

Creating the
Next Generation of
Technology Solutions



AASHTOWare[®] CATALOG

FY 2019

AASHTOWare®

Catalog

July 1, 2018 – June 30, 2019

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Highway and Transportation Officials**

May 2018

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Overview

Welcome to the AASHTOWare® products and services catalog for fiscal year 2019. This catalog provides information on existing and proposed products and services offered by AASHTO through its Cooperative Software Development Program. The catalog includes descriptions of each AASHTOWare product and service, hardware and software requirements, license fee schedule, and the availability of service units where applicable. In addition, the catalog provides instructions on ordering the AASHTOWare products and services.

About Us

This section provides information regarding membership status within AASHTO and provides general ordering procedures for our member departments as well as the private sector.

AASHTOWare

The AASHTO Cooperative Computer Software Development Program, also referred to as the AASHTO Joint Development Program, is administered under the provisions of Administrative Resolution AR-2-86 as adopted and modified from time to time by the AASHTO Board of Directors. Under this program, each AASHTOWare product and development project is guided by a task force. These task forces, together with other advisory task forces, are directed by the Special Committee on AASHTOWare (SCOA). This Catalog describes the AASHTOWare products and projects to be offered in the fiscal year and establishes the license and/or participation fees. The AASHTO Executive Committee approves the annual program budget, while the Board of Directors retains responsibility for approving the policies governing the Software Development program. This committee structure is illustrated below.

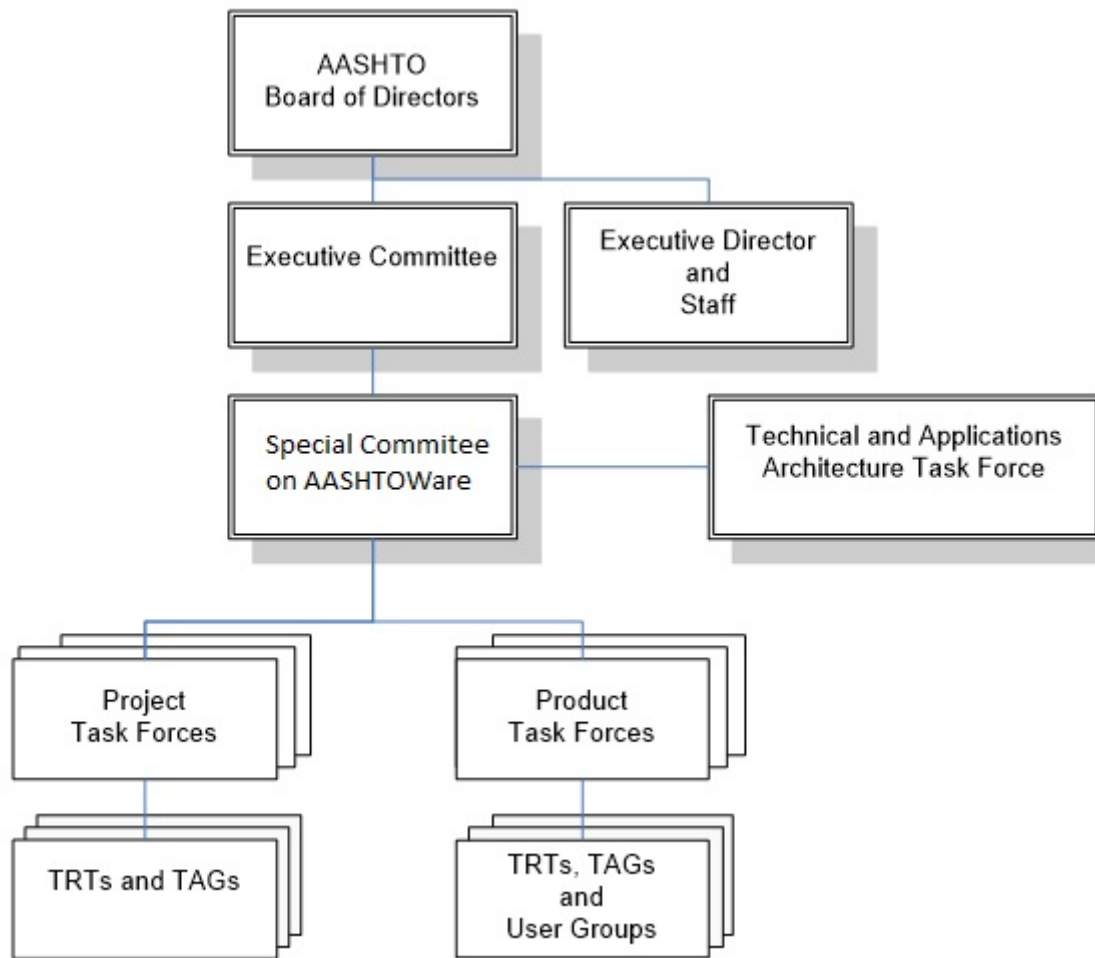


Figure 1. Cooperative Computer Software Development Organization.

AASHTO

The American Association of State Highway and Transportation Officials (AASHTO) is a nonprofit, nonpartisan association that represents the member highway and transportation departments in the 50 states, the District of Columbia, and Puerto Rico. It is the only association that represents all five transportation modes – air, highways, public transportation, rail, and water. Its purpose is to foster the development, operation, and maintenance of an integrated national transportation system.

Membership to AASHTO is on an agency basis. The U.S. Department of Transportation is an *ex-officio* member. A number of transportation agencies in other countries belong to the Association as affiliate members. Several sub-state transportation agencies in the U.S. and several federal agencies are associate members. Membership is not extended to individuals or private sector entities.

Note: To obtain the listing of all AASHTO Members, please visit <http://www.transportation.org/board-of-directors/aashto-board-of-directors-membership/>

How to Order AASHTOWare Products and Services

A brief description of the ordering and licensing procedures for both Member Department and Non-Member Agencies is described below. All products, services, and associated fees are provided on an annual fiscal year basis. The current AASHTO fiscal year period begins on July 1, 2018 and ends on June 30, 2019. Additional information can be obtained by visiting our website at <http://www.aashtoware.org> or by calling Angel Williams, AASHTOWare Business Operations Manager, at (202) 624-5808.

Member Agencies

Orders for the AASHTOWare products are transmitted through our annual solicitation and commitment process. An annually distributed package includes two (2) forms that we request be completed and returned to indicate which software products or projects your department wishes to license or participate in during the current fiscal and license year. From your department's return of the AASHTOWare Products and Services Request Form and the Primary Designee Form, we will prepare the appropriate Supplemental License Agreements and invoices; all previously executed Master License Agreements remain in place. If your member department or agency has not yet executed a Master Software License Agreement with AASHTO, and you wish to participate in any of the current projects/ products, simply complete and return the appropriate forms. A Master License Agreement and the current fiscal year Supplemental License Agreement with an appropriate invoice will be provided for execution.

The AASHTOWare Products and Services Request Form and the AASHTOWare Member Department/Agency Primary Designee Form are available online at <http://www.aashtoware.org>.

Non-Member Organizations

Orders may be transmitted through the annual AASHTO software solicitation and commitment process for non-member licensees of AASHTOWare products. Participation in the solicitation allows you to indicate which AASHTOWare products your firm plans to license during the current fiscal year period. From the completion and return of the Non-Member Software Request Form and the Non-Member Primary Designee Form, AASHTO will prepare the appropriate license agreements and invoice(s) for the current AASHTO license year and submit them to you for execution. If you wish to license any of the current product(s), simply complete and return the appropriate forms. A License Agreement for the current fiscal year along with an appropriate invoice will be provided for execution.

The AASHTOWare Non-Member Software Request Form and the Non-Member Primary Designee Form is available online at <http://www.aashtoware.org> or you may order online at <https://store.aashtoware.org>. Registration is required prior to ordering.

On The Horizon

This information is provided with the objective of letting agencies know about planned product enhancements and new products or projects that are expected to be solicited through the joint development process in the upcoming year. Projects presented in this section are almost certain to move forward but have not yet been developed to the extent that they are ready to be formally offered in this catalog. It is also intended to give agencies sufficient lead-time to budget for their participation.

AASHTOWare Project Data Analytics™ Solicitation

The AASHTOWare Project Task Force will solicit new funding to support the development of approved functionality in the web-based and software-as-a-service (SaaS) AASHTOWare Project Data Analytics software. Funding obtained through the solicitation will reduce the time that it takes to complete the development.

The proposed effort will take advantage of the SaaS architecture to release feature/model functionality for production use throughout the project as approved by the AASHTOWare Project Task Force. Participating agencies will have input into defining the functionality and testing the new software in hosted SaaS environments using their agency's data prior to production release.

Agencies that participate in the AASHTOWare Project Data Analytics solicitation up to the point that the target \$9 million in funding is committed will receive the following benefits:

- A seat on the TRT – input into product development decisions (including feature delivery prioritization).
- Access and license for production use of the web-based components and the regularly updated SaaS software releases throughout the 4-year project duration.
- A 25% reduction in license fee for AASHTOWare Project Data Analytics for a period of 3 years after the conclusion of the project.

Agencies that do not participate in the AASHTOWare Project Data Analytics solicitation before the target amount is committed (or agencies that participate at less than the target \$750,000 amount), will be provided an opportunity to later join the project at a prorated contribution amount based on the months remaining in the project. Agencies will be provided the following benefits, with the concurrence of 2/3 of the full target amount participants:

- A seat on the TRT – input into remaining product development decisions.
- Access and license for production use of the web-based components and the regularly updated SaaS software releases throughout the remaining project duration.

AASHTOWare Bridge Design/AASHTOWare Bridge Rating Software Modernization Project

The AASHTOWare Bridge Design/AASHTOWare Bridge Rating system is undergoing a software modernization effort which began in FY2017. The current system, initially released in April 1999, will be revamped to take advantage of state-of-the-art technologies, software architecture, development environments, and development tools. Project goals include:

- Significant upgrades to the core technology to a modern architecture that better utilizes current and future hardware, and the latest software development technologies;
- Improve analysis performance by taking advantage of the latest hardware and software advances (parallelization, multi-threading capabilities);
- Improve and simplify the user interface;
- Improve reporting capabilities;
- Reduce implementation time for new users; and
- Reduce maintenance costs.

The AASHTOWare Bridge Task Force is soliciting new funding to support the AASHTOWare Bridge Design/AASHTOWare Bridge Rating software modernization project. All funding obtained to support this project will reduce the time that it takes to convert the software to a web-services architecture.

The AASHTOWare Bridge Design/AASHTOWare Bridge Rating modernized software will continue to use the existing database model, support the library of AASHTO specifications and will feature all of the current design, analysis and rating capabilities supported by an improved user interface that can be configured to the user's needs and familiarity with the software.

AASHTO welcomes interested agencies to contribute to the AASHTOWare Bridge Design/AASHTOWare Bridge Rating Modernization project. Agencies may elect to use newly purchased or existing AASHTOWare Bridge Design/AASHTOWare Bridge Rating Service Units to help fund participation in this project. In addition, AASHTO has coordinated with the Federal Highway Administration to allow use of State Planning and Research (SP&R) funds for participation in this project.

Members interested in participating in the project should contact the AASHTO project manager, Judy Tarwater (jtawater@ashto.org).

New for Fiscal Year 2019

The following summarizes several AASHTOWare product options, features and enhancements that are new for the current AASHTO fiscal and license year. Detailed descriptions of these new product options and features are provided in the applicable product sections in this catalog.

AASHTOWare Project™ 4.0

The AASHTOWare Project 4.0 software release is available. The AASHTOWare Project 4.0 software includes enhancements to the AASHTOWare Project Estimation™, AASHTOWare Preconstruction™, AASHTOWare Project Civil Rights & Labor™, and AASHTOWare Project Construction & Materials™ modules. Upgrading to the latest version of the software can help your agency visit [http://www.aashtoware.org/AASHTOWare Project 3.01-10 Reasons to Upgrade](http://www.aashtoware.org/AASHTOWare%20Project%203.01-10%20Reasons%20to%20Upgrade) for more information.

AASHTOWare Project™ 4.1

The AASHTOWare Project 4.1 software is planned for release in August 2018. The AASHTOWare Project 4.1 software includes enhancements to the AASHTOWare

Preconstruction, AASHTOWare Project Civil Rights & Labor, and AASHTOWare Project Construction & Materials modules.

AASHTOWare Project Data Analytics™

The first licensable component of the AASHTOWare Project Data Analytics software became available with the AASHTOWare Project 4.0 software release in September 2017. AASHTOWare Project Data Analytics currently provides graphical, bid-based price analysis and item price estimates utilizing historical bid data from the web-based AASHTOWare Project unified database. The analytical methodology, originating from AASHTOWare Project BAMS/DSS, includes expanded functionality available only in the web-based version of AASHTOWare Project.

All agencies with a paid license to AASHTOWare Project BAMS/DSS or an AASHTOWare Project Site License, will be permitted access to the two SaaS themes being released in August 2018 (includes features from Line Item Profiles and Bid Evaluation Analysis) in addition to the web-based AASHTOWare Project Data Analytics functionality developed up to and included in AASHTOWare Project 4.1.

If an agency without an AASHTOWare Project BAMS/DSS license chooses to execute an annual license to AASHTOWare Project Data Analytics (\$68,000 in FY 2019), they will be granted access to the two SaaS themes being released in August 2018 (includes features from Line Item Profiles and Bid Evaluation Analysis) in addition to the web-based AASHTOWare Project Data Analytics functionality developed up to and included in AASHTOWare Project 4.1.

If an agency also chooses to execute a no-cost evaluation license agreement of AASHTOWare Project Data Analytics, access to an evaluation site will be granted for a period of 3 months. Access will be provided to all AASHTOWare Project Data Analytics web-based components as well as the SaaS components for evaluation-only, non-production purposes, and will include upload of agency-specific data.

AASHTOWare Bridge™

AASHTOWare Bridge Design/AASHTOWare Bridge Rating™

With development of the multi-year AASHTOWare Bridge Design/AASHTOWare Bridge Rating Software Modernization Project underway at full speed, the AASHTOWare Bridge Design 6.8.3 and AASHTOWare Bridge Rating 6.8.3 released in FY2018 marks the Phase 1 completion of the Modernization Project. The first release of the modernized system focuses on the AASHTO analysis engine. A fully modernized superstructure analysis and specification checking engine is available in the legacy 6.8.3 system along with the existing legacy analysis engine. Users can choose between the existing legacy analysis engine and the new modernized analysis engine.

Annual product releases to support necessary maintenance will continue for the duration of the AASHTOWare Bridge Design/AASHTOWare Bridge Rating Modernization Project. However, functionality enhancements will not be incorporated into the 6.8.X releases. Support for AASHTOWare Bridge Design/AASHTOWare Bridge Rating release 6.8.4 and all earlier versions will cease effective June 30, 2021.

AASHTOWare Bridge Management™

Agencies licensing AASHTOWare Bridge Management in FY2019 will receive a copy of web-based AASHTOWare Bridge Management 5.3.

AASHTOWare Bridge Management 5.3, released in September 2017, supports improved project management and analysis functions with updated deterioration module dashboards as well as the available project and program modules. Highlights of AASHTOWare Bridge Management 5.3 include:

- Migration from Cassini to ISS Express - With the recent migration to ISS Express, the legacy Cassini framework that supports the workstation has been abandoned.
- Re-write of Element Condition Grid:
 - Significant performance improvements
 - Repositioning of buttons and functionality, as well as new functionality (such as multi-sorting and new search capabilities).
 - Update of SHOULD/SHALL for defect quantities now set as a COPTION (ELEMINSALLOWCHDQTYGTRPARENT, default to SHALL)
 - Improved validation and warning/error messages.
- Parameters Page Update
 - Nulls are now allowed
 - Added the ability to include a sort order to the entries
- Sufficiency Rating Page Update - Updated sufficiency rating page. In 5.2.2 the calculation code was migrated from C++ to the database. In 5.3 the sufficiency rating page User Interface has been updated and improved
- Enhanced rule builder for network policies - Ability to use elements in the rule builder for network policies
- Cross Section Module - Inclusion of the Alabama Department of Transportation Cross-Section Module. The module is a port from the existing Alabama DOT custom module, expanded to meet the needs of the user community at large.
- Load Rating Module - Inclusion of a new Load Rating Module that allows users to store more detailed load rating data in BrM. This module can support vehicles which are unique to user agencies, perform multiple load rating events to give a full load rating history of a structure, and store future load ratings which may not take effect until after construction is completed.
- Default Data Script
 - Inclusion of IsActive in additional screens/tables. Additional tables/screens will have the IsActive functionality similar to the functionality in the PARAMTRS table. Users will now have the ability to 'soft delete' (hide) certain data from the rest of the software, and the scripts will not add the data back. (e.g the user has the ability to remove a filter from the rest of the system, without the scripts trying to bring it back).
 - Restoration of Default. Originally planned for inclusion via a separate script, this feature has been added via a simpler approach involving a script toggle option. The name of this option is 'DISABLE_FORCE_DEF_BY_TABLE'. By default, is the option forces all data to be restored. (If desired, the default setting can be reset to not force all data to be restored).
- Error Pre-Check Script - Inclusion of the Error Check Prescript to identify invalid data/invalid relationships/etc. prior to running the 'mega-script' for upgrading the user's database.

Development of AASHTOWare Bridge Management 6.0, which will incorporate high priority improvements, has begun and is anticipated to be released in early FY2019. AASHTOWare Bridge Management 6.0 will include the following new features:

- A Patchable Version - In response to user requests for a 'patchable' version of AASHTOWare Bridge Management, the Task Force is focusing on developing this patchable version of AASHTOWare Bridge Management that will allow the software to be patched rather than requiring a complete reinstall for many of the software changes, including bug fixes. Future software releases that introduce significant changes to AASHTOWare Bridge Management functionality may still require a complete software reinstall.
- Screen Needs List Export, export all lists, (e.g. needs list and graphs)
- Updates and Improvements to Reports – In response to feedback from the user community to update and improve AASHTOWare Bridge Management standard reports, the Reports TAG has identified several reports to be updated and/or modified in release 6.0.
 - Mapping Feature Enhancements – In response to feedback from the user community, improved functionality related to AASHTOWare Bridge Management mapping features will be delivered with release 6.0.

AASHTO is also offering the option to have AASHTOWare Bridge Management hosted by the contractor. Agencies interested in online hosting services should contact the contractor, Bentley Systems, for more information.

In addition to the hosting of AASHTOWare Bridge Management, licensees will be able to purchase optional add-on modules as they become available to enhance the overall capabilities of the system.

AASHTOWare Safety Analyst™

AASHTOWare Safety Analyst will include the following new license option in FY2019:

- **Agency Sponsored Licenses.** A member agency who is a licensee of the AASHTOWare Safety Analyst site license may purchase client software bundles for sharing on behalf of consulting engineering firms or local agencies performing safety analysis supporting the member agency goals to improve safety.

AASHTOWare Pavement ME Design™

Pavement ME Design will include the following enhancements in FY2019:

- **Backcalculation Tool.** The Pavement ME Deflection Data Analysis and Backcalculation Tool is a standalone software program that can be used to generate backcalculation inputs from Falling Weight Deflectometer (FWD) files to the AASHTO Pavement ME Design software for rehabilitation design. The tool is capable of analyzing raw deflection data files from three FWD testing devices: Dynatest®, JILS and KUAB. The tool provides three major functions: pre-processing deflection data (including project segmentation), backcalculation, and post-processing of results to generate inputs for Pavement ME rehabilitation design. This tool uses the EVERCALC® algorithm for the iterative backcalculation process.
- **Calibration Assistance Tool.** This will be a tool to help in local calibration efforts that is independent of the user as much as possible and to help the user accomplish the following three objectives for each distress transfer function.
 - Determine whether there is any bias in the predictions.
 - Establish the cause of any bias if it is found through the calibration process.
 - Optimize the calibration coefficient of the transfer function(s) for each distress to eliminate bias and minimize the standard error of the estimate.

Important Administrative Policies and Procedures

When AASHTO issues a license for one or more of its computer software products, it is done on an organization or agency wide basis, and not to individuals. The following is intended to clarify and define what is included and meant by the use of the terms "organization or agency." "An "organization" or "agency" may be:

An AASHTO member department, or associate member agency;

An Agency, Department or equivalent governmental organization that is an officially constituted or a designated unit of a sovereign Country's national government and with whom the U.S. Government does not prohibit issuing such licenses;

An Agency, Department or equivalent governmental organization of a State, Province or similarly constituted unit of a sovereign Country and with whom the U.S. Government does not prohibit issuing such licenses;

An Agency, Department or equivalent governmental organization of a county or similarly constituted unit of a State;

A city;

An educational institution; and

A private sector firm, company or corporation.

AASHTO licenses computer software products to organizations or agencies under the terms and conditions of a Master License Agreement and a Supplemental License Agreement. AASHTO agreements include limitations on the use of the AASHTO software products, protections of AASHTO proprietary rights, limitations on warranties and other terms and conditions relevant to the use of the AASHTO software products by the licensee. In such instances where a licensee employs a contractor to perform certain work for the licensee using the AASHTO software

products, the contractor must acknowledge the rights, limitations, terms and conditions set forth in the AASHTO Agreements and agree to be bound by the same. Contractor acknowledgement must be accomplished via the execution of the Contractor Agreement (Appendix A to the Master and Supplemental Agreements).

Provisions for Sunsetting an AASHTOWare Product

The administrative procedures and practice for sunsetting or discontinuing AASHTO support for outdated options, versions, releases and even entire products have been established. You will note that sunsetting has been and is being announced or confirmed for some aspect of a current AASHTOWare product(s). You should carefully read the sections of this document that describe specific products and refer to sunsetting activities.

No Cost AASHTOWare Product Evaluation

AASHTO member agencies may request to install and evaluate most AASHTOWare products for a period of 120 calendar days without licensing fees. AASHTO member agencies may request to evaluate the AASHTOWare Project software for a period of 180-days at no cost. The SYNC Service for AASHTOWare Project is available for a no cost 90-day license.

The software provided is not a demonstration copy but the actual executable full-function current software release of the product. Execution of an Evaluation License Agreement is required. This no cost option is limited to one evaluation period per agency per product prior to licensing.

This licensing option is also available to non-member entities for limited periods with certain restrictions. Additionally, AASHTO will evaluate requests from international entities on a case-by-case basis, depending on the software desired and the level of technical support required. Contact the AASHTO staff representative listed for the respective products for more information.

AASHTOWare Project™ Software

Introduction

AASHTOWare Project software is the complete, enterprise-wide software solution developed by AASHTO for managing an agency's construction program.

The client/server AASHTOWare Project software consists of the following thirteen (13) modules designed to meet most transportation agency preconstruction and construction management needs.

- AASHTOWare Project Cost Estimation™ – Cost Estimation System
- PES® – Proposal and Estimates System
- LAS® – Letting and Award System
- AASHTOWare Project Construction Administration™ – Construction Administration System
- AASHTOWare Project BAMS/DSS™ – Data Warehouse and Decision Support System
- AASHTOWare Project Expedite™ – Electronic Bidding System
- AASHTOWare Project Bids™ – Electronic Bidding System
- AASHTOWare Project Estimator™ – Cost Estimation Workstation
- AASHTOWare Project SiteManager™ – Construction Management System
- AASHTOWare Project SiteXchange™ – Contractor Data Transfer
- AASHTOWare Project FieldManager™ – Construction Management Suite for Project Engineers and Inspectors
- AASHTOWare Project FieldNet™ – Electronic Data Transfer System for FieldManager
- AASHTOWare Project TRACER™ – TRANsportation Cost Estimator

Web-based AASHTOWare Project software consists of the following five (5) modules designed to meet transportation agencies preconstruction and civil rights and labor management, construction and materials, and estimation needs.

- AASHTOWare Project Estimation™ – Estimation System
- AASHTOWare Project Preconstruction™ – Proposal, Estimates, Letting, and Award System

- AASHTOWare Project Civil Rights & Labor™ – Civil Rights and Labor Management System
- AASHTOWare Project Construction & Materials™ – Construction Management, Materials Management and Laboratory Information Management System
- AASHTOWare Project Data Analytics™ – Data analytics system

SYNC Service for AASHTOWare Project provides automatic synchronization of data between the mobile applications on a smartphone or tablet and the AASHTOWare Project software. Currently, the service includes secure storage and transmission for two mobile apps. The first is between the Mobile Inspector mobile application and the AASHTOWare Project SiteManager, the AASHTOWare Project FieldManager, or the AASHTOWare Project Construction & Materials application software. The second is between the Field Interviewer application and the AASHTOWare Project Civil Rights & Labor software.

AASHTOWare Project Modules

Each AASHTOWare Project module addresses the needs of the transportation agency during a particular phase in the construction life cycle, beginning with project definition, through the archival of final contract information, and beyond, by providing access to it for use in decision-making and reporting. A Site License, which includes most of the modules, is available for an annual fee. The modules can also be licensed individually so that the licensee can choose only needed modules.

Generic releases of the AASHTOWare Project modules are available to provide operational support and appropriate analysis reports in easy-to-understand formats. The generic approach provides an efficient and flexible computer-operating environment and user interface, with integrated tools for adding new or modified reports, extending the database with agency specific data, and conducting ad hoc analyses. The current releases offer significant capability to tailor AASHTOWare Project to each agency's individual needs, using system installation options, report templates, and generic fields in the database.

AASHTOWare Project Cost Estimation, PES, LAS, AASHTOWare Project Construction Administration, AASHTOWare Project SiteManager and AASHTOWare Project BAMS/DSS are currently available in multi-tier client/server architecture over a network supporting the TCP/IP protocol. The AASHTOWare Project Bids, AASHTOWare Project TRACER, AASHTOWare Project Estimator, AASHTOWare Project Expedite, AASHTOWare Project SiteXchange modules and the AASHTOWare Project BAMS/DSS Workstation run on PCs. The AASHTOWare Project FieldManager product suite is a Windows-based system capable of operating in either a client/server, network environment, or in a standalone mode.

The web-based AASHTOWare Project modules of AASHTOWare Project Estimation, AASHTOWare Project Preconstruction, AASHTOWare Project Civil Rights & Labor, AASHTOWare Project Construction & Materials, and AASHTOWare Project Data Analytics are available in a web-based services architecture based on the Microsoft .NET platform. The modules support Microsoft's Active Directory (AD) and Lightweight Directory Access Protocol (LDAP).

Information on tested and supported platforms is available at http://www.cloverleaf.net/sys_arch/.

AASHTOWare Project Cost Estimation

AASHTOWare Project Cost Estimation is the AASHTOWare Project module for construction cost estimation. AASHTOWare Project Cost Estimation provides a full range of cost estimating capabilities from conceptual estimation to the final engineer's estimate required for award approval using parametric, cost-based and bid-based job cost estimates. AASHTOWare Project Cost Estimation comes ready with the tools to upload existing labor, equipment, material, and crew data. Estimators can migrate their work through each stage of estimation, splitting and combining jobs as required, moving smoothly from parametric to detailed estimation, creating PES and AASHTOWare Project Preconstruction projects and producing the final estimate. AASHTOWare Project Cost Estimation allows users to take snapshot views of estimates at various stages in the estimation life cycle, so final results can be traced back to their conceptual beginnings. The snapshot descriptions can be modified or changed as needed by the user.

With the availability of the web-based AASHTOWare Project Estimation software, the AASHTOWare Project Cost Estimation is no longer available to be licensed by new licensees. Please refer to the AASHTOWare Project Estimation software.

PES

PES addresses the needs of numerous offices involved during the pre-letting phase of construction. With PES, the user can enter project data, prepare the PS&E estimate for transportation construction projects, combine them into proposals, and select a group of proposals for a bid-letting package, all within an interactive, online system. Standard reports include the detail estimate, the proposal estimate, and the proposal price schedule. This module has been designed for flexibility in project definition and proposal creation using multiple funding units, bid-based pricing at both the project and proposal level, differing Engineering & Construction percents, Cost Plus Time designations, and alternate specifications at both the category and line item levels. PES supports the exchange of data with the following AASHTOWare Project modules: AASHTOWare Project Cost Estimation, AASHTOWare Project Estimator and AASHTOWare Project Expedite. PES contains a Worksheet (AASHTOWare Project Worksheet) that facilitates the entry and editing of project information in a spreadsheet-like format with import capabilities for receiving data from design systems. The AASHTOWare Project Worksheet is also available in a standalone version so that designers and others in remote offices can build a project using the data entry and edit capabilities of the full client/server version of PES.

Standard support for PES ended on June 30, 2014. Existing PES licensees will receive up to two hours of support per issue. Support needs that exceed this allotment will be at the agencies expense. Also, with the availability of the web-based AASHTOWare Project Preconstruction software, PES is no longer available to be licensed by new licensees. Please refer to the AASHTOWare Project Preconstruction software.

LAS

LAS addresses the needs during the advertisement and award phase of activity. It is designed to aid transportation agency personnel in advertising proposals, tracking plan and proposal holders, processing bid information, tracking disadvantaged business enterprise (DBE) commitments, and making award decisions. LAS receives data directly from AASHTOWare Project Expedite (Electronic Bidding System), including Cost Plus Time bids and DBE commitment information. It provides the notice to contractors, plan holder management, online and batch data entry facilities for vendor bids, the bid tabulation report and analyses of the received

bids, and bid letting summary reports. Additionally, it maintains the plan holders list and produces mailing lists and plan holder invoices.

Standard support for LAS ended on June 30, 2014. Existing LAS licensees will receive up to two hours of support per issue. Support needs that exceed this allotment will be at the agencies expense. In addition, with the availability of the web-based AASHTOWare Project Preconstruction software, LAS is no longer available to be licensed by new licensees. Please refer to the AASHTOWare Project Preconstruction software.

AASHTOWare Project Construction Administration

AASHTOWare Project Construction Administration manages contract information from award to final payment. It offers a complete set of management information reports detailing construction progress. This module addresses the Construction office's needs regarding contractor payments (partial/final), funding participation allocation, subcontract approval, and tracking and changes to original contract specifications (change orders and supplemental agreements). AASHTOWare Project Construction Administration can track DBE contractor utilization and contract compliance with goals. The partial payment voucher, construction report, contract status reports, and an item-level funding export are several of the key outputs produced by the AASHTOWare Project Construction Administration software.

Also, with the availability of the web-based AASHTOWare Project Construction & Materials software, the AASHTOWare Project Construction Administration software is no longer available to be licensed by new licensees. Please refer to the AASHTOWare Project Construction & Materials software.

AASHTOWare Project BAMS/DSS

AASHTOWare Project BAMS/DSS provides a complete AASHTOWare Project historical data warehouse specifically designed to provide decision support in the areas of bid monitoring and evaluation, vendor (contractor, subcontractor, and DBE) and market analysis, item price estimation, and the planning and budgeting process.

The AASHTOWare Project BAMS/DSS Workstation was developed to provide a desktop platform for AASHTOWare Project BAMS/DSS analysis as an alternative to host-based AASHTOWare Project BAMS/DSS analysis. In this context, the “desktop” is a computer running the Windows operating system, and the “host” is the computer where the full AASHTOWare Project BAMS/DSS system is installed. The AASHTOWare Project BAMS/DSS Workstation permits an AASHTOWare Project BAMS/DSS analyst to download Data Views from a host computer and perform Statistical Models Analysis and Ad Hoc Analysis on the desktop on those downloaded Data Views. The Workstation provides a faster, more responsive analysis environment.

Standalone AASHTOWare Project BAMS/DSS is an option that provides the full AASHTOWare Project BAMS/DSS software capabilities on a single Windows PC. It also allows additional AASHTOWare Project BAMS/DSS Workstations to access the PC as a database server. This configuration is ideal for agencies that need the full power of AASHTOWare Project BAMS/DSS without the additional overhead of a client/server implementation.

AASHTOWare Project BAMS/DSS supports interactive drill-down analysis of contract item bids, facilitating faster contract award decisions based on more information at the analyst's fingertips. This feature is also used for long-term bidding pattern analysis, providing quick answers to the detail questions, such as, “What were this item's prices for this contractor over the last six months?”

Because of the collusion detection aspects, AASHTOWare Project BAMS/DSS is only available to Member and Associate-International Member agencies.

AASHTOWare Project Expedite

AASHTOWare Project Expedite is a Windows application designed to work with AASHTOWare Project Preconstruction, PES and LAS, or any similar proposal preparation and bid letting management system. Expedite allows bidders to receive proposal information including item schedules, DBE requirements, and affidavits; enter all information required for a valid proposal; and submit item bids in a secure machine-readable form. AASHTOWare Project Expedite supports proposals with Cost Plus Time components, alternate sections and alternate items, lump sum and fixed-price items, and distribution of amendments in electronic form.

AASHTOWare Project Expedite consists of several components, some intended to be run by the transportation agency and others to be run by bidders. The first component will convert a flat file of proposal item information, taken from AASHTOWare Project Preconstruction, PES or a similar system, into an electronic proposal or amendment file for distribution to prospective bidders. The second component, called the electronic bid manager, is run by the bidder and allows item bids to be entered interactively, as on a spreadsheet, with item extensions and section and proposal totals calculated and displayed immediately. It also facilitates the submittal of DBE commitment information and an electronic bid bond identifier or manually delivered check or payment indication. The third component, run by the transportation agency, checks the electronic bid for validity and data errors, prints a log listing information about the electronic bid for comparison to the paper bid and produces a flat file suitable for loading into AASHTOWare Project Preconstruction, LAS or a similar system. The fourth component allows the transportation agency to enter bid data from proposals submitted manually in a PC-based program for loading into AASHTOWare Project Preconstruction, LAS or a similar system. The final component is a program that allows the transportation agency to electronically verify the bidder's bid bond.

The electronic bid manager component and its associated documentation may be copied by the transportation agency for distribution to and use by all its prospective bidders, provided the software and documentation are not modified in any way.

With the availability of the new AASHTOWare Project Bids software, the AASHTOWare Project Expedite software will be sunset on June 30, 2019 and currently is no longer available to be licensed by new licensees. Please refer to the AASHTOWare Project Bids software.

AASHTOWare Project Bids

The AASHTOWare Project Bids software streamlines the bidding process, providing transportation agencies with control over the bid letting process while facilitating bid submittal for contractors. Bidders are able to receive proposal item schedules and to submit and withdraw item bids in a secure, electronic environment. The AASHTOWare Project Bids software provides security and encryption functionality for bids submitted over the Internet.

The AASHTOWare Project Bids software is designed to exchange data with the AASHTOWare Project Preconstruction software or similar systems. Item schedule data can be produced to assist with proposal creation and proposal information can be shared with many word processing, database, or spreadsheet systems.

The AASHTOWare Project Bids software supports proposals with alternate sections or alternate items, lump sum and fixed price items, and the electronic distribution of amendments. Bidders simply open the AASHTOWare Project Bids file provided by

the letting agency and enter line item prices for each item. The AASHTOWare Project Bids software calculates bid values as bidders work through the item list and alerts them if an item is accidentally omitted. The software facilitates import and export of item lists to allow for interaction with bid estimation systems commonly used by the contracting community.

The AASHTOWare Project Bids software uses a customizable configuration file to meet agency needs. The configuration file provides control over printed and displayed data and information gathering.

AASHTOWare Project Estimator

AASHTOWare Project Estimator is an interactive, standalone cost estimation system for transportation construction projects that assists in the preparation of detailed estimates. AASHTOWare Project Estimator has an intuitive interface that new users learn quickly. It supports generation of cost estimates using cost-based and bid-based techniques, and it includes primary funding capabilities at the group and estimate levels. All base data for these estimates, such as labor rates, equipment, and material costs, production rates, and historical item price estimation data is typically stored and maintained on the individual workstation, though the application also supports shared network installations. AASHTOWare Project Estimator can utilize bid-based item price estimates directly from the web-based AASHTOWare Project Data Analytics software, or based on estimation data imported from AASHTOWare Project BAMS/DSS. Users can copy catalog elements across specification years and the field labels, and tree labels can be customized to meet the user's needs. It supports use of multiple bid histories from which the user can choose that most suitable for the current estimate scenario. AASHTOWare Project Estimator can interface with the AASHTOWare Project Cost Estimation module or the AASHTOWare Project Estimation module for further refinement of estimates and for integration of project estimates into program estimates. AASHTOWare Project Estimator is well-suited for distributing the estimation function throughout regional or satellite offices and for exchanging data with design consulting firms. AASHTOWare Project Estimator is integrated with the other AASHTOWare Project modules, and supports additional file formats, such as XML, HTML, CSV, XLS, and XLSX. Additionally, AASHTOWare Project Estimator can read from and write to Microsoft Excel files. AASHTOWare Project Estimator includes an expression builder tool to aid estimators in constructing formulas in all numeric fields, and granular security features for ease of system administration.

AASHTOWare Project SiteManager

AASHTOWare Project SiteManager is a comprehensive construction management tool. It provides for data entry, tracking, reporting, and analysis of contract data from contract award through finalization. AASHTOWare Project SiteManager is built on the same multi-tier architecture as the rest of the client/server AASHTOWare Project suite, allowing for easy integration and data transfer. It can be used by all levels of construction and materials personnel such as field inspectors, technicians, project managers, clerks, auditors, lab personnel, management, producer/suppliers, contractors, and the FHWA.

Also, with the availability of the web-based AASHTOWare Project Construction & Materials software, the AASHTOWare Project SiteManager software is no longer available to be licensed by new licensees. Please refer to the AASHTOWare Project Construction & Materials modules software.

AASHTOWare Project SiteXchange

AASHTOWare Project SiteXchange enables contractors to enter subcontractor information once a contract is awarded. In an effort to make the implementation process as smooth as possible, AASHTOWare Project SiteXchange was built on the framework of the AASHTOWare Project Expedite module, which is already familiar to many contractors. The transportation agency portions are based on the corresponding AASHTOWare Project Expedite components, modified to work with AASHTOWare Project Preconstruction, PES/LAS or AASHTOWare Project SiteManager. AASHTOWare Project SiteXchange exports a file that is converted into contract files. The contract files are distributed to prime contractors, who then add the subcontractor data to the contract. The contractor program may contain a miscellaneous data screen with form elements, and it provides a printed report. The completed form is then sent back to the transportation agency to be loaded into AASHTOWare Project SiteManager.

The contractor component and its associated documentation may be copied by the licensing agency for distribution to and use by all its contractors, provided the software and documentation are not modified in any way

AASHTOWare Project FieldManager

The AASHTOWare Project FieldManager suite is a comprehensive construction management system for managing and tracking construction projects, documenting construction progress, initiating contractor payments, and communicating with an agency's central office contract administration system. It was designed for use by state departments of transportation, local government agencies, engineering consultants, contractors, or any other organization that manages construction projects. The close interaction of AASHTOWare Project FieldManager, AASHTOWare Project FieldBook™, and AASHTOWare Project FieldBuilder™ provides many benefits, including a high level of communication, data sharing and accuracy, information management, and record keeping and administrative time and cost savings.

The AASHTOWare Project FieldManager suite is no longer available to be licensed by new licensees. Please refer to the AASHTOWare Project Construction & Materials modules for construction management software.

AASHTOWare Project FieldManager

AASHTOWare Project FieldManager focuses on refining the workflow of construction contract management at the field office level; the field office can manage field-gathered data, and then interface with a central office. This allows several users to update contract information, implementing a shared database to expand an agency's data-sharing capabilities. Data can be entered once and shared electronically, replacing the need to enter the same data manually in multiple locations.

AASHTOWare Project FieldBook

AASHTOWare Project FieldBook is a subset of AASHTOWare Project FieldManager, designed to automate the construction inspector's task of documenting the progress of a construction project. Operating on a laptop computer, AASHTOWare Project FieldBook allows inspectors to take a more active role in the project, providing the flexibility of recording construction information at the project site, including work item and material progress, contractor/subcontractor documentation, daily report attachments, site conditions and general comments. The construction progress is recorded in

Inspector's Daily Reports (IDRs), which are uploaded to AASHTOWare Project FieldManager in the field office. Contract updates are downloaded from AASHTOWare Project FieldManager, giving inspectors direct access to the latest contract data and other information vital to their field operations.

AASHTOWare Project FieldBuilder

AASHTOWare Project FieldBuilder is a data entry interface that enables office personnel to enter contract information and export the contract data directly into AASHTOWare Project FieldManager. This gives an organization the flexibility to use AASHTOWare Project FieldManager as a standalone system, creating contracts from scratch. All of an organization's pay items and contractors can be managed by importing information from the central office, from a text file or by adding them directly into AASHTOWare Project FieldBuilder. Once a contract has initially been created, a user can copy it, modify any necessary information and quickly create a new contract.

AASHTOWare Project FieldNet

AASHTOWare Project FieldNet provides an automated interface between AASHTOWare Project FieldManager and AASHTOWare Project Contract Administration. It enables the electronic transfer of contract, estimate, contract modification, and reference information. AASHTOWare Project FieldNet can be used to obtain supervisor approvals for estimates and contract modifications. AASHTOWare Project FieldNet can also be used to transfer both read-only and working copies of contracts to other AASHTOWare Project FieldManager machines, and to facilitate electronic communications between AASHTOWare Project FieldManager and AASHTOWare Project FieldBook.

AASHTOWare Project TRACER

TRANsportation Cost Estimator (AASHTOWare Project TRACER) is an integrated, parametric cost estimating solution developed specifically for transportation-related construction, renovation, and demolition projects. AASHTOWare Project TRACER is a parametric cost engineering tool that streamlines the budgetary/planning process by employing pre-engineered model parameters and construction criteria in conjunction with RSMeans® location-specific cost-based cost data to create accurate and comprehensive project cost estimates utilizing limited design information. This is achieved through default quantity calculations, which are built into the software and based on similar projects and experienced engineering assumptions. Pre-defined and documented engineering relationships link primary parameters to detailed design assumptions and associated engineering quantity output.

AASHTOWare Project TRACER is a standalone Windows based interactive cost estimating software solution. All parametric algorithms and RSMeans cost data are inherent to the software and the turnkey package allows the user to begin creating cost-based estimates from the moment the software is launched.

AASHTOWare Project Data Analytics

AASHTOWare Project Data Analytics currently provides graphical, bid-based price analysis and item price estimates utilizing historical bid data from the web-based AASHTOWare Project unified database. The analytical methodology, originating from AASHTOWare Project BAMS/DSS, includes expanded functionality available only in the web-based version of AASHTOWare Project.

The initial functionality became available as of the AASHTOWare Project 4.0 software release in September 2017. The Software-as-a-Service functionality, which

will provide specific features/models to perform analytical support, will have its initial release in July 2018.

See “On the Horizon” for details regarding AASHTO’s upcoming solicitation to continue the development of the AASHTOWare Data Analytics software.

AASHTOWare Project Estimation

AASHTOWare Project Estimation is a web-based cradle-to-grave estimation application. AASHTOWare Project Estimation provides a variety of estimation methodologies (bid-based, cost based, reference based, parametric estimation, ad hoc pricing, collection bases) to perform your estimates. AASHTOWare Project Estimation includes the assessment and assignment of risk contingency, life cycle analysis tools, expansion of existing import/export capabilities, inclusion of non-bid costs, non-construction costs and markups, and the ability to utilize snapshots in creation of an audit trail for the agency’s estimates. The software provides the ability to run a quick analysis of bid-history pricing to utilize in what-if scenarios and planning discussions. AASHTOWare Project Estimation contains interactive graphical display for accessing the dynamic bid history profiles utilizing the AASHTOWare Project Data Analytics analysis. AASHTOWare Project Estimation requires licensing of AASHTOWare Project Preconstruction. For bid-based pricing, licensing of AASHTOWare Project Data Analytics is required.

AASHTOWare Project Preconstruction

AASHTOWare Project Preconstruction replaces the existing client/server PES and LAS modules with a web-based product offering similar functionality which allows the user to enter project data, prepare the PS&E estimate, create proposals, select a group of proposals for a bid letting and create various reports. In addition to the replacement of PES/LAS, AASHTOWare Project Preconstruction includes features such as simplified installation, a unified database, consolidated security model, workflow/phase handling, innovative bidding a new reporting tool, improved handling of generic fields, and customization features. A data migration utility from PES/LAS has also been included to assist agencies in their migration to the web-based product. Licensing of AASHTOWare Project Data Analytics or AASHTOWare Project BAMS/DSS is required in order to utilize the AASHTOWare Project Preconstruction basic bid-based item price functionality.

AASHTOWare Project Civil Rights & Labor

AASHTOWare Project Civil Rights & Labor receives and processes the data required to meet federal and state requirements for civil rights and labor compliance activities. AASHTOWare Project Civil Rights & Labor is a web-based product offering that allows the effective administration of an agency’s external civil rights and labor compliance activities such as contractor payrolls and labor compliance, wage decisions, Disadvantaged Business Enterprise (DBE) certification, vendor data management, DBE commitments, On-the-Job Trainees (OJT) tracking and monitoring, subcontractor data and prompt pay tracking, Bidder/Quoter submittals, trucking types and tracking, interfaces with client/server, and contract compliance reviews. Functionality and security is also available to allow non-agency users (e.g. contractors and subcontractors) to access AASHTOWare Project Civil Rights & Labor to submit electronic payroll and subcontractor payment information. Non-agency users can also manage DBE commitments and Bidder/Quoter submittals. AASHTOWare Project Civil Rights & Labor requires licensing of AASHTOWare Project Preconstruction.

Two tools are also available to assist contractors and payroll software companies in creating Extensible Markup Language (XML) formatted payroll files for import into AASHTOWare Project Civil Rights & Labor software: the AASHTOWare Project Payroll Spreadsheet and Conversion Utility and the AASHTOWare Project Payroll XML Developer's Resource Kit.

AASHTOWare Project Construction & Materials

AASHTOWare Project Construction & Materials is a web-based construction and materials management software application. AASHTOWare Project Construction & Materials covers the construction and materials management process, including laboratory information management functionality. It is a powerful application spanning all levels of construction and materials enabling personnel to progress a contract and its supporting documentation from award through finalization.

AASHTOWare Project Construction & Materials allows an organization to manage all aspects of a construction project through Daily Work Reports, diaries, storm water compliance inspections, contract change orders, force accounts, contractor evaluations, design evaluations, plan discrepancies, meeting records, document submission and review, stockpiles, and contractor payments. AASHTOWare Project Construction & Materials provides the ability to track materials, approve materials for source and facilities, qualifications (for testers, samplers, calibrators, welders, and laboratories), track test equipment and calibrate equipment, withhold payment for insufficient materials, approve mix designs for their design and use on a construction contract. AASHTOWare Project Construction & Materials features a laboratory information management component which allows an organization the ability to manage and track progress through each critical step of the material sample lifecycle.

SYNC Service for AASHTOWare Project

The SYNC Service for AASHTOWare Project provides automatic synchronization of data between the Info Tech® Mobile Inspector™ application or the Info Tech® Field Interviewer™ application on a smartphone or tablet. The Mobile Inspector application can be used with either the AASHTOWare Project SiteManager, the AASHTOWare Project FieldManager, or AASHTOWare Project Construction & Materials software. The Field Interviewer application is used with the AASHTOWare Project Civil Rights & Labor software. The service includes a secure storage and transmission service for the AASHTOWare Project SiteManager or the AASHTOWare Project FieldManager application. The service includes secure storage and transmission service for the AASHTOWare Project Construction & Materials and AASHTOWare Project Civil Rights & Labor applications and a plug-in is not required.

Info Tech Mobile Inspector is an application that allows inspectors the ability to collect the data required for a daily report, including item progress, contractor work force, photos and site conditions.

Info Tech Field Interviewer is an application that allows civil rights and/or field personnel with a simple, more accurate way to conduct interviews and capture interview data.

Both of the applications can be used on tablets or smart phones, can be used on-line or off-line, and can accommodate any size contract. These applications are available for free download from the Apple App, Google Play, and Windows stores.

AASHTOWare Project Licensing Arrangements

AASHTOWare Project Estimator, AASHTOWare Project FieldNet and the AASHTOWare Project FieldManager Suite

AASHTOWare Project Estimator and AASHTOWare Project FieldNet are proprietary software products of Info Tech, Inc., Gainesville, Florida. The AASHTOWare Project FieldManager suite (including AASHTOWare Project FieldManager, AASHTOWare Project FieldBook and AASHTOWare Project FieldBuilder) is a proprietary software product jointly owned by Info Tech, Inc. and the State of Michigan. The SYNC Service for AASHTOWare Project is a service owned by Info Tech, Inc. AASHTO and its licensees have been granted a license to use the AASHTOWare Project Estimator, AASHTOWare Project FieldManager, and AASHTOWare Project FieldNet software as well as the SYNC Service for AASHTOWare Project by an agreement with Info Tech, Inc. AASHTO Member Departments and Associate-International Members wishing to use these products or service must license them from AASHTO and abide by the terms and conditions granted by this license agreement, which is incorporated by reference into the AASHTO licensing agreement(s). A copy of the AASHTO-Info Tech agreements will be provided to any requesting member or associate member agency.

Local Government

The pricing of licenses to local government entities is the same as for AASHTO members. Note: The AASHTOWare Project BAMS/DSS module is available only to AASHTO Members and Associate-International Members. Local government transportation agencies must license the AASHTOWare Project FieldManager suite, AASHTOWare Project FieldNet, and the SYNC Service for AASHTOWare Project, through Info Tech, and all other AASHTOWare Project modules through AASHTO. Info Tech, Inc. can be reached at:

Info Tech, Inc.
2970 SW 50th Terrace
Gainesville, FL 32608
Phone: (352) 381-4400
Fax: (352) 381-4444
www.infotechfl.com/ordering.php
Attn: Mr. Terry Sullivan

Use at Multiple Installations

An agency obtaining one license for AASHTOWare Project BAMS/DSS, AASHTOWare Project Cost Estimation, AASHTOWare Project Construction Administration, AASHTOWare Project SiteManager, AASHTOWare Project Expedite, AASHTOWare Project Estimation, AASHTOWare Project Bids, AASHTOWare Project Preconstruction, PES/LAS, AASHTOWare Project Civil Rights & Labor, AASHTOWare Project Construction & Materials, or AASHTOWare Project Data Analytics may install servers at multiple locations and run the applications completely independent of other regions/districts of the agency. However, AASHTO will send software releases to only one location, and all support service requests from the multiple unrelated locations/districts must be made through one agency location.

Hardware and Software Environments

Because of the rapid pace at which technology changes, a website has been established to provide the most current approved hardware and software specifications for the AASHTOWare Project suite of products. Please visit this website at the following address: http://www.cloverleaf.net/sys_arch/.

The following table shows the current release information for AASHTOWare Project modules as of the publication date of this Catalog. Additional releases may be available and will supersede the information provided in the table. Please visit <http://www.cloverleaf.net/cgi-bin/UpcomingRelease.cgi/> for the latest information.

Description	Current Release	Release Date
PES/LAS	5.9g	June 2012 ¹
AASHTOWare Project Construction Administration	5.6e	June 2012
AASHTOWare Project Worksheet	5.10e	June 2012
AASHTOWare Project BAMS/DSS	6.9d	June 2018
AASHTOWare Project Cost Estimation	5.10b	June 2014
AASHTOWare Project Estimator	2.16b	June 2018
AASHTOWare Project SiteManager	3.18-1a	April 2018
AASHTOWare Project SiteXchange	1.0c	June 2011
AASHTOWare Project Expedite	5.11a	June 2011
AASHTOWare Project FieldManager	5.3b	June 2018
AASHTOWare Project FieldNet	3.5a	June 2015
AASHTOWare Project Preconstruction	4.0 ²	September 2017
AASHTOWare Project Civil Rights & Labor	4.0 ²	September 2017
AASHTOWare Project Construction & Materials	4.0 ²	September 2017
AASHTOWare Project Estimation	4.0 ²	September 2017
AASHTOWare Project Bids	2.0	June 2018
AASHTOWare Project TRACER	4.1	June 2016

¹ PES/LAS 5.9g released June 2012 is the final release of these modules, which no longer include standard support as of June 30, 2014. Please visit the Supported Products & Platforms area of the Cloverleaf.net Support page for the latest software support status information.

² Product updates are released throughout the fiscal year. For the latest information, see <https://www.cloverleaf.net/cgi-bin/UpcomingRelease.cgi/>

Current Annual Fees and Licensing Options

Fees vary depending upon the modules licensed. All of the modules are licensed on an annual license fee basis; however, some of the modules are also licensed annually on a per user basis. Costs associated with installation, implementation and training are the licensees' responsibility, and may be negotiated directly with the appropriate AASHTO contractor. Service units (described below) may be purchased from AASHTO to cover installation, implementation and training costs associated with AASHTOWare Project.

AASHTOWare Project Site License

An annual Site License is available to any agency/organization desiring to license all the following AASHTOWare Project modules: AASHTOWare Project Cost Estimation, AASHTOWare Project Estimation, PES/LAS, AASHTOWare Project Preconstruction, AASHTOWare Project Construction Administration, either AASHTOWare Project BAMS/DSS or AASHTOWare Project Data Analytics, AASHTOWare Project Civil Rights & Labor, AASHTOWare Project SiteManager, AASHTOWare Project SiteXchange, AASHTOWare Project Expedite, AASHTOWare Project Bids, AASHTOWare Project Construction & Materials, and the AASHTOWare Project Worksheet. The AASHTOWare Project Estimator and AASHTOWare Project FieldNet modules, as well as the AASHTOWare Project FieldManager Suite, are NOT included in this Site License. AASHTOWare Project TRACER is NOT included in this Site License. SYNC Service for AASHTOWare Project is also NOT included in this Site License.

Description		Annual License Fee
AASHTOWare Project Site License	Unlimited use	\$475,000

Note: The AASHTOWare Project BAMS/DSS and the AASHTOWare Project Data Analytics modules are available only to AASHTO Members and Associate-International Members.

Annual License Fees by Module

Annual fees for the AASHTOWare Project BAMS/DSS or AASHTOWare Project Data Analytics, AASHTOWare Project Cost Estimation, PES/LAS or AASHTOWare Project Preconstruction, AASHTOWare Project Construction Administration, AASHTOWare Project Construction & Materials, AASHTOWare Project Expedite or AASHTOWare Project Bids, AASHTOWare Project Estimation, AASHTOWare Project SiteManager, AASHTOWare Project SiteXchange, AASHTOWare Project Worksheet and AASHTOWare Project Civil Rights & Labor modules are as follows:

Modules	Annual License Fee⁵	Other Suggested Modules
BAMS/DSS ^{® 1,12}	\$ 77,000	
Data Analytics ¹	\$ 68,000	Preconstruction, Estimation
Cost Estimation ^{4,11}	\$ 59,000	BAMS/DSS or Data Analytics
PES/LAS ^{2,3,4,11}	\$ 47,000	BAMS/DSS or Data Analytics
Construction Administration ¹²	\$ 59,000	PES/LAS or Preconstruction and BAMS/DSS or Data Analytics
Construction & Materials ⁸	\$207,000	
Expedite ¹²	\$ 19,500	
Estimation ^{7, 9}	\$47,000	Preconstruction, Data Analytics
SiteManager ^{®4,11}	\$230,000	
SiteXchange	\$ 19,500	SiteManager
Preconstruction ^{3,6}	\$ 47,000	Data Analytics
Civil Rights & Labor ⁷	\$ 47,000	Preconstruction
Bids ¹⁰	\$ 19,500	

Note:

1. AASHTOWare Project BAMS/DSS and AASHTOWare Project Data Analytics modules are available to AASHTO Members and Associate-International Members only. There is no additional fee for the BAMS/DSS Workstation option.
2. Due to the complementary nature of PES and LAS, these modules must be licensed together.
3. Project Worksheet is available at no additional cost with a license of PES/LAS or Preconstruction. Agencies may provide copies for consultant and contractor usage. However, the agencies are responsible for: 1) distributing copies of Project Worksheet software including copying and distributing user documentation as needed to contractors and/or consultants; 2) maintaining a list of contractors/consultants to whom the agency distributes the Project Worksheet software; 3) acting as the single point of contact for all contractor and/or consultant software support inquiries (Such inquiries may be forwarded by the agency to Info Tech for resolution back to the agency); and 4) protecting AASHTO's proprietary rights associated with the Project Worksheet software product.
4. The PES, LAS, Cost Estimation and SiteManager licenses are intended for use by all client implementations configured by the licensee to communicate to the corporate database server(s) under the direct technical and administrative control of the licensee.
5. If any individual module is to be initially installed during the license year, the module fee may be prorated for the remaining months in that licensing year only. (All subsequent licensing of previously installed modules is for the full year and will not be prorated for a partial year.)

6. If requested, Preconstruction may be obtained at no additional cost with the licensing of the PES/LAS.
7. Due to the nature of the software, Civil Rights & Labor and Estimation are only licensed with Preconstruction.
8. If requested, Construction & Materials may be obtained at no additional cost with the licensing of SiteManager or an extended license of FieldManager.
9. If requested, Estimation may be obtained at no additional costs with the licensing of Cost Estimation.
10. If requested, Bids may be obtained at no additional cost with the licensing of Expedite.
11. These modules are no longer available to new licensees.
12. Agencies with a paid license to AASHTOWare Project BAMS/DSS or an AASHTOWare Project Site License will be permitted access to the two SaaS themes being released in August 2018 (includes features from Line Item Profiles and Bid Evaluation Analysis) in addition to the web-based AASHTOWare Project Data Analytics functionality developed up to and included in AASHTOWare Project 4.1.

Annual License Fees for Modules based on Copy Quantity

AASHTOWare Project Estimator

AASHTOWare Project Estimator has the following fee structure:

	Description	Annual License Fee
AASHTOWare Project Estimator	1-15 Copies (each copy)	\$ 1,450
	16-20 Copies	\$23,500
	21-30 Copies	\$31,300
	31-40 Copies	\$37,900
	41-50 Copies	\$42,800
	51-60 Copies	\$47,600
	Site License*	\$52,800

Note: The above fees are annual fees. The total amount varies depending upon the number of workstations licensed. If AASHTOWare Project Estimator is installed on additional workstations during the license year, the annual fee for the additional workstations will be prorated for the remaining months of the license year (July 1 - June 30). This proration applies only to the initial installation of AASHTOWare Project Estimator. These license fees include support and maintenance by Info Tech consistent with AASHTOWare products.

* Agencies holding a site license for AASHTOWare Project Estimator may, with no additional license fee, extend their site license to their local governments for projects in which federal money is involved and for which the agency has oversight responsibilities. This exception does not apply to consultants who are doing design work for the agency or to local governments that are doing their own non-federal projects. Consultants (and local agencies doing non-federal projects) must purchase their own AASHTOWare Project Estimator license at the special reduced license fee available on the Info Tech, Inc. website: www.infotechfl.com.

AASHTOWare Project FieldManager

Pricing for AASHTOWare Project FieldManager is calculated on either a “per copy” or “per site” license basis. AASHTOWare Project FieldManager has the following fee structure:

Description		Annual License Fee
AASHTOWare Project FieldManager suite (FieldManager® and FieldBuilder™ Components Only)	Each Installed Copy	\$ 3,450
	Each installed copy of FieldBook	\$ 1,050
Site License (All FieldManager Components)	Site License (1-15 users)	\$ 18,000
	Site License (16-30 users)	\$ 30,200
	Site License (31-50 users)	\$ 45,300
	Site License (51-300 users)	\$ 91,000
	Site License (301-800 users)	\$136,500
	Site License (more than 800 users)	\$182,000

Note: These AASHTOWare Project FieldManager Licenses are intended to cover only actual employees of the licensing agency. Consultants and other agencies (i.e. cities and counties) doing work for a licensing agency are not covered under this type of license agreement. Agencies wishing to cover (in addition to their own employees) consultants working directly under their control or local governments administering state-let, state-paid contracts should use the AASHTOWare Project FieldManager Extended License option detailed below (instead of this option).

AASHTOWare Project FieldManager Extended License

The AASHTOWare Project FieldManager Extended License is intended for member agencies wishing to cover not only their own employees, but also consultants working directly under their control (for example, as field inspectors) and/or local governments administering state-let, state-paid contracts under their license agreement. Agencies acquiring an Extended License may provide copies of the software to their consultant workforce and local governments, but are responsible for the following:

- Distributing copies of the AASHTOWare Project FieldManager software, including copying and distributing user documentation, as needed, to consultants and local agencies;

- Maintaining a list of consultants and local agencies to which the agency distributes the AASHTOWare Project FieldManager software (including any of its components);
- Acting as the single point of contact for all consultant and local agency software support inquiries. Inquiries that are clearly beyond the normal technical expertise of the agency may be forwarded by the agency to Info Tech for resolution back to the agency. In accordance with standard AASHTO policy, the agency will identify a maximum of four people authorized to contact Info Tech with support requests;
- Ensuring that FieldBuilder is not provided to anyone outside the state agency. Since the intent of this license is to allow performance of work on state-let, state-paid contracts only, consultants and local governments wishing to use AASHTOWare Project FieldManager (or any of its components) for accomplishing work on their own projects must purchase their own, separate licenses to do this; and
- Recovering all copies of the AASHTOWare Project FieldManager software and documentation from all consultants and local agencies whenever appropriate: for example, upon termination of service and/or consulting agreement under which the distribution of the software was initiated.
- Thus, member agencies have two options available to them to provide access to the AASHTOWare Project FieldManager software to their consultant work force (project managers, field inspectors, etc.) and/or their local government agencies administering state-let, state-paid contracts:
- Purchase this Extended License for the appropriate number of anticipated total users (state employees, consultant work force and local government employees); or,
- Continue to require their consultants and Locals to purchase their own copies of the software directly from Info Tech. In the latter case, technical and administrative support will be available from Info Tech.

The AASHTOWare Project FieldManager Extended License has the following fee structure:

Description	Annual License Fee
FieldManager suite (All FieldManager Components Except FieldBuilder)	\$ 27,800
Extended License (1-15 users)	\$ 42,400
Extended License (16-30 users)	\$ 64,500
Extended License (31-50 users)	\$119,000
Extended License (51-300 users)	\$174,500
Extended License (301-800 users)	\$228,000
Extended License (more than 800 users)	\$228,000

AASHTOWare Project FieldNet

AASHTOWare Project FieldNet has the following fee structure:

Description		Annual License Fee
FieldNet	Site License (Up to 100 total users)	\$ 35,000
	Site License (101-500 users)	\$ 70,000
	Site License (501-600 users)	\$ 78,500
	Site License (601-750 users)	\$ 90,000
	Site License (751-900 users)	\$100,000
	Site License (901-1000 users)	\$105,500
	Site License (1001 or more users)	\$141,000

AASHTOWare Project TRACER

AASHTOWare Project TRACER has the following fee structure:

Description		Annual License Fee
AASHTOWare Project TRACER	Up to 10 Copies	\$2,000 per copy
	11-20 Copies	\$21,750 + \$1,750 per copy in excess of 11
	21-30 Copies	\$38,750 + \$1,250 per copy in excess of 21
	31-50 Copies	\$50,900 + \$900 per copy in excess of 31
	51-90 Copies	\$68,750 + \$ 750 per copy in excess of 51
	More than 90 Copies	Customized Quote*

Note: The above fees are annual fees. The total amount varies depending upon the number of workstations licensed. If AASHTOWare Project TRACER is installed on any additional workstations during the license year, the annual fee for the additional workstations will be prorated for the remaining months of the license year (July 1 – June 30). This proration applies only to the initial installation of AASHTOWare Project TRACER. These license fees include support and maintenance by AECOM consistent with AASHTOWare products.

*Due to license fee royalties for the RS Means industry cost data used by AASHTOWare Project TRACER, the purchase of more than 90 licenses requires a customized quote; please contact the AASHTO Associate Project Director or AASHTOWare Project TRACER contractor listed at the end of this section for additional information.

SYNC Service for AASHTOWare Project

SYNC Service for AASHTOWare Project has the following fee structure:

Number of Connections to the SYNC Service	Annual License Fee
1-10	\$ 3,200
11-20	\$ 6,400
21-30	\$ 9,600
31-40	\$ 12,800
41-50	\$ 16,000
51-100	\$ 21,200
101-150	\$ 26,500
151-200	\$ 31,800
201-300	\$ 42,400
301-400	\$ 53,000
401-500	\$ 63,600
501-600	\$ 74,200
601-800	\$ 90,000
801-1000	\$100,000
1001 or more connections	\$113,300

For each app on a user's device, agencies must license a connection to the SYNC Service for AASHTOWare Project. For example, if a user needs to connect three apps on the user's device to the SYNC Service, the agency must license three connections.

Evaluation License Option

First-time licensees of the SYNC Service for AASHTOWare Project may elect a no-cost 90-day evaluation license.

First-time licensees of a production release module may elect a no-cost 180-day evaluation or pay for a one-year evaluation license. The one-year evaluation license is good for twelve months from time of initial license at a license fee equal to the current license fees listed above. The AASHTOWare Project BAMS/DSS one-year evaluation license provides one Evaluation License Service Unit (ELSU). The one-year evaluation license option for AASHTOWare Project Preconstruction, AASHTOWare Project Civil Rights & Labor, AASHTOWare Project Construction & Materials, or AASHTOWare Project Estimation includes two Evaluation License Service Units of support (\$27,000 value) at no additional cost.

Evaluation License Service Units (ELSUs) are valid only for the one-year duration of the associated evaluation license. The licensee may use these ELSUs at its discretion to assist with installation, implementation and training activities during the evaluation period. Unused ELSUs units expire at the end of the one-year license period. AASHTO will no longer offer an evaluation license for AASHTOWare

Project Cost Estimation, AASHTOWare Project Construction Administration or AASHTOWare Project SiteManager. Because of the expense involved in providing the no-cost service units associated with the one-year evaluation license, the standard Site License option for all AASHTOWare Project modules is not available in conjunction with an evaluation license. To continue licensing beyond the initial 12-month evaluation period, licensees would then pay a prorated annual license fee based on the number of months remaining in the current fiscal year in order to return to the normal AASHTO fiscal/licensing year of July 1 - June 30.

Example: A request for a one-year evaluation license of AASHTOWare Project Preconstruction, AASHTOWare Project Civil Rights & Labor, AASHTOWare Project BAMS/DSS, AASHTOWare Project Construction & Materials, and AASHTOWare Project Estimation would result in the following fee:

Description		Annual License Fee
Modules	BAMS/DSS	\$ 77,000
	Preconstruction	\$ 47,000
	Civil Rights & Labor	\$ 47,000
	Construction & Materials	\$ 207,000
	Estimation	\$ 47,000
Total		\$ 425,000

Note: In the above one-year evaluation license example, nine (9) Evaluation License Service Units are included (one for AASHTOWare Project BAMS/DSS, two for AASHTOWare Project Preconstruction, two for AASHTOWare Project Civil Rights & Labor, two for AASHTOWare Project Construction & Materials, and two for AASHTOWare Project Estimation) at no additional fee.

Service Units

For the period from July 1, 2018 through June 30, 2019, AASHTO has established an arrangement with its AASHTOWare Project contractors, Info Tech, Inc. and AECOM, Inc., to offer the opportunity for agencies to acquire special fixed-fee increments or units of contractor-provided service for consultation and support to assist an agency in implementing the AASHTOWare Project modules. During this period, an agency may commit to one or more units of service. The actual number of hours the contractor will expend for one unit may vary depending on the AASHTO billing level of the contractor staff involved and the location where the service is being provided. The number of Service Units remaining at the conclusion of a fiscal year will be carried forward into the next fiscal year, but could result in a difference in work accomplished as the AASHTO billing level is based on the year during which the work is performed.

Service Unit Work Plan Development

Service Unit Contractors (Info Tech and AECOM) are independent contractors and solely responsible for all aspects of the performance, delivery, quality and terms and conditions of service they provide to agencies.

AASHTO SHALL NOT BE RESPONSIBLE AND DISCLAIMS ANY AND ALL LIABILITY FOR ANY DAMAGE OR LOSS WHATSOEVER, INCLUDING PERSONAL INJURY, DAMAGE TO PROPERTY, OR LOSS

OF BUSINESS OPERATIONS, INFORMATION OR DATA, ARISING OUT OF OR RELATING TO ANY ACT OR OMISSION OF SERVICE UNIT CONTRACTORS, THEIR EMPLOYEES, AGENTS AND SUBCONTRACTORS.

It is highly recommended that each agency review its service needs with the appropriate AASHTOWare Project contractor, develop a firm estimate of the number of units required and establish work plans and other terms and conditions of service, including the schedule for delivery, prior to submitting their commitment. Further, the AASHTOWare Project Task Force reserves the right to review work plans for Service Unit work to ensure conformance with the guidelines for their use.

This service is not a pre-requisite to license AASHTOWare Project software, nor does it affect in any way the normal support, maintenance and enhancement services provided under the AASHTO license agreement and normal fee structure for AASHTOWare Project. Choosing this special offering is strictly the prerogative of an agency. The intent of Service Units is to offer the opportunity for an agency to acquire special fixed-fee increments or units of contractor-provided service for consultation and support. AASHTO shall serve as facilitator only by accepting the commitment for such contractor-provided services, invoice and receive payment on behalf of the agency and forward the order and payment to the contractor for the appropriate number of units of services ordered.

Further, AASHTO assumes no responsibility or liability for any obligation of Service Unit Contractors, including scheduling or delivery of such units of service. It shall remain the responsibility of the subscribing agency to schedule their individual unit(s) of service and establish any other terms and conditions directly with the contractor.

Service Unit Work Options

These services provide for consultation and support to assist the agency in the implementation of the AASHTOWare Project products and can include the following:

- Planning and conducting training events;
- Implementation planning;
- Technical assessment/technical planning;
- Application installation and configuration;
- Data mapping of current agency systems data to AASHTOWare Project (e.g. financial, pre-construction, materials management);
- Configuring of generic field windows;
- Configuring of custom templates/agency views (e.g. agency specific material test methods);
- Hosted Services;
- Interface development (e.g. from agency specific pre-construction systems and to agency specific financial management systems); and
- Conversion development to take data from existing agency systems and load into AASHTOWare Project (e.g. materials management data).

In general, Service Units should not be used for work involving major new software development by member agencies. Service Units may be converted to provide additional enhancement funding under the guidance of the Task Force.

To ensure that ownership issues are resolved, significant development work related to AASHTOWare products and enhancement requests utilizing service units should be reviewed by the Task Force prior to the work being performed. The use of Service Units to perform modifications that change AASHTO product source code must be reviewed and approved by the Task Force. Service units may not be used to provide reimbursement for travel expenses by agency personnel.

Fee for Service Units

Service Units can be ordered in unit increments of \$13,500 that cannot be prorated and shall be paid upon receipt of the invoice. This fee includes the AASHTO administrative costs. Each service unit provides \$12,200 in contractor services. For enhancement work requiring multiple service units, it may be better to consider the mechanism described in the Additional Funding for Development/Enhancement Items section.

Hosted Services

Agencies may use Service Units to acquire AASHTOWare Project hosted services. The intention is to allow interested agencies the opportunity to contract with the AASHTOWare Project contractor for allocation, setup, and maintenance of the physical environment (e.g. hardware, software, connectivity) needed to run and implement the AASHTOWare Project software. The actual number of hours and cost required to support an agency's specific hosted services needs will vary from agency to agency, based on several factors including, but not limited to the number and type of software modules to be hosted, the number and type of users to be supported, the number and type of customizations and interfaces to be supported, the types of administrative services needed, and the terms of service desired by the agency (e.g. uptime, backups).

Implementation of AASHTOWare Project software via a hosted environment and use of Service Units for hosted services does not in any way affect the normal maintenance, support, and enhancement services provided or the normal fee structure for AASHTOWare Project.

At this time, the use of service units for hosted services through AASHTO is only available for the existing AASHTOWare Project contractor, Info Tech, Inc. with which AASHTO has an existing contractual relationship. However, member agencies have the option to contract directly with a third party under the existing terms of the licensing agreement between AASHTO and the member agency independent of the use of service units.

Additional Funding for Development/Enhancement Items

Funding for Enhancement Items

The AASHTOWare Project Task Force recognizes that some member agencies may desire certain additional development or may desire to accelerate development of an AASHTOWare Project optional component(s), and may be in a position to fund such development. In fact, the practice of individual and/or groups of member agencies funding specific development/enhancement work through AASHTO's contracts with

its software service providers has long been an acceptable means of accomplishing such work.

Note: Agencies may transfer Service Units to fund additional enhancement items.

Process for Funding Additional Enhancements

Any agency or group of agencies that desire to fund enhancement work to one or more AASHTOWare Project modules that will not be addressed in our current work plan(s) should follow the process outlined below:

- Submit a request to the AASHTOWare Project Task Force describing the desired enhancement(s). This request should also indicate which member departments are considering or are prepared to fund the additional enhancement work, as well as an indication of how incorporating the desired enhancement will benefit the AASHTO community of users as a whole;
- If the desired enhancement is acceptable to the Task Force, the Task Force will direct the AASHTOWare Project Contractor to develop system requirements, cost estimate, i.e. work plan for the specific enhancement(s) and notify the requesting agency(ies) of the direction. If the desired enhancement is not accepted by the Task Force, the Task Force will provide the requesting agencies with their specific areas of concern.
- Based upon the work plan developed by the AASHTOWare Project Contractor, the requesting member agency or agencies will be notified of the total cost to accomplish the desired enhancement activity;
- The requesting agency or agencies should submit written funding commitment to AASHTO, attention AASHTOWare Project, Associate Project Director, along with instructions for billing, i.e. individual and address to send appropriate invoice(s); and
- Upon receipt of sufficient commitment(s) for funding, AASHTO will initiate the process to initiate a new contract or to approve and execute a contract modification to incorporate the approved enhancement activities.

Contact Information

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AASHTOWare Bridge Design™ and AASHTOWare Bridge Rating™ Software

Introduction

AASHTOWare Bridge Design and AASHTOWare Bridge Rating software products are comprehensive bridge design and load rating tools developed by AASHTO. For an agency's bridge inventory, the products store detailed bridge descriptions sufficient for structural analysis. AASHTOWare Bridge Design is the tool for assisting in the design of both superstructures and substructures in accordance with the AASHTO LRFD specification. AASHTOWare Bridge Rating is a tool for rating bridge superstructures in accordance with the AASHTO Manual for Condition Evaluation of Bridges, AASHTO Manual for Bridge Evaluation, AASHTO Standard Specification and AASHTO LRFD Specification. The two products share much of their user interface and database. When both products are licensed, a bridge can be designed using AASHTOWare Bridge Design and be immediately available to AASHTOWare Bridge Rating for load rating without re-entering and validating additional data. Refer to the detailed features and capabilities for each product below.

There are three primary components to the system: the user interface, the database and the analysis or computational engines. The database and user interface are capable of supporting a two or three-dimensional description of a bridge. Three-dimensional description is the basis for the 3-D modeling and analysis of special vehicle configurations. The computational engines support both line girder and 3-D analyses.

AASHTOWare Bridge Design and AASHTOWare Bridge Rating use a common database to allow an agency to store a detailed description of each bridge, which is independent of the analytical engine (including specification checking) and the user interface. The concept of storing generic bridge descriptions in a database is a powerful one with many user and agency benefits. Among the benefits are:

- Designing and rating a bridge using multiple analysis programs and specifications from the same description and input;
- Upgrading and/or replacing components of the system, including the structural analysis engine, specification checking software, and user interface while preserving the basic bridge data; and
- Easily linking to other related software systems, including bridge management systems such as AASHTOWare Bridge Management.

Additionally, the AASHTOWare Bridge Design/AASHTOWare Bridge Rating database is fully linked with the AASHTOWare Bridge Management database, meaning that users of two or all three of these AASHTOWare Bridge systems may query data across product lines. AASHTOWare Bridge users can now maintain a single bridge database supporting all the products, easily add and remove structures, and have the systems automatically coordinate their common bridge information.

AASHTOWare Bridge Design/AASHTOWare Bridge Rating Products and Project Functionality – Long Term

Long-term functionality changes include:

- Integrated report writing, using XML and a browser interface, combining data from all three products from their integrated database. This functionality will be directed to AASHTOWare Bridge Rating users who wish to include certain types of AASHTOWare Bridge Management data in their reports. Some functional design work has been completed on this task, but further development has been put on hold based on higher priority of other user demands;
- Integrated advanced report writing for design and rating of highway structures, using Crystal Reports. AASHTOWare Bridge Rating users who wish to include certain types of AASHTOWare Bridge Management data can do so using the combined data from the integrated database for the AASHTOWare Bridge;
- Extension of AASHTOWare Bridge Design/AASHTOWare Bridge Rating security features to be compatible with new security features for AASHTOWare Bridge Management. This will include: a utility to assign access rights to users across all AASHTOWare Bridge within the same user interface; an integrated log-in so users have access to all permitted AASHTOWare Bridge functionality after just one log-in; and an integrated Bridge Explorer style front-end providing access to all relevant AASHTOWare Bridge Design, AASHTOWare Bridge Rating and AASHTOWare Bridge Management functionality, compatible with the new AASHTOWare Bridge Management architectural direction now being defined;
- Additional automated design features through a new AASHTOWare Bridge Design Tool. The AASHTOWare Bridge Design Tool will be a separate application and will include steel plate girder sizing for steel multi-girder superstructures and automated strand design or reinforcement design for concrete multi-girder superstructures. Using a new streamlined interface, bridges will be planned, sized and designed with minimal input by the user. Completed designs will then be available for advanced analysis and specification checking and rating within the current AASHTOWare Bridge Design/AASHTOWare Bridge Rating platform;
- New frame analysis and rating features are being explored and are expected to be introduced over the upcoming years, including a generic finite element modeling approach; and
- Ongoing commitment to the advancement of the software platform to keep current with the latest technology provided by the Windows Operating System and Database Management Systems.

6.8.3 release marked the Phase 1 completion of the Modernization Project. The first release of the modernized system focuses on the AASHTO analysis engine. A fully modernized superstructure analysis and specification checking engine is available in the legacy 6.8.3 system along with the existing legacy analysis engine. Users can

choose between the existing legacy analysis engine and the new modernized analysis engine.

Annual product releases to support necessary maintenance and AASHTO specification updates will continue for the duration of the AASHTOWare Bridge Design/AASHTOWare Bridge Rating Modernization Project. However, functionality enhancements will not be incorporated into the 6.8.X releases. Support for AASHTOWare Bridge Design/AASHTOWare Bridge Rating release 6.8.4 and all earlier versions will cease effective June 30, 2021.

AASHTOWare Bridge Design – LRFD Bridge Design

AASHTOWare Bridge Design employs the same database and graphical user interface as AASHTOWare Bridge Rating, and has the same COM-compliant interface for third-party add-on modules. (See AASHTOWare Bridge Rating section on Architectural Support for Third-Party Customizations and Add-ons.) AASHTOWare Bridge Design includes an LRFD analysis engine. This analysis engine supports the current analysis needs of the software and designers can run multiple analysis programs from one definition of a bridge.

A new design tool for prestressed concrete beams was released in 2016. The first release includes the overall framework including libraries of beam shapes, vehicles, materials and the basic capabilities required to analyze and design a single prestressed concrete beam. A future release will add the capability to design all beams in a cross-section. The user can describe the overall bridge geometry (framing plan) that includes multiple prestressed concrete beams. This is the “System” definition in AASHTOWare Bridge Design and AASHTOWare Bridge Rating. The tool will compute live load distribution factors and both dead loads and live loads. The user specifies parameters, such as a range for the beam depth, and the tool will determine a strand pattern for either harped strands or debonded strands as specified that satisfies the AASHTO LRFD specification. The user is presented with one or more beam designs that satisfy the specification.

Bridge Configurations and Capabilities

Superstructure configurations and capabilities include:

- Simple spans, continuous spans, hinges (Steel and Reinforced Concrete);
- U. S. Customary and S.I. units;
- Girder-line and 3D-FEM analyses;
- Parallel and flared girder configurations;
- Reinforced concrete tee beams, slabs, I-beams and multi-cell box beams;
- Reinforced concrete box culverts;
- Prestressed concrete box, I, tee and U-beams (precast, pretensioned continuity for live load);
- Harped strands and debonded strands;
- Steel rolled beams (including cover plates);
- Steel built-up plate I-girders;
- Steel welded plate I-girders (including hybrid);
- Parallel, tapered, parabolic and circular webs;

- Transverse and longitudinal stiffened;
- Frame structure simplified definition;
- 3-D analysis of steel and concrete multi-girder superstructures; and
- 3-D analysis of curved steel multi-girder superstructures.

Substructure capabilities include:

- Analysis and specification-checking of bridge piers including wall, hammerhead and multi-column pier bents; and
- Single drilled shaft for substructure.

Design Review/Specification Checking Features

- LRFD specification checking with detailed computation reporting (for example, failed specification or resistance checks can be examined with equation and article references including inputs, output and conclusions);
- Design ratio graphs and summary reports;
- Wizards for simplifying the design of steel and prestressed concrete bridges; and
- AASHTO engine for LRFD design review/specification checking.

LRFD Design Capabilities

- Prestressed Concrete Design Tool;
- Shear Stirrup Design Tool;
- Shear Stud Design Tool;
- Flange to web weld design; and
- Reinforced Concrete Box Culvert Design Tool.

Common Database and User Interface

Since AASHTOWare Bridge Design and AASHTOWare Bridge Rating share the same database, all structural models built with AASHTOWare Bridge Design will automatically be available for analysis in AASHTOWare Bridge Rating. Both systems also share a common interface with AASHTOWare Bridge Management, thus providing an integrated set of tools covering the entire life cycle of the bridge inventory.

Output Reporting Features

AASHTOWare Bridge Design provides a sophisticated set of output reports to help the designer understand the performance of a new bridge. A tree-structured graphical representation of the LRFD specification indicates whether each article is passed or failed and provides access to the detailed calculations for the bridge as well as the specification text. A suite of X-Y plots shows moments, shears, deflections, and other valuable information.

Substructures

AASHTOWare Bridge Design for LRFD substructures was incorporated into the product line in April 2008 (release 6.0) and later incorporated into the AASHTOWare Bridge Design and Rating software as a standard feature in release 6.1. AASHTOWare Bridge Design substructure provides for the analysis and specification-checking for common pier types including wall, hammerhead and multi-column bents. If funding permits other substructure types, including abutments, may be added.

AASHTOWare Bridge Rating – Bridge Load Rating System

AASHTOWare Bridge Rating is AASHTOWare's product for bridge load rating, featuring state-of-the-art graphical tools to speed preparation of the data and application of the results. Using a newly developed AASHTO module as its analytical engine for load and resistance factor rating (LRFR), load factor rating (LFR) and allowable stress rating (ASR), Bridge Rating provides an integrated database where rating inputs and outputs can readily be stored, reviewed and re-used. Through this database and the application-independent user interface, a user may provide a 3-dimensional description of a bridge superstructure. This bridge data can then be used by a variety of line-girder, 2-D or 3-D analysis packages, permit/routing systems and other third-party produced applications.

Bridge Configurations and Capabilities

- Simple spans, continuous spans, hinges (Steel and Reinforced concrete);
- U. S. Customary and S.I. units;
- Girder-line and 3D-FEM analyses;
- Parallel and flared girder configurations;
- Reinforced concrete tee beams, slabs, I-beams and multi-cell box beams;
- Reinforced concrete box culverts;
- Prestressed concrete box, I, tee and U-beams (precast, pretensioned, continuity for live load);
- Post-tensioned multi-cell box beams;
- Harped strands and debonded strands;
- Steel rolled beams (including cover plates);
- Steel built-up plate I-girders;
- Steel welded plate I-girders (including hybrid);
- Parallel, tapered, parabolic and circular webs;
- Transverse and longitudinal stiffened;
- Frame structure simplified definition;
- Steel trusses and floor systems;
- Timber beams and decks;

- Corrugated metal decks; 3-D analysis of steel and concrete multi-girder superstructures; and
- 3-D analysis of curved steel multi-girder superstructures.

Load Rating Features

- Load rate various structure units within a bridge;
- Load rate various members within a structural unit;
- Rate a user-defined group of bridges;
- Input definition and rating of deteriorated sections;
- Review of rating history for groups of bridges and routing applications;
- AASHTO engine for LRFR/LFD/ASD rating;
- Load rate timber and corrugated metal decks;
- Load rate girder-floorbeam-stringer configurations;
- Load rate truss-floorbeam-stringer and floor-truss configurations;
- Permit rating with routine traffic in adjacent lane;
- A vehicle library capable of defining any number of wheels on any number of axles; and
- Rating of non-standard gage vehicles by loading a 3-D influence surface.

Bridge Load Rating and Permit Vehicle Analysis Database

Having all of its data in a standardized accessible form makes it economical to build powerful new features for management of the load rating process and for support of routine business activities such as policy development and overload permit application review. For example, bridges along a route can be placed into folders, where an entire route can be rated for a permit vehicle in a single step. Permit analysis includes sophisticated three-dimensional analysis to consider load effects due to a specific vehicle traveling along a user-defined path on a structure. AASHTOWare Bridge Rating complies with corporate database management standards by supporting the widely used Oracle and Microsoft SQL Server database managers, including their data sharing and security features.

A new rating tool was released in 2016. The tool adds a new process to AASHTOWare Bridge Rating that is capable of very quickly computing load ratings. To the extent possible, data required for computing a load rating will be computed and saved in advance of the request for a load rating. This process greatly reduces the amount of computations that must be performed to produce a load rating when one is requested. This is because the majority of the computations will be done in advance of the request, pre-computing the data necessary for computing a load rating. This technique implemented in the new rating tool allows AASHTOWare Bridge Rating users to quickly compute load ratings based on a vehicle description and a list of bridges. The new rating tool is not a permitting system. It will not select a route or generate a list of bridges along a route. It will be able to utilize a list of bridges selected by the user and rate those bridges that are in the rating repository. There is a software interface for the new rating tool that enables it to be called from other systems including permitting systems.

Graphical Features and Customizable Libraries

AASHTOWare Bridge Rating contains a host of features to make load rating as easy as possible. Libraries of standard and user-defined vehicles, loads, steel and pre-stressed shapes, load and resistance factors, materials, parapets, and other bridge components allow bridge models to be built quickly in a drag-and-drop manner. All or part of a bridge can quickly be copied to another bridge. As a bridge model is constructed, a graphical schematic framing plan, elevation view, cross-section view, and other schematics provide feedback and make common types of errors apparent.

Import and Rating Features

As the successor to the Bridge Analysis and Rating Systems (BARS), AASHTOWare Bridge Rating can import existing BARS data files. Existing BRASS and BAR7 data files are also supported by the import feature.

AASHTOWare Bridge Rating provides flexure and shear ratings, computes dead loads and distribution factors if they are not manually input, and analyzes deteriorated sections. Data can be provided in either cross-section or schedule-based forms.

Architectural Support for Third-Party Customization and Add-ons

Since the structural model of a bridge in a database can be complex, AASHTOWare Bridge Rating provides a simplified object model that ties the modules of the system together and makes the software open to expansion by sophisticated users and third-party developers. Although AASHTOWare Bridge Rating is written in C++/C#, its support of the industry-standard COM interface makes it possible to access the system's data and functionality from many commercial software packages, including Visual Basic®, Excel®, AutoCAD®, and even Microsoft Word®. AASHTO encourages third-party developers to market add-on features, which enhance the core capabilities of the system.

User Support

User support is provided for licensed AASHTOWare Bridge Design and AASHTOWare Bridge Rating users by telephone and on-line via the Internet. Support mechanisms include:

- AASHTOWare Bridge Design and Rating Support Center – Assists users and support staff in managing support requests. Users can view past requests and staff responses, and add new requests of their own;
- AASHTOWare Bridge Design and AASHTOWare Bridge Rating Technical Notes – Contains answers to frequently asked questions, announcements of changes, discussion of hardware requirements, and modeling considerations;
- User Forum – Allows users and developers to exchange comments and issues with other users, as well as members of the development and support staff;
- Download – Patches, updates, add-ins, and documentation are available on the product website; and
- Web Page – The AASHTOWare Bridge Design and Rating Technical Support web page at <https://aashto.mbakercorp.com> provides access to all the

AASHTOWare Bridge Design and AASHTOWare Bridge Rating support information and links to related materials.

Hardware and Software Environments

For the latest supported configurations, please visit: <https://aashto.mbakercorp.com>

Minimum Configuration

Minimum configuration is not recommended for 3D FEM analysis.

Hardware Requirements

Machine	Intel Core i5 processor or equivalent
Memory	2 GB for 32-bit OS 8 GB for 64-bit OS
Video	1600x1200
Mouse	Microsoft® or compatible
Hard Disk	250 GB

Software Requirements

Microsoft Windows® 7, Windows®8, or Windows®10

Recommended Configuration

Hardware Requirements

Machine	Intel Core i7 processor or equivalent
Memory	32 GB or more for 64-bit OS
Video	1600x1200
Mouse	Microsoft® or compatible
Hard Disk	1 TB *

* Solid State Drive is recommended for 3D FEM analysis.

Software Requirements

Microsoft Windows®7, Windows®8, or Windows®10

Database Support and Sunset Status

Database support for AASHTOWare Bridge Design or AASHTOWare Bridge Rating is coordinated with the availability of support that the industry vendors provide. This table will change as Oracle or Microsoft ceases support for any of the listed versions.

Platform	Version(s)	Status
Oracle*	10g R2 (10.2)	Active
	11g R2 (11.2)	Active
	12c R1 (12.1)	Active
MS SQL Server**	2014 SP2	Active
MS SQL Server Express**	2014 SP2	Active

* Previous versions of Oracle 10g (i.e. 10.0 through 10.1) are not supported.

** Previous versions of SQL Server are not supported.

Current Annual Fees and Licensing Options

The option to deliver AASHTOWare Bridge Design and AASHTOWare Bridge Rating software electronically is available to licensing agencies.

Base System Option

The base system consists of the AASHTOWare Bridge database and the graphical user interface (GUI).

Standalone – Developer

This option is available to third party developers, subject to AASHTOWare Bridge Task Force approval, who wish to create bridge software tools that would link to the AASHTOWare Bridge database and/or utilize the AASHTOWare Bridge Design/AASHTOWare Bridge Rating GUI. End users of third party tools would be required to be a licensee of the AASHTO base system described above in order to use the third party linkage. A third party developer cannot distribute the AASHTO base system. Third party developed software can be licensed, if desired, by the third party developer independent of AASHTO. The licensee of this product will be required to sign a non-disclosure agreement. The license fee includes two hours of installation support.

Description	Annual License Fee
Annual Fee	\$500

AASHTOWare Bridge Design Single Workstation Option

This option includes the complete AASHTOWare Bridge Design software for designing (analysis and specification checking) steel, reinforced concrete, prestressed concrete and timber superstructures on a standalone workstation. This option includes unlimited support. Use of the AASHTOWare Bridge database under this license is limited to a single user at a time working on the same machine where

the database is installed. Prorated options are available for special research projects upon request.

Description	Annual License Fee
First License AASHTOWare Bridge Design Single Workstation Option	\$10,000
Subsequent AASHTOWare Bridge Design Single Workstation Option	\$8,500

Organizations licensing workstation versions of both AASHTOWare Bridge Rating and AASHTOWare Bridge Design may request to have their software delivered with a single user interface which provides access to both products.

AASHTOWare Bridge Design Unlimited Option (AASHTO Member Agency)

This AASHTO member agency option includes the complete AASHTOWare Bridge Design software described above for use on an unlimited number of workstations within the agency or installed on a server for unlimited user access. This license includes unlimited support.

Description	Annual License Fee
AASHTOWare Bridge Design Unlimited Option (AASHTO Member Agency)	\$37,500

AASHTOWare Bridge Design Unlimited Option (Non-Member Organization)

This non-member organization option includes the complete AASHTOWare Bridge Design software described above for use on an unlimited number of workstations within the agency or installed on a server for unlimited user access. This license includes unlimited support.

Description	Annual License Fee
AASHTOWare Bridge Design Unlimited Option (Non-Member Organization)	\$50,000

AASHTOWare Bridge Rating Single Workstation Option

This option includes the complete AASHTOWare Bridge Rating software for load rating steel, reinforced concrete and pre-stressed concrete superstructures on a standalone workstation. This option includes unlimited support. Use of the AASHTOWare Bridge database under this license is limited to a single user at a time working on the same machine where the database is installed. For research, a prorated option may be available upon request.

Description	Annual License Fee
First License AASHTOWare Bridge Rating Single Workstation Option	\$10,000
Subsequent License AASHTOWare Bridge Rating Single Workstation Option	\$8,500

Organizations licensing workstation versions of both AASHTOWare Bridge Rating and AASHTOWare Bridge Design may request to have their software delivered with a single user interface which provides access to both products.

AASHTOWare Bridge Rating Unlimited Option (AASHTO Member Agency)

This AASHTO member agency option includes the complete AASHTOWare Bridge Rating software described above for use on an unlimited number of workstations within the agency or installed on a server for unlimited user access. This license includes unlimited support.

Description	Annual License Fee
AASHTOWare Bridge Rating Unlimited Option (AASHTO Member Agency)	\$37,500

AASHTOWare Bridge Rating Unlimited Option (Non-Member Organization)

This non-member organization option includes the complete AASHTOWare Bridge Rating software described above for use on an unlimited number of workstations within the agency or installed on a server for unlimited user access. This license includes unlimited support.

Description	Annual License Fee
AASHTOWare Bridge Rating Unlimited Option (Non-Member Organization)	\$50,000

Special Consultant/Agency Option

Consulting engineering firms performing rating or design work, or other agencies working with and supplying information to/for a member agency holding a valid license to the AASHTOWare Bridge Design or AASHTOWare Bridge Rating Unlimited Option may obtain a single workstation copy of AASHTOWare Bridge Design or AASHTOWare Bridge Rating for a special license fee. Under this licensing option, the sponsoring member agency (holding the Unlimited Option license) must approve the consultant to license under their unlimited option license to perform work on bridges that are included in their unlimited license inventory. This special licensing option is also available to universities engaged in performing research on bridges in the unlimited licensing inventory of a sponsoring member agency holding a valid license to the AASHTOWare Bridge Design or AASHTOWare Bridge Rating Unlimited Option, provided such special license

request is approved by the sponsoring agency. The system requires a database engine. Contractor support for this licensing option is limited to installation support. Application support for consultants licensing under this option is provided by the Unlimited Option sponsoring agency.

Description	Annual License Fee
AASHTOWare Bridge Rating Special Consultant Option	\$5,000 per workstation
AASHTOWare Bridge Design Special Consultant Option	\$5,000 per workstation

Organizations licensing workstation versions of both AASHTOWare Bridge Rating and AASHTOWare Bridge Design may request to have their software delivered with a single user interface which provides access to both products.

Agency Sponsored Consultant Licenses

A member agency who is a licensee of the AASHTOWare Bridge Design or AASHTOWare Bridge Rating Unlimited Option may purchase on behalf of consulting engineering firms performing rating or design work for the member agency or a local agency performing rating or design work for the member agency the following AASHTOWare Bridge Design or AASHTOWare Bridge Rating “10-packs”. The system requires a database engine and includes limited support by the member agency. Consulting firms or local agencies using this license option will be required to sign a software license agreement with AASHTO. Contractor support for this licensing option is limited to installation support. Application support for consultants licensing under this option is provided by the Agency Sponsored Consultant licensee purchasing the consultant’s license.

Description	Annual License Fee
AASHTOWare Bridge Design or AASHTOWare Bridge Rating	10 Copies \$33,000
	20 Copies \$60,000
	30+ Copies \$90,000

Educational Option

This option exists for educational institutions within the jurisdictions of our Member Departments, and/or Associate Members to AASHTOWare Bridge Design or AASHTOWare Bridge Rating free of charge for use in the classroom. This option is not available to individuals and it is not to be used for research, graduate work or any other purpose.

The educational option license offers full functionality with the following limitations:

Maximum number of spans:	3
Maximum span length:	no limit
Maximum number of girders per structure:	10
Maximum number of bridges:	no limit

Note: A licensing agreement executed by the institution assuring compliance with the education and training limitation is necessary to exercise this option.

AASHTOWare Bridge Design & Rating Licensing Arrangements

PGSuper Professional™

PGSuper Professional™ is a proprietary software product of BridgeSight Inc, South Lake Tahoe, California. AASHTO Member Departments and Associate Members wishing to use PGSuper Professional must license the software from AASHTO and abide by the terms and conditions granted by this license agreement, which is incorporated by reference into the AASHTO licensing agreement (s). A copy of the AASHTO-BridgeSight agreement will be provided to any requesting member or associate member agency.

PGSuper Professional models simple and continuous span conventional pre-tensioned precast /prestressed bridge girder structures. It designs, performs specification checks, and load rates in accordance with the AASHTO LRFD Bridge Design Specifications, the AASHTO Manual for Bridge Evaluation for LRFR Load Ratings, and DOT agency-specific criteria.

PGSuper Professional adds over a dozen enhancements to the basic PGSuper software including the ability to translate bridge models from PGSuper to the AASHTOWare Bridge Design & Rating database. Other powerful features include: the Girder Design Dashboard™, 3D model visualization, enhanced reporting, enhanced library management, data exchange with Microsoft Excel, DXF, LandXML, and ViaThor's VBent substructure design software. PGSuper Professional also adds exclusive section types including the PCI North East NEXT Beam, Florida I Beam, square-voided slab, and the Illinois IL Girder. Also, for ease of use, PGSuper Professional includes access to cloud-based configurations for a growing number of DOTs.

Compatibility with AASHTOWare Bridge Design and Rating

The BridgeSight PGSuper Professional AASHTO Bridge Data Exporter translates a detailed precast, pretensioned girder bridge superstructure model from PGSuper to the AASHTO Bridge database in seconds. Translated data includes the bridge geometry and framing information, concrete, reinforcing and prestressing materials, LRFD resistance factors, load case descriptions, dead and live loads, sidewalk definitions, allowable stress limits, prestress losses, live load distribution factors, and much more. After translation, bridges can be checked and load rated by AASHTOWare Bridge Design & Rating to provide a secondary method of calculation for verification as is recommended by Section 4.4 in the AASHTO LRFD Bridge Design Specifications.

Data translation is performed through the AASHTOWare Bridge products API, which is considered to be the safe, preferred method to write data into AASHTOWare Bridge Design & Rating.

Hardware Requirements

The minimum hardware requirements for PGSuper Professional are the same as for the AASHTOWare Bridge Rating-Design programs. A minimum video resolution of 1280x1024 (SXGA) is recommended.

Licensing Options

Description	Number of Support Contacts	Annual License Fee
Single User	1	\$1,500
Single Site	1 – 3	\$4,500
Single Site	5	\$5,500
Single Site	6 or more	\$1,000/Contact

A Single User license allows one designated individual to use PGSuper Professional on up to two computers (typically, one desktop and one laptop computer). This person may also utilize support services and is entitled to product updates over the license duration.

Single Site Licenses provide unlimited installations for an entire office located at a single physical address. Companies must purchase a Single Site License for each office location separately. Single Site License pricing is based on the number of contacts for support desired for that office. Support is made available to only those individuals on the Support Contact list. A list of Support Contacts is created at the time of software delivery and may be modified up to twice annually. Licensees are entitled to all product updates over the license duration.

BridgeLink Professional™

BridgeLink Professional™, a suite of bridge engineering software, is a proprietary product of BridgeSight Inc, South Lake Tahoe, California which interfaces with the AASHTOWare Bridge Design & Rating database for precast-prestressed girder bridges and provides additional features and tools to support bridge design and rating activities. BridgeLink contains the following software tools.

- PGSuper Professional™ - a tool for precast-prestressed girder bridge design, analysis and load rating
- PGSplice Professional™ - a tool for precast-prestressed spliced girder bridge design, analysis and load rating
- BEToolbox™ - Bridge Engineering Toolbox utility programs
- TOGA™ - TxDOT Optional Girder Analysis tool
- XBRate™ - reinforced concrete cross beam load rating

Hardware Requirements

The minimum hardware requirements for BridgeLink Professional are the same as for the AASHTOWare Bridge Rating-Design programs. A minimum video resolution of 1280x1024 (SXGA) is recommended.

Licensing Options

Description	Number of Support Contacts	Annual License Fee
Single User	1	\$3,500
Single Site	1 – 3	\$10,000
Single Site	5	\$13,500
Single Site	6 or more	\$2,300/Contact

A Single User license allows one designated individual to use PGSuper Professional on up to two computers (typically, one desktop and one laptop computer). This person may also utilize support services and is entitled to product updates over the license duration.

Single Site Licenses provide unlimited installations for an entire office located at a single physical address. Companies must purchase a Single Site License for each office location separately. Single Site License pricing is based on the number of contacts for support desired for that office. Support is made available to only those individuals on the Support Contact list. A list of Support Contacts is created at the time of software delivery and may be modified up to twice annually. Licensees are entitled to all product updates over the license duration.

Contact Information:

Additional information about PGSuper Professional and BridgeLink Professional can be found at <http://bridgesight.com>

Richard Pickings, P.E.

BridgeSight Inc.

P.O. Box 19172

South Lake Tahoe, CA 96151

mkting@bridgesight.com

(877) 441-0346

Service Units

For the period from July 1, 2018 through June 30, 2019, AASHTO has established an arrangement with its AASHTOWare Bridge Design and AASHTOWare Bridge Rating contractor, Michael Baker International, to offer the opportunity for agencies to acquire special fixed-fee increments or units of contractor-provided service for consultation and support to assist the licensee in expediting conversion to the current generic releases of AASHTOWare Bridge Design/AASHTOWare Bridge Rating or any related bridge load rating or bridge design needs using the software. During this period, an agency may commit to one or more units of service. The fee for each unit of service provides approximately 80 total hours of labor by a contractor employee preparing for, spending up to four days at the licensee site, and providing follow-up support, and includes all other direct and related travel expenses. The actual number of hours may vary depending on the AASHTO billing level of the employees involved and whether or not any direct costs or travel costs are involved. Service Units remaining at the conclusion of a fiscal year will be carried forward into the next fiscal year. The number of Service Units carried forward will be adjusted to reflect the subsequent year's price per unit, but the dollar value of the licensee's Service Units available will remain the same.

Service Unit Work Plan Development

Service Unit Contractor (Michael Baker International) is an independent contractor and is solely responsible for all aspects of the performance, delivery, quality and terms and conditions of service they provide to agencies.

AASHTO SHALL NOT BE RESPONSIBLE AND DISCLAIMS ANY AND ALL LIABILITY FOR ANY DAMAGE OR LOSS WHATSOEVER, INCLUDING PERSONAL INJURY, DAMAGE TO PROPERTY, OR LOSS OF BUSINESS OPERATIONS, INFORMATION OR DATA, ARISING OUT OF OR RELATING TO ANY ACT OR OMISSION OF SERVICE UNIT CONTRACTORS, THEIR EMPLOYEES, AGENTS AND SUBCONTRACTORS.

It is highly recommended that each agency review its service needs with the appropriate AASHTOWare Bridge Design/AASHTOWare Bridge Rating contractor, develop a firm estimate of the number of units required and establish work plans and other terms and conditions of service, including the schedule for delivery, prior to submitting their commitment. Further, the AASHTOWare Bridge Task Force reserves the right to review work plans for Service Unit work to ensure conformance with the guidelines for their use.

This service is not a pre-requisite to license AASHTOWare Bridge Design/AASHTOWare Bridge Rating, nor does it affect in any way the normal support, maintenance and enhancement services provided under the AASHTO license agreement and normal fee structure for AASHTOWare Bridge Design/AASHTOWare Bridge Rating. Choosing this special offering is strictly the prerogative of an agency. The intent of Service Units is to offer the opportunity for an agency to acquire special fixed-fee increments or units of contractor-provided service for consultation and support. AASHTO shall serve as facilitator only by accepting the commitment for such contractor-provided services, invoice and receive payment on behalf of the agency and forward the order and payment to the contractor for the appropriate number of units of services ordered.

Further, AASHTO assumes no responsibility or liability for any obligation of Service Unit Contractors, including scheduling or delivery of such units of service. It shall remain the responsibility of the subscribing agency to schedule their individual unit(s) of service and establish any other terms and conditions directly with the contractor.

Service Unit Work Options

Service units are intended to provide consultation and support to assist the licensee in the implementation of the AASHTOWare Bridge Design/AASHTOWare Bridge Rating products, and may include the following types of activities, or work by the contractor:

- Updating prior releases of the AASHTOWare Bridge Design/AASHTOWare Bridge Rating database;
- Adding an analytical or specification engine to the AASHTOWare Bridge Design system;
- Adding new agency-specific features to the system; and
- Specialized training in the use of AASHTOWare Bridge Design or AASHTOWare Bridge Rating during a two-day workshop for up to 15 individuals.

Note: The contractor will provide the instructors and workshop materials and will work with the agency to set up the training (software installation, etc.) within reason. All travel related costs for the instructors are also included in the fee. The sponsoring agency shall provide the facilities, hardware and support for the training. The agency is also responsible for inviting the attendees and for their associated travel costs.

The examples listed above may require more than one service unit each, depending on specific agency requirements. Other work that can be performed using one or more service units includes addressing other database issues, performing software development tasks, developing custom reports, or other AASHTOWare Bridge Design/AASHTOWare Bridge Rating-related work as needed by the agency.

In general, Service Units should not be used for work involving major new software development by member agencies. Service Units may be converted to provide additional enhancement funding under the guidance of the Task Force. To ensure that ownership issues are resolved, significant development work related to AASHTOWare products and enhancement requests utilizing service units should be reviewed by the Task Force prior to the work being performed. The use of Service Units to perform modifications that change AASHTO product source code must be reviewed and approved by the Task Force. Service units may not be used to provide reimbursement for travel expenses by agency personnel.

Fee for Service Units

This service is offered and can be ordered in unit increments of \$11,600, which cannot be prorated and shall be paid upon receipt of the invoice. This fee includes the AASHTO administrative costs. Each service unit provides \$10,000 in contractor services.

Additional Funding for Development/Enhancement Items

The AASHTOWare Bridge Task Force recognizes that some member agencies might desire certain additional development or may desire to accelerate development of an AASHTOWare Bridge Design/AASHTOWare Bridge Rating optional component(s), and may be in a position to fund such development. In fact, the practice of individual and/or groups of member agencies funding specific development/enhancement work through AASHTO's contracts with its software service providers has long been an acceptable means of accomplishing such work.

Process for Funding Additional Enhancements

Any member department, or group of member departments that desires to fund development/enhancement work for one or more AASHTOWare Bridge Design/AASHTOWare Bridge Rating modules that will not be addressed in our current work plan(s) should follow the process outlined below:

- Submit a request to the AASHTOWare Bridge Task Force describing the desired enhancement(s). This request should also indicate which member departments are considering or are prepared to fund the additional enhancement work, as well as an indication of how incorporating the desired enhancement will benefit the AASHTO community of users as a whole;

- If the desired enhancement is acceptable to the Task Force, the Task Force will direct the AASHTOWare Bridge Design/AASHTOWare Bridge Rating Contractor to develop system requirements, cost estimate, i.e. work plan for the specific enhancement(s) and notify the requesting agency(ies) of the direction. If the desired enhancement is not accepted by the Task Force, the Task Force will provide the requesting agencies with their specific areas of concern;
- Based upon the work plan developed by the AASHTOWare Bridge Design/AASHTOWare Bridge Rating Contractor, the requesting member agency or agencies will be notified of the total cost to accomplish the desired enhancement activity;
- The requesting agency or agencies should submit written funding commitment to AASHTO, attention AASHTOWare Bridge Project Manager, along with instructions for billing, i.e. individual and address to send appropriate invoice(s); and
- Upon receipt of sufficient commitment(s) for funding, AASHTO will initiate the process to initiate a new contract or to approve and execute a contract modification to incorporate the approved enhancement activities.

Contact Information

AASHTO Staff

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AASHTOWare Bridge Management™ Software

Introduction

The AASHTOWare Bridge Management software is a comprehensive asset management system developed to assist in the challenging task of bridge management. AASHTOWare Bridge Management stores bridge inventory and inspection data; formulates network-wide preservation and improvement policies for use in evaluating the needs of each bridge in a network; and makes recommendations for what projects to include in an agency's capital plan for deriving the maximum benefit from limited funds.

AASHTOWare Bridge Management

AASHTOWare Bridge Management supports the entire bridge management cycle, allowing user input at every stage of the process. The system stores bridge inventories and records inspection data. Once inspection data is entered, AASHTOWare Bridge Management is capable of maintenance tracking and federal reporting. The software integrates the objectives of public safety and risk reduction, user convenience, and preservation of investment to produce budgetary, maintenance, and program policies. Additionally, it provides a systematic procedure for the allocation of resources to the preservation and improvement of the bridges in a network, by considering both the costs and benefits of maintenance policies versus investments in improvements or replacements.

AASHTOWare Bridge Management supports the collection of inspection data based on the AASHTO Manual for Bridge Element Inspection, and provides the user with a well-organized and intuitive graphical user interface. In fact, the software's interface continues to be improved and expanded as shown by the recent release of AASHTOWare Bridge Management 5.3. The system consists of a set of modules, each of which is designed to provide the user with the informational display, options and actions relevant to the module's particular function.

Furthermore, the AASHTOWare Bridge Management framework has been expanded to support multi-asset data collection and storage. The current version of AASHTOWare Bridge Management, 5.3, includes capabilities to collect and report tunnel inspection data in addition to bridges.

Agencies licensing AASHTOWare Bridge Management in FY2019 will receive AASHTOWare Bridge Management 5.3 and subsequent releases in FY2019. This web-based version of the system supports bridge management, inventory, and inspection data through a web server on an agency's intranet or internet connections.

Report development for AASHTOWare Bridge Management is facilitated through Crystal Reports. With the purchase of each Agency's AASHTOWare Bridge Management software license, each Agency has a developer license to Crystal Reports 2013. To obtain a license, each Agency should send an email to the contractor and they will provide the license key.

Support for AASHTOWare Bridge Management releases 5.2.1 and earlier will cease effective June 30, 2019

Given that AASHTOWare Bridge Management is a web-based bridge management tool, AASHTO is also offering the option to have the software hosted by the contractor. Agencies interested in online hosting services should contact the contractor, Bentley Systems, for more information.

In addition to the hosting of AASHTOWare Bridge Management, licensees are able to purchase optional add-on modules to enhance the overall capabilities of the system. Add-on modules and hosting services may be ordered via AASHTO Hosting and Add-On (HAO) Service Units.

AASHTOWare Bridge Management supports Oracle and Microsoft SQL Server databases. Licensees should confirm support for specific versions or releases of these databases with the contractor.

User Support

User support is provided for licensed AASHTOWare Bridge Management users through a variety of means, including phone, email and online via the Internet. Support mechanisms include:

- AASHTOWare Bridge Management Support Center – Assists users and contractor staff in managing support requests. Users can view past requests/tickets and staff responses, and add new requests of their own.
- AASHTOWare Bridge Management Technical Notes – Contains answers to frequently asked questions, announcements of changes, discussion of hardware requirements, and modeling considerations.
- User Forum – Allows users and developers to exchange comments and issues with other users, as well as members of the development and support staff.
- Download – Patches, updates, add-ins, and documentation are available on the product website.
- Web Page – The AASHTOWare Bridge Management web page at <http://aashtowarebridge.com> provides access to all the AASHTOWare Bridge Management support information, links to other AASHTOWare products, and AASHTOWare Bridge Management promotional material. The web page can be found.

Hardware and Software Environments

For the latest supported configurations, please visit: <http://aashtowarebridge.com>.

Recommended Configuration - Workstation

Hardware Requirements

Machine	Quad Core 3GHz
Memory	16 GB
Video	1920x1080, 32-bit color
Mouse	Microsoft® or compatible
Hard Disk	2 GB Free Space *
Disk Drives	DVD Drive

*Refers to the AASHTOWare Bridge Management install only. Multimedia storage space will vary depending on client needs.

Software Requirements

Windows 7 32-bit and 64-bit
Microsoft® .NET Framework 4.5 is supported (previous versions not supported)

Recommended Configuration - Enterprise

Hardware Requirements

Machine	Eight Core 3GHz
Memory	32 GB
Video	1920x1080, 32-bit color
Mouse	Microsoft® or compatible
Hard Disk	2 GB Free Space*
Disk Drives	DVD
Fast Network	1 GB Network or Faster

*Refers to the AASHTOWare Bridge Management install only. Multimedia storage space will vary depending on client needs.

Software Requirements

5.2.1 - Microsoft Windows Server 2012 (32-bit and 64-bit) Standard Edition with Microsoft Internet Information Server (IIS) 7.0 or 7.5

5.2.2 - Microsoft Windows Server 2012 (64-bit) Standard Edition with Microsoft Internet Information Server (IIS) 7.0 or 7.5

Microsoft® .NET Framework 4.0 is supported (previous versions not supported)

5.2.3 - Microsoft Windows Server 2012 (64-bit) Standard Edition with Microsoft Internet Information Server (IIS) 8.0

5.3 - Microsoft Windows Server 2012 (64-bit) Standard Edition with Microsoft Internet Information Server (IIS) 8.0

Microsoft® .NET Framework 4.5 is supported (previous versions not supported)

Database Support and Sunset Status

Database support for AASHTOWare Bridge Management is coordinated with the availability of support that the industry vendors provide. This table will change as Oracle or Microsoft ceases support for any of the listed versions.

Platform	Version(s)	Status
Oracle**	11gR2 (11.2)	Active
	12cR1 (12.1)	Active
Oracle Express**	11gR2 (11.2)	Active
MS SQL Server***	2008 R2	Active
	2012	Active
	2014	Active
MS SQL Server Express***	2008 R2	Active
	2012	Active
	2014	Active

**Previous versions of Oracle 10g (i.e. 10.0 through 10.1) are not supported.

*** Previous versions of SQL Server (i.e. 2000, 2005, and 2008) are not supported.

Current Annual Fees and Licensing Options

The option to deliver AASHTOWare Bridge Management software electronically is available to licensing agencies.

Standalone Developer Option

This option is available to third party developers, subject to AASHTOWare Bridge Task Force approval, who wish to create bridge management software tools that would link to the AASHTOWare Bridge Management database and/or utilize the AASHTOWare Bridge Management web interface. The developer license cannot be used to support production asset management operations.

End users of third party tools would be required to be a licensee of the AASHTOWare Bridge Management system in order to use the third party linkage. A third party developer cannot distribute the AASHTO base system. Third party developed software can be licensed, if desired, by the third party developer independent of AASHTO. The licensee of this product will be required to sign a non-disclosure agreement. The license fee includes five (5) hours of installation support. Additional support may be obtained via the purchase of AASHTOWare Bridge Management Service Units, described below.

Description	Annual License Fee
Annual Fee	\$1,500

Super Site License

This license allows for use of AASHTOWare Bridge Management on an unlimited number of workstations within the agency, and permits the agency and their agents to use the software on specified structures within the bounds of the licensing agency's inspection and management responsibilities.

Note: AASHTO member agencies wishing to exercise this option will be required to register the names and contact information for all contractors/consultants using the AASHTOWare Bridge Management product(s) via their Site License and will be responsible for protecting AASHTO's intellectual property rights to the AASHTOWare Bridge Management product by having each contractor execute the Contractor Agreement in the form specified in Appendix A of the Supplemental License Agreement, and providing a copy of the executed Contractor Agreement to AASHTO.

Description	Annual License Fee
Super Site License	\$37,000

Asset Tiered License

AASHTO offers an asset tier-based licensing of AASHTOWare Bridge Management with pricing based on the number of assets stored in/managed by the software. This licensing option allows for the use of AASHTOWare Bridge Management by an unlimited number of users within the agency. Agents of the licensing agency may also use the software under the agency license, on specified structures within the bounds of the licensing agency, up to the maximum asset number listed for the license tier. Support is limited to 10 hours per year under this licensing option and will not include complimentary attendance at the annual users' group meeting. An add-on option to include an additional 5 hours of support and provide users group attendance is available for a nominal fee.

Description	Annual License Fee
Asset Tier 1 Annual License (max. of 1,000 assets)	\$16,000 + 1 Service Unit for initial setup + Optional HAO Units for hosting
Asset Tier 2 Annual License (max of 500 assets)	\$10,600 + 1 Service Unit for initial setup + Optional HAO Units for hosting
Asset Tier 3 Annual License (max of 250 assets)	\$ 7,900+ 1 Service Unit for initial setup + Optional HAO Units for hosting
Enhanced Asset Tier Support/Users Group Attendance (optional)	\$ 3,000

The enhanced support and users group line item is an optional add-on to any level of the local/small agency license. This add-on entitles the licensee to an additional 5 hours of support per year for a total of 15 hours. The add-on also provides for complimentary registration for one designated licensee to attend the annual users'

group meeting. Travel costs for the user group meetings held within North America are reimbursed by AASHTO.

The following is provided for planning purposes.

	Cost for Tier 1 (max of 1000 bridges)
AASHTOWare Bridge Management Asset Tier 1 Licensing Fee (Annual Fee) Annual fee for the use of the appropriate asset tier license.	\$16,000
Initial Set-up of AASHTOWare Bridge Management (One Time Fee = 1 Service Unit) This is an 'out of the box' set up of AASHTOWare Bridge Management version. No training or system customizations are included in this deliverable. If your agency would like Bentley to import inventory or historical inspection data into AASHTOWare Bridge Management please let us know the data format that would be provided. The amount of historic data and data format may have an impact on the set-up fees.	\$11,600
Asset Tier 1 organization FIRST YEAR	\$27,600

Educational License

This option exists for educational institutions within the jurisdictions of our Member Departments, and/or Associate Members to AASHTOWare Bridge Management free of charge for use in the classroom. This option is not available to individuals and it is not to be used for research, graduate work or any other purpose.

Note: A licensing agreement executed by the institution assuring compliance with the education and training limitation is necessary to exercise this option.

Service Units

For the period from July 1, 2018 through June 30, 2019, AASHTO has established an arrangement with its AASHTOWare Bridge Management contractor, Bentley Systems, Inc. to offer the opportunity for agencies to acquire special fixed-fee increments or units of contractor-provided service for consultation and support to assist the agency in expediting conversion to the current generic releases of AASHTOWare Bridge Management. During this period, an agency may commit to one or more units of service. The fee for each unit of service can be used to provide for items such as: labor costs, on-site training, follow-up support, and direct/travel expenses. The actual number of hours may vary depending on the AASHTO billing level of the employees involved. Service Units remaining at the conclusion of a fiscal year will be carried forward into the next fiscal year. The number of Service Units carried forward will be adjusted to reflect the subsequent year's price per unit, but the dollar value of the licensee's Service Units available will remain the same.

Service Unit Work Plan Development

The service unit contractor (Bentley) is an independent contractor and is solely responsible for all aspects of the performance, delivery, quality and terms and conditions of service they provide to agencies.

AASHTO SHALL NOT BE RESPONSIBLE AND DISCLAIMS ANY AND ALL LIABILITY FOR ANY DAMAGE OR LOSS WHATSOEVER, INCLUDING PERSONAL INJURY, DAMAGE TO PROPERTY, OR LOSS OF BUSINESS OPERATIONS, INFORMATION OR DATA, ARISING OUT OF OR RELATING TO ANY ACT OR OMISSION OF SERVICE UNIT CONTRACTORS, THEIR EMPLOYEES, AGENTS AND SUBCONTRACTORS.

It is highly recommended that each agency review its service needs with the appropriate AASHTOWare Bridge Management contractor, develop a firm estimate of the number of units required and establish work plans and other terms and conditions of service, including the schedule for delivery, prior to submitting their commitment. Further, the AASHTOWare Bridge Task Force reserves the right to review work plans for Service Unit work to ensure conformance with the guidelines for their use.

This service is not a pre-requisite to license AASHTOWare Bridge Management, nor does it affect in any way the normal support, maintenance and enhancement services provided under the AASHTO license agreement and normal fee structure for AASHTOWare Bridge Management. Choosing this special offering is strictly the prerogative of an agency. The intent of Service Units is to offer the opportunity for an agency to acquire special fixed-fee increments or units of contractor-provided service for consultation and support. AASHTO shall serve as facilitator only by accepting the commitment for such contractor-provided services, invoice and receive payment on behalf of the agency and forward the order and payment to the contractor for the appropriate number of units of services ordered.

Further, AASHTO assumes no responsibility or liability for any obligation of Service Unit Contractors, including scheduling or delivery of such units of service. It shall remain the responsibility of the subscribing agency to schedule their individual unit(s) of service and establish any other terms and conditions directly with the contractor.

Service Unit Work Options

Service units are intended to provide consultation and support to assist the licensee in the implementation of the AASHTOWare Bridge Management products, and may include, but are not limited to, the following types of activities, or work by the contractor:

- Importing data into a single-user database;
- Adding agency-specific fields to the AASHTOWare Bridge Management database;
- Developing custom reports and/or forms;
- Migrating Elements to National Bridge Elements;
- Addressing database issues; and/or,
- Specialized training in the use of AASHTOWare Bridge Management

In general, Service Units should not be used for work involving major new software development by member agencies. Service Units may be converted to provide additional enhancement funding under the guidance of the Task Force. To ensure that ownership issues are resolved, significant development work related to AASHTOWare products and enhancement requests utilizing service units should be reviewed by the Task Force prior to the work being performed. The use of Service Units to perform modifications that change AASHTO product source code must be reviewed and approved by the Task Force. Service

units may not be used to provide reimbursement for travel expenses by agency personnel.

Fee for Service Units

This service is offered and can be ordered in unit increments of \$11,600, which cannot be prorated and shall be paid upon receipt of the invoice. This fee includes the AASHTO administrative costs. Each service unit provides \$10,000 in contractor services.

Hosting and Add-On (HAO) Service Units

For the period from July 1, 2018 through June 30, 2019, AASHTO has established an arrangement with its AASHTOWare Bridge Management contractor, Bentley Systems, Inc. to offer the opportunity for agencies to acquire special fixed-fee increments or units of contractor-provided services for hosting and optional add-on Bentley modules, Hosting and Add-On (HAO) Service Units, for AASHTOWare Bridge Management. During this period, an agency may commit to one or more units of service. HAO Service Units remaining at the conclusion of a fiscal year will be carried forward into the next fiscal year. The number of HAO Service Units carried forward will be adjusted to reflect the subsequent year's price per unit, but the dollar value of the licensee's HAO Service Units available will remain the same.

HAO Service Unit Work Plan Development

The HAO service unit contractor (Bentley) is an independent contractor and is solely responsible for all aspects of the performance, delivery, quality and terms and conditions of service they provide to agencies.

AASHTO SHALL NOT BE RESPONSIBLE AND DISCLAIMS ANY AND ALL LIABILITY FOR ANY DAMAGE OR LOSS WHATSOEVER, INCLUDING PERSONAL INJURY, DAMAGE TO PROPERTY, OR LOSS OF BUSINESS OPERATIONS, INFORMATION OR DATA, ARISING OUT OF OR RELATING TO ANY ACT OR OMISSION OF SERVICE UNIT CONTRACTORS, THEIR EMPLOYEES, AGENTS AND SUBCONTRACTORS.

It is highly recommended that each agency review its service needs with the appropriate AASHTOWare Bridge Management contractor, develop a firm estimate of the number of units required and establish work plans and other terms and conditions of service, including the schedule for delivery, prior to submitting their commitment. Further, the AASHTOWare Bridge Task Force reserves the right to review work plans for Service Unit work to ensure conformance with the guidelines for their use.

This service is not a pre-requisite to license AASHTOWare Bridge Management, nor does it affect in any way the normal support, maintenance and enhancement services provided under the AASHTO license agreement and normal fee structure for AASHTOWare Bridge Management. Choosing this special offering is strictly the prerogative of an agency. The intent of these special Hosting and Add-On Service Units is to offer the opportunity for an agency to acquire contractor-provided services and modules to improve the AASHTOWare Bridge Management experience and functionality. AASHTO shall serve as facilitator only by accepting the commitment for such contractor-provided services, invoice and receive payment on behalf of the agency and forward the order and payment to the contractor for the appropriate number of units of services ordered.

Further, AASHTO assumes no responsibility or liability for any obligation of Service Unit Contractors, including scheduling or delivery of such units of service. It shall remain the responsibility of the subscribing agency to schedule their individual unit(s) of service and establish any other terms and conditions directly with the contractor.

Hosting and Add-On Service Unit Options

These service units are intended to provide a means for allowing AASHTOWare Bridge Management licensees to supplement their existing system with hosting services and/or advanced inspection modules that may further enhance their AASHTOWare Bridge Management solution. Examples of possible options for usage include:

- Hosting and maintenance of AASHTOWare Bridge Management 5.2.3/5.3 on contractor servers; and/or,
- Purchase of approved plug-in modules for AASHTOWare Bridge Management 5.2.3/5.3 for content as it becomes available.

Fee for HAO Service Units

This service is offered and can be ordered in HAO unit increments of \$3,000, which cannot be prorated and shall be paid upon receipt of the invoice. This fee includes the AASHTO administrative costs. Each HAO service unit provides \$2,500 in contractor services.

Agencies interested in online hosting services should contact the contractor, Bentley Systems, for more information.

Additional Funding for Development/Enhancement Items

The AASHTOWare Bridge Task Force recognizes that some member agencies might desire certain additional development or may desire to accelerate development of an AASHTOWare Bridge Management optional component(s), and may be in a position to fund such development. In fact, the practice of individual and/or groups of member agencies funding specific development/enhancement work through AASHTO's contracts with its software service providers has long been an acceptable means of accomplishing such work.

Process for Funding Additional Enhancements

Any member department, or group of member departments that desires to fund development/enhancement work for one or more AASHTOWare Bridge Management modules that will not be addressed in our current work plan(s) should follow the process outlined below:

- Submit a request to the AASHTOWare Bridge Task Force describing the desired enhancement(s). This request should also indicate which member departments are considering or are prepared to fund the additional enhancement work, as well as an indication of how incorporating the desired enhancement will benefit the AASHTO community of users as a whole;
- If the desired enhancement is acceptable to the Task Force, the Task Force will direct the Contractor to develop system requirements, cost estimate, i.e. work plan for the specific enhancement(s) and notify the requesting Agency(ies) of

the direction. If the desired enhancement is not accepted by the Task Force: The Task Force will provide the requesting agencies with their specific areas of concern;

- Based upon the work plan developed by the AASHTOWare Bridge Management Contractor, the requesting member agency or agencies will be notified of the total cost to accomplish the desired enhancement activity;
- The requesting agency or agencies should submit written funding commitment to AASHTO, attention AASHTOWare Bridge Project Manager, along with instructions for billing, i.e. individual and address to send appropriate invoice(s); and
- Upon receipt of sufficient commitment(s) for funding, AASHTO will initiate the process to initiate a new contract or to approve and execute a contract modification to incorporate the approved enhancement activities.

Contact Information

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AASHTOWare Safety Analyst™ Software

Introduction

AASHTOWare Safety Analyst provides a set of software tools for use by state and local highway agencies for highway safety management. These tools can be used to develop programming for site-specific highway safety improvements following the process and procedures in the Highway Safety Manual (HSM).

AASHTOWare Safety Analyst incorporates the HSM safety management approaches into computerized analytical tools for guiding the decision-making process. Because it has a strong basis in cost-effectiveness analysis, AASHTOWare Safety Analyst can play an important role in prioritizing improvements so that highway agencies get the greatest possible safety benefit from each dollar spent in the name of safety.

AASHTOWare Safety Analyst

AASHTOWare Safety Analyst integrates all parts of the highway safety management process into a single software package. AASHTOWare Safety Analyst includes five analysis modules:

1. **The Network Screening Module** identifies sites with potential for safety improvements. It includes an option to use a variety of severity levels and any crash attribute as screening criteria. Measures of effectiveness and statistical methodologies are used to provide a more a reliable list of locations warranting further investigation.
2. **The Diagnosis and Countermeasure Selection Module** is used to diagnose the nature of safety problems at specific sites and assist users in selecting effective countermeasures to address those problems. It facilitates thorough diagnosis through basic collision diagramming and identification of significant accident patterns, and systematic countermeasure selection through site-specific diagnostic questions.
3. **The Economic Appraisal and Priority Ranking Module** performs an economic appraisal of countermeasures or alternative countermeasures for a specific site, an optimization of sites and countermeasures, and a priority ranking of alternative improvements. Optional benefit methodologies are provided to support requirements of the federal Highway Safety Improvement Program.

4. **The Countermeasure Evaluation Module** provides the capability to conduct before/after evaluations of implemented safety improvements. New statistical methods provide valuable feedback on the effectiveness of completed countermeasures for reporting and future planning.
5. **The Systemic Site Selection Module** is used to identify the most appropriate sites from implementation of a selected countermeasure. The module incorporates network screening procedures to identify sites with crash patterns that can be remedied by the countermeasure selected for implementation and then economic analysis procedures are used to identify the most cost effective locations to implement the countermeasure given a specified budget.

Data Requirements

The AASHTOWare Safety Analyst software tools require a linked database of roadway characteristics, traffic volume, and crash data at the site level. Many of the required data elements should be readily available to highway agencies as part of MIRE and MMUCC datasets. However, some effort to assemble and format the data may be needed. AASHTOWare Safety Analyst includes a data management tool to help users import and manage their data. While many additional data elements are desirable and may be evaluated, the minimum set of data elements required to use AASHTOWare Safety Analyst are crash and traffic data and either roadway segment, intersection, or ramp data.

- Crash Data: crash location, date, collision type, severity, relationship to junction, maneuvers by involved vehicles (straight ahead/left turn/right turn/etc.)
- Roadway Segment Characteristics Data: segment number, segment location (mapped to crash locations), segment length (mi), area type (rural/urban), number of through traffic lanes (by direction of travel), median type (divided/undivided), access control (freeway/ non-freeway), two-way vs. one-way operation, traffic volume (AADT)
- Intersection Characteristics Data: intersection number, intersection location (mapped to crash locations), area type (rural/urban), number of intersection legs, type of intersection traffic control, major-road traffic volume (AADT), minor-road traffic volume (AADT)
- Ramp Characteristics Data: ramp number, ramp location (in a form that is linkable to crash locations), area type (rural/urban), ramp length (mi), ramp type (on-ramp/off-ramp/freeway-to-freeway ramp), ramp configuration (diamond/loop/directional), ramp traffic volume (AADT)

Hardware and Software Environments

Minimum Configuration (Client Workstation Only)

Hardware Requirements¹

Architecture ²	x86 (32-bit)	x86-64 (64-bit)
CPU	Operating system dependent	Operating system dependent
Memory	Operating system dependent	Operating system dependent
Video	1024 x 768, 16-bit color	1024 x 768, 16-bit color
Mouse	Microsoft or compatible	Microsoft or compatible
Hard Disk ³	10 GB	10 GB

Software Requirements

Operating System ²	Windows 7 (32-bit or 64-bit) Windows 10 (32-bit or 64-bit) A Linux version of AASHTOWare Safety Analyst is available on request.
Browser	HTML browser, PDF viewer or RTF viewer required; CSV-capable spreadsheet program recommended.

Recommended Configuration (Standalone or Data Management Workstation)

Hardware Requirements¹

Architecture ²	x86 (32-bit)	x86-64 (64-bit)
CPU	Operating system dependent	Operating system dependent
Memory	2 GB	8 GB
Video	1280 x 1024, 32-bit color	1280 x 1024, 32-bit color
Mouse	Microsoft or compatible	Microsoft or compatible
Hard Disk ³	20 GB	20 GB

Software Requirements

Operating System ²	Windows 7 (32-bit or 64-bit) Windows 10 (32-bit or 64-bit) A Linux version of AASHTOWare Safety Analyst is available on request.
Browser	HTML browser, PDF viewer or RTF viewer required; CSV-capable spreadsheet program recommended.

Database Server (optional, recommended for enterprise deployments)

Requirements

Any hardware, operating system and an SQL-compliant database management system (DBMS) that supports the Java® Database Connectivity (JDBC) API. Fully tested DBMS include Oracle, Microsoft SQL Server, and Apache Derby.

- Notes:**
1. CPU and memory requirements vary by operating system. For Microsoft Windows operating systems, the minimum requirements recommended for the selected operating system will be sufficient to support the product in a minimum (Client-only) configuration.
 2. The software is limited to using 1 GB on 32-bit systems. For large data sets (in excess of 70,000 sites or 1 million crash records), a 64-bit operating system with 2 GB or more of memory may be required to perform data management, or to perform a single network screening analysis on all sites in the data set.
 3. The value represents storage in addition to what is required by the operating system, and is required only if data sets are stored locally on the workstation. Storage requirements depend on the size of the inventory, traffic and crash data. A production data set of 25,000 roadways segments, 46,000 intersections, 1.4 million crashes and 9 years of traffic data requires less than 1.5 GB of disk space.
-

Current Annual Fees and Licensing Options

Single Workstation Option

This license allows installation and use of AASHTOWare Safety Analyst software on a single standalone workstation. Use of the software under this license is limited to one user at a time. The agency is not permitted to share the software, or access to the software and its data, with contractors/consultants employed by the agency, nor cities, counties, or regional agencies within the agency's jurisdiction. This license is not intended to restrict the storage of the data or location of the database, which is permitted to be on an agency network or server computer. This license option includes up to 24 hours in engineering support, minimal data management support via a monthly support webinar, and any software updates released during the fiscal year.

Description	Annual License Fee
Single Workstation Option	\$20,600

Site License

This license allows use of AASHTOWare Safety Analyst on an unlimited number of workstations within an agency, and permits contractors / consultants / universities operating on behalf of the member agency with a formal contract access to the software under Appendix A to the Master and Supplemental Agreements described in the policies and procedures section.

Note: AASHTO member agencies wishing to exercise this option will be required to register the names and contact information for all contractors/consultants using AASHTOWare Safety Analyst via their Site License and will be responsible for protecting AASHTO's intellectual property rights to the AASHTOWare Safety Analyst product by having each contractor execute the Contractor Agreement in the form specified in Appendix A of the Supplemental License Agreement, and providing a copy of the executed Contractor Agreement to AASHTO.

Description	Annual License Fee
Site License	\$36,000

International License

This AASHTOWare Safety Analyst license is available for agencies in foreign countries with Associate-International membership in AASHTO. This license option includes limited engineering and data management support. All software updates released during the fiscal year are also included. Each licensing agency shall designate a prime contact person through whom all support and maintenance will be funneled to the contractor. The licensing agency shall also be responsible for ensuring protection of AASHTO trademarks and copyrights for all copies of the software made available to the licensing agency within the constraints of the International License agreement.

Description	Annual License Fee
International Workstation License	\$20,600 USD
International Site License	\$36,000 USD

Agency Sponsored Licenses

A member agency who is a licensee of the AASHTOWare Safety Analyst site license may purchase on behalf of consulting engineering firms or a local agencies performing safety analysis supporting the member agency goals to improve safety. The member agency licensee may purchase the following AASHTOWare Safety Analyst client software bundles for sharing. The system requires a database engine and includes limited support by the member agency. Consulting firms or local agencies using this license option will be required to sign a software license agreement with AASHTO. Application support for consultants or local agencies licensing under this option is provided through the member agency licensee only, not the contractor.

Description	Annual License Fee	
AASHTOWare Safety Analyst (Client Only)	5 Copies	\$2,500
	10 Copies	\$4,500

Educational Option

This option exists for educational institutions within the jurisdictions of our Member Departments, and/or Associate Members to AASHTOWare Safety Analyst free of charge for use in the classroom. This option is not available to individuals and it is not to be used for research, graduate work or any other purpose.

Note: A licensing agreement executed by the institution assuring compliance with the education and training limitation is necessary to exercise this option.

Service Units

For the period from July 1, 2018 through June 30, 2019, AASHTO has established an arrangement with the two AASHTOWare Safety Analyst contractors, MRI Global and Peraton Corporation, to offer the opportunity for agencies to acquire special fixed-fee increments or units of contractor-provided service for consultation and support to assist the agency in preparing data and using AASHTOWare Safety Analyst. During this period, an agency may commit to one or more units of service from MRI Global and/or Peraton. The fee for each unit of service provides approximately forty (40) total hours of labor by a contractor employee. Related travel expenses for on-site tasks will be converted to equivalent service units. The actual number of hours may vary depending on the AASHTO billing level of the employees involved. Service Units remaining at the conclusion of a fiscal year will be carried forward into the next fiscal year. The number of Service Units carried forward will be adjusted to reflect the subsequent year's price per unit, but the dollar value of the licensee's Service Units available will remain the same.

Service Unit Work Plan Development

The service unit contractors (MRI Global and Peraton Corporation) are independent contractors and solely responsible for all aspects of the performance, delivery, quality and terms and conditions of service they provide to agencies. AASHTO SHALL NOT BE RESPONSIBLE AND DISCLAIMS ANY AND ALL LIABILITY FOR ANY DAMAGE OR LOSS WHATSOEVER, INCLUDING PERSONAL INJURY, DAMAGE TO PROPERTY, OR LOSS OF BUSINESS OPERATIONS, INFORMATION OR DATA, ARISING OUT OF OR RELATING TO ANY ACT OR OMISSION OF SERVICE UNIT CONTRACTORS, THEIR EMPLOYEES, AGENTS AND SUBCONTRACTORS. It is highly recommended that each agency review its service needs with the appropriate AASHTOWare Safety Analyst contractor, develop a firm estimate of the number of units required and establish work plans and other terms and conditions of service, including the schedule for delivery, prior to submitting their commitment. Further, the AASHTOWare Safety Analyst Task Force reserves the right to review work plans for Service Unit work to ensure conformance with the guidelines for their use.

This service is not a pre-requisite to license AASHTOWare Safety Analyst, nor does it affect in any way the support, maintenance and enhancement services provided under the AASHTO license agreement and license fee structure for AASHTOWare Safety Analyst. Choosing this special offering is strictly the prerogative of the agency. The intent of Service Units is to offer the opportunity for an agency to acquire special fixed-fee increments or units of contractor-provided service for consultation and support. AASHTO shall serve as facilitator only by accepting the commitment for such contractor-provided services, invoice and receive payment on behalf of the agency and forward the order and payment to the contractor for the appropriate number of units of services ordered.

Further, AASHTO assumes no responsibility or liability for any obligation of Service Unit Contractors, including scheduling or delivery of such units of service. It shall remain the responsibility of the subscribing agency to schedule their individual unit(s) of service and establish any other terms and conditions directly with the contractor.

Service Unit Work Options

Service units are intended to provide consultation and support to assist the licensee in the implementation of the AASHTOWare Safety Analyst product, and may include the following types of activities, or work by the contractor(s):

- Identifying data gaps or needs for agencies and preparing an implementation plan;
- Preparing and importing the required roadway inventory, crash report and traffic volume data;
- Specialized training in the use of AASHTOWare Safety Analyst for either engineering or software production;
- Assist with software deployment;
- Agency specific modifications or customized reports and data exporting; and
- Agency specific enhancements to AASHTOWare Safety Analyst modules.

In general, Service Units should not be used for work involving major new software development by member agencies. Service Units may be converted to provide additional enhancement funding under the guidance of the Task Force. To ensure that ownership issues are resolved, significant development work related to AASHTOWare products and enhancement requests utilizing service units should be reviewed by the Task Force prior to the work being performed. The use of Service Units to perform modifications that change AASHTO product source code must be reviewed and approved by the Task Force. Service units may not be used to provide reimbursement for travel expenses by agency personnel.

Fee for Service Units

This service is offered and can be ordered in unit increments of \$8,500 for MRI Global and \$9,000 for Peraton Corporation, which cannot be prorated and shall be paid upon receipt of the invoice. This fee includes the AASHTO administrative costs. Each service unit provides \$7,300 in MRI Global contractor services or \$7,850 in Peraton contractor services.

Additional Funding for Development/Enhancement Items

The AASHTOWare Safety Analyst Task Force recognizes that some member agencies might desire certain additional development or may desire to accelerate development of an AASHTOWare Safety Analyst optional component(s), and may be in a position to fund such development. In fact, the practice of individual and/or groups of member agencies funding specific development/enhancement work through AASHTO's contracts with its software service providers has long been an acceptable means of accomplishing such work.

Process for Funding Additional Enhancements

Any member department, or group of member departments that desires to fund development/enhancement work for one or more AASHTOWare Safety Analyst modules that will not be addressed in our current work plan(s) should follow the process outlined below:

- Submit a request to the AASHTOWare Safety Analyst Task Force describing the desired enhancement(s). This request should also indicate which member departments are considering or are prepared to fund the additional enhancement work, as well as an indication of how incorporating the desired enhancement will benefit the AASHTO community of users as a whole;
- If the desired enhancement is acceptable to the Task Force, the Task Force will direct the AASHTOWare Safety Analyst Contractor to develop system requirements, cost estimate, i.e. work plan for the specific enhancement(s) and notify the requesting agency or agencies of the direction. If the desired enhancement is not accepted by the Task Force: the Task Force will provide the requesting agencies with their specific areas of concern;
- Based upon the work plan developed by the AASHTOWare Safety Analyst Contractor, the requesting member agency or agencies will be notified of the total cost to accomplish the desired enhancement activity;
- The requesting agency or agencies should submit written funding commitment to AASHTO, attention AASHTOWare Safety Analyst Project Manager, along with instructions for billing, i.e. individual and address to send appropriate invoice(s); and
- Upon receipt of sufficient commitment(s) for funding, AASHTO will initiate the process to initiate a new contract or to approve and execute a contract modification to incorporate the approved enhancement activities.

Contact Information

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AASHTOWare Pavement ME Design™ Software

Introduction

The 1993 AASHTO *Guide for the Design of Pavement Structures* (and previous versions) is one of the primary documents used by state highway agencies for designing new and rehabilitated pavements. The basis of this design has been the empirical equations developed from the AASHTO Road Test. The AASHTO Road Test was conducted from 1958 to 1960 using limited pavement sections and modest traffic levels as compared to those used today.

In 1996, to achieve a state-of-the-practice pavement design procedure, the AASHTO Joint Task Force on Pavements sponsored the development of a mechanistic-empirical design guide for new and rehabilitated pavements, through the National Cooperative Highway Research Program (NCHRP). In 2004, NCHRP 1-37A was completed and delivered a mechanistic-empirical pavement design guide and accompanying software.

The products developed under NCHRP 1-37A have provided advancements in pavement design practices and work is continuing under NCHRP, FHWA and various state agencies.

AASHTOWare Pavement ME Design

AASHTOWare Pavement ME Design is the next generation of pavement design software, which builds upon the NCHRP mechanistic-empirical pavement design guide, and expands and improves the features in the accompanying prototype computational software. AASHTOWare Pavement ME Design is a production-ready software tool to support the day-to-day operations of public and private pavement engineers.

It calculates pavement responses (stresses, strains, and deflections) and combines them with other pavement, traffic, climate, and materials parameters to predict the progression of key pavement distresses and smoothness loss over time for hot-mix asphalt (HMA) and portland cement concrete (PCC) pavements. These outputs are the basis for checking the adequacy of a trial design. AASHTOWare Pavement ME Design is a powerful program that incorporates a user-friendly interface with several functional, stability, and performance enhancements, such as improved runtime, automatic update notification, an SI version, inclusion of highway capacity limits, climate data viewers and climate summaries, batch processing, multi-project editing, project compare tool, error checking for individual inputs and forms, provisions for

sensitivity analysis, thickness optimization, ability to import backcalculation data, database functionality at enterprise and workstation level, a structural response query tool, and improved reporting.

For many pavement engineers, it is a paradigm shift away from a nomograph-based design to one based on engineering principles and mechanics. Instead of entering basic site and project information into an equation and getting an empirically based pavement design output, the engineer can use detailed traffic, materials and environmental information to assess the short and long-term performance of a pavement design using nationally and/or locally calibrated models.

This software is a comprehensive pavement design and analysis tool, capable of providing support and insights to highway decision-makers, academia and consultants. This state-of-the-practice tool represents the current advancements in pavement design. It also provides tools to generate optimized pavement design based on given requirements allowing the user to evaluate and fine-tune the design. The database utility allows users to save final designs as well as individual input parameters such that these can subsequently be used for future designs, various distress and performance analyses, and for other management purposes.

AASHTOWare Pavement ME Design reflects a change in the methods and procedures engineers use to design pavement structures. It takes advantage of the advances in material mechanics, axle-load spectra and climate data for predicting pavement performance. While this software does not answer all of the challenges to pavement design, it is a quantum leap forward from previous pavement design procedures and facilitates future development in pavement modeling and analysis.

Hardware and Software Environments

System Requirements

Hardware Requirements

Machine	Minimum: 1.9GHz clock speed processor Recommended: dual processor
Memory	Minimum: 2GB of RAM Recommended: 4GB RAM or more
Monitor	Monochrome or color (preferred) monitor with display adapter supported by Windows® Minimum: 1024 x 768; Recommended: 1600x1200
Video Card	VGA or higher resolution graphics card
Hard Disk	Minimum: 500 MB free hard disk space Recommended: 5GB free hard disk space (for project files).
Mouse	Microsoft or compatible mouse
Disk Drives	Optional
Printer	A printer supported by Windows® (optional)

Software Requirements

Operating System (32 or 64-bit)	Windows 7 SP1 Windows 8.x Windows 10
Database	MS SQL Server 2005+ Oracle 10g+
Browser	Internet Explorer 7.0+ Firefox 3.5+ Google Chrome
PDF Reader	Adobe Acrobat 10.0.1+
Spreadsheet	Excel 2003+
Library	Microsoft .NET Framework 4.5.1

Current Annual Fees and Licensing Options

AASHTOWare Pavement ME Design is available for license to agencies with membership or associate membership in AASHTO and to other entities located in the United States. Each licensee shall designate a primary contact person through whom all support and maintenance will be coordinated with the contractor support team.

Individual Workstation License

The individual workstation license allows only one user to use the software at a time. With this option, the computer operates in standalone mode. An agency can purchase multiple workstation licenses.

Description	Annual License Fee
Individual Workstation	\$5,800

Site License

A site license is based on the maximum number of concurrent users accessing the program through a single license server in the network. A site license requires a connection to the internet when installing the software.

A site license permits cities/counties, and contractors/consultants employed by the licensing agency access to the product on the Member Department's network.

Note: AASHTO member agencies wishing to exercise this option will be required to register the names and contact information for all contractors/consultants using AASHTOWare Pavement ME Design via their Site License and will be responsible for protecting AASHTO's intellectual property rights to the AASHTOWare Pavement ME Design product by having each contractor execute the Contractor Agreement in the form specified in Appendix A of the Supplemental License Agreement, and providing a copy of the executed Contractor Agreement to AASHTO.

Description	Annual License Fee
Site License – up to 9 concurrent users	\$23,100
Site License – up to 14 concurrent users	\$34,700
Site License – up to 20 concurrent users	\$46,200

Note: Purchasers of the Site License for up to 20 Concurrent Users will have an option to increase the number of concurrent users for \$2500 each.

Backcalculation Tool

The Pavement ME Deflection Data Analysis and Backcalculation Tool is a standalone software program that can be used to generate backcalculation inputs from Falling Weight Deflectometer (FWD) files to the AASHTO Pavement ME Design software for rehabilitation design. The tool is capable of analyzing raw deflection data files from three FWD testing devices: Dynatest®, JILS and KUAB. The tool provides three major functions: pre-processing deflection data (including project segmentation), backcalculation, and post-processing of results to generate inputs for Pavement ME rehabilitation design. This tool uses the EVERCALC® algorithm for the iterative backcalculation process.

Although the tool is included with the Pavement ME Design software, it can also be licensed separately and used as a standalone single user application. A training presentation is available at <http://me-design.com/MEDesign/Webinars.html>.

Description	Annual License Fee
Standalone Single User Backcalculation Tool	\$1,250

There is no evaluation or educational version for the backcalculation tool.

International License

AASHTOWare Pavement ME Design is available for licensing to entities located outside the United States and that do not have membership in AASHTO. These international entities must license through Applied Research Associates, Inc. (ARA), ARA can be reached at:

Applied Research Associates, Inc.
100 Trade Centre Drive, Suite 200
Champaign, IL 61820
(217) 356-4500
Fax: (217) 356-3088
Joe Sebright, email: jsebright@ara.com

Educational Option

This is a no cost workstation version of the AASHTOWare Pavement ME Design software that is modified for use by educational institutions within the jurisdictions of our Member Departments, and/or Associate Members for teaching purposes in the classroom only. This option is not available to individuals and it is not to be used for research, graduate work or any other purpose. (An SI version is available for those institutions located within the jurisdictions of international AASHTO Member Departments.)

The no cost educational version differs from the full version as follows:

- Limited design types—new asphalt and concrete (JPCP and CRCP), AC/AC overlays, AC/JPCP overlays, unbonded PCC overlays.
- Limited analysis period: 30 years.
- Limited climate stations: 8 to 10 stations from around the country representing each climate zone.
- No batch mode and sensitivity analysis.
- Output reports (PDF and Excel) include the watermark text “Educational Version.”
- No access to intermediate output files.

Note: A licensing agreement executed by the institution assuring compliance with the education and training limitation is necessary to exercise the educational license option.

The license agreement is between the institution and AASHTO. Therefore, the educational version of the software is limited to one copy per institution and should be used in a computer lab environment, installed on computers owned by the institution. It should not be installed on individual personal student machines.

If the software is installed on multiple machines, the machines should be ghosted.

Only one copy of the educational software is licensed to each institution and the maximum number of seats per institution is limited to 25.

Service Units

For the period from July 1, 2018 through June 30, 2019, AASHTO has established an arrangement with the AASHTOWare Pavement ME Design contractor, ARA, to offer the opportunity for agencies to acquire special fixed-fee increments or units of contractor-provided service for consultation and support to assist the agency in preparing data and using AASHTOWare Pavement ME Design. During this period, an agency may commit to one or more units of service from ARA. The fee for each unit of service provides approximately sixty-five (65) total hours of labor by the contractor. Related travel expenses for on-site tasks will be converted to equivalent service units. The actual number of hours may vary depending on the AASHTO billing level of the employees involved. Service Units remaining at the conclusion of a fiscal year will be carried forward into the next fiscal year. The number of Service Units carried forward will be adjusted to reflect the subsequent year's price per unit, but the dollar value of the licensee's Service Units available will remain the same.

Service Unit Work Plan Development

The service unit contractor (Applied Research Associates, Inc.) is an independent contractor and solely responsible for all aspects of the performance, delivery, quality and terms and conditions of service they provide to agencies. AASHTO SHALL NOT BE RESPONSIBLE AND DISCLAIMS ANY AND ALL LIABILITY FOR ANY DAMAGE OR LOSS WHATSOEVER, INCLUDING PERSONAL INJURY, DAMAGE TO PROPERTY, OR LOSS OF BUSINESS OPERATIONS, INFORMATION OR DATA, ARISING OUT OF OR RELATING TO ANY ACT OR OMISSION OF SERVICE UNIT CONTRACTORS, THEIR EMPLOYEES, AGENTS AND SUBCONTRACTORS. It is highly recommended that each agency review its

service needs with the appropriate AASHTOWare Pavement ME Design contractor, develop a firm estimate of the number of units required and establish work plans and other terms and conditions of service, including the schedule for delivery, prior to submitting their commitment. Further, the AASHTOWare Pavement ME Design Task Force reserves the right to review work plans for Service Unit work to ensure conformance with the guidelines for their use.

This service is not a pre-requisite to license AASHTOWare Pavement ME Design, nor does it affect in any way the support, maintenance and enhancement services provided under the AASHTO license agreement and license fee structure for AASHTOWare Pavement ME Design. Choosing this special offering is strictly the prerogative of the agency. The intent of Service Units is to offer the opportunity for an agency to acquire special fixed-fee increments or units of contractor-provided service for consultation and support. AASHTO shall serve as facilitator only by accepting the commitment for such contractor-provided services, invoice and receive payment on behalf of the agency and forward the order and payment to the contractor for the appropriate number of units of services ordered.

Further, AASHTO assumes no responsibility or liability for any obligation of Service Unit Contractors, including scheduling or delivery of such units of service. It shall remain the responsibility of the subscribing agency to schedule their individual unit(s) of service and establish any other terms and conditions directly with the contractor.

Service Unit Work Options

Service units are intended to provide consultation and support to assist the licensee in the implementation of the AASHTOWare Pavement ME Design and may include the following types of activities, or work by Applied Research Associates, Inc.

- Customization of the user interface including:
- Setting language preferences;
- Tool tip help;
- User defined field names;
- Local calibration settings;
- Input field locking; and
- Setting agency-specific default values and ranges;
- Loading user defined weather data;
- Converting prior versions of user projects to AASHTOWare Pavement ME Design file formats;
- Creating custom batch reports; and
- Specialized training in the use of AASHTOWare Pavement ME Design during a two-day workshop for up to 15 individuals.

Note: The contractor, ARA, will provide the instructors and workshop materials and will work with the agency to set up the training (software installation, etc.) within reason. All travel related costs for the instructors are also included in the fee. The sponsoring agency shall provide the facilities, hardware and support for the training. The agency is also responsible for inviting the attendees and for their associated travel costs.

In general, Service Units should not be used for work involving major new software development by member agencies. Service Units may be converted to provide additional enhancement funding under the guidance of the Task Force. To ensure that ownership issues are resolved, significant development work related to AASHTOWare products and enhancement requests utilizing service units should be reviewed by the Task Force prior to the work being performed. The use of Service Units to perform modifications that change AASHTO product source code must be reviewed and approved by the Task Force. Service units may not be used to provide reimbursement for travel expenses by agency personnel.

Fee for Service Units

This service is offered and can be ordered in unit increments of \$13,500, which cannot be prorated and shall be paid upon receipt of the invoice. This fee includes the AASHTO administrative costs. Each service unit provides \$12,200 in ARA contractor services.

Additional Funding for Development/Enhancement Items

The AASHTOWare Pavement ME Design Task Force recognizes that some member agencies may desire certain additional development or may desire to accelerate development of an AASHTOWare Pavement ME Design optional component(s), and may be in a position to fund such development. In fact, the practice of individual and/or groups of member agencies funding specific development/enhancement work through AASHTO's contracts with its software service providers has long been an acceptable means of accomplishing such work.

Process for Funding Additional Enhancements

Any member department, or group of member departments that desires to fund development/enhancement work for one or more AASHTOWare Pavement ME Design modules that will not be addressed in current work plan(s) should follow the process outlined below:

- Submit a request to the AASHTOWare Pavement ME Design Task Force and Project Manager describing the desired enhancement(s). This request should also indicate which member departments are considering or are prepared to fund the additional enhancement work, as well as an indication of how incorporating the desired enhancement will benefit the AASHTO community of users as a whole;
- If the desired enhancement is acceptable to the Task Force, the Task Force will direct the AASHTOWare Pavement ME Design Contractor to develop system requirements, cost estimate, i.e. work plan for the specific enhancement(s) and notify the requesting agency(ies) of the direction. If the desired enhancement is not accepted by the Task Force: the Task Force will provide the requesting agencies with their specific areas of concern;
- Based upon the work plan developed by the AASHTOWare Pavement ME Design Contractor, the requesting member agency or agencies will be notified of the total cost to accomplish the desired enhancement activity;
- The requesting agency or agencies should submit written funding commitment to AASHTO, attention AASHTOWare Pavement ME Design Project Manager,

along with instructions for billing, i.e. individual and address to send appropriate invoice(s); and

- Upon receipt of sufficient commitment(s) for funding, AASHTO will initiate the process to initiate a new contract or to approve and execute a contract modification to incorporate the approved enhancement activities.

Contact Information

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The AASHTOWare technical service program has a rich history of serving its customers and being a leader in bringing the power of technology through automation to the public sector transportation industry.

As we look to the future, it is important that we build on this rich and robust tradition to create the next generation of technology solutions and continuously improve service to our customers. Our success is based on the commitment of hundreds of volunteers, in partnership with the private community, to produce quality products that meet the common needs of our customers. The challenges we face now and into the future are increasingly more complex than in the past. To ensure continued success as we establish our next generation of products and services, we will clearly focus on a mutually agreed upon set of principles and values to drive our strategic plan, vision, mission, goals and objectives.



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