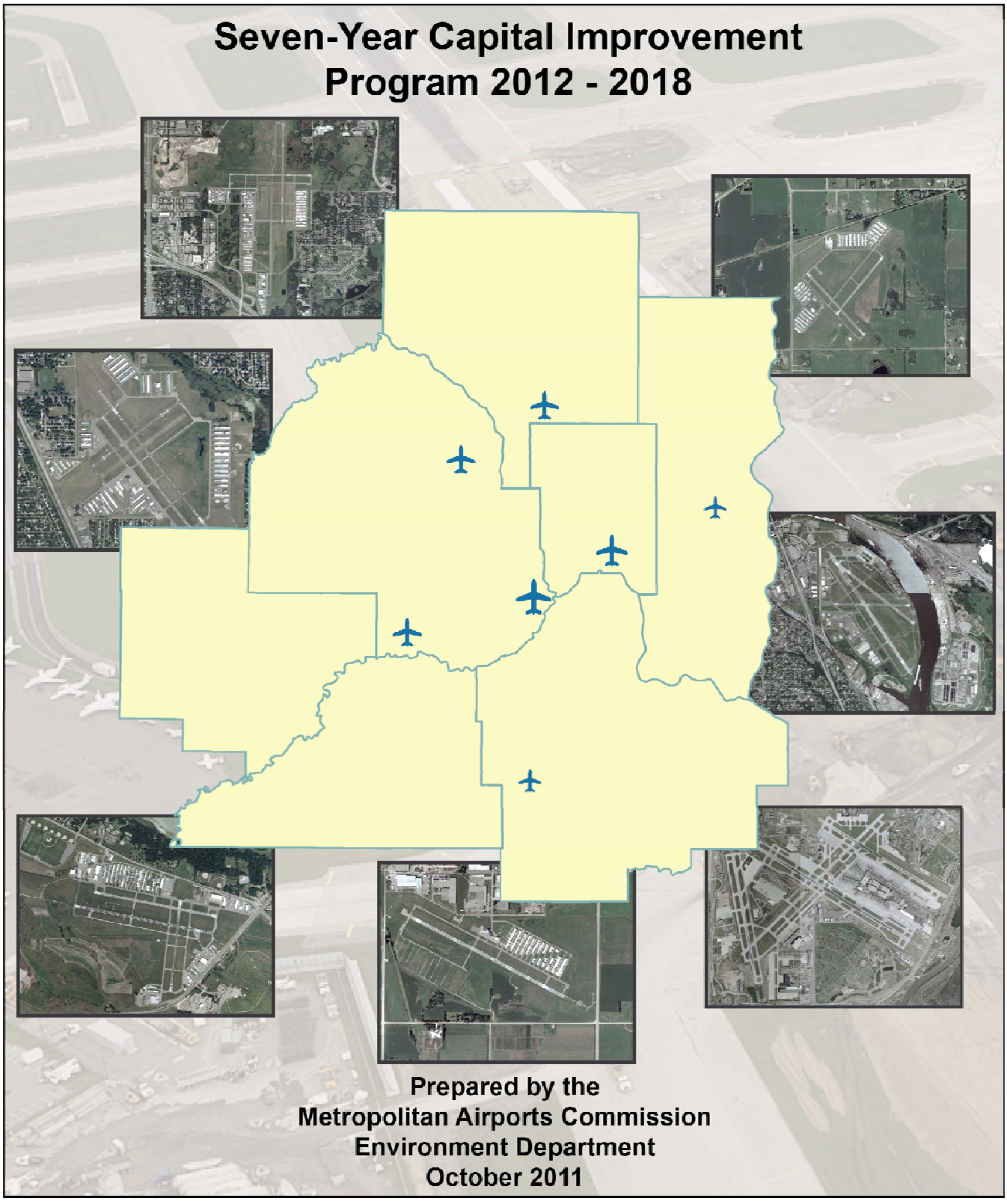
Metropolitan Airports Commission

Assessment of Environmental Effects



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Section 1

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's (MAC) Seven-Year Capital Improvement Program (CIP) from 2012 to 2018 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 will not affect use of the facilities and as such will not add to, or subtract from, cumulative environmental effects. The anticipated measurable effects during construction are discussed in Section 2.

The amended 1986 law also requires the preparation of an Environmental Assessment Worksheet under the Minnesota Environmental Policy Act (MEPA) for projects that meet all of the following conditions:

1. The project is scheduled in the CIP for the succeeding calendar year (2012 in this CIP);

2. The project is scheduled to cost $5 million or more at Minneapolis-St. Paul International Airport (MSP) or $2 million or more at any other MAC airport; and

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 1-1 lists all projects included in the Seven-Year Capital Improvement Program for the years 2012 through 2018. An Environmental Assessment Worksheet (EAW), Environmental Assessment (EA) or Environmental Impact Statement (EIS) has been prepared for all projects scheduled to be implemented in 2012 that meet the above three conditions in Minnesota Statutes 1986, Chapter 473 for a mandatory EAW. These projects are presented in Table 1-2.

Table 1-1

2012 - 2018 Capital Improvement Program

Notes	Projects	Capital Improvement Projects 2012	Capital Improvement Program 2013	Capital Improvement Plan 2014	2015	2016	2017	2018
	Noise Mitigation Program							
(1)	Noise Mitigation Settlement	$3,600,000	$1,300,000	$3,420,000				
	Subtotal Noise Mitigation Program	$3,600,000	$1,300,000	$3,420,000	$0	$0	$0	$0
	Subtotal 2010 Program	$3,600,000	$1,300,000	$3,420,000	$0	$0	$0	$0
	Post 2010 Program							
	10 - Terminal 1 - Lindbergh							
	Safety/Security Projects							
(5)	Checked Baggage Inspection System (CBIS) Integration*	$18,000,000						
(3)	Automated External Defibrillator Notification System		$550,000					
(5)	Telecom Room Equipment Continuity and Security	$2,300,000	$2,350,000	$2,000,000				
(5)	Fall Protection Program	$100,000	$100,000	$100,000				
	Subtotal Safety/Security Projects	$20,400,000	$3,000,000	$2,100,000	$0	$0	$0	$0
	*Assumes TSA will provide funding for 90% of the eligible project costs.							
	Facility Rehabilitation							
(2)	Skyway HVAC	$1,500,000						
(2)	Electrical Infrastructure Rehabilitation Program	$2,000,000	$2,500,000	$2,150,000	$2,200,000	$2,250,000	$1,100,000	$1,100,000
(3)	Terminal Miscellaneous Modifications	$2,500,000	$3,000,000	$3,000,000	$3,000,000	$3,000,000	$3,500,000	$3,500,000
(4)	Emergency Power Upgrades	$2,200,000	$1,250,000	$2,300,000	$2,450,000	$1,000,000	$1,300,000	
(5)	Lower Level Roadway/GTC Water Infiltration Mitigation			$2,500,000				
(2)	Restroom Upgrade Program	$2,600,000	$1,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000
(4)	Air Handling Unit Replacement	$2,100,000	$2,250,000	$2,000,000	$1,800,000	$1,500,000	$1,700,000	$2,000,000
(4)	Conveyance System Upgrades	$2,700,000	$2,000,000					
(4)	Passenger Boarding Bridge Replacements			$11,000,000	$11,000,000	$11,000,000		
(2)	Folded Plate Drain and Roof Repair	$6,400,000						
(2)	Plumbing Infrastructure Upgrade Program	$500,000	$500,000	$500,000	$500,000			
(2)	Terminal Bag Claim Rehabilitation	$14,400,000		$14,400,000	$14,400,000			
(2)	Folded Plate Roof Replacement							$34,000,000
(2)	Food Court Counter Upgrades	$100,000						
(4)	Way-Finding Sign Backlighting Replacement		$1,600,000	$1,600,000	$1,600,000			
(2)	Conference Center Upgrades		$300,000					
(2)	Terminal Curtainwall Repair	$100,000	$100,000	$100,000				
(2)	C-G Connector Soffit Repair		$200,000					
(2)	CBP Carpet Replacement			$350,000				
	Subtotal Facility Rehabilitation	$37,100,000	$14,700,000	$41,900,000	$38,950,000	$20,750,000	$9,600,000	$42,600,000

	Projects	Capital Improvement Projects 2012	Capital Improvement Program 2013	Capital Improvement Plan 2014	2015	2016	2017	2018
	Passenger Amenities							
(4)	Art in the Terminal	$250,000		$250,000		$250,000		$250,000
(2)	Meeter/Greeter/Freedom of Speech Booth Upgrades			$225,000				
(2)	Concessions Revenue Development/Upgrades	$200,000	$200,000	$200,000	$200,000	$200,000	$200,000	$200,000
(5)	Terminal Seating Improvements		$800,000					
(2)	Ticket Counter Upgrades to ADA			$800,000				
(4)	Commission Chambers Telecoil Installation			$160,000				
(4)	Way-Finding Signage Improvements	$200,000	$300,000					
(2)	Elevator Access to Observation Deck				$750,000			
(2)	Concourse Service Center Upgrades		$2,000,000					
(4)	MUFIDS/Electronic Video Information Display		$600,000					
	Subtotal Passenger Amenities	$650,000	$3,900,000	$1,635,000	$950,000	$450,000	$200,000	$450,000
	Operational Improvements							
(4)	Concourse C Elevator to D Street			$450,000				
(4)	Open Architecture Building Automation (OABA)	$1,850,000	$2,250,000	$1,250,000				
(6)	IS Data Center Facilities	$15,000,000						
(4)	Fiber Optic Cable Infrastructure Upgrade/Expansion	$1,650,000	$1,150,000	$1,200,000	$500,000			
(3)	Wireless Network Control System	$850,000	$1,425,000	$500,000				
(4)	Southeast Mezzanine Office and Exit Stairs				$1,600,000			
(6)	Landside Operations Offices Upgrades				$500,000			
(6)	FIS Modifications			$6,000,000				
	Subtotal Operational Improvements	$19,350,000	$4,825,000	$9,400,000	$2,600,000	$0	$0	$0
	Concourse G Improvements							
(2)	Concourse G Roof Replacement		$6,200,000					
(5)	Concourse G Fire Protection System	$7,400,000						
(4)	Energy Savings Projects	$1,200,000	$1,200,000					
(2)	Exterior Panel/Sealant Replacement					$2,100,000	$2,000,000	$1,000,000
	Subtotal Concourse G Improvements	$8,600,000	$7,400,000	$0	$0	$2,100,000	$2,000,000	$1,000,000
	T1-Lindbergh Demand Driven Projects							
	Terminal Remodeling							
(6)	Concourse E Remodeling/Expansion				$36,600,000			
(2)	Ticket Lobby Modifications				$18,010,000	$18,010,000		
(2)	MAC Ops Center						$1,235,000	
	Subtotal Terminal Remodeling	$0	$0	$0	$54,610,000	$18,010,000	$1,235,000	$0
	Concourse G Expansion							
(1)	Concourse G Tram - Equipment Procurement				$50,000,000			
(1)	Concourse G Tram - Guideway Installation						$76,000,000	
(1)	Concourse G Tram - Stations						$33,000,000	
(1)	Gate Hold Expansion - 10 Gates						$153,000,000	$153,000,000
(1)	FIS Curbside Roadway						$2,000,000	
(1)	Apron Improvements					$17,000,000		
(1)	Air Side Tunnel Expansion					$20,000,000		
	Subtotal Concourse G Expansion	$0	$0	$0	$50,000,000	$37,000,000	$264,000,000	$153,000,000
	Roadway and Parking Expansion							
(1)	Lower Level Curbside Expansion					$10,340,000		
	Subtotal Roadway and Parking Expansion	$0	$0	$0	$0	$10,340,000	$0	$0

		Capital Improvement Projects	Capital Improvement Program	Capital Improvement Plan				
	Projects	2012	2013	2014	2015	2016	2017	2018
	Subtotal T1-Lindbergh Demand Driven Projects	$0	$0	$0	$104,610,000	$65,350,000	$265,235,000	$153,000,000
	Subtotal Terminal 1-Lindbergh	$86,100,000	$33,825,000	$55,035,000	$147,110,000	$88,650,000	$277,035,000	$197,050,000
	13 - Energy Management Center							
(4)	Energy Savings Projects	$3,000,000	$3,500,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000
(4)	Alternative Energy Projects		$1,000,000					
	Subtotal Energy Management Center	$3,000,000	$4,500,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000
	21 - Field and Runway							
(2)	Airside Bituminous Rehabilitation/Electrical Construction	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000
(2)	Pavement Joint Sealing/Repair	$650,000	$650,000	$650,000	$650,000	$650,000	$650,000	$650,000
(2)	Pavement Rehabilitation - Aprons	$2,200,000	$1,900,000			$10,500,000		
(2)	Pavement Reconstruction - Taxiway Delta (W to S)							$7,000,000
(1)	Runway 30R MALSF	$1,900,000						
(2)	Miscellaneous Airfield Construction	$400,000	$400,000	$400,000	$400,000	$400,000	$400,000	$400,000
(5)	Perimeter Gate Security Improvements	$575,000						
(5)	Baggage Quarantine Building				$1,225,000			
(5)	SIDA Incursion Upgrades				$800,000			
(4)	ASR Shadow Mitigation				$5,000,000			
(4)	South Field Maintenance Building Wash Bay					$1,300,000		
	Runway 12R/30L Tunnel Rehabilitation							
(2)	Lighting and Pumping Station	$1,425,000						
(2)	Mill and Overlay		$275,000					
	Sanitary Sewer Replacements							
(2)	USAF Apron				$2,250,000			
(2)	USAF Campus				$700,000			
(2)	Delta Buildings C and G				$1,500,000			
(1)	Storm Water Ponds 3&4 Enhancements	$5,000,000						
(2)	Runway 30R Deicing Pad Subdrain	$800,000						
	Subtotal Field and Runway	$13,450,000	$3,725,000	$1,550,000	$13,025,000	$13,350,000	$1,550,000	$8,550,000
	26 - Terminal Roads/Landside							
(2)	Tunnel/Bridge Rehabilitation	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000
(2)	Upper Level Roadway Rehabilitation					$1,800,000		
(2)	Upper Level Roadway Electrical System Rehabilitation			$400,000				
	Subtotal Terminal Roads/Landside	$100,000	$100,000	$500,000	$100,000	$1,900,000	$100,000	$100,000
	31 - Parking							
(2)	T1/T2 Parking Structure Rehabilitation	$3,500,000	$3,500,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000
(4)	T2-Humphrey Ramp VMS/Rev. Control System Upgrade				$2,250,000			
(2)	T2-Humphrey GTC Core Building Modifications				$850,000			
(4)	T1-Lindbergh/T2-Humphrey Vehicle Detection/Counting				$400,000			
(2)	T1-Lindbergh Short Term Parking Redesignation				$350,000			
(4)	T1-Lindbergh Valet/Commercial Entrance Lanes Mods			$1,000,000				
(3)	T2-Humphrey Helix Access Gates/Loops	$350,000						
(2)	T2-Humphrey Elevator to Mezzanine				$3,600,000			
	Subtotal Parking	$3,850,000	$3,500,000	$5,000,000	$11,450,000	$4,000,000	$4,000,000	$4,000,000

	Projects	Capital Improvement Projects 2012	Capital Improvement Program 2013	Capital Improvement Plan 2014	2015	2016	2017	2018
	36 - Terminal 2 - Humphrey							
	Safety/Security Projects							
(5)	Emergency Voice Evacuation System		$4,000,000					
(1)	Security Check Point Renovations	$1,600,000						
(5)	Checked Baggage Inspection System (CBIS) Program *							
(5)	Shell		$14,100,000					
(5)	CBIS/ROW			$21,200,000				
	Subtotal Safety/Security Projects	$1,600,000	$18,100,000	$21,200,000	$0	$0	$0	$0
	*Assumes TSA will provide funding for 90% of the eligible project costs.							
	Facility Rehabilitation							
(2)	Curbside Canopy Repair	$1,100,000						
	Subtotal Facility Rehabilitation	$1,100,000	$0	$0	$0	$0	$0	$0
	Passenger Amenities							
(6)	Skyway to LRT Flooring Installation				$800,000			
(6)	Curbside Canopy Extension				$1,500,000			
(2)	Concessions Revenue Development/Upgrades	$150,000						
	Subtotal Passenger Amenities	$150,000	$0	$0	$2,300,000	$0	$0	$0
	Operational Improvements							
(6)	Bag Make-up Expansion *		$11,700,000					
	Subtotal Operational Improvements	$0	$11,700,000	$0	$0	$0	$0	$0
	*This project is shown under Operational Improvements and under the Terminal 2-Humphrey Demand Driven category. It could be funded as a stand alone operational improvement project, included in the Terminal 2-Humphrey North Expansion project, or could be added to the Terminal 2- Humphrey CBIS project depending on TSA funding eligibility.							
	Design Fees							
(7)	Environmental Assessment (EA)	$100,000						
(7)	Airport Layout Plan (ALP)	$1,000,000						
(7)	Three Gate Expansion		$4,950,000					
	Subtotal Design Fees	$1,100,000	$4,950,000	$0	$0	$0	$0	$0
	Terminal 2 - Humphrey Demand Driven Projects							
	Terminal 2 - Humphrey North Expansion							
(1)	Apron Expansion - North			$7,000,000	$7,300,000			
(1)	Bag Make-up Expansion *			$11,700,000				
(1)	Gates 1 - 3			$28,900,000				
(1)	Gates 4 - 7				$65,155,000			
(6)	Site Utilities			$850,000				
	Subtotal Terminal 2 - Humphrey North Expansion	$0	$0	$48,450,000	$72,455,000	$0	$0	$0
	*This project is shown under Operational Improvements and under the Terminal 2-Humphrey Demand Driven category. It could be funded as a stand alone operational improvement project, included in the Terminal 2-Humphrey North Expansion project, or could be added to the Terminal 2- Humphrey CBIS project depending on TSA funding eligibility.							
	Terminal 2 - Humphrey South Expansion							
(1)	Apron Expansion - South				$18,000,000	$22,000,000	$19,000,000	$18,000,000
(1)	Taxiway D Extension							$18,000,000
(1)	Gates 18 -27			$99,600,000				
(6)	Site Utilities				$5,000,000			
	Subtotal Terminal 2 - Humphrey South Expansion	$0	$0	$99,600,000	$23,000,000	$22,000,000	$19,000,000	$36,000,000

	Projects	Capital Improvement Projects 2012	Capital Improvement Program 2013	Capital Improvement Plan 2014	2015	2016	2017	2018
(1)	Auto Rental Facilities/QTA			$62,535,000				
(1)	Roadway Realignment			$6,000,000				
(1)	Purple Ramp Outrigger Addition					$32,100,000		
(1)	Orange Ramp Outrigger Addition/Levels 9&10							$58,700,000
	Subtotal Terminal 2 - Humphrey Demand Driven Projects	$0	$0	$216,585,000	$95,455,000	$54,100,000	$19,000,000	$94,700,000
	*Assumes that 85% funding for this project to be provided by others.							
	Subtotal Terminal 2 - Humphrey	$3,950,000	$34,750,000	$237,785,000	$97,755,000	$54,100,000	$19,000,000	$94,700,000
	39 - Public Areas/Roads							
(2)	Landside Pavement Rehabilitation *	$1,900,000	$400,000	$400,000	$400,000	$400,000	$400,000	$400,000
(2)	Roadway Fixture Refurbishment	$100,000	$100,000	$100,000				
(2)	Taxi Cab Break Room Expansion				$800,000			
	I-494/34th Ave. Interchange Enhancements							
(1)	Diverging Diamond Interchange (DDI) *		$6,000,000					
	Subtotal Public Areas/Roads	$2,000,000	$6,500,000	$500,000	$1,200,000	$400,000	$400,000	$400,000
	*Partial funding for this project being discussed with the City of Minneapolis.							
	46 - Hangars and other Buildings							
(6)	Zantop Hangar				$1,000,000			
(3)	Navy Building/Old Motor Pool Buildings				$1,000,000			
(2)	Roof Replacements		$4,200,000					
(2)	Impark Building Rehabilitation			$600,000				
(2)	Drivers Training Facility Rehabilitation			$530,000				
(2)	FAA Building Parking Lot Upgrades		$1,050,000					
(6)	Building F Tower Demolition		$1,700,000					
(2)	Building H Upgrades	$100,000						
	Subtotal Hangars and other Buildings	$100,000	$6,950,000	$1,130,000	$2,000,000	$0	$0	$0
	56 - Trades/Maintenance Buildings							
(4)	Trades Building Cooling System Improvements		$600,000					
	Subtotal Trades/Maintenance Buildings	$0	$600,000	$0	$0	$0	$0	$0
	63 - Police							
	Public Safety Facility		$300,000	$17,500,000				
(5)	Perimeter Fence Intrusion Detection System				$3,000,000			
(4)	CCTV Improvements *	$9,100,000	$4,000,000	$2,000,000	$2,000,000	$500,000	$500,000	$500,000
	Subtotal Police	$9,100,000	$4,300,000	$19,500,000	$5,000,000	$500,000	$500,000	$500,000
	*Assumes TSA will provide partial funding for eligible project costs.							
	66 - Fire							
(5)	Post Road Fuel Farm Fire Protection Improvements	$3,500,000						
(3)	MSP Campus Fire Alarm System Upgrade				$850,000	$850,000		
	Subtotal Fire	$3,500,000	$0	$0	$850,000	$850,000	$0	$0

	Projects	Capital Improvement Projects 2012	Capital Improvement Program 2013	2014	Capital Improvement Plan 2015	2016	2017	2018
	76 - Environment							
(1)	Storm Water Pond Dredging	$3,000,000						
(5)	North Fuel Island Oil/Water Separator	$1,000,000						
	Environmental Improvements							
(2)	Storm Sewer Rehabiitation - Deicing Areas		$2,600,000					
(2)	Mother Lake Stormwater Diversion				$850,000			
(4)	Runway 12R/30L Glycol Forcemain				$1,000,000			
(3)	MACNOMS Noise Monitoring Tower Upgrades	$900,000						
(3)	MAC Multilateration System				$1,300,000			
(6)	Concourse C Compactor Canopy			$160,000				
(4)	Ponds 1 and 2 Access Control	$100,000						
(6)	Concourse D Organic Waste Compactor	$350,000						
(6)	Concourse G Compactor Canopy			$250,000				
	Subtotal Environment	$5,350,000	$2,600,000	$410,000	$3,150,000	$0	$0	$0
	Reliever Airports							
	81 - St. Paul							
(6)	Holman Terminal Sub drain							$600,000
(2)	Joint and Crack Repairs	$100,000		$100,000		$100,000		$100,000
(5)	MAC Building Maintenance	$200,000		$250,000		$200,000		$200,000
(2)	Pavement Rehabilitation	$1,000,000		$1,500,000	$500,000			
(4)	Electrical Vault Improvements				$700,000			
(4)	Compensatory Excavation Mitigation							$1,000,000
(2)	Airfield Signage/Wind Cone Upgrade					$500,000		
(6)	Cold Equipment Storage Building							$750,000
(6)	Storm Sewer Improvements		$500,000					
	Subtotal St. Paul	$1,300,000	$500,000	$1,850,000	$1,200,000	$800,000	$0	$2,650,000
	82- Lake Elmo							
(2)	Pavement Rehabilitation		$300,000					
(1)	East Building Area Development *						$2,800,000	
(1)	East Side Parallel Taxiway						$1,200,000	
(2)	Runway 14/32 Reconstruction	$500,000						
(1)	Runway 14/32 Replacement				$5,000,000			
(2)	Alleyway Rehabilitation				$900,000			
(6)	Materials Storage Building							$600,000
	Subtotal Lake Elmo	$500,000	$300,000	$0	$5,900,000	$0	$4,000,000	$600,000
	*Funding for this project to be provided by others.							
	83 - Airlake							
(2)	Pavement Rehabilitation		$200,000			$400,000		
(1)	South Building Area Development *				$2,700,000			
(1)	Runway 12/30 Extension							$8,000,000
(6)	South Building Area Alleyway Development **				$1,000,000			
(2)	Maintenance Building Improvements			$50,000				
(6)	Materials Storage Building							$600,000
	Subtotal Airlake	$0	$200,000	$50,000	$3,700,000	$400,000	$0	$8,600,000

*Funding for this project to be provided by others.

**Partial funding for this project to be provided by others.

	Projects	Capital Improvement Projects 2012	Capital Improvement Program 2013	Capital Improvement Plan 2014	2015	2016	2017	2018
	84 - Flying Cloud							
(2)	Alleyway Rehabilitation	$300,000						
	Pavement Rehabilitation							
(2)	Taxiway A - Phase 1				$800,000			
(2)	Taxiway A - Phase 2					$900,000		
(1)	Runway 18/36 Extension/Improvements		$1,700,000					
(2)	East/West Perimeter Road	$50,000	$250,000					
(6)	South Building Area Development *	$1,500,000			$600,000			
(6)	Commercial Development All Relievers*	$100,000						
(6)	Equipment Storage Building						$2,500,000	
	Subtotal Flying Cloud	$1,950,000	$1,950,000	$0	$1,400,000	$900,000	$2,500,000	$0
	*Funding for this project to be provided by others.							
	85 - Crystal							
(2)	Alleyway Rehabilitation							$550,000
(4)	Obstruction Removals					$300,000		
(2)	Pavement Rehabilitation	$200,000		$700,000				
(1)	Runway 14R/32L Modifications			$1,000,000				
(2)	Airfield Signage/Electrical Improvements	$300,000						
(6)	Materials Storage Building						$600,000	
	Subtotal Crystal	$500,000	$0	$1,700,000	$0	$300,000	$600,000	$550,000
	86 - Anoka County - Blaine							
(2)	Pavement Rehabilitation							
(2)	Alleyways		$800,000					
(2)	Runways	$200,000						
(1)	Building Area Development - East Annex *							$2,400,000
(1)	Building Area Development - Xylite St. Relocation						$1,000,000	
(1)	Building Area Development - West Annex *					$850,000		
(6)	Taxiway Charlie - A2/C2 Extension				$900,000			
(6)	Materials Storage Building						$600,000	
(2)	Airfield Signage/Electrical Improvements				$500,000			
	Subtotal Anoka County - Blaine	$200,000	$800,000	$0	$1,400,000	$850,000	$1,600,000	$2,400,000
	*Funding for this project to be provided by others.							
	Subtotal Reliever Airports	$4,450,000	$3,750,000	$3,600,000	$13,600,000	$3,250,000	$8,700,000	$14,800,000
	Subtotal Post 2010 Program	$134,950,000	$105,100,000	$329,010,000	$299,240,000	$171,000,000	$315,285,000	$324,100,000
	Total 2012 CIP	$138,550,000	$106,400,000	$332,430,000	$299,240,000	$171,000,000	$315,285,000	$324,100,000

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 safety or 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.

(7) Design or environemtal review fees.

Table 1-2
Summary Environmental Assessment of 2012 Projects in the MAC 2012-2018 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	Floodplain 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															
Storm Water Ponds 3&4 Enhancements Runway 30R MALSF Storm Water Pond Dredging	YES Final Environmental Assessment North Side Storm Sewer Improvements and Runway 30R Approach Lighting System September 2011	Temporary Impacts*	No Effect	Temporary Impacts*	Minor Impacts*	No Effect	No Effect	Minor Impacts*	No Effect	Temporary Impacts*	Temporary Impacts*	Minor Impacts*	Temporary Impacts*	No Effect	No Effect
Terminal 2 – Humphrey Security Check Point Renovations	YES Environmental Assessment Worksheet July 2011	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	Temporary Impacts*	No Effect	No Effect	No Effect	No Effect	Temporary Impacts*

*All required permits and/or mitigation are being completed as part of the project.

Section 2

Projects with Potential Environmental Effects and Effects During Construction

Projects with Potential Environmental Effects

As is detailed in Table 1-2, there are four Capital Improvement Program (CIP) projects scheduled in 2012 that required the preparation of an Environmental Assessment or Environmental Assessment Worksheet. Table 1-1 identifies those projects in the CIP that do not have a potential substantive effect on the environment (such as the repair, reconstruction or rehabilitation of pavement and buildings, and replacement of existing facilities). The notes in Table 1-1 offer further explanation of the type of work that each project entails and why this work will not affect the environment. Appendix A provides a description of each project in the CIP to be implemented in the years 2012 and 2013 and for only those projects that have potential substantive environmental effects to be implemented in 2014 through 2018. The descriptions of those projects scheduled to be implemented in 2014 through 2018 are preliminary and subject to change.

Effects during Construction

Typical mitigation measures will be used during construction to minimize potential adverse environmental effects including noise, dust and erosion caused by the construction process. The environmental effects of construction are temporary and do not constitute cumulative, long-term effects. As a result, the environmental effects from construction of projects in the CIP are not discussed in Section 3 of this document, which describes cumulative environmental effects.

Section

3 Cumulative Environmental Effects

An Environmental Assessment Worksheet (EAW), Environmental Assessment (EA) or Environmental Impact Statement (EIS) requires an assessment of cumulative effects. A cumulative effect is the effect on the environment that results from the incremental effect of a project in addition to other past, present and reasonably foreseeable future projects regardless of what entity or person undertakes the other projects. Cumulative effects may result from individually minor but collectively significant projects taking place over a period of time.

2010 MSP Projects

With the exception of the Residential Noise Mitigation Program, all projects related to the MSP 2010 Program and the Dual Track Airport Planning Process Final Environmental Impact Statement (Dual Track FEIS) have been completed. In the case of the Residential Noise Mitigation Program the environmental effects are of a positive nature providing enhanced environmental circumstances that do not require completion of and EAW, EA or EIS.

Post 2010 MSP Projects

Beyond the 2012 CIP projects discussed in Section 2, the Capital Improvement Program (CIP) also includes projects for Minneapolis-St. Paul International Airport (MSP) that were not included in the Dual Track FEIS but that have the potential for substantive environmental effects. These planned projects flow from the Metropolitan Airports Commission's (MAC) recently completed MSP 2030 Long-Term Comprehensive Plan Update that was finalized in July 2010.

In September 2010 the MAC initiated the Environmental Assessment (EA) process for Phases 1 and 2 of the MSP 2030 Long-Term Comprehensive Plan. This will be a comprehensive and detailed environmental analysis of the direct and cumulative environmental effects related to the projects planned for implementation through the year 2020. The findings of the EA will be documented in a future MAC CIP Assessment of Environmental Effects (AOEE) prior to project commencement.

Anoka County – Blaine Reliever Airport Projects

The MAC completed updating the Anoka County Blaine Airport Long-Term Comprehensive Plan (LTCP) in June 2010. The plan includes a taxiway extension, general pavement rehabilitation and identifies long term needs for additional hangar space.

The MAC and the Federal Aviation Administration (FAA) prepared and approved a Final EIS for the Anoka County-Blaine reliever airport in January 2003. The Final EIS included the East and West Annex Building Area projects and the proposed Xylite Street relocation that are a part of the CIP. These projects may affect water quality and wetlands by increasing impervious surface area, which will result in increased storm water runoff. To protect wetland areas, storm water detention ponds or

ditches will accommodate the increased runoff. Wetlands impacted by construction will be mitigated according to watershed district and/or Minnesota DNR requirements.

The Taxiway Charlie work, West Annex, Xylite Street Relocation and the East Annex are planned to begin in 2015 and be completed in a timeframe that spans out to the year 2018.

The only 2012 project at the airport provides minor runway rehabilitation work. Similar work is planned for taxiways in 2014. No additional environmental review is required for these activities.

Airlake Reliever Airport Projects

The MAC completed an update to the Long-Term Comprehensive Plan for Airlake Airport in December 2008. The recommendation in the plan includes completing the final phase of the South Building Area alleyway development and the extension of Runway 12/30 from 4,098 feet to 5,000 feet. The MAC prepared an EAW for the Airlake Airport South Building Area Development project in January 1999. The EAW addressed the storm water runoff and designated trout stream impacts. In 2001, the initial grading for the building area was completed with the construction of a storm water detention pond to capture runoff before it enters the designated trout stream. The trout stream was also relocated under a permit by the Minnesota DNR as part of the project. The final phase of construction is scheduled for completion in 2015 and will involve the placement of aggregate base and asphalt material for hangar area taxilanes and the installation of sanitary sewer and water services. All of this work was also evaluated in the 1999 EAW.

The Long-Term Comprehensive Plan for the airport details the extension of Runway 12/30 to 5,000 feet and the realignment of Cedar Avenue. This project is currently planned for 2018. The MAC published the Final Scoping Decision Document and the Final EAW in March 2011 and is planning to initiate an EIS for the project when a solid project implementation timeline is determined. The MAC will have to identify funding sources for implementation of the proposed runway extension and will not proceed with the runway extension project until the necessary environmental review is completed.

There are no 2012 CIP projects scheduled at the airport.

Lake Elmo Reliever Airport Projects

The MAC completed an update to the Long-Term Comprehensive Plan for Lake Elmo Airport in December 2008. The recommendation in the plan includes the construction of the East Building Area and extension of Runway 4/22 from 2,499 feet to 3,200 feet. The MAC prepared an EAW for the East Building Area development in October 2001. The document identified increased storm water runoff, the conversion of approximately 32 acres of farmland on MAC property, and an impact of 0.016 acres to a 3.30 acre Type 3 (small, shallow) wetland. As with past airport projects, the MAC will design the project to accommodate the storm water runoff onsite and will obtain all environmental permits necessary to implement the project.

Although the Long-Term Comprehensive Plan (LTCP) originally envisioned an extension would occur on the crosswind Runway 4/22, the MAC is considering accommodating the 3,200-foot length as part of a Runway 14/32 replacement project in 2015, in which a new, longer runway would be constructed parallel to the existing Runway 14/32. The existing runway would then become a taxiway. All LTCP updates and environmental study would be completed prior to the proposed construction of the replacement runway. The replacement runway project would involve grading, paving, storm sewer management, lighting and pavement marking. Since there are wetlands on the airport property, an

evaluation would be completed to review any potential impacts as part of the documentation listed above. No land acquisition would be required.

The only 2012 project at Lake Elmo involves the reconstruction of the center section of the existing Runway 14/32. This is the same portion of runway that will ultimately become a parallel taxiway in the future. No further environmental review is required for the 2012 rehabilitation project.

Crystal Reliever Airport Projects

The MAC completed an update to the Long-Term Comprehensive Plan for Crystal Airport in December 2008. The recommendation in that plan is to close two of the airport's four runways. The MAC is in the process of determining the best course of action for implementing the long-term plan. The FAA must also approve the proposed runway closures.

The CIP includes the Runway 14R/32L modifications project, scheduled for 2014. This project involves the reconstruction and conversion of the existing runway pavement into a taxiway. This project will not be implemented until the necessary approvals and environmental study associated with the runway closure are completed.

2012 CIP projects at the airport are largely maintenance activities with no additional environmental review required.

Flying Cloud Reliever Airport Projects

In June 2004, the MAC prepared and approved a Final EIS that included the Runway 10R/28L Widening/Extension and South Building Area Development projects. In 2009 the runway extension was completed along with grading and paving of the South Building Area alleyways and service road. In 2011 the remaining piece of the South Building Area development will include only the installation of sanitary sewer and water.

The MAC updated the Flying Cloud Airport Long-Term Comprehensive Plan in October 2010. The plan proposes a shift of Runway 18/36 to the north by 58 feet, to bring the runway into required FAA safety area compliance, with an additional extension to the north of 109 feet, increasing the overall runway length to 2,800 feet. Additionally, an east-west perimeter road will be constructed through the Runway 18 approach area along Pioneer Trail.

The Runway 18/36 and east-west perimeter road project is planned for 2013, except for a small portion that may be constructed in 2012. The environmental work of this categorically excluded project has been completed.

The 2012 CIP projects at Flying Cloud Airport include the south building area and development, as well as commercial development. These projects will not have substantive environmental effects nor do they require an EAW or EIS.

St. Paul Downtown Reliever Airport Projects

The MAC completed updating the St. Paul Downtown Airport Long-Term Comprehensive Plan in June 2010. The plan does not propose any substantive expansion or enhancement of the facilities at the airport.

Future CIP projects at St. Paul Downtown Airport are largely maintenance activities with no additional environmental review required.

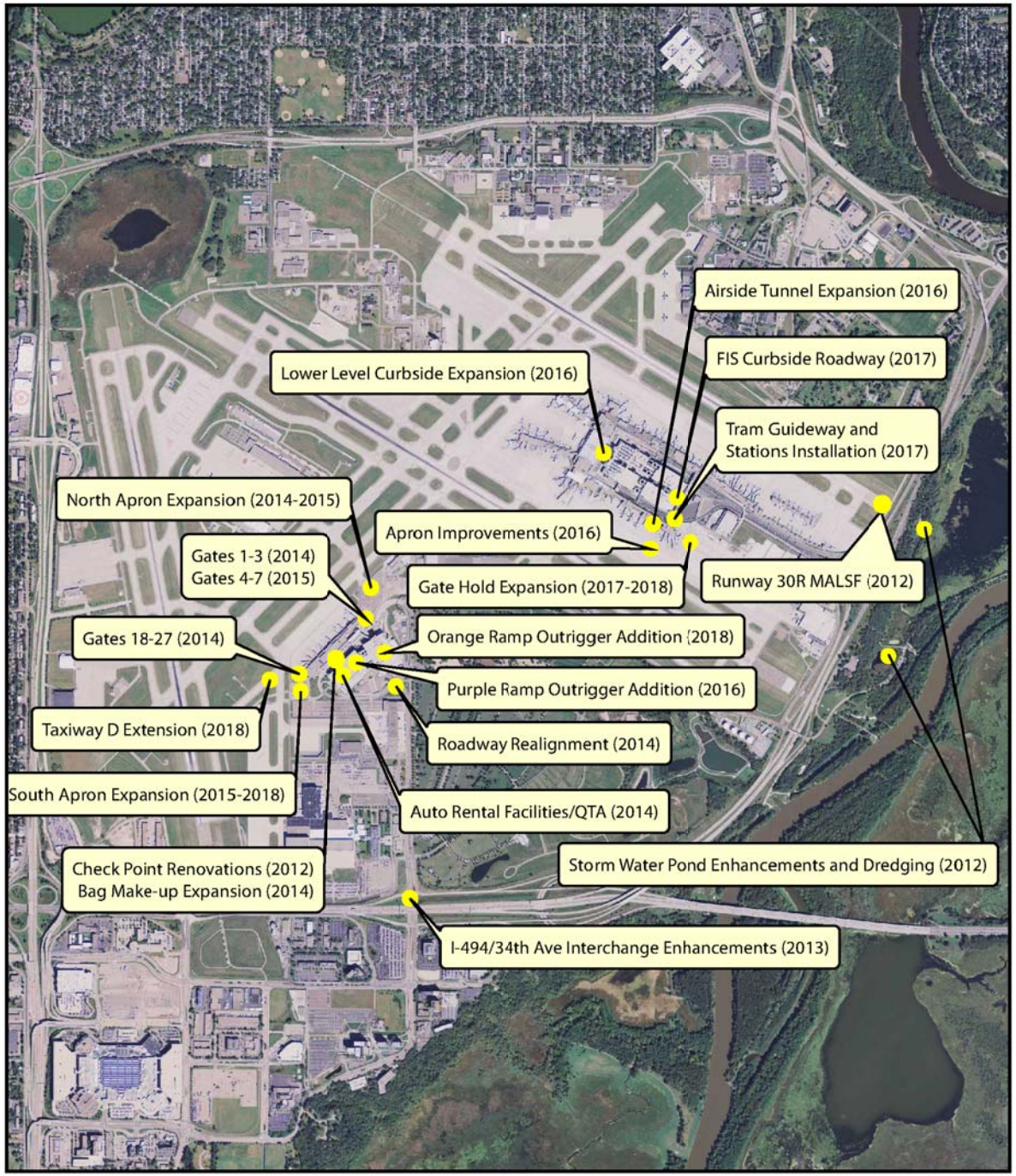
Appendix A

Description of Projects in the 2012 – 2018 Capital Improvement Program

Figure A-1

Capital Improvement Projects with Potential Environmental Effects

Minneapolis - St. Paul International Airport
2012-2018



Proposed Project Schedule

2012
- Storm Water Ponds 3 and 4 Enhancements
- Storm Water Pond Dredging
- Runway 30R MALSF
- Terminal 2 - Humphrey Security Check Point Renovations
- *Noise Mitigation Settlement*

2013
- I-494/34th Ave Interchange Enhancements
- *Noise Mitigation Settlement*

2014
- Terminal 2 - Humphrey North Apron Expansion
- Terminal 2 - Humphrey Gates 1-3
- Terminal 2 - Humphrey Gates 18-27
- Terminal 2 - Humphrey Bag Make-up Expansion
- Auto Rental Facilities/QTA
- Roadway Realignment
- *Noise Mitigation Settlement*

2015
- Terminal 2 - Humphrey North Apron Expansion
- Terminal 2 - Humphrey South Apron Expansion
- Terminal 2 - Humphrey Gates 4-7

2016
- Concourse G Apron Improvements
- Concourse G Airside Tunnel Expansion
- Lower Level Curbside Expansion
- Terminal 2 - Humphrey South Apron Expansion
- Purple Ramp Outrigger Addition

2017
- Concourse G Tram Guideway and Stations Installation
- Concourse G Gate Hold Expansion 10 Gates
- Concourse G FIS Curbside Roadway
- Terminal 2 - Humphrey South Apron Expansion

2018
- Concourse G Gate Hold Expansion 10 Gates
- Terminal 2 - Humphrey South Apron Expansion
- Terminal 2 - Humphrey Taxiway D Extension
- Orange Ramp Outrigger Addition/Levels 9 & 10

Projects in italics are not shown on map

2012 Capital Improvement Program

2010 Development Program

Noise Mitigation Program

Noise Mitigation Settlement $3,600,000

This project is a continuation of the implementation of the noise mitigation program based on the Noise Exposure Map contained in the court-ordered Consent Decree, including the construction and administrative costs associated with noise mitigation in the 2007 60-62 DNL contours. The project funds will be expended over two years, 2011 and 2012, and will provide noise mitigation for homes in the $14,000 Mitigation Menu category (Phase 2B). In addition, homeowner reimbursements for approved noise mitigation work in the 2005 60-64 DNL contours (Phase 3) are included in the 2012 project budget.

Post 2010 Program Projects

10 –Terminal 1- Lindbergh

SAFETY/SECURITY PROJECTS

Checked Baggage Inspection System (CBIS) Integration $18,000,000

MAC staff, in concert with the Transportation Security Administration (TSA) and the airlines, has developed a plan for the installation of a CBIS for Terminal 1 – Lindbergh (T1).
Phase 1 (West CBIS) provides 100% checked bag screening of all Delta Air Lines passengers' bags. Phase 1 also included Explosive Detection System (EDS) equipment which was installed in the north ticket lobby of T1 for the other airlines. This system was operational in August 2007 and satisfied the initial TSA and MAC goal of 100% EDS-screening of all T1 baggage.

Phase 2 (The Old Bus Stop) is currently under construction and replaces the semi-automated CBIS placed in service following the events of September 11, 2001. In March of 2010, the MAC received a grant from the TSA for reimbursement of 90% of the eligible project costs of this $33.5 million project. Phase 2 replaces nine CTX 5500s with three high-throughput CTX 9800 devices, and is being constructed below the Concourse G FIS pod. The temporary bus-stop building which housed this facility will be demolished as part of the plan. All T1 ticket counters will feed both CBIS systems and all bag belt devices located in the bag room. This project is currently under construction and will be operational by February 2013.

Phase 3 of the program is the final T1 phase and will transition all EDS installations at T1 to a fully automated "in-line" CBIS system that will meet all current TSA guidelines. TSA will provide funding for 90% of the eligible project costs.

Telecommunications Room Equipment Continuity and Security $2,300,000

The MAC network (MACNet) carries credit card data from the Landside Parking Revenue Control System. The credit card industry has created security standards which merchants, like the MAC, are required to meet to protect card holder data. Among these requirements are security standards for the physical locations where MACNet equipment is located. Additionally, the network equipment

itself must have added security features to prevent unauthorized network access. This program will address these standards by providing security equipment and relevant network hardware for the 150 telecommunications rooms on the MAC campus. This program is being coordinated with related projects including CCTV, fiber upgrade the Data Center projects to avoid duplication of effort and cost. This will be a multi-year program.

Fall Protection Program $100,000

The Occupational Safety and Health Administration (OSHA) requires that employers protect their employees that who on roof tops next to roof edges and at other locations where there could be the potential for injuries due to falls. Options range from warning signage and spotters to guardrail and tie-off systems. A Roof Fall Protection Committee has been formed and is reviewing roof areas around the MSP campus to determine potential hazards and mitigation options. This program is being implemented to address roof fall protection in those areas deemed to present an imminent hazard to MAC staff and that are not being addressed in a current roof repair project.

FACILITIES REHABILITATION

Skyway HVAC $1,500,000

The skyways from Terminal 1-Lindbergh that connect to the parking structures utilize 24 individual units for heating and cooling the skyways. These HVAC units have been failing over the years and repair parts have been increasingly difficult to find. This project would replace the units with a new HVAC system. The north skyway was completed in 2011 and this year's project will provide a new HVAC system on the south skyway.

Electrical Infrastructure Rehabilitation Program $2,000,000

There are 53 electrical substations that serve the Terminal 1-Lindbergh complex. It is imperative that these substations be inspected, cleaned and upgraded in order to ensure their continued performance. This is a continuation of a multi-phase program that began in 2009.

Terminal Miscellaneous Modifications $2,500,000

Each year, there is a list of maintenance projects that are beyond the capability of the MAC's maintenance staff to accomplish. These projects are prioritized and completed either as a series of contracts or as purchase orders. The list of potential projects will be compiled and prioritized in early 2012.

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

Building Exterior Rehabilitation *

A continuation of the program to rehabilitate the exterior of the terminals 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.

MSP Campus Modifications *

An ongoing program to modify or remodel areas within 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 and the highest priority projects within any of these project categories included in the program.

Emergency Power Upgrades $2,200,000

Studies and surveys of the Terminal 1-Lindbergh transfer switches and emergency lighting were completed in 2008. This year's project will continue the design and implementation of emergency power and lighting corrective work that has been identified for upgrading.

Restroom Upgrade Program $2,600,000

A study of all restrooms in Terminal 1-Lindbergh was completed in 2010 and a program was developed to upgrade/modernize them. From this study, each restroom was prioritized as to its condition. This program would provide for the phased modernization of the restrooms to include upgraded finishes, lighting, resource and energy saving upgrades and ADA compliance.

Air Handling Unit Replacement $2,100,000

There are existing air handling units serving Terminal 1-Lindbergh that were installed with the original terminal construction and are over 40 years old. A study of these units that evaluated each unit's age, condition and ability to adequately heat or cool the spaces it serves has been completed. A multi-year program to provide for the replacement of the units that have been identified as needing replacement will be implemented. The estimated project costs include modifications to building walls to facilitate the removal of existing equipment and installation of the new units, upgraded electrical and temperature controls and asbestos abatement where required.

Conveyance System Upgrades $2,700,000

A study of the MSP campus conveyance systems including elevators, escalators, moving walks, dumbwaiters and material lifts was completed by the Facilities Department's conveyance consultant. The study evaluated the useful life of each system including the availability of replacement parts and technical support of the equipment. Many of the systems are being operated by outdated technology that is generally less efficient than modern control equipment. Some of the systems do not include safety devices or features that are commonly installed on modern equipment. A multi-year program will therefore be implemented to modernize and replace elements of the conveyance systems.

Folded Plate Drain and Roof Repair $6,400,000

The Terminal 1-Lindbergh folded plate roof structure consists of lightweight concrete that was constructed in 1958-60. Existing faulty roof drains, drain pans and pits are allowing water to penetrate the concrete resulting in structural deterioration, concrete spalling and water leakage into the building at multiple locations. A pilot project that modified the roof drain and pit drain at one location was completed in 2010. Based on the success of the pilot project, a 3-year program was implemented starting in 2011 to modify roof drains and pit drains at 33 locations. In addition, catwalk access and stairs, lightning protection, fall arresting systems and leak and heat detection will be installed.

Plumbing Infrastructure Upgrade Program $500,000

In 2010, MAC staff prepared a preliminary study of the reliability and maintainability of the existing plumbing infrastructure. Portions of the existing plumbing infrastructure serving Terminal 1-Lindbergh are over 40 years old, have systems that are undersized for today's demands, contain isolation valves that are either inaccessible or no longer function and utilize aging water meter systems. There are also deteriorated sections of the existing sanitary and storm water systems. A 4-year program will be implemented in 2012 to upgrade the plumbing infrastructure system to meet current code requirements and MAC standards.

Terminal Bag Claim Rehabilitation $14,400,000

This is a multi-year baggage claim remodel program that will upgrade existing baggage claim devices, interior finishes, lighting, ceiling conditions, office and left-baggage storage modifications and fire sprinkler and notification/voice-evacuation systems to meet MAC standards and code requirements. Some of the existing baggage claim devices are original to the terminal construction and present less than efficient space utilization and presentation length for current and projected growth. The project will also be coordinated with the ticket lobby remodel multi-year project that may include additional egress stair modifications.

Food Court Counter Upgrades $100,000

The main food court in Terminal 1-Lindbergh was renovated in 2005-2006 and incorporated the installation of wooden counters. Subsequent to this installation, the remaining food courts in T1 have been renovated utilizing an engineered quartz product. This product has proven to be much more durable and easier to clean than the wood counters. This project will provide for the installation of new engineered quartz counters, including required structural supports.

Terminal Curtainwall Repair $100,000

The rubber gaskets that are integral to sealing the existing curtainwall system from air infiltration, heating and cooling loss and water intrusion have been failing and require replacement in many locations. The gasket failures result in increased heating and cooling costs and repair costs resulting from water damage to the building wall assembly. This multi-year program will provide for the replacement of failing gaskets and related repairs to the curtainwall system.

PASSENGER AMENITIES

Art in the Terminal $250,000

This project presents an opportunity to partner with the Airport Foundation to provide a gallery-type space on Concourse C for the display of permanent and temporary/rotating art exhibits. This

project also includes lighting and finish upgrades in the baggage claim area to support art installations. The Concourse C location was identified as an art location with the adoption of the Public Art standards in 1999. This project will be the second phase in a program that began in 2011.

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 Terminal 1-Lindbergh.

Way-Finding Signage Improvements $200,000

With the change in terminal designation from Lindbergh Terminal to Terminal 1-Lindbergh, there is a need to modify additional interior and exterior signage. In addition, there is also a need to add LRT signage to improve access/visibility to the public, add missing elevator signs and modify overhead illuminated and non-illuminated signage to improve passenger way-finding.

OPERATIONAL IMPROVEMENTS

Open Architecture Building Automation (OABA) $1,850,000

This program will upgrade all MAC building automation systems to the LonMark open protocol so that the MAC 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 is a continuation of a multi-year program.

IS Data Center Facilities $15,000,000

The MAC is currently supporting 125 rooms used as data centers located throughout the MSP campus. Most of these rooms are telecommunications closets designed to hold telephone cabling and termination equipment. Each of these rooms contains rack-mounted IT equipment that serves various functions including airport security, landside operations (parking operations), credit card processing, accounting, human resources, payroll and life safety systems (fire alarm). Many of these rooms are running out of power and cooling capacity. Several of the rooms do not have emergency power, redundant cooling, security features or environmental monitoring. Maintenance and construction work regularly requires power shutdowns, which also shut down IT systems in these rooms. In addition, the “hub and spoke” configuration of network cabling among the various IT locations has created a single point of failure that could affect all systems severely.

A study was completed in 2010 that recommends that the majority of the 125 rooms used as data centers be consolidated into one new data center. This facility, as well as four hub rooms, will be connected using a new network dual fiber ring configuration that will enhance system reliability. The dual ring upgrade project began in 2011 with the construction of the new data center programmed for 2012.

Fiber Optic Cable Infrastructure Upgrade/Expansion $1,650,000

Fiber optic cable infrastructure is the basic vehicle that allows for broader use of both new and existing communications and computer-based technologies. The cable infrastructure requires ongoing upgrade, replacement and expansion. This project will provide for the expansion of cabling infrastructure including replacing materials that don’t meet current MAC standards and adding capacity between locations where existing capacity has been used up.

Wireless Network Control System $850,000

This project will provide a campus-wide wireless network to be implemented over a 2-year period. This system would allow remote wireless access to and manipulation of the MAC Facilities Intelligent Monitoring and Control System (IMACS). The system would allow access to data and drawings from the MAC network from the terminals as well as from vehicles on the airfield.

CONCOURSE G IMPROVEMENTS

Concourse G Fire Protection System $7,400,000

As required by the MAC Building Official and Fire Marshal, this project will install and upgrade existing fire suppression and visual and auditory notification systems on Concourse G to meet current code (including voice evacuation), and will include additional exit and security signage and new exit doors with windows. Northwest Airlines, now Delta Air Lines, had been requested to complete these upgrades in previous years. Delta Air Lines has indicated that it would like to have the MAC undertake this project with reimbursement to be made to the MAC in accordance with the agreements to be in place as part of the Delta Air Lines OTG concessions upgrade project.

Energy Savings Projects $1,200,000

A program was initiated in 2002 to provide for the implementation of projects that would save the MAC energy costs in its operating budget. Discussions with both Xcel and Centerpoint have identified additional projects that are eligible for energy saving rebates and that will save the MAC additional energy costs. In order to qualify, projects must provide a 5-year pay back. Delta Air Lines has indicated that it would like the MAC to undertake these projects with reimbursement to be made to the MAC in accordance with the agreements to be in place as part of the Delta Air Lines OTG concessions upgrade project.

13 – Energy Management Center

Energy Savings Projects $3,000,000

A program was initiated in 2002 to provide for the implementation of projects that would save the MAC energy costs in its operating budget. Discussions with both Xcel and Centerpoint have identified additional projects that are eligible for energy saving rebates and that will save the Commission additional energy costs. In order to qualify, projects must provide at least a 5-year pay back.

21 - Field and Runway

Airside Bituminous Rehabilitation/Electrical Construction $500,000

This is an ongoing program to construct or reconstruct bituminous pavements and airfield electrical or lighting within the Air Operations Area. Inspection of taxiway pavements, lighting and electrical circuits will be made to determine what areas should be prioritized for rehabilitation under this year's project.

Pavement Joint Sealing/Repair $650,000

This is an ongoing program to provide for the resealing of joints in existing concrete pavements. The areas scheduled for sealing will be determined in the spring of 2012. This project will also provide for limited crack and surface repairs.

Pavement Rehabilitation – Aprons $2,200,000

This is an ongoing program to replace sections of concrete pavement in the aircraft operational areas that have deteriorated to a point where routine maintenance is no longer a viable option. This year's project will replace approximately 6,400 square yards of concrete apron located adjacent to Concourse C between Gates C4 and C6.

Runway 30R MALSF $1,900,000

MAC staff has been requesting that a MALSF system be acquired and installed for the approach to Runway 30R at MSP since May 2005. A MALSF system is a medium-intensity approach lighting system with flashers spaced along the extended runway centerline from the threshold to a distance of 1,400 feet. Currently all of the available arrival runways at MSP are equipped with approach lighting systems (ALS) except for Runway 30R. Lack of an ALS limits the throughput of the airport during conditions requiring an instrument approach to Runway 30R. Important visual clues for crews are not available, requiring higher weather minima for 30R and resulting in reduced airport capacity. The airlines and the FAA Air Traffic Control Tower staff strongly support the installation of the 30R MALSF. (See Figures A-2 and A-3)

Miscellaneous Airfield Construction $400,000

This is 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 that come up unexpectedly.

Perimeter Gate Security Improvements $575,000

This project is a continuation of the 2011 perimeter gates improvements project and provides for additional improvements to the existing security gates (specifically Gates 435, 269, 222, and 122), along with spare gate components.

Runway 12R/30L Tunnel Rehabilitation - Lighting & Pumping Station $1,425,000

This project provides for the rehabilitation of the storm water lift station serving the vehicular tunnel located beneath Runway 12R/30L, along with improvements to the existing subdrain system and replacement/enhancements to the tunnel lighting.

Storm Water Ponds 3 & 4 Enhancements $5,000,000

This project provides for modifications to storm water detention ponds 3 and 4 to reduce overflows into Snelling Lake. 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 spillway will be replaced to prevent future spillway washout. The outlet structure will also be replaced and a parallel 72-inch storm sewer installed to increase the outflow capacity from pond 3. (See Figure A-3)

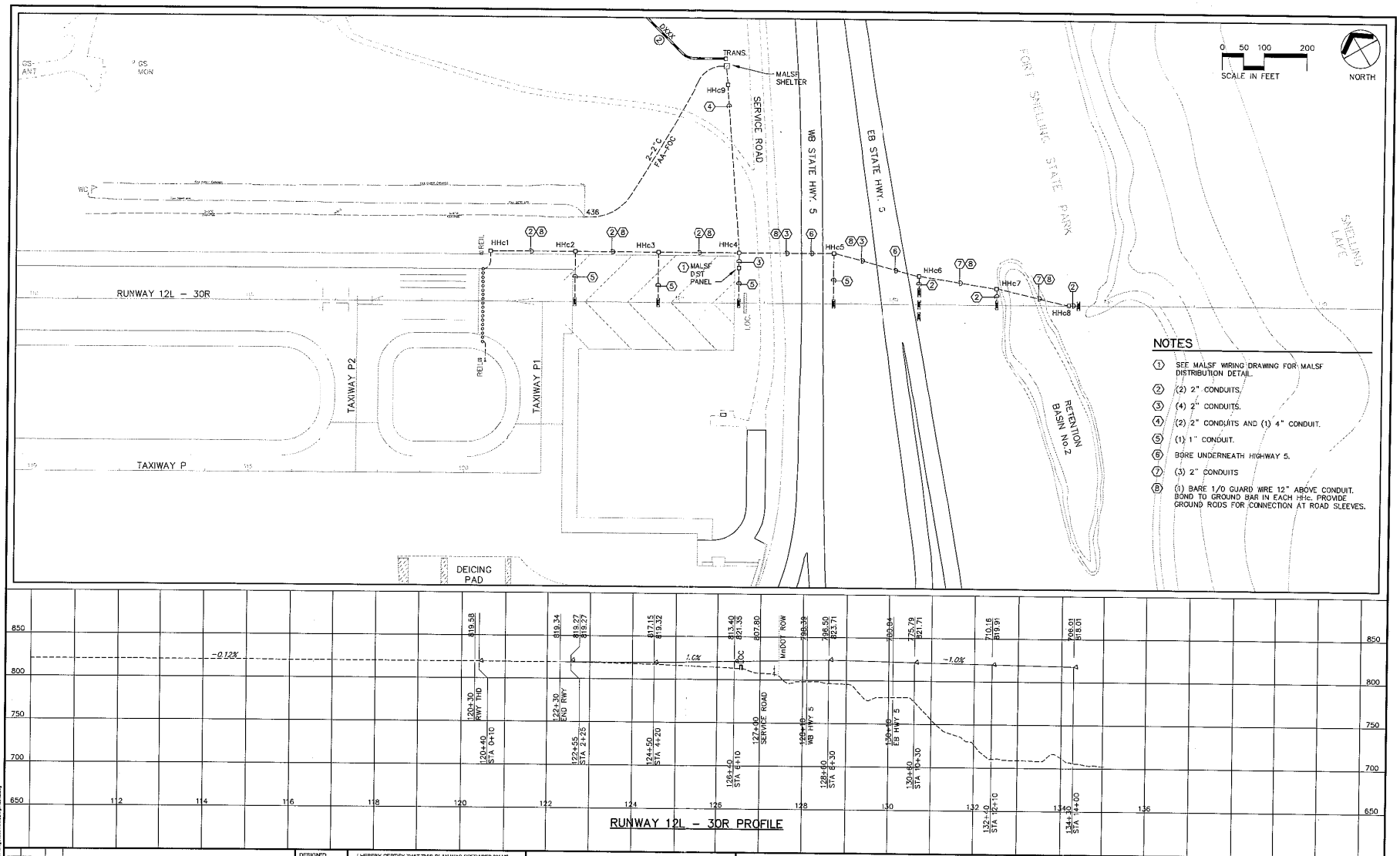


Figure A-2

Metropolitan Airports Commission

GENERAL OFFICES
6040 - 28TH AVENUE SOUTH
MINNEAPOLIS, MINNESOTA 55450

TKDA
ENGINEERING • ARCHITECTURE • PLANNING

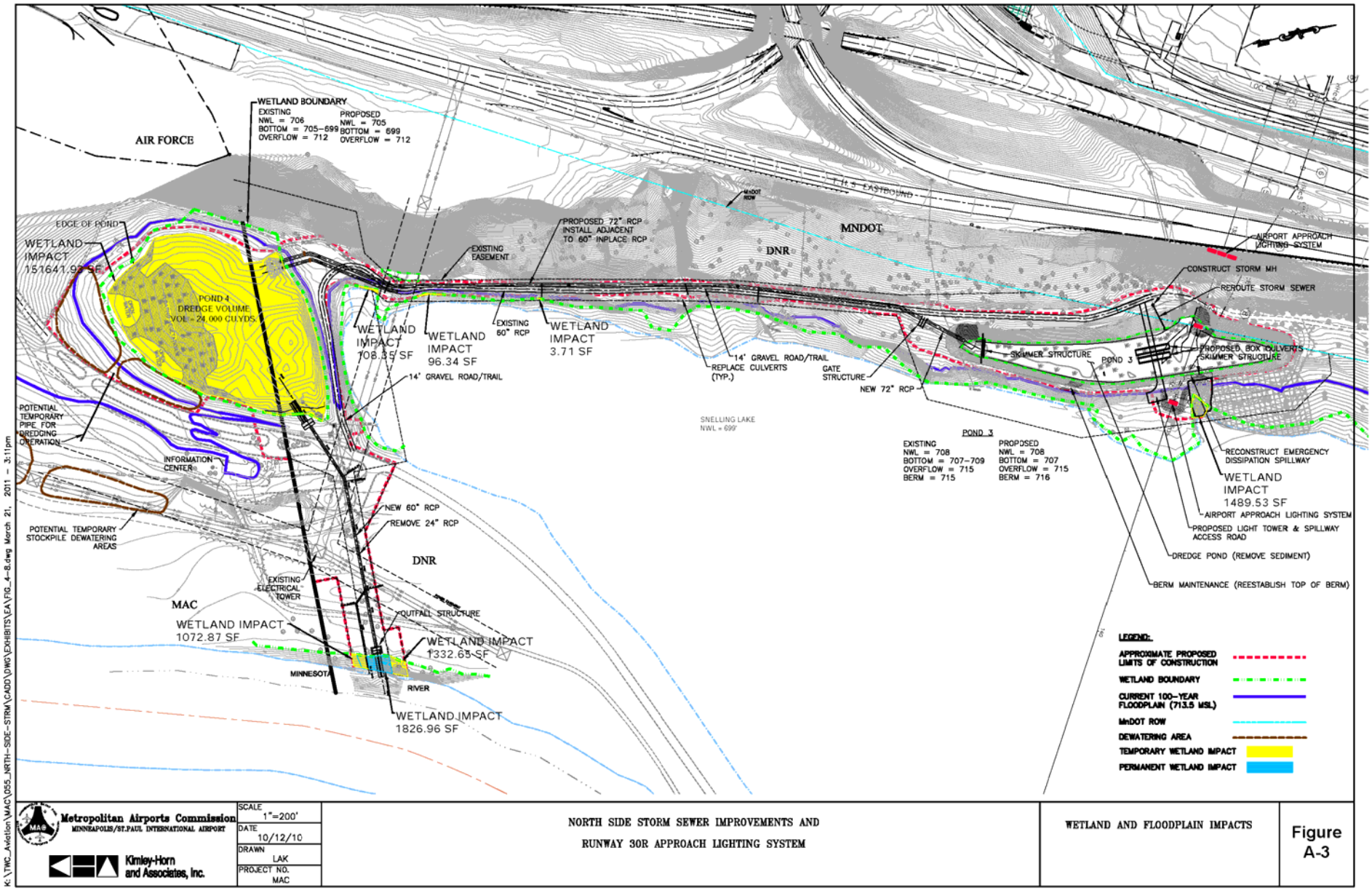
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA
NAME:
XXX XX, 2010
LIC. NO. 00000

DESIGNED JRN
DRAWN JRN
CHECKED JRN

NO. | DATE | BY | DESCRIPTION OF REVISIONS

MALSF PLAN & PROFILE
RUNWAY 30R MALSF

PROJ. NO. 14677 MSP
DRAWING NO. C00X


WETLAND BOUNDARY
EXISTING
NWL = 706
BOTTOM = 705-699
OVERFLOW = 712
PROPOSED
NWL = 705
BOTTOM = 699
OVERFLOW = 712
AIR FORCE
EDGE OF POND
WETLAND IMPACT 151641.93 SF
POND 4
DREDGE VOLUME
VOL = 24,000 CU YDS
POTENTIAL TEMPORARY PIPE FOR DREDGING OPERATION
INFORMATION CENTER
POTENTIAL TEMPORARY STOCKPILE DEWATERING AREAS
MAC
WETLAND IMPACT 1072.87 SF
EXISTING ELECTRICAL TOWER
DNR
NEW 60" RCP
REMOVE 24" RCP
OUTFALL STRUCTURE
MINNESOTA RIVER
WETLAND IMPACT 1332.65 SF
WETLAND IMPACT 1826.96 SF
WETLAND IMPACT 708.35 SF
WETLAND IMPACT 96.34 SF
EXISTING 60" RCP
WETLAND IMPACT 3.71 SF
14' GRAVEL ROAD/TRAIL
EXISTING EASEMENT
PROPOSED 72" RCP INSTALL ADJACENT TO 60" INPLACE RCP
REPLACE CULVERTS (TYP.)
GATE STRUCTURE
NEW 72" RCP
MNDOT
DNR
SNELLING LAKE
NWL = 699
POND 3
EXISTING
NWL = 708
BOTTOM = 707-709
OVERFLOW = 715
BERM = 715
PROPOSED
NWL = 708
BOTTOM = 707
OVERFLOW = 715
BERM = 716
SKIMMER STRUCTURE
POND 3
CONSTRUCT STORM MH
REROUTE STORM SEWER
AIRPORT APPROACH LIGHTING SYSTEM
PROPOSED BOX CULVERTS
SKIMMER STRUCTURE
RECONSTRUCT EMERGENCY DISSIPATION SPILLWAY
WETLAND IMPACT 1489.53 SF
AIRPORT APPROACH LIGHTING SYSTEM
PROPOSED LIGHT TOWER & SPILLWAY ACCESS ROAD
DREDGE POND (REMOVE SEDIMENT)
BERM MAINTENANCE (REESTABLISH TOP OF BERM)
LEGEND:
APPROXIMATE PROPOSED LIMITS OF CONSTRUCTION
WETLAND BOUNDARY
CURRENT 100-YEAR FLOODPLAIN (713.5 MSL)
MnDOT ROW
DEWATERING AREA
TEMPORARY WETLAND IMPACT
PERMANENT WETLAND IMPACT
K:\TNC_Aviation\MAC\055_NRTH-SIDE-STRM\CADD\DWG\EXHIBITS\EA\FIG_4-8.dwg March 21, 2011 - 3:11pm
Metropolitan Airports Commission
MINNEAPOLIS/ST.PAUL INTERNATIONAL AIRPORT
Kimley-Horn and Associates, Inc.
SCALE 1"=200'
DATE 10/12/10
DRAWN LAK
PROJECT NO. MAC
NORTH SIDE STORM SEWER IMPROVEMENTS AND
RUNWAY 30R APPROACH LIGHTING SYSTEM
WETLAND AND FLOODPLAIN IMPACTS
Figure A-3

Runway 30R Deicing Pad Subdrain $800,000

This project includes the installation of a lift station and subdrain system to capture potentially impacted groundwater beneath the 30R deicing pad and route it to the sanitary sewer system.

26 - Terminal Roads/Landside

Tunnel/Bridge Rehabilitation $100,000

A Bridge and Tunnel Safety Inspections Report was prepared in 2007. The report is updated each year and outlines maintenance recommendations to be implemented.

31 – Parking

T1/T2 Parking Structure Rehabilitation $3,500,000

This is 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 and updated in 2011.

T2-Humphrey Helix Access Gates/Loops $350,000

Customers who are diverted to Terminal 2 – Humphrey when parking is at capacity at Terminal 1 - Lindbergh or who choose to take advantage of MSP Value Parking enter the Orange parking ramp utilizing helixes and then park on either the Mezzanine Level or level 2. To exit from these levels, customers must take a speed ramp down to the ground level or up to level 3 to exit. This movement can be confusing to customers. In order to improve on the customer's experience, this project will add count loops, gates and signage to existing portals at the helixes at these levels such that entering and existing movements will both be through the helixes.

36 – Terminal 2 – Humphrey

SAFETY/SECURITY PROJECTS

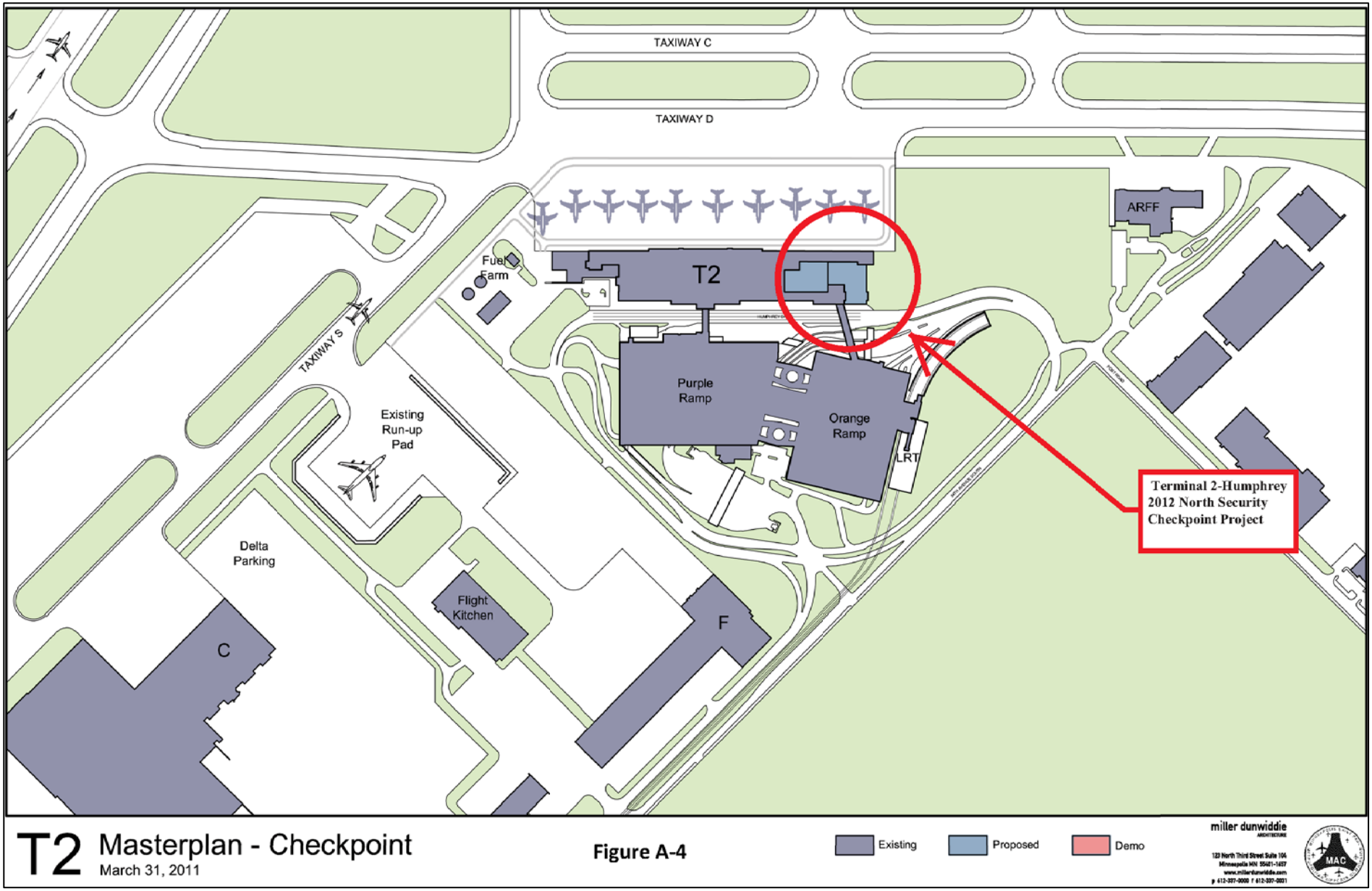
Security Check Point Renovations $1,600,000

A new security check point will be constructed in 2012 adjacent to the north skyway. Once this check point is operational, the existing checkpoint will be remodeled and reconfigured in a north-south direction in order to accommodate the current TSA equipment guidelines. An open area directly north of the queue area for the check point will also be in-filled to add an additional 130 linear feet of queuing. (See Figure A-4)

FACILITY REHABILITATION

Curbside Canopy Repair $1,100,000

The existing curbside canopy and drain system is in need of replacement/repair due to deterioration of the canopy roofing panels and freezing problems within the drain system. The redesign of the roof panels to meet current OSHA structural requirements resulted in higher than expected costs and only the south half of the canopy was repaired. This project will provide for the repair of the north end of the canopy including some required repairs to the east roadway lights.


TAXIWAY C
TAXIWAY D
ARFF
Fuel Farm
T2
TAXIWAY S
Purple Ramp
Orange Ramp
LRT
Existing Run-up Pad
Terminal 2-Humphrey 2012 North Security Checkpoint Project
Delta Parking
Flight Kitchen
C
F
T2 Masterplan - Checkpoint
March 31, 2011
Figure A-4
Existing
Proposed
Demo
miller dunwiddie
MAC

PASSENGER AMENITIES

Concessions Revenue Development/Upgrades $150,000

This project will fund miscellaneous upgrades (finishes, furniture, condiment stations, etc.), signage and/or modified connections to utilities for the concession programs at Terminal 2-Humphrey.

DESIGN FEES

Environmental Assessment (EA) $100,000

The MAC is working with the FAA to complete a Federal Environmental Assessment (EA) that will then allow MAC to participate in funding through the Federal Airport Improvement Program (AIP) or the Passenger Facility Charge (PFC) program for eligible airport development. This process is required to be completed prior to the start of expansion projects associated with Phases 1 and 2 of the recently adopted Long Term Comprehensive Plan (LTCP) for MSP. This year's program is a continuation of the 2011 efforts toward completing the EA document.

Airport Layout Plan (ALP) $1,000,000

In conjunction with the recently adopted LTCP for MSP and the planned Federal EA process, the MAC must complete an update to the overall Airport Layout Plan (ALP) that will identify the locations of proposed expansion projects. A project must be shown on an FAA-approved ALP in order to receive funding through the AIP or PFC programs. The efforts required to update the ALP to meet the new FAA electronic format standards include the need for extensive airfield ground surveys, data collection via aerial photogrammetry, data compilation/verification and coordination with the National Geodetic Surveys for enhanced survey control points.

39 – Public Areas/Roads

Landside Pavement Rehabilitation $1,900,000

This project provides for the reconstruction of 28th Avenue from approximately Highway 62 (Cross-town) to E. 62nd Street. This roadway has been used as a haul route for many airside projects over the years and the constant pounding by heavily-loaded trucks has caused the roadway to deteriorate to the point where major reconstruction is required. The MAC is discussing with the City of Minneapolis possible funding for a section of the road within the City's maintenance responsibility.

Roadway Fixture Refurbishment $100,000

Many of the light poles, overhead obstruction bars, sign units, fence sections and canopies on the airport roadways are in need of repainting and maintenance. This program would provide for refurbishment of these fixtures utilizing both MAC staff and temporary seasonal staff as required.

46 – Hangars and other Buildings

Building H Upgrades $100,000

Building H houses the MAC's Driver License Center as well as other airport tenants. The exterior of this facility, including the concrete block wall structure and windows, requires repair and replacement. This project will include tuck pointing of the concrete block, repair/replacement of existing windows and re-painting of the building's exterior.

63 – Police

CCTV Improvements $9,100,000

This is an ongoing program to add new and to upgrade existing CCTV systems to ensure the safety and security of MSP. An analysis of the existing CCTV system was completed in 2010. The existing system consists of a mix of old and new technology with some equipment being in excess of 16 years old. The consensus of the CCTV working group was to replace and upgrade the existing CCTV system to a fully digital system. Initially, a CCTV Systems Integrator will be selected to assist in the development and installation of new Video Management System (VMS) and Physical Security Information System (PISM) software. New IP cameras will also be installed and evaluated. A program to systematically replace and integrate the approximately 1800 existing cameras will begin. The MAC is working with TSA on an Other Transaction Agreement (OTA) to provide funding for eligible project costs.

66 – Fire

Post Road Fuel Farm Fire Protection Improvements $3,500,000

In order to enhance fire protection at the Post Road fuel storage facility, a series of improvements will be implemented. These include the installation of a 30-foot by 50-foot pump house with foam proportioning equipment and associated piping, and electric motor operated nozzles. This project also includes Emergency Fuel Shutoff (EFSO) System monitoring upgrades, heat sensors and additional controls to monitor drain valves.

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 ponds 3 and 4 to increase the storm water runoff storage volume. (See Figure A-3)

North Fuel Island Oil/Water Separator $1,000,000

This project provides for the installation of an oil/water separator (OWS) and modification of pavements at the MAC North Fueling Facility. The OWS provides storm water protection from spills and releases during vehicle fueling and fuel transfer activities. The current fuel island directs storm water flows to a grass retention basin where, in the event of a release, impacted soils are removed and disposed of at an approved facility. This project will bring MAC-controlled facilities up to MSP recommended water quality best management practices.

MACNOMS Upgrades $900,000

The Metropolitan Airports Commission's system of 39 permanent noise monitoring sensors, located in the surrounding communities, provides high quality, reliable noise data for correlation with aircraft flight track data and also provides verification of modeled noise contours produced per the requirements of the noise Consent Decree. The noise sensors are comprised of an environmental noise analyzer, outdoor preamplifier and microphone mounted on a tilting tower. Ancillary components include a modem to provide a means of system communications and equipment for providing backup power.

The system's components, installed in three phases beginning in 1992, currently average over 15 years of usage, with over sixty percent of the components over 18 years of usage. The system's

main component, the analyzer, which was designed in the 1980s, is no longer sold or supported. Its interoperability with current technology is restricted by its unsupported, non-standard communication protocol. In addition, conditions affecting sensitivity, reliability and appearance are also becoming more prevalent as a result of component age and continued exposure to environmental factors. New hardware would address these concerns and present the option of new functionality such as real-time data, audio of events and frequency analysis.

Ponds 1 and 2 Access Control $100,000

This project provides for the installation of a motorized access control gate at the entrance to MSP ponds 1 and 2 that is located within an expanded cab staging site along Post Road. The pond area is accessed numerous times on a daily basis by various MAC departments, tenants and consultants. While the pond area is not a secured area as defined by TSA, an automatically closing gate would minimize the potential for access by unauthorized individuals and the associated safety and liability concerns. There would be a reduced likelihood of littering and vandalism.

Concourse D Organic Waste Compactor $350,000

The MAC currently owns a compactor suitable for containing the organic materials diverted from the solid waste stream from the terminal. The Organics Project Team is recommending the installation of the compactor on a site on Concourse D to accommodate the increasing volumes of material generated by the organics program. The program's potential to expand is severely limited by the storage capacity afforded by 90-gallon carts currently being utilized. There are also no storage options available for the number of additional carts that would otherwise be needed.

To facilitate the planned expansion of the organics composting program, it is necessary to provide a permanent location for the compactor. This will enable the program to expand by providing adequate capacity and the capability to safely and efficiently handle organic materials on a daily basis. The containers that are used to transport the diverted organic materials, occasionally through public areas, need to be washed on a regular basis to remove residue, prevent odors and deter pests. This project also includes an indoor space, near the compactor, to allow for container wash down that will help maintain acceptable sanitation standards.

81 - St. Paul

Joint and Crack Repairs $100,000

Given the extremely poor subgrade materials at St. Paul Downtown Airport, the need for crack repair and joint sealing is critical to maintain pavement strength and pavement life. An inspection of the pavement will be completed to determine the areas most in need of repair.

MAC Building Maintenance $200,000

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

Pavement Rehabilitation $1,000,000

This is 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 project will include the reconstruction of portions of Taxiway Alpha north of Runway 9/27, along with

necessary subgrade rehabilitation and electrical system upgrades. This pavement is exhibiting deterioration and major transverse cracks have developed.

82 – Lake Elmo

Runway 14/32 Reconstruction $500,000

Runway 14/32 has poor subgrade soils and cracks are difficult to keep under control from year to year. The long term plan for the airport discusses potential relocation of this runway at some point, so a complete reconstruction in its existing location does not make financial sense. If the runway were to be relocated, this existing runway pavement would become a taxiway which, by MAC standards, should be 40-feet wide. This project includes reconstruction of the center 40-foot section of the primary runway, including any necessary subgrade work and overall joint/pavement sealing. This will provide a reconstructed, more stable pavement surface for the runway and is not a throw-away cost given its future use as a taxiway. One of the runway connectors will also be reconstructed under this project.

84 - Flying Cloud

Alleyway Rehabilitation $300,000

This is 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 project includes rehabilitation of the remaining alleyways in the north building area.

East/West Perimeter Road $50,000

As part of the runway incursion reduction steps the MAC is taking at Flying Cloud, an east/west perimeter road will be constructed to allow tenants, fueling trucks and maintenance vehicles access across the north end of the airfield without direct access to the taxiways or runways. This year's project includes funds needed for the construction of the portion of perimeter road that coincides with the Thunderbird FBO expansion and proposed parking lot.

South Building Area Development $1,500,000

This project includes installation of a portion of the sanitary sewer and water system as well as installation of other utilities necessary for hangar construction in the south building area. Funding for this project will be provided by others.

Commercial Development – All Relievers $100,000

Similar to the costs expended in 2011 for a revenue generating parcel at Flying Cloud, these costs allow for the MAC to research and/or prepare sites at the Reliever Airports for potential development. The costs for each parcel will be assessed to the developer who ultimately takes on the commercial development. Funding for this project will be provided by others.

85 - Crystal

Pavement Rehabilitation $200,000

This is 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 project includes rehabilitation of portions of Taxiway A and Taxiway C along with pavement crack sealing.

Airfield Signage/Electrical Improvements $300,000

Through the Runway Safety Action Team (RSAT), the FAA, the MAC and tenants have identified improvements that can be made to the existing airfield signage to improve operations and reduce the potential for runway incursions. This project includes the installation of new signs, modifications to existing sign faces and the removal of some signs. Improvements are also necessary with the airfield electrical circuitry and vaults to accommodate the new signs. This project also includes modifications to two of the airfield power-operated security gates.

86 – Anoka County - Blaine

Pavement Rehabilitation – Runways $200,000

This is 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 project includes Runway 9/27 grooving, and full-depth crack repairs and crack sealing for that same runway and the full length parallel taxiway pavement.

2010 Development Program

Noise Mitigation Settlement $1,300,000

This project is a continuation of the implementation of the noise mitigation program based on the Noise Exposure Map contained in the court-ordered Consent Decree. The project funds will be expended for professional services and for homeowner reimbursements for approved noise mitigation work in the 2005 60-64 DNL contours (Phase 3).

Post 2010 Program Projects

10 –Terminal 1- Lindbergh

SAFETY/SECURITY PROJECTS

Automated External Defibrillator Notification System $550,000

This project will provide an automated and wireless location and removal notification system for the existing Automated External Defibrillators (AEDs) installed throughout Terminal 1-Lindbergh and Terminal 2-Humphrey. The system will tie into the existing facilities monitoring and Card Access systems and be connected to the Emergency Communications Center (ECC). When a door to an AED is opened, the ECC will immediately be notified and will be able to dispatch Fire Department personnel to the general location. If a 911 call is made, the nearest AED's notification lights will be able to be alarmed/flashed and overhead announcements made to identify the AED location.

Telecommunications Room Equipment Continuity and Security $2,350,000

The MAC network (MACNet) carries credit card data from the Landside Parking Revenue Control System. The credit card industry has created security standards which merchants, like the MAC, are required to meet to protect card holder data. Among these requirements are security standards for the physical locations where MACNet equipment is located. Additionally, the network equipment itself must have added security features to prevent unauthorized network access. This program will address these standards by providing security equipment and relevant network hardware for the 150 telecommunications rooms on the MAC campus. This program is being coordinated with related projects including CCTV, fiber upgrade the Data Center projects to avoid duplication of effort and cost. This will be a multi-year program.

Fall Protection Program $100,000

The Occupational Safety and Health Administration (OSHA) requires that employers protect their employees that work on roof tops, next to roof edges and at other locations where there could be the potential for injuries due to falls. Options range from warning signage and spotters to guardrail and tie-off systems. A Roof Fall Protection Committee has been formed and is reviewing roof areas around the MSP campus to determine potential hazards and mitigation options. This program is being implemented to address roof fall protection in those areas deemed to present an imminent hazard to MAC staff and that are not being addressed in a current roof repair project.

FACILITIES REHABILITATION

Electrical Infrastructure Rehabilitation Program $2,500,000

There are 53 electrical substations that serve the Terminal 1-Lindbergh complex. It is imperative that these substations be inspected, cleaned and upgraded in order to ensure their continued performance. This is a continuation of a multi-phase program that began in 2009.

Terminal Miscellaneous Modifications $3,000,000

Each year, there is a list of maintenance projects that are beyond the capability of MAC's maintenance staff to accomplish. These projects are prioritized and completed either as a series of contracts or as purchase orders. The list of potential projects will be compiled and prioritized in early 2013.

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

Building Exterior Rehabilitation *

A continuation of the program to rehabilitate the exterior of the terminals 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.

MSP Campus Modifications *

An ongoing program to modify or remodel areas within 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 and the highest priority projects within any of these project categories included in the program.

Emergency Power Upgrades $1,250,000

Studies and surveys of Terminal 1-Lindbergh transfer switches and emergency lighting were completed in 2008. This year's project will continue the design and implementation of emergency power and lighting corrective work previously identified.

Restroom Upgrade Program $1,000,000

A study of all restrooms in Terminal 1-Lindbergh was completed in 2010 to develop a program to upgrade/modernize the restrooms at Terminal 1-Lindbergh. From this study, each restroom was prioritized as to its condition. This program would provide for the phased modernization of the restrooms to include upgraded finishes, lighting, resource and energy saving upgrades, and ADA compliance.

Air Handling Unit Replacement $2,250,000

There are existing air handling units serving Terminal 1-Lindbergh that were installed with the original terminal construction and that are over 40 years old. A study of these units that evaluated each unit based on its age, condition and ability to adequately heat or cool the spaces it serves has been completed. This program will replace ten units that have been identified as needing replacement phased over a 3-year period. The estimated project costs include modifications to building walls to facilitate the removal of existing equipment and installation of the new units, upgraded electrical and temperature controls and asbestos abatement where required.

Conveyance System Upgrades $2,000,000

A study of the MSP campus conveyance systems including elevators, escalators, moving walks, dumbwaiters and material lifts was completed by the Facilities Department's conveyance consultant. The study evaluated the useful life of each system including the availability of replacement parts and technical support of the equipment. Many of the systems are being operated by outdated technology that is generally less efficient than modern control equipment. Some of the systems do not include safety devices or features that are commonly installed on modern equipment. A multi-year program will therefore be implemented to modernize and replace elements of the conveyance systems.

Plumbing Infrastructure Upgrade Program $500,000

In 2010, MAC staff prepared a preliminary study of the reliability and maintainability of the existing plumbing infrastructure. Portions of the existing plumbing infrastructure serving Terminal 1-Lindbergh are over 40 years old, have systems that are undersized for today's demands, contain isolation valves that are either inaccessible or no longer function and utilize aging water meter systems. There are also deteriorated sections of the existing sanitary and storm water systems. This is a multi-year program.

Way-Finding Sign Backlighting Replacement $1,600,000

The majority of the Terminal 1-Lindbergh, Terminal 2-Humphrey and parking ramp signs utilize cold-cathode/neon lighting technology that has a high failure rate and limited repair options. New technology LED lighting has been incorporated into all new signs and this technology has been proven to be resilient in temperature and other environmental extremes as well as being solid-state and long lasting. This is a multi-year program to replace existing cold-cathode and neon lighting components with LED components.

Conference Center Upgrades $300,000

The Airport Conference Center was constructed in 1998. This project will upgrade the conference center with new carpeting as the existing carpeting is failing and in need of replacement. New

electrical and data outlets will also be installed in the floor and tables to improve access around the conference tables.

Terminal Curtainwall Repair $100,000

The rubber gaskets that are integral to sealing the existing curtainwall system from air infiltration, heating and cooling loss and water intrusion have been failing and require replacement in many locations. The gasket failures result in increased heating and cooling costs and repair costs resulting from water damage to the building wall assembly. This multi-year program will provide for the replacement of failing gaskets and related repairs to the curtainwall system.

C-G Connector Soffit Repair $200,000

The soffit under the Concourse C-G connector is constructed of individual insulated panels fastened to the connector structure. A number of these panels have been damaged by high winds over the years. Additional panels have been damaged by leaking oil pans related to the moving walkway belts. This project would remove and replace the damaged panels as well as provide an opportunity for the inspection of the structure supporting the panels to determine if additional repair is required.

PASSENGER AMENITIES

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 Terminal 1-Lindbergh.

Terminal Seating Improvements $800,000

In 2011, a selection process to replace public seating was conducted. As part of this process, the addition of power to the new seating was evaluated and a best and final offer to provide the new seating completed. This project will expand public seating replacements to other areas of the terminal, including the rental car and ground transportation atrium areas.

Way-Finding Signage Improvements $300,000

With the change in terminal designation from Lindbergh Terminal to Terminal1-Lindbergh, there is a need to modify additional interior and exterior signage. In addition, there is also a need to add LRT signage to improve access/visibility to the public, add missing elevator signs and modify overhead illuminated and non-illuminated signage to improve passenger way-finding.

Concourse Service Center Upgrades $2,000,000

The current service centers located throughout Terminal 1-Lindbergh were built in 1999-2001 and have not been upgraded since they were built. A new prototype service center was constructed in 2010 when the center at C1 was relocated to C3. The remaining 10 service centers will be upgraded with the technology and amenities included with the C3 prototype.

MUFIDS/Electronic Video Information Display $600,000

The installation of Multi-User Flight Information Display (MUFIDS) and Electronic Video Information Display Systems (EVIDS) throughout Terminal 1-Lindbergh and Terminal 2-Humphrey has been so successful that there have been requests for the installation of these electronic information tools in other areas in the terminal complex. These areas include the Custom Border Patrol

(CBP)/Federal Inspection Services (FIS) areas in both terminals and the Terminal 2-Humphrey baggage claim area. This project would also provide for the replacement of monitors that were installed in 2009 with newer LED backlit technology.

OPERATIONAL IMPROVEMENTS

Open Architecture Building Automation (OABA) $2,250,000

This program will upgrade all MAC building automation systems to the LonMark open protocol so that the MAC 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 is a continuation of a multi-year program.

Fiber Optic Cable Infrastructure Upgrade/Expansion $1,150,000

Fiber optic cable infrastructure is the basic vehicle that allows for broader use of both new and existing communications and computer-based technologies. The cable infrastructure requires ongoing upgrade, replacement and expansion. This project will provide for the expansion of cabling infrastructure including replacing materials that don't meet current MAC standards and adding capacity between locations where existing capacity has been used up.

Wireless Network Control System $1,425,000

This project will provide a campus-wide wireless network to be implemented over a 2-year period. This system would allow remote wireless access to and manipulation of the MAC Facilities Intelligent Monitoring and Control System (IMACS). The system would allow access to data and drawings from the MAC network from the terminals as well as from vehicles on the airfield.

CONCOURSE G IMPROVEMENTS

Concourse G Roof Replacement $6,200,000

An inspection of the Concourse G roof by the MAC's roofing consultant indicates that a complete re-roofing of the concourse, with the exception of the roof over the FIS facility, is required. The project would include upgrading the insulation to MAC energy standards and the repair/replacement of the clerstory curtainwall system that is failing. Required drains, roof hatch guardrails and removal and reattachment of roof top units would also be included. The project will be coordinated with the Delta Air Lines OTG concessions upgrade project to account for new roof penetrations for new air handling units. Delta Air Lines will reimburse the MAC for this project in accordance with the agreements to be in place as part of the Delta Air Lines OTG concessions upgrade project.

Energy Savings Projects $1,200,000

A program was initiated in 2002 to provide for the implementation of projects that would save the MAC energy costs in its operating budget. Discussions with both Xcel and Centerpoint have identified additional projects that are eligible for energy saving rebates and that will save the MAC additional energy costs. In order to qualify, projects must provide a 5-year pay back. Delta Air Lines has indicated that it would like the MAC to undertake these projects with reimbursement to be made to the MAC in accordance with the agreements to be in place as part of the Delta Air Lines OTG concessions upgrade project.

13 – Energy Management Center

Energy Savings Projects $3,500,000

A program was initiated in 2002 to provide for the implementation of projects that would save the MAC energy costs in its operating budget. Discussions with both Xcel and Centerpoint have identified additional projects that are eligible for energy saving rebates and that will save the Commission additional energy costs. In order to qualify, projects must provide a 5-year pay back.

Alternative Energy Projects $1,000,000

This project will evaluate potential alternative energy projects including wind power, solar power and geo thermal.

21 - Field and Runway

Airside Bituminous Rehabilitation/Electrical Construction $500,000

This is an ongoing program to construct or reconstruct bituminous pavements and airfield electrical or lighting within the Air Operations Area. Inspection of taxiway pavements, lighting and electrical circuits will be made to determine what areas should be prioritized for rehabilitation under this year's project.

Pavement Joint Sealing/Repair $650,000

This is an ongoing program to provide for the resealing of joints in existing concrete pavements. The areas scheduled for sealing will be determined in the spring of 2013. This project will also provide for limited crack and surface repairs.

Pavement Rehabilitation – Aprons $1,900,000

This is an ongoing program to replace sections of concrete pavement in the aircraft operational areas that have deteriorated to a point where routine maintenance is no longer a viable option. This year's project will replace approximately 6,000 square yards of concrete apron located adjacent to Concourse C between Gates C7 and C9.

Miscellaneous Airfield Construction $400,000

This is 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.

Runway 12R/30L Tunnel Rehabilitation – Mill and Overlay $275,000

This project includes the mill and overlay of the tunnel approach pavements as well as the section of pavement within the Runway 12R/30L tunnel.

26 - Terminal Roads/Landside

Tunnel/Bridge Rehabilitation $100,000

A Bridge and Tunnel Safety Inspections Report was prepared in 2007. The report is updated each year and outlines structural maintenance recommendations to be implemented.

31 – Parking

T1/T2 Parking Structure Rehabilitation $3,500,000

This is 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 and updated in 2012.

36 – Terminal 2 – Humphrey

SAFETY/SECURITY PROJECTS

Emergency Voice Evacuation System $4,000,000

This project will upgrade the existing paging system at Terminal 2 - Humphrey to comply with current codes for emergency evacuation. A similar upgrade was completed on Concourse A and B.

CBIS Program - Shell $14,100,000

In 2004, the MAC began planning and design efforts for an automated, in-line Explosives Detection System (EDS) baggage screening system for Terminal 2-Humphrey. The original concepts and plans have been redesigned to meet the new TSA furnished high-speed screening equipment with the TSA funding 90 percent of the eligible design efforts through an Other Transaction Agreement (OTA) for Design Services. The MAC has now applied for an OTA to help fund the construction costs. Once this project is complete, the existing screening process located in the ticketing lobby will be moved behind the scenes. TSA will provide funding for 90% of the eligible project costs.

OPERATIONAL IMPROVEMENTS

Bag Make-up $11,700,000

The existing bag make-up area is currently operating at capacity and will be required to be expanded with the addition of new gates.

DESIGN FEES

Three Gate Expansion $4,950,000

This program includes design fees only for work related to the proposed 3-gate expansion at T2 – Humphrey. It is proposed that design of the facility expansion, companion apron expansion and associated airside and landside utility work be completed concurrent with the environmental review

so that upon completion of the environmental document, the MAC could move forward with advertising, bidding and awarding of the projects as soon as possible should demand require it.

39 – Public Areas/Roads

Landside Pavement Rehabilitation $400,000

This is an ongoing program to reconstruct the airport's roadways and parking lots. Projects proposed for 2011 include a micro-surfacing project on inbound Glumack Drive and the repair to the overlay of the cargo road in the Y-3 tunnel.

Roadway Fixture Refurbishment $100.000

Many of the light poles, overhead obstruction bars, sign units, fence sections and canopies on the airport roadways are in need of repainting and maintenance. This program would provide for refurbishment of these fixtures utilizing MAC staff and seasonal help as required.

I-494/34th AVE INTERCHANGE ENHANCEMENTS

Diverging Diamond Interchange (DDI) $6,000,000

The I-494 and 34th Avenue South interchange is located at the border of MSP and the City of Bloomington, between Airport Lane and American Boulevard East. During peak hours of traffic movement, the eastbound exit ramp from I-494 to northbound 34th Avenue results in traffic queues that extend two-thirds the length of the ramp. As traffic demand increases, the existing interchange will be unable to safely and efficiently handle the traffic. As this interchange is critical to both MSP's and the City of Bloomington's long range plans, the MAC and the City have partnered to apply for a grant through the Transportation Economic Development (TED) pilot program. This program provides state funding for a share of the costs for projects that will improve the statewide transportation network while promoting economic growth. The proposed interchange improvements will convert the existing diamond interchange to a diverging diamond interchange (DDI), increasing capacity and decreasing queue lengths and conflict points at a cost far below that of completely replacing the existing interchange. Approximately 85% of this project will be funded by a combination of a TED grant (70%) and reimbursement by the City of Bloomington (15%).

46 – Hangars and other Buildings

Roof Replacements $4,200,000

MAC's roofing consultant has completed a study that assessed the condition of the roof systems of the buildings on the MAC campus and developed a roof management program. Buildings that require either repairs or replacements in 2013 include the Green/Gold Parking Ramp Core building, the Red/Blue Hub building and Concourse F.

FAA Building Parking Lot Upgrades $1,050,000

The FAA building and parking lot was constructed over 20 years ago. The building has now come back to the MAC and is being upgraded with reimbursement from the FAA as part of a lease extension agreement. The building parking lot is not included to be reimbursed through the new lease agreement; however, the pavement has deteriorated to the point that complete reconstruction will be required. Improvements include complete reconstruction of the existing parking lot, expansion of the lot and storm water drainage improvements.

Building F Tower Demolition $1,700,000

Building F is located on 34th Avenue south of Terminal 2-Humphrey and consists of a cargo/warehouse building and a three story office tower. The building was formally leased by Northwest and then Delta Air Lines. As of January 1, 2011 the lease expired. Delta would like to retain the cargo/warehouse portion of the building along with an amount of landside parking space on the east side for the cargo building and airside parking for cargo coordination and overflow aircraft parking. A study was completed in 2010 that considered the options of mothballing the office tower portion of the building for future demolition or to proceed with demolition now. The cost to demolish the office tower was the most cost effective option.

56 – Trades/Maintenance Buildings

Trades Building Cooling System Improvements $600,000

The Trades Building was constructed in 1997 and included an air-cooled chiller that provides cooling to the administrative offices area. The existing chiller has been subject to frequent service and repair due to short cycling of the two reciprocating compressors. This short cycling wastes energy and accelerates the wear on the compressors. Options to improve the cooling system have been evaluated with the following goals: (1) improve the efficiency and reliability of the central cooling plant, (2) add cooling to other areas within the Trades Building, and (3) add an air handler to the records retention trailer adjacent to the Trades Building to improve dehumidification. A new split chiller comprised of an air-cooled condensing unit (outdoors) connected to an indoor evaporator utilizing six compressors was the system that provided for the best energy payback.

63 – Police

Public Safety Facility $300,000

This project will relocate the MAC Police Department to a new stand alone facility outside of the terminal complex. The new facility will have convenient access to both the airside and landside with improved response to both terminals via airside or public roadways. The building is envisioned as a multi-story structure that will accommodate future growth and consolidation of the Emergency Call Center and Airport Operations into one building.

CCTV Improvements $4,000,000

This is an ongoing program to add new and upgrade existing CCTV systems to ensure the safety and security of MSP. An analysis of the existing CCTV system was completed in 2010. The existing system consists of a mix of old and new technology with some equipment being in excess of 16 years old. The consensus of the CCTV working group was to replace and upgrade the existing CCTV system to a fully digital system. In 2012, a CCTV Systems Integrator was selected to assist in the development and installation of new Video Management System (VMS) and Physical Security Information System (PISM) software. New IP cameras were evaluated. This is the continuation of the program to systematically replace and integrate the approximately 1800 existing cameras and to add expand the camera coverage as required. TSA will provide funding for eligible project costs.

76 – Environment

Storm Sewer Rehabilitation – Deicing Areas $2,600,000

This project provides for rehabilitation of storm sewer pipes and manholes at various locations where aircraft deicing occurs to enhance the collection and storage of glycol-impacted storm water resulting from deicing operations.

81 – St. Paul

Storm Sewer Improvements $500,000

This project will investigate and correct poor storm drainage in the oldest and lowest portion of the airport. The old storm sewer system infrastructure is not removing storm water from the site as effectively as it should. Improvements will also aid in fighting floods by insuring no groundwater is infiltrating the old system and backing up into the airfield requiring additional groundwater pumping capacity to keep up.

82 – Lake Elmo

Pavement Rehabilitation $300,000

This is 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 project includes rehabilitation of the Runway 4/22 pavements and portions of the parallel taxiway.

83 – Airlake

Pavement Rehabilitation $200,000

This is 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 project includes rehabilitation of the runway and taxiway pavements, full depth crack repairs and crack sealing.

84 - Flying Cloud

Runway 18/36 Reconstruction Segment. 3 $1,700,000

Segment 3 of Runway 18/36 includes Runway end 36 to the Runway 10R/28L safety area boundary and lighting cable replacement for the Runway 18/36 parallel taxiway. In addition, the runway safety area deficiency will be corrected and the runway extended to 2,800 feet as recommended in the Long-Term Comprehensive Plan. This project will also include a supplemental wind cone on the airfield, necessary updates to the Airport Layout Plan (ALP) and Pavement grooving of Runway 10R/28L.

East/West Perimeter Road $250,000

As part of the runway incursion reduction steps the MAC is taking at Flying Cloud, an east/west perimeter road will be constructed to allow tenants, fueling trucks and maintenance vehicles access across the north end of the airfield without direct access to the taxiways or runways. This year's project will include the portion of road within the Runway 18 RPZ and connection to the tenant areas to the east.

86 – Anoka County – Blaine

Pavement Rehabilitation - Alleyways $800,000

This is 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 project includes rehabilitation of the alleyways in the east building area.

2014 – 2018 Capital Improvement Program

(Description of projects expected to be implemented in 2014 - 2018 are preliminary, and only those that have potential substantive environmental effects are included in this section.)

2010 Program Projects

MSP Noise Mitigation Program

Noise Mitigation Settlement $3,420,000

The project implements the noise mitigation program based on the 2007 Noise Exposure Map contained in the Part 150 Update, consistent with the terms and conditions of the court-ordered Consent Decree.

Post 2010 Program

T1 – Lindbergh Demand Driven projects

CONCOURSE G EXPANSION

Concourse G Tram – Equipment Procurement $50,000,000

The Long-Term Comprehensive Plan (LTCP) for MSP recommends that Concourse G be expanded and that a tram system be installed for the efficient movement of passengers. This project will provide for the procurement of the Concourse G tram vehicles.

Concourse G Tram – Guideway Installation $76,000,000

This project will provide for the installation of the Concourse G tram guideway.

Concourse G Tram – Stations $33,000,000

This project will include the construction of three stations for the Concourse G tram.

Gate Hold Expansion – 10 Gates $306,000,000

This project will add 10 additional gates to Concourse G, including the required baggage handling and conveyance system, a satellite Energy Management Center, a new International Arrivals Facility (IAF) and airline support space. These gates will be capable of accommodating domestic or international flights.

FIS Curbside Roadway $2,000,000

A new curbside roadway to support the new gate hold expansion and IAF and a potential airport hotel and conference center will be constructed under this project.

Apron Improvements $17,000,000

This project will provide for the improvements to the apron including the extension of the fuel hydrant system to support the new gate hold expansion.

Airside Tunnel Expansion $20,000,000

There is a tunnel that provides airside access from Concourse C to the airside adjacent to existing Concourse G. This tunnel will be extended under the new gate hold expansion.

ROADWAY AND PARKING EXPANSION

Lower Level Curbside Expansion $10,340,000

The existing arrivals curb front cannot be lengthened due to Concourses G and C. This project will provide an outer curb with pedestrian crosswalks that will traverse the inner curb area, potentially at grade. These improvements to the curb area will improve capacity and efficiency for arriving passengers to reach shuttles, taxis and private vehicles.

Terminal 2 – Humphrey Demand Driven Projects

TERMINAL 2 – HUMPHREY NORTH EXPANSION

Apron Expansion – North $14,300,000

The expansion of Terminal 2-Humphrey will require the expansion of the terminal apron. This project will provide for the construction of the concrete apron and installation of aircraft fueling pits on the north end of the existing terminal to accommodate a six gate expansion.

Bag Make-up Expansion $11,700,000

The existing bag make-up area is currently operating at capacity and will be required to be expanded with the addition of new gates.

Gates 1-3 $28,900,000

This project will provide three new gates including gate hold areas, passenger boarding bridges, space for additional vending and food services and signage revisions on the north end of the terminal.

Gates 4-7 $65,155,000

This project will add four new gates to the north end of Terminal 2-Humphrey including gate hold areas, passenger boarding bridges, space for additional vending and food services and signage revisions.

TERMINAL 2 – HUMPHREY SOUTH EXPANSION

Apron Expansion – South $77,000,000

The expansion of Terminal 2-Humphrey will require the expansion of the terminal apron. This project will provide for the construction of the apron and installation of aircraft fueling pits to accommodate gates 18 through 27.

Taxiway D Extension $18,000,000

This project provides for the extension of Taxiway D to the south from a future extension of the Terminal 2-Humphrey southeast apron to accommodate new airfield operations associated with the expansion of Terminal 2-Humphrey.

Gates 18-27 $99,600,000

In accordance with the LTCP, this project will add 10 new gates to the south end of Terminal 2-Humphrey including gate hold areas, passenger boarding bridges, space for additional vending and food services and signage revisions.

Auto Rental Facilities/QTA $62,535,000

Accommodations for rental cars would be provided by developing facilities in expanded existing parking garages. These facilities will include Quick Turn Around (QTA) facilities.

Roadway Realignment $6,000,000

Access to Terminal 2-Humphrey is provided by both Post Road and 34th Avenue. The LTCP states that both existing roadways will be incapable of handling the required traffic volumes to Terminal 2-Humphrey in future years. The concept for improving this condition is to route all inbound traffic to Post Road and outbound traffic to 34th Avenue. This concept will require widening Post Road, intersection improvements at 34th Avenue and 70th Street, and realignment of a section of the outbound road from Terminal 2-Humphrey to 34th Avenue.

I-494/34th Ave. Interchange Enhancement $6,000,000

The LTCP states that future traffic volumes exiting Terminal 2-Humphrey on 34th Avenue will require improvements to the interchange at I-494 and 34th Avenue to provide for a smooth transition to both east and westbound I-494.

Purple Ramp Outrigger Addition $32,100,000

This project will add seven additional levels (levels 2 – 8) of parking on the east side of the Purple Ramp, which would add approximately 1,288 parking spaces.

Orange Ramp Outrigger Addition /Levels 9&10 $58,700,000

This project provides for the construction of seven additional levels (levels 4 - 10) of parking on the east side of the Orange Ramp, two additional levels (levels 9 and 10) on the Orange Ramp, and seven additional levels (levels 4 – 10) of parking over the LRT station.

Reliever Airport Programs

LAKE ELMO

East Building Area Development $2,800,000**

The LTCP for Lake Elmo forecasts that there will be an increase in based aircraft that will require the development of a new hangar area. The LTCP recommends the development of a new hangar area on the east side of the airport. Funding for this project will be provided by others.

Runway 14/32 Replacement $5,000,000

The current Long-Term Comprehensive Plan (LTCP) for the Lake Elmo Airport demonstrates a need to have an extended runway length of 3,200 feet to accommodate the existing users. While the LTCP originally envisioned an extension would occur on the crosswind Runway 4/22, the MAC is considering accommodating the 3,200-foot length as part of a Runway 14/32 replacement project, in which a new longer runway would be constructed parallel to the existing Runway 14/32. The existing runway would then become a taxiway. All LTCP updates and environmental study would be completed prior to the proposed construction of the replacement runway. The replacement runway project would involve grading, paving, storm sewer management, lighting and pavement marking. Since there are wetlands on the airport property, an evaluation would be completed to review any potential impacts as part of the documentation listed above. No land acquisition would be required.

East Side Parallel Taxiway $1,200,000

This project includes the construction of a full parallel taxiway to Runway 4/22 in conjunction with the extension of Runway 4/22 and a new east side hangar area.

AIRLAKE

South Building Area Development $2,700,000**

This project will provide for alleyway construction, including aggregate base and bituminous pavements, along with the installation of sanitary sewer and water main including a stand alone restroom facility and fire protection hydrant line. The project also includes paving a section of 225th Street that will then connect to Cedar Avenue. Funding for this project will be provided by others.

Runway 12/30 Extension $8,000,000

This project will provide for the extension of Runway 12/30 from 4,098 feet to 5,000 feet. The runway extension would have an impact on Cedar Avenue, which lies directly east of the airfield, and a segment of the road would be rerouted around the end of the runway end safety area.

CRYSTAL

Runway 14R/32L Modifications $1,000,000

As defined in the LTCP update, this project will include closure of Runway 14R/32L and reconstruction of the pavement into a parallel taxiway. Portions of the Taxiway Echo connectors will also be reconstructed. An environmental study for the runway closure will be completed prior to commencement of the project.

ANOKA-COUNTY BLAINE

Building Area Development – East Annex $2,400,000 **

This project includes installation of sanitary sewer and water main, grading and paving of alleyways for up to 80 storage hangars and includes facilities to accommodate storm water runoff. Funding for this project will be provided by others.

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 will be provided by others.