

SureBuilt

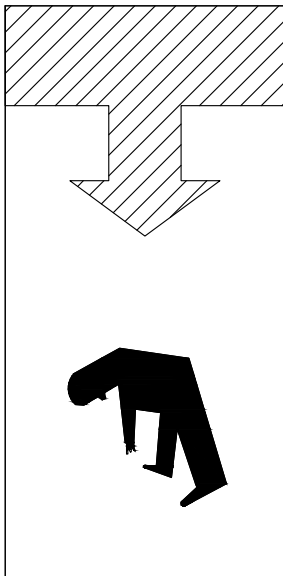
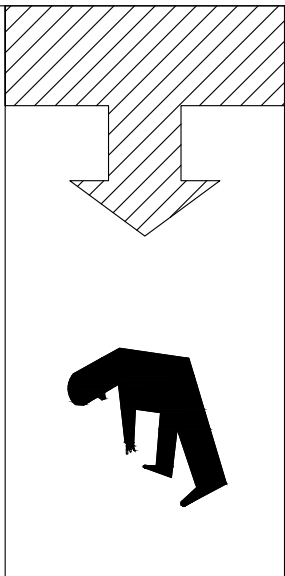
Concrete Forms & Accessories



Tilt-Up General Notes



- Warning** **Always follow instructions of product manufacturers.**
Various construction products are specified within these drawings. These products shall be used in complete accordance with the product manufacturer's instructions. Failure to do so may result in property damage, injury or death.
- Warning** **Do not substitute products or interchange components from different manufacturers.**
Substituted products may not have the same load carrying capacity or functionality as those specified. Product components from different manufacturers may not be compatible, causing product malfunction and/or a reduction in the products load carrying capacity. Either case may result in an unexpected failure of the product, resulting in possible property damage, injury or death.
- Warning** **Do not use damaged or worn products and equipment.**
All construction products, equipment, hardware and braces shall be inspected for damage and wear prior to use. Damaged or worn items shall not be used as malfunction and/or reduced load carrying capacity could result in unexpected failure causing possible property damage, injury, or death.
- Warning** **Stay clear of tilt-up panels during erection.**
Do not get beneath panels. Do not ride or climb on panels. Stay clear of panel fall zones. Failure to do so may result in property damage, injury, or death.
- Warning** **Do not alter rigging, reinforcing steel or strongbacks.**
Altering the rigging can change the applied lift insert loads, panel stresses and overall behavior of the panel during erection. Altering or omitting reinforcing steel or strongbacks can cause cracking or complete panel collapse during erection. Both can lead to property damage, severe injury or death.
- Warning** **Follow all OSHA Standards and other applicable safety standards.**
Pay particular attention to OSHA 1926(b)(1) through (2), 1926.21(b)(2) and 1926.704; and PCI Erection Safety Manual (MNL 132). Failure to do so may result in property damage, injury, or death.
- Warning** **Do not deviate from the information shown on the drawings without notifying and obtaining approval from Surebuilt Engineering Services.**

	<p style="text-align: center;">DANGER</p> <p style="text-align: center;">Falling Panels, bracing or hardware can cause property damage, severe injury or death.</p> <p>Read all instructions and notes contained within this tilt-up construction drawings booklet. All information should be clearly understood by all job site personnel involved in the construction and erection process prior to proceeding with construction. If anyone is unclear as to the intent of the drawings or notes, contact Surebuilt Engineering Services for clarification.</p> <p>Failure to follow all instructions and warnings contained herein, may result in exposure of workers and other personnel in the area of the job site to unsafe conditions or hazards that can cause property damage, severe injury or death.</p>	
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NOTICE OF COPYRIGHT

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Advertencia Siempre siga las instrucciones del fabricante del producto.
Varios productos de la construcción se especifican dentro de estos dibujos. Estos productos se utilizarán en completa conformidad con las instrucciones del fabricante. No seguir las debidas instrucciones puede resultar en el daño de la propiedad, provocar severas heridas o la muerte.

Advertencia No sustituya el producto, ni intercambie componentes de diferentes fabricantes.
Los productos sustituidos pueden no tener la misma capacidad de carga o funcionalidad que estos especifican. Los componentes del producto de diferentes fabricantes pueden no ser compatibles, causando un mal funcionamiento del producto y/o una reducción en la capacidad de carga del mismo. Cualquier caso puede provocar una inesperada falla del producto, teniendo como resultado el daño posible de la propiedad, severas heridas o la muerte..

Advertencia No utilice producto o equipo dañado y/o defectuoso
Todos los productos de la construcción, el equipo, piezas metálicas y los puntales se inspeccionarán antes de su uso para encontrar daños o defectos. Los artículos dañados o defectuosos no deben ser usados, porque se puede producir un malfuncionamiento del mismo o puede reducir la capacidad de carga, lo que resultaría en una inesperada falla del producto, lo que puede causar daños a la propiedad, heridas severas o la muerte.

Advertencia Permanezca alejado del panel Tilt-Up durante el levantamiento.
No permanezca debajo de los paneles. No se suba, ni escale los paneles. Permanezca alejado de las zonas de caída del panel. No seguir estas indicaciones puede resultar en el daño de la propiedad, provocar severas heridas o la muerte.

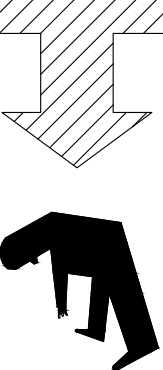
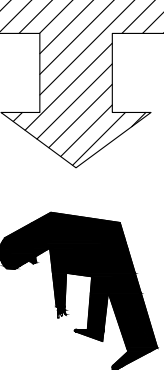
Advertencia No altere la distribución de los anclajes, el refuerzo de varilla de acero o los refuerzos.

Alterar la distribución de los anclajes puede cambiar las cargas aplicadas en los mismos, las fuerzas de tensión en el panel y el comportamiento general del panel durante el levantamiento. Alterar u omitir las varillas de acero o los refuerzos, puede causar agrietamiento o colapsar por completo el panel durante la erección. Ambos pueden provocar daños a la propiedad, severas heridas o la muerte.

Advertencia Siga todos los Estándares de la OSHA y otros estándares de seguridad que apliquen al caso.

Ponga particular atención a los siguientes artículos de la OSHA: 1926(b) (1) hasta (2), 1926.21 (b) (2) y 1926.704; y al Manual de Seguridad de Erección de PCI (MNL 132). No seguir estas indicaciones puede resultar en el daño de la propiedad, provocar severas heridas o la muerte.

Advertencia No se desvíe de la información mostrada en los dibujos sin notificar u obtener aprobación por parte de la compañía Surebuilt Engineering Services.

	<p style="text-align: center;">PELIGRO</p> <p>La caída de Paneles, puntales o piezas de metal, pueden causar daños a la propiedad, severas heridas o la muerte.</p> <p>Lea todas las instrucciones y las notas contenidas dentro de este documento de dibujos sobre la construcción de paneles Tilt-Up. Toda la información debe ser claramente entendida por todo el personal implicado, en el sitio de trabajo, la construcción y en el proceso del levantamiento, antes de proceder a la construcción. Si algún dibujo o nota no es lo suficientemente clara, contacte a la compañía Surebuilt Engineering Services para su explicación.</p>	
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TILT-UP LIFTING AND BRACING GENERAL NOTES

THE CONCRETE MUST ATTAIN THE MINIMUM COMPRESSIVE STRENGTH AND THE MINIMUM MODULUS OF RUPTURE, AS NOTED BELOW, PRIOR TO TILT-UP PANEL ERECTION.

- Required minimum **compressive strength** = 3,000 p.s.i. prior to erection as determined by ASTM C39 standard cylinder test for compressive strength.
- Required minimum **modulus of rupture** = 500 p.s.i. prior to erection as determined by ASTM C78 standard beam test for flexural strength.

ATTAINING THE REQUIRED COMPRESSIVE STRENGTH DOES NOT ENSURE THAT THE REQUIRED MODULUS OF RUPTURE HAS BEEN ATTAINED. The modulus of rupture beam and compressive strength cylinder test specimens shall remain in the field with the panels and receive the same curing treatment as the panels.

1. All reinforcing steel and/or strongbacks shown on these drawings are required to resist the erection stresses and shall be installed as indicated. Reinforcing shown is the minimum required for erection and may be a part of the reinforcing steel required for in place loads specified by the Engineer of Record; therefore reinforcing shown herein is not additive to other reinforcing requirements. If "Estimated Quantity to Add" note is used, the numbers in the [] is an estimated quantity that should be added to the reinforcing requirements specified by the Engineer of Record.
2. The contractor shall install lifting anchors as indicated herein and/or as required by the manufacturer. **Do not use damaged anchors, anchor hardware or lifting equipment that is damaged.**
3. The contractor shall install the braces and bracing hardware as indicated herein and as required by the manufacturer. **The braces and bracing hardware shall not be used if bent or damaged! Verify that the capacity of the braces used equals or exceeds the required capacity!**
4. This erection design is based on there being no bond between the panels and casting surfaces, no shrinkage cracks and no impact during erection.
5. For important additional information concerning the proper use of the lifting and bracing products depicted herein and the tilt-up process, refer to the Manufacture's technical information and instructions.
6. The attached rigging details are recommended to ensure proper loading of the lift anchors. The erection contractor should not make any changes in rigging details which will alter the load on the lifting inserts.
7. The size and type of crane and the experience and competency of the crane operator shall be as determined by others for the given site conditions. The crane operator shall maintain the crane load line directly over the panel's center of lift. The crane shall be of adequate load capacity and shall have sufficient boom length to erect the panels without sliding or jerking. Surebuilt Engineering Services, accepts no responsibility for crane selection or operation.
8. Spreader beams, crane cables and accessory hardware must be tested and certified pursuant to Federal, State or other jurisdictional regulations before being used to lift concrete tilt-up panels. The selection of these items is the responsibility of others.
9. The crane must be positioned so that the crane line is vertical, perpendicular to the panel surface and casting slab when the lift begins. It must remain perpendicular to the casting slab with its line of action bisecting the sling angle throughout the lift. If the crane line is not in the correct position the loads to the inserts and the stresses in the concrete will be different than those calculated and may result in a hazardous condition.

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TILT-UP LIFTING AND BRACING GENERAL NOTES

10. Tilt-up bracing design depicted herein was developed using a minimum construction period wind speed of 100 mph Risk Category I as recommended by The Tilt-Up Concrete Association which is based on ASCE 37-14. This is the 80 mph basic wind speed modified by 0.8 to convert it to a 1 year mean recurrence interval for the construction period. **This bracing design is not sufficient to withstand hurricane force winds.** It is the contractor's responsibility to take additional precautions to secure the erected panels in the event of a high wind occurrence.

If bracing is on the Gulf Coast or Eastern Seaboard and construction period occurs within July 1 and October 31 then contractor shall have a plan in place if the onset of a hurricane is announced. If the design needs to be revised to higher wind loads please contact Surebuilt Engineering Services.

If wind speeds are predicted to exceed 50 mph, for worker safety, we recommend that the site be shut down and cleared of personnel.

11. In order to develop the full capacity of the brace anchor inserts, the inserts must be embedded in concrete with 2500 p.s.i. minimum concrete compressive strength, five inch (5") minimum embedment and located one foot (1') minimum from all concrete edges. Lesser embedments or lower concrete strengths will reduce the capacity of the brace insert shown on the panel erection details. Attach the braces to the panels using $\frac{3}{4}$ " Φ cast in coil inserts. At the bottom end of the brace, attached the brace to the concrete floor slab, foundations or temporary brace anchors using cast in coil anchors or drilled in Titan HD $\frac{3}{4}$ " Φ x 6" anchor (THDT75600H tilt-up version) as manufactured by Simpson Strong-Tie. All brace anchors are to be as indicated on the panel detail sheet.
12. **The braces must be anchored to a concrete floor slab, footing or temporary brace anchor with sufficient area, weight and strength to resist the applied brace loads.** The braces are designed for attachment at top of floor slab elevation unless noted otherwise on the details. Using floor slabs, footings or temporary brace anchor of insufficient size or strength may result in failure of the brace system before the design wind load is reached. The design of concrete floor slab, footings or temporary brace anchors to resist brace loads is the responsibility of others.
13. The bracing requirements depicted herein are for the resistance of construction period wind load only. **The effect of construction live loads, construction impact loads, soil backfill loads, and other vertical and lateral loads, have not been considered in the design of the bracing systems depicted herein. It is the contractor's responsibility to provide any additional bracing resistance required to withstand these additional loads.**
14. The vertical location, horizontal location and angle of the braces are critical factors in the design of the bracing system. Additionally certain panel connections as indicated herein may be a part of the bracing system. These connections must be installed during the erection of each panel. Deviations may significantly reduce the capacity of the bracing system.
15. The contractor/client must review and verify drawings to ensure that the panel dimensions and embed locations are correct before the casting of any panels.
16. These drawings are based on information furnished to Surebuilt Engineering Services, by our client. Surebuilt Engineering Services, has relied upon the accuracy of that information. SUREBUILT ENGINEERING, accepts no responsibility for any construction deviations from these drawings, any error in such information provided to them by the client, clients failure to verify embed locations and casting dimensions, workmanship in the field, or field conditions.

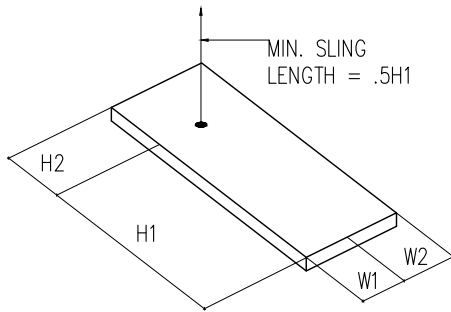
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TILT-UP LIFTING AND BRACING GENERAL NOTES

17. The attached panel drawings are only intended to relay the design intent of the panel lifting and bracing design. **These panel drawings should not be used for casting of panels**, as some dimensions may be approximate.
18. All tilt-up panels are to be erected on two sets of temporary plastic shims (4" x 6" x 1") that are capable of compression forces of 10,000 p.s.i. before significant deformation. The shim packs are to be approximately located 1'-0" from the ends of the each panel and at the center of mass of the panels (front to back).
19. Tilt-up construction and erection should only be performed under the direction and direct supervision of properly trained and experienced field supervisors meeting the requirements of TCA/ACI Certified Tilt-up Superintendent.
20. Helical anchor design had not been addressed, responsibly for helical anchor design is by others. The bracing loads are provided, so that an outside design company can to determine minimum torque and minimum depth for helical anchors based on site conditions.

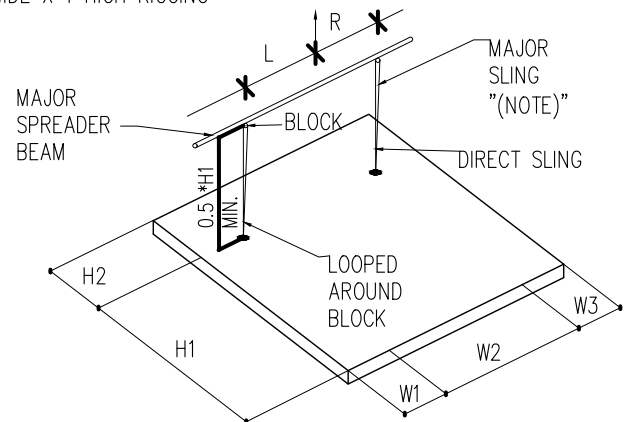
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1 WIDE X 1 HIGH RIGGING



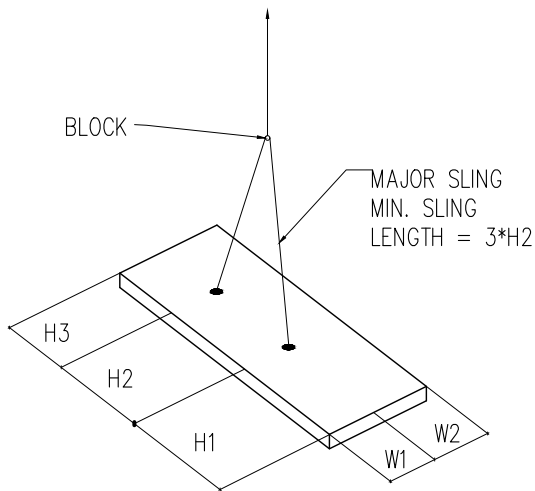
CAN ALSO BE USED FOR
TOP EDGE LIFTING

2 WIDE X 1 HIGH RIGGING

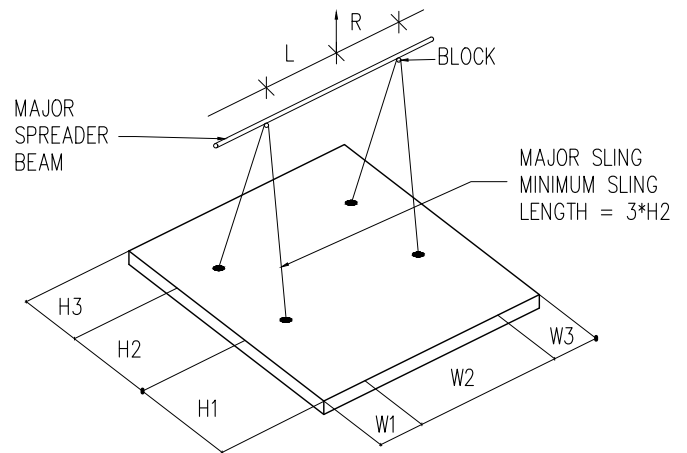


CAN ALSO BE USED FOR
TOP EDGE LIFTING

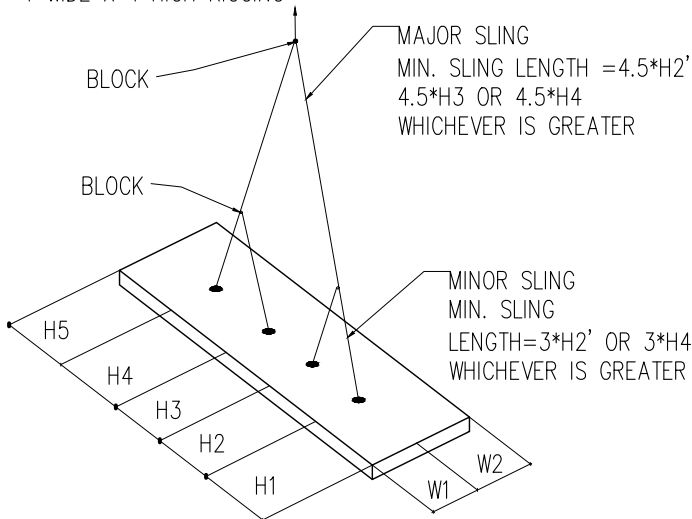
1 WIDE X 2 HIGH RIGGING



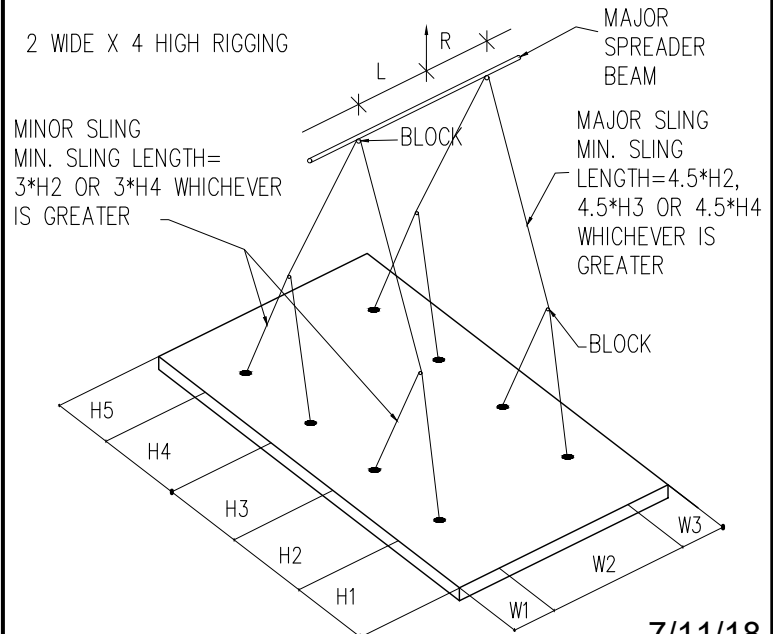
2 WIDE X 2 HIGH RIGGING



1 WIDE X 4 HIGH RIGGING

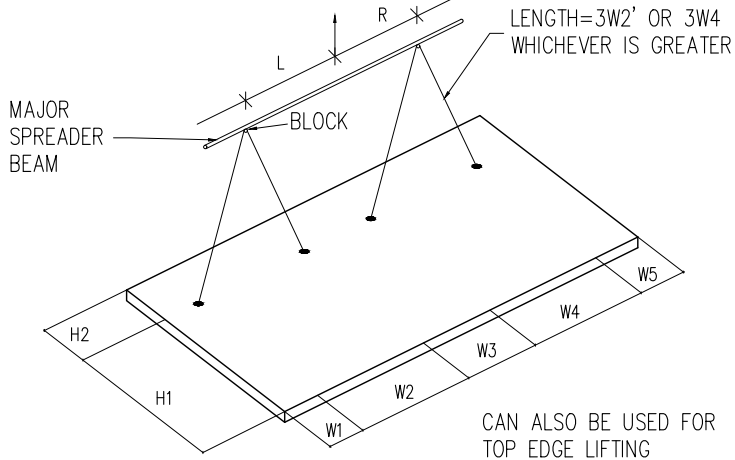


2 WIDE X 4 HIGH RIGGING



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4 WIDE X 1 HIGH RIGGING



SYMBOL LEGEND



BRACE ANCHOR



LIFT INSERT:



CENTER OF LIFT : (X,Y)

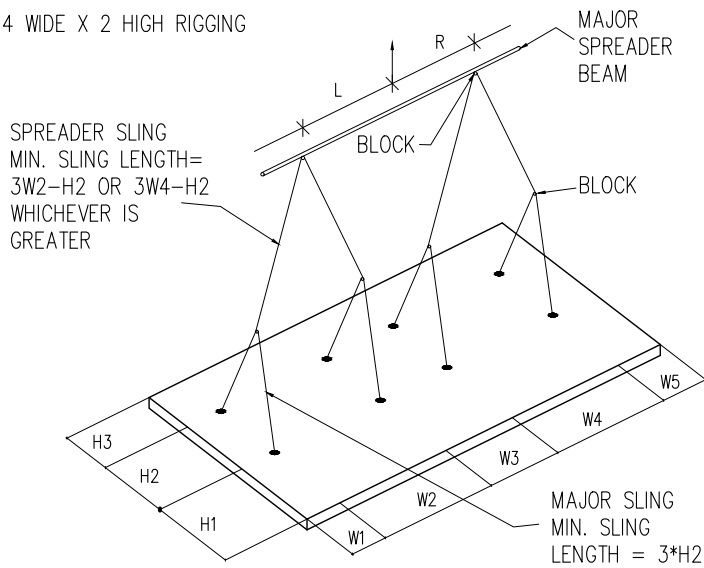


CENTER OF GRAVITY : (X,Y)

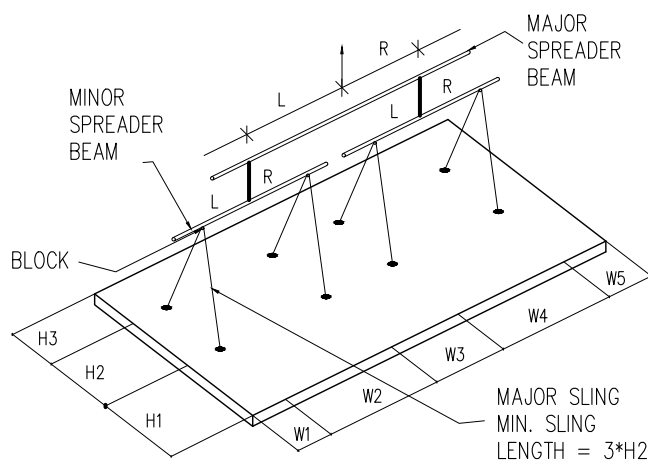


FOUNDATION CONNECTION
REQUIRED AT TIME OF
ERECTION

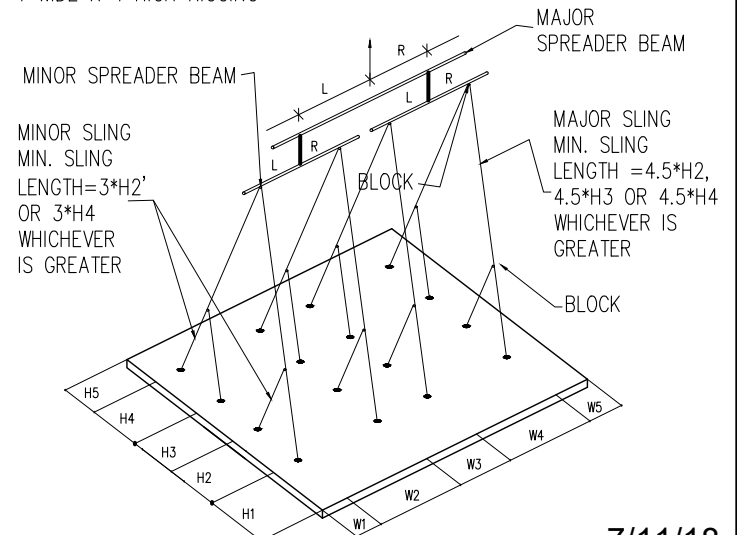
4 WIDE X 2 HIGH RIGGING



4 WIDE X 2 HIGH RIGGING



4 WIDE X 4 HIGH RIGGING



7/11/18

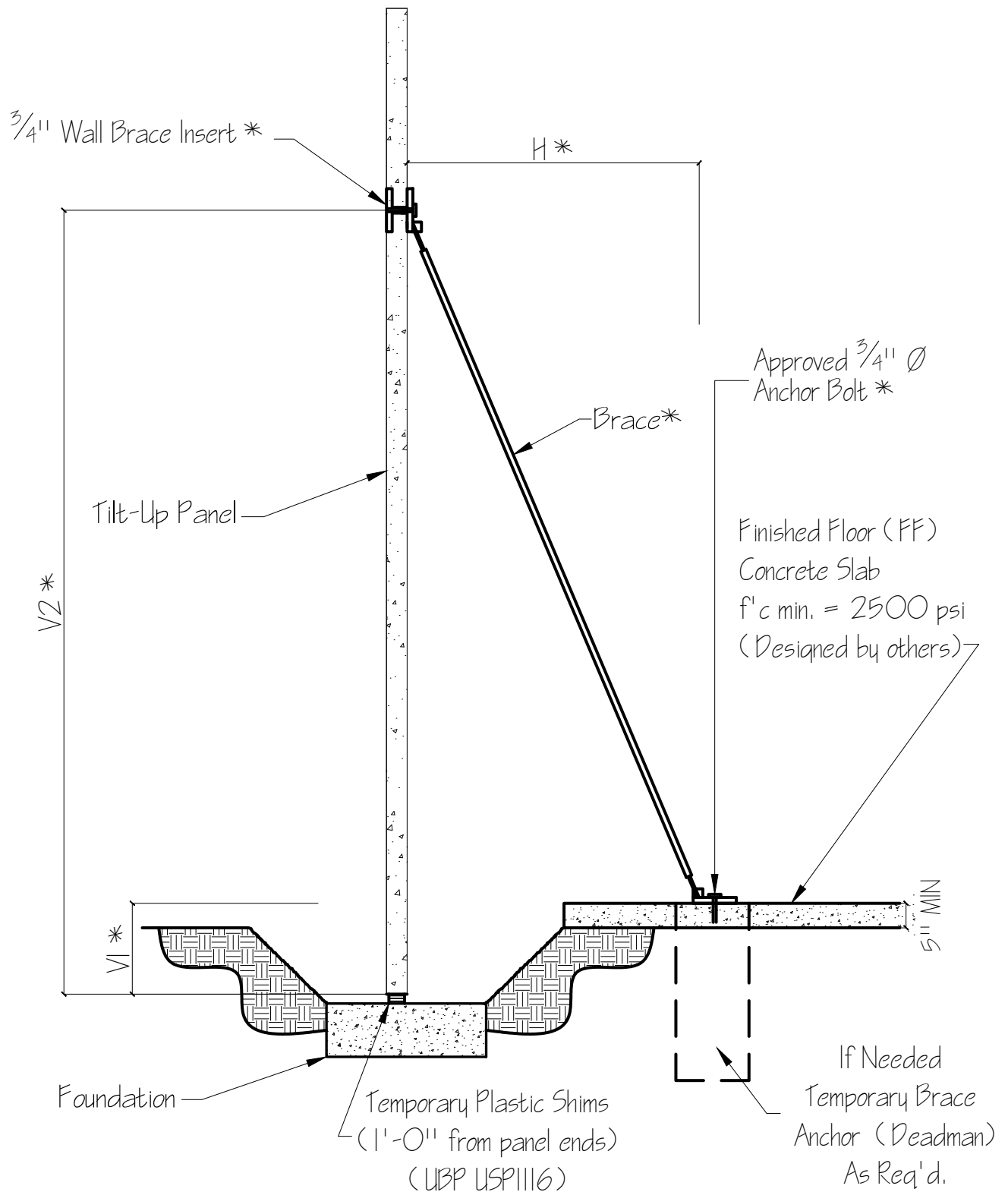
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RIGGING DETAILS

Sheet:

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* SEE PANEL LIFTING DETAIL AND/ OR NOTES

7/11/18

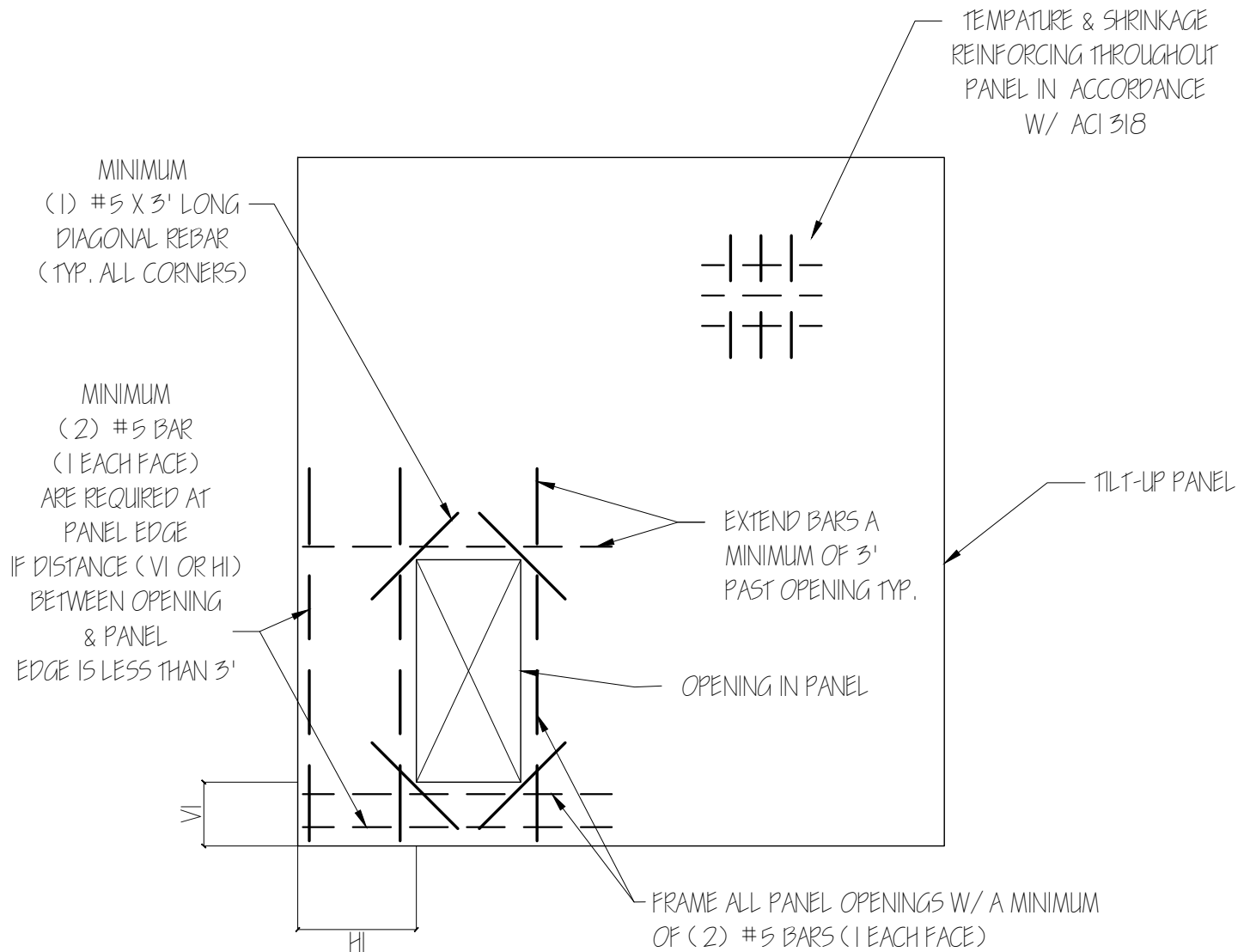
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TYPICAL BRACING DETAIL

Sheet:

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NOTE: THIS DETAIL REFLECTS THE MINIMUM REINFORCING REQUIRED TO BE PRESENT. FOR ADDITIONAL REINFORCING REQUIREMENTS SPECIFIC TO INDIVIDUAL PANELS, REFER TO AMERICAN CONSTRUCTIONERS LLC, PANEL ERECTION DETAILS AND / OR THE CONTRACT DOCUMENTS OF THE STRUCTURE PREPARED BY THE ENGINEER OF RECORD (EOR). REINFORCING SHOWN IS THE MINIMUM REQUIRED FOR ERECTION AND MAY BE A PART OF THE REINFORCING STEEL REQUIRED FOR IN PLACE LOADS SPECIFIED BY THE (EOR); THEREFORE REINFORCING SHOWN HEREIN IS NOT ADDITIVE TO OTHER REINFORCING REQUIREMENTS.

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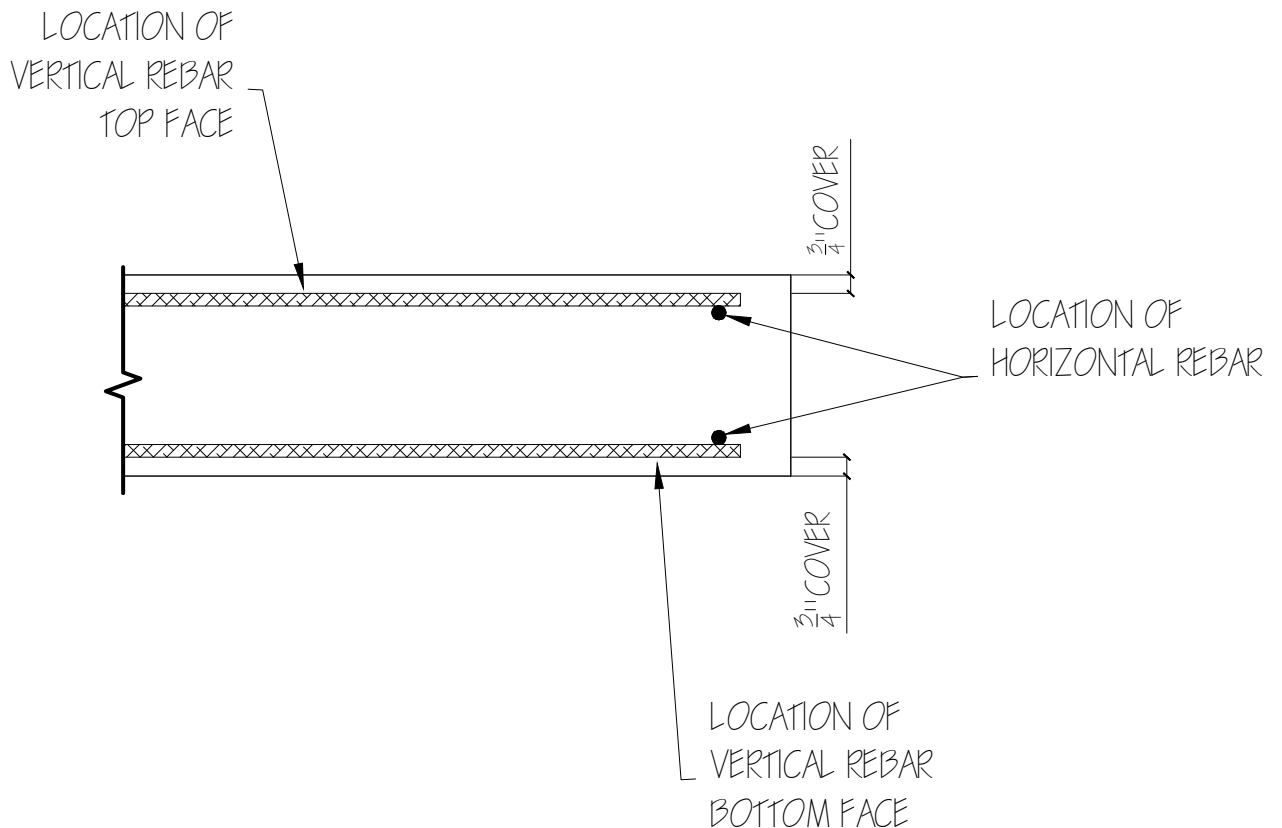
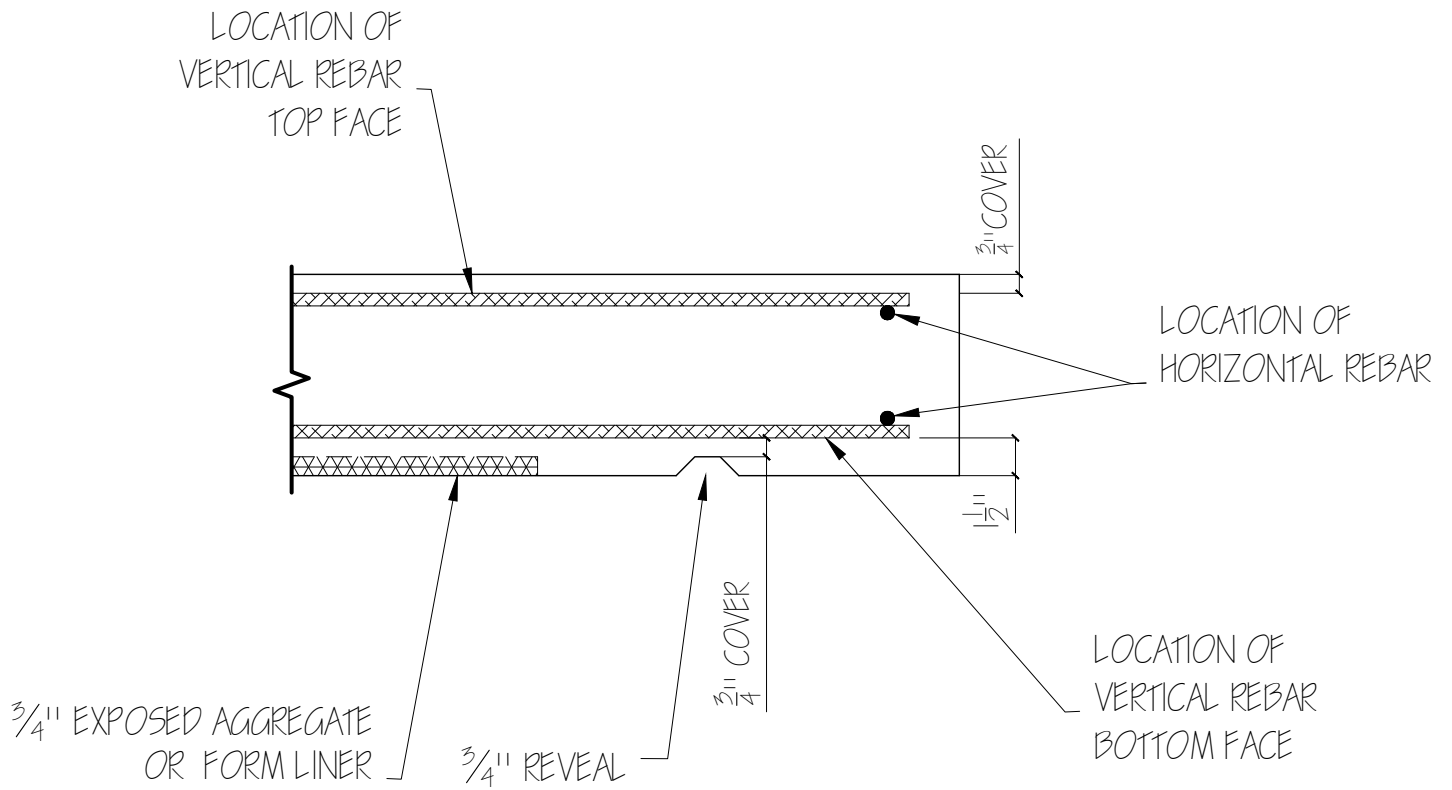
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TYPICAL MINIMUM REINFORCING REQUIREMENTS

Sheet:

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Bracing to Cylindrical Brace Anchors

Use the chart below to select the proper size Brace Anchor if your project requires the use of a Brace Anchor for brace attachment in lieu of an anchor cast into a floor slab.

How to select the proper size Brace Anchor:

- 1) Determine the maximum applied brace load for the project.
- 2) The proper Brace Anchor must weigh at least as much as the maximum individual brace load.
- 3) Find a number on the Brace Anchor chart that is equal to or greater than the required Brace Anchor weigh. Follow the numbers in the top column and the far left column of the chart for the proper diameter and height of the Brace Anchor.

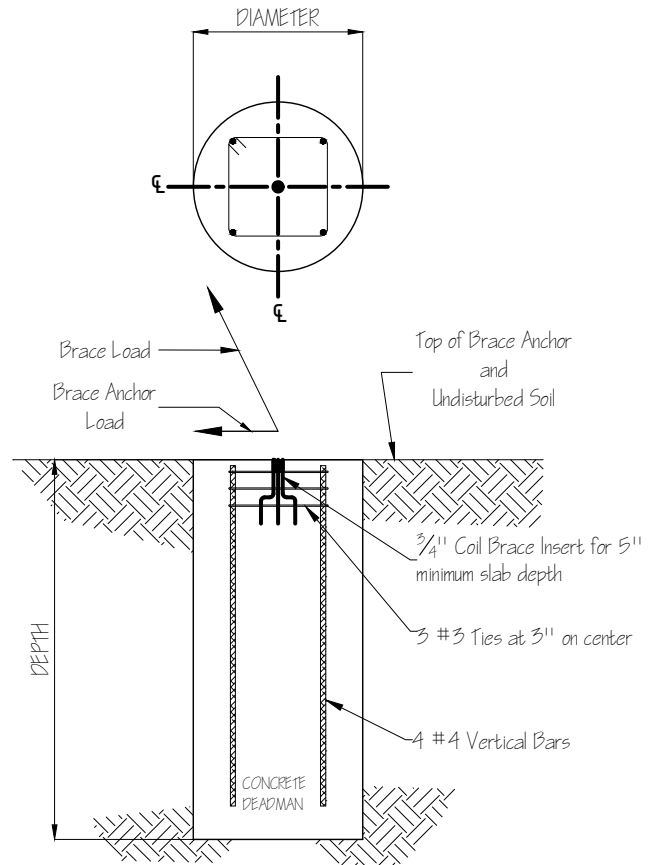
Example:

Maximum Applied Brace Load = 3,700 lbs.

Acceptable deadman sizes are:

Diameter	Height
24"	8'-0"
30"	5'-6"
36"	3'-6"
42"	3'-6"

Weights Of Brace Anchor (Pounds)				
Height	24" Diameter	30" Diameter	36" Diameter	42" Diameter
3'-6"	1,650	2,580	3,710	5,050
4'-0"	1,890	2,950	4,240	5,770
4'-6"	2,120	3,310	4,770	6,490
5'-0"	2,360	3,680	5,300	7,220
5'-6"	2,590	4,050	5,830	7,931
6'-0"	2,830	4,420	6,360	8,652
6'-6"	3,060	4,790	6,890	9,373
7'-0"	3,300	5,150	7,420	
7'-6"	3,540	5,520	7,950	
8'-0"	3,770	5,890	8,480	
8'-6"	4,010	6,260	9,010	
9'-0"	4,240	6,630		
9'-6"	4,480			
10'-0"	4,710			



Warning:

This table applies to auger excavated round cylindrical Brace Anchor only, cast directly against undisturbed soil with the minimum soil and concrete properties noted below. Do NOT place Brace Anchor in or close to embankments, as this way reduce it's load carrying capacity. The Brace Anchor sizes obtained from the table are recommended minimum sizes based on the soil conditions listed. A qualified professional engineer familiar with the job site soil conditions should review the Brace Anchor size selected to ensure that it is adequate in size and properly located to withstand the applied brace loads.

Minimum Concrete Properties:

Concrete Compressive Strength = 2500 p.s.i.

Concrete Density = 145 p.c.f.

Minimum Soil Properties:

Soil Density = 100 p.c.f.

Angle of Soil Shearing Resistance = 35 degrees

Vertical Soil Bearing = 1500 p.s.f.

Lateral Soil Bearing = 150 p.s.f.

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CYLINDRICAL BRACE ANCHOR

Sheet:

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$\frac{3}{4}$ " Inverted Wall Brace Insert *

H *

Tilt-Up Panel

Brace*

Finished Floor (FF)

Concrete Slab

f'_c min. = 2500 psi

(Designed by others)

Approved $\frac{3}{4}$ " \varnothing
Anchor Bolt *

V1 *

V2 *

5" MIN

Temporary Brace
Anchor
As Needed

Temporary Plastic Shims
(1'-0" from panel ends)

Foundation

* SEE PANEL LIFTING DETAIL AND/ OR NOTES

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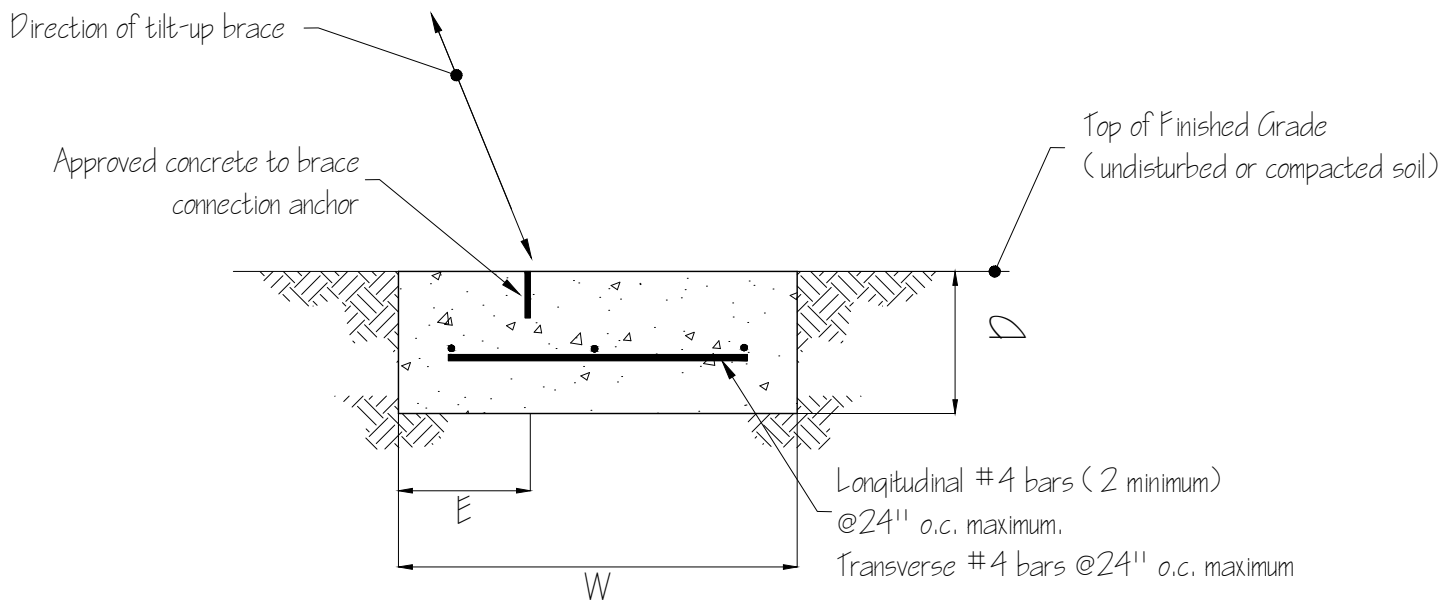
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TYPICAL BRACING OUTSIDE DETAIL

Special Detail

SD - 1

Bracing to Continuous Brace Anchors



Continuous Footing Detail

W	D	E	PANEL NUMBERS

Warning:

This detail applies to excavated continuous Brace Anchor only, cast directly against undisturbed soil with the minimum soil and concrete properties noted below. Do NOT place Brace Anchor in or close to embankments, as this way reduce it's load carrying capacity. The extent of continuous footing MUST cover the full width of the panel. The Brace Anchor sizes obtained from this detail are recommended minimum sizes based on the soil conditions listed. A qualified professional engineer familiar with the job site soil conditions should review the Brace Anchor size selected to ensure that it is adequate in size and properly located to withstand the applied brace loads.

Minimum Concrete Properties:

Concrete Compressive Strength = 2500 p.s.i.

Concrete Density = 145 p.c.f.

Minimum Soil Properties:

Soil Density = 100 p.c.f.

Angle of Soil Shearing Resistance = 35 degrees

Vertical Soil Bearing = 1500 p.s.f.

Lateral Soil Bearing = 150 p.s.f.

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CONTINUOUS BRACE ANCHOR

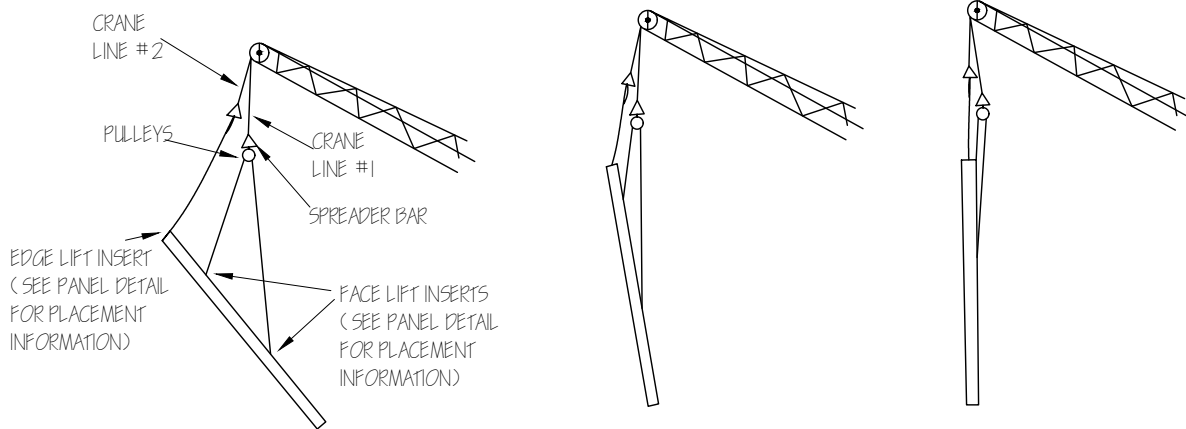
Special Detail

SD - 2

HORIZONTAL TO VERTICAL PANEL TRANSFERS

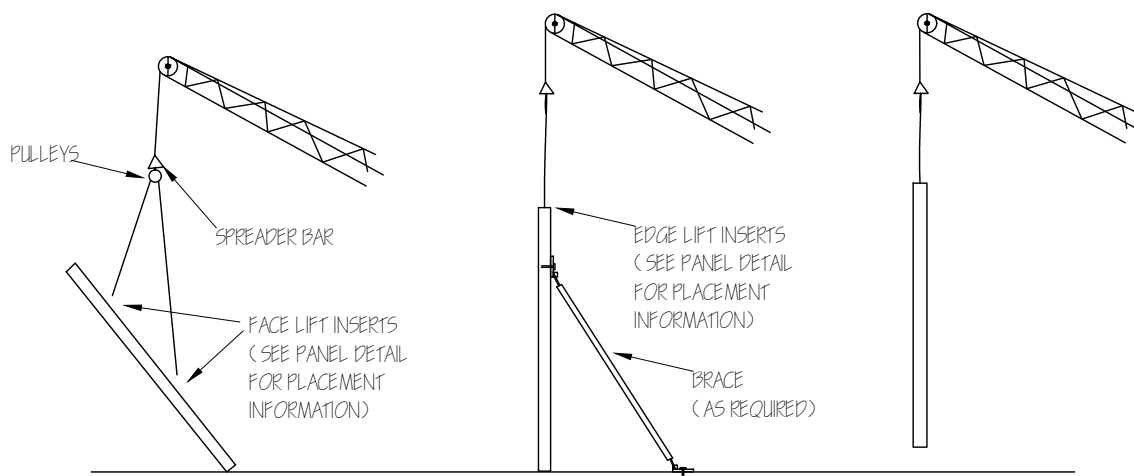
MID-AIR TRANSFER (TWO CRANE LINE METHOD)

1. LIFT THE PANEL TO VERTICAL POSITION USING CRANE LINE #1 AND FACE LIFT INSERTS ONLY, LEAVING SLACK IN CRANE LINE #2.
2. ONCE THE PANEL IS HANGING VERTICAL AND FREE OF THE CASTING BED, TRANSFER THE ENTIRE LOAD OF THE PANEL TO CRANE LINE #2 AND THE INSERTS IN THE TOP EDGE OF THE PANEL.
3. THE PANEL MAY NOW BE SET INTO POSITION USING CRANE LINE #2 AND THE INSERTS IN THE EDGE OF THE PANEL ONLY.



BRACE AND TRANSFER (SINGLE CRANE LINE METHOD)

1. LIFT THE PANEL TO VERTICAL POSITION USING FACE LIFT INSERTS ONLY.
2. SECURELY BRACE THE PANEL IN THE VERTICAL POSITION IN A MANNER CONSISTENT WITH APPLICABLE BUILDING CODES AND CONSTRUCTION SAFETY ORDERS.
3. RELEASE THE CRANE LINES FROM THE FACE LIFT INSERTS AND ATTACH TO THE INSERTS IN THE TOP EDGE OF THE PANEL. CHANGE LIFTING HARDWARE AND RIGGING AS REQUIRED FOR COMPATIBILITY.
4. WITH THE CRANE LINES TAUT, SUPPORTING THE PANEL, RELEASE THE BRACING AND LIFT THE PANEL WITH THE EDGE LIFT INSERTS TO SET IT IN ITS FINAL LOCATION.



NOTE: "TWO-HIGH" RIGGING SHOWN ABOVE IS FOR ILLUSTRATION PURPOSES ONLY. SEE GENERAL NOTES AND PANEL DETAILS FOR ACTUAL RIGGING CONFIGURATION, SLING LENGTHS AND SPREADER BAR REQUIREMENTS.

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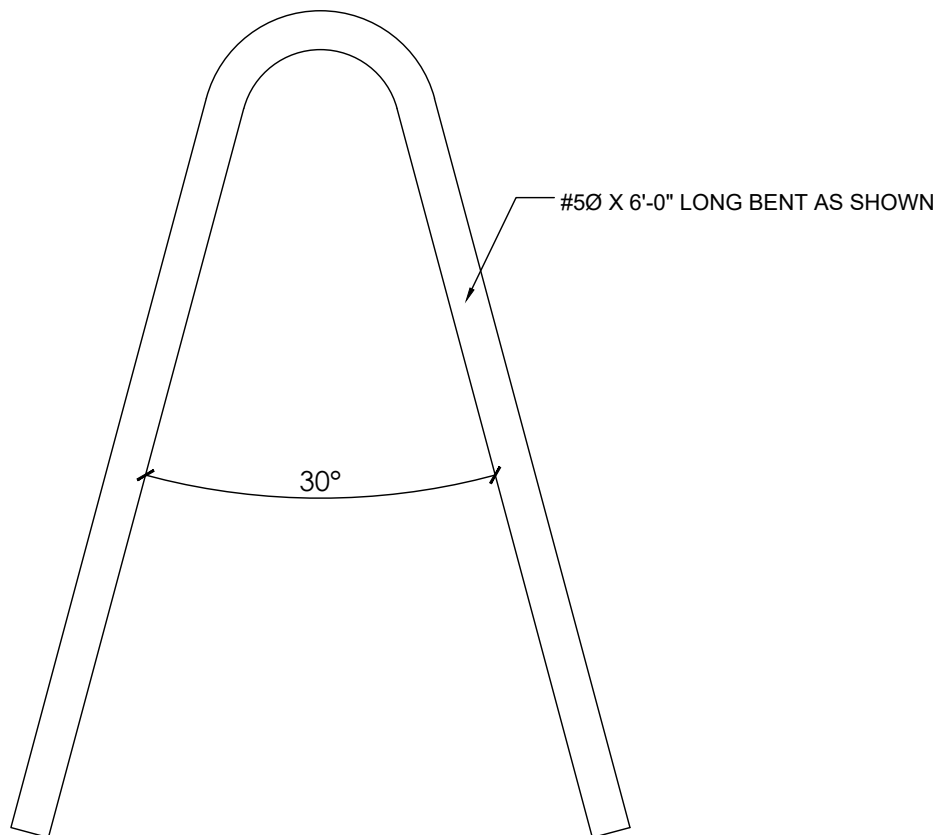
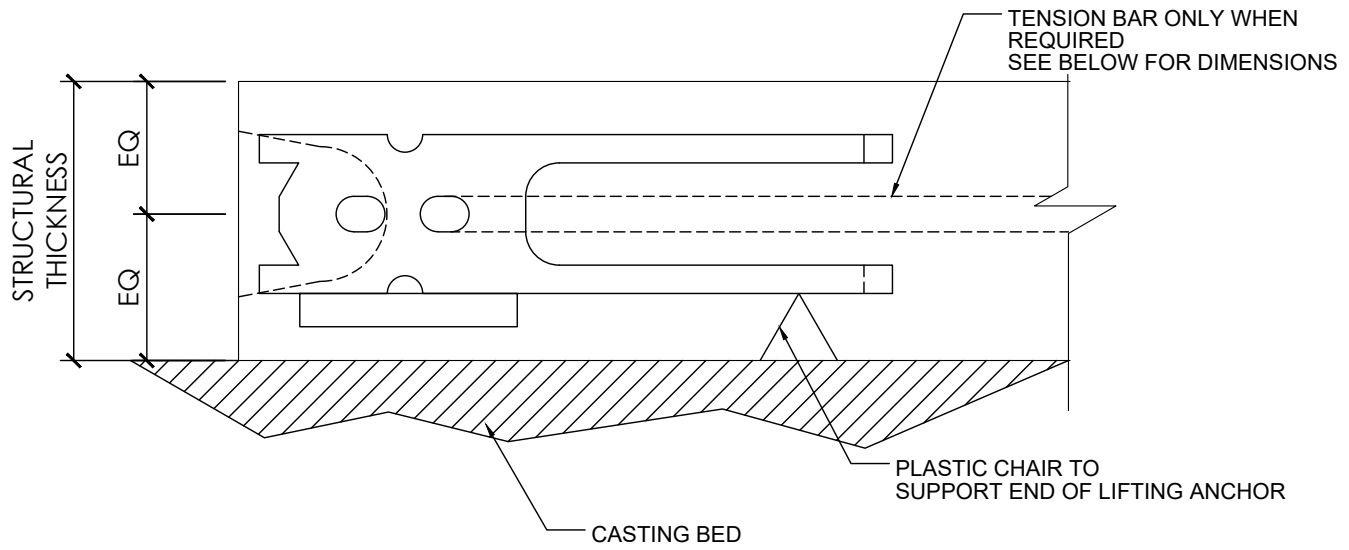
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MID-AIR TRANSFER

Special Detail

SD-3



1/1/20

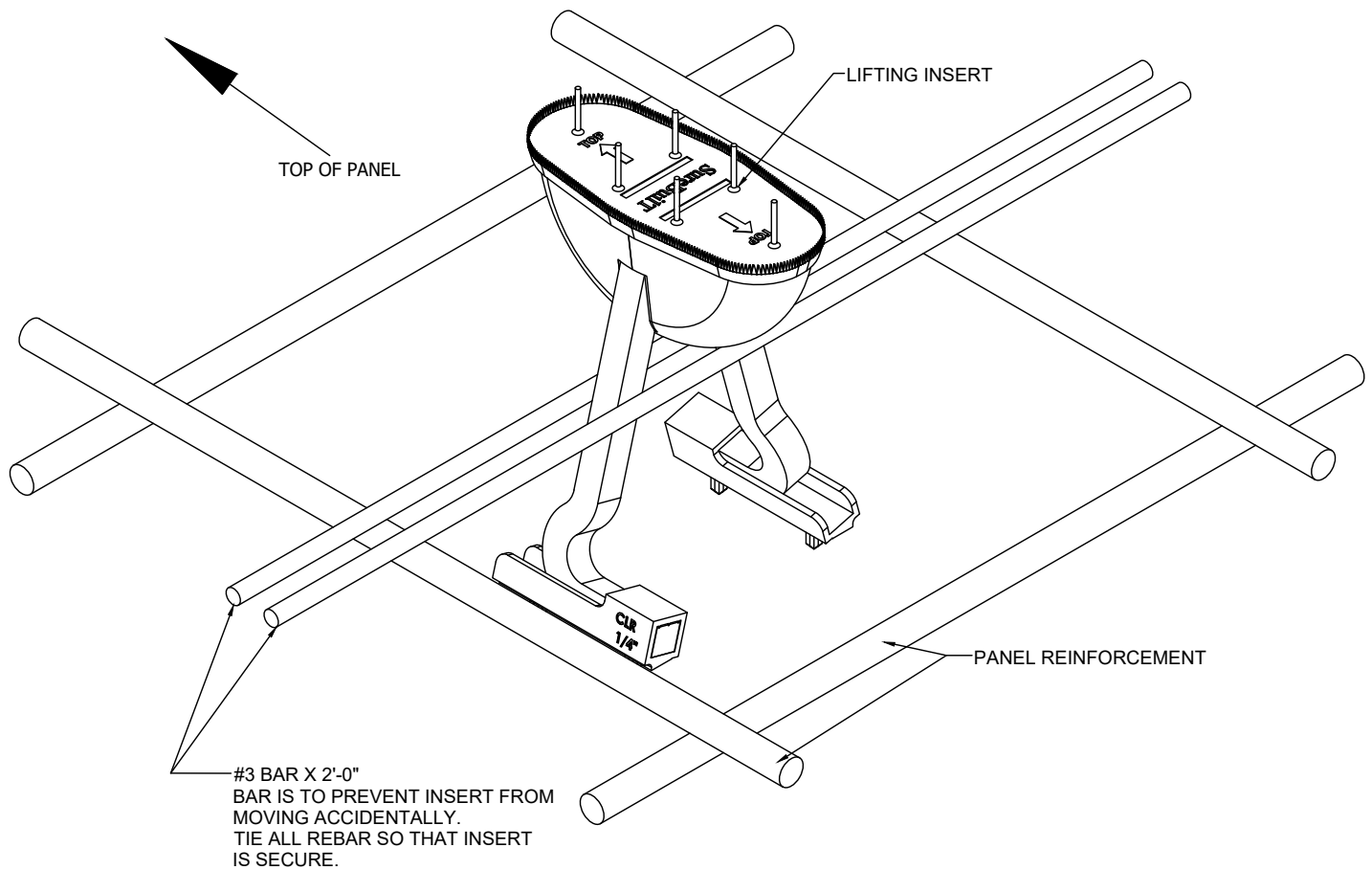
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EDGE LIFTING INSERT

Special Detail

SD-4



1/1/20

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INSERT PLACEMENT

Special Detail

SD-5

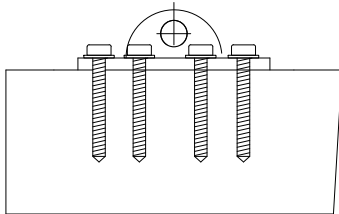
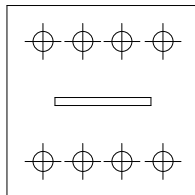
THE EMERGENCY LIFT-IT PLATE IS DESIGNED TO BE APPLIED WHEN THE ORIGINAL INSERT IS NOT USABLE FOR WHATEVER REASON OR WHEN NEEDED TO RELOCATE A LIFT POINT TO ITS PROPER POSITION WHEN THE ORIGINAL INSERT IS MIS-LOCATED IN THE PANEL.

THE PLATE IS DESIGNED TO BE ATTACHED TO THE PANEL WITH $\frac{3}{4}$ " X 6" SIMPSON TITEN HD ANCHORS OR EQUIVALENT. IF USING AN EQUIVALENT ANCHOR SEE THE ANCHOR MANUFACTURER'S INSTRUCTION SHEET FOR PROPER INSTALLATION OF THE ANCHOR AS WELL AS THE ANCHOR'S SAFE WORKING LOAD.

THE LIFT-IT PLATE IS TO BE INSTALLED OVER THE ORIGINAL INSERT LOCATION OR TO A DESIGNATED SPOT AS DIRECTED BY AN INDIVIDUAL EXPERIENCED IN SUCH SITUATIONS. IF THE USER IS UNCERTAIN AS TO WHAT TO DO CONTACT AMERICAN CONSTRUCTIONERS FOR DIRECTION. WHEN INSTALLING THE PLATE ALWAYS BE CERTAIN THE LIFTING LUG IS ALIGNED WITH THE CRANE CABLES.

THE EMERGENCY LIFT-IT PLATE HAS A MAXIMUM SAFE WORKING LOAD OF 22,000lbs. (INCLUDING A 5:1 SAFETY FACTOR) AND **SHOULD NOT BE LOADED OVER THAT AMOUNT.** HOWEVER, THE ACTUAL SAFE WORKING LOAD MAY BE LESS DEPENDING ON THE TYPE AND AMOUNT OF ANCHORS USED TO INSTALL THE PLATE.

WHEN INSTALLING DRILLING HOLES FOR BOLTS, REBAR IN THE PANEL SHALL NOT BE CUT. ONLY THE EOR MAY APPROVE WHEN REBAR IN A PANEL CAN BE CUT. CUTTING OF REBAR CAN COMPROMISE PANEL INTEGRITY.



TITEN HD Anchor

Anchor Size	Anchor TYPE	SWL (lbs)	Min Torque (ft/lbs)
$\frac{3}{4}$ " x 6"	TITEN HD BY SIMPSON	6,843	100
Approximate Safety Factor. 2:1 in 3000 psi concrete			

Anchor Installation

Before installing the Anchor Check the Threads:

The bolts use shall be new and have no damage to the threads. Care must be taken in drilling the holes as damaged holes may compromise anchor capacity.

WARNINGS:

1. The concrete must have a minimum of 3000 psi compressive strength
2. Do not use the Titen HD Anchor in panels thinner than 7"
3. Recommended minimum edge distance to drill center is 12"
4. Titen HD anchors shall be used once. After single use capacity of anchors may be comprised.

Drilling the hole for Coil Expansion Anchor and installing the Emergency Lift-Plate.

1. Drill holes at 90 degree angle to the panel surface using a $\frac{3}{4}$ " diameter carbide-tipped drill bit. Drill a minimum of 5 $\frac{3}{4}$ " deep for 6" Anchor into the panel. Using the Emergency Lift-it Plate as a template.
2. Clean the holes with compressed air or blow out bulb.
3. Place Emergency Lift-it Plate over the holes. Drill down until the washer and head of the Anchor touch the Lift-it Plate.
4. Tighten the Anchor using a $\frac{3}{4}$ " impact wrench.
5. Check the Anchor with a torque wrench to make sure the bolt is tightened to minimum 100 FT-LBS torque.

7/11/18

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EMERGENCY LIFT-IT PLATE

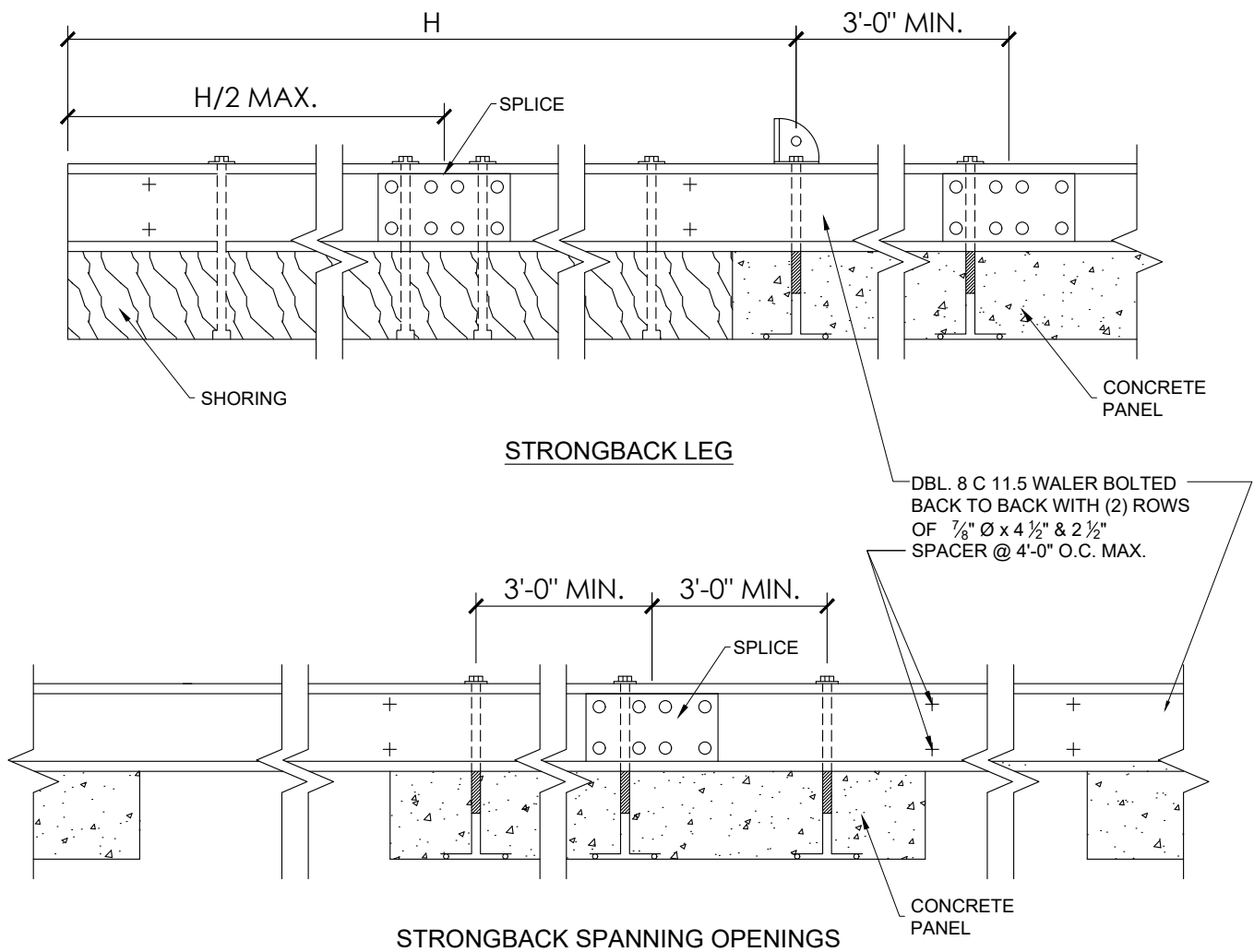
Special Detail

ELP-1

8" STEEL CHANNEL STRONGBACK SPLICES

When using the double 8C11.5 Steel Channel Strongbacks on tilt-up panels, use continuous unspliced channels when possible. Steel Channel Strongbacks may be spliced for length requirements over 15'-0" or when continuous shorter lengths are not available. When channel splices are required, the restrictions below apply.

1. Only approved 8" channel splices shall be used.
2. Each channel splice shall be attached with (8) $\frac{7}{8}$ " \varnothing x 1 $\frac{1}{2}$ " machine bolts tightened to 150 foot-pounds minimum torque.
3. Splice location limits shall be as shown below.
4. Unless noted otherwise on panel details, no splice location restrictions apply to strongbacks that are connected to and resting on the concrete panel over its entire length.



TYPICAL STRONGBACK
SPLICE PLATE DETAIL

Special Detail

SB - 1



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