



Metropolitan Airports Commission

TO: Planning, Development and Environment Committee

FROM: Heather J. Leide, Director – Airport Development (612-726-8128)

SUBJECT: **Preliminary 2021 – 2027 Capital Improvement Program
Program Overview**

DATE: September 2, 2020

FOR ACTION

Summary

Each year, MAC staff prepares a seven-year Capital Improvements Program (CIP) for review and approval by the full Commission. A preliminary version of the 2021-2027 CIP listing is provided in September in order to give Commissioners, Affected Municipalities and the public an opportunity to see what is planned for the upcoming seven-year program, with specifics included for the proposed projects forthcoming for construction contract award in 2021.

The seven-year CIP includes projects for both the Minneapolis-St. Paul International Airport (MSP) and the six airports in the Reliever Airport System. The majority of projects in the attached project listing focus on the rehabilitation and replacement of airport infrastructure, existing assets, and terminal systems to ensure that airport safety, security and operations are not compromised.

Fiscal Impact

No Impact Operating Budget CIP Other

The Airport Development Department works closely with Finance staff during the CIP development process to review funding for the seven-year program. Any project changes to the preliminary CIP will be reflected in the final version brought to the Commission in December for final adoption. At that time, Finance will also provide a companion funding analysis for the first three years of the program for information.

Action Requested

- 1. Recommend that the full Commission accept the attached preliminary 2021-2027 Capital Improvement Program for purposes of conducting the affected municipalities review and the Assessment of Environmental Effects (AOEE) process; and**
- 2. Authorize staff to proceed with these processes.**

Background

The 2021-2027 preliminary CIP includes the following (attached to this memo):

- (a) Anticipated CIP process schedule;
- (b) Draft listing of projects by category with proposed year and estimated cost for each;
and
- (c) Draft project narratives for the projects listed in 2021.

Applicable Legal Authority

MAC's Bylaws, Minnesota Statutes Sec. 473.621, Subd. 6 and 7.

Analysis

Due to the economic realities and uncertainties related to the global pandemic and associated reduction in air travel, this is a particularly challenging project planning cycle. Staff approached this preliminary draft by moving most of the projects that were paused in 2020 into 2021 and shifting the 2021-2026 projects approved in the 2020 program into 2022-2027. Then, the most critical projects were pulled forward identified by stakeholders. Anticipated grant funding opportunities also influenced the scheduling of projects in 2021.

In 2021, there are significant dollars associated with the major enhancements to the Terminal 1 arrivals and departures levels (continuing from previous years) via the Operational Improvements Program. This program provides benefit to the local travelers who utilize the check-in, baggage drop, baggage claim, and security-related passenger processing facilities. Also at MSP are planned major investments in the fire station portion of the Safety and Security Center and necessary pavement reconstruction.

In addition, the seven-year program includes the next phases associated with proposed runway changes at the Lake Elmo Airport as outlined in MAC's Long Term Comprehensive Plans for that facility.

The preliminary seven-year program as attached will be made available to affected municipalities for review and comment. Affected municipalities will have 60 days to review the proposed program and offer comments to MAC staff for consideration when preparing the final program recommendations for review by the full Commission in December. The 60-day comment period is anticipated to run from September 21, 2020 through November 20, 2020.

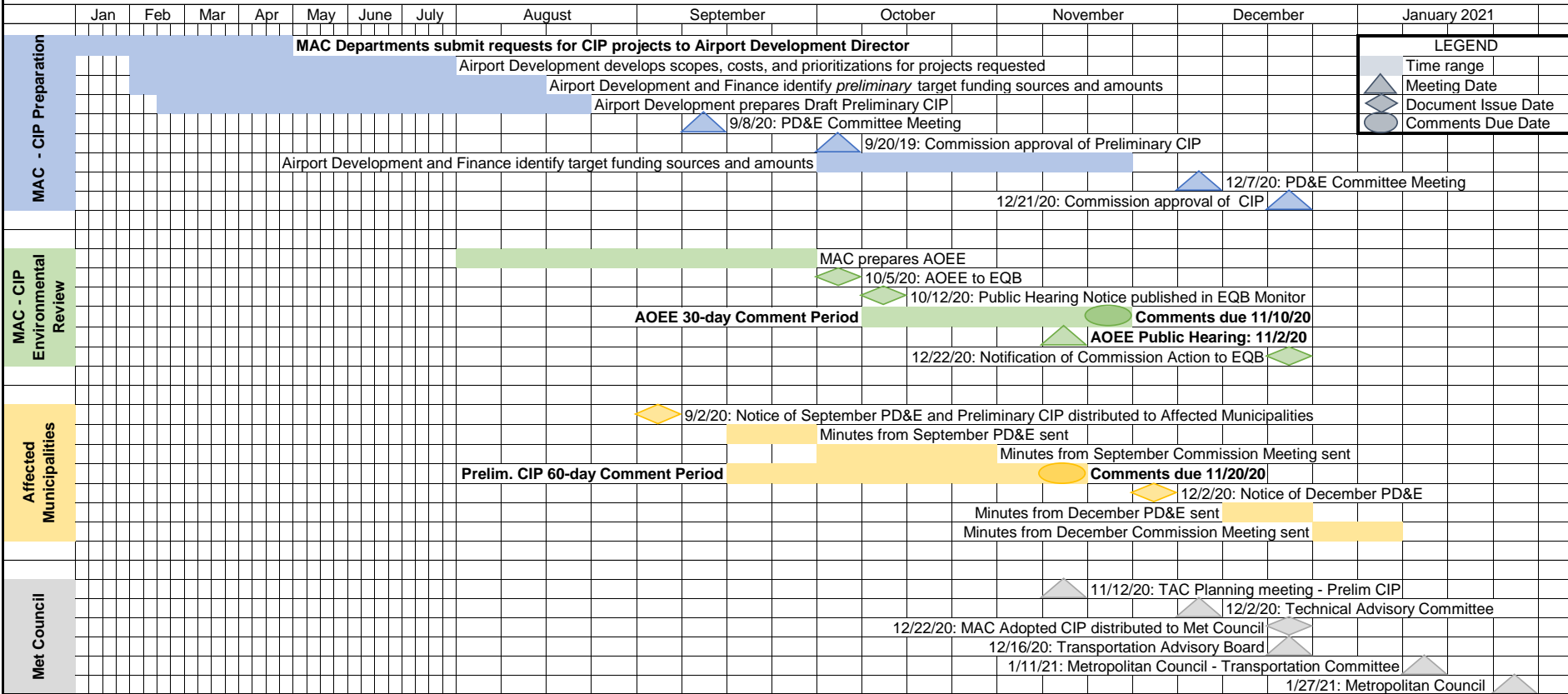
The preliminary program will also be utilized to develop the annual Assessment of Environmental Effects (AOEE) document, as outlined in the companion memorandum to this agenda item.

As required by Minnesota law, MAC's seven-year CIP must be reviewed by the Metropolitan Council. This preliminary program will be submitted to the sub-committees of the Metropolitan Council for initial review and discussion. Upon MAC's adoption of the final December version of the program, MAC will request review by the full Metropolitan Council of the adopted program in January 2021.

Looking forward, please note that the recommended action in December specific to the 2021-2027 CIP will include adoption of a proposed final CIP as well as authorize staff to:

- (a) Prepare plans and specifications and advertise for bids for the 2021 projects.
- (b) Conduct further studies to refine the scopes and costs, and to prepare plans and specifications for the 2022 projects.
- (c) Conduct studies and develop preliminary plans and specifications for the 2023 projects.
- (d) Utilize consultants as necessary in accordance with MAC's consultant use policies.
- (e) Initiate appropriate documentation to apply for federal, state, and PFC funding.
- (f) Forward the adopted 2021-2027 CIP to the Metropolitan Council for their review.

2021 - 2027 CAPITAL IMPROVEMENT PROGRAM DEVELOPMENT SCHEDULE



2021-2027 Capital Improvement Program - Preliminary Draft	2021	2022	2023	2024	2025	2026	2027
MSP End of Life/Replacement Projects							
<i>10 - Terminal 1</i>							
Concourse and Hub Tram Replacement			\$500,000			\$300,000,000	\$300,000,000
Passenger Boarding Bridge Replacements	\$4,100,000	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000
Recarpeting Program				\$7,000,000	\$7,000,000	\$7,000,000	
TSA Recapitalization		\$16,000,000					
<i>13 - Energy Management Center</i>							
Concourses E and F Bridge Heating and Cooling System Replacement			\$2,100,000	\$2,000,000	\$1,600,000		
GTC Dual-temperature Pump Improvements			\$1,800,000				
Heating Pump Upgrades		\$900,000					
Variable Air Volume (VAV) Box Replacement		\$750,000	\$750,000	\$750,000	\$750,000		
<i>21 - Field and Runway</i>							
30L EMAS Replacement						\$19,000,000	
Bituminous Shoulder Reconstruction		\$5,000,000	\$7,000,000	\$7,500,000	\$7,000,000	\$6,500,000	\$7,000,000
Airfield Snow Melter Replacement/Upgrades				\$1,400,000	\$1,400,000	\$1,400,000	\$1,400,000
Taxiway A Pavement Reconstruction	\$16,000,000					\$6,500,000	\$9,500,000
Taxiway B and Concourse G Apron Pavement Reconstruction	\$16,000,000	\$6,000,000	\$13,500,000		\$11,500,000		\$11,000,000
Taxiway P Reconstruction		\$10,000,000					
<i>26 - Terminal Roads/Landside</i>							
Lower Level Roadway Rehabilitation				\$1,100,000			
Upper Level Roadway Electrical System Rehabilitation				\$1,000,000			
Upper Level Roadway Rehabilitation				\$2,000,000			
UPS Loop Pavement Reconstruction				\$1,600,000			
Variable Message Signs Replacement, Phase 3				\$1,600,000			
<i>31 - Parking</i>							
Parking Ramp Snow Melter Replacement/Upgrades		\$1,350,000	\$1,350,000				
<i>36 - Terminal 2</i>							
Terminal 2 Recarpeting Program		\$500,000	\$500,000	\$500,000	\$500,000		
<i>39 - Public Areas/Roads</i>							
28th Avenue South Reconstruction						\$2,270,000	
East 62nd Street Reconstruction				\$3,500,000			
MSP End of Life/Replacement Projects Subtotal	\$36,100,000	\$44,500,000	\$31,500,000	\$33,950,000	\$33,750,000	\$346,670,000	\$332,900,000

2021-2027 Capital Improvement Program - Preliminary Draft	2021	2022	2023	2024	2025	2026	2027
MSP IT Projects							
<i>10 - Terminal 1</i>							
Concourse C and G Digital Directory Replacement				\$200,000			
Intelligent Monitoring and Control Systems (IMACS)	\$1,500,000	\$1,500,000					
MAC Technology Upgrades	\$8,500,000	\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000
Telecom Room Equipment Continuity (TREC)		\$1,500,000		\$1,500,000			
<i>63 - Police</i>							
Radio DAS Coverage Deficiency Resolution	\$600,000			\$500,000	\$1,500,000		
Card Access Modifications	\$200,000	\$1,300,000		\$500,000	\$1,000,000		
<i>66 - Fire</i>							
Fire Alarm System Transition (FAST)	\$1,800,000	\$1,400,000	\$1,500,000	\$2,000,000	\$1,200,000	\$1,000,000	\$1,200,000
MSP IT Projects Subtotal	\$10,800,000	\$15,700,000	\$11,500,000	\$14,700,000	\$13,700,000	\$11,000,000	\$11,200,000

2021-2027 Capital Improvement Program - Preliminary Draft	2021	2022	2023	2024	2025	2026	2027
MSP Long Term Comprehensive Plan Projects							
<i>10 - Terminal 1</i>							
Baggage Claim/Ticket Lobby Operational Improvements	\$83,700,000	\$44,900,000	\$14,300,000				
Baggage Handling System	\$36,300,000						
Checkpoint Expansion					\$11,000,000		
D-Pod Outbound Baggage System							\$5,000,000
Expand and Remodel International Arrivals Facility			\$5,000,000				
MSP Airport Layout Plan		\$800,000					
MSP Long Term Plan	\$250,000	\$750,000					
Unstaffed Exit Lanes					\$2,500,000		
<i>21 - Field and Runway</i>							
Runway 30R Parallel Taxiway				\$12,000,000	\$10,000,000		\$14,000,000
<i>36 - Terminal 2</i>							
Terminal 2 North Gate Expansion				\$100,000,000			
MSP Long Term Comprehensive Plan Projects Subtotal	\$120,250,000	\$46,450,000	\$19,300,000	\$112,000,000	\$23,500,000	\$0	\$19,000,000

2021-2027 Capital Improvement Program - Preliminary Draft

	2021	2022	2023	2024	2025	2026	2027
MSP Maintenance/Facility Upgrade Projects							
<i>10 - Terminal 1</i>							
ADO Office Expansion				\$4,000,000			
Art Display Areas	\$150,000	\$150,000	\$200,000	\$250,000			
Arts Master Plan - TBD	\$300,000	\$900,000	\$1,100,000	\$1,200,000	\$500,000	\$500,000	\$600,000
Concourse G Moving Walks				\$6,000,000			
Delivery Node Redevelopment		\$500,000	\$2,700,000	\$7,800,000	\$2,700,000	\$2,250,000	\$4,320,000
Folded Plate Repairs		\$8,900,000		\$8,900,000		\$8,900,000	
Lighting Infrastructure Technology and Equipment (LITE)			\$2,250,000		\$2,500,000		\$2,500,000
Restroom Upgrade Program			\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000
Terminal 1 Employee Breakroom		\$225,000					
Terminal 1 Mechanical Room C-1043			\$5,500,000				
Terminal 1 Public Walk Aisle Terrazzo Floor Installation				\$4,400,000	\$4,400,000	\$4,500,000	\$4,500,000
Terminal 1 Tug Door Replacement		\$540,000					
Terminal 1 Tug Drive Heater Replacement			\$900,000				
Way-Finding Sign Backlighting Replacement				\$1,600,000			
<i>13 - Energy Management Center</i>							
Chiller Plant Optimization				\$3,000,000			
Concourse B Heating System Upgrades	\$950,000	\$2,050,000					
EMC Roof Replacement and Break Room Remodel		\$8,300,000					
Energy Savings Program	\$700,000		\$2,000,000		\$2,000,000		\$2,000,000
Indoor Air Quality Monitoring System	\$700,000						
LED Lighting Conversion in Valet	\$500,000						
MAC Automation Infrastructure Program			\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000
Material Storage Building - Boiler Room Addition			\$1,000,000				
Victaulic Piping Replacement	\$1,000,000			\$2,000,000		\$2,000,000	
<i>21 - Field and Runway</i>							
Apron Lighting LED Upgrade				\$5,000,000	\$1,000,000	\$3,000,000	\$1,000,000
Runway LED Lighting Upgrade			\$1,500,000	\$1,700,000	\$2,700,000		
Taxiways B & Q Islands	\$700,000						
Taxiway T Centerline Lights		\$700,000					
Terminal 2 Glycol Lift Station/forcemain				\$1,100,000			
Tunnel Lighting LED Upgrade				\$1,100,000	\$1,000,000	\$900,000	\$400,000
<i>31 - Parking</i>							
Orange Ramp Metal Panel Replacement		\$500,000					
Parking Guidance System			\$6,500,000				
Parking Ramp Railing Refinishing		\$1,000,000		\$1,000,000		\$100,000	
<i>36 - Terminal 2</i>							
Terminal 2 Employee Breakroom		\$350,000					
Terminal 2 MUFIDS/EVIDS Millwork Upgrades				\$350,000			
Terminal 2 Gate Area Passenger Amenities				\$1,000,000			
Terminal 2 Gate Desk/Podium Replacement							\$450,000
Terminal 2 Ground Transportation Waiting Area Expansion				\$400,000			
Terminal 2 Pre-Conditioned Air (PCA) Replacement (H1-H10)		\$2,000,000					
Terminal 2 Rentable Space Build-out		\$700,000					
Terminal 2 Skyway to LRT Flooring Installation			\$800,000				
<i>39 - Public Areas/Roads</i>							
Diverging Diamond Intersection Rehabilitation				\$340,000			
Terminal 1 Ground Transportation Modifications			\$600,000				
Tunnel Fan Replacement				\$4,700,000	\$6,800,000		

MSP Maintenance/Facility Upgrade Projects continues on the next page.

2021-2027 Capital Improvement Program - Preliminary Draft	2021	2022	2023	2024	2025	2026	2027
MSP Maintenance/Facility Upgrade Projects (cont.)							
46 - Hangars and Other Buildings							
MAC Storage Facility			\$10,000,000				
Safety and Security Center	\$30,000,000			\$90,000,000			
56 - Trades/Maintenance Buildings							
South Field Maintenance Building Wash Bay				\$3,500,000			
63 - Police							
Badging Office Relocation	\$4,100,000						
Perimeter Gate Security Improvements		\$7,500,000		\$6,500,000	\$6,500,000		
Perimeter Fence Intrusion Detection System					\$1,000,000		
Public Safety Modifications	\$1,500,000		\$1,000,000		\$1,000,000		
Terminal 1 APD Locker Room Expansion		\$1,200,000					
66 - Fire							
Campus Fire Protection		\$2,800,000		\$2,400,000		\$3,400,000	
70 - General Office/Administration							
GO Building Improvements		\$500,000					
76 - Environment							
Glycol Sewer & Storm Sewer Inspection/Rehabilitation					\$1,400,000	\$500,000	
Ground Service Equipment (GSE) Electrical Charging Stations				\$3,000,000			
Lift Station at Ponds 1 and 2			\$1,400,000				
Runway 12R-30L Glycol Forcemain Environmental Improvements			\$2,000,000				
Terminal 2 Remote Ramp Lot/Drainage Improvements				\$2,000,000			
MSP Maintenance/Facility Upgrade Projects Subtotal	\$40,600,000	\$38,815,000	\$43,450,000	\$167,240,000	\$37,500,000	\$30,050,000	\$19,770,000

2021-2027 Capital Improvement Program - Preliminary Draft

	2021	2022	2023	2024	2025	2026	2027
MSP Noise Mitigation Consent Decree Amendment	\$1,500,000	\$1,000,000	\$1,000,000	\$1,000,000			
MSP Ongoing Maintenance Programs							
<i>10 - Terminal 1</i>							
Air Handling Unit Replacement		\$6,500,000	\$6,500,000	\$6,500,000	\$6,500,000	\$6,500,000	\$3,000,000
Baggage System Upgrades	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
Concourse G Rehabilitation	\$4,000,000	\$4,000,000	\$5,000,000	\$5,000,000	\$5,000,000	\$5,000,000	\$5,000,000
Conveyance System Upgrades		\$3,000,000			\$3,000,000		
Electrical Infrastructure Program (EIP)		\$2,000,000	\$2,500,000	\$2,500,000		\$2,500,000	\$2,500,000
Electrical Substation Replacement	\$1,400,000	\$1,400,000	\$1,400,000	\$1,400,000	\$1,200,000	\$1,200,000	
Emergency Power Upgrades	\$2,000,000		\$2,500,000	\$2,500,000		\$2,500,000	\$2,500,000
Plumbing Infrastructure Upgrade Program	\$600,000	\$600,000	\$600,000	\$700,000	\$700,000	\$700,000	\$700,000
Terminal Building Remediation Program		\$2,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000
Terminal Miscellaneous Modifications	\$2,400,000	\$2,400,000	\$2,500,000	\$2,500,000	\$2,500,000	\$2,500,000	\$2,500,000
<i>13 - Energy Management Center</i>							
EMC Plant Upgrades (T1 & T2)		\$1,500,000	\$1,300,000			\$1,500,000	
<i>21 - Field and Runway</i>							
Airside Electrical Construction		\$4,000,000	\$2,300,000	\$2,500,000	\$2,500,000		
Airside Roadway Pavement Restoration		\$1,200,000	\$1,200,000	\$1,200,000	\$1,200,000	\$1,200,000	\$1,200,000
Glycol Tank Repairs		\$800,000					
Miscellaneous Airfield Construction	\$3,000,000	\$3,500,000	\$4,000,000				
Pavement Joint Sealing/Repair	\$1,200,000	\$800,000	\$800,000	\$800,000	\$800,000	\$800,000	\$800,000
<i>26 - Terminal Roads/Landside</i>							
Glumack Drive Reconstruction				\$2,800,000			
Tunnel Approaches Reconstruction			\$2,370,000				
Tunnel/Bridge Rehabilitation	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$120,000	\$120,000
<i>31 - Parking</i>							
Parking Structure Rehabilitation	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000
<i>39 - Public Areas/Roads</i>							
34th Ave Sanitary Sewer Replacement						\$2,200,000	
34th Avenue Bus Area Reconstruction				\$700,000			
34th Avenue Reconstruction						\$7,000,000	\$7,000,000
Concrete Joint Repair		\$400,000	\$900,000	\$1,000,000	\$300,000	\$400,000	\$1,200,000
Landside Pavement Rehabilitation		\$500,000	\$500,000	\$500,000	\$500,000		\$500,000
Landside Utility Rehabilitation		\$750,000	\$750,000	\$750,000	\$750,000	\$750,000	
Roadway Fixture Refurbishment	\$150,000	\$150,000	\$150,000	\$150,000			
<i>46 - Hangars and Other Buildings</i>							
Campus Building Rehab Program		\$500,000	\$1,500,000	\$1,500,000	\$1,500,000		\$1,500,000
Campus Parking Lot Reconstructions			\$650,000	\$650,000			
End of Life Campus Building Demolition			\$400,000	\$400,000			
MSP Campus Building Roof Replacements		\$1,300,000	\$2,900,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
MSP Ongoing Maintenance Programs Subtotal	\$18,350,000	\$40,900,000	\$47,320,000	\$41,650,000	\$34,050,000	\$42,370,000	\$36,020,000

2021-2027 Capital Improvement Program - Preliminary Draft

	2021	2022	2023	2024	2025	2026	2027
MSP Tenant Projects							
<i>10 - Terminal 1</i>							
Concessions Upgrades/Revenue Development		\$100,000	\$100,000	\$200,000	\$200,000	\$200,000	\$200,000
Elevator and concourse improvements related to relocated United Club			\$200,000				
Terminal 1 Pre-Conditioned Air (PCA)		\$2,000,000		\$2,000,000			
<i>46 - Hangars and Other Buildings</i>							
Ground Service Equipment (GSE) Maintenance Facility			\$200,000				
MSP Tenant Projects Subtotal	\$0	\$2,100,000	\$500,000	\$2,200,000	\$200,000	\$200,000	\$200,000

2021-2027 Capital Improvement Program - Preliminary Draft	2021	2022	2023	2024	2025	2026	2027
Reliever Airports Long Term Comprehensive Plan (LTCP) Projects							
81 - St. Paul							
STP Airport Layout Plan			\$400,000				
82 - Lake Elmo							
21D Long Term Comp Plan					\$100,000		
21D Runway 14-32 Replacement	\$5,000,000	\$3,500,000					
83 - Airlake							
LVN Long Term Comp Plan					\$100,000		
LVN Runway 12-30 Improvements			\$3,500,000				
84 - Flying Cloud							
FCM Airport Layout Plan		\$300,000					
FCM Purchase and Demolition of Hangars			\$1,300,000				
FCM South Building Area Utilities						\$600,000	
85 - Crystal							
MIC Long Term Comp Plan					\$100,000		
86 - Anoka County - Blaine							
ANE Airport Layout Plan		\$400,000					
ANE Building Area Development - Xylite St. Relocation					\$1,000,000		
Reliever Airports LTCP Projects Subtotal	\$5,000,000	\$4,200,000	\$5,200,000	\$0	\$1,300,000	\$600,000	\$0

2021-2027 Capital Improvement Program - Preliminary Draft	2021	2022	2023	2024	2025	2026	2027
Reliever Airports Maintenance/Facility Upgrade Projects							
<i>80 - Reliever Airports</i>							
Reliever Building Misc Mods	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000
Reliever Obstruction Removal			\$300,000		\$300,000		\$300,000
Reliever Pavement Rehabilitation Misc Mods	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000
<i>81 - St. Paul</i>							
STP Airport Perimeter Roads					\$500,000		
STP Cold Equipment Storage Building						\$750,000	
STP Customs and Border Patrol General Aviation Facility							\$2,000,000
STP Intelligent Monitoring and Control System (IMACS) Expansion				\$2,250,000			
STP LED Edge Lighting Upgrades	\$500,000		\$500,000	\$1,500,000			
STP MAC Building Improvements	\$400,000		\$200,000		\$200,000		\$200,000
STP Pavement Rehabilitation-Taxilanes/Tower Road						\$500,000	
STP Runway 13-31 Pavement Reconstruction			\$5,000,000				
STP Runway 14-32 EMAS Replacement							\$10,000,000
STP Runway 14-32 Reconstruction					\$5,000,000	\$5,000,000	
STP Storm Sewer Improvements				\$1,500,000			
STP Taxiway B Rehabilitation					\$800,000		
STP Taxiway Lima Rehabilitation							\$200,000
<i>82 - Lake Elmo</i>							
21D Intelligent Monitoring and Control System (IMACS)					\$1,150,000		
21D Material Storage Building				\$500,000			
21D North Building Area Pavement Rehabilitation				\$900,000			
21D North Service Roads Rehabilitation					\$500,000		
21D Northside Taxiway Reconstruction					\$600,000		
21D Runway 04-22 Pavement Rehabilitation				\$4,000,000			
<i>83 - Airlake</i>							
LVN Existing Runway 12-30 Reconstruction			\$3,500,000				
LVN Intelligent Monitoring and Control System (IMACS)						\$1,150,000	
LVN Joint and Crack Repairs	\$150,000						
LVN LED Edge Lighting			\$200,000				
LVN North Service Road Pavement Rehabilitation							\$400,000
LVN North Taxilanes Pavement Rehabilitation							\$1,000,000
LVN South Building Area Sewer and Water Expansion		\$200,000					
<i>84 - Flying Cloud</i>							
FCM Airfield Electrical Improvements - TXY D & E Lights	\$300,000						
FCM Airport Access Roads and Tango Lane						\$500,000	
FCM Electrical Vault Modifications						\$500,000	
FCM Gate Replacements					\$500,000		
FCM Intelligent Monitoring and Control System (IMACS)				\$2,250,000			
FCM MAC Building Improvements	\$520,000					\$600,000	
FCM Runway 10R-28L Pavement Rehabilitation				\$2,300,000			
FCM Underground Fuel Storage Tank Replacement				\$400,000			
<i>85 - Crystal</i>							
MIC Existing Hangar Revitalization						\$800,000	
MIC Intelligent Monitoring and Control System (IMACS)						\$1,150,000	
MIC LED Edge Lighting Upgrade	\$400,000		\$400,000				
MIC Obstruction Removal					\$300,000		
MIC Runway 6L-24R Pavement Rehabilitation							\$2,000,000
MIC Service Roads			\$1,200,000				
MIC Taxilanes Pavement Rehabilitation		\$550,000	\$750,000		\$600,000		\$600,000
MIC Underground Fuel Storage Tank Replacement				\$400,000			
<i>Reliever Airports Maintenance/Facility Upgrade Projects continues on the next page.</i>							

2021-2027 Capital Improvement Program - Preliminary Draft	2021	2022	2023	2024	2025	2026	2027
Reliever Airports Maintenance/Facility Upgrade Projects (cont.)							
<i>86 - Anoka County - Blaine</i>							
ANE Electrical Vault Improvements					\$750,000		
ANE Intelligent Monitoring and Control System (IMACS)					\$1,150,000		
ANE Pavement Rehabilitation - Taxiway A and Edge Lights			\$1,800,000				
ANE Runway 18-36 Pavement Rehabilitation							\$2,500,000
ANE Taxilanes Pavement Reconstruction	\$750,000						
ANE Underground Fuel Storage Tank Replacement				\$400,000			
ANE West Perimeter Road				\$1,500,000			
Reliever Airports Maintenance/Facility Upgrade Projects Subtotal	\$3,720,000	\$1,450,000	\$14,550,000	\$18,600,000	\$13,050,000	\$11,650,000	\$19,900,000
MSP Subtotal	\$227,600,000	\$189,465,000	\$154,570,000	\$372,740,000	\$142,700,000	\$430,290,000	\$419,090,000
Relievers Subtotal	\$8,720,000	\$5,650,000	\$19,750,000	\$18,600,000	\$14,350,000	\$12,250,000	\$19,900,000
Total	\$236,320,000	\$195,115,000	\$174,320,000	\$391,340,000	\$157,050,000	\$442,540,000	\$438,990,000

**PRELIMINARY DRAFT 2021-2027 CIP
2021 Capital Improvement Program Narratives
Metropolitan Airports Commission**

MSP End of Life/Replacement Projects

10 – Terminal 1

Passenger Boarding Bridge Replacements \$4,100,000

This project provides for the replacement of jet bridges at Terminal 1. Bridges to be replaced will be determined based on a condition assessment and input from the airlines. Aircraft parking positions will be optimized at the impacted gates and fuel pits adjusted as necessary. Podiums and door openings may also be adjusted to optimize gate hold area. It is assumed fixed walkways may need to be replaced or added to meet ADA slope requirements and all gate hold areas will be upgraded with security doors, card readers, and cameras.

21 – Field and Runway

Taxiway A Pavement Reconstruction \$16,000,000

The project provides for reconstruction of Taxiway A from Taxiway A3 to just west of the 12R-30L Tunnel. In addition, it includes a 75-foot-wide strip of the pavement within the Taxiway A safety area. Work will include removals, excavation, granular material, crushed aggregate base, concrete pavement, bituminous shoulders, pavement marking and taxiway centerline and edge lights.

Taxiway B and Concourse G Apron Pavement Reconstruction \$16,000,000

This project will reconstruct a portion of Taxiway B and the associated apron area near Gates G15 through G19. Work will include removals, excavation, granular material, crushed aggregate base, concrete pavement, bituminous shoulders, storm and glycol sewers, fuel pit, pavement marking, and taxiway centerline lights.

MSP IT Projects

10 – Terminal 1

Intelligent Monitoring and Control Systems (IMACS) \$1,500,000

This is a continuation of a multi-year program to upgrade all MAC building automation systems to an open architecture protocol so that MAC can bid maintenance and construction contracts more competitively. This project will replace sole-source controllers such as Siemens and Legacy Honeywell with controllers from Honeywell, Circon, Distech, and TAC systems that are LonMark certified products.

MAC Technology Upgrades \$8,500,000

Each year, there are a number of IT projects that are beyond the resources of MAC's staff and operating budget to accomplish. These projects are prioritized and completed either as a series of contracts or as purchase orders. Work may include Fiber Optic Cable Upgrades, MACNet maintenance and upgrades, EVIDs/MUFIDs digital signs, Wireless System enhancements, and MAC Public Address System maintenance and upgrades. The list of potential projects will be compiled and prioritized in early 2021.

Telecommunications Room Equipment Continuity (TREC) \$1,500,000

The MAC network (MACNet) carries, along with other information, credit card data collected from the landside parking revenue control system. Merchants like the MAC are required to meet credit card security standards created 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 multi-year program addresses these standards by providing security equipment and relevant network hardware for the 150 telecommunications rooms on the MAC campus.

63 – Police

Radio DAS Coverage Deficiency Resolution \$600,000

This project will continue past efforts to improve the public safety radio signal coverage on the MSP campus by expanding the Distributed Antenna System (DAS).

Card Access Modifications \$200,000

This is a multi-year program to refresh the inventory of card access security readers as they get to end of life, add outdoor biometric readers, add mobile card readers, add other readers as needed throughout the campus, and align card access control with other surveillance technology including IVISN.

66 – Fire

MSP Campus Fire Alarm System Transition \$1,800,000

In an effort to improve monitoring reliability and eliminate the existing single point of failure configuration, this multi-year project will include database redundant systems, device controller upgrades and the decentralization of the fire alarm master control equipment.

MSP Long Term Comprehensive Plan Projects

10 – Terminal 1

Baggage Claim/Ticket Lobby Operational Improvements \$83,700,000

This is continuation of a program that will provide the level of service requirements for short- and medium-term growth of the Origin & Destination (O&D) passengers, addressing issues of congestion and functionality in the Terminal 1 Arrivals and Departures areas. This program will complete the expansion of the east terminal façade, including walkways that meet required codes, public seating areas, curtain wall replacement, improved lighting and sight lines, east mezzanine removal/reduction, structural enhancements, improved vestibules and curbside. In the Departures Hall this program will increase the depth of the check-in area and include airline check-in facilities, ticket offices, and TSA space. The South Security Checkpoint will be expanded to eight lanes, and add an employee screening portal. The Center Mezzanine will be expanded with a cantilevered corridor, allowing security observation and facilitating future remodeling. On the Arrivals Level, baggage claim device capacity will be increased.

Baggage Handling System \$36,300,000

This project includes baggage handling system (BHS) work associated with the south half of Terminal 1 related to several phases of operational improvements between the baggage claim and ticket lobby levels. Improvements to the inbound BHS include new baggage claim devices and conveyors. The outbound BHS improvements include self-service bag drop devices, related conveyors, oversize bag screening and tub returns.

MSP Long Term Plan \$250,000

The MSP 2030 Long Term Comprehensive Plan (LTCP), previously completed in April 2010, was scheduled to be updated in 2020. While work that had already started with forecasting and gap analyses were paused earlier this year, efforts to continue work on the LTCP document is anticipated later in 2021, with more work planned in 2022.

MSP Maintenance/Facility Upgrade Projects

10 – Terminal 1

Art Display Areas \$150,000

This program is a continuation of the existing program, in partnership with the MSP Foundation, to provide opportunities and space build out for the display of permanent and temporary/rotating art exhibits.

Arts Master Plan \$300,000

This program supports procurement of commissioned art and rotating exhibits as part of the Percent for Arts program.

13 – Energy Management Center (EMC)

Concourse B Heating System Upgrades

\$950,000

This project will upgrade Concourse B's fin tube radiation and variable air volume boxes as they are inefficient, expensive to operate and at the end of their expected life.

Energy Savings Program

\$700,000

The scope of this year's project involves work at both Terminal 1 and Terminal 2 and in general includes the replacement of valves, boilers, lighting controls, and motors with high efficiency models.

Indoor Air Quality Monitoring

\$700,000

This project will install needed carbon dioxide sensors in common return air ducts, and tie all new and existing sensors into the IMACS for remote monitoring and for automatic safety ventilation. It will also provide the EMC with advanced modular indoor air quality (IAQ) sensors to install temporarily at any location that has IMACS to detect ultra-fine particles, volatile organic compounds, CO₂, CO, NO₂ and other gasses in the area if an IAQ complaint is filed, enabling the EMC to accurately assess the problem and solution.

LED Lighting Conversion in Valet

\$500,000

This project replaces light fixtures in the valet parking area with LED fixtures for improved energy efficiency in support of the MAC's Carbon Management Plan.

Victaulic Piping Replacement

\$1,000,000

This 5-year program will replace the Victaulic piping and valves in Terminal 2, and in these areas of Terminal 1: Concourse E, Concourse F, Concourse C and Concourse C Tunnel. While Victaulic pipe fittings allow for the pipe to be quickly and easily disassembled when needed, it was discovered that the joints cause leaking because the seals shrink when they cool due to shut downs and service disruptions, which occur frequently at MSP, and then don't hold tight when the system is restored to normal operation. 2021 is the second year of work under this program.

21 – Field and Runway

Taxiways B and Q Islands

\$700,000

This project will construct taxiway islands created by Taxiways A and B, C and D, and P and Q.

46 – Hangars and Other Buildings

Safety and Security Center

\$30,000,000

The project will construct a replacement fire station (ARFF #2) and relocate airfield navigational aids impacted by the whole building's planned construction. A future phase will construct a building to house a new Airport Operations Center which includes Airside Operations and the Emergency Communications Center, a dedicated primary Emergency Operations Center, and consolidated Airport Police Department facilities. This combined facility is intended to bring together the airport entities that are stakeholders in the daily operations to improve collaboration and coordination.

63 – Police

Badging Office Relocation

\$4,100,000

This project will co-locate all Airport Police Badging Office functions to the spaces currently occupied by the Rental Car Agencies in the Red/Blue parking ramp core following RAC relocation to the Customer Service Building in the Silver Ramp.

Public Safety Modifications

\$1,500,000

This program enhances the safety of the MSP campus through door hardware, signage, security controls, and other equipment to provide for egress requirements, code compliance, security conformity, and emergency responder access.

MSP Noise Mitigation Projects

Noise Mitigation Consent Decree Amendment

\$1,500,000

The Consent Decree First Amendment Program is a residential noise mitigation program that began in March 2014 under the terms of an amended legal agreement (Consent Decree) between the Metropolitan Airports Commission (MAC) and the cities of Richfield, Minneapolis, and Eagan, and approved by the Hennepin County District Court (effective until December 31, 2024). Under this program, eligibility of single-family and multi-family homes will be determined annually, based upon actual noise contours that are developed for the preceding calendar year, beginning in March 2014. This project will provide noise mitigation for those single family and multifamily homes meeting the eligibility requirements of the program.

MSP Ongoing Maintenance Projects

10 – Terminal 1

Baggage System Upgrades

\$500,000

This multi-year program will provide necessary upgrades to the inbound and outbound baggage system not covered by general system maintenance.

Concourse G Rehabilitation

\$4,000,000

This multi-year program will provide operational improvements to the existing concourse over time, including replacing elevators, modifying and replacing structural, electrical and mechanical systems.

Electrical Substation Replacement

\$1,400,000

This is a multi-year program to replace electrical substations which are at or very near end of life. This program will also improve redundancy.

Emergency Power Upgrades

\$2,000,000

A study and survey of Terminal 1 transfer switches and emergency lighting was completed in 2008. This year's project is part of a multi-year program that will continue the design and implementation of emergency power and lighting corrective work identified in this study.

Plumbing Infrastructure Upgrades

\$600,000

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 are over 40 years old, have systems that are undersized for today's demands, contain isolation valves that are either inaccessible or no longer functional, and utilize aging water meter systems. There are also deteriorated sections of the existing sanitary and storm water systems. This ongoing program was implemented in 2012 to upgrade the plumbing infrastructure system to meet current code requirements and MAC standards. The focus of the 2021 project is to continue the replacement of aging plumbing systems.

Terminal Miscellaneous Modifications

\$2,400,000

Each year, there is a list of maintenance projects that are beyond the resources of MAC's maintenance and trades staff to accomplish. These projects are prioritized and completed either as a series of contracts or as purchase orders. Typical work includes door replacements, emergency upgrades to mechanical, electrical, plumbing or HVAC systems, loading dock work, etc. The list of potential projects will be compiled and prioritized in early 2021.

21 – Field and Runway

Miscellaneous Airfield Construction

\$3,000,000

This program supports Part 139 Airport Certification through grading and drainage improvements within runway safety areas, airfield pavement marking modifications, and other miscellaneous airside projects that are too small to accomplish independently or arise unexpectedly.

Pavement Joint Sealing/Repair

\$1,200,000

This is an ongoing program to provide for the resealing of joints, sealing of cracks, and limited surface repairs on existing concrete pavements. The areas scheduled for sealing will be as defined in the overall joint sealing program or as identified by staff inspection in the early spring of each year.

26 – Terminal Roads/Landside

Tunnel/Bridge Rehabilitation

\$100,000

The MSP Campus has MAC-owned bridges and tunnels. Bridge and tunnel inspections are conducted each year to identify maintenance and repairs which are then implemented in a timely fashion.

31 – Parking

Parking Structure Rehabilitation

\$3,000,000

This is an annual 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.

39 – Public Areas/Roads

Roadway Fixture Refurbishment

\$150,000

Many of the light poles, clearance restriction boards, sign units, fence sections, and canopies on the airport roadways are in need of repainting and maintenance. This project provides for refurbishment of these fixtures.

Reliever Airports Long Term Comprehensive Plan Projects

82 – Lake Elmo

21D Runway 14-32 Replacement

\$5,000,000

The updated long term comprehensive plan for this airport proposes relocating and extending the primary runway northeast of its current alignment. This year's scope includes the third phase of construction for this project which focuses on construction of the new runway.

Reliever Airports Maintenance/Facility Upgrade Projects

80 – Reliever Airports

Reliever Building Miscellaneous Modifications

\$400,000

This program will address ongoing needs for repairs and modifications of MAC-owned buildings at the five of the reliever airports, excluding St. Paul. These items may include: crew rest areas, heating, air conditioning, structural repairs, and aesthetic updates. The list of potential projects will be compiled and prioritized in early 2020.

Reliever Pavement Rehabilitation Miscellaneous Modifications

\$300,000

This program will address ongoing needs for crack sealing, joint repairs, pavement rejuvenation, and pavement repairs at the six reliever airports. The list of potential projects will be compiled and prioritized in early 2020.

81 – St. Paul

STP LED Edge Lighting Upgrades

\$500,000

This program will replace taxiway edge lighting and signage with LED. The 2021 and 2023 projects will address taxiways East of Runway 14-32.

STP MAC Building Improvements

\$400,000

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.

83 – Airlake

LVN Joint and Crack Repairs

\$150,000

This project will execute joint and crack repairs on taxiways and taxiway connectors.

84 – Flying Cloud

FCM Airfield Electrical Improvements – Txy D and E Lights

\$300,000

This project will install LED taxiway edge lighting on the remaining portions that do not have lighting.

FCM MAC Building Improvements **\$520,000**

This year's project will focus on mitigating water infiltration at the electrical vault building. Other improvement work will address the most urgent issues identified during design.

85 – Crystal

MIC LED Edge Lighting Upgrade **\$400,000**

This project will replace existing, end of life, edge lighting with LED. Airfield signage improvements are also part of this program.

86 – Anoka County - Blaine

ANE Taxilanes Pavement Reconstruction **\$750,000**

This is an ongoing program to reconstruct 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. The pavement condition index report as well as an inspection of the pavement will be completed to determine the area most in need of repair.