



Document Title:  
**Crossarm Shelf Gain**

Document Type:  
**Specification**

Engineering Type  
**Material Specification**

Document No.:  
**4752.315**

Department:

Version:  
01


Effective Date:  
Dec 10, 2024

**Transmission  
Engineering**

**Shared document with: N/A**

**Author**

Guillermo J. Nieves Díaz  
Technical Specialist 1, Transmission Lines Engineering  
Design & Standards

  
Guillermo Nieves (Dec 6, 2024 16:13 AST)


**Reviewer 1**

Leonardo Montes Sánchez  
Engineer 2, Transmission Lines Engineering Design &  
Standards

  
Leonardo Montes Sanchez (Dec 9, 2024 15:48 AST)

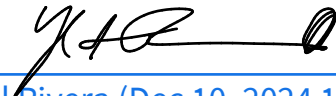
**Reviewer 2**

Juan C. Miranda Rivera  
Manager, Transmission Lines Engineering Design

  
Juan Carlos Miranda (Dec 10, 2024 14:48 AST)

**Approver**

Yamil I. Rivera Hernández  
Section Manager, Transmission Lines Engineering  
Design

  
Yamil Rivera (Dec 10, 2024 15:07 AST)

**Management Approval (If apply)**

**Approver**

Name  
Position

Signature and Date

**Related/Referenced Documents**

Version	Date	Revision
00	Mar 14, 2023	First Issue
01	Dec 10, 2024	Changed cover page and document to new format. Modified section 4. Added a table of compliance. Industry design codes and standards merged into acceptance criteria. Added Compatible with section.

## **1. General**

### **1.1. Overview**

- 1.1.1. This is a general specification that covers the minimum requirements for a galvanized steel crossarm shelf gain to be used in the transmission system in Puerto Rico.
- 1.1.2. Further information will be provided by LUMA Energy at the time of order placement and will provide information on site conditions, quantity, and other requirements.
- 1.1.3. This document includes the general mechanical and fabrication characteristics of the material.

## **2. Specific Name**

- 2.1. Crossarm Shelf Gain

## **3. Basic Use**

- 3.1. For supporting a W10x22 steel crossarm connection at the pole mounting location for tangent h-frame structures.

## **4. Specific Requirements**

- 4.1. Samples shall be furnished to LUMA.
- 4.2. LUMA requires One (1) unit properly labeled for testing and analysis.
- 4.3. Descriptive and technical literature shall be supplied to LUMA.
- 4.4. They shall be required to show evidence of LUMA's approval of the equipment.

## **5. Acceptance Criteria**

- 5.1. Latest applicable codes, standards and other regulations: ANSI/ASTM.
- 5.2. All holes, slots, or other fabrication adjustments shall be made prior to galvanizing. No "cold galv" or paint shall be accepted.
- 5.3. Galvanized coating shall be in good condition, and show no signs of flaking, delamination from the steel surface, or scratches/damage from handling or transport.
- 5.4. Welds to attach item 1b to item 1a shall be on the underside of 1b, so that there is not a weld bead on the top surface where the crossarm is to contact the shelf.
- 5.5. Steel material per: A-242, GR-50 or ASTM A-572, GR-50.
- 5.6. Steel shall be galvanized per ASTM A123

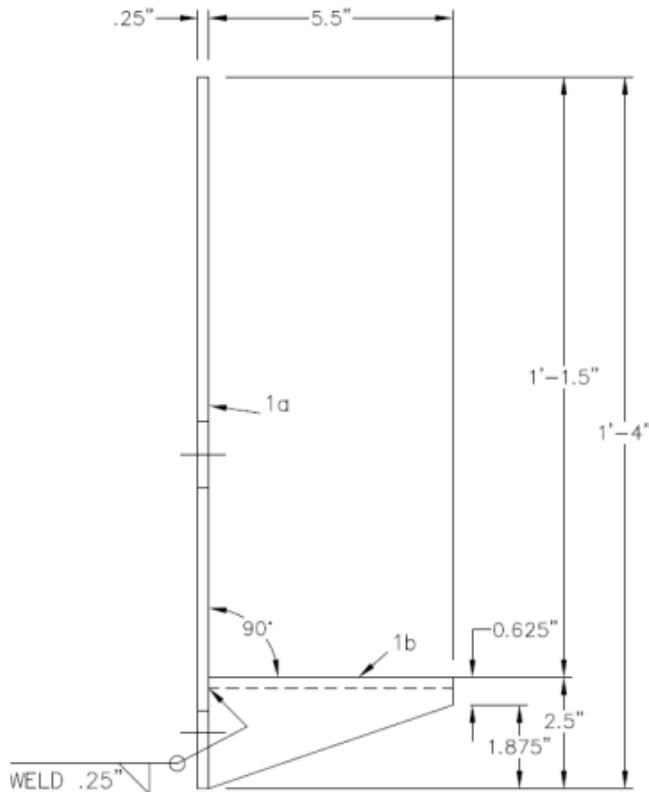
## **6. Markings and Packaging**

- 6.1. Containers/pallets or package shall be marked outside with LUMA'S purchase order number and code number.

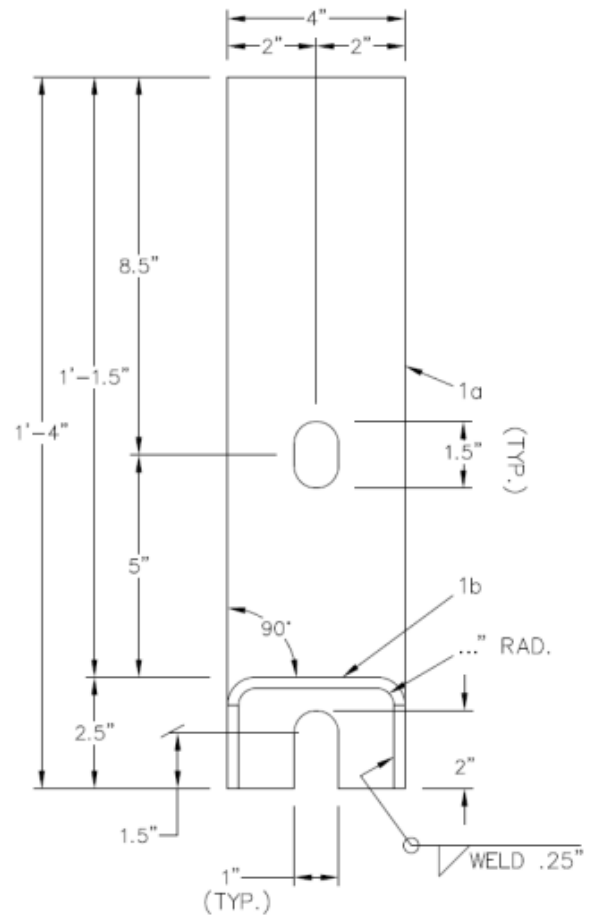
- 6.2. Vendor shall prepare material and equipment for shipment in such manner as to facilitate handling and protection for damage.
- 6.3. All material should be packaged and marked in such a way that the receiving warehouse can readily identify and send in one (1) complete unit to a field location without opening crates or boxes to sort items and / or parts.
- 7. Compatible with:**
  - 7.1. LUMA will evaluate equally any model not listed here during any acquisition event.
- 8. Proposal Information**
  - 8.1. Submitted proposals must include:
    - a. Technical Information
    - b. Table of Compliance completed by the bidder with reference
- 9. Inspection**
  - 9.1. The acceptance of any material or equipment shall in no way relieve the vendor from his responsibility to meet all the requirements of this specification, and it shall not prevent subsequent rejection if such material is found to be defective later
- 10. Drawings:**
  - 10.1. Included in next page:

ITEM NO. XXXX			
BILL OF MATERIAL			
ITEM NO.	QTY.	DESCRIPTION	WT. LBS.
1	1	WELDED ASSEMBLY	5.77
1a	1	PL 0'-4"x1/4"x 16" LG., ASTM A242 or A572, GRADE 50	3.92
1b	1	PL 0'-8 1/2"x1/4"x 5 1/2" LG, ASTM A242 or A572, GRADE 50	1.85

OVERALL LENGTH: 16" OR ~1.33 FT



LEFT SIDE VIEW



FRONT VIEW

OVERALL WEIGHT: 5.77 LBS  
 ULT. STRENGTH: N/A

TOLERANCES	
MATERIAL LENGTH	±1/16"
HOLE LOCATIONS (EITHER DIRECTION)	±1/16"

- NOTES:  
 1. PART MAY BE FABRICATED FROM EITHER ASTM A242 OR A572, GRADE 50 STEEL.  
 2. PART TO BE GALVANIZED PER ASTM123  
 3. FABRICATOR SHALL PROVIDE ALL MATERIAL LISTED IN BILL OF MATERIAL

Warehouse ID	002-84428
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— End of Specification —

## Appendix

Appendix 1. Table of Compliance

Line	Criteria	Description	Pass/Fail (P / F)	Comments
1	Specification	The Proponent complies with the corresponding specification document (4752.315)		
2	Industry Standards	The Proponent complies with the industry standards established in the specification document (ANSI, ASTM).		
3	Material	Crossarm Shelf Gain Shall be constructed entirely of high strength aluminum alloy wire formed into helical rods		
4	Requirements	<ul style="list-style-type: none"> <li>• Samples shall be furnished to LUMA.</li> <li>• LUMA requires One (1) unit properly labeled for testing and analysis.</li> <li>• Descriptive and technical literature shall be supplied to LUMA.</li> <li>• They shall be required to show evidence of LUMA’s approval of the equipment.</li> <li>• Complies with measurements on the drawing in this specification.</li> <li>• All holes, slots, or other fabrication adjustments shall be made prior to galvanizing. No “cold galv” or paint shall be accepted.</li> <li>• Galvanized coating shall be in good condition, and show no signs of flaking, delamination from the steel surface, or scratches/damage from handling or transport.</li> <li>• Welds to attach item 1b to item 1a shall be on the underside of 1b, so that there is not a weld bead on the top surface where the crossarm is to contact the shelf.</li> <li>• A-242, GR-50 or ASTM A-572, GR-50.</li> <li>• Steel shall be galvanized per ASTM A123</li> </ul>		












# 4752.315 Crossarm Shelf Gain

Final Audit Report

2024-12-10

Created:	2024-12-06
By:	Guillermo Nieves (guillermoj.nievesdia@lumapr.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAFrOrSs1oI269VPu7W_KHI-SyMpqsIMG8

## "4752.315 Crossarm Shelf Gain" History

-  Document created by Guillermo Nieves (guillermoj.nievesdia@lumapr.com)  
2024-12-06 - 8:11:54 PM GMT
-  Document e-signed by Guillermo Nieves (guillermoj.nievesdia@lumapr.com)  
Signature Date: 2024-12-06 - 8:13:01 PM GMT - Time Source: server
-  Document emailed to Leonardo Montes Sanchez (leonardo.montessanch@lumapr.com) for signature  
2024-12-06 - 8:13:03 PM GMT
-  Document e-signed by Leonardo Montes Sanchez (leonardo.montessanch@lumapr.com)  
Signature Date: 2024-12-09 - 7:48:27 PM GMT - Time Source: server- Signature captured from device with phone number XXXXXXXX5488
-  Document emailed to Juan Carlos Miranda (juanc.miranda@lumapr.com) for signature  
2024-12-09 - 7:48:28 PM GMT
-  Email viewed by Juan Carlos Miranda (juanc.miranda@lumapr.com)  
2024-12-10 - 6:48:07 PM GMT
-  Document e-signed by Juan Carlos Miranda (juanc.miranda@lumapr.com)  
Signature Date: 2024-12-10 - 6:48:44 PM GMT - Time Source: server
-  Document emailed to Yamil Rivera (yamil.rivera@lumapr.com) for signature  
2024-12-10 - 6:48:46 PM GMT
-  Email viewed by Yamil Rivera (yamil.rivera@lumapr.com)  
2024-12-10 - 7:07:09 PM GMT
-  Document e-signed by Yamil Rivera (yamil.rivera@lumapr.com)  
Signature Date: 2024-12-10 - 7:07:36 PM GMT - Time Source: server
-  Agreement completed.  
2024-12-10 - 7:07:36 PM GMT