



BLAINE HATTEN

Career Summary:

Blaine brings deep Bentley product expertise to the team, with advanced proficiency in OpenRoads Designer, MicroStation, ProjectWise, and OpenBridge Modeler. Beyond software, he is skilled in backend configurations, including Workspaces, Worksets, Macros, Print Styles, and Pen Tables, ensuring projects run smoothly and efficiently from setup to completion. Blaine has extensive experience preparing plan sets across Civil, Structural, and Lighting disciplines, allowing him to contribute to a wide range of engineering projects with accuracy and attention to detail. Known for his ability to streamline workflows without sacrificing quality, he consistently delivers high-standard work on tight deadlines. His combination of technical proficiency, cross-disciplinary experience, and dedication to efficiency makes him a valuable asset to any engineering team.

Contact Information:

- ◆ Email: blaine@wi-skies.com
- ◆ Cell: (832) 338-4366

Education:

- ◆ B.F.A Sam Houston State University, 2010

Certifications:

- ◆ Bentley Accredited Microstation Professional
- ◆ Bentley Accredited ProjectWise Administrator
- ◆ Bentley Accredited Road Modeler
- ◆ Bentley Accredited Bridge Modeler

Areas of Expertise:

- ◆ **Bentley Software**
(OpenRoads Designer, MicroStation Connect & V8i, ProjectWise Administrator & Explorer, OpenBridge Modeler, Geopak, LumenRT)
- ◆ **GIS Software**
(ArcGIS, Google Earth, Nearmap)



Project Summary:

CAD Technician for Interstate Lighting Retrofit using Carbon Reduction Program Funding for Georgia DOT. GDOT Management wanted to retrofit and repair approximately fifty miles of existing lighting along the interstate system within the I-285 Atlanta metro perimeter ahead of the World Cup arrival in the summer of 2026. The Department identified and utilized available funding from the federal carbon reduction program (CRP) initiative to deliver this seemingly impossible task in less than a year and a half. This timeframe included development of full plans, specifications and estimates for fourteen total projects which were competitively bid and awarded to comply with federal funding requirements. Starting in October of 2024, each of the fourteen projects had to be developed in extremely short order to ensure they were competitively bid, awarded, procured, installed and operational before May 2026 to meet the World Cup deadline. This required an incredible amount of effort and coordination with over a dozen GDOT Offices to ensure the delivery schedule was met. All plan development was done in accordance with all GDOT and FHWA requirements, including coordination and approval from all parties, including environmental, right-of-way, structural, railroad, utility, and state construction offices. Despite the consolidated schedule, all construction delivery requirements had to be fulfilled, including final field plan review (FFPR), approval from all offices, including FHWA, and Construction Bidding Administration (CBA) and Let date timelines.

All fourteen projects required full electrical survey to determine the condition and power source of each individual luminaire and circuit along each corridor to establish accurate quantities to ensure adequate funding was provided within each of the individual projects' budget while not exceeding the overall available CRP funding. As much of the system was in disrepair, this required a lot of cable replacement as well as replacement of each of the service points to ensure all lights are metered. Each project was designed to meet current IES/ANSI lighting requirements whenever possible without creating environmental, ROW or constructability issues with variances granted when necessary. In order to adhere to these IES recommendations, several trees, branches and other foliage were removed within a certain distance of each pole or tower to ensure the luminaire distribution pattern was not disrupted in the near future.

Wi-Skies is also responsible for construction oversight of all projects to address the myriad of RFI's and construction issues with all fourteen projects. These projects are concurrent to many other large-scale projects, such as repaving all fifty miles of the same stretches of the same interstate system and a fiber installation project, all with competing lane closures. We are also responsible for providing as-built drawings for all work completed, including final wiring schematics for each service point throughout the interstate system, as this information did not previously exist, but is necessary for any future maintenance or proposed project.

Blaine assisted with Photometric, Lighting, Plan and Detail Sheet preparation in accordance with GDOT Plan and Presentation Guide and Electronic Data Guideline requirements for the projects below.

(PI0020767) I-75 from Musket Ridge to I-85. This six-mile-long segment included all lighting infrastructure along the mainlines, ramps, and under bridge locations along I-75 south of the I-75/85 Connector split. This project included one interchange that was lit by high mast light towers, which needed extensive repair in addition to being retrofitted. Additionally, some light poles were relocated from behind sound barriers to in front to alleviate accessibility and maintenance concerns.

BLAINE HATTEN

(PI0021308) I-85 from I-75 Split to Lenox Rd. This 3.5-mile-long segment included all lighting infrastructure along the mainlines, ramps, and under bridge locations along I-85 north of the I-75/85 Connector split. This segment included the illumination of the Buford Highway ramps and side streets spanning underneath the I-85 mainline, adjacent to the Buford Spring Connector Tunnel, which was Let separately, but includes both daytime and nighttime lighting. Field analysis was conducted to ensure all existing, damaged, or removed lighting infrastructure was accounted for. During design, several service points were eliminated and combined with others to minimize the number of locations that could be vandalized while also helping to reduce the cost of the project.

(P#0020951) I-85 from Riverdale Rd to I-75. This 5.5-mile-long segment includes all lighting infrastructure along the mainlines, ramps, and under bridge locations along I-85 near the Atlanta airport. This segment had a very large amount poles which were knocked down or subject to copper thievery, which presented the opportunity to shift the new poles back from the mainline and ramps to minimize the risk of future knockdowns. Several other locations which were subject to frequent knockdowns, guardrail was added to help prevent future knockdowns. Many trees which were found to be located within clear zone were removed as part of this project and all trees were trimmed at all light pole locations. Special attention was given to the photometric distribution of new LED luminaires, and short mast arms were recommended for use on existing poles located close to the roadway to optimize the uniformity of the new lighting design. Field analysis was especially critical for this segment to ensure all existing, damaged, or removed lighting infrastructure was accounted for. The overall design was improved to meet current ANSI/IES standards, and new design layouts were implemented where the team discovered the opportunity to without interfering with existing infrastructure. Careful consideration was also provided to ensure there was minimal uplight to the incoming and outgoing pilots near the Atlanta airport.

(PI0021310) I-20 from Capitol Ave to Flat Shoals Road. This five-mile segment includes the mainlines, ramps, and under bridge locations along I-20 immediately east of the I-75/85 Connector. This section of I-20 includes both center median light poles and single conventional light poles on the outer lanes as well as high mast towers at the interchange of I-75/I-85. Special attention was given to which poles required new fixtures with a higher-lumen output or lower-lumen output to ensure the existing infrastructure is optimized to ensure all lanes are properly lit. Field analysis was especially critical to ensure all existing, damaged, or removed lighting infrastructure was accounted for. Several of the service points were moved from their existing location to a more accessible location for maintenance and operational considerations. The overall design was improved to meet current ANSI/IES standards, and new design layouts were implemented where the team discovered the opportunity to without interfering with existing infrastructure.

(PI0021311) I-20 from Flat Shoals Rd to Columbia Dr. This four-mile-long segment included lighting along the median of the mainlines, lighting along ramps, and under bridge lighting along I-20, all of which was retrofitted to LED. Field analysis was conducted to ensure all existing, damaged, or removed lighting infrastructure was accounted for. The overall design was improved to meet current ANSI/IES standards, and new design layouts were implemented where the team discovered the opportunity to without interfering with existing infrastructure.

(PI0020952) I-75/85 at Capitol Ave and Memorial Dr Tunnel Lighting Retrofit. Located immediately north of the I-20 interchange, this 0.35 mile long segment of I-75/85 is the most heavily traveled roadway in Atlanta. The tunnel has six northbound lanes, six southbound lanes, and five ramp lanes running under it. Due to the tunnel's overall width, length and relatively short height and only outside wall-mounted luminaires, rear-end accidents and traffic backups are common in this area. A 3D model of the entire tunnel was generated using actual tunnel entrance and exit portal height measurements and aerial imagery. A daytime analysis was done within AGI32 to determine how much natural daylight penetrated within the tunnel. From this information, Wi-Skies developed an experimental solution to provide minimal lighting only where necessary rather than current IES/ANSI recommendations. The lighting design took into consideration a variety of budgetary and constructability concerns and developed custom overhead installation assemblies braced between existing concrete beams directly over traffic without drilling the existing concrete beams anywhere. Because a maximum of three lanes of traffic could only be shut down at any time for either construction or maintenance, Wi-Skies had to limit the design to place lights only over the three inside and outside lanes only. Despite the many design challenges, the proposed design delivered a much more effective lighting solution within the tunnel despite reducing the overall luminaire count by almost half.

(PI0021192) The Buford Spring Connector Tunnel. This 435' long tunnel is a braided ramp from the SR13 Buford Connector SB ramp passing under the I-85 mainline to I-85 SB. A 3D model of the entire tunnel was generated using actual tunnel entrance and exit portal height measurements and aerial imagery. AGI32 was used to perform daylighting analysis to determine the amount of natural daylight penetration within the tunnel. It was not surprising that this box culvert tunnel required supplemental daytime lighting and nighttime lighting within it due to the overall poor natural daylight that penetrates within it. A minimalistic approach was taken to provide new lighting within the tunnel by placing new lights along each of the wall sides to light the single lane. Given the nature of the tunnel and limitations of the scope, the existing embedded conduit and junction boxes were re-used in the retrofit, but everything surface mounted was removed. As the existing system was operational and the tunnel is so dark, Wi-Skies worked diligently with the contractor to ensure a hybrid of the existing and proposed lighting system remained operational throughout the construction process.

(P#0020764) I-75 at NB and SB Cumberland Braided Ramp Tunnels. These dual tunnels cover the I-285 movements to I-75 just north of Cumberland Ave. The Northbound tunnel ramp connects I-75 NB to I-285 east by spanning under the Cumberland entrance ramp to I-75 northbound and 490' long. The southbound tunnel connects the I-285 westbound movement to I-75 southbound by spanning under the four lane exit ramp to Cumberland Ave. A 3D model of both tunnels was generated using real tunnel entrance and exit portal height measurements and aerial imagery. AGI32 was used to perform

BLAINE HATTEN

daylighting analysis with real location data. Unsurprisingly, both tunnels modeled very dark within them and required supplemental daytime lighting and nighttime lighting. The LED retrofit design provided a much more efficient design while delivering better overall lighting within the tunnels.

CAD Technician for Jonesboro Rd Widening – Henry County, GA. This 7.7-mile-long project is a large-scale road improvement initiative largely along Jonesboro Rd (SR 920) from just west of US 19/ US 41 in Clayton County to the I-75 interchange in Henry County. The existing two-lane roadway is being expanded to four travel lanes with raised medians, bike lanes, sidewalks, proposed and re-aligned turning lanes at intersections, and a bridge replacement over Walnut Creek. This project will improve traffic operations and safety, accommodate for future growth and traffic demands, and improve access for pedestrian and multi-modal transportation. The new roadway lighting design enhances the safety by improving the visibility during nighttime or low-light conditions across the entire project for the entire roadway and pedestrian areas including at all intersections, pedestrian crossings, changes in roadway geometry, and unexpected hazards. Due to limited ROW and time constraints, the Wi-Skies team had to work closely with Georgia Power (GPC) to develop a dual-purpose solution, consisting of standalone light poles wherever possible, but joint use poles installed where we directed by GPC in areas where ROW or easement could not be procured. Blaine was responsible for Photometric Plan preparation and assisted with Lighting Plan and Detail Sheet preparation.

CAD Technician for SR 8 Bridge at Jackson Creek for GDOT. The SR 8/US 29 (Lawrenceville Hwy) bridge replacement over Jackson Creek is designed to enhance safety and aesthetics. To ensure proper alignment and transition, the sidewalks and civil infrastructure surrounding the approaches to the bridge bring the total project length to 0.4 miles. The design required careful coordination with the City's construction team to utilize decorative pedestrian light poles to match the community aesthetics. Wi-Skies paid special attention to ensure the lighting meets minimum pedestrian path recommendations and does not create an adverse glare affect to the drivers along the roadway. Blaine was responsible for Photometric Plan, Lighting Plan, and Detail Sheet preparation.

CAD Technician for 14th Street and Washington Street Roundabout in Darlington County, SC (SCDOT). Wi-Skies was tasked with providing full roundabout and approach lighting design including photometric calculations, plans, specifications, and quantities for a three-legged roundabout in Darlington County, South Carolina. The existing intersection is being revised to improve traffic flow and safety. Blaine was responsible for Photometric plan preparation.

CAD Technician for City of Albany Lighting at Traffic Signal Upgrades. The City of Albany, GA is upgrading sixteen intersections throughout their downtown corridor as part of a traffic enhancement and beautification project. As part of this work, they are installing decorative lighting onto these traffic signal poles, for which Wi-Skies is responsible for. Given the luminaire locations are dictated by the traffic signal locations (by MUTCD), the challenge is meeting intersection lighting requirements with these limitations. It is our responsibility to provide luminaires to maximize the lighting delivered where it needs to be within the intersection while also meeting the aesthetic objectives of the project. Blaine was responsible for assisting with Light Plan preparation.

CAD Technician for I-74 Danville Lighting Replacement, IDOT District 5, Contract 70A29. The District is making several traffic improvements along the corridor through three interchanges along I-74 – MLK Drive, N G St and US 150 in Danville, IL. This presented them the opportunity to retrofit the existing lighting to LED. All existing roadway lighting poles not affected by the roadway work, so a simple retrofit was done for a majority of the poles. An auxiliary lane was also added to a portion of I-74 near N G St. where several luminaires were required to be removed and reinstalled to accommodate the new lane. In the end three manufacturers were determined to meet the standards called out in the IDOT BDE manual. The District also combined two lighting controllers at the MLK interchange into one controller as the load LED luminaires requires is much lower than that of the existing HPS fixtures and one of the existing controllers was difficult to access. Blaine was responsible for Lighting Plan and Detail Sheet preparation.

CAD Technician for SR 30 at Kolic Helmey Rd Roundabout for Effingham County, GA. The existing stop-controlled T-intersection is to be replaced with a roundabout at the SR 30/ Kolic Helmey Rd crossing while introducing a new roadway serving a new residential development. Crosswalks and multi-use paths are being placed around and through the roundabout while the current undivided two-lane highway and undivided two-lane road are yet to be developed for future growth and multimodal traffic. Wi-Skies is providing lighting design including photometric calculations, plans, specifications, and quantities for a four-legged roundabout which will improve traffic flow and safety. Blaine assisted with Photometric and Lighting Plan preparation.

CAD Technician for SC 403, SC 341, and S 56 Roundabout in Florence County, SC (SCDOT) Wi-Skies is tasked with providing a border and approach lighting design including photometric calculations, plans, specifications, and quantities for a four-legged roundabout in Florence County, South Carolina. The existing intersection is being revised to improve traffic flow and safety. Blaine is responsible for Photometric Plan preparation.

CAD Technician for Andrews Road Improvements, Columbus, GA (GDOT) This mile long project is a corridor improvement project for CR 455/Andrews Road from Cussetta Road to Buena Vista Road. The project will widen the corridor to include one lane of traffic in each direction, a center turn lane, and a 10' multi use path for bicycles and pedestrians. Continuous lighting will be added to ensure better traffic flow, as well as traffic and pedestrian safety. Increased lighting along the corridor will also enhance the visibility of commerce along the corridor. Blaine is responsible for Photometric, Lighting Plan, and Detail Sheet preparation.

Lead Lighting Designer for Brennan Road Improvements, Columbus, GA (GDOT) This 1.2 mile long project is a corridor improvement project for CR 2228/Brennan Road from Cussetta Road to St. Mary's Road. The project will widen the corridor to include a widened lane of traffic in each direction, and a 10' multi use path for bicycles and pedestrians. Continuous lighting will be added to ensure better traffic flow, as well as traffic and pedestrian safety. Increased lighting along the corridor will also enhance the visibility of commerce along the corridor. Blaine is responsible for Photometric, Lighting Plan, and Detail Sheet preparation.

BLAINE HATTEN

CAD Technician for City of Union City, GA Gateway Park Lighting and Cameras. Union City is developing a new Gateway Park adjacent to the intersection of SR 92 at SR 14, which requires new parking lot, decorative sign and pavilion lighting, in addition to security cameras to provide visibility to the Union City police department throughout project site. Wi-Skies was brought in after the plans were awarded to the Contractor to re-design all of the lighting and electrical systems. Careful coordination with ongoing construction activities and concurrent design with an adjacent GDOT project was imperative to the success of delivering of this project. Blaine was responsible for Lighting Plan and Detail Sheet preparation.