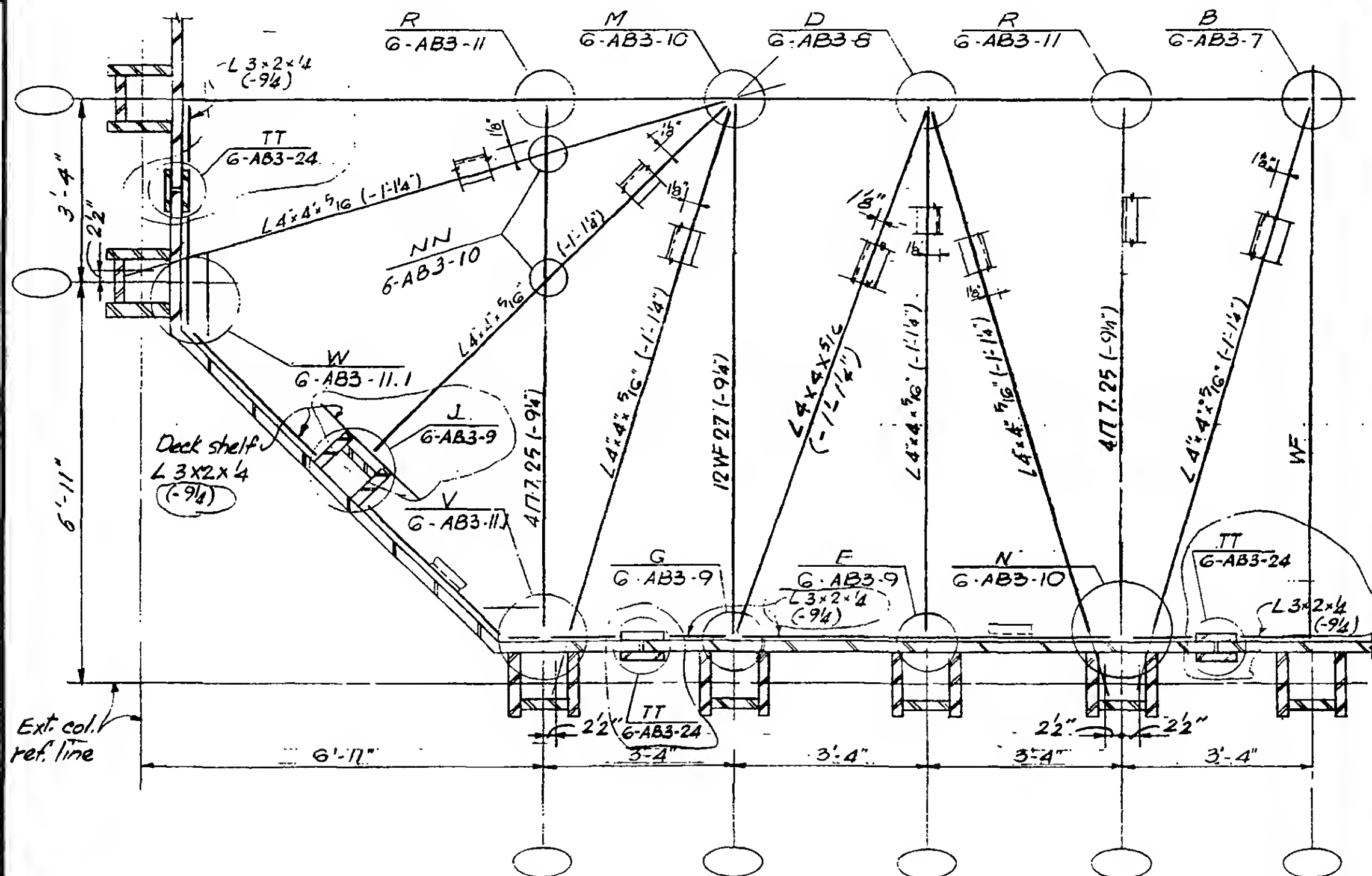
PROJECT THE WORLD TRADE CENTER

TITLE HORIZONTAL TRUSSES H3 &amp; H4

DATE 12-20-67

REVISIONS

8-29-68

H3H4 opp. hand.

G-AB3-3



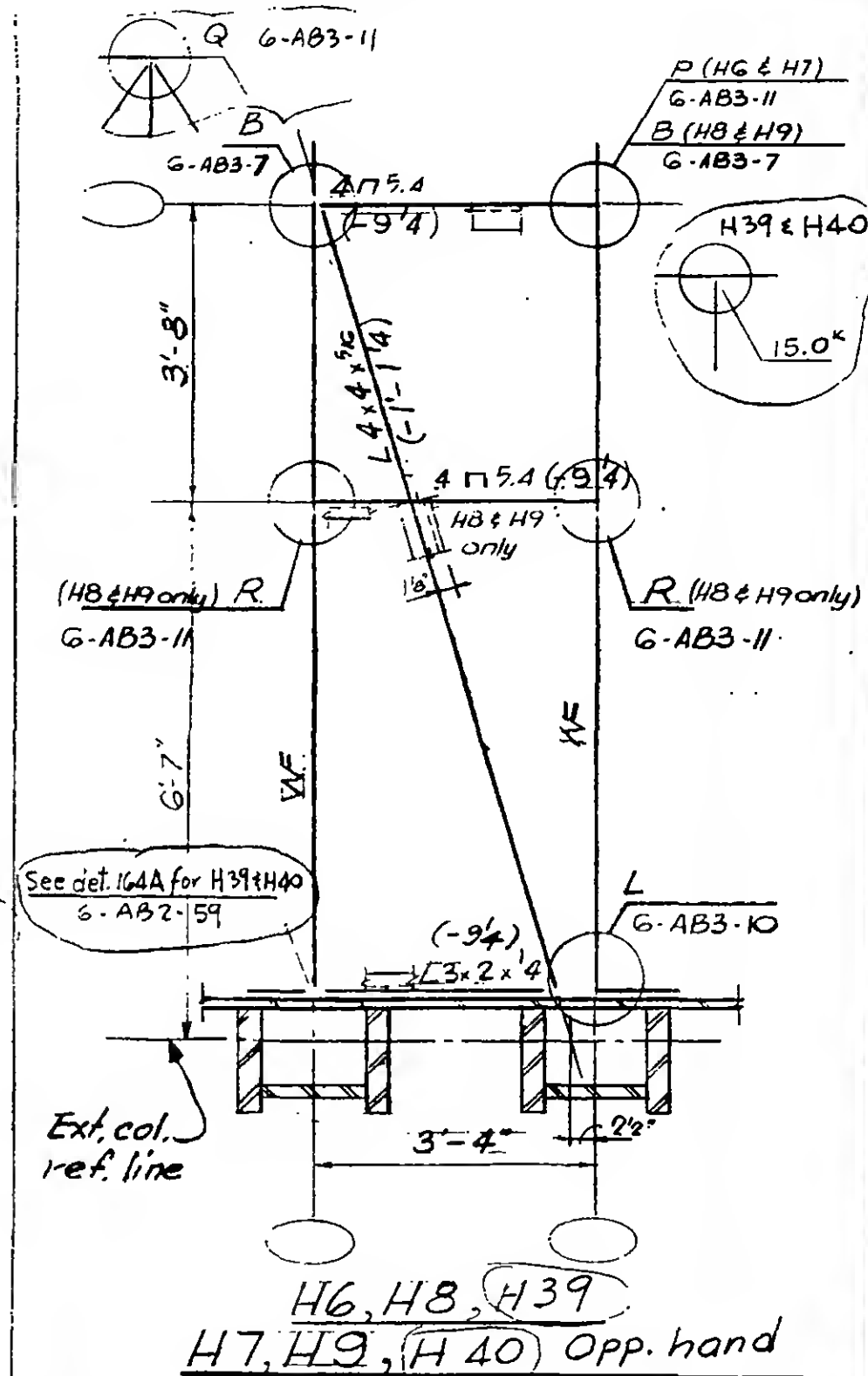
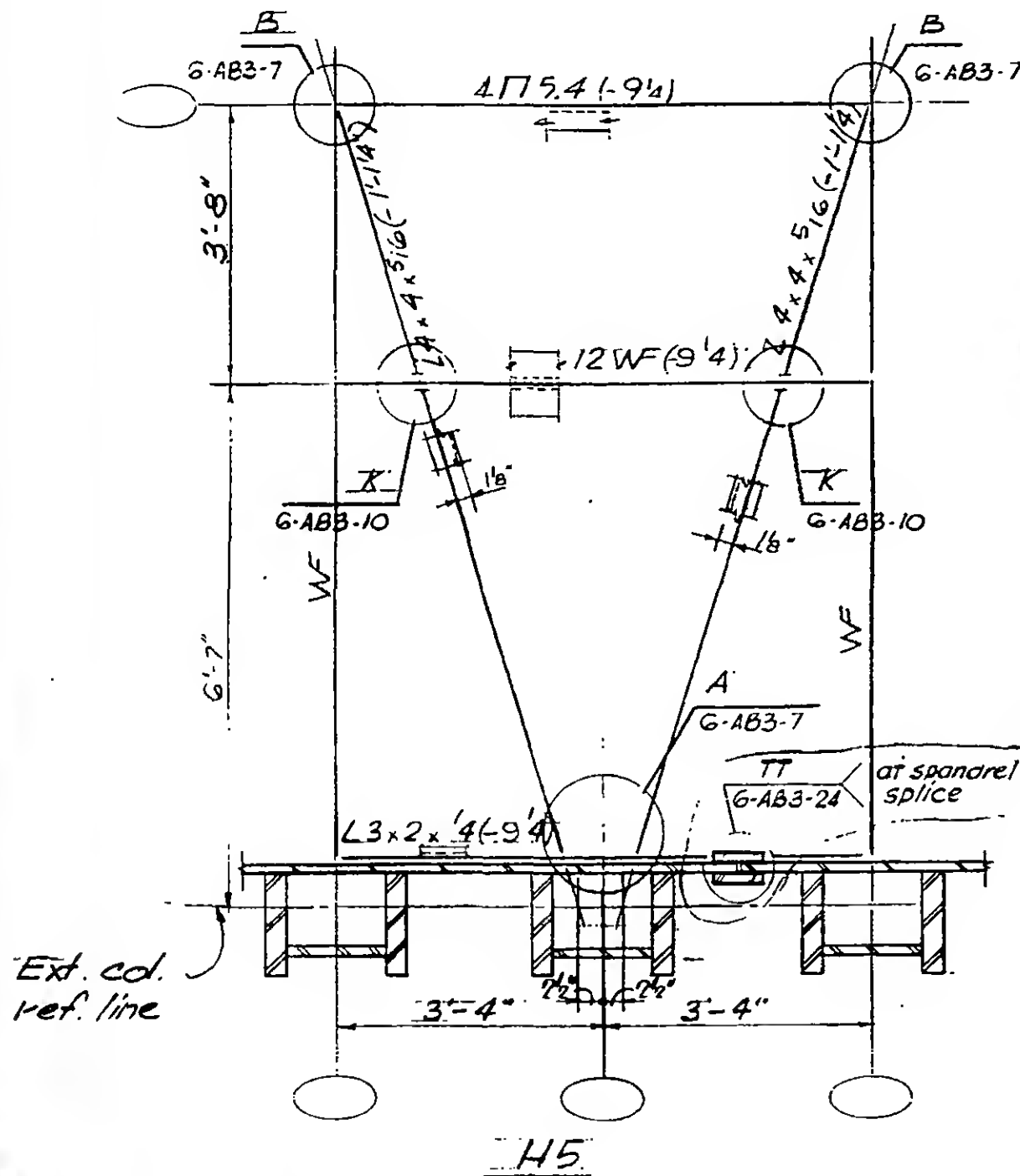
PROJECT THE WORLD TRADE CENTER

TITLE HORIZONTAL TRUSSES H5 TO H9, H39 & H40

DATE 12-20-67

REVISIONS

1-24-68  
8-29-68



G-AB3-4

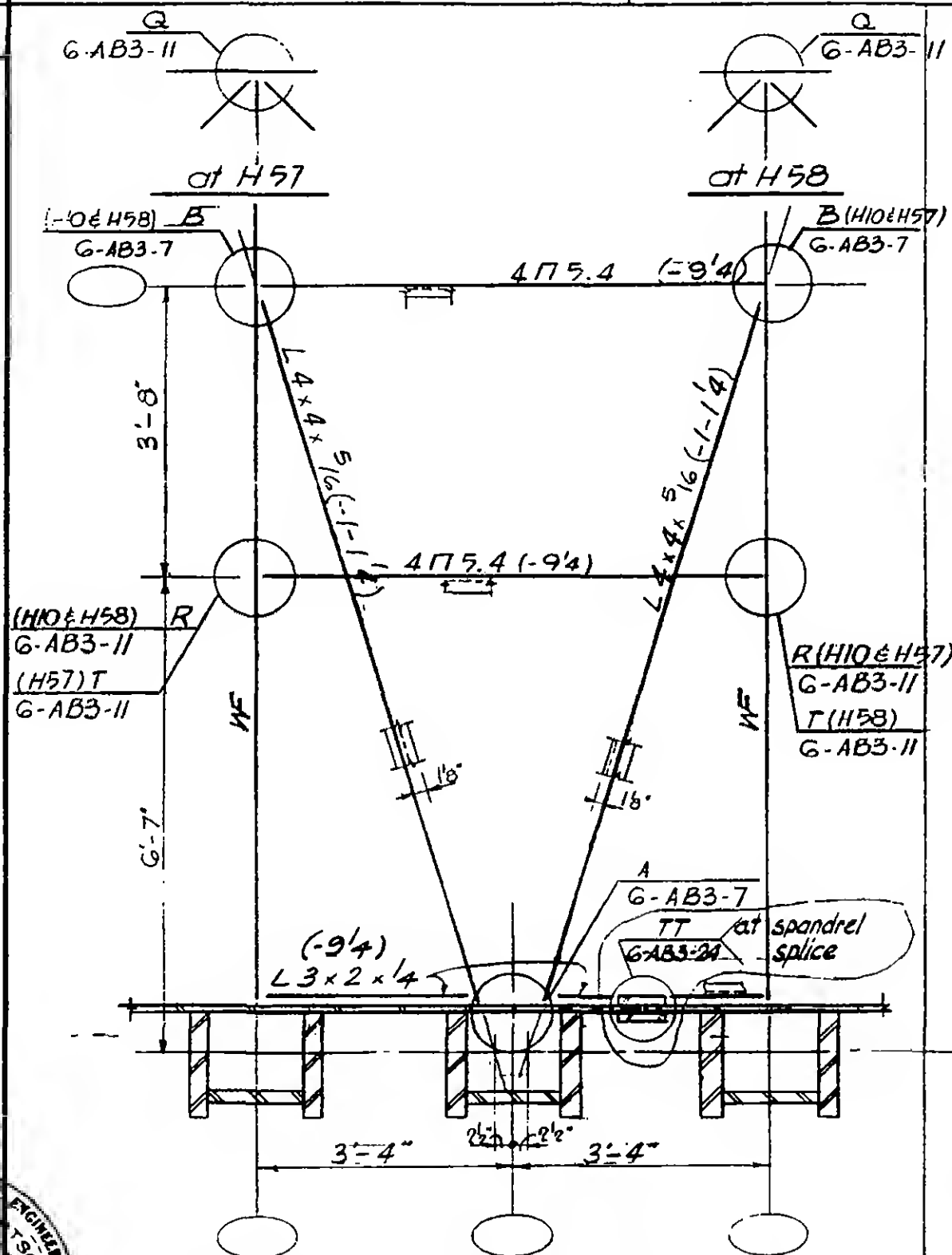
PROJECT THE WORLD TRADE CENTER

TITLE HORIZONTAL TRUSSES H10, H12, H57, H58

DATE 12-20-67

REVISIONS

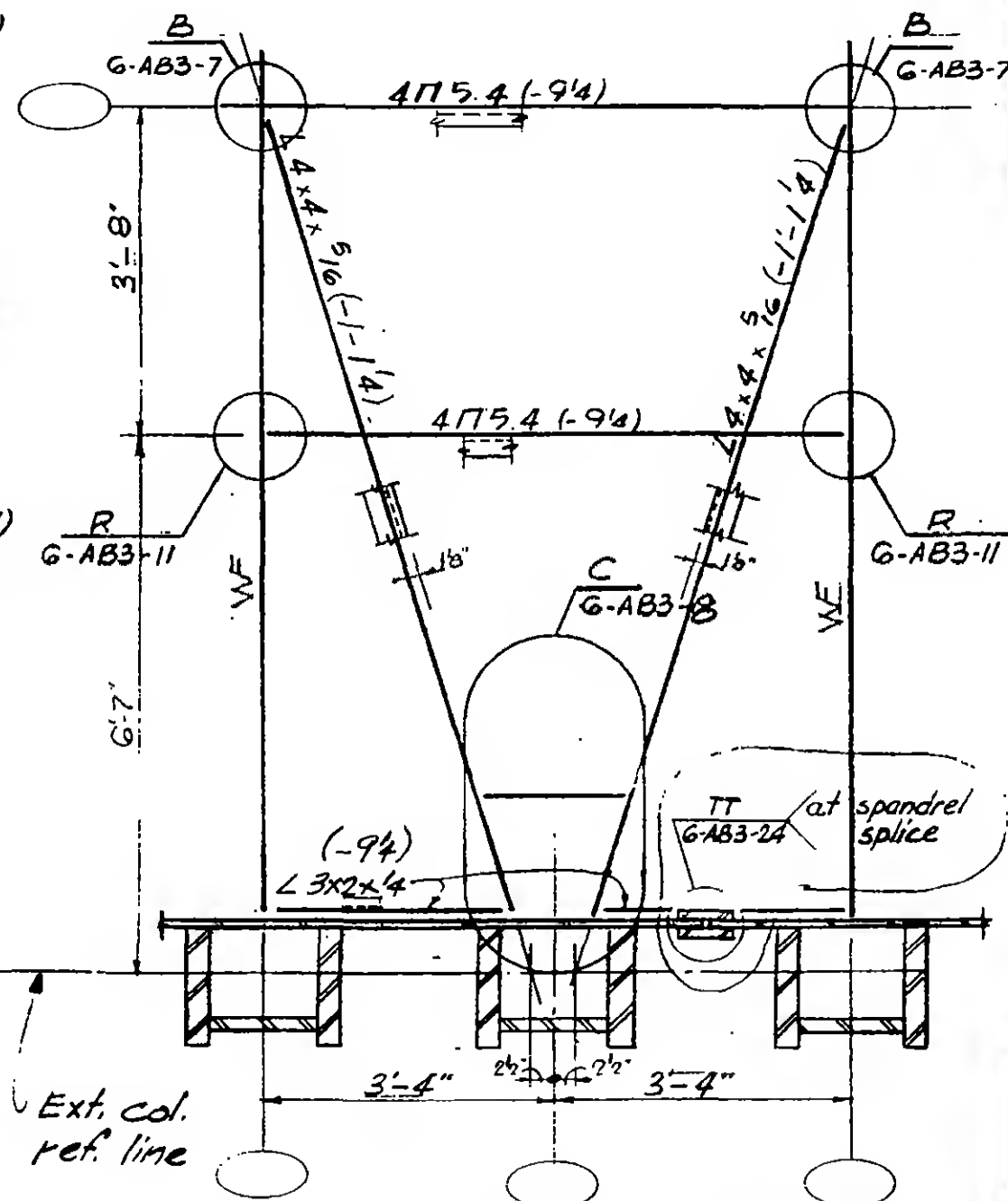
1-24-68  
8-29-68



H10

H57 as noted

H58 as noted



H12

G-AB3-5



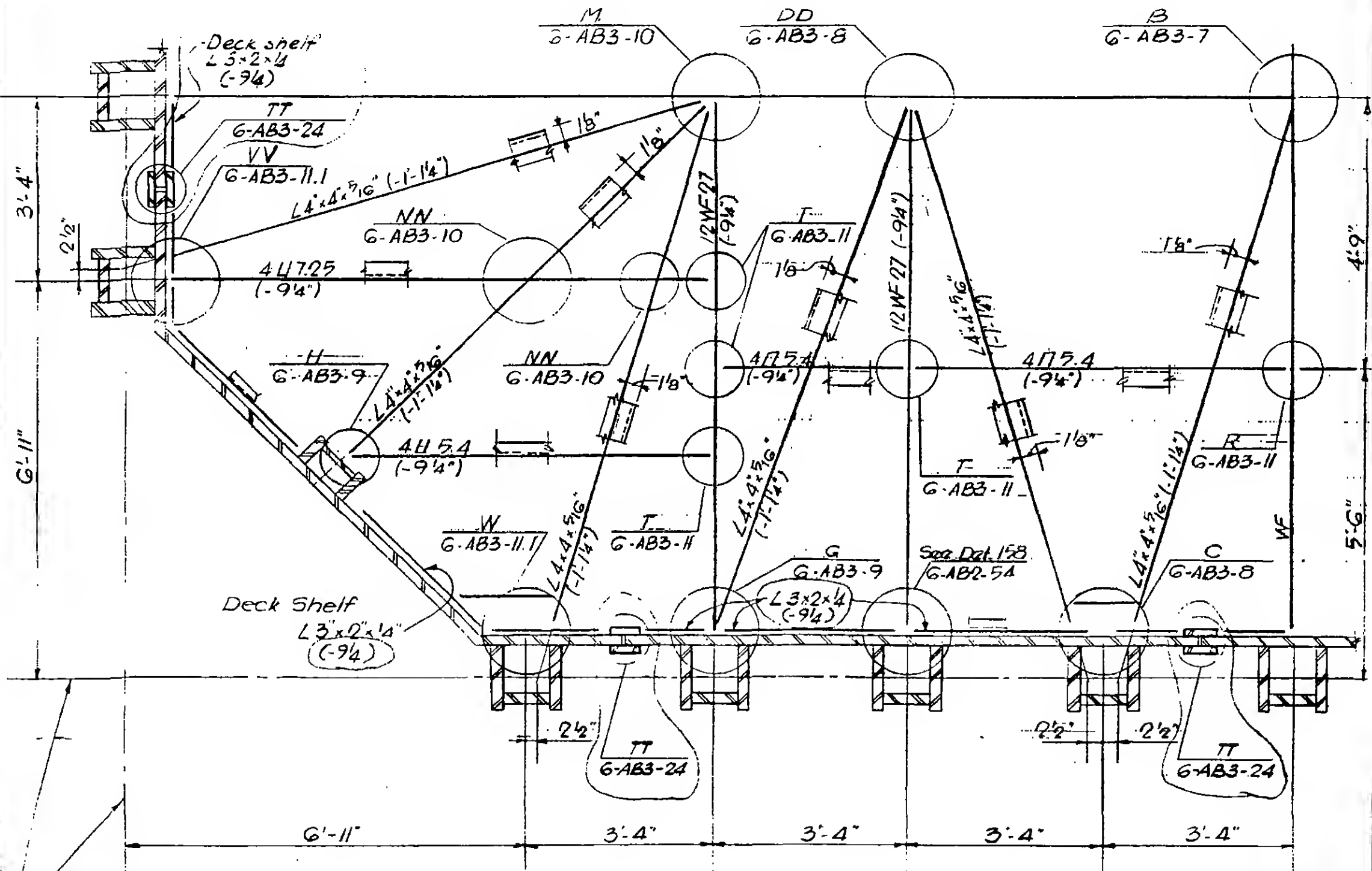
PROJECT THE WORLD TRADE CENTER

TITLE HORIZONTAL TRUSSES H14 &amp; H15

DATE 12.20.67

## REVISIONS

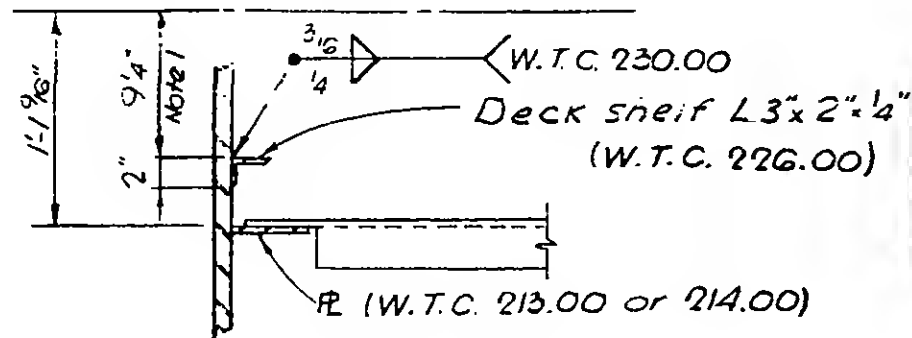
8-29-68

Ext. col.  
ref. lineH14  
H15 opp. hand

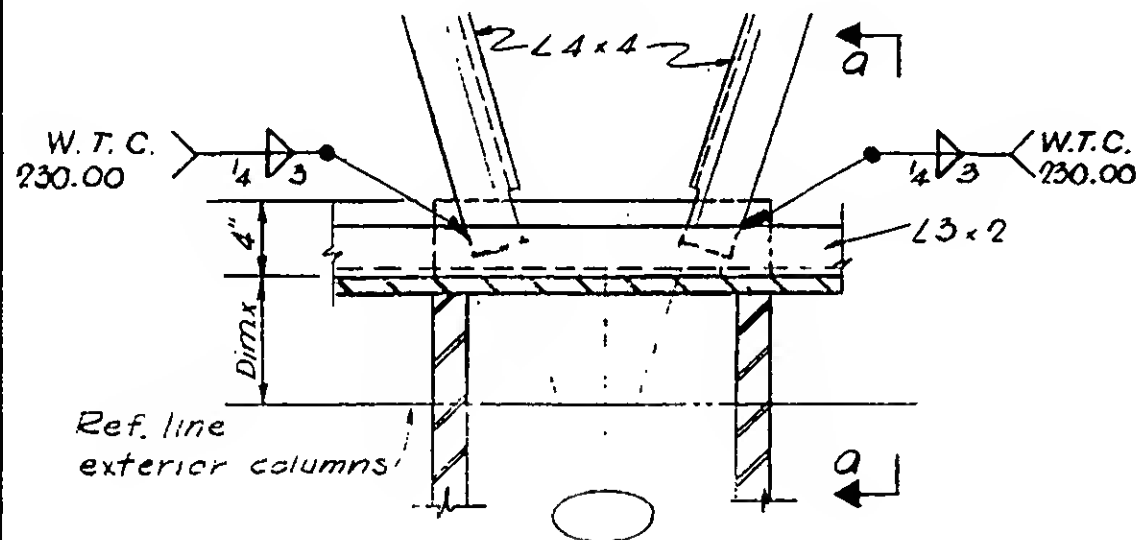
G-AB3-6

REVISIONS

Note: See approved steel deck shop drawings for locations where this dim. is 7<sup>3</sup>/<sub>4</sub>".

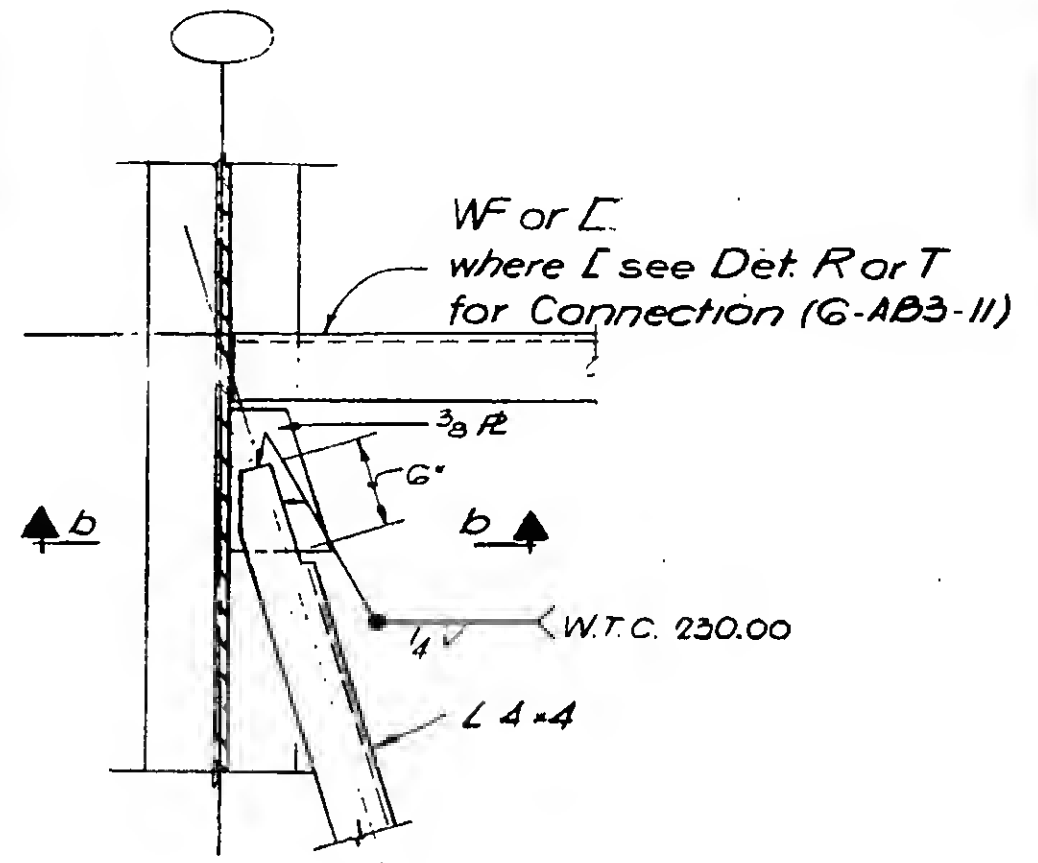


SECTION a-a

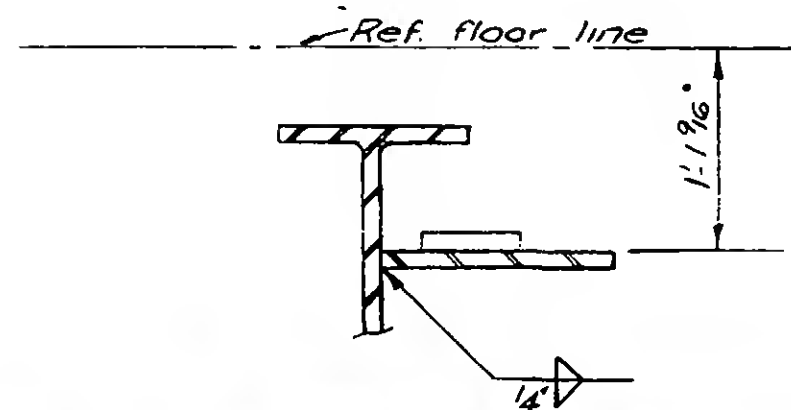


Detail A

| Floor   | Dim. X                           |
|---------|----------------------------------|
| 9       | 7 <sup>7</sup> / <sub>8</sub> "  |
| 41 & 43 | 7 <sup>7</sup> / <sub>16</sub> " |
| 75 & 77 | 7 <sup>1</sup> / <sub>16</sub> " |
| 107     | 6 <sup>7</sup> / <sub>8</sub> "  |



Detail B



Section b-b

6-AB3-7



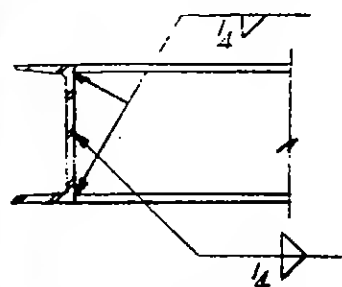
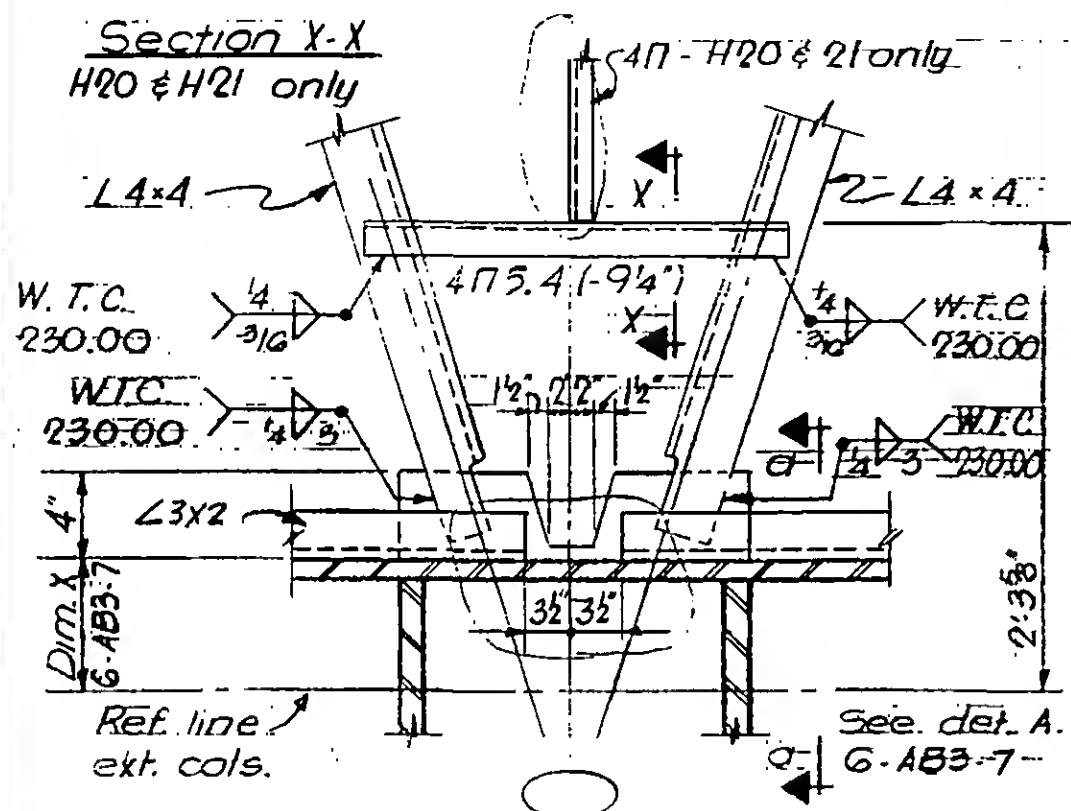
PROJECT THE WORLD TRADE CENTER

TITLE HORIZONTAL TRUSS- DETAILS C, D &amp; DD

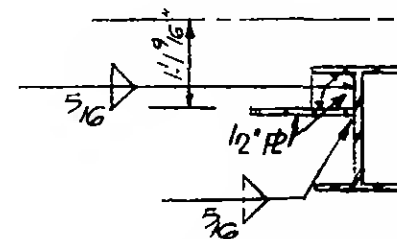
DATE 12-20-67

## REVISIONS

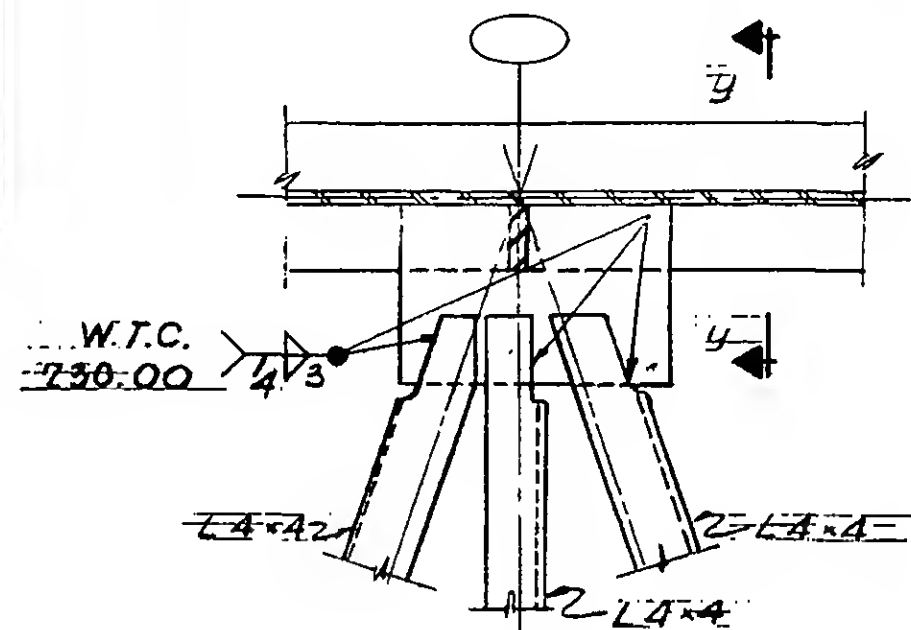
8-29-68

Section X-X  
H20 & H21 only

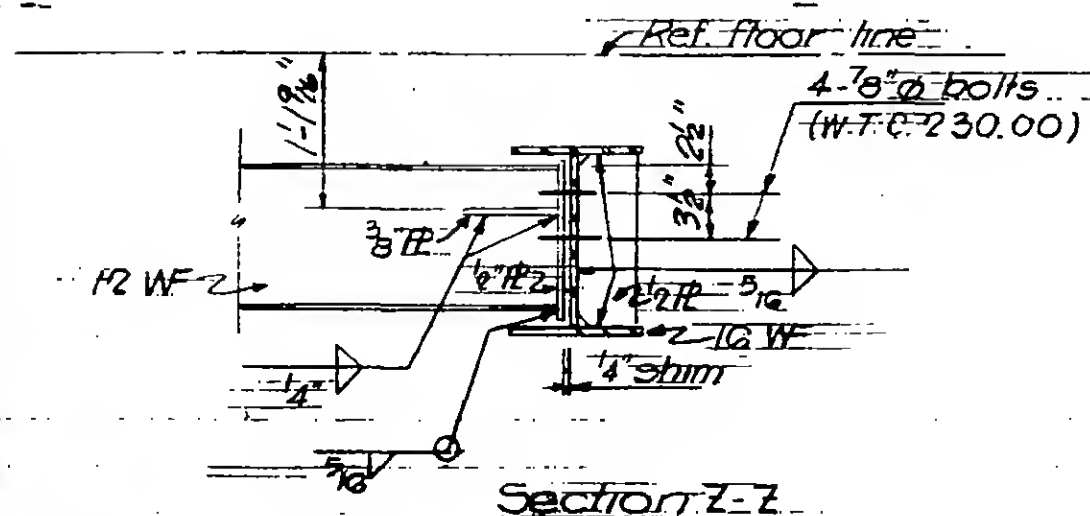
Detail C



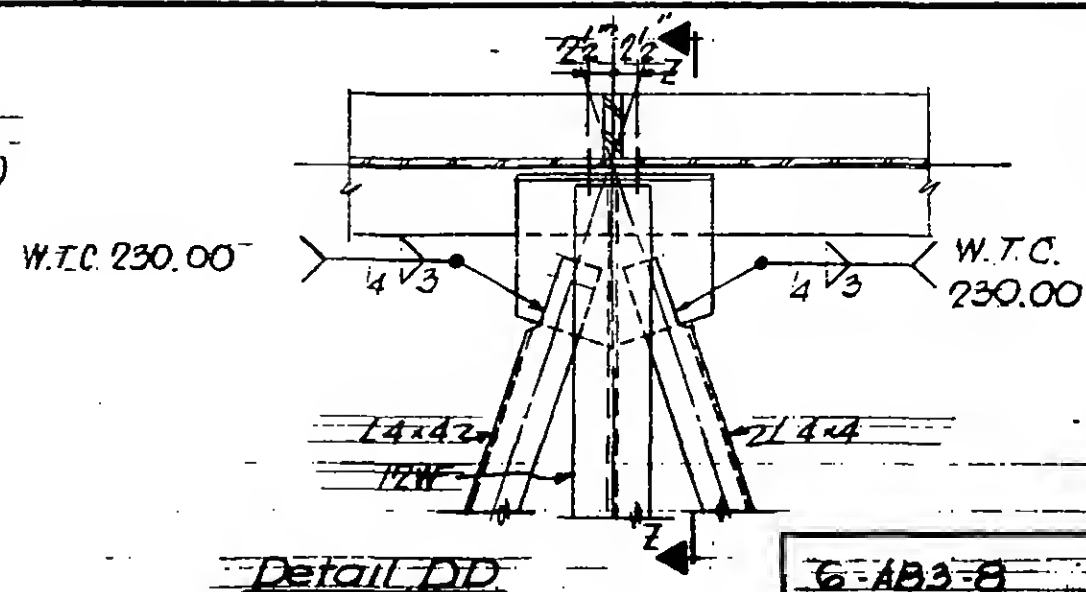
Section y-y



Detail D



Section Z-Z



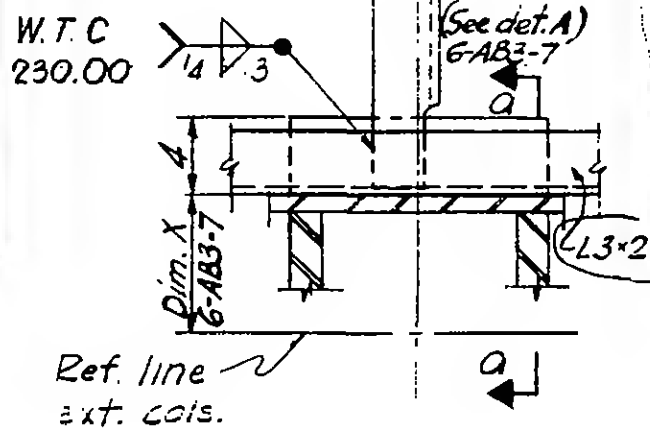
Detail DD

G-AB3-8

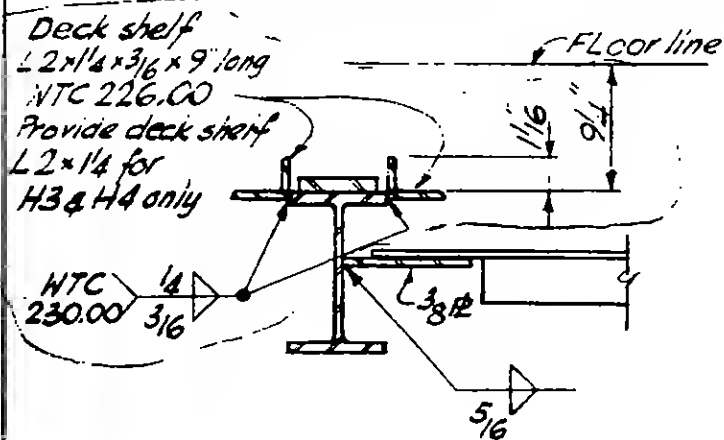


REVISIONS

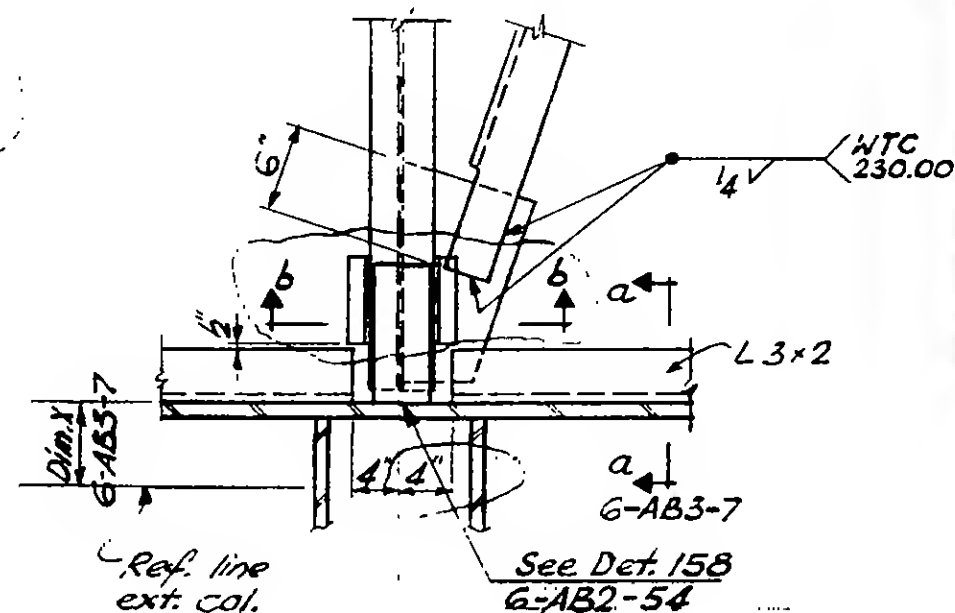
8-29-68



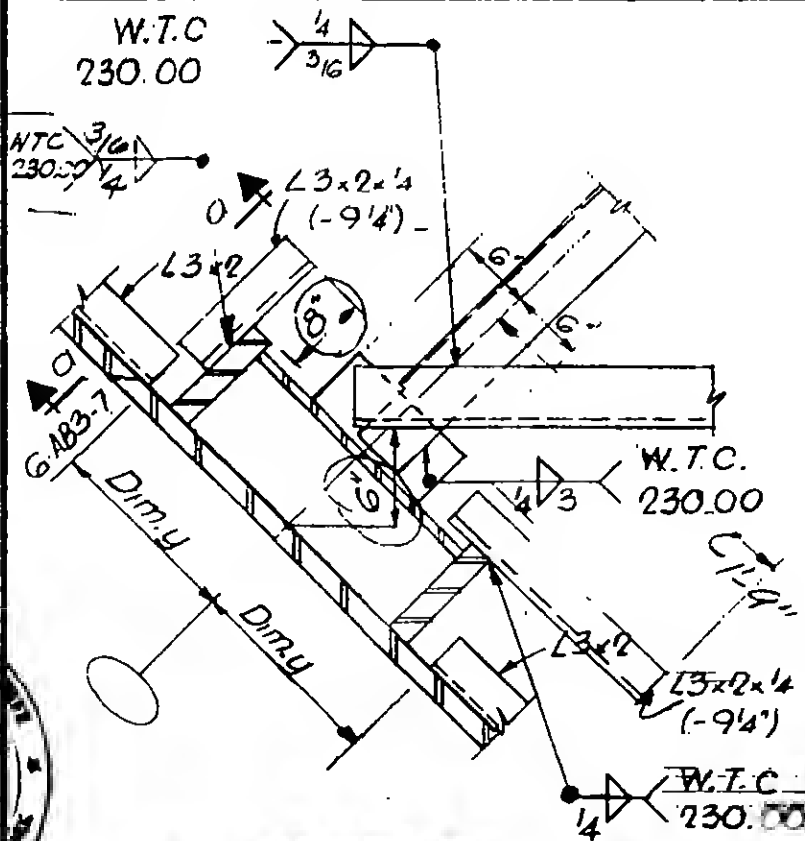
Detail F



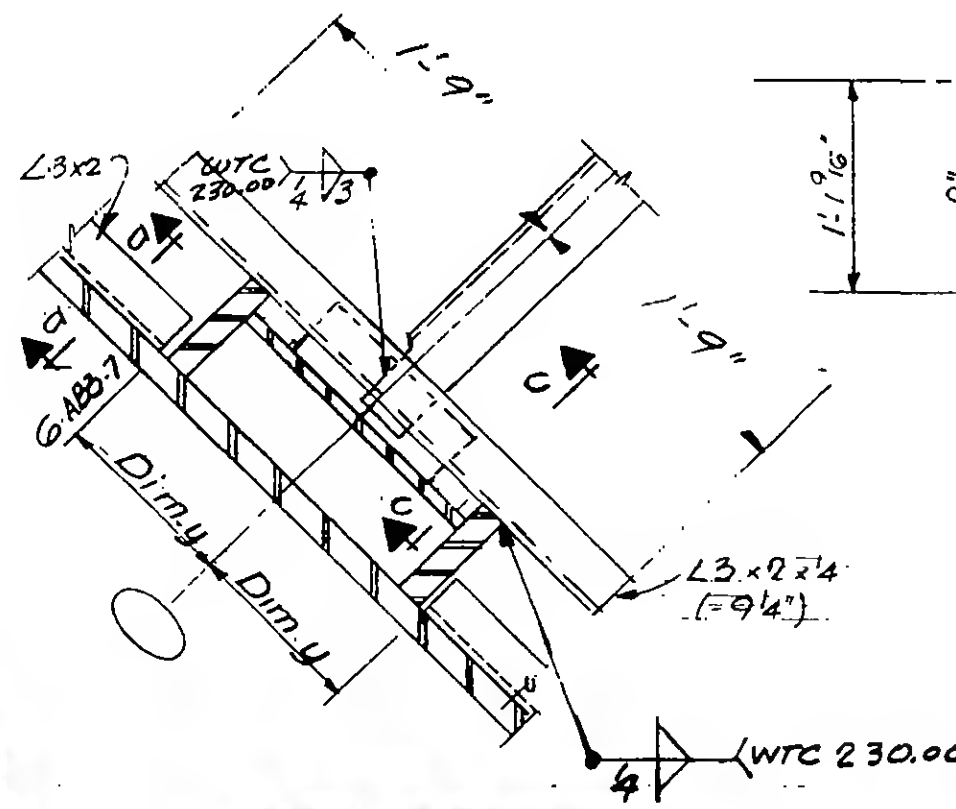
Section b-b



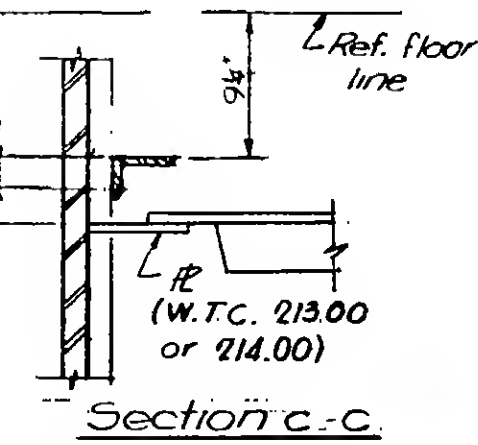
Detail G



Detail H



Detail J



Section c-c

| Dim. y     |           |           |
|------------|-----------|-----------|
| Col. No.   | 100 & 300 | 200 & 400 |
| 77, 75 & 9 | 11"       | 8"        |
| 41 & 43    | 8"        | 11"       |

6-AB3-9



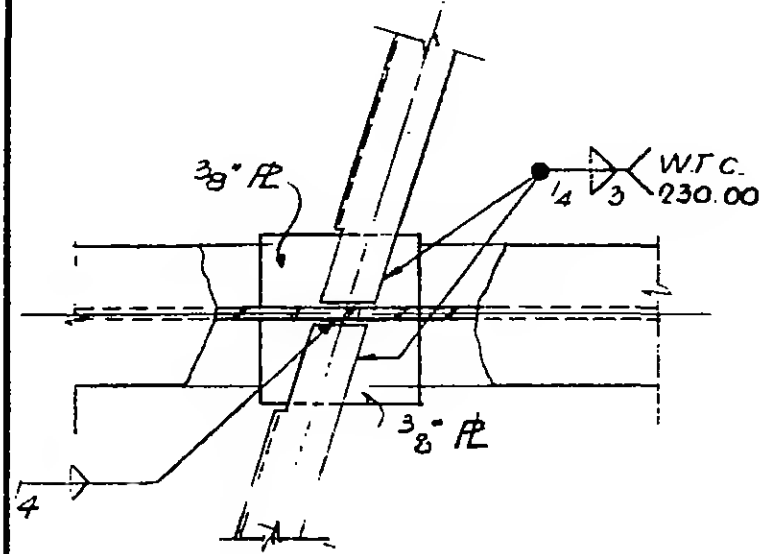
PROJECT THE WORLD TRADE CENTER

TITLE HORIZONTAL TRUSS-DETAILS K, L, M, N, MM, & NN

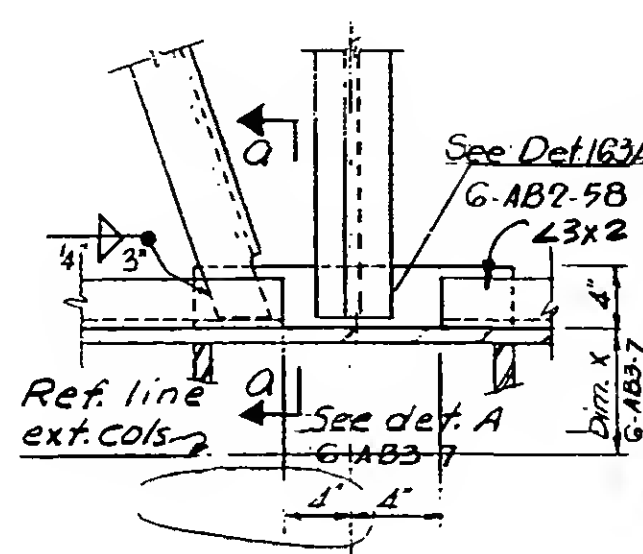
DATE 12-20-67

REVISIONS

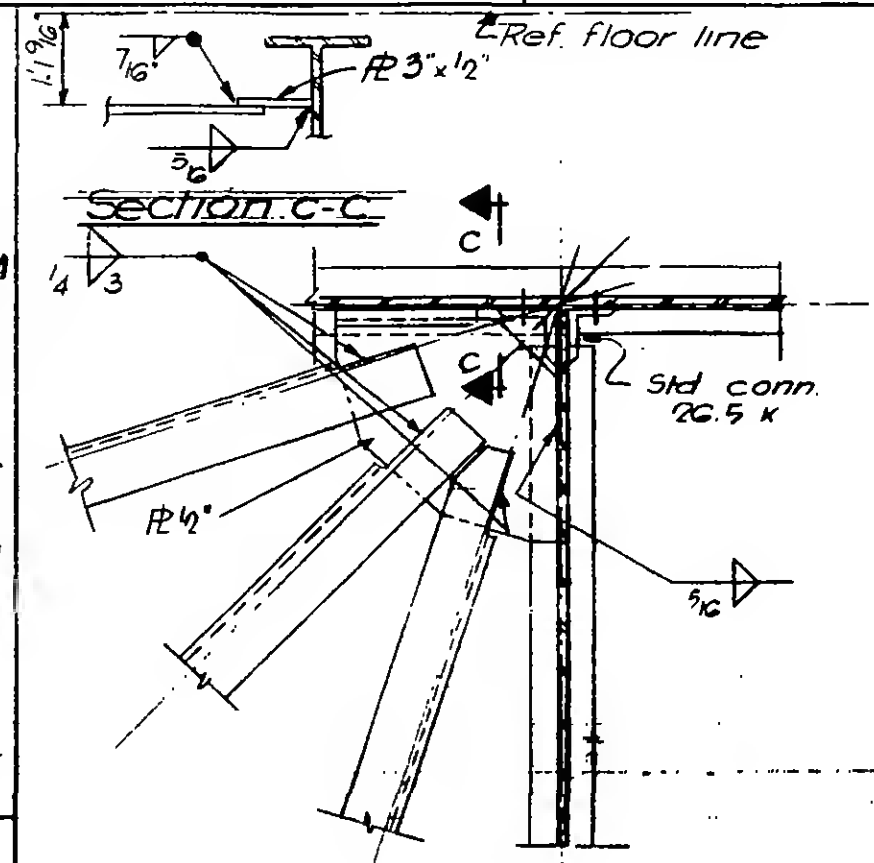
8-29-68



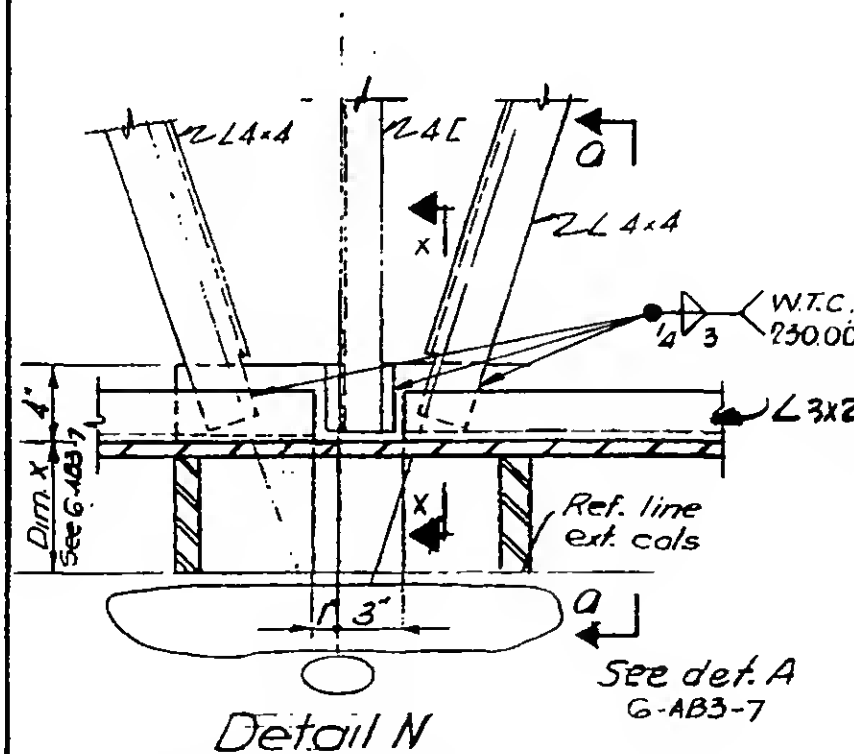
Detail K



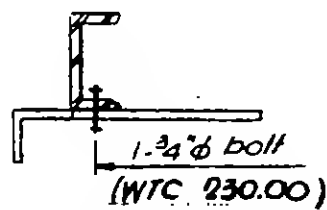
Detail L



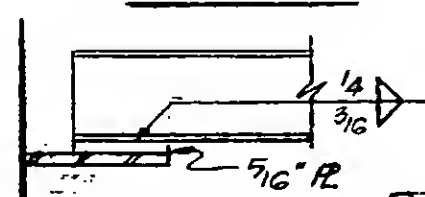
Detail M



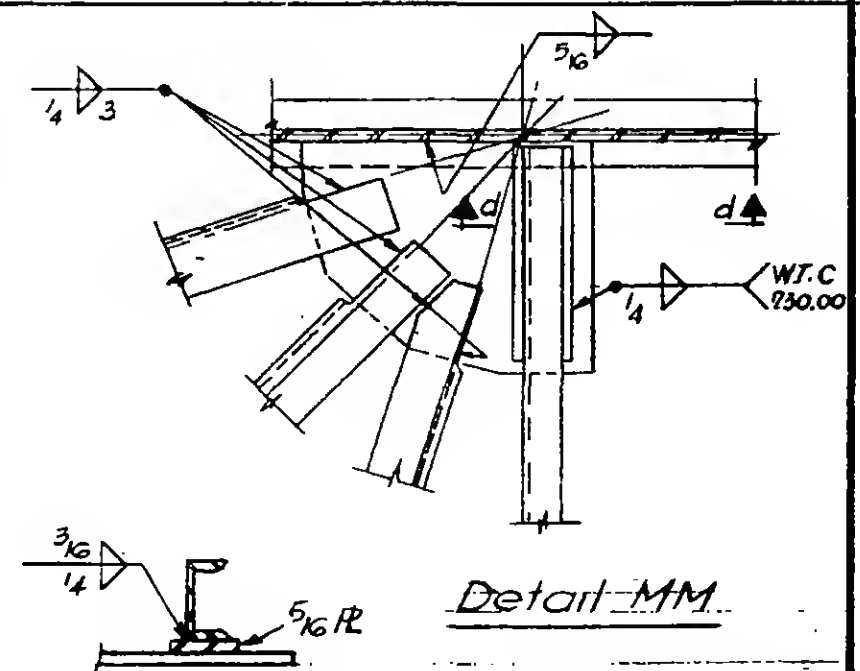
Detail N



Detail NN



Section x-x

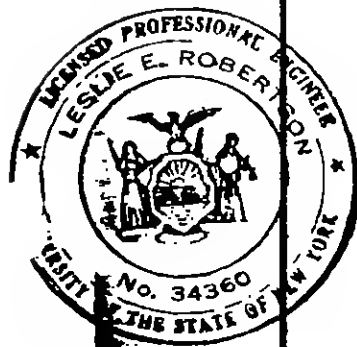


Detail MM

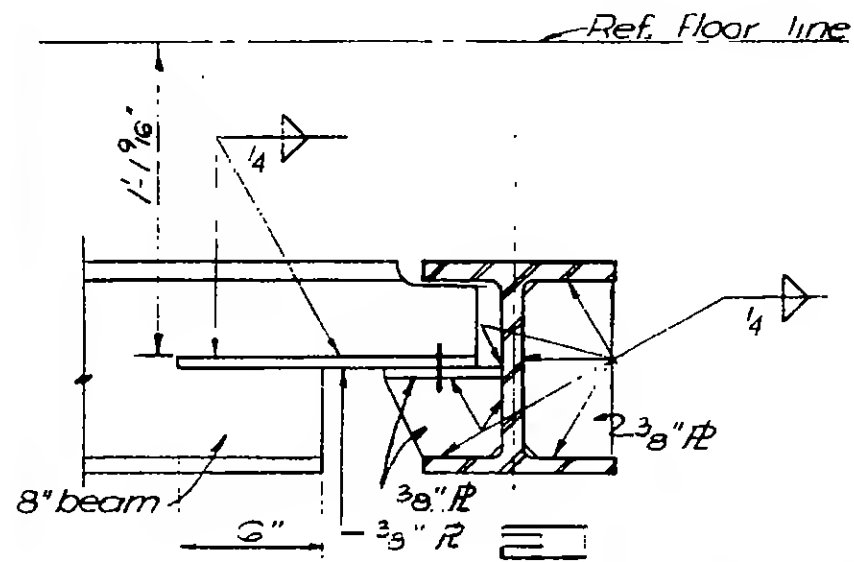


Section d-d

G-AB3-10

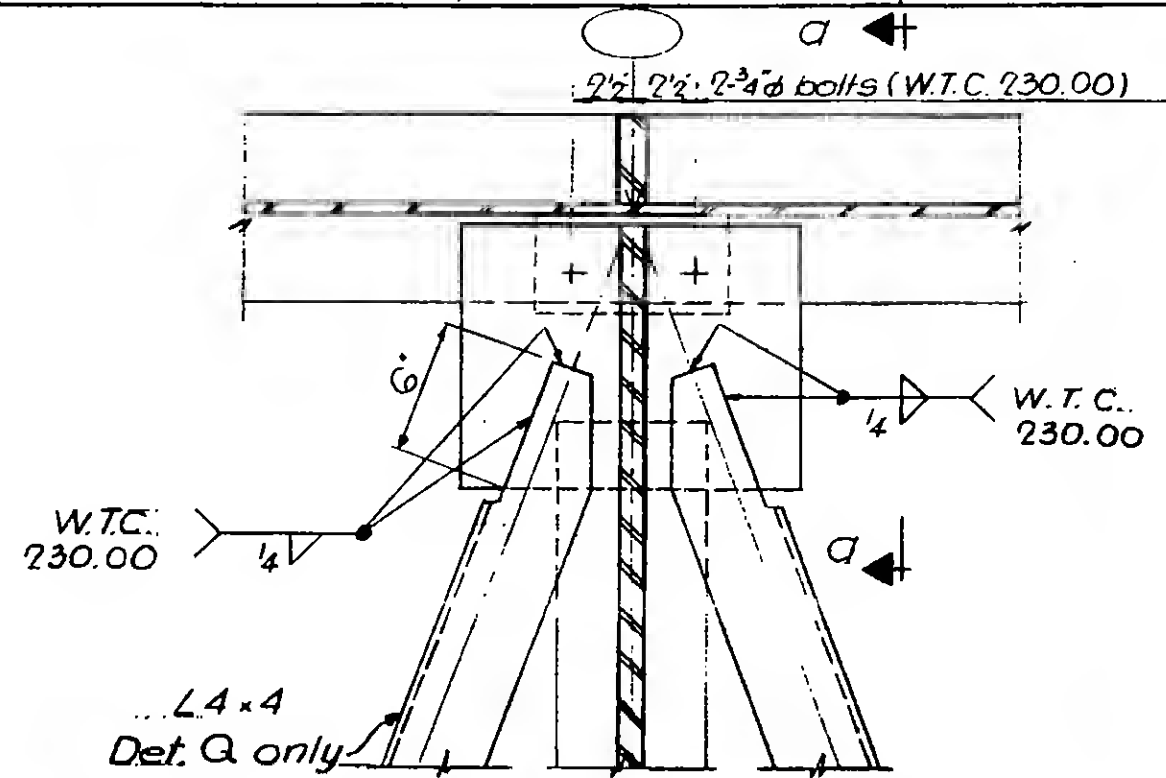


REVISIONS

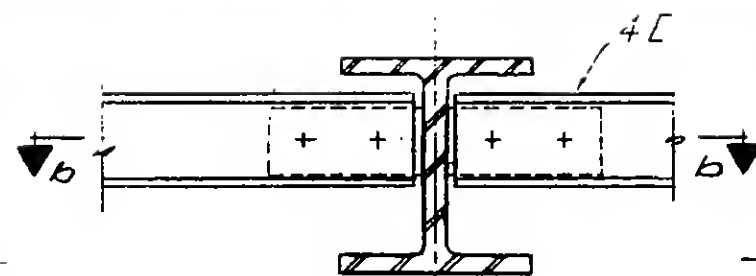


Section a-a

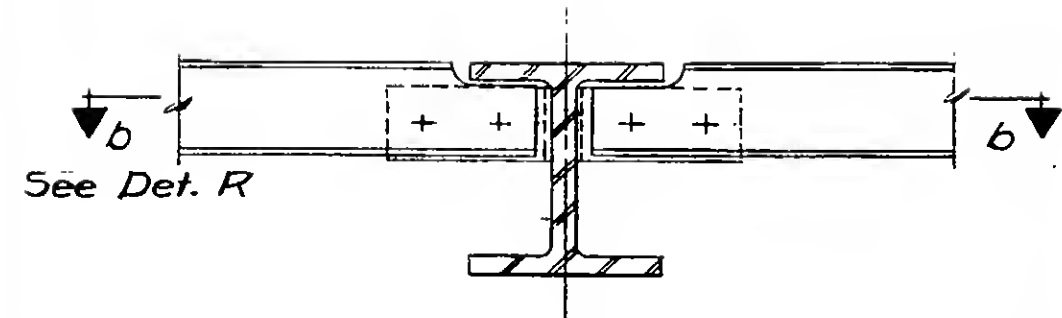
Detail P  
Detail Q as noted



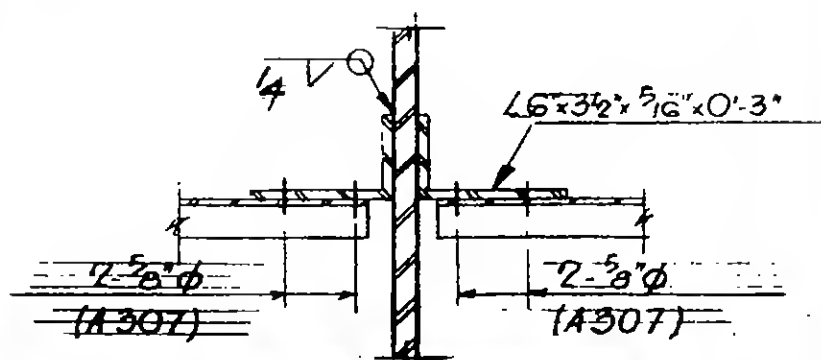
Plan



Detail R



Detail T

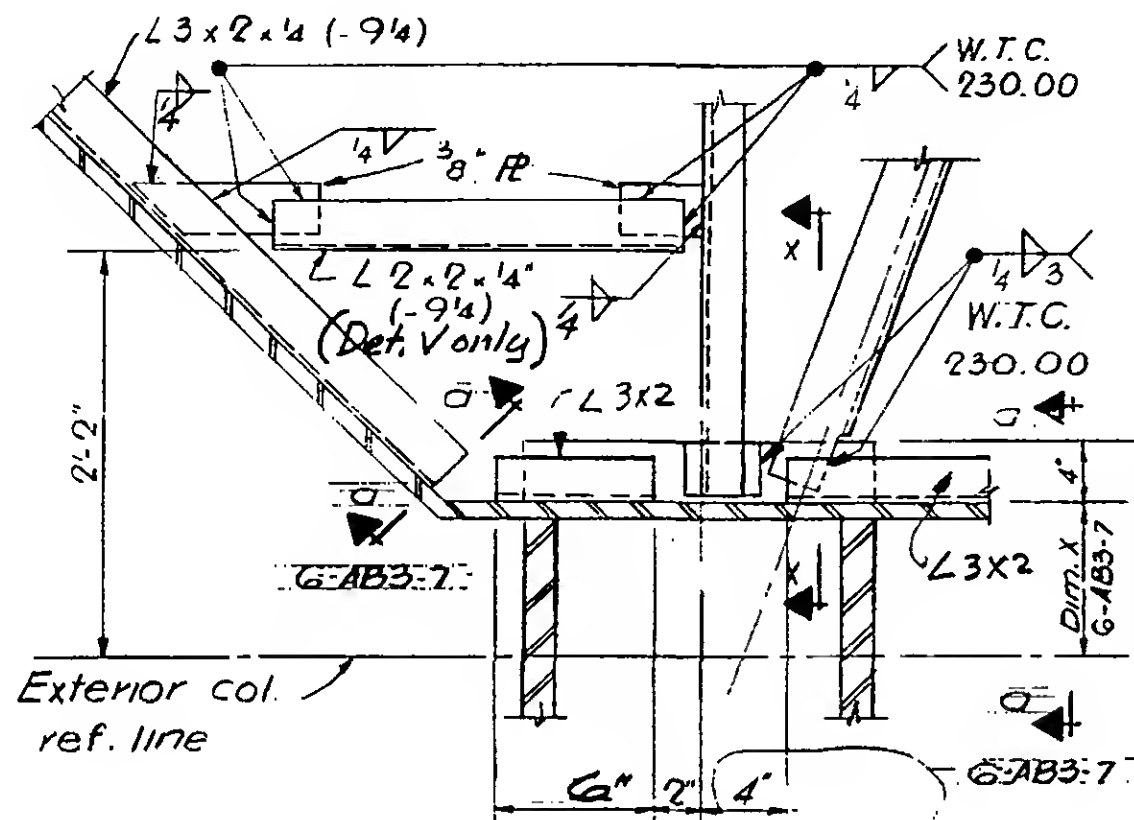


Section b-b

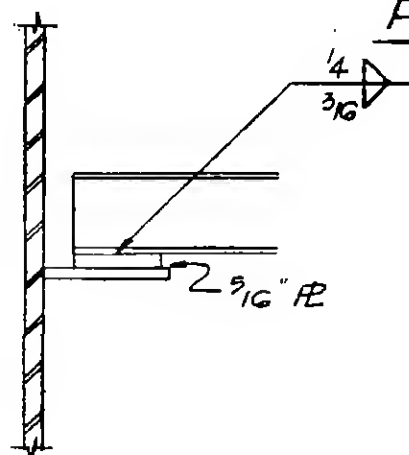


## REVISIONS

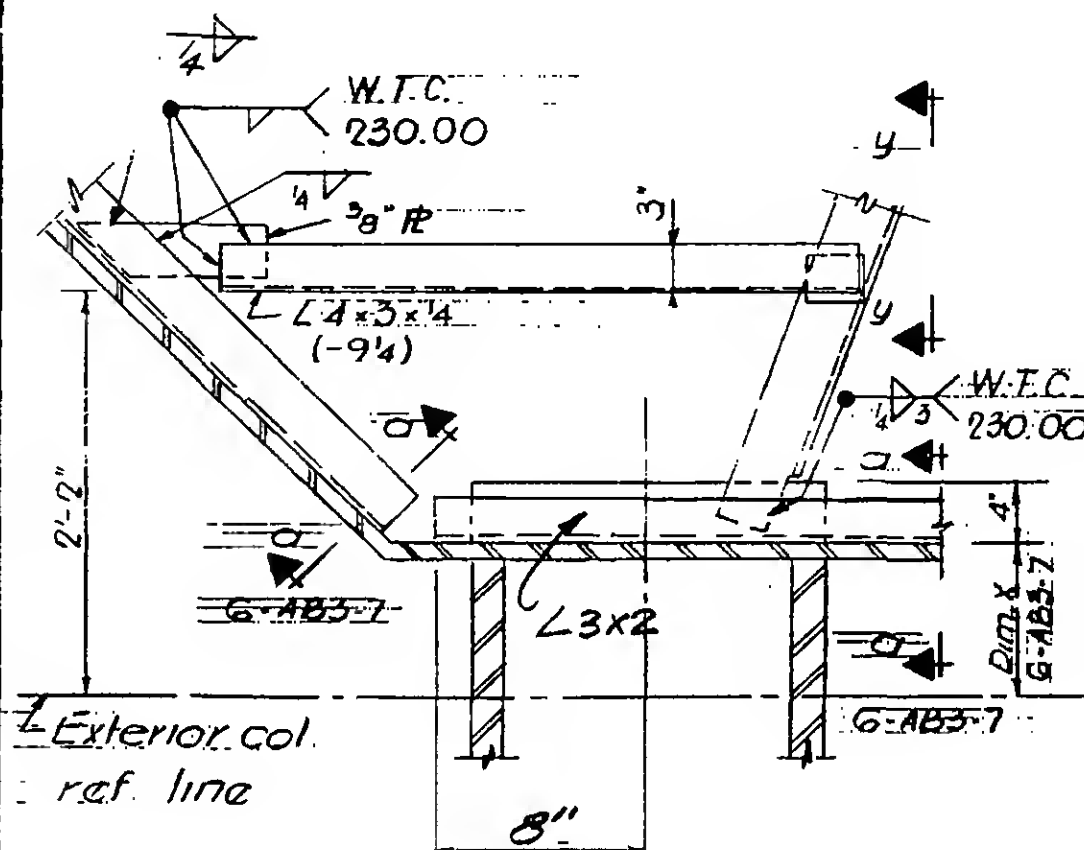
8-29-68



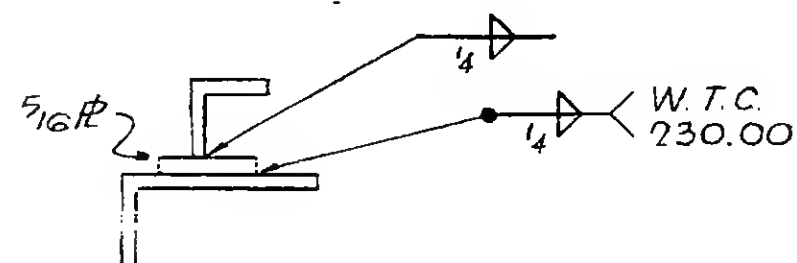
Plan



Section X-X

Detail V  
Detail VV as noted

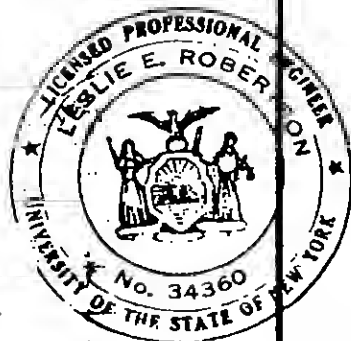
Plan



Section y-y

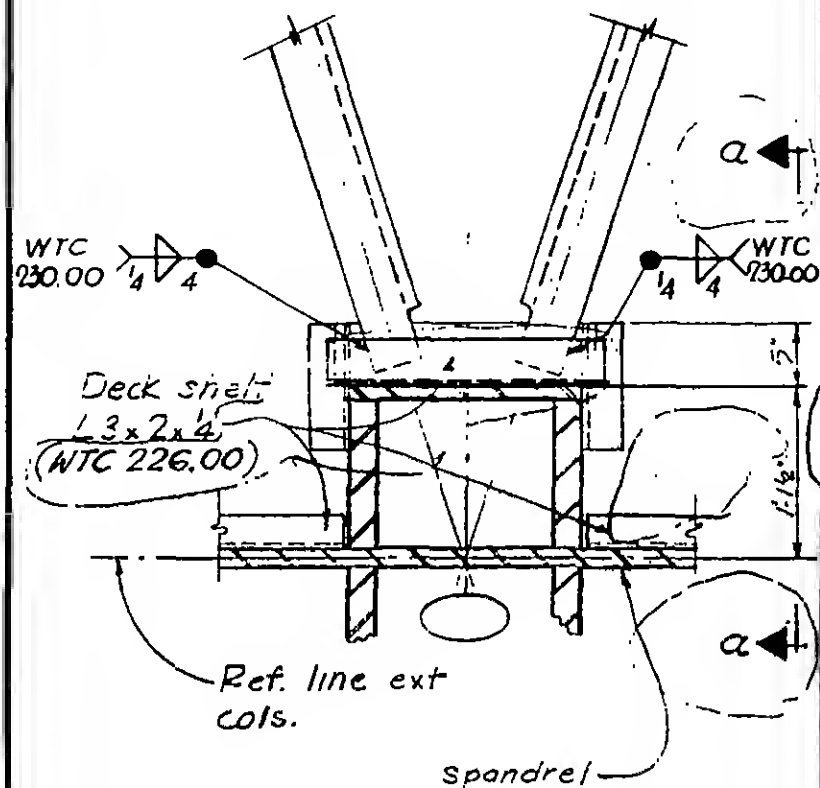
Detail W

G-AB3-11.1

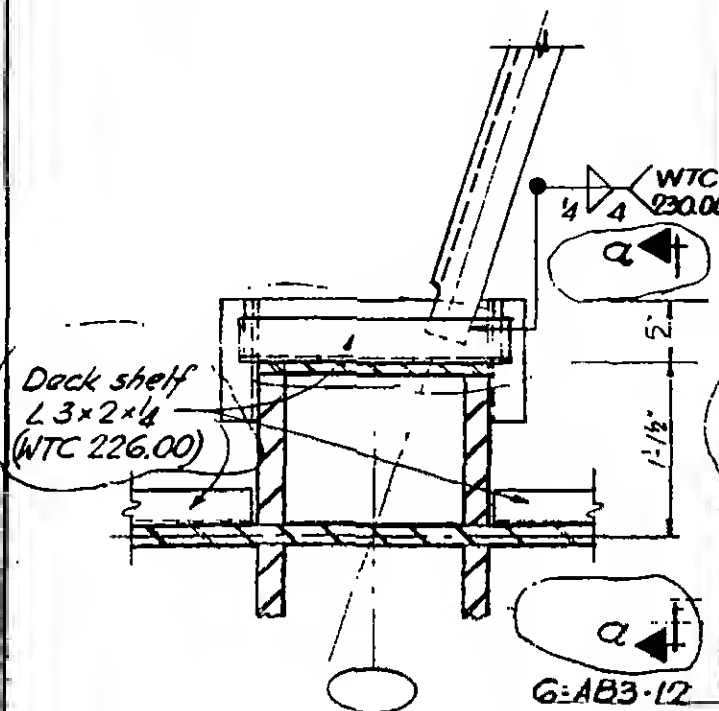


REVISIONS

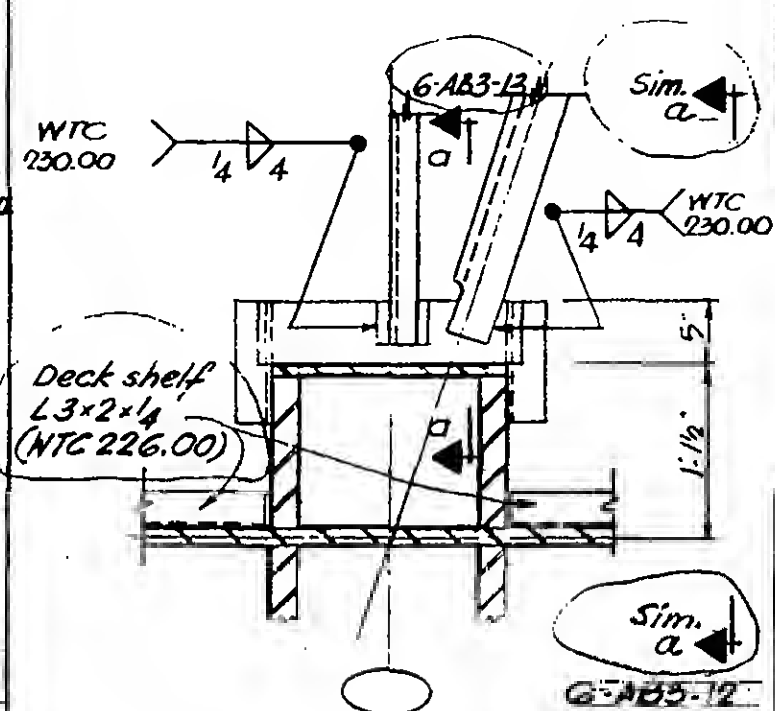
8-29-68



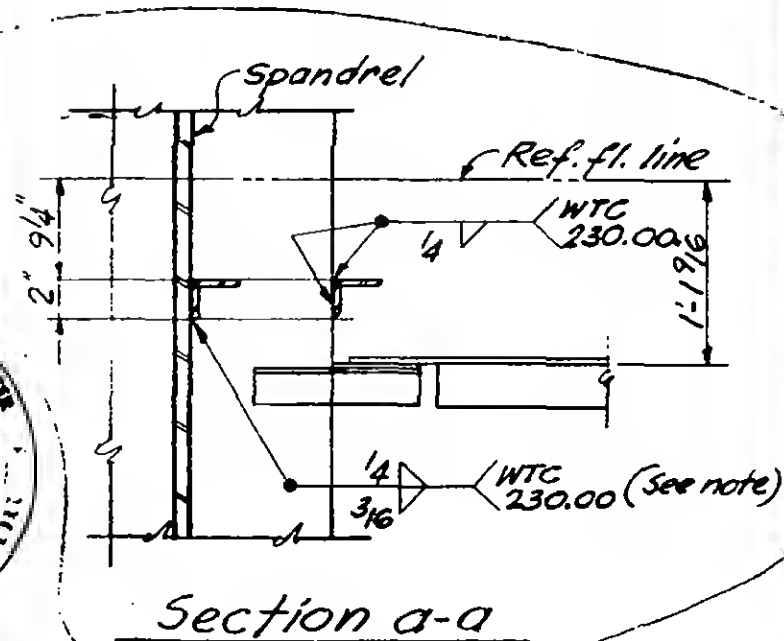
Detail AA



Detail BB

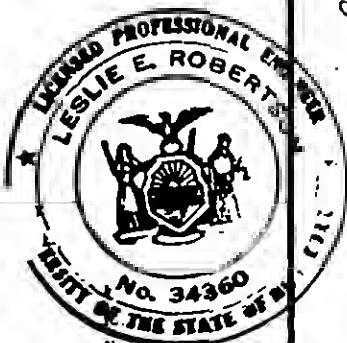


Detail CC



Notes:  
1) At spandrel splice for position and weld requirement of deck shelf angle, see Det. UU G-AB3-25

G-AB3-12



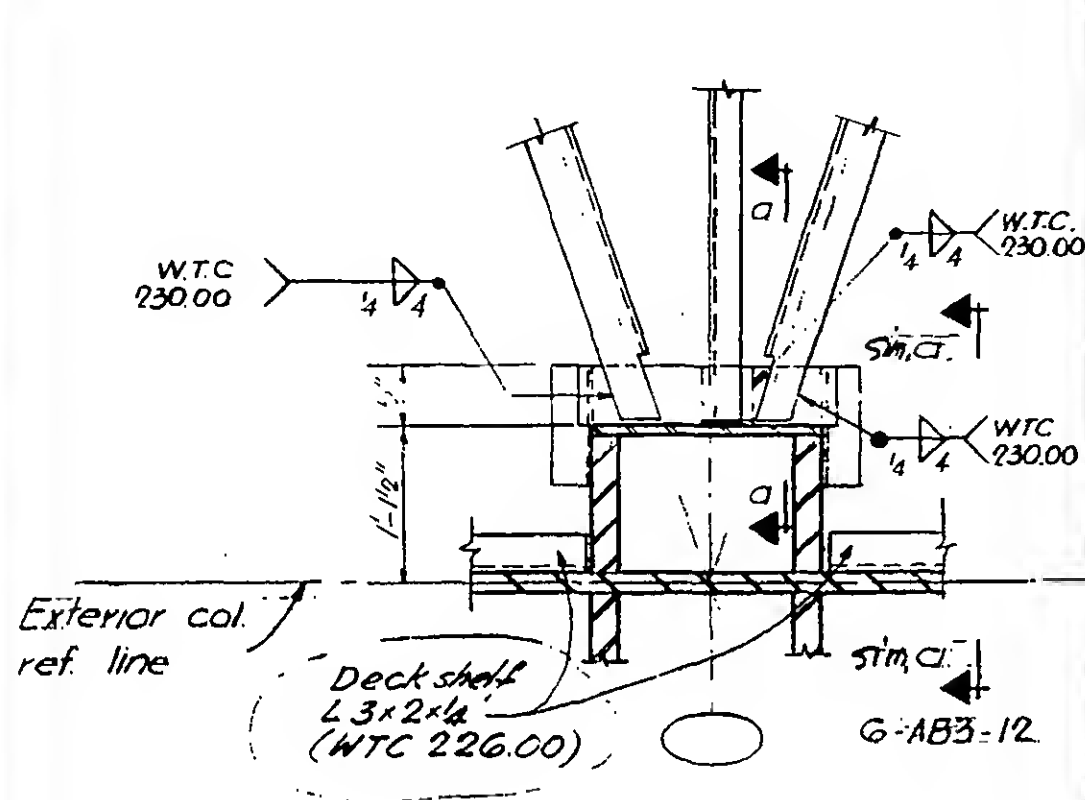
PROJECT THE WORLD TRADE CENTER

TITLE HORIZONTAL TRUSS- DETAILS EE & FF

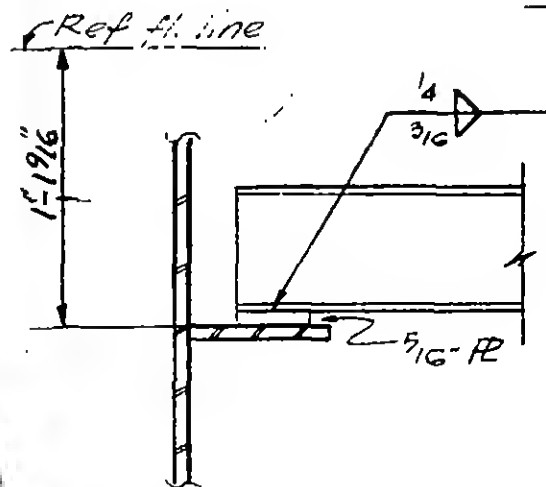
DATE 12-20-67

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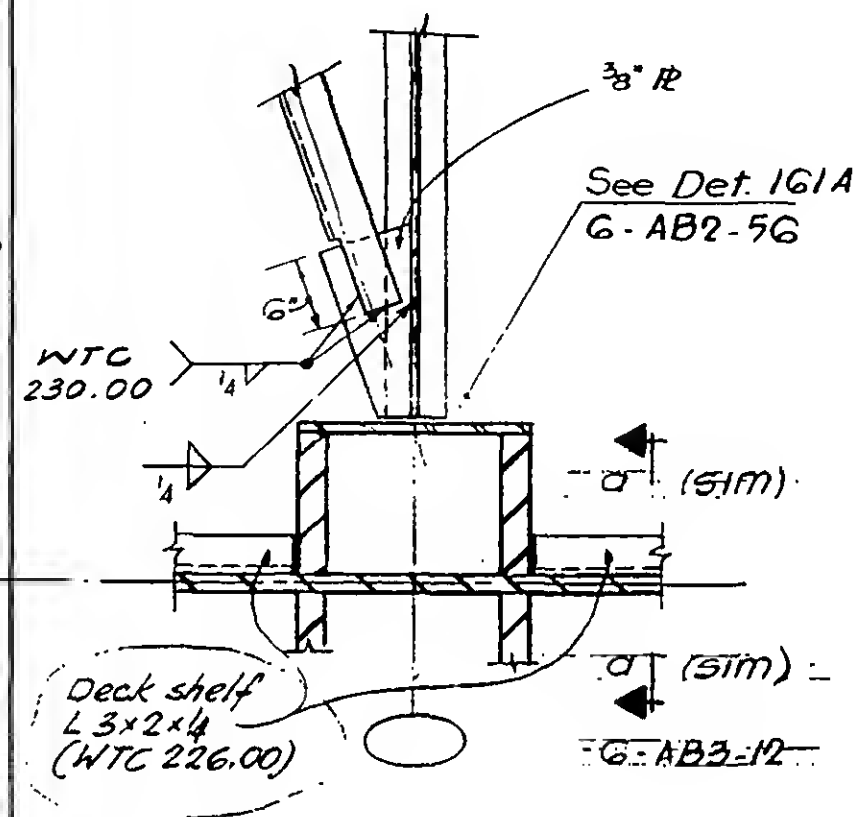
8-29-68



Detail FF



Section a-a



Detail EE



G-AB3-13

PROJECT THE WORLD TRADE CENTER

TITLE HORIZONTAL TRUSSES H20, H21, H22, H54, H55, H56

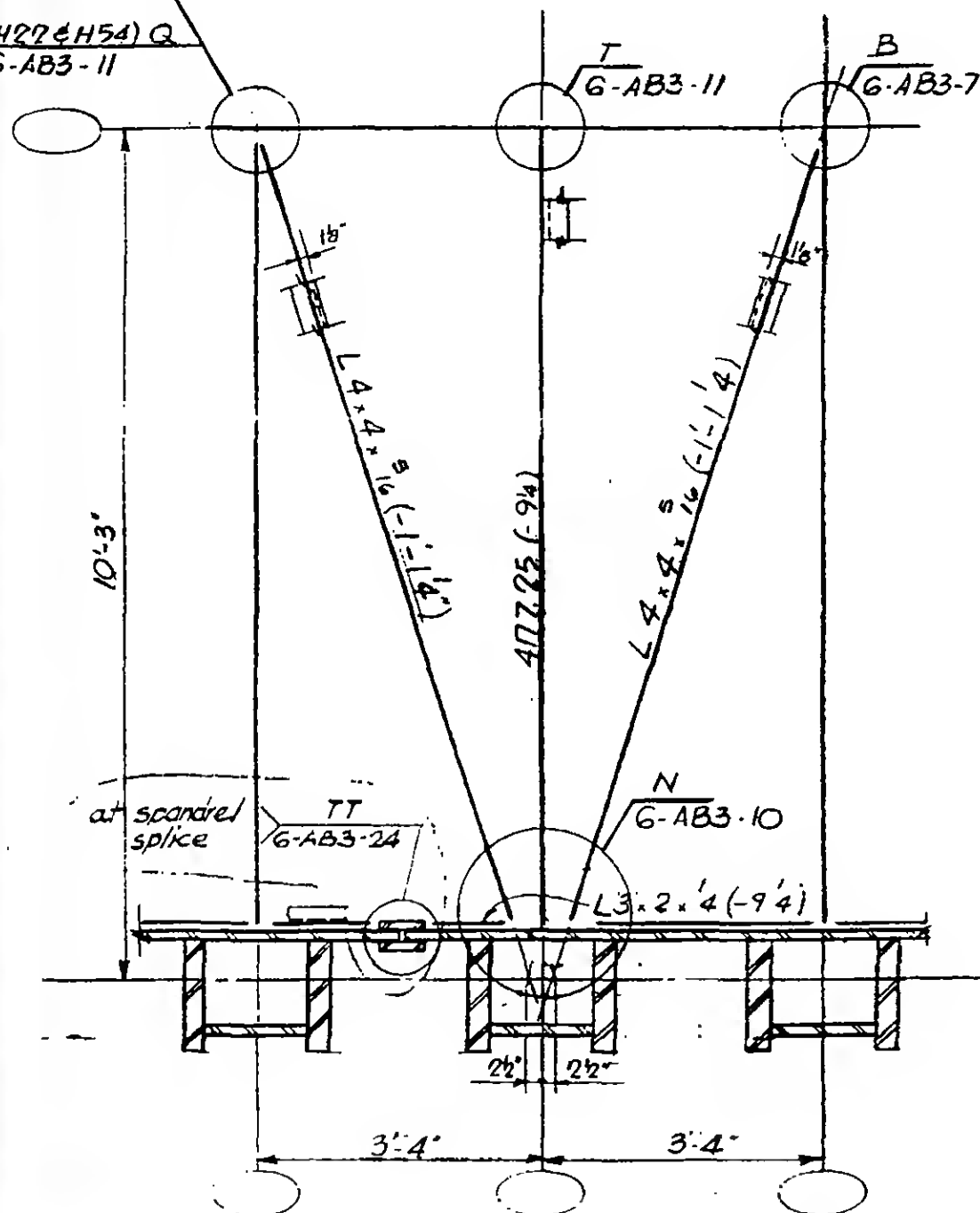
DATE 12-20-67

REVISIONS

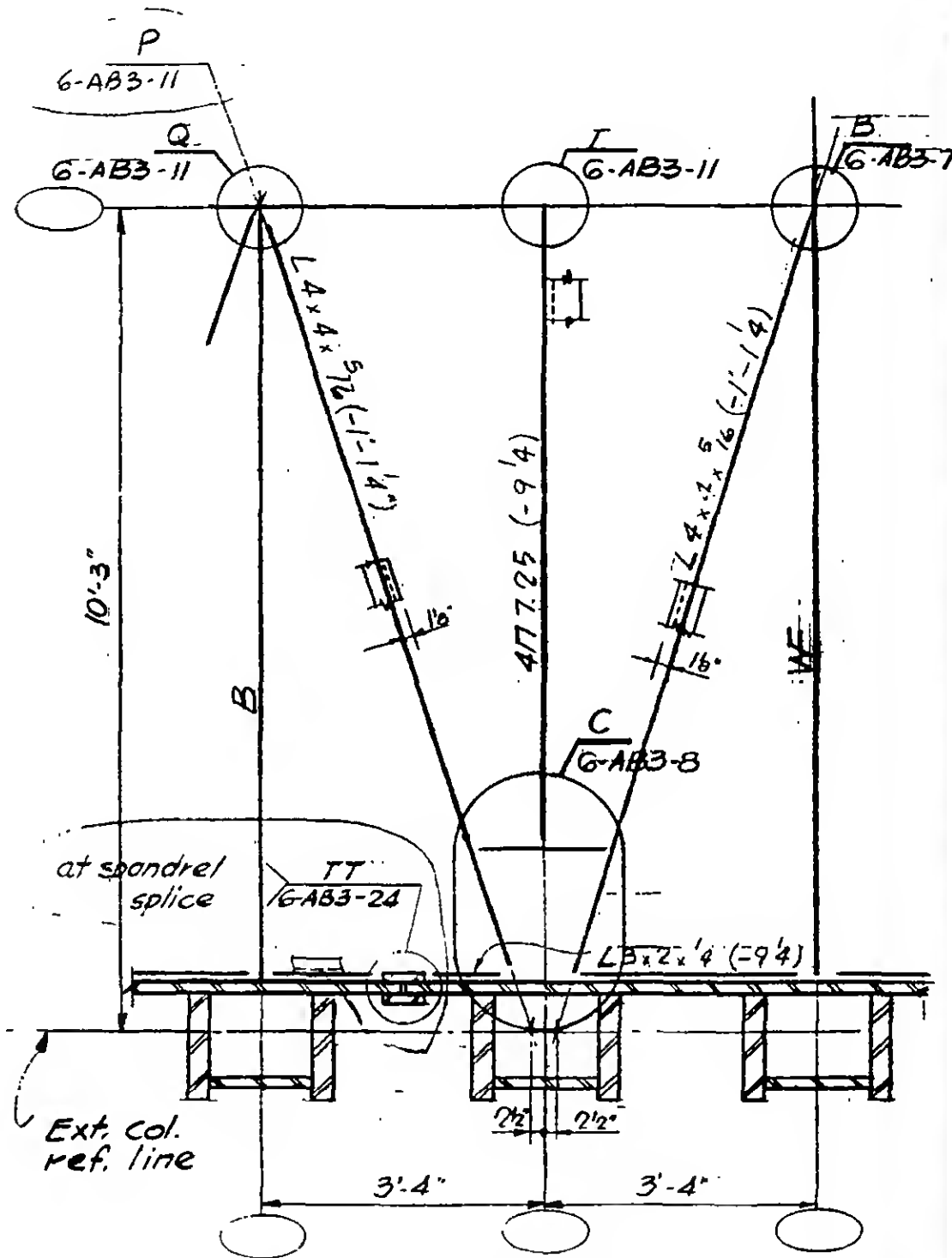
8-29-68

(H55 & H56) P  
G-AB3-11

(H22 & H54) Q  
G-AB3-11



H22  
H54 opp. hand  
H55 as noted  
H56 opp. hand as noted



H20  
H21 Opp hand

G-AB3-14



PROJECT THE WORLD TRADE CENTER

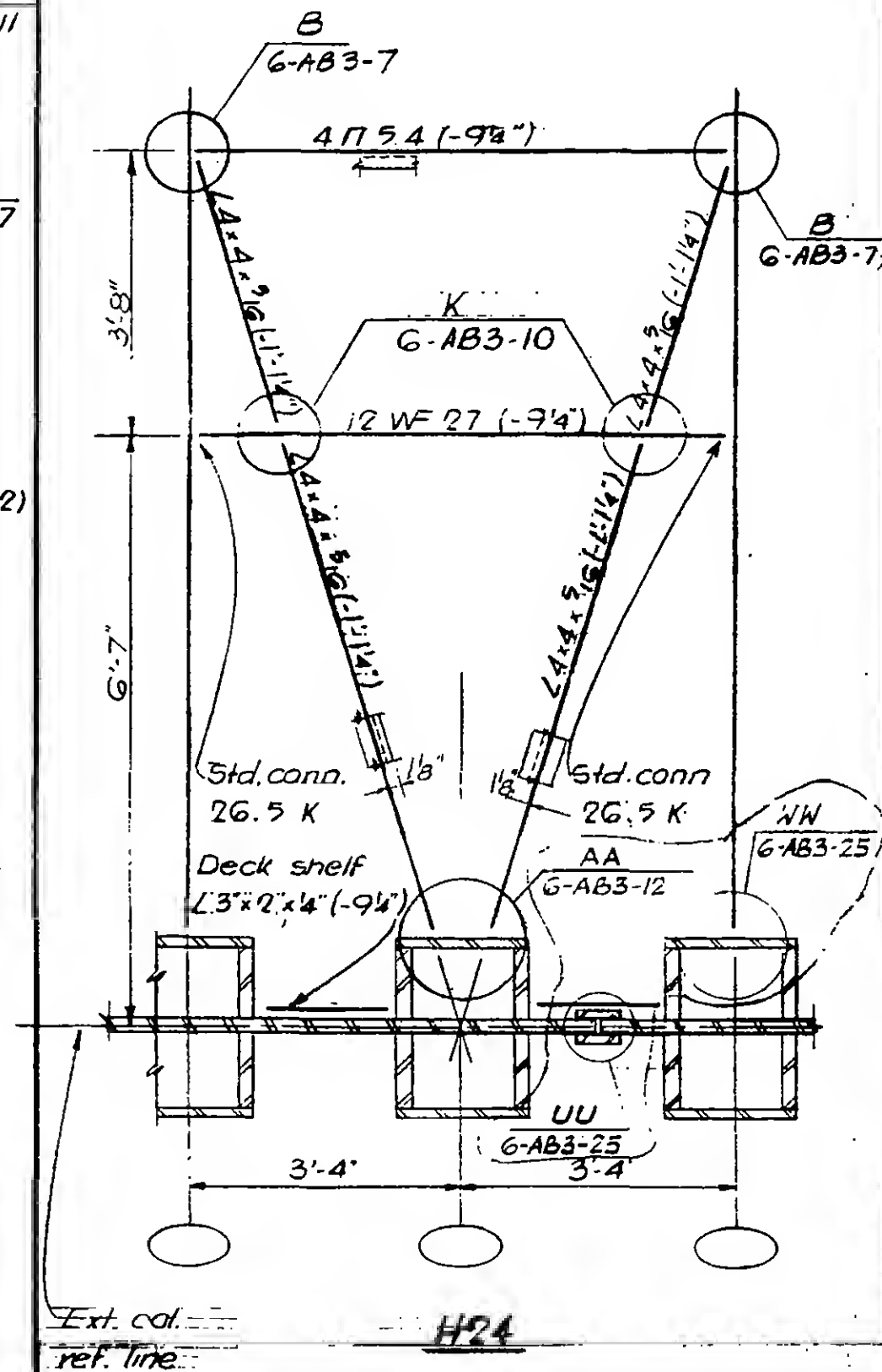
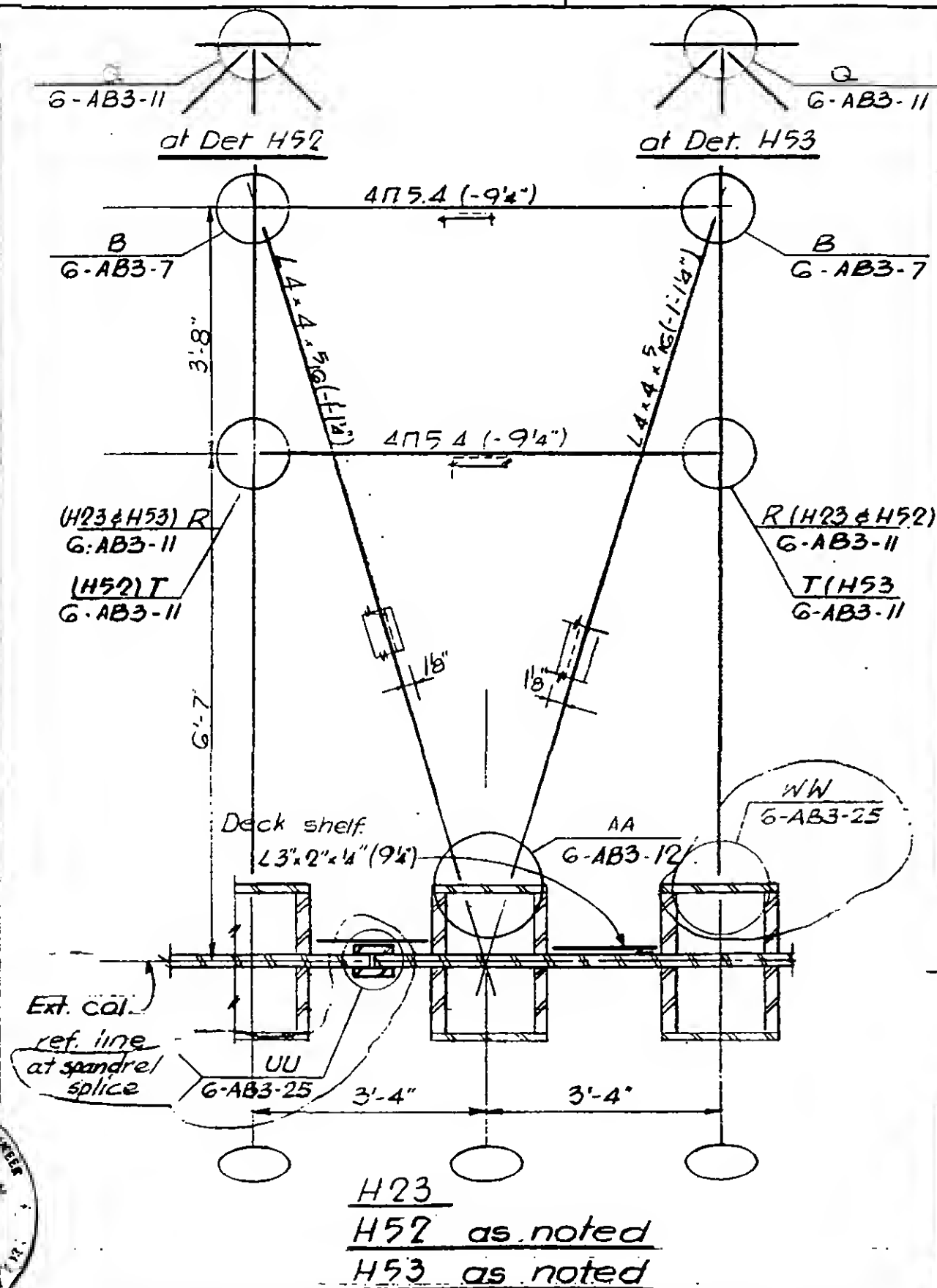
TITLE HORIZONTAL TRUSSES H23, H24, H52 &amp; H53

DATE 12-20-67

## REVISIONS

1-24-68

8-29-68



6-AB3-15

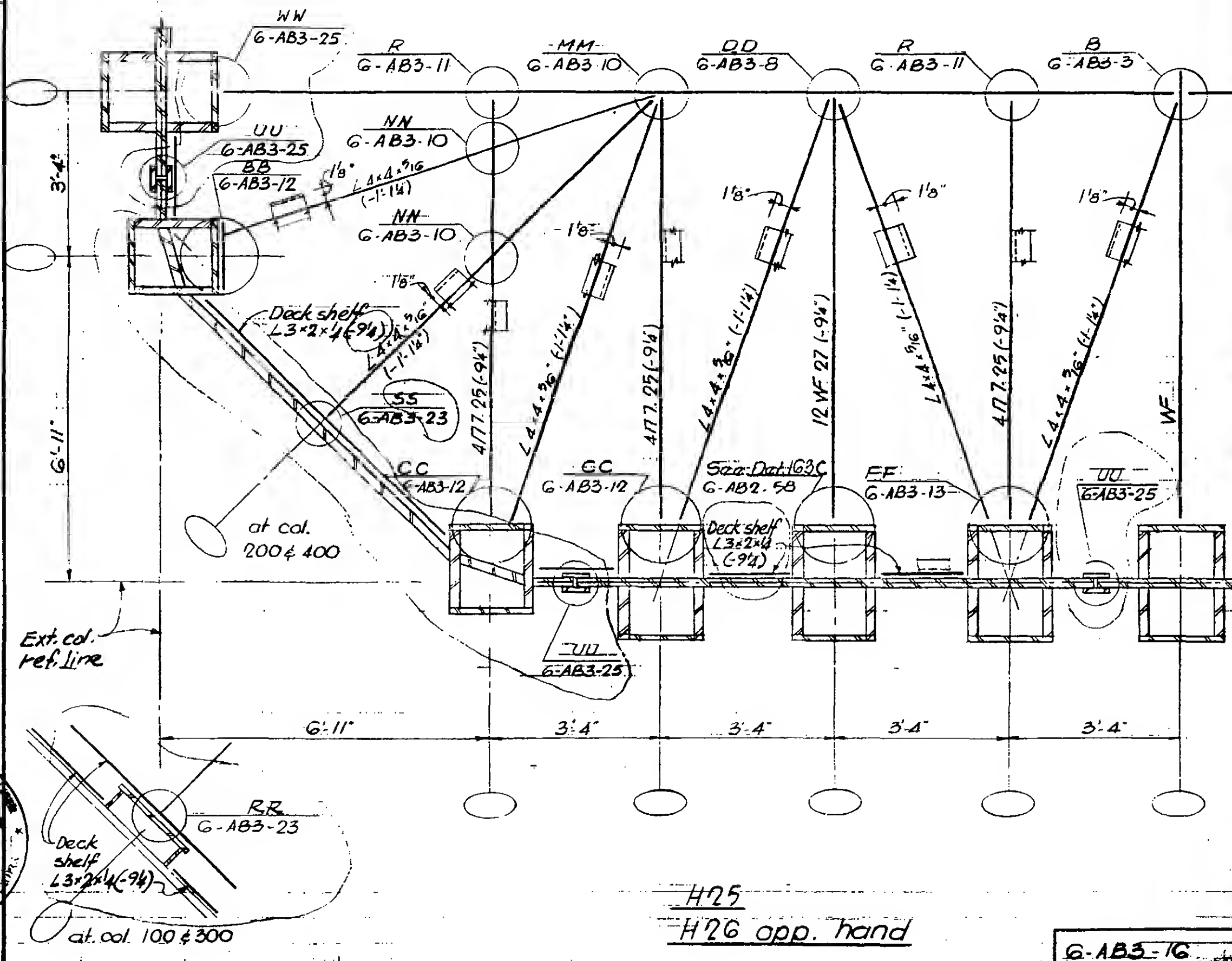


PROJECT THE WORLD TRADE CENTER

TITLE HORIZONTAL TRUSSES H25 &amp; H26

DATE 12-20-67

## REVISIONS

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8-29-68

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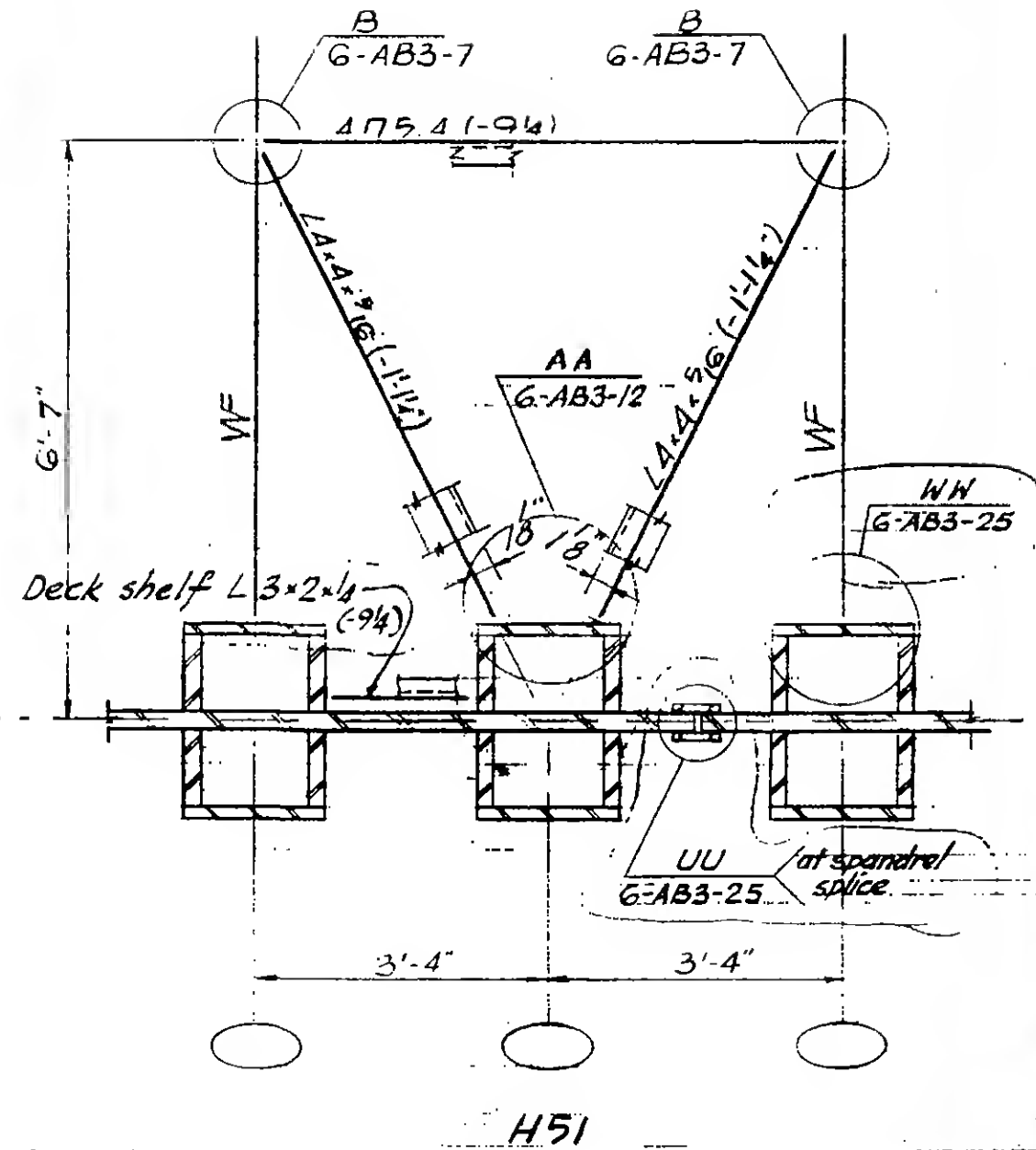
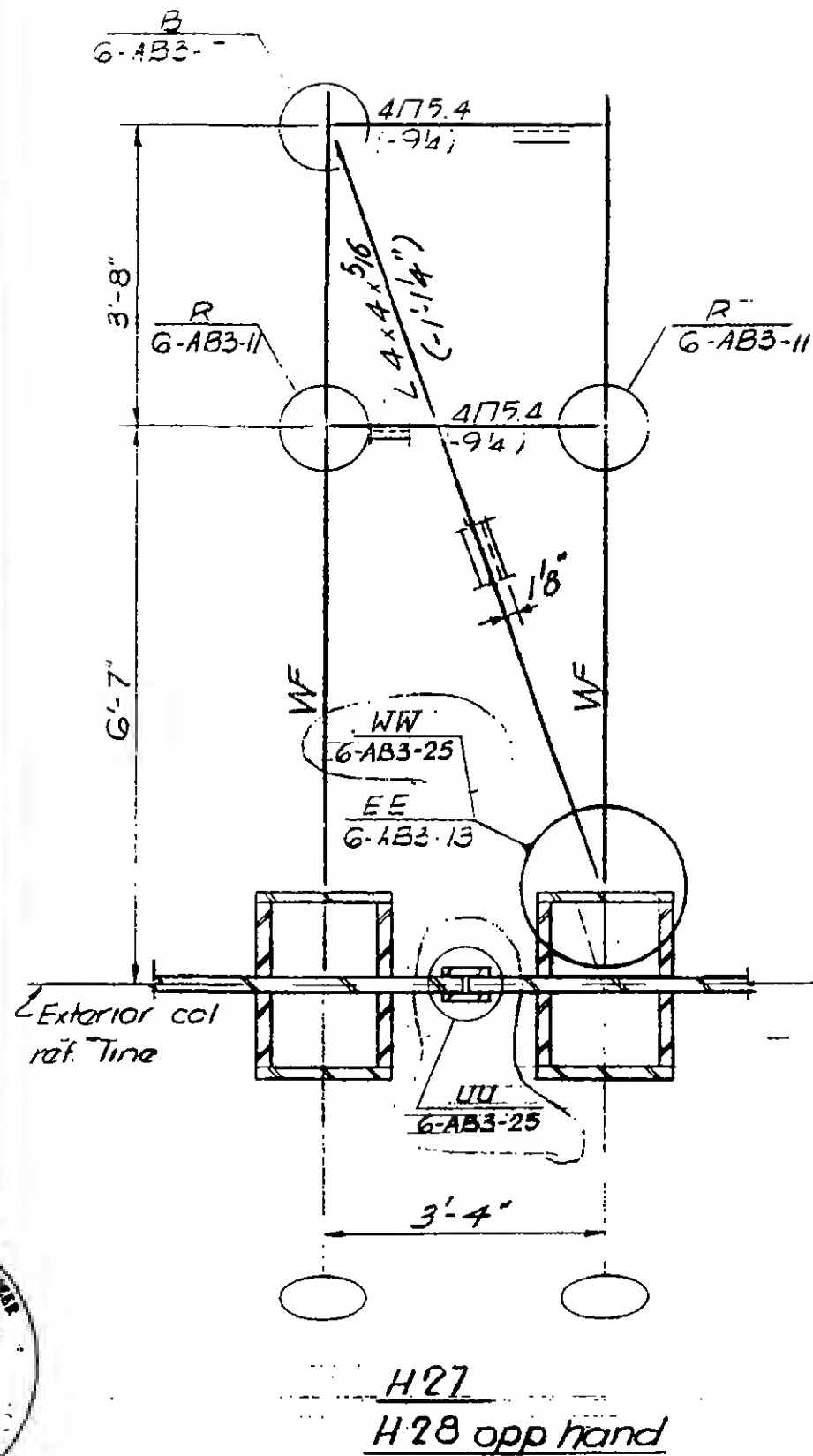
TITLE HORIZONTAL TRUSSES H27, H28 &amp; H51

DATE 12-20-67

## REVISIONS

1-24-68

8-29-68



G-AB3-17



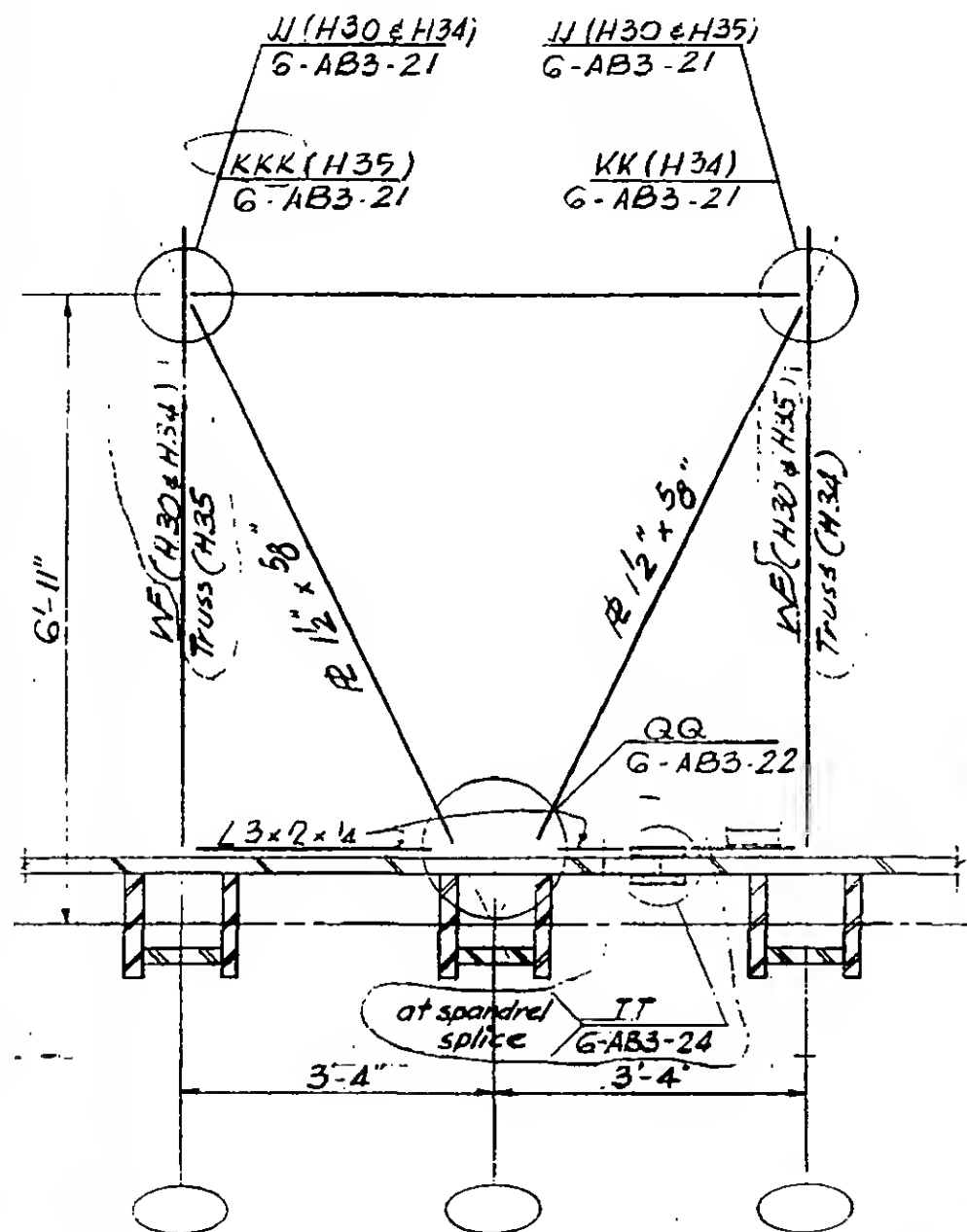
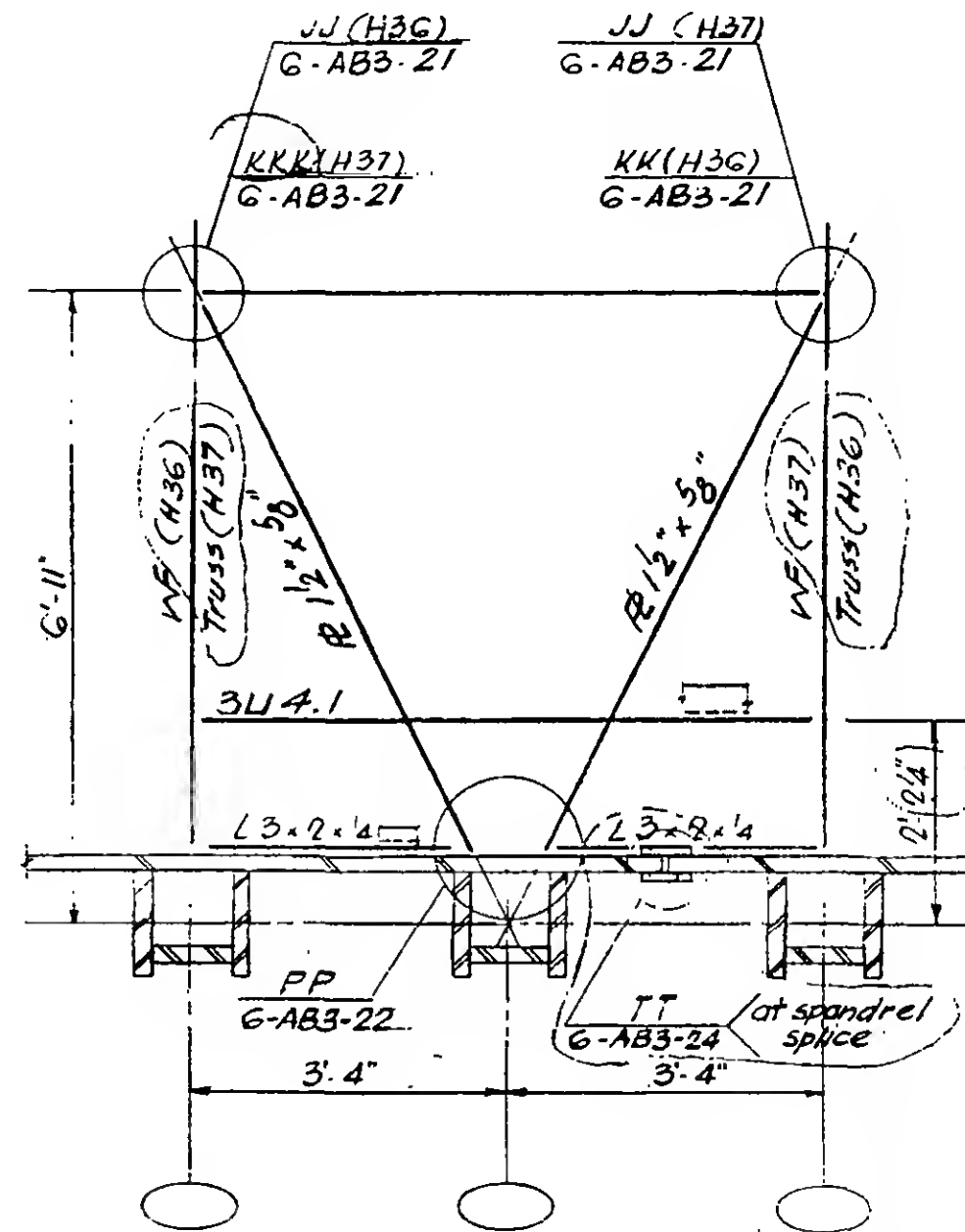
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TITLE HORIZONTAL TRUSSES H30: H34, H35, H36 &amp; H37

DATE 12-20-67

REVISIONS

8-29-68

H30H34H35H36H37

G-AB3-18



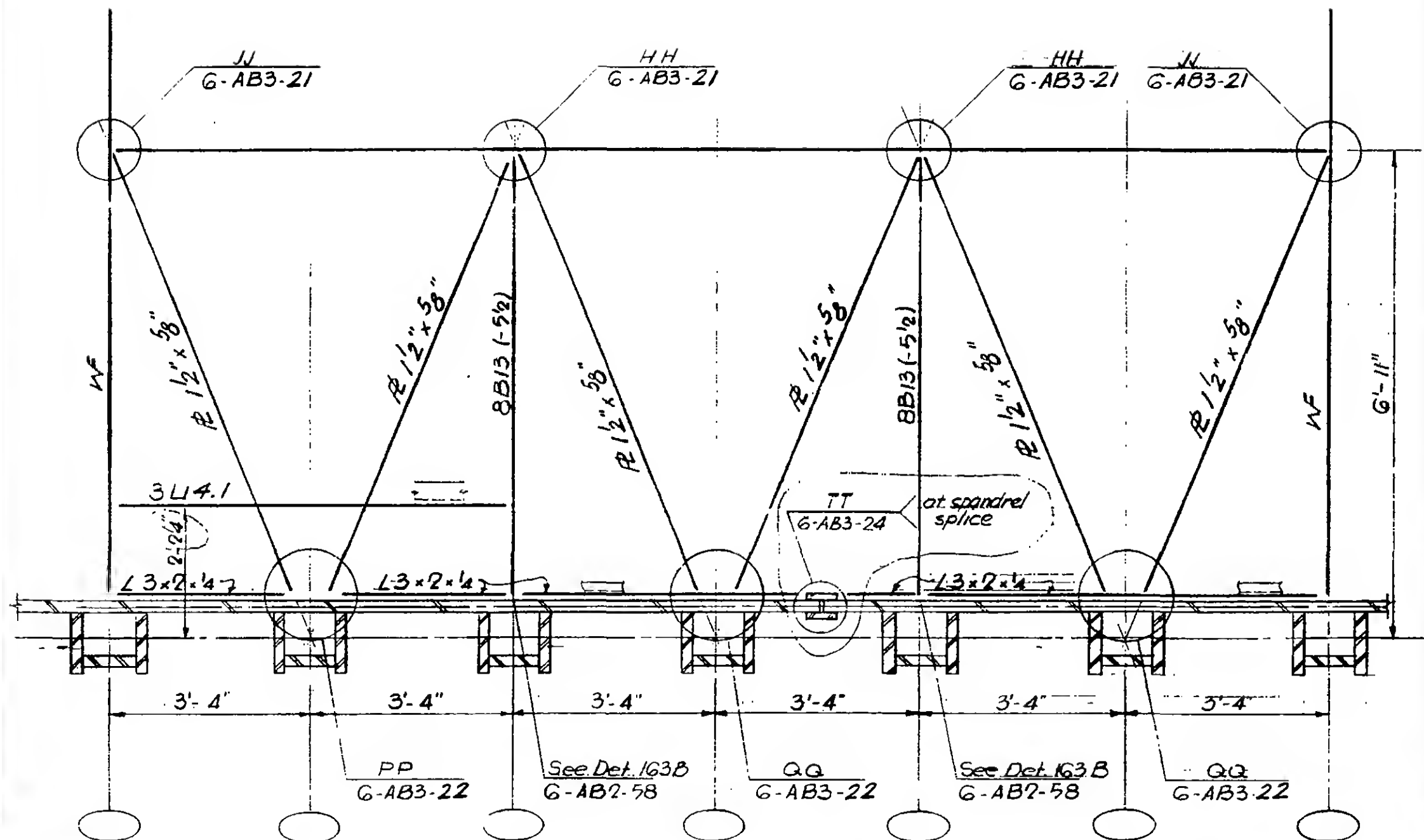
PROJECT THE WORLD TRADE CENTER

TITLE HORIZONTAL TRUSSES H32 &amp; H33

DATE 12-20-67

## REVISIONS

8-29-68



H32  
H33 opp hand

G-AB3-19



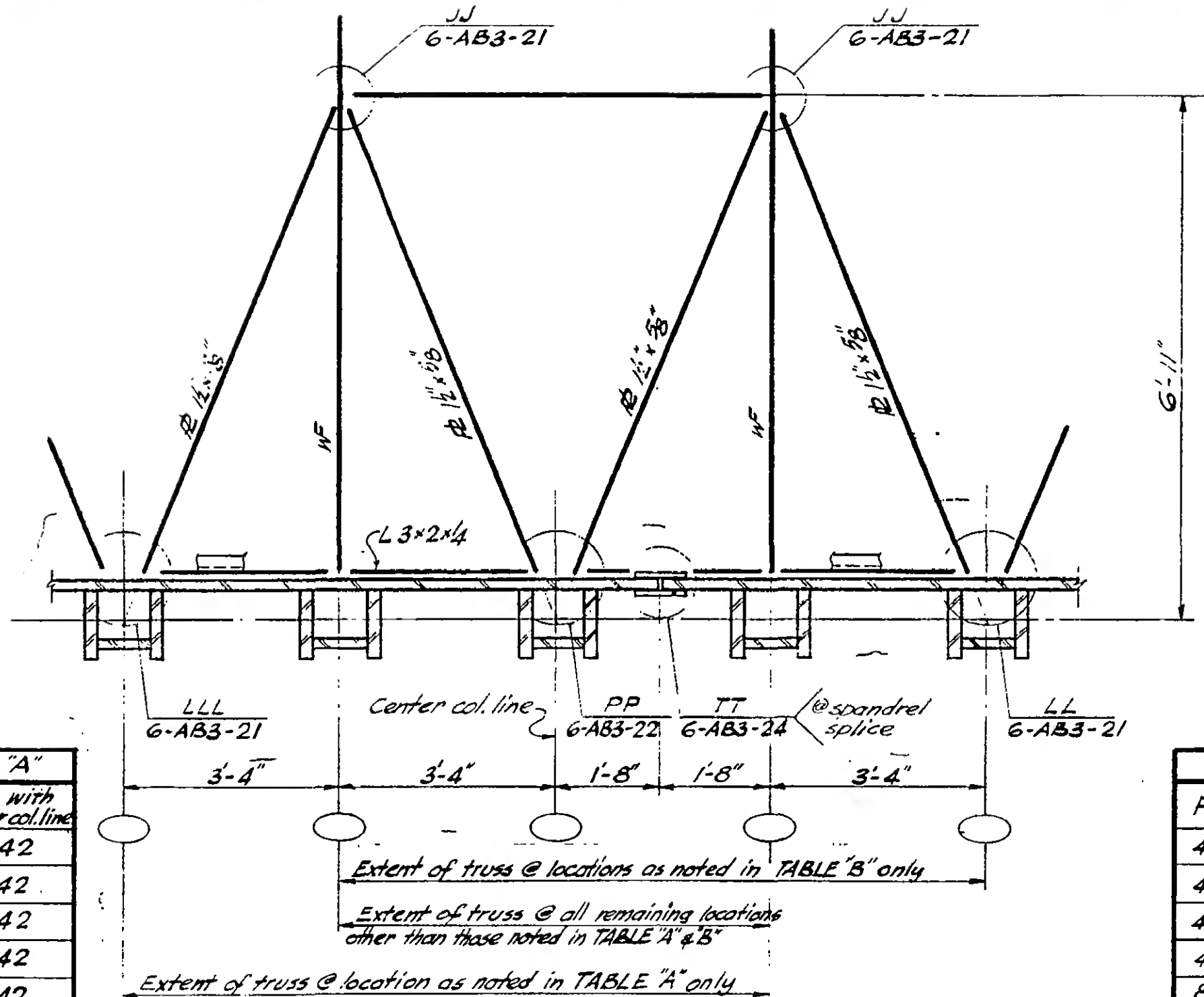
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TITLE HORIZONTAL TRUSS H38

DATE 12-20-67

## REVISIONS

8-29-68



| TABLE "A" |                             |
|-----------|-----------------------------|
| Fl.       | Truss with center col. line |
| 46        | 242                         |
| 47        | 242                         |
| 48        | 242                         |
| 79        | 442                         |
| 80        | 442                         |
| 81        | 442                         |
| 82        | 442                         |

| TABLE "B" |                             |
|-----------|-----------------------------|
| Fl.       | Truss with center col. line |
| 45        | 418                         |
| 46        | 418                         |
| 47        | 418                         |
| 48        | 418                         |
| 80        | 218                         |
| 81        | 218                         |
| 82        | 218                         |

H38

6-AB3-20

DESIGNED

DRAWN

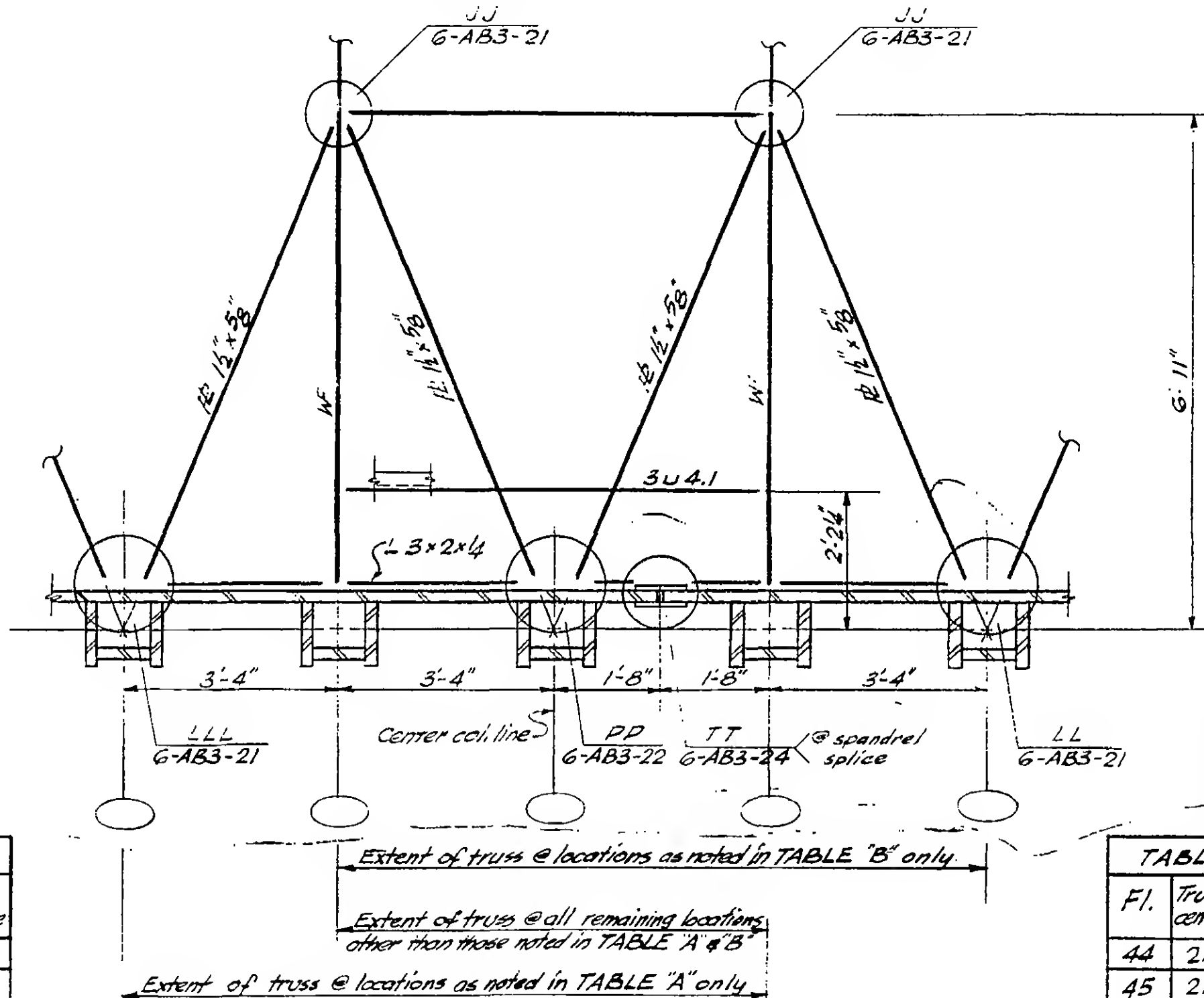
REVIEWED

PROJECT THE WORLD TRADE CENTER

TITLE HORIZONTAL TRUSS H31

DATE 8-29-68

REVISIONS



| TABLE "A" |                             |
|-----------|-----------------------------|
| Fl.       | Truss with center col. line |
| 44        | 242, 442                    |
| 45        | 242                         |
| 49        | 242                         |
| 78        | 242, 442                    |
| 79        | 242                         |
| 83        | 442                         |

| TABLE "B" |                             |
|-----------|-----------------------------|
| Fl.       | Truss with center col. line |
| 44        | 218, 418                    |
| 45        | 218                         |
| 49        | 418                         |
| 78        | 218, 418                    |
| 79        | 218                         |
| 83        | 218                         |

H31

G-AB3-20.1

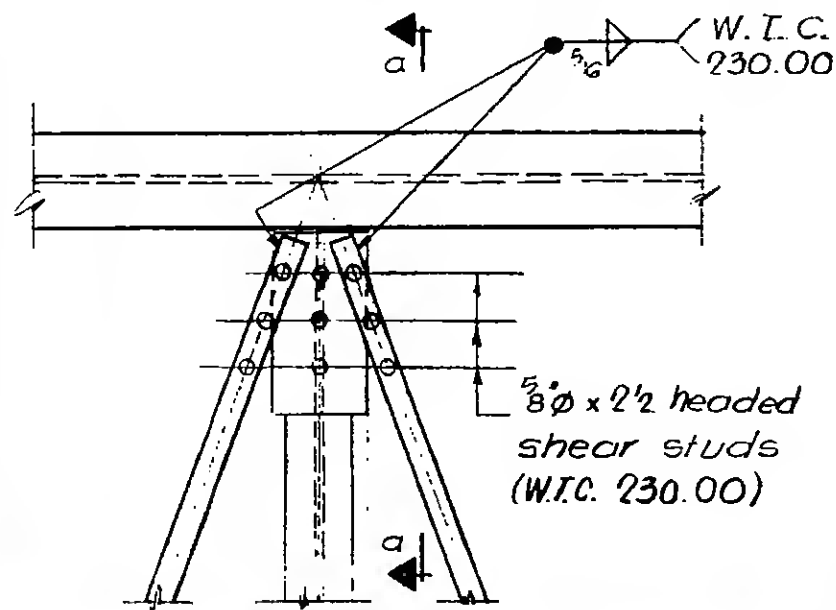
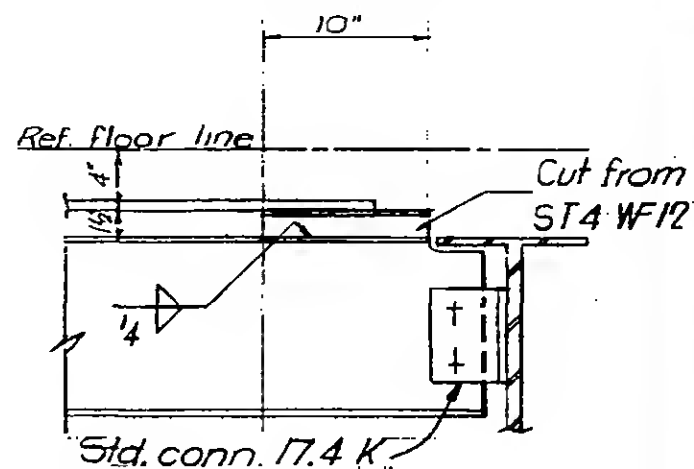
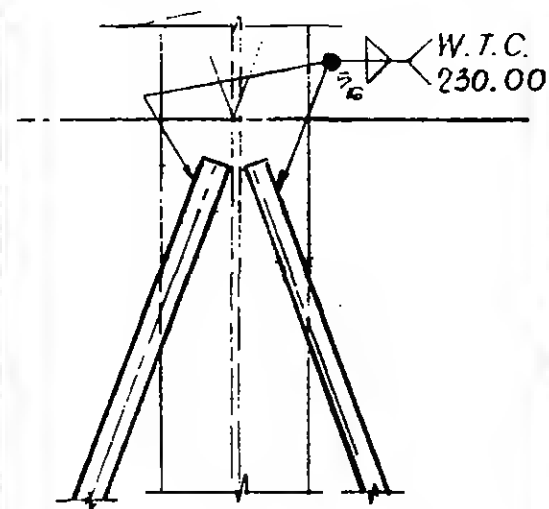
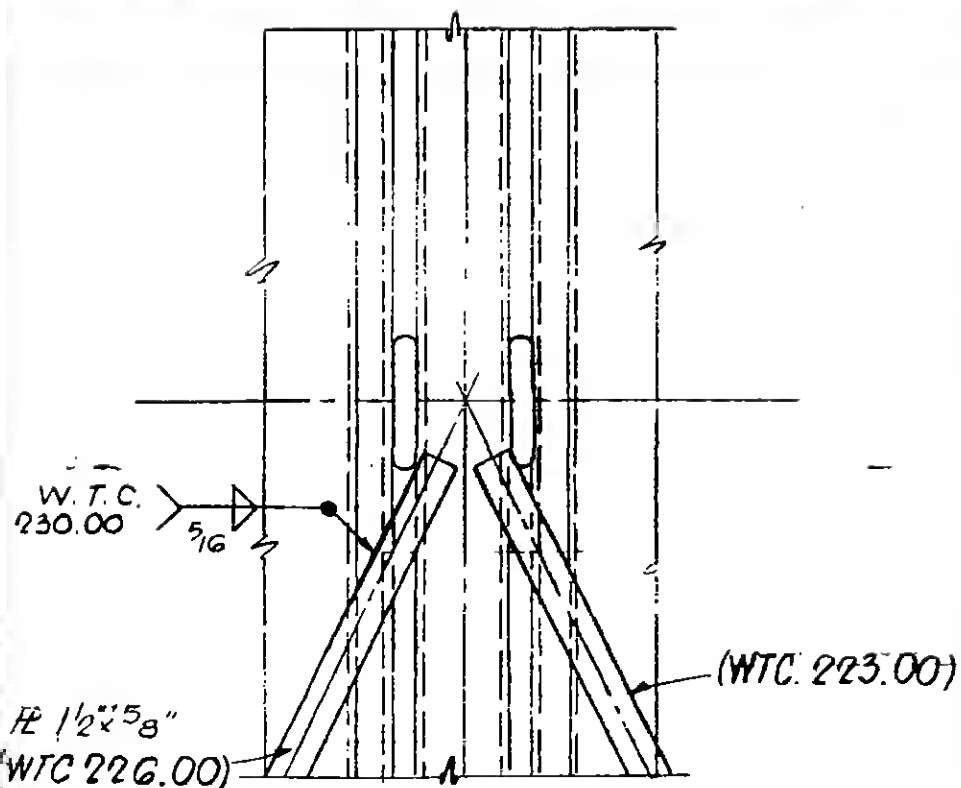
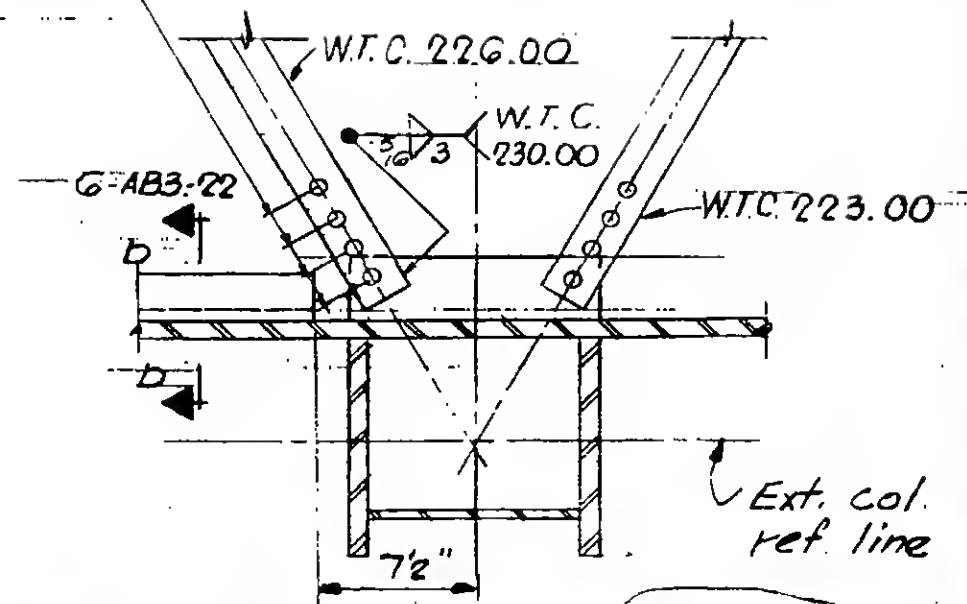
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TITLE HORIZONTAL TRUSS-DETAILS HH, JJ, KK, LL, KKK, LLL

DATE 12-20-67

## REVISIONS

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PlanSection a-aDetail HHDetail JJDetail KK (as shown)  
Detail KKK (opp. hand)4- $\frac{3}{8} \phi \times 2\frac{1}{2}$ "  
shear studs @ 6" o.c.  
(W.T.C. 230.00)Detail LL (as shown)  
Detail LLL (opp hand)

G-AB3-2L



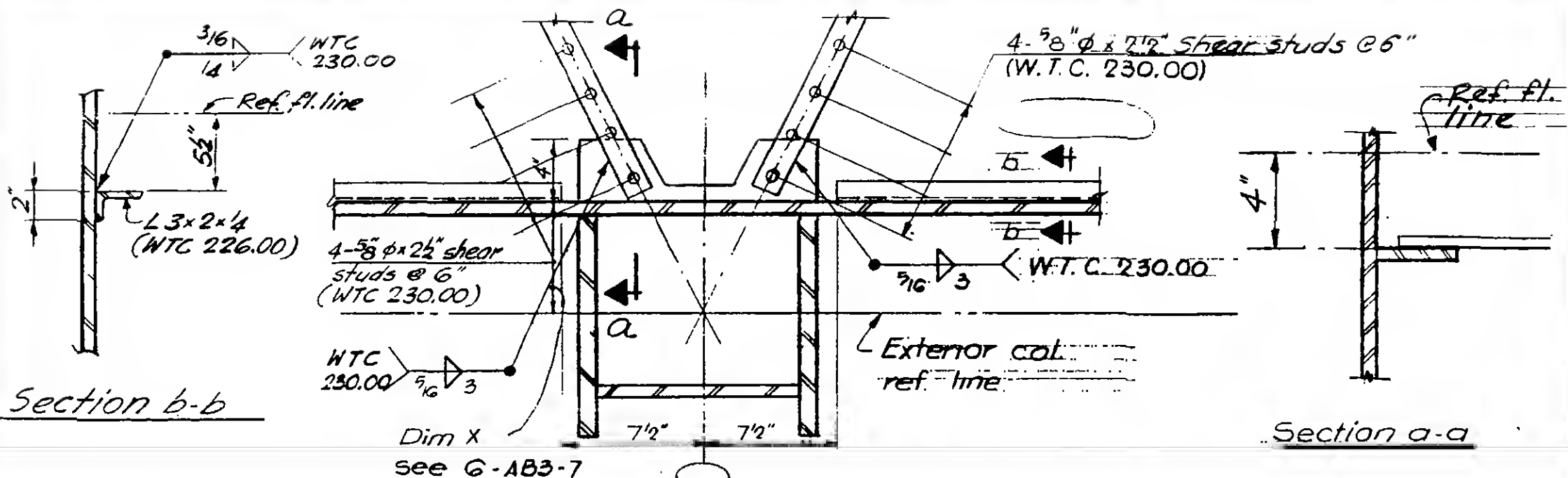
PROJECT THE WORLD TRADE CENTER

TITLE HORIZONTAL TRUSS - DETAILS PP &amp; QQ

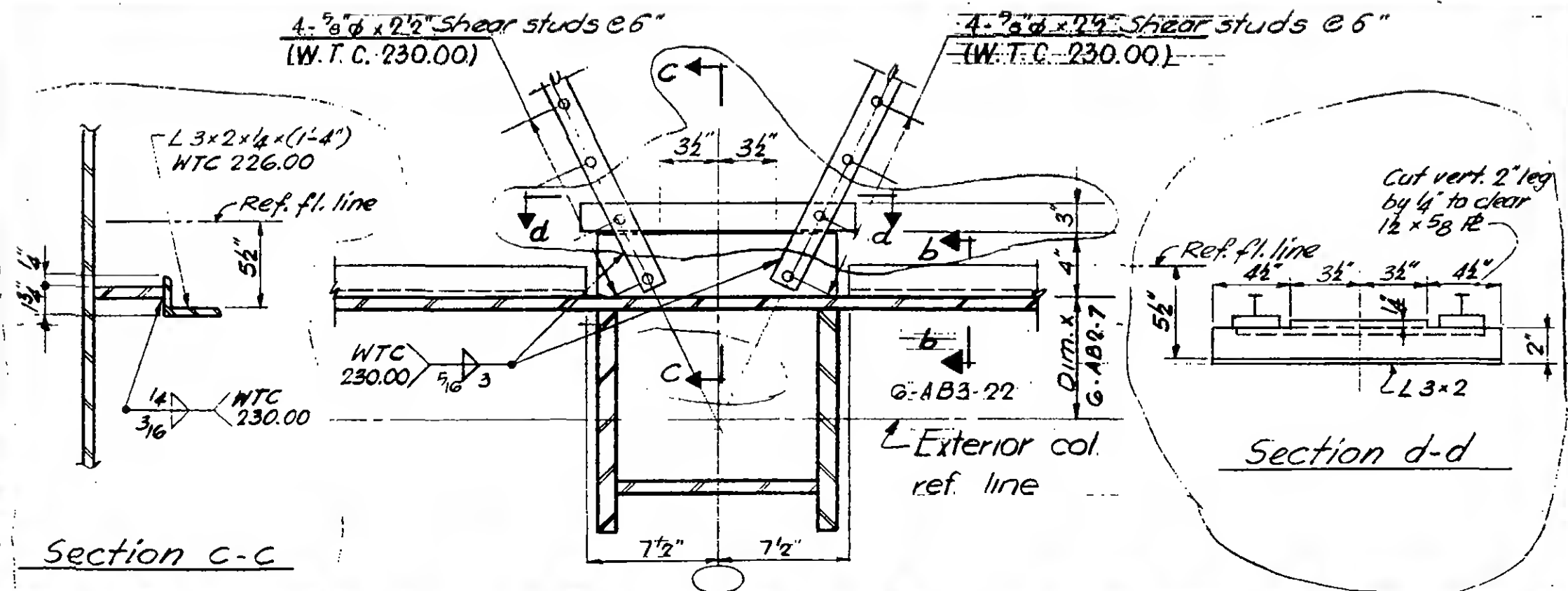
DATE 12-20-67

## REVISIONS

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Detail PP



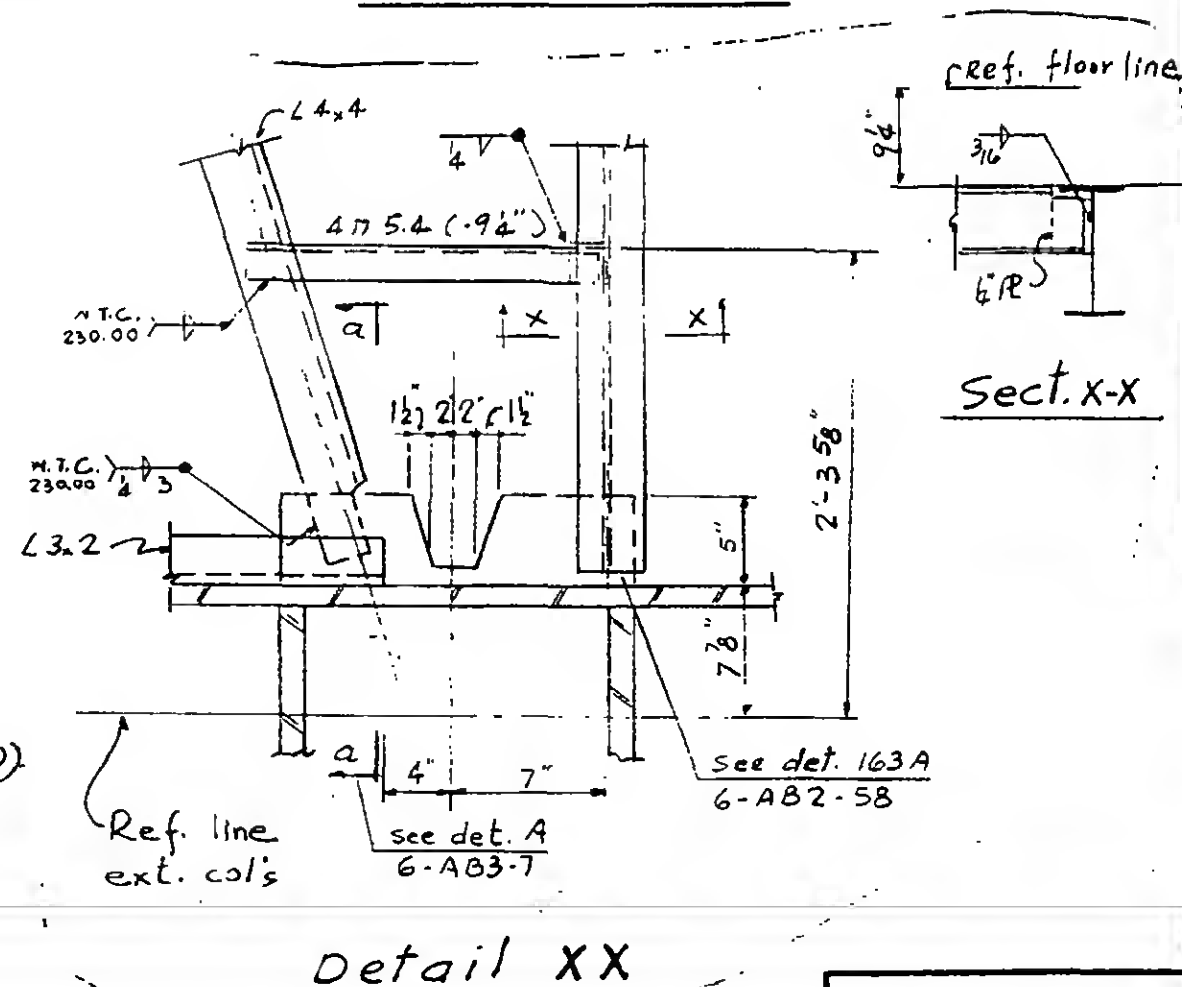
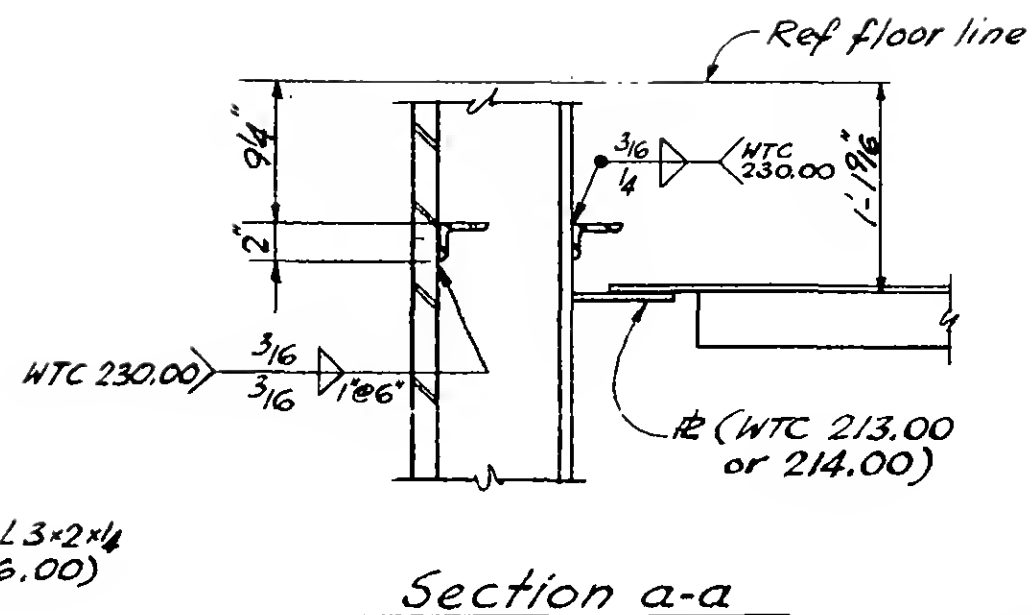
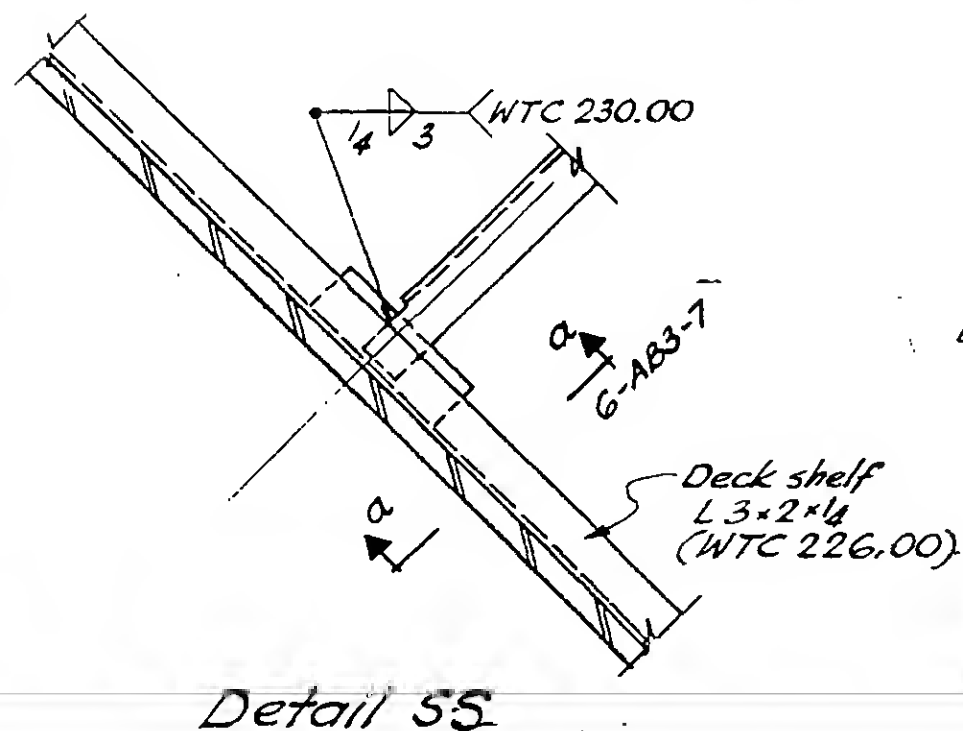
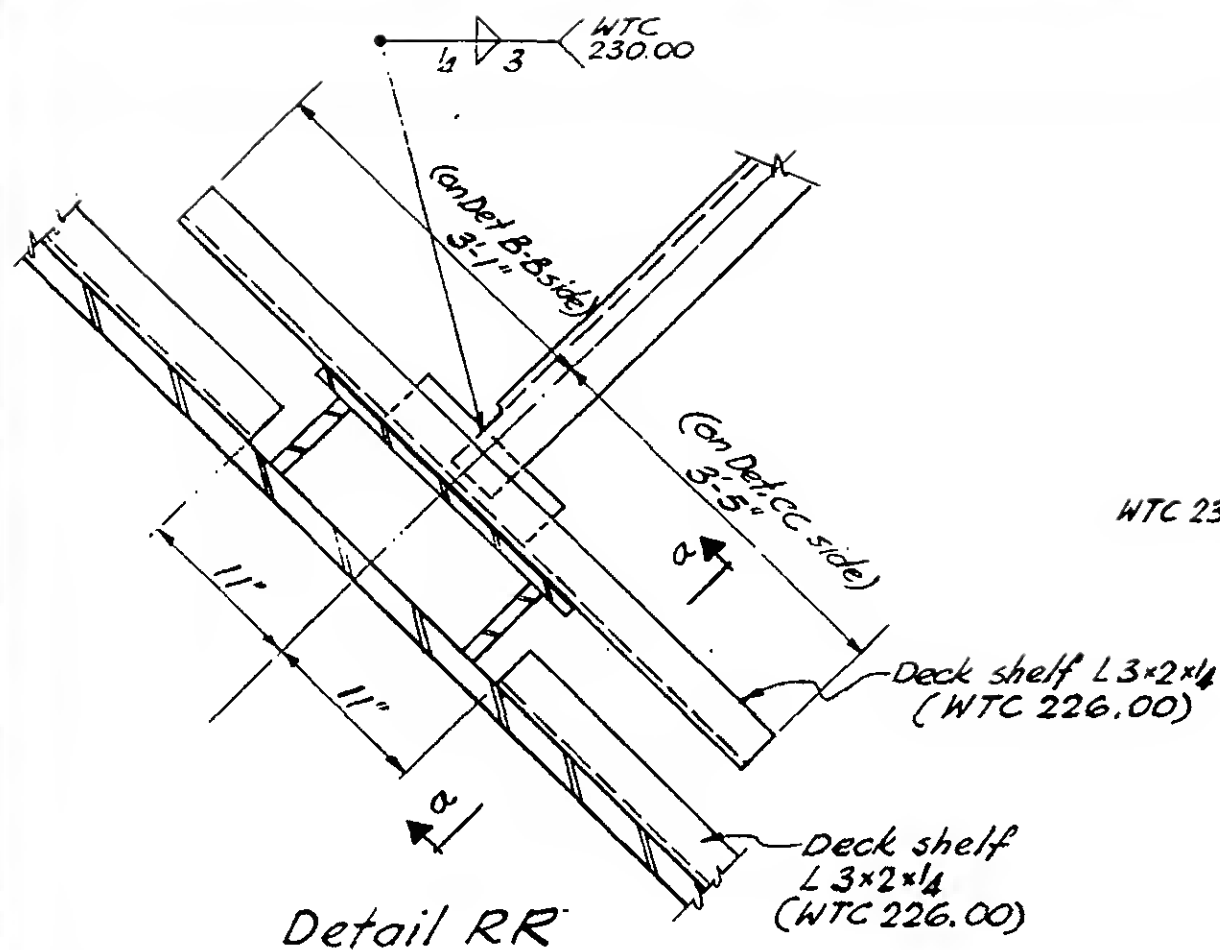
Detail QQ

G-AB3-22



## REVISIONS

3-29-68



6-AB3-23

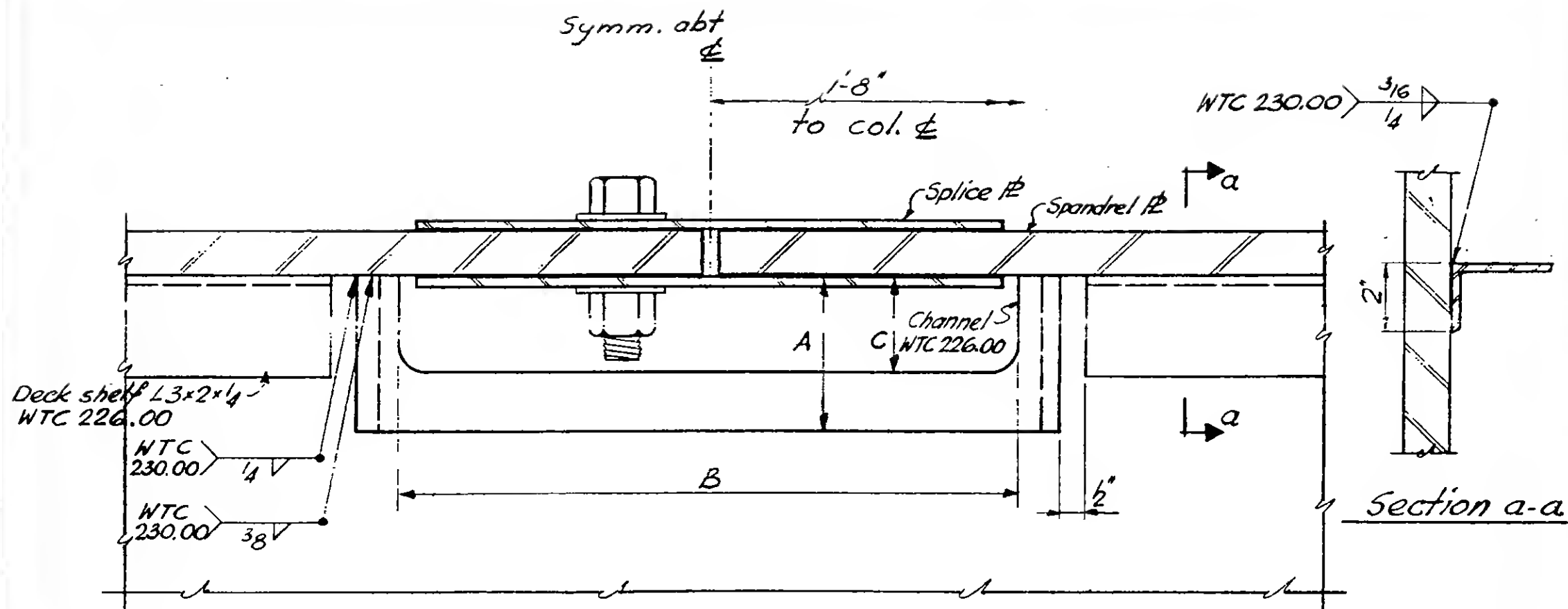


DESIGNED

DRAWN

REVIEWED

## REVISIONS



| Floor                            | Channel size      | A                 | B                  | C                 |
|----------------------------------|-------------------|-------------------|--------------------|-------------------|
| 9                                | 18 $\square$ 42.7 | 4 $\frac{3}{4}$ " | 15 $\frac{3}{8}$ " | 2 $\frac{3}{4}$ " |
| 41, 43, 44, to 48<br>49, 75 & 77 | 15 $\square$ 33.9 | 4 $\frac{3}{4}$ " | 9 $\frac{1}{2}$ "  | 2 $\frac{3}{4}$ " |
| 78 to 83<br>107, 108, 110        | 15 $\square$ 33.9 | 4 $\frac{3}{8}$ " | 7 $\frac{1}{2}$ "  | 2 $\frac{3}{8}$ " |

Note: Top of steel of L same as deck shelf L3x2

Detail TT

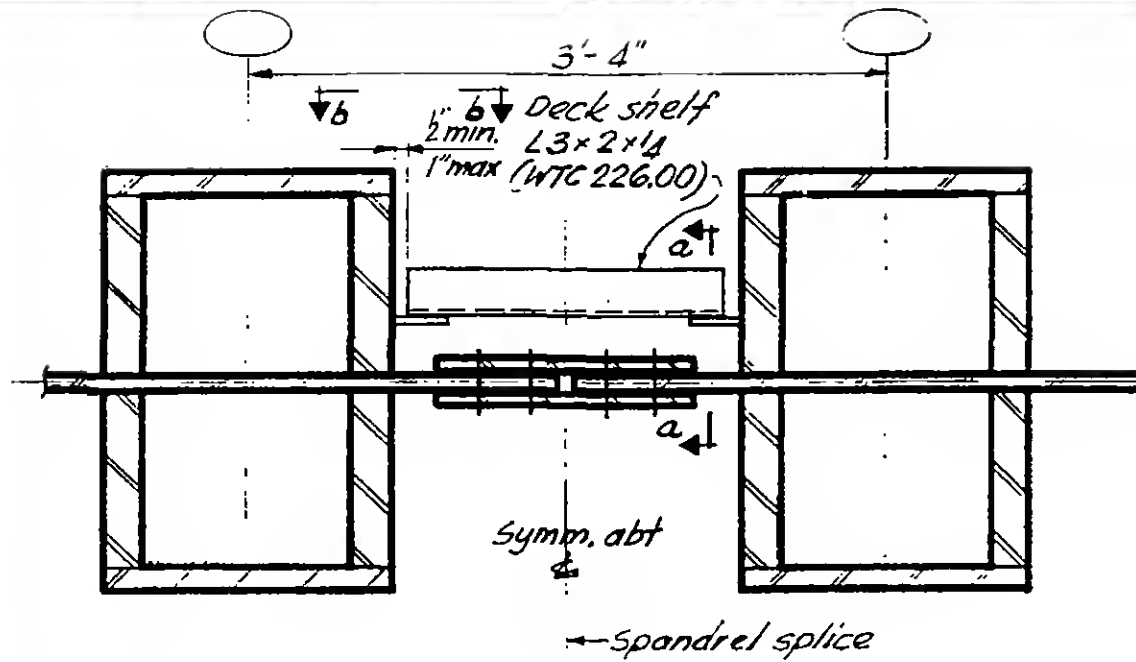
DESIGNED

DRAWN

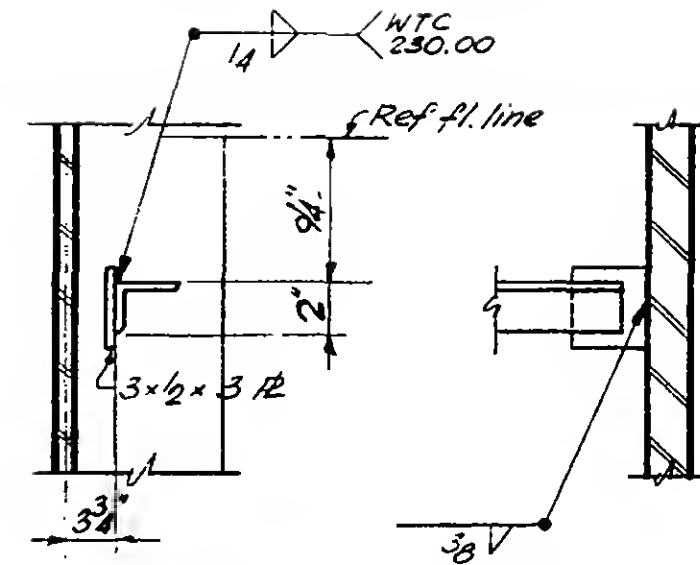
REVIEWED

G-AB3-24

## REVISIONS



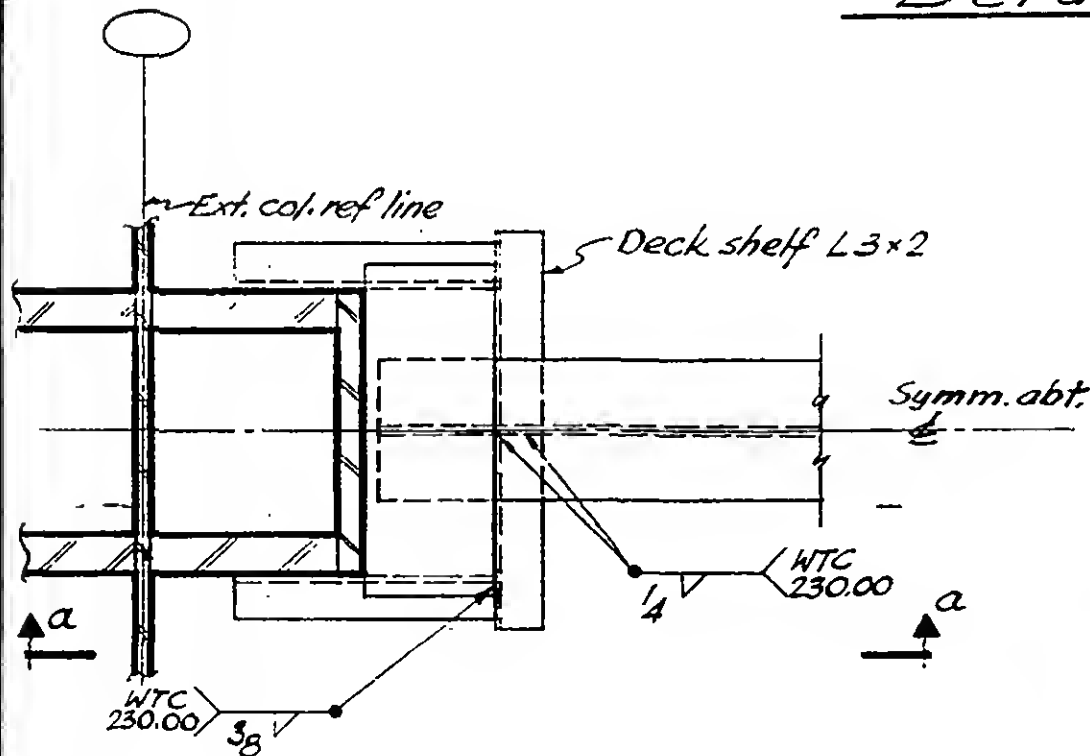
Plan



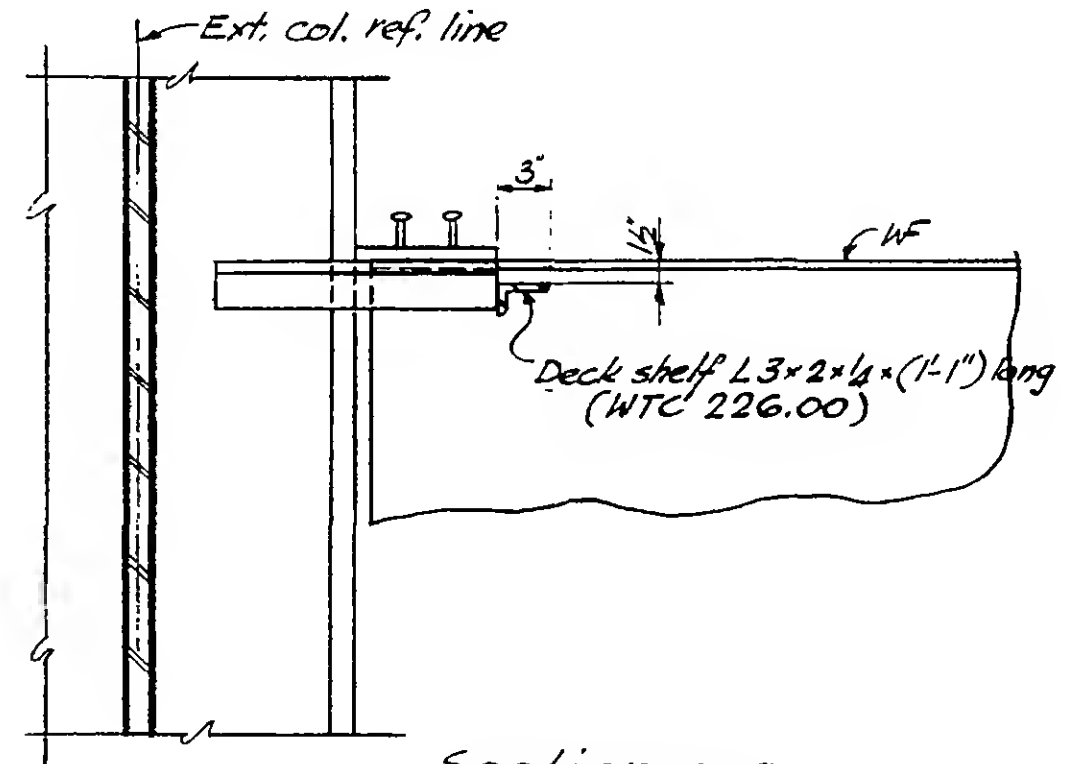
Section a-a

Section b-b

Detail UU



Plan



Section a-a

Note: Det. WW to be used in conjunction  
with Details 6-AB2-55 & 6-AB2-56

Detail WW

DESIGNED

DRAWN

REVIEWED

6-AB3-25

PROJECT

THE WORLD TRADE CENTER

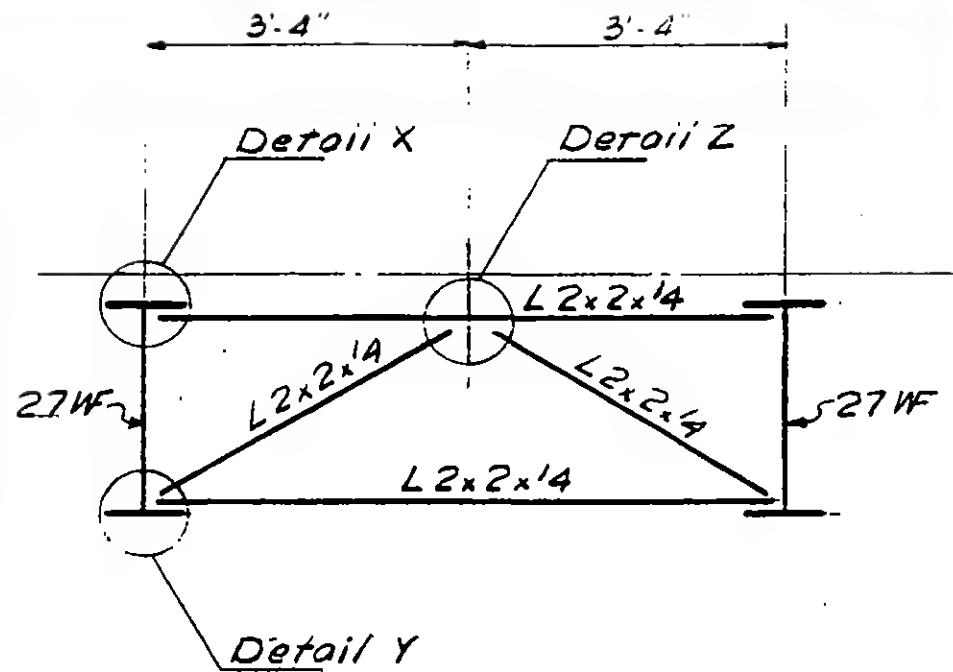
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BEAM FLOOR BRIDGING TYPES B1 THRU B4

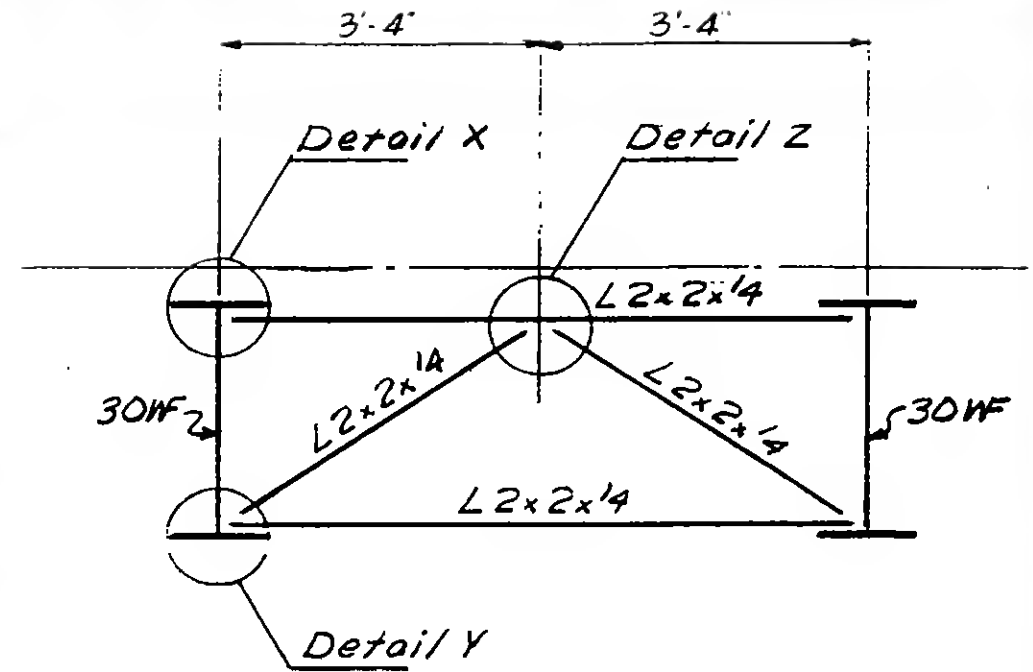
DATE

12-20-67

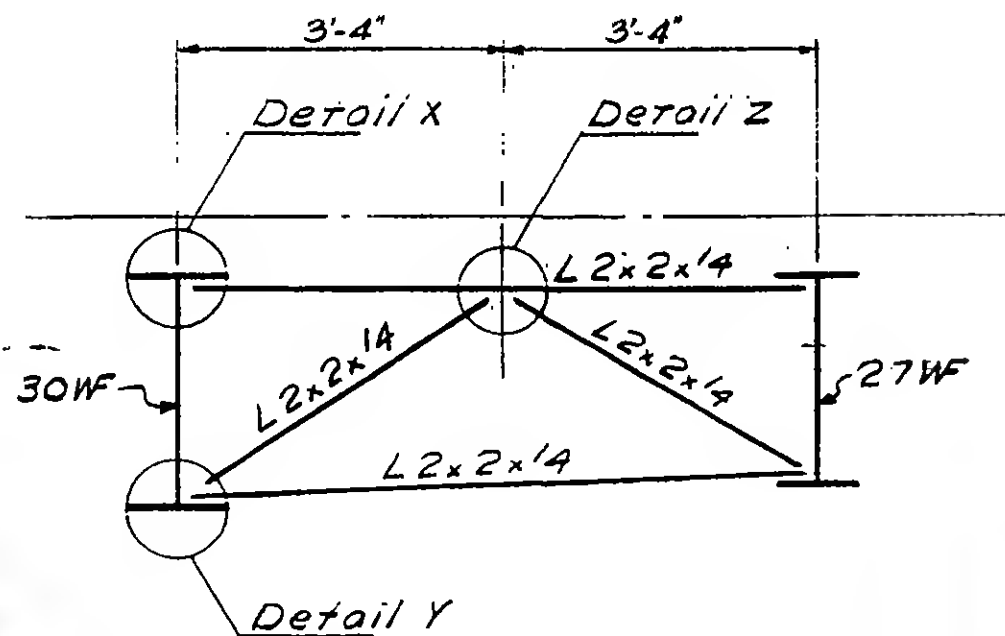
REVISIONS



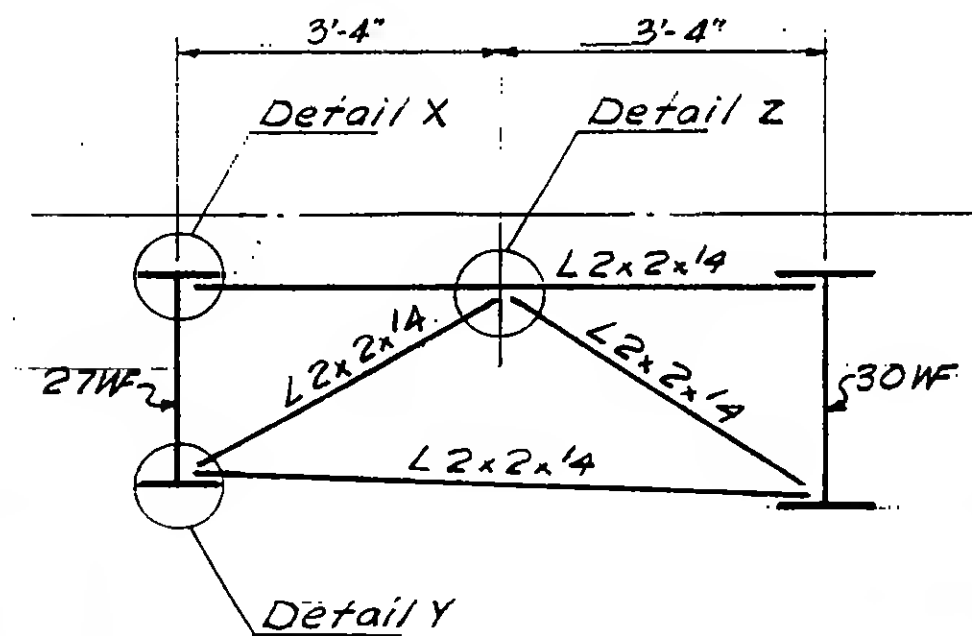
B1



B2



B3

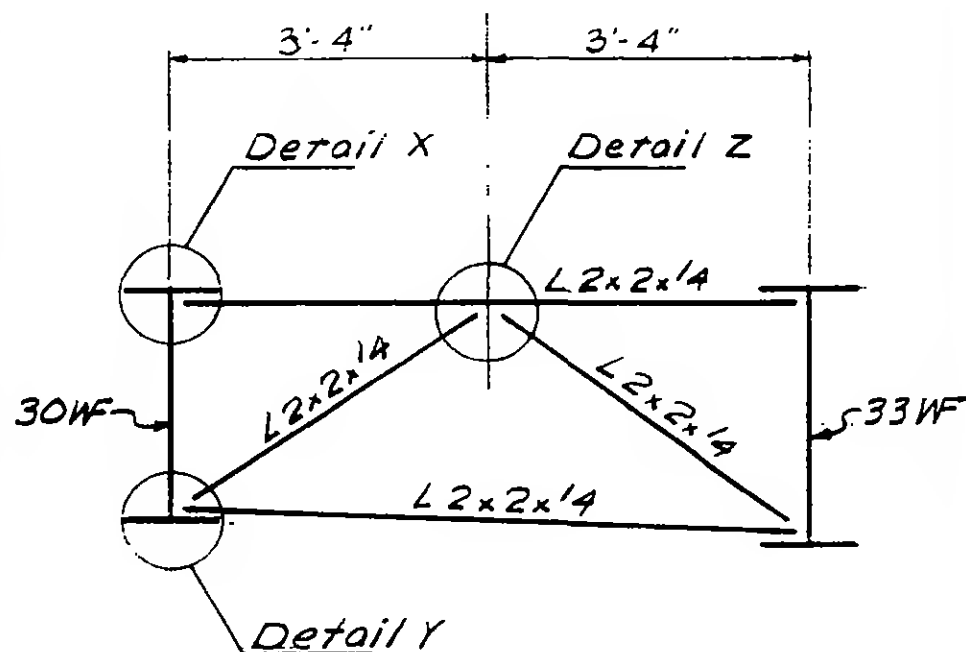


B4

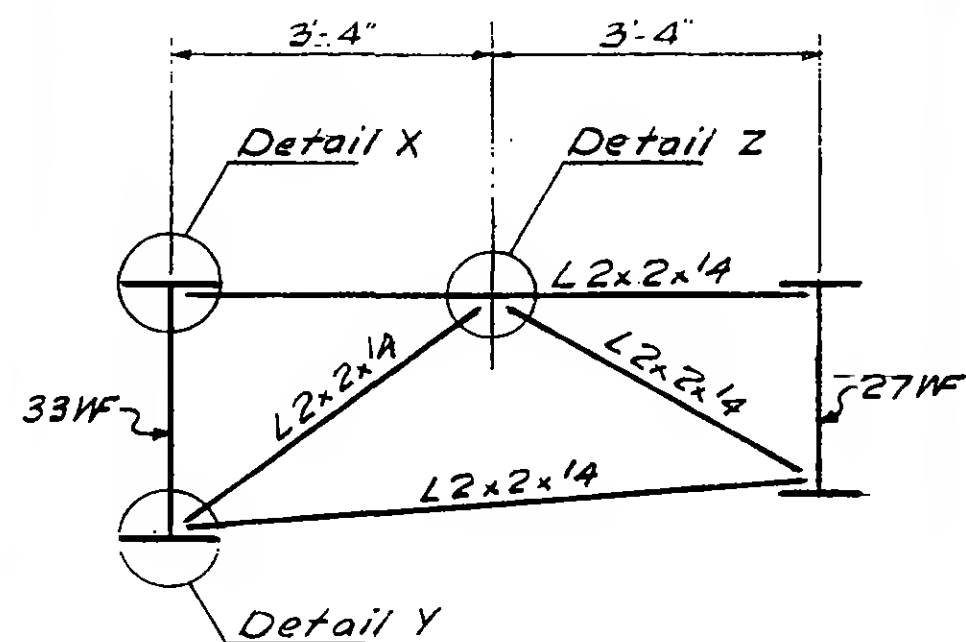


G-AB3-30

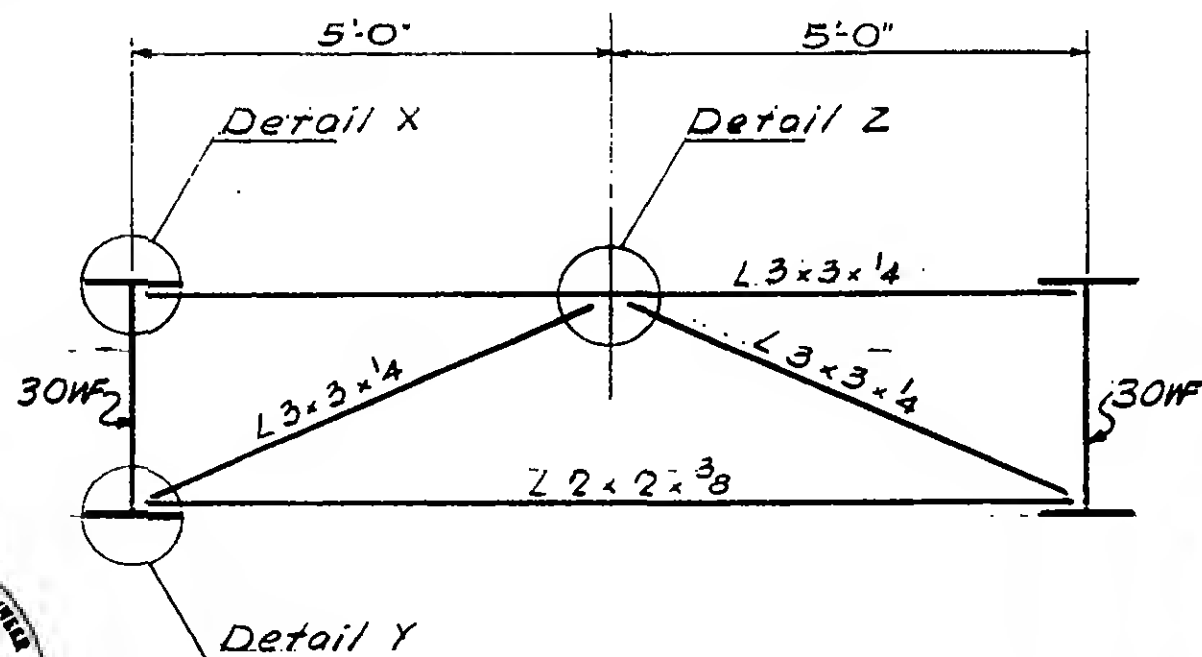
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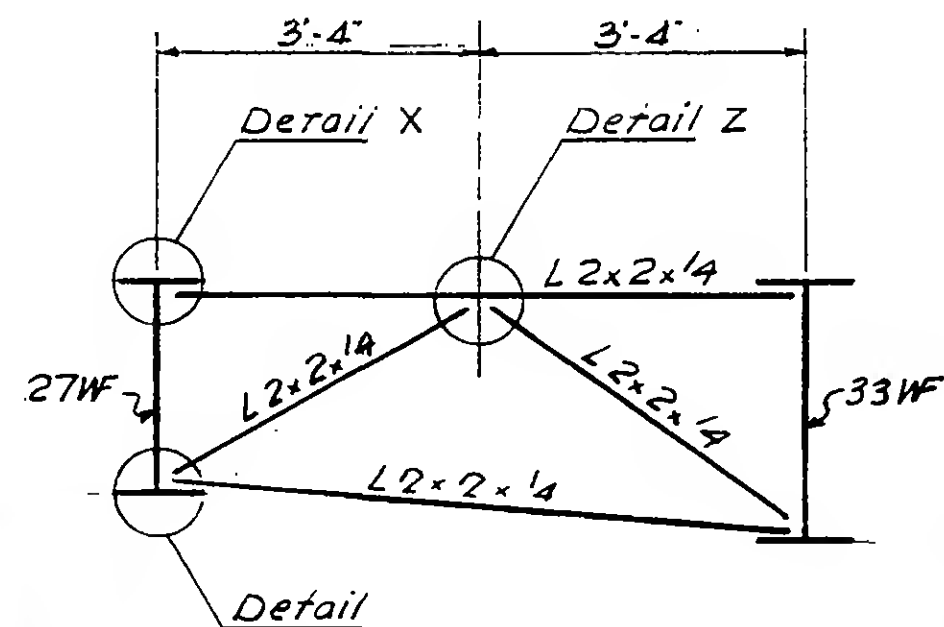
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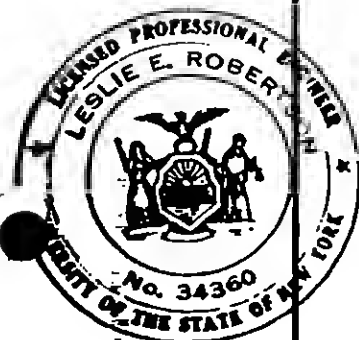
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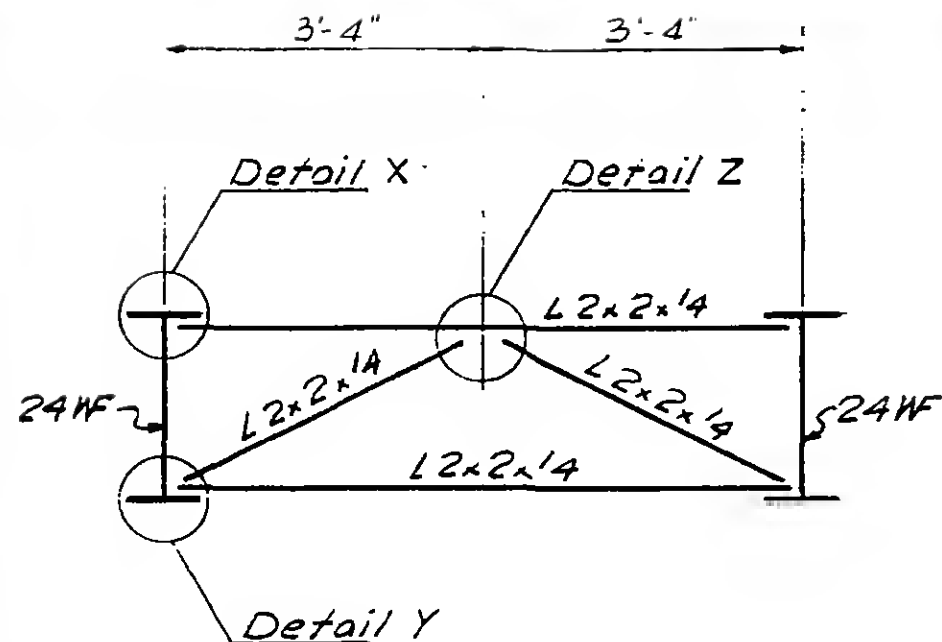
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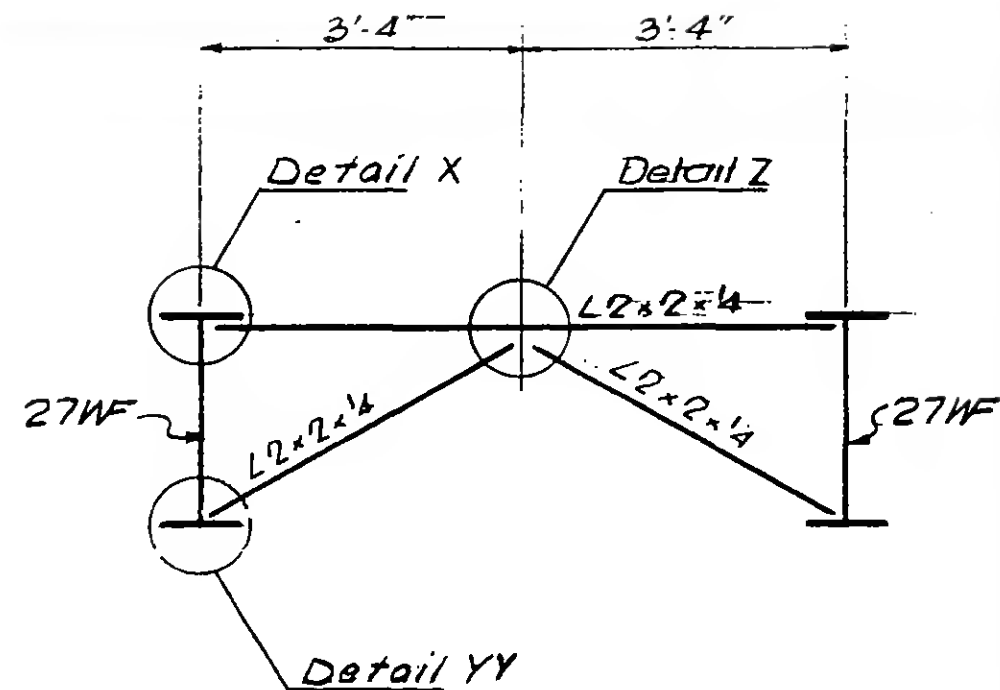
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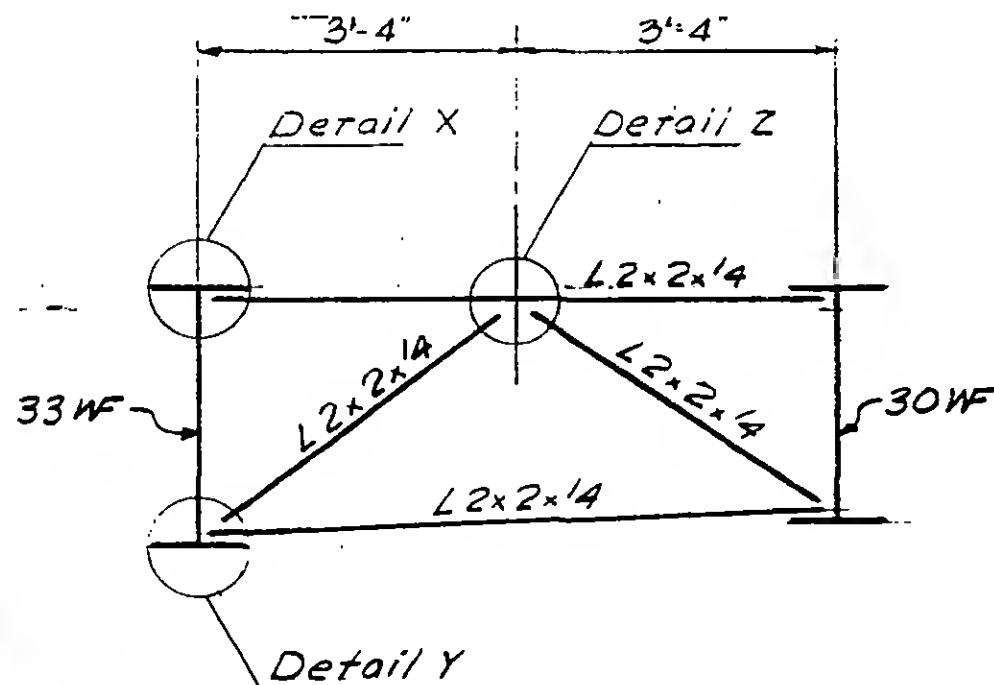
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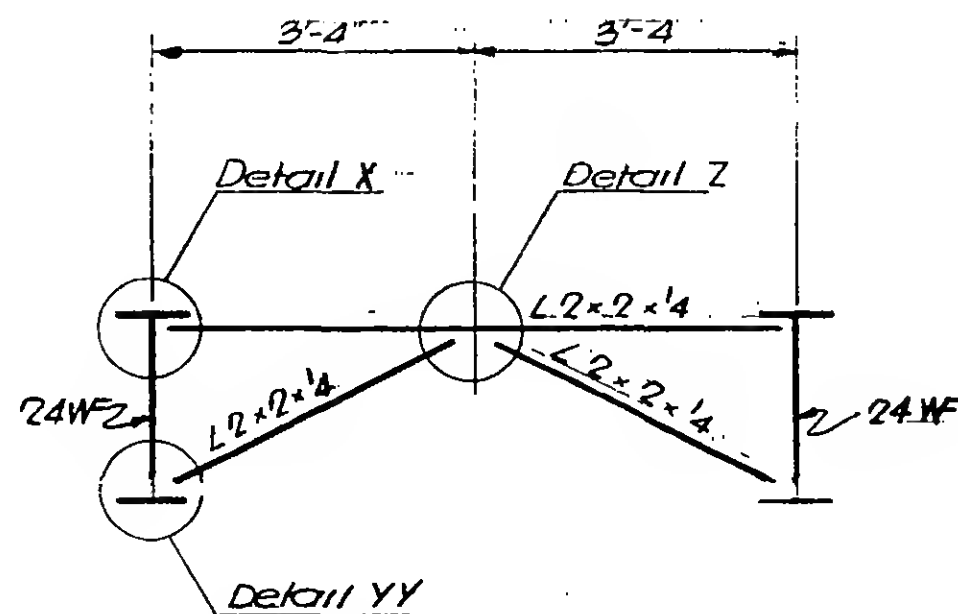
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B10



B11



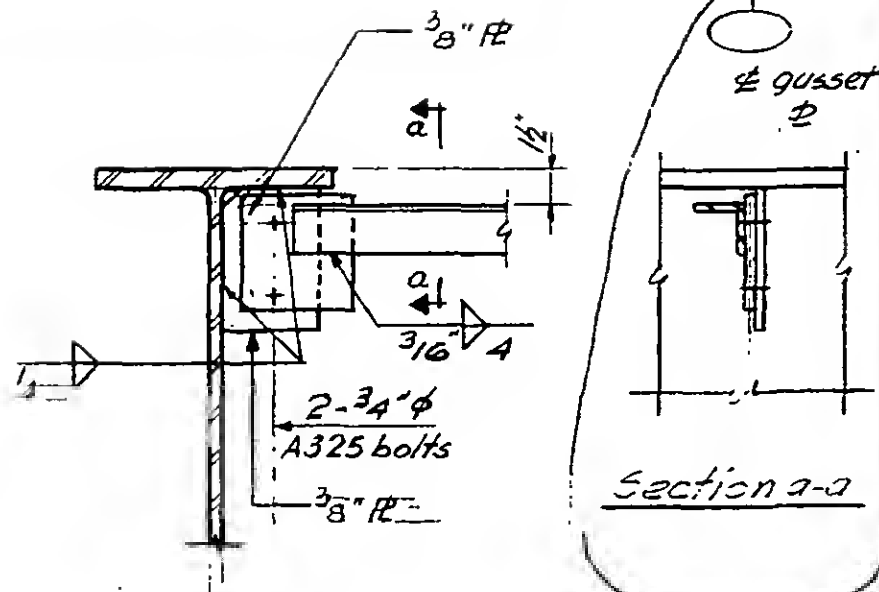
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G-AB3-32

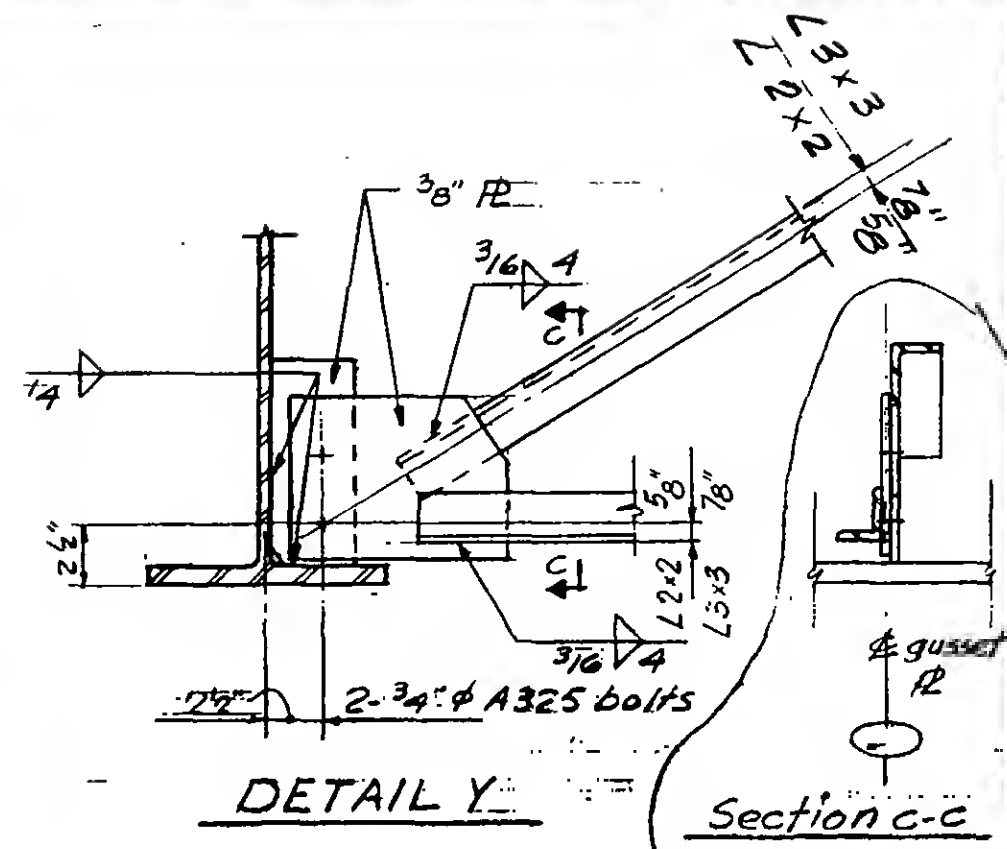


REVISIONS

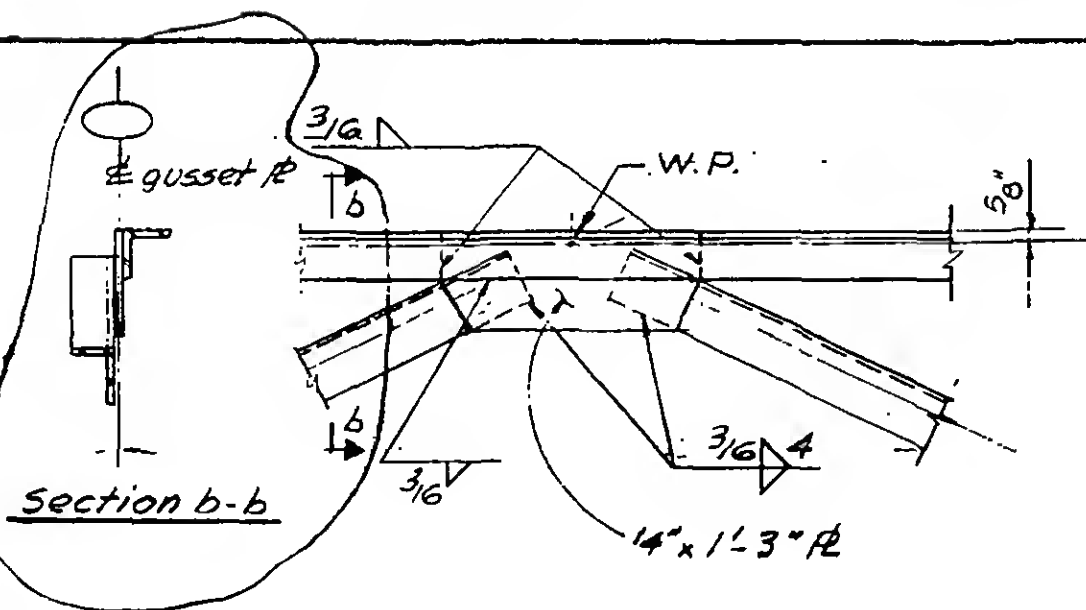
-24-68



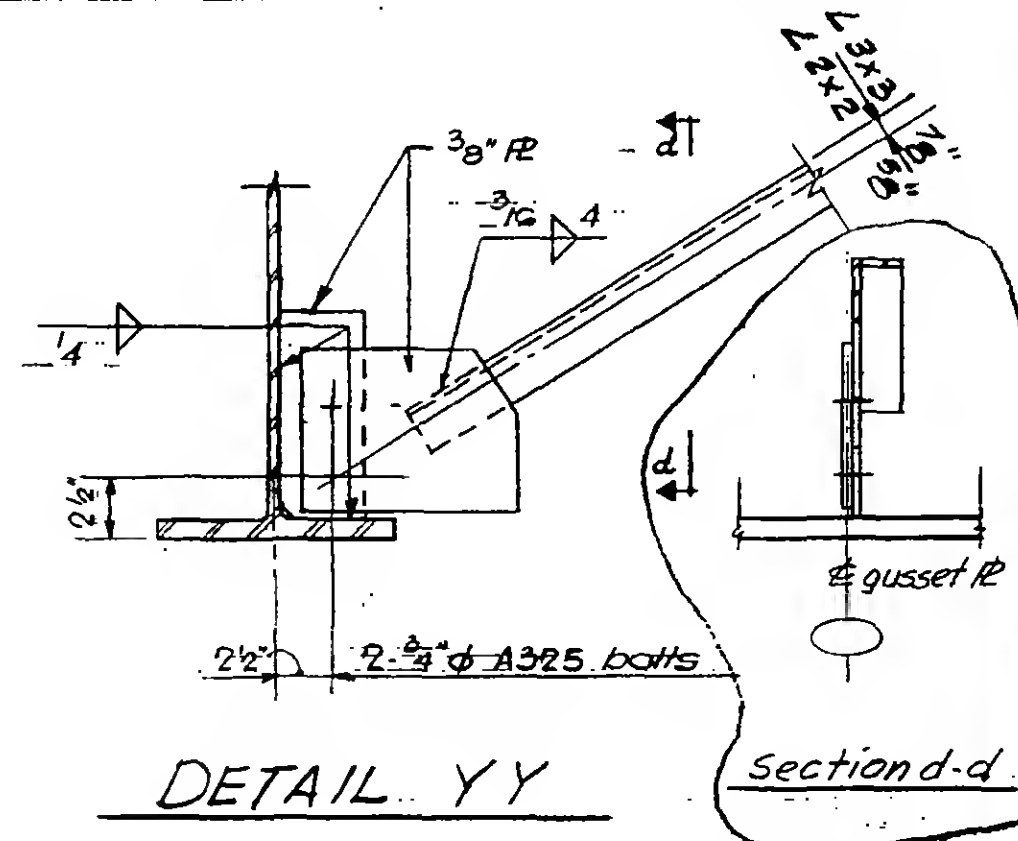
DETAIL X



DETAIL Y



DETAIL Z

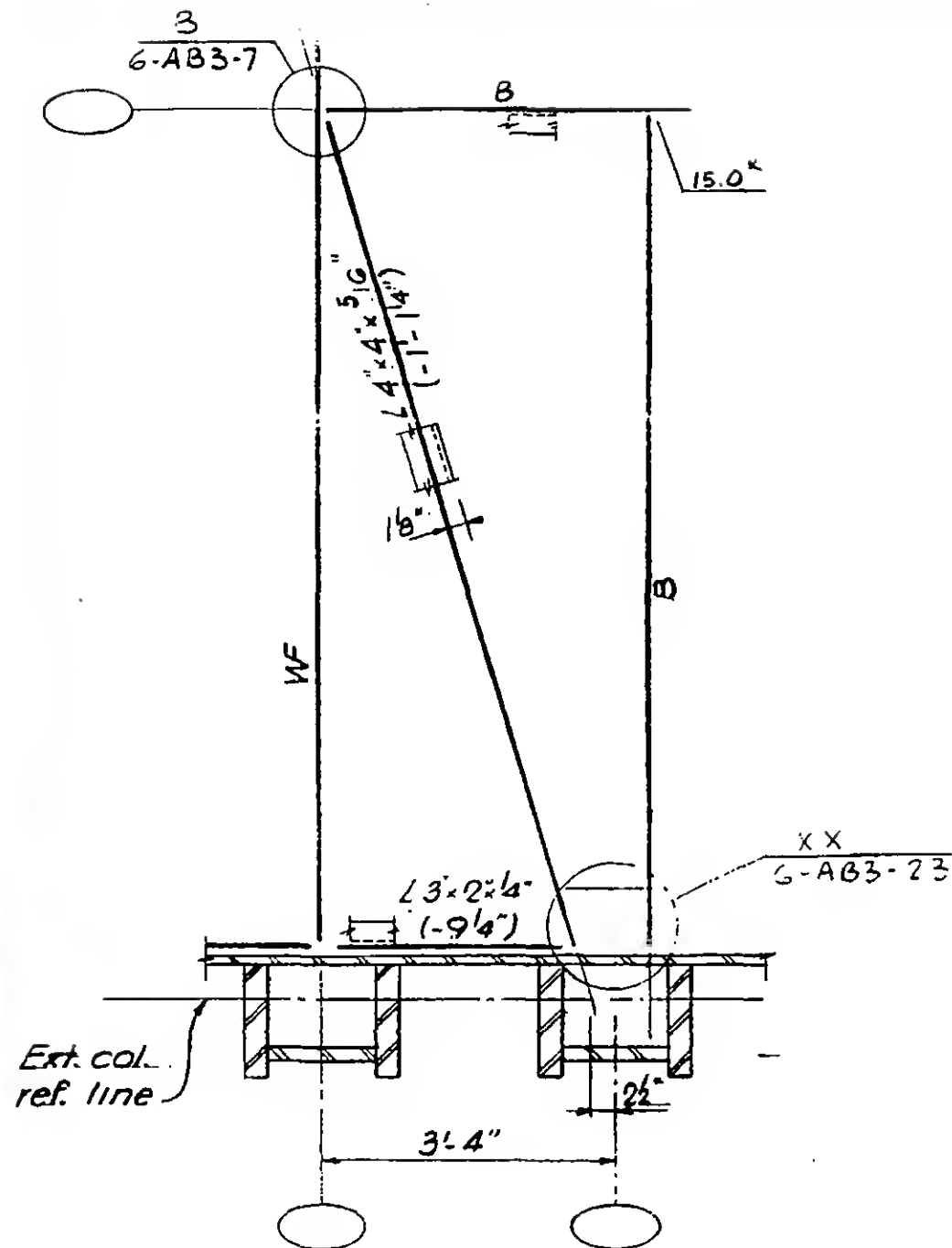


DETAIL YY

C-AB3-33



## REVISIONS



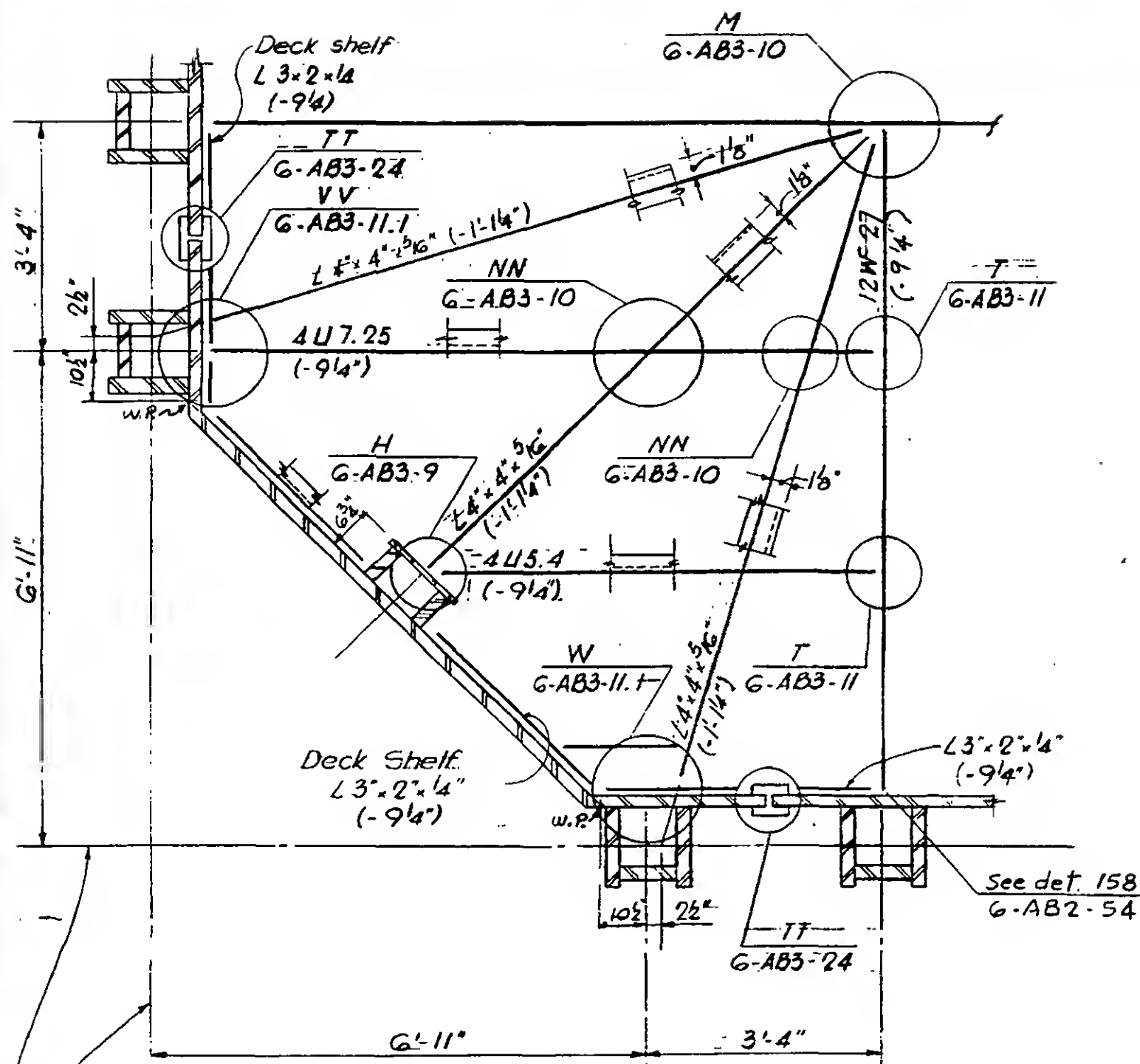
DESIGNED

DRAWN

REVIEWED

G-AB3-34

## REVISIONS



H 16

H 17 opp. hand

G-AB3-35

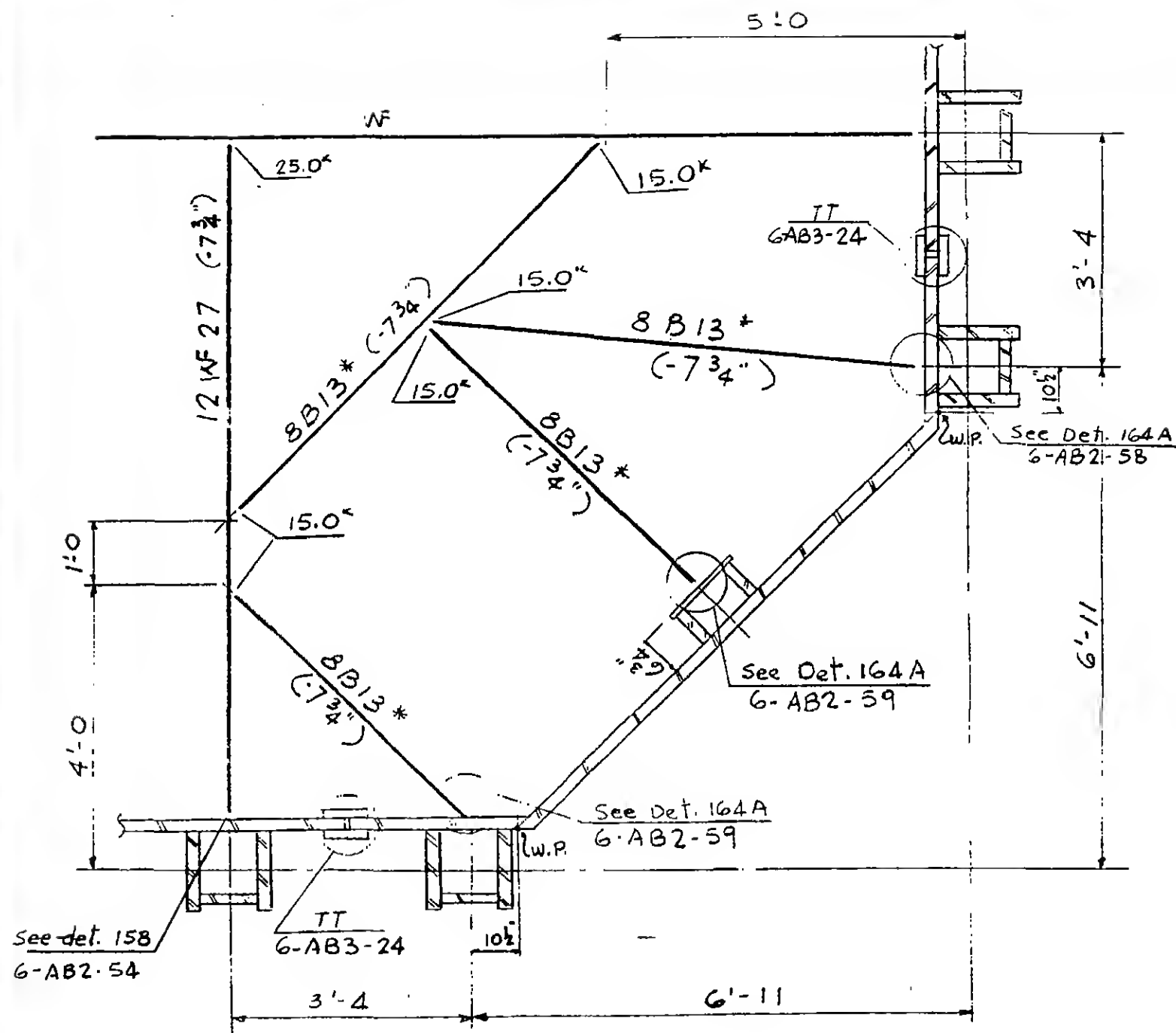


DESIGNED

DRAWN

REVIEWED

## REVISIONS

H 18H 19 opp. hand

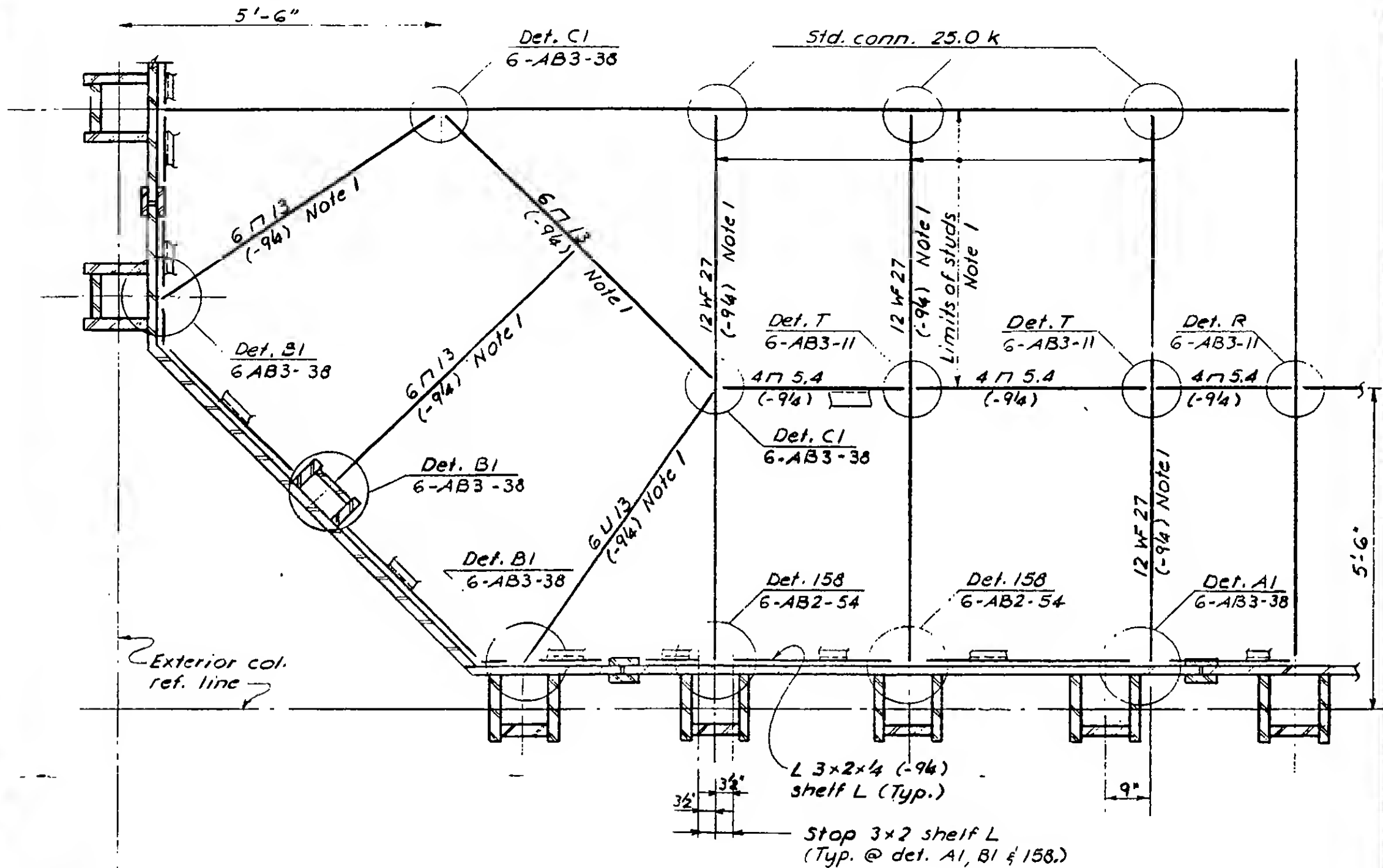
DESIGNED

DRAWN

REVIEWED

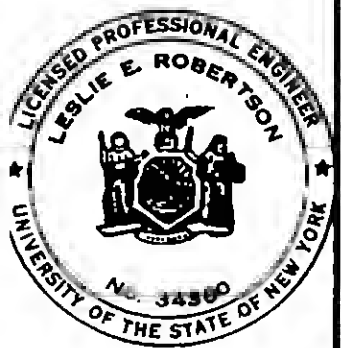
6-AB3-36

## REVISIONS



## Notes:

1. Provide shear studs on top flange :  $\frac{3}{4}$ "  $\phi$  x 3" at 6" c.c.



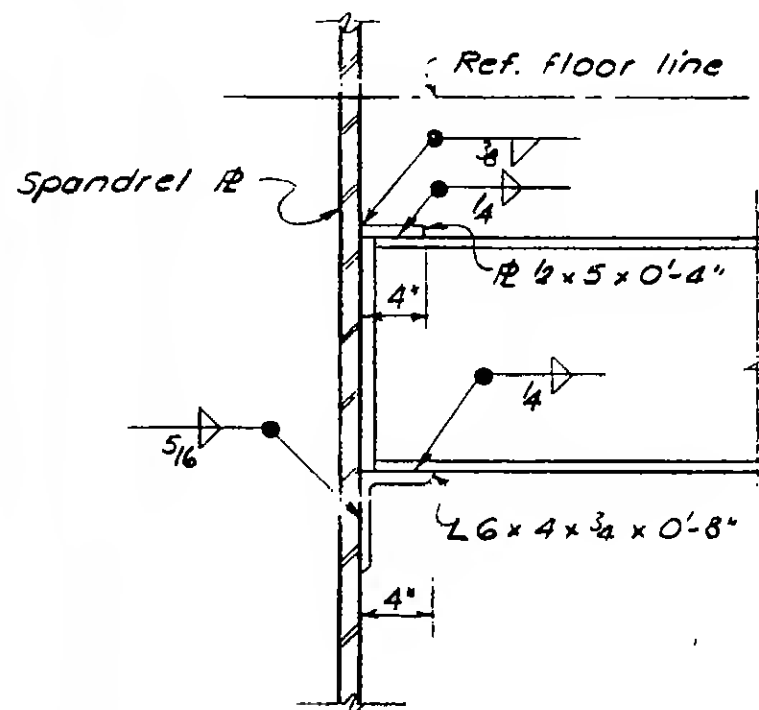
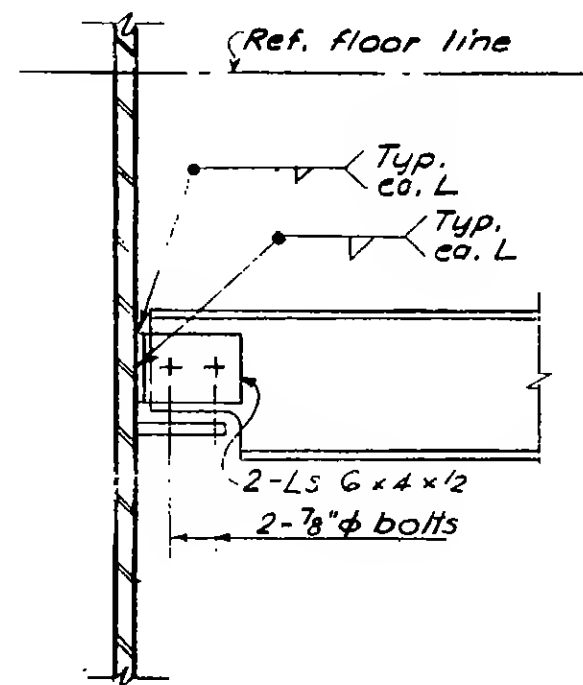
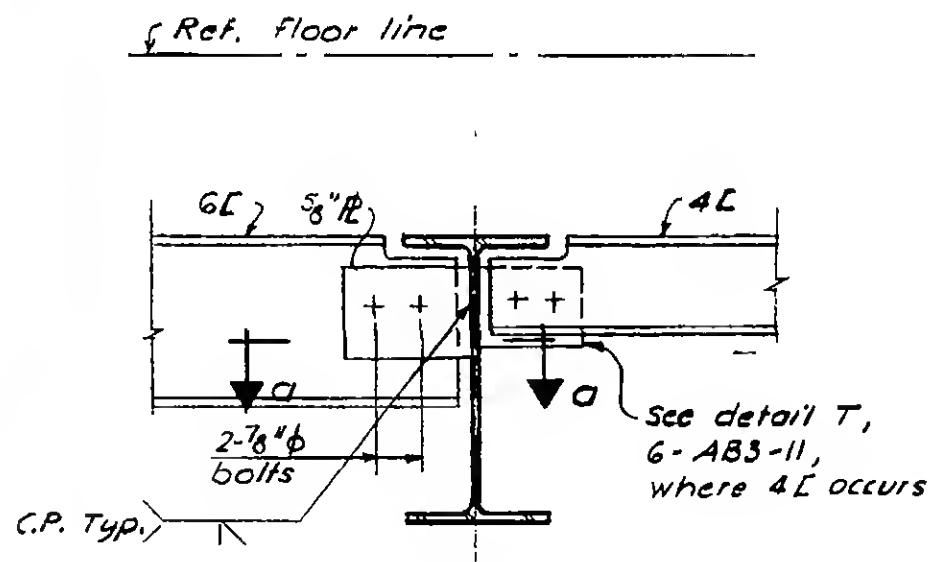
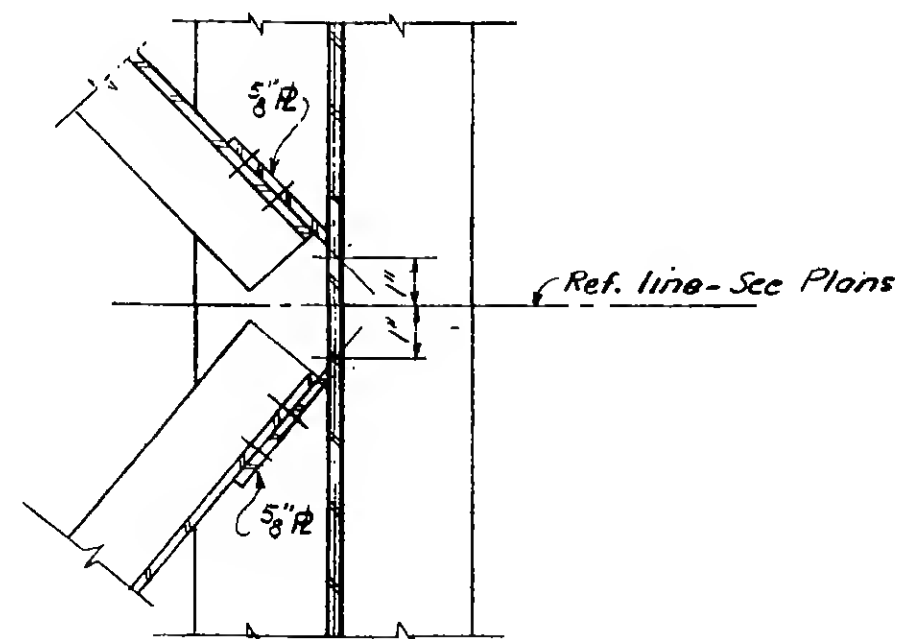
DESIGNED

DRAWN

REVIEWED

6-AB3-37

## REVISIONS

DETAIL A1DETAIL B1DETAIL C1Section a-a

DESIGNED

DRAWN

REVIEWED

PROJECT

THE WORLD TRADE CENTER

TITLE

LOUVER WALL ELEVATIONS &amp; DETAILS

DATE

12-20-67

## REVISIONS

1-3-69

2-3-69

3-3-69

4-1-69

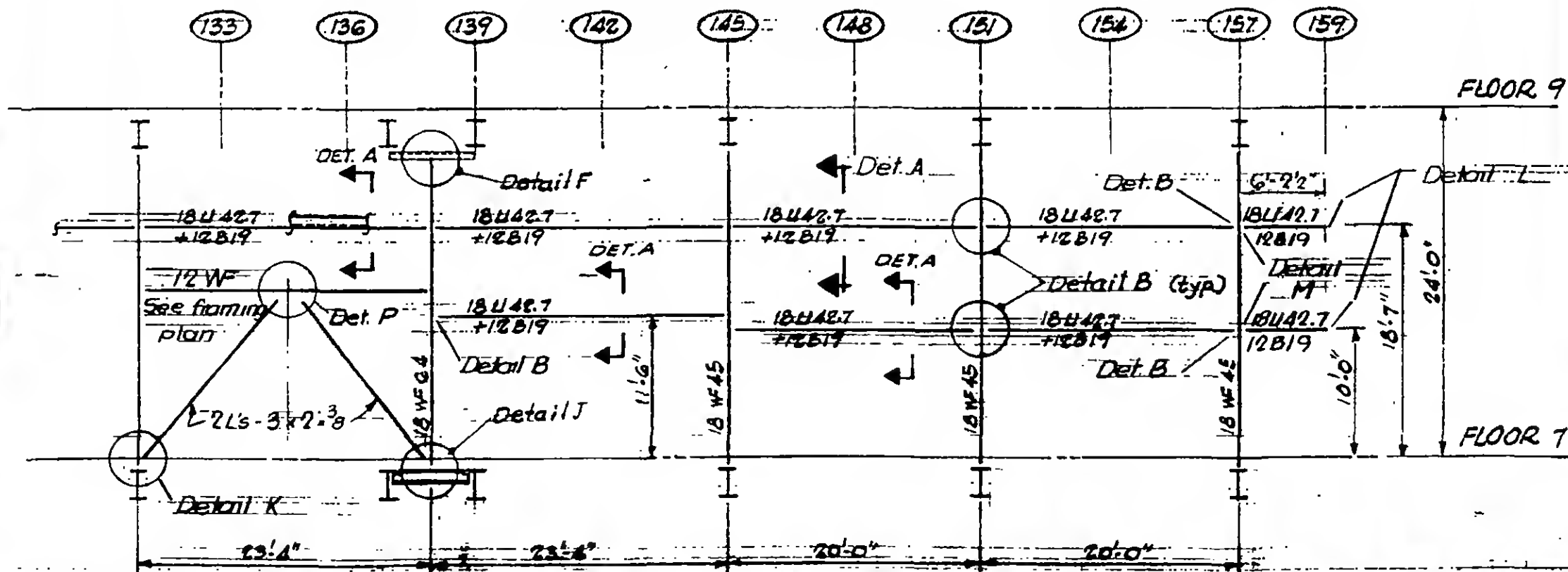
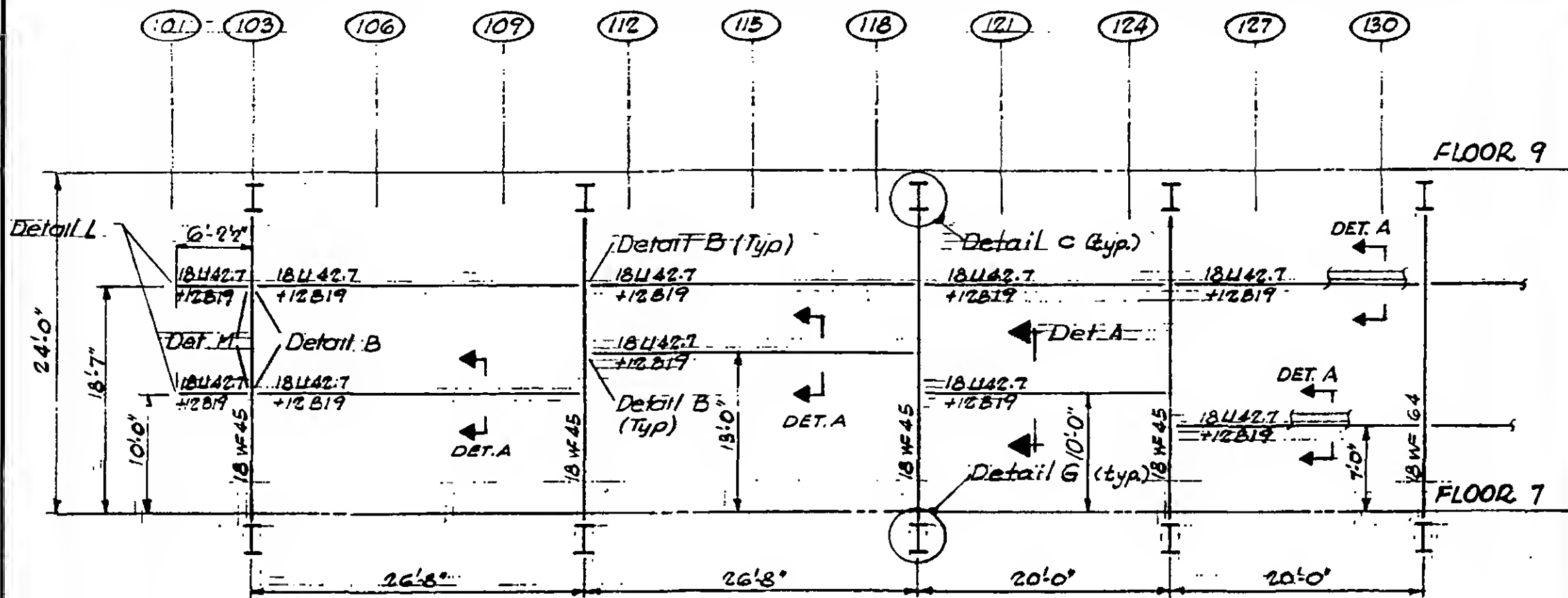
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REVISIONS



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TITLE

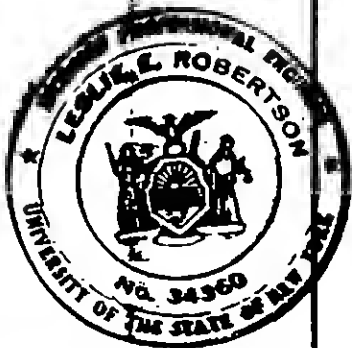
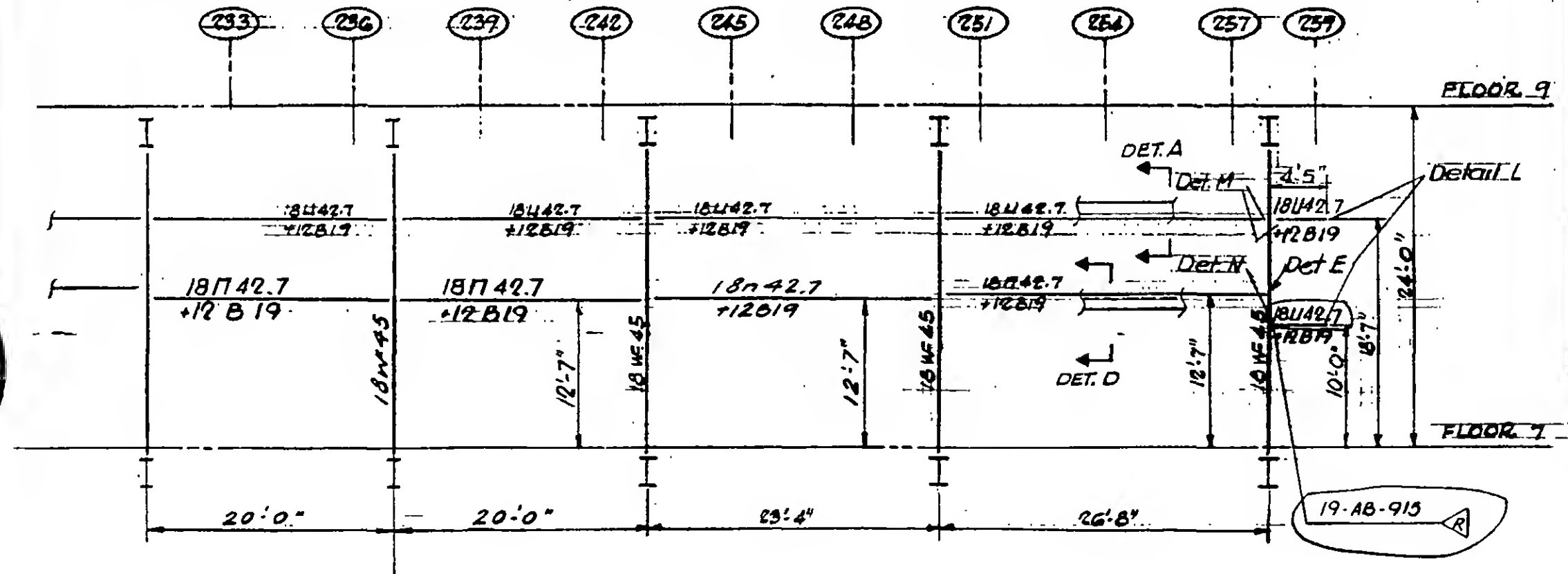
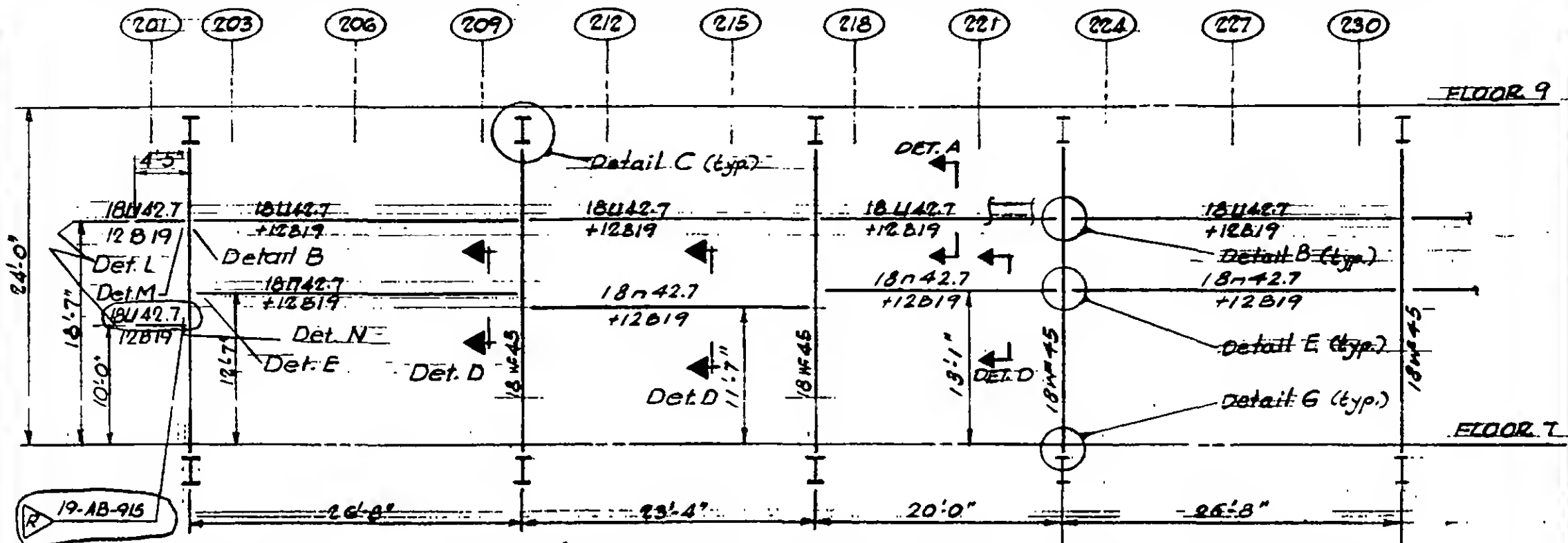
LOUVER SUPPORTS - ELEVATION WALL 200

DATE

12-20-67

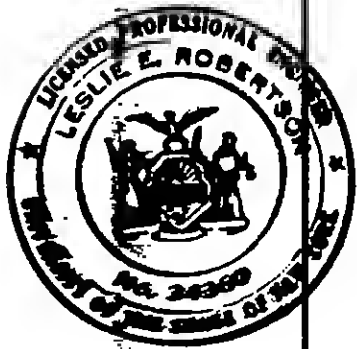
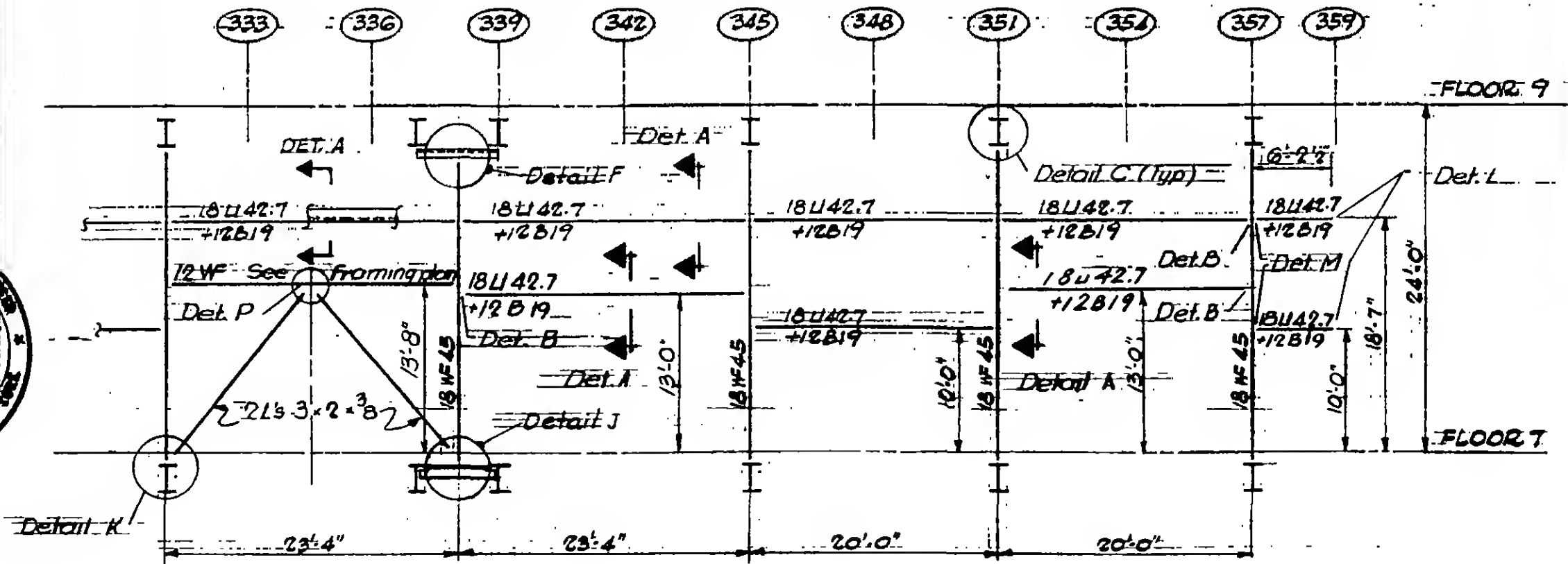
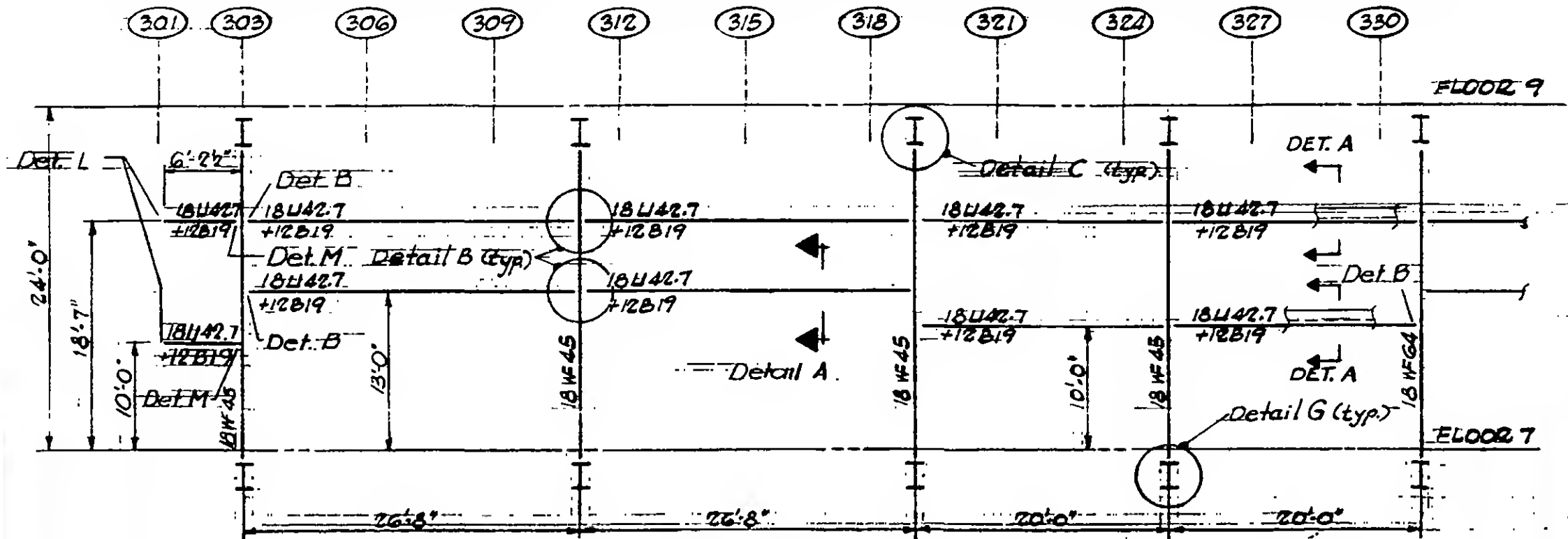
REVISIONS

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G-AB4-3

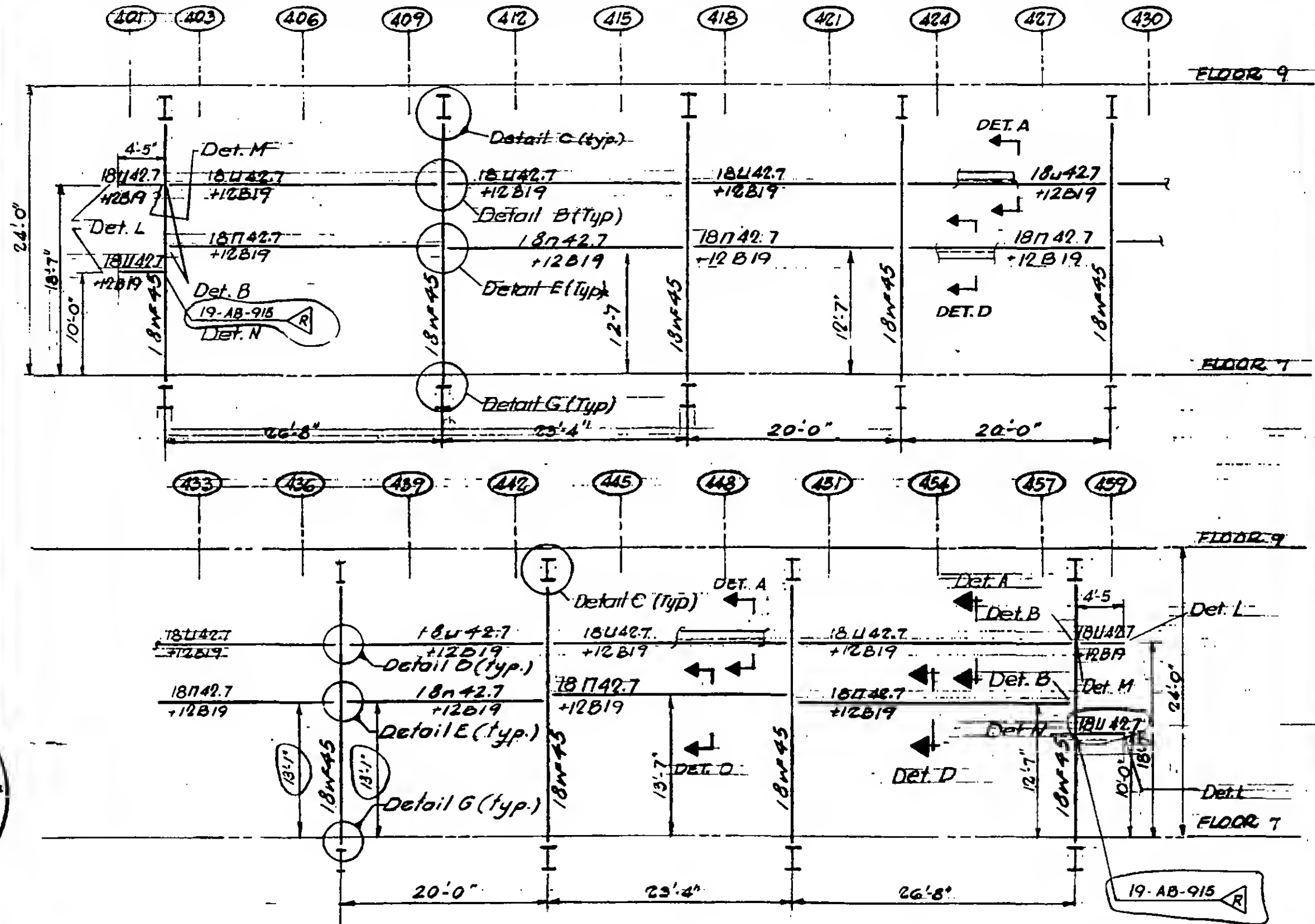
## REVISIONS



6-AB4-4

REVISIONS

11-29-68



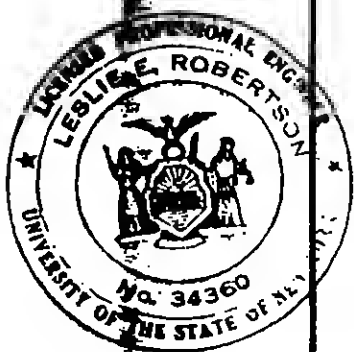
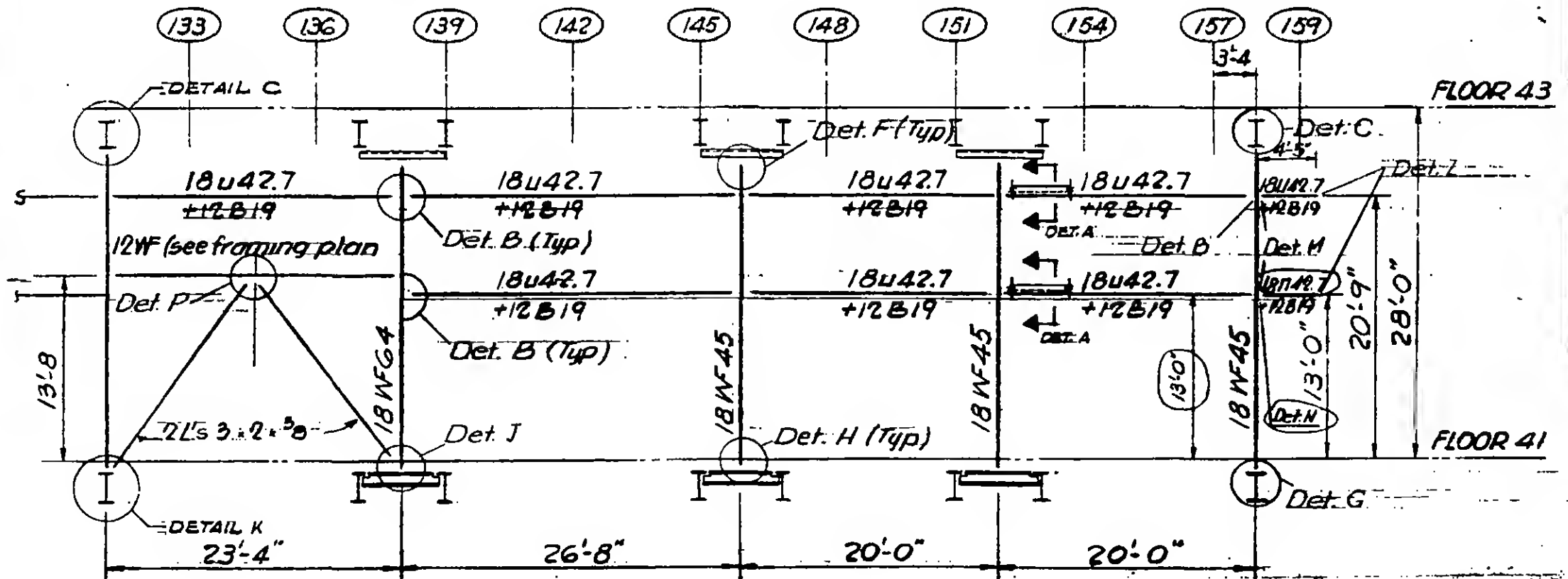
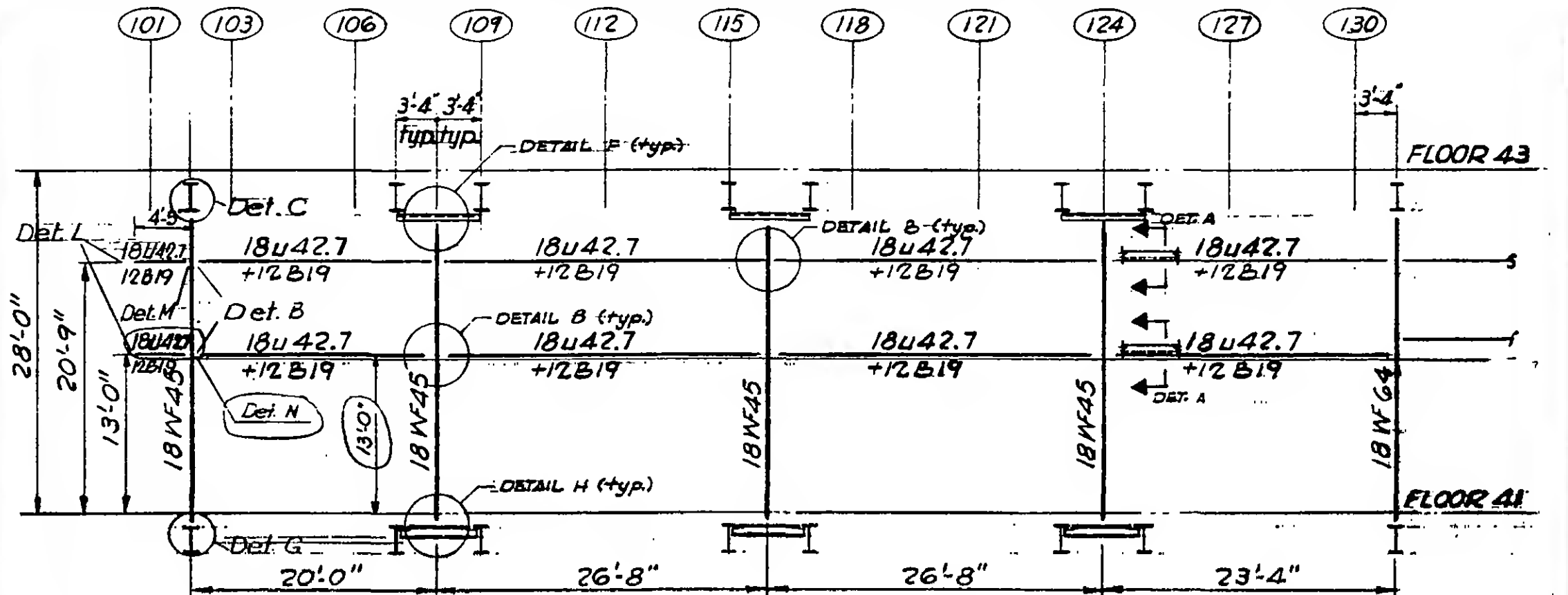
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TITLE LOUVER SUPPORTS - ELEVATION WALL 100

DATE 12-20-67

REVISIONS

11-29-68



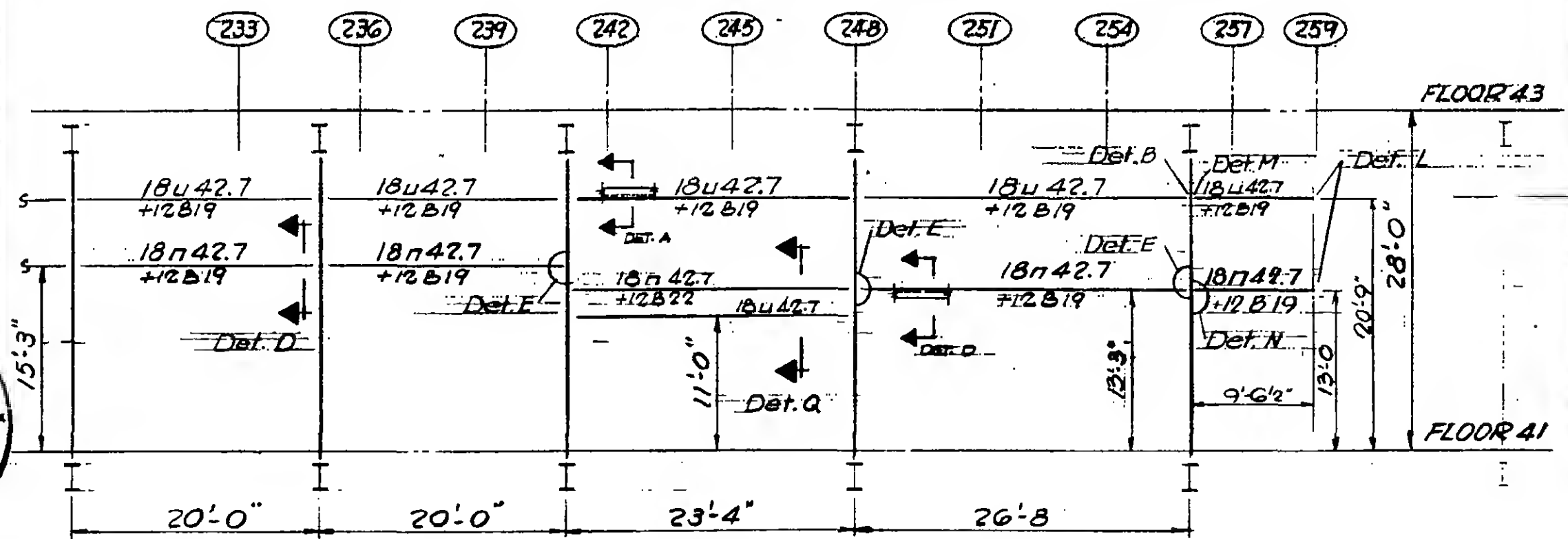
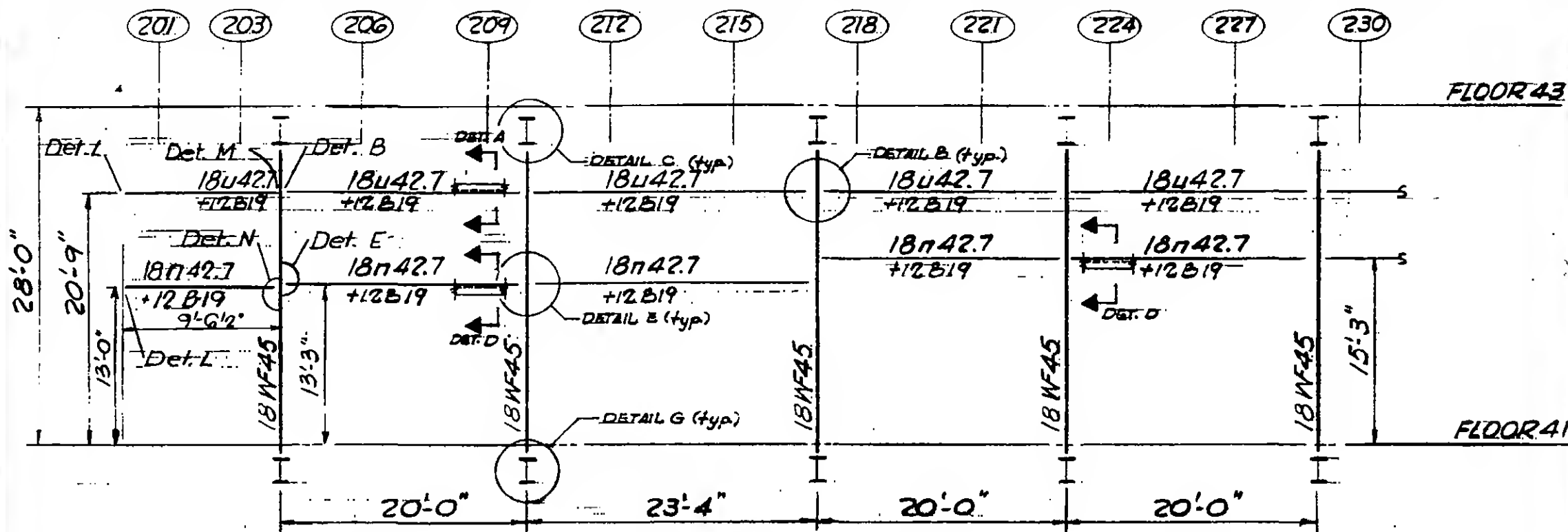
G-AB-4-C

PROJECT THE WORLD TRADE CENTER

TITLE LOUVER SUPPORTS - ELEVATION WALL 200

DATE 12-20-67

REVISIONS



G-484-3

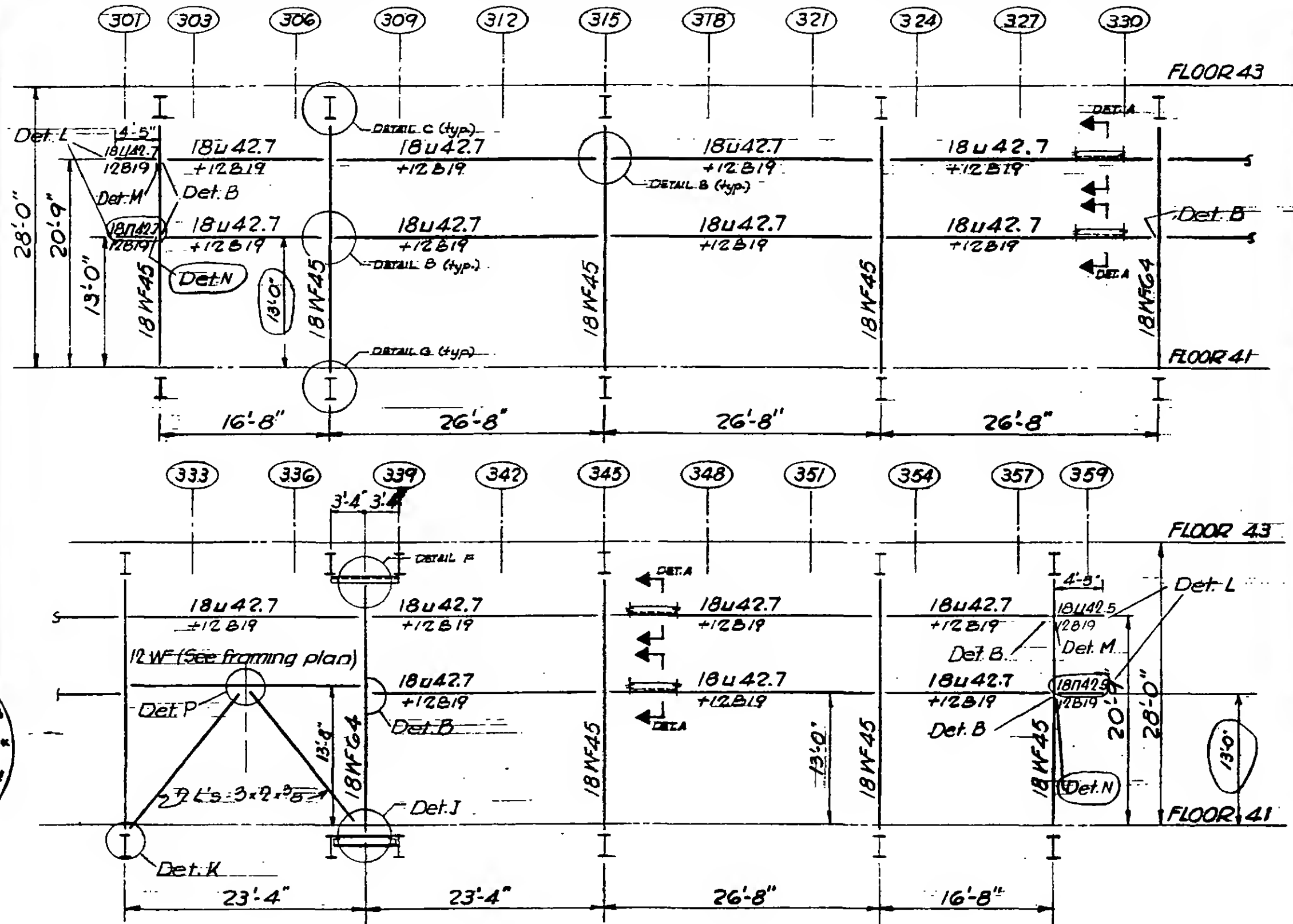
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TITLE LOUVER SUPPORTS - ELEVATION WALL 300

DATE 12-20-67

REVISIONS

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6-48438

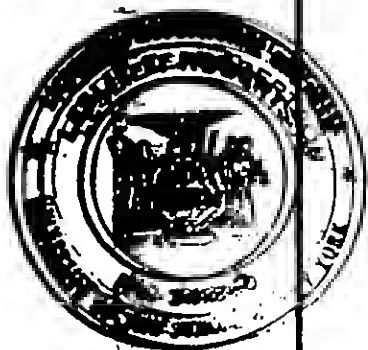
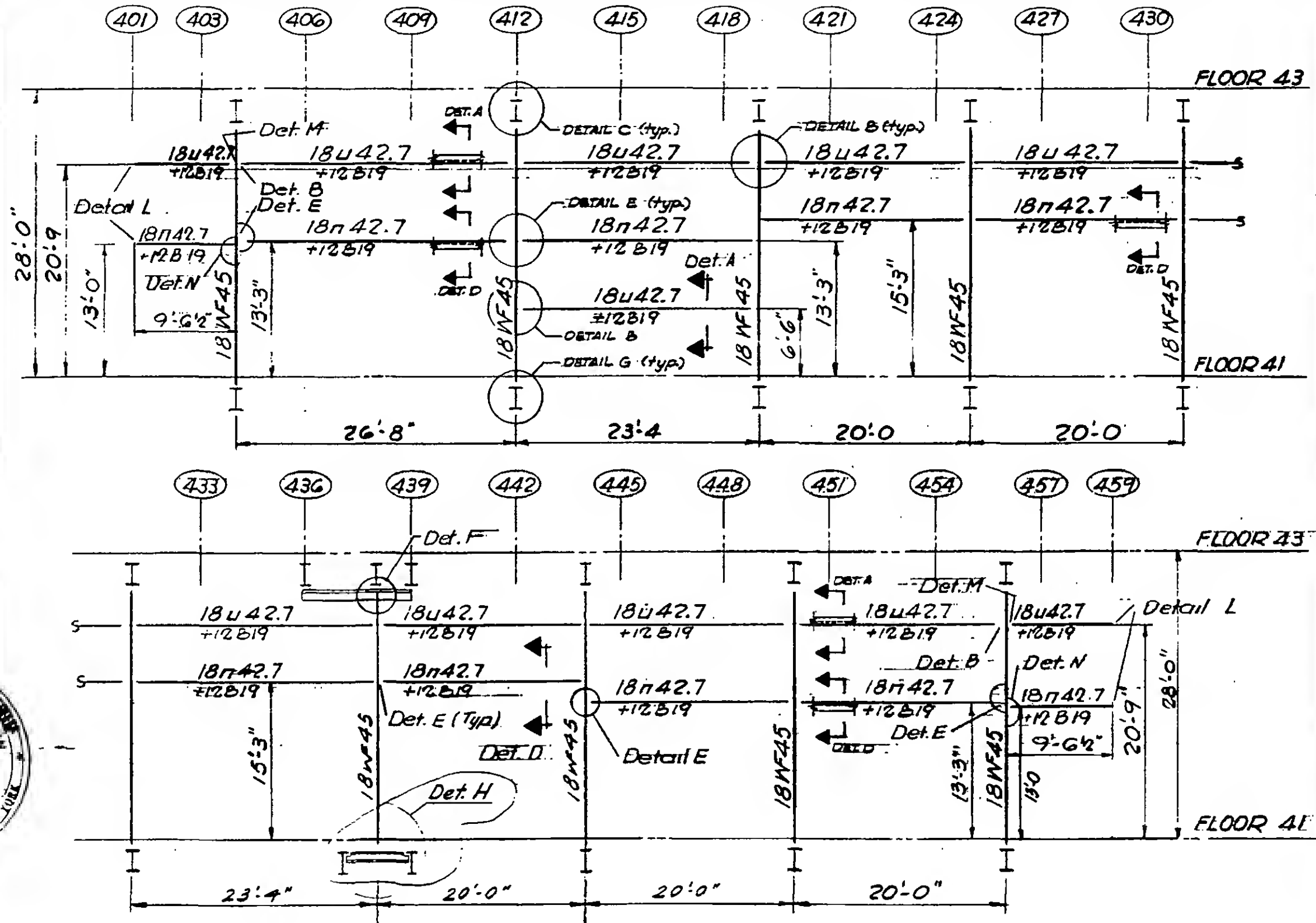
PROJECT THE WORLD TRADE CENTER

TITLE LOUVER SUPPORTS - ELEVATION WALL 400

DATE 12-20-67

REVISIONS

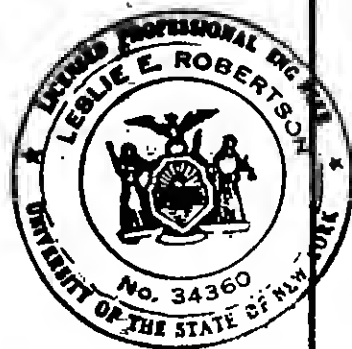
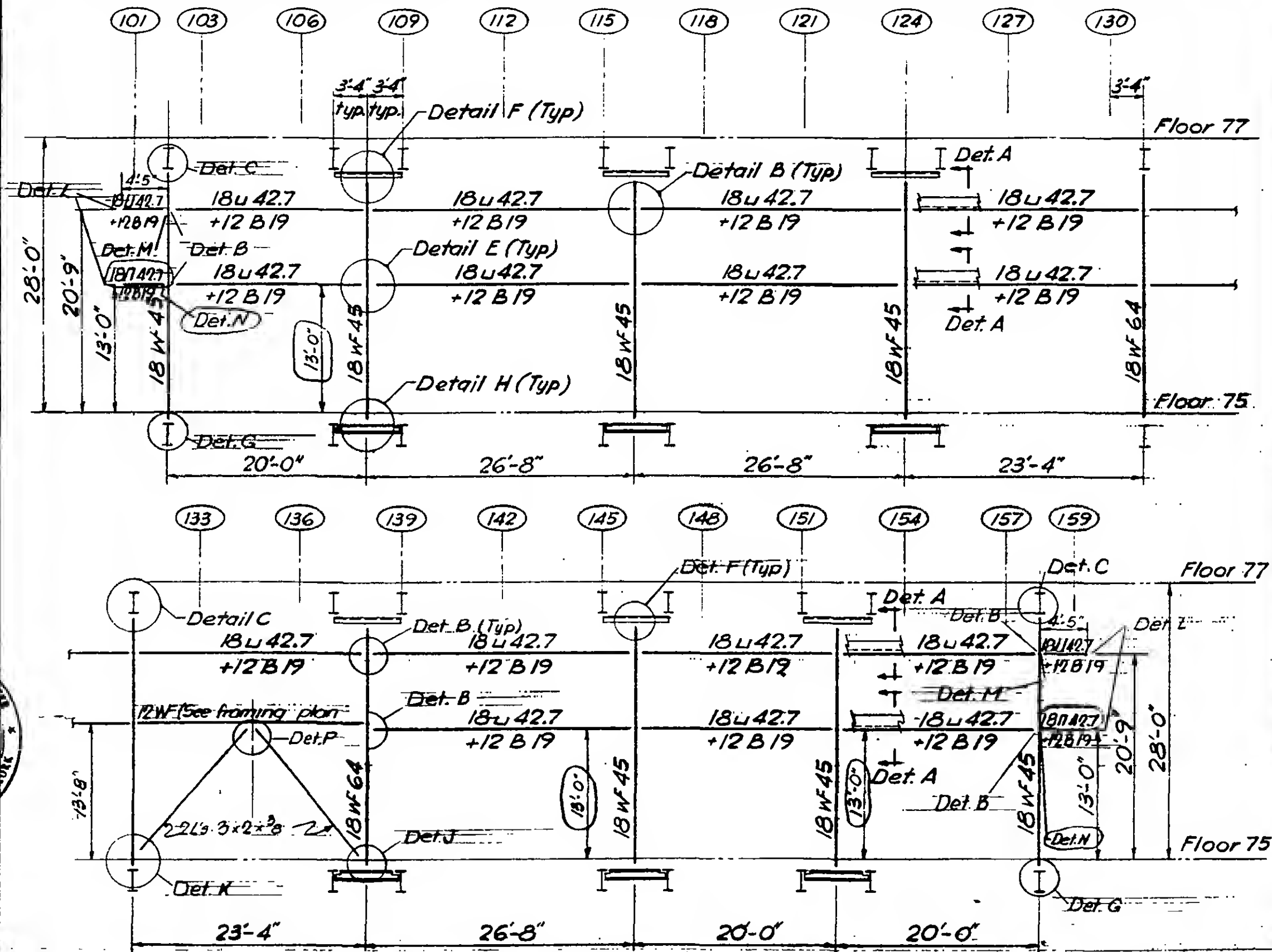
8-29-68



6-AB-1-2

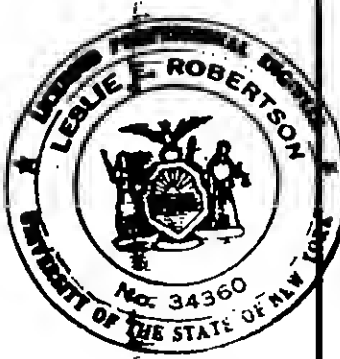
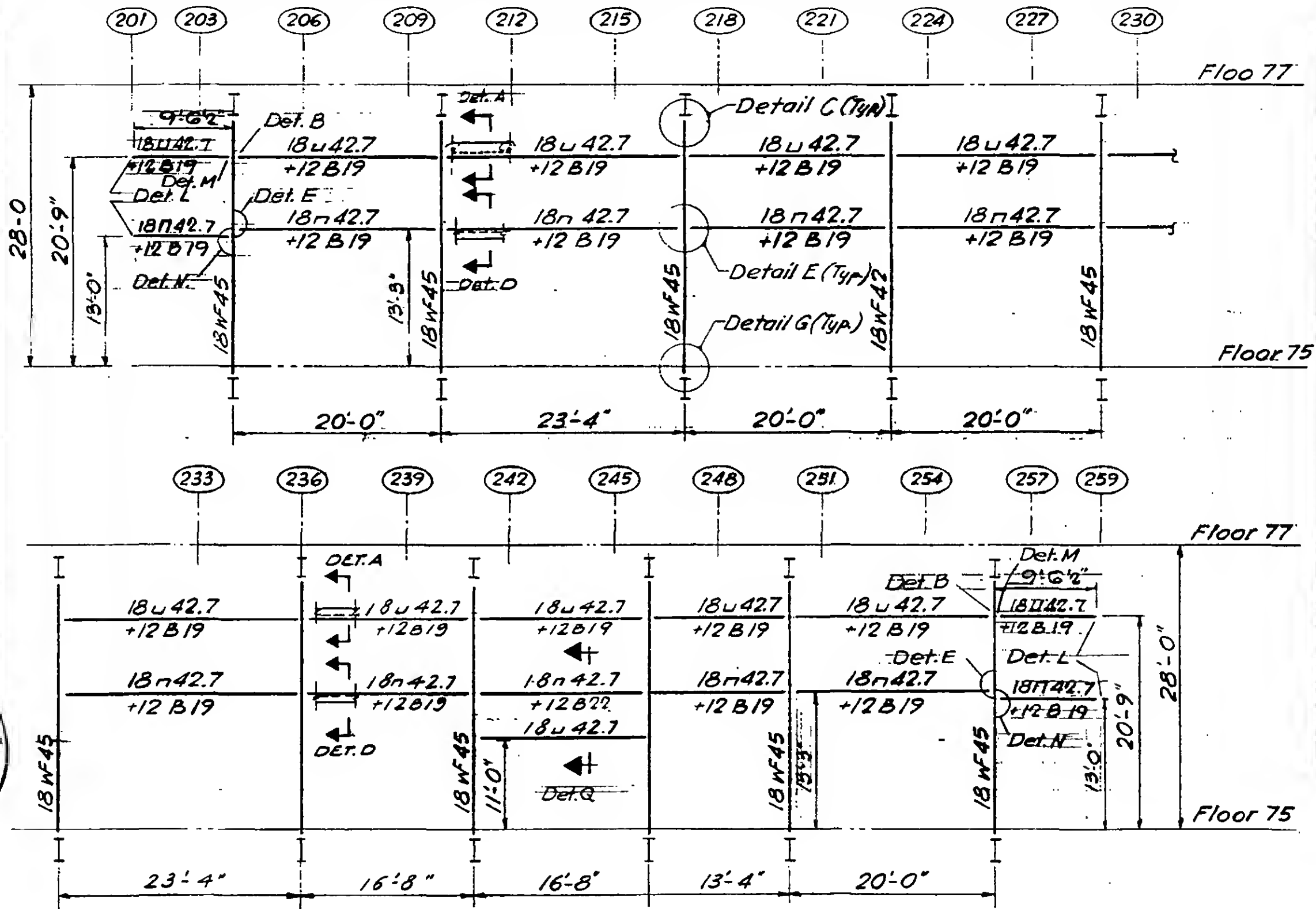
## REVISIONS

11-29-68



~~6-AB4-10~~

REVISIONS



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

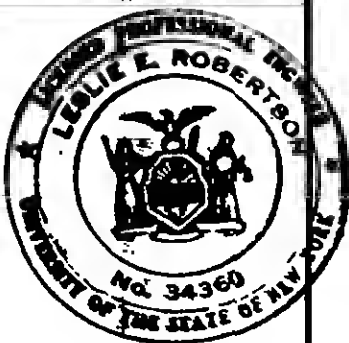
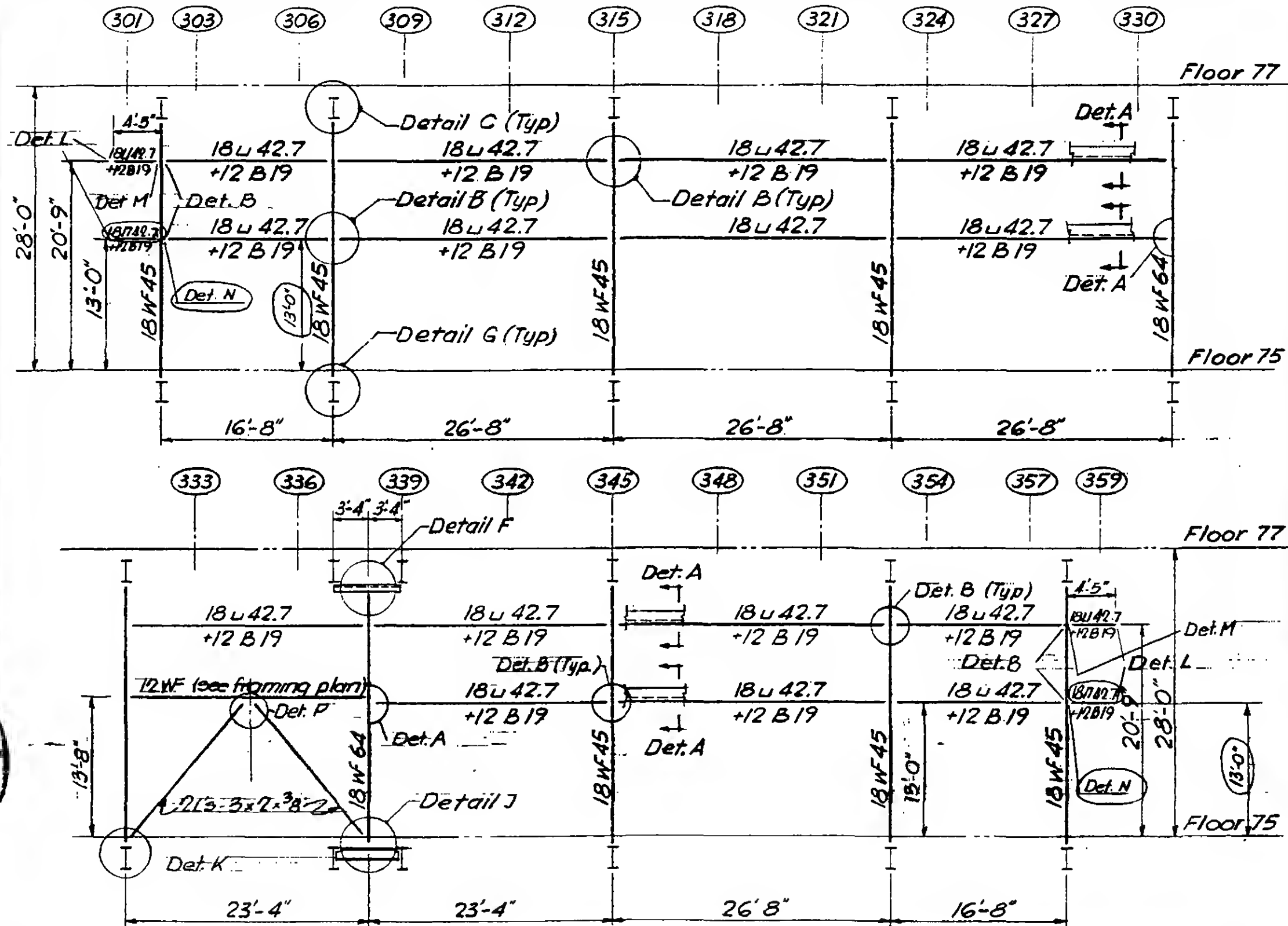
PROJECT THE WORLD TRADE CENTER

TITLE ELEVATION WALL 300 - LOUVER SUPPORTS

DATE 12-20-67

REVISIONS

11-29-68



6-AB4-12

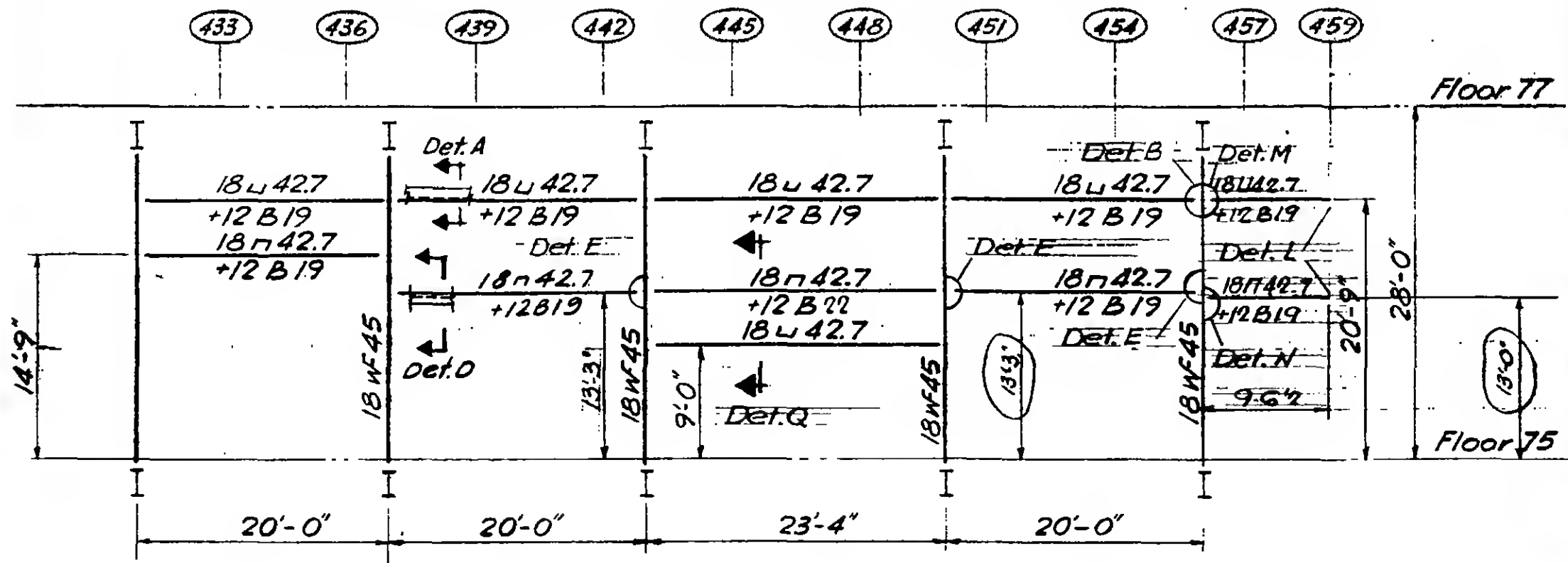
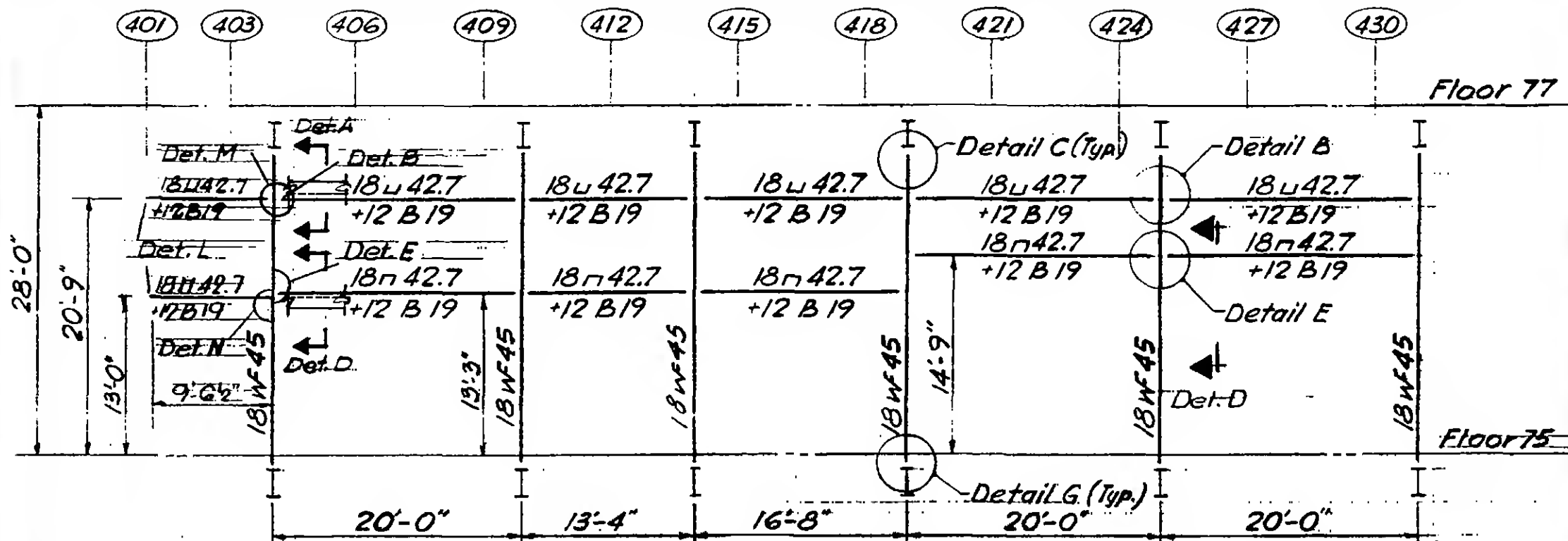
PROJECT THE WORLD TRADE CENTER

TITLE ELEVATION WALL 400 - LOUVER SUPPORTS

DATE 12-20-67

REVISIONS

11-29-68



6-AB4-13

SKILLING - HELLE - CHRISTIANSEN - ROBERTSON

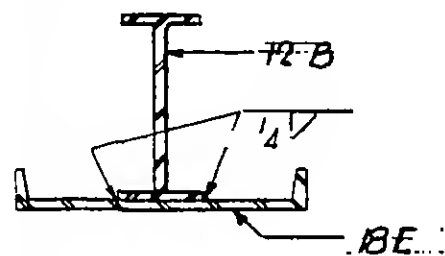
Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER

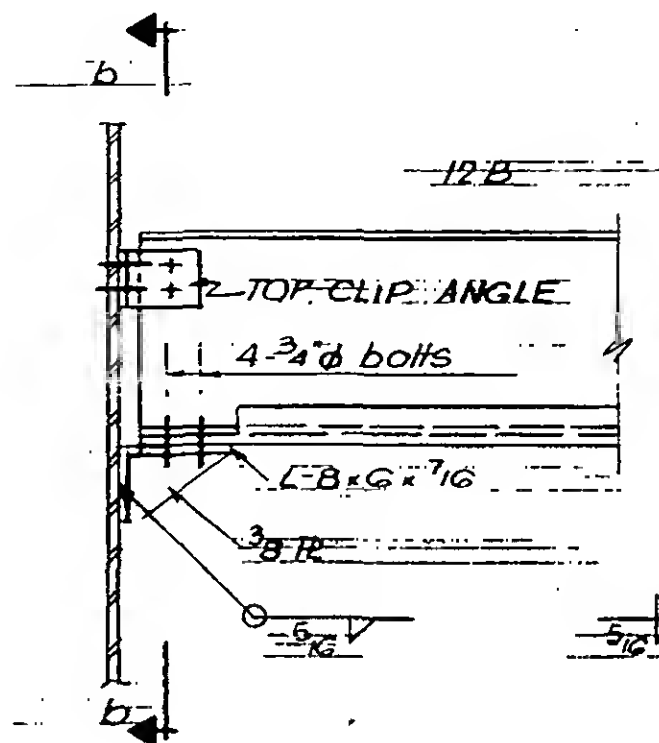
TITLE LOUVER SUPPORTS - DETAILS A & B

DATE 12-20-87

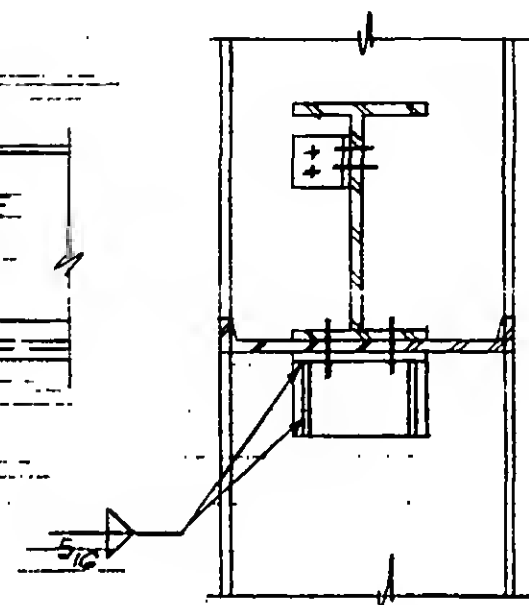
REVISIONS



Detail A



Detail B



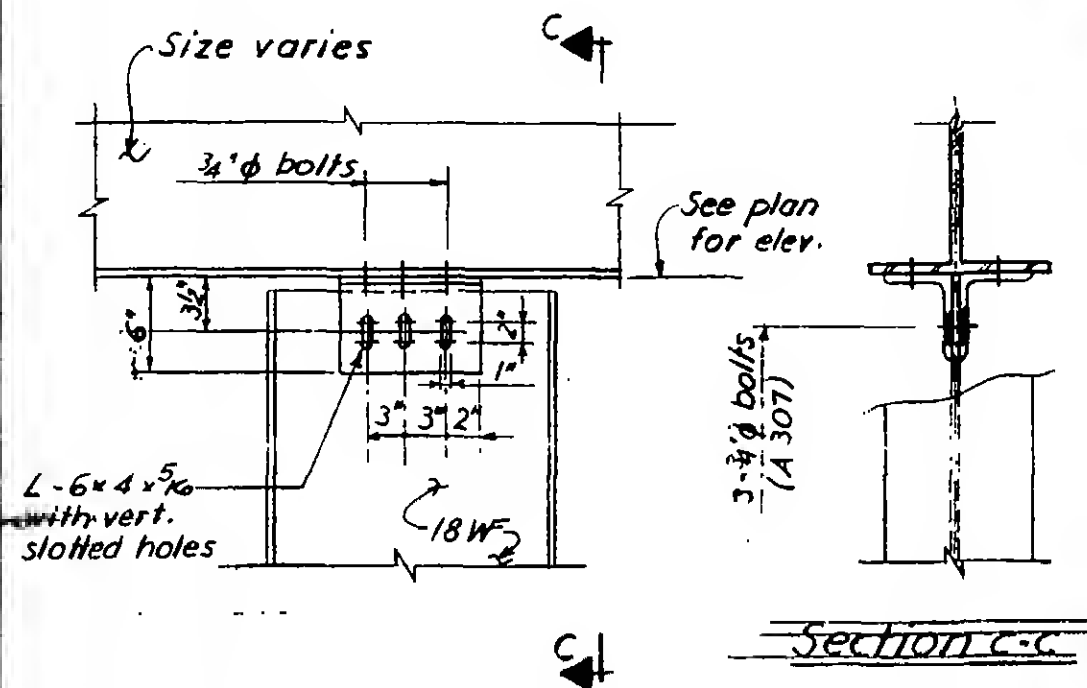
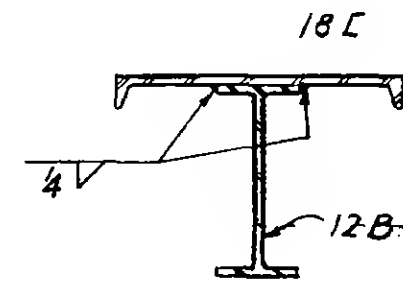
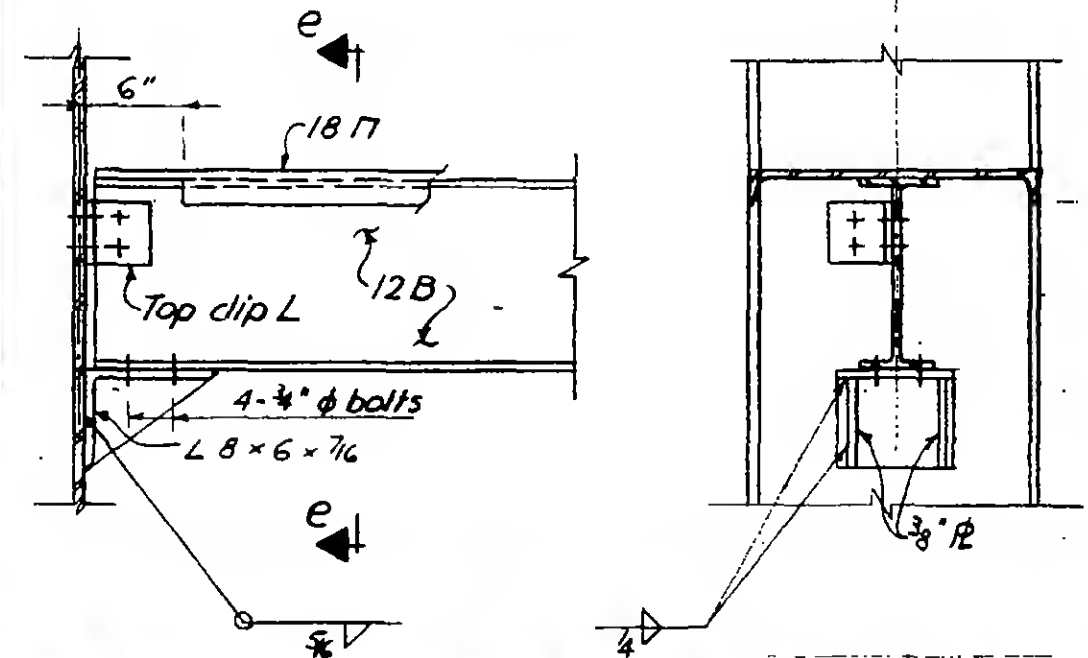
Section b-b



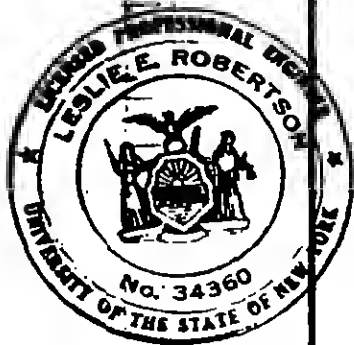
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PROJECT THE WORLD TRADE CENTERTITLE LOUVER SUPPORTS - DETAILS C, D & EDATE 12-20-67

REVISIONS

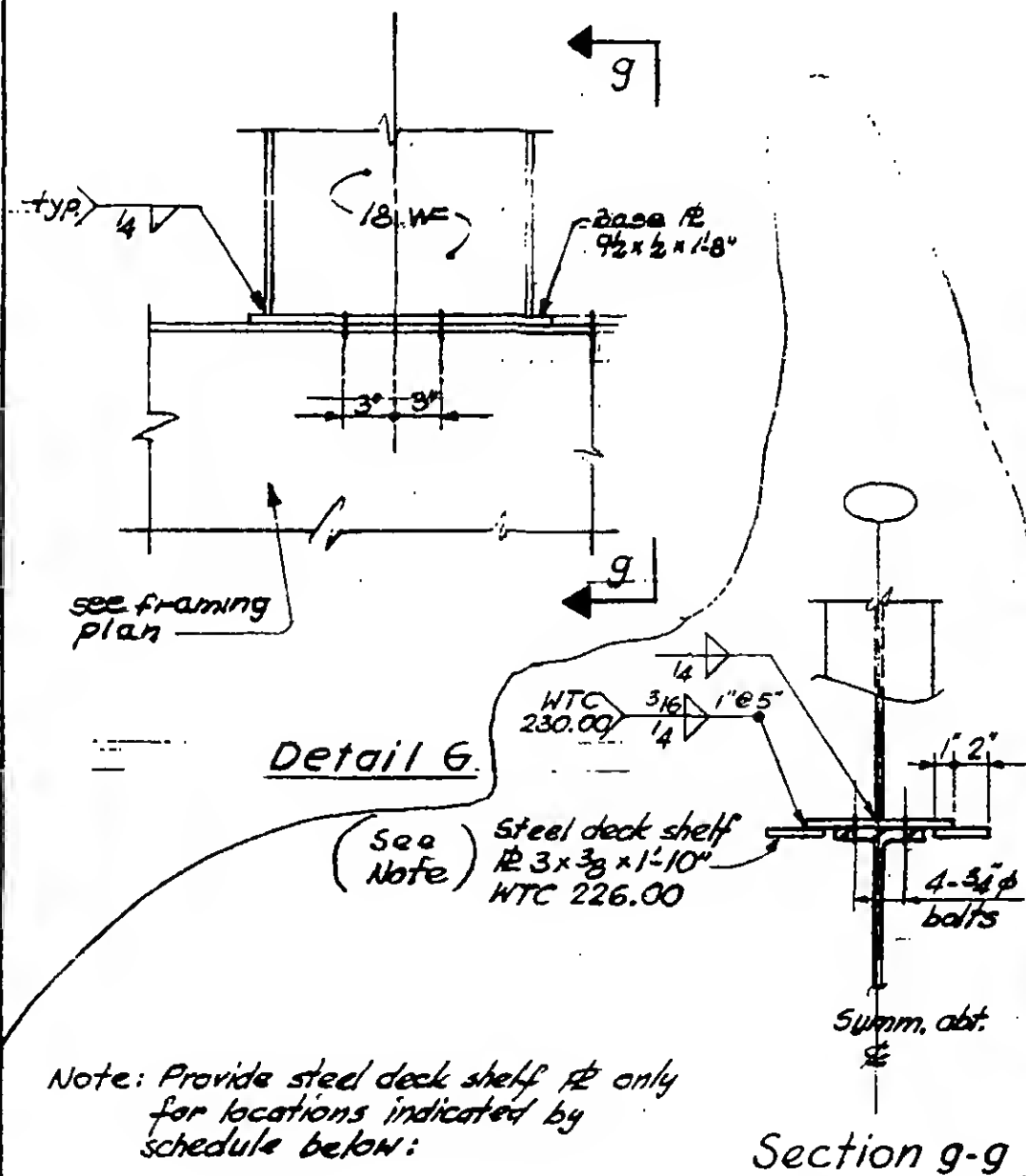
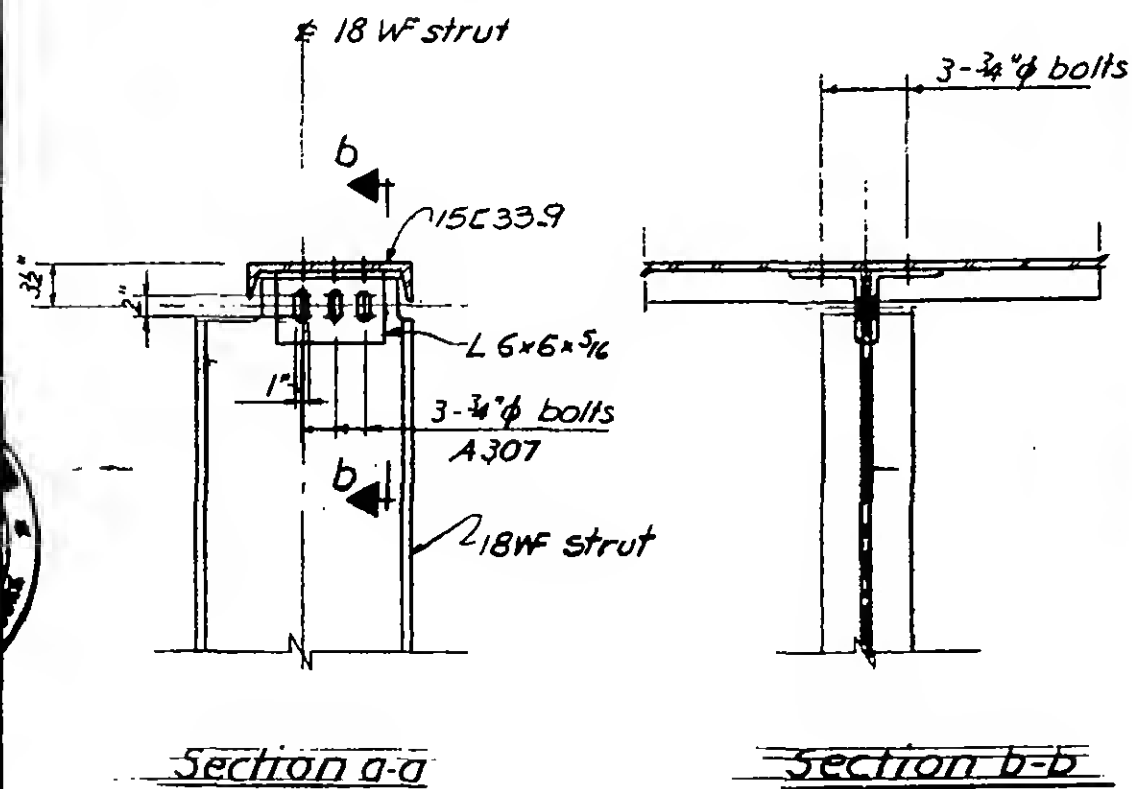
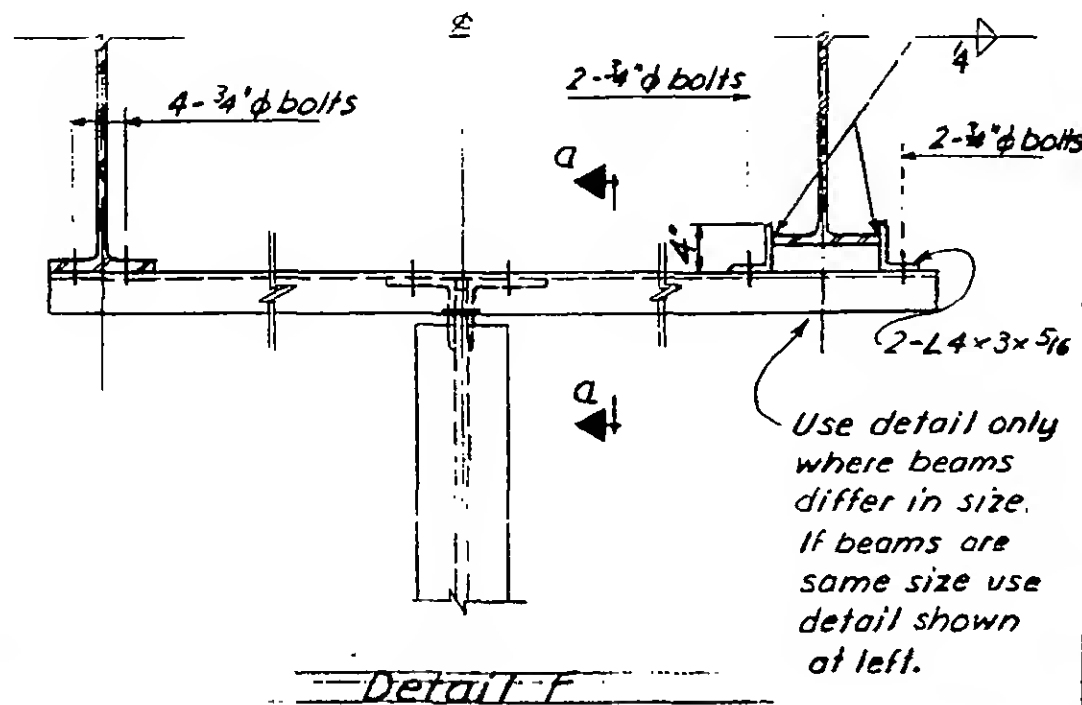
Detail CDetail DDetail E

6-AB4-19



REVISIONS

8-29-68



| Floor | Column lines        |
|-------|---------------------|
| 7     | 103, 157, 303 & 357 |
| 41    | 102, 158, 302 & 358 |
| 75    | 102, 158, 302 & 358 |



PROJECT THE WORLD TRADE CENTER

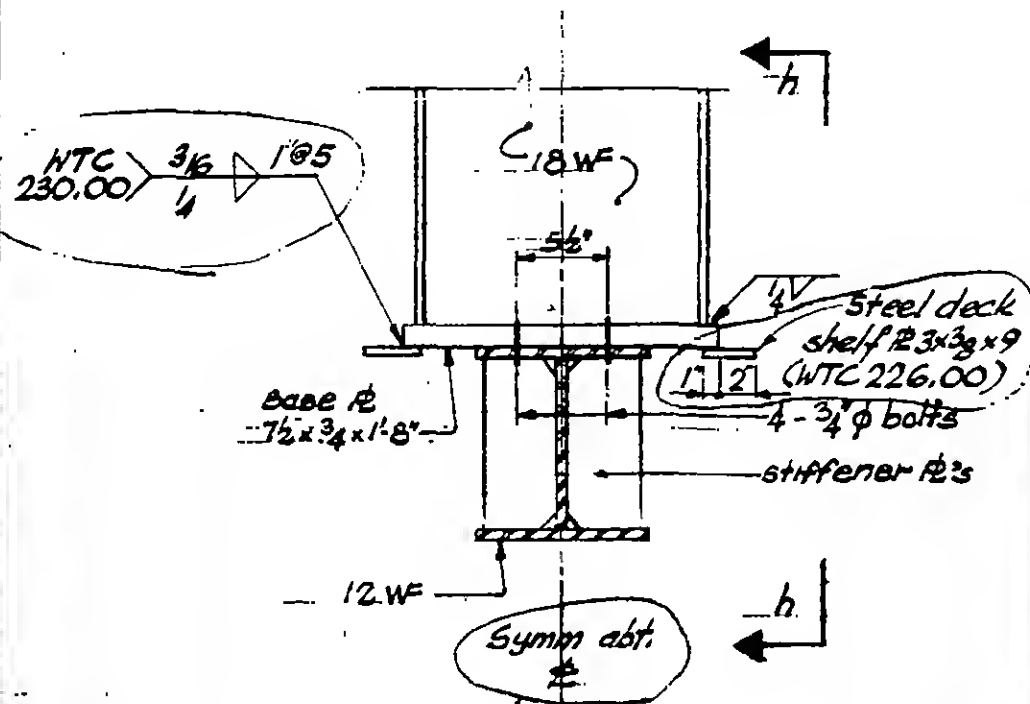
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LOUVER SUPPORTS - DETAILS H & J

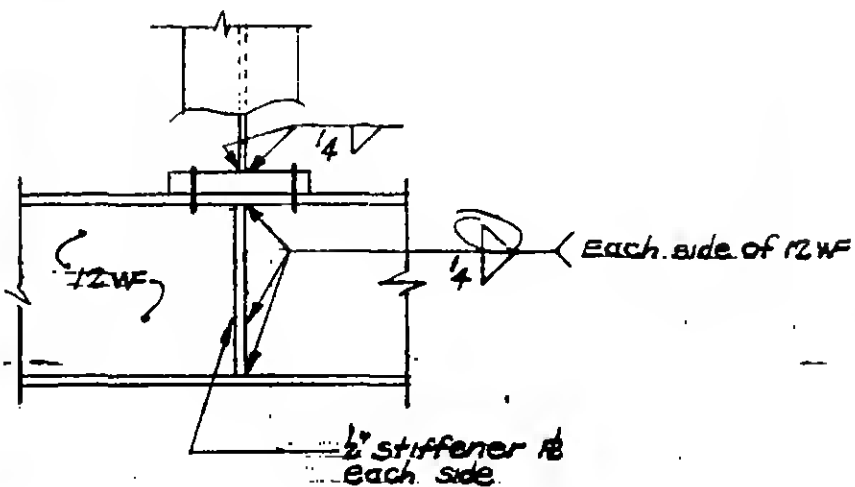
DATE 12-20-67

REVISIONS

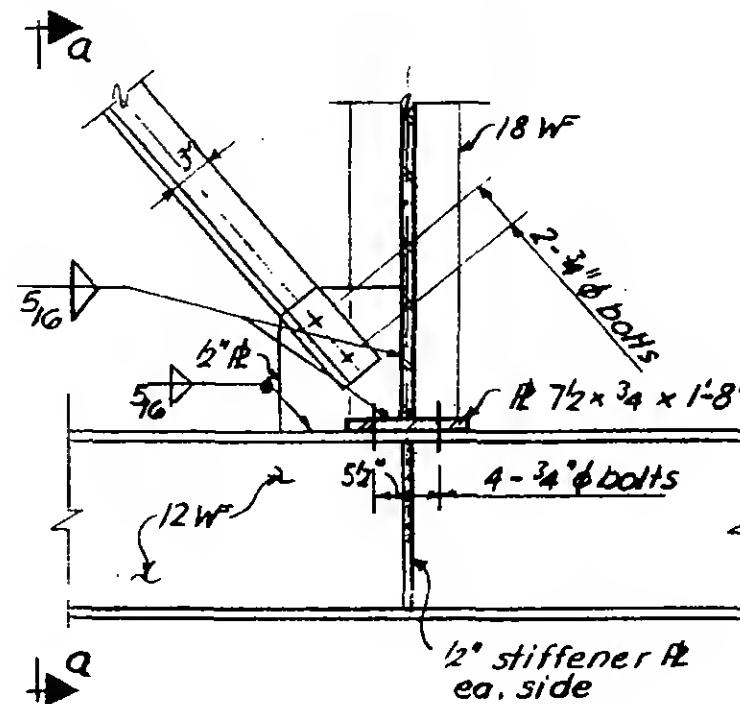
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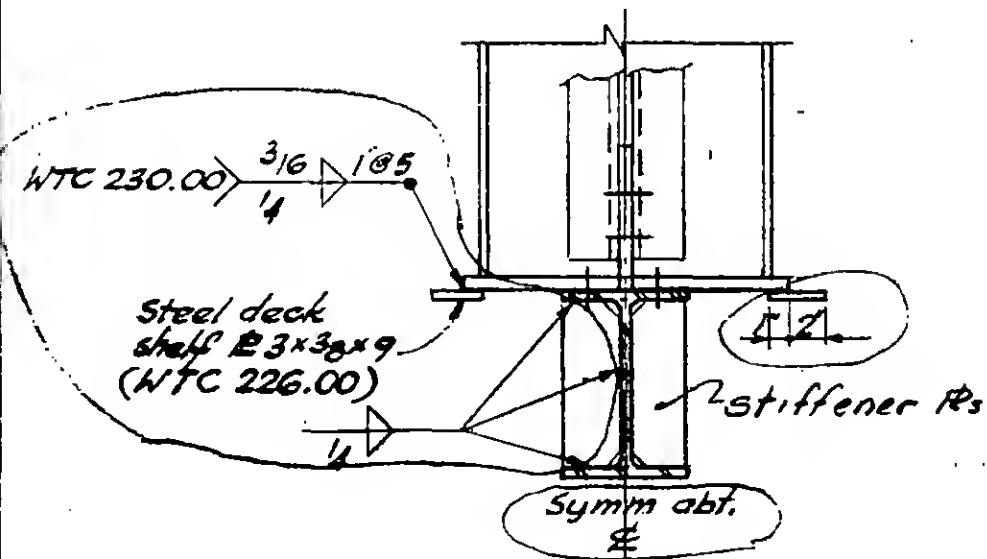
Detail H



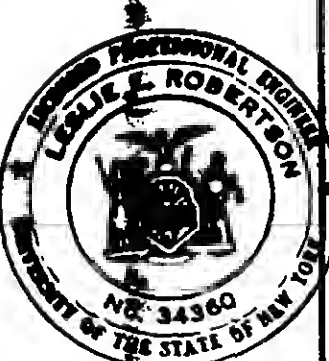
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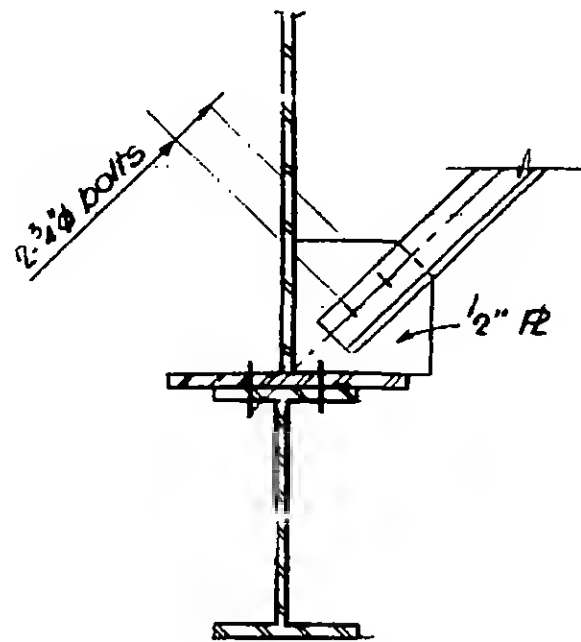
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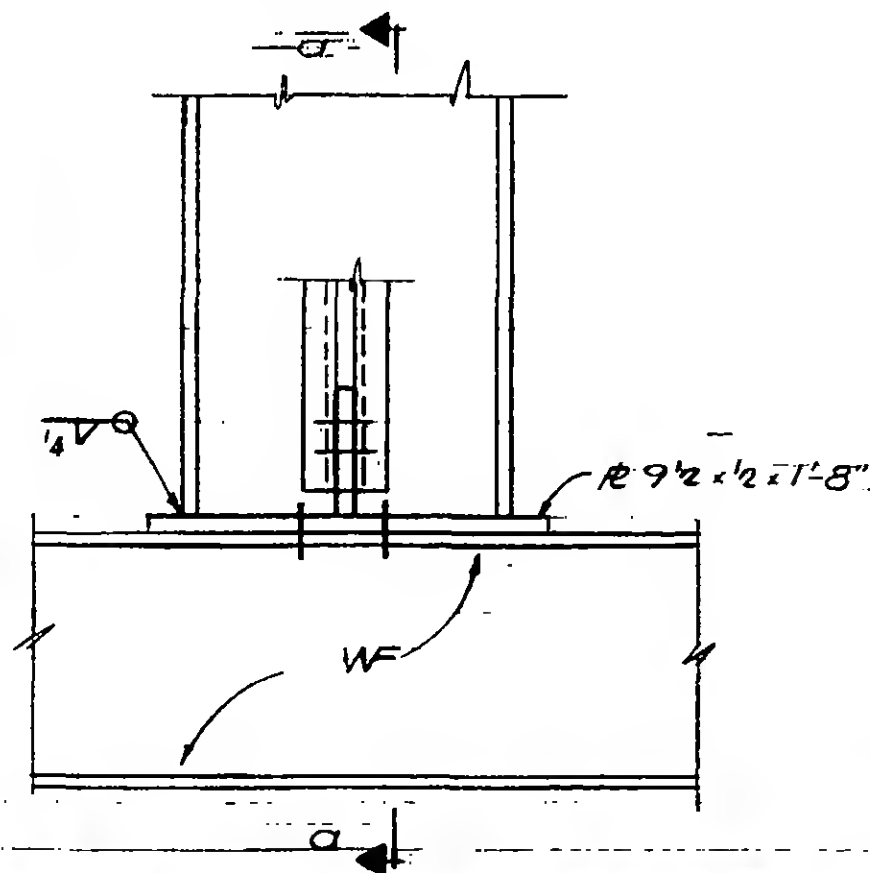
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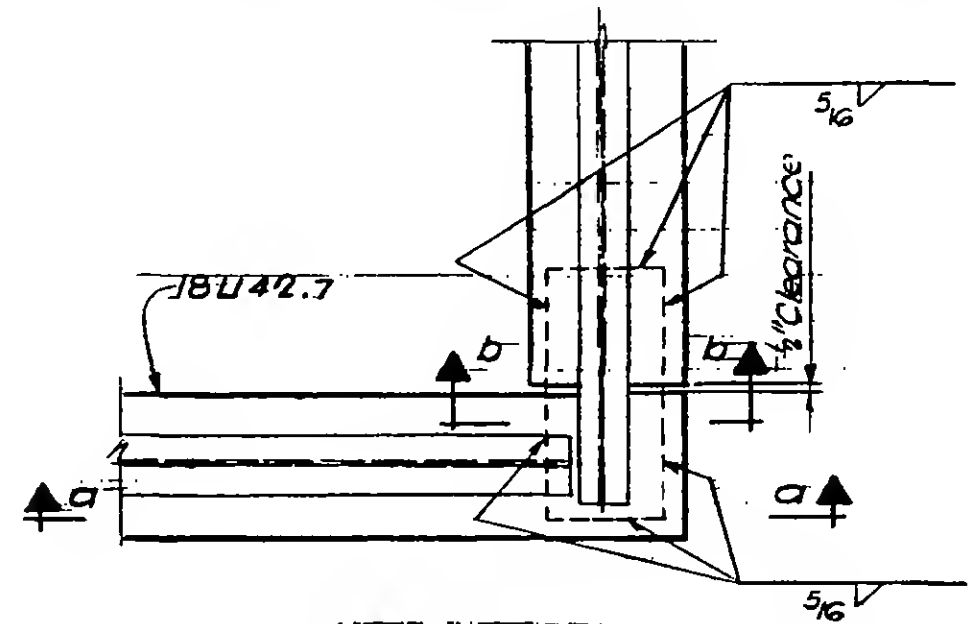
REVISIONS



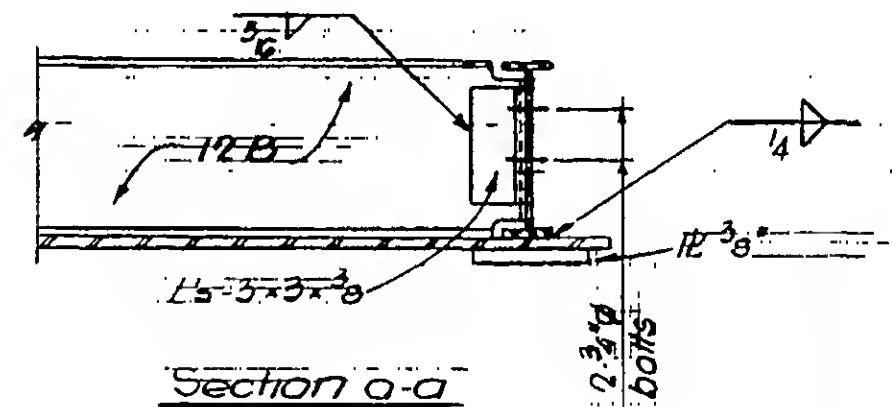
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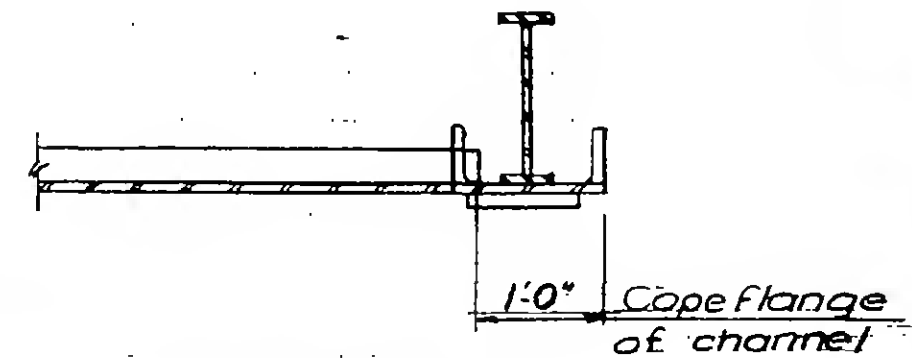
Detail K



Plan



Section a-a

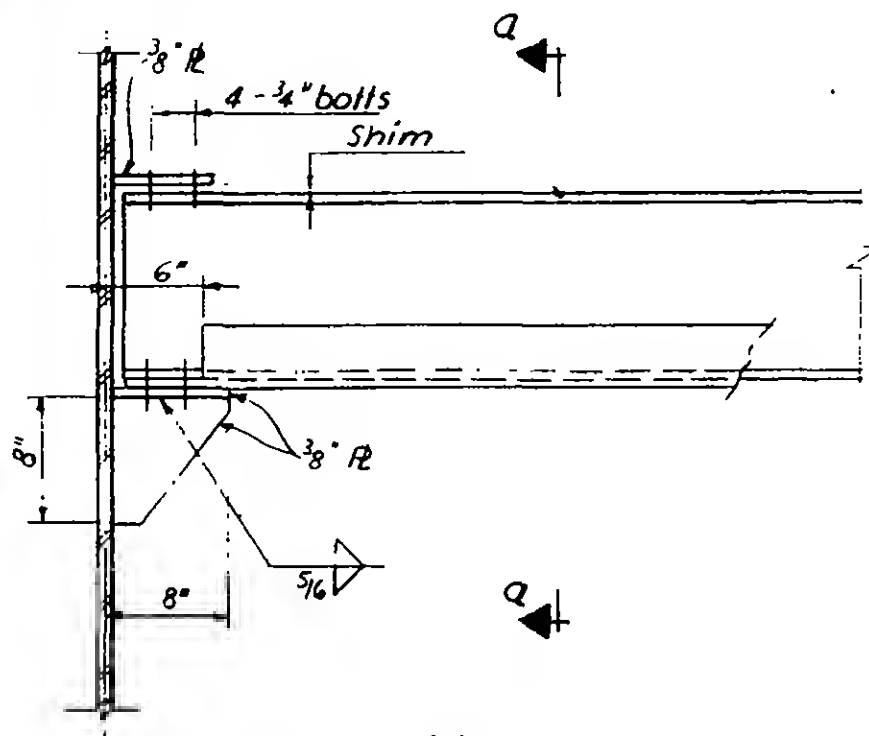


Section b-b

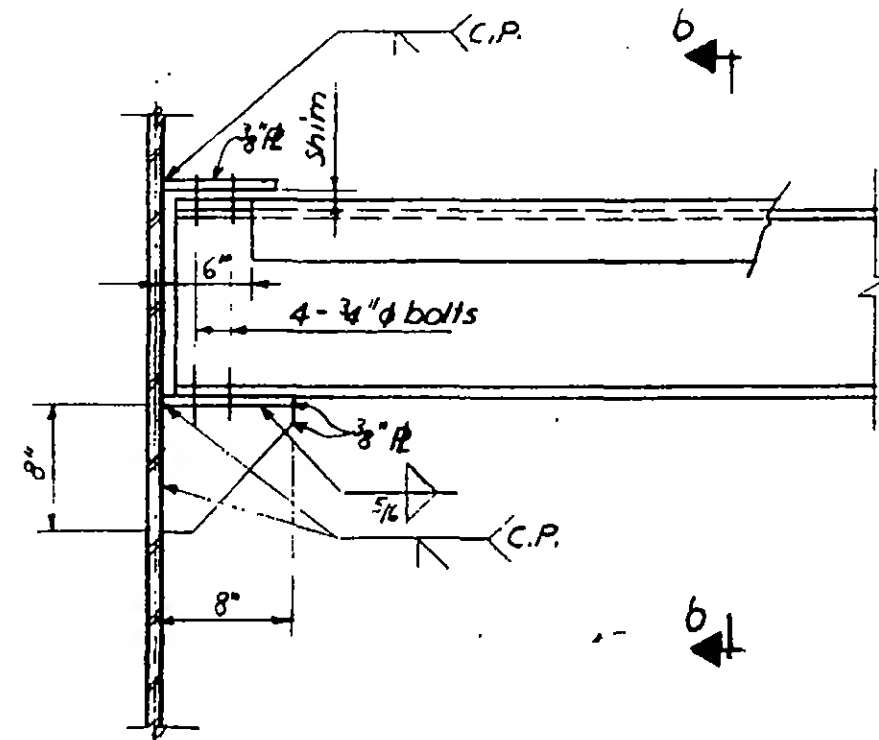
Detail L



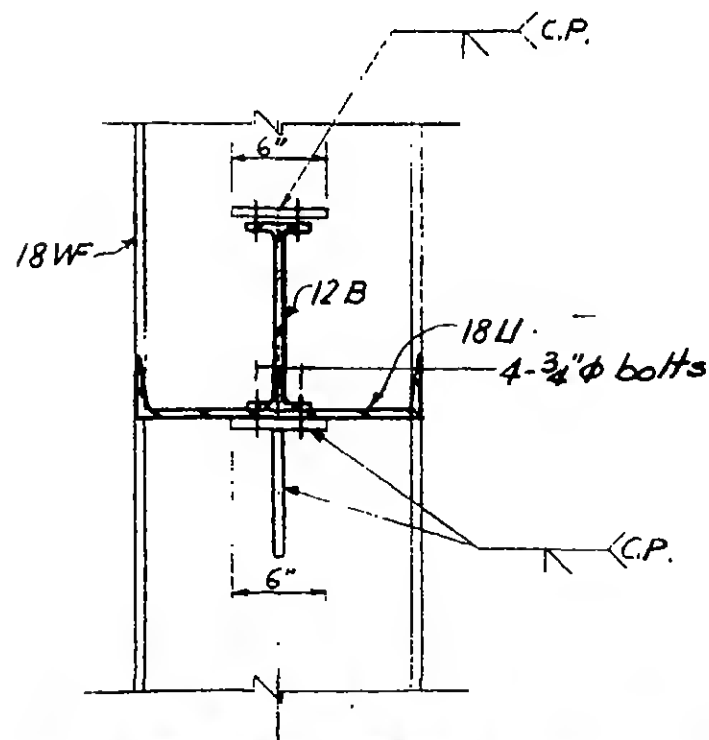
REVISIONS



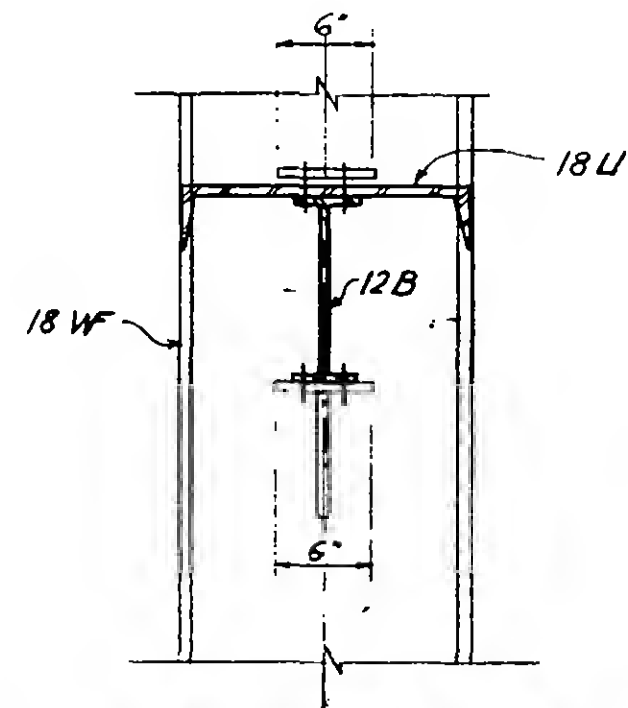
Detail M



Detail N



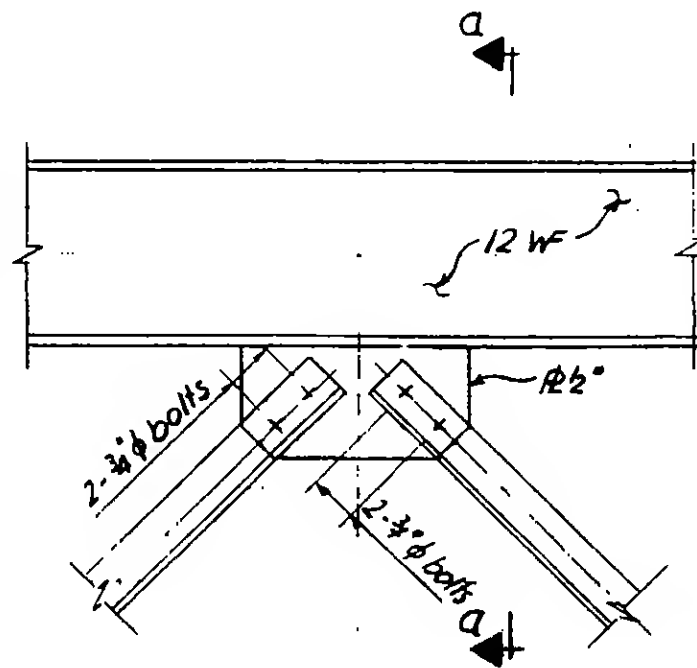
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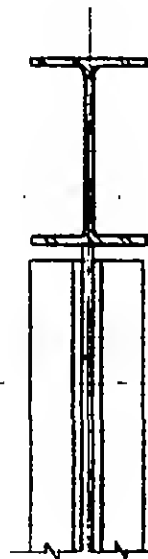
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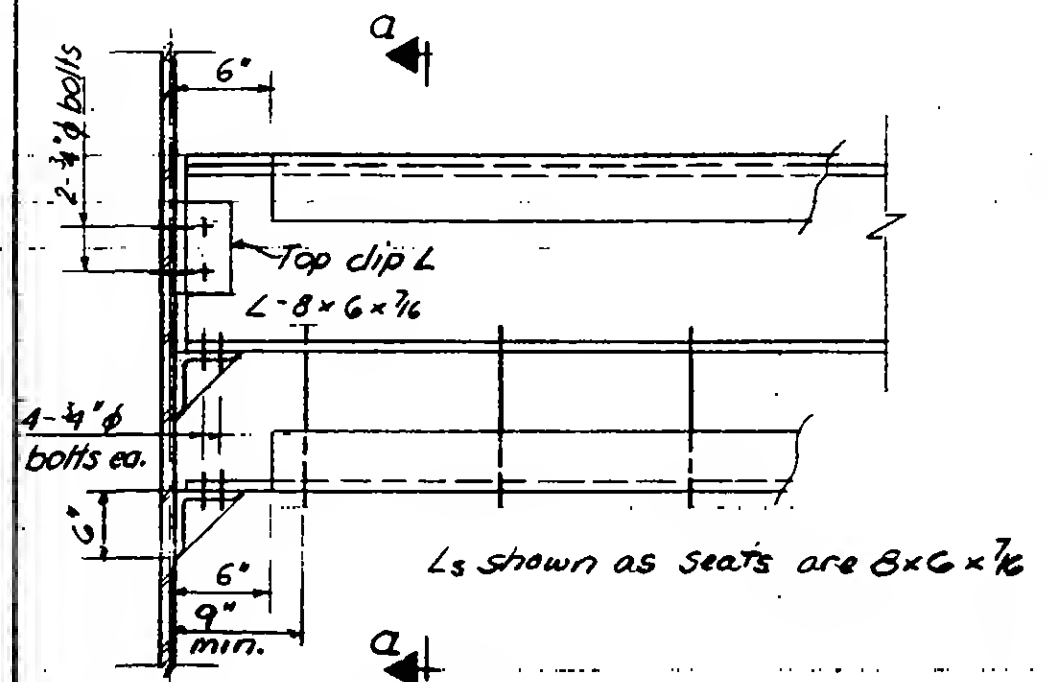
REVISIONS



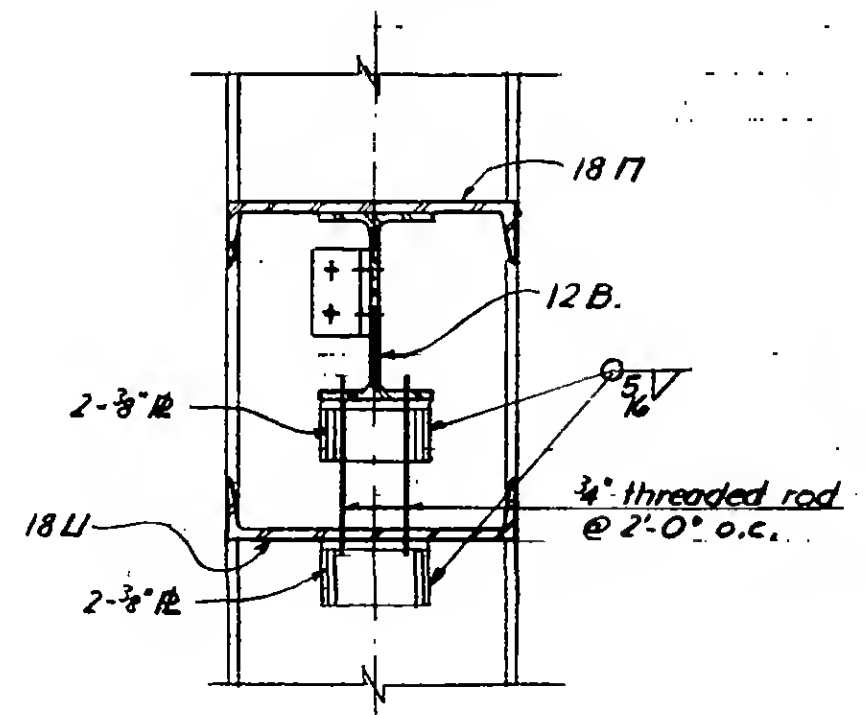
Detail P



Section a-a



Detail Q



Section a-a

