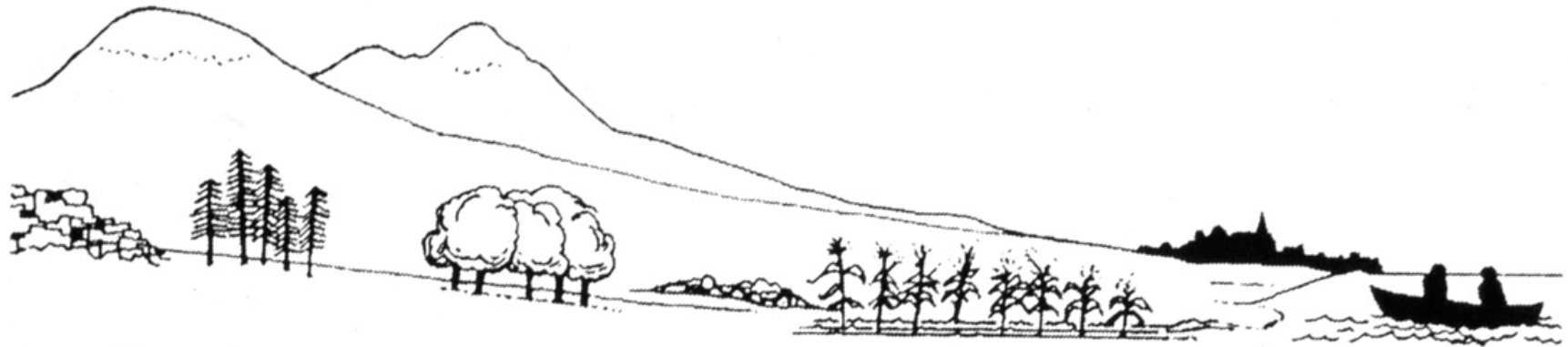


Title: Calibrated Transect Illustration
Source: Leon Krier



MINER



WOODMAN



HUNTER



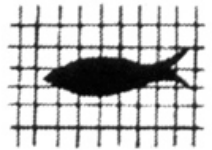
SHEPHERD



PEASANT



GARDENER



FISHER

TABLE 1. TRANSECT ZONE DESCRIPTIONS

SMARTCODE

Municipality

TABLE 1: Transect Zone Descriptions. This table provides descriptions of the character of each T-zone.

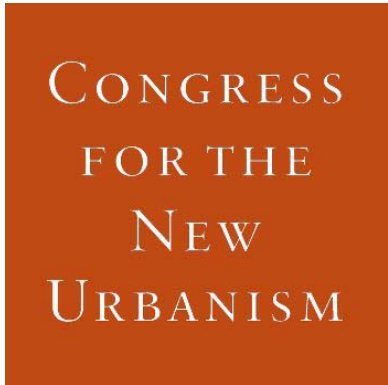
 <p>T1</p>	<p>T-1 NATURAL T-1 Natural Zone consists of lands approximating or reverting to a wilderness condition, including lands unsuitable for settlement due to topography, hydrology or vegetation.</p>	<p>General Character: Building Placement: Frontage Types: Typical Building Height: Type of Civic Space:</p>	<p>Natural landscape with some agricultural use Not applicable Not applicable Not applicable Parks, Greenways</p>
 <p>T2</p>	<p>T-2 RURAL T-2 Rural Zone consists of sparsely settled lands in open or cultivated states. These include woodland, agricultural land, grassland, and irrigable desert. Typical buildings are farmhouses, agricultural buildings, cabins, and villas.</p>	<p>General Character: Building Placement: Frontage Types: Typical Building Height: Type of Civic Space:</p>	<p>Primarily agricultural with woodland & wetland and scattered buildings Variable Setbacks Not applicable 1- to 2-Story Parks, Greenways</p>
 <p>T3</p>	<p>T-3 SUB-URBAN T-3 Sub-Urban Zone consists of low density residential areas, adjacent to higher zones that some mixed use. Home occupations and outbuildings are allowed. Planting is naturalistic and setbacks are relatively deep. Blocks may be large and the roads irregular to accommodate natural conditions.</p>	<p>General Character: Building Placement: Frontage Types: Typical Building Height: Type of Civic Space:</p>	<p>Lawns, and landscaped yards surrounding detached single-family houses; pedestrians occasionally Large and variable front and side yard Setbacks Porches, fences, naturalistic tree planting 1- to 2-Story with some 3-Story Parks, Greenways</p>
 <p>T4</p>	<p>T-4 GENERAL URBAN T-4 General Urban Zone consists of a mixed use but primarily residential urban fabric. It may have a wide range of building types: single, sideyard, and rowhouses. Setbacks and landscaping are variable. Streets with curbs and sidewalks define medium-sized blocks.</p>	<p>General Character: Building Placement: Frontage Types: Typical Building Height: Type of Civic Space:</p>	<p>Mix of Houses, Townhouses & small Apartment buildings, with scattered Commercial activity; balance between landscape and buildings; presence of pedestrians Shallow to medium front and side yard Setbacks Porches, fences, Dooryards 2- to 3-Story with a few taller Mixed Use buildings Squares, Greens</p>
 <p>T5</p>	<p>T-5 URBAN CENTER T-5 Urban Center Zone consists of higher density mixed use building that accommodate retail, offices, rowhouses and apartments. It has a tight network of streets, with wide sidewalks, steady street tree planting and buildings set close to the sidewalks.</p>	<p>General Character: Building Placement: Frontage Types: Typical Building Height: Type of Civic Space:</p>	<p>Shops mixed with Townhouses, larger Apartment houses, Offices, workplace, and Civic buildings; predominantly attached buildings; trees within the public right-of-way; substantial pedestrian activity Shallow Setbacks or none; buildings oriented to street defining a street wall Stoops, Shopfronts, Galleries 3- to 5-Story with some variation Parks, Plazas and Squares, median landscaping</p>
 <p>T6</p>	<p>T-6 URBAN CORE T-6 Urban Core Zone consists of the highest density and height, with the greatest variety of uses, and civic buildings of regional importance. It may have larger blocks; streets have steady street tree planting and buildings are set close to wide sidewalks. Typically only large towns and cities have an Urban Core Zone.</p>	<p>General Character: Building Placement: Frontage Types: Typical Building Height: Type of Civic Space:</p>	<p>Medium to high-Density Mixed Use buildings, entertainment, Civic and cultural uses. Attached buildings forming a continuous street wall; trees within the public right-of-way; highest pedestrian and transit activity Shallow Setbacks or none; buildings oriented to street, defining a street wall Stoops, Dooryards, Forecourts, Shopfronts, Galleries, and Arcades 4-plus Story with a few shorter buildings Parks, Plazas and Squares; median landscaping</p>



LEED® for Neighborhood Development



LEED® for Neighborhood Development is a partnership of:



What is LEED for Neighborhood Development?



LEED for Neighborhood Development is a rating system that combines elements of smart growth, new urbanism, and green building into the first national standard for neighborhood design.

There are three categories of prerequisites and credits in the rating system.



← Smart Location & Linkage

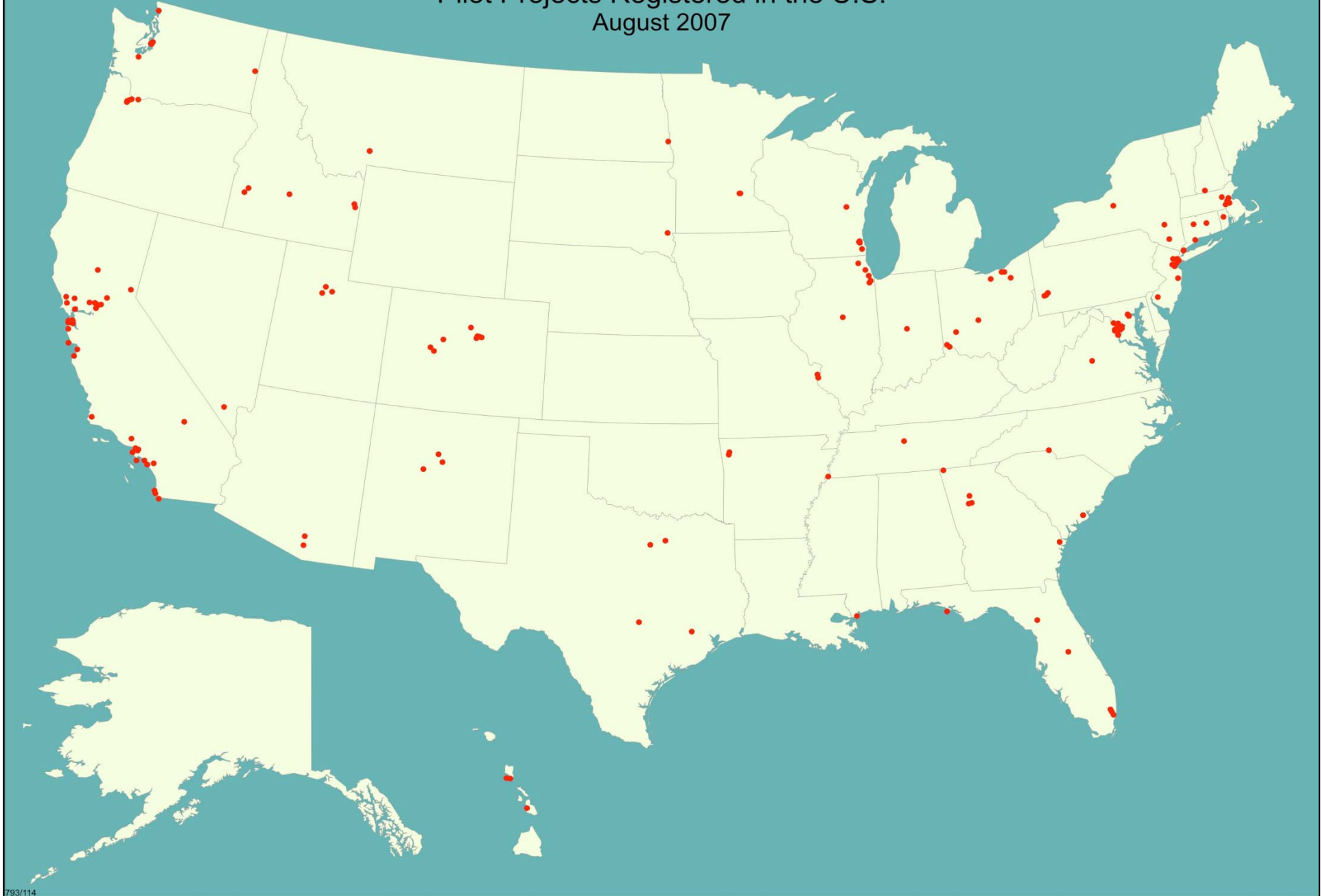
Neighborhood Pattern & Design



Green Construction & Technology

LEED for Neighborhood Development

Pilot Projects Registered in the U.S.
August 2007



Development Timeline for Rating System



2009: Full post-pilot rating system ballot and launch

2008: Revisions to rating system
Public comment periods begin

2007: Pilot Program launches

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- Download the complete LEED for Neighborhood Development Pilot Rating System.
- View a complete list of pilot projects.
- Sign up for our corresponding committee listserv to receive announcements.

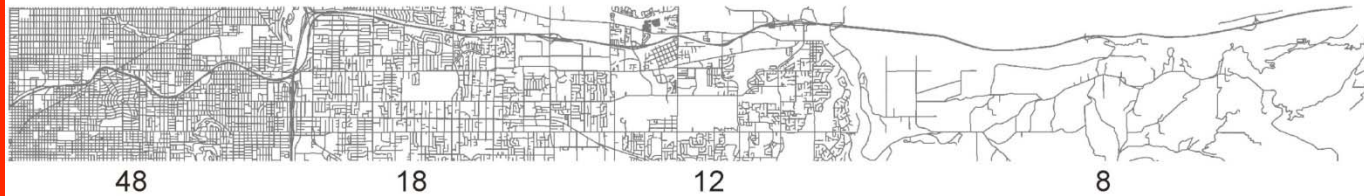
Proxy measures for T-zones

- surrounding street grid density (centerlines per square mile)
- surrounding built density (du/acre and FAR)

(surrounding = 1 mile radius)

Proxy measures for T-zones

**Street Grid Transect in
Centerline Miles Per Square Mile**



Street Grid Equivalencies
(equivalencies are approximate)

Centerline mi/sq.mi.	Block length (ft.)	Intersections per sq. mi.
10	1000	50
12	800	70
14	700	85
16	600	110
18	500	130
24	400	180
30	300	240
48	200	550

LEED-ND could be informed by Sustainable Sites Initiative

Smart Location and Linkage:

Prereq 2 Proximity to Water and Wastewater Infrastructure

Prereq 3 Imperiled Species and Ecological Communities

Prereq 4 Wetland and Water Body Conservation

Prereq 5 Farmland Conservation

Prereq 6 Floodplain Avoidance

LEED-ND could be informed by Sustainable Sites Initiative

Smart Location and Linkage:

Credit 8 Steep Slope Protection

Credit 9 Site Design for Habitat or Wetland Conservation

Credit 10 Restoration of Habitat or Wetland

Credit 11 Conservation Management of Habitat or Wetlands

LEED-ND could be informed by Sustainable Sites Initiative

Neighborhood Pattern and Design:

Credit 7 Walkable Streets

Credit 12 Access to Public Spaces

Credit 16: Local Food Production

LEED-ND could be informed by Sustainable Sites Initiative

Green Construction and Technology:

Credit 3 Reduced Water Use

Credit 6 Minimize Site Disturbance through Site Design

Credit 7 Minimize Site Disturbance during Construction

Credit 8 Contaminant Reduction in Brownfields Remediation

LEED-ND could be informed by Sustainable Sites Initiative

Green Construction and Design:

Credit 9 Stormwater Management

Credit 10 Heat Island Reduction

Credit 16 Wastewater Management

Credit 19 Comprehensive Waste Management

R U R A L | | | | | T R A N S E C T | | | | | U R B A N



PAVING

COMPACTED EARTH - Low - \$			
WOOD PLANKS - High - \$\$\$			
PLASTIC MESH/GEOMAT - Low - \$			
CRUSHED STONE/SHELL - Medium - \$			
CAST/PRESSED CONCRETE PAVER BLOCK - Low - \$\$			
GRASSED CELLULAR PLASTIC - Medium - \$\$\$			
GRASSED CELLULAR CONCRETE - Medium - \$\$\$			
PERVIOUS ASPHALT - Low - \$\$			
ASPHALT - Low - \$			
CONCRETE - Low - \$\$			
PERVIOUS CONCRETE - Low - \$\$			
STAMPED ASPHALT - Low - \$\$\$			
STAMPED CONCRETE - Low - \$\$\$			
PEA GRAVEL - Medium - \$			
STONE/MASONRY PAVING BLOCKS - Low - \$\$\$			
WOOD PAVING BLOCKS ON CONCRETE - Low - \$\$\$			
ASPHALT PAVING BLOCKS - Medium - \$\$			

CHANNELING

NATURAL CREEK - Low - \$			
TERRACING - Medium - \$\$			
VEGETATIVE SWALE - Low - \$			
DRAINAGE DITCH - Low - \$			
STONE/RIP RAP CHANNEL - Low - \$\$			
VEGETATIVE STONE SWALE - Low - \$			
GRASSED CELLULAR PLASTIC - Medium - \$\$\$			
GRASSED CELLULAR CONCRETE - Medium - \$\$\$			

TABLE 18D: Sustainability Standards.

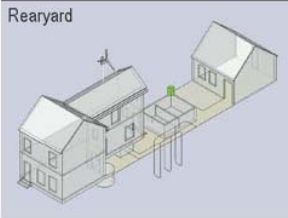
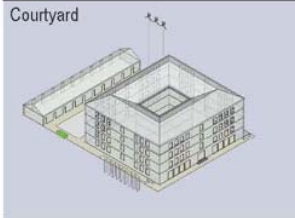
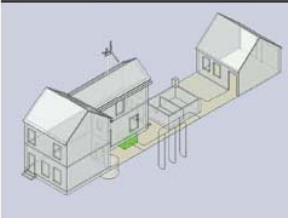
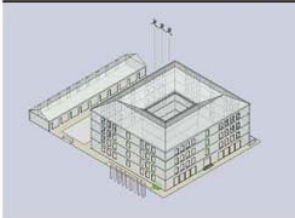
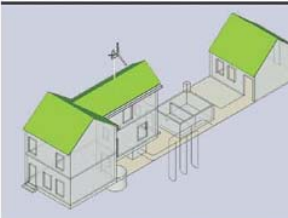
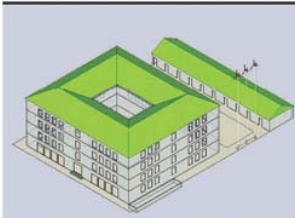
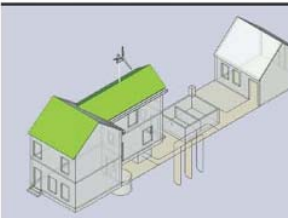
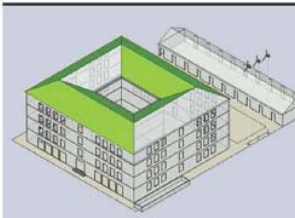
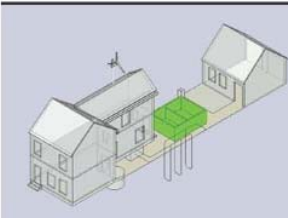
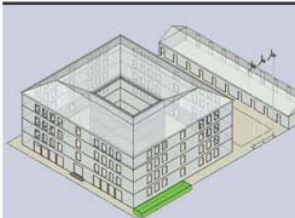
a. Compost Bins:	<p>Rearyard</p>  <p>T4 T5 T6</p>	<p>Courtyard</p>  <p>T5 T6</p>
b. Geothermal Wells:	 <p>T4 T5 T6</p>	 <p>T5 T6</p>
c. Green Roofs:	 <p>T4 T5 T6</p>	 <p>T5 T6</p>
d. Hot Water Panels:	 <p>T4 T5 T6</p>	 <p>T5 T6</p>
e. Septic Tanks:	 <p>T4 T5 T6</p>	 <p>T5 T6</p>

TABLE 18D: Sustainability Standards.

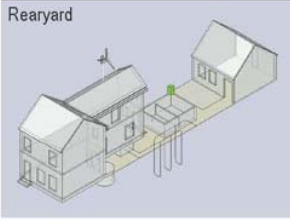
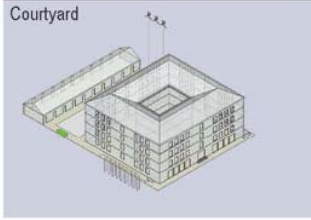
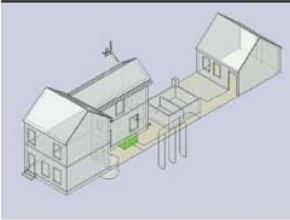
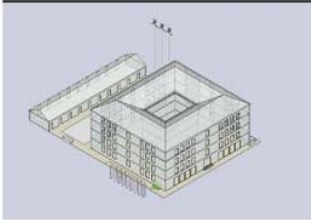
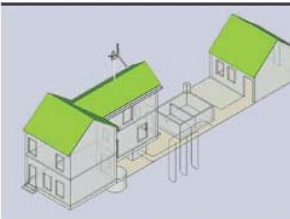
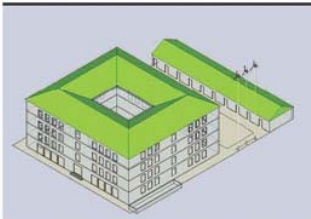
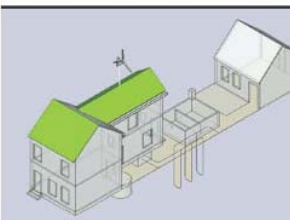
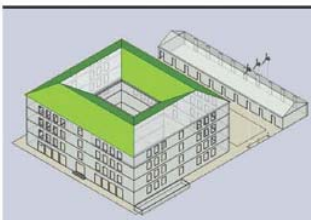
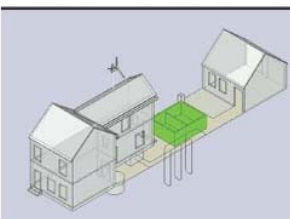
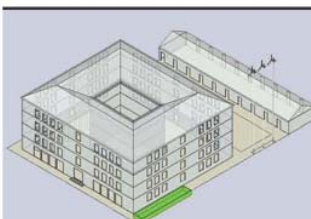
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b. Geothermal Wells:	 <p>T4 T5 T6</p>	 <p>T5 T6</p>
c. Green Roofs:	 <p>T4 T5 T6</p>	 <p>T5 T6</p>
d. Hot Water Panels:	 <p>T4 T5 T6</p>	 <p>T5 T6</p>
e. Septic Tanks:	 <p>T4 T5 T6</p>	 <p>T5 T6</p>

TABLE 18D: Sustainability Standards.

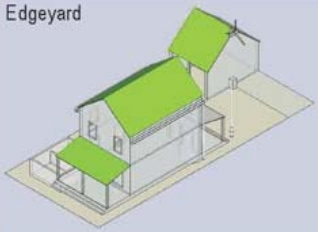
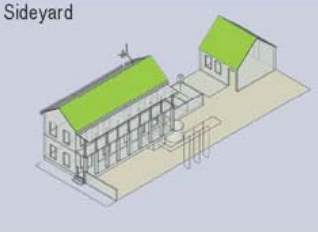
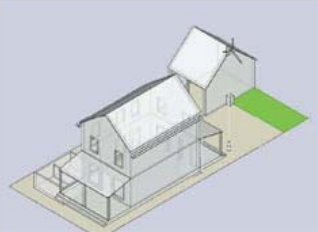
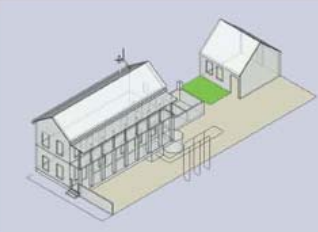
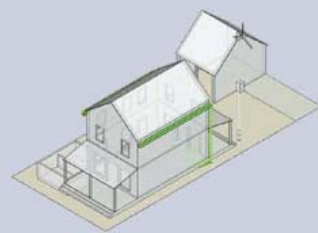
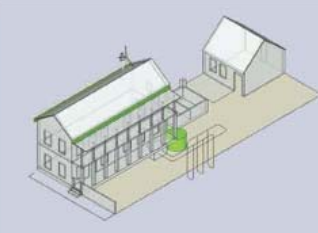
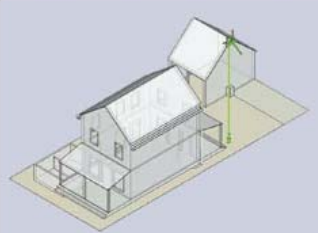
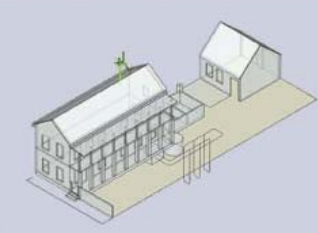
<p>f. Solar Roofs:</p>	<p>Edgeyard</p>  <p>T1 T2 T3 T4</p>	<p>Sideyard</p>  <p>T4 T5</p>
<p>g. Vegetable Gardens:</p>	 <p>T1 T2 T3 T4</p>	 <p>T4 T5</p>
<p>h. Water Harvesters:</p>	 <p>T1 T2 T3 T4</p>	 <p>T4 T5</p>
<p>i. Wind Turbines:</p>	 <p>T1 T2 T3 T4</p>	 <p>T4 T5</p>

TABLE 18D: Sustainability Standards.

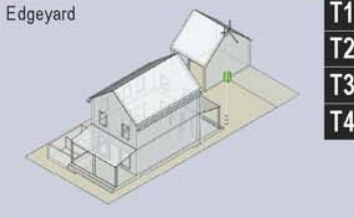
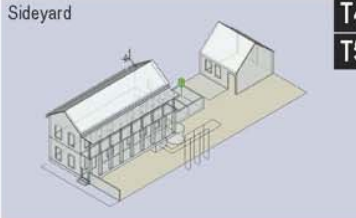
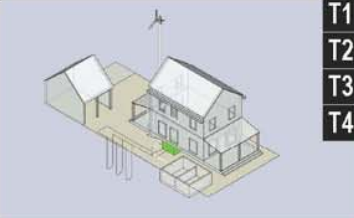
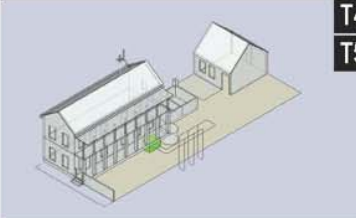
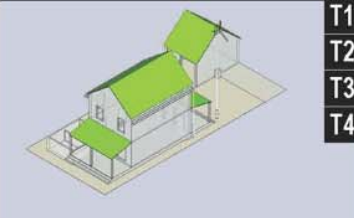
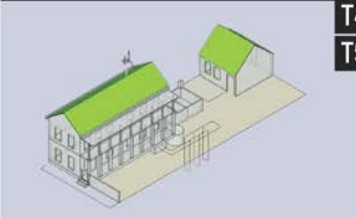
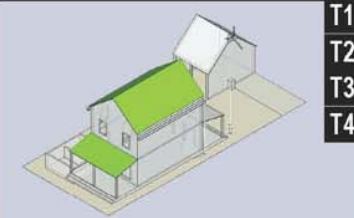
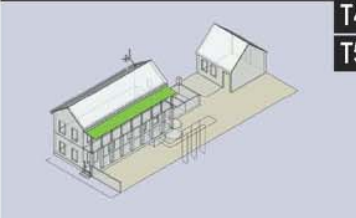
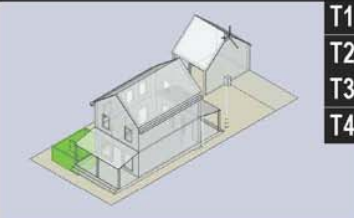
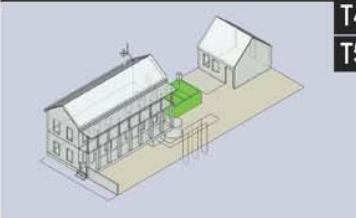









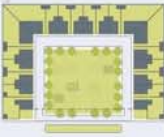
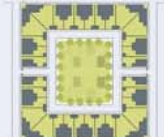
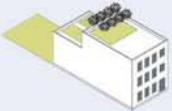

a. Compost Bins:	<p>Edgeyard</p>  <p>T1 T2 T3 T4</p>	<p>Sideyard</p>  <p>T4 T5</p>
b. Geothermal Wells:	 <p>T1 T2 T3 T4</p>	 <p>T4 T5</p>
c. Green Roofs:	 <p>T1 T2 T3 T4</p>	 <p>T4 T5</p>
d. Hot Water Panels:	 <p>T1 T2 T3 T4</p>	 <p>T4 T5</p>
e. Septic Tanks:	 <p>T1 T2 T3 T4</p>	 <p>T4 T5</p>

TABLE 6: Public Planting. This table shows six common types of street tree shapes and their appropriateness within the Transect Zones. The local planning office selects species appropriate for the bioregion.

	T1	T2	T3	T4	T5	T6	SD	Specific Lighting
Pole 	•	•	•	•	•	•		_____ _____ _____ _____ _____ _____ _____
Oval 	•	•	•	•	•	•		_____ _____ _____ _____ _____ _____ _____
Ball 	•	•	•	•	•	•		_____ _____ _____ _____ _____ _____ _____
Pyramid 	•	•	•	•				_____ _____ _____ _____ _____ _____ _____
Umbrella 	•	•	•	•				_____ _____ _____ _____ _____ _____ _____
Vase 	•	•	•	•				_____ _____ _____ _____ _____ _____ _____



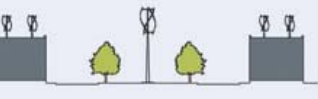

Food Production. This table shows ways of incorporating food production within the transect.

	T1	T2	T3	T4	T5	T6	SD	Specific
<p>Farm</p> 	•						•	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p>Agricultural Plots</p> 		•	•				•	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p>Vegetable Garden</p> 		•	•	•				<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p>Urban Foam</p> 			•	•	•			<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p>Community Gardens</p> 			•	•	•	•		<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p>Green Roof</p> <ul style="list-style-type: none"> - Extensive - Semi Intensive - Intensive 	•	•	•	•	•	•	•	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p>Vertical Farm</p> 					•	•	•	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>

	T1	T2	T3	T4	T5	T6	SD
On-Site Organics Processing	■	■					■
Self Drop Collection Systems	■	■					
Optional/Competitive Collection C??	■	■	■				
Mandatory Curbside Collection				■	■	■	■
Centralized Composting Systems							■
Smaller Regional Composting		■	■				
On Site Processing	■	■	■				■
Re-Use Centers		■	■	■	■	■	•
Recycling Processing Centers		■	■	■	■	■	•
Onced Used Materials Storage	■	■	■				■
Disposal Facilities	□	□	□	□	□	□	□
Transfer Stations		•	•	■	■	■	■

- Permitted
- Not Permitted
- Required

Wind Power. This table prescribes opportunities for the placement of Wind Turbines within the Transect.

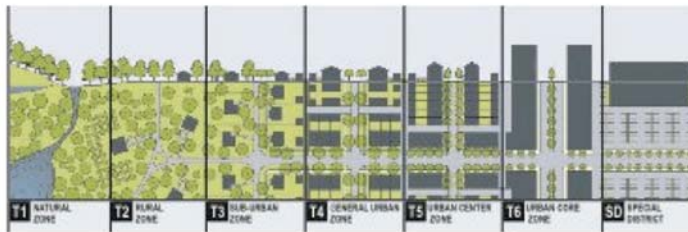
	T1	T2	T3	T4	T5	T6	SD	Specifics
<p>Wind Farm</p> 	▪					▪		<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p>Horizontal Axis</p> 	▪	▪	▪			▪		<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p>Vertical Axis</p> 			▪	▪	▪	▪	▪	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p>Public Furniture</p> 			▪	▪	▪	▪	▪	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>

SMARTCODE MODULE

LIGHT IMPRINT STORM DRAINAGE MATRIX

Municipality


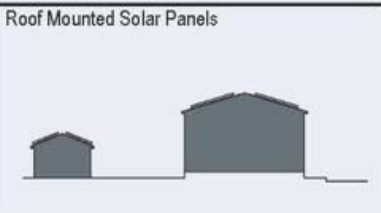
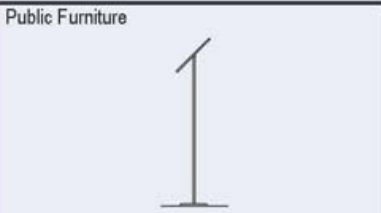
Note: All requirements in this Table are subject to calibration for local context.



	T1	T2	T3	T4	T5	T6	SD	Meas. Desc.
b. PAVING								
Compacted Earth	*	*	*					L 1 B
Wood Planks								M 1 S11
Plastic Mulch/Board		*	*					L 1 B
Coated Stone/Gravel		*	*	*				M 1 S
Cast/Pressed Concrete Paving Blocks			*	*	*			L 1 S1
Grassoid Cellular Plastic			*	*	*			M 1 S11
Grassoid Cellular Concrete			*	*	*	*		M 1 S11
Permeable Asphalt			*	*	*	*		L 1 S1
Asphalt			*	*	*	*		L 1 B
Concrete			*	*	*	*		L 1 S1
Permeable Concrete			*	*	*	*		L 1 S1
Grassoid Asphalt			*	*	*	*		L 1 S1
Stamped Concrete			*	*	*	*		L 1 S11
Pea Gravel			*	*	*	*		M 1 B
Stone/Recessed Paving Blocks			*	*	*	*		L 1 S11
Wood Paving Blocks on Concrete			*	*	*	*		L 1 S11
Asphalt Paving Blocks			*	*	*	*		M 1 S1
c. CHANNELING								
Natural Creek	*	*	*					L 1 B
Terracing	*	*	*					M 1 S1
Vegetation Basins	*	*	*					L 1 B
Storage Basin	*	*	*					L 1 S
Steering Bay Channels		*	*	*				L 1 S1
Vegetation/Stone Basins		*	*	*	*			L 1 B
Grassoid Cellular Plastic		*	*	*	*	*		M 1 S11
Grassoid Cellular Concrete		*	*	*	*	*		M 1 S11
Soakaway Trench		*	*	*	*	*		M 1 S11
Slope Runoff		*	*	*	*	*		M 1 S11
Tree Basin		*	*	*	*	*		M 1 S
Grassoid Cellular Paving/Blockwater Concrete		*	*	*	*	*		L 1 B
Concrete Pipe		*	*	*	*	*		L 1 S1
Stake		*	*	*	*	*		L 1 S1
Planting Hole Trench		*	*	*	*	*		L 1 B
Masonry Trough		*	*	*	*	*		L 1 S1
Canal		*	*	*	*	*		M 1 S11
Sculpted Watercourse, i.e. cascades		*	*	*	*	*		M 1 S11
Concrete Trough		*	*	*	*	*		L 1 S1
Architectural Stone		*	*	*	*	*		L 1 S11
c. STORAGE								
Vegetation Pond		*	*					L 1 B
Retention Basin with Sloping Bank		*	*					L 1 S1
Retention Basin with Pavers		*	*	*				L 1 S1
Retention Module		*	*	*				M 1 S
Retention Pond		*	*	*				L 1 B
Vegetation Purification Bed		*	*	*	*			M 1 S1
Floating Park		*	*	*	*			M 1 S1
Retention Pond		*	*	*	*			M 1 S1
Landscape Tree Well		*	*	*	*			L 1 S1
Plant Penetration		*	*	*	*	*		M 1 S11
Underground Vault/Pipe/Column-Corrugated Metal		*	*	*	*	*		L 1 S1
Underground Vault/Pipe/Column-Precast Concrete		*	*	*	*	*		L 1 S1
Underground Vault/Pipe/Column-Cast in place Concrete		*	*	*	*	*		L 1 S1
Gravel Tree Well		*	*	*	*	*		L 1 S1
Underground Vault/Pipe/Column-Plastic		*	*	*	*	*		L 1 S11
Paved Basin		*	*	*	*	*		M 1 S11
d. FILTRATION								
Wetland Swamp	*	*	*					L 1 S
Filtration Ponds	*	*	*					L 1 S1
Shallow Runoff	*	*	*					M 1 S
Surface Landscaping	*	*	*					L 1 S
Natural Vegetation	*	*	*	*	*	*		L 1 B
Constructed Wetland	*	*	*					M 1 S
Run Retention Basin	*	*	*					M 1 S1
Purification Basins	*	*	*	*				M 1 S1
Green Finger	*	*	*	*	*	*		L 1 S11
Roof Garden	*	*	*	*	*	*		M 1 S11
Planter Garden	*	*	*	*	*	*		M 1 S1
Retention Pond	*	*	*	*	*	*		L 1 S
Grassoid Cellular Plastic	*	*	*	*	*	*		M 1 S11
Grassoid Cellular Concrete	*	*	*	*	*	*		M 1 S11
Watercapes	*	*	*	*	*	*		M 1 S11

*NOR - Maintenance is denoted as 100% Medium and 50% High

Solar Energy. This table shows opportunities for the placement of Solar Panels within the Transect.

	T1	T2	T3	T4	T5	T6	SD	Specifics
<p>Solar Farm</p> 	▪					▪		<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p>Roof Mounted Solar Panels</p> 	▪	▪	▪	▪	▪	▪		<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p>Public Furniture</p> 			▪	▪	▪	▪	▪	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>

Note: A solar dish/engine system also utilizes solar collectors tracking the sun on two axes but it concentrates the energy at the focal point of a separate dish.