FROST CONTROL SYSTEMS

The Sense of Safety

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ABOUT US

Frost Control Systems (FCS) is a USA-based manufacturer and service provider of fixed Road Weather Information Systems (RWIS). We manufacture, install, and maintain non-invasive, non-contact IoT sensors and pair them with industry leading software. Our data-driven insights and alerts enable communities to create safer roadways, enhance operational efficiencies, and mitigate environmental decay from the overuse of road salt.

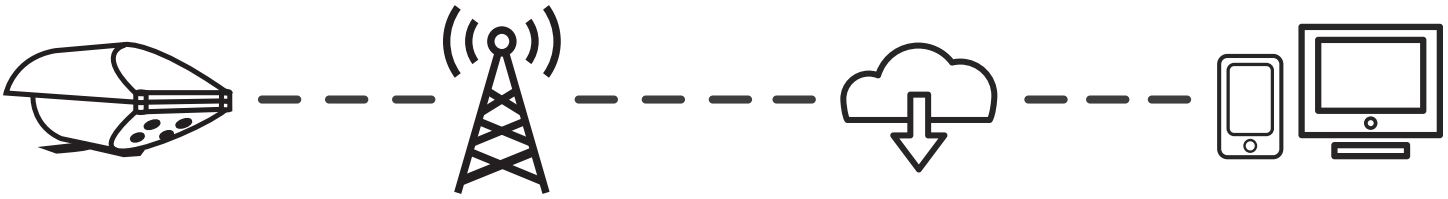
OUR MINI RWIS IS DESIGNED WITH MUNICIPALITIES IN MIND.

An FCS Mini RWIS provides critical insights about road conditions that can be used to improve the way roads are treated during the winter months. By leveraging this data communities will be able to prioritize plow routes for optimal safety.

Many cities do not have access to this data, as other RWIS are out of budget and cumbersome in a municipal setting. Our units are noninvasive and can be attached to most common support structures allowing for the most flexible placement.

With this data available, communities are better equipped to prevent accidents and reduce risk by creating the safest roadways, walkways and parking lots. These insights will also aid in preventing long term infrastructure corrosion and damage, saving even more in the long run.

HOW IT WORKS

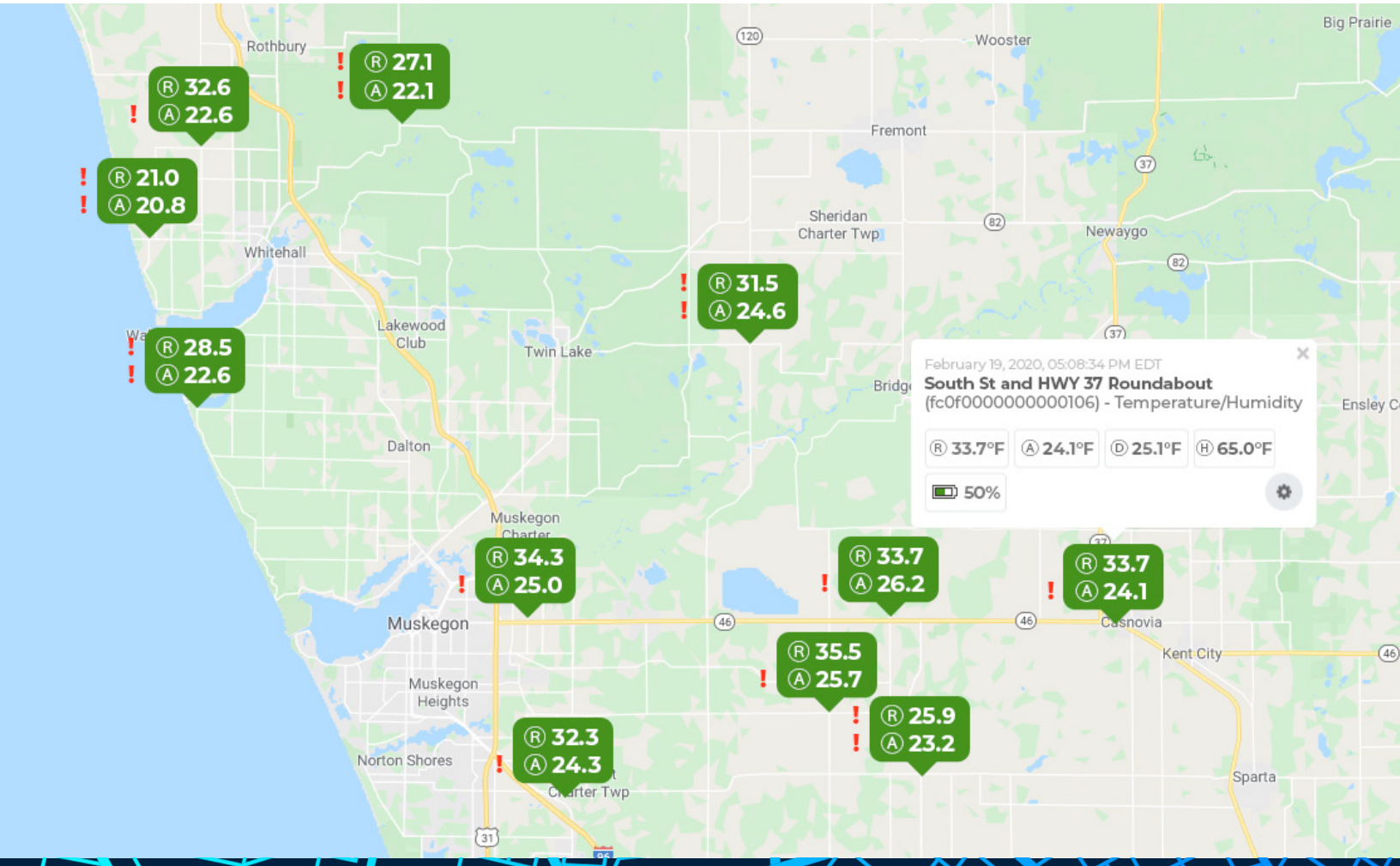


Each RWIS monitors atmospheric data, takes images & sends data packages every 20 minutes.

Internal roaming SIM card identifies the best signal and sends the data packages.

Cloud-based software organizes data, sends alerts, and displays charts.

Monitor conditions and recieve alerts on both desktop and mobile devices.

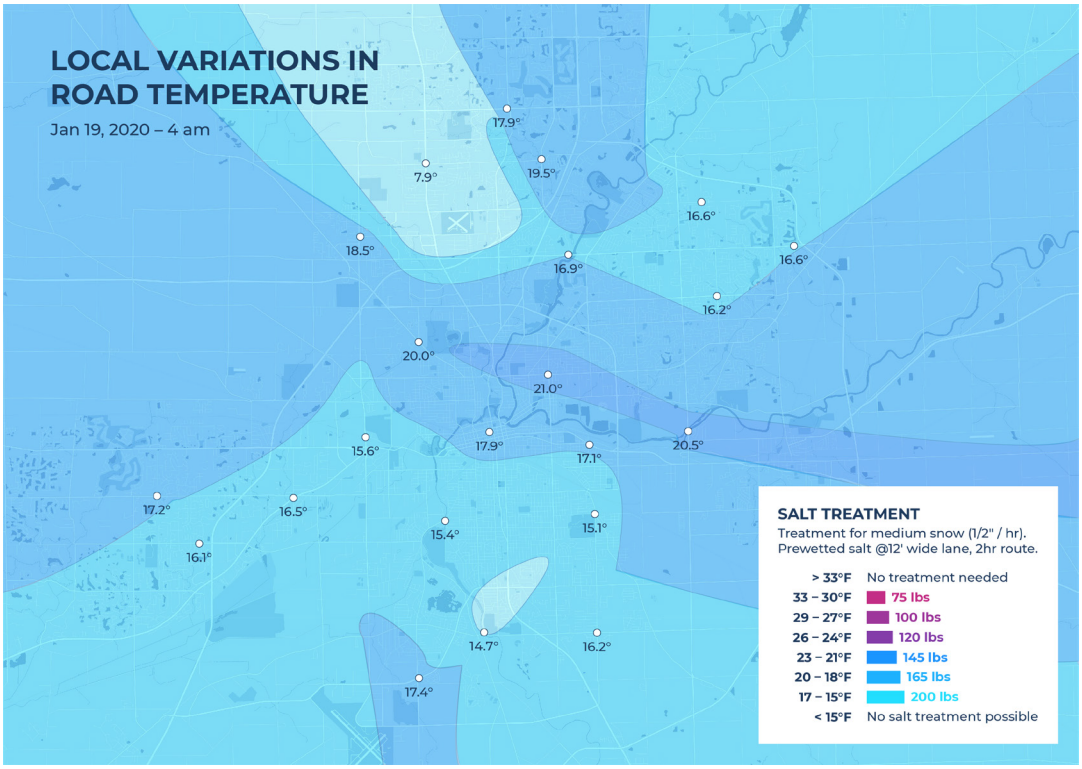


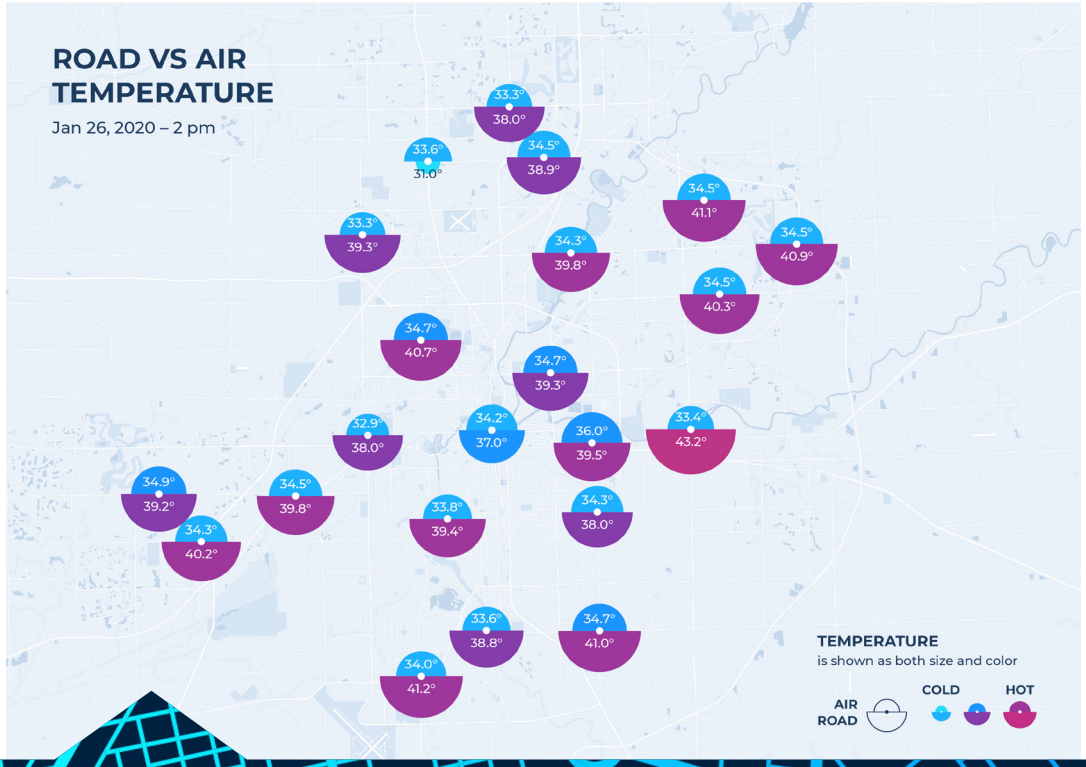
FCS DASHBOARD

All information collected by our Mini RWIS can be easily accessed through our dashboard including historical data access, data charts, and sensor maps (above). From the dashboard is where each sensor can be monitored and all alert settings can be customized for maximum efficiency.

HOW WE HELP

Our primary line of RWIS focuses on utilizing highly accurate infrared technology to create temperature sensors. These sensors are then placed into our Mini RWIS to produce an accessible, comprehensive, real- time map of road temperatures. With these critical insights now readily available from any device, public works personnel will now know exactly how much and what type of salt, or salt mixture to use on a route-to-route basis.





As you can see in the visual above, surface temperature does not stay consistent throughout one area, and once road temperatures start dropping below 20°F, salt starts becoming less effective.

Many communities are reliant on air temperature data to determine treatment plans because they don't have access to surface temperature data. This becomes a problem when surface temperature must be known to accurately assess how much salt is needed to provide the safest travel.

In communities that rely on air temperature to determine treatment, if they had recorded air temperatures similar to the visual below, it is very likely they would have seen temperatures approaching freezing, and treated the roads as such. However, road temperatures are around 40 degrees, which requires no treatment. With our sensors, department workers would be able to see that only one area of the community needs their roads treated.

“We had the highest output of snow this year on March 22, 2020 and with the help of this system we were able to monitor the storm without any callouts or use of materials on the roadways. I can say without hesitation that in the past we would have mobilized the fleet and utilized chemicals as a precaution.”

Michael C. Eulitz
Public Assests Supervisor for the City of Joliet

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WHY PARTNER WITH FCS?

FCS has created a custom solution for communities at a fraction of the cost to traditional RWIS. After years of university and city-based research, we have refined our services to aid communities in proactively and sustainably placing their de-icing materials with the same levels of sophistication as the nation's leading Departments of Transportation.

RWIS HARDWARE

The case for a fixed RWIS solution

Fixed

Save time driving around and collecting data by installing an FCS RWIS to key routes and remotley accessing that data from any device. Fixed RWIS are highly accurate and require minimal maintenance.

Mobile

Mobile RWIS can be attached to any vehicle and can only collect data from one location at one time. Innaccurate and time consuming, mobile RWIS require frequent maintenance and recalibration if stored indoors.

Handheld

Like mobile, to acquire data these RWIS have to be used manually. The accuracy of handheld devices are imacted by rapid changes in ambient temperature and have trouble adjusting to cold temperatures when stored inside.

FCS TURNKEY SERVICE (We do it all!)

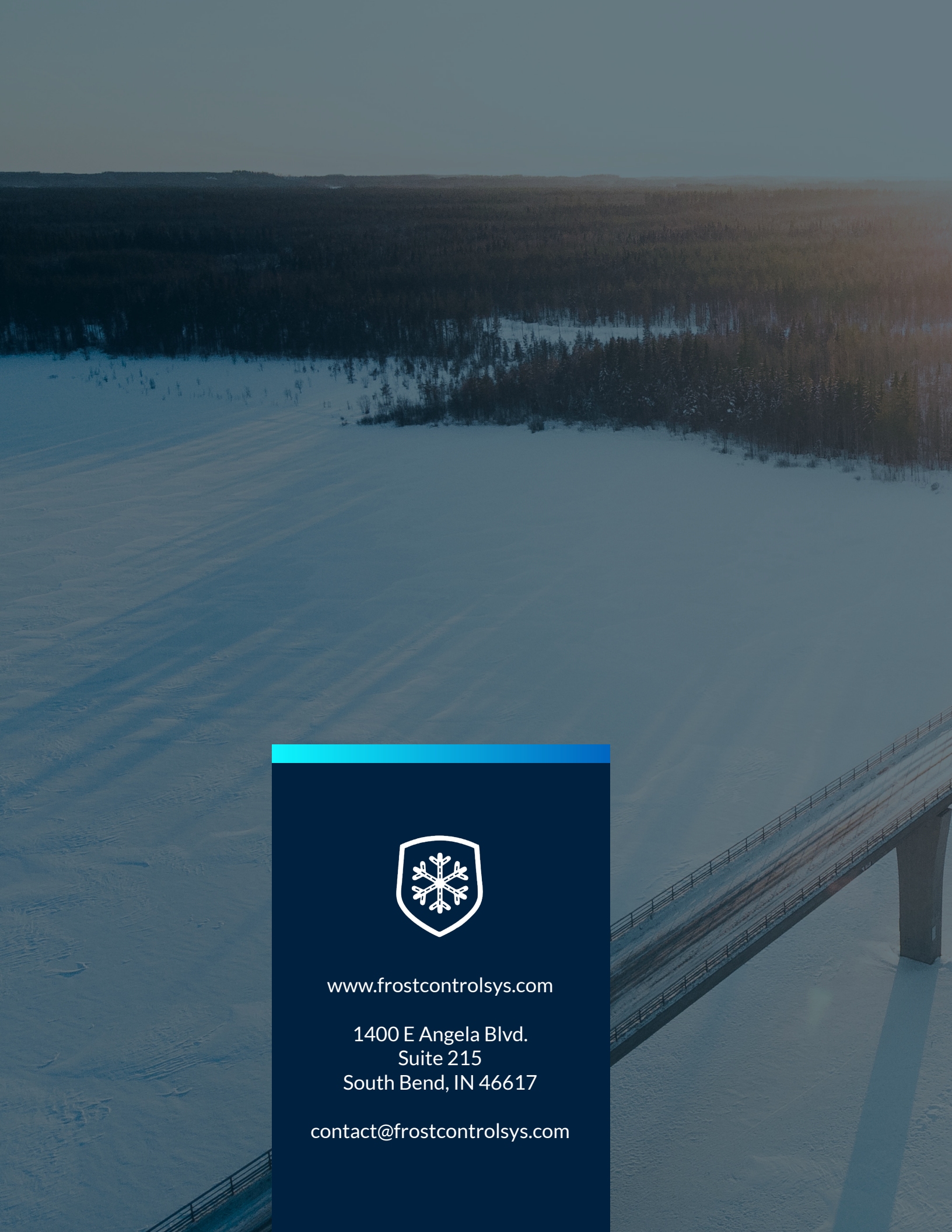
✓	Hardware installation alongside FCS Engineer
✓	Custom Software to view RWIS data
✓	Unlimited log-ins for all public works personnel
✓	24/7 access to all RWIS data
✓	Individual route forecasting & analysis
✓	Daily reports, alert systems & historical data
✓	Dedicated Account Manager & Engineer
✓	Complimentary integration to most forecasting platforms
✓	Complimentary replacement of faulty equipment
✓	Complimentary hardware replacement every 2 years
✓	Up to 40 Hours of complimentary network design
✓	Hotspot monitoring and concrete buckling analysis

Reliability. Accuracy. Safety.

RWIS MINI

“Our biggest priority for us is increasing roadway safety for the citizens and residents. With this system we are able to monitor the road conditions throughout the county from the seat at my desk, and supervisors can easily monitor changing conditions and determine the best plan of action.”

Andrew Nichols, Maintenance Superintendent
Muskegon County Road Commision



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