

# CIVIL INTEGRATED MANAGEMENT (CIM)

With limited resources and public expectations higher than ever, all parties to highway construction projects must work together and utilize emerging technologies for the fast, efficient, and safe delivery of projects. FHWA and the three national associations—AASHTO, ARTBA, and AGC—are jointly promoting “Civil Integrated Management” (CIM) to highlight these types of resources.

CIM is the collection, organization, and managed accessibility to accurate data and information related to a highway facility. The concept may be used by all affected parties for a wide range of purposes, including planning, environmental, surveying, construction, maintenance, asset management, and risk assessment.

## Project Examples with Vendor Demonstrations



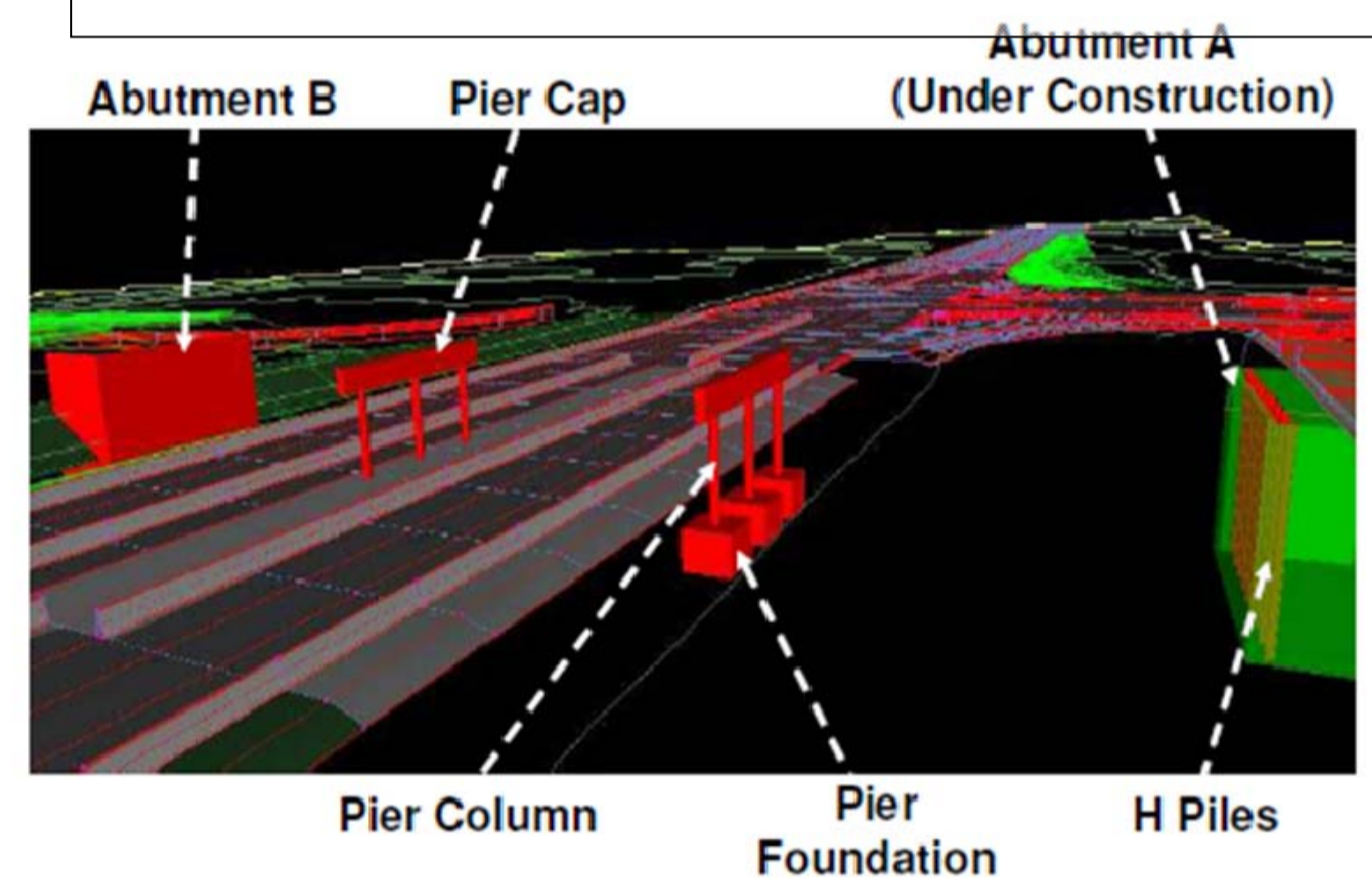
**Alternative Contracting**  
**Integrated with Construction**  
 Design Build  
 Alternative Technical Concepts  
 Construction Manager / General Contractor (CMGC)  
 Franchise Contracting  
 Alternative Bidding



**Real Time Verification**  
**Integrated with Construction**  
 Intelligent Compaction  
 Pavement Thermal Imaging  
 RFID for materials quantity and certification transmittal  
 In-cab weight scales  
 Video surveillance for remote construction inspection and recording

**Project Management Systems**  
**Integrated with Construction**  
 Electronic document approval, transmittal, and storage  
 Online real-time status of materials sampling and testing  
 Electronic wage rate verification  
 Public Relations

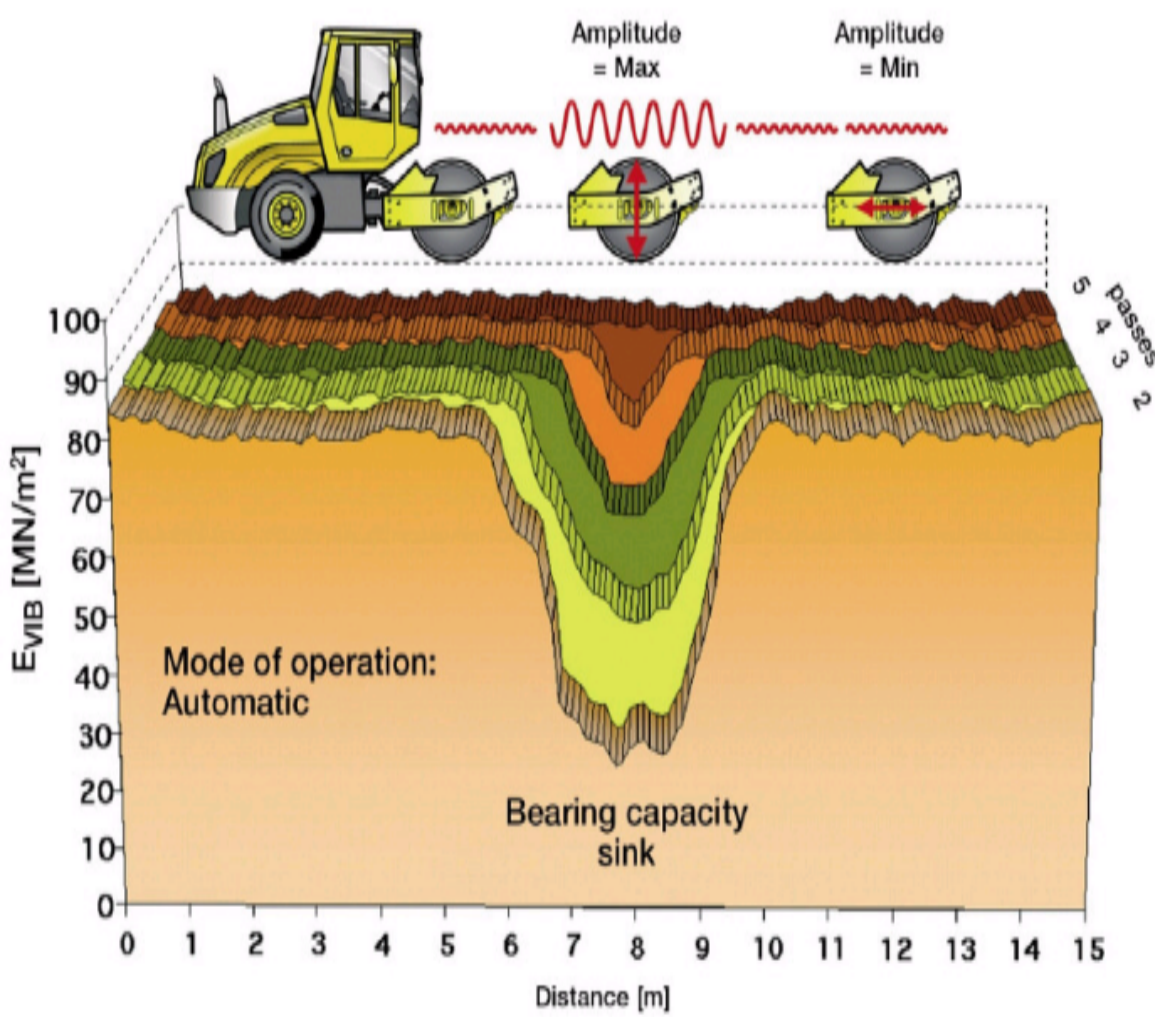
**Surveying**  
**Integrated with Construction**  
 Light Detection and Ranging (LiDAR)  
 Equipment flexibility, precision and accuracy of survey, and data processing and storage  
 Laser Total Stations



**Legal**  
**Integrated with Construction**  
 Liability of plan and survey data  
 Long-term liability with as-builds

**Utilities**  
**Integrated with Construction**  
 3D Mapping and data storage  
 RFID subsurface marking

**Information Modeling**  
**Integrated with Construction**  
 Public Outreach  
 Software applications  
 Optimizing construction means and methods  
 Earthwork balancing  
 Equipment automatic guidance control systems  
 3/4/5/x D Modeling



Would you like to learn more about CIM? Please contact one of the 4 individuals representing their respective organization and we can help.  
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