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16. Abstract Mass transportation improvements are being developed in many freeway corridors in the major urban areas of the U.S. Since implementation of these types of improvements usually involves several different agencies, a variety of legal, administrative and jurisdictional issues arise. Given the large commitment to mass transit improvements in Texas, the State Department of Highways and Public Transportation will need to negotiate numerous cooperative agreements concerning the implementation of transit improvements in freeway corridors. This report presents the findings of a survey of major freeway-transit projects recently implemented in the U.S. The intent of this survey was to identify: (1) What types of freeway-transit improvements have been implemented; (2) How the projects were funded; (3) Who owns, operates and maintains the resulting improvements; and (4) What types of legal arrangements have been developed between the participating agencies. Both high-occupancy vehicle facilities and rail transit improvements were included in the survey.			
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METRIC (SI*) CONVERSION FACTORS

APPROXIMATE CONVERSIONS TO SI UNITS

Symbol	When You Know	Multiply By	To Find	Symbol
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LENGTH

in	inches	2.54	millimetres	mm
ft	feet	0.3048	metres	m
yd	yards	0.914	metres	m
mi	miles	1.61	kilometres	km

AREA

in ²	square inches	645.2	millimetres squared	mm ²
ft ²	square feet	0.0929	metres squared	m ²
yd ²	square yards	0.836	metres squared	m ²
mi ²	square miles	2.59	kilometres squared	km ²
ac	acres	0.395	hectares	ha

MASS (weight)

oz	ounces	28.35	grams	g
lb	pounds	0.454	kilograms	kg
T	short tons (2000 lb)	0.907	megagrams	Mg

VOLUME

fl oz	fluid ounces	29.57	millilitres	mL
gal	gallons	3.785	litres	L
ft ³	cubic feet	0.0328	metres cubed	m ³
yd ³	cubic yards	0.0765	metres cubed	m ³

NOTE: Volumes greater than 1000 L shall be shown in m³.

TEMPERATURE (exact)

°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C
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APPROXIMATE CONVERSIONS TO SI UNITS

Symbol	When You Know	Multiply By	To Find	Symbol
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LENGTH

mm	millimetres	0.039	inches	in
m	metres	3.28	feet	ft
m	metres	1.09	yards	yd
km	kilometres	0.621	miles	mi

AREA

mm ²	millimetres squared	0.0016	square inches	in ²
m ²	metres squared	10.764	square feet	ft ²
km ²	kilometres squared	0.39	square miles	mi ²
ha	hectares (10 000 m ²)	2.53	acres	ac

MASS (weight)

g	grams	0.0353	ounces	oz
kg	kilograms	2.205	pounds	lb
Mg	megagrams (1 000 kg)	1.103	short tons	T

VOLUME

mL	millilitres	0.034	fluid ounces	fl oz
L	litres	0.264	gallons	gal
m ³	metres cubed	35.315	cubic feet	ft ³
m ³	metres cubed	1.308	cubic yards	yd ³

TEMPERATURE (exact)

°C	Celsius temperature	9/5 (then add 32)	Fahrenheit temperature	°F
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These factors conform to the requirement of FHWA Order 5190.1A.

* SI is the symbol for the International System of Measurements

**PLANNING AND POLICY ISSUES ASSOCIATED WITH
DEVELOPING MASS TRANSPORTATION IMPROVEMENTS IN
URBAN FREEWAY CORRIDORS**

by

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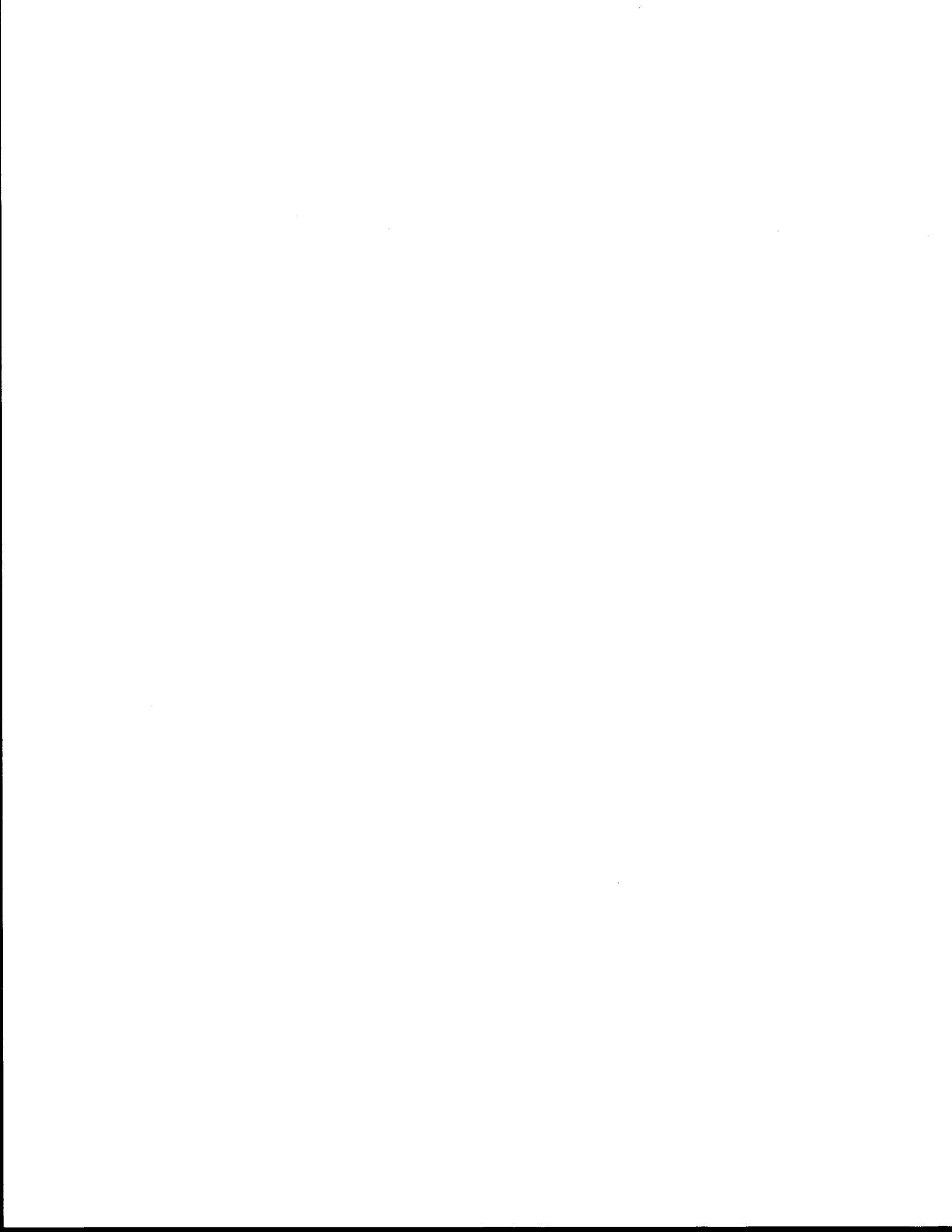
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ABSTRACT

Mass transportation improvements are being developed in many freeway corridors in the major urban areas of the U.S. Since implementation of these types of improvements usually involves several different agencies, a variety of legal, administrative and jurisdictional issues arise. Given the large commitment to mass transit improvements in Texas, the State Department of Highways and Public Transportation will need to negotiate numerous cooperative agreements concerning the implementation of transit improvements in freeway corridors. This report presents the findings of a survey of major freeway-transit projects recently implemented in the U.S. The intent of this survey was to identify: (1) What types of freeway-transit improvements have been implemented; (2) How the projects were funded; (3) Who owns, operates and maintains the resulting improvements; and (4) What types of legal arrangements have been developed between the participating agencies. Both high-occupancy vehicle facilities and rail transit improvements were included in the survey.

Key Words: High-occupancy vehicle lane, rail transit, light rail, heavy rail, interagency cooperative agreements.

IMPLEMENTATION STATEMENT

Given the large commitment to freeway-transit improvements in Texas, the SDHPT will need to negotiate numerous cooperative agreements concerning the implementation of transit improvements in freeway corridors. The different types of interagency cooperative agreements identified as part of this technical study will assist the SDHPT in identifying the cooperative agreement options available and the applicability of these options to Texas.

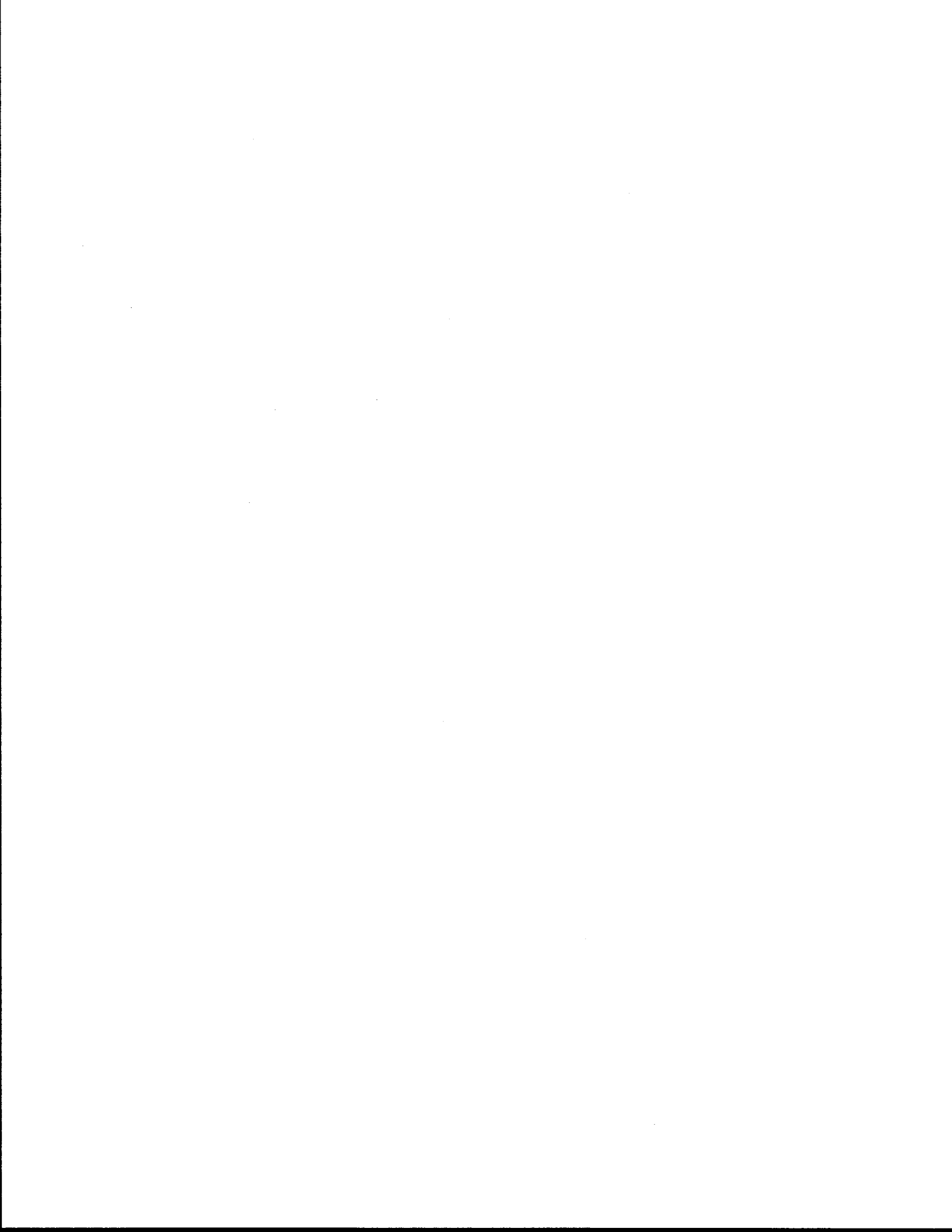
DISCLAIMER

The contents of this report reflect the views of the author who is responsible for the opinions, findings, and conclusions presented herein. The contents do not necessarily reflect the official views or policies of the Texas State Department of Highways and Public Transportation or the Urban Mass Transportation Administration. This report does not constitute a standard, specification, or regulation.

ACKNOWLEDGEMENTS

To successfully undertake a project of this nature requires the cooperation and assistance of a number of different agencies. Texas Transportation Institute was provided with this assistance and the cooperation of the following agencies is gratefully acknowledged.

Bay Area Rapid Transit District
California Department of Transportation
Florida Department of Transportation
Galveston Island Parks Board of Trustees, City of Galveston
Maryland Mass Transit Administration
Metropolitan Atlanta Rapid Transit Authority
Metropolitan Dade County Transportation Administration
Metropolitan Transit Authority of Harris County
Niagara Frontier Transportation Authority
Port Authority of Allegheny County
Port Authority of New York and New Jersey
Sacramento Regional Transit District
San Diego Trolley, Inc.
Santa Clara County Transit District
Tri-County Metropolitan Transportation District
Virginia Department of Transportation
Washington Metropolitan Area Transportation Authority
Washington State Department of Transportation



SUMMARY

The development of a High-Occupancy Vehicle (HOV) facility or a rail transit improvement within an urban freeway corridor can present a challenge to the State in the area of cross-jurisdictional issues which may affect numerous different federal, state and local governmental agencies as well as private interests. To assist the SDHPT in meeting such a challenge, a survey of major freeway-transit projects in the U.S. was performed. The purpose of this survey was to determine: a) what types of freeway-transit improvements have been implemented; b) how the projects were funded; c) who "owns" the resulting improvements; d) who operates the transit improvement; and e) what types of legal agreements have been developed between the participating agencies. Operators of 26 HOV and rail transit improvements located in 17 U.S. cities were surveyed.

Types of Freeway-Transit Improvements Implemented

Fifteen HOV facilities in 10 cities were identified and reviewed. The projects surveyed represent a range of design and operational features. For example:

- 2 are exclusive facilities operated on separate right-of-way;
- 6 are exclusive facilities operated on freeway right-of-way;
- 6 are concurrent flow lanes operated on freeways; and
- 1 is a contraflow lane operated on a freeway.

Eleven rail transit improvements recently implemented in 8 states were also surveyed. Six of these are light rail transit systems and 5 are heavy rail transit operations.



HOV management, the cooperation between the SDHPT and METRO can serve as a good example for other states in the nation to follow.

For 9 of the 11 rail systems studied, a metropolitan area transit agency typically owns, operates and maintains the rail improvement once it is in place. In two cities, however, the rail systems are owned and managed either by the city or the state. Because several of the rail systems surveyed operate a portion of their service in freeway corridors, a variety of legal agreements have been developed between the rail transit agency and the state departments of transportation.

Examples of the types of cooperative agreements developed in connection with HOV/rail transit improvements in freeway corridors are briefly summarized in this report. These included two master operation and maintenance agreements (one for HOV lane operation and one for rail service operations), a right-of-way services agreement, a cooperative work agreement, a temporary right-of-use agreement, a right-of-way purchase and construction agreement, an airspace agreement, and a memorandum of understanding. Copies of these documents, in their entirety, are also included in Appendices A through G. These documents (or portions thereof) can serve as guidelines to the SDHPT in negotiating future freeway-transit improvements in Texas. These documents also illustrate the different roles state DOTs have assumed as well as different services state DOTs have provided to transit agencies in the development of specific HOV/rail transit improvements.

For example, one state DOT agreed to perform all right-of-way acquisition functions and be responsible for all condemnation activities and has been reimbursed by the transit agency for all expenses relating to these activities. Another DOT agreed to share in the cost of right-of-way acquisition, building of overpass structures, and other work required to accommodate the rail system within a freeway corridor. Yet another DOT agreed to coordinate the development of a highway with the rail transit agency such that space shall be provided in the median for an extension of the rail system through that highway corridor.

This information should provide guidance to the SDHPT in the formulation of the roles and services it wishes to provide as additional freeway-transit improvements are proposed and developed in Texas.

TABLE OF CONTENTS

ABSTRACT	iii
IMPLEMENTATION STATEMENT	iv
DISCLAIMER	iv
ACKNOWLEDGEMENTS	v
SUMMARY.	vii
Types of Freeway-Transit Improvements Implemented	vii
Sources of Project Funding.	viii
Ownership and Management of Freeway-Transit Improvements and Legal Agreements Developed Between Participating Agencies	viii
INTRODUCTION	1
Background.	1
Objectives.	2
Survey Methodology.	2
Description of Alternative Freeway-Transit Improvements	3
SURVEY OF HOV FACILITIES	7
General Information	7
Capital Costs and Funding Sources	11
Agencies Responsible for the Implementation of HOV Projects	11
Interagency Master Operating and Maintenance Agreements	13
SURVEY OF RAIL TRANSIT IMPROVEMENTS.	19
General Information	19
Capital Costs and Sources of Funding.	20
Agencies Responsible for the Implementation of Rail Transit	21
CONCLUSIONS.	31
High-Occupancy Vehicle Facilities	31

Rail Transit Improvements	32
REFERENCES	35
APPENDIX A - TRANSITWAYS MASTER OPERATION AND MAINTENANCE AGREEMENT . .	37
APPENDIX B - RIGHT-OF-WAY SERVICES AGREEMENT/COOPERATIVE WORK AGREEMENT.	55
APPENDIX C - TEMPORARY RIGHT-OF-USE AGREEMENT.	85
APPENDIX D - RIGHT-OF-WAY PURCHASE AND CONSTRUCTION AGREEMENT.	101
APPENDIX E - AIRSPACE AGREEMENT.	109
APPENDIX F - MAINTENANCE AND OPERATIONS AGREEMENT.	129
APPENDIX G - MEMORANDUM OF UNDERSTANDING	139

INTRODUCTION

Background

In recent years, efforts to maximize the person-movement capacity of urban freeways have emphasized mass transportation improvements directed at making more efficient use of existing highway facilities. High-occupancy vehicle (HOV) lanes, for example, can be an effective means of increasing the person-movement capacity of certain corridors by altering the manner in which the roadway is designed or operated. The implementation of rail transit improvements within urban freeway corridors can also be effective in increasing the total person throughput.

Mass transit improvements are being planned and developed in many freeway corridors in the major urban areas of Texas. For example, an extensive system of HOV lanes is being implemented in major freeway corridors in Houston and light rail transit is being proposed for freeway corridors in Houston and Dallas. As long-range metropolitan area transit plans are developed, it is likely that proposals to implement mass transit improvements in freeway rights-of-way will become even more widespread.

Since implementation of these types of improvements may involve several different agencies, a variety of legal, administrative and jurisdictional issues must be resolved if these cooperative projects are to be operated efficiently. Given the large commitment to transitways and other mass transit improvements in Texas, the State Department of Highways and Public Transportation (SDHPT) will need to negotiate numerous cooperative agreements concerning implementation of these improvements in urban freeway corridors. To assist the SDHPT in this endeavor, an assessment of the interagency cooperative agreements developed in major freeway-transit improvements in the U.S. was performed. This report documents the results of that assessment.

Objectives

The development of an HOV facility or a rail transit improvement within an urban freeway corridor can present a challenge to the State in the area of cross-jurisdictional issues which may affect numerous federal, state and local governmental agencies, as well as private interests. To assist the SDHPT in meeting such a challenge, a survey of major freeway-transit projects in the U.S. was performed. The purpose of this survey was to determine: a) what types of freeway-transit improvements have been implemented; b) how the projects were funded; c) who "owns" the resulting improvements; d) who operates the transit improvements; and e) what types of legal agreements have been developed between the participating agencies. Both HOV and rail improvements were surveyed.

Survey Methodology

Information on major freeway-transit projects in the U.S. was obtained from two sources: 1) a literature search; and 2) telephone contacts with operators of recently developed HOV and rail transit facilities.

The literature search consisted of a manual search of Texas Transportation Institute publications and a computer assisted search of the Transportation Research Information Service (TRIS) and the National Technical Information Service (NTIS) files.

The second phase of the survey effort consisted of telephone surveys of project operators to update data obtained from the literature search. Information was sought on the types of legal agreements that have been developed between HOV/rail transit operators and various state and local agencies concerning the rights and obligations of each party for the construction, operation and maintenance of the HOV/rail transit improvements. Operators of 26 HOV and rail transit improvements located in 17 U.S. cities were surveyed.

Description of Alternative Freeway-Transit Improvements

A review of the freeway-transit related projects that have been implemented recently in the U.S. identified several types of operations. This study primarily focused on priority lanes for high-occupancy vehicles (buses, vanpools and carpools) and rail transit improvements developed in freeway rights-of-way (ROW). However, HOV facilities developed in separate rights-of-way were also addressed to a limited extent. Descriptions of the four types of HOV and two types of rail transit improvements considered as part of this study are presented below.

High-Occupancy Vehicle Lanes

Exclusive HOV Facility on Separate Right-of-Way - Roadways or lanes constructed in a right-of-way independent from any facility for general traffic and designated for the exclusive use by high-occupancy vehicles for all or part of the day.

Exclusive HOV Facility on Freeway Right-of-Way - Roadways or lanes constructed within a freeway right-of-way that are physically separated (usually with barriers) from the adjacent general purpose freeway lanes and designated for the exclusive use by high-occupancy vehicles for all or part of the day.

Concurrent Flow Lane on Freeway Right-of-Way - A freeway lane in the peak-direction of travel (typically the inside lane), not physically separated from the other general traffic lanes and designated for exclusive use by high-occupancy vehicles (usually buses, vanpools and carpools) during at least some portions of the day.

Contraflow Lane on Freeway Right-of-Way - A freeway lane (commonly the inside lane in the off-peak direction of travel) designated for exclusive use by high-occupancy vehicles traveling in the peak direction during limited hours of the day. Contraflow lanes are typically separated from the off-peak direction travel lanes by plastic pylons which are later removed when the lane reverts back to general purpose use.

Rail Transit Improvements

Light Rail Transit (LRT) - An urban mass transit railway mode which utilizes predominantly reserved, but not necessarily grade-separated, right-of-way. Power distribution for LRT vehicles is through overhead electrical wires. LRT is specifically applied to systems which employ a rail weight of 100 pounds per yard or less.

Because of its operating characteristics and power collection, LRT has more travel alignment options available than any other forms of rail transit. LRT systems typically utilize one or more of the following travel ways:

- Freeway right-of-way (alignments located either on the side of the freeway between the shoulder and the edge of the ROW or within the median area);
- Elevated or aerial guideways (exclusive ROW above ground);
- Subways or tunnels (exclusive ROW below ground);
- Railroad ROW (either exclusive or joint use);
- Reserved transit lanes (separated from other traffic by striping, pylons or mountable barriers);
- Dedicated street ROW (reserved ROW located in the center of a street by the use of full curbs with a raised or lowered median area or by separation of the track by fencing, greenery or concrete barriers);
- Mixed traffic operation along city streets; and
- Shared with other land uses (pedestrian malls, parks, etc.)

Heavy Rail Transit (HRT) - An urban railway mode which utilizes dual guideways located on exclusive, fully grade-separated rights-of-way with no

external interferences. Power distribution for HRT vehicles is through a third-rail electric power pick-up. HRT is specifically applied to systems which employ a rail weight of 115-135 pounds per yard.

Heavy rail transit vehicles are electrically propelled by voltages which typically range from 600 to 1000 volts dc. The current is transmitted to electric traction motors through an energized third rail, mounted on the railroad track cross ties on the outside of and adjacent to one of the running rails.

For safety reasons, the use of a third rail requires complete grade separation of HRT lines from other traffic. This, in turn, limits the travel alignment options available (as compared to LRT). HRT systems typically utilize one or more of the following travel ways:

- Subways, tunnels or depressed ROW alignments;
- Elevated or aerial guideways; and
- Surface operation utilizing freeway medians or railroad rights-of-way (surface portions are usually fenced off, with no grade crossings with streets or other railways).

Classification of HOV/Rail Transit Improvements Included in Study

The 25 HOV and rail transit improvement projects surveyed as part of this study can be categorized as follows:

High-Occupancy Vehicle Lanes

Exclusive Lanes on Separate Right-of-Way

- East (MLK, Jr.) Busway - Pittsburgh, PA
- South Busway - Pittsburgh, PA

Exclusive Lanes on Freeway Right-of-Way

- El Monte (I-10) Busway - Los Angeles, CA

- Shirley Highway (I-395) HOV Lanes - Washington, D.C.
- I-66 HOV Facility - Washington, D.C.
- Katy (I-10W) Transitway - Houston, TX
- North (I-45N) Transitway - Houston, TX
- Gulf (I-45S) Transitway - Houston, TX

Concurrent Flow Lanes on Freeway Right-of-Way

- SR 91 Commuter Lane - Los Angeles, CA
- SR 55 Commuter Lane - Orange County, CA
- US 101 HOV Lanes - San Francisco Bay Area (Marin Co.), CA
- I-95 HOV Lane - Miami, FL
- SR 520 HOV Lane - Seattle, WA
- I-5 HOV Lane - Seattle, WA

Contraflow Lane on Freeway Right-of-Way

- Lincoln Tunnel (NJ Route 495) Exclusive Bus Lane, NY/NJ

Rail Transit Improvements

Light Rail Transit

- Sacramento, CA
- San Diego, CA
- Santa Clara County, CA
- Buffalo, NY
- Portland, OR
- Galveston, TX

Heavy Rail Transit

- San Francisco-Oakland, CA
- Washington, D.C.
- Miami, FL
- Atlanta, GA
- Baltimore, MD

SURVEY OF HOV FACILITIES

General Information

Fifteen HOV facilities in 10 cities were identified and reviewed. A summary of the design and operating characteristics of these facilities is presented in Table 1. The projects surveyed represent a range of design and operational features. For example:

- 2 are exclusive facilities operated on separate right-of-way;
- 6 are exclusive facilities operated on freeway right-of-way;
- 6 are concurrent flow lanes operated on freeway right-of-way; and
- 1 is a contraflow lane operated on freeway right-of-way.

The vehicles allowed to use these facilities are summarized in Table 2. As this table indicates, vanpools are permitted on 12 of the facilities and carpools are permitted on 11 of the 15 facilities surveyed. School buses are also allowed on the HOV lanes in Los Angeles, Houston and Washington, D.C. In addition, both light rail trolleys and buses operate on one portion of the South Busway in Pittsburgh. Operation of the North Transitway in Houston is unique in that only vehicles formally authorized by the local transit authority are allowed to use that facility; authorization involves several factors including driver training, vehicle inspection and insurance requirements.

Morning vehicle and passenger counts for both the HOV facilities and the adjacent mixed-flow freeway lanes (where applicable) are presented in Table 3. Data presented include both the a.m. peak hour and the a.m. peak period. The length of the a.m. peak period is also shown.

Table 1.
Physical Description of High-Occupancy Vehicle Lanes

HOV Facility/Location	Number of Lanes	Length (miles)	Year Opened	Hours of Operation
<u>EXCLUSIVE LANES-SEPARATE ROW</u>				
<u>Pittsburgh, PA</u>				
East Busway	1/direction	6.8	1983	24 hours/day
South Busway	1/direction	3.5	1977	24 hours/day
<u>EXCLUSIVE LANES-FREEWAY ROW</u>				
<u>Los Angeles, CA</u>				
E1 Monte Busway	1/direction	11.0	1973	24 hours/day
<u>Washington, D.C.</u>				
Shirley Highway	2-reversible	11.0	1969	6:00-9:00 a.m.; 3:30-6:00 p.m.
I-66	2/direction	9.6	1982	6:30-9:00 a.m.; 4:30-6:30 p.m.
<u>Houston, TX</u>				
Katy Transitway	1-reversible	13.7	1984	4:00 a.m.-1:00 p.m.; 2:00-10:00 p.m.
North Transitway	1-reversible	9.6 ¹	1979	5:45-8:45 a.m.; 3:30-7:00 p.m.
Gulf Transitway	1-reversible	6.5	1988	4:00 a.m.-1:00 p.m.; 2:00-10:00 p.m.
<u>CONCURRENT FLOW LANES-FREEWAY ROW</u>				
<u>Los Angeles, CA</u>				
SR 91	1 (EB only)	8.0	1985	3:00-7:00 p.m.
<u>Orange County, CA</u>				
SR 55	1/direction	11.0	1985	24 hours/day
<u>San Francisco, CA</u>				
US 101	1/direction	3.7	1974	6:30-8:30 a.m.; 4:30-7:00 p.m.
<u>Miami, FL</u>				
I-95	1/direction	7.5	1976	7:00-9:00 a.m.; 4:00-6:00 p.m.
<u>Seattle, WA</u>				
I-5	1/direction	5.6 ²	1983	24 hours/day
SR 520	1 (WB only)	3.0	1973	Varies
<u>CONTRAFLOW LANE-FREEWAY ROW</u>				
<u>New York/New Jersey</u>				
Lincoln Tunnel	1 (EB only)	2.5	1970	6:30-10:00 a.m.

¹In the a.m., a 3.2-mile concurrent flow lane is also in operation (total HOV length = 12.8 mi.)

²HOV Lane is 5.6 mi. SB and 5.0 mi. NB

Source: Reference 1 updated by information obtained during HOV operator interviews.

Table 2.
Vehicles Allowed to Use High-Occupancy Vehicle Facilities

HOV Facility/Location	Public Transit Buses	School Buses	Vanpools	Carpools	Taxi	Police/ Emergency	Other
<u>EXCLUSIVE LANES-SEPARATE ROW</u>							
<u>Pittsburgh, PA</u>							
East Busway	X					X	
South Busway	X					X	Trolleys
<u>EXCLUSIVE LANES-FREEWAY ROW</u>							
<u>Los Angeles, CA</u>							
EI Monte Busway	X	X	X	3+	X	X	
<u>Washington, D.C.</u>							
Shirley Highway	X	X	X	4+		X	
I-66	X	X	X	3+		X	1
<u>Houston, TX</u>							
Katy Transitway	X	X	X	2+		X	Airport Bus
North Transitway	X		X			X	Airport Bus
Gulf Transitway	X	X	X	2+		X	Airport Bus
<u>CONCURRENT FLOW LANES-FREEWAY ROW</u>							
<u>Los Angeles, CA</u>							
SR 91	X		X	2+	X	X	
<u>Orange County, CA</u>							
SR 55	X		X	2+	X	X	
<u>San Francisco, CA</u>							
US 101	X		X	3+		X	
<u>Miami, FL</u>							
I-95	X		X	2+	X	X	
<u>Seattle, WA</u>							
I-5	X		X	3+			Motorcycles
SR 520	X		X	3+			Motorcycles
<u>CONTRAFLOW LANE-FREEWAY ROW</u>							
<u>New York/New Jersey</u>							
Lincoln Tunnel	X						

¹Only vehicles formally authorized by METRO and State are allowed to use HOV Lane.

²Traffic to/from Dulles Airport not subject to HOV restrictions.

Source: Reference 1 updated by information obtained during HOV operator interviews.

Table 3.
A.M. Peak Hour and Peak Period Utilization of High-Occupancy Vehicle Facilities

HOV Facility/Location	A.M. Peak Hour				A. M. Peak Period				Length of Peak Period (hrs.)
	HOV Veh	Lane Pass	Non HOV Veh	Lanes Pass	HOV Veh	Lane Pass	Non HOV Veh	Lanes Pass	
<u>EXCLUSIVE LANES-SEPARATE ROW</u>									
<u>Pittsburgh, PA</u>									
East Busway	105	5,590	NA	NA	225	8,570	NA	NA	2.00
South Busway	75	2,950	NA	NA	140	4,530	NA	NA	2.00
<u>EXCLUSIVE LANES-FREEWAY ROW</u>									
<u>Los Angeles, CA</u>									
El Monte Busway	835	5,800	7,920	10,300	2,370	14,250	29,680	38,580	4.00
<u>Washington, D.C.</u>									
Shirley Highway	1,969	14,446	8,261	10,247	4,623	31,351	22,426	27,865	2.50
I-66	1,525	5,613	NA	NA	3,404	11,088	NA	NA	2.50
<u>Houston, TX</u>									
Katy Transitway	1,391	4,284	4,374	4,593	2,921	8,909	13,465	14,309	3.50
North Transitway	179	3,911	6,223	7,064	319	7,239	19,720	22,891	3.50
Gulf Transitway	305	1,607	5,791	7,030	507	2,726	16,421	19,406	3.75
<u>CONCURRENT FLOW LANES-FREEWAY ROW</u>									
<u>Los Angeles, CA</u>									
SR 91 ¹	--	--	--	--	2,204	4,877	13,205	14,640	2.00
<u>Orange County, CA</u>									
SR 55	1,403	3,260	5,800	6,380	3,463	7,900	--	--	3.00
<u>San Francisco, CA</u>									
US 101-Cort Madera	300	3,100	--	2,650 ²	550	5,100	--	<5,300 ²	2.00
US 101-San Rafael	300	2,000	--	1,800 ²	550	3,000	--	<3,600 ²	2.00
<u>Miami, FL</u>									
I-95	1,309	2,810	6,100	7,260	--	--	--	--	--
<u>Seattle, WA</u>									
I-5	460	3,290	--	--	--	--	--	--	--
SR 520	--	--	--	--	538	5,094	6,253	6,958	2.00
<u>CONTRAFLOW LANE-FREEWAY ROW</u>									
<u>New York/New Jersey</u>									
Lincoln Tunnel	725	34,685	4,475	7,380	1,650	65,000	17,435	29,120	3.50

¹HOV Lane not in operation in the a.m.; data presented is for the p.m.

²Estimate

Note: NA indicates Not Applicable; -- indicates data not available.

Source: TTI counts & Reference 1 updated by information obtained during HOV operator interviews.

Capital Costs and Funding Sources

The estimated capital cost per mile (in construction year dollars) for the HOV projects surveyed are presented in Table 4. In reviewing these figures, it should be noted that capital costs are frequently affected by site-specific considerations. For example, the cost shown for the I-66 HOV facility is the entire cost of constructing the freeway. (I-66 was constructed as a four-lane freeway; the two lanes in the peak direction are reserved for high-occupancy vehicles only during peak periods. This is not a typical means of providing an HOV facility and, therefore, has unusually high costs associated with its implementation.) In addition, the same cost items are not included in all projects. For example, costs associated with HOV support facilities (new access roads, bus purchases, park-and-ride lots, bus maintenance facilities, etc.) may be included in some instances and not in others.

In general, as would be expected, the costs associated with implementing contraflow and concurrent flow lanes are substantially less than those associated with constructing exclusive lanes.

A review of the sources of funding for HOV projects (Table 4) indicates that construction of these types of improvements are frequently multiagency cooperative efforts, involving federal, state and local monies.

Agencies Responsible for the Implementation of HOV Projects

The planning, construction and operation of HOV facilities necessarily involves the cooperation of a number of different agencies. For example, the planning phase, which is probably the most critical to the overall success of a project, frequently involves the greatest number of interests. Agencies/individuals often involved in the planning phase of HOV project development include:

- State Departments of Transportation;
- Law Enforcement Agencies;
- Transit Agencies;

Table 4.
Estimated Capital Costs (Construction Year \$) for High-Occupancy Vehicle Facilities

HOV Facility/Location	Capital Cost \$1000s/Mile	Funding Sources
<u>EXCLUSIVE LANES-SEPARATE ROW</u>		
<u>Pittsburgh, PA</u>		
East Busway	\$16,588	UMTA, PennDOT, Allegheny County
South Busway	7,714	UMTA, PennDOT, Allegheny County
<u>EXCLUSIVE LANES-FREEWAY ROW</u>		
<u>Los Angeles, CA</u>		
El Monte Busway	4,692	UMTA, Federal Aid Urban, State Highway
<u>Washington, D.C.</u>		
Shirley Highway	4,000	Federal Aid Interstate
I-66	31,000	Federal Aid Interstate
<u>Houston, TX¹</u>		
Katy Transitway (13.0 mi.)	4,800	UMTA, Houston METRO, State & Federal Highway
North Transitway (19.7 mi.)	7,162	UMTA, Houston METRO, State & Federal Highway
Gulf Transitway (15.5 mi.)	6,464	Houston METRO, State & Federal Highway
<u>CONCURRENT FLOW LANES-FREEWAY ROW</u>		
<u>Los Angeles, CA</u>		
SR 91	34	Federal & State Highway
<u>Orange County, CA</u>		
SR 55	37	Federal & State Highway
<u>San Francisco, CA</u>		
US 101	--	--
<u>Miami, FL</u>		
I-95	2,773	Federal & State Highway
<u>Seattle, WA</u>		
I-5	1,442	Federal & State Highway
SR 520	67	State Highway
<u>CONTRAFLOW LANE-FREEWAY ROW</u>		
<u>New York/New Jersey</u>		
Lincoln Tunnel ²	212	Federal & Port Authority of NY & NJ

¹Cost includes associated park-and-ride lots and transit centers.

²Construction cost includes new access road.

Source: References 1 and 2 updated by information obtained during HOV operator interviews.

- Cities, Communities and/or Counties along the alignment;
- Metropolitan Planning Organizations;
- Councils of Governments;
- Federal and State funding agencies;
- Railroad Agencies (if any of the facility is constructed within railroad right-of-way); and
- Private property owners and developers along the alignment and in the major activity centers served by the HOV facility;
- Members of the general public.
- Other special interests.

The construction, operation, enforcement and maintenance of HOV facilities usually involve fewer agencies and interests. Table 5 summarizes the primary agencies involved in implementing HOV facilities surveyed. With a few exceptions, the State is the primary agency typically charged with developing and operating HOV Lanes in the U.S.

Interagency Master Operating and Maintenance Agreements

With the exception of the HOV facilities located in Pittsburgh and Houston, the State Department of Transportation is the agency who typically owns, operates and maintains the HOV facilities; enforcement of HOV regulations is the responsibility of the State Highway Patrol. Because the entire responsibility of HOV management rests with state agencies, no interagency cooperative agreements are necessary.

Pittsburgh, PA

In Pittsburgh, the Port Authority of Allegheny County is the sole agency responsible for the maintenance, operation and enforcement of the South Busway. However, because a portion of the East Busway was proposed to be constructed on right-of-way owned by the Consolidated Rail Corporation (Conrail), the Port Authority purchased from Conrail a portion of Conrail's property required for the busway. In order to construct and later operate the East Busway, the Port Authority entered into a two-part agreement with Conrail.

Table 5.
Agencies with Primary Responsibility for Developing and Operating High-Occupancy Vehicle Lanes

HOV Facility/Location	Planning and Design	Construction	Operation	Enforcement	Maintenance
<u>EXCLUSIVE LANES-SEPARATE ROW</u>					
<u>Pittsburgh, PA</u>					
East Busway	Transit	Transit	Transit	Transit	Transit
South Busway	State/Transit	Transit	Transit	Transit	Transit
<u>EXCLUSIVE LANES-FREEWAY ROW</u>					
<u>Los Angeles, CA</u>					
El Monte Busway	State	State	State	State	State
<u>Washington, D.C.</u>					
Shirley Highway	State	State	State	State	State
I-66	State	State	State	State	State
<u>Houston, TX</u>					
Katy Transitway	State/Transit	State/Transit	Transit	Transit	State/Transit ¹
North Transitway	State/Transit	State/Transit	Transit	Transit	State/Transit ¹
Gulf Transitway	State/Transit	State/Transit	Transit	Transit	State/Transit ¹
<u>CONCURRENT FLOW LANES-FREEWAY ROW</u>					
<u>Los Angeles, CA</u>					
SR 91	State	State	State	State	State
<u>Orange County, CA</u>					
SR 55	State	State	State	State	State
<u>San Francisco, CA</u>					
US 101	State	State	State	State	State
<u>Miami, FL</u>					
I-95	State	State	State	State	State
<u>Seattle, WA</u>					
I-5	State	State	State	State	State
SR 520	State	State	State	State	State
<u>CONTRAFLOW LANE-FREEWAY ROW</u>					
<u>New York/New Jersey</u>					
Lincoln Tunnel	State/P.A./ Turnpike	P.A./State/ Turnpike	P.A.	P.A./State/ Turnpike	P.A.

¹State is responsible for major maintenance; State & Transit Agency share minor maintenance.
Note: P.A. = Port Authority of New York & New Jersey; Turnpike = New Jersey Turnpike Authority.
Source: Reference 1 updated by information obtained during HOV operator interviews.

The first part of the interagency agreement set forth conditions during the construction of the busway. This portion of the agreement expired once the construction activities were completed. The second part of the agreement is a real estate sales agreement and deed. This portion of the agreement basically established:

- Procedures for the transfer of a parcel of property (72.8 acres) from Conrail to the Port Authority where Conrail reserved easements on the property for the purpose of continuing rail operations and necessary functions related thereto;
- Provisions for joint ownership and maintenance of certain facilities located on the property (bridges, pedestrian underpasses and stations);
- Definitions of certain restrictions and easements of use (access onto each other's property and for what purpose); and
- Indemnification.

The real estate sales agreement and deed continued (and continues) in effect after the construction portion of the agreement expired.

Houston, TX

In Houston, the development of HOV facilities has truly been an interagency cooperative effort. The State of Texas, acting by and through the State Department of Highways and Public Transportation (State) and the Metropolitan Transit Authority of Harris County (METRO) agreed to construct, maintain and operate public transportation facilities, known locally as transitways, along certain controlled-access highways (freeways) in and around Harris County, Texas.

In doing so, the State and METRO entered into a transitways master operation and maintenance agreement, which specified the rights and obligations of the respective parties with respect to the overall operation

and maintenance of Houston's transitway system. Basic provisions of this agreement specify that:

- The controlled-access highways are under the ultimate control and supervision of the State.
- The operation and maintenance of the system of transitways should be uniform and coordinated. Therefore, to accomplish this objective, the TRANSITWAYS MASTER OPERATION AND MAINTENANCE AGREEMENT covers all transitways which METRO and the State have agreed, or will agree, to construct.
- While METRO is the primary agency responsible for the day-to-day operation and maintenance of the transitways, such transitways (being part of the controlled-access highways) impact freeway operation. The State, therefore, has an interest and responsibility in the operation and maintenance of the transitways and maintains final authority over the facilities.
- METRO and the State agree to divide the responsibility for the maintenance of the transitways as follows:
 - METRO agrees to maintain the signs, control devices, vehicle impact attenuators, equipment and illumination devices installed, including the provision, at METRO's expense, of all electrical power required for transitway operation. METRO is responsible for removal of all debris detrimental to safe operation of the transitways that are beyond the sweeping and litter pick-up obligations of the State as set out below.
 - METRO agrees to maintain all park-and-ride or transit center facilities.
 - The State agrees to maintain all other portions of the transitway fixtures, including all paved surfaces, all supporting structures, and all traffic control devices not

listed above. The State will perform sweeping and litter pick-up on a routine basis.

- With regard to the operation of the transitways, METRO and the State agree to the following:
 - METRO and the State shall publish an Operations Plan for each transitway.
 - The hours of operation of the transitways are to be shown in each Operations Plan.
 - Because transitways are intended for use by high-occupancy vehicles, only buses, vanpools, carpools and State/METRO operational/maintenance vehicles are to be authorized to use transitways in accordance with the provisions of the Operations Plans. The definition of what constitutes a carpool authorized to use a transitway shall be shown in the Operations Plan.
 - Amendments to Operations Plans may be made by consent of both METRO and the State as represented by the State Transitway Engineer (for the State) and the METRO Transitway Manager (for METRO).
 - The State Transitway Engineer and the METRO Transitway Manager shall constitute the Transitway Management Team. As part of the Operations Plan for each transitway, the Transitway Management Team will develop for each transitway: (1) Transitway rules and regulations governing transitway users; and (2) A Transitway Operating Manual covering procedures for day-to-day transitway operation.
- METRO shall be responsible for prompt removal of disabled vehicles from the transitways.

- METRO Transit Police will be responsible for enforcement of laws and regulations applicable to each transitway, and will assist in opening and closing the lanes.

Also included in the TRANSITWAYS MASTER OPERATION AND MAINTENANCE AGREEMENT are provisions for the termination of transitway use, temporary termination or modification of transitway use, indemnification, and legal compliance. A copy of the entire agreement is included in Appendix A.

SURVEY OF RAIL TRANSIT IMPROVEMENTS

General Information

Eleven rail transit improvements recently implemented in 8 states were identified and reviewed. Six of these are light rail transit systems and 5 are heavy rail transit systems. A summary of the design and operating characteristics of these systems is presented in Table 6.

Table 6.
Design and Operating Characteristics of Selected Rail Transit Systems

Rail Transit System	Number of Lines	Length (miles)	Number of Stations	Number of Vehicles	Average Weekday Ridership
<u>LIGHT RAIL TRANSIT</u>					
San Diego, CA	2	20.9	18	30	28,000
Santa Clara County, CA	1	9.0	20	35	5,875
Sacramento, CA	2	18.3	26	26	13,000
Buffalo, NY	1	6.4	12	27	30,000
Portland, OR	1	15.1	27	26	2,453
Galveston, TX	1	4.8	20	1	1,000
<u>HEAVY RAIL TRANSIT</u>					
San Francisco-Oakland, CA	4	75.0	34	550	200,000
Washington, D.C.	4	70.0	64	666	500,000
Miami, FL	1	20.1	20	136	34,000 ¹
Atlanta, GA	2	32.0	29	240	185,000
Baltimore, MD	1	14.0	12	100	50,000

¹Average weekend ridership is 100,894 persons.
Source: Interviews of rail transit operators.

Capital Costs and Sources of Funding

The estimated capital cost and capital cost per mile (in construction year dollars) for the 11 rail transit improvements surveyed are presented in Table 7.

Table 7.
Estimated Capital Costs for Rail Transit Improvements

Rail Transit System	Year Opened	Length (miles)	Capital Cost ¹ (millions)	Capital Cost/Mile (millions)	Sources of Funding
<u>LIGHT RAIL TRANSIT</u>					
San Diego, CA					
South Line	1981	15.9	\$ 116.6	\$ 7.3	State & Local
Euclid Line	1986	4.5	33.6	7.5	State & Local
Santa Clara County, CA	1987	20.0	372.0	18.6	80% Federal; 20% Local ²
Sacramento, CA	1987	18.3	166.0	9.0	50% Federal; 18% State; 32% Local ³
Buffalo, NY	1984	6.4	530.0	82.8	80% Federal; 20% State
Portland, OR	1986	15.1	214.1	14.2	82% Federal; 12% State; 4% Transit; 2% Local Govt. & Private Corp/Individuals
Galveston, TX	1988	4.8	14.0	3.5	Federal & Local
<u>HEAVY RAIL TRANSIT</u>					
San Francisco-Oakland, CA	1972	71.5	1,600.0	22.4	26% Federal; 11% State; 63% Local
Washington, D.C.	1976	70.0	7,000.0	100.0	80% Federal; 20% Local ⁴
Miami, FL	1984	20.5	1,050.0	51.2	80% Federal; 10% State
Atlanta, GA	1979	25.0	1,722.0	68.9	85% Federal; 15% State & Local
Baltimore, MD	1984	6.0	178.0	29.7	75-85% Federal; 15-25% State

¹In general, capital costs are in construction-year dollars.

²Local share paid by the Cities of San Jose and Santa Clara, Caltrans, County of Santa Clara, and Santa Clara County Transit District.

³Federal share funded by Interstate Transfer Funds, Local share included 12.5% from the County and the County Redevelopment Agency, 6% from the regional transit district and 0.5% from other sources.

⁴Local funding included \$1 billion in bonds.

Source: References 3 and 4 and information obtained during interviews of rail transit operators.

As was the case with HOV facilities, the capital costs associated with rail transit improvements are difficult to estimate, since it is not always possible to identify what elements are included in the cost values. Capital costs are also affected by site-specific construction conditions. For example, much of San Diego's LRT system was constructed on an existing, publicly-owned rail line which reduced the cost of land acquisition considerably. In Buffalo, on the other hand, a significant portion of the system was constructed underground, adding millions to the total cost. In general, heavy rail transit improvements, which require fully grade-separated and protected right-of-way, are frequently more capital intensive than light rail transit improvements.

Agencies Responsible for the Implementation of Rail Transit

The development of a rail transit system typically involves a complex, multifaceted range of issues requiring federal, state and local agency involvement over a significant span of time. For 9 of the rail systems studied, a local metropolitan area transit agency typically owns, operates and maintains the rail improvement. In Galveston and Baltimore, however, the rail systems are managed by the city and state, respectively (Table 8).

Table 8.
Primary Agency Responsible for Development of Rail Transit System

Rail Transit System	Agency
<u>LIGHT RAIL TRANSIT</u>	
San Diego, CA	San Diego Trolley, Inc.
Santa Clara County, CA	Santa Clara County Transit District
Sacramento, CA	Sacramento Regional Transit District
Buffalo, NY	Niagara Frontier Transportation Authority
Portland, OR	Tri-County Metropolitan Transportation District
Galveston, TX	Galveston Island Parks Board of Trustees, City of Galveston
<u>HEAVY RAIL TRANSIT</u>	
San Francisco-Oakland, CA	Bay Area Rapid Transit District
Washington, D.C.	Washington Metropolitan Area Transit Authority
Miami, FL	Metropolitan Dade County Transportation Administration
Atlanta, GA	Metropolitan Atlanta Rapid Transit Authority
Baltimore, MD	Maryland Mass Transit Administration

Because of the operating characteristics of rail transit service and the variety of travel alignments available (rail systems can run above ground, below ground or at-grade; along or on streets, freeways or separate right-of-way; through neighborhoods, historic districts and downtown areas), numerous cooperative agreements are necessary between the transit agency and various federal, state and local entities with regard to the design, funding, construction and operation of rail service. A few examples identified through this study include cooperative agreements between the transit agency and the following:

- UMTA and other federal, state local agencies for grants covering the design, engineering and construction of the rail system;
- City and/or county for construction of different phases of the rail system and facilities;
- City and/or county for demolition of fixtures in rail system alignment;
- City redevelopment agency for property acquisition;
- City historic landmark commission relating to the design and construction of the rail line through historic districts;
- City and/or county for cost sharing on street paving projects;
- City development commission for construction of fountains, art work, additional landscaping adjacent to rail lines;
- City and/or county for relocation/adjustment of utilities;
- City, county and state for continuing control (city/county/state grants easements to transit agency for rail operations, but retains control over ROW outside area subject to easements);

- City and/or county for transit agency obligations, city/county obligations, project coordination and final product;
- City and/state DOT defining responsibilities of respective parties in maintenance of certain facilities;
- Railroad agencies concerning easements in railroad rights-of-way;
- State DOT to identify/assign highway relocation and transit work to be performed in conjunction with rail system implementation;
- State DOT for acquisition of ROW;
- State DOT for temporary right to use certain portion of state ROW;
- State DOT for utilization of airspace over state-owned ROW;
- State DOT for joint participation in design of support facilities built in conjunction with rail system; and
- State DOT and railroad agencies which define state and railroad agencies responsibilities to each other.

The focus of this report is the types of interagency agreements that have been developed as a result of part of the rail transit improvement being constructed and operated within an urban freeway corridor.

Several of the rail systems surveyed do not have any portion of the rail operations located within freeway corridors. For example, two were constructed entirely on right-of-way owned by the transit district (BART in San Francisco-Oakland, Metrorail in Washington, D.C.). In addition, much of the San Diego Trolley was constructed on existing, publicly-owned rail lines; Baltimore's light rail system is entirely underground or aerial over railroad rights-of-way; and the Galveston Island Trolley service operates entirely on city streets.

Of those cities which do have a portion of their rail transit system operating in a freeway corridor, several have developed interagency agreements, parts of which may have potential application in Texas in the future. Brief descriptions of these agreements follow.

Right-of-Way Services Agreement

A right-of-way services agreement between the Tri-County Metropolitan Transportation District of Oregon (Tri-Met) and the State of Oregon, through its Department of Transportation (State), was entered into for the purpose of Tri-Met employing the State to acquire real property and all related right-of-way activities of the Light Rail Element of the Banfield Project. In this agreement, Tri-Met agreed to finance the right-of-way and relocation cost and all expenses incurred by the acquisition program.

Elements of the right-of-way services agreement include:

- An outline of the responsibilities of the State and Tri-Met during various stages of the right-of-way acquisition which included:
 - State will appraise real property to be acquired and will make review appraisal by qualified senior appraisers;
 - State will be responsible for negotiations with land owners;
 - State will provide relocation plan, replacement housing benefit corporations, moving cost estimates, and relocation review service;
 - State will provide all relocation services to relocatees, process all claims and pay promptly;
 - Tri-Met will, with State's assistance, establish an appeal procedure whereby displacees are informed of the procedure at the outset of negotiations;

- State will take possession of properties as occupants move out and will be responsible for disposal of all improvements and excess land; Tri-Met will carry insurance on all acquired improvements during period between possession and disposal;
 - Tri-Met will process options and settlements and secure approval of their Board of Directors;
 - State will draw deeds and have them executed and recorded in the name of Tri-Met;
 - State will make payments for all property;
 - Tri-Met will be responsible for the entire condemnation action.
- Record keeping/reporting requirements and provisions for Tri-Met to reimburse the State for costs incurred.

A copy of the right-of-way services agreement, with amendments and exhibits, is provided in Appendix B.

Cooperative Work Agreement

This agreement between the State and Tri-Met (which became Exhibit 3 of the right-of-way services agreement described above) defines the highway relocation and transit work that was done by the State and funded by Interstate Transfer (e)(4) Transit funds. Work performed by the State using these funds included the relocating and reconstructing of the Banfield Freeway, right-of-way acquisition, building or rebuilding overpass structures, reconstruction of a bridge and ramps, and other work initiated as part of the comprehensive effort to accommodate the light rail system in the Banfield Corridor. State and Tri-Met obligations were outlined and the State and Tri-Met mutually agreed to pay 100% of the difference between the actual total costs of the work and the amount contributed by the Federal Government.

A copy of the agreement, including the Scope of Work to be performed, estimated cost, and listing of real estate acquisitions, is included as Exhibit 3 in Appendix B.

Temporary Right-of-Use Agreement

An agreement between the State of Georgia Department of Transportation (Georgia DOT) and the Metropolitan Atlanta Rapid Transit Authority (MARTA) was entered into in which MARTA agreed to pay Georgia DOT the sum of \$1.00 for the temporary right to use a portion of the right-of-way of Main Street in East Point, Georgia, for the purpose of widening the street and constructing a heavy rail transit line adjacent to the street. Georgia DOT then agreed to pay MARTA the sum of \$1.00 for legal title to a permanent easement for road purposes within that right-of-way.

In granting the temporary right-of-use to MARTA, MARTA agreed to numerous provisions which governed construction activities, including:

- All construction within the right-of-use area shall be in accordance with previously approved (by Georgia DOT) plans and specifications;
- Any facility or utility relocation which may be required by MARTA's plans shall be negotiated directly by MARTA and the appropriate party upon mutually agreeable terms, subject to any permits required by Georgia DOT and at no cost to Georgia DOT.
- MARTA shall indemnify Georgia DOT and the State of Georgia from any and all responsibility for damages and liability arising out of MARTA's exercise of the Main Street right-of-use.
- All construction/reconstruction work on Main Street by MARTA shall be in conformance with Georgia DOT's Standard Specifications;
- MARTA shall be responsible for the design and construction or rearrangements of Georgia DOT's storm sewers, where necessary.

A copy of this agreement which contains all the terms, limitations and conditions of this cooperative effort is included in Appendix C.

Right-of-Way Purchase and Construction Agreement

An additional agreement between Georgia DOT and MARTA has been recently developed. Under this agreement, Georgia DOT shall continue to engineer and develop State Route 400 with coordination from the MARTA engineering staff so that sufficient usable space for a new heavy rail transit line shall be provided in the median and proper provision be made for entrances and exits into the State Route median for MARTA's HRT vehicles. In addition, Georgia DOT will purchase right-of-way and design and construct certain facilities in the median of State Route 400 for MARTA. MARTA will reimburse Georgia DOT in an amount estimated to be \$60 million as MARTA's share of the costs of the right-of-way, design and construction activities. Further provisions of this agreement are presented in Appendix D.

Airspace Agreement

In 1979, the State of Florida Department of Transportation (Department) and Metropolitan Dade County (County) developed an airspace agreement in which the County obtained a permanent right to use airspace on a highway under the control of the Department, some of which is on the Federal-Aid System of Highways of the U.S. Department of Transportation, Federal Highway Administration (FHWA). This airspace is to be used for the construction, operation and maintenance of a public heavy rail transit system. Contained in the agreement is the following:

- County is responsible for developing and operating the airspace (aerial or subsurface) according to the guidelines and specifications outlined in the agreement;
- County agrees to indemnify the Department and FHWA harmless from any and all claims, liability, losses and causes of actions which may arise out of this agreement; and

- The Department, for itself and FHWA, retains the right to have access over, under, across and through the property encumbered by aerial and surface easements and to enter the rail transit facilities for purposes of access to provide maintenance, inspection or reconstruction of highway facilities involved.

Additional provisions relating to real estate conveyances, Department approvals and FHWA concurrence (if applicable), utilities, and reversion of permanent aerial easement in the case of project abandonment are presented in Appendix E.

Maintenance and Operations Agreement

An agreement between the State of Oregon through its Department of Transportation (State) and the Tri-County Metropolitan Transportation District of Oregon (Tri-Met) was developed in 1986 to outline the responsibilities of the State and Tri-Met to each other and to the Union Pacific Railroad with regard to the maintenance and operation of Portland's light rail line (a part of the Banfield Project). This document outlines the division of responsibility for the LRT trackway and facilities, defines terms of LRT access, and provides for emergency procedures to be carried out according to an emergency operations and procedure plan which was prepared as a supplement to this agreement. A copy of this agreement is provided in Appendix F.

Memorandum of Understanding

Although none of the Buffalo light rail project was constructed within a freeway corridor, a memorandum of understanding between the New York State Department of Transportation (NYSDOT) and the Niagara Frontier Transportation Authority (NFTA) was developed at the outset of the project which described the principles under which the project and associated improvements were to be undertaken. In this agreement, NYSDOT agreed to provide assistance in administering the implementation of the light rail project (at the request of the New York State Division of Budgets). The memorandum was developed to provide a clear understanding of the administrative procedures (including the

project review processes) under which NYSDOT would undertake the responsibilities.

A copy of the Memorandum of Understanding, in its entirety, is included in Appendix G.



CONCLUSIONS

Implementing HOV or rail transit improvements within urban freeway corridors is typically a multiagency cooperative effort. While this type of cooperative effort makes it possible to undertake projects that would be difficult (if not impossible) for a single agency, it also gives rise to a number of legal, administrative and jurisdictional issues that must be resolved if these projects are to be developed and operated efficiently. Examples of these issues are: (1) Who owns the resulting improvement? (2) Who operates the transit improvement? and (3) What types of legal agreements have been developed between participating agencies?

High-Occupancy Vehicle Facilities

The results of a survey of operators of 15 HOV facilities in the U.S. showed that while many agencies and interests are involved in the planning of HOV lanes, only a few are typically involved in the construction, operation and maintenance of the facility. With the exception of the HOV facilities in Pittsburgh and Houston, the State Department of Transportation is the agency who typically owns, operates and maintains the HOV facilities; enforcement of HOV regulations is the responsibility of the State Highway Patrol. Because the entire responsibility of HOV management rests with state agencies, no interagency cooperative agreements are necessary.

In Pittsburgh, the Port Authority of Allegheny County is the sole agency responsible for the maintenance, operation and enforcement of its HOV facilities.

In Houston, the State Department of Highways and Public Transportation (SDHPT) owns the HOV improvements. However, operation, maintenance and enforcement of the HOV facilities has been a joint effort between the SDHPT and the Metropolitan Transit Authority of Harris County (METRO). As a

result, these two agencies have entered into a master operations and maintenance agreement which defines the rights and obligations of the respective parties. This agreement is general in nature and applies to all HOV facilities which the transit agency and the SDHPT have agreed, or will agree, to construct. In addition to this agreement, the SDHPT and METRO have developed HOV facility operations plans and HOV lane operating manuals for each priority lane under their control. The Operations Plan and Operating Manual for each HOV lane is tailored to the unique design and operating characteristics and conditions of that particular facility. In the area of HOV management, the cooperation between the SDHPT and METRO can serve as a good example for other states in the nation to follow.

Rail Transit Improvements

Operators of eleven rail transit improvements recently implemented in 8 states were surveyed. As was the case for HOV improvements, the planning of rail transit improvements necessarily involves numerous agencies. For 9 of the rail systems studied, a metropolitan area transit agency typically owns, operates and maintains the rail improvement once it is in place. In two cities, however, the rail systems are owned and managed either by the city or the state. Because several of the rail systems surveyed operate a portion of their service in freeway corridors, a variety of legal agreements have been developed between the rail transit agency and the state departments of transportation.

Examples of the types of cooperative agreements developed in connection with HOV/rail transit improvements in freeway corridors are briefly summarized in the previous sections of this report. These included two master operation and maintenance agreements (one for HOV lane operation, one for rail service operations), a right-of-way services agreement, a cooperative work agreement, a temporary right-of-use agreement, a right-of-way purchase and construction agreement, an airspace agreement, and a memorandum of understanding. Copies of these documents, in their entirety, are also included in Appendices A through G. These documents (or portions thereof) can serve as guidelines to the SDHPT in negotiating future freeway-transit improvements in Texas. These documents also illustrate the different

roles state DOTs have assumed as well as different services state DOTs have provided to transit agencies in the development of specific HOV/rail transit improvements.

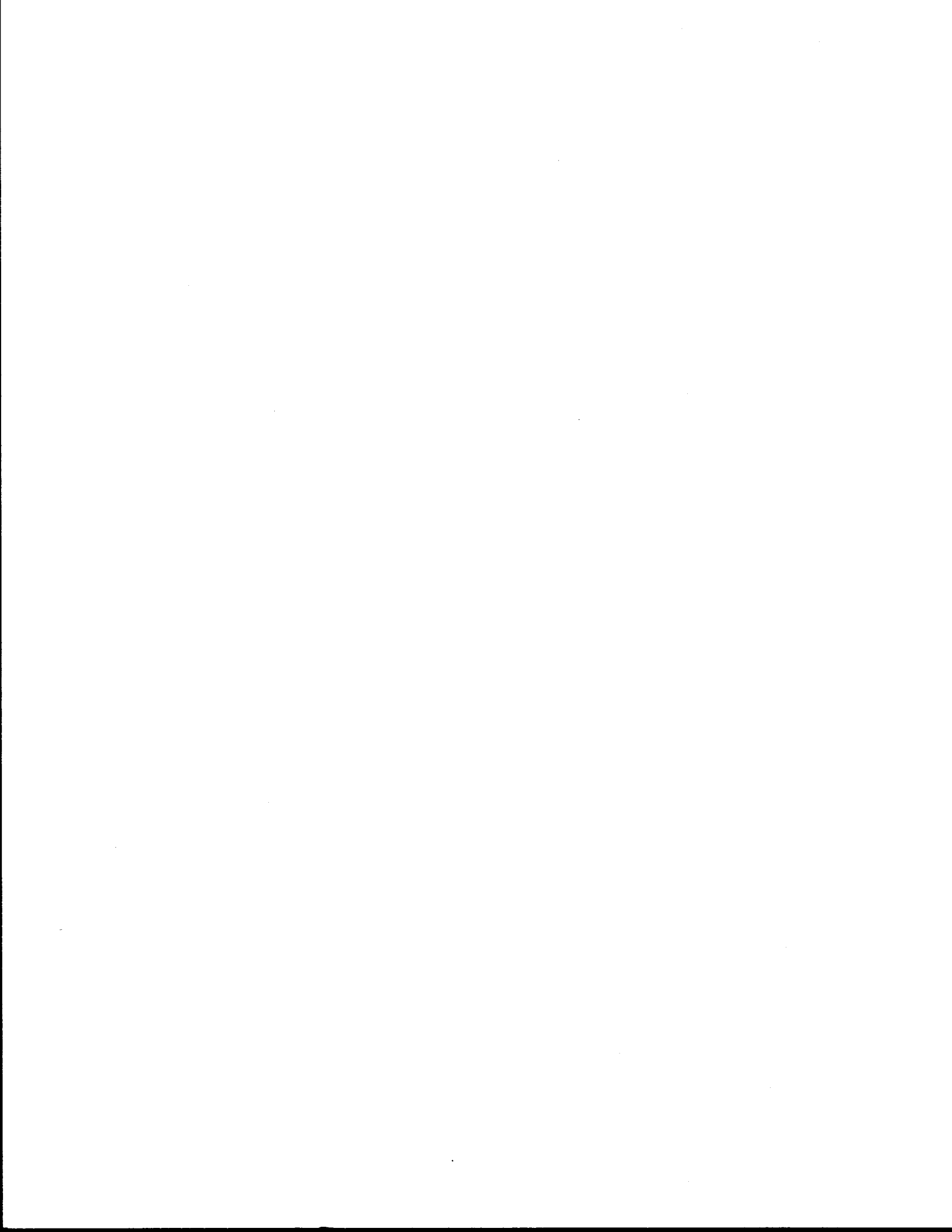
For example, one state DOT agreed to perform all right-of-way acquisition functions and be responsible for all condemnation activities and has been reimbursed by the transit agency for all expenses relating to these activities. Another DOT agreed to share in the cost of right-of-way acquisition, building of overpass structures, and other work required to accommodate the rail system within a freeway corridor. Yet another DOT agreed to coordinate the development of a highway with the rail transit agency, such that space shall be provided in the median for an extension of the rail system through that highway corridor.

This information should provide guidance to the SDHPT in the formulation of the roles and services it wishes to provide as additional freeway-transit improvements are proposed and developed in Texas.

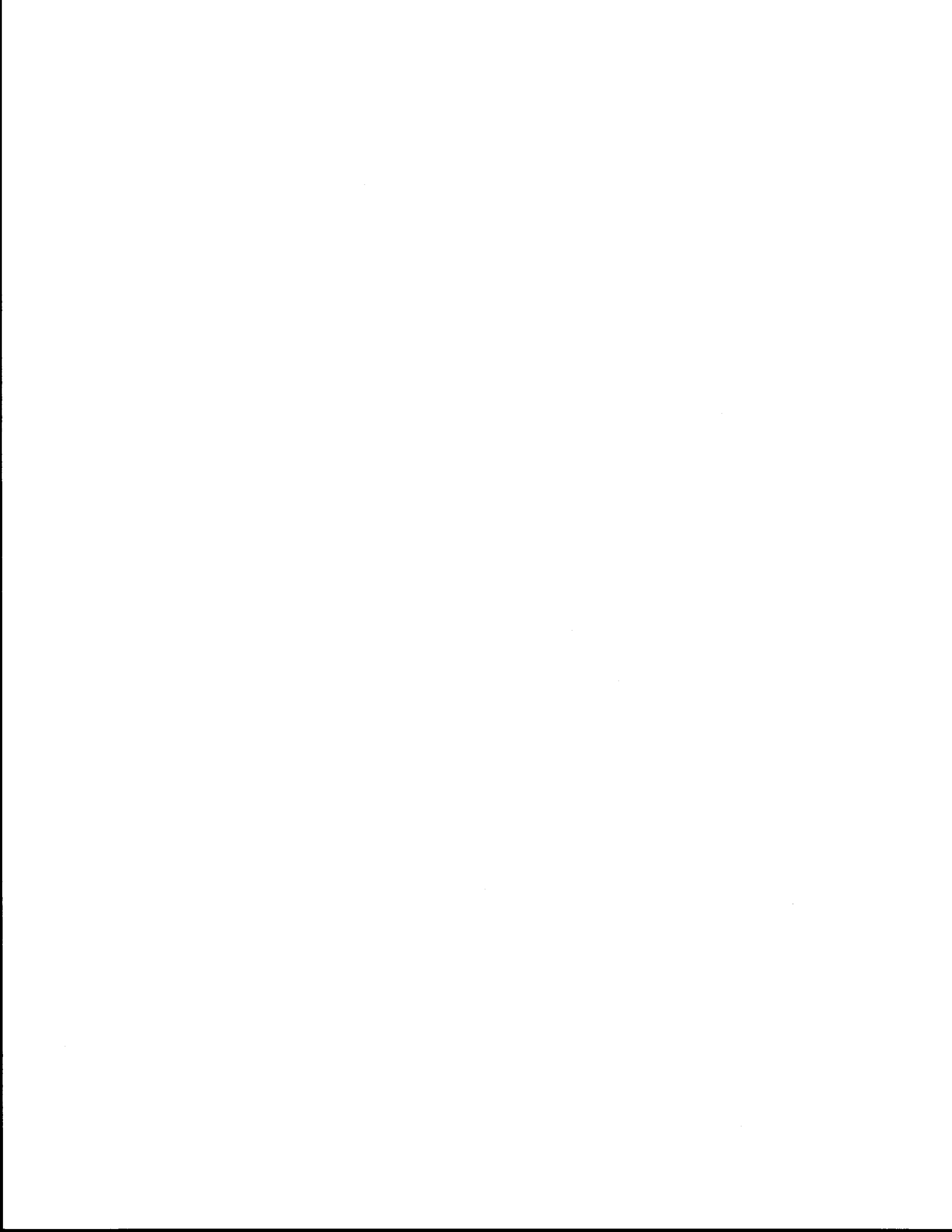


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1. Institute of Transportation Engineers. The Effectiveness of High-Occupancy Vehicle Facilities. Informational Report, 1988.
2. Metropolitan Transit Authority of Harris County, Texas. METRO Transitway Programs. Informational Report, 1988.
3. Tri-County Metropolitan Transportation District of Oregon. "North America's Rail Renaissance." MAX Metropolitan Area Express, January 5, 1988.
4. Christiansen, Dennis L. Alternative Mass Transportation Technologies Technical Data. TTI Research Report 339-4, December 1985.



APPENDIX A
TRANSITWAYS MASTER OPERATION
AND MAINTENANCE AGREEMENT



TRANSITWAYS
MASTER OPERATION AND MAINTENANCE AGREEMENT

THE STATE OF TEXAS
COUNTY OF TRAVIS

THIS AGREEMENT, by and between the State of Texas, acting by and through the State Department of Highways and Public Transportation (hereinafter called the "State"), and the Metropolitan Transit Authority of Harris County, Texas acting by and through its General Manager (hereinafter called "METRO"), is to become effective when fully executed by both parties.

W I T N E S S E T H

WHEREAS, Article 1118X, Texas Revised Civil Statutes (Texas Laws 1973, Ch. 141, p. 302 et seq, as amended authorizes METRO to operate public transportation facilities on highways under control of the State; and

WHEREAS, METRO and the State have previously agreed to construct, maintain and operate public transportation facilities known as authorized vehicle lanes (AVL's), high-occupancy vehicle lanes (HOV's), and Transitways (hereinafter called Transitways) along certain controlled-access highways (freeways) in and around Harris County, Texas as shown in Appendix A to this Agreement; and

WHEREAS, such controlled-access highways are defined in Articles 6674 W through 6675 W-5, Texas Civil Statutes (Texas Laws 1957, Ch. 300, p. 724 et seq), and, as provided therein, are under the ultimate control and supervision of the State; and

MOMA
2-11-88

WHEREAS, Texas State Highway and Public Transportation Commission Minute Order No. _____, dated _____ directed the Engineer-Director of the Texas State Department of Highways and Public Transportation to enter into any necessary agreements with METRO for the maintenance and operation of Transitways; and

WHEREAS, the manner that such facilities are to be operated and maintained has heretofore been covered by individual agreements pertaining to each of the Transitways concerned; and

WHEREAS, experience has been gained in operating such facilities on the first two Transitways to become operational in Harris County, Interstate Highway 45N (the North Freeway) north of downtown Houston, Texas and Interstate Highway 10W (the Katy Freeway) west of downtown Houston, Texas; and

WHEREAS, such experience indicates that the operation and maintenance of a contemplated system of Transitways along the above mentioned and other State freeways within METRO's jurisdiction should be uniform and coordinated; and

WHEREAS, METRO and the State desire to accomplish such uniformity and coordination by entering into this "MASTER OPERATION AND MAINTENANCE AGREEMENT" which covers all such Transitways which METRO and the State have agreed, or will agree, to construct by other individual construction agreements; and

WHEREAS, the parties by this Agreement desire to specify the rights and obligations of the respective parties for the operation and maintenance of Transitways along State freeways within METRO's jurisdiction; and

WHEREAS, while METRO is the primary agency responsible for the day-to-day operation and maintenance of Transitways, such Transitways, being part of the controlled-access highways, impact freeway operation and the State therefore

MOMA
2-11-88

has an interest and responsibility in the operation and maintenance of Transitways and maintains final authority over the facility; and

WHEREAS, it is the intent of the parties to this Agreement that Transitways be operated in a safe and effective manner for high-occupancy vehicles, with safety as a primary concern, and that Transitway operations be conducted with the goal of achieving high volumes of high-occupancy vehicles in unimpeded Transitway traffic flow and minimum adverse impact on traffic flow on freeways and other affected roadways;

THEREFORE, in consideration of the premises and of the mutual covenants and agreements of the parties hereto to be by them respectively kept and performed as hereinafter set forth, METRO and the State do mutually agree as follows:

A G R E E M E N T

Applicability

1. This MASTER OPERATION AND MAINTENANCE AGREEMENT supersedes all agreements or portions of agreements pertaining to the operation and maintenance of Transitways heretofore executed by METRO and the State.

Maintenance of Transitways

2. Beginning on the date that final completion of construction is certified, METRO and the State agree to divide the responsibility for maintenance of Transitways as follows:

- (a) METRO agrees to maintain the signs, control devices, vehicle impact attenuators, equipment and illumination devices installed as a part of a Transitway which are clearly identified on As-Built Plans as items to be maintained by METRO. Maintenance shall include the

MOMA
2-11-88

provision, at METRO's expense, of all electrical power required for Transitway operation. METRO shall be responsible for removal of debris or other objects detrimental to safe operation of Transitways that are above and beyond the sweeping and litter pick-up obligations of the State set out below.

(b) METRO agrees to maintain all park-and-ride or transit center facilities to include, but not to limited to the following: Pavement, striping, lighting, signing, buildings, sanitary facilities, water, storm sewer, detention ponds and facilities, telephones, utilities, signals and landscaping. METRO's responsibility shall begin at the point the access ramps cross the normal State right of way.

(c) The State agrees to maintain all other portions of said segments and fixtures thereto including, without limitation, all paved surfaces, all supporting structures, all traffic control devices not covered by subparagraph (a) of this paragraph 2, all traffic separation facilities not covered by said paragraph (a), and any other device or fixture not clearly identified on As-Built Plans as items to be maintained by METRO. The State will perform sweeping and litter pick-up on a routine basis.

With respect to the items mentioned above in subparagraphs (a), (b) and (c), the provisions of this paragraph 2 shall be the exclusive expression of the duties of the parties.

Operation of Transitways

3. METRO, acting through its General Manager, and the State, acting through its District 12 Engineer, shall publish an Operations Plan for each

MOMA
2-11-88

Transitway not less than thirty days prior to the commencement of operations on any segment of such Transitway. Where Operations Plans have already been published for Transitways in operation prior to the execution of this Agreement, such Operations Plans will be reviewed for compliance with the terms of this Agreement, and revised as appropriate. Operations Plans shall be filed with both agencies, their purpose being to define the procedures to be used by the agencies involved in Transitway operations as well as those which will govern Transitway users.

4. Amendments to Operations Plans may be made by consent of both METRO and the State as represented by the following:

- (a) State Transitway Engineer - an assigned and identified representative of the State designated by the State's District 12 Engineer.
- (b) METRO Transitway Manager - an assigned and identified representative of METRO, designated by the General Manager.

5. The State Transitway Engineer and the METRO Transitway Manager shall constitute the Transitway Management Team. They shall meet monthly to: oversee Transitway Operations; monitor policies and procedures promulgated by Operations Plans; interpret and implement the terms of Operations Plans; and review Transitway operating procedures, rules and regulations established pursuant to Operations Plans. On a semi-annual basis, they shall submit a report to METRO's General Manager and the State's District 12 Engineer concerning such matters as Transitway vehicle and passenger usage, operating speeds, accident and incident data, and other matters pertaining to the safe and effective operations of Transitways. The reports may also include recommendations for design modifications of existing Transitways and suggestions regarding the design of future Transitways.

MOMA
2-11-88

6. Pursuant to the terms of the Operations Plans for each Transitway, the Transitway Management Team will develop for each Transitway:

(a) Transitway Rules and Regulations governing Transitway users in order to assure safe and effective operation consonant with the design, environment and overall traffic conditions pertaining to each Transitway.

(b) A Transitway Operating Manual covering procedures to be used by those agency personnel assigned direct responsibility for day-to-day transitway operation. This Manual shall include, but not be limited to, sections covering:

1. Deployment
2. Surveillance, Communications and Control (SC&C)
3. Enforcement
4. Incident Management
5. Training

7. When, by execution of a separate construction agreement, METRO and the State agree to construct additional Transitways, the operation of same shall be governed by this MASTER OPERATION AND MAINTENANCE AGREEMENT, and the description and limits of such additional Transitways will be added to the list shown in Appendix A to this Agreement upon execution of said construction agreement.

8. The hours of operation of Transitways are to be shown in each Operations Plan.

9. METRO shall arrange for the prompt removal of disabled vehicles from Transitways through use of its own wreckers or through the use of a wrecker service agreement as described in Operations Plans.

MOMA
2-11-88

10. During the hours of operation of Transitways, METRO shall be represented in the field on each Transitway by a designated representative (called the Transitway Crew Chief) who will be in responsible charge of all METRO personnel and all METRO activity within the limits of the transitway. This METRO Transitway Crew Chief will be charged with the duty of carrying out the policies and procedures defined by, and pursuant to, the Operations Plans under the general direction of the METRO Transitway Manager.

11. Because Transitways are intended for use by high-occupancy vehicles, only buses, vanpools, carpools and State/METRO operational/maintenance vehicles are to be authorized to use Transitways in accordance with the provisions of Operations Plans. The definition of what constitutes a carpool authorized to use a Transitway shall be shown in the Operations Plan but only with prior concurrence in the definition by the METRO Board of Directors and the State.

12. METRO Transit Police, operating under the general direction of the METRO Transitway Crew Chief for each Transitway, will be responsible for enforcement of laws and regulations applicable to each Transitway, pursuant to specific enforcement requirements and procedures promulgated under the direction of the Transitway Management Team. Enforcement activities are intended to assure safe and effective Transitway operation. At least one METRO Police Officer will be present on each Transitway during the hours of deployment and operation.

METRO Transit Police will assist in the opening and closing of the lanes as specified in procedures established by the Transitway Management Team. During hours of lane operation, METRO Transit Police will enforce the lane-use procedures developed by the Transitway Management Team.

MOMA
2-11-88

During periods of normal lane operation, enforcement personnel will stop violators at the termini of the Transitway only. Due to the narrow width of the Transitway, no vehicles will be stopped along the length of the lane by enforcement personnel.

13. The Transitway Management Team will regularly evaluate the effectiveness of Transitway traffic control devices in achieving the goals set forth in this Agreement. They shall direct such changes to be made as may be necessary to further such goals, reporting on these matters in the semi-annual report mandated in Item 5 of this Agreement. To the extent applicable, such Transitway traffic control devices and measures shall conform to the Texas Manual of Uniform Traffic Control Devices.

Use of Facilities

14. The parties acknowledge that the highway facilities upon which Transitways are constructed are under the ultimate control and supervision of the State; however, the parties also acknowledge that the construction, and maintenance of Transitways involve the investment of substantial sums for mass transit purposes; therefore, the State agrees that it will exercise its rights of control and supervision so as to recognize the mass transit purposes of Transitways throughout their useful lifetime.

Termination of Transitway Use

15. In the event that METRO determines that operation of any Transitway is no longer necessary to accommodate public transportation, METRO shall cause all specialized equipment which it may have had installed for the operation of such Transitway to be removed from the highway right-of-way, a single median barrier to be installed and appropriate lane markings to be made or such right-of-way to be restored to such other condition as METRO and the State

MOMA
2-11-88

agree, all at the sole expense of METRO, provided that METRO gives notice in writing of such determination and the date of termination to the State at least sixty (60) days prior to such date. To be effective, any such notice shall conform to the form set out in paragraph 28.

16. In the event that the State determines that METRO's continued operation of any Transitway as constructed materially interferes with or adversely affects the general highway use of the pertinent highway, the State will consult with METRO and such modifications or remedial actions as the State may finally determine to be appropriate will be accomplished and shall be at the sole expense of METRO.

Temporary Termination or Modification of Transitway Use

17. The State may temporarily remove any portion of the Transitway facility subject to the provisions of governing laws, by giving sixty (60) days written notice to METRO, when such removal is necessary to repair, construct, reconstruct and/or make changes in the said segment. The State agrees to provide for all costs necessary to make such alterations to the Transitway and to restore the Transitway to normal operations as soon as possible.

18. It is understood and agreed that Transitway operations may by necessity be curtailed temporarily in the event of flood, accidents, ice, or other causes in order to assure the safety of Transitway users. The State will, in this event, do everything reasonable to provide for rapid and timely repair of any portions of the roadways or other items for which they are responsible, which may be damaged. METRO will do likewise for those items which are their responsibility, so that safe and effective Transitway operation can be reinstated as soon as possible.

MOMA
2-11-88

Indemnification

19. To the extent permitted by law, METRO agrees to indemnify and save harmless the State, its agents and employees, from all suits, actions or claims and from all liability and damages for any and all injuries or damages sustained by any person or property in consequence of any neglect in the performance of design, construction, maintenance or operation of the Transitway by METRO, its contractors or subcontractors, agents and employees, and from any claims or amounts arising or recovered under the "Worker's Compensation Laws"; the Texas Tort Claims Act, Chapter 101, Texas Civil Practice and Remedies Code; or any other applicable laws or regulations, all as from time to time may be amended. In addition, METRO shall require its contractor(s) and subcontractor(s) to secure a policy of insurance in the maximum statutory limits for tort liability, naming the State as an additional insured under its terms. METRO shall provide necessary safeguards to protect the public on State-maintained highways, and to save the State harmless from damages.

METRO shall require any and all its contractors engaged in construction, maintenance or operation of the Transitway to maintain adequate insurance for payment of any damages for which they are liable.

Adequate insurance, as a minimum shall mean METRO's contractors shall furnish the State with the State Department of Highways and Public Transportation's Certificate of Insurance covering the below-listed insurance coverages:

- (a) Worker's Compensation Insurance
Amount - Statutory

MOMA
2-11-88

- (b) Comprehensive General Liability Insurance
 - Amounts - Bodily Injury \$500,000 each person
 - Property Damage \$100,000 each occurrence
 - \$100,000 each aggregate

- (c) Comprehensive Automobile Liability Insurance
 - Amounts - Bodily Injury \$250,000 each person
 - \$500,000 each occurrence
 - Property Damage \$100,000 each occurrence

The State shall be included as an "Additional Insured" by endorsement to policies issued for coverages listed in subparagraphs (b) and (c) above. A "Waiver of Subrogation Endorsement" in favor of the State shall be a part of each policy for coverages listed in subparagraphs (a), (b) and (c) above. METRO and/or its contractors shall be responsible for any deductions stated in the policies.

Parties in Interest

20. This Agreement shall bind, and shall be for the sole and exclusive benefit of the respective parties and their legal successors.

Assignment

21. METRO shall not assign, sublet, or transfer its interest in this Agreement without the prior written consent of the State.

Prohibited Interests

22. No member of or delegate to the Congress of the United States of America shall be admitted to any share or part of this Agreement or to any benefit arising therefrom.

23. No member, officer, or employee of the Public Body (State of Texas and Metropolitan Transit Authority of Harris County) or of a local body during his tenure or one year thereafter shall have any interest, direct or indirect, in this Agreement or the benefits/proceeds thereof.

Legal Compliance

24. This Agreement shall be subject to all laws, ordinances, rules, regulations, and orders of legally constituted authority bearing on its performance. If this Agreement is at variance therewith in any respect, appropriate modifications will be made by agreement of the parties.

25. If any provision of this Agreement, on the application thereof to any person or circumstance, is rendered or declared illegal for any reason and shall be invalid or unenforceable, the remainder of the Agreement and the applications of such provision to other persons or circumstances shall not be affected thereby but shall be enforced to the greatest extent permitted by the applicable law.

Amendments

26. Execution of any amendment to this Agreement shall be subject to the written approval of the State and METRO.

Default and Remedies

27. Default shall occur only in the event either party fails to adhere to its respective obligations hereunder. In such event, the non-defaulting party shall give the defaulting party written notice of the condition of default. The defaulting party may cure such default, if possible, or alternatively shall commence efforts to cure such default, within ten (10) days from and after date of receipt of notice of default. In the event of continued failure to cure or continued absence of efforts to cure such default, the non-defaulting party may thereafter notify the defaulting party of its intent to terminate this Agreement. This Agreement shall not be considered as specifying the exclusive remedy for any default, but all remedies existing at law and in equity may be availed of by either party and shall be cumulative.

MOMA
2-11-88

Notices

28. All notices to either party by the other required under this Agreement shall be delivered personally or sent by registered U.S. Mail, postage prepaid, addressed to such party at the following respective addresses:

METRO: Metropolitan Transit Authority of Harris County
500 Jefferson
Post Office Box 61424
Houston, Texas 77208
Attention: General Manager

STATE: State Department of Highways of Public Transportation
Dewitt C. Greer State Highway Bldg.
11th and Brazos Streets
Austin, Texas 78701
Attention: Engineer-Director

and shall be deemed given on the date so delivered or so deposited in the mail, unless otherwise provided herein. Either party hereto may change the above address by sending written notice of such change to the other in the manner provided for above.

IN WITNESS WHEREOF, the State of Texas and the Metropolitan Transit Authority of Harris County have executed this Agreement in duplicate on the dates shown hereinbelow, effective on the date last executed.

MOMA
2-11-88

STATE OF TEXAS

METROPOLITAN TRANSIT AUTHORITY OF
HARRIS COUNTY, TEXAS

Certified as being executed for the purpose and effect of activating or carrying out the orders, established policies or work programs heretofore approved and authorized by the State Highway and Public Transportation Commission.

By: _____
General Manager

Date: _____

APPROVED:

Executed for and on behalf of the Metropolitan Transit Authority of Harris County, pursuant to Resolution No. _____ of the Board of Directors, passed on the _____ of _____, and on file in the office of the Assistant Secretary of METRO.

By: _____
Deputy Engineer-Director

Date: _____

Executed and approved for the State Highway and Public Transportation Commission under authority of Commission Minute Order No. _____, dated _____.

ATTEST:

Assistant Secretary

RECOMMENDED FOR APPROVAL:

APPROVED FORM:

Deputy-Director

Staff Counsel

Chief Engineer, Maintenance and Safety Operations

APPROVED: (SUBSTANCE)

General Counsel

Assistant General Manager of Transportation

District Engineer, District 12

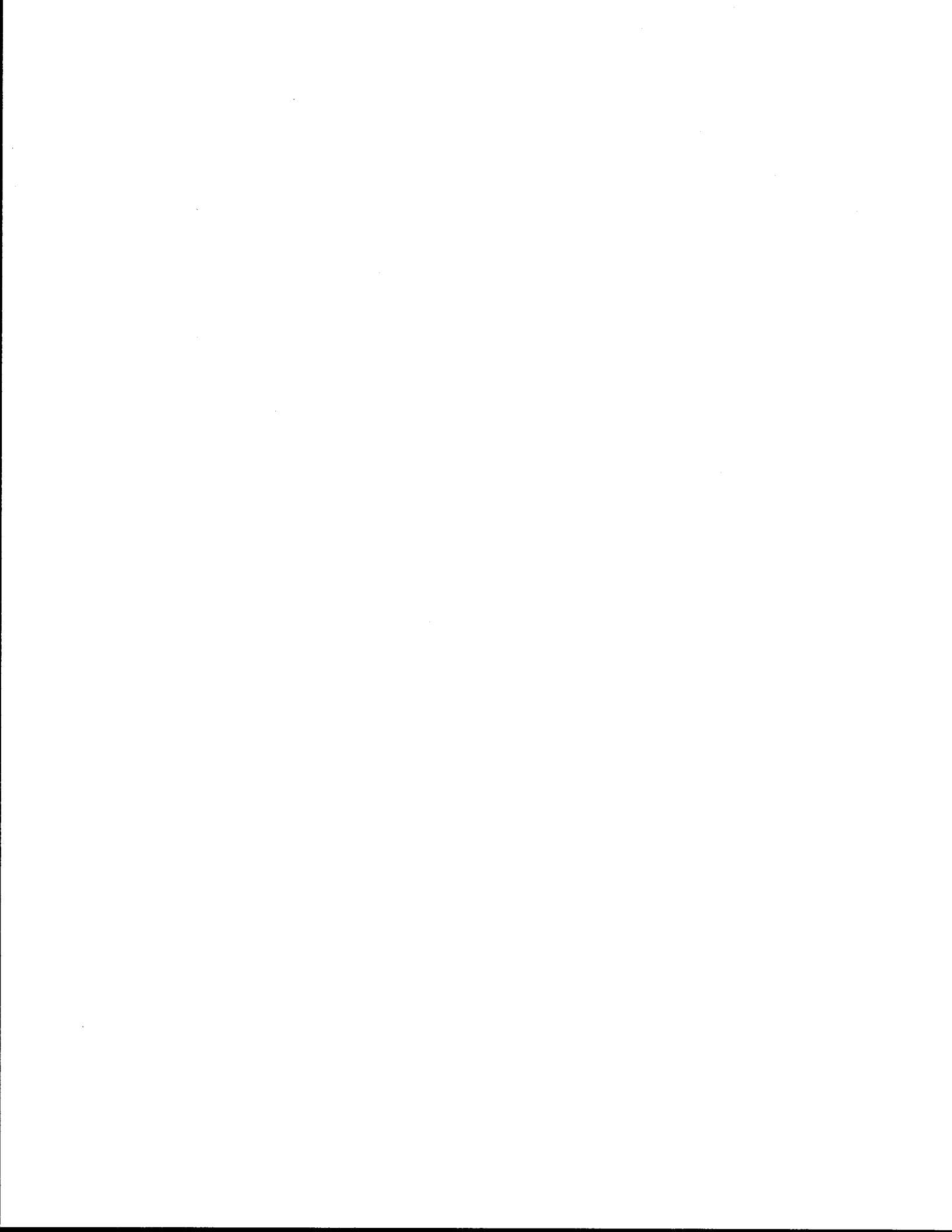
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2-11-88

APPENDIX A

HIGHWAY/TRANSITWAY LIMITS	DATE OF CA* EXECUTION
1. Interstate Highway 45 (the North Freeway/Transitway)	
A. From downtown Houston to N. Shepherd Drive	8-20-79
B. From N. Shepherd Drive to IH-10	4-13-83
C. From IH-10 to Beltway 8	5-25-85
2. Interstate Highway 10 (the Katy Freeway/Transitway)	
A. From Post Oak to Beltway 8	9-27-84
B. From Beltway 8 to SH-6	4-08-85
3. Interstate Highway 45 (the Gulf Freeway/Transitway)	
A. From Calhoun Street to Choate Road including Lockwood Transit Center and Fuqua Vanpool Staging Area	4-15-85
B. Lockwood Transit Center	9-04-86
4. US Highway 290 (the Northwest Freeway/Transitway)	
A. From IH-610 to IH-10	10-10-86
B. From IH-10 to W. Little York Road	1-27-87
C. From W. Little York Road to FM 1960	11-13-87
5. US Highway 59 (the Southwest Freeway/Transitway)	Pending

*CA = Construction Agreement

MOMA
2-11-88



APPENDIX B

RIGHT-OF-WAY SERVICES AGREEMENT

COOPERATIVE WORK AGREEMENT



RIGHT OF WAY SERVICES AGREEMENT
BANFIELD TRANSITWAY PROJECT
LIGHT RAIL ELEMENT

THIS AGREEMENT, made and entered into by and between TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON, by and through its Board of Directors, hereinafter called "Tri-Met" and the STATE OF OREGON, by and through its Department of Transportation, Highway Division, hereinafter called "State";

W I T N E S S E T H

RECITALS:

1. This Agreement is entered into for the purpose of Tri-Met employing state to acquire real property and all related right-of-way activities of the Light Rail Element located from the Portland Central Business District to the connection of Holladay Street at the Banfield Freeway and from the connection of the Light Rail alignment and the Banfield Freeway at the Gateway District to the Gresham Central Business District, and also including all Park and Ride lots; Terminal Stations; Light Rail Maintenance Station; and Portland Traction Company right-of-way, hereinafter referred to as "Project".
2. Tri-Met is willing and able to finance the right-of-way and relocation cost and all expenses incurred by the acquisition program.
3. State has a right-of-way staff capable of performing the real property acquisition and relocation phases for the project.
4. Tri-Met and State propose to enter into this agreement for the purpose of employing State to perform services in the acquisition phase and other phases preliminary thereto for the project according to applicable laws and regulations. Tri-Met and State hereby pledge complete cooperation with each other in order to accomplish these things set forth and agreed upon in this agreement.

I.

Tri-Met agrees to and hereby does employ State and State agrees to act for Tri-Met in performing the services hereinafter called for in this agreement in connection with the project. The parties hereto mutually agree to the following:

II.

A. Acquisition Phase

I. General

- a. Tri-Met will pay all costs of real property and cost of services as set out in General Provisions.

- b. State will provide Tri-Met with a schedule of acquisition. [VOID]
- c. State will provide Tri-Met with a detailed status report of the project every 30 days.
- d. Tri-Met will certify to the Right of Way Supervisor that the right-of-way is clear five weeks ahead of contract letting. [VOID]

2. Legal Descriptions

- a. Tri-Met will provide sufficient vesting deeds, maps and other data, so that legal descriptions of the property can be written. [VOID]
- b. State will write legal descriptions, prepare property map, assign a file number and type option agreements. [VOID]
- c. Tri-Met will specify use to be made of property; nature of interest to be acquired; and duration of interest, if not perpetual. [VOID]

3. Real Property and Title Insurance

- a. State will order preliminary title reports and title insurance at the appropriate times. [VOID]
- b. State will provide encumbrance report. [VOID]
- c. Tri-Met will check encumbrances and notify State which are objectionable. [VOID]
- d. Tri-Met will approve sufficiency of title. [VOID]

4. Appraisal Process

- a. State will appraise real property to be acquired.
- b. State will make review appraisal by qualified senior appraiser.
- c. State will submit review appraisal to Tri-Met will promptly approve or disapprove the amount and notify State. [VOID]

5. Negotiation

- a. State will be responsible for this function.
- b. All monetary offers are to be made to the land owner in writing at the review and approved figure. Offers and options above the approved figure are to have advance

approval by Tri-Met and options are to be accompanied by an administrative review justification. [VOID]

- c. All proposed legal settlements made by Tri-Met over the reviewed and approved figure are to be cleared with the State, prior to settlement, to assure compliance with applicable regulations.

6. Relocation

- a. State will provide relocation plan, replacement housing benefit computations, moving cost estimates, and relocation review service.
- b. State will submit additive computations to Tri-Met who will promptly approve or disapprove the amount and notify State. [VOID]
- c. State will provide all relocation services to relocatees, process all claims and pay promptly.
- d. Tri-Met will, with State's assistance, promptly establish an appeal procedure whereby displaces are informed of the procedure at the outset of negotiations.
- e. State will assist and provide necessary evidence at relocation and appeal hearing.

7. Property Management

- a. State will take possession of properties as occupants move out.
- b. State will be responsible for disposal of all improvements and excess land.
- c. Tri-Met will carry insurance on all acquired improvements during interim period between possession and disposal.

B. Closing Phase

1. Tri-Met will process options and settlements and secure approval of their Board of Directors.
2. State will draw deeds and necessary releases and satisfactions, have executed and recorded.
3. All property acquired under this agreement shall be purchased in the name of Tri-County Metropolitan Transportation District of Oregon.
4. State will make payments for all property, incidental expenses and relocation claims.

5. State will provide Tri-Met with copies of all pertinent letters, title reports, deeds and other recorded documents, and obligations of real property acquisition.

C. Condemnation

1. State, upon request, will provide formats for condemnation resolutions, legal letters of offer, complaints and summons.
2. Tri-Met will be responsible for the entire condemnation action.
3. Tri-Met will send written request to State for any additional appraisals required for condemnation.
4. State will obtain appraisal and have reviewed by qualified senior appraiser.
5. State will submit reviewed appraisal to Tri-Met for approval and use by their attorney. The attorney will offer the land owner or his representative in writing, the reviewed and approved figure if the reviewed appraisal has been changed after the original offer.

III.

GENERAL PROVISIONS

1. The acquisition and relocation will be in full accordance with the "Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970" (Public Law 91-646), Federal-Aid Highway Program Manual, Volume 7, and State of Oregon Right of Way Manual, Official Publication 74-4.

2. State shall compile accurate cost accounting records and, when computed, furnish Tri-Met with an itemized statement of said costs.

3. Tri-Met shall, prior to State Proceeding with the project, forward to State advance deposits or irrevocable letter of credit on a bank acceptable to State for the current estimated costs of right-of-way and all costs related to acquisition for the project. During the course of the project if the balance remaining on the deposit or the letter of credit appears to State to be insufficient to pay the current estimated costs, State will furnish Tri-Met with an estimate or voucher of additional costs and Tri-Met will issue an additional deposit or a letter of credit in that amount as soon as practicable.

Expenditures exceeding \$150,000 will be submitted to Tri-Met on an individual basis in order that Tri-Met can submit vouchers to the Federal Government for its share.

4. In the event an irrevocable letter of credit is selected by Tri-Met, State will pay all costs relating to the project by drawing on the irrevocable letter of credit with a copy of each draw to Tri-met.

5. Tri-Met agrees to pay all salaries and payroll reserves of State

employees, the rental of equipment, per diem and a 10% surcharge of administrative costs.

6. State shall keep records of its actual costs and expenses incurred in performing the agreed services for the project under the terms of this agreement and submit an itemized statement once each 30 days.

7. Tri-Met agrees that should it cancel or terminate the project prior to its completion, it will reimburse State for any costs that have been incurred by State in behalf of the project.

8. State records for the costs and expenses shall be available to Tri-Met for auditing at any reasonable time. The billing for cost and expenses is to be done by the State Accounting Section in a format suitable for use in Tri-Met's project Management Information System.

9. State will not discriminate on the grounds of race, color, natural origin or sex and comply with code of Federal Regulations, Appendix C, Title 49, Part 21 and 25.

10. It is mutually agreed that any change in this agreement must be reduced to writing with approval of the Chief Executive Officer of Tri-Met and the Right of Way Manager and Chief Counsel of the Oregon State Highway Division.

11. Notwithstanding anything else in this agreement, the intent is that Tri-met has employed State as an independent contractor for its services with regard to the provisions set forth herein.

IN WITNESS WHEREOF the parties hereto have caused this agreement to be executed on the day and year hereafter written.

The State Highway Engineer, acting under delegated authority from the Oregon Transportation Commission, authorized the Right of Way Manager to approve and execute this contract on behalf of the Commission.

Dated this 7 day of November, 1980.

STATE OF OREGON, by and through its
DEPARTMENT OF TRANSPORTATION,
Highway Division

APPROVED AS TO FORM

Assistant Attorney General
and Counsel

J. B. Boyd, Right of Way Manager

TRI-COUNTY METROPOLITAN
TRANSPORTATION DISTRICT OF OREGON

E. R. Peter Cass, General Manager



AMENDMENT TO RIGHT OF WAY SERVICES AGREEMENT
BANFIELD TRANSITWAY PROJECT
LIGHT RAIL ELEMENT

THIS AMENDMENT replaces Article II, Paragraph C, of the Right of Way Service Agreement, Banfield Transitway, Light Rail Element executed November 7, 1980 between the State of Oregon and Tri-Met. Under Article III, Paragraph 10 of that agreement an amendment requires the approval of the Chief Executive Officer of Tri-Met and Right of Way Manager and Chief Counsel of the Oregon State Highway Division. The undersigned do hereby mutually agree to the following amendment:

C. Condemnation

1. State will prepare condemnation resolutions for Tri-Met.
2. State will prepare legal letters of offer for Tri-Met.
3. State will prepare complaints for Tri-Met.
4. State will prepare summons for Tri-Met.
5. State will obtain any additional appraisals required for condemnation and have reviewed by qualified senior appraiser.
6. State will submit reviewed appraisals to Tri-Met who will promptly approve or disapprove the amount and notify State. [VOID]
7. State, if not handled by Tri-Met's attorneys, will offer the land owner or his representative in writing the reviewed and approved figure if the reviewed appraisal has been changed after the original offer.

Dated this 9 day of July, 1981.

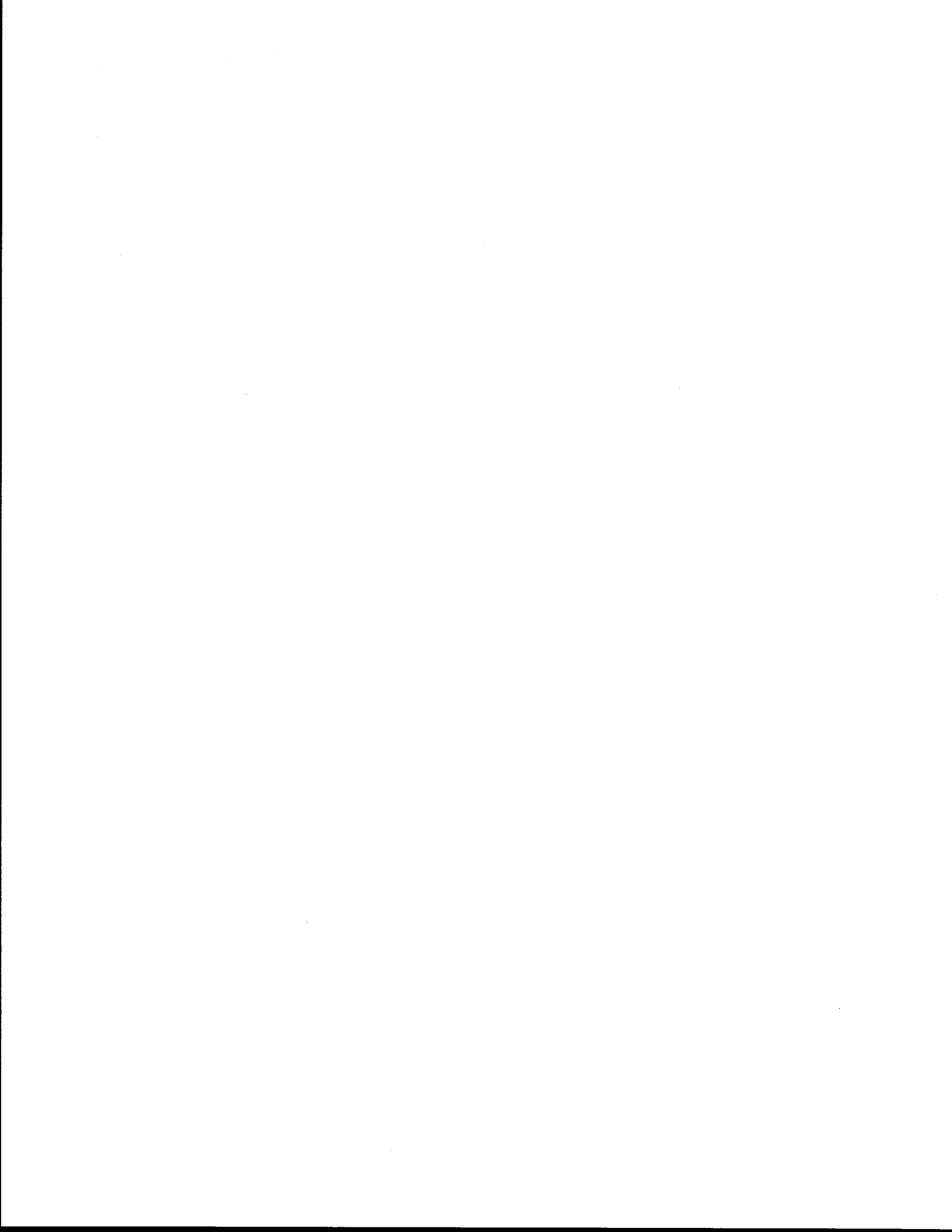
TRI-COUNTY METROPOLITAN
TRANSPORTATION DISTRICT OF
OREGON

STATE OF OREGON, by and through
its DEPARTMENT OF TRANSPORTATION,
Highway Division

General Manager

J. B. Boyd, Right of Way Manager

Assistant Attorney General and Counsel



MCH:pf
4/29/82
Revised: 7/8/82

Misc. Contracts & Ageements
No. 7630

STATE/TRI-MET
COOPERATIVE WORK AGREEMENT
BANFIELD TRANSITWAY PROJECT

THIS AGREEMENT is made and entered into by and between the STATE OF OREGON, acting by and through its Department of Transportation, Highway Division, hereinafter referred to as "State"; and the TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OR OREGON, a public transit agency, acting by and through its Board of Directors, hereinafter referred to as "Tri-Met".

W I T N E S S E T H

RECITALS

1. By the authority granted in certain ORS provisions, State and Tri-Met wish to enter into an agreement concerning right-of-way acquisition, design and construction of the Banfield Transitway Project, hereinafter referred to as "Project".

2. This agreement defines the highway relocation and transit work that will be done by State and funded with Interstate Transfer funds covered under Full Funding Grant Agreement between Tri-Met and the Urban Mass Transportation Administration, hereinafter referred to as "UMTA".

3. Interstate Transfer (e) (4) Transit funds are available to be used for relocating and reconstructing the Banfield Freeway, right-of-way acquisition, building or rebuilding overpass structures, reconstruction of the Steel Bridge and ramps, and other work which is initiated as part of the comprehensive effort to accommodate the total length rail system in the Banfield Corridor as further defined in this agreement. All work agreed upon for Interstate Transfer (e) (4) Transit funding and covered by this agreement is referred to as State highway relocation and transit work, hereinafter called "Work", and is as identified in attached Exhibit "A", and by this reference made a part hereof.

NOW, THEREFORE, the premises being in general as stated in the foregoing RECITALS, it is agreed by and between the parties hereto as follows:

STATE OBLIGATIONS

1. State shall provide Tri-Met with the information needed to support grant application, amendments, and requests to UMTA for federal funding and shall be responsible for all right-of-way acquisition functions, condemnation actions, eligible utility relocations, design and construction for the Work

to be funded by UMTA through Tri-Met under the UMTA Full Funding Grant Agreement and amendments thereto for this Project. No Work shall proceed until written authorization from Tri-Met is received.

2. State shall prepare the contract documents, advertise for bid proposals, award all contracts, furnish all construction engineering, material testing, technical inspection and project management services for construction of the Work.

3. State shall provide Tri-Met with construction schedules and costs applicable to the Work in a suitable format prescribed by Tri-Met for use in Tri-Met's project construction management information system. State shall also provide progress reports monthly in support of claims for reimbursement from Interstate Transfer (e) (4) Transit funds.

4. State shall submit plans, specifications and estimates for Tri-Met's review and approval prior to award of a construction contract.

5. Prior to award of contracts related to the Work, State shall notify Tri-Met indicating contract amount and contract cash flow. No Work shall proceed until Tri-Met has given written authorization for the funding of said contracts. UMTA grant approvals for Work will be based upon cash flow needs rather than contractual needs. Therefore, Tri-Met authorizations may be based upon "no prejudice" authority to be contained in the full funding agreement between UMTA and Tri-Met.

6. State shall arrange conferences at least monthly with Tri-Met during construction to review the work in progress. A preconstruction conference will also be arranged with representatives of State, Tri-Met and the contractor in attendance and at any time alternates are to be considered.

7. State shall submit statements for the agreed UMTA federal share of Work to Tri-Met for approval and payment.

8. State shall relocate, or cause to be relocated, all utility conduits, lines, poles, mains, pipes and other such facilities where such relocation is necessary in order to conform said utilities or facilities with the plans and ultimate requirements of the project.

9. State shall provide Tri-Met with all information needed to support additional Work or a change in scope of Work is required. No additional Work or change in scope of Work shall be done without written approval of Tri-Met and the Federal Highway Administration, hereinafter called "FHWA", on behalf of UMTA.

10. In the acquisition of all parcels of real estate shown on Exhibit C, attached hereto, whether by purchase or condemnation, the services of State and the Oregon Department of Justice (ODOJ) shall be utilized following all rules, regulations and requirements of the FHWA and the approval of Tri-Met. Further, in the administration settlement of eminent domain cases for an amount in excess of the estimated value per Exhibit C, the advance written approval of Tri-Met and FHWA shall be obtained.

11. The particular parcels of real estate indicated on Exhibit C attached hereto as vested in State are to become and remain the property of State subject to any applicable FHWA rules, regulations or other requirements, including project use, maintenance and disposition.

12. All costs incurred by State under this agreement shall comply with all rules, regulations and other requirements of FHWA and be with the approval of Tri-Met.

13. All work to be performed by State under this agreement shall be upon Tri-Met's approval.

14. State shall require its contractors, subcontractors, their suppliers of materials or services or others engaged by the contractors to indemnify and protect Tri-Met and its representatives against any claim or liability and name Tri-Met as additional insured on insurance policies required by State and Tri-met.

TRI-MET OBLIGATIONS

1. Tri-Met shall submit grant applications, amendments and requests to UMTA with a request for approval of federal aid participation in all phases of the right-of-way acquisition functions, eligible utility relocations, design and construction related to the Work, and shall provide State with written authorization to proceed when applications have been approved.

2. Tri-Met shall approve claims for payment according to federal letter of credit procedure and immediately submit to State reimbursements received.

3. Tri-Met shall provide State with written authorization to proceed with additional Work or change in scope of Work agreed to by State and Tri-Met.

4. Tri-Met shall accept all responsibility for design and supervision of work of ballast placement, installation of electrification components and the laying of track for light rail vehicles and, upon completion of construction, maintain and operate the Light Rail Transitway in accordance with State and Federal regulations.

GENERAL PROVISIONS

1. The parties hereto mutually agree and understand that State and Tri-Met shall pay 100 percent of the difference between the actual total costs of that portion of the Project related to the Work and the amount contributed by the Federal Government.

2. The construction agreement between Tri-Met and State dated January 13, 1981, and Supplemental Agreement No. 1 dated May 28, 1981, are hereby terminated and shall have no force or effect.

3. Federal funding limitation. State understands that funds to pay for Work under this agreement in the amount specified in Exhibit B have been

made available from the United States Department of Transportation through UMTA. All funds must be approved and administered by UMTA.

4. Tri-Met's obligation for federal funds hereunder is limited to direct Project costs including but not limited to salaries and payroll reserves (fringe benefits) of state employees, the rental of equipment, per diem and contractor payments from funds that are appropriated and allocated by UMTA for the performance of Work as delineated in this agreement. Tri-Met is not liable for damages or additional cost in connection with this agreement on account of delay in payments to State due to lack of available funds or delay in federal funding. UMTA funding of the Project is subject to terms and conditions of the UMTA Funding Grant Agreement with Tri-Met as now or hereinafter amended.

5. The parties hereto agree and understand that they will comply with all applicable Federal and State statutes and regulations, including but not limited to: Title 6, U.S.C., Civil Rights Act; Title 18, U.S.C., Anti-Kickback Act; Title 23, U.S.C., Federal Aid Highway Act; Titles 2 and 3 of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970; Federal Management Circular 74-4; and OMB Circulars Nos. A-87 and A-102.

6. Provisions of State and Federal law applicable to public contracts and agreements of this type are hereby incorporated by reference as if fully set forth herein. In addition, all Work to be performed by State on this Project pursuant to this agreement shall be in compliance with all regulations of FHWA rather than UMTA, including but not limited to real estate acquisition, utility relocation, demolition and construction and procurements of all supplies, services and facilities.

7. State and Tri-Met mutually agree and understand that contract work planned by either of the parties hereto shall be scheduled in such a manner that the Work will not cause any conflict between contractors.

8. It is mutually agreed by the parties hereto that any change in this agreement must have the written approval of the General Manager of Tri-Met, the State Highway Engineer and the Chief Counsel to the Oregon Transportation Commission and concurred in by UMTA.

9. Tri-Met and State agree to complete the project by December 31, 1985. It is the intention of the parties that the date shall be subject to renegotiation if there is a delay in the approved critical path for the Project that is beyond the control of either party if UMTA has concurred in writing with said delay.

10. The parties hereto agree to comply with all applicable provisions of the UMTA Full-Funding Grant Agreement.

IN WITNESS WHEREOF, the parties hereto have set their hands and affixed their seals as of the day and year hereinafter written.

This Project was approved by the Oregon Transportation Commission on January 19, 1982 as part of the Six Year Highway Improvement Program (page 54).

The Oregon Transportation Commission, by a duly adopted delegation order, authorized the State Highway Engineer to sign this agreement for and on behalf of the Commission. Said authority is set forth in the Minutes of the Oregon Transportation Commission.

APPROVAL RECOMMENDED

STATE OF OREGON, by and through its
Department of Transportation,
Highway Division

Metro Region Engineer

By _____
State Highway Engineer

Date _____ 7/22/87 _____

APPROVED AS TO LEGAL SUFFICIENCY

TRI-COUNTY METROPOLITAN TRANSPORTATION
DISTRICT OF OREGON, by and through
its Board of Directors

By _____
Assistant Attorney General

By _____

Date _____ 7/21/82 _____

Title _____



EXHIBIT A

STATE HIGHWAY RELOCATION & TRANSIT WORK SCOPE OF WORK

1. Steel Bridge and Ramps Section

a. First Avenue - Steel Bridge LRT Ramp

Design of the ramp connecting to N.W. First Avenue from the west end of the Steel Bridge. Design work is to include the Everett Street and First Avenue intersection and plans for removal of the ramp connecting the Steel Bridge to southbound Front Avenue (subject to final determination).

Produce contract drawings, specifications, bid and contract documents and advertise for bid proposals.

Award contracts, manage and provide construction engineering support and inspection during the construction stages for Tri-Met Banfield Project Civil Engineering Section.

b. Steel Bridge Main Span, Glisan and Oregon Street Ramps

Design for reinforcement of structural steel section; traffic control signals and gates for drawbridge operation; design for attachment of rail and LRT loadings, electrification and LR traffic control signals.

Produce contract drawings specifications, bid and contract documents and advertise for bid proposals.

Award contracts, manage and provide construction engineering support and inspection during the construction stages for Tri-Met Banfield Project Civil Engineering Section.

c. Holladay Ramp

Design modification of the existing ramp connecting to Holladay Street from the east end of the Steel Bridge to accommodate light rail.

Produce contract drawings, specifications, bid and contract documents and advertise for bid proposals.

Award contracts, manage and provide construction engineering support and inspection during the construction stages for Tri-Met Banfield Project Civil Engineering Section.

2. Banfield (16th Avenue - 87th Avenue Section)

a. Banfield Light Rail Trackway Grade

Design drainage, grading, noise and shoulder barriers, walls, structures, ramp for LRT between Holladay Street and Banfield utilities. This work is to provide the prepared subgrade for light rail facility and all other elements except for light rail trackwork, electrification, signals, communications and stations.

Produce contract drawings, specifications, bid and contract documents and advertise for bid proposals.

Award contracts, manage and provide construction engineering support and inspection during the construction stages for Tri-Met Banfield Project Civil Engineering Section.

b. Banfield Highway Relocation Work (16th Avenue - 87th Avenue Section)

Design drainage, grading, walls, barriers, city street overpass structures, ramp structures, relocation of utilities and paving for the relocation and reconstruction of the existing Banfield (I-84) Freeway between 16th Avenue and 87th Avenue, providing six twelve-foot lanes with eight-foot shoulders and a ten-foot median. (The same number of lanes as exist at present are to be rebuilt).

Produce contract drawings, specifications, bid and contract documents and advertise for bid proposals.

Award contracts, manage and provide construction engineering support and inspection during the construction stages for this work.

3. I-205 (Banfield E. Burnside) Section

a. Banfield - Gateway Station Ramp

Design for grading, drainage, walls and ramp structure to Banfield from the Gateway Station.

Produce contract drawings, specifications, bid and contract documents and advertise for bid proposals.

Award contracts, manage and provide construction engineering support and inspection during the construction stages for Tri-Met Banfield Project Civil Engineering Section.

b. Glisan Street Underpass

Design for light rail structure crossing beneath Glisan Street.

Produce contract drawings, specifications, bid and contract documents and advertise for bid proposals.

Award contracts, manage and provide construction engineering support and inspection during the construction stages for Tri-Met Banfield Project Civil Engineering Section.

c. Gateway - East Burnside

Design for grading, drainage, walls and noise barriers for the light rail facility between Gateway Station and East Burnside Street.

Produce contract drawings, specifications, bid and contract documents and advertise for bid proposals.

Award contracts, manage and provide construction engineering support and inspection during the construction stages for Tri-Met Banfield Project Civil Engineering Section.

EXHIBIT B

STATE HIGHWAY RELOCATION AND TRANSIT WORK

BANFIELD LIGHT RAIL PROJECT
CAPITAL COST ESTIMATE

(1)	(2)	(3)	(4)	(5)	(6)	(7)
CONTRACT NO.	CONTRACT DESCRIPTION	BASE DOLLARS (In Thousands) MID-APRIL 80	SCHEDULED NOTICE TO PROCEED MID-MONTH	MIDPOINT OF ACTIVITY	ESCALATION FACTOR	COST AT TIME EXECUTION (In Thousands)
168N/6001	Right-of-Way Acquisition	\$12,705	1/81	11/81	1.20	\$15,246
0	Support Services	2,538	7/80	6/83	1.43	3,630
189N/5020	Professional Services	1,220	1/81	10/82	1.33	1,622
189N/6010	Line Section 1 (87th Ave. to 58th Ave.)	18,756	10/82	9/83	1.47	27,572
189N/6020	Line Section 2 (60th Ave. to 39th Ave.)	10,335	11/82	10/83	1.49	15,399
189N/6030-6040	Line Section 3 & 4 (39th Ave. to 16th Ave.)	24,960	5/82	8/83	1.46	36,442
189N/6060	Steel Bridge & Ramps Const.	7,902	5/83	5/84	1.59	12,564
189N/6070	Line Section 5 (I-205 Banfield to E. Burnside)	7,324	8/82	8/83	1.46	10,693
0	Contingencies	2,538				3,619
	TOTAL	88,278				126,787
	Federal Funding Limitation			\$125,787 x 85% =		107,769

EXHIBIT C

BANFIELD PROJECT - REAL ESTATE ACQUISITION

<u>LOCATION</u>	<u>FILE</u>	<u>ESTIMATED ACQUISITION AND RELOCATION COST</u>		<u>TITLE VESTED IN</u>
		<u>1980 BASE \$</u>	<u>ESCALATED</u>	
<u>DOWNTOWN SEGMENT:</u>				
11th & Morrison - Yamhill 51528)				
11th & Morrison - Yamhill 51529)		\$ 782,500	\$ 892,050	Tri-Met
<u>BANFIELD SEGMENT:</u>				
I-5 - 47th Ave.	51147	1,676,000	1,910,640	State
I-5 - 47th Ave.	51148	1,420,000	1,618,800	State
I-5 - 47th Ave.	51149	185,000	210,900	State
47th Ave. -56th Ave.	51150	415,000	473,100	State
47th Ave. -56th Ave.	51151	200,000	228,000	State
47th Ave. -56th Ave.	51307	88,000	100,320	State
47th Ave. -56th Ave.	51308	125,000	142,500	State
47th Ave. -56th Ave.	51309	139,000	158,460	State
47th Ave. -56th Ave.	51310	9,600	10,944	State
47th Ave. -56th Ave.	51311	7,600	8,664	State
47th Ave. -56th Ave.	51312	1,000	1,140	State
47th Ave. -56th Ave.	51313	11,000	12,540	State
47th Ave. -56th Ave.	51314	16,000	18,240	State
47th Ave. -56th Ave.	51315	16,000	18,240	State
47th Ave. -56th Ave.	51316	7,500	8,550	State
47th Ave. -56th Ave.	51317	2,000	2,280	State
47th Ave. -56th Ave.	51318	5,000	5,700	State
47th Ave. -56th Ave.	51319	4,000	4,560	State
47th Ave. -56th Ave.	51320	1,000	1,140	State
58th Ave. - I-205	51321	165,000	188,100	State
58th Ave. - I-205	51323	19,000	21,660	State
Hollywood Sta. & Ramps	51530	100,000	114,000	State
(43rd Ave.)	51754	235,000	267,900	Tri-Met
(43rd Ave.)	51755	70,000	79,800	State
(43rd Ave.)	51756	2,000	2,280	Tri-Met
Union Pac. R.R. Easement (18-45 Ave.:70-92 Ave.) (60% of Total)	49425	1,042,211	1,188,121	State
(Temporary Construction Easements)	52278 Through 52300 & 52423	121,800	138,852	State
I-205 Gateway Station	51413	1,000,000	1,140,000	Tri-Met

<u>LOCATION</u>	<u>FILE</u>	<u>ESTIMATED ACQUISITION AND RELOCATION COST</u>		
		<u>1980 BASE \$</u>	<u>ESCALATED</u>	<u>TITLE VESTED IN</u>
<u>EAST BURNSIDE SEGMENT:</u>				
181st Park & Ride	51409	\$ 475,000	\$ 541,500	Tri-Met
Unidentified Street Widening, etc.		350,000	399,000	Tri-Met
Unidentified P&R Lots		329,500	375,630	Tri-Met
<u>PORTLAND TRACTION SEGMENT:</u>				
Portland Traction R/Way	51715	1,600,000	1,824,000	Tri-Met
<u>GRESHAM SEGMENT:</u>				
City Hall Station P&R	51800)	700,000	798,000	Tri-Met
City Hall Station P&R	51838)			
Central Station	51540	67,500	76,950	Tri-Met
Terminal Station P&R	51631)	800,000	912,000	Tri-Met
Terminal Station P&R	51632)			
Maintenance Facility:	51137	128,000	140,920	Tri-Met
	51138	134,000	147,760	Tri-Met
	51139	128,000	140,920	Tri-Met
	51140	128,000	140,920	Tri-Met
	51141	98,000	111,720	Tri-Met
	51142	108,000	123,120	Tri-Met
	51143	<u>106,000</u>	<u>120,840</u>	
	TOTALS	\$13,018,211	\$14,820,761	
	Appraisals	231,100	242,839	
	Contingencies	<u>160,000</u>	<u>182,400</u>	
	TOTAL	<u>\$13,409,311</u>	<u>\$15,246,000</u>	

44 files
(+ Unidentified)

**ACQUISITION PROCEDURES
BURNSIDE UNIT
BANFIELD LIGHT RAIL PROJECTS
May 31, 1983**

Explanation: This procedure is for the purpose of defining the steps to be taken in order that Tri-Met can meet the time schedule of the Burnside Unit, Banfield Light Rail Project. These procedures are necessary to meet the critical time schedule on this project. OSHD will comply with all of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, also known as the Uniform Act.

I. Schedule

A meeting between the Oregon State Highway Division and Tri-Met will be held each month to review the workload and establish acquisition schedules.

II. Financing

All costs on this project will be paid by Tri-Met as indicated in the original right-of-way agreement dated November 7, 1980. In order to expedite payment for the right-of-way acquired for the Burnside Unit, Tri-Met agrees to make an initial deposit of \$200,000 into the local government investment pool before the acquisition project begins. When the funds are withdrawn by State to pay for the acquired right-of-way, Tri-Met will be notified and additional funds will be deposited, as soon as practicable, in order to keep the fund at its original level.

III. Coordination and Supervision

All field activities in the acquisition process will be centered in two persons; Ron Higbee for Tri-Met; and Steven Green, Right of Way Supervisor for the Oregon Highway Division. At the outset coordination meetings will be held between those two persons twice a month until the acquisition procedures become routine. After that, meetings will be held regularly once a month on an informal basis so that both parties can be assured the acquisition schedule is being met. Tri-Met Representatives that can provide field information such as staking, and individual problem solving, will be named at project start. Sufficient field crews must be available for driveway staking, property corner setting, etc.

IV. Personnel

The Right of Way Section will proceed utilizing its regular acquisition crew. When the number of files and the difficulty are disclosed, the hiring of temporary personnel to augment the Metro crew will be decided upon.

V. Acquisition Procedure

1. Materials pertaining to acquisition will be delivered in the following order:
 - a. East Unit LS-2A Phase I
 - b. East Unit LS-2A Phase II
 - c. West Unit LS-2B
2. Materials Delivered prior to start of each phase:
 - a. Right-of-way map -- completed and checked for agreement to right-of-way descriptions.
 - b. Right-of-way descriptions checked to agree with right-of-way map.
 - c. Construction plans with sufficient detail to correlate between the right-of-way map and the work to be done.
 - d. Cross-sections portraying the original ground and "to be constructed" template.
 - e. Title information on each file.
3. Document Preparation:

Descriptions furnished by Tri-Met will be utilized by OSHD for preparing documents. Tri-Met shall be responsible for checking descriptions or other data furnished to the Right of Way Section.
4. Information will be transmitted to Region Right of Way Supervisor Steven Green on a phase basis following the schedule shown in I.

VI. Appraisal Manpower

As each phase is received, manpower will be assessed and determined whether fee appraisers, in-house staff, or additional personnel will be required on each successive phase. Until receipt of actual documents and program, no additional personnel will be hired.

VII. Appraisals

The most difficult parcels will be given first priority. Appraisals will be reviewed in the field by the Appraisal Supervisor. Before and after appraisals will not be required unless the taking impacts the remainder substantially. If appraisals are found acceptable, negotiations will be authorized by the Right of Way Supervisor.

VIII. Negotiations

Negotiations will be carried on by the Right of Way staff negotiators. Right-of-way settlements will be discussed with Right of Way Administration. If approved by Right of Way Administration, the administrative settlement will be concluded by the field supervisor. Substantial right-of-way administrative settlement approval will be discussed with the Tri-Met General Manager by direct contact between he and Right of Way Administration. A weekly option report will be approved by the Tri-Met General Manager. After his approval payment will be made.

IX. Condemnation

All condemnation actions will be in the name of the State under authority granted in ORS 366.775. Upon completion of the project, all right-of-way will be transferred to Multnomah County and all other property acquired will be transferred to Tri-Met.

X. Documents and Payment

All documents and payment information will be prepared and processed by Right of Way Administration. All property will be acquired in the name of the State. Upon completion of the project, all right-of-way will be transferred to Multnomah County and all other property acquired for the project will be transferred to Tri-Met.

XI. Property Owner Contacts

Subject to the below. The Oregon Highway Division accepts responsibility for the acquisition program, all contacts with the property owners will be the responsibility of Highway personnel. Responsibility will be understood to occur on the first 20 files on Phase I East Unit when the staking is complete and/or when the appraiser first discloses his presence.

It is understood that Tri-Met will have active and substantial contact and involvement with graters and other interested parties along E. Burnside Street but the parties agree that this involvement will be complete by December 31, 1983. All contacts and commitments to property owners or tenants shall be documented in written form, forwarded to ODOT, and included in each grantor's file.

XII. Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970

The Oregon Highway Division will follow the acquisition procedures outlined in UMTA Circular C45301 dated March 21, 1978 with the following exceptions:

1. Chapter II, Section 13 - Page II-4

d. Before and After Valuation.

The "before and after" method of Valuation will be used in partial acquisitions except where there is no damage to the remaining property or a small acquisition of low value is taken from a large property of high value. This exception is permissible only when the element of damage to the remainder is a small part of the value assigned to the acquisition.

2. Chapter II, Section 15 - Page II-9

a. Appraisals Contracted.

The State will secure at least two appraisals for each parcel to be acquired except when the value is estimated to be under \$100,000 at which time only one appraisal will be required. There will be no value limitation on appraisals made by qualified State Highway Division staff appraisers.

3. Chapter II, Section 17 - Page II-10

a. Employment of Fee Appraisers and Specialists.

(3) The appraiser selection, contract and fee are in accordance with OMB Circular A-102.

4. Chapter III, Section 20 - Page III-3

b. Initiation of Negotiation.

(4) Delete "Revisions must receive prior UMTA approval."

Paragraph (6) should be revised as follows:

(6) All offers of just compensation must be approved by the appropriate UMTA official when the offer is in excess of \$250,000. Exceptions may be made in certain situations with prior UMTA approval.

c. Summary Statement of the Basis of Just Compensation.

(5) Delete (conflicts with Chapter II, Section 15 a.)

- (10) If there are separately held interests in the real property to be acquired the State will present the offer to all interested parties.

5. Chapter III, Section 22.5 - Page III-14

An Administrative Settlement is any settlement made, or authorized to be made, by a responsible employee of the Grantee in excess of the Grantee's approved just compensation prior to transfer of the parcel to legal authority for further handling.

a. Basis for Administrative Settlement.

A designated Grantee representative may make an Administrative Settlement for files if the administrative settlement does not exceed \$10,000 or 10% above the reviewed appraisal which ever is greater. Files over these limits will require prior UMTA approval by direct contact. However, indiscriminate use of the method is not implied, nor is litigation to be avoided only because of the cost of trial when circumstances indicated otherwise. In arriving at a determination to make an Administrative Settlement, the designated representative should carefully review the parcel file giving full consideration at all pertinent information including:

- (1) The appraiser's opinion of value;
- (2) Just compensation as recommended by the reviewing appraiser;
- (3) Recent court awards for similar type property;
- (4) The negotiator's recorded information;
- (5) The estimate of trial cost; and
- (6) The opinion of legal counsel.

b. Documentation.

The Grantee's file is to be appropriately documented whenever an Administrative Settlement is made. In all instances the reasoning for the settlement should be set forth in writing. However, it is recognized that the extent of written explanation is a judgmental determination and should be consistent with the situation, circumstances and the amount of money involved. The file will indicate that the approved amount was established prior to any agreement with the owner. Such approval may be oral with subsequent written verification by the responsible Grantee representative placed in the file prior to payment.

Immediately after approving an Administrative Settlement the Right of Way Manager will send UMTA Region X a copy of all relevant documents including a written justification for the settlement.

c. Noncompensable.

Should the settlement include the payment of items considered as noncompensable under Federal law, the amounts paid for such items will be established and excluded from the Grantee's claim for Federal participation in the settlement.

**AMENDMENT NO. 2 TO RIGHT OF WAY SERVICES AGREEMENT
BANFIELD TRANSITWAY PROJECT
LIGHT RAIL ELEMENT**

THIS AMENDMENT NO. 2 identifies changes relative to that portion of the Agreement between the Gateway Transit Center and Gresham as it affects the LS-2 Section of the Banfield Transitway Project. Attached are four exhibits:

- EXHIBIT "1": The original Agreement dated November 7, 1980 on which Paragraphs A(1) (b) & (d); A(2); A(3); A(4) (c); A(5) (b)-Second Sentence; and A(6) (b) have been voided. No other changes.
- EXHIBIT "2": Amendment to the original Agreement dated July 9, 1981 on which Paragraph C (b) has been voided. No other changes.
- EXHIBIT "3": In the event of any conflict between the terms and conditions of the State/Tri-Met Cooperative Work Agreement dated July 8, 1982 and this Amendment No. 2, the terms of this Amendment shall prevail.
- EXHIBIT "4": Acquisition procedures specifically designed in order to meet the time schedule on this specific section of the Banfield Project.

These four Exhibits provide in this Amendment No. 2, a specific solution to the time schedule problem on this portion of the Project so that construction of the Light Rail elements will be functional as required for the overall plan of the Banfield Transitway.

Dated this 8 day of July, 1983.

TRI-COUNTY METROPOLITAN
TRANSPORTATION DISTRICT OF
OREGON

STATE OF OREGON, by and through its
DEPARTMENT OF TRANSPORTATION,
Highway Division

General Manager

J. B. Boyd, Right of Way Manager

APPROVED AS TO FORM

APPROVED AS TO LEGAL SUFFICIENCY

Contracts & Legal Services

Assistant Attorney General and Counsel



APPENDIX C

TEMPORARY RIGHT-OF-USE AGREEMENT



CS560 CLEVELAND AVENUE TO TAYLOR AVENUE
AGREEMENT
BETWEEN DEPARTMENT OF TRANSPORTATION
AND
METROPOLITAN ATLANTA RAPID TRANSIT AUTHORITY

This agreement is made this 31st day of July, 1984, by and between the Department of Transportation, an agency of the State of Georgia, hereinafter sometimes referred to as Georgia DOT, and the Metropolitan Atlanta Rapid Transit Authority, hereinafter sometimes referred to as MARTA.

WHEREAS, the citizens of Georgia have declared that the public transportation of passengers for hire is an essential governmental function and a public purpose; and

WHEREAS, the citizens of Fulton and Dekalb Counties and the City of Atlanta have authorized the creation of a public authority for this purpose; and

WHEREAS, the General Assembly of Georgia did in fact, create the Metropolitan Atlanta Rapid Transit Authority pursuant to that authorization; and

WHEREAS, under Georgia Laws 1975, Page 98, the General Assembly of Georgia has authorized Georgia DOT to grant MARTA the right to occupy or traverse portions of the right-of-way of roads on the State Highway System.

NOW THEREFORE, pursuant to such authority granted by the General Assembly of Georgia, Georgia DOT and MARTA agree as follows:

ARTICLE I

For and in consideration of the mutual premises and covenants herein contained, the public benefits accruing to the citizens of Georgia, the agreement by MARTA to the conveyance to Georgia DOT as set forth in Article II hereof, and the sum of \$1.00 in hand paid to Georgia DOT by MARTA, the

receipt and sufficiency of which is hereby acknowledged, Georgia DOT has granted and by these presents does hereby grant unto MARTA, subject to the terms, limitations and conditions set forth hereinafter, a temporary right to use a certain portion of the right-of-way of Main Street (A/K/A U.S. 29, S.R. 14 and S.R. 139), hereinafter sometimes referred to as Main Street in East Point, Georgia, for all purposes necessary for the widening of Main Street, said right to use being hereinafter referred to as "right-of-use" and said right-of-way portion being hereinafter referred to as the "right-of-use area" and described in Article III.

ARTICLE II

In further consideration of the mutual premises and covenants herein contained, the conveyance by Georgia D.O.T. to MARTA of the temporary right of use pursuant to Article I of this Agreement and the sum of \$1.00 in hand paid by Georgia D.O.T. to MARTA, the receipt and sufficiency of which is hereby acknowledged and as authorized by the Board of directors of MARTA in consequence of its determination that the same is necessary to facilitate the location of a MARTA transportation project upon the real property of another, MARTA hereby agrees to grant unto Georgia D.O.T., to the extent of MARTA's rights, title and interests and without warranty, a permanent easement for road purposes, in the area (hereinafter referred to as the "Easement Area") described hereinbelow as Parcel "A", said Easement Area being more particularly described as follows:

Easement Area - PARCEL "A"

All THAT TRACT OF PARCEL OF LAND lying and being in Land Lots 157 and 158 of the 14th District of Fulton County, Georgia, and being more particularly described as follows:

BEGINNING at a point on the proposed right-of-way line of Main Street, which point is located north 37°05'45" east, a distance of 184.86 feet from MARTA Monument SW-4, located at Coordinates North 1,337,116.184 and East 416,337.832, 1927 Georgia Transverse Mercator Grid System, West Zone, as adjusted in 1974 for Metropolitan Atlanta Rapid Transit Authority, as set forth in Plat Book 107, Pages 1 through 18, in the Office of the Clerk of the Superior Court of Fulton County, Georgia; thence along said proposed right-of-way line of Main Street the following courses: south 17°36'52" west,

134.48 feet to a point; thence south 15°55'02" west, 202.59 feet to a point; thence south 17°36'52" west, 158.02 feet to a point; thence south 20°16'23" west, 526.33 feet to a point; thence north 89°30'34" west, 18.28 feet to a point on the existing easterly right-of-way line of Main Street; thence north 17°38'03" east, a distance of 317.76 feet along said right-of-way line to a point; thence continuing along said right-of-way line south 72°21'57" east, a distance of 22.00 feet to a point; thence continuing along said right-of-way line north 17°38'03" east, a distance of 738.39 feet to a point; thence along the proposed right-of-way line of Main Street south 72°23'08" east, a distance of 8.52 feet to a point; thence continuing along said proposed right-of-way line south 08°09'08" west, a distance of 30.41 feet to the POINT OF BEGINNING, said tract or parcel of land contains 20,658 square feet.

The above described Easement Area is the same as that property shown as Parcel "A" on the plat attached hereto as Exhibit "A", Sheet 1 of 1.

Georgia DOT and MARTA hereby acknowledge that MARTA has entered into that certain Detailed Agreement Between Metropolitan Atlanta Rapid Transit Authority and Atlanta and West Point Rail Road Company for Project Number CS560, dated November 29, 1983 (hereinafter referred to as the "MARTA-A&WP CS560 Agreement"). MARTA hereby covenants that under and by virtue of the MARTA-A&WP CS560 Agreement, MARTA obtained equitable title to the above described Easement Area, and that said Agreement provides for the conveyance of legal title to the above described Easement Area to MARTA within a short described period of time. MARTA hereby covenants and agrees to convey to Georgia DOT legal title to the above described permanent easement no earlier than the date of acquisition by MARTA of such legal title, and no later than December 1, 1984.

MARTA does not now, nor will MARTA, either expressly or by implication, warrant the title to any of the property or interests therein which will be acquired from the A & WP and made subject to the hereinabove described permanent easement.

The permanent easement hereinabove agreed to be conveyed by MARTA to the Georgia DOT shall terminate without liability to MARTA at such time that the property in which said permanent easement is granted ceases to be planned for or to be used for public road purposes. "Public road" shall be as defined in the Official Code of Georgia Annotated Section 32-1-3 (24).

ARTICLE III

GEORGIA DOT hereby grants, and by these presents does grant, unto MARTA, subject to the terms, limitations and conditions hereinafter set out, a

temporary right-of-use over, under, across and through the following described portion of the right-of-way of Main Street for purposes of performance of MARTA Project No. CS560, said right to remain in effect, upon the terms and conditions set forth below, until the work performed under MARTA Project No. CS560 has been accepted by MARTA. Said portion of the right-of-way subject to such temporary right-of-use is more particularly described hereinbelow:

Temporary Right-of-Use - PARCEL "B"

ALL THAT TRACT OR PARCEL OF LANE lying and being in Land Lot 157 of the 14th District of Fulton County, Georgia, and being more particularly described as follows:

BEGINNING at a point north 27°07'03" east, a distance of 176.71 feet from MARTA Monument SW-4, located at Coordinates North 1,337,116.184 and East 416,337.832, 1927 Georgia Transverse Mercator Grid System, West Zone, as adjusted in 1974 for Metropolitan Atlanta Rapid Transit Authority, as set forth in Plat Book 107, Pages 1 through 18, in the Office of the Clerk of the Superior Court of Fulton County, Georgia; thence south 72°23'08" east, a distance of 12.48 feet to a point; thence south 17°38'03" west, a distance of 805.00 feet to a point; thence north 72°21'57" west, a distance of 35.00 feet to a point; thence north 17°35'53" east, a distance of 700.00 feet to a point; thence south 72°23'08" east, a [portion of contract illegible] east, a distance of 105.00 feet to the POINT OF BEGINNING. Said tract or parcel contains 25,752 square feet.

The above described Right-of-Use is the same as that property shown as Parcel "B" on the plat attached hereto as Exhibit "A", Sheet 1 of 1.

Georgia DOT does not, either expressly or by implication, warrant the title to the property over which the hereinabove described right-of-use is conveyed.

ARTICLE IV

MARTA agrees that all construction which is undertaken within the right-of-use area which is granted to MARTA by this agreement shall be in accordance with the construction plans and specifications for MARTA Project No. CS560, which plans and specifications have been previously approved in writing by Georgia DOT and are on file at the office of the Assistant General

Manager for Transit system Development [MARTA], Atlanta, Georgia. No change in:

- [a] Horizontal Alignment;
- [b] Vertical Alignment;
- [c] Required limits of rights-of-use;
- [d] Type of aerial and at-grade structures;
- [e] Drainage structures and types;
- [f] Any design that would affect the safety of the traveling public on Main Street as determined by Georgia DOT;

within the limits of construction on this right-of-use area shall be implemented without the prior written approval of Georgia DOT, with the concurrence of the Federal Highway Administration, hereinafter sometimes referred to as FHWA.

Georgia DOT's approval of these plans and specifications or any changes therein does not carry with it the responsibility for errors or faulty designs not discovered prior to the approval. The responsibility remains with MARTA.

ARTICLE V

Georgia DOT shall have the right, with the concurrence of the FHWA, to terminate the right-of-use herein granted, without liability to Georgia DOT, for any of the following reasons:

- [a] Failure of MARTA to use the right-of-use area exclusively for the purposes set out herein;
- [b] Failure of MARTA to construct MARTA Project No. CS560 in accordance with the plans and specifications approved by Georgia DOT;
- [c] MARTA's making construction changes in MARTA Project No. CS560 without the approval of Georgia DOT for those items enumerated in Article IV;

Provided, however, that prior to Georgia DOT's exercise of the right of termination herein retained Georgia DOT shall have given MARTA written notice specifying MARTA's non-compliance hereunder and MARTA shall have failed to correct such non-compliance for a period of 90 days from the date of said notice.

ARTICLE VI

In granting the right-of-use to MARTA, Georgia DOT does not certify or in any manner covenant that the right-of-use area is free and clear of utilities or buildings on the right-of-use area by permit or otherwise. The granting of this right-of-use shall not be considered, or otherwise construed, as an expression by Georgia DOT that the facilities or utilities be required to relocate.

Any facility or utility relocation which may be required by MARTA's plans shall be negotiated directly between MARTA and the appropriate party upon mutually agreeable terms, subject to any permits that may be required from Georgia DOT and at no cost to Georgia DOT.

ARTICLE VII

MARTA covenants and agrees that it shall at all times indemnify and save harmless the Georgia Department of Transportation and the State of Georgia from any and all responsibility for damages or liability, or both, arising out of MARTA's exercise of the right-of-use herein granted upon Main Street which result from:

[1] The installation, construction, maintenance or repair, or any combination of the foregoing, of any structure, or any part or appurtenances thereof, constructed by or on behalf of MARTA on or across the right-of-way of Main Street.

[2] The construction, reconstruction, repair or maintenance of Main Street until any such work has been accepted by Georgia DOT; or

[3] Any combination of any of the foregoing.

The covenants set out above are intended to, and do indemnify and save harmless the Georgia Department of Transportation and the State of Georgia not only for damage and liabilities in favor of third persons, but also damages to property, structures, and improvements owned by Georgia Department of Transportation or the State of Georgia.

MARTA further covenants and agrees that it shall at all times indemnify and save harmless the Georgia Department of Transportation and the State of Georgia from any damages caused by water or silting or otherwise occurring as a consequence either directly or indirectly, of MARTA's relocation of, additions to or modifications of Georgia DOT's existing storm sewer facilities.

The covenants contained herein shall not be limited by the terms of any insurance which may be provided for herein. Said covenants shall not terminate upon the completion of construction but shall remain in full force and effect until the right of use herein granted is terminated.

ARTICLE VIII

MARTA covenants and agrees to take all reasonable precautions to preclude unauthorized persons access to the job site.

ARTICLE IX

All construction on Main Street constructed or reconstructed by MARTA shall be in conformance with Georgia DOT's 1983 Standard Specifications and all supplements thereto made available to MARTA by Georgia DOT. All drainage, roadway surfaces, signing and striping shall be at least equivalent to those utilized by Georgia DOT on projects let to contract by Georgia DOT.

Upon completion of the widening of Main Street under MARTA Project No. CS560, all curbs and gutters and all portions of the roadway surface constructed or reconstructed by MARTA shall be in conformance with Georgia DOT's 1977 Standard Specifications and any supplemental specifications thereto made available to MARTA by Georgia DOT.

During all construction operations, MARTA shall follow the traffic control sequences shown on the construction plans for MARTA Project No CS560 previously approved by Georgia DOT. MARTA contractor traffic control sequences subsequently approved by Georgia DOT shall become a part of the construction plans for MARTA Project No. CS560 and shall supersede all traffic control sequences previously approved [portion of contract illegible] traffic control sequences shall be submitted to Georgia DOT at least two weeks prior to the date of proposed implementation. MARTA shall make no changes in these sequences without the prior written approval of Georgia DOT.

MARTA shall provide, erect and maintain, or cause to be provided, erected and maintained, all necessary barricades, suitable and sufficient lights, danger signals, signs and other traffic control devices and shall take all necessary precautions for the protection of the safety of the traveling public. Travel lanes closed to traffic shall be protected by effective barricades, which barricades shall be lighted during hours of darkness. Suitable warning signs shall be provided to properly control and direct traffic.

MARTA shall furnish, install and maintain, or cause to be furnished, installed and maintained, all necessary barricades, warning signs and other protective devices in accordance with the current edition of the "Georgia Manual on Uniform Traffic Control Devices" or as directed by Georgia DOT to better fit conditions encountered in the field. Temporary signs may be reused, provided they are in good condition and legible. All barricades, warning signs and other protective devices shall be kept in good and legible condition while in use. Warning lights shall be operative while in use.

As soon as construction advances to the extent that temporary barricades and signs are no longer needed to inform the traveling public, such barricades and signs shall be removed or shall be masked so as not to confuse the traveling public.

For at least one week prior to each change in traffic lanes or patterns on Main Street as authorized by this document, MARTA shall provide extensive

radio, television and newspaper messages to the public advising of the traffic restrictions to be encountered on Main Street during construction on MARTA Project No. CS560. These announcements shall contain, but not be limited to, the specific type of restriction, the reason for the restriction, the beginning and ending dates of the restriction, suggestions for alternate routing, and alternate dates in case of inclement weather.

ARTICLE X

Prior to the beginning of any work on MARTA Project No CS560, MARTA shall certify to Georgia DOT that it has obtained the following minimum amount of insurance:

- [1] Workmen's Compensation Insurance in accordance with the laws of the State of Georgia.
- [2] Public Liability Insurance in an amount not less than \$500,000 for injuries, including those resulting in death to any one person, and in an amount not less than \$1,000,000 on account of any one occurrence.
- [3] Property Damage Insurance in an amount not less than \$600,000 for damages resulting on account of any occurrence, with an aggregate limit of \$1,000,000.
- [4] Valuable Papers Insurance in an amount sufficient to assure the restoration of any plans, drawings, field notes, or other similar data relating to the work covered by this project.

Insurance shall be maintained in full force and effect during the life of MARTA's System.

ARTICLE XI

Subject to Georgia DOT's review and approval, MARTA shall be responsible for the design and construction or rearrangements of Georgia DOT's storm

sewer facilities, where necessary. Rearrangement of, additions to and deletions from existing storm sewers, culverts and appurtenant structures shall provide service at least equivalent to that of the facility replaced by such rearrangements, additions and deletions. Such replacement shall be constructed so as not to increase the flow, speed or amount of water placed upon the property, or within the drainage facilities, downstream of the facility. MARTA assumes the responsibility and liability for any damage which may result from any increased flow, speed or amount of water.

ARTICLE XII

All work done by MARTA on Georgia DOT right-of-way and all changes made to Georgia DOT's existing facilities shall be in conformance with detailed construction plans previously approved by Georgia DOT. No change affecting those items enumerated in Article IV affecting Georgia DOT's right-of-way facilities shall be made without the prior written approval of Georgia DOT, with the concurrence of FHWA.

ARTICLE XIII

MARTA shall notify Georgia DOT in writing of the date the work is to begin on the right-of-use area. MARTA shall notify Georgia DOT of the date, time and place of the preconstruction conference and Georgia DOT will have the right to attend. MARTA shall furnish Georgia DOT with a construction schedule for work to be done on this property. MARTA shall keep this schedule up-dated and accurate by timely revisions.

ARTICLE XIV

MARTA shall not, nor shall it allow any of its contractors to, close any portion of Main Street until Georgia DOT has reviewed and approved the Contractor's Traffic Control Plan (TCP); proposed plans for the signing; lighting; displaying of warning signs, lights and devices; erecting protective devices in the area of lane closures are the Contractor's method of operation to institute the necessary lane closures. This plan shall show the number and kind of equipment on the project to be used, certification

that necessary materials are stockpiled on the project to accomplish the closure and that an adequate number of qualified men are on hand to prosecute the work to completion, maintain it and remove it. Any recommendations made by Georgia DOT will be included within the plans of MARTA and any of its contractors without cost to Georgia DOT.

ARTICLE XV

MARTA shall be directly responsible for adequate construction supervision and testing of materials. Although MARTA may employ a consultant to provide construction engineering services, it shall be the responsibility of MARTA to provide a full-time resident engineer who acts directly for MARTA and whose decisions are binding on MARTA, to be in responsible charge and direct control of the project at all times.

ARTICLE XVI

Georgia DOT and FHWA shall have the right to inspect MARTA's construction on Georgia DOT right-of-way to insure compliance with the approved plans. Georgia DOT's representative will be the Field District Engineer of the Seventh Highway District or his authorized representative.

Any deviation from the approved plans discovered during Georgia DOT field inspections shall be noted in writing to MARTA's Resident Engineer. Any safety hazards to the traveling public discovered during field inspections shall be noted in writing to MARTA's Resident Engineer and shall be corrected immediately by MARTA. Should MARTA fail to correct these safety hazards, Georgia DOT or its agent may do so and Georgia DOT may bill MARTA for the cost thereof, and MARTA shall pay such cost within thirty [30] days of the receipt of said bill.

ARTICLE XVII

MARTA will at all times provide adequate lateral and subterranean support to prevent damage to those parts of the Main Street right-of-way and facilities located thereon not covered by this agreement. All work performed

on the right-of-way will be done in such a manner that adequate lateral and subterranean support will be provided from the right-of-way to adjacent property and any facilities located thereon.

ARTICLE XVIII

All records maintained by MARTA concerning MARTA Project No. CS560 shall be available upon reasonable notice for inspection by Georgia DoT during normal business hours at the place where the records are normally kept during construction of the project and for a period of three [3] years after completion of construction of the project.

ARTICLE XIX

Upon notice from MARTA that the project is complete, Georgia DOT will make an inspection in anticipation of approving the work done in the right-of-use area. Approval will not be given until all deviations from the plans and specifications and accrued changes which have been cited to MARTA have been corrected to the satisfaction of Georgia DOT. MARTA shall furnish to Georgia DOT two complete sets of as built plan prints.

ARTICLE XX

MARTA shall not use, or allow its contractors or sub-contractors to use, any part of the right-of-way of Main Street other than that portion of the right-of-way included in the right-of-use area described in this Agreement, for the parking of vehicles or construction equipment or for the storage or stockpiling of materials. Said storage or stockpiling of materials shall be limited to that required for actual MARTA Project No. CS560 construction and for the period of time required for said construction.

ARTICLE XXI

The responsibility for all testing, planning, design, construction and maintenance of MARTA Project No. CS560 is, and shall remain with, MARTA. Plan approvals, final construction plans, and the results of tests made by

Georgia DOT of soils or other conditions which may be relied upon by MARTA are for Georgia DOT's use in managing its property. All risks and liabilities resulting from the use of the above testing, planning, design, construction or maintenance, or any combination thereof, of the project shall remain with MARTA, which shall indemnify and save harmless Georgia DOT and the State of Georgia from any and all such risks and liability.

IN WITNESS WHEREOF, the parties have set their hands and affixed their seals the day and date first set out above.

RECOMMENDED:

APPROVED AS TO LEGAL FORM:

OFFICE HEAD

GENERAL COUNSEL, METROPOLITAN
ATLANTA RAPID TRANSIT AUTHORITY

RECOMMENDED:

METROPOLITAN ATLANTA RAPID
TRANSIT AUTHORITY

DIVISION DIRECTOR

BY: _____
KENNETH M. GREGOR
GENERAL MANAGER

RECOMMENDED:

ATTEST:

STATE HIGHWAY ENGINEER

ASST. SECRETARY, METROPOLITAN
ATLANTA RAPID TRANSIT AUTHORITY

BY: _____
COMMISSIONER
IN THE PRESENCE OF

WITNESS

WITNESS

ATTEST:

SECRETARY AND TREASURER

APPROVED AS TO LEGAL FORM:

ASSISTANT ATTORNEY GENERAL

APPENDIX D

RIGHT-OF-WAY PURCHASE AND CONSTRUCTION AGREEMENT



AGREEMENT BETWEEN DEPARTMENT OF TRANSPORTATION,
STATE OF GEORGIA AND
METROPOLITAN ATLANTA RAPID TRANSIT AUTHORITY FOR
RIGHTS-OF-WAY
STATE ROUTE 400/MARTA NORTH LINE CORRIDOR

WHEREAS, the Metropolitan Atlanta Rapid Transit Authority (hereinafter called "MARTA") and the Georgia Department of Transportation (hereinafter called "DOT") both have respective responsibilities for the provision of transportation services in the State Route 400 Corridor;

WHEREAS, the Atlanta Regional Commission has placed the construction of both a highway element and a transit element in the State Route 400 Corridor between I-85 on the south and I-285 on the north in the Regional Transportation Plan and in the Transportation Improvement Program;

WHEREAS, the design being developed by DOT and coordinated with MARTA staff provides sufficient rights of way and proper geometry to accommodate either a rapid bus way or a heavy rail element in the State Route 400 median;

WHEREAS, the MARTA Board of Directors has, by resolutions dated September 22, 1986 and November 12, 1986, authorized the construction of a heavy rail line to be located primarily within the State Route 400 Corridor, the right-of-way location of said heavy rail line being more fully described in the Engineering Report incorporated in the Rapid Transit Contract and Assistance Agreement, as amended (the temporary and permanent right-of-way requirements for the MARTA heavy rail line as located within the State Route 400 Corridor being hereafter called the "MARTA North Line Corridor");

WHEREAS, DOT has proceeded with preliminary designs, public hearings and the necessary environmental studies covering the construction of the highway element plus the provision of space for MARTA;

WHEREAS, DOT and MARTA agree that DOT will purchase right-of-way and design and construct certain facilities in the median of State Route 400 for MARTA, and that MARTA will reimburse DOT in an amount estimated to be Sixty Million Dollars as MARTA's share of the costs of right-of-way, design and construction activities, said reimbursement for design and construction activities to be more fully defined and set forth in a separate agreement between MARTA and DOT.

WHEREAS, MARTA has expressed a willingness to proceed with the investment of funds proportional to its right-of-way acquisition costs; and

WHEREAS, both MARTA and DOT have sufficient authority vested in law to proceed with joint implementation of portions of the State Route 400 project.

NOW THEREFORE, both MARTA and DOT, in recognition of the public benefits that will flow from cooperative planning and joint participation in the implementation of the State Route 400 project and MARTA's North Line, agree as follows:

1. The DOT staff shall continue to engineer and develop State Route 400 with coordination from the MARTA engineering staff or its agent so that sufficient usable space for the MARTA North Line Corridor shall be provided in the median of State Route 400 and proper provision be made for the appropriately engineered entrances and exits into the State Route 400 median for MARTA's vehicles.

2. Within sixty (60) days of the date of this Agreement, DOT shall transfer or cause to be transferred to MARTA by quitclaim deed insurable fee simple title (subject only to such title exceptions or other as may be approved by MARTA) to all real property interests then owned by DOT which DOT acquired prior to October 1, 1987, and which constitute part of the MARTA North Line Corridor. DOT shall furnish to MARTA certificates of title for

all such real property interests and shall cure any and all title defects or objections which may arise with respect to such property (other than such defects or objections as may be approved in advance in writing by MARTA).

3. DOT shall coordinate with and assist Fulton County, Georgia in the preparation of instruments of conveyance and related documents, and the conveyance thereby to MARTA of real property interests presently owned by Fulton County, Georgia which constitute part of the MARTA North Line Corridor.

4. Except as may be independently acquired or owned by MARTA, and in addition to the transfers contemplated by Paragraph 2 of this Agreement, DOT shall acquire or cause to be acquired on MARTA's behalf all temporary and permanent right-of-way necessary for the MARTA North Line Corridor as located within the State Route 400 Corridor. DOT shall transfer or cause to be transferred to MARTA by quitclaim deed insurable fee simple title (subject only to such title exceptions as may be approved in advance in writing by MARTA) to all interests located within the MARTA North Line Corridor and such easements (temporary and permanent) as may be necessary for construction and operation of the Transit System within the MARTA North Line Corridor, subject, however, to such reserved easements as may be necessary for State Route 400 or other public road facilities crossing the MARTA North Line Corridor. MARTA shall have the right to review and approve in advance of any such conveyance the geographical description of the interest being conveyed. DOT shall also provide to MARTA, at no additional cost, construction and access easements within DOT right-of-way as mutually agreed upon for purposes of constructing and operating the MARTA North Line. It is understood and agreed that DOT shall make these conveyances and MARTA shall accept them as soon as possible after DOT's acquisition of the property.

5. Simultaneously with the conveyances by DOT to MARTA in accordance with Paragraph 4 of this Agreement, MARTA shall provide compensation to DOT, which compensation shall be equal to that proportion of Acquisition Costs directly attributable to the right-of-way so conveyed to MARTA. "Acquisition Costs" shall be the actual proportionate amount of (a) consideration paid for such right-of-way (excluding, however, the value of property interests

retained by DOT within the right-of-way conveyed to MARTA), (b) relocation and demolition costs, (c) appraisal costs and (d) other acquisition costs. MARTA's proportionate amount generally means the land in the median designated as MARTA right-of-way plus one-half (1/2) of the roadway side slopes. Where additional air rights are needed by MARTA, the proportionate amount will increase accordingly. It is understood by both parties that all acquisition costs may not be known at the time DOT transfers to MARTA the property interests MARTA needs because of condemnation and other factors. MARTA hereby agrees to compensate DOT for MARTA's proportionate share of the known costs and will pay any additional proportionate share documented by DOT upon a final accounting of the Acquisition Costs. Any and all such costs must be documented in writing by DOT, provided to MARTA in advance, and subject to audit by MARTA. In no event shall MARTA be obligated under this Agreement to provide compensation to DOT for other than MARTA's share of said Acquisition Costs. The total amount of consideration provided to DOT by MARTA in accordance with this Agreement is estimated to be an amount not to exceed Twenty-One Million Dollars (\$21,000,000.00). However, said amount may be increased by execution of another agreement. Said amount shall be considered part of the amount of Sixty Million Dollars (\$60,000,000) which is projected as MARTA's equitable share of the total estimated cost of the joint State Route 400 and MARTA North Line Corridor.

6. Any permanent right-of-way presently owned or hereafter acquired by MARTA which is within State Route 400 but outside of the MARTA North Line Corridor shall be conveyed by MARTA to DOT only to the extent necessary for State Route 400. MARTA shall receive a credit against compensation due DOT in accordance with Paragraph 5 of this Agreement for Acquisition Costs attributable to such right-of-way conveyed to DOT. The total amount of Twenty-One Million Dollars (\$21,000,000.00) identified in said Paragraph 5 shall be reduced to the extent of Acquisition Costs attributable to real property acquired by MARTA after October 1, 1987, other than from DOT, which real property is located within the MARTA North Line Corridor.

7. In the event that any time DOT is enjoined by court order from right-of-way acquisition for or construction of State Route 400, or if the development of State Route 400 is delayed or enjoined for an extended period,

MARTA shall have the right to proceed independently with acquisition of the MARTA North Line Corridor and development of the MARTA North Line. In such event DOT shall convey to MARTA, without charge, easements necessary for construction of the MARTA North Line.

Signed this 27th day of June, 1988.

METROPOLITAN ATLANTA RAPID
TRANSIT AUTHORITY

By _____
Kenneth M. Gregor
General Manager

Approved as to legal form:

By _____
General Counsel,
Metropolitan Atlanta
Rapid Transit Authority

GEORGIA DEPARTMENT OF
TRANSPORTATION

By _____
Hal Rives
Commissioner

Attest: _____
Arthur A. Vaughn
Treasurer

RECOMMENDED:

Rodney R. Tarrer
State Rights of Way Engineer

RECOMMENDED:

Alton L. Dowd, Jr.
Director of Preconstruction

RECOMMENDED:

Alva R. Byrom
State Highway Engineer

APPENDIX E
AIRSPACE AGREEMENT



AIRSPACE AGREEMENT
BETWEEN
METROPOLITAN DADE COUNTY FLORIDA
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

THIS AGREEMENT (hereinafter called The AGREEMENT) made and entered into this 20th day of August, 1979, by and between METROPOLITAN DADE COUNTY, a political subdivision of the State of Florida, (hereinafter called COUNTY), and the STATE OF FLORIDA, DEPARTMENT OF TRANSPORTATION, a component agency of the State of Florida (hereinafter called DEPARTMENT).

W I T N E S S E T H :

WHEREAS, COUNTY intends to construct and operate a system of public rail rapid transit facilities (hereinafter called Project) in accordance with plans to be approved by the Urban Mass Transportation Administration (UMTA) and as generally described in Exhibits "A" and "B" attached hereto and made a part hereof; and

WHEREAS, COUNTY has conducted a comprehensive study regarding the Project including transit system alignment and station location and has completed in May, 1978, the "Final Environmental Impact Statement", UMTA Project No. FL-03-0036, which has been approved by the COUNTY, and U.S. Department of Transportation, Urban Mass Transportation Administration; and

WHEREAS, the Project will be situated partially on properties under control of DEPARTMENT some of which are on the Federal-Aid System of Highways of the U.S. Department of Transportation, Federal Highway Administration (FHWA); and

WHEREAS, COUNTY and DEPARTMENT desire to set forth the process for submittal of project related drawings and specifications by COUNTY to DEPARTMENT for approval; and

WHEREAS, the COUNTY is desirous of obtaining certain real property and interest in real property including, by way of illustration, permanent and

assignable serial easements for the elevated portions and permanent surface easements for at-grade portions of the project where transit facilities run along, cross over, under, or are located in the median of DEPARTMENT controlled streets and highways, as designated conceptually and for general informational purposes only on the right of way map attached hereto as Exhibit "A"; and

WHEREAS, the parties to this AGREEMENT contemplate a series of conveyances of real property or interest in real property and desire to establish the process, terms and conditions of said conveyances in this AGREEMENT; and

WHEREAS, the DEPARTMENT is desirous of obtaining a more functional utilization of the right of way of its Interstate and other federally and state funded highways in METROPOLITAN DADE COUNTY; and

WHEREAS, the DEPARTMENT is desirous that said highway right of way should make a greater contribution toward creating a safer, more healthy and more attractive urban environment; and

WHEREAS, the Florida Law requires that DEPARTMENT, in developing comprehensive plans shall take into account the joint use of transportation corridors and major transportation facilities for alternate transportation and community uses; and

WHEREAS, Florida Law provides that, under certain conditions DEPARTMENT, may sell, lease, or convey in the name of the State, any land, buildings, or other property, real or personal; and

WHEREAS, the United States Department of Transportation, Federal Highway Administration requires any public agency desiring to use airspace above right of way of a highway on a Federal-Aid System to enter into an airspace agreement providing for adherence to all policy requirements in the applicable directive, where such are appropriate to the intended use; and

WHEREAS, COUNTY has submitted certain data to DEPARTMENT for benefit of bondholders and said bondholders have accepted reports from their respective bond consultants stating that there should not be any adverse effect on toll road revenues due to construction and operation of the transit facilities.

NOW THEREFORE, in consideration of the covenants, promises, understandings and AGREEMENTS made by each party to the other as set forth herein, the parties hereto do mutually agree as follows:

I

GENERAL

DEPARTMENT and COUNTY agree, to the process described herein related to conveyance and utilization of required property or interest in real property as generally depicted in Exhibit "A" attached hereto and made a part hereof including, but not necessarily limited to permanent aerial, surface and subsurface easements with rights as described in Section IV of this AGREEMENT and to the process related to plan and specification approval, subject to FHWA concurrence, where applicable, as described in Section V of this AGREEMENT and to the general design for the use of the airspace, including any facilities to be constructed and such maps, plans or sketches as are necessary to set out pertinent features in relation to the highway facility which are contained in Exhibit "B" attached hereto and made a part hereof.

It is understood and agreed that Exhibits "A" and "B" are conceptual in nature and will be followed by more definitive maps, plans and sketches, right of way maps and corresponding metes and bounds legal descriptions submitted to DEPARTMENT and FHWA as the final design process progresses.

The aforementioned metes and bounds description of the surface area together with appropriate plans or cross sections clearly defining the vertical use limits, will be furnished as a three dimensional description of the easement envelopes.

II

DEFINITIONS AND ABBREVIATIONS

For the purpose of this AGREEMENT, the following terms shall have the meaning set forth hereinafter:

1) The Federal Highway Administration of the U.S. Department of Transportation shall hereinafter be referred to as "FHWA."

2) The words "Contact Officer" denotes the person designated by each of the parties to be the person to whom all correspondence, notices, submissions for approval from the other party pertaining to this Agreement shall be directed, and initial contact made relating to problems or matters under this Agreement. The Contact Officer for the DEPARTMENT shall be the District Engineer of the Sixth District, or should the districts be changed in the future by law, the District Engineer or his successor having responsibility for the state highway network in Metropolitan Dade County at the time. The Contact Officer for the COUNTY will be the Transportation Coordinator.

3) The Project consists of those rail rapid transit facilities and appurtenances which the COUNTY proposes to construct, operate and maintain to provide a means of public mass transportation within Metropolitan Dade County.

4) Rail rapid transit facilities are defined as any or all property, real or personal structures, fixtures and improvements located thereon owned or controlled by the COUNTY including, but not limited to, guideway structures, roadbed, tracks, signals and power systems, bridges and any equipment, apparatus or structures appurtenant thereto or associated therewith.

III

DEPARTMENT - FHWA REQUIREMENTS

It is understood that some of the property controlled by DEPARTMENT to be encumbered by aerial, surface, or subsurface easements was acquired as right of way in connection with various Federal aid highway projects under the guidelines of FHWA. While not a party to this AGREEMENT, the FHWA has authority to prescribe policies relating to management of airspace on federal aid highway systems for non-highway purposes. These policies are contained in Section 3, Chapter 4, Volume 7, Federal-Aid Highway Program Manual of FHWA, as amended. Because of funding by FHWA, DEPARTMENT must obtain the concurrence of the FHWA at various times on many issues involved in the entering into and implementation of this AGREEMENT. The COUNTY acquiesces, agrees and understands that, where discretion is allowed the DEPARTMENT under this AGREEMENT, its actions for the most part must have FHWA concurrence. It is understood that particularly with respect to any change in the limited access characteristic of interstate highways, FHWA concurrence would be required by the FHWA Administrator.

It is understood and agreed that COUNTY will adhere to the applicable prescribed policies as contained in the aforementioned part of the Federal-Aid Highway Program Manual, the provisions of which shall also apply to DEPARTMENT controlled Right of Way not on the Federal Aid Highway System where FHWA concurrence is not required, and more specifically set forth as follows:

- 1) Metropolitan Dade County, Florida is the party responsible for developing and operating the airspace.

- 2) Metropolitan Dade County, Florida, proposes to use the airspace for the construction, operating and maintenance of a public rail rapid transit facility together with appropriate appurtenant and ancillary facilities.

- 3) In general, the public rail rapid transit facilities will consist of an at-grade and elevated guideway track system together with appurtenant

supporting structures, station facilities and parking lots. The general design for the use of the space, including any facilities to be constructed, and such maps, plans, or sketches as are necessary to set out pertinent features in relation to the highway facility are contained in Exhibit "B".

4) A detailed three dimensional description of the space to be used, metes and bounds description of the surface areas together with appropriate plans or cross sections clearly defining the vertical use limits, shown generally and conceptually in Exhibit "A" and "B", will be provided to DOT and FHWA at the time a request is made for conveyance of the real property or interest in real property.

5) Any significant revision in the design or construction of a facility described in paragraph 3) above shall receive prior approval by the DEPARTMENT subject to concurrence by the FHWA,

6) Any change in the authorized use of airspace shall receive prior approval by the DEPARTMENT subject to concurrence by the FHWA.

7) It is understood and agreed that the airspace shall not be transferred, assigned or conveyed to another party without prior DEPARTMENT approval subject to concurrence by FHWA. In the event that the airspace is transferred, assigned, conveyed or leased by COUNTY to other parties, with approval and concurrence as aforementioned, the transferee, assignee, grantee or lessee shall be bound by all of the provisions of this AGREEMENT and this AGREEMENT shall be attached to and made a part of the appropriate documents.

8) It is understood and agreed that the AGREEMENT will be revocable in the event that once constructed, the airspace facility ceases to be used or is abandoned as evidenced by no operations or maintenance for a period of six consecutive months. In the event the AGREEMENT is revoked under this provision and the DEPARTMENT deems it necessary to request the removal of the facility occupying the air-space, the removal shall be accomplished by COUNTY in a manner prescribed by DEPARTMENT at no cost to DEPARTMENT or FHWA.

9) It is understood and agreed that the AGREEMENT may be revoked if any provision of Section III of the AGREEMENT is violated and such violation is not corrected within a reasonable length of time after written notice of noncompliance has been given. Further, that in the event the AGREEMENT is revoked and the DEPARTMENT deems it necessary to request the removal of the facility occupying the airspace, the removal shall be accomplished by COUNTY in a manner prescribed by the DEPARTMENT at no cost to the FHWA.

10) County does hereby agree to indemnify and save the DEPARTMENT and FHWA harmless, to the extent of the monetary limitations included within Florida Statutes, Section 768.28, from any and all claims, liability, losses and causes of actions which may arise out of this AGREEMENT, or be attributable to substandard design or construction according to DEPARTMENT standards regardless of whether or not DEPARTMENT has granted a variance from its standards and criteria, or which may arise out of the activities on the easements conveyed; however, nothing in this section shall indemnify the DEPARTMENT for any liability or claim arising out of the performance or failure of performance required of the DEPARTMENT under the AGREEMENT or from the DEPARTMENT'S negligence.

COUNTY shall maintain comprehensive general liability insurance in the amount of 5 Million Dollars, to the extent such protection is available in the domestic or international insurance market, including bodily injury and property damage liability coverage for all COUNTY construction operations performed at the locations described in this AGREEMENT. During the operational phase of COUNTY transit system, the COUNTY will have a comprehensive program of protection for liabilities arising out of accidents resulting in bodily injury and property damage. The COUNTY program has not been formalized because operations are not expected to commence before July, 1983. The COUNTY will have insurance coverage in effect prior to commencement of start-up operations. The provisions of this paragraph pertaining to insurance coverage do not in any way modify or limit the County's obligation to indemnify the DEPARTMENT and FHWA.

11) DEPARTMENT, for itself and FHWA, retains the right to have access over, under, across and through the property encumbered by aerial and surface

easements and to enter the rail rapid transit facilities for purposes of access to provide maintenance, inspection or reconstruction of the highway facilities herein involved or for inspection of the easement area as to the use to which it is being put. DEPARTMENT, for itself and FHWA covenants that it will be reasonable in the exercise of such rights and will not unnecessarily cross the encumbered property for such aforementioned purposes; provided, however, that, recognizing certain dangerous and hazardous characteristics of COUNTY'S facilities and COUNTY'S right to protect the transit structures, DEPARTMENT, for itself and FHWA, shall not exercise its rights as aforementioned within ten (10) feet horizontally and below and sixteen (16) feet vertically above top or rail elevation of any rapid transit facility structure, or appurtenance without first giving COUNTY written notice 15 calendar days in advance of its intent to enter the easement or facility and provided that DEPARTMENT adheres to the regularly established procedures implemented by COUNTY for entry in or upon its facilities.

12) It is understood and agreed that rail rapid transit facilities will be maintained so as to assure that the structures and the area within the highway right of way boundaries will be kept in good condition, both as to safety and appearance, and that such maintenance will be accomplished in a manner so as to cause no unreasonable interference with highway use.

In the event that COUNTY fails in its maintenance obligations, DEPARTMENT shall notify COUNTY in writing of the failure, and specify the corrective action to be taken. COUNTY shall have sixty (60) days to correct the failure. If COUNTY fails to perform the corrective action, DEPARTMENT may enter the premises to perform such work charging the COUNTY with the reasonable cost thereof; provided, however, that recognizing certain dangerous and hazardous characteristics of COUNTY'S facilities and County's right to protect the transit structures, DEPARTMENT for itself and FHWA shall not exercise its rights as aforementioned within ten (10) feet horizontally and below and sixteen (16) feet vertically above top of rail elevation of any rapid transit facility structure or appurtenance without first having given COUNTY written notice 15 calendar days in advance of its intent to enter the easement or facility and provided DEPARTMENT adheres to the regular procedures established by COUNTY for entry in or upon its facilities.

At the time COUNTY request conveyances of property or interests in property in accordance with Section IV of this AGREEMENT, COUNTY shall specify maintenance responsibilities. In those areas where COUNTY is granted surface rights, COUNTY will maintain the surface area. In areas where DEPARTMENT retains surface rights, DEPARTMENT will maintain the surface area.

In those areas where COUNTY maintains surface areas, COUNTY shall submit to DEPARTMENT an initial written request for authorization to occupy DEPARTMENT controlled Right of Way for such maintenance together with a traffic maintenance plan. Thereafter, written authorizations from DEPARTMENT will not be required but only advance notification of DEPARTMENT Contact Officer. Traffic maintenance plans will be required; however, where COUNTY maintenance causes interference with traffic utilization of DEPARTMENT'S Right of Way, such as the closure of traffic lanes.

13) The following provisions for non-discrimination are applicable.

(a) The COUNTY or its personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree that in the event facilities are constructed, maintained, or otherwise operated on the property which is the subject of this AGREEMENT for the accommodation of the traveling public or business users of any Federal-Aid highway (such as eating, sleeping, rest, recreation, and vehicle servicing), he (she or it) will not discriminate on the grounds of race, color, sex, or national origin against such travelling public or highway users in their access to and use of the facilities and services so constructed, maintained or otherwise operated, and that any successor in interest, assignee, licensee or permittee shall maintain and operate such facilities and services in compliance with all other requirements imposed pursuant to Title 15, Code of Federal Regulations, Commerce and Foreign Trade, Subtitle A., Office of the Secretary of Commerce, Part 8 (15CFR, PART 8), and as said Regulations may be amended.

(b) The COUNTY or its personal representative, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree that (1) no person, on the grounds of race, color, sex, or

national origin shall be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities, (2) that in connection with the construction of any improvements on said lands and the furnishing of services thereon, no discrimination shall be practiced in the selection of employees and contractors, by contractors in the selection and retention of first-tier subcontractors and by first-tier subcontractors in the selection and retention of second-tier subcontractors, (3) that such discrimination shall not be practiced against the public in their access to and use of the facilities and services provided for public accommodations (such as eating, sleeping, rest, recreation, and vehicle servicing) constructed or operated on, over, or under the space of the right of way, and (4) that any lessee and any sub-lease shall use the premises in compliance with all other requirements imposed pursuant to Title 15, Code of Federal Regulations, Commerce and Foreign Trade, Subtitle A., Office of the Secretary of Commerce, Part 8 (15 CFR, Part 8) and as said Regulations may be amended.

(c) In the event of breach of any of the above non-discrimination covenants, the DEPARTMENT shall consider same as a violation of the AGREEMENT to be handled in accordance with Section III, 9.

14) Use of airspace beneath the established gradeline of the highway shall provide sufficient vertical and horizontal clearances for the construction, operation, maintenance, ventilation, and safety of the highway facility.

15) The proposed use of airspace above the established gradeline of the highway shall not, at any point between two points established 15 feet beyond the two outer edges of the geometric section (highway prism) of the highway, extend below a horizontal plane which is at least 16 feet 6 inches above the gradeline of the highway, or the minimum vertical clearance plus 4 inches as approved by the DEPARTMENT except as necessary for columns, foundations or other support structures. Where control and directional signs needed for the highway are to be installed beneath an overhead structure, vertical clearance will be at least 20 feet from the gradeline of the highway to the lowest point of the side it of the overhead structure. Exceptions to the lateral

limits set forth above, may be considered on an individual basis when justified by the DEPARTMENT with FHWA concurrence.

16) Piers, columns or any other portion of the airspace structure shall not be erected in location which will interfere with visibility or reduce sight distance or in any other way interfere with the safety and free flow of traffic on the highway facility, except as authorized by DEPARTMENT with concurrence by FHWA.

17) The structural supports for the airspace facility shall be located to clear all horizontal and vertical dimensions established by the DEPARTMENT. Supports shall be clear of the shoulder or safety walks of the outer roadways. However, supports may be located in the median or outer separation when the DEPARTMENT determines and the FHWA concurs that such medians and outer separations are of sufficient width. All supports are to be back of or flush with the face of any wall at the same location. Supports shall be adequately protected by means acceptable to the DEPARTMENT and the FHWA. No supports shall be located in the ramp gores, or in a position so as to interfere with the signing necessary for the proper use of the ramps except as specifically authorized by DEPARTMENT with concurrence by FHWA.

18) The use of airspace shall not result in either highway or non-highway users being unduly exposed to hazardous conditions because of highway location, design, maintenance, and operation features.

19) Appropriate safety precautions and features necessary to minimize the possibility of injury to users of either the highway facility or airspace due to traffic accidents occurring on the highway or airspace due to traffic accidents occurring on the highway or accidents resulting from nonhighway use shall be provided. Such precautions should include, but not be limited to: consideration of protective barriers or continuous guardrail with impact attenuation proper to prevent penetration by heavy vehicles; installation of fire hydrants; drainage arrangements adequate to safely handle accidentally released hazardous liquids; warning signs, reflectors, and lights; speed controls; and where deemed necessary, limitations on the use of the highway facility by vehicles carrying hazardous materials. Airspace facilities shall

not be approved for construction over or under the highways, unless the plans therefor contain adequate provisions, acceptable to the DEPARTMENT and the FHWA, for evacuation of the structures or facilities in case of a major accident endangering the occupants of such structures or facilities.

20) The rail rapid transit facilities shall be fire resistant in accordance with the criteria approved by the COUNTY Fire/Life Safety Technical Committee, which Committee includes the State Fire Marshall or his representatives. Such facilities shall not be used for the manufacture or storage of flammable, explosives, or hazardous material or for any occupation which is deemed by the DEPARTMENT or the FHWA to be a hazard to highway or non-highway users. The criteria adopted by the Fire/Life Safety Technical Committee shall be approved by DEPARTMENT with FHWA concurrence.

21) No structure or structures built over a highway facility shall occupy more length of the highway than will permit adequate natural ventilation of the enclosed section of the highway for the conditions at the location, assuming a volume of traffic equal to capacity. Each such covered length shall be preceded and followed by uncovered lengths of highway that will safely affect natural ventilation. The DEPARTMENT shall determine such lengths for each particular case, subject to FHWA concurrence. Exceptions may be considered when complete tunnel ventilation is provided. Unless tunnel ventilation is provided, structures over highway shall be so designed and constructed as to facilitate natural ventilation of the highway. To this end, the underside and any supports for such structures shall have smooth and easily cleanable surfaces. Supports for such structures shall leave as much open space on the sides of the highway as feasible. Such space shall be appropriately graded when deemed necessary or desirable by the DEPARTMENT.

22) The design, occupancy, and use of any structure over or under a highway facility shall be such that neither the use, safety, appearance, nor the enjoyment of the highway will be adversely affected by fumes, vapors, odors, drippings, droppings, or discharge of any kind therefrom.

23) On-premise signs, displays, or devices for rapid transit facilities may be erected on structures occupying highway airspace, but shall be

restricted to those indicating ownership and type of on-premise activities and shall be subject to regulation by the DEPARTMENT and the FHWA with respect to number, size, location and design.

24) Construction of any structure above or below a highway facility shall not require any temporary or permanent change in alignment or profile of an existing highway without prior approval by the DEPARTMENT and the FHWA.

25) Where either the DEPARTMENT or the FHWA is of the opinion that the proposed use of airspace requires changes in or additions to existing highway facilities for the proper operation and maintenance of the highway, such facilities as are directly attributable to the Project shall be provided without cost to DEPARTMENT or FHWA. There may be exception to this policy when the proposed use is for highway related or other public or quasi-public use which would assist in integrating the highway into the local environment and enhance other publicly supported programs. This provision is not intended to expand existing limitations upon expenditures from the highway trust fund, nor is it intended to conflict with the provisions of Volume 7, Section 8, of the Federal-Aid Highway Program Manual, relating to joint development of highway corridors and multiple use of roadway properties. Additionally, there may be exceptions to this policy where DEPARTMENT, with FHWA concurrence, and COUNTY mutually agree that Federal Highway Funds are to be utilized.

26) Proposed airspace facilities shall be designed and constructed in a manner which will permit access to the highway facility for the purpose of inspection, maintenance, and reconstruction when necessary.

27) COUNTY'S use of airspace shall be in conformity with the provisions of current appropriate Federal Aviation Administration Regulations.

IV

REAL ESTATE CONVEYANCES

It is contemplated that COUNTY and DEPARTMENT will enter into a series of conveyances pertaining to the real estate requirements for the project. In order to achieve an expeditious efficient processing of real estate transactions the parties hereto agree to the following procedure:

1) Within 10 days of receipt by the COUNTY of authorization to acquire from the Board of County Commissioners, COUNTY will forward to the DEPARTMENT Contact Officer six (6) sets of the appropriate right of way drawings depicting estates and areas to be acquired, legal descriptions, and easement definitions together with a request to acquire the described property.

2) Within 30 days after receipt of the COUNTY'S acquisition request, DEPARTMENT, unless it has notified COUNTY of the possible delay and identified a new conveyance date, shall convey the required real property or interests in property clear of all liens or security interest, but subject to the rights of third parties lawfully occupying DEPARTMENT property and not in conflict with the COUNTY use and occupancy of the property, by Easement deed, at no charge to COUNTY use and occupancy of the property, by EASEMENT deed, at no charge to COUNTY except as provided for in SECTION V 3) of this AGREEMENT.

3) Aerial, surface, and subsurface easements shall include the rights as generally described hereinafter:

a) COUNTY may have the right of unobstructed and unimpaired use, consistent with other provisions of this AGREEMENT, of the aerial and surface easements for the purpose of construction, operation and maintenance of the project including all appurtenant facilities therefor, such as, by way of example and not limitation, supports, guideways, underground or surface utilities serving the rapid transit system and maintenance access roads; provided that the transit elevated guideway structures will be designed and constructed in accordance with Section III of this AGREEMENT and will be no

less than 16 feet 6 inches above existing grade (minimum clearance distance) at locations where the transit guideway structures cross over existing roads. It is understood that COUNTY shall have the right to the use of the ground surface area directly below by the aerial structure for use as contractor's work area during construction provided, however, that the COUNTY'S Director of the Transit System Development Division shall submit traffic maintenance plans and schedules to DEPARTMENT for approval in accordance with the provisions of SECTION V, I) of this AGREEMENT.

b) DEPARTMENT shall retain the right to use and develop the property encumbered by the easement provided, however, that DEPARTMENT shall not, nor allow others to:

- (i) place any structures within ten (10) feet horizontally and below sixteen (16) feet vertically above top of rail elevation or any rapid transit facility without COUNTY'S prior written authorization. In the event, however, that it is necessary to support highway or traffic related overhead signs and/or traffic signal heads from transit facilities, or it is necessary to utilize DEPARTMENT controlled right of way encumbered by easements for public utility facilities, DEPARTMENT will submit such proposal together with appropriate plans and specifications to County Contact Officer for review and approval. Within thirty (30) days COUNTY will review and respond unless DEPARTMENT is otherwise notified. COUNTY reserves right to inspect construction to insure the integrity of transit facilities. It is understood that the purpose of this provision is not to place total and final control of other nontransit property in COUNTY, but rather to insure protection of rapid transit facilities.
- (ii) locate, store, or permit to be located or stored upon the property encumbered by the easement any flammables, explosives or materials of like nature.
- (iii) develop the property in such a manner as to lessen or interfere with the lateral and subjacent support of COUNTY rapid transit facilities.

- (iiii) interfere with COUNTY'S use of its rights, including specifically the COUNTY'S right to continued access for maintenance and inspection activities related to the rapid transit facilities.

V

DEPARTMENT APPROVALS
AND
FHWA CONCURRENCE IF APPLICABLE

1) COUNTY, through its Director of the Transit System Development Division, shall secure approval of project plans and specifications and traffic maintenance plans and schedules by the DEPARTMENT with FHWA concurrence, if applicable, prior to advertisement of each individual construction contract unit. Such approval by DEPARTMENT, with FHWA concurrence as appropriate, shall constitute authorization to COUNTY to proceed with advertisement and construction.

2) During the design process, COUNTY shall submit coordination or approval packages in all areas where the rapid transit system is jointly using DEPARTMENT right of way. These packages shall comply with documentation requirements of Exhibit "C".

3) Where DEPARTMENT projects financed by bonds are affected by design, construction or real estate acquisition, then the following procedure will be adhered to with respect to plan and specification and charges related thereto:

Where DEPARTMENT projects financed by bonds are affected, written certification must be obtained from the DEPARTMENT'S Traffic Engineers and Consulting Engineers stating that the joint use would not adversely affect present or future operation of the toll facility involved.

VI
UTILITIES

In the event that COUNTY must install utility facilities solely to serve the rapid transit facilities within the property encumbered by the permanent aerial easement, then COUNTY shall follow DEPARTMENT'S established policy and procedures for securing an appropriate utility permit. It is understood that the purpose of this provision is to further ensure timely, efficient review of proposed utility facility installation to preclude present or future conflict situations. It is understood and agreed that COUNTY shall be responsible at its expense for relocation of utilities in conflict with transit facilities or for damage caused to utility facilities regardless of whether or not utility is on DEPARTMENT right of Way by appropriate authorization.

VII
REVERSION

In the event that COUNTY does not commence construction of said Project by January 1, 1985 or in the event that once constructed the transit facilities cease to be used, or are abandoned as evidenced by no operations or maintenance for a period of six consecutive months, all areas conveyed by permanent aerial easement will revert to DEPARTMENT. In the event of such reversion DEPARTMENT shall have the authority to perform necessary maintenance to protect the interests of DEPARTMENT and FHWA, and such costs related thereto shall be assessed to and paid for by COUNTY.

This AGREEMENT expresses the entire AGREEMENT between the parties hereto and may not be altered or amended except by written instrument of both parties.

This AGREEMENT is subject to approval by the Dade County Board of County Commissioners and shall have no effect whatever until approved by said Board of County Commissioners and executed by both parties.

Dated this 20th day of August, 1979

(OFFICIAL SEAL)

DADE COUNTY, FLORIDA
BY ITS BOARD OF
COUNTY COMMISSIONERS

ATTEST:

RICHARD P. BRINKER, CLERK

BY: _____
DEPUTY CLERK

BY: _____
COUNTY MANAGER

WITNESSES:

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

AS TO THE DEPARTMENT

BY: _____
DEPUTY SECRETARY
FOR ADMINISTRATION

ATTEST: _____
EXECUTIVE SECRETARY

APPROVED AS TO FORM LEGALITY
FLORIDA DEPARTMENT OF TRANSPORTATION

BY: _____
ATTORNEY

APPENDIX F

MAINTENANCE AND OPERATIONS AGREEMENT



May 16, 1986
84-605N/5020A

STATE/TRI-MET MAINTENANCE AND OPERATIONS AGREEMENT
BANFIELD TRANSITWAY PROJECT
N.E. 16TH AVENUE TO EAST BURNSIDE STREET SECTION

This Agreement is made and entered into by and between the STATE OF OREGON, by and through its Department of Transportation, Highway Division, hereinafter referred to as "State", and the TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON, a public transit agency, acting by and through its Board of Directors, hereinafter referred to as "Tri-Met".

This Agreement shall become effective upon execution.

W I T N E S S E T H:

RECITALS

1. By the authority granted in certain Oregon statutes, State and Tri-Met entered into a series of agreements which outlined the process by which the development of the Banfield Transitway Project, hereinafter referred to as "Project", occurred. The agreements between State and Tri-Met are as follows:

- A. Right of Way Services Agreement, November 7, 1980
- B. Right of Way Services Agreement Supplement, July 9, 1981
- C. Cooperative Work Agreement, July 22, 1982
- D. Funding Agreement, July 22, 1982
- E. Cooperative Work Agreement Supplement No. 1, July 22, 1982
- F. Cooperative Work Agreement Supplement No. 2, November 7, 1983
- G. Continuing Control Agreement, February 23, 1983

2. The Project development required negotiation and agreement with the Union Pacific Railroad, hereinafter referred to as "Railroad". These agreements covered the full range of responsibilities of both the State and Tri-Met in the operation of the light rail system and the highway system. The entire project was dependent upon the agreement being satisfactorily concluded with the Railroad. Those agreements are as follows:

- A. Railroad/STATE Compensation UPDEED 14544 ODOT No. RR 1043, November 4, 1980
- B. Permit of Entry, June 21, 1982

- C. Construction Maintenance and Operation of Storm Sewer line, August 13, 1982
- D. Construction Temporary Overcrossings, 21st, 33rd, Sandy, 60th, Halsey, 82nd, October 11, 1982
- E. Permanent Overcrossings Holladay, 28th, 42nd, 43rd and Halsey at 81st, October 11, 1982
- F. Temporary and Permanent Overcrossing at 39th, October 11, 1982
- G. Temporary and Permanent Overcrossing at 47th, October 11, 1982

3. Time being of the essence and the legitimate concern of the State and Tri-Met, the necessity for the State to act in the capacity of a project manager with the responsibility and authority to make such agreements also required State and Tri-Met to execute, as a final act, a document which outlines State and Tri-Met responsibilities to each other and to the Railroad. Each of the foregoing agreements are by this reference made a part of this central Maintenance and Operations Agreement as to the section involved. The Steel Bridge Section of the Banfield Transitway Project will be covered by a separate agreement because of its distinct individual characteristics.

4. This Agreement defines the respective responsibilities of the parties, and will remain in effect until such time as the Project portions operated by Tri-Met are abandoned, or until amended by supplemental agreements.

NOW, THEREFORE, the premises being in general as stated in the foregoing RECITALS and in consideration of the terms, conditions and covenants hereinbelow, the parties hereto agree as follows:

I. DEFINITIONS

1. COP. Refers to the City of Portland, which is not a party to this Agreement. Such references are informational only, and are the subject of separate Agreements to which the City of Portland is a party.

2. Exhibit. Reference to any exhibit refers to an attached document identified by letter, all of which are hereby incorporated by reference.

3. Maintenance. This includes all of the maintenance necessary to keep in good operating condition any of the items in Section II, including but not limited to, physical damage due to any cause, not constituting reconstruction, litter removal and ordinary maintenance of all the areas and facilities involved.

4. Operations. Defines all those responsibilities divided on the areas shown in Section II which pertain to control, safe operation and responsibility.

5. LRT Zone. The area within which the Light Rail Transit operates. This area is generally between the UPRR on the north and the Freeway zone on the south from NE 16th Avenue to NE 92nd Avenue. From NE 92nd Avenue to East Burnside, the LRT zone is within the I-205 Freeway right-of-way along the east side of said Freeway.

6. Freeway Zone. The area within which the automobile traffic operates. This area is generally south of the LRT zone from NE 16th Avenue to NE 92nd Avenue, and west of the LRT Zone from NE 92nd Avenue to East burnside.

7. UPRR Zone. The area within which the Union Pacific Railroad operates. This area is generally north of the LRT zone from NE 16th Avenue to NE 92nd Avenue only.

II. DIVISION OF RESPONSIBILITY

This Section covers those portions of the Project which were fundamentally designed for the Light Rail Transit (LRT) portion of the Project and for which costs were allocated to Tri-Met. The areas are necessarily general in nature but include any appurtenance thereto. Maintenance for each area shall be the responsibility of the party noted.

A. LRT Trackway and Facilities

This Section describes that portion of the Project from NE 16th Avenue to East Burnside Street on either State highway property or State highway controlled easements from the Railroad (Exhibit "A").

<u>Facility and Appurtenances</u>	<u>Responsible Party</u>
1. LRT track drains	Tri-Met
2. Retaining walls and related footing drains (shown on Exhibit "A")	
a) Walls and footing drains between Freeway and LRT	State
b) Walls and footing drains between Railroad and LRT	Tri-Met
3. Trackwork and ballast and sub-ballast	Tri-Met
4. Storm water collection system	
a) track drains to their connections with the primary storm drain system	Tri-Met
b) primary storm drain system	State
5. Jersey barriers and glare screen	State

Facility and Appurtenances

Responsible Party

- | | |
|--|---|
| 6. Fence and landscaping | |
| a) Fence north side of trackway
(NE 16th Ave. to NE 92nd Ave.) | Tri-Met maintains
State to reimburse
1/2 cost |
| b) Fence west side of trackway
(NE Glisan to E Burnside) | Tri-Met |
| c) All landscaping in LRT Zone | Tri-Met |
| 7. Electrification pole foundations and
anchor foundation integral with retaining
walls and jersey barriers | Tri-Met |
| 8. All LRT electrification system items in-
cluding poles, foundations, anchors and
attachments to overhead cross street and
freeway ramp structures. | Tri-Met |
| 9. Maintain LRT signal system, including
signal cases, LRT signals and conduits. | Tri-Met |
| 10. LRT stations at 42nd, 60th, and 82nd
Ave. | Tri-Met |

B. Glisan Box

This structure carries the LRT under Glisan Street in the vicinity of N,E. 97th Ave. (Exhibit "B").

Facility and Appurtenances

Responsible Party

- | | |
|--|----------------------------|
| 1. Maintain trackway drains and ditches | Tri-Met |
| 2. Maintain storm drainage system | As noted on
Exhibit "B" |
| 3. Maintain all LRT conduits | Tri-Met |
| 4. Maintain structural integrity of box
and retaining walls. | Tri-Met |
| 5. Maintain interior surface | |
| 6. Maintain street level lighting, fencing,
drainage, sidewalks and pavement. | State/COP |

C. Doernbecker/Gateway/Holladay LRT Structures

These are three structures constructed for the specific purpose of carrying the LRT over the Railroad in the vicinity of Holladay Street, the

LRT over the Doernbecker access road, and the LRT over I-84 and I-205 in the vicinity of the Gateway Station.

<u>Facility and Appurtenances</u>	<u>Responsible Party</u>
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- | | |
|---|---------|
| 1. Maintain drainage system for bridge deck and structure | Tri-Met |
| 2. Illumination (exclusive of Doernbecker) | Tri-Met |
| 3. Embedded and exposed LRT conduits | Tri-Met |
| 4. Maintain structures and abutments | Tri-Met |
| 5. Maintain handrails and/or parapet fence | Tri-Met |
| 6. Maintain approach slabs | Tri-Met |

D. 21st, 28th, 33rd, 39th, 47th, 53rd, Halsey at 67th and 74th, Overpasses (Underpasses) and Ramps

These particular structures carry the traffic on those streets over the LRT, Freeway, and Railroad Zones.

<u>Facility and Appurtenances</u>	<u>Responsible Party</u>
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- | | |
|---|-----------|
| 1. Overpass storm drainage system | COP |
| 2. Overpass structures, retaining walls and abutments | State/COP |
| 3. All illumination | COP |

E. Sandy Overpass (Underpass) and Ramp

This structure carries Sandy Boulevard over the Freeway, LRT and Railroad Zones.

<u>Facility and Appurtenances</u>	<u>Responsible Party</u>
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- | | |
|---|---------|
| 1. Overpass storm drainage system | State |
| 2. Maintain inserts for electrification system supports | Tri-Met |
| 3. Overpass structures, retaining walls and abutments | State |

F. 42nd, 60th, 82nd Avenue overpasses with Transit Station and Pedestrian Facilities

In addition to three overpasses of the Freeway, LRT and Railroad, these structures provide pedestrian access between the LRT Stations and the overpasses.

<u>Facility and Appurtenances</u>	<u>Responsible Party</u>
1. Overpass storm drainage system	State/COP
2. Maintain all LRT conduits and attachments	Tri-Met
3. Maintain inserts for electrification system supports	Tri-Met
4. Overpass structures, retaining walls and abutments for 60th and 82nd Aves.	State/COP
5. 60th Street lighting	COP
6. 82nd Street lighting	State
7. 42nd Street pedestrian overcrossing	
a) Bent 1 to south side of Freeway (including south end ramp and stairway)	State
b) North of Bent 1	Tri-met
8. All elevators and stairways	Tri-Met
9. LRT Platforms and station landings	Tri-Met
10. All LRT station related illumination	Tri-Met
G. <u>82nd Avenue LRT substation (Exhibit "C")</u>	
<u>Facility and Appurtenances</u>	<u>Responsible Party</u>
1. Landscaping	Tri-Met
2. Bike path	State
3. Substation building and related components	Tri-Met
H. <u>Gateway Station, Park and Ride Lot and Substation</u>	
<u>Facility and Appurtenances</u>	<u>Responsible Party</u>
1. Landscaping	Tri-Met
2. Sidewalk and Platform	Tri-Met
3. Illumination	Tri-Met
4. Storm and track drain system	Tri-Met
5. Buildings and related components	Tri-Met

Facility and Appurtenances

Responsible Party

6. Bikepath

State

III. ACCESS

It shall be understood that there shall be no LRT Zone access to or from the Freeway without State permission, except in emergency situations, by Tri-Met personnel. All maintenance and operation of the LRT is to be accomplished from within the LRT Zone.

IV. EMERGENCY PROCEDURES

Tri-Met and ODOT mutually agree that for safe and efficient operation of the parallel Freeway and LRT facilities, an emergency operations and procedure plan is required and will be prepared as a supplement to this agreement.

V. COOPERATION

In the spirit of cooperation, and with the knowledge that Tri-Met may not have the need for employment of crews to maintain structures and walls, State, at Tri-Met's request, will provide service requested through a continuing maintenance agreement entered into as a supplement to this Agreement.

The Oregon Transportation Commission, by a duly adopted delegation order, authorized the State Highway Engineer to sign this agreement for and on behalf of the Commission. Said authority is set forth in the Minutes of the Oregon Transportation Commission.

APPROVAL RECOMMENDED BY:

STATE OF OREGON, by and through
its DEPARTMENT OF TRANSPORTATION,
Highway Division

Region Engineer

Date _____

State Highway Engineer

APPROVED AS TO LEGAL SUFFICIENCY:

Date _____

Assistant Attorney General & Counsel

TRI-COUNTY METROPOLITAN
TRANSPORTATION DISTRICT OF OREGON

Date _____

Title

APPROVED AS TO FORM:

Kevin McDonald
Contracts and Legal Services

Date _____

APPENDIX G

MEMORANDUM OF UNDERSTANDING



MEMORANDUM OF UNDERSTANDING
BETWEEN DEPARTMENT OF TRANSPORTATION, STATE OF NEW YORK
and
NIAGARA FRONTIER TRANSPORTATION AUTHORITY

This Memorandum of Understanding (MU) between the New York State Department of Transportation (NYSDOT) and the Niagara Frontier Transportation Authority (NFTA) describes the substance and principles under which the Buffalo-Amherst light rail rapid transit (LRRT) project and associated transportation improvements will be undertaken. In its role under this MU, NYSDOT at the request of the New York State Division of the Budget (DOB) is assisting in administering the project. Therefore, the intent of this MU is to provide a clear understanding of the administrative procedures under which NYSDOT will undertake these responsibilities as NFTA proceeds to implement the project. The processes described in the MU are intended to help expedite the necessary approvals of DOB and the Comptroller's Office and in no case supersede the standard practices of those offices.

1. NFTA will develop and submit to NYSDOT for a review a program of activities describing in detail (including critical path method charts or other management information system reports as agreed upon by the NFTA and NYSDOT) the use of the two state appropriations to NFTA (\$86M and \$16M) which authorize state funding for the non-federal share of the Buffalo-Amherst LRRT corridor activities (planning, engineering, design and construction) as well as other related transit projects which will be charged to the two appropriations. The program of activities shall be accompanied by a detailed timetable for each activity and will be submitted to NYSDOT by June 15, 1978.
2. To facilitate final DOB approval of consultant designations and contracts, NFTA will submit to NYSDOT for review, consultant scopes of services, including the design parameters given to design consultants and the list of candidate firms to receive the proposals prior to solicitation. After consultant evaluations have been made, NFTA will apprise NYSDOT of their findings prior to recommendation of a consultant designation.
3. On all engineering and design contracts when the work is 50 percent complete, NFTA will submit a narrative report justifying the final design features and the associated cost of the project for NYSDOT review. In order to insure expeditious review, NFTA will coordinate and cooperate fully with NYSDOT during all design phases thus insuring that NFTA will not have to halt work during the review. It is intended that this review will incur full agreement on final design features at a point where there is still flexibility for change if it becomes necessary due to appropriation or other fiscal limitations.
4. Prior to advertisement, NFTA will submit to NYSDOT final PS&E [plans, specifications and estimates] and other proposed bid documents for review.
5. NFTA will solicit bids and award all construction contracts based upon previously reviewed (by NYSDOT) PS&E. If the low bidder is not selected or

if the low bid received is 10% greater than the approved engineering cost estimate then NFTA will submit a written justification (including all bid components) to NYSDOT for review before contract award.

6. NFTA will be responsible for all inspection-related activities and certification of work performed as required by the Comptroller's Office. As such, all payment requests will be forwarded directly from NFTA to the Comptroller's Office. To facilitate uniform record keeping and subsequent auditing, the NYSDOT Manual of Uniform Record Keeping (MURK) procedures or other mutually agreed upon procedures will be utilized.

7. NFTA will submit to NYSDOT for review all change orders resulting in a net increase in project cost of \$100,000 or more.

8. NFTA will submit to NYSDOT for review all changes in project scope.* This shall be done regardless of the associated cost, if any, involved in the scope change.

9. To facilitate all necessary reviews, NYSDOT will appoint a project coordinator located in the NYSDOT Region 5 office who shall be responsible for all aspects of the Buffalo-Amherst Corridor project liaison.

10. NYSDOT may, at the request of NFTA, act as NFTA's agent in the acquisition of all or specific portions of rights of way for the LRRT project. NFTA will reimburse NYSDOT for all costs associated with this activity.

by: William C. Hennessy
Commissioner
New York State Department
of Transportation

by: Chester R. Hardt
Chairman
Niagara Frontier
Transportation Authority

Date: 5/23/78

Date: 5/17/78

*See attachment for definitions

DEFINITIONS

Activity

each planned undertaking that will become an element of the LRRT corridor facility; generally work to be accomplished under and which is defined within a specific contract.

Program of Activities

an outline of each activity and all associated actions (including their cost) that will be necessary to complete the LRRT corridor project in its entirety.

Scope or Project Change

a variation from the previously reviewed and accepted plans and specifications for the LRRT corridor projects that may result in a different physical facility or that will change the transportation service to be provided by the project(s).

