



BHC RHODES
CIVIL ENGINEERS • SURVEYORS

Leaders in Fiber Optic
Outside Plant Engineering



The People

Kevin Honomichl, P.E., L.S.
President



Mr. Honomichl

is a professional engineer and land surveyor with twenty-five years experience in civil engineering and eighteen in land surveying. Project experience includes feasibility studies, environmental compliance and permitting, land and design surveying, design and construction management for commercial site developments, associated public infrastructure improvements, fiber optic cable, OSP design for metropolitan telephone networks and building interior routing for telephone service access. Mr. Honomichl also has several business function responsibilities as one of three principal owners of the company.

Bill Brungardt, P.E.
Executive Vice President



Mr. Brungardt

has twenty-eight years of experience managing and designing outside plant fiber optic networks. He has been responsible for the implementation through design and construction of fiber optic projects throughout the country. Responsibilities include route studies, financial analysis, mapping, permitting and right-of-way acquisition, design, material management and construction management. Mr. Brungardt has a long history of successful projects and satisfied customer from major telecommunication companies. He was a co-founder of BHC RHODES and has led the telecommunication services since it's inception.

Matthew Brungardt, P.E.
Vice President



Mr. Brungardt

is a professional engineer with twenty-four years experience in utility joint use, telecommunications, structural and civil engineering. He has managed the technical aspects of telecommunications outside plant design for projects of various types and sizes throughout the United States. Areas of expertise include geographical information systems, CAD platform implementation, joint use structural analysis and lidar implementation. He also serves as one of three principal owners of Brungardt Honomichl & Company, P.A.

Larry Suppes
Utility Coordinator



Mr. Suppes has forty-

six years of experience in telecommunications management involving cable maintenance, construction, dispatch control center for maintenance and installation and managing field and office associates for analysis of joint use utility poles. He has ten years of experience in managing crews for placement, splicing, restoration of fiber failures and relocation of single mode fiber, both loose tube and ribbon, using fusion welders for splicing. The last six years he has been providing utility coordination and project construction inspection management.

Phil Jones
OSP Designer



Mr. Jones has fifty

years in telecommunications management involving outside plant construction, engineering, cable maintenance and permitting/easements. The last nine years his focus has been the design and inspection of various telecommunication projects throughout the United States and Puerto Rico.

BHC RHODES
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Our Partners



Level (3)
COMMUNICATIONS

Surewest



tw telecom.

KC Live Entertainment District



BHC RHODES was selected to design an urban telecom conduit system ranging from 16 ducts to in excess of 40 ducts, with 5' by 12' access manholes for KC's new downtown Entertainment District. This complicated project involved the design of the location and alignment of the system considering existing utility congestion and the construction of new public and private utilities. Services included coordination with the City of Kansas City, Missouri and all stakeholders, detailed design, drawing production, and bid phase support.

Joint Pole Use Inventory and Analysis



This project, performed jointly with Capital Electric for Everest Connections, included a detailed inventory of utility pole data including basic pole information, pole locations, and an accounting of all conductors, cables, and equipment attached to the poles. BHC RHODES developed a custom database application for collection of all field information and processing of data for reporting and structural analysis. Approximately 25,000 poles were inventoried using pen tablet computers over a two year period.

Kansas City Metro Time Warner Asset Inventory



BHC RHODES performed field data collection and drawing revisions for approximately 130 miles of Time Warner cable in Kansas City, Missouri and Johnson County, Kansas. BHC RHODES developed an ID naming convention and produced index maps of the network. BHC RHODES collected data at over 1,000 points for such items as splice locations, aerial slack loops, utility pole and manhole ID's and cable attachment heights. The project took 4 months to complete.

Tulsa Fiber Ring Expansion



tw telecom selected BHC RHODES to provide audit services and drawing production on 6 miles of existing rings in Tulsa, OK. BHC RHODES produced cable placement drawings for placing new cable in the CBD2 conduit system and provided all cable data including cable type, sequential and fiber mapping tw telecom's OSPInsite management software. BHC RHODES obtained map accurate GPS locations on all structures and produced final record drawings in formats acceptable to tw telecom and the City of Tulsa.

Kansas City Metro FTTP Building Entry Design



BHC RHODES provided inside plant and outside plant fiber optic engineering for metro network expansion for MCI Worldcom including design from the network to the customer equipment location for over 60 buildings. BHC RHODES has provided metro ring network design for over 30 miles of fiber and building entry design and inside plant routing for over 100 customers of tw telecom. BHC RHODES' staff provided direct coordination with building and property management staff. Building entries were completed to meet sales driven service dates.

Plaza Ring Expansion in Kansas City, Missouri



BHC RHODES was selected by tw telecom to provide permitting, design, drawings and construction management services on this 6 mile ring extension through the Plaza. The route consisted of both new buried, existing conduit and new aerial facilities. BHC RHODES provided all design within schedule and coordinated issues with the conduit owner for leased approval and city officials for placement. BHC RHODES found economical construction solutions for the client that got the job done while coexisting with the public.

Level 3 National Network Expansion



BHC RHODES performed fiber optic network design for William Communications (now Level 3) for 974 miles of routes between:

- Point Arena and Sacramento, CA (two redundant routes)
- Kansas City and St. Louis, MO
- Toledo OH and Pittsburgh, PA
- Chattanooga, TN and Atlanta GA

BHC RHODES performed base-mapping, field design, and construction drawing production in metropolitan areas, in public road right-of-way, along railroads, and in private easements.

Kansas City Metro tw telecom Asset Inventory



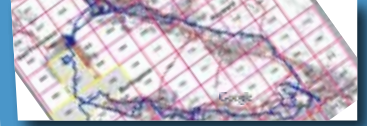
BHC RHODES was part of a team that performed a full cable audit of both buried and aerial cable on 3 metro rings totaling more than 100 miles of cable. BHC Rhodes planned the audit based on existing, but outdated, drawings and then updated the drawings with new information from the audit. Data collected included splice locations, fiber count and paths, pole risers, pole guys, etc. The client was pleased enough with this project that they hired BHC RHODES to lead the cable audit for the ring in Tulsa, OK.

ARE-ON Fiber Expansion in Arkansas



This project deploys middle-mile fiber infrastructure backbone with up to 380 route miles of underground fiber optic cable and fiber connections to two-year schools. This project will expand the Arkansas Research & Education Optical Network (ARE-ON) to 23 currently unconnected two-year colleges for the purposes of research, education, telehealth, and emergency preparedness, and provide additional resources to UAMS and the ATOM network by transporting data traffic from ATOM aggregation sites to UAMS.

San Francisco Bay Area Cable Inventory



BHC RHODES performed cable location and inventory services for approximately 200 miles of fiber optic cable systems around the San Francisco bay area. Services included review of existing records from acquired routes, field verification and location of cable facilities and GIS mapping of routes and cables.

The Projects

The Profile

Telecommunications

- Fiber Optic Networks
- Last Mile/City Rings (OSP, ISP)
- Relocations
- Feasibility and Route Selection
- Joint Pole Use
- Permitting and Right-of-Way
- Records/As-Builts

Municipal and DOT Fiber

- Buried/Aerial Systems (OSP)
- Inventories/Audits
- Facility Management
- Construction Administration

Surveying & Basemapping

- Design and As-Built Survey
- 3D Laser Scanning
- ALTA/ACSM Survey
- Geodetic Survey
- Route Survey/Right-of-Way Survey
- GIS Development
- Construction Staking

Construction Administration

- Daily On-Site Observation
- Schedule and Payment Management
- Contract Administration
- Progress Reporting
- Material Management

Joint Pole Use

- Surveying/Mapping
- Joint Use/Pole Inventories
- Wind and Ice Loading Analysis
- Attachment Design
- Code Assessment
- Construction Administration

Fiber Optic Networks

- Buried and aerial field engineering
- Scheduling and cost estimates
- Control, topography and centerline surveying
- CAD and database services
- Material evaluation and cost estimates
- Geotechnical investigations
- Aerial photography and mapping
- Right-of-way and permitting
- Directional bore and bridge attachment design

Last City/Mile Rings

- Aerial make ready design
- Utility and right-of-way investigation
- Special designs: bridges, campuses, wind and ice loadings
- Bid and construction administration
- Building entry coordination and design

Relocation

- Coordination with DOT and city/county engineering personnel by licensed professionals
- Interpretation of highway and infrastructure plans and sections
- Out of the box problem solving to avoid costly relocations
- Easements and permitting
- Liaison during construction

Feasibility/Route Selection

- Route determination for best value combination of cost to construct, total project time, environmental impact and cable protection over its useful life
- Customized approach to meet each customers unique objectives

Records/As-Builts

- Record updating with appropriate entities for tax reporting, right-of-way files and one-call systems
- Construction red-lines and final record drawings

901 N. 8th Street, Kansas City, KS 66101
(913) 371-5300



Office

6363 College Blvd., Overland Park, KS 66211
(913) 663-1900



Office

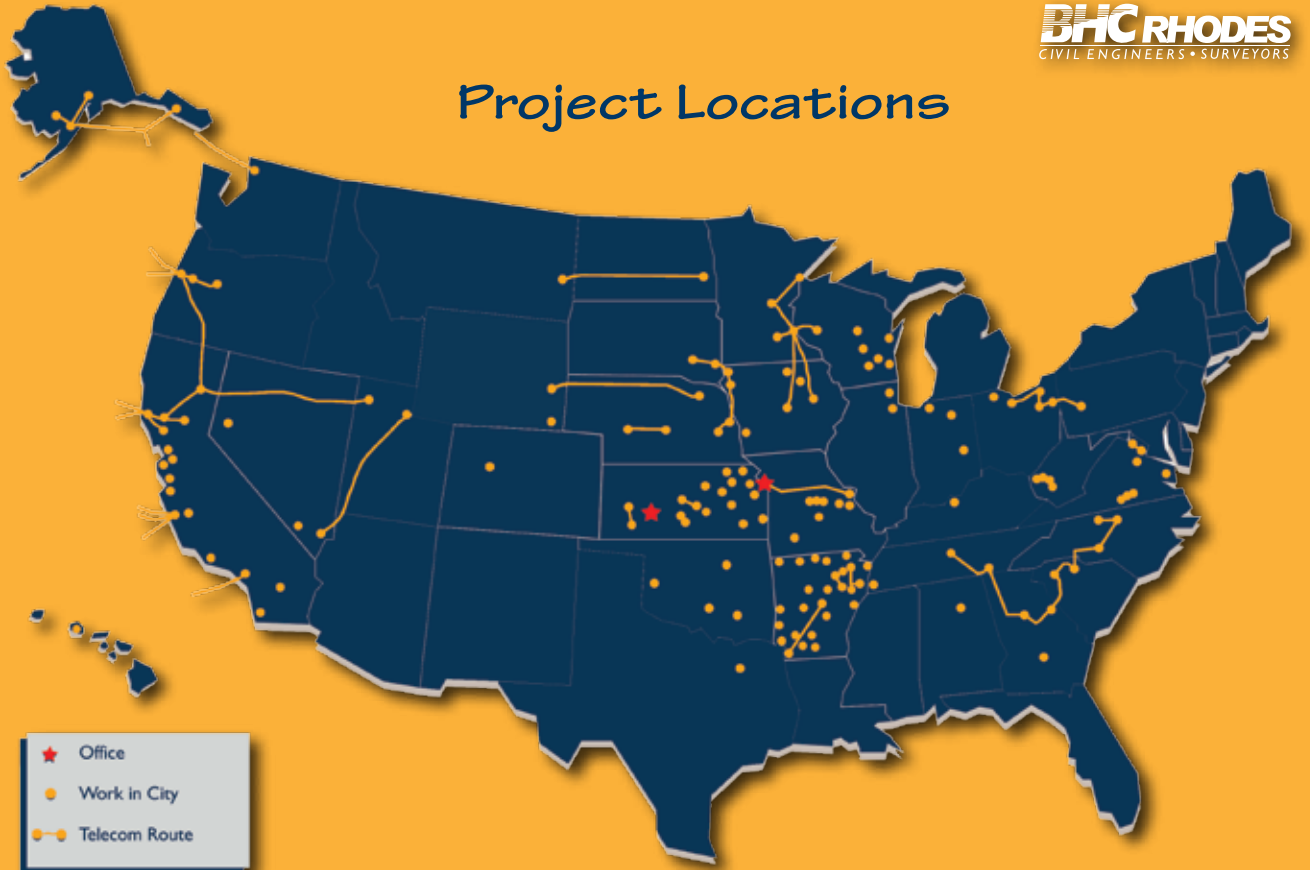
705 1st Avenue, Dodge City, KS 67801
(620) 225-1400



Office

BHC RHODES
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Project Locations



Projects Completed in 37 States and in the U.S. Virgin Islands and Puerto Rico

The Places

ibhc.com

