Emergency Lighting 2020

COMPARING CENTRAL BATTERY SYSTEMS TO TRADITIONAL ALTERNATE SOURCE'S

LESS BATTERY
MORE COVERAGE

DESIGNED & MANUFACTURED

IN THE U.S.A.

Signtex Inc
LIGHTING

INTELLIGENT EMERGENCY LIGHTING SYSTEMS

BATTERY POLLUTION THE NEXT GLOBAL KILLER?

- Plastic production over the past 7 decades with no real plan on recycling are choking our oceans, streams and rivers, all our aquatic life are in dire peril.
- 80 years of Nuclear w/ NO PLACE TO STORE THAT WASTE
- Now ENERGY STORAGE is the new buzz word, CORDLESS THIS, WIRELESS CHARGING THAT , from electric cars and trucks, toys, to mowers and appliances down to the micro-batteries on circuit board to maintain memory of our digital systems.
- Plastics have MOTHER EARTH on the ropes, batteries will be finish HER off if we do not NOW reduce this toxic use and demand recycling.

CODE REQUIREMENTS

LIGHT LEVEL REQUIREMENTS

NFPA 101: In the event of a power outage, the emergency lighting must be transferred to its alternate source within 10 sec. Additionally, battery-powered emergency lighting shall be continuously available for 1.5 hours after the power outage. The emergency illumination shall be spaced to provide initial illumination along the defined path of egress of not less than an average of 1.0 fc and not less than 0.1 fc at the floor of the defined path of egress. At the end of 1.5 hours, the illumination levels are permitted to decline along the path of egress as the emergency power source discharges to an average of 0.6 fc but not less than 0.06 fc .

In order to provide sufficient contrast and subsequent visual acuity, the maximum to minimum illumination uniformity ratio shall be no greater than 40:1.

TESTING

NFPA 101 Article 7.9.3 requires emergency lighting systems to have periodic functional tests. The functional testing is to be conducted monthly for a minimum of 30 sec, with an annual functional test of 1.5 hours required for battery-powered systems. The key constituent of this requirement is the maintenance of written documentation confirming the mandated monthly and annual functional testing visual inspections. NFPA 101 also allows self-testing and self-diagnosis as long as the self-testing is compliant with the **manual requirements**. For emergency lighting systems where self-testing is computer-based, a computer-generated report detailing the history of the tests is adequate for AHJ review.

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SIGNTEX
CENTRAL BATTERY SYSTEM
2005- TO PRESENT

In 2005 an Architect called us while working on an elementary school and was trying to get a LEED point for innovation by reducing hazardous waste in schools i.e. BATTERIES. They asked us to see how we could reduce batteries in schools.

WE GOT RIGHT TO WORK
THE CENTRAL BATTERY SYSTEM WITH MOONLITE FIXTURES WAS BORN

Thru out the presentation today you'll see
1. How we compare to traditional methods
2. How we use fewer # batteries and less battery volume per sqft than any other method or system
3. Our monitoring and reporting capabilities.

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Conventional Emergency Lighting

K-12, commercial office, retail, hotels all average 20-25 batteries for every 10,000 sqft of building

- A typical High School may range from
- HUNDREDS to EVEN THOUSANDS's of batteries.
- These must be tested monthly a written log maintained on status and maintenance history
- The typical contractor cost to replace one single battery can be over $200
- LOOK FOR FUTURE BATTERY REGULATIONS

Emergency Lighting: The Conventional Approach

- Most emergency lighting fixtures were designed years ago, with little regard for ease of maintenance or cost of operation.
- Unfortunately, there are no specifications as to the design and performance of these fixtures, only requirements to the space they are in.
- We have bugeyes that boast 70’ spacing and those that could not meet code on 10’ spacings. AS SOON AS THE CONTRACTOR SAYS “VE”10’ FIXTURES GO TO THE 70’ LOCATIONS.
- With battery pollution hanging over us like it is, a minimum performance should be required.

EM BATTERY PACKS,

- "REMEMBER WHEN THE PACKS FIT INSIDE THE FLUORESCENT FIXTURES?
- Nor has the industry, built fixtures to house these battery packs , so we are setting them on the back of the fixture, on the tile next to the fixture.
- AGAIN EMERGENCY LIGHTING IS AN AFTER THOUGHT.

- Batteries are subjected to:
  - HIGH AND LOW TEMPS
  - RAPID TEMPERATURE CHANGES
  - HUMIDITY
- Typical useful life: 4-7 Years

Too Expensive

While EM battery packs are $150.00 on bid day, this can be easily a $400.00 bill for an end user to get replaced.

And why do we throw away the inverter EVERYTIME?

WHY ARE WE THROWING AWAY ALL THE ELECTRONICS ALONG WITH THE BATTERY, ARE THESE BEING PROPERLY DISPOSED OF ???

AC INVERTERS

Emergency Lighting Inverters

First problem with AC Inverters?
They power all lighting fixtures at full light output.
This is 85-90% “more battery volume” needed for NFPA101 Requirements

Factory start-up required- $xx000?

Factory maintenance required

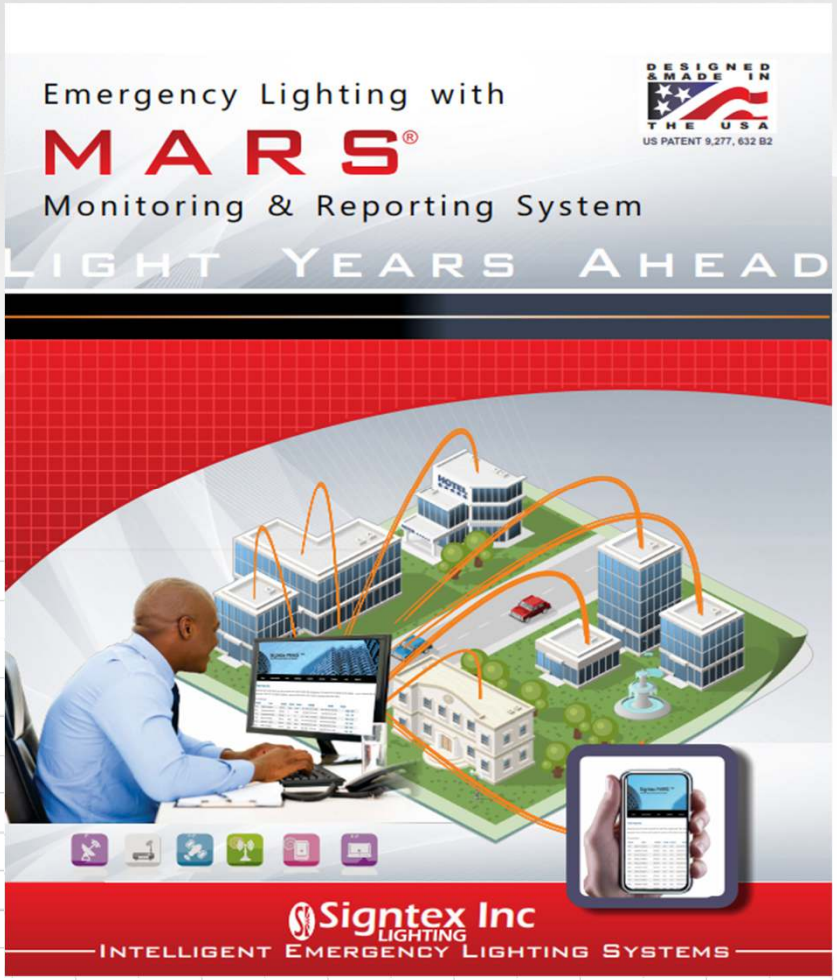
Emergency Inverter branch circuits require Class 1 wiring in conduit

Inverters can require large spaces with special fire ratings and ventilation.

Let’s not forget all the GTD’s ACLR’s etc.

2017 NEC 700.3 Requires back up of AC inverters during extended maintenance

OUR SOLUTION???



Computer Controlled Self- test Diagnostics

Control

The four emergency lighting functions defined in NFPA Life Safety Code 101 and UL Standard 924 for Emergency and Power Equipment are tested as follows:

Battery Condition
Every 28 days or sooner if desired, batteries are tested for voltage and discharge rate: Every 12 months, batteries are discharged under full load to confirm minimum of 87.5% of rated voltage after 90 minute discharge. If required, discharge and test timing parameters can be changed.

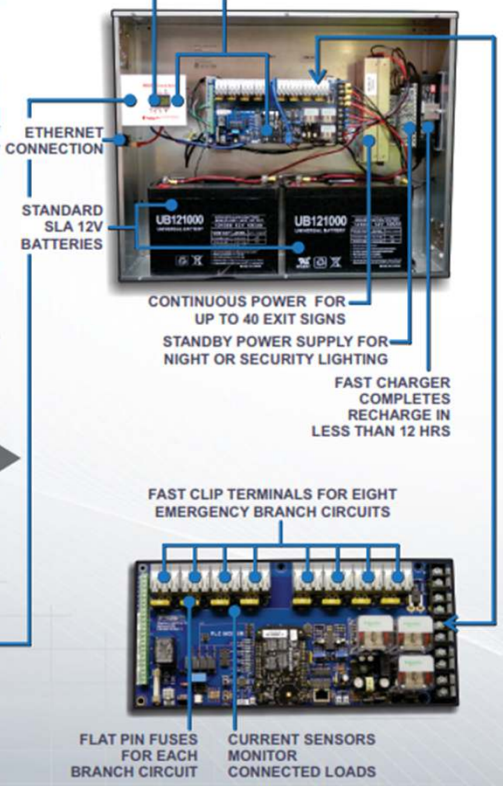
Automatic Transfer Switch
Every 28 days or sooner if desired, the ATS is tested to ensure full load transfer after any loss of AC building utility power.

Battery Charger Function
Every 28 days or sooner if desired, the charger is tested for correct charge rate and voltage.

Connected Emergency Load
Every 28 days or sooner if desired.

Battery Panel Power Range

Four models are available to supply 100, 250, 500 or 1,000 Watts of emergency power for 90 minutes at 24 VDC.



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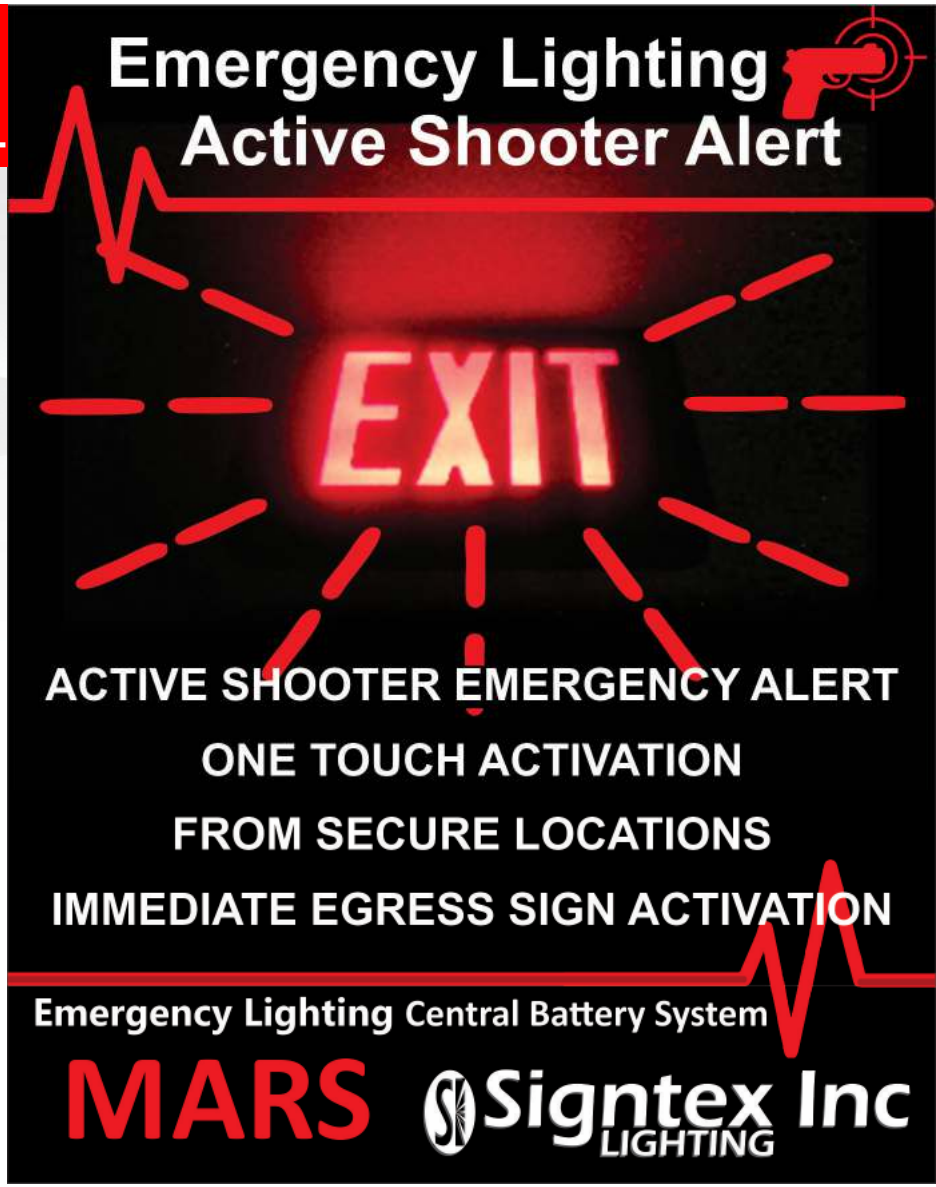
LIGHTING

INTELLIGENT EMERGENCY LIGHTING SYSTEMS

1 TOUCH AND BUILDING IS NOTIFIED
"POTENTIAL EMERGENCY"
If you have active shooter drills,
or ANY building wide
emergency notification
Signtex Life Safety system can also double
as silent notification:
1 TOUCH AND YOUR PEOPLE KNOW TO TAKE SHELTER
We can also tie into your fire alarm,
so any time the fire alarm comes on,
we can either come on and stay on or flash,
Example:
active fire alarm, : flash / lose power switches to full on.
ALL TO BE WORKED OUT DURING PROGRAMMING



NFPA “ASHER” ACTIVE SHOOTER HOSTILE EVENT RESPONSE

FACT SHEET

NFPA 3000™ (PS): *STANDARD FOR AN ACTIVE SHOOTER/ HOSTILE EVENT RESPONSE (ASHER) PROGRAM*

What You Need To Know About NFPA 3000™ (PS)

As more hostile events continue to occur, it is critical for law enforcement, first responders, emergency personnel, facility managers, hospital officials, community members, and others to have the information they need to be prepared when attacks happen. To address that need, NFPA® developed a new standard – NFPA 3000™ (PS), *Standard for an Active Shooter/ Hostile Event Response (ASHER) Program.*

The purpose of NFPA 3000™ (PS) is to identify the minimum program elements needed to organize, manage, and sustain an active shooter and/or hostile event response program and to reduce or eliminate the risks, effect, and impact on an organization or community affected by these events. The document addresses the following areas and others:

- Planning
  - Assessing risks
  - Developing community-wide programs
- Responding
  - Establishing competencies
  - Communicating to all stakeholders
- Recovering
  - Planning recovery efforts
  - Taking into account healthcare and mental health issues

4 Main Concepts	
Every chapter is written with these 4 concepts in mind.	Whole Community
	Unified Command
	Integrated Response
	Planned Recovery

By the Numbers

Active shooter events in the US: 2000–2018

Active Shooter/Hostile Event Response Program

FACT SHEET

NFPA 3000™ (PS): *STANDARD FOR AN ACTIVE SHOOTER/ HOSTILE EVENT RESPONSE (ASHER) PROGRAM* CONTINUED

What You Should Know

If you are a **policymaker**, you need to know how implementing NFPA 3000™ (PS) can help make your entire community safer. As a leader, you can influence all aspects of your community to put into practice the parts that are relevant and be the connection that brings everyone together.

If you are a **facility manager**, you need to be involved in the creation of an active shooter/ hostile event response plan, integrate the plan with your response community, and train all personnel on the plan.

If you are a **first responder** (law, fire, or EMS), you must work together across disciplines to have the needed knowledge and training to reduce harm.

If you are a member of the **public**, ask your local officials if they have an active shooter/ hostile event response program in place that is integrated with the entire community.

Who Worked on Developing NFPA 3000™ (PS)?

The standard was created with widespread support from fire service, law enforcement, EMS, emergency management, higher education, and facility management professionals. Committee members include representatives from 46 government agencies, organizations, and associations.

BECOME AN NFPA MEMBER
FOR MORE OF THESE RESOURCES

Is NFPA 3000™ (PS) Only for the Fire Service?

No, NFPA 3000™ (PS) is for all safety planners, first responders, and policy makers. This includes fire, EMS, police, school superintendents, facility managers, building owners, safety officers, safety and security consultants, loss control/risk safety officers, risk managers, emergency services directors, and federal, state, city, and municipal government officials. All of these stakeholders need to be at the table and working together.

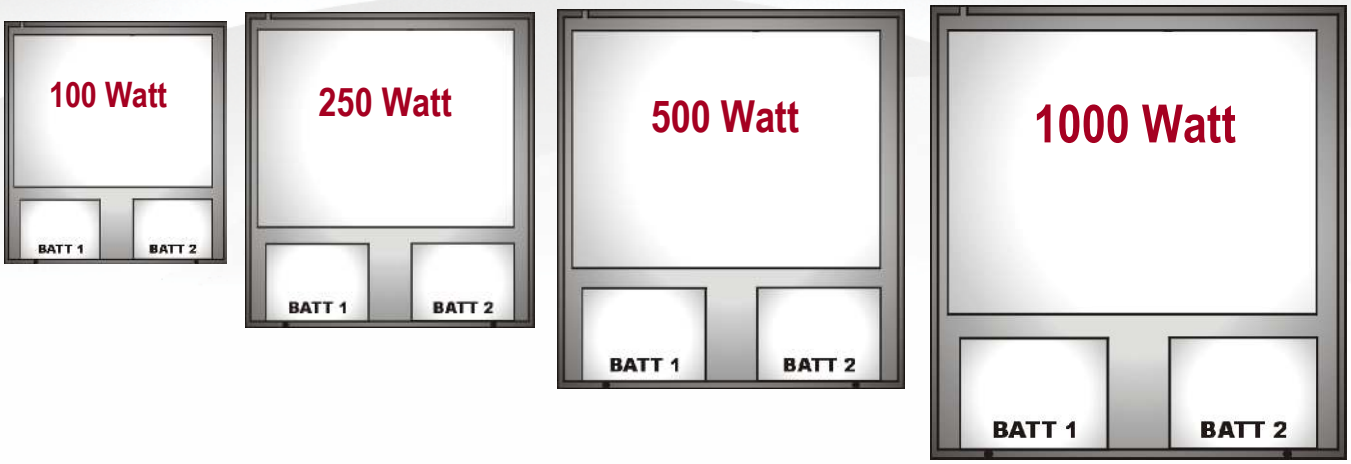
How was NFPA 3000™ (PS) Developed?

Next Steps You Can Take

- Learn more by going to nfpa.org/3000 where you can follow the standard's development process and sign up for updates.
- Identify and implement the components that are relevant in your community.
- Visit nfpa.org/3000news for access to all the resources you need to implement NFPA 3000™ (PS) in your community.
- Engage with our experts and your peers on NFPA Xchange™ at https://community.nfpa.org/.

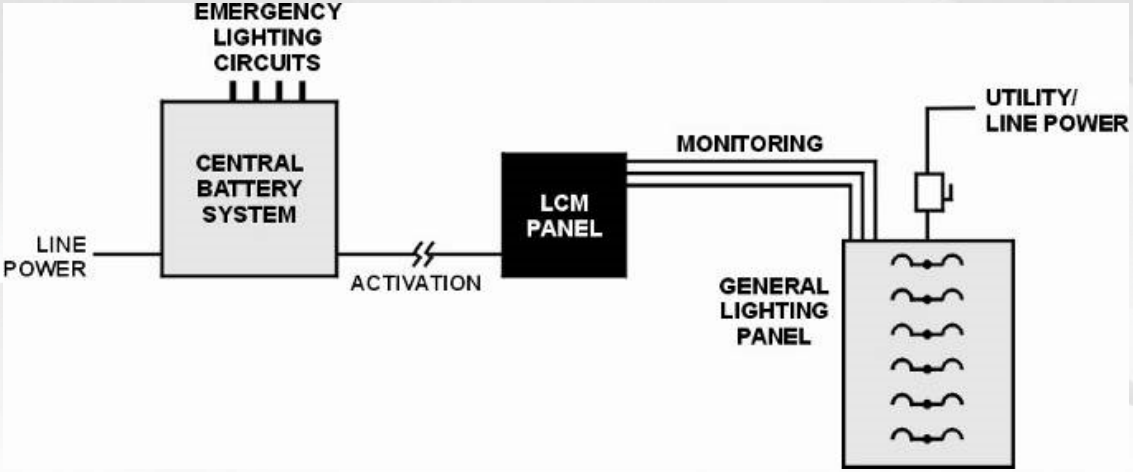
IT'S A BIG WORLD.
LET'S PROTECT IT TOGETHER.

100 to 1000 watts of emergency power to any combination of Signtex products



- Minimum of 90 minutes.
- FEMA SAFE ROOM?
- 120 MINUTES NO PROBLEM.

Local Branch Circuit Monitoring Option



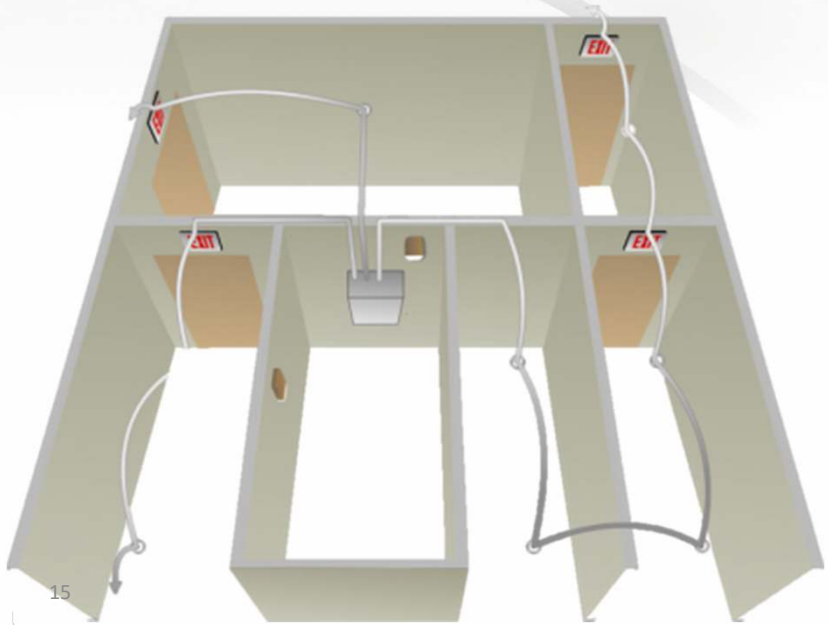
- Monitors the status of up to eight (8) branch circuits.
- If any monitored circuit breaker is opened, a signal will be sent to a CBS panel to activate emergency lighting in the monitored area.
- Enables compliance with NFPA Life Safety Code 101 (2009), Para 7.9.2.3.

Central Battery System
Easy to Maintain

- Standard lead- calcium batteries can be purchased from stock at commercial battery suppliers
- Battery removal and replacement can be performed in minutes by in- house personnel. No Special Training Required!
- Open One Door to Service 100 Fixtures

Central Battery System Easy to Wire

- Up to eight 24V emergency branch circuits with wire size from #18AWG to #8AWG can be installed with 1-hour rated metal jacket type “MC” cable, per NEC 700.9 (d)(1). If required, loads may be rated for Class 2 wiring. Hard conduit Class 1 wiring is not required unless specified by local codes.



WORKING DRAWINGS

ELC

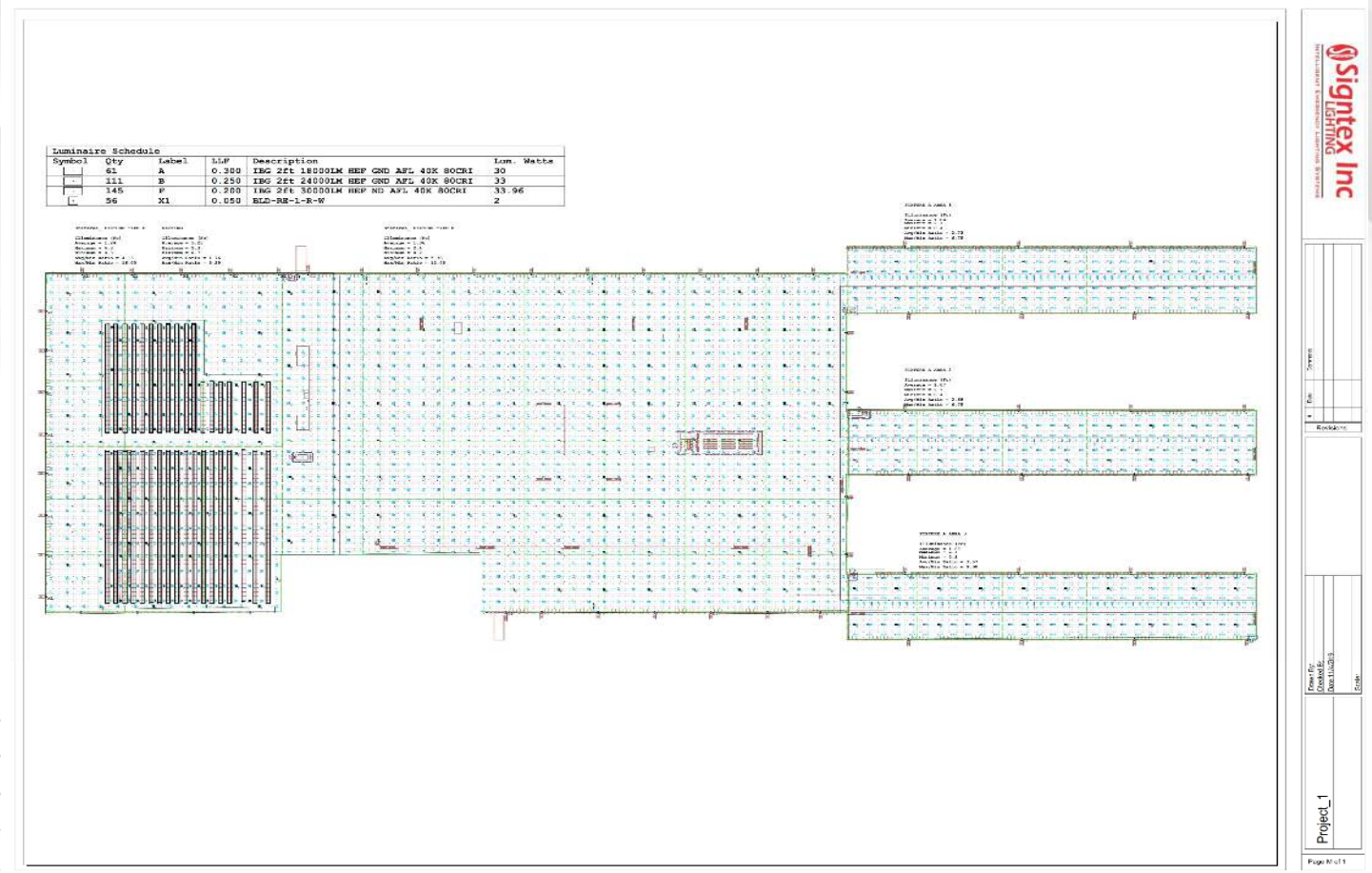
Signtex will not ship a job until we have done all photometrics, low voltage schematics and load charts

SIGNTEX HIBAY SOLUTION 1.5 MILLION SQFT DISTRIBUTION

COMPLETE FACILITY EGRESS POINT X POINT CALCULATION

THE WORK WE DO ON EVERY PROJECT

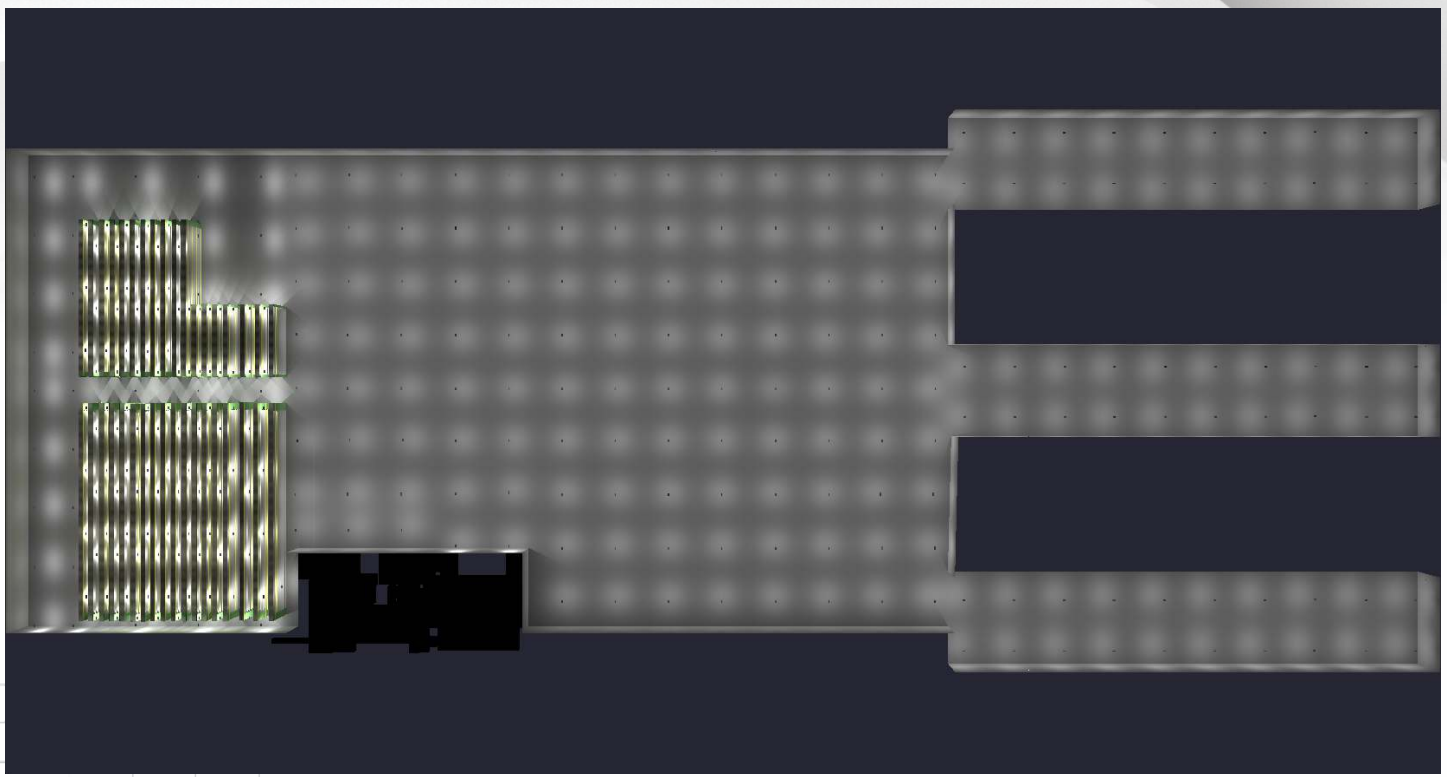
Every project complete egress photometrics are first completed



SIGNTEX HIBAY SOLUTION 1.5 MILLION SQFT DISTRIBUTION

COMPLETE FACILITY EGRESS POINT X POINT CALCULATION

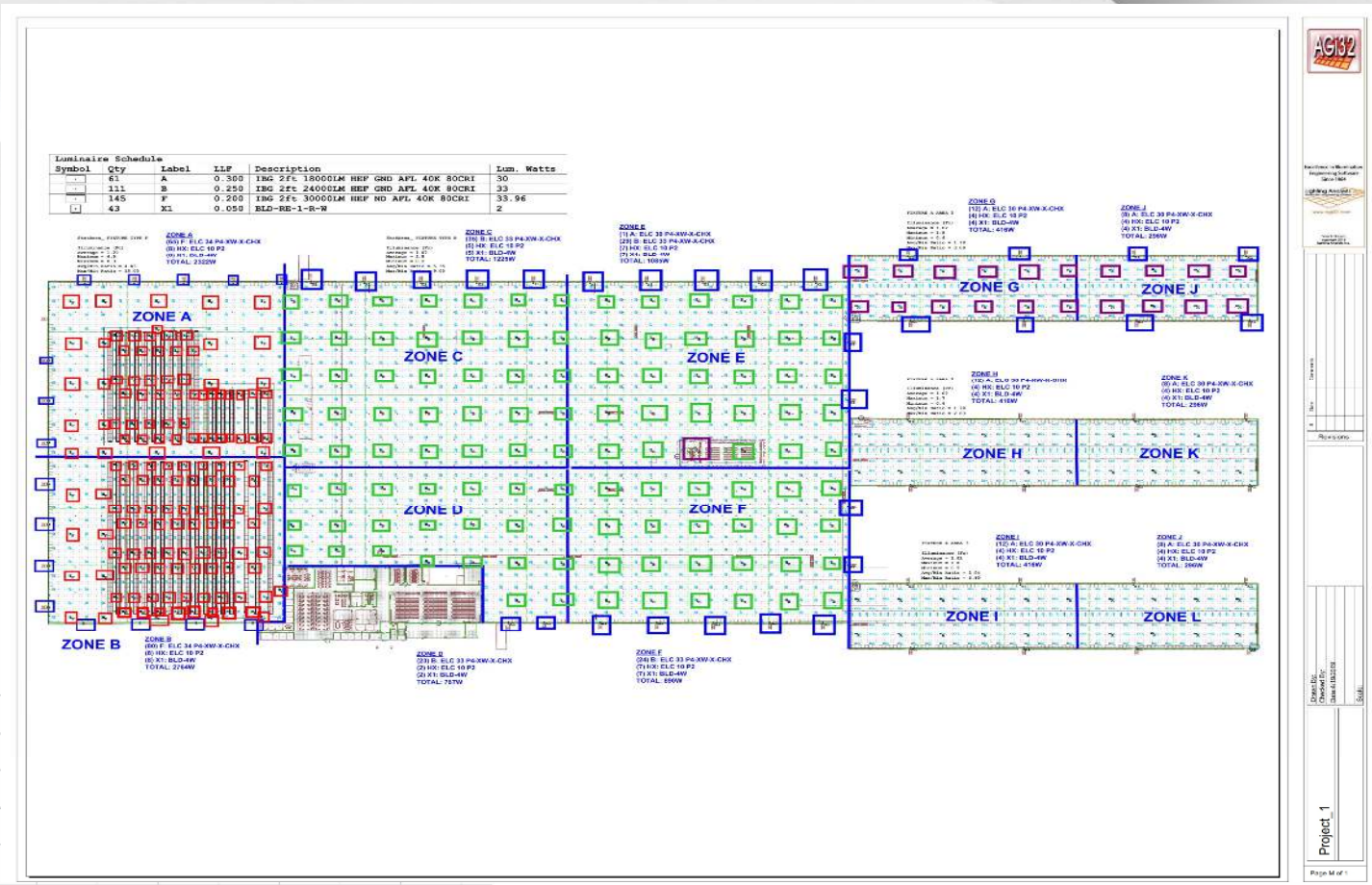
Every project complete egress photometrics are first completed, Renderings are always generated for review



SIGNTEX HIBAY SOLUTION

ZONED FOR CBM UNITS

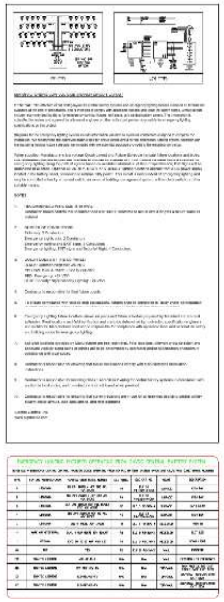
The facilities are zoned for Central Battery location.



SIGNTEX HIBAY SOLUTION

Circuit Design

Every project is circuited displaying all low voltage schematics along with wire sizing for voltage drop calculations completed.



Load charts

ELC

CIRCUIT LOAD SCHEDULE — PROJECT: HOOVER ELEM SCHOOL — DATE: 5/1/14

CBS # WATTS	MODEL SERIES	FIXT. TYPE	EPR Watts	FIXTURE COUNT FOR CIRCUITS #1- 8								FIXT. QTY	CBS LOAD
				1	2	3	4	5	6	7	8		
	WLD	EM	10	3		4	2		1			10	100
	WLD	EM-DP	10	1								1	10
CR1	MGE	EM1	10	1	1	1			2			5	50
	MLW	EM2	10				1					1	10
1000	MHE	MHF	30		3	1	4	4	3			15	450
	RPR	X1	2	1	2	1		1	2			7	14
MECH RM C25	RPR	X2	4	1								1	4
												0	0
												0	0
												0	0
												0	0
												0	0
												0	0
												0	0
	CIRCUIT LOAD (WATTS)			56	104	82	140	132	124	0	0		538
	CIRCUIT LENGTH (FT)			120	205	155	125	180	180				
	WLD	EM	10	6	2	7	4	2	8			29	290
	WLD	EM-DP	10		1		1					2	20
CR2	MGE	EM1	10	1	1	1	1		1			5	50
	MLW	EM2	10									0	0
1000	MHE	MHF	30		1			4				5	150
	RPR	X1	2	1	1	1	2	1	2			8	16
MECH RM C25	RPR	X2	4				2		1			3	12
												0	0
												0	0
												0	0
												0	0
												0	0
												0	0
												0	0
	CIRCUIT LOAD (WATTS)			72	72	82	72	142	98	0	0		538
	CIRCUIT LENGTH (FT)			168	115	255	162	165	245				

DATA ENTRY==		
FORMULAS==		
MAX LOAD CIRCUIT NO:	2	5
ACTUAL MAX LOAD:	104	132
CIRCUIT LENGTH(FT):	205	180
NUMBER OF FIXTURES:	5	5
WIRE SIZE (AWG):	10	10
VALUE "M":	1.71	1.71
VALUE "K":	13586	13586
MAX ALLOWED LOAD =	119	129

MAX LOAD CIRCUIT NO:	5	6
ACTUAL MAX LOAD:	142	98
CIRCUIT LENGTH(FT):	165	245
NUMBER OF FIXTURES:	7	12
WIRE SIZE (AWG):	10	10
VALUE "M":	1.71	1.32
VALUE "K":	13586	13586
MAX ALLOWED LOAD =	144	101

FIXTURE SCHEDULE:

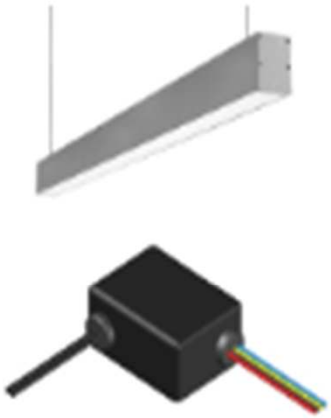
TYPE	QTY	EPR	WATTS
EM	29	10	290
EM-DP	3	10	30
EM1	10	10	100
EM2	1	10	10
MHF	20	30	600
X1	15	2	30
X2	4	4	16
	0	0	0
	0	0	0
	0	0	0
	0	0	0
	0	0	0
	0	0	0
	0	0	0
	0	0	0

TOTAL CBS (EPR) POWER REQUIRED: 1178 WATTS

MAX LOAD = K x M / CIRCUIT LENGTH

Emergency Lighting Control (ELC) for LED Luminaires

STRIP



P2 : Emergency Power
5- 20W

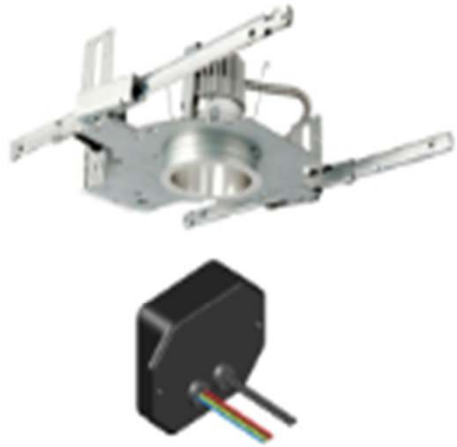
TROFFER

P2 : Emergency Power
5- 20W

HIGH BAY

P4 : Emergency Power
10- 60W

DOWN LIGHT



P5 : Emergency Power
5- 20W

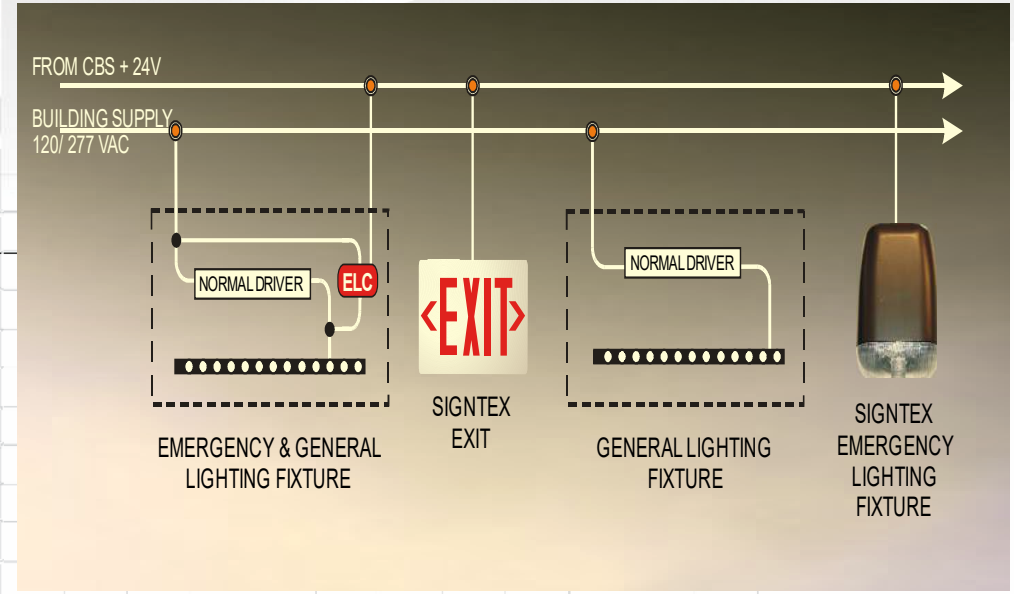
ELC

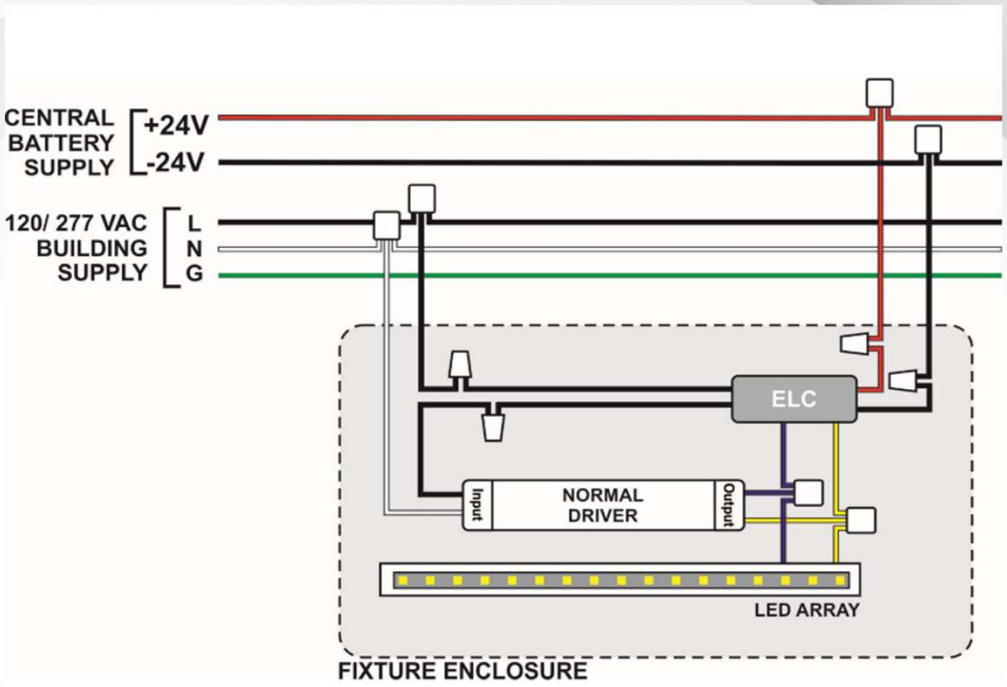
- Component UL Standard 924, for field or factory installation in the Fire and Electrical Enclosure of any LED fixture

  Normal lighting operation is not affected by ELC operation. Compatible with all types of dimming and lighting controls.

Typical Wiring
ELC: Emergency Lighting Control for LED General Lighting Fixtures

ELC





K-12 SCHOOL SYSTEM COMPARISONS

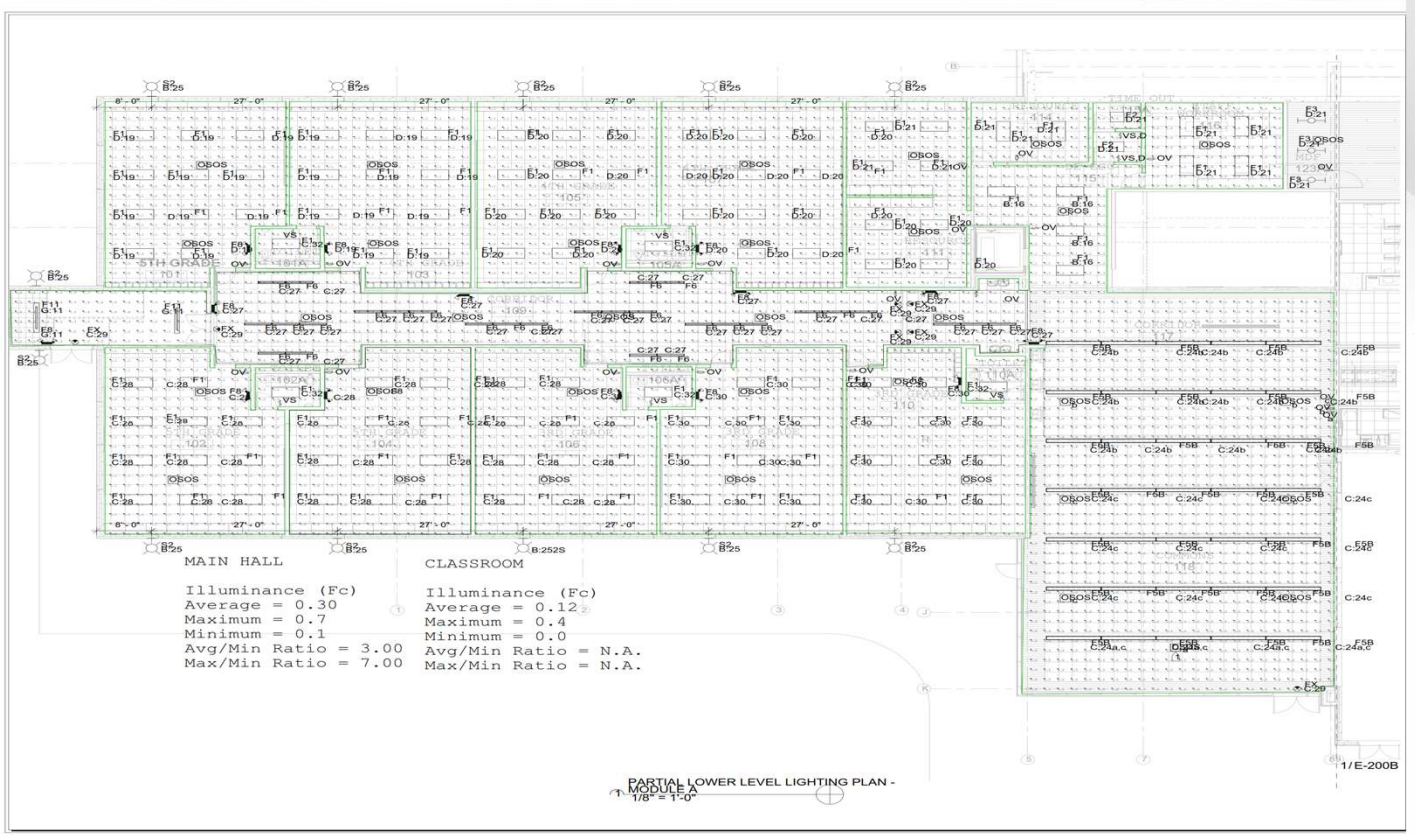
BUG EYE K-12 SCHOOL SOLUTION

School with BUGEYES

DOES NOT MEET CODE

This School is typical of the kinds of things we specified daily.
Too often Engineers depend on spacing recommendation on fixtures cut sheets rather than actually running calcs.
As you can see , we ran calcs on this example , it grossly fails to meet code for light levels.

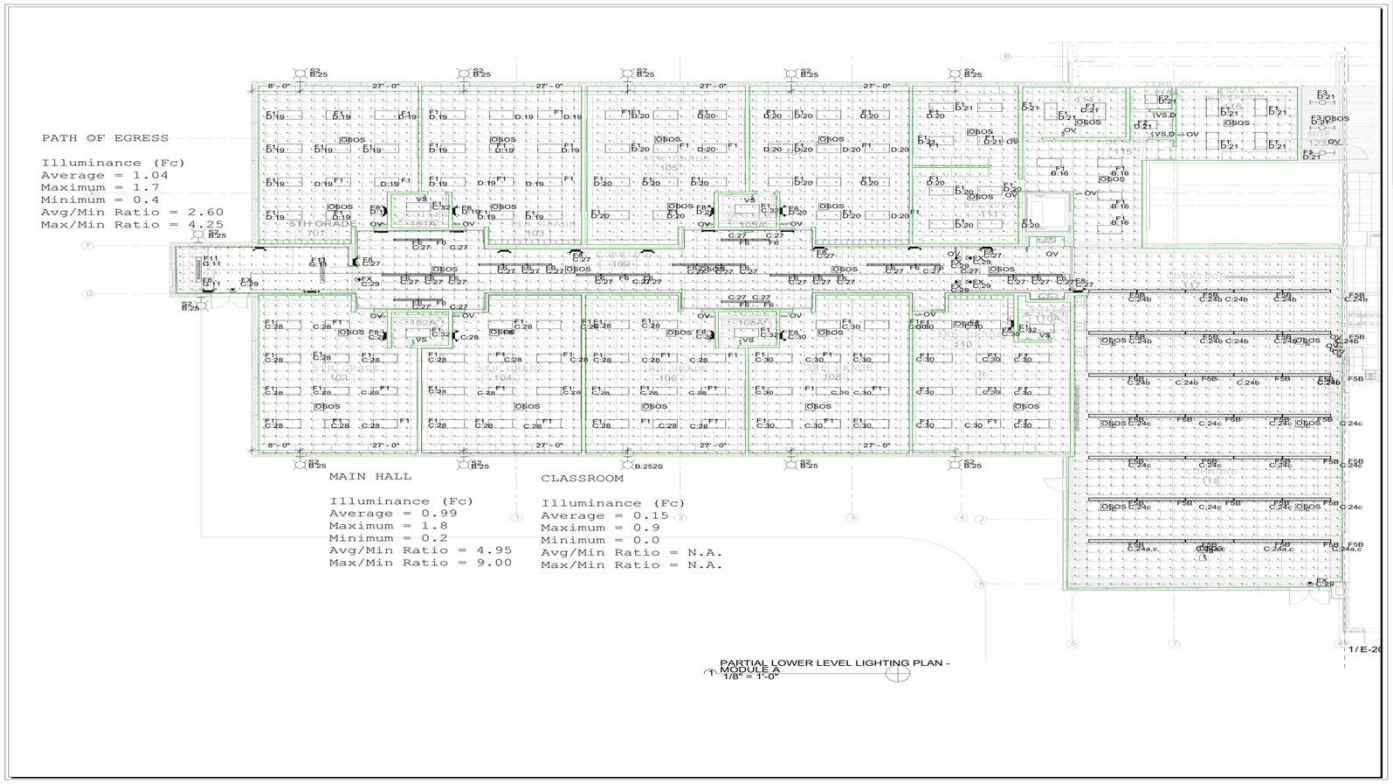
Total of 6 bugeye fixtures for the main corridor and an average illuminance of .3 ftc



BUG EYE K-12 SCHOOL SOLUTION

School with BUGEYES

After this was pointed out to the architect it was changed to 15 bug eyes in the same corridor to achieve 1.04 ftc in a designated path of egress
To be code compliant.
In researching contractor labor costs, there is approximately $150.00 in pipe, wire, boxes , fittings and labor in the walls, along with $75.00 for a quality bugeye with nicad batteries, self diagnostics that can to achieve 30’ spacing which brings bugeye cost to over
$225- PER EMERGENCY POINT



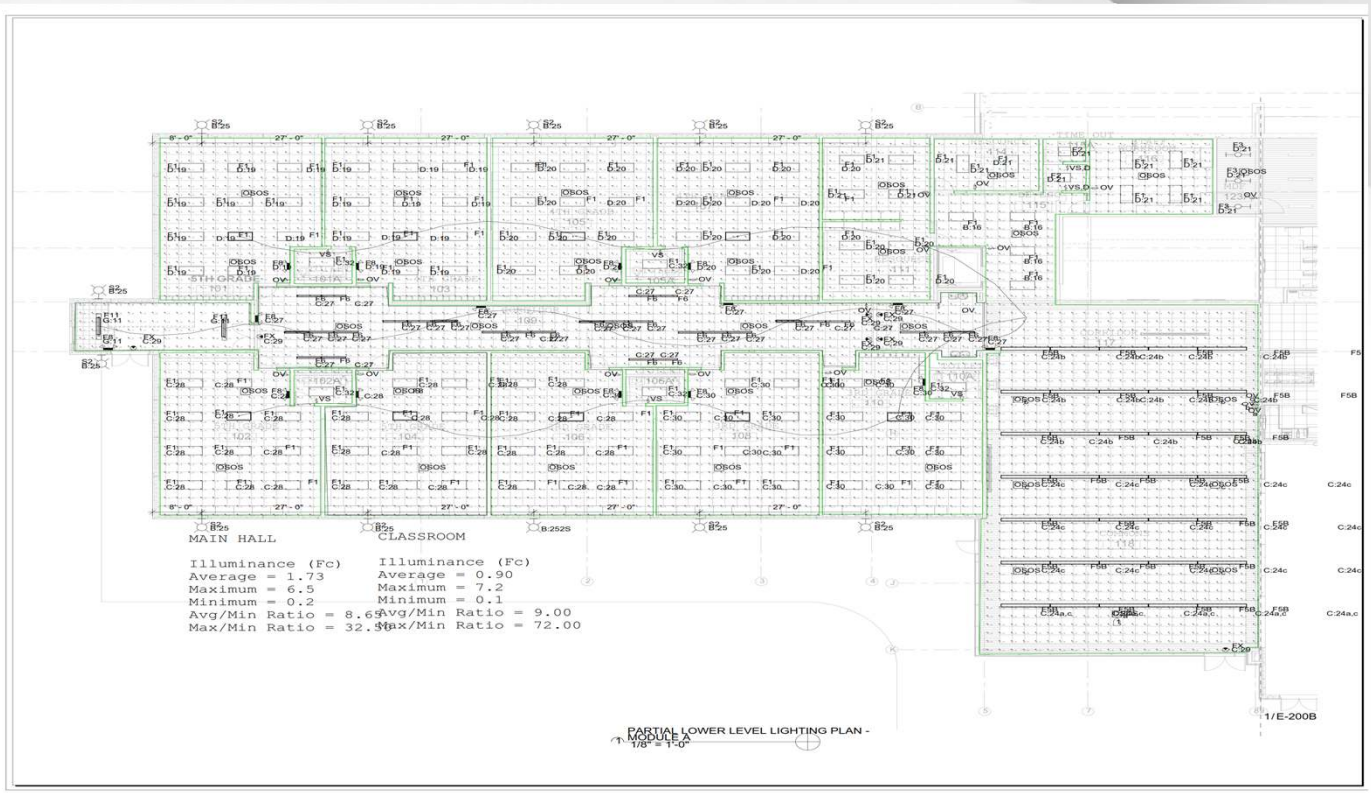
SIGNTEX ELC K-12 SCHOOL SOLUTION

School w/ SIGNTEX Emergency Lighting Controllers

Signtex ELC?
7 ELCP2's factory installed for the same corridor,
1.74 ftc ave on every sqft of the hall.
NO DESIGNATED PATH REQUIRED

PULLING CLASS II LOW VOLTAGE MC CABLE

2 12v batteries in 1 CBM cabinet for every 20,000 sqft of building.
Pulling only class 2 low voltage to each em fixture.



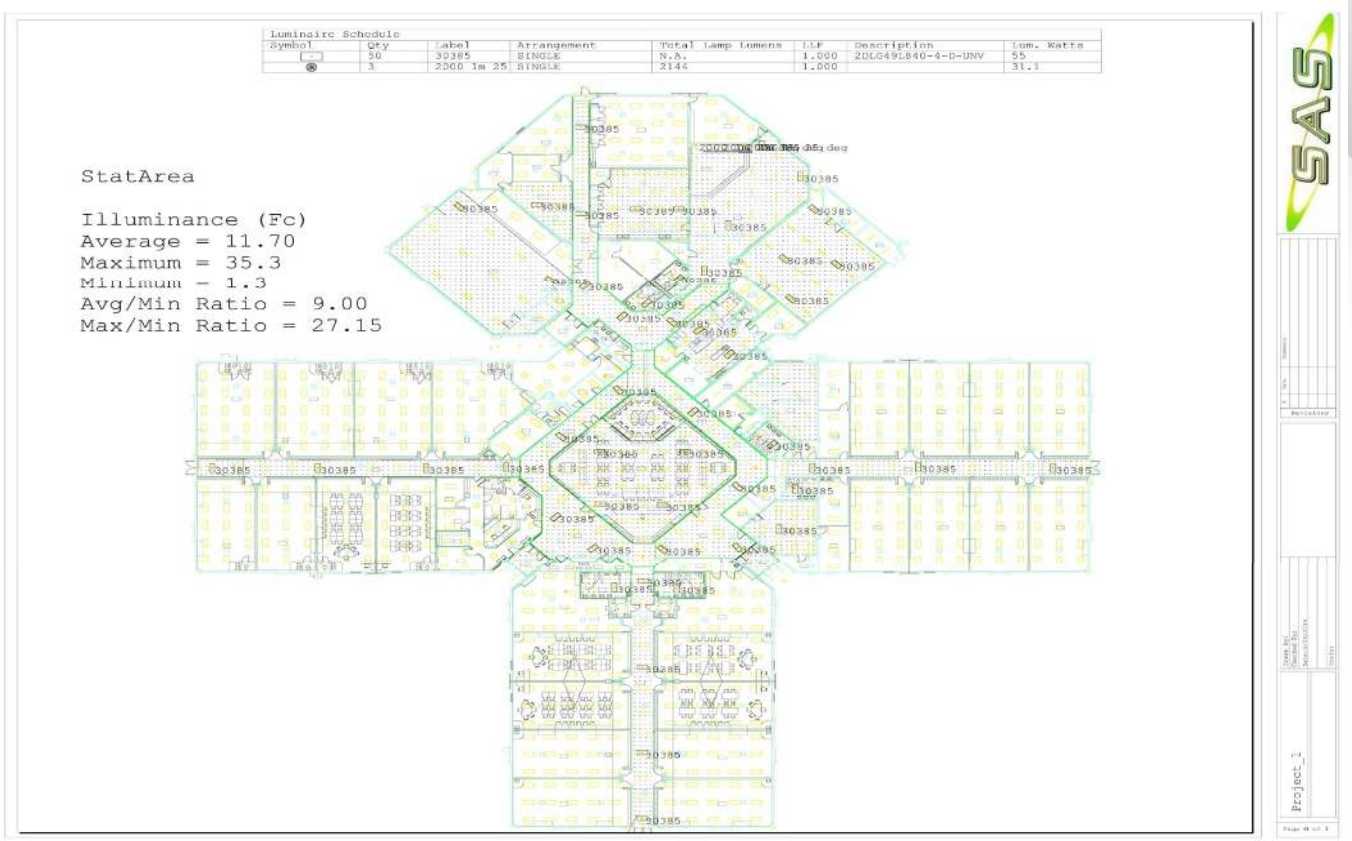
INVERTER K-12 SCHOOL SOLUTION

School with Inverter

This School originally specified with 3KVA inverter + exits
Inverters power everything @ full light output.
We DO NOT NEED 11.7 ftc,
WE NEED 1 FTC AVE .1 MIN

53 4000 LUMEN 2X4, 7 EXITS
60 EMERGENCY POINTS

$4000.00 BATTERY REPLACEMENT EVERY 8 YEARS

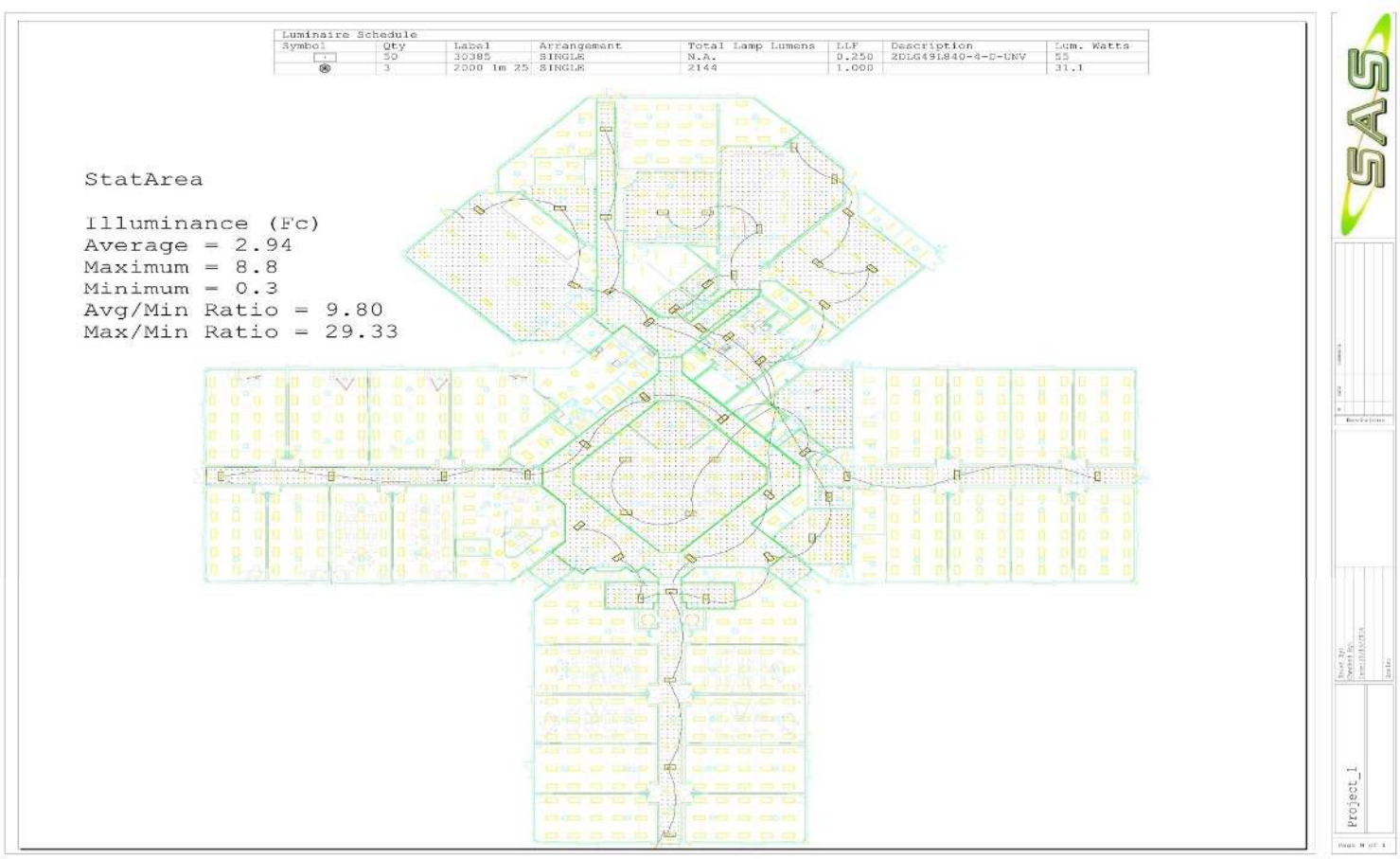


SIGNTEX K-12 SOLUTION

School with SIGNTEX MARS

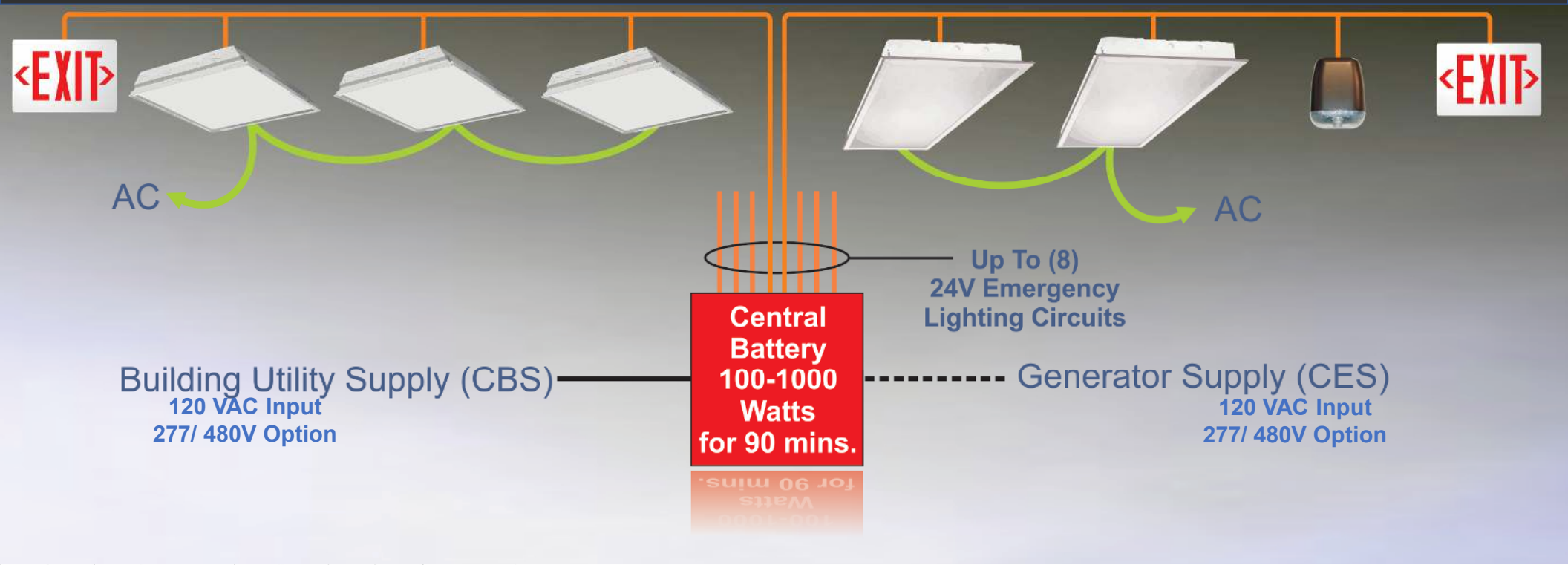
Signtex Mars with 53 ELC's, 7 Exits 1 CBM 500
Tests itself every month, stores the data in the cloud and sends an email with every test.
Your building loses power over the weekend?
GET AN EMAIL NOTIFICATION W/ AN OUTAGE DURATION REPORT

$150.00 SYSTEM BATTERY REPLACEMENT EVERY 6-8 YEARS



The Signtex Solution: Central Battery with MARS

All Emergency Fixtures Operate From One Power Source at 24 VDC



Reduces number of batteries per building by more than 100:1 compared to unit equipment

INDUSTRIAL / WAREHOUSE

HIBAY INTEGRAL BATTERY PACK SOLUTION

HIBAY INTEGRAL 30 WATT BATTERY PACKS

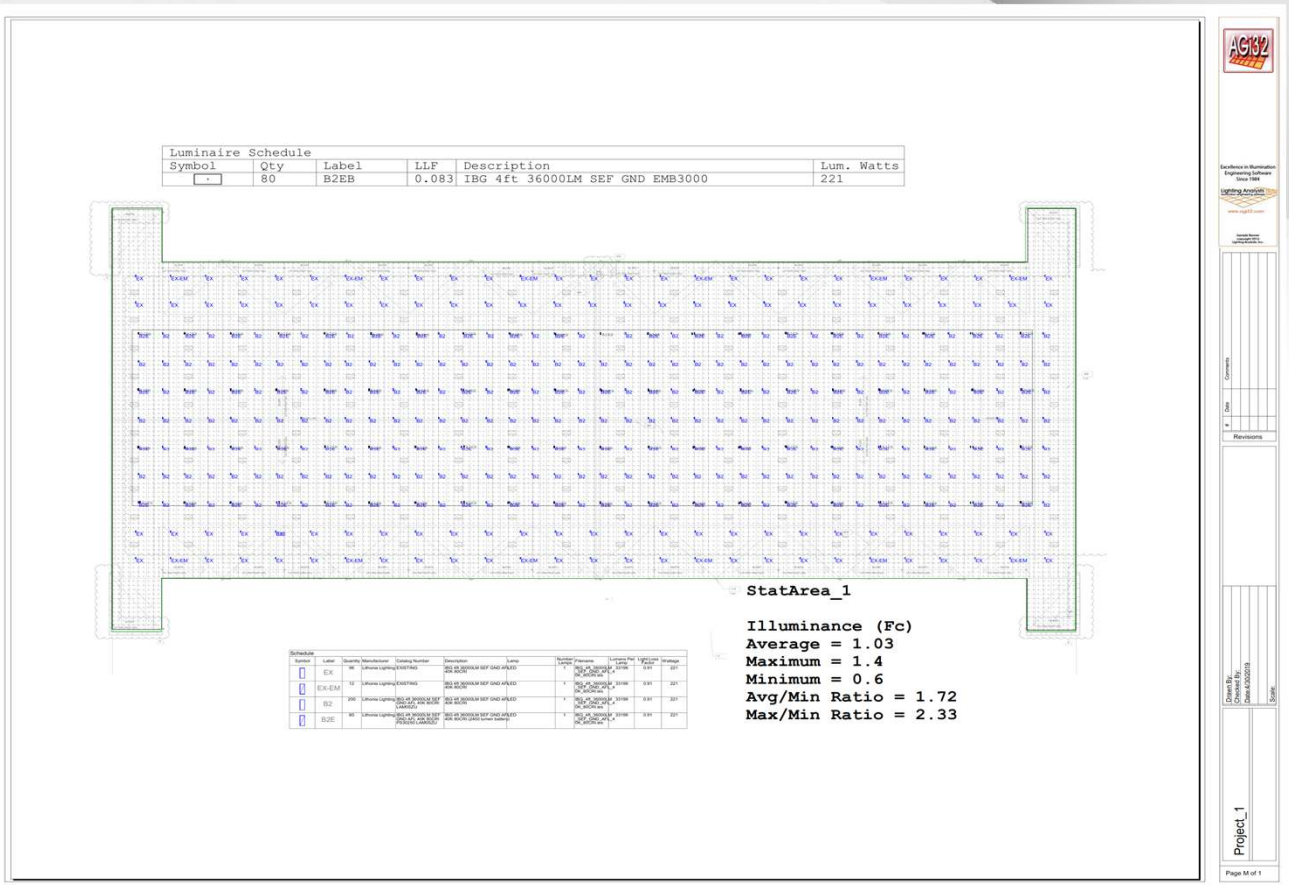
REQUIRED 80 30 WATT FIELD INSTALLED BATTERY PACKS@ $250.00 EA. $20,000.00 PLUS LABOR, LOTS OF WIRES

Hard to actually verify light levels, battery packs milliamp rating different than the ambient drivers?

80 battery packs @ 30’ LIFT REQUIRED

REPLACEMENT COST : could be as much as $500.00 EA with distributor markup and contractor labor

$40,000.00 TOTAL COST BATTERY REPLACEMENT EVERY 4-5 YEARS.
IF ANYONE “EVER” MAINTAINS THEM



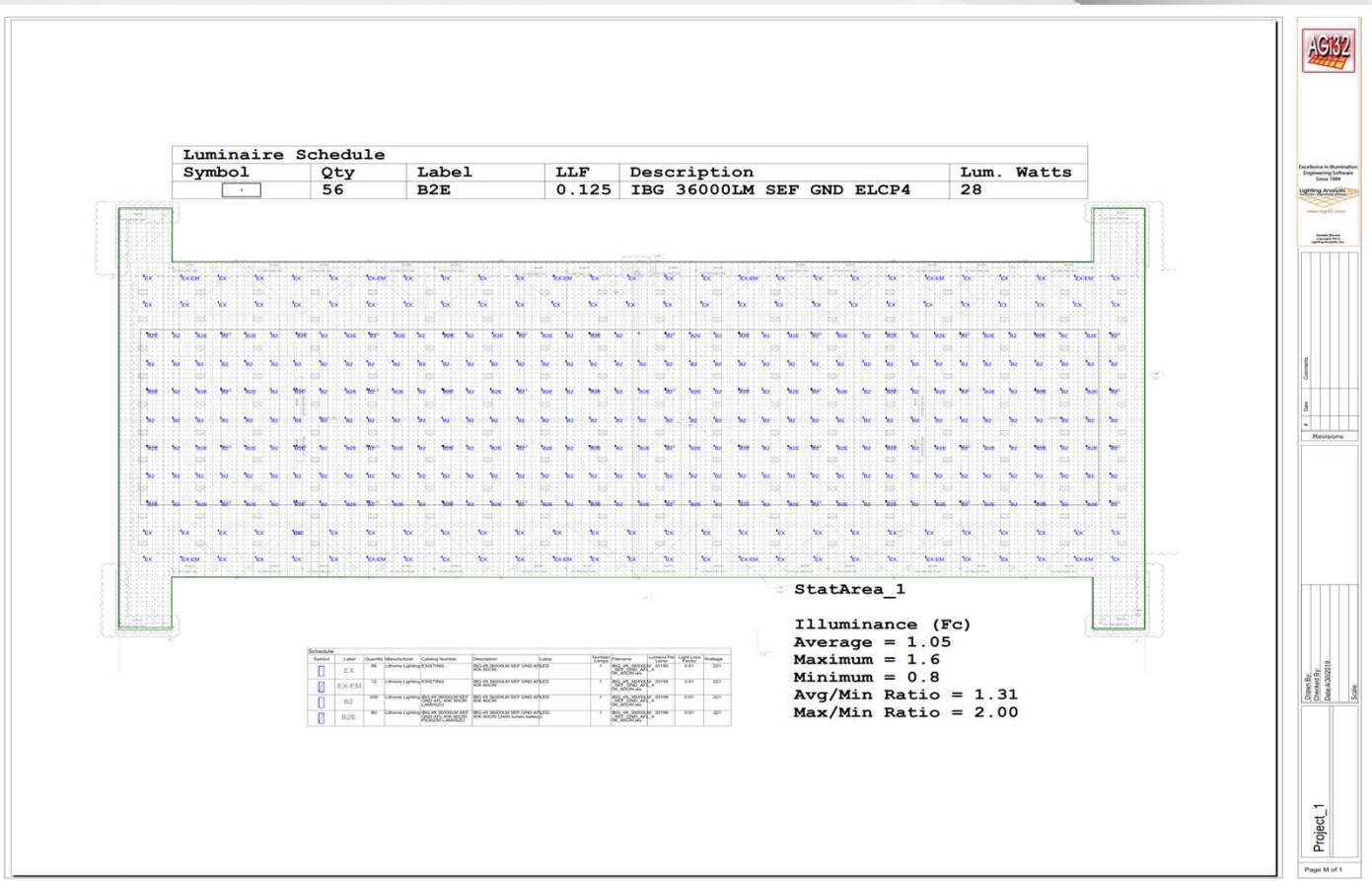
SIGNTEX HIBAY SOLUTION

SIGNTEX MARS $14,550.00

Signtex Mars with ELC,
2 CBM1000 56 ELCP4
Tests itself every month, stores the data in the cloud and sends an email with every test.
Your building loses power over the weekend?
GET AN EMAIL NOTIFICATION W/ AN OUTAGE DURATION REPORT

4 BATTERIES @ EYE LEVEL

TOTAL BUILDING BATTERY REPLACEMENT $300.00 EVERY 6-8 YEARS



ELC FOR HIBAYS

Emergency Lighting Control
For Use With Series CBS Central Battery System for Emergency Lighting
Series ELC Type P4

ELCP4.10.17.11

GENERAL DESCRIPTION

ELC converts an LED luminaire to emergency lighting operation, powered from a Signtex central battery system. Constant power output is factory adjustable to optimize emergency illumination level and fixtures may be on, off, switched or dimmed in normal mode without affecting emergency operation. General lighting fixtures with ELC may be combined with MOONLITE LED™ emergency luminaires and exits in the central battery system, as required.

Typical applications for Type P4 may include high- bay luminaires with normal power range from 50W to 400W, and AC LED driver output up to 210V.

All Signtex central battery systems Series CBL and CBM include fully automatic self-test, self-diagnostics. Series CBM includes the MARS™ Monitoring and Reporting System which provides cloud-based internet communication and fault reports delivered automatically via email for all components of the emergency system.

CONSTRUCTION & OPERATION

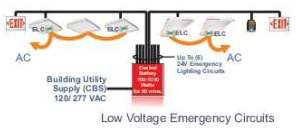
- Factory or field installable in the Fire and Electrical Enclosure of listed fixtures.
- Normal lighting operation is not affected by ELC operation.
- Compatible with all types of dimming and lighting controls.

ELECTRICAL

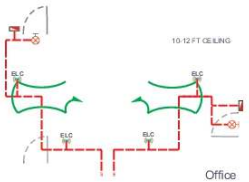
- Input 24 VDC.
- Constant emergency power output is factory adjustable from 15W to 60W.
- Up to 4 Channel output for operation in luminaires with up to 4 drivers.
- Input voltage option to 480 VAC.
- Output voltage auto sensing range up to 210V.
- Adjustable emergency lumen output allows optimum settings for any fixture to equal or exceed requirements of NEC and NFPA 101 codes for varying mounting heights and other conditions.
- Available for LED fixtures operating from 50W to 400W or higher in normal mode.

CODES

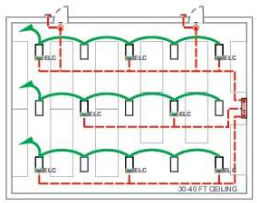
- UL Listed in compliance with UL Standard 924 and CAN/ CSA C22.2 No. 141-15 for field or factory installation in Fire and Electrical Enclosure. All Signtex Central Battery Systems and MOONLITE LED emergency fixtures are Listed to UL Standard 924.



Low Voltage Emergency Circuits



Office



Warehouse

EMERGENCY LIGHTING CIRCUIT: LOW VOLTAGE 24 VDC
NORMAL LIGHTING BRANCH CIRCUIT 120/ 277 VAC

FIXTURE SCHEDULE

MODEL	CATALOG NO
APPROVAL	JOB INFORMATION

DESIGNED & MANUFACTURED IN THE USA

c UL us LISTED

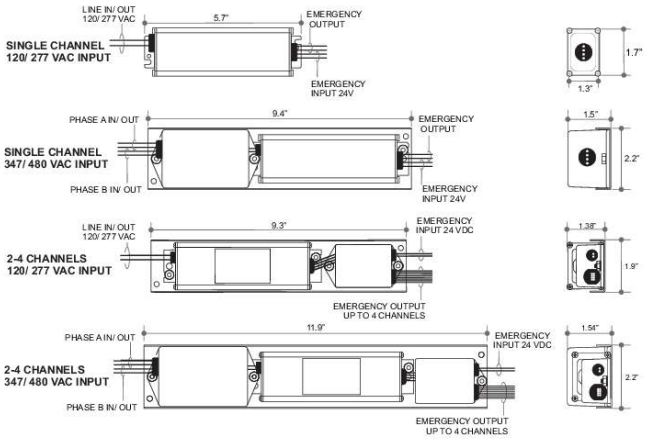
Signtex Inc LIGHTING
SPECIFIED EMERGENCY LIGHTING

Emergency Lighting Control
For Use With Series CBS Central Battery System for Emergency Lighting
Series ELC Type P4

ELCP4.10.17.11

SUGGESTED SPECIFICATIONS:

Supply and install Signtex Emergency Lighting Control Series ELC which shall be capable of operating a LED general lighting fixture in emergency mode for a minimum of 90 minutes following failure of the normal power supply to the fixture, when connected to a Signtex Central Battery System, Series CBM or CBL, with luminance level to equal or exceed the minimums required by the current NEC codes. See Signtex SPECIFICATION GUIDE to develop exact specifications for your specific application



EMERGENCY OUTPUT: MAX POWER 60W

Standard Voltage.....,24-57 VDC; 100-1050 mA
Option Voltage V1.....,60-180 VDC; 100-330 mA
Option Voltage V2.....,60-210 VDC; 100-290 mA

Operating Temperature: -35° to +65° C
Max Ambient Temperature (Ta) 65° C
Max Case Temperature (Tc) 85° C

ORDERING INFORMATION: Example: ELC12P4-48W36-CH2

ELC	12	P4	-48W	36	-CH2
MODEL SERIES	EMERGENCY POWER WATTS	PACKAGE TYPE	FIXTURE NORMAL POWER WATTS	NORMAL DRIVER MAX OUTPUT VOLTS	OPTIONS
ELC	X Watts[1]	P4	XW=X Watts	X Volts DC	CHX = X Channels[2] V1 = 60 - 180 VDC: 100 - 330 mA V2 = 60 - 210 VDC: 100 - 290 mA HV= 347/ 480 VAC Input

[1] Based on lumen output required

[2] X= Number of normal drivers installed

Signtex Inc LIGHTING
220 VFW Avenue, Grasonville, MD 21638
TEL:(410)827-8300 Fax:(410)827-8866
sales@signtexinc.com www.signtexinc.com

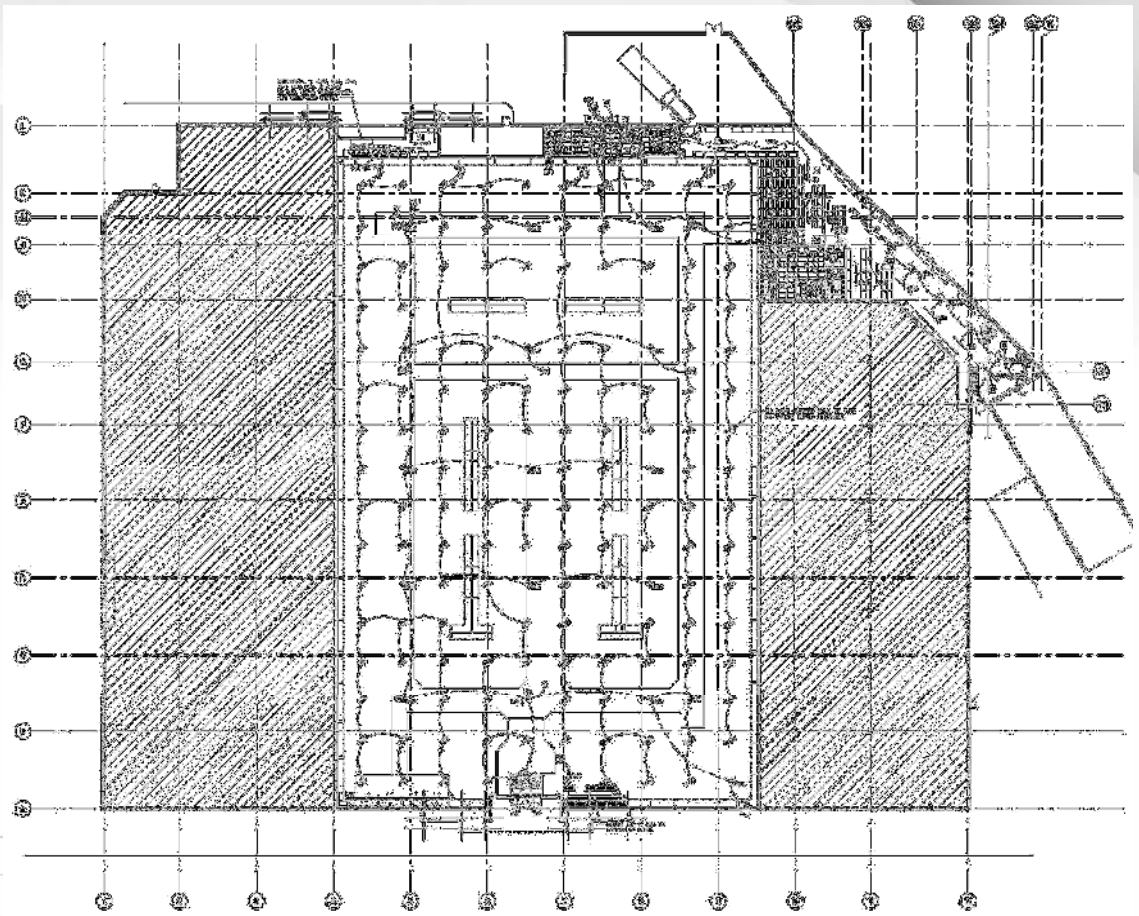
DISTRIBUTOR:

RETAIL APPLICATION BATTERY PACKS & BUGEYE VS CENTRAL BATTERY

TYPICAL BIG BOX STORE

41,000 SQFT UNIT AND BATTERY PACK EQUIPMENT

50 EMERGENCY POINT'S
50 BATTERIES TOTAL
10 - 14 WATT BATTERY PACKS,
17 - 20 WATT BATTERY PACKS,
(LIFT REQUIRED)
7 - 7 WATT BATTERY PACKS,
2 – 10 WATT **C/W BATTERY PACKS**,
1 - ELM6
2 – ELRG
12 EXIT SIGN BATTERIES,
Must be tested monthly, a log maintained and the fixtures maintained
ESTIMATED INTIAL MATERIAL COST
$10,500.00
ESTIMATED EMERGENCY BATTERY REPLACEMENT EVERY 4-5 YEARS
$17000.00



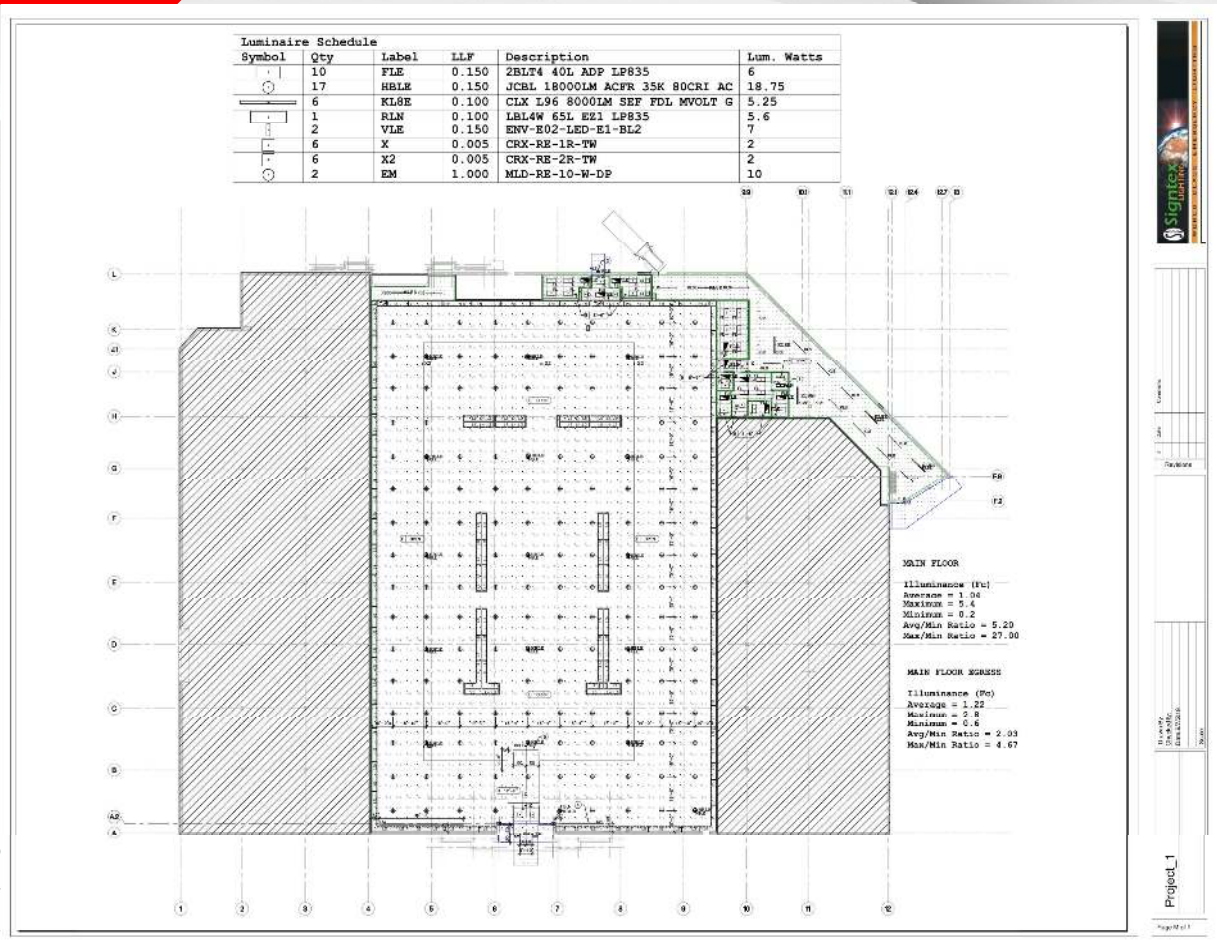
KOHLS **"VIDEO COMPARIOSN LINK"** https://www.youtube.com/watch?v=SaOC3k8cbLY&t=5s

41,000 SQFT *SIGNTEX MARS W/ELC*

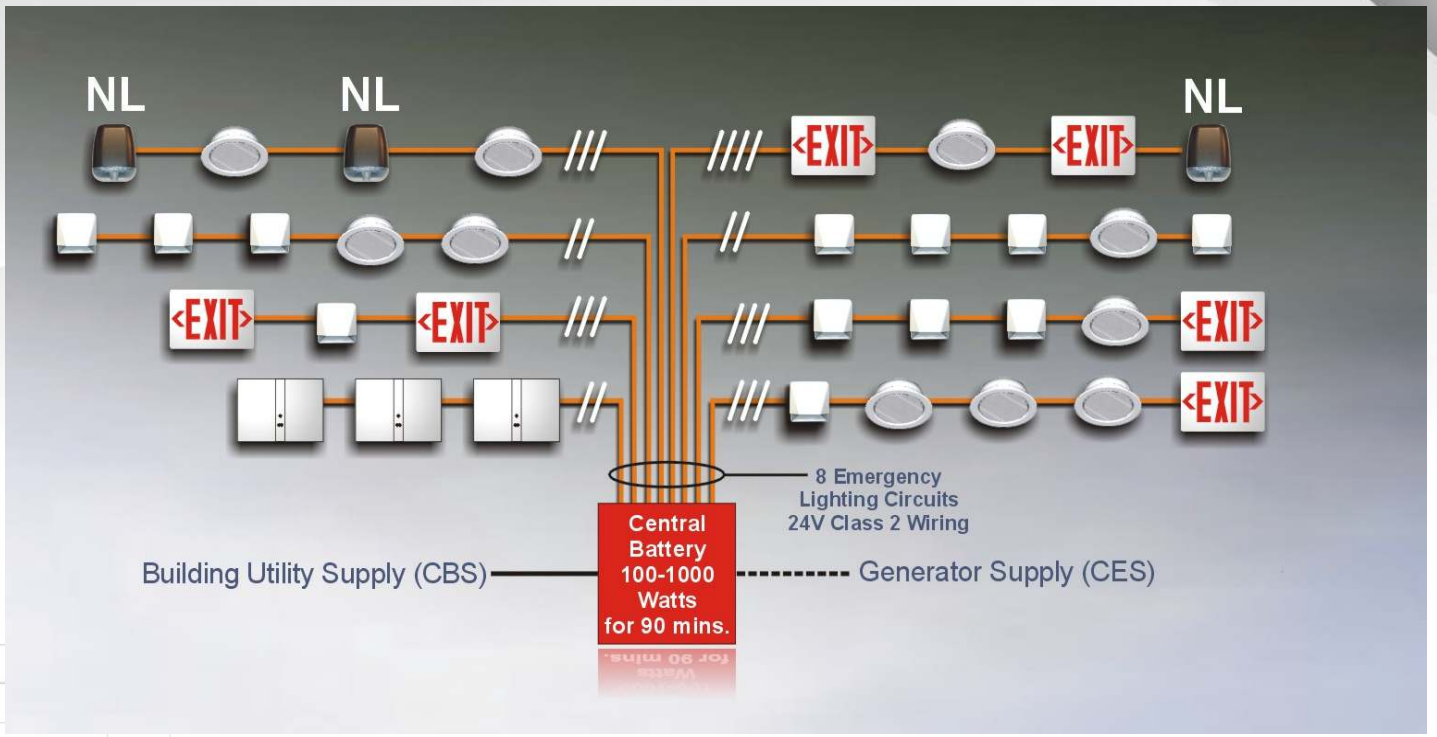
WE ARE THE "BIG BOX SOLUTION"

50 EMERGENCY POINT'S
2 BATTERIES TOTAL
1 CBM500
Tests itself every month, stores every test ever run, sends an email with every test.
GET AN EMAIL NOTIFICATION W/ OUTAGE DURATION REPORT,
(a single breaker trips get a report)
2-12V BATTERIES PER STORE
38 ELC'S, 2 MLD'S 12 EXITS
(10 YEAR WARRANTY)
$8800.00 INITIAL MATERIAL COST

$150.00 SYSTEM BATTERY
REPLACEMENT EVERY 6-8 YEARS



All fixtures operate from one power source



Central Battery System

- Moonlite LED: Low Power & High Brightness LED FIXTURES

No lamp service during a typical building lifetime.

Ultra Thin RAPIER DIE CAST

- Rugged Ultra Thin Die Cast Aluminum LED emergency exit only 5/8" thick.
- Looks like a recessed sign when color-matched to mounting surface.
- Clear polycarbonate security covers are available, only 1” height above surface.
- Open face models with Custom Graphics Available.

Services Offered ,

- Submittal Documentation & Support
  - Circuit design and full layouts on specification CAD drawings
  - Load calculations and wire size selection
  - Fixture Schedule
  - Detailed Riser Diagram
  - IES photometric Point to Point layouts