Successful Installation of PHOTOLUMINESCENT EXIT PATH MARKING SYSTEMS
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AGENDA

► Building Code Update
► How Does It Work
► Elements of Successful PL Installations
► Products & Systems
► Joint Commission Requirements
Photoluminescent Markings in all enclosed stairwells used for emergency evacuation in all New & Existing High-Rise Buildings

- Handrails
- Stair Treads & Landings
- Demarcation Lines
- Exit Door Markings & Directional Signage
- Obstruction Markings

NOTE: Buildings with occupied floors over 75 ft in height
2009 - 2012 IBC/IFC
Types of Buildings Covered
New & Existing

► Group A Assembly; gathering together of persons for civic, social, religious, recreation, casinos, arenas, theaters

► Group B Business; Offices, banks, education above 12th grade, laboratories, post offices

► Group E Educational; through 12th grade

► Group I Institutional; Hospitals, Nursing Homes, Health Care in general.

► Group M Mercantile; Department stores, retail stores, wholesale stores.

► Group R-1 Residential subset; where occupants are primarily transient in nature including boarding houses, hotels, and motels.
IBC/IFC Section 1024
Brightness Standard

ASTM E 2072

30 millicandela/sq meter @ 10 minutes
5 millicandela/sq meter @ 90 minutes

Source illumination – 1 foot-candles (11 LUX) for one (1) hour

OR

UL 1994

Recommend: Tested & Listed Products Only
IBC Section 1024
Brightness Standard

UL 1994 OR ASTM E 2072

Tested & Listed by
Independent Laboratory

Don’t settle for less
NFPA 101 and 5000
Means of Egress
Section 7.2.2.5.5 Exit Stair Path Markings

Differences from IBC

- No minimum building height specified
- PL strip integral with the nosing of each step
- Adhesive backed tapes shall not be used

Effective January 1, 2009 Nationwide
Section 7.8 Means of Egress

- Requires PL Exit Path Markings – Facilities with occupied floors over 75 ft in height
- UL 924 PL Exit Signs authorized for use
- Based on 2009 NFPA 101 Life Safety Code
Photoluminescent Exit Sign

- Section 1011
- Listed UL 924
- LEED Points Qualified
- Zero Energy Use
- Zero Maintenance
- Recyclable
- Meets All Current Building Codes
- Use in Floor Proximity and High Level Applications
- 2012 IBC/IFC Req. R-1
- No Battery Backup
- 25+ year life expectancy
- PVC FREE
Floor Identification Signs

Floor Identification Signs are required at each floor landing in the Exit Enclosure that:

- Connects more than 3 stories – new & existing
- If connecting more than 7 stories must be made of the same photoluminescent materials required by section 1024.4
  
i.e. Comply with UL 1994 or ASTM 2072
NORTH STAIR
NO ROOF ACCESS

5

FLOOR G - 25
DOWN TO FLOOR G
FOR EXIT DISCHARGE
Successful PL Installations

Requires Knowledge of:

- Enclosure Environment
- Surface Inspection & Prep
- Enclosure Traffic & Maintenance
Successful PL Installations

Verify Enclosure Lighting Meets Code:

- 1 Ft-Candle Minimum
- Continuously Illuminated
- NO Motion Sensors Allowed
Know Your Materials

Types of PL Products

► Flexible – Tapes and Thin Films
► Semi-Rigid - PVC Based
► Rigid - PVC Laminated to an Aluminum Substrate
► Rigid – Powder Coated Aluminum
► Coatings – Two Part Paint Systems
Enclosure Environment

Difficult At Best

- Non-Conditioned Air
- Replicates Exterior Environment for Humidity & Temperature

Effects the Material Selection
Poor Material Selection
Poor Material Selection
Poor Material Selection
Enclosure Environment

Know Your Environmental Conditions

Select Materials Accordingly
Successful PL Installations

Requires Inspection & Surface Prep

Concrete

- Spalling, Loose Paint
- Surface Sounding
- Dished & Worn Treads
- Clean Surface - 50% Alcohol
Successful PL Installations

Requires Inspection & Surface Prep

Metal Stairs
- Wire Brush Loose Paint
- Clean Surface - 50% Alcohol
Successful PL Installations

Requires Inspection & Surface Prep

Rubber, VCT, Carpet Stairs
- Good Bonding to Subsurface
- Mechanical Attachment
Enclosure Traffic & Maintenance

Knowledge of:

- Stairs Used Every Day
- Level of Maintenance
  Power Washing
- Effects Material Selection
Not Successful PL Installations
Not Successful PL Installations
Economical
Exceeds PL Codes
Slip Resistant
Durable
PL Stair Nosing Installation

Diagram showing the installation of a stair nosing with 2.00" maximum height and labelled parts 1 and 2a.
Successful PL Installations
Retrofit Stair Nosings

- Used on stairs that have been formed already
- Can install on stairs that have been chipped on the edges
- Higher Traffic Volume
- Solid or ribbed abrasive
- Swept back or 90 degree
Successful PL Installations
Successful PL Installations
Successful PL Installations

Enclosure Traffic & Maintenance

- PL Strip Integral with Stair Nosing
- Glue It & Screw It
- If You Walk On It
  No Tape or Paint
Successful PL Installations

Requires Knowledge of:

- Enclosure Environment
- Surface Inspection & Prep
- Enclosure Traffic & Maintenance
How Do You Know It Works

Recommend PL Products

Be Tested and Listed by an Accredited Independent Laboratory

DIIM
Successful Installation of PHOTOLUMINESCENT EXIT PATH MARKING SYSTEMS
Thank you for your time and attention!