SITE DEVELOPMENT PROCESS

EXTENSION BULLETIN
E1252 FILE 36.44

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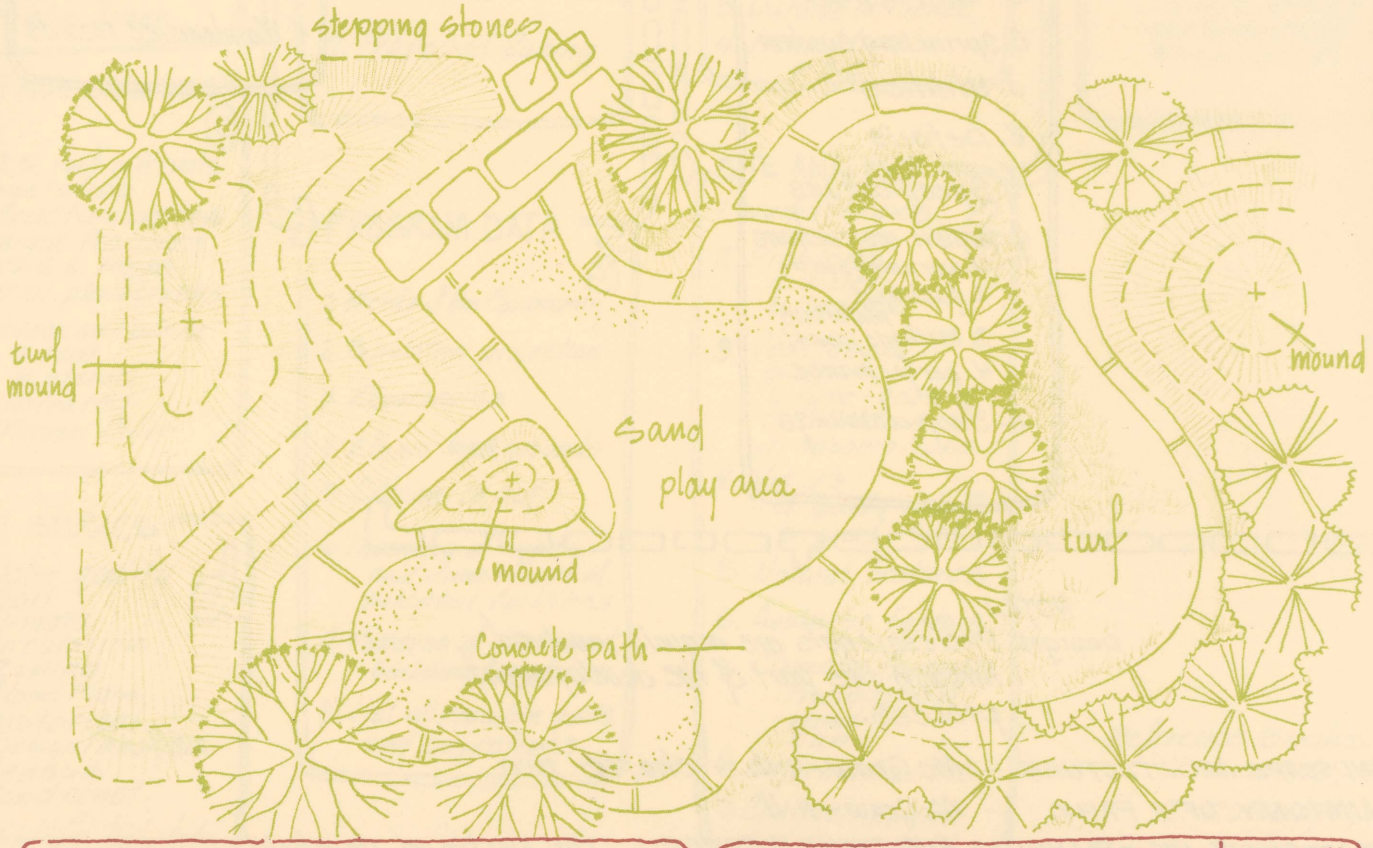
The site development process is a step by step, integrated procedure. The more you are aware of the process, the more responsive the final design. For our purposes, the individual or agency primarily responsible for the planning and development of a site will be referred to as the "owner" or "agency."

This brochure details the responsibilities of both the planner and the owner, so that the two can effectively work together for the best solution. If each is sensitive to the other's skills and responsibilities, duplication of work and expense (in time and money) can be avoided.

This is a guide, not a checklist. Once you use this process—it will change as you adapt it to your needs. It is important to decide what information is relevant to each individual site. Setting priorities at the start will save effort and expense and avoid confusion. Look over the flow chart first, then read the detailed discussion. Reference books are included for acquiring more information.



Site Development Process

MICHIGAN STATE UNIVERSITY | NOV. 1978
COOPERATIVE EXTENSION SERVICE

OWNER/CONSULTANT RESPONSIBILITIES.

	BACKGROUND INFORMATION	INVENTORY	SYNTHESIS	DESIGN	DEVELOPMENT	SUMMARY
OWNER/AGENCY &	gather information	1. Prepare program objectives 2. Set budget parameters 3 set delimitations	give design concepts and consult with designer	develop design and contract reviews. Prepare the financial obligations.	meet financial obligations and work through the consultant.	FOLLOW the master plan
CONSULTANT &	review and supplement	completly understand the site, program, and objectives.	review program and analysis - establish the design concepts.	develop design and development plans. Prepare the "Contract" or "Legal" documents.	site inspections - advise owner as to quality of work.	submit "as built" drawings.

A RESEARCH EXISTING DATA | B ORGANIZE PROGRAM and DATA | C ANALYSIS | D SITE STRUCTURE DIAGRAMS | E DESIGN | F CONTRACT DOCUMENTS | G FOLLOW UP

LEGAL DESCRIPTIONS — 1a

a. recorded survey
b. location
c. Orientation
d. Liens
e. Easements
f. Right of way

UTILITY DRAWINGS — b

a. Water
b. Sanitary Sewer
c. Storm Sewer
d. Gas/electric
e. Telephone
f. Public Lines

CONTROL DRAWINGS — c

a. 1,2,5, foot intervals
b. Vegetation
c. Structure location
d. Unique features
e. U.S.G.S. Maps.
f. aerial photographs
   1. black and white
      a. Flat
      b. stereo
   2. Infrared
   3. Normal Color

PAST STUDIES — d

a. water quality
b. Soil
c. Climate
d. Circulation
e. Zoning
f. Flood Plain
g. historical
h. Design/Analysis
i. Census
j. Pond const.
k. wildlife habitats

SURVEY DRAWINGS — 2

1. Existing/Proposed structures
2. Circulation types
   a. roads
   b. walks/trails
   c. waterways
3. Natural features
4. Vegetation
5. Contour check
6. Utilities
7. Proposed Zoning

PROGRAM DATA — 3

1. Needs of the Community
2. Population projection
3 Economics
4. Ethnic backgrounds
5 Citizen input
6. Inventory of types and dimensions of potential facilities
7. Patterns of development building & recreation.
8 List all possible goals and objectives.

PROGRAM ANALYSIS — 4

1. Outline program
   a. activities
   b. operations and maintenance
   c. budgets
2. Evaluate

AREA ANALYSIS — 5

1 Economic support
2. Development trends
3. Outside influence
4. travel time E.T.C.

SITE ANALYSIS — 6

1. grades/slopes
2. Problems
   a. water
   b. Bedrock
3 Vegetation
   a. age
   b. type - season
   c. Condition
   d. associations
4. Views
   a. good/ on site
   b. poor/ off site
5. Natural features
6. Aesthetic factors
7. Climatic factors
   . Precipitation
   . wind
   . Sun
8. Adjacent Properties
9. Contrast Region and Community.

SCHEMATIC SYNTHESIS — 7

1. Identify all problems and possible solutions
2 Evaluate alternatives
3. Establish a concept for design
4. Evaluate present and future needs
5. Project future impact on site, region, and community through design.

PRELIMINARY DESIGN — 8

1. Types of design
2. Uniqueness of the solution
3. Refinement of design ideating

FINAL DESIGN — 9

1. Refinement of design
2. Establish controls
3. Final drawings prepared
   a. Construction drawings
      1. grading
      2. Layout/dimensions
      3. details (design)
   b Planting plan
   c. Sprinkling system
   d. Utilities
   e. Details
   f. Specifications
   g. written instructions
      1. workmanship
      2. quality of materials
      3. methods/const.
      4. performance
   h. Shop drawings

IMPLEMENTATION — 10

1. advertisement
2. Bidding
3 Construction
4 Site inspections
5. Payments
6. Maintenance

EVALUATION — 11

1. Compare: objectives and results
2. Reconfirm direction and critical Path.
3. LEARN
   a. Evaluations
      1 year
      3 year
      5 year
   b. Citizen input
4. Maintenance records

NOTE:
Design Professionals are mainly involved through this part of the development process.

Reference Books.

1. Simonds, John - LANDSCAPE ARCHITECTURE - Mc Graw-Hill - chapter two
2. Rutledge, Albert - ANATOMY OF A PARK - Mc Graw-Hill
3. Pechara, Joseph; Koppelman, Lee - PLANNING AND DESIGN CRITERIA - Van Nostrand Reinhold.

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DISCUSSION OF THE VARIOUS STAGES OF THE DEVELOPMENT PROCESS

- See the center section..

A. RESEARCHING EXISTING DATA

Background Information: Without accurate information, no realistic planning decisions can be made. Some information can be gathered by the agency—some data inventory is best left to the planner or consultant. If the agency can provide much of the data, the planner will spend less time (and money) on background material.

1a. Legal Descriptions: Legal documents describing the site should be prepared or examined to clarify terms of payment, services included, allowable uses of property, restrictions on development, etc.

1b. Utility Drawings: "As Built" drawings are contract or legal documents identifying the location, capacity, condition, etc. of the finished construction. The location of all utilities is shown. Utilities are the infra structure of the site and cannot be ignored.

1c. Control Drawings: These maps tie aerial surveys and ground surveys together. It is important that those gathering this material are experienced and qualified. Poor mapping can result in higher costs and serious problems later.

1d. Past Studies: All studies done on, around or affecting the site are valuable in determining past recommendations, public thinking, past proposals, etc. Establish a checklist of the pertinent information and list agencies and personnel best suited to help you.

B. ORGANIZING DATA/PROGRAM

These steps are generally done at the same time. Both survey drawings and program data can be obtained from the agency or owner.

2. Survey Drawings: Existing data has been gathered and now must be organized and checked. The location, condition, capacity, use, value, etc. of existing and proposed structures, circulation, natural features, vegetation, contours, etc. should be field checked. Personal observations are as important as pure data gathered during field checks and should be recorded as such.

3. Program Data: Much of this information must be gathered by the agency so that the consultant or planner can better meet the owner's needs and expectations. Here are a few points to consider: What are the needs of the community? What is your directed market? Can the community support the program? What are the goals and objectives of the agency? Define both short and long range objectives. Define the user and establish the performance criteria for each type of activity.

To set realistic goals, raise capital funds, and operate facilities, you should carefully evaluate both the economic profile and financial capability.

C. ANALYSIS

4. Program Analysis: The data has been gathered—the decision must be made concerning the activities and performance criteria. Performance criteria are a basis from which the planner models the design. Guidelines must be established to locate the best site for an activity or best function for the site. Program analysis should include both operations and maintenance since both are essential elements.

5. Area Analysis: Here are a few of the questions to be answered: What are the economic characteristics of the planning area? What are the estimated capital development and operational costs for both existing and planned facilities? Will it be funded by user fees, grants, operational income or a combination of the above? What are the effects of zoning economics, politics, etc. on the program and site?

6. Site Analysis: Existing conditions and generated data are plotted and/or verified by inspecting the site. Natural stream, vegetation, soil patterns, etc. are documented along with the utility lines, structures, views, etc. This is generally done by the planner, but the owner can, and should, have valuable input.

D. SITE STRUCTURE

7. Schematic Synthesis Studies: The agency makes its final development decisions by comparing several alternative solutions. These are generally quick sketches that show a variety of schemes to meet program requirements. The planner should have a rationale for each solution, and be able to clarify why and how they differ. During the first presentations, both the planner and the owner should work closely together for maximum input and feedback.

E. DESIGN

8. Preliminary Design: The preliminary solution is usually quickly prepared, like the alternatives were. The agency and consultant should meet again to discuss and evaluate not only its functional effectiveness and efficiency, but also the design uniqueness. An attractive and imaginative plan should lead to the refined plan.

F. CONTRACT OR LEGAL DOCUMENTS

9. Final Design: The planner meets with the owner to discuss the design solutions. Based on this meeting, where the final design is thoroughly assessed against the program requirements, the designer begins the last phases of the work—preparing the technical drawings and specifications necessary for construction.

The drawings and specifications are legal documents and an easily executed and well-constructed project depends on thorough contract documents. The planner prepares two sets of drawings: design drawings and construction drawings. Depending on the complexity of the design project, a complete set of working drawings would include some or all of the drawings listed in the flow chart.

G. FOLLOW UP

10. Implementation: the final phase. The implementation tasks ensure the proper construction and continued usability of the project. This stage consists of: pre-construction— advertisement and bidding procedures; construction and supervision of contractors; payments, and the preparation of the maintenance guide. An agency may be involved in part of the implementation but many of the tasks require the planner or consultant.

The safe and successful operation of any project depends upon maintenance. The maintenance program should begin with the initial planning and is finalized at this stage.

11. Evaluation: Evaluation takes place in several phases and to different degrees: immediate, ongoing and periodic. This leads to effective expansion and/or alteration of the project. Immediate evaluation follows construction in comparing objectives with results. Ongoing evaluation evolves from the daily maintenance and cost records and period evaluation can be set up at different intervals of time for differing objectives. Sources and methods of evaluation as well as the objectives and goals of the agency should be carefully studies to achieve a successful program.

Summary: As the owner and/or agency understanding increases, the effectiveness of communication increases.