Overview and Status

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Overview

• Background and Acknowledgements
• Purpose and Scope
• Progress to date
• Gaps in evidence-based knowledge
• Need for Research
• Future Plans
Background and Acknowledgements

- **2008-2010**: POEs on US Courthouses:
  - Initiated by Vijay Gupta at GSA, and conducted by NIBS,
  - Discovered issues with the visual environment that do not accommodate persons with Low Vision

- **2010-2011**:
  - GSA requested and funded NIBS to conduct a Workshop, publish Proceedings, and develop a Concept Paper

- **2012**:
  - NIBS established the Low Vision Design Committee in Sep 2012

- **2012 – Present**:
  - Work on the Guideline began with funding from the Hulda B. and Maurice L. Rothschild Foundation
  - Subsequent funding received from the Jim H. McClung Lighting Research Foundation in Mar 2013
  - First Public Review Document available in Jan 2014
Need for Design Guide

- ADA/ABA addresses needs of persons who are blind, but not for those with Low Vision
- A dearth of codes and standards exists to accommodate persons with low vision
- Designers, clinicians, and other accountable persons should be able to use the same parameters and values to define the visual environment
Purpose of Guideline

“To offer the means to achieve these values based on:

• Empirical data from published lab and field studies
• Recommended design practices from technical societies
• Published POEs of buildings occupied by both low vision and normally sighted persons”
Scope of Guideline

- Intended for use in new construction and alterations of public accommodations and commercial facilities
- Addresses planning and design of a building and facility site, including:
  - All features used to access the building or facility such as walkways and pathways, stairs, and ramps
  - The facility interior spaces, including finish materials, fixed and moveable furniture; and the lighting design, including the use of daylighting and electrical lighting
- May also be of use to home designers and builders of senior housing facilities
# Table of Contents

- Acknowledgements
- Foreword
- What is Low Vision
- Chapter 1: General Design Principles
- Chapter 2: Site and Landscape Design
- Chapter 3: Architecture, Lighting and Interior Design
- References and Bibliography
- Technical Appendices
- Index (TBD)
- Endnotes
Progress to Date

• Preliminary literature review on evidence-based data on responses of persons with low vision to measures of the visual environment (Reference Section 4C)

• Chapter 1 provides basis for a Paradigm Shift that emphasizes measures of luminance, contrast and glare
  – Difference between Illuminance and Luminance based design
  – Gaps in available information

• Chapter 2 provides guidance on site and landscape design elements including:
  – Surface characteristics that affect comfort and safety
  – Impact of surfaces and light sources that affect glare
  – Wayfinding and signage
Progress to Date (2)

• Chapter 3 provides guidance on architecture, lighting and interior design elements including:
  – Daylighting control
  – Surface finishes
  – Furniture Selection
  – Electric lighting
  – Signage and Wayfinding

• References and Appendices provide supporting information and additional technical guidance

• Public Review Draft is being finalized in Committee
Gaps in Evidence-Based Knowledge

• Only a few lab studies on responses of subjects with low vision and normal vision to controlled visual environments

• No case-control field studies have been identified that compare responses of occupants with low and normal vision to visual environments

• Most evidence-based data are from young subjects with normal vision

• Many studies conducted without concomitant human response measures

• Current codes and standards not based on evidence from low vision subject/occupants
Need for Evidence-Based Research

• Comprehensive review of evidence-based literature – Conduct gap analysis
• Rationalization of design calculations (i.e., predicted values) and measured values in lab studies, POEs (e.g., case-control studies), and clinical evaluations
• Effectiveness of products and control strategies to enhance visual environments
• Impact of enhanced visual environments on health, safety, security, economics, energy resources and sustainability
Future Plans

• Continue to update and publish the “Design Guidelines for the Visual Environment”
• Evaluate the need to develop a Standard
• Obtain funding and sponsors
• Subcommittee Activities:
  – **Research:** identify research needs, conduct and support research
  – **Codes and Standards:** interface with ICC and standards organizations
  – **Outreach:** interface with governmental agencies, non-governmental organizations, manufacturers, consultants, and educational institutions to disseminate Guidelines and other Low Vision information
Questions?