

JENNIFER JACKA-TAYLOR, PE, ENV SP

Education

BS – Business Administration, Kansas State University, 2000
BS – Civil Engineering, Kansas State University, 2004



Professional Licenses

Professional Engineer – Kansas, Texas, and Missouri

Specialty Certifications

Envision Sustainability Professional
OSHA 30-Hour Construction Safety
HAZWOPER 40 Hour Training
Basic Orientation Plus

Professional Affiliations

American Society of Civil Engineers – Region 7 Governor
Kansas State Board of Technical Professions – Board Member
Women's Transportation Seminar – Awards Chair
National Council of Examiners for Engineering and Surveying – Awards Chair

Professional Experience

Jennifer has experience with a diversity of projects, including landfills, wetlands, environmental site assessments, research, report writing, site design, rail yard development, underground stormwater drainage system design, ponds, erosion controls and other environmental solutions.

Prior to joining SCS Engineers, Jennifer led a team of nine civil engineers and designers on a \$4 billion project that included all aspects of site design. She built a team that produced creative quality designs under very demanding timelines. This team extended to the Mumbai, India Office. Jennifer traveled there to teach and unite the groups to a common vision and foster clear communication.

Jennifer also served several years as the Stormwater Management Coordinator for a municipality where she was hired following an audit and consent decree by the EPA. She led them to compliance with their NPDES permit, and due to her diligence, the city received no fines from the EPA. The Stormwater Program she established has been used as an example for other Phase II Municipalities.

PROJECT EXPERIENCE PRIOR TO JOINING SCS

Civil Engineering Site Design Municipalities

Kansas City Department of Public Works/HDR Engineering, KC Streetcar Vehicle Maintenance Facility Expansion, Kansas City, Missouri. Civil Engineering Project Manager for the project, which included grading and paving, stormwater management, BMPs and Green infrastructure solutions underground utility coordination and relocation, and ADA compliant parking lot expansion. This project is LEED Gold certified.

Kansas City Department of Public Works/Walter P. Moore, Wornall Road – 74th to 79th Street, Kansas City, Missouri. Civil Engineering Project Manager for the project, which included the stormwater design using various green stormwater systems to reduce runoff quantity and improve quality. Underground stormwater storage chambers, curb cuts and tree box systems as well as improvements the existing storm system were designed.

City of Belton, Missouri, Utility and Stream Stabilization at Highway 58. Project Manager responsible for direction and oversight of design to replace an undermined sanitary sewer pipe caused by erosion of the stream bed. This included working with USACE and MDNR to get permitting to stabilize the stream bed and banks in several locations.

Civil Engineering Site Design Oil, Gas and Chemical Sites

Chevron Phillips Chemical Company, USGC II Petrochemicals Project OSBL FEED and Early Works, US Gulf Coast. Lead Civil Engineer for the project, which included the development of a more than 1,300-acre greenfield site. This included a rail yard, heavy haul roads, drainage issues, reroute of centralized water supply canal, and multiple permitting efforts. Responsible for oversight of the 12-member team, guiding their daily activities designing drainage and grading for the site. Coordinated and collaborated with all project stakeholders, working directly with clients and five regulatory authorities.

Motiva, Port Arthur Chemicals OSBL, Port Arthur, Texas. Lead Civil Engineer for the project involving treatment of 2 million cubic yards of contaminated soil. Responsible for oversight of the team designing drainage and grading for the site. Also responsible for constructability and phasing of construction.

Marathon (formerly Andeavor), Salt Lake City Refinery Improvement, Salt Lake City, Utah. Civil Engineer for the project intended to increase rail storage for new unit improvements. Responsible for coordination of the design for grading, rail layout, drainage, and bid quantities.

Marathon (formerly Andeavor), Mandan Tier III, Mandan, North Dakota. Civil Engineer for the project intended to expand refinery capacity. Responsible for drainage study and pond and pipe sizing and design, grading, road layout, and drainage.

Valero, Houston Alkylation Unit, Houston, Texas. Civil Engineer for the project involving adaptation of an off-the-shelf sulfuric acid butylene alkylation unit process technology package to support Valero's specialized capital strategy. The effort requires the re-engineering of several key components of the unit and involves the conversion of the existing alkylation unit from a butylene to an amylene alkylation unit and other outside battery limits (OSBL) scope. As the civil engineer, Jennifer was responsible for designing the stormwater system and paving for the unit.

Marathon, Flare Gas Recovery Tier III, Canton, Ohio. Civil Engineer for two environmental compliance projects to bring the refinery into compliance with EPA regulations. The flare consent decree project involved the design and installation of a flare gas recovery unit (FGRU) to remove H₂S and waste gas. Tier III project included modifications to reduce the overall sulfur in gasoline. Responsibilities included paving, drainage, and underground oily water drain system design.

Energy Transfer Company, Revolution Fractionator Project, Marcus Hook, Pennsylvania. Civil Engineer for project involving design and construction of a natural gas fractionator designed to process 30,000 SBPD of deethanized NGL feed, producing three primary products: propane, mixed butanes, and natural gasoline. This unit is tied to existing assets at the facility and was designed to accommodate continued operations throughout construction. As the civil engineer, Jennifer was responsible for containment, paving, and stormwater and oily water sewers.

Phillips 66, Vacuum Improvements Projects (VIP), Billings, Montana. Civil Engineer for project involving complex combined underground storm and process sewer system with extensive existing constraints and an aggressive timeline. Performed and led other team members through detailed design. Resolved RFIs from the field during construction phase.

Phillips 66, Tight Oil Processing Flexibility (TOP Flex), Ponca City, Oklahoma. Civil Engineer for project involving construction of a new LSR/Naphtha Splitter tower in an inside battery limits (ISBL) area, reusing two existing towers as debutanizers, and the installation of outside battery limits (OSBL) piping and electrical infrastructure to support the new unit. Included extensive grading and drainage and the extension of a large cliff to accommodate new equipment and construction and plant traffic.

Valero, Eagle Ford Crude Units, Corpus Christie, Texas and Houston Texas. Civil Engineer for similar crude units at two locations. Involved massive underground storm and process sewer system. Designed grading and roadway design to haul giant equipment through construction, for two clients with different expectations. Involved through the life of the project from early conceptual layouts and designs in front end planning (FEP), performing and leading others through detailed design, and resolving requests for information (RFIs) during construction.

Enable, Gas Plant Expansion, Bradley, Oklahoma. Civil Engineer for project involving massive containment area with HDPE liner and a Geoweb Driving Surface. Performed and led others through detailed design of the containment area, drainage, and access roads. Resolved RFIs during construction of this unique design.

Marathon, LPG Risk Mitigation Project, Detroit, Michigan. Civil Engineer for project involving several large containment areas. Researched the requirements and worked with the designer to develop the four tanks and bullet containment areas. Designed the underground piping system to accommodate flow from the containment areas.

Stormwater Design

City of Hutchinson, Stormwater Management Coordination, Hutchinson, Kansas. Stormwater Management Coordinator. Helped bring the City into compliance with its NPDES permit and avoided all fines following an audit and consent decree issued to the City by the EPA. Overhauled, implemented, and managed the City's stormwater program including public education and outreach, construction and post construction site compliance, discharge program, and City operations affecting stormwater. Updated City ordinances, implemented standard operating procedures, followed-up with training programs for city employees, and enforced ordinances with residents and contractors. Prepared a grant proposal and received funding to design and construct the first bioswale and rain garden stormwater treatment train in Hutchinson. Reviewed plans and inspected all construction

sites to ensure compliance with the Stormwater Pollution Prevention Plans and Post Construction Permanent Best Management Practices. served as Project manager for the design of several drainage improvement projects for the City of Hutchinson.

Environmental Design

Westar Energy, Constructed Wetland Treatment System, Saint Mary's, Kansas. Civil Engineer for project involving the design of a constructed wetland treatment system to treat wastewater from Jeffrey Energy Center's flue gas desulfurization process. Primary responsibility was to design the erosion control plans to protect nearby waterways from runoff. Included compliance with NPDES Permit for a very large construction site. Also compiled the efforts of a large team into the engineering report and technical specifications and ensured that the site complied with regulations by writing reports to the Kansas Department of Health and Environment to gain approval to beneficially reuse gypsum by-products for structural fill and alternative liner designs.

LAXFUEL Corp., LAX Fuel Baseline Environmental Assessment Report and Subgrade Investigation Work Plans, Los Angeles, California. Civil Engineer for project involving many environmental and subsurface investigations have been performed over the years at LAX Airport. Compiled these investigations and analyzed the data to prepare a baseline assessment report to identify the locations of potential contamination and determine how to proceed. Created a work plan for each terminal with proposed boring locations to gather information where there were gaps in the data and to determine the vertical and horizontal extents of known contamination.

Butler County, Landfill Stormwater Pollution Prevention Plan, Butler County, Kansas. Civil Engineer responsible for updating the Stormwater Pollution Prevention Plan (SWPPP) for the Butler County Landfill. Operations at the landfill had changed and the SWPPP needed to be updated to meet the requirements in the NPDES permit. Updated the SWPPP to ensure compliance and was the Engineer of Record on the updated SWPPP document.

City of Grand Forks, Grand Forks North Municipal Solid Waste Permit Update, Grand Forks, North Dakota. Civil Engineer assisting in updating the soil loss prevention, seeding plan, and the closure plan. Also performed landfill airspace calculations and soil balance calculations to determine the remaining life of the landfill site and the amount of soil needed for the life of the landfill.

University of Central Missouri, Gaines Building Hydraulic Lift, Williamsburg, Missouri. Civil Engineer responsible for investigating a potential leak at the University of Central Missouri below an in-ground hydraulic lift. Assisted on a site visit to observe any potential environmental impacts and compiled the Environmental Site Assessment Report based on the findings of the site visit. Performed a comprehensive investigation of the site and surrounding areas.

Kansas City Missouri, Choteau Trafficway MoDOT Environmental Site Assessment, Kansas City, Missouri. Civil Engineer responsible for performing an environmental site assessment near Choteau Trafficway. Assisted in compiling the Environmental Site Assessment Report based on the findings of the site visit and a comprehensive investigation of the site and surrounding areas.

University of Missouri, Kansas City Phase I Environmental Site Assessment UMKC, Kansas City, Missouri. Civil Engineer responsible for performing an environmental site assessment for several properties owned by the University of Missouri - Kansas City. Assisted in compiling the Environmental Site Assessment Report based on the findings of the site visit and a comprehensive investigation of the site and surrounding areas.

Transportation Design

City of Hutchinson, Hospital Corridor Improvement, Hutchinson, Kansas. Civil Engineer for project. The traffic corridor near the hospital was in major disrepair and very congested during peak hours. Pedestrian traffic and numerous access points to businesses were also concerns in this area. The team was challenged with designing and evaluating several alternative solutions to improve traffic and safety in this area taking into account emergency vehicle access and the needs of elderly drivers. Alternatives included roundabouts with mountable center islands and widening the roadway to accommodate the numerous access drives. Plans for each alternative were prepared and presented to the stakeholders in the area for comments and then presented to the City Council for approval.

Burlington Northern Santa Fe Railway (BNSF), Gardner Intermodal Final Design, Gardner, Kansas. Civil Engineer for BNSF Gardner Final Design project which involved final engineering design including preparation of construction documents for the Gardner Intermodal Facility. This also included site, track, facilities, utilities, electrical, and other engineering efforts and coordination with federal, state, and local agencies for approval and coordination to initiate construction. Duties included final civil engineering design and preparation of Issue for Construction documents.

Burlington Northern Santa Fe Railway (BNSF), Double Track Design Mason City to Berwyn, Nebraska. Civil Engineer for this project, providing design services for capacity improvements of 10.5 miles of track to Powder River. This consisted of new track alignments including siding tracks and crossovers. Responsible for horizontal track layout, crossover design, and creation of criteria files to efficiently run GeoPak cross-sections.

Federal Highway Administration (FHWA), Non-Motorized Intersection Improvements, Columbia, Missouri. Civil Engineer responsible for the plan design and production of the intersection improvement project in Columbia, Missouri implemented as part of FHWA's Non-Motorized Transportation Pilot Program. This project dealt specifically with improvements at eight intersections throughout Columbia to improve pedestrian safety and addition of bike lanes. Many innovative design approaches were implemented on this project.

Federal Highway Administration (FHWA), Alternative Transportation System, Columbia, Missouri. Civil Engineer responsible for the plan design and production of vertical and horizontal alignment for the project. The City of Columbia, Missouri as part of FHWA's Non-Motorized Transportation Pilot Program was initiating a web of trails to provide an alternative means of transportation and access throughout the City and connecting to the Katy Trail system. This project dealt specifically with a 10 mile portion of new shared use trails.

Kansas City Missouri Public Works Department, 72nd Street Extension at Waukomis Drive, Kansas City, Missouri. Civil Engineer for project involving conceptual design for the extension of NW 72nd Street to NW Waukomis Drive and the re-alignment of N. Green Hills Road and NW Waukomis Drive from NW Barry Road to Bryan Avenue. Responsible for the horizontal and vertical design of this project which included a large roundabout at the intersection of these arterials.

Kansas City Missouri Public Works Department, Englewood Parkway, Barry, Missouri. Civil Engineer for project including preliminary design improvements for Englewood Parkway, part of the Parks and Recreation Department's Centennial Boulevard System. One of the objectives of the project was to develop an alignment and associated improvements that serve motorists, hikers, and bicyclists in a scenic and pleasing manner. This alignment included a single roundabout at the intersection of Waukomis Drive and Englewood and also included a double roundabout at the interchange of

Englewood Boulevard and US-169. Responsible for the layout of the roadway and intersections including the horizontal and vertical alignment.

Kansas City Missouri Public Works Department, NE 104th Street Improvements, Kansas City, Missouri. Civil Engineer for project to provide the Kansas City, Missouri Public Works Department with a preliminary design and estimate for future improvements to the NE 104th Street Corridor between MO Route 291 and MO Route A. Project duties included plan preparation and determination of quantities for cost estimate.

Kansas City Missouri Public Works Department, NW 72nd Street and I-29, Kansas City, Missouri. Civil Engineer for project including a preliminary design and estimate for future improvements to the NW 72nd Street Corridor between I-29 and Platte Purchase Drive. Project duties included plan preparation and determination of quantities for cost estimate.

Kansas Department of Transportation, I-135 Interchange Modification, Wichita, Kansas. Civil Engineer for project to rehabilitate a section of I-135 between the Pawnee Street interchange and the viaduct north of the US-54 interchange in Wichita, Kansas. I-135 is a major North-South freeway serving the City of Wichita. I-135 is a six-lane facility through the project area with auxiliary lanes in several locations. Duties included design of criteria files for ease of cross-section creation using GeoPak, culvert and drainage design, lighting design, and quantity calculation for construction cost estimate.

Kansas Department of Transportation, Long-Range Transportation Plan, Kansas. Civil Engineer for project. The Kansas Department of Transportation was updating its Long-Range Transportation Plan. This multi-modal plan was being developed to comply with the federal SAFTEA-LU legislation, but more importantly, it involved the citizens of Kansas in determining the state's transportation (and by extension, economic) future. The development of the Plan was divided in three phases. Appointed to the Micropolitan Committee to assess the transportation needs of small communities in Kansas.

Missouri Department of Transportation, Route 116 over Little Sugar Creek Emergency Bridge Replacement, Missouri. Civil Engineer responsible for quick and accurate plan preparation. This project involved emergency bridge replacement and channel realignment.

Missouri Department of Transportation, Route 291 - Claywoods, Liberty, Missouri. Civil Engineer for project which included a span-wire traffic signal and intersection improvements at the intersection of a four-lane expressway with a minor collector. The project was designed to conform to MoDOT plan standards and City of Liberty specifications. Duties included horizontal alignment, signing, pavement marking, and determination of construction quantity for cost estimate.

Missouri Department of Transportation, Route 763, Columbia, Missouri. Civil Engineer for project providing engineering services for the preliminary plans, right-of-way plans, and final roadway design for Route 763 in Columbia, Missouri from north of Big Bear Boulevard to south of Route 63. This 2.75 mile urban highway project included expansion from a 2-lane to a 4-lane highway with bike lanes, sidewalks, curb and gutters, retaining walls, signalized intersections with turn lanes, and storm sewers. Duties included horizontal alignment, signing, pavement marking, and determination of construction quantity for cost estimate.

Publications and Presentations

“Sustainability and Envision Certification”, American Society of Civil Engineers Wichita Branch Meeting, Wichita, Kansas, May 2021

“ASCE Report Card on America’s Infrastructure – Government Relations,” Air and Waste Management Association Midwest Section Environmental Technical Conference, Lenexa, Kansas, September 2019

“Public Policy and Government Relations – Engineers Needed”, American Society of Civil Engineers Wichita Branch Meeting, Wichita, Kansas, May 2018

“Envision,” American Society of Civil Engineers Iowa Annual Meeting, Des Moines, Iowa, September 2013.