



Installation and Maintenance Manual for Rigid Lifelines Traveling Bridge Fall Protection Systems

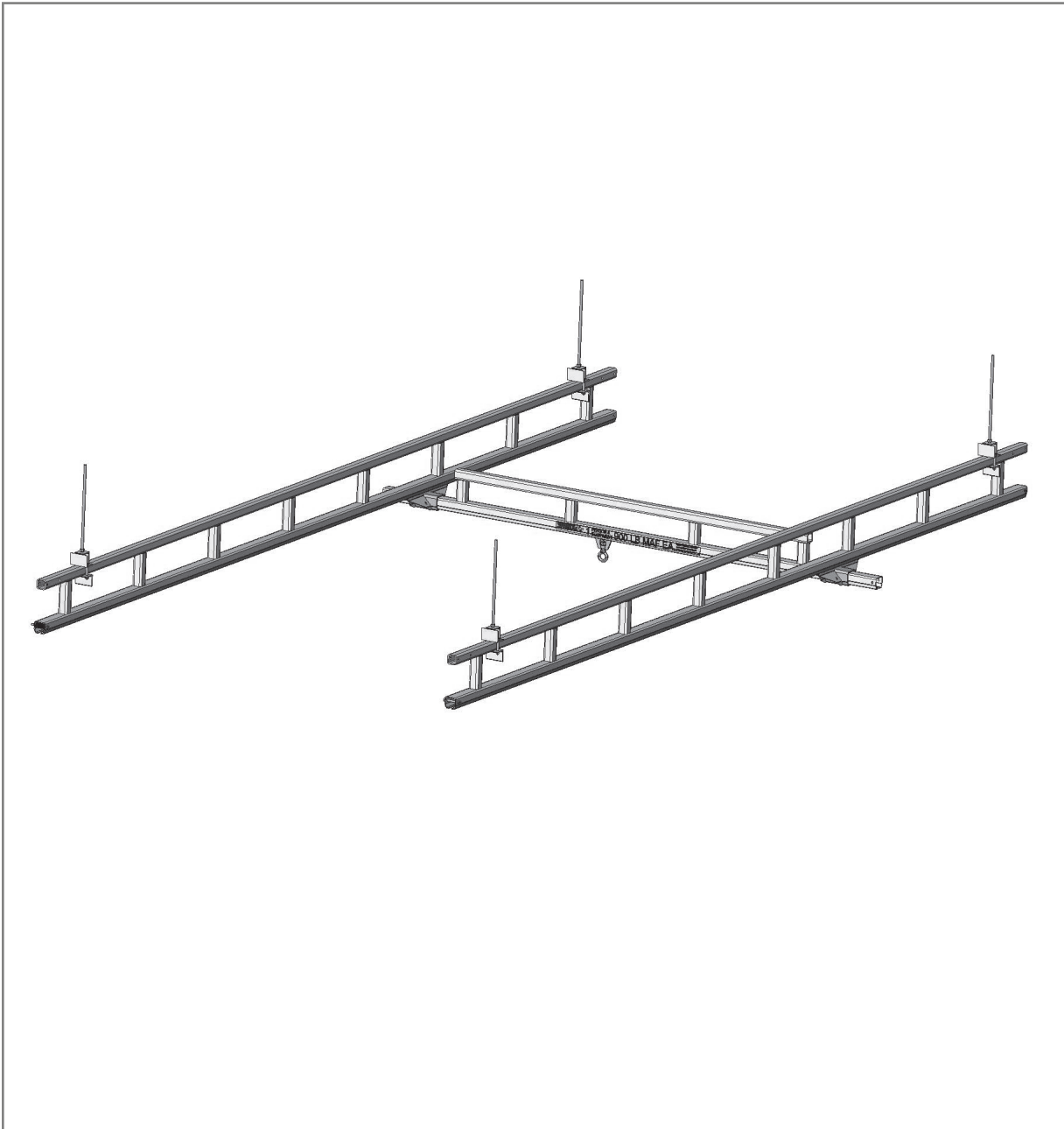


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FORWARD

This manual contains important information to help you install, operate, maintain, and service your new fall protection system. We recommend that you study its contents thoroughly before putting the system into use. By practicing the recommended maintenance, with proper installation, and application of correct operating procedures, you will be assured maximum service from your fall protection system.

The systems described in this manual are intended for indoor service. Systems used for outdoor service require special consideration.

INSTALLATION:

Before attempting to install your new system, the following items must be understood...

1. It is the customer's responsibility to ensure that building columns or walls are adequate to support the system.
2. Systems should not be hung from an existing building structure without first consulting a qualified architect or engineer for the purpose of determining the structure's adequacy.



NOTE: DO NOT MOUNT THE SYSTEM TO ANY STRUCTURE UNLESS YOU ARE SURE THE STRUCTURE CAN SAFELY SUPPORT THE LOADS IMPOSED UPON THE STRUCTURE. FAILURE TO CHECK THIS ITEM CAN RESULT IN SEVERE BODILY INJURY OR DEATH.

Fall Arrest Considerations

Per OSHA 1926.500, Subpart M, "Anchorages used for attachment of personal fall arrest equipment shall be independent and capable of supporting at least 5000 pounds per employee attached, or designed installed and used as part of a complete fall arrest system which maintains a safety factor of two (2) and under the supervision of a qualified person.

Personal fall arrest systems when stopping a fall shall:

1. Be rigged so that an employee cannot contact any lower level.
2. Bring an employee to a complete stop and limit maximum deceleration distance an employee travels to 3.5 feet.

FALL PROTECTION SAFETY AND CONSIDERATIONS

Fall Protection Safety

1. Remove systems and components from service IMMEDIATELY if they have been subjected to fall impact until inspected by a competent person and deemed undamaged and suitable for use.
2. Promptly rescue employees in the event of a fall, or assure that they are able to rescue themselves.
3. Inspect systems prior to each use for wear, damage, and other deterioration; and remove defective components.
4. Do NOT attach fall arrest systems to guard rail systems or hoists.
5. Do NOT attach fall arrest systems to crane bridges unless specifically designed for such use by a competent engineer.
6. Every fall arrest system should have a rescue plan to recover fallen workers. If the same fall arrest system will be used to recover a fallen worker, a two man system must be specified.
7. Workers using fall protection shall follow the "buddy system" by utilizing a spotter.

Fall Protection Considerations

Anyone working in general industry over a height of 4 ft. or more above a lower level with an unprotected side or edge shall be protected from falling.

Anchorage used for attachment of personal fall arrest equipment shall be certified for the applied forces by others.

Note: Consult factory for custom design if maximum arresting force exceeds 900 lb.

Check bolts annually for tightness.

FALL PROTECTION COMPONENT AND SYSTEM INSTALLATION REQUIREMENTS

Engineered fall protection components and standard systems displayed in Rigid Lifelines sales literature meet or exceed all regulations as defined by ANSI Z359, OSHA 1910.66 and OSHA 1926.502 for engineered components.

Rigid Lifelines fall arrest components and systems must be employed and maintained in accordance with all ANSI and OSHA regulations.

INSTALLATION INSTRUCTIONS

Install components as defined in this manual and in accordance with ANSI and OSHA regulations. If the system is a standard engineered fall protection system, install the system(s) as defined on the provided assembly drawings.

If the system has been custom engineered as custom system by Rigid Lifelines, install the system(s) as defined on the provided custom assembly drawing.

NOTE: Rigid Lifelines fall protection components are similar to crane designs, but may never be used as a crane.



Never use a Rigid Lifelines fall protection component or system as a crane or to lift objects, unless specifically engineered by Rigid Lifelines to do so.

PERFORMANCE TESTING OF FALL PROTECTION COMPONENTS AND SYSTEMS

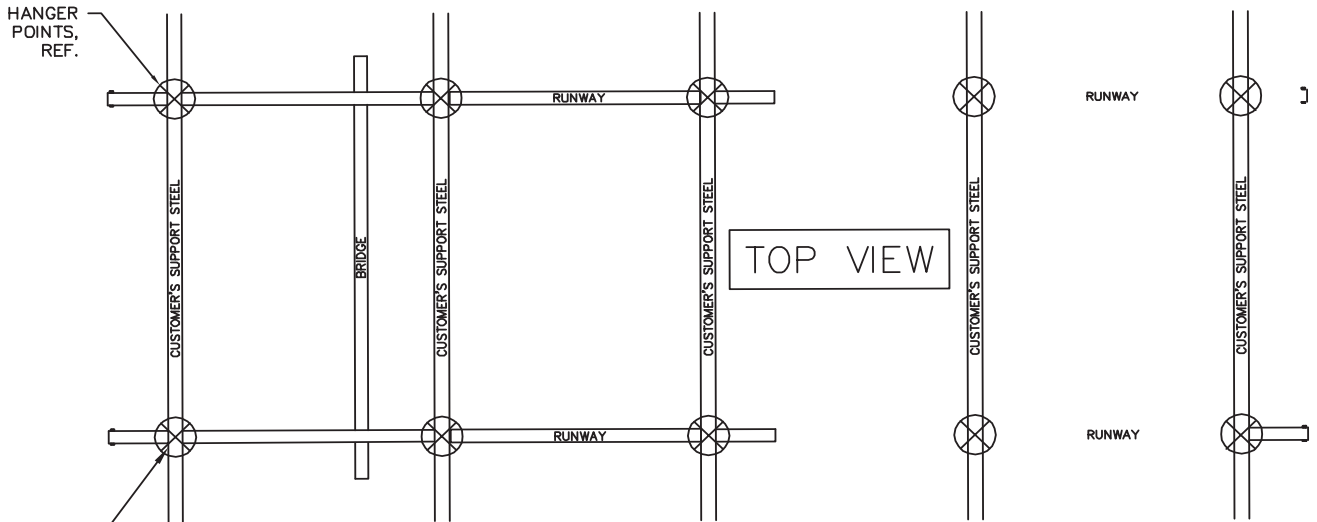
When installed, operated, and maintained in accordance with the supplied Rigid Lifelines documentation, **no acceptance test is required.**

Rigid Lifelines has engineered all systems to exceed OSHA's requirement that the entire system provide a safety factor of two over applied loads.

If acceptance testing is requested, Rigid Lifelines recommends following the ANSI requirements for dynamic performance testing of all Rigid Lifelines fall protection components and systems. The application of a dynamic performance test, as defined by ANSI Z359.1-2007 consists of a 220 lb test weight dropped for a total 6-foot free fall before a 900 lb MAF (maximum arresting force) "ripstitch" energy absorbing lanyard engages to decelerate the load (reference Z359.1 sections 4.1.2 and 4.2.9). A two-man system will use two separate weights (using one 900 MAF lanyard per weight), a three-man system will use three separate weights, and so on. ANSI standards are available at www.ansi.org

USAGE NOTES

1. Read, understand and follow instructions of all component manuals and warnings before use.
2. Follow all current requirements of ANSI Z359.
3. Always perform a hazard analysis before use. Correct all hazards before use.
4. Inspect system before use, per instruction manual.
5. Inspect thoroughly by competent person after each fall.
6. Inspect annually by competent person.
7. Never load track at an angle greater than 30° from vertical.
8. Never use system with the attachment point below the D-ring of the harness.
9. Always have a written rescue plan that defines who will rescue and what equipment will be used.
10. Never use without a worker monitor (buddy system).
11. If a jib boom is provided, never apply a lateral load at the boom tip.
12. Per OSHA and ANSI, a competent person must provide proper user training before use.
13. Never deviate from the above unless you have written permission and authorization from Rigid Lifelines.
14. Only for use with self-retracting lanyards (SRL).
15. Only for use with ANSI full-body fall protection harnesses.

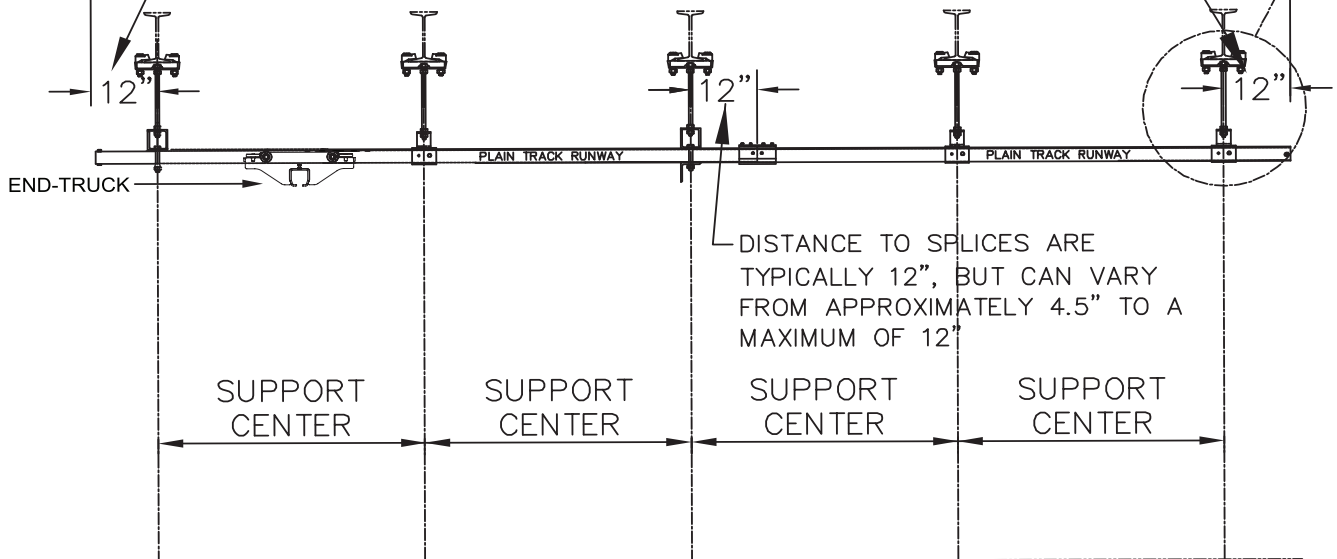


TOP VIEW

RUNWAY BRACING (BY OTHERS) TYP. @ (4) CORNERS & AT ONE SIDE OF RUNWAY AT EACH HANGER POINT

END CANTILEVERS ARE ALWAYS 12", UNLESS ORDERED CUSTOM.*

RUNWAY LENGTH DEFINED AT TIME OF ORDER

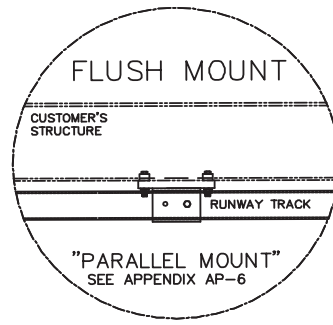
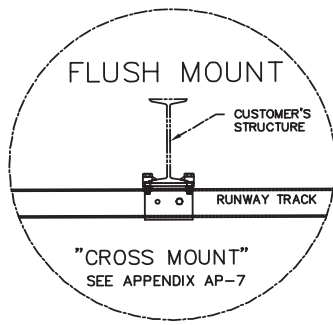
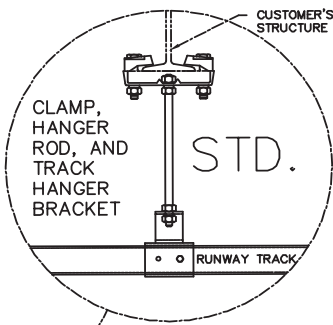


DISTANCE TO SPLICES ARE TYPICALLY 12", BUT CAN VARY FROM APPROXIMATELY 4.5" TO A MAXIMUM OF 12"

NOTE: EACH SECTION OF PLAIN TRACK THAT WILL CARRY A FULL LOAD MUST BE SUPPORTED BY AT LEAST TWO HANGERS.

SIDE VIEW OF RUNWAYS

*HEAVILY CUSTOMIZED SYSTEMS WILL COME WITH A DETAILED ASSEMBLY DRAWING.

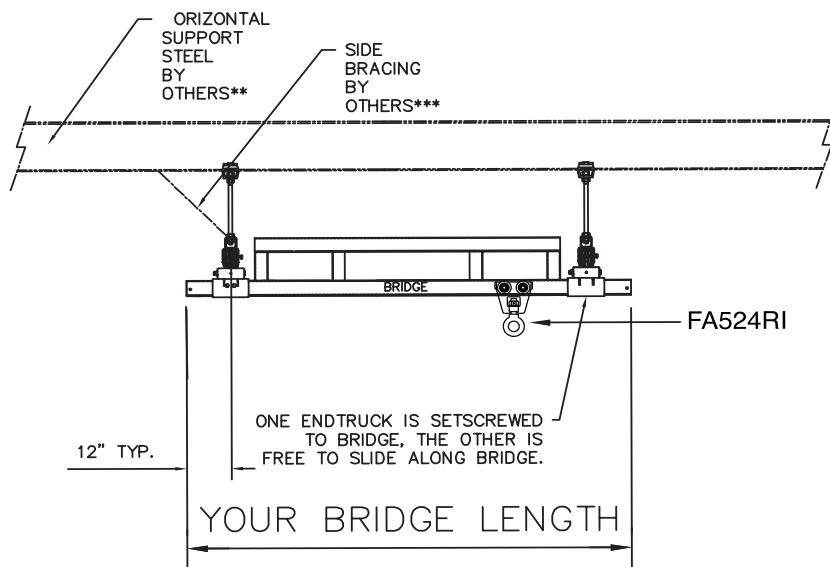


VARIOUS METHODS OF HANGING RUNWAYS

PLAIN TRACK RUNWAYS

IMPORTANT DIMENSIONS
FOR TYPICAL TRAVELING
BRIDGE INSTALLATIONS

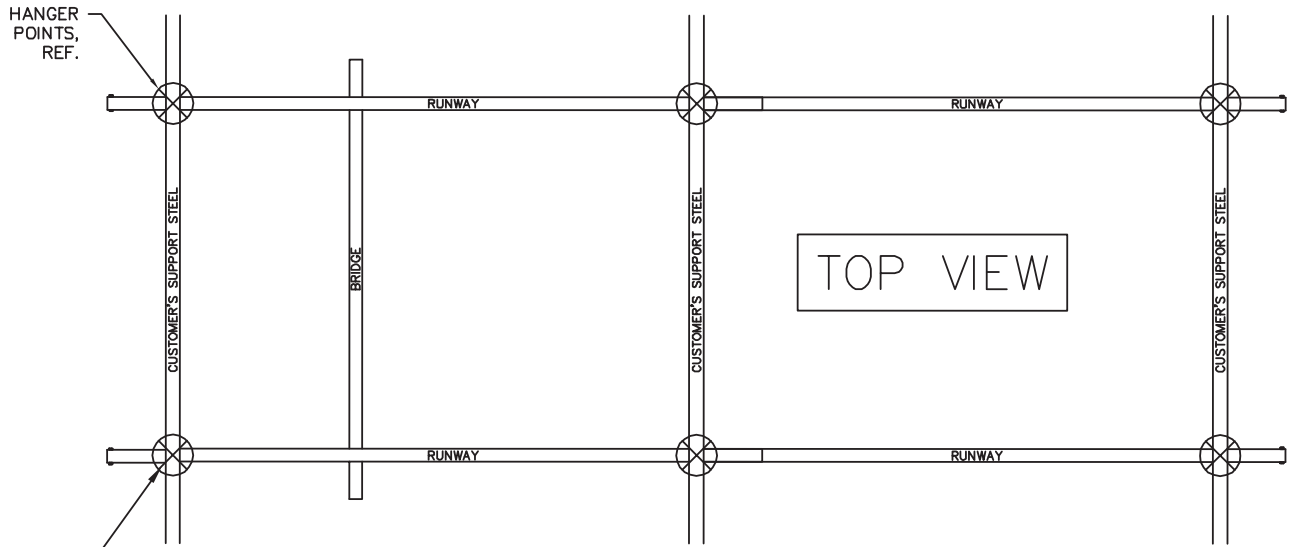
(A MULTIPLE BAY SYSTEM IS SHOWN FOR REFERENCE)



END VIEW OF BRIDGE

****IMPORTANT - IF SUPPORT STEEL IS SLOPED, SPECIAL SLOPED HANGERS MUST BE USED. CALL YOUR RIGID LIFELINES SALESPERSON.**

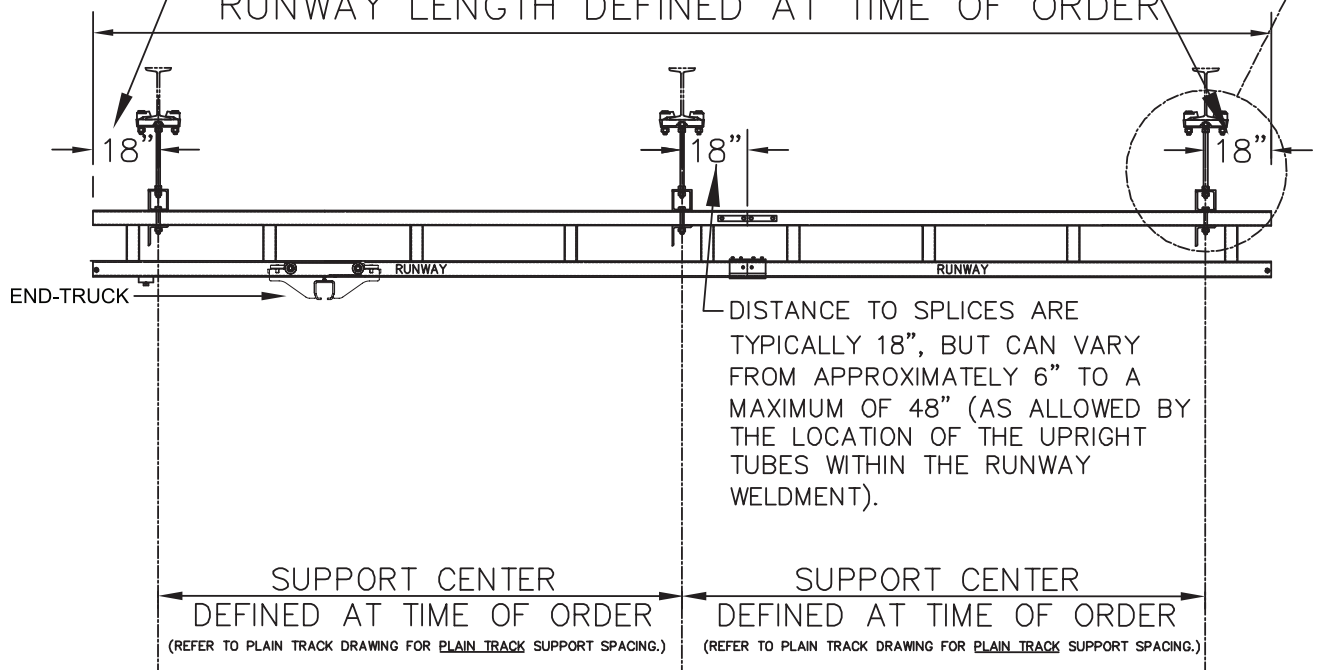
*****BRACING BRACKETS, #09B0510, ARE AVAILABLE, FOR USE WITH 1" DIAMETER PIPE. CALL YOUR RIGID LIFELINES SALESPERSON.**



RUNWAY BRACING (BY OTHERS) TYP. @ (4) CORNERS & AT ONE SIDE OF RUNWAY AT EACH HANGER POINT

END CANTILEVERS ARE ALWAYS 18" (EXCEPT 30' SUPPORT CENTERS WHICH ARE 24"), UNLESS ORDERED CUSTOM.*

RUNWAY LENGTH DEFINED AT TIME OF ORDER

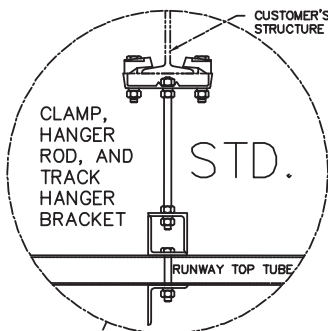


DISTANCE TO SPLICES ARE TYPICALLY 18", BUT CAN VARY FROM APPROXIMATELY 6" TO A MAXIMUM OF 48" (AS ALLOWED BY THE LOCATION OF THE UPRIGHT TUBES WITHIN THE RUNWAY WELDMENT).

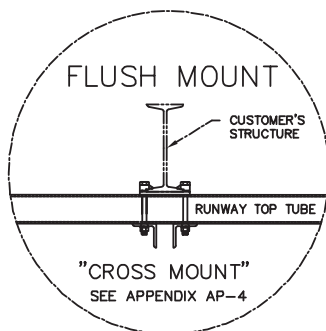
SUPPORT CENTER DEFINED AT TIME OF ORDER (REFER TO PLAIN TRACK DRAWING FOR PLAIN TRACK SUPPORT SPACING.)

*HEAVILY CUSTOMIZED SYSTEMS WILL COME WITH A DETAILED ASSEMBLY DRAWING.

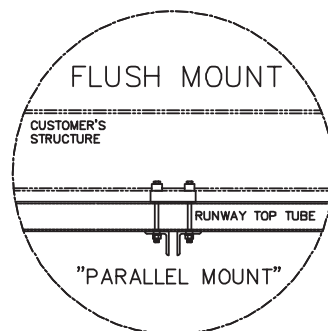
SIDE VIEW OF RUNWAYS



STANDARD**



OPTION**



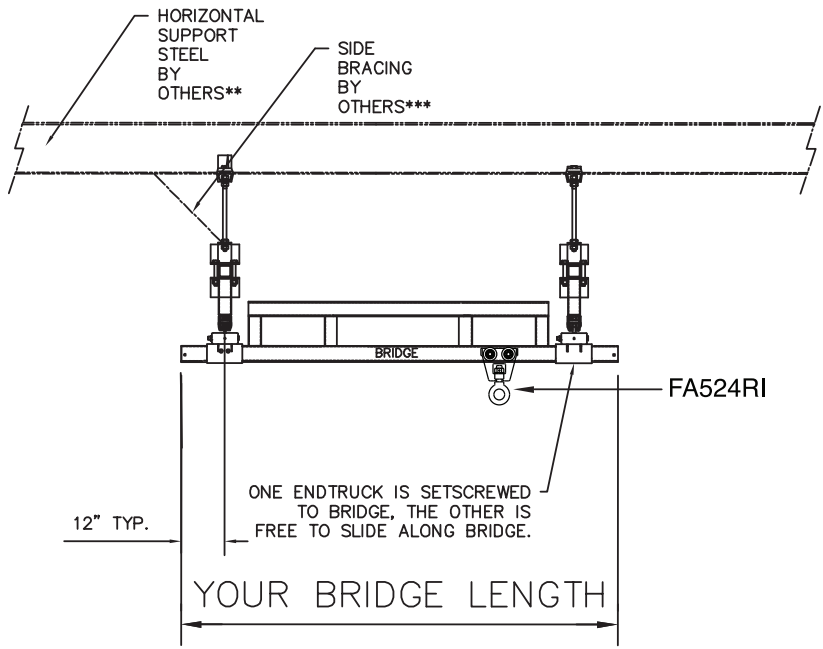
OPTION**

VARIOUS METHODS OF HANGING RUNWAYS

TRUSSED RUNWAYS

IMPORTANT DIMENSIONS FOR TYPICAL TRAVELING BRIDGE INSTALLATIONS

(A TWO BAY SYSTEM IS SHOWN FOR REFERENCE)



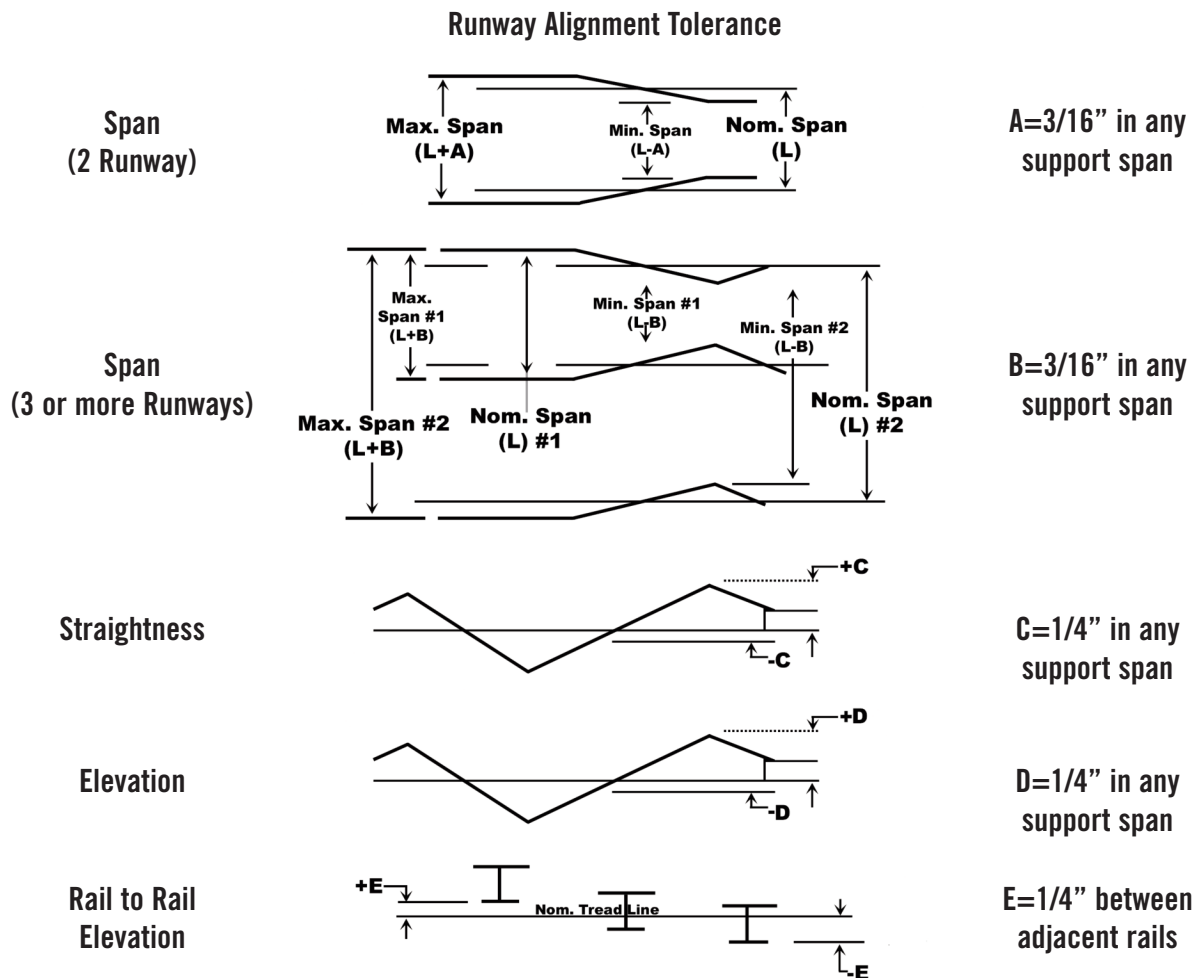
****IMPORTANT - IF SUPPORT STEEL IS SLOPED, SPECIAL SLOPED HANGERS MUST BE USED. CALL YOUR RIGID LIFELINES SALESPERSON.**

*****BRACING BRACKETS, #09B0510, ARE AVAILABLE, FOR USE WITH 1\" DIAMETER PIPE. CALL YOUR RIGID LIFELINES SALESPERSON.**

END VIEW OF BRIDGE

DESIGN FACTORS

Nameplate bridge capacity represents the rated load on the fall protection bridge. The load rating of trolleys shall not exceed the bridge rating.



Because Rigid Lifelines Enclosed Track System provides a very high ease of movement, Rigid Lifelines recommends bridge and runway slope of no more than 1/4" in 20'-0" to prevent drift of bridge or trolley. Diagrams courtesy of MMA MH27.1 and MH 27.2

PREPARATION

1. Before starting the installation, check the material list to be sure you have received all parts. Systems that mount directly to overhead supports with support flush mount brackets do not require lateral sway bracing.



WARNING All systems with drop rod hangers must be laterally and longitudinally braced. Lateral sway bracing is furnished by others.

RUNWAY INSTALLATION

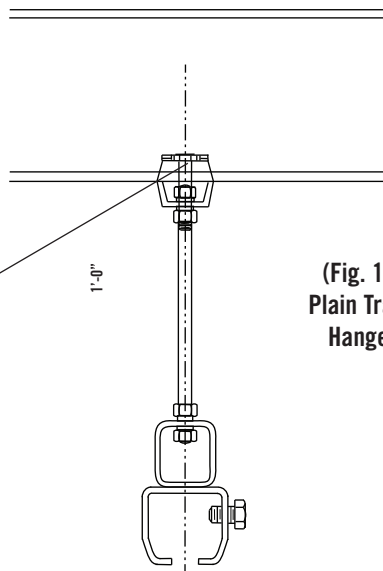
- Traveling bridge workstation designs may vary from system to system. The positioning of support brackets or hangers likewise may vary with building structural arrangement as well as with track profile.

Establish where the system is to be installed. Bolt the proper mounting support brackets or hangers to the ceiling beam(s). See Figs. 1a-1b below. Raise the runway track section and attach it to the brackets or hangers with the appropriate fasteners. Runways should extend between 4 1/2" and 12" beyond the last support at either end for plain track runways, up to 48" for trussed runways.

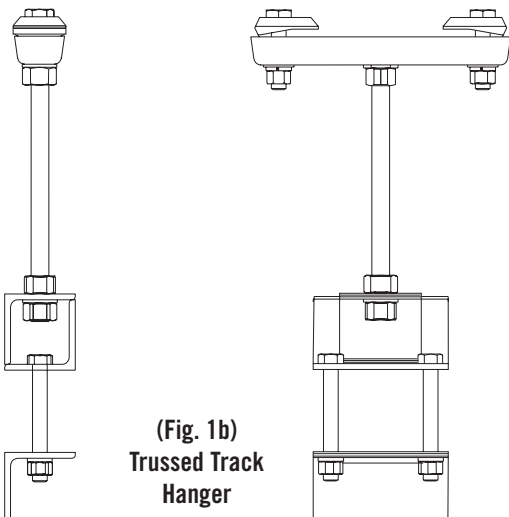
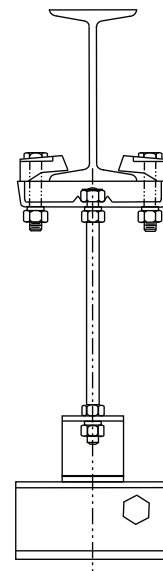


WARNING Runway endstops must be aligned longitudinally so bridge hits end stops simultaneously.

Adjustable roof beam clamp providing secure fit to horizontal beams only. Flange widths range from 2-1/4" to 8", and a maximum flange thickness of 7/16". Alternate clamps can be provided, upon request, for larger beams or for sloped beams (not horizontal).



(Fig. 1a)
Plain Track
Hanger



(Fig. 1b)
Trussed Track
Hanger

See appendix for hanger torque specifications.

SPLICE TRACK SERIES	ALIGNMENT BOLTS TORQUE SPECIFICATIONS
500	50 IN-LBS
600	60 IN-LBS
Exceeding these torque specifications may cause endtracks to bind in track.	

Note: Each section of plain track must have at least 2 hangers per track section.

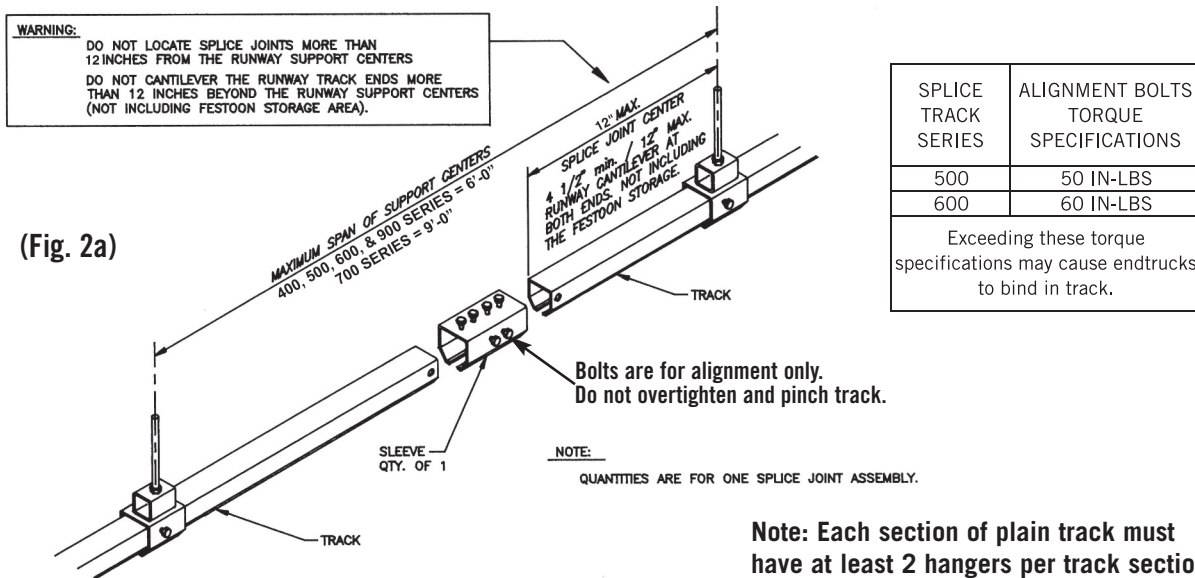
SPLICE INSTALLATION

- If your system has more than one section length of runway track, each additional section is installed in the same manner as the first, with the addition of a splice joint assembly.

Plain Track: Splice joints should be within 12" of a support bracket or hanger as shown in AAFig. 2a.

Reinforced Runway: Splice joints should be within 48" of a support bracket or hanger.

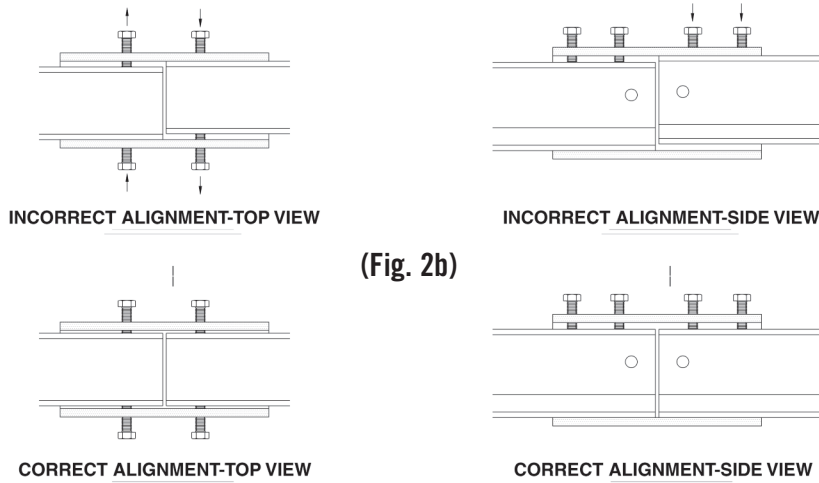
The track splice joint is made from a sleeve with a total of eight set screws threaded into the top and both sides. Slide the sleeve over the end of the first runway track, then butt the second runway track against the first. Center the sleeve over the joint. The two center top set screws should be tightened slightly to push the tracks against the base of the sleeve so that the two bottom surfaces of the track are even. Adjust the side set screws so that the track slots are aligned and there is a smooth transition from one track to the other, see Fig. 2b. Tighten all top set screws then side set screws for correct track alignment.



PRODUCT #	WEIGHT LB/FT	MAXIMUM SPAN				CANTILEVERS	
		1 MAN	2 MAN	3 MEN	4 MEN	1 MAN	2 MAN
FAP500	3.8	10'	8'	6'-6"	5'-4"	3'	2'-6"
FAP600	5.9	15'	12'-6"	10'	8'	4'	3'-4"
FAR250	10.1	20'	17'	14'	11'-6"	5'	4'
FAR525	10.5	25'	18'	15'	12'	6'	5'
FAR530	12.9	30'	25'	21'	17'	7'	6'
FAR520C	25.4	40'	33'	27'	22'	5'	4'
FAR525C	25.8	50'	42'	35'	28'	6'	5'
FAR530C	32.9	58'	48'	40'	32'	7'	6'
FAR520-DT	13.9	N/A	30'-6"	25'	21'	6'	5'
FAR525-DT	14.3	N/A	33'	27'	22'	7'	6'
FAR530-DT	16.7	N/A	45'	32'	26'	8'	7'
FAP-306 ALUTRACK	5.6	11'-6"	9'-6"	8'	6'-6"	3'	2'-6"
FAP-308 ALUTRACK	7.7	20'	17'	14'	11'	5'	4'
FAP-308R ALUTK REINFORCED	12.1	30'	26'	22'	18'	6'	5'

IMPORTANT: ANY SCAFFOLD OR SCAFFOLD-LIKE APPLICATION REQUIRES SPECIAL ENGINEERING ANALYSIS DUE TO THE POTENTIAL OF AN INSTANTANEOUS FLOORING FAILURE. SCAFFOLD OR SCAFFOLD-LIKE APPLICATIONS MUST BE BROUGHT TO RIGID LIFELINES ATTENTION BEFORE PLACING AN ORDER.

Splice Joint Track Alignment



(Fig. 2b)

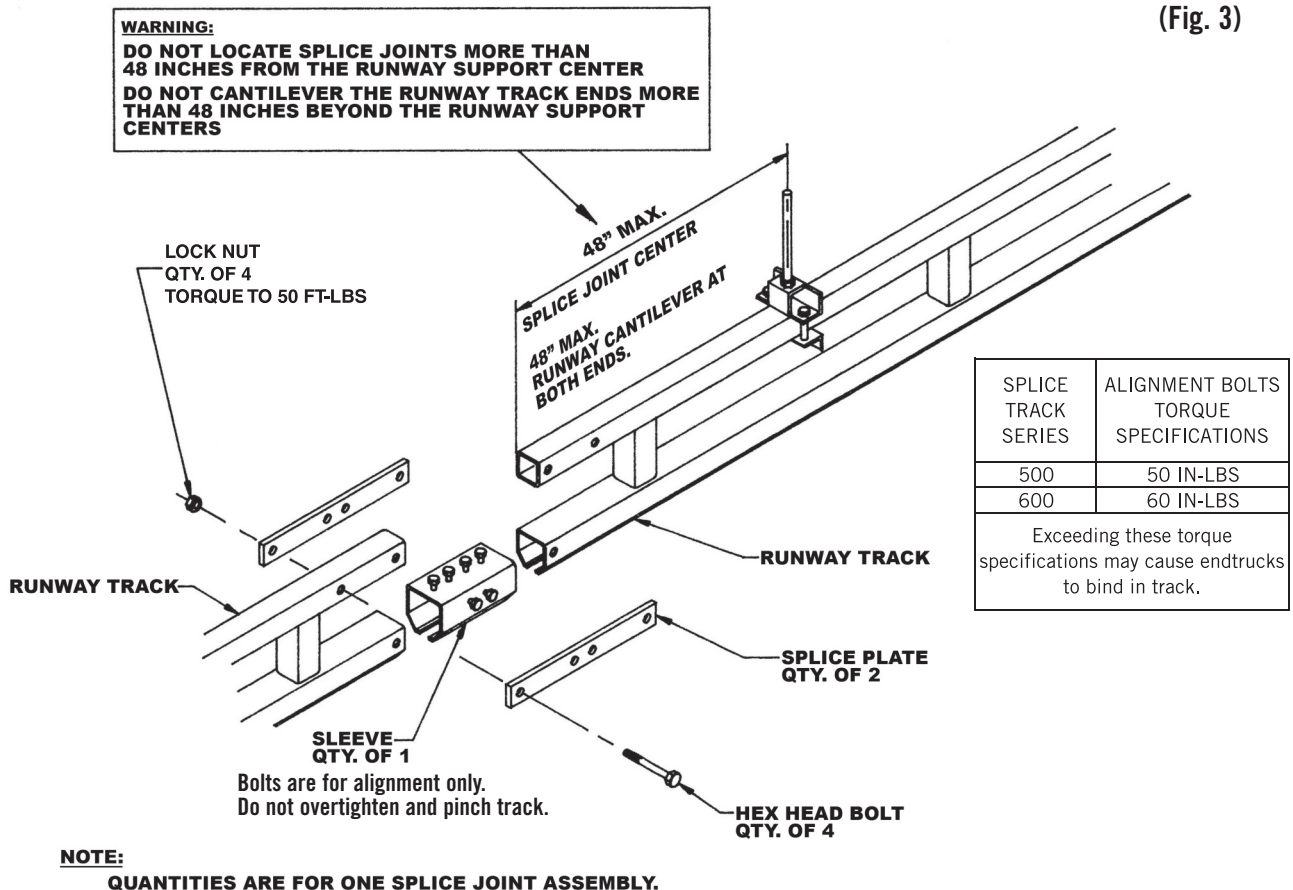
*** DO NOT OVERTIGHTEN BOLTS**

SPLICE TRACK SERIES	ALIGNMENT BOLTS TORQUE SPECIFICATIONS
500	50 IN-LBS
600	60 IN-LBS

Exceeding these torque specifications may cause endtrucks to bind in track.

- Trussed runway splice joints also include two splice plates and four, 1/2" bolts with lock nuts. Install the splice plates to connect the ends of the truss tubes with the four through bolts provided. Torque through bolts to 50 FT. lbs., see Fig. 3.

NOTE: When end stop hole in runway or track align with sleeve set screw, move sleeve approximately 1/4 of an inch to either side of the end stop hole.



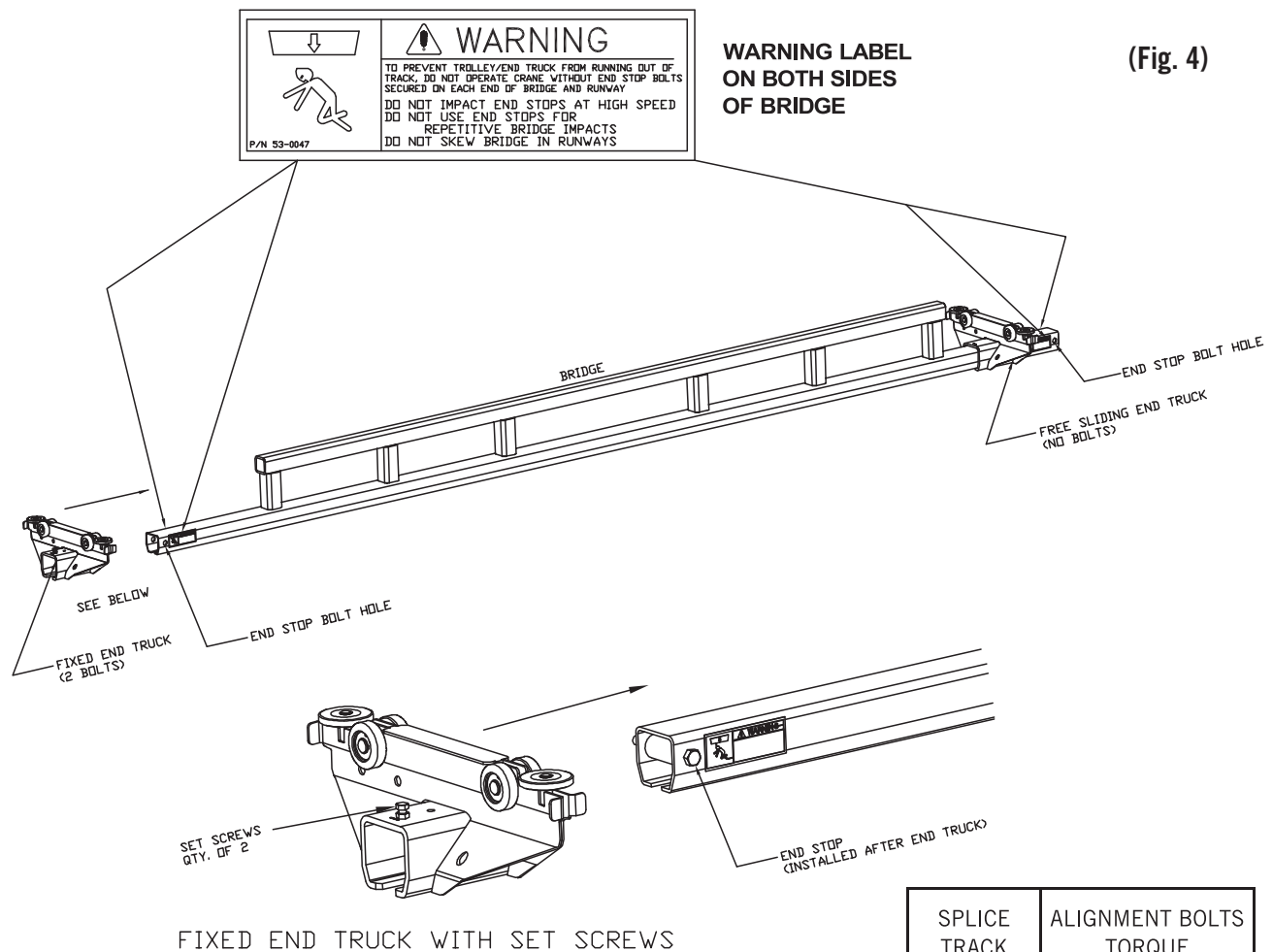
(Fig. 3)

SPLICE TRACK SERIES	ALIGNMENT BOLTS TORQUE SPECIFICATIONS
500	50 IN-LBS
600	60 IN-LBS

Exceeding these torque specifications may cause endtrucks to bind in track.

BRIDGE END TRUCK INSTALLATION

5. Insert the bridge track into the sleeves of the end trucks. Locate the center of the end trucks approximately 12" from each end of the bridge. One end truck is secured to the bridge track with set screws, furnished with the sleeve. The other end truck is allowed to slide freely on the bridge track in order to accommodate any slight misalignment between the parallel runway tracks, see Fig. 4. Install the bridge crane by inserting both end trucks into one end of the runway tracks. Adjust and tighten the bridge end truck set screws to provide a minimum clearance of 2" between the ends of the bridge and any side obstructions. Adjust support brackets or hangers to provide a minimum clearance of 3" between the top of the bridge and any overhead obstructions.



SPLICE TRACK SERIES	ALIGNMENT BOLTS TORQUE SPECIFICATIONS
500	50 IN-LBS
600	60 IN-LBS
Exceeding these torque specifications may cause endtrucks to bind in track.	

RUNWAY END STOP INSTALLATION

6. Secure end stop assemblies, end stop bolts, and lock nuts at both ends of both runway tracks.

TROLLEY INSTALLATION

7. Install trolley on bridge track. Secure end stop bolts and rubber bumpers.



To prevent personal injury or death **DO NOT** operate without end stop through bolts securely in place.

Once installation is completed, the bridge and runways should be leveled. Install the 1 lateral and longitudinal sway bracing, furnished by others, as required. The total system should then be checked for tightness of all nuts and bolts.

WARNING, SAFETY, OR CAPACITY LABELS

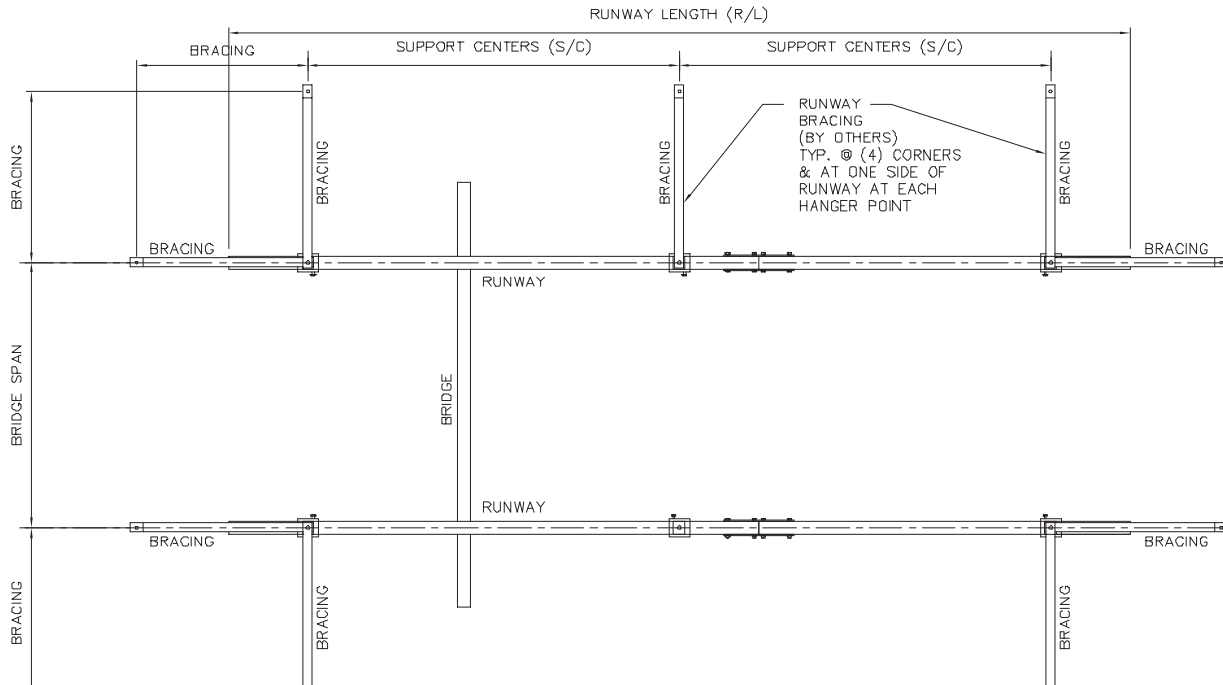
8. **If at any time these labels are lost, stolen, removed or become illegible, contact Rigid Lifelines at (844) 467-4443 for free replacements.** Please order by part number on the label or by the facsimiles in this manual.

SWAY BRACING REQUIREMENTS (SUPPLIED BY OTHERS)

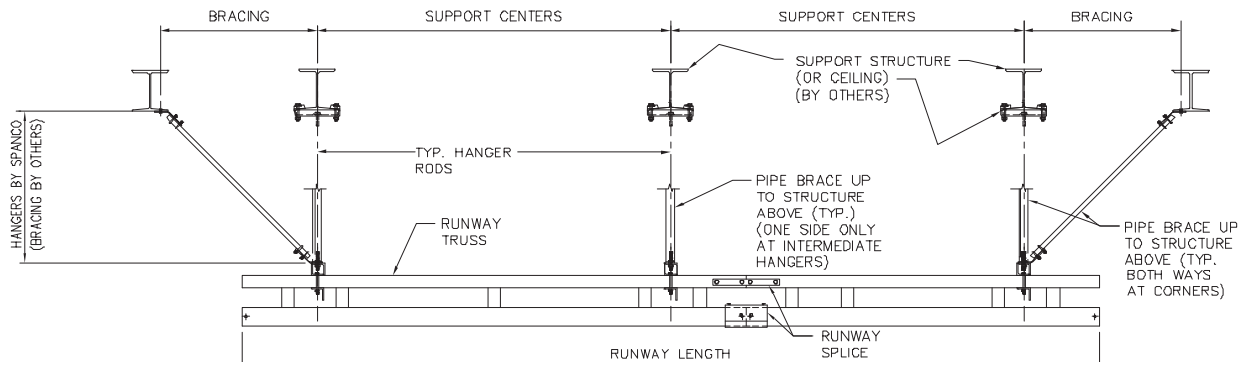
- Sway bracing is required for all systems with hanger rods.
- Bracing is required at all corners of systems in both directions. (laterally and longitudinally).
- Intermediate bracing is required on one side of runways at each hanger closest to runway splices.
- Sway bracing shall be used to reduce lateral stresses on hanger rods and help prevent system hardware from loosening and fatigue due to cycle loading.
- Rigid Lifelines is not responsible for design of supporting structures or attachments of system hangers and/or bracing to supporting structures. All supporting structures shall be designed by a qualified person using all applicable local, state, and national code requirements.
- Support structures shall be designed per requirements of “American Institute of Steel Construction” (AISC) specifications for design, fabrication, and erection of structural steel for buildings. Specific attention shall be given to requirements for impact and deflection to maintain the integrity of the complete building/fall protection system. All responsibility for the final design shall rest with the qualified person and NOT Rigid Lifelines.
- All bracing shown in this drawing is to be used as a guide only and shall be considered as the minimum required for any Rigid Lifelines ceiling mounted system. Minimum pipe size shall be 1” \varnothing sch. 40 for systems with hanger rods up to 6’-0” long. Systems with rods longer than 6’-0” shall be considered to require special attention.
- Other bracing materials and designs may be acceptable provided they are designed by a qualified person.

LATERAL BRACING FOR TRAVELING BRIDGE

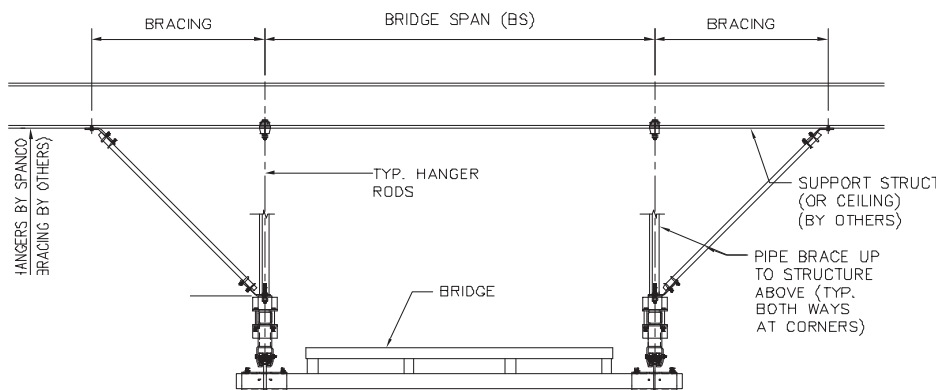
TOP VIEW



SIDE VIEW



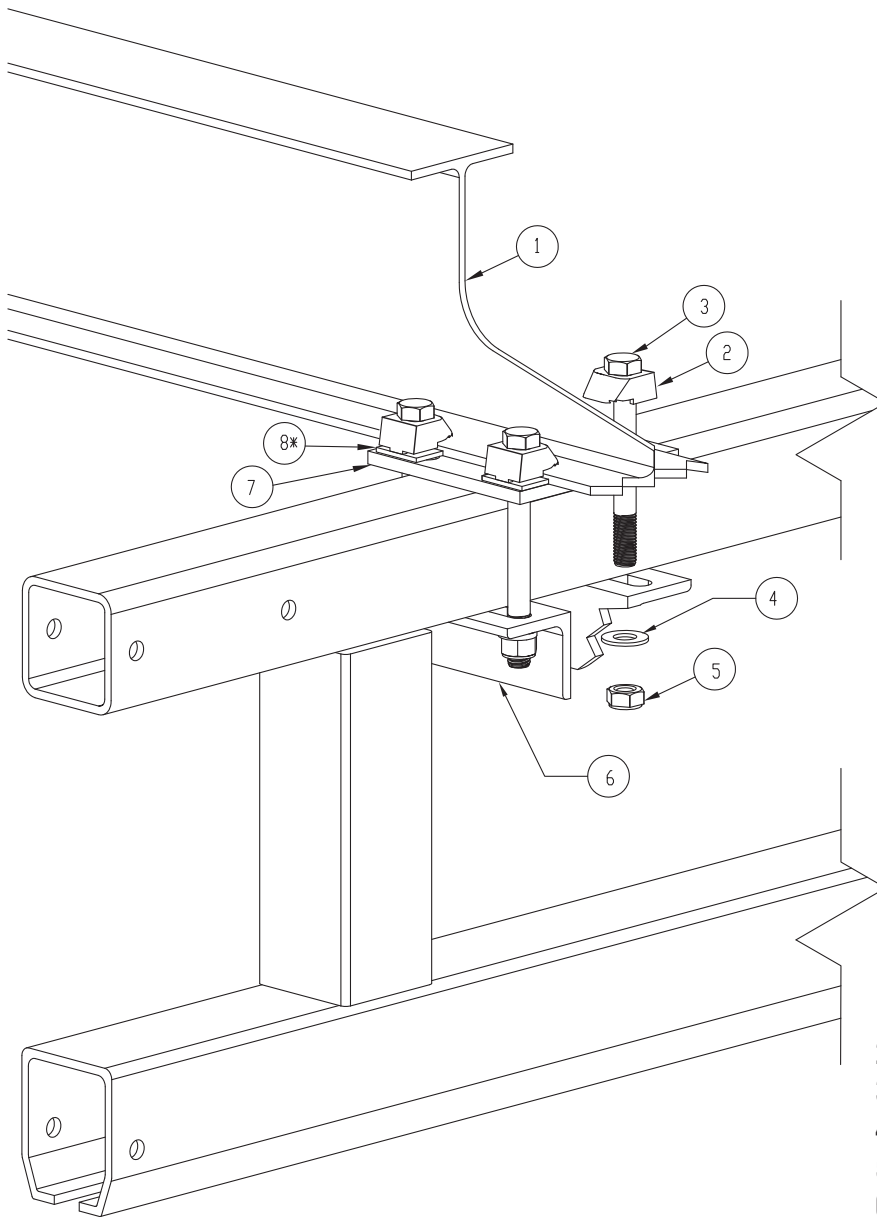
END VIEW



APPENDIX

- AP-1 Fall Arrest Flush Mount Truss Hanger
- AP-2 FAC-480 Assembly
- AP-3 Fall Arrest Ceiling Mount Truss Hanger
- AP-4 Fall Arrest Ceiling Mount Truss Hanger C-482
- AP-5 Fall Arrest Ceiling Mount Plain Track Hanger
- AP-6 Fall Arrest Flush Mount Parallel Mount Plain Track Hanger
- AP-7 Fall Arrest Ceiling Mount Plain Track Cross Mount
- AP-8 Fall Arrest Slope Hanger (Up to 10" Wide Beam)
- AP-9 Fall Arrest C-480 Sub Hanger
- AP-10 Fall Arrest Ceiling Mount Truss Hanger
- AP-11 Fall Arrest Bar Joist Hanger
- AP-12 Fall Arrest C-480 360° Truss Hanger Assembly
- AP-13 Fall Arrest 360° Flush Mount Plain Track Hanger
- AP-14 Fall Arrest Ceiling Mount Plain Track Bar Joist Hanger
- AP-15 Fall Arrest Slope Hanger (Over 10" Wide Beam)
- AP-16 Fall Arrest Hanger
- AP-17 Fall Arrest FA-K-CMT-500 Bolt

FALL ARREST FLUSH MOUNT TRUSS HANGER



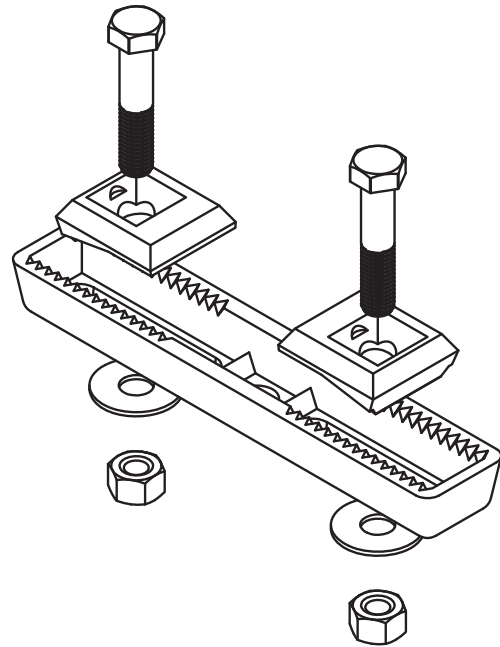
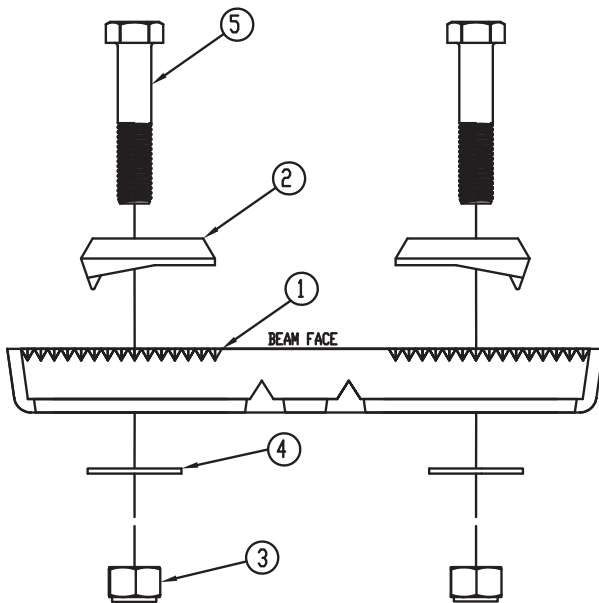
- 1. SUPPORT BEAM
- 2. (4) BEAM CLIP
- 3. (4) HEX BOLTS
- 4. (4) FLAT WASHER
- 5. (4) HEX LOCK NUT
- 6. (2) ACT
- 7. (1) PCT
- 8. (4) CLIP WASHER*

* - CLIP WASHER OR PACKING MAY BE REQUIRED TO ACCOMMODATE THICKER FLANGES- THESE ARE NOT ALWAYS NEEDED

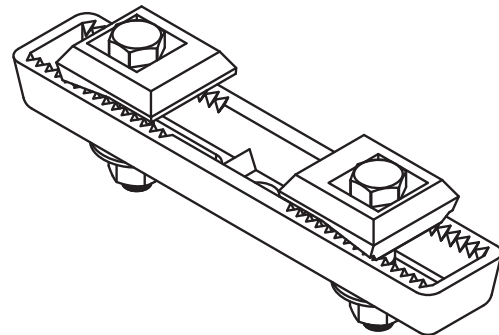
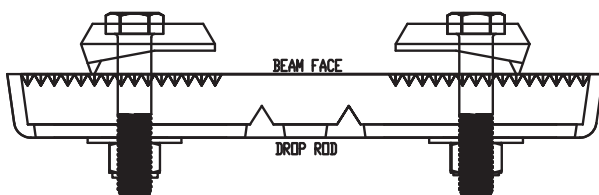
**TORQUE ALL FASTENERS:
5/8" - 108 FT/LBS**

FAC-480 ASSEMBLY INSTRUCTIONS

AP-2

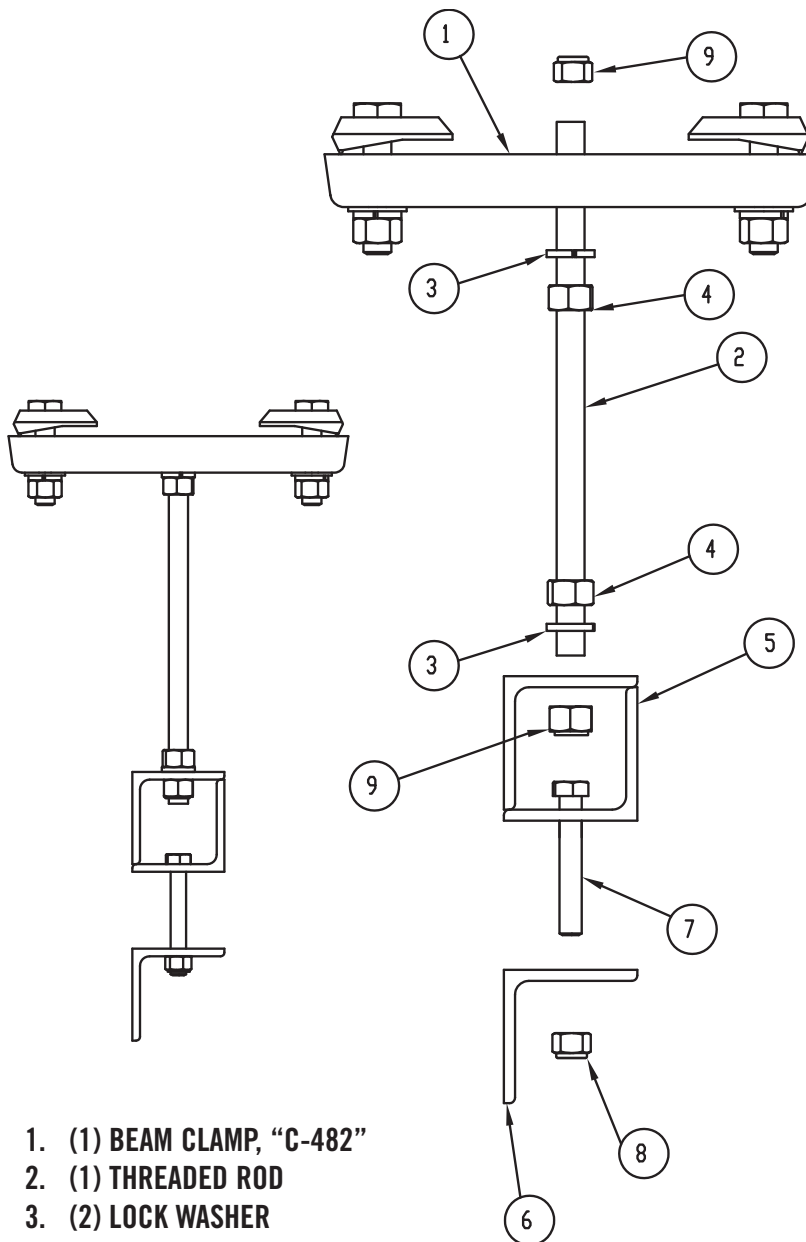
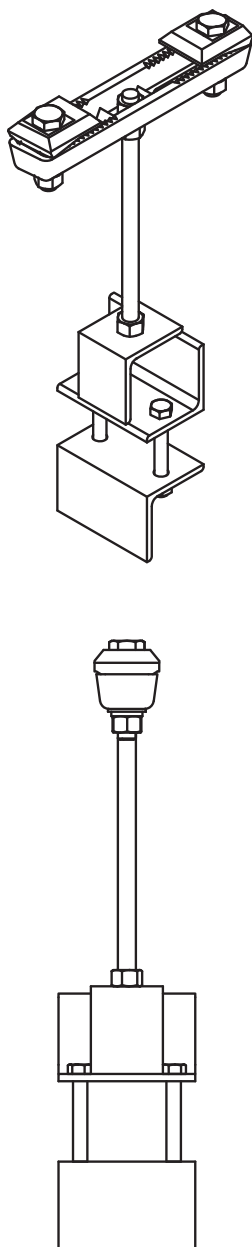


1. (1) C- 480- BASE
2. (2) C- 480- CLAMP
3. (2) C- 480- LOCK NUT
4. (2) C- 480- FLAT WASHER
5. (2) C- 480- BOLT



**TORQUE ALL FASTENERS:
5/8" - 108 FT/LBS**

FALL ARREST CEILING MOUNT TRUSS HANGER



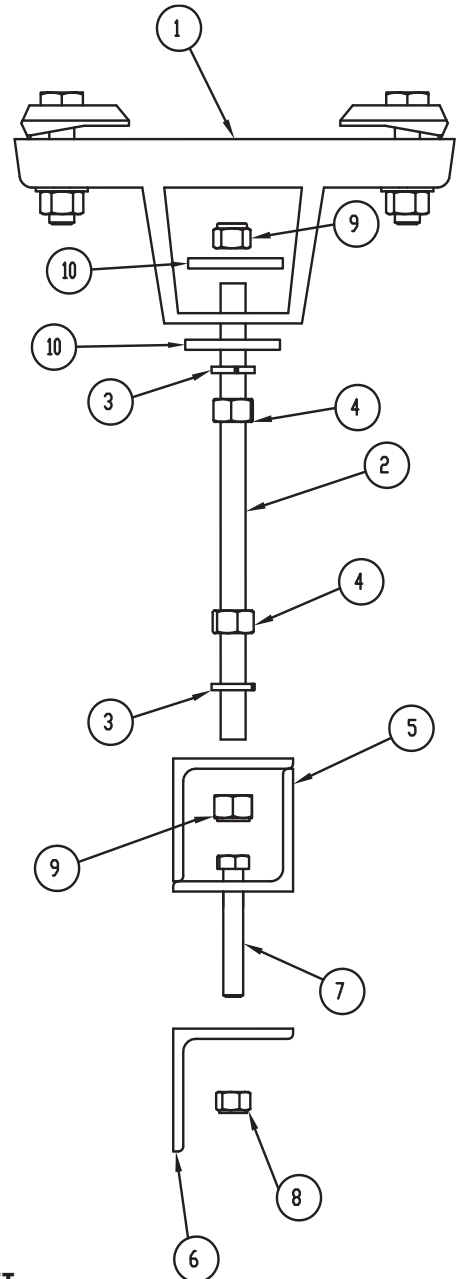
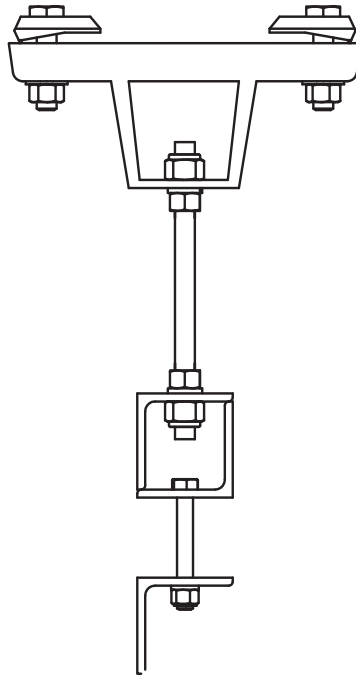
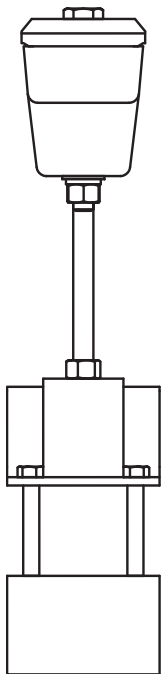
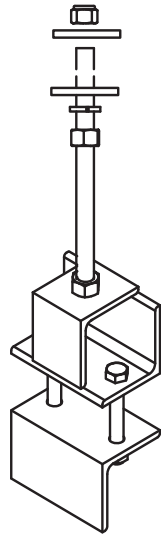
- 1. (1) BEAM CLAMP, "C-482"
- 2. (1) THREADED ROD
- 3. (2) LOCK WASHER
- 4. (2) HEX NUT
- 5. (1) HANGER TRUSS BRACKET
- 6. (1) L-ANGLE (2 HOLES)
- 7. (2) BOLT, HEX HEAD
- 8. (2) HEX LOCK NUT
- 9. (2) HEX LOCK NUT

TORQUE ALL FASTENERS:
DROP RODS & C-480 BEAM
HANGERS
5/8" - 108 FT/LBS

RUNWAY HANGERS:
1/2" - 78 FT/LBS

FALL ARREST CEILING MOUNT TRUSS HANGER C- 482

AP-4

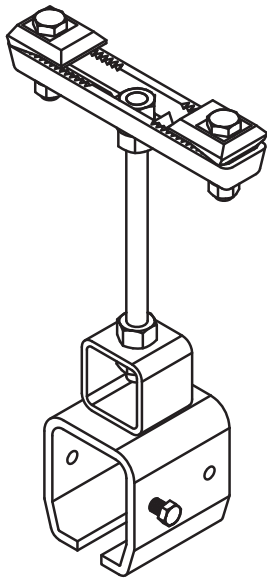


1. (1) BEAM CLAMP, "C-482"
2. (1) THREADED ROD
3. (2) LOCK WASHER
4. (2) HEX NUT
5. (1) HANGER TRUSS BRACKET
6. (1) L-ANGLE (2 HOLES)
7. (2) BOLT, HEX HEAD
8. (2) HEX LOCK NUT
9. (2) HEX LOCK NUT
10. (2) 2X2 BOLT PAD

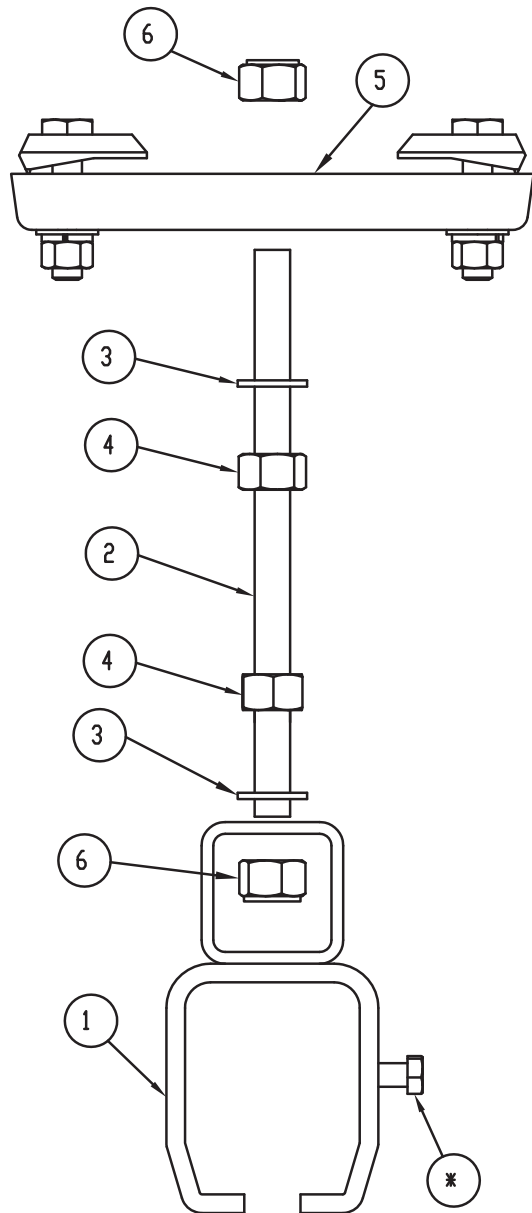
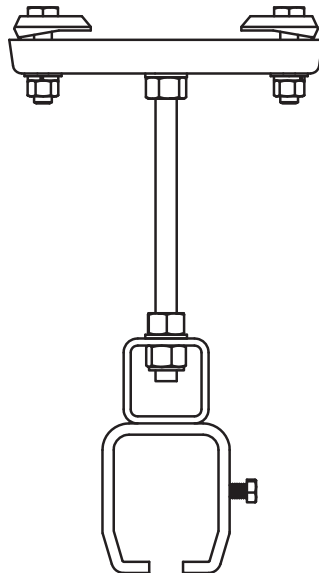
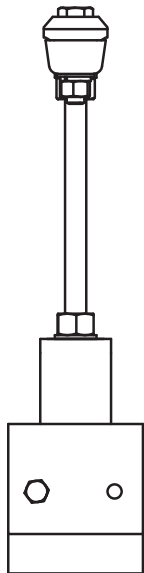
TORQUE ALL FASTENERS:
DROP RODS & C-480 BEAM HANGERS
5/8" - 108 FT/LBS

RUNWAY HANGERS:
1/2" - 78 FT/LBS

FALL ARREST CEILING MOUNT PLAIN TRACK HANGER



1. (1) PLAIN TRACK HANGER BRACKET, "HB"
2. (1) THREADED ROD
3. (2) LOCK WASHER
4. (2) HEX NUT
5. (1) BEAM CLAMP, "C-480"
6. (2) HEX LOCK NUT

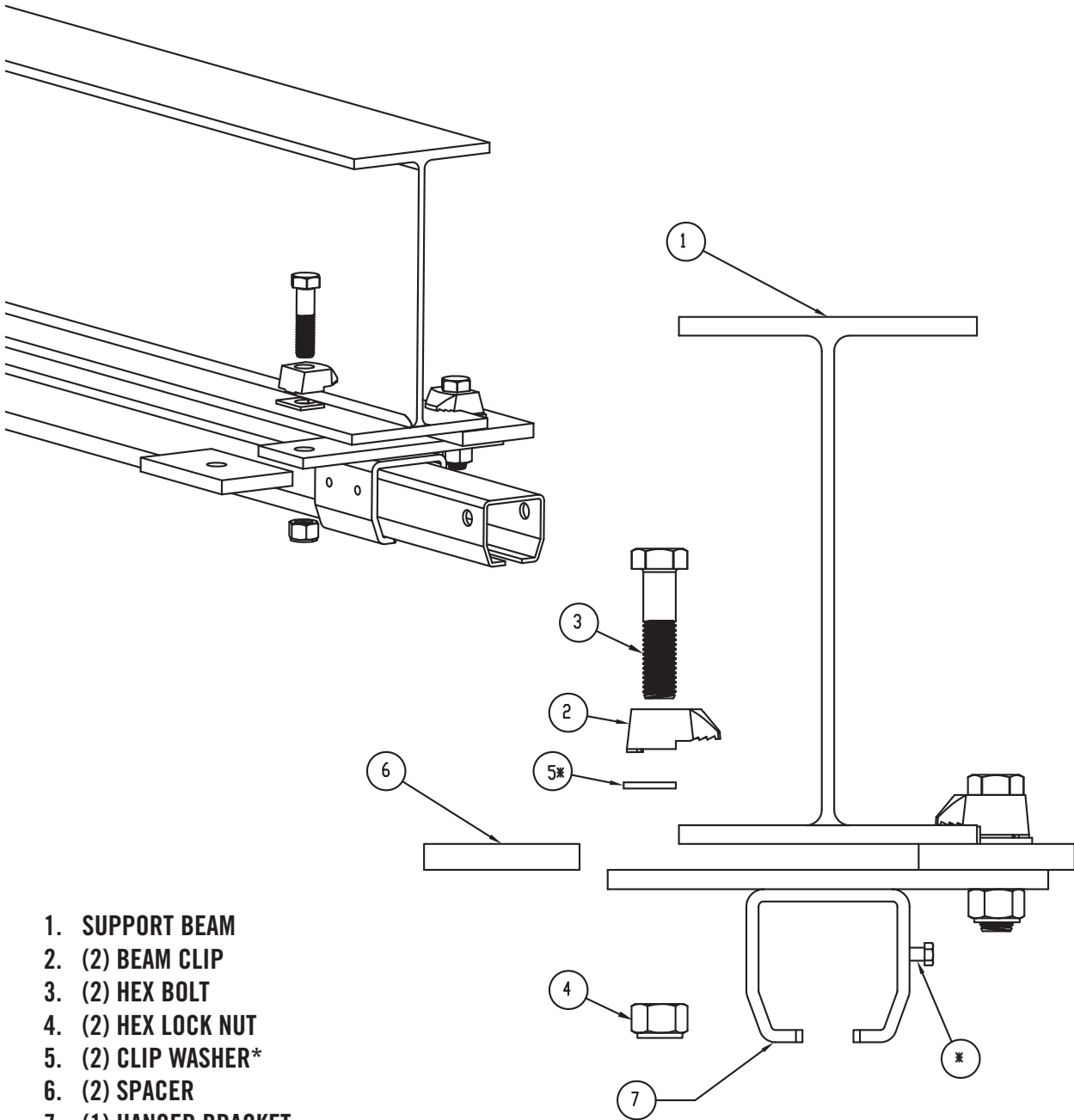


TORQUE ALL FASTENERS:
DROP RODS & C-480 BEAM
HANGERS
5/8" - 108 FT/LBS

*** SNUG BOLT DO NOT OVER TIGHTEN**

FALL ARREST FLUSH MOUNT PARALLEL MOUNT PLAIN TRACK HANGER

AP-6

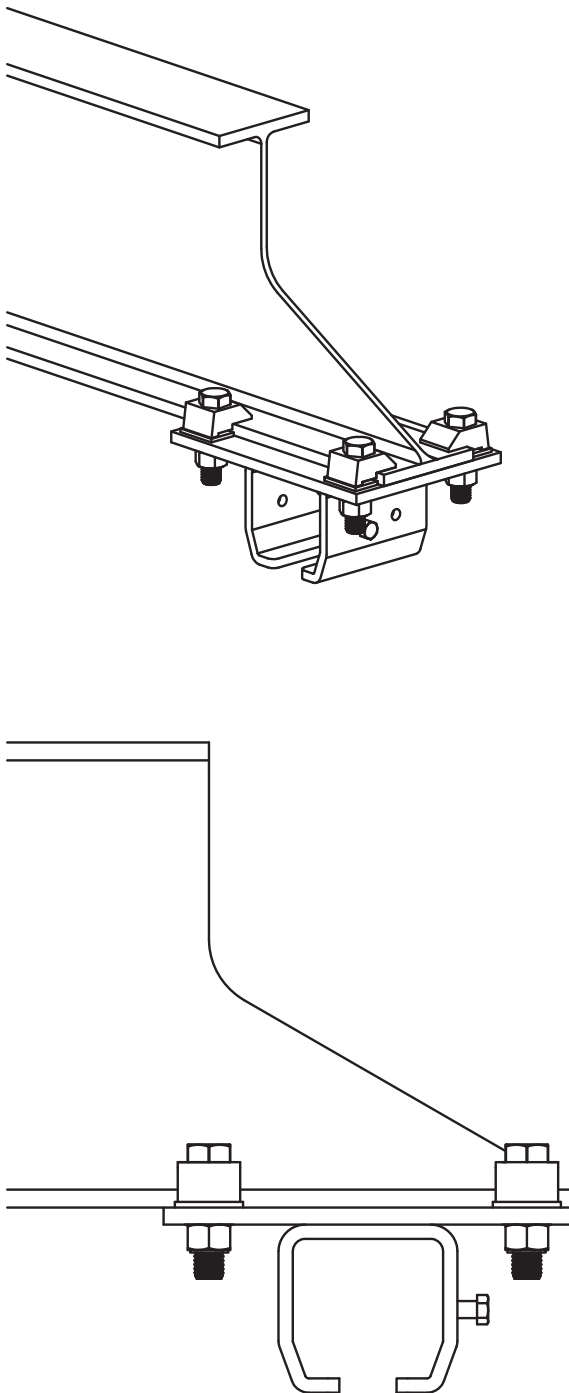


1. SUPPORT BEAM
2. (2) BEAM CLIP
3. (2) HEX BOLT
4. (2) HEX LOCK NUT
5. (2) CLIP WASHER*
6. (2) SPACER
7. (1) HANGER BRACKET

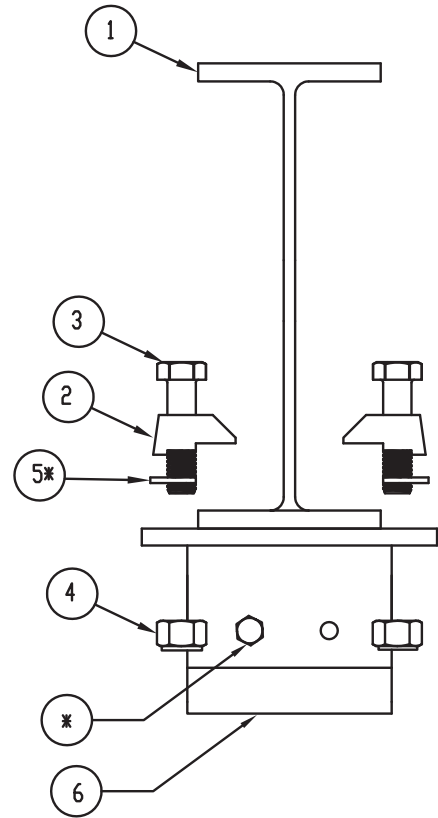
TORQUE ALL FASTENERS:
DROP RODS & C-480 BEAM
HANGERS
5/8" - 108 FT/LBS

*** SNUG BOLT DO NOT OVER TIGHTEN**

FALL ARREST CEILING MOUNT PLAIN TRACK CROSS MOUNT



**TORQUE ALL FASTENERS:
DROP RODS & C-480 BEAM
HANGERS
5/8" - 108 FT/LBS**

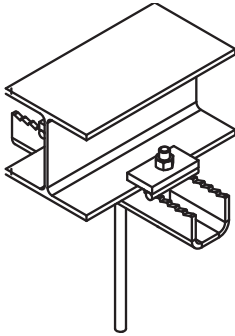


1. SUPPORT BEAM
2. (4) BEAM CLIP
3. (4) HEX BOLT
4. (4) HEX LOCK NUT
5. (4) CLIP WASHER*
5. (1) HANGER BRACKET

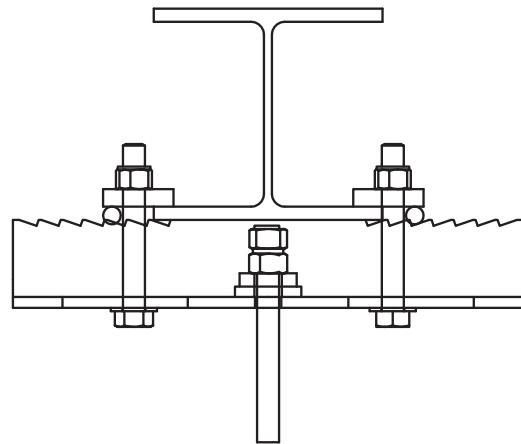
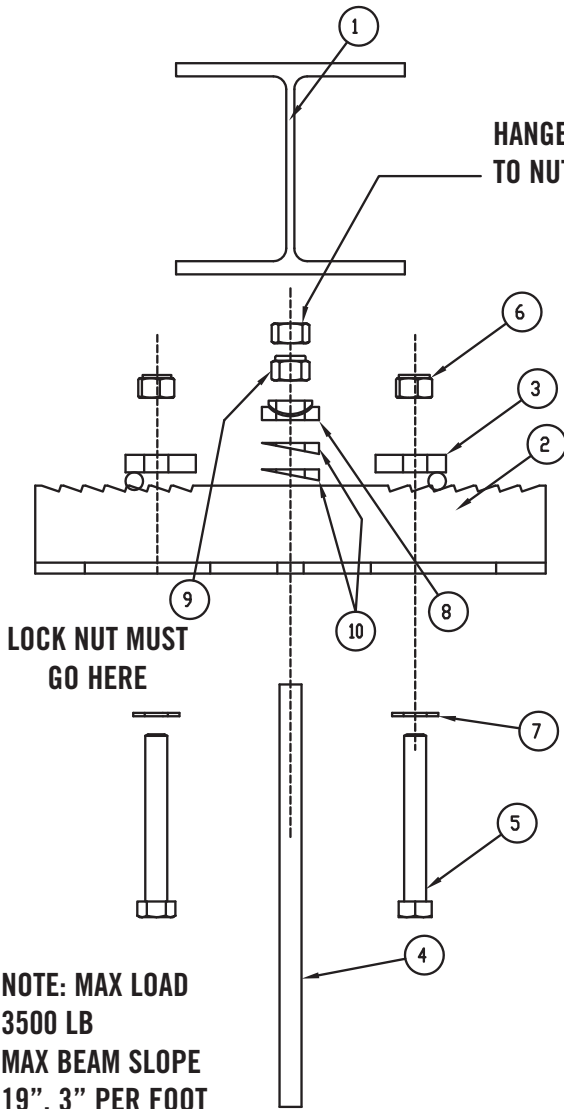
* - CLIP WASHER OR
PACKING MAY BE
REQUIRED TO
ACCOMMODATE THICKER
FLANGES - THESE ARE NOT
ALWAYS NEEDED

* SNUG BOLT DO NOT OVER TIGHTEN

FALL ARREST SLOPED HANGER (UP TO 10" WIDE BEAM)



1. (REF) EXSISTING BUILDING STRUCTURE
2. (1) BEAM CLAMP CHANNEL
3. (2) BEAM CLAMP CLIP
4. (1) HANGER ROD
5. (2) HEX BOLTS
6. (2) HEX LOCK NUTS
7. (2) FLAT WASHER
8. (1) SPHERICAL WASHER
9. (1) LOCK NUT
10. (2) BEVEL WASHER (QTY. NEED DEPENDS ON DEGREE OF SLOPE)



NOTES:

1. NUTS MUST BE TORQUED TO PREVENT ROD FROM TURN OUT.
2. CLIPS MUST BE POSITIONED SUCH THAT THEY SEAT FULLY IN CUTOUT, WITH THE BOLT AS CLOSE AS POSSEBLE TO THE EDGE OF THE BEAM FLANGE.
3. POSITION CLIPS SUCH THAT THEY ARE AN EQUAL NUMBER OF CUTOUTS FROM THE CENTER.
4. TIGHTEN NUT 6 TO PULL CLAMP CHANNEL TIGHTLY AGAINST BEAM.

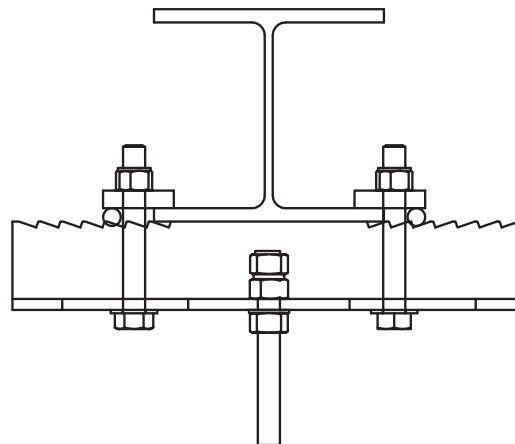
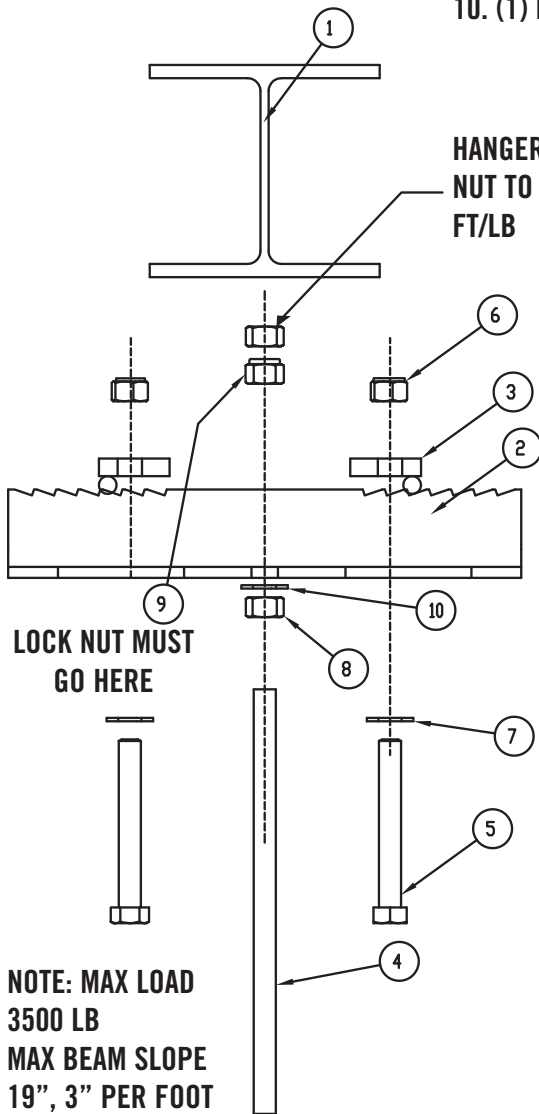
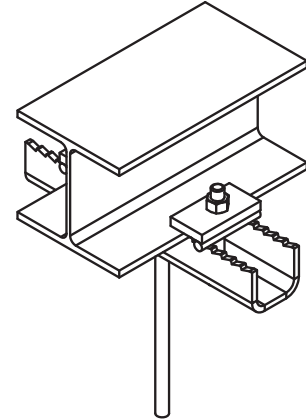
TORQUE ALL FASTENERS:
DROP RODS & C-480 BEAM
HANGERS
5/8" - 108 FT/LBS

SPANCO IS NOT RESPONSIBLE FOR
ENGINEERING, DESIGN, VALIDATION
OR QUALITY OF SUPPORT STRUCTURE

RUNWAY HANGERS:
1/2" - 78 FT/LBS

FALL ARREST C-480 SUB HANGER

1. (REF) EXISTING BUILDING STRUCTURE
2. (1) BEAM CLAMP CHANNEL
3. (2) BEAM CLAMP CLIP
4. (1) HANGER ROD
5. (2) HEX BOLTS
6. (2) HEX LOCK NUTS
7. (2) FLAT WASHER
8. (2) HEX NUT
9. (1) LOCK NUT
10. (1) LOCK WASHER



NOTES:

1. NUTS MUST BE TORQUED TO PREVENT ROD FROM TURN OUT.
2. CLIPS MUST BE POSITIONED SUCH THAT THEY SEAT FULLY IN CUTOUT, WITH THE BOLT AS CLOSE AS POSSIBLE TO THE EDGE OF THE BEAM FLANGE.
3. POSITION CLIPS SUCH THAT THEY ARE AN EQUAL NUMBER OF CUTOUTS FROM THE CENTER.
4. TIGHTEN NUT 6 TO PULL CLAMP CHANNEL TIGHTLY AGAINST BEAM.

**NOTE: MAX LOAD
3500 LB
MAX BEAM SLOPE
19", 3" PER FOOT**

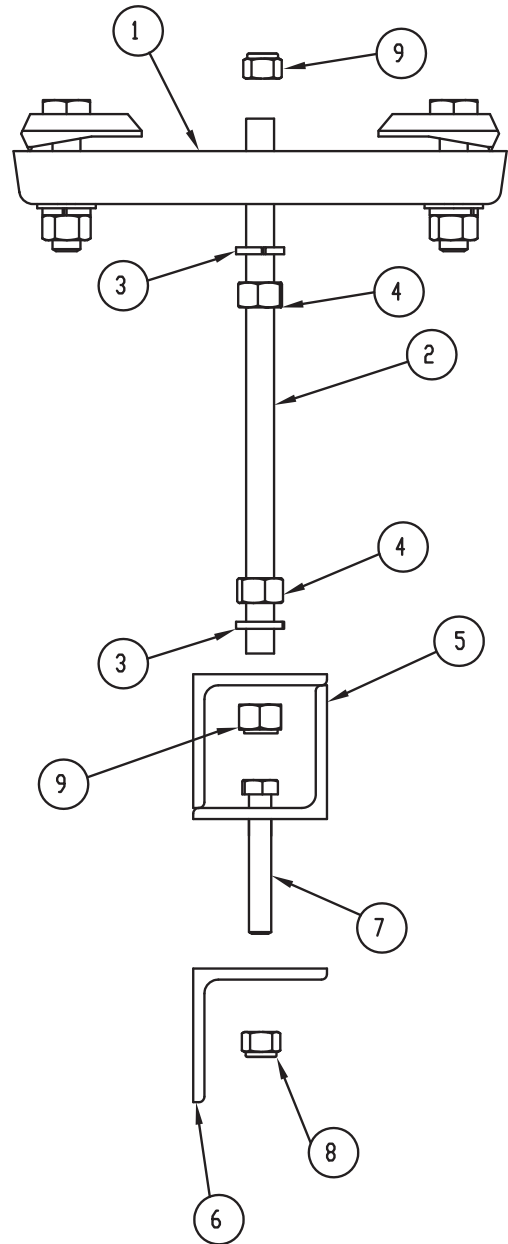
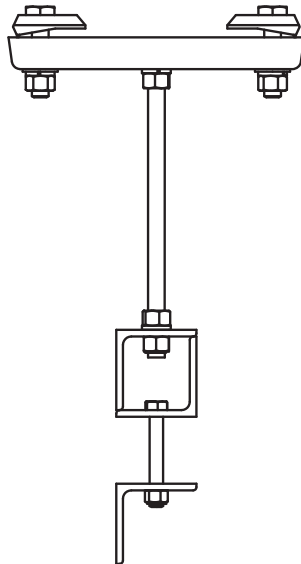
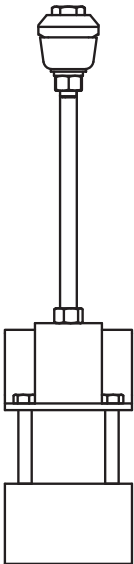
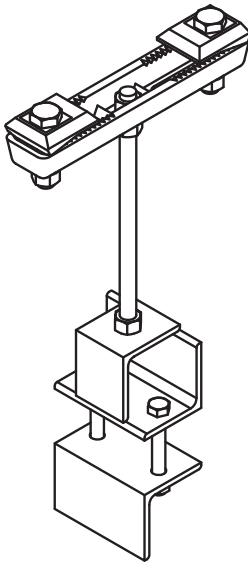
**TORQUE ALL FASTENERS:
DROP RODS & C-480 BEAM
HANGERS**
5/8" - 108 FT/LBS

**SPANCO IS NOT RESPONSIBLE FOR
ENGINEERING, DESIGN, VALIDATION
OR QUALITY OF SUPPORT STRUCTURE**

RUNWAY HANGERS:
1/2" - 78 FT/LBS

FALL ARREST CEILING MOUNT TRUSS HANGER

1. (1) BEAM CLAMP, "C-482"
2. (1) THREADED ROD
3. (2) LOCK WASHER
4. (2) HEX NUT
5. (1) HANGER TRUSS BRACKET
6. (1) L-ANGLE (2 HOLES)
7. (2) BOLT, HEX HEAD
8. (2) HEX LOCK NUT
9. (2) HEX LOCK NUT



**TORQUE ALL FASTENERS:
DROP RODS & C-480 BEAM
HANGERS
5/8" - 108 FT/LBS**

**RUNWAY HANGERS:
1/2" - 78 FT/LBS**

FALL ARREST BAR JOIST HANGER

NOTES:

1. NUTS MUST BE TORQUED TO PREVENT ROD FROM TURN OUT.
2. BOLT PADS MUST BE POSITIONED SUCH THAT THEY SEAT FULLY ON BAR TRUSS
3. TIGHTEN NUT 2 & 3 TO PULL BOLT PADS TIGHTLY AGAINST BEAM AS SEEN IN FIGURE 2.

HANGER ROD NUT (5/8") TORQUE
NUT TO NUT TO A VALUE OF 112
FT/LB

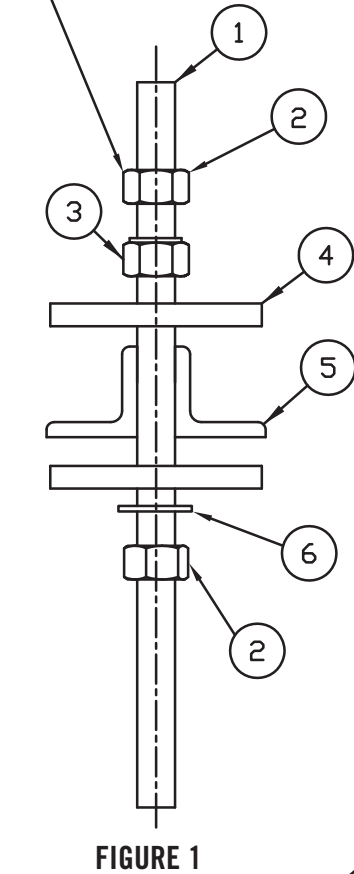


FIGURE 1

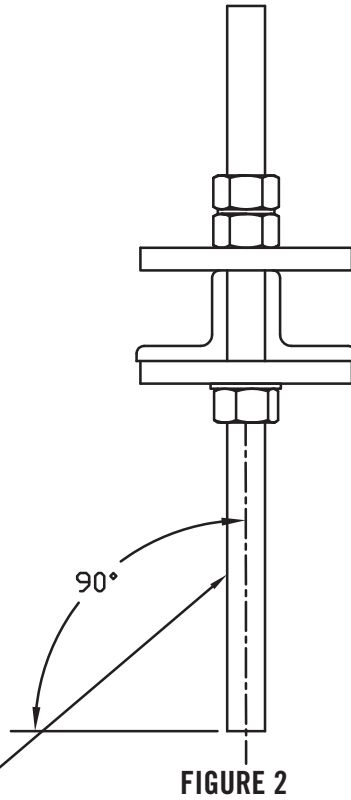
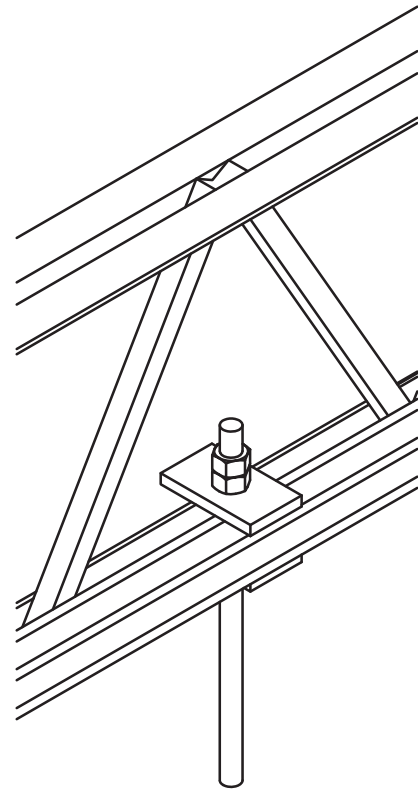


FIGURE 2

ROD MUST HANG STRAIGHT DOWN AFTER
INSTALLATION, DO NOT BEND ROD



NOTE:

- 1) MAX LOAD 5650 LB
- 2) FOR HORIZONTAL TRUSSES ONLY

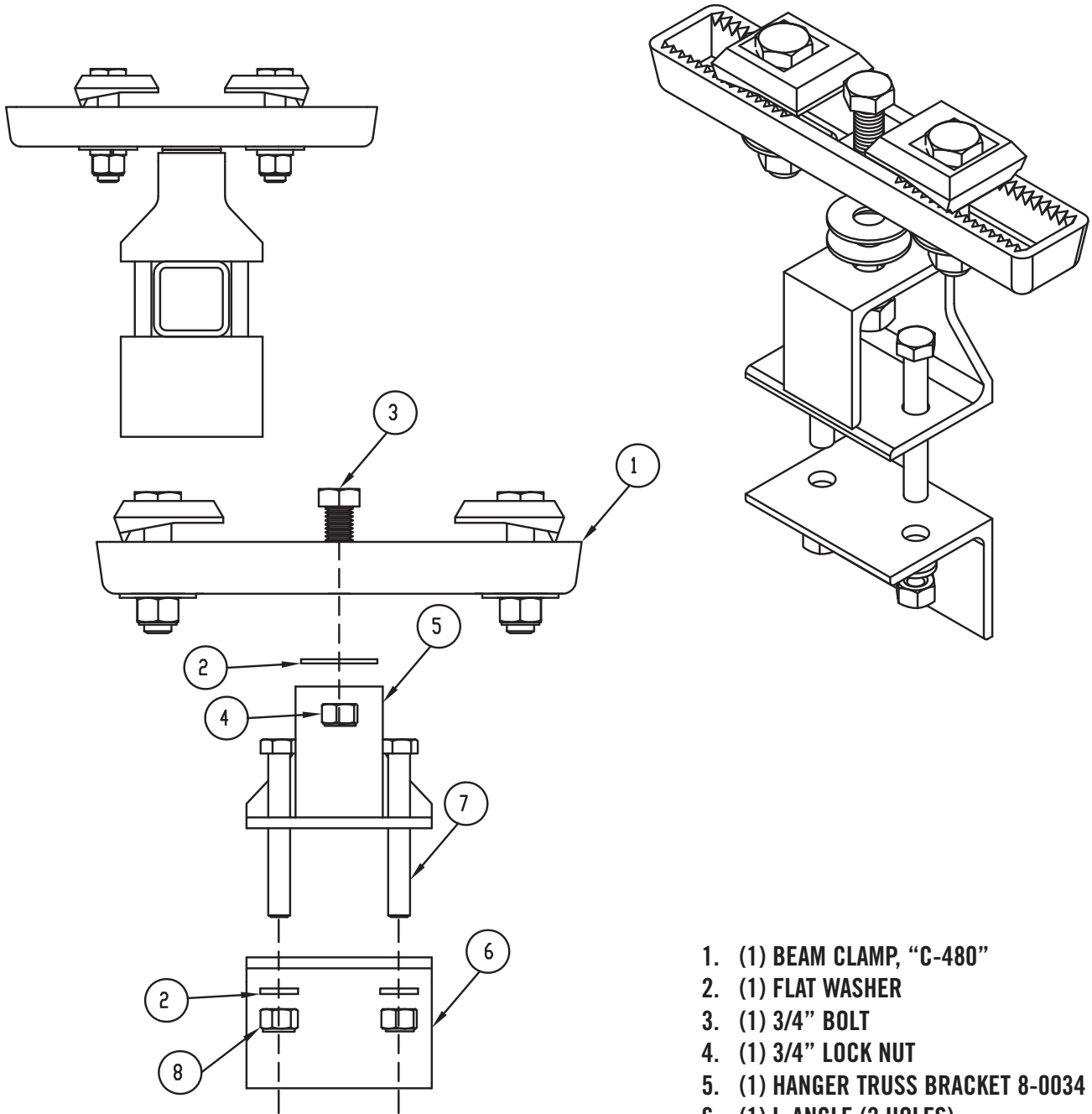
1. (REF) HANGER DROP ROD
2. (2) HEX NUTS
3. (1) LOCK NUT
4. (2) BOLT PAD
5. (REF) EXISTING BUILDING STRUCTURE
6. (1) LOCK OUT

TORQUE ALL FASTENERS:
DROP RODS & C-480 BEAM
HANGERS
5/8" - 108 FT/LBS

SPANCO IS NOT RESPONSIBLE FOR
ENGINEERING, DESIGN, VALIDATION
OR QUALITY OF SUPPORT STRUCTURE

RUNWAY HANGERS:
1/2" - 78 FT/LBS

FALL ARREST C-480 360° TRUSS HANGER ASSEMBLY

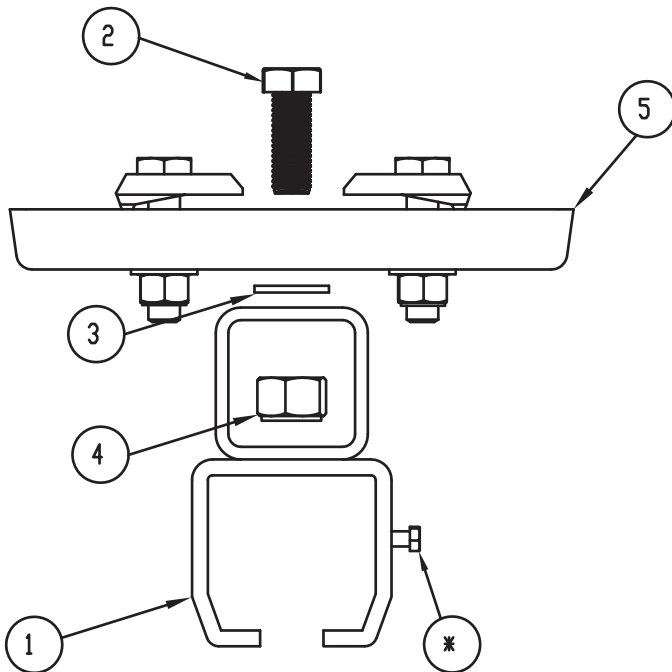
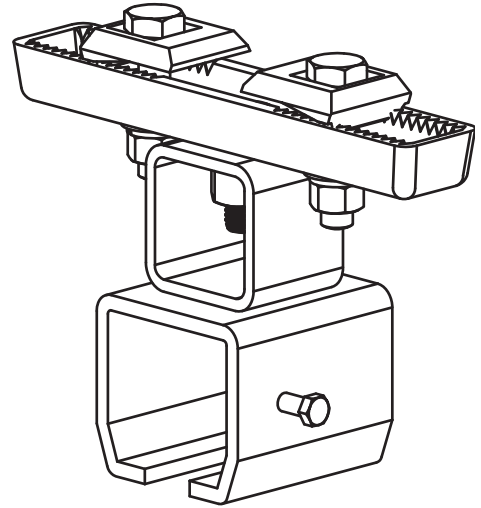
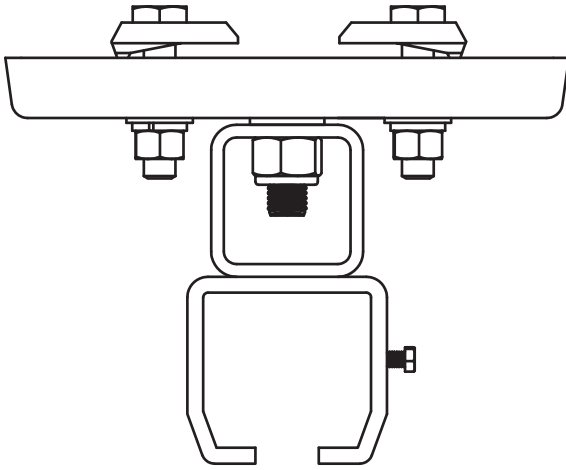


1. (1) BEAM CLAMP, "C-480"
2. (1) FLAT WASHER
3. (1) 3/4" BOLT
4. (1) 3/4" LOCK NUT
5. (1) HANGER TRUSS BRACKET 8-0034
6. (1) L-ANGLE (2 HOLES)
7. (2) BOLT, HEX
8. (2) HEX LOCK NUTS

TORQUE ALL FASTENERS:
DROP RODS & C-480 BEAM
HANGERS
5/8" - 108 FT/LBS

RUNWAY HANGERS:
1/2" - 78 FT/LBS

FALL ARREST 360° FLUSH MOUNT PLAIN TRACK HANGER



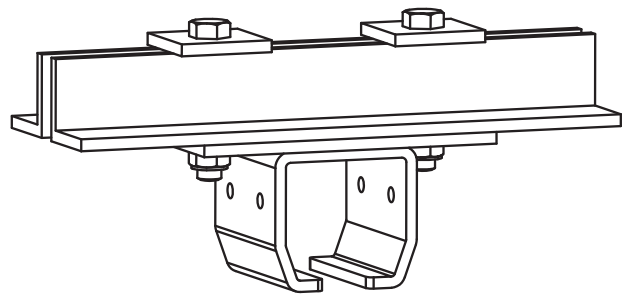
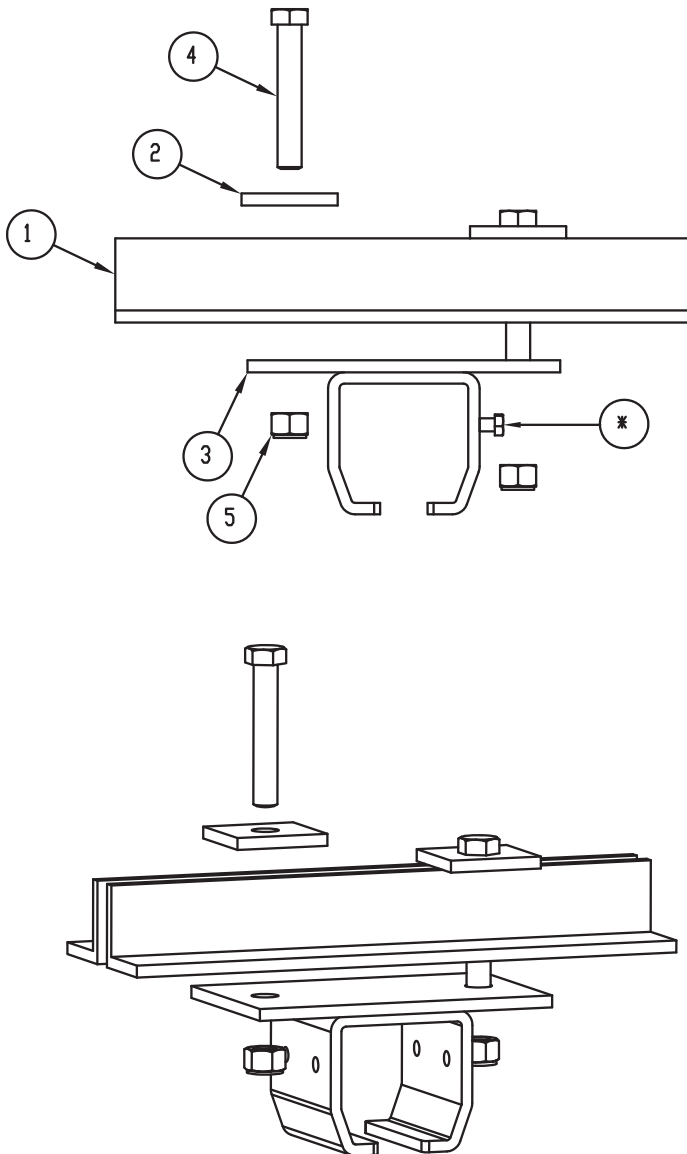
1. (1) PLAIN TRACK HANGER BRACKET, "HB"
2. (1) HANGER HEX BOLT (3/4")
3. (1) FLAT WASHER 3/4"
4. (1) HEX LOCK NUT (3/4")
5. (1) BEAM CLAMP, "C-480"

**TORQUE ALL FASTENERS:
DROP RODS & C-480 BEAM
HANGERS
5/8" - 108 FT/LBS**

*** SNUG BOLT DO NOT OVER TIGHTEN**

FALL ARREST CEILING MOUNT PLAIN TRACK BAR JOIST HANGER

AP-14



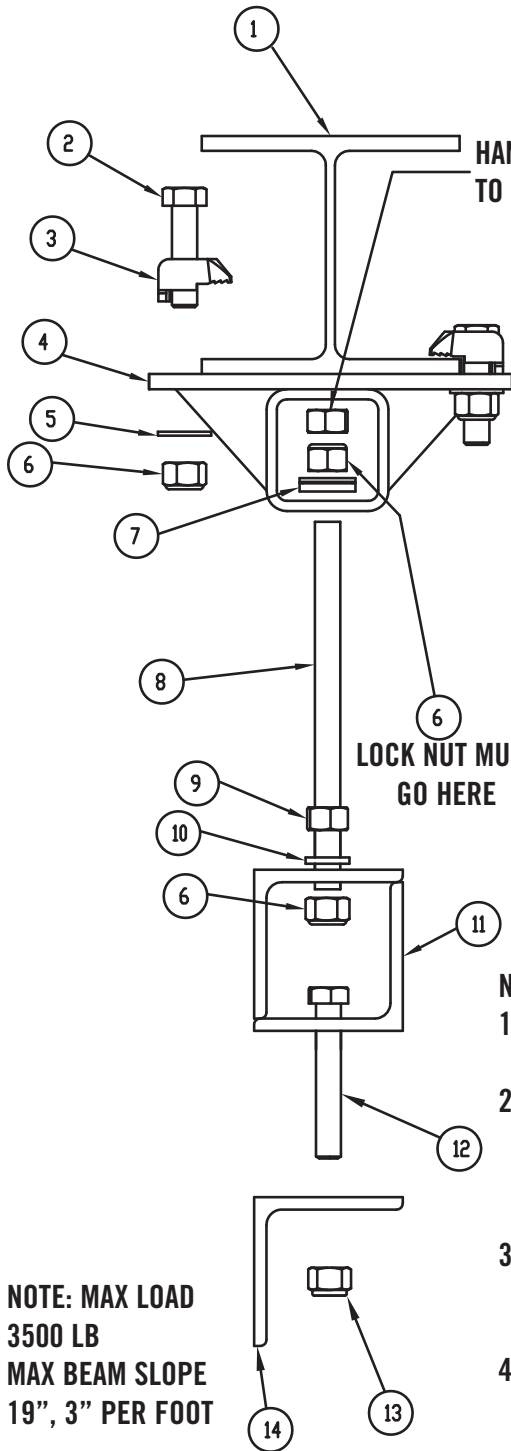
1. BAR JOIST
2. (2) BOLT PAD
3. (1) PLAIN TRACK HANGER
4. (2) HEX BOLTS
5. (2) HEX LOCK NUTS

TORQUE ALL FASTENERS:
DROP RODS & C-480 BEAM
HANGERS
 5/8" - 108 FT/LBS

* SNUG BOLT DO NOT OVER TIGHTEN

RUNWAY HANGERS:
 1/2" - 78 FT/LBS

FALL ARREST SLOPE HANGER (OVER 10" WIDE BEAM)



HANGER ROD NUT (5/8") TORQUE NUT
TO NUT TO A VALUE OF 112 FT/LB

LOCK NUT MUST
GO HERE

1. SUPPORT BEAM
2. (4) HEX BOLTS
3. (4) BEAM CLIP
4. (1) HANGER WELDMENT
5. (4) FLAT WASHER
6. (6) HEX LOCK NUT
7. (1) SPHERICAL WASHER
8. (1) DROP WASHER
9. (1) HEX NUT
10. (1) LOCK WASHER
11. (1) HANGER TRUSS BRACKET, "HTB"
12. (2) HEX BOLT
13. (2) HEX LOCK NUT
14. (1) L-ANGLE (2 HOLES)

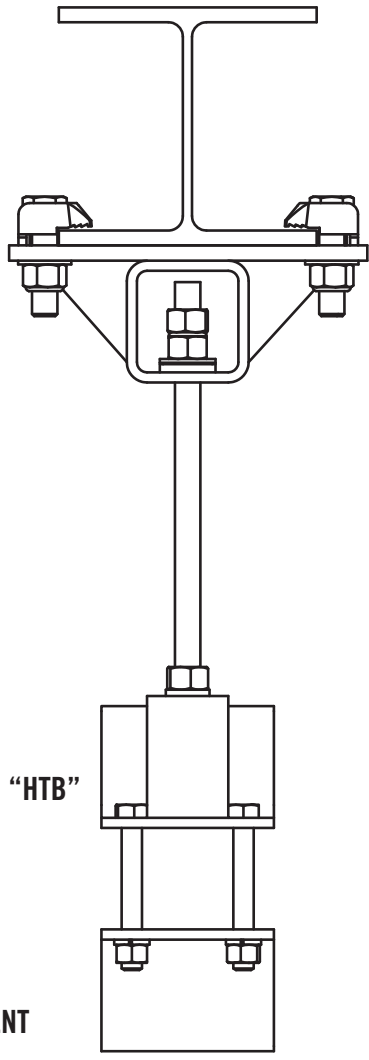
- NOTES:**
1. NUTS MUST BE TORQUED TO PREVENT ROD FROM TURN OUT.
 2. CLIPS MUST BE POSITIONED SUCH THAT THEY SEAT FULLY IN CUTOUT, WITH THE BOLT AS CLOSE AS POSSIBLE TO THE EDGE OF THE BEAM FLANGE.
 3. POSITION CLIPS SUCH THAT THEY ARE AN EQUAL NUMBER OF CUTOUTS FROM THE CENTER.
 4. TIGHTEN NUT 6 TO PULL CLAMP CHANNEL TIGHTLY AGAINST BEAM.

**NOTE: MAX LOAD
3500 LB
MAX BEAM SLOPE
19", 3" PER FOOT**

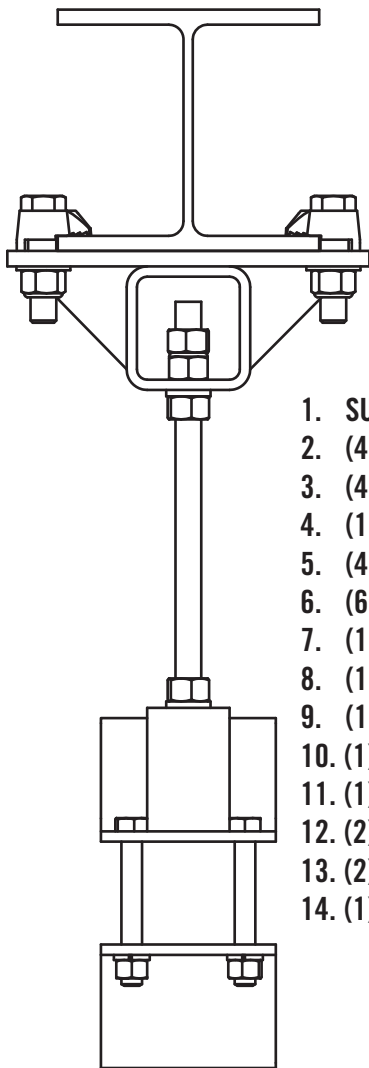
**TORQUE ALL FASTENERS:
DROP RODS & C-480 BEAM
HANGERS
5/8" - 108 FT/LBS**

**SPANCO IS NOT RESPONSIBLE FOR
ENGINEERING, DESIGN, VALIDATION
OR QUALITY OF SUPPORT STRUCTURE**

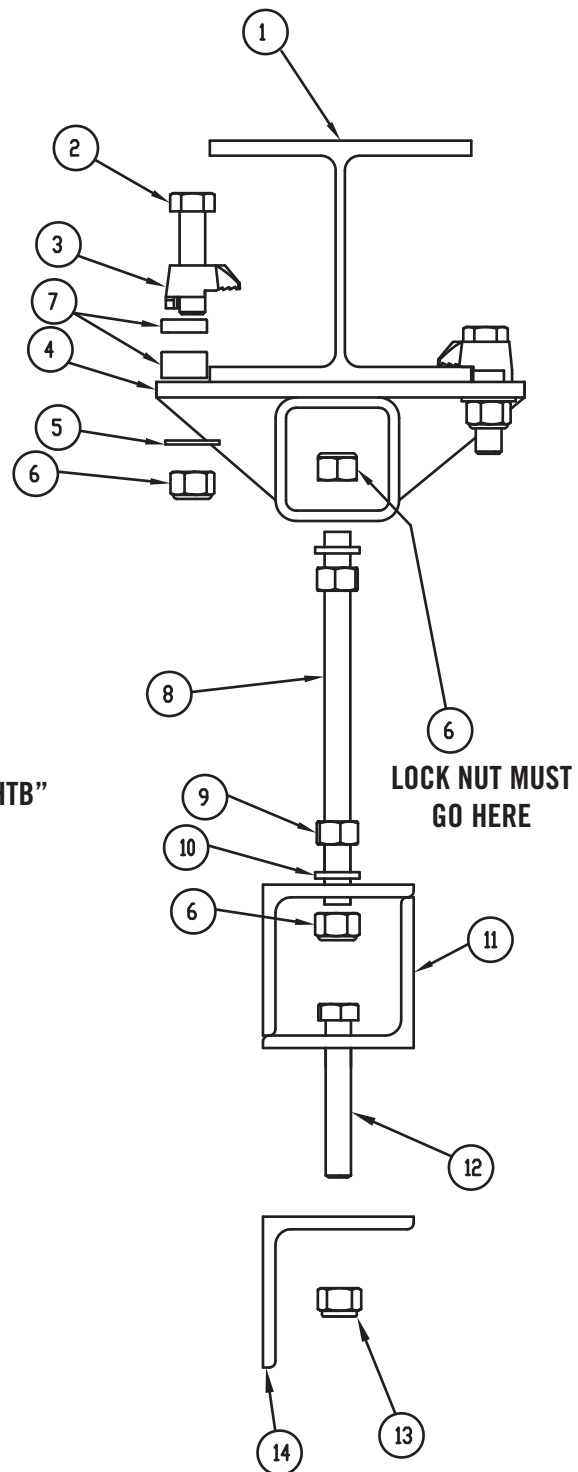
**RUNWAY HANGERS:
1/2" - 78 FT/LBS**



FALL ARREST HANGER



1. SUPPORT BEAM
2. (4) HEX BOLTS
3. (4) BEAM CLIP
4. (1) HANGER WELDMENT
5. (4) FLAT WASHER
6. (6) HEX LOCK NUT
7. (1&1) PACKING P1 & P2
8. (1) DROP ROD
9. (1) HEX NUT
10. (1) LOCK WASHER
11. (1) HANGER TRUSS BRACKET, "HTB"
12. (2) HEX BOLT
13. (2) HEX LOCK NUT
14. (1) L-ANGLE (2 HOLES)

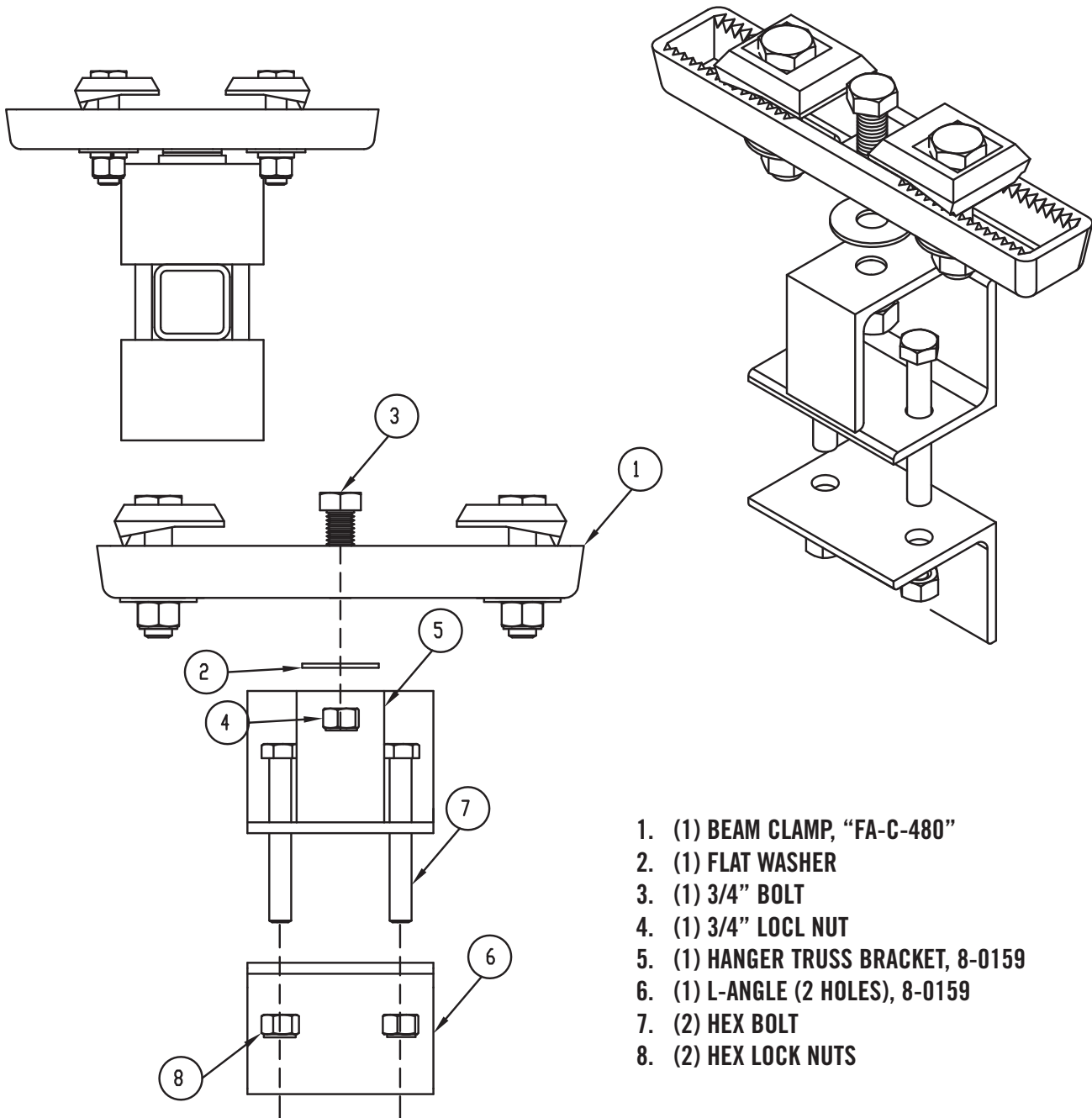


TORQUE ALL FASTENERS:
DROP RODS & C-480 BEAM
HANGERS
 5/8" - 108 FT/LBS

SPANCO IS NOT RESPONSIBLE FOR
 ENGINEERING, DESIGN, VALIDATION
 OR QUALITY OF SUPPORT STRUCTURE

RUNWAY HANGERS:
 1/2" - 78 FT/LBS

FALL ARREST FA-K-CMT-500-BOLT



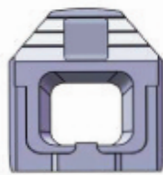
TORQUE ALL FASTENERS:
DROP RODS & C-480 BEAM
HANGERS
5/8" - 108 FT/LBS

RUNWAY HANGERS:
1/2" - 78 FT/LBS
3/4" - 210 FT/LBS

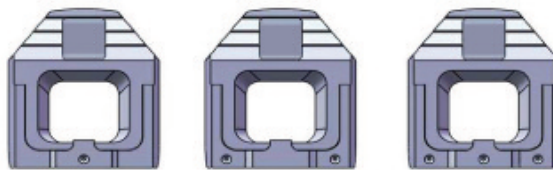
BEAM CLIP - CHART

BEAM FLANGE THICKNESS (IN)	FORGED BEAM CLAMP
1/4"	S
5/16"	S
3/8"	S+CW
7/16"	S+CW
1/2"	S+2CW
9/16"	S+1P1
5/8"	S+1P1
11/16"	S+1CW+1P1
3/4"	S+1CW+1P1
13/16"	S+2CW+1P1
7/8"	S+2CW+1P2
15/16"	S+2P2
1"	S+1CW+1P2

S = 1/4" TAIL FORGED CLAMP
CW = 1/8" CLIP WASHER
P1 = 5/6" THICK PACKING WASHER
P2 = 5/8" THICK PACKING WASHER



STANDARD CLIP
(0) DOT



SHORT TAIL
(1) DOT

MEDIUM TAIL
(2) DOT

LONG TAIL
(3) DOT



CLIP WASHER



PACKING WASHER



FALL PROTECTION SAFETY AND MAINTENANCE INSTRUCTIONS

All potential users of this equipment and user's management must read and understand all instructions fully; failure to do so could result in serious or fatal injury.

The user is ultimately responsible for his or her own safety when using a Rigid Lifelines fall arrest product. The following safety and maintenance instructions are designed to make your Rigid Lifelines product as safe as possible. To obtain the utmost level of safety that this equipment can provide all instructions must be followed thoroughly.

All Rigid Lifelines Fall Arrest systems are designed with a safety factor of two. Fall Arrest systems are fully engineering systems based on calculations and testing. All systems are designed to take a maximum arresting force to 900 lbs. per person.

Rigid Lifelines fall arrest systems should be inspected annually and at minimum as described below. For the highest level of safety, Rigid Lifelines fall arrest systems can be checked before each use as described below. The user or management should determine what system will be inspected when, and it is always a good idea to keep an inspection log. Above all simple common sense must always be used to keep safety first.

Overview

- Inspect and maintain equipment
- Understand the limitations and requirements of the equipment
- Understand the penalties of not following and understanding the instructions
- If any of the below items fail the product is unsafe and must be marked unsafe and the system's use must be discontinued until the system is fixed.

Fall Arrest Track (Where Applicable)

- Inspect for loose debris inside track
- Check track for cracks, holes, heavy rust, or deterioration
- If trussed track, inspect welds for stress cracks or broken welds
- Flange thickness should not be worn to less than 90% of original thickness
- Flange should not be bent more than 5 degrees below horizontal

Hanger System (Where Applicable)

- Inspect roof beam clamp bolts to see if tightened to **108 FT.lbs for 5/8" bolts and 210 FT.lbs for 3/4" bolts.**
- See if all adjustment screws are tight and accounted for
- For side support brackets inspect all mounting bolts, nuts and lock washers for proper installation and tightness
- For drop rod support brackets, inspect for broken welds or stress cracks, inspect drop rods for being bent along with checking drop rod bolts for tightness and proper installation
- Inspect all beam clamps for proper installation and if tightened to **108 FT.lbs for 5/8" bolts and 210 FT.lbs for 3/4" bolts.**

End Stop Bumper (Where Applicable)

- Inspect to see if end stop bumper is installed at each end of track
- Inspect rubber for wear
- Check for lock washer and nut and check for tightness

Splices (Where Applicable)

- Check for installation of all alignment bolts and inspect for tightness (on track)
- Inspect the four 1/2" diameter through bolts and check for 50 FT.lbs on bolt head (on Truss)
- Splices should be installed within 1 foot of hanger

Sway Bracing (Drop Rod Systems) (Where Applicable)

- Check for proper tightness
- Check for hanging or broken or frayed cables
- Check all connections for proper installation

End Trucks (Traveling Bridge System) (Where Applicable)

- Roll bridge to each end of runway checking smoothness for wheel and bearing use
- Inspect bolts on fixed end truck (one per bridge) to see if all tightened

Training Procedures

- Locate all fall hazards and eliminate
- Find and reduce free fall distances
- Properly fit a harness
- Inspect and maintain equipment
- Know the limitations of the equipment
- Know the consequence of not following safety instructions

Emergency Plan

- Minimum time take should be taken to rescue casualty victim, due to blood restriction cause from harness.
- Fire department or other means of professional emergency services should be notified immediately to carry rescue out, due to possible spine injury or possible suspension trauma injury.

Checklist

- System assembled to Rigid Lifelines instructions and standards?
- Has user been properly trained on equipment?
- Is the system being used within maximum load capacities?
- Has system been checked with Inspection and is maintenance log being filled out regularly?

FALL ARREST IS NOT DESIGNED FOR NORMAL CRANE USE, ONLY FOR FALL PROTECTION

THE BUYER IS RESPONSIBLE FOR ENSURING CORRECT STRENGTH AND RELIABILITY OF SYSTEM AND PROPER INSTALLATION ACCORDING TO ALL APPLICABLE FALL ARREST SPECIFICATIONS

THE BUYER IS RESPONSIBLE FOR USING THE FALL PROTECTION SYSTEM IN FULL COMPLIANCE WITH ALL OSHA REGULATIONS. PER OSHA 1910.66 App C “The employer shall provide for prompt rescue of employees in the event of a fall or shall assure the self-rescue capability of employees.” FOLLOW ANSI Z359 STANDARDS, INCLUDING Z359.2 “Minimum Requirements for a Comprehensive Managed Fall Protection Program” TO FULFILL ANSI REQUIREMENTS FOR A RELIABLE RESCUE PLAN.

ALL RIGID LIFELINES TRACK, TROLLEYS, JIBS, AND HANGERS ARE DESIGNED IN ACCORDANCE WITH A.N.SI. Spec No. Z359, OSHA 1910.66 and OSHA Std.1926.502

Rigid Lifelines Annual Fall Protection Systems Inspection Checklist



Inspector Name: _____ Date: _____

System Number: _____ Model: _____

Inspection Point	Inspection Result (3)	
	Pass	Fail
1) Check that the beam clamps are installed horizontal within + / - 5 degrees.		
2) Check that endstop bolts are present and have locknuts installed.		
3) Using a torque wrench, check that all bolts are torqued to values shown in manual.		
4) Check that splices, if supplied, are centered on track joints.		
5) Verify that capacity signs are present, attached, and legible.		
6) Verify that the number of trolleys matches the value on the capacity sign.		
7) Verify that the fall arrest system is not being used for material handling.		
8) Check the track for levelness within + / - 1/4" per 20 feet of track.		
9) Check the track flanges. Track flanges cannot be bent downward more than 5 degrees.		
10) Check the track thickness. Track thickness cannot be worn more than 10 percent.		
11) Check all system welds for cracks.		
12) Check system components for corrosion.		
13) Check system components for bent or damaged areas.		
14) Verify trolley can traverse entire length of track without snags.		
15) Check connector trolley for visibly bent eye bolt, broken welds, or excessive wear or corrosion		
16) Test the operation of the connector trolley eye bolt and verify the eye bolt can rotate freely.		
17) Test the operation of the connector trolley and verify the wheels rotate freely.		
18) Check system components for loose components.		
19) Check system components for loose or missing fasteners.		
20) Check system support structure for stability.		
21) Verify that any hangar clamps are installed properly and fasteners are torqued to proper values.		



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TEN-YEAR EQUIPMENT WARRANTY

Rigid Lifelines warrants the engineered track equipment, wearable end truck wheels, and Anchor Trolley™ wheels and teeth to be free from defects in material and workmanship for a period of ten (10) years commencing on the date of installation.

TWO-YEAR EQUIPMENT WARRANTY

Rigid Lifelines warrants XSPlatforms Fall Protection components to be free from defects in material and workmanship for a period of two (2) years commencing from the date of installation.

ONE-YEAR EQUIPMENT WARRANTY

Rigid Lifelines warrants the motorized products and drive components to be free from defects in material and workmanship for a period of one (1) year, commencing on the date of shipment to the first retail purchaser ("Purchaser").

Rigid Lifelines warrants all Rigid Lifelines fall protection soft goods, devices, connectors, and accessories to be free from defects in material and workmanship for a period of one (1) year, commencing on the date of shipment to the first retail purchaser ("Purchaser").

Rigid Lifelines is dedicated to offering superior service and quality products to all of our customers. If you would like to contact a customer service representative, please call the following number: 1 (844) 467-4443. We will be happy to assist you in any way that we can.

These warranties do not extend to equipment which has been subject to misuse, use in excess of rated capacity, negligent operation, use beyond Rigid Lifelines published service factors, improper installation or maintenance, adverse environments, and does not apply to any equipment which has been repaired or altered without Rigid Lifelines written authorization. This warranty is void for any product that is designed to deform or absorb energy during a fall event and needs to be replaced after a fall event has occurred.

Written notice of any claimed defect must be given to Rigid Lifelines within thirty (30) days after such defect is discovered. Rigid Lifelines obligation, and Purchaser's sole remedy under this warranty is limited to, at Rigid Lifelines discretion, the replacement or repair of the equipment at Rigid Lifelines factory or at a location approved by Rigid Lifelines. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES WHATSOEVER WHETHER EXPRESS, IMPLIED, OR STATUTORY. SELLER MAKES NO WARRANTY AS TO THE MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE EQUIPMENT AND MAKES NO OTHER WARRANTY, EITHER EXPRESS OR IMPLIED.

Rigid Lifelines shall not be liable, under any circumstances, for any indirect, special, or consequential damages including (but not limited to): lost profits, increased operating costs, or loss of production. This warranty shall not extend to damages including (but not limited to): lost profits, increased operating costs, or loss of production. This warranty shall not extend to any components or accessories not manufactured by Rigid Lifelines (example: casters), with the exception of the components, systems, or accessories involved with XSPlatforms, and purchaser's remedy for such components and accessories shall be determined by the terms and conditions of any warranty provided by the manufacturer of such components and accessories.

SERVICE POLICY

1. Obtain as much information as possible concerning the problem through personal observation by yourself or other authorized personnel familiar with the job and equipment: include model, serial and/or part numbers, voltages, speeds and any other special identifying features. Be prepared to discuss the situation in detail.
2. All authorized labor charges will be based on straight time. Hourly rates, estimated man hours, and not to exceed total dollar amount required for corrections are to be agreed upon before authorization is given. There will be no allowances for overtime except in dire emergencies and then only with prior approval.
3. A verbal agreement may be reached immediately on both the method of correction and the approximate cost. A warranty authorization number will be assigned for the specific incident. A confirming written authorization will be forwarded to the distributor.
4. The distributor must send an itemized invoice, showing our release number or invoice number and warranty authorization number after authorized corrections have been made. A credit memo will be issued by accounting after the invoice has been received and approved. Warranty charges ARE NOT to be deducted from outstanding open account invoices under any circumstances.
5. Any field corrections made prior to an authorization by Rigid Lifelines will not be accepted as a warranty charge or the responsibility of Rigid Lifelines. Any modification to the equipment made without the prior approval of the seller will void all warranties. A verbal authorization for modification may be obtained, in which event a warranty authorization number will be assigned for the specific modification. A confirming written authorization will be forwarded to the distributor.