



3-Bar Earth Covered Magazine

IESSE 2026 Phoenix, AZ

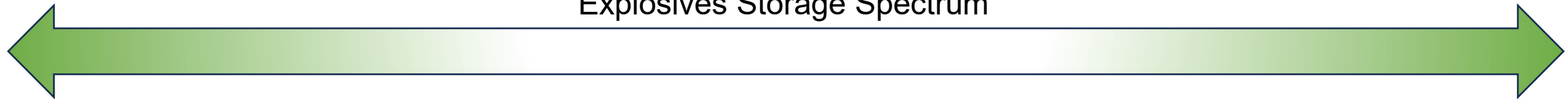
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3-Bar ECM





Explosives Storage Spectrum



- ✓ Protective construction
- ✓ Heavily reinforced
- ✓ Reduced ESQD
- Expensive
- Lengthy construction
- Difficult to acquire (MILCON)

3-Bar ECM

- No protection
- Maximum ESQD
- ✓ Low cost
- ✓ Rapid delivery
- ✓ Deployable
- ✓ Easy to acquire (O&M)

Intermagazine distance

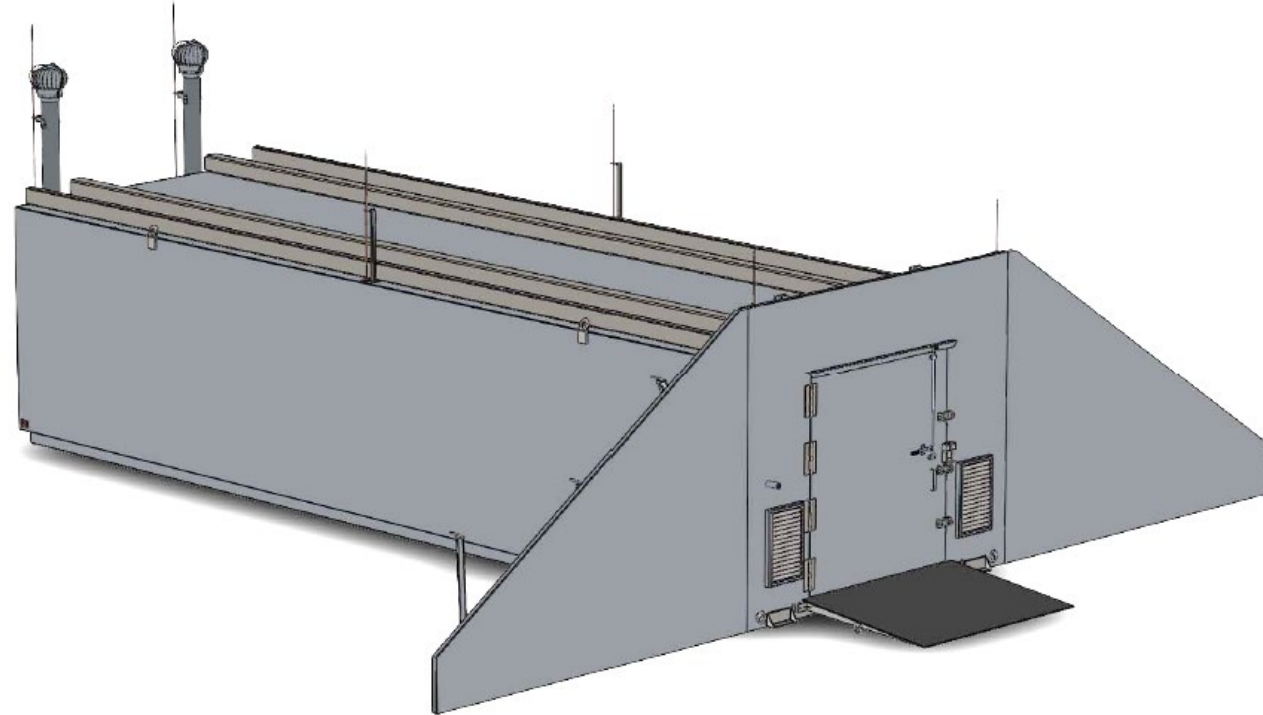
50,000lbs NEW HD 1.1

	7-Bar ECM	Arm ag 3-Bar ECM	Undefined ECM	Barricaded AGM	Unbarricaded AGM
Side to Side	1.25	1.25	1.25	6	11
Front to back	2	4.5	6	6	11

	7-Bar ECM	Arm ag 3- Bar ECM	Undefined ECM	Barricaded AGM	Unbarricaded AGM
Side to side – ft (m)	46.1 (14.1)	46.1 (14.1)	46.1 (14.1)	221.0 (67.4)	405.2 (123.5)
Front to back – ft (m)	73.7 (22.5)	165.8 (50.5)	221.0 (67.4)	221.0 (67.4)	405.2 (123.5)

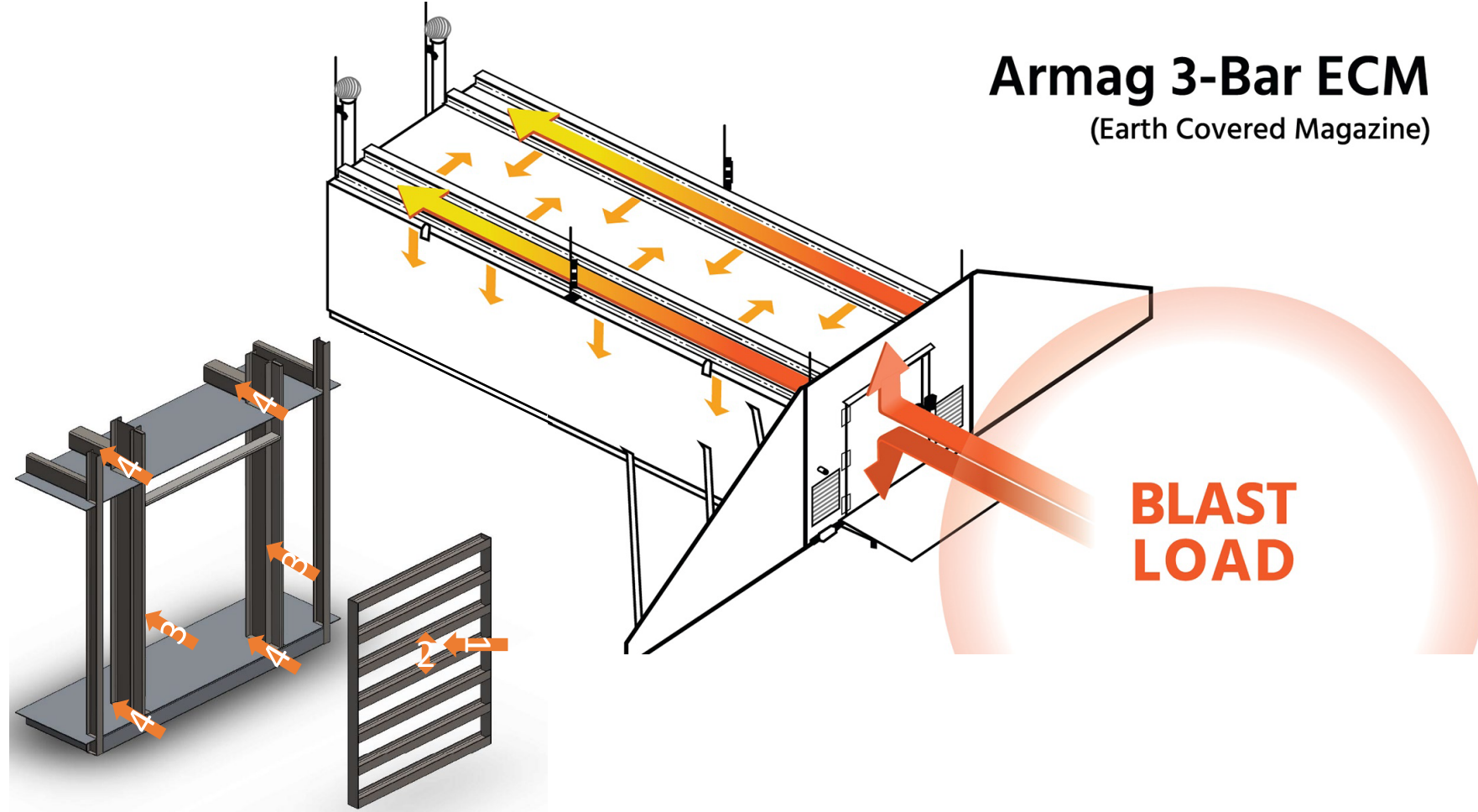
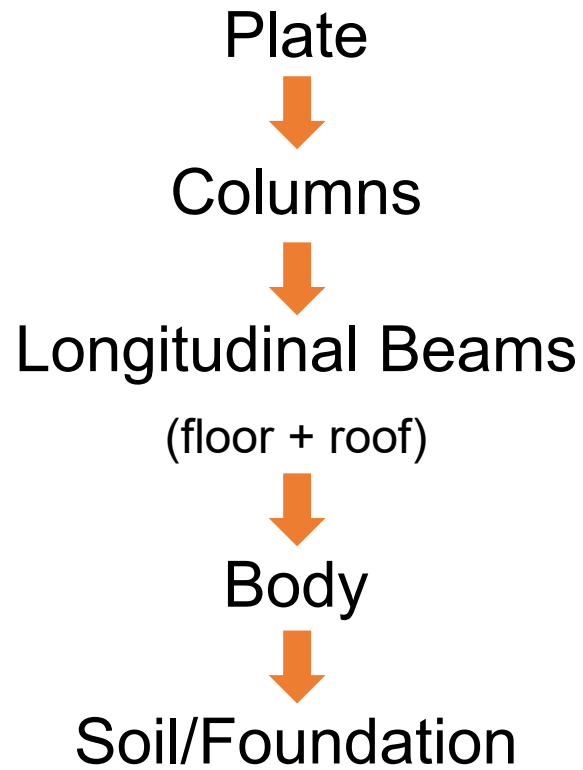
Structural Design

- UFC 3-340-02
- 3-Bar headwall loading
 - 43.5 psi
 - Impulse: 416 psi/ms, 19ms
- Flat roof loading
 - 108 psi
 - Impulse: 700 psi/ms, 13ms



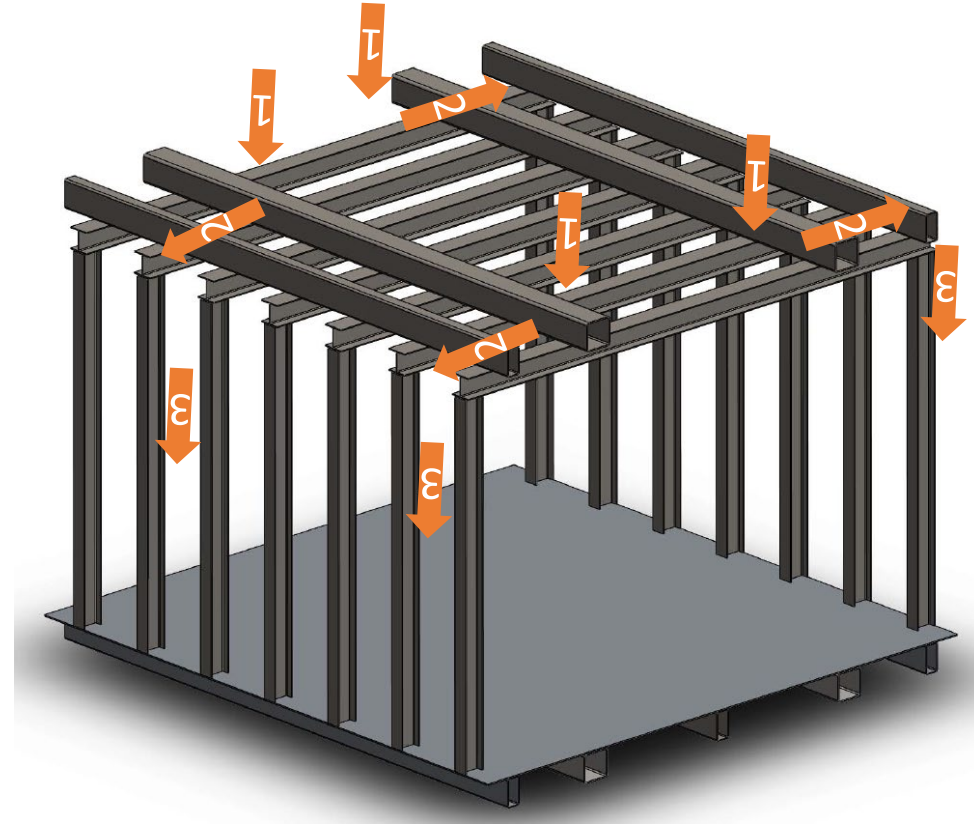
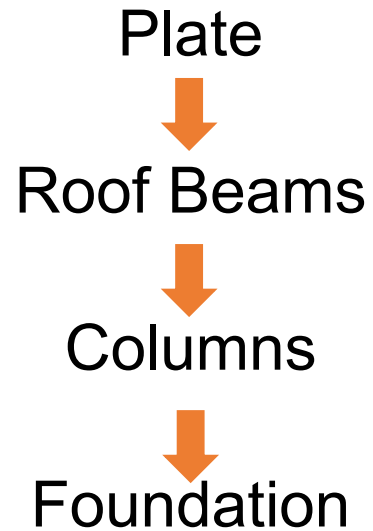
Structural Design - Headwall

Load transfer



Structural Design - Roof

Load transfer



Design Considerations

Must Haves

- Low-cost
- Easy to manufacture
- Protective construction designation
- Durable / long-life
- Forced entry resistant

Desirables

- Eliminate condensation
- Rapid installation
- Deployable
- No hardwood

Key Features

Steel plate construction

- No concrete
- Transportable

Line-X protective coating

- Impact resistant
- Water resistant

Insulated walls/roof

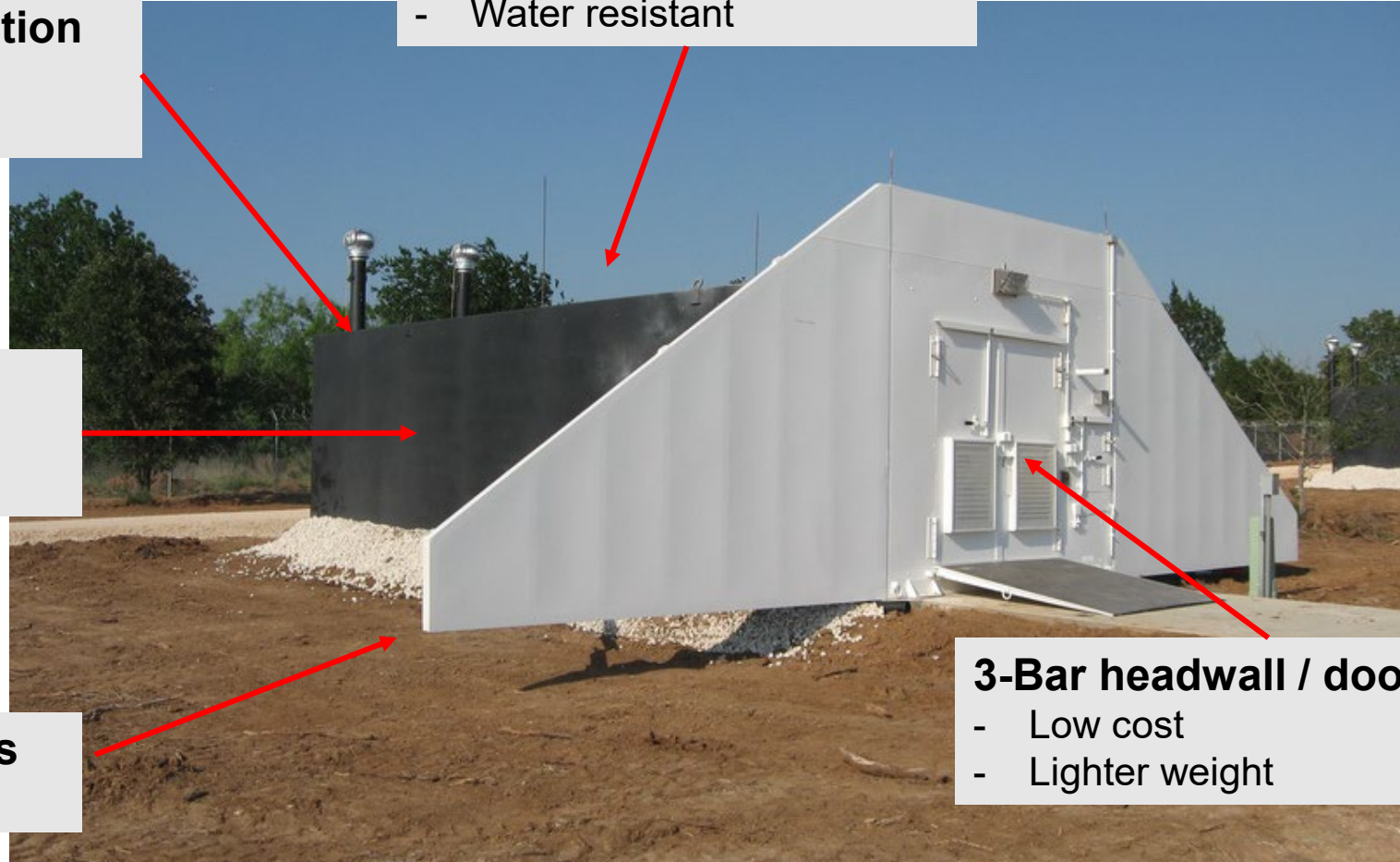
- Condensation support
- No hardwood

Fold-out retaining walls

- Single piece

3-Bar headwall / door

- Low cost
- Lighter weight



Key Features

Forced Entry Resistant

UFC 4-026-01

- Threat severity level III

DoD 5100.76M

- 10 minutes delay

Internal Locking Device (ILD)



Contributors



The
Schreifer
Group



Summary

- Fills a documented gap in the explosives storage spectrum
- Structural performance is intentional and criteria-driven
- Siting efficiency is largely preserved
- Practical to acquire, deploy, and sustain
- Design is reviewed, analyzed, tested, and approved

Uncompromised Physical Security

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