LEXINGTON AIRPORT

This report describes how your Pavement Maintenance Management Program (PMMP) was developed. Your Program was developed as part of the Oregon Continuous Aviation System Plan sponsored in part by the Oregon Department of Aviation and the Federal Aviation Administration (FAA). The information and data contained in this report ensures you comply with the requirements of FAA Grant Assurance Number 11 which states that any airport requesting federal funds for pavement improvement projects must have implemented a pavement maintenance management program.

DATA COLLECTION

To determine how your pavements were constructed and their age, a records review was conducted. Figure LX-1 shows the records review results. This figure identifies pavement boundaries, dimensions, pavement layer types, thicknesses and dates of construction. The most recent construction date for each pavement can also be found in the Section Condition Report in Appendix 2. Figure LX-1 and the information contained in Appendices 1, 2 and 4 ensure that your airport complies with the "pavement inventory" requirement of FAA's PMMP guidelines.

The pavements at your airport were divided into branches, sections and sample units in accordance with the methodology outlined in the current edition of ASTM D5430, *Standard Test Method for Airport Condition Index Surveys*. The branches, sections and sample units established at your airport are shown in Figure LX-2. A Branch Condition Report showing all branches, their associated areas, and their area-weighted average condition is provided in Appendix 1. Additionally, the Appendix 2 Section Condition Report provides information used to define each branch and section in the PAVER database.

Using the branch, section and sample unit divisions established, a visual condition survey was conducted at Lexington Airport in June 2017. During the inspection, pavement defects were identified and measured in accordance with the methodology outlined in ASTM D5430. This inspection ensures your airport complies with the "detailed inspection" requirement of FAA's PMMP guidelines. After collection, the data were entered into the PAVER software for analysis. These data are reproduced in the Re-Inspection Report attached as Appendix 4.

The PAVER database updated during this project ensures your airport complies with the "record keeping and information retrieval" requirements of FAA's PMMP guidelines.

Figure LX-1. Airport Layout, Dimensions and Pavement Cross-Sections.
Lexington Airport

Drawing Date: July 2017

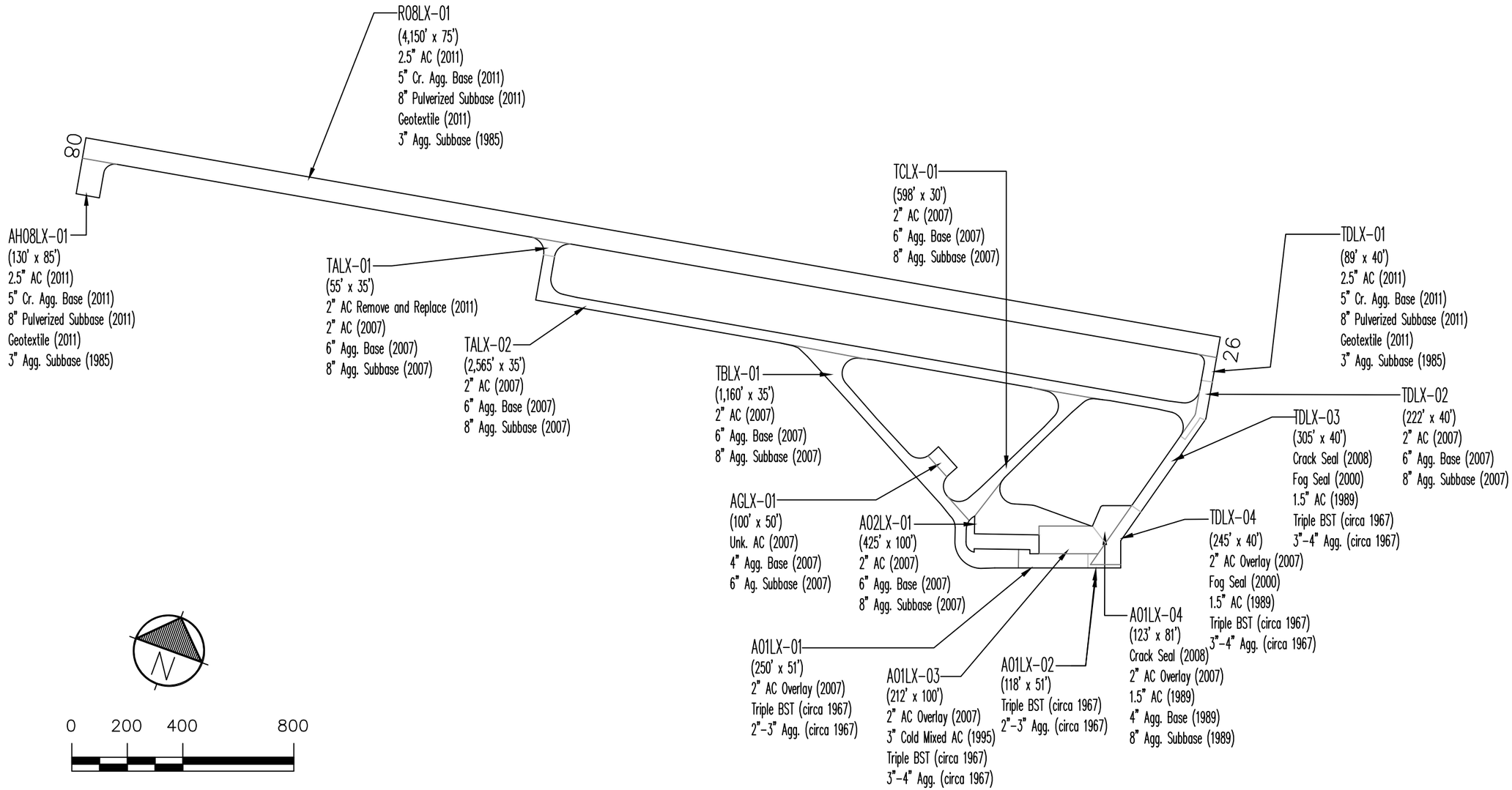

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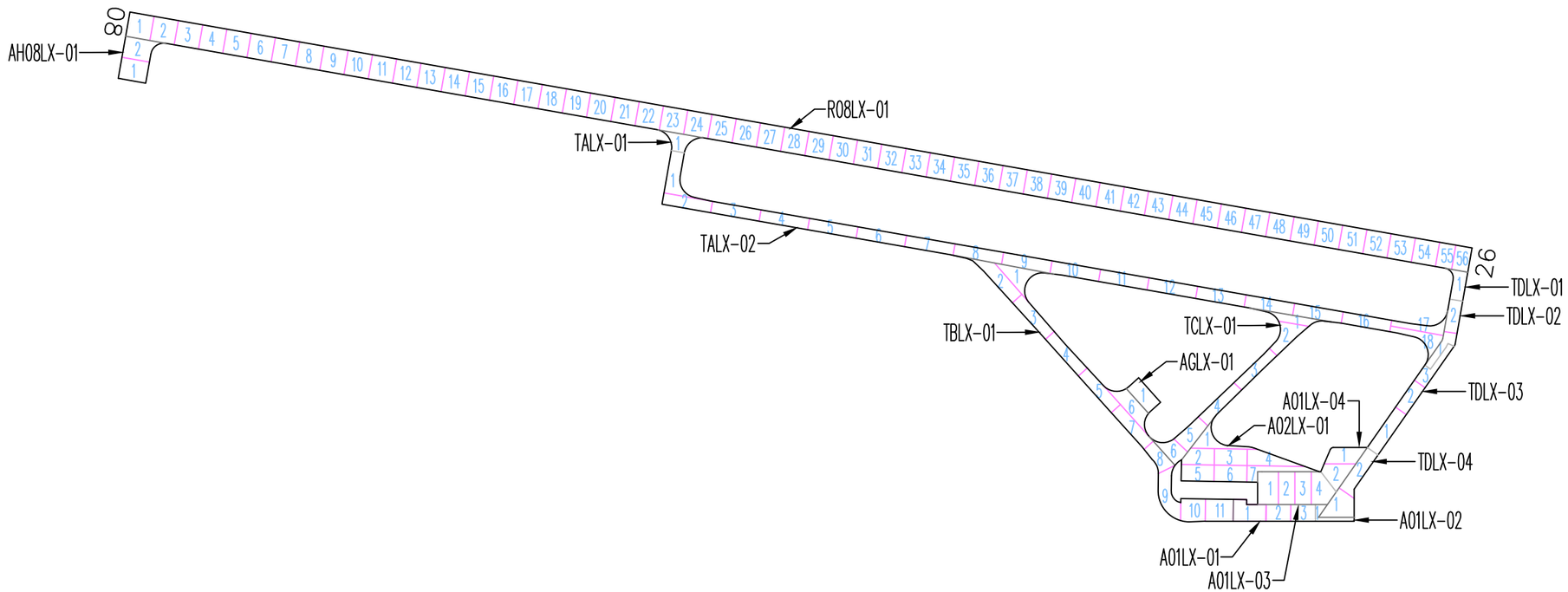
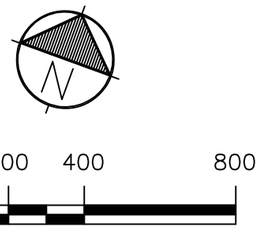
Figure LX-2. Pavement Branch, Section and Sample Unit Layout.
Lexington Airport

Drawing Date: July 2017





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RESULTS

Using the data collected during the visual inspection, the PAVER software was used to calculate an area-weighted average Pavement Condition Index (PCI) for each pavement section inspected using the sample units evaluated. Using each section's PCI, a Pavement Condition Rating (PCR) was assigned. The PCIs measured during this inspection are shown in Table 1. The table also contains PCIs from past inspections as well as projected PCIs for 2022 and 2027. The projections were based on pavement deterioration models developed by PAVER using the inspection data from other pavements in the same airport category as your airport, located in the same climatic region, and with the same surface type and use.

The Branch Condition Report in Appendix 1 summarizes current pavement condition by branch while the Section Condition Report in Appendix 2 lists pavement condition by section. The current Pavement Condition Rating (PCR) is shown graphically in Figure LX-3.

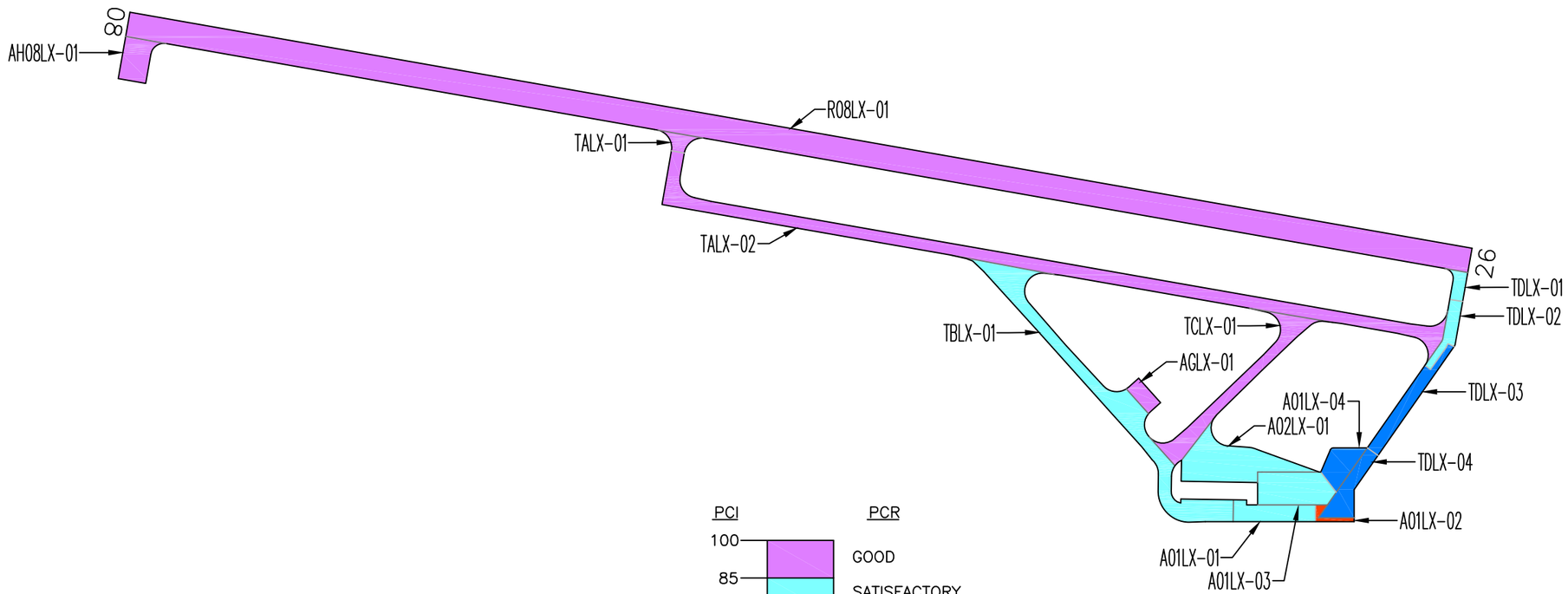
Table 1. Past, Present and Future Pavement Condition Indices.

Branch	Section	Inspections			Forecast	
		2011	2014	2017	2022	2027
A01LX	01	100	89	84	76	73
A01LX	02	22	4	7	0	0
A01LX	03	99	82	80	67	55
A01LX	04	61	40	63	52	43
A02LX	01	100	88	79	74	73
AGLX	01	100	96	94	82	75
AH08LX	01	100	100	86	77	73
R08LX	01	100	100	98	84	82
TALX	01	100	100	88	74	62
TALX	02	100	97	91	80	73
TBLX	01	97	94	85	76	70
TCLX	01	100	97	88	78	71
TDLX	01	100	100	81	73	68
TDLX	02	100	80	75	69	67
TDLX	03	60	53	68	58	52
TDLX	04	56	50	70	60	53

Section PCIs at Lexington Airport range from a low of 7 (a PCR of "Failed") to a high of 98 (a PCR of "Good"). The area-weighted average PCI for all airport pavements is 91, corresponding to an overall PCR of "Good". Figure LX-4 shows how much pavement area is associated with each Pavement Condition Rating category and also shows pavement condition distribution from the inspections conducted in 2011 and 2014.

Figure LX-3. Pavement Condition in June 2017.
Lexington Airport

Drawing Date: July 2017



PCI	PCR
100	GOOD
85	SATISFACTORY
70	FAIR
55	POOR
40	VERY POOR
25	SERIOUS
10	FAILED
0	

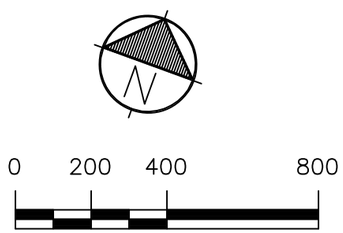


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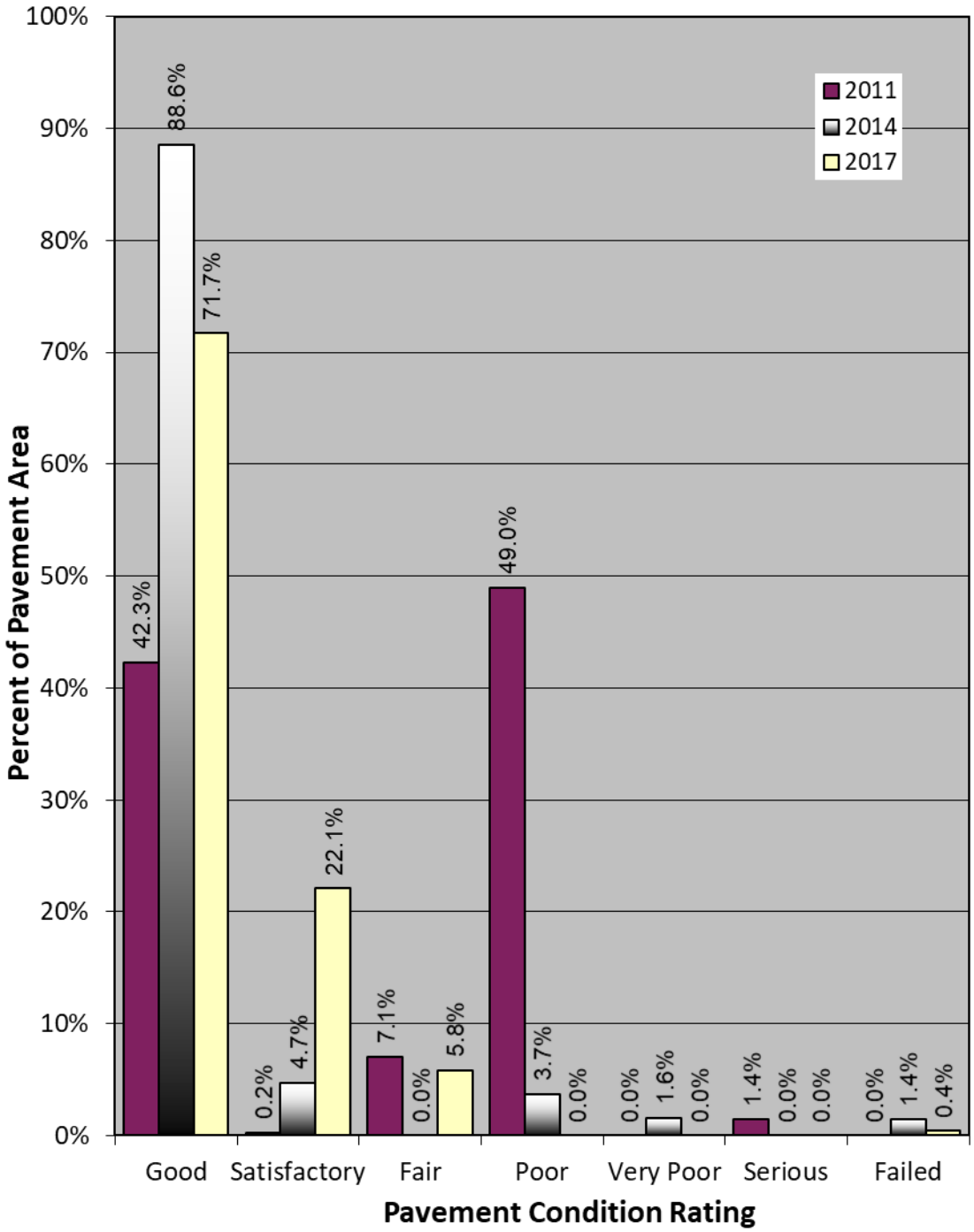
Figure LX-4. Distribution of Pavement Condition
Lexington Airport



The primary distresses observed during the inspection were: longitudinal and transverse cracking, weathering, and block cracking, with isolated occurrences of alligator cracking, raveling, patching and depressions.

A graphical representation of the projected PCIs listed in Table 1 is shown in Figure LX-5.

RECOMMENDATIONS

Data collected during the visual condition survey were used by the PAVER software to generate the Network Maintenance Report contained in Appendix 3. This report identifies, for each pavement section, the recommended localized maintenance activities (i.e.-crack sealing, patching) that should be completed to repair the defects observed during the visual inspection. The repair quantities identified in the report were extrapolated to cover the entire pavement section, based on the distresses measured in the inspected sample units. If the repair activities identified are completed, the pavement deterioration rate will be slowed.

The recommended localized maintenance activities to be applied are selected by the PAVER software based on a Distress Maintenance Policy established for the Oregon airport system. The report results indicate that, over your entire airport, the following quantities of localized maintenance are needed:

- 4,789 linear feet of asphalt concrete crack sealing
- 307 square feet of deep (full-depth) asphalt concrete patching

The PAVER software can also identify and schedule recommended global (applied over an entire section) maintenance activities such as fog seals, slurry seals and other surface treatments, as well as major rehabilitation activities such as asphalt concrete overlays and complete reconstruction. PAVER schedules global maintenance on a user-defined interval. To schedule major rehabilitation PAVER uses pavement deterioration models developed during this project. These models are used to estimate future pavement condition and to schedule rehabilitation based on a trigger PCI.

During this project a 5-year program outlining recommended global maintenance and rehabilitation was developed. The program begins in the year 2018 to allow time for project development. These recommendations are presented in Table 2, which identifies the pavement section requiring rehabilitation, the year the action should be completed, the type of action, and an associated cost. This information is also presented graphically in Figure LX-6.

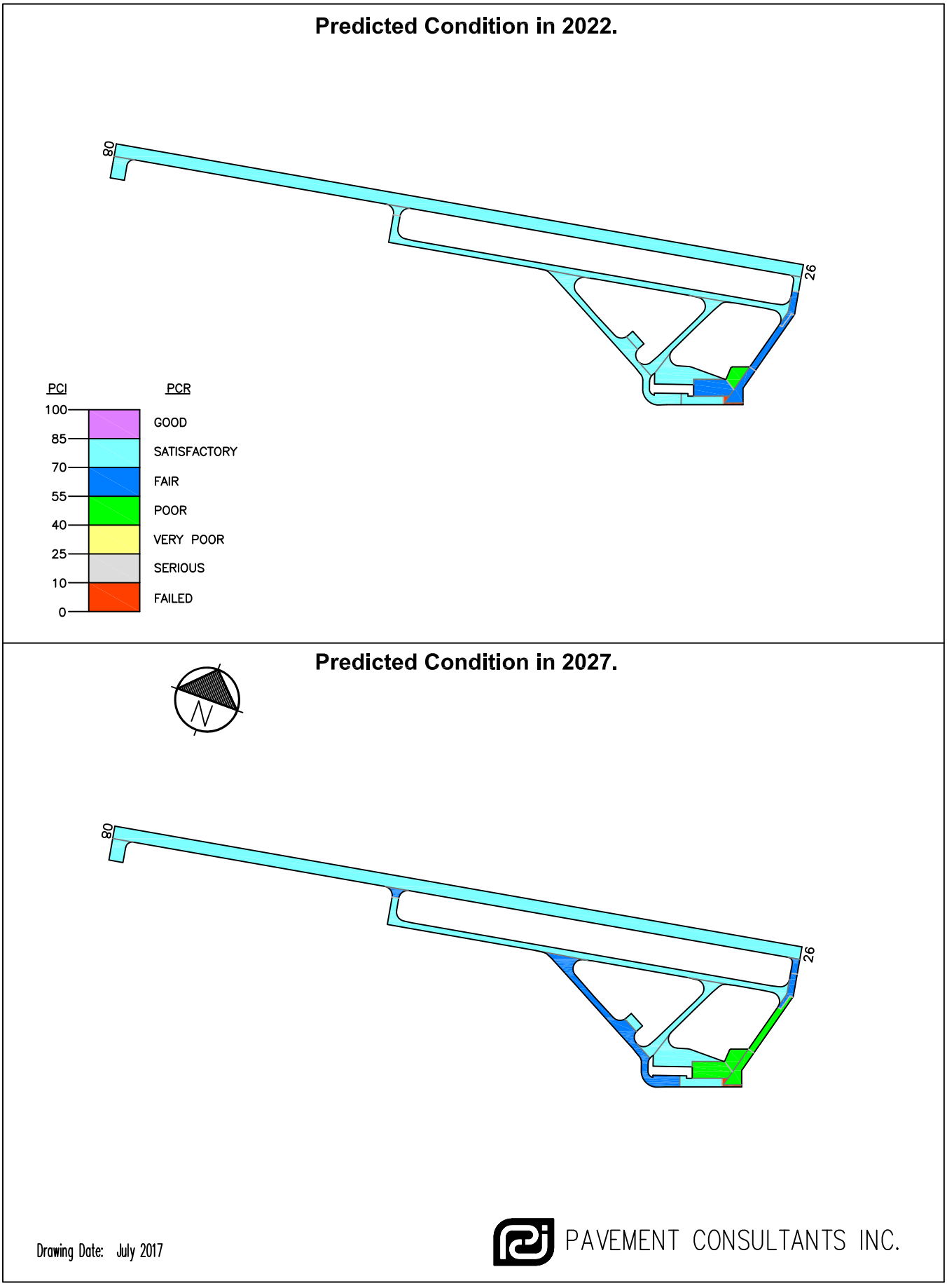


Figure LX-5. Future Pavement Condition.

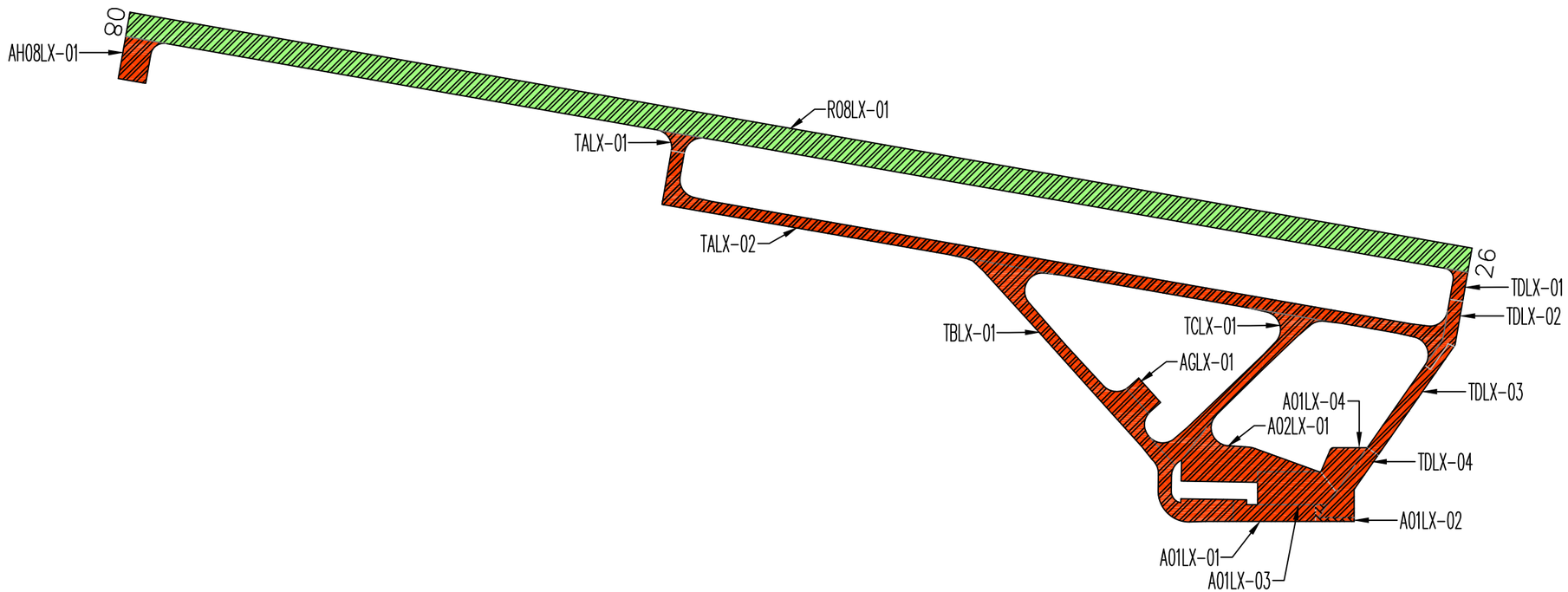
Table 2. Five-Year Global Maintenance and Rehabilitation Plan.

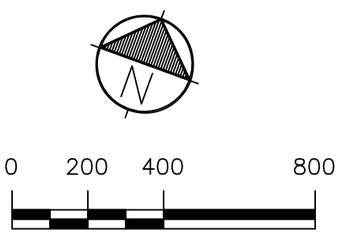
Year	Branch	Section	Action	Area (sf)	Unit Cost ($/sf)	Total Cost ($)
2018	A01LX	01	Slurry Seal	13,376	$0.31	$4,147
2018	A01LX	02	2.5" AC over 5" Crushed Aggregate Base over 8" Aggregate Subbase	2,290	$7.68	$17,587
2018	A01LX	03	Slurry Seal	21,941	$0.31	$6,802
2018	A01LX	04	Slurry Seal	10,133	$0.31	$3,141
2018	A02LX	01	Slurry Seal	33,525	$0.31	$10,393
2018	AH08LX	01	Slurry Seal	11,393	$0.31	$3,532
2018	AGLX	01	Slurry Seal	5,004	$0.31	$1,551
2018	TALX	01	Slurry Seal	3,470	$0.31	$1,076
2018	TALX	02	Slurry Seal	96,003	$0.31	$29,761
2018	TBLX	01	Slurry Seal	60,530	$0.31	$18,764
2018	TCLX	01	Slurry Seal	27,004	$0.31	$8,371
2018	TDLX	01	Slurry Seal	3,790	$0.31	$1,175
2018	TDLX	02	Slurry Seal	7,379	$0.31	$2,287
2018	TDLX	03	Slurry Seal	14,052	$0.31	$4,356
2018	TDLX	04	Slurry Seal	12,405	$0.31	$3,846
					2018 Total	$116,788
2020	R08LX	01	Slurry Seal	311,250	$0.31	$96,487
					2020 Total	$96,487
					TOTAL	$213,275

If the global maintenance and/or rehabilitation activities recommended in Table 2 are not completed, the localized maintenance activities identified in the Network Maintenance Report (Appendix 3) for that section should be done. Additionally, for those sections not listed in Table 2 as requiring global maintenance or rehabilitation, the localized maintenance activities outlined in the Network Maintenance Report should be completed. By completing the localized maintenance activities, pavement condition is improved, life is extended, deterioration is slowed and the length of time until major repair or rehabilitation is required is increased.

Figure LX-6. Five-Year Pavement Management Plan.
Lexington Airport

Drawing Date: July 2017





ACTION TIMING

- 2018
- 2019
- 2020
- 2021
- 2022

ACTION

- FOG SEAL
- SLURRY SEAL
- OVERLAY
- RECONSTRUCT
- ROUTINE MAINTENANCE

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INSPECTION SCHEDULE

To comply with the inspection schedule requirement of FAA Grant Assurance Number 11, a detailed visual inspection should be conducted every 3 years using the methodology described in ASTM D5430. The next scheduled detailed visual inspection should take place in 2020.

In addition, the FAA requires that a drive-by inspection be conducted monthly to detect unforeseen changes in pavement condition. The results of each drive-by inspection should be recorded and kept in a file. At a minimum, the date of the inspection and an indication of any maintenance performed since the last drive-by inspection should be recorded.