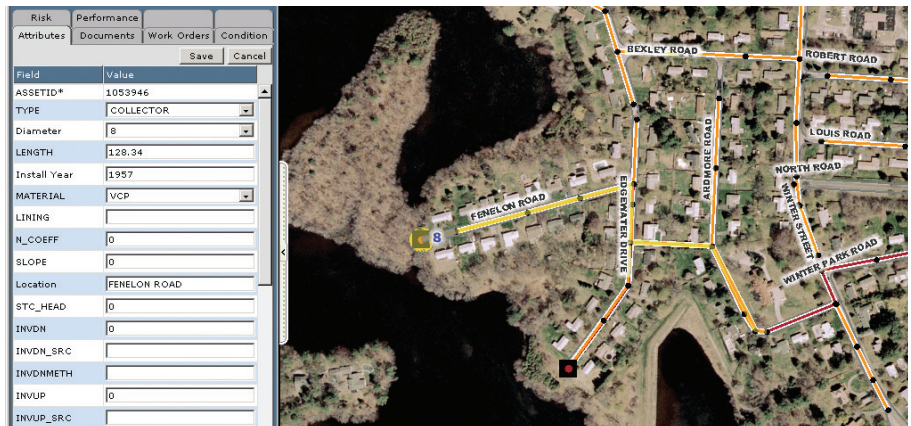


Geographic Information System Services

Kleinfelder's Geographic Information System (GIS) expand from field-data collection and mapping to web-application development. Our services support Kleinfelder's projects throughout most of our areas of expertise including civil engineering, environmental site assessment, environmental permitting and planning, geology, geotechnical engineering, sustainability and risk management.

Our GIS Services Include:

- GIS Needs Assessments and Implementation Plans
- Data Conversion/Digitizing
- GPS Field Data Collection
- Database Development and Management
- 3-D Modeling and Animation
- Spatial Analysis
- Geostatistical Analysis
- Infrastructure and Land Use Analysis
- Digital Orthophotogrammetry and LiDAR
- Engineering and Planning Model Integration
- Web Hosting and Application Development
- GIS Software Training
- High Quality Cartography and Large Format Color Plotting
- Raster to Vector Conversion
- Topographic Map Modeling
- Transportation Modeling
- Hydrologic and Hydraulic Modeling



STREAMLINING TIMELY RESULTS

Kleinfelder's GIS architecture, based on ESRI® technology, allows our GIS team to share data and workflows efficiently across our multiple offices. Our GIS staff use of ArcGIS software with other scientific and engineering modeling solutions such as Surfer®, gINT®, RockWare®, and EQUIS® to provide state-of-the-art analysis and visuals. We also interface our GIS technology with the latest AutoDesk® and Intergraph® for engineering and construction design.

GIS FOR CIVIL ENGINEERING

Kleinfelder provides an array of GIS services and solutions to support civil engineering and construction projects and asset management solutions for utilities, facilities and infrastructure. Our service span from field data collection using sub-centimeter accuracy GPS devices and inspectional services for water, storm water and sanitary systems, mapping, data integration into GIS from a wide variety of sources and formats, geodatabase development and maintenance, file integration into GIS system, CAD/GIS interoperability, 3D visualization, risk analysis, capital planning, hydrologic and hydraulic modeling, ground water modeling, and custom application development amongst others. We work with a variety of clients in the oil and gas industry, municipalities, higher education institutions, commercial clients, and transportation agencies.

