

Network / Data Center Facilities



Tectonic

PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.



www.tectonicengineering.com/teleco

ABOUT US

Tectonic Engineering was founded in 1986 and is a multi-disciplined engineering and professional service firm, employing a staff of approximately 500 professionals. Tectonic has over 40 years experience, with a reputation for offering professional quality services to its clients, earning a ranking in the ENR Top 500 Engineering Design Firms since 2001, with a current national ranking of 216.

Tectonic's success stems from a philosophy of providing clients with superior service through a staff of quality-minded professionals. When you choose Tectonic, you work with some of the finest professionals in the business; professionals who will earn your trust and confidence, every day, every project.

MISSION STATEMENT

TECTONIC'S GOALS, MISSION STATEMENT AND PHILOSOPHY

Tectonic has been guided by a focused philosophy and goals since the firm's beginning - vision, integrity and technical expertise. Simply put, Tectonic's goals are to:

- Maintain the highest standard of quality on each and every project.
- Complete projects within budget and on-time.
- Exceed our Client's expectations.

"Practical Solutions, Exceptional Service"





NETWORK / EDGE & CRAN / FACILITY SERVICES

Tectonic provides comprehensive Network Facility Switch Design on new facilities, expansions, and upgrades. Our team provides the full range of permitting, A&E design, construction compliance and management and professional services resulting in cohesive, seamless projects. Compliance with client-specific Network Facility Standards, as well as, all applicable local, state and federal codes, and standards is integral in our design and commissioning process.

Master Planning
Site Due-Diligence / Feasibility Studies
Design and Permitting
Facility Commissioning
Civil / Site Engineering
Electrical Design and Upgrades
Security Systems
Locating Services Edge Facilities

M.E.P. / HVAC Engineering
Structural / Seismic Analysis
Geotechnical Investigations
Emergency Power Design
Fire Suppression
Security Systems
Site Acquisition Services
Project Management



PROFESSIONAL SERVICES

Civil Engineering

Cost and Feasibility Studies
Grading and Drainage Design
Hydraulic and Hydrologic Analyses
Infrastructure/Utility Evaluations
Landscape Planning
Municipal Engineering
Regulatory Permitting/Compliance
Environmental Impact Studies
Roadway and Highway Design
Site Planning and Design
Storm water Management Plans
Low-Impact Design
Transportation/Traffic Engineering
Visual Resource Renderings and Photo Simulations
Water Resource Investigation and Design
Water and Wastewater Systems Design
Wetland Delineation and Mitigation

Structural Engineering

Structural Design
Structural Investigations
Code Compliance Review
Construction Support
Feasibility Studies
Forensic Assessment
Plan Review
Seismic Analysis
Transmission Structures Design & Retrofit
Communication Tower Analysis
Construction Support
Sheeting & Shoring
Crane Loading Analysis
Temporary Structures
Specialty Fabrications
Aerial Tower Inspections / Inventories
Line of Sight Perspective Videos
Complete Drone Services



PROFESSIONAL SERVICES

Geotechnical Engineering

Design Phase Services
Foundation Design and Analysis
Subsurface Investigations
Soil and Rock Mechanics
Laboratory Soil and Rock Testing
Hydrogeologic Studies
Retaining Wall Studies and Design
Seismic Analysis (including site specific)
Ground Improvement Design
Slope Stabilization Design
Forensic Investigations
Dewatering Systems
Earth Support Systems
Pile Load Test
Sub-Grade Evaluations
Underpinning Systems
Vibrations and Blasting

Environmental Services

Due Diligence
Phase I and II Environmental Site Assessments
NEPA Investigations and Reports
Environmental Impact Statements
Wetland Delineation
Wetland Mitigation Plans
Avian/Bat/Threatened & Endangered Species Assessments
Air Monitoring
Brownfield Redevelopment



NETWORK SWITCH FACILITY PROJECTS

Verizon Wireless - Rochester, NY MSC Single Aggregation Point Master Plan Expansion - Project Management, Architectural, Civil Engineering including storm water and utility requirements, Property/Topographic Surveying, Structural Engineering, Geotechnical Engineering

Verizon Wireless - Plymouth Meeting, PA MSC Single Aggregation Point Master Plan Expansion - Project Management, Architectural, Civil Engineering including storm water and utility requirements, Property/Topographic Surveying, Structural Engineering, Geotechnical Engineering

Verizon Wireless - Pennsylvania, New York, Nevada, North Carolina MSC Single Aggregation Point Master Plan Expansion & Upgrades - Project Management and Design Services for Architectural, Fire Resistance, Civil, Geotechnical, and Structural Engineering for HVAC, Electrical, Generator and Building Upgrades

T-Mobile/MetroPCS - Hawthorne, NY Switching Facility - Design, Permitting, and Engineering Services which included Architectural Design and Code Review, Seismic Compliance, Mechanical, Electrical, Plumbing, Fire Suppression, Security & Alarm Design.

T-Mobile/Metro PCS – Fairfield, NJ New Switch and Office Build – Program Management, Architectural & Engineering and Permitting for the Full Design and Development of the Switch and Associated office space

Verizon Wireless - Windsor, CT Mobile Switching Center Renovation – Program Management and Architectural & Engineering Design for 8,000 Square Feet of Network Equipment Switching Space

Verizon Wireless - Macon, GA MSC 480 Volt Service Upgrades – Program Management, Architectural & Engineering Design including Demolition, Structural, Electrical and Mechanical Plans. Tectonic also provided Construction Inspection Services

Verizon Wireless – Philadelphia & Harrisburg, PA & Wilmington, DE Baseline Commissioning Survey & Testing - Survey and Testing of existing Infrastructure Systems for Compliance with Verizon Standards and Comprehensive Report & Recommendations

Verizon Wireless – Richmond, VA- Tectonic provided special inspection services to monitor conformance to design and construction documents.



NETWORK SWITCH FACILITY PROJECTS

Verizon Wireless - New York, Connecticut & Texas New MSC Design Services – Zoning & Code Review, Architectural Design, Power Design, Network Equipment Layout, Grounding and LP Design, Site/Civil Design, Structural/Seismic Design

SunCom/AT&T - Richmond, VA Telecommunication Switching Facility Expansion - Structural Design, Facility Design, Electric/HVAC, Construction Inspection/Resident Engineering, Zoning/Permitting

Verizon Wireless - Yonkers, NY Dual Switching Facility/SAP Expansion– Program Management, Architectural & Engineering, Zoning/Permitting and Surveying

Verizon Wireless - Dallas / Fort Worth New MSC - Programmatic Facility Design, Civil/Site Design, Architectural/Life Safety Design, Code/Network Compliance Review, Geotechnical Design, Survey

Verizon Wireless - Windsor, CT Mobile Switching Center Renovation - Full Facility Analysis & Master Plan including Structural/Seismic Design, Civil/Site Design, Code/Life Safety Design, MEP Design Boundary & Topographic Survey, Fire Suppression, Zoning Support & Approvals

Verizon Wireless - Pennsylvania and New Jersey MSC Switch Design Expansions including Architectural/ADA/Life Safety, Structural/Seismic, Mechanical Systems, Electrical Systems, Plumbing Systems, Security, Fire Detection/Fire Suppression, Building Automation Systems, Basis of Design, Project Specifications, Equipment Cuts/Systems Review, and Engineering Cost Estimates/Project Schedule

Verizon Switch - Yonkers, NY



CRAN FACILITY PROJECTS

CRAN Services - Verizon Wireless Southwest (NM, AZ, NV and TX)

Tectonic is providing A/E Design Services for CRAN (Centralized Radio Access Network) Hubs throughout the Southwest for Verizon Wireless. These sites have been identified as requiring Medium Sized Hubs to centralize numerous cell sites within the regional areas. Services include Civil, HVAC, Fire Protection, AC / DC Electrical Power Upgrades and Structural Engineering services to provide redundancy and convert the existing buildings into Network Grade Hub Facilities.

CRAN Services – Verizon Wireless Northeast & Southeast (CT, NC, SC and TN)

Tectonic is currently providing Real Estate and A/E Design services CRAN hubs in Verizon Wireless' Southeast and Northeast Region. These existing cell sites have been identified as possible Medium Sized Hubs in order to centralize numerous cell sites within the regional areas of both markets. Tectonic services include completion of all Phase 1 requirements including due diligence, leasing review, site feasibility assessments and preliminary leasing documents.

CRAN / DAS Services – Verizon Wireless Southeast (Lynchburg, VA)

Liberty University in Lynchburg, VA has requested that VZW provide a medium hub head end for the proposed Distributed Antenna System throughout the school. This CRAN Medium HUB will require a complete fit out of the tenant space to include upgrades in Electrical Power, Emergency Generators, HVAC Upgrades, Fire Protection and Access Controls.

Large HUB A/E Services – Verizon Wireless Northeast (LaGrange, NY)

The LaGrange Large Hub currently has approximately 100 cell sites connected in this Facility. Tectonic is providing A/E Design Services to include Electrical and Emergency power service upgrades and HVAC Upgrades for additional cooling. AC power and HVAC studies to determine/verify the existing loads and future loads. HVAC Alarms, controls and monitoring were also designed to be compliant with the current VZW NSTD 3000 standards.



REFERENCES

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Verizon SAP - Rochester, NY



PROFESSIONAL SERVICES

Land Surveying

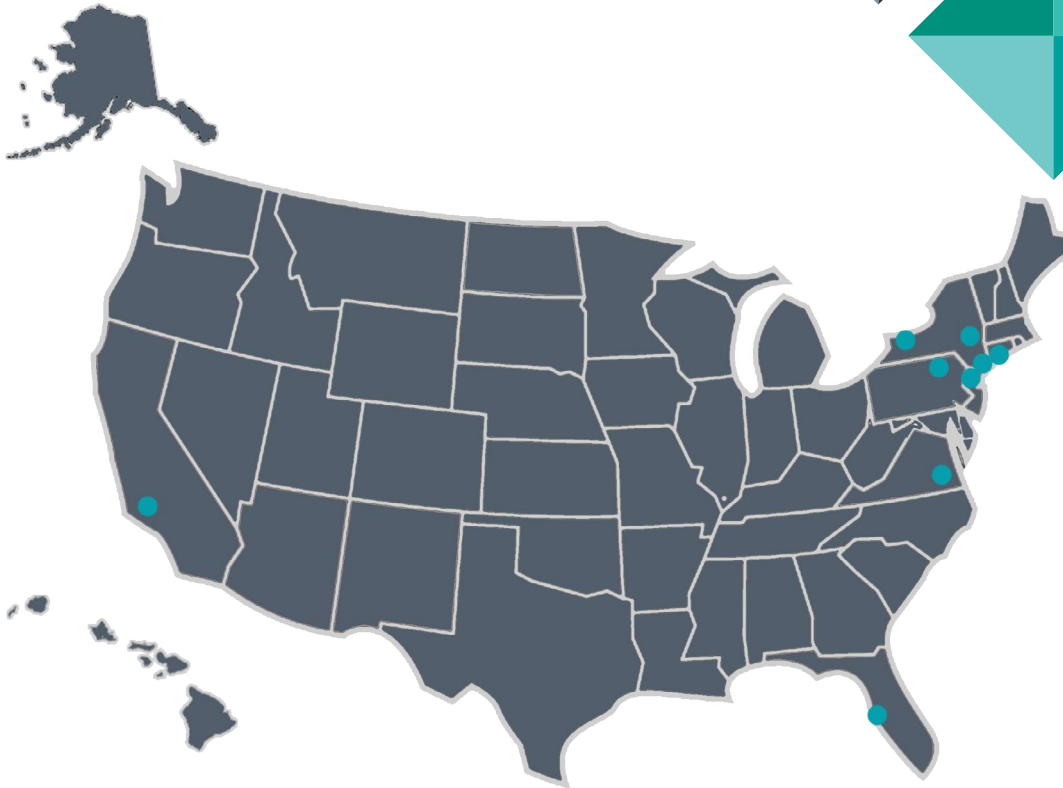
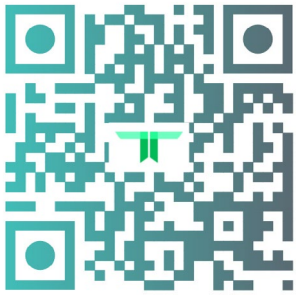
Acquisition/ROW
Aerial Control
ALTA/ACSM Land Title
Certified Boundary
Geodetic Control
GIS Mapping
Property Subdivision
Route Surveys
Topographic
Wetland Delineation
Anchor Bolt Location
As-Built Plans
Baseline Location
Construction Layout
Litigation Support
Steel Plumbness Surveys

Construction Services

Blasting and Vibration Monitoring
Claims Analyses
Constructability Reviews
Contract Administration
QA/QC Programs
Resident Engineering
Technical Inspections
Asphalt Pavement
Concrete
Fire stopping
Fireproofing
Roofing
Soils Inspection
Subgrades
Structural Steel
Rock Bolts
Structural Cold-Formed Steel
Masonry
Precast Concrete
Post-tensioned Concrete







TECTONIC Office Locations.

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