



SCCA EDUCATIONAL SESSION

Presenter

Michael Lagana

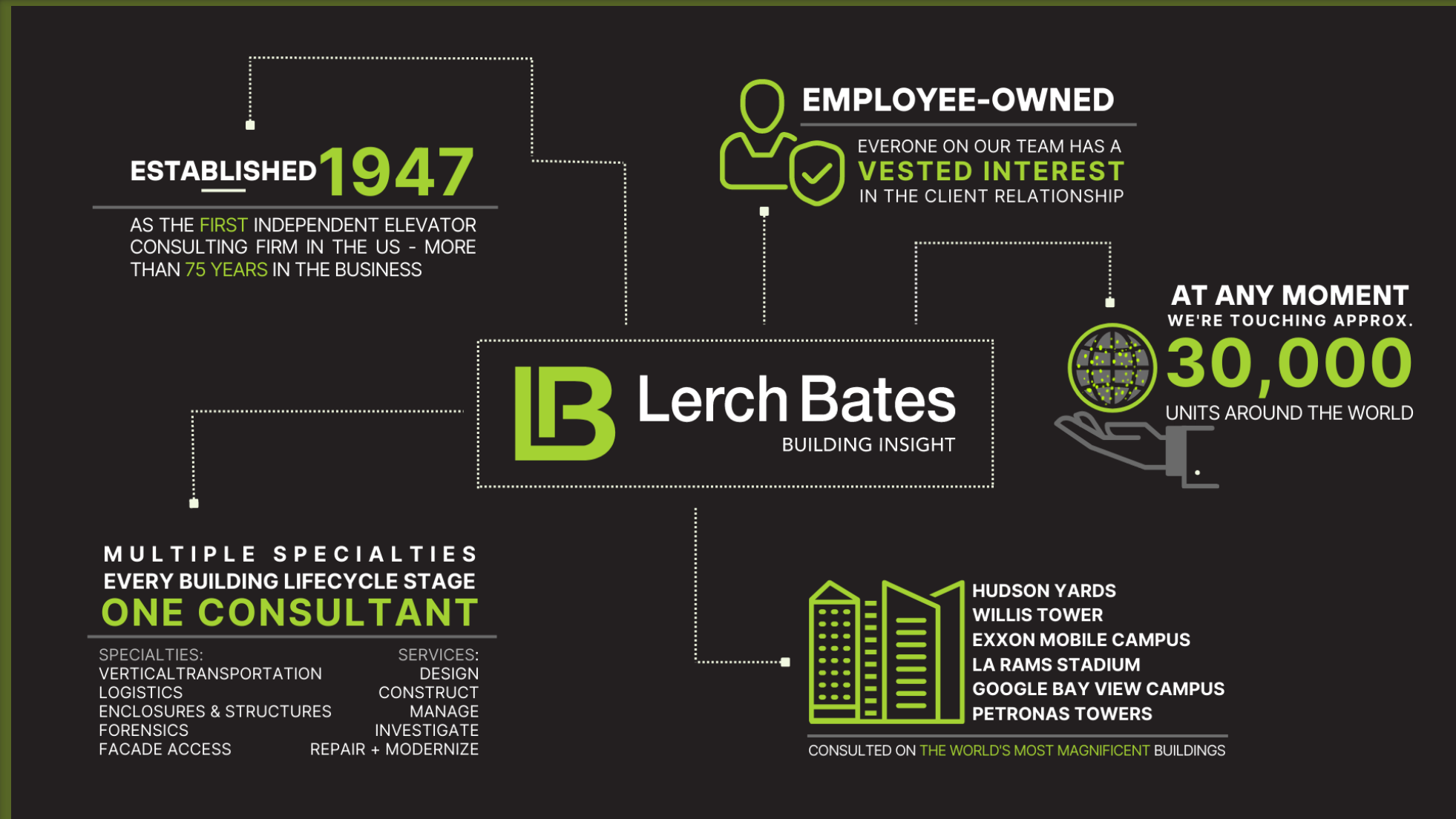
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Elevator & Escalator Consulting

New & Existing Construction.

One Time Service or Partner for on going project and service oversight.

GLOBAL SERVICES

New Design & Modernization

- Technical Plan & Specification Drafting
- Design & Ownership Team Collaboration
- RFI Reviews & Assistance

Construction


- Submittal Reviews
- Construction Coordination Meetings
- QA Observations & Reporting
- Final Punchout
- Warranty Phase Observations

Operate

- Maintenance & Condition Assessments
- Pre-Purchase Services
- Asset Management (OpEx / CapEx Planning)
- Maintenance Program Development
- Scope/RFP Development

Problem Resolution

- Water Damage
- Service Callback Reviews
- Obsolescence Claims
- Invoice & Proposal Review

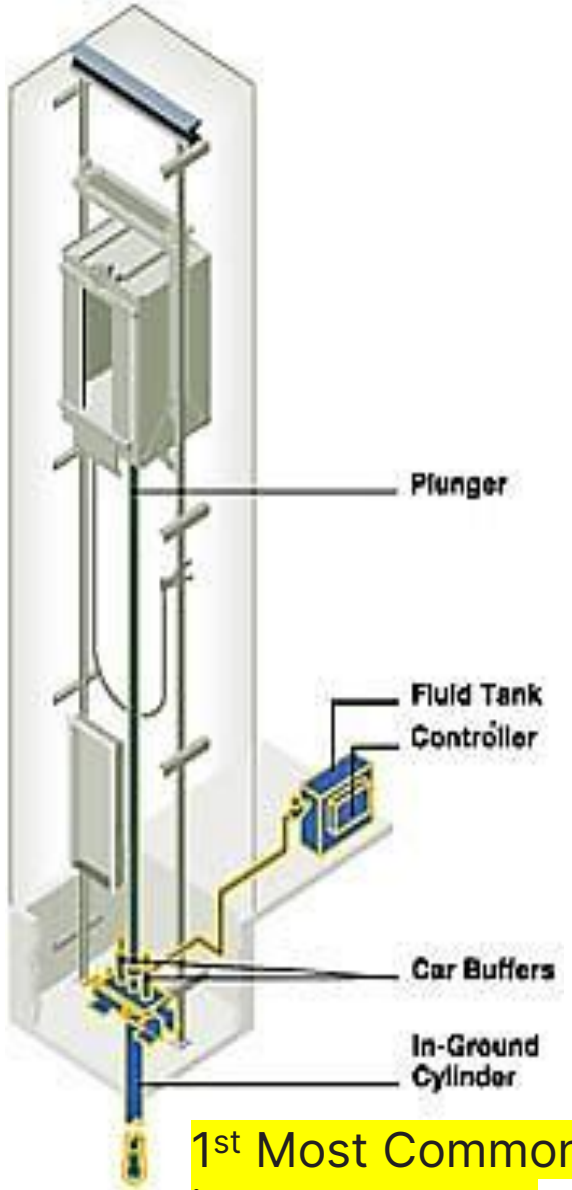


We are an extension of your staff that simply knows Elevators, Contractors and always has your best interests no matter the stage of the equipment's life.

Agenda

- **Topic 1: Retro Active Codes**
- **Topic 2: Life Cycle & Capital Planning**
- **Topic 3: Tips for a better tomorrow**
- **Topic 4: Maintenance Contracts**

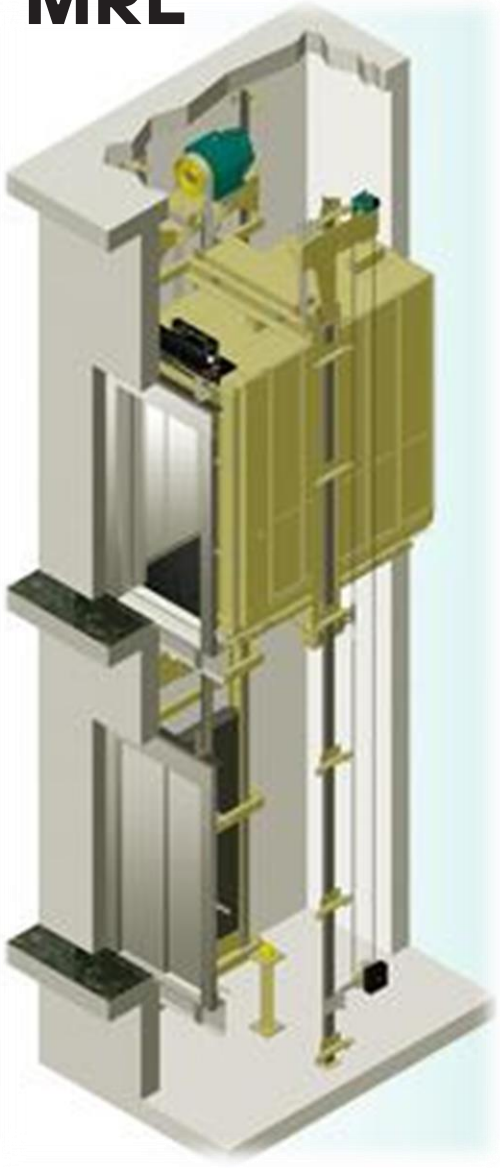
Hydraulic



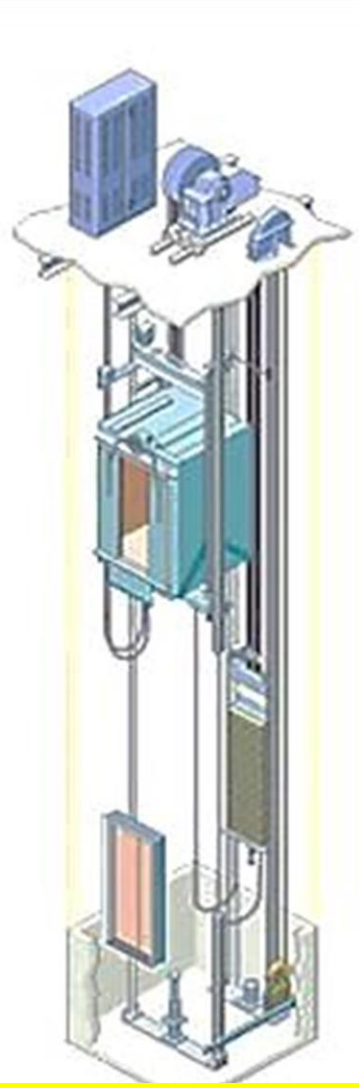
1st Most Common in Local Market

Traction Elevator Examples

MRL

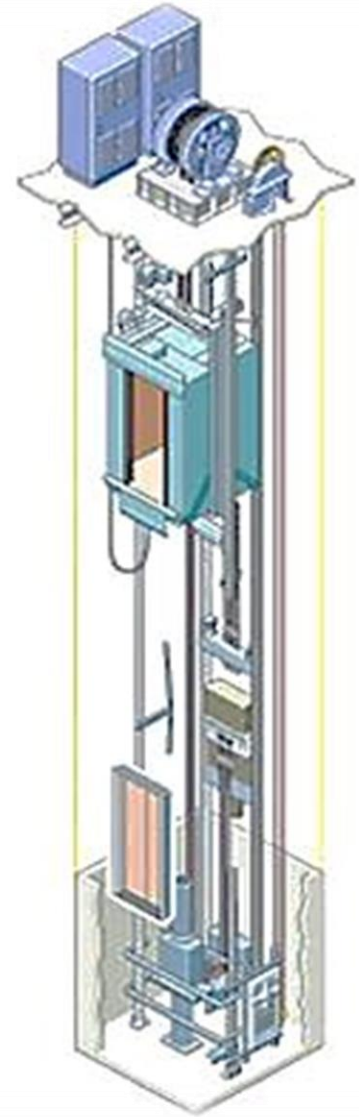


Geared



2nd Most Common in Local Market

Gearless



Most Recognized Elevator Codes

ASME **A17.3** Code is the Minimum Code Enforced
Can be retro-active.

2015 (Current) with potential of adopting **2020** (1/1/24)

ASME **A17.1** Code is the New Construction Code and
Alteration (Modernization) Code Standards.

2016 (Current) with potential of adopting **2019** (1/1/2024)

Vote is on December 6th

CODE ADOPTION

RULE TITLE: Florida Administrative Code 61C-5.001 Safety Standards

Dear Elevator Licensee or Elevator Personnel,

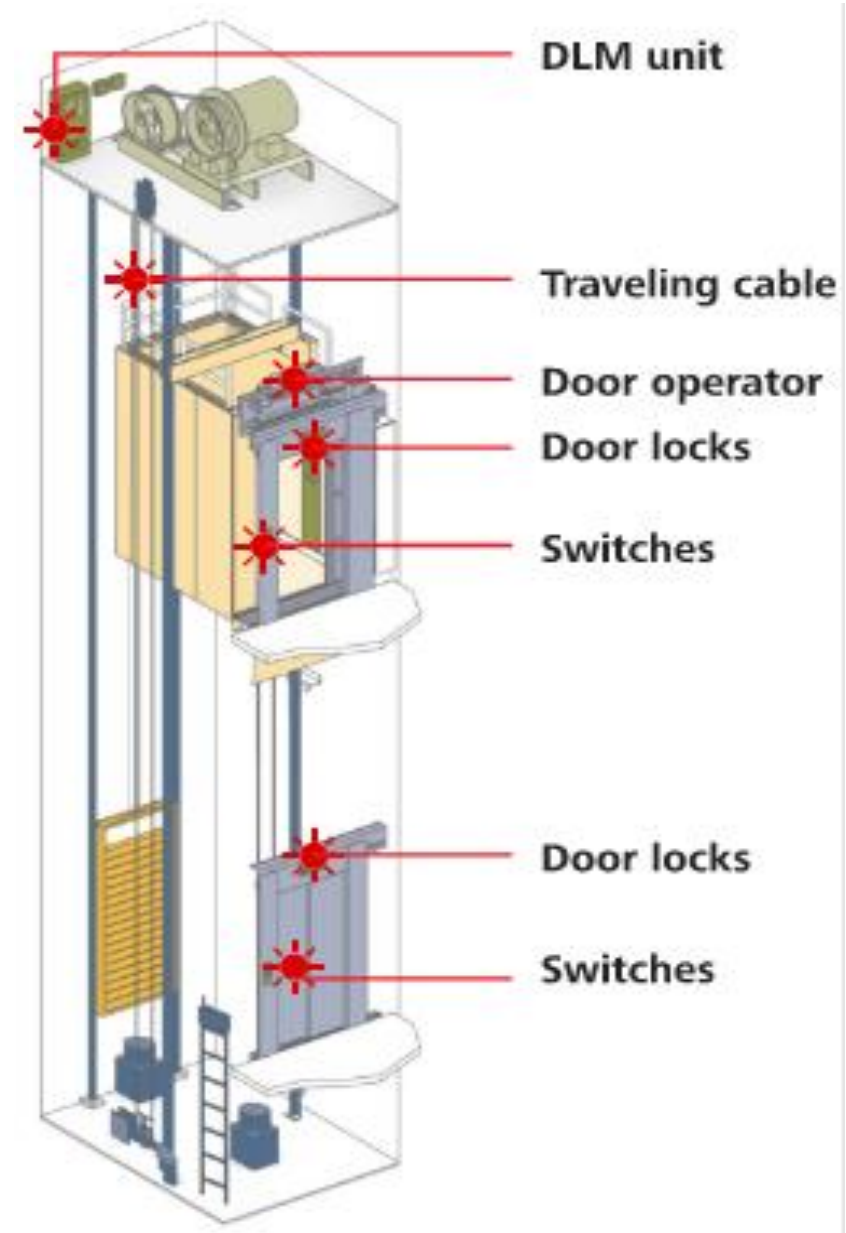
The Bureau of Elevator Safety has adopted new ASME Elevator Safety Code A17.3-2015, Safety Code for Existing Elevators and Escalators. Part of this new Safety Code includes Section 3.10 Operating Devices and Control Equipment, Requirement 3.10.12 System to Monitor and Prevent Automatic Operation of the Elevator with Faulty Door Contact Circuits. All conveyances licensed by the State of Florida Bureau of Elevator Safety, including those located within the 5 contracted jurisdictions must be in compliance of the above Code by December 31, 2023. The Bureau of Elevator Safety encourages all owners of conveyances licensed by the State of Florida or any of its 5 Contracted Jurisdictions to contact your Elevator Company to discuss what your conveyances will need in order to comply with this section of A17.3-2015.

Your received this notice because this is the official email address on record for the license(s). If you no longer own, lease or manage the elevator property, please take the time to notify the Bureau of Elevator Safety of the change of ownership at dhr.elevators@myfloridalicense.com. For licensing and other information, you may call our Customer Contact Center at 850.487.1395 between the hours of 8:00 a.m. - 5:00 p.m., ET, Monday through Friday.

Regards,
Bureau of Elevator Safety

What?

- Monitors and detects position of doors
- Detects failures in door lock and car gate switch circuits
- Prevents elevator from operating once fault is detected, which is intended to prevent car from operating w/doors open!



RETRO ACTIVE

OPTIONS

D.L.M. Overlay

- Adds Functionality to Current Controller
- Install: 1 Day (avg)
- Avg. Cost:
 - \$10k to \$25k ea.
- Not Retained During Future Modernization



D.L.M. Software

- Adds Functionality to Current Controller
- Install: < 1 hour
- Avg. Cost: \$2k to \$10k ea.
- Not Retained

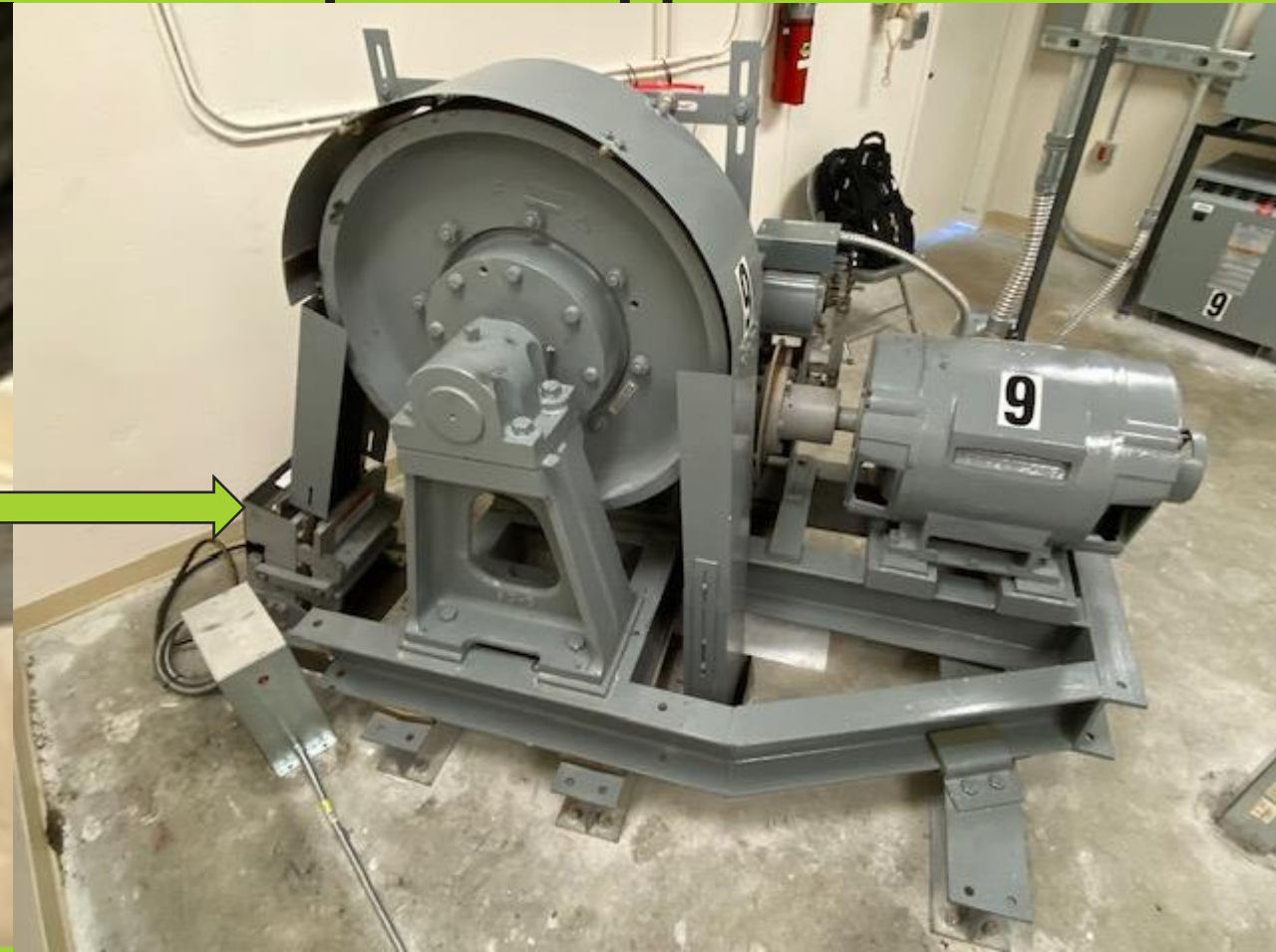
Modernization

- Resets Lifecycle
- Won't happen in 2023
- Install:
 - Hydro: 2-5 weeks
 - Traction: 6-16 weeks
- Cost:
 - Hydro: \$75k to \$200k
 - Traction: \$300 to \$800k
- Additional Benefits beyond DLM functionality

RETRO ACTIVE

NEW CHALLENGE

By going from ASME A17.3 2015 to the 2020 version (again this is the minimum safety standard), Traction Elevators now need unintended movement protection by August 1, 2028. This may force a modernization and your DLM compliance approach.



RETRO ACTIVE EXAMPLE SITUATIONS

Type of Elevator	D.L.M (A17.3 2015) *Deadline August 1, 2024	Unintended Movement Protection (A17.3 2020) *Deadline August 1, 2028	A17.3 2020 Options
Traction	Already added DLM to Current Elevator Controller. Did not replace controller/modernize	Can be Retro-Fitted to Machine & Controller logic	Retro Fit or Modernize by 9/1/28
Traction	Already added DLM to Current Elevator Controller. Did not replace controller/modernize	Cannot be Retro-Fitted to Machine &/or Controller logic.	Modernize by 9/1/28
Traction	Intend on DLM retrofit	Can be Retro-Fitted to Machine & Controller logic	Retro Fit or Modernize by 9/1/28. Retrofit by 9/1/24
Traction	Intend on DLM retrofit	Cannot be Retro-Fitted to Machine &/or Controller logic.	Modernize by 9/1/28 & DLM Retrofit by 9/1/24
Traction	Intend on Modernizing to Comply	Your Modernization will automatically bring you into compliance but D.L.M. deadline is earlier	Meet the DLM deadline and No Action Needed.
Traction	Already Modernized recently to Comply	Your Modernization will automatically bring you into compliance	No action needed

Key Take Away Points

1 – A DLM retrofit on a traction elevator to avoid the cost for a modernization may only buy an owner to the next deadline of 8/1/28 to comply with unintended movement protection (UMP) forcing a modernization if an UMP retro-fit is not a viable option.

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2 – DLM has a closer deadline than UMP. Retro-fit route does not extend lifecycle of elevators. A “Modernization” of respectable scale would and achieve code compliance for both.

3 – Owners should know if they are making a short-term investment approach or a long-term investment.

NOT RETRO ACTIVE

Applies to all elevators that are permitted for New Installation or Modernization (Alteration) 1/1/2024 and onward.

Is NOT retroactive

**ASME A17.1 2019
(New Design /
Alteration i.e.
Modernization**

A lot of permitting in the industry is going to occur in the next 90 days in attempt to permit under the current code (ASME A17.1 2016) versus the new ASME A17.1 2019 code because of a complex safety feature that is within the new code.

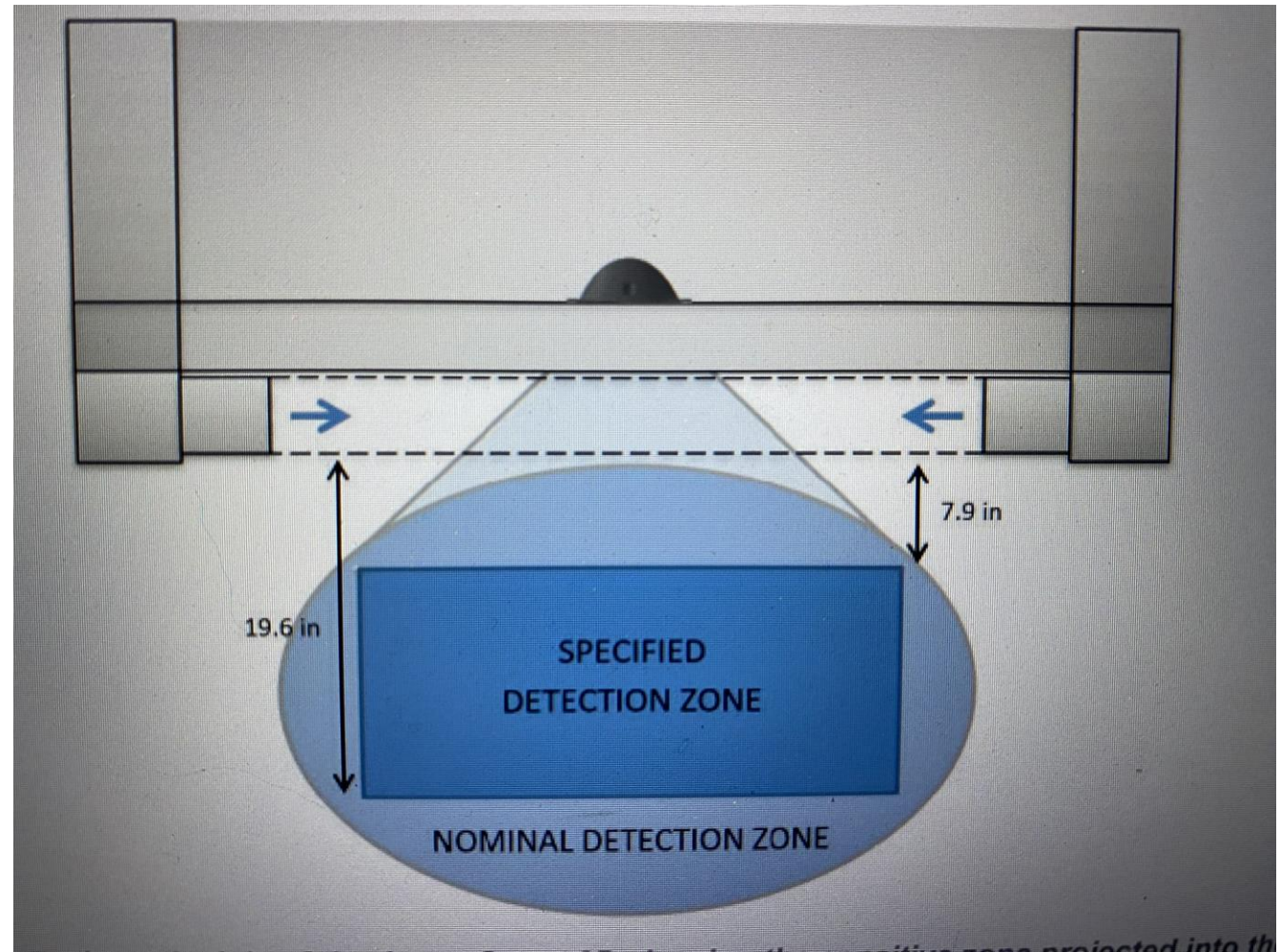
2-Way Text & Video Communication

3-Dimensional Door Protection Means

NOT RETRO ACTIVE

Intent is to observe potential obstruction to closing elevator doors **before** *“your waving hand”* enters the danger zone to reopen the doors.

3-Dimensional Door Detection Means



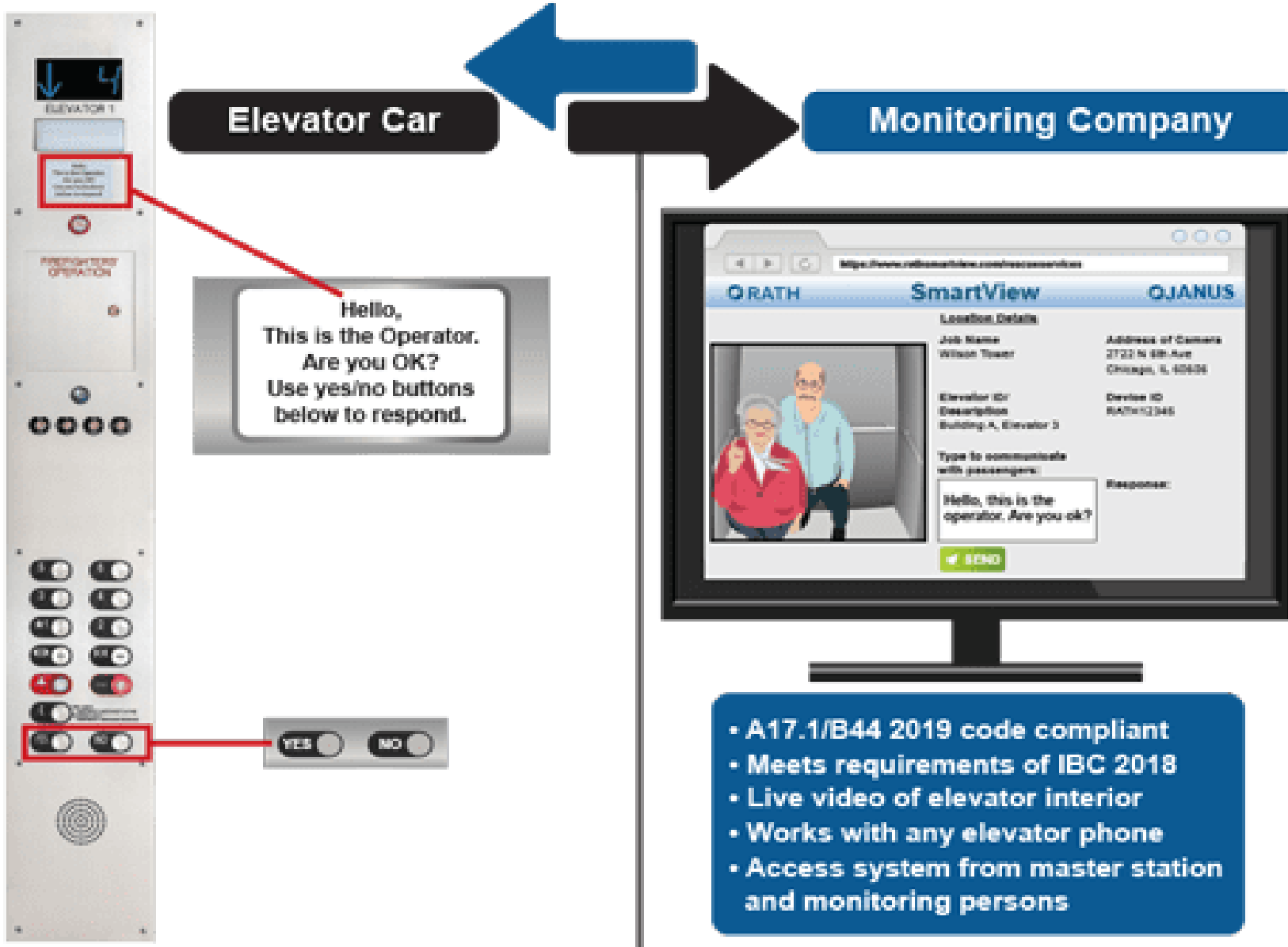
Intent is to achieve communication method beyond audible (text) for those who can't hear

**2-Way Text &
Video
Communication**

Intent is to achieve visual for emergency personnel responding to in-cab emergency call when no-one is responding from audible or text communication. Camera is activated

NOT RETRO ACTIVE

2-Way Text & Video Communication



Likely going to add 10-20k per elevator depending on several variables. Monitoring Fees & Proprietary level of equipment to be reviewed.

SIRS

A **Structural Integrity Reserve Study** is a non-invasive, visual inspection of critical infrastructure that relates to the safety of a building. The scope of work includes (at a minimum) roofs, structure, load-bearing walls, primary structural systems and members, fireproofing and protection systems, plumbing, electrical systems, waterproofing and exterior painting, common area windows, exterior doors, and any other items that have a deferred maintenance expense or **replacement cost that exceeds \$10,000** and the failure to replace or maintain such items negatively affects any of the above referenced building components.

Who Needs One Condominiums and cooperatives of 3-stories or more are required to conduct periodic structural integrity reserve studies

Qualifications The visual inspection portion of the structural integrity reserve study or a verification of the SIRS must be conducted by a Reserve Specialist (RS), a Professional Reserve Analyst (PRA), or a Florida licensed Professional Engineer or Architect.

Frequency An initial SIRS must be conducted by 12/31/2024 and updated every 10 years thereafter

Timelines Associations existing prior to 7/1/2022 that are controlled by the unit owners have until 12/31/2024 to complete their initial structural integrity reserve study

Statutory Funding Any budget adopted on or after December 31, 2024 requires that a SIRS be used as the basis for funding structural reserves.

An Official Record The structural integrity reserve study is part of the association's official record and must be held on to for 15 years

Fiduciary Obligations Failure to comply with the structural integrity reserve study requirements is considered a breach of one's fiduciary duty

Timeline

Product	Typical Lifespan
Microprocessor Based Traction Elevators in Local Market	20-25 Years
Microprocessor Based Hydraulic Elevators in Local Market	25-35 Years
Hot Water Tank	10-15 Years
Home Air Conditioning System	10-15 Years
Washer / Dryer	7-10 Years
Refrigerator (Current Era)	7-10 Years
Refrigerator (1974 Avocado Green)	It's now the "garage" fridge and runs like a tank still
Car (How long we keep it)	3-5 Years
Car (How long it could last before an overhaul)	10-15 Years
Laptop	3-5 Years
Phone (Not flip phone or curly cord phone)	2-3 Years

Summary

- **Historically a 35-year lifecycle** was standard given product subcomponent availability, good maintenance and knowledgeable technicians.
- A change in equipment technology, subcomponent shelf-life, landscape of maintenance and decline in training on legacy equipment has **reduced standard life cycle to 20-25** years presently and the **MRL may be a 15-20** years.
- **Timeline not updated in budgets which causes:**
 1. Insufficient scope of work performed to maintain budget.
 2. Project deferred causing reliability issues.
 3. Loans and or assessments
 4. Violation of Florida Reserve Requirements

ESTIMATED MODERNIZATION TIMELINES & ESTIMATED COSTS

Task	Hydraulic	Traction	Influencing Factors
Establish Scope	1 Month	2 Months	Who is involved & pace of decisions?
Bidding	1 Month	1.5 Month	Contractor backlog, project scope
Award Phase	3 Months	3 Months	Negotiations, Lawyers, Available funds
Engineering	2 Months	3 Months	Backlog, complexity, vendor quantity
Mfg/Delivery/Crew Avail	4 - 6 Months	6 - 10 Months	Backlog, Economic Impacts, Manpower
Installation	1 Month each	2 - 6 Months each	Scope, Correct Material, Skillset, Qty. Floors
Total	Long Time	Even Longer	

Floors Served	Hydraulic	Traction
2-5 Stories	\$100,000 - \$200,000	\$250,000 - \$350,000
6-10 Stories		\$300,000 - \$400,000
11-20 Stories		\$400,000 - \$600,000
21-30 Stories		\$400,000 - \$600,000
31-40 Stories		\$500,000 - \$700,000
41-50 Stories		\$600,000 - \$800,000+

Additional Items to Consider	Add to Elevator Cost
Building Work	10% - 30%
Access Control (security)	Varies
Cab Interiors	20-50k ea.
LAN Costs	Varies
Consultant Costs	Varies

COMMON OUT OF CONTRACT COSTS

Open Order Repair Costs (Excluded from Contract)	Market Price
Obsolete Traction Elevator Controller DRIVE (part of controller)	20-35k each
Door operator package (reliability & performance)	25-50k each
Cab Interiors	20-50k ea.
3-D Door Detector Edge (upgrade from standard, added safety)	4k-5k ea.
Door Lock Monitoring (Basic Software approach - Safety)	2-5k ea.
Door Lock Monitoring (Overlay approach - Safety) *more if no wires	15-25k ea.
ROA (Running on Arrival)	Discuss
Building Power Issue Fluctuation (no damage but required tech)	Discuss
Travel Time & Miscellaneous Surcharges	Discuss
What is your 2-year historical spend for costs that fall outside your maintenance contract coverage?	
Contest out of contract invoices within 30 days of receiving. Avoid credit hold & Memory Loss of Event	

Tips To Make Tomorrow a Better Day

Top 11 Tips for C.A.M. and B.O.D.

1. **Obtain a current copy of your elevator maintenance agreement.**
2. **Make every effort to understand what you are signing. Raise hand.**
3. **Perform Code Inspections outside of the months May to August**
4. **You MUST have your elevators tested on Generator every year w/ Inspector & Elevator Contractor. This must be scheduled timely.**
5. **Do not cancel your elevator contractor before you're certain it is in the best interest of the building's operation and ownership input.**
6. **Have a 3rd party do a review of your elevators to understand lifecycle, condition and validate adequate maintenance**
7. **Make Time. Relationships take time but pay dividends**
8. **Hire your own code inspector.**
9. **The rate of obsolescence in the industry is accelerating. Capital planning for elevators is an annual task now.**
10. **Be an end user**
11. **Management of Realistic and Measurable Expectations**

MAINTENANCE CONTRACT SHORT FALLS

What is a Maintenance Contract? It outlines maintenance responsibilities of the Contractor and Building and outlines component coverages/exclusions like an elevator “Insurance Policy”.

What does your contract cover and not cover? Who wrote it? Who does it favor?

AUTO RENEW & ONLY 30 DAY WINDOW TO CANCEL (90 but not more than 120 days)

NO MEASURABLE PERFORMANCE METRICS TO ESTABLISH QUALITY OF SERVICE

NO RECOURSE FOR PURCHASER FOR NON-PERFORMANCE

UNFAVORABLE OBSOLESCENCE LANGUAGE

NO STATED TIME DURATIONS/INTERVALS OF PREVENTIVE MAINTENANCE

NO STATED LABOR RATES

UNFAVORABLE OR VAGUE ESCALATION PROVISIONS

EXCLUSIONS IN COMPONENT COVERAGE. BIG TICKET ITEMS TRENDING TO BE EXCLUDED

“REPLACEMENT DONE ONLY IN CONTRACTOR’S OPINION”

Areas we focus on to Improve Contracts

Key Performance Indicators (KPI)

- Monthly Maintenance
- Monthly Testing for Fire Service
- Minimum Hydraulic Maintenance Time (.5-1.5)
 - Minimum MRL Maintenance Time (.5-2.0)
- Minimum Traction Maintenance Time (1.0-4.0)
 - Response Time for Callbacks (30-160)
 - Response Times for Entrapments (30-60)
 - Non-Performance Based Cancellation
 - Client Meeting Requirements
 - Contractor QAQC Requirements
 - Elevator Reliability Metrics (i.e. <5 yr)
 - Establish Travel Time Costs & Misc. Charges
- **Establishing Realistic Expectations for Market**

Protections

- Pre-qualifications of Contractor Locally
 - Non-Performance Cancellation
 - Financial Penalties for KPI failures
 - Financial credits for missed maintenance
- Monthly Payments so invoice crediting can occur
- Clearly defined obsolescence language and framework to deal with.
 - No Auto-Renew
- Clearly stated Labor Rates (negotiated too)
- O.T. Billable Travel Time Cap or Elimination
- Annual cap on increase or 5 -year pricing upfront
- Ability to award modernization work elsewhere

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