

## **ABSTRACT**

**THESIS:** One Step Closer to Achieving Inclusive Design: Design Considerations for Clients with Low-Vision.

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While the low-vision population in American continues to increase, few empirical studies have been completed investigating how environmental factors affect a low-vision person's ability to accurately perceive the interior environment. This study uses quantitative research methods to understand the critical relationship between contrast levels within the built environment and the ability of the low-vision and normal-sighted population to accurately perceive that environment. This study investigates the environmental factor of contrast and how varying levels of contrast within interior spaces affect the behavior of low-vision participants within the interior environment.

This study consists of two phases. The first phase was a survey designed to evaluate the preferences and potential behavioral impacts caused by perceived contrast levels present within the interior environment on people with all visual abilities. The second stage of the study involves observing and videotaping low-vision and normal-sighted participants within a laboratory setting and documenting preferred contrast levels and changes in behavior under different contrast scenarios.

The findings of this study demonstrate the preference among normal-sighted and low-vision participants for high-contrast environments. High-contrast between the wall and floor

surfaces are helpful cues to the low-vision population's ability to perceive the environment accurately. This researcher also found that low-vision participants exhibited fewer behaviors in high contrast environments than in medium and low contrast environments.

The researcher recommends that high-contrast environments are an appropriate inclusive design measure that interior designers should consider when designing the built interior, and that they decrease the risk of behavioral reactions exhibited within an interior space.