Appendix A. PCN Analysis

In accordance with FAA AC 150/5335-5C, *Standard Method of Reporting Pavement Strength-PCN*, a Pavement Classification Number (PCN) analysis was completed using COMFAA software (version 3.0) and the supporting Excel spreadsheet. The PCN analysis was performed on Runways 17/35, 8R/26L and 8L/26R. In addition to the runways, PCN analysis was performed on Taxiway A and all associated connectors (A1-A12), Taxiway B and all associated connectors (B1-B7), and Taxiway C, D, E and E7.

The PCNs calculated are approximate values based on available historical pavement section data. Pavement section data is based on pavement strength surveys, geotechnical reports, and construction drawings from past projects. On pavement areas in which the pavement section data is not available, a PCN value was not calculated. Some older pavement sections such as Taxiway A may have incomplete data available, resulting in lower-than-expected PCN values. More accurate pavement section data can be obtained by conducting a geotechnical investigation of the airfield in conjunction with Falling Weight Deflectometer (FWD) testing.

The proposed aircraft fleet mix for the PCN analysis is identified in **Table 1** below. The aircraft and operations used are based on data provided by the FAA Airport Master Record (5010, dated 6/18/2020), the Traffic Flow Management System Counts (TFMSC), Aviation System Performance Metrics (ASPM) (dated 3/26/2020), historical data maintained and updated by PUB, and this Airport Master Plan. This representative fleet mix was developed using equivalent traffic calculations in accordance with FAA AC 150/5335-5C, Section A3. The equivalent traffic calculations were performed on military and GA jet traffic utilizing the Gulfstream G-V and C-130 Hercules as representative aircraft.

Aircraft operations data were converted to departures to be analyzed by the COMFAA software. One departure equals 0.5 operations. Aircraft operations were then further broken down by runway. The PUB ATCT provided an approximate breakdown of aircraft operations by runway as shown in **Table 1**. Each runway/taxiway was analyzed using the fleet mix currently using that specific section of runway or taxiway.

In general, the pass to coverage (P/C) used for analysis was 1.0 as specified in FAA AC 150/5335-5C, Section A 2.2, for airports with parallel taxiway scenarios in which aircraft will be obtaining fuel at the airport. For analysis purposes, the P/C ratio and departures may have been increased in order to obtain cumulative damage factor (CDF) resulting in a representative PCN.

TABLE 1 Airport Fleet Mix

AIRCRAFT FLEET MIX			PUEBLO MEMORIAL AIRPORT MASTER PLAN PCN ANALYSIS ANNUAL DEPARTURES			
Aircraft Type	ARC	Max. Take-off Weight (lbs.)	Average Projected Departures/YEAR 2020 - 2040	Runway 8R - 26L Departures	Runway 8L - 26R Departures	Runway 17/35 Departures
Boeing 737-800	D-III	174,700	100	95	0	5
Cessna Skyhawk 172	A-I	2,550	9,479	8,531	474	474
Diamond DA-20	A-I	1,764	186,837	88,748	88,748	9,342
Gulfstream G-V	C-III	90,900	1,315	1,249	0	66
C-130 Hercules	C-IV	155,000	225	214	0	11
CRJ-200	C-II	53,000	2,325	2,209	0	116

SOURCES: FAA Airport Master Record; FAA TFMSC database; PUB airport management and ATCT records; June, 2020; Aviation System Performance Metrics, March 2020.

Using the aircraft fleet mix data displayed in **Table 1**, the PCN of each pavement section was determined. The PCN is comprised of four components representing pavement type, subgrade strength category, allowable tire pressure, and method used to determine PCN. Each component is represented by a code and are defined as follows:

Pavement Codes

Pavement Type	Pavement Code
Flexible	F
Rigid	R

Subgrade Strength Category

Subgrade Strength Category	Subgrade Support CBR-Value	Represents	Code Designation
High	15	CBR ≥ 13	A
Medium	10	8<CBR<13	B
Low	6	4<CBR≤8	C
Ultra-Low	3	CBR≤4	D

Allowable Tire Pressure

Category	Code	Tire Pressure Range
Unlimited	W	No Pressure Limit
High	X	Pressure Limited to 254 psi (1.75 MPa)
Medium	Y	Pressure Limited to 181 psi (1.25 MPa)
Low	Z	Pressure Limited to 73 psi (0.50 MPa)

Method used to determine PCN

Results of technical Study = T
Based on aircraft using pavement = U

Table 2 identifies the runway/taxiway areas under analysis and the fleet mix used to evaluate the pavement area. The PCN results for each runway/taxiway are also illustrated. The COMFAA data sheets detailing the analysis for the runways/taxiways are provided in this Appendix for a more in-depth review. The data sheets include the following:

- **Aircraft operational and maximum gross weights**
- **Typical aircraft weight distribution on the main and nose gear**
- **Main gear type (dual, dual tandem, etc.)**
- **Main gear tire pressure**
- **Maximum allowable gross weight for each aircraft on pavement at equivalent annual departure level**
- **Aircraft Classification Number (ACN) of each aircraft at its maximum allowable gross weight.**

TABLE A2 Summary of PCN Data for PUB Runways & Taxiways

PUB MASTER PLAN PCN DATA		
Runway / Taxiway	**Aircraft Fleet Mix**	**PCN**
Runway 8L-26R	8L-26R	7.6 F/D/Z/T
Runway 8R-26L (Keel)	8R-26L	73 F/D/X/T
Runway 8R-26L (Edges)	8R-26L	67 F/D/X/T
Runway 17-35	17-35	57 F/B/X/T
Taxiway A	100% Fleet	36 R/C/X/T
Taxiway A (A1 to A2)	100% Fleet	31 F/C/X/T
Taxiway A (E7 to A10)	8R-26L	73 F/C/X/T
Taxiway A (A10 to A12)	8R-26L	41 F/D/X/T
Taxiway A2	100% Fleet	61 F/C/X/T
Taxiway A3	100% Fleet	28 F/C/X/T
Taxiway A6	8R-26L	63 F/C/X/T
Taxiway A9	8R-26L	13 F/C/X/T
Taxiway B	8L-26R	7.6 F/D/Z/T
Taxiway B1	8L-26R	8.1 F/D/Z/T
Taxiway B3	8L-26R	7.6 F/D/Z/T
Taxiway B4	8L-26R	7.6 F/D/Z/T
Taxiway B7	8L-26R	8.1 F/D/Z/T
Taxiway C	8L-26R	8.1 F/D/Z/T
Taxiway D	17-35	66 F/B/X/T
Taxiway E	8R-26L	61 R/C/X/T
Taxiway E7	8R-26L	35 R/D/X/T

SOURCE: Dibble Engineering, June 2020.

```
Runway 8L-26R
Pavement Section R11

Library file name = K:\2019\1019046_PUB_MP_Update\Technical Information\PCN\Aircraft Fleet Mix\PUB 8L-26R Fleet.Ext
Units = English

Evaluation pavement type is flexible and design procedure is CBR.
Alpha Values are those approved by the ICAO in 2007.

                                CBR = 3.00 (Subgrade Category is D(3))
              Evaluation pavement thickness = 25.50 in
       Pass to Traffic Cycle (PtoTC) Ratio = 10.00 (non-standard)
          Maximum number of wheels per gear = 1
        Maximum number of gears per aircraft = 1

No aircraft have 4 or more wheels per gear.  The FAA recommends a reference section assuming
3 inches of HMA and 6 inches of crushed aggregate for equivalent thickness calculations.


Results Table 1. Input Traffic Data
                          Gross   Percent   Tire    Annual     20-yr     6D
 No.  Aircraft Name       Weight  Gross Wt  Press    Deps     Coverages  Thick
------------------------------------------------------------------------------
  1   Diamond DA-20        1,764  100.00    30.0   887,480  15,881,654   10.25
  2   Skyhawk-172          2,558   95.00    50.0     4,740      54,598    7.19

Results Table 2. PCN Values
                         Critical      Thickness    Maximum      ACN Thick at
                       Aircraft Total  for Total    Allowable    Max. Allowable            PCN on
 No. Aircraft Name     Equiv. Covs.    Equiv. Covs. Gross Weight Gross Weight    CDF       D(3)
--------------------------------------------------------------------------------------------------
  1  Diamond DA-20      >5,000,000       10.25       10,912        18.20       0.0000      7.6
  2  Skyhawk-172        >5,000,000        9.06       20,248        18.20       0.0000      7.6
                                                                 Total CDF =   0.0000


When computing the numbers of coverages to failure, the coverages for none
of the aircraft converged at a pavement thickness greater than 99 percent of
the evaluation thickness. This means that the life of the pavement is unlimited
and the pavement is very strong in relation to the aircraft loading. The
relative aircraft load evaluations are also unreliable. Consider reviewing
the procedures used to determine the evaluation thickness and the strength
of the support. The thicknesses for unlimited operations of each of the
aircraft are as follows.

Results Table 2a. Thicknesses for Unlimited Operations
Diamond DA-20             14.64
Skyhawk-172              12.95

Results Table 3. Flexible ACN at Indicated Gross Weight and Strength
 No. Aircraft Name        Gross    % GW on    Tire      ACN     ACN on
                          Weight  Main Gear  Pressure   Thick    D(3)
--------------------------------------------------------------------------
  1 Diamond DA-20          1,764   100.00     30.0      7.32      1.2
  2 Skyhawk-172            2,558    95.00     50.0      6.47      1.0


Results Table 4. Summary Output for Copy and Paste Into the Support Spread Sheet

Num,Plane,GWin,ACNin,ADout,6Dt,COV20yr,COVtoF,CDFt,GWcdf,PCNcdf,EVALt,SUBcode,KorCBR,PtoTC,FlexOrRig
1,Diamond DA-20,1764.000,1.2,8874800,10.25,1.58817E+007,1.01423E+304,10.25,10911.780,7.6,25.5,D,3.00,10.00,F
2,Skyhawk-172,2558.000,1.0,47400,7.19,5.45977E+004,1.01423E+304,9.06,20247.843,7.6,25.5,D,3.00,10.00,F
```

```
Runway 8R-26L (Keel)

Pavement Section R1

Library file name = K:\2019\1019046_PUB_MP_Update\Technical Information\PCN\Aircraft Fleet Mix\PUB 8R-26L Fleet.Ext
Units = English

Evaluation pavement type is flexible and design procedure is CBR.
Alpha Values are those approved by the ICAO in 2007.

                                CBR = 4.00 (Subgrade Category is D(3))
            Evaluation pavement thickness = 40.80 in
       Pass to Traffic Cycle (PtoTC) Ratio = 2.00
          Maximum number of wheels per gear = 2
        Maximum number of gears per aircraft = 2

No aircraft have 4 or more wheels per gear.  The FAA recommends a reference section assuming
3 inches of HMA and 6 inches of crushed aggregate for equivalent thickness calculations.

Results Table 1. Input Traffic Data
                        Gross   Percent   Tire    Annual     20-yr     6D
 No.  Aircraft Name     Weight  Gross Wt  Press   Deps     Coverages  Thick
-------------------------------------------------------------------------------
  1  B737-800           174,700  93.56    205.0     100     1,124    34.80
  2  RegionalJet-200     53,000  95.00    177.0   2,209    17,072    24.80
  3  C-130              155,000  95.00    105.0     214     3,702    31.42
  4  Gulfstream-G-V      90,900  95.00    188.0   1,249    11,911    31.45
  5  Diamond DA-20        1,764 100.00     30.0  88,748   317,633     7.15
  6  Skyhawk-172          2,558  95.00     50.0   8,531    19,653     5.72

Results Table 2. PCN Values
                        Critical      Thickness     Maximum      ACN Thick at
                       Aircraft Total  for Total    Allowable    Max. Allowable              PCN on
 No. Aircraft Name     Equiv. Covs.  Equiv. Covs.  Gross Weight  Gross Weight    CDF        D(3)
----------------------------------------------------------------------------------------------------
  1  B737-800                1,195       35.01       226,190         56.42      0.1430      73.3
  2  RegionalJet-200     >5,000,000      37.06        63,987         30.97      0.0000      22.1
  3  C-130                  67,455       37.57       177,468         43.94      0.0083      44.5
  4  Gulfstream-G-V      3,044,985       39.10        98,569         38.04      0.0006      33.3
  5  Diamond DA-20       >5,000,000      11.79        21,129         25.32      0.0000      14.8
  6  Skyhawk-172         >5,000,000      10.96        35,480         24.09      0.0000      13.4
                                                                  Total CDF =   0.1520


Results Table 3. Flexible ACN at Indicated Gross Weight and Strength
 No. Aircraft Name        Gross    % GW on    Tire      ACN     ACN on
                         Weight   Main Gear  Pressure   Thick    D(3)
-------------------------------------------------------------------------
  1 B737-800             174,700    93.56     205.0     48.96    55.2
  2 RegionalJet-200       53,000    95.00     177.0     28.09    18.2
  3 C-130                155,000    95.00     105.0     40.41    37.6
  4 Gulfstream-G-V        90,900    95.00     188.0     36.45    30.6
  5 Diamond DA-20          1,764   100.00      30.0      7.32     1.2
  6 Skyhawk-172            2,558    95.00      50.0      6.47     1.0


Results Table 4. Summary Output for Copy and Paste Into the Support Spread Sheet

Num,Plane,GWin,ACNin,ADout,6Dt,COV20yr,COVtoF,CDFt,GWcdf,PCNcdf,EVALt,SUBcode,KorCBR,PtoTC,FlexOrRig
1,B737-800,174700.000,55.2,200,34.80,1.12440E+003,7.86085E+003,35.01,226189.940,73.3,40.8,D,4.00,2.00,F
2,RegionalJet-200,53000.000,18.2,4418,24.80,1.70719E+004,1.01423E+304,37.06,63987.406,22.1,40.8,D,4.00,2.00,F
3,C-130,155000.000,37.6,428,31.42,3.70182E+003,4.43861E+005,37.57,177468.253,44.5,40.8,D,4.00,2.00,F
4,Gulfstream-G-V,90900.000,30.6,2498,31.45,1.19108E+004,2.00364E+007,39.10,98569.016,33.3,40.8,D,4.00,2.00,F
5,Diamond DA-20,1764.000,1.2,177496,7.15,3.17633E+005,1.01423E+304,11.79,21128.666,14.8,40.8,D,4.00,2.00,F
6,Skyhawk-172,2558.000,1.0,17062,5.72,1.96529E+004,1.01423E+304,10.96,35479.552,13.4,40.8,D,4.00,2.00,F
```

```
Runway 8R-26L (Edges)

Pavement Section R2

Library file name = K:\2019\1019046_PUB_MP_Update\Technical Information\PCN\Aircraft Fleet Mix\PUB 8R-26L Fleet.Ext
Units = English

Evaluation pavement type is flexible and design procedure is CBR.
Alpha Values are those approved by the ICAO in 2007.

                                  CBR = 4.00 (Subgrade Category is D(3))
              Evaluation pavement thickness = 36.80 in
         Pass to Traffic Cycle (PtoTC) Ratio = 1.00
            Maximum number of wheels per gear = 2
         Maximum number of gears per aircraft = 2

No aircraft have 4 or more wheels per gear.  The FAA recommends a reference section assuming
3 inches of HMA and 6 inches of crushed aggregate for equivalent thickness calculations.

Results Table 1. Input Traffic Data
                          Gross   Percent   Tire    Annual    20-yr      6D
  No.  Aircraft Name      Weight  Gross Wt  Press    Deps    Coverages  Thick
-------------------------------------------------------------------------------
   1  B737-800            174,700  93.56    205.0     100       562     32.32
   2  RegionalJet-200      53,000  95.00    177.0   2,209     8,536     23.84
   3  C-130               155,000  95.00    105.0     214     1,851     29.72
   4  Gulfstream-G-V       90,900  95.00    188.0   1,249     5,955     30.12
   5  Diamond DA-20         1,764 100.00     30.0  88,748   158,817      6.92
   6  Skyhawk-172           2,558  95.00     50.0   8,531     9,826      5.47

Results Table 2. PCN Values
                         Critical      Thickness     Maximum      ACN Thick at
                      Aircraft Total   for Total    Allowable    Max. Allowable              PCN on
  No. Aircraft Name   Equiv. Covs.   Equiv. Covs.  Gross Weight  Gross Weight    CDF         D(3)
------------------------------------------------------------------------------------------------------
   1  B737-800                 678        33.01      209,131         54.06       0.2742       67.3
   2  RegionalJet-200   >5,000,000        36.77       53,092         28.11       0.0000       18.2
   3  C-130                 14,849        34.56      172,194         43.09       0.0412       42.8
   4  Gulfstream-G-V       129,515        35.32       98,174         37.96       0.0152       33.2
   5  Diamond DA-20     >5,000,000        11.79       17,189         22.84       0.0000       12.0
   6  Skyhawk-172       >5,000,000        10.96       28,864         21.73       0.0000       10.9
                                                                  Total CDF =   0.3306

Results Table 3. Flexible ACN at Indicated Gross Weight and Strength
  No. Aircraft Name       Gross    % GW on      Tire       ACN     ACN on
                         Weight  Main Gear   Pressure     Thick     D(3)
-------------------------------------------------------------------------
   1 B737-800            174,700    93.56      205.0      48.96     55.2
   2 RegionalJet-200      53,000    95.00      177.0      28.09     18.2
   3 C-130               155,000    95.00      105.0      40.41     37.6
   4 Gulfstream-G-V       90,900    95.00      188.0      36.45     30.6
   5 Diamond DA-20         1,764   100.00       30.0       7.32      1.2
   6 Skyhawk-172           2,558    95.00       50.0       6.47      1.0


Results Table 4. Summary Output for Copy and Paste Into the Support Spread Sheet

Num,Plane,GWin,ACNin,ADout,6Dt,COV20yr,COVtoF,CDFt,GWcdf,PCNcdf,EVALt,SUBcode,KorCBR,PtoTC,FlexOrRig
1,B737-800,174700.000,55.2,100,32.32,5.62200E+002,2.05041E+003,33.01,209131.035,67.3,36.8,D,4.00,1.00,F
2,RegionalJet-200,53000.000,18.2,2209,23.84,8.53597E+003,4.75968E+019,36.77,53092.127,18.2,36.8,D,4.00,1.00,F
3,C-130,155000.000,37.6,214,29.72,1.85091E+003,4.49159E+004,34.56,172194.222,42.8,36.8,D,4.00,1.00,F
4,Gulfstream-G-V,90900.000,30.6,1249,30.12,5.95539E+003,3.91759E+005,35.32,98174.454,33.2,36.8,D,4.00,1.00,F
5,Diamond DA-20,1764.000,1.2,88748,6.92,1.58817E+005,1.01423E+304,11.79,17188.881,12.0,36.8,D,4.00,1.00,F
6,Skyhawk-172,2558.000,1.0,8531,5.47,9.82644E+003,1.01423E+304,10.96,28863.822,10.9,36.8,D,4.00,1.00,F
```

```
Runway 17-35

Pavement Section R8

This file name = PCN Results Flexible 6-23-2020 15;57;18.txt
Library file name = K:\2019\1019046_PUB_MP_Update\Technical Information\PCN\Aircraft Fleet Mix\PUB 17-35 Fleet.Ext
Units = English

Evaluation pavement type is flexible and design procedure is CBR.
Alpha Values are those approved by the ICAO in 2007.

                              CBR = 10.00 (Subgrade Category is B(10))
            Evaluation pavement thickness = 25.60 in
        Pass to Traffic Cycle (PtoTC) Ratio = 8.00 (non-standard)
          Maximum number of wheels per gear = 2
        Maximum number of gears per aircraft = 2

No aircraft have 4 or more wheels per gear.  The FAA recommends a reference section assuming
3 inches of HMA and 6 inches of crushed aggregate for equivalent thickness calculations.

Results Table 1. Input Traffic Data
                        Gross    Percent   Tire    Annual    20-yr     6D
  No.  Aircraft Name    Weight   Gross Wt  Press   Deps      Coverages Thick
-----------------------------------------------------------------------------
   1   B737-800         174,700  93.56     205.0   200       8,995     22.81
   2   RegionalJet-200   53,000  95.00     177.0   116       3,586     13.28
   3   C-130            155,000  95.00     105.0    11         761     15.45
   4   Gulfstream-G-V    90,900  95.00     188.0    66       2,518     16.24
   5   Diamond DA-20      1,764 100.00      30.0  9,342     133,742     2.91
   6   Skyhawk-172        2,558  95.00      50.0    474       4,368     2.54

Results Table 2. PCN Values
                        Critical      Thickness     Maximum      ACN Thick at
                        Aircraft Total for Total    Allowable    Max. Allowable           PCN on
  No. Aircraft Name     Equiv. Covs.  Equiv. Covs.  Gross Weight Gross Weight   CDF       B(10)
-----------------------------------------------------------------------------------------------
   1  B737-800                 8,996      22.81       209,399         25.79     0.1506     57.0
   2  RegionalJet-200     >5,000,000      22.46        67,886         16.40     0.0000     23.1
   3  C-130               >5,000,000      24.61       165,535         19.47     0.0000     32.4
   4  Gulfstream-G-V      >5,000,000      24.82        96,045         18.65     0.0000     29.8
   5  Diamond DA-20       >5,000,000       5.00        46,305         12.80     0.0000     14.0
   6  Skyhawk-172         >5,000,000       5.40        57,498         12.80     0.0000     14.0
                                                                  Total CDF =   0.1506

Results Table 3. Flexible ACN at Indicated Gross Weight and Strength
  No. Aircraft Name     Gross    % GW on     Tire      ACN    ACN on
                        Weight   Main Gear   Pressure  Thick  B(10)
-----------------------------------------------------------------------------
   1 B737-800           174,700  93.56       205.0     22.99  45.3
   2 RegionalJet-200     53,000  95.00       177.0     14.26  17.4
   3 C-130              155,000  95.00       105.0     18.78  30.2
   4 Gulfstream-G-V      90,900  95.00       188.0     18.03  27.9
   5 Diamond DA-20        1,764 100.00        30.0      2.50   0.5
   6 Skyhawk-172          2,558  95.00        50.0      2.70   0.6

Results Table 4. Summary Output for Copy and Paste Into the Support Spread Sheet

Num,Plane,GWin,ACNin,ADout,6Dt,COV20yr,COVtoF,CDFt,GWcdf,PCNcdf,EVALt,SUBcode,KorCBR,PtoTC,FlexOrRig
1,B737-800,174700.000,45.3,1600,22.81,8.99520E+003,5.97252E+004,22.81,209398.663,57.0,25.6,B,10.00,8.00,F
2,RegionalJet-200,53000.000,17.4,928,13.28,3.58596E+003,1.01423E+304,22.46,67886.408,23.1,25.6,B,10.00,8.00,F
3,C-130,155000.000,30.2,88,15.45,7.61122E+002,8.98022E+007,24.61,165534.617,32.4,25.6,B,10.00,8.00,F
4,Gulfstream-G-V,90900.000,27.9,528,16.24,2.51757E+003,4.19922E+008,24.82,96044.792,29.8,25.6,B,10.00,8.00,F
5,Diamond DA-20,1764.000,0.5,74736,2.91,1.33742E+005,1.01423E+304,5.00,46304.521,14.0,25.6,B,10.00,8.00,F
6,Skyhawk-172,2558.000,0.6,3792,2.54,4.36782E+003,1.01423E+304,5.40,57497.823,14.0,25.6,B,10.00,8.00,F
```

```
Taxiway A (Between Taxiway A1 and A2)

Pavement Section T6

Library file name = K:\2019\1019046_PUB_MP_Update\Technical Information\PCN\Aircraft Fleet Mix\PUB 100% Fleet.Ext
Units = English

Evaluation pavement type is flexible and design procedure is CBR.
Alpha Values are those approved by the ICAO in 2007.

                                    CBR = 4.90 (Subgrade Category is C(6))
               Evaluation pavement thickness = 24.90 in
         Pass to Traffic Cycle (PtoTC) Ratio = 1.00
            Maximum number of wheels per gear = 2
         Maximum number of gears per aircraft = 2

No aircraft have 4 or more wheels per gear.  The FAA recommends a reference section assuming
3 inches of HMA and 6 inches of crushed aggregate for equivalent thickness calculations.

Results Table 1. Input Traffic Data
                        Gross   Percent   Tire    Annual    20-yr      6D
  No.  Aircraft Name    Weight  Gross Wt  Press   Deps      Coverages  Thick
-------------------------------------------------------------------------------
   1  B737-800          174,700  93.56    205.0      100       562     28.37
   2  RegionalJet-200    53,000  95.00    177.0    2,325     8,984     21.40
   3  C-130             155,000  95.00    105.0      225     1,946     26.17
   4  Gulfstream-G-V     90,900  95.00    188.0    1,315     6,270     26.95
   5  Diamond DA-20       1,764 100.00     30.0  186,837   334,349      6.10
   6  Skyhawk-172         2,558  95.00     50.0    9,479    10,918      4.79

Results Table 2. PCN Values
                        Critical      Thickness    Maximum      ACN Thick at
                     Aircraft Total   for Total   Allowable    Max. Allowable            PCN on
  No. Aircraft Name   Equiv. Covs.  Equiv. Covs. Gross Weight  Gross Weight    CDF       C(6)
---------------------------------------------------------------------------------------------------
   1  B737-800              1,537       31.59       120,031        25.45      2.7230      31.2
   2  RegionalJet-200   1,625,197       26.55        46,910        18.00      0.0412      15.6
   3  C-130                 8,164       29.17       117,772        22.18      1.7745      23.7
   4  Gulfstream-G-V       16,065       28.55        71,068        21.45      2.9055      22.2
   5  Diamond DA-20     >5,000,000      10.03        10,872        10.43      0.0000       5.2
   6  Skyhawk-172       >5,000,000       9.53        17,466        10.78      0.0000       5.6
                                                              Total CDF =    7.4442


Results Table 3. Flexible ACN at Indicated Gross Weight and Strength
  No. Aircraft Name      Gross    % GW on     Tire      ACN     ACN on
                        Weight  Main Gear   Pressure    Thick    C(6)
----------------------------------------------------------------------
   1 B737-800           174,700    93.56     205.0     32.30     50.3
   2 RegionalJet-200     53,000    95.00     177.0     19.24     17.8
   3 C-130              155,000    95.00     105.0     25.91     32.3
   4 Gulfstream-G-V      90,900    95.00     188.0     24.70     29.4
   5 Diamond DA-20        1,764   100.00      30.0      4.20      0.8
   6 Skyhawk-172          2,558    95.00      50.0      4.12      0.8


Results Table 4. Summary Output for Copy and Paste Into the Support Spread Sheet

Num,Plane,GWin,ACNin,ADout,6Dt,COV20yr,COVtoF,CDFt,GWcdf,PCNcdf,EVALt,SUBcode,KorCBR,PtoTC,FlexOrRig
1,B737-800,174700.000,50.3,100,28.37,5.62200E+002,2.06461E+002,31.59,120031.447,31.2,24.9,C,4.90,1.00,F
2,RegionalJet-200,53000.000,17.8,2325,21.40,8.98422E+003,2.18317E+005,26.55,46909.780,15.6,24.9,C,4.90,1.00,F
3,C-130,155000.000,32.3,225,26.17,1.94605E+003,1.09668E+003,29.17,117772.044,23.7,24.9,C,4.90,1.00,F
4,Gulfstream-G-V,90900.000,29.4,1315,26.95,6.27009E+003,2.15800E+003,28.55,71067.980,22.2,24.9,C,4.90,1.00,F
5,Diamond DA-20,1764.000,0.8,186837,6.10,3.34349E+005,1.01423E+304,10.03,10872.092,5.2,24.9,C,4.90,1.00,F
6,Skyhawk-172,2558.000,0.8,9479,4.79,1.09184E+004,1.01423E+304,9.53,17465.959,5.6,24.9,C,4.90,1.00,F
```

```
Taxiway A (Between TWY E7 and A10)

Pavement Section T15

This file name = PCN Results Flexible 6-23-2020 17;41;39.txt
Library file name = K:\2019\1019046_PUB_MP_Update\Technical Information\PCN\Aircraft Fleet Mix\PUB 8R-26L Fleet.Ext
Units = English

Evaluation pavement type is flexible and design procedure is CBR.
Alpha Values are those approved by the ICAO in 2007.

                                CBR = 6.00 (Subgrade Category is C(6))
              Evaluation pavement thickness = 30.50 in
         Pass to Traffic Cycle (PtoTC) Ratio = 1.00
            Maximum number of wheels per gear = 2
         Maximum number of gears per aircraft = 2

No aircraft have 4 or more wheels per gear.  The FAA recommends a reference section assuming
3 inches of HMA and 6 inches of crushed aggregate for equivalent thickness calculations.

Results Table 1. Input Traffic Data
                       Gross   Percent   Tire    Annual    20-yr     6D
  No.  Aircraft Name   Weight  Gross Wt  Press    Deps    Coverages  Thick
--------------------------------------------------------------------------------
   1  B737-800         174,700  93.56    205.0     100       562    24.88
   2  RegionalJet-200   53,000  95.00    177.0   2,209     8,536    19.05
   3  C-130            155,000  95.00    105.0     214     1,851    22.93
   4  Gulfstream-G-V    90,900  95.00    188.0   1,249     5,955    23.86
   5  Diamond DA-20      1,764 100.00     30.0  88,748   158,817     4.94
   6  Skyhawk-172        2,558  95.00     50.0   8,531     9,826     4.12

Results Table 2. PCN Values
                       Critical    Thickness    Maximum     ACN Thick at
                     Aircraft Total  for Total  Allowable   Max. Allowable           PCN on
  No. Aircraft Name   Equiv. Covs.  Equiv. Covs. Gross Weight Gross Weight  CDF       C(6)
--------------------------------------------------------------------------------------------
   1  B737-800             618        25.15       236,516       38.79     0.1211     72.5
   2  RegionalJet-200  >5,000,000     29.84        55,299       19.68     0.0000     18.7
   3  C-130               33,271      27.79       181,570       28.43     0.0074     38.9
   4  Gulfstream-G-V     171,416      28.47       103,122       26.51     0.0046     33.9
   5  Diamond DA-20    >5,000,000      8.40        23,262       15.25     0.0000     11.2
   6  Skyhawk-172      >5,000,000      8.25        34,951       15.25     0.0000     11.2
                                                           Total CDF =   0.1332


Results Table 3. Flexible ACN at Indicated Gross Weight and Strength
  No. Aircraft Name     Gross   % GW on     Tire     ACN    ACN on
                        Weight Main Gear  Pressure  Thick    C(6)
--------------------------------------------------------------------------------
   1 B737-800           174,700   93.56     205.0   32.30    50.3
   2 RegionalJet-200     53,000   95.00     177.0   19.24    17.8
   3 C-130              155,000   95.00     105.0   25.91    32.3
   4 Gulfstream-G-V      90,900   95.00     188.0   24.70    29.4
   5 Diamond DA-20        1,764  100.00      30.0    4.20     0.8
   6 Skyhawk-172          2,558   95.00      50.0    4.12     0.8


Results Table 4. Summary Output for Copy and Paste Into the Support Spread Sheet

Num,Plane,GWin,ACNin,ADout,6Dt,COV20yr,COVtoF,CDFt,GWcdf,PCNcdf,EVALt,SUBcode,KorCBR,PtoTC,FlexOrRig
1,B737-800,174700.000,50.3,100,24.88,5.62200E+002,4.64106E+003,25.15,236515.774,72.5,30.5,C,6.00,1.00,F
2,RegionalJet-200,53000.000,17.8,2209,19.05,8.53597E+003,1.01423E+304,29.84,55299.218,18.7,30.5,C,6.00,1.00,F
3,C-130,155000.000,32.3,214,22.93,1.85091E+003,2.49837E+005,27.79,181569.738,38.9,30.5,C,6.00,1.00,F
4,Gulfstream-G-V,90900.000,29.4,1249,23.86,5.95539E+003,1.28719E+006,28.47,103122.470,33.9,30.5,C,6.00,1.00,F
5,Diamond DA-20,1764.000,0.8,88748,4.94,1.58817E+005,1.01423E+304,8.40,23262.148,11.2,30.5,C,6.00,1.00,F
6,Skyhawk-172,2558.000,0.8,8531,4.12,9.82644E+003,1.01423E+304,8.25,34950.924,11.2,30.5,C,6.00,1.00,F
```

```
Taxiway A (Between TWY A10 and A12)

Pavement Section T12

Library file name = K:\2019\1019046_PUB_MP_Update\Technical Information\PCN\Aircraft Fleet Mix\PUB 8R-26L Fleet.Ext
Units = English

Evaluation pavement type is flexible and design procedure is CBR.
Alpha Values are those approved by the ICAO in 2007.

                                  CBR = 3.00 (Subgrade Category is D(3))
              Evaluation pavement thickness = 35.60 in
         Pass to Traffic Cycle (PtoTC) Ratio = 1.00
            Maximum number of wheels per gear = 2
          Maximum number of gears per aircraft = 2

No aircraft have 4 or more wheels per gear.  The FAA recommends a reference section assuming
3 inches of HMA and 6 inches of crushed aggregate for equivalent thickness calculations.

Results Table 1. Input Traffic Data
                        Gross   Percent   Tire    Annual    20-yr     6D
  No.  Aircraft Name    Weight  Gross Wt  Press    Deps    Coverages Thick
-------------------------------------------------------------------------------
   1  B737-800          174,700  93.56    205.0     100       562    38.56
   2  RegionalJet-200    53,000  95.00    177.0   2,209     8,536    27.82
   3  C-130             155,000  95.00    105.0     214     1,851    35.46
   4  Gulfstream-G-V     90,900  95.00    188.0   1,249     5,955    35.29
   5  Diamond DA-20       1,764 100.00     30.0  88,748   158,817     8.59
   6  Skyhawk-172         2,558  95.00     50.0   8,531     9,826     6.46

Results Table 2. PCN Values
                        Critical     Thickness    Maximum     ACN Thick at
                     Aircraft Total  for Total   Allowable   Max. Allowable          PCN on
  No. Aircraft Name   Equiv. Covs.  Equiv. Covs. Gross Weight Gross Weight   CDF     D(3)
------------------------------------------------------------------------------------------
   1  B737-800             1,089       41.27      136,106        42.52      1.9546    41.6
   2  RegionalJet-200   >5,000,000     36.62       50,152        27.29      0.0014    17.2
   3  C-130                7,336       39.56      130,217        36.35      0.9549    30.4
   4  Gulfstream-G-V      25,798       38.39       78,850        33.78      0.8737    26.3
   5  Diamond DA-20     >5,000,000     14.64       10,430        17.79      0.0000     7.3
   6  Skyhawk-172       >5,000,000     12.95       19,345        17.79      0.0000     7.3
                                                             Total CDF =   3.7847

Results Table 3. Flexible ACN at Indicated Gross Weight and Strength
  No. Aircraft Name       Gross    % GW on     Tire      ACN     ACN on
                         Weight  Main Gear  Pressure    Thick    D(3)
-------------------------------------------------------------------------
   1 B737-800            174,700    93.56     205.0     48.96     55.2
   2 RegionalJet-200      53,000    95.00     177.0     28.09     18.2
   3 C-130               155,000    95.00     105.0     40.41     37.6
   4 Gulfstream-G-V       90,900    95.00     188.0     36.45     30.6
   5 Diamond DA-20         1,764   100.00      30.0      7.32      1.2
   6 Skyhawk-172           2,558    95.00      50.0      6.47      1.0


Results Table 4. Summary Output for Copy and Paste Into the Support Spread Sheet

Num,Plane,GWin,ACNin,ADout,6Dt,COV20yr,COVtoF,CDFt,GWcdf,PCNcdf,EVALt,SUBcode,KorCBR,PtoTC,FlexOrRig
1,B737-800,174700.000,55.2,100,38.56,5.62200E+002,2.87628E+002,41.27,136105.903,41.6,35.6,D,3.00,1.00,F
2,RegionalJet-200,53000.000,18.2,2209,27.82,8.53597E+003,5.90228E+006,36.62,50151.518,17.2,35.6,D,3.00,1.00,F
3,C-130,155000.000,37.6,214,35.46,1.85091E+003,1.93823E+003,39.56,130217.342,30.4,35.6,D,3.00,1.00,F
4,Gulfstream-G-V,90900.000,30.6,1249,35.29,5.95539E+003,6.81630E+003,38.39,78850.277,26.3,35.6,D,3.00,1.00,F
5,Diamond DA-20,1764.000,1.2,88748,8.59,1.58817E+005,1.01423E+304,14.64,10430.211,7.3,35.6,D,3.00,1.00,F
6,Skyhawk-172,2558.000,1.0,8531,6.46,9.82644E+003,1.01423E+304,12.95,19345.225,7.3,35.6,D,3.00,1.00,F
```

Taxiway A

Pavement Section T19

This file name = PCN Results Rigid 6-23-2020 16;07;55.txt
Library file name = K:\2019\1019046_PUB_MP_Update\Technical Information\PCN\Aircraft Fleet Mix\PUB 100% Fleet.Ext
Units = English

Evaluation pavement type is rigid
Equivalent coverages computed with the AC 150/5320-6C/D edge stress design method.
Maximum gross weight computed with the AC 150/5320-6C/D edge stress design method.

```
                          k Value = 116.0 lbs/in^3 (Subgrade Category is C(147))
                  flexural strength = 650.0 psi
          Evaluation pavement thickness = 11.60 in
     Pass to Traffic Cycle (PtoTC) Ratio = 1.00

         Maximum number of wheels per gear = 2
       Maximum number of gears per aircraft = 2
```

Results Table 1. Input Traffic Data

No.	Aircraft Name	Gross Weight	Percent Gross Wt	Tire Press	Annual Deps	20-yr Coverages	6D Thick
1	B737-800	174,700	93.56	205.0	100	562	14.01
2	RegionalJet-200	53,000	95.00	177.0	2,325	8,984	9.55
3	C-130	155,000	95.00	105.0	225	973	10.50
4	Gulfstream-G-V	90,900	95.00	188.0	1,315	6,270	11.76
5	Diamond DA-20	1,764	100.00	30.0	186,837	334,349	2.71
6	Skyhawk-172	2,558	95.00	50.0	9,479	10,918	2.09

Results Table 2. PCN Values

No.	Aircraft Name	Critical Aircraft Total Equiv. Covs.	Thickness for Total Equiv. Covs.	Maximum Allowable Gross Weight	ACN Thick at Max. Allowable Gross Weight	CDF	PCN on C(147)
1	B737-800	566	14.02	121,668	11.14	188.6392	35.5
2	RegionalJet-200	>5,000,000	14.87	32,795	6.55	0.0374	11.4
3	C-130	1,958,117	15.53	86,920	8.13	0.0944	18.1
4	Gulfstream-G-V	972,850	15.72	51,538	7.78	1.2245	16.5
5	Diamond DA-20	>5,000,000	12.35	1,528	1.89	0.0000	0.8
6	Skyhawk-172	>5,000,000	12.31	2,247	1.74	0.0000	0.7
					Total CDF = 189.9956		

Results Table 3. Rigid ACN at Indicated Gross Weight and Strength

No.	Aircraft Name	Gross Weight	% GW on Main Gear	Tire Pressure	ACN Thick	ACN on C(147)
1	B737-800	174,700	93.56	205.0	13.56	54.1
2	RegionalJet-200	53,000	95.00	177.0	8.50	19.9
3	C-130	155,000	95.00	105.0	11.05	34.9
4	Gulfstream-G-V	90,900	95.00	188.0	10.59	31.9
5	Diamond DA-20	1,764	100.00	30.0	2.02	0.9
6	Skyhawk-172	2,558	95.00	50.0	1.85	0.8

Results Table 4. Summary Output for Copy and Paste Into the Support Spread Sheet

```
Num,Plane,GWin,ACNin,ADout,6Dt,COV20yr,COVtoF,CDFt,GWcdf,PCNcdf,EVALt,SUBcode,KorCBR,PtoTC,FlexOrRig
1,B737-800,174700.000,54.1,100,14.01,5.62200E+002,2.98029E+000,14.02,121668.402,35.5,11.6,C,116.00,1.00,R
2,RegionalJet-200,53000.000,19.9,2325,9.55,8.98422E+003,2.39900E+005,14.87,32795.199,11.4,11.6,C,116.00,1.00,R
3,C-130,155000.000,34.9,225,10.50,9.73026E+002,1.03061E+004,15.53,86919.946,18.1,11.6,C,116.00,1.00,R
4,Gulfstream-G-V,90900.000,31.9,1315,11.76,6.27009E+003,5.12038E+003,15.72,51537.709,16.5,11.6,C,116.00,1.00,R
5,Diamond DA-20,1764.000,0.9,186837,2.71,3.34349E+005,3.56172E+032,12.35,1528.357,0.8,11.6,C,116.00,1.00,R
6,Skyhawk-172,2558.000,0.8,9479,2.09,1.09184E+004,5.37300E+034,12.31,2247.042,0.7,11.6,C,116.00,1.00,R
```

Taxiway A2

Pavement Section T4

Library file name = K:\2019\1019046_PUB_MP_Update\Technical Information\PCN\Aircraft Fleet Mix\PUB 100% Fleet.Ext
Units = English

Evaluation pavement type is flexible and design procedure is CBR.
Alpha Values are those approved by the ICAO in 2007.

```
                              CBR = 6.00 (Subgrade Category is C(6))
           Evaluation pavement thickness = 37.40 in
      Pass to Traffic Cycle (PtoTC) Ratio = 10.00 (non-standard)
         Maximum number of wheels per gear = 2
        Maximum number of gears per aircraft = 2
```

No aircraft have 4 or more wheels per gear. The FAA recommends a reference section assuming
3 inches of HMA and 6 inches of crushed aggregate for equivalent thickness calculations.

Results Table 1. Input Traffic Data

No.	Aircraft Name	Gross Weight	Percent Gross Wt	Tire Press	Annual Deps	20-yr Coverages	6D Thick
1	B737-800	174,700	93.56	205.0	400	22,488	34.01
2	RegionalJet-200	53,000	95.00	177.0	2,325	89,842	21.50
3	C-130	155,000	95.00	105.0	225	19,461	26.97
4	Gulfstream-G-V	90,900	95.00	188.0	1,315	62,701	27.27
5	Diamond DA-20	1,764	100.00	30.0	186,837	3,343,490	5.60
6	Skyhawk-172	2,558	95.00	50.0	9,479	109,184	4.76

Results Table 2. PCN Values

No.	Aircraft Name	Critical Aircraft Total Equiv. Covs.	Thickness for Total Equiv. Covs.	Maximum Allowable Gross Weight	ACN Thick at Max. Allowable Gross Weight	CDF	PCN on C(6)
1	B737-800	22,490	34.01	204,391	35.56	0.1564	61.0
2	RegionalJet-200	>5,000,000	29.84	82,191	24.31	0.0000	28.5
3	C-130	>5,000,000	36.33	162,506	26.63	0.0000	34.2
4	Gulfstream-G-V	>5,000,000	37.10	92,308	24.91	0.0000	29.9
5	Diamond DA-20	>5,000,000	8.40	34,978	18.71	0.0000	16.9
6	Skyhawk-172	>5,000,000	8.25	52,554	18.70	0.0000	16.8
					Total CDF =	0.1564	

Results Table 3. Flexible ACN at Indicated Gross Weight and Strength

No.	Aircraft Name	Gross Weight	% GW on Main Gear	Tire Pressure	ACN Thick	ACN on C(6)
1	B737-800	174,700	93.56	205.0	32.30	50.3
2	RegionalJet-200	53,000	95.00	177.0	19.24	17.8
3	C-130	155,000	95.00	105.0	25.91	32.3
4	Gulfstream-G-V	90,900	95.00	188.0	24.70	29.4
5	Diamond DA-20	1,764	100.00	30.0	4.20	0.8
6	Skyhawk-172	2,558	95.00	50.0	4.12	0.8

Results Table 4. Summary Output for Copy and Paste Into the Support Spread Sheet

```
Num,Plane,GWin,ACNin,ADout,6Dt,COV20yr,COVtoF,CDFt,GWcdf,PCNcdf,EVALt,SUBcode,KorCBR,PtoTC,FlexOrRig
1,B737-800,174700.000,50.3,4000,34.01,2.24880E+004,1.43830E+005,34.01,204391.296,61.0,37.4,C,6.00,10.00,F
2,RegionalJet-200,53000.000,17.8,23250,21.50,8.98422E+004,1.01423E+304,29.84,82190.893,28.5,37.4,C,6.00,10.00,F
3,C-130,155000.000,32.3,2250,26.97,1.94605E+004,1.16160E+009,36.33,162505.603,34.2,37.4,C,6.00,10.00,F
4,Gulfstream-G-V,90900.000,29.4,13150,27.27,6.27009E+004,2.01144E+013,37.10,92307.787,29.9,37.4,C,6.00,10.00,F
5,Diamond DA-20,1764.000,0.8,1868370,5.60,3.34349E+006,1.01423E+304,8.40,34977.903,16.9,37.4,C,6.00,10.00,F
6,Skyhawk-172,2558.000,0.8,94790,4.76,1.09184E+005,1.01423E+304,8.25,52553.628,16.8,37.4,C,6.00,10.00,F
```

```
Taxiway A3

Pavement Section T3

Library file name = K:\2019\1019046_PUB_MP_Update\Technical Information\PCN\Aircraft Fleet Mix\PUB 100% Fleet.Ext
Units = English

Evaluation pavement type is flexible and design procedure is CBR.
Alpha Values are those approved by the ICAO in 2007.

                                    CBR = 6.00 (Subgrade Category is C(6))
              Evaluation pavement thickness = 20.90 in
         Pass to Traffic Cycle (PtoTC) Ratio = 1.00
            Maximum number of wheels per gear = 2
          Maximum number of gears per aircraft = 2

No aircraft have 4 or more wheels per gear.  The FAA recommends a reference section assuming
3 inches of HMA and 6 inches of crushed aggregate for equivalent thickness calculations.

Results Table 1. Input Traffic Data
                        Gross   Percent   Tire    Annual    20-yr    6D
  No.  Aircraft Name    Weight  Gross Wt  Press    Deps    Coverages Thick
--------------------------------------------------------------------------------
   1  B737-800          174,700  93.56    205.0     100       562    24.88
   2  RegionalJet-200    53,000  95.00    177.0   2,325     8,984    19.11
   3  C-130             155,000  95.00    105.0     225     1,946    23.03
   4  Gulfstream-G-V     90,900  95.00    188.0   1,315     6,270    23.94
   5  Diamond DA-20       1,764 100.00     30.0 186,837   334,349     5.11
   6  Skyhawk-172         2,558  95.00     50.0   9,479    10,918     4.15

Results Table 2. PCN Values
                        Critical      Thickness    Maximum     ACN Thick at
                      Aircraft Total  for Total   Allowable    Max. Allowable            PCN on
  No. Aircraft Name   Equiv. Covs.   Equiv. Covs. Gross Weight Gross Weight     CDF      C(6)
----------------------------------------------------------------------------------------------
   1  B737-800               1,837       28.14     108,309         23.87       3.7684    27.5
   2  RegionalJet-200      587,703       23.05      44,153         17.41       0.1883    14.6
   3  C-130                  8,196       25.57     108,087         21.15       2.9242    21.6
   4  Gulfstream-G-V        14,210       25.23      65,484         20.44       5.4339    20.1
   5  Diamond DA-20      >5,000,000       8.40      10,923         10.45       0.0000     5.3
   6  Skyhawk-172        >5,000,000       8.25      16,412         10.45       0.0000     5.3
                                                              Total CDF =    12.3147


Results Table 3. Flexible ACN at Indicated Gross Weight and Strength
  No. Aircraft Name        Gross    % GW on    Tire     ACN    ACN on
                          Weight  Main Gear  Pressure  Thick    C(6)
-------------------------------------------------------------------------
   1 B737-800             174,700    93.56     205.0   32.30    50.3
   2 RegionalJet-200       53,000    95.00     177.0   19.24    17.8
   3 C-130                155,000    95.00     105.0   25.91    32.3
   4 Gulfstream-G-V        90,900    95.00     188.0   24.70    29.4
   5 Diamond DA-20          1,764   100.00      30.0    4.20     0.8
   6 Skyhawk-172            2,558    95.00      50.0    4.12     0.8


Results Table 4. Summary Output for Copy and Paste Into the Support Spread Sheet

Num,Plane,GWin,ACNin,ADout,6Dt,COV20yr,COVtoF,CDFt,GWcdf,PCNcdf,EVALt,SUBcode,KorCBR,PtoTC,FlexOrRig
1,B737-800,174700.000,50.3,100,24.88,5.62200E+002,1.49188E+002,28.14,108308.524,27.5,20.9,C,6.00,1.00,F
2,RegionalJet-200,53000.000,17.8,2325,19.11,8.98422E+003,4.77236E+004,23.05,44153.301,14.6,20.9,C,6.00,1.00,F
3,C-130,155000.000,32.3,225,23.03,1.94605E+003,6.65508E+002,25.57,108086.658,21.6,20.9,C,6.00,1.00,F
4,Gulfstream-G-V,90900.000,29.4,1315,23.94,6.27009E+003,1.15388E+003,25.23,65483.763,20.1,20.9,C,6.00,1.00,F
5,Diamond DA-20,1764.000,0.8,186837,5.11,3.34349E+005,1.01423E+304,8.40,10923.031,5.3,20.9,C,6.00,1.00,F
6,Skyhawk-172,2558.000,0.8,9479,4.15,1.09184E+004,1.01423E+304,8.25,16411.645,5.3,20.9,C,6.00,1.00,F
```

```
Taxiway A6

Pavement Section T7

Library file name = K:\2019\1019046_PUB_MP_Update\Technical Information\PCN\Aircraft Fleet Mix\PUB 8R-26L Fleet.Ext
Units = English

Evaluation pavement type is flexible and design procedure is CBR.
Alpha Values are those approved by the ICAO in 2007.

                                    CBR = 6.00 (Subgrade Category is C(6))
              Evaluation pavement thickness = 35.60 in
         Pass to Traffic Cycle (PtoTC) Ratio = 7.00 (non-standard)
            Maximum number of wheels per gear = 2
          Maximum number of gears per aircraft = 2

No aircraft have 4 or more wheels per gear.  The FAA recommends a reference section assuming
3 inches of HMA and 6 inches of crushed aggregate for equivalent thickness calculations.

Results Table 1. Input Traffic Data
                        Gross    Percent   Tire    Annual    20-yr      6D
  No.  Aircraft Name    Weight   Gross Wt  Press   Deps     Coverages  Thick
-------------------------------------------------------------------------------
   1  B737-800          174,700  93.56     205.0     200      7,871    31.76
   2  RegionalJet-200    53,000  95.00     177.0   2,209     59,752    21.12
   3  C-130             155,000  95.00     105.0     214     12,956    26.32
   4  Gulfstream-G-V     90,900  95.00     188.0   1,249     41,688    26.74
   5  Diamond DA-20       1,764 100.00      30.0  88,748  1,111,716     5.38
   6  Skyhawk-172         2,558  95.00      50.0   8,531     68,785     4.64

Results Table 2. PCN Values
                         Critical      Thickness      Maximum      ACN Thick at
                       Aircraft Total  for Total     Allowable     Max. Allowable            PCN on
  No. Aircraft Name    Equiv. Covs.   Equiv. Covs.  Gross Weight  Gross Weight    CDF       C(6)
------------------------------------------------------------------------------------------------------
   1  B737-800                7,882       31.76       210,323          36.18     0.1541      63.1
   2  RegionalJet-200     >5,000,000      29.84        74,648          23.10     0.0000      25.7
   3  C-130               >5,000,000      34.16       166,046          26.97     0.0002      35.1
   4  Gulfstream-G-V      >5,000,000      34.89        94,410          25.23     0.0000      30.7
   5  Diamond DA-20       >5,000,000       8.40        31,692          17.81     0.0000      15.3
   6  Skyhawk-172         >5,000,000       8.25        47,617          17.80     0.0000      15.3
                                                                  Total CDF =    0.1543


Results Table 3. Flexible ACN at Indicated Gross Weight and Strength
  No. Aircraft Name        Gross    % GW on     Tire      ACN     ACN on
                           Weight  Main Gear  Pressure   Thick    C(6)
-------------------------------------------------------------------------
   1  B737-800             174,700   93.56      205.0    32.30     50.3
   2  RegionalJet-200       53,000   95.00      177.0    19.24     17.8
   3  C-130                155,000   95.00      105.0    25.91     32.3
   4  Gulfstream-G-V        90,900   95.00      188.0    24.70     29.4
   5  Diamond DA-20          1,764  100.00       30.0     4.20      0.8
   6  Skyhawk-172            2,558   95.00       50.0     4.12      0.8


Results Table 4. Summary Output for Copy and Paste Into the Support Spread Sheet

Num,Plane,GWin,ACNin,ADout,6Dt,COV20yr,COVtoF,CDFt,GWcdf,PCNcdf,EVALt,SUBcode,KorCBR,PtoTC,FlexOrRig
1,B737-800,174700.000,50.3,1400,31.76,7.87080E+003,5.10806E+004,31.76,210323.142,63.1,35.6,C,6.00,7.00,F
2,RegionalJet-200,53000.000,17.8,15463,21.12,5.97518E+004,1.01423E+304,29.84,74648.491,25.7,35.6,C,6.00,7.00,F
3,C-130,155000.000,32.3,1498,26.32,1.29564E+004,5.96609E+007,34.16,166046.365,35.1,35.6,C,6.00,7.00,F
4,Gulfstream-G-V,90900.000,29.4,8743,26.74,4.16877E+004,8.54731E+009,34.89,94410.279,30.7,35.6,C,6.00,7.00,F
5,Diamond DA-20,1764.000,0.8,621236,5.38,1.11172E+006,1.01423E+304,8.40,31691.947,15.3,35.6,C,6.00,7.00,F
6,Skyhawk-172,2558.000,0.8,59717,4.64,6.87851E+004,1.01423E+304,8.25,47616.517,15.3,35.6,C,6.00,7.00,F
```

```
Taxiway A9

Pavement Section T18
Library file name = K:\2019\1019046_PUB_MP_Update\Technical Information\PCN\Aircraft Fleet Mix\PUB 8R-26L Fleet.Ext
Units = English

Evaluation pavement type is flexible and design procedure is CBR.
Alpha Values are those approved by the ICAO in 2007.

                              CBR = 3.00 (Subgrade Category is D(3))
            Evaluation pavement thickness = 22.20 in
         Pass to Traffic Cycle (PtoTC) Ratio = 1.00
            Maximum number of wheels per gear = 2
          Maximum number of gears per aircraft = 2

No aircraft have 4 or more wheels per gear.  The FAA recommends a reference section assuming
3 inches of HMA and 6 inches of crushed aggregate for equivalent thickness calculations.
```

Results Table 1. Input Traffic Data

No.	Aircraft Name	Gross Weight	Percent Gross Wt	Tire Press	Annual Deps	20-yr Coverages	6D Thick
1	B737-800	174,700	93.56	205.0	100	562	38.56
2	RegionalJet-200	53,000	95.00	177.0	2,209	8,536	27.82
3	C-130	155,000	95.00	105.0	214	1,851	35.46
4	Gulfstream-G-V	90,900	95.00	188.0	1,249	5,955	35.29
5	Diamond DA-20	1,764	100.00	30.0	88,748	158,817	8.59
6	Skyhawk-172	2,558	95.00	50.0	8,531	9,826	6.46

Results Table 2. PCN Values

No.	Aircraft Name	Critical Aircraft Total Equiv. Covs.	Thickness for Total Equiv. Covs.	Maximum Allowable Gross Weight	ACN Thick at Max. Allowable Gross Weight	CDF	PCN on D(3)
1	B737-800	3,652	45.71	53,164	23.91	25.1241	13.2
2	RegionalJet-200	79,303	31.13	27,838	19.98	17.5646	9.2
3	C-130	7,724	39.70	56,741	22.56	39.1014	11.7
4	Gulfstream-G-V	11,940	36.83	36,306	21.95	81.3921	11.1
5	Diamond DA-20	>5,000,000	14.64	4,056	11.09	0.0000	2.8
6	Skyhawk-172	>5,000,000	12.95	7,523	11.09	0.0000	2.8
						Total CDF = 163.1822	

Results Table 3. Flexible ACN at Indicated Gross Weight and Strength

No.	Aircraft Name	Gross Weight	% GW on Main Gear	Tire Pressure	ACN Thick	ACN on D(3)
1	B737-800	174,700	93.56	205.0	48.96	55.2
2	RegionalJet-200	53,000	95.00	177.0	28.09	18.2
3	C-130	155,000	95.00	105.0	40.41	37.6
4	Gulfstream-G-V	90,900	95.00	188.0	36.45	30.6
5	Diamond DA-20	1,764	100.00	30.0	7.32	1.2
6	Skyhawk-172	2,558	95.00	50.0	6.47	1.0

```
Results Table 4. Summary Output for Copy and Paste Into the Support Spread Sheet

Num,Plane,GWin,ACNin,ADout,6Dt,COV20yr,COVtoF,CDFt,GWcdf,PCNcdf,EVALt,SUBcode,KorCBR,PtoTC,FlexOrRig
1,B737-800,174700.000,55.2,100,38.56,5.62200E+002,2.23769E+001,45.71,53164.043,13.2,22.2,D,3.00,1.00,F
2,RegionalJet-200,53000.000,18.2,2209,27.82,8.53597E+003,4.85976E+002,31.13,27837.722,9.2,22.2,D,3.00,1.00,F
3,C-130,155000.000,37.6,214,35.46,1.85091E+003,4.73362E+001,39.70,56740.607,11.7,22.2,D,3.00,1.00,F
4,Gulfstream-G-V,90900.000,30.6,1249,35.29,5.95539E+003,7.31692E+001,36.83,36305.908,11.1,22.2,D,3.00,1.00,F
5,Diamond DA-20,1764.000,1.2,88748,8.59,1.58817E+005,1.01423E+304,14.64,4056.013,2.8,22.2,D,3.00,1.00,F
6,Skyhawk-172,2558.000,1.0,8531,6.46,9.82644E+003,1.01423E+304,12.95,7522.803,2.8,22.2,D,3.00,1.00,F
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Taxiway B

Pavement Section T17

Library file name = K:\2019\1019046_PUB_MP_Update\Technical Information\PCN\Aircraft Fleet Mix\PUB 8L-26R Fleet.Ext
Units = English

Evaluation pavement type is flexible and design procedure is CBR.
Alpha Values are those approved by the ICAO in 2007.

                              CBR = 3.00 (Subgrade Category is D(3))
           Evaluation pavement thickness = 25.50 in
      Pass to Traffic Cycle (PtoTC) Ratio = 10.00 (non-standard)
        Maximum number of wheels per gear = 1
      Maximum number of gears per aircraft = 1

No aircraft have 4 or more wheels per gear.  The FAA recommends a reference section assuming
3 inches of HMA and 6 inches of crushed aggregate for equivalent thickness calculations.

Results Table 1. Input Traffic Data
                        Gross   Percent   Tire    Annual    20-yr     6D
 No.  Aircraft Name     Weight  Gross Wt  Press   Deps      Coverages Thick
--------------------------------------------------------------------------------
  1  Diamond DA-20       1,764  100.00     30.0  887,480  15,881,654  10.25
  2  Skyhawk-172         2,558   95.00     50.0    4,740      54,598   7.19

Results Table 2. PCN Values
                        Critical     Thickness    Maximum     ACN Thick at
                      Aircraft Total  for Total    Allowable   Max. Allowable          PCN on
 No. Aircraft Name    Equiv. Covs.   Equiv. Covs. Gross Weight Gross Weight   CDF      D(3)
------------------------------------------------------------------------------------------------
  1  Diamond DA-20     >5,000,000      10.25        10,912        18.20     0.0000     7.6
  2  Skyhawk-172       >5,000,000       9.06        20,248        18.20     0.0000     7.6
                                                              Total CDF =   0.0000

When computing the numbers of coverages to failure, the coverages for none
of the aircraft converged at a pavement thickness greater than 99 percent of
the evaluation thickness. This means that the life of the pavement is unlimited
and the pavement is very strong in relation to the aircraft loading. The
relative aircraft load evaluations are also unreliable. Consider reviewing
the procedures used to determine the evaluation thickness and the strength
of the support. The thicknesses for unlimited operations of each of the
aircraft are as follows.

Results Table 2a. Thicknesses for Unlimited Operations
Diamond DA-20            14.64
Skyhawk-172             12.95

Results Table 3. Flexible ACN at Indicated Gross Weight and Strength
 No. Aircraft Name         Gross    % GW on    Tire     ACN     ACN on
                           Weight  Main Gear  Pressure  Thick    D(3)
------------------------------------------------------------------------
  1 Diamond DA-20          1,764   100.00      30.0     7.32     1.2
  2 Skyhawk-172            2,558    95.00      50.0     6.47     1.0


Results Table 4. Summary Output for Copy and Paste Into the Support Spread Sheet

Num,Plane,GWin,ACNin,ADout,6Dt,COV20yr,COVtoF,CDFt,GWcdf,PCNcdf,EVALt,SUBcode,KorCBR,PtoTC,FlexOrRig
1,Diamond DA-20,1764.000,1.2,8874800,10.25,1.58817E+007,1.01423E+304,10.25,10911.780,7.6,25.5,D,3.00,10.00,F
2,Skyhawk-172,2558.000,1.0,47400,7.19,5.45977E+004,1.01423E+304,9.06,20247.843,7.6,25.5,D,3.00,10.00,F
```

Taxiway B1

Pavement Section T13

Library file name = K:\2019\1019046_PUB_MP_Update\Technical Information\PCN\Aircraft Fleet Mix\PUB 8L-26R Fleet.Ext
Units = English

Evaluation pavement type is flexible and design procedure is CBR.
Alpha Values are those approved by the ICAO in 2007.

```
                                CBR = 5.00 (Subgrade Category is C(6))
           Evaluation pavement thickness = 20.70 in
     Pass to Traffic Cycle (PtoTC) Ratio = 10.00 (non-standard)
        Maximum number of wheels per gear = 1
      Maximum number of gears per aircraft = 1
```

No aircraft have 4 or more wheels per gear. The FAA recommends a reference section assuming
3 inches of HMA and 6 inches of crushed aggregate for equivalent thickness calculations.

Results Table 1. Input Traffic Data

No.	Aircraft Name	Gross Weight	Percent Gross Wt	Tire Press	Annual Deps	20-yr Coverages	6D Thick
1	Diamond DA-20	1,764	100.00	30.0	887,480	15,881,654	6.88
2	Skyhawk-172	2,558	95.00	50.0	4,740	54,598	5.23

Results Table 2. PCN Values

No.	Aircraft Name	Critical Aircraft Total Equiv. Covs.	Thickness for Total Equiv. Covs.	Maximum Allowable Gross Weight	ACN Thick at Max. Allowable Gross Weight	CDF	PCN on C(6)
1	Diamond DA-20	>5,000,000	6.88	15,962	12.64	0.0000	7.7
2	Skyhawk-172	>5,000,000	6.59	25,228	12.95	0.0000	8.1
					Total CDF =	0.0000	

When computing the numbers of coverages to failure, the coverages for none
of the aircraft converged at a pavement thickness greater than 99 percent of
the evaluation thickness. This means that the life of the pavement is unlimited
and the pavement is very strong in relation to the aircraft loading. The
relative aircraft load evaluations are also unreliable. Consider reviewing
the procedures used to determine the evaluation thickness and the strength
of the support. The thicknesses for unlimited operations of each of the
aircraft are as follows.

Results Table 2a. Thicknesses for Unlimited Operations
Diamond DA-20   9.82
Skyhawk-172   9.41

Results Table 3. Flexible ACN at Indicated Gross Weight and Strength

No.	Aircraft Name	Gross Weight	% GW on Main Gear	Tire Pressure	ACN Thick	ACN on C(6)
1	Diamond DA-20	1,764	100.00	30.0	4.20	0.8
2	Skyhawk-172	2,558	95.00	50.0	4.12	0.8

Results Table 4. Summary Output for Copy and Paste Into the Support Spread Sheet

```
Num,Plane,GWin,ACNin,ADout,6Dt,COV20yr,COVtoF,CDFt,GWcdf,PCNcdf,EVALt,SUBcode,KorCBR,PtoTC,FlexOrRig
1,Diamond DA-20,1764.000,0.8,8874800,6.88,1.58817E+007,1.01423E+304,6.88,15961.750,7.7,20.7,C,5.00,10.00,F
2,Skyhawk-172,2558.000,0.8,47400,5.23,5.45977E+004,1.01423E+304,6.59,25227.589,8.1,20.7,C,5.00,10.00,F
```

```
Taxiway B1

Pavement Section T13A

Library file name = K:\2019\1019046_PUB_MP_Update\Technical Information\PCN\Aircraft Fleet Mix\PUB 8L-26R Fleet.Ext
Units = English

Evaluation pavement type is flexible and design procedure is CBR.
Alpha Values are those approved by the ICAO in 2007.

                                CBR = 3.00 (Subgrade Category is D(3))
            Evaluation pavement thickness = 25.50 in
      Pass to Traffic Cycle (PtoTC) Ratio = 10.00 (non-standard)
         Maximum number of wheels per gear = 1
       Maximum number of gears per aircraft = 1

No aircraft have 4 or more wheels per gear.  The FAA recommends a reference section assuming
3 inches of HMA and 6 inches of crushed aggregate for equivalent thickness calculations.

Results Table 1. Input Traffic Data
                         Gross    Percent    Tire    Annual      20-yr     6D
 No.  Aircraft Name      Weight  Gross Wt   Press    Deps      Coverages  Thick
---------------------------------------------------------------------------
  1  Diamond DA-20        1,764  100.00     30.0   887,480  15,881,654   10.25
  2  Skyhawk-172          2,558   95.00     50.0     4,740      54,598    7.19

Results Table 2. PCN Values
                         Critical      Thickness     Maximum     ACN Thick at
                       Aircraft Total  for Total    Allowable    Max. Allowable          PCN on
 No. Aircraft Name     Equiv. Covs.   Equiv. Covs. Gross Weight  Gross Weight   CDF     D(3)
-----------------------------------------------------------------------------------------------
  1  Diamond DA-20      >5,000,000      10.25        10,912         18.20      0.0000    7.6
  2  Skyhawk-172        >5,000,000       9.06        20,248         18.20      0.0000    7.6
                                                                   Total CDF =  0.0000

When computing the numbers of coverages to failure, the coverages for none
of the aircraft converged at a pavement thickness greater than 99 percent of
the evaluation thickness. This means that the life of the pavement is unlimited
and the pavement is very strong in relation to the aircraft loading. The
relative aircraft load evaluations are also unreliable. Consider reviewing
the procedures used to determine the evaluation thickness and the strength
of the support. The thicknesses for unlimited operations of each of the
aircraft are as follows.

Results Table 2a. Thicknesses for Unlimited Operations
Diamond DA-20            14.64
Skyhawk-172             12.95

Results Table 3. Flexible ACN at Indicated Gross Weight and Strength
 No. Aircraft Name         Gross    % GW on    Tire     ACN     ACN on
                          Weight  Main Gear  Pressure   Thick    D(3)
-------------------------------------------------------------------------
  1 Diamond DA-20          1,764    100.00     30.0     7.32     1.2
  2 Skyhawk-172            2,558     95.00     50.0     6.47     1.0


Results Table 4. Summary Output for Copy and Paste Into the Support Spread Sheet

Num,Plane,GWin,ACNin,ADout,6Dt,COV20yr,COVtoF,CDFt,GWcdf,PCNcdf,EVALt,SUBcode,KorCBR,PtoTC,FlexOrRig
1,Diamond DA-20,1764.000,1.2,8874800,10.25,1.58817E+007,1.01423E+304,10.25,10911.780,7.6,25.5,D,3.00,10.00,F
2,Skyhawk-172,2558.000,1.0,47400,7.19,5.45977E+004,1.01423E+304,9.06,20247.843,7.6,25.5,D,3.00,10.00,F
```

Taxiway B3

Pavement Section T14A

ibrary file name = K:\2019\1019046_PUB_MP_Update\Technical Information\PCN\Aircraft Fleet Mix\PUB 8L-26R Fleet.Ext
Units = English

Evaluation pavement type is flexible and design procedure is CBR.
Alpha Values are those approved by the ICAO in 2007.

                                  CBR = 3.00 (Subgrade Category is D(3))
              Evaluation pavement thickness = 25.50 in
        Pass to Traffic Cycle (PtoTC) Ratio = 10.00 (non-standard)
            Maximum number of wheels per gear = 1
        Maximum number of gears per aircraft = 1

No aircraft have 4 or more wheels per gear. The FAA recommends a reference section assuming
3 inches of HMA and 6 inches of crushed aggregate for equivalent thickness calculations.

Results Table 1. Input Traffic Data

No.	Aircraft Name	Gross Weight	Percent Gross Wt	Tire Press	Annual Deps	20-yr Coverages	6D Thick
1	Diamond DA-20	1,764	100.00	30.0	887,480	15,881,654	10.25
2	Skyhawk-172	2,558	95.00	50.0	4,740	54,598	7.19

Results Table 2. PCN Values

No.	Aircraft Name	Critical Aircraft Total Equiv. Covs.	Thickness for Total Equiv. Covs.	Maximum Allowable Gross Weight	ACN Thick at Max. Allowable Gross Weight	CDF	PCN on D(3)
1	Diamond DA-20	>5,000,000	10.25	10,912	18.20	0.0000	7.6
2	Skyhawk-172	>5,000,000	9.06	20,248	18.20	0.0000	7.6
					Total CDF =	0.0000	

When computing the numbers of coverages to failure, the coverages for none
of the aircraft converged at a pavement thickness greater than 99 percent of
the evaluation thickness. This means that the life of the pavement is unlimited
and the pavement is very strong in relation to the aircraft loading. The
relative aircraft load evaluations are also unreliable. Consider reviewing
the procedures used to determine the evaluation thickness and the strength
of the support. The thicknesses for unlimited operations of each of the
aircraft are as follows.

Results Table 2a. Thicknesses for Unlimited Operations
Diamond DA-20   14.64
Skyhawk-172   12.95

Results Table 3. Flexible ACN at Indicated Gross Weight and Strength

No.	Aircraft Name	Gross Weight	% GW on Main Gear	Tire Pressure	ACN Thick	ACN on D(3)
1	Diamond DA-20	1,764	100.00	30.0	7.32	1.2
2	Skyhawk-172	2,558	95.00	50.0	6.47	1.0

Results Table 4. Summary Output for Copy and Paste Into the Support Spread Sheet

Num,Plane,GWin,ACNin,ADout,6Dt,COV20yr,COVtoF,CDFt,GWcdf,PCNcdf,EVALt,SUBcode,KorCBR,PtoTC,FlexOrRig
1,Diamond DA-20,1764.000,1.2,8874800,10.25,1.58817E+007,1.01423E+304,10.25,10911.780,7.6,25.5,D,3.00,10.00,F
2,Skyhawk-172,2558.000,1.0,47400,7.19,5.45977E+004,1.01423E+304,9.06,20247.843,7.6,25.5,D,3.00,10.00,F

Taxiway B4

Pavement Section T15

Evaluation pavement type is flexible and design procedure is CBR.
Alpha Values are those approved by the ICAO in 2007.

```
                                 CBR = 3.00 (Subgrade Category is D(3))
              Evaluation pavement thickness = 25.50 in
        Pass to Traffic Cycle (PtoTC) Ratio = 10.00 (non-standard)
           Maximum number of wheels per gear = 1
        Maximum number of gears per aircraft = 1
```

No aircraft have 4 or more wheels per gear. The FAA recommends a reference section assuming
3 inches of HMA and 6 inches of crushed aggregate for equivalent thickness calculations.

Results Table 1. Input Traffic Data

No.	Aircraft Name	Gross Weight	Percent Gross Wt	Tire Press	Annual Deps	20-yr Coverages	6D Thick
1	Diamond DA-20	1,764	100.00	30.0	887,480	15,881,654	10.25
2	Skyhawk-172	2,558	95.00	50.0	4,740	54,598	7.19

Results Table 2. PCN Values

No.	Aircraft Name	Critical Aircraft Total Equiv. Covs.	Thickness for Total Equiv. Covs.	Maximum Allowable Gross Weight	ACN Thick at Max. Allowable Gross Weight	CDF	PCN on D(3)
1	Diamond DA-20	>5,000,000	10.25	10,912	18.20	0.0000	7.6
2	Skyhawk-172	>5,000,000	9.06	20,248	18.20	0.0000	7.6
					Total CDF =	0.0000	

When computing the numbers of coverages to failure, the coverages for none
of the aircraft converged at a pavement thickness greater than 99 percent of
the evaluation thickness. This means that the life of the pavement is unlimited
and the pavement is very strong in relation to the aircraft loading. The
relative aircraft load evaluations are also unreliable. Consider reviewing
the procedures used to determine the evaluation thickness and the strength
of the support. The thicknesses for unlimited operations of each of the
aircraft are as follows.

Results Table 2a. Thicknesses for Unlimited Operations

Diamond DA-20	14.64
Skyhawk-172	12.95

Results Table 3. Flexible ACN at Indicated Gross Weight and Strength

No.	Aircraft Name	Gross Weight	% GW on Main Gear	Tire Pressure	ACN Thick	ACN on D(3)
1	Diamond DA-20	1,764	100.00	30.0	7.32	1.2
2	Skyhawk-172	2,558	95.00	50.0	6.47	1.0

Results Table 4. Summary Output for Copy and Paste Into the Support Spread Sheet

Num,Plane,GWin,ACNin,ADout,6Dt,COV20yr,COVtoF,CDFt,GWcdf,PCNcdf,EVALt,SUBcode,KorCBR,PtoTC,FlexOrRig
1,Diamond DA-20,1764.000,1.2,8874800,10.25,1.58817E+007,1.01423E+304,10.25,10911.780,7.6,25.5,D,3.00,10.00,F
2,Skyhawk-172,2558.000,1.0,47400,7.19,5.45977E+004,1.01423E+304,9.06,20247.843,7.6,25.5,D,3.00,10.00,F

```
Taxiway B7

Pavement Section T16

Library file name = K:\2019\1019046_PUB_MP_Update\Technical Information\PCN\Aircraft Fleet Mix\PUB 8L-26R Fleet.Ext
Units = English

Evaluation pavement type is flexible and design procedure is CBR.
Alpha Values are those approved by the ICAO in 2007.

                              CBR = 5.00 (Subgrade Category is C(6))
           Evaluation pavement thickness = 20.70 in
     Pass to Traffic Cycle (PtoTC) Ratio = 10.00 (non-standard)
        Maximum number of wheels per gear = 1
      Maximum number of gears per aircraft = 1

No aircraft have 4 or more wheels per gear.  The FAA recommends a reference section assuming
3 inches of HMA and 6 inches of crushed aggregate for equivalent thickness calculations.

Results Table 1. Input Traffic Data
                         Gross   Percent   Tire    Annual    20-yr     6D
  No.  Aircraft Name     Weight  Gross Wt  Press   Deps      Coverages Thick
--------------------------------------------------------------------------------
   1   Diamond DA-20      1,764  100.00     30.0  887,480  15,881,654   6.88
   2   Skyhawk-172        2,558   95.00     50.0    4,740      54,598   5.23

Results Table 2. PCN Values
                        Critical      Thickness    Maximum     ACN Thick at
                        Aircraft Total for Total   Allowable   Max. Allowable           PCN on
  No. Aircraft Name     Equiv. Covs.  Equiv. Covs. Gross Weight Gross Weight    CDF      C(6)
------------------------------------------------------------------------------------------------
   1  Diamond DA-20      >5,000,000        6.88       15,962        12.64     0.0000      7.7
   2  Skyhawk-172        >5,000,000        6.59       25,228        12.95     0.0000      8.1
                                                               Total CDF =   0.0000

When computing the numbers of coverages to failure, the coverages for none
of the aircraft converged at a pavement thickness greater than 99 percent of
the evaluation thickness. This means that the life of the pavement is unlimited
and the pavement is very strong in relation to the aircraft loading. The
relative aircraft load evaluations are also unreliable. Consider reviewing
the procedures used to determine the evaluation thickness and the strength
of the support. The thicknesses for unlimited operations of each of the
aircraft are as follows.

Results Table 2a. Thicknesses for Unlimited Operations
Diamond DA-20            9.82
Skyhawk-172             9.41

Results Table 3. Flexible ACN at Indicated Gross Weight and Strength
  No. Aircraft Name        Gross    % GW on    Tire      ACN     ACN on
                           Weight  Main Gear  Pressure   Thick    C(6)
-----------------------------------------------------------------------
   1 Diamond DA-20          1,764   100.00      30.0     4.20      0.8
   2 Skyhawk-172            2,558    95.00      50.0     4.12      0.8


Results Table 4. Summary Output for Copy and Paste Into the Support Spread Sheet

Num,Plane,GWin,ACNin,ADout,6Dt,COV20yr,COVtoF,CDFt,GWcdf,PCNcdf,EVALt,SUBcode,KorCBR,PtoTC,FlexOrRig
1,Diamond DA-20,1764.000,0.8,8874800,6.88,1.58817E+007,1.01423E+304,6.88,15961.750,7.7,20.7,C,5.00,10.00,F
2,Skyhawk-172,2558.000,0.8,47400,5.23,5.45977E+004,1.01423E+304,6.59,25227.589,8.1,20.7,C,5.00,10.00,F
```

Taxiway C

Pavement Section T13

his file name = PCN Results Flexible 6-23-2020 17;57;13.txt
Library file name = K:\2019\1019046_PUB_MP_Update\Technical Information\PCN\Aircraft Fleet Mix\PUB 8L-26R Fleet.Ext
Units = English

Evaluation pavement type is flexible and design procedure is CBR.
Alpha Values are those approved by the ICAO in 2007.

```
                              CBR = 5.00 (Subgrade Category is C(6))
          Evaluation pavement thickness = 20.70 in
     Pass to Traffic Cycle (PtoTC) Ratio = 10.00 (non-standard)
        Maximum number of wheels per gear = 1
      Maximum number of gears per aircraft = 1
```

No aircraft have 4 or more wheels per gear. The FAA recommends a reference section assuming
3 inches of HMA and 6 inches of crushed aggregate for equivalent thickness calculations.

Results Table 1. Input Traffic Data

No.	Aircraft Name	Gross Weight	Percent Gross Wt	Tire Press	Annual Deps	20-yr Coverages	6D Thick
1	Diamond DA-20	1,764	100.00	30.0	887,480	15,881,654	6.88
2	Skyhawk-172	2,558	95.00	50.0	4,740	54,598	5.23

Results Table 2. PCN Values

No.	Aircraft Name	Critical Aircraft Total Equiv. Covs.	Thickness for Total Equiv. Covs.	Maximum Allowable Gross Weight	ACN Thick at Max. Allowable Gross Weight	CDF	PCN on C(6)
1	Diamond DA-20	>5,000,000	6.88	15,962	12.64	0.0000	7.7
2	Skyhawk-172	>5,000,000	6.59	25,228	12.95	0.0000	8.1
					Total CDF =	0.0000	

When computing the numbers of coverages to failure, the coverages for none
of the aircraft converged at a pavement thickness greater than 99 percent of
the evaluation thickness. This means that the life of the pavement is unlimited
and the pavement is very strong in relation to the aircraft loading. The
relative aircraft load evaluations are also unreliable. Consider reviewing
the procedures used to determine the evaluation thickness and the strength
of the support. The thicknesses for unlimited operations of each of the
aircraft are as follows.

Results Table 2a. Thicknesses for Unlimited Operations
Diamond DA-20   9.82
Skyhawk-172   9.41

Results Table 3. Flexible ACN at Indicated Gross Weight and Strength

No.	Aircraft Name	Gross Weight	% GW on Main Gear	Tire Pressure	ACN Thick	ACN on C(6)
1	Diamond DA-20	1,764	100.00	30.0	4.20	0.8
2	Skyhawk-172	2,558	95.00	50.0	4.12	0.8

Results Table 4. Summary Output for Copy and Paste Into the Support Spread Sheet

Num,Plane,GWin,ACNin,ADout,6Dt,COV20yr,COVtoF,CDFt,GWcdf,PCNcdf,EVALt,SUBcode,KorCBR,PtoTC,FlexOrRig
1,Diamond DA-20,1764.000,0.8,8874800,6.88,1.58817E+007,1.01423E+304,6.88,15961.750,7.7,20.7,C,5.00,10.00,F
2,Skyhawk-172,2558.000,0.8,47400,5.23,5.45977E+004,1.01423E+304,6.59,25227.589,8.1,20.7,C,5.00,10.00,F

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Taxiway D

Pavement Section T1


Library file name = K:\2019\1019046_PUB_MP_Update\Technical Information\PCN\Aircraft Fleet Mix\PUB 17-35 Fleet.Ext
Units = English

Evaluation pavement type is flexible and design procedure is CBR.
Alpha Values are those approved by the ICAO in 2007.

                                  CBR = 9.00 (Subgrade Category is B(10))
              Evaluation pavement thickness = 22.00 in
        Pass to Traffic Cycle (PtoTC) Ratio = 10.00 (non-standard)
           Maximum number of wheels per gear = 2
        Maximum number of gears per aircraft = 2

No aircraft have 4 or more wheels per gear.  The FAA recommends a reference section assuming
3 inches of HMA and 6 inches of crushed aggregate for equivalent thickness calculations.

Results Table 1. Input Traffic Data
                          Gross    Percent   Tire    Annual    20-yr      6D
   No.  Aircraft Name     Weight  Gross Wt  Press     Deps    Coverages  Thick
-----------------------------------------------------------------------------
    1  B737-800           174,700  93.56    205.0       5        281    17.69
    2  RegionalJet-200     53,000  95.00    177.0     116      4,482    14.41
    3  C-130              155,000  95.00    105.0      11        951    16.96
    4  Gulfstream-G-V      90,900  95.00    188.0      66      3,147    17.74
    5  Diamond DA-20        1,764 100.00     30.0   9,342    167,177     3.33
    6  Skyhawk-172          2,558  95.00     50.0     474      5,460     2.82

Results Table 2. PCN Values
                          Critical      Thickness     Maximum      ACN Thick at
                       Aircraft Total   for Total    Allowable     Max. Allowable           PCN on
   No. Aircraft Name    Equiv. Covs.  Equiv. Covs. Gross Weight   Gross Weight    CDF       B(10)
-------------------------------------------------------------------------------------------------
    1  B737-800                 387       18.39       234,538         27.74      0.1245      65.9
    2  RegionalJet-200    >5,000,000      21.61        54,798         14.52      0.0000      18.1
    3  C-130                   8,717      19.98       184,024         20.64      0.0187      36.5
    4  Gulfstream-G-V         19,147      20.10       105,947         19.80      0.0282      33.6
    5  Diamond DA-20      >5,000,000       5.65        26,735          9.72      0.0000       8.1
    6  Skyhawk-172        >5,000,000       5.91        35,436         10.05      0.0000       8.6
                                                                   Total CDF =  0.1714


Results Table 3. Flexible ACN at Indicated Gross Weight and Strength
   No. Aircraft Name         Gross     % GW on     Tire       ACN     ACN on
                             Weight   Main Gear  Pressure    Thick    B(10)
-----------------------------------------------------------------------------
    1 B737-800               174,700    93.56     205.0      22.99     45.3
    2 RegionalJet-200         53,000    95.00     177.0      14.26     17.4
    3 C-130                  155,000    95.00     105.0      18.78     30.2
    4 Gulfstream-G-V          90,900    95.00     188.0      18.03     27.9
    5 Diamond DA-20            1,764   100.00      30.0       2.50      0.5
    6 Skyhawk-172              2,558    95.00      50.0       2.70      0.6


Results Table 4. Summary Output for Copy and Paste Into the Support Spread Sheet

Num,Plane,GWin,ACNin,ADout,6Dt,COV20yr,COVtoF,CDFt,GWcdf,PCNcdf,EVALt,SUBcode,KorCBR,PtoTC,FlexOrRig
1,B737-800,174700.000,45.3,50,17.69,2.81100E+002,2.25716E+003,18.39,234538.398,65.9,22.0,B,9.00,10.00,F
2,RegionalJet-200,53000.000,17.4,1160,14.41,4.48245E+003,1.41588E+010,21.61,54798.036,18.1,22.0,B,9.00,10.00,F
3,C-130,155000.000,30.2,110,16.96,9.51403E+002,5.08491E+004,19.98,184023.519,36.5,22.0,B,9.00,10.00,F
4,Gulfstream-G-V,90900.000,27.9,660,17.74,3.14696E+003,1.11692E+005,20.10,105947.117,33.6,22.0,B,9.00,10.00,F
5,Diamond DA-20,1764.000,0.5,93420,3.33,1.67177E+005,1.01423E+304,5.65,26734.880,8.1,22.0,B,9.00,10.00,F
6,Skyhawk-172,2558.000,0.6,4740,2.82,5.45977E+003,1.01423E+304,5.91,35435.919,8.6,22.0,B,9.00,10.00,F
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Taxiway E

Pavement Section T8

Library file name = K:\2019\1019046_PUB_MP_Update\Technical Information\PCN\Aircraft Fleet Mix\PUB 8R-26L Fleet.Ext
Units = English

Evaluation pavement type is rigid
Equivalent coverages computed with the AC 150/5320-6C/D edge stress design method.
Maximum gross weight computed with the AC 150/5320-6C/D edge stress design method.

                                 k Value = 200.0 lbs/in^3 (Subgrade Category is C(147))
                        flexural strength = 650.0 psi
               Evaluation pavement thickness = 14.00 in
          Pass to Traffic Cycle (PtoTC) Ratio = 1.00

             Maximum number of wheels per gear = 2
          Maximum number of gears per aircraft = 2

Results Table 1. Input Traffic Data
                         Gross    Percent   Tire    Annual     20-yr     6D
 No. Aircraft Name       Weight   Gross Wt  Press   Deps     Coverages  Thick
-------------------------------------------------------------------------------
  1  B737-800           174,700   93.56     205.0     100        562    13.26
  2  RegionalJet-200     53,000   95.00     177.0   2,209      8,536     9.12
  3  C-130              155,000   95.00     105.0     214        925     9.65
  4  Gulfstream-G-V      90,900   95.00     188.0   1,249      5,955    11.09
  5  Diamond DA-20        1,764  100.00      30.0  88,748    158,817     2.42
  6  Skyhawk-172          2,558   95.00      50.0   8,531      9,826     1.97

Results Table 2. PCN Values
                         Critical      Thickness    Maximum      ACN Thick at
                       Aircraft Total  for Total   Allowable    Max. Allowable              PCN on
 No. Aircraft Name      Equiv. Covs.  Equiv. Covs. Gross Weight  Gross Weight    CDF       C(147)
------------------------------------------------------------------------------------------------------
  1  B737-800                   627      13.30       192,626         14.30      0.1814       60.6
  2  RegionalJet-200     >5,000,000      13.05        60,726          9.15      0.0003       23.3
  3  C-130                  257,900      12.90       182,963         12.09      0.0007       42.3
  4  Gulfstream-G-V          60,408      12.81       107,462         11.60      0.0199       38.7
  5  Diamond DA-20       >5,000,000      13.79         1,830          2.05      0.0000        1.0
  6  Skyhawk-172         >5,000,000      13.80         2,644          1.88      0.0000        0.8
                                                                  Total CDF =   0.2024


Results Table 3. Rigid ACN at Indicated Gross Weight and Strength
 No. Aircraft Name        Gross     % GW on     Tire      ACN     ACN on
                          Weight   Main Gear   Pressure  Thick    C(147)
-------------------------------------------------------------------------
  1 B737-800              174,700    93.56      205.0     13.56     54.1
  2 RegionalJet-200        53,000    95.00      177.0      8.50     19.9
  3 C-130                 155,000    95.00      105.0     11.05     34.9
  4 Gulfstream-G-V         90,900    95.00      188.0     10.59     31.9
  5 Diamond DA-20           1,764   100.00       30.0      2.02      0.9
  6 Skyhawk-172             2,558    95.00       50.0      1.85      0.8


Results Table 4. Summary Output for Copy and Paste Into the Support Spread Sheet

Num,Plane,GWin,ACNin,ADout,6Dt,COV20yr,COVtoF,CDFt,GWcdf,PCNcdf,EVALt,SUBcode,KorCBR,PtoTC,FlexOrRig
1,B737-800,174700.000,54.1,100,13.26,5.62200E+002,3.09916E+003,13.30,192625.549,60.6,14.0,C,200.00,1.00,R
2,RegionalJet-200,53000.000,19.9,2209,9.12,8.53597E+003,3.09325E+007,13.05,60725.661,23.3,14.0,C,200.00,1.00,R
3,C-130,155000.000,34.9,214,9.65,9.25456E+002,1.27449E+006,12.90,182963.313,42.3,14.0,C,200.00,1.00,R
4,Gulfstream-G-V,90900.000,31.9,1249,11.09,5.95539E+003,2.98521E+005,12.81,107462.148,38.7,14.0,C,200.00,1.00,R
5,Diamond DA-20,1764.000,0.9,88748,2.42,1.58817E+005,1.20306E+043,13.79,1829.655,1.0,14.0,C,200.00,1.00,R
6,Skyhawk-172,2558.000,0.8,8531,1.97,9.82644E+003,7.77395E+044,13.80,2643.624,0.8,14.0,C,200.00,1.00,R
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Taxiway E7

Pavement Section T20

Library file name = K:\2019\1019046_PUB_MP_Update\Technical Information\PCN\Aircraft Fleet Mix\PUB 8R-26L Fleet.Ext
Units = English

Evaluation pavement type is rigid
Equivalent coverages computed with the AC 150/5320-6C/D edge stress design method.
Maximum gross weight computed with the AC 150/5320-6C/D edge stress design method.

                                k Value = 85.0 lbs/in^3 (Subgrade Category is D(74))
                      flexural strength = 650.0 psi
            Evaluation pavement thickness = 11.60 in
       Pass to Traffic Cycle (PtoTC) Ratio = 1.00

           Maximum number of wheels per gear = 2
         Maximum number of gears per aircraft = 2

Results Table 1. Input Traffic Data
                        Gross    Percent  Tire    Annual    20-yr     6D
 No. Aircraft Name      Weight   Gross Wt Press   Deps      Coverages Thick
--------------------------------------------------------------------------------
  1  B737-800           174,700  93.56    205.0      100       562    14.35
  2  RegionalJet-200     53,000  95.00    177.0    2,209     8,536     9.76
  3  C-130              155,000  95.00    105.0      214       925    10.93
  4  Gulfstream-G-V      90,900  95.00    188.0    1,249     5,955    12.01
  5  Diamond DA-20        1,764 100.00     30.0   88,748   158,817     2.70
  6  Skyhawk-172          2,558  95.00     50.0    8,531     9,826     2.14

Results Table 2. PCN Values
                        Critical      Thickness    Maximum      ACN Thick at
                        Aircraft Total for Total    Allowable    Max. Allowable          PCN on
 No. Aircraft Name      Equiv. Covs.  Equiv. Covs. Gross Weight Gross Weight  CDF       D(74)
--------------------------------------------------------------------------------------------------
  1  B737-800                    567  14.35        114,943          11.49  341.9248      34.6
  2  RegionalJet-200      >5,000,000  15.33         30,854           6.64    0.0563      10.9
  3  C-130                 1,886,032  16.16         80,616           8.39    0.1691      17.8
  4  Gulfstream-G-V          816,702  15.97         49,473           8.03    2.5133      16.2
  5  Diamond DA-20        >5,000,000  12.47          1,501           1.76    0.0000       0.7
  6  Skyhawk-172          >5,000,000  12.41          2,207           1.51    0.0000       0.5
                                                                     Total CDF = 344.6636

Results Table 3. Rigid ACN at Indicated Gross Weight and Strength
 No. Aircraft Name       Gross    % GW on    Tire      ACN     ACN on
                         Weight   Main Gear  Pressure  Thick   D(74)
---------------------------------------------------------------------
  1 B737-800             174,700   93.56     205.0     14.40    56.1
  2 RegionalJet-200       53,000   95.00     177.0      8.91    20.2
  3 C-130                155,000   95.00     105.0     11.92    37.5
  4 Gulfstream-G-V        90,900   95.00     188.0     11.16    32.6
  5 Diamond DA-20          1,764  100.00      30.0      1.93     0.8
  6 Skyhawk-172            2,558   95.00      50.0      1.66     0.6


Results Table 4. Summary Output for Copy and Paste Into the Support Spread Sheet

Num,Plane,GWin,ACNin,ADout,6Dt,COV20yr,COVtoF,CDFt,GWcdf,PCNcdf,EVALt,SUBcode,KorCBR,PtoTC,FlexOrRig
1,B737-800,174700.000,56.1,100,14.35,5.62200E+002,1.64422E+000,14.35,114943.417,34.6,11.6,D,85.00,1.00,R
2,RegionalJet-200,53000.000,20.2,2209,9.76,8.53597E+003,1.51482E+005,15.33,30854.009,10.9,11.6,D,85.00,1.00,R
3,C-130,155000.000,37.5,214,10.93,9.25456E+002,5.47210E+003,16.16,80615.517,17.8,11.6,D,85.00,1.00,R
4,Gulfstream-G-V,90900.000,32.6,1249,12.01,5.95539E+003,2.36956E+003,15.97,49472.698,16.2,11.6,D,85.00,1.00,R
5,Diamond DA-20,1764.000,0.8,88748,2.70,1.58817E+005,2.05863E+031,12.47,1501.308,0.7,11.6,D,85.00,1.00,R
6,Skyhawk-172,2558.000,0.6,8531,2.14,9.82644E+003,5.08183E+033,12.41,2206.657,0.5,11.6,D,85.00,1.00,R
```