U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

NORTHWEST MOUNTAIN REGION

**AIRPORT IMPROVEMENT PROGRAM**

**MODIFICATION OF AIRPORT DESIGN STANDARDS**

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| BACKGROUND |
| 1. AIRPORT:      | 2. LOCATION (CITY, STATE):       | 3. LOC ID:       |
| 4. EFFECTED RUNWAY/TAXIWAY:       | 5. APPROACH (EACH RUNWAY):[ ]  PIR[ ]  NPI[ ]  VISUAL | 6. AIRPORT REF. CODE (ARC):       |
| 7. DESIGN AIRCRAFT (EACH RUNWAY/TAXIWAY):      |
| MODIFICATION OF STANDARDS |
| 8. TITLE OF STANDARD BEING MODIFIED (CITE REFERENCE DOCUMENT): Federal Aviation Administration, Advisory Circular (AC) 150/5370-10G, Standards for Specifying Construction of Airports. Item D-751 Section 751-2.7 Steps. |
| 9. STANDARD/REQUIREMENT: 751-2.7 Steps. The steps or ladder bars shall be gray or malleable cast iron or galvanized steel. The steps shall be the size, length, and shape shown on the plans and those steps that are not galvanized shall be given a coat of bituminous paint, when directed. |
| 10. PROPOSED: Replace these sections as follows:751-2.7 Steps. The steps shall be reinforced polypropylene plastic conforming to the requirements of ASTM C 478 and ASTM C 497, except that the minimum horizontal pullout load shall be 1,500 pounds. The steel shall be Grade 60, 1/2 inch (13 mm) deformed reinforcing bar conforming to ASTM A 615. The polypropylene shall conform to ASTM D 4101. The entire polypropylene material surrounding the reinforced steel bar shall be encased monolithically with a minimum thickness over the steel of 1/16 inch (1.6 mm).Steps or ladder bars made of gray or malleable cast iron are acceptable alternatives. The steps shall be the size, length, and shape shown on the plans and those steps that are not galvanized shall be given a coat of bituminous paint, when directed. |
| 11. EXPLAIN WHY STANDARD CANNOT BE MET (FAA ORDER 5300.1E):AC 150 5300-13A states that the design of storm drainage systems must meet local requirements and address storm water quality issues in accordance with state and local permits. The Port of Portland is a co-permittee with the City of Portland on Municipal Separate Storm Sewer System (MS4) Permit No. 101314, which was issued by the Oregon Department of Environmental Quality (DEQ) in 2011. This permit requires the Port to monitor levels of metals dissolved within the stormwater discharge and stay below state mandated threshold (i.e. Copper, lead, zinc, etc.).The FAA standard specification allows for a galvanized steel step which erodes over time and increases the amount of heavy metals at discharge points in the storm drainage system.The polypropylene plastic step described in Section 10 is a standard detail used by the City of Portland throughout the jurisdiction. This step will not erode in the stormwater and therefore allows the Port of Portland to meet the MS4 permit obligations with DEQ. |
| 12. DISCUSS VIABLE ALTERNATIVES (FAA ORDER 5300.1E): The standard specification allows for both galvanized steel and cast iron. We would still allow the cast iron option because iron is not currently one of the heavy metals being monitored at the outfall locations. However, the proposed polypropylene plastic is the standard, required step for manholes by the City of Portland for the area. |
| 13. STATE WHY MODIFICATION WOULD PROVIDE ACCEPTABLE LEVEL OF SAFETY, ECONOMY, DURABILITY, AND WORKMANSHIP (FAA ORDER 5300.1E): The City of Portland has required the use of this polypropylene plastic step because it does not erode and therefore does not introduce another source of heavy metals into the storm system. This step provides the same strength and improved durability over the galvanized steel option. This step is readily available due to being the local requirement for the Portland area and is expected to cost less than the galvanized steel option. |
| **ATTACH ADDITIONAL SHEETS AS NECESSARY – INCLUDE SKETCH/PLAN** |

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| MODIFICATION: AC 150/5370-10G | LOCATION:       | PAGE 3 OF 3 |
| 14. SIGNATURE OF ORIGINATOR:       | 15. ORIGINATOR’S ORGANIZATION: Port of Portland | 16. TELEPHONE:       |
| 17. DATE OF LATEST FAA SIGNED ALP:  |
| 18. ADO RECOMMENDATION:  | 19. SIGNATURE:  | 20. DATE:  |
| 21. FAA DIVISIONAL REVIEW (AT, AF, FS):  |
| ROUTING SYMBOL | SIGNATURE | DATE | CONCUR | NON-CONCUR |
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|  |  |  |  |  |
|  |  |  |  |  |
| COMMENTS:  |
| 22. AIRPORTS’ DIVISION FINAL ACTION:  |
| [ ]  UNCONDITIONAL APPROVAL | [ ]  CONDITIONAL APPROVAL | [ ]  DISAPPROVAL |
| DATE:  | SIGNATURE: | TITLE:  |
| CONDITIONS OF APPROVAL:  |

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ITEMS 1-17 ARE TO BE COMPLETED BY THE AIRPORT SPONSOR(ORIGINATOR). ALL OTHER ITEMS WILL BE COMPLETED BY THE FAA.

THE COMPLETED FORM WILL BE TRANSMITTED BY THE ORIGINATOR TO THE APPLICABLE ADO/AFO. THE ADO/AFO WILL TRANSMIT THE FINAL FAA DETERMINATION TO THE ORIGINATOR.

MODIFICATION TO AIRPORT DESIGN STANDARDS REQUESTS SHOULD INCLUDE SKETCHES OR DRAWINGS WHICH CLEARLY ILLUSTRATE THE NONSTANDARD CONDITION.

 ITEMS

1. LEGAL NAME OF AIRPORT.

2. ASSOCIATED CITY.

3. AIRPORT LOCATION IDENTIFIER (SEE APPROACH PLATES/AIRPORT FACILITY DIRECTORY).

4. IDENTIFY THE RUNWAY(S), TAXIWAY(S) OR OTHER FACILITIES EFFECTED BY THE PROPOSED MODIFICATION TO STANDARDS REQUEST.

5. IDENTIFY THE MOST CRITICAL APPROACH FOR EACH RUNWAY IDENTIFIED IN #4.

6. AIRPORT REFERENCE CODE - SEE PARAGRAPH 2, PAGE 1 AC 150/5300-13(CHANGE 4) - I.E. C-II, B-II, A-I (SMALL).

7. NOTE THE DESIGN AIRCRAFT (ARC OR SPECIFIC AIRCRAFT) FOR EACH

FACILITY IDENTIFIED IN #4. A DESIGN AIRCRAFT MUST MAKE REGULAR USE OF THE FACILITY. NORMALLY, FAA CONSIDERS REGULAR USE TO BE 500 OR MORE ANNUAL INTINERANT OPERATIONS.

IF THE AIRPORT SERVES A WHOLE FAMILY OF AIRCRAFT IN A PARTICULAR GROUP, THE ARC (I.E. B-II) SHOULD BE SPECIFIED. IF, HOWEVER, THE AIRPORT IS USED BY ONLY 1 OR 2 OF A FAMILY OF AIRCRAFT (IX- BEECH KING AIR C90), THE MOST DEMANDING (APPROACH SPEED, WINGSPAN)

AIRCRAFT SHOULD BE SPECIFIED.

8. IDENTIFY THE SPECIFIC NAME OF THE STANDARD THAT IS PROPOSED TO BE MODIFIED FOR THE SUBJECT LOCAL CONDITION.

9. DESCRIBE (WORDS AND NUMBERS) THE DIMENSIONS AND REQUIREMENTS

OF THE STANDARD AS PROVIDED IN AC 150/5300-13.

10. STATE THE PROPOSED MODIFICATION TO THE STANDARD.

11. DISCUSS THE LOCAL CONDITIONS THAT MAKE IT IMPRACTICAL OR

IMPOSSIBLE TO MEET THE STANDARD.

12. IDENTIFY ALTERNATIVES TO THE SUBJECT PROPOSED MODIFICATION,

AND SHOW WHY THESE ALTERNATIVES ARE NOT VIABLE.

13. DISCUSS HOW THE PROPOSED MODIFICATION WOULD IMPACT AIRPORT

SAFETY AND EXPLAIN WHY AN ACCEPTABLE LEVEL OF SAFETY, ECONOMY, DURABILITY, AND WORKMANSHIP WOULD STILL EXIST.

14. TYPED NAME AND SIGINATURE OF AIRPORT AUTHORITY REPRESELNTATIVE.

15. SELF-EXPLANATORY.

16. SELF-EXPLANATORY.

17. SELF-EXPLANATORY.

18. TO BE COMPLETED BY FAA