

277/480 VOLT, 3 PHASE, 4 WIRE

<b>MSB TOTAL LOAD</b>	<b>CONNECTED</b>	<b>DEMAND</b>	
HVAC LOADS			
RTU-1	51.19 KVA	51.19 KVA	
RTU-2	43.21 KVA	43.21 KVA	
	<hr/>	<hr/>	
	94.4 KVA	94.4 KVA	
HOUSE LOADS			
LIGHTING LOAD	4.88 KVA	6.10 KVA	
RECEPTACLE LOAD	6.48 KVA	6.48 KVA	
MOTOR LOAD	8.75 KVA	8.75 KVA	
HEAT LOAD	0.75 KVA	0.75 KVA	
DEADICATED	24.26 KVA	24.26 KVA	
25% LARGEST MOTOR		0.32 KVA	
<b>PANEL L2</b>	<b>233.9 KVA</b>	<b>86.96 KVA</b>	
	<hr/>	<hr/>	
<b>Total Load</b>	<b>139.5 KVA</b>	<b>235.45 KVA</b>	<b>283.34 AMPS</b>

Separate electrical permit is required with Washington State  
Department of Labor & Industries.  
[https://lni.wa.gov/licensing-permits/electrical/electrical-permits-fee  
s-and-inspections](https://lni.wa.gov/licensing-permits/electrical/electrical-permits-fee-s-and-inspections) or Licensing information: Call 1-800-647-0982

<b>PANEL</b> <b>H1</b>	<b>LOCATION:</b> <u>MAIN ELECTRICAL ROOM</u> <b>SERVING:</b> <u>Gymnasium</u>	<u>480/277</u> VOLT, <u>3</u> PHASE, <u>4</u> WIRE. <u>35,000</u> AIC, <u>200</u> AMP MAIN <u>      </u> Lugs
---------------------------	----------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------

CKT	LOAD DESCRIPTION	TYPE	KVA	A/P	PHASE			A/P	KVA	TYPE	LOAD DESCRIPTION	CKT
					A	B	C					
1	LIGHTING: MAIN GYM	L	2.851	20/1	A			90/3	40.558	D	75 KVA TRANSFORMER	②
3	LIGHTING: SMALL GYM	L	1.036	20/1		B					"	4
5	LIGHTING: OUTSIDE LIGHTS	L	0.250	20/1			C				"	6
7	WRESTLING SPOT LIGHTS	L	0.344	20/1	A							8
9	STORAGE ROOM LIGHTS	L	0.396	20/1		B						10
11							C					12
13					A							14
15						B						16
17							C					18
19					A							20
21						B						22
23							C					24
25					A							26
27						B						28
29							C					30
31					A							32
33						B						34
35							C					36
37					A							38
39						B						40
41							C					42

**PHASE LOAD**      PHASE A= 16.71 KVA,      PHASE B= 14.95 KVA,      PHASE C= 13.77 KVA.

LOAD TYPE	L	R	M	H	WH		D	A	K	LM	TOTAL LOADS	
<b>CONN. LOAD</b>	4.88						40.56				<b>45.43 KVA</b>	<b>54.65 AMP</b>
<b>NET CALC. LOAD</b>	6.10						40.56				<b>46.65 KVA</b>	<b>56.12 AMP</b>

<input type="checkbox"/> ISOLATED GROUND BUS	<input type="checkbox"/> FEED THRU LUGS	<input type="checkbox"/> MAIN BKR SHUNT TRIP	<input type="checkbox"/> PANEL SKIRTS	<input checked="" type="checkbox"/> SURFACE
<input type="checkbox"/> RAIN TIGHT NEMA-3R ENCLOSURE	<input type="checkbox"/> DOUBLE LUGS	<input type="checkbox"/> SERVICE ENTRANCE LABEL	<input type="checkbox"/> INTEGRAL TVSS	<input type="checkbox"/> FLUSH

REMARKS: \_\_\_\_\_  
 \_\_\_\_\_

<b>PANEL</b> <b>L1</b>	<b>LOCATION:</b> MAIN ELECTRICAL ROOM	208/120 VOLT,	3 PHASE,	4 WIRE.
	<b>SERVING:</b> Gymnasium	35,000 AIC,	200 AMP MAIN	Lugs

CKT	LOAD DESCRIPTION	TYPE	KVA	A/P	PHASE			A/P	KVA	TYPE	LOAD DESCRIPTION	CKT
1	RECEPT: IT ROOM	R	0.900	20/1	A			20/1	0.360	D	RECEPT: AV ROOM	②
3	RECEPT: CENTER FLOOR	R	0.720	20/1		B		20/1	0.540	R	RECEPT: FLOOR SOUTH	4
5	RECEPT: SW WALL	R	0.900	20/1			C	20/1	0.540	R	RECEPT: FLOOR SOUTH	6
7	RECEPT: WEST WALL	R	0.540	20/1	A			20/1	0.540	R	RECEPT: NORTH WALL	8
9	RECEPT: EAST WALL	R	0.720	20/1		B		20/1	0.540	R	RECEPT: NORTH WALL	10
11	RECEPT: HOT BOX	D	1.500	20/1			C	20/1	1.200	D	RECEPT: DRINKING FOUNTAIN	12
13	BASKETBALL HOOP #1	D	1.270	20/1	A			20/1	1.270	M	BASKETBALL HOOP #6	14
15	BASKETBALL HOOP #2	D	1.270	20/1		B		20/1	1.270	M	BASKETBALL HOOP #7	16
17	BASKETBALL HOOP #3	D	1.270	20/1			C	20/1	1.270	M	BASKETBALL HOOP #8	18
19	BASKETBALL HOOP #4	D	1.270	20/1	A			20/1	1.270	M	ROLL DOWN CURTAIN	20
21	BASKETBALL HOOP #5	D	1.270	20/1		B		20/1	1.270	M	ROLL DOWN CURTAIN	22
23	WRESTLING MATT	D	2.370	20/3			C	20/1	1.200	M	SCOREBOARD #1	24
25	"				A			20/1	1.200	M	SCOREBOARD #2	26
27	"					B		20/1	0.360	D	AV SCREEN	28
29	RECEPT: AV ROOM	D	0.540	20/1			C	20/1	1.000	D	FIRE ALARM	30
31	RECEPT: STORAGE	R	0.360	20/1	A			20/1	0.180	D	RECEPT: ROOFTOP	32
33	EW-1	H	0.750	20/2		B		30/2	5.200	D	AV SPLIT HVAC	34
35	"						C					36
37	RECEPT: ELECT	R	0.180	20/1	A			30/2	5.200	D	IT SPLIT HVAC	38
39						B						40
41							C					42

**PHASE LOAD** PHASE A= 12.73 KVA, PHASE B= 14.33 KVA, PHASE C= 13.19 KVA.

LOAD TYPE	L	R	M	H	WH		D	A	K	LM	TOTAL LOADS	
<b>CONN. LOAD</b>		6.48	8.75	0.75			24.26			1.27	<b>40.24 KVA</b>	<b>111.70 AMP</b>
<b>NET CALC. LOAD</b>		6.48	8.75	0.75			24.26			0.32	<b>40.56 KVA</b>	<b>112.58 AMP</b>

- |                                                       |                                         |                                                 |                                        |                                             |
|-------------------------------------------------------|-----------------------------------------|-------------------------------------------------|----------------------------------------|---------------------------------------------|
| <input type="checkbox"/> ISOLATED GROUND BUS          | <input type="checkbox"/> FEED THRU LUGS | <input type="checkbox"/> MAIN BKR SHUNT TRIP    | <input type="checkbox"/> PANEL SKIRTS  | <input checked="" type="checkbox"/> SURFACE |
| <input type="checkbox"/> RAIN TIGHT NEMA-3R ENCLOSURE | <input type="checkbox"/> DOUBLE LUGS    | <input type="checkbox"/> SERVICE ENTRANCE LABEL | <input type="checkbox"/> INTEGRAL TVSS | <input type="checkbox"/> FLUSH              |

REMARKS: \_\_\_\_\_

<b>PANEL</b> <b>L2</b>	<b>LOCATION:</b> _____ <b>SERVING:</b> _____	<u>208/120</u> VOLT, <u>3</u> PHASE, <u>4</u> WIRE. AIC, <u>600</u> AMP MAIN <u>      </u> BREAKER
---------------------------	-------------------------------------------------	-------------------------------------------------------------------------------------------------------

CKT	LOAD DESCRIPTION	TYPE	KVA	A/P	PHASE			A/P	KVA	TYPE	LOAD DESCRIPTION	CKT
					A	B	C					
1	PANEL L3-A	D	17.553	200/3	A			200/3	10.410	D	PANEL L4	②
3	"			"		B		"			"	4
5	"			"			C	"			"	6
7	OU-O1	M	21.960	100/3	A			70/3		M	OU-02 - FUTURE	8
9	"			"		B		"			"	10
11	"			"			C	"			"	12
13	ELEV RM	M	4.186	60/3	A			125/3	26.280	M	ELEVATOR	14
15	"			"		B		"			"	16
17	"			"			C	"			"	18
19					A							20
21						B						22
23							C					24
25					A							26
27						B						28
29							C					30

**PHASE LOAD**    PHASE A= 26.80 KVA,    PHASE B= 26.80 KVA,    PHASE C= 26.80 KVA.

LOAD TYPE	L	R	M	H	WH		D	A	K	LM	TOTAL LOADS	
<b>CONN. LOAD</b>			52.43				27.96			26.28	<b>80.39</b> KVA	<b>223.14</b> AMP
<b>NET CALC. LOAD</b>			52.43				27.96			6.57	<b>86.96</b> KVA	<b>241.37</b> AMP

<input type="checkbox"/> ISOLATED GROUND BUS	<input type="checkbox"/> FEED THRU LUGS	<input type="checkbox"/> MAIN BKR SHUNT TRIP	<input type="checkbox"/> PANEL SKIRTS	<input checked="" type="checkbox"/> SURFACE
<input type="checkbox"/> RAIN TIGHT NEMA-3R ENCLOSURE	<input type="checkbox"/> DOUBLE LUGS	<input type="checkbox"/> SERVICE ENTRANCE LABEL	<input type="checkbox"/> INTEGRAL TVSS	<input type="checkbox"/> FLUSH

REMARKS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

<b>PANEL</b> <b>L3-A</b>	<b>LOCATION:</b> _____ <b>SERVING:</b> 1st FLOOR	<u>208/120</u> VOLT, <u>3</u> PHASE, <u>4</u> WIRE. <b>AIC,</b> <u>200</u> AMP MAIN                      Lugs
-----------------------------	-----------------------------------------------------	------------------------------------------------------------------------------------------------------------------

CKT	LOAD DESCRIPTION	TYPE	KVA	A/P	PHASE			A/P	KVA	TYPE	LOAD DESCRIPTION	CKT
					A	B	C					
1	BATHROOM 107 & 105 LIGHTING	L	0.099	20/1	A			20/1	0.180	R	BATHROOM 107 RECEPTICLE	②
3	RM 106 LIGHTING	L	0.033	20/1		B		20/1	0.720	R	RM 105 & 106 RECEPTICLES	4
5	RM 103 & 104 LIGHTING	L	0.232	20/1			C	20/1	0.720	R	RM 103 & 104 RECEPTICLES	6
7	RM 102 OFFICE LIGHTING	L	0.132	20/1	A			20/1	0.540	R	RM 102 OFFICE RECEPTICLES	8
9	RM 101 OFFICE LIGHTING	L	0.132	20/1		B		20/1	0.540	R	RM 101 OFFICE RECEPTICLES	10
11	108 HALL LIGHTING	L	0.364	20/1			C	20/1	0.540	R	108 HALL RECEPTICLES	12
13	115 STAIR LIGHTING	L	0.070	20/1	A			20/1	0.174	L	EXTERIOR LIGHTING	14
15	012, 013, 014 LIGHTING	L	0.099	20/1		B		20/1	0.180	R	012 JANITOR RECEPTICLE	16
17	ELEV LIGHTING	L	0.096	20/1			C	20/1	0.180	R	ELEV RECEPTICLE	18
19	STAIR HEATER	H	1.125	20/2	A			20/1	0.360	R	WATER FOUNTAIN RECEPTICLE	20
21	"			"		B		20/1	0.500	L	MENS REST LIGHTING	22
23	LOBBY LIGHTING	L	0.828	20/1			C	20/1	0.500	L	WOMENS REST LIGHTING	24
25	LOBBY RECEPTICLES	R	0.540	20/1	A			20/1	0.540	R	MENS REST RECEPTICLES	26
27						B		20/1	0.540	R	WOMENS REST RECEPTICLES	28
29							C					30
31					A							32
33						B						34
35							C					36
37					A			100/3	6.773	D	L3-B	38
39						B		"			"	40
41							C	"			"	42

**PHASE LOAD**    PHASE A= 5.46 KVA,    PHASE B= 5.56 KVA,    PHASE C= 5.72 KVA.

LOAD TYPE	L	R	M	H	WH		D	A	K	LM	TOTAL LOADS	
<b>CONN. LOAD</b>	3.26	5.58		1.13			6.77				<b>16.74 KVA</b>	<b>46.46 AMP</b>
<b>NET CALC. LOAD</b>	4.08	5.58		1.13			6.77				<b>17.55 KVA</b>	<b>48.72 AMP</b>

<input type="checkbox"/> ISOLATED GROUND BUS	<input type="checkbox"/> FEED THRU LUGS	<input type="checkbox"/> MAIN BKR SHUNT TRIP	<input type="checkbox"/> PANEL SKIRTS	<input checked="" type="checkbox"/> SURFACE
<input type="checkbox"/> RAIN TIGHT NEMA-3R ENCLOSURE	<input type="checkbox"/> DOUBLE LUGS	<input type="checkbox"/> SERVICE ENTRANCE LABEL	<input type="checkbox"/> INTEGRAL TVSS	<input type="checkbox"/> FLUSH

REMARKS: \_\_\_\_\_  
 \_\_\_\_\_

<b>PANEL</b> <b>L3-B</b>	<b>LOCATION:</b> _____ <b>SERVING:</b> 1ST FLOOR	<u>208/120</u> VOLT, <u>3</u> PHASE, <u>4</u> WIRE. <b>AIC,</b> <u>200</u> AMP MAIN              Lugs _____
-----------------------------	-----------------------------------------------------	----------------------------------------------------------------------------------------------------------------

CKT	LOAD DESCRIPTION	TYPE	KVA	A/P	PHASE			A/P	KVA	TYPE	LOAD DESCRIPTION	CKT
					A	B	C					
1	CLASS RM 110 LIGHTING	L	0.335	20/1	A			20/1	0.900	R	CLASS RM 110 RECEPTICLES	②
3	CLASS RM 110 DEDICATED RECEPTICLE	R	0.180	20/1		B		20/1	0.335	L	CLASS RM 109 LIGHTING	4
5	CLASS RM 109 RECEPTICLES	R	0.720	20/1			C	20/1	0.180	R	CLASS RM 109 DEDICATED RECEPTICLE	6
7	CLASS RM 113 LIGHTING	L	0.335	20/1	A			20/1	0.720	R	CLASS RM 113 RECEPTICLES	8
9	CLASS RM 113 DEDICATED RECEPTICLE	R	0.180	20/1		B		20/1	0.335	L	CLASS RM 112 LIGHTING	10
11	CLASS RM 112 RECEPTICLES	R	0.720	20/1			C	20/1	0.180	R	CLASS RM 112 DEDICATED RECEPTICLE	12
13	CLASS RM 111 LIGHTING	L	0.335	20/1	A			20/1	0.720	R	CLASS RM 111 RECEPTICLES	14
15	CLASS RM 111 DEDICATED RECEPTICLE	R	0.180	20/1		B						16
17							C					18
19					A							20
21						B						22
23							C					24
25					A							26
27						B						28
29							C					30
31					A							32
33						B						34
35							C					36
37					A							38
39						B						40
41							C					42

**PHASE LOAD**    PHASE A= 3.34 KVA,    PHASE B= 1.21 KVA,    PHASE C= 1.80 KVA.

LOAD TYPE	L	R	M	H	WH		D	A	K	LM	TOTAL LOADS	
<b>CONN. LOAD</b>	1.67	4.68									<b>6.35 KVA</b>	<b>17.64 AMP</b>
<b>NET CALC. LOAD</b>	2.09	4.68									<b>6.77 KVA</b>	<b>18.80 AMP</b>

<input type="checkbox"/> ISOLATED GROUND BUS	<input type="checkbox"/> FEED THRU LUGS	<input type="checkbox"/> MAIN BKR SHUNT TRIP	<input type="checkbox"/> PANEL SKIRTS	<input checked="" type="checkbox"/> SURFACE
<input type="checkbox"/> RAIN TIGHT NEMA-3R ENCLOSURE	<input type="checkbox"/> DOUBLE LUGS	<input type="checkbox"/> SERVICE ENTRANCE LABEL	<input type="checkbox"/> INTEGRAL TVSS	<input type="checkbox"/> FLUSH

REMARKS: \_\_\_\_\_  
 \_\_\_\_\_

<b>PANEL</b> <b>L4</b>	<b>LOCATION:</b> _____ <b>SERVING:</b> 2nd FLOOR	<u>208/120</u> VOLT, <u>3</u> PHASE, <u>4</u> WIRE. AIC, <u>200</u> AMP MAIN    Lugs _____
---------------------------	-----------------------------------------------------	-----------------------------------------------------------------------------------------------

CKT	LOAD DESCRIPTION	TYPE	KVA	A/P	PHASE			A/P	KVA	TYPE	LOAD DESCRIPTION	CKT
					A	B	C					
1	ROOF RECEPTICLE	R	0.180	20/1	A			20/1	0.360	R	UPSTAIRS HALL 021 RECEPTICLES	②
3	UPSTAIRS LIGHTING HALL 221	L	0.354	20/1		B		20/1	0.780	L	EXTERIOR CANOPY LIGHTING	4
5	UPSTAIRS LIGHTING HIGH CEILING	L	0.246	20/1			C					6
7					A							8
9						B						10
11							C					12
13					A							14
15						B						16
17							C					18
19					A							20
21						B						22
23							C					24
25					A							26
27						B						28
29							C					30
31					A							32
33						B						34
35							C					36
37					A			30/3	6.516	M	DOAS-01	38
39						B		"			"	40
41							C	"			"	42

**PHASE LOAD**    PHASE A= 2.71 KVA,    PHASE B= 3.31 KVA,    PHASE C= 2.42 KVA.

LOAD TYPE	L	R	M	H	WH		D	A	K	LM	TOTAL LOADS	
<b>CONN. LOAD</b>	1.38	0.54	6.52							6.52	<b>8.44 KVA</b>	<b>23.42 AMP</b>
<b>NET CALC. LOAD</b>	1.73	0.54	6.52							1.63	<b>10.41 KVA</b>	<b>28.90 AMP</b>

<input type="checkbox"/> ISOLATED GROUND BUS	<input type="checkbox"/> FEED THRU LUGS	<input type="checkbox"/> MAIN BKR SHUNT TRIP	<input type="checkbox"/> PANEL SKIRTS	<input checked="" type="checkbox"/> SURFACE
<input type="checkbox"/> RAIN TIGHT NEMA-3R ENCLOSURE	<input type="checkbox"/> DOUBLE LUGS	<input type="checkbox"/> SERVICE ENTRANCE LABEL	<input type="checkbox"/> INTEGRAL TVSS	<input type="checkbox"/> FLUSH

REMARKS: \_\_\_\_\_  
 \_\_\_\_\_

<b>PANEL ELEV RM</b>	LOCATION: _____ SERVING: _____	<u>208/120</u> VOLT, <u>3</u> PHASE, <u>4</u> WIRE. AIC, <u>100</u> AMP MAIN    Lugs _____
--------------------------	-----------------------------------	-----------------------------------------------------------------------------------------------

CKT	LOAD DESCRIPTION	TYPE	KVA	A/P	PHASE			A/P	KVA	TYPE	LOAD DESCRIPTION	CKT
					A	B	C					
1	CAR LIGHTS	L		20/1	A			20/1		L	PIT GFCI	②
3	ROOM GFCI	R		20/1		B		20/1		R	PIT LIGHTS	4
5	HP-01	M	3.349	30/2			C					6
7	"			"	A							8
9						B						10
11							C					12
13					A							14
15						B						16
17							C					18
19					A							20
21						B						22
23							C					24

**PHASE LOAD**    PHASE A= 1.67 KVA,    PHASE B= \_\_\_\_\_ KVA,    PHASE C= 1.67 KVA.

LOAD TYPE	L	R	M	H	WH		D	A	K	LM	TOTAL LOADS	
<b>CONN. LOAD</b>			3.35							3.35	<b>3.35 KVA</b>	<b>9.30 AMP</b>
<b>NET CALC. LOAD</b>			3.35							0.84	<b>4.19 KVA</b>	<b>11.62 AMP</b>

- |                                                       |                                         |                                                 |                                        |                                             |
|-------------------------------------------------------|-----------------------------------------|-------------------------------------------------|----------------------------------------|---------------------------------------------|
| <input type="checkbox"/> ISOLATED GROUND BUS          | <input type="checkbox"/> FEED THRU LUGS | <input type="checkbox"/> MAIN BKR SHUNT TRIP    | <input type="checkbox"/> PANEL SKIRTS  | <input checked="" type="checkbox"/> SURFACE |
| <input type="checkbox"/> RAIN TIGHT NEMA-3R ENCLOSURE | <input type="checkbox"/> DOUBLE LUGS    | <input type="checkbox"/> SERVICE ENTRANCE LABEL | <input type="checkbox"/> INTEGRAL TVSS | <input type="checkbox"/> FLUSH              |

REMARKS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_