

## SERVICE

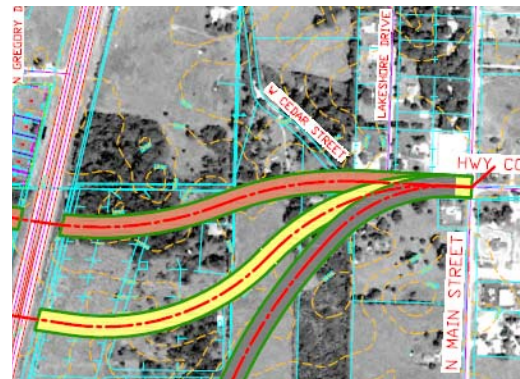
CJW Transportation Consultants prides itself on its honesty and integrity, and really cares about the client relationship. CJW's services include:

- Transportation Planning
- Land Survey and Mapping
- Traffic Signal Design
- Land Development & Civil Engineering Design
- Traffic Modeling and Impact Analyses
- Roadway and Intersection Design
- ITS Planning and Design

## TRANSPORTATION PLANNING

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No matter what scale your transportation planning project, CJW helps you develop practical solutions to transportation planning that have a high probability of being successfully built in your community. Whether city, county, or State CJW's Transportation Planning process identifies the social, technical, and environmental issues that will determine your best options for success. We use current modeling techniques to provide dependable project evaluation for effective decision-making. We strive for Transportation Planning Studies that are technically sound and account for public concerns, government mandates, and your community's planning process. CJW Transportation Consultants provides a variety of Transportation Planning services to Public Agencies and Private Partnerships. CJW's Transportation Planning Services were utilized in the following projects.



### ***NIXA TRANSPORTATION ENHANCEMENT PROJECT PRIORITIZATION STUDY City of Nixa, Missouri***

As part of on-call engineer services, CJW performed a study for the City of Nixa to prioritize the transportation improvement projects throughout the city. To determine which projects should take precedence. Key factors were considered in the analysis including congestion relief, economic competitiveness, safety, and current road system conditions. The study provided City leaders an opportunity to quantitatively compare the needs for new roadway construction and improvements to existing roadways alike. The City adopted and is in the process of implementing the recommendations provided in the study. CJW also provided assistance in securing and programming FHWA funding for completing the design for each improvement.

### ***STONE COUNTY REGIONAL TRANSPORTATION STUDY – HIGHWAY 76 & PROPOSED PENINSULA PARKWAY Stone County, Missouri***

CJW completed a study with Stone County Regional Transportation Study Group; consisting of Stone County, City of Branson West, City of Kimberling City, Village of Indian Point, Indian Ridge Resort Community, and Silver Dollar City; to provide traffic analysis and recommended short-term improvements for the Highway 76 corridor and identify viable alignments for proposed Peninsula Parkway from the Ozark Mountain Highroad to Highway 13. The study included both short and long range projections and prioritization of proposed improvements for the corridors.

**ROUTE 14**  
**Ozark, MO**

**Missouri Department of Transportation**

CJW provided traffic studies including review of existing information, data collection and calibration, HCS & SYNCHRO development for both the construction and design year volumes. The project also included preliminary design including traffic signal modifications, interchange analysis, and geometric improvements for the entire corridor.

**HIGHWAY CC EXTENSION**  
**City of Nixa, Missouri**

CJW completed work as the lead consultant for the conceptual layout and environmental assessment of State Highway CC extension from Main Street to Nicholas Street in portions of the City and Christian County, Missouri. The project is federally funded and provides engineering assistance to the City of Nixa.

**NORTH-SOUTH CORRIDOR STUDY**  
**Springfield, MO**

**Ozark Transportation Organization**

CJW has provided, as a sub-consultant, traffic studies including review of existing information, data collection and calibration, development of alternatives and the collection of data to evaluate the corridor alternatives.

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**TRAFFIC MODELING AND IMPACT ANALYSIS**

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CJW Transportation Consultants provides Traffic Modeling and Traffic Impact Analysis services that are tailor made for your specific needs. Whether a single family home subdivision, commercial property, or race track, CJW can provide the analysis to suit your needs. CJW has worked with multiple public agencies and private partners to resolve access issues and traffic concerns. CJW will provide timely economical solutions that are practical. CJW offers the following Traffic Modeling and Traffic Impact Analysis Services, Synchro Computer Modeling, VisSim Computer Modeling, Highway Capacity Manual Evaluation, Traffic Projections, Traffic Distribution, Traffic Assignment, SIDRA Software Analysis, Signal System Evaluation, and Roundabout Analysis. The following projects completed by CJW Transportation Consultants offer examples of such services.



**QUAPAW TRIBE**  
**Quapaw, Oklahoma**

CJW evaluated the existing roadway geometrics and access points. The purpose of the study was to determine what improvements (lane additions and/or traffic control modifications) were necessary to the adjacent and nearby road system to mitigate the impact and maintain a satisfactory level of service, safety, and access to the development. This included the evaluation and comparison of roundabouts to signals. The study showed that roundabouts would be the best alternative due to roadway layout and the superior performance of the roundabouts.

***CASEY'S GENERAL STORE TRAFFIC IMPACT STUDY  
Nixa, MO***

CJW evaluated the existing roadway geometrics and access points. The purpose of the study was to determine what improvements (lane additions and/or traffic control modifications) were necessary to the adjacent and nearby road system to mitigate the impact and maintain a satisfactory level of service, safety, and access to the development.

***TRUMAN ELEMENTARY SCHOOL  
Webb City, Missouri***

CJW worked with the School District of Webb City R-7 to evaluate the traffic impact of a 41,000 square foot school addition. The purpose of the study was to determine what improvements (lane additions and/or traffic control modifications) were necessary to the adjacent and nearby road system (Rte. 96/Rte. D) to mitigate the impact and maintain a satisfactory level of service, safety, and access to the development.

***STOCKTON HIGH SCHOOL  
Stockton, Missouri***

CJW worked with the School District of Stockton to evaluate the traffic impact of a new high school. The purpose of the study was to determine what improvements (lane additions and/or traffic control modifications) were necessary to the adjacent and nearby road system to mitigate the impact and maintain a satisfactory level of service, safety, and access to the development.

***HOWARD BUSH DRIVE EXTENSION  
Neosho, MO***

CJW was contracted to provide Traffic Modeling, Traffic Signal Design, and Traffic Control Plans for an Industrial Park Development. CJW provided final construction documents, project special provisions and bid proposal quantities, and pre and post bid consultations.

***PARADISE PARK DEVELOPMENT  
Springfield, MO***

CJW worked with Hood-Rich, Inc. to evaluate the traffic impact of 128 acres for a single family residential development containing 426 dwelling units. The purpose of the study was to determine what improvements (lane additions and/or traffic control modifications) were necessary to the adjacent and nearby road system to mitigate the impact and maintain a satisfactory level of service, safety, and access to the development.

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**LAND SURVEY AND MAPPING**

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The CJW Land Survey and Mapping Department offers the right combination of field experience, meticulous attention to detail, an understanding of your schedule and budget. The CJW Land Survey and Mapping Department gets the job done with your needs in mind. CJW provides a variety of Land Survey and Mapping services which include Boundary Surveys, Construction Staking, Topographical Surveys, and Graphical Information Systems (GIS) Mapping and geo database development. CJW Transportation Consultants Surveying Services were utilized in the following projects.



**MASTER PLAN COX NORTH HOSPITAL  
Springfield, MO**

CJW was retained by Cox Health Systems to provide a master plan for the redevelopment of the Cox North Campus. CJW's Services included existing utility location, boundary survey, and topographical survey.

**MASTER PLAN COX SOUTH HOSPITAL  
Springfield, MO**

CJW was retained by Cox Health Systems to provide a master plan for the addition of a new Emergency Department at the Cox South Campus. CJW's Services included existing utility location, boundary survey, and topographical survey.

**COMMERCIAL STREET STREETScape PHASE III  
Springfield, MO**

CJW was retained by the City of Springfield to provide surveying data for the Commercial Street Streetscape project. CJW's Services included existing utility location, boundary survey, and topographical survey.

**GEOGRAPHIC INFORMATION SYSTEMS (GIS)  
City of Nixa, Missouri**

As part of an on-call services contract, CJW Transportation Consultants, L.L.C. was retained, among other services, to maintain the City of Nixa complete infrastructure GIS which includes the City's utilities (street, sanitary sewer, water, electric, and storm water). The database was built using AutoCAD, ArcGIS, and CartêGraph software and is a vital tool in generating their annual GASB34 (Governmental Accounting Standards Board) reports.

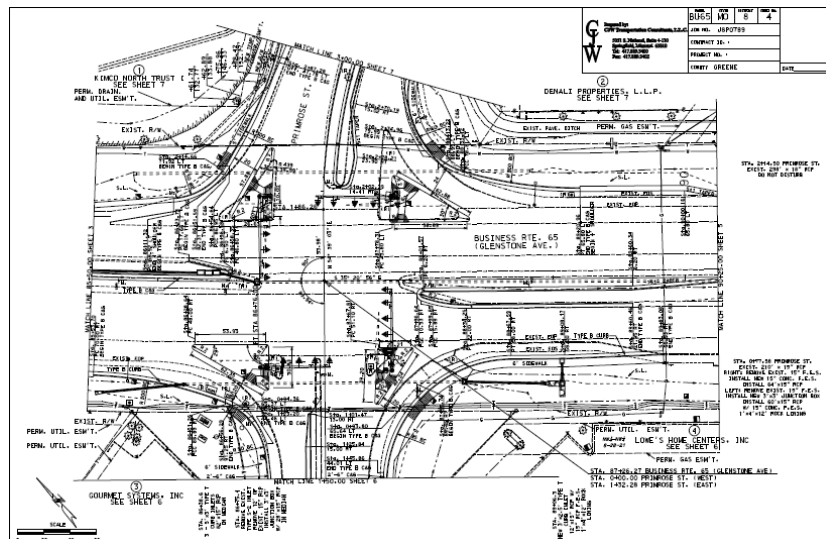
**CITY OF JOPLIN/MoDOT DISTRICT 7 ITS STUDY/GIS DEVELOPMENT  
Joplin, Missouri**

As a Sub-Consultant on the Project Team, CJW Transportation Consultants, L.L.C. was retained to design and build a GIS database of the Joplin and MoDOT District 7 signal system infrastructure. As part of the project an inventory of all traffic signal equipment within the city was collected and delivered in a report format as well as in a GIS format compatible with an ESRI Geodatabase format.

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**ROADWAY AND INTERSECTION DESIGN**

An integral part of many transportation projects is roadway design. CJW has designed multiple roadway and intersection projects including widening for left turn bays, right turn bays, and other capacity increasing techniques for Public Agencies and Private Partners. Many projects of this nature have involved federal, state, and



private funding. CJW has complete and thorough knowledge of Agency Design Standards has been developed to facilitate the development of roadway and intersection plans. Traffic counts and accident analyses are also a part of the evaluation process for these projects. CJW provides Roadway and Intersection Design for Public Agencies and Private Partnerships. The following list includes roadways and intersections designed by CJW Transportation Consultants.

***ROUTE ZZ AND ROUTE M  
Republic, MO***

CJW is currently working with the Republic School District to provide supplemental surveying and geometric design for roadway and signal improvements along Route M and Route ZZ. CJW is providing and preparing conceptual, preliminary, and final design of improvements, including final construction bid documents.

***GLENSTONE AVENUE & PRIMROSE STREET  
Springfield, MO***

As part of the MoDOT District 8 on-call services contract, CJW has worked to provide geometric and traffic signal design for intersection improvements at Glenstone (Business Route 65) and Primrose Street. The project includes intersection widening to accommodate dual left turn lanes and exclusive right turn lanes, new signals, CCTV camera relocation and fiber optic interconnect.

***COMMERCIAL STREET STREETScape PHASE III  
Springfield, MO***

CJW was retained by the City of Springfield to provide street plans for the Commercial Street Streetscape project. CJW's Services included existing utility location, boundary survey, and topographical survey.

***3RD STREET (ROUTE 14)  
Ozark, MO***

CJW is currently working with the City of Ozark to provide surveying and geometric design for streetscape, roadway and roundabout improvements along 3rd Street (Route 14) in conjunction with Ozark downtown revitalization. CJW is providing and preparing conceptual, preliminary, and final design of improvements, including final construction bid documents.

***ROUTE CC (EXTENSION)  
Nixa, MO***

CJW is currently working with the City of Nixa to provide surveying and geometric design for roadway and signal improvements along the extension of Highway CC from Main Street to US Highway 160. CJW is providing and preparing conceptual, preliminary, and final design of improvements, including final construction bid documents.

***FORT AVENUE & SUNSHINE STREET  
Springfield, MO***

CJW is currently working with the City of Springfield to provide geometric and traffic signal design for intersection improvements at Fort Avenue and Sunshine Street. The project includes intersection widening, new signals, and stormwater improvements.

***ROUTE CC  
Ozark, MO***

As part of the Deerbrook Commercial and Deerbrook South developments, CJW is providing surveying and geometric design for roadway, stormwater, traffic signal, roundabout, and interchange improvements along Route CC from Highway 65 through 25<sup>th</sup> Street. CJW is preparing and providing traffic conceptual, preliminary, and final traffic design of improvements, including final construction bid documents.

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## **TRAFFIC SIGNAL DESIGN**

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Traffic Signal design is an important aspect of many transportation projects. CJW has designed multiple signalized intersections for Public Agencies and Private Partners. Projects of this nature have included federal, state, and private funding. The following includes a partial list of signalized intersections designed by CJW Transportation Consultants.



### ***TRUMAN BOULEVARD & STATE HIGHWAY 14***

#### ***Nixa, MO***

CJW worked with the City of Nixa to provide Traffic Modeling, Traffic Signal Design, and Traffic Control Plans for the intersection of Truman Boulevard and State Highway 14.

### ***KANSAS EXPRESSWAY & EVERGREEN INTERSECTION IMPROVEMENTS***

#### ***Springfield, MO***

CJW provided Traffic Signal Design, Geometric Layout, and Traffic Control Plans for the above intersection, including preparation of traffic signal conceptual, preliminary, and final design of improvements. The project includes relocation of the traffic signal and geometric improvements to improve traffic flow and tie into future interchange improvements at Kansas Expressway and Interstate 44.

### ***ELLIOT AVENUE (ROUTE 39) & PROSPECT STREET***

#### ***Aurora, MO***

#### ***Missouri Department of Transportation, District 7***

As part of the MoDOT District 7 on-call services contract, CJW has been worked with the Missouri Department of Transportation to provide traffic signal design for intersection improvements at Elliot Avenue (Route 39) and Prospect Street.

### ***7TH AND GENEVA AND 3RD STREET AND NORTH PARK LANE***

#### ***Joplin, MO***

CJW provided Traffic Signal Design, Traffic Control Plans, and Interconnect for the intersection of 7th & Geneva and Traffic Signal Design, and Traffic Control Plans for 3<sup>rd</sup> Street & North Park Lane.

### ***TRAFFIC SIGNAL DESIGN AND MODIFICATIONS***

#### ***City of Springfield, MO***

CJW Transportation Consultants has worked with the City of Springfield to provide traffic signal design and modifications to Campbell & McDaniel, Campbell & College, and Campbell & Olive as a part of the College Station and Heers streetscape projects in downtown Springfield. CJW provided final construction documents, project special provisions and bid proposal quantities, and pre and post bid consultations.

### ***ALDERSGATE & MAIN***

#### ***Nixa, Missouri***

CJW worked with the City of Nixa to provide Traffic Modeling, Traffic Signal Design, and Traffic Control Plans for the above intersection.

### ***AIRPORT PLAZA TRAFFIC SIGNAL DESIGN Springfield, MO***

CJW has worked with Carleton & Company to provide Intersection Design, Traffic Signal Design, Traffic Control Plans, and Interconnect for the intersection of Kearney Street & Cresthaven. CJW provided final construction documents, project special provisions and bid proposal documents, and pre and post bid consultations.

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## **ITS PLANNING AND DESIGN**

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CJW provides practical and innovative solutions to your Intelligent Transportation System planning and design. Successful ITS projects start with a clear concept of operation from data collection, processing and dissemination. CJW has a passion for making your ITS design affordable, expandable, and easily maintained. CJW prides itself on staying on the cutting edge of ITS design and advancement. The following projects highlight the ITS services provided by CJW.



### ***OPERATION GREEN LIGHT - TRAFFIC SIGNAL CONTROLLER UPGRADE DESIGN Mid-America Regional Council***

Operation Greenlight (OGL) is a program developed to improve vehicular travel in the Kansas City Metropolitan Area by optimizing travel time, safety, and traffic flow along arterial corridors. CJW is a Sub-Consultant on the Project Team to provide traffic signal controller upgrades at 260 initial locations. This initial contract involves providing the needs analysis for all 260 intersections and preparing the design and construction support for 59 locations where electro-mechanical controllers are to be replaced.

### ***OPERATION GREEN LIGHT - FIELD COMMUNICATION DESIGN Mid-America Regional Council***

Operation Greenlight (OGL) is a program developed to improve vehicular travel in the Kansas City Metropolitan Area by optimizing travel time, safety, and traffic flow along arterial corridors. CJW was retained as a sub-consultant to complete preliminary and final design of both direct field and wireless communications to 600 signals, linking Olathe, Kansas City, Missouri, and Overland Park Traffic Management Centers with the KC Scout Traffic Management Center.

### ***ITS RAMP METERING DESIGN - INTERSTATE 435 Kansas City Scout***

CJW worked as a Sub-Consultant on the Project Team to provide design to the Missouri Department of Transportation and the Kansas Department of Transportation for the first ramp metering project in the Kansas City Region. The project includes the on-ramps at Metcalf Avenue, Nall Avenue, Roe Avenue, State Line Road, Wornall Road, and Holmes Road. The project consists of studies and analysis, public relations program, plan preparation and design, and project management.

### ***ATMS SYSTEM DEVELOPMENT AND IMPLEMENTATION Springfield, MO***

CJW worked as a Sub-Consultant on the Project Team to assist the Missouri Department of Transportation and City of Springfield with development and implementation of an integrated regional inter-jurisdictional arterial and freeway advanced traffic management system for the

Springfield Region. The project includes deployment of central software for real-time data collection, incident response, DMS control, CCTV control and traffic signal control, including firmware replacement.

#### ***ATMS DESIGN SERVICES FOR FIELD DEPLOYMENT***

##### ***Springfield, MO***

CJW has been retained as a Sub-Consultant on the Project Team to assist the Missouri Department of Transportation and City of Springfield with the design 33 dynamic message signs, 275 vehicle detectors, 14 rail crossing train detectors, 54 CCTV cameras, and over 28 miles of fiber-optic cable and wireless communications infrastructure along several freeway and arterial routes throughout the city.

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#### ***CITY OF JOPLIN ITS***

##### ***Joplin, MO***

CJW has been retained as a Sub-Consultant on the Project Team to assist the Missouri Department of Transportation and City of Joplin with the analysis of the existing Signal System, and the appropriate recommendations for upgrades, communication, and interconnection between signals. This project included the development of a signal system infrastructure database. This database will be utilized and expanded for Maintenance and ITS purposes.

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## **LAND DEVELOPMENT & CIVIL ENGINEERING DESIGN**

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It is important that CJW identify with your business, share your vision, and have a passion for making your vision a reality. It is also important that CJW help maximize the value of your property while providing quality affordable design, timely permitting, and incomparable follow-through. Our full-service team develops solutions that are economical, practical, and constructible. CJW works continually with regulatory public agencies to address any concerns and complete your project in a timely manner, and then follow the project through the construction phase. CJW provides a variety of Land Development & Civil Engineering Design Services that include Surveying, Sanitary Sewer Design, Storm Water Design, Detention Pond Design, and Water Distribution Design. These design services were included in the following projects completed by CJW.



***Water Main Extension  
Duenweg, MO***

CJW has worked to provide land disturbance plans and develop construction plans and specifications for a water main extension in the City of Duenweg, Missouri. As a part of this contract CJW also provides hydraulic analysis of the proposed extension.

***Gravity Sewer Extension  
Neosho, MO***

CJW Transportation Consultants has worked to provide land disturbance plans and develop construction plans and specifications for a gravity sewer extension in the City of Neosho, Missouri.

***Emergency Department for Cox South Hospital  
Springfield, MO***

CJW been retained by Cox Health Systems to provide site civil design services for the new Emergency Department addition and parking garage. The scope of work includes grading and staking layouts with finish floor elevations, parking lot and entrance design, storm water design and conveyance, sanitary sewer relocation, erosion control plans (SWPPP), completion of MoDNR land disturbance permit application, planting design, irrigation plan, and a landscape lighting plan.

***Elite North Storage  
Springfield, MO***

CJW has worked with Gregg Stancer to provide professional services for the Elite North Storage Facility. CJW's work includes developing a preliminary plat, street and grading plans, storm water detention plans with construction permit applications from MoDNR.

***Neosho Heights Subdivision  
Neosho, MO***

CJW has worked with Integrity Group to provide professional services for the Neosho Height Subdivision. CJW's work includes developing a preliminary plat, street and grading plans, storm water detention plans, water and gravity sewer extension plans with construction permit applications from MoDNR.

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