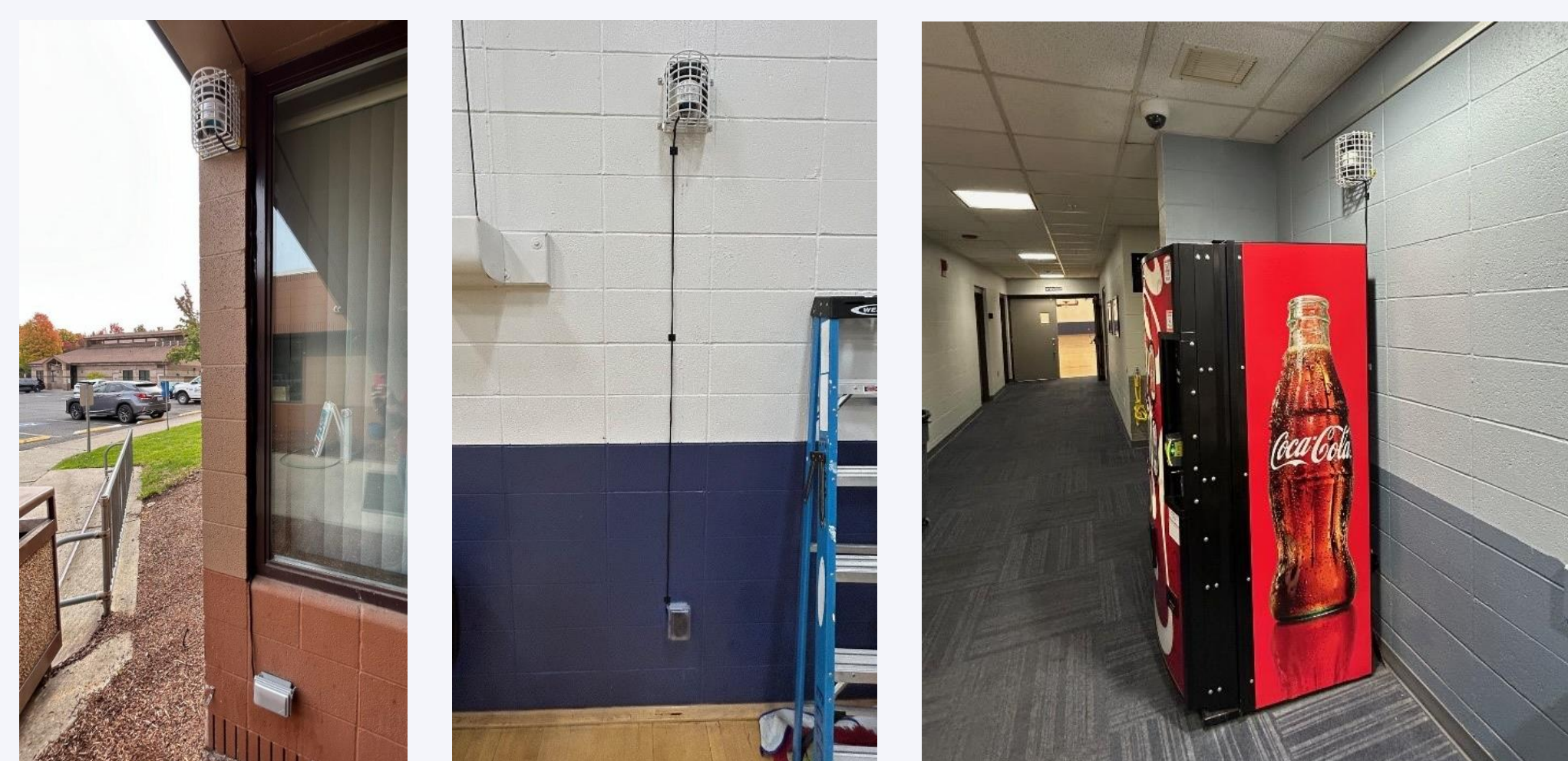
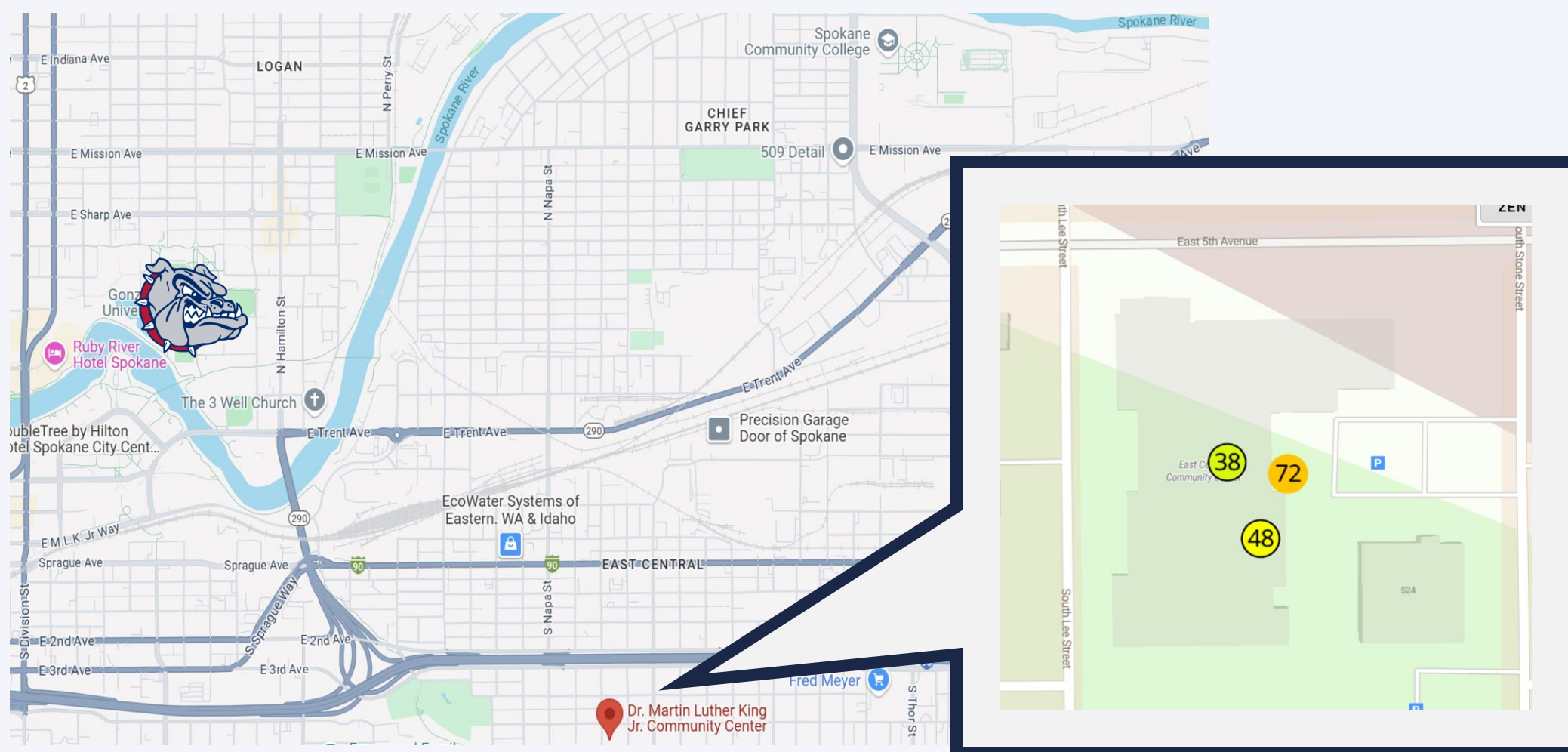


## Background

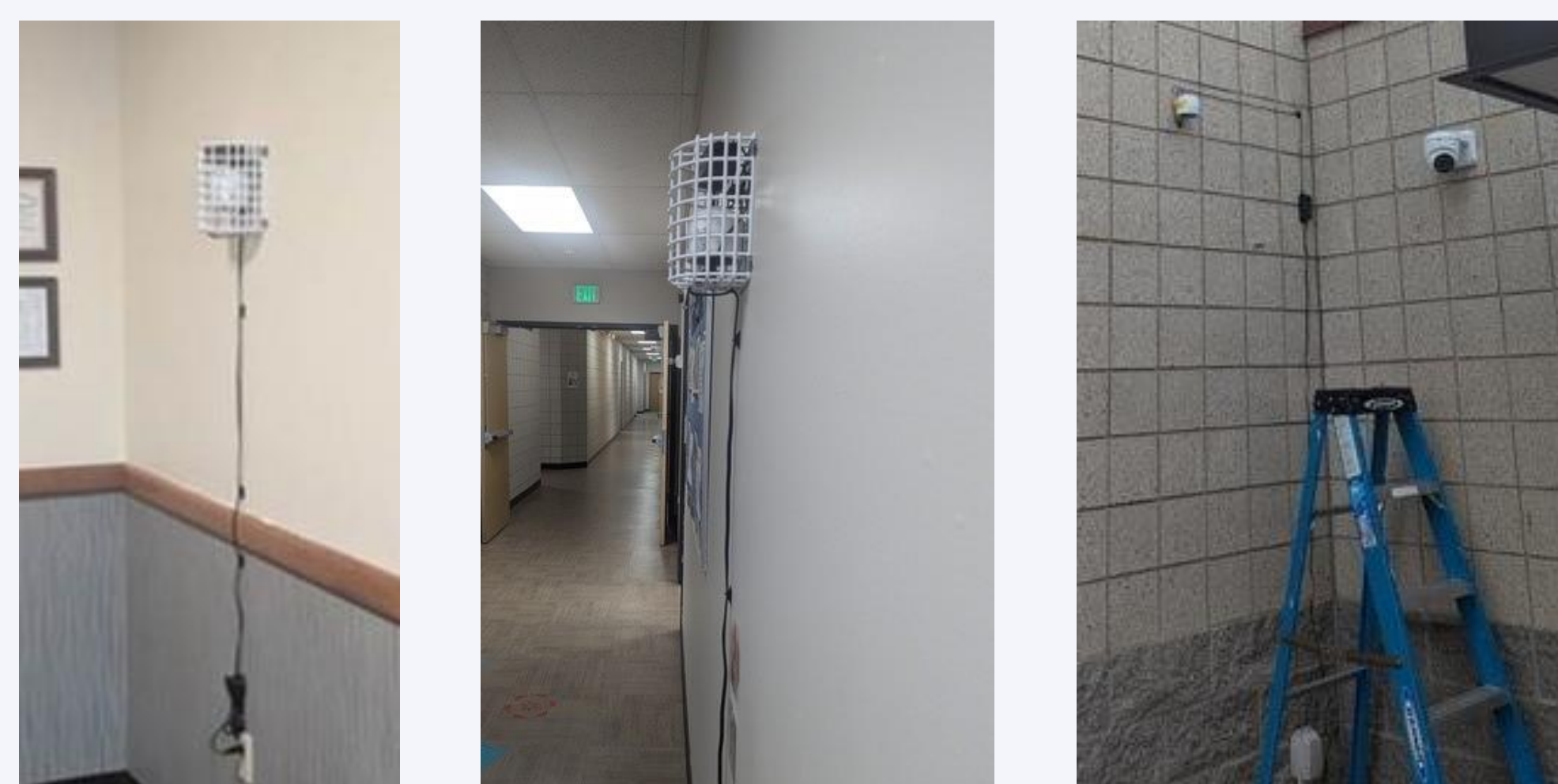
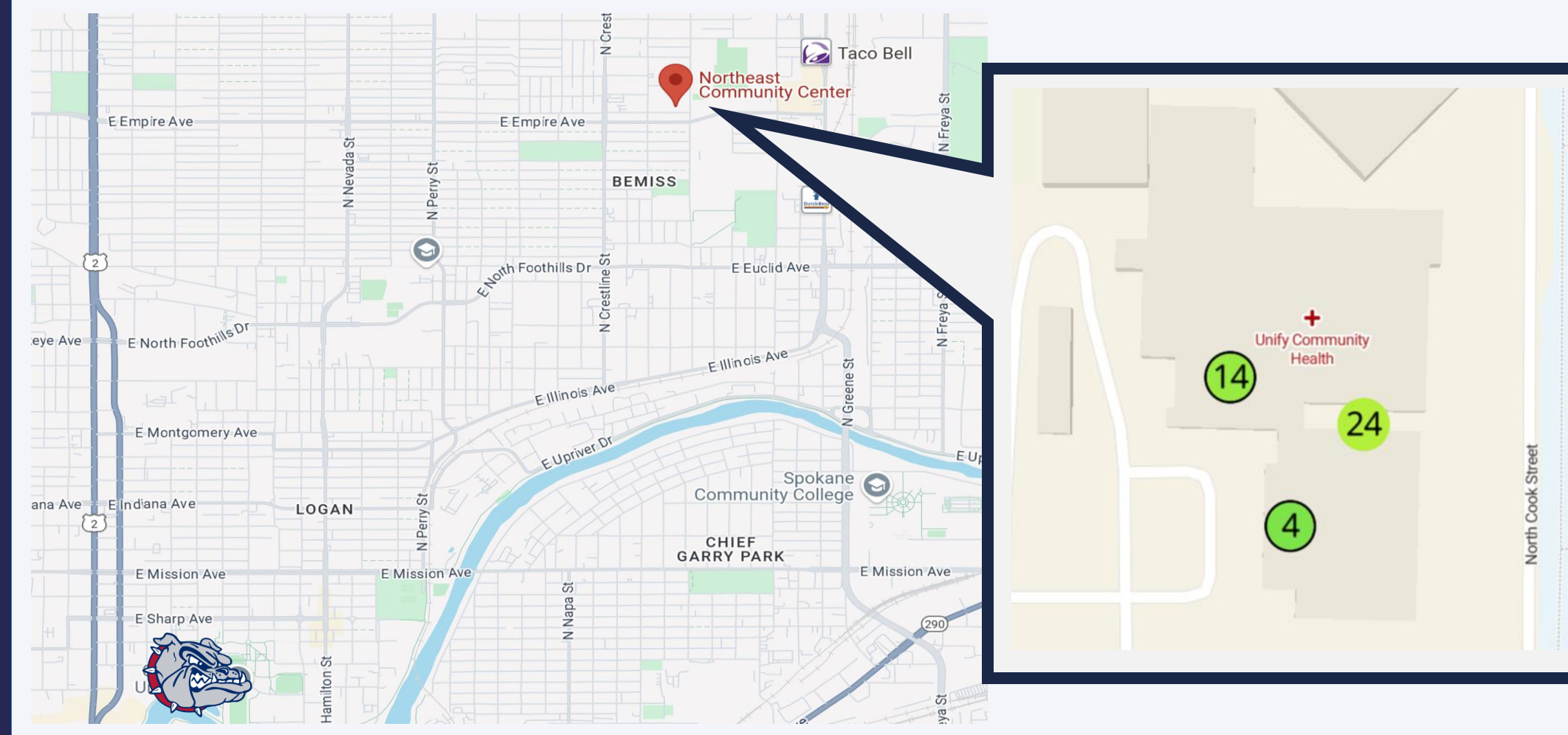
The Smoke Ready Spokane project deployed air quality sensors and interactive dashboards to bolster community preparedness during wildfire smoke events. Sensors were placed in three city-owned community centers that were recently designated as clean air spaces, providing real-time air quality data for public and staff use. Discussed below are the installation process and system performance, providing understanding of the technical and logistical challenges along with the feasibility of deploying urban air quality monitoring systems for public health.

### Martin Luther King Community Center Install



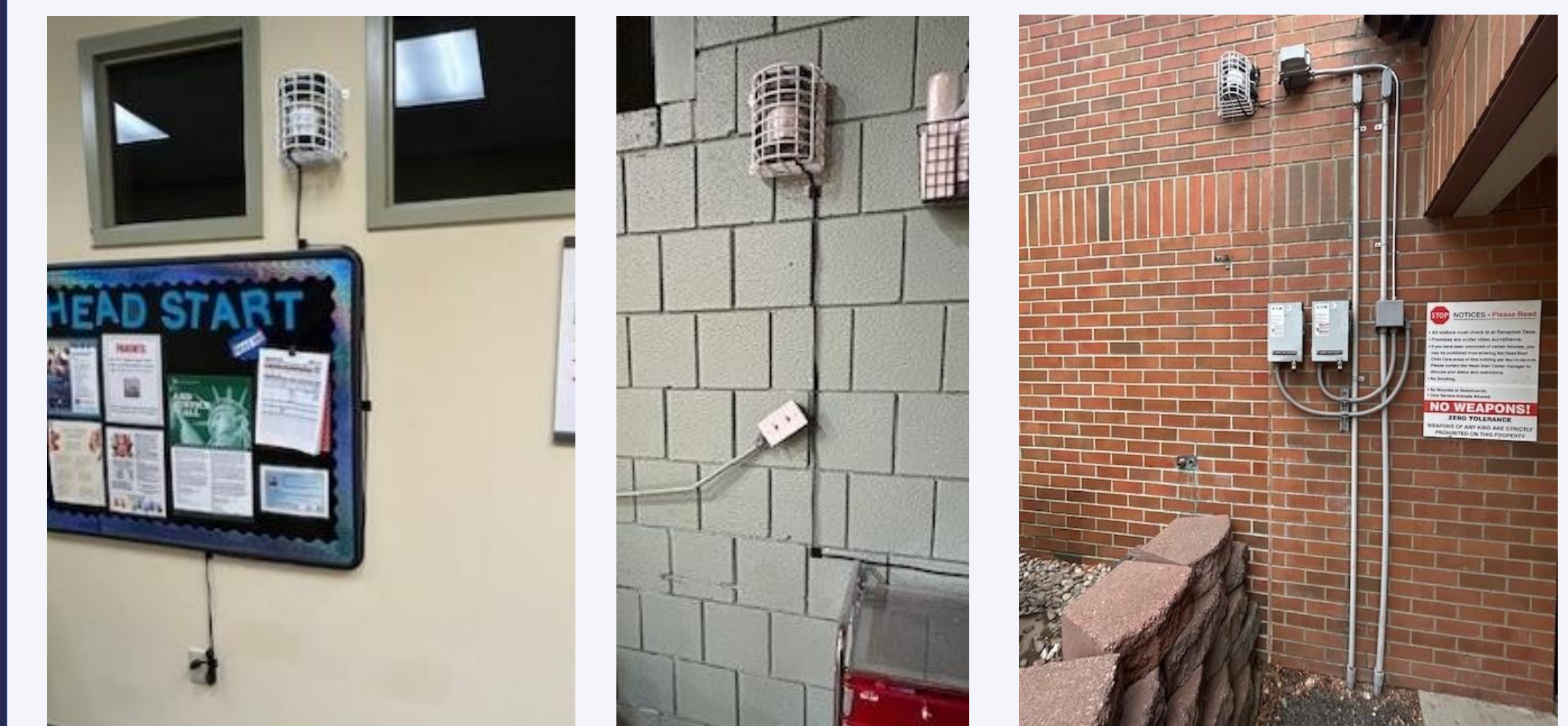
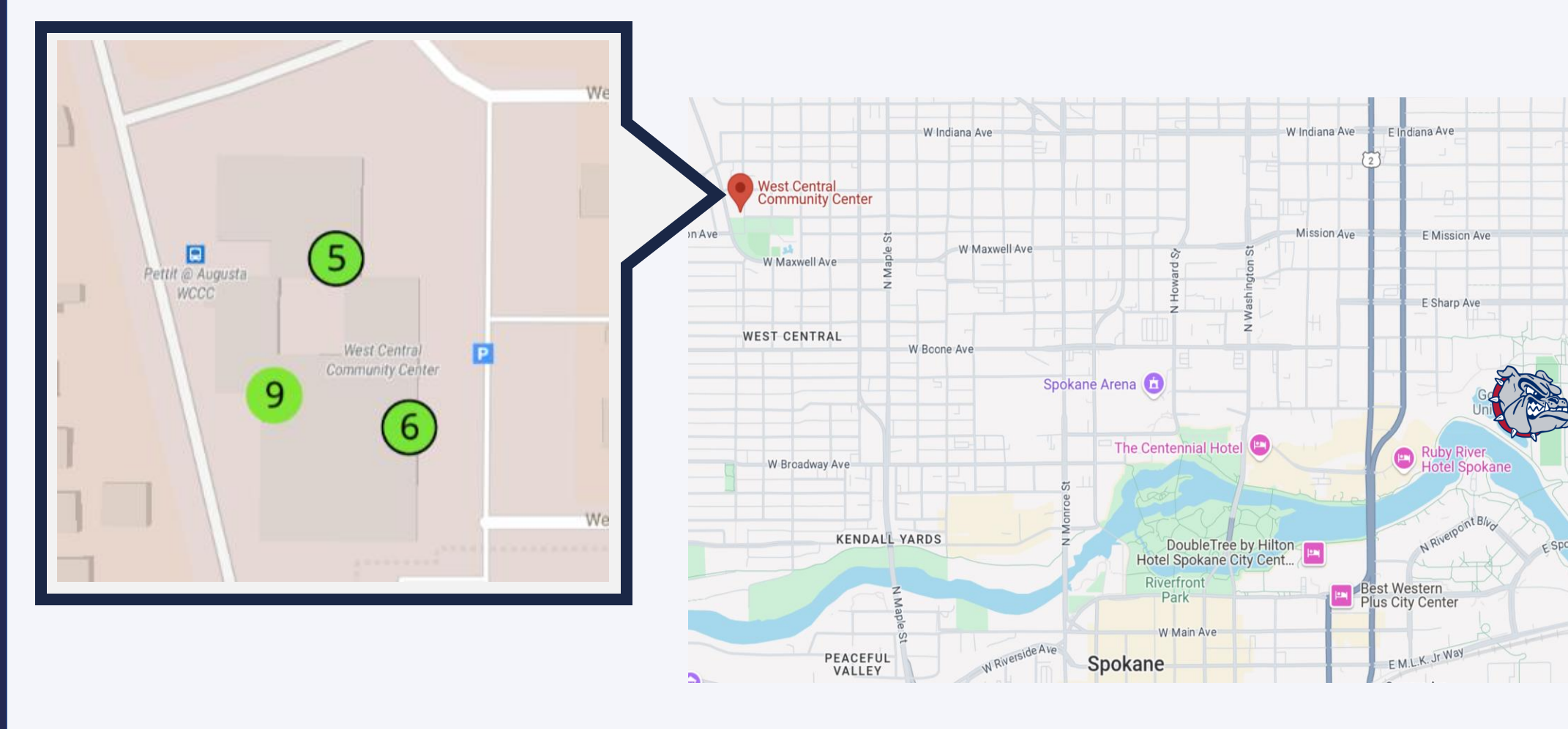
Exterior Sensor (left), Gymnasium Sensor (center), and Main Entryway Sensor (right)

### Northeast Community Center Install



South End of Interior Sensor (left), Hallway Sensor (center), and Exterior Sensor (right)

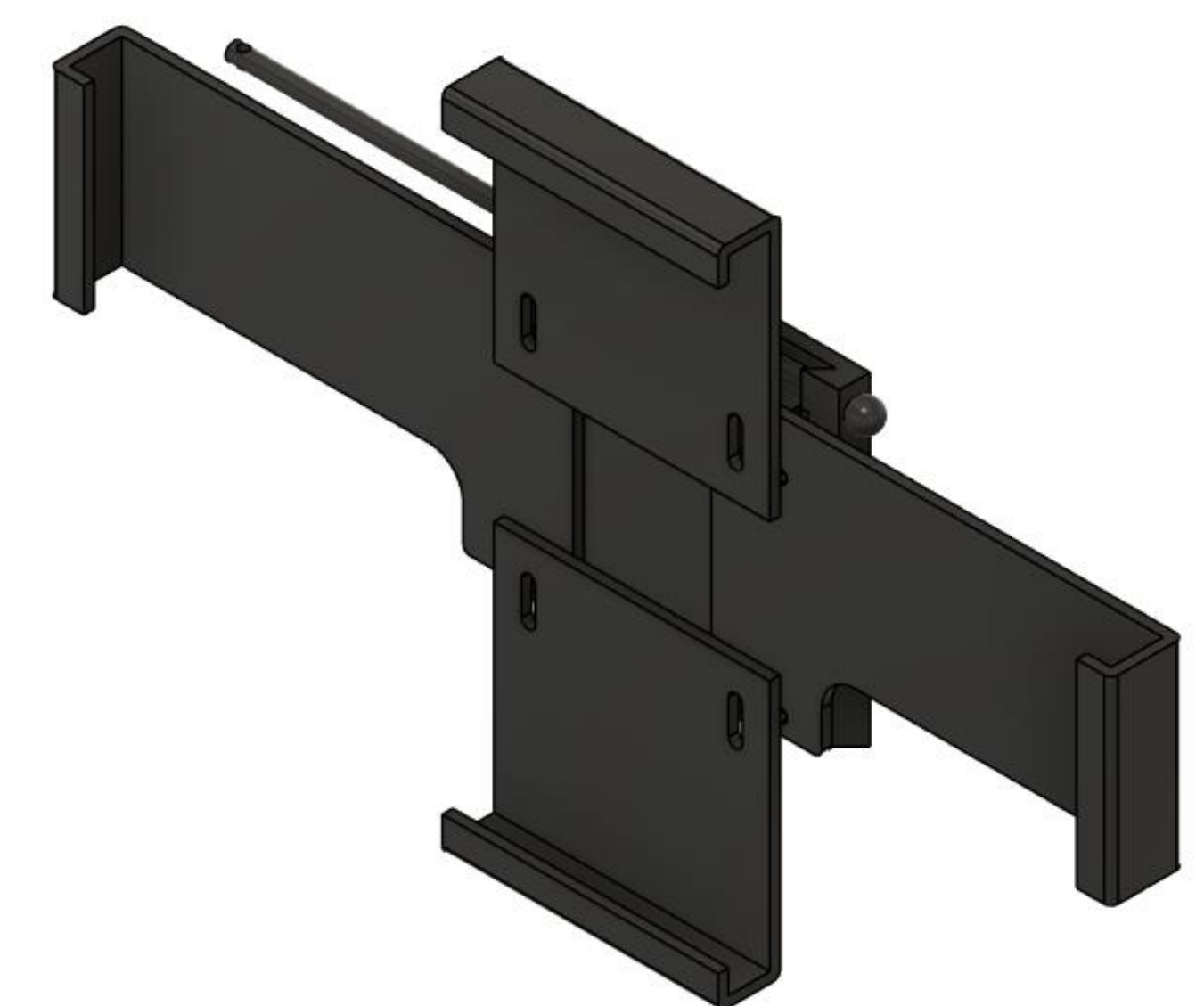
### West Central Community Center Install



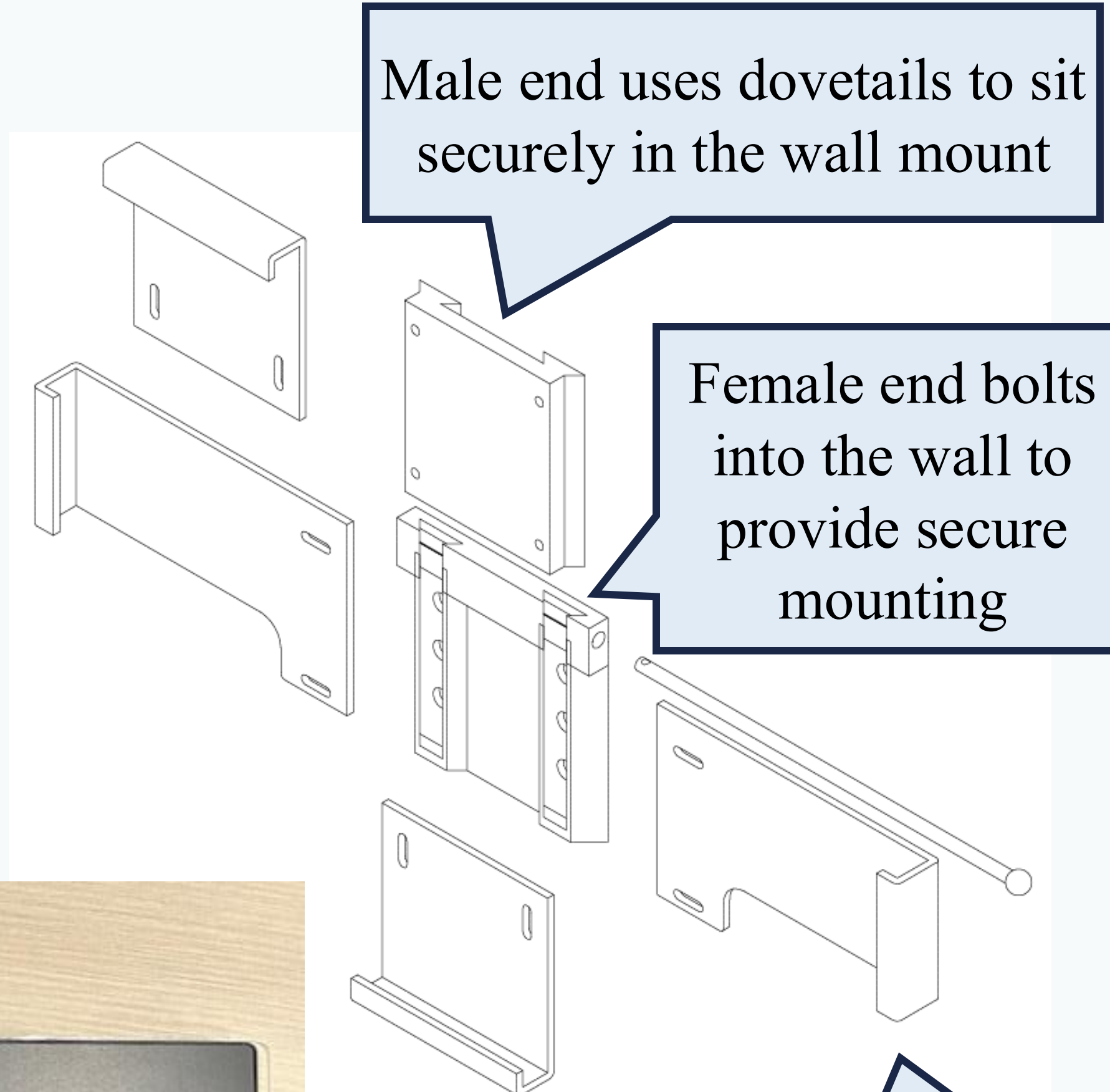
Central Entrance Sensor (left), Daycare Center Sensor (center), and Exterior Sensor (right)

## Dashboard System Design

The dashboards consist of three main components: The air quality sensors, the displays, and the mounting hardware. Air quality sensors by Purple Air were installed indoors and outdoors at each location to provide comparative measurements. The displays consist of a 15.6" monitor with a Raspberry Pi to provide real time data tracking. The dashboard mounts, consisting of mounting arms and an acrylic cover, were designed and 3D printed in Gonzaga's Cadwell Maker Center.



## Dashboard Mount Features



Slim profile allows the dashboard to extrude no more than 2" from the wall

Arms are sandwiched between the male mounting plate and the monitor

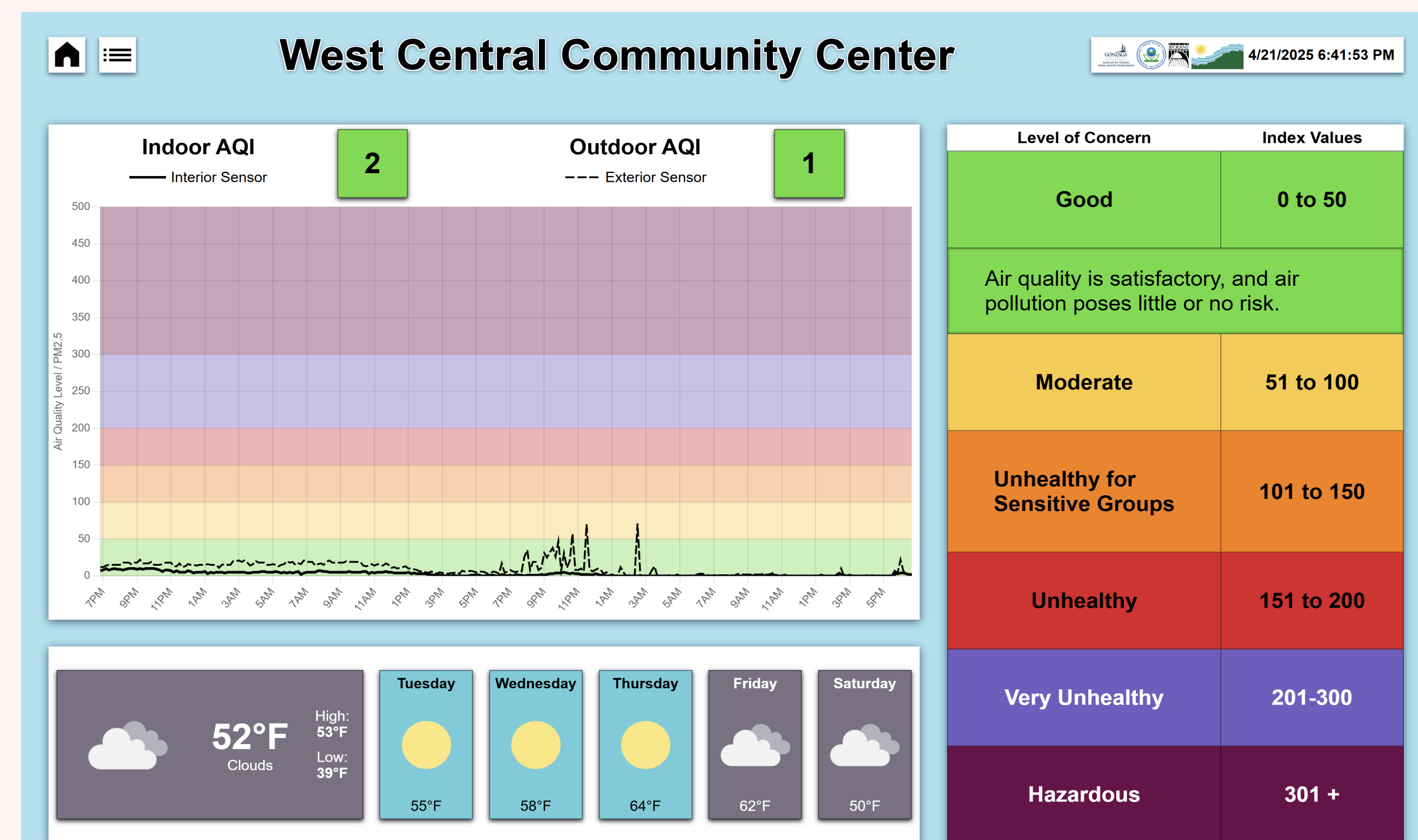
Side, top, and bottom arms wrap around the monitor to hold the acrylic cover in place

Locking bar provides a physical stop, with accommodations for a padlock to prevent theft

Special cutouts in the side arms provide space behind the monitor to house the Raspberry Pi out of sight

## Final Version of the Dashboard

The final product of this dashboard allows staff ease of monitoring interior and exterior air quality to be more prepared for wildfires drastically raising the particulate matter in the air. The website was designed to further enhance the reader's understanding of the data.



You can learn more about how GU is working to mitigate the impact of wildfire smoke on Spokane's community here:

