



CASE STUDY



How Castle Rock Microwave helped Douglas County School District improve first responder connectivity to keep students and staff safe

The Douglas County School District (DCSD) sought improved public safety radio communication for emergency response and day-to-day operations. To address this critical need, Castle Rock Microwave collaborated with the Douglas County Sheriff's Office to provide a comprehensive solution that led to 95% or greater coverage of first responder radio signal within some DCSD elementary, middle, high and charter schools.



The result: all buildings achieved complete connectivity across their respective campus giving first responders the coverage they need to communicate properly.

Challenges

Schools within the Douglas County School District did not meet the requirement of building signal coverage, as defined by the International Building Code and the National Fire Protection Association.

Each school has different signal specifications to consider

without compromising the county's radio system. As a result, sourcing proper materials, complex school designs, and tight timeframe of installation all contributed to the complicated and unique challenge of this work.

► Every school included had areas in which first responder radios would not work



Solution

Douglas County School District partnered with Castle Rock Microwave and the Douglas County Sheriff's Office to address the signal coverage issues. This included researching a variety of possible solutions to determine the appropriate equipment and how to seamlessly integrate the new system.

The Castle Rock Microwave team meticulously conducted signal measurements to gauge the existing signal strength and the data was compiled into a comprehensive, actionable report. This helped DCSD know where to focus resources to strengthen in-building communication reliability.

Castle Rock Microwave custom-designed each system, ensuring a tailored solution for each building's complete coverage. This included BDA/DAS which provided enhanced public safety radio coverage within each school. Additionally, Castle Rock Microwave monitors the health of these systems and responds to any outages, through an SLA. The care and customization in design led to minimal impact on the Digital Trunked Radio System (DTRS), which would have had a major impact if not done properly.



Outcomes & Results

The Castle Rock Microwave team successfully completed the installation in 18 schools.

This work resulted in:

- ▶ Enhanced first responder radio coverage deep within schools to provide adequate communications in the event of an emergency.
- ▶ Achieving the targeted signal strength.
- ▶ Increased student, staff, and first responder safety.
- ▶ Peace of mind for school security, First Responders, and Douglas County Sheriff's Office radio team.
- ▶ A strong working relationship between the sheriff's office, fire districts, and school district, utilizing public funding.
- ▶ Standardization of equipment, meaning increased knowledge, appropriate spare parts for backup, and consistency across users.
- ▶ A county-wide change in how AHJs process BDA applications.



All students and staff deserve the highest level of safety and security. We're ready to bring this same level of dedicated expertise to other schools, leveraging our experience to provide a connected learning environment for all.

To learn more about working with Castle Rock Microwave for your communication and connectivity needs, visit www.CastleRockMicrowave.com or call 720-798-4520.



As technology changed, our systems became outdated, and we needed a partner with a strong knowledge base and local footprint to address potential communication issues. The Castle Rock Microwave team has gone above and beyond supporting Douglas County School District with this work. I'm thankful to their team for their professionalism and for getting the job done right.

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