

## Noise Levels at Fifth Street Substation

### Noise Levels with existing equipment

Black Hills Power has taken noise level readings on the outside perimeter of the substation fence. We took the noise level readings under normal operating conditions as well as with the fans on. The results can be seen on the attachment. The attachment also shows the noise levels along the two major roads adjacent to the site. Please note that these noise level readings taken at the fence and property lines were taken during the day and include all background noises present.

### New Equipment Noise Levels

The majority of the noise within a distribution substation comes from the transformers. Both transformers on site will be replaced and will meet today's standards in regards to transformer noise. The noise levels in the substation will meet the City's noise level standards of less than 70dB at the property line.

77.3 dBA PEAK - FANS ON  
76.3 dBA PEAK - FANS OFF  
62.1 dBA NO TRAFFIC - FANS OFF

BIKE PATH

CORNER OF  
5th STREET  
& CLEVELAND

NO FANS [ 79.9 dBA (PEAK TRAFFIC)  
WITH FANS [ 77.6 dBA (PEAK TRAFFIC)

\*NOTE THESE VALUES TAKEN  
AT ABOUT 11 00 am

62.7 dBA (FANS OFF)  
64.7 dBA (FANS ON)

62.5 dBA  
(FANS OFF)  
63.9 dBA  
(FANS ON)

62.4 dBA  
(FANS OFF)  
66.5 dBA  
(FANS ON)

61.4 dBA (FANS OFF)  
62.7 dBA (FANS ON)

KNOLLOGY  
ACCESS

61.3 dBA (FANS OFF)  
62.1 dBA (FANS ON)

ALLEY

GATE  
62.4 dBA (FANS OFF)  
63.2 dBA (FANS ON)

62.2 dBA  
(FANS OFF)  
61.8 dBA  
(FANS ON)

CORNER OF ALLEY  
& CLEVELAND

# EXISTING FIFTH STEET SUBSTATION

