

ASSESSMENT OF ENVIRONMENTAL EFFECTS

**METROPOLITAN AIRPORTS COMMISSION
SEVEN-YEAR CAPITAL IMPROVEMENT PROGRAM
2008 - 2014**

BY

HNTB CORPORATION

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ASSESSMENT OF ENVIRONMENTAL EFFECTS

Metropolitan Airports Commission Seven-Year Capital Improvement Program 2008 - 2014

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ASSESSMENT OF ENVIRONMENTAL EFFECTS

Metropolitan Airports Commission Seven-Year Capital Improvement Program – 2008 - 2014

A. INTRODUCTION

This report is prepared in response to the requirements of Minnesota Statutes 1986, Chapter 473, as amended in 1988 and 1998. It presents an assessment of the environmental effects (AOEE) of projects in the Metropolitan Airports Commission (MAC) Seven-Year Capital Improvement Program (CIP) from 2008 to 2014 for each MAC airport. Under Minnesota law, the MAC is required to “examine the cumulative environmental effects at each airport of the projects at that airport (in the seven-year CIP), considered collectively.” Many of the projects in the CIP entail repair or rehabilitation of existing facilities. Such work would not affect the before/after usage of the facilities and as such would not add to, or subtract from, the cumulative environmental effects. The anticipated measurable effects during construction are discussed under Paragraph C.

The amended 1986 law also requires the preparation of an Environmental Assessment Worksheet (EAW) for projects that meet all of the following conditions:

- (1) The project is scheduled in the CIP for the succeeding calendar year (2008 in this CIP);
- (2) The project is scheduled to cost \$5 million or more at MSP or \$2 million or more at any other MAC airport;
- (3) The project involves the construction of: (i) a new or expanded structure for handling passengers, cargo, vehicles or aircraft; or (ii) a new runway or taxiway or the extension of an existing runway or taxiway.

Table 1 lists all projects included in the Seven-Year Capital Improvement Program for the years 2008 through 2014. An EAW, EA or EIS has been prepared for all projects scheduled for 2008 that meet the above 3 conditions for a mandatory EAW. These projects are presented in **Table 2**.

B. PROJECTS WITH POTENTIAL ENVIRONMENTAL EFFECTS

The social, economic and natural environment items included in an EAW that are potentially affected by projects to be implemented in 2008 are identified in **Table 2**. Those projects in the CIP that do not have a potential substantive effect on the environment upon implementation are so noted in **Table 1** (e.g., the repair, reconstruction or rehabilitation of pavement and buildings, and replacement of existing facilities). The notes in the table explain in more detail the type of work the project entails and why this type of project will not affect the environment. A description of each project in the years 2008 and 2009 is presented in Appendix A. Descriptions of projects expected to be implemented in 2010 through 2014 are preliminary, and only those that have potential substantive environmental effects are included in Appendix A.

TABLE 1
2008 - 2014 CAPITAL IMPROVEMENT PROGRAM

Note	Project	2008	2009	2010	2011	2012	2013	2014
MSP Runway 4/22 Development Program								
(1)	North Side Storm Sewer		\$4,300,000					
<i>Subtotal Runway 4/22 Development Program</i>			\$4,300,000					
MSP Noise Mitigation Program								
(1)	Residential Sound Insulation (60-64 2007 DNL)		\$13,900,000	\$17,000,000	\$17,000,000			
(1)	Residential Sound Insulation (60-64 2007 DNL) Pilot	\$3,200,000						
<i>Subtotal Noise Mitigation Program</i>		\$3,200,000	\$13,900,000	\$17,000,000	\$17,000,000			
MSP Taxiway C/D Complex Construction								
(1)	Taxiway C/D Complex	\$2,200,000	\$11,800,000					
<i>Subtotal Taxiway C/D Complex Construction</i>		\$2,200,000	\$11,800,000					
MSP Airfield Rehabilitation Program								
(2)	Airside Bituminous Rehabilitation	\$500,000	\$500,000	\$500,000				
(2)	Pavement Rehabilitation - Aprons			\$1,800,000	\$1,500,000	\$1,400,000		
(2)	Pavement Joint Sealing/Repair	\$500,000	\$500,000	\$500,000				
<i>Subtotal Airfield Rehabilitation Program</i>		\$1,000,000	\$1,000,000	\$2,800,000	\$1,500,000	\$1,400,000		
MSP Runway Rehabilitation Program								
(2)	Pavement Rehabilitation - Runway 12L/30R Seg. 2	\$26,700,000						
(2)	Pavement Rehabilitation - Runway 12R/30L Seg. 2							
<i>Subtotal Runway Rehabilitation Program</i>		\$26,700,000						
Lindbergh Terminal Rehabilitation and Development Program								
(2)	International Arrivals Facility	\$500,000						
<i>Subtotal Lindbergh Terminal Expansion and Rehabilitation Program</i>		\$500,000						
MSP Landside Rehabilitation & Repair Program								
(2)	Landside Pavement Rehabilitation	\$400,000	\$400,000	\$400,000				
(2)	Parking Structure Rehabilitation	\$3,000,000	\$3,000,000	\$3,000,000				
(4)	Terminal Modifications	\$2,000,000	\$2,000,000	\$2,000,000				
(4)	Building Exterior Modifications	-	-	-				
(4)	Terminal Electrical Modifications	-	-	-				
(4)	Terminal Mechanical Modifications	-	-	-				
(4)	Terminal Miscellaneous Modifications	-	-	-				
(2)	Humphrey Terminal & MSP Campus Mods	-	-	-				
<i>Subtotal Landside Rehabilitation and Repair Program</i>		\$5,400,000	\$5,400,000	\$5,400,000				
*\$2,000,000 to be used to fund the highest priority projects from these categories								
Reliever Airport Program								
Airlake								
(1)	South Building Area Development **	\$2,500,000						
(2)	Pavement Rehabilitation			\$200,000				
<i>Subtotal</i>		\$2,500,000		\$200,000				
**Funding for this project to be provided by others.								
Anoka County - Blaine								
(1)	Building Area Development - East Annex **				\$2,400,000			
(1)	Building Area Development - Xyite St. Relocation		\$1,000,000					
(1)	Building Area Development - West Annex **		\$850,000					
(2)	Pavement Rehabilitation			\$1,000,000	\$400,000			
<i>Subtotal</i>			\$1,850,000	\$1,000,000	\$2,800,000			
**Funding for this project to be provided by others.								
Crystal								
(2)	Alleyway Rehabilitation		\$350,000		\$550,000	\$300,000		
(4)	Obstruction Removals	\$320,000						
(2)	Pavement Rehabilitation			\$600,000				
(2)	Runway 14L/32R Reconstruction	\$1,800,000						
(2)	Runway 14R/32L Reconstruction			\$1,000,000				
<i>Subtotal</i>		\$2,120,000	\$350,000	\$1,600,000	\$550,000	\$300,000		
Flying Cloud								
(2)	Alleyway Rehabilitation		\$400,000		\$300,000			
(4)	Hangar/Building Removal		\$300,000					
(2)	Pavement Rehabilitation			\$700,000	\$1,000,000			
(2)	Runway 18/36 Reconstruction Seg. 3/Lighting							
(1)	Runway 10R/28L Widening/ Extension		\$11,200,000					
(1)	Runway 10L/28R Extension	\$900,000						
(1)	South Building Area Development **		\$7,000,000	\$3,000,000				
<i>Subtotal</i>		\$900,000	\$18,900,000	\$4,700,000	\$300,000			
**Funding for this project to be provided by others.								
Lake Elmo								
(1)	East Building Area Development **			\$2,300,000				
(2)	Pavement Rehabilitation	\$300,000	\$500,000		\$2,000,000			
(2)	Runway 14/32 Reconstruction					\$1,500,000		
(2)	Runway 4/22 Reconstruction					\$900,000		
(2)	East Side Parallel Taxiway					\$2,400,000		
<i>Subtotal</i>		\$300,000	\$500,000	\$2,300,000	\$2,000,000	\$1,500,000		
**Funding for this project to be provided by others.								
St. Paul								
(4)	Compass Calibration Pad			\$850,000				
(2)	Joint and Crack Repairs	\$100,000		\$100,000				
(4)	MAC Building Maintenance	\$200,000		\$200,000				
(1)	Runway Safety Area	\$10,700,000						
(2)	Pavement Rehabilitation	\$1,000,000	\$2,500,000	\$800,000	\$1,000,000			
<i>Subtotal</i>		\$12,000,000	\$2,500,000	\$1,950,000	\$1,000,000			
<i>Subtotal Reliever Airport Program</i>		\$17,820,000	\$24,100,000	\$11,750,000	\$6,650,000	\$2,700,000		
Reliever Airports Utility Extension Program								
Airlake								
(4)	Plane Wash & Restroom Facilities		\$200,000					
Lake Elmo								
(1)	Sanitary Sewer and Watermain Extensions					\$500,000		
Flying Cloud								
(1)	Sanitary Sewer and Watermain Extensions	\$4,300,000						
<i>Subtotal Reliever Airports Utility Extension Program</i>		\$4,300,000	\$200,000			\$500,000		

2008 - 2014 CAPITAL IMPROVEMENT PROGRAM

Note	Project	2008	2009	2010	2011	2012	2013	2014
MSP Miscellaneous Field and Runway Program								
(2) (3) (4)	Miscellaneous Airfield Construction	\$550,000	\$400,000	\$400,000				
	<i>Subtotal Miscellaneous Field and Runway Program</i>	<i>\$550,000</i>	<i>\$400,000</i>	<i>\$400,000</i>				
MSP Miscellaneous Landside Program								
(3)	Facilities Monitoring System	\$800,000						
(6)	MAC Cargo Buildings - Air Freight Facility				\$1,900,000			
(6)	MAC Cargo Buildings - Airline Belly Cargo Facility				\$3,600,000			
	<i>Subtotal Miscellaneous Landside Program</i>	<i>\$800,000</i>			<i>\$5,500,000</i>			
	<i>Subtotal 2010 Program</i>	<i>\$62,470,000</i>	<i>\$61,100,000</i>	<i>\$37,350,000</i>	<i>\$30,650,000</i>	<i>\$4,600,000</i>		
Post 2010 Program								
10 - Lindbergh Terminal								
	Lindbergh Terminal Sprinkler System							
(4)	Lindbergh Terminal	\$11,200,000						
(4)	Concourses C & D		\$8,600,000					
(4)	Landside Concessions Development	\$1,200,000						
(2)	Upgrade Mezzanine Restrooms to meet ADA Code	\$600,000						
(2)	Lindbergh Terminal Carpet Replacement	\$5,500,000						
(2)	Skyway HVAC		\$1,200,000					
(2)	Skyway Flooring Replacement		\$150,000					
(2)	Terminal Backlit Sign Replacements	\$1,600,000	\$1,650,000	\$1,700,000	\$1,800,000			
(2)	Commission Chambers Upgrade	\$550,000						
(2)	Tug Drive Floor Repair	\$1,900,000	\$2,000,000	\$1,000,000				
(2)	ADO Modifications	\$400,000						
(4)	Concourse C Elevator to D Street	\$400,000						
(2)	Food Courts Upgrade/Remodel	\$175,000						
(4)	Fiber Optic Cable Capacity/Reporting	\$2,000,000						
(4)	Open Architecture Building Automation (OABA)	\$1,800,000	\$1,800,000					
(2)	Elevator Modifications		\$1,250,000					
(4)	MAC Fibernet Mods - Plumbing	\$600,000						
(2)	Electrical Infrastructure Rehab Program	\$2,700,000	\$2,400,000	\$1,800,000				
(4)	Art in the Terminal	\$500,000						
(4)	Automated External Defibrillator Monitoring System	\$400,000						
(4)	Checkpoint 5 Elevator/Escalator/Employee Checkpoint	\$3,700,000						
(4)	Electric Video Information Display System Installation	\$450,000						
(4)	ADO Mechanical Room Relocation				\$8,200,000			
(4)	Lindbergh Terminal Masterclock System	\$450,000						
(2)	PSA Breakroom Remodel	\$100,000						
(2)	Meeter/Greeter/Freedom of Speech Booth Upgrades	\$225,000						
(4)	Jet Bridge Card Reader Installation *			\$2,500,000				
(2)	Ticketing Level Floor Replacement			\$4,000,000				
(4)	Lindbergh Terminal In-line Baggage Screening	\$16,000,000		\$12,000,000				
(2)	Concourse E and C Renovations						\$14,100,000	
(2)	Ticket Lobby Modifications						\$2,600,000	
(2)	L Terminal Bag Claim/Make-up Area/Rehab						\$8,000,000	
(4)	Curbside Check-In Expansion						\$2,900,000	
(6)	Concourse G Extension - Site Preparation	\$24,000,000	\$21,000,000					
(1)	Concourse G Extension						\$113,400,000	
(3)	Terminal Miscellaneous Modifications				\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000
(6)	Concourse G/H Tram			\$5,000,000	\$170,000,000			
(4)	D Pod Baggage Conveyor	\$10,000,000						
(5)	Concessions Revenue Development/Upgrades	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000
	<i>Subtotal Lindbergh Terminal</i>	<i>\$86,650,000</i>	<i>\$40,250,000</i>	<i>\$28,200,000</i>	<i>\$209,800,000</i>	<i>\$2,200,000</i>	<i>\$115,600,000</i>	<i>\$2,200,000</i>
13 - Energy Management Center								
(4)	Energy Savings Projects	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000			
(4)	Chilled Water Distribution Improvements	\$2,500,000						
	<i>Subtotal Energy Management Center</i>	<i>\$3,500,000</i>	<i>\$1,000,000</i>	<i>\$1,000,000</i>	<i>\$1,000,000</i>			
21 - Field and Runway								
(4)	MSP Fuel Consortium Modifications*	\$570,000						
(4)	ALEC North Relocation				\$15,000,000			
(4)	Runway 30R MALSF		\$1,700,000					
(2)	Runway 30L EMAS Replacement	\$3,000,000						
(2)	Miscellaneous Field and Runway				\$400,000	\$400,000	\$400,000	\$400,000
(5)	Perimeter Fence/Gate Barrier System	\$6,400,000	\$6,300,000	\$3,000,000				
(5)	Baggage Quarantine Building		\$1,100,000					
(5)	SIDA Incurison Upgrades			\$750,000				
(2)	Sanitary Sewer/Manhole Repair - Runway 12L	\$600,000						
(6)	Taxiway C Extension			\$5,500,000				
(4)	Fuel System Direct Connection*			\$1,500,000				
(5)	Post Road Fuel Farm Security Improvements*	\$1,000,000						
	<i>Subtotal Field and Runway</i>	<i>\$11,570,000</i>	<i>\$9,100,000</i>	<i>\$10,750,000</i>	<i>\$15,400,000</i>	<i>\$400,000</i>	<i>\$400,000</i>	<i>\$400,000</i>
			*Self-liquidating project					
23 - Control Tower								
(6)	Relocate Air Traffic Control Tower				\$5,800,000	\$24,000,000	\$30,000,000	
	<i>Subtotal Control Tower</i>				<i>\$5,800,000</i>	<i>\$24,000,000</i>	<i>\$30,000,000</i>	
26 - Terminal Roads/Landside								
(2)	Tunnel/Bridge Rehabilitation	\$100,000	\$100,000	\$100,000	\$100,000	\$500,000	\$100,000	\$100,000
	<i>Subtotal Terminal Roads/Landside</i>	<i>\$100,000</i>	<i>\$100,000</i>	<i>\$100,000</i>	<i>\$100,000</i>	<i>\$500,000</i>	<i>\$100,000</i>	<i>\$100,000</i>
31 - Parking								
(2)	Parking Structure Rehabilitation				\$3,000,000	\$3,500,000	\$3,500,000	\$3,500,000
(4)	Humphrey Ramp VMS/Revenue Control System Upgrade	\$1,600,000						
(2)	Humphrey GTC Core Building Modifications	\$850,000						
(1)	Humphrey Orange Ramp East/North Addition				\$5,700,000	\$25,800,000		
(1)	Humphrey Purple Ramp East Addition						\$4,800,000	\$21,700,000
(4)	Lindbergh Guaranteed Parking Control	\$180,000						
(4)	Lindbergh Terminal - New Parking Entrance/Transit Gate		\$200,000					
(4)	AVI Reader Replacement	\$1,100,000						
(4)	Lindbergh/Humphrey Vehicle Detection/Counting	\$350,000						
(2)	Building B Parking Ramp Rehab.	\$1,300,000						
	<i>Subtotal Parking</i>	<i>\$5,380,000</i>	<i>\$200,000</i>	<i>\$0</i>	<i>\$8,700,000</i>	<i>\$29,300,000</i>	<i>\$8,300,000</i>	<i>\$25,200,000</i>
36 - Humphrey Terminal								
(2)	Humphrey Terminal Roof Icing Mitigation	\$700,000						
(6)	Humphrey Terminal Expansion - Skyway		\$4,000,000		\$83,500,000			
(1)	Humphrey Terminal Expansion - North Expansion			\$7,500,000	\$48,000,000			
(4)	GSE Building Relocation				\$5,500,000			
(3)	Fuel Farm Lease Extinguishment	\$3,500,000						
(1)	Humphrey Fuel Facility Relocation				\$5,900,000			
(4)	Ground Transportation Improvements			\$1,100,000				
(1)	Auto Rental Facilities			\$3,500,000				
(2)	Humphrey Jetbridge Replacement - 6&7			\$1,600,000				
	<i>Subtotal Humphrey Terminal</i>	<i>\$4,200,000</i>	<i>\$4,000,000</i>	<i>\$13,700,000</i>	<i>\$122,900,000</i>			
39 - Public Areas/Roads								
(1)	Airport Lane/34th Ave. Access Reconfiguration			\$800,000				
(2)	Landside Pavement Rehabilitation				\$400,000	\$400,000	\$400,000	\$400,000
(4)	Inbound/Outbound Roadway Monument Sign	\$250,000						
(4)	VMS Billboard Installation		\$2,800,000					
(2)	Taxi Lot VMS Replacement	\$400,000						
	<i>Subtotal Public Areas/Roads</i>	<i>\$650,000</i>	<i>\$2,800,000</i>	<i>\$800,000</i>	<i>\$400,000</i>	<i>\$400,000</i>	<i>\$400,000</i>	<i>\$400,000</i>
63 - Police								
(4)	Secured Access/CCTV Program	\$650,000						

2008 - 2014 CAPITAL IMPROVEMENT PROGRAM

Note	Project	2008	2009	2010	2011	2012	2013	2014
(6)	Public Safety Building	\$3,800,000	\$31,300,000					
	<i>Subtotal Police</i>	<i>\$4,600,000</i>	<i>\$31,300,000</i>					
66 - Fire								
(2)	ARFF Station #2 Roof Replacement	\$300,000						
	<i>Subtotal Fire</i>	<i>\$300,000</i>						
76 - Environment								
(2)	Stormwater Pond Dredging	\$3,000,000						
(4)	ANOMS System Upgrade	\$500,000						
	<i>Subtotal Environment</i>	<i>\$3,500,000</i>						
Reliever Airports								
81 - St. Paul								
(6)	Holman Terminal Subdrain		\$600,000					
(2)	Float Plane Stairway		\$75,000					
(2)	Joint and Crack Repairs					\$100,000		\$100,000
(5)	MAC Building Maintenance					\$200,000		\$200,000
	<i>Subtotal St. Paul</i>		<i>\$675,000</i>			<i>\$300,000</i>		<i>\$300,000</i>
	<i>Subtotal Post 2010 Program</i>	<i>\$120,650,000</i>	<i>\$89,425,000</i>	<i>\$54,550,000</i>	<i>\$364,100,000</i>	<i>\$57,100,000</i>	<i>\$154,800,000</i>	<i>\$28,600,000</i>
	ANNUAL TOTAL - MAC PROJECTS	\$183,120,000	\$150,525,000	\$91,900,000	\$394,750,000	\$61,700,000	\$154,800,000	\$28,600,000

NOTES:

- (1) A project that has potential substantive environmental effects.
- (2) A repair, rehabilitation or reconstruction project that does not physically alter the original size (the project does not have substantive environmental effects; an EAW or EIS is not required).
- (3) An electrical or mechanical device that monitors, indicates or controls existing conditions (the project does not have substantive environmental effects; an EAW or EIS is not required).
- (4) A structural, mechanical or electrical device and/or modification of an existing system or structure that does not significantly increase size or passenger capacity (the project does not have substantive environmental effects; an EAW or EIS is not required).
- (5) A project that consists of security enhancements, facility maintenance or upgrades (the project will not have substantive environmental effects; an EAW or EIS is not required).
- (6) A new, replacement or expansion project that does not have substantive environmental effects; an EAW or EIS is not required.

Table 2
Summary Environmental Assessment of 2008 Projects in the MAC 2008-2014 Capital Improvement Program that require an EAW or EIS

Project Description	Are the Effects of the Project Addressed in an Approved EAW, EA or EIS?	Environmental Categories Affected by the Project													
		Air Quality	Compatible Land Use	Fish, Wildlife and Plants	Floodplains and Floodways	Hazardous Materials, Pollution Prevention and Solid Waste	Historical, Architectural, Archaeological and Cultural Resources	Light Emissions and Visual Effects	Parks, Recreation Areas and Trails	Noise	Water Quality (Storm, Waste and Ground Water)	Wetlands	Infrastructure and Public Services	Farmland	Erosion and Sedimentation
MSP PROJECTS															
Taxiway C/D Complex	Yes 2010 LTCP FEIS, May 1998	No effect	No effect	No effect	No effect	No effect	No effect	No effect	No effect	No effect	Effect	No effect	No effect	No effect	No effect
Concourse G Extension – Site Preparation	Yes 2015 Terminal Expansion Project Draft EA, Dec. 2005	Effect	No effect	No effect	No effect	Effect	No effect	No effect	No effect	Effect	Effect	No effect	No effect	No effect	No effect
RELIEVER AIRPORT PROJECTS															
Airake															
South Building Area Development	Yes South Building Area Development Project EAW, Jan. 1999	No effect	No effect	No effect	No effect	No effect	No effect	No effect	No effect	No effect	Effect	No effect	No effect	No effect	No effect
St. Paul															
Runway Safety Area	Yes Perimeter Dike and Runway Safety Area Improvements Project EA, Jan. 2006	No effect	No effect	No effect	No effect	No effect	No effect	No effect	No effect	No effect	No effect	No effect	No effect	No effect	No effect

C. EFFECTS DURING CONSTRUCTION

Typical mitigation measures will be used during construction to minimize potential adverse environmental effects caused by noise, dust, erosion, runoff, etc. Since the environmental effects of construction are temporary, they are not included in the cumulative, long-term effects of projects in the CIP.

It is recognized that the planned rehabilitation of MSP Runway 12L/30R requires rerouting of air traffic for temporary periods. This project does not meet the requirements of the amended 1986 law, however MAC recognizes that the rerouting of aircraft traffic will cause temporary changes in over flight noise patterns for different communities. It is anticipated that during the reconstruction of Runway 12L/30R, aircraft operations will be redistributed to other active runways at MSP. This will result in increased arrival and departure operations on Runways 12R/30L, 4/22 and 17/35 for all runway ends. In addition, MAC has implemented feasible noise control/reduction measures during the construction of these runway segments including:

- 1) Scheduling construction for mid-April to mid-August
- 2) Balancing the effects of night construction noise with aircraft operating noise.
- 3) Enforcing stringent penalties on contractors for work delays.
- 4) Departure procedures that minimize the noise effect of aircraft operations.

Although this project will modify runway use at MSP, the temporary nature and short duration of construction activities results in no long term substantive effects beyond the construction period and therefore does not require an EAW. A detailed discussion of the potential environmental effects of this project is presented in Appendix B.

D. CUMULATIVE ENVIRONMENTAL EFFECTS

It is important to note that an EAW, EA or EIS requires an assessment of the potential environmental effects of all past, present and reasonably foreseeable future actions/projects that would have environmental effects that would be cumulative with the proposed project.

MSP Projects

The effects of CIP projects in the MSP 2010 LTCP were addressed in the Dual Track Airport Planning Process Final EIS. This document assessed the cumulative environmental effects of the MSP 2010 LTCP and 2020 Concept Plan. The 2010 LTCP is the first-phase implementation of the 2020 Concept Plan; it includes the new north-south runway and related projects, and interim improvements to the Lindbergh and HHH terminals and parking. The Final EIS was distributed and made available to affected agencies and the public for review and comment on its adequacy on May 7, 1998. The FAA determined in its September 23, 1998 Record of Decision that the Final EIS, together with supporting documents and responses to comments on its adequacy, met the environmental review reporting requirements of the National Environmental Policy Act (NEPA) for projects in the MSP 2010 LTCP. The Minnesota Environmental Quality Board (EQB) found the Final EIS to be adequate in terms of compliance with the environmental review requirements of the state of Minnesota on October 26, 1998.

The CIP also includes projects that were not included in the Dual Track Final EIS. The projects with potential substantive environmental effects are included in the 2015 Terminal Expansion Project Draft Environmental Assessment (EA). Minnesota Rules, Chapter 4410.1300, allow a Federal environmental

assessment (EA) to substitute for an EAW. A 2015 Terminal Expansion Project Draft EA that included Phases 1 and 2 of the 2020 Development Program was prepared by the MAC and circulated for comment in July 2005. The MAC is the Responsible Government Agency (RGU) for the State process and in December 2005, the MAC determined that the potentially significant environmental effects of the 2015 Terminal Expansion Project had been addressed and the preparation of an EIS was therefore not needed. The 2015 Terminal Expansion Project Draft EA assessed the cumulative environmental effects for past, present and future projects at MSP, which included the 2008 - 2014 CIP projects that would have cumulative effects.

The major environmental impacts of projects planned for implementation at MSP are air quality, noise, and water quality. Projects that affect aircraft operations can affect air quality and noise. Projects that create additional impervious surface (runoff) or increase the generation of sewage/wastewater or the use of glycol in deicing aircraft can affect water quality, including the groundwater and the discharge to receiving waters.

The Taxiway C/D Complex project will result in additional impervious surface and therefore additional storm water runoff, which will be accommodated by the existing detention facilities. The Humphrey Parking Expansion project will result in an estimated additional emission of 60 tons of carbon monoxide (CO) annually, which is minimal since it is less than ½ of 1% of the existing annual emissions of CO (approximately 20,670 tons). The project, in conjunction with the proposed expansion of the Humphrey Terminal, will also result in additional traffic on 34th Avenue South and congestion at the intersection with Airport Lane. The Airport Lane/34th Avenue Access Reconfiguration project will mitigate this impact. The parking expansion and Airport Lane reconfiguration will not have a significant effect on surface water runoff due to the fact that these projects are being constructed on existing impervious surfaces.

The cumulative effects of the MSP projects are as follows. The forecast of operations for the year 2015 in the 2015 Terminal Expansion Project Draft EA was the basis for determining the cumulative air emissions and noise values contained in the Draft EA for all past, present and known future projects at MSP. The primary pollutant emission of concern from vehicular air and ground traffic is CO since the Twin Cities Metropolitan Region is a designated maintenance area for CO. CO emissions would increase compared to existing CO emissions. However, the 2015 forecast of operations is the same with the proposed projects as without the proposed projects (no action). Therefore, because delay levels at terminal gates would be greater under no action, the proposed projects would emit less CO in 2015 than no action. Also, there would be slightly fewer persons adversely affected by aircraft noise in 2015 compared to no action (primarily due to changes in aircraft type).

The four major watersheds on MSP property cover approximately 2,700 acres, of which approximately 1,400 acres are impervious. Surface water discharges to the airport storm sewer system consist primarily of storm water run-off. This storm water may come into contact with aircraft deicing fluids (ADF), pavement deicing chemicals, sand, and the residual effects of any unwanted releases (petroleum or otherwise) that have the potential to impact the storm water. The primary pollutant of concern is the carbonaceous biochemical oxygen demand (CBOD5) that is exerted on the receiving waters by the glycol component found in ADFs. The airport has a National Pollutant Discharge Elimination System (NPDES) Permit that regulates the discharge of CBOD5 to the receiving waters.

Over the last 14 years the airport has invested millions of dollars in capital improvements and best management practices to help minimize the impact of airport operations on the quality of storm water discharge. The improvements include plug and pump contained deicing locations, dedicated deicing pads, contained snow melters, glycol recovery vehicles, state of the art deicing equipment, pavement brooming equipment, storm water retention ponds, new glycol management facility, elimination of urea

usage, and other measures to reduce the impacts of airport operations on the receiving waters. These efforts have helped to achieve over 80% reduction in CBOD5 discharge to the receiving waters.

The proposed CIP projects would have limited impact on surface water discharges from MSP. The various project sites are located primarily on previously developed, impervious areas. There are less than three acres of pervious area that would be affected. This new impervious area is negligible compared to the 1,400 acres of existing impervious area at MSP.

The proposed projects should have no impact on the groundwater or the hydrogeologic conditions at MSP. Construction activity related to the projects is not anticipated to occur at depths that would penetrate the Glenwood Shale confining layer. If in fact construction is required to penetrate the confining layer, engineered controls would be used to re-establish existing confining conditions (thus preventing vertical migration of groundwater) and either contain or divert groundwater flow in the immediate area. It should be noted that there are no known groundwater impacts in the area of the two listed projects. This may have minor hydrogeologic effects on the local groundwater, but it is not expected to significantly impact the hydrogeologic conditions at MSP. These construction practices have been employed successfully during past construction projects at MSP.

It should be noted that the expansion of the terminals would require an expansion of the existing fuel hydrant system. Although this would not affect the groundwater, it does create a potential source of groundwater impacts should the hydrant system have an unwanted release. Leak detection equipment, system maintenance procedures, and best management practices currently employed with the MSP hydrant system would be applied to the new system to ensure that the potential for undesired releases is minimized.

Wastewater discharges from MSP are conveyed to the MCES Metro Plant on Childs Road. This plant has a design capacity of 250 million gallons per day (MGD). The proposed projects are expected to increase passenger loads by approximately 50% between 2004 and 2015. This passenger growth will be accompanied by approximately an equivalent increase in wastewater discharges.

Wastewater is discharged to the Metro Plant through the MCES sewer interceptor system. Discharges from MSP are conveyed to the interceptor system through three different sewer systems. The majority is discharged from the airport to a tunnel near the Mississippi River that discharges into the interceptor system. A small volume of wastewater is discharged into the City of Minneapolis sewer system prior to reaching the interceptors. Wastewater from the south west portion of MSP (Cargo operations, Humphrey Terminal, Signature Executive, etc.) is discharged through the City of Richfield sewer system prior to reaching the MCES interceptors.

The estimated 50% increase in passenger loads is predicted to increase the daily sanitary discharge volume by approximately 0.35 MGD. This increase would be conveyed through the "tunnel" and Richfield systems. Assuming a 2.5 peak loading factor, this would amount to a peak addition of approximately 37,000 gallons per hour. Although this increase in loading is not expected to be an issue with the Metro Plant's total capacity (this increase amounts to less than 0.2% of its daily treatment capacity), there could be potential issues with the wet-weather conveyance capacity of the interceptor system from other municipal sources. The MCES indicated through conversations with Liesch Associates that there is sufficient dry-weather capacity in the MCES interceptor system to handle the proposed increase in flow (see discussion below regarding wet-weather capacity). In addition, the Richfield system is oversized to provide options for the City of Bloomington to divert their flows to the Metro Plant (via the Richfield system) if their conveyance to the Seneca Treatment Facility is obstructed. Recent upgrades to the Bloomington conveyance system have made the possibility of Bloomington utilizing the Richfield system unlikely. Therefore, the Richfield system should have adequate capacity.

Currently, the City of Minneapolis and the MCES have been working diligently to reduce the combined sewer overflow (CSO) problems that exist within the sanitary sewer network. Due to old infrastructure in and around the city, certain storm sewers are conveyed into the sanitary system, which can overwhelm the system and cause spilling out into the Mississippi River during significant precipitation events. Any additional wastewater conveyed through the system during a potential CSO condition will add to the total volume of flow and therefore potentially increase the frequency of CSOs. Obviously this problem is one that any amount of growth in areas served by this interceptor will exacerbate; therefore it is not an issue unique to airport growth, but nonetheless it is an issue and should be considered for future planning purposes.

Note that there may be MAC-owned sanitary sewer infrastructure upgrades required to convey the higher volume of wastewater from the Lindbergh and/or Humphrey Terminals (upstream of the “tunnel” and Richfield systems), regardless of whether the proposed projects are implemented. After the development decisions have been made, the existing capacity of the MAC-owned sanitary sewer system should be evaluated to determine where and when capacity limitations may be encountered.

Anoka County – Blaine Reliever Airport

A Final EIS was prepared and approved by the MAC and FAA in January 2003, which included the East and West Annex Building Area projects. The projects will affect water quality and wetlands. There will be increased impervious surface resulting in increased storm water runoff, which will be accommodated by the construction of detention ponds. Affected wetlands will be replaced in accordance with state and federal regulations. Both of these projects will proceed only if funding from sources other than MAC can be found.

Airlake Reliever Airport Projects

An EAW was prepared for the Airlake Airport South Building Area Development Project in January 1999. The project will affect water quality. There will be increased impervious surface resulting in increased storm water runoff, which will be accommodated by the construction of a detention pond. This project will proceed only if funding from sources other than MAC can be found.

Lake Elmo Reliever Airport Projects

An EAW was prepared for the Lake Elmo Airport East Building Area Development in October 2001. The CIP projects will affect water quality, farmland, wetlands and public infrastructure. There will be increased impervious surface resulting in increased storm water runoff, which will be accommodated by the existing detention facilities. Approximately 32 acres of farmland will be removed, 0.016 acres of a 3.30-acre Type 3 (small, shallow) wetland will be filled, and a new access road will be constructed to serve the new building area tenants. This project will proceed only if funding from sources other than MAC can be found.

Flying Cloud Reliever Airport Projects

A Final EIS was prepared and approved by the MAC and FAA in June 2004, which included the Runway 10R/28L Widening/Extension and South Building Area Development projects. The projects will affect water quality, land use, noise and air quality; however, the effects do not exceed state and federal standards or thresholds. Approximately 258 acres of land have been acquired to prevent development incompatible with the operation of the airport. To improve airfield safety, 11 historic hangars will be demolished. In February 2006 the Minnesota Environmental Quality Board (EQB) determined that the FEIS was adequate in accordance with Minnesota law and EQB rules. This project will proceed only if funding from sources other than MAC can be found.

St. Paul Downtown Reliever Airport Projects

A Final EA was prepared for the Perimeter Dike and Runway Safety Area Improvements Projects in January 2006. The Perimeter Dike project is under construction. The Runway Safety Area Improvements project, which includes the installation of an Engineered Material Arresting System (EMAS) at both ends of Runway 14/32, the relocation of the Runway 32 localizer antenna, and minor modifications to some Runway 14 instrument landing system aids, will not have substantive effects on the environment.

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APPENDIX A

Description of Projects in the 2008 – 2014 Capital Improvement Program

Appendix A describes each project in the years 2008 and 2009 of the 2008-2014 Capital Improvement Program (CIP). Descriptions of projects expected to be implemented in 2010 and later are preliminary, and only those that have potential substantive environmental effects are included in this appendix. The general locations of MSP projects that have substantive environmental effects are shown on **Figure A-1**.

Minneapolis - St. Paul International Airport

Projects with Potential Environmental Effects 2008-2014

2008 Capital Improvement Projects

- A Taxiway C/D Complex
 - B Concourse G Extension - Site Preparation
- Residential Sound Insulation (Inside 2007 DNL 60-64 Noise Contour) Pilot*

2009 Capital Improvement Projects

- A Taxiway C/D Complex
 - B Concourse G Extension - Site Preparation
 - C North Side Storm Sewer
 - D Humphrey Terminal Expansion - Skyway (Design Only)
- Residential Sound Insulation (Inside 2007 DNL 60-64 Noise Contour)*

2010 Capital Improvement Projects

- D Humphrey Terminal Expansion - North Expansion (Design Only)
 - E Taxiway C Extension
 - F Auto Rental Facilities (Design Only)
 - G Airport Lane/34th Ave. Access Reconfiguration
- Residential Sound Insulation (Inside 2007 DNL 60-64 Noise Contour)*

2011 Capital Improvement Projects

- D Humphrey Terminal Expansion - Skyway and North Expansion
 - H Humphrey Parking Ramp Addition - Orange Ramp
 - I Relocate Air Traffic Control Tower
- Residential Sound Insulation (Inside 2007 DNL 60-64 Noise Contour)*

2012 Capital Improvement Projects

- H Humphrey Parking Ramp Addition - Orange Ramp
- I Relocate Air Traffic Control Tower

2013 Capital Improvement Projects

- B Concourse G Extension
- H Humphrey Parking Ramp Addition - Purple Ramp
- I Relocate Air Traffic Control Tower

2014 Capital Improvement Projects

- H Humphrey Parking Ramp Addition - Purple Ramp



Figure A-1

2008 Capital Improvement Program

2010 Program Projects

Noise Mitigation Program

Residential Sound Insulation (60-64 2007 DNL) Pilot **\$3,200,000**

There will be a series of projects to provide noise mitigation for single family residential houses within the certified 2007 DNL 60-64 noise contour. The mitigation will consist of a mechanical package that will provide air conditioning for homes that do not have air conditioning. Residential homeowners would be subject to a copay based on the following percentages: 64 DNL – 10%, 63DNL – 20%, 62 DNL – 30%, 61 DNL – 40%, 60DNL – 50%. Prior to proceeding with this program, a pilot program will be rolled out. The pilot program will be used to help determine manageable production goals for the program and to help determine out year project budgets. The initiation of this project is subject to the outcome of pending litigation.

Taxiway C/D Complex Construction (Project A in Figure A-1)

Taxiway C/D Complex **\$2,200,000**

This project is the fourth phase of a multi-phase program to reconstruct and reconfigure Taxiways C and D between Runway 12L/30R and Runway 12R/30L. This project provides for the reconstruction of pavement bounded by new alignments of Taxiways C, D, P and Q. This project is also shown on attached Figure A-2.

Airfield Rehabilitation Program

Airside Bituminous Rehabilitation **\$500,000**

An ongoing program to construct or reconstruct bituminous pavements within the Air Operations Area. Inspection of taxiway pavements and other airfield areas will be made to determine whether or not a bituminous repair project is required.

Pavement Joint Sealing **\$500,000**

An ongoing program to provide for the resealing of joints in existing concrete pavements. The project also provides for limited crack and surface repairs. This year's project is located at the east and west ends of Runway 12L/30R.

Runway Rehabilitation Program

Pavement Rehabilitation – Runway 12L/30R Seg. 2 **\$26,700,000**

This project provides for the reconstruction of the middle section of Runway 12L/30R located between Runway 4/22 and Taxiway P3 as well as the middle segment of Taxiway P and associated taxiway connectors. Reconstruction of two separate segments has been completed in previous years with Segment 2 being the final section of pavement requiring reconstruction.

Terminal Rehabilitation & Development Program

International Arrivals Facilities **\$500,000**

This project provides for rehabilitation of the International Arrivals Facilities in the Lindbergh terminal to include the installation of a new paging system and the modification of three Customs Border Patrol offices.

Landside Rehabilitation & Repair Program

Landside Pavement Rehabilitation **\$400,000**

An ongoing program to reconstruct the airport's roadways and parking lots. A specific project has not been identified at this time. Pavements will be evaluated in the spring of 2008 to determine whether a pavement repair project is needed.

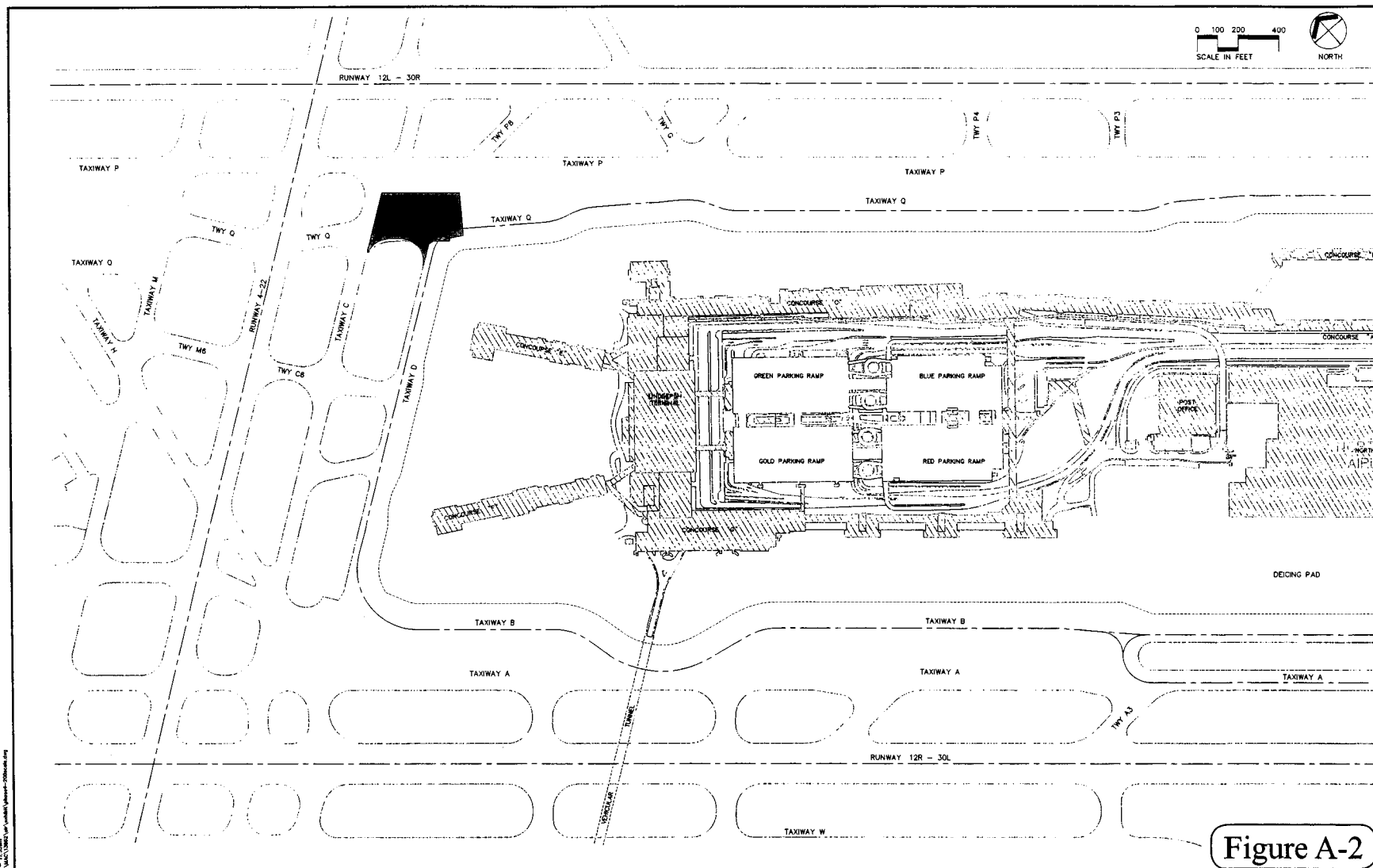


Figure A-2

DATE: 04/10/13
 TIME: 10:50 AM
 PROJECT: MSP AIRPORT TAXIWAY C-D COMPLEX PHASE 4

NO.	DATE	BY	DESCRIPTION OF REVISIONS

DESIGNED	
DRAWN	
CHECKED	

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

 LIC. NO. _____

TKDA
 ENGINEERS-ARCHITECTS-PLANNERS

Metropolitan Airports Commission
 GENERAL OFFICES
 6040-28TH AVENUE SOUTH
 MINNEAPOLIS, MINN. 55430

LOCATION PLAN		COM. NO.	MSP
TAXIWAY C-D COMPLEX - PHASE 4		DRAWING NO.	PH4

Parking Structure Rehabilitation

\$3,000,000

An ongoing program to maintain the integrity of the airport's multi level parking structures. A "Condition Assessment and Management Program Report" was completed in 2007 that summarizes the condition of the five existing parking structures and provides recommendations for repairs and maintenance. Projects typically include concrete repair, joint sealant replacement, expansion joint repairs, concrete sealing and electrical improvements.

Terminal Modifications

\$2,000,000

Each year, MAC staff compiles a list of "maintenance" projects that are beyond the capability of the MAC's maintenance staff. These projects are then prioritized and completed either as a series of contracts or as purchase orders. A list was compiled for 2007 and any projects that did not fit within the budget will be carried over into 2008. New projects will be discussed in early 2008.

Summarized below are the categories of the projects which are included in the Terminal Modifications program:

Building Exterior Rehabilitation

*

This is a continuation of the program to rehabilitate the exterior of the Lindbergh Terminal and other MAC buildings including roof and curtain wall rehabilitation.

Terminal Electrical Modifications

*

An ongoing program to address electrical issues in the terminals due to age and deterioration of the existing systems or modifications necessary for improved reliability.

Terminal Mechanical Modifications

*

An ongoing program to address mechanical issues in the terminals due to age and deterioration of the existing systems or modifications necessary for improved reliability.

Terminal Miscellaneous Modifications

*

An ongoing program to update and remodel areas within the terminals to keep abreast with changing requirements. This may be accomplished through a series of small individual projects to meet the requirements of the various tenants or may be consolidated into a single project.

Humphrey Terminal & MSP Campus Modifications

*

An ongoing program to modify or remodel areas within the West Terminal Complex, the Humphrey Terminal and other facilities around the MSP Campus to meet the needs of the various tenants/general public/MAC departments utilizing the facilities

*Historically, projects have been defined for each of these five categories. With reduced dollars available to fund non-revenue generating projects, a total dollar allocation of \$2,000,000 has been allocated to fund the highest priority projects within any of these project categories.

Reliever Airport Program

Airlake

South Building Area Development (Figure A-3)

\$2,500,000 **

This project provides for the installation of sanitary sewer and water main including a stand alone restroom facility and fire protection hydrant line, and alley construction including aggregate base and bituminous. The project also includes paving a section of 225th Street that will then connect to Cedar Avenue.

** Funding for this project to be provided by others.

SOUTH BUILDING AREA DEVELOPMENT AIRLAKE AIRPORT

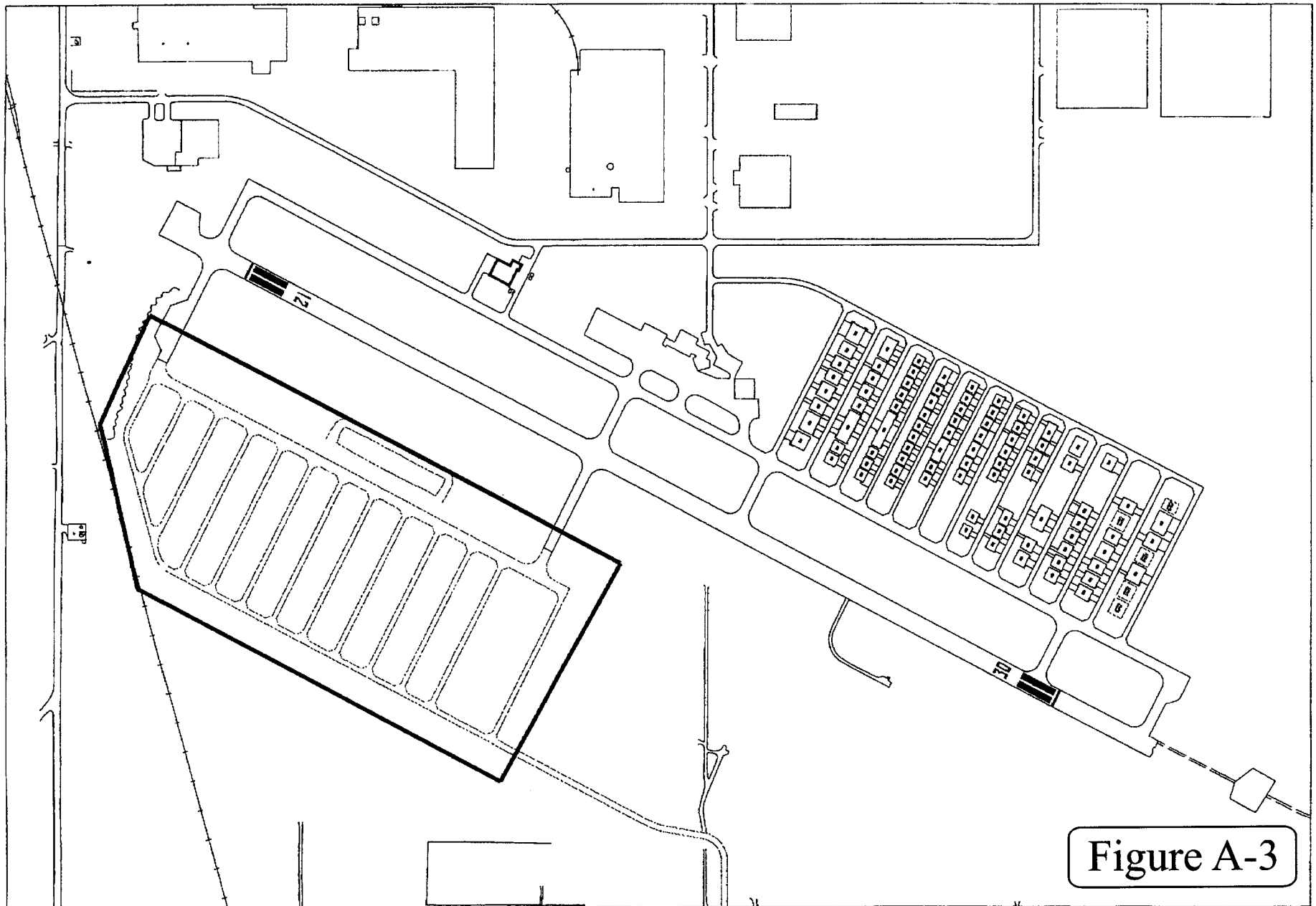


Figure A-3

Crystal

Obstruction Removals

\$320,000

This project includes removal of trees that have been determined through location surveys to be obstructions.

Runway 14L/32R Reconstruction

\$1,800,000

This project provides for the reconstruction of Runway 14L/32R and segments of the Taxiway E connectors within the runway safety area with new bituminous pavement and subgrade correction.

Flying Cloud

Runway 10L/28R Extension

\$900,000

This project includes the extension of the north parallel runway from 3,600 to 3,900 feet.

Lake Elmo

Pavement Rehabilitation

\$300,000

An ongoing program to rehabilitate aircraft operational areas (runways, taxiways, aprons) through bituminous overlays, seal coats, or in some instances, reconstruction, to restore the surfaces to a smooth, even condition and improve overall operating conditions. This year's project will include the rehabilitation of taxiway connectors to Runway 14/32.

St. Paul

Joint and Crack Repairs

\$100,000

The pavement subgrade at the St. Paul Downtown Airport is extremely poor. An annual pavement joint and crack repair program will therefore be initiated to maintain pavement strength and pavement life.

MAC Building Maintenance

\$200,000

An ongoing program to provide for facility modifications to ensure continued efficient operation of buildings or modifications necessary to meet the requirements of the tenants.

Runway Safety Area (Figure A-4)

\$10,700,000

This project is the third and final stage of safety area improvements at St. Paul. This year's project includes the installation of an Engineered Material Arresting System (EMAS) at both ends of Runway 14/32, the relocation of the Runway 32 localizer antenna, and minor modifications to some Runway 14 MALSR towers.

Pavement Rehabilitation

\$1,000,000

An ongoing program to rehabilitate aircraft operational areas (runways, taxiways, aprons) through bituminous overlays, seal coats, or in some instances, reconstruction, to restore the surfaces to a smooth, even condition and improve overall operating conditions. This year's project will include the reconstruction of pavement and subbase on segments of Taxiways D and N.

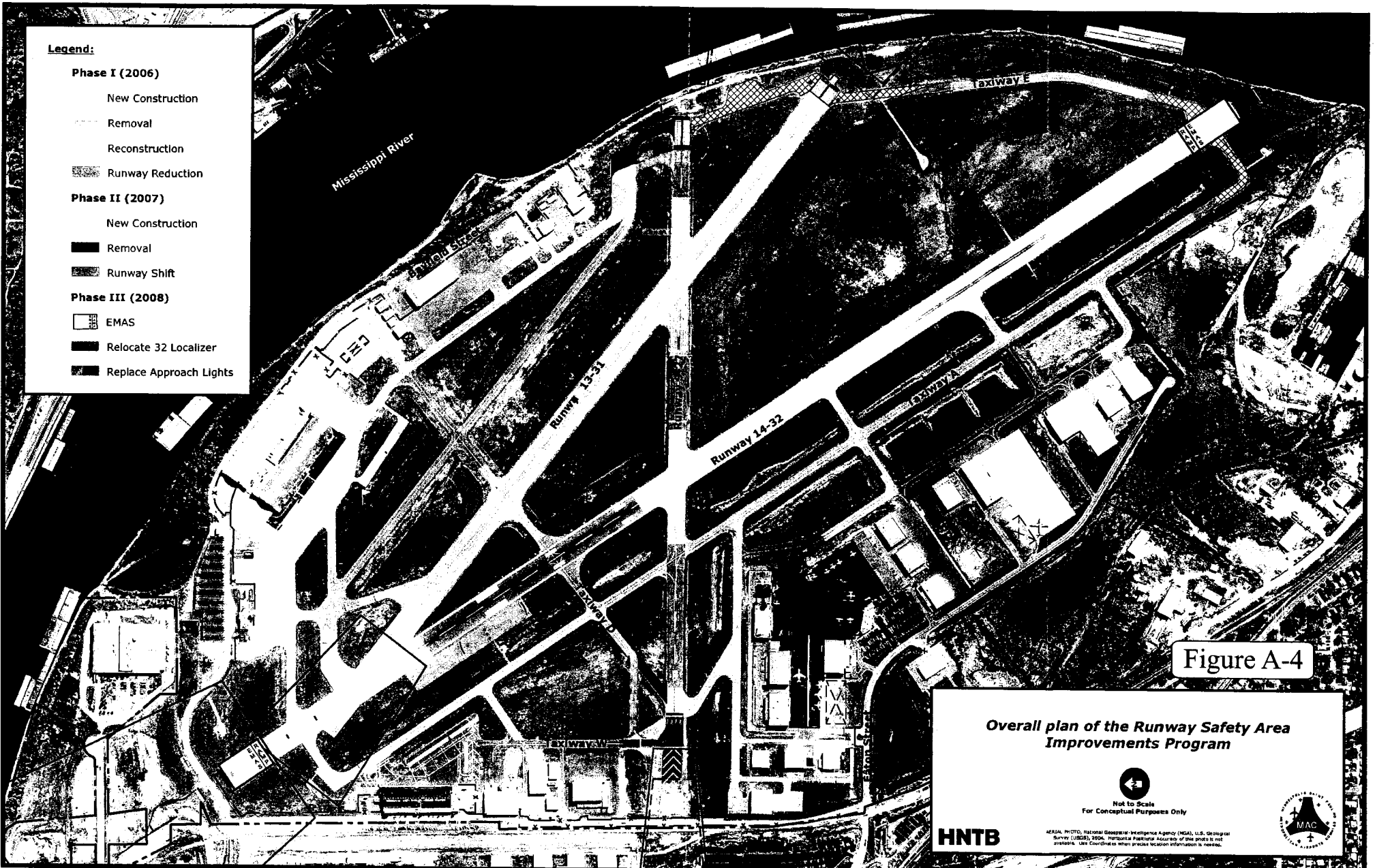
Reliever Airport Utility Extension Program

Flying Cloud

Sanitary Sewer and Water Main Extensions

\$4,300,000


In accordance with the Memorandum of Agreement with the City of Eden Prairie and the requirement by the Minnesota Pollution Control Agency to close all private well and septic systems at the airport, staff proposes to complete the installation of sanitary sewer and water along Pioneer Trail to serve the FBOs and interested tenants in the north building areas. In addition, the project will include construction of a restroom facility for tenants who do not or cannot connect to the new utilities (many are in a non-service area) and a plane wash facility.



- Legend:**
- Phase I (2006)**
 - New Construction
 - Removal
 - Reconstruction
 - Runway Reduction
 - Phase II (2007)**
 - New Construction
 - Removal
 - Runway Shift
 - Phase III (2008)**
 - EMAS
 - Relocate 32 Localizer
 - Replace Approach Lights


Figure A-4

**Overall plan of the Runway Safety Area
Improvements Program**


 Not to Scale
 For Conceptual Purposes Only

HNTB

AERIAL PHOTO: National Geospatial-Intelligence Agency (NGA), U.S. Geological Survey (USGS), 2004. Horizontal Positional Accuracy of the photo is not available. Use Coordinates when precise location information is needed.



Miscellaneous Field and Runway Program

Miscellaneous Construction

\$550,000

An ongoing program to consolidate various incidental items beyond the capabilities of the maintenance personnel, projects too small to be accomplished independently or to handle airside problems requiring repair which come up unexpectedly. This year's project will include the relocation of Runway 4/22 airfield guidance signs to minimize damage from 747 operations, the replacement of duct bank adjacent to Taxiway P, and, if necessary, limited wiring changes for the Runway 12L touchdown zone lights.

Miscellaneous Landside Program

Facilities Monitoring Program

\$800,000

This project will provide a centralized monitoring system consolidating data and alarms from several facility systems into a higher level acquisition and alarm display system. Previous projects have already installed a fiber optic backbone and associated communication hub rooms throughout the Lindbergh Terminal and between the Lindbergh and Humphrey Terminals and have relocated the Lindbergh Terminal's main communications infrastructure room and a data transport system. This is a continuation of the program that started in 2003 and will include adding monitors to the automatic tug doors, groundwater sump pumps in the Lindbergh Terminal, the automatic doors throughout the Lindbergh and Humphrey terminals, two grease collection systems, and several electrical substations and large UPS systems.

Post 2010 Program Projects

10 - Lindbergh Terminal

Lindbergh Terminal Sprinkler System

\$11,200,000

Changes in the State Building Code require that the terminal and concourse be fully sprinkled. This project will be the second phase in a multi-phase program to provide the required fire sprinkler and alarm system. This year's project will be located within the Lindbergh Terminal.

Landside Concessions Development

\$1,200,000

The Commission approved a \$2.2M CIP adjustment in 2005 to develop five landside concessions. This project provides for the concession work that needs to carry over to 2008 including a new restaurant located on the non-secure side of the ticketing level.

Upgrade Mezzanine Restrooms to meet ADA Code

\$600,000

The restrooms located on the mezzanine level of the Lindbergh Terminal do not meet the current ADA Code. A project to upgrade these bathrooms to meet the current code is being studied.

Lindbergh Terminal Carpet Replacement

\$5,500,000

The carpet in the Lindbergh Terminal was replaced in phases starting in 1998. The carpet is delaminating and showing excessive wear and a program to replace the carpet is being proposed to start in 2008.

Terminal Backlit Sign Replacements

\$1,600,000

Many of the illuminated way finding signs in both the Lindbergh and Humphrey Terminals have neon lamps that are burned out. These lamps are difficult and costly to replace and have limited longevity. A Signage Management and Maintenance Work Group (SMMWG) reviewed options ranging from replacing the existing lamps to replacing the illumination units. The SMMWG is recommending that the unit be replaced with a single row of LED units. The LEDs are easy to maintain, have an extended life (7 years), and are comparable in cost to a new fluorescent sign that has a two year bulb life. A phased four year program to retrofit the illuminated signs in both the Lindbergh and Humphrey Terminals is proposed to start in 2008.

Commission Chambers Upgrade**\$550,000**

The MAC Commission Chambers/Grieve Conference Center has been in use for the last ten years without substantial modification. This project will include upgrades to the audio, video, video-conferencing and technology presentation equipment and interfaces in the Commission Chambers and three conference rooms. The project will also provide way finding signage. This project will include upgrades to the three conference rooms.

Tug Drive Floor Repair**\$1,900,000**

The membrane waterproofing system on the tug drive floor is deteriorating and coming apart in various areas or has been damaged allowing water to leak into work areas, electrical vault rooms, the valet garage and other operational areas. The membrane system is nearing the end of its designated life of 5 years and must therefore be replaced in a phased program. The first phase was completed in 2007.

ADO Modifications**\$400,000**

The MAC Airport Director's Office (ADO) kitchenette and copy area requires modification and consolidation of functions to accommodate additional offices to support communication and coordination within the ADO and associated departments. This project will add three offices, a modified kitchenette, break room, and copy center.

C Concourse Elevator to D Street**\$400,000**

Currently, the C Concourse elevator stops at the concourse level. MAC staff has requested that this elevator be modified to allow for access to D Street. This would allow the MAC trades to get lift equipment used to change lights and clean high areas to the east end of the C Concourse.

Food Courts Upgrade/Remodel**\$175,000**

The Food Court projects include updating and remodeling fixtures, furnishings, and equipment at the A, F, C, and E Concourses food courts. This project is being implemented in conjunction with significant tenant funded leasehold improvements initiated with the Concessions Transition Project. The project will be phased over two years, with the E and F Concourse Food Courts scheduled in 2007 and the A and C Food Courts scheduled in 2008.

Fiber Optic Cable Capacity/Reporting**\$2,000,000**

The MAC/MSP campus has approximately 150 Telecommunication Closet locations each connected by an extensive fiber optic cable network allowing the many computer systems, security devices, and airline and concession services to operate. This project will install new fiber in identified locations and pathways where additional capacity is required.

Open Architecture Building Automation (OABA)**\$1,800,000**

This project will upgrade all MAC building automation systems to the LonMark open protocol; so that the airport can bid maintenance and construction contracts more competitively. This project will replace Siemens controllers and legacy Honeywell controllers with LonMark controllers from Honeywell, Circon, Distech, or TAC systems, that are all LonMark certified product lines. This project will be phased over two years.

MAC Fibernet Mods – Plumbing**\$600,000**

This project will upgrade the existing MAC Fibernet that provides for the monitoring of the lift stations and pumping stations that serve the MSP campus. A pilot project completed in 2007 was very successful in enhancing the performance and reliability of the existing monitoring system to three pumping stations. The same system will be extended to twelve additional pumping stations in 2008.

Electrical Infrastructure Rehab Program

\$2,700,000

There are fifty-three electrical substations that serve the Lindbergh Terminal complex. It is imperative that these substations be inspected, cleaned and upgraded in order to ensure their continued performance. It is proposed that this work be accomplished over a three year period beginning in 2008.

Art in the Terminal

\$500,000

This project presents the opportunity to partner with the Airport Foundation in displaying permanent and temporary/rotating art exhibits within the Lindbergh Terminal complex. This project would provide for a gallery-type space on Concourse C and in the baggage claim area to support art installations. Work would include lighting and finishes upgrades.

Automated External Defibrillator Monitoring System

\$400,000

The MAC Fire Department has provided, through grants and donations, Automated External Defibrillators (AEDs) that have been installed in the Lindbergh and Humphrey Terminals. This project will provide for the installation of an automated wireless notification system that will be tied into the existing facilities monitoring system and to the Emergency Communications Center (ECC). When a door to an AED is opened, the ECC will be immediately notified and will then dispatch aid to the location. If a 911 call is made, the nearest AEDs' notification lights will be alarmed/flushed and overhead announcements made for the AED location.

Checkpoint 5 Elevator/Escalator/Employee Checkpoint

\$3,700,000

This project will improve the access for customers exiting from Concourses F and G to bag claim by the installation of an elevator at the Checkpoint 5 exit. The project would also add an employee checkpoint at the baggage claim level and reverse the direction of one escalator for employees to use to access the North Star Crossing concession area.

Electronic Video Information Display Systems (EVIDS) Installation

\$450,000

This project will install Electronic Video Information Display Systems (EVIDS) at all Lindbergh Terminal Checkpoints. The EVIDS will provide passengers awaiting screening with static and dynamic information. The EVIDS would replace all of the existing TSA and regulatory signage at the checkpoints, provide additional information for passengers waiting to be screened, and allow the MAC to provide visual paging at these locations.

Lindbergh Terminal Master Clock System

\$450,000

This project will replace the existing master clock system with a new wireless clock system. The system will augment time provided by FIDS, overhead announcements on the one-half-hour, and personal cellular phones and computers. This project will reduce the number of clocks currently in use by thirty percent.

Passenger Service Assistant (PSA) Break Room Remodel

\$100,000

This project will provide an expanded break room for PSAs including larger lockers, expanded storage, a sink for washing hands and cleaning lunch containers, and the installation of additional electrical outlets.

Meeter/Greeter/Freedom of Information Booth Upgrades

\$225,000

This project will replace the existing meter/greeter and Freedom of Information booths with updated furniture and a new information display system. The existing booths are showing signs of wear. These booths are the welcome location for major corporations and regional events and provide arriving passengers with a first impression of MSP

Lindbergh Terminal In-line Baggage Screening Expansion

\$16,000,000

This project will begin Phase 2 of a 3 phase program to provide the Lindbergh Terminal with an automated, in-line Explosives Detection System (EDS). Phase 2 will provide a replacement building and in-line, automated EDS system for the Lindbergh Terminal's existing "bus-stop" semi-automated system. This upgrade will improve baggage screening, overall system reliability, and reduce labor costs.

Concourse G Extension – Site Preparation (Project B in Figure A-1) **\$24,000,000**

In July of this year, the Commission approved the demolition of the Building B complex except for premises retained by Northwest Airlines. There will be a series of projects to accomplish the demolition of the structure and below-grade utilities including removal and disposal of all asbestos containing materials (ACM) and any other environmentally hazardous materials. This project will provide for the demolition of the superstructure. This project is also shown in attached **Figure A-5**.

D Pod Baggage Conveyor **\$10,000,000**

This project provides for the installation of a conveyor from the existing EDS baggage screening system to new piers in the ground level of the D pod. The new piers will accommodate a future allocated sortation system. The completed system will improve existing tenant baggage sortation and transfer efficiency and safety and allow a quicker response for entry into the market for future D pod tenants.

Concessions Revenue Development/Upgrades **\$200,000**

This project will fund miscellaneous upgrades (finishes, furniture, condiment stations, etc.), signage and/or modified connections to utilities for the concession programs at the Lindbergh and Humphrey Terminals.

13 - Energy Management Center

Energy Savings Projects **\$1,000,000**

A program was initiated in 2002 to provide for the implementation of projects that would save the Commission energy costs in its operating budget. Discussions with both Xcel and Reliant have identified additional projects that are eligible for energy saving rebates and will save the Commission additional energy costs.

Chilled Water Distribution Improvements **\$2,500,000**

Concourses E, F and the south end of the Lindbergh Terminal experience warm conditions during the summer months due to bottlenecks in the chilled water system that serve these areas. This project provides for increasing the size of existing chilled water piping and replacing four existing chilled water coils in order to increase the capacity of the chilled water distribution system.

21 - Field and Runway

MSP Fuel Consortium Modifications* **\$570,000**

The MSP Fuel Consortium operates the airline fuel system that was installed by the MAC. The Consortium has requested that upgrades to the system are required over the next several years. Projects that have been requested include the upgrade of its emergency generator. The Fuel Consortium will reimburse MAC for these costs.

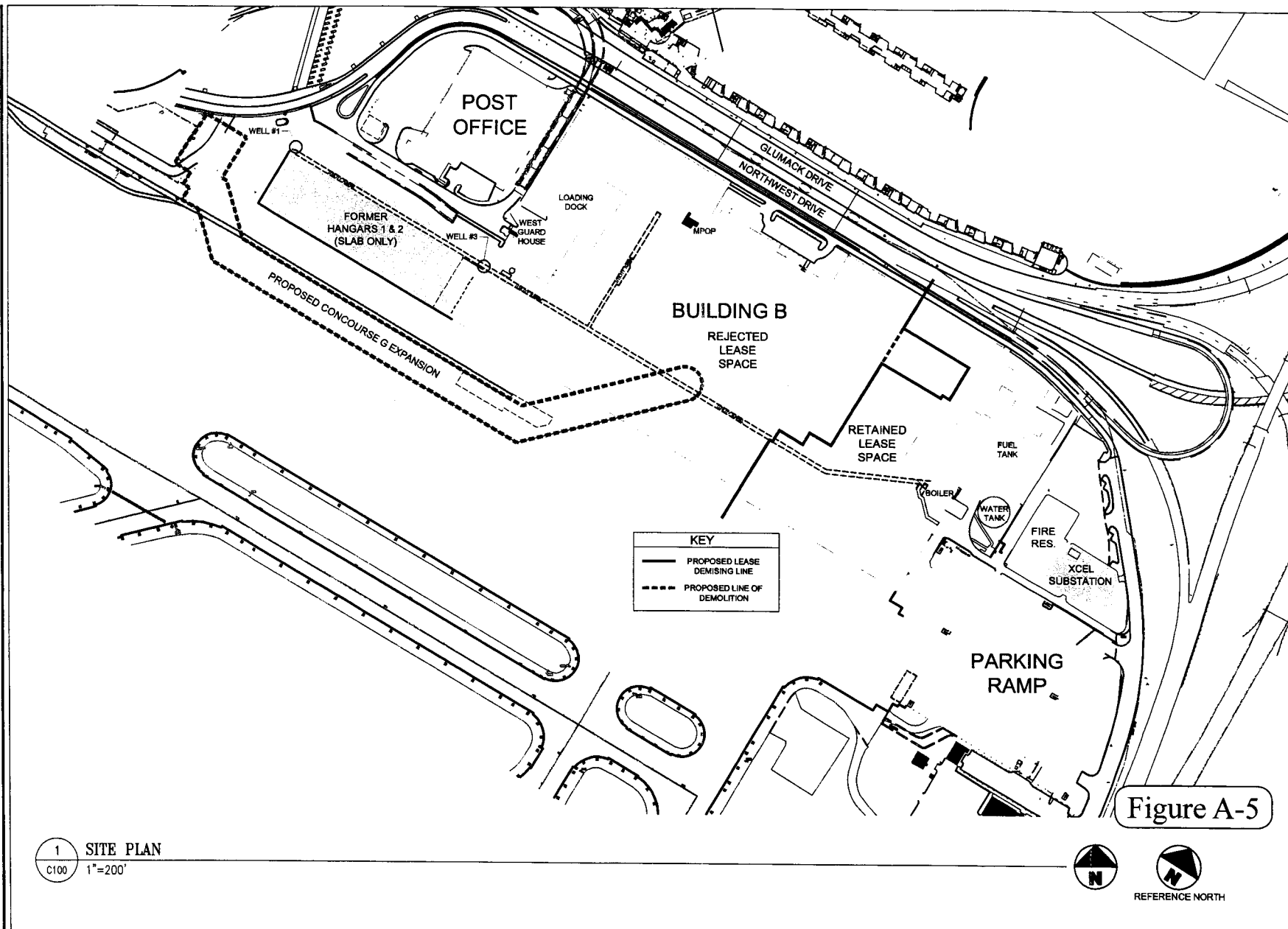
* Self-liquidating Project

Runway 30L EMAS Replacement **\$3,000,000**

In 1999, a project was completed to enhance the Runway 30L safety area with the installation of an Engineered Materials Arresting System (EMAS). The EMAS bed is comprised cellular cement blocks that is designed to stop an aircraft over-run by exerting predictable deceleration forces on the landing gear as the EMAS crushes. The cement blocks have begun to deteriorate and 11 rows were replaced in 2007. This project will provide for the replacement of the remaining rows.

Perimeter Fence/Gate Barrier System **\$6,400,000**

This project is part of a phased program to strengthen the perimeter security fence and airfield access gates. Proposed work includes the reinforcement of the existing chain link fence with steel cabling and in some locations welded wire mesh fence on concrete barriers. Existing gates will be reinforced and a hydraulic crash barrier will be constructed at one gate location.



KEY	
	PROPOSED LEASE DEMISING LINE
	PROPOSED LINE OF DEMOLITION

Figure A-5

1 SITE PLAN
C100 1"=200'



miller dunwiddie
ARCHITECTURE
123 North Third Street Suite 104
Minneapolis MN 55401-1487
www.millerdunwiddie.com
p 612-337-0000 f 612-337-0031

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

Signature _____
X
Name _____
X
Date _____ License # _____

PROJECT

CONCOURSE G EXPANSION
SITE PREPARATION
MAC NO. 120-2-011
MINNEAPOLIS - ST. PAUL INTERNATIONAL AIRPORT

REVISION
Mark Date Description

Consent No. MAC0704
Date: 6/29/07
Drawn: PTL
Checked: GSH
© 2007 Miller Dunwiddie Architecture, Inc.
DWG FILE

SITE PLAN
DWG FILE

C100

Sanitary Sewer/Manhole Repair – Runway 12L

\$600,000

The 12-inch sanitary sewer that is located in the approach to Runway 12L was constructed in 1948 utilizing vitrified clay pipe and brick and mortar manholes. Cleaning of this sewer has been hindered by blockages in the pipe and this line was televised to determine the condition of the pipe. The televising report indicated cracked and broken sections of pipe. A complete replacement of the pipe and manholes is being considered versus repairing only those pipe sections that have deteriorated.

Post Road Fuel Farm Security Improvements

\$1,000,000

The fuel farm on Post Road is a high security priority. The Police Department is recommending that a physical security enhancement is needed to adequately protect the site. This project will provide for the an improved perimeter security fence around the tank farm to include the construction of 8-foot and 6-foot welded wire mesh fence on concrete retaining walls or Jersey barriers. The project will also include the addition of gate barriers.

26 - Terminal Roads/Landside

Tunnel/Bridge Rehabilitation

\$100,000

A Bridge and Tunnel Safety Inspections Report was prepared in 2007. The report outlines structural maintenance recommendations to be implemented. While there are no significant structural repairs required, an annual project for bridge and tunnel maintenance will be starting in 2007.

31 - Parking

Humphrey Ramp VMS/Revenue Control System Upgrades

\$1,600,000

This project provides for the installation of a number of Variable Message Signs (VMS) at the Humphrey Parking Ramp and on airport roadways between the Humphrey and Lindbergh Terminals that will aid in directing the public to the appropriate parking facility. It is also proposed to install additional revenue control equipment and signage to allow for more flexibility in the use of the Humphrey parking ramps.

Humphrey GTC Core Building Modifications

\$850,000

This project will provide for the renovation of the Humphrey ground transportation core (GTC) building by installing a passenger information booth, a meeter/greeter booth and Freedom of Information booth, and commercial vehicle counter spaces equipped with variable message signage.

Lindbergh Guaranteed Parking Control

\$180,000

The Landside Operations Department has established a guaranteed parking area on the ground level of the Gold Parking Ramp. This project will construct a new entrance and exit into this area from the east commercial vehicle roadway including the installation of revenue control equipment.

AVI Reader Replacement

\$1,100,000

This project for the replacement of the AVI readers and AVI tags with current technology. The existing equipment was installed as part of the 1994 automation of commercial vehicle and taxi dispatching. Problems associated with the existing system include lack of redundant readers, interference when readers are installed side by side, and that the existing equipment only supports a crude portable AVI reader.

Lindbergh/Humphrey Vehicle Detection/Counting

\$350,000

This project will provide for the installation of a vehicle detection system to generate data showing the number and location of vehicles at each terminal. This data will be use to analyze vehicle movements on the roadway system, roadway wear, to determine where signage improvements are required, and to generate improved public/commercial vehicle use fleet percentages and forecasts.

Building B Parking Ramp Rehabilitation

\$1,300,000

MAC has acquired the Building B parking ramp formerly used by Northwest Airlines. This project will provide needed repairs to the electrical and fire protection systems, the installation of a CCTV system, and general structure maintenance.

36 - Humphrey Terminal

Humphrey Terminal Roof Icing Mitigation

\$700,000

Since the Humphrey Terminal opened, there has been a problem with icicles forming from the top portion of the roof overhang. The potential for someone to get injured from a falling icicle has resulted in Field Maintenance installing J barriers along the front of the terminal during the winter months. These barriers are then removed in the spring. This project would provide for the construction of a re-configured roof overhang that would prevent snow from accumulating at the roof edge and forming icicles.

Fuel Farm Lease Extinguishment

\$3,500,000

These costs are for payment of the unamortized portion of the existing fuel farm lease when the facilities are demolished and the loading rack relocated adjacent to the Humphrey remote apron.

26 - Public Areas/Roads

Inbound/Outbound Roadway Monument Sign

\$250,000

The existing monument sign on the Lindbergh Terminal inbound/outbound roadway system is over 10 years and the variable message signs that are incorporated into the sign use outdated technology. Portions of the sign have been down for repairs for much of the last year. Due to the sign utilizing outdated technology, many repair parts cannot be found. This project would replace the existing sign in its entirety with a monument sign similar to those located on Longfellow Ave. New variable message signs would be installed on the front and back of the monument sign.

Taxi Lot VMS Replacement

\$400,000

The four existing variable message signs that provide real-time information to all commercial vehicle/taxicab operators utilize outdated technology that has exceeded its useful life span. This project will replace these signs with new variable message signs that will better integrate with the new MAC Automated Vehicle Identification System (MAVIS) to be installed this year.

63 - Police

Secured Access/CCTV Program

\$650,000

This project will be a continuation of the program to upgrade the secured access and CCTV systems at MSP. Included in this project is the purchase and installation of biometric readers and CCTV cameras at various locations around the MSP campus.

Security Guard Shack

\$350,000

The police department is proposing to construct a manned guard "shack" to screen vehicles and people entering the AOA SIDA area at the north perimeter of the airport.

Public Safety Building

\$3,800,000

This project will provide for the construction of a Public Safety Building that would house the Emergency Communications Center (ECC), the Airport Operations Department (AirOps) and the Airport Police Department. This would be a two phase program. An ECC back-up facility would be constructed in 2008 in the basement of the ARFF and occupied as soon as possible to allow AirOps to expand into the vacated ECC space. Construction of the new Public Safety Building would start in 2009 with completion scheduled for January 2010. All three departments would then move to the new facility leaving the ECC back-up facility in place at the ARFF.

66 - Fire

ARFF Station #2 Roof Replacement

\$300,000

A roof condition study completed in 2006 indicates that the roof on the old ARFF station has reached its useful life and is need of replacement.

76 - Environment

Storm Water Pond Dredging

\$3,000,000

This project provides for the removal and proper disposal of accumulated sediments in storm water detention pond 4 to increase the storm water runoff storage volume.

ANOMS System Upgrade

\$500,000

To ensure continued application of the Airport Noise and Operations Monitoring Systems (ANOMS) technology, it is necessary to provide for periodic system upgrades. The upgraded system would consist of three main components: new analysis system software; upgraded analysis system hardware; and a multi-lateration flight track acquisition system. The multi-lateration system would include installation of 6-9 remote sensors that provide precise aircraft tracking and positional information by interrogating aircraft transponder signals and triangulating an aircraft's exact position. The project would include complete installation of all components associated with the ANOMS central processing system. Modem connectivity would be installed and the system would be integrated with the existing 39 Remote Monitoring Terminals (RMTs) and integration with all ANOMS central processing computers.

2009 Capital Improvement Program

2010 Program Projects

Runway 4/22 Development Program

North Side Storm Sewer (Project C in Figure A-1)

\$4,300,000

This project provides for the modifications to storm water detention ponds 3 and 4. The pond 4 outlet control structure will be replaced and a 60-inch storm sewer pipe installed to increase the outflow capacity of the pond. The pond 3 berm will be raise 2 feet and the spillway reconstructed to reduce pond overtopping and spillway washout. The outlet control structure will also be replaced and 60-inch storm sewer installed to increase the outflow capacity.

Noise Mitigation Program

Residential Sound Insulation (60-64 2007 DNL)

\$13,900,000

There will be a series of projects to provide noise mitigation for single family residential houses within the certified 2007 DNL 60-64 noise contour. The mitigation will consist of a mechanical package that will provide air conditioning for homes that do not have air conditioning. Residential homeowners would be subject to a co-pay based on the following percentages: 64 DNL – 10%, 63DNL – 20%, 62 DNL – 30%, 61 DNL – 40%, 60DNL – 50%. The initiation of this project is subject to the outcome of pending litigation.

Taxiway C/D Complex Construction (Project A in Figure A-1)

Taxiway C/D Complex

\$11,800,000

This project will be the fifth phase in a multi-phase program to reconstruct and reconfigure Taxiways C and D between Taxiway A and Taxiway P. This project consists of reconstruction of segments of Taxiway D and associated crossover taxiways.

Airfield Rehabilitation Program

Airside Bituminous Rehabilitation

\$500,000

An ongoing program to construct or reconstruct bituminous pavements within the Air Operations Area. Inspection of taxiway pavements and other airfield areas will be made to determine whether or not a bituminous repair project is required.

Pavement Joint Sealing

\$500,000

An ongoing program to provide for the resealing of joints in existing concrete pavements. The project also provides for limited crack and surface repairs.

Landside Rehabilitation & Repair Program

Landside Pavement Rehabilitation

\$400,000

An ongoing program to reconstruct the airport's roadways and parking lots. A specific project has not been identified at this time. Pavements will be evaluated in the spring of 2009 to determine whether a pavement repair project is needed.

Parking Structure Rehabilitation

\$3,000,000

An ongoing program to maintain the integrity of the airport's multi-level parking structures. Projects typically include concrete repair, joint sealant replacement, expansion joint repairs, concrete sealing and lighting improvements. This project will implement recommendations made in the "Condition Assessment and Management Program Report" completed in 2007.

Terminal Modifications

\$2,000,000

Each year, MAC staff compiles a list of "maintenance" projects that are beyond the capability of the MAC's maintenance staff. These projects are then prioritized and completed either as a series of contracts or as purchase orders. A list was compiled for 2008 and any projects that did not fit within the budget will be carried over into 2009. New projects will be discussed in early 2009.

Summarized below are the categories of the projects which are included in the Terminal Modifications program:

Building Exterior Rehabilitation

*

This is a continuation of the program to rehabilitate the exterior of the Lindbergh Terminal and other MAC buildings including roof and curtain wall rehabilitation.

Terminal Electrical Modifications

*

An ongoing program to address electrical issues in the terminals due to age and deterioration of the existing systems or modifications necessary for improved reliability.

Terminal Mechanical Modifications

*

An ongoing program to address mechanical issues in the terminals due to age and deterioration of the existing systems or modifications necessary for improved reliability.

Terminal Miscellaneous Modifications

*

An ongoing program to update and remodel areas within the terminals to keep abreast with changing requirements. This may be accomplished through a series of small individual projects to meet the requirements of the various tenants or may be consolidated into a single project.

Humphrey Terminal & MSP Campus Modifications

*

An ongoing program to modify or remodel areas within the West Terminal Complex, the Humphrey Terminal and other facilities around the MSP Campus to meet the needs of the various tenants/general public/MAC departments utilizing the facilities

*Historically, projects have been defined for each of these five categories. With reduced dollars available to fund non-revenue generating projects, a total dollar allocation of \$2,000,000 has been allocated to fund the highest priority projects within any of these project categories.

Reliever Airport Program

Anoka County –Blaine

Building Area Development – Xylite St. Relocation \$1,000,000

This project provides for the relocation of Xylite Street including the installation of curb and gutter and construction of a berm and landscaping.

Building Area Development – West Annex \$850,000 **

This project provides for the construction of two alleyways for eight storage hangars and three corporate hangars, sanitary sewer and water main and accommodation of storm water drainage.

**Funding for this project to be provided by others.

Crystal

Alleyway Rehabilitation \$350,000

This project will include reconstruction of taxilanes in portions of the west and south building areas. The project will also include any necessary airfield crack repairs.

Flying Cloud

Alleyway Rehabilitation- \$400,000

This project will include the reconstruction of taxilanes in the north building area and the north access road.

Hangar/Building Removal \$300,000

Two rows of hangars on Mustang Lane are obstructions to the existing and ultimate approach to Runway 28L and require removal per FAA standards.

Runway 10R/28L Widening/Extension \$11,200,000

This project includes the construction of a 1,200 foot extension to Runway 10R/28L along with the widening of the existing runway pavement from 75 feet to 100 feet. The project also includes the relocation of the VOR, MALSR, and glide slope equipment via a FAA reimbursable agreement, and guidance sign relocations to reflect the extended runway length.

South Building Area Development \$7,000,000 **

This project will provide for the first phase in the construction of the new South Building Area and will include site grading and sanitary sewer and water main installation.

**Funding for this project is to be provided by others.

Lake Elmo

Pavement Rehabilitation \$500,000

This project will include reconstruction of the airfield apron/run-up area in front of the MAC maintenance building and replacement of the pavement on the main entrance road and loop. This project will also include required airfield crack repairs.

St. Paul

Pavement Rehabilitation \$2,500,000

This project will include the reconstruction of segments of Taxiway A, A1, and A2.

Reliever Airports Utility Extension Program

Airlake

Plane Wash & Restroom Facilities \$200,000

This project will include the construction of an airplane washing facility and a common use restroom facility west of the MAC maintenance building. This project is contingent upon the city and Eureka Township resolving issues regarding sanitary sewer and water main installation.

Miscellaneous Field and Runway Program

Miscellaneous Construction

\$400,000

An ongoing program to consolidate various incidental items beyond the capabilities of the maintenance personnel, projects too small to be accomplished independently or to handle airside problems requiring repair which come up unexpectedly.

Post 2010 Program Projects

10 – Lindbergh Terminal

Lindbergh Terminal Sprinkler System

\$8,600,000

Changes in the State Building Code require that the terminal and concourse be fully sprinkled. This project will be the second phase in a multi-phase program to provide the required fire sprinkler and alarm system. This year's project will include Concourses C and D.

Skyway HVAC

\$1,200,000

The existing packaged air handling units providing heating and cooling for the skyways have reached their use-full life and require replacement. A study is in process to evaluate how to best replace these individual units with centralized units.

Skyway Flooring Replacement

\$150,000

The skyway flooring material has deteriorated to the point where replacement is required.

Terminal Backlit Sign Replacements

\$1,650,000

Many of the illuminated way finding signs in both the Lindbergh and Humphrey Terminals have neon lamps that are burned out. These lamps are difficult and costly to replace and have limited longevity. A Signage Management and Maintenance Work Group (SMMWG) reviewed options ranging from replacing the existing lamps to replacing the illumination units. The SMMWG is recommending that the unit be replaced with a single row of LED units. The LEDs are easy to maintain, have an extended life (7 years), and are comparable in cost to a new fluorescent sign that has a two year bulb life. A phased four year program to retrofit the illuminated signs in both the Lindbergh and Humphrey Terminals commenced in 2008.

Tug Drive Floor Repair

\$2,000,000

The membrane waterproofing system on the tug drive floor is deteriorating and coming apart in various areas or has been damaged allowing water to leak into work areas, electrical vault rooms, the valet garage and other operational areas. The membrane system is nearing the end of its designated life of 5 years and will therefore be replaced in a phased program.

Open Architecture Building Automation (OABA)

\$1,800,000

This project will upgrade all MAC building automation systems to the LonMark open protocol; so that the airport can bid maintenance and construction contracts more competitively. This project will replace Siemens controllers and legacy Honeywell controllers with LonMark controllers from Honeywell, Circon, Distech, or TAC systems, that are all LonMark certified product lines. This project will be phased over two years.

Elevator Modifications

\$1,250,000

The new Minnesota Elevator Code that has been adopted will require the upgrade of existing MAC facilities. Work will include modifications to the fireman's service operation, the replacement/modification of hydraulic cylinders, escalator skirt modifications, adding signage to

machine/equipment rooms, installation of escalator safety brushes, and the replacement of elevator car door glass panels.

Electrical Infrastructure Rehab Program **\$2,400,000**

There are fifty-three electrical substations that serve the Lindbergh Terminal complex. It is imperative that these substations be inspected, cleaned and upgraded in order to ensure their continued performance. This is the second phase in a three phase program that began in 2008.

Concourse G Extension – Site Preparation (Project B in Figure A-1) **\$21,000,000**

In July of 2007, the Commission approved the demolition of the Building B complex except for premises retained by Northwest Airlines. There will be a series of projects to accomplish the demolition including removal and disposal of all asbestos containing materials (ACM) and any other environmentally hazardous materials. This project will provide for the demolition of the concrete slab and required below grade demolition and abatement.

Concessions Revenue Development/Upgrades **\$200,000**

This project will fund miscellaneous upgrades (finishes, furniture, condiment stations, etc.), signage and/or modified connections to utilities for the concession programs at the Lindbergh and Humphrey Terminals.

13 - Energy Management Center

Energy Savings Projects **\$1,000,000**

A program was initiated in 2002 to provide for the implementation of projects that would save the Commission energy costs in its operating budget. Discussions with both Xcel and Reliant have identified additional projects that are eligible for energy saving rebates and will save the Commission additional energy costs.

21 - Field and Runway

Runway 30R MALSF **\$1,700,000**

This project will provide for the installation of a medium intensity approach lighting system with flashers (MALSF) for Runway 30R. This system consists of 45 steady burning lights and 3 flashing lights spaced along the extended runway centerline from the runway threshold to a distance of 1,400 feet.

Perimeter Fence/Gate Barrier System **\$6,300,000**

This project is part of a phased program to strengthen the perimeter security fence and airfield access gates. Proposed work includes reinforcement of the existing chain link fence with steel cables and in specified locations welded wire mesh on concrete barriers, and the hardening of security gates.

Baggage Quarantine Building **\$1,100,000**

This project will provide for the construction of a 50 foot by 100 foot block building for inspection of suspicious luggage. This building will be located at a yet to be determined location within the airside of the airport.

26 - Terminal Roads/Landside

Tunnel/Bridge Rehabilitation **\$100,000**

A Bridge and Tunnel Safety Inspections Report was prepared in 2007. The report outlines structural maintenance recommendations to be implemented. While there were no immediate structural repairs required, an annual project for bridge and tunnel maintenance will continue in 2008.

31 - Parking

Lindbergh Terminal – New Parking Entrance/Transit Gate \$200,000

This project would reconfigure the entrance to public parking at the Lindbergh Terminal such that an additional entrance lane and revenue control gate will be established. This project will also add an access/revenue control gate to the adjacent entrance to the Lindbergh Terminal Transit Center.

36 - Humphrey Terminal

Humphrey Terminal Expansion – Skyway \$4,000,000

This project will provide for the construction of the permanent skyway link between the Orange Parking Ramp and the Humphrey Terminal but only expand the terminal to the extent as to provide a connection to the new skyway. No new gates will be provided.

39 – Public Areas/Roads

VMS Billboard Installation \$2,800,000

This project would purchase and install three billboard size variable message signs on inbound travel routes for airport advertising and customer information.

63 - Police

Public Safety Building \$31,300,000

This project will provide for the construction of a Public Safety Building that would house the Emergency Communications Center (ECC), the Airport Operations Department (AirOps) and the Airport Police Department. This would be a two phase program. An ECC back-up facility would be constructed in 2008 the basement of the ARFF and occupied as soon as possible to allow AirOps to expand into the vacated ECC space. Construction of the new Public Safety Building would start in 2009 with completion scheduled for January 2010. All three departments would then move to the new facility leaving the ECC back-up facility in place at the ARFF.

Reliever Airports

St. Paul

Holman Terminal Sub-drain \$600,000

This project will provide for the installation of a sub-drain system around the MAC Administration building in order to keep the basement from flooding.

Float Plane Stairway \$75,000

This project provides for the refurbishing of the existing float plane stairway at the St. Paul Downtown airport.

2010 – 2014 Capital Improvement Program

(Descriptions of projects expected to be implemented in 2010 through 2014 are preliminary, and only those that have potential substantive environmental effects are included.)

2010 Program Projects

Noise Mitigation Program

Residential Sound Insulation (60-64 2007 DNL) \$34,000,000

There will be a series of projects in 2010 and 2011 to provide noise mitigation for single family residential houses within the certified MSP 2007 DNL 60-64 noise contour. The mitigation will consist of a mechanical package that will provide air conditioning for homes that do not have air conditioning. Residential homeowners would be subject to a co-pay based on the following percentages: 64 DNL – 10%, 63 DNL – 20%, 62 DNL – 30%, 61 DNL – 40%, 60 DNL – 50%.

Reliever Airport Program

Anoka County - Blaine

Building Area Development – East Annex

\$2,400,000 **

This 2011 project includes grading and construction of alleyways for up to 80 storage hangars, installation of sanitary sewer and water and accommodation of storm water.

**Funding for this project is to be provided by others.

Flying Cloud

South Building Area Development

\$3,000,000 **

This 2010 project would complete the construction of the new South Building Area and would include sanitary sewer and water main installation.

**Funding for this project is to be provided by others.

Lake Elmo

East Building Area Development

\$2,300,000 **

This project includes the grading and paving for alleyways, an access road and connecting taxiway for the new East Building Area, taxiway pavement marking and reflectors and street lighting along a section of the county road. Also included is storm water management and minor wetland mitigation.

**Funding for this project to be provided by others.

Post 2010 Program Projects

Concourse G Expansion (Project B in Figure A-1)

\$113,400,000

This 2014 project will include the construction of 18 additional airline gates.

21 – Field and Runway

Taxiway C Extension (Project E in Figure A-1)

\$5,500,000

This 2010 project will extend Taxiway C approximately 1,200 feet to connect to the Humphrey Terminal remote apron to accommodate additional remote overnight parking at the terminal.

31 - Parking

Humphrey Parking Structure Expansion (Project H in Figure A-1)

\$58,000,000

This 2011, 2012, 2013 and 2014 project provides for the expansion of the Orange and Purple Ramps to provide an additional 4,550 parking spaces. The existing parking structures continue to fill up on a regular basis and additional parking will be required to accommodate the expansion of the Humphrey Terminal.

36 – Humphrey Terminal

Humphrey Terminal Expansion (Project D in Figure A-1)

\$55,500,000

The Humphrey Terminal will continue to be expanded in 2010 and 2011 to 22 gates. The expansion will include the construction of 10 new gates and all associated facilities including ticketing, baggage claim, baggage make up and in-line baggage screening, road improvements, new aircraft apron and hydrant fueling at all gates.

Auto Rental Facilities (Project F in Figure A-1)

\$3,500,000

This 2010 project completes the construction begun in 2008 of auto rental facilities including counters, back office and ready and return facilities for all on-airport auto rental providers as well as a new quick-turn-around (QTA) facility to serve vehicles at the Humphrey Terminal.

39 – Public Areas/Roads

Airport Lane/34th Avenue Access Reconfiguration (Project G in Figure A-1)

\$800,000

Existing access from 34th Avenue and Airport Lane does not meet current traffic engineering criteria. This 2010 project will realign the access to conform to appropriate standards for similar types of intersections.

APPENDIX B

Supplemental Information

Runway 12L-30R Reconstruction Project

The Runway 12L-30R (North Parallel) Center Segment Reconstruction project provides for the complete reconstruction of the center section of Runway 12L-30R at MSP. The entire project will take an estimated four months. However, the time the runway will actually be closed is approximately two months in order to help mitigate the off-airport impacts from the project. To encourage on-time completion of the project in the shortest time possible, MAC construction contracts for the project will provide that the Runway 12L-30R reconstruction contractor may incur liquidated damages per day if the contractor does not begin and complete the contracted work on time. The following is a discussion of the potential environmental effects of the project.

Air Quality

There will be no long-term air quality impacts as a result of the project. The project will not change the capacity of the airport. As a result, the only potential for air quality impacts will be short-term and will occur during construction.

The Runway 12L-30R reconstruction project will occur wholly within the airport boundary. Construction activities from the project may create dust as a result of stockpiling, material transfers, traffic, and excavation activities. Any dust from construction activities is unlikely to be blown beyond the airport property. To prevent off-airport dust impacts, MAC's construction contracts require contractors to employ appropriate dust control measures, such as spraying the construction site with water, a calcium chloride solution, or similar dust suppressants. In addition, MAC requires a recirculating air sweeper with dust control and auxiliary pick-up type sweepers to be present and available as necessary to suppress dust generated at the construction project site and on haul routes to and from the construction project site. Construction will also be limited to approximately four months to minimize any potential short-term impacts from dust or traffic.

The level of construction-related truck traffic is not expected to adversely impact traffic on surrounding roads. Truck traffic for the project will include delivery and removal of materials, along with construction employee vehicle traffic. There are no indications that the level of traffic will exceed the capacity of existing roadways in the area. MAC will work with its construction contractor to stage vehicle trips to avoid any negative impacts on traffic flow in the area. With respect to exhaust from truck traffic, the area is surrounded by highways and roadways already frequented by diesel-fueled vehicles. The level of truck traffic is not expected to result in any measurable impact on air quality in the area.

Construction projects do not typically require air quality permits. The proposed Runway 12L-30R reconstruction project is limited in scope and duration, and does not require an air quality permit from the Minnesota Pollution Control Agency (MPCA). In addition, the runway reconstruction project will not result in any increase in the capacity of MSP or the number or type of aircraft operations at MSP.

As in the reconstruction of Runway 12R-30L in 2007, FAA will modify MSP air traffic control procedures to accommodate MSP's aircraft activity with the least amount of operational disruption during the months that Runway 12L-30R will be closed. FAA's modified air traffic control procedures are designed to replicate, as closely as possible, MSP's normal operating conditions. When the reconstruction project is complete and Runway 12L-30R is reopened, FAA will return MSP to its pre-reconstruction operational patterns. MAC has no governmental approval authority over FAA's decision to modify MSP air traffic control procedures during the project, and federal law preempts all state laws

affecting aircraft operations. Given the nature of FAA's air traffic control changes and the short duration of the approximate two-month runway closure, it is unlikely that FAA's short-term relocation of certain aircraft operations will have a measurable effect on air quality.

Storm Water

The general storm water flow for the construction area drains to MSP Pond 2 and Snelling Lake. The Runway 12L-30R reconstruction project will not change the storm water drainage flow for the construction area. During the reconstruction period, storm water flows will be temporarily reduced as a result of the reduction of impervious surfaces. MSP Pond 2 was specifically designed to provide over 46 acre feet of storm water storage, with a pond fore bay to remove the majority of sediment and a main pond body to address the remaining total suspended solids to protect the Minnesota River. Snelling Lake watershed consists of MSP Pond 3, which acts as a fore bay to remove sediment prior to discharge into MSP Pond 4. Erosion control measures for the project will minimize erosion of soils and prevent sediment from entering the storm sewer system or washing to other low areas. Measures to control erosion during reconstruction of Runway 12L-30R will include the installation of silt fencing and storm drain inlet protection before MAC commences any grading or soil disruption activities associated with the reconstruction project. MAC will maintain these erosion control measures until the reconstruction project is complete. MAC's construction contractor will also obtain a storm water permit for the reconstruction project from MPCA. In addition, MAC's construction contracts require the contractor to comply with all applicable permit requirements, including applicable storm water requirements in MAC's permits for MSP issued by the Lower Minnesota River Watershed District and the Minnehaha Creek Watershed District.

Pavement and Soils

The historic use of the project site has been as a runway. MAC did not conduct a pre-construction environmental investigation of the project area and has no reason to believe that runway pavement or soils in the area are contaminated. Nevertheless, MAC's construction contract for the Runway 12L-30R reconstruction project requires trained environmental personnel to verify the condition of runway pavements and soils during reconstruction. If any runway pavement or soil contamination is discovered, MAC will manage the contaminated pavement or soil according to the MPCA-approved soil management plan for MSP. MPCA reviews the plan annually, and MAC's 2007 MSP Annual Soil Management Report to MPCA will discuss the Runway 12L-30R reconstruction project.

Leak Sites

MAC has compared the Runway 12L-30R reconstruction project area with the comprehensive list of leak and spill sites at MSP. This review revealed that there are no open or closed leak sites within the project area. In addition, there are no spill sites within or immediately adjacent to the project area. The Runway 12L-30R reconstruction project will not cause jet fuel line leaks because none of the jet fuel lines are located within or adjacent to the project area.

Fuel Lines and Leaks

MSP terminal gate areas are served by a hydrant fuel system. The entire hydrant fueling system at MSP is leased to the Minneapolis Fuel Committee (MFC), which is comprised of contracting airline members that operate at MSP. In 2003, Aircraft Services International Group (ASIG) had the contract with MFC to operate and maintain the system when two separate hydrant leaks occurred (one at Gate D5 and the other at Gate A7). The status of the leaks, investigation activities, corrective actions, mitigation

measures and the contents of the Stipulation Agreement negotiated between MAC, MFC, ASIG and MPCA were discussed at numerous public MAC meetings. These discussions included MAC staff presentations to the Planning and Environment Committee or the full Commission, or both, in March 2003, July 2003, October 2003, January 2005, June 2005 and October 2005.

In March 2005, MAC, MFC, and ASIG signed a Stipulation Agreement with the MPCA that addresses the hydrant fuel release discovered in 2003. The complete executed Stipulation Agreement has been available on MAC's website since March 2005. The Stipulation Agreement identified corrective actions that MAC, MFC, and ASIG implemented to improve the management and handling of fuel and fuel products at MSP. MAC staff discussed these management and handling practices in detail at the meeting of the full Commission in January 2005. In October 2007 the MPCA terminated the Stipulation Agreement and closed the leak site after the parties completed all elements in the Stipulation Agreement.

There are no hydrant fuel lines located within or immediately adjacent to the project area. As a result, the Runway 12L-30R reconstruction project will not expose or alter jet fuel lines in any way. As discussed above, there is no evidence that the Runway 12L-30R reconstruction project will cause jet fuel line leaks. The Runway 12L-30R reconstruction project also will not remove any gates from service, so there will be no fueling system stress as a result of changes in gate assignments. Similarly, any changes in ground traffic flow will not affect the fueling system because ground movement activities are unrelated to the fueling system.

Noise and Air Traffic Control Changes

FAA's Modified Air Traffic Control Procedures

FAA modified MSP air traffic control procedures to accommodate aircraft activity with the least amount of operational disruption during the 2007 Runway 12R-30L reconstruction project and will make similar modifications for the Runway 12L-30R reconstruction project. FAA has undertaken SIMMOD (airport simulation) modeling to identify air traffic control procedures designed to replicate, as closely as possible, MSP's normal operating conditions. MAC has no governmental approval authority over FAA's decision to modify air traffic control procedures during the Runway 12L-30R reconstruction project. Federal law also preempts all state laws affecting aircraft operations, such as air traffic control procedures. *Minnesota Pub. Lobby v. Metro. Airports Comm'n*, 520 N.W.2d 388, 391-92 (Minn. 1994).

Noise from FAA's Modified Air Traffic Control Procedures

As mentioned above, the modified air traffic control procedures that FAA will employ during the runway reconstruction project are designed to replicate, as closely as possible, MSP's normal operating conditions. When the reconstruction project is complete and Runway 12L-30R is reopened, FAA will return MSP to its pre-reconstruction operational patterns. Most areas near MSP that will see an increase in operations under FAA's modified air traffic control procedures already experience regular aircraft over flights. In fact, the only areas where operational patterns will be noticeably different from those during normal runway operations at MSP are areas north of MSP in Minneapolis, which are in the approach path to Runway 17, and areas in St. Paul to the northeast of MSP, which are in the approach path to Runway 22. Residents living north of Runway 17 in Minneapolis will observe a change from existing conditions during the two-month closure of the runway for reconstruction, primarily as a result of arrival operations on Runway 17. Similarly, residents living in St. Paul will observe a change from existing conditions during the two-month reconstruction of the runway primarily as a result of arrival operations on Runway 22.

Aircraft arrival operations are typically quieter than departure operations. An analysis of noise events from DC9 aircraft—one of the loudest aircraft in the fleet mix at MSP—at ANOMS RMT 6 in Minneapolis during February 2007 revealed an average departure operation sound exposure level (SEL) of 99.3 dB. An analysis of arrival operations for the same aircraft at the same location in February 2007 revealed an average SEL of 94.5 dB, or a difference of 4.8 dB. A doubling of aircraft operations results in a 3 dB increase in noise energy. As such, it would take more than double the number of DC9 arrival operations to equal the same noise energy as is produced by DC9 departure operations.

MAC will be taking measures to explain FAA's modified air traffic control procedures to communities surrounding MSP. In consultation with the Noise Oversight Committee (NOC), MAC will propose a comprehensive plan to explain the Runway 12L-30R reconstruction project and the temporary changes that FAA will implement while Runway 12L-30R is closed for reconstruction. The four components of the proposed plan are: (1) descriptions of the FAA temporary operational modifications in the *MSP Noise News* newsletter; (2) descriptions of the modifications on MAC's web site; (3) postcard mailings describing the modifications; and (4) community open houses addressing the modifications.

There are no cumulative potential environmental effects from future projects related to the Runway 12L-30R reconstruction project. The Runway 12L-30R reconstruction is a discrete repair project of short duration designed to restore the surface of a portion of an existing runway.