

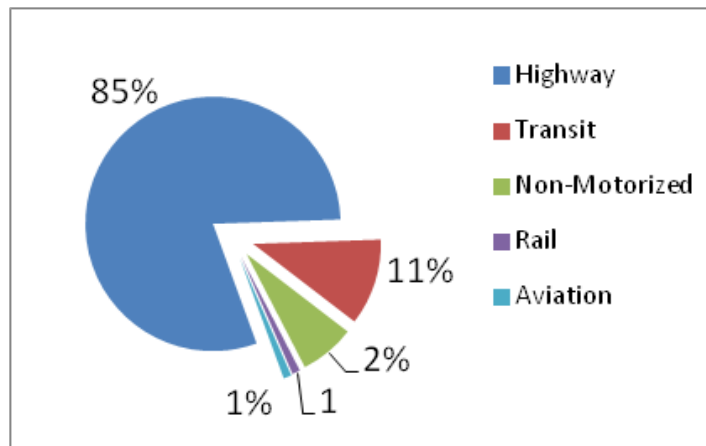
**CHAPTER 8
FEDERAL FINANCIAL RESOURCES FORECAST**

1. OVERVIEW

According to the Code of Federal Regulations (CFR - §450.314(a)), for the purpose of developing the MTP, the MPO, State, and public transportation operators shall cooperatively develop estimates of funds that will be available to support plan implementation. The development process takes into account all projects and strategies proposed for funding that will use Federal funds for eligible projects and activities related to highway, non-motorized, transit, and multimodal, as identified under Title 23 United States Code (USC), and Title 49 USC Chapter 53, respectively.

As a result of that development process, Eastgate in cooperation with the State and public transit operators needed to develop estimated funds to support plan implementation for 398 project recommendations with a *total project cost* of \$1,101,802,203. Those eligible projects and activities related to highway, non-motorized, transit, and multimodal systems for Eastgate’s 2040 MTP are illustrated below. Within Eastgate’ planning area, the greatest needs reflect that Highway (85%), and Transit (11%), represented the largest share of recommendations, followed by Non-Motorized (2%), Rail (1%), and Aviation (1%). Figure 8.1 displays Projects Recommendations by Mode.

Figure 8.1 – Projects Recommendations by Mode



Eastgate’s Total Project Cost of Project Recommendations – by Mode	
Highway	\$ 936,716,000
Transit	\$ 120,656,203
Non-Motorized	\$ 22,730,000
Rail	\$ 15,400,000
Aviation	\$ 6,300,000
Total	\$ 1,101,802,203

Out of the total of 398 projects that are recommended and financially constrained to be identified in the plan, the majority of projects (387) or 97%, are for operating, maintaining, preserving, and implementing improvements to the existing transportation system. The remaining 3% (11 projects) are major new construction projects that remain viable from Eastgate’s regional perspective. Because of the large dollar amounts associated with the construction of major new projects, the dollar percent ratio for 398 projects is that 74% of the projected funding is targeted toward maintaining the existing transportation system, and 26% is identified for

major new construction.

Eastgate's Federal Financial Resources Forecast contained within this section will describe the following: current Federal Funding Synopsis; Assumptions, Methodology, and Financial Resources Forecasts; and Conclusion and Estimated Financial Forecast Projections.

To date, Eastgate has not identified new revenue sources or strategies to fund projects and/or activities within the plan. Instead, Eastgate continues to use historic and/or traditional revenue datum and methodologies. In addition, reasonable revenue and cost estimates, including inflation rates reflecting "year of expenditure dollars," were decided collaboratively between the MPO, State, and public transportation operators, and based on reasonable financial assumptions and information. The financial plan reflects aggregate cost ranges/cost bands, and projects future funding sources that are reasonably expected to be available to support the projected cost ranges/cost bands.

For the 2040 MTP, ODOT assisted Eastgate by developing an optional standard financial planning approach and methodology, which could be utilized for projecting funding levels for the 2040 MTP. ODOT provided this methodology to all MPO's throughout the State, with supporting data for their respective region. ODOT provided source data showing 2000-2011 historical funding utilizing Federal and State dollars; average annual expenditure levels from the historical data; revenue projections based on current funding levels; and growth factors based on ODOT's 2010-2011 Business Plan. It is interesting to note that Eastgate's Federal projection total, and ODOT's Federal Fiscal Plan work-up showing their projections prepared for Eastgate in 2011, are comparable: Eastgate - \$1,547,987,041; ODOT - \$1,556,559,941, respectively.

The Western Reserve Transit Authority (WRTA) in Mahoning County provided a breakdown for Vehicle Capital Improvements showing: replacement schedules by year, quantity, federal description, useful life, and total project cost showing federal, state, and local shares. The newly formed Trumbull County Transit Board (TCTB) is responsible for transit services in Trumbull County. The TCTB intends to continue to operate the Trumbull Transit System and are committed to providing services through a private sector provider through a capital cost of contract. TCTB has provided a projected budget identifying projected operation, capital cost, and the local shares to run that service from 2012 through 2040.

2. FEDERAL FUNDING SYNOPSIS

The Safe, Accountable, Flexible, Efficient, Transportation Equity Act- a Legacy for Users (SAFETEA-LU) officially expired on September 30, 2009, and for nearly three years the bill continued through a series of legislative resolutions. Eastgate proceeded with its financial forecast assuming that all federal programs would continue under the next transportation bill. On July 6, 2012, a new Transportation Bill – Moving Ahead for Progress in the 21st Century Act (MAP-21) was signed into law; it is the first highway authorization act enacted by Congress since 2005. MAP-21 extended the current SAFETEA-LU funding for the remainder of FY2012, with new provisions for FY2013 and beyond taking effect on October 1, 2012. MAP-21 funding will be maintained at FY2012 levels, with adjustments for inflation, of \$40,400,000,000 from the Highway Trust Fund for FY2013, and \$41,000,000,000 for FY2014. Obligation limitations for MAP-21 have been set to reflect an annual obligation limitation of \$39,699,000,000 for FY2013, and \$40,256,000,000 for FY2014, to limit highway spending each year. Since this is only a two year bill, funding availability beyond 2014 will need to be monitored on a yearly basis until another new bill is signed into law, making it difficult to accurately predict what revenues will be available in the later years; all financial projections made at this point in time cannot pick-up fluctuations in material costs.

3. ASSUMPTIONS, METHODOLOGY, AND FINANCIAL RESOURCES FORECASTS

Eastgate's methodology has not changed significantly from what was developed four years ago. Federal

funding projections were done in five steps and grouped by Spending Authority Codes (SAC) as follows: Step 1 – Transportation Review Advisory Council (TRAC); Step 2 – ODOT District 4 (D4); Step 3 - Eastgate; Step 4 – County Engineers Association of Ohio (CEAO); and Step 5 – Transit. Exhibit 8.1 can be referenced for the following narrative. For each of the five steps, the following additional data needed to be determined: Base year allocation; Aggregate Cost Bands (by percent) for a Control Number (CN) identifying drawdown of forecast dollars; System Level Project Implementation, and System Level Operations and Maintenance Costs.

Two formulas (A) and (B), as shown below, were developed to determine funding projections for: Step 1 – TRAC (A); Step 2 – ODOT D4 (B); and Step 4 – CEAO (A), and were based on 2010 population totals.

Formulas		percent ratio	
(A) =	Base amt x $\frac{\text{Eastgate pop}}{\text{OH pop}} =$	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="padding: 5px;"> $\frac{449,135}{11,536,504}$ 0.0389 </td> </tr> </table>	$\frac{449,135}{11,536,504}$ 0.0389
$\frac{449,135}{11,536,504}$ 0.0389			
(B) =	Base amt x $\frac{\text{Eastgate pop}}{\text{District 4 pop}} =$	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="padding: 5px;"> $\frac{449,135}{1,629,418}$ 0.2756 </td> </tr> </table>	$\frac{449,135}{1,629,418}$ 0.2756
$\frac{449,135}{1,629,418}$ 0.2756			

2010 D4 pop ATB;SUM;POR;STA;MAH;TRU = 1,629,418
 2010 State pop = 11,536,504

Step 1 – TRAC projections: TRAC projections were based on the MAH/TRU I-80 Project. TRAC allocates approximately \$500,000,000 over a four year period for various project phases throughout the state. Originally the I-80 project was identified in our 2030 air quality network. Due to economic development expansion and private investment of more than \$650,000,000 by V&M, D4 advanced this project to 2016-17, and a revised project cost was provided to TRAC. Eastgate assumed the total project cost of \$97,000,000 and did not adjust the cost downward. Eastgate anticipates that about 19.4% of TRAC’s \$500,000,000 will be allocated to this project. TRAC’s CN developed in Step 1 was determined by using the total project cost, multiplied by formula A’s percent ratio to set up a base year amount. The result was then multiplied by the remaining years of the plan to determine the CN. Eastgate anticipates that allocations for this project will become available during the (B) FY2016-2020 aggregate cost band. Below is a sample calculation of how the CN was established for TRAC.

- Total Project Cost = \$ 97,000,000; Formula A Ratio = 0.0389; remaining years in the plan = 28;
- To determine base year: \$97,000,000 x 0.0389 = \$3,776,369;
- To set CN: \$3,776,369 x 28 = \$105,738,329.

Step 2 – ODOT District 4 projections: Since D4’s jurisdiction covers six counties, the first step was to determine what amount of federal funding would be used for Eastgate’s planning areas of Mahoning and Trumbull Counties; the D4 CN developed in Step 2 was determined by using Eastgate’s FY 2012-2015 TIP-Table 4; summing the totals for Bridge (BR), Interstate Maintenance (IM), National Highway System (NHS), Surface Transportation Program (STP)/Highway Safety Improvement Program (HSIP), and High Priority (HP), multiplied by formula B’s percent ratio to set up a base year amount. That result was then multiplied by the remaining years of the plan to determine the CN. Below is a sample calculation of how the CN was established for ODOT D4:

- Sum of BR, IM, NHS, STP/HSIP, HP = \$129,258,615; Formula B Ratio = 0.2756;
- Remaining years in the plan = 28;
- To determine base year: \$129,258,615 x 0.2756 = \$35,629,021
- To set CN: \$35,629,021 x 28 = \$997,612,586

EXHIBIT 8.1

Eastgate 2040 MTP: Transportation Federal Funding Financial Resources Forecast October_2012

financial forecast 2012 table _cost bands single file V-2

Funding Source	Base year FY 2012	A	FY 2013 - FY 2015 (3 year aggregate cost band)		B	FY 2016 - FY 2020 (5 year aggregate cost band)		C	FY 2021 - FY 2030 (10 year aggregate cost band)		D	FY 2031 - FY 2040 (10 year aggregate cost band)		Control Numbers (CN)
	allocation dollars	Available Funding 0.388% drawdown of forecast dollar control number A = (1) + (2)	System Level Project Implementation (1)	System Level Operations & Maintenance Costs (2)	Available Funding 0.321% drawdown of forecast dollar control number B = (3) + (4)	System Level Project Implementation (3)	System Level Operations & Maintenance Costs (4)	Available Funding 0.194% drawdown of forecast dollar control number C = (5) + (6)	System Level Project Implementation (5)	System Level Operations & Maintenance Costs (6)	Available Funding 0.097% drawdown of forecast dollar control number D = (7) + (8)	System Level Project Implementation (7)	System Level Operations & Maintenance Costs (8)	Total Plan (28 yrs) forecast dollars by funding source CN = A+B+C+D
MNC - TRAC: 0.1940% of \$500M *** MAM/TRU I-80 Project - add lane	3,776,369	0	0	0	30,769,854	20,923,501	9,846,353	33,942,003	12,219,121	21,722,882	41,026,472	41,026,472	0	105,738,329
District 4 allocations: BR/BH IM, NHS,STPS, HSIP, HP, TES/TAS	35,629,021	387,073,684	263,210,105	123,863,579	320,233,640	217,758,875	102,474,765	193,536,842	131,605,052	61,931,789	96,768,421	65,802,826	30,965,895	997,612,587
STP (E)	7,332,619	79,661,573	54,169,870	25,491,703	65,905,580	44,815,794	21,089,785	39,830,786	27,084,935	12,745,852	19,915,393	13,542,467	6,372,926	205,313,332
CMAQ (E)	2,798,137	30,398,960	20,671,293	9,727,667	25,149,655	17,101,766	8,047,890	15,199,480	10,335,647	4,863,834	7,599,740	5,167,823	2,431,917	78,347,835
MTE/TA (E)	299,129	3,249,738	2,209,821	1,039,916	2,688,571	1,828,229	860,343	1,624,869	1,104,911	519,958	812,434	552,455	259,979	8,375,612
CEAO BRC & STPC	516,550	5,611,797	3,816,022	1,795,775	4,642,749	3,157,070	1,485,680	2,805,898	1,908,011	897,887	1,402,949	954,005	448,944	14,463,393
FTA Section 5307/5340 SAFETEA-LU	4,238,861	1,644,678	1,118,381	526,297	1,360,674	925,259	435,416	822,339	559,191	263,148	411,170	279,595	131,574	4,238,861
FTA Section 5307/5316 MAP-21	0	42,254,164	28,732,832	13,521,333	34,957,698	23,771,234	11,186,463	21,127,082	14,366,416	6,760,666	10,563,541	7,183,208	3,380,333	108,902,485
FTA Section 5310 MAP-21 EMSID	143,066	5,063,624	3,443,264	1,620,360	4,189,235	2,848,680	1,340,555	2,531,812	1,721,632	810,180	1,265,906	860,816	405,090	13,050,577
FTA Section 5316 SAFETEA-LU	282,842	109,743	74,625	35,118	90,792	61,739	29,054	54,871	37,313	17,559	27,436	18,656	8,779	282,842
FTASection 5339 - MAP-21	0	4,460,152	3,032,903	1,427,249	3,689,971	2,509,180	1,180,791	2,230,076	1,516,452	713,624	1,115,038	758,226	356,812	11,495,237
FTA Section 5317 SAFETEA-LU	165,951	64,389	43,785	20,604	53,270	36,224	17,046	32,195	21,892	10,302	16,097	10,946	5,151	165,951
Aggregate cost bands totals →		559,592,502	380,522,901	179,069,601	493,731,689	335,737,551	157,994,141	313,738,253	202,480,573	111,257,681	180,924,597	136,157,495	44,767,400	1,547,987,041 ↓ 1,547,987,041

BR/BH Bridge Replacement/Rehabilitation
 CMAQ Congestion Mitigation/Air Quality
 HP High Priority Demonstration; Demonstration Project/High Priority Funding
 HSIP (S) Highway Safety Improvement Program
 IM Interstate Maintenance
 MNC - TRAC *** Major New Construction - Transportation Review Advisory Council (TRAC)
 MTE/TA MPO Transportation Enhancement Program/Transportation Alternatives - Eastgate
 NHS National Highway System
 Congestion Mitigation/Air Quality
 *** TRAC is not subject to percentage drawdown's under each Control Number

STP (E) Surface Transportation Program - Eastgate
 STP (S) Surface Transportation Program - ODOT
 BRC, STPC Bridge and Surface Transportation Programs - County Engineer's Association
 TE (S) Transportation Enhancement - State Bicycle/Pedestrian Program

SAFETEA-LU
 FTA Section 5307 Formula Grant Program
 FTA Section 5309 Discretionary Grant Program
 FTA Section 5310 Specialized Transportation Program
 FTA Section 5316 Job Access Reverse Commute
 FTA Section 5317 New Freedom

MAP-21
 FTA Section 5316 JARC is now combined into 5307
 FTA Section 5339 - Buses/Bus facilities formula apportionment
 FTA Section 5310 - formally known Specialized Transportation is now combined
 w/New Freedom is NKA Enhanced Mobility of Seniors
 and Individuals w/Disabilities (EMSID)
 FTA Section 5337 - State of Good Repair [fixed guideway systems]

Aggregate cost Bands Total			
System Level Project Implementation	\$ 1,054,898,520	0.68	
System Level Operations/Maintenance	\$ 493,088,823	0.32	
	\$ 1,547,987,343		

rounding

Step 3 – Eastgate projections – non transit related: See Table 8.1 Non Transit.

- used FY 2012 as the base year to project Eastgate’s federal allocations of: STP, MTE/TA, CMAQ;
- applied realistic growth assumptions to determine projected average base amount to allocate over the life of the plan;
- summed dollar amounts for each funding category to establish a CN.

Step 4 – CEAO projections: CEAO’s CN developed in Step 5 was determined by using Eastgate’s FY 2012-2015 TIP – Table 4; summed total for the CEAO (Bridge County (BRC) and Surface Transportation Program (STPC), multiplied by formula A’s percent ratio to set up a base year amount. That result was then multiplied by the remaining years of the plan to determine the CN. Below is a sample calculation of how the CN was established for CEAO:

- Sum of CEAO (BRC and STPC) = \$13,268,123; Formula B Ratio = 0.0389;
- Remaining years in the plan = 28;
- To determine base year: $\$13,268,123 \times 0.0389 = \$516,550$
- To set CN: $\$516,550 \times 28 = \$14,463,393$

Step 5 – Eastgate transit projections – non highway: See Table 8.2 Non Highway.

- used FY 2012 as the base year to project Eastgate’s federal allocations of: FTA Section 5307/5340; FTA Section 5307/5316; FTA Section 5310; FTA Section 5316; FTA Section 5339, and FTA Section 5317;
- applied realistic growth assumptions to determine projected average base amount to allocate over the life of the plan;
- summed dollar amounts for each funding category to establish a CN.

For this update, a number of sources were referenced (Congressional Budget Office, ODOT Estimator, National Highway Construction Cost Index, Federal Aid Highway Trends) in an effort to determine what percentage rate should be utilized for the purposes of inflating project costs out to a future year of expenditure. Over the years Eastgate has used a 4% inflation projection matrix for each project identified in the MTP. Eastgate decided to maintain its 4% inflation rate for all projects for the first ten years of the plan (2012 through 2021), and then assumed a 1% inflation rate for the years 2022 through 2040.

This matrix is used as an analytic tool to project costs in an effort to estimate fiscal constraint during the development of the plan. These projections are used as a placeholder. Although the matrix is characteristically used for estimating a total project cost, any phase of a project can be inserted into the spreadsheet and a new dollar amount will be calculated out to as far as 2050.

Table 8.3 is a sample of this matrix, which lists 25 projects at a time, is shown at the end of this section. For this example the selected sheet lists Mahoning county projects 76 through 100. The top portion of the matrix has several columns that show a numerical listing of projects down the left side of the page, the county, project name, a total project cost, and the calculated federal share (80%) for each project. The lower portion of the matrix shows columns for an (n) factor used for annual compounding at 4%, a proposed implementation year, and the project numbers shown across the page and above each column, coincide with the project numbers listed vertically down the left side of the top of the matrix. For this example, use the top portion of the matrix and select number 85. - MAH I-80. This add lane construction project has a current total project cost that was updated to \$97,000,000. To determine a projection using the lower portion, select number 85 above the column, choose an implementation year, 2017, and read across to that column for the federal dollar amount which is more than \$87,292,000. [For fiscal constraint Eastgate subtracts the total project cost, for all programs, from the projected revenue sources rather than using the 80% federal share.] Eastgate’s projection matrix has

been a useful fiscal management tool used for planning purposes. Eastgate anticipates that the plan will be financially constrained at all times, knowing that not all of the recommended projects would be advanced into the TIP all at one time, and that the TIP must be financially constrained. The plan is updated every four years, and the financial update would be monitored and adjusted accordingly.

Table 8.1 – Non Transit

**EASTGATE MPO PROJECTED FEDERAL FUNDING: STP - MTE - MPO CMAQ - LTIP/SCIP
FISCAL CONSTRAINT ANALYSIS FOR 2040 MTP - Sept 2012**

Using FY2012 as base year

Eastgate 2040projections Hwy_Tran_2 pages

YEAR			STP Annual Allocation		MTE/TA Annual Allocation		MPO CMAQ Annual Allocation		LTIP/SCIP * D6PWIC	
Carryovers from 7/1/2012			7,836,428		1,858,374		6,174,692			
1	2012	a.	5,730,960		a.	573,096	a.	3,518,925	a.	1,790,000
2	2013	b.	5,845,579		c.	584,558	d.	3,554,114	e.	502,174
3	2014		5,962,491		f.	190,841	g.	1,759,463		502,174
4	2015	h.	6,081,741			190,841		1,759,463		502,174
5	2016		6,203,376			190,841		1,759,463		502,174
6	2017		6,327,444			190,841		1,759,463		502,174
7	2018		6,453,993			190,841		1,759,463		502,174
8	2019		6,583,073			190,841		1,759,463		502,174
9	2020		6,714,734			190,841		1,759,463		502,174
10	2021	i.	6,748,308		j.	191,795	k.	2,639,194		502,174
11	2022		6,782,050			192,754		2,639,194		502,174
12	2023		6,815,960			193,718		2,639,194		502,174
13	2024		6,850,040			194,687		2,639,194		502,174
14	2025		6,884,290			195,660		2,639,194		502,174
15	2026		6,918,711			196,638		2,639,194		502,174
16	2027		6,953,305			197,621		2,639,194		502,174
17	2028		6,988,072			198,609		2,639,194		502,174
18	2029		7,023,012			199,602		2,639,194		502,174
19	2030		7,058,127			200,600		2,639,194		502,174
20	2031		7,093,418			201,603		2,639,194		502,174
21	2032		7,128,885			202,611		2,639,194		502,174
22	2033		7,164,529			203,624		2,639,194		502,174
23	2034		7,200,352			204,642		2,639,194		502,174
24	2035		7,236,354			205,665		2,639,194		502,174
25	2036		7,272,536			206,693		2,639,194		502,174
26	2037		7,308,899			207,726		2,639,194		502,174
27	2038		7,345,443			208,765		2,639,194		502,174
28	2039		7,382,170			209,809		2,639,194		502,174
29	2040		7,419,081			210,858		2,639,194		502,174

	Fed projection	Total Project Cost (TPC)
Totals [2012 - 2014]	25,375,458	3,206,869
Totals [2015 - 2020]	38,364,361	1,145,046
Totals [2021 - 2040]	141,573,542	4,023,680
		15,007,194
		10,556,775
		52,783,880
		10,043,480
	<u>307,887,677</u>	
		384,859,596
Totals [2012 - 2040]	205,313,361	8,375,595
		78,347,849
		15,850,872
	<u>307,887,677</u>	← Total Federal Projection

MPO - Metropolitan Planning Organization
 STP - Surface Transportation Program
 MTE - MPO Transportation Enhancements now known as
 TA - Transportation Alternatives in MAP-21 signed 7/6/12.
 MPO CMAQ - Congestion Mitigation Air Quality
 LTIP - Local Transportation Improvement Program
 SCIP - State Capital Improvement Program
 D6PWIC - District Six Public Works Integrating Committee
 * used as match towards federal projects - conservative

D6PWIC 1,790

Assumptions for remaining SAFETEA-LU T-bill 2012 (Oct.1) and MAP -21 FY 2013 and 2014 (July 6, 2014).

- a. Actual STP, MTE, MPO CMAQ, D6PWIC allocations.
- b. Increased STP by 0.02% above 2012 allocation through 2014
- c. MTE's will continue to be 0.10% of STP total allocation through 2013
- d. MPO CMAQ increased by 0.01% above 2012 allocation for 2013
- e. Three lowest year average of committed D6PWIC projects used as local match through 2040-constant figure.
- f. MTE: assumed a reduction of 1/3 of the 2012 MTE total allocation in 2014 [MAP-21 redistribution of Transportation Alternatives]
- g. Eastgate assumed 1/2 of 2012 CMAQ through 2020 due to revocation of 1997 ozone standard; outcome on funding unknown at this time-used constant figure

Assumptions for next transportation T-bill or reauthorization of MAP-21: assumed six year bill 2015 through 2020

- h. Increased STP by 0.02% above 2014 allocation through 2020
- f. MTE's assumed a reduction of 1/3 (0.333) of the 2012 MTE total allocation through 2020.
- g. Maintained 1/2 of 2012 CMAQ through 2020 due to revocation of 1997 ozone standard; outcome on funding unknown at this time-used constant figure

Assumptions for next transportation T-bill 2021 - 2040.

- i. Increased STP by 0.005% above 2020 allocation through 2040
- j. Increased MTE by 0.005% above 2020 allocation through 2040
- k. Took 3/4 of 2012 CMAQ and held constant through 2040 anticipate PM 2.5 non-attainment beyond 2021 due to change in NAAS standards.

Table 8.2 – Non Highway

TRANSIT - EASTGATE MPO PROJECTED FEDERAL FUNDING for: 5307, 5309, 5310, 5316, 5317, 5337, 5339
 FISCAL CONSTRAINT ANALYSIS FOR 2040 MTP - Sept 2012

Using FY2012 as base year

Eastgate 2040 projections Hwy_Transit_2 pages

YEAR	5307/5340 SAFETEA-LU Urbanized Area Formula Grants	5307/5316 MAP-21 Formula Grants	5310 MAP-21 EMSID	5316 SAFETEA-LU Job Access Reverse Commute	5339 MAP-21 Buses/Bus Facilities	5317 SAFETEA-LU New Freedom		
1 2012	a. \$4,238,861	\$0	b. \$143,066	c. \$282,842	\$0	c. \$165,951		
2 2013	\$0	d. \$3,869,914	e. \$458,676	f. \$0	g. \$408,490	f. \$0		
3 2014	h. \$0	i. \$3,947,312	i. \$467,850	\$0	i. \$416,660	\$0		
4 2015	\$0	j. \$3,889,264	j. \$460,969	\$0	j. \$410,532	\$0		
5 2016	\$0	\$3,967,049	\$470,189	\$0	\$418,743	\$0		
6 2017	\$0	\$3,908,710	\$463,274	\$0	\$412,585	\$0		
7 2018	\$0	\$3,986,884	\$472,540	\$0	\$420,837	\$0		
8 2019	\$0	\$3,928,254	\$465,590	\$0	\$414,648	\$0		
9 2020	\$0	\$4,006,818	\$474,903	\$0	\$422,941	\$0		
10 2021	\$0	k. \$3,869,914	k. \$458,676	\$0	k. \$408,490	\$0		
11 2022	\$0	\$3,869,914	\$458,676	\$0	\$408,490	\$0		
12 2023	\$0	\$3,869,914	\$458,676	\$0	\$408,490	\$0		
13 2024	\$0	\$3,869,914	\$458,676	\$0	\$408,490	\$0		
14 2025	\$0	\$3,869,914	\$458,676	\$0	\$408,490	\$0		
15 2026	\$0	\$3,869,914	\$458,676	\$0	\$408,490	\$0		
16 2027	\$0	\$3,869,914	\$458,676	\$0	\$408,490	\$0		
17 2028	\$0	\$3,869,914	\$458,676	\$0	\$408,490	\$0		
18 2029	\$0	\$3,869,914	\$458,676	\$0	\$408,490	\$0		
19 2030	\$0	\$3,869,914	\$458,676	\$0	\$408,490	\$0		
20 2031	\$0	\$3,869,914	\$458,676	\$0	\$408,490	\$0		
21 2032	\$0	\$3,869,914	\$458,676	\$0	\$408,490	\$0		
22 2033	\$0	\$3,869,914	\$458,676	\$0	\$408,490	\$0		
23 2034	\$0	\$3,869,914	\$458,676	\$0	\$408,490	\$0		
24 2035	\$0	\$3,869,914	\$458,676	\$0	\$408,490	\$0		
25 2036	\$0	\$3,869,914	\$458,676	\$0	\$408,490	\$0		
26 2037	\$0	\$3,869,914	\$458,676	\$0	\$408,490	\$0		
27 2038	\$0	\$3,869,914	\$458,676	\$0	\$408,490	\$0		
28 2039	\$0	\$3,869,914	\$458,676	\$0	\$408,490	\$0		
29 2040	\$0	\$3,869,914	\$458,676	\$0	\$408,490	\$0		
Totals [2012 - 2014]	\$4,238,861	\$7,817,226	\$1,069,592	\$282,842	\$825,150	\$165,951	\$14,399,622	\$17,999,528
Totals [2015 - 2020]	\$0	\$23,686,979	\$2,807,465	\$0	\$2,500,286	\$0	\$28,994,730	\$36,243,413
Totals [2021 - 2040]	\$0	\$77,398,280	\$9,173,520	\$0	\$8,169,800	\$0	\$94,741,600	\$118,427,000
							\$138,135,952	\$172,669,940
Totals [2012 - 2040]	\$4,238,861	\$108,902,485	\$13,050,577	\$282,842	\$11,495,236	\$165,951	\$138,135,952	Total Federal Projection

Assumptions for remaining SAFETEA-LU T-bill 2012 (Oct.1) and MAP -21 FY 2013 and 2014 (July 6, 2014).

- a. 5307 split FY 12: actual totals for: WRTA \$2,894,849; Niles Trumbull Transit \$688,725; Shenango Valley Shuttle Service \$655,287; reference Letter of Agreement dated 9/25/12
- b. Averaged: based on actual vehicle distribution for three years: 2010 -2012; prior to MAP-21 FY10: \$110,646+\$1,099 (GPB#016-2010); FY11: \$83,125 (GPB#012-2011); FY12: 234,328 (GPB#005-2012);
- c. FY 12 Federal Register breakout prior to being consolidated into other sections
- d. 5307 - MAP-21 FY13 allocation for 6 months: \$1,934,957 x 2= \$3,869,914;
- e. 5310 - MAP-21 FY13 allocation for 6 months: \$229,338 x 2= \$458,676
- f. MAP-21 transit programs combined 5316 into 5307 and 5317 into 5310
- g. 5339 - MAP-21 FY13 allocation for 6 months: \$204,245 x 2= \$408,490
- h. Go to next column under MAP-21
- i. 2% increase over MAP-21 allocation through 2014
- Sec 5309 Discretionary grants \$0 - deleted
- Sec 5316 JARC is now combined into 5307
- Sec 5339 - Buses/Bus facilities formula apportionment
- Sec 5310 - formally known Specialized Transportation is now combined w/New Freedom is now known as Enhanced Mobility of Seniors and Individuals w/Disabilities (EMSID)
- Sec 5337 - State of Good Repair [fixed guideway systems]

Assumptions for next transportation T-bill six year time frame: 2015 through 2020.

- j. Assuming a reauthorization of new T-bill; projection of a 0.005% increase greater than FY 13 MAP-21 allocation

Assumptions For FY2021 - FY2040

- k. Beginning in 2021 assumed 2012 MAP-21 dollar amount to the out-year of 2040.

Exhibit 8.1 depicts federal funding projections for the region using all of the methodologies previously discussed, and in addition to the following narrative, will describe setting up aggregate cost bands by percent. Using the Control Numbers established for each funding category, four “aggregate” cost bands, A through D, were determined. This was done in an effort to allocate a specific dollar amount for each CN based on a percentage amount that could reasonably be available over life of the plan. The term drawdown is used for fiscal constraint purposes. It is used as a mechanism that allows for the spending down of available funding over the life of the plan – 28 years, and allows for a specific amount of funding to be used over a period of time. With the exception of TRAC, since this funding is not a dedicated funding source, the available percent of a funding drawdown for each forecast dollar by CN was calculated to be: (A) 0.388% FY 2013-2015, (B) 0.321% FY 2016-2020, (C) 0.194% FY 2021-2030, and (D) 0.097% FY 2031-2040. The “aggregate cost bands” were set up to coincide with, and/or

incorporate, each out year of Eastgate's Air Quality Networks. Those totals were further divided into allocations for System Level Project Implementation, and System Level Operations and Maintenance Costs. Based on Eastgate's critique, a decision was made that for future year dollar expenditure costs, 32% of the projection stream would be devoted to System Level Operations and Maintenance Costs, and the remaining 68% would be utilized for System Level Project Implementation. Below is a sample calculation to determine the dollar amounts for the aggregate cost band for (C) 0.194% FY 2021-2030 for FTA Section 5307/5316 MAP-21.

- CN for FTA Section 5307/5316 MAP-21 = \$108,902,485; percent drawdown = 0.194%
- System Level Project Implementation = 0.68%.
- System Level Operations and Maintenance Costs = 0.32%;

- (C) Drawdown: $\$108,902,485 \times 0.194\% = \$21,127,082$
- System Level Project Implementation: $\$21,127,082 \times 0.68 = \$14,366,416$
- System Level Operations and Maintenance Costs: $\$21,127,082 \times 0.32 = \$6,760,666$

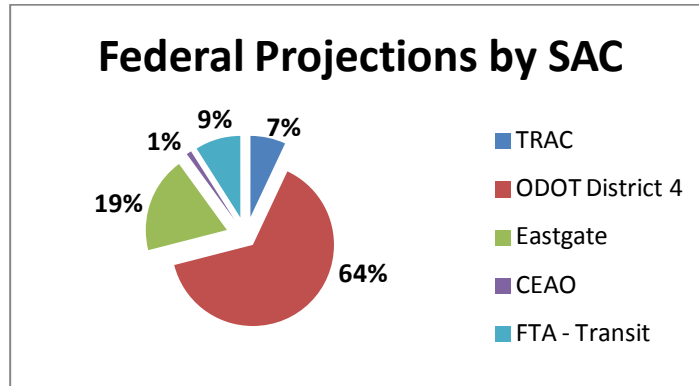
4. CONCLUSION AND ESTIMATED FINANCIAL FORECAST PROJECTIONS

Eastgate's forecast projections demonstrate the dollar amounts of federal financial resources that are estimated to be available to maintain the needs of the region over the 28 year span of the plan. It should be expressed that on a year-by-year basis the forecasted revenues, and operations and maintenance costs will vary from the actual revenues and operations and maintenance costs expenditures, but Eastgate anticipates that this funding should reasonably be expected to be available over the forecast period of the plan. Eastgate acknowledges that there "may be" some factors affecting revenues, recommendations, and costs, that are beyond the control or prediction of Eastgate, ODOT, or the federal government. Based on current conditions, it is estimated that approximately \$1,547,987,041 in federal funding, for all programs, should reasonably be expected to be available for allocation through Eastgate's General Policy Board for transportation projects within the Eastgate area between 2012 and 2040. This total represents \$1,054,898,520 for System Level Project Implementation, and \$493,088,521 devoted to System Level Operations and Maintenance costs; \$1,547,987,041 represents a 80% pro-rata share; with the *total project cost*, for all programs, threshold being \$1,934,983,801. As illustrated in the beginning of this section, Eastgate's total "Draft" *Total Project Cost* of Project Recommendations – by Mode totaled \$1,101,802,203. As cited previously, Eastgate subtracts the *total project cost*, for all programs, from the projected revenue sources for fiscal constraint, rather than using the 80% federal share. Therefore Eastgate's federal projection minus the *total project cost* of project recommendations is: $\$1,547,987,041 - \$1,101,802,203 = \$446,184,838$ remaining funds; fiscally constrained.

Eastgate affirms that the federal financial forecast as prepared for the 2040 MTP, is reasonable, comparable to ODOT's federal projections, and demonstrates financial constraint as mandated by the federal requirements. Figure 8.2 is an illustration of Eastgate's Draft Federal Funding Projections by Spending Authority Code (SCA). These projections identified are and displayed in Exhibit 8.1.

Total funding availability will increase between the forecast period 2012 through 2040 by more than \$15,000,000 by incorporating local project investment projections anticipated to be received through the State's Capital Improvement Program (SCIP), and Local Transportation Improvement Program (LTIP), administered through the District 6 Public Works Commission (D6PWC).

Figure 8.2 – Eastgate’s Federal Funding Projections – by Spending Authority Code (SAC)



Eastgate’s Federal Funding Projections – by Spending Authority Code (SAC)	
TRAC	\$ 105,738,329
ODOT District 4	\$ 997,612,587
Eastgate – Non Transit	\$ 292,036,779
County Engineers Association of Ohio (CEAO)	\$ 14,463,939
Eastgate Transit – Non Highway	\$ <u>138,135,953</u>
Total	\$ 1,547,987,041

Table 8.3 – Sample 2040 Projection Matrix

Project Number	County	Project Name	Limits	Brief Description	Length (mi)	Total Cost of Project (000's)	Cost at 80% (000's)
76	MAH	SR46				6500	\$5,200
77	MAH	SR46				6928	\$5,542
78	MAH	US62				715	\$572
79	MAH	US62/SR46				2130	\$1,704
80	MAH	US62				115	\$92
81	MAH	US62/164/165/422				6400	\$5,120
82	MAH	US62				19800	\$15,840
83	MAH	US62/SR170				2210	\$1,768
84	MAH	IR76				385	\$308
85	MAH	IR80				97000	\$77,600
86	MAH	IR80				6600	\$5,280
87	MAH	I80164/165				4000	\$3,200
88	MAH	IR80				12500	\$10,000
89	MAH	IR80				55700	\$44,560
90	MAH	CH100 Shields Rd				1600	\$1,280
91	MAH	CH100 Shields Rd				3000	\$2,400
92	MAH	CH100 Shields Rd				1200	\$960
93	MAH	CR 109 ped lighting				219	\$175
94	MAH	Meridian Road P3				1035	\$828
95	MAH	Meridian Road CH117 signal up				680	\$544
96	MAH	Meridian Road CH117 P1				2650	\$2,120
97	MAH	Meridian Road CH117 P2				2150	\$1,720
98	MAH	Meridian Road CH117 P3				1700	\$1,360
99	MAH	CH151				8297	\$6,638
100	MAH	CH163 North Lima Rd				600	\$480
						\$244,114	\$195,291

NOTES: Assumed annual compounding factors of 4% to be applied to federal cost (80%) for years 2015 - 2050

n	factor	Proposed Implementati year	Project numbers across the page																											
			76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100			
1	1.0400	2015	\$5,408	\$5,764	\$595	\$1,772	\$96	\$5,325	\$16,474	\$1,839	\$320	\$80,704	\$5,491	\$3,328	\$10,400	\$46,342	\$1,331	\$2,496	\$998	\$182	\$861	\$566	\$2,205	\$1,789	\$1,414	\$6,903	\$499			
2	1.0816	2016	\$5,624	\$5,995	\$619	\$1,843	\$100	\$5,538	\$17,133	\$1,912	\$333	\$83,932	\$5,711	\$3,461	\$10,816	\$48,196	\$1,384	\$2,596	\$1,038	\$189	\$896	\$588	\$2,293	\$1,860	\$1,471	\$7,179	\$519			
3	1.1249	2017	\$5,849	\$6,235	\$643	\$1,917	\$103	\$5,759	\$17,818	\$1,989	\$346	\$87,292	\$5,939	\$3,600	\$11,249	\$50,126	\$1,440	\$2,700	\$1,080	\$197	\$931	\$612	\$2,385	\$1,935	\$1,530	\$7,467	\$540			
4	1.1699	2018	\$6,083	\$6,484	\$669	\$1,994	\$108	\$5,990	\$18,531	\$2,068	\$360	\$90,784	\$6,177	\$3,744	\$11,699	\$52,131	\$1,497	\$2,808	\$1,123	\$205	\$969	\$636	\$2,480	\$2,012	\$1,591	\$7,765	\$562			
5	1.2167	2019	\$6,327	\$6,743	\$696	\$2,073	\$112	\$6,230	\$19,273	\$2,151	\$375	\$94,416	\$6,424	\$3,893	\$12,167	\$54,216	\$1,557	\$2,920	\$1,168	\$213	\$1,007	\$662	\$2,579	\$2,093	\$1,655	\$8,076	\$584			
6	1.2653	2020	\$6,580	\$7,013	\$724	\$2,156	\$116	\$6,478	\$20,042	\$2,237	\$390	\$98,187	\$6,681	\$4,049	\$12,653	\$56,382	\$1,620	\$3,037	\$1,215	\$222	\$1,048	\$688	\$2,682	\$2,176	\$1,721	\$8,399	\$607			
7	1.3159	2021	\$6,843	\$7,293	\$753	\$2,242	\$121	\$6,737	\$20,844	\$2,327	\$405	\$102,114	\$6,948	\$4,211	\$13,159	\$58,637	\$1,684	\$3,158	\$1,263	\$231	\$1,090	\$716	\$2,790	\$2,263	\$1,790	\$8,734	\$632			
8	1.3686	2022	\$7,117	\$7,585	\$783	\$2,332	\$126	\$7,007	\$21,679	\$2,420	\$422	\$106,203	\$7,226	\$4,380	\$13,686	\$60,985	\$1,752	\$3,285	\$1,314	\$240	\$1,133	\$745	\$2,901	\$2,354	\$1,861	\$9,084	\$657			
9	1.4233	2023	\$7,401	\$7,888	\$814	\$2,425	\$131	\$7,287	\$22,545	\$2,516	\$438	\$110,448	\$7,515	\$4,555	\$14,233	\$63,422	\$1,822	\$3,416	\$1,366	\$249	\$1,178	\$774	\$3,017	\$2,448	\$1,936	\$9,447	\$683			
10	1.4802	2024	\$7,697	\$8,204	\$847	\$2,522	\$136	\$7,579	\$23,446	\$2,617	\$456	\$114,864	\$7,815	\$4,737	\$14,802	\$66,958	\$1,895	\$3,552	\$1,421	\$259	\$1,226	\$805	\$3,138	\$2,546	\$2,013	\$9,825	\$710			
11	1.5395	2025	\$8,005	\$8,533	\$881	\$2,623	\$142	\$7,882	\$24,386	\$2,722	\$474	\$119,465	\$8,129	\$4,926	\$15,395	\$68,600	\$1,971	\$3,695	\$1,478	\$270	\$1,275	\$837	\$3,264	\$2,648	\$2,094	\$10,219	\$739			
12	1.6010	2026	\$8,325	\$8,873	\$916	\$2,728	\$147	\$8,197	\$25,360	\$2,831	\$493	\$124,238	\$8,453	\$5,123	\$16,010	\$71,341	\$2,049	\$3,842	\$1,537	\$280	\$1,326	\$871	\$3,394	\$2,754	\$2,177	\$10,627	\$768			
13	1.6651	2027	\$8,659	\$9,229	\$952	\$2,837	\$153	\$8,525	\$26,375	\$2,944	\$513	\$129,212	\$8,792	\$5,328	\$16,651	\$74,197	\$2,131	\$3,996	\$1,598	\$292	\$1,379	\$906	\$3,530	\$2,864	\$2,265	\$11,052	\$799			
14	1.7317	2028	\$9,005	\$9,598	\$991	\$2,951	\$159	\$8,866	\$27,430	\$3,062	\$533	\$134,380	\$9,143	\$5,541	\$17,317	\$77,165	\$2,217	\$4,156	\$1,662	\$303	\$1,434	\$942	\$3,671	\$2,979	\$2,355	\$11,494	\$831			
15	1.8009	2029	\$9,365	\$9,981	\$1,030	\$3,069	\$166	\$9,221	\$28,526	\$3,184	\$555	\$139,750	\$9,509	\$5,763	\$18,009	\$80,248	\$2,305	\$4,322	\$1,729	\$316	\$1,491	\$980	\$3,818	\$3,098	\$2,449	\$11,954	\$864			
16	1.8730	2030	\$9,740	\$10,381	\$1,071	\$3,192	\$172	\$7,882	\$29,668	\$3,311	\$577	\$145,345	\$9,889	\$5,994	\$18,730	\$83,461	\$2,397	\$4,495	\$1,798	\$328	\$1,551	\$1,019	\$3,971	\$3,222	\$2,547	\$12,432	\$899			
17	1.9479	2031	\$10,129	\$10,796	\$1,114	\$3,319	\$179	\$7,882	\$30,855	\$3,444	\$600	\$151,157	\$10,285	\$6,233	\$19,479	\$86,798	\$2,493	\$4,675	\$1,870	\$341	\$1,613	\$1,060	\$4,130	\$3,350	\$2,649	\$12,929	\$935			
18	2.0258	2032	\$10,534	\$11,228	\$1,159	\$3,452	\$186	\$7,882	\$32,089	\$3,582	\$624	\$157,202	\$10,696	\$6,483	\$20,258	\$90,270	\$2,593	\$4,862	\$1,945	\$355	\$1,677	\$1,102	\$4,295	\$3,484	\$2,755	\$13,446	\$972			
19	2.1068	2033	\$10,955	\$11,677	\$1,205	\$3,590	\$194	\$7,882	\$33,372	\$3,725	\$649	\$163,488	\$11,124	\$6,742	\$21,068	\$93,879	\$2,697	\$5,056	\$2,023	\$369	\$1,744	\$1,146	\$4,465	\$3,624	\$2,865	\$13,984	\$1,011			
20	2.1911	2034	\$11,394	\$12,144	\$1,253	\$3,734	\$202	\$7,882	\$34,707	\$3,874	\$675	\$170,029	\$11,569	\$7,012	\$21,911	\$97,635	\$2,805	\$5,259	\$2,103	\$384	\$1,814	\$1,192	\$4,646	\$3,769	\$3,024	\$14,544	\$1,052			
21	2.2788	2028	\$11,850	\$12,630	\$1,303	\$3,883	\$210	\$7,882	\$36,096	\$4,029	\$702	\$176,835	\$12,032	\$7,292	\$22,788	\$101,543	\$2,917	\$5,469	\$2,188	\$399	\$1,887	\$1,240	\$4,831	\$3,920	\$3,099	\$15,126	\$1,094			
22	2.3699	2029	\$12,323	\$13,135	\$1,356	\$4,038	\$218	\$7,882	\$37,539	\$4,190	\$730	\$183,904	\$12,513	\$7,584	\$23,699	\$105,603	\$3,033	\$5,688	\$2,275	\$415	\$1,962	\$1,289	\$5,024	\$4,076	\$3,223	\$15,730	\$1,138			
23	2.4647	2030	\$12,816	\$13,660	\$1,410	\$4,200	\$227	\$7,882	\$39,041	\$4,358	\$759	\$191,261	\$13,014	\$7,887	\$24,647	\$109,827	\$3,155	\$5,915	\$2,366	\$432	\$2,041	\$1,341	\$5,225	\$4,239	\$3,352	\$16,360	\$1,183			
24	2.5633	2031	\$13,329	\$14,207	\$1,466	\$4,368	\$236	\$7,882	\$40,603	\$4,532	\$789	\$198,912	\$13,534	\$8,203	\$25,633	\$114,821	\$3,281	\$6,152	\$2,461	\$449	\$2,122	\$1,394	\$5,434	\$4,409	\$3,486	\$17,014	\$1,230			
25	2.6658	2032	\$13,862	\$14,775	\$1,525	\$4,543	\$245	\$7,882	\$42,226	\$4,713	\$821	\$206,866	\$14,075	\$8,531	\$26,658	\$118,788	\$3,412	\$6,398	\$2,559	\$467	\$2,207	\$1,450	\$5,651	\$4,585	\$3,625	\$17,695	\$1,280			
26	2.7725	2033	\$14,417	\$15,366	\$1,586	\$4,724	\$255	\$7,882	\$43,916	\$4,902	\$854	\$215,146	\$14,639	\$8,872	\$27,725	\$123,543	\$3,549	\$6,654	\$2,662	\$486	\$2,296	\$1,508	\$5,878	\$4,769	\$3,771	\$18,403	\$1,331			
27	2.8834	2034	\$14,994	\$15,981	\$1,649	\$4,913	\$265	\$7,882	\$45,673	\$5,098	\$888	\$223,752	\$15,224	\$9,227	\$28,834	\$128,484	\$3,691	\$6,920	\$2,768	\$505	\$2,387	\$1,569	\$6,113	\$4,959	\$3,921	\$19,139	\$1,384			
28	2.9987	2035	\$15,593	\$16,620	\$1,715	\$5,110	\$276	\$7,882	\$47,499	\$5,302	\$924	\$232,699	\$15,833	\$9,596	\$29,987	\$133,622	\$3,838	\$7,197	\$2,879	\$525	\$2,483	\$1,631	\$6,357	\$5,158	\$4,078	\$19,904	\$1,439			
29	3.1187	2036	\$16,217	\$17,285	\$1,784	\$5,314	\$287	\$7,882	\$49,400	\$5,514	\$961	\$242,011	\$16,467	\$9,980	\$31,187	\$138,969	\$3,992	\$7,485	\$2,994	\$546	\$2,582	\$1,697	\$6,612	\$5,364	\$4,241	\$20,701	\$1,497			
30	3.2434	2037	\$16,866	\$17,976	\$1,855	\$5,527	\$298	\$7,882	\$51,375	\$5,734	\$999	\$251,688	\$17,125	\$10,379	\$32,434	\$144,526	\$4,152	\$7,784	\$3,114	\$568	\$2,686	\$1,764	\$6,876	\$5,579	\$4,411	\$21,528	\$1,557			
31	3.3731	2038	\$17,540	\$18,695	\$1,929	\$5,748	\$310	\$7,882	\$53,430	\$5,964	\$1,039	\$261,753	\$17,810	\$10,794	\$33,731	\$150,305	\$4,318	\$8,095	\$3,238	\$591	\$2,793	\$1,835	\$7,151	\$5,802	\$4,587	\$22,389	\$1,619			
32	3.5081	2039	\$18,242	\$19,443	\$2,007	\$5,978	\$323	\$7,882	\$55,568	\$6,202	\$1,080	\$272,229	\$18,523	\$11,226	\$35,081	\$156,321	\$4,490	\$8,419	\$3,368	\$615	\$2,905	\$1,908	\$7,437	\$6,034	\$4,771	\$23,285	\$1,684			
33	3.6484	2040	\$18,972	\$20,221	\$2,087	\$6,217	\$336	\$7,882	\$57,791	\$6,450	\$1,124	\$283,116	\$19,264	\$11,675	\$36,484	\$162,573	\$4,670	\$8,756	\$3,502	\$639	\$3,021	\$1,985	\$7,735	\$6,275	\$4,962	\$24,217	\$1,751			
34	3.7943	2041	\$19,730	\$21,030	\$2,170	\$6,465	\$349	\$7,882	\$60,102	\$6,708	\$1,169	\$294,438	\$20,034	\$12,142	\$37,943	\$169,074	\$4,857	\$9,106	\$3,643	\$665	\$3,142	\$2,064	\$8,044	\$6,526	\$5,160	\$25,185	\$1,821			
35	3.9461	2042	\$20,520	\$21,871	\$2,257	\$6,724	\$363	\$7,882	\$62,506	\$6,977	\$1,215	\$306,217	\$20,835	\$12,628	\$39,461	\$175,838	\$5,051	\$9,471	\$3,788	\$691	\$3,267	\$2,147	\$8,366	\$6,787	\$5,367	\$26,193	\$1,894			
36	4.1039	2043	\$21,340	\$22,745	\$2,347	\$6,993	\$378	\$7,882	\$65,006	\$7,256	\$1,264	\$318,463	\$21,669	\$13,132	\$41,039	\$182,870	\$5,253	\$9,849	\$3,940	\$719	\$3,398	\$2,233	\$8,700	\$7,059	\$5,581	\$27,240	\$1,970			
37	4.2681	2044	\$22,194	\$23,656	\$2,441	\$7,273	\$393</																							