Activity 3.4.6 Landscaping (Optional)

Introduction

Landscaping plays a major role in the valuation of property and has many purposes. One obvious benefit of landscaping is to improve the appearance of a property. Curb appeal can increase the value of the property. However, landscaping is also a means of managing the natural resources of a site. The design should begin with an evaluation of the natural elements that already exist on a site. The local codes must be researched to ensure compliance with landscaping regulations. In addition, the effect of landscaping on the environment should be considered.

To reduce the negative effect of landscaping on the environment, landscaping can be designed to preserve natural areas and require low water usage, plant selection, and maintenance.

In this activity you will research landscaping code requirements and create a water-wise landscape plan for the Keystone Library Renovation project. You may wish to refer to the research you performed for Activity 3.4.2 Parking Lot Design to help you with this activity.

Equipment

- Engineering notebook
- Pencil
- Individual version of Keystone Library Renovation Preliminary Site (student version)
- Internet access

Procedure

1. Research the Noblesville Indiana Unified Development Ordinance (**http://www.cityofnoblesville.org/egov/docs/1102311937181.htm**). Review Article 12: Landscaping and Screening and answer the following.

    a. What is the requirement concerning existing plant materials? (Section 4.A.7)

    b. What landscaping treatment is required for detention/retention ponds? (Section 4.A.9)

    c. What landscape materials are prohibited? (Section 4.B.1.d)

    d. What is the class of the proposed parking lot? (Section 5.B.1)

    e. What percent of the parking area is required to be landscaped?

    f. What is the maximum parking lot island size? (Section 5.C.1)

    g. What is the minimum size of a landscape island in a single row of parking? What types of plantings must it include? (Section 5.C.1.a)

h. What is the minimum size of a landscape island in a double row of parking? (Section 5.C.1.b)

i. What is the requirement at the end of parking rows? (Section 5.C.1.c)

j. What perimeter parking lot landscaping is required for the Keystone Library Renovation project? Assume that the property abuts other commercial facilities and public streets. (Section 4.D.2)

k. Is a landscape buffer yard required for the Keystone Library Renovation project? (Table 12.0.7.E)

l. What is the requirement for screening trash receptacle enclosures? (Section 8.B.1)

m. What is the requirement for street trees? Although Highway 37 is a state road, for the purposes of this activity, assume that both adjacent streets are city streets. You will have to access Article 6: Site Design and Improvement Standards at (**http://www.cityofnoblesville.org/egov/docs/1102311937181.htm**. (Article 6, Part M)

2. Use the on-line publication *Xeriscape: A guide to Developing a Water-Wise Landscape* (**http://pubs.caes.uga.edu/caespubs/pubcd/B1073/B1073.htm**) to answer the following.

- Describe/define the term Xeriscape.

- List the seven fundamental Xeriscape areas that must be considered when designing a landscape.

- List the criteria that should be followed when selecting plant material for a site.

- What part does shade play in water resource management and human comfort?

- How should turf be integrated into a Xeriscape?

- What benefit does mulch provide to the landscape?

Print three copies of your project site plan (including property lines, building, patios, driveway, and walkways) without detailing. Then complete the following.

3. Using one of the site plans, create a bubble diagram of the basic use areas (public, private, and service) for your project similar to Figure 6 of *Xeriscape: A guide to Developing a Water-Wise Landscape*. Label this "Basic Use Areas", sign and date. Note: you may have more than one of each use area.

4. On the second site plan, sketch a bubble diagram of water-use zones (low, medium, high) for your project similar to Figure 7 of *Xeriscape: A guide to Developing a Water-Wise Landscape*. Use high water-use areas sparingly – only at the entrance or outdoor entertainment areas. Label this "Water Use Areas", sign and date.

5. On the third site plan, sketch a concept (master) plan for your project home similar to Figure 8 of *Xeriscape: A guide to Developing a Water-Wise Landscape*. Label this "Landscape Concept Plan", sign and date.

- Include symbols for individual shrubs and trees and label each as a deciduous or coniferous tree or shrub.

- Turf areas and beds of seasonal color may be indicated with a bubble for each location.

- 🎬 Include hardscape (walkways, patios, decks, walls, or fences).
- 🎬 Locate at least one focal point in the design. Call it out as "FOCAL POINT"
- 🎬 Indicate the function of each plant, bed, or turf area on the map (i.e. screen neighbor, aesthetics, wildlife habitat, sound control, provide shade, create wind break, seasonal color, fragrance, divide space, hide trash receptacles, etc.)

6. Incorporate your design into your Keystone Library Renovation Preliminary Site plan.

7. Research potential hardscape elements for your design. Use the Internet and other resources to choose appropriate materials for your parking area, driveway, walkways, and other hardscape elements. Create a document that provides pictures of each hardscape material you plan to use in the landscape. Some websites that may help are listed below.

- 🎬 Hardscapes for Sustainable Landscapes: Patios, Decks, Walkways, and Driveways **http://extension.oregonstate.edu/catalog**
- 🎬 Library of Selected Hardscape Material **http://www.camberlygardens.com/index.html?body=/Camberly_hardlib.html**
- 🎬 Decorative Concrete Photo Gallery **http://www.concretenetwork.com/photo-gallery/**

8. Find the Hardiness Zone in which your project falls by accessing the online *USDA Hardiness Zone Map* (**http://www.usna.usda.gov/Hardzone/ushzmap.html**). Create a document with a close-up map of the appropriate region. On the map, locate your project and identify the applicable Hardiness Zone. Include a header with your name, project name, date, source of information, and "Project Location and Hardiness Zone".

9. Identify potential trees for your project using the Arbor Day Foundation website at **http://www.arborday.org/**. Search the site for the "Hardiness Zone Map." Using the appropriate zip code (46060 is a Noblesville, IN zip code), find the most popular trees for your hardiness zone. Print this list of trees.

10. On the same site, search for the "Tree Guide" and use the search feature to find at least ten of these ten trees in the data base. Create a document which includes a picture of at least two of these trees that you may consider using in your landscape plan. Next to each tree image record the following: name, height, spread, growth rate, soil, sun, shape, and whether the tree is deciduous or coniferous. Include a header with your name, project name, date, source of information, and "Popular Tree characteristics".

11. Visit the Lady Bird Johnson Wildflower center Recommended Species page (**http://www.wildflower.org/collections/**). Print out the printer friendly species list of native plants. Browse the list and highlight at least one species each of tree, shrub, herb, and vine that will thrive in each of the water use zones (high, moderate, and low) using a different color highlighter for each water use zone. Alternatively, you can use the Narrow Your Search tool to identify species that will thrive in specific growing conditions.

12. Create a document that includes an image of each species that you highlighted and specifies the plant characteristics and growing conditions for each. Include a header with your name, project name, date, source of information, and "Recommended Native Plants".

13. Using the criteria you listed for #4 above, choose appropriate plants for your project landscape design. Try to limit the number of plant species used and consider site orientation factors as well. Create a Landscape (Planting) Plan in Revit.

- Show existing trees to be removed, if applicable.
- Show existing trees to remain, if applicable.
- Show all new vegetation. Label all species on the plan.
- Include a planting schedule which shows the number of each species.

Conclusion

1. Why does it matter if a site is landscaped?

2. How can landscaping improve the aesthetic appeal of a site and the structures on the site?