



DSL/4GEN REQUIREMENTS FOR CARGO SECUREMENT

FMCSR - General Rule

- ▶ “Cargo must be FIRMLY IMMOBILIZED OR SECURED on or within a vehicle by STRUCTURES OF **ADEQUATE STRENGTH**, dunnage, bags, shoring, tiedowns or a combination of these”

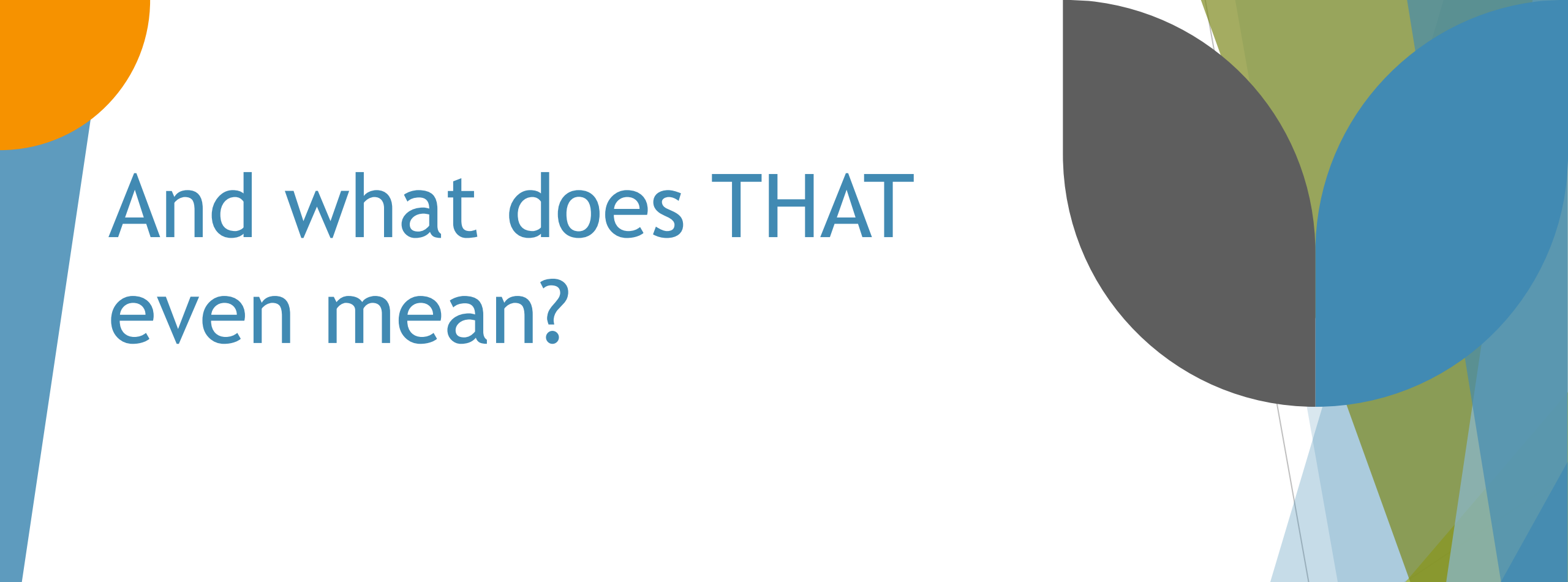
WHAT DOES ADEQUATE STRENGTH MEAN?

Securement devices must withstand:

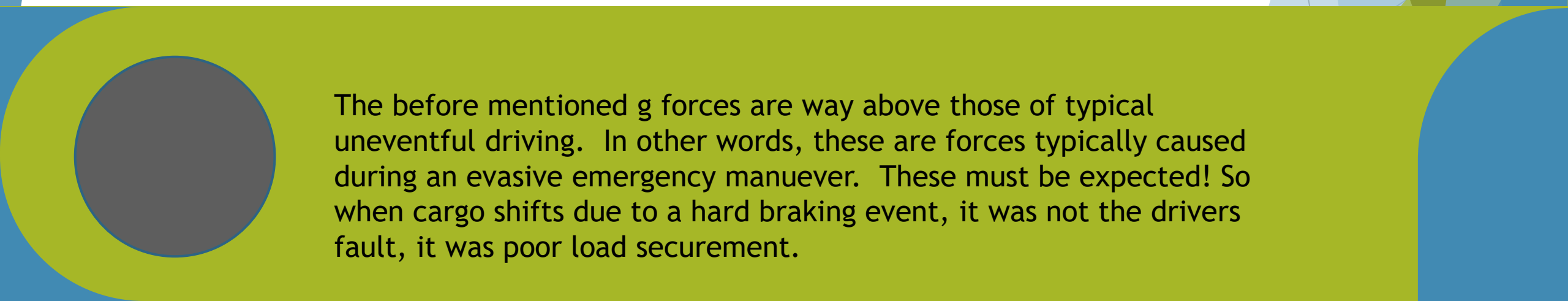
.8 g deceleration in the forward position

.5 g acceleration in the rearward direction

.5 g acceleration in a lateral direction



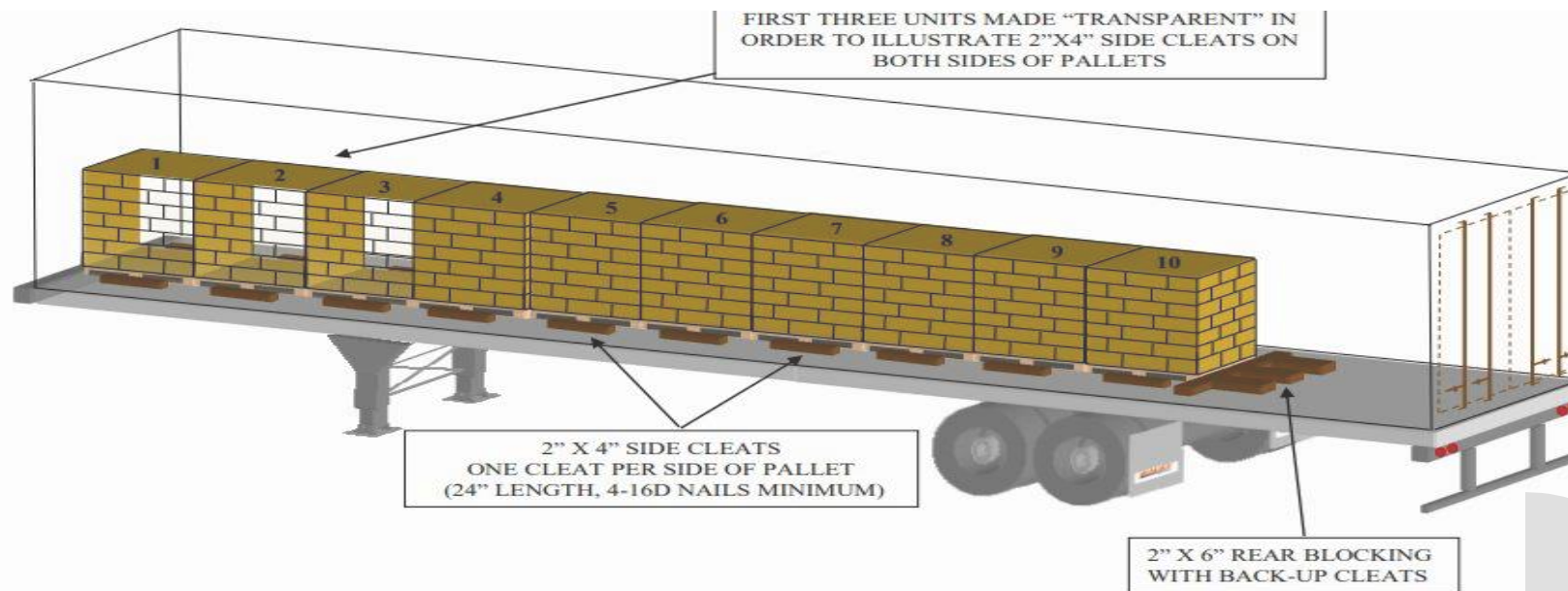
And what does THAT even mean?



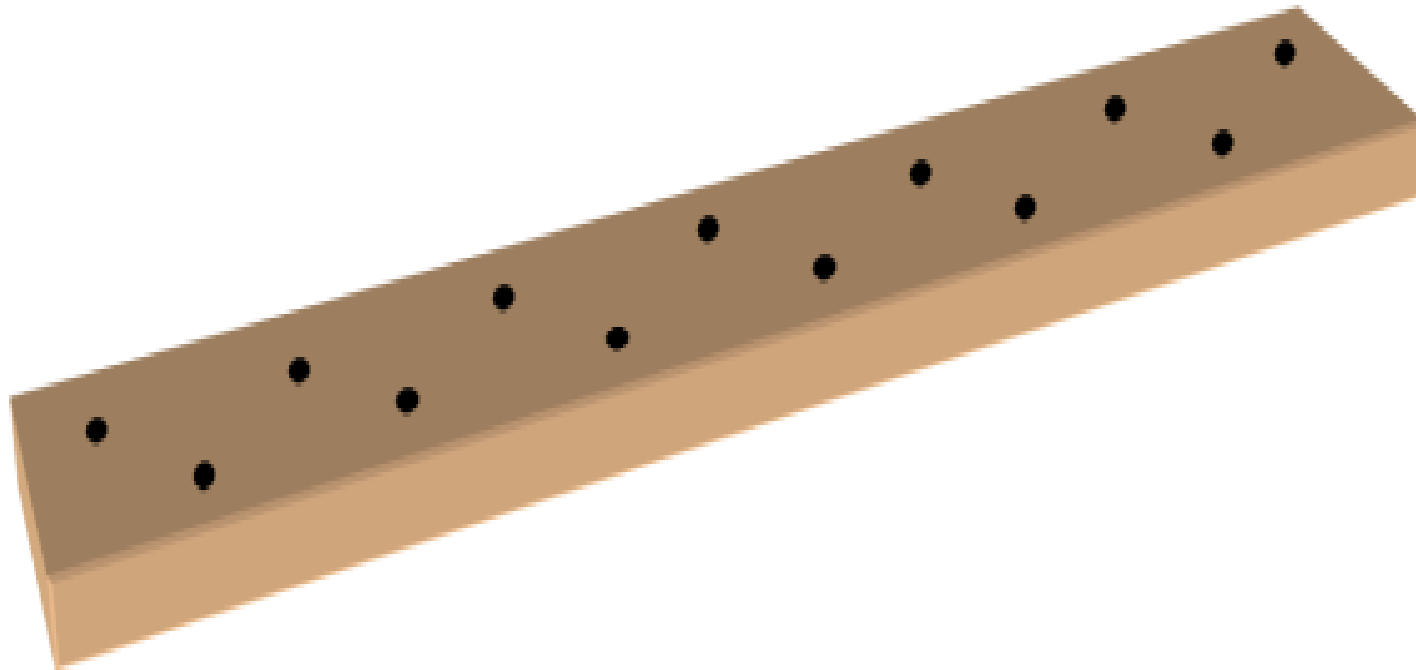
The before mentioned g forces are way above those of typical uneventful driving. In other words, these are forces typically caused during an evasive emergency maneuver. These must be expected! So when cargo shifts due to a hard braking event, it was not the drivers fault, it was poor load securement.

Examples of proper load securement...

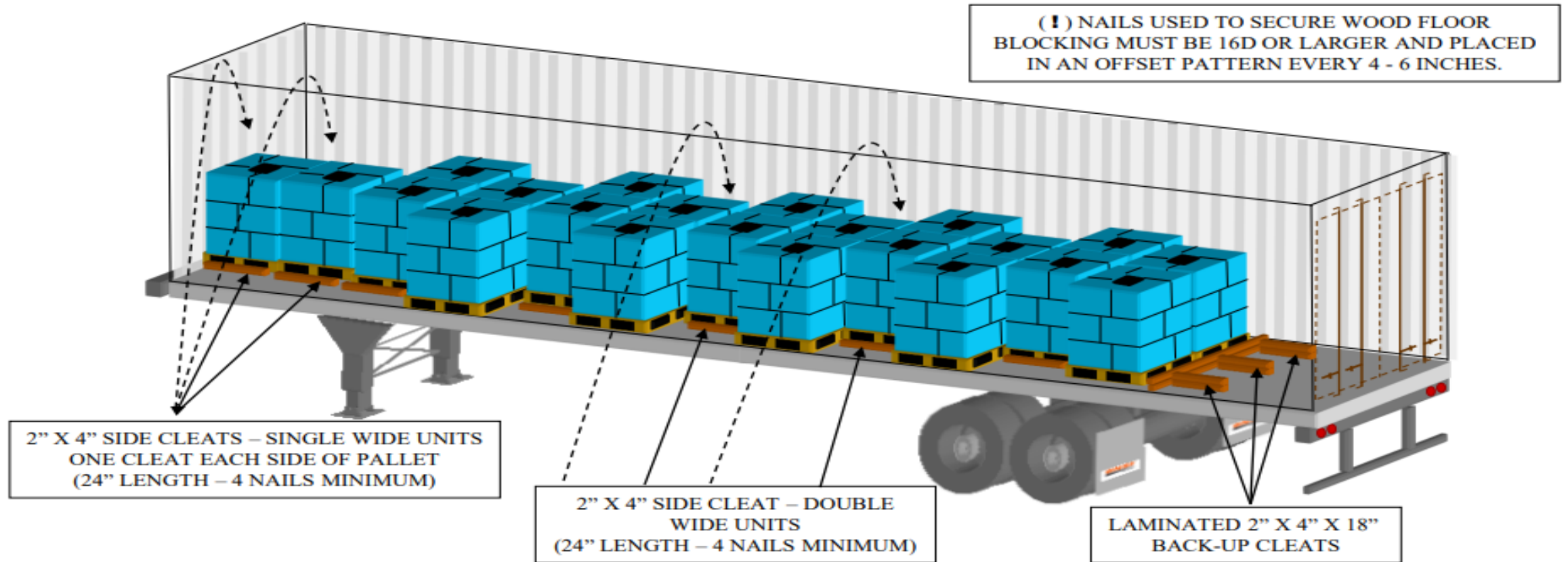
- ▶ ANY time there is space between cargo and side of container or space between cargo and nose or tail of a container, securement devices **MUST** be used to prevent movement.



FLOOR BLOCKING SHOULD BE SECURELY NAILED TO THE TRAILER FLOOR AND MUST PENETRATE THE TRAILER FLOOR TO A DEPTH OF 1" OR MORE. THE NAILS SHOULD BE SPACED FOUR-SIX INCHES APART IN A STAGGERED PATTERN (SEE BELOW).

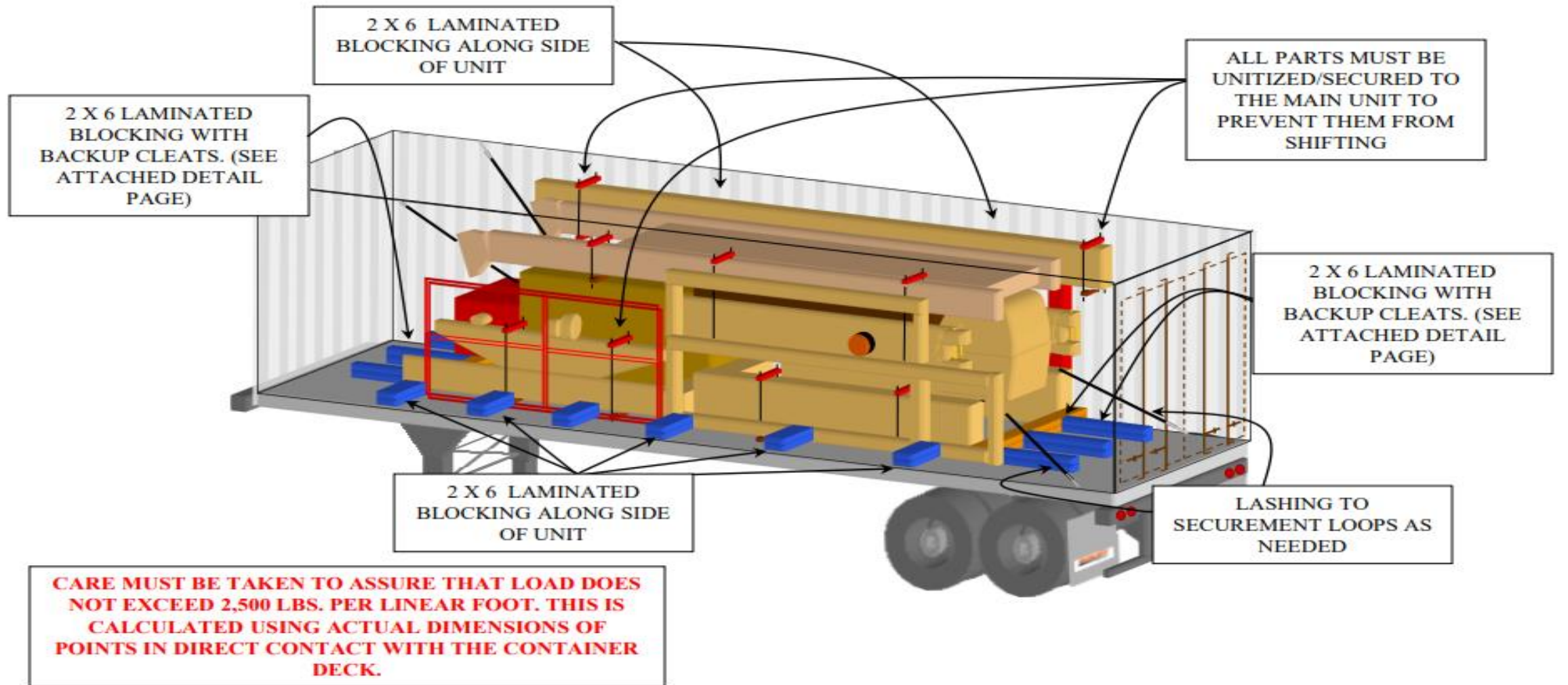


Same type of load, staggered for balance.

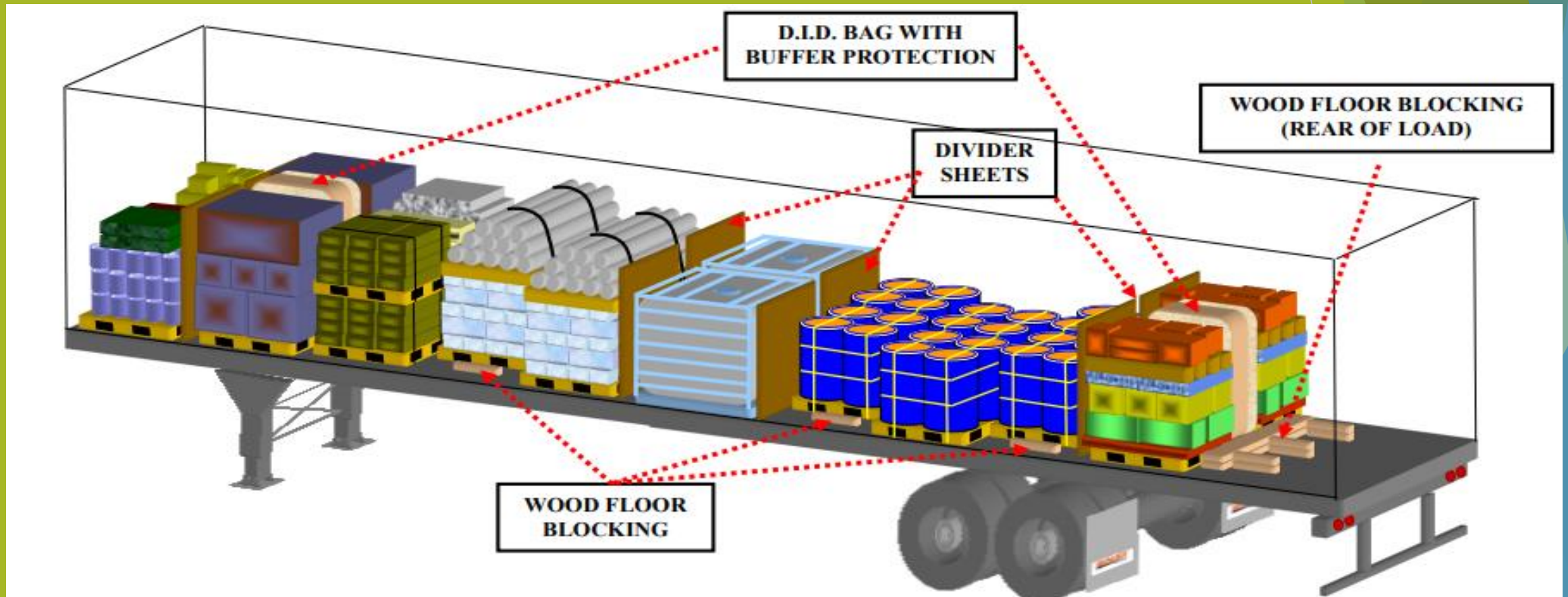


ALL UNITS MUST BE PROPERLY STRETCH-WRAPPED TO MAINTAIN ADEQUATE VERTICAL ALIGNMENT DURING THE TRANSPORTATION CYCLE (3 TO 4 WRAPS PER UNIT). SINGLE UNITS MUST BE HEAVILY STRETCH-WRAPPED TO OBTAIN OPTIMUM RESTRAINING CAPACITY.

Heavy Machinery - Beef it up!



Varied cargo? Use varied load securement. Fill all gaps!



Here is one that caused a layover.....

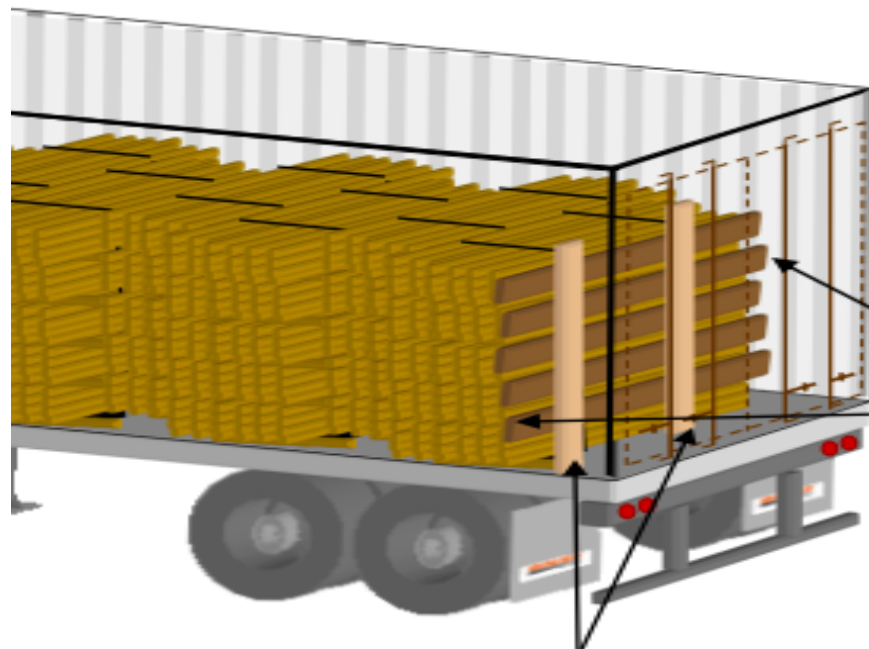


PRESE

It's not just cargo that gets damaged....



Think about those that need to open the doors upon delivery.
Falling cargo is a common occurrence!



LOAD RESTRAINING CAPACITY	
RESTRAINT DEVICE	CAPACITY
2" X 4" BULL BOARD	5,600 LBS
2" X 6" BULL BOARD	8,000 LBS
2" X 4" "T" BRACE	7,000 LBS

2" x 6" BULL BOARDS IN
CORRUGATED CONTAINER
SIDEWALLS

VERTICAL 2"X4" LUMBER IS SECURED TO THE
HORIZONTAL BULL BOARDS IN ORDER TO
PREVENT DISPLACEMENT

The costs of a layover...

Wrecker (uprighting, towing, impound) - upwards of \$25,000 depending on location

Transloading - \$5,000 to \$8,000 (more if it needs to happen at accident scene)

Injured driver - UP TO HUNDREDS OF THOUSANDS, MORE IF FATALITY

Totaled truck - Up to \$180,000

Totaled container - up to \$10,000

Totaled chassis - up to \$20,000

Your cargo.....? Your customer? Your business?

Increased insurance premiums?

Lawsuits?



When in doubt.....

When it doubt, send pictures of your load for either reassurance or advice, whatever you need! safety@duncanandson.com

And please remember.... make sure all new employees are trained in proper load securement. Lives depend on them!

Thank you!

Julie Smith

Safety Manager

Duncan Trucking, Ltd.