

STORM DRAIN RECOMMENDATIONS

CRITICAL STRUCTURES

Structures described as “Critical” consist of various inlets, junction boxes, pipe, and outfalls at various locations within the airport property. These structures are considered to be either unsafe, or in need of immediate attention, in order to reduce risk of permanent failure of the structure. Structures 1A, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15, 18, 22, & 23, are located within the airport’s OFA for Runway 18/36 and taxiway system. These structures are responsible for carrying storm water under the existing taxiways and runway, and therefore could create potential unsafe conditions for aircraft if not addressed. Structures 33, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, & 56, are located within the taxiway between Hangar B1 and Hangar B2. Since planes and aircraft operations are located in the vicinity of these structures the deficiencies should be addressed.

A description of recommended improvements for each structure and cost associated with the repair has been provided in Appendix “C” of this report. A brief summary of the estimated cost to repair and/or replace structures described as Critical is shown in Table 1.

CRITICAL STRUCTURES		
ID#	Drainage Structure Description	Estimate
1A	EARTHEN DIVERSION BERM	\$5,000.00
2, 3, & 4	Concrete Drop Inlet, 15" Concrete Pipe, and 15" Headwall	\$36,500.00
5, 6, & 7	Concrete Drop Inlet, 18" Concrete Pipe, and 18" Headwall	\$34,000.00
8, 9, & 10	Concrete Drop Inlet, 15" x 22" Corrugated Metal Pipe, and Buried Junction Box	\$38,500.00
11 & 12	18" Concrete Pipe with Headwall	\$68,450.00
15	48" Concrete Headwall	\$8,000.00
18	23" X 36" Concrete Arch Pipe (Beneath Runway)	\$93,000.00
22	26" x 44" Concrete Headwall	\$5,400.00
23	26" x 44" Concrete Headwall	\$5,400.00
33	12" PVC Storm Drain Pipe	\$3,800.00
45-56	Concrete Drop Inlet, 15" Concrete Pipe, and 15" Headwall	\$59,000.00
Sub-Total		\$357,050.00
Engineering at 20%		\$71,410.00
Total for Critical Structures		\$428,460.00

Table 1 (Approximate Cost to Repair or Replace Critical Structures)

NEED IMPROVEMENT STRUCTURES

Structures described as “Needs Improvement” consist of various inlets, junction boxes, pipes, and outfalls at various locations within the airport property. These structures at the time of inspection were found to be functioning properly, but were in need of minor maintenance or minor improvements. Structure 17, and 19 are located within the OFA of Runway 18/36. These structures are in need of basic maintenance in the form of backfilling minor washing in the area installing permanent vegetation. Structures 25, 30, 36, 38, and 43 are not located within OFA. These structures should be evaluated periodically to judge changes in conditions and if those changes require immediate attention. A description of possible solutions for each structure and cost associated with the repair has been provided in Appendix “D” of this report. A brief summary of the estimated cost to repair and/or replace structures described as Needs Improvement is shown in Table 1. A brief summary of the estimated cost is shown in Table 2.

NEEDS IMPROVEMENT		
ID#	Drainage Structure Description	Estimate
17	23" X 36" Headwall	\$1,500.00
19	23" X 36" Headwall	\$2,100.00
25	26" x 44" Headwall and Slope (Beyond Fence)	\$1,700.00
30	18" x 29" Outfall	\$1,600.00
36	Standard Yard Inlet	\$1,500.00
38	18" Concrete Headwall	\$700.00
43	18" Concrete Headwall	\$11,000.00
Sub-Total		\$20,100.00
Engineering at 20%		\$4,020.00
Total for Needs Improvement Structures		\$24,120.00

Table 2 (Approximate Cost to Repair or Replace Needs Improvement Structures)

SATISFACTORY STRUCTURES

Structures described as "Satisfactory" need not be considered for replacement at this time. These structures were in an acceptable operating condition at the time of this study but should be inspected annually and maintained as needed to prevent problems.