

L. B. Foster Company
Transit Products Division - Direct Fixation - Rail Fastener
Model F51R4 & F51R0

The Model F51R4 & F51R0 Direct Fixation fasteners has been designed, tested and supplied to the Chicago Transit Authority. The F51R4 & F51R0 was designed and tested in 2019 and began supplying to Chicago Transit Authority in 2020. The Model F51R4 & F51R0 provides the following fundamental functions:

- Secures 115 RE rail to concrete track bed or wood ties at 1:40 cant for the F51R4 and zero cant for the F51R0
- Stabilizes vertical and lateral rail movement.
- Controls longitudinal rail movement.
- Provides track noise and vibration dampening.
- Electrically isolates rail from track bed.
- Incorporates a captive design.
- Utilizes Pandrol e-clips or PR clips in either right-hand or left-hand orientation.

Based on extensive laboratory testing, the Model F51R4 & F51R0 provides the following load environment and electrical characteristics:

- Vertical stiffness of approximately 175,000 pounds per inch deflection measured between 4,000 lb and 12,000 lb.
- Dynamic to static stiffness ratio less than 1.5 times static stiffness.

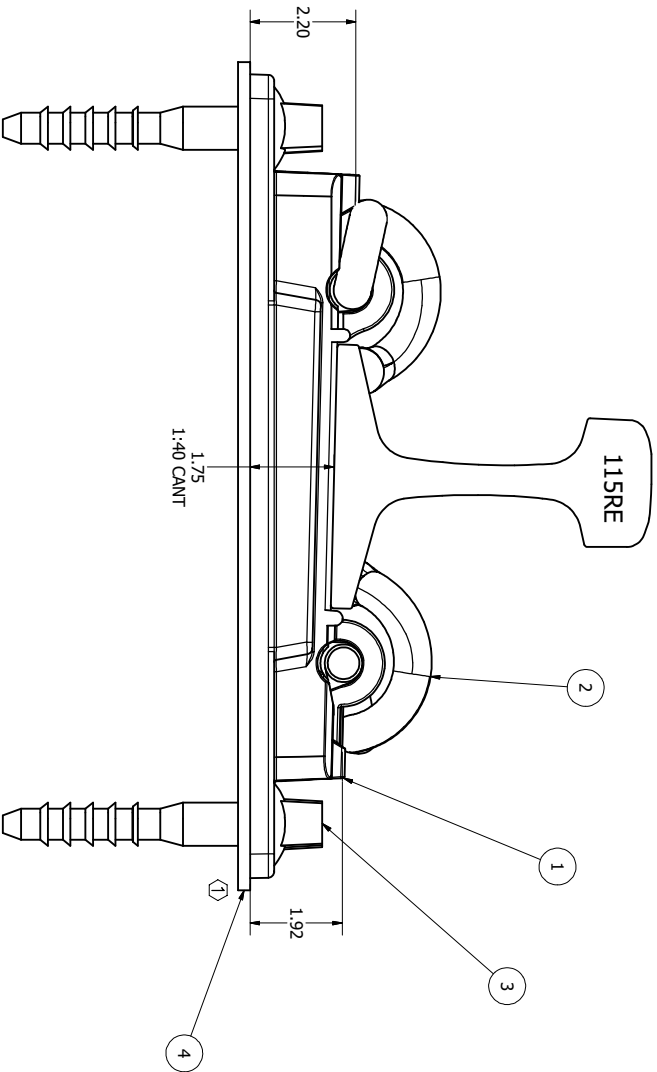
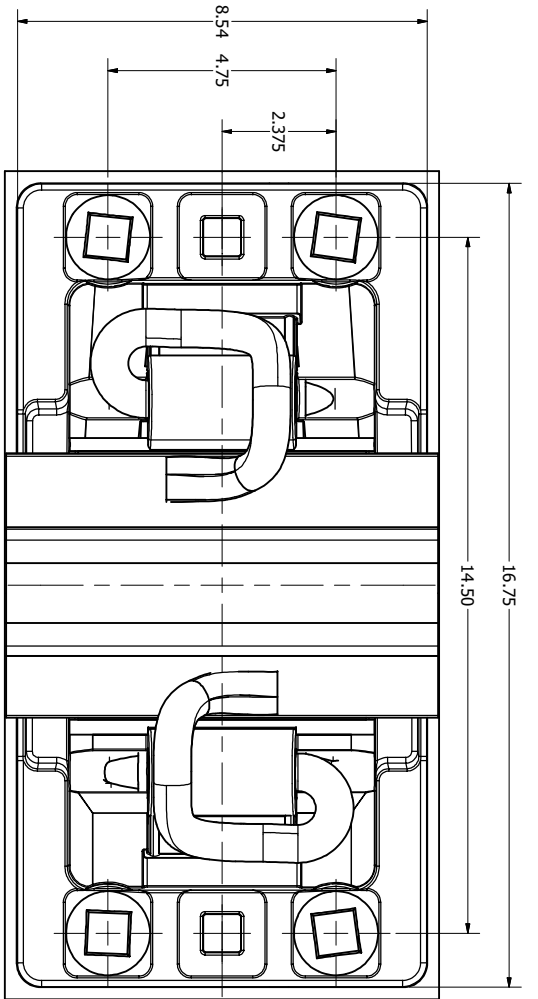


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Direct Fixation Rail Fastener
Model F51R4 & F51R0

- Applied vertical uplift forces of 2,000 pounds per fastener with upward deflection less than 5% of rail seat height.
- With vertical forces of 16,800 pounds and lateral forces of 4,000 pounds, the rail head movement is less than 0.125 inches.
- Nominal longitudinal rail slippage occurs at approximately 2,750 pounds.
- Withstands 15,000 volts dc without damage.
- Electrical resistance at 100 volts (dc) greater than 10 megohms (dry).
- Electrical impedance at 50 volts (ac), 10,000 Hertz, greater than 10,000 ohms.

The above performance characteristics are provided for informational purpose only and are based solely on previous testing. Actual performances may vary from those stated above.

Variations to Model F51R4 & F51R0 can be made to accommodate various custom requirements. For more information concerning this Direct Fixation Fastener model or other product needs, please contact us through www.lbfoster.com or call us in our Suwanee, Georgia office at (678) 926-5200.



- NOTES
1. ALL DIMENSIONS IN INCHES UNLESS OTHERWISE NOTED.
 2. USE WRITTEN DIMENSIONS, DO NOT USE SCALED OFF DIMENSIONS IN PRODUCTION.
 3. ALL DIMENSIONS FOR REFERENCE ONLY.

PARTS LIST

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	00-041-396	MODEL FS1R4 FASTENER
2	2	10-334-002	PANDROL E2055 RH CLIP
3	4	10-503-059	7/8 X 5 1/2 SCREW SPIKE
4	1	65-291-374	HDPE SHIM, FS1R4

NOT TO BE DIRECTED, USED OR DUPLICATED FOR PROCUREMENT, MANUFACTURE OR ANY OTHER PURPOSE EXCEPT AS AUTHORIZED, IN WRITING, BY TRANSIT PRODUCTS DIVISION.

PROPRIETARY

LB Foster® TRANSIT PRODUCTS DIVISION
 Rail Business SUWANEE, GA. 30024

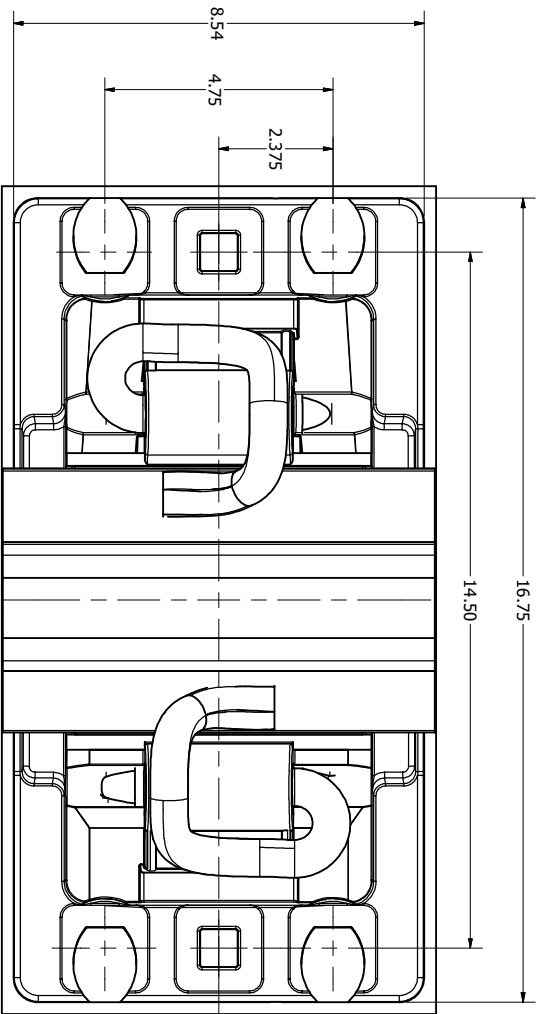
TITLE FASTENER MODEL FS1R4 ASSEMBLY

FOR INFORMATIONAL PURPOSES ONLY

DESIGN	TRANSIT	REVISIONS	BY
DATE	DATE	DESCRIPTION	
5.11.20		ADD SHIM	SSF

DESIGN TRANSIT
 DATE 01.08.19
 DRAWN BY SSF
 EST. NO. N/A
 DWG NO. DF-137
 CONTRACT
 REF 18-960.004

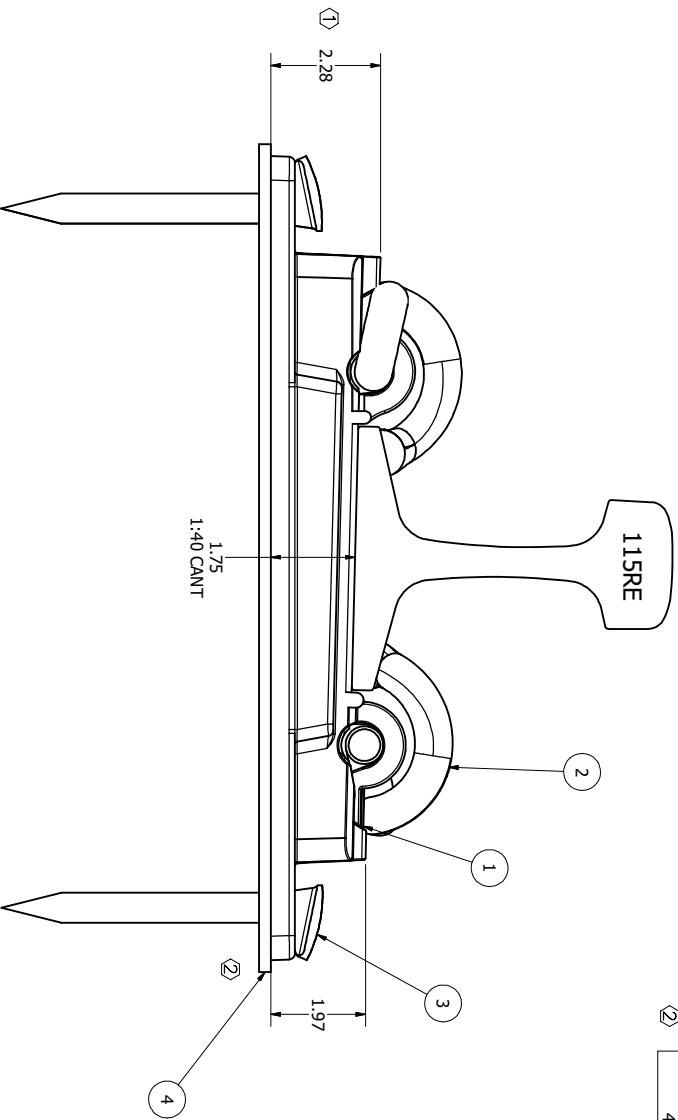
18-960.004



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PARTS LIST

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	00-041-397	MODEL FS1R4A FASTENER
2	2	10-334-002	PANDROL E2055 RH CLIP
3	4	--	AREMA 5/8 X 6 TRACK SPIKE
4	1	65-291-372	HDPE SHIM, FS1R4A



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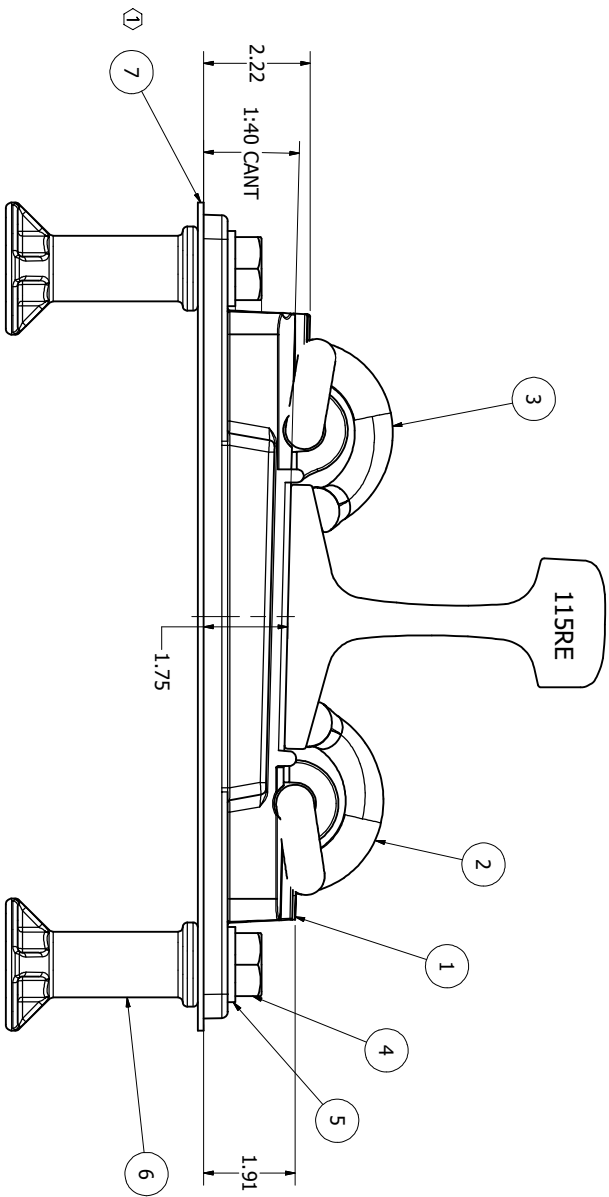
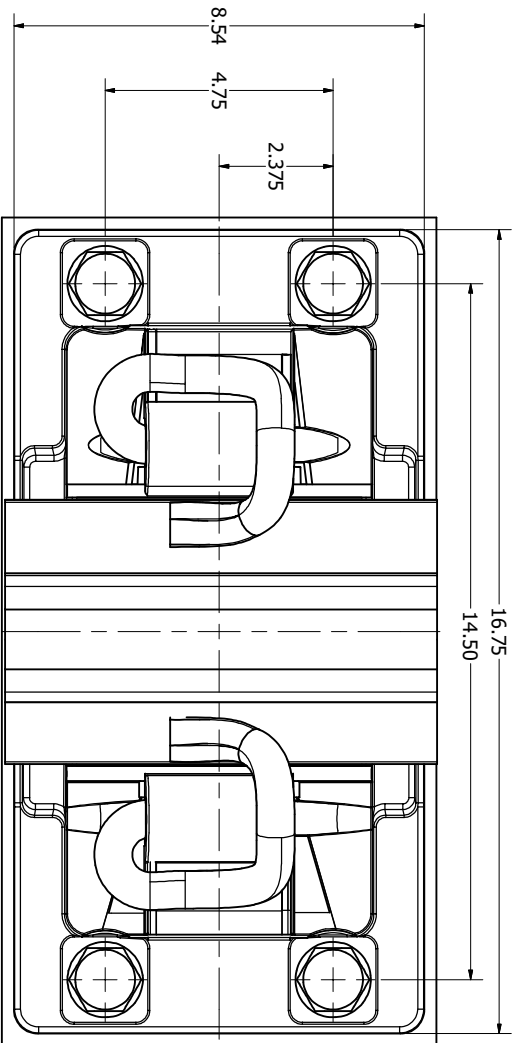
LB Foster TRANSPORT PRODUCTS DIVISION
 Rail Business SUWANEE, GA. 30024

TITLE FASTENER MODEL FS1R4A ASSEMBLY

FOR INFORMATIONAL PURPOSES ONLY

DESIGN	TRANSIT	DATE	REVISIONS	BY
DESIGNED BY	SSF	01.08.19		
APPROVED		8.7.19	① DIM CHANGE	SSF
EST. NO.	N/A	5.11.20	② ADD SHIM	SSF
DWG. NO.	DF-138			
CONTRACT				
REF	18-960.004			





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ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	00-041-398	MODEL F51R4B FASTENER, DIRECT FIXATION
2	1	10-334-043	PANDROL E2056 LH CLIP, ZINC, GREEN
3	1	10-334-022	PANDROL E2055 RH CLIP, ZINC
4	4	25-510-109	7/8-9X4 HEX HEAD BOLT, HOT DIPPED GALVANIZED
5	4	10-548-060	7/8 EXTRA DUTY LOCKWASHER, HOT DIPPED GALVANIZED
6	4	31-371-052	7/8 ANCHOR INSERT
7	1	65-291-365	HDPE SHIM, F51R4B

PARTS LIST

PROPRIETARY

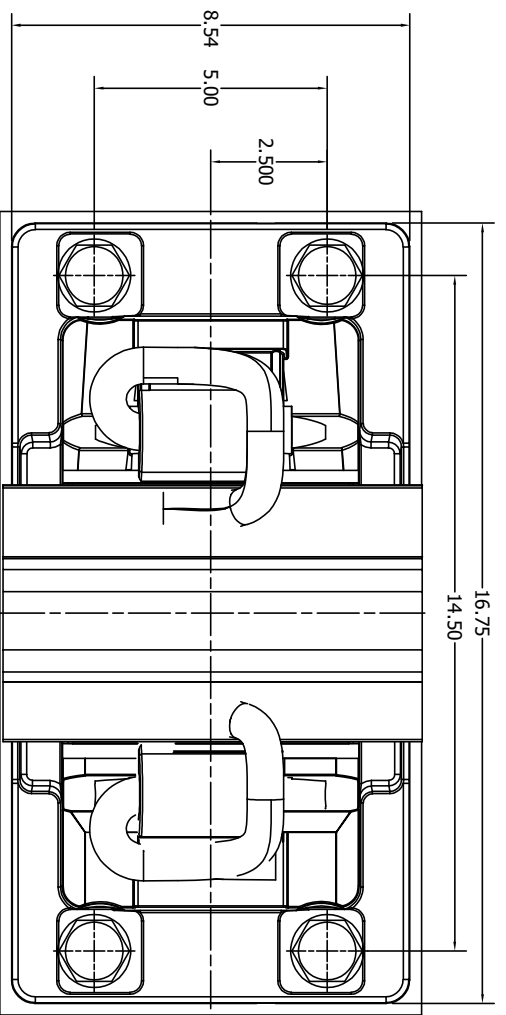
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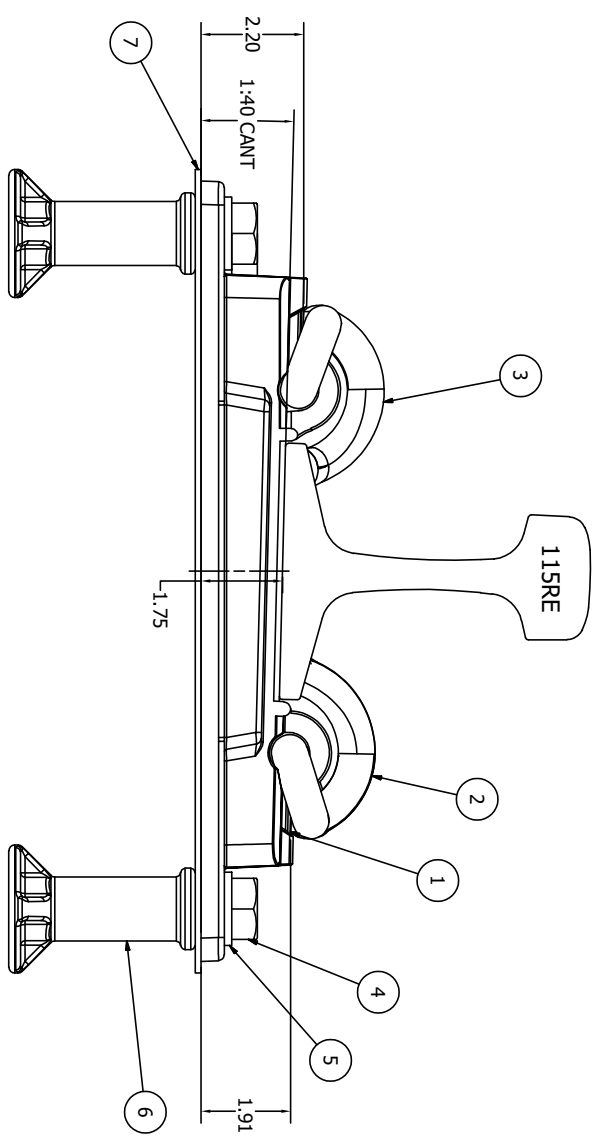
TITLE F51R4B MODEL FASTENER, DIRECT FIXATION

FOR INFORMATIONAL PURPOSES ONLY

DESIGN	TRANSIT	DATE	REVISIONS	BY
DWG BY	SSF	01.28.19		
APP'D		4.9.19	① ADD SHIM	SSF
EST. NO.	N/A			
DWG NO.	DF-139			
CONTRACT				
REF	18-960,004			



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ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	00-041-404	MODEL F51R4C FASTENER, DIRECT FIXATION
2	1	10-334-043	PANDROL E2056 LH CLIP, ZINC, GREEN
3	2	10-334-022	PANDROL E2055 RH CLIP, ZINC
4	4	25-510-109	7/8-9X4 HEX HEAD BOLT, HOT DIPPED GALVANIZED
5	4	10-548-060	7/8 EXTRA DUTY LOCKWASHER, HOT DIPPED GALVANIZED
6	4	31-371-053	7/8 EPOXY COATED ANCHOR INSERT
7	1	65-291-384	HDPE SHIM, F51R4C

PARTS LIST

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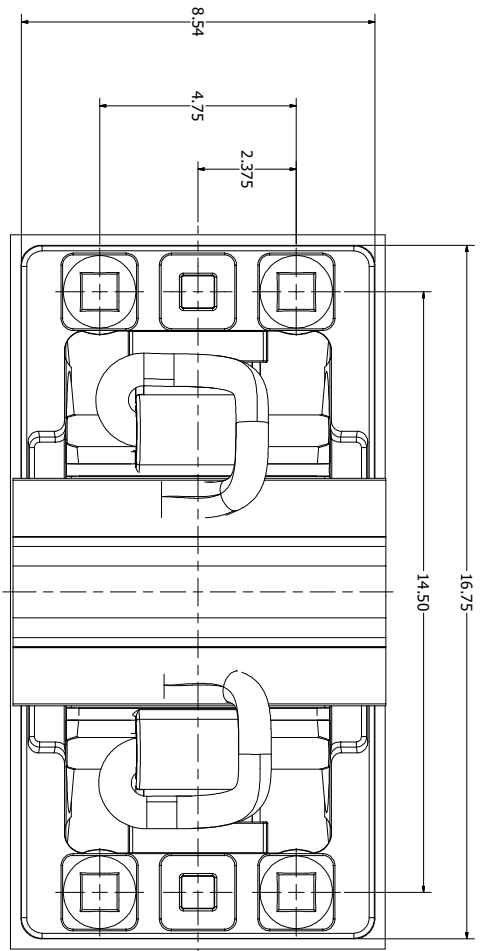
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TITLE F51R4C MODEL FASTENER, DIRECT FIXATION
 FOR INFORMATIONAL PURPOSES ONLY

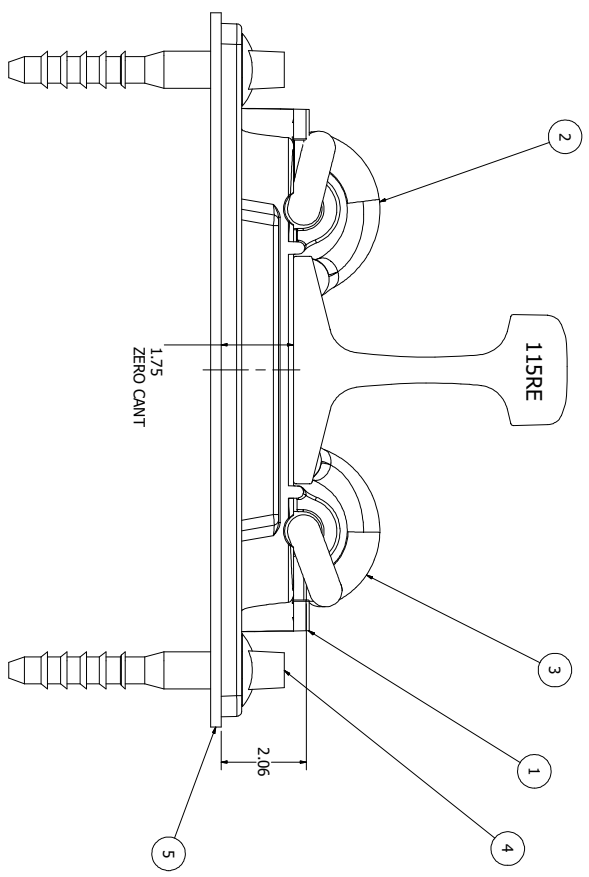
DESIGN TRANSIT	DATE	REVISIONS	BY
DWG BY SSF	11.25.19		
EST. WT.	N/A		
DWG NO.	DF-147		
CONTRACT	18-960.004		

NOTES

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PARTS LIST		DESCRIPTION
ITEM	QTY	PART NUMBER
1	1	00-041-401 MODEL F51R0 FASTENER
2	1	10-334-022 PANDROL E2055 RH CLIP, ZINC
3	1	10-334-043 PANDROL E2056 LH CLIP, ZINC, GREEN
4	4	10-503-059 7/8 x 5 1/2 SCREW SPIKE
5	1	65-291-374 HDPE SHIM, F51R0



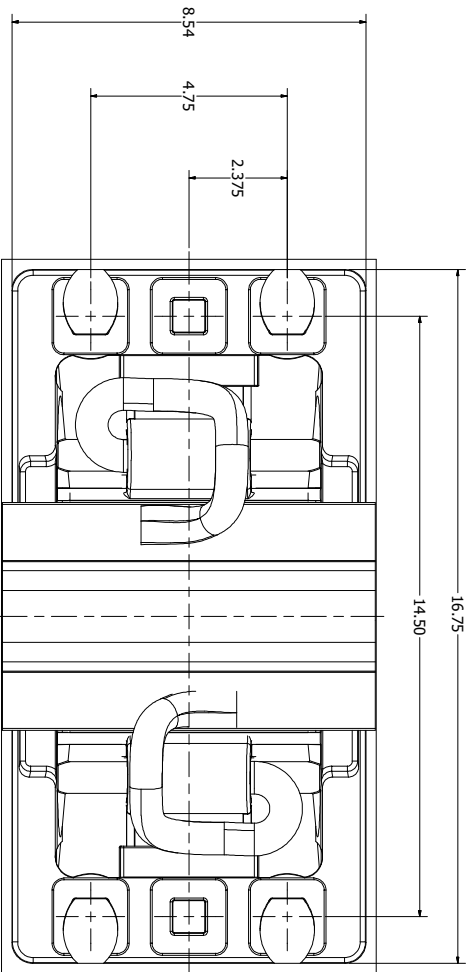
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Rail Business SUWANEE, GA, 30024

TITLE MODEL F51R0 ASSEMBLY, WOOD CURVE
FOR INFORMATIONAL PURPOSES ONLY

DESIGN	TRANSIT	REVISIONS
DWG BY	SSF	5.11.20
APP'D		
SCALE		
DWG NO.	DF-152	
CONTRACT		
REF	18-960.004	

---PROPRIETARY---

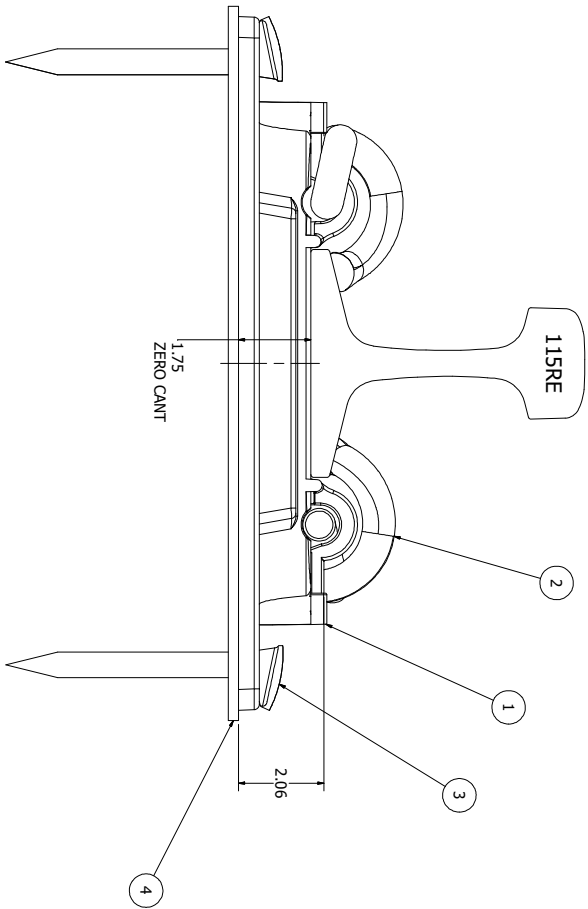
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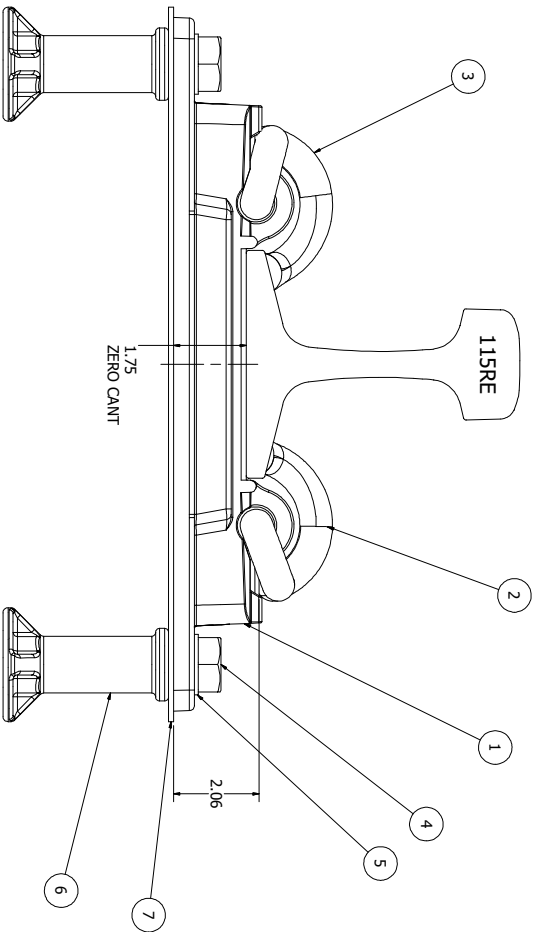
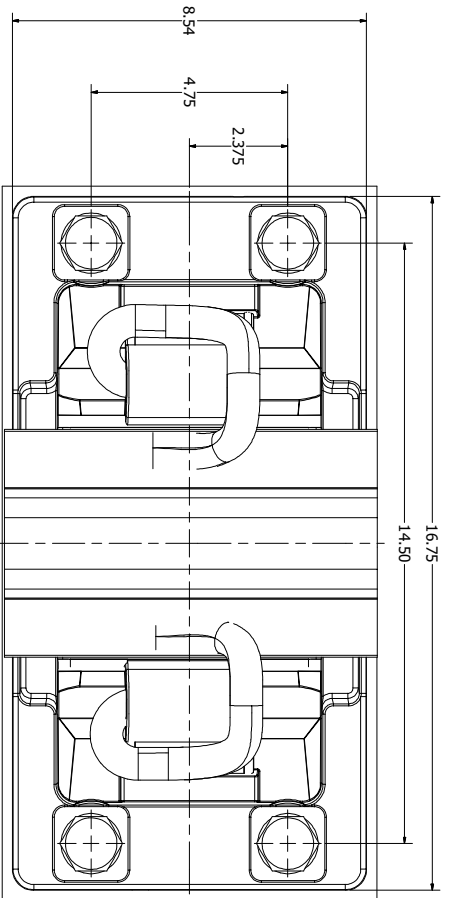
PARTS LIST		DESCRIPTION
ITEM	QTY	PART NUMBER
1	1	00-041-402 MODEL F51R0A FASTENER
2	2	10-334-002 PANDROL E2055 RH CLIP
3	4	AREMA 5/8 X 6 TRACK SPIKE
4	1	65-291-372 HDPE SHIM, F51R0A



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LB Foster Rail Business		TRANSIT PRODUCTS DIVISION SUWANEE, GA. 30024			
TITLE F51R0A ASSEMBLY, WOOD TANGENT					
FOR INFORMATIONAL PURPOSES ONLY					
DESIGN	TRANSIT	DATE	REVISIONS		
DWG BY	SSF	5.11.20	DATE	DESCRIPTION	BY
APP'D					
SCALE					
DWG NO.	DF-153				
CONTRACT					
REF	18-960.004				



ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	00-041-403	MODEL FS1ROB FASTENER, DIRECT FIXATION
2	1	10-334-043	PANDROL E2056 LH CLIP, ZINC, GREEN
3	1	10-334-022	PANDROL E2055 RH CLIP, ZINC
4	4	25-510-109	7/8 - 9 X 4 HEX HEAD BOLT, HOT DIPPED GALVANIZED
5	4	10-548-060	7/8 EXTRA DUTY LOCKWASHER, HOT DIPPED GALVANIZED
6	4	31-371-053	7/8 ANCHOR INSERT, EPOXY
7	1	65-291-365	HDPE SHIM, FS1ROB

PARTS LIST

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LB Foster Rail Business TRANSIT PRODUCTS DIVISION SUWANEE, GA, 30024			
TITLE FS1ROB FASTENER, CONCRETE			
FOR INFORMATIONAL PURPOSES ONLY			
DESIGN	TRANSIT	REVISIONS	
DWG BY	SSF	DATE	DESCRIPTION
APP'D			BY
SCALE			
DWG NO.	DF-154		
CONTRACT			
REF	18-960.004		