Index

A

Access:
- easements, 150
- to site, 151–154, 304, 319
- solar, 95–99
Aesthetics, see Design, principles; Visual quality
Agriculture, see Farmland preservation
Americans with Disabilities Act (ADA), 141, 149
Archaeological resources, 66, 172
Architect Registration Exam (ARE), 25–26
Architecture, 287–288, 312–313. See also
- Buildings
Articulation, 22, 162, 278, 281–316. See also
- Design, principles
Aspect, 78–80. See also Topography
Aquifer recharge, 82–85. See also Hydrology; Stormwater management

B

Balance, in design, 287–288. See also Design, principles
Base maps, 72–74. See also Mapping
Bicycles, 303. See also Pedestrians; Vehicles
Buildings:
- character, 167–170
- design guidelines, 149
- envelopes, 143–146, 253, 260–261
- façade articulation, 242–243, 276–277, 312–316
- floor-area ratio, 137
- footprints, 63
- heights, 178–181
- massing, 162, 242, 272–273, 276
- orientation, 90
- siting, 90, 99, 253, 260–261, 314–316
- typology, 169–170

Case studies:
- Community planning and farmland preservation, South Livermore Valley, California, 234–243
- Design guidelines, Wallingford Neighborhood, Seattle, Washington, 275–277
- Design review, Architecture+Design Scotland, 320–322
- Downtown planning, Madison, Wisconsin, 189–202
- Metropolitan area greenway planning, Chouteau Greenway, St. Louis, Missouri, 127–134
- New town planning, Indian Trace, Florida, 100–110
- Site selection and programming, Arlington Boathouse, Virginia, 61–69
Case studies (continued)
Urban infill, Northwestern Memorial Hospital, Chicago, Illinois, 156–166
Case study method, 41
Certified Planning Examination (CPE), 26–27.
See also Examinations
Circulation systems, see Bicycles; Pedestrians; Vehicles
Climate, 90–98, 101, 207
change, 113. See also Hazards, natural microclimate, 95–98, 101, 213
plant hardiness zones, 93–94
solar access, 95–99
wind, 96–97, 117, 120–122
Codes, see Land use, regulation
Concept:
development, 20–22, 251–264
diagram, 251–261
evaluation and refinement, 273–274
Connectivity:
landscape corridors, 112–122
open space systems, 264–268, 294–298
pedestrian circulation systems, 270–271, 299–310
Construction:
contract administration, 24
drawings, 22–23
specifications, 23–24
Corridors, see also Connectivity
highway, 183–184
landscape, 112–122
Costs, see Feasibility analysis
Creativity, 249–251. See also Design
Critical areas, see also Land use, regulation
Certiﬁed Planners Examination (CPE), 26–27.
See also Examinations
Circulation systems, see Bicycles; Pedestrians; Vehicles
Climate, 90–98, 101, 207
change, 113. See also Hazards, natural microclimate, 95–98, 101, 213
plant hardiness zones, 93–94
solar access, 95–99
wind, 96–97, 117, 120–122
Codes, see Land use, regulation
Concept:
development, 20–22, 251–264
diagram, 251–261
evaluation and refinement, 273–274
Connectivity:
landscape corridors, 112–122
open space systems, 264–268, 294–298
pedestrian circulation systems, 270–271, 299–310
Construction:
contract administration, 24
drawings, 22–23
specifications, 23–24
Corridors, see also Connectivity
highway, 183–184
landscape, 112–122
Costs, see Feasibility analysis
Creativity, 249–251. See also Design
Critical areas, see also Land use, regulation
Index

E
Easements, 150
Ecological, see also Species communities, 116–122
Ecosystem services, 3–6
Elevation, 76–77. See also Topography
Emphasis, 288–290. See also Design, principles
Environmental Site Assessment (ESA), 136
Exactions, see Land use, regulation
Examinations, professional:
Architect Registration Exam (ARE), 25–26
Certified Planning Examination (CPE), 26–27
Fundamentals of Engineering (FE), 26
Landscape Architect Registration Exam (LARE), 25

F
Farmland preservation, 234–241
Feasibility analysis, 56–59
Fibonacci series, 288. See also Design, principles
Fire, see Hazards
Flooding, 57, 64, 111–112. See also Hazards
Floor-area ratio (FAR), 137. See also Buildings
Form-based codes, 146–148. See also Land use, regulation
Fundamentals of Engineering (FE), 26
G

Geology, 81–83, 206. See also Hazards
Geographic information systems (GIS), 328–330. See also Mapping
buffering, 227
intersection function, 228–229
union function, 228
Georeferencing, 329–330
Global Positioning Systems (GPS), 327–328
Graphic communication, 72–75, 204–205, 251–264, 330–332
base maps, 72–74
green roofs, 115
green streets, 134
Greyfields, 32. See also Redevelopment
Groundwater, see Hydrology

H

Habitats, 116–118
fragmentation, 113
restoration, 267
Hazard: man-made, 21, 230
Health, and the built environment, 93, 187–188, 270, 299–309
Historic resources, 170–174, 104–198, 207
Hydrology, 82–86, 206. See also Stormwater management
groundwater, 102–104
wellhead protection, 85
See also Hydrology; Stormwater management

I

Infrastructure, 151–155
green, 264–268
nature’s, 113–118
Isopleth map, see Maps

L

Landscaping, 277, 308. See also Plantings; Vegetation.
Landmarks, 196. See also Visibility
Land use, see Design, guidelines
history, 170–175. See also Historic resources
regulation, 140–150, 163–165, 229–232, 316–322. See also Zoning
synergies, 32–33, 42
Landform classification, 81. See also Geology
Landscape Architect Registration Exam (LARE), 25
Landscape:
corridors, 127–134
symbolic meaning, 179
ecology, 112–113, 116–118
urbanism, 14
LEED (Leadership in Energy and Environmental Design), 14–15, 31
LESA (Land Evaluation and Site Assessment), 229
Location efficiency, 6–7, 32–33

M

Mapping, fundamentals, 323–330
Maps:
base, 72–74
choropleth, 78–79, 326
cognitive, 167
figure–ground, 168
isopleth, 326
plat, 30
scale, 323–325
thematic, 325–326
Market analysis, 65
Metapopulation, 121–122
Microclimate, see Climate

N

Natural hazards, see Hazards
Neighborhood:
design guidelines, 149–150
typologies, 169–170, 177
unit, 267
walkability, 6
New Urbanism, 7, 14, 32
Nolen, John, 189–191
Nuisance, 21
  light, 215
  noise, 187–188

O

Open space:
  conservation, 234–241
  design, 252–253, 264–268
  enclosure, 270, 295, 300–304
  site selection, 55–56, 73–75
Ordinances, see Land use, regulation

P

Parcel size and shape, 76
Parking lots, see Vehicles
Pedestrians:
  circulation system analysis, 148–149, 200
  circulation system design, 6, 201
Perception, environmental, 176–187
Permitting and approvals, see Land use, regulation
Photosimulation, 68
Place, sense of, 216–222
Placelessness, 213–215
Planning, comprehensive, 142, 189
  Plants, 122–126, 302. See also Vegetation;
    Landscaping
    species selection, 126
Policy, see Land use, regulation
Porous paving, see Stormwater management
Postoccupancy evaluation (POE), 41, 214
Precedents, see Design
Preferences. See also Programming
  site users, 37–39
  visual, 39–40
Professional competency, 24–27
Programming, 18–19, 33–42. See also Design, guidelines
Property:
  ownership, 137, 147
  takings, 140
  value, 137–139
Proportion, see Design, principles
Purchase of Development Rights (PDR), 139–140

R

Redevelopment, 31–33, 72
Remote sensing, 326–327
Runoff, see Stormwater management

S

Scale, see Design; Mapping
Scenic quality, 182–187. See also Visual quality
Sewer systems, see Utilities
Shadows, 97–98. See also Climate
Site plan review, 316–320. See also Land use, regulation
Site planning process, summary, 17–24
Site selection, 18–19, 43–60
  case studies, 61–69, 156–166
  feasibility, 56–59
  matrix, 54, 69, 158
  report, 60
  weighting criteria, 54–56
Slope, 77–78. See also Topography
Smart growth, 7, 13–17, 135, 144, 229–231.
  See also Planning
Soils, 86–90, 206
Species, 112–126
  invasive, 117–118
Stormwater management, 84, 116, 223–224, 296–298
  impervious surfaces, 114–115
  wellhead protection, 85–86
Suitability, of sites, 12–13, 49–61, 205–232.
  See also Land use, regulation
Sun, see Climate
Sustainability:
  Institute for Sustainable Infrastructure, 7
  Partnership for Sustainable Communities, 6
  science, 5
  STAR Community Index, 16–17
Sustainable Sites Initiative, 7, 15–16
Sustainability 2030 Tool Kit, 7
Sustaining Places Initiative, 7
Symmetry, see Design, principles

T
Theory, see Design, principles
Topography, 206
aspect, 78–80
elevation, 76–77
slope, 77–78
Transfer of Development Rights (TDR), 140
Transportation, 151. See also Bicycles; Pedestrians; Vehicles
Trees:
enclosing space, 124–125
in parking lots, 114–115
protecting, 124–126
real estate value, 122–126
Typologies:
buildings, 169–170
neighborhoods, 169–170
urban form, 167

U
Unified Development Codes, 146–148. See also Land use, regulation
Unity, in design, 283–286. See also Design, principles
User needs and preferences, 37–40. See also Programming
Utilities, 150–155, 207
easements, 150

V
Vegetation:
in design, 277, 302
inventory, 112–134
Vehicles:
circulation systems, 157–160,
199–202
green streets, 134
parking lots, 114–115, 306–312
Visibility, 178–181, 185–187, 191–193,
216–222
Visual quality, 181–187, 192–193,
280–294
visual preference surveys (VPS), 39–40
visual resource assessment, 183–187

W
Walkways, see Pedestrians
Water. See also Hydrology; Stormwater management
wellhead protection, 85
Wetlands, 118–121, 229–232. See also Hydrology
Wildlife, 121–122, 207. See also Habitats
Wind, see Climate

Z
Zoning, see also Land use, regulation
amendments, 163–165
codes, 142–145
overlay districts, 145