

Bentley[®]
Advancing Infrastructure



SUPERLOAD[®]

Automated Oversize/Overweight Vehicle Permitting and Optimized Routing

Bentley SUPERLOAD is a comprehensive solution for intelligent permitting and routing of oversize/overweight (OS/OW) vehicles. It automates the permitting process, giving transportation agencies a management system for permit issuance and OS/OW carriers an easy means of acquiring permits online. The system taps into current restrictions and live bridge rating to optimize routing.

Streamlines Permit System Management

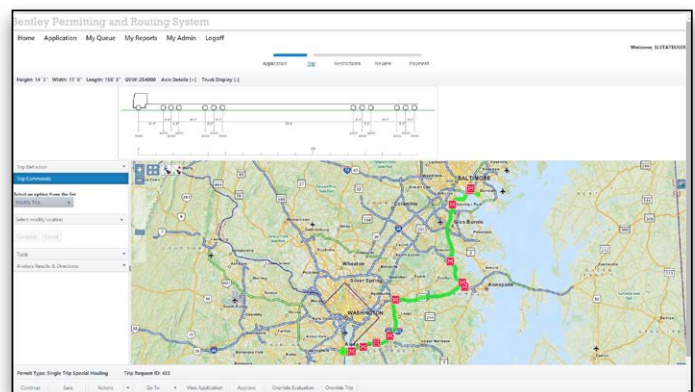
SUPERLOAD offers a best-practices approach to permit processing that delivers substantial cost savings to the permitting agency. The result is that the majority of permits can be issued online without agency intervention. The software streamlines permit application in conformance with agency rules and regulations, performing intelligent routing, real-time live-load bridge analysis, secure payment processing, and permit issuance. Powerful administration capabilities support the back-office requirements of the permit administration team.

Fast Permitting

With the ability to directly apply for a permit and request a route from virtually any location, carriers can save hours, even days, in the permitting process. SUPERLOAD automates the full workflow, from requesting a route and payment by credit card to permit issuance. A dynamic map and other features speed the routing process. Users can quickly analyze their trip as they work interactively through the route selection.

Determines Routing Feasibility

SUPERLOAD performs real-time route validation based on the size/weight of the permit vehicle and the constraints and conditions of specified routes. Bridge clearances, bridge live-load analyses, and temporary restrictions help determine routing feasibility. SUPERLOAD automatically generates a route to the destination for the particular permit vehicle. The software enables you to select a specific route via an interactive map or textual input. With SUPERLOAD, you are able to analyze the route and display the results.



Interactive map-based routing speeds processing.

Automates Processing and Payment

SUPERLOAD makes online permitting safe and secure. When processing applications, it automatically checks applicant information: account balances, insurance coverage, permitting violations, registration, and other background information. A built-in accounting system works independently or along with other accounting and finance systems to handle electronic payment transactions, billing, and account management. The permitting agency can custom tailor the system to handle unique permit operations. A complete audit trail of all financial transactions is maintained automatically.

Protection for Infrastructure and the Traveling Public

With its built-in knowledge of the roadway network, SUPERLOAD provides you with the capabilities to maintain a digital model of the highway system. The model includes the location of all structures, detailed interchange configurations, bidirectional clearances, and all temporary restrictions. SUPERLOAD processes all structures and other appurtenances involved in the route and delivers a split-second analysis of vertical and horizontal clearances. All bridge analysis is performed for the specific permit vehicle configuration over each specific structure. An integrated live-load bridge analysis of each structure on the route determines safe passage feasibility and any speed or lane restrictions. Bridge analysis utilizes bridge data from multiple sources, including Bentley's LARS Bridge software as well as AASHTOWare BrR and BARS.



SUPERLOAD automates online access for route requests and payments – no agency interaction is necessary.

Manages Restriction Events

Restriction Manager is a SUPERLOAD module that enables organizations to apply restriction information to the roadway network as a factor in individual permit trip analysis. For most regulating agencies, Restriction Manager is a vital piece of the overall OS/OW routing solution that helps them manage restriction events, from full route closure to limited access and route advisories. This augments infrastructure project planning, notification, and construction management. Restriction Manager can share data with other agency systems. If changing conditions affect an issued permit, SUPERLOAD automatically notifies the permit requestor and the agency.

Configurability

SUPERLOAD is designed to be configurable enabling you to display and process preferences at a system level, configure data validation, computation, and application evaluation at the field level. The feature also includes configuring user authorization rules for site menus, permit types, administrative functions, reports, and action buttons.

Maximizes the Value of Data Integration

SUPERLOAD provides distinct advantages to the permitting agency when linked with other systems or mined for detailed information. Agencies can choose to implement SUPERLOAD to work with Commercial Vehicle Information Systems and Networks (CVISN) and other agency programs to perform checks as well as share data for roadside monitoring. Permit routing data provides detailed information on the movement of all carriers. The agency can query specific routing data such as vehicle dimensions and permit timeframes. Mined permitting data can help establish transportation improvement plans that alleviate highway system constraints that adversely impact effective movement of motor vehicles.

The screenshot displays the 'Step 2 Vehicle Configuration' section of the SUPERLOAD application. It includes fields for 'Stored Vehicles/Units(-)', 'Vehicle Information', and 'Vehicle Type'. Below this, there are sections for 'Truck Make', 'Trailer 1 Make', and 'Trailer 2 Make', each with dropdown menus for 'No of Axles', 'License Number', 'License State', and 'Weight'. A 'Load Information' section includes 'Description', 'Load Weight', 'Wheel', and 'Serial Number'. 'Overall Vehicle Dimensions' are listed as Length: 138' 3", Width: 17' 0", and GVW: 120000. 'Axle Information' shows 'Number of Axles' as 13. At the bottom, there is a 'Truck Display' section with a diagram of the vehicle's axle configuration.

A step-by-step application process streamlines permit issuance.

Issues Multi-agency Permits

The SUPERLOAD system is designed to provide direct electronic communication with Bentley's GotPermits.com, a one-stop source for acquiring permits from multiple agencies. GotPermits.com is the growing choice of permitting points-of-issuance by transportation departments. Using GotPermits.com's advanced permit application process, transport professionals can complete a single permit application for permitting by several state systems. The website requests only the specific information needed by relevant states and provides multistate routing to resolve cross-boundary routing issues. The uniform processing not only simplifies data entry but also ensures conformance with all state laws, routing requirements, and processes.



Underlay aerial photos and other WMS data provide for precise routing.

System Requirements

Web server:

Microsoft Windows Server 2012 64-bit operating system (with current updates), can be on virtualized servers or physical servers

- 12+ GB RAM
- 80+ GB HDD (free)
- Microsoft IIS 8.0

Browsers:

IE 10 or higher, Chrome, Firefox, Safari

Database support:

SQL Server 2012 (with current updates), Oracle 11g

Find out about Bentley at: www.bentley.com

Contact Bentley

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Global Office Listings

www.bentley.com/contact

Bentley SUPERLOAD At-A-Glance

Automatic Permitting

- Creates, edits, revises, issues, inspects, grants, or denies permits
- Handles agency's specific/custom permit types
- Formalizes the permit-decision process
- Assists users by applying built-in knowledge of permit policy
- Verifies application data (account balance, insurance, violation, registration, and background information)
- Validates weights and dimensions for consistency and accuracy
- Manages overall interagency review workflows
- Automates the delivery of permits
- Manages automated permittee notification of changing road, bridge, or restriction conditions affecting outstanding permits
- Prints required trip and restriction information on permit

Intelligent Routing and Analysis

- Provides multiple methods for users to specify a route to be analyzed
- Evaluates user-entered routes for safe passage
- Automatically finds a route that can be approved in lieu of a user-requested route
- Handles multiple starts and stops for off-system routes
- Provides interactive maps for route selection and display of analysis results
- Automatically assigns road and bridge restrictions
- Can favor routes based on special routing procedures and route or functional classification
- Performs integrated live-load bridge analysis in real time
- Takes into account temporary restrictions
- Includes manual override and editing capabilities
- Reports reason and position of failure for rejected routes
- Allows underlay of aerial/spatial and other Web Map Service (WMS) data
- Mines data for review of permitted movements and transportation improvement planning

Restrictions Data Management

- Input, display, manage, query, maintain, and report temporary route restriction information via key-in or interactive map
- Define attributes
 - » Height
 - » Width
 - » Length
 - » Gross weight
 - » Axle weight
 - » Weight per unit of tire width

- Define crossover restrictions
- Analyze features for dual-direction travel
- Check multiple area restrictions for excessive issues
- Review all outstanding permits for restriction impact

Finance and Accounting

- Post charges in real time
- Provide audit trail of all transactions
- Exercise full account management
- Select appropriate account types (escrow, bonded, and receivable)
- Use accurate, automated fee assessment
- Process payments electronically
- Choose form of payment: cash, check, money order, credit card, or various escrow / bonded account types

Data Management

- Integrates existing data sources
- Captures both electronic and nonelectronic data
- Creates special and custom reports
- Allows ad hoc reporting
- Manages e-commerce options
- Complies with Commercial Vehicle Information Systems and Networks (CVISN)
- Complies with Intelligent Transportation Systems-Commercial Vehicle Operations (ITS-CVO)
- Supports multistate permit readiness

Routing Data Requirements

- Highway characteristics available from GIS, databases and maps
- Bridge characteristics available from GIS, databases, maps and bridge rating systems
- Bridge structural models for live-load bridge analysis – Bentley bridge products, AASHTOWare BrR, AASHTOWare BARS, and other engineering data
- Additional information describing the route system deemed important to the jurisdiction for proper route analysis

Communication Support

- Internet access
- Automated delivery of output documents via web, email, or fax

User Community

- Used by approximately one-third of all U.S. state DOTs
- Has successfully issued millions of permits
- Developed on proven technology
- Uses core products that are continually enhanced with cost sharing benefitting all users

For more information, visit:

www.bentley.com/SUPERLOAD