## Background

View's mission is to "create delightful human environments". In alignment with our mission, our shipping team is equipped to fulfill glass orders that delight our customers.

### 1.0 Scope

The purpose of this document is to explain View Inc.'s Standard Insulated Glass Packaging and Shipment Methods.

### 2.0 Communication

At View Inc. we believe that strong, direct communication is a key factor to success. We are committed to defining a clear chain of communication both internally and externally to promote a positive work environment for our employees as well as a positive experience for our customers.

### 2.1 Address \& Hours of Operation

View, Shipping Dept<br>12380 Kirk Road<br>Olive Branch, MS 38654<br>Mon-Fri, 7:00am -3:00pm (CST)

### 2.2 Need to Contact Us?

Factory Phone \#: (662) 892 -3415
Director of Logistics: 1.662.408.3740
Logistics Supervisor: 1.662.892.3433
Logistics Analyst: 1.662.408.3755
Load Master: 1.662.408.3757

### 2.3 Communication Chain



Figure 1: Typical Communication Chain that you can expect.

### 3.0 Preparation or Safety Requirements

All Operators will be in full PPE when handling and transporting glass.

### 4.0 Crate/Rack Types

View Inc. uses two types of packaging crates/racks. The type of packaging used can depend on the total sq. ft. of an order, location of delivery site or several other factors. The packaging type will be determined by View Inc.

### 4.1 Wood Crates

- Wood crates are generally used for smaller jobs (less than truckload).
- Wood crates are built to order and can accommodate multiple sizes and/or weights.
- Wood crates may be loaded up to 5,000 lbs for shipping (unless otherwise requested).
- Additional charges will apply to all requests that require less than the maximum crate capacity (dependent on crate size).
- Wood crates are designed to only be lifted with a forklift. Wood crates are NOT designed to be lifted with a crane.
- Dependent on shipping needs, unloading \& onsite equipment limitations, transport modes etcetera, you may expect to see any of the types of wooden crates depicted in Figure 2.
- For example, an equipment limitation may be a forklift load capacity, which would determine the weight limit of the crates to be shipped.

Note: Please provide as much relevant information to View's logistics analyst as possible so that we may select the container type that best suits your unique conditions to ensure a smooth transit \& unloading process once on site.


Figure 2b: Wooden Crate Types (Internal \& External Dimensions).


Figure 2b: Wooden Crate Types.

### 4.2 Metal A-frames

- Metal A-Frames are designed to be easily rolled on concrete as well as lifted with a forklift or overhead crane.
- Metal A-Frames vary in weight but typically average around 725 pounds, with the following dimensions: 96" long x 48 " wide" x 93 " high (see figure 3a).
- For IGUs which exceed A-Frame length, "end caps" must be applied to the ends of the A-frame for support (see figure 3b).
- A-frames with endcaps typically average around 860 pounds with a cumulative length of 130 ".
- A-frames may be loaded up to 5,000 lbs for shipping.
- Additional charges will apply to all requests that require less than 5,000 lbs. per metal A-Frame.
- $\quad$ There will be a $\$ 10,000$ charge for each metal A-Frame that is not returned to View Inc. within 30 days of job completion.
- View Inc. will arrange for pickup of the empty metal A-Frames at View Inc.'s expense (Please refer to section 2.2 for contacts to arrange return).
- Top of A-Frames must be covered with foam pads to prevent tarp damage.
- Whenever a crane must be used on project site to lift IGU containers, A-frames must be used.
- A-frames have crane hook mounts on both sides along the top.

Note: Please contact our shipping analyst if this requirement applies to you, so that we may plan accordingly.


Figure 3a: Metal A-frame with crane hook mounts and dimensions.


Figure 3b: A frame with endcaps \& dimensions.

### 5.0 Crate Information and Design



Figure 4: Dimensions and crate design layout (subject to change based on shipping considerations).


Figure 5: Closure design showing stability for transit (for international shipments).

View crates are designed with the glazier in mind. All crates are built with a slight angle on the back wall to ensure units do not fall forward during transit and unloading. (Except international shipments, in which case, special crates are designed to maximize capacity of shipping containers.)

View crates have a wide base for increased stability so there is no risk of the crate tipping during transit or while sitting at a jobsite. (Special considerations will be communicated for international shipments.)

Crates are designed to be moved with a forklift only. The crates have 3 " of clearance for fork access.


Figure 6: Back wall is designed with a slight angle to ensure units do not tip.


Figure 7: Large base to ensure crates do not tip.

### 6.0 Procedure

### 6.1 Sorting

- By default, all insulated glass units will be packaged from largest to smallest within each individual crate or A-Frame.
- Extra charges may apply to all other packaging requests (e.g., packaging all like sizes together, packaging by customer Mark ID\#, or packaging specific units in each crate). It should also be noted that special packaging requests made after receipt of the order can potentially affect quoted delivery time and costs.


Figure 8: Units will be stacked by like size, or largest to smallest.

### 6.2 Loading Crates

View Inc. packs with safety, security and quality in mind. Units are secured with elastic banding, 2"x4"s secured to the bottom of the crate, and compressed cardboard. Cork pads are placed between each of the units to create separation while loading.


Figure 9: Cork pads are placed between each of the units when loading.


Figure 10: Plastic banding is placed on the outside of the crate to secure crate.


Figure 11: Units secured with $2 \times 4$ banding and angled cardboard. $2 \times 4$ boards placed to secure movement.


Figure 12: Units are shrink wrapped to further secure the units inside crate.


Figure 13: Crate is securely strapped and staged on truck/flatbed.


Figure 14: Crates are fully covered with 8ft tarps and strapped.

### 6.3 Loading A-Frames

View Inc. packs with safety, security and quality in mind. Units are secured with shrink wrap, banding, and cardboard.


Figure 15: Cork pads are placed between each of the units when loading.


Figure 16: Units are secured to A-Frame and prepped to wrap.


Figure 17: Final Product is ready to ship with packing list enclosed.

## Placing Support Boards

- $\quad$ Stage eight $2 \times 6$ boards (8ft in length) on or near flatbed truck.
- Using a forklift, suspend container over the flatbed truck to measure where to place boards, they should be place on the inside of the wheels a few inches from the wheel. If units are longer than the width of the A-Frame, place A-Frame with extended unit side on the outside to maximize space. Reverse this when placing next row so that both flat ends are on the same side.


Figure 18: Frames are aligned with boards for stability during transit.

- Once the first two boards are secured to the trailer, place second, third and fourth boards on top, using nail gun to secure each board into place until boards are stacked four high.
- Nail board directly to "Nailer" plane on the trailer.


Figure 19: Nail 4 boards on each side to secure frames.

- Once boards are in place, use the forklift to place finished frame on top of boards, ensuring the wheels of the A-Frame are not touching the flatbed.


Figure 20: Frame is aligned neatly onto $82 \times 4$ boards.


Figure 21: Frames are strapped underneath as required prior to leaving the facility. Straps or chains are acceptable. (NO STRAPPING OVER TOP.)

Note: Driver will complete required loading process by strapping down the containers and placing tarp over shipment.


Figure 22: Load fully tarped and ready for transit.

### 6.4 Transportation and Delivery Method

The transportation and delivery method can vary depending on several factors. Transportation is generally charged by the mile, by the number of crates, transportation mode, and urgency.

## Order / Trailer Size

Small Orders (Less than a truckload (LTL))
Small orders are often shipped LTL (Less than truckload) unless special equipment is requested (e.g., dedicated carrier, flatbed). This means LTL glass shipments will always be packed on wooden crates.

## Large Orders (Truckload)

Large orders will typically ship on 53 ft flatbed or 48 ft flatbed depending on the customer's request and availability of carriers. These types of glass shipments are usually packed and shipped on metal a-frames. However, depending on the distance and the costs, it may be financially prudent to pack on wooden crates due to the cost of retrieving metal a-frames. The decision will always consider the customer preference but is ultimately View's discretion unless specifically approved otherwise.

## Trailer Type

Type 1: Flat Bed

- A flat bed is a 40 -foot, 48 -foot, or a 53 -foot trailer with no side rails and no enclosures.
- 40 foot $=$ "Hot shot" These are used for smaller loads such as a single frame or a pair of frames weighing less than 15 thousand pounds combined or "total". Usually reserved for shipments proximal to Olive Branch, MS.
- 48 -foot = The most commonly available type of trailer. Used to carry a maximum of 10 frames, this trailer is rated at 30 thousand pounds.
- 53 -foot $=$ The largest size available, this trailer is rated for 40 thousand pounds. This size can fit a maximum of 12 frames and only ten frames if they have endcaps. These are preferred due to the weight restrictions not exceeding our typical total weight as well as the fact that these sometimes come with a "Conestoga" or built-in tarp.

Note: A forklift or crane is required on site for off-load. Must be offloaded from the sides; cannot be unloaded from a dock plate.


Figure 23: Flatbed trailer.

- Type 2: Van (dry, enclosed containers):
- Dry vans are reserved for crates or LTL shipments. They keep the product dry and safe on the way to a shipping hub where it is then handed off to a major distribution network such as FedEx or XPO.

Note 1: A dock or concrete ramp equipped with dock plate is required to safely unload vans.

Note 2: A forklift or pallet jack is needed to unload freight.
Note 3: Only forklifts should be used when using concrete ramps to prevent from rolling downhill.


Figure 24: Van (dry container).

- Type 3: Overseas Shipping containers (dry enclosed containers):
- These containers are used to ship overseas on cargo vessels.
- They have strict requirements and sometimes are restricted on what can and cannot go into them. These containers may be $20^{\prime}$ or $40^{\prime}$ in length.

Note 1: A dock or concrete ramp equipped with dock plate are required to safely unload vans.
Note 2: A forklift or pallet jack is needed to unload freight.
Note 3: Only forklifts should be used when using concrete ramps to prevent rolling downhill.


Figure 25: Van (dry container).

### 6.5 Paperwork to expect with your delivery

- Packing Slip Each A-frame or Crate gets this applied during the packing process. It contains:
- 1) Container ID (whereas container = a crate or A-frame)
- 2 Project \#
- 3 Order \# \& Customer Purchase Order \#
- 4 Mark ID
- 5 Shows how many windows are packed on each container. Each "Lite ID" is a separate window.
- 6 Total Square Area / Square Footage of all of the windows on a given A-frame or crate.


Figure 26: Packing Slip labeled with key information.

- Bill of Lading which contains:
- 1 The \# of frames or crates (denoted as "No. Shipping Units") within a trailer load.
- 2 Types of cargo (i.e. "A-frames with Glass", "Crates with Glass", or A-frames/Crates with glass in the case of mix loads)
- 3 Container \#s assigned to each A-frame or crate.
- 4 Weights


Figure 27: Bill of Lading labeled with relevant information.

- Shipping Manifest which contains:
- 1 The container count (How many A-frames or crates are in a given load).
- 2 The total "IGU Count" (How many individual windows are contained in a given load).
- (3) Container \#s assigned to each A-frame or crate.


Figure 28: Shipping Manifest labeled with relevant information.

