

2035

Metropolitan Transportation Plan **The Anchorage Bowl and Chugiak-Eagle River**

Prepared for:

**Municipality of Anchorage, Anchorage Metropolitan
Area Transportation Solutions**

Prepared by:

Kittelson & Associates, Inc.
Brooks & Associates
CH2M Hill
Word Wrangling

May 2012

This publication was released by the Anchorage Metropolitan Area Transportation Solutions, the Municipality of Anchorage, and the Alaska Department of Transportation & Public Facilities for the purpose of public information. This report was funded in part through grant(s) from the U.S. Department of Transportation, Federal Highway Administration and Federal Transit Administration. The views and opinions of the authors expressed herein do not necessarily state or reflect those of the U. S. Department of Transportation.

2035

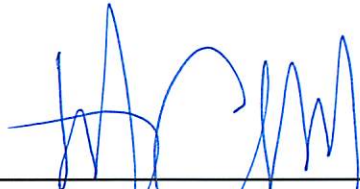
Metropolitan Transportation Plan

The Anchorage Bowl and Chugiak-Eagle River

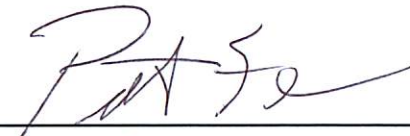
ANCHORAGE METROPOLITAN AREA TRANSPORTATION SOLUTIONS

Approved by the AMATS Policy Committee

Date: May 3, 2012



Robert Campbell, Regional Director (Chair)
Alaska Department of Transportation and Public Facilities



Patrick Flynn
Anchorage Municipal Assembly



Dan Sullivan, Mayor
Municipality of Anchorage



Chris Birch
Anchorage Municipal Assembly



Alice Edwards, Director of Air Quality
Alaska Department of Environmental Conservation

Acknowledgements

AMATS Policy Committee (PC)

Robert A. Campbell, P.E., Chair, DOT&PF
Mayor Dan Sullivan, Vice Chair, MOA
Patrick Flynn, MOA Assembly
Chris Birch, MOA Assembly
Alice Edwards, DEC

AMATS Technical Advisory Committee (TAC)

Stephanie Mormilo, Chair, MOA
Bruce Carr, Alaska Railroad Corporation
Emily Cotter, Port of Anchorage
Todd Cowles, Port of Anchorage
John Crapps, MOA
Lois Epstein, Air Quality Advisory Group
Jerry Hansen, MOA
Cindy Heil, DEC
Steve Morris, MOA
Ken Morton, DOT&PF
Steve Ribuffo, Port of Anchorage
Kim Rice, DOT&PF
Jerry Weaver, MOA
Lance Wilber, MOA
Jennifer Witt, DOT&PF

2035 MTP Technical Advisory Committee (TAC+)

David Barton, Access Alaska
Dorothy Cook, Eklutna Native Village
Karol Fink, State of Alaska, Department of Health & Social Services
Loran Frazier, KABATA
Linda Kovac, Chugiak-Eagle River
John Madden, Homeland Security
Nick Moe, Alaska Center of the Environment
Chuck Monie, JBER
Mike Saville, Public Transit Advisory Board
Toby Smith, Alaska Center for the Environment
Brad Sworts, Mat-Su Borough
Aves Thompson, Alaska Trucking Association
AMATS TAC (see left)

Project Oversight Committee

Craig Lyon, AMATS
Jon Spring, Spring Planning Services
Lance Wilber, MOA People Mover
Jennifer Witt, DOT&PF Central Region
Gary Katsion, Kittelson & Associates, Inc.

AMATS

Craig Lyon
Jon Spring, Project Manager
Teresa Brewer
Erika McConnell
Vivian Underwood
Tana Klunder

MOA

Jody Karcz
Lori Schanche
Jamie Acton

DOT&PF-Central Region

Bart Rudolph
Aaron Jongenelen

KABATA

Andrew Niemiec
Judy Dougherty
Kevin Hemenway
Loran Frazier

Consultant Team

Kittelson & Associates, Inc.

Ralph Bentley
Nick Foster
Gary Katsion
Jackie Olsommer
Andrew Ooms
Galina Osintsev
Jay Roebuck
Phill Worth

Brooks & Associates

Anne Brooks
Joann Mitchell

CH2M Hill

Jennifer Emerson
Ed Granzow

Word Wrangling

Judy Griffin

Homestead Graphics

Jan Hazen

Kristi Krueger Consulting

Kristi Krueger

TABLE OF CONTENTS

List of Tables TOC-V
List of Figures TOC-IX
Appendices TOC-XIII

Introduction 1-1

Shaping the Plan Character 1-2
Understanding the Organizational Structure of Transportation Planning in the AMATS Region 1-3
Meeting Regulatory Requirements 1-5
Coordinating the Transportation Planning Process 1-6
Policy Committee Guidance for Plan Development 1-7
Gathering Information for Plan Development 1-8
Moving the Vision Forward 1-8

Public Involvement 2-1

Building Awareness of the Metropolitan Transportation Plan 2-2
Developing the Metropolitan Transportation Plan through Outreach 2-3
Facilitating Plan Review and Approval 2-4

Plan Goals and Objectives 3-1

Developing Goals and Objectives 3-1
Goals and Objectives 3-2
Meeting Regulatory Requirements 3-6

AMATS Transportation System Today 4-1

- Transportation Plan Implementation Since 2007 4-1
- Roads 4-4
- Road Ownership 4-4
- Public Transportation 4-15
- Non-Motorized Transportation System 4-20
- Freight Distribution 4-24

Metropolitan Area Transportation in 2035 5-1

- Demographics 5-2
- Distribution of MOA Population, Household, and Employment Growth 5-6
- Transportation System 5-16

Financial Plan 6-1

- Identifying Project Categories—Short Term, Long Term, and Illustrative 6-2
- Examining Project Cost and Revenue Detail 6-12
- Conclusion 6-32

Recommendations 7-1

- A Call to Action 7-2
- Roads 7-4
- Public Transportation 7-39
- Congestion Management 7-46
- Non-motorized Transportation (Pedestrian, Bicycle, and Trail Facilities) 7-50
- Freight Distribution 7-71
- Regional Connections 7-73
- Integration with Other Transportation and Land Use Plans 7-73
- MTP System Performance 7-74
- Summary of MTP Recommendations 7-80

- Implementation 8-1**
 - Policy Shapes Implementation 8-1
 - Process—From the MTP to Project Implementation 8-23

- Air Quality and the Metropolitan Transportation Plan 9-1**
 - Background 9-1
 - Impact of the Transportation Plan on Air Pollutant Emissions 9-4

LIST OF TABLES

Table 2-1 MTP Stakeholder Groups2-3

Table 2-2 Issues Identified During Public Involvement Outreach2-5

Table 3-1 MTP Goals Address Required Planning Factors3-7

Table 4-1 Projects Completed Since 2007. 4-2

Table 4-2 Road Classifications and Their Characteristics 4-5

Table 4-3 Severity of Glenn Highway Crashes Between Airport Heights Drive and
Parks Highway Interchange, 2000-20094-15

Table 4-4 Anchorage Ride Sharing Statistics, 2005-20104-19

Table 4-5 Bike to Work Day Counts, 2007-2010. 4-22

Table 4-6 Average Weekday Truck Counts at Spot Locations, 2009 4-24

Table 5-1 Projected Population, Household, and Employment Growth
for the Southcentral Region5-2

Table 5-2 Projected Household Growth by Planning Area, 2007-20355-12

Table 5-3 Projected Employment Growth by Planning Area, 2007-20355-14

Table 5-4 Comparison of 2035 Land Use Assumptions and Traffic Volumes –
2035 MTP vs. KAC Project.5-18

Table 5-5 Level of Service Characteristics5-21

Table 5-6 Performance Comparison for 2007 and 2035 Project Scenarios 5-23

Table 5-7 People Mover Service and Ridership, 1992-2010 5-32

Table 5-8 Mode Share and Purposes of Weekday Trips by Public Transportation 5-34

Table 5-9 2035 Road Projects 5-57

Table 5-10 2035 Public Transportation Projects 5-63

Table 5-11 2035 Non-Motorized Transportation Projects. 5-65

Table 6-1	Recommended Projects by Category	6-2
Table 6-2	Example Calculations for the Cost of Recommended Short-Term Road Projects, 2011-2035	6-3
Table 6-3	Total Revenue Forecast – Short Term (2011-2023)	6-4
Table 6-4	Total Revenues Forecast - Long Term (2024-2035).....	6-6
Table 6-5	Capital Funding Sources for Road Projects – Short Term (2011-2023).....	6-13
Table 6-6	Capital Funding Sources for Road Projects - Long Term (2024-2035)	6-14
Table 6-7	Sources and Uses of Revenue for Road Projects	6-16
Table 6-8	Lane Mile Increases by Agency Maintenance Responsibility	6-17
Table 6-9	Comparison of Funding and Expenses for Roads and Non-Motorized Operations & Maintenance – Short Term (2011-2023)	6-18
Table 6-10	Comparison of Funding vs. Expenses for Roads and Non-Motorized Operations & Maintenance – Long Term (2024-2035).....	6-19
Table 6-11	Capital Funding Sources for Public Transportation Projects- Short Term (2011-2023)	6-21
Table 6-12	Capital Funding Sources for Public Transportation Projects – Long Term (2024-2035)	6-22
Table 6-13	Public Transportation Projects Sources and Uses of Revenue	6-23
Table 6-14	Public Transportation Capital Projects and Operations & Maintenance Expenses – Short-Term (2011-2023).....	6-24
Table 6-15	Public Transportation Capital Projects and Operations & Maintenance Expenses – Long-Term (2024-2035)	6-25
Table 6-16	Non-Motorized Projects Captial Funding Sources – Short-Term (2011-2023) & Long-Term (2024-2035).....	6-27
Table 6-17	Sources and Uses of Revenue for Non-motorized Transportation Projects.....	6-28
Table 6-18	Sources and Uses of Revenue for Knik Arm Crossing	6-31

Table 6-19	2035 MTP Sources and Uses of Revenue - Short Term (2011-2023)	6-33
Table 6-20	2035 MTP Sources and Uses of Revenue - Long Term (2024-2035).	6-34
Table 7-1	Initial Screening Criteria for Road Projects	7-5
Table 7-2	Initial Screening Scores for Road Projects	7-6
Table 7-3	Recommended 2035 MTP Road Projects.	7-13
Table 7-4	Knik Arm Crossing Project	7-24
Table 7-5	Illustrative Road Projects (Not funded in MTP—after 2035).	7-35
Table 7-6	Initial Screening Criteria for Public Transportation Projects	7-40
Table 7-7	Recommended 2035 MTP Public Transportation Projects	7-41
Table 7-8	Illustrative Public Transportation Project (Not funded in MTP—after 2035)	7-49
Table 7-9	Initial Screening Criteria for Non-Motorized Transportation Projects	7-50
Table 7-10	Initial Screening Scores for Non-Motorized Transportation Projects	7-51
Table 7-11	Recommended 2035 MTP Projects for Non-Motorized Transportation Facilities.	7-60
Table 7-12	Illustrative Non-Motorized Projects (Not funded in MTP—after 2035)	7-71
Table 8-1	Action Item Recommendations - Comprehensive Plans	8-2
Table 8-2	Action Item Recommendations - Financial Issues	8-4
Table 8-3	Action Item Recommendations - Public Involvement	8-5
Table 8-4	Action Item Recommendations - Transportation System	8-6
Table 8-5	Action Item Recommendations - Roads.	8-7
Table 8-6	Action Item Recommendations - Public Transportation	8-10
Table 8-7	Action Item Recommendations - Non-Motorized System.	8-12
Table 8-8	Action Item Recommendations - Freight.	8-14

Table 8-9 Action Item Recommendations – Regional Connections. 8-17

Table 8-10 Action Item Recommendations – Congestion Management. 8-18

Table 8-11 Action Item Recommendations – Coordination of Local Plans 8-20

Table 8-12 Action Item Recommendations – Maintenance and Operations 8-21

Table 8-13 Action Item Recommendations – Environmental Concerns,
Air Quality, and Public Health. 8-22

Table 9-1 CO Concentrations in Selected Western U.S. Metropolitan Areas (2010) 9-2

LIST OF FIGURES

Figure 1-1	AMATS Boundaries	1-2
Figure 4-1	Completed Projects Since 2007 – Anchorage Bowl	4-3
Figure 4-2	Completed Projects Since 2007 – Chugiak-Eagle River	4-3
Figure 4-3	National Highway System – Anchorage Bowl	4-6
Figure 4-4	National Highway System – Chugiak-Eagle River	4-6
Figure 4-5	Road Functional Classifications – Anchorage Bowl	4-7
Figure 4-6	Road Functional Classifications – Chugiak-Eagle River	4-7
Figure 4-7	Road Ownership – Anchorage Bowl	4-8
Figure 4-8	Road Ownership – Chugiak-Eagle River	4-8
Figure 4-9	2009 Freeway Level of Service - Morning and Afternoon Peak Periods	4-9
Figure 4-10	2010 Intersection Level of Service - Morning Peak Period	4-10
Figure 4-11	2010 Intersection Level of Service - Afternoon Peak Period	4-11
Figure 4-12	Automobile Travel by Time of Day on Major Corridors, 2010	4-13
Figure 4-13	Afternoon Peak Travel Times, 1998 – 2010	4-14
Figure 4-14	People Mover Bus Routes in 2011 – Anchorage Bowl	4-16
Figure 4-15	People Mover Bus Routes in 2011 – Chugiak-Eagle River	4-16
Figure 4-16	People Mover Average Daily Riders 2002-2010	4-17
Figure 4-17	People Mover Productivity, 2002 – 2010	4-18
Figure 4-18	Sidewalks – Anchorage Bowl	4-21
Figure 4-19	Sidewalks – Chugiak-Eagle River	4-21
Figure 4-20	Bicycle Facilities – Anchorage Bowl	4-23
Figure 4-21	Bicycle Facilities – Chugiak-Eagle River	4-23

Figure 4-22 Port of Anchorage Tonnage Trends, 2001 – 2010 4-25

Figure 4-23 TSAIA Air Passenger and Cargo Trends, 2000-2009 4-26

Figure 4-24 Alaska Railroad Freight Tonnage Trends, 2000 – 2009 4-27

Figure 4-25 Regional Transportation Hubs and Corridors 4-28

Figure 5-1 Regional Population Growth 5-3

Figure 5-2 Projected Commuters from Chugiak-Eagle River and the
Mat-Su Valley to Anchorage Bowl Employment 5-4

Figure 5-3 Projected Employment Growth 5-5

Figure 5-4 Land-Use Policy Areas in the Anchorage Bowl Comprehensive Plan 5-7

Figure 5-5 Land-Use Policy Areas in the Chugiak-Eagle River Comprehensive Plan 5-7

Figure 5-6 Anchorage Bowl Planning Areas 5-9

Figure 5-7 Chugiak-Eagle River Planning Areas 5-9

Figure 5-8 2007 Household Density – Anchorage Bowl 5-10

Figure 5-9 2007 Household Density – Chugiak-Eagle River 5-10

Figure 5-10 2007 Employment Density – Anchorage Bowl 5-11

Figure 5-11 2007 Employment Density – Anchorage Bowl 5-11

Figure 5-12 2007-2035 Household Growth by Traffic Analysis Zone – Anchorage Bowl 5-13

Figure 5-13 2007-2035 Household Growth by Traffic Analysis Zone –
Chugiak-Eagle River 5-13

Figure 5-14 2007-2035 Employment Growth by Traffic Analysis Zone – Anchorage Bowl 5-15

Figure 5-15 2007-2035 Employment Growth by Traffic Analysis Zone –
Chugiak-Eagle River 5-15

Figure 5-16 Weekday Person Trips (2007 and 2035) 5-17

Figure 5-17 Missing Grid Links in the Roadway Network – Anchorage Bowl 5-20

Figure 5-18	Missing Grid Links in the Roadway Network - Chugiak-Eagle River	5-20
Figure 5-19	Total Daily Performance of the No-Build 2010 Road Network in 2035 - Anchorage Bowl	5-22
Figure 5-20	Total Daily Performance of the No-Build 2010 Road Network in 2035 - Chugiak-Eagle River	5-22
Figure 5-21	Glenn Highway Commuters and Capacity: Morning Peak Period	5-24
Figure 5-22	Projects in the 2035 Base Road Network - Anchorage Bowl	5-26
Figure 5-23	Projects in the 2035 Base Road Network - Chugiak-Eagle River	5-26
Figure 5-24	Projects Added in the 2035 Base Plus Road Network - Anchorage Bowl	5-27
Figure 5-25	Projects Added in the 2035 Base Plus Road Network - Chugiak-Eagle River	5-27
Figure 5-26	Total Daily Performance of the 2035 Base Network - Anchorage Bowl	5-29
Figure 5-27	Total Daily Performance of the 2035 Base Network - Chugiak-Eagle River	5-29
Figure 5-28	Total Daily Performance of the 2035 Base Plus Network - Anchorage Bowl	5-30
Figure 5-29	Total Daily Performance of the 2035 Base Plus Network - Chugiak-Eagle River	5-30
Figure 5-30	2035 Base Scenario for the Public Transportation System - Anchorage Bowl	5-35
Figure 5-31	2035 Base Scenario for the Public Transportation System - Chugiak-Eagle River	5-35
Figure 5-32	2035 Base Plus Scenario for the Public Transportation System - Anchorage Bowl	5-36
Figure 5-33	2035 Base Plus Scenario for the Public Transportation System - Chugiak-Eagle River	5-36
Figure 5-34	2035 Bus Rapid Transit Scenario for the Public Transportation System - Anchorage Bowl	5-37
Figure 5-35	2035 Bus Rapid Transit Scenario for the Public Transportation System - Chugiak-Eagle River	5-37

Figure 5-36 Municipality of Anchorage Population Projection, Age 65 and Older, 2006–2030. 5-39

Figure 5-37 AnchorRIDES Trips, 2001–2009. 5-39

Figure 5-38 Congestion Management Methods 5-40

Figure 5-39 Trip Fluctuation 5-46

Figure 5-40 Historical Pedestrian-Vehicle and Bicycle-Vehicle Crash Data 5-47

Figure 5-41 Recommended Core Network for Non-motorized Transportation – Anchorage Bowl 5-48

Figure 5-42 Recommended Core Network for Non-motorized Transportation – Chugiak-Eagle River 5-48

Figure 5-43 Freight Traffic at the Port of Anchorage, 2000–2010 5-50

Figure 5-44 2035 Truck Origin Trips (Productions) by Traffic Analysis Zones – Anchorage Bowl 5-53

Figure 5-45 2035 Truck Origin Trips (Productions) by Traffic Analysis Zones – Chugiak-Eagle River 5-53

Figure 5-46 Regional Transportation Hubs and Transportation Corridors. 5-54

Figure 6-1 Federal, State, and Local Revenues by Year Totals Through 2035 6-10

Figure 6-2 Federal, State, and Local Revenues by Year Through 2035 6-11

Figure 6-3 Comparison of Federal, State, and Local Revenues Percentages for the 2027 LRTPs and 2035 MTP. 6-11

Figure 7-1 Recommended Road Projects-Anchorage Bowl. 7-25

Figure 7-2 Recommended Road Projects-Chugiak-Eagle River 7-25

Figure 7-3 Benefits of the Connecting Corridor 7-27

Figure 7-4 Easing the Glenn Highway Commute 7-31

Figure 7-5 Knik Arm Crossing Project 7-33

Figure 7-6	Knik Arm Crossing Project Preferred Alignment.	7-33
Figure 7-7	Recommended Public Transportation Projects – Anchorage Bowl.	7-45
Figure 7-8	Recommended Public Transportation Projects – Chugiak-Eagle River.	7-45
Figure 7-9	Recommended Non-Motorized Transportation Projects – Anchorage Bowl.	7-69
Figure 7-10	Recommended Non-Motorized Transportation Projects – Chugiak-Eagle River.	7-69
Figure 7-11	Road Projects That Enhance Freight Distribution – Anchorage Bowl.	7-72
Figure 7-12	Road Projects That Enhance Freight Distribution – Chugiak-Eagle River	7-72
Figure 7-13	Total Daily Performance of “2035 MTP Network” – Anchorage Bowl.	7-75
Figure 7-14	Total Daily Performance of “2035 MTP Network” – Chugiak-Eagle River	7-75
Figure 7-15	Morning Peak Period Performance of 2035 MTP Network – Anchorage Bowl	7-76
Figure 7-16	Morning Peak Period Performance of 2035 MTP Network – Chugiak-Eagle River.	7-76
Figure 7-17	Afternoon Peak Period Performance of 2035 MTP Network – Anchorage Bowl	7-77
Figure 7-18	Afternoon Peak Period Performance of 2035 MTP Network – Chugiak-Eagle River.	7-77
Figure 8-1	Project Decision-Making Process.	8-28
Figure 8-2	Typical Schedule for a Federal-Aid Highway Requiring an Environmental Impact Statement	8-29
Figure 9-1	Estimated CO Emissions by Source in the Anchorage Bowl (2010)H-	9-2
Figure 9-2	Glacial Dust Being Carried Down to Anchorage by High Winds, September 24, 2010	9-3
Figure 9-3	Eagle River PM-10 Problem Zone.	9-4

APPENDICES

- A Abbreviations, Glossary and Knik Arm Crossing Project Index A-1**
 - Abbreviations A-1
 - Glossary A-3
 - Knik Arm Crossing Project Index. A-12

- B Environmental Justice C-1**

- C Public Involvement Activities. D-1**

- D Publications and Other Sources E-1**
 - Sources By Title E-1
 - Sources Presented By Author and Date of Publication. E-4

