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

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

**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, transmission, and storage
- Online real-time status of materials sampling and testing
- Electronic wage rate verification
- Public Relations

**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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