

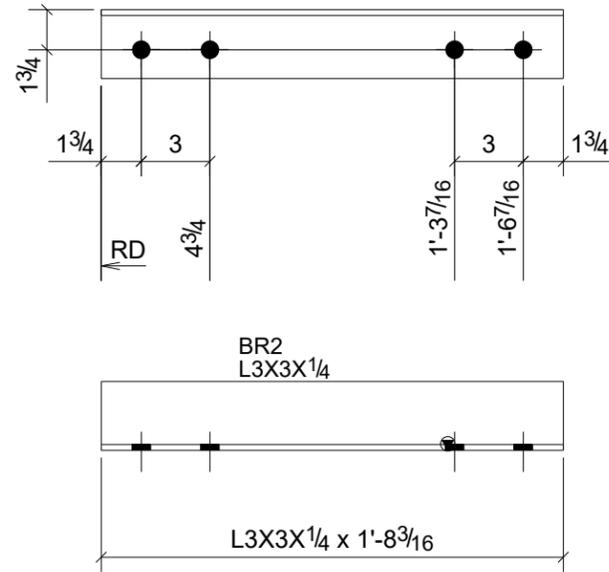
ALL HOLES ARE 13/16" Ø U.N.O.

### 8 - BRACE ANGLES - BR1

0	ISSUED FOR FABRICATION	08/FEB/2016
REV	DESCRIPTION	DATE

## BILL OF MATERIAL

MARK	QTY	DESCRIPTION	LENGTH	WEIGHT	REMARKS	DESCRIPTION	BRACE ANGLE		
BR1	8	BRACE ANGLES			SQ-2	PROJECT NAME	BLVD PUB & GRUB		
BR1	8	L3X3X1/4	1'-10 7/16"	73	MILL FINISH w A36	DRAWN BY	JOB No.		
TOTAL WEIGHT THIS DRAWING				73		DATE DRAWN	01/03/2016	BLVD	DRG No. BR1



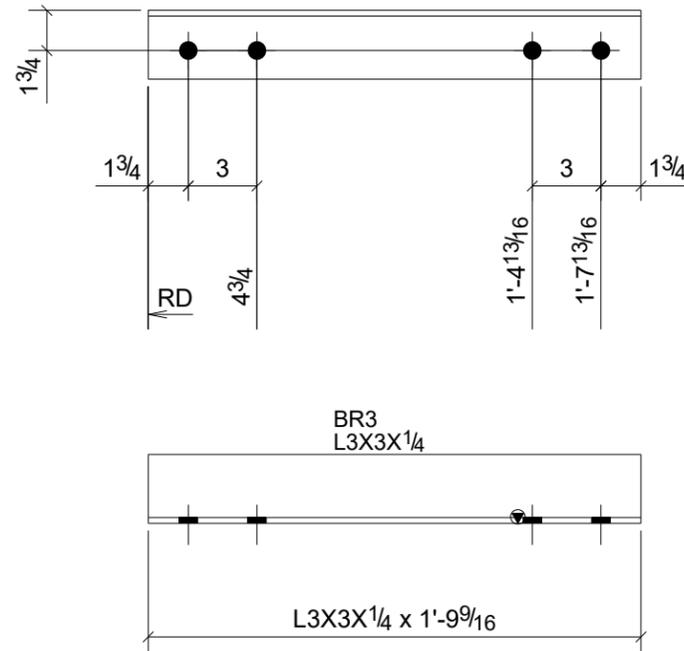
ALL HOLES ARE 13/16Ø U.N.O.

### 4 - BRACE ANGLES - BR2

0	ISSUED FOR FABRICATION	08/FEB/2016
REV	DESCRIPTION	DATE

## BILL OF MATERIAL

MARK	QTY	DESCRIPTION	LENGTH	WEIGHT	REMARKS	DESCRIPTION	BRACE ANGLE		
BR2	4	BRACE ANGLES			SQ-2	PROJECT NAME	BLVD PUB & GRUB		
BR2	4	L3X3X1/4	1'-8 3/16"	33	MILL FINISH w A36	DRAWN BY	JOB No.		
TOTAL WEIGHT THIS DRAWING				33		DATE DRAWN	01/03/2016	BLVD	DRG No. BR2



ALL HOLES ARE 13/16" Ø U.N.O.

### 4 - BRACE ANGLES - BR3

0	ISSUED FOR FABRICATION	08/FEB/2016
REV	DESCRIPTION	DATE

## BILL OF MATERIAL

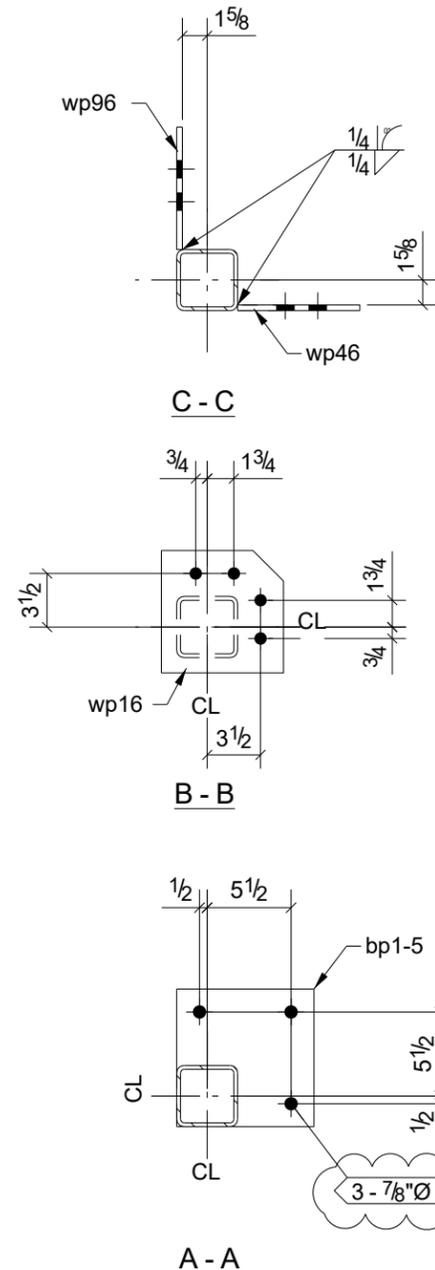
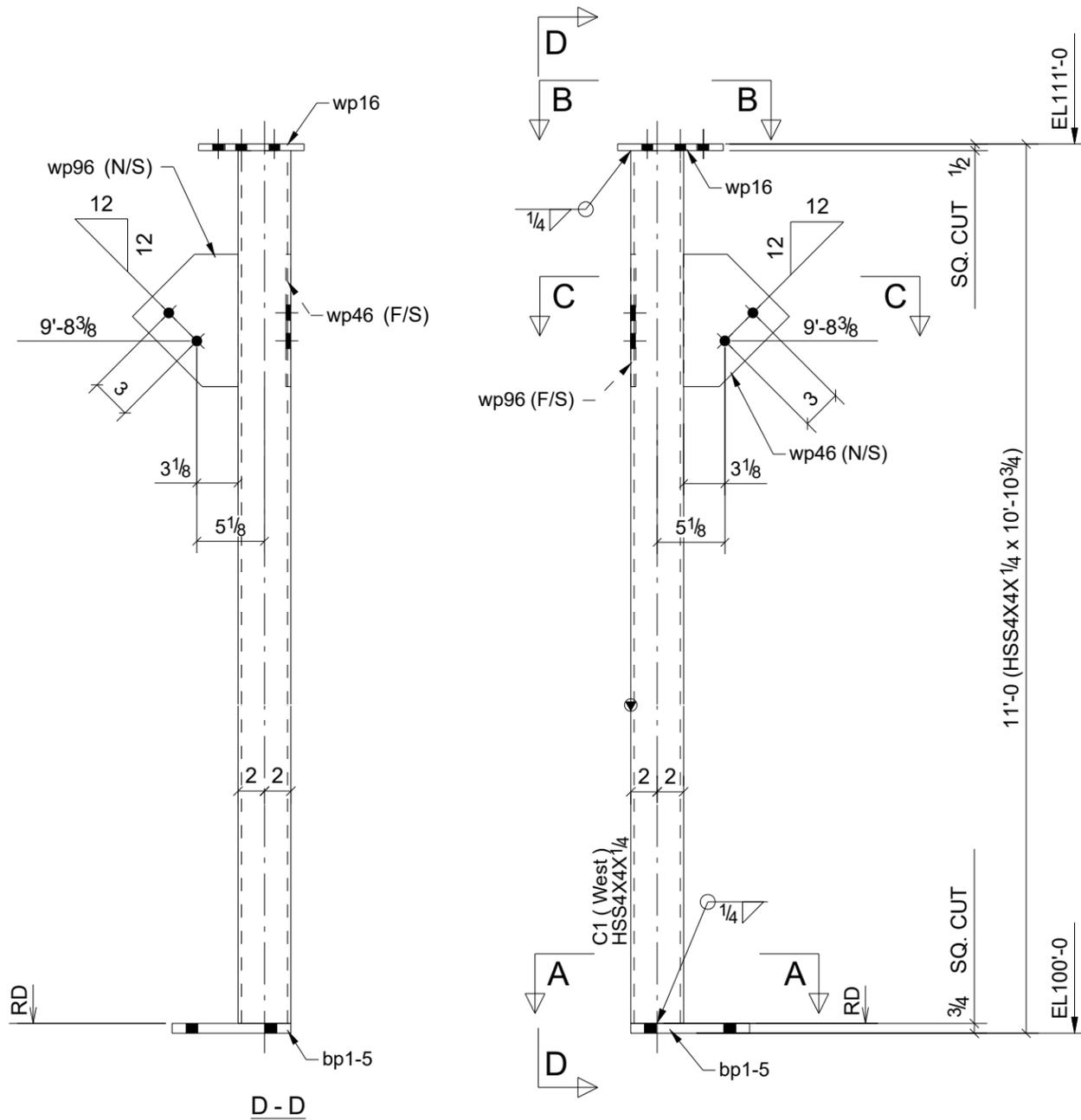
MARK	QTY	DESCRIPTION	LENGTH	WEIGHT	REMARKS	DESCRIPTION	BRACE ANGLE		
BR3	4	BRACE ANGLES			SQ-2	PROJECT NAME	BLVD PUB & GRUB		
BR3	4	L3X3X1/4	1'-9 9/16"	35	MILL FINISH w A36	DRAWN BY	JOB No.		
TOTAL WEIGHT THIS DRAWING				35		DATE DRAWN	01/27/2016	BLVD	DRG No. BR3

GRID LOCATION	BOTTOM ELEV.
4-5/A>	100'-0"

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	C1		1		HSS4X4X1/4	10	10 3/4"	
2		bp1-5	1		FL3/4"X9"	0	9"	
3		wp16	1		FL1/2"X8"	0	8"	
4		wp46	1		PL3/8"X8"	0	10"	
5		wp96	1		FL3/8"X8"	0	10"	
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TOTAL FIELD BOLTS IN THIS SHEET



- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

ALL VERIFICATION REQUESTS ON THIS SET OF DRAWINGS WILL BE ASSUMED CORRECT AS SHOWN UNLESS OTHERWISE NOTED. WHERE FABRICATOR HAS REQUESTED INFORMATION TO BE PROVIDED, CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH TRADES, ARCHITECT AND ENGINEER AS REQ'D TO COMPLETE VERIFICATION REQUESTS, OR STEEL DELIVERY MAY BE DELAYED. ANY REFABRICATION COST DO TO INCOMPLETE OR INACCURATE VERIFICATION RESPONSES WILL BE BILLED AS EXTRA TO THE GENERAL CONTRACTOR.

NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL FROM  
 REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH.No.	BLVD
FABRICATION		CONTRACTOR:			C1
JOB USE					

**ONE - COLUMN - C1**

FINISH NOTE:  
 MILL FINISH w/ CLEAR POLY COAT

Tekla structures

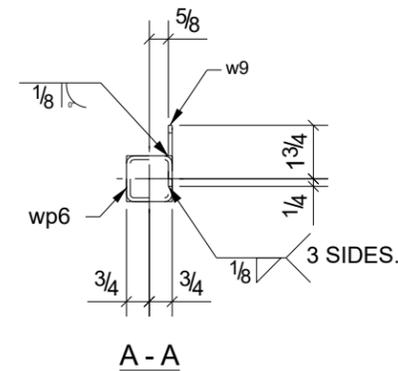
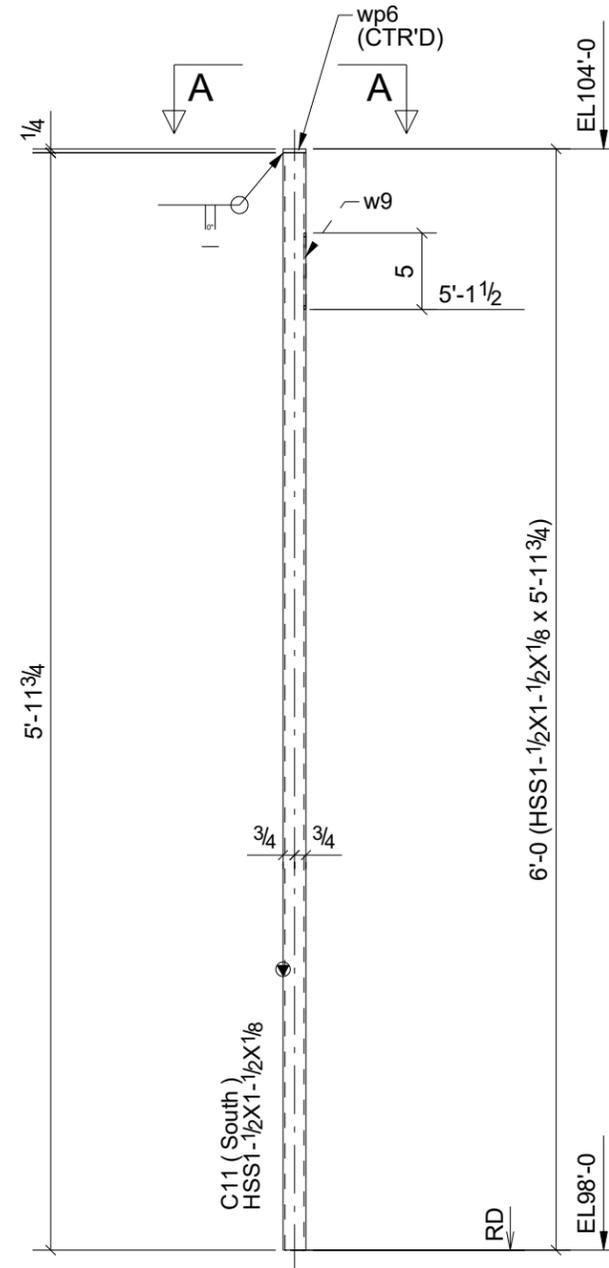
0	ISSUED FOR FABRICATION	08/FEB/2016
REV	DESCRIPTION	DATE

GRID LOCATION	BOTTOM ELEV.
5/G	98'-0"

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	C11		1		HSS1-1/2X1-1/2X1/8	5	11 3/4"	
2		w9	1		FL1/8"X2"	0	5"	
3		wp6	1		FL1/4"X1 1/2"	0	1 1/2"	
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TOTAL FIELD BOLTS IN THIS SHEET



- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH.No.	BLVD
FABRICATION		CONTRACTOR:			C11
JOB USE					

**ONE - GATE POST - C11**

FINISH NOTE:  
MILL FINISH - CLEAR COAT

Tekla structures

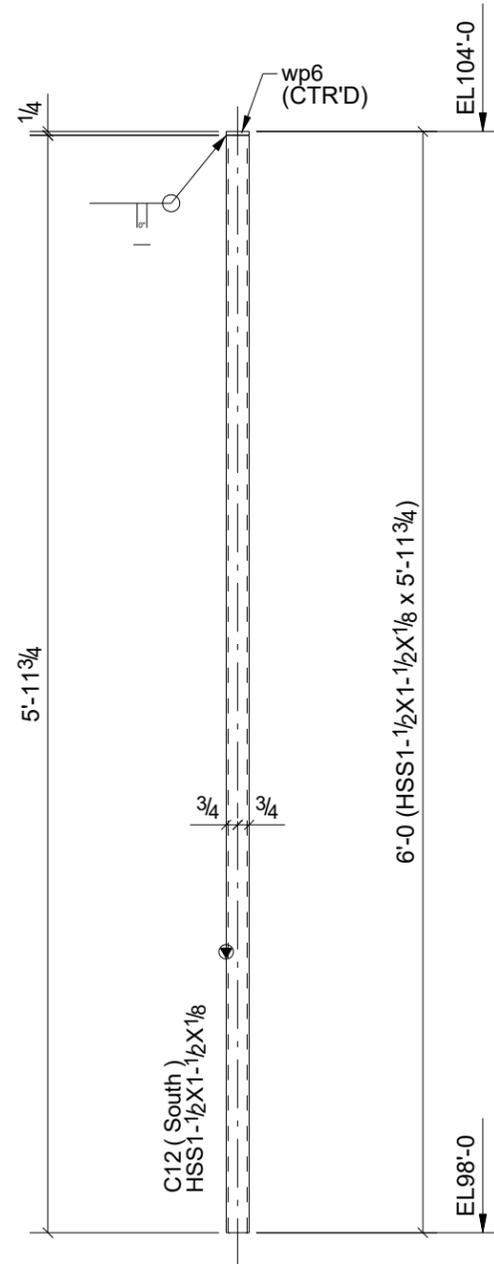
E	ISSUED FOR REVIEW/COMMENT/APPROVAL	19/JAN/2016
REV	DESCRIPTION	DATE

GRID LOCATION	BOTTOM ELEV.
5/F	98'-0"

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	C12		1		HSS1-1/2X1-1/2X1/8	5	11 3/4"	
2		wp6	1		FL1/4"X1 1/2"	0	1 1/2"	
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TOTAL FIELD BOLTS IN THIS SHEET



**ONE - GATE POST - C12**

- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

ALL VERIFICATION REQUESTS ON THIS SET OF DRAWINGS WILL BE ASSUMED CORRECT AS SHOWN UNLESS OTHERWISE NOTED. WHERE FABRICATOR HAS REQUESTED INFORMATION TO BE PROVIDED, CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH TRADES, ARCHITECT AND ENGINEER AS REQ'D TO COMPLETE VERIFICATION REQUESTS, OR STEEL DELIVERY MAY BE DELAYED. ANY REFABRICATION COST DO TO INCOMPLETE OR INACCURATE VERIFICATION RESPONSES WILL BE BILLED AS EXTRA TO THE GENERAL CONTRACTOR.

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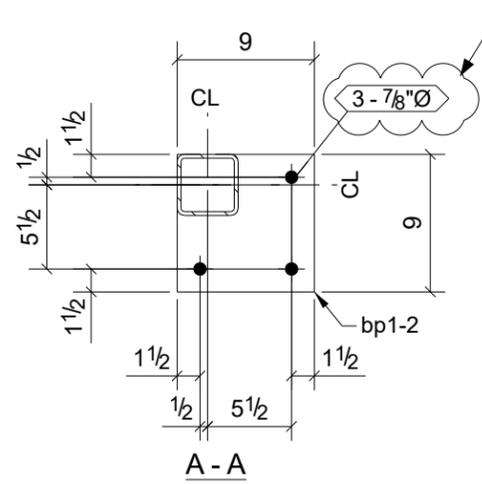
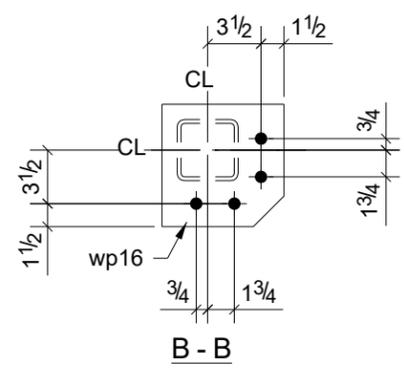
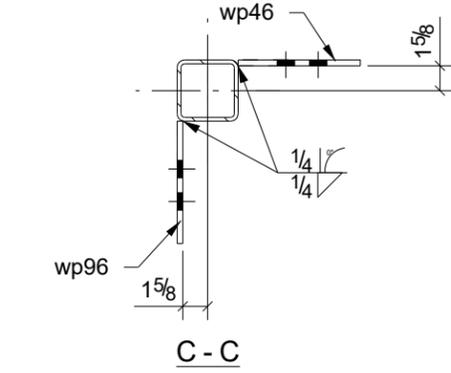
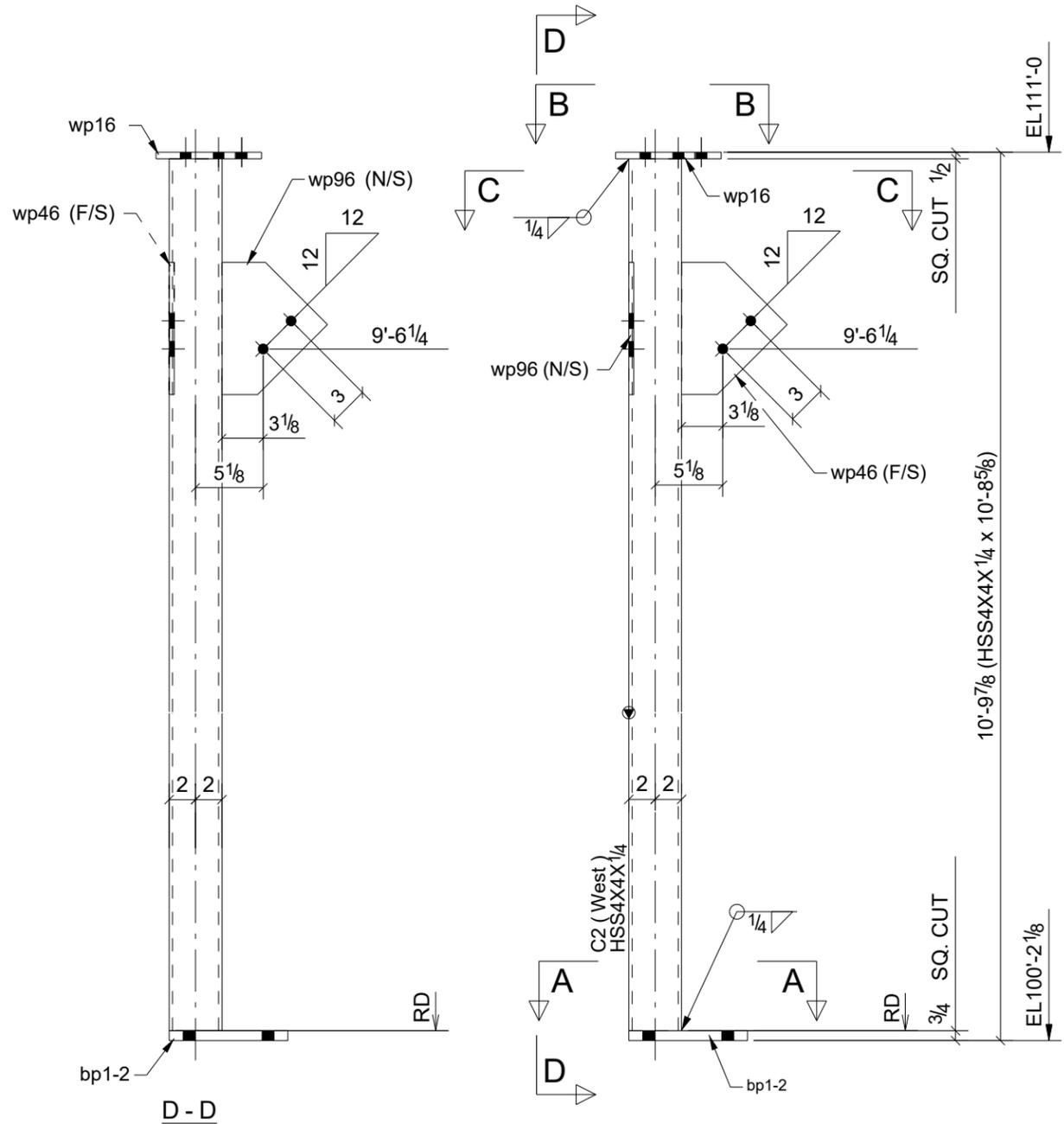
ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	BLVD	
FABRICATION		CONTRACTOR:		C12	
JOB USE					

E	ISSUED FOR REVIEW/COMMENT/APPROVAL	19/JAN/2016
REV	DESCRIPTION	DATE

Tekla structures

FINISH NOTE:  
MILL FINISH - CLEAR COAT

GRID LOCATION	BOTTOM ELEV.
4-5/A>	100'-2 1/8"



**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	C2		1		HSS4X4X1/4	10	8 5/8"	
2		bp1-2	1		FL3/4"X9"	0	9"	
3		wp16	1		FL1/2"X8"	0	8"	
4		wp46	1		PL3/8"X8"	0	10"	
5		wp96	1		FL3/8"X8"	0	10"	
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TOTAL FIELD BOLTS IN THIS SHEET

- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH.No.	BLVD
FABRICATION		CONTRACTOR:			C2
JOB USE					

0	ISSUED FOR FABRICATION	08/FEB/2016
REV	DESCRIPTION	DATE

**ONE - COLUMN - C2**

Tekla structures

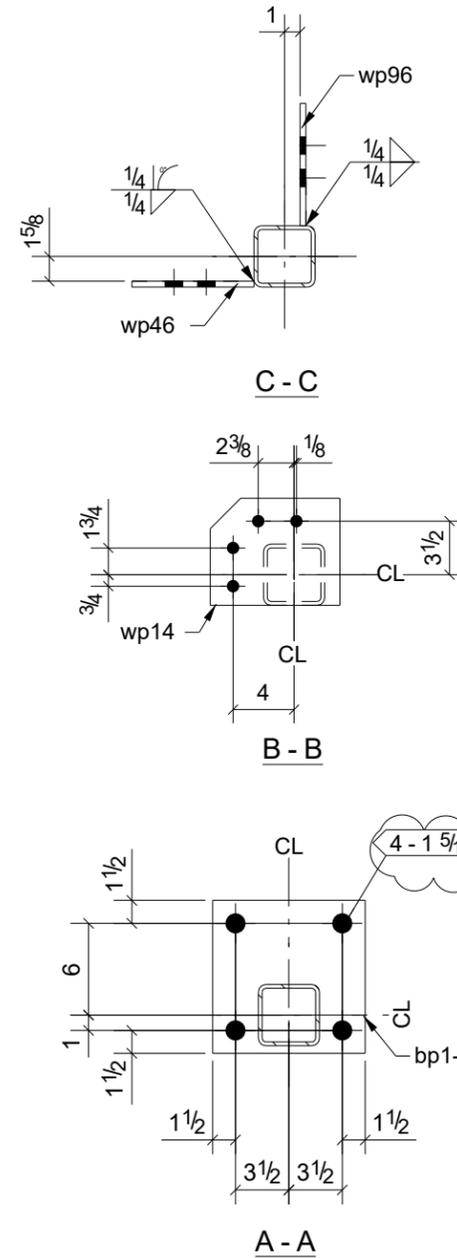
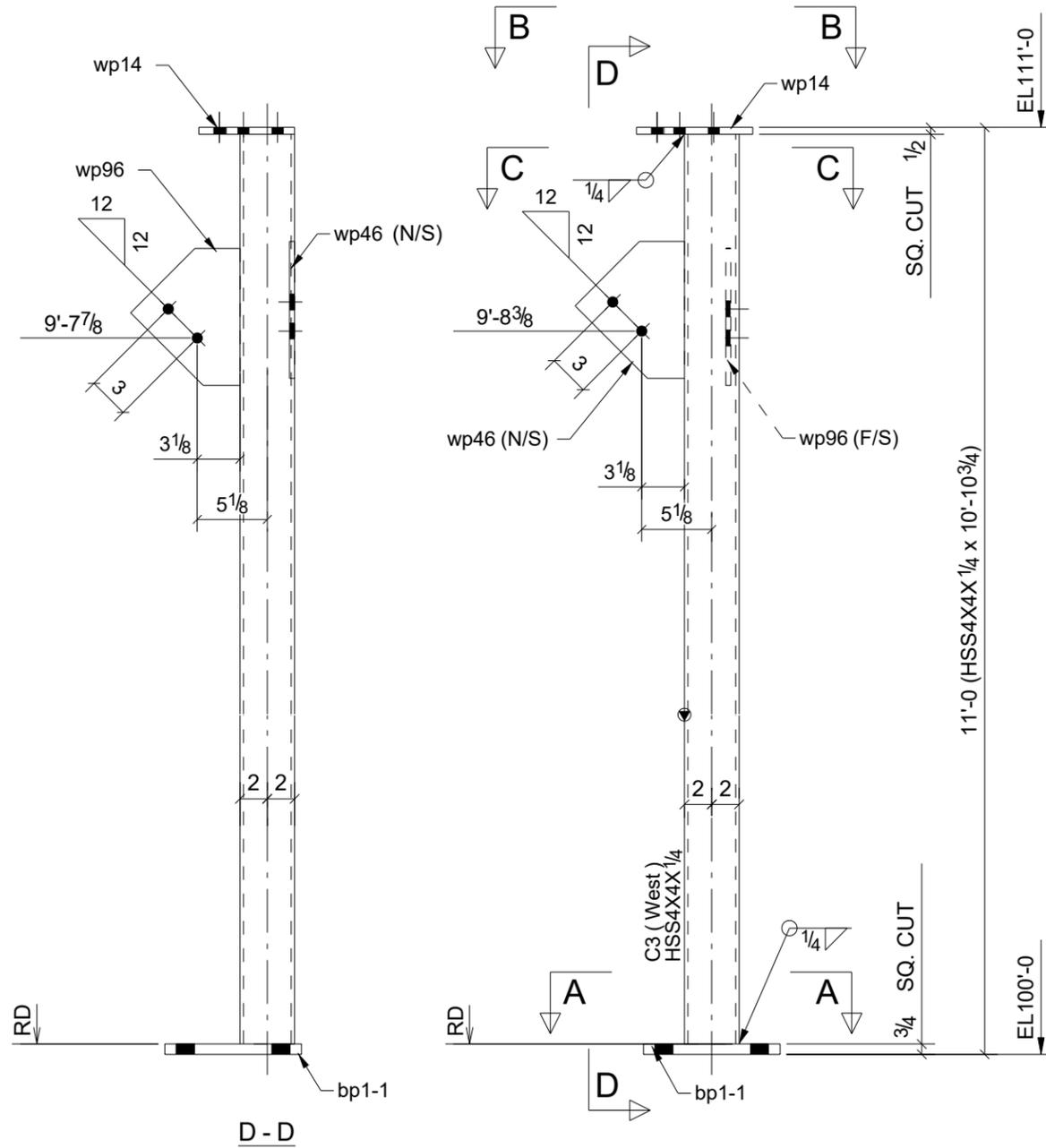
FINISH NOTE:  
MILL FINISH w/ CLEAR POLY COAT

GRID LOCATION	BOTTOM ELEV.
4-5/A>	100'-0"

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	C3		1		HSS4X4X1/4	10	10 3/4"	
2		bp1-1	1		FL3/4"X10"	0	10"	
3		wp14	1		FL1/2"X7"	0	8 1/2"	
4		wp46	1		PL3/8"X8"	0	10"	
5		wp96	1		FL3/8"X8"	0	10"	
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TOTAL FIELD BOLTS IN THIS SHEET



- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.;
  - 2.) SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 3.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 4.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 5.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 6.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
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ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			C3
JOB USE					

0	ISSUED FOR FABRICATION	08/FEB/2016
REV	DESCRIPTION	DATE

**ONE - COLUMN - C3**

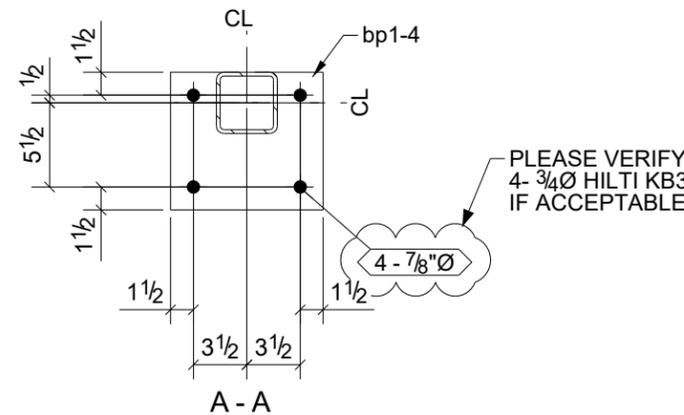
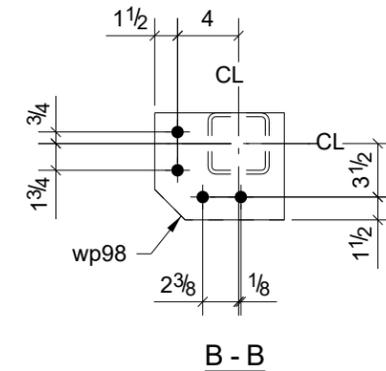
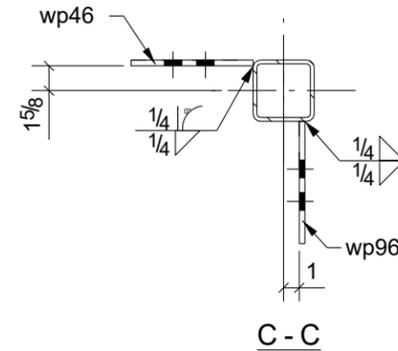
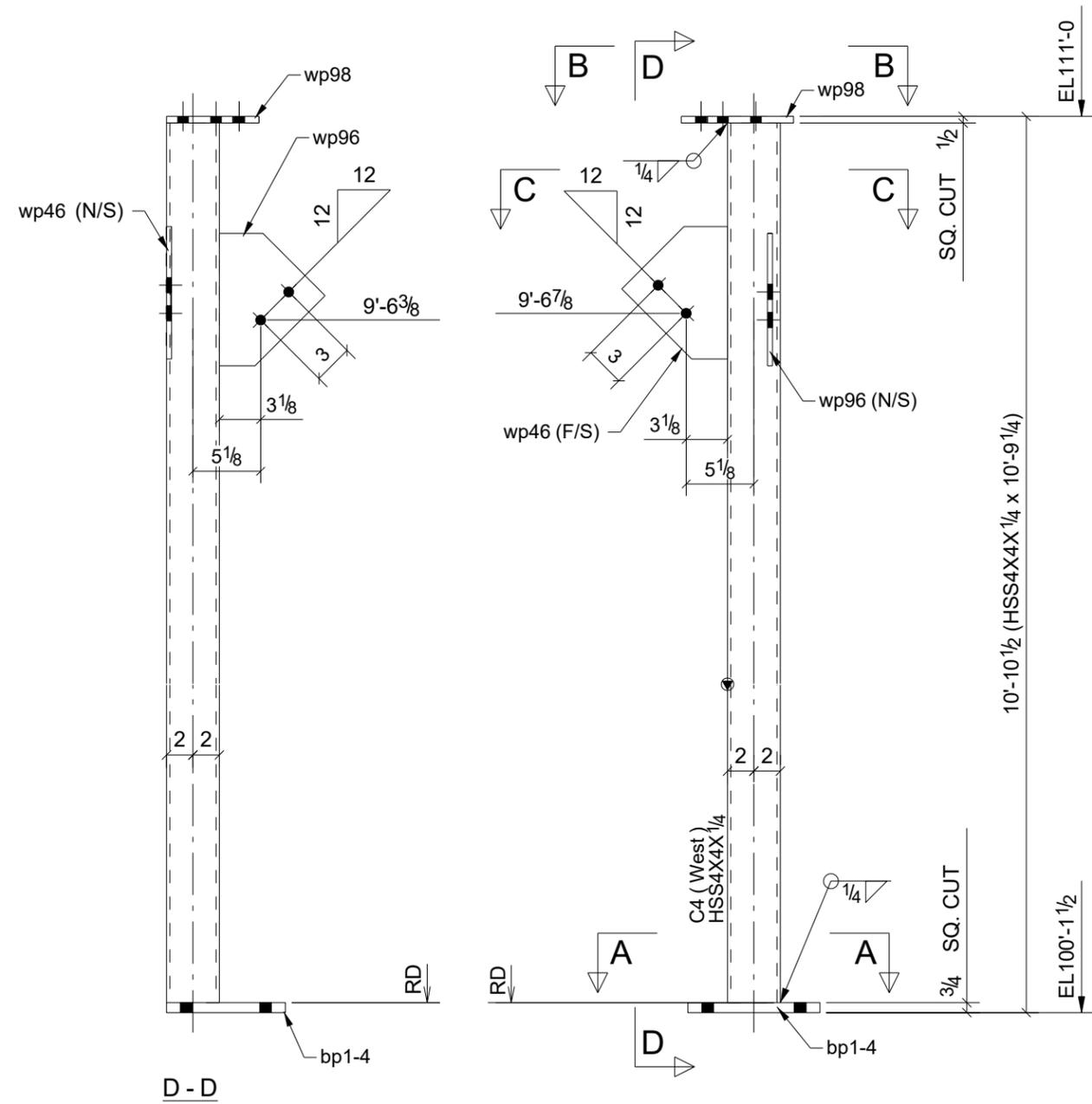
FINISH NOTE:  
MILL FINISH w/ CLEAR POLY COAT

GRID LOCATION	BOTTOM ELEV.
4-5/A>	100'-1 1/2"

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	C4		1		HSS4X4X1/4	10	9 1/4"	
2		bp1-4	1		FL3/4"X9"	0	10"	
3		wp46	1		PL3/8"X8"	0	10"	
4		wp96	1		FL3/8"X8"	0	10"	
5		wp98	1		FL1/2"X7"	0	8 1/2"	
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TOTAL FIELD BOLTS IN THIS SHEET



**ONE - COLUMN - C4**

Tekla structures  
 FINISH NOTE:  
 MILL FINISH w/ CLEAR POLY COAT

- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			C4
JOB USE					

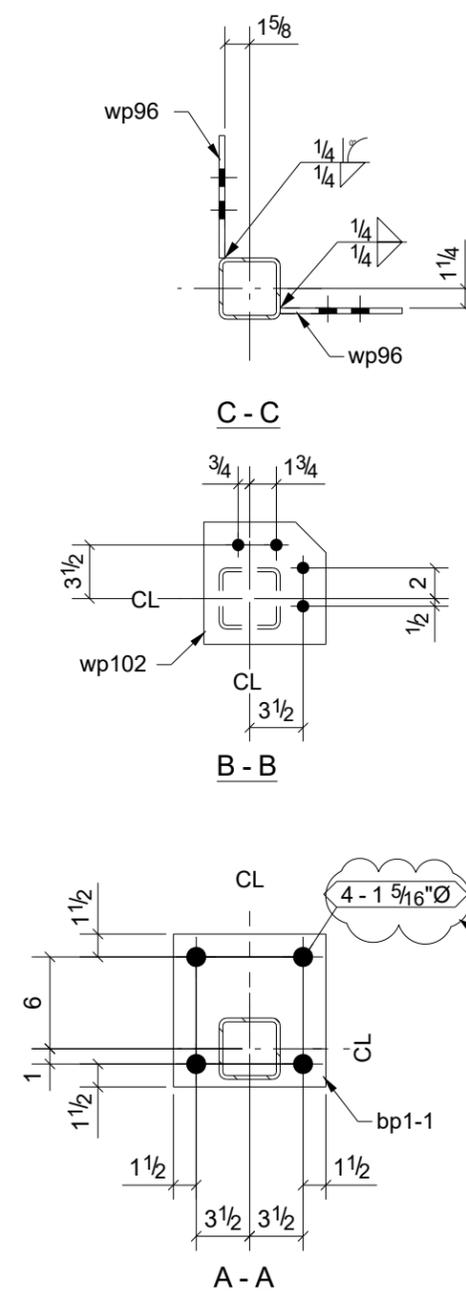
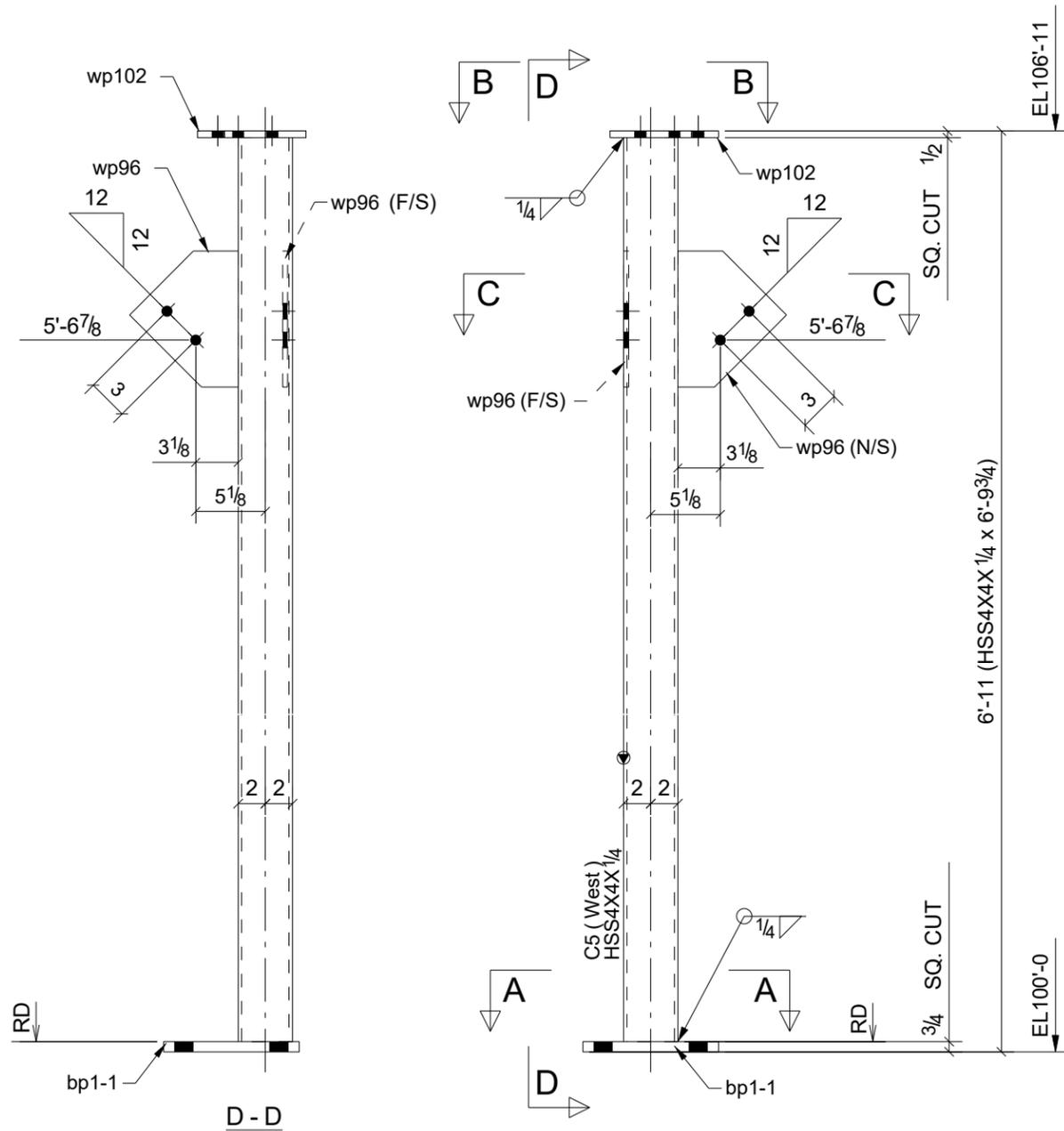
0	ISSUED FOR FABRICATION	08/FEB/2016
REV	DESCRIPTION	DATE

GRID LOCATION	BOTTOM ELEV.
5>/A>	100'-0"

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	C5		1		HSS4X4X1/4	6	9 3/4"	
2		bp1-1	1		FL3/4"X10"	0	10"	
3		wp96	2		FL3/8"X8"	0	10"	
4		wp102	1		FL1/2"X8"	0	8"	
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TOTAL FIELD BOLTS IN THIS SHEET



PLEASE VERIFY  
4- 3/4" HILTI  
KB3 IF ACCEPTABLE

- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16" TYP. U.N.O. FIELD BOLTS ARE 3/4" Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16" ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL FROM  
REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

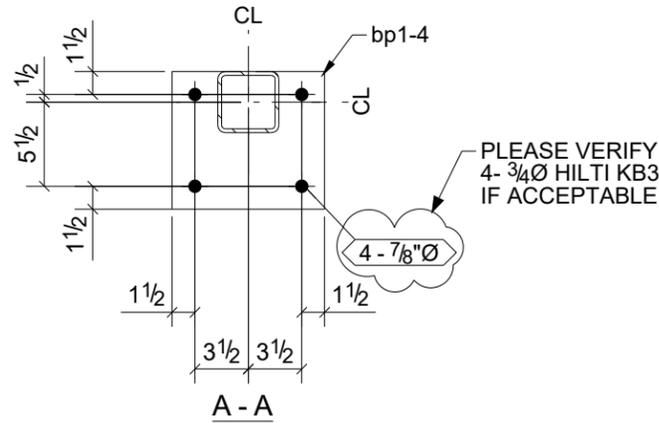
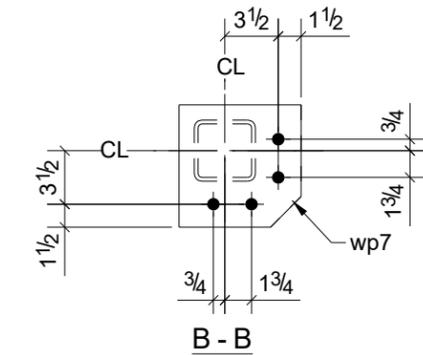
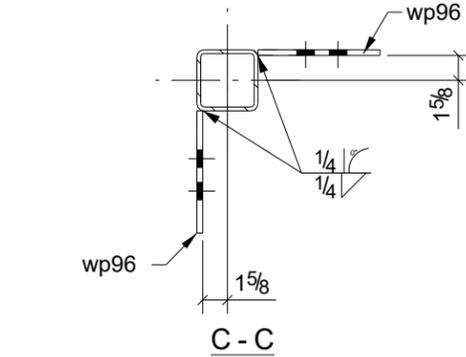
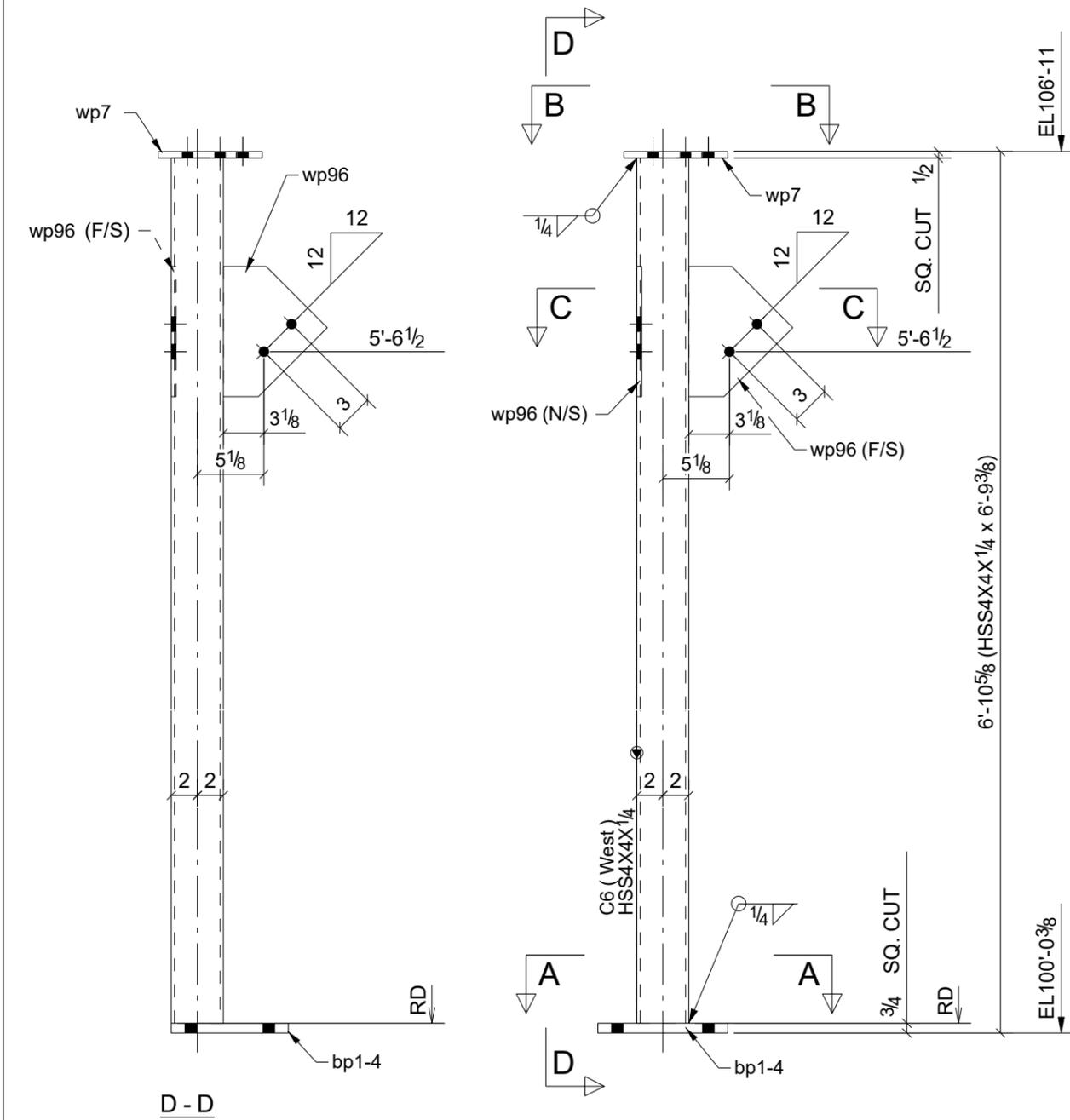
ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			C5
JOB USE					

**ONE - COLUMN - C5**

0	ISSUED FOR FABRICATION	08/FEB/2016
REV	DESCRIPTION	DATE

Tekla structures  
FINISH NOTE:  
MILL FINISH w/ CLEAR POLY COAT

GRID LOCATION	BOTTOM ELEV.
5>/A>	100'-0" 3/8



BILL OF MATERIALS								
SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	C6		1	HSS4X4X1/4		6	9 3/8"	
2		bp1-4	1	FL3/4"X9"		0	10"	
3		wp7	1	FL1/2"X8"		0	8"	
4		wp96	2	FL3/8"X8"		0	10"	
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TOTAL FIELD BOLTS IN THIS SHEET

- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRANSONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL FROM  
REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH.No.	BLVD
FABRICATION		CONTRACTOR:			C6
JOB USE					

0	ISSUED FOR FABRICATION	08/FEB/2016
REV	DESCRIPTION	DATE

ONE - COLUMN - C6

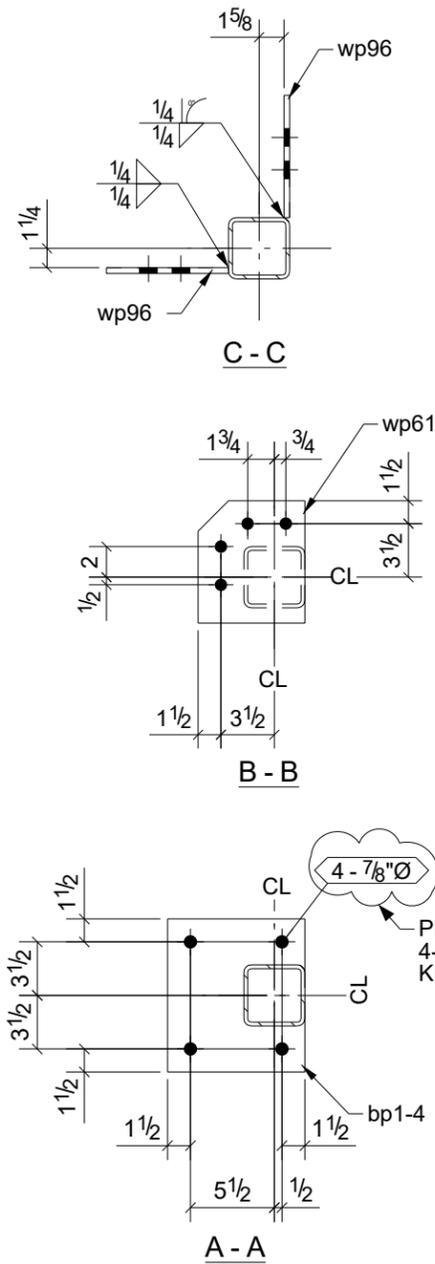
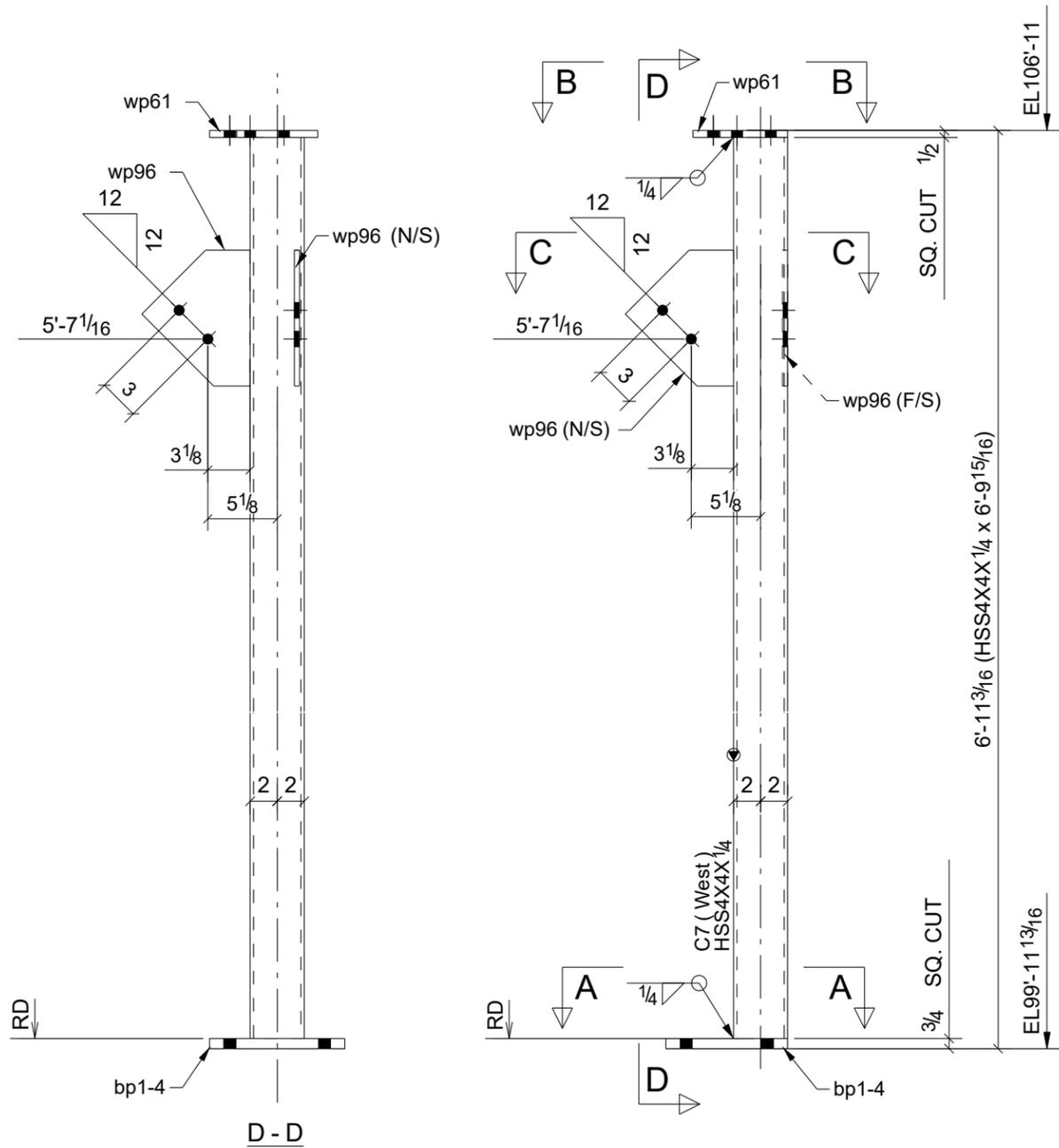
Tekla structures  
FINISH NOTE:  
MILL FINISH w/ CLEAR POLY COAT

GRID LOCATION	BOTTOM ELEV.
5>/A>	99'-11"13/16"

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	C7		1	HSS4X4X1/4		6	9 15/16"	
2		bp1-4	1		FL3/4"X9"	0	10"	
3		wp61	1		FL1/2"X7"	0	8"	
4		wp96	2		FL3/8"X8"	0	10"	
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TOTAL FIELD BOLTS IN THIS SHEET



- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL FROM  
REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH.No.	BLVD
FABRICATION		CONTRACTOR:			C7
JOB USE					

**ONE - COLUMN - C7**

FINISH NOTE:  
MILL FINISH w/ CLEAR POLY COAT

Tekla structures

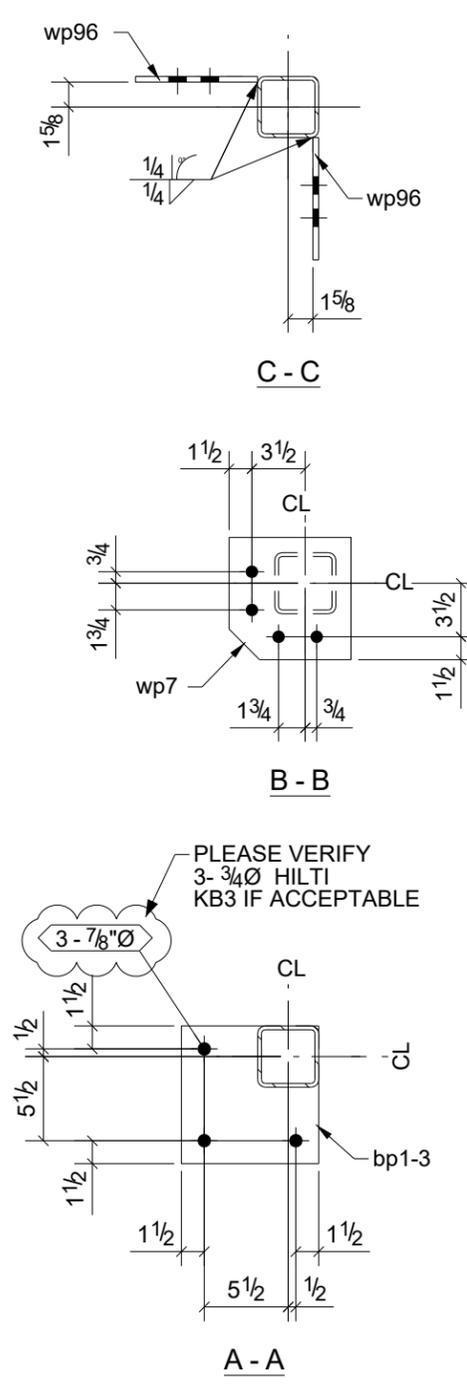
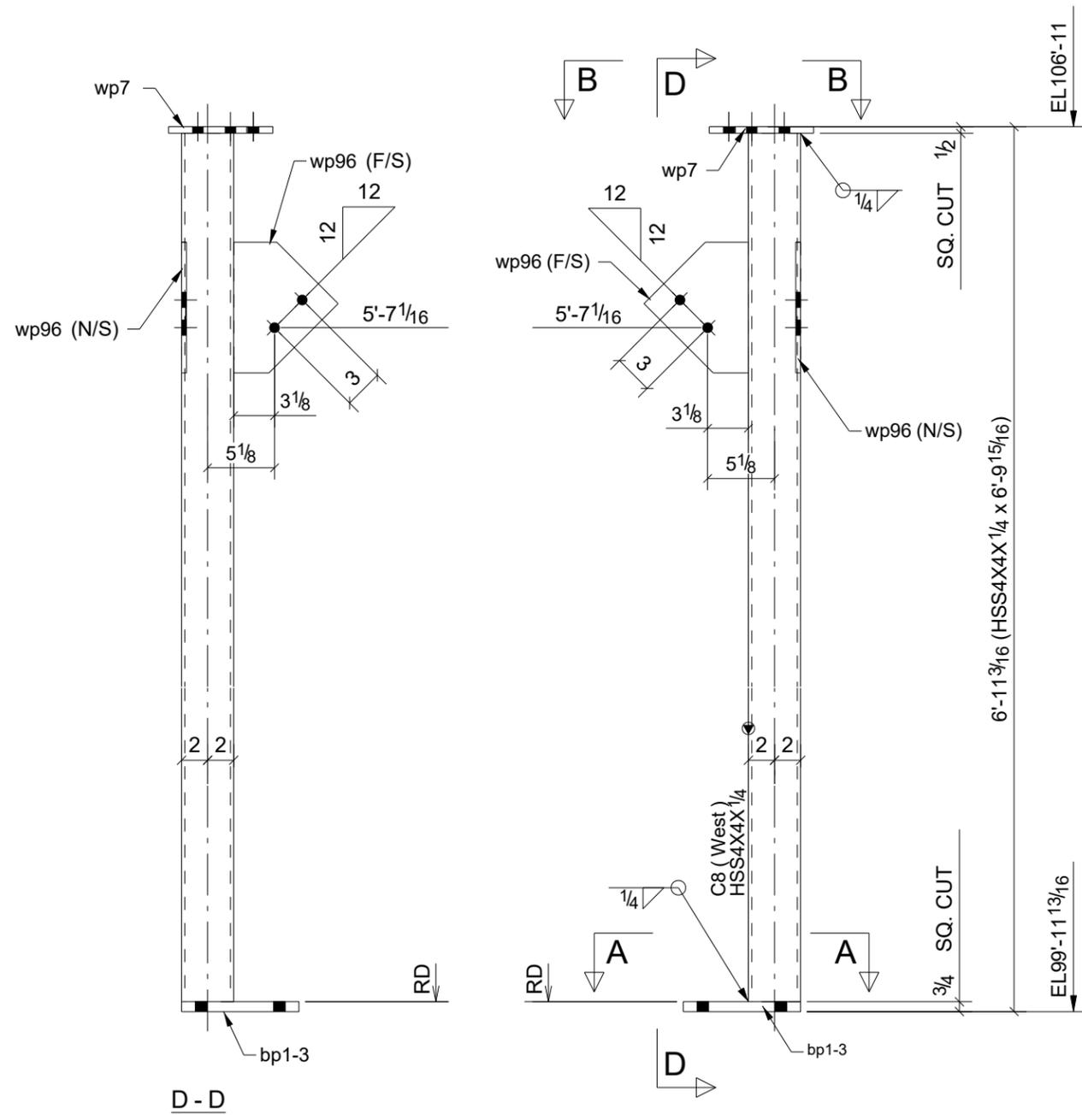
0	ISSUED FOR FABRICATION	08/FEB/2016
REV	DESCRIPTION	DATE

GRID LOCATION	BOTTOM ELEV.
5>/A>	99'-11"13/16

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	C8		1		HSS4X4X1/4	6	9 15/16"	
2		bp1-3	1		FL3/4"X9"	0	9"	
3		wp7	1		FL1/2"X8"	0	8"	
4		wp96	2		FL3/8"X8"	0	10"	
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TOTAL FIELD BOLTS IN THIS SHEET



**ONE - COLUMN - C8**

Tekla structures  
 FINISH NOTE:  
 MILL FINISH w/ CLEAR POLY COAT

- SHOP NOTES:  
 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.  
 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O  
 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE  
 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m  
 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)  
 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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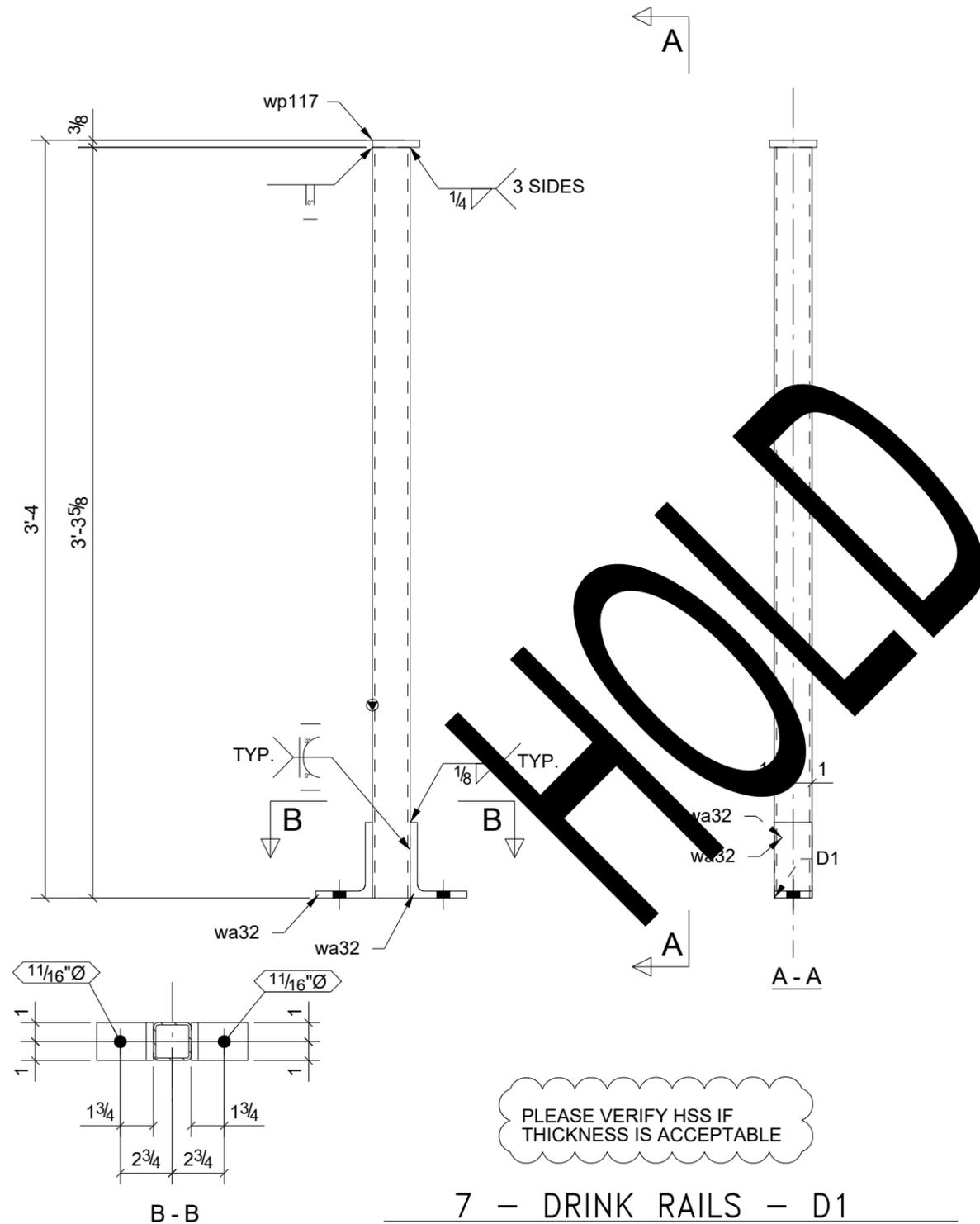
ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			C8
JOB USE					

0	ISSUED FOR FABRICATION	08/FEB/2016
REV	DESCRIPTION	DATE

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	D1		7		HSS2X2X1/8	3	3 5/8"	
2		wa32	14		L4X3X3/8	0	2"	
3		wp117	7		FL3/8"X2 1/2"	0	2 1/2"	
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TOTAL FIELD BOLTS IN THIS SHEET  
14-ØX 0 BOLTS W/ N&W



PLEASE VERIFY HSS IF THICKNESS IS ACCEPTABLE

7 - DRINK RAILS - D1

- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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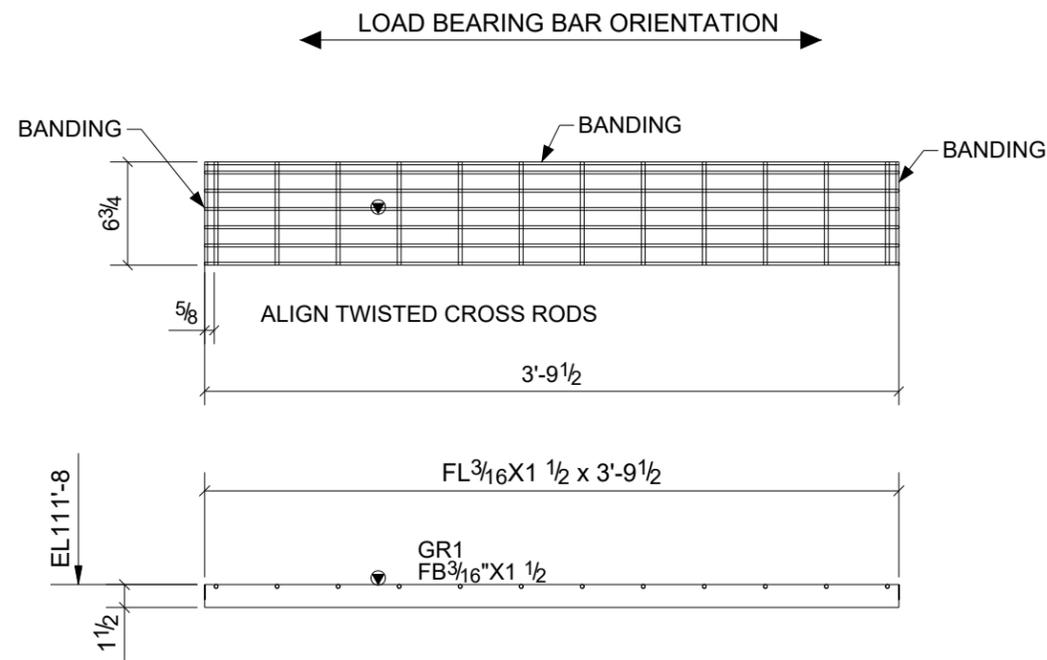
ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND		
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	JOB No.	
FABRICATION		CONTRACTOR:			
JOB USE				SH.No.	BLVD D1

E	ISSUED FOR REVIEW/COMMENT/APPROVAL	19/JAN/2016
REV	DESCRIPTION	DATE

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	GR1		1		Grating 1"1/2 Serrated	3	9 1/2"	BUY OUT
2								
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TOTAL FIELD BOLTS IN THIS SHEET



NOTE: DIMENSIONS ARE FOR ACTUAL SIZE OF FINISHED GRATING

ONE - GRATING - GR1

SHOP NOTES:

- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.;
- 2.) SQ. HSS MAT'L ASTM A500 GR.B U.N.
- 3.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
- 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
- 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
- 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
- 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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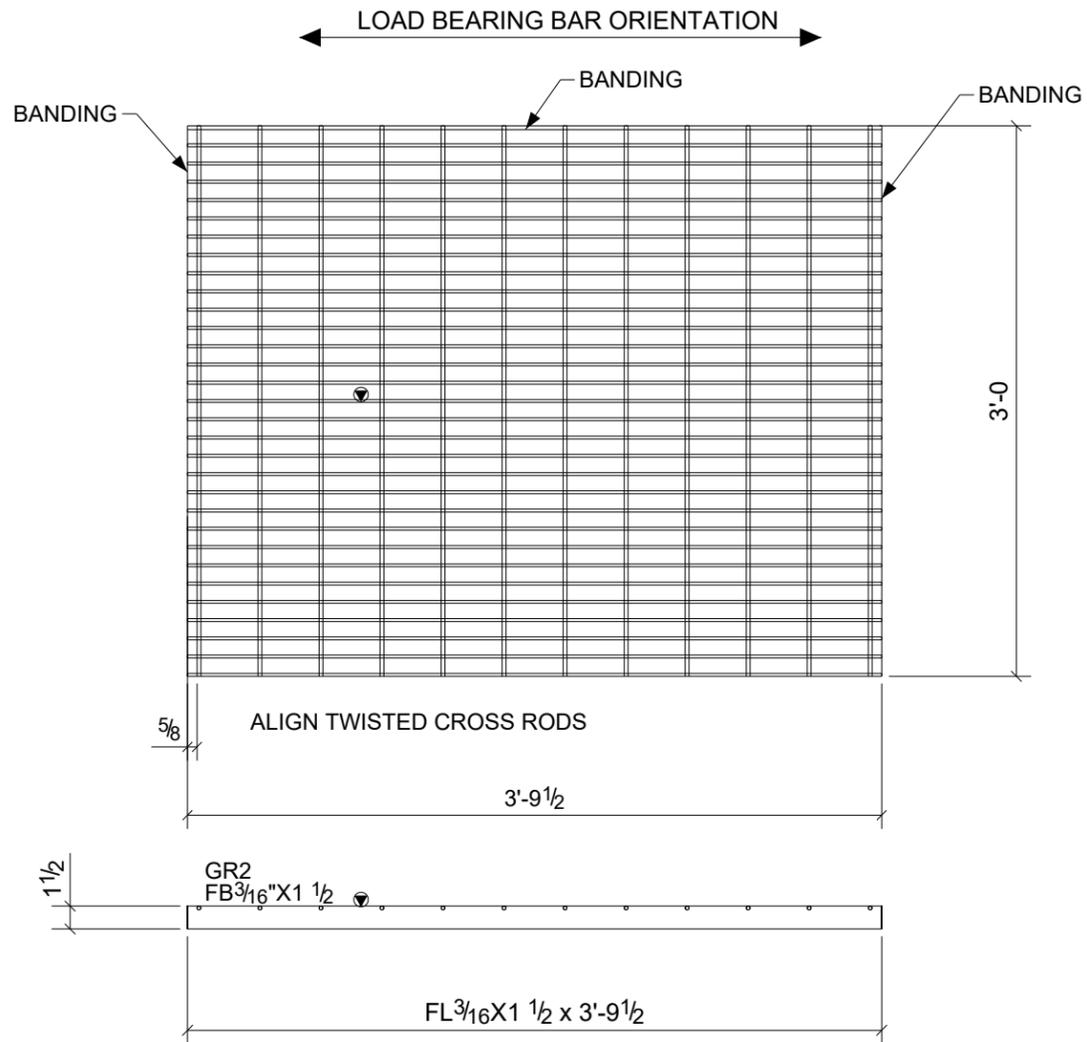
ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			GR1
JOB USE					

0	ISSUED FOR FABRICATION	08/FEB/2016
REV	DESCRIPTION	DATE

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	GR2		3		Grating 1 1/2 Serrated	3	9 1/2"	BUY OUT
2								
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4								
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TOTAL FIELD BOLTS IN THIS SHEET



NOTE: DIMENSIONS ARE FOR ACTUAL SIZE OF FINISHED GRATING

**3 - GRATINGS - GR2**

SHOP NOTES:

- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.;
- 2.) SQ. HSS MAT'L ASTM A500 GR.B U.N.
- 3.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
- 4.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
- 5.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b,k, OR m
- 6.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
- 6.) ULTRANSONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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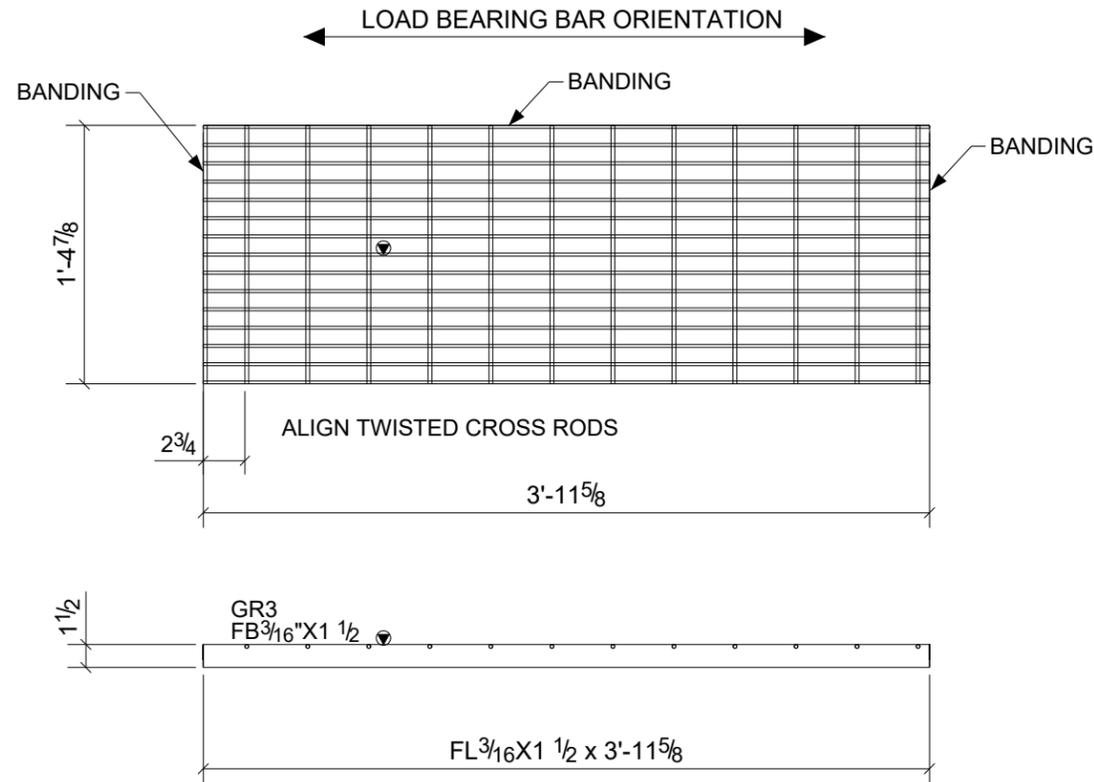
ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH.No.	BLVD
FABRICATION		CONTRACTOR:			GR2
JOB USE					

0	ISSUED FOR FABRICATION	08/FEB/2016
REV	DESCRIPTION	DATE

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	GR3		1		Grating 1"1/2 Serrated	3	11 5/8"	BUY OUT
2								
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TOTAL FIELD BOLTS IN THIS SHEET



NOTE: DIMENSIONS ARE FOR ACTUAL SIZE OF FINISHED GRATING

**ONE - GRATING - GR3**

- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.;
  - 2.) SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 3.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b,k, OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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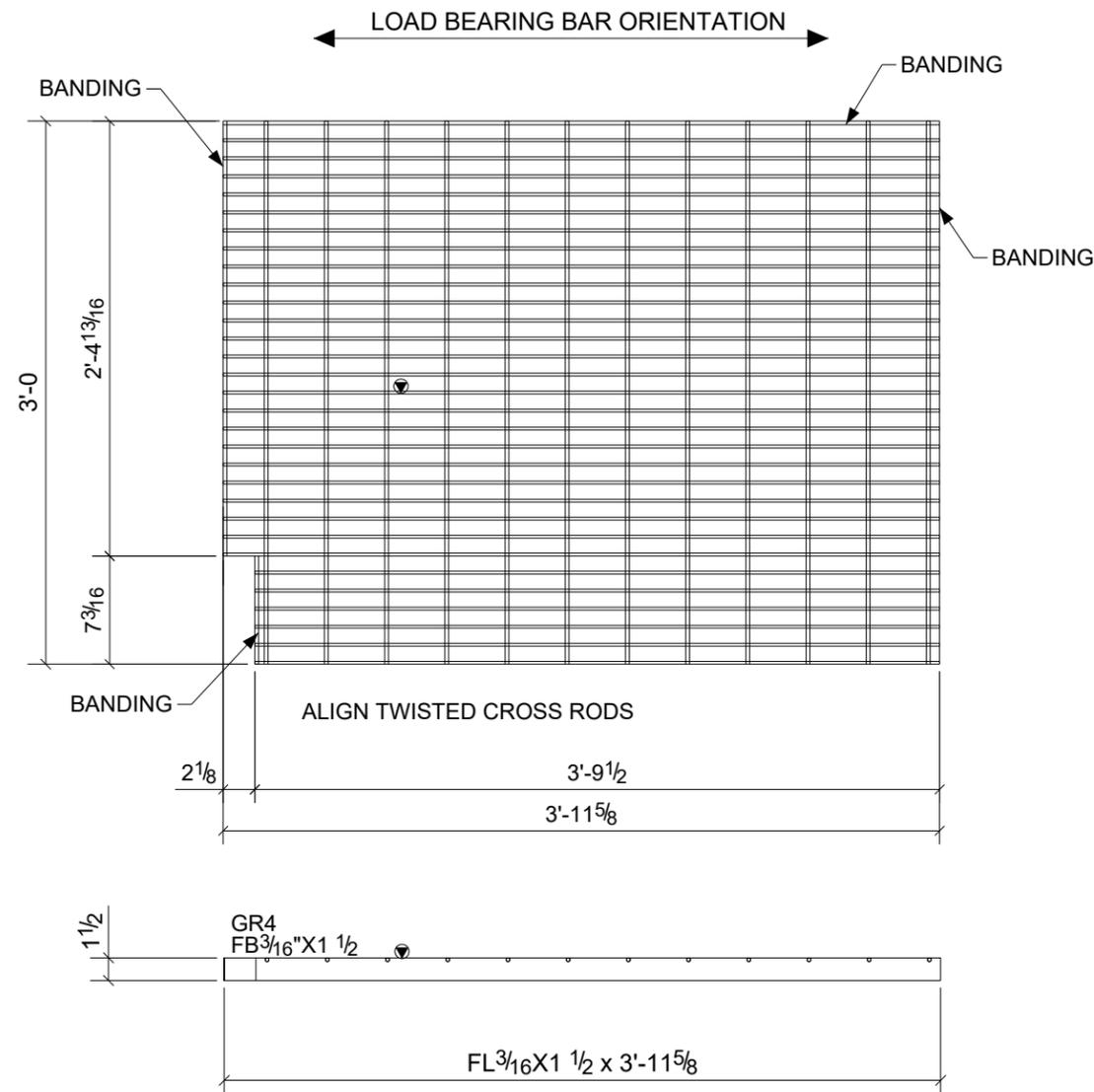
ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			GR3
JOB USE					

0	ISSUED FOR FABRICATION	08/FEB/2016
REV	DESCRIPTION	DATE

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	GR4		1		Grating 1 1/2 Serrated	3	11 5/8"	BUY OUT
2								
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TOTAL FIELD BOLTS IN THIS SHEET



NOTE: DIMENSIONS ARE FOR ACTUAL SIZE OF FINISHED GRATING

**ONE - GRATING - GR4**

SHOP NOTES:

- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.;
- 2.) SQ. HSS MAT'L ASTM A500 GR.B U.N.
- 3.) HOLES 13/16" TYP. U.N.O. FIELD BOLTS ARE 3/4" Ø-N TYPE 1 U.N.O
- 4.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
- 5.) 13/16" Ø X 1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b,k, OR m
- 6.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
- 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

ALL VERIFICATION REQUESTS ON THIS SET OF DRAWINGS WILL BE ASSUMED CORRECT AS SHOWN UNLESS OTHERWISE NOTED. WHERE FABRICATOR HAS REQUESTED INFORMATION TO BE PROVIDED, CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH TRADES, ARCHITECT AND ENGINEER AS REQ'D TO COMPLETE VERIFICATION REQUESTS, OR STEEL DELIVERY MAY BE DELAYED. ANY REFABRICATION COST DO TO INCOMPLETE OR INACCURATE VERIFICATION RESPONSES WILL BE BILLED AS EXTRA TO THE GENERAL CONTRACTOR.

NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL FROM  
REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

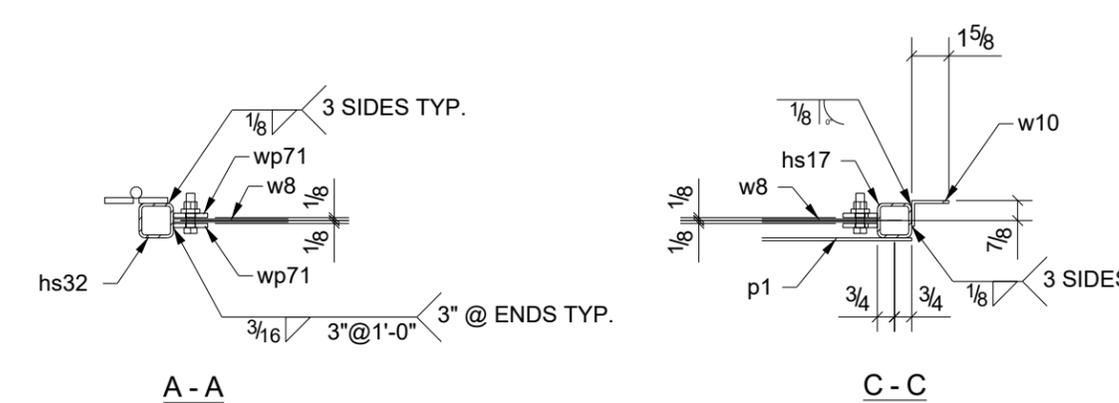
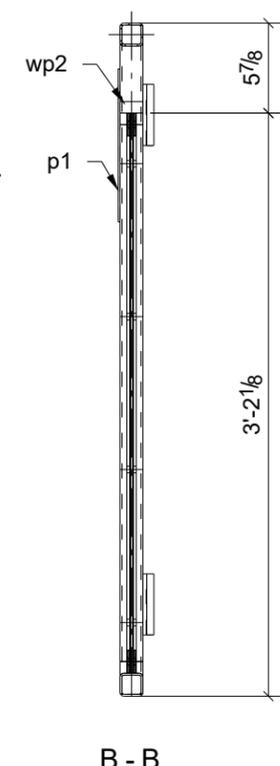
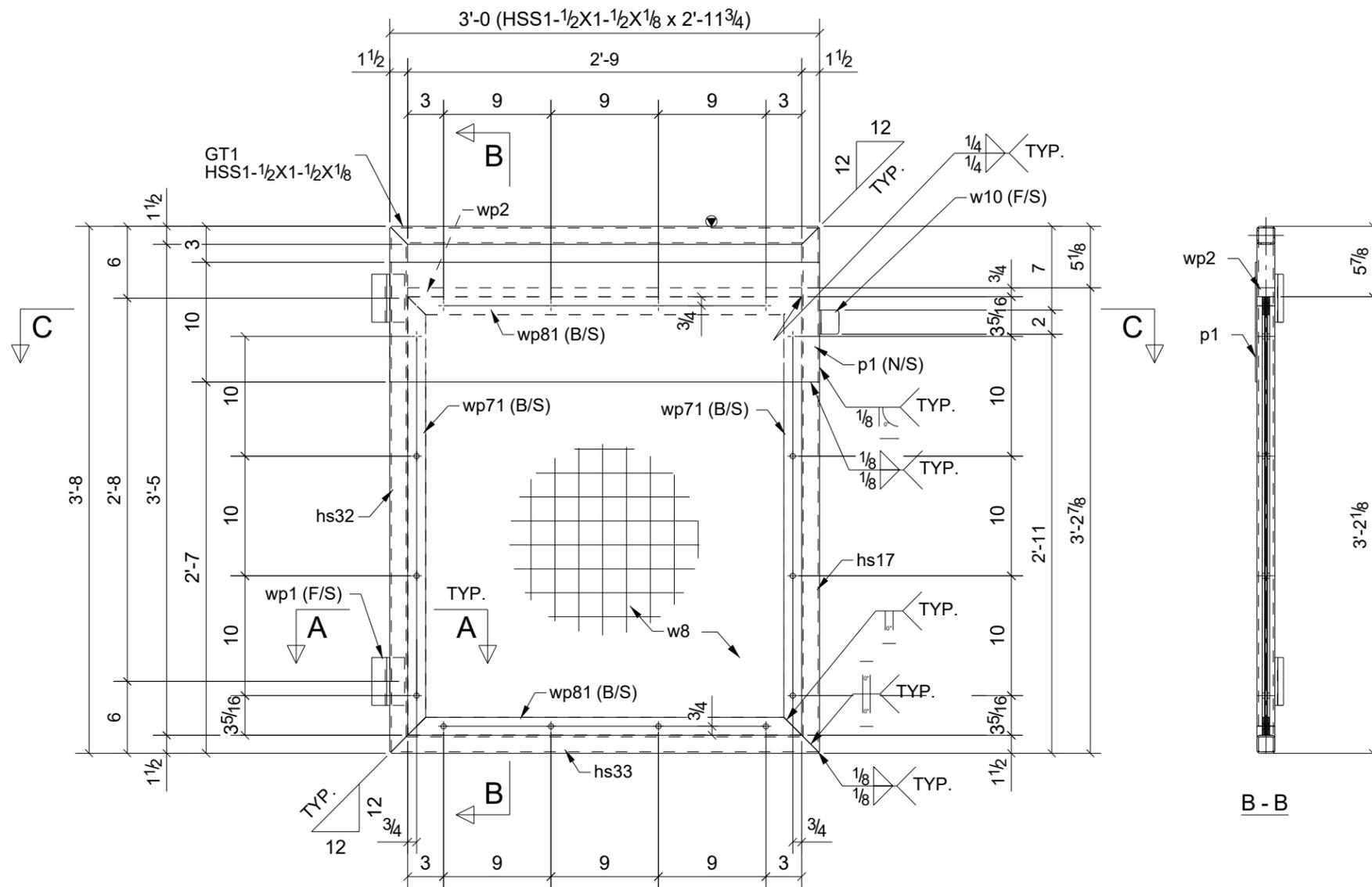
ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			GR4
JOB USE					

0	ISSUED FOR FABRICATION	08/FEB/2016
REV	DESCRIPTION	DATE

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	GT1		1		HSS1-1/2X1-1/2X1/8	2	11 3/4"	
2		hs17	1		HSS1-1/2X1-1/2X1/8	3	7 3/4"	
3		hs32	1		HSS1-1/2X1-1/2X1/8	3	7 3/4"	
4		hs33	1		HSS1-1/2X1-1/2X1/8	2	11 3/4"	
5		p1	1		FL1/8"X10"	3	0"	
6		w8	1		McNichols Steel Mesh	3	0 5/8"	
7		w10	1		FL1/8"X2"	0	2 1/2"	
8		wp1	2		SELF CLOSING HINGE	0	4"	
9		wp2	1		FL3/4"X1 1/2"	2	9"	
10		wp71	4		FL3/16"X1 1/2"	3	0 5/8"	
11		wp81	4		FL3/16"X1 1/2"	2	9"	
12			16		A307 3/8"Ø		1 1/2"	
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TOTAL FIELD BOLTS IN THIS SHEET



**ONE - PATIO GATE - GT1**

- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O.
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

ALL VERIFICATION REQUESTS ON THIS SET OF DRAWINGS WILL BE ASSUMED CORRECT AS SHOWN UNLESS OTHERWISE NOTED. WHERE FABRICATOR HAS REQUESTED INFORMATION TO BE PROVIDED, CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH TRADES, ARCHITECT AND ENGINEER AS REQ'D TO COMPLETE VERIFICATION REQUESTS, OR STEEL DELIVERY MAY BE DELAYED. ANY REFABRICATION COST DO TO INCOMPLETE OR INACCURATE VERIFICATION RESPONSES WILL BE BILLED AS EXTRA TO THE GENERAL CONTRACTOR.

NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL FROM  
REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH.No.	BLVD
FABRICATION		CONTRACTOR:			GT1
JOB USE					

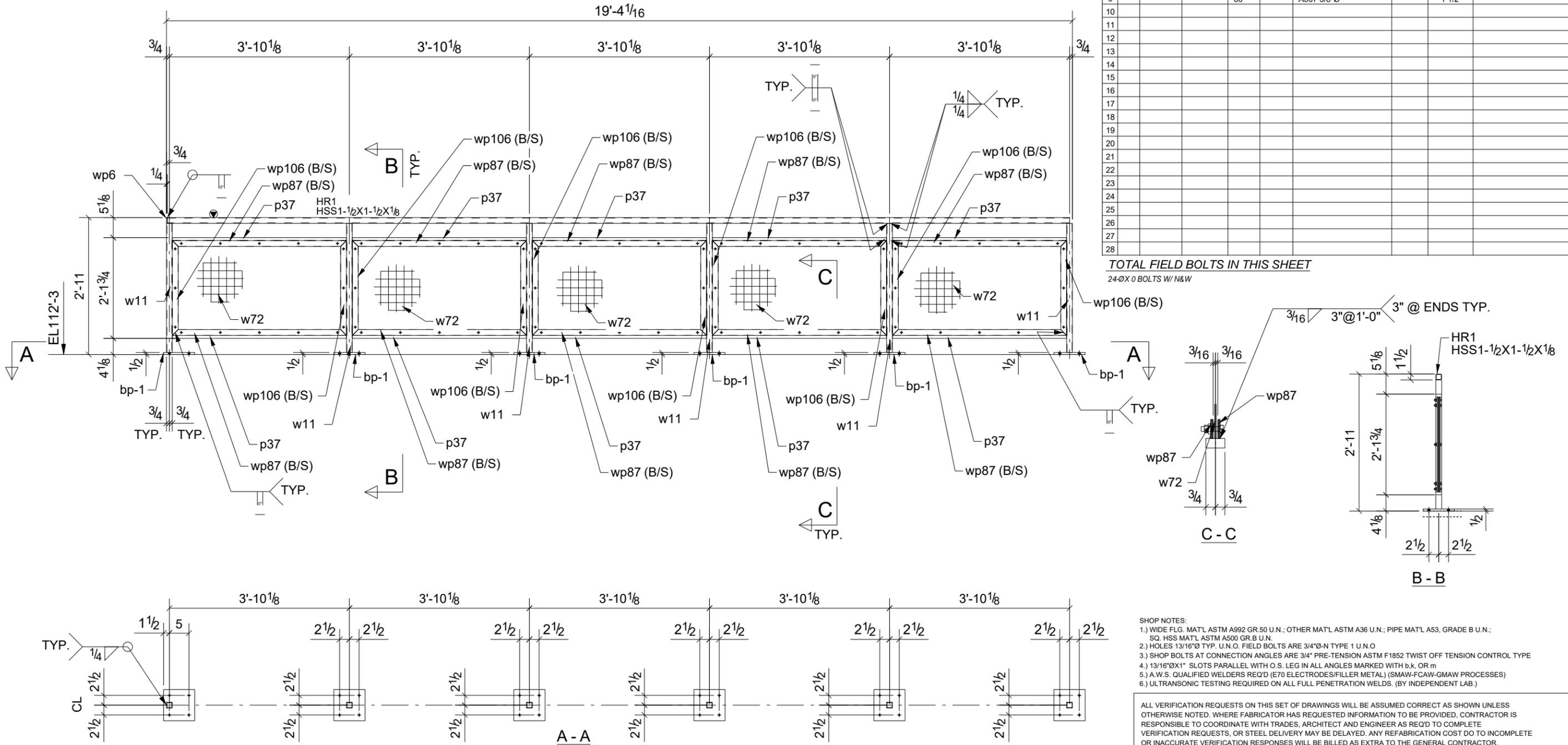
E	ISSUED FOR REVIEW/COMMENT/APPROVAL	19/JAN/2016
REV	DESCRIPTION	DATE

Tekla structures  
FINISH NOTE:  
MILL FINISH - CLEAR COAT

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	HR1		1		HSS1-1/2X1-1/2X1/8	19	3 1/16"	
2		bp-1	6		FL1/2"X8"	0	8"	
3		p37	10		FL3/4"X1 1/2"	3	8 5/8"	
4		w11	6		HSS1-1/2X1-1/2X1/8	2	9"	
5		w72	5		McNichols Steel Mesh	3	8 5/8"	
6		wp6	1		FL1/4"X1 1/2"	0	1 1/2"	
7		wp87	20		FL3/16"X1 1/2"	3	8 5/8"	
8		wp106	20		FL3/16"X1 1/2"	2	0 1/4"	
9			80		A307 3/8"Ø		1 1/2"	
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TOTAL FIELD BOLTS IN THIS SHEET  
24-ØX Ø BOLTS W/ N&W



- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL FROM  
REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS		
FABRICATION		CONTRACTOR:			
JOB USE					

B	ISSUED FOR REVIEW/COMMENT/APPROVAL	11/NOV/2015
REV	DESCRIPTION	DATE

ALL HOLES ARE 9/16"Ø U.N.O.

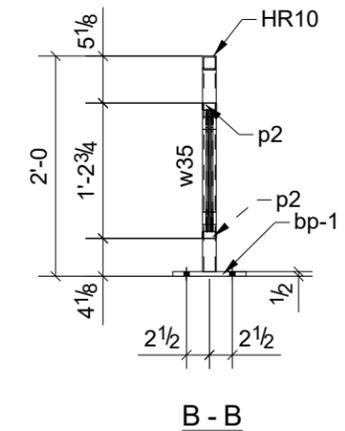
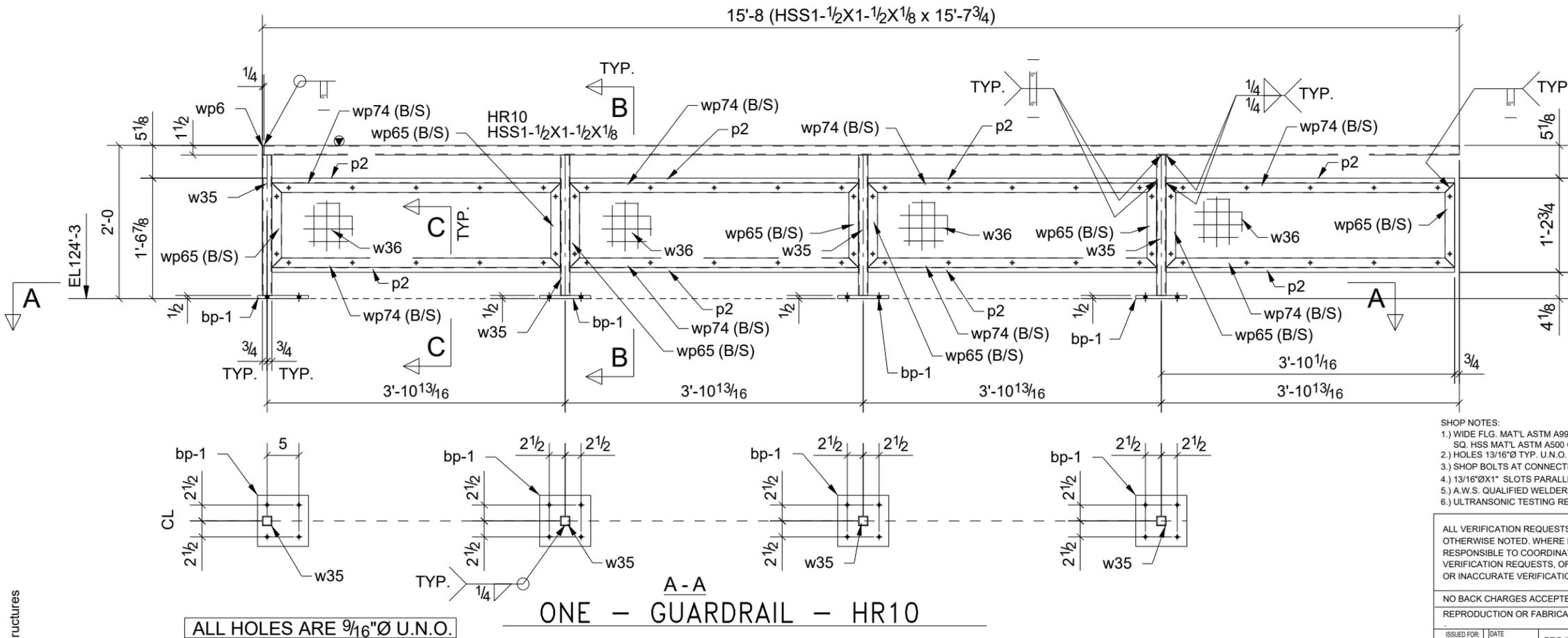
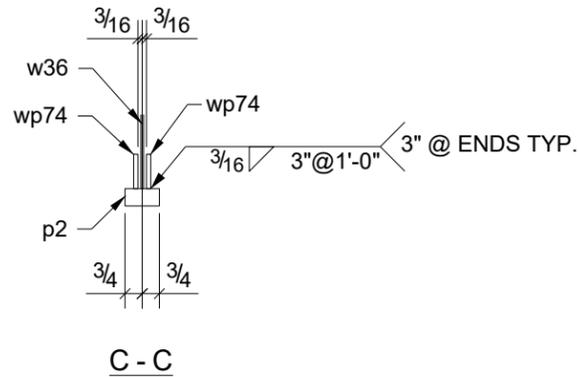
ONE - GUARDRAIL - HR1

Tekla structures  
FINISH NOTE:  
MILL FINISH-CLEAR COAT

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	HR10		1		HSS1-1/2X1-1/2X1/8	15	7 11/16"	
2		bp-1	4		FL1/2"X8"	0	8"	
3		p2	8		FL3/4"X1 1/2"	3	9 5/16"	
4		w35	4		HSS1-1/2X1-1/2X1/8	1	10"	
5		w36	4		McNichols Steel Mesh	3	9 5/16"	
6		wp6	1		FL1/4"X1 1/2"	0	1 1/2"	
7		wp65	16		FL3/16"X1 1/2"	1	1 1/4"	
8		wp74	16		FL3/16"X1 1/2"	3	9 5/16"	
9			56		A307 3/8"Ø		1 1/2"	
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TOTAL FIELD BOLTS IN THIS SHEET  
16-ØX Ø BOLTS W/ N&W



- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
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REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			HR10
JOB USE					

1	ISSUED FOR FABRICATION	08/FEB/2016
REV	DESCRIPTION	DATE

Tekla structures

FINISH NOTE:  
MILL FINISH-CLEAR COAT

ALL HOLES ARE 9/16"Ø U.N.O.

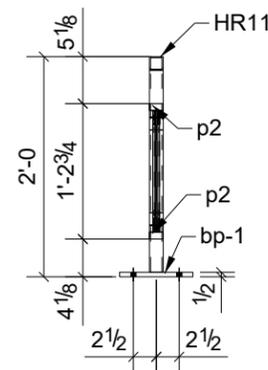
A - A  
**ONE - GUARDRAIL - HR10**

**BILL OF MATERIALS**

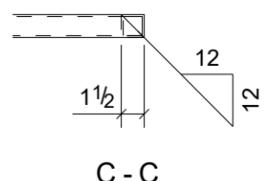
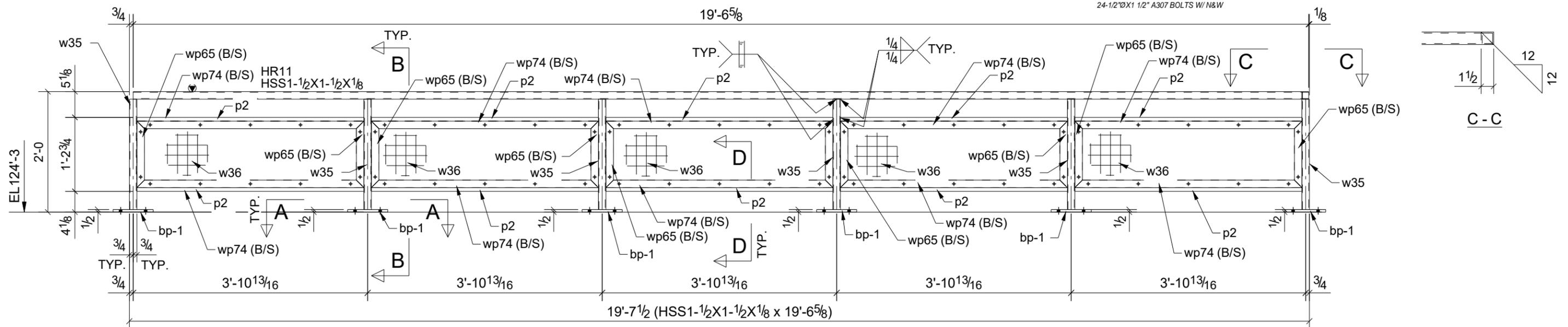
SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	HR11		1		HSS1-1/2X1-1/2X1/8	19	6 5/8"	
2		bp-1	6		FL1/2"X8"	0	8"	
3		p2	10		FL3/4"X1 1/2"	3	9 5/16"	
4		w35	6		HSS1-1/2X1-1/2X1/8	1	10"	
5		w36	5		McNichols Steel Mesh	3	9 5/16"	
6		wp65	20		FL3/16"X1 1/2"	1	1 1/4"	
7		wp74	20		FL3/16"X1 1/2"	3	9 5/16"	
8			70		A307 3/8"Ø		1 1/2"	
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TOTAL FIELD BOLTS IN THIS SHEET

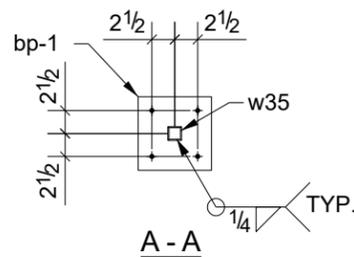
24-1/2"ØX1 1/2" A307 BOLTS W/ N&W



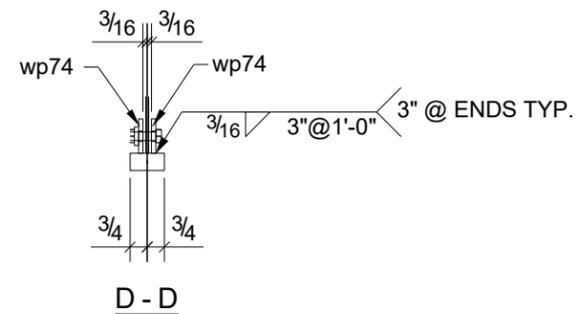
B - B



C - C



A - A



D - D

- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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ALL HOLES ARE 9/16"Ø U.N.O. ONE - GUARDRAIL - HR11

Tekla structures  
FINISH NOTE:  
MILL FINISH-CLEAR COAT

1	ISSUED FOR FABRICATION	08/FEB/2016
REV	DESCRIPTION	DATE

ISSUED FOR APPROVAL	DATE	PROJECT: BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION: WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER: CHRIS HAWLEY ARCHITECTS		
FABRICATION		CONTRACTOR:		
JOB USE			SH.No.	BLVD HR11

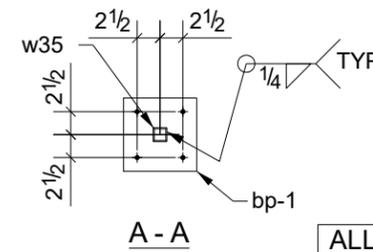
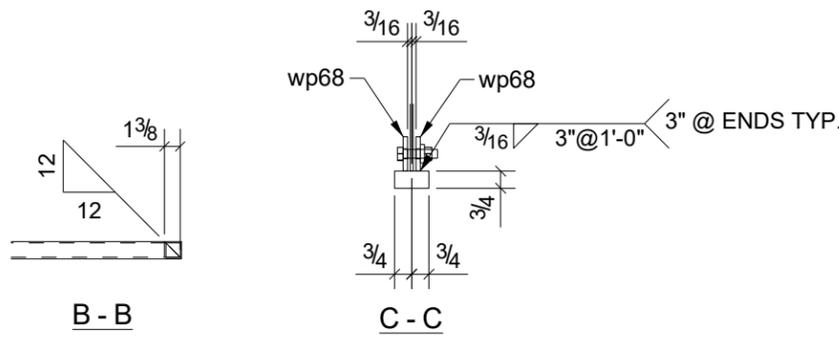
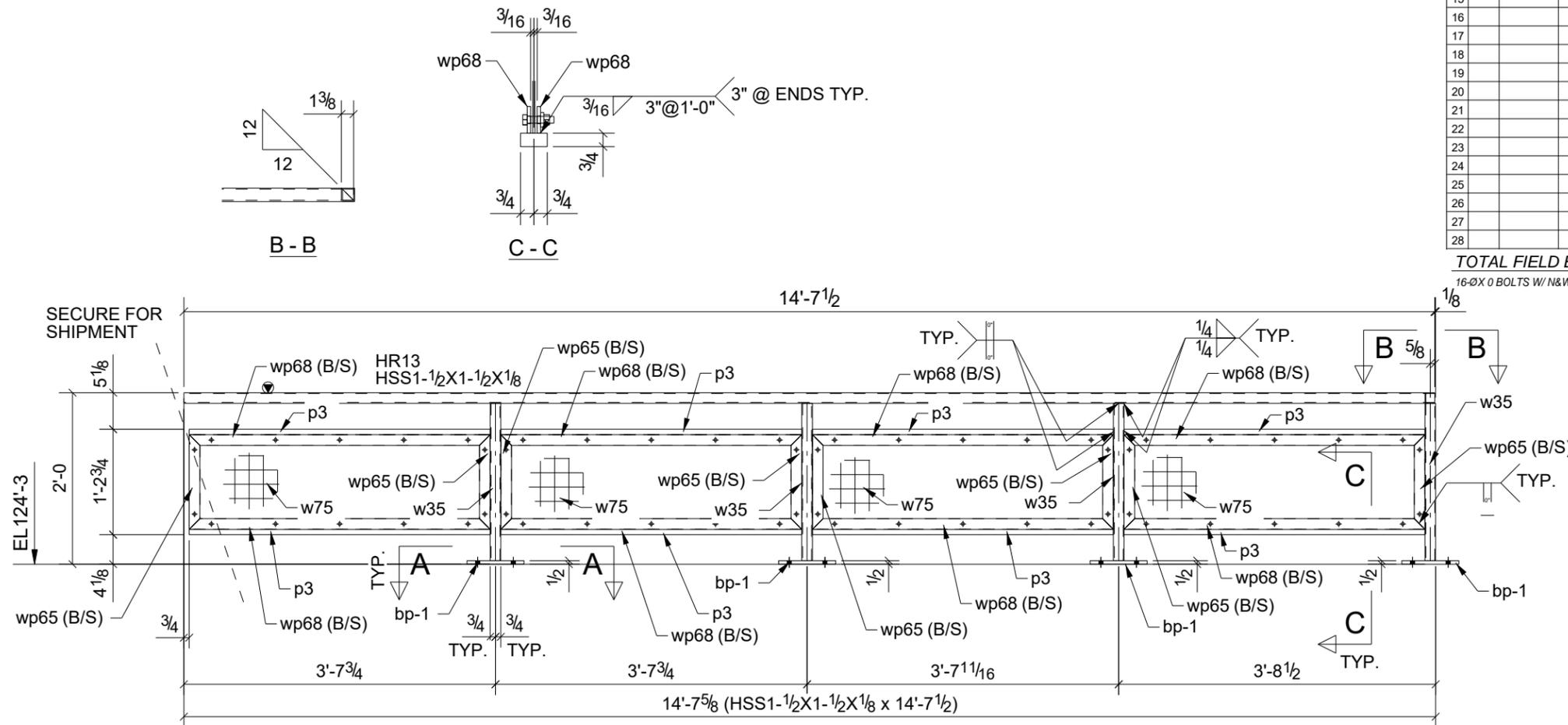


**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	HR13		1		HSS1-1/2X1-1/2X1/8	14	7 1/2"	
2		bp-1	4		FL1/2"X8"	0	8"	
3		p3	8		FL3/4"X1 1/2"	3	6 3/16"	
4		w35	4		HSS1-1/2X1-1/2X1/8	1	10"	
5		w75	4		McNichols Steel Mesh	3	6 3/16"	
6		wp65	16		FL3/16"X1 1/2"	1	1 1/4"	
7		wp68	16		FL3/16"X1 1/2"	3	6 1/4"	
8			56		A307 3/8"Ø		1 1/2"	
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TOTAL FIELD BOLTS IN THIS SHEET

16-ØX Ø BOLTS W/ N&W



ALL HOLES ARE 9/16"Ø U.N.O.

**ONE - GUARDRAIL - HR13**

- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O.
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

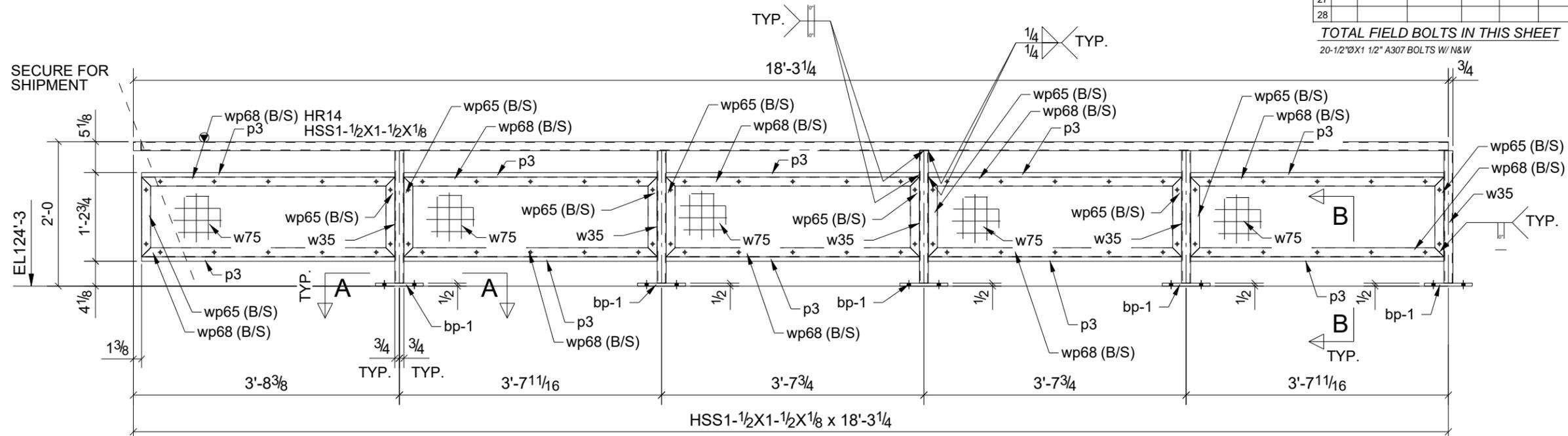
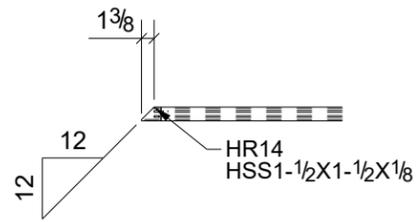
ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH.No.	BLVD
FABRICATION		CONTRACTOR:			HR13
JOB USE					

1	ISSUED FOR FABRICATION	08/FEB/2016
REV	DESCRIPTION	DATE

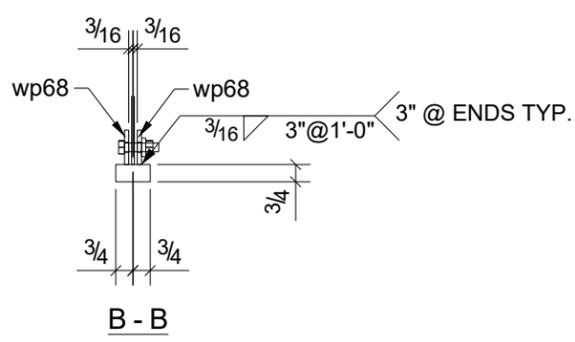
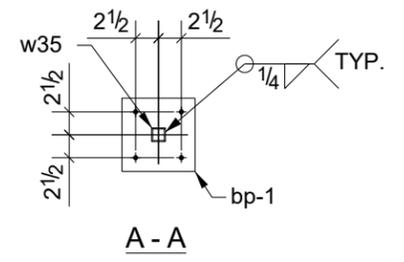
Tekla structures  
FINISH NOTE:  
MILL FINISH-CLEAR COAT

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	HR14		1		HSS1-1/2X1-1/2X1/8	18	3 1/4"	
2		bp-1	5		FL1/2"X8"	0	8"	
3		p3	10		FL3/4"X1 1/2"	3	6 3/16"	
4		w35	5		HSS1-1/2X1-1/2X1/8	1	10"	
5		w75	5		McNichols Steel Mesh	3	6 3/16"	
6		wp65	20		FL3/16"X1 1/2"	1	1 1/4"	
7		wp68	20		FL3/16"X1 1/2"	3	6 1/4"	
8			70		A307 3/8"Ø		1 1/2"	
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TOTAL FIELD BOLTS IN THIS SHEET  
20-1/2"ØX1 1/2" A307 BOLTS W/ N&W



- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O.
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

ALL VERIFICATION REQUESTS ON THIS SET OF DRAWINGS WILL BE ASSUMED CORRECT AS SHOWN UNLESS OTHERWISE NOTED. WHERE FABRICATOR HAS REQUESTED INFORMATION TO BE PROVIDED, CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH TRADES, ARCHITECT AND ENGINEER AS REQ'D TO COMPLETE VERIFICATION REQUESTS, OR STEEL DELIVERY MAY BE DELAYED. ANY REFABRICATION COST DO TO INCOMPLETE OR INACCURATE VERIFICATION RESPONSES WILL BE BILLED AS EXTRA TO THE GENERAL CONTRACTOR.

NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL FROM  
REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ALL HOLES ARE 9/16"Ø U.N.O.

**ONE - GUARDRAIL - HR14**

Tekla structures  
FINISH NOTE:  
MILL FINISH-CLEAR COAT

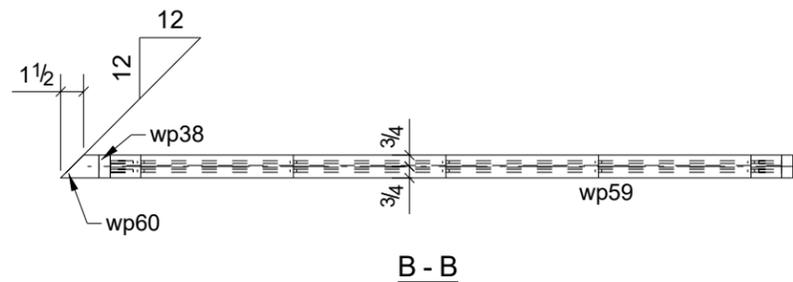
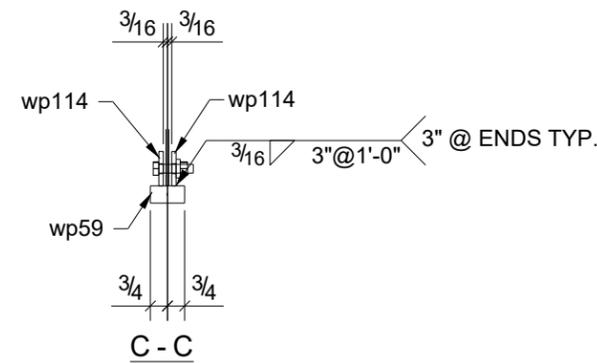
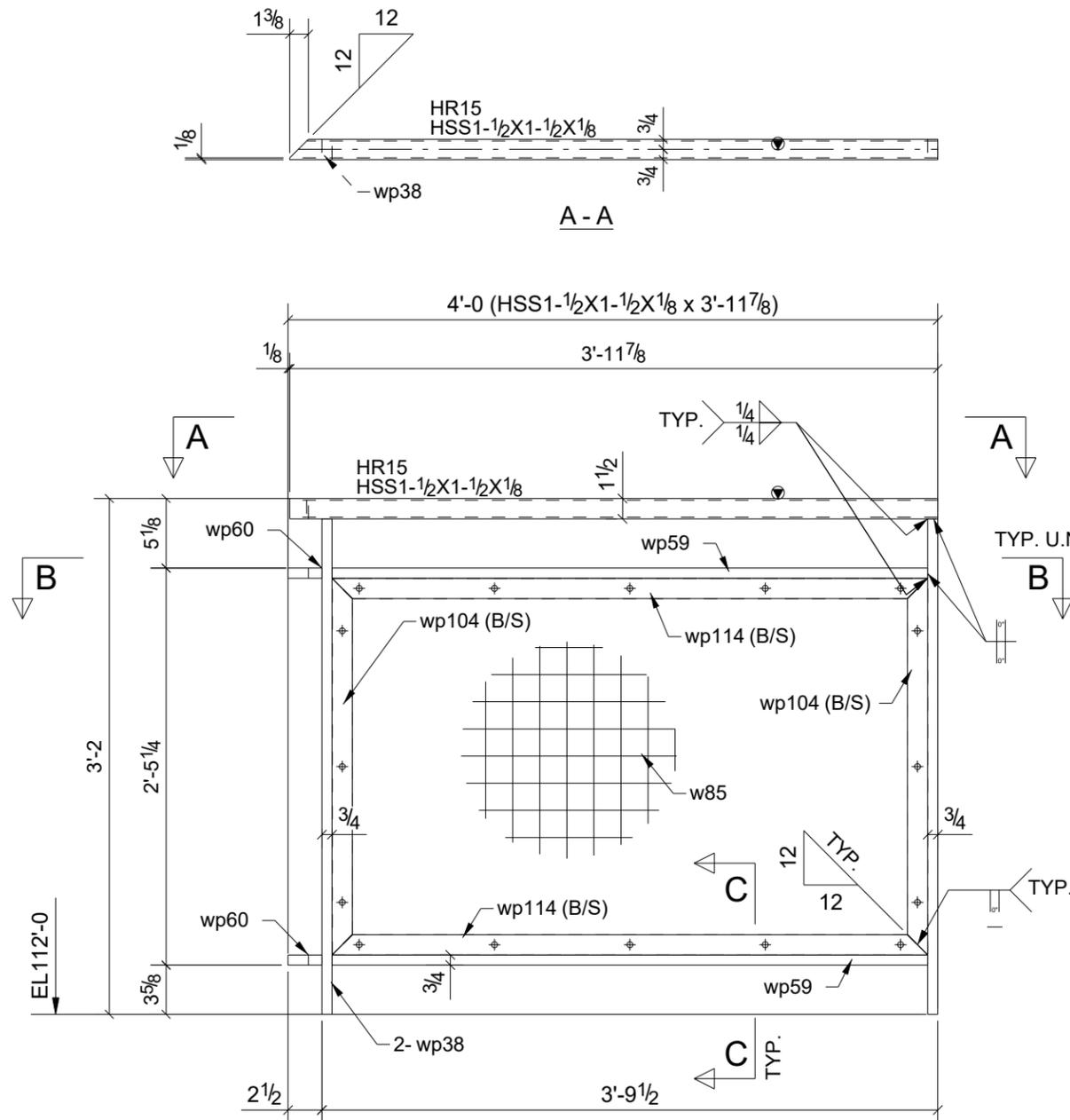
REV	DESCRIPTION	DATE
1	ISSUED FOR FABRICATION	08/FEB/2016

ISSUED FOR APPROVAL	DATE	PROJECT: BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION: WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER: CHRIS HAWLEY ARCHITECTS		
FABRICATION		CONTRACTOR:		
JOB USE			SH.No.	BLVD HR14

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	HR15		1		HSS1-1/2X1-1/2X1/8	3	11 7/8"	
2		w85	1		McNichols Steel Mesh	3	8"	
3		wp38	2		FL3/4"X1 1/2"	3	0 1/2"	
4		wp59	2		FL3/4"X1 1/2"	3	8"	
5		wp60	2		FL3/4"X1 1/2"	0	2 1/2"	
6		wp104	4		FL3/16"X1 1/2"	2	3 3/4"	
7		wp114	4		FL3/16"X1 1/2"	3	8"	
8			16		A307 3/8"Ø		1 1/2"	
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TOTAL FIELD BOLTS IN THIS SHEET



**ONE - HANDRAIL - HR15**

- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

ALL VERIFICATION REQUESTS ON THIS SET OF DRAWINGS WILL BE ASSUMED CORRECT AS SHOWN UNLESS OTHERWISE NOTED. WHERE FABRICATOR HAS REQUESTED INFORMATION TO BE PROVIDED, CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH TRADES, ARCHITECT AND ENGINEER AS REQ'D TO COMPLETE VERIFICATION REQUESTS, OR STEEL DELIVERY MAY BE DELAYED. ANY REFABRICATION COST DO TO INCOMPLETE OR INACCURATE VERIFICATION RESPONSES WILL BE BILLED AS EXTRA TO THE GENERAL CONTRACTOR.

NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL FROM  
REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

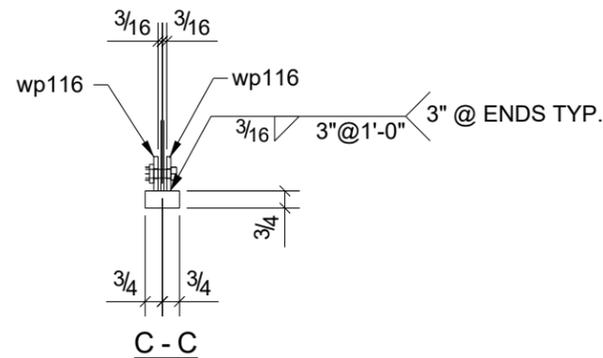
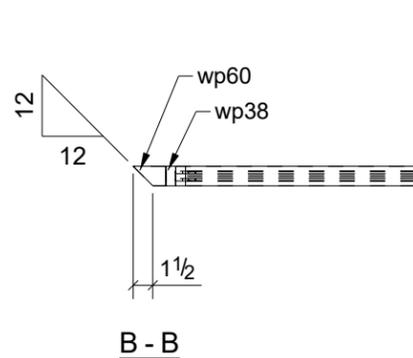
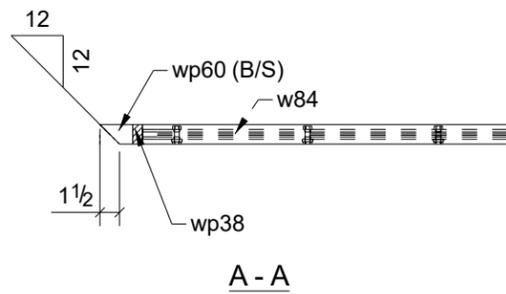
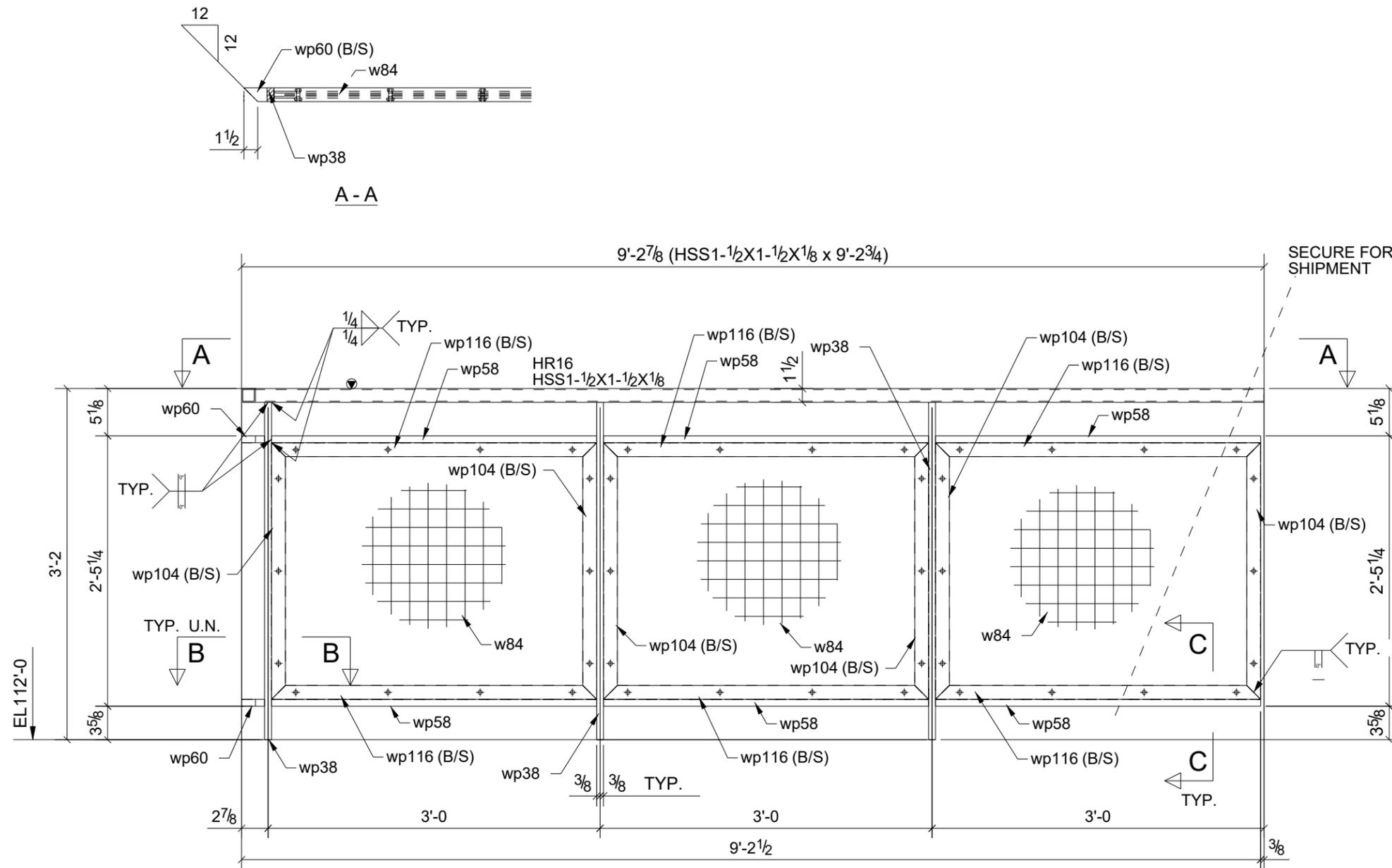
ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			HR15
JOB USE					

0	ISSUED FOR FABRICATION	08/FEB/2016
REV	DESCRIPTION	DATE

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	HR16		1		HSS1-1/2X1-1/2X1/8	9	2 3/4"	
2		w84	3		McNichols Steel Mesh	2	11 1/4"	
3		wp38	3		FL3/4"X1 1/2"	3	0 1/2"	
4		wp58	6		FL3/4"X1 1/2"	2	11 1/4"	
5		wp60	2		FL3/4"X1 1/2"	0	2 1/2"	
6		wp104	12		FL3/16"X1 1/2"	2	3 3/4"	
7		wp116	12		FL3/16"X1 1/2"	2	11 1/4"	
8			42		A307 3/8"Ø		1 1/2"	
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TOTAL FIELD BOLTS IN THIS SHEET



**ONE - HANDRAIL - HR16**

- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L ASTM A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

ALL VERIFICATION REQUESTS ON THIS SET OF DRAWINGS WILL BE ASSUMED CORRECT AS SHOWN UNLESS OTHERWISE NOTED. WHERE FABRICATOR HAS REQUESTED INFORMATION TO BE PROVIDED, CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH TRADES, ARCHITECT AND ENGINEER AS REQ'D TO COMPLETE VERIFICATION REQUESTS, OR STEEL DELIVERY MAY BE DELAYED. ANY REFABRICATION COST DO TO INCOMPLETE OR INACCURATE VERIFICATION RESPONSES WILL BE BILLED AS EXTRA TO THE GENERAL CONTRACTOR.

NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL FROM  
REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

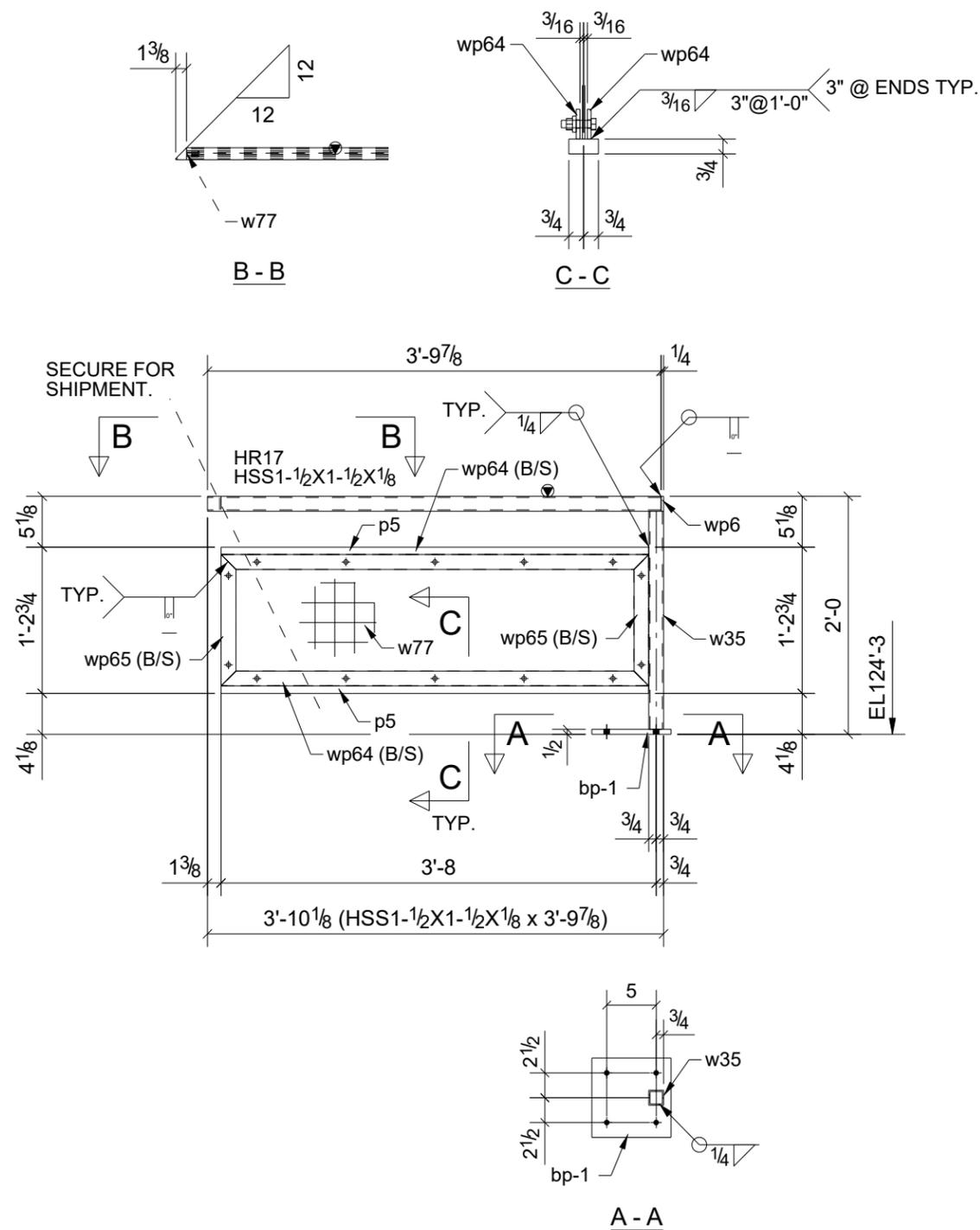
ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			HR16
JOB USE					

0	ISSUED FOR FABRICATION	08/FEB/2016
REV	DESCRIPTION	DATE

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	HR17		1		HSS1-1/2X1-1/2X1/8	3	9 7/8"	
2		bp-1	1		FL1/2"X8"	0	8"	
3		p5	2		FL3/4"X1 1/2"	3	7 1/4"	
4		w35	1		HSS1-1/2X1-1/2X1/8	1	10"	
5		w77	1		McNichols Steel Mesh	3	7 1/4"	
6		wp6	1		FL1/4"X1 1/2"	0	1 1/2"	
7		wp64	4		FL3/16"X1 1/2"	3	7 1/4"	
8		wp65	4		FL3/16"X1 1/2"	1	1 1/4"	
9			14		A307 3/8"Ø		1 1/2"	
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**TOTAL FIELD BOLTS IN THIS SHEET**  
4-1/2"ØX1 1/2" A307 BOLTS W/ N&W



ALL HOLES ARE 9/16"Ø U.N.O.

**ONE - GUARDRAIL - HR17**

- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O.
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL FROM  
REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

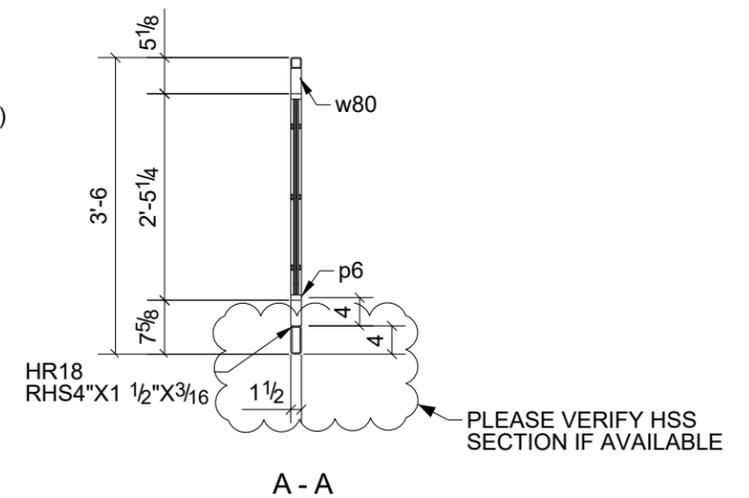
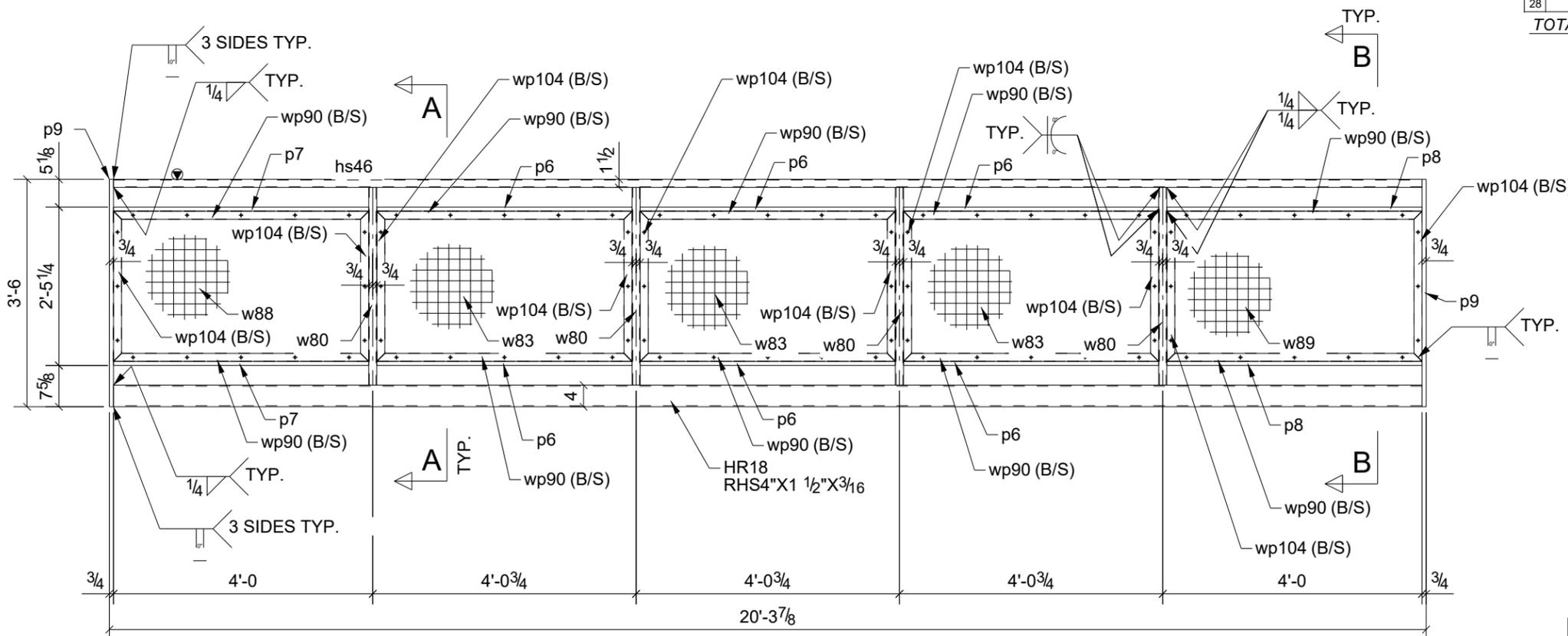
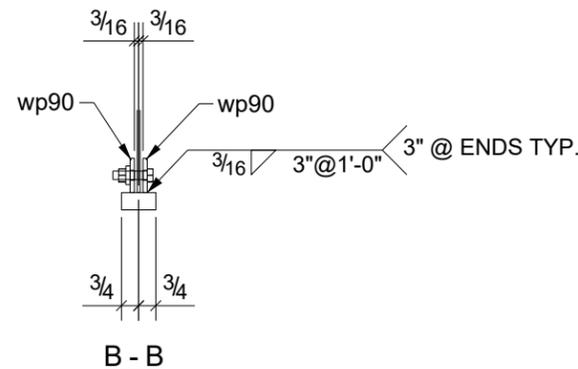
ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			HR17
JOB USE					

1	ISSUED FOR FABRICATION	08/FEB/2016
REV	DESCRIPTION	DATE

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	HR18		1		RHS4"X1 1/2"X3/16"	20	2 3/8"	
2		hs46	1		HSS1-1/2X1-1/2X1/8	20	2 3/8"	
3		p6	6		FL3/4"X1 1/2"	3	11 1/4"	
4		p7	2		FL3/4"X1 1/2"	3	11 1/4"	
5		p8	2		FL3/4"X1 1/2"	3	11 1/4"	
6		p9	2		FL3/4"X1 1/2"	3	6"	
7		w80	4		HSS1-1/2X1-1/2X1/8	3	0 1/2"	
8		w83	3		McNichols Steel Mesh	3	11 1/4"	
9		w88	1		McNichols Steel Mesh	3	11 1/4"	
10		w89	1		McNichols Steel Mesh	3	11 1/4"	
11		wp90	20		FL3/16"X1 1/2"	3	11 1/4"	
12		wp104	20		FL3/16"X1 1/2"	2	3 3/4"	
13			80		A307 3/8"Ø		1 1/2"	
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TOTAL FIELD BOLTS IN THIS SHEET



- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O.
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			HR18
JOB USE					

E	ISSUED FOR REVIEW/COMMENT/APPROVAL	19/JAN/2016
REV	DESCRIPTION	DATE

**ONE - GUARDRAIL - HR18**

ALL HOLES ARE 9/16"Ø U.N.O.

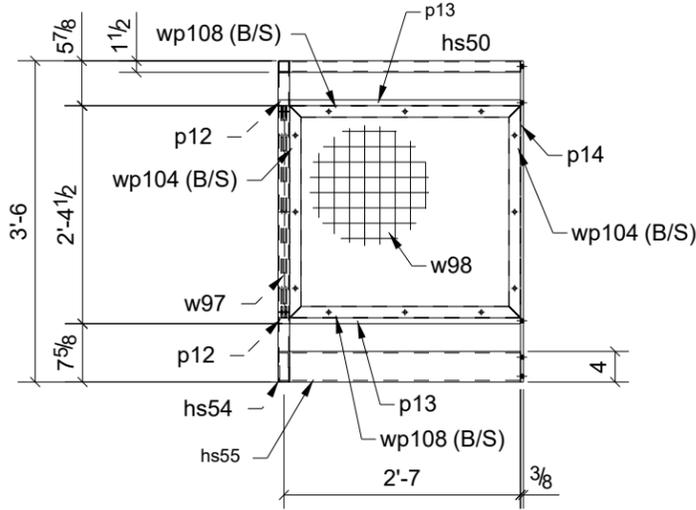
FINISH NOTE:  
MILL FINISHED

Tekla structures

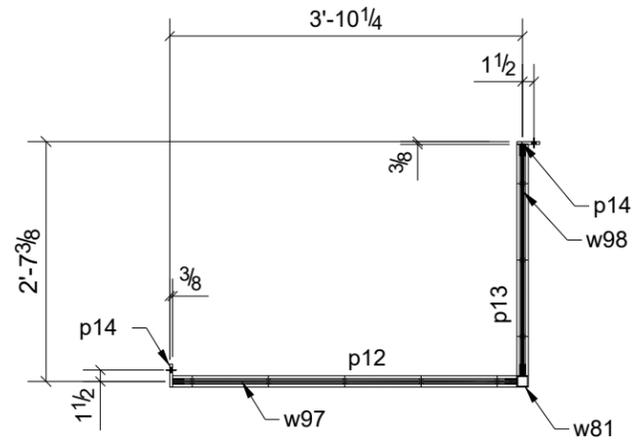
**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	HR19		1		HSS1-1/2X1-1/2X1/8	3	10 1/2"	
2		hs50	1		HSS1-1/2X1-1/2X1/8	2	7 5/8"	
3		hs54	1		RHS4"X1 1/2"X3/16"	3	9 1/8"	
4		hs55	1		RHS4"X1 1/2"X3/16"	2	6 1/4"	
5		p12	2		FL3/4"X1 1/2"	3	9 1/8"	
6		p13	2		FL3/4"X1 1/2"	2	6 1/4"	
7		p14	2		FL3/8"X3"	3	6"	
8		w81	1		HSS1-1/2X1-1/2X1/8	3	4 1/2"	
9		w97	1		McNichols Steel Mesh	3	9 1/8"	
10		w98	1		McNichols Steel Mesh	2	6 1/4"	
11		wp88	4		FL3/16"X1 1/2"	3	9 1/8"	
12		wp104	8		FL3/16"X1 1/2"	2	3 3/4"	
13		wp108	4		FL3/16"X1 1/2"	2	6 1/4"	
14			28		A307 3/8"Ø		1 1/2"	
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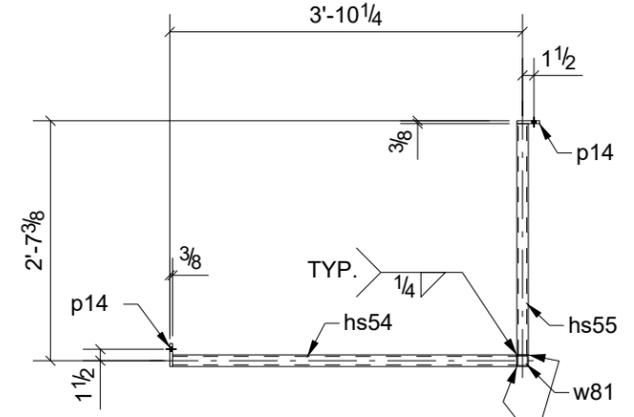
TOTAL FIELD BOLTS IN THIS SHEET  
10-ØX Ø BOLTS W/ N&W



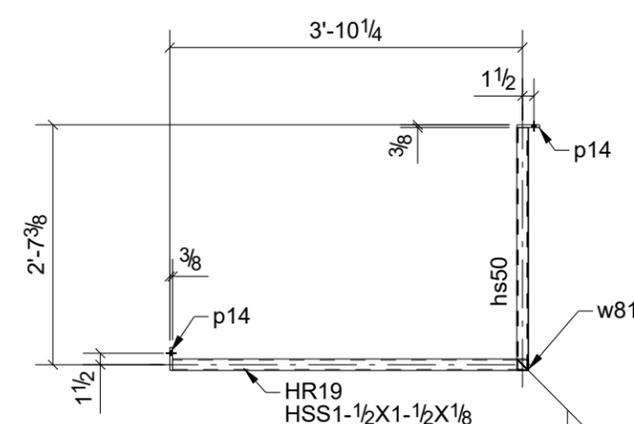
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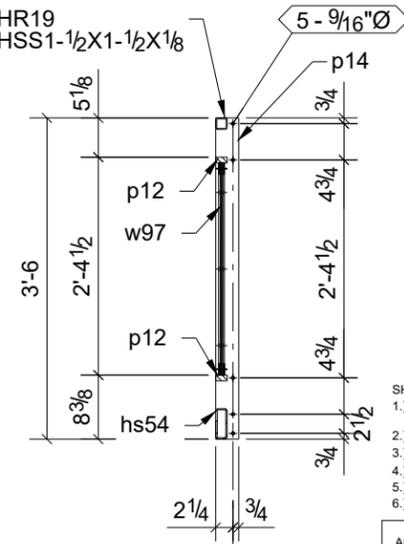
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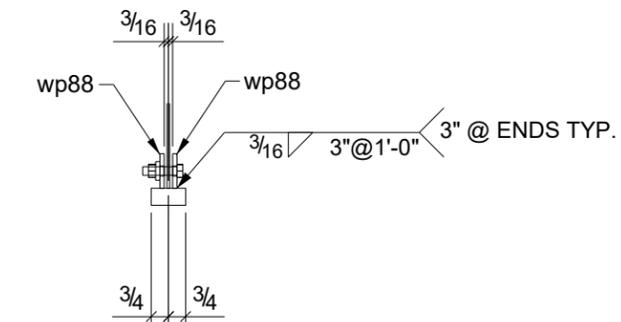
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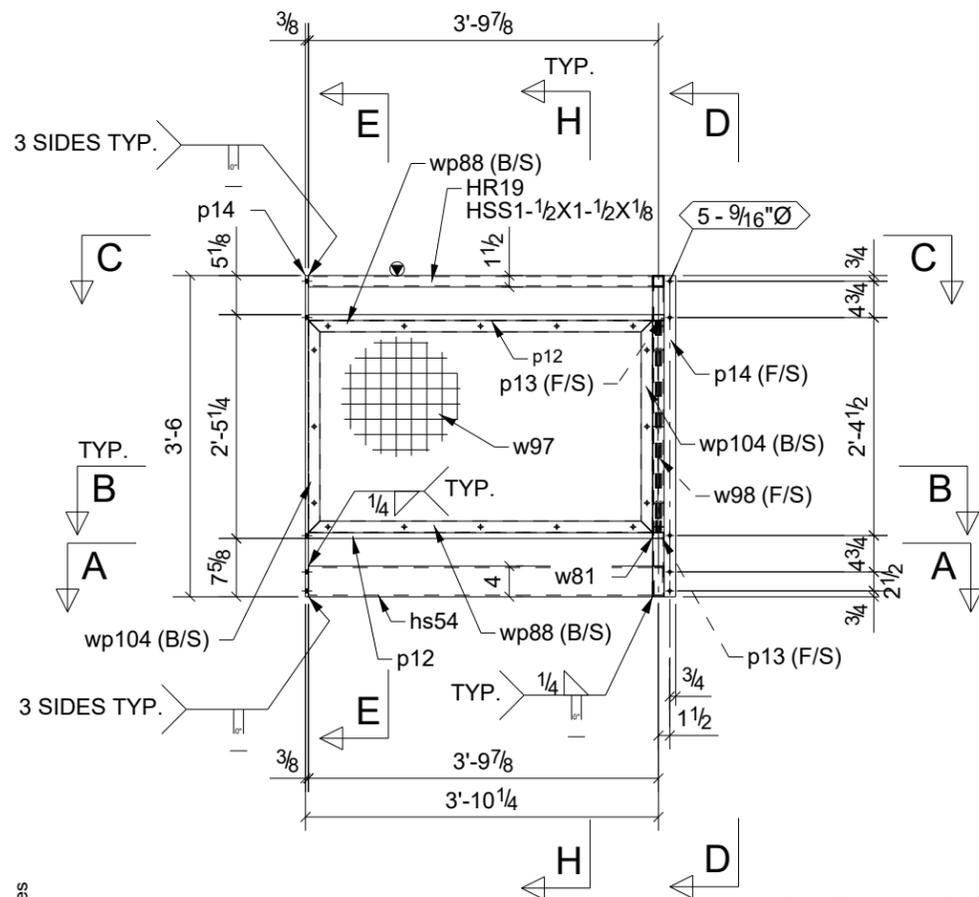
C - C



E - E



H - H



**ONE - GUARDRAIL - HR19**

ALL HOLES ARE 9/16"Ø U.N.O.

- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL FROM  
REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD HR19
FABRICATION		CONTRACTOR:			
JOB USE					

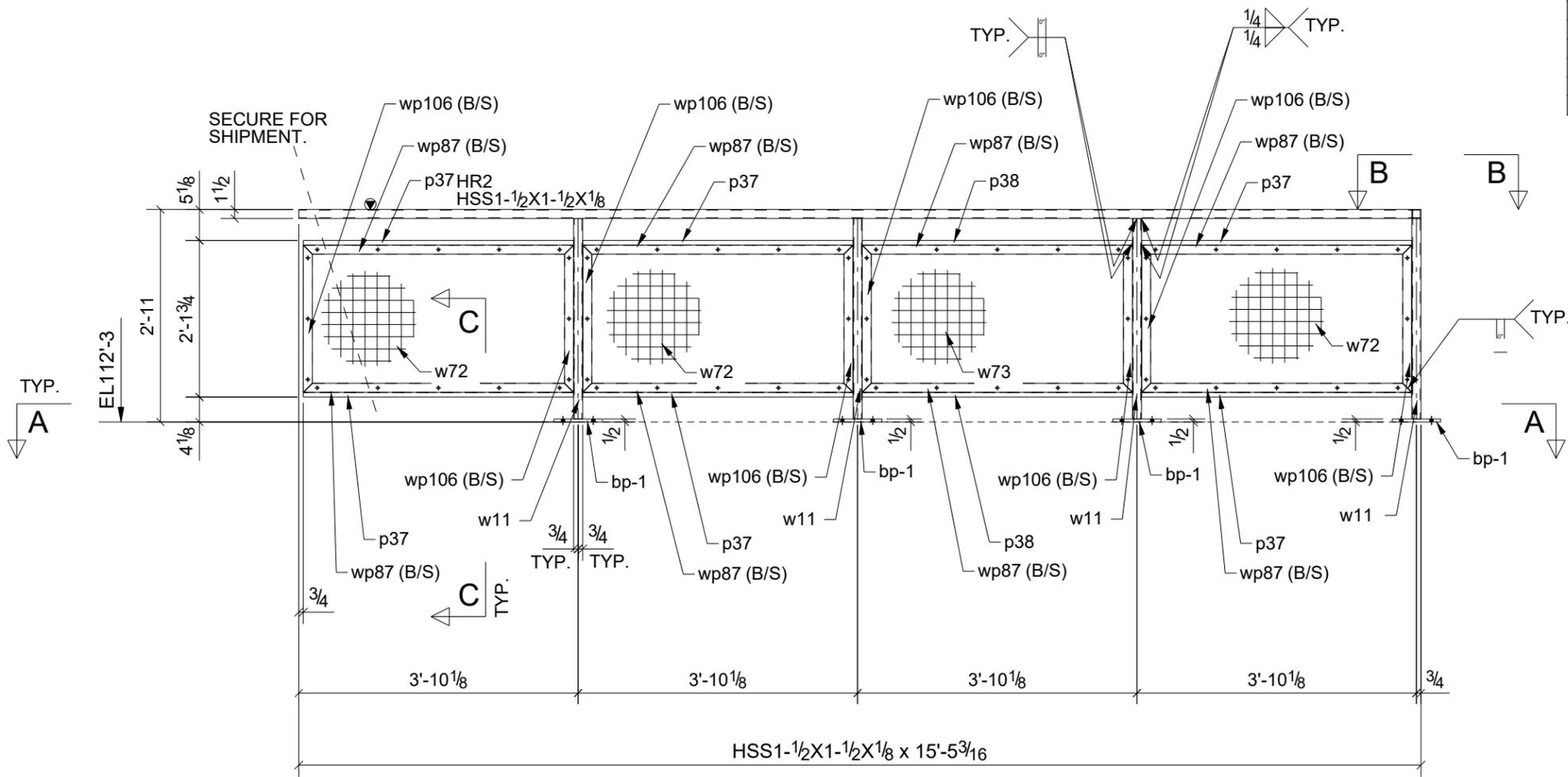
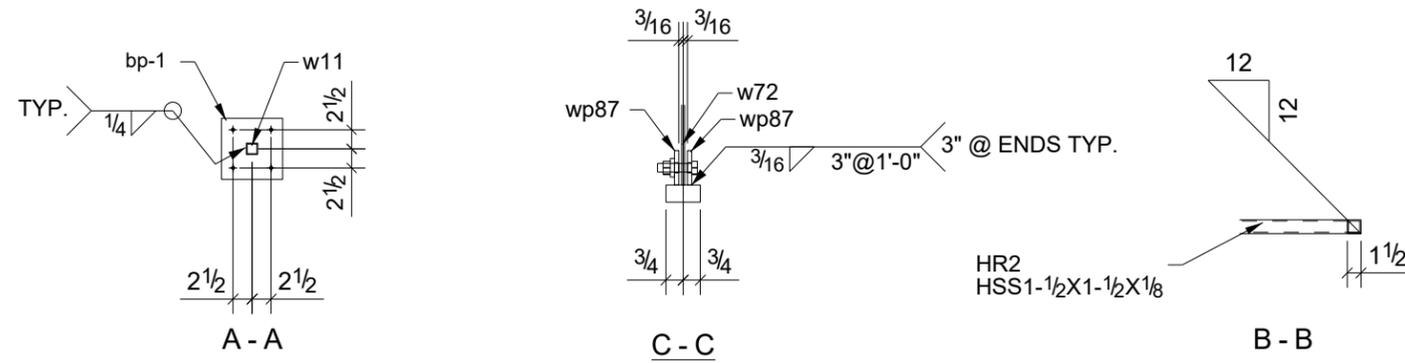
E	ISSUED FOR REVIEW/COMMENT/APPROVAL	19/JAN/2016
REV	DESCRIPTION	DATE

Tekla structures  
FINISH NOTE:  
MILL FINISH-CLEAR COAT

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	HR2		1		HSS1-1/2X1-1/2X1/8	15	5 3/16"	
2		bp-1	4		FL1/2"X8"	0	8"	
3		p37	6		FL3/4"X1 1/2"	3	8 5/8"	
4		p38	2		FL3/4"X1 1/2"	3	8 5/8"	
5		w11	4		HSS1-1/2X1-1/2X1/8	2	9"	
6		w72	3		McNichols Steel Mesh	3	8 5/8"	
7		w73	1		McNichols Steel Mesh	3	8 5/8"	
8		wp87	16		FL3/16"X1 1/2"	3	8 5/8"	
9		wp106	16		FL3/16"X1 1/2"	2	0 1/4"	
10			64		A307 3/8"Ø		1 1/2"	
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TOTAL FIELD BOLTS IN THIS SHEET  
16-ØX Ø BOLTS W/ N&W



ALL HOLES ARE 9/16"Ø U.N.O. ONE - GUARDRAIL - HR2

- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O.
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

ALL VERIFICATION REQUESTS ON THIS SET OF DRAWINGS WILL BE ASSUMED CORRECT AS SHOWN UNLESS OTHERWISE NOTED. WHERE FABRICATOR HAS REQUESTED INFORMATION TO BE PROVIDED, CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH TRADES, ARCHITECT AND ENGINEER AS REQ'D TO COMPLETE VERIFICATION REQUESTS, OR STEEL DELIVERY MAY BE DELAYED. ANY REFABRICATION COST DO TO INCOMPLETE OR INACCURATE VERIFICATION RESPONSES WILL BE BILLED AS EXTRA TO THE GENERAL CONTRACTOR.

NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL FROM  
REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			HR2
JOB USE					

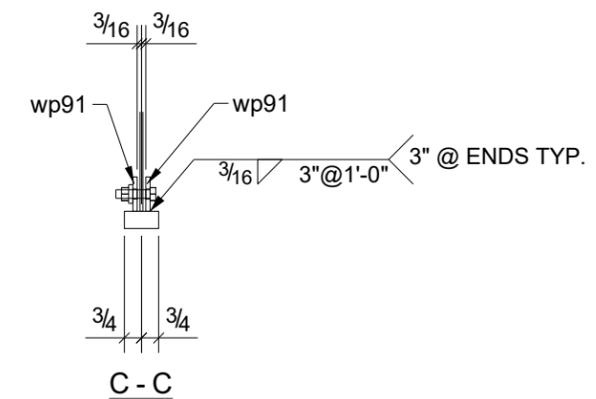
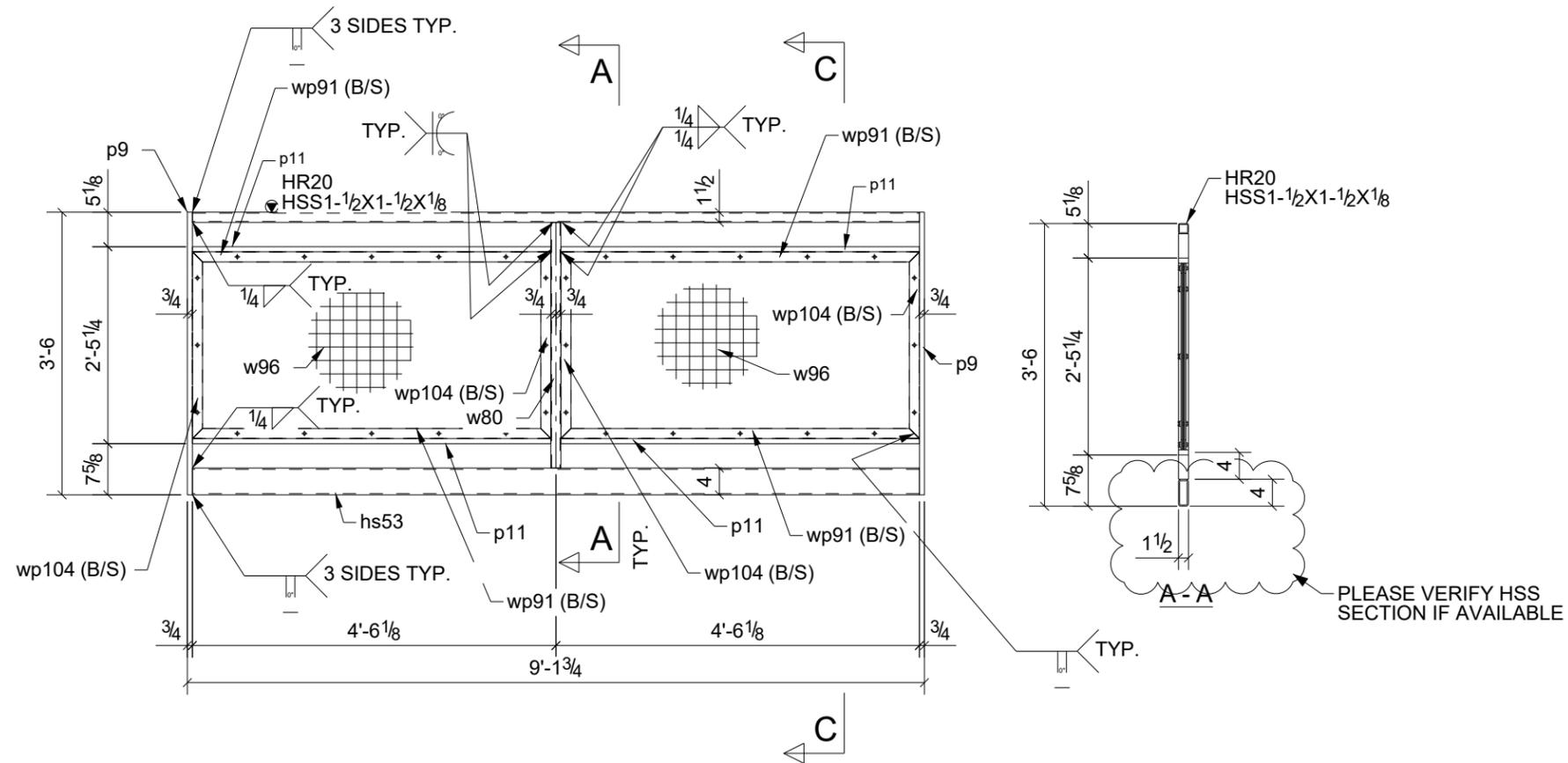
0	ISSUED FOR FABRICATION	08/FEB/2016
REV	DESCRIPTION	DATE

Tekla structures  
FINISH NOTE:  
MILL FINISH-CLEAR COAT

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	HR20		1		HSS1-1/2X1-1/2X1/8	9	0 1/4"	
2		hs53	1		RHS4"X1 1/2"X3/16"	9	0 1/4"	
3		p9	2		FL3/4"X1 1/2"	3	6"	
4		p11	4		FL3/4"X1 1/2"	4	5 3/8"	
5		w80	1		HSS1-1/2X1-1/2X1/8	3	0 1/2"	
6		w96	2		McNichols Steel Mesh	4	5 3/8"	
7		wp91	8		FL3/16"X1 1/2"	4	5 3/8"	
8		wp104	8		FL3/16"X1 1/2"	2	3 3/4"	
9			32		A307 3/8"Ø		1 1/2"	
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TOTAL FIELD BOLTS IN THIS SHEET



SHOP NOTES:

- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
- 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O.
- 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
- 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
- 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
- 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

ALL VERIFICATION REQUESTS ON THIS SET OF DRAWINGS WILL BE ASSUMED CORRECT AS SHOWN UNLESS OTHERWISE NOTED. WHERE FABRICATOR HAS REQUESTED INFORMATION TO BE PROVIDED, CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH TRADES, ARCHITECT AND ENGINEER AS REQ'D TO COMPLETE VERIFICATION REQUESTS, OR STEEL DELIVERY MAY BE DELAYED. ANY REFABRICATION COST DO TO INCOMPLETE OR INACCURATE VERIFICATION RESPONSES WILL BE BILLED AS EXTRA TO THE GENERAL CONTRACTOR.

NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL FROM  
REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			HR20
JOB USE					

**ONE - GUARDRAIL - HR20**

ALL HOLES ARE 9/16"Ø U.N.O.

FINISH NOTE:  
MILL FINISH-CLEAR COAT

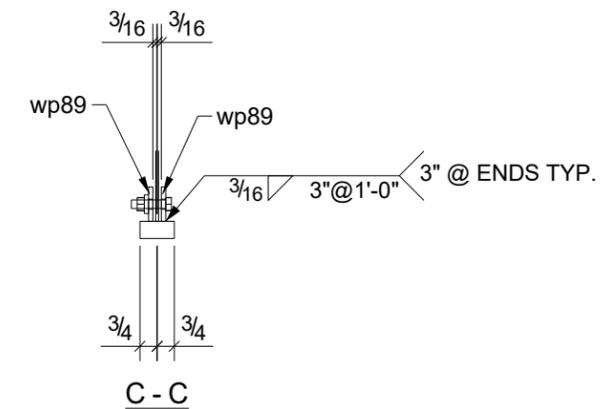
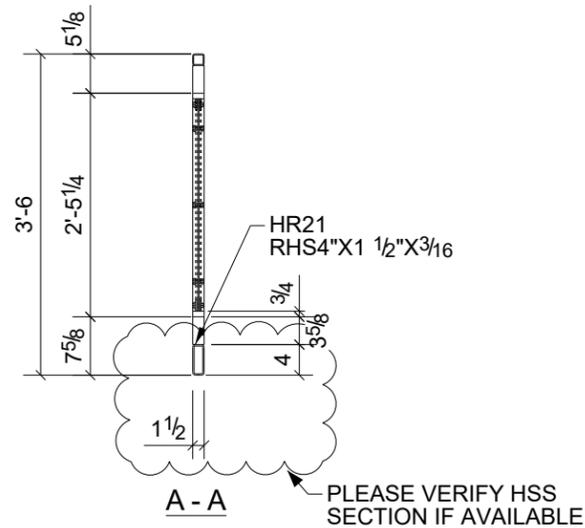
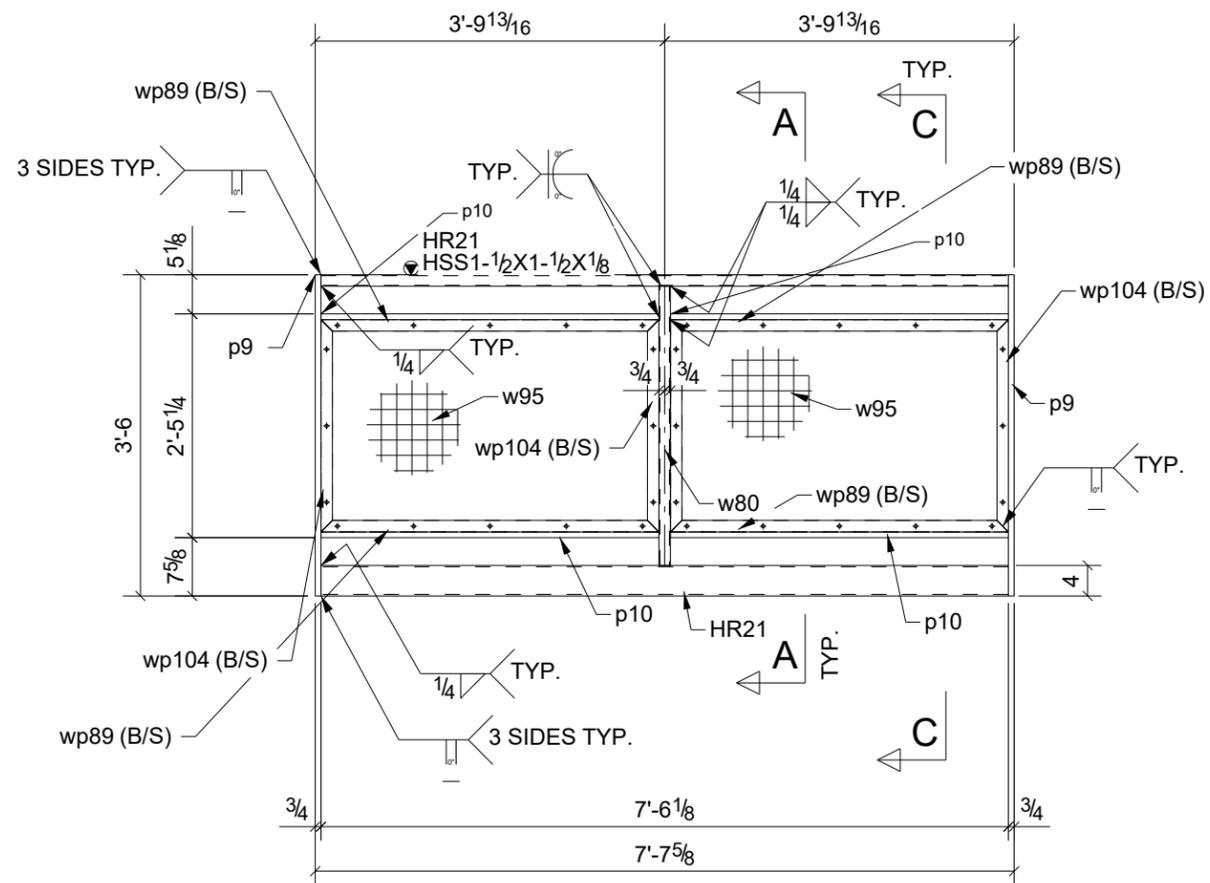
Tekla structures

E	ISSUED FOR REVIEW/COMMENT/APPROVAL	19/JAN/2016
REV	DESCRIPTION	DATE

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	HR21		1		RHS4"X1 1/2"X3/16"	7	6 1/8"	
2		hs48	1		HSS1-1/2X1-1/2X1/8	7	6 1/8"	
3		p9	2		FL3/4"X1 1/2"	3	6"	
4		p10	4		FL3/4"X1 1/2"	3	8 5/16"	
5		w80	1		HSS1-1/2X1-1/2X1/8	3	0 1/2"	
6		w95	2		McNichols Steel Mesh	3	8 5/16"	
7		wp89	8		FL3/16"X1 1/2"	3	8 5/16"	
8		wp104	8		FL3/16"X1 1/2"	2	3 3/4"	
9			32		A307 3/8"Ø		1 1/2"	
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TOTAL FIELD BOLTS IN THIS SHEET



SHOP NOTES:

- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
- 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
- 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
- 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
- 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
- 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

ALL VERIFICATION REQUESTS ON THIS SET OF DRAWINGS WILL BE ASSUMED CORRECT AS SHOWN UNLESS OTHERWISE NOTED. WHERE FABRICATOR HAS REQUESTED INFORMATION TO BE PROVIDED, CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH TRADES, ARCHITECT AND ENGINEER AS REQ'D TO COMPLETE VERIFICATION REQUESTS, OR STEEL DELIVERY MAY BE DELAYED. ANY REFABRICATION COST DO TO INCOMPLETE OR INACCURATE VERIFICATION RESPONSES WILL BE BILLED AS EXTRA TO THE GENERAL CONTRACTOR.

NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL FROM  
REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			HR21
JOB USE					

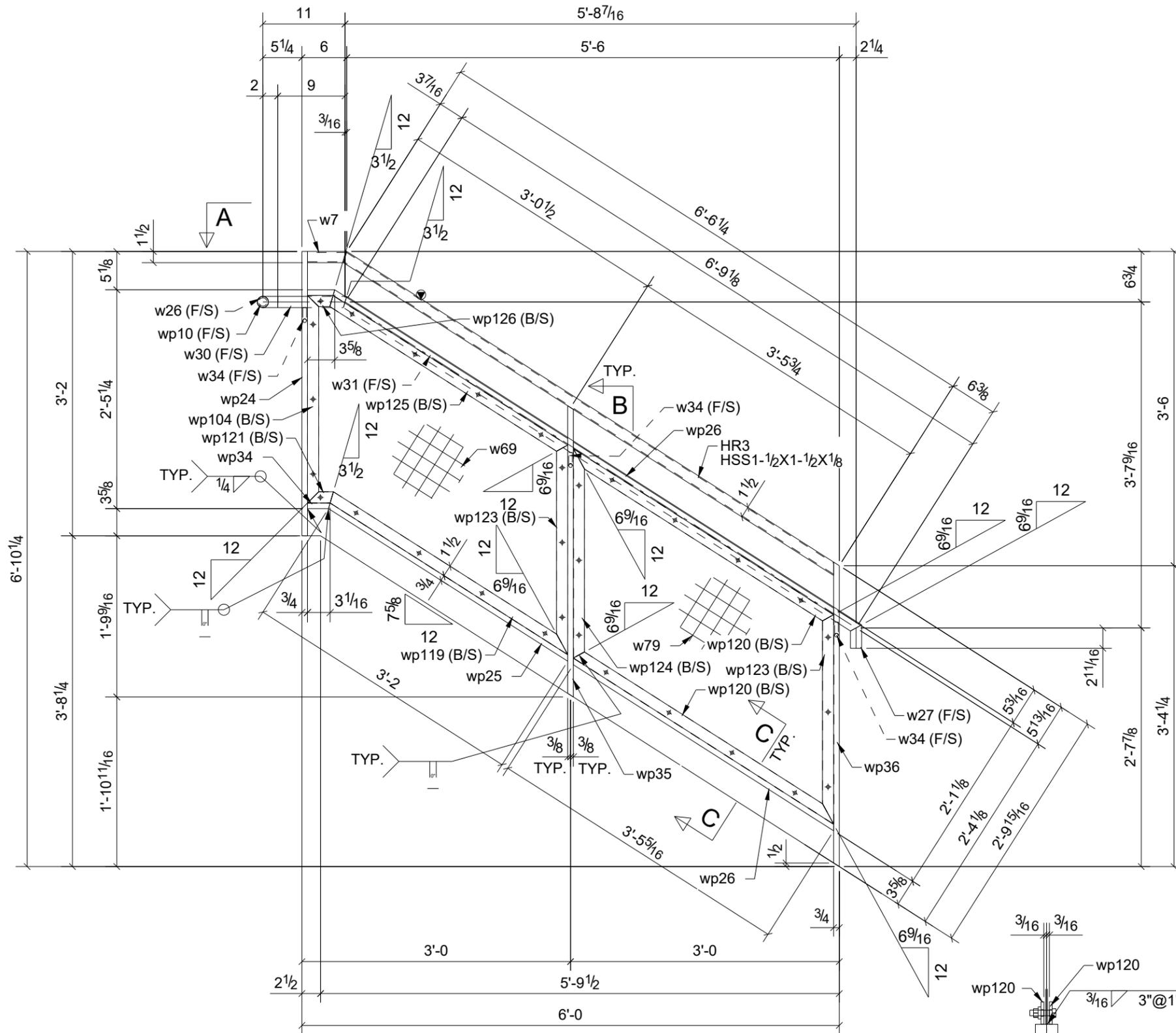
Tekla structures

FINISH NOTE:  
MILL FINISHED

ALL HOLES ARE 9/16"Ø U.N.O.

**ONE - GUARDRAIL - HR21**

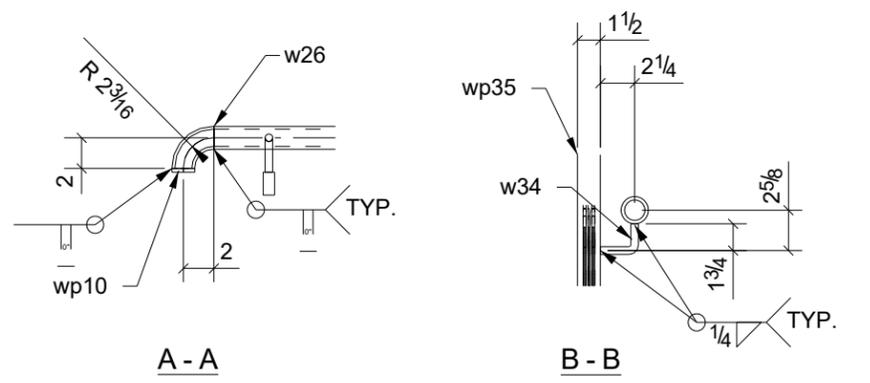
E	ISSUED FOR REVIEW/COMMENT/APPROVAL	19/JAN/2016
REV	DESCRIPTION	DATE



ONE - HANDRAIL - HR3

BILL OF MATERIALS									
SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS	
						FEET	INCH		
1	HR3		1		HSS1-1/2X1-1/2X1/8	6	6 5/16"		
2		w7	1		HSS1-1/2X1-1/2X1/8	0	5 1/4"		
3		w26	1		TUBE 1 1/2"X3/16"	0	2"		
4		w27	1		TUBE 1 1/2"X3/16"	0	3 1/8"		
5		w30	1		TUBE 1 1/2"X3/16"	0	9 1/4"		
6		w31	1		TUBE 1 1/2"X3/16"	6	9 13/16"		
7		w34	3		ROD 1/2"	0	3 7/16"		
8		w69	1		McNichols Steel Mesh	4	0"		
9		w79	1		McNichols Steel Mesh	4	8 3/8"		
10		wp10	1		FL 1/4"X1 1/2"	0	1 1/2"		
11		wp24	1		FL 3/4"X1 1/2"	3	2"		
12		wp25	1		FL 3/4"X1 1/2"	3	2 3/16"		
13		wp26	2		FL 3/4"X1 1/2"	3	5 13/16"		
14		wp30	1		FL 3/4"X1 1/2"	3	1 1/2"		
15		wp31	1		FL 3/4"X1 1/2"	0	3 5/8"		
16		wp34	1		FL 3/4"X1 1/2"	0	3 1/16"		
17		wp35	1		FL 3/4"X1 1/2"	3	2 15/16"		
18		wp36	1		FL 3/4"X1 1/2"	3	4 11/16"		
19		wp104	2		FL 3/16"X1 1/2"	2	3 3/4"		
20		wp119	2		FL 3/16"X1 1/2"	3	2 3/16"		
21		wp120	4		FL 3/16"X1 1/2"	3	5 5/16"		
22		wp121	2		FL 3/16"X1 1/2"	0	3 1/2"		
23		wp123	4		FL 3/16"X1 1/2"	2	3 15/16"		
24		wp124	2		FL 3/16"X1 1/2"	2	3 15/16"		
25		wp125	2		FL 3/16"X1 1/2"	3	1 1/4"		
26		wp126	2		FL 3/16"X1 1/2"	0	3 7/16"		
27			30		A307 3/8"Ø		1 1/2"		
28									

TOTAL FIELD BOLTS IN THIS SHEET



- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD HR3
FABRICATION		CONTRACTOR:			
JOB USE					

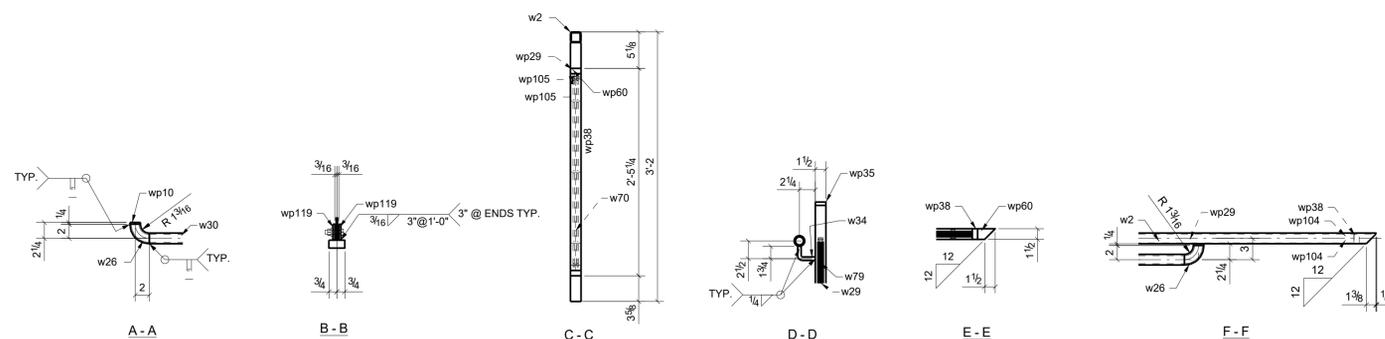
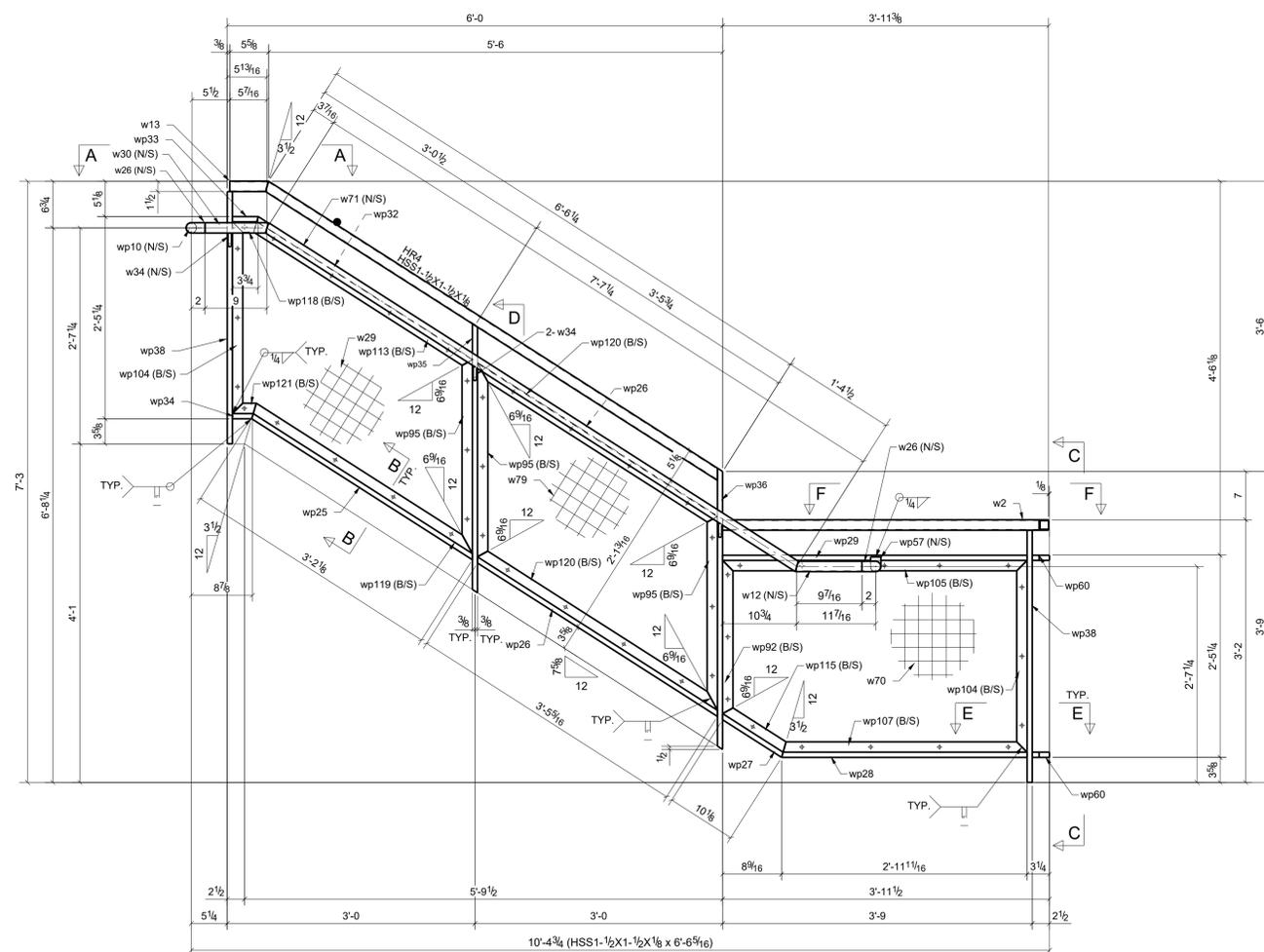
0	ISSUED FOR FABRICATION	08/FEB/2016
REV	DESCRIPTION	DATE

Tekla structures  
FINISH NOTE:  
MILL FINISH w/ CLEAR POLY COAT

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	HR4		1		HSS1-1/2X1-1/2X1/8	6	6 5/16"	
2		w2	1		HSS1-1/2X1-1/2X1/8	3	11 3/8"	
3		w12	1		TUBE1 1/2"X3/16"	0	9 11/16"	
4		w13	1		HSS1-1/2X1-1/2X1/8	0	5 5/8"	
5		w26	2		TUBE1 1/2"X3/16"	0	2"	
6		w29	1		McNichols Steel Mesh	4	0"	
7		w30	1		TUBE1 1/2"X3/16"	0	9 1/4"	
8		w34	3		ROD1/2"	0	3 7/16"	
9		w70	1		McNichols Steel Mesh	3	8 1/4"	
10		w71	1		TUBE1 1/2"X3/16"	7	7 11/16"	
11		w79	1		McNichols Steel Mesh	4	8 3/8"	
12		wp10	1		FL1/4"X1 1/2"	0	1 1/2"	
13		wp25	1		FL3/4"X1 1/2"	3	2 3/16"	
14		wp26	2		FL3/4"X1 1/2"	3	5 13/16"	
15		wp27	1		FL3/4"X1 1/2"	0	10 5/8"	
16		wp28	1		FL3/4"X1 1/2"	2	11 11/16"	
17		wp29	1		FL3/4"X1 1/2"	3	8 1/4"	
18		wp32	1		FL3/4"X1 1/2"	3	1 3/8"	
19		wp33	1		FL3/4"X1 1/2"	0	3 3/4"	
20		wp34	1		FL3/4"X1 1/2"	0	3 1/16"	
21		wp35	1		FL3/4"X1 1/2"	3	2 15/16"	
22		wp36	1		FL3/4"X1 1/2"	3	4 11/16"	
23		wp38	2		FL3/4"X1 1/2"	3	0 1/2"	
24		wp57	1		FL1/4"X1 1/2"	0	2 1/8"	
25		wp60	2		FL3/4"X1 1/2"	0	2 1/2"	
26		wp92	2		FL3/16"X1 1/2"	1	10 3/16"	
27		wp95	6		FL3/16"X1 1/2"	2	4"	
28		wp104	4		FL3/16"X1 1/2"	2	3 3/4"	
29		wp105	2		FL3/16"X1 1/2"	3	8 1/4"	
30		wp107	2		FL3/16"X1 1/2"	2	11 7/16"	
31		wp113	2		FL3/16"X1 1/2"	3	1 1/8"	
32		wp115	2		FL3/16"X1 1/2"	0	10 3/8"	
33		wp118	2		FL3/16"X1 1/2"	0	3 9/16"	
34		wp119	2		FL3/16"X1 1/2"	3	2 3/16"	
35		wp120	4		FL3/16"X1 1/2"	3	5 5/16"	
36		wp121	2		FL3/16"X1 1/2"	0	3 1/2"	
37			46		A307 3/8"Ø		1 1/2"	
38								

TOTAL FIELD BOLTS IN THIS SHEET



**ONE - HANDRAIL - HR4**

- SHOP NOTES:  
 1.) WIDE FLG. MAT'L ASTM A992 GR 50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.;  
 2.) HSS MAT'L ASTM A500 GR.B U.N.  
 3.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O  
 4.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE  
 5.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m  
 6.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW/FCM/GMAW PROCESSES)  
 7.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL FROM  
 REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB
RESUBMITTAL		LOCATION:	WEST FARGO ND
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS
FABRICATION		CONTRACTOR:	
JOB USE			

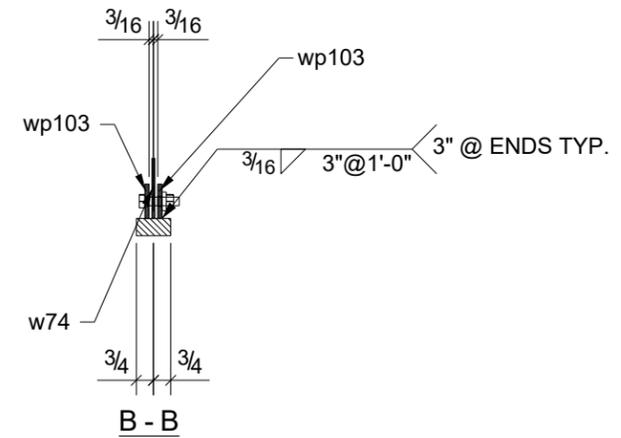
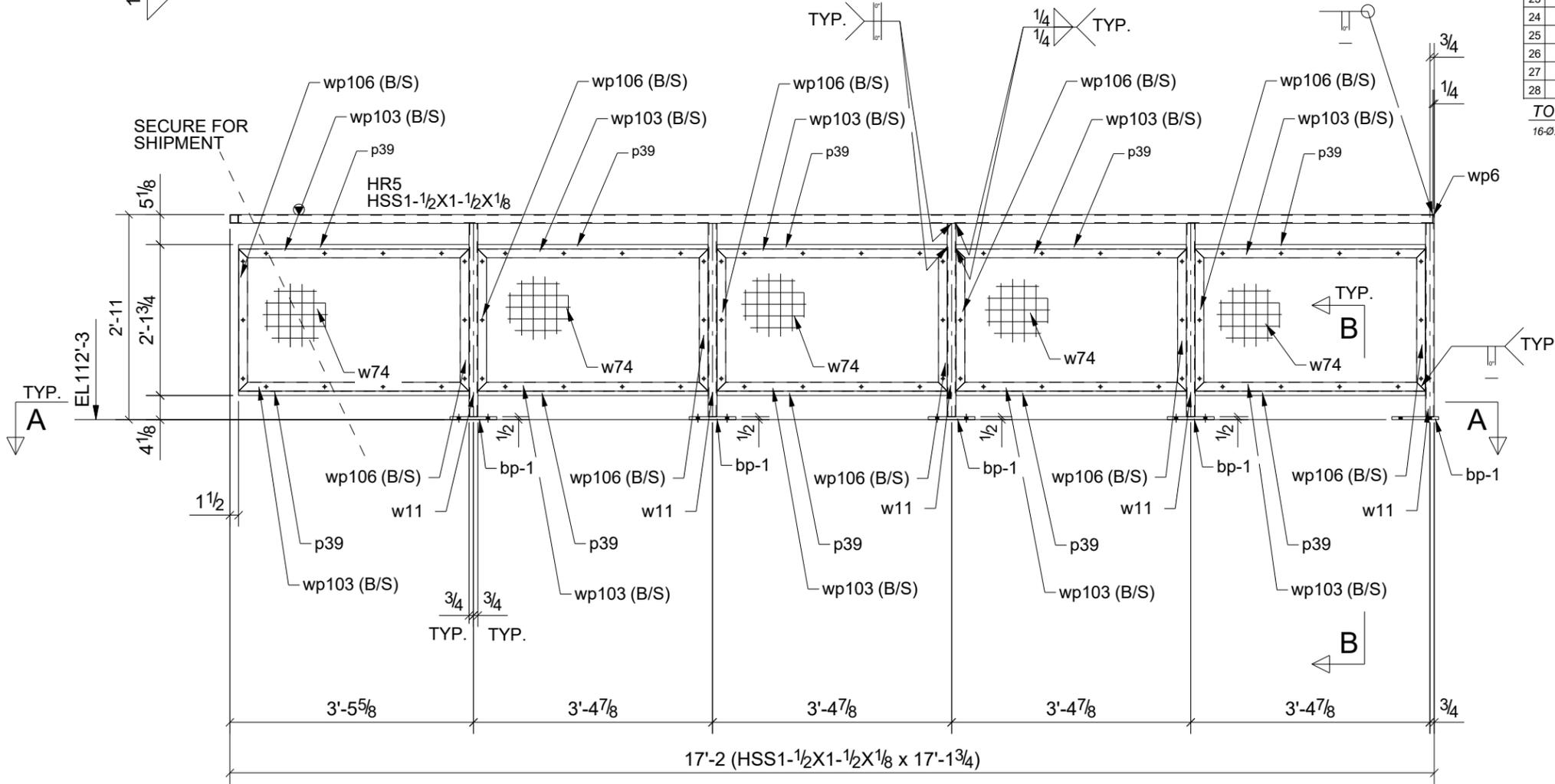
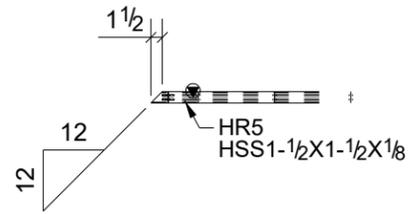
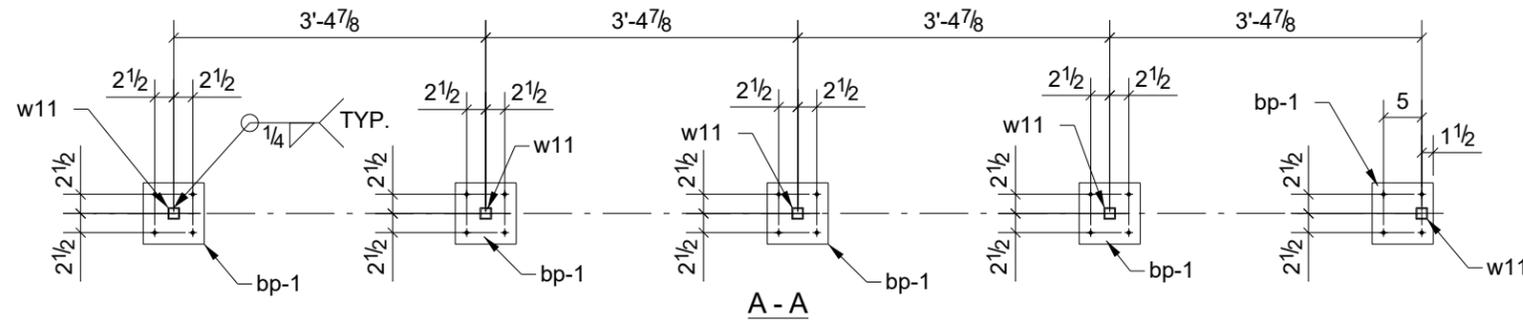
0	ISSUED FOR FABRICATION	08/FEB/2016
REV	DESCRIPTION	DATE

DRAWN DATE  
 JOB No.  
 SH.No. **BLVD HR4**

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	HR5		1		HSS1-1/2X1-1/2X1/8	17	1 3/4"	
2		bp-1	5		FL1/2"X8"	0	8"	
3		p39	10		FL3/4"X1 1/2"	3	3 3/8"	
4		w11	5		HSS1-1/2X1-1/2X1/8	2	9"	
5		w74	5		McNichols Steel Mesh	3	3 3/8"	
6		wp6	1		FL1/4"X1 1/2"	0	1 1/2"	
7		wp103	20		FL3/16"X1 1/2"	3	3 7/16"	
8		wp106	20		FL3/16"X1 1/2"	2	0 1/4"	
9			70		A307 3/8"Ø		1 1/2"	
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27								
28								

**TOTAL FIELD BOLTS IN THIS SHEET**  
16-ØX Ø BOLTS W/ N&W



- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL FROM  
REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			HR5
JOB USE					

0	ISSUED FOR FABRICATION	08/FEB/2016
REV	DESCRIPTION	DATE

ALL HOLES ARE 9/16"Ø U.N.O.

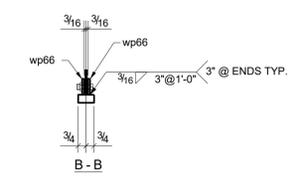
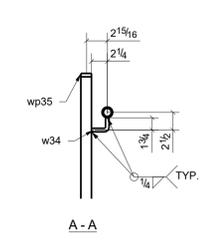
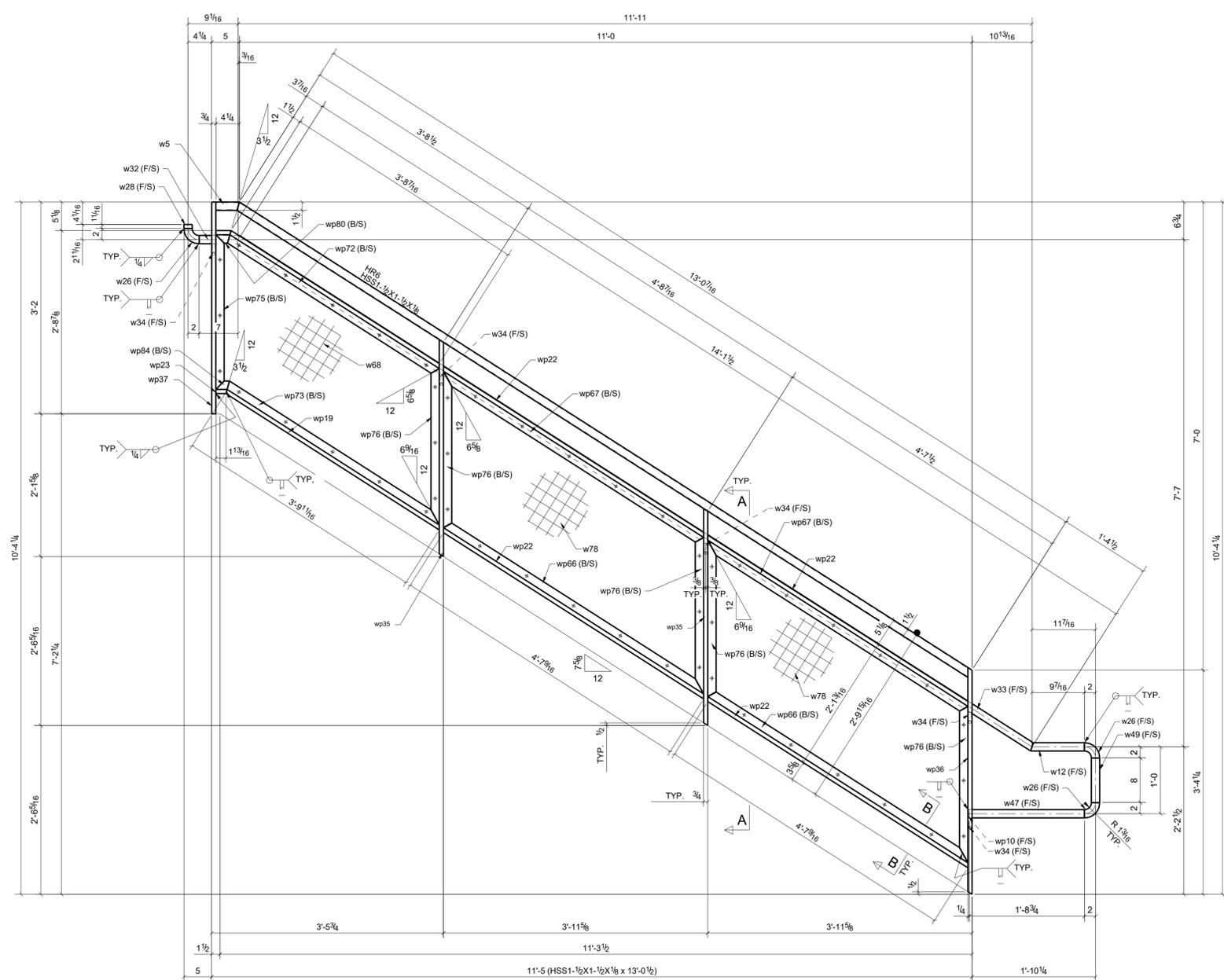
**ONE - GUARDRAIL - HR5**

Tekla structures  
FINISH NOTE:  
MILL FINISH-CLEAR COAT

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	HR6		1		HSS1-1/2X1-1/2X1/8	13	0 1/2"	
2		w5	1		HSS1-1/2X1-1/2X1/8	0	4 1/4"	
3		w12	1		TUBE1 1/2"X3/16"	0	9 11/16"	
4		w26	3		TUBE1 1/2"X3/16"	0	2"	
5		w28	1		TUBE1 1/2"X3/16"	0	0 11/16"	
6		w32	1		TUBE1 1/2"X3/16"	0	7 1/4"	
7		w33	1		TUBE1 1/2"X3/16"	14	1 15/16"	
8		w34	5		ROD1/2"	0	3 7/16"	
9		w47	1		TUBE1 1/2"X3/16"	1	8 3/4"	
10		w49	1		TUBE1 1/2"X3/16"	0	8"	
11		w68	1		McNichols Steel Mesh	4	4 1/16"	
12		w78	2		McNichols Steel Mesh	5	10 9/16"	
13		wp10	1		FL1/4"X1 1/2"	0	1 1/2"	
14		wp19	1		FL3/4"X1 1/2"	3	9 13/16"	
15		wp22	4		FL3/4"X1 1/2"	4	8"	
16		wp23	1		FL3/4"X1 1/2"	0	2 1/16"	
17		wp35	2		FL3/4"X1 1/2"	3	2 15/16"	
18		wp36	1		FL3/4"X1 1/2"	3	4 11/16"	
19		wp37	1		FL3/4"X1 1/2"	3	2"	
20		wp43	1		FL3/4"X1 1/2"	3	8 15/16"	
21		wp44	1		FL3/4"X1 1/2"	0	2 3/4"	
22		wp66	4		FL3/16"X1 1/2"	4	7 1/2"	
23		wp67	4		FL3/16"X1 1/2"	4	7 1/2"	
24		wp72	2		FL3/16"X1 1/2"	3	8 11/16"	
25		wp73	2		FL3/16"X1 1/2"	3	9 3/4"	
26		wp75	2		FL3/16"X1 1/2"	2	3 3/4"	
27		wp76	10		FL3/16"X1 1/2"	2	4"	
28		wp80	2		FL3/16"X1 1/2"	0	2 9/16"	
29		wp84	2		FL3/16"X1 1/2"	0	2 1/2"	
30			35		A307 3/8"Ø		1 1/4"	
31			13		A307 3/8"Ø		1 1/2"	
32								
33								
34								
35								
36								
37								
38								

TOTAL FIELD BOLTS IN THIS SHEET



**ONE - HANDRAIL - HR6**

FINISH NOTE:  
MILL FINISH w/ CLEAR POLY COAT

- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR 50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O.
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW/FCM/GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL FROM  
REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB
RESUBMITTAL		LOCATION:	WEST FARGO ND
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS
FABRICATION		CONTRACTOR:	
JOB USE			

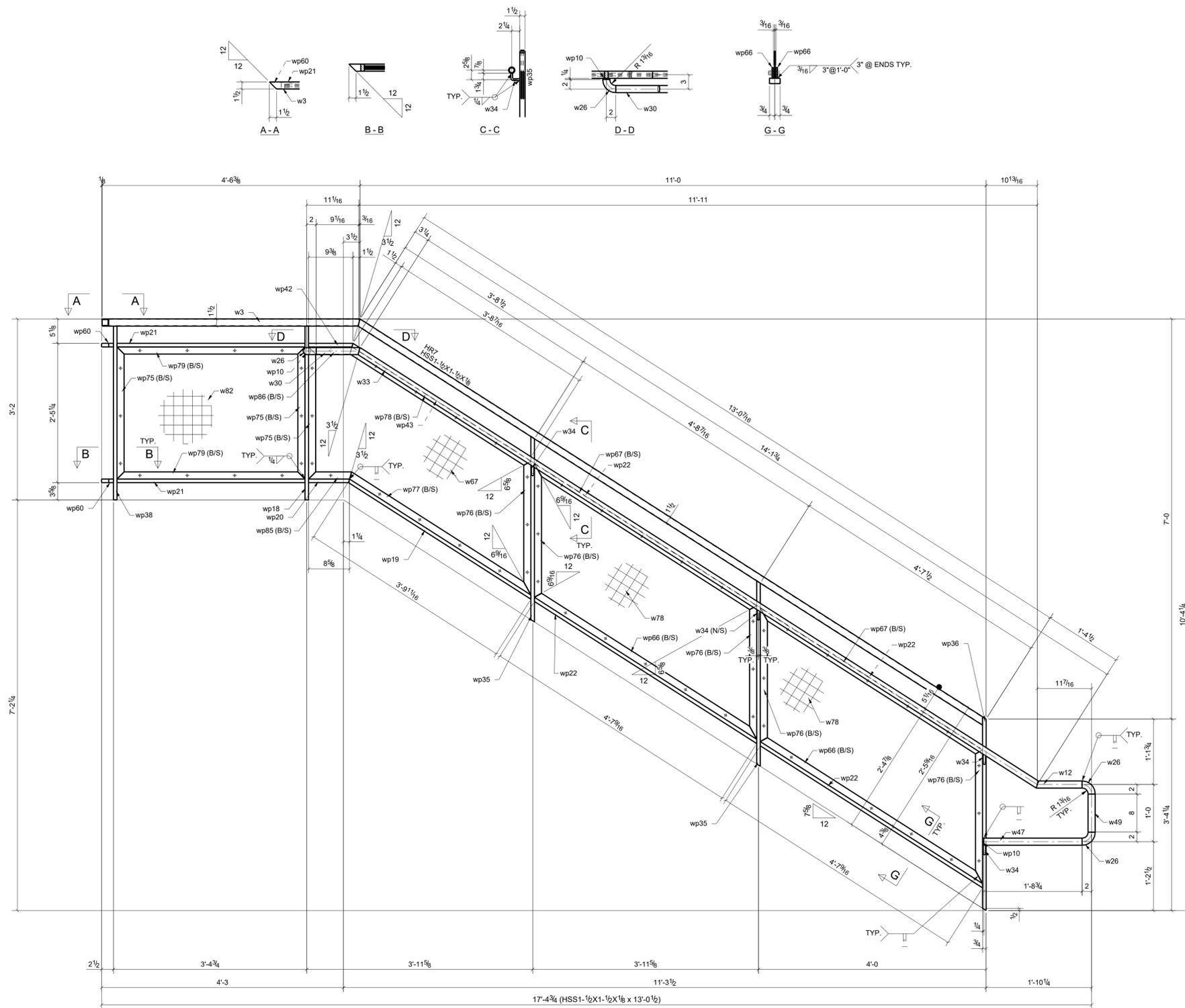
1	ISSUED FOR FABRICATION	08/FEB/2016
REV	DESCRIPTION	DATE

DRAWN DATE  
JOB No.  
SH No. **BLVD HR6**

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	HR7		1		HSS1-1/2X1-1/2X1/8	13	0 1/2"	
2		w3	1		HSS1-1/2X1-1/2X1/8	4	6 3/8"	
3		w12	1		TUBE1 1/2"X3/16"	0	9 11/16"	
4		w26	3		TUBE1 1/2"X3/16"	0	2"	
5		w30	1		TUBE1 1/2"X3/16"	0	9 1/4"	
6		w33	1		TUBE1 1/2"X3/16"	14	1 15/16"	
7		w34	4		ROD1/2"	0	3 7/16"	
8		w47	1		TUBE1 1/2"X3/16"	1	8 3/4"	
9		w49	1		TUBE1 1/2"X3/16"	0	8"	
10		w67	1		McNichols Steel Mesh	4	4 1/16"	
11		w78	2		McNichols Steel Mesh	5	10 9/16"	
12		w82	1		McNichols Steel Mesh	3	3 5/8"	
13		wp10	2		FL1/4"X1 1/2"	0	1 1/2"	
14		wp18	1		FL3/4"X1 1/2"	3	0 1/2"	
15		wp19	1		FL3/4"X1 1/2"	3	9 13/16"	
16		wp20	1		FL3/4"X1 1/2"	0	8 5/8"	
17		wp21	2		FL3/4"X1 1/2"	3	3 5/8"	
18		wp22	4		FL3/4"X1 1/2"	4	8"	
19		wp35	2		FL3/4"X1 1/2"	3	2 15/16"	
20		wp36	1		FL3/4"X1 1/2"	3	4 11/16"	
21		wp38	1		FL3/4"X1 1/2"	3	0 1/2"	
22		wp42	1		FL3/4"X1 1/2"	0	9 3/8"	
23		wp43	1		FL3/4"X1 1/2"	3	8 15/16"	
24		wp60	2		FL3/4"X1 1/2"	0	2 1/2"	
25		wp66	4		FL3/16"X1 1/2"	4	7 1/2"	
26		wp67	4		FL3/16"X1 1/2"	4	7 1/2"	
27		wp75	6		FL3/16"X1 1/2"	2	3 3/4"	
28		wp76	10		FL3/16"X1 1/2"	2	4"	
29		wp77	2		FL3/16"X1 1/2"	3	9 3/4"	
30		wp78	2		FL3/16"X1 1/2"	3	8 11/16"	
31		wp79	4		FL3/16"X1 1/2"	3	3 5/8"	
32		wp85	2		FL3/16"X1 1/2"	0	9 1/16"	
33		wp86	2		FL3/16"X1 1/2"	0	9 1/8"	
34			51		A307 3/8"Ø		1 1/4"	
35			11		A307 3/8"Ø		1 1/2"	
36								
37								
38								

TOTAL FIELD BOLTS IN THIS SHEET



ONE - HANDRAIL - HR7

- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR 50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O.
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCM-W-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB
RESUBMITTAL		LOCATION:	WEST FARGO ND
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS
FABRICATION		CONTRACTOR:	
JOB USE			

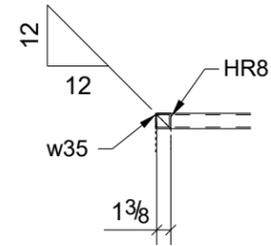
1	ISSUED FOR FABRICATION	08/FEB/2016
REV	DESCRIPTION	DATE

DRAWN DATE  
JOB No.  
SH No. **BLVD HR7**

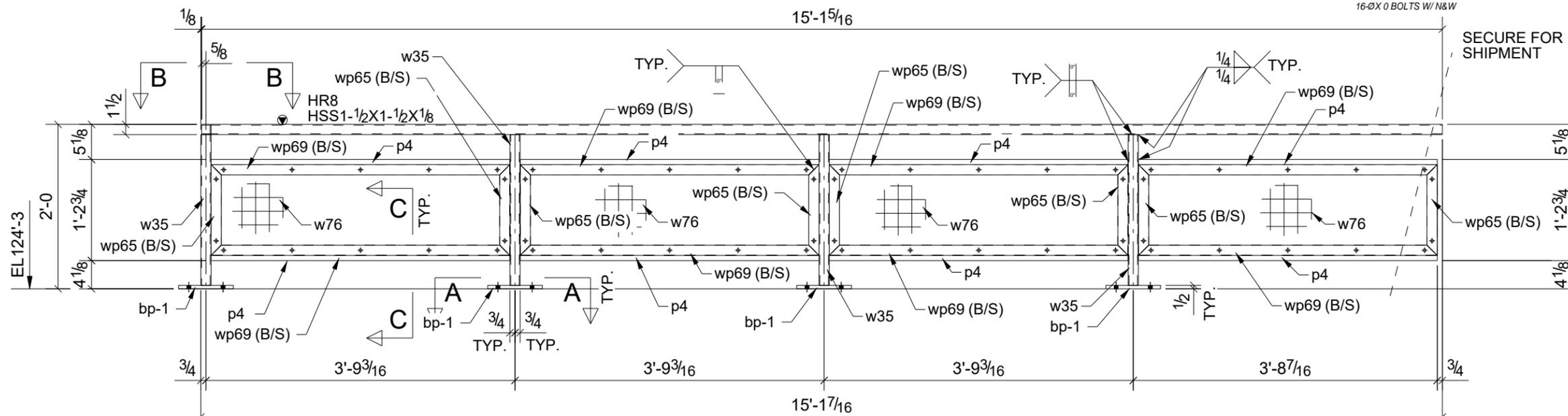
**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	HR8		1		HSS1-1/2X1-1/2X1/8	15	1 5/16"	
2		bp-1	4		FL1/2"X8"	0	8"	
3		p4	8		FL3/4"X1 1/2"	3	7 11/16"	
4		w35	4		HSS1-1/2X1-1/2X1/8	1	10"	
5		w76	4		McNichols Steel Mesh	3	7 11/16"	
6		wp65	16		FL3/16"X1 1/2"	1	1 1/4"	
7		wp69	16		FL3/16"X1 1/2"	3	7 11/16"	
8			56		A307 3/8"Ø		1 1/2"	
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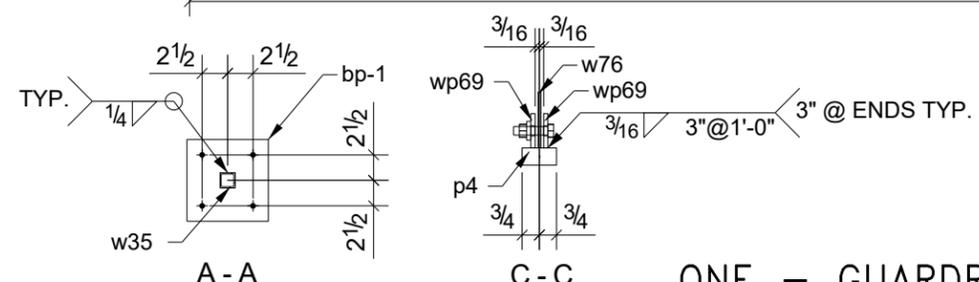
TOTAL FIELD BOLTS IN THIS SHEET  
16-ØX Ø BOLTS W/ N&W



B - B



SECURE FOR SHIPMENT



ALL HOLES ARE 9/16"Ø U.N.O.

ONE - GUARDRAIL - HR8

- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.;
  - 2.) SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 3.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O.
  - 4.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 5.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 6.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 7.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			HR8
JOB USE					

1	ISSUED FOR FABRICATION	08/FEB/2016
REV	DESCRIPTION	DATE

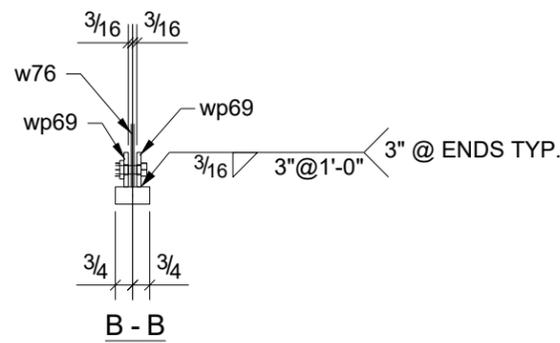
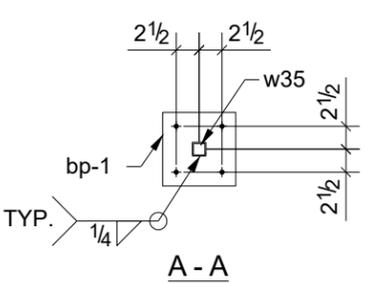
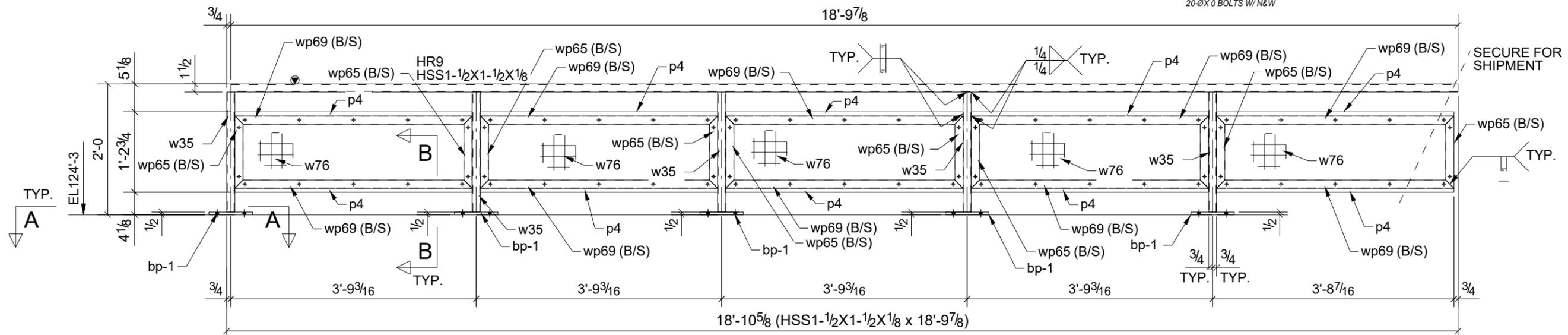
Tekla structures  
FINISH NOTE:  
MILL FINISH-CLEAR COAT

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	HR9		1		HSS1-1/2X1-1/2X1/8	18	9 7/8"	
2		bp-1	5		FL1/2"X8"	0	8"	
3		p4	10		FL3/4"X1 1/2"	3	7 11/16"	
4		w35	5		HSS1-1/2X1-1/2X1/8	1	10"	
5		w76	5		McNichols Steel Mesh	3	7 11/16"	
6		wp65	20		FL3/16"X1 1/2"	1	1 1/4"	
7		wp69	20		FL3/16"X1 1/2"	3	7 11/16"	
8			70		A307 3/8"Ø		1 1/2"	
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25								
26								
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28								

TOTAL FIELD BOLTS IN THIS SHEET

20-ØX Ø BOLTS W/ N&W



- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
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ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			HR9
JOB USE					

ALL HOLES ARE 9/16"Ø U.N.O.

**ONE - GUARDRAIL - HR9**

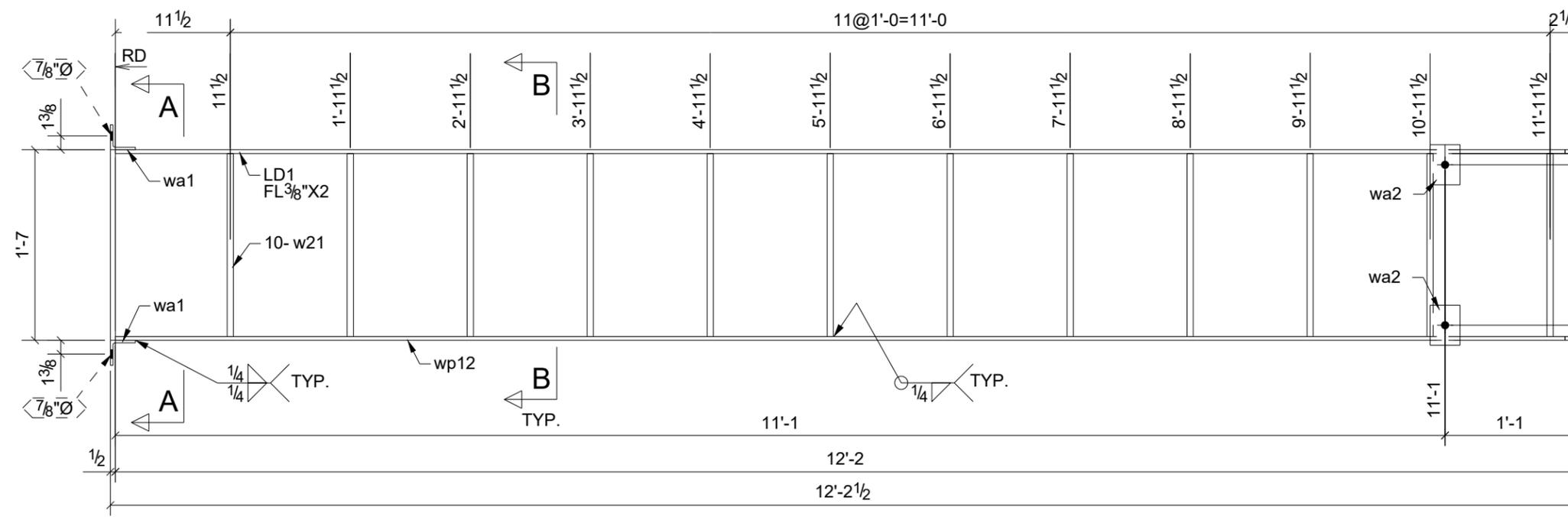
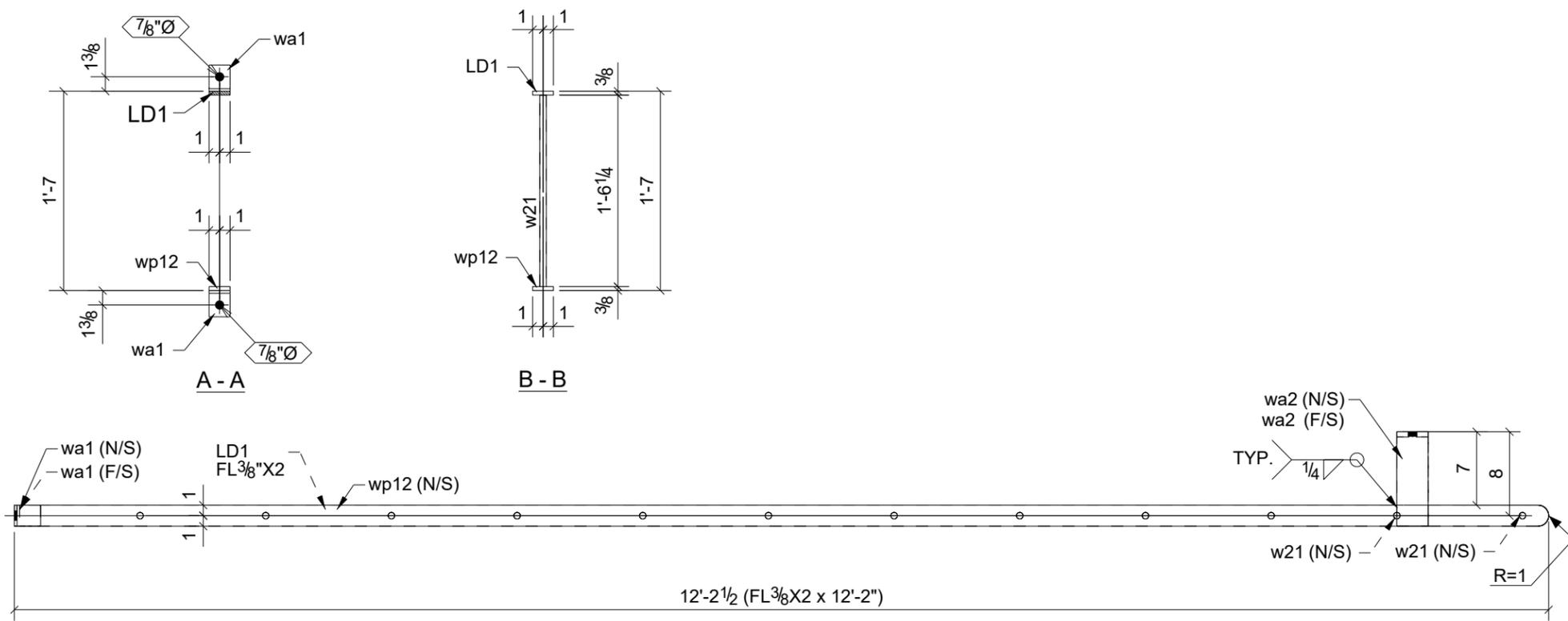
1	ISSUED FOR FABRICATION	08/FEB/2016
REV	DESCRIPTION	DATE

Tekla structures  
FINISH NOTE:  
MILL FINISH-CLEAR COAT

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	LD1		1		FL3/8"X2"	12	2"	
2		w21	12		RB5/8"	1	6 1/4"	
3		wa1	2		L2-1/2X2-1/2X1/4	0	2"	
4		wa2	2		L9X4X1/2	0	3"	
5		wp12	1		FL3/8"X2"	12	2"	
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26								
27								
28								

TOTAL FIELD BOLTS IN THIS SHEET



- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O.
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL FROM  
 REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			LD1
JOB USE					

Tekla structures

FINISH NOTE:  
SHOP PRIMED-GRAY

ALL HOLES ARE 13/16"Ø U.N.O.

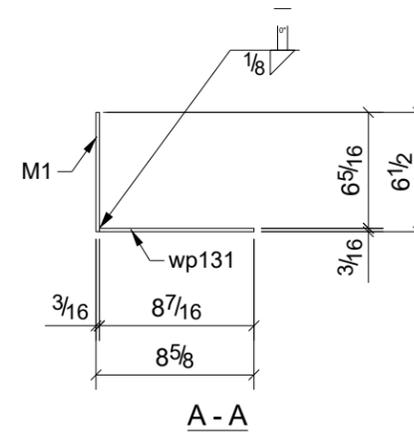
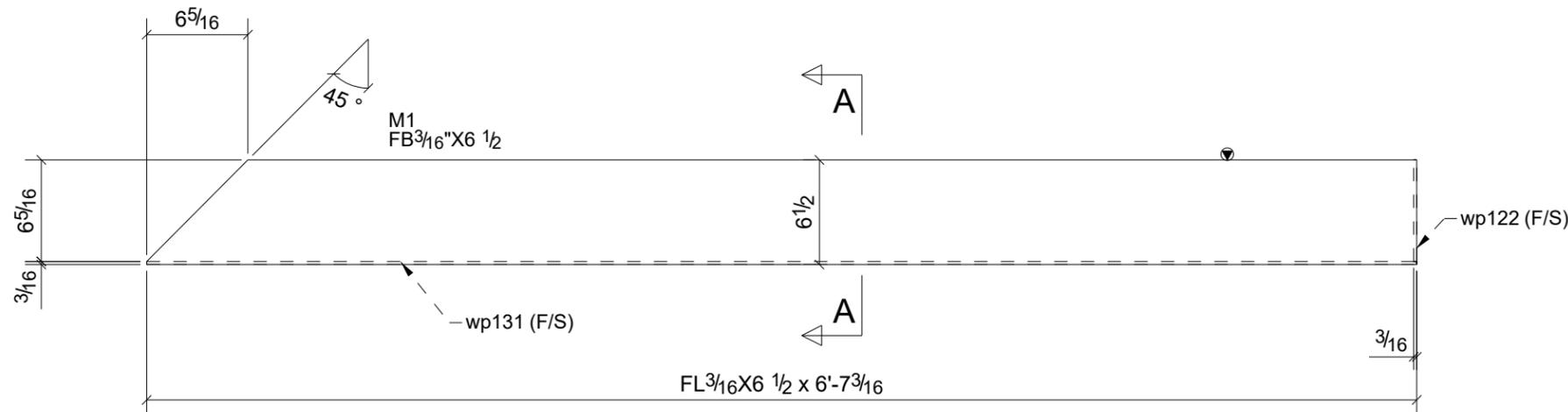
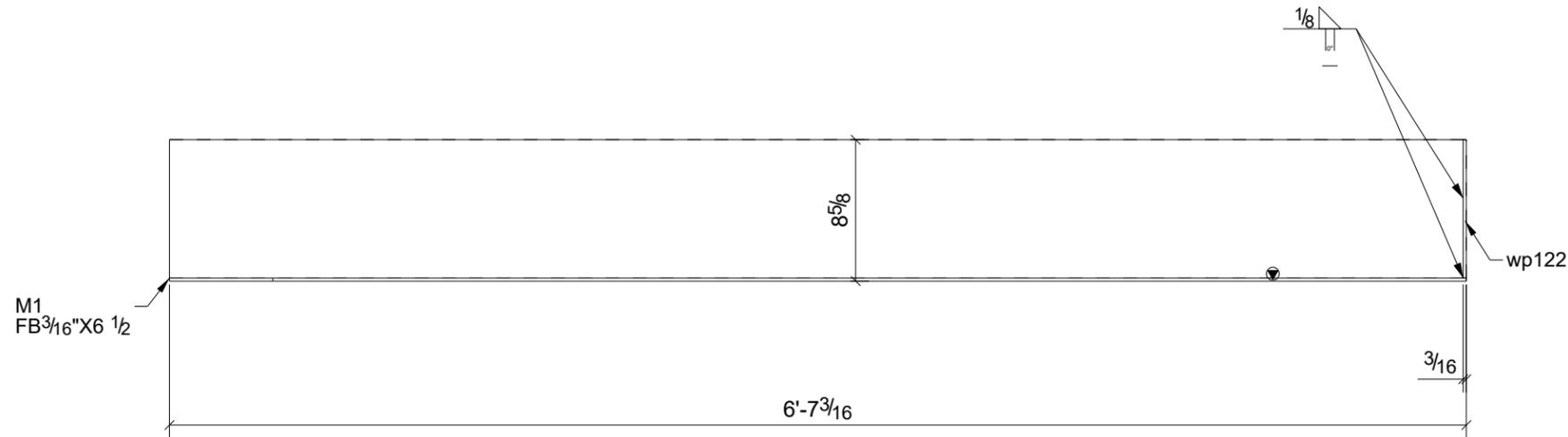
**ONE - LADDER - LD1**

0	ISSUED FOR FABRICATION	19/JAN/2016
REV	DESCRIPTION	DATE

BILL OF MATERIALS

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	M1		1		FL3/16"x6 1/2"	6	7 3/16"	
2		wp122	1		PL3/16"x6 5/16"	0	8 7/16"	
3		wp131	1		PLT3/16"x8 7/16"	6	7 3/16"	
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TOTAL FIELD BOLTS IN THIS SHEET



- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

ALL VERIFICATION REQUESTS ON THIS SET OF DRAWINGS WILL BE ASSUMED CORRECT AS SHOWN UNLESS OTHERWISE NOTED. WHERE FABRICATOR HAS REQUESTED INFORMATION TO BE PROVIDED, CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH TRADES, ARCHITECT AND ENGINEER AS REQ'D TO COMPLETE VERIFICATION REQUESTS, OR STEEL DELIVERY MAY BE DELAYED. ANY REFABRICATION COST DO TO INCOMPLETE OR INACCURATE VERIFICATION RESPONSES WILL BE BILLED AS EXTRA TO THE GENERAL CONTRACTOR.

NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL FROM  
REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			M1
JOB USE					

ONE - BENCH FOOTREST - M1

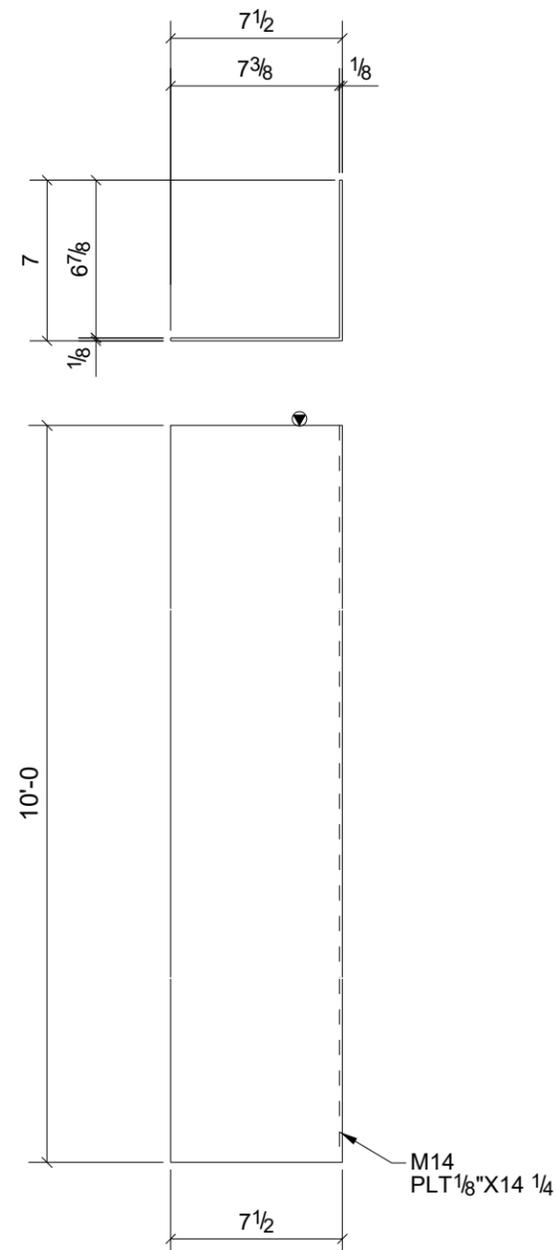
FINISH NOTE:  
MILL FINISH - CLEAR POLY COAT

0	ISSUED FOR FABRICATION	01/MAR/2016
REV	DESCRIPTION	DATE

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	M14		3		PLT 1/8" X 14 1/4"	10	0"	
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TOTAL FIELD BOLTS IN THIS SHEET



- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b,k, OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

ALL VERIFICATION REQUESTS ON THIS SET OF DRAWINGS WILL BE ASSUMED CORRECT AS SHOWN UNLESS OTHERWISE NOTED. WHERE FABRICATOR HAS REQUESTED INFORMATION TO BE PROVIDED, CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH TRADES, ARCHITECT AND ENGINEER AS REQ'D TO COMPLETE VERIFICATION REQUESTS, OR STEEL DELIVERY MAY BE DELAYED. ANY REFABRICATION COST DO TO INCOMPLETE OR INACCURATE VERIFICATION RESPONSES WILL BE BILLED AS EXTRA TO THE GENERAL CONTRACTOR.

NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL FROM  
REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			M14
JOB USE					

**3 – MAIN BAR FOOTRESTS – M14**

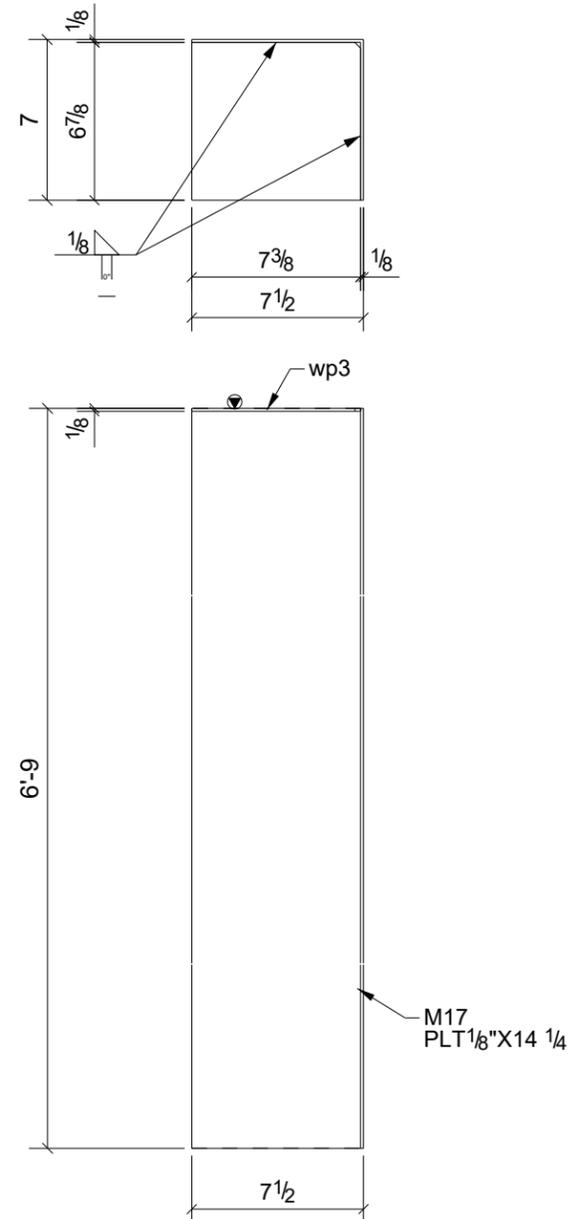
FINISH NOTE:  
MILL FINISH – CLEAR POLY COAT

E	ISSUED FOR REVIEW/COMMENT/APPROVAL	19/JAN/2016
REV	DESCRIPTION	DATE

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	M17		1		PLT1/8"X14 1/4"	6	9"	
2		wp3	1		PL1/8"X6 7/8"	0	7 3/8"	
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TOTAL FIELD BOLTS IN THIS SHEET



- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.;
  - 2.) SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 3.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 4.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 5.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 6.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

ALL VERIFICATION REQUESTS ON THIS SET OF DRAWINGS WILL BE ASSUMED CORRECT AS SHOWN UNLESS OTHERWISE NOTED. WHERE FABRICATOR HAS REQUESTED INFORMATION TO BE PROVIDED, CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH TRADES, ARCHITECT AND ENGINEER AS REQ'D TO COMPLETE VERIFICATION REQUESTS, OR STEEL DELIVERY MAY BE DELAYED. ANY REFABRICATION COST DO TO INCOMPLETE OR INACCURATE VERIFICATION RESPONSES WILL BE BILLED AS EXTRA TO THE GENERAL CONTRACTOR.

NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL FROM  
 REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			M17
JOB USE					

**ONE – MAIN BAR FOOTREST – M17**

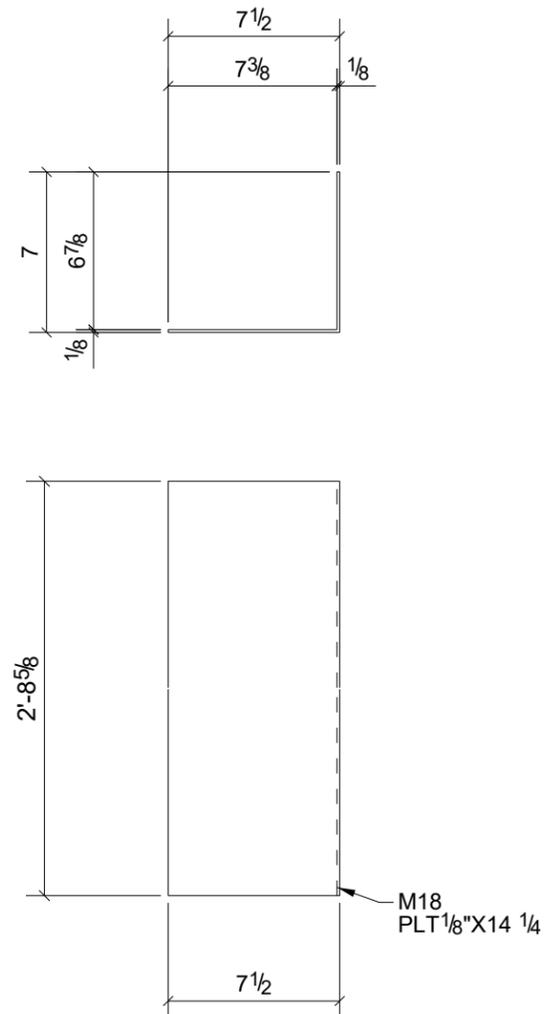
FINISH NOTE:  
 MILL FINISH – CLEAR POLY COAT

E	ISSUED FOR REVIEW/COMMENT/APPROVAL	19/JAN/2016
REV	DESCRIPTION	DATE

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	M18		1		PLT 1/8" X 14 1/4"	2	8 5/8"	
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TOTAL FIELD BOLTS IN THIS SHEET



- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.;
  - 2.) SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 3.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

ALL VERIFICATION REQUESTS ON THIS SET OF DRAWINGS WILL BE ASSUMED CORRECT AS SHOWN UNLESS OTHERWISE NOTED. WHERE FABRICATOR HAS REQUESTED INFORMATION TO BE PROVIDED, CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH TRADES, ARCHITECT AND ENGINEER AS REQ'D TO COMPLETE VERIFICATION REQUESTS, OR STEEL DELIVERY MAY BE DELAYED. ANY REFABRICATION COST DO TO INCOMPLETE OR INACCURATE VERIFICATION RESPONSES WILL BE BILLED AS EXTRA TO THE GENERAL CONTRACTOR.

NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL FROM  
 REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH.No.	BLVD
FABRICATION		CONTRACTOR:			M18
JOB USE					

**ONE – MAIN BAR FOOTREST – M18**

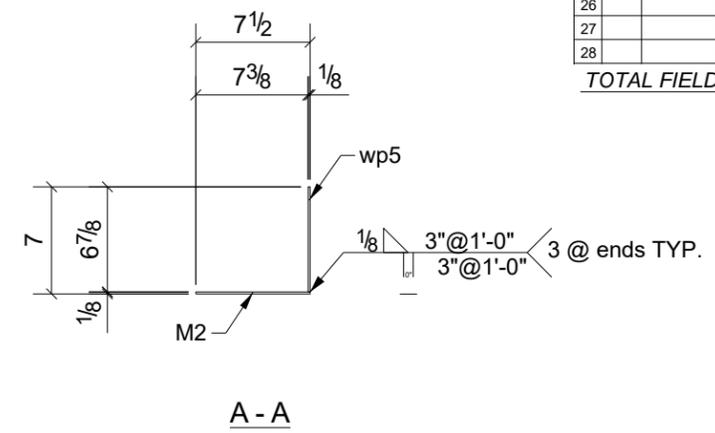
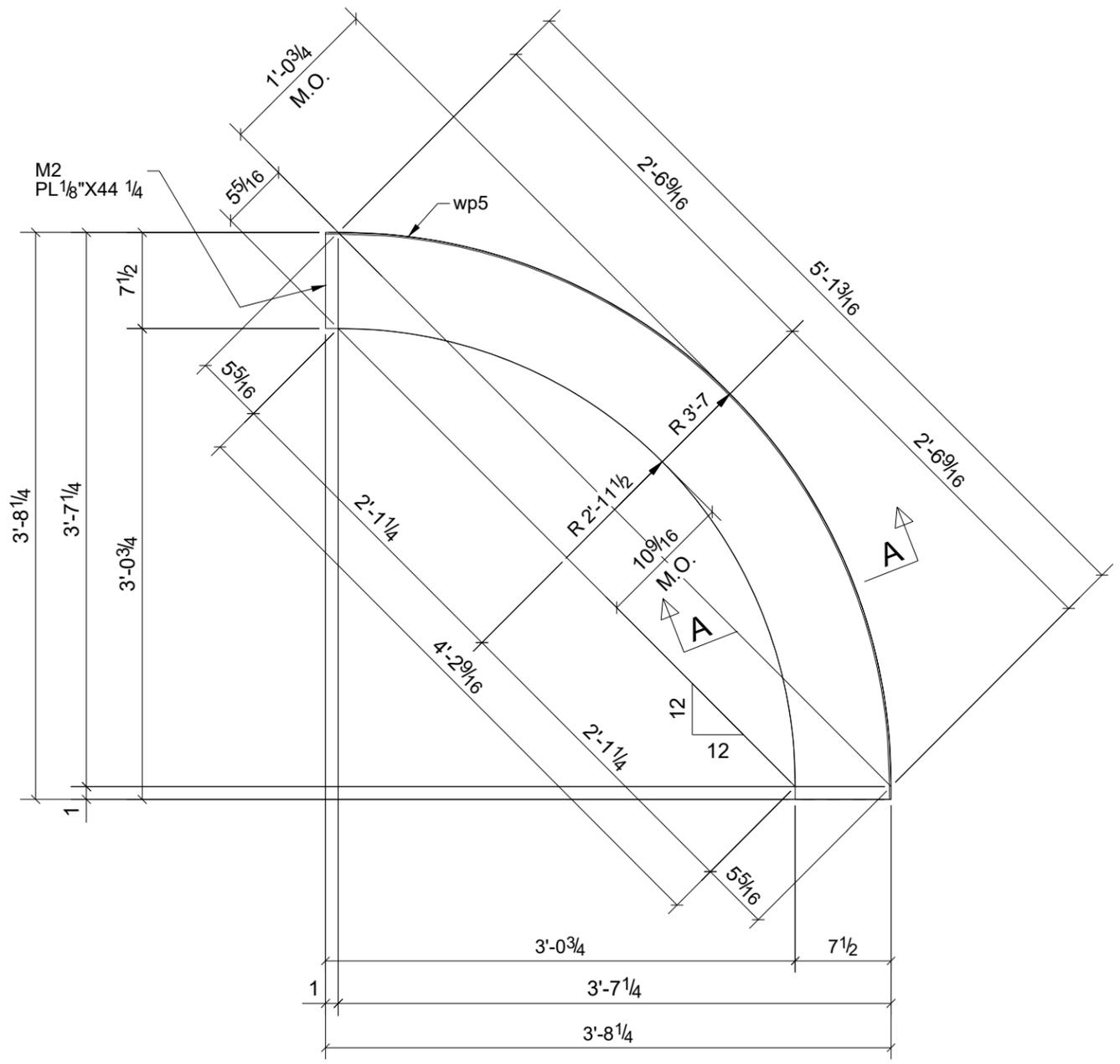
FINISH NOTE:  
 MILL FINISH – CLEAR POLY COAT

E	ISSUED FOR REVIEW/COMMENT/APPROVAL	19/JAN/2016
REV	DESCRIPTION	DATE

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	M2		4		PL1/8"X44 1/4"	3	8 1/4"	
2		wp5	4		PLT1/8"X6 7/8"	5	9 7/8"	
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TOTAL FIELD BOLTS IN THIS SHEET



Tekla structures

FINISH NOTE:  
MILL FINISH - CLEAR POLY COAT

**4 - MAIN BAR FOOTRESTS - M2**

- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

ALL VERIFICATION REQUESTS ON THIS SET OF DRAWINGS WILL BE ASSUMED CORRECT AS SHOWN UNLESS OTHERWISE NOTED. WHERE FABRICATOR HAS REQUESTED INFORMATION TO BE PROVIDED, CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH TRADES, ARCHITECT AND ENGINEER AS REQ'D TO COMPLETE VERIFICATION REQUESTS, OR STEEL DELIVERY MAY BE DELAYED. ANY REFABRICATION COST DO TO INCOMPLETE OR INACCURATE VERIFICATION RESPONSES WILL BE BILLED AS EXTRA TO THE GENERAL CONTRACTOR.

NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL FROM  
REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

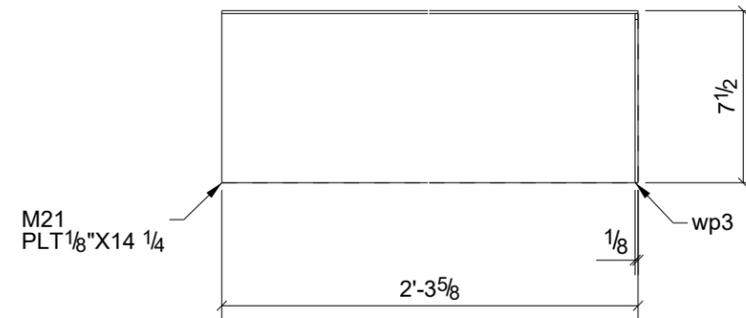
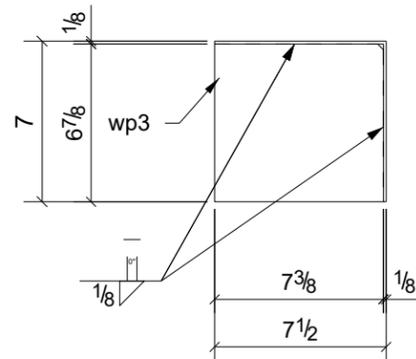
ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			M2
JOB USE					

REV	DESCRIPTION	DATE

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	M21		1		PLT1/8"X14 1/4"	2	3 5/8"	
2		wp3	1		PL1/8"X6 7/8"	0	7 3/8"	
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TOTAL FIELD BOLTS IN THIS SHEET



- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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 REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			M21
JOB USE					

**ONE – MAIN BAR FOOTREST – M21**

FINISH NOTE:  
 MILL FINISH – CLEAR POLY COAT

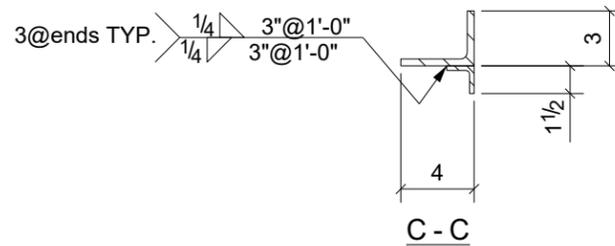
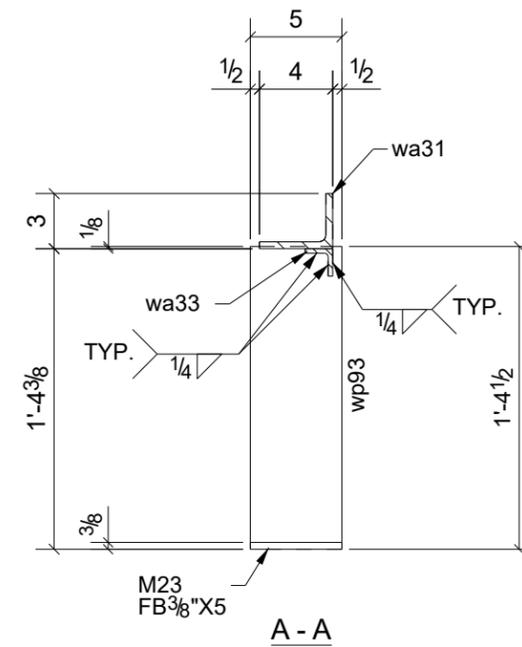
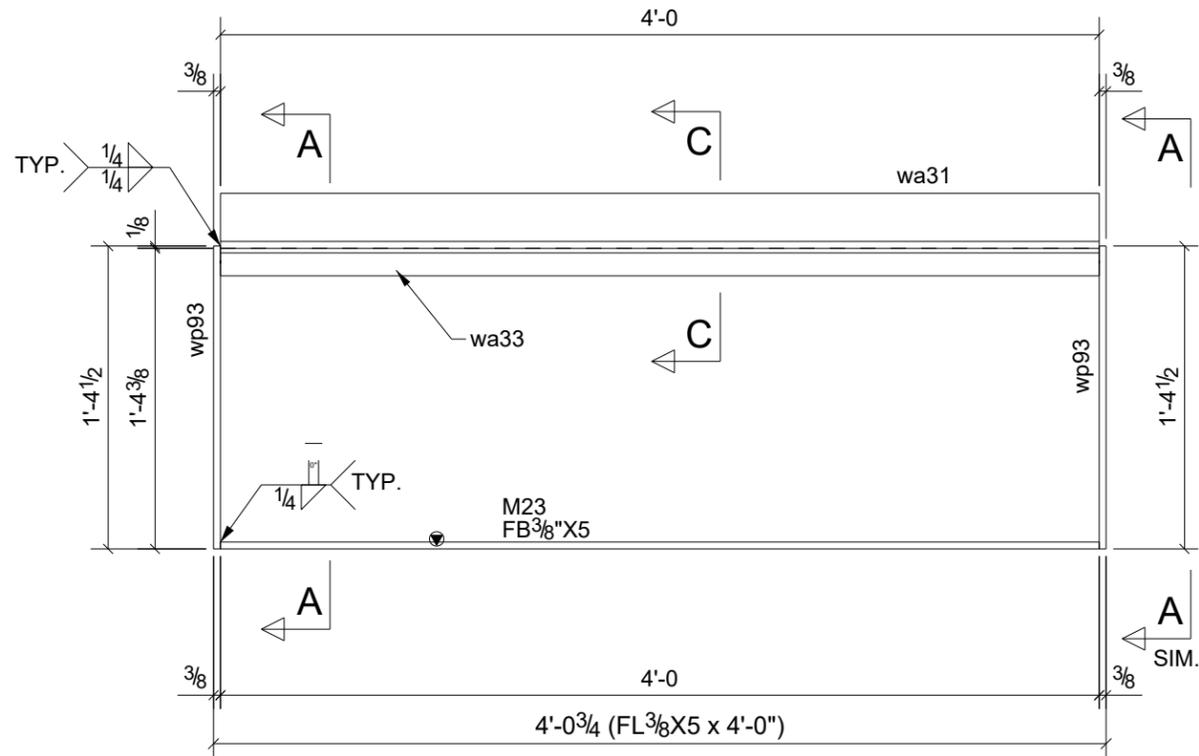
Tekla structures

E	ISSUED FOR REVIEW/COMMENT/APPROVAL	19/JAN/2016
REV	DESCRIPTION	DATE

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	M23		2		FL3/8"X5"	4	0"	
2		wa31	2		L4X3X3/8	4	0"	
3		wa33	2		L1-1/2X1-1/2X1/4	4	0"	
4		wp93	4		FL3/8"X5"	1	4 1/2"	
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TOTAL FIELD BOLTS IN THIS SHEET



- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL FROM  
REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH.No.	BLVD
FABRICATION		CONTRACTOR:			M23
JOB USE					

**2 - FIREPLACE PLATES - M23**

Tekla structures

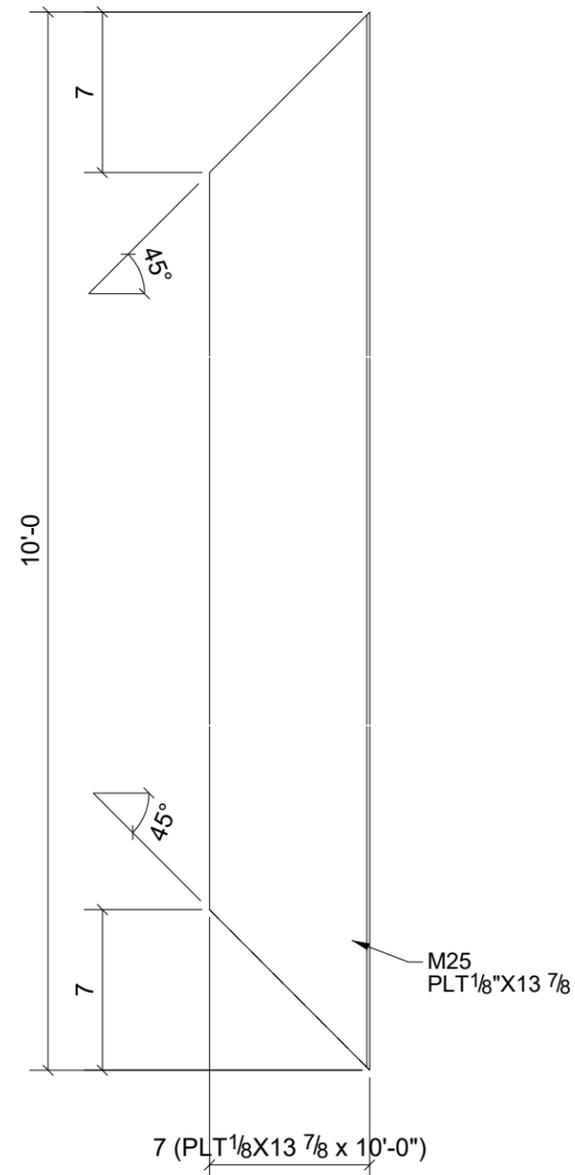
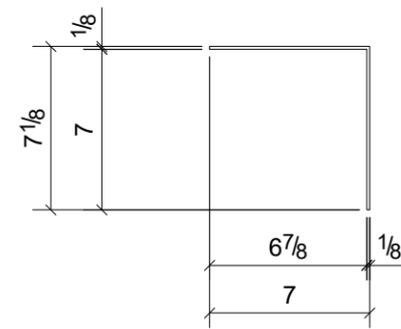
FINISH NOTE:  
MILL FINISH - CLEAR POLY COAT

E	ISSUED FOR REVIEW/COMMENT/APPROVAL	19/JAN/2016
REV	DESCRIPTION	DATE

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	M25		1		PLT 1/8" X 13 7/8"	10	0"	
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TOTAL FIELD BOLTS IN THIS SHEET



**ONE – MAIN BAR FOOTREST – M25**

SHOP NOTES:

- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
- 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
- 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
- 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b,k, OR m
- 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
- 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL FROM  
REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

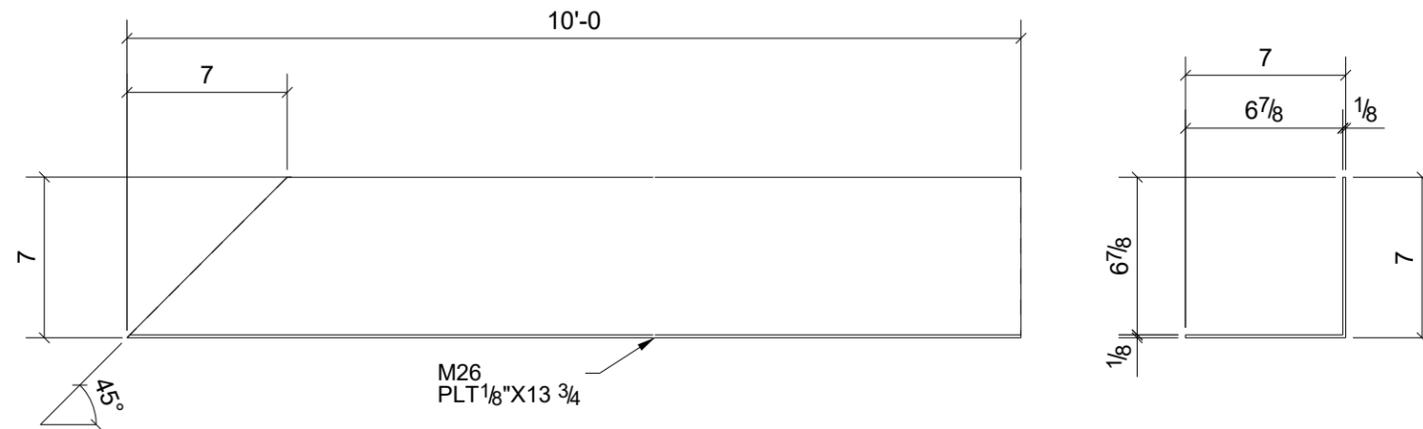
ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			M25
JOB USE					

E	ISSUED FOR REVIEW/COMMENT/APPROVAL	19/JAN/2016
REV	DESCRIPTION	DATE

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	M26		1		PLT1/8"X13 3/4"	10	0"	
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TOTAL FIELD BOLTS IN THIS SHEET



- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b,k, OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL FROM  
 REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			M26
JOB USE					

**ONE – MAIN BAR FOOTREST – M26**

Tekla structures

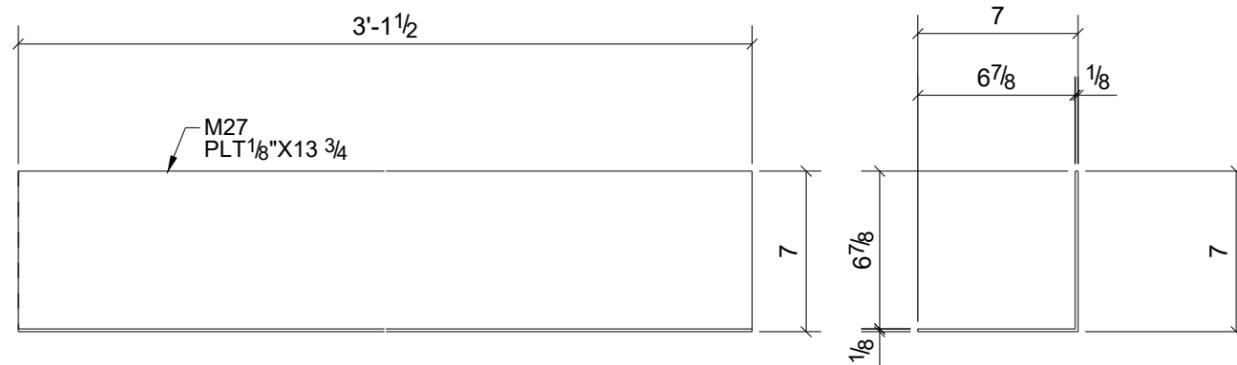
FINISH NOTE:  
MILL FINISH – CLEAR POLY COAT

E	ISSUED FOR REVIEW/COMMENT/APPROVAL	19/JAN/2016
REV	DESCRIPTION	DATE

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	M27		1		PLT1/8"X13 3/4"	3	1 1/2"	
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TOTAL FIELD BOLTS IN THIS SHEET



- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.;
  - 2.) SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 3.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b,k, OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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 REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No:	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No:	BLVD
FABRICATION		CONTRACTOR:			M27
JOB USE					

**ONE – MAIN BAR FOOTREST – M27**

E	ISSUED FOR REVIEW/COMMENT/APPROVAL	19/JAN/2016
REV	DESCRIPTION	DATE

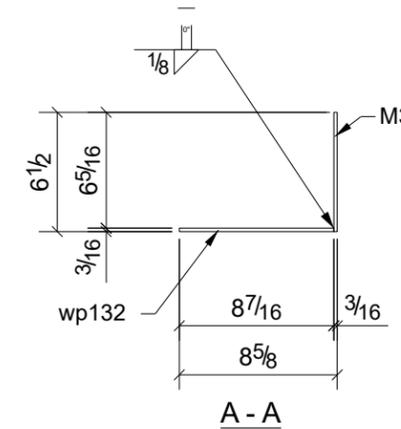
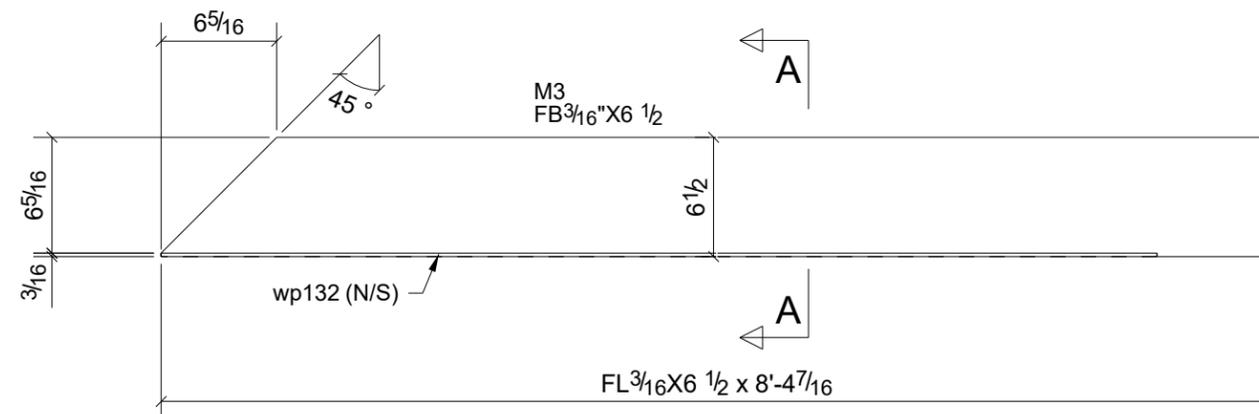
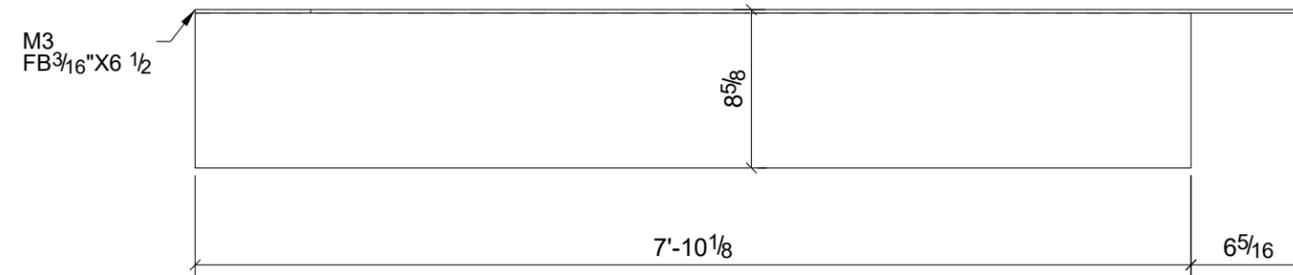
Tekla structures

FINISH NOTE:  
MILL FINISH – CLEAR POLY COAT

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	M3		1		FL3/16"X6 1/2"	8	4 7/16"	
2		wp132	1		PLT3/16"X8 7/16"	7	10 1/8"	
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TOTAL FIELD BOLTS IN THIS SHEET



SHOP NOTES:

- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.;
- 2.) SQ. HSS MAT'L ASTM A500 GR.B U.N.
- 3.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
- 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
- 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
- 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
- 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			M3
JOB USE					

**ONE – BENCH FOOTREST – M3**

Tekla structures

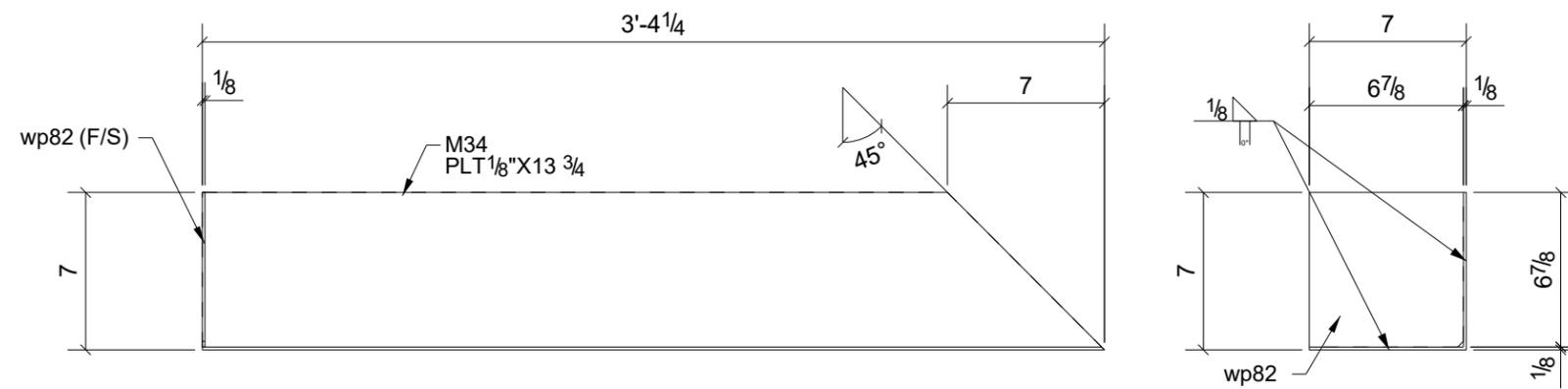
FINISH NOTE:  
MILL FINISH – CLEAR POLY COAT

0	ISSUED FOR FABRICATION	01/MAR/2016
REV	DESCRIPTION	DATE

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	M34		1		PLT 1/8" X 13 3/4"	3	4 1/4"	
2		wp82	1		PL 1/8" X 6 7/8"	0	6 7/8"	
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TOTAL FIELD BOLTS IN THIS SHEET



- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			M34
JOB USE					

**ONE – MAIN BAR FOOTREST – M34**

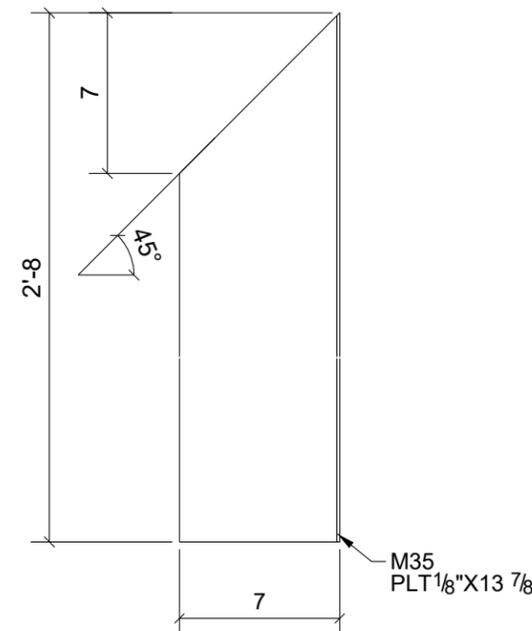
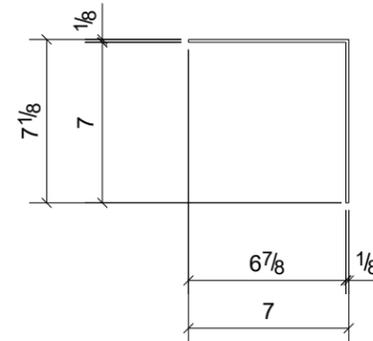
FINISH NOTE:  
MILL FINISH – CLEAR POLY COAT

E	ISSUED FOR REVIEW/COMMENT/APPROVAL	19/JAN/2016
REV	DESCRIPTION	DATE

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	M35		1		PLT 1/8" X 13 7/8"	2	8"	
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TOTAL FIELD BOLTS IN THIS SHEET



- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b,k, OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			M35
JOB USE					

**ONE – MAIN BAR FOOTREST – M35**

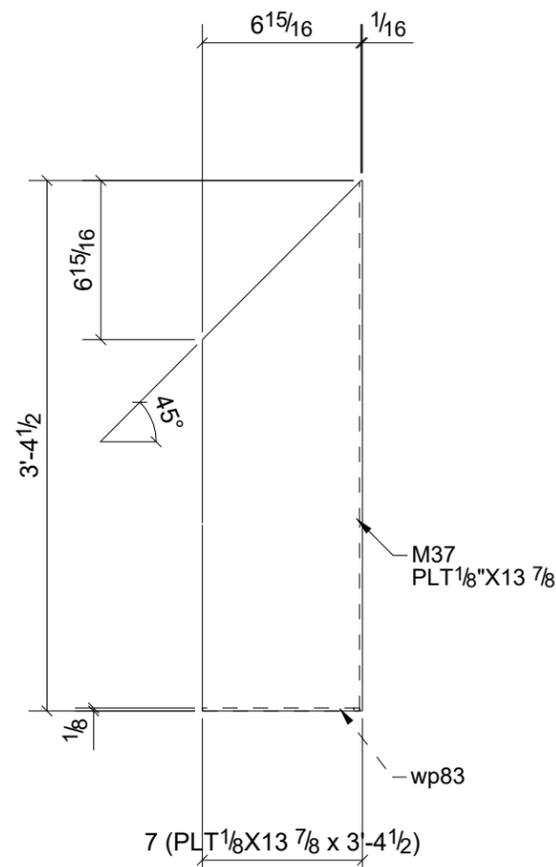
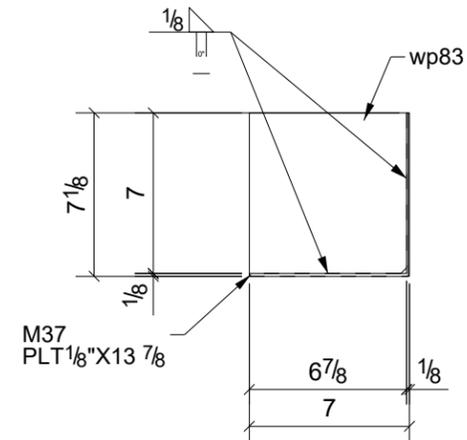
FINISH NOTE:  
 MILL FINISH – CLEAR POLY COAT

E	ISSUED FOR REVIEW/COMMENT/APPROVAL	19/JAN/2016
REV	DESCRIPTION	DATE

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	M37		1		PLT 1/8" X 13 7/8"	3	4 1/2"	
2		wp83	1		PL 1/8" X 6 7/8"	0	7"	
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TOTAL FIELD BOLTS IN THIS SHEET



**ONE - MAIN BAR FOOTREST - M37**

SHOP NOTES:

- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
- 2.) HOLES 13/16" TYP. U.N.O. FIELD BOLTS ARE 3/4" Ø-N TYPE 1 U.N.O
- 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
- 4.) 13/16" Ø X 1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
- 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
- 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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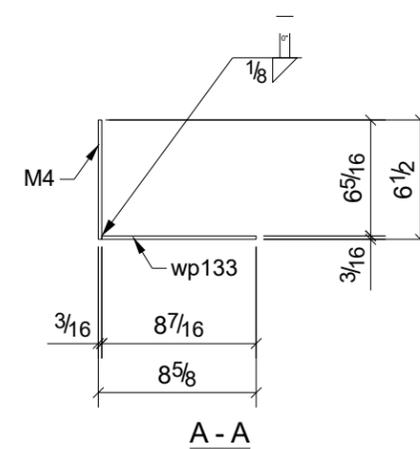
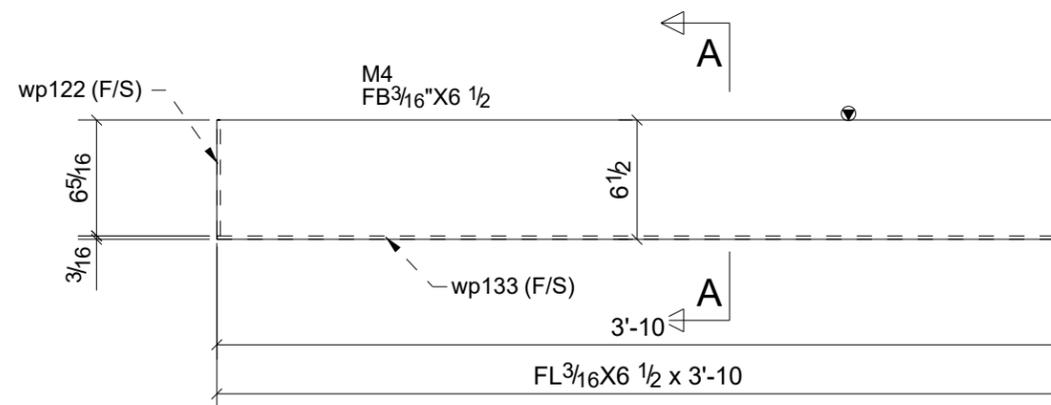
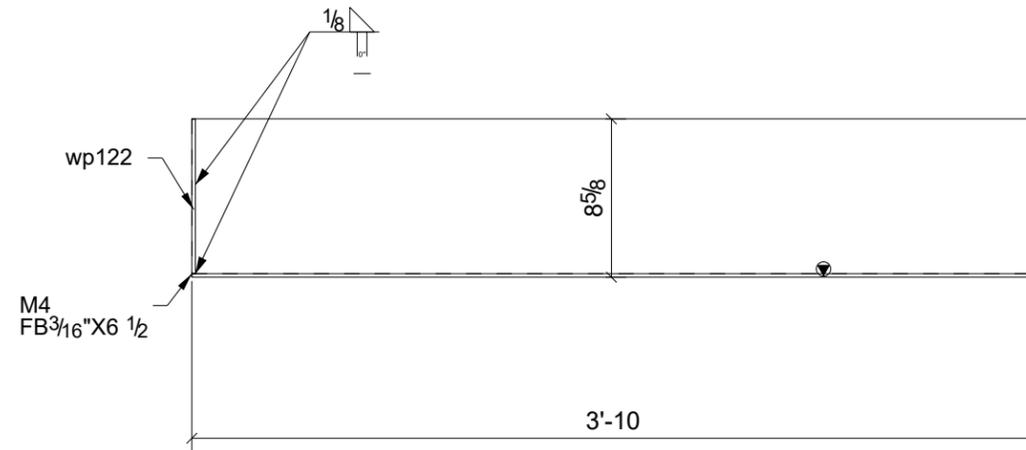
ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND		
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	JOB No.	BLVD
FABRICATION		CONTRACTOR:		SH.No.	M37
JOB USE					

E	ISSUED FOR REVIEW/COMMENT/APPROVAL	19/JAN/2016
REV	DESCRIPTION	DATE

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	M4		1		FL3/16"X6 1/2"	3	10"	
2		wp122	1		PL3/16"X6 5/16"	0	8 7/16"	
3		wp133	1		PLT3/16"X8 7/16"	3	10"	
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TOTAL FIELD BOLTS IN THIS SHEET



- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.;
  - 2.) SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 3.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH.No.	BLVD
FABRICATION		CONTRACTOR:			M4
JOB USE					

**ONE – BENCH FOOTREST – M4**

Tekla structures

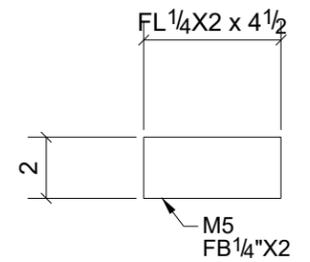
FINISH NOTE:  
MILL FINISH – CLEAR POLY COAT

0	ISSUED FOR FABRICATION	01/MAR/2016
REV	DESCRIPTION	DATE

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	M5		7		FL1/4"X2"	0	4 1/2"	
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TOTAL FIELD BOLTS IN THIS SHEET



7 - PLATES - M5

- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b,k, OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

ALL VERIFICATION REQUESTS ON THIS SET OF DRAWINGS WILL BE ASSUMED CORRECT AS SHOWN UNLESS OTHERWISE NOTED. WHERE FABRICATOR HAS REQUESTED INFORMATION TO BE PROVIDED, CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH TRADES, ARCHITECT AND ENGINEER AS REQ'D TO COMPLETE VERIFICATION REQUESTS, OR STEEL DELIVERY MAY BE DELAYED. ANY REFABRICATION COST DO TO INCOMPLETE OR INACCURATE VERIFICATION RESPONSES WILL BE BILLED AS EXTRA TO THE GENERAL CONTRACTOR.

NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL FROM  
 REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH.No.	BLVD
FABRICATION		CONTRACTOR:			M5
JOB USE					

REV	DESCRIPTION	DATE

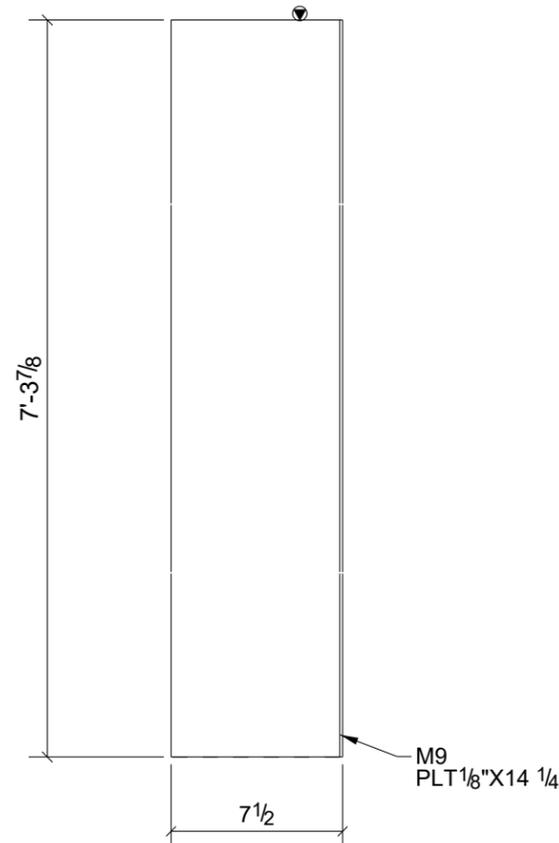
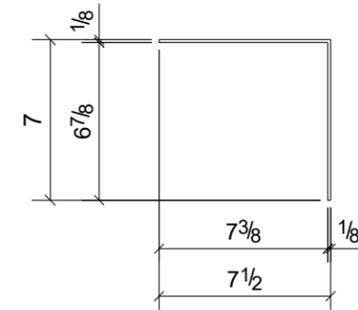
Tekla structures

FINISH NOTE:

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	M9		2		PLT1/8"X14 1/4"	7	3 7/8"	
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TOTAL FIELD BOLTS IN THIS SHEET



- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b,k, OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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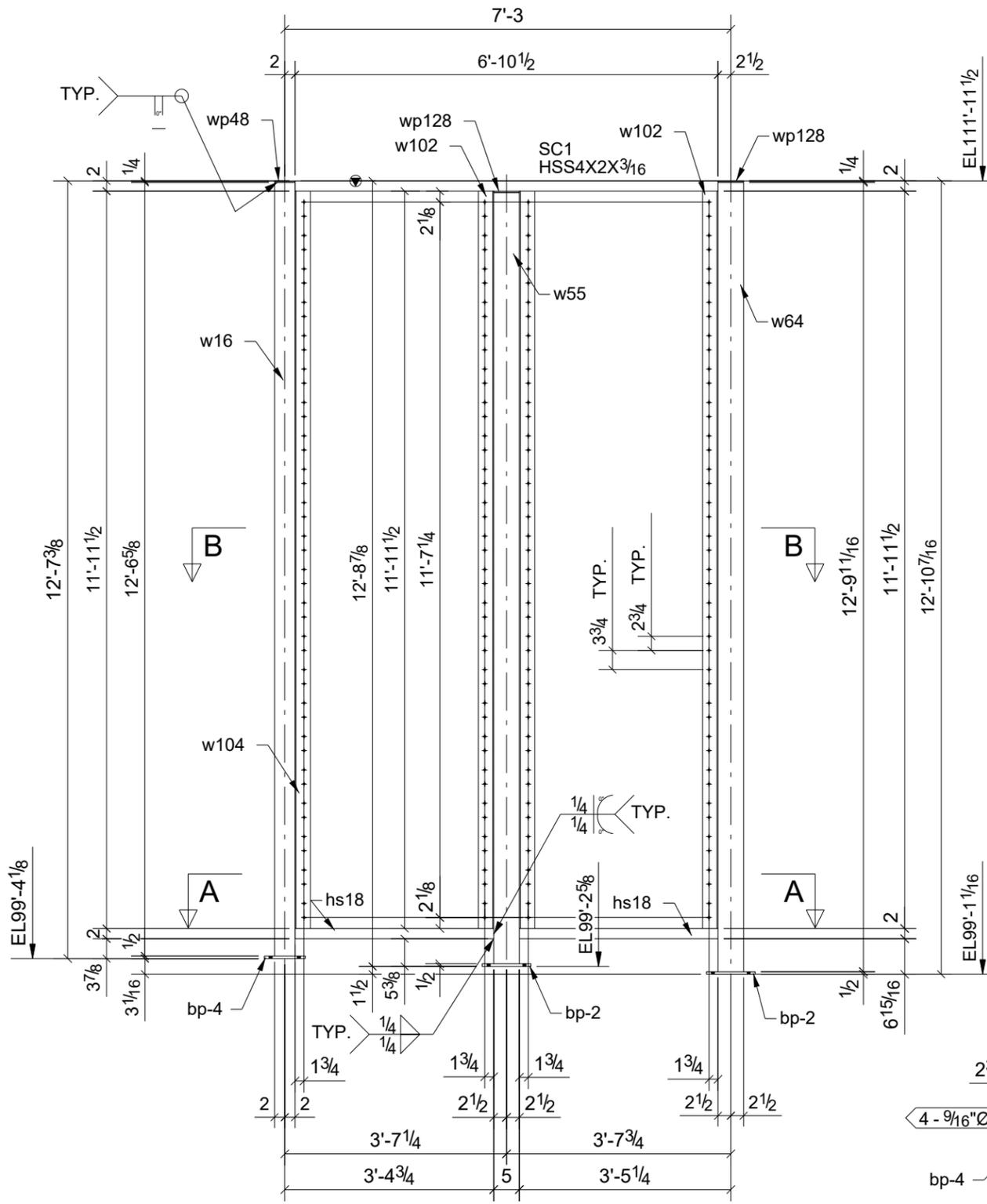
NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL FROM  
 REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND		
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	JOB No:	
FABRICATION		CONTRACTOR:			BLVD
JOB USE				SH No:	M9

**2 - MAIN BAR FOOTRESTS - M9**

FINISH NOTE:  
 MILL FINISH - CLEAR POLY COAT

E	ISSUED FOR REVIEW/COMMENT/APPROVAL	19/JAN/2016
REV	DESCRIPTION	DATE

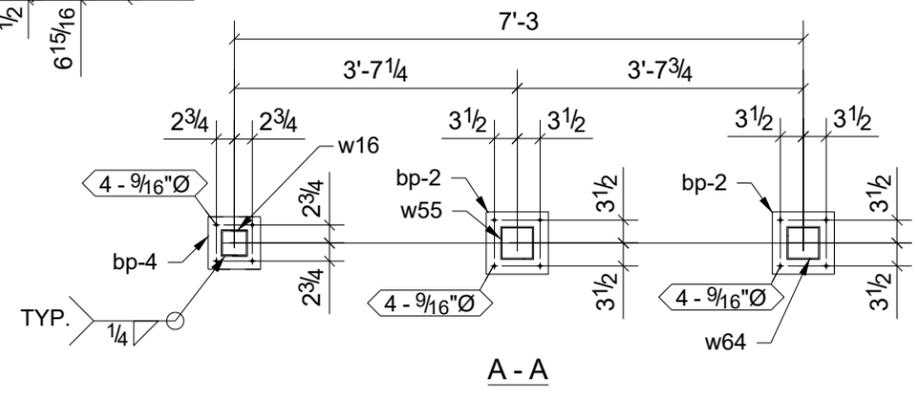
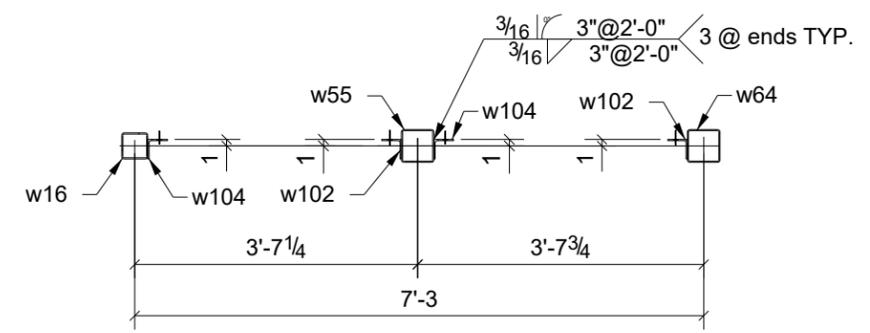


ALL HOLES ARE 9/16" U.N.O.

ONE - SCREEN WALL - SC1

BILL OF MATERIALS								
SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	SC1		1		HSS4X2X3/16	6	10 1/2"	
2		bp-2	2		FL1/2"X9 1/2"	0	9 1/2"	
3		bp-4	1		FL1/2"X8"	0	8"	
4		hs18	2		HSS4X2X3/16	3	2 3/4"	
5		w16	1		HSS4X4X3/16	12	6 5/8"	
6		w55	1		HSS5X5X3/16	12	6 1/8"	
7		w64	1		HSS5X5X3/16	12	9 11/16"	
8		w102	2		L3X3X3/16	11	11 1/2"	
9		w104	2		L3X3X3/16	11	11 1/2"	
10		wp48	1		FL1/4"X4"	0	4"	
11		wp128	2		FL1/4"X5"	0	5"	
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TOTAL FIELD BOLTS IN THIS SHEET



- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16" TYP. U.N.O. FIELD BOLTS ARE 3/4" Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

ALL VERIFICATION REQUESTS ON THIS SET OF DRAWINGS WILL BE ASSUMED CORRECT AS SHOWN UNLESS OTHERWISE NOTED. WHERE FABRICATOR HAS REQUESTED INFORMATION TO BE PROVIDED, CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH TRADES, ARCHITECT AND ENGINEER AS REQ'D TO COMPLETE VERIFICATION REQUESTS, OR STEEL DELIVERY MAY BE DELAYED. ANY REFABRICATION COST DO TO INCOMPLETE OR INACCURATE VERIFICATION RESPONSES WILL BE BILLED AS EXTRA TO THE GENERAL CONTRACTOR.

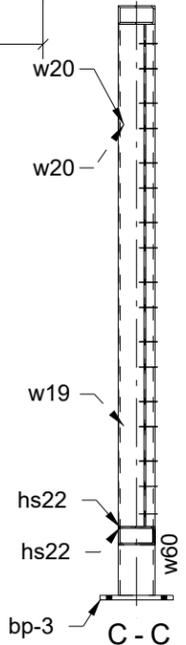
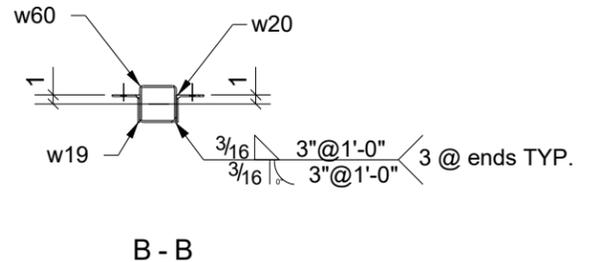
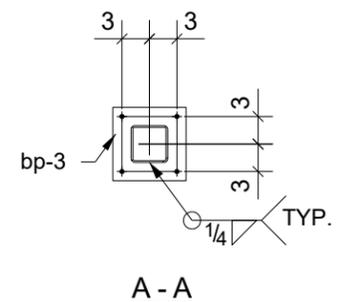
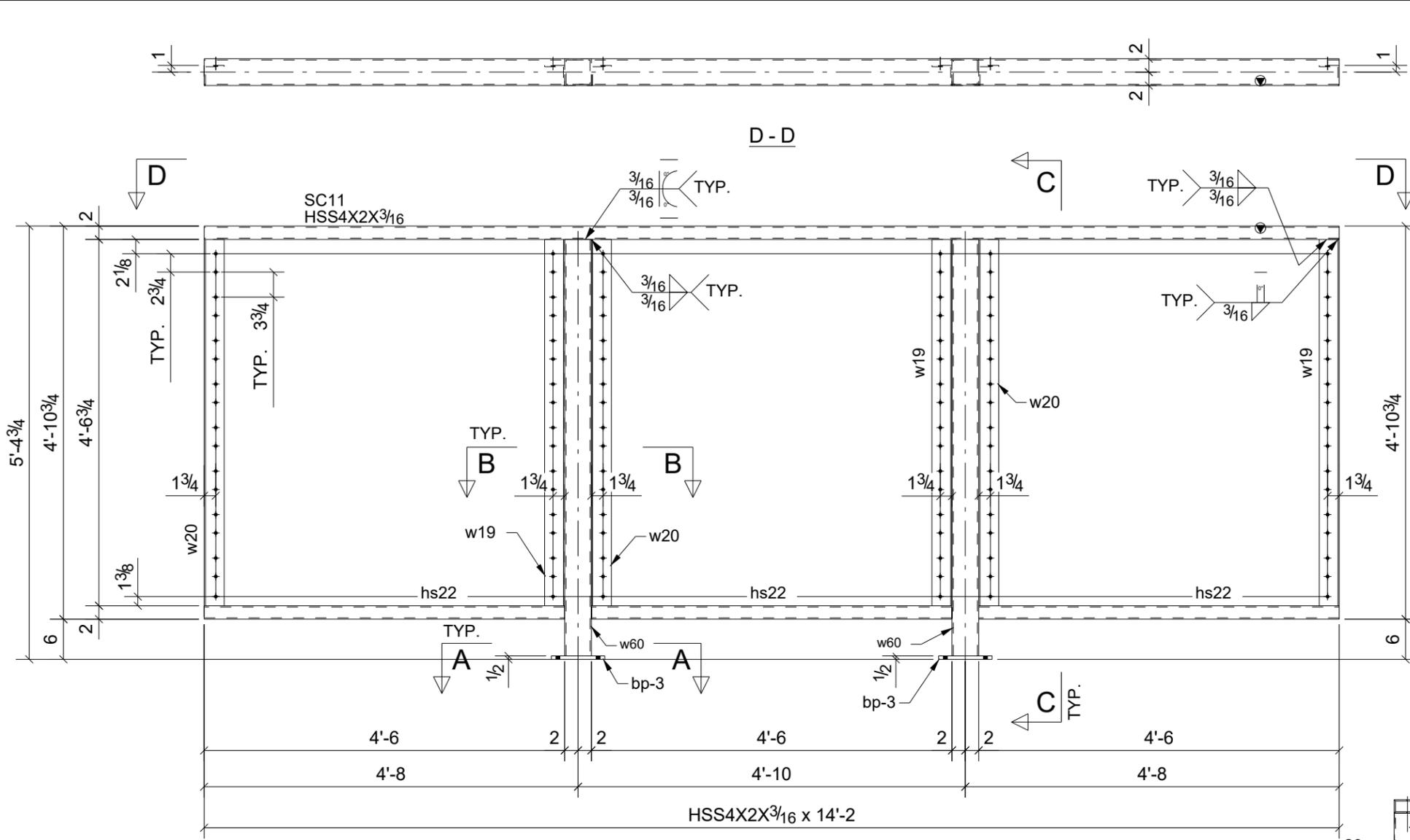
NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL FROM  
REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			SC1
JOB USE					

REV	DESCRIPTION	DATE
E	ISSUED FOR REVIEW/COMMENT/APPROVAL	19/JAN/2016

Tekla structures  
FINISH NOTE:  
MILL FINISH-CLEAR COAT





ALL HOLES ARE 9/16" Ø U.N.O.

ONE - SCREEN WALL - SC11

BILL OF MATERIALS								
SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	SC11		1	HSS4X2X3/16		14	2"	
2		bp-3	2	FL1/2"X8"		0	8"	
3		hs22	3	HSS4X2X3/16		4	6"	
4		w19	3	L3X3X3/16		4	6 3/4"	
5		w20	3	L3X3X3/16		4	6 3/4"	
6		w60	2	HSS4X4X3/16		5	2 1/4"	
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TOTAL FIELD BOLTS IN THIS SHEET

- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.;
  - 2.) SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 3.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O.
  - 4.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 5.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 6.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 7.) ULTRANSONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

ALL VERIFICATION REQUESTS ON THIS SET OF DRAWINGS WILL BE ASSUMED CORRECT AS SHOWN UNLESS OTHERWISE NOTED. WHERE FABRICATOR HAS REQUESTED INFORMATION TO BE PROVIDED, CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH TRADES, ARCHITECT AND ENGINEER AS REQ'D TO COMPLETE VERIFICATION REQUESTS, OR STEEL DELIVERY MAY BE DELAYED. ANY REFABRICATION COST DO TO INCOMPLETE OR INACCURATE VERIFICATION RESPONSES WILL BE BILLED AS EXTRA TO THE GENERAL CONTRACTOR.

NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL FROM  
REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			SC11
JOB USE					

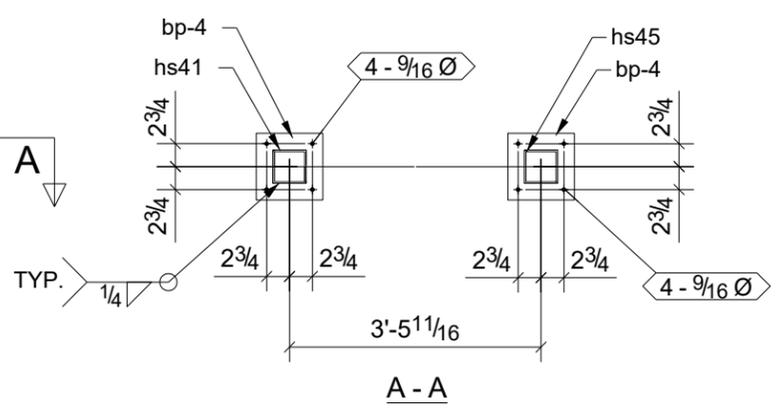
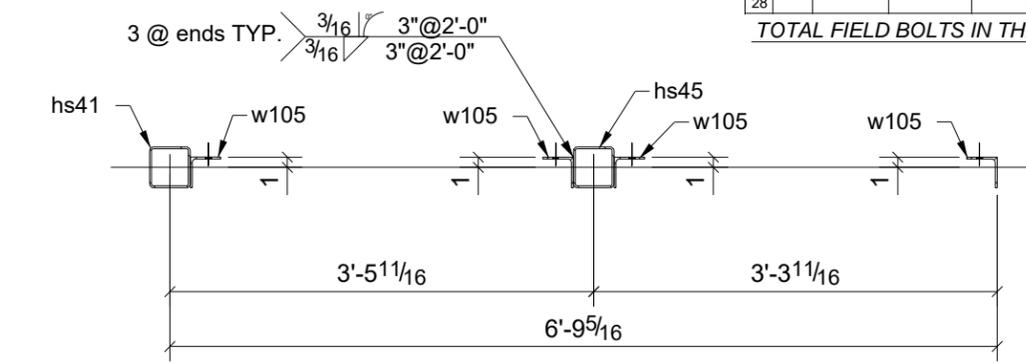
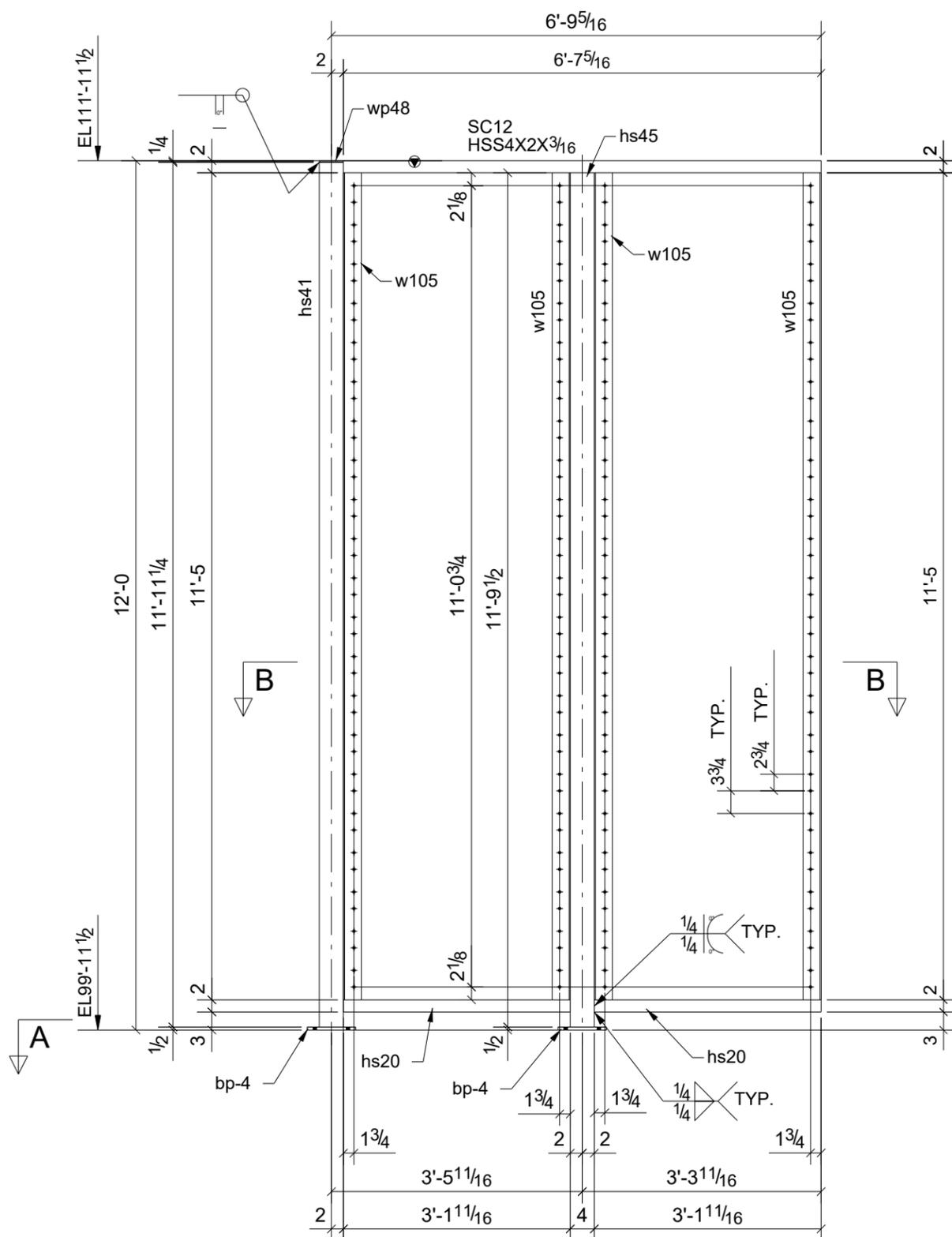
0	ISSUED FOR FABRICATION	08/FEB/2016
REV	DESCRIPTION	DATE

Tekla structures  
FINISH NOTE:  
MILL FINISH-CLEAR COAT

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	SC12		3		HSS4X2X3/16	6	7 5/16"	
2		bp-4	6		FL1/2"X8"	0	8"	
3		hs20	6		HSS4X2X3/16	3	1 11/16"	
4		hs41	3		HSS4X4X3/16	11	11 1/4"	
5		hs45	3		HSS4X4X3/16	11	9 1/2"	
6		w105	12		L3X3X3/16	11	5"	
7		wp48	3		FL1/4"X4"	0	4"	
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TOTAL FIELD BOLTS IN THIS SHEET



- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS		
FABRICATION		CONTRACTOR:			
JOB USE					

**3 - SCREEN WALLS - SC12**

ALL HOLES ARE 9/16"Ø U.N.O.

FINISH NOTE:  
MILL FINISH-CLEAR COAT

Tekla structures

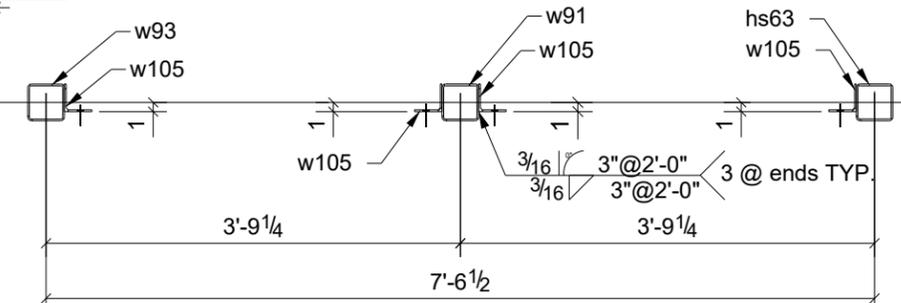
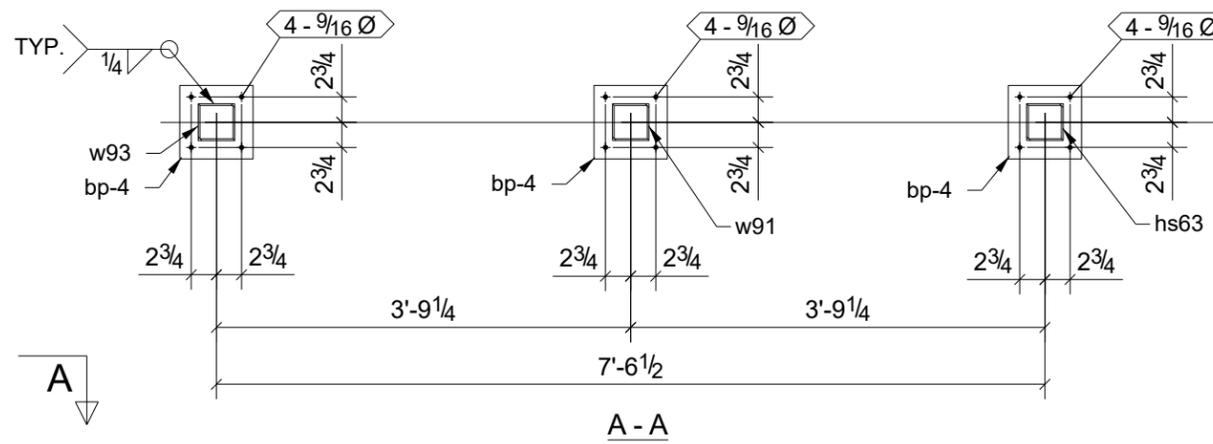
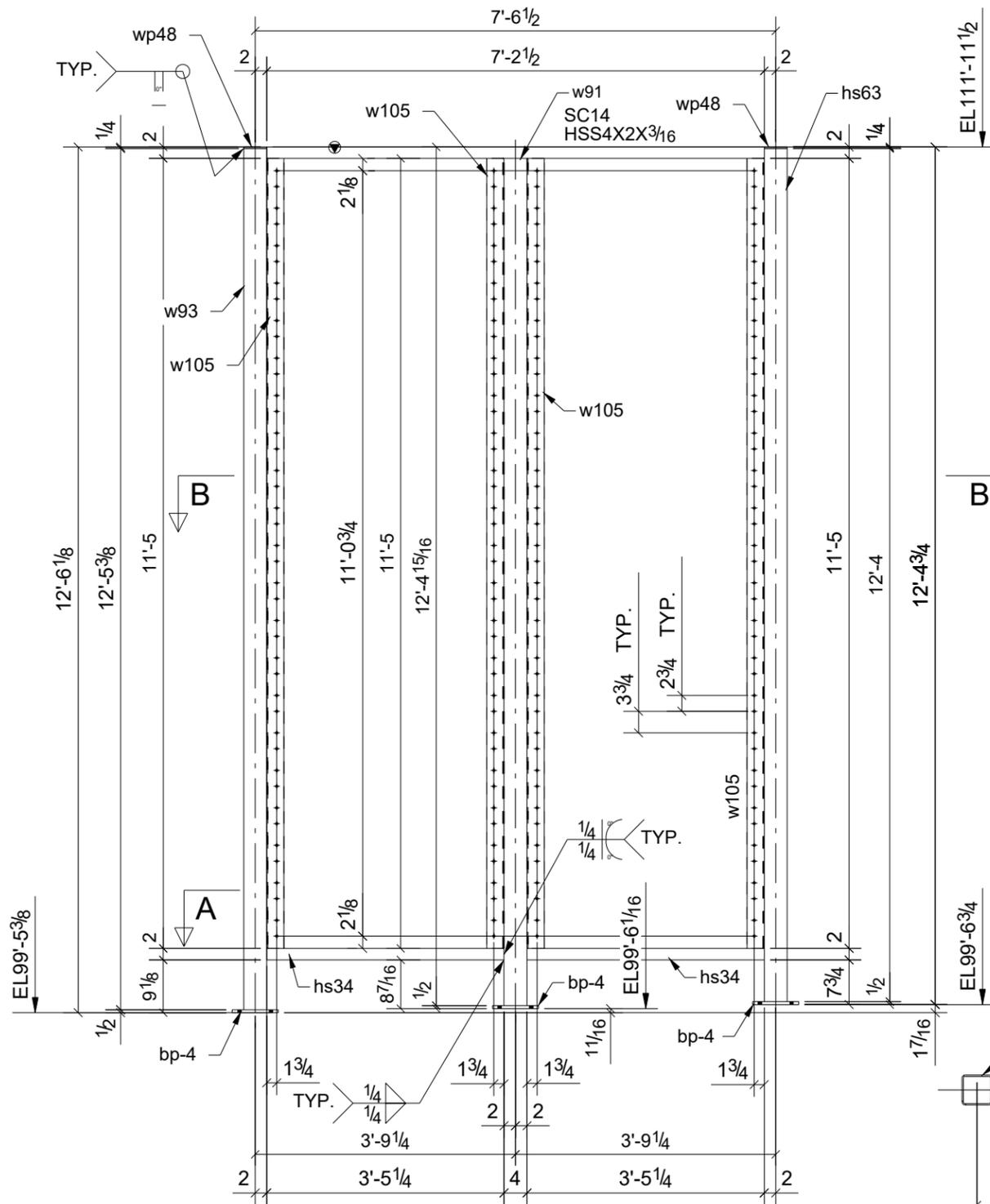
E	ISSUED FOR REVIEW/COMMENT/APPROVAL	19/JAN/2016
REV	DESCRIPTION	DATE

BLVD  
SC12

**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	SC14		1		HSS4X2X3/16	7	2 1/2"	
2		bp-4	3		FL1/2"X8"	0	8"	
3		hs34	2		HSS4X2X3/16	3	5 1/4"	
4		hs63	1		HSS4X4X3/16	12	4"	
5		w91	1		HSS4X4X3/16	12	2 15/16"	
6		w93	1		HSS4X4X3/16	12	5 3/8"	
7		w105	4		L3X3X3/16	11	5"	
8		wp48	2		FL1/4"X4"	0	4"	
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TOTAL FIELD BOLTS IN THIS SHEET



- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			SC14
JOB USE					

E	ISSUED FOR REVIEW/COMMENT/APPROVAL	19/JAN/2016
REV	DESCRIPTION	DATE

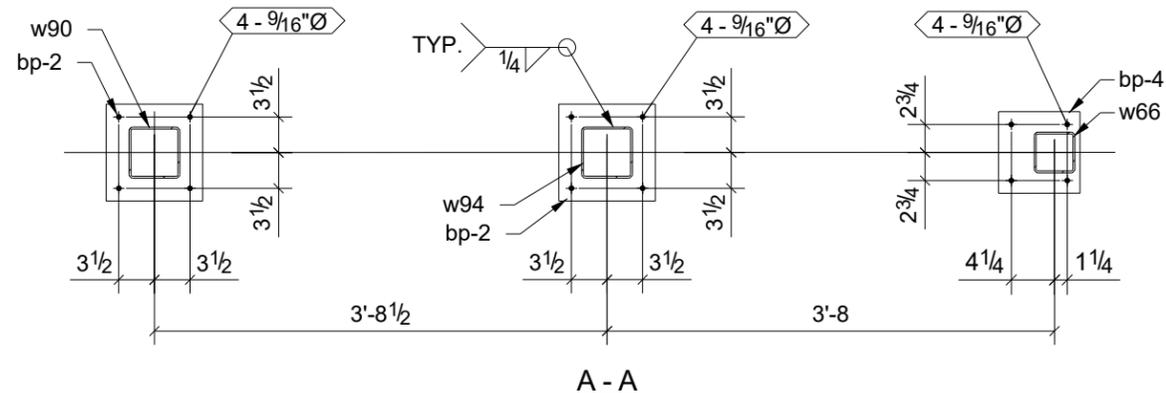
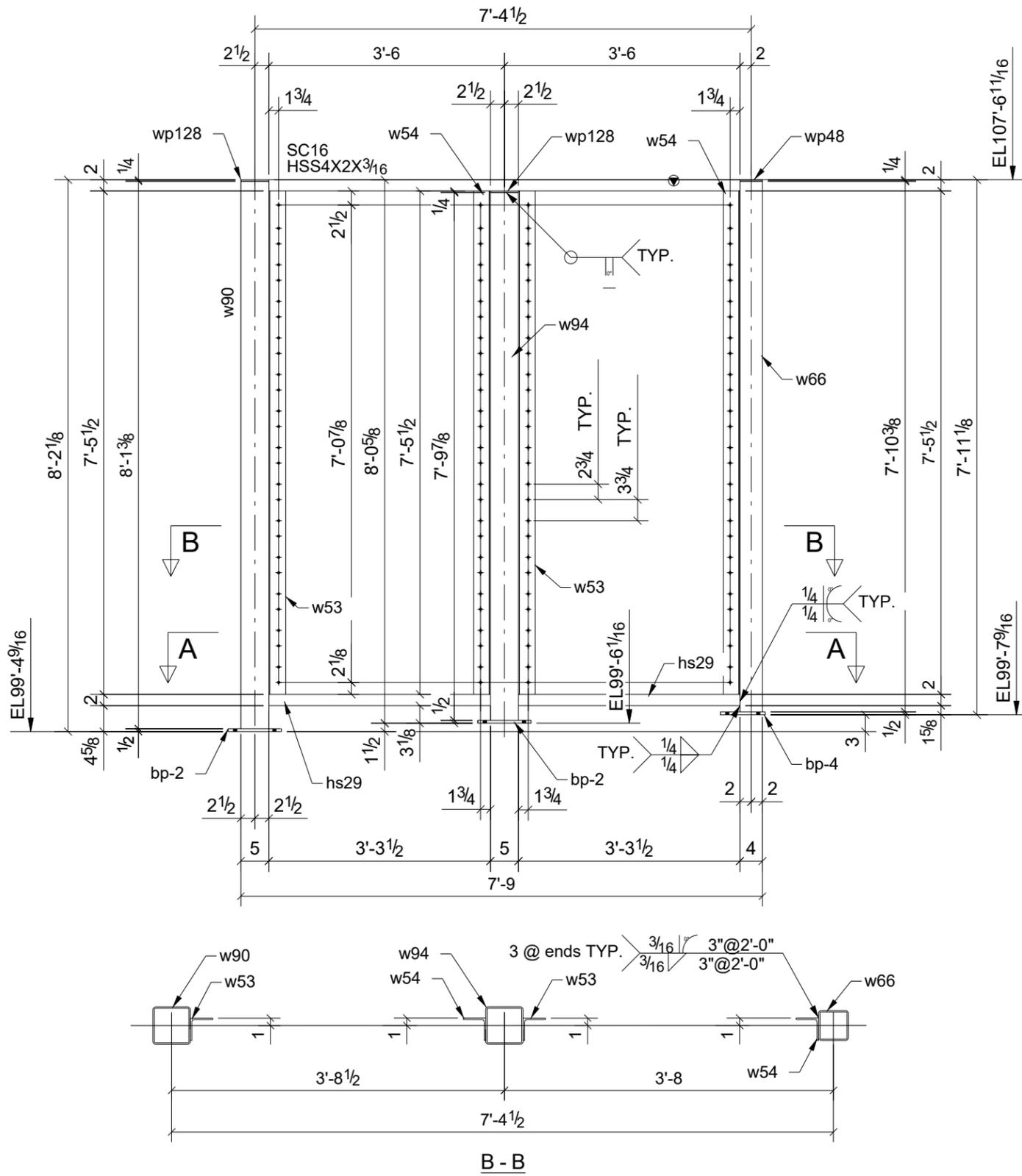
ALL HOLES ARE 9/16"Ø U.N.O.

Tekla structures

FINISH NOTE:  
MILL FINISH-CLEAR COAT

**ONE - SCREEN WALL - SC14**

**B - B**



- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O.
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
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  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			SC16
JOB USE					

BILL OF MATERIALS								
SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	SC16		1		HSS4X2X3/16	7	0"	
2		bp-2	2		FL1/2"X9 1/2"	0	9 1/2"	
3		bp-4	1		FL1/2"X8"	0	8"	
4		hs29	2		HSS4X2X3/16	3	3 1/2"	
5		w53	2		L3X3X3/16	7	5 1/2"	
6		w54	2		L3X3X3/16	7	5 1/2"	
7		w66	1		HSS4X4X3/16	7	10 3/8"	
8		w90	1		HSS5X5X3/16	8	1 3/8"	
9		w94	1		HSS5X5X3/16	7	9 7/8"	
10		wp48	1		FL1/4"X4"	0	4"	
11		wp128	2		FL1/4"X5"	0	5"	
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TOTAL FIELD BOLTS IN THIS SHEET

ALL HOLES ARE 9/16"Ø U.N.O.

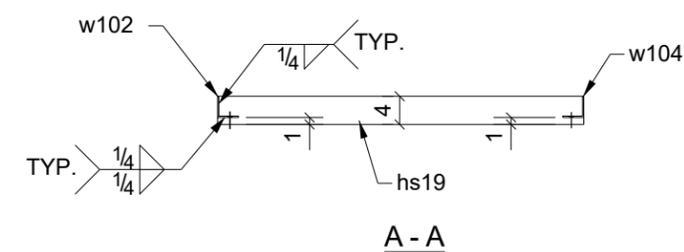
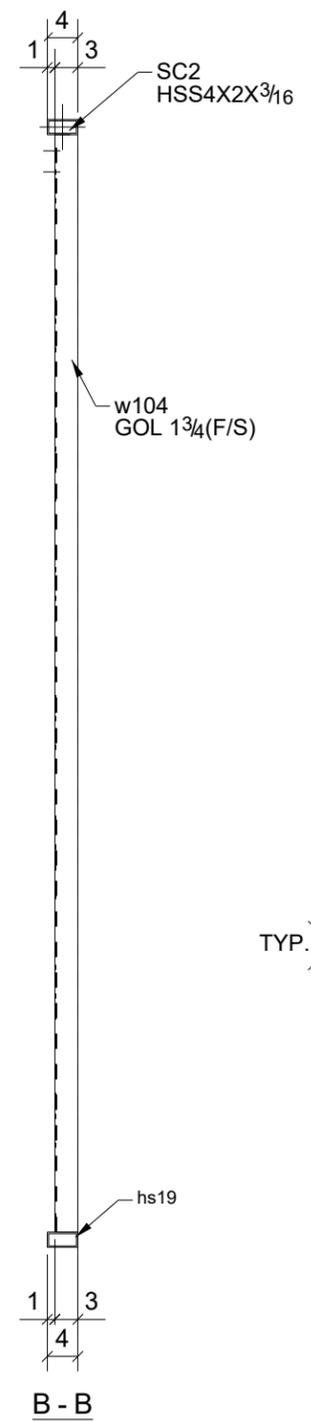
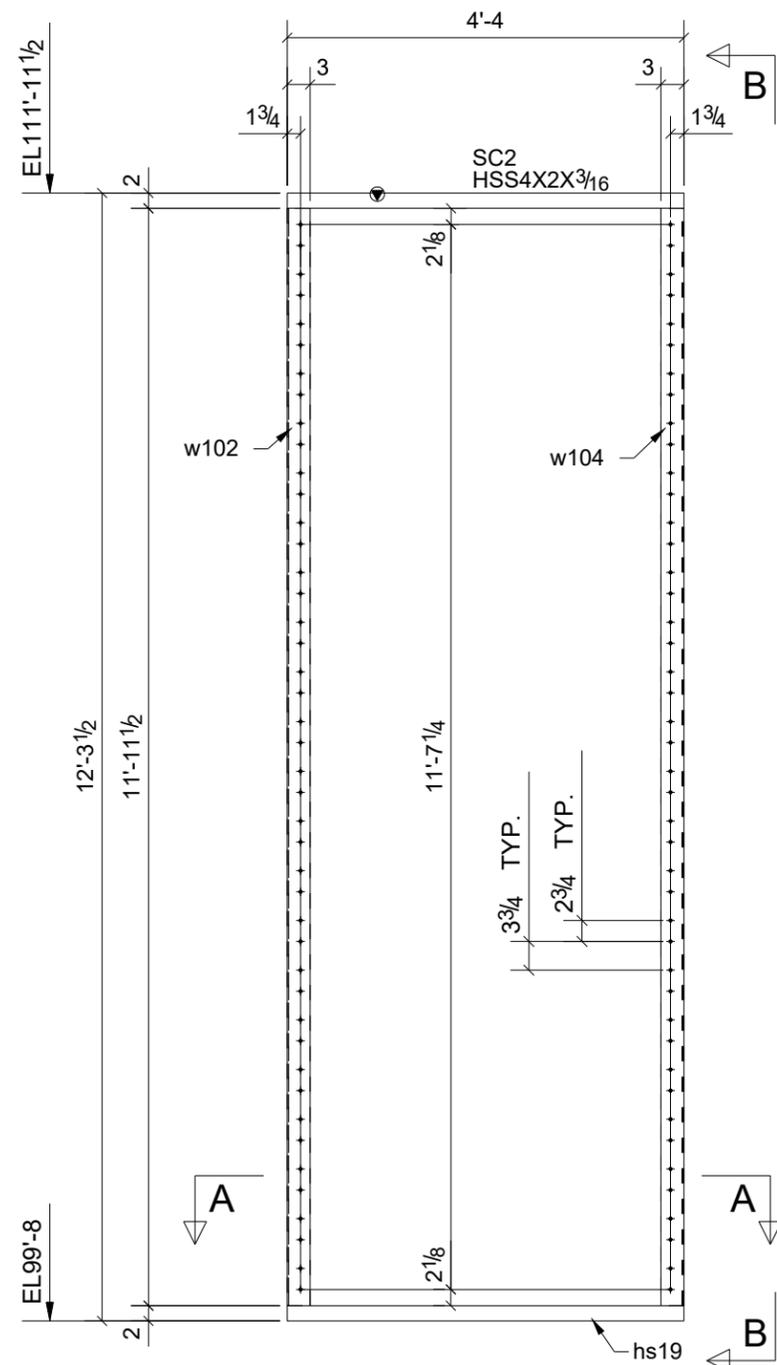
ONE - SCREEN WALL - SC16

Tekla structures  
FINISH NOTE:  
MILL FINISH-CLEAR COAT

E	ISSUED FOR REVIEW/COMMENT/APPROVAL	19/JAN/2016
REV	DESCRIPTION	DATE

BILL OF MATERIALS								
SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	SC2		1		HSS4X2X3/16	4	4"	
2		hs19	1		HSS4X2X3/16	4	4"	
3		w102	1		L3X3X3/16	11	11 1/2"	
4		w104	1		L3X3X3/16	11	11 1/2"	
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TOTAL FIELD BOLTS IN THIS SHEET



Tekla structures

ALL HOLES ARE 9/16" Ø U.N.O.

ONE - SCREEN WALL - SC2

FINISH NOTE:  
MILL FINISH-CLEAR COAT

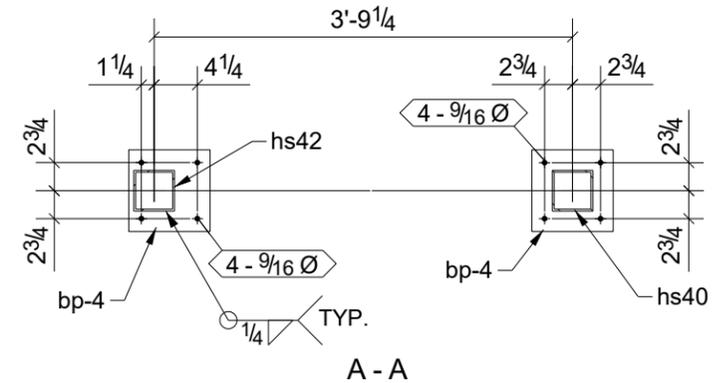
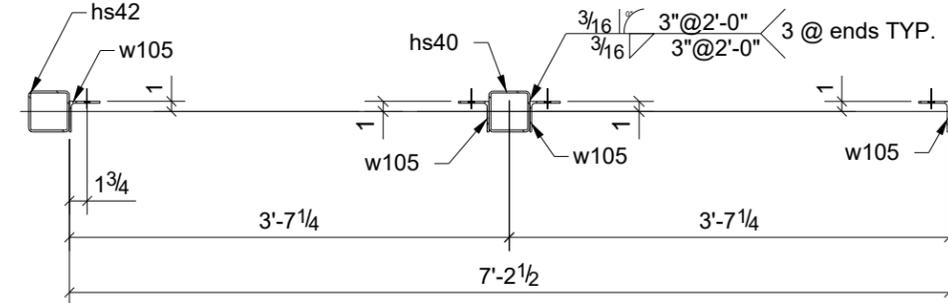
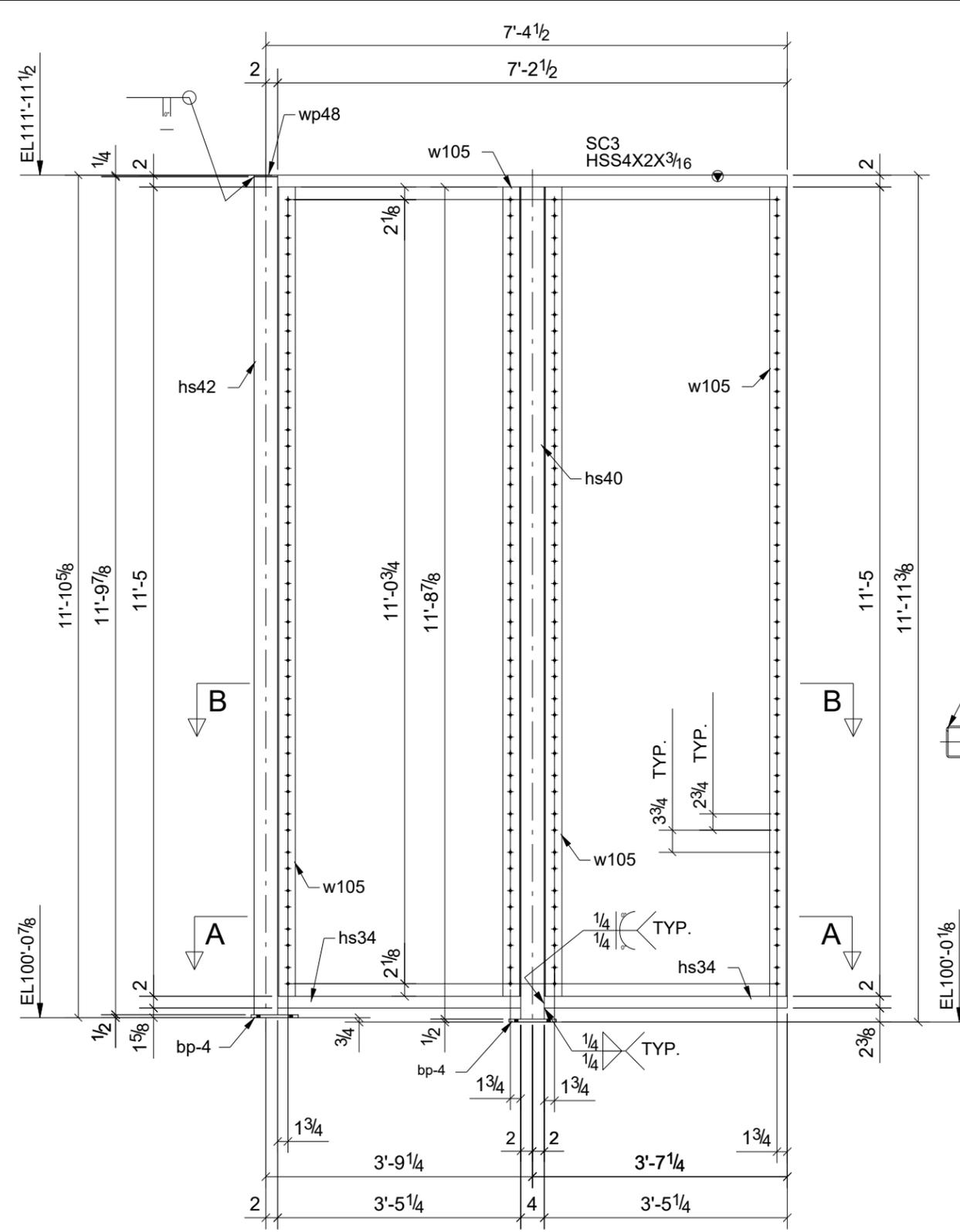
- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16" Ø TYP. U.N.O. FIELD BOLTS ARE 3/4" Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16" Ø X 1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL FROM  
REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			SC2
JOB USE					

REV	DESCRIPTION	DATE



**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	SC3		1		HSS4X2X3/16	7	2 1/2"	
2		bp-4	2		FL1/2"X8"	0	8"	
3		hs34	2		HSS4X2X3/16	3	5 1/4"	
4		hs40	1		HSS4X4X3/16	11	8 7/8"	
5		hs42	1		HSS4X4X3/16	11	9 7/8"	
6		w105	4		L3X3X3/16	11	5"	
7		wp48	1		FL1/4"X4"	0	4"	
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TOTAL FIELD BOLTS IN THIS SHEET

Tekla structures  
 FINISH NOTE:  
 MILL FINISH-CLEAR COAT

ALL HOLES ARE 9/16" Ø U.N.O.

**ONE - SCREEN WALL - SC3**

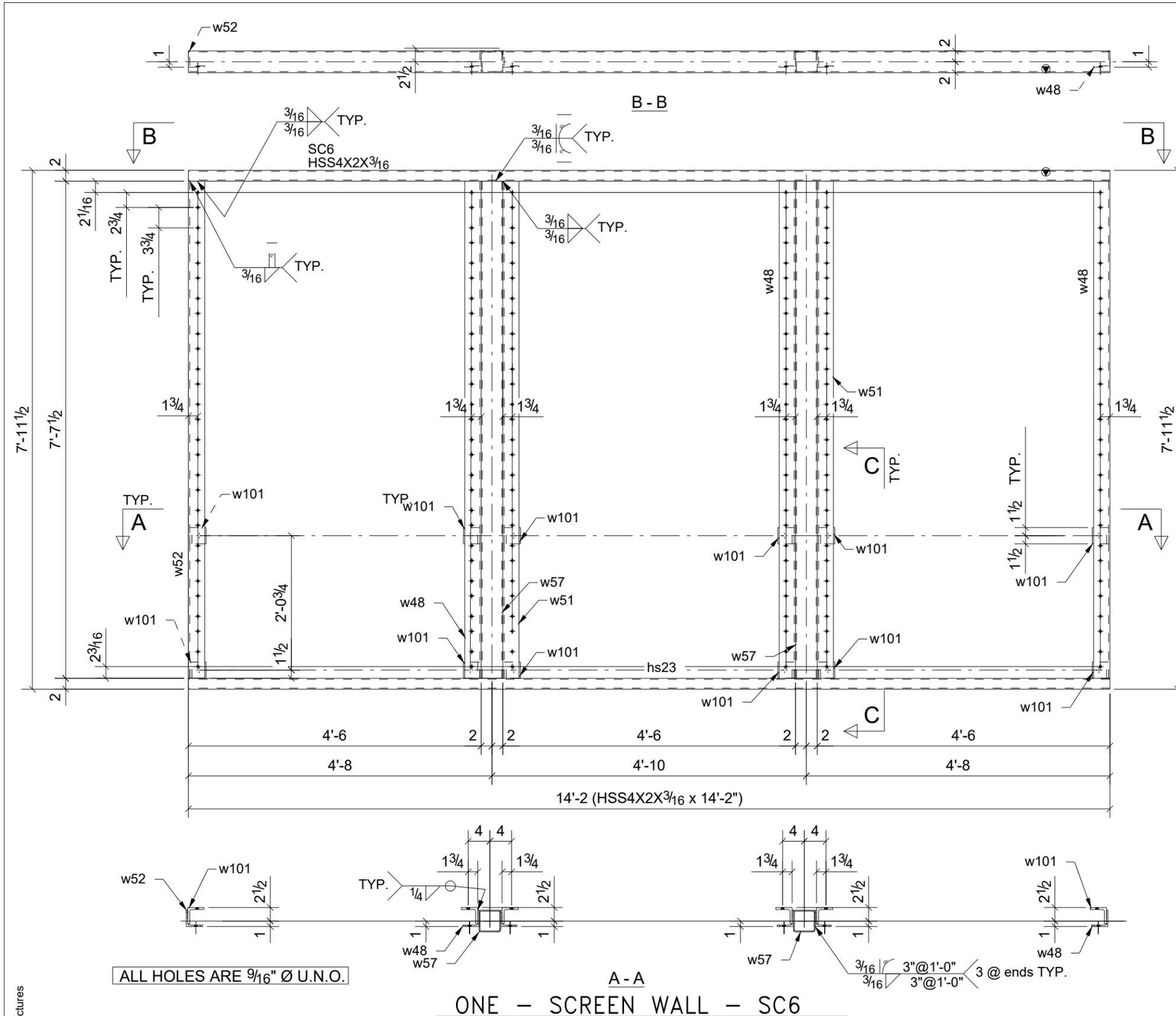
- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16" Ø TYP. U.N.O. FIELD BOLTS ARE 3/4" Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16" Ø X 1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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 REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

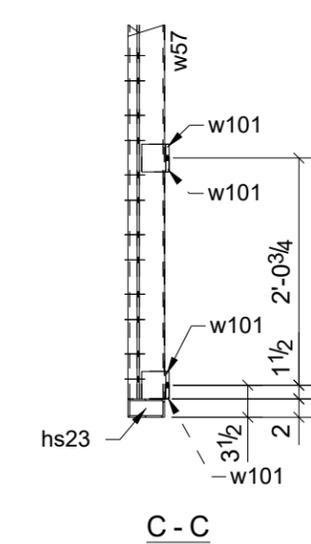
REV	DESCRIPTION	DATE
E	ISSUED FOR REVIEW/COMMENT/APPROVAL	19/JAN/2016

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			SC3
JOB USE					



BILL OF MATERIALS								
SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	SC6		1		HSS4X2X3/16	14	2"	
2		hs23	1		HSS4X2X3/16	14	2"	
3		w48	3		L3X3X1/4	7	7 1/2"	
4		w51	2		L3X3X1/4	7	7 1/2"	
5		w52	1		L3X3X1/4	7	7 7/16"	
6		w57	2		HSS4X4X3/16	7	7 1/2"	
7		w101	12		L3X3X3/8	0	3"	
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TOTAL FIELD BOLTS IN THIS SHEET



- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b,k, OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL FROM  
REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

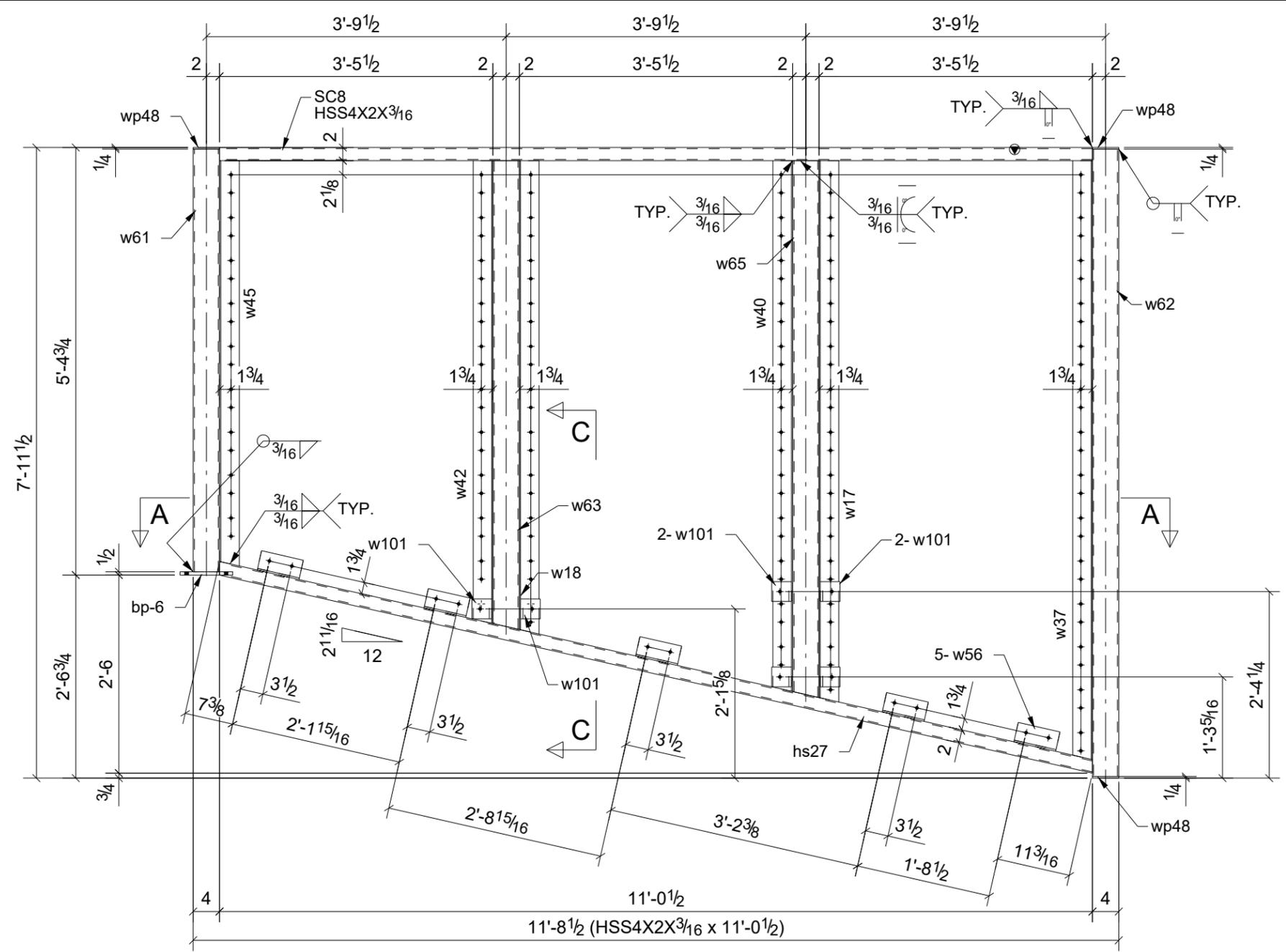
ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH.No.	BLVD
FABRICATION		CONTRACTOR:			SC6
JOB USE					

0	ISSUED FOR FABRICATION	08/FEB/2016
REV	DESCRIPTION	DATE

Tekla structures  
FINISH NOTE:  
MILL FINISH-CLEAR COAT

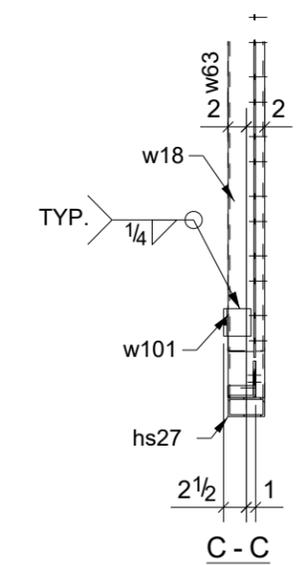
ALL HOLES ARE 9/16" Ø U.N.O.

ONE - SCREEN WALL - SC6



BILL OF MATERIALS								
SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	SC8		1		HSS4X2X3/16	11	0 1/2"	
2		bp-6	1		FL1/2"X8"	0	8"	
3		hs27	1		HSS4X2X3/16	11	4 5/16"	
4		w17	1		L3X3X3/16	6	10"	
5		w18	1		L3X3X3/16	5	11 11/16"	
6		w37	1		L3X3X3/16	7	6 11/16"	
7		w40	1		L3X3X3/16	6	8 3/8"	
8		w42	1		L3X3X3/16	5	10 1/8"	
9		w45	1		L3X3X3/16	5	1 3/8"	
10		w56	5		L3X3X1/4	0	6 1/2"	
11		w61	1		HSS4X4X3/16	5	4"	
12		w62	1		HSS4X4X3/16	7	11"	
13		w63	1		HSS4X4X3/16	5	11"	
14		w65	1		HSS4X4X3/16	6	9 5/16"	
15		w101	6		L3X3X3/8	0	3"	
16		wp48	3		FL1/4"X4"	0	4"	
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TOTAL FIELD BOLTS IN THIS SHEET  
10-ØX Ø BOLTS W/ N&W

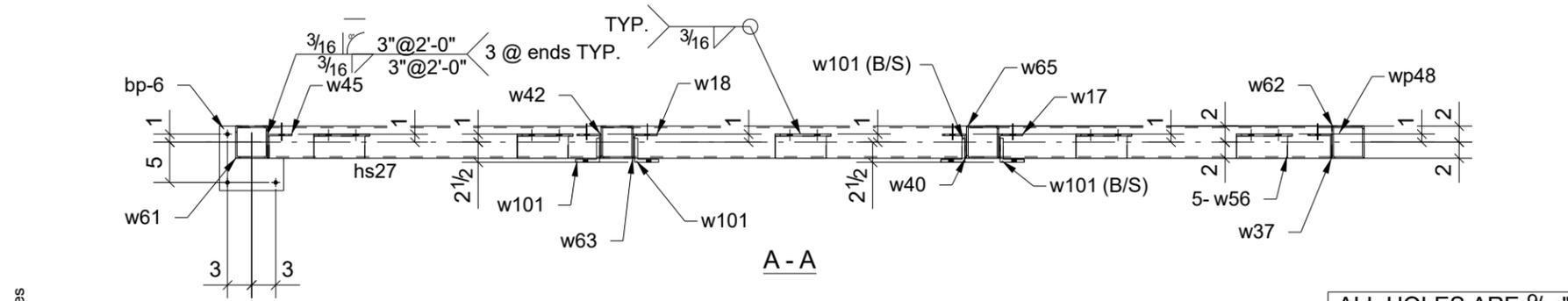


- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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REPRODUCTION OR FABRICATION FROM THIS DRAWING IS NOT PERMITTED WITHOUT WRITTEN PERMISSION FROM

ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH.No.	BLVD
FABRICATION		CONTRACTOR:			SC8
JOB USE					

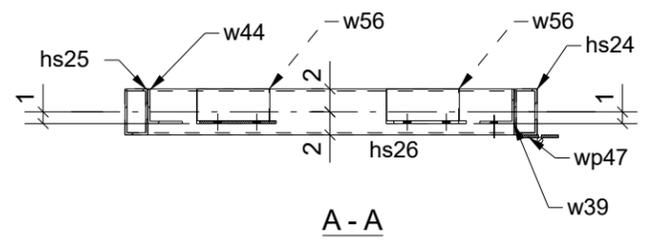
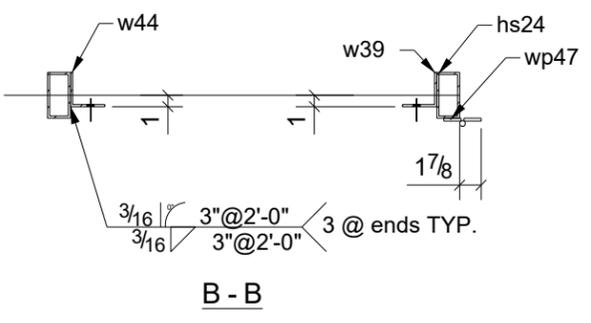
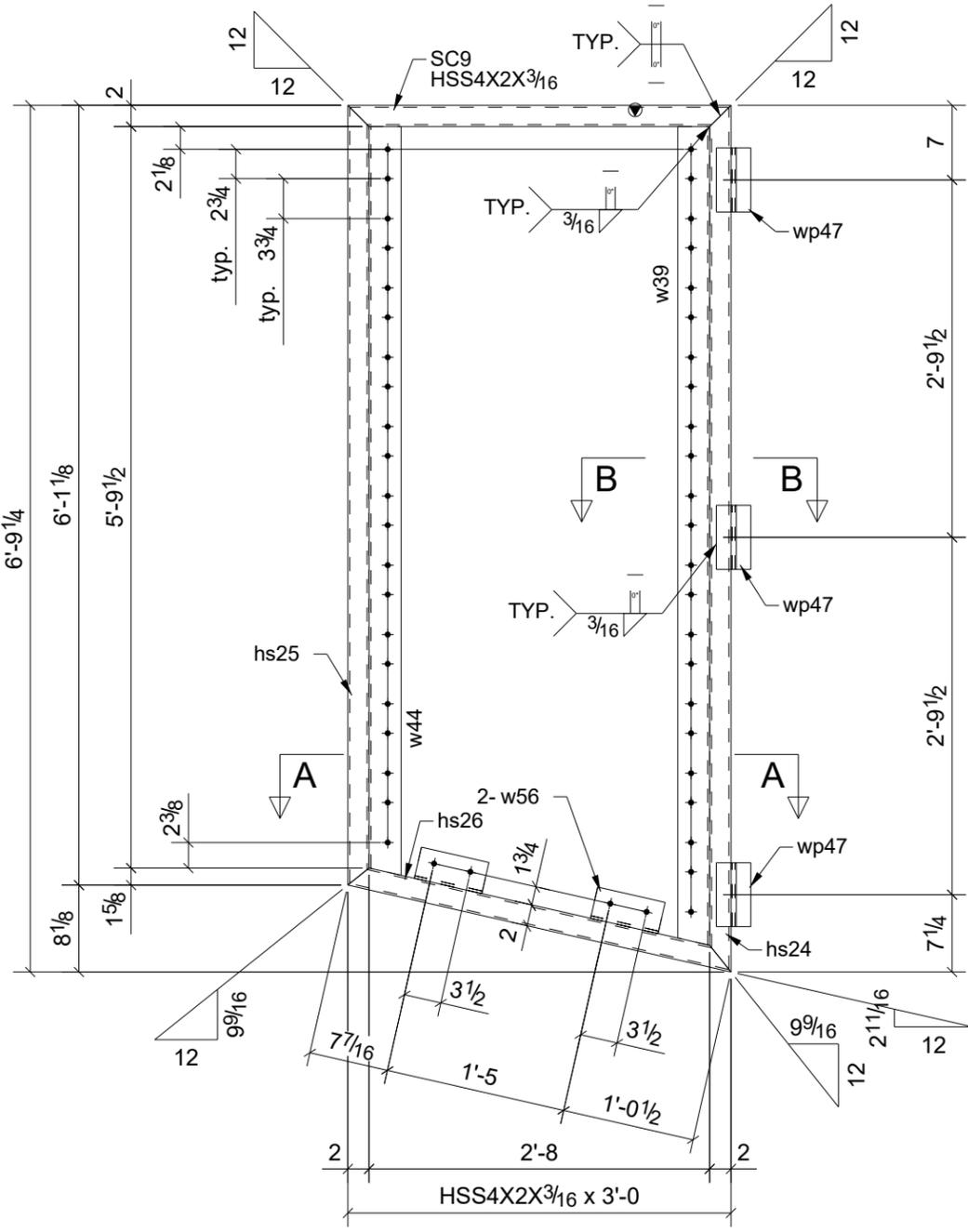


ONE - SCREEN WALL - SC8

ALL HOLES ARE 9/16" Ø U.N.O.

Tekla structures  
FINISH NOTE:  
MILL FINISH-CLEAR COAT

0	ISSUED FOR FABRICATION	08/FEB/2016
REV	DESCRIPTION	DATE



BILL OF MATERIALS								
SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	SC9		1		HSS4X2X3/16	3	0"	
2		hs24	1		HSS4X2X3/16	6	9 1/4"	
3		hs25	1		HSS4X2X3/16	6	1 1/8"	
4		hs26	1		HSS4X2X3/16	3	0 15/16"	
5		w39	1		L3X3X3/16	6	4 3/4"	
6		w44	1		L3X3X3/16	5	10 3/16"	
7		w56	2		L3X3X1/4	0	6 1/2"	
8		wp47	3		SELF CLOSING HINGE	0	6"	
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TOTAL FIELD BOLTS IN THIS SHEET  
4-ØX 0 BOLTS W/ N&W

- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
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ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH.No.	BLVD
FABRICATION		CONTRACTOR:			SC9
JOB USE					

ALL HOLES ARE 9/16" Ø U.N.O. ONE - SCREEN WALL - SC9

Tekla structures  
FINISH NOTE:  
MILL FINISH-CLEAR COAT

0	ISSUED FOR FABRICATION	08/FEB/2016
REV	DESCRIPTION	DATE

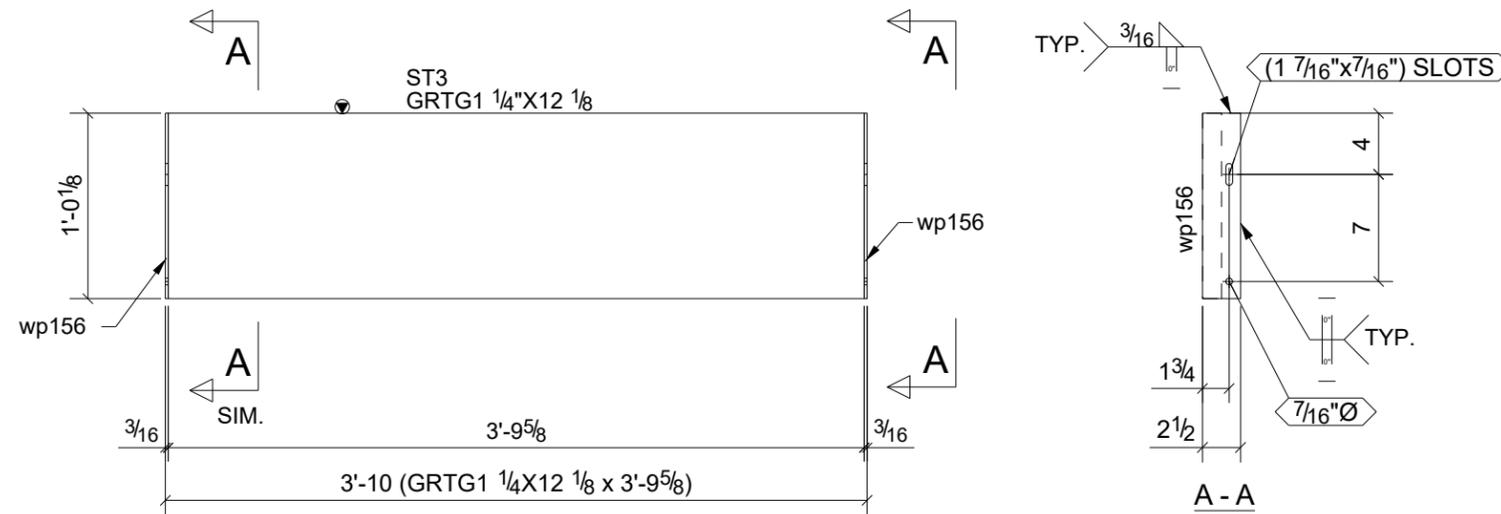




**BILL OF MATERIALS**

SHIP SEQ	SHIP MARK	SHOP MARK	QUAN	SHAPE	DESCRIPTION	LENGTH		REMARKS
						FEET	INCH	
1	ST3		18		GRTG1 1/4"X12 1/8"	3	9 5/8"	
2		wp156	36		FL3/16"X2 1/2"	1	0 1/8"	
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TOTAL FIELD BOLTS IN THIS SHEET



- SHOP NOTES:
- 1.) WIDE FLG. MAT'L ASTM A992 GR.50 U.N.; OTHER MAT'L ASTM A36 U.N.; PIPE MAT'L A53, GRADE B U.N.; SQ. HSS MAT'L ASTM A500 GR.B U.N.
  - 2.) HOLES 13/16"Ø TYP. U.N.O. FIELD BOLTS ARE 3/4"Ø-N TYPE 1 U.N.O
  - 3.) SHOP BOLTS AT CONNECTION ANGLES ARE 3/4" PRE-TENSION ASTM F1852 TWIST OFF TENSION CONTROL TYPE
  - 4.) 13/16"ØX1" SLOTS PARALLEL WITH O.S. LEG IN ALL ANGLES MARKED WITH b.k. OR m
  - 5.) A.W.S. QUALIFIED WELDERS REQ'D (E70 ELECTRODES/FILLER METAL) (SMAW-FCAW-GMAW PROCESSES)
  - 6.) ULTRASONIC TESTING REQUIRED ON ALL FULL PENETRATION WELDS. (BY INDEPENDENT LAB.)

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ISSUED FOR APPROVAL	DATE	PROJECT:	BLVD PUB & GRUB	DRAWN	DATE
RESUBMITTAL		LOCATION:	WEST FARGO ND	JOB No.	
PURCHASING		ENGINEER:	CHRIS HAWLEY ARCHITECTS	SH No.	BLVD
FABRICATION		CONTRACTOR:			ST3
JOB USE					

**18 - STAIR TREADS - ST3**

Tekla structures

FINISH NOTE:  
MILL FINISH w/ CLEAR POLY COAT

0	ISSUED FOR FABRICATION	08/FEB/2016
REV	DESCRIPTION	DATE