

NIBS LOW VISION DESIGN COMMITTEE

November 3, 2011

Organizational Meeting: Minutes

FILE MANAGER site: <http://files.nibs.org>

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(both one word, all lowercase)

Folder: Materials from the 110311 LVDC Kickoff Meeting

Contains files:

- 102411.lvdc.agendamission.docx (agenda and draft of mission statement)
- 102411.lvdc.contactinfo.xlsx (committee members listing and proposed committee assignments)
- 102411.lvdc.conceptpaper.5.pdf (fifth draft of Environmental Design and Operations for People with Low Vision)
- BS 8300:2009.pdf (British Standards Institute: Design of buildings and their approaches to meet the needs of disabled people – Code of practice)
- Project summary.massof.pdf (Bob Massof's summary of his R-21 research proposal to NIH)
- 110311.lvdc.minutes.docx (these minutes)

IN ATTENDANCE:

- John Eberhard, FAIA, architect and neuroscientist
- Nanne Eliot, NIBS
- Vijay Gupta, PE, mechanical engineer
- Earle Kennett, NIBS
- Stuart Knoop, FAIA, Oudens Knoop Knoop + Sachs
- Fred Krimgold, PhD, Va. Tech
- Bob Massof, PhD, Lions Low Vision Research and Rehab Center
- Marcia Mazz, Access Board
- Rob Meyer, Rothschild Foundation
- Eunice Noell-Waggoner, interior designer
- Priscilla Rogers (via phone) American Federation for the Blind
- Stephanie Stubbs, NIBS
- Tom Williams, AIA, GSA
- Jim Woods, PE, PhD, indoor environment consultant.

Earle Kennett and Stephanie Stubbs welcomed the group to NIBS. Earle explained that NIBS committees are formed around a special research interest and are free to

operate under the rules of their choice. If they establish themselves and prevail over the course of two or three years, the NIBS Board can make them official councils, and they will be subject to NIBS rules and procedures for election of officers, reporting, etc. NIBS has appointed Jim Woods to serve as chair and Stuart Knoop to serve as vice chair.

Chair Jim Woods and Vice Chair Stuart Knoop credited Vijay Gupta, in his role as chief mechanical engineer with the General Services Administration, for getting them involved in design for the low vision populations. They also acknowledged and thanked Rob Mayer and the Rothschild Foundation for support and seed money to establish the committee.

2. AGENDA

The group adopted the proposed agenda for the meeting. (see file: 102411.lvdc.agendamission.docx)

3. MISSION STATEMENT

The group refined the proposed Mission Statement (appears at the end of this document).

4. SELF INTRODUCTIONS

The group members introduced themselves.

Some interesting points:

- Bob Massof described the four phases of the research model. Eunice asked for a summary of the research project; Bob will send. (See file: Project summary.massof.pdf)
- Rob Mayer described the workings and background of the Rothschild Foundation, our sponsor for this meeting. Its focus is quality of life and seeking a balance between regulations and quality of life, particularly for those in nursing homes and other elder care facilities.
- Marsha Mazz described the workings and make-up of the Access Board. Members are appointed and statutory; no one represents any particular interest group. She reminded the group that the ADA is a prescriptive standard; designers need not understand the needs of facilities users, they only have to comply with the standard. The ADA is enforced when someone make a complaint; anyone, whether affected personally or not, can file a complaint. Complainants are kept anonymous.

5. REVIEW OF BACKGROUND TO COMMITTEE FORMATION

Low Vision Issues in Public Buildings: Vijay Gupta talked about his workings with GSA and his personal; experience with the slow development of macular

degeneration and how it changed his awareness of low vision issues in buildings. With the rise of design excellence program, new Federal buildings has seen an increase in the square footage of glass used and subsequent glare problems.

Questions:

--Fred Krimgold: Can we add an education component to the Mission Statement? (Jim: That discussion will follow this afternoon when we discuss the tasks.)

--John Eberhard: Can we get the AIA to change their Awards procedures? They choose from pictures, where they should do a POE-like evaluation of the buildings. (Tom: Some of the selections are embarrassing.)

--Tom Williams: We have to do what's legally required to comply with standards for federal agency buildings—we have a boatload of standards designers have to deal with. If buildings are built before 1968, we try to do the right thing--but there are no standards.

- **Workshop in September 2010.** Stuart Knoop described how GSA, through Vijay, asked Stuart's firm to do search to see if this information concerning design for low vision existed. They found some studies and standards published in England and other countries, but not in the U. S. To help fill this gap, Earle Kennett suggested a workshop. One of the recommendations from workshop participants was that NIBS set up this committee. GSA asked us to create amendments to the P-100. Stuart and Jim worked on this task. They kept the structure of P-100, and inserted recommended changes. (Tom mentioned that NIBS currently is involved in and developing revisions P-100. The Low Vision recommendations for P-100 would be published as a set of separate recommendations.)

- **Draft of Modification to GSA P-100 for Low Vision Design Guidelines** Stuart Knoop explained how the changes suggested to the P-100 low vision guidelines were developed into a freestanding reference document

Jim concluded by saying that the workshop highlighted interior design, barriers, lighting—those are the components of low vision design. Proceedings are recorded. It's available on the file manager site (Folder: Workshop Proceedings; File: Final LowVision.030811. It is the basis of the concept paper (discussed later).

- **Application to NIH/NEI for funding for Low Vision Research:** Bob Massof explained the basic concepts behind the research paper that he is submitting to NIH entitled, "Computational Model of the Perception of Environments by People with Low Vision." It centers on building four models:
 - A physical model that measures and shows how environmental light hits the cornea from a set vantage point

- A computational model measuring how light is absorbed by the eye
- A computational model showing how light absorption is processed into visual sensation
- A computational model that allows observers to see optimal processing of different visual perceptions (including contours, depth, and patterns).

This project grew out of the September 2010 workshop, and Bob believes this tool will be very useful for researchers. He believes we have a good, enthusiastic team for the project once we get past the hurdle of getting funding from NIH.

Bob noted that a lot of the terms used by designers are not appropriate for emulating the physics of a model of what you see. He noted further that in the practice of architecture and engineering, it doesn't appear that a lot of data is specified on a building project. This research project will require architects and engineers to make measurements that can be used for vision requirements.

- **Support from Rothschild Foundation:** Rob Mayer, president of the Rothschild Foundation, explained that they looked carefully at NIBS' proposed work and found it very ambitious. Part of it doesn't intersect with Rothschild's trajectory, but they agreed to fund: this meeting (Task 1), Task 3.1 support for new AIA/FGI document, revisions to ANSI 2807; and Subtask 3.3 recommendations to ANSI. Their purpose in providing this funding is to help this committee get off the ground and get organized as well as to focus the committee on regulations.

6. ONGOING RELATED ACTIVITIES

- **Revisions to FGI Guidelines for Design and Construction of Long Term Residential Health, Care, and Support Facilities** Eunice Noell-Waggoner talked about proposed revisions to the FCI Guidelines, which formerly were under the auspices of AIA. Residential, long-term care and adult daycare are in one section of the guidelines. The deadline for submission of comments and new information info was October 31. Eunice tried to include glare, reflectivity, amount of light, controlling daylight, etc., with the thought that this information could be tweaked (if necessary) at a later date, as long as it already was included in a new section on building systems. In the next year, we can wordsmith the draft. (www.FGI.org) You can comment and see all of the comments posted. The next meeting of the group will in January in San Antonio. Eunice will send everyone the information that she submitted, the committee will look at it, and then decide on next steps.
- **Revisions to ANSI/IESNA RP-28-07: Recommended Practices for Lighting and the Visual Environment for Senior Living.** Eunice told the group she

is in the process of making recommendations for this standard as well. She is trying to get table of illuminances, with specifics for people with vision impairments, published after the handbook, so that it will supersede the handbook data.

Eunice said that we need literature searches that show research studies and a report for what is really needed in the visual environments.

Bob replied that research on the subject is very spare—there is relatively little work done in this area. He’s hoping that the NIH grant will stimulate this research.

- **Access Board:** The U.S. Access Board will hold a public hearing November 9 on the Board’s proposed guidelines for accessible public rights-of-way (Marsha Mazz: The Board Some elements—such as street lighting—pertain to low-vision issues. Marsha further noted that you don’t have to be at the hearing to make comments. You can submit comments online at the Access Board’s website [<http://www.access-board.gov/gs.htm>] by November 23.

Particularly tricky is trying to resolve issues of roundabouts, which have no signal that alert pedestrians when it’s safe to cross the street and do not account for bicycle traffic moving in and out of the roundabout.

7. DISCUSSION OF CONCEPT PAPER

The group talked briefly about the issues and knowledge gaps in the Concept Paper prepared by Jim Woods.

Proposed Changes:

Page 4: Marsha will re-write the paragraph on “the distinction between low vision and legal blindness...”

Page 5: The phrase (“i.e., perceptions and judgments”) was deleted.

Page 7: Last bullet in series, phrase now reads, “The National Fire **Protections’ Life Safety Code** allows...”

All agreed to read the paper more thoroughly for further discussion. (The Concept Paper is available on the File Manager site. File Name: 102411.lvdc.conceptpaper.5)

8. DISCUSSION AND PRIORITIZATION OF COMMITTEE TASKS AND CREATION OF SUB-COMMITTEES

- **Administrative and Fund Raising (Jim Woods will lead this effort)**
Task 1: Identify budgets and potential funding sources for future committee work. Jim presented a list of possible funding sources in addition to the Rothschild Foundation, including: GSA; VA; IRS; National Eye Institute; Robert Woods Johnson Foundation; ASHRAE, IES, Jones Lang LaSalle, developer; American Federation for the Blind; Lighthouse; Lions Club; Access Board; Foundation for Fighting Blindness;

MetLife Foundation; AIA, and AARP Foundation. Jim will develop his spreadsheet further and distribute it to the committee members.

Task 2: Begin development of an MOU among Federal Agencies. Tom Williams will initiate the action by speaking to Susan Brita about it. He was asked to remind her of her enthusiasm when the idea surfaced at the 2010 workshop and ask if she still thinks it is a good idea.

- **Outreach and Education** (John Eberhard will lead this effort)
 - Subtask 7.1: Awareness Articles (perhaps in the building industry-related publications)
 - Subtask 7.2: Educational paradigm (this will be developed at a later date).

- **Codes, Standards, and Guidelines** (Eunice Noell-Waggoner will lead this effort)
 - Subtask 3.1: The committee will provide comments on Provide FGI/AIA sections (Eunice will send a draft of the proposed changes.) and to the revisions to ANSI/IESNA RP-28-07.
 - Marsha suggested that the group also look at ANSI 117.1, which is about to begin its 5-year code revision cycle, The standard is under the purview of ICC. They will accept a proposal on a new topic, but if it isn't proposed at the beginning of the cycle, the topic can't be added later (in the same way that FGI works). (Stephanie will contact Kermit Robinson at ICC[krobinson@iccsafe.org] to see if we can get access to the standard without a fee.)
 - Subtask 3.2: Begin literature search, review and comments on existing documents. Jim suggested that this not be limited to the U.S. One of the best documents is a British stud, the British Standard BS – 8300-2009: “Design of buildings and their approaches to meet the needs of disabled people – Code of practice.” [File: BS 8300:2009.pdf]
 - Subtask 3.3: Coordinate with U.S. Access Board. Marsha will be glad to help in this effort. We can submit comments collectively or individually on the rights-of-way proposal at the Nov. 9 hearings or by November 23 via the website. ([<http://www.access-board.gov/gs.htm>])
 - Subtasks 4.1 – 4.5: Develop initial design and operations guidelines.

Research and Development (Bob Massof will lead this effort)

- Subtasks 5.1 – 5.3: Develop an interactive LV Repository (WBDG or Alternative)
- Subtasks 6.1 – 6.3: Develop and validate a Protocol for Post-Occupancy Evaluation (POE) of the Visual Environment in Public and Private Buildings

Longer range plans

- Task 8: Correlate clinical and health-care data with POEs (Mid-Range)

- Task 9: Conduct experimental laboratory, clinical and field studies (Long Range)
- Task 10: Apply POE results to design and operations (Jim said a good POE takes four people about a week and costs about \$50,000)
- Identify further research needs.

John described research by a doctor concerning the connection of premature birth, neonatal care, and vision development. Our senses of taste, touch, and smell are developed during the second trimester of growth. Hearing develops in the third trimester, and sight develops only after hearing. If a child is born before the third trimester, his hearing and sight are underdeveloped. The doctor's research show that when a premature infant is placed in a typical neonatal units—with harsh light and loud noises that his sight and hearing are not yet equipped to handle—he runs a risk of developing loss of vision acuity and macular degeneration in later years. This doctor developed more calming crib environments for premies.

9. SUMMARY, CONCLUSIONS, AND ACTION ITEMS

John mentioned that he is presenting a panel at the AIA convention on neuroscience and architecture. (The group thought it would be premature to include presentation of Bob's NIH grant.)

Marsha also suggested that the group explore [Global Universal Design Commission, Inc.](http://globaluniversaldesign.com/) [http://globaluniversaldesign.com/], headed by Ed Steinfield, which awards a points system (like LEED) for Universal Design elements that are incorporated into a project. Perhaps we could have points for low vision design.

Marsha asked that we not use italics type in publications—bold for emphasis is much easier to read. She prefers the Cambria font.

Bob Massof said that the Envision Conference in St. Louis on September 12. [http://www.envisionconference.org] He is on the submissions committee, and thought a panel symposium on the committee and its work would be welcome addition to the program. Because the audience is mostly clinician and researchers, the building environment approach would be unique and of great interest.

Date for next meeting:

Tentatively, **Wednesday May 16, 2012**, just before the start of the AIA convention. We can also discuss meeting at the Access Board, which has a bigger conference room than NIBS.

ATTACHMENT 1

Mission Statement for the NIBS Committee on Low Vision Design Draft 21 Oct 11 (Revised November 3, 2011)

The U.S. population with low vision (defined as a chronic visual impairment that causes functional limitations or disability) and ~~other disease- or other age-related~~ **vision challenges** has been growing. The need to accommodate this population in the built environment must be addressed **and has been emphasized with the increase of older adults in the general population.**

NIBS is charged with the identification and resolution of problems and potential problems that hamper the design, construction and operation of safe, affordable structures for housing, commerce and industry throughout the United States.

The mission of the Committee on Low Vision Design is to address the needs of all occupants of the built environment, including those with low vision, through improvements in designs and operational procedures for new and existing ~~buildings-facilities~~ to **enhance the function, safety, and quality of life.** The Committee will identify existing knowledge and needs for further research to accomplish these objectives.