Cornell University
Division of Budget and Planning

Longview Budget Management Tool Report Developer's Training Orientation Guide

[Document subtitle]

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The Longview Report Developer Tools

Longview is a suite of applications that allow users to access the Longview database in various fashions. Among these applications are two Report Developer tools:

- **Longview Analysis and Reporting:** This tool allows a user to view and report on information stored in the Longview database. This tool can be used throughout the Budget cycle as a means of verifying data and analyzing data, such as verifying data after the Budget Initialization process or analyzing data from different time periods to aid in the planning process.

    - The Longview Analysis and Reporting tool is used for two main purposes:
        - Query and analyze data stored in the Longview database
        - Designing, formatting and creating reports

- **Longview for Excel:** This tool is an add-in to Microsoft Excel 1997 or later. Users can dynamically link Longview data to an Excel spreadsheet using this tool. Once the data is downloaded, Excel functionality, including pivot tables, can be used to manipulate the data. Excel's powerful reporting functions can be used to create custom formatted reports.

Symbols

A Symbol is a specific and unique data point amongst a query string. The intersections of symbols are used to store information in the Longview database and give Users the ability to pull stored data and report the results. Symbols work the same way as data elements in KFS. Every data element in KFS has a unique **Code** as well as a *Name* that describes the code. In Longview, every Symbol has a unique **Name** and Symbol Names have Longview calls a *Description*.

The table below gives a few crosswalk examples between what you may be familiar with in KFS and it would look like in Longview:

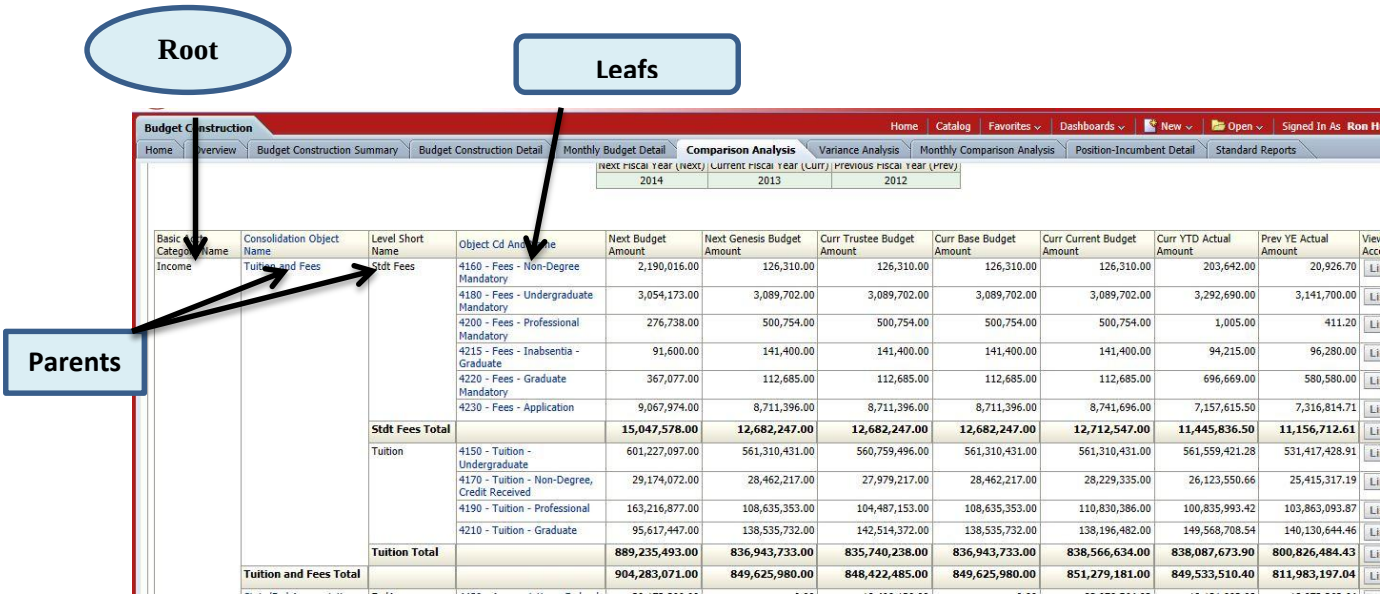
	KFS		Longview	
	Code	**Name**	**Symbol Name**	**Symbol Description**
College Org	0100	Agriculture and Life Sciences	C_0100	Agriculture and Life Sciences
Dept Org	5762	Capital Projects	D_5762	Capital Projects
Fiscal Period	03	September	A201403MTH	Sep FY14 Act
Fiscal Year	2013	FY2013	AYR2013	Tot Mth FY13 Act
Object Consolidation	TUFE	Tuition and Fees	TUFE	Tuition and Fees
Object	4430	Appropriation - Federal	4430	Appropriation - Federal
Fund Grp	GN	General Funds	GN	General Funds
Position	00144507	Professor	00144507	Professor

Hierarchies

A hierarchy is a method of organizing symbols and their relationships to each other. Symbols are defined according to the relationships they have with other symbols. The relationship between individual symbols is called a parent/child relationship.

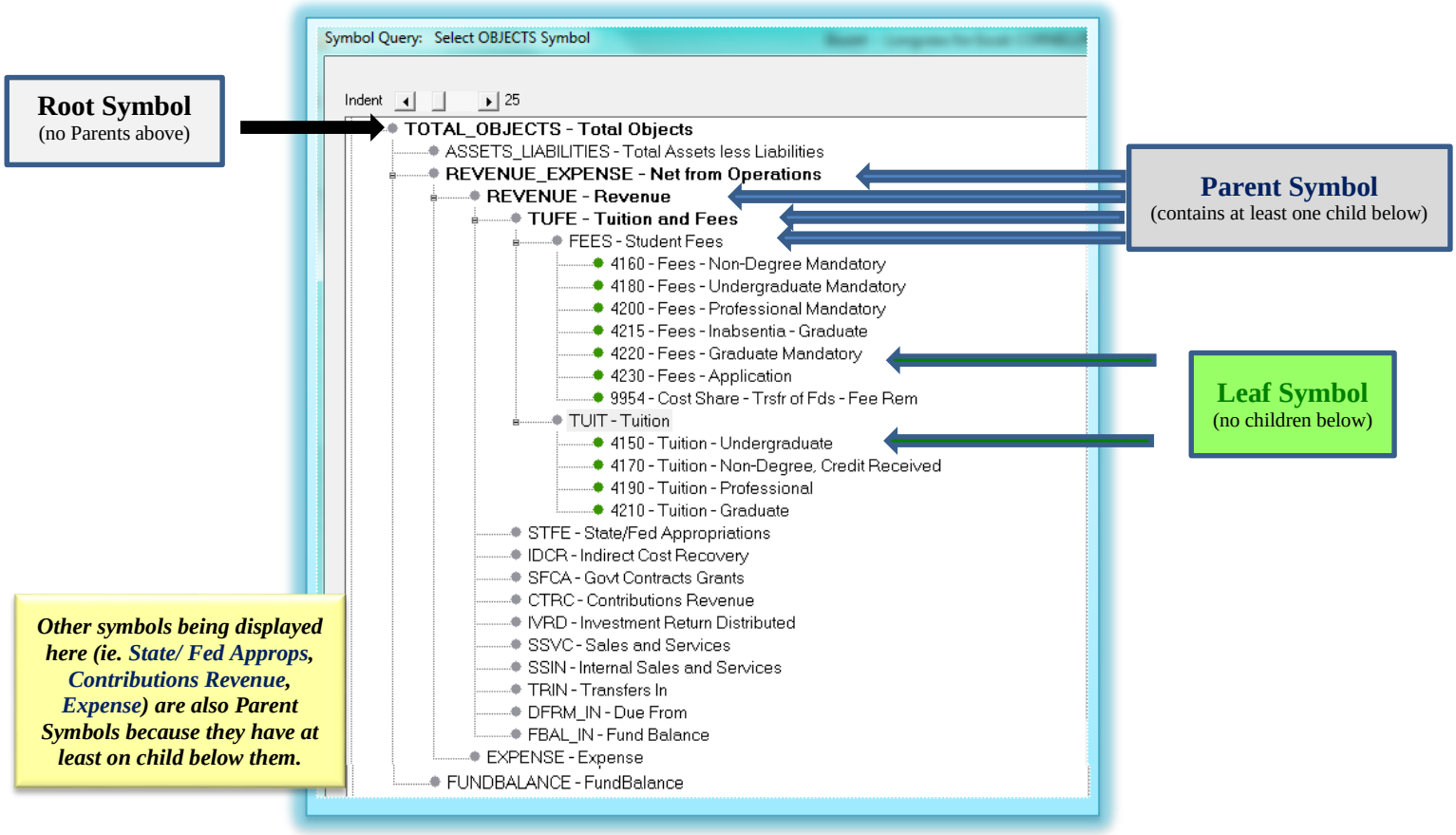
Symbol Type	Definition
Child	A child symbol has at least one level of symbols above it in its hierarchy. The value of the child symbol is determines the value of the parent.
Parent	A parent symbol has at least one child symbol beneth it. The value of the child symbol determines the vale of the parent.
Leaf	A leaf symbol has no symbols beneath it. Its value can be entered manually or by import, but it cannot be determined by a rollup like the value of a parent symbol. A leaf symbol is often referred to as a child symbol.
Root	A root symbol is a parent symbol whose value doesn't roll up to any other symbols. There is only one root symbol in any hierarchy.

Take the KFS Budget Construction Dashboard for example and in drawing comparisons to the Object Code hierarchy, the Root symbol would be a data element from Basic Accounting Category and the Child or Leaf symbol would be an Object Code belonging to that Root. In between Root and Leaf would consist of many Parent Symbols.



Basic Accounting Category Name	Consolidation Object Name	Level Short Name	Object Cd And Name	Next Budget Amount	Next Genesis Budget Amount	Curr Trustee Budget Amount	Curr Base Budget Amount	Curr Current Budget Amount	Curr YTD Actual Amount	Prev YE Actual Amount
Income	Tuition and Fees	Stdt Fees	4160 - Fees - Non-Degree Mandatory	2,190,016.00	126,310.00	126,310.00	126,310.00	126,310.00	203,642.00	20,926.70
			4180 - Fees - Undergraduate Mandatory	3,054,173.00	3,089,702.00	3,089,702.00	3,089,702.00	3,089,702.00	3,292,690.00	3,141,700.00
			4200 - Fees - Professional Mandatory	276,738.00	500,754.00	500,754.00	500,754.00	500,754.00	1,005.00	411.20
			4215 - Fees - Inabsentia - Graduate	91,600.00	141,400.00	141,400.00	141,400.00	141,400.00	94,215.00	96,280.00
			4220 - Fees - Graduate Mandatory	367,077.00	112,685.00	112,685.00	112,685.00	112,685.00	696,669.00	580,580.00
			4230 - Fees - Application	9,067,974.00	8,711,396.00	8,711,396.00	8,711,396.00	8,741,696.00	7,157,615.50	7,316,814.71
		Stdt Fees Total		**15,047,578.00**	**12,682,247.00**	**12,682,247.00**	**12,682,247.00**	**12,712,547.00**	**11,445,836.50**	**11,156,712.61**
		Tuition	4150 - Tuition - Undergraduate	601,227,097.00	561,310,431.00	560,759,496.00	561,310,431.00	561,310,431.00	561,559,421.28	531,417,428.91
			4170 - Tuition - Non-Degree, Credit Received	29,174,072.00	28,462,217.00	27,979,217.00	28,462,217.00	28,229,335.00	26,123,550.66	25,415,317.19
			4190 - Tuition - Professional	163,216,877.00	108,635,353.00	104,487,153.00	108,635,353.00	110,830,386.00	100,835,993.42	103,863,093.87
			4210 - Tuition - Graduate	95,617,447.00	138,535,732.00	142,514,372.00	138,535,732.00	138,196,482.00	149,568,708.54	140,130,644.46
		Tuition Total		**889,235,493.00**	**836,943,733.00**	**835,740,238.00**	**836,943,733.00**	**838,566,634.00**	**838,087,673.90**	**800,826,484.43**
	Tuition and Fees Total			**904,283,071.00**	**849,625,980.00**	**848,422,485.00**	**849,625,980.00**	**851,279,181.00**	**849,533,510.40**	**811,983,197.04**

In Longview, hierarchies roll up the same way. In the example below, The Hierarchy or Root Symbol - **TOATAL_OBJECTS** has three children (**ASSETS_LIABILITIES**, **REVENUE_EXPENSE** and **FUNDBALANCE**). In most cases regarding the operating budget you will be utilizing Object symbols within the Parent **REVENUE_EXPENSE**.



Dimensions

In the Longview database, each broad category of data is called a Dimension. Dimensions contain hierarchies that possess similar business elements. In our customized package, Longview has developed nine (9) Dimensions to store the most important datasets needed to build our budgets, conduct robust forecasting/scenarios and most importantly be report your results. Cornell's Dimensions in Longview are:

- **1. ACCOUNTS** – this includes your area's organizational structure set in KFS. This will include the lowest levels (or Leaf Symbols) that you oversee, such as Accounts or Sub Accounts all the way up to your Department or College/ Unit that you have access to. The following Hierarchies (Root Symbols) have been created:

Symbol Name	Symbol Description	Definition and suggested to use when:
DIM0SET	Accounts Default	This hierarchy does not filter any specific account. It will produce results based on your security access and the Symbol parameters selected for the other eight (8) Dimensions. Recommended to use when symbols selected in the other Dimensions is sufficient criteria. This will produce results the fastest out of all the ACCOUNTS' hierarchies, however keep in mind that if you have access to other accounts across campus that they will included in your data pull.
UNIV_000	Cornell University	This hierarchy most resembles the KFS organizational structure. All Orgs are prefixed with the "Org Type_." For example the Symbol name for Art, Architecture and Planning is C_2000. The "C_" makes this Symbol unique in the Longview database and avoids any conflict with the Accounts Payable Object 2000. Accounts are unique and appear as you know them to be in KFS unless they have a Sub Account. In this case, Account will be a Parent and their Sub Accounts will be a concatenation of "Account", "_" and "Sub Account." Existing Accounts (Leaf Symbol) with Sub Accounts created in the future will automatically create a "T" at end of the Account and become a Parent Symbol. The Leaf Symbols of this Account ending with "T" will include the original 7 character Account as well as the Sub Accounts. This hierarchy is best to use when basic Account information is needed for display for Revenue/ Expense and Funding Source reporting.
UNIV_000_ENCC	Cornell University	Colleges and Departments in the UNIV_000 hierarchy are denoted here with a suffix "_EN" or "_CC" based on the Account Type of their Leaf Symbols. Accounts and Sub Accounts follow the same rules given in UNIV_000. For example, Contract College Account **7100005** is a Child of **D_5761_CC** who's Parent.is **C_5700_CC** under **UNIV_000_CC** and Root **UNIV_000_ENCC**. An example of an Endowed Account within this Department would follow path like **UNIV_000_ENCC** -> **UNIV_000_EN_D_5761_EN** -> **P544702**. This hierarchy is best to use when looking to produce Account Type Reporting for Revenue/ Expense and Funding Sources.
UNIV_000_POS	Univ_000 Position Data	Colleges and Departments that own Positions as per Workday will have a Symbol here. As in the UNIV_000 hierarchy, hierarchal Symbol Names will contain a prefix "C_" or "D_" based on Org type. The Symbols here are identified with the suffix "_POS." Departments are the Leaf Symbols since Positions live at the Department level. If there are positions KFS Org 5761 then the path to query position information would be **UNIV_000_POS** -> **UNIV_000_EN_D_5761_POS**. This hierarchy is best to use when looking to produce Position & Incumbent Detail Reporting.

TOTAL_HIGHER_ED_FUNCTION_CODES	Total Higher Ed Function Codes	Colleges and Departments in the UNIV_000 hierarchy are denoted here with a prefix "HEC_function code_" and then the College or Department Symbol Name. The Path from Parent to Leaf Symbol for Account **7100005** in this Hierarchy would be **Total Higher Ed Function Codes** -> **HEC_4710** -> **HEC_4710_C_5700** -> **HEC_4710_D_5761** -> **7100005** This hierarchy is best to use when looking to produce Higher Education Function Code Reporting for Revenue/ Expense and Funding Sources.
TOTAL_TRUSTEE_BUDGET	Total Trustee Budget	Symbols are driven by KFS Colleges/ Units and Departments. Hierarchy groups non-operating accounts and Units in their own category within Total Trustee Budget Symbol. This hierarchy is most beneficial for those with oversight of Accounts or Organizations across campus and will allow for drilling capabilities for broader categories like OAP, Admin & Support and Centrally Recorded Financial Aid. Reporting on Operating Accounts would be best to utilize the Parent **TB_TOTAL_ITHACA_CAMPUS** (Child of TOTAL_TRUSTEE_BUDGET). The next level down includes Unit groupings presented in the May Book. One level down will include the C Level Org(s). For example, **TB_OAP** - Other Academic Programs has five (5) Children: **C_0200**, **C_3100**, **C_3700**, **C_7000**. Thereafter will follow the path identical to **UNIV_000**. Revenue/ Expense Reporting capabilities as well as Funding Sources.
TRANSFER_ACCOUNTS	Default accounts for Transfers	Hierarchy that only consist of Transfer object codes

- **2. TIMEPER** – this includes regular time periods such as Actuals, Base Budget, Trustee Budget and Future Forecasting. Floating Time Periods for various Time Periods.

Symbol Name	Symbol Description	Definition and suggested to use when:
DIM1SET	Timper Default	This hierarchy does not filter any specific Time Period. This Symbol would probably not be useful any of your reports.
ACTUALS		Includes for Fiscal Years 2011 - 2014. Full Year Actual Time Periods beginning with "AYR." FY2011 will be AYR2011 in Longview. Year to Date Time Period Symbols end with YTD. Most current Full Year Actuals for this Fiscal Year would be AYR2014YTD. All actuals consist of Monthly Symbols as their Leaf. These Symbols can be identified with "AYYYYMMMTH", a leading "A" followed by numerical Fiscal Year and ending with "MTH." to query actuals in November 2012, this would require Symbol A201305MTH. To extract Year to Date actuals through November 2012, the recommended Symbol to use would be A201305YTD.
BASE_BUDGET	Base Budget Time Periods	Includes Full Year Base Budgets recorded in the GL for 2012 - 2014 as well as the new budget being planned - 2015. Identified with leading "BBYR" followed by Fiscal Year. FY2014 Base Budget in Longview is BBYR2014.
BUDGET	Budget Time Periods	Includes Fiscal Year Budgets for 2012 - 2014. Full Year Actual Time Periods beginning with "BYR." FY2014 budget will be BYR2014 in Longview. Year to Date Budgets end with YTD. Most current Full Year Budgeted amounts for this Fiscal Year can be found using BYR2014YTD. All Budgets in this hierarchy consist of Monthly Symbols as their Leaf. These Symbols can be identified with "BYYYYMMMTH", a leading "B" followed by numerical Fiscal Year and ending with "MTH." to query budget amounts planned for November 2013, this would require Symbol B201405MTH. To extract Year to Date budgeted amounts through November 2013, the recommended Symbol to use would be B201305YTD.

TRUSTEE_BUDGET	Trustee Budget Time Periods	Includes Full Year Trustee Budgets recorded in the GL for 2012 - 2014 as well as the new Trustee Budget planned for 2015. Identified with leading "TBYR" followed by Fiscal Year. FY2014 Trustee Budget in Longview is TBYR2014.

- **3. ENTITIES** - this Dimension is reserved for creating different type of hierarchies in the future that might not necessarily produce clean reports.

Symbol Name	Symbol Description	Definition and suggested to use when:
DIM2SET	Entities Default	Almost always the default Symbol for Entities should be selected. This Dimension is reserved for creating different type of hierarchies in the future that might not necessarily produce clean reports.

- **4. OBJECTS** – summarizes the type of financial activities that occurred for selected Symbols in the other Dimensions. This would include varying rollups of revenue and expenses, assets and liabilities.

Symbol Name	Symbol Description	Definition and suggested to use when:
DIM3SET	Dimension 3 Default	Similar to Accounts Default, the Object's default makes no distinction between Object Codes. No recommendation to use DIM3SET.
REV_Exp_Non	Revenue less Expense Plus Non-Operating	This hierarchy at the Root nets Operating and Non-Operating Revenue and Expense categories. The next level includes three (3) Children**:** **REVENUE, EXPENSE** and **NONOPEROBJECTS. REVENUE** Symbols include KFS Operating Income Object Consolidations like **Tuition and Fees**, **State/Fed Appropriations**, **Investment Return Distributed. EXPENSE** Symbols follow the same structure for Operating Expense categories in KFS. Finally **NONOPEROBJECTS**, Non-Operating Income/ Expense Object Consolidations like **Change in Value of Split Agreement**, **Net Asset Released Pension & Post Retirement, Investment Return Net of Amt Distributed**, etc. This hierarchy is recommended if there is a need to report both Operating and Non-Operating Revenue/ Expense categories.
REV_EXP_PLAN	Revenue and Expense Objects for Planning	This hierarchy consists of three (3) levels. **REVENUE** and **EXPENSE**, Children of **REV_EXP_PLAN** then Object Code. This Hierarchy is recommended if Users are looking to report on Object Codes only (intention is not display any Parents in between like: Object Consolidations or Levels).
TOTAL_OBJECTS	Total Objects	This hierarchy has four Children, **ASSETS_LIABILITIES** (Assets - Liabilities), **REVENUE_EXPENSE** (Net from Operations, REVENUE - EXPENSE) and **FUND BALANCE** consists of three (3) levels. **REVENUE** and **EXPENSE**, Children of **REV_EXP_PLAN** then Object Code. This Hierarchy is recommended if there is a need to analyze Assets & Liabilities or Net Operations.
TRANSFER_OBJECTS	Objects Used in Transfers	Displays Transfer In and Transfer Out Object Levels as well as respective Object Codes.

- **5. SUBOBJECTS** – data element used to per Account owner's request and established in KFS to detail further financial activity. Sub Objects are not uniquely tied to a specific Object Code which is why it stands alone in its own Dimension. Sub Objects become unique with the combination of Account and Object.

Symbol Name	Symbol Description	Definition and suggested to use when:
DIM4SET	Dimension 4 Default	Sub Object's default makes no distinction between Sub Object Codes. No recommendation to use DIM3SET.
SUB_OBJECTS	Sub Objects	Two (2) level hierarchy. Includes the Root Symbols and all Sub Objects as its Leaf. This Symbol is the recommended Symbol to use with the Sub Object's.

- **6. FUNDS** – explains the source of funds groupings established in the financial system when for a given account.

Symbol Name	Symbol Description	Definition and suggested to use when:
DIM5SET	Dimension 5 Default	Fund's default makes no distinction between Fund groups. Unable to do report on Funds, however is useful if not necessary and Symbols selected in other Dimensions is enough information required for query.
OPERATING_NON_OPERATING_FUNDS	Total Funding Sources	This hierarchy divides KFS Sub Funds between Operating and Non-Operating Funds, Symbol names **OPERATING_FUNDS** and **NON_OPERATING_FUNDS**, respectively. The next level down consists of Symbols at the Sub Fund level and the Leaf Symbols the respective Sub Fund Programs. For example the Ithaca Campus Utilities' Sub Fund Program would follow the path: **OPERATING_NON_OPERATING_FUNDS** -> **OPERATING_FUNDS** -> **GN_GNAPPR** -> **GN_GNAPPR_ITUTIL**. Sub Fund Program Realized Gains INFFE follows a path of: **OPERATING_NON_OPERATING_FUNDS** -> **NON_OPERATING_FUNDS** -> **IN_INFFE** - > **IN_INFFE_GAINS**. The hierarchy is best to use when building a report that only includes Operating Funds or Non-Operating Funds or easily drawing comparisons between the two.
TOTAL_FUNDS	Total Funding Sources	This hierarchy exactly follows KFS Fund Group structure: Fund Group -> Sub Fund Group -> Sub Fund Program. Ithaca Campus Utilities' Sub Fund Program will follow the path: **TOTAL_FUNDS** -> **GN** -> **GN_APPR** -> **GN_APPR_ITUTIL**. This hierarchy is best to use when there is a need to display at the Fund Group Level (and below) and when there is no need to group operating or non-operating funds.
Total_Sub_Funds	Total Funding Sources	This hierarchy begins with the Parent Symbol at the Sub Fund Group level and Sub Program as the Leaf. Ithaca Campus Utilities' Sub Fund Program will follow the path: **Total_Sub_Funds** -> **GN_APPR** -> **GN_APPR_ITUTIL**. This hierarchy is best to use when there is a need to display at the Sub Fund Group Level (and below) and when there is no need to group operating or non-operating funds.

- **7. POSITIONS** – this Dimension includes Position information (only) that is fed from or intended to push back into the Workday HR system.

Symbol Name	Symbol Description	Definition and suggested to use when:
DIM6SET	Dimension 6 Default	Position default makes no distinction Position groups. This Symbol must be selected when extracting revenue/expense data. When reporting on Position detail information, the default Symbol should not be selected, but rather Symbols from another hierarchy depending on need.
ALL_POSITIONS	All Positions	This hierarchy should only be used to build Position reports. The Root Symbol is **ALL_POSITIONS** followed by all Position Numbers and description as the Leaf Symbol.
UNIV_000_P	Cornell University	This hierarchy contains the same roll up structure as UNIV_000. In addition to Accounts or Sub Accounts as Leafs, Position Numbers and Descriptions are Leaf Symbols within respective Department or Section. Recommendation is to not to use this Symbol as it may make your data quest more complicated than it should be. To report on Position, we recommend using the ALL_POSITIONS' hierarchy.

- **8. DETAILS** – this Dimension is intended to capture key planning details such as Employee and Salary information that is fed from or intended to push back to the Workday HR system, as Transfer and Allocation planning details.

Symbol Name	Symbol Description	Definition and suggested to use when:
DIM7SET	Dimension 7 Default	Details default makes no distinctions on Detail Symbols. This Symbol must be selected when extracting revenue/expense data. When reporting on Position, or Transfer detail information, the default Symbol should not be selected, but rather Symbols from another hierarchy depending on need.
EMPLOYEE_POSITION	Employee - Position Columns	This hierarchy includes Employee Data Feed Columns like Employee Job Function, Position Number, Pay Rate, Employee Name/ID as well as other Position detail information coming from Workday. This hierarchy also stores Employee Calculated information like Employee Plan Benefit Rate etc. This should only be used to build Position reports.
LEAVE_AMT_PCT	Leave amounts and percentage	This hierarchy includes all Leave Type information such as Leave Amounts (**LEAVE_AMT** contains Leaf Symbols such as **LVAMT_HIRE**, **LVAMT_LWOP**, **LVAMT_ADMIN**, etc. where **SABATICAL_AMT** contains Leaf Symbols such as **LVAMT_SABA**, **LVAMT_SABS**, etc.), Leave Percentages and Leave Codes.
SALARY_DETAILS	Salary Planning Details	This hierarchy includes similar information to **EMPLOYEE_POSITION** but in addition, includes Symbols for the Budget in Progress. All Symbols in this hierarchy begins with "**SALARY_**."
SIP_DETAILS	SIP Details	This hierarchy is intended to provide specific SIP information that you have planned in Longview. Planned information should include SIP Total (or Leaf Symbols below such as: **SIP_AMOUNT1 - Merit**, **SIP_AMOUNT2 - Increase to Minimum**, **SIP_AMOUNT3 - Equity**, **SIP_AMOUNT4 - Other**). Additional SIP information such as SIP %, SIP Eligible code, Executive SIP, SIP notes and SIP Flags.

- **9. VERSIONS** – this hierarchy is intended to allow users to store planning scenarios and be able to compare different "points in time" information in the Longview database.

Symbol Name	Symbol Description	Definition and suggested to use when:
DIM8SET	Dimension 8 Default	Version default does not point to any specific Version Symbols. In most cases this hierarchy is the selection that you would opt to use. Only reason to use another hierarchy in this Dimension is to extract a specific scenario.
Scenarios	Scenarios	This hierarchy includes Symbols that individual users created and saved off for their on planning and scenario building purposes. Examples would be Best Case, Scenario1, etc.
SIP_Applied	SIP Applied	This hierarchy is intended to include SIP scenarios created and saved off by individual users planning purposes.

When developing reports using Longview Analysis and Reporting or Longview for Excel, it is very useful to keep in mind the following:

1. All nine (9) Dimensions must have a Symbol selected in order for Longview to produce the data that you are specifically looking for. This is commonly referred to as the "*intersection*" of where data is stored.
2. In Longview Analysis and Reporting, reports can be developed with a display of Dimensions and their respective Symbols going ***down*** or ***across***. Dimensions not displayed in the report view will remain in the ***fixed*** area. Dimensions going ***down*** or ***across*** in a report can have one or more Symbols selected. Each ***fixed*** Dimensions however, can only have one Symbol selected.

Attributes

In addition to Symbols, Hierarchies and Data Intersections, Symbol Attributes are also stored in the Longview database. Although Users are not accessible thorough Analysis and Reporting, Longview for Excel provides a rich functionality in which Attributes can be queried or referenced in more complex data analysis extracts.

The following Attributes are currently stored in the Longview database:

ATTR_NAME	ATTR_DESCRIPTION
AZAcctApprop	Appropriation Account
AZAcctBenRate	Labor Benefit Rate Category Code
AZAcctClosedFlag	Account Closed Flag
AZAcctExpire	Expiration Date
AZAcctFund	Account Fund
AZAcctHigherEd	Higher Education Function Code
AZAcctRest	Account Restricted Status Code
AZAcctStatus	Budget Record Level Code
AZAcctType	Account Type
AZCapDesc	Capital Plan Object Description
AZMajorReportingCategoryCode	Major Reporting Category Code

Additional material and training will be provided on utilizing Attributes stored in Longview.