

## **APPENDIX F**

### TDM Model Setup and Results

## TDM Model Inputs - 2014

AREAWIDE AND EMPLOYER STRATEGIES												
TEST DESCRIPTION	2014CAT2			NO TEST			NO TEST			NO TEST		
	AREA	EMPLOYER	PART	AREA	EMPLOYER	PART	AREA	EMPLOYER	PART	AREA	EMPLOYER	PART
	WIDE	STRAT	PART	WIDE	STRAT	PART	WIDE	STRAT	PART	WIDE	STRAT	PART
Transit Service Improvements												
I V T (min.)	0.			0.			0.			0.		
O V T (min.)	0.			0.			0.			0.		
Rideshare Prog.		31	2		0	0		0	0		0	0
Vanpool Program		31	2		0	0		0	0		0	0
Transit Program		31	2		0	0		0	0		0	0
Work Hours Mgmt												
Flex Time		0	0		0	0		0	0		0	0
Stagrd Hours		0	0		0	0		0	0		0	0
Comp 4/40		10	2		0	0		0	0		0	0
Comp 9/80		5	2		0	0		0	0		0	0
Tele/Commute	3.0	10	2	.0	0	0	.0	0	0	.0	0	0
HOV Lane												
Time Savings	0.			0.			0.			0.		
Restriction	0			0			0			0		
TIME CHANGES												
Pref. Parking			0			0			0			0
1 / VEH		.0			.0			.0			.0	
2 / VEH		.0			.0			.0			.0	
3 / VEH		.0			.0			.0			.0	
4+ / VEH		.0			.0			.0			.0	
Transit		.0			.0			.0			.0	
Vanpool		.0			.0			.0			.0	
COST(\$ ) SUBSIDY												
Pref. Parking			2			0			0			0
1 / VEH	.0	.00		.0	.00		.0	.00		.0	.00	
2 / VEH	.0	-3.00		.0	.00		.0	.00		.0	.00	
3 / VEH	.0	-4.50		.0	.00		.0	.00		.0	.00	
4+ / VEH	.0	-6.00		.0	.00		.0	.00		.0	.00	
Transit	.0	-1.50		.0	.00		.0	.00		.0	.00	
Vanpool		-18.00			.00			.00			.00	
GENERIC ACTIONS												
			DST				DST				DST	
Time Changes												
1 / VEH	.0	N		.0	N		.0	N		.0	N	
2 / VEH	.0	N		.0	N		.0	N		.0	N	
3 / VEH	.0	N		.0	N		.0	N		.0	N	
4+ / VEH	.0	N		.0	N		.0	N		.0	N	
Transit	.00	N		.00	N		.00	N		.00	N	
Vanpool	.00	N		.00	N		.00	N		.00	N	
Cost Changes												
1 / VEH	.00	N		.00	N		.00	N		.00	N	
2 / VEH	.00	N		.00	N		.00	N		.00	N	
3 / VEH	.00	N		.00	N		.00	N		.00	N	
4+ / VEH	.00	N		.00	N		.00	N		.00	N	
Transit	.00	N		.00	N		.00	N		.00	N	
Vanpool	.00	N		.00	N		.00	N		.00	N	

## TDM Model Outputs - 2014

	PERCENT MODE SHARE					P E A K H O U R			% REDUCTION		
	DA	TRN	CP	VP	AVR	PERSON TRIPS	VEHICLE TRIPS	V M T	PERS TRIPS	VEH TRIPS	VMT
	0	80.8	7.6	11.6	.0	1.16	1247402	1073671	98000784		
1	79.1	7.8	12.2	.9	1.18	1237769	1046501	95463088	.8	2.5	2.6

Line 0 is 2014 base condition.  
 Line 1 is 2014 TDM Program.  
 Change in VMT due to 2014 TDM Program is -253,769.6

## TDM Model Inputs - 2040

AREAWIDE AND EMPLOYER STRATEGIES														
TEST DESCRIPTION	2040CAT7			NO TEST			NO TEST			NO TEST				
	AREA	EMPLOYER	PART	AREA	EMPLOYER	PART	AREA	EMPLOYER	PART	AREA	EMPLOYER	PART		
	WIDE	STRAT	PART	WIDE	STRAT	PART	WIDE	STRAT	PART	WIDE	STRAT	PART		
Transit Service Improvements														
I V T (min.)	0.			0.			0.			0.				
O V T (min.)	0.			0.			0.			0.				
Rideshare Prog.		41	6		0	0		0	0		0	0		
Vanpool Program		41	6		0	0		0	0		0	0		
Transit Program		41	6		0	0		0	0		0	0		
Work Hours Mgmt														
Flex Time		0	0		0	0		0	0		0	0		
Stagrd Hours		0	0		0	0		0	0		0	0		
Comp 4/40		20	6		0	0		0	0		0	0		
Comp 9/80		5	6		0	0		0	0		0	0		
Tele/Commute	3.0	30	6	.0	0	0	.0	0	0	.0	0	0		
HOV Lane														
Time Savings	0.			0.			0.			0.				
Restriction	0			0			0			0				
TIME CHANGES			0			0			0			0		
Pref. Parking														
1 / VEH		.0			.0			.0			.0			
2 / VEH		.0			.0			.0			.0			
3 / VEH		.0			.0			.0			.0			
4+ / VEH		.0			.0			.0			.0			
Transit		.0			.0			.0			.0			
Vanpool		.0			.0			.0			.0			
COST(\$ ) SUBSIDY			6			0			0			0		
Pref. Parking														
1 / VEH	.0	.00		.0	.00		.0	.00		.0	.00			
2 / VEH	.0	-3.00		.0	.00		.0	.00		.0	.00			
3 / VEH	.0	-4.50		.0	.00		.0	.00		.0	.00			
4+ / VEH	.0	-6.00		.0	.00		.0	.00		.0	.00			
Transit	.0	-1.50		.0	.00		.0	.00		.0	.00			
Vanpool		-18.00			.00			.00			.00			
GENERIC ACTIONS														
			DST				DST				DST			
Time Changes														
1 / VEH	.0	N		.0	N		.0	N		.0	N			
2 / VEH	.0	N		.0	N		.0	N		.0	N			
3 / VEH	.0	N		.0	N		.0	N		.0	N			
4+ / VEH	.0	N		.0	N		.0	N		.0	N			
Transit	.00	N		.00	N		.00	N		.00	N			
Vanpool	.00	N		.00	N		.00	N		.00	N			
Cost Changes														
1 / VEH	.00	N		.00	N		.00	N		.00	N			
2 / VEH	.00	N		.00	N		.00	N		.00	N			
3 / VEH	.00	N		.00	N		.00	N		.00	N			
4+ / VEH	.00	N		.00	N		.00	N		.00	N			
Transit	.00	N		.00	N		.00	N		.00	N			
Vanpool	.00	N		.00	N		.00	N		.00	N			

## TDM Model Outputs - 2040

	PERCENT MODE SHARE					P E A K H O U R			% REDUCTION		
	DA	TRN	CP	VP	AVR	PERSON TRIPS	VEHICLE TRIPS	V M T	PERS TRIPS	VEH TRIPS	VMT
0	81.2	7.3	11.5	.0	1.16	1520485	1314751	115601736			
1	66.4	8.0	18.9	6.7	1.34	1439488	1076245	94423304	5.3	18.1	18.3

Line 0 is 2040 base condition.  
 Line 1 is 2040 TDM Program.  
 Change in daily VMT due to 2040 TDM Program is -2,117,843.2

## Employer Participation Rate

The effectiveness of a particular TDM measure when applied through employers depends on the degree to which employers actually implement the measure. Generally, this is determined by the legal/regulatory requirement imposed on employers. As might be expected, the imposition of a requirement not only affects the number of employers who participate, but the spirit or quality with which the program measure is implemented.

The TDM model reflects this relationship through the Employer Participation Rate. This Rate is defined as the percentage of employers in the study area who would be expected to offer the particular measure under different legal/regulatory conditions. There are different participation rates for each type of action.

You are provided with 6 Employer Participation Rate options:

- Level 1: No participation ( i.e., 0% ).
- Level 2: Voluntary participation, meaning that there is no legal requirement compelling participation ( i.e., it is up to the employer's self interest).
- Level 3: New Mandatory participation, meaning that there is a legal requirement compelling participation on the particular measure, but that requirement applies only to those employers who enter the local employment base between now or the date of enactment of their requirement, and the study forecast year.
- Level 4: Full Mandatory participation, meaning that the legal requirement applies to all employment, new and existing.
- Level 5: Maximum participation, which assumes the theoretically unobtainable 100% involvement of all employers.
- Level 6: A blank column which is available for you to test your own design, should you be examining a special form of ordinance, or you expect a different pattern of participation from the default values provided.

Participation Rate #2 was used for 2014 TDM Program.

Participation Rate #6 was used for 2040 TDM Program.

## Employer Participation Rate

EMPLOYER INCENTIVE PROGRAMS							
Work Place Category		Employer Participation Rate					
Type	Size	1	2	3	4	5	6
New Office	1-49	0	1	76	76	100	50
New Office	50-99	0	1	100	100	100	65
New Office	100-499	0	7	100	100	100	75
New Office	500+	0	7	100	100	100	85
Old Office	1-49	0	1	1	76	100	50
Old Office	50-99	0	1	1	100	100	65
Old Office	100-499	0	7	7	100	100	75
Old Office	500+	0	7	7	100	100	85
New Non-Office	1-49	0	1	76	76	100	50
New Non-Office	50-99	0	1	100	100	100	65
New Non-Office	100-499	0	7	100	100	100	75
New Non-Office	500+	0	7	100	100	100	85
Old Non-Office	1-49	0	1	1	76	100	50
Old Non-Office	50-99	0	1	1	100	100	65
Old Non-Office	100-499	0	7	7	100	100	75
Old Non-Office	500+	0	7	7	100	100	85

Participation Rate #2 was used for 2014 TDM Program.  
 Participation Rate #6 was used for 2040 TDM Program.

COMPRESSED WORKWEEK AND TELECOMMUTING							
Work Place Category		Employer Participation Rate					
Type	Size	1	2	3	4	5	6
New Office	1-49	0	4	76	76	100	50
New Office	50-99	0	4	100	100	100	65
New Office	100-499	0	37	100	100	100	75
New Office	500+	0	37	100	100	100	85
Old Office	1-49	0	4	4	76	100	25
Old Office	50-99	0	4	4	100	100	65
Old Office	100-499	0	37	37	100	100	75
Old Office	500+	0	37	37	100	100	85
New Non-Office	1-49	0	0	0	0	0	0
New Non-Office	50-99	0	0	0	0	0	0
New Non-Office	100-499	0	0	0	0	0	0
New Non-Office	500+	0	0	0	0	0	0
Old Non-Office	1-49	0	0	0	0	0	0
Old Non-Office	50-99	0	0	0	0	0	0
Old Non-Office	100-499	0	0	0	0	0	0
Old Non-Office	500+	0	0	0	0	0	0

Participation Rate #2 was used for 2014 TDM Program.  
 Participation Rate #6 was used for 2040 TDM Program.

## Employer Participation Rate

EMPLOYER SUPPORT PROGRAMS (Carpool, Vanpool, Transit)							
Work Place Category		Employer Participation Rate					
Type	Size	1	2	3	4	5	6
New Office	1-49	0	4	76	76	100	50
New Office	50-99	0	4	100	100	100	65
New Office	100-499	0	37	100	100	100	75
New Office	500+	0	37	100	100	100	85
Old Office	1-49	0	4	4	76	100	50
Old Office	50-99	0	4	4	100	100	65
Old Office	100-499	0	37	37	100	100	75
Old Office	500+	0	37	37	100	100	85
New Non-Office	1-49	0	4	76	76	100	50
New Non-Office	50-99	0	4	100	100	100	65
New Non-Office	100-499	0	37	100	100	100	75
New Non-Office	500+	0	37	100	100	100	85
Old Non-Office	1-49	0	4	4	76	100	50
Old Non-Office	50-99	0	4	4	100	100	65
Old Non-Office	100-499	0	37	37	100	100	75
Old Non-Office	500+	0	37	37	100	100	85

Participation Rate #2 was used for 2014 TDM Program.  
 Participation Rate #6 was used for 2040 TDM Program.

# Employer Level of Effort

## LEVEL OF EFFORT - VANPOOL PROGRAMS

The values of 1 to 4 describe the level of effort the employer will put into a vanpool program. The following is the meaning of these values:

1. Vanpool information activities (tied in with areawide vanpool matching and/or third-party vanpool programs), plus 1/4 time transportation coordinator.
2. In-house vanpool matching services, and/or personalized vanpool candidate get-togethers, and non-monetary vanpool development, plus 1/4 time transportation coordinator and a policy of flexible work schedules.
3. In-house vanpool matching services, vanpool development and operating assistance including financial assistance such as vanpool purchase loan guarantees, consolidated purchase of insurance, and startup subsidy (generally at least two forms of such financial assistance), and additional incentives such as van washing and preferential (reserved, inside, and/or especially convenient) parking for vanpools, plus a 1/2 time transportation coordinator.
- 4 In-house vanpool matching services, vanpool development and operating assistance including major financial assistance such as employer purchase of vans with favorable leaseback (or alternative continuing subsidy such as free maintenance, free insurance, and/or direct subsidy to keep vanpool fares low) in addition to startup subsidy, several additional incentives such as van washing, preferential parking for vanpools and guaranteed ride home, and a full-time transportation coordinator, and/or personalized vanpool candidate get-togethers.

Level #3 was used for 2014 TDM Program.

Level #4 was used for 2040 TDM Program.

Level #1 was used as the base condition for both 2014 and 2040.

## Employer Level of Effort

### LEVEL OF EFFORT - TRANSIT PROGRAMS

The values of 1 to 4 describe the level of effort the employer will put into a transit program. The following is the meaning of these values:

1. Transit information center plus 1/4 time transportation coordinator.
2. Transit information center and a policy of work hours flexibility to accommodate transit schedules/delays, plus 1/4 time transportation coordinator.
3. Transit information center and a policy of work hours flexibility, on-site bus pass sales, plus a 1/2 time transportation coordinator.
4. Transit information center and a policy of work hours flexibility, on-site bus pass sales, guaranteed ride home, and a full-time transportation coordinator.

Level #3 was used for 2014 TDM Program.

Level #4 was used for 2040 TDM Program.

Level #1 was used as the base condition for both 2014 and 2040.

### LEVEL OF EFFORT - CARPOOL PROGRAMS

The values of 1 to 4 describe the level of effort the employer will put into a carpooling program. The following is the meaning of these values:

1. Carpool information activities (tied in with areawide matching), and a 1/4 time transportation coordinator.
2. In-house carpool matching services and/or personalized carpool candidate get-togethers (including information activities), and a 1/4 time transportation coordinator.
3. In-house carpool matching and information services, plus preferential (reserved, inside, and/or especially convenient) parking for carpools, a policy of flexible work schedules to accommodate carpools, and a 1/2 time transportation coordinator.
4. In-house carpool matching and information services, plus preferential parking for carpools, flexible schedules, guaranteed ride home, and a full-time transportation coordinator.

Level #3 was used for 2014 TDM Program.

Level #4 was used for 2040 TDM Program.

Level #1 was used as the base condition for both 2014 and 2040.