

1. Record Nr.	UNINA9910526238503321
Autore	Levy Francois <1966->
Titolo	BIM in small-scale sustainable design [[electronic resource] /] / Francois Levy
Pubbl/distr/stampa	Hoboken, New Jersey : , : Wiley, , c2012
ISBN	1-119-57261-4 1-118-10682-2 1-283-33240-X 9786613332400 1-118-10385-8 1-118-15342-1
Descrizione fisica	1 online resource (308 pages)
Collana	THEi Wiley ebooks.
Classificazione	ARC004000
Disciplina	628 728
Soggetti	Building information modeling Sustainable construction
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	BIM in Small-Scale Sustainable Design; Contents; Acknowledgments; Introduction; Building Information Models and Modeling; The cost of buildings; See, change; BIM for the rest of us; What this book is, and isn't; A word on the case studies; 1: BIM and Sustainable Design; The emergence of Building Information Modeling; BIM for design; High-performance architecture; Case study: Moonrise Ranch; 2: Design Software; BIM applications; Complementary software; Further reading; Case Study: Parameterized Hauer Curtain Wall; 3: Site Analysis; Developing a site model; Analyzing the site Case Study: House in Sonoma4: Massing Analysis; Creating massing models; Perimeter/volume ratios: optimizing for envelope quantity; Confirming desirable and undesirable views; Preliminary cost and feasibility analysis; Preliminary passive heating and cooling design data; Case Study: New High School; 5: Solar Geometry and Daylighting; Shade from the sun; Daylighting; Case Study: Ross Street House; 6: Passive Cooling; Appropriate responses for local climates; Rules of

thumb and sizing guidelines for cooling strategies; Case Study: Hadlow College Rural Regeneration Centre; 7: Passive Heating Rules of thumb and sizing guidelines for heating strategies Whole-building heat loss; Whole-building heat gain; Case Study: Battelle Darby Creek Environmental Center; 8: Onsite Energy Systems; Solar photovoltaics; Azimuth and elevation; Solar thermal systems; Wind turbines; Case Study: Cascadia Center for Sustainable Design and Construction; 9: Building Hydrology; Site design for water; Rainwater harvesting; Plumbing fixture efficiency; Sizing constructed wetlands; Gutter sizing; Case Study: Bee Ranch; 10: Materials and Waste; Material takeoffs and cost calculations; Advanced framing Sheet materials Preliminary life cycle analysis; LEED material calculations; Case Study: Loblolly House; 11: Collaboration; Imported backgrounds; Exporting files; Project coordination; Case Study: Paisano Senior Housing; Afterword; Bibliography and References; Index

Sommario/riassunto

"Any architect doing small or medium scaled projects who is also vested in sustainable design but is not yet doing BIM will enjoy this book's overall focus." -Architosh.com This work is the leading guide to architectural design within a building information modeling (BIM) workflow, giving the practitioner a clear procedure when designing climate-load dominated buildings. The book incorporates new information related to BIM, integrated practice, and sustainable design, as well information on how designers can incorporate the latest technological tools. Each chapter addresses specific top
