

	Rehabilitación Integral Pista 02-20 AIR Proyecto Ejecutivo ANEXO I – DISEÑO ESTRUCTURAL		 AEROPUERTO INTERNACIONAL ROSARIO ISLAS MALVINAS
	REV. 00 AIR-RWY-MI-01-AI-00	Fecha Rev. 22/7/2021	



AEROPUERTO
INTERNACIONAL
ROSARIO
ISLAS MALVINAS



AEROPUERTO INTERNACIONAL ROSARIO "ISLAS MALVINAS"

PROYECTO:

Rehabilitación Integral Pista 02-20 AIR

Proyecto Ejecutivo

ANEXO I - DISEÑO ESTRUCTURAL

Julio de 2021

	Rehabilitación Integral Pista 02-20 AIR Proyecto Ejecutivo ANEXO I – DISEÑO ESTRUCTURAL		
	REV. 00 AIR-RWY-MI-01-AI-00	Fecha Rev. 22/7/2021	

AEROPUERTO INTERNACIONAL ROSARIO "ISLAS MALVINAS"

REHABILITACIÓN INTEGRAL PISTA 02-20 AIR

PROYECTO EJECUTIVO

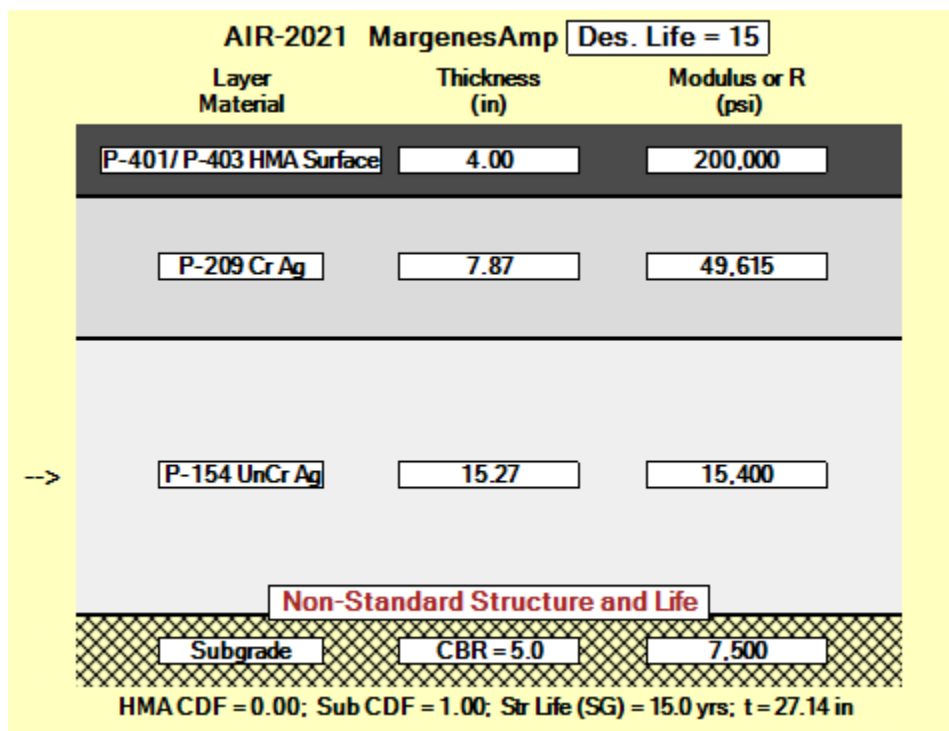
ANEXO I - DISEÑO ESTRUCTURAL

	Rehabilitación Integral Pista 02-20 AIR Proyecto Ejecutivo ANEXO I – DISEÑO ESTRUCTURAL		 AEROPUESTO INTERNACIONAL ROSARIO CELIAE MARINAT
	REV. 00 AIR-RWY-MI-01-AI-00	Fecha Rev. 22/7/2021	

ANEXO I	DISEÑO ESTRUCTURAL	4
I.1	Márgenes nuevos	4
I.2	Refuerzo de márgenes.....	6
I.3	Refuerzo asfáltico en Zona Crítica 01	8
I.4	Refuerzo asfáltico en Zona Crítica 02	10
I.5	Refuerzo asfáltico en Zona Crítica 03	12
I.6	Refuerzo asfáltico en Zona Crítica 04	14
I.7	Refuerzo asfáltico en Zona No Crítica 01 y 02.....	16
I.8	Refuerzo asfáltico en Zona No Crítica 03 y 04.....	18
I.9	Reconstrucción de Cabecera 02	20
I.10	Ampliación de plataforma de viraje 02	22
I.11	Reconstrucción de Cabecera 20	24
I.12	Ampliación de Plataforma de viraje 20	26
I.13	Rodaje Bravo	28

Anexo I DISEÑO ESTRUCTURAL

I.1 Márgenes nuevos



FAARFIELD v 1.42 - Airport Pavement Design

Section MargenesAmp in Job AIR-2021.

The section does not have a design life of 20 years. This constitutes a deviation from standards and requires FAA approval.

The structure is New Flexible.

Design Life = 15 years.

A design has not been completed for this section.

Pavement Structure Information by Layer, Top First

No.	Type	Thickness in	Modulus psi	Poisson's Ratio	Strength R,psi
1	P-401/ P-403 HMA Surface	4.00	200,000	0.35	0
2	P-209 Cr Ag	7.87	49,615	0.35	0
3	P-154 UnCr Ag	15.27	15,400	0.35	0
4	Subgrade	0.00	7,500	0.35	0

Total thickness to the top of the subgrade = 27.14 in

Airplane Information

No.	Name	Gross Wt. lbs	Annual Departures	% Annual Growth
1	A319-100 opt	150,796	0	0.00
2	A320-200 Twin opt	172,842	0	0.00
3	A321-200 opt	207,014	0	0.00
4	A330-200 std	509,047	0	0.00
5	B737-700	155,000	0	0.00
6	B737-800	174,700	0	0.00
7	B747-400ER	913,000	0	0.00
8	B747-400ER Belly	913,000	0	0.00
9	B777-300 ER	777,000	1	0.00
10	B787-8	503,500	0	0.00
11	EMB-190 STD	105,712	0	0.00
12	EMB-195 STD	107,916	0	0.00

Additional Airplane Information

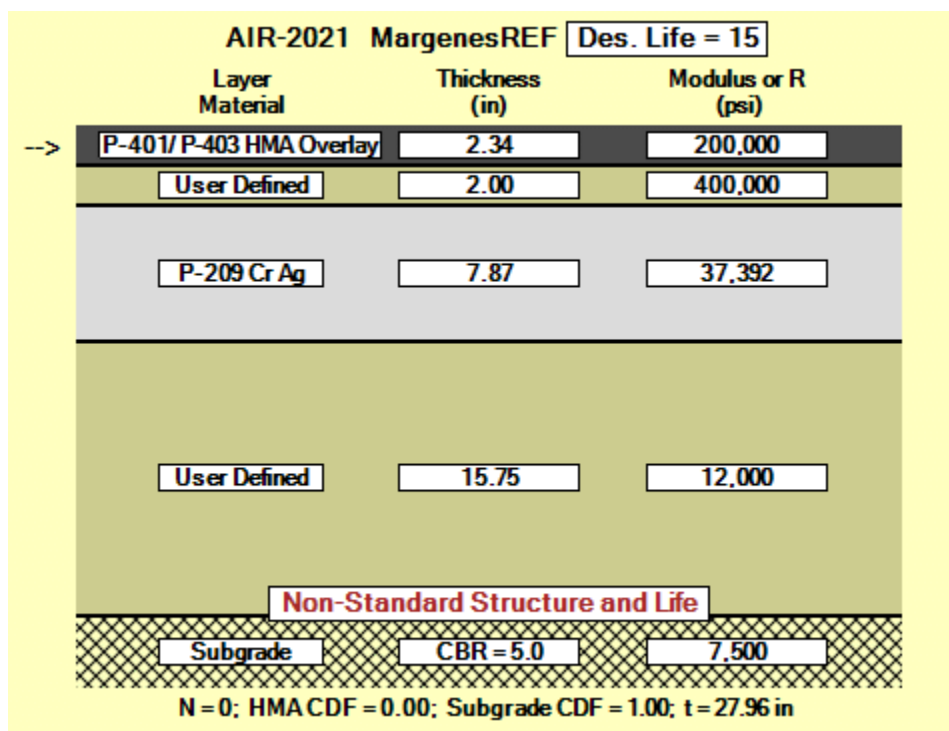
Subgrade CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	A319-100 opt	0.00	0.00	1.27
2	A320-200 Twin opt	0.00	0.00	1.27
3	A321-200 opt	0.00	0.00	1.26
4	A330-200 std	0.00	0.00	1.38
5	B737-700	0.00	0.00	1.30
6	B737-800	0.00	0.00	1.29
7	B747-400ER	0.00	0.00	1.26
8	B747-400ER Belly	0.00	0.00	1.27
9	B777-300 ER	1.00	1.00	1.39
10	B787-8	0.00	0.00	1.34
11	EMB-190 STD	0.00	0.00	1.31
12	EMB-195 STD	0.00	0.00	1.31

HMA CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	A319-100 opt	0.00	0.00	2.89
2	A320-200 Twin opt	0.00	0.00	2.79
3	A321-200 opt	0.00	0.00	2.65
4	A330-200 std	0.00	0.00	1.49
5	B737-700	0.00	0.00	2.78
6	B737-800	0.00	0.00	2.69
7	B747-400ER	0.00	0.00	1.41
8	B747-400ER Belly	0.00	0.00	1.42
9	B777-300 ER	0.00	0.00	1.02
10	B787-8	0.00	0.00	1.48
11	EMB-190 STD	0.00	0.00	2.88
12	EMB-195 STD	0.00	0.00	2.91

I.2 Refuerzo de márgenes



FAARFIELD v 1.42 - Airport Pavement Design

Section MargenesREF in Job AIR-2021.

The section does not have a design life of 20 years. This constitutes a deviation from standards and requires FAA approval.

The structure is AC Overlay on Flexible. Asphalt CDF was not computed.

Design Life = 15 years.

A design for this section was completed on 07/19/21 at 16:01:03.

Pavement Structure Information by Layer, Top First

No.	Type	Thickness in	Modulus psi	Poisson's Ratio	Strength R, psi
1	P-401/ P-403 HMA Overlay	2.34	200,000	0.35	0
2	User Defined	2.00	400,000	0.35	0
3	P-209 Cr Ag	7.87	37,392	0.35	0
4	User Defined	15.75	12,000	0.35	0
5	Subgrade	0.00	7,500	0.35	0

Total thickness to the top of the subgrade = 27.96 in

Airplane Information

No.	Name	Gross Wt. lbs	Annual Departures	% Annual Growth
1	A319-100 opt	150,796	0	0.00
2	A320-200 Twin opt	172,842	0	0.00
3	A321-200 opt	207,014	0	0.00
4	A330-200 std	509,047	0	0.00
5	B737-700	155,000	0	0.00
6	B737-800	174,700	0	0.00
7	B747-400ER	913,000	0	0.00
8	B747-400ER Belly	913,000	0	0.00
9	B777-300 ER	777,000	1	0.00
10	B787-8	503,500	0	0.00
11	EMB-190 STD	105,712	0	0.00
12	EMB-195 STD	107,916	0	0.00
13	ARFF Vehicle - 1500 gal	58,000	0	0.00
14	Truck Axle Dual-Tandem	74,960	0	0.00

Additional Airplane Information

Subgrade CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	A319-100 opt	0.00	0.00	1.27
2	A320-200 Twin opt	0.00	0.00	1.26
3	A321-200 opt	0.00	0.00	1.25
4	A330-200 std	0.00	0.00	1.35
5	B737-700	0.00	0.00	1.29
6	B737-800	0.00	0.00	1.28
7	B747-400ER	0.00	0.00	1.24
8	B747-400ER Belly	0.00	0.00	1.24
9	B777-300 ER	1.00	1.00	1.37
10	B787-8	0.00	0.00	1.31
11	EMB-190 STD	0.00	0.00	1.30
12	EMB-195 STD	0.00	0.00	1.30
13	ARFF Vehicle - 1500 gal	0.00	0.00	1.96
14	Truck Axle Dual-Tandem	0.00	0.00	1.56

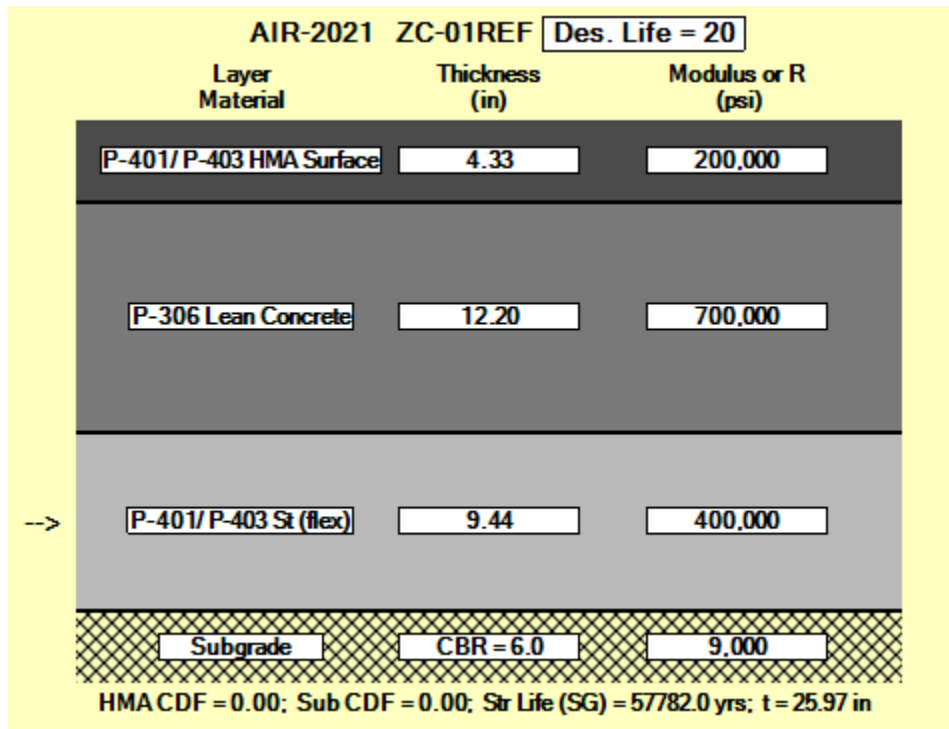
Overlay HMA CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	A319-100 opt	0.00	0.00	3.22
2	A320-200 Twin opt	0.00	0.00	3.10
3	A321-200 opt	0.00	0.00	2.92
4	A330-200 std	0.00	0.00	1.63
5	B737-700	0.00	0.00	3.09
6	B737-800	0.00	0.00	2.98
7	B747-400ER	0.00	0.00	1.56
8	B747-400ER Belly	0.00	0.00	1.56
9	B777-300 ER	0.00	0.00	1.12
10	B787-8	0.00	0.00	1.62
11	EMB-190 STD	0.00	0.00	3.22
12	EMB-195 STD	0.00	0.00	3.25
13	ARFF Vehicle - 1500 gal	0.00	0.00	2.66
14	Truck Axle Dual-Tandem	0.00	0.00	1.75

HMA CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	A319-100 opt	0.00	0.00	2.83
2	A320-200 Twin opt	0.00	0.00	2.73
3	A321-200 opt	0.00	0.00	2.60
4	A330-200 std	0.00	0.00	1.47
5	B737-700	0.00	0.00	2.72
6	B737-800	0.00	0.00	2.64
7	B747-400ER	0.00	0.00	1.39
8	B747-400ER Belly	0.00	0.00	1.39
9	B777-300 ER	0.00	0.00	1.00
10	B787-8	0.00	0.00	1.45
11	EMB-190 STD	0.00	0.00	2.82
12	EMB-195 STD	0.00	0.00	2.85
13	ARFF Vehicle - 1500 gal	0.00	0.00	2.34
14	Truck Axle Dual-Tandem	0.00	0.00	1.49

I.3 Refuerzo asfáltico en Zona Crítica 01



FAARFIELD v 1.42 - Airport Pavement Design

Section ZC-01REF in Job AIR-2021.

The structure is New Flexible.

Design Life = 20 years.

A design has not been completed for this section.

Pavement Structure Information by Layer, Top First

No.	Type	Thickness in	Modulus psi	Poisson's Ratio	Strength R,psi
1	P-401/ P-403 HMA Surface	4.33	200,000	0.35	0
2	P-306 Lean Concrete	12.20	700,000	0.20	0
3	P-401/ P-403 St (flex)	9.44	400,000	0.35	0
4	Subgrade	0.00	9,000	0.35	0

Total thickness to the top of the subgrade = 25.97 in

Airplane Information

No.	Name	Gross Wt. lbs	Annual Departures	% Annual Growth
1	A319-100 opt	150,796	682	0.00
2	A320-200 Twin opt	172,842	682	0.00
3	A321-200 opt	207,014	682	0.00
4	A330-200 std	509,047	194	0.00
5	B737-700	155,000	682	0.00
6	B737-800	174,700	4,093	0.00
7	B747-400ER	913,000	97	0.00
8	B747-400ER Belly	913,000	97	0.00
9	B777-300 ER	777,000	194	0.00
10	B787-8	503,500	194	0.00
11	EMB-190 STD	105,712	2,729	0.00
12	EMB-195 STD	107,916	1,364	0.00

	Rehabilitación Integral Pista 02-20 AIR Proyecto Ejecutivo ANEXO I – DISEÑO ESTRUCTURAL		 AEROPUESTO INTERNACIONAL ROSARIO DE LAS MARINAS
	REV. 00 AIR-RWY-MI-01-AI-00	Fecha Rev. 22/7/2021	

Additional Airplane Information

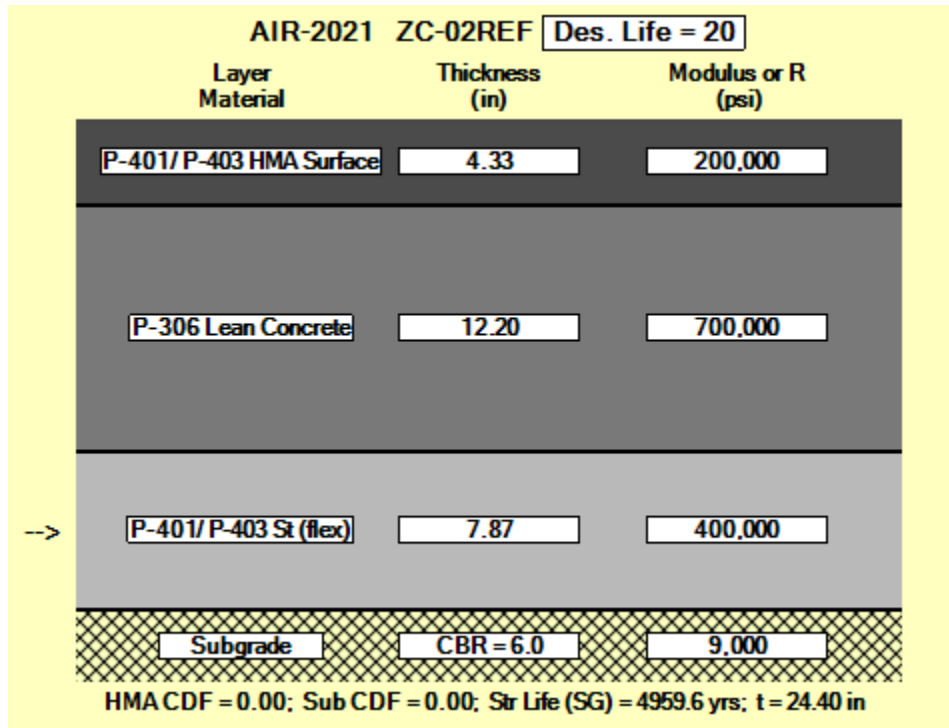
Subgrade CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	A319-100 opt	0.00	0.00	1.28
2	A320-200 Twin opt	0.00	0.00	1.28
3	A321-200 opt	0.00	0.00	1.27
4	A330-200 std	0.00	0.00	1.41
5	B737-700	0.00	0.00	1.31
6	B737-800	0.00	0.00	1.30
7	B747-400ER	0.00	0.00	1.30
8	B747-400ER Belly	0.00	0.00	1.30
9	B777-300 ER	0.00	0.00	1.43
10	B787-8	0.00	0.00	1.37
11	EMB-190 STD	0.00	0.00	1.32
12	EMB-195 STD	0.00	0.00	1.32

HMA CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	A319-100 opt	0.00	0.00	2.83
2	A320-200 Twin opt	0.00	0.00	2.73
3	A321-200 opt	0.00	0.00	2.60
4	A330-200 std	0.00	0.00	1.47
5	B737-700	0.00	0.00	2.72
6	B737-800	0.00	0.00	2.64
7	B747-400ER	0.00	0.00	1.39
8	B747-400ER Belly	0.00	0.00	1.39
9	B777-300 ER	0.00	0.00	1.00
10	B787-8	0.00	0.00	1.45
11	EMB-190 STD	0.00	0.00	2.82
12	EMB-195 STD	0.00	0.00	2.85

I.4 Refuerzo asfáltico en Zona Crítica 02



FAARFIELD v 1.42 - Airport Pavement Design

Section ZC-02REF in Job AIR-2021.

The structure is New Flexible.

Design Life = 20 years.

A design has not been completed for this section.

Pavement Structure Information by Layer, Top First

No.	Type	Thickness in	Modulus psi	Poisson's Ratio	Strength R,psi
1	P-401/ P-403 HMA Surface	4.33	200,000	0.35	0
2	P-306 Lean Concrete	12.20	700,000	0.20	0
3	P-401/ P-403 St (flex)	7.87	400,000	0.35	0
4	Subgrade	0.00	9,000	0.35	0

Total thickness to the top of the subgrade = 24.40 in

Airplane Information

No.	Name	Gross Wt. lbs	Annual Departures	% Annual Growth
1	A319-100 opt	150,796	682	0.00
2	A320-200 Twin opt	172,842	682	0.00
3	A321-200 opt	207,014	682	0.00
4	A330-200 std	509,047	194	0.00
5	B737-700	155,000	682	0.00
6	B737-800	174,700	4,093	0.00
7	B747-400ER	913,000	97	0.00
8	B747-400ER Belly	913,000	97	0.00
9	B777-300 ER	777,000	194	0.00
10	B787-8	503,500	194	0.00
11	EMB-190 STD	105,712	2,729	0.00
12	EMB-195 STD	107,916	1,364	0.00

	Rehabilitación Integral Pista 02-20 AIR Proyecto Ejecutivo ANEXO I – DISEÑO ESTRUCTURAL		 AEROPUERTO INTERNACIONAL ROSARIO SOLÍS MARIÑEL
	REV. 00 AIR-RWY-MI-01-AI-00	Fecha Rev. 22/7/2021	

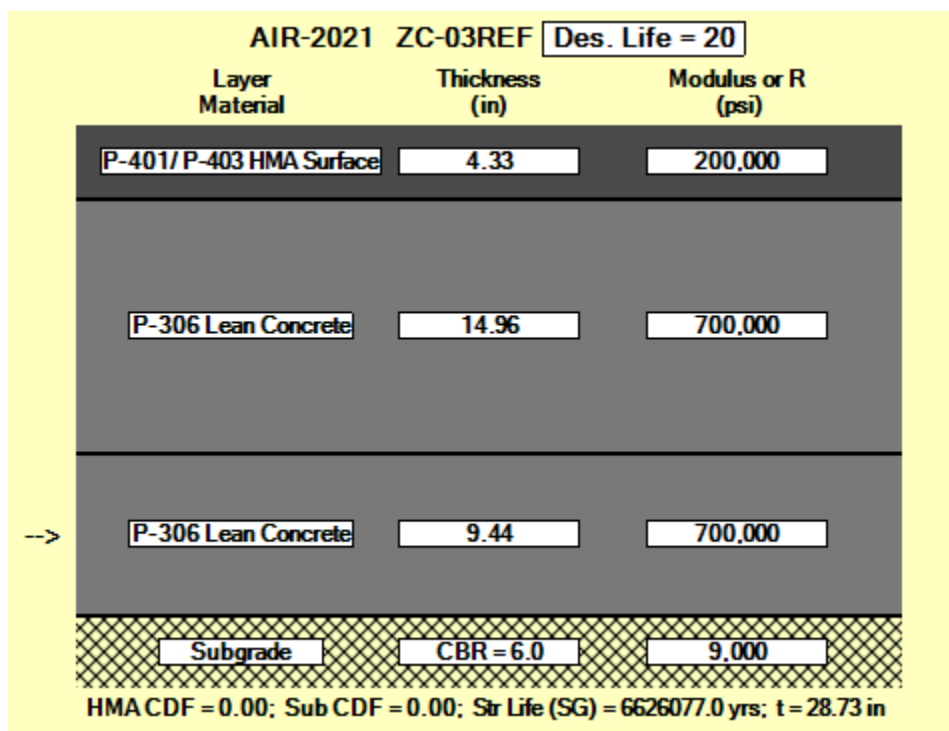
No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	A319-100 opt	0.00	0.00	1.30
2	A320-200 Twin opt	0.00	0.00	1.30
3	A321-200 opt	0.00	0.00	1.29
4	A330-200 std	0.00	0.00	1.47
5	B737-700	0.00	0.00	1.33
6	B737-800	0.00	0.00	1.32
7	B747-400ER	0.00	0.00	1.34
8	B747-400ER Belly	0.00	0.00	1.35
9	B777-300 ER	0.00	0.00	1.49
10	B787-8	0.00	0.00	1.43
11	EMB-190 STD	0.00	0.00	1.34
12	EMB-195 STD	0.00	0.00	1.34

HMA CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	A319-100 opt	0.00	0.00	2.83
2	A320-200 Twin opt	0.00	0.00	2.73
3	A321-200 opt	0.00	0.00	2.60
4	A330-200 std	0.00	0.00	1.47
5	B737-700	0.00	0.00	2.72
6	B737-800	0.00	0.00	2.64
7	B747-400ER	0.00	0.00	1.39
8	B747-400ER Belly	0.00	0.00	1.39
9	B777-300 ER	0.00	0.00	1.00
10	B787-8	0.00	0.00	1.45
11	EMB-190 STD	0.00	0.00	2.82
12	EMB-195 STD	0.00	0.00	2.85

	Rehabilitación Integral Pista 02-20 AIR		
	Proyecto Ejecutivo ANEXO I – DISEÑO ESTRUCTURAL		
	REV. 00 AIR-RWY-MI-01-AI-00	Fecha Rev. 22/7/2021	

I.5 Refuerzo asfáltico en Zona Crítica 03



FAARFIELD v 1.42 - Airport Pavement Design

Section ZC-03REF in Job AIR-2021.

The structure is New Flexible.

Design Life = 20 years.

A design has not been completed for this section.

Pavement Structure Information by Layer, Top First

No.	Type	Thickness in	Modulus psi	Poisson's Ratio	Strength R,psi
1	P-401/ P-403 HMA Surface	4.33	200,000	0.35	0
2	P-306 Lean Concrete	14.96	700,000	0.20	0
3	P-306 Lean Concrete	9.44	700,000	0.20	0
4	Subgrade	0.00	9,000	0.35	0

Total thickness to the top of the subgrade = 28.73 in

Airplane Information

No.	Name	Gross Wt. lbs	Annual Departures	% Annual Growth
1	A319-100 opt	150,796	227	0.00
2	A320-200 Twin opt	172,842	227	0.00
3	A321-200 opt	207,014	227	0.00
4	A330-200 std	509,047	65	0.00
5	B737-700	155,000	227	0.00
6	B737-800	174,700	1,364	0.00
7	B747-400ER	913,000	32	0.00
8	B747-400ER Belly	913,000	32	0.00
9	B777-300 ER	777,000	65	0.00
10	B787-8	503,500	65	0.00
11	EMB-190 STD	105,712	910	0.00
12	EMB-195 STD	107,916	455	0.00

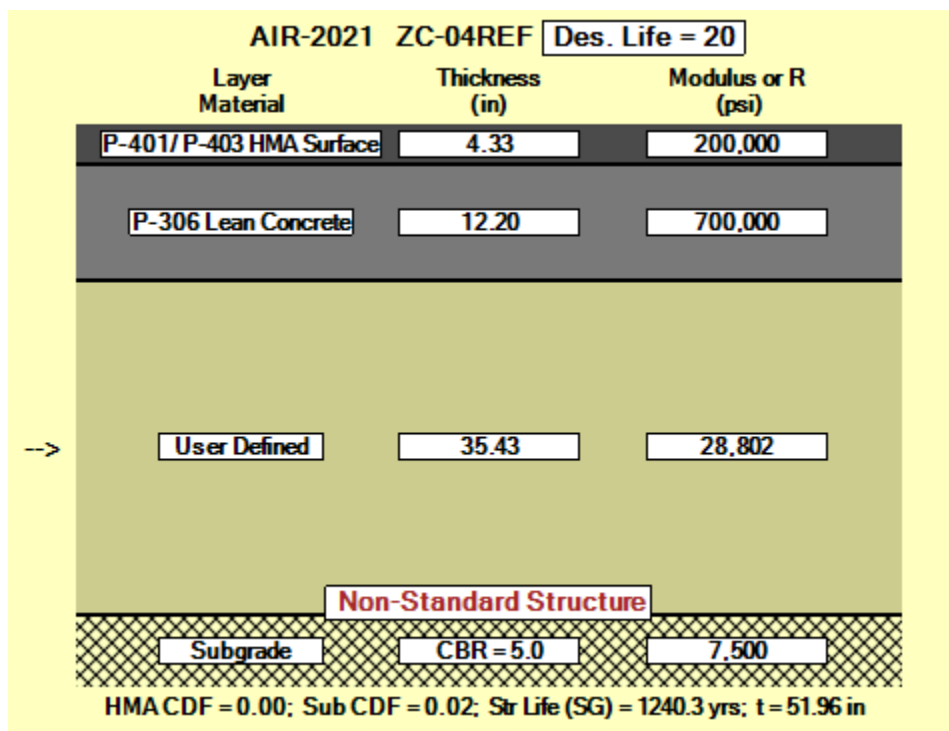
	Rehabilitación Integral Pista 02-20 AIR Proyecto Ejecutivo ANEXO I – DISEÑO ESTRUCTURAL		 AEROPUERTO INTERNACIONAL ROSARIO DE LAS PROVINCIAS
	REV. 00 AIR-RWY-MI-01-AI-00	Fecha Rev. 22/7/2021	

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	A319-100 opt	0.00	0.00	1.26
2	A320-200 Twin opt	0.00	0.00	1.25
3	A321-200 opt	0.00	0.00	1.24
4	A330-200 std	0.00	0.00	1.33
5	B737-700	0.00	0.00	1.28
6	B737-800	0.00	0.00	1.27
7	B747-400ER	0.00	0.00	1.22
8	B747-400ER Belly	0.00	0.00	1.22
9	B777-300 ER	0.00	0.00	1.34
10	B787-8	0.00	0.00	1.29
11	EMB-190 STD	0.00	0.00	1.29
12	EMB-195 STD	0.00	0.00	1.29

HMA CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	A319-100 opt	0.00	0.00	2.83
2	A320-200 Twin opt	0.00	0.00	2.73
3	A321-200 opt	0.00	0.00	2.60
4	A330-200 std	0.00	0.00	1.47
5	B737-700	0.00	0.00	2.72
6	B737-800	0.00	0.00	2.64
7	B747-400ER	0.00	0.00	1.39
8	B747-400ER Belly	0.00	0.00	1.39
9	B777-300 ER	0.00	0.00	1.00
10	B787-8	0.00	0.00	1.45
11	EMB-190 STD	0.00	0.00	2.82
12	EMB-195 STD	0.00	0.00	2.85

I.6 Refuerzo asfáltico en Zona Crítica 04



FAARFIELD v 1.42 - Airport Pavement Design

Section ZC-04REF in Job AIR-2021.

The structure is New Flexible.

Design Life = 20 years.

A design has not been completed for this section.

Pavement Structure Information by Layer, Top First

No.	Type	Thickness in	Modulus psi	Poisson's Ratio	Strength R,psi
1	P-401/ P-403 HMA Surface	4.33	200,000	0.35	0
2	P-306 Lean Concrete	12.20	700,000	0.20	0
3	User Defined	35.43	28,802	0.35	0
4	Subgrade	0.00	7,500	0.35	0

Total thickness to the top of the subgrade = 51.96 in

Airplane Information

No.	Name	Gross Wt. lbs	Annual Departures	% Annual Growth
1	A319-100 opt	150,796	227	0.00
2	A320-200 Twin opt	172,842	227	0.00
3	A321-200 opt	207,014	227	0.00
4	A330-200 std	509,047	65	0.00
5	B737-700	155,000	227	0.00
6	B737-800	174,700	1,364	0.00
7	B747-400ER	913,000	32	0.00
8	B747-400ER Belly	913,000	32	0.00
9	B777-300 ER	777,000	65	0.00
10	B787-8	503,500	65	0.00
11	EMB-190 STD	105,712	910	0.00
12	EMB-195 STD	107,916	455	0.00

Additional Airplane Information

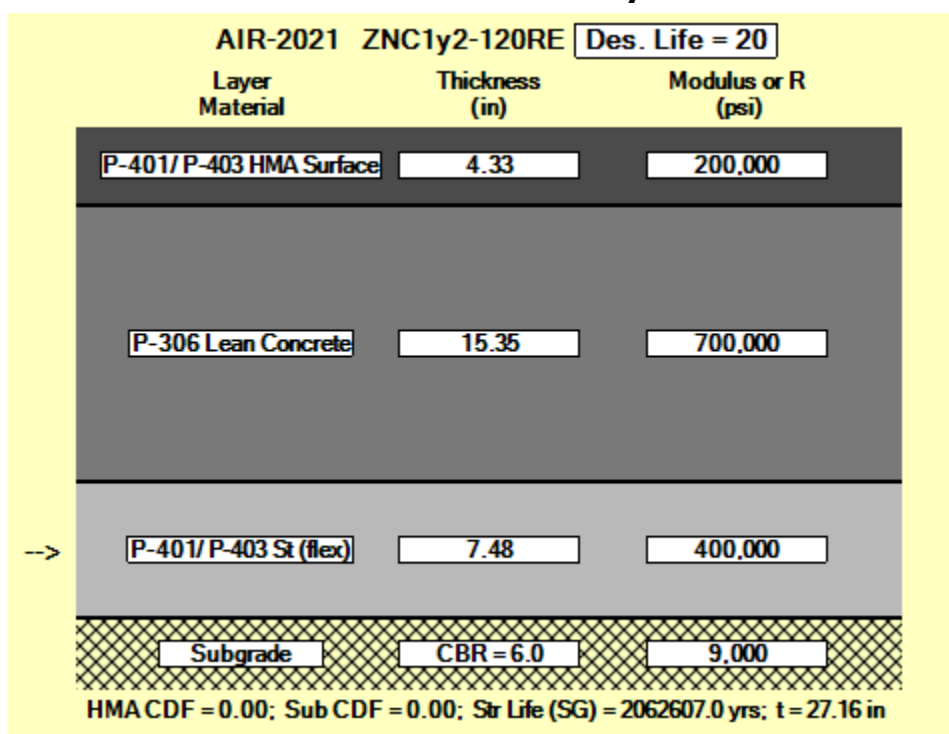
Subgrade CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	A319-100 opt	0.00	0.00	1.11
2	A320-200 Twin opt	0.00	0.00	1.11
3	A321-200 opt	0.00	0.00	1.10
4	A330-200 std	0.00	0.00	1.05
5	B737-700	0.00	0.00	1.12
6	B737-800	0.00	0.00	1.12
7	B747-400ER	0.00	0.00	1.08
8	B747-400ER Belly	0.00	0.00	1.08
9	B777-300 ER	0.02	0.02	1.05
10	B787-8	0.00	0.00	1.06
11	EMB-190 STD	0.00	0.00	1.12
12	EMB-195 STD	0.00	0.00	1.12

HMA CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	A319-100 opt	0.00	0.00	2.83
2	A320-200 Twin opt	0.00	0.00	2.73
3	A321-200 opt	0.00	0.00	2.60
4	A330-200 std	0.00	0.00	1.47
5	B737-700	0.00	0.00	2.72
6	B737-800	0.00	0.00	2.64
7	B747-400ER	0.00	0.00	1.39
8	B747-400ER Belly	0.00	0.00	1.39
9	B777-300 ER	0.00	0.00	1.00
10	B787-8	0.00	0.00	1.45
11	EMB-190 STD	0.00	0.00	2.82
12	EMB-195 STD	0.00	0.00	2.85

I.7 Refuerzo asfáltico en Zona No Crítica 01 y 02



FAARFIELD v 1.42 - Airport Pavement Design

Section ZNC1y2-120RE in Job AIR-2021.

The structure is New Flexible.

Design Life = 20 years.

A design has not been completed for this section.

Pavement Structure Information by Layer, Top First

No.	Type	Thickness in	Modulus psi	Poisson's Ratio	Strength R,psi
1	P-401/ P-403 HMA Surface	4.33	200,000	0.35	0
2	P-306 Lean Concrete	15.35	700,000	0.20	0
3	P-401/ P-403 St (flex)	7.48	400,000	0.35	0
4	Subgrade	0.00	9,000	0.35	0

Total thickness to the top of the subgrade = 27.16 in

Airplane Information

No.	Name	Gross Wt. lbs	Annual Departures	% Annual Growth
1	A319-100 opt	150,796	682	0.00
2	A320-200 Twin opt	172,842	682	0.00
3	A321-200 opt	207,014	682	0.00
4	A330-200 std	509,047	194	0.00
5	B737-700	155,000	682	0.00
6	B737-800	174,700	4,093	0.00
7	B747-400ER	913,000	97	0.00
8	B747-400ER Belly	913,000	97	0.00
9	B777-300 ER	777,000	194	0.00
10	B787-8	503,500	194	0.00
11	EMB-190 STD	105,712	2,729	0.00
12	EMB-195 STD	107,916	1,364	0.00

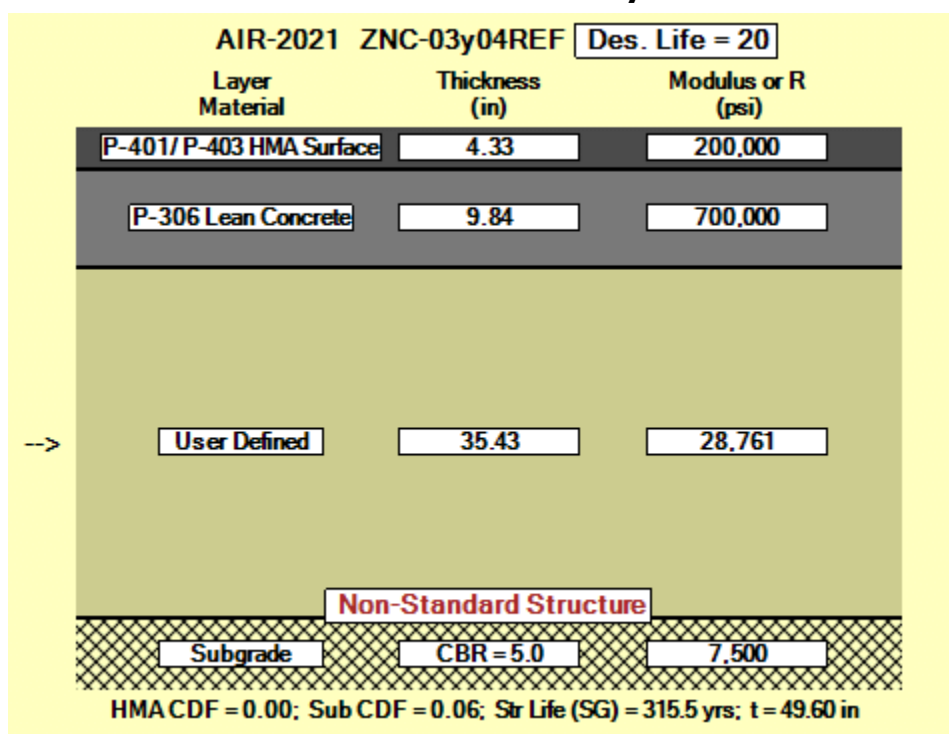
	Rehabilitación Integral Pista 02-20 AIR Proyecto Ejecutivo ANEXO I – DISEÑO ESTRUCTURAL		 AEROPUERTO INTERNACIONAL ROSARIO DE LAS MARINERAS
	REV. 00 AIR-RWY-MI-01-AI-00	Fecha Rev. 22/7/2021	

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	A319-100 opt	0.00	0.00	1.27
2	A320-200 Twin opt	0.00	0.00	1.27
3	A321-200 opt	0.00	0.00	1.26
4	A330-200 std	0.00	0.00	1.38
5	B737-700	0.00	0.00	1.30
6	B737-800	0.00	0.00	1.29
7	B747-400ER	0.00	0.00	1.26
8	B747-400ER Belly	0.00	0.00	1.26
9	B777-300 ER	0.00	0.00	1.39
10	B787-8	0.00	0.00	1.34
11	EMB-190 STD	0.00	0.00	1.31
12	EMB-195 STD	0.00	0.00	1.31

HMA CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	A319-100 opt	0.00	0.00	2.83
2	A320-200 Twin opt	0.00	0.00	2.73
3	A321-200 opt	0.00	0.00	2.60
4	A330-200 std	0.00	0.00	1.47
5	B737-700	0.00	0.00	2.72
6	B737-800	0.00	0.00	2.64
7	B747-400ER	0.00	0.00	1.39
8	B747-400ER Belly	0.00	0.00	1.39
9	B777-300 ER	0.00	0.00	1.00
10	B787-8	0.00	0.00	1.45
11	EMB-190 STD	0.00	0.00	2.82
12	EMB-195 STD	0.00	0.00	2.85

I.8 Refuerzo asfáltico en Zona No Crítica 03 y 04



FAARFIELD v 1.42 - Airport Pavement Design

Section ZNC-03y04REF in Job AIR-2021.

The structure is New Flexible.

Design Life = 20 years.

A design has not been completed for this section.

Pavement Structure Information by Layer, Top First

No.	Type	Thickness in	Modulus psi	Poisson's Ratio	Strength R,psi
1	P-401/ P-403 HMA Surface	4.33	200,000	0.35	0
2	P-306 Lean Concrete	9.84	700,000	0.20	0
3	User Defined	35.43	28,761	0.35	0
4	Subgrade	0.00	7,500	0.35	0

Total thickness to the top of the subgrade = 49.60 in

Airplane Information

No.	Name	Gross Wt. lbs	Annual Departures	% Annual Growth
1	A319-100 opt	150,796	227	0.00
2	A320-200 Twin opt	172,842	227	0.00
3	A321-200 opt	207,014	227	0.00
4	A330-200 std	509,047	65	0.00
5	B737-700	155,000	227	0.00
6	B737-800	174,700	1,364	0.00
7	B747-400ER	913,000	32	0.00
8	B747-400ER Belly	913,000	32	0.00
9	B777-300 ER	777,000	65	0.00
10	B787-8	503,500	65	0.00
11	EMB-190 STD	105,712	910	0.00
12	EMB-195 STD	107,916	455	0.00

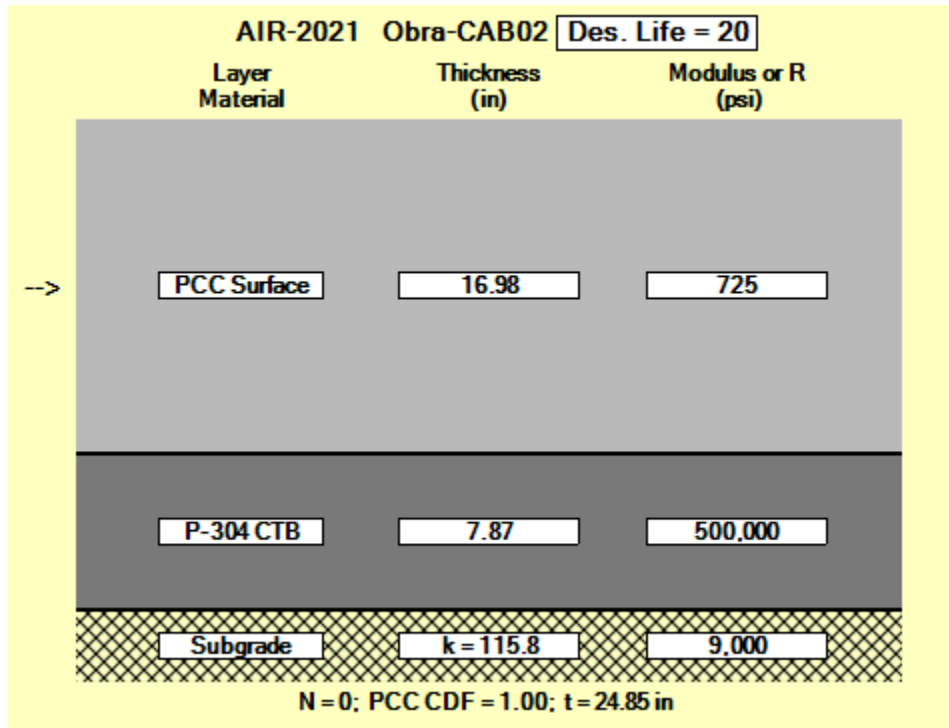
	Rehabilitación Integral Pista 02-20 AIR Proyecto Ejecutivo ANEXO I – DISEÑO ESTRUCTURAL		 AEROPUERTO INTERNACIONAL ROSARIO SOLÍS MARIÑEL
	REV. 00 AIR-RWY-MI-01-AI-00	Fecha Rev. 22/7/2021	

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	A319-100 opt	0.00	0.00	1.12
2	A320-200 Twin opt	0.00	0.00	1.12
3	A321-200 opt	0.00	0.00	1.11
4	A330-200 std	0.00	0.00	1.05
5	B737-700	0.00	0.00	1.13
6	B737-800	0.00	0.00	1.13
7	B747-400ER	0.00	0.00	1.09
8	B747-400ER Belly	0.00	0.00	1.09
9	B777-300 ER	0.06	0.06	1.05
10	B787-8	0.00	0.00	1.06
11	EMB-190 STD	0.00	0.00	1.14
12	EMB-195 STD	0.00	0.00	1.14

HMA CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	A319-100 opt	0.00	0.00	2.83
2	A320-200 Twin opt	0.00	0.00	2.73
3	A321-200 opt	0.00	0.00	2.60
4	A330-200 std	0.00	0.00	1.47
5	B737-700	0.00	0.00	2.72
6	B737-800	0.00	0.00	2.64
7	B747-400ER	0.00	0.00	1.39
8	B747-400ER Belly	0.00	0.00	1.39
9	B777-300 ER	0.00	0.00	1.00
10	B787-8	0.00	0.00	1.45
11	EMB-190 STD	0.00	0.00	2.82
12	EMB-195 STD	0.00	0.00	2.85

I.9 Reconstrucción de Cabecera 02



FAARFIELD v 1.42 - Airport Pavement Design

Section Obra-CAB02 in Job AIR-2021.

The structure is New Rigid.

Design Life = 20 years.

A design for this section was completed on 07/19/21 at 17:28:20.

Pavement Structure Information by Layer, Top First

No.	Type	Thickness in	Modulus psi	Poisson's Ratio	Strength R,psi
1	PCC Surface	16.98	4,000,000	0.15	725
2	P-304 CTB	7.87	500,000	0.20	0
3	Subgrade	0.00	9,000	0.40	0

Total thickness to the top of the subgrade = 24.85 in

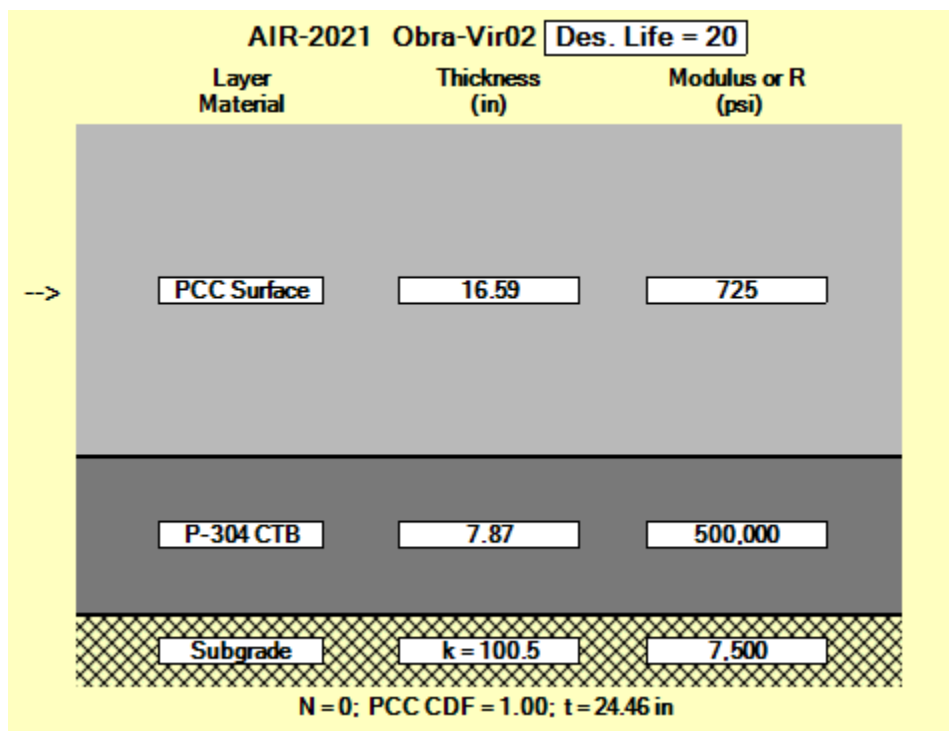
Airplane Information

No.	Name	Gross Wt. lbs	Annual Departures	% Annual Growth
1	A319-100 opt	150,796	682	0.00
2	A320-200 Twin opt	172,842	682	0.00
3	A321-200 opt	207,014	682	0.00
4	A330-200 std	509,047	194	0.00
5	B737-700	155,000	682	0.00
6	B737-800	174,700	4,093	0.00
7	B747-400ER	913,000	97	0.00
8	B747-400ER Belly	913,000	97	0.00
9	B777-300 ER	777,000	194	0.00
10	B787-8	503,500	194	0.00
11	EMB-190 STD	105,712	2,729	0.00
12	EMB-195 STD	107,916	1,364	0.00

	Rehabilitación Integral Pista 02-20 AIR Proyecto Ejecutivo ANEXO I – DISEÑO ESTRUCTURAL		 AEROPUERTO INTERNACIONAL RODASIO ISLAS MALVINAS
	REV. 00 AIR-RWY-MI-01-AI-00	Fecha Rev. 22/7/2021	

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	A319-100 opt	0.00	0.00	3.84
2	A320-200 Twin opt	0.00	0.00	3.67
3	A321-200 opt	0.00	0.00	3.42
4	A330-200 std	0.00	0.00	1.88
5	B737-700	0.00	0.00	3.67
6	B737-800	0.00	0.00	3.52
7	B747-400ER	0.00	0.00	3.64
8	B747-400ER Belly	0.00	0.00	3.65
9	B777-300 ER	0.97	0.97	3.87
10	B787-8	0.02	0.02	3.77
11	EMB-190 STD	0.00	0.00	3.85
12	EMB-195 STD	0.00	0.00	3.90

I.10 Ampliación de plataforma de viraje 02



FAARFIELD v 1.42 - Airport Pavement Design

Section Obra-Vir02 in Job AIR-2021.

The structure is New Rigid.

Design Life = 20 years.

A design for this section was completed on 07/19/21 at 17:45:01.

Pavement Structure Information by Layer, Top First

No.	Type	Thickness in	Modulus psi	Poisson's Ratio	Strength R,psi
1	PCC Surface	16.59	4,000,000	0.15	725
2	P-304 CTB	7.87	500,000	0.20	0
3	Subgrade	0.00	7,500	0.40	0

Total thickness to the top of the subgrade = 24.46 in

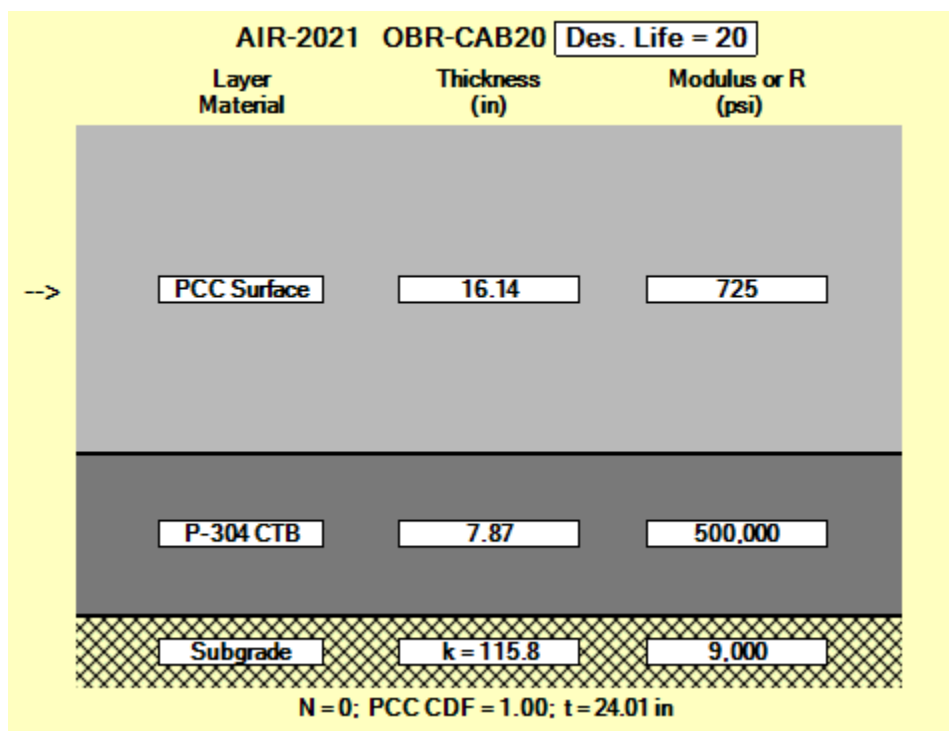
Airplane Information

No.	Name	Gross Wt. lbs	Annual Departures	% Annual Growth
1	A319-100 opt	150,796	227	0.00
2	A320-200 Twin opt	172,842	227	0.00
3	A321-200 opt	207,014	227	0.00
4	A330-200 std	509,047	65	0.00
5	B737-700	155,000	227	0.00
6	B737-800	174,700	1,364	0.00
7	B747-400ER	913,000	32	0.00
8	B747-400ER Belly	913,000	32	0.00
9	B777-300 ER	777,000	65	0.00
10	B787-8	503,500	65	0.00
11	EMB-190 STD	105,712	910	0.00
12	EMB-195 STD	107,916	455	0.00

	Rehabilitación Integral Pista 02-20 AIR Proyecto Ejecutivo ANEXO I – DISEÑO ESTRUCTURAL		 AEROPUERTO INTERNACIONAL RODASIO ISLAS MALVINAS
	REV. 00 AIR-RWY-MI-01-AI-00	Fecha Rev. 22/7/2021	

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	A319-100 opt	0.00	0.00	3.84
2	A320-200 Twin opt	0.00	0.00	3.67
3	A321-200 opt	0.00	0.00	3.42
4	A330-200 std	0.00	0.00	1.88
5	B737-700	0.00	0.00	3.67
6	B737-800	0.00	0.00	3.52
7	B747-400ER	0.00	0.00	3.64
8	B747-400ER Belly	0.00	0.00	3.65
9	B777-300 ER	0.96	0.96	3.87
10	B787-8	0.03	0.03	3.77
11	EMB-190 STD	0.00	0.00	3.85
12	EMB-195 STD	0.00	0.00	3.90

I.11 Reconstrucción de Cabecera 20



FAARFIELD v 1.42 - Airport Pavement Design

Section OBR-CAB20 in Job AIR-2021.

The structure is New Rigid.

Design Life = 20 years.

A design for this section was completed on 07/19/21 at 17:52:18.

Pavement Structure Information by Layer, Top First

No.	Type	Thickness in	Modulus psi	Poisson's Ratio	Strength R,psi
1	PCC Surface	16.14	4,000,000	0.15	725
2	P-304 CTB	7.87	500,000	0.20	0
3	Subgrade	0.00	9,000	0.40	0

Total thickness to the top of the subgrade = 24.01 in

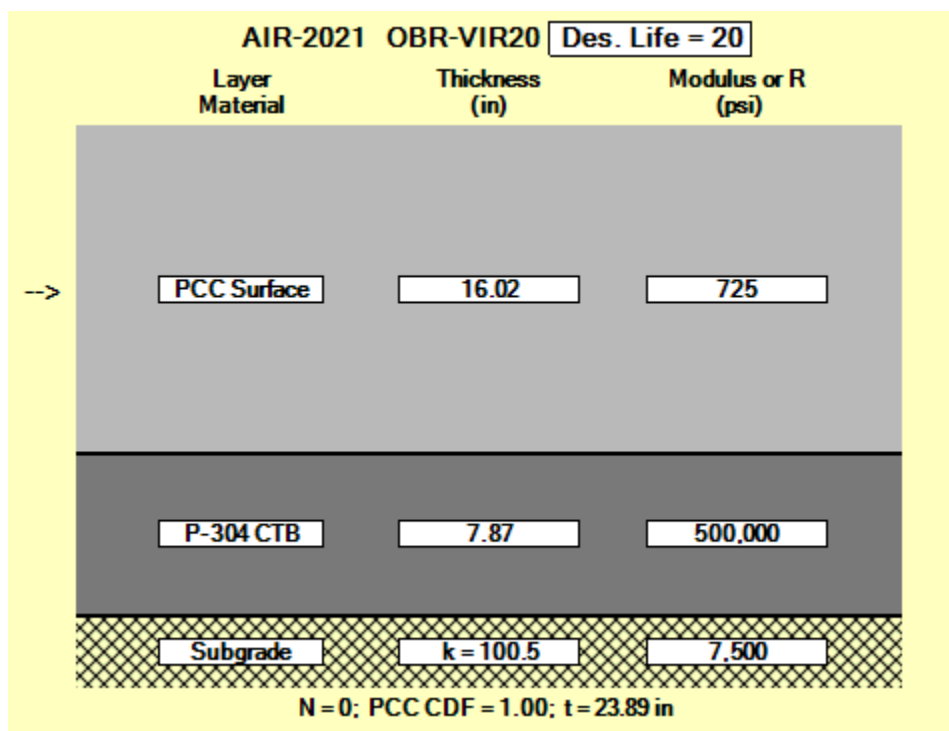
Airplane Information

No.	Name	Gross Wt. lbs	Annual Departures	% Annual Growth
1	A319-100 opt	150,796	227	0.00
2	A320-200 Twin opt	172,842	227	0.00
3	A321-200 opt	207,014	227	0.00
4	A330-200 std	509,047	65	0.00
5	B737-700	155,000	227	0.00
6	B737-800	174,700	1,364	0.00
7	B747-400ER	913,000	32	0.00
8	B747-400ER Belly	913,000	32	0.00
9	B777-300 ER	777,000	65	0.00
10	B787-8	503,500	65	0.00
11	EMB-190 STD	105,712	910	0.00
12	EMB-195 STD	107,916	455	0.00

	Rehabilitación Integral Pista 02-20 AIR Proyecto Ejecutivo ANEXO I – DISEÑO ESTRUCTURAL		 AEROPUERTO INTERNACIONAL RODASIO ISLAS MALVINAS
	REV. 00 AIR-RWY-MI-01-AI-00	Fecha Rev. 22/7/2021	

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	A319-100 opt	0.00	0.00	3.84
2	A320-200 Twin opt	0.00	0.00	3.67
3	A321-200 opt	0.00	0.01	3.42
4	A330-200 std	0.01	0.01	1.88
5	B737-700	0.00	0.00	3.67
6	B737-800	0.00	0.00	3.52
7	B747-400ER	0.01	0.01	3.64
8	B747-400ER Belly	0.00	0.01	3.65
9	B777-300 ER	0.95	0.95	3.87
10	B787-8	0.03	0.04	3.77
11	EMB-190 STD	0.00	0.00	3.85
12	EMB-195 STD	0.00	0.00	3.90

I.12 Ampliación de Plataforma de viraje 20



FAARFIELD v 1.42 - Airport Pavement Design

Section OBR-VIR20 in Job AIR-2021.

The structure is New Rigid.

Design Life = 20 years.

A design for this section was completed on 07/19/21 at 18:17:00.

Pavement Structure Information by Layer, Top First

No.	Type	Thickness in	Modulus psi	Poisson's Ratio	Strength R,psi
1	PCC Surface	16.02	4,000,000	0.15	725
2	P-304 CTB	7.87	500,000	0.20	0
3	Subgrade	0.00	7,500	0.40	0

Total thickness to the top of the subgrade = 23.89 in

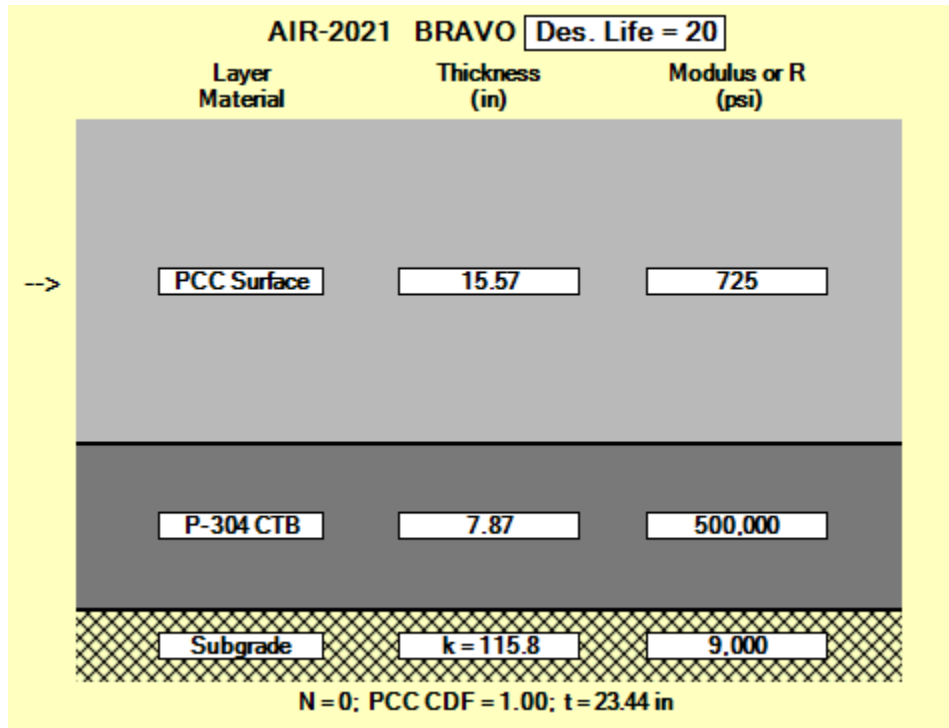
Airplane Information

No.	Name	Gross Wt. lbs	Annual Departures	% Annual Growth
1	A319-100 opt	150,796	114	0.00
2	A320-200 Twin opt	172,842	114	0.00
3	A321-200 opt	207,014	114	0.00
4	A330-200 std	509,047	32	0.00
5	B737-700	155,000	114	0.00
6	B737-800	174,700	682	0.00
7	B747-400ER	913,000	16	0.00
8	B747-400ER Belly	913,000	16	0.00
9	B777-300 ER	777,000	32	0.00
10	B787-8	503,500	32	0.00
11	EMB-190 STD	105,712	455	0.00
12	EMB-195 STD	107,916	227	0.00

	Rehabilitación Integral Pista 02-20 AIR Proyecto Ejecutivo ANEXO I – DISEÑO ESTRUCTURAL		 AEROPUERTO INTERNACIONAL ROSARIO DE LAS INDIAS
	REV. 00 AIR-RWY-MI-01-AI-00	Fecha Rev. 22/7/2021	

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	A319-100 opt	0.00	0.00	3.84
2	A320-200 Twin opt	0.00	0.00	3.67
3	A321-200 opt	0.00	0.01	3.42
4	A330-200 std	0.01	0.01	1.88
5	B737-700	0.00	0.00	3.67
6	B737-800	0.00	0.00	3.52
7	B747-400ER	0.01	0.01	3.64
8	B747-400ER Belly	0.00	0.01	3.65
9	B777-300 ER	0.95	0.95	3.87
10	B787-8	0.04	0.04	3.77
11	EMB-190 STD	0.00	0.00	3.85
12	EMB-195 STD	0.00	0.00	3.90

I.13 Rodaje Bravo



FAARFIELD v 1.42 - Airport Pavement Design

Section BRAVO in Job AIR-2021.

The structure is New Rigid.

Design Life = 20 years.

A design for this section was completed on 07/19/21 at 17:57:12.

Pavement Structure Information by Layer, Top First

No.	Type	Thickness in	Modulus psi	Poisson's Ratio	Strength R,psi
1	PCC Surface	15.57	4,000,000	0.15	725
2	P-304 CTB	7.87	500,000	0.20	0
3	Subgrade	0.00	9,000	0.40	0

Total thickness to the top of the subgrade = 23.44 in

Airplane Information

No.	Name	Gross Wt. lbs	Annual Departures	% Annual Growth
1	A319-100 opt	150,796	114	0.00
2	A320-200 Twin opt	172,842	114	0.00
3	A321-200 opt	207,014	114	0.00
4	A330-200 std	509,047	32	0.00
5	B737-700	155,000	114	0.00
6	B737-800	174,700	682	0.00
7	B747-400ER	913,000	16	0.00
8	B747-400ER Belly	913,000	16	0.00
9	B777-300 ER	777,000	32	0.00
10	B787-8	503,500	32	0.00
11	EMB-190 STD	105,712	455	0.00
12	EMB-195 STD	107,916	227	0.00

	Rehabilitación Integral Pista 02-20 AIR Proyecto Ejecutivo ANEXO I – DISEÑO ESTRUCTURAL		 AEROPUERTO INTERNACIONAL RODASIO ISLAS MALVINAS
	REV. 00 AIR-RWY-MI-01-AI-00	Fecha Rev. 22/7/2021	

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	A319-100 opt	0.00	0.00	3.84
2	A320-200 Twin opt	0.00	0.00	3.67
3	A321-200 opt	0.00	0.01	3.42
4	A330-200 std	0.01	0.01	1.88
5	B737-700	0.00	0.00	3.67
6	B737-800	0.00	0.00	3.52
7	B747-400ER	0.01	0.01	3.64
8	B747-400ER Belly	0.00	0.01	3.65
9	B777-300 ER	0.94	0.94	3.87
10	B787-8	0.04	0.05	3.77
11	EMB-190 STD	0.00	0.00	3.85
12	EMB-195 STD	0.00	0.00	3.90



República Argentina - Poder Ejecutivo Nacional
AÑO DE LA RECONSTRUCCIÓN DE LA NACIÓN ARGENTINA

Hoja Adicional de Firmas
Informe gráfico

Número:

Referencia: DISEÑO ESTRUCTURAL DE PAVIMENTO ANEXO I

El documento fue importado por el sistema GEDO con un total de 29 pagina/s.