



# TITAN HV & XL

User Guide

**TITAN**  
formwork systems

Equipping Builders to Succeed

# EQUIPPING BUILDERS TO S U C C E E D

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Dear Valued Customer,

The ownership and management at TITAN are dedicated to your success and safe use of TITAN's products. To this end, we have prepared safety guidelines and other necessary information to help ensure a safe experience. This manual outlines the basics, but in no way should be considered exhaustive.

You the customer should always employ a field crew experienced at shoring concrete structures. In addition, they should have a full working knowledge of applicable OSHA regulations and other state and local statutes. If you ever have a question about the safe use of our equipment, please don't hesitate to call us. We are firmly committed to your success.

Sincerely,



David L. Bacon  
President

#### TRADUCCIONES Y NOTAS PARA NUESTROS CLIENTES HISPANOS

Querido Cliente Valioso,

La propiedad y la administración de TITAN están dedicadas a su éxito y uso seguro de TITAN equipo. Con este fin, hemos preparado pautas de seguridad y otra información necesaria para ayudar a garantizar una experiencia segura. Este manual describe los conceptos básicos, pero de ninguna manera debe considerarse exhaustivo.

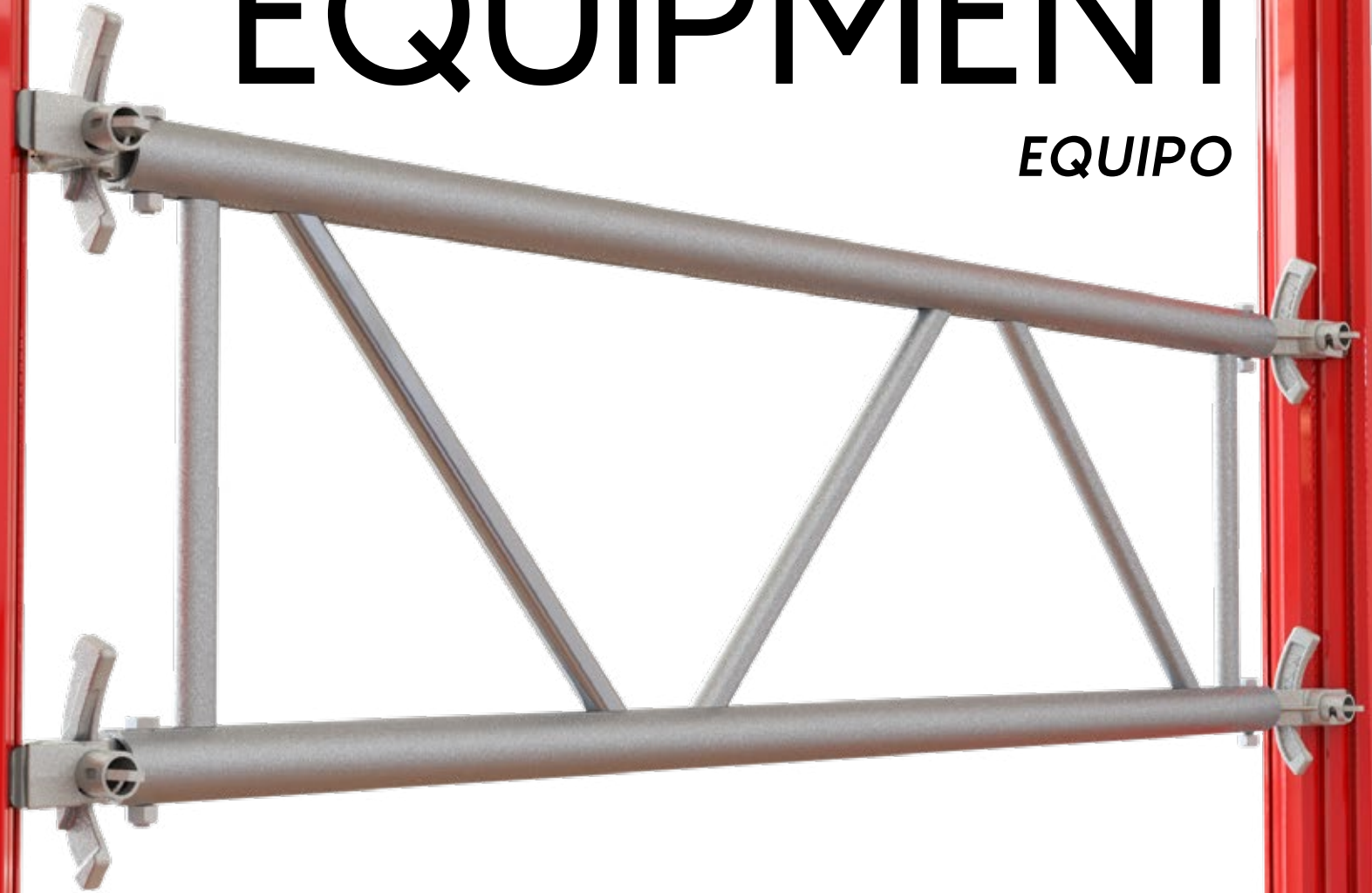
Usted, el cliente, siempre debe contratar un equipo de campo con experiencia en apuntalamiento de estructuras de concreto. Además, deben tener un conocimiento práctico completo de las regulaciones aplicables de OSHA y otros estatutos estatales y locales. Si alguna vez tiene alguna pregunta sobre el uso seguro de nuestro equipo, no dude en llamarnos. Estamos firmemente comprometidos con su éxito.

## CONTENTS

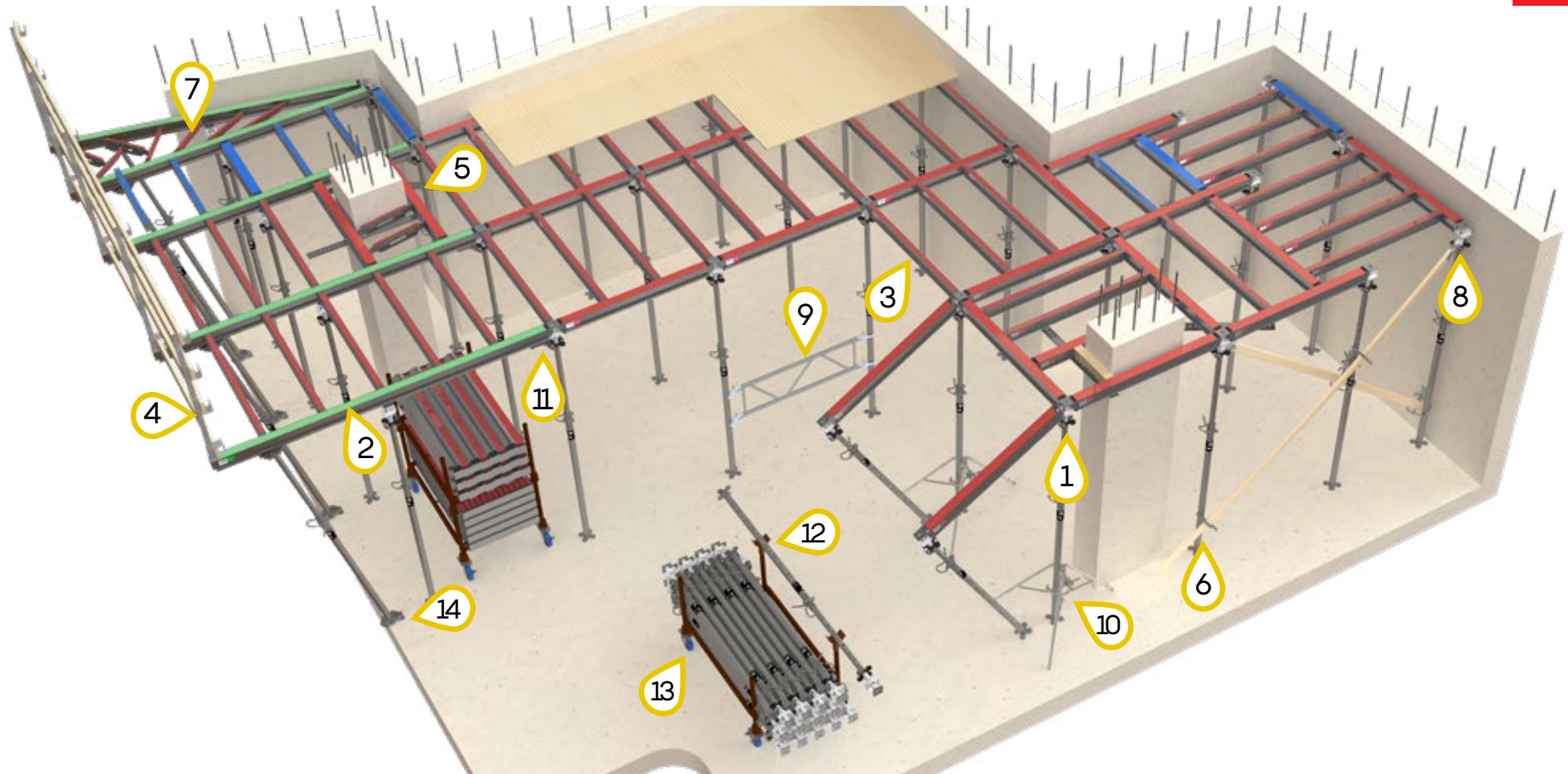
Equipment . . . . .	4
Erection & Stripping . . . . .	10
Typical Details . . . . .	17
Safety Guidelines . . . . .	27
Technical Data . . . . .	34
HV Post Shore Load Chart . . . . .	36
XL Post Shore Load Chart . . . . .	38
Shipping & Receiving . . . . .	40
Shipping Forms . . . . .	46
Stacking Standards . . . . .	51















# EQUIPMENT

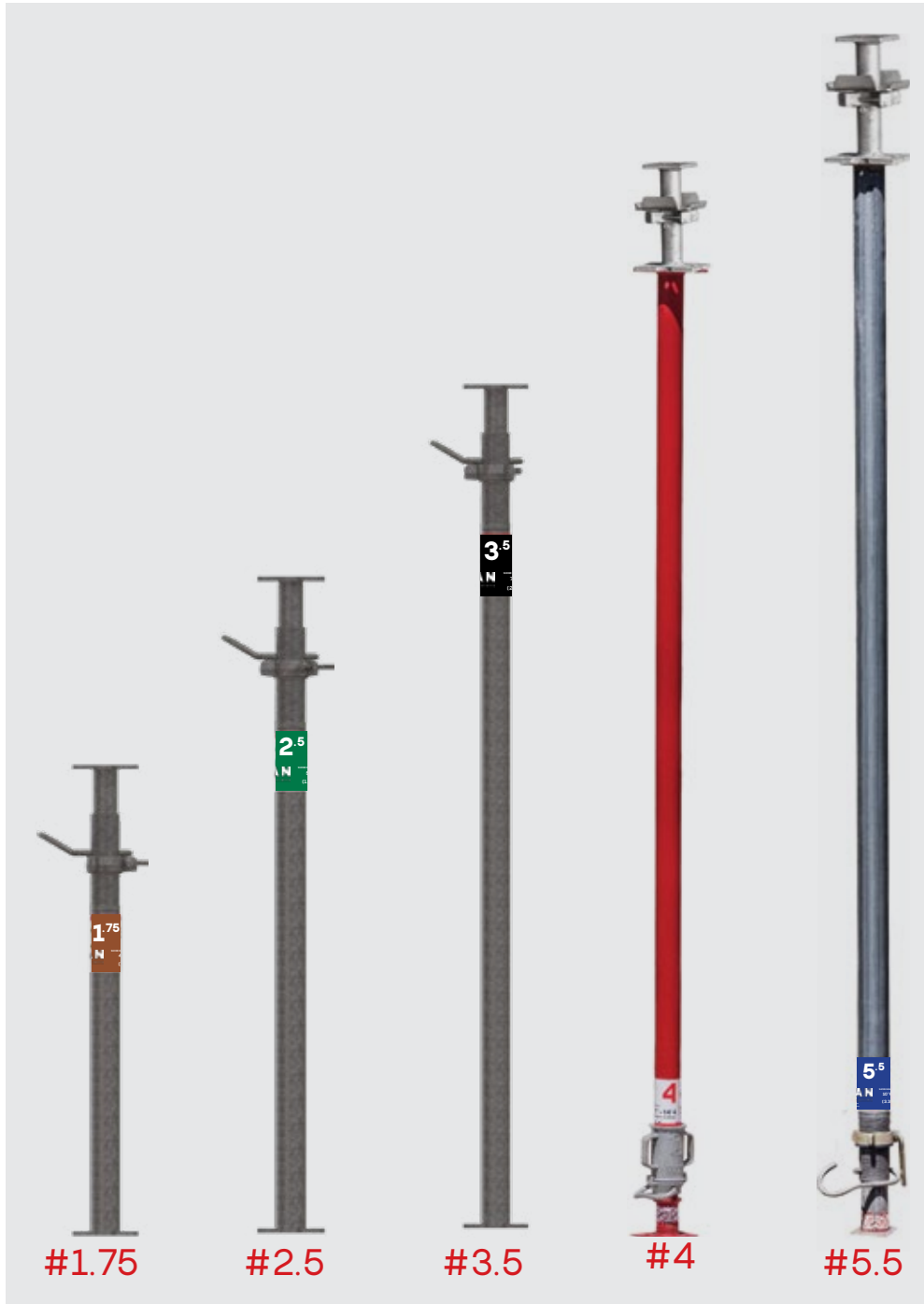
*EQUIPO*



# HV & XL ON THE JOBSITE



- |  |                      |   |                          |   |                       |
|--|----------------------|---|--------------------------|---|-----------------------|
|  | 1. HV Drophead       |  | 6. Universal Wedge Clamp |  | 11. HV Safety Catch   |
|  | 2. HV Main Beam      |  | 7. TITAN Filler Beam     |  | 12. Barella w/ U-head |
|  | 3. HV Secondary Beam |  | 8. Drophead Clamp        |  | 13. Casters           |
|  | 4. HV Guardrail Post |  | 9. HV & XL Ledger Frames |  | 14. T-Shoe            |
|  | 5. TITAN Column Lock |  | 10. Universal Tripod     |   |                       |



#1.75

#2.5

#3.5

#4

#5.5

## TITAN HV

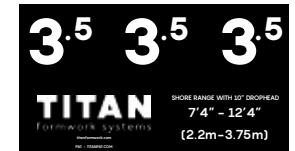
**#1.75 Post Shore (w/ Drophead)**  
 4'5"-6'7" / 1.3m-2m  
 25.4lb+(10.5lb Drophead)  
 974-009+013



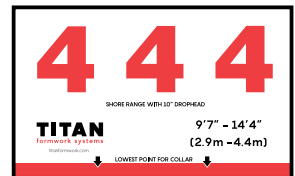
**#2.5 Post Shore (w/ Drophead)**  
 5'7"-9'0" / 1.7m-2.75m  
 32.2lb+(10.5lb Drophead)  
 974-010+013



**#3.5 Post Shore (w/ Drophead)**  
 7'4"-12'4" / 2.2m-3.75m  
 44.7lb+(10.5lb Drophead)  
 974-011+013



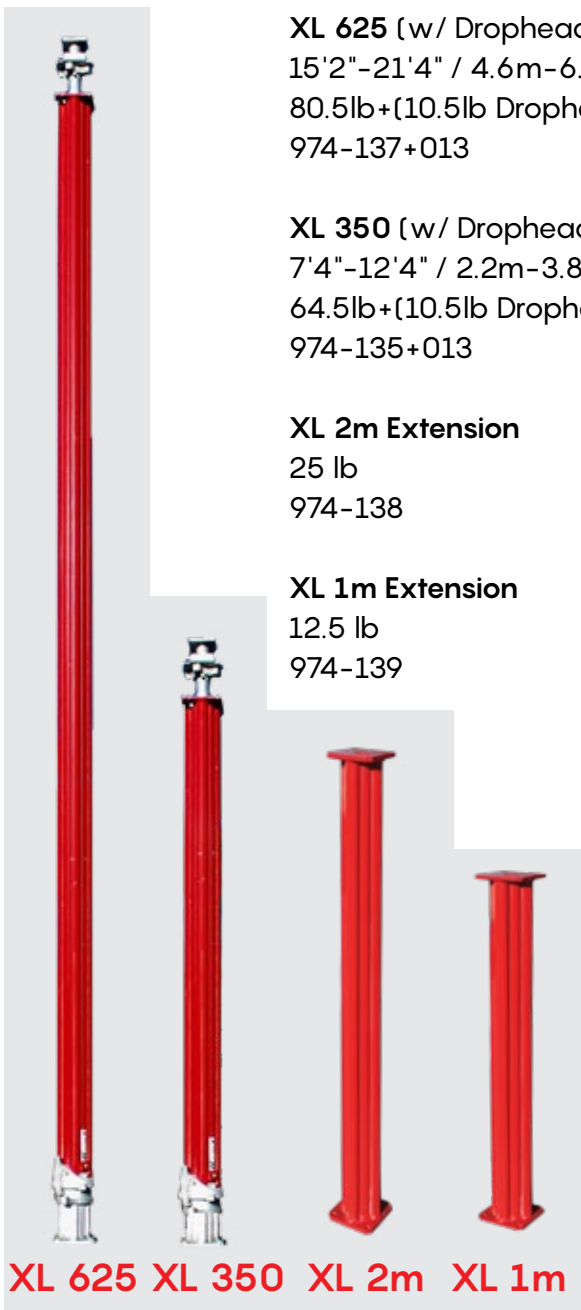
**#4 Post Shore (w/ Drophead)**  
 9'7"-14'4" / 2.90m-4.35m  
 76.3lb+(10.5lb Drophead)  
 974-005+013



**#5.5 Post Shore (w/ Drophead)**  
 10'9"-18'10" / 3.3m-5.75m  
 86.8lb+(10.5lb Drophead)  
 974-005+013



# TITAN XL



**XL 625** (w/ Drophead)  
15'2"-21'4" / 4.6m-6.5m  
80.5lb+(10.5lb Drophead)  
974-137+013

**XL 350** (w/ Drophead)  
7'4"-12'4" / 2.2m-3.8m  
64.5lb+(10.5lb Drophead)  
974-135+013

**XL 2m Extension**  
25 lb  
974-138

**XL 1m Extension**  
12.5 lb  
974-139

XL 625 XL 350 XL 2m XL 1m

# HV BEAMS



Main

Secondary

**11'6" HV Main Beam**  
(3.5m) - 70.1 lb  
974+023

**3'9" HV Main Beam**  
(1.15m) - 22.8 lb  
974-020

**7'7" HV Main Beam**  
(2.3m) - 46.0 lb  
974-022

**5'7" HV Secondary Beam**  
(1.7m) - 13.7 lb  
974-025

**5'7" HV Main Beam**  
(1.7m) - 34.0 lb  
021+021

**3'9" HV Secondary Beam**  
(1.15 m) - 9.5 lb  
974-025



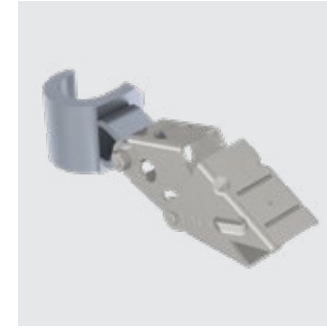
**HV Drop Head**  
10.5 lb  
974-013



**4' TITAN Filler Beam**  
9 lb  
974-027



**TITAN Column Lock**  
5.5 lb  
974-019



**TITAN Drophead Clamp**  
3.25 lb  
974-036



**Universal Wedge Clamp**  
4.0 lb  
974-037



**XL Clip**  
0.41 lb  
974-138



**TITAN T-Shoe**  
4.4 lb  
974-035



**10% Alum. Shore Wedge**  
2.0 lb  
974-031



**Universal Tripod**  
31 lb  
974-044



**HV Safety Catch**  
2.7 lb  
974-058



**HV Box Stringer U-Shoe**  
11.5 lb  
974-018



**Post Shore Head**  
8.2 lb  
974-007



**Stub Shore**  
17.5 lb  
974-008

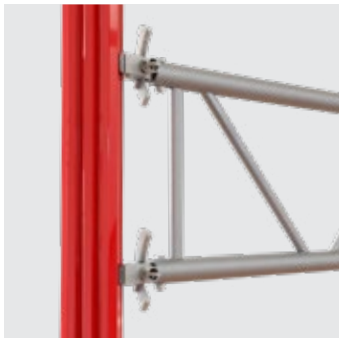


**HV Guardrail Post**  
5' / 1.5m  
25 lb  
974-057



**TITAN Positioner**  
0.4 lb  
974-059





**XL Ledger Frame**

6' - 27 lb  
8' - 32 lb  
974-191/192



**HV Ledger Frame**

6' - 27 lb  
8' - 31 lb  
974-194/195



**Outrigger Platform**

2,675 lb  
974-200



**Adjustable Hanger**

28" - 18.0 lb  
52" - 20.0 lb  
974-048/049



**Hanger**

15" - 12.3 lb  
19" - 12.5 lb  
974-046/047



**Dead Blow Hammer**

2.0 lb  
974-052



**Reshore Spring Clip**

0.8 lb  
974-068



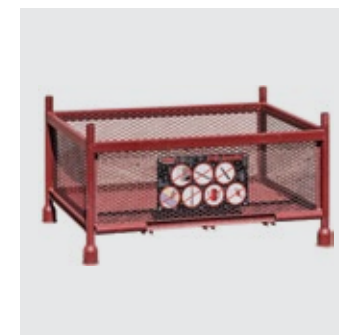
**T-Clip**

0.5 lb  
974-184



**Barella**

83.6 lb  
974-028



**Barella Basket**

215.0 lb  
974-029



**Barella U-Head**

3.3 lb  
974-053



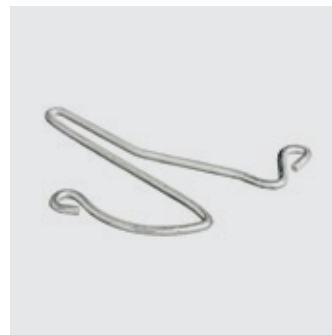
**Caster Swivel w/ Brake**

13.6 lb  
974-032+034



**Caster Fixed**

10.0 lb  
974-033+034

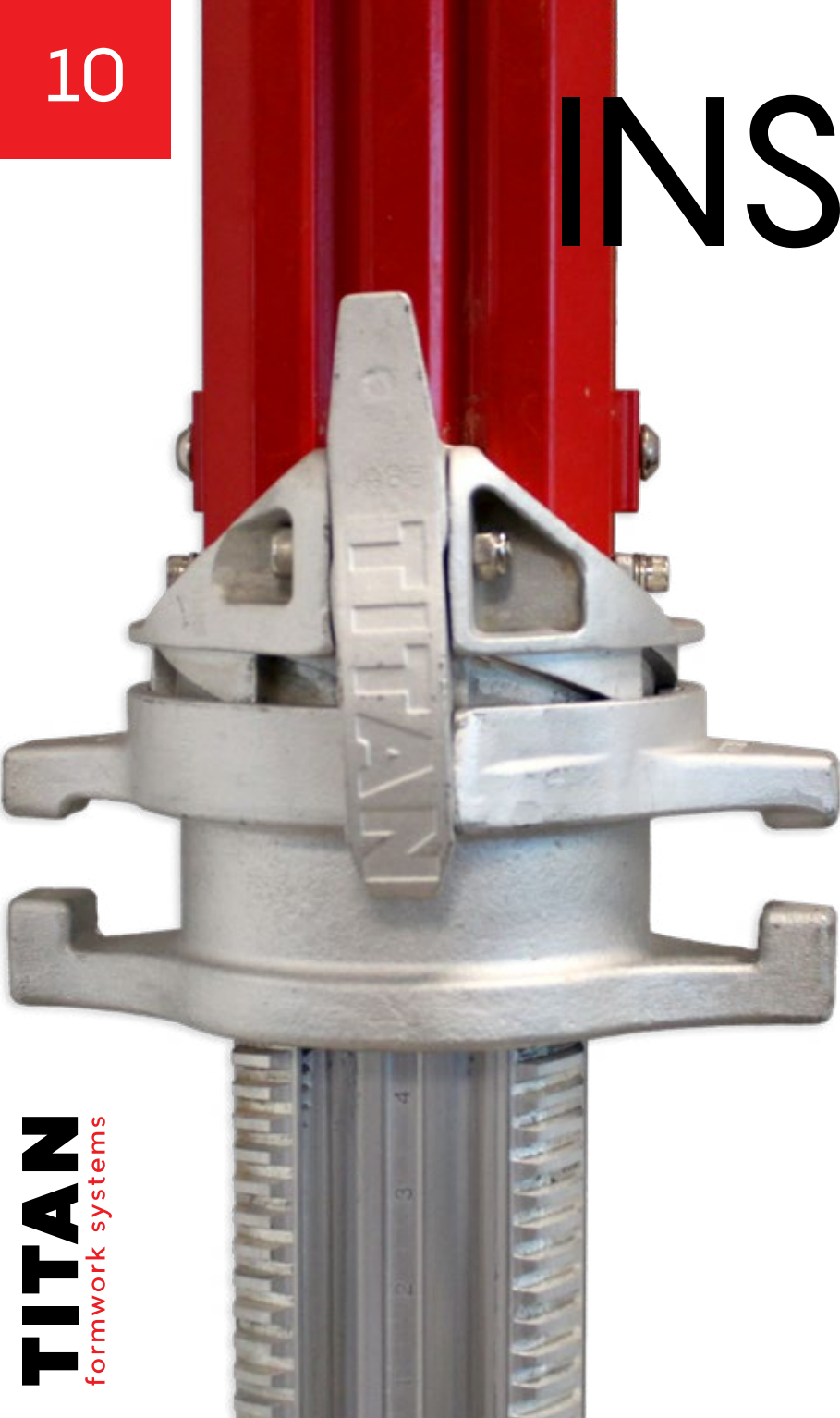


**Wire Pin**

0.2 lb  
974-034

# INSTALLATION & REMOVAL

## *INSTALACIÓN y DESMONTAJE*



### EQUIPMENT CARE

1. NEVER DROP EQUIPMENT!
2. Continually remove excess concrete build-up.
3. Never strike aluminum framing members and/or Post Shores with a hammer, stripping bar or similar. Use polyurethane mallets provided by TITAN.
4. Continually inspect all welds prior to installation, call out cracked or otherwise suspect welds for inspection by a TITAN representative.
5. Do not remove pin from Post Shore while shore is in vertical position.

## PRODUCTIVITY TIPS

1. Avoid locating Secondary Beams at Drophead locations wherever possible. This will improve access to the quick-release Drophead.
2. Use scissor lifts in lieu of rolling scaffolds where shoring heights require the same equal heights.
3. Optimal productivity is achieved with a two man crew to install TITAN HV or XL. Two men should be able to install 3,000-5,000 sf/day. If additional output is required, consider implementing an additional crew.
4. Always keep floors clean from debris, so not to impede the rolling Barella carts.
5. When cantilevered (11'6") Main Beams are required, minimize length of cantilever outside edge of concrete. When transverse Main Beams are required outside the concrete edge (at framing around columns & walls), ensure that these members are brought in snug to the edge. Minimizing/eliminating heavy objects outside the concrete edge will simplify stripping.
6. Attach plywood decking to TITAN HV beams with "6 common" nails at a 45° angle for best results.

## CONSEJOS DE PRODUCTIVIDAD

1. Evite ubicar Vigas Secundarias en locaciones de Drophead siempre que sea posible. Esto mejorará el acceso al Drophead de liberación rápida.
2. Utilice elevadores de tijera en lugar de andamios rodantes donde las alturas de apuntalamiento requieren las mismas alturas iguales.
3. Para obtener la máxima productividad, utilice un equipo de dos personas para instalar TITAN HV o XL. Dos trabajadores deberían poder instalar entre 3000 y 5000 pies cuadrados por día. Si se requiere producción adicional, considere agregar un equipo adicional.
4. Mantenga siempre los pisos limpios de escombros, para no bloquear los carros Barella.
5. Cuando se requieran Vigas Principales en voladizo (11'6"), minimice la longitud del borde exterior del concreto en voladizo. Cuando se requieran Vigas Principales transversales fuera del borde del concreto (en el marco alrededor de columnas y paredes), asegúrese de que estas los miembros ajustados para minimizar/eliminar objetos pesados fuera del borde del concreto simplificarán el desmontaje.
6. Fije la plataforma de madera contrachapada a las vigas TITAN HV con "6 clavos comunes" en un ángulo de 45° para obtener mejores resultados.

## SAFE INSTALLATION



The TITAN HV and XL systems are a ground based installation process:

1. Secure the first few post shores with tripods and hang the Main Beams from the Drophead.
2. After this is done simply raise the Main Beam with the Shore/Drophead into position.
3. Once Main Beams are erected, begin installing the Secondary Beams.
4. Install TITAN Column Lock or bracing when applicable, once framing is completed at column to ensure lateral stability.
5. When sufficient framing is erected, bracing and plywood are installed to achieve a pour-ready system.

**Want to see these steps in action?**  
Scan the QR code to watch our How-To installation videos on YouTube.

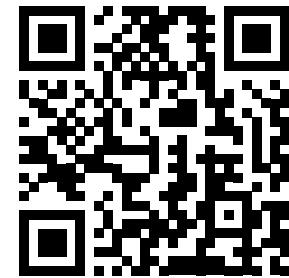
**¿Quieres ver estos pasos en acción?**  
Escanee el código QR para ver nuestros videos instructivos de instalación en YouTube.

Main & Secondary Beams can generally be installed without the assistance of scissors lifts for shoring heights up to 10' for Main Beams and 8' for Secondary Beams.

Tripods should be temporarily used while standing the first group of shores, but should be replaced with Cross Braces as soon as possible.

Before installing plywood decking, ensure that:

- The TITAN HV or XL framing is properly braced.
- Proper fall protection is used by employees installing plywood.
- Guardrail Posts are installed as soon as possible.



# INSTALACIÓN SEGURA



El proceso de montaje de TITAN HV y XL es un proceso de instalación en tierra:

1. Asegure los primeros puntales de los postes con trípodes y cuelgue las Vigas Principales de los Dropheads.
2. Una vez hecho esto, simplemente levante la Viga Principal con el apuntalador/cabezal abatible en su posición.
3. Una vez que las Vigas Principales estén montadas, comience a instalar las Vigas Secundarias.
4. Instale TITAN Column Lock cuando corresponda una vez que se complete el marco en la columna para garantizar la estabilidad lateral.
5. Cuando se construye una estructura suficiente, se instalan refuerzos y madera contrachapada para lograr un sistema listo para verter.

Las Vigas Principales y Secundarias generalmente se pueden instalar sin la ayuda de elevadores de tijera para alturas de apuntalamiento de hasta 10' para las Vigas Principales y 8' para las Vigas Secundarias.

Los trípodes se deben usar temporalmente mientras se está en el primer grupo de apuntalamientos, pero se deben reemplazar con soportes transversales tan pronto como sea posible.

Antes de instalar una plataforma de madera contrachapada, asegúrese de que:

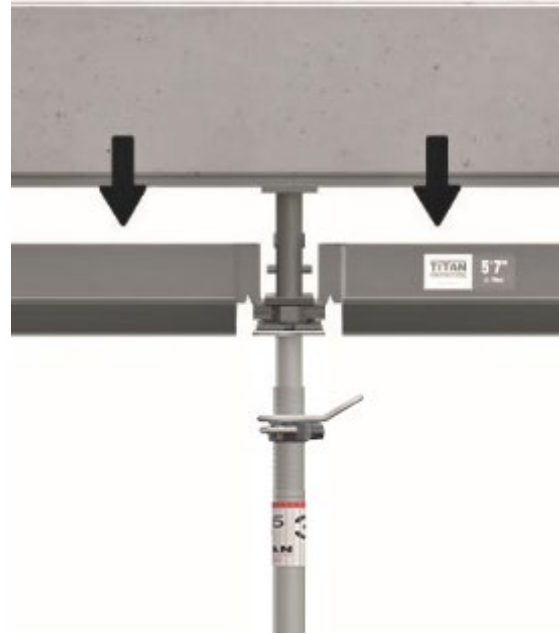
- La estructura TITAN HV o XL está debidamente apuntalada.
- Los empleados que instalan madera contrachapada utilizan una protección adecuada contra caídas.
- Los postes de barandilla se instalan lo antes posible.

## SAFE REMOVAL

### Step 1

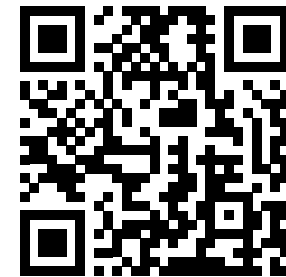


### Step 2



Want to see these steps in action?  
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¿Quieres ver estos pasos en acción?  
Escanee el código QR para ver nuestros  
videos instructivos de instalación en  
YouTube.



The TITAN HV and XL stripping process is as follows:

1. Release the Drophead with a hammer stroke.
2. Begin taking down the Secondary Beams and stacking them in the Barella carts.
3. Recover the Main Beams and stack them in the Barellas.
4. Post Shores and all remaining plywood can be recovered once a stripping release is obtained.

DO NOT LOOSEN Post Shores prior to obtaining a full stripping release. Be aware that Post Shores may loosen during Post-Tension operations. Check and secure Post Shores as required to avoid fall hazards.

Main and Secondary Beams can generally be stripped without the assistance of scissors lifts for shoring heights up to 8'.

Always strip unrestrained plywood immediately following Beam removal to avoid accidents.

## DESMONTAJE SEGURO

### Step 3



El proceso de desarmar de TITAN HV y XL es el siguiente:

1. Suelte el Drophead con un golpe de martillo.
2. Comience a desmontar las vigas secundarias y apilarlas en las Barellas carros.
3. Recupera las Vigas Principales y apílalas en las Barellas.
4. Post Shores y toda la madera contrachapada restante se pueden recuperar una vez que se obtenga una liberación de decapado.

NO AFLOJE los apuntalamientos de los postes antes de obtener una liberación completa del desmontaje. Tenga en cuenta que los Post Shores pueden aflojarse durante las operaciones de postensado. Verifique y asegure los puntales de los postes según sea necesario para evitar riesgos de caídas.

Las Vigas Principales y Secundarias generalmente se pueden desarmar sin la ayuda de elevadores de tijera para alturas de apuntalamiento de hasta 8'.

Siempre retire la madera contrachapada suelta inmediatamente después de retirar la viga para evitar accidentes.

# EARLY FRAMING REMOVAL CRITERIA

## CRITERIOS PARA EL DESMONTAJE TEMPRANO DEL MARCO

### Proposed Guidelines for 5'7" Spacing

\*Removal of form facing material guidelines.\*

Slab (inches)	Min. Req'd f'c (PSI)	F'c 4,000 PSI (%)	Normal Cure (Days)
4"	2,430	61%	7
5"	1,230	31%	3
6"	720	18%	2
7"+	500*	12%	1

### Proposed Guidelines for 7'11" Spacing

\*Removal of form facing material guidelines\*

Slab (inches)	Min. Req'd f'c (PSI)	F'c 4,000 PSI (%)	Normal Cure (Days)
4"	6,768	169%	28
5"	3,395	85%	14
6"	1,971	49%	5
7"	1,258	31%	3
8"	860	22%	3
9"	622	16%	2
10"	467	12%	1

### Design Considerations

1. Max Post Shore spacing - 5'11" or 7'7" (See charts above)
2. Max distance Post Shore can be from edge of slab - 2'5" of typical spacing
3. Normal weight concrete (150 pcf)
4. Construction Live Load - 50 psf
5. Post Shores remain undisturbed until full stripping release
6. Only aluminum framing members and unrestrained plywood can be removed
7. "Normal cure days" is based on standard 28-day curve (ACI 301-16, Paragraph 2.3.2.5)

\*Contractor to verify strength prior to stripping

### Consideraciones de Diseño

1. Máx. Espaciado entre postes: 5'11" o 7'7" (Ve chartas arriba)
2. Máx. distancia desde el apuntalamiento hasta el borde de la losa 2'5"
3. Peso normal del concreto (150 pcf)
4. Carga viva: 50 psf
5. Se pueden retirar los miembros de aluminio y la madera contrachapada.
6. El poste debe permanecer en el lugar hasta que pueda ser retirado.
7. Los "días de curación normales" se basan en la curva estándar de 28 días (ACI 301-16, párrafo 2.3.2.5)

\* Contratista verificará la resistencia antes del desmontaje\*



# TYPICAL

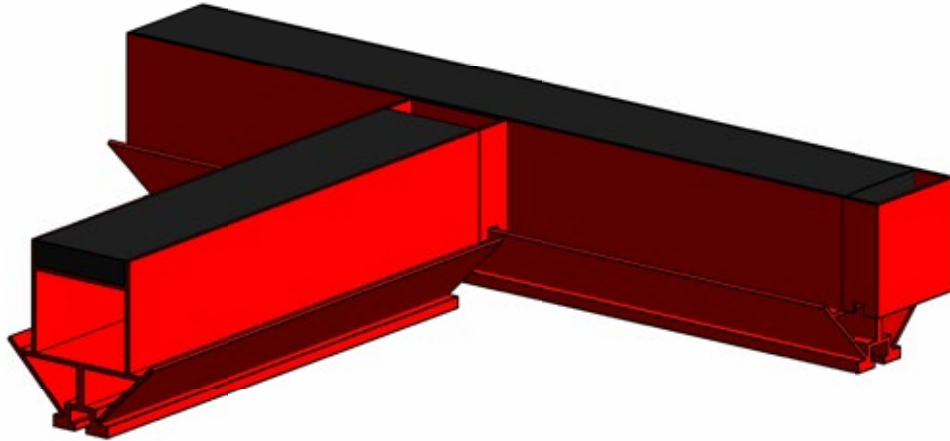
## DETAILS

### *DETALLES TÍPICOS*



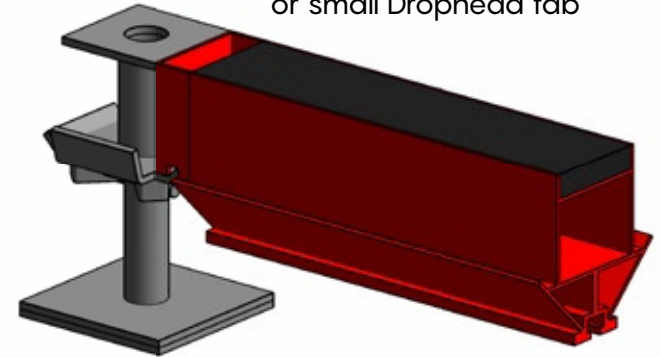
# CONNECTIONS

Main to Main Beam

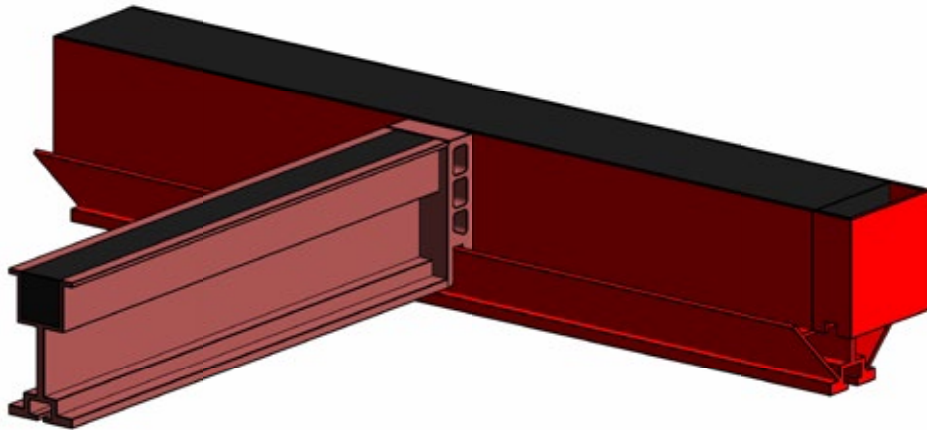


Main to Drophead

Main Beam can fit on large or small Drophead tab

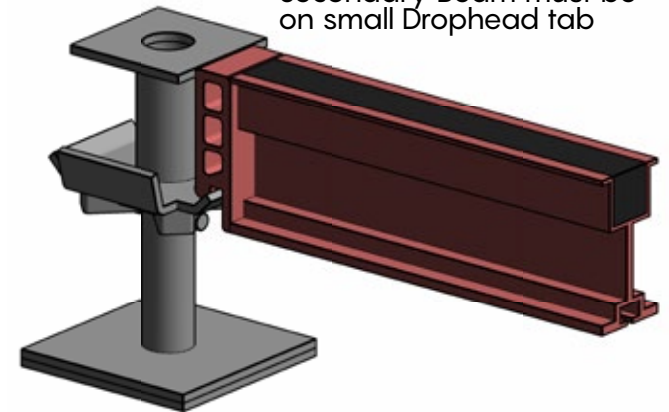


Secondary to Main Beam



Secondary to Drophead

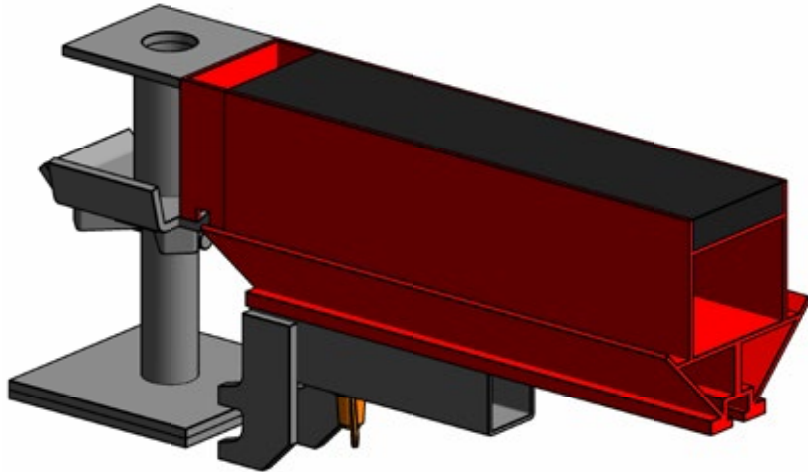
Secondary Beam must be on small Drophead tab



# CONEXIONES

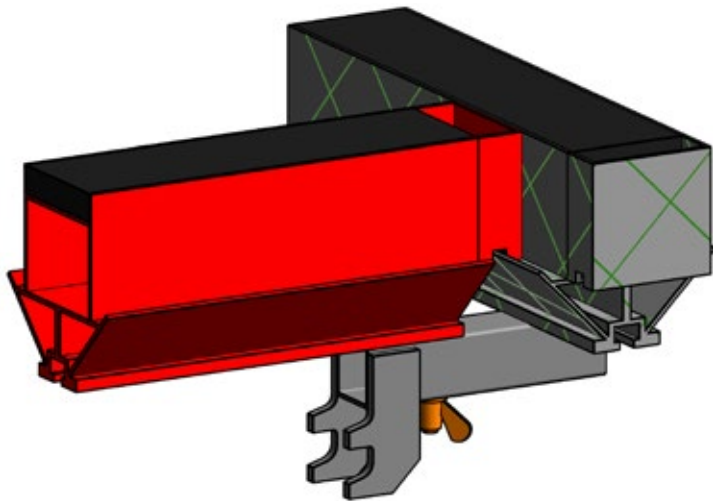
## Safety Catch - Beam to Drophead

Required at cantilevered conditions



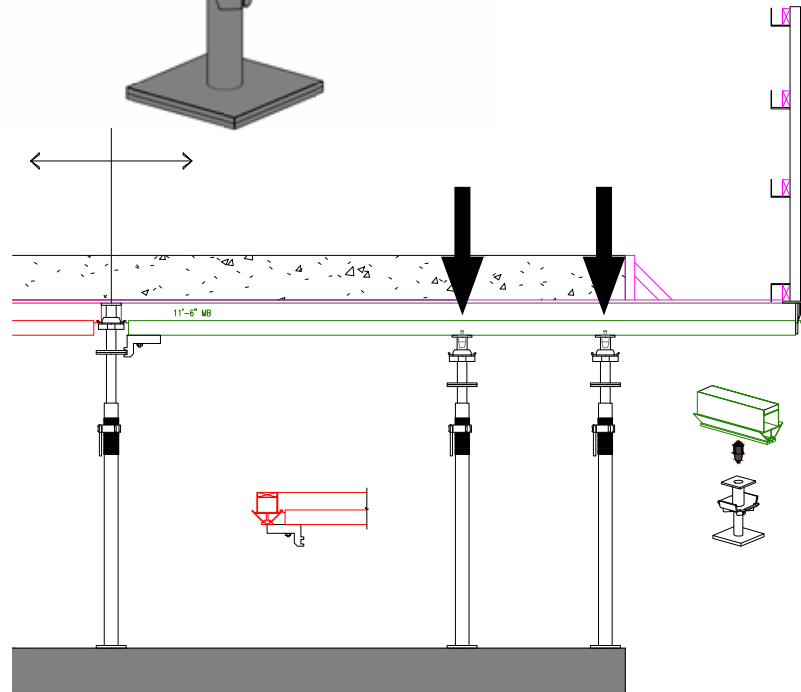
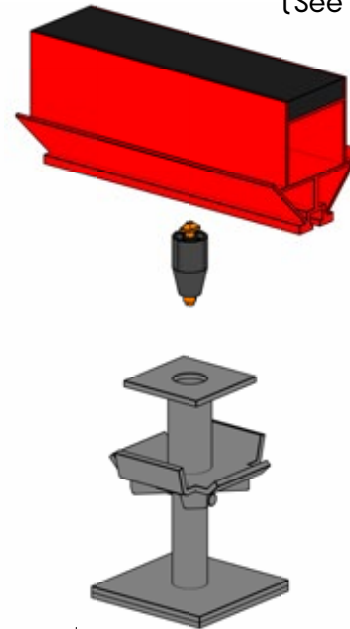
## Safety Catch - Beam to Beam

Required at cantilevered conditions

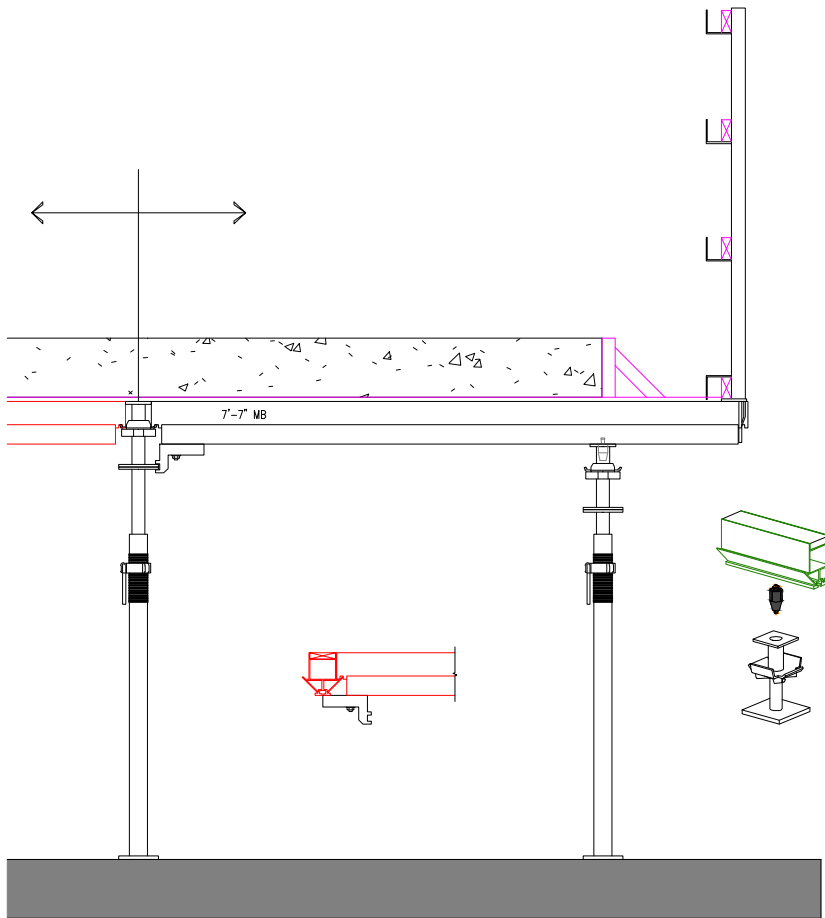


## TITAN Positioner

Required for supplemental shores  
(See Page 20 for more details)



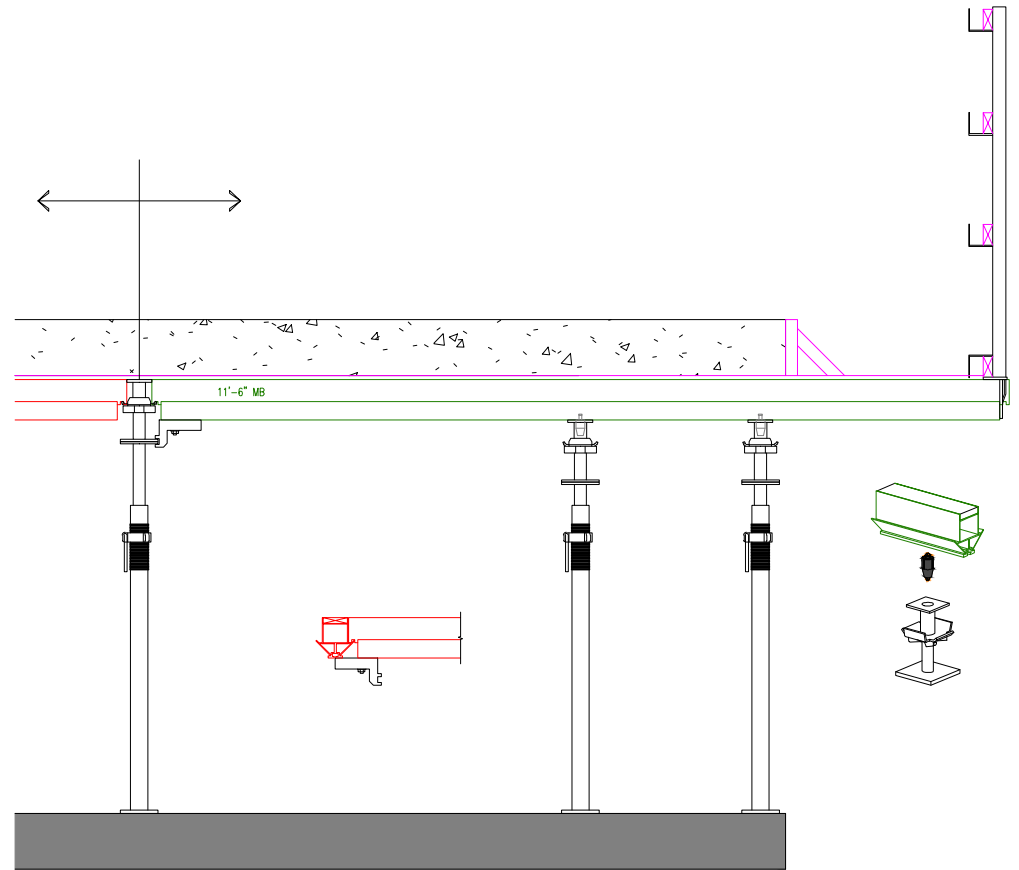
# TYPICAL PERIMETER DETAIL



Typical Perimeter Detail with 7'7" Main Beams

Note use of:

- Beam to Drophead Safety Catch
- TITAN Positioner for Supplemental Shores
- HV Guardrail Post



Typical Perimeter Detail with 11'5" Main Beams

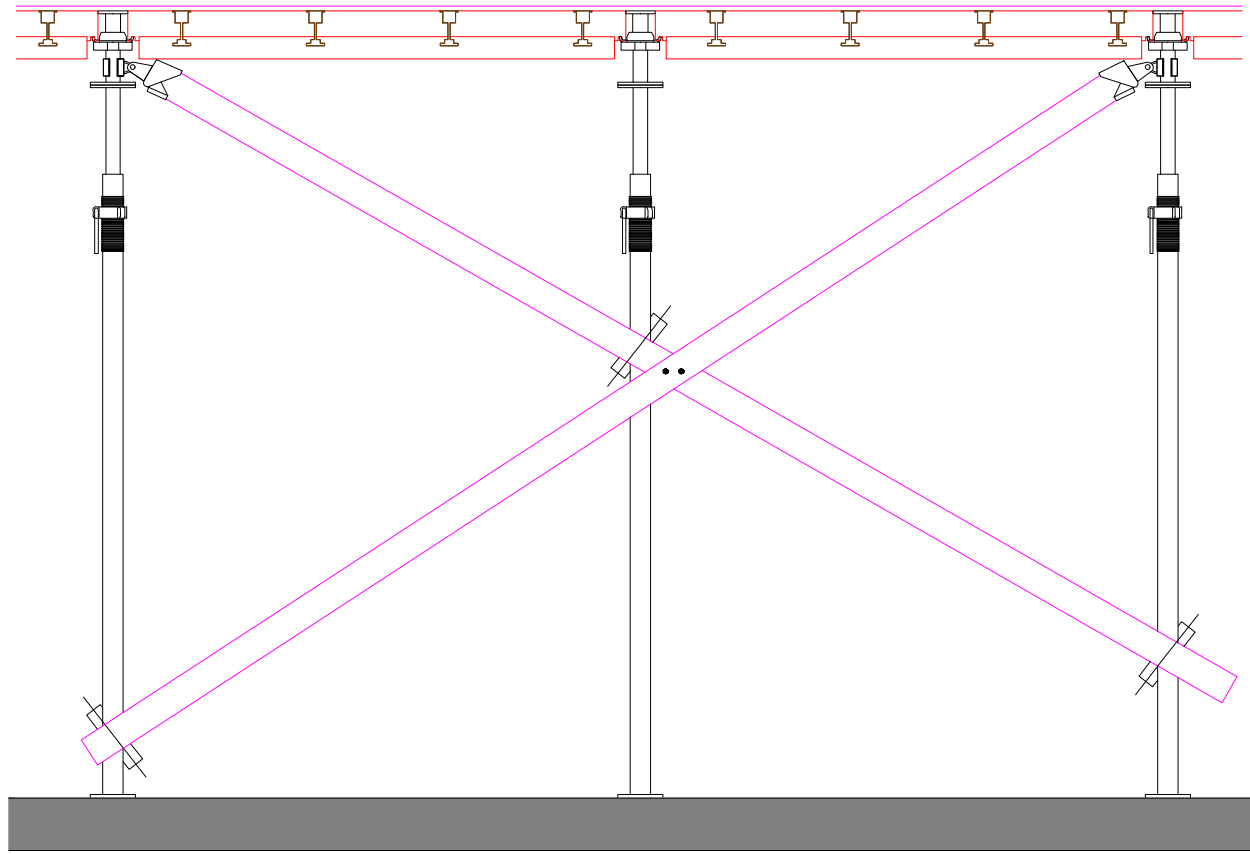
Note use of:

- Beam to Drophead Safety Catch
- TITAN Positioners for Supplemental Shores
- HV Guardrail Post

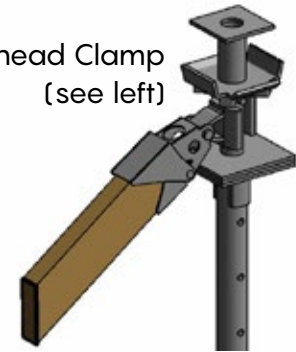
1. Special care must be exercised at cantilever conditions to avoid fall hazards. **WARN ALL PERSONNEL (INCLUDING OTHER TRADES) TO STAY OFF CANTILEVERED CONDITION UNTIL INSTALLATION & FALL PROTECTION IS COMPLETE.**
2. Where possible, hook 11'6" Main Beam directly into Drophead as shown on the drawing. If cantilevered 11'6" Main Beam must hook into transverse 5'7", 5'7", or 3'9" Main Beam, install Safety Catches at both ends of transverse Main Beam in addition to end of cantilevered 11'6" Main Beam as shown to ensure adequate ballast.
3. See Guardrail Post detail.
4. **AVOID THE FOLLOWING CONDITIONS:**
  - Loading 11'6" Main Beam cantilever prior to installing all Secondary Beams, Post Shores, Positioners, Safety Catches, Cross Bracing, Lacing and adjacent Plywood.
  - Cantilevering 5'7" or 3'9" Main Beams.
  - Cantilevering 11'6" Main Beams where adjacent framing/plywood isn't sufficient to ballast loads at cantilever.
  - Post Shores under Main Beams without Positioners.
  - Stored materials at cantilever or walkway areas.
  - Loading cantilever beyond its design capacity.

1. Se debe tener especial cuidado en condiciones de voladizo para evitar riesgos de caídas. **ADVIERTE A TODO EL PERSONAL (INCLUYENDO OTROS TRABAJOS) QUE SE MANTENGA FUERA DE LA CONDICIÓN EN VOLADIZO HASTA QUE SE COMPLETE LA INSTALACIÓN Y LA PROTECCIÓN CONTRA CAÍDAS.**
2. Siempre que sea posible, enganche la Viga Principal de 11'6" directamente en el Drophead como se muestra en el dibujo. Si la Viga Principal de 11'6" está en voladizo debe engancharse en la Viga Principal transversal de 5'7", 5'7" o 3'9", instale Safety Catch en ambos extremos de la Viga Principal transversal además del extremo de la Viga Principal en voladizo de 11'6" como se muestra para garantizar un lastre adecuado.
3. Ver detalle del Poste de Barandilla.
4. **EVITE LAS SIGUIENTES CONDICIONES:**
  - Cargar el voladizo de la Viga Principal de 11'6" antes de instalar todas las Vigas Secundarias, apuntalamientos de postes, posicionadores, pestillos de seguridad, refuerzos transversales, cordones y madera contrachapada adyacente.
  - Vigas Principales en voladizo de 5'7" o 3'9".
  - Vigas Principales en voladizo de 11'6" donde el marco/madera contrachapada adyacente no es suficiente para lastrar las cargas en voladizo.
  - Postes de apuntalamiento bajo Vigas Principales sin posicionadores.
  - Materiales almacenados en voladizos o zonas de paso.
  - Carga del voladizo más allá de su capacidad de diseño.

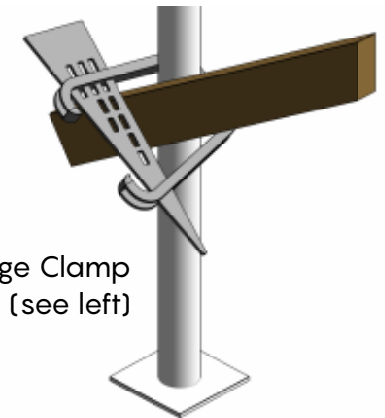
# INTERIOR CROSS BRACING DETAIL



Drophead Clamp  
(see left)



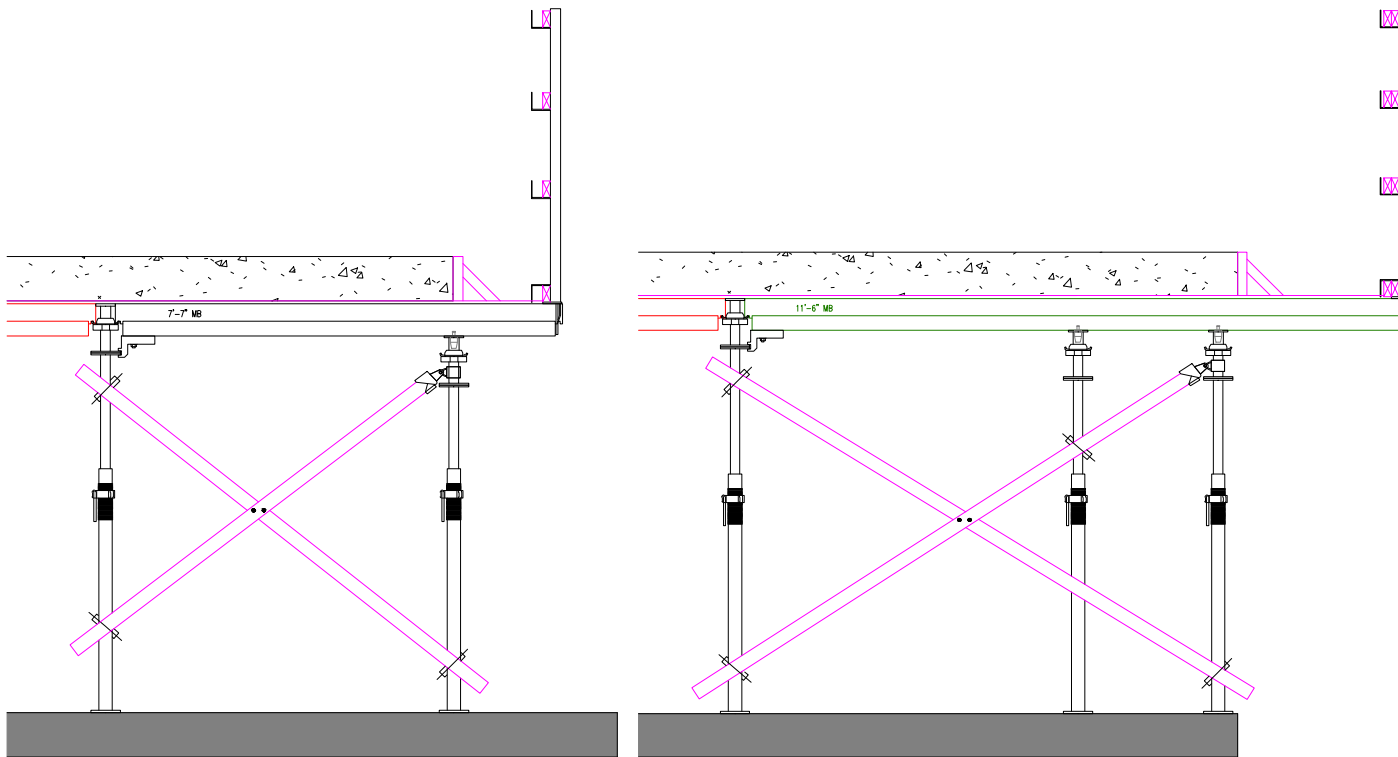
Wedge Clamp  
(see left)



1. Bracing material 2x4 (full length).
2. Locate cross bracing where noted on plans.
3. Cross braces must span at least three Post Shores (+/-12').
4. Cross braces must be installed full height (top of one shore to bottom of other).
5. Cross bracing must be secured with wedge clamps at ends and intersections.
6. See lacing detail for Post Shore lacing.

1. Material de refuerzo 2x4 (longitud total).
2. Ubique los refuerzos transversales donde se indica en los planos.
3. Los tirantes transversales deben abarcar al menos tres apuntalamientos de postes (+/-12').
4. Los tirantes transversales deben instalarse en toda su altura (desde la parte superior de una orilla hasta la parte inferior de la otra).
5. Los refuerzos transversales deben asegurarse con abrazaderas de cuña en los extremos y las intersecciones.
6. Consulte el detalle de cordones para cordones Post Shore.

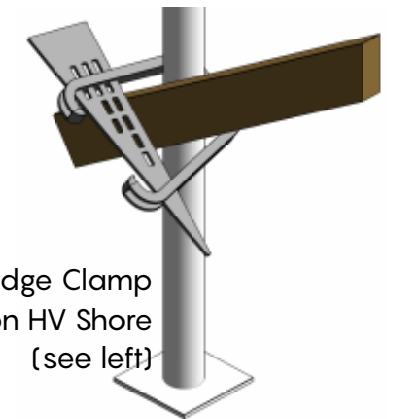
# PERIMETER CROSS BRACING DETAIL



Wedge Clamp  
on XL Shore



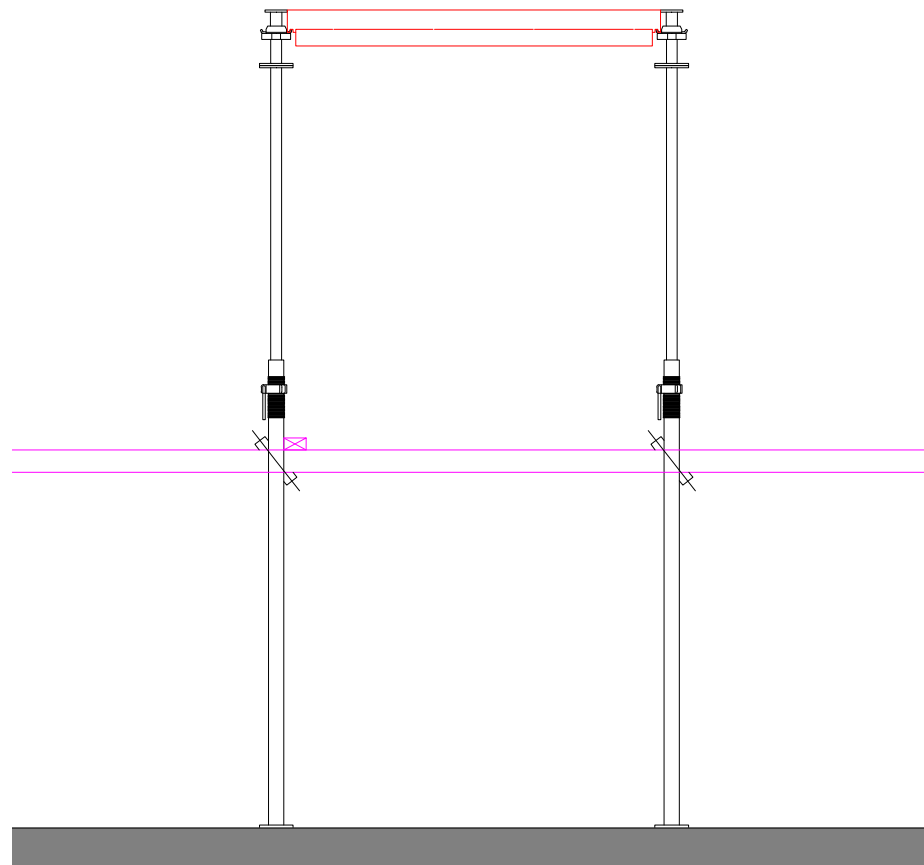
Wedge Clamp  
on HV Shore  
(see left)



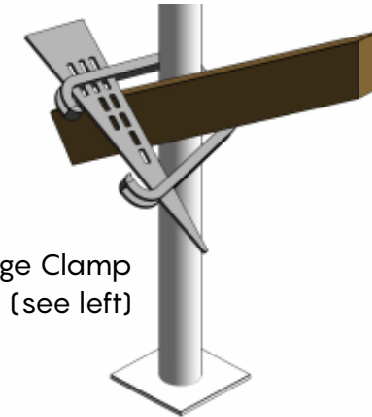
1. Bracing material 2x4 (full length)
2. Locate cross bracing where noted on plans.
3. Cross braces must span at least three Post Shores.
4. Cross braces must be installed full height (top of one shore to bottom of other)
5. Cross bracing must be secured at ends & intersections.
6. See lacing detail for Post Shore lacing.

1. Material de refuerzo 2x4 (longitud completa)
2. Ubique los refuerzos transversales donde se indica en los planos.
3. Los tirantes transversales deben abarcar al menos tres apuntalamientos de postes.
4. Los tirantes transversales deben instalarse en toda su altura (desde la parte superior de un puntal hasta la parte inferior del otro).
5. Se deben asegurar refuerzos transversales en los extremos y las intersecciones.
6. Consulte el detalle de cordones para cordones Post Shore.

## POST SHORE LACING DETAIL



Wedge Clamp  
(see left)

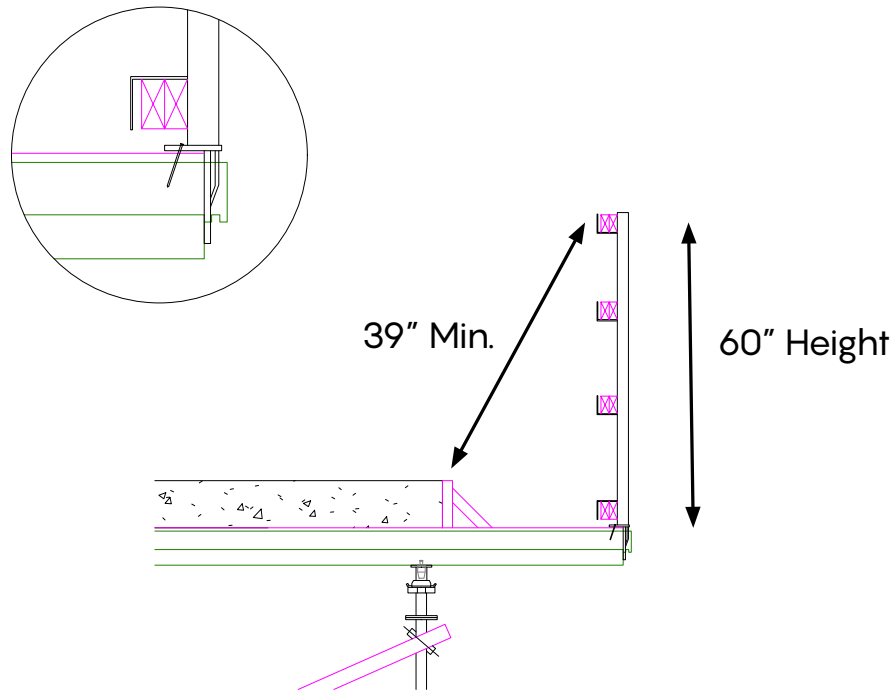


1. Bracing material 2x4 (full length)
2. Locate cross bracing where noted on plans.
3. Cross braces must span at least three Post Shores.
4. Cross braces must be installed full height (top of one shore to bottom of other)
5. Cross bracing must be secured at ends & intersections.
6. See lacing detail for Post Shore lacing.

1. Material de refuerzo 2x4 (longitud completa)
2. Ubique los refuerzos transversales donde se indica en los planos.
3. Los tirantes transversales deben abarcar al menos tres apuntalamientos de postes.
4. Los tirantes transversales deben instalarse en toda su altura (desde la parte superior de un puntal hasta la parte inferior del otro).
5. Se deben asegurar refuerzos transversales en los extremos y las intersecciones.
6. Consulte el detalle de cordones para cordones Post Shore.



# TITAN HV GUARDRAIL POST DETAIL



1. Special care must be exercised while installing Guardrail Post and Guardrails to avoid fall hazards. **WARN ALL PERSONNEL (INCLUDING OTHER TRADES) TO STAY OFF DECK UNTIL INSTALLATION & FALL PROTECTION IS COMPLETE.**
2. Use 2x4 lumber (min.) for Guardrails (top-rail, mid-rail and toe boards).
3. **TO AVOID FALL HAZARDS, ENSURE THE FOLLOWING:**
  - Prior to installing Guardrail Posts, the shoring system below is complete and secured (incl. Supplemental Post Shores with Positioners, Cross Bracing, Lacing, Safety Catches and Plywood decking).
  - Guardrail Posts never exceed 8'0" spacing.
  - Guardrail Post is secured and safety nailed to plywood decking and/or Main Beam to prevent Guardrail Post uplift.
  - Walkway areas are 100% decked.
  - Top-rails, mid-rails and toe boards are secured by backnailing into Guardrail Posts and that lapping of these members takes place at Guardrail Posts.
  - Where TITAN Guardrail Posts do not work (i.e. Edges over walls etc.) suitable fall protection (by Contractor) must be installed.

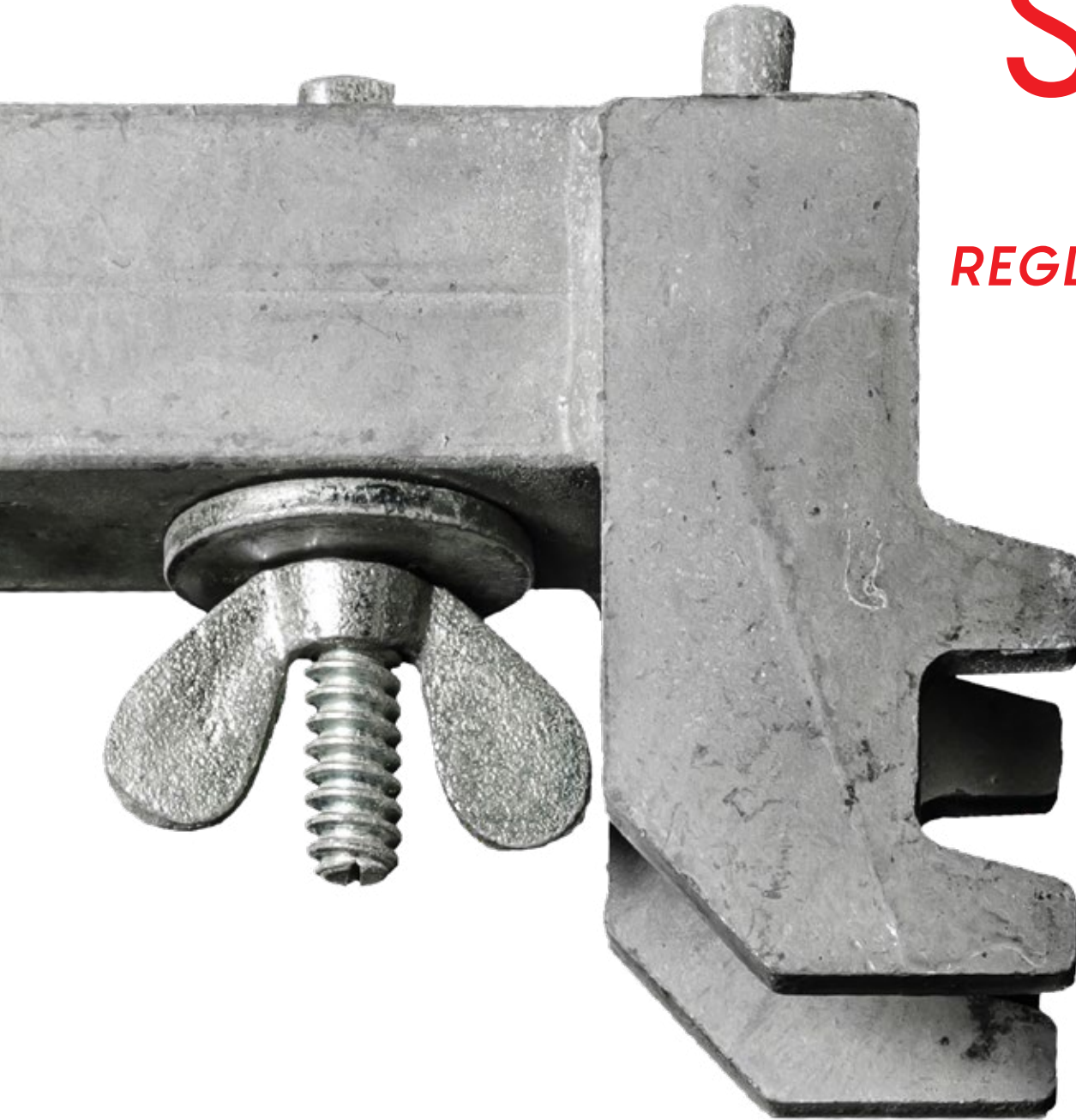
1. Se debe tener especial cuidado al instalar el poste de barandilla y las barandillas para evitar riesgos de caídas. **ADVIERTE A TODO EL PERSONAL (INCLUYENDO OTROS COMERCIOS) QUE PERMANEZCA FUERA DE LA CUBIERTA HASTA QUE SE COMPLETE LA INSTALACIÓN Y LA PROTECCIÓN CONTRA CAÍDAS.**
2. Utilice madera de 2x4 (mínimo) para las barandillas (barandal superior, barandal central y rodapiés).
3. **PARA EVITAR PELIGROS DE CAÍDAS, ASEGÚRESE DE LO SIGUIENTE:**
  - Antes de instalar los postes de barandilla, el sistema de apuntalamiento a continuación debe estar completo y asegurado (incluidos apuntalamientos de postes suplementarios con posicionadores, refuerzos transversales, cordones, cierres de seguridad y plataformas de madera contrachapada).
  - Los postes de barandilla nunca exceden los 8'0" de espacio.
  - El poste de la barandilla está asegurado y clavado de forma segura a la plataforma de madera contrachapada y/o a la viga principal para evitar que el poste de la barandilla se levante.
  - Las zonas de paso están 100% cubiertas.
  - Los rieles superiores, los rieles intermedios y los rodapiés se aseguran clavando en los postes de la barandilla y el traslape de estos miembros se realiza en los postes de la barandilla.
  - Donde los postes de barandilla TITAN no funcionan (es decir, bordes sobre paredes, etc.), se debe instalar una protección contra caídas adecuada (por parte del contratista).



# SAFETY

## GUIDELINES

### REGLAS DE SEGURIDAD



## EQUIPMENT CARE

1. **NEVER DROP EQUIPMENT!**
2. Continually remove excess concrete build-up.
3. Never strike aluminum framing members and/or Post Shores with a hammer, stripping bar or similar. Use polyurethane mallets provided by TITAN.
4. Continually inspect all welds prior to installation, call out cracked or otherwise suspect welds for inspection by a TITAN representative.
5. Do not remove pin from Post Shore while shore is in vertical position.

## POST SHORES

1. Install cross bracing as shores and framing are being erected.
2. Use special precautions when shoring from or to a sloped surface. Additional cross braces must be installed to stabilize sloped framing. Wedges should be installed under the base plate to gain adequate bearing when shoring from sloped surfaces. TITAN HV should not be used to support sloping slabs exceeding 6% of level grade (16% with HV wedge).
3. Do not overextend screw adjustment (threads on TITAN shores should not be visible).

## HORIZONTAL SHORING

1. When using the HV Drophead, ensure that the Drophead:
  - Is secured to the post shore (2 bolts minimum or 2 XL Clips).
  - Bracing plate is in the UP position and that the disk wedge is securely engaged.
2. Ensure that the bearing ends of the Main & Secondary Beams are securely seated in the Drophead or Main Beam bracing plate supports prior to placing loads on members.
3. When 4x4s are used as Secondary Beams, ensure that:
  - A structural engineer has reviewed the conditions and approved their use.
  - Full bearing is achieved at the Main Beam.
  - Duplex nails are used to prevent the 4x4 from dislodging
4. When beams require mid-span support (i.e., cantilevered beam conditions, heavy slabs, etc.), be sure that:
  - Positioners are used under beams to ensure concentric loading and post shore stability.
  - Safety catches are installed where cantilevered beam conditions exist to resist possible uplifting. Install sufficient Safety
  - Catches prior to loading cantilevered members.
  - Materials and/or equipment should never be stored on cantilevered framing.
  - Adequate cross-bracing is installed to stabilized cantilevered conditions.
5. Removal of form facing material may only be done with the quick release Drophead in accordance with TITAN's minimum standards. In addition, Post Shores must remain undisturbed during this process.

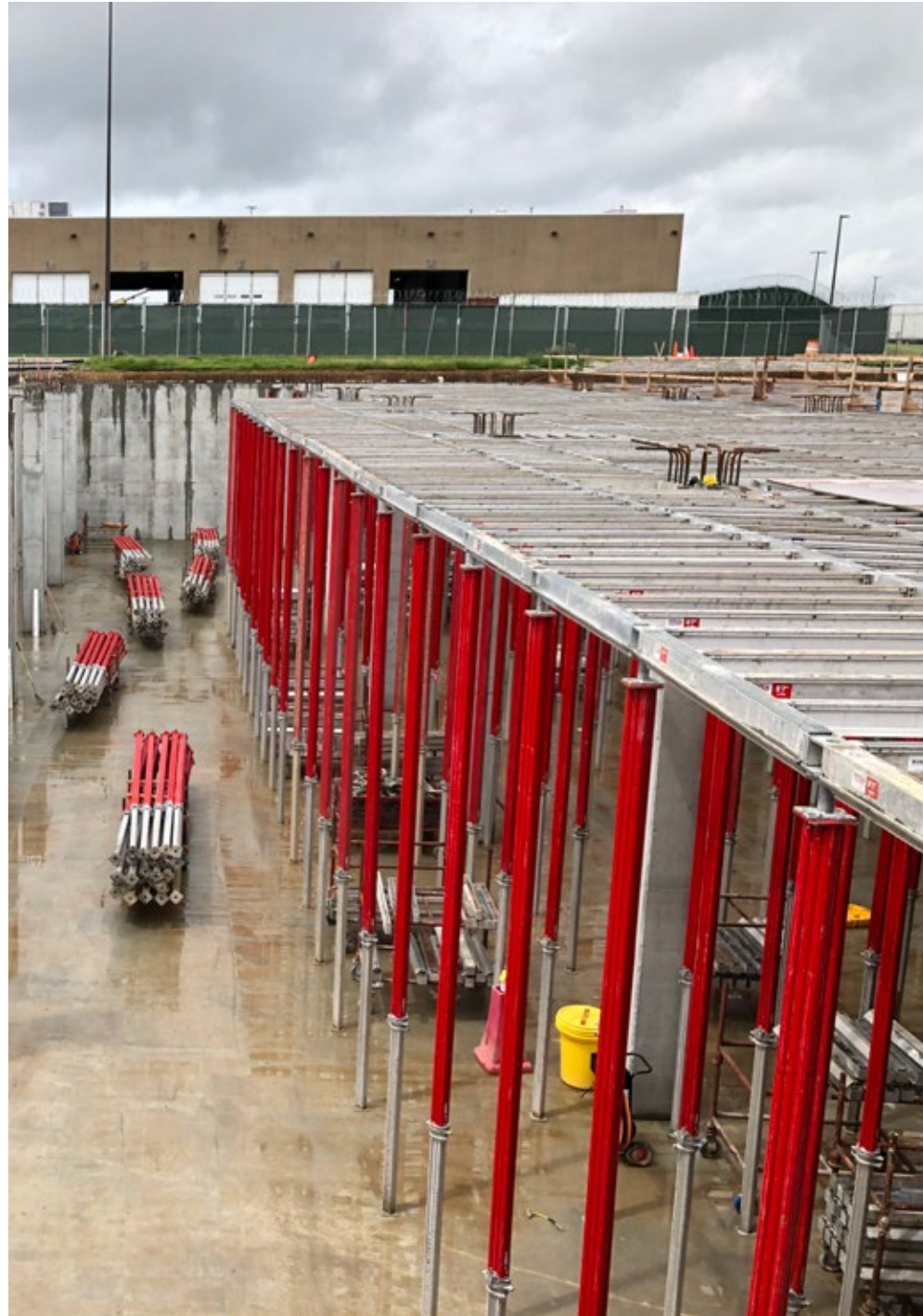


## THEFT

1. Ensure a secure work site.
2. Avoid storing TITAN equipment in plain view of public areas.
3. Avoid leaving stacked equipment unattended. Strip and stack only as much equipment as can be subsequently re-installed or shipped off-site the same day.

## BARELLA CARTS

1. Do not use for purposes other than handling and transporting TITAN equipment. **THE USE OF BARELLA CARTS AS MOBILE SCAFFOLDS AND/OR PERSONNEL PLATFORMS IS STRICTLY PROHIBITED.**
2. Take care not to overload Barellas, review bundling standards to ensure proper loading. Barellas with wheels are designed to be pushed by hand. **USING MACHINERY TO PUSH OR PULL BARELLAS IS STRICTLY PROHIBITED.** Continually inspect wheel/Barella connection to ensure the keeper pin is engaged.
3. Ensure bundles are stable before hoisting to avoid falling material hazards.
4. Adhere to the following stacking standards to avoid load instability and/or equipment damage:
  - **Shipping & storage (without wheels):**
    - » Post Shores - 2 Barellas high max.
    - » Aluminum Beams - 3 Barellas high max
  - **On-site movement activities (with wheels):**
    - » Post Shores - 1 Barella high max
    - » Aluminum Beams - 2 Barellas high max



**CUIDADO DEL EQUIPO****1. NUNCA DEJE CAER EL EQUIPO!**

2. Elimine continuamente el exceso de acumulación de concreto.
3. Nunca golpee miembros estructurales de aluminio y/o apuntalamientos de postes con un martillo, barra decapante o similar. Utilice martillo de goma proporcionados por TITAN.
4. Inspeccione continuamente todas las soldaduras antes de la instalación, llame a las soldaduras agrietadas o sospechosas para que las inspeccione un representante de TITAN.
5. No retire el pasador del poste de apuntalamiento mientras el apuntalador esté en posición vertical.

**POST SHORES**

1. Instale refuerzos transversales mientras se construyen los apuntalamientos y el marco.
2. Tome precauciones especiales al apuntalar desde o hacia una superficie inclinada. Se deben instalar tirantes transversales adicionales para estabilizar el marco inclinado. Se deben instalar cuñas debajo de la placa base para lograr un soporte adecuado al apuntalar desde superficies inclinadas. TITAN HV no debe usarse para soportar losas inclinadas que excedan el 6% del nivel del nivel (16% con TITAN HV Wedge).
3. No extienda demasiado el ajuste del tornillo (las roscas de los puntales TITAN no deben ser visibles).

**APOYO HORIZONTAL**

1. Cuando utilice el HV Drophead, asegúrese de que el Drophead:
  - Está asegurado al poste (mínimo 2 pernos o XL Clips).
  - La placa de soporte esté en la posición ARRIBA y que la cuña del disco esté firmemente enganchada.
2. Asegúrese de que los extremos de soporte de las vigas principales y secundarias estén asentados de forma segura en los soportes de la placa de soporte de la viga principal o del cabezal abatible antes de colocar cargas sobre los miembros.
3. Cuando se utilizan 4x4 como vigas secundarias, asegúrese de que:
  - Un ingeniero estructural ha revisado las condiciones y aprobado su uso.
  - El apoyo total se logra en la viga principal.
  - Los clavos dúplex se utilizan para evitar que el 4x4 se desaloje.
4. Cuando las vigas requieren soporte en la mitad del claro (es decir, condiciones de vigas en voladizo, losas pesadas, etc.), asegúrese de que:
  - Los posicionadores se utilizan debajo de las vigas para garantizar la carga concéntrica y la estabilidad del poste.
  - Se instalan pestillos de seguridad donde existen vigas en voladizo para resistir posibles levantamientos. Instale suficiente seguridad
  - Capturas previas a la carga de miembros en voladizo.
  - Los materiales y/o equipos nunca deben almacenarse sobre estructuras en voladizo.
  - Se instalan refuerzos transversales adecuados para estabilizar las condiciones de voladizo.
5. La eliminación del material de revestimiento del encofrado solo se puede realizar con el Drophead de liberación rápida de acuerdo con los estándares mínimos de TITAN. Además, Post Shores no debe ser perturbado durante este proceso.

## ROBO

1. Garantizar un lugar de trabajo seguro.
2. Evite almacenar equipos TITAN a la vista de áreas públicas.
3. Evite dejar equipos apilados desatendidos. Pele y apile sólo la cantidad de equipo que pueda volver a instalarse o enviarse posteriormente fuera del sitio el mismo día.

## CARROS BARELLA

1. No lo utilice para otros fines que no sean manipular y transportar equipos TITAN HV. **ESTÁ ESTRICTAMENTE PROHIBIDO EL USO DE CARROS BARELLA COMO ANDAMIOS MÓVILES Y/O PLATAFORMAS DE PERSONAL.**
2. Tenga cuidado de no sobrecargar Barellas, revise los estándares de agrupación para garantizar una carga adecuada. Las barellas con ruedas están diseñadas para ser empujadas con la mano. **ESTÁ ESTRICTAMENTE PROHIBIDO EL USO DE MAQUINARIA PARA EMPUJAR O TIRAR DE BARELLAS.** Inspeccione continuamente la conexión rueda/Barella para asegurarse de que el pasador de retención esté enganchado.
3. Asegúrese de que los paquetes estén estables antes de levantarlos para evitar riesgos de caída de materiales.
4. Cumpla con los siguientes estándares de apilamiento para evitar la inestabilidad de la carga y/o daños al equipo:
  - Envío y almacenamiento (sin ruedas):
    - Post Shores - 2 Barellas alto máx.
    - Vigas de Aluminio - 3 Barellas de altura máx.
  - Actividades de movimiento en sitio (con ruedas):
    - Post Shores - 1 Barella alto máximo
    - Vigas de Aluminio - 2 Barellas alto max



# SINGLE POST SHORE SAFETY RULES – SSFI

As recommended by  
SCAFFOLDING, SHORING AND FORMING INSTITUTE

It shall be the responsibility of all employers and users to read and comply with the following common sense guidelines which are designed to promote safety in the erection, dismantling and use of single post shoring. These guidelines are not all inclusive nor do they supplant or replace other additional safety and precautionary measures to cover usual or unusual conditions. If these guidelines conflict in any way with any state, provincial, local or federal statute or governmental regulation, said statute or regulation shall supersede these guidelines and it shall be the responsibility of each employee and user to comply therewith and also to be knowledgeable and understand all state, local or federal statutes or governmental regulations pertaining to single post shoring.

1. POST THESE SHORING SAFETY GUIDELINES in a conspicuous place and be sure that all persons who erect, dismantle or use shoring are aware of them.
  2. FOLLOW ALL STATE, PROVINCIAL, LOCAL AND FEDERAL CODES, ORDINANCES AND REGULATIONS pertaining to shoring.
  3. SURVEY THE JOB SITE. A survey by a qualified person shall be made of the job site for hazards, such as untamped earth fills, ditches, debris, high tension wires, unguarded openings and other hazardous conditions. These conditions should be corrected or avoided as noted in the following sections.
  4. PLAN SHORING ERECTION SEQUENCE in advance and obtain necessary access equipment to accomplish the work safely.
  5. INSPECT ALL EQUIPMENT BEFORE USING. Never use any equipment that is structurally defective in any way. Mark it or tag it as defective, then remove it from the jobsite.
  6. A SHORING DRAWING prepared by a person qualified to analyze the loading intended and consistent with the manufacturer's recommended safe working loads, shall be used on the job at all times.
  7. ERECT, DISMANTLE OR ALTER SHORING only under the supervision of a qualified person.
  8. DO NOT ABUSE OR MISUSE THE SHORING EQUIPMENT.
  9. INSPECT ERECTED SHORING: (a) immediately prior to concrete placement; (b) during concrete placement and while vibrating concrete, and (c) after concrete placement until concrete is set.
  10. NEVER TAKE CHANCES! IF IN DOUBT REGARDING THE SAFETY OR USE OF THE SHORING, CONSULT YOUR SHORING SUPPLIER.
  11. USE SHORING EQUIPMENT only for the purposes or in ways for which it was intended. Use proper tools when installing equipment.
  12. ERECTING AND DISMANTLING OF SHORING requires good physical condition. Do not work on shoring if you feel dizzy, unsteady in any way or are impaired in any way by drugs or any other substances.
  13. DO NOT USE SHORING SYSTEMS for fall protection.
- 
- |  |  |
|--|--|
| <ol style="list-style-type: none"> <li>A. USE MANUFACTURER'S RECOMMENDED SAFE WORKING LOADS CONSISTENT with the height from supporting sill to formwork.</li> <li>B. PROVIDE AND MAINTAIN A SOLID FOOTING to distribute maximum loads properly.</li> <li>C. PLUMB ALL POST SHORES AS THE ERECTION PROCEEDS. Check plumb of post shores JUST PRIOR TO POUR.</li> <li>D. CHECK TO SEE THAT ALL CLAMPS, SCREWS, PINS and all other components are in a CLOSED OR ENGAGED POSITION.</li> <li>E. MAKE CERTAIN THAT ALL BASE PLATES AND SHORE HEADS ARE IN FIRM CONTACT with THE FOOTING SILL AND FORM MATERIAL.</li> <li>F. IF MOTORIZED CONCRETE EQUIPMENT IS TO BE USED, be sure that post shores are SPACED AND BRACED WITH THIS FACT IN MIND.</li> <li>G. FOR STABILITY, SINGLE POST SHORES SHALL HAVE ADEQUATE BRACING provided in the longitudinal, transverse and diagonal directions. Bracing shall be installed as the shores are being erected.</li> <li>H. DEVICES WHICH ATTACH THE STABILITY BRACING shall be securely fastened to the single post shores.</li> <li>I. DO NOT USE SINGLE POST SHORES MORE THAN ONE TIER HIGH. Where greater shore heights are required consult the supplier.</li> <li>J. ADJUSTMENT OF SINGLE POST SHORES TO RAISE FORMWORK shall not be made after concrete is in place.</li> <li>K. AVOID ECCENTRIC LOADS ON UHEADS, AND TOP PLATES by centering stringers on those members.</li> </ol> | <ol style="list-style-type: none"> <li>L. USE SPECIAL PRECAUTIONS when shoring from or to sloped surfaces.</li> <li>M. WINDLOAD: Erector must analyze the forming/shoring system for additional loads imposed from wind loading and provide adequate anchorage to resist these forces, including uplifting wind forces.</li> <li>N. RESHORING is one of the most critical operations in formwork; consequently, reshoring procedure must be designed by a qualified person and approved by the architect/engineer of record.</li> <li>O. DO NOT BACK-OFF OR STRIP POST SHORES until proper authority is given.</li> <li>P. USE LUMBER STRESSES consistent with age, type and condition of available lumber to be used. Use only lumber that is in good condition.</li> </ol> |
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SH302 4/00 Rev 6/03



# HORIZONTAL SHORING BEAM SAFETY RULES – SSFU

As recommended by

SCAFFOLDING, SHORING AND FORMING INSTITUTE

It shall be the responsibility of all employers and users to read and comply with the following common sense guidelines which are designed to promote safety in the erection, dismantling and use of horizontal shoring beams. These guidelines are not all inclusive nor do they supplant or replace other additional safety and precautionary measures to cover usual or unusual conditions. If these guidelines conflict in any way with any state, provincial, local or federal statute or governmental regulation, said statute or regulation shall supersede these guidelines and it shall be the responsibility of each employee and user to comply therewith and also to be knowledgeable and understand all state, local or federal statutes or governmental regulations pertaining to horizontal shoring beams.

1. POST THESE SHORING SAFETY GUIDELINES in a conspicuous place and be sure that all persons who erect, dismantle or use shoring are aware of them.
2. FOLLOW ALL STATE, PROVINCIAL, LOCAL AND FEDERAL CODES, ORDINANCES AND REGULATIONS pertaining to shoring.
3. SURVEY THE JOB SITE. A survey by a qualified person shall be made of the job site for hazards, such as untamped earth fills, ditches, debris, high tension wires, unguarded openings and other hazardous conditions. These conditions should be corrected or avoided as noted in the following sections.
4. PLAN SHORING ERECTION SEQUENCE in advance and obtain necessary access equipment to accomplish the work safely.
5. INSPECT ALL EQUIPMENT BEFORE USING. Never use any equipment that is structurally defective in any way. Mark it or tag it as defective, then remove it from the jobsite.
6. A SHORING DRAWING prepared by a person qualified to analyze the loading intended and consistent with the manufacturer's recommended safe working loads, shall be used on the job at all times.
7. ERECT, DISMANTLE OR ALTER SHORING only under the supervision of a qualified person.
8. DO NOT ABUSE OR MISUSE THE SHORING EQUIPMENT.
9. INSPECT ERECTED SHORING: (a) immediately prior to concrete placement; (b) during concrete placement and while vibrating concrete, and (c) after concrete placement until concrete is set.
10. NEVER TAKE CHANCES! IF IN DOUBT REGARDING THE SAFETY OR USE OF THE SHORING, CONSULT YOUR SHORING SUPPLIER.
11. USE SHORING EQUIPMENT only for the purposes or in ways for which it was intended. Use proper tools when installing equipment.
12. ERECTING AND DISMANTLING OF SHORING requires good physical condition. Do not work on shoring if you feel dizzy, unsteady in any way or are impaired in any way by drugs or any other substances.
13. DO NOT USE SHORING SYSTEMS for fall protection.

## A. USE MANUFACTURER'S RECOMMENDED SAFE WORKING LOADS AND PROCEDURES FOR:

1. Span, spacing, and types of shoring beams.
  2. Types, sizes, heights, and spacing of vertical shoring supports.
- B. USE LUMBER EQUIVALENT TO THE STRESS, species, grade and size used on the layout. Use only lumber that is in good condition. Do not splice between supports.
- C. DO NOT MAKE UNAUTHORIZED CHANGES OR SUBSTITUTION OF EQUIPMENT; always consult your supplier prior to making changes necessitated by jobsite conditions.
- D. PROVIDE AND MAINTAIN ADEQUATE SUPPORT TO properly distribute shoring loads. When supporting horizontal shoring beams on:
1. Masonry walls, insure that masonry units have adequate strength. Brace walls as necessary.
  2. Ledgers supported by walls using bolts, or other means, they should be properly designed and installed per recommendation of supplier or job architect/engineer.
  3. Formwork, such formwork should be designed for additional loads imposed by the shoring beams.
  4. Structural Steel Framework, the ability of the steel to support this construction loading should be checked and approved by the responsible project architect/engineer.
  5. When supporting horizontal beams on steel hangers, be sure that the bearing ends fully engage on the hangers. The hangers shall be designed to conform to the bearing end and shall have a rated strength to safely support the shoring loads imposed. (Follow hanger manufacturers' recommendations.)
  6. Do not bear adjustable beams on other adjustable horizontal beams.
- E. SPECIAL CONSIDERATION MUST BE GIVEN TO THE INSTALLATION OF HORIZONTAL SHORING:
1. When sloped or supported by sloping ledgers (stringers).
  2. When ledger (stringer), including blocking, height/width ratio exceeds 2½–1. Under no circumstances shall horizontal shoring beams bear on a single "two by" ledger (stringer).
  3. When eccentric loading conditions exist.

4. When ledger (stringer) consists of multiple members. (i.e., double 2x6, 2x8, etc.)

- F. ASSURE THAT BEARING ENDS OF SHORING BEAMS ARE PROPERLY SUPPORTED and that locking devices are properly engaged before placing any load on beams.
- G. IF MOTORIZED CONCRETE PLACEMENT EQUIPMENT IS TO BE USED, be sure that lateral and other forces have been considered and adequate precautions taken to assure stability.
- H. HORIZONTAL SHORING BEAMS SHOULD NOT be supported other than at the bearing prongs unless recommended by supplier.
- I. DO NOT NAIL BEAM BEARING PRONGS TO LEDGER.
- J. PLAN CONCRETE POURING METHODS AND SEQUENCES TO insure against unbalanced loading of the shoring equipment. Take all necessary precautions to avoid uplift of shoring components and formwork.
- K. AVOID SHOCK OR IMPACT LOADS FOR which the shoring was not designed.
- L. DO NOT PLACE ADDITIONAL, TEMPORARY LOADS (such as rebar bundles) on erected formwork or poured slabs, without checking the capacity of the shoring and/or structure to safely support such additional loads.
- M. DO NOT RELEASE ANY PART OF THE FORMWORK OR SHORING until proper authority has been obtained. Particular consideration must be given to reshoring procedures.
- N. WINDLOAD: Erector must analyze the forming/shoring system for additional loads imposed from wind loading and provide adequate anchorage to resist these forces, including uplifting wind forces.
- O. RESHORING is one of the most critical operation in formwork; consequently, reshoring procedure must be designed by a qualified person and approved by the architect/engineer of record.

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# TECHNICAL

DATA

TÉCNICO DATOS



# TITAN HV BEAM PROPERTIES

Properties (X-axis)	Main Beams		Secondary Beams	
	IMP	SI	IMP	SI
I	13.4 in <sup>4</sup>	559.3 cm <sup>4</sup>	4.2 in <sup>4</sup>	175.0 cm <sup>4</sup>
S	3.7 in <sup>3</sup>	60.8 cm <sup>3</sup>	1.77 in <sup>3</sup>	29.0 cm <sup>3</sup>
E	10.1E6 lb/in <sup>2</sup>	7.02E6 N/cm <sup>2</sup>	10.1E6 lb/in <sup>2</sup>	7.02E6 N/cm <sup>2</sup>
Mmax	71,472 in-lb	813,700 N-cm	28,800 in-lb	327,900 N-cm
Vmax	6,000 lb	26,900 N	3,700 lb	16,600 N

## Main Beams

Dimensions	Length (feet)	Center to Center (feet)	Weight (lbs)
MB 3'9"	3'9"	4'1"	22.8
MB 5'7"	5'7"	5'11"	34
MB 7'7"	7'7"	7'11"	46
MB 11'6"	11'6"	11'10"	62.1

## Secondary Beams

Dimensions	Length (feet)	Center to Center (feet)	Weight (lbs)
SB 3'9"	3'9"	4'1"	9.5
SB 5'7"	5'7"	5'11"	13.7
NX 7'7"	7'7"	7'11"	20

## TITAN POST SHORE LOAD CHART

### SUMMARY LOAD CHART FOR HV POST SHORE #1.75, #2.5, #3.5, #4, #5

Post Shore Heights include Drophead (Safety Factor 2.5:1)

SHORE HEIGHT (ft)		#1.75 SHORE		#2.5 SHORE		#3.5 SHORE		#4 SHORE		#5 SHORE	
		HV LOAD CHART	PLATE TO PLATE PER SSFI	HV LOAD CHART	PLATE TO PLATE PER SSFI	HV LOAD CHART	PLATE TO PLATE PER SSFI	HV LOAD CHART	PLATE TO PLATE PER SSFI	HV LOAD CHART	PLATE TO PLATE PER SSFI
3' - 7"	1.09		12,300								
3' - 8"	1.12		12,300								
3' - 10"	1.17		12,200								
4' - 0"	1.22		12,100								
4' - 1"	1.24		12,100								
4' - 2"	1.27		12,000								
4' - 4"	1.32		12,000								
4' - 5"	1.35	12,600	11,900	12,900							
4' - 8"	1.42	12,500	11,800	12,700							
4' - 10"	1.47	12,500	11,800	12,500	12,900						
5' - 0"	1.52	12,400	11,700	12,200							
5' - 4"	1.63	12,300	11,600	11,800							
5' - 8"	1.73	12,200	11,400	11,300	12,600						
5' - 9"	1.75	12,200	11,400	11,200	12,600						
6' - 0"	1.83	12,100	10,900	10,900	12,500						
6' - 4"	1.93	12,000	10,400	10,400	12,400	12,800					
6' - 6"	1.98	12,000	10,200	10,200	12,300						
6' - 7"	2.01	11,900	10,100	10,100	12,300						
7' - 0"	2.13		12,100	12,100	12,100						
7' - 4"	2.24		12,000	12,000	12,000						
7' - 8"	2.34		11,900	11,900	11,900						
7' - 10"	2.39		11,800	11,800	11,800						
8' - 0"	2.44		11,700	11,700	11,700	12,700	12,900				
8' - 2"	2.49		11,700	11,700	11,700		12,900				
8' - 4"	2.54		11,600	11,600	11,600		12,900				
8' - 6"	2.59		11,500	11,500	11,500		12,900				
8' - 8"	2.64		11,500	11,500	11,500		12,900				
8' - 10"	2.69		11,400	11,400	11,400		12,900				
9' - 0"	2.74		11,400	11,400	11,400		12,900				
9' - 2"	2.79										
9' - 4"	2.84										
9' - 5"	2.87										
9' - 6"	2.90										
9' - 8"	2.95										
9' - 10"	3.00										
10' - 0"	3.05										
10' - 2"	3.10										
10' - 4"	3.15										
10' - 6"	3.20										
10' - 7"	3.23										
10' - 8"	3.25										
10' - 10"	3.30										
11' - 0"	3.35										
11' - 2"	3.40										

11' - 4"	3.45				8,200	10,100	6,000	9,400	6,900		11,700	8,500
11' - 5"	3.48				7,950	10,100	5,900	9,200	6,900		11,600	8,500
11' - 6"	3.51				7,800	10,000	5,800	9,100	6,900		11,600	8,500
11' - 7"	3.53				7,700	10,000	5,700	8,900	6,900		11,500	8,400
11' - 8"	3.56				7,500	10,000	5,600	8,800	6,900		11,400	8,400
11' - 10"	3.61				7,200	9,900	5,400	8,700	6,900		11,300	8,300
12' - 0"	3.66				6,900	9,800	5,200	8,600	6,900		11,100	8,200
12' - 2"	3.71				6,700	9,700	4,900	8,450	6,900		11,050	8,200
12' - 3"	3.73				6,500	9,600	4,800	8,350	6,900		11,000	8,100
12' - 4"	3.76				6,400	9,600	4,700	8,300	6,900		10,900	8,100
12' - 6"	3.81				6,400	9,500		8,100	6,900		10,700	8,000
12' - 8"	3.86				6,400	9,400		7,900	6,900		10,600	7,900
12' - 10"	3.91				6,400	9,300		7,700	6,900		10,400	7,800
13' - 0"	3.96				6,300	9,200		7,500	6,900		10,300	7,800
13' - 2"	4.01				6,200	9,200		7,300	6,900		10,200	7,700
13' - 4"	4.06				6,200	9,100		7,100	6,900		10,000	7,600
13' - 6"	4.11				6,100	9,000		6,900	6,900		9,900	7,500
13' - 8"	4.17				6,000	8,900		6,700	6,900		9,800	7,500
13' - 10"	4.22				6,000	8,800		6,550	6,900		9,600	7,400
14' - 0"	4.27				6,000	8,700		6,400	6,900		9,500	7,300
14' - 2"	4.32				5,900	8,600		6,200	6,900		9,500	7,200
14' - 4"	4.37				5,800	8,500		6,000	6,900		9,500	7,200
14' - 6"	4.42				5,800	8,400			6,900		9,500	7,100
14' - 8"	4.47				5,800	8,400			6,900		9,500	7,000
14' - 9"	4.50				5,800	8,400			6,900		9,500	7,000
14' - 10"	4.52				5,700	8,300			6,900		9,500	7,000
15' - 0"	4.57				5,600	8,300			6,900		9,500	6,900
15' - 2"	4.62				5,600	8,200			6,900		9,500	6,800
15' - 4"	4.67				5,500	8,100			6,900		9,500	6,800
15' - 5"	4.70				5,500	8,000			6,900		9,500	6,700
15' - 6"	4.72				5,400	7,900			6,900		9,500	6,600
15' - 8"	4.78				5,300	7,900			6,900		9,500	6,600
15' - 10"	4.83				5,300	7,800			6,900		9,500	6,500
16' - 0"	4.88				5,300	7,700			6,900		9,500	6,500
16' - 2"	4.93				5,300	7,600			6,900		9,500	6,400
16' - 4"	4.98				5,200	7,500			6,900		9,500	6,300
16' - 6"	5.03				5,100	7,500			6,900		9,500	6,200
16' - 8"	5.08				5,100	7,400			6,900		9,500	6,100
16' - 10"	5.13				5,000	7,300			6,900		9,500	6,100
17' - 0"	5.18				5,000	7,200			6,900		9,500	6,000
17' - 2"	5.23				4,900	7,100			6,900		9,500	5,900
17' - 4"	5.28				4,900	7,000			6,900		9,500	5,800
17' - 6"	5.33				4,800	6,900			6,900		9,500	5,800
17' - 8"	5.38				4,800	6,800			6,900		9,500	5,700
17' - 10"	5.44				4,800	6,700			6,900		9,500	5,600
18' - 0"	5.49				4,700	6,700			6,900		9,500	5,500
18' - 2"	5.54				4,600	6,600			6,900		9,500	5,500
18' - 4"	5.59				4,600				6,900		9,500	5,400
18' - 6"	5.64				4,500				6,900		9,500	5,300
18' - 8"	5.69				4,400				6,900		9,500	5,200
18' - 10"	5.74				4,400				6,900		9,500	5,100
					4,300				6,900		9,500	5,100

1-METER EXTENSION

2-METER EXTENSION

# TITAN POST SHORE LOAD CHART

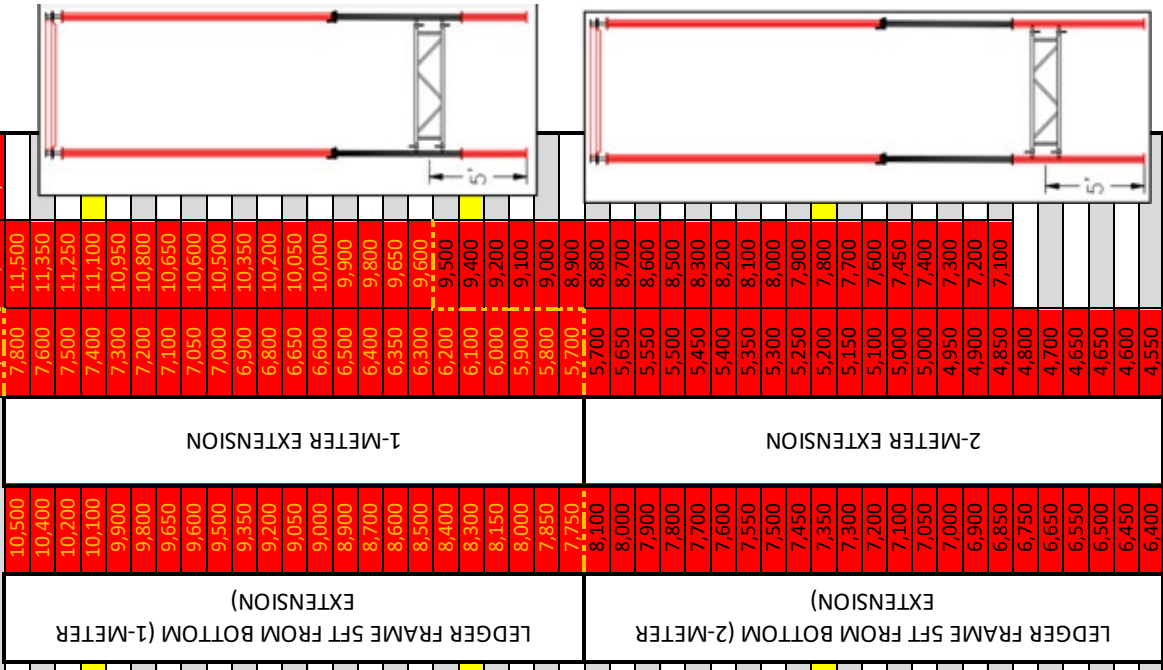
**SUMMARY LOAD CHART FOR XL 350, AND XL 625 POST SHORE**  
Post Shore Heights include Drophead (Safety Factor 2.5:1)

SHORE HEIGHT		XL 350		XL 625	
(ft)	(m)	HV LOAD CHART	PLATE TO PLATE PER SSFI	HV LOAD CHART	PLATE TO PLATE PER SSFI
6' - 0"	1.83				
6' - 4"	1.93				
6' - 6"	1.98		30,400		
6' - 7"	2.01		30,400		
7' - 0"	2.13		30,400		
7' - 4"	2.24		29,900		
7' - 8"	2.34		29,200		
7' - 10"	2.39		28,900		
8' - 0"	2.44		28,700		
8' - 2"	2.49		28,400		
8' - 4"	2.54		28,200		
8' - 6"	2.59		28,000		
8' - 8"	2.64		27,800		
8' - 10"	2.69		27,700		
9' - 0"	2.74		27,400		
9' - 2"	2.79		27,100		
9' - 4"	2.84		27,000		
9' - 5"	2.87		26,800		
9' - 6"	2.90		26,500		
9' - 8"	2.95		26,200		
9' - 10"	3.00		25,900		
10' - 0"	3.05	12,900	25,700		
10' - 2"	3.10		25,400		
10' - 4"	3.15		25,100		
10' - 6"	3.20		24,900		
10' - 7"	3.23		24,800		
10' - 8"	3.25		24,500		
10' - 10"	3.30		24,200		
11' - 0"	3.35		23,900		
11' - 2"	3.40		23,600		
11' - 4"	3.45		23,400		
11' - 5"	3.48		23,300		
11' - 6"	3.51		23,200		
11' - 7"	3.53		23,000		
11' - 8"	3.56		22,700		
11' - 10"	3.61		22,500		
12' - 0"	3.66		22,200		
12' - 2"	3.71		22,000		
12' - 3"	3.73		21,900		
12' - 4"	3.76		21,700		
12' - 6"	3.81		21,400		
12' - 8"	3.86		21,100		
12' - 10"	3.91		20,800		
13' - 0"	3.96		20,600		
13' - 2"	4.01		20,300		
13' - 4"	4.06		20,000		
13' - 6"	4.11		19,700		
13' - 8"	4.17		19,500		
13' - 10"	4.22		19,200		
14' - 0"	4.27		18,900		
14' - 2"	4.32		18,600		
14' - 4"	4.37		18,400		
14' - 6"	4.42		18,100		
14' - 8"	4.47		18,000		
14' - 9"	4.50				
14' - 10"	4.52				
15' - 0"	4.57				
15' - 2"	4.62				
15' - 4"	4.67				
15' - 5"	4.70				
15' - 6"	4.72				
15' - 8"	4.78				
15' - 10"	4.83				
16' - 0"	4.88				
16' - 2"	4.93				

1-METER EXTENSION

22,250
22,000
21,750
21,600
21,500
21,200
20,900
20,600
20,500
20,350
20,300
20,000
19,750
19,500
19,200
11,900
11,900
11,800
11,800
11,600
11,400
11,300
11,100

16' - 4"	4.98					18,950	10,900
16' - 6"	5.03					12,700	18,650
16' - 8"	5.08					12,400	18,400
16' - 10"	5.13					12,200	18,100
17' - 0"	5.18					11,900	17,900
17' - 2"	5.23					11,700	17,650
17' - 4"	5.28					11,400	17,400
17' - 6"	5.33					11,200	17,100
17' - 8"	5.38					10,900	16,850
17' - 10"	5.44					10,600	16,500
18' - 0"	5.49					10,400	16,300
18' - 2"	5.54					10,100	16,000
18' - 4"	5.59					10,000	15,750
18' - 6"	5.64					9,900	15,400
18' - 8"	5.69					9,800	15,200
18' - 10"	5.74					9,700	14,900
19' - 0"	5.79					9,500	14,650
19' - 2"	5.84					9,400	14,300
19' - 4"	5.89					9,300	14,100
19' - 6"	5.94					9,200	13,850
19' - 8"	5.99					9,100	13,600
19' - 10"	6.05					8,900	13,350
20' - 0"	6.10					8,800	13,100
20' - 2"	6.15					8,700	12,800
20' - 4"	6.20					8,600	12,550
20' - 6"	6.25					8,500	12,300
20' - 8"	6.30					8,300	12,150
20' - 10"	6.35					8,200	12,000
21' - 0"	6.40					8,100	11,900
21' - 2"	6.45					8,000	11,750
21' - 3"	6.48					7,950	11,700
21' - 4"	6.50					7,900	11,600
21' - 6"	6.55					7,800	11,500
21' - 8"	6.60					7,600	11,350
21' - 10"	6.65					7,500	11,250
22' - 0"	6.71					7,400	11,100
22' - 2"	6.76					7,300	10,950
22' - 4"	6.81					7,200	10,800
22' - 6"	6.86					7,100	10,650
22' - 7"	6.88					7,050	10,600
22' - 8"	6.91					7,000	10,500
22' - 10"	6.96					6,900	10,350
23' - 0"	7.01					6,800	10,200
23' - 2"	7.06					6,650	10,050
23' - 3"	7.09					6,600	10,000
23' - 4"	7.11					6,500	9,900
23' - 6"	7.16					6,400	9,800
23' - 8"	7.21					6,350	9,650
23' - 9"	7.24					6,300	9,600
23' - 10"	7.26					6,200	9,500
24' - 0"	7.32					6,100	9,400
24' - 2"	7.37					6,000	9,200
24' - 4"	7.42					5,900	9,100
24' - 6"	7.47					5,800	9,000
24' - 7"	7.49					5,700	8,900
24' - 8"	7.52					5,700	8,800
24' - 10"	7.57					5,650	8,700
25' - 0"	7.62					5,550	8,600
25' - 2"	7.67					5,500	8,500
25' - 4"	7.72					5,450	8,300
25' - 6"	7.77					5,400	8,200
25' - 8"	7.82					5,350	8,100
25' - 9"	7.85					5,300	8,000
25' - 10"	7.87					5,250	7,900
26' - 0"	7.92					5,200	7,800
26' - 2"	7.98					5,150	7,700
26' - 4"	8.03					5,100	7,600
26' - 6"	8.08					5,000	7,450
26' - 7"	8.10					5,000	7,400
26' - 8"	8.13					4,950	7,300
26' - 10"	8.18					4,900	7,200
27' - 0"	8.23					4,850	7,100
27' - 2"	8.28					4,800	
27' - 4"	8.33					4,700	
27' - 6"	8.38					4,650	
27' - 7"	8.41					4,600	
27' - 8"	8.43					4,600	
27' - 10"	8.48					4,550	



# SHIPPING

## & RECEIVING

*ENVÍO Y RECIBIR*





# SHIPPING/RECEIVING POLICY

TITAN is committed to providing excellent service to you the customer. We realize that receiving equipment in good working condition and in a timely fashion is vital to your success. In addition, receiving an accurate account of all equipment shipped to and from the job can help us both avoid significant pitfalls. To this end, TITAN has implemented the following policy for handling and accounting for TITAN equipment.

## Shipping from TITAN Yard

1. The TITAN office prepares equipment order from the quantity survey posted on the approved shop drawing(s). The order shall include the following:
  - Lease Agreement Number.
  - Customer name, address, jobsite phone & contact name.
  - Delivery date(s).
  - Equipment quantities (including summary quantities for consecutive orders).
2. The truck shall be loaded as ordered, ensuring that:
  - All equipment is bundled properly (no partial bundles of Barellas are to be used).
  - All equipment is in good working order.
  - All equipment is counted and recorded accurately.
3. The TITAN yard shall prepare an accurate Shipping report(s) and advise the TITAN office of any equipment discrepancies from original order(s).
4. Prior to shipment, the Equipment Supervisor must review all loads as follows:
  - Verify that all Barellas are bundled properly.
  - Verify all Barella counts for Beams and Post Shores.
  - Take pictures of loaded truck with digital camera (4 min.).
  - Review Shipping report to verify accuracy and sign report acknowledging same.
5. Provide copies of signed Shipping reports for driver and customer.
6. Forward signed Shipping report(s) and digital picture files to TITAN office.

## Receiving Loads from Customer

1. Count all equipment on the truck and provide an accurate Receiving report. Verify quantities shown on customer's Shipping report (if provided).
2. Prior to unloading, the Equipment Supervisor must review all loads as follows:
  - Verify that all Barellas are bundled properly.
  - Verify all Barella counts for Beams and Post Shores.

- Take digital pictures of the following:
    - » The truck prior to unloading (4 min.).
    - » Improperly or partially loaded Barellas.
    - » Damaged equipment (if any).
  - Review Receiving report to verify accuracy and sign report acknowledging same.
1. Forward signed Receiving report, customers Shipping report and digital pictures files to TITAN office. The Equipment Supervisor shall perform a thorough review of returned equipment within 10-working days (U.O.N.) of receiving the return load. Equipment designated as damaged shall be identified and placed in a holding area for a period of 30 days following notification to the customer.
  2. Return & Damage Notification shall be forwarded to the customer in a timely fashion following completion of the review.

## CUSTOMER SHIPPING INSTRUCTIONS

1. You, the customer, should implement a policy which verifies quantities shipped, both in-coming and out-going. In the event a discrepancy is found in equipment shipped to your jobsite, notify the TITAN office immediately, in accordance with the Lease Agreement.
2. TITAN strongly recommends taking pictures of both sides of every load of equipment shipped or received (preferably before the straps are removed).
3. Returned equipment should be stacked and banded per the enclosed Bundling Standards.
4. When loading trucks to return equipment, the customer should adhere to the following shipment stacking standards:
  - Aluminum: place no more than three (3) Barellas high, except in the case of 11-6 main beams, which should be no more than two (2) high.
  - Shores: place no more than two (2) high in any case.

Do not place Barellas of secondary beams at the end of the trailer. The secondary beams may vibrate out of the Barellas in transit if the banding is not sufficiently tight.

The customer should provide a completed packing list and bill of lading for the shipment. The enclosed EQUIPMENT SHIPPING REPORT may be photo copied and used for this purpose. Additionally blank bill of ladings can be found in the back pocket.

In an effort to maximize freight, TITAN recommends using a 48' trailer with split axle. This configuration can typically accommodate a balanced load (shores & aluminum) of 46,000# subject to truck driver's approval.

## POLÍTICA DE ENVÍO/RECEPCIÓN

TITAN se compromete a brindarle un excelente servicio a usted, el cliente. Sabemos que recibir equipos en buenas condiciones de funcionamiento y de manera oportuna es vital para su éxito. Además, recibir una cuenta precisa de todos los equipos enviados hacia y desde el trabajo puede ayudarnos a ambos a evitar obstáculos importantes. Con este fin, TITAN ha implementado la siguiente política para el manejo y contabilidad de los equipos TITAN.

### Envío desde TITAN Yard

1. La oficina de TITAN prepara el pedido de equipos a partir del estudio de cantidad publicado en los planos de taller aprobados. La orden incluirá lo siguiente:
  - Número de contrato de arrendamiento.
  - Nombre del cliente, dirección, teléfono del lugar de trabajo y nombre de contacto.
  - Fechas de entrega).
  - Cantidades de equipo (incluidas cantidades resumidas para pedidos consecutivos).
2. El camión se cargará según lo ordenado, asegurándose de que:
  - Todo el equipo está empaquetado correctamente (no se deben utilizar paquetes parciales de Barellas).
  - Todo el equipo está en buen estado de funcionamiento.
  - Todo el equipo se cuenta y registra con precisión.
3. El astillero de TITAN preparará informes de envío precisos y notificará a la oficina de TITAN sobre cualquier discrepancia entre los equipos y los pedidos originales.
4. Antes del envío, el supervisor del equipo debe revisar todas las cargas de la siguiente manera:
  - Verifique que todas las Barellas estén empaquetadas correctamente.
  - Verifique todos los recuentos de Barella para vigas y apuntalamientos de postes.
  - Tomar fotografías del camión cargado con cámara digital (4 min.).
  - Revise el informe de envío para verificar la exactitud y firme el informe reconociendo el mismo.
5. Proporcionar copias de los informes de envío firmados para el conductor y el cliente.
6. Envíe los informes de envío firmados y los archivos de imágenes digitales a la oficina de TITAN.

### Recibir cargas del cliente

1. Cuente todo el equipo en el camión y proporcione un informe de recepción preciso. Verifique las cantidades que se muestran en el informe de envío del cliente (si se proporciona).
2. Antes de la descarga, el Supervisor de Equipo debe revisar todas las cargas de la siguiente manera:
  - Verifique que todas las Barellas estén empaquetadas correctamente.
  - Verifique todos los recuentos de Barella para vigas y apuntalamientos de postes.
  - Tome fotografías digitales de lo siguiente:

- » El camión previo a la descarga (4 min.).
  - » Barellas mal o parcialmente cargadas.
  - » Equipo dañado (si lo hubiera).
  - Revise el informe de recepción para verificar la exactitud y firme el informe reconociendo el mismo.
3. Reenviar informe de recepción firmado, informe de envío de clientes y archivos de imágenes digitales a la oficina de TITAN. El Supervisor de Equipo deberá realizar una revisión exhaustiva del equipo devuelto dentro de los 10 días hábiles (U.O.N.) de recibir la carga devuelta. Los equipos designados como dañados serán identificados y colocados en un área de espera por un período de 30 días después de la notificación al cliente.
  4. La notificación de devolución y daños se enviará al cliente de manera oportuna una vez finalizada la revisión.

## ***INSTRUCCIONES DE ENVÍO AL CLIENTE***

1. Usted, el cliente, debe implementar una política que verifique las cantidades enviadas, tanto entrantes como salientes. En caso de que se encuentre una discrepancia en el equipo enviado a su lugar de trabajo, notifique a la oficina de TITAN de inmediato, de acuerdo con el Contrato de Arrendamiento.
2. TITAN recomienda encarecidamente tomar fotografías de ambos lados de cada carga de equipo enviada o recibida (preferiblemente antes de quitar las correas).
3. El equipo devuelto debe apilarse y anillarse según las Normas de empaquetado adjuntas.
4. Al cargar camiones para devolver equipos, el cliente debe cumplir con los siguientes estándares de apilamiento de envíos:
  - Aluminio: colocar no más de tres (3) Barellas de altura, excepto en el caso de 11-6 Tes principales, que no deberán tener más de dos (2) de altura.
  - Orillas: colocar no más de dos (2) de altura en ningún caso.

No colocar Barellas de vigas secundarias al final del remolque. Las vigas secundarias pueden salirse de las Barellas por vibración durante el transporte si las bandas no están lo suficientemente apretadas.

El cliente debe proporcionar una lista de embalaje completa y un conocimiento de embarque para el envío. El INFORME DE ENVÍO DEL EQUIPO adjunto se puede fotocopiar y utilizar para este fin. Además, en el bolsillo trasero se puede encontrar un conocimiento de embarque en blanco.

En un esfuerzo por maximizar el flete, TITAN recomienda utilizar un remolque de 48' con eje dividido. Esta configuración normalmente puede acomodar una carga equilibrada (puntales y aluminio) de 46 000 # sujeto a la aprobación del conductor del camión.

## YARD ADDRESSES

(Return to closest location unless noted otherwise):

(Regrese a la ubicación más cercana a menos que se indique lo contrario):

### NORTHWEST YARD - USA

TITAN Formwork Systems  
13007 125<sup>th</sup> St. Ct. KPN  
Gig Harbor, WA 98329

P: 480.305.1872  
Delivery: 7 am-3:30 pm (PST)

### MIDWEST - USA

TITAN Formwork Systems  
23420 NW Frontage Rd  
Channahon, IL 60410

P: 480.305.1850  
Delivery: 7 am-3:30 pm (CST)

### NORTHEAST YARD - USA

TITAN Formwork Systems  
3367 Gun Club Rd.  
Nazareth, PA 18064

P: 480.305.1876  
Delivery: 7 am-3:30 pm (EST)

### SOUTHWEST YARD - USA

TITAN Formwork Systems  
1476 N Grant Ave.  
Casa Grande, AZ 85222

P: 480.305.1880  
Delivery: 6:30 am-3 pm (AZ)

### SOUTH CENTRAL - USA

TITAN Formwork Systems  
2919 Farrell Road  
Houston, TX 77073

P: 480.305.1921  
Delivery: 7 am-3:30 pm (CST)

### EASTERN CANADA

TITAN Formwork Systems  
131 Industrial Rd  
Bolton, ON L7E 1K5

P: 480.305.1874  
Delivery: 7 am-3:30 pm (EST)

TITAN equipment will not be transferred between projects without TITAN's prior approval. TITAN discourages transferring equipment from job to job due to the possibility of accounting and quality control issues.

Los equipos TITAN no se transferirán entre proyectos sin la aprobación previa de TITAN. TITAN desaconseja transferir equipos de un trabajo a otro debido a la posibilidad de problemas de contabilidad y control de calidad.

46

# SHIPPING FORMS

*FORMAS DE ENVÍO*



**TITAN**  
formwork systems

		<b>HV &amp; NX EQUIPMENT SHIPPING REPORT</b>							
		<input type="checkbox"/> <b>Titan Southwest</b> 1476 N Grant Ave Casa Grande, AZ 85122		<input type="checkbox"/> <b>Titan Northwest</b> 13007 125th St. Ct. KPN Gig Harbor, WA 98329		<input type="checkbox"/> <b>Titan Eastern Canada</b> 131 Industrial Rd Bolton, ON L7E 1K5			
Shipped From: _____ Date: _____ Project: _____		<input type="checkbox"/> <b>Titan Northeast</b> 3367 Gun Club Rd Nazareth, PA 18064		<input type="checkbox"/> <b>Titan Midwest</b> 23420 NW Frontage Rd Channahon, IL 60410		<input type="checkbox"/> <b>Titan South Central</b> 2919 Farrell Rd Houston, TX 77073			
QTY	ITEM(S)	DESCRIPTION	UNIT WT	TOTAL WT	QTY	ITEM(S)	DESCRIPTION	UNIT WT	TOTAL WT
<b>EQUIPMENT IN FULL BARELLAS</b>									
	001+013+028	#1 Shore w/ Drophead (50 pcs)		1,784		020+028	HV Main Beam 3-9 (39 pcs)		974
	002+013+028	#2 Shore w/ Drophead (50 pcs)		2,509		021+028	HV Main Beam 5-7 (28 pcs)		1,036
	003+013+028	#3 Shore w/ Drophead (50 pcs)		2,609		045+028	HV Main Beam 7-7 (28 pcs)		1,431
	004+013+028	#4 Shore w/ Drophead (35 pcs)		2,376		022+028	HV Main Beam 7-10 (28 pcs)		1,192
	005+013+028	#5 Shore w/ Drophead (30 pcs)		2,888		023+028	HV Main Beam 11-6 (28 pcs)		1,822
	009+013+028	#1.75 Shore w/ Drophead (45 pcs)		1,699		024+028	HV Secondary Beam 3-9 (88 pcs)		920
	010+013+028	#2.5 Shore w/ Drophead (45 pcs)		2,005		025+028	HV Secondary Beam 5-7 (65 pcs)		974
	011+013+028	#3.5 Shore w/ Drophead (45 pcs)		2,568		083+028	NX Secondary Beam 5-7 (52 pcs)		796
	135+013+028	XL-350cm Shore w/ Drophead (24 pcs)		1,488		084+028	NX Secondary Beam 7-7 (52 pcs)		890
	137+013+028	XL-625cm Shore w/ Drophead (24 pcs)		2,268		057+028	HV Guardrail Post 5-0 (55 pcs)		1,129
	191+028	XL Ledger 5-11 (13 pcs)		435		194+028	HV Ledger 5-11 (16 pcs)		516
	192+028	XL Ledger 7-10 (13 pcs)		500		195+028	HV Ledger 7-10 (16 pcs)		580
<b>PIECE COUNTS OF EQUIPMENT NOT INCLUDED IN FULL BARELLAS</b>									
	001 / 009	#1 / #1.75 Shore		23.5 / 25.4		974-028	Barella		83.6
	002 / 010	#2 / #2.5 Shore		38.0 / 32.2		974-029	Barella Basket		215.0
	003 / 011	#3 / #3.5 Shore		40.0 / 44.7		974-032	Wheels - Swvl w/ Brake		13.6
	974-004	#4 Shore		55.0		974-033	Wheels - Fixed		10.0
	974-005	#5 Shore		76.3		974-034	New Wire Pin		0.2
	974-007	Post Shore Head		8.2		974-013	HV Drop Head		10.5
	974-008	Stub Shore		17.5		974-015	HV T-Shoe		4.4
	974-135	XL-350cm Shore		48.0		974-018	U-Shoe		13.0
	974-137	XL-625cm Shore		80.5		974-019	HV Column Lock		5.5
	974-139	XL- 100cm Extension		12.5		974-027	HV Filler Beam		8.0
	974-140	XL- 200cm Extension		25.0		974-036	HV Drophead Clamp		3.3
	974-138	XL Clip		0.4		974-037	Universal Wedge Clamp		4.0
	974-155	XL U-Head		4.8		974-044	Universal Tripod W/Leg		36.0
	974-020	HV Main Beam 3-9		22.8		974-057	HV Guardrail Post 5-0		19.0
	974-021	HV Main Beam 5-7		34.0		974-058	HV Safety Catch		3.2
	974-045	HV Main Beam 7-7		48.1		974-059	HV Positioner		0.2
	974-022	HV Main Beam 7-10		39.6		974-094	NX 10% Alum Shore Wedge		2.0
	974-023	HV Main Beam 11-6		62.1		974-184	T-Clip		0.5
	974-024	HV Secondary Beam 3-9		9.5		974-191	XL Ledger 5-11		27.0
	974-025	HV Secondary Beam 5-7		13.7		974-192	XL Ledger 7-10		32.0
	974-083	NX Secondary Beam 5-7		13.7		974-194	HV Ledger 5-11		27.0
	974-084	NX Secondary Beam 7-7		15.5		974-195	HV Ledger 7-10		31.0
						974-200	Outrigger		2,675.0
<b>TOTAL WEIGHT:</b>									
Notes:							Date Received: _____		
							Received By: _____		

Scan the QR code to download the digital version of the HV/XL/NXUS Shipping Report.

Escanee el código QR para descargar la versión digital de HV/XL/NXUS Forma de Envío.



HV/XL/NXUS SHIPPING REPORT - SAMPLE



**MAX & 12K EQUIPMENT SHIPPING REPORT**

- Titan Southwest  
 1476 N Grant Ave  
 Casa Grande, AZ 85122
- Titan Northwest  
 13007 125th St. Ct. KPN  
 Gig Harbor, WA 98329
- Titan Eastern Canada  
 131 Industrial Rd  
 Bolton, ON L7E 1K5
- Titan Northeast  
 3367 Gun Club Rd  
 Nazareth, PA 18064
- Titan Midwest  
 23420 NW Frontage Rd  
 Channahon, IL 60410
- Titan South Central  
 2919 Farrell Rd  
 Houston, TX 77073

Shipped From: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Project: \_\_\_\_\_

QTY	ITEM(S)	DESCRIPTION	UNIT WT	TOTAL WT	QTY	ITEM(S)	DESCRIPTION	UNIT WT	TOTAL WT
<b>EQUIPMENT IN FULL BARELLAS</b>									
	132+028	Max Alum Shore 6-0 (30 pcs)		699					
	146+028	Max Screw Jack 6-0 (60 pcs)		1,824					
	132+146+028	Max Alum Shore 6-0 w/ Screw Jack (24 pcs)		1,272					
<b>PIECE COUNTS OF EQUIPMENT NOT INCLUDED IN FULL BARELLAS</b>									
	974-124	MAX Ledger 3-0		19.5		432-060	6-0 Alum Purlin		22.8
	974-125	MAX Ledger 4-1		22.0		432-070	7-0 Alum Purlin		26.6
	974-126	MAX Ledger 5-11		26.7		432-080	8-0 Alum Purlin		30.4
	974-127	MAX Ledger 6-2		32.9		432-090	9-0 Alum Purlin		34.2
	974-128	MAX Ledger 10-0		38.0		432-100	10-0 Alum Purlin		38.0
	974-131	MAX Alum Shore 3-0		12.0		432-106	10-6 Alum Purlin		39.9
	974-132	MAX Alum Shore 6-0		20.5		432-110	11-0 Alum Purlin		41.8
	974-143	3' Modular Screw Jack		15.0		432-120	12-0 Alum Purlin		45.6
	974-144	4' Modular Screw Jack		20.0		432-126	12-6 Alum Purlin		47.5
	974-145	5' Modular Screw Jack		25.0		432-130	13-0 Alum Purlin		49.4
	974-146	MAX Screw Jack 6-0		29.0		432-140	14-0 Alum Purlin		53.2
	974-018	U-Shoe		13.0		432-150	15-0 Alum Purlin		57.0
	974-184	T-Clip		0.5		432-156	15-6 Alum Purlin		58.9
	152+153	Modular Coupler & Pin		1.5		432-160	16-0 Alum Purlin		60.8
	974-156	MAX U-Head		6.2		432-166	16-6 Alum Purlin		62.7
	974-157	MAX U-Head w/o Post		6.0		432-170	17-0 Alum Purlin		64.6
	974-159	Two Way U/H		30.0		432-176	17-6 Alum Purlin		66.5
	974-162	MAX Swivel Plate		4.5		432-180	18-0 Alum Purlin		68.4
	974-210	Beam (6.5") 10-6		42.0		432-186	18-6 Alum Purlin		70.3
	974-241	12K Frame 4 x 4		22.0		432-190	19-0 Alum Purlin		72.2
	974-243	12K Frame 4 x 6		32.0		432-200	20-0 Alum Purlin		76.0
	974-245	12K Frame 4 x 8		49.0		432-206	20-6 Alum Purlin		77.9
	974-253	12K Brace 5 x 4		8.1		432-220	22-0 Alum Purlin		83.6
	974-255	12K Brace 8 x 4		11.4		974-104	Box Stringer 6-0		32.0
	974-260	12K Screw Jacks w/ Base Plate		15.5		974-108	Box Stringer 8-0		42.7
	974-261	12K Screw Jacks w/ U-Head		17.0		974-109	Box Stringer 8-3		44.0
	249+250	12K Coupler & W-Pin		2.5		974-111	Box Stringer 10-0		53.3
	974-028	Barella		83.6		974-112	Box Stringer 10-6		56.0
	974-029	Barella Basket		215.0		974-115	Box Stringer 12-6		72.0
	974-032	Wheels - Swvl w/ Brake		13.6		974-120	Box Stringer 16-6		94.0
	974-033	Wheels - Fixed		10.0		974-122	Box Stringer 20-6		109.4
	974-034	New Wire Pin		0.2		974-123	Box Stringer 24-6		130.7
	974-200	Outrigger Platform		2,675.0		974-164	B.S. Guardrail Bracket		12.0
	974-202	C-Hook 20' Mast		800.0		974-180	BS Tie down		2.0
	974-203	C-Hook		3,400.0					

**TOTAL WEIGHT:** \_\_\_\_\_

Notes: \_\_\_\_\_

Date Received: \_\_\_\_\_

Received By: \_\_\_\_\_

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Escanee el código QR para descargar la versión digital de 12K/MAX Forma de Envío.





UNIFORM STRAIGHT BILL OF LADING Original - Not Negotiable - Domestic

Shipper's # Contract #  
Carrier \_\_\_\_\_ Agent's No. \_\_\_\_\_

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading,  
at Project City / State from Customer Name / Project Name  
the property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown) marked, consigned and destined as shown below, which said company (the word company being understood throughout this contract as meaning any person or corporation in possession of the property under the control of the carrier) agrees to carry to its usual place of delivery at said destination, if on its own railroad, water line, highway route or routes, or within the territory of its highway operations, otherwise to deliver to another carrier on the route to said destination, as mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the conditions not prohibited by law, whether printed or written, herein contained, including the conditions on back hereof, which are hereby agreed to by the shipper and accepted for himself and his assigns.

Consigned to Titan Formwork Systems, LLC (Mail or street address of consignee - For purposes of notification only.)  
Destination (SEE Yard Options Below) State of \_\_\_\_\_ Zip Code \_\_\_\_\_ County of \_\_\_\_\_  
Routing \_\_\_\_\_ Delivering Carrier Carrier Name Vehicle No. Truck # or Car Initial \_\_\_\_\_

Collect On Delivery \$ \_\_\_\_\_ and remit to: \_\_\_\_\_  
Street \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_

No. Packages	Description of Articles, Special Marks, and Exceptions	Weight (Sub. to Car.)	Class or Rate	Check Column
32	Barellas	45,500		
1	Box	500		
		46,000		

C. O. D. charges to be paid by Not Shipper  Consignee

Subject to Section 7 of conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statements:

The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.  
Do Not Use  
(Signature of Consignor.)

If charges are to be prepaid, write or stamp here, "TO BE PREPAID."  
Prepaid

Received \$ \_\_\_\_\_ to apply to prepayment of the charges on the property described hereon.

Agent or Cashier \_\_\_\_\_  
Per \_\_\_\_\_ (the signature here acknowledges only the amount Prepaid.)

Charges Advanced: \$ \_\_\_\_\_

"If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is "carrier's or shipper's weight." NOTE - Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.  
The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding \_\_\_\_\_ per \_\_\_\_\_

Customer Signature Shipper, Per Driver Signature Agent, Per 1

Permanent post-office address of shipper. \_\_\_\_\_

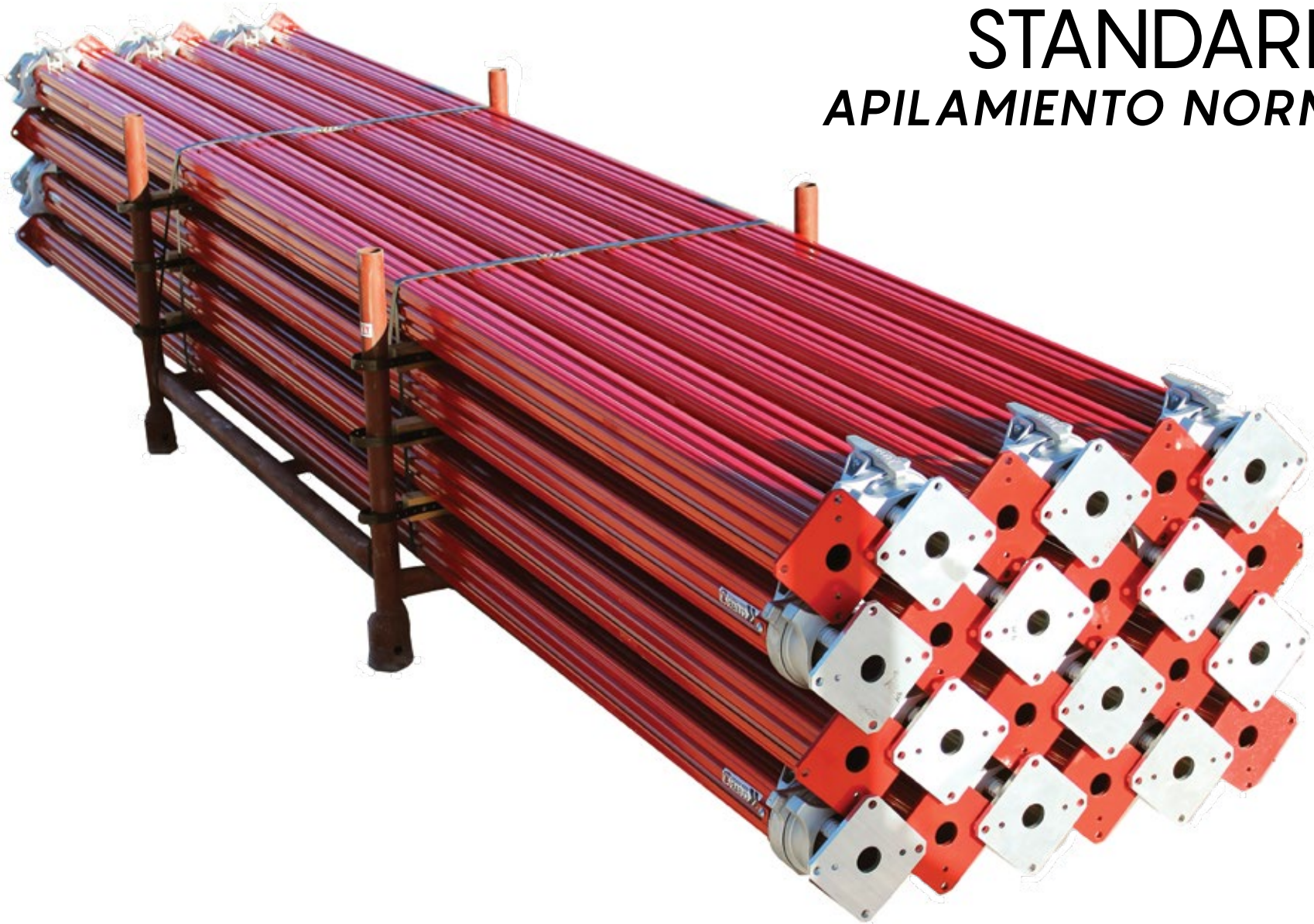
(This Bill of Lading is to be signed by the shipper and agent of the carrier issuing same.)

Bill of Lading



# STACKING

STANDARDS  
*APILAMIENTO NORMAS*





# BALANCED TRUCK LOADS

- Equipment should be stacked and banded per the Stacking Standards in the following pages.
- Shores should be placed at the rear of the trailer, stacked no more than two barellas high.
- Aluminum should be placed at the head of the trailer. Barellas should be placed three high, except for 11'6" Main Beams, which should only be stacked 2 high.
- Customer to provide completed packing list and bill of lading for the shipment.
- To maximize freight, TITAN recommends using 48' split axle trailers. This configuration will hold a balanced load (shores and aluminum) of 46,000 pounds,

- El equipo debe apilarse y anillarse según los Estándares de Apilamiento que se detallan en las páginas siguientes.
- Los postes deben colocarse en la parte trasera del remolque, apilados a no más de dos barellas de altura.
- El aluminio debe colocarse en la cabecera del remolque. Las Barellas se deben colocar en tres alturas, excepto las Tes Principales de 11'6", que solo se deben apilar en 2 alturas.
- El cliente debe proporcionar la lista de empaque completa y el conocimiento de embarque para el envío.
- Para maximizar la carga, TITAN recomienda utilizar remolques de eje dividido de 48'. Esta configuración aguantará una carga equilibrada (puntales y aluminio) de 46.000 libras,

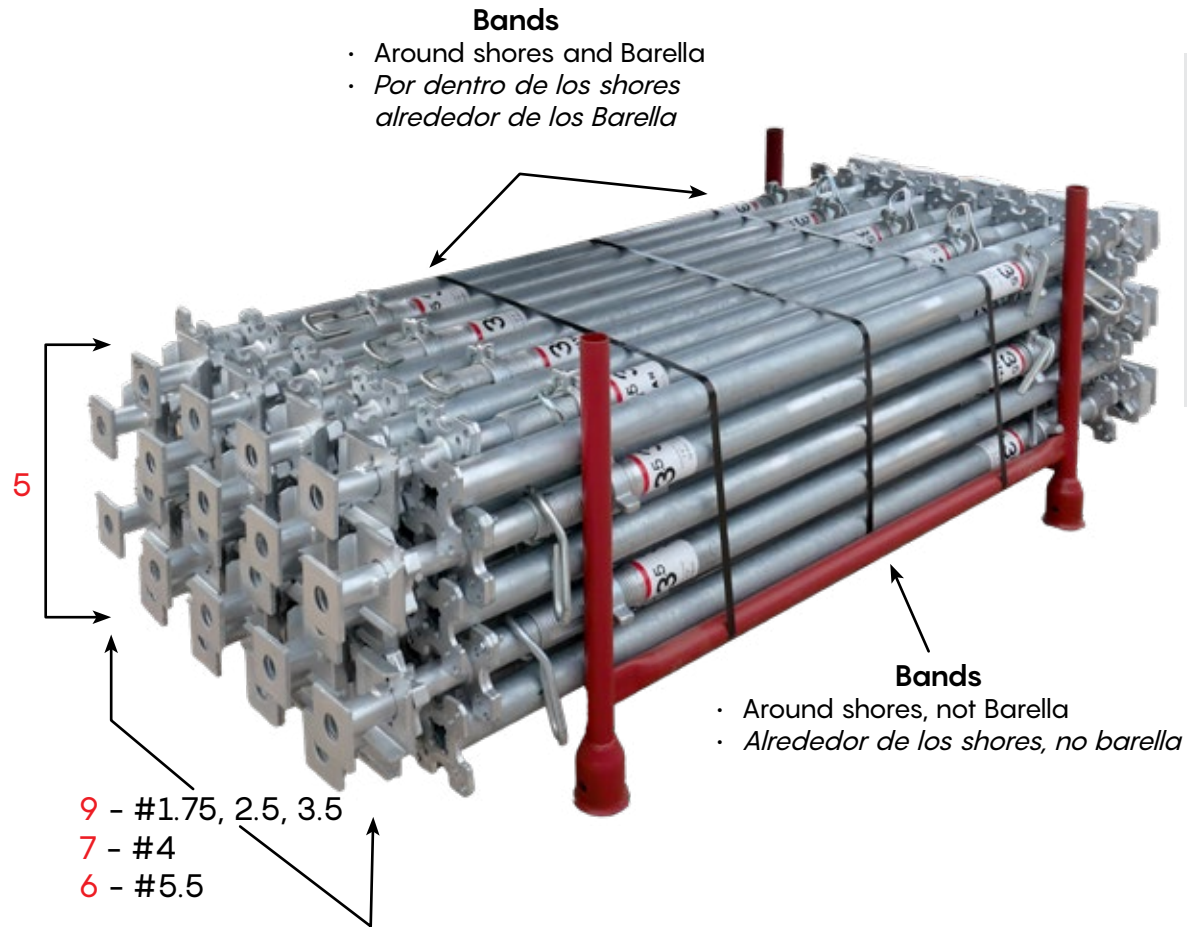


# SHORES 1.75 / 2.5 / 3.5 / 4 / 5.5

#1.75, 2.5, 3.5 - 45 pieces

#4 - 35 pieces

#5.5 - 30 pieces



- Always follow bundling and handling standards to prevent equipment damage and ensure optimal handling.

- Shores should be nested. Alternate dropheads every other shore when loading Barella.

- *Siempre siga las normas de empaquetado y manipulación para evitar daños al equipo y asegurar un manejo óptimo.*

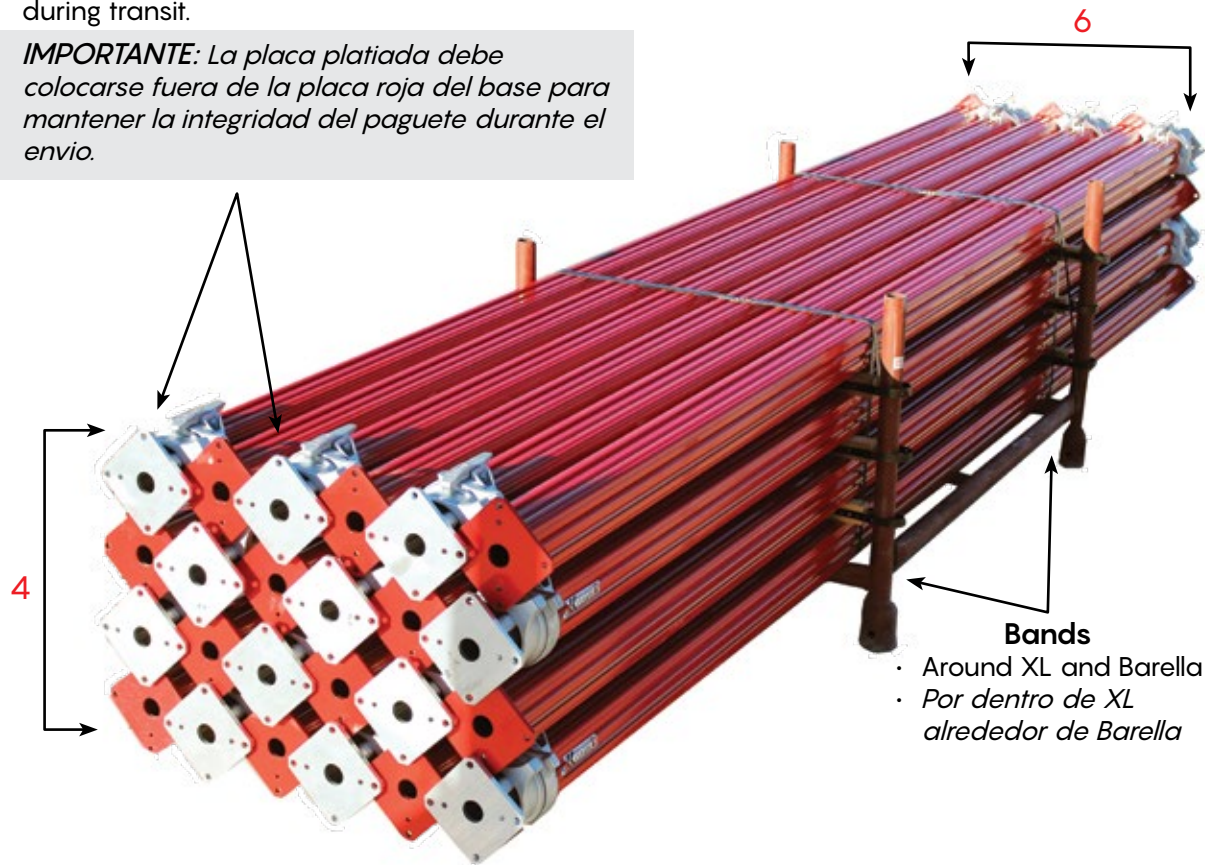
- *Las orillas deben ser nested, dropheads alternos cada otra orilla al cargar Barella.*

# XL SHORES 350/625

4x6 - 24 pieces

**NOTE:** Silver plate MUST be positioned OUTSIDE the red baseplate to maintain bundle integrity during transit.

**IMPORTANTE:** La placa platiada debe colocarse fuera de la placa roja del base para mantener la integridad del paquete durante el envío.



- Always follow bundling and handling standards to prevent equipment damage and ensure optimal handling.

- Shores should be nested. Alternate dropheads every other shore when loading Barella.

- Siempre siga las normas de empaquetado y manipulación para evitar daños al equipo y asegurar un manejo óptimo.

- Las orillas deben ser nested, dropheads alternos cada otra orilla al cargar barella.

# HV MAIN BEAMS 3'9"

3x13 - 39 pieces



- Always follow bundling and handling standards to prevent equipment damage and ensure optimal handling.

- Orient pieces properly in carts. Shorter members (i.e., 3-9 Main Beams and Secondary Beams) should be stacked in the Barellas the short direction (as seen here).

- Main Beams must be nested. This is done by alternating the beams "right side up" and then "upside down."

- *Siempre siga las normas de empaquetado y manipulación para evitar daños al equipo y asegurar un manejo óptimo.*

- *Oriente correctamente las piezas en carros. Los miembros más cortos (es decir, 3'9" Main Beam y Secondary Beams) se deben apilar en la Barella la dirección corta (como se ve aquí).*

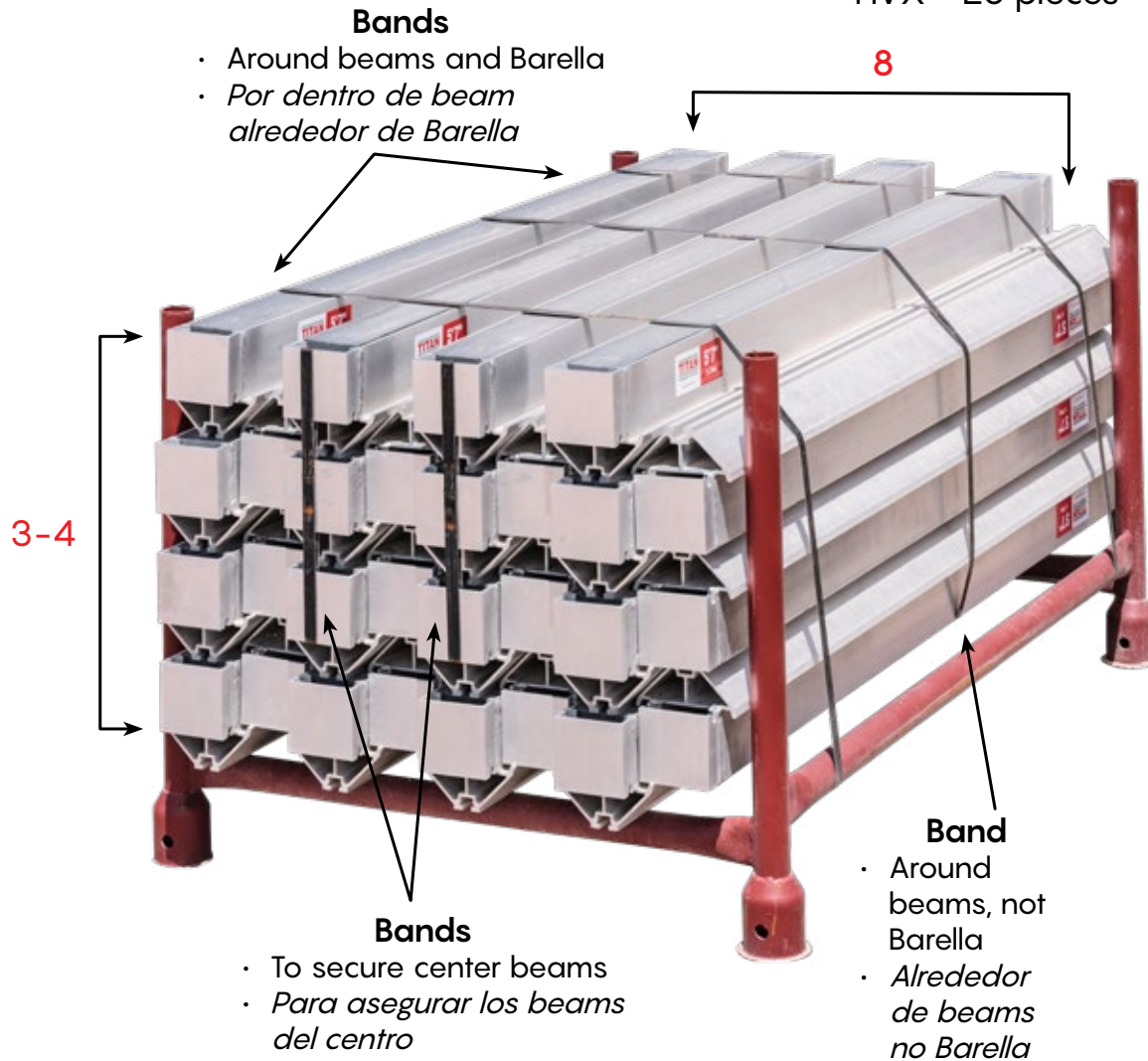
- *Los Main Beam deben anidarse. Esto se hace alternado los beams "vertical i luego al revez."*



# HV MAIN BEAMS 5'7" / 7'7" / 11'6"

5'7" / 7'10" / 11'6" - 28 pieces

HVX - 20 pieces

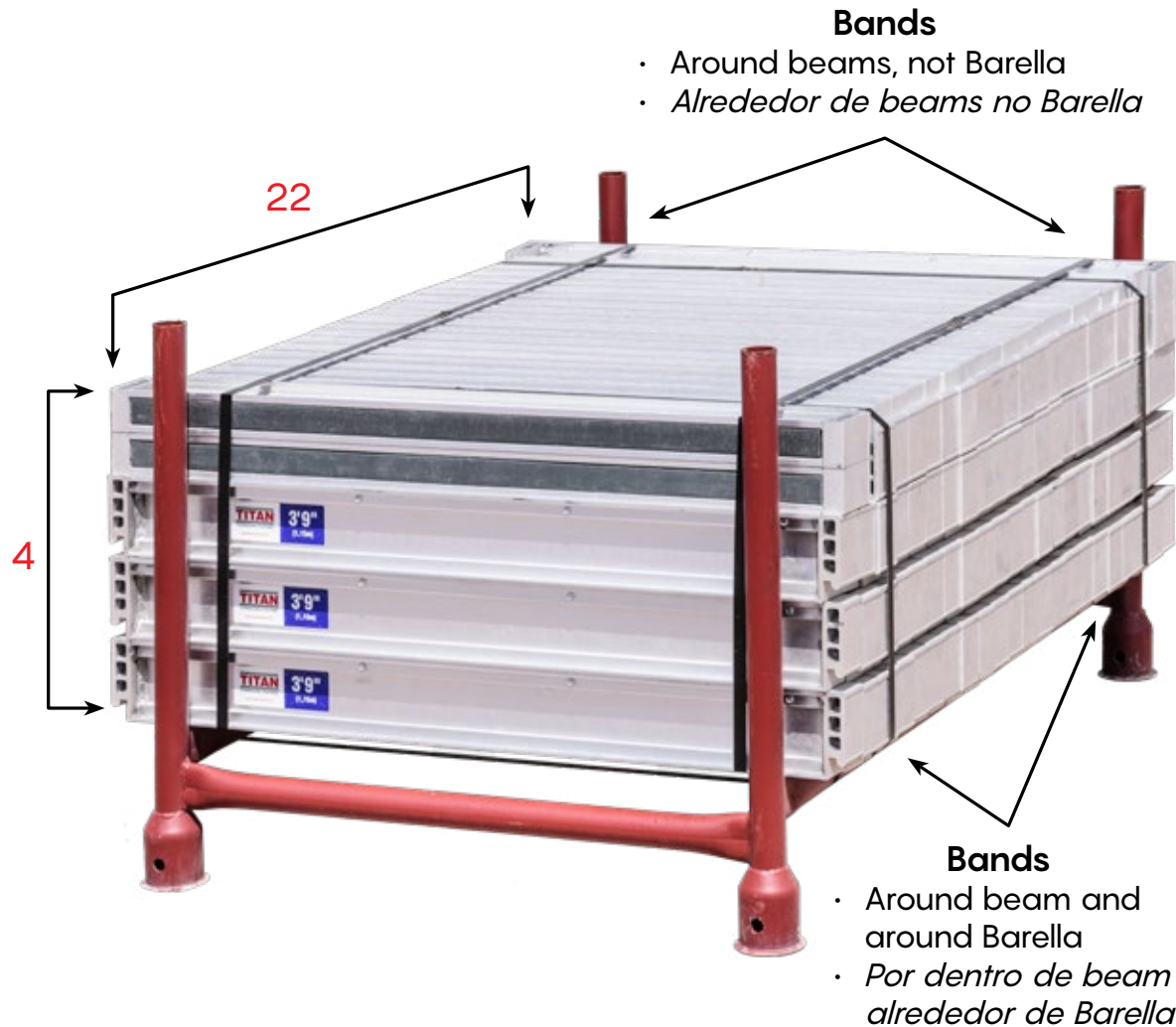


- Always follow bundling and handling standards to prevent equipment damage and ensure optimal handling.
- Orient pieces properly in carts. Longer pieces (i.e., Post Shores, 5'7" Main Beams and Secondary Beams, and 11'6" Main Beams) should be stacked in Barellas in the long direction (as seen here).
- Main Beams must be nested; alternate the beams "right-side-up" and then "upside-down."

- *Siempre siga las normas de empaquetado y manipulación para evitar daños al equipo y asegurar un manejo óptimo.*
- *Oriente correctamente las piezas en carros. Las piezas más largas (es decir, los post shore, 5'7" Main Beam y Secondary Beam y 11'6" Main Beams se deben apilar en Barellas en la dirección larga.)*
- *Los main beam deben anidarse. Esto se hace alternando los beams "vertical i luego al revéz."*

# HV SECONDARY BEAMS 3'9"

4X22 - 88 pieces



- Always follow bundling and handling standards to prevent equipment damage and ensure optimal handling.

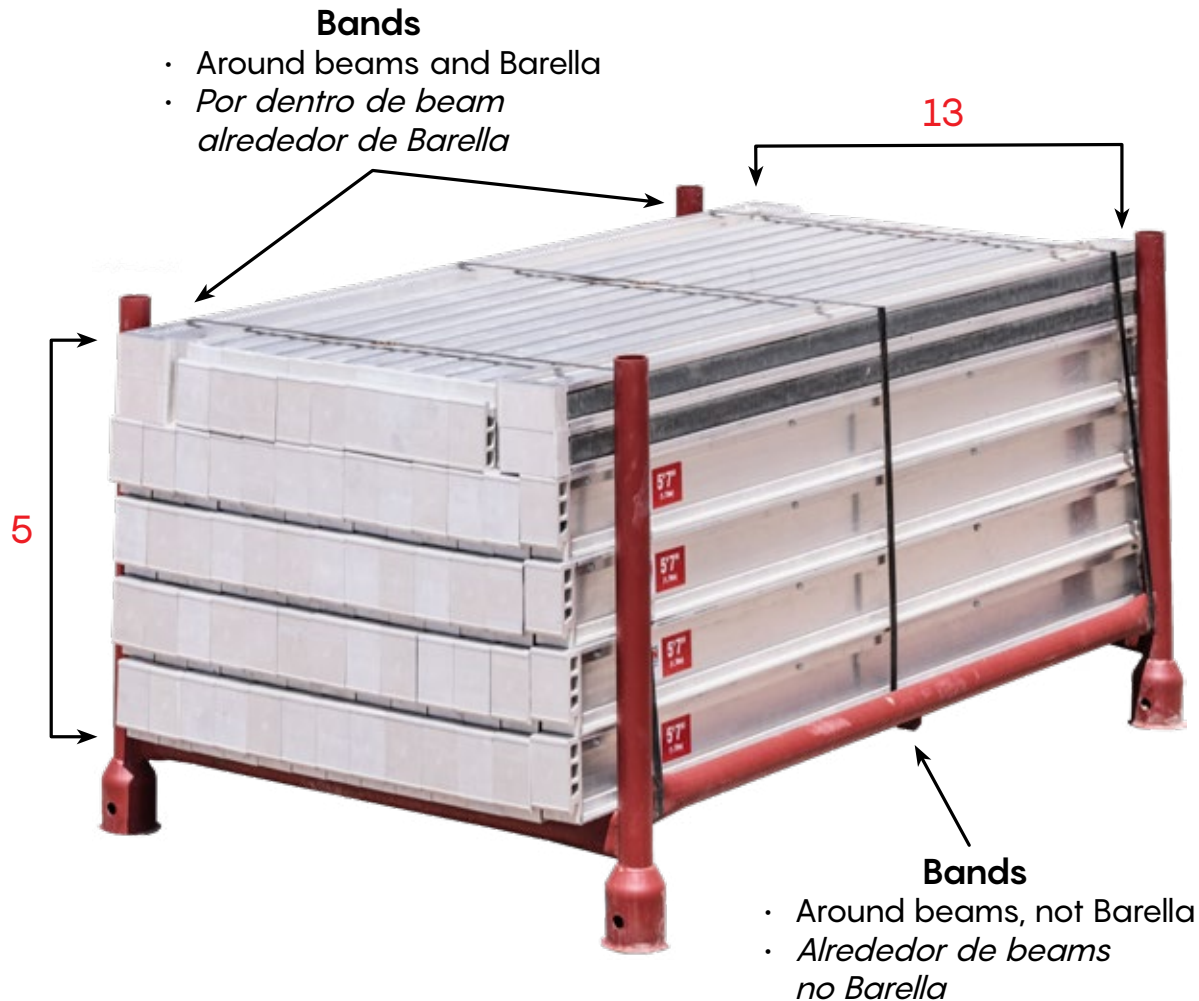
- Orient pieces properly in carts. Shorter members (i.e., 3'9" Main Beams and Secondary Beams) should be stacked in the Barellas the short direction (as seen here).

• *Siempre siga las normas de empaquetado y manipulación para evitar daños al equipo y asegurar un manejo óptimo.*

- *Oriente correctamente las piezas en carros. Los miembros más cortos (es decir, 3'9" main beam y Secondary Beams) se deben apilar en la Barellas la dirección corta (como se ve aquí).*

# HV SECONDARY BEAMS 5'7"

5x13 - 65 pieces



- Always follow bundling and handling standards to prevent equipment damage and ensure optimal handling.
- Orient pieces properly in carts. Longer pieces (i.e., post shores, 5'7" Main Beams and Secondary Beams, and 11'6" Main Beams) should be stacked in Barellas in the long direction (as seen here).

- *Siempre siga las normas de empaquetado y manipulación para evitar daños al equipo y asegurar un manejo óptimo.*
- *Oriente correctamente las piezas en carros. Las piezas más largas (es decir, los post shore, 5'7" Main Beam y Secondary Beam y 11'6" Main Beams se deben apilar en Barellas en la dirección larga.)*

# HV & XL LEDGERS 5'11" - 7'11"

1x13 - 13 pieces - XL

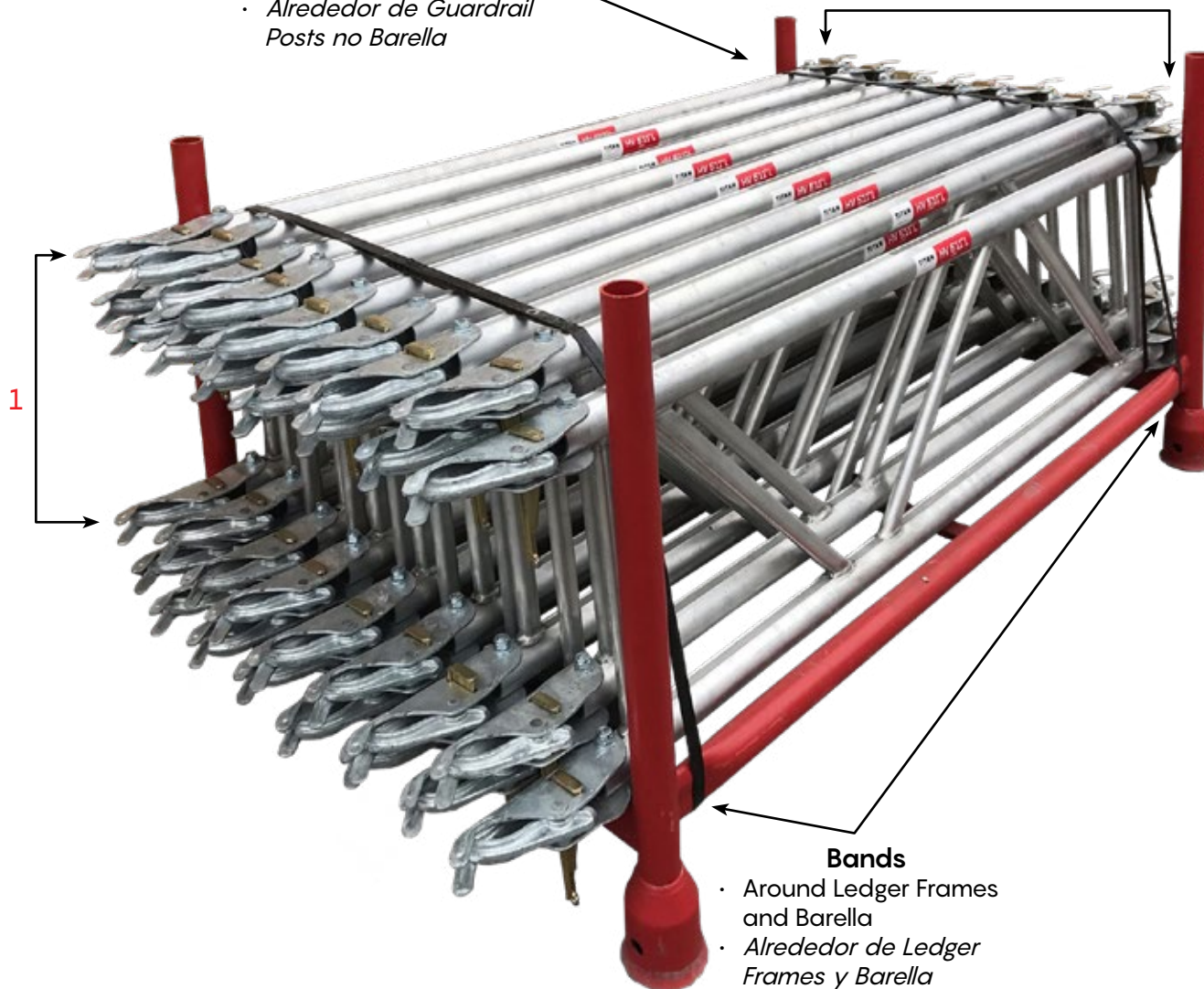
1x16 - 16 pieces - HV

## Bands

- Around Guardrail Posts, not Barella
- *Alrededor de Guardrail Posts no Barella*

13 - XL LEDGER

16 - HV LEDGER



## Bands

- Around Ledger Frames and Barella
- *Alrededor de Ledger Frames y Barella*

- Always follow bundling and handling standards to prevent equipment damage and ensure optimal handling.

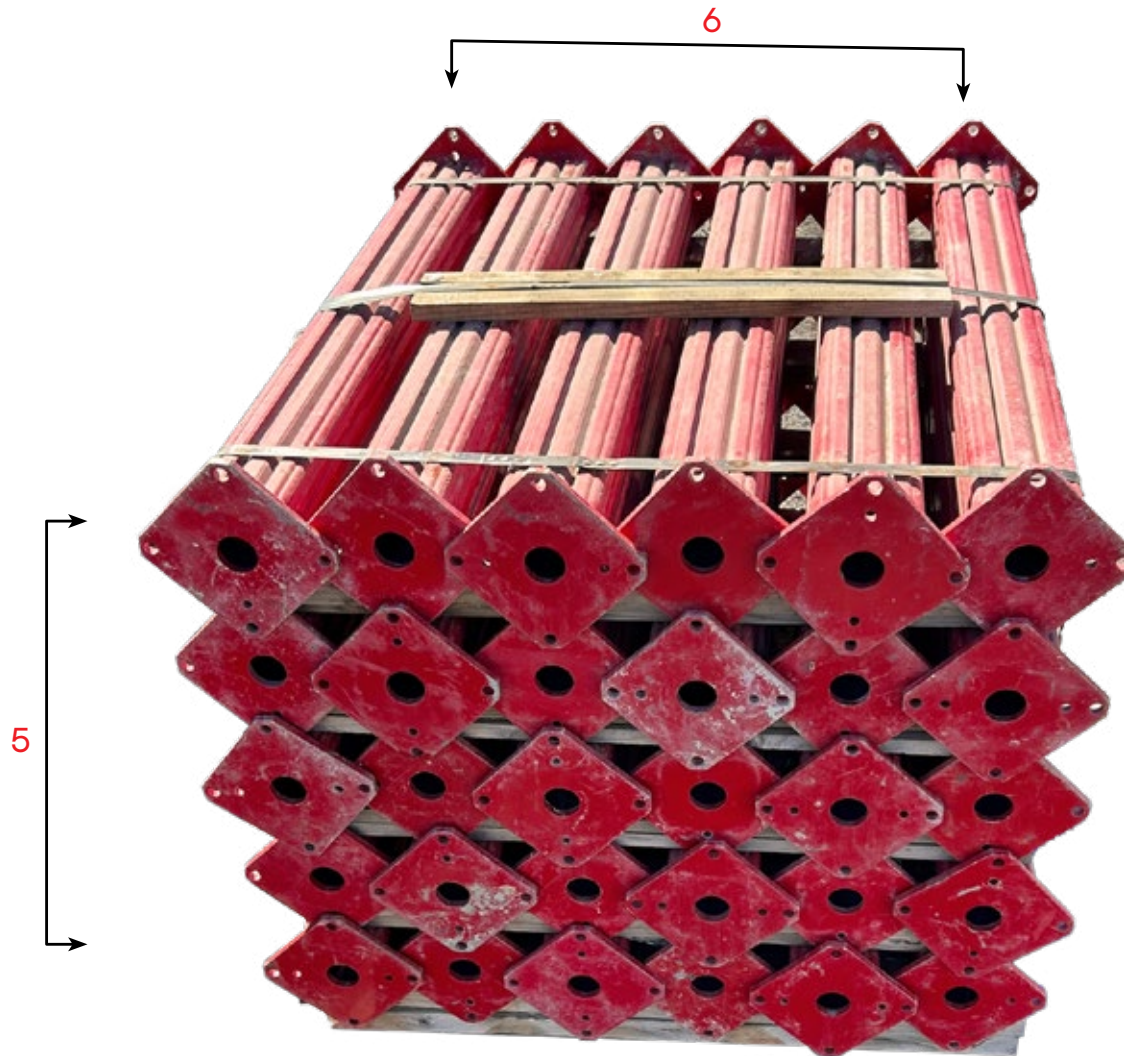
- Ledgers should be staggered when stacked.

• *Siempre siga las normas de empaquetado y manipulación para evitar daños al equipo y asegurar un manejo óptimo.*

- *Ledgers deben ser apilados.*

# XL EXTENSIONS 1m/2m

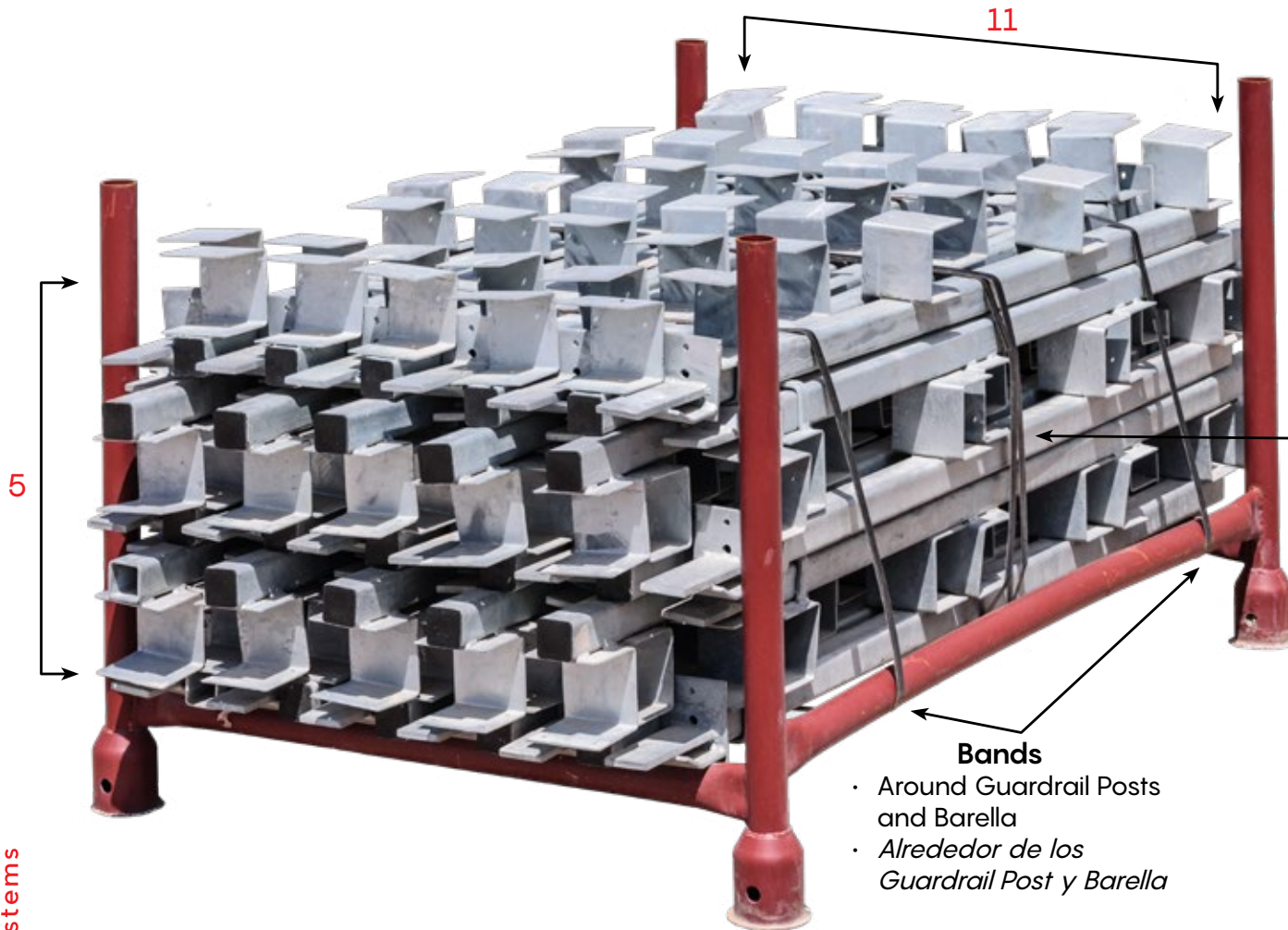
5x6 - 30 pieces



- Always follow bundling and handling standards to prevent equipment damage and ensure optimal handling.
- Shores should be nested. Alternate dropheads every other shore when loading Barella.
- *Siempre siga las normas de empaquetado y manipulación para evitar daños al equipo y asegurar un manejo óptimo.*
- *Las orillas deben ser nested, dropheads alternos cada otra orilla al cargar barella.*

# GUARDRAIL POSTS

5x11 - 55 pieces



- Always follow bundling and handling standards to prevent equipment damage and ensure optimal handling.

• *Siempre siga las normas de empaquetado y manipulación para evitar daños al equipo y asegurar un manejo óptimo.*

## Bands

- Around Guardrail Posts, not Barella
- *Alrededor de Guardrail Posts no Barella*

## Bands

- Around Guardrail Posts and Barella
- *Alrededor de los Guardrail Post y Barella*



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