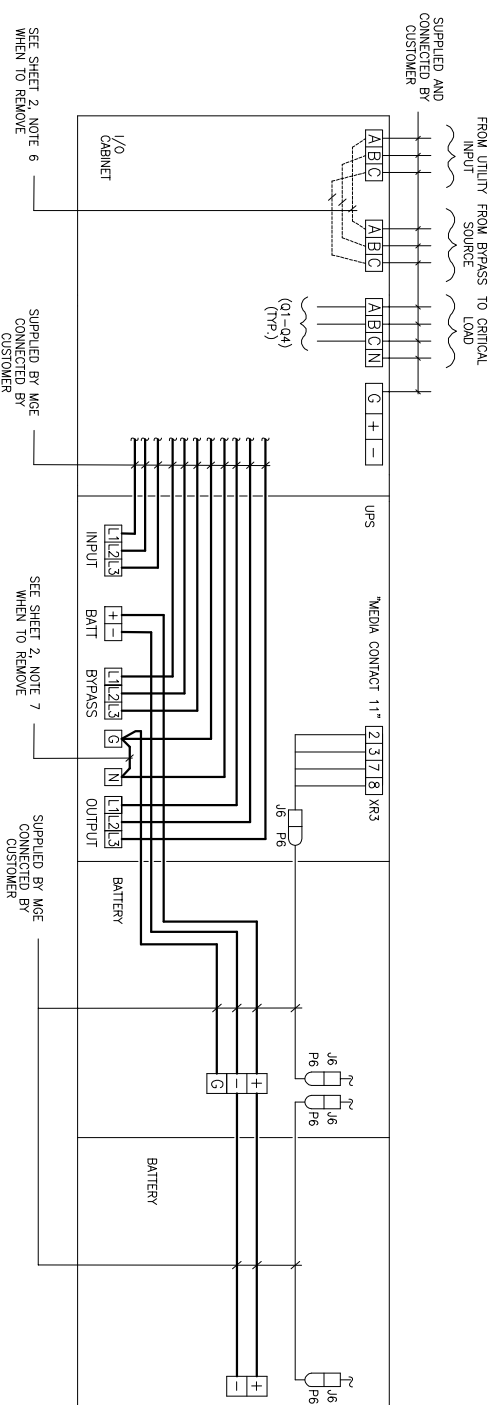
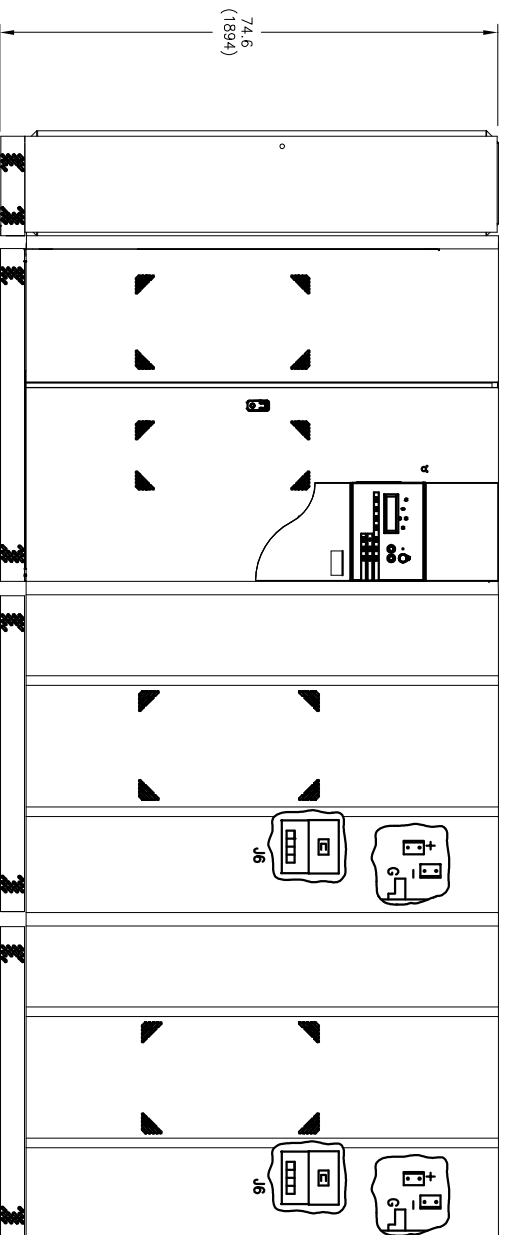
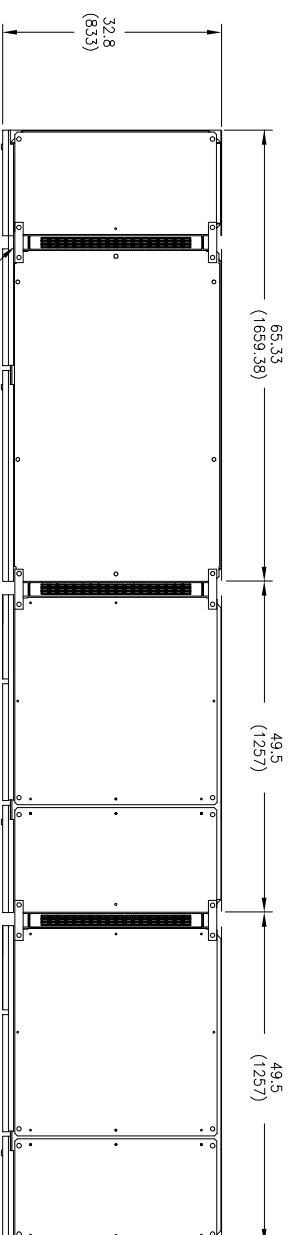


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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A00	NEW RELEASE	08-15-03	KJK

CUSTOMER IS RESPONSIBLE FOR CONNECTING ALL MGE SUPPLIED CABLES. BATTERY CABLE VOLTAGE DROP SHALL BE KEPT TO LESS THAN 0.5VDC BASED ON QF1 RATING.

NOTES: UNLESS OTHERWISE SPECIFIED

1. DIMENSIONING FORMAT IS INCHES (mm).
2. ALL DIMENSIONS ARE TO THE OUTSIDE EDGE OF CABINET, EXCLUDING DOOR LOCKS AND ALL HARDWARE.

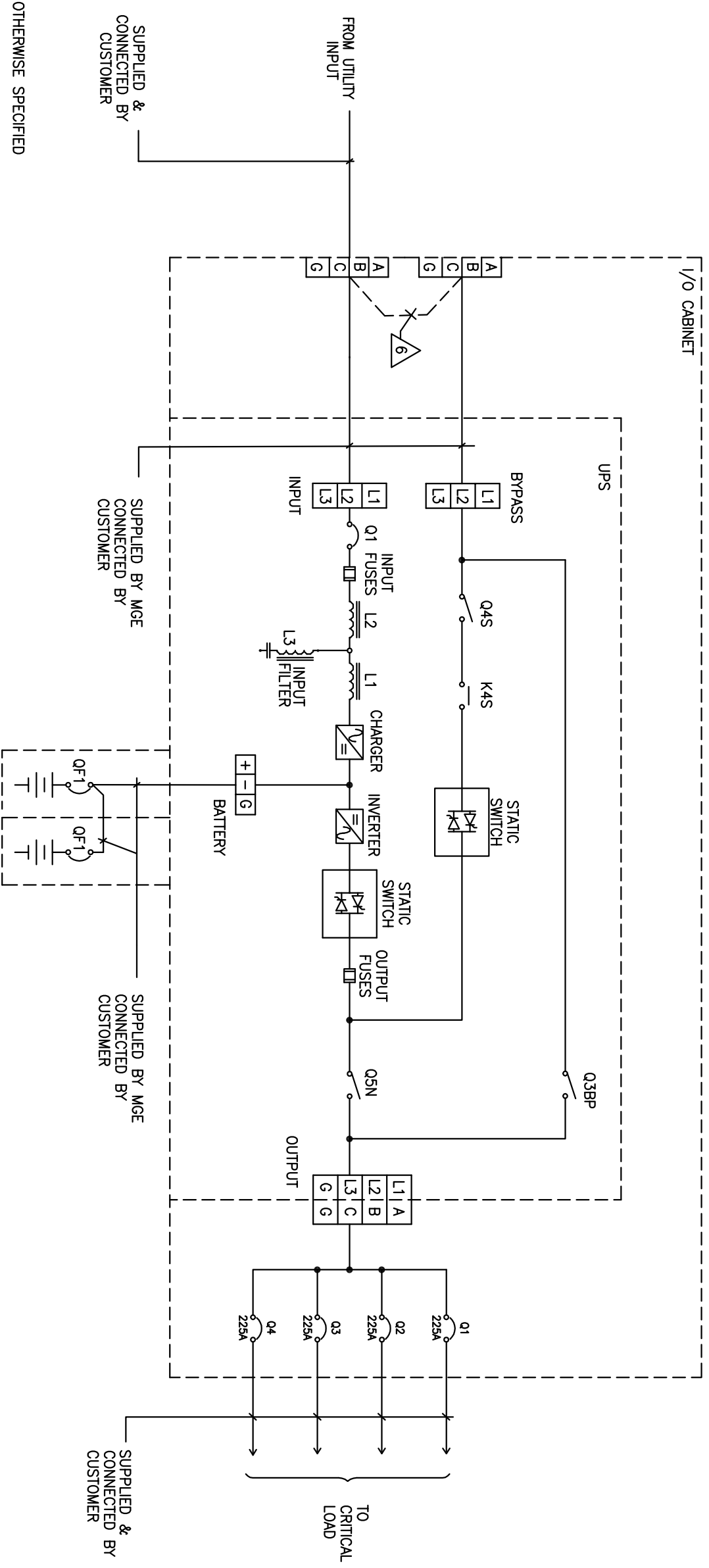
REFER TO SHEET 3 INSTRUCTIONS ON SECURING CABINETS TOGETHER USING HARDWARE PROVIDED.

4. CONTROL WIRING MUST BE ROUTED IN SEPARATE CONDUITS FROM POWER WIRING.
5. GROUND UPS FRAME USING GROUND BUS PROVIDED ACCORDING TO NATIONAL ELECTRIC CODE AND APPLICABLE LOCAL CODES.
6. CABINETS ARE JOINED MECHANICALLY USING COPPER STRAPS WHICH ALSO PROVIDE ELECTRICAL GROUND PATH BETWEEN CABINETS. PROPER ALIGNMENT OF ADJACENT CABINETS AND PROPER INSTALLATION OF THESE STRAPS IS CRITICAL TO A SAFE INSTALLATION. SEE SHEET 3, STEP 6 & 7.

**SYSTEM FEATURE:**

- TOP CABLE ENTRY
- OUTPUT DISTRIBUTION

CONTRACT NO.		<b>MGE</b> UPS SYSTEMS		MGE UPS Systems, Inc. 1660 Scenic Avenue Costa Mesa, CA. 92626	
APPROVALS	DATE	SIZE	FSCM NO.	DWG. NO.	REV.
B.KHLOUSI	08-15-03	B	91985	99-17881-05	A00
CHECKED	YNG	ISSUED	KJK	08-15-03	
SYSTEM INSTALLATION 100-225KVA 480V-480V GALAXY PW		SCALE	NONE	SHEET	1 OF 4



NOTES: UNLESS OTHERWISE SPECIFIED

1. FOLLOW ALL APPLICABLE NEC & LOCAL ELECTRICAL CODES.
2. ALL EXTERNAL WIRING BY OTHERS.
3. INPUT AND BYPASS SHALL NOT BE PROVIDED FROM A CORNER GROUNDED DELTA.
4. POWER & CONTROL CABLES SHALL BE IN SEPARATE CONDUITS.
5. BATTERY CABLE VOLTAGE DROP SHALL BE KEPT TO LESS THAN 0.5VDC BASED ON QF1 RATING.
6. REMOVE THESE JUMPERS WHEN SEPARATE BYPASS INPUT IS PROVIDED. BYPASS SOURCE MUST BE PROTECTED BY UPSTREAM CB OR FUSES AT PROPER RATING AS DETAILED IN SPECIFICATIONS.
7. 4 WIRE-CONNECTED LOAD REQUIRES A 4 WIRE BYPASS SOURCE. FOR THE APPLICATION OF GROUNDED CONDUCTOR (NEUTRAL) AND PROPER GROUNDING, REFER TO SEPARATE MGE DOCUMENT NO. 9110000.000

MODEL NO.	QF1
72-131304-11	250A

9. FOR SYSTEM ELECTRICAL CHARACTERISTICS REFER TO DWG. 90-133106-00.

SIZE	FSCM NO.	DWG. NO.	REV.
B	91985	99-17881-05	A00
SCALE	NONE	SHEET	2 OF 4

## CABINET INSTALLATION INSTRUCTIONS

### AUXILIARY CABINET INSTALLATIONS:

USE THESE INSTRUCTIONS IN CONJUNCTION WITH THE INSTALLATION MANUAL.

NOTE: DO NOT REMOVE THE SIDE PANELS OF THE UPS.

- STEP 1: USE FIGURE 3 TO POSITION THE UPS CABINET.
- STEP 2: REMOVE M16 BOLTS, COPPER STRAPS AND WASHERS FROM THE FIRST AUXILIARY CABINET FOR RE-USE LATER.
- STEP 3: ALIGN THE AUXILIARY CABINET TO THE UPS AS CLOSE AS POSSIBLE. ROUTE ALL POWER AND CONTROL CABLES THROUGH THE SIDE OF THE AUXILIARY CABINET. HORIZONTAL ALIGNMENT OF THE UPS AND AUXILIARY CABINET IS DESCRIBED IN DETAIL IN SHEET 4.
- STEP 4: INSTALL THE GALVANIZED STRAPS PROVIDED WITH THE UPS, ONE IN THE FRONT AND ONE AT THE BACK AS SHOWN IN FIGURE 1, USING THE M16 BOLTS AND WASHERS REMOVED IN STEP 2 AND THE M6 SCREWS PROVIDED WITH THE UPS. TIGHTEN THESE HARDWARE. THE COPPER STRAPS CAN BE DISCARDED.

PROCEED WITH STEP 5 IF THERE ARE MORE AUXILIARY CABINETS.

STEP 5: POSITION THE NEXT AUXILIARY CABINET. HORIZONTAL ALIGNMENT OF THE AUXILIARY CABINET IS DESCRIBED IN DETAIL IN SHEET 4.

STEP 6: ROUTE ALL POWER AND CONTROL CABLES THROUGH THE SIDE OF THE AUXILIARY CABINET.

STEP 7: LOOSEN THE FRONT COPPER STRAP OF THIS AUXILIARY CABINET AND CONNECT THE OTHER END OF THE COPPER STRAP TO THE ADJACENT AUXILIARY CABINET USING THE M16 BOLT REMOVED IN STEP 2. TIGHTEN THESE HARDWARE.

STEP 8: REPEAT STEP 7 FOR THE REAR COPPER STRAP.

### ADJACENT BATTERY CABINET INSTALLATION:

THE PROCEDURE IS SIMILAR TO THE AUXILIARY CABINET PROCEDURE ABOVE.

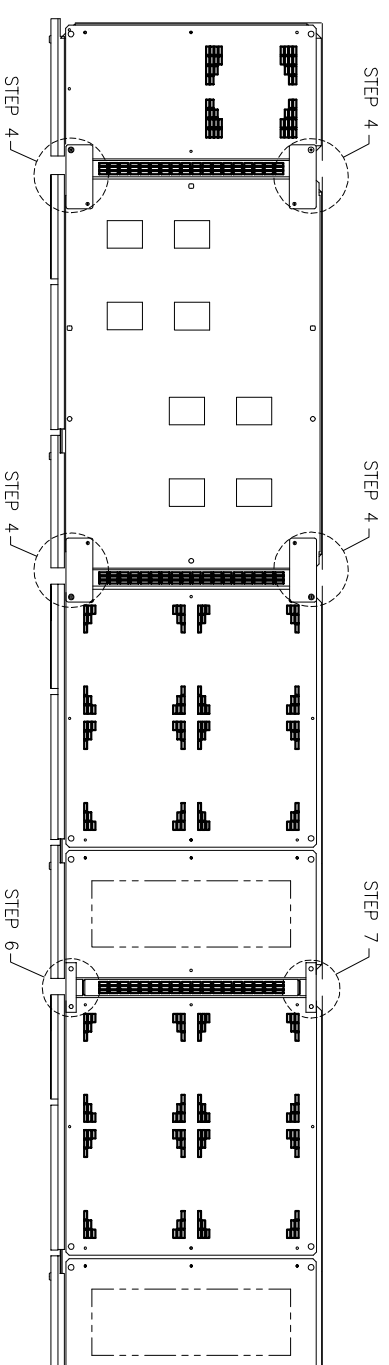


FIGURE-1  
TOP VIEW

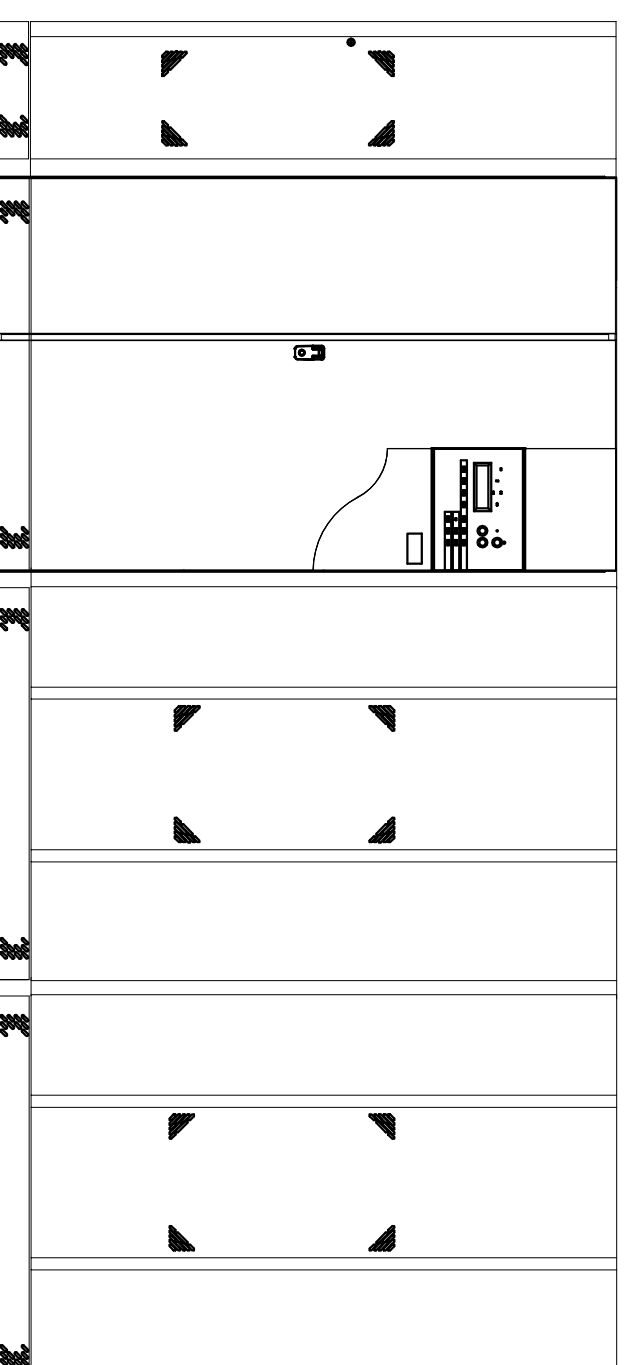


FIGURE-2  
FRONT VIEW

DIMENSIONS										
LEVELER CENTER	A	B	C	D	E	F	G	H	J	U
(32)	1.26	28.99	4.44	44.74	42.35	26.60	2.44	2.61	5.62	13.25
		(736)	(113)	(1136)	(1075.7)	(675.6)	(61.98)	(66.29)	(142.75)	(336.55)
LEVELER TANGENT	M	N	P	Q	R	S	T	V		
(2)	.08	31.43	47.10	44.712	2.00	28.962	1.268	15.69		
		(798.32)	(1196)	(1135.69)	(51)	(735.64)	(32.21)	(398.53)		
OVERALL	L									
(1208)	47.56									

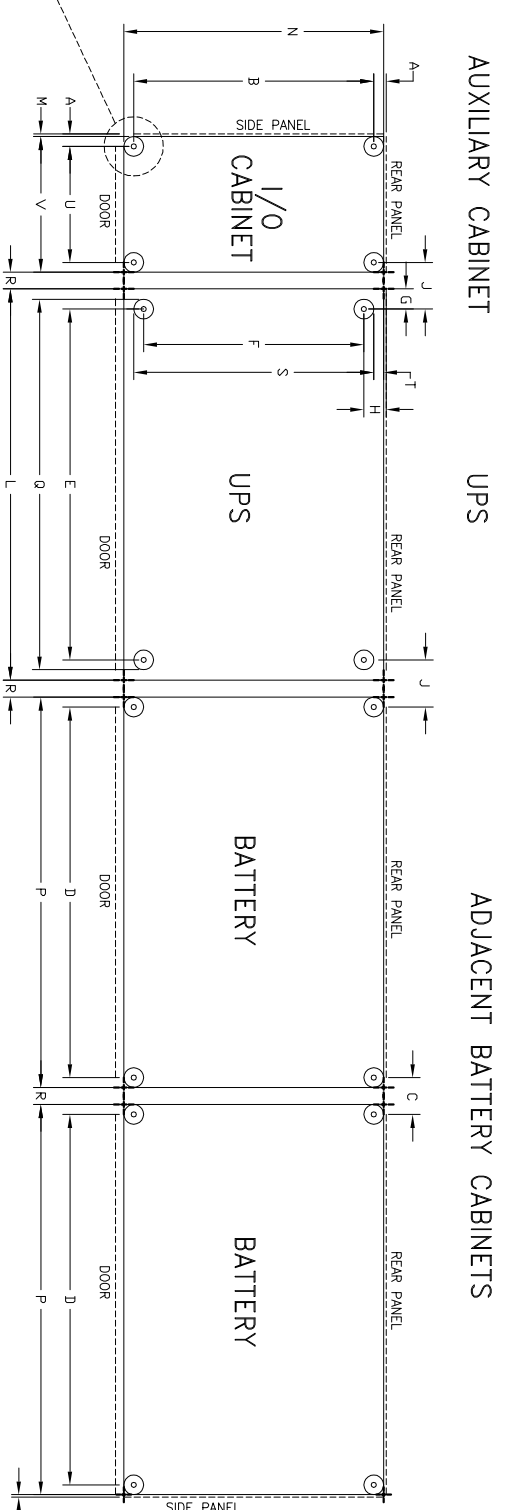
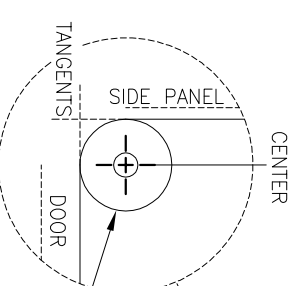
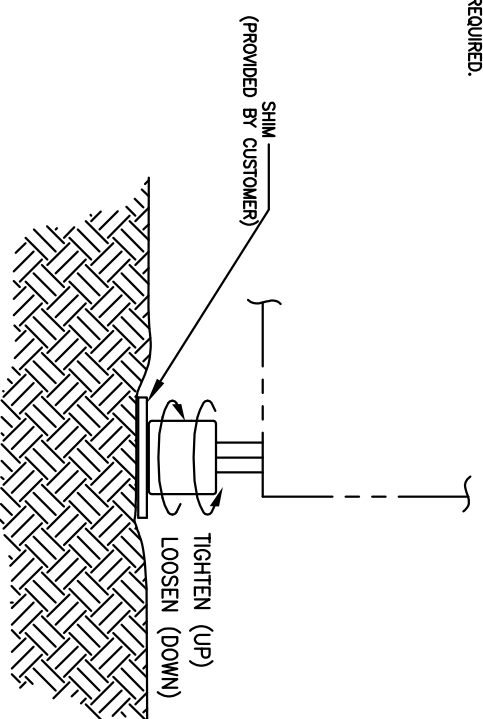


FIGURE-3  
FLOOR LAYOUT



SIZE	FSCM NO.	DWG. NO.	REV.
B	91985	99-17881-05	A00
SCALE	NONE	SHEET	3 OF 4
N99178\881053			

NO. OF TURNS	VERTICAL TRAVEL IN. (mm)
1/4	0.020 (0.5)
1/2	0.034 (1)
3/4	0.059 (1.5)
1	0.079 (2)
2	0.157 (4)
3	0.236 (6)
4	0.315 (8)
5	0.394 (10)
6	0.472 (12)
7	0.5512 (14)



THE VERTICAL DISTANCE BETWEEN THE HIGHEST AND THE LOWEST AREA OF THE FLOOR WHERE THE LEVELERS WILL SET MUST NOT BE MORE THAN 5/8". SHIMS ARE REQUIRED FOR DISTANCES MORE THAN 5/8".

MAXIMUM ALLOWABLE LEVELER TRAVEL = 5/8" (DRAWING IS EXAGGERATED TO SHOW RELATIVE POSITION).

THE LEVELER THAT SITS AT THE HIGHEST LEVEL OF THE FLOOR MUST BE TURNED ALL THE WAY UP TIGHT AGAINST THE LEVELER STEM.

MOVE LEVEL TO EACH CABINET

36" CARPENTER'S LEVEL

SYSTEM LINE-UP  
(MAY BE MORE THAN 2 CABINETS)

LEVELER STEM

**FACTS TO KNOW DURING FLOOR PREPARATION:**

- \* FOR EASE OF CABINET INSTALLATION, IT IS RECOMMENDED THAT FLOOR MUST BE LEVEL (NO GRADE).
- \* TO AVOID USING SHIMS DURING INSTALLATION, PREPARE THE FLOOR FOUNDATION SUCH THAT THE DIFFERENCE BETWEEN THE HIGHEST AND LOWEST PORTIONS OF THE FLOOR OF THE COMPLETE SYSTEM IS NOT MORE THAN 5/8".

**FACTS TO KNOW BEFORE LEVELING:**

- \* DO NOT USE A WRENCH OR ANY TOOL TO TURN THE LEVELERS DURING THE LEVELING PROCESS. A LIFTING DEVICE OR JIG MUST BE USED WHILE TURNING LEVELERS. A PIPE WRENCH MAY ONLY BE USED TO LOOSEN THE LEVELERS FROM THE LEVELER STEM.
- \* MAXIMUM ALLOWABLE LEVELER TRAVEL = 5/8". FOR ADJUSTMENTS OF MORE THAN 5/8" USE A SHIM POSITIONED UNDER THE LEVELER.
- \* THE THREADED PART OF LEVELER STEM ATTACHED TO THE CABINET FRAME IS PROVIDED WITH THREAD-LOCKING COMPOUND TO PREVENT IT FROM TURNING WHEN LEVELERS ARE ADJUSTED.
- \* REMOVAL AND INSTALLATION OF PANELS MAY BE DIFFICULT IF A CABINET IS NOT LEVEL.
- \* TOOL REQUIRED: 36" CARPENTER'S LEVEL

**LEVELING OF AUXILIARY CABINETS OR BATTERY CABINETS ADJACENT TO UPS:**

1. POSITION THE CABINET CLOSE TO THE UPS.
2. ADJUST THE TWO LEVELERS CLOSEST TO THE UPS UNTIL THE TOP OF THIS CABINET IS EVEN WITH THE UPS.
3. WITH A CARPENTER' LEVEL SET ON THE CABINET'S HORIZONTAL FRAME, ADJUST THE OTHER TWO LEVELERS UNTIL THE CABINET IS LEVEL.
4. INSTALL THE GROUNDING STRAPS AS DESCRIBED IN A SEPARATE INSTRUCTION.
5. TIGHTEN ALL STRAP BOLTS AFTER LEVELING IS COMPLETE FOR ALL CABINETS.

SIZE	FSCM NO.	DWG. NO.	REV.
B	91985	99-17881-05	A00
SCALE	NONE	SHEET	4 OF 4