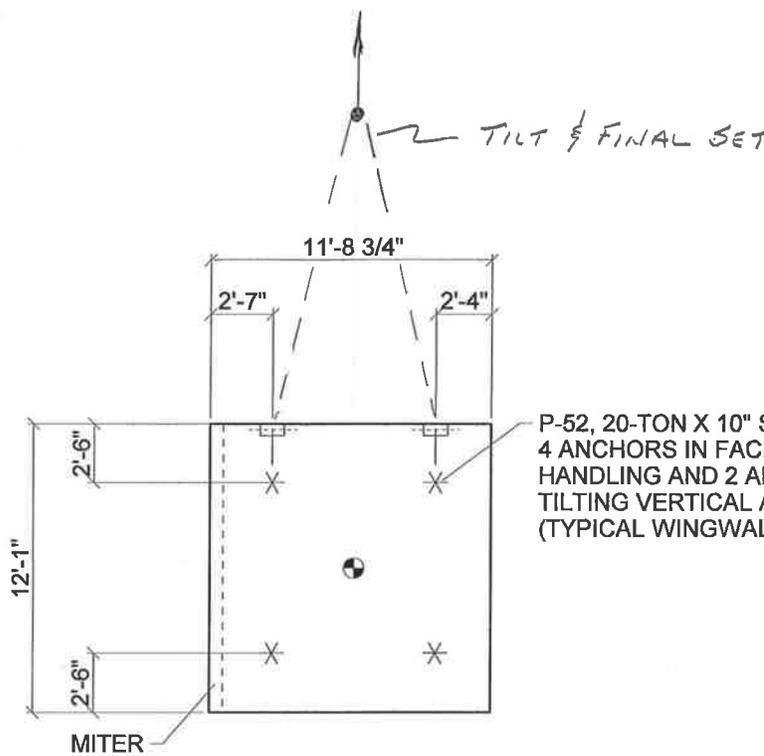
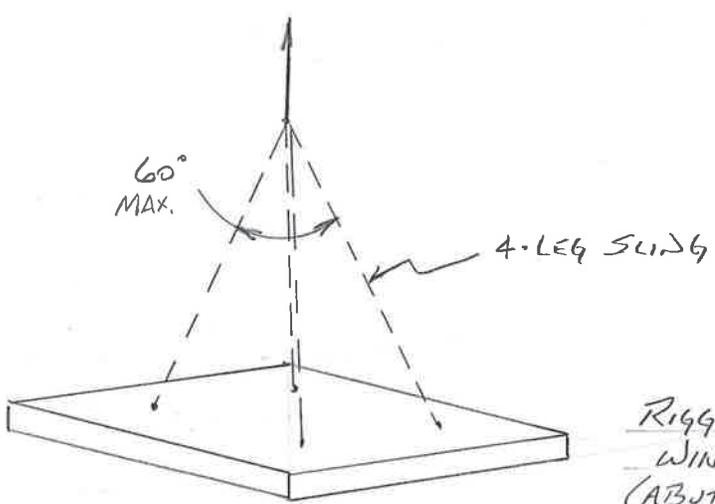


NON STR. THK.	STRUCT. THK.	WEIGHT	WIDTH	HEIGHT	NO. REQ'D.	PANEL NUMBER OR TYPE
	18 1/8"	31.4 kips	11'-8 3/4"	12'-1"	1	WW1



P-52, 20-TON X 10" SWIFT-LIFT ANCHORS
 4 ANCHORS IN FACE FOR STRIPPING AND
 HANDLING AND 2 ANCHORS IN TOP FOR
 TILTING VERTICAL AND FINAL SET.
 (TYPICAL WINGWALL PANELS)



*RIGGING DETAIL
 WING-WALL PANELS
 (ADJUSTMENTS SIMILAR)*

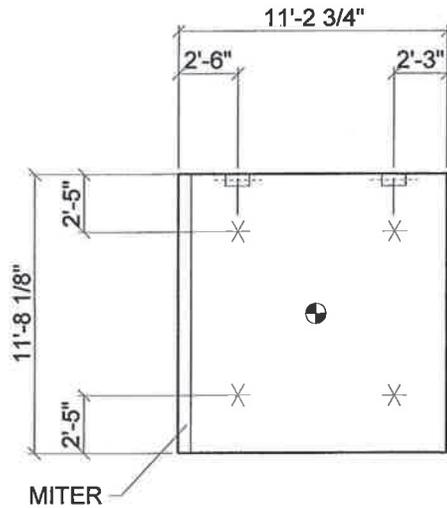


VERIFY ALL DIMENSIONS PRIOR TO POURING PANEL MINIMUM COMPRESSIVE STRENGTH REQ'D.= 4,000 PSI

Construction Period Design Wind Speed	84 mph	TOTAL BRACE LOAD =	B=	W=	F=	BRACE REQ'D.:
GROUND RELEASE II TILT-UP SYSTEM This drawing is furnished solely for the purpose of clarifying the proper use, installation and application of products supplied by Dayton Superior. Dayton Superior does not assume any responsibility for the correctness of structural designs or dimensions furnished by others. These drawings are intended merely to supplement the architectural and structural drawings and are to be used only in conjunction with them. In no way are these drawings to be interpreted as shop drawings for panel fabrication.	\bar{X} 5'-11 15/16"	ΔX .13 >	CY= 7.7		SCALE:	RIGGING DETAILS
	\bar{Y} 6'-0 1/2"	$2\Delta X$.26	GROSS AREA 141.7	1/8"	F32	
	PANEL VIEWED FROM: INSIDE	CHECKED BY	NET AREA 141.7	JOB NO.	SHEET	
	LAYOUT BY BP	DATE 3/14/14	14120	1 OF 20		

NOTE: INSERT AND BRACING DESIGN SHOWN IS BASED ON THE USE OF DAYTON SUPERIOR PRODUCTS ONLY!

NON STR. THK.	STRUCT. THK.	WEIGHT	WIDTH	HEIGHT	NO. REQ'D.	PANEL NUMBER OR TYPE
	18"	28.8 kips	11'-2 3/4"	11'-8 1/8"	1	WW2



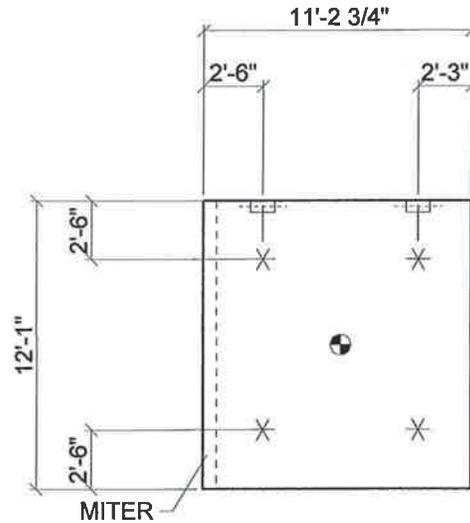
VERIFY ALL DIMENSIONS PRIOR TO POURING PANEL

MINIMUM COMPRESSIVE STRENGTH REQ'D.= 4,000 PSI

Construction Period Design Wind Speed	84 mph	TOTAL BRACE LOAD =	B=	W=	F=	BRACE REQ'D.:		
GROUND RELEASE II TILT-UP SYSTEM This drawing is furnished solely for the purpose of clarifying the proper use, installation and application of products supplied by Dayton Superior. Dayton Superior does not assume any responsibility for the correctness of structural designs or dimensions furnished by others. These drawings are intended merely to supplement the architectural and structural drawings and are to be used only in conjunction with them. In no way are these drawings to be interpreted as shop drawings for panel fabrication.	X	5'-8 15/16"	ΔX	.13 >	CY= 7.1	SCALE:	RIGGING DETAILS	
	Y	5'-10 1/16"	$2\Delta X$.26	GROSS AREA 131.1	1/8"	F32	
	PANEL VIEWED FROM:		INSIDE		CHECKED BY	NET AREA 131.1	JOB NO.	SHEET
					LAYOUT BY BP	DATE 3/14/14	14120	2 OF 20

NOTE: INSERT AND BRACING DESIGN SHOWN IS BASED ON THE USE OF DAYTON SUPERIOR PRODUCTS ONLY!

NON STR. THK.	STRUCT. THK.	WEIGHT	WIDTH	HEIGHT	NO. REQ'D.	PANEL NUMBER OR TYPE
	18"	29.8 kips	11'-2 3/4"	12'-1"	1	WW3



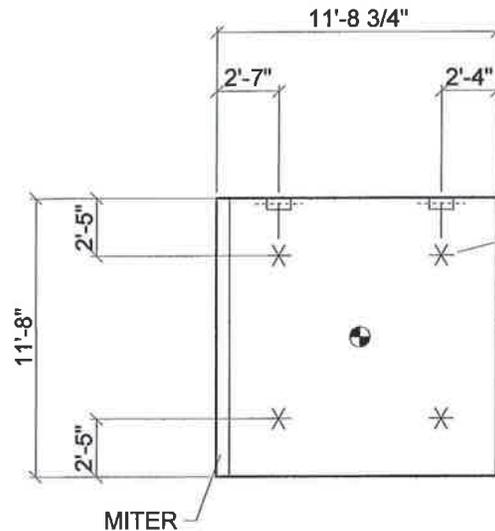
VERIFY ALL DIMENSIONS PRIOR TO POURING PANEL

MINIMUM COMPRESSIVE STRENGTH REQ'D.= 4,000 PSI

Construction Period Design Wind Speed	84 mph	TOTAL BRACE LOAD =	B=	W=	F=	BRACE REQ'D.:
GROUND RELEASE II TILT-UP SYSTEM This drawing is furnished solely for the purpose of clarifying the proper use, installation and application of products supplied by Dayton Superior. Dayton Superior does not assume any responsibility for the correctness of structural designs or dimensions furnished by others. These drawings are intended merely to supplement the architectural and structural drawings and are to be used only in conjunction with them. In no way are these drawings to be interpreted as shop drawings for panel fabrication.	\bar{X} 5'-8 15/16"	ΔX .13 >	CY= 7.4	SCALE:	RIGGING DETAILS	
	\bar{Y} 6'-0 1/2"	$2\Delta X$.26	GROSS AREA 135.7	1/8"	F32	
	PANEL VIEWED FROM: INSIDE	CHECKED BY	NET AREA 135.7	JOB NO.	SHEET	
	LAYOUT BY BP	DATE 3/14/14	14120	3 OF 20		

NOTE: INSERT AND BRACING DESIGN SHOWN IS BASED ON THE USE OF DAYTON SUPERIOR PRODUCTS ONLY!

NON STR. THK.	STRUCT. THK.	WEIGHT	WIDTH	HEIGHT	NO. REQ'D.	PANEL NUMBER OR TYPE
	18"	30.1 kips	11'-8 3/4"	11'-8"	1	WW4



P-52, 20-TON X 10" SWIFT-LIFT ANCHORS
 4 ANCHORS IN FACE FOR STRIPPING AND
 HANDLING AND 2 ANCHORS IN TOP FOR
 TILTING VERTICAL AND FINAL SET.



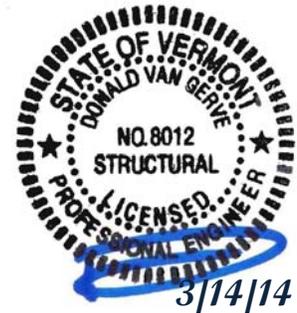
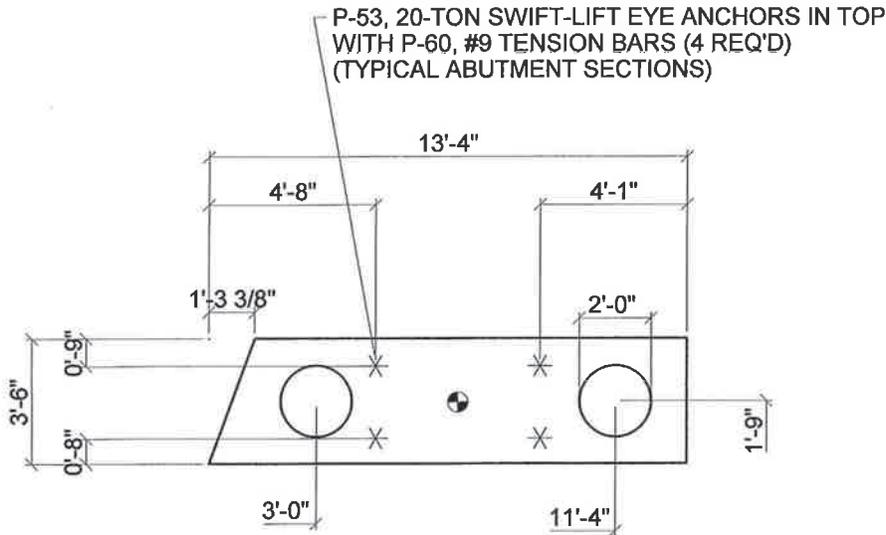
VERIFY ALL DIMENSIONS PRIOR TO POURING PANEL

MINIMUM COMPRESSIVE STRENGTH REQ'D.= 4,000 PSI

Construction Period Design Wind Speed	84 mph	TOTAL BRACE LOAD =	B=	W=	F=	BRACE REQ'D.:
GROUND RELEASE II TILT-UP SYSTEM This drawing is furnished solely for the purpose of clarifying the proper use, installation and application of products supplied by Dayton Superior. Dayton Superior does not assume any responsibility for the correctness of structural designs or dimensions furnished by others. These drawings are intended merely to supplement the architectural and structural drawings and are to be used only in conjunction with them. In no way are these drawings to be interpreted as shop drawings for panel fabrication.	\bar{X} 5'-11 15/16"	ΔX .13 >	CY= 7.4		SCALE:	RIGGING DETAILS
	\bar{Y} 5'-10"	$2\Delta X$.26	GROSS AREA 136.8	1/8"	F32	
	PANEL VIEWED FROM: INSIDE	CHECKED BY	NET AREA 136.8	JOB NO.	SHEET	
	LAYOUT BY BP	DATE 3/14/14	14120	4 OF 20		

NOTE: INSERT AND BRACING DESIGN SHOWN IS BASED ON THE USE OF DAYTON SUPERIOR PRODUCTS ONLY!

NON STR. THK.	STRUCT. THK.	WEIGHT	WIDTH	HEIGHT	NO. REQ'D.	PANEL NUMBER OR TYPE
	98 3/8"	46.9 kips	13'-4"	3'-6"	1	13.33ft. ABUTMENT SECTION



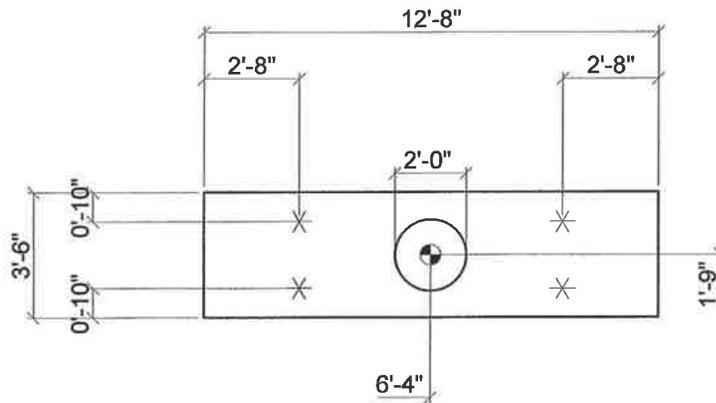
VERIFY ALL DIMENSIONS PRIOR TO POURING PANEL

MINIMUM COMPRESSIVE STRENGTH REQ'D.= 4,000 PSI

Construction Period Design Wind Speed	84 mph	TOTAL BRACE LOAD =	B=	W=	F=	BRACE REQ'D.:		
GROUND RELEASE II TILT-UP SYSTEM This drawing is furnished solely for the purpose of clarifying the proper use, installation and application of products supplied by Dayton Superior. Dayton Superior does not assume any responsibility for the correctness of structural designs or dimensions furnished by others. These drawings are intended merely to supplement the architectural and structural drawings and are to be used only in conjunction with them. In no way are these drawings to be interpreted as shop drawings for panel fabrication.	X	6'-11 7/16"	ΔX	.28 >	CY=	11.6	SCALE:	RIGGING DETAILS
	Y	1'-8 9/16"	2ΔX	.57	GROSS AREA	46.7	3/16"	F22
	PANEL VIEWED FROM:		INSIDE		CHECKED BY	NET AREA	38.1	JOB NO.
				LAYOUT BY	DATE	3/14/14	14120	5 OF 20

NOTE: INSERT AND BRACING DESIGN SHOWN IS BASED ON THE USE OF DAYTON SUPERIOR PRODUCTS ONLY!

NON STR. THK.	STRUCT. THK.	WEIGHT	WIDTH	HEIGHT	NO. REQ'D.	PANEL NUMBER OR TYPE
	100 1/2"	51.8 kips	12'-8"	3'-6"	2	12.67ft. ABUTMENT SECTION



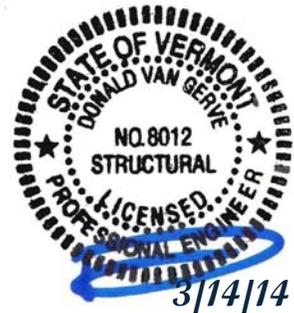
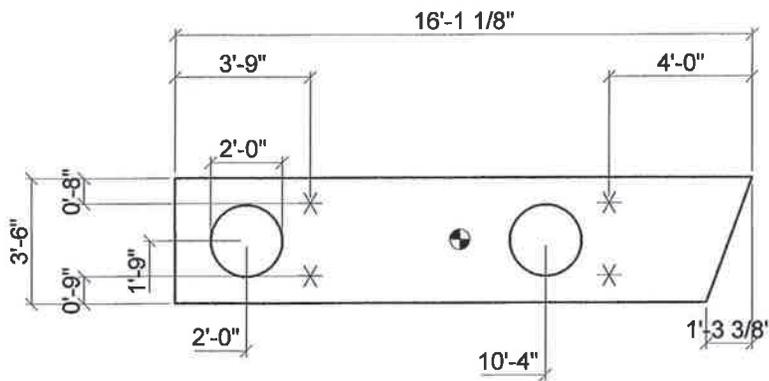
VERIFY ALL DIMENSIONS PRIOR TO POURING PANEL

MINIMUM COMPRESSIVE STRENGTH REQ'D.= 4,000 PSI

Construction Period Design Wind Speed	84 mph	TOTAL BRACE LOAD =	B=	W=	F=	BRACE REQ'D.:
GROUND RELEASE II TILT-UP SYSTEM This drawing is furnished solely for the purpose of clarifying the proper use, installation and application of products supplied by Dayton Superior. Dayton Superior does not assume any responsibility for the correctness of structural designs or dimensions furnished by others. These drawings are intended merely to supplement the architectural and structural drawings and are to be used only in conjunction with them. In no way are these drawings to be interpreted as shop drawings for panel fabrication.	\bar{X} 6'-4"	ΔX .0 <	CY= 12.8	SCALE:	RIGGING DETAILS	
	\bar{Y} 1'-9"	$2\Delta X$.0	GROSS AREA 44.3	3/16"	F22	
	PANEL VIEWED FROM: INSIDE	CHECKED BY	NET AREA 41.2	JOB NO.	SHEET	
		LAYOUT BY BP	DATE 3/14/14	14120	6 OF 20	

NOTE: INSERT AND BRACING DESIGN SHOWN IS BASED ON THE USE OF DAYTON SUPERIOR PRODUCTS ONLY!

NON STR. THK.	STRUCT. THK.	WEIGHT	WIDTH	HEIGHT	NO. REQ'D.	PANEL NUMBER OR TYPE
	103"	61.5 kips	16'-1 1/8"	3'-6"	1	16.09ft. ABUTMENT SECTION



VERIFY ALL DIMENSIONS PRIOR TO POURING PANEL

MINIMUM COMPRESSIVE STRENGTH REQ'D.= 4,000 PSI

Construction Period Design Wind Speed	84 mph	TOTAL BRACE LOAD =	B=	W=	F=	BRACE REQ'D.:			
GROUND RELEASE II TILT-UP SYSTEM This drawing is furnished solely for the purpose of clarifying the proper use, installation and application of products supplied by Dayton Superior. Dayton Superior does not assume any responsibility for the correctness of structural designs or dimensions furnished by others. These drawings are intended merely to supplement the architectural and structural drawings and are to be used only in conjunction with them. In no way are these drawings to be interpreted as shop drawings for panel fabrication.	X	7'-11 1/4"	ΔX	-0.11 <	CY=	15.2	SCALE:	RIGGING DETAILS	
	Y	1'-9 5/16"	2ΔX	-0.22	GROSS AREA	56.3	3/16"	F22	
	PANEL VIEWED FROM:		INSIDE		CHECKED BY	NET AREA	47.8	JOB NO.	SHEET
					LAYOUT BY	DATE	3/14/14	14120	7 of 20

NOTE: INSERT AND BRACING DESIGN SHOWN IS BASED ON THE USE OF DAYTON SUPERIOR PRODUCTS ONLY!

Summary - P-52 Swift Lift Anchor Safe Working Load Calculations
DAYTON SUPERIOR CORPORATION

Precaster: Cold River Bridges

Project: Pittsfield ER BRF 022-1 (23) P-52, 20-ton x 10" Swift-Lift Anchors IN FACE

Location: New Hampshire

Dealer: Harris Rebar
Harris Rebar.2014-0120A.3.14.14

Recommended P-52 Swift Lift (SL) Anchor	=	20.00	tons
Recommended length of SL Anchor	=	10.000	in. long
SL Anchor set back from face of concrete	=	0.563	inches
SL Anchor embedment depth (Le)	=	9.938	inches
SL Anchor foot diameter (Dh)	=	2.813	inches
Concrete compressive strength	=	4,000	psi at initial lift
Concrete unit weight	=	150.00	lbs. per cubic foot
SL Anchor front edge distance (T1)	=	24.000	inches
SL Anchor back edge distance (T2)	=	24.000	inches
SL Anchor left edge distance (T3)	=	24.000	inches
SL Anchor right edge distance (T4)	=	24.000	inches
Concrete ultimate pull out capacity	=	118,531	lbs. per anchor
SL Anchor ultimate mechanical capacity	=	160,000	lbs. per anchor
Recommended factor of safety	=	4.00	to 1 (Ult. to SWL)
SL Anchor tension safe working load	=	29,625	lbs. per anchor

By: Brad Phillips

Date: 03/14/2014

Summary - P-52 Swift Lift Anchor Safe Working Load Calculations

DAYTON SUPERIOR CORPORATION

Precaster: Cold River Bridges

Project: Pittsfield ER BRF 022-1 (23) P-52, 20-ton x 10" Swift-Lift Anchors IN EDGE

Location: New Hampshire

Dealer: Harris Rebar
Harris Rebar.2014-0120A.3.14.14

Recommended P-52 Swift Lift (SL) Anchor	=	20.00	tons
Recommended length of SL Anchor	=	10.000	in. long
SL Anchor set back from face of concrete	=	1.063	inches
SL Anchor embedment depth (Le)	=	10.438	inches
SL Anchor foot diameter (Dh)	=	2.813	inches
Concrete compressive strength	=	4,000	psi at initial lift
Concrete unit weight	=	150.00	lbs. per cubic foot
SL Anchor front edge distance (T1)	=	9.000	inches
SL Anchor back edge distance (T2)	=	9.000	inches
SL Anchor left edge distance (T3)	=	30.000	inches
SL Anchor right edge distance (T4)	=	39.000	inches
Concrete ultimate pull out capacity	=	62,689	lbs. per anchor
SL Anchor ultimate mechanical capacity	=	160,000	lbs. per anchor
Recommended factor of safety	=	4.00	to 1 (Ult. to SWL)
SL Anchor tension safe working load	=	15,675	lbs. per anchor

By: Brad Phillips

Date: 03/14/2014

Operator : BP
 Job no.: 14120
 Panel no.: WW1-TILT
 Date : 3/14/2014

HORIZONTAL ANALYSIS

Uniform loads

Segment Number	Length (Feet)	Load (PPF)
01	00.54	00689.14
02	02.05	01368.85
03	06.80	01368.85
04	02.33	01368.85

Section Properties

N	D(N) (Ft.)	Area (In.^2)	Mom. of In. (In^4)	Neut. Axis (In.)	+Sec. Mod. (In.^3)	-Sec. Mod. (In.^3)	Eff. Thk. (In.)
01	000.54	00661.58	000004590	004.56	00001006	00001006	009.12
02	002.05	01314.10	000035975	009.06	00003970	00003970	018.13
03	006.80	01314.10	000035975	009.06	00003970	00003970	018.13
04	002.33	01314.10	000035975	009.06	00003970	00003970	018.13

First point of zero shear = 06.04 ft.

Additional reinforcing

Angle Deg.	Loc. Feet	Flexure Stress PSI	Bending Moment Ft-Lbs	Allow. Moment Ft-Lbs	Tens. Steel Sq. In.	Comp. Steel Sq. In.	Strongbacks	
							Sec. Mod. Wood In^3	Sec. Mod. Steel In^3

Maximum positive stress (Bottom)= 14 psi @ 6.0 ft. and 0°

Maximum negative stress (Top)= 11 psi @ 2.59 ft. and 0°

Balancing moment = 0.00 ft.-lbs./ft. over 0.00 ft.W-Shift 0.00

Strongback req'ments (Applicable only if printout shows add'l steel req'd.)

- Wood: 0 single 2X12's or equivalent.
- 0 single 4X12's or equivalent.
- Steel: 0 double C6X8.2 or equivalent.
- 0 double C8x11.5 or equivalent.

Operator : BP
 Job no.: 14120
 Panel no.: WW1-TILT
 Date : 3/14/2014

VERTICAL ANALYSIS

Uniform loads

Segment Number	Length (Feet)	Load (PPF)
01	012.08	02596.45

Section Properties

N	D(N) (Ft.)	Area (In.^2)	Mom. of In. (In^4)	Neut. Axis (In.)	+Sec. Mod. (In.^3)	-Sec. Mod. (In.^3)	Eff. Thk. (In.)
01	012.08	02492.59	000068198	008.96	00007528	00007442	018.12

Additional reinforcing

Angle Deg.	Loc. Feet	Flexure Stress PSI	Bending Moment Ft-Lbs	Allow. Moment Ft-Lbs	Tens. Steel Sq. In.	Strongbacks	
						Comp. Steel Sq. In.	Sec. Mod. Wood In^3

Insert loads

Maximum tension load = 15686.91 lbs per insert.
 Maximum shear load = 7843.46 lbs per insert.
 Maximum ground reaction = 15686.92 lbs
 Maximum positive stress (Bottom)= 76 psi @ 6.04 ft. and 0°
 Maximum negative stress (Top)= 0 psi @ 0.0 ft. and 0°

Strongback req'ments (Applicable only if printout shows add'l steel req'd.)

- Wood: 0 single 2X12's or equivalent.
- 0 single 4X12's or equivalent.
- Steel: 0 double C6X8.2 or equivalent.
- 0 double C8x11.5 or equivalent.

Insert locations - decimal

ROW	Column 1	Column 2
0	02.59,12.08	09.40,12.08

One row cable length = 20'-0"

Operator : BP
Job no.: 14120
Panel no.: WW1-TILT
Date : 3/14/2014

Insert type: Other
Safe working load = 20000 lbs.
Concrete compressive strength = 4000 psi.
Allowable bending strength = 379.4733 psi.
Steel grade = 60
Concrete unit Weight = 150 pcf.

Panel geometry

Feature number - 0 (Panel perimeter)
X(0) =00.00 Y(0) = 00.00 Width(0) =11.7292 Height(0) = 12.0833
X(1) =00.00 Y(1) = 12.0833
X(2) =11.7292 Y(2) = 12.0833
X(3) =11.7292 Y(3) = 00.00

Feature number - 1 (Arch. feature -- up Face, incremental thk. = -9 in.)
X(0) =00.00 Y(0) = 00.00 Width(1) =00.5417 Height(1) = 12.0833
X(1) =00.00 Y(1) = 12.0833
X(2) =00.5417 Y(2) = 12.0833
X(3) =00.5417 Y(3) = 00.00

Weight and C. G.

Structural thickness = 18.125 in.
Overall thickness = 18.125 in.
Projected area = 142 sq. ft.
Effective area = 138 sq. ft.
X-bar = 6.00 ft.
Y-bar = 6.04 ft.
Z-bar = 9.1696 inches
Bottom Concrete Cover for reinforcing = .75 in.
Top Concrete Cover for reinforcing = .75 in.
Weight = 31373.83 lbs.
Minimum number of inserts required by Weight = 2

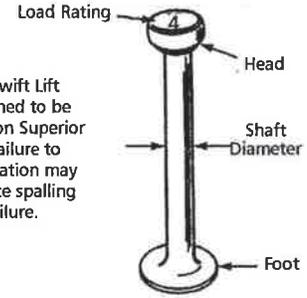
P52 Swift Lift® Anchor

The P52 Swift Lift Anchor is hot forged from carbon steel. The formed head provides spherical seating that the Lifting Eye engages, while a disc-shaped foot is embedded in the concrete.

Due to its being a forged part, the Swift Lift Anchor does not depend on welds or thread engagement to develop its safe working load. Forging provides maximum safety with its advantageous material structure. This allows the anchor to easily meet the OSHA requirement of a 4 to 1 factor of safety.

In addition to the carbon steel anchors, Type 304 or 316 Stainless Steel Swift Lift Anchors are available on special order. Use stainless steel anchors when maximum protection against corrosion is required.

For safety, refer to the P52 Swift Lift Anchor Selection Chart to determine the actual safe working load of an individual anchor. The MAXIMUM safe working load is clearly visible on the head of the anchor for easy recognition of the appropriate hardware and accessories for-use with each Swift Lift Anchor.



Caution: The Swift Lift Anchor is designed to be used with Dayton Superior components. Failure to use this combination may result in concrete spalling or premature failure.

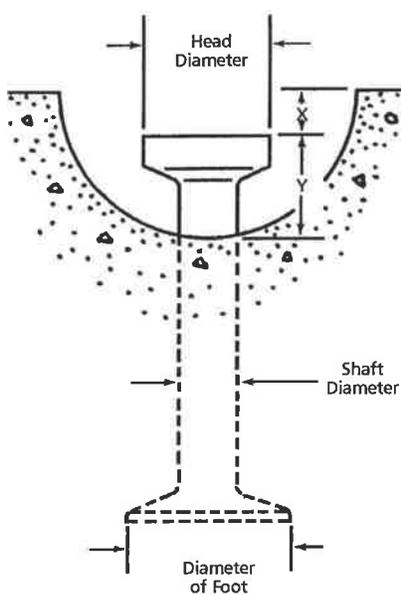
To Order:

Specify: (1) quantity, (2) name, (3) system size, (4) length

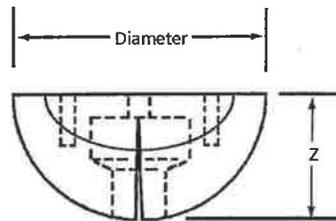
Example:

200, P52 Swift Lift Anchors, 4 ton, 9-1/2" long

P52 Swift Lift Anchor and Recess Plug Dimensions



P52 Swift Lift Anchor



Swift Lift Round Recess Plug

Swift Lift Round Recess Plug Dimensions		
Swift Lift Anchor	Diameter of Recess Plug	Dimension Z
1	2-7/16"	1-3/16"
2	3-5/16"	1-7/16"
4	4"	1-13/16"
8	5"	2-5/16"
20 Tons	6-3/8"	3-1/8"

Note: The diameter of the narrow recess plug is the same as the diameter of the round recess plug.

P52 Swift Lift Anchor Dimensions					
Swift Lift Anchor	Dimension X	Dimension Y	Shaft Diameter	Foot Diameter	Head Diameter
1	5/16"	7/8"	3/8"	1"	11/16"
2	7/16"	1-1/16"	9/16"	1-3/8"	1-1/32"
4	9/16"	1-5/16"	3/4"	1-7/8"	1-11/32"
8	9/16"	1-5/8"	1-3/32"	2-5/8"	1-7/8"
20 Tons	9/16"	2-5/8"	1-1/2"	3-3/4"	2-3/4"

P53 Swift Lift® Eye Anchor

The Dayton Superior Swift Lift Eye Anchor (P53) is similar to the P52 anchor but has an eye at the foot to accept P60 Tension Bars. The P53 anchor is used primarily in thin sections, thin panels of lightweight concrete or shapes that must be handled at concrete compressive strengths below 2,000 psi. P53 anchors are available in 1, 2, 4, 8 and 20-ton capacities and each has its load rating embossed on the head.

To Order:

Specify: (1) quantity, (2) name, (3) system size, (4) length.

Example:

200, P53 Swift Lift Eye Anchors, 4 ton, 9-1/2" long.

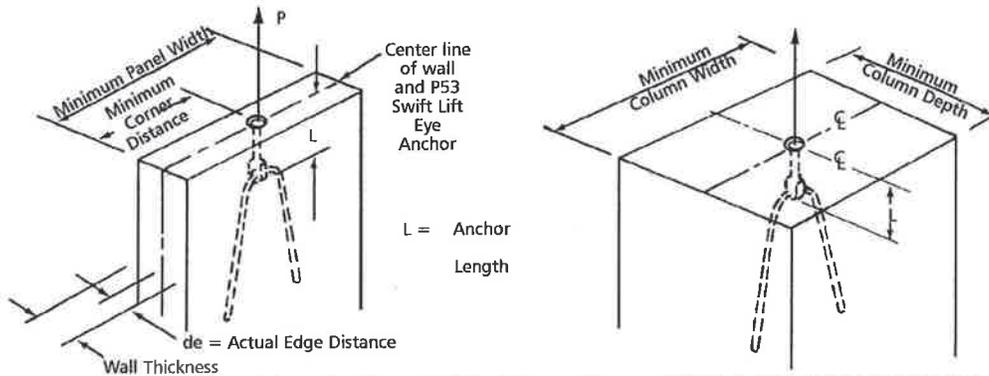


P53 Swift Lift Eye Anchor

P53 Swift Lift® Eye Anchor for Lifting and Handling

The P53 Swift Lift Eye Anchor is designed for use with the P60 Tension Bar placed through the eye of the anchor. This combination of Swift Lift Eye Anchor and P60 Tension Bar allows the anchor's full rated tensile load to be developed in thin, narrow wall applications. The anchor should be located at the center line of the wall. When two or more anchors are required, the minimum spacing between anchors must be equal to the minimum panel width.

The combination of P53 Swift Lift Eye Anchor and P60 Tension Bar is an excellent system to use for lifting, handling and setting precast columns.



P53 Swift Lift® Eye Anchor Selection Chart

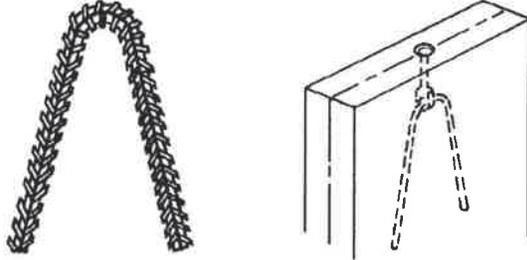
Anchor Rated Load (tons)	Anchor Length L	Minimum Thickness or Depth de	Actual Edge Distance de	Minimum Corner Distance	Minimum Panel Width	Tensile Safe Working Load per Anchor* (lbs.)
1	2-1/2"	3"	1-1/2"	8"	16"	2,000
2	3-1/2"	3"	1-1/2"	4"	8"	4,000
4	4-3/4"	3-3/4"	1-7/8"	5"	10"	8,000
8	7-1/16"	4-3/4"	2-3/8"	7"	14"	16,000
20	9-7/8"	6-3/8"	3-3/16"	8-1/2"	17"	40,000

* Safe Working Load provides a factor of safety of approximately 4 to 1 in 2,000 psi normal weight concrete. The P53 Eye Anchor must be used in conjunction with the P60 Tension Bar in order to develop its published rated working loads.

Note: Contact Dayton Superior Technical Service Department for safe working loads when the P53 Eye Anchor is used with straight lengths of rebar.

P60 Swift Lift® Tension Bar

The Dayton Superior Swift Lift Tension Bar (P60) is designed to be used with the P53 Eye Anchor in order for the eye anchor to develop its published rated working loads. See P60 sizes and dimensions below.



P60 Swift Lift Tension Bar

To Order:

Specify: (1) quantity, (2) name, (3) anchor size.

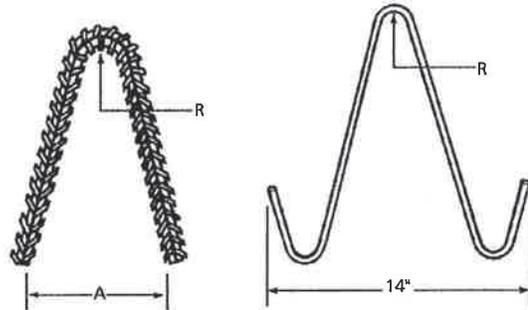
Example:

200, P60 Swift Lift Tension Bar, 10-ton anchor.

Swift Lift System

P60 Swift Lift Tension Bar Dimensions					
Anchor Rated Load (Tons)	Grade 60 Rebar Size	Rebar Overall Length	A		R
			Standard	Maximum	
1	.306" Wire	40"	1 4 "	—	3/4"
2	#3	24"	5 "	7 -1 /2 "	1-1/8"
4	#5	24"	6 -1 /4 "	1 0 "	1-7/8"
8	#6	48"	9 -1 /2 "	1 5 "	2-1/4"
20	#9	156"	1 2 -1 /2 "	2 0 "	3"

Note: Wire style is for use with 1 ton P53 Eye Anchors only.



P60 Rebar Style

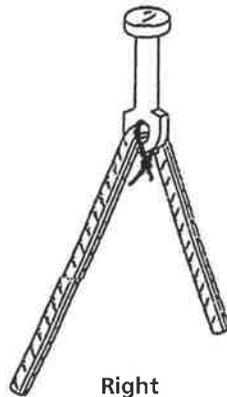
P60 Wire Style

P60 Swift Lift® Tension Bar Installation

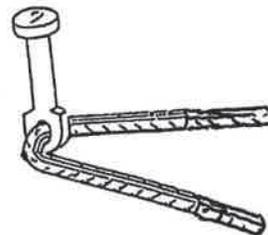
The proper installation of a tension bar is as follows:

1. Place the tension bar through the eye of the anchor in such a manner that the tension bar contacts the bottom of the eye.
2. Make certain the legs of the tension bar are equal on either side of the anchor.
3. Wire the tension bar into position so that the tension bar stays in contact with the bottom of the eye. (See sketch below.)

DO NOT attempt to use field-bent bars as a replacement for the Dayton Superior P60 Tension Bar. Field bending may result in an improperly shaped tension bar, an incorrect radius and/or a cracked bar. A problem such as this can cause the field-bent tension bar to fail prematurely.



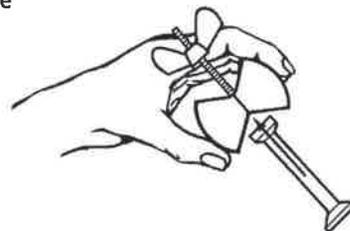
Right



Wrong

How to Install P56 and P56PL Recess Plugs on P52 Anchors

Grasp the recess plug firmly across the top diameter of the plug. Application of pressure by the thumb and fingers on the outer edge of the plug will cause the plug to open up to allow insertion of the anchor.

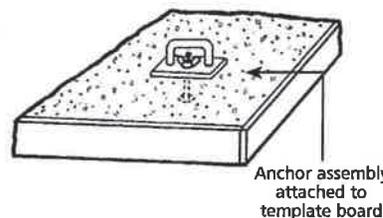


“Wet Setting” P52 Swift Lift Face Lift Anchors

When a Swift Lift anchor is to be positioned in the top surface of a flat precast section, wet setting the anchor is best done immediately after the concrete has been placed.

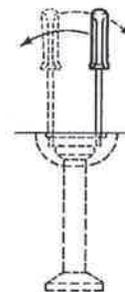
The anchor/recess plug assembly is attached to a small template board and pressed into the fresh concrete until the template board lies flush on the surface of the concrete.

Light vibration of the fresh concrete will assure proper embedment and anchorage.



Recess Plug Removal

Swift Lift recess plugs provide two holes in the top surface that are used in the removal process. Insert two screw drivers or steel rods into the holes and simply lever the two across the plug for easy removal.



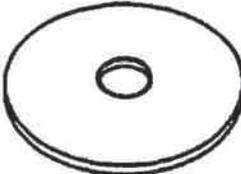
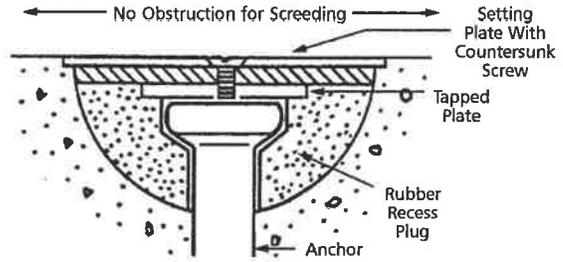
Selecting the Proper Swift Lift Anchor

Determination of the required rated load and length of a P52 Swift Lift Anchor is based on the actual maximum load that is transferred to the anchor. In most cases, a flat slab can be handled with the anchors properly located in the face of the flat slab. The anchors should normally be the maximum length that can be accommodated in the slab's structural thickness, allowing at least 1/2" clearance between the anchor and the casting bed. Dimension tables and safe working load charts, contained herein, will aid in the selection of the proper anchor. Keep in mind that the safe working load of an anchor is a function of several factors:

1. The effective concrete thickness
2. Actual edge distance
3. Concrete compressive strength at time of lift
4. Anchor length
5. In some applications, the use of a shear bar

P61 Swift Lift® Setting Plate, P62 Countersunk Screw

The Dayton Superior P61 Swift Lift Setting Plate and P62 Countersunk Screw combination provide an easy method of placing a Swift Lift Anchor into the surface of a flat panel without obstructing the screeding process. The P61 setting plate is available in two sizes, a 4" unit for use with 4-ton anchors and a 5" unit for use with 8-ton anchors. The P62 screw is available in two sizes to match the setting plates. The 4-ton setup uses a 3/4" long, 5/16" – 18 NC thread screw and the 8-ton setup uses a 3/4" long, 7/16" – 14 NC thread screw.



P61 Swift Lift Setting Plate



P62 Swift Lift Countersunk Screw

To Order:

Specify: (1) quantity, (2) name, (3) anchor size.

Example:

200, P61 Swift Lift Setting Plates and 200, P62 Countersunk Screws for 4-ton anchors.

P63 Swift Lift® Stud, P64 Swift Lift Wing Nut

The Dayton Superior P63 Swift Lift Stud and P64 Wing Nut combination is used to set P56 Narrow Recess Plugs. Available in two sizes, 5/16" – 18 NC threads for use with the 1-ton anchor and 7/16" – 14 NC threads for use with 2, 4, 8 and 20-ton P56 anchors.



P63 Swift Lift Stud

Note: The P63 Stud and P64 Wing Nut are not interchangeable with the P56PL Recess Plug accessories.



P64 Swift Lift Wing Nut

To Order:

Specify: (1) quantity, (2) name, (3) size.

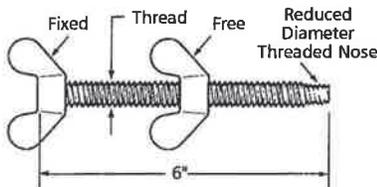
Example:

200, P63 Swift Lift Studs and 200 P64 Swift Lift Wing Nuts, 7/16" dia.

P63PL Swift Lift® Plus Holding Stud, P64PL Swift Lift Plus Wing Nut

The Dayton Superior P63PL Swift Lift Plus Holding Stud is a 3/8" diameter, coil threaded stud with a fixed wing nut and a free-running wing nut used with the P66PL threaded plate to quickly attach the P56PL recess plug to the formwork. The holding stud is inserted through the form and threaded into the threaded plate. Complete the anchor installation by screwing the free-running wing nut tightly against the form.

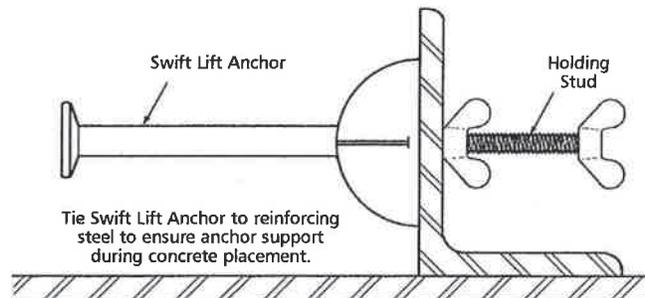
The P64PL Wing Nut has 3/8" diameter coil thread and is available as a replacement nut for the P63PL Holding Stud.



P63PL Swift Lift Plus Holding Stud



P64PL Swift Lift Plus Wing Nut



To Order:

Specify: (1) quantity, (2) name.

Example:

200, P63PL Swift Lift Plus Holding Studs.

Swift Lift® System

The Swift Lift System is a quick connect-disconnect system that allows precast concrete elements to be handled repeatedly, with speed, safety and economy. It is a non-welded system and void of threaded connections. The quality, reusable Swift Lift Lifting Eye's heavy duty construction will provide years of good service.

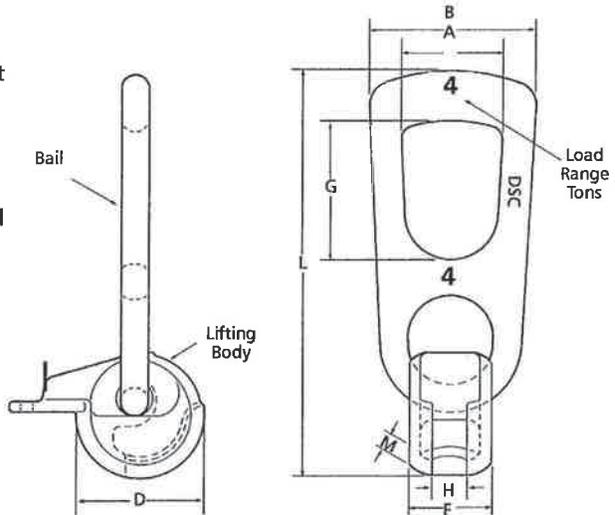
The Swift Lift System is available with safe load ratings of 1, 2, 4, 8 and 20 tons. Each component is clearly marked with its maximum safe working load. The System is extremely versatile and can be utilized for vertical and diagonal pulls. It can be used to lift concrete elements from a horizontal to a vertical position without the aid of a tilting table.

P50 Swift Lift® Universal Lifting Eye

The Swift Lift Universal Lifting Eye (P50) consists of a flat-sided, spherical lifting body and a high strength bail. The lifting body has a T-shaped slot that permits rapid attachment and release of the head on Swift Lift Anchors.

The design of the P50 Universal Lifting Eye permits the bail to freely rotate 180°, while the complete lifting eye may rotate through a 360° arc. This design feature allows precast concrete elements to be turned, tilted and/or rotated under load.

Dayton Superior does not recommend the use of this lifting eye for edge lifting of thin precast concrete panels.



P50 Swift Lift Universal Lifting Eye Dimensions						
Rated Load Tons	A	B	D	F	G	L
1	1.87"	2.95"	2.20"	1.26"	2.80"	7.40"
2	2.34"	3.58"	2.68"	1.61"	3.41"	9.06"
4	2.76"	4.65"	3.46"	2.22"	3.46"	11.14"
8	3.47"	6.30"	4.41"	2.83"	4.52"	15.79"
20	4.18"	7.09"	6.00"	4.29"	5.31"	20.00"

The rated load provides a factor of safety of approximately 5 to 1 (ultimate to rated load).

P50 Inspection and Maintenance

The P50 Universal Lifting Eye may be subjected to wear, misuse, overloading and other factors that can affect the lifting eye's rated load. Therefore, it is imperative that the lifting eye be user-inspected at least once a month to determine its general condition and degree of wear.

During the user's monthly inspection, the lifting eye should be checked for evidence of heat application. If evidence of heat application is found, the unit must be scrapped. Check for a bent or twisted bail and discard all units found to have these flaws. Also, check to make certain that the bail rotates freely in all directions.

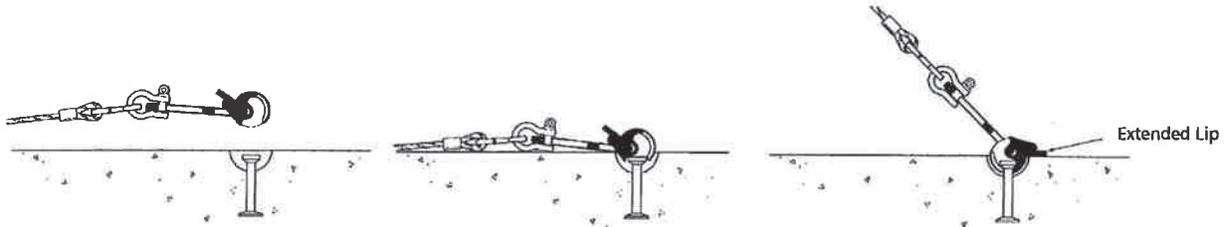
At least once every three months, dimensions "H" and "M" on each unit should be checked. The upper limits are shown in the chart. If either of these limits is exceeded, the P50 Universal Lifting Eye must be removed from service and destroyed.

The proper method for scrapping a lifting eye is to cut through the bail with a cutting torch to render the unit useless as a lifting device.

No repairs or welding to the P50 Swift Lift Universal Lifting Eye are permitted.

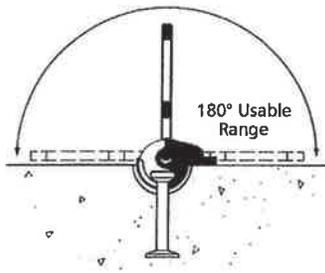
Limiting Dimensions on P-50 Swift Lift Universal Lifting Eye		
Rated Load (Tons)	H Maximum Width	M Minimum Thickness
1	0.512"	0.217"
2	0.709"	0.236"
4	0.984"	0.315"
8	1.260"	0.472"
20	1.811"	0.709"

How to Use the P50 Swift Lift Universal Lifting Eye

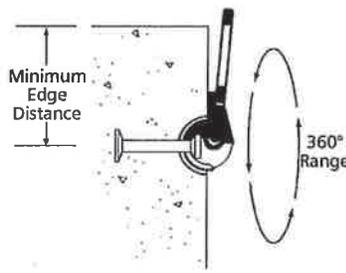


1. To install the P50 lifting eye, hold the unit upside down with the T-shaped slot directly over the head of the Swift Lift anchor.
2. Lower the lifting eye down onto the anchor until the Tslot engages the head of the anchor.
3. Rotate the lifting eye until the extended lip of the body touches the horizontal surface of the concrete.

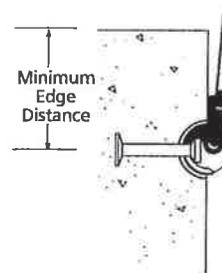
Note: Prior to lifting a precast element, apply an initial cable tension to make sure that the bail and body of the lifting eye are aligned in the direction of the cable pull.



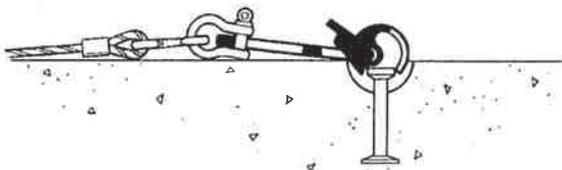
The bail of the P50 lifting eye can move through a 180° usable range.



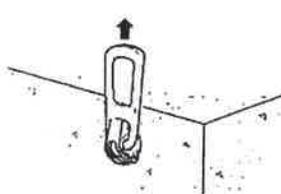
The main body of the lifting eye has a 360° rotational range.



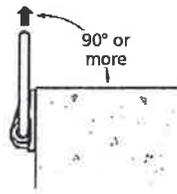
The P50 lifting is used with the T-shaped slot facing toward the direction of the applied load.



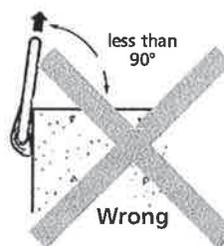
To disengage the lifting eye, the crane hook is lowered and the body removed by rotating the extended lip upward.



Right



Right



Wrong

Dos and Don'ts of the P50 Swift Lift Universal Lifting Eye

Prior to lifting a precast element, apply an initial cable tension to make certain that the bail and body of the lifting eye are aligned in the direction of the cable pull.

When applying the initial cable tension on edge lift applications, make sure that the cables are at a 90° angle (or larger) to the surface of the precast element.

Warning: Do not allow the crane lines to form an angle less than 90° during an edge lift application. This condition can bend the lifting eye bail and could lead to a premature failure.

Warning: The crane line and bail of the lifting hardware must be turned in the direction of the cable forces before the lifting operation begins. The crane line must not be allowed to apply a sideward force on the bail. This condition is dangerous and could lead to premature failure of the hardware or insert.

Warning: Do not modify, weld or alter in any way the Swift Lift Universal Lifting Eye.