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Federal Aviation Agency

ADVISORY CIRCULAR

AC NO: AC 150/5340-9	
AIRPORTS	
EFFECTIVE: 8/18/64	

SUBJECT: PREFABRICATED METAL HOUSING FOR ELECTRICAL EQUIPMENT

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1. PURPOSE. This advisory circular presents guidance to the public on the subject metal housing. The design and installation details described are acceptable in accomplishing a project meeting the eligibility requirements of the Federal-aid Airport Program.

2. APPLICATION. The metal enclosure may be used to house transformers, regulators, and switch gear close to the loads they serve. Another application of the housing is to enclose additional equipment when an existing facility is expanded. The vault equipment installed in the housing should be designed for installation in a weatherproof enclosure. For the above conditions, the metal enclosure may be an individual unit, modular construction or a supplement to the vault covered in Item L-109 of Advisory Circular No. 150/5370-1, "Standard Specifications for Construction of Airports".

3. DESIGN AND INSTALLATION. The design and installation details are shown on Figure 1. Additional descriptive data follows.

   a. The metal housing is prefabricated at the factory and erected at the site. Applicable portions in Item L-109 of Advisory Circular No. 150/5370-1, and Change 1, "Supplement No. 2", should be used for field installation.

   b. Single enclosure units may be bolted together to increase the overall length of the housing. The banked units meet all requirements of the single unit except in cases where vent panels are normally supplied in the side panels of a single unit. In such cases, the total vent area of a dual unit is two times the total vent area of a single unit minus the total vent area normally supplied in the internal side walls of the adjacent units.

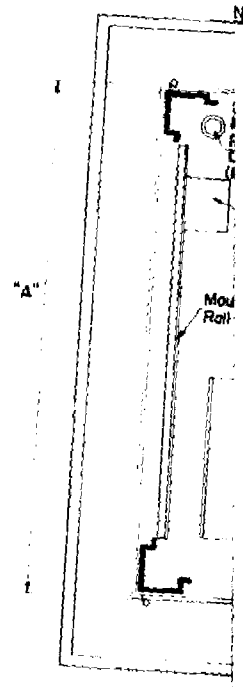
   c. A complete parts list and installation instructions are furnished with each new installation. The parts list and installation instructions are also furnished with individual components of the

housing shipped for maintenance or replacement purposes. The instructions include sufficient drawings or illustrations to indicate clearly the method of installation.

4. AVAILABILITY. The prefabricated metal housing may be obtained from Line Material Industries, Milwaukee 1, Wisconsin, or other manufacturers that may furnish equipment equal to that shown on the drawing.

5. HOW TO GET THIS CIRCULAR. Obtain copies of this circular, AC 150/5340- , "Prefabricated Metal Housing for Electrical Equipment", from the Federal Aviation Agency, Distribution Section, HQ-438, Washington, D. C. 20553.

for Cole Morrow, Director
Airports Service



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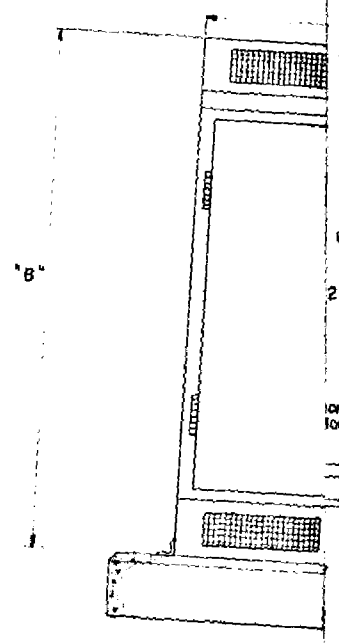

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Notes

1. The housing is designed tamperproof so that no foreign objects may be inserted by unauthorized personnel to contact energized components.
2. All external components of the unit are fabricated of #12 gauge hot rolled sheet steel in accordance with American Society for Testing and Materials Specification A303-"Hot Rolled Carbon Steel Strip Of Structural Quality." All sheet steel panels have formed edges to provide the necessary rigidity to panels.
3. The unit is designed to have a minimum number of sheet metal edges exposed to weather and to be rigid and free standing when doors are opened or removed.
4. Vent screening is galvanized, 5 x 5 mesh of .062" steel wire or approved equal material having same percentage of free opening.
5. All external fasteners are stainless steel and designed to be removed from inside of unit.
6. The roof of the unit is designed to permit effective water drainage.
7. After fabrication, the entire unit is thoroughly cleaned to remove all rust, scale, weld, metal, flux, and weld splater.
8. Prior to finish painting, components are coated with a primer paint compatible with the finish paint. An Epon Ester Base or equal is acceptable, the oven dried prime coat is from 0.5 to 1.0 mil thick.
9. The finish paint is acrylic base, or equal sprayed on uniformly and oven baked. The oven dried finish coat is from 0.5 to 1.0 mil thick.
10. The unit or units are provided with support channels to raise transformer, regulators, or equipment above concrete pad. All support channels, clips, angles, and equipment mounting rails are hot dipped galvanized parts.
11. Insulating baffles are included in the units, when specified.
12. When a multiple unit assembly is required, a mullion or tie assembly is provided for bolting units together to form a continuous enclosure.
13. A grounding lug is provided on the housing for grounding the equipment.
14. The doors are installed on stainless steel slip pin hinges to permit removal after the doors are opened to an approximate angle of 90°. Provisions are made for padlocking each door.
15. The concrete foundation or pad is the size and design indicated on the plans for the installation. The material for the pad is structural portland cement in accordance with Item P-610 of "Standard Specifications for Construction of Airports".
16. A minimum of 4 housing anchors are required to secure each single assembly to the concrete pad.
17. A grounding bolt is supplied with the enclosure with provisions for attaching the grounding bolt to any part of the galvanized framing angles.
18. The total vent area is designed to dissipate the heat of the enclosed equipment at a nominal rate of 5 watts per sq. in., but it does not exceed 7.5 watts per sq. in.
19. Typical lighting circuit wiring diagrams are in Advisory Circular No. 150/5340-2, "Airport Lighting Control".
20. Rigid metal conduits and fittings are in accordance with Federal Specification WW-C-581, "Conduit, Metal, Rigid and Coupling, Elbow and Nipple, Electrical Conduit: Zinc-Coated".

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housing.

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FEDERAL AVIATION AGENCY
AIRPORTS SERVICE
AIRPORT STANDARDS DIVISION

PREFABRICATED METAL HOUSING FOR ELECTRICAL EQUIPMENT

REV			
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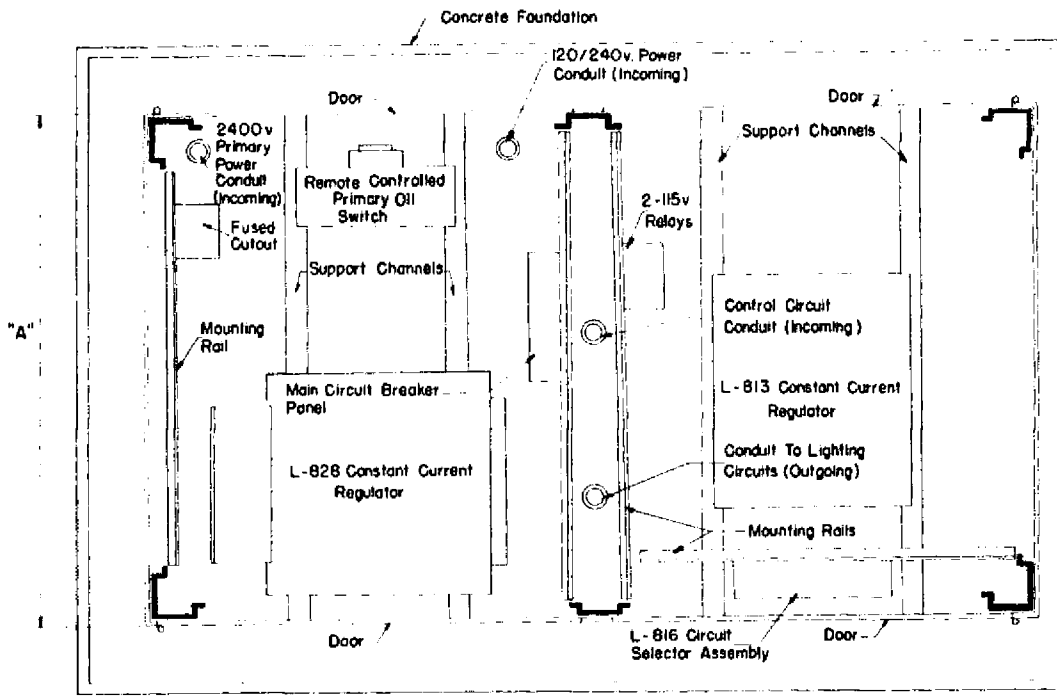
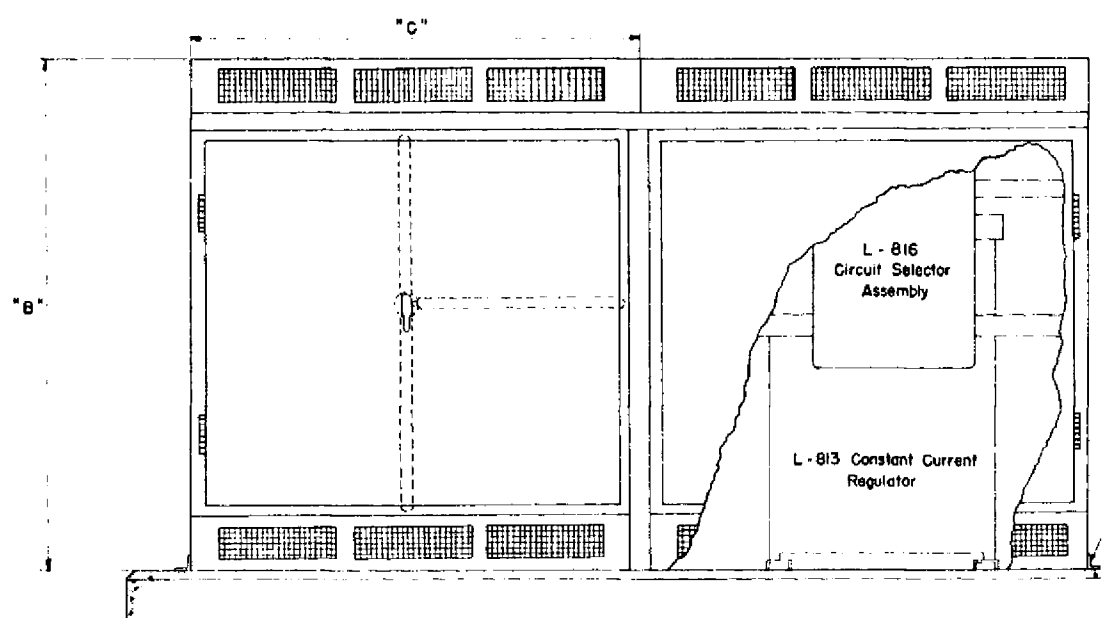
	DATE 8-18-64	SHEET 1 OF 1	DWG NO LI-64-2

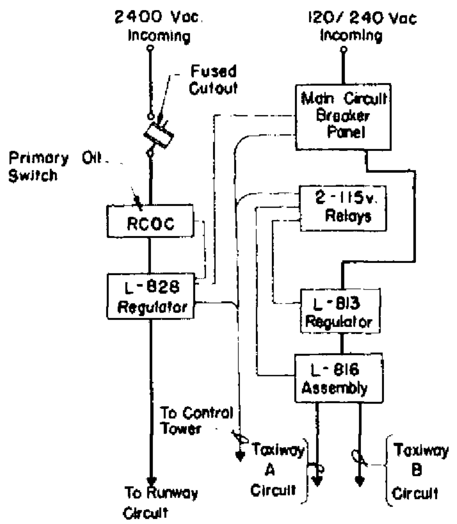


TYPICAL PLAN VIEW OF PREFABRICATED METAL HOUSING WITH EQUIPMENT

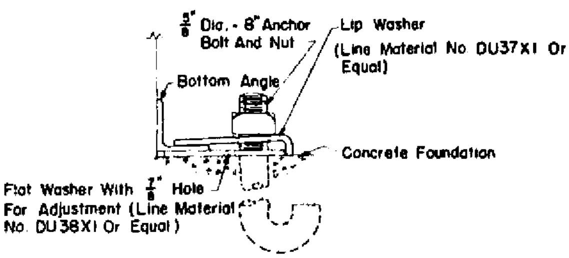


TYPICAL ELEVATION VIEW OF PREFABRICATED METAL HOUSING WITH EQUIPMENT

HOUSING DIMENSIONS			
SIZE	A	B	C
1	42"	46"	42"
2	42"	56"	42"
3	42"	56"	42"
4	42"	66"	42"
5	54"	61"	54"
6	54"	71"	54"
7	54"	81"	54"
8	54"	91"	54"



TYPICAL WIRING DIAGRAM



DETAIL "A" HOUSING ANCHOR

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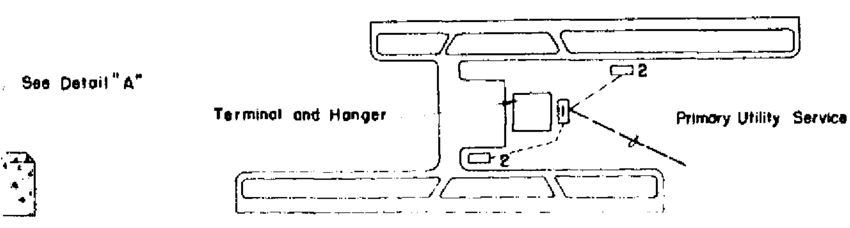
1- Terminal And Hangar Distribution Transformer Station.
2- Runway And Taxiway Regulator And Transformer Housing.



TYPICAL APPLICATIONS OF PREFABRICATED METAL HOUSINGS

Figure 1

FEDERAL AVIATION AGENCY
AIRPORTS SERVICE
AIRPORT STANDARDS DIVISION

PREFABRICATED METAL HOUSING FOR ELECTRICAL EQUIPMENT

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	CHECKED [signature]	DRAWN BY R N ZIMMERMAN
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