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	Enhanced Mission Model Tolling
Jesus Heredia, TxDOT	Methodology Memorandum

HNTB Job Number

42085

Technical Memorandum

Texas Department of Transportation (TxDOT) has contracted HNTB to conduct traffic forecasting and analysis in support of the environmental analysis for the Border Highway West project west of downtown El Paso, Texas as part of contract number 24-648P5001, Work Authorization number 11. This project includes a proposed extension of Schuster Avenue to cross I-10 and connect with US 85 (Paisano Avene), a collector-distributor system along I-10 near the Sunland Park interchange, and the Border Highway West project.

This memorandum outlines the process proposed to incorporate open road tolling into the traffic assignment process of the Enhanced Mission travel demand model.

Traffic Estimation/TransCAD Analysis

HNTB has developed an Enhanced Mission TransCAD travel demand model, utilizing available datasets from the current El Paso Metropolitan Planning Organization (El Paso MPO) Mission Model development process. The Mission Model is a daily traffic forecasting model developed within the TransCAD travel demand modeling software platform. Data from the Mission Model will be utilized to develop travel demand tables over smaller periods than one twenty-four daily period within the Enhanced Mission Model. Of particular concern is the level of travel demand and resulting roadway congestion during the AM and PM peak periods. Figure 1 provides an overview of the process proposed for the developing peak period trip tables and resulting daily traffic assignments using the Enhanced Mission Model.

External Trip Classification

Vehicle trips with one or both trip ends outside the El Paso model area are handled within the Mission Model as external trips. There are two types of external trips, those with only one trip end outside of El Paso (external-internal trips) and those trips with both ends outside of El Paso (external-external trips).
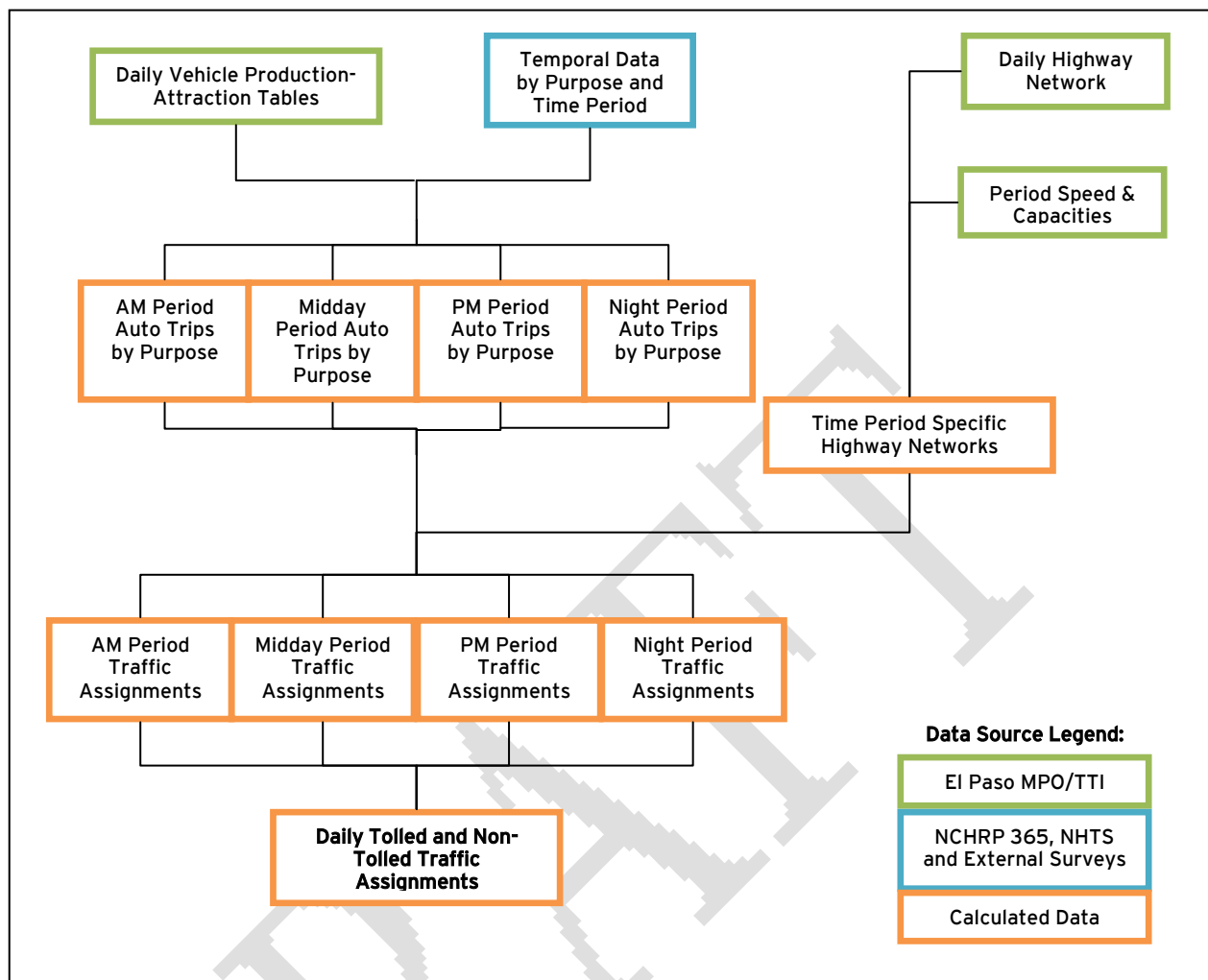
Figure 1 Enhanced Mission Model Flowchart

The primary facility for external movements is Interstate 10 (I-10). Tables 1 and 2 show previous data collection for auto and commercial vehicle interaction on I-10 near the El Paso Mission Model limits. Table 3 provides the estimate of external to internal trips at I-10, based on removing the external-external trips from the 24 hour volumes taken at part of the same study.

Table 1 I-10 through movements

		Survey Volume		Percent of Volume	
From	To	Non-commercial	Commercial	Non-Commercial	Commercial
New Mexico State Line	Loop 375	2,311	2,888	44.4%	55.6%
Loop 375	New Mexico State Line	1,914	2,406	44.3%	55.7%
	Average			44.4%	55.6%

Source: Table 9 of El Paso EXTLP2007.PDF, TTI 2007 Memo

Table 2 I-10 24 Hour Volume at I-10

Location	Direction	Volume		Percent of Volume	
		Non-Commercial	Commercial	Non-Commercial	Commercial
New Mexico State Line	NB	23,942	6,728	78.1%	21.9%
	SB	25,608	7,945	76.3%	23.7%
Loop 375	WB	38,216	9,076	80.8%	19.2%
	EB	35,655	11,113	76.2%	23.8%
			Average	77.9%	22.1%

Source: Tables 1 and 2 of El Paso EXLP2007.PDF, TTI 2007 Memo

Table 3 External-Internal Volume at I-10

Location	Direction	Volume		Percent of Volume	
		Non-Commercial	Commercial	Non-Commercial	Commercial
New Mexico State Line	NB	22,028	4,322	83.6%	16.4%
	SB	23,297	5,057	82.2%	17.8%
Loop 375	WB	36,302	6,670	84.5%	15.5%
	EB	33,344	8,225	80.2%	19.8%
			Average	82.6%	17.4%

Source: HNTB Corporation, Table 2 minus Table 1 above.

Table 4 provides the auto and commercial vehicle split for each external station in the El Paso Mission Model, the previous approved El Paso MPO model. These values will be used to disaggregate the external trips into auto and commercial purposes in the Enhanced Mission Model. All external stations not included in the survey were assumed to have 5% commercial vehicles.

Table 4 Non-Commercial and Commercial Splits for El Paso

Model Station	Survey Direction	Facility	Non-Commercial Vehicles	Commercial Vehicles
720	Inbound	Cordova Bridge	59,379	2,655
721	Inbound	Stanton Street Bridge	8,467	0
722	Inbound	El Paso Street Bridge	19,454	0
719	Inbound	Zaragosa Bridge	24033	2375
718	Both	Fabens Bridge	2776	0
715	Outbound	US 62/US 180	975	424
716	Outbound	I-10 East	5386	6488
717	Outbound	SH 20 East	489	138
725	Inbound	Santa Teresa POE	1039	301
724	Inbound	Santa Teresa Cattle Crossing	93	12
N/A	Outbound	Hwy 9	282	72
708	Outbound	Hwy 28	1445	199
710	Outbound	Hwy 478	2801	446
711	Outbound	I-10 North	19559	8667
712	Outbound	Hwy 213	1566	201
714	Outbound	US 54	2038	993

Source: Table 20 Expanded Vehicle Survey Results by Station, El Paso External Survey Technical Summary, TTI, August 2003.

Time of Day

Traffic count data in the El Paso area was collected in 2009 and 2010. Figure 2 below shows the daily distribution of traffic per half-hour increment over 20 locations in the El Paso area (concentrated near the Border Highway West study area). This data indicates that the peak three-hour AM period is between 7:00 AM and 10:00 AM, while the peak three-hour PM periods is between 3:30 PM and 6:30 PM. The midday period is therefore five and a half hours long, from 10:00 AM to 3:30 PM. The night period is twelve and a half hours long, from 6:30 PM to 7:00 AM.
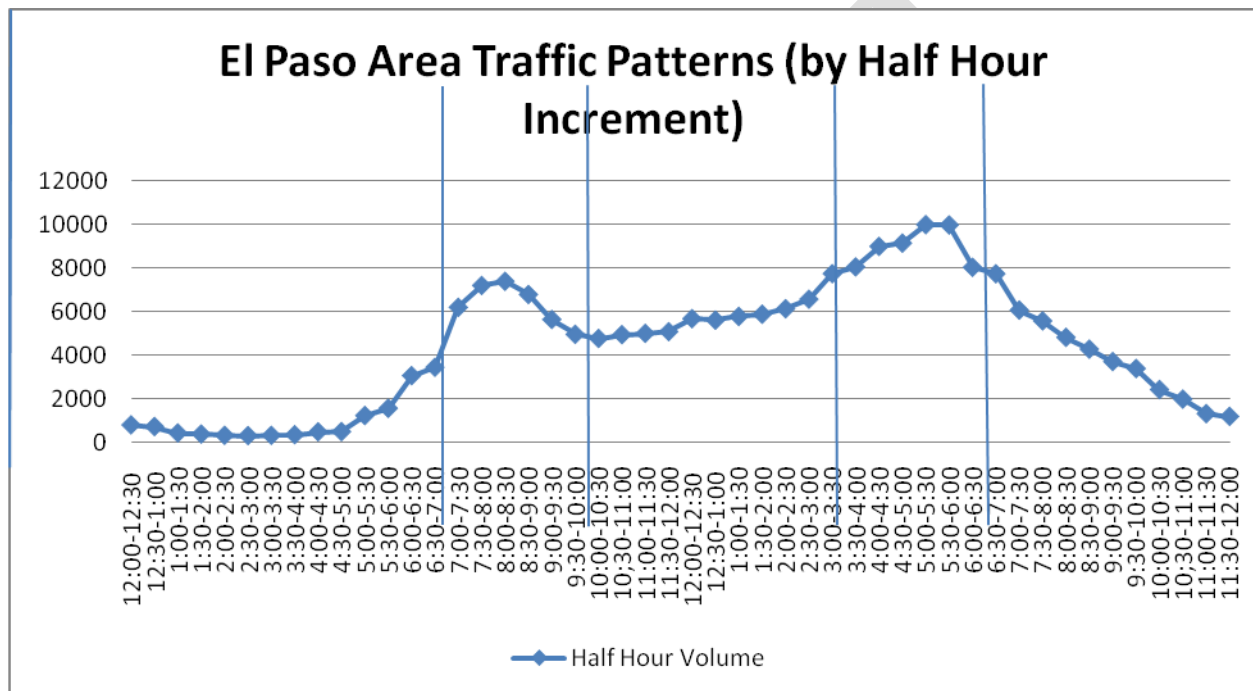

Figure 2 Traffic counts by half hour increment in El Paso area

HNTB will develop an Enhanced Mission Model, containing four peak period auto trip tables by trip purpose, allowing for traffic assignments to be conducted for each of the four time periods. These four traffic assignments are aggregated to a daily traffic assignment, see Figure 1. Currently, the twenty-four hour trip table is assigned to the highway network, resulting in the daily traffic assignment.

The four peak period trip tables are developed using the vehicle production-attraction tables from the daily trip distribution model. Temporal data benchmarks comes from two sources, the National Cooperative Highway Research Program Report 365 (table 5), and National Household Transportation Survey data collected in Wisconsin in year 2001 (table 6). A similar process was previously conducted using the Mission Model. The parameters shown in table 7 include refinement through the use of the Mission Model to match observed travel patterns in the Border Highway West study area using peak period traffic counts, hourly tube counts and AADT data. Table 8 provides temporal distribution data for the external station movements.

The daily vehicle production to attraction table is first multiplied by the Daily to Peak factor. The P-A to O-D factor is then applied to calculate the number of vehicles trips traveling from the production zone to the attraction zone. The calculation is repeated, but with the transpose of the daily vehicle trip table and

with one minus the P-A to O-D factor, resulting in the number of vehicles traveling from the attraction zone to the production zone in the peak period.

Table 5 NCHRP 365 Time of Day Factors

Purpose	Daily to Peak				P-A to O-D			
	AM	MD	PM	NT	AM	MD	PM	NT
HBW	26.32%	13.40%	29.47%	30.80%	0.9490	0.5217	0.1067	0.5030
HBO	15.71%	29.80%	22.61%	31.88%	0.8553	0.5118	0.5380	0.4178
NHB	8.30%	39.66%	29.23%	22.83%	0.5000	0.5000	0.5000	0.5000

Source: National Cooperative Highway Research Program Report 365, Travel Estimation Techniques for Urban Planning, National Academy Press, Washington D.C., 1998, Table 41 (500,000- 1,000,000) and Table 42.

Table 6 NHTS Survey Time of Day Factors, Northeast Wisconsin

Purpose	Daily to Peak				P-A to O-D			
	AM	MD	PM	NT	AM	MD	PM	NT
HBW	33.4%	18.3%	26.9%	21.4%	0.9310	0.4980	0.1260	0.4740
HBSHOP	9.2%	47.6%	26.5%	16.7%	0.7000	0.5060	0.3430	0.3560
HBSCHL	43.0%	21.8%	24.2%	11.0%	0.9420	0.3560	0.1900	0.3450
HBO	15.8%	28.9%	25.1%	30.2%	0.7930	0.5610	0.4630	0.3460
NHB	11.3%	49.5%	24.5%	14.7%	0.5000	0.5000	0.5000	0.5000

Source: National Household Travel Survey Add-On Data, Northeast Wisconsin area, courtesy of the Wisconsin Department of Transportation.

Table 7 Estimated Time of Day Factors, Enhanced Mission Model

Purpose	Daily to Peak				P-A to O-D			
	AM	MD	PM	NT	AM	MD	PM	NT
HBW	32%	15%	29%	24%	0.92	0.45	0.13	0.45
HBNW	21%	30%	27%	22%	0.75	0.50	0.40	0.40
NHB	11%	41%	28%	20%	0.50	0.50	0.50	0.50
Trucks	22%	35%	22%	21%	0.60	0.50	0.40	0.50
Visitor	15%	40%	20%	25%	0.60	0.50	0.40	0.50

Source: HNTB Corporation

Table 8 Temporal Distribution of Externals

Time Period	Non-Commercial		Commercial	
	In	Out	In	Out
AM	17	18	16	16
MD	28	28	27	29
PM	23	20	18	17
NT	32	34	39	39

Source: Figures 15 and 16 of El Paso External Tech Summary

Network Lookup Modifications

Daily capacities are not intended to be altered with the Enhanced Mission Model. The one exception is the Border Highway, FUNCL 1. The capacity originally used in the Mission Model was lower than commonly expected for typical limited access freeway-type facilities. The daily capacity has been updated, according to table 9.

Table 9 Border Highway Functional Class Daily Per Lane Capacities

Area Type	Mission Model	Enhanced Mission Model (and Enhanced Mission Model)
1	13,300	15,200
2	11,800	15,200
3	10,400	15,200
4	9,200	13,300
5	7,000	13,300

The daily capacities will be disaggregated, with each period receiving a portion of the daily capacity. The anticipated split between the four time periods is shown in table 10.

Table 10 Peak Period Capacity, Enhanced Mission Model

Time Period	Percent of Daily Capacity
AM	16%
Midday	25%
PM	16%
Night	43%

Source: HNTB Corporation

HNTB suggests adding two new functional classifications to the Enhanced Mission Model lookup table. Class 15 represents managed lane facilities east of US 54 while class 16 represents managed lane facilities west of I-110. These two new classes would provide flexibility in controlling the differences in operational characteristics between the managed lanes and the general purpose lanes within close proximity.

Changing the architecture of the Enhanced Mission Model to utilize four time periods resulted in developing lookup speeds that where typically closer to free-flow speeds. This allowed the AM and PM peak periods to experience lower congested speeds, while the midday and night periods experienced less congestion and higher congested speeds. The speeds for all functional class/area type combinations are found in Appendix A.

Toll Rate

Per the Market Valuation Agreement (MVA) between Camino Real and TxDOT, the 2015 base auto toll rate is $0.10/mile, with trucks having a rate 2 to 5 times the base rate. For modeling purposes, a truck toll rate of 3 times the auto will be utilized, 2015 truck toll rate equals $0.30/mile. The MVA states the base toll rate will be adjusted to maintain LOS C or better on the facility. The MVA also includes a 2% MINIMUM escalation, or the CPI, whichever is greater. For modeling purposes, a 2% escalation will be utilized. This results in a 2035 base toll rate of $0.15/mile for autos and $0.45/mile for trucks.

Value of Time

Year 2011 demographics report documents the median household incomes shown table 11 in by county in the El Paso area. The corresponding TAZ demographic data provided the number of housing units by county.

Table 11 Median Household Income and Number of Households by County

County	Median Household Income (2009 $)	Households (2010)
El Paso	35,249	256,170
Dona Ana	35,544	12,348
Otero	38,262	3,074

Source: El Paso MPO 2011 Demographic Update Technical Memorandum, Draft, Table 5.

Weighting the median household income by the number of housing units by county results in an area-wide median household income of $35,297 in 2009 dollars. A 2080 hour work year provides an hourly value of $16.97. Using half the hourly wage results in a value of time (VOT) for the El Paso area at $8.49 (2009 dollars).

The MVA indicates a 2% annual escalation for tolling. Using this 2% escalation for VOT results in a $9.56/hour value of time in year 2015 dollars. Trucks are assumed to have three times the VOT, resulting in a $28.68 VOT in 2015 dollars. Using the 2% escalation to year 2035 results in VOT of $14.21 per auto, and $42.62 for trucks.

Vehicle Operating Costs

The price of fuel is relatively volatile, a December quote from El Paso Gas Prices,(http://www.elpasogasprices.com/) is $2.94, therefore a value of $3.00 per gallon will be used. Diesel varied from $3.56 to $3.89, a midpoint value of $3.70 will be used. Using with the 2% escalation rate used in establishing the VOT and toll rates, the 2015 unleaded is $3.25, while diesel is $4.00. 2035 unleaded is $4.83, 2035 diesel is $6.43.

The latest available data for fuel efficiency was for 2008 (http://www.eia.gov/totalenergy/data/ monthly/pdf/sec1_17.pdf), which states passenger cars have an average fuel efficiency of 22.6 mpg, while light trucks (minivans, SUV's, etc) have 18.1 mpg average. The vehicle classification data for I-10 east of US 85 indicates a 82%-18% split between passenger cars and light trucks, which would equate to 21.8 mpg. The trend for both vehicle types is slightly improving efficiency, so estimate that 2015 auto fuel efficiency is 22.0 mpg. With $3.25 fuel, the cost per mile for autos in 2015 will be modeled as $0.148/mile.

Truck fuel efficiency is shown at 6.2 mpg in 2008, with an increasing trend. Eestimate truck fuel efficiency for 2015 is 6.5 mpg. With $4.00 diesel, cost per mile for trucks in 2015 will be modeled at $0.615/mile.

Recently proposed NHTSA/EPA fuel economy standards (http://www.nhtsa.gov/staticfiles/rulemaking /pdf/cafe/2017-25_CAFE_NPRM_Factsheet.pdf) indicate that fuel efficiency for autos and light trucks (minivans, SUV's, etc) manufactured in 2025 will be 49.6 mpg. For modeling purposes, it is assumed that

turnover in the total vehicle fleet between 2025 and 2035 will result in auto fuel efficiency to be 49.6 mpg in 2035, resulting in $0.097/mile auto operating cost.

According to NHTSA proposals for heavy truck standards for 2015,

"The final NHTSA standards represent an average per-vehicle improvement in fuel consumption of 15 percent for diesel vehicles and 10 percent for gasoline vehicles, compared to a common baseline."

(http://www.epa.gov/otaq/climate/documents/420f11031.pdf)
Using the 15% reduction in fuel consumption from the 2008 data, 2035 truck fuel efficiency is 7.3 mpg. With $6.43/gallon diesel, 2035 truck operating cost is $0.881/mile.

The vehicle operating costs are added to each link as a toll. The actual tolls of the managed lanes are then added on to the vehicle operating costs. This allows for specific costs for autos and trucks separately.

The auto and truck trip tables will be assigned to the time period specific roadway networks for each of the four time periods using TransCAD's multi-modal assignment procedure, which allows for simultaneous assignment of the auto and truck trip tables. The assignment parameters used in the Horizon Model will be utilized to assign each of the four time period trip table sets. The four resulting traffic assignments will be aggregated to generate the daily traffic assignment values for each roadway link.

Toll Revenue Forecasts

The Enhanced Mission Model's multi-modal assignment process will be used to estimate toll usage and corresponding revenue under three tolling concepts for each of the four time periods. The four time period assignments will be aggregated to develop the daily toll vehicles miles traveled (VMT), which are then expanded to annual values. Previous toll modeling efforts for the Border Highway West will also be reviewed for consistency with the Enhanced Mission Model outputs. The tolled VMT values will then be further analyzed using a spreadsheet process to adjust for system ramp up, violation and system operating costs in order to calculate the toll revenue.

2010 Validation Check

Total VMT in the original 2010 Mission Model equaled 1.57×10^7, while the enhanced Mission Model parameters resulted in 1.58×10^7, indicating the general traffic assignments were not significantly altered.

2035 Validation Checks

The modifications made to the Enhanced Mission Model are intended to improve the ability to forecast traffic in the El Paso area considering the option of toll facilities. The toll volumes generated for the Cesar Chavez managed lane project are therefore being used as a validation check for the model's modifications. Table 12 compares assignments on the Cesar Chavez general purpose and managed lane facilities between the original Mission Model and the Enhanced Mission Model.

Table 12 Comparison of Original Mission Model and Enhanced Mission Model along Cesar Chavez

Location	Original Mission Model		Enhanced Mission Model	
	Managed Lanes	GP Lanes	Managed Lanes	GP Lanes
West of Fonseca	16,500	47,200	19,100	48,200
East of Fonseca	18,300	47,300	20.100	49,800
South of Midway	13,800	40,200	10,000	43,900
SE of Lee Trevino	12,000	41,400	9,400	43,000
South of Padres	8,400	28,600	4,100	32,900

Appendix A

FUNCL	ATYPE	LOOK UP	SPEED D	CAP PK	A	B	SPEED PK	A PK	B PK	AUTO OPCO35	TRK OPCO35	AUTO VOT35	TRK VOT35
1	1	11.00	38	15200	0.15	4.00	44.00	0.55	7.00	0.0970	0.8810	0.2368	0.7103
1	2	12.00	40	15200	0.15	4.00	44.00	0.55	7.00	0.0970	0.8810	0.2368	0.7103
1	3	13.00	43	15200	0.15	4.00	44.00	0.55	7.00	0.0970	0.8810	0.2368	0.7103
1	4	14.00	46	13300	0.15	4.00	49.00	0.55	7.00	0.0970	0.8810	0.2368	0.7103
1	5	15.00	49	13300	0.15	4.00	51.00	0.55	7.00	0.0970	0.8810	0.2368	0.7103
2	1	21.00	43	28200	0.15	4.00	50.00	0.55	7.00	0.0970	0.8810	0.2368	0.7103
2	2	22.00	45	25100	0.15	4.00	52.00	0.55	7.00	0.0970	0.8810	0.2368	0.7103
2	3	23.00	48	22500	0.15	4.00	55.00	0.55	7.00	0.0970	0.8810	0.2368	0.7103
2	4	24.00	51	20200	0.15	4.00	58.00	0.55	7.00	0.0970	0.8810	0.2368	0.7103
2	5	25.00	54	16700	0.15	4.00	61.00	0.55	7.00	0.0970	0.8810	0.2368	0.7103
3	1	31.00	31	13300	0.15	4.00	37.00	0.30	5.70	0.0970	0.8810	0.2368	0.7103
3	2	32.00	35	11800	0.15	4.00	41.00	0.30	5.70	0.0970	0.8810	0.2368	0.7103
3	3	33.00	39	10400	0.15	4.00	45.00	0.30	5.70	0.0970	0.8810	0.2368	0.7103
3	4	34.00	43	9200	0.15	4.00	49.00	0.30	5.70	0.0970	0.8810	0.2368	0.7103
3	5	35.00	50	7000	0.15	4.00	56.00	0.30	5.70	0.0970	0.8810	0.2368	0.7103
4	1	41.00	30	9400	0.15	4.00	31.00	0.30	5.00	0.0970	0.8810	0.2368	0.7103
4	2	42.00	34	9000	0.15	4.00	35.00	0.30	5.00	0.0970	0.8810	0.2368	0.7103
4	3	43.00	37	8000	0.15	4.00	38.00	0.30	5.00	0.0970	0.8810	0.2368	0.7103
4	4	44.00	43	7000	0.15	4.00	44.00	0.30	5.00	0.0970	0.8810	0.2368	0.7103
4	5	45.00	49	5300	0.15	4.00	50.00	0.30	5.00	0.0970	0.8810	0.2368	0.7103
5	1	51.00	29	9100	0.15	4.00	33.00	0.20	4.50	0.0970	0.8810	0.2368	0.7103
5	2	52.00	33	8200	0.15	4.00	37.00	0.20	4.50	0.0970	0.8810	0.2368	0.7103
5	3	53.00	36	7300	0.15	4.00	40.00	0.20	4.50	0.0970	0.8810	0.2368	0.7103
5	4	54.00	42	6300	0.15	4.00	46.00	0.20	4.50	0.0970	0.8810	0.2368	0.7103
5	5	55.00	48	4800	0.15	4.00	52.00	0.20	4.50	0.0970	0.8810	0.2368	0.7103
6	1	61.00	24	8100	0.15	4.00	24.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
6	2	62.00	29	7700	0.15	4.00	29.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
6	3	63.00	33	6900	0.15	4.00	33.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
6	4	64.00	37	6000	0.15	4.00	37.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
6	5	65.00	44	4600	0.15	4.00	44.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
7	1	71.00	23	7800	0.15	4.00	23.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
7	2	72.00	28	7000	0.15	4.00	28.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
7	3	73.00	32	6200	0.15	4.00	32.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
7	4	74.00	36	5500	0.15	4.00	36.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
7	5	75.00	43	4200	0.15	4.00	43.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
8	1	81.00	22	6000	0.15	4.00	22.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
8	2	82.00	26	5700	0.15	4.00	26.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
8	3	83.00	29	5200	0.15	4.00	29.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
8	4	84.00	34	4500	0.15	4.00	34.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
8	5	85.00	41	3500	0.15	4.00	41.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
9	1	91.00	21	5100	0.15	4.00	21.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
9	2	92.00	25	4600	0.15	4.00	25.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
9	3	93.00	28	4100	0.15	4.00	28.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103

9	4	94.00	33	3600	0.15	4.00	33.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
9	5	95.00	40	2800	0.15	4.00	40.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
10	1	101.00	16	5100	0.15	4.00	16.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
10	2	102.00	20	4600	0.15	4.00	20.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
10	3	103.00	23	4100	0.15	4.00	23.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
10	4	104.00	28	3600	0.15	4.00	28.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
10	5	105.00	35	2800	0.15	4.00	35.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
11	1	111.00	29	8100	0.15	4.00	29.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
11	2	112.00	32	7700	0.15	4.00	32.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
11	3	113.00	35	6900	0.15	4.00	35.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
11	4	114.00	40	6000	0.15	4.00	40.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
11	5	115.00	46	4600	0.15	4.00	46.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
12	1	121.00	24	18000	0.15	4.00	24.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
12	2	122.00	27	18000	0.15	4.00	27.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
12	3	123.00	30	18000	0.15	4.00	30.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
12	4	124.00	35	18000	0.15	4.00	35.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
12	5	125.00	41	18000	0.15	4.00	41.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
13	1	131.00	17	9400	0.15	4.00	17.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
13	2	132.00	21	9000	0.15	4.00	21.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
13	3	133.00	24	8000	0.15	4.00	24.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
13	4	134.00	30	7000	0.15	4.00	30.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
13	5	135.00	36	5300	0.15	4.00	36.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
14	1	141.00	43	28200	0.15	4.00	43.00	0.55	7.00	0.0970	0.8810	0.2368	0.7103
14	2	142.00	45	26300	0.15	4.00	45.00	0.55	7.00	0.0970	0.8810	0.2368	0.7103
14	3	143.00	48	24500	0.15	4.00	48.00	0.55	7.00	0.0970	0.8810	0.2368	0.7103
14	4	144.00	51	22900	0.15	4.00	51.00	0.55	7.00	0.0970	0.8810	0.2368	0.7103
14	5	145.00	54	20400	0.15	4.00	54.00	0.55	7.00	0.0970	0.8810	0.2368	0.7103
0	1	1.00	13	5100	0.15	4.00	13.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
0	2	2.00	17	4600	0.15	4.00	17.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
0	3	3.00	20	4100	0.15	4.00	20.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
0	4	4.00	25	3600	0.15	4.00	25.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
0	5	5.00	32	2800	0.15	4.00	32.00	0.15	4.00	0.0970	0.8810	0.2368	0.7103
15	1	151.00		28200			44.00	0.55	7.00	0.0970	0.8810	0.2368	0.7103
15	2	152.00		26300			44.00	0.55	7.00	0.0970	0.8810	0.2368	0.7103
15	3	153.00		24500			44.00	0.55	7.00	0.0970	0.8810	0.2368	0.7103
15	4	154.00		22900			49.00	0.55	7.00	0.0970	0.8810	0.2368	0.7103
15	5	155.00		20400			51.00	0.55	7.00	0.0970	0.8810	0.2368	0.7103
16	1	161.00		28200			50.00	0.55	7.00	0.0970	0.8810	0.2368	0.7103
16	2	162.00		25100			52.00	0.55	7.00	0.0970	0.8810	0.2368	0.7103
16	3	163.00		22500			55.00	0.55	7.00	0.0970	0.8810	0.2368	0.7103
16	4	164.00		20200			58.00	0.55	7.00	0.0970	0.8810	0.2368	0.7103
16	5	165.00		16700			61.00	0.55	7.00	0.0970	0.8810	0.2368	0.7103