

INVERTER OUTPUT PANEL INV1				
VOLTS:	120			
PHASE:	1			
BUSSING:	60 Amp			
POLES:	6P			
LOAD DESCRIPTION		KVA	BRKR.	CKT
LTG - ELECT, RESTRMS, LOBBY, LOCK EXTERIOR		0.43	20/1	1
LTG - VESTIBULE, STAGE		0.52	20/1	2
LTG - EXTERIOR		0.87	20/1	3
LTG - HOUSE		1.2	20/1	4
SPARE			20/1	5
SPARE			20/1	6
		3.02		
PHASE A: 3020				VA
				25.17
				MAX AMPS

INVERTER UNIT SPECIFICATIONS - INV1

4. ALL EMERGENCY SOURCE CIRCUITS SHALL BE INSTALLED IN SEPARATE RACEWAYS (FROM NORMAL POWER), PER 2014 NEC 700.10(B), OR APPLICABLE CODE AT THE TIME OF PERMITTING.
5. REFER ALSO TO SPECIFICATIONS SECTION 265101. UNIT SHALL BE MYERS ILLUMINATOR 'E' SERIES OR APPROVED EQUAL NO. 1-E-4-S-BA2006-M-S-T-Z-2YW.
6. UNIT SHALL BE 120V 1PH 2W INPUT, 120V OUTPUT, RATED 3.75KVA WITH 20AMP OUTPUT CIRCUIT BREAKERS.
7. INPUT SHALL BE EQUIPPED WITH ANSI 62.41 SURGE PROTECTION AND 1HZ NOMINAL SYNCHRONIZING SLEW RATE.
8. OUTPUT VOLTAGE STATIC REGULATION SHALL BE +/- 5% FOR 100% RESISTIVE LOAD.
9. OUTPUT DISTORTION SHALL BE 5% THD MAXIMUM.
10. OVERLOAD RATING: 150% MOMENTARY; 120% FOR 5 MINUTES.
11. TRANSFER TIME: NO BREAK
12. BATTERY SHALL BE SEALED LEAD CALCIUM, 10 YEAR LIFE, 90 MINUTE RUN TIME, WITH AUTO-DISCONNECT FOR LOW BATTERY VOLTAGE.
13. PROVIDE RS232 PORT FOR EXTERNAL COMMUNICATIONS.
14. INVERTER SHALL BE PWM TYPE.
15. PROVIDE MAINTENANCE BYPASS.
16. PROVIDE IN NEMA 1 ENCLOSURE, FRONT ACCESS ONLY.
17. PROVIDE FACTORY STARTUP AND TEST OF UNIT TO THE SATISFACTION OF BUILDING INSPECTION AUTHORITIES AND WITH MAXIMUM 4 HOURS OF PERSONNEL TRAINING FOLLOWING STARTUP.
18. AUTO SELF TESTING.
19. PROVIDE (6) OUTPUT CIRCUIT BREAKERS RATED 20AMPS EACH WITH DEDICATED CIRCUITS FOR EACH OF THE EMERGENCY LIGHTING LOADS. SEE INVERTER LOAD SCHEDULE, SHEET E-6.1.
20. CBC 2016 SPECIAL SEISMIC CERTIFICATION.
21. SUBMIT FOR REVIEW AND APPROVAL.

PANEL HM

VOLTS:277/480

PHASE:3 PH

WIRE:4 W

BUSSING:225A

POLES:30P

NOTE: ALL BREAKERS HAZZ TYPE

MAIN BRKR:

FEEDER:

CONDUIT:

MOUNTED:

AIC RATING:

MLO

SEE SINGLE LINE

SEE SINGLE LINE

SURFACE

SERIES

LOAD DESCRIPTION

TYPE

A

B

C

BRKR

CKT.

CKT.

BRKR

A

B

C

TYPE

LOAD DESCRIPTION

AC-1

H

6.10

1

2

6.10

H

AC-3

H

6.10

303

3

4

303

6.10

H

H

6.10

5

6

6.10

H

H

6.10

7

8

AC-2

H

6.10

303

9

10

203

SPARE

H

6.10

11

12

13

14

SPACE

15

16

SPACE

17

18

19

20

SPACE

21

22

203

SPACE

23

24

25

26

27

28

SPACE

29

30

SPACE

31

32

33

34

35

36

37

38

39

40

41

42

12.20

12.20

12.20

6.10

6.10

6.10

TYPE "M": NON-CONTINUOUS / MISC. LOADS

0.00

100%

0.00

TYPE "L": LIGHTING / CONTINUOUS LOADS

0.00

125%

0.00

TYPE "R": RECEPTACLES (FIRST 10KVA)

0.00

100%

0.00

TYPE "R": RECEPTACLES (OVER 10KVA)

0.00

50%

0.00

TYPE "H": HVAC / MECHANICAL LOADS

54.50

100%

54.50

TOTALS:

54.50

54.50

PHASE A:18.30KVA

PHASE B:18.30KVA

PHASE C:18.30KVA

66.06MAX AMPS / PHASE

PANEL LM

VOLTS:

120/208

PHASE:

3 PH

WIRE:

4 W

BUSSING:

225A

POLES:

42

MAIN BRKR:

MLO

FEEDER:

SEE SINGLE LINE

CONDUIT:

SEE SINGLE LINE

MOUNTED:

SURFACE

AIC RATING:

SERIES

NOTE: ALL BREAKERS BACK TYPE

LOAD DESCRIPTION	TYPE	A	B	C	BRKR	CKT.	CKT.	BRKR	A	B	C	TYPE	LOAD DESCRIPTION
EXHAUST FANS	H	0.40			201	1	2	152	0.10			H	FC-1
EW1 1-1	H		2.08		302	3	4			0.10		H	
	H			2.08		5	6	152			0.12	H	FC-2
EW1 1-2	H	2.08			302	7	8		0.12			H	
	H		2.08			9	10	152		0.10		H	FC-3
EW1 1-3	H			2.08	302	11	12				0.10	H	
	H	2.08				13	14	152	0.05			H	FC-4
EW1 1-4	H		2.08		302	15	16			0.05		H	
	H			2.08		17	18	152			0.07	H	FC-5
EW1 1-5	H	2.08			302	19	20		0.07			H	
	H		2.08			21	22	152		0.07		H	FC-6
ERV 1-1	H			0.37	152	23	24				0.07	H	
	H	0.37				25	26	152	0.07			H	FC-7
FC-8	H		0.50		152	27	28			0.07		H	
	H			0.50		29	30	201				H	SPARE
SPARE					202	31	32	302	1.98			H	HP-2
						33	34			1.98		H	
SPARE					201	35	36	402			3.50	H	HP-1
SPARE					201	37	38		3.50			H	
SPARE					201	39	40	302		1.98		H	HP-3
SPARE					201	41	42				1.98	H	
		7.01	8.82	7.11					5.89	4.35	5.84		

DEMAND LOAD SUMMARY

CONN. KVA

DEMAND FACTOR

DEMAND KVA

TYPE "M": NON-CONTINUOUS / MISC. LOADS

0.00

100%

0.00

TYPE "L": LIGHTING / CONTINUOUS LOADS

0.00

125%

0.00

TYPE "R": RECEPTACLES (FIRST 10KVA)

0.00

100%

0.00

TYPE "R": RECEPTACLES (OVER 10KVA)

0.00

80%

0.00

TYPE "R": HVAC / MECHANICAL LOADS

39.02

100%

39.02

TOTALS

39.02

39.02

PHASE A:

12.90

KVA

PHASE B:

13.17

KVA

PHASE C:

12.95

KVA

109.75

MAX AMPS / PHASE

LOW VOLTAGE RELAY LIGHTING CONTROL PANEL LCP

ZONE/SWITCH DESIGNATION	RELAY NO.	LINE VOLTAGE CIRCUIT	LOAD VA	ROOM NAME / FIXTURE TYPE	MASTER SWITCH ZONE GROUP	NOTES	PROGRAM CHANNEL
S1*	1	LA-33	5	EXTERIOR SITE LIGHTS (CONTROL RELAY FOR INV1-3)		1	
S2*	2	LA-33	5	EXTERIOR SITE LIGHTS (CONTROL RELAY FOR INV1-3)		1	
S3*	3	LA-33	91	EXTERIOR BUILDING LIGHTS		2	
S4	4	LA-33	72	EXTERIOR BUILDING LIGHTS		1	
S5*	5	LA-33	75	EXTERIOR BUILDING LIGHTS		2	
S6*	6	LA-33	100	EXTERIOR BUILDING LIGHTS		1	
	7			SPARE			
	8			SPARE			

NOTES:

1 PROVIDE AN ASTRO-DIAL MASTER CHANNEL; ASTRO-ON, TIMECLOCK-OFF.
RELAYS NOTED SHALL BE AUTOMATICALLY CONTROLLED BY THE RESPECTIVE ASTRO CHANNEL FOR EXTERIOR CONTROL.

2 PROVIDE AN ASTRO-DIAL MASTER CHANNEL; ASTRO-ON, ASTRO-OFF.
RELAYS NOTED SHALL BE AUTOMATICALLY CONTROLLED BY THE RESPECTIVE ASTRO CHANNEL FOR EXTERIOR CONTROL.

*3 PROVIDE (1) EMERGENCY LIGHTING CONTROL MODULE FOR EACH RELAY INDICATED WITH AN ASTERISK.

[illegible]

PANEL AV-1A

VOLTS:		120 / 208		NOTES		MAIN BRKR:		MLO						
PHASE:		3 PH		1. PROVIDE 15 BUS IN ADDITION TO STANDARD GROUND BUS		FEEDER:		SEE SINGLE LINE						
WIRE:		4 W		2. PROVIDE 200K NUTTED RATED BUS		CONDUIT:		SEE SINGLE LINE						
BUSSING:		100A		3. PANEL SHALL BE LISTED IFC TYPE, WITH MOTORIZED BREAKERS		MOUNTED:		SURFACE						
POLES:		41P				A/C RATING:		SERIES						
LOAD DESCRIPTION		TYPE	A	B	C	BRKR	CKT.	CKT.	BRKR	A	B	C	TYPE	LOAD DESCRIPTION
AV RACKS	M	0.75				20/1	1	2	20/1	0.36			R	ABOVE STAGE GRND
AV RACKS	M		0.75			20/1	3	4	20/1		0.36		R	ABOVE STAGE GRID
AV RACKS	M			0.75		20/1	5	6	20/1			0.36	R	ABOVE STAGE GRID
AV RACKS	M	0.75				20/1	7	8	20/1	0.36			R	ABOVE STAGE GRID
AV RACKS	M		0.75			20/1	9	10	20/1		0.36		R	CONTROL BOOTH
AV RACKS	M			0.75		20/1	11	12	20/1			0.36	R	ACCESS 201
AV RACKS	M	0.75				20/1	13	14	20/1	0.36			R	STAGE
AV RACKS	M		0.75			20/1	15	16	20/1		0.36		R	STAGE
CONTROL BOOTH	R			0.36		20/1	17	18	20/1			0.36	R	STAGE
SPARE						20/1	19	20	20/1	0.36			R	STAGE
SPARE						20/1	21	22	20/1		0.36		R	AUXITORIUM FLOOR POCKETS
SPARE						20/1	23	24	20/1		0.36		R	AUXITORIUM FLOOR POCKETS
SPARE						20/1	25	26	20/1	0.36			R	AUXITORIUM FLOOR POCKETS
SPARE						20/1	27	28	20/1		0.36		R	AUXITORIUM FLOOR POCKETS
SPARE						20/1	29	30	20/1					SPARE
SPARE						20/1	31	32	20/1					SPARE
SPARE						20/1	33	34	20/1					SPARE
SPARE						20/1	35	36	20/1					SPARE
SPARE						20/1	37	38	20/1					SPARE
SPARE						20/1	39	40	20/1					SPARE
SPARE						20/1	41	42						
			2.25	2.25	1.86					1.80	1.80	1.44		

DEMAND LOAD SUMMARY	CONN. KVA	DEMAND FACTOR	DEMAND KVA
TYPE "M": NON-CONTINUOUS / MISC. LOADS	6.00	100%	6.00
TYPE "L": LIGHTING / CONTINUOUS LOADS	0.00	125%	0.00
TYPE "R": RECEPTACLES (FIRST 10KVA)	5.40	100%	5.40
TYPE "R": RECEPTACLES (OVER 10KVA)	0.00	50%	0.00
TYPE "H": HVAC / MECHANICAL LOADS	0.00	100%	0.00
TOTALS:	11.40		11.40

PHASE A:	4.05	KVA
PHASE B:	4.05	KVA
PHASE C:	3.30	KVA

33.75 MAX AMPS / PHASE

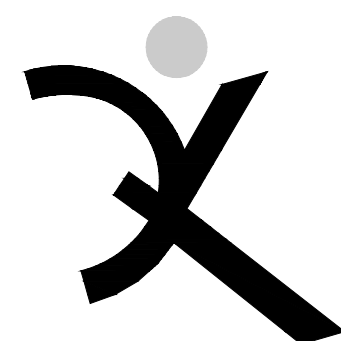
PANEL LA

VOLTS:	120 / 208											MAIN BRKR:	MLO
PHASE:	3 PH											FEEDEER:	SEE SINGLE LINE
WIRE:	4 W											CONDUIT:	SEE SINGLE LINE
BUSING:	225A											MOUNTED:	SURFACE
POLES:	42P											AIC RATING:	SERIES
* PROVIDE BREAKER WITH LOCK ON DEVICE													
LOAD DESCRIPTION	TYPE	A	B	C	BRKR.	CKT.	BRKR.	A	B	C	TYPE	LOAD DESCRIPTION	
OUTLET AT PLD-C-1, C-9	R	0.36			20/1	1	2	20/1	0.25			M	IRRIGATION CONTROLLER
FAEP-C	M		0.30		*20/1	3	4	20/1		0.90		R	STORAGE, AMP. ACCESS, BOOTH, EXT
THERMAL LIGHTING CONTROLS				0.20	20/1	5	6	20/1			0.90	R	STORAGE, AMP. ACCESS, EXT
CONCESSIONS	R	0.54			20/1	7	4	20/1	0.72			R	BOOTH, AUDITORIUM
CONCESSIONS	R		0.54		20/1	9	10	20/1		0.72		R	RESTROOMS, LOBBY, ACCESS
SPRINKLER BELL	M			0.20	20/1	11	12	20/1			0.54	R	LOBBY 118
AUDITORIUM, LIGHT LOOKS	R	0.54			20/1	13	14	20/1	1.08			R	STAGE
AUDITORIUM, LIGHT LOOKS, FIRE RISER			0.72		20/1	15	16	20/1		1.08		R	STAGE
AUDITORIUM, LIGHT LOOKS	R			0.54	20/1	17	18	20/1			1.08	R	STAGE
SPARE					20/1	19	20	20/1					SPARE
IDF-PAC2	M		0.50		20/1	21	22	20/1					SPARE
CLASSROOM 106	R			0.72	20/1	23	24	20/1			0.50	M	MOTORIZED DOOR
CLASSROOM 106	R	0.72			20/1	25	26	20/1	0.50			M	MOTORIZED DOOR
FAEP-V			0.30		*20/1	27	28	20/1					SPARE
SPARE					20/1	29	30	20/1					SPARE
LTO - LOBBY, TICKETS, CONTROL	L	0.87			20/1	31	32	20/1	0.50			M	MOTORIZED PROJECTION SCREEN
LTO - CLASSRMS, TOILET, EXTERIOR	L		0.94		20/1	33	34	20/1		0.30		M	SMOKE HATCH RELEASE
SPARE					20/1	35	36	20/1			1.00	R	DRESSING STATION
DRESSING STATION	R	1.00			20/1	37	38	20/1	1.00			R	ELECTRIC HAND DRYER
DRESSING STATION	R		1.00		20/1	39	40	20/1		1.00		R	ELECTRIC HAND DRYER
DRESSING STATION	R			1.00	20/1	41	42	20/1			1.00	R	ELECTRIC HAND DRYER
		4.03	4.30	2.66					4.05	4.00	5.02		

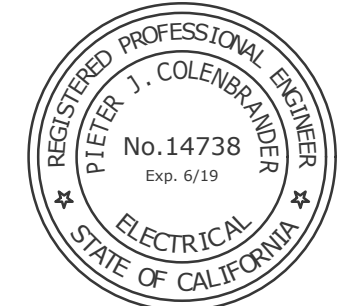
DEMAND LOAD SUMMARY	CONN. KVA	DEMAND FACTOR	DEMAND KVA
TYPE "M": NON-CONTINUOUS / MISC. LOADS	3.25	100%	3.25
TYPE "L": LIGHTING / CONTINUOUS LOADS	1.81	125%	2.26
TYPE "RC": RECEPTACLES (FIRST 10KVA)	10.00	100%	10.00
TYPE "RC": RECEPTACLES (OVER 10KVA)	8.70	80%	4.35
TYPE "HVAC": HVAC / MECHANICAL LOADS	0.00	100%	0.00
TOTALS:	23.76		19.68

PHASE A:	8.08	KVA
PHASE B:	8.30	KVA
PHASE C:	7.68	KVA

69.17 MAX AMPS / PHASE



QUATTROCCHI KWOK
ARCHITECTS
Main Office:
636 Fifth Street, Santa Rosa, CA 95404
Pleasanton Office:
600 Main Street, Suite E,
Pleasanton, CA 94566
(707) 576-0829



**SAN MARIN
HIGH SCHOOL**

PERFORMING ARTS BUILDING

15 SAN MARIN DR
NOVATO, CA 94945

NOVATO UNIFIED
SCHOOL DISTRICT[illegible]

ARCH PROJECT NO:	1700.02
DRAWN BY:	LN/TV
DRAWING SCALE:	AS NOTED
PTN:	65417-138

100% CD
FEB 15, 2019

SCHEDULES

SHEET NUMBER

E-6.1