Integrative Process (IP)©

ANSI Consensus National Standard Guide©
February 2, 2012

for

Design and Construction of Sustainable Buildings and Communities

The financial support of BetterBricks / Northwest Energy Efficiency Alliance in the development of this
Standard, and leadership support of Bill Reed and John Boecker, are greatly appreciated.

Copyright 2005-2012
Market Transformation to Sustainability & American National Standards Institute
TABLE OF CONTENTS

1.0 SECTION ONE – Introduction and Making the Case
1. A. Introduction ................................................................. 4
1. B. Integrative Process Definition ........................................... 4
1. C. Intent of this Standard Guide ........................................... 5
   1.C.1 Consensus Standard Guide ........................................... 5
   1.C.2 Relationship to AIA’s Integrated Project Delivery (IPD) .... 5
   1.C.3 Relationship to US Green Building Council’s LEED Green Building Rating System... 5
   1.C.4 Ensuring that this Standard Guide is Implemented Effectively .... 6
1. D. Background
   1.D.1 Philosophy .................................................................. 6
   1.D.2 Two Examples of the Integrative Process Benefits ........... 7
      a. Building Systems as a Unified Organism (not separate pieces) .... 7
      b. Building Team as a Unified Organism (not solving problems in isolation)... 8
   1.D.3 Everyone is Practicing Integrative Design . . . at least that’s what they say ...... 9
1. E. The Integrative Process Structure Compared to a Conventional, Linear Process ... 13
1. F. The Key Aspects of an Integrative Process ..................... 15

2.0 SECTION TWO Implementation ........................................ 16
2.A. Part A Discovery .......................................................... 19
   2.A.1 Stage A.1 – Research and Analysis: Preparation ............... 20
   2.A.2 Stage A.2 – Workshop No. 1: Alignment of Purpose and Goal-Setting .... 22
   2.A.3 Stage A.3 – Research and Analysis: Evaluating Possible Strategies .... 27
   2.A.4 Stage A.4 – Workshop No. 2: Conceptual Design Exploration .... 29
   2.A.5 Stage A.5 – Research and Analysis: Testing Conceptual Design Ideas ... 31
2.B. Part B Design and Construction .......................................... 33
   2.B.1 Stage B.1 – Workshop No. 3: Schematic Design Kickoff – Bringing it All Together (without committing to building form) ... 33
   2.B.2 Stage B.2 – Research and Analysis: Schematic Design – Bringing it All Together (and now committing to building form) ... 36
   2.B.3 Stage B.3 – Workshop No. 4: Design Development Kickoff – It Is Brought Together; Does It Work? ....................... 37
   2.B.4 Stage B.4 – Research and Analysis: Design Development (Optimization) .... 39
   2.B.5 Stage B.5 – Workshop No. 5: Construction Documents Kickoff – Performance Verification and Quality Control ................. 41
   2.B.6 Stage B.6 – Construction Documents (No More Designing) ........ 42
   2.B.7 Stage B.7 – Building and Construction – Aligning with the Constructor .... 43
2.C. Part C Occupancy, Operations, and Performance Feedback .... 46
   2.C.1 Stage C.1 – Occupancy: Feedback from All Systems ............. 46

3.0 Appendix
3.A Glossary ........................................................................ 48
3.B Reference Standards and Guidelines .................................. 54
3.C Acknowledgements.......................................................... 55
SECTION ONE – Introduction and Making the Case

1.A Introduction
This Integrative Process (IP) Guide is comprised of two sections: Section One introduces the history, intent, background, philosophy, and fundamental premises that support the growing need for building design and construction teams to align around the implementation of a clearly defined Integrative Process. Section Two defines that process; providing a step-by-step outline for its implementation. Accordingly, Section Two is the portion that project teams should follow when they desire to conform with this ANSI Consensus Standard Guide.

This document is the result of six years of work beginning in November 2005, when a core committee of building industry practitioners gathered in Chicago to begin a dialogue on how to offer the marketplace a document that codifies the meaning, importance, structure, and practice of an Integrative Design Process. The Institute for Market Transformation to Sustainability (MTS) requested the formation of this group to create a standard guideline of practice that would provide building Owners and building design and construction practitioners with a framework for practicing in a highly interactive way, using a co-learning process. This Integrative Process is essential for achieving both cost efficiencies and highly effective sustainably oriented performance. Many professionals talk about the need for this process, but very few teams do it well. This guide is intended to inform designers, engineers, constructors, facilities managers, building owners, and clients about this process and to provide a framework for taking the mystery out of this way of practicing.

Version 2.0 is a refinement of the ANSI/MTS 1.0 Whole Systems Integrated Process Guide (WSIP)-2007 for Sustainable Buildings and Communities. After Version 1.0 was adopted, a book was published to elaborate on the “lessons learned” from implementing an Integrative Process (IP). The book, The Integrative Design Guide to Green Building, written by the 7group and Bill Reed (IDGGB, or, the Reference Guide), built upon the structure of the original ANSI Standard Guide and appreciably refined it. Further, in 2009, approximately thirty peer reviewers, from a range of design and building professions, were engaged to review the detail practices and stages outlined in the book; a workshop was held in Seattle, Washington in October 2009 to synthesize their comments. This Version 2.0 is guided by the suggestions, comments, and edits that grew out of this peer review process.

As outlined in the prior Version 1.0 Standard Guide, the premises of this document are:

- It needs to be simple enough to be referenced by busy building professionals and clients seeking to understand why they can benefit from an IP structure.
- It needs to be specific enough to function as a guideline for practitioners and clients in determining the scope and deliverables associated with building design, construction, and operations practices.
- The framework needs to be generic enough to be applicable to a wide variety of project types and process entry points in the timeline of a project.
- It needs to speak to all participants in project delivery, so that they can comfortably participate in the integrative design process.

1.B Integrative Process Definition
The Integrative Process actively seeks to design and construct projects that are cost-effective over both the short and long terms, by engaging all project team members in an intentional process of discovering mutually beneficial interrelationships and synergies between systems and components, in a way that unifies technical and living systems, so that high levels of building performance, human performance, and environmental benefits are achieved.