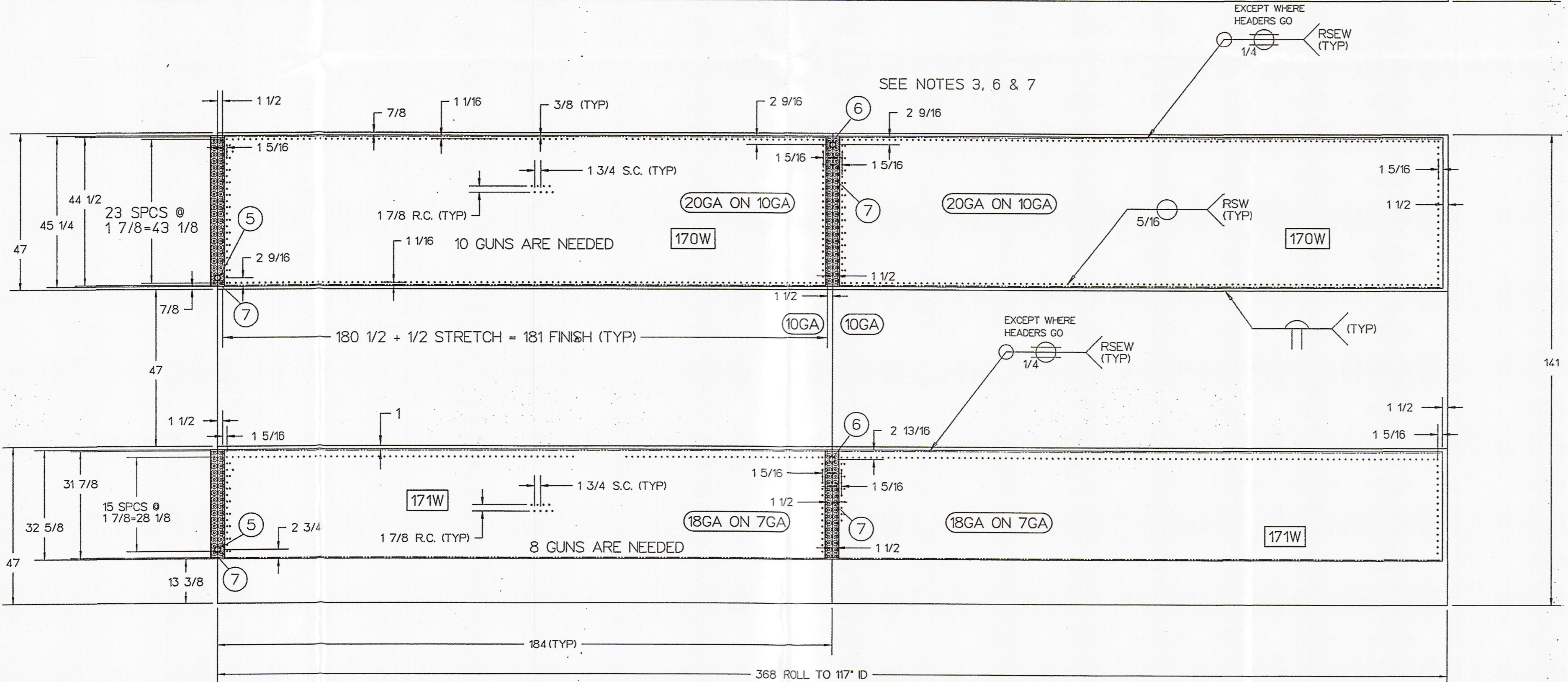
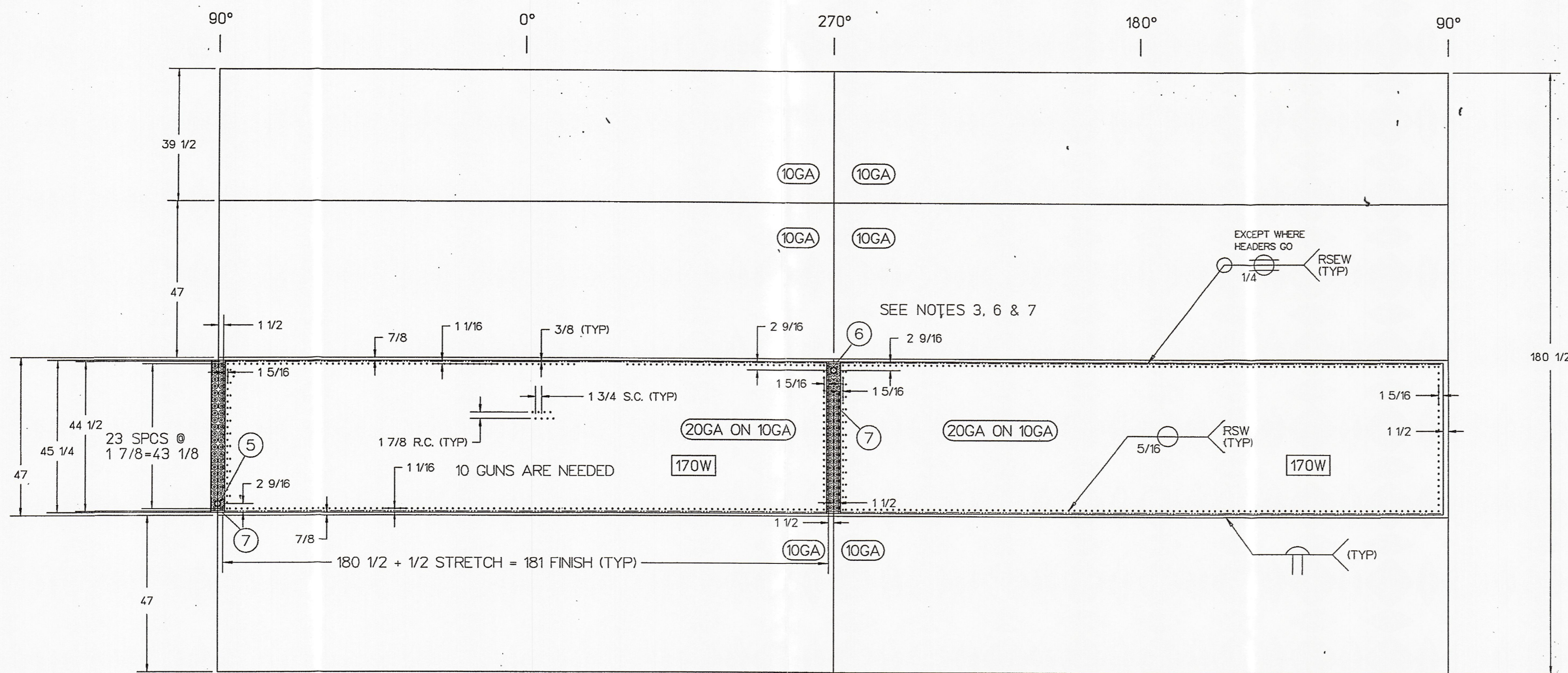


CUST. NO.	ITEM NO.	NO. REQ'D	PART NO.	DESCRIPTION	DRAWING NO.
	1			SHELL ASSY 10GA 304 S/S W/20GA INFLATED TEMP-PLATE UPPER BANDS	FP14890 D
	1	4		AND 7GA 304 S/S W/18GA INFLATED TEMP-PLATE LOWER BAND	
	2			SHELL BAND 10GA 304 S/S W/20GA INFLATED TEMP-PLATE 47" WIDE	
	3			SHELL BAND 7GA 304 S/S W/18GA INFLATED TEMP-PLATE 47" WIDE	
	4	1		SHELL 117" ID X 180.5" LG 10GA W/ 20GA T/P 304 S/S UPPER SECTION	
	5	3	9801781	SHELL 117" ID X 141" LG 10/7GA W/ 20/18GA T/P 304 S/S LOWER SECTION	
	6	3	9801781	NIPPLE 304 S/S 1.5" NPT X 6" LG SCH 40 TOE (INLET)	
	7	6	9900872	NIPPLE 304 S/S 1.5" NPT X 6" LG SCH 40 TOE (OUTLET)	
				HEADER DIMPLED DBL FLOW 14GA 304 S/S	9900872 B



- NOTES-**
- ALL DIMENSIONS ARE IN INCHES UNLESS SPECIFIED OTHERWISE.
 - MAX HYDROSTATIC INFLATION PSI 18/7 GA - 997. 20/10 GA - 520.
 - INSTALL FITTINGS PER 9000728C DET B.
 - SUITABLE PRESSURE RELIEF VALVE MUST BE INSTALLED BY CUSTOMER FOR HEAT TRANSFER OPERATION.
 - TEMP-PLATE SURFACES TO BE POLISHED IN SHEET POLISHER TO REMOVE HEAT TINT.
 - RESISTANCE SPOTS ADJACENT TO HEADERS ARE TO BE IN A STRAIGHT LINE AS SHOWN.
 - INFLATE THRU HEADERS?
YES- FOR 20GA ON 10GA.
NO-- FOR 18GA ON 7GA.
 - FOR DYE TEST REQUIREMENTS SEE PROCEDURE 103.

CERTIFIED CORRECT AND RELEASED FOR FABRICATION

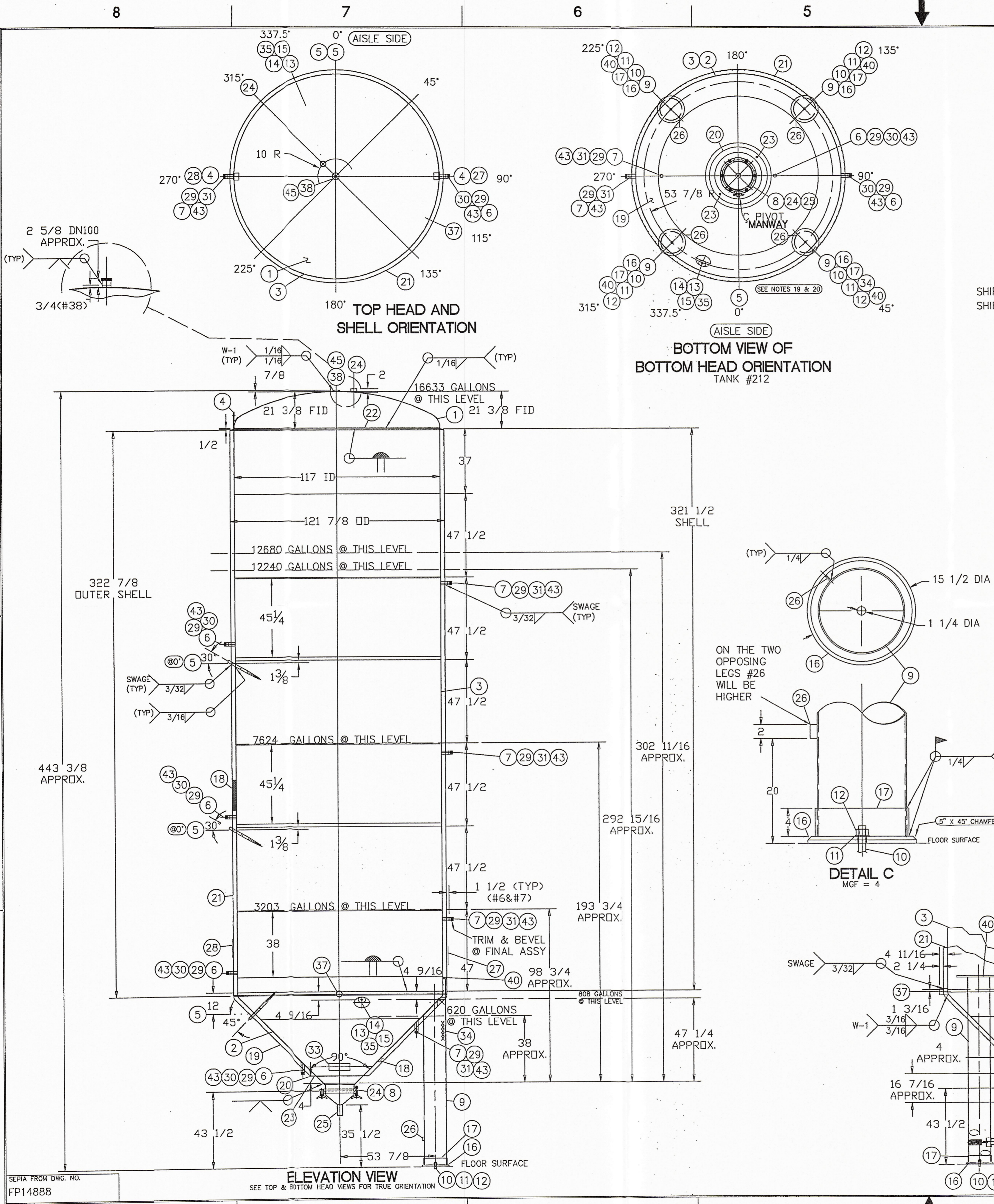
FABRICATION WILL BE IN ACCORDANCE WITH THIS DRAWING. ANY FURTHER CHANGES WILL BE REVIEWED FOR COST AND DELIVERY ADJUSTMENTS.

PAUL MUELLER COMPANY

TEST PLATE NO:	MS-332(20/10), MA-735A(18/7)
TEMP-PLATE TYPE:	<input checked="" type="checkbox"/> INFL. <input type="checkbox"/> DIMPLED <input type="checkbox"/> DIEFORMED
ROW AND SPOT SPACINGS ON INFLATED TYPE CANNOT EXCEED 1/8" MORE THAN DIMENSIONS SHOWN ON THIS DRAWING FOR ASME EQUIPMENT. (REF. SECT. VIII, DIV. 1, APX. 17.)	
MACHINE NO'S: SPOT WELDS	SEAM WELDS
PROTECTIVE PAINT:	
SURFACES TO BE PAINTED:	
TRIM EDGES:	<input type="checkbox"/> ENDS ONLY <input type="checkbox"/> ALL EDGES
MATERIAL FINISHES	WELD FINISHES
INTERIOR 2B	FINE GRIND #4
EXTERIOR 2B	AS IS (AI)
<input type="checkbox"/> ASME 'U' STAMPED <input type="checkbox"/> ASME DESIGNED (No Stamp)	<input checked="" type="checkbox"/> NON ASME <input type="checkbox"/> ASME MATERIAL & WELDING (No Stamp)
SPECIFICATIONS	TOP HEAD SHELL BTM HEAD
DESIGN PRESSURE PSI	100
DESIGN TEMP. ° F	100
MAX. HYDROSTATIC INFLATION PSI	NOTE 2
HYDROSTATIC TEST PSI	130
MAX. PNEUMATIC INFLATION PSI	---
PNEUMATIC TEST PSI	---
FILLOW DEPTH INCHES	.100
HEATING MEDIUM	NONE
COOLING MEDIUM	GLYCOL
DEHYDRATION (per S.O.P. 23-6)	NO
TEMP-PLATE CONTACT AREA (SF.)	301.04
TEMP-PLATE VOLUME CU.FT.	1.80
QUANTITY:	ONE (1) PER ASSEMBLY

ALL MATERIALS OR COMPONENT PARTS CALLED OUT ON THIS DRAWING SHALL BE AS SPECIFIED OR APPROVED EQUAL.			
DRAWN BY	D. POWELL	SALES ORDER/MODEL(S)	349403
DATE	03/22/06		-1-4
REVIEWED BY	J. MINOR	SCALE	1/16" = 1"
DATE	03/22/06	SIZE	16,600 GAL
CHANGED WELD FINISH TYPES* SYM. CHANGE BY DATE		TDM 05/19/06 BY DATE	
REVISIONS			
TITLE INNER SHELL AND TEMP-PLATE ASSEMBLY			DRAWING NO. FP14890 D

SEPIA FROM DWG. NO. FP13087



CUST NO.	ITEM NO.	NO. REQ'D	PART NO.	DESCRIPTION	DRAWING NO.
	1	1	V02	TANK ASSY 16,600 GAL MODEL "F" FERMENTER	FP14913 D
	1	1	H02/101	HEAD TOP 10GA 304 S/S ASME F&D 8"KR 1"SF	
	2	1	H52	HEAD ASSY BOT INNER 7GA 304 S/S 90° CONE 2"KR, 1.5"SF W/18GA 304 S/S INF. T-PL	FP14913 D
	3	1	S01/S02	SHELL ASSY 10GA 304 S/S W/20GA 304 S/S INFLATED TEMP-PL UPPER BANDS AND 7GA 304 S/S W/18GA 304 S/S INFLATED TEMP-PL LOWER BAND	FP14913 D
	4	2	9901259	LUG LIFTING ASSY SVW S/S .25 & .25"THK 304 MATL. 9000# CAPACITY	9000480 B
	5	3	9824639	WELL ASSY THERM .75"NPT 316L S/S OAL 20.625"	
	6	4	(REF)	CONN TP-PL INLET 1.5" 304 S/S SCH 40 PIPE 6"LG TOE(9801781)	FP14913 D
	7	4	(REF)	CONN TP-PL OUTLET 1.5" 304 S/S SCH 40 PIPE 6"LG TOE(9801781)	FP14913 D
	8	1	750P294433	MANWAY ASSY MC10 16"ID 304 S/S (REDHOOK STYLE)(REF. 750P294433)	
	9	4	109	LEG 12" 304 S/S SCH 10 PIPE	9000263 B
	10	4	CUST FURN	TIE DOWN BOLT 1-8NC (CUSTOMER SUPPLIED/INSTALLED)	
	11	4	CUST FURN	WASHER FLAT 1" (CUSTOMER SUPPLIED/INSTALLED)	
	12	4	CUST FURN	NUT HEAVY HEX 1-8NC (CUSTOMER SUPPLIED/INSTALLED)	
	13	1	9803210	TRYCOCK PERLUCK .25" 316 S/S F-27805-SS	9900633 A
	14	1	9802383	GASKET FIBER PERLUCK F-11284-1	9900633 A
	15	1	9802384	ADAPTER WELD IN .25" 304 S/S	DETAIL D
	16	4	116W164563	BASE PLATE 1"THK 15.5"OD W/1.25"ID 304 S/S	
	17	4	117W164563	LEG COLLAR 304 S/S .25"THK X 4"HIGH W/12.875"ID	
	18	A/R	9902473	INSULATION 2" URETHANE 2' X 4' GROOVED	
	19	1	119	HEAD OUT BOT 12GA 304 S/S 90° CONE 2"KR 1"SF	
	20	1	9827623	RING ENCLOSURE .1875" NOM 304 S/S 35.8125"OD X 26.8125"ID	
	21	2	921W294433	JACKET SECTIONS 12GA 304 S/S	
	22	1	9827637	BREAST RING 14GA 304 S/S	9000582 C
	23	2	9901490	VENT ASSY JACKET 1" DIA 304 S/S	9901490 A
	24	1	F24	EXTENSION DN80 304 S/S X 2"LG (TOP HEAD)	
	25	1	751P294433	TUBE 3"OD X .065"W 304 S/S POLISHED ID 6"LONG (OUTLET)	
	26	4	126W164563	LUG LEVELING .25"THK 304 S/S 1"W X 2"LG	
	27	1	3743	PLATE NAME PROCESS 2.175" X 9.5" 22GA 304 S/S	
	28	1	9803082	PLATE DATA MUELLER FOIL 3.75" X 5.25" X .003"THK W/PRESSURE	
	29	8	9808631	LABEL CAUTION USE BACKUP WRENCH 3" X 2" LABEL BLUE W/WHITE LETTERING	
	30	4	9901403	LABEL "IN" .5" X 1.5" SILVER W/BUE LETTERING POLY-STIK-S .005"THK	
	31	4	9901404	LABEL "OUT" .5" X 1.5" SILVER W/BUE LETTERING POLY-STIK-S .005"THK	
	32	1	9900380	ENVELOPE ASSY INSTRUCTION SINGLE WALL TANK	
	33	1	9900362	PLATE WARNING "PRESSURE" 316 /316L S/S 3.5"X2"X 16GA THK	
	34	1		PERMANENT STAMPED SERIAL NUMBER	
	35	1	9827639	RECESS COLLAR 7GA 304 S/S W/3"ID	9900064 A
	36				
	37	1	137W164563	PIPE STUB 3"SCH 10 304 S/S BEVEL END	
	38	1	F38	EXTENSION DN100 304 S/S 4.179"OD X 2"LG (TCP HEAD)	
	39				
	40	4	140W164563	CAP LEG SUPPORT 1"THK X 2" X 25"LG 304 S/S	DETAIL B
	41				
	42				
	43	8	9824549	LABEL ATTENTION "CUSTOMER" 1.75"X3.5"X.005"THK MYLAR W/3M#468	
	44	1	153W164563	LEG HOLDING JIG FOR REDHOOK 16,600 GAL TANKS	FP08723 C
	45	1		FITTING METRIC 304 S/S (CUSTOMER SUPPLIED DN100-TOP HEAD)	
	46	A/R	9808680	INSULATION 2"THK ALUMINA SILICA 6# DENSITY THERMAL CERAMIC FIBER	

- NOTES:**
- ALL MATERIALS OR COMPONENT PARTS CALLED OUT ON THIS DRAWING SHALL BE AS SPECIFIED "OR APPROVED EQUAL." DIMENSIONS, UNLESS OTHERWISE INDICATED, ARE NOMINAL AND STANDARD SHOP TOLERANCES ARE TO BE EXPECTED. (ENPE 222) MEASUREMENTS FOR ANY FIELD ATTACHMENTS SHOULD BE VERIFIED ON SITE BY OTHERS BEFORE FABRICATION OF THE ATTACHMENTS.
 - CORROSION DISCLAIMER**
PAUL MUELLER COMPANY IS NOT RESPONSIBLE FOR CORROSION OR SUITABILITY FOR USE OF ANY MATERIAL IN ANY PARTICULAR APPLICATION. THE CORROSION RESISTANCE AND SUITABILITY FOR USE OF A MATERIAL IS DEPENDENT ON OPERATING ENVIRONMENT AND CONDITIONS, CLEANING PRACTICES, AND MANY OTHER FACTORS BEYOND THE CONTROL OF THE EQUIPMENT FABRICATOR. THE USER OF THE EQUIPMENT BEARS TOTAL RESPONSIBILITY FOR CORROSION OR SUITABILITY FOR USE OF ALL MATERIALS IN THEIR PARTICULAR APPLICATION.
 - ALL FLANGES WILL HAVE BOLT HOLES STRADDLE THE 0°-180° & 90°-270° CENTER LINES, UNLESS SPECIFIED OTHERWISE.
 - VESSEL TO BE VENTED FOR SHIPMENT.
 - ALL DIMENSIONS ARE IN INCHES UNLESS SPECIFIED OTHERWISE.
 - ALL WELD SIZES ARE MINIMUM AFTER GRINDING.
 - SUITABLE PRESSURE RELIEF VALVE MUST BE INSTALLED BY CUSTOMER FOR TEMP-PLATE OPERATION.
 - SUITABLE PRESSURE AND/OR VACUUM RELIEF VALVE MUST BE INSTALLED BY CUSTOMER FOR VESSEL OPERATION.
 - PRODUCT SPECIFIC GRAVITY: 1.0135-1.0960
 - REMOVE HEAT TINT FROM VESSEL INTERIOR WITH SHEET POLISHER.
 - VESSEL DESIGNED FOR SEISMIC ZONE #2A
 - ENTIRE CONE (ITEM #19), LEGS (ITEM #9), FOOT ASSY (ITEM #17), FOOT PADS (ITEM #16), AND MANWAY ASSY (ITEM #24) ARE TO BE GLASS BEAD BLASTED (GB).
 - NO ESCUTCHEON PLATES ARE TO BE USED ON THESE TANKS.
 - THESE TANKS ARE LOCATED IN A SHOW AREA. PLEASE USE EXTRA CARE DURING PRODUCTION FOR TOP QUALITY RESULTS.
 - ITEM 42 TO BE ASSY FITTING FOR #36 & 38. CUSTOMER SUPPLIED (METRIC SIZE 304 S/S AND MAILED TO SALES FOR INSTALLATION BY PHCO).
 - STAMP TANK NUMBER AT HINGE POINT ON MANWAY.
 - ITEMS #16 & #17 SHALL BE SHIPPED LOOSE.
 - URETHANE INSULATION TO BE PLACED ON JACKET. INSWOOL INSULATION TO BE PLACED ON BOTTOM CONE.
 - BOTTOM HEAD AND LEGS TO BE INSTALLED TO BOTTOM HALF OF TANK PRIOR TO SHELL WELDING.

MATERIAL FINISHES

INTERIOR	2B/NOTE #11	EXTERIOR	2B/NOTE #13
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WELD FINISHES

INTERIOR	#4
EXTERIOR	BF/NOTE #13

SPECIFICATIONS VESSEL

CODE	NONE
RADIOGRAPHY	Top Head To Shell, Shell, Bottom Head To Shell

HEAT TRANSFER

CODE	NONE
RADIOGRAPHY	Top Head To Shell, Shell, Bottom Head To Shell

DESIGN INFORMATION

DESIGN PRESSURE	15 PSF	DESIGN TEMP.	100 °F
HYDRO TEST PRESSURE	0 PSF	DESIGN VOLUME	.1445 CU. FT.
DESIGN PRESSURE	100 PSF	HEAT TRANSFER INFORMATION	
TEST PRESSURE	130 PSF	DESIGN TEMP.	100 °F
MEDIUM	NONE / GLYCOL	VOLUME	

EST. EMPTY WEIGHT = 13200 LBS
SCALE 1" = 32" (DO NOT SCALE THIS DRAWING)

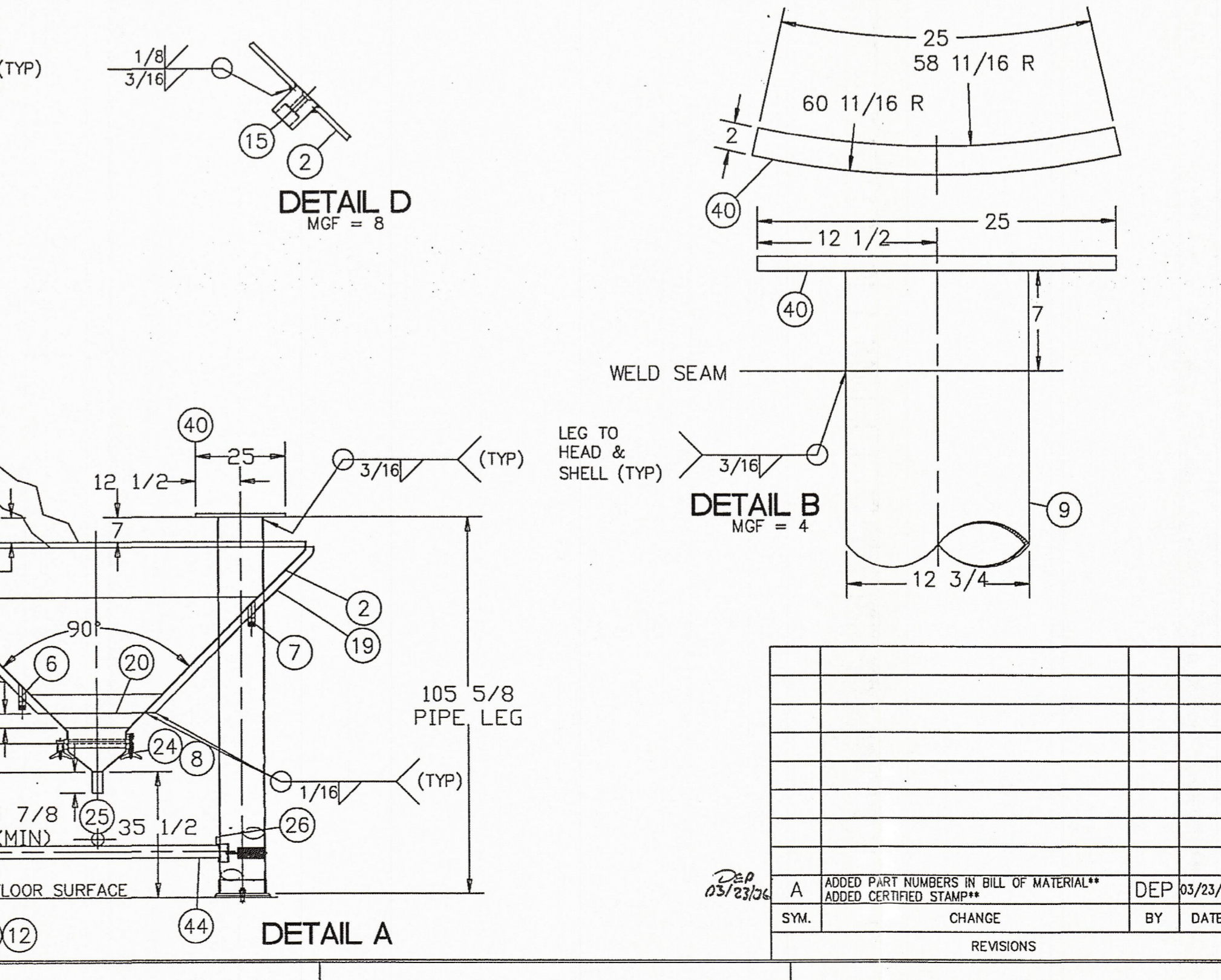
DRAWN BY	R. HUGHES	DATE	02/20/06
REVIEWED BY	D. POWELL	DATE	02/22/06
REVIEWED BY		DATE	
APPROVED BY		DATE	

SOLD TO: REDHOOK ALE BREWERY
ADDRESS: PORTSMOUTH, NH
CUSTOMER ORDER NO.: 35061
TITLE: 16,600 GAL MODEL "F" CONE BOTTOM FERMENTER
QUANTITY: THREE

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MUELLER
P. O. BOX 828 / SPRINGFIELD, MISSOURI 65801-0828, U.S.A.

SALES ORDER & SERIAL NO.	DRAWING NO.
349403-2THRU-4	FP14913



SEPIA FROM DWG. NO. FP14888

ELEVATION VIEW
SEE TOP & BOTTOM HEAD VIEWS FOR TRUE ORIENTATION

SYMBOL	ADDED PART NUMBERS IN BILL OF MATERIAL**	DEP	03/23/06
	ADDED CERTIFIED STAMP**	BY	DATE
	CHANGE		
	REVISIONS		