

## 2013 Mini, Small, Medium and Large Estimates

### Estimate

mini	<2 days
small	2 - 5 days
medium	1 - 2 weeks
large	2 - 4 weeks
extensive	> 4 weeks
nc	No charge
no est	Not estimated yet

	Done for 6.5
	Do for 6.6

Cost estimate includes unit testing but not alpha, beta and acceptance testing or fixing.

**7/12/03 - Est. Cost changed to reflect the cost of fixing during testing. Does not include testing.**

### Bucket Symbols

TR	Superstructure - Truss
GFS	Superstructure - GFS
TFD	Superstructure - TF Direction
UI	Superstructure - UI
TI	Superstructure - Timber
PT	Superstructure - Post Tensioning
3D	Superstructure - 3-D Analysis
OFM	Substructure - Original Functionality Missing
GR	Substructure - Graphics
RE	Reports
AT	Administrative Tools
CU	Culvert
NET	.NET
M	Maintenance

### Notes Symbols

TF	Task Force Approved
LR	Long Range
SL	Short Listed by TAG

Enhancement Category	Version	Incident	Bucket Category	Estimate	Est. Cost	Date Submitted	Notes	Benefits	Subject
Wizard		162	Enhancement	small	6500		SL 7/04	Both	Improve Point of Interest data entry to make it more efficient (add wizard)
Library		239	Enhancement	medium	13000			Both	Library Explorer - no tree item menu available using right mouse click
Useability		844	Cosmetic	small	6500			Both	Data validation message formatting -- decimal places shown
Schematic		858	Enhancement	small	6500	3/15/99		Both	Profile View: Bottom Cover PL. is showing in the schematic, but it isn't called out in the text (size/description)
Schematic		1149	Enhancement	mini	2600			Both	Schematic Profile View - Hinge locations not available
Useability		1208	Enhancement	small	6500	6/12/99		BrR	Printing of structure rating results from the Bridge Explorer
Useability		1232	Change Request	large	26000	6/22/99		Both	Window Configuration -- resizing columns when windows open
Useability		1364	Enhancement	medium	13000	8/9/99		Both	Height of Rows
Useability		1375	Enhancement	medium	13000	8/10/99		Both	diaphragm wizard--possible to highlight entire bay and delete at once, rather than line-by-line?
Useability		1411	Enhancement	small	6500			Both	Profile schematic does not show steel girder profile beyond the CL brg.
Behavior		1445	Enhancement	mini	2600	8/23/99		Both	Option to saving before running - add to preferences
Useability		1505	Change Request	small	6500	9/21/99		Both	Load Case Description -- Virtis load case name not used in Analysis Results window
Useability		1685	Enhancement	medium	13000	11/8/99		Both	BWS Tree collapses when checking out structure definition - save status of tree to file
Technical		1748	Enhancement	medium	13000	11/22/99		Both	Stress Limit - allowable slab compression -- need to associate deck concrete
Useability		1800	Enhancement	small	6500	11/29/99		Both	Just default stress limit range to the span length
Technical		1850	Enhancement	small	6500	12/2/99		BrD	Live Load Distribution (LRFD) -- Slab Bridge -- calculate button
Technical		1865	Enhancement	no est	no est	12/2/99		Both	Strand Hold Down Devices
Technical		1923	Enhancement	no est	no est			BrR	Spec check detail for rating factor computations
Useability		1935	Enhancement	no est	no est			Both	Rebar Sizes - add to library including square bars
Useability		2178	Enhancement	small	6500	1/11/00		Both	Point of Interest description -- add description to poi
Technical		2183	Enhancement	small	6500	1/12/00		Both	Add a table to store parameters
Technical		2190	Enhancement	large	26000	1/13/00		Both	SHEAR REINFORCEMENT RANGES -- symmetric option
Useability		2406	Enhancement	mini	2600	2/27/00		Both	Time of analysis -- default to service life
Useability		2531	Enhancement	small	6500	3/17/00		Both	Drag and Drop: Enhancement--scroll down tree when dragging
Technical		2569	Enhancement	Scope Req'd	no est	3/22/00		Both	Linking engine error to GUI windows
Technical		2656	Enhancement	mini	2600	5/3/00		BrR	Load Case Description -- R/C
Useability		2697	Enhancement	mini	2600	5/22/00		BrR	LL Distribution Factors Compute from Typ Section Details window - Add details window
Useability		2704	Enhancement	no est	no est			BrR	Enhancement Request - How Do I create a folder based on multiple routes
Output		2711	RE	medium	13000	5/25/00		Both	Enhancement Request - Reports
Useability		2726	Enhancement		#N/A			BrR	Getting rating results that were not asked for
Useability		2732	Enhancement	medium	13000	6/6/00		Both	Need a New Parapet GUI (a more general parapet definition)
Technical		2737	Enhancement	small	6500		SL 7/02	BrD	AASHTO LL deflection control option (LRFD)
Useability		2754	Enhancement	medium	13000	6/23/00		BrD	Vehicle Scale Factor for LRFD Fatigue Truck
Technical		2817	Enhancement	small	6500	8/25/00		Both	Metric Reinforcing Steel - add hard metric bars to db
Useability		2837	Enhancement	medium	13000	9/14/00		Both	Preview Model Enhancement-one button ability to see struc typ sec, framing plan from Bridge Explorer or BWS
Useability		2839	Enhancement	small	6500	9/14/00		Both	Reporting of Section Properties-maybe add graph of I or S so user can see where section changes
Technical		2847	Enhancement	medium	13000	9/15/00		BrR	Display warning messages issued within BRASS LFD output in a window in Virtis
Useability		2848	Enhancement	large	26000	9/18/00		Both	Analysis Chart Enhancements-envelope of max LL, graph sum of individual DL's
Useability		2876	Enhancement	small	6500	10/4/00		Both	Enhancement Request - Bridge Explorer desktop - add 8 more columns from Pontis

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Enhancement Category	Version	Incident	Bucket Category	Estimate	Est. Cost	Date Submitted	Notes	Benefits	Subject
Technical		2958	Enhancement	small	6500			Both	Timber Enhancement - Increase DF, mark stringer as broken
Useability		2967	Enhancement	small	6500	11/15/00		Both	Change Folder from Private to Public
Technical		2969	Enhancement	small	6500	11/15/00	SL 7/02	Both	Distribution Factor Manipulations (without checking out the bridge) (Use scale factor)
Useability		2987	Enhancement	mini	2600	11/21/00		Both	Enhance Tabular Reports window to allow selection of columns
Useability		3017	Enhancement	small	6500			BrD	LRFD Analysis (Change validate to scan for largest end distance)
Useability		3051	Enhancement	mini	2600	7/6/01		Both	Change "Member Alt Types" to "Member Alt Types - Tree Display Options" on the Member Alt window
Useability		3075	Enhancement	no est	no est			Both	Analysis Progress Dialog needs a filter for the warnings
Useability		3093	Enhancement	large	26000	2/5/01		BrR	Add Report Tool for ASD analysis
Useability		3095	Enhancement	small	6500	2/5/01		Both	Timber Framing Plan Detail - make the window larger and the controls expand with the window
Useability		3150	Enhancement	medium	13000	3/6/01		Both	Printing Analysis Results - Print Preview printer setup
Useability		3151	Enhancement	medium	13000	3/6/01		Both	Printer Setup - Landscape - Save printer properties for each printable object in Virtis/Opis
Useability		3153	Enhancement	large	26000			BrR	A field for user to control if fatigue should be considered in the controlling rating
Technical		3172	Enhancement	no est	no est			BrD	P/S design tool will harp strands through void
Useability		3208	Enhancement	no est	no est	5/1/01		Both	Analysis Progress Window - Print Selection
Useability		3244	Enhancement	no est	no est			Both	Warn users when a value is changed that affects computed values
Technical		3253	Enhancement	mini	2600		SL 6/09	Both	Additional P/S Shape Window Validation
Technical		3264	Enhancement	small	6500	12/5/00		Both	Add user validation indicator to bridge and perhaps structure defs and member alts.
Technical		3268	Enhancement	medium	13000	12/5/00		BrR	Add warnings to Virtis if spec-checks fail
Useability		3270	Enhancement	medium	13000	7/6/01		Both	Change the schematic toolbar button to display a list of possible schematics
Useability		3274	Enhancement	small	6500			Both	Need validation for P/S beam shapes windows
Useability		3282	Enhancement	small	6500			Both	Need a dialog for controlling the event history
Useability		3411	Enhancement	mini	2600			Both	Pedestrian rail base
Technical		3425	Enhancement	no est	no est			Both	Provide wire mesh shear reinforcement for PS boxes
Useability		3511	Enhancement	large	26000			Both	4.1 Beta 2: BWS Report Tool - Restructure window similar to Windows Explorer
Technical		3550	Enhancement	small	6500			BrD	Prestress Design Tool Distribution Factors - compute based on lever rule
Technical		3584	Enhancement	no est	no est			BrR	Parabolic Haunch Bottom Slab Thickness Variation
Useability		3608	Enhancement	no est	no est			Both	Add Sorting/Finding/Filtering Structure Types with File Properties
Useability		3609	AT	medium	13000		SL 7/02	Both	Configuration - Sorting by Users ID
Useability		3658	Enhancement	small	6500			Both	Make New Member Alternative Dialog easier to use
Useability		3659	Enhancement	small	6500			Both	Add a button to the Find Bridge dialog to add the result set bridges to the current folder
Technical		3781	Enhancement	no est	no est			BrD	Temporary construction loads (load staging) are not handled
Useability		3838	Enhancement	medium	13000			Both	Default load cases should be configurable in the Configuration Browser
Technical		3840	Enhancement	small	6500			BrR	Put BRASS default shear method to use in Configuration Browser
Schematic		3846	Enhancement	large	26000			Both	Schematic View of girder details at section changes
Useability		3854	Enhancement	Scope Req'd	no est			Both	Transverse Stiffener Wizard - input multiple groups of equal spacing
Technical		3858	Enhancement	Scope Req'd	no est			Both	Differ Support Conditions with Construction Stages
Technical		3859	Enhancement	Scope Req'd	no est			BrR	Different Dist. Factors for Inv. And Operating
Useability		3860	Enhancement	large	26000			Both	Longitudinal Symmetry Option
Technical		3864	Enhancement	large	26000			Both	Define a Member Alt as a channel
Technical		3866	Enhancement	Scope Req'd	no est			Both	Upside down channel shape (precast/prestressed)
Useability		3867	Enhancement	Scope Req'd	no est			Both	Chart Enhancement
Useability		3881	Enhancement	large	26000			Both	Report Writer Enhancement - add analysis output like code checks & section properties to report
Technical		3906	New Feature	Scope Req'd	no est			Both	Add Bearing Stiffeners for Floorbeams
Technical		3996	Enhancement	Scope Req'd	no est			Both	Allow debonding of PS strands in the center of a span
Useability		4057	Enhancement	large	26000			Both	BWS Report Tool flexibility - add ability to select just 1 mbr alt or structure def for report
Useability		4171	Enhancement	small	6500			Both	Enhance all grids to display all numbers beyond decimal point for read only cells
Useability		4238	Enhancement	medium	13000			Both	Explorer Window Columns - choose which to display and where to position
Useability		4250	Enhancement	mini	2600			Both	Compute U Beam Interior Diaphragm Load (Box beams also)
Technical		4315	Enhancement	Scope Req'd	no est	2/4/03		BrD	Slab thickness used in Distribution Factors
Useability		4362	AT	medium	13000		SL 7/04	Both	Save Analysis Events - Location
Technical		4403	Enhancement	small	6500		SL 7/04	Both	Stiffener or Frame Connector Plate-Add ability to enter diaphragm conn plates that aren't analyzed as stiffeners
Technical		4460	Enhancement	Scope Req'd	no est			BrR	Add Timber Stability Factor (Virtis and Madero)
Useability		4465	Enhancement	small	6500			BrR	BWS Tree - nails appear after deck window
Useability		4468	Enhancement	medium	13000		SL 7/04	BrR	Add deck rating to Bridge Routing Results and Pontis Rating windows
Technical		4480	Enhancement	medium	13000			BrR	Incorrect span calculation for timber deck
Useability		4516	Enhancement	small	6500			Both	Library Import and Export - show progress meter in window
Useability		4520	Enhancement	mini	2600			Both	Show member def assigned to Str Mem Alt and FB Mem Alt in the tree
Useability		4530	Enhancement	mini	2600			Both	Graph header needs to be more descriptive.
Technical		4678	Change Request	small	6500			BrR	5.0.0 - RC tee beam gets zero rating for shear at support
Technical		4686	Enhancement	no est	no est	7/14/03		Both	Allow PS U-beams with vertical legs to have harped strands
Useability		4689	Enhancement	no est	no est	7/16/03		Both	Indicate in Rating Results window if the rating analysis did not run to completion for a mbr alt
Useability		4729	Enhancement	small	6500			Both	Show calculations for live load distribution factors and effective flange widths.
Useability		4781	Enhancement	small	6500			Both	Copy Diaphragms to All Bays
Schematic		4814	Enhancement	small	6500			Both	Show hold-down pt on p/s profile schematic
Useability		4820	Enhancement	medium	13000			Both	Export warnings filter needed
Useability		4840	Enhancement	mini	2600			BrR	No option to add hinge for main girder in floor system.
Useability		4854	Enhancement	small	6500			Both	PS Value System Defaults

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Output		4899	Enhancement	mini	2600			BrR	Cannot turn on intermediate output for P/S moment capacity calculations
Useability		4900	Enhancement	small	6500			Both	Cleanup utility for events
Schematic		4941	Enhancement	medium	13000			BrR	Improve floor system framing plan schematic.
Useability		4942	Enhancement	small	6500			BrR	Enhance Stringer Member window with span lengths info.
Useability		4943	Enhancement	small	6500			BrR	Validate stringer span lengths info in definition to agree with stringer member alternative.
Useability		4979	Enhancement	no est	no est	2/2/04		BrR	Rating Factor Failure not in Results Graph
Useability		4986	AT	mini	2600		SL 7/04	Both	Show NBI number in the Bridge explorer
Useability		5025	Enhancement	mini	2600			Both	Move the Transfer This License" function from the Tools menu onto the login dialog."
Useability		5190	Enhancement	no est	no est			Both	Copy Diaphragms to All Bays
Useability		5273	Enhancement	no est	no est			Both	Let users see more significant digits in data computed by Virtis/Opis
Useability		5275	Enhancement	no est	no est			Both	Enhancements to Member Loads window
Technical		5299	Enhancement	medium	13000		SL 4/05	Both	bar mark definitions & developement length - allow fully developed at one end only
Useability		5391	Enhancement	medium	13000			Both	RC Slab Compute Button for LFD & LRFD Distribution Factors
Useability		5392	Enhancement	large	26000			Both	RC Symmetry Needed
Useability		5393	Enhancement	large	26000			Both	RC Girder Profile -- Reinforcement -- Distance to steel
Technical		5400	Enhancement	medium	13000			Both	Allow Bar Mark Definitions to have more than 1 hump
Useability		5410	Enhancement	small	6500			Both	Input sched reinf from centerline of beam not from edge
Useability		5492	Enhancement	no est	no est			Both	Printing Controls Needed - fit to one or more pages wide and tall
Technical		5742	Enhancement	no est	no est	12/30/04		BrD Sub	Enhancement for shaft isn't centered or symmetrical on the footing
Output		5797	RE	medium	13000	1/13/05	SL 6/09	BrD Sub	Tabular Reports
Useability		5809	Enhancement	small	6500	1/14/05	SL 6/09	BrD Sub	Provide option to get skew from struct def
Output		5830	RE	no est	no est	1/21/05		BrD Sub	wind data: (calculations)
Technical		5864	OFM	no est	no est	1/25/05		BrD Sub	Creep Loads can not be entered
Technical		5904	Enhancement	large	26000			Both	Vary web thickness in schedule based rc
Useability		5905	Enhancement	medium	13000			Both	Schedule based rc - compute tributary width
Useability		5935	Enhancement	small	6500			Both	Improve Wizard to Apply Different Stiffeners at Bearing Diaphragms
Technical		6037	Enhancement	medium	13000	2/10/05	SL 6/09	BrD Sub	Minimize time of superstructure analysis when launched from pier analysis
Output		6048	Enhancement	no est	no est	2/15/05		Both	XML Missing Right Overhang
Useability		6053	Enhancement	mini	2600			Both	Report Tool Returning ID Number and not the Name
Technical		6131	Enhancement	small	6500	3/10/05		BrR	User shouldn't have to specify PS I Beam shape for Virtis to compute distribution factors
Useability		6240	Enhancement	small	6500			Both	Start - Programs - AASHTOWARE
Output		6269	RE	small	6500	4/4/05		BrD Sub	Add eccentricity to LLReactionDetails
Useability		6295	Enhancement	small	6500			Both	Improve handling of changes to ranges
Useability		6308	Enhancement	small	6500			Both	Revise the Configuration Browser
Schematic		6365	GR	small	6500	4/29/05		BrD Sub	Column Geometry/Wall Shaft Geometry window for varying sections
Useability		6376	Enhancement	small	6500			Both	Copy and paste column and row headers with the results graph data.
Useability		6384	Enhancement	small	6500			Both	Need default file name during bridge export
Useability		6510	Enhancement	small	6500			Both	Add ability to rate with and without wearing surface in one analysis run
Useability		6535	GFS	no est	no est	6/24/05		BrR	Girder-floorbeam system problems
Useability		6545	GFS	small	6500			Both	Distribution of appurtenance loads in a floor system
Useability		6548	Enhancement	small	6500			Both	Global preferences
Import		6570	Enhancement	Scope Req'd	no est	7/21/05		BrR	BRASS Import
Useability		6586	Enhancement	medium	13000		SL 7/06	Both	Ability to find bridges with specific types of mbr alts
Miss Function		6608	OFM	no est	no est	8/15/05		BrD Sub	Proposed Addition - Options for Analyze button - Super and Sub
Useability		6623	Enhancement	medium	13000		SL 7/06	Both	Virginia DOT training: Revise Girder Member Loads input format
Useability		6626	Enhancement	small	6500			Both	Virginia DOT training: make stiffener/stirrup ranges start distance & spacing the same units
Import		6699	Enhancement	no est	no est	9/16/05		BrR	Import does not work for a timber deck on a steel beam
Technical		6700	Enhancement	small	6500		SL 7/06	BrR	Add BRASS engine data for user to pick how to compute shear capacity in reinforced concrete
Technical		6729	Enhancement	large	26000		SL 7/06	Both	Prestress Design with various strand pulls
Technical		6766	TR	medium	13000		SL 7/06	BrR	Truss Command - Member Load
Technical		6767	TR	medium	13000		SL 7/06	BrR	Truss Command - Additional Self Load
Useability		6819	Enhancement	small	6500			BrR	NSG enhancement: copy wheel set from each axle to another axle
Useability		6827	Enhancement	Scope Req'd	no est			BrR	Allow different vehicles for Inv/Op rating in NSG analysis
Useability		6906	Enhancement	large	26000			Both	Add engine warnings/messages to results object; Display in GUI
Technical		6950	Enhancement	large	26000			Both	Revise haunch geometry for PS U beams
Useability		6988	Enhancement	small	6500		SL 7/06	BrR	Setting Allowable Fatigue Stress
Useability		7109	Enhancement	small	6500		SL 7/06	Both	Remove Girder Concrete entry from Beam Details window
Useability		7193	Enhancement	medium	13000			BrR	LFD Factors-allow blank values to be considered as unchanged from AASHTO instead of as 0
Useability		7198	Enhancement	Scope Req'd	no est	3/21/06		Both	Update the jacking stress ratio automatically for user
Technical		7255	Enhancement	no est	no est	4/14/06		BrD	How to override Allowable Deflection Denominator from 800 to 1000
Useability		7293	AT	small	6500			Both	Make it easier to Re-Register the Software
Output		7304	Enhancement	medium	13000	5/18/06		BrR	Member Capacity in output
Useability		7411	Enhancement	no est	no est			Both	ms sqlserver- VO using windows and LDAP authentication
Useability		7417	Enhancement	large	26000		SL 7/06	BrR	NSG enhancement - store influence surfaces (lines for 2D) for future use
Useability		7429	Enhancement	medium	13000		SL 7/06	BrR	Compute LFD Dist. Factor for Non-Splayed Girders in a Splayed Girder System
Useability		7440	AT	small	6500		SL 7/06	Both	Expand/Collapse Branch in Library Explorer
Wizard		7445	Enhancement	medium	13000			Both	Wizard to Create Superstructures and Superstructure Alts

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Useability		7461	GFS	small	6500	6/21/06		BrR	Compute From Typical Section button should be available to just compute Std effective flange width for 2-girder system
Output		7471	RE	medium	13000	6/27/06		BrD	Unable to generate LRFD flexure analysis summary and shear analysis summary for RC bridge
Useability		7510	Enhancement	large	26000	7/20/06		Both	response file for the installer
Useability		7538	Enhancement	Scope reqd	no est	8/4/06	LR	BrD	UG 2006 - Design tool for P/S beam capacity
Useability		7539	Enhancement	Scope reqd	no est	8/4/06	LR	BrD	UG 2006 - Steel Design
Useability		7540	Enhancement	Scope reqd	no est	8/4/06	LR	BrD	UG 2006 - Shear stirrup design for P/S beams
Useability		7541	Enhancement	Scope reqd	no est	8/4/06	LR	BrD	UG 2006 - Stiffener spacing design
Schematic		7543	Enhancement	small	6500	8/7/06		BrD Sub	Shrinkage in 3D schematic is misleading
Schematic		7544	Enhancement	small	6500	8/7/06		BrD Sub	Don't show forces for rigid links in the 3D schematic
Useability		7545	GR	medium	13000	8/7/06		BrD Sub	Save 3D schematic settings
Useability		7608	TR	medium	13000	9/13/06		BrR	Truss-suggestion: add ability to code "I" shaped truss members as built up sections
Technical		7672	TFD	small	6500	10/20/06		Both	Traffic Tab Missing Design ADT Field
Technical		7673	TFD	small	6500	10/20/06		Both	Traffic Tab Missing Truck Fraction Multiplier
Useability		7680	TFD	medium	13000	10/26/06		Both	The name of the engine files created by NSG analysis may need to append to the EngineFiles.LST
Library		7715	Enhancement	mini	2600	12/5/06	SL 6/09	BrR	Phi Factor for P/S Negative Moment Capacity
Wizard		7718	Enhancement	medium	13000	12/6/06		Both	Superstructure Definition Wizard Enhancements
Technical		7761	Enhancement	medium	13000	1/9/07		Both	Prestressed Concrete I-Beam Wheel Distribution Factor Computation Problem
Useability		7846	Enhancement	no est	no est	2/19/07		Both	RC Frame Example - add one to sample database
Useability		7960	Enhancement	small	6500	6/12/07		Both	Additional fields in Bridge Explorer
Useability		7974	M	small	6500	6/26/07		BrR	Rating Method selected for Prestressed
Output		7976	RE	Scope Req'd	no est	6/26/07		BrR	As Requested in Rating Analysis Results
Useability		7991	Enhancement	no est	no est	6/29/07		BrR	NSG suggestion - disable checkbox requirement for analysis
Useability		8004	GFS	small	6500	7/11/07		Both	Copy member loads to another member
Library		8110	AT	small	6500	8/28/07	SL 6/09	Both	Library tree items
Output		8117	Enhancement	no est	no est	8/31/07		Both	Files written by Virtis/Opis
Output		8120	RE	no est	no est	9/5/07		BrD	Report wish list for LRFD reports
Technical		8130	TR	no est	no est	9/7/07		BrR	Virtis Truss - Unsupported member cross section
Schematic		8143	GFS	no est	no est	9/12/07		BrR	GFS Girder Member Schematic Shows Stringer Diaphragms
Behavior		8177	TR	no est	no est	10/1/07		BrR	Prevent analysis of a truss from the Superstructure Definition on the model tree
Useability		8179	TR	no est	no est	10/1/07		BrR	GFS/TFS - Provide a way to link a Stringer Member to another identical Stringer Member.
Useability		8180	TR	no est	no est	10/1/07		BrR	GFS/TFS - Provide a way to link a Floorbeam Member to another identical Floorbeam Member.
Output		8204	RE	no est	no est	10/11/07		BrR	Reports from the Toolbar
Technical		8230	Enhancement	medium	13000	10/22/07	SL 6/09	BrD Sub	Add option to ignore compression reinforcement in the beam
Useability		8245	UI	no est	no est	10/30/07		Both	4 Prestress Input Enhancements Needed
Useability		8267	Enhancement	no est	no est	11/13/07		Both	System Defaults Need to be Added
Technical		8323	Enhancement	large	no est	12/4/07	SL 6/09	BrD	Axial Loads due to Temperature are not in load combinations or Spec. Checking reports
Useability		8366	Enhancement	no est	no est	12/11/07		Both	Registration of dll's and registry information is version dependent. (enhancement)
Technical		8379	Enhancement	large	26000	12/13/07	SL 6/09	Both	Provide another DL distribution method based on percentages of load
Useability		8383	Enhancement	no est	no est	12/18/07		BrD	Engine Tab Options for Opis LRFD Properties
Miss Function		8433	OFM	large	26000	1/22/08		BrD Sub	Spec check of individual pier components
Schematic		8437	GR	no est	no est	1/23/08		BrD Sub	Foundation Geometry, Pile
Output		8443	RE	no est	no est	1/24/08		BrD	Dead Load Camber Summary Report
Miss Function		8455	OFM	no est	no est	2/4/08		BrD Sub	Pipe Pile Substructure Option
Output		8513	RE	no est	no est	3/19/08		BrD	Opis RC LRFD superstructure engine - provide report of dead load calcs
Useability		8525	Enhancement	medium	13000	3/27/08		BrR	Truss Command Language
Useability		8534	UI	no est	no est	4/2/08		BrD Sub	OPIS SUB: Bridge Explorer Tree
Useability		8536	UI	no est	no est	4/2/08		BrD Sub	OPIS SUB: Vehicles tab for LRFD Substructure Design
Useability		8570	Enhancement	Scope Req'd	no est	4/16/08		BrR	Truss Will Not Rate from Bridge Explorer Unless it Has Been Checked Out
Schematic		8581	GR	no est	no est	4/22/08		BrD Sub	Schematic of pier reinforcement
Miss Function		8600	OFM	no est	no est	4/24/08		BrD Sub	Substructure Wizards Needed
Output		8624	Enhancement	no est	no est	4/30/08		Both	Reports
Useability		8625	Enhancement	mini	2600	4/30/08		Both	Reinforcement - add square bar equivalents to the help.
Technical		8642	Enhancement	Scope Req'd	no est	5/8/08		Both	Stage 1 Reaction Error for Continuous PS I-beams.
Useability		8644	Enhancement	large	26000	5/9/08		BrR	Truss Input from STADD
Useability		8697	Enhancement	mini	2600	5/30/08		BrD	Bridge Layout Wizard, Validation Error - Add Route to the wizard
Useability		8713	Enhancement	no est	no est	6/3/08		BrD Sub	Locking Superstructure when Substructure is Being Entered
Technical		8721	TR	no est	no est	6/4/08		BrR	TRUSS/FLOOR SYSTEMS: Deck Profile - Compute from Cross Section
Useability		8759	Enhancement	no est	no est	6/25/08		BrD Sub	Duplicate Function in Reinforcement Tabs
Schematic		8760	Enhancement	no est	no est	6/25/08		BrD Sub	3D Schematic Doesn't Show Piling
Useability		8766	Enhancement	small	6500	6/26/08		BrD Sub	3-D schematic view properties
Output		8782	Enhancement	small	6500	7/7/08		BrD Sub	5.7.3.2
Technical		8812	Enhancement	large	26000	7/30/08	SL 6/09	BrR	Enhancement request - add option for AASHTO Eq 8-59
Useability		8818	UI	Scope Req'd	no est	8/6/08		Both	enhancement for graphical user interface based on presentation by George Colgrove in vobug 2008
Import		8823	TR	Scope Req'd	no est	8/7/08		BrR	Truss Import Tool
Technical		8845	Enhancement	large	26000	8/12/08		BrR	NSG will not run on Adjacent PS Box bridge with no deck.
Technical		8848	Enhancement	large	26000	8/13/08	SL 6/09	Both	Library Properties - PS with Radius Fillet
Useability		8849	Enhancement	small	6500	8/14/08	SL 6/09	Both	Unit Weight PS Sections Library

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Enhancement Category	Version	Incident	Bucket Category	Estimate	Est. Cost	Date Submitted	Notes	Benefits	Subject
Useability		8858	Enhancement	no est	no est	8/20/08		BrR	Girder-Floorbeam Problems
Output		8874	Enhancement	no est	no est	9/11/08		BrD	OPIS P/S Girder, BRASS LRFD, Concrete Stresses uncoupled from Prestress.
Output		8894	RE	no est	no est	9/30/08		Both	Report Tool Sorting
Technical		8906	Enhancement	large	26000	10/24/08	SL 6/09	Both	Additional Dead Loads (Studs, stiffeners, splice plates)
Technical		8935	TFD,UI	small	6500	12/5/08	TF	BrR	Determination of single lane loaded
Technical		8949	Enhancement	no est	no est	12/23/08		BrR	alt timber loading for deck- where did it go????
Useability	6.5.1	8990	Enhancement	Scope Req'd	no est	3/11/09	LR	BrR	Post Tension Concrete Girder
Useability	6.5.1	8991	Enhancement	Scope Req'd	no est	3/11/09		BrR	Concrete Box Girder Bridge
Output		9038	Enhancement	small	6500	4/16/09		BrR	Unsymmetrical concurrent forces for symmetrical truss
Output		9175	TR	medium	13000	5/20/09		BrR	concurrent force report- multiple trucks
Output		9176	TR	small	6500	5/20/09		BrR	enhancement- computing maximum shear on the x and y planes
Resolved	6.5	9327	Enhancement	large	26000	7/1/09		BrR	LRFR - NSG Unavailable
Resolved	6.5	9359	Enhancement	medium	13000	7/13/09	SL 5/10	BrR	Point Load Capacity for Pin and Hanger
Useability		9416	Enhancement	no est	no est	8/6/09		Both	Support harped and straight debonded strand configuration for PS U shape
Useability		9421	TI	no est	no est	8/11/09		BrR	Increase max number of axles in a vehicle in Madero engine
Output		9422	M	small	6500	8/11/09		BrR	forces in PanelPointMaxForces & PanelPointConcurrentForces files
Useability		9424	Enhancement	no est	no est	8/12/09		BrR	Maximum Spans for Concrete Bridge
Useability		9427	Enhancement	Scope Req'd	no est	8/13/09		Both	Virtis Opis Remote Installation
Useability		9428	Enhancement	Scope Req'd	no est	8/13/09		Both	Video courses for fundamental training of Viris/Opis
Useability		9452	TI	no est	no est	8/21/09		BrR	timber gluelam beams
Technical		9458	M	no est	no est	8/21/09		BrR	Live Loads - AASHTO Manual for Condition Evaluation Spec 6.4.4.2.1
Useability		9513	Enhancement	Scope Req'd	no est	10/1/09		Both	modulus of rupture choices
Useability		9515	Enhancement	small	6500	10/2/09		BrD	DLA windows need improving
Technical		9522	Enhancement	Scope Req'd	no est	10/7/09		BrD	non linear yeild line method for slab bridges.
Useability		9532	Enhancement	no est	no est	10/16/09		BrR	Virtis to BRASS seems to ignore median definition
Useability		9588	Enhancement	Scope Req'd	no est	12/8/09		Both	Enhancement to Structure Export
Useability		9589	Enhancement	small	6500	12/8/09		Both	Modification to Multimedia file selection default
Resolved	6.5	9635	Enhancement	medium	13000	2/9/10		BrR	NSG and using multiple distribution factors
Technical		9638	Enhancement	no est	no est	2/9/10		BrR	GFS Systems: Girders rating extermely low. Virtis appears not to be analyzing girder as a GFS system where the floorbeams
Resolved	6.5	9641	AT	medium	13000	2/12/10	SL 5/10	Both	Add a Stop Button to Stop an analysis Run
Useability		9655	Enhancement	medium	13000	2/24/10		Both	POI generator
Useability	6.5.1	9704	M	no est	no est	4/1/10		Both	Dist Factor Wizard - Skew
Wizard		9713	Enhancement	medium	13000	4/7/10		BrD Sub	Pile Pattern Templates
Technical		9734	Enhancement	small	6500	4/15/10		Both	Enhancement Request: Alternate distribution factors for Concrete Beams used in Multibeam Decks""
Useability		9832	AT	Scope Req'd	no est	4/29/10		Both	Delete Data Sources from Virtis Opis - Enhancement Request
Resolved	6.5	9932	AT	Scope Req'd	no est	5/11/10	SL 4/11	Both	Number of decimal points shown
Useability		9948	M	small	6500	5/11/10		Both	Haunch Profile Panel To Be Improved
Technical		9964	3D	medium	13000	5/12/10	SL 4/11	BrR	NSG distribution factor
Miss Function		10107	OFM	Scope Req'd	no est	7/8/10		BrD Sub	Timber Pile
Useability		10121	M	no est	no est	7/14/10		Both	Virtis LRFR gives error
Miss Function		10161	M	medium	13000	7/28/10		Both	Parapet Loads not being applied -
Resolved	6.5	10177	Enhancement	Scope Req'd	no est	8/4/10		Both	Curved Steel beams support
Behavior		10179	Enhancement	small	6500	8/4/10	SL 4/11	Both	Multiple windows in Specification Check Window
Technical		10189	Enhancement	medium	13000	8/11/10		Both	Flange lateral bending stress as User Input.
Technical		10221	Enhancement	no est	no est	8/26/10		Both	Bent rebar issue #2 - enhancement request
Useability		10223	UI	small	6500	8/27/10		Both	Selecting trucks in the Analysis Settings Dialog
Useability	6.5.1	10299	M	Scope Req'd	no est	11/18/10		BrR	Geometric Properties calcs for PS I-Beam Wide Flange with Radius Fillet
Technical		10315	Enhancement	Scope Req'd	no est	12/1/10		BrR	Generic Deck is not allowing a rating to be done for NSG
Wizard		10332	M	medium	13000	12/17/10		BrD	Unable to retrieve vehicles for Shear Stud Wizard.
Useability		10371	GR	small	6500	1/19/11		BrD Sub	Column Reinforcement Screen
Useability		10381	TR	medium	13000	1/21/11		BrR	Support symmetry for Trusses
Useability		10392	Enhancement	large	26000	1/25/11		BrR	Floor Line Superstructure Floorbeam Fails to Run in Virtis 6.2
Useability		10471	Enhancement	small	6500	2/25/11		Both	Adding database conversion option to setup
Output		10481	RE	Scope Req'd	no est	2/28/11		Both	Analysis results be put in table form
Technical		10503	TR,M	large	26000	3/1/11		BrR	Eccentric Axial Rating for Truss Member in Virtis
Useability		10681	Enhancement	Scope Req'd	no est	4/12/11		BrD	Designing for a permit vehicle using Service III limit state
Resolved	6.5	10691	Enhancement	large	26000	4/12/11	SL 4/11	BrD	Weld Design
Useability		10700	Enhancement	large	26000	4/12/11		Both	Exporting/importing analysis templates & system defaults
Technical		10727	M	no est	no est	4/13/11		Both	Member Loads Displayed Incorrectly in the Analysis Chart and Report
Output		10737	Enhancement	Scope Req'd	no est	4/13/11		BrR	Ratings for non controlling limit states are not shown
Useability		10743	Enhancement	medium	13000	4/13/11		Both	Ignoring the Rebar Development Length for Deep Section Provision
Useability		10778	Enhancement	large	26000	4/21/11	SL 5/12	Both	Bending and Shear Capacity for Bend Over Bars
Resolved	6.5	10813	Enhancement	small	6500	4/29/11	SL 5/12	Both	Enhancement for Shear Stirrup Wizard
Useability		10933	M	Scope Req'd	no est	6/7/11		Both	Live Load Scale Factor not applied in rating
Resolved	6.5	11037	Enhancement	large	26000	7/21/11		BrR	Corrugated Deck Enhancement
Wizard		11044	Enhancement	medium	13000	7/29/11		Both	PSC Shear Stirrup Wizard Problems
Technical		11047	Enhancement	large	26000	8/2/11		BrR	Enhance for Concrete Shear Reinforcement Capacity with LFR

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Enhancement Category	Version	Incident	Bucket Category	Estimate	Est. Cost	Date Submitted	Notes	Benefits	Subject
Output		11050	RE	large	26000	8/3/11		BrR	Rating Results Table created in Explorer - Enhancement Request
Technical		11084	Enhancement	medium	13000	8/25/11	SL 5/12	BrR	Dist. Factor LRFR Stripped Lanes
Useability		11089	Enhancement	Scope Req'd	no est	9/1/11		BrR	Apparent AASHTO Engine LFD Moment Analysis Bug
Useability		11106	Enhancement	medium	13000	9/20/11	SL 5/12	BrR	Virtis Enhancement
Schematic		11117	Enhancement	medium	13000	9/26/11		Both	Additional field for the vertical location of appurtenance
Useability		11128	Enhancement	small	6500	10/7/11		Both	Virtis Enhancement - Generate POI @ Stirrup Space Increase in Concrete Members
Wizard		11129	M	small	6500	10/7/11		Both	Virtis Enhancement: LLDF Computation for Non-splayed Girders
Useability		11147	UI	medium	13000	10/25/11		Both	Library / Agency Std. Gage Vehicle Problems
Output		11219	RE	large	26000	1/23/12		BrR	Virtis Output Enhancement
Technical		11220	Enhancement	medium	13000	1/23/12	SL 5/12	Both	Built-up Section Enhancement
Output		11232	RE	Scope Req'd	no est	2/1/12		Both	Reports Enhancement Request
Technical		11236	M	medium	13000	2/6/12		Both	Support settlement load in the AASHTO Engine.
Technical		11361	Enhancement	large	26000	4/18/12		Both	Transforming girder reinforcement
Useability		11367	Enhancement	large	26000	4/20/12		BrR	VIRTIS calculation of C for FB with Section Loss
Useability		11396	M	large	26000	5/1/12		Both	Bridge Exchange Errors
Useability		11400	Enhancement	small	6500	5/2/12	SL 5/12	BrR	Virtis Enhancement Suggestion: Floor System Stringer Unit Names
Useability		11407	Enhancement	large	26000	5/3/12		BrR	Option for User Defined Cb in AASHTO LFD
Useability		11422	Enhancement	mini	2600	5/8/12		Both	Any xml file, Validate window
Useability		11458	Enhancement	large	26000	5/15/12	SL 5/12	BrR	Truss Builtup Member Revision
Resolved	6.5	11533	Enhancement	large	26000	5/30/12	SL 5/12	Both	User defined shapes and materials
Useability		11544	Enhancement	medium	13000	5/30/12		Both	Export/Import
Useability		11551	Enhancement	no est	no est	5/30/12		Both	Spec Check does not check for Strength II when choosen
Resolved	6.5	11562	Enhancement	medium	13000	5/30/12	SL 5/12	Both	Enhancement request - Allow for beam top flange Lateral Support to be entered at point locations
Resolved	6.5	11563	Enhancement	small	6500	5/30/12	SL 5/12	Both	Enhancement request - Copy Bracing from One Bay to Multiple Bays
Miss Function		11566	Enhancement	large	26000	5/30/12	SL 5/12	BrR	Enhancement request - Truss Supports Deck
Useability		11585	Enhancement	large	26000	5/31/12		Both	Cross Frames member that made Double Angles
Useability		11586	Enhancement	small	6500	5/31/12		Both	XFrames within Diaphragm Wizard
Useability		11618	CU	large	26000	6/5/12		Both	Steel bars along the length of culvert
Useability	6.6	11642	CU	medium	13000	6/13/12		Both	Welded wire reinforcement in Library
Technical		11682	Enhancement	medium	13000	7/2/12		BrR	Capacity should be limited to Moment at first yield for girders with Fy <30 ksi
Useability		11706	CU	large	26000	7/12/12		BrD	Culvert Design Tool - Various Issues
Wizard		11713	Enhancement	small	6500	7/13/12	SL 5/13	Both	PS Deck Beam Distribution Factor Control
Technical		11719	CU	medium	13000	7/16/12		Both	Culvert - Bi-axial flexure
Useability		11720	Enhancement	small	6500	7/16/12		BrR	Add 2 parameters into the GUI for the calculation of the transverse load patterns
Technical		11770	TR	large	26000	7/30/12		BrR	Enhancement of Truss Member and Cross Section Inputs
Useability		11774	Enhancement	large	26000	7/31/12	SL 5/13	Both	Unable to define girder or deck loads as composite loads
Useability		11775	Enhancement	large	26000	8/1/12	SL 5/13	Both	Would like ability to run a spec check from a previous 3D bridge analysis
Output		11815	RE	small	6500	8/9/12		BrR	Detailed Rating Report using BWS Report writer
Miss Function		11831	OFM	Scope Req'd	no est	8/10/12		BrD	Drilled Shaft Issues
Useability		11837	Enhancement	mini	2600	8/13/12		BrD	Add default values of k and E50 to help file
Behavior		11838	NET	medium	13000	8/13/12		BrD	Units for soil parameters in Drilled Shaft
Useability		11863	TR	medium	13000	8/16/12	SL 5/13	BrR	Built-Up I Beam Member: No Provision for a Horizontal Back To back Dimension
Technical		11958	M	large	26000	10/5/12	SL 5/13	BrR	Rate for both positive and negative LL demand regardless of the sign of factored TOTAL demand
Output		11995	RE, CU	large	26000	10/29/12		Both	Culvert Reports - Member Moments, Shears and Axial Forces
Useability		11998	CU	large	26000	10/30/12		BrR	LRD Culvert Live Loading
Technical		12073	M	medium	13000	11/28/12		Both	In 5.8.3.4.2 Epsilon is not allowed to be less than zero
Output		12091	CU, M	small	6500	12/6/12		BrR	STR-I limit state removed from box culvert analysis when permit vehicles only are specified
Resolved	6.5	12098	Enhancement	medium	13000	12/11/12		BrR	Conservative Estimation of Fcr for the Rolled Beam with Thin/Wide Cover Plates
Useability	6.5.1	12130	Enhancement	medium	13000	1/10/13		BrR	Ignore shear control option for the AASHTO Steel LFR engine
Resolved	6.5	12131	Enhancement	large	26000	1/10/13		Both	Determine bar profile based on its physical location in a cross section
Wizard		12135	M	medium	13000	1/14/13		Both	Bridge Alternative Wizard - Culvert
Technical		12168	Enhancement	medium	13000	2/1/13	SL 5/13	BrR	Traffic load placement for the narrow way bridges
Useability		12172	CU	large	26000	2/1/13	SL 5/13	Both	Culvert - Bent bar with hook
Resolved	6.5	12179	Enhancement	small	6500	2/8/13		Both	LRFD Load Modifiers - Culverts
Technical		12181	CU	medium	13000	2/8/13	SL 5/13	Both	General Procedure Method for Shear Computation - Culvert
Useability		12200	Enhancement	medium	13000	2/20/13	SL 5/13	Both	Support varying LRFD LL DF within a range
Technical		12202	CU	small	6500	2/20/13		Both	Bottom Slabs of Box Culverts
Useability		12213	CU	medium	13000	2/27/13		Both	Culvert - Exposure Factor enhancement
Useability		12216	Enhancement	medium	13000	2/27/13	SL 5/13	Both	PS I Beam Shapes will not use entered Area to compute self-load
Useability		12222	Enhancement	large	26000	3/7/13		Both	Wearing surface consideration/improvement in virtis
Useability		12339	CU, M	medium	13000	4/9/13		Both	Culvert - Rebar Size
Technical		12341	Enhancement	no est	no est	4/10/13		BrR	Madero engine: Locating max and min LL actions
Useability		12352	CU	large	26000	4/15/13		Both	Culvert: User-Defined Dead Load
Useability		12388	Enhancement	large	26000	4/25/13	SL 5/13	BrR	Fixed Ends on Floorbeams
Miss Function		12433	Enhancement	Scope Req'd	no est	5/3/13		Both	How to model precast, prestressed, rectangular beam with variable depth
Behavior		12467	Enhancement	small	6500	5/7/13		Both	Behavior of Shear Stirrup Wizard, after it generated the shear spacing
Useability		12471	Enhancement	large	26000	5/7/13		Both	User defined materials and beam shapes

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Enhancement Category	Version	Incident	Bucket Category	Estimate	Est. Cost	Date Submitted	Notes	Benefits	Subject
Useability		12501	Enhancement	medium	13000	5/9/13	SL 5/13	Both	Allow input of feet, inches and decimals in input fields
Output		12559	RE	medium	13000	5/23/13		BrD	Enhancement request for reports/charts
Output		12562	Enhancement	small	6500	5/24/13		Both	Clarification on LFR Culvert Output Requested
Technical		12608	Enhancement	large	26000	6/3/13		Both	LRFD Culvert - Limit States
Output		12642	RE	medium	13000	6/7/13		BrD	Analysis Charts - Request for additional Critical Loads
Output		12655	Enhancement	small	6500	6/12/13		BrR	Rating Summary Report - % Span column missing
Useability		12712	M	medium	13000	6/26/13		Both	Duplicate Bar Mark
Output		12715	Enhancement	small	6500	6/26/13		Both	Span length attribute should be added to Girder Member <sup>***</sup>
Output		12716	Enhancement	large	26000	6/26/13		Both	Data withinin BWS report should reflect the values entered into the software