Office of Financial Management

STATE OF WASHINGTON

LIFE CYCLE COST MODEL INSTRUCTIONS

State Facilities Oversight and Management Program

July 2016

CONTENTS

PREFACE

Life cycle cost analysis (LCCA) is a projection of initial and ongoing costs of ownership or leasing and operations for a facility or site over its useful life. LCCA is used to determine the relative economic cost of various alternatives so they can be compared. It is usually one of many factors considered when making a decision to lease or own property. These other factors often include the business need, availability of funding, schedule constraints, jurisdictional and community interests.

Washington law requires all proposed property acquisition projects, including leased and owned, greater than 20,000 sf to have a LCCA performed, unless the expected occupancy of the proposed space is less than five years.

LCCA can be very detailed and complex. This LCCA tool was created to provide a simplified tool to help decide the most economical option for housing state functions. Further analysis may be desired to have a more in-depth study of alternatives.

Users can develop the analysis by providing basic information such as existing lease information, proposed lease terms, location, square feet, construction or purchase project costs, and project completion dates. Additional information may be inputted in order to create a more customized option.

The Office of Financial Management (OFM) has chosen to control many of the key financial and cost parameters in the tool to simplify the analysis and ensure that the results are comparable for all projects. Refer to the assumptions section for a more detailed breakdown of assumptions.

LIFE CYCLE COST MODEL OVERVIEW

SOFTWARE

The LCCA is performed by an Excel workbook file. The Life Cycle Cost Model (LCCM) workbook is able to be used stand-alone from other workbooks. While there are links to other workbooks, such as in the Financial Assumptions tab, these will not prevent the workbook from working properly.

The version of Excel must be Excel 2007 or later. There are complex formulas, formatting, functions, and conditional formatting that will not work on earlier versions of Excel.

MODEL FORMATTING

The sheets are protected. You may input or change any cell that is green in any green tab (option inputs). All other cells may be looked at but cannot be changed. This is for transparency of the calculations and default inputs.

Any cell with an asterisk to the left of it must be inputted in order for that option to work. All green cells in the workbook allow you to input data. If filled in, the data in the green cells will be used rather than the defaults if applicable.

There are six input tabs (green) where data can be entered; Existing Lease, Lease Option 1, Lease Option 2, Ownership Option 1, Ownership Option 2, and Ownership Option 3. The summary tab (yellow) returns results for all options. The remaining tabs either contain assumptions, data, or perform calculations.

The workbook is setup to print as landscape on legal size paper (8.5” x 14”). The sheets have been print formatted for clarity of reading once printed.

SHEET DESCRIPTIONS

EXISTING LEASE SHEET

This sheet is where agency and project information along with existing leases are entered.

LEASE OPTION 1 SHEET

This sheet is where agency and project information, existing leases, and new lease proposals are entered. The sheet also projects the biennial budget impacts for any new lease in comparison to the existing lease. This information is not shown on the summary sheet as it is a

near-term outcome. However, this can be a useful near-term “existing to lease option” comparison.

LEASE OPTION 2 SHEET

This sheet contains the inputs for a secondary lease option.

OWNERSHIP OPTIONS 1, 2 & 3 SHEETS

These sheets contain the inputs for ownership options. These allow for input of a construction project or a facility purchase and renovation of an existing building. Additional ongoing building operating costs are included.

SUMMARY SHEET

This sheet summarizes the major information needed to distinguish options such as project descriptions, size, costs, and space use ratios. It also ranks the options based on the net present value (what the total cost converted to today’s dollars).

This sheet shows the results of the analysis for a user specified period and the state mandated 30 and 50 year analysis periods. Additionally, the net present value chart of the options shows the various options cross over time and when their costs intersect.

Major financial assumptions are summarized on the bottom of this sheet.

REMAINING SHEETS

The remaining tabs either contain assumptions, data, or perform calculations.

Cash Flow – Calculates the cash flow and net present value of the options by month for 100 years. It also calculates the year in which the options are a better economic value than the existing lease (or if no existing lease the proposed lease).

Discount Rate Sensitivity – Calculates the net present value of the options with discount rates of 1% through 10%. It also generates charts to show how the discount rate affects the NPV of the option.

Capital Construction Defaults – OFM set default values from construction, renovation projects, and industry estimating guides. The defaults in green cells can be adjusted.

Financial Assumptions – The Office of the State Treasurer sets the financial assumptions for the LCCM. This sheet is updated twice a year. Any LCCA that uses different numbers from the Treasurer's should be noted and explained.

Market Rental Rate – This sheet list the State Facilities Oversight and Management estimated full service rental rates for all cities in Washington. This list is periodically updated to reflect market rate studies. This sheet also lists the combined state and local sales tax for each city as reported by the Department of Revenue.

CPI-U – Inflation index as reported by Global Insight and OFM Forecasting.

Operating Costs Table - This sheet is the operating costs for ongoing operations, maintenance, and managing of office buildings. The information is taken from the Whitestone Research Facility Operations Cost Reference. This is a yearly publication. The rates used are for selected market areas in Washington and the greater Portland market for Vancouver, Washington. The rates are costs per gross square foot.

Lease Annual Operating Costs - This sheet is the annual operating costs for the selected city in the Lease Inputs tab. The figures are escalated yearly from the data date year of the Whitestone report.

Project Annual Operating Costs - This tab is similar to the Lease Annual Operating Costs tab, however, the rates are for the selected city in the Construction Option tab. This allows the construction and purchase options to take into consideration operating rates in a different city than the current lease.

INSTRUCTIONS FOR MODEL

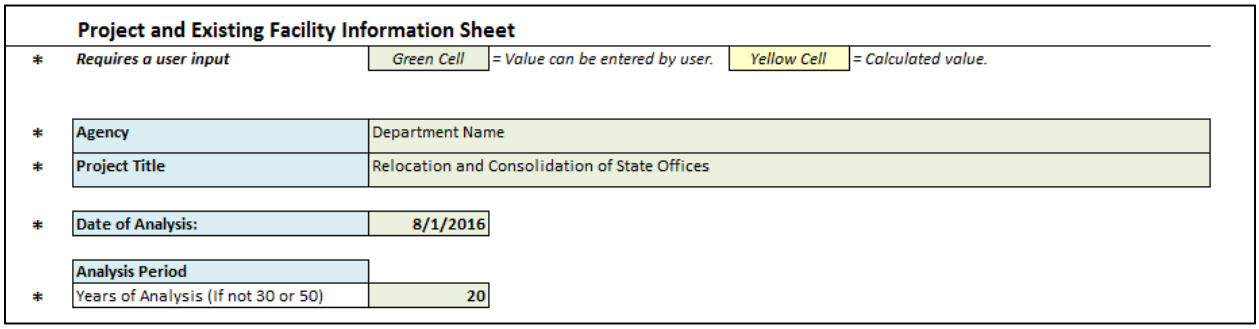
ENTERING OPTIONS – PROJECT INFORMATION AND EXISTING LEASE

To start a project, it is recommended that you save the excel file with a unique name describing the analysis.

Note: Any cell with an asterisk to the left of it must be inputted in order for that option to work. All green cells in the workbook allow you to input data. If filled in, the data in the green cells will be used rather than the defaults if applicable.

1. Open the Existing Lease sheet.

2. Enter the following information (required information in bold below is noted with asterisks * on the spreadsheet):
    - **Agency**
    - **Project Title**
    - **Project Description**
    - **Date of Analysis –** This is the date the LCCM scenario is run.
    - Years of Analysis (optional) – This allows you to run an analysis for a specified period in addition to the standard 30 and 50 year periods.



Project and Existing Facility Information Sheet

* *Requires a user input* | *Green Cell* = *Value can be entered by user.* | *Yellow Cell* = *Calculated value.*

*	**Agency**	Department Name
*	**Project Title**	Relocation and Consolidation of State Offices
*	**Date of Analysis:**	**8/1/2016**
	Analysis Period	
*	Years of Analysis (If not 30 or 50)	**20**

3. Next enter in the Current Lease Information. This can be found on the executed lease. There is room for up to six existing leases. If there is no existing lease then leave the following section blank.
    - Existing Square Feet - This is usually in rentable square feet.
    - Lease start date
    - Lease end date
    - Lease rate per month – rate listed on lease

- Additional operating costs / month – services such as utilities, custodial, recycling, etc., that the tenant is responsible for paying.
- FTE's Relocating – enter the number of people who work at this location who would be relocating

	Existing Facility Description	4 Separate Thurston County Leased Facilities

	Existing Lease Information	Lease 1	Lease 2	Lease 3	Lease 4	Lease 5	Lease 6	Total
	Existing Square Feet	17,836	9,519	11,036	6,215			44,606
	Lease Start Date / Last Lease Increase	7/1/2012	2/1/2014	11/1/2013	7/1/2015			
	Lease End Date	6/30/2017	1/31/2019	10/31/2018	6/30/2017			
	Lease Rate per Month	$ 24,525	$ 25,781	$ 19,773	$ 10,985			$ 81,063
	Lease Rate per SF per Year at End Date	$ 16.50	$ 32.50	$ 21.50	$ 21.21			$ 21.81
	Additional Operating Costs per Month	$ 2,705						$ 2,705
	Total Lease Costs per Month	$ 27,230	$ 25,781	$ 19,773	$ 10,985			$ 83,768
*	Persons Relocating	65	43	50	21			179
	SF per Person Calculated	274	221	221	296			249
	Estimated Lease Renewal Rate - 5 Year	$ 19.13	$ 37.69	$ 24.93	$ 23.53			$ 25.14

ENTERING OPTIONS – LEASE OPTION 1

1. Open the Existing Lease sheet.
2. Enter New Lease Option 1 Description.
3. Next enter in the New Lease Information.
    - Lease Location – Select a city from the pull-down list.
    - Lease Square Feet Type – Select either gross or rentable from the pull-down list
    - New Facility Square Feet – Enter the size of the new lease
    - New Lease Start Date – Enter the date that the new lease begins

Lease Option 1 Information Sheet

* ***Requires a user input*** | *Green Cell* = *Value can be entered by user.* | *Yellow Cell* = *Calculated value.*

	New Lease Option 1 Description	New Consolidated Leased Building in Thurston County @ Market Rate

	New Lease Information		
*	Lease Location	Olympia	Market Area: Thurston County
*	Lease Square Feet Type	Rentable	
*	New Facility Square Feet	40,000	
*	New Lease Start Date	2/1/2019	
	SF per Person Calculated	223	

4. New Lease Costs – This section allows you to enter the length and rate of the lease terms. If no lease terms are input the model will use the estimated lease rates for the city.

   Most leases will have a 5 year fixed rate, however, some leases are negotiated with step increases. For instance, a 10 year lease with a rate increase in years 6 – 10 would be entered as shown below:

	New Lease Costs	Years of Term	Rate / SF / Year	Rate / Month	Adjusted to FS Rate	Total FS Rate / Month	Estimated FSG Market Rate	Estimated FSG Rate / Month	Real Estate Transaction Fees for Term
*	Years 1 - 5	5				$ 112,225	$ 33.67	$ 112,225	$ 153,083
	Years 6 - 10	5				$ 130,137	$ 39.04	$ 130,137	$ 89,976
	Years								
	Years								
	Years								
	Total Length of Lease	10							$ 243,059
	Transaction Fee for first 5 Years	2.50%	*of total rent for first 5 years of term*						
	Transaction Fee for Additional Years	1.25%	*of total rent for term beyond 5 years*						

Note: Real estate transaction fees calculated on base lease - not full service rate including added services and utilities.

After the last year specified in the New Lease Costs section, the lease rate will be calculated by escalating the last rate by inflation. This rate renews and escalates every five years thereafter.

5. Real Estate Transaction Rates – Only input different commission rates for the real estate transaction if they have been negotiated outside of the standard rate. The commission rates shown are the standard Department of Enterprise Services rates.

6. New Lease Operating Costs – This section allows you to account for services that are not included in the lease but will be paid for by the agency.

Added Services	New Lease Operating Costs (Starting in current year)	Known Cost / SF / Year	Estimated Cost / SF / Year in 2019 - Rentable	Total Cost / Year	Cost / Month
☑	Energy (Electricity, Natural Gas)	$ -	$ 1.13	$ 45,031	$ 3,753
☑	Janitorial Services	$ -	$ 1.33	$ 53,136	$ 4,428
☑	Utilities (Water, Sewer, & Garbage)	$ -	$ 0.60	$ 23,866	$ 1,989
☐	Grounds	$ -	$0.00	$ -	$ -
☐	Pest Control	$ -	$0.00	$ -	$ -
☐	Security	$ -	$0.00	$ -	$ -
☐	Maintenance and Repair	$ -	$0.00	$ -	$ -
☐	Management	$ -	$0.00	$ -	$ -
☐	Road Clearance	$ -	$0.00	$ -	$ -
☐	Telecom	$ -	$0.00	$ -	$ -
	Additional Parking	$ -	$ -	$ -	$ -
	Other	$ -	$ -	$ -	$ -
	Total Operating Costs	**$ -**	**$ 3.05**	**$ 122,033**	**$ 10,169**

Escalated to lease start date

To add a service, check the box to the left of the service. This will automatically add in the estimated cost per square foot per year. If you wish to override this cost with a

known service cost enter the cost in the Known Cost / SF / Year column. You must still check the box on the left.

7. New Lease One Time Costs – This section allows you to input the one-time costs associated with moving into a new leased space. The calculated costs (in yellow) are for reference only and will not be added into the cash flow. If you want costs added into the cash flow you must enter them in the green boxes.
   If you need help in working up the individual costs, you may contact DES Real Estate Services or OFM State Facilities Oversight and Management.

	New Lease One Time Costs	Current Estimate	Calculated (for reference)	
*	Real Estate Transaction Fees	$ 243,059	$ 243,059	*Per Std %*
*	Tenant Improvements	$ 780,000	$ 600,000	*$19.5 per SF*
*	IT Infrastructure	$ 150,000	$ 62,650	*$838 per Person*
*	Furniture Costs	$ 65,000	$ 89,500	*$363 per Person*
*	Building Security and Access Systems	$ 50,000		
*	Moving Vendor and Supplies	$ 42,000	$ 36,695	*$235 per Person*
	Other / Incentive	$ 4,000		
	Total	$ 1,334,059	$ 1,031,904	

Biennium Budget Impacts for New Lease

This section does not have any user inputs but displays the biennial budget impacts for the lease option 1 from the analysis start date biennium and continuing for 5 biennia.

LEASE OPTION 2

The Lease Option 2 sheet contains the same inputs as the Lease Inputs sheet.

ENTERING OPTIONS – OWNERSHIP OPTIONS

These sheets contain the inputs for an ownership project along with the ongoing building operating costs. Many of the inputs on these sheets are similar to the Lease Inputs sheet. Additional information regarding the Capital Budget System and predesigns can be found at the OFM Capital Budget website: http://www.ofm.wa.gov/budget/instructions/capital.asp.

Note: Any cell with an asterisk to the left of it must be inputted in order for that option to work. All green cells in the workbook allow you to input data. If filled in, the data in the green cells will be used rather than the defaults if applicable.

1. Enter the following information (required information in bold below is noted with asterisks * on the spreadsheet):
    - **Project Description**
    - **Construction of Purchase/Remodel** – Select from the pull-down list.
    - **Project Location** – Select a city from the pull-down list.
    - **Gross Sq Ft** – This is the total building area including exterior walls.
    - **Usable Sq Ft** – This is the area of the building that is able to be used by the tenant.
    - **Move In Date** – This is the date that the agency moves people into the building. The cash flow automatically assumes a two month period for moving furniture and other items into the building.

The following items are automatically calculated based upon standard assumptions or user inputs further down the construction option sheet.

- Space Efficiency
- Estimated Acres Needed
- MACC Cost per Sq Ft
- Estimated Total Project Costs per Sq Ft
- Escalated MACC Cost per Sq Ft
- Escalated Total Project Costs per Sq Ft

Ownership Option 1 Information Sheet

* *Requires a user input* | *Green Cell* = *Value can be entered by user.* | *Yellow Cell* = *Calculated value.*

*	**Project Description**	Construction of a 2 story facility on purchased land in Thurston County - Standard Assumptions
*	**Construction or Purchase/Remodel**	Construction
*	**Project Location**	Olympia — Market Area = Thurston County

	Statistics	
*	Gross Sq Ft	45,000
*	Usable Sq Ft	40,000
	Space Efficiency	89%
	Estimated Acres Needed	2.00
	MACC Cost per Sq Ft	$300.00
	Estimated Total Project Costs per Sq Ft	$420.00
	Escalated MACC Cost per Sq Ft	$327.88
	Escalated Total Project Costs per Sq Ft	$459.03
*	**Move In Date**	7/1/2019

2. If there is an interim lease (such as a temporary leased space during construction) enter the following information.

- Lease Start Date
- Length of Lease (in months)
- Square Feet (holdover/temp lease)
- Lease Rate – Full Serviced ($ / SF / Year) – see the Lease Input sheet for services that might be included in the lease.
- One Time Costs (if double move) – see the Lease Input sheet for items that would be included in these category.

Interim Lease Information	**Start Date**
Lease Start Date	
Length of Lease (in months)	
Square Feet (holdover/temp lease)	
Lease Rate- Full Serviced ($/SF/Year)	
One Time Costs (if double move)	

3. Construction Cost Estimates Details – This section allows you to enter specific construction category costs or use the generated costs. The inputs are based on the OFM Capital Budget System (CBS) inputs. (For explanation of the CBS refer to the CBS instructions: http://bass.ofm.wa.gov/BASSPR/library/CBS_Tutorial_Divison_and_Facility.pdf).

The model will automatically estimate costs for a typical state office building based upon standard OFM assumptions for the size and location of the proposed building. Refer to the assumptions section for more detail.

Values in green cells will be used rather than the estimated values. For instance, in the Construction Contracts section a particular building site may require a more than normal level of preparation. If this is entered then the total will reflect the amount in the Site Work cell. However, once an item is entered, the entire category must be filled in. In this case you must also fill in Related Project Costs, if any, and Facility Construction costs.

	Construction Cost Estimates (See Capital Budget System For Detail)			
		Known Costs	Estimated Costs	Cost to Use
	Acquisition Costs Total		$ 500,000	$ 500,000
A & E	**Consultant Services**			
	A & E Fee Percentage (if services not specified)		7.5% Std	7.50%
	Pre-Schematic Design services			
	Construction Documents			
	Extra Services			
	Other Services			
	Design Services Contingency			
	Consultant Services Total	$ -	$ 1,219,911	$ 1,219,911
	Construction Contracts			
MACC	Site Work			
	Related Project Costs			
	Facility Construction			
	MACC SubTotal	$ -	$ 13,500,000	$ 13,500,000
	Construction Contingency (5% default)		$ 675,000	$ 675,000
	Non Taxable Items			$ -
	Sales Tax		$ 1,188,000	$ 1,188,000
	Construction Additional Items Total	$ -	$ 1,863,000	$ 1,863,000
	Equipment			
	Equipment			
	Non Taxable Items			
	Sales Tax			
	Equipment Total	$ -		$ -
	Art Work Total		$ 67,500	$ 67,500
	Other Costs			
	Additional Item #1	$ 654,654		
	Other Costs Total	$ 654,654		$ 654,654
	Project Management Total			$ -
	Grand Total Project Cost	**$ 654,654**	**$ 17,150,411**	**$ 17,805,065**

4. Construction One Time Project Costs – This section allows you to enter moving expenses and any other items that are not covered in the Construction Cost Estimate section.

Construction One Time Project Costs			
One Time Costs	Estimate	Calculated	
Moving Vendor and Supplies	$ 42,000	$ 40,105	*$205 / Person in FY09*
Other (not covered in construction)	$ 4,000		
Total	$ 46,000	$ 46,000	

5. Ongoing Building Costs - This section allows you to account for services that are not included in the lease but will be paid for by the agency.

	Ongoing Building Costs				
Added Services	New Building Operating Costs	Known Cost /GSF/ 2019	Estimated Cost /GSF/ 2019	Total Cost / Year	Cost / Month
☑	Energy (Electricity. Natural Gas)	$ -	$ 1.13	$ 50,660	$ 4,222
☑	Janitorial Services	$ -	$ 1.33	$ 59,778	$ 4,982
☑	Utilities (Water, Sewer, & Garbage)	$ -	$ 0.60	$ 26,850	$ 2,237
☑	Grounds	$ -	$ 0.11	$ 5,066	$ 422
☐	Pest Control	$ -	$0.00	$ -	$ -
☑	Security	$ -	$ 0.11	$ 5,066	$ 422
☑	Maintenance and Repair	$ -	$ 5.25	$ 236,074	$ 19,673
☑	Management	$ -	$ 0.64	$ 28,876	$ 2,406
☐	Road Clearance	$ -	$0.00	$ -	$ -
☐	Telecom	$ -	$0.00	$ -	$ -
	Additional Parking	$ -	$ -	$ -	$ -
	Other	$ -	$ -	$ -	$ -
	Total Operating Costs	**$ -**	**$ 9.16**	**$ 412,370**	**$ 34,364**

To add a service, check the box to the left of the service. This will automatically add in the estimated cost per square foot per year. If you wish to override this cost with a known service cost enter the cost in the Known Cost / SF / Year column. You must still check the box on the left.

ENTERING OPTIONS – PURCHASE OPTION

The major difference with a Purchased/Remodeled option may be the amount of Acquisition Costs Total. This is where the initial purchase price of a facility would be entered. The A & E Fee Percentage will be adjusted to the standard fee for remodel projects.

The following shows how this type of project input could vary from a construction project.

	Construction Cost Estimates (See Capital Budget System For Detail)			
		Known Costs	Estimated Costs	Cost to Use
	Acquisition Costs Total	$ 12,300,000	$ 750,000	$ 12,300,000
A & E	**Consultant Services**			
	A & E Fee Percentage (if services not specified)		10.97% Std	10.97%
	Pre-Schematic Design services			
	Construction Documents			
	Extra Services			
	Other Services			
	Design Services Contingency			
	Consultant Services Total	$ -	$ 386,265	$ 386,265
	Construction Contracts			
MACC	Site Work	$ 54,000		
	Related Project Costs	$ 68,000		
	Facility Construction	$ 3,400,000		
	MACC SubTotal	$ 3,522,000	$ 15,715,500	$ 3,522,000
	Construction Contingency (5% default)		$ 176,100	$ 176,100
	Non Taxable Items			$ -
	Sales Tax		$ 309,936	$ 309,936
	Construction Additional Items Total	$ -	$ 486,036	$ 486,036
	Equipment			
	Equipment	$ 500,000		
	Non Taxable Items			
	Sales Tax	$ 44,000		
	Equipment Total	$ 544,000		$ 544,000
	Art Work Total		$ 17,610	$ 17,610
	Other Costs			
		$ 340,000		
	Other Costs Total	$ 340,000		$ 340,000
	Project Management Total			$ -
	Grand Total Project Cost		$ -	$ 17,595,911

SUMMARY

Once all of your project information has been entered the results will be shown on the Summary sheet.

This sheet summarizes the major information needed to distinguish options such as project descriptions, size, costs, and space use ratios. It also ranks the options based on the net present value (the total cost converted to today's dollars).

This sheet shows the results of the analysis for a user specified period and the state mandated 30 and 50 year analysis periods. Options can be displayed by selecting the Yes/No Display Option pull-down in green.

Financial Analysis of Options

	Display Option?	Yes	Yes	Yes	No	No	Yes	No	No	No	Ye
	Financial Comparisons	Existing Lease	Lease 1	Lease 2	Ownership 1				Ownership 2		
Years	Financing Means	Current	Current	Current	GO Bond	COP	COP Deferred *	63-20	GO Bond	COP	COP Def
20	20 Year Cumulative Cash	$ 28,293,095	$ 33,348,544	$ 28,867,287			$ 37,931,237				$ 46,26
	20 Year Net Present Value	$ 26,972,962	$ 31,830,391	$ 27,573,461			$ 36,188,869				$ 44,06
	Lowest Cost Option (Analysis Period)	1	3	2			5				

The best NPV result for the 20 year analysis period is the Existing Lease option using Current financing. This option becomes the best financial alternative in 2016.

	Financial Comparisons	Existing Lease	Lease 1	Lease 2	Ownership 1				Ownership 2		
Years	Financing Means	Current	Current	Current	GO Bond	COP	COP Deferred *	63-20	GO Bond	COP	COP Def
30	30 Year Cumulative Cash	$ 50,114,234	$ 58,195,303	$ 49,901,688			$ 46,744,448				$ 58,04
	30 Year Net Present Value	$ 46,506,210	$ 54,069,281	$ 46,400,130			$ 44,092,181				$ 54,66
	Lowest Cost Option (30 Years)	4	5	3			1				

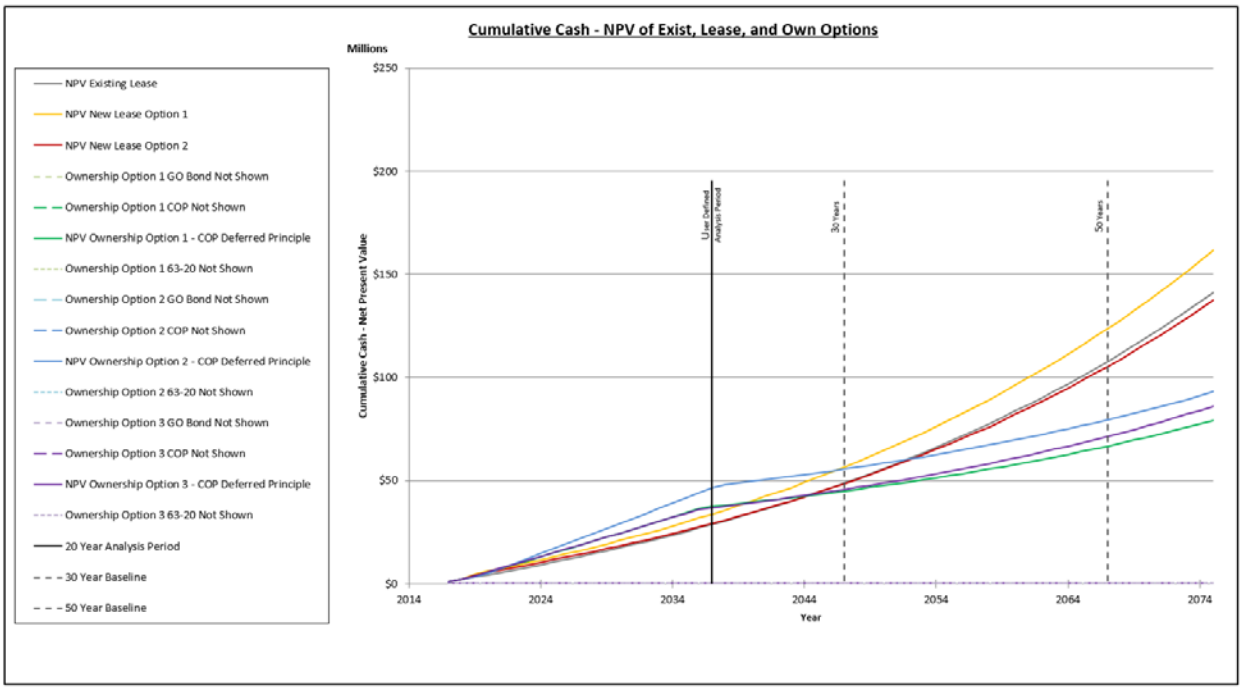
*The best NPV result for the 30 year analysis period is the Ownership 1 option using COP Deferred * financing. This option becomes the best financial alternative in 2046.*

	Financial Comparisons	Existing Lease	Lease 1	Lease 2	Ownership 1				Ownership 2		
Years	Financing Means	Current	Current	Current	GO Bond	COP	COP Deferred *	63-20	GO Bond	COP	COP Def
50	50 Year Cumulative Cash	$ 118,927,959	$ 136,534,787	$ 116,221,164			$ 72,216,213				$ 85,90
	50 Year Net Present Value	$ 103,999,853	$ 119,513,660	$ 101,803,061			$ 65,373,693				$ 77,94
	Lowest Cost Option (50 Years)	5	6	4			1				

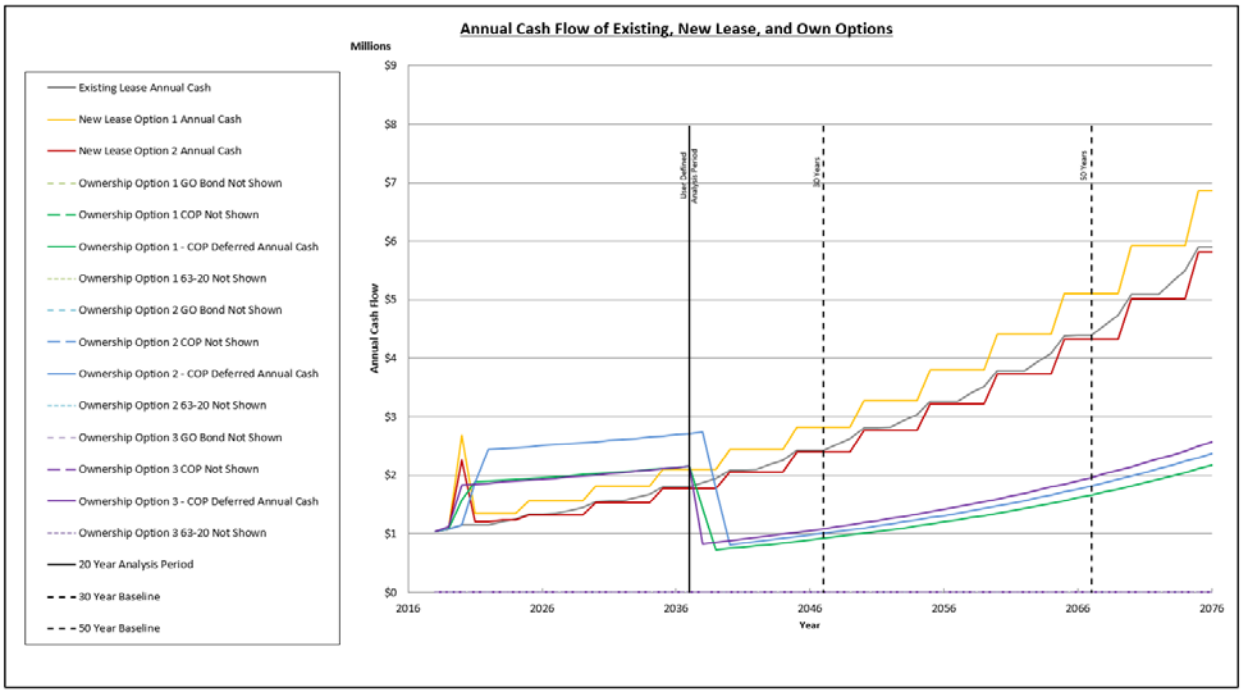
*The best NPV result for the 50 year analysis period is the Ownership 1 option using COP Deferred * financing. This option becomes the best financial alternative in 2046.*

** - Defers payment on principle for 2 years while the building is being constructed. See instructions on Capitalized Interest.*

Additionally, the net present value chart shows the selected options cumulative cash outlay over time and when their costs intersect.



Also shown is the annual cash flow comparison chart.



Major financial assumptions are summarized on the bottom of this sheet.

ASSUMPTIONS

The LCCA can be very complex with multiple variables. In order to simplify the analysis and ensure that the results are comparable for all projects OFM has chosen to control many of the key financial and cost parameters in the tool. In addition, OFM has supplied default construction numbers to allow a quick comparison of a typical office construction project with lease options. These assumptions can be found on the tabs named Capital Construction Defaults, Financial Assumptions, Market Rental Rate Table, and Operating Costs Table.

The model allows most of the assumptions to be overridden with agency supplied numbers. However, the Financial Assumptions, such as the percentage rates for various financing options and the general inflation numbers, are provided by the Office of the Treasurer of Washington State and cannot be changed by the user.

METHODOLOGY

The methodology of the LCCA tool is based on cash flows for a specified number of years. The cash flow may include ongoing lease rates, debt payments, operating and maintenance costs, and one-time project costs. These individual costs are inflated to the year when the cost is incurred. For instance, a payment on a debt for a construction project may begin some years in the future, even though the project starts today.

The total option spend for the period is then adjusted to a Net Present Value, or today's value of the money that is spent in future years. These net present values are then compared to each other.

GLOSSARY

The following terms are used both in these instructions and in the Life Cycle Cost Model. The definitions are how they are used within this context.

63-20 Financing – A single-purpose nonprofit corporation is created in order to issue bonds. Using bond proceeds, the nonprofit funds the project and contracts with a developer for its construction. The state then leases the completed building from the nonprofit. Debt service on the bonds and other costs are covered by lease payments. At the end of the lease, which coincides with bond maturity, the state owns the building. For additional information refer to the Washington State Treasurer's report on 63-20 Capital Project Financing: http://www.tre.wa.gov/documents/sfc_63-20Study.pdf and the State Finance Committee Guidelines For Use of 63-20 Financing Contracts: http://www.tre.wa.gov/documents/sfc_GuidlinesUse63-20FinancingContracts.pdf

A & E Fee – Architectural and Engineering Basic Services Fee - These design services include normal architectural, structural, civil, mechanical, and electrical engineering services. These include the following phases of the project; schematic design, design development, construction documents, bidding, construction contract administration, and project closeout. For more information refer to the Guidelines for Determining Architect/Engineer Fees for Public Works Building Projects; http://ofm.wa.gov/budget/instructions/capinst/aeguidelines.pdf

Analysis Period – The set number of years for comparing alternatives. Input by the user or the required 30 and 50 year periods.

Annual Lease Cost – The cost per year for rental of a facility paid to the building owner. This may include services such as utilities if such are paid to the building owner. Services paid to third parties are not included.

Cash Flow – An expense stream over a given period.

Certificate of Participation (COP) - In this type of real estate financing, the state leases property to a designated non-profit organization (without transferring ownership) and then makes periodic payments to lease the property back over the life of the financing. Multiple financings are often pooled together to achieve economies of scale in borrowing and issuance costs. COPs are not backed by the full faith and credit of the state. Instead, each agency pledges its appropriation from the state, although some state agencies, particularly community and technical colleges, rely on revenue sources such as student fees that are not considered general state revenues to make payments. COPs are subject to non-appropriation risk and to across-the-board cuts authorized by the Governor. State real estate acquisitions financed with COPs must be authorized by the Legislature, typically in the Capital Budget.

Consumer Price Index (CPI) - A consumer price index measures a price change for a constant market basket of goods and services from one period to the next within the same city (or in the Nation).

Cumulative Cash – The total amount spent over a period of time.

COP Deferred – This option for a COP, as shown in the summary sheet, uses capitalization of interest during the construction of the building. The interest is adding back onto the principle and that amount is the adjusted debt. For additional information on capitalized interest refer to; http://www.wisegeek.com/what-is-capitalized-interest.htm

Discount Rate - The discount rate reflects the time value of money. This should be the approximate cost to the state for long-term debt (bonds).

Full Service Cost – The cost of a lease that includes all services, such as utilities, garbage, custodial, etc.

General Obligation Bond (GO Bond) - Bonds that have the full faith, credit and taxing power of the state *irrevocably* to the payment of the bonds. Borrowing costs on general obligation bonds are lower than costs for other types of state obligations.

Gross Square Feet (GSF) – The total constructed area of a building is the sum of all spaces on all floors of a building measured to the exterior enclosing walls.

Inflation Rate – Rate of general inflation as set by the Office of the Treasurer of Washington State.

I.T. Infrastructure – The physical information technology hardware required to interconnect computers and users. This may include wiring, I.T. trays, racks, etc.

Market Rental Rate – Market lease rates at a specific point in time for major markets / submarkets to use with relocations and new space.

Maximum Allowable Construction Cost (MACC) - The total sum available to the A/E for construction purposes, including all alternates. The MACC excludes Washington state sales tax, professional fees, project contingency funds, or other charges that may not be under the scope of the architect (see Cost Estimate in Capital Budget System (CBS)).

Net Present Value (NPV) - NPV compares the value of a dollar today to the value of that same dollar in the future, taking inflation and returns into account.

Operating Costs – Cost to operate and maintain a facility. This may include energy, janitorial, utilities (water, sewer, and garbage), grounds, pest control, security, maintenance and repair, building management, road clearance, telecom, additional parking, among other items.

Real Estate Transaction Fees – The commission fees charged for negotiating and executing a lease.

Rentable Square Feet (RSF) - The actual space occupied by the tenant agency, plus the building's shared facilities.

Space Efficiency – The usable square feet divided by the gross square feet.

Total Project Costs (TPC) – the sum total of all costs associated with a project, including acquisition, A & E fees, MACC, equipment, art work, project management, and other costs.

Usable Square Feet (USF) - On a multi-tenant floor, usable area is the total size of the floor less hallways, elevators, restrooms, etc. On a single tenant floor, usable area is the total size of the floor less the building lobby, HVAC ducts, stairwells and elevators.