notes from Site Analysis (LaGro)

~~Chapter~~ Part I

* natural & cultural resources (inventory at community level)
  - wetland & buffers fen
  - floodways & floodplains
  - mod & steep slopes
  - groundwater resources & aquifer recharge areas
  - woodlands
  - productive farmland
  - significant wildlife habitats
  - historic
  - scenic views from public roads

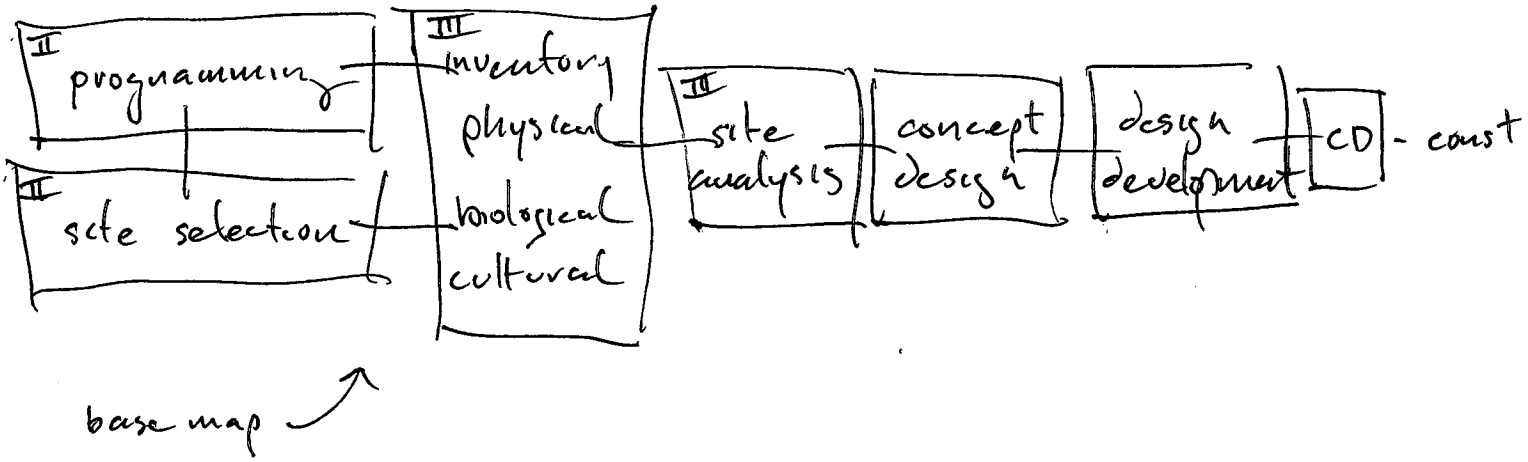
* Sustainable development
  - increase use of renewable energy and resources
  - reduce solid waste and conserve energy and natural resources
  - prevent pollution and improve personal & community health

* smart growth planning goals
  - foster distinctive attractive communities w/ strong sense of place
  - preserve open space, farmland, natural beauty & critical env. areas
  - strengthen & direct dev. toward existing communities
  - mix land uses
  - foster compact buildg design
  - create a range of housing opportunities & choices
  - create walkable neighborhoods
  - provide variety of transp. choices

* smart growth process goals
  - make development decisions predictable, fair, cost effective
  - encourage community, stakeholder collaboration in develop decisions

LEED Leadership in Energy and Environmental Design rating system and voluntary guidelines for improving sustainability in the built env.

programming p.14 defines the project's objectives and functional requirements, including the proposed activities, area allocated for each activity, and the function or spatial relationships among those activities



Part II

Greyfield are previously developed sites that have minor and relatively easily mitigated environmental contamination (strip malls, regional malls, low density shopping centers)
- urban infill - use existing utilities, transp. instead of developing new infrastructure

Programming is typically expressed in terms of quality and quantity of spaces needed to meet anticipated future needs.
- can occur over a range of spatial scales

the programmer:
- communicates the proposed process to all involved
- does not lock in preconceived solutions
- reconciles subcomponent needs with overall organizational goals and resources
- frequently tests and reviews design concepts

- may be outside Arch, LA, planning culture (as they have greater bias towards particular solutions)

goal setting - clarify quality level expectations

- Initiate the project
- develop the project mission and objectives

- determine the project's operational and physical req.
- document and present the program to the client

user needs and preferences - stakeholders

- elected officials (political)
- appointed "
- facility operators
- funding mgrs & analysts
- public works, maint staff
- citizen groups

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Part III

Site Inventory and Analysis

- proposed site use (project program)
- existg on and off site conditions (site data)
- requirements for permitting & approvals
- costs of data collection and analysis

site inventory - physical

- legal — prop line, easements, setbacks (subdivision maps)
- topo — elevation contures, spot (high-low), slope, aspect
- vegetation — wooded, isolated trees (species, dbh)
- soils/geology — geotech report, pH, perm., erosion
- hydrology — surface water, wetlands, flood
- utilities — type, size, facilities, sw, telcom
- structures — buildings
- circulation — streets, r/w, curb & gutter, parking
- climate — temp, rain, humid., wind, solar

site inventory - biological

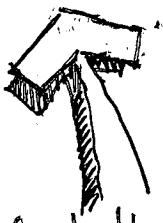
- ecological communities
  exotic species, wetlands, habitat fragmentation
- trees
- wildlife

site inventory - cultural

- prior use / current use, ownership
- land use regulation
  - federal } costal pollution ada.
  - state }
  - local
    - comprehensive
      - housing, transportation, utilities, economic dev. natural and cultural resources
    - zoning
      - land use regulation
        - planned unit development (PUD)
        - planned development districts (PDD)
        - mixed use
    - subdivision ord.
      - min. size for parcel
      - curb cuts, street access
      - building setbacks
    - legal constraints
      - zoning classification (permitted use and densities
      - easements, covenants, deed restrictions
      - gov agencies w/ jurisdiction over prop. (overlay)
      - building placement requirements (setbacks)
      - building height restrictions, F.A.R., footprint res
      - allowable buildable area (%)
      - parking driveway req.
      - min open space req.
      - recreation } environmental req
      - stormwater (SW), erosion control req.
      - landscape req.
      - special permits, regs, variance, design review, hearings e.i.r. req.

site inventory - cultural cont'd

- property value
  - can be restricted -
    - the purchase of development rights coupled w conservation easements, can keep land undeveloped for a limited or defined period of time.
    - conservation easements (typ held by non-profit)
  - can be enhanced
    - development of amenities
- public infrastructure — circulation utilities
- building and neighborhood character
  height, width, setback, proportion of openings, horizontal rhythms, roof form, materials, color, sidewalk, signage



- historic resources
- sensory perception
  - visibility
  - visual quality
    subjective vs. objective
  - noise & odors
    airport, fwy, rendering plant

EASEMENTS
access - ensure physical access
utility - gas, elect, water, cable tv, phone
conservation - restricts use, requires physical access
scenic - protect vistas
solar - solar access to adjacent prop

* they all add up to create the existg site & contextual conditions

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Site Analysis

program + existg conditions

site suitability - constraints and opportunities

- <u>carrying capacity</u>
  - brute force to overcome difficulties vs letting some sites remain undeveloped
  - $ vs $ what is more valuable
  - develop w nature -
- suitability analysis -

- suitability analysis - the process of determining the fitness, or the appropriateness, of a given tract of land for a specified use. A location that is suitable for a particular land use is one that can accomodate the proposed development with the minimum amount of inputs or resources

* A suitability analysis is spatially explicit and program dependent

- single attribute analyses - setbacks, or buffers
- multiple " - scoring the resources

- suitability and development regulation - may allow land to be developed in accordance with the constraints and opportunities provided by the land itself

ex: flood plain - sports fields, etc
landfill - botanic garden

Part IV

Design & Implementation

concept = vision
context-sensitive = design w nature, culture, places for people
= responsive to sun/wind, lotsize/shape, transportation systems proximity, veg/topo/natural features vistas/views/cultural landmarks, buildg scale/character

design determinants
- program & preferences.
- on-site form
- off-site form
- design theory

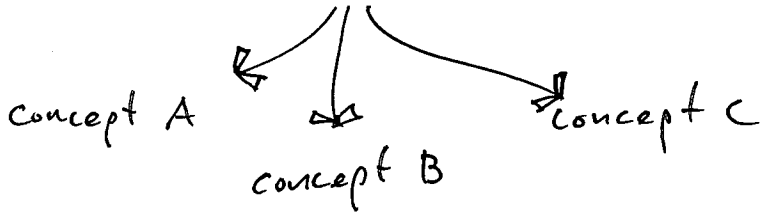
creativity and conceptual design
- problem solving - variables, reconcile conflicting values

maneuver around constraints.

conceptual design process

- project program
- community goals
- site suitability

} knowledge, skills, abilities/values
design theory
graphic communication
professional ethics



concept plan

components
- natural infrastructure & open space - water, forest, etc
- developed open space - parks, plazas, recreation
- building envelopes or pods - single fam, apt, townhome
- circulation systems - public, bike, auto, ped
- views

maybe... utility easements

design development

- sustainability and livability - smart growth
- design theory - culturally influenced, unity, order, balance
- open space - conservation of natural
  - hard - plaza, promenade, courtyard
  - soft - lawn, garden, park
- circulation
  - pedestrian separation, accessibility, capacity, connectivity
  - bicycle - class I, II, III
  - vehicle - circ & parking
- buildings
  - arch design, use, articulation, siting

project implementation

skillful site planning and arch. design can yield significant social, economic, and environmental benefits.

it is not any more expensive to build than a poorly designed project

- quality by design
  - reclaiming the built environment for pedestrians
  - restoration and redevelopment - urban infill
  - storm water management pervious pavement, biofiltration reduce runoff and improve water quality
  - erosion control
  - sediment control
- construction documentation
  - ideas to reality, legally binding agreement, drawings, specifications
- contract administration
  - project management
- permitting & approvals

development controls - public investment, regulations (zoning), incentives & disincentives (tax), land use plan

- governmental (political)
- zoning & overlay (additional)
- subdivision ord., building codes, unified develop codes (not OBC)
- review boards, hearings, etc