MMM Group Limited



PRECINCT J

DAWSON TRAIL COST BENEFIT ANALYSIS

COMMUNITIES

TRANSPORTATION

BUILDINGS

INFRASTRUCTURE

SUBMITTED BY:

MMM GROUP

November 2013 | 5513007.130

PRECINCT J COST BENEFIT ANALYSIS

Prepared For:

Rivergrove Developments

Submitted By:

MMM Group Limited

November 2013

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STANDARD LIMITATIONS

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EXECUTIVE SUMMARY

Precinct J is approximately 475 acres (192 hectares) of land identified as a “New Community” in the City of Winnipeg’s land use plan, Complete Communities. The new community, Dawson Trail, will consist of residential and commercial properties to be established on a land area of approximately 215 acres (87 hectares) within the precinct area.

This cost benefit analysis determines that the new community will provide net revenues totaling $21.4 million to the City of Winnipeg at the completion of the 10-year build out period. This net revenue increases to $184.9 million at the 80-year life cycle period. The two key factors driving the positive revenue for the City in this analysis are the relatively low operating costs to service the proposed residential densities and the existing regional infrastructure.

The results of this analysis have determined that from commencement, the Dawson Trail community will provide a net financial benefit to the City of Winnipeg.

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1.0 INTRODUCTION

Precinct J is approximately 475 acres (192 hectares) of land identified as a "New Community" in the City of Winnipeg's land use plan, Complete Communities. It is bound on the north by Fermor Avenue, on the west generally by Lagimodiere Boulevard, on the east by the boundary of the City of Winnipeg and Plessis Road, and on the south by the future extension of Bishop Grandin Boulevard, but excludes the community of Southland Park (Figure 1 Precinct J – Dawson Trail Boundary). A precinct plan has been prepared as a planning and policy framework for the development of this area. The purpose of the plan is to ensure that the growth and development of Precinct J occurs in a logical, integrated manner that pursues the goals of *Complete Communities,* the City's development plan.

Proposed development within Precinct J will be a mix of uses including lower density residential, multi-family residential and commercial. Supporting infrastructure will include:

- Collector and local streets
- Sidewalks, pedestrian walkways and pathways
- Public transit stops
- Municipal water distribution, stormwater and wastewater collection
- Active and passive parks

A significant portion of the land within Precinct J is not available for development. Manitoba Hydro's St. Vital Station, the associated high voltage transmission corridor, and the Glen Lawn Memorial Gardens and Funeral Home both occupy significant portions of the precinct and are not anticipated to change. The new community of Dawson Trail will be established using the remaining land area of approximately 215 acres.



Figure 1: Precinct J – Dawson Trail Boundary

2.0 METHODOLOGY

This analysis uses known and estimated values and rates to compare the financial costs and benefits associated with the development. Proposed residential and commercial mixes and densities are provided in the precinct plan. Information relating to municipal taxation and servicing costs are obtained from current and historical data at the City of Winnipeg and Statistics Canada.

The analysis considers the development to be completely built out at 10 years and projects the costs and benefits over an 80-year life cycle.

***Note: all values are in 2012 dollars*

Revenue

The Dawson Trail development will generate revenue for the City of Winnipeg in the form of property tax, permit fees and development fees. The following values and rates were used to calculate revenue:

- General Municipal Mill Rate (2013) 14.6
- Residential Portioning 45%
- Commercial Portioning 65%
- Average Assessed Value Single-Family Dwelling $350,000
- Average Assessed Value Multi-Family Dwelling $240,000
- Average Assessed Value per Commercial Acre $1,950,000
- Permit Fees per Single-Family Unit $1,231
- Permit Fees per Multi-Family Unit $1,069
- Permit Fees per Commercial Acre $3,660
- Development Administration Fee per Acre $1,200
- Lot Fee $35.60

Capital Costs

The developers are responsible for all of the capital costs of the infrastructure in Precinct J. This includes local roads, underground services, signage, lighting, sidewalks, parks and trails. The City of Winnipeg funds regional streets, regional sewer and water infrastructure, and community facilities. Costs are shared between the developer and the City when capital improvements are required as a direct result of development.

The primary capital costs to the City in this area of Winnipeg are for regional transportation improvements. The 2012 Transportation Master Plan (TMP) has identified future required upgrades to Fermor Avenue that include a four lane twinned road cross-section and a grade separated intersection at Lagimodiere Boulevard. The TMP estimates that these improvements will cost 40 million dollars (15 million dollars for road improvements and 25 million dollars for grade separation) and has indicated a medium range (by 2021) timeframe for the completion of construction. These improvements are not related to the development of Precinct J, rather they reflect upgrades necessary to the City's Strategic Road Network and Goods Movement Network. The development of Precinct J will in fact help the City, through partnership and cost sharing with the developer, by reducing the cost to the City of these required road works by an estimated 2.5 million dollars.

A capital cost of $560,000 has been included as part of the future four-lane divided extension of Bishop Grandin Boulevard. This figure represents the City's contribution of one-lane of the two westbound lanes adjacent to the south boundary of the development area.

Infrastructure renewal costs relating to roads, major water and wastewater services and local underground services are also included in this analysis. Total future road costs are estimated at **$58.4 million** and are phased in at 10-year increments for renewal and at 50 years for replacement. This cost is based on $85,000 per net acre and a total area of 250 acres.

Total future water and wastewater cost is estimated at **$21.3 million** for replacement at 50 years.

There are no anticipated increased capital costs related to fire, paramedic, police or community services as a result of the development.

The City's Water and Waste Department manages the water and wastewater utility. The operation is cost-neutral and funded through the frontage levy and direct billing of customers. Any extension of the regional trunk systems would be funded by the utility and not the City's tax-supported capital budget, therefore costs relating to water and wastewater are not included in this analysis.

Table 1 Summary of infrastructure renewal and replacement costs/scheduling for Precinct J.

Infrastructure Category	Unit Cost/Acre	Acres	Frequency and % of Cost	Total Cost
Wastewater (Main)	$3,800	250	50 Years, 100%	$950,000
Water (Main)	$2,400	250	50 Years, 100%	$600,000
Underground Services (Local)	$79,000	250	50 Years, 100%	$19,750,000
Local Roads (Renewal)	$85,000	250	Every 10 Years, 25%	$37,187,500
Local Roads (Replacement)	$85,000	250	50 Years, 100%	$21,250,000

Operating Costs

The City provides municipal services through its operating budget. Examples of these services include:

- Fire, Paramedic and Police
- Community Services
- Planning and Property Development
- Public Works
- Corporate and Administration

There will be a cost to the City to provide these services to the 2,325 dwelling units in the Dawson Trail development. An average cost of **$1,439** per lower density residential dwelling unit and an average cost of **$640** per higher density dwelling unit has been included in this analysis. These figures were derived from the City of Winnipeg's 2012 Operating Budget and household data from the 2011 Census.

When the 2004 Waverley West Cost Benefit Analysis was prepared, the City's operating budget identified a cost for services per single-family household of $1,050 in 2003 and estimated the cost for services to be $1,190 for 2004. That analysis assumed that operating costs per single-family dwelling were 2.25 times greater than a multi-family unit resulting in an average operating cost of $530 per multi-family household. Based on these estimates, the cost of providing services to all of the households in the City of Winnipeg represented 37% of the 2004 operating budget.

The cost of services per single-family household is no longer provided in the City's budget and must be calculated to achieve the average cost per household for this analysis.

The average annual cost per household to the City for the Dawson Trail community is based on the same 37% portion of the total operating budget and the same cost ratio of 2.25:1 (lower density to higher density) using the following values:

- 183,245 single-family dwellings (2012)
- 108,070 all other dwelling types (2012)
- $900 million operating budget (2013)

This development will have almost two times more multi-family dwelling units than single-family resulting in a relatively high residential density and low average operating cost per dwelling for the City.

Operating costs to the City for commercial development are based on the amount of commercial area planned in Precinct J. The 50 acres of planned commercial property represents approximately 25% of the total development acres, therefore operating costs to the City are estimated at 25% of residential operating costs. Since a number of services provided by the City are not provided to or used to a lesser degree by commercial users, this provides a conservative estimate of the operating costs associated with commercial development.

3.0 COST BENEFIT SUMMARY

City of Winnipeg Project Revenue at 80 Years

Single-Family	$141.6 M
Multi-Family	$177.7 M
Commercial	$72.3 M
Permits and Fees	$3.1 M
Frontage Levy	$13.1 M
TOTAL	**$407.9 M**

City of Winnipeg Project Costs at 80 Years

Capital Costs	$77.8 M
Operating Costs	$145.1 M*
TOTAL	**$222.9 M**

Summary

Net Financial Benefit	**$184.9 M**
Net Present Value of Benefit	**$62.7 M**

**Note – The operating costs assume that the cost to provide services to a new development are lower than the cost to provide services in established and older neighbourhoods. This analysis scales the operating costs up over time to reflect this assumption. If it is assumed that the operating costs are the same for newer neighbourhoods as older the total costs to the City would increase to $280.9 M, the Net Financial Benefit would decrease to $126.9 M, and the Net Present Value to $42.1 M.*

Precinct J Cost-Benefit Data

DIRECT REVENUE		YEAR 1	2	3	4	5	6	7	8	9	10	TOTAL AT FULL BUILD-OUT	11	12	13	14
TO THE CITY OF WINNIPEG																
SINGLE-FAMILY - Property Tax																
Single-Family Homes Projected/Year (% of total)		0%	0%	0%	18%	18%	18%	18%	18%	10%	0%					
Single-Family Homes/Year		0	0	0	148.5	148.5	148.5	148.5	148.5	82.5						
Total Single-Family Homes Projected	825	0	0	0	148.5	297	445.5	594	742.5	825	825		825	825	825	825
Property Tax (2012 Base)	$2,299	$0	$0	$0	$341,402	$682,803	$1,024,205	$1,365,606	$1,707,008	$1,896,675	$1,896,675	**$8,914,373**	$1,896,675	$1,896,675	$1,896,675	$1,896,675
MULTI-FAMILY - Property Tax																
Multi-Family Units Projected/Year (% of total)		0%	11%	11%	12%	12%	12%	12%	12%	12%	6%					
Multi-Family Units/Year		0	165	165	180	180	180	180	180	180	90					
Total Multi-Family Units Projected	1500	0	165	330	510	690	870	1050	1230	1410	1500		1500	1500	1500	1500
Property Tax (2012 Base)	$1,576	$0	$260,040	$520,080	$803,760	$1,087,440	$1,371,120	$1,654,800	$1,938,480	$2,222,160	$2,364,000	**$12,221,880**	$2,364,000	$2,364,000	$2,364,000	$2,364,000
COMMERCIAL - Property Tax																
Commercial Area Projected/Year (%of total)		40%	20%	20%	20%	0%	0%	0%	0%	0%	0%					
Commercial Area/Year		20	10	10	10	0	0	0	0	0	0					
Total Commercial Acres Projected	50	20	30	40	50	50	50	50	50	50	50		50	50	50	50
Property Tax (2012 Base)	$18,356	$367,120	$550,680	$734,240	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	**$8,076,640**	$917,800	$917,800	$917,800	$917,800
PERMIT FEES																
Single Family Homes ($1,231 per house)	$1,231	$0	$0	$0	$182,804	$182,804	$182,804	$182,804	$182,804	$101,558	$0	**$1,015,575**	$0	$0	$0	$0
Multi-Family Units ($1,069 per unit)	$1,069	$0	$176,385	$176,385	$192,420	$192,420	$192,420	$192,420	$192,420	$192,420	$96,210	**$1,603,500**		$0	$0	$0
Commercial/Office (estimated at $3,660 per acre)	$3,660	$73,200	$36,600	$36,600	$36,600	$0	$0	$0	$0	$0	$0	**$183,000**	$0	$0	$0	$0
DEVELOPMENT FEES																
Per Acre Administration Fee (215 acres)	$1,200	$129,000	$0	$0	$129,000	$0	$0	$0	$0	$0	$0	**$258,000**	$0	$0	$0	$0
Lot Fee	$35.60	$0	$0	$0	$5,287	$5,287	$5,287	$5,287	$5,287	$2,937	$0	**$29,370**	$0	$0	$0	$0
Public Works Frontage Levy (Single-Family)	3.75	$0	$0	$0	$24,503	$49,005	$73,508	$98,010	$122,513	$136,125	$136,125	**$639,788**	$136,125	$136,125	$136,125	$136,125
Public Works Frontage Levy (Multi-Family)	3.75	$0	$1,568	$3,135	$4,845	$6,555	$8,265	$9,975	$11,685	$13,395	$14,250	**$73,673**	$14,250	$14,250	$14,250	$14,250
Public Works Frontage Levy (Commercial)	3.75	$9,600	$14,400	$19,200	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	**$211,200**	$24,000	$24,000	$24,000	$24,000
TOTAL REVENUE:		**$578,920**	**$1,039,673**	**$1,489,640**	**$2,662,419**	**$3,148,113**	**$3,799,407**	**$4,450,701**	**$5,101,995**	**$5,507,070**	**$5,449,060**	**$33,226,998**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**
Running Total:		**$578,920**	**$1,618,593**	**$3,108,233**	**$5,770,652**	**$8,918,765**	**$12,718,172**	**$17,168,873**	**$22,270,868**	**$27,777,938**	**$33,226,998**	**$33,226,998**	**$38,579,848**	**$43,932,698**	**$49,285,548**	**$54,638,398**

DIRECT COSTS		YEAR 1	2	3	4	5	6	7	8	9	10	TOTAL AT FULL BUILD-OUT	11	12	13	14
TO THE CITY OF WINNIPEG:																
Capital Costs (City costs directly attributed to the development):																
External Roads Improvements	$560,000		$0	$0	$0	$0	$0	$560,000	$0	$0	$0	**$560,000**	$0	$0	$0	$0
Fermor Renewal (Cost Reduction)	-$2,500,000	-$2,500,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	**-$2,500,000**	$0	$0	$0	$0
Renewal (Roads)	$58,437,000										$5,312,500	**$5,312,500**				
Renewal (underground)	$21,300,000											**$0**				
Total Capital Cost:	**$77,797,000**	**-$2,500,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$560,000**	**$0**	**$0**	**$5,312,500**	**$3,372,500**	**$0**	**$0**	**$0**	**$0**
Annual City of Winnipeg Operating Costs:		55.0%	55.0%	55.0%	55.0%	55.0%	55.0%	55.0%	55.0%	55.0%	55.0%		55.0%	55.0%	55.0%	55.0%
Residential Single Family	$1,439.00	$0	$0	$0	$213,692	$427,383	$641,075	$854,766	$1,068,458	$1,187,175	$1,187,175	**$5,579,723**	$1,187,175	$1,187,175	$1,187,175	$1,187,175
Residential Multi-Family	$640.00	$0	$105,600	$211,200	$326,400	$441,600	$556,800	$672,000	$787,200	$902,400	$960,000	**$4,963,200**	$960,000	$960,000	$960,000	$960,000
Commercial/Business/Office[25]	25%	$214,718	$322,076	$429,435	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	**$4,723,785**	$536,794	$536,794	$536,794	$536,794
Total Operating Costs:		**$118,095**	**$235,222**	**$352,349**	**$592,287**	**$773,177**	**$954,068**	**$1,134,958**	**$1,315,848**	**$1,444,503**	**$1,476,183**	**$8,396,689**	**$1,476,183**	**$1,476,183**	**$1,476,183**	**$1,476,183**
TOTAL CITY OF WINNIPEG COSTS:		**-$2,381,905**	**$235,222**	**$352,349**	**$592,287**	**$773,177**	**$954,068**	**$1,694,958**	**$1,315,848**	**$1,444,503**	**$6,788,683**	**$11,769,189**	**$1,476,183**	**$1,476,183**	**$1,476,183**	**$1,476,183**

**Operating Costs Phased in from 55%-90% of City Average Over 80 Years

SUMMARY	YEAR 1	2	3	4	5	6	7	8	9	10	TOTAL AT FULL BUILD-OUT	11	12	13	14
TOTAL REVENUE:	**$578,920**	**$1,039,673**	**$1,489,640**	**$2,662,419**	**$3,148,113**	**$3,799,407**	**$4,450,701**	**$5,101,995**	**$5,507,070**	**$5,449,060**	**$33,226,998**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**
TOTAL CITY OF WINNIPEG COSTS:	**-$2,381,905**	**$235,222**	**$352,349**	**$592,287**	**$773,177**	**$954,068**	**$1,694,958**	**$1,315,848**	**$1,444,503**	**$6,788,683**	**$11,769,189**	**$1,476,183**	**$1,476,183**	**$1,476,183**	**$1,476,183**
DIFFERENCE:	**$2,960,825**	**$804,451**	**$1,137,291**	**$2,070,132**	**$2,374,936**	**$2,845,340**	**$2,755,743**	**$3,786,147**	**$4,062,567**	**($1,339,623)**	**$21,457,808**	**$3,876,667**	**$3,876,667**	**$3,876,667**	**$3,876,667**
PRESENT VALUE:	**$2,846,947**	**$743,760**	**$1,011,047**	**$1,769,558**	**$1,952,024**	**$2,248,713**	**$2,094,138**	**$2,766,500**	**$2,854,305**	**($905,001)**	**$17,381,993**	**$2,518,209**	**$2,421,355**	**$2,328,226**	**$2,238,679**

Total Cumulative Net Revenue After 80 Years	**$184,957,261**
Net Present Value	**$62,746,928**

15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
825	825	825	825	825	825	825	825	825	825	825	825	825	825	825	825	825	825
$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675
1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000
50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800
$0	$0	$0	$0	$0	$0	$0	$0	$0	-	-	-	-	-	-	-	-	-
$0	$0	$0	$0	$0	$0	$0	$0	$0	-	-	-	-	-	-	-	-	-
$0	$0	$0	$0	$0	$0	$0	$0	$0	-	-	-	-	-	-	-	-	-
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125
$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250
$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000
$5,352,850	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**
$59,991,248	**$65,344,098**	**$70,696,948**	**$76,049,798**	**$81,402,648**	**$86,755,498**	**$92,108,348**	**$97,461,198**	**$102,814,048**	**$108,166,898**	**$113,519,748**	**$118,872,598**	**$124,225,448**	**$129,578,298**	**$134,931,148**	**$140,283,998**	**$145,636,848**	**$150,989,698**

15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
					$5,312,500										$5,312,500		
$0	**$0**	**$0**	**$0**	**$0**	**$5,312,500**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$5,312,500**	**$0**	**$0**
55.5%	55.5%	55.5%	55.5%	55.5%	56.0%	56.0%	56.5%	57.0%	57.5%	58.0%	58.5%	59.0%	59.5%	60.0%	60.5%	61.0%	61.5%
$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175
$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000
$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794
$1,489,603	**$1,489,603**	**$1,489,603**	**$1,489,603**	**$1,489,603**	**$1,503,023**	**$1,503,023**	**$1,516,442**	**$1,529,862**	**$1,543,282**	**$1,556,702**	**$1,570,122**	**$1,583,542**	**$1,596,961**	**$1,610,381**	**$1,623,801**	**$1,637,221**	**$1,650,641**
$1,489,603	**$1,489,603**	**$1,489,603**	**$1,489,603**	**$1,489,603**	**$6,815,523**	**$1,503,023**	**$1,516,442**	**$1,529,862**	**$1,543,282**	**$1,556,702**	**$1,570,122**	**$1,583,542**	**$1,596,961**	**$1,610,381**	**$6,936,301**	**$1,637,221**	**$1,650,641**

15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
$5,352,850	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**
$1,489,603	**$1,489,603**	**$1,489,603**	**$1,489,603**	**$1,489,603**	**$6,815,523**	**$1,503,023**	**$1,516,442**	**$1,529,862**	**$1,543,282**	**$1,556,702**	**$1,570,122**	**$1,583,542**	**$1,596,961**	**$1,610,381**	**$6,936,301**	**$1,637,221**	**$1,650,641**
$3,863,247	**$3,863,247**	**$3,863,247**	**$3,863,247**	**$3,863,247**	**($1,462,673)**	**$3,849,828**	**$3,836,408**	**$3,822,988**	**$3,809,568**	**$3,796,148**	**$3,782,728**	**$3,769,308**	**$3,755,889**	**$3,742,469**	**($1,583,451)**	**$3,715,629**	**$3,702,209**
$2,145,124	**$2,062,619**	**$1,983,288**	**$1,907,008**	**$1,833,661**	**($667,545)**	**$1,689,434**	**$1,618,793**	**$1,551,087**	**$1,486,194**	**$1,423,999**	**$1,364,389**	**$1,307,259**	**$1,252,504**	**$1,200,028**	**($488,208)**	**$1,101,536**	**$1,055,344**

33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
825	825	825	825	825	825	825	825	825	825	825	825	825	825	825	825	825	825
$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675
1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000
50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125
$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250
$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000
$5,352,850	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**
$156,342,548	**$161,695,398**	**$167,048,248**	**$172,401,098**	**$177,753,948**	**$183,106,798**	**$188,459,648**	**$193,812,498**	**$199,165,348**	**$204,518,198**	**$209,871,048**	**$215,223,898**	**$220,576,748**	**$225,929,598**	**$231,282,448**	**$236,635,298**	**$241,988,148**	**$247,340,998**

33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
							$5,312,500										$21,250,000
																	$21,300,000
$0	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$5,312,500**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$42,550,000**
62.0%	62.5%	63.0%	64.0%	65.0%	65.5%	66.0%	67.0%	68.0%	69.0%	70.0%	71.0%	71.5%	72.0%	73.0%	74.0%	75.0%	76.0%
$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175
$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000
$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794
$1,664,061	**$1,677,480**	**$1,690,900**	**$1,717,740**	**$1,744,580**	**$1,758,000**	**$1,771,419**	**$1,798,259**	**$1,825,099**	**$1,851,938**	**$1,878,778**	**$1,905,618**	**$1,919,038**	**$1,932,458**	**$1,959,297**	**$1,986,137**	**$2,012,977**	**$2,039,816**
$1,664,061	**$1,677,480**	**$1,690,900**	**$1,717,740**	**$1,744,580**	**$1,758,000**	**$1,771,419**	**$7,110,759**	**$1,825,099**	**$1,851,938**	**$1,878,778**	**$1,905,618**	**$1,919,038**	**$1,932,458**	**$1,959,297**	**$1,986,137**	**$2,012,977**	**$44,589,816**

33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
$5,352,850	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**
$1,664,061	**$1,677,480**	**$1,690,900**	**$1,717,740**	**$1,744,580**	**$1,758,000**	**$1,771,419**	**$7,110,759**	**$1,825,099**	**$1,851,938**	**$1,878,778**	**$1,905,618**	**$1,919,038**	**$1,932,458**	**$1,959,297**	**$1,986,137**	**$2,012,977**	**$44,589,816**
$3,688,789	**$3,675,370**	**$3,661,950**	**$3,635,110**	**$3,608,270**	**$3,594,850**	**$3,581,431**	**($1,757,909)**	**$3,527,751**	**$3,500,912**	**$3,474,072**	**$3,447,232**	**$3,433,812**	**$3,420,393**	**$3,393,553**	**$3,366,713**	**$3,339,873**	**($39,236,966)**
$1,011,076	**$968,651**	**$927,995**	**$885,763**	**$845,406**	**$809,867**	**$775,812**	**($366,153)**	**$706,531**	**$674,188**	**$643,288**	**$613,767**	**$587,863**	**$563,044**	**$537,140**	**$512,396**	**$488,761**	**($5,521,136)**

51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67
825	825	825	825	825	825	825	825	825	825	825	825	825	825	825	825	825
$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675
1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000
50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125
$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250
$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000
$5,352,850	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**
$252,693,848	**$258,046,698**	**$263,399,548**	**$268,752,398**	**$274,105,248**	**$279,458,098**	**$284,810,948**	**$290,163,798**	**$295,516,648**	**$300,869,498**	**$306,222,348**	**$311,575,198**	**$316,928,048**	**$322,280,898**	**$327,633,748**	**$332,986,598**	**$338,339,448**

51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
									$5,312,500							
$0	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$5,312,500**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
77.0%	78.0%	79.0%	80.0%	81.0%	82.0%	83.0%	84.0%	85.0%	86.0%	87.0%	87.5%	88.0%	88.5%	89.0%	89.0%	89.5%
$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175
$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000
$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794
$2,066,656	**$2,093,496**	**$2,120,335**	**$2,147,175**	**$2,174,015**	**$2,200,854**	**$2,227,694**	**$2,254,534**	**$2,281,373**	**$2,308,213**	**$2,335,053**	**$2,348,473**	**$2,361,893**	**$2,375,312**	**$2,388,732**	**$2,388,732**	**$2,402,152**
$2,066,656	**$2,093,496**	**$2,120,335**	**$2,147,175**	**$2,174,015**	**$2,200,854**	**$2,227,694**	**$2,254,534**	**$2,281,373**	**$7,620,713**	**$2,335,053**	**$2,348,473**	**$2,361,893**	**$2,375,312**	**$2,388,732**	**$2,388,732**	**$2,402,152**

51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67
$5,352,850	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**
$2,066,656	**$2,093,496**	**$2,120,335**	**$2,147,175**	**$2,174,015**	**$2,200,854**	**$2,227,694**	**$2,254,534**	**$2,281,373**	**$7,620,713**	**$2,335,053**	**$2,348,473**	**$2,361,893**	**$2,375,312**	**$2,388,732**	**$2,388,732**	**$2,402,152**
$3,286,194	**$3,259,354**	**$3,232,515**	**$3,205,675**	**$3,178,835**	**$3,151,996**	**$3,125,156**	**$3,098,316**	**$3,071,477**	**($2,267,863)**	**$3,017,797**	**$3,004,377**	**$2,990,958**	**$2,977,538**	**$2,964,118**	**$2,964,118**	**$2,950,698**
$444,624	**$424,031**	**$404,365**	**$385,584**	**$367,650**	**$350,525**	**$334,173**	**$318,561**	**$303,655**	**($215,584)**	**$275,839**	**$264,051**	**$252,761**	**$241,949**	**$231,595**	**$222,687**	**$213,153**

68	69	70	71	72	73	74	75	76	77	78	79	80	After 80 Years
825	825	825	825	825	825	825	825	825	825	825	825	825	
$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	$1,896,675	**$141,681,623**
1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	
$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	$2,364,000	**$177,701,880**
50	50	50	50	50	50	50	50	50	50	50	50	50	
$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	$917,800	**$72,322,640**
-	-	-	-	-	-	-	-	-	-	-	-	-	**$1,015,575**
-	-	-	-	-	-	-	-	-	-	-	-	-	**$1,603,500**
-	-	-	-	-	-	-	-	-	-	-	-	-	**$183,000**
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$258,000**
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$29,370**
$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	$136,125	**$10,168,538**
$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	$14,250	**$1,071,173**
$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	$24,000	**$1,891,200**
$5,352,850	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$407,926,498**
$343,692,298	**$349,045,148**	**$354,397,998**	**$359,750,848**	**$365,103,698**	**$370,456,548**	**$375,809,398**	**$381,162,248**	**$386,515,098**	**$391,867,948**	**$397,220,798**	**$402,573,648**	**$407,926,498**	**$407,926,498**

68	69	70	71	72	73	74	75	76	77	78	79	80	After 80 Years
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$560,000**
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**-$2,500,000**
		$5,312,500										$5,312,500	**$58,437,500**
													$21,300,000
$0	**$0**	**$5,312,500**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$5,312,500**	**$77,797,500**
89.5%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	
$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	$1,187,175	**$88,681,973**
$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	$960,000	**$72,163,200**
$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	$536,794	**$42,299,348**
$2,402,152	**$2,415,572**	**$2,415,572**	**$2,415,572**	**$2,415,572**	**$2,415,572**	**$2,415,572**	**$2,415,572**	**$2,415,572**	**$2,415,572**	**$2,415,572**	**$2,415,572**	**$2,415,572**	**$145,171,737**
$2,402,152	**$2,415,572**	**$7,728,072**	**$2,415,572**	**$2,415,572**	**$2,415,572**	**$2,415,572**	**$2,415,572**	**$2,415,572**	**$2,415,572**	**$2,415,572**	**$2,415,572**	**$7,728,072**	**$222,969,237**

68	69	70	71	72	73	74	75	76	77	78	79	80	After 80 Years
$5,352,850	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$5,352,850**	**$407,926,498**
$2,402,152	**$2,415,572**	**$7,728,072**	**$2,415,572**	**$2,415,572**	**$2,415,572**	**$2,415,572**	**$2,415,572**	**$2,415,572**	**$2,415,572**	**$2,415,572**	**$2,415,572**	**$7,728,072**	**$222,969,237**
$2,950,698	**$2,937,278**	**($2,375,222)**	**$2,937,278**	**$2,937,278**	**$2,937,278**	**$2,937,278**	**$2,937,278**	**$2,937,278**	**$2,937,278**	**$2,937,278**	**$2,937,278**	**($2,375,222)**	**$184,957,261**
$204,955	**$196,175**	**($152,535)**	**$181,375**	**$174,399**	**$167,692**	**$161,242**	**$155,040**	**$149,077**	**$143,343**	**$137,830**	**$132,529**	**($103,047)**	**$62,746,928**