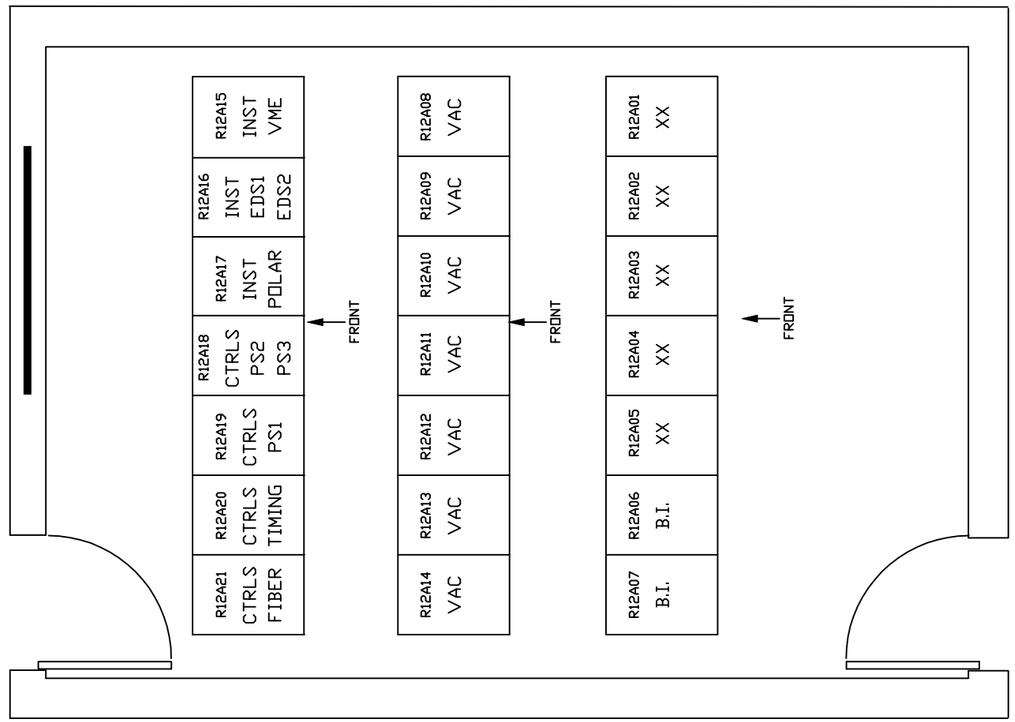
REV.	ZONE	ECN NO.	DATE	BY	CKR	APP.

Schoenfeld, Controls 11/21/2003 2:45 PM 8570.dwg



NOTE

M.E. - MAGNET ELECTRICAL
CTRLS - CONTROLS
VAC - VACUUM
B.I. - BEAM INSTRUMENTATION

-3	-2	-1	REF DESIGNATOR	ITEM NO.	DESCRIPTION	MAT'L DWG NO.,BHL NO.
		1	R12A21	5	RACK R12A21 ASSEMBLY	94028571
		1	R12A20	5	RACK R12A20 ASSEMBLY	94028572
		1	R12A19	4	RACK R12A19 ASSEMBLY	94028573
		1	R12A18	3	RACK R12A18 ASSEMBLY	94028574
				2		
		1		1	RHIC CONTROLS BLDG. 1012A WIRING DIAGRAM	94028579

QTY REQD

INTERPRET IN GENERAL ACCORDANCE WITH ASME Y14.24M-1989

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

DECIMAL TOLERANCES
.X ±NA
.XX ±NA
.XXX ±NA
ANGULAR TOLERANCE
± .5°

OUTSTANDING ECN

NA FINISH

BREAK SHARP EDGES
MAX. XX MIN. XX

Q.A. CATEGORY A-3		DATE
DRAWN BY	Ed Koropsak	6/23/98
CHECKED BY		
DESIGN APPROVAL		
ENGINEER APPROVAL	R. MICHNOFF	6/23/98
SUPVR. APPROVAL		

NEXT ASSEMBLY

BROOKHAVEN NATIONAL LABORATORY
UPTON, N.Y. 11973

RHIC CONTROLS

1012A FLOOR PLAN

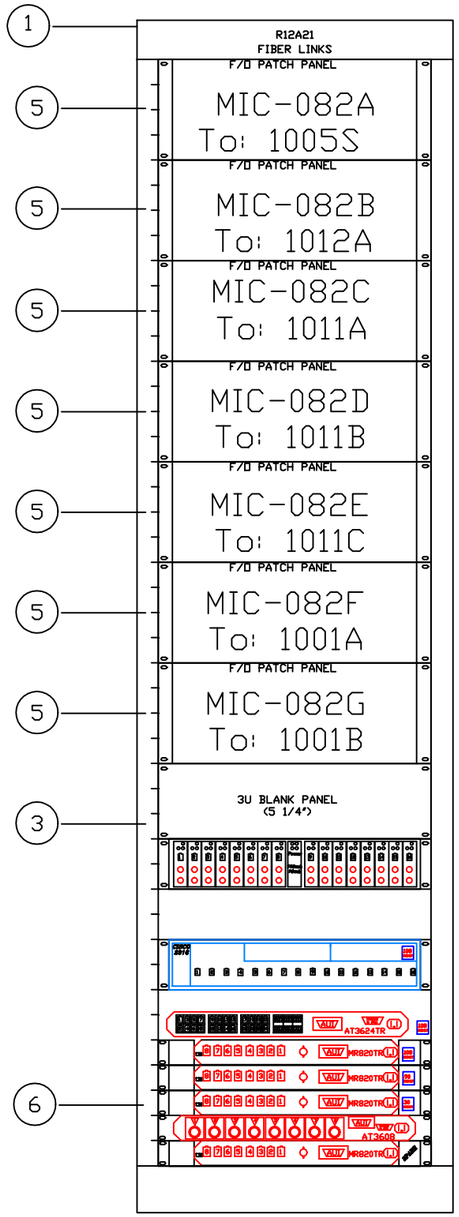
SIZE D | DRAWING NUMBER 94028570 | REV. A

MATERIAL: ——— SCALE: NA WEIGHT: – SHEET 1 OF 1

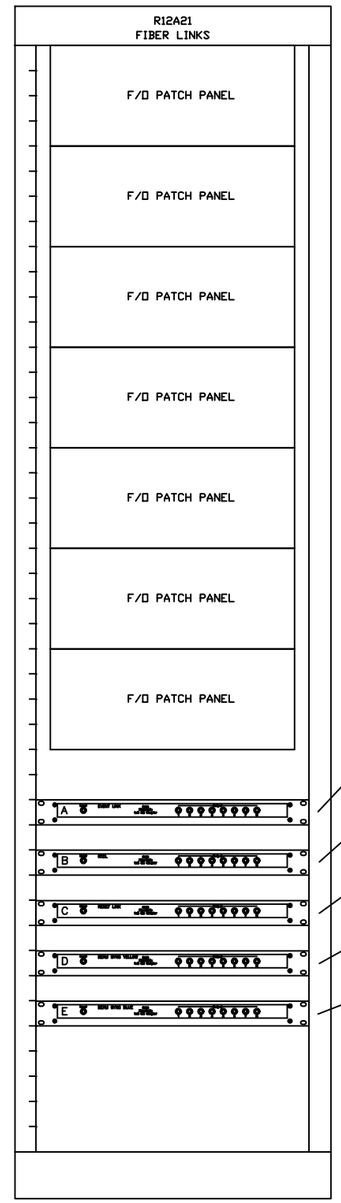
*AUTOCAD

REV.	ZONE	ECN NO.	DATE	BY	CKR	APP.

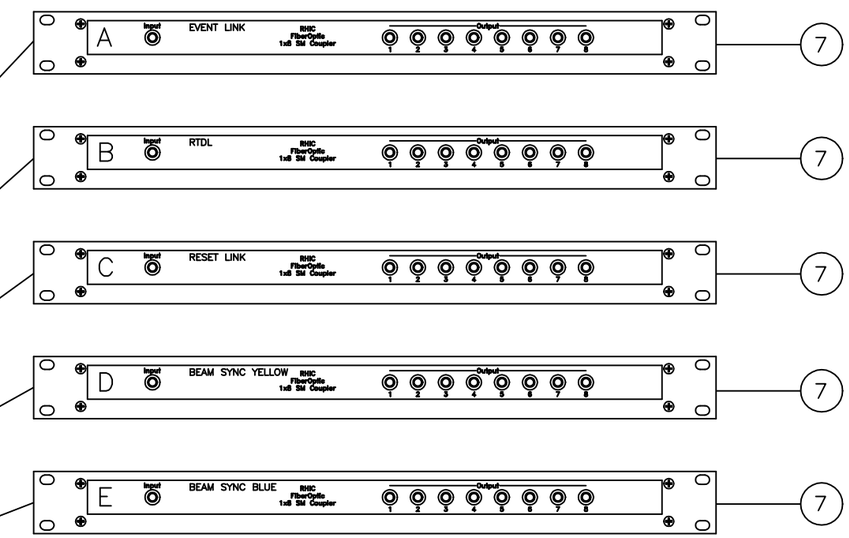
Schoenfeld, Controls 11/18/2003 9:14 AM 8571.dwg



FRONT VIEW



REAR VIEW



QTY REQD -3	QTY REQD -2	QTY REQD -1	REF DESIGNATOR	ITEM NO.	DESCRIPTION	MAT'L. DWG NO.,BNL NO.
		AR	PANELS	8	10-32 x 1/2" BINDING HEAD MACHINE SCREWS	T-32276
		5	A,B,C,D,E	7	1x8 FIBER OPTIC COUPLER	58030006
		3	NA	6	ETHERNET NETWORK REPEATERS	X
		7	NA	5	FIBER OPTIC PATCH PANEL (FONS RIC 72P)	X
		-	NA	4		X
		1	NA	3	3U x 19" BLANK PANEL (PREMIER METAL ARP-519-553)	X
				2		
		1	NA	1	19" RACK, 77" H RACK SPACE	X

INTERPRET IN GENERAL ACCORDANCE WITH ASME Y14.24M-1989

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

DECIMAL TOLERANCES
.X ±.030
.XX ±.015
.XXX ±.005
ANGULAR TOLERANCE ± .5°

NA FINISH

BREAK SHARP EDGES MAX. XX MIN. XX

OUTSTANDING ECN

Q.A. CATEGORY A-3		DATE
DRAWN BY	Ed Koropsak	6/23/98
CHECKED BY		
DESIGN APPROVAL		
ENGINEER APPROVAL	R. MICHNOFF	6/23/98
SUPVR. APPROVAL		
NEXT ASSEMBLY		

BROOKHAVEN NATIONAL LABORATORY
UPTON, N.Y. 11973

RHIC CONTROLS
SERVICE BLDG. 1012A

RACK R12A21 ASSEMBLY

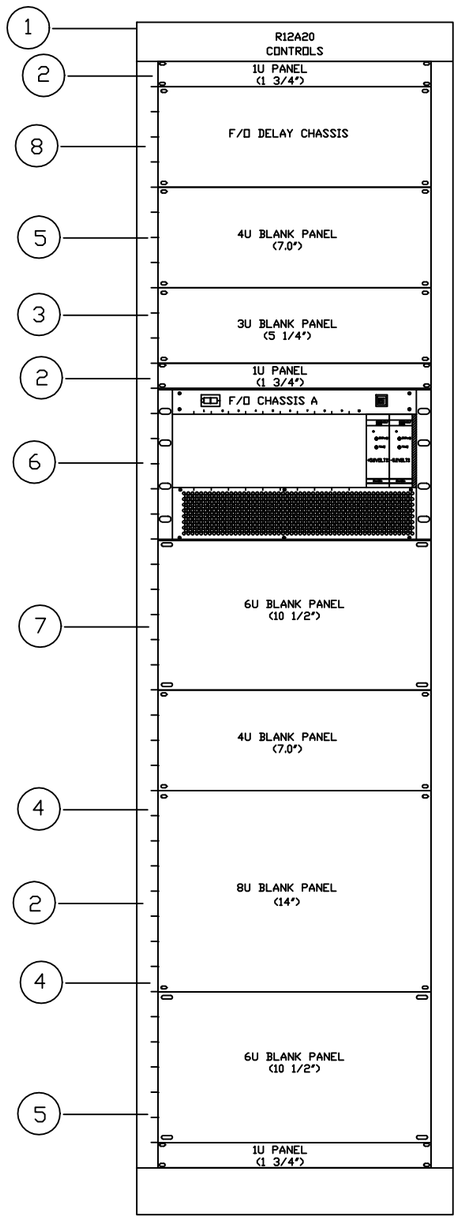
SIZE D | DRAWING NUMBER 94028571 | REV. A

MATERIAL: ——— SCALE: NA WEIGHT: – SHEET 1 OF 1

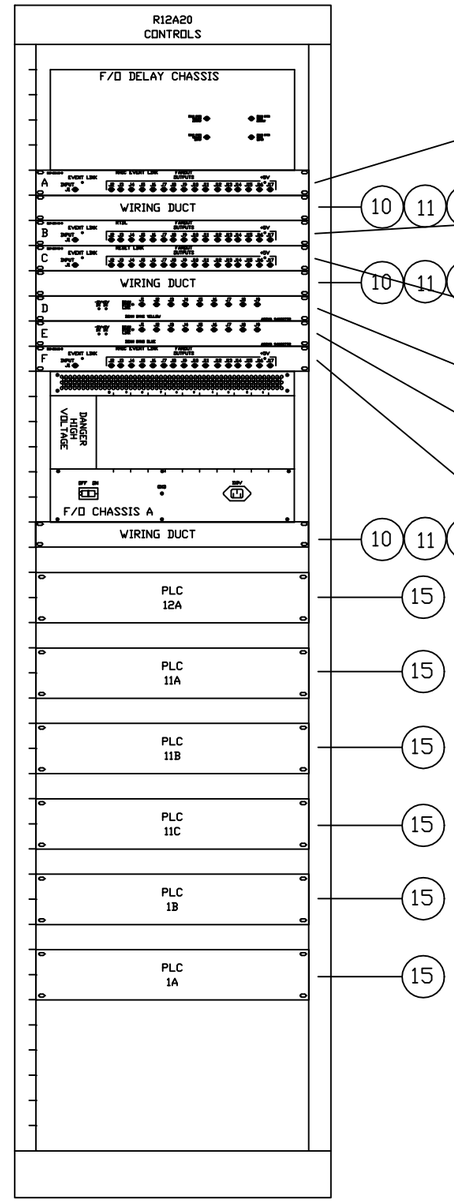
*AUTOCAD

REV.	ZONE	ECN NO.	DATE	BY	CKR	APP.

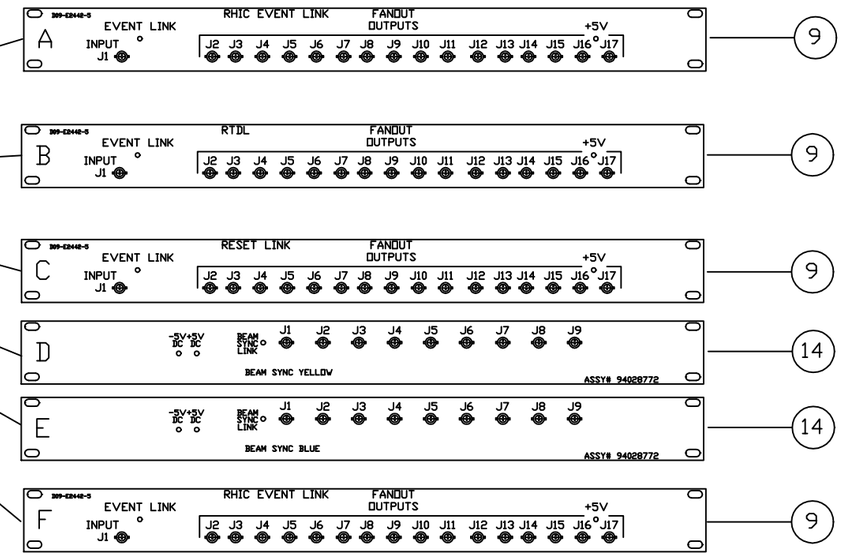
Schoenfeld, Controls 11/21/2003 9:00 AM 8572.dwg



FRONT VIEW



REAR VIEW



QTY REQD -3	QTY REQD -2	QTY REQD -1	REF DESIGNATOR	ITEM NO.	DESCRIPTION	MAT'L. DWG NO.,SPEC. NO.
		6	NA	15	PLC ALAN BRADLY	
		2	D, E	14	ECL FANOUTS	94028772
		AR	PANELS	13	10-32 x 1/2" BINDING HEAD MACHINE SCREWS	T-32276
		6	NA	12	WIRING DUCT SPRING CLIPS 1.5"W (PANDUIT S1.5-C)	X
		3	NA	11	WIRING DUCT COVER 1.5"w (PANDUIT C1.5LG6)	X
		3	NA	10	WIRING DUCT 1.5"W x 4"D (PANDUIT E1.5X4LG6)	X
		4	A,B,C,F	9	FANOUT ASSEMBLY	DD9-E2442
		1	NA	8	FIBER OPTIC DELAY CHASSIS ASSY.	94028277
		1	NA	7	8U x 19" BLANK PANEL (PREMIER METAL ARP-1419-553)	X
		1	NA	6	F/O CHASSIS A	94028575
		2	NA	5	4U x 19" BLANK PANEL (PREMIER METAL ARP-719-553)	X
		2	NA	4	6U x 19" BLANK PANEL (PREMIER METAL ARP-1019-553)	X
		1	NA	3	3U x 19" BLANK PANEL (PREMIER METAL ARP-519-553)	X
		3	NA	2	1U x 19" BLANK PANEL (PREMIER METAL ARP-119-553)	X
		1	NA	1	19" RACK, 77" H RACK SPACE	X

INTERPRET IN GENERAL ACCORDANCE WITH ASME Y14.24M-1989

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

DECIMAL TOLERANCES
.X ±.030
.XX ±.015
.XXX ±.005
ANGULAR TOLERANCE
± .5°

OUTSTANDING ECN

NA FINISH

BREAK SHARP EDGES
MAX. XX MIN. XX

Q.A. CATEGORY A-3

		DATE
DRAWN BY	Ed Koropsak	6/23/98
CHECKED BY		
DESIGN APPROVAL		
ENGINEER APPROVAL	R. MICHNOFF	6/23/98
SUPVR. APPROVAL		

NEXT ASSEMBLY

BROOKHAVEN NATIONAL LABORATORY
UPTON, N.Y. 11973

RHIC CONTROLS

SERVICE BLDG. 1012A

RACK R12A20 ASSEMBLY

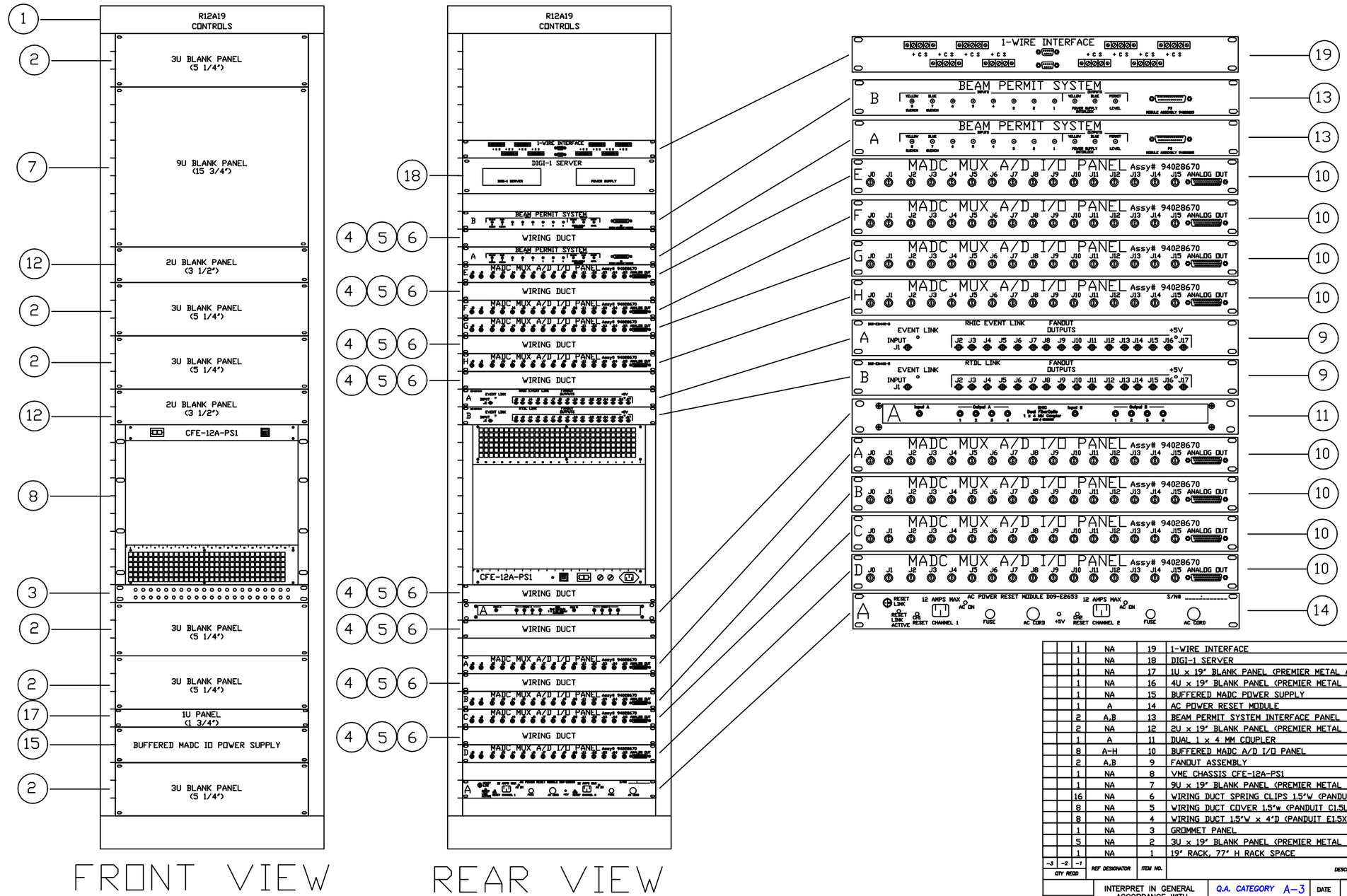
SIZE D | DRAWING NUMBER 94028572 | REV. A

MATERIAL: ——— | SCALE: NA | WEIGHT: – | SHEET 1 OF 1

*AUTOCAD

REV.	ZONE	ECN NO.	DATE	BY	CKR	APP.

Schoenfeld, Controls 11/21/2003 9:37 AM8573.dwg



QTY REQD -3	QTY REQD -2	QTY REQD -1	REF DESIGNATOR	ITEM NO.	DESCRIPTION	MAT'L DWG NO.,BNL NO.
		1	NA	19	1-WIRE INTERFACE	X
		1	NA	18	DIGI-1 SERVER	X
		1	NA	17	1U x 19" BLANK PANEL (PREMIER METAL ARP-719-553)	X
		1	NA	16	4U x 19" BLANK PANEL (PREMIER METAL ARP-719-553)	X
		1	NA	15	BUFFERED MADC POWER SUPPLY	94028808
		1	A	14	AC POWER RESET MODULE	D09-E2653
		2	A,B	13	BEAM PERMIT SYSTEM INTERFACE PANEL	94028215
		2	NA	12	2U x 19" BLANK PANEL (PREMIER METAL ARP-119-553)	X
		1	A	11	DUAL 1 x 4 MM COUPLER	58030008
		8	A-H	10	BUFFERED MADC A/D I/O PANEL	94028670
		2	A,B	9	FANOUT ASSEMBLY	DD9-E2442
		1	NA	8	VME CHASSIS CFE-12A-PS1	94028576
		1	NA	7	9U x 19" BLANK PANEL (PREMIER METAL ARP-1419-553)	X
		16	NA	6	WIRING DUCT SPRING CLIPS 1.5"W (PANDUIT S1.5-C)	X
		8	NA	5	WIRING DUCT COVER 1.5"w (PANDUIT C1.5LG6)	X
		8	NA	4	WIRING DUCT 1.5"W x 4"D (PANDUIT E1.5X4LG6)	X
		1	NA	3	GROMMET PANEL	94028410
		5	NA	2	3U x 19" BLANK PANEL (PREMIER METAL ARP-519-553)	X
		1	NA	1	19" RACK, 77" H RACK SPACE	X

INTERPRET IN GENERAL ACCORDANCE WITH ASME Y14.24M-1989

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

DECIMAL TOLERANCES
.X ±.030
.XX ±.015
.XXX ±.005
ANGULAR TOLERANCE ± .5°

OUTSTANDING ECN

NA FINISH

BREAK SHARP EDGES MAX. XX MIN. XX

Q.A. CATEGORY A-3

		DATE
DRAWN BY	Ed Koropsak	6/23/98
CHECKED BY		
DESIGN APPROVAL		
ENGINEER APPROVAL	R. MICHNOFF	6/23/98
SUPVR. APPROVAL		

NEXT ASSEMBLY

BROOKHAVEN NATIONAL LABORATORY
UPTON, N.Y. 11973

RHIC CONTROLS
SERVICE BLDG. 1012A

RACK R12A19 ASSEMBLY

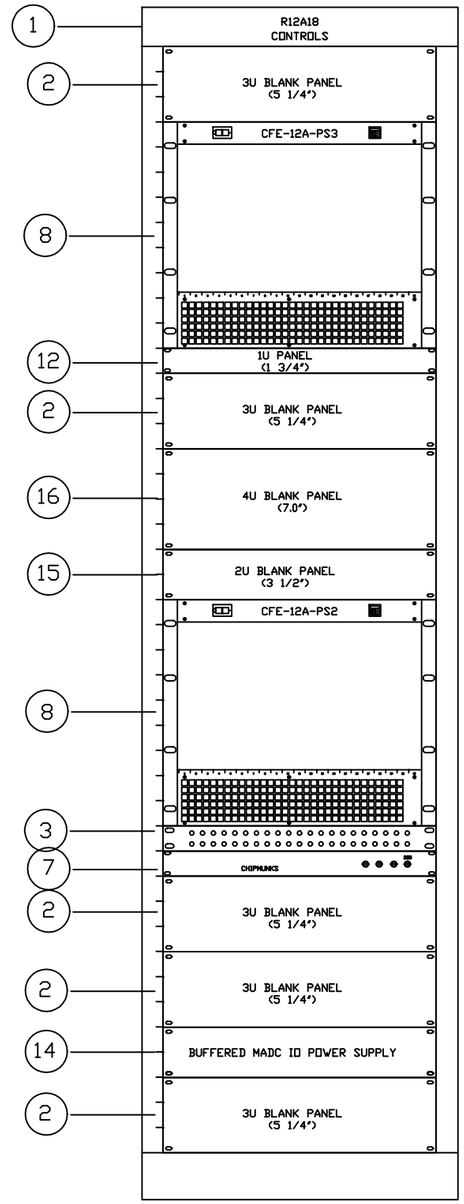
SIZE D | DRAWING NUMBER 94028573 | REV. A

MATERIAL: ——— SCALE: NA WEIGHT: – SHEET 1 OF 1

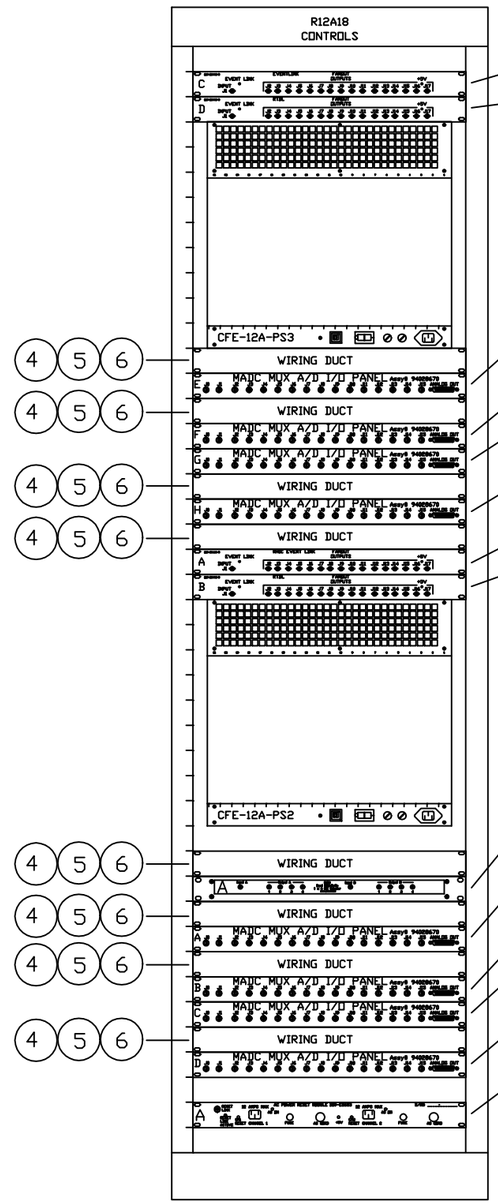
1 *AUTOCAD

REV.	ZONE	ECN NO.	DATE	BY	CKR	APP.

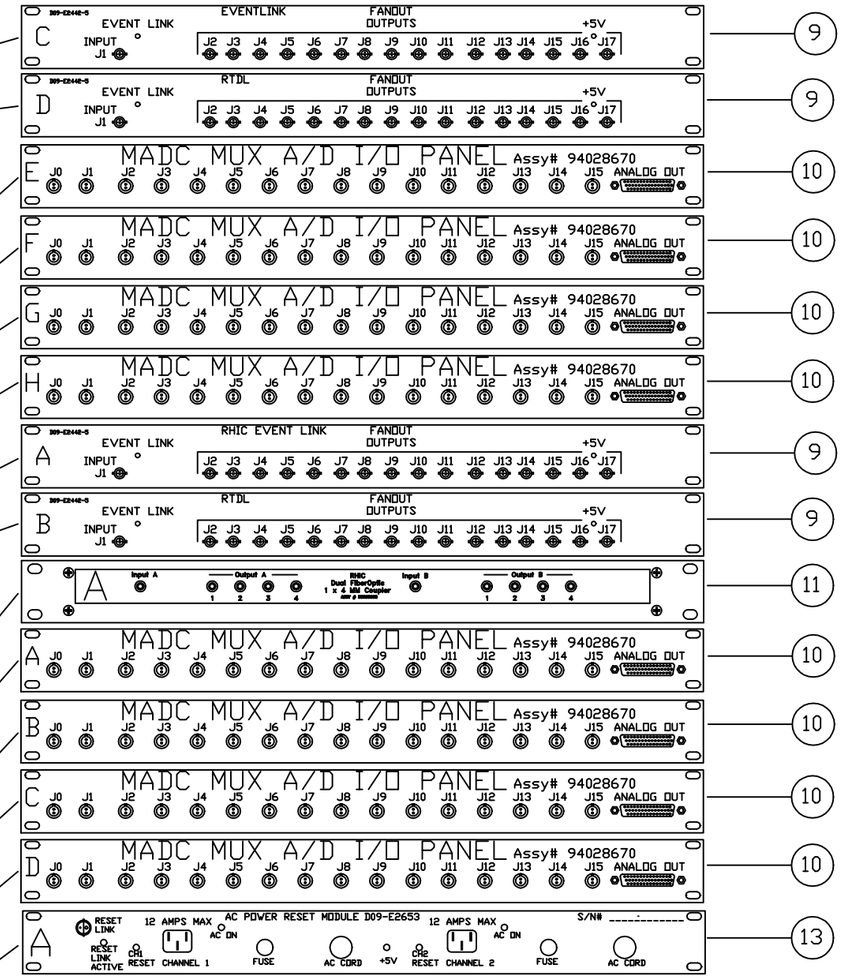
Schoenfeld, Controls 11/21/2003 9:56 AM 8574_01.dwg



FRONT VIEW



REAR VIEW



QTY REQD -3	QTY REQD -2	QTY REQD -1	REF DESIGNATOR	ITEM NO.	DESCRIPTION	MAT'L DWG NO.,BNL NO.
		1	NA	16	4U x 19' BLANK PANEL (PREMIER METAL ARP-119-553)	X
		1	NA	15	2U x 19' BLANK PANEL (PREMIER METAL ARP-119-553)	X
		1	NA	14	BUFFERED MADC POWER SUPPLY	94028808
		1	NA	13	AC POWER RESET MODULE	D09-E2653
		1	NA	12	1U x 19' BLANK PANEL (PREMIER METAL ARP-119-553)	X
		1	A	11	DUAL 1 x 4 MM COUPLER	58030008
		8	A-H	10	BUFFERED MADC A/D I/O PANEL	94028670
		4	A,B,C,D	9	FANOUT ASSEMBLY	D09-E2442
		2	NA	8	VME CHASSIS CFE-12A-PS2, CFE-12A-PS3	94028576
		1	NA	7	CHIPMUNK PATCH PANEL	X
		16	NA	6	WIRING DUCT SPRING CLIPS 1.5"W (PANDUIT S1.5-C)	X
		8	NA	5	WIRING DUCT COVER 1.5"w (PANDUIT C1.5LG6)	X
		8	NA	4	WIRING DUCT 1.5"W x 4"D (PANDUIT E1.5X4LG6)	X
		1	NA	3	GROMMET PANEL	94028410
		5	NA	2	3U x 19" BLANK PANEL (PREMIER METAL ARP-519-553)	X
		1	NA	1	19" RACK, 77" H RACK SPACE	X

INTERPRET IN GENERAL ACCORDANCE WITH ASME Y14.24M-1989

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

DECIMAL TOLERANCES
.X ±.030
.XX ±.015
.XXX ±.005
ANGULAR TOLERANCE ± .5°

OUTSTANDING ECN

NA FINISH

BREAK SHARP EDGES MAX. XX MIN. XX

Q.A. CATEGORY A-3

		DATE
DRAWN BY	Ed Koropsak	6/23/98
CHECKED BY		
DESIGN APPROVAL		
ENGINEER APPROVAL	R. MICHNOFF	6/23/98
SUPVR. APPROVAL		

NEXT ASSEMBLY

BROOKHAVEN NATIONAL LABORATORY
UPTON, N.Y. 11973

RHIC CONTROLS

SERVICE BLDG. 1012A

RACK R12A18 ASSEMBLY

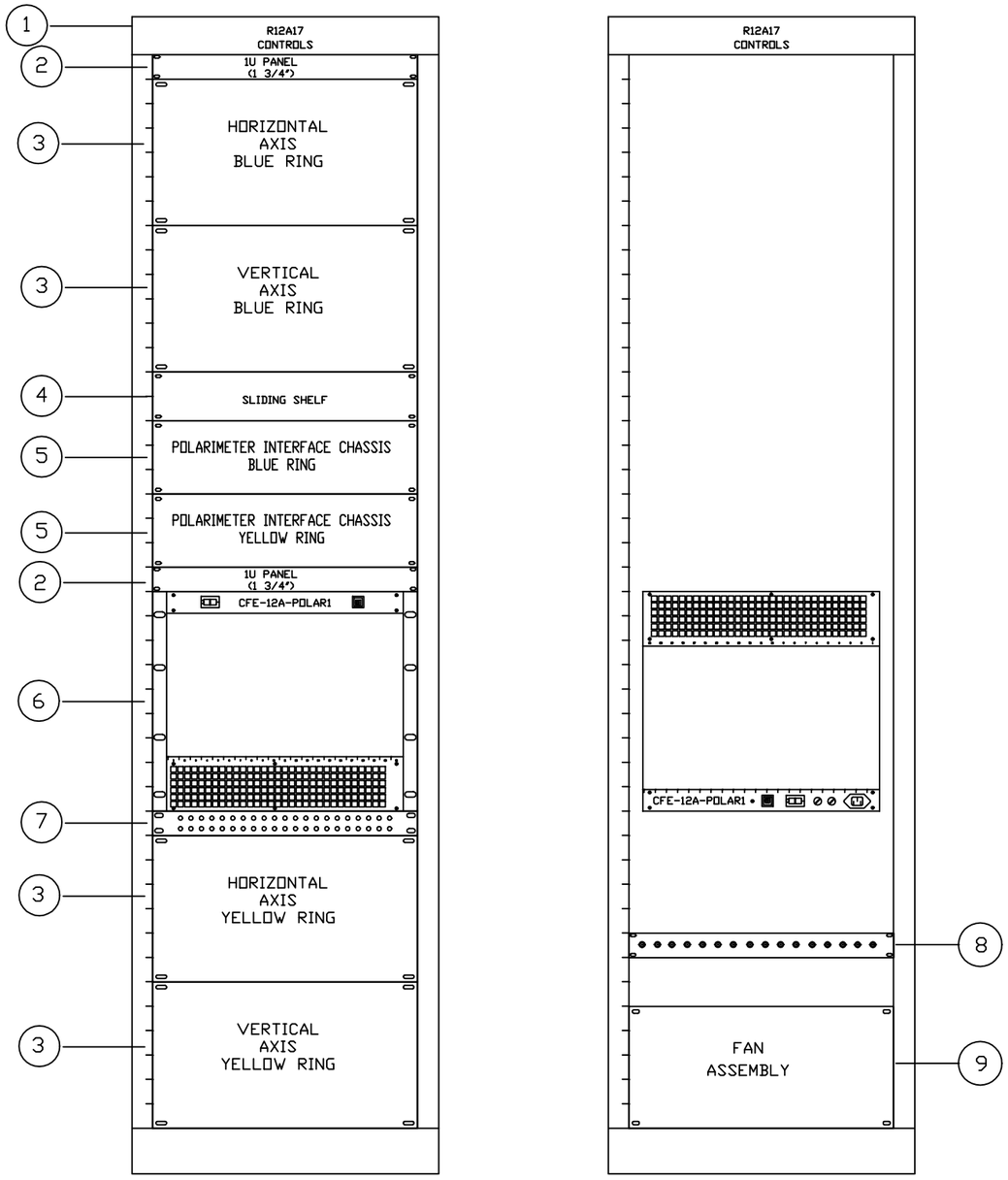
SIZE D | DRAWING NUMBER 94028574 | REV. A

MATERIAL: ——— SCALE: NA WEIGHT: – SHEET 1 OF 4

*AUTOCAD

REV.	ZONE	ECN NO.	DATE	BY	CKR	APP.

Schoenfeld, Controls 11/21/2003 9:56 AM 8574_02.dwg



FRONT VIEW

REAR VIEW

-3	-2	-1	REF DESIGNATOR	ITEM NO.	DESCRIPTION	MAT'L DWG NO.,BNL NO.
		1	NA	9	FAN ASSEMBLY	
		1	NA	8	16 BNC PATCH PANEL	
		1	NA	7	GROMMET PANEL	94028410
		1	NA	6	VME CHASSIS CFE-12A-POLAR1	94028576
		2	NA	5	POLARIMETER INTERFACE CHASSIS	X
		1	NA	4	SLIDING SHELF	X
		4	NA	3	AXIS CONTROL UNIT	
		2	NA	2	1U x 19" BLANK PANEL (PREMIER METAL ARP-519-553)	X
		1	NA	1	19" RACK, 77" H RACK SPACE	X

QTY REQD

INTERPRET IN GENERAL ACCORDANCE WITH ASME Y14.24M-1989

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

DECIMAL TOLERANCES
.X ±.030
.XX ±.015
.XXX ±.005
ANGULAR TOLERANCE
± .5°

NA FINISH

BREAK SHARP EDGES
MAX. XX MIN. XX

OUTSTANDING ECN

Q.A. CATEGORY A-3

		DATE
DRAWN BY	Ralph Schoenfeld	11/5/03
CHECKED BY		
DESIGN APPROVAL		
ENGINEER APPROVAL		
SUPVR. APPROVAL		

NEXT ASSEMBLY

BROOKHAVEN NATIONAL LABORATORY
UPTON, N.Y. 11973

RHIC CONTROLS

SERVICE BLDG. 1012A

RACK R12A17 ASSEMBLY

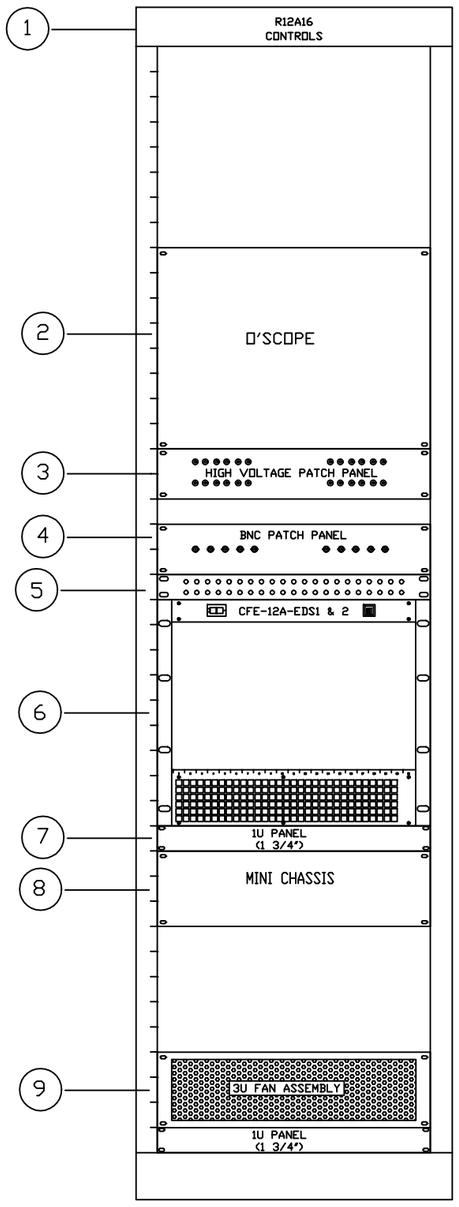
SIZE D | DRAWING NUMBER 94028574 | REV. A

MATERIAL: ——— | SCALE: NA | WEIGHT: – | SHEET 2 OF 4

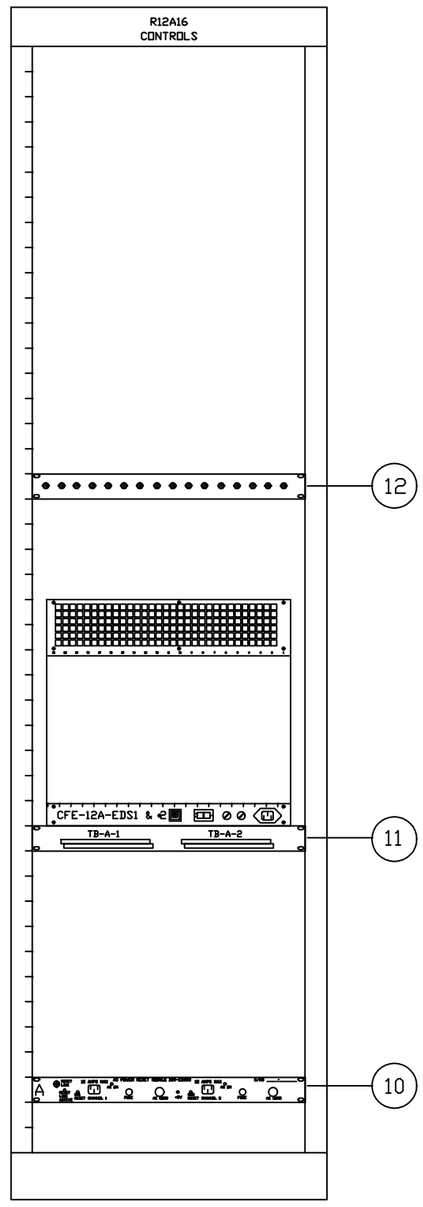
*AUTOCAD

REV.	ZONE	ECN NO.	DATE	BY	CKR	APP.

Schoenfeld, Controls 11/21/2003 9:55 AM 8574_03.dwg



FRONT VIEW



REAR VIEW

-3	-2	-1	REF DESIGNATOR	ITEM NO.	DESCRIPTION	MAT'L DWG NO.,BNL NO.
		1	NA	12	16 BNC PATCH PANEL	
		1	NA	11	DUAL 64-PIN TRANSITION PANEL	VMIACC-BT01
		1	NA	10	AC POWER RESET MODULE	D09-E2653
		1	NA	9	FAN ASSEMBLY	
		1	NA	8	16 BNC PATCH PANEL	
		1	NA	7	3U x 19" MINI CHASSIS	
		1	NA	6	VME CHASSIS CFE-12A-EDS1 & 2	94028576
		1	NA	5	GROMMET PANEL	94028410
		1	NA	4	BNC PATCH PANEL	X
		1	NA	3	HIGH VOLTAGE PATCH PANEL	
		1	NA	2	OSCILLOSCOPE	X
		1	NA	1	19" RACK, 77" H RACK SPACE	X

QTY REQD

INTERPRET IN GENERAL ACCORDANCE WITH ASME Y14.24M-1989

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

DECIMAL TOLERANCES
.X ±.030
.XX ±.015
.XXX ±.005
ANGULAR TOLERANCE
± .5°

NA FINISH

BREAK SHARP EDGES
MAX. XX MIN. XX

OUTSTANDING ECN

Q.A. CATEGORY A-3

		DATE
DRAWN BY	Ralph Schoenfeld	11/5/03
CHECKED BY		
DESIGN APPROVAL		
ENGINEER APPROVAL		
SUPVR. APPROVAL		

NEXT ASSEMBLY

BROOKHAVEN NATIONAL LABORATORY
UPTON, N.Y. 11973

RHIC CONTROLS

SERVICE BLDG. 1012A

RACK R12A16 ASSEMBLY

SIZE D | 94028574 | REV. A

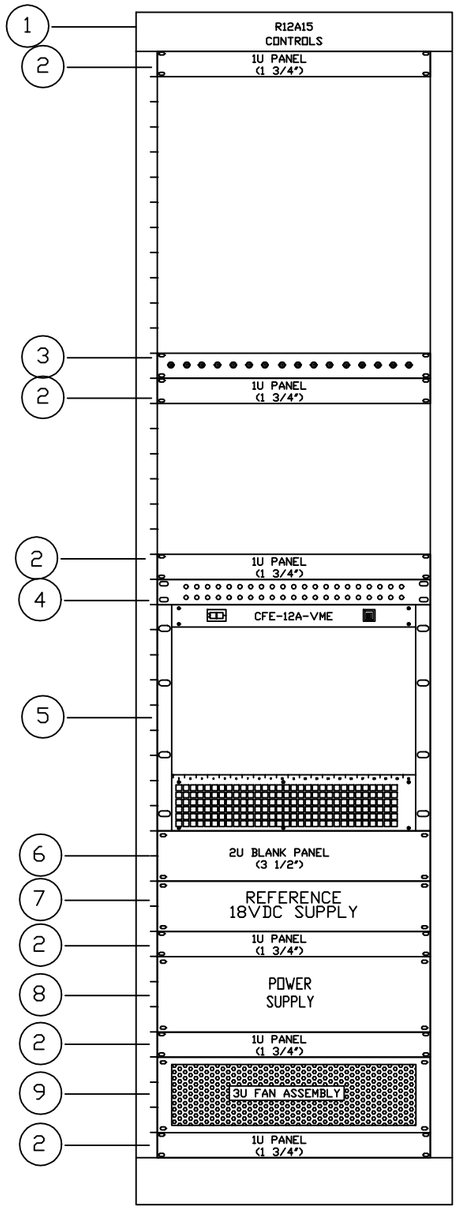
DRAWING NUMBER

MATERIAL: ——— SCALE: NA WEIGHT: – SHEET 3 OF 4

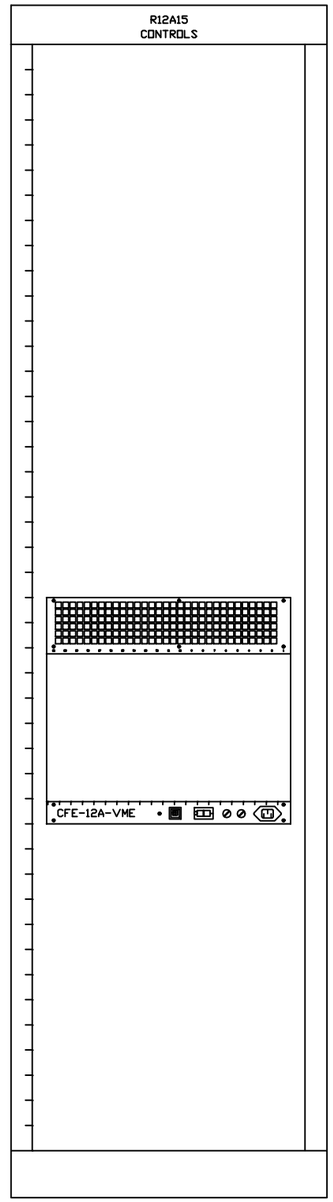
1 *AUTOCAD

REV.	ZONE	ECN NO.	DATE	BY	CKR	APP.

Schoenfeld, Controls 11/21/2003 9:55 AM 8574_04.dwg



FRONT VIEW



REAR VIEW

-3	-2	-1	QTY REQD	REF DESIGNATOR	ITEM NO.	DESCRIPTION	MAT'L DWG NO.,BNL NO.
		1	NA		9	FAN ASSEMBLY	
		1	NA		8	POWER SUPPLY	
		1	NA		7	18VDC REFERENCE POWER SUPPLY	
		1	NA		6	2U x 19" MINI CHASSIS	
		1	NA		5	VME CHASSIS CFE-12A-VME	94028576
		1	NA		4	GROMMET PANEL	94028410
		1	NA		3	16 BNC PATCH PANEL	
		6	NA		2	1U x 19" BLANK PANEL (PREMIER METAL ARP-519-553)	X
		1	NA		1	19" RACK, 77" H RACK SPACE	X

INTERPRET IN GENERAL ACCORDANCE WITH ASME Y14.24M-1989

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

DECIMAL TOLERANCES
.X ±.030
.XX ±.015
.XXX ±.005
ANGULAR TOLERANCE
± .5°

NA FINISH

BREAK SHARP EDGES
MAX. XX MIN. XX

OUTSTANDING ECN

Q.A. CATEGORY A-3

		DATE
DRAWN BY	Ralph Schoenfeld	11/5/03
CHECKED BY		
DESIGN APPROVAL		
ENGINEER APPROVAL		
SUPVR. APPROVAL		

NEXT ASSEMBLY

BROOKHAVEN NATIONAL LABORATORY
UPTON, N.Y. 11973

RHIC CONTROLS

SERVICE BLDG. 1012A

RACK R12A15 ASSEMBLY

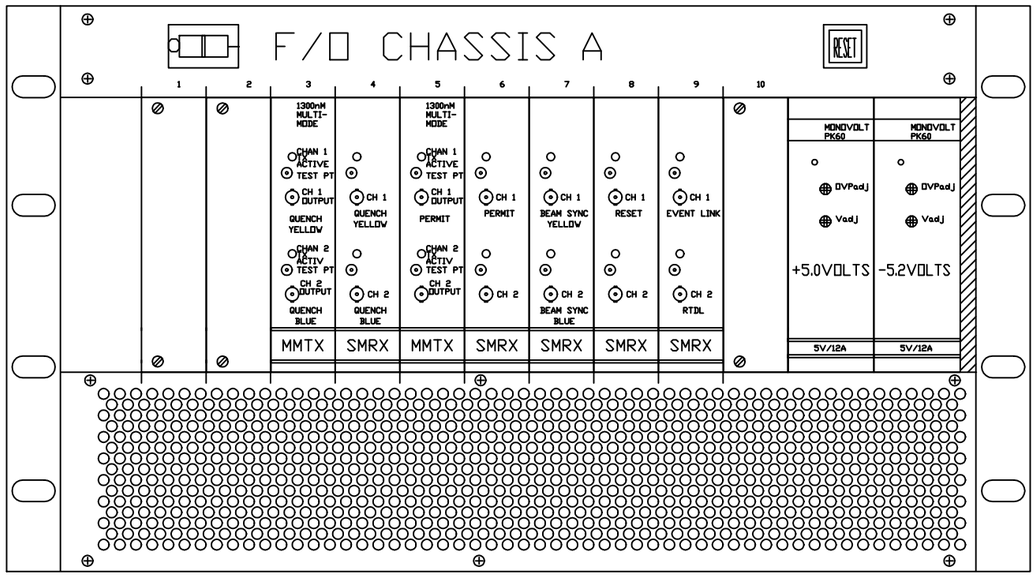
SIZE D | DRAWING NUMBER 94028574 | REV. A

MATERIAL: ——— | SCALE: NA | WEIGHT: – | SHEET 4 OF 4

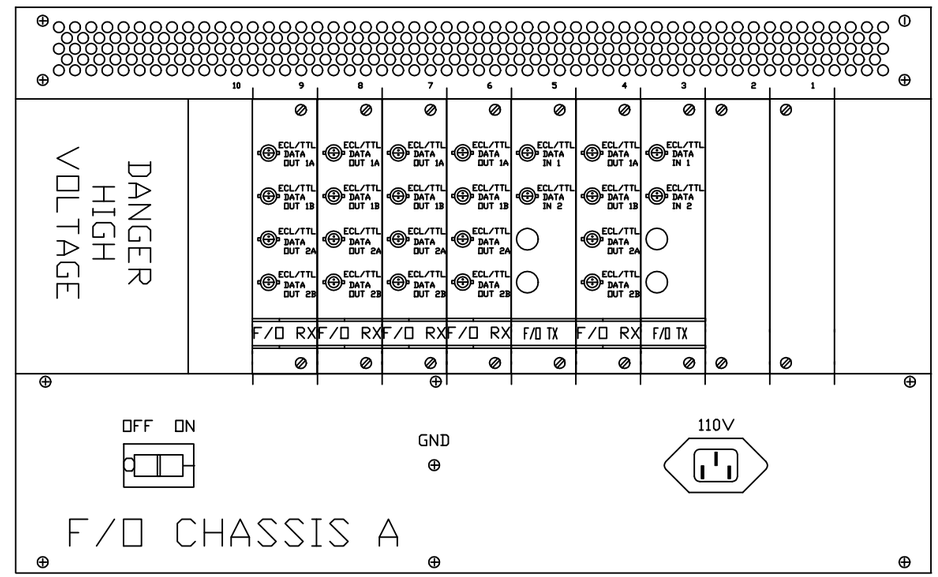
*AUTOCAD

REV.	ZONE	ECN NO.	DATE	BY	CKR	APP.

Schoenfeld, Controls 11/21/2003 9:45 AM 8575.dwg



FRONT VIEW



REAR VIEW

QTY REQD -3	-2	-1	REF DESIGNATOR	ITEM NO.	DESCRIPTION	MAT'L. DWG NO.,SHL NO.
		1	SLOT 7	7	3U FIBER OPTIC RECEIVER TRANSISTION MODULE, ECL	D09-E2541-3
		6	ALL UNUSED	6	3U x 6HP BLANK PANEL (ELECTRO-SPACE ESFE-3032)	X
		4	SLOT4,6,8,9	5	3U FIBER OPTIC RECEIVER TRANSITION MODULE, TTL	D09-E2542-3
		5	SLOT4,6,7-9	4	3U FIBER OPTIC RECEIVER MODULE, MULTIMODE/SINGLEMODE	94028101
		2	SLOT 5,6	3	3U FIBER OPTIC TRANSMITTER TRANSITION MODULE, TTL	D09-E2495-3
		2	SLOT 3,5	2	3U FIBER OPTIC TRANSMITTER MODULE, MULTIMODE	94028168
		1	N/A	1	3U FIBER OPTIC CHASSIS	94028261

INTERPRET IN GENERAL ACCORDANCE WITH ASME Y14.24M-1989

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

DECIMAL TOLERANCES
.X ±.030
.XX ±.015
.XXX ±.005
ANGULAR TOLERANCE
± .5°

NA FINISH

BREAK SHARP EDGES
MAX. XX MIN. XX

OUTSTANDING ECN

Q.A. CATEGORY A-3		DATE
DRAWN BY	Ed Koropsak	6/23/97
CHECKED BY		
DESIGN APPROVAL		
ENGINEER APPROVAL	R. MICHNOFF	6/23/98
SUPVR. APPROVAL		

NEXT ASSEMBLY

BROOKHAVEN NATIONAL LABORATORY
UPTON, N.Y. 11973
RHIC CONTROLS
1012A RACK R012A20
F/O CHASSIS A ASSY.

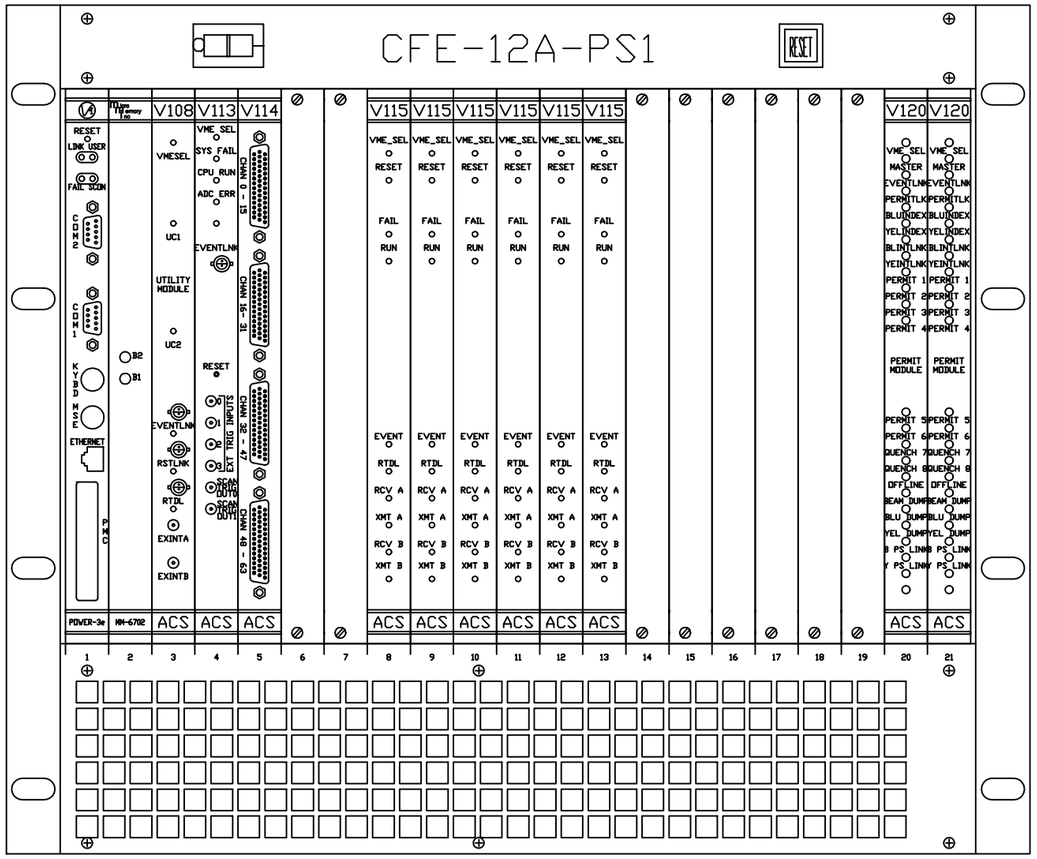
SIZE D | DRAWING NUMBER 94028575 | REV. A

MATERIAL: ——— SCALE: NA WEIGHT: – SHEET 1 OF 1

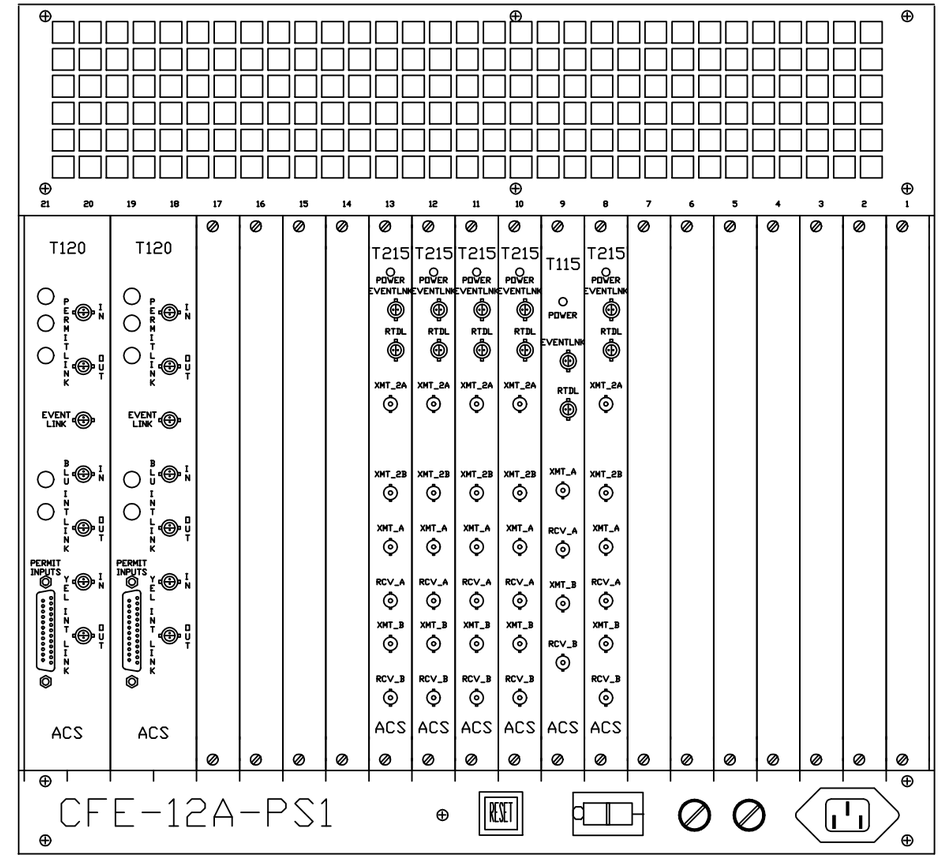
*AUTOCAD

REV.	ZONE	ECN NO.	DATE	BY	CKR	APP.

Schoenfeld, Controls 11/21/2003 9:46 AM 8576.dwg



FRONT VIEW



REAR VIEW

NOTE:

1. ALL UNUSED SLOTS, FRONT AND REAR

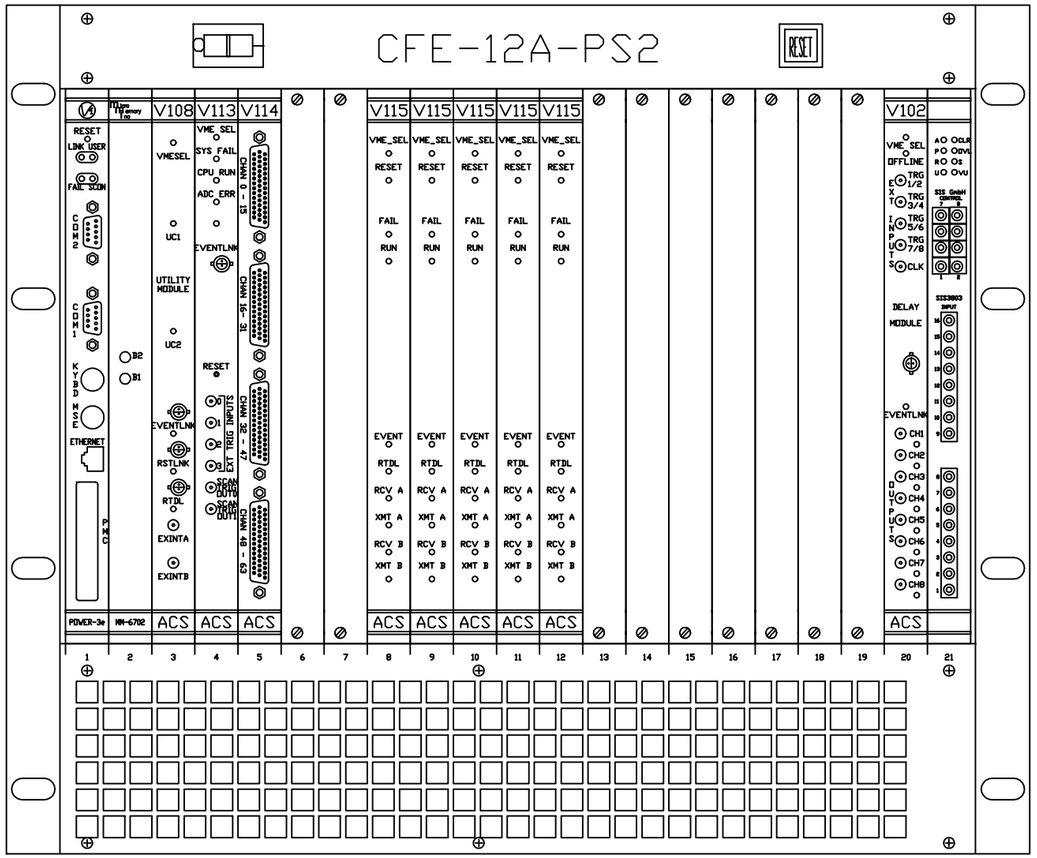
QTY REQD -3	QTY REQD -2	QTY REQD -1	REF DESIGNATOR	ITEM NO.	DESCRIPTION	MAT'L DWG NO.,BNL NO.
		2	SLOT 18-21	11	T120 PERMIT SYSTEM TRANSITION MODULE	94028199-2
		2	SLOT 20,21	10	V120 PERMIT SYSTEM MODULE	94028077
		x	SEE NOTE 1	9	VME BLANK PANEL (ELECTRO-SPACE ESFE-2985)	
		1	SLOT 9	8	T115 WAVEFORM GENERATOR TRANSITION MODULE	
		5	SL 8,10-13	8	T215 WAVEFORM GENERATOR TRANSITION MODULE	94028441-2
		6	SLOT 8-13	7	V115 WAVEFORM GENERATOR MODULE	94028108
		1	SLOT 5	6	V114 MADC A/D CONVERTER MODULE	94028226
		1	SLOT 4	5	V113 MADC CONTROLLER MODULE	94028140
		1	SLOT 3	4	V108 UTILITY MODULE	94028094
		1	SLOT 2	3	MEMORY BOARD	MM-6702
		1	SLOT 1	2	FRONT END COMPUTER	POWER-3e
		1	N/A	1	VME CHASSIS	RHIC-93008000

INTERPRET IN GENERAL ACCORDANCE WITH ASME Y14.24M-1989	Q.A. CATEGORY A-3	DATE	BROOKHAVEN NATIONAL LABORATORY	
	DRAWN BY Ed Koropsak	6/23/98	UPTON, N.Y. 11973	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	CHECKED BY		RHIC CONTROLS	
DECIMAL TOLERANCES .X ±.030 .XX ±.015 .XXX ±.005 ANGULAR TOLERANCE ± .5°	DESIGN APPROVAL		SERVICE BLDG 1012A	
	ENGINEER APPROVAL R. MICHNOFF	6/23/98	VME CHASSIS CFE-12A-PS1	
	SUPVR. APPROVAL		SIZE D	DRAWING NUMBER 94028576 REV. A
NA FINISH	BREAK SHARP EDGES MAX. XX MIN. XX	NEXT ASSEMBLY	MATERIAL: ———	SCALE: NA WEIGHT: – SHEET 1 OF 1
OUTSTANDING ECN				

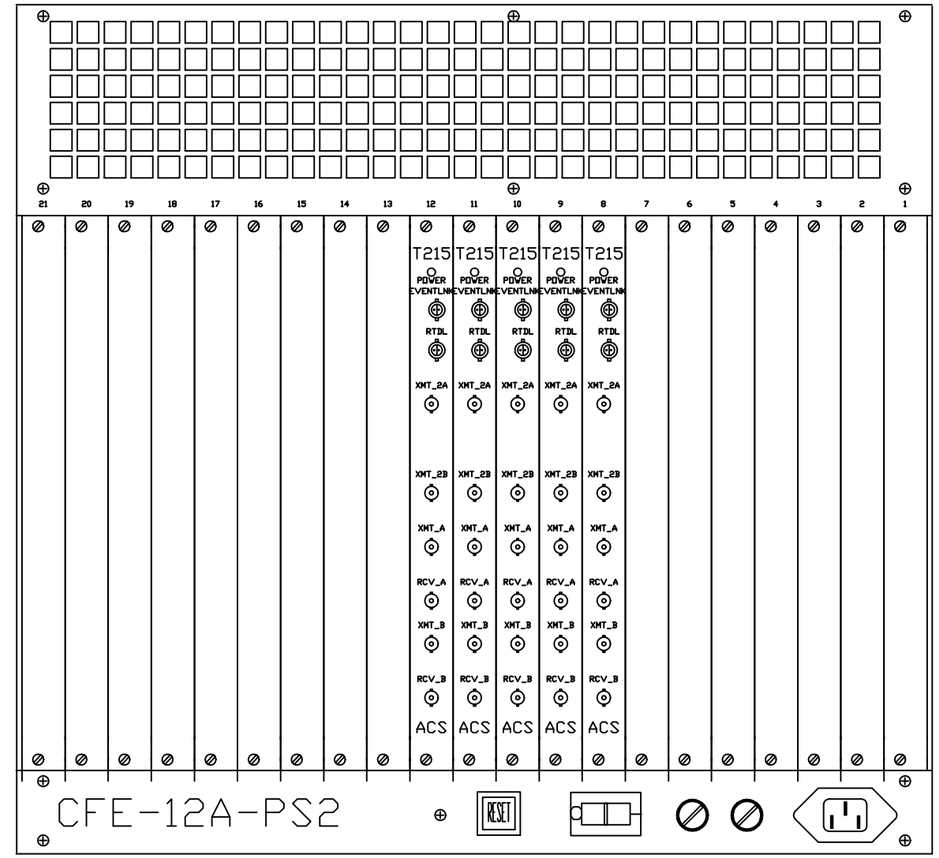
*AUTOCAD

REV.	ZONE	ECN NO.	DATE	BY	CKR	APP.

Schoenfeld, Controls 11/21/2003 9:49 AM 8577.dwg



FRONT VIEW



REAR VIEW

NOTE:

1. ALL UNUSED SLOTS, FRONT AND REAR

-3	-2	-1	REF DESIGNATOR	ITEM NO.	DESCRIPTION	MAT'L. DWG NO.,BNL NO.
		1	SLOT 21	11	SIS 3803 SCALER	
		1	SLOT 20	10	V102 DELAY MODULE	94028072
		x	SEE NOTE 1	9	VME BLANK PANEL (ELECTRO-SPACE ESFE-2985)	
		5	SLOT 8-12	8	T215 WAVEFORM GENERATOR TRANSITION MODULE	94028441-2
		5	SLOT 8-12	7	V115 WAVEFORM GENERATOR MODULE	94028108
		1	SLOT 5	6	V114 MADC A/D CONVERTER MODULE	94028226
		1	SLOT 4	5	V113 MADC CONTROLLER MODULE	94028140
		1	SLOT 3	4	V108 UTILITY MODULE	94028094
		1	SLOT 2	3	MEMORY BOARD	MM-6702
		1	SLOT 1	2	FRONT END COMPUTER	POWER-3e
		1	N/A	1	VME CHASSIS	RHIC-93008000

QTY REQD

INTERPRET IN GENERAL ACCORDANCE WITH ASME Y14.24M-1989

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

DECIMAL TOLERANCES
.X ±.030
.XX ±.015
.XXX ±.005
ANGULAR TOLERANCE
± .5°

NA FINISH

BREAK SHARP EDGES
MAX. XX MIN. XX

OUTSTANDING ECN

Q.A. CATEGORY A-3

		DATE
DRAWN BY	Ed Koropsak	6/23/98
CHECKED BY		
DESIGN APPROVAL		
ENGINEER APPROVAL	R. MICHNOFF	6/23/98
SUPVR. APPROVAL		

NEXT ASSEMBLY

BROOKHAVEN NATIONAL LABORATORY
UPTON, N.Y. 11973
RHIC CONTROLS
SERVICE BLDG 1012A
VME CHASSIS CFE-12A-PS2

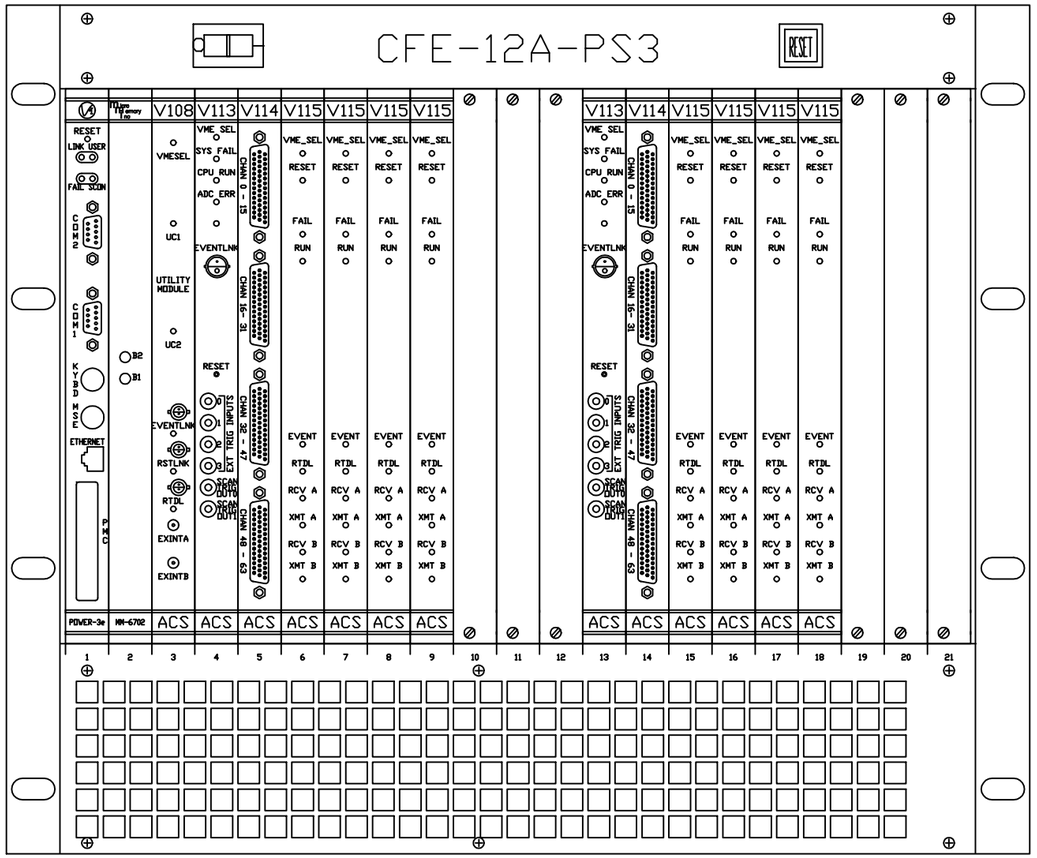
SIZE D
DRAWING NUMBER 94028577
REV. A

MATERIAL: ——— SCALE: NA WEIGHT: – SHEET 1 OF 1

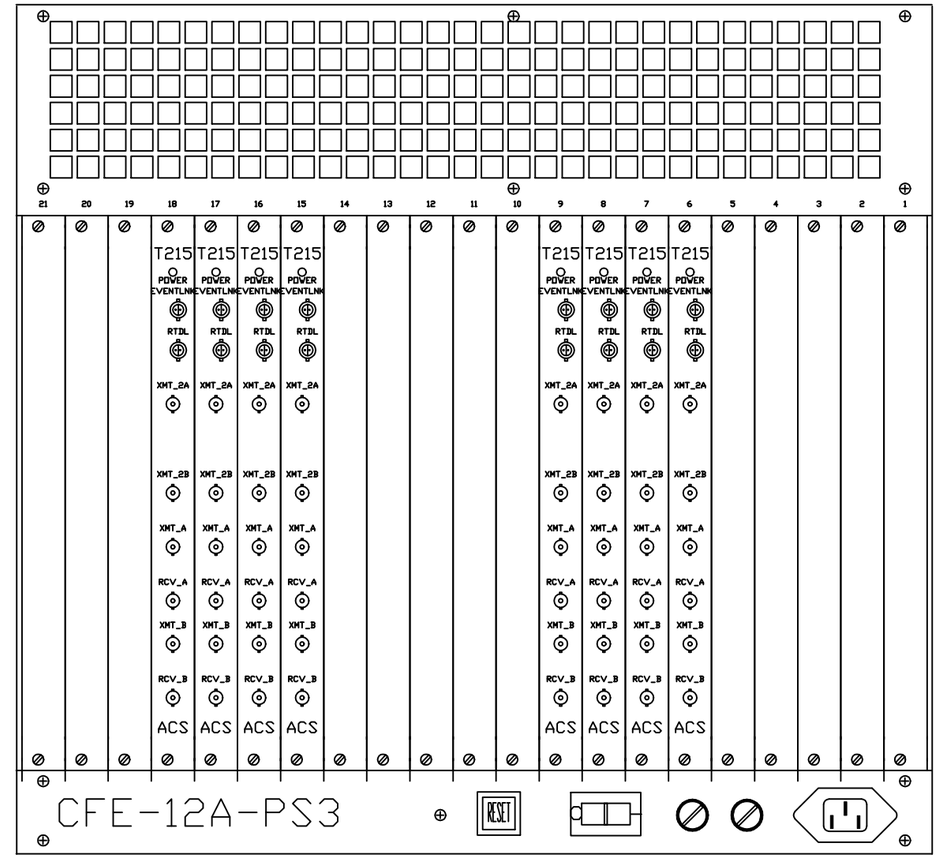
*AUTOCAD

REV.	ZONE	ECN NO.	DATE	BY	CKR	APP.

Schoenfeld, Controls 11/21/2003 9:55 AM 8578_01.dwg



FRONT VIEW



REAR VIEW

NOTE:

1. ALL UNUSED SLOTS, FRONT AND REAR

-3	-2	-1	REF DESIGNATOR	ITEM NO.	DESCRIPTION	MAT'L. DWG NO.,SPEC. NO.
		x	SEE NOTE 1	11	VME BLANK PANEL (ELECTRO-SPACE ESFE-2985)	
		4	SLOT 15-18	10	T215 WAVEFORM GENERATOR TRANSITION MODULE	94028441-2
		4	SLOT 6-9	9	T215 WAVEFORM GENERATOR TRANSITION MODULE	94028441-2
		4	SLOT 15-18	8	V115 WAVEFORM GENERATOR MODULE	94028108
		4	SLOT 6-9	7	V115 WAVEFORM GENERATOR MODULE	94028108
		2	SLOT 5,14	6	V114 MADC A/D CONVERTER MODULE	94028226
		2	SLOT 4,13	5	V113 MADC CONTROLLER MODULE	94028094
		1	SLOT 3	4	V108 UTILITY MODULE	94028094
		1	SLOT 2	3	MEMORY BOARD	MM-6702
		1	SLOT 1	2	FRONT END COMPUTER	POWER-3e
		1	N/A	1	VME CHASSIS	RHIC-93008000

QTY REQD

INTERPRET IN GENERAL ACCORDANCE WITH ASME Y14.24M-1989

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

DECIMAL TOLERANCES
.X ±.030
.XX ±.015
.XXX ±.005
ANGULAR TOLERANCE
± .5°

OUTSTANDING ECN

NA FINISH

BREAK SHARP EDGES
MAX. XX MIN. XX

Q.A. CATEGORY A-3

		DATE
DRAWN BY	RALPH SCHOENFELD	10/27/03
CHECKED BY		
DESIGN APPROVAL		
ENGINEER APPROVAL	R. MICHNOFF	6/23/98
SUPVR. APPROVAL		

NEXT ASSEMBLY

BROOKHAVEN NATIONAL LABORATORY
ASSOCIATED UNIVERSITIES, INC.
UPTON, N.Y. 11973

RHIC CONTROLS

SERVICE BLDG 1012A

VME CHASSIS CFE-12A-PS3

SIZE D

94028578

DRAWING NUMBER

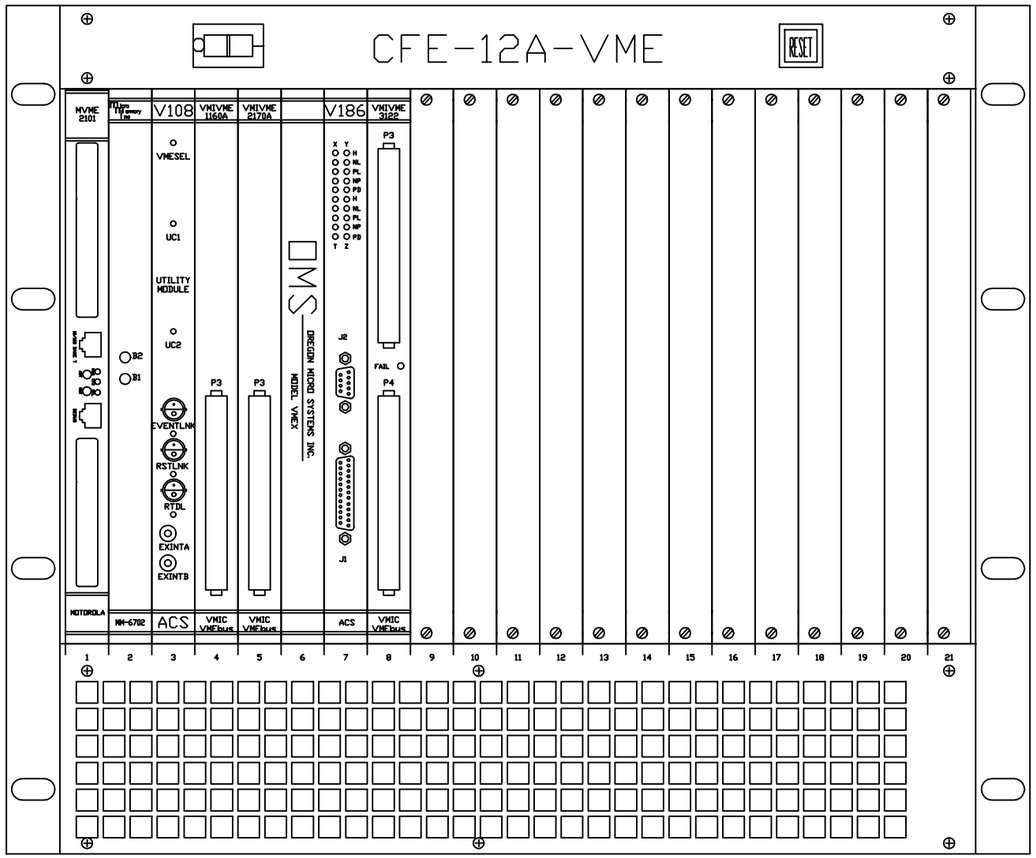
REV. A

MATERIAL: ——— SCALE: NA WEIGHT: – SHEET 1 OF 4

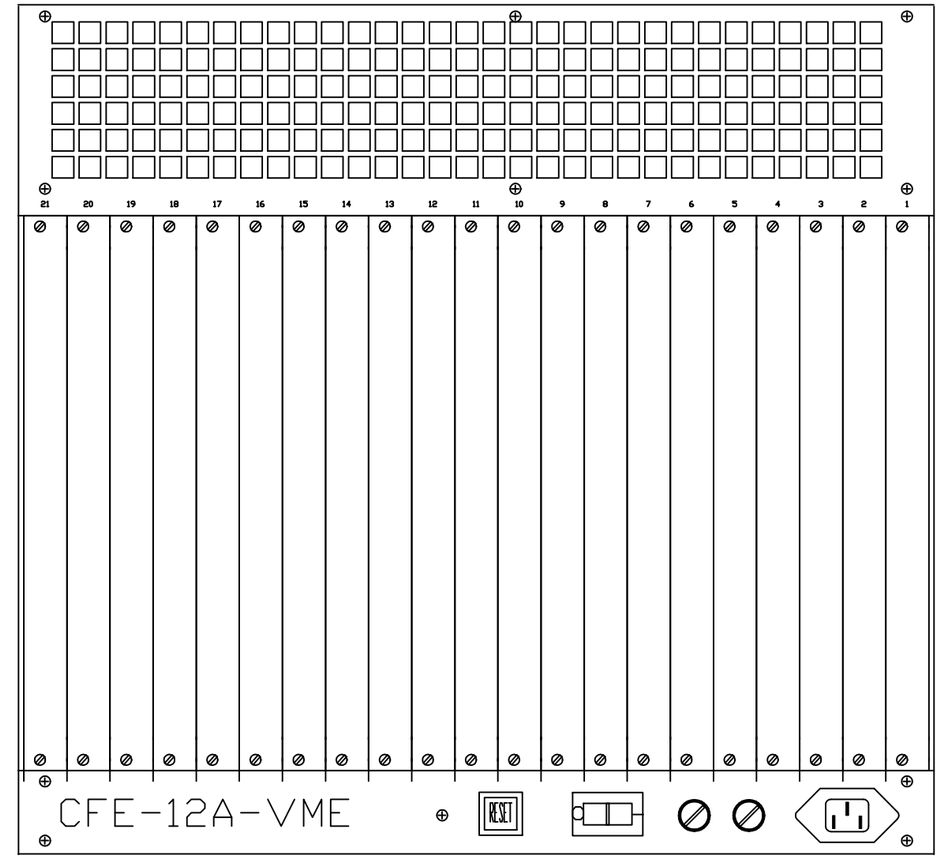
*AUTOCAD

REV.	ZONE	ECN NO.	DATE	BY	CKR	APP.

Schoenfeld, Controls 11/21/2003 9:55 AM 8578_02.dwg



FRONT VIEW



REAR VIEW

NOTE 1:

ALL UNUSED SLOTS
REQUIRE BLANK PANELS.

-3	-2	-1	REF DESIGNATOR	ITEM NO.	DESCRIPTION	MAT'L DWG NO.,BNL NO.
		34	SEE NOTE 1	10	VME BLANK PANEL (ELECTRO-SPACE ESFE-2985)	X
		1	SLOT 8	9	VMIVME 3122-442	X
		1	SLOT 7	8	OREGON MICRO SYSTEMS MOTOR CONTROLLER	VX2-006
		1	SLOT 6	7	OREGON MICRO SYSTEMS MOTOR CONTROLLER	VMEX-4
		1	SLOT 5	6	VMIVME 2170A-210	X
		1	SLOT 4	5	VMIVME 1160A-201	X
		1	SLOT 3	4	V108	94028094
		1	SLOT 2	3	MEMORY BOARD	MM-6702
		1	SLOT 1	2	FRONT END COMPUTER	MVME2101-1
		1	N/A	1	VME CHASSIS	RHIC-93008000

QTY REQD

INTERPRET IN GENERAL ACCORDANCE WITH ASME Y14.24M-1989

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

DECIMAL TOLERANCES
.X ±.030
.XX ±.015
.XXX ±.005
ANGULAR TOLERANCE
± .5°

FINISH: NA

BREAK SHARP EDGES
MAX. XX MIN. XX

OUTSTANDING ECN

Q.A. CATEGORY A-3		DATE
DRAWN BY	John Pepe	9/9/2003
CHECKED BY		
DESIGN APPROVAL		
ENGINEER APPROVAL		
SUPVR. APPROVAL		

NEXT ASSEMBLY

BROOKHAVEN NATIONAL LABORATORY
UPTON, N.Y. 11973
RHIC CONTROLS
SERVICE BLDG. 1012A
VME CHASSIS CFE-12A-VME

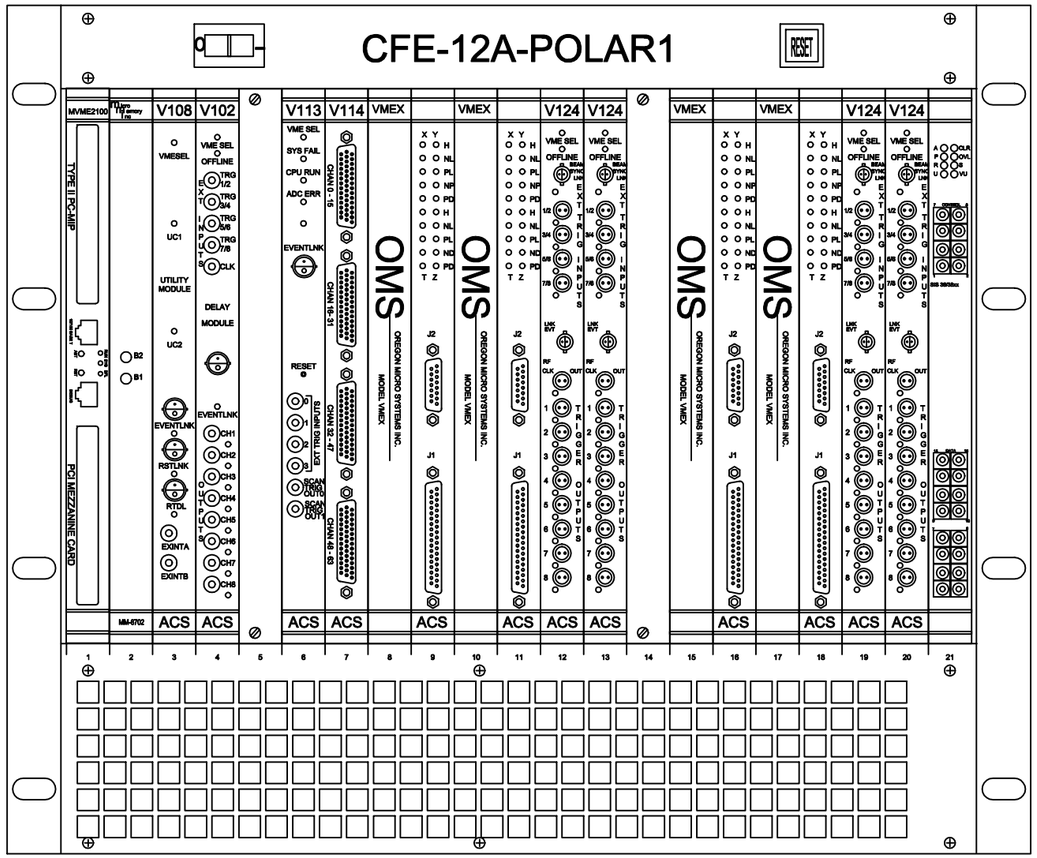
SIZE: D
94028578
DRAWING NUMBER
REV. A

MATERIAL: ——— SCALE: FULL WEIGHT: – SHEET 2 OF 4

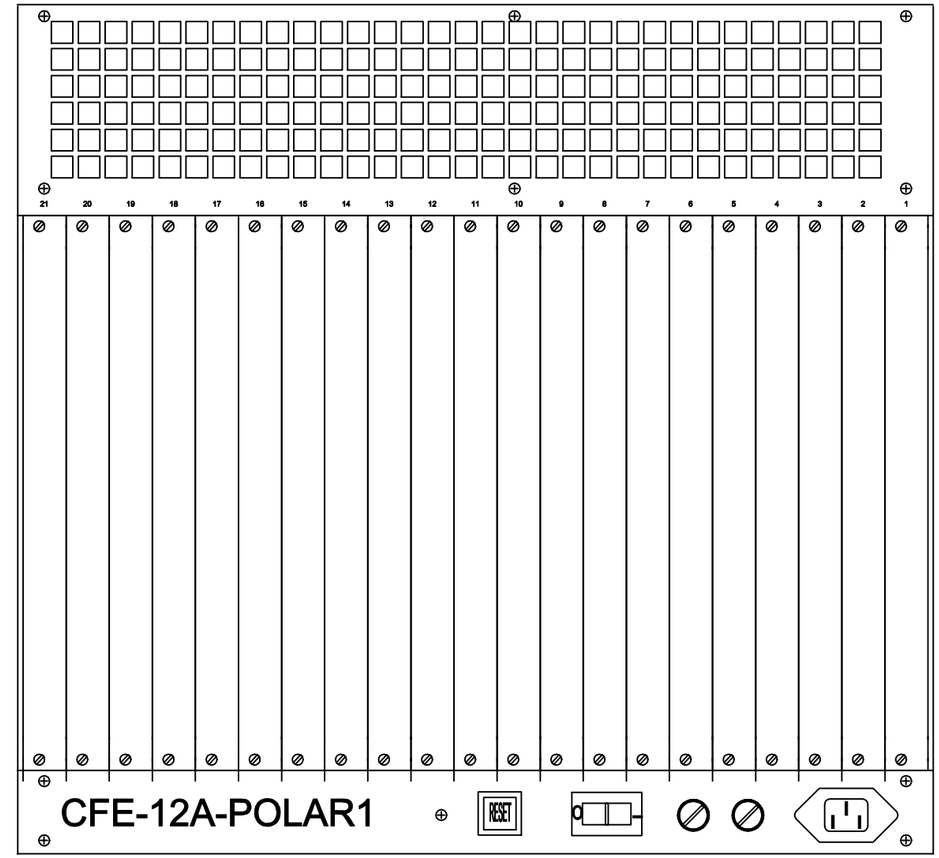
*AUTOCAD

REV.	ZONE	ECN NO.	DATE	BY	CKR	APP.

Schoenfeld, Controls 11/21/2003 9:55 AM 8578_03.dwg



FRONT VIEW



REAR VIEW

NOTE 1:

ALL UNUSED SLOTS
REQUIRE BLANK PANELS.

QTY REQD -3	QTY REQD -2	QTY REQD -1	REF DESIGNATOR	ITEM NO.	DESCRIPTION	MAT'L. DWG NO.,SPEC. NO.
		2	SL 15&16,17&18	14	BACKPLANE JUMPER CABLE FOR OMS/TRANS	
		2	SL 8&9,10&11	13	BACKPLANE JUMPER CABLE FOR OMS/TRANS	
		1	SLOT 6&7	12	BACKPLANE JUMPER CABLE FOR V113/V114	
		2	SLOT 15,17	11	OREGON MICRO SYSTEMS MOTOR CONTROLLER	VX2
		4	SL 12,13,19,20	10	V124 BEAM SYNC TRIGGER MODULE	94028432
		4	SL 9,11,16,18	9	STEPPER MOTOR CONTROL MODULE	D09-E-2694
		2	SL 8,10	8	OREGON MICRO SYSTEMS MOTOR CONTROLLER	VMEX-4
		1	SLOT 7	7	V114 MADC A/D CONVERTER MODULE	94028228
		1	SLOT 6	6	V113 MADC CONTROLLER MODULE	94028140
		1	SLOT 4	5	V102	XXXXX
		1	SLOT 3	4	V108	94028094
		1	SLOT 2	3	MEMORY BOARD	MM6702
		1	SLOT 1	2	FRONT END COMPUTER	MVME 2100
		1	N/A	1	VME CHASSIS	RHIC-93008000

INTERPRET IN GENERAL ACCORDANCE WITH ASME Y14.24M-1989

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

DECIMAL TOLERANCES
.X ±.030
.XX ±.015
.XXX ±.005
ANGULAR TOLERANCE
± .5°

OUTSTANDING ECN

NA FINISH

BREAK SHARP EDGES
MAX. XX MIN. XX

Q.A. CATEGORY A-3

		DATE
DRAWN BY	Ralph Schoenfeld	11/5/03
CHECKED BY		
DESIGN APPROVAL		
ENGINEER APPROVAL		
SUPVR. APPROVAL		

NEXT ASSEMBLY

BROOKHAVEN NATIONAL LABORATORY
UPTON, N.Y. 11973
RHIC CONTROLS
SERVICE BLDG. 1012A
VME CHASSIS CFE-12A-POLAR1

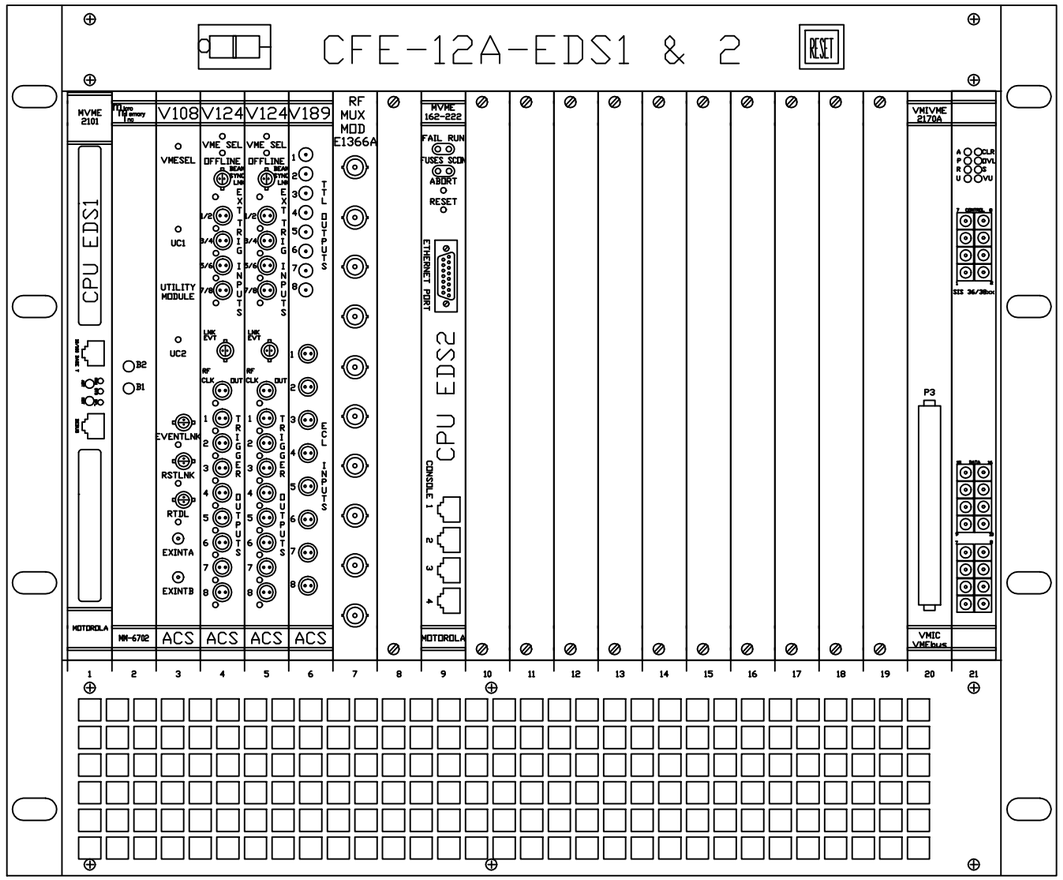
SIZE D | DRAWING NUMBER 94028578 | REV. A

MATERIAL: | SCALE: NA | WEIGHT: | SHEET 3 OF 4

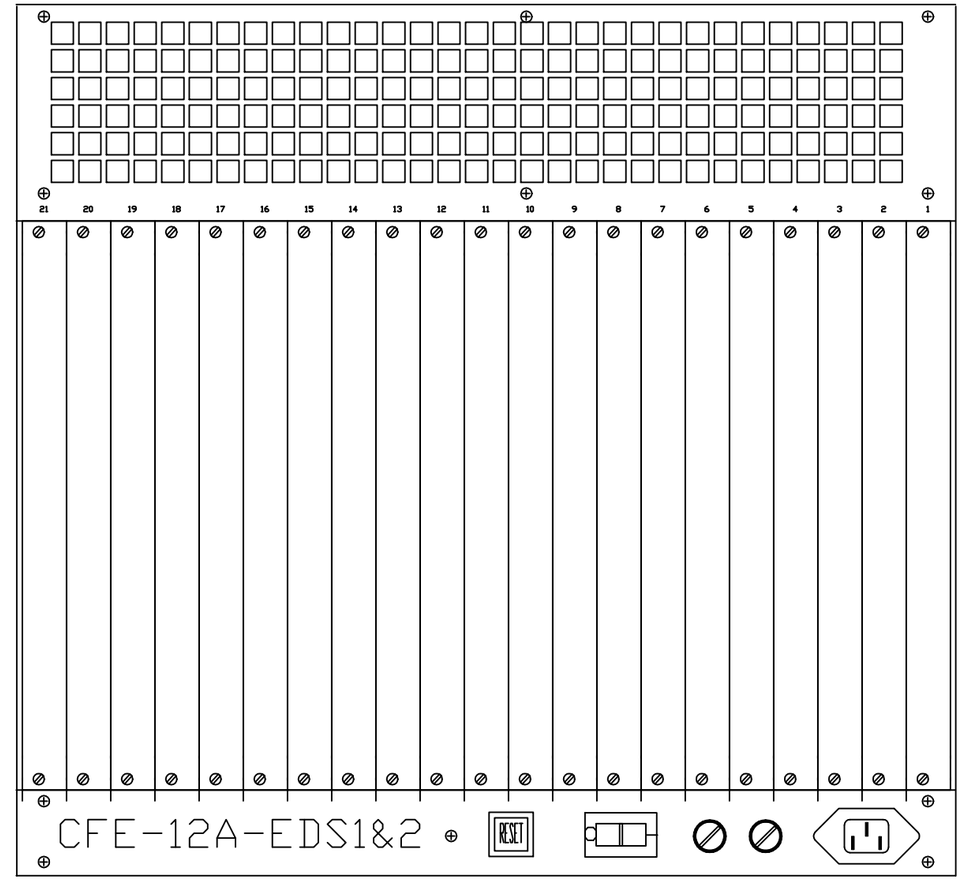
*AUTOCAD

REV.	ZONE	ECN NO.	DATE	BY	CKR	APP.

Schoenfeld, Controls 11/21/2003 9:54 AM 8578_04.dwg



FRONT VIEW



NOTE:
1. ALL UNUSED SLOTS, FRONT AND REAR.

-3	-2	-1	REF DESIGNATOR	ITEM NO.	DESCRIPTION	MAT'L. DWG NO.,BNL NO.
		32	SEE NOTE 1	11	VME BLANK PANELS (ELECTRO-SPACE ESFE-2985)	X
		1	SLOT 21	10	SCALER BOARD	SIS 3803
		1	SLOT 20	9	DIGITAL OUTPUT LOW CURRENT	VMIVME 2170A-200
		1	SLOT 9	8	FRONT END COMPUTER	MVME 162-222
		1	SLOT 7	7	HP E1366A RF MUX MODULE	X
		1	SLOT 6	6	V189 ECL TO TTL MODULE	X
		2	SLOT 4,5	5	V124 BEAM SYNC DECODER	
		1	SLOT 3	4	V108 UTILITY MODULE	94028094
		1	SLOT 2	3	MEMORY BOARD	MM-6702
		1	SLOT 1	2	FRONT END COMPUTER	MVME 2101-1
		1	N/A	1	VME CHASSIS	RHIC-93008000

QTY REQD

INTERPRET IN GENERAL ACCORDANCE WITH ASME Y14.24M-1989

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

DECIMAL TOLERANCES
.X ±.030
.XX ±.015
.XXX ±.005
ANGULAR TOLERANCE ± .5°

OUTSTANDING ECN

NA FINISH

BREAK SHARP EDGES MAX. XX MIN. XX

Q.A. CATEGORY A-3		DATE	BROOKHAVEN NATIONAL LABORATORY
DRAWN BY	Ralph Schoenfeld	11/5/03	UPTON, N.Y. 11973
CHECKED BY			RHIC CONTROLS WIRING DIAGRAM
DESIGN APPROVAL			BLDG. 1012A
ENGINEER APPROVAL			VME CHASSIS CFE-12A-EDS1 & 2
SUPVR. APPROVAL			SIZE D — 94028578 — REV. A
NEXT ASSEMBLY			DRAWING NUMBER

MATERIAL: ——— SCALE: FULL WEIGHT: – SHEET 4 OF 4

*AUTOCAD