

SMARTCODE

FREE 'SHAREWARE'



SmartCode Central

HOME

ABOUT THE CODE

WHY WE DO THIS

THE TRANSECT

SMARTCODE V9 FILES

MODULE FILES

CONSULTANT SERVICES

SEMINARS

NEWS & RESOURCES

SMARTCODE GUILD

CONTACT

WELCOME TO SMARTCODE CENTRAL

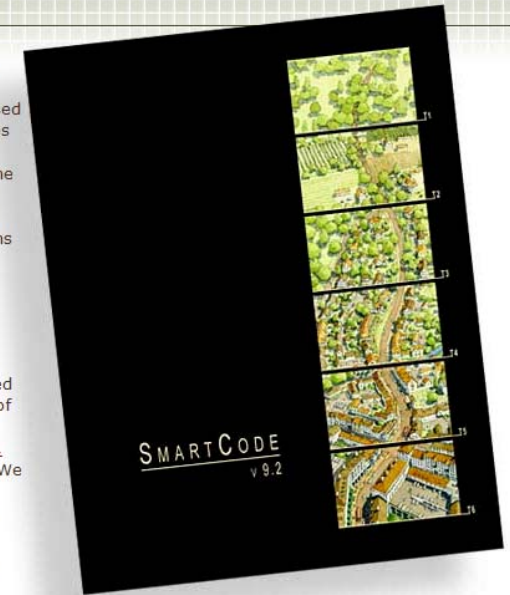
The SmartCode is a model transect-based development code available for all scales of planning, from the region to the community to the block and building. The code is intended for local calibration to your town or neighborhood. As a form-based code, the SmartCode keeps towns compact and rural lands open, while reforming the destructive sprawl-producing patterns of separated use zoning.

SmartCode Central collects all the important components of transect-based planning in one place. We provide files of the latest versions of the model [SmartCode](#) and supplementary [Modules](#), including new sustainability standards. We also link to calibrators, attorneys, and town planners who do significant work with the SmartCode.

The SmartCode was released by [Duany Plater-Zyberk and Company \(DPZ\)](#) in 2003, after two decades of research and implementation. The code is open source and free of charge.

The non-profit [Center for Applied Transect Studies \(CATS\)](#) was founded in 2007 to promote understanding of the built environment as part of the natural environment, through the planning methodology of the rural-to-urban transect. The SmartCode is the foundational tool for implementation of this methodology.

All diagrams ©DPZ & Co.



The 2008 *SmartCode v9 and Manual* is now available from [New Urban News Publications](#).

News: The transect-based model SmartCode wins a 2009 CNU [Charter Award](#)

Now available for download: the [Sustainable Urbanism Performance-based SmartCode Module](#) by Farr Associates



SMARTCODE
VERSION 9.2

www.SmartCodeCentral.org

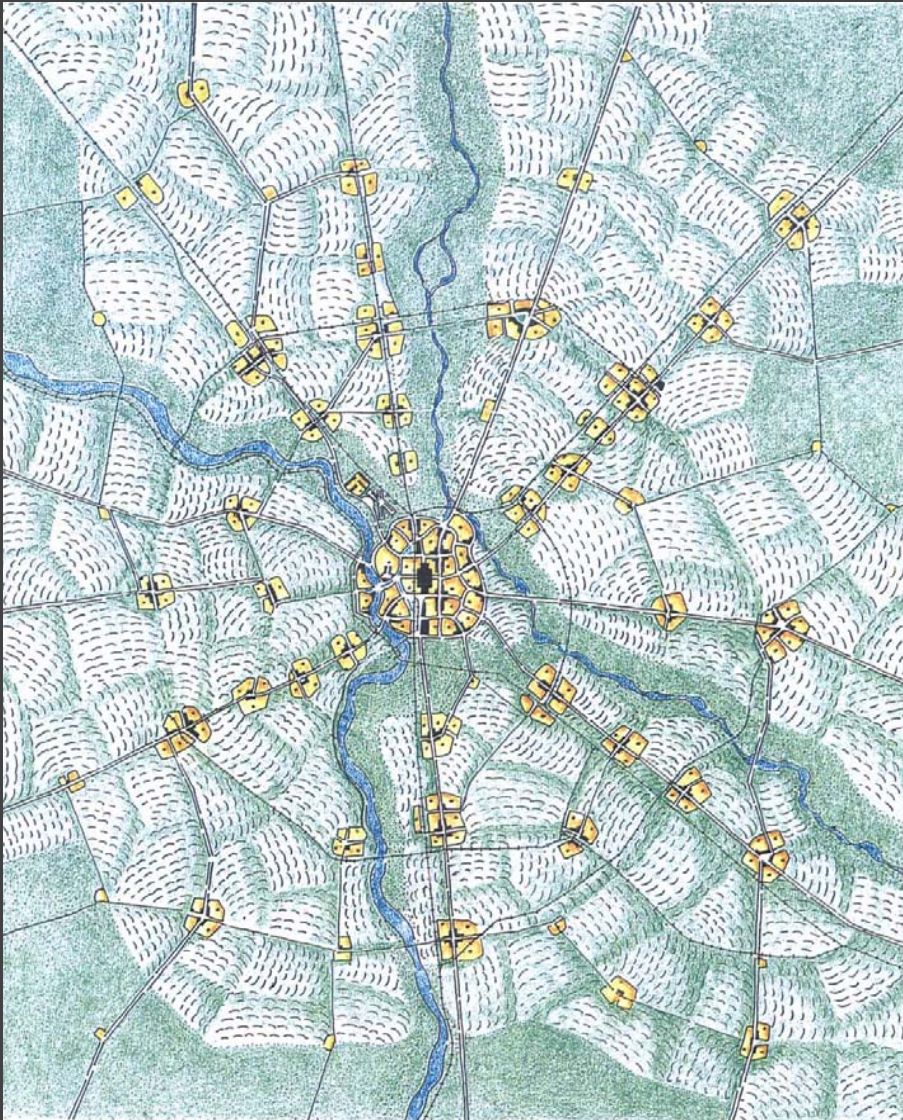
UNIFIES PLANNING & ZONING

UNIFIES PLANNING & ZONING at all scales

FROM THE FORM OF THE BUILDINGS...



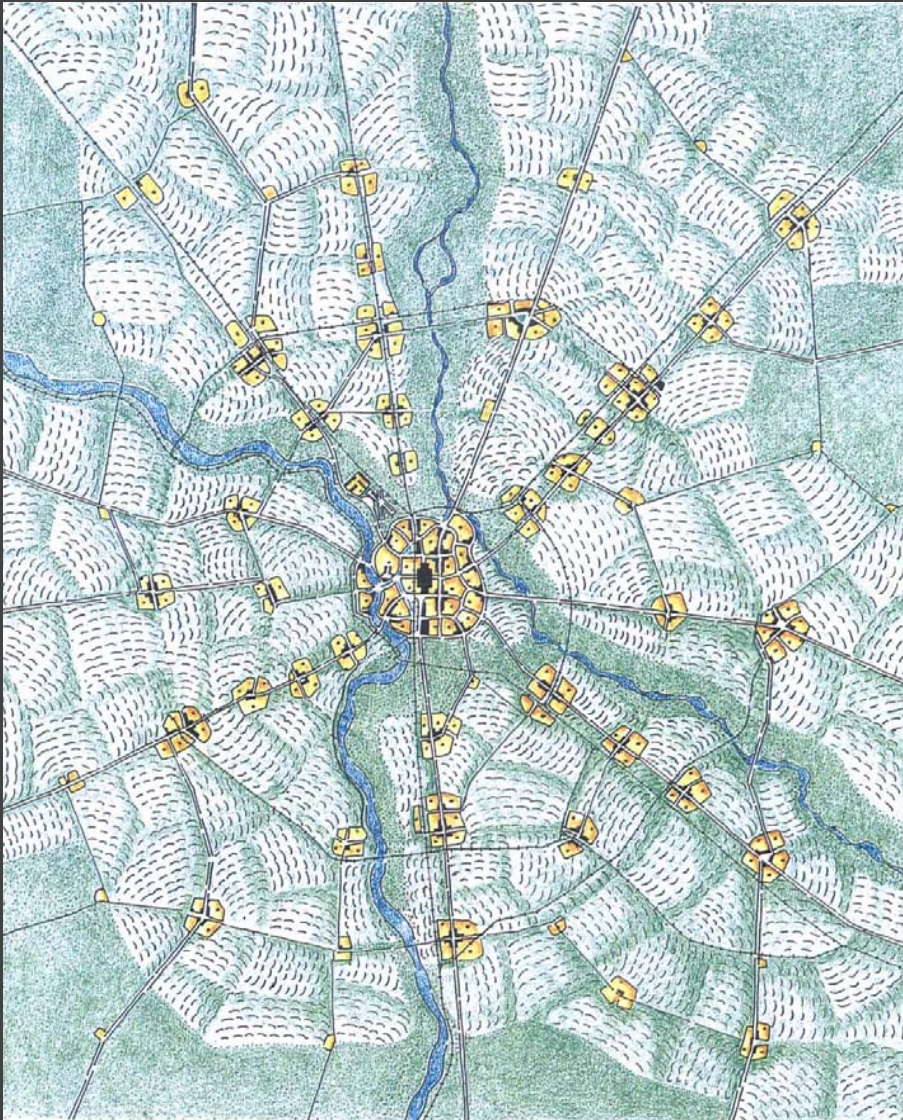
...TO THE FORM OF THE REGION



THE REGION OF
CITY, TOWNS, VILLAGES, AND HAMLETS

DPZ

...TO THE FORM OF THE REGION

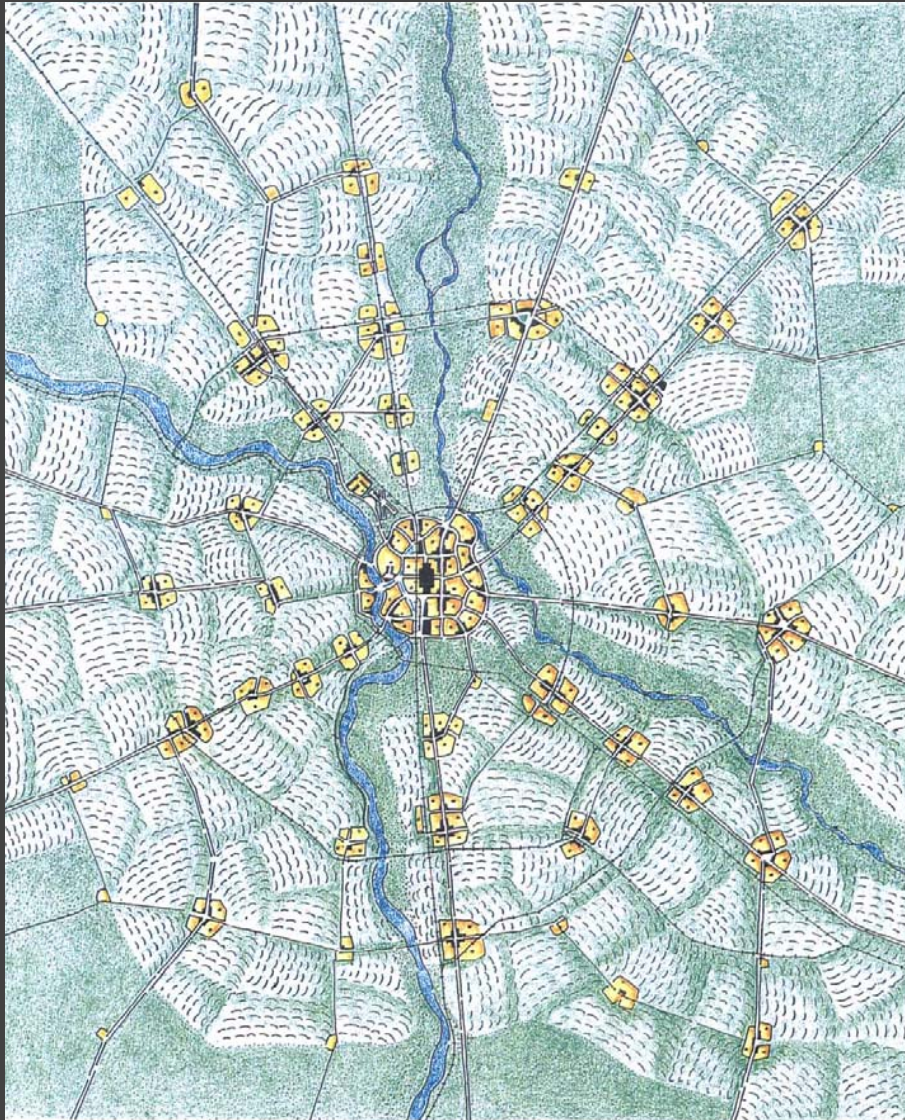


THE REGION OF
CITY, TOWNS, VILLAGES, AND HAMLETS

DPZ



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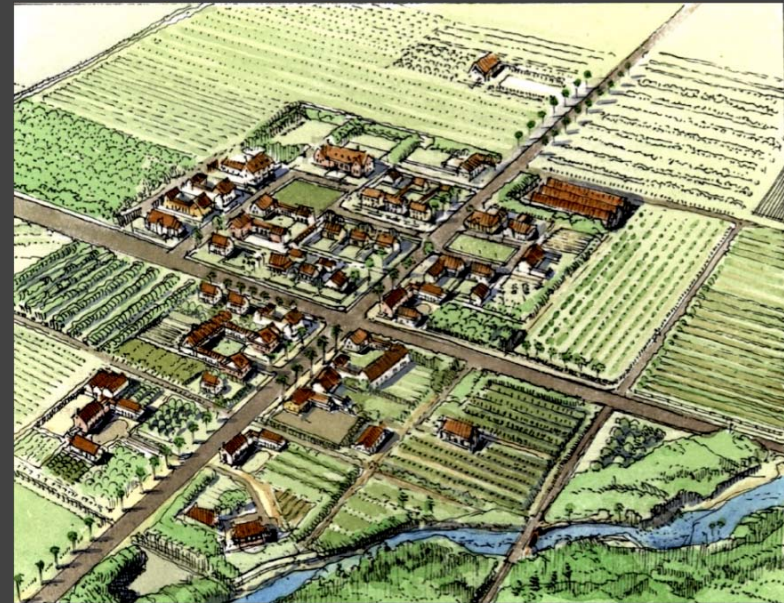
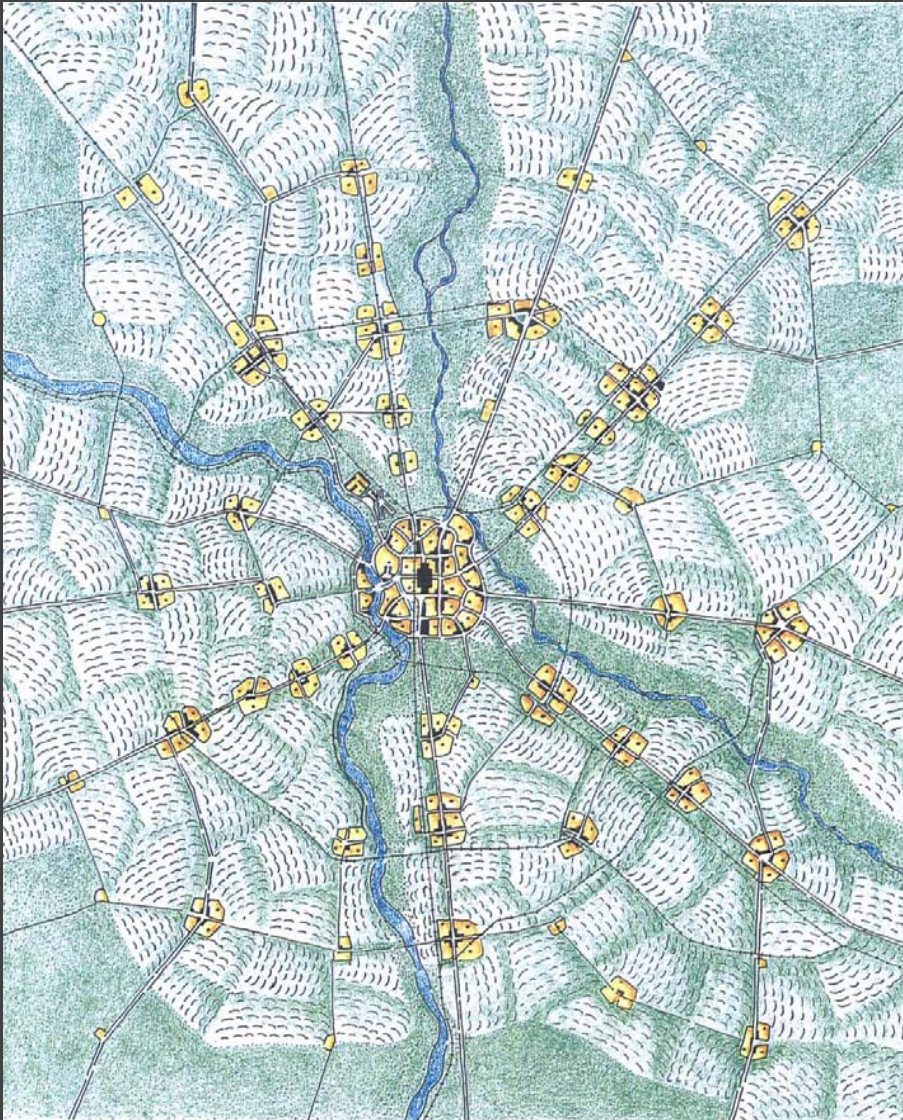


THE REGION OF
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DPZ



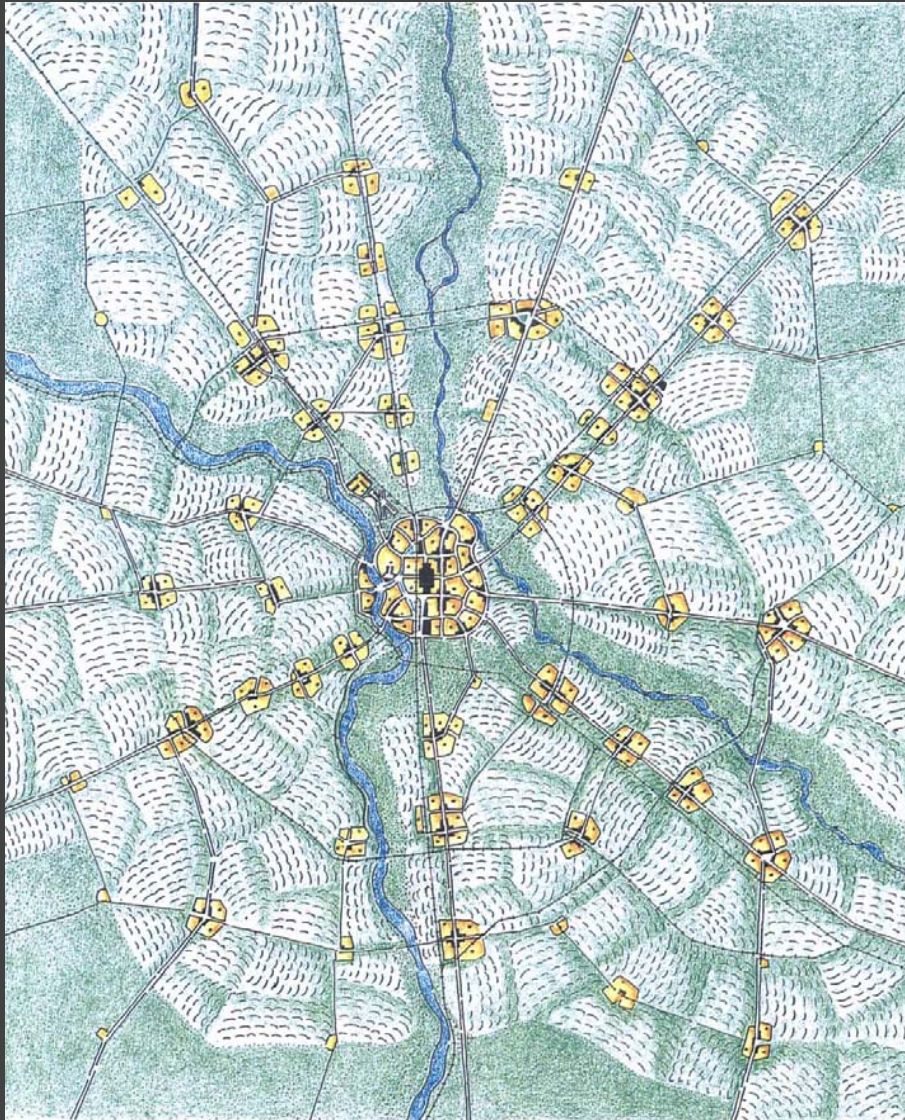
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CITY, TOWNS, VILLAGES, AND HAMLETS

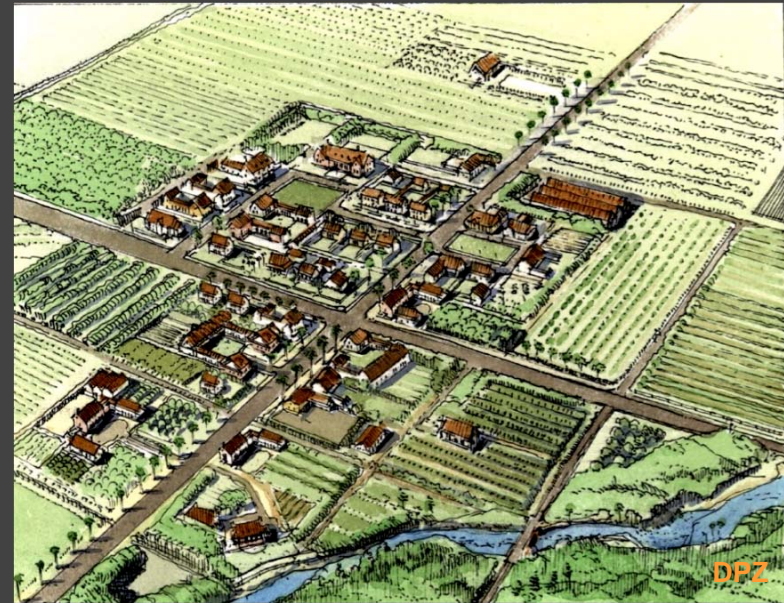
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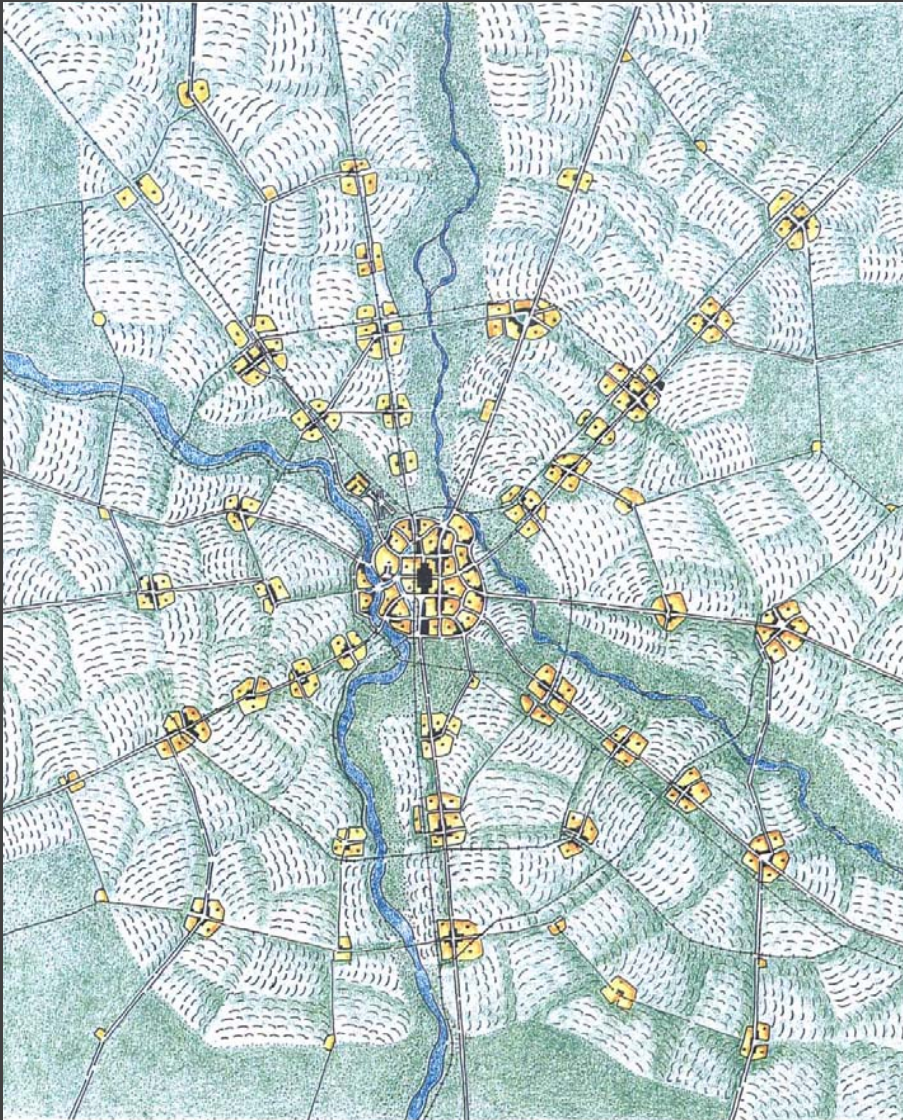


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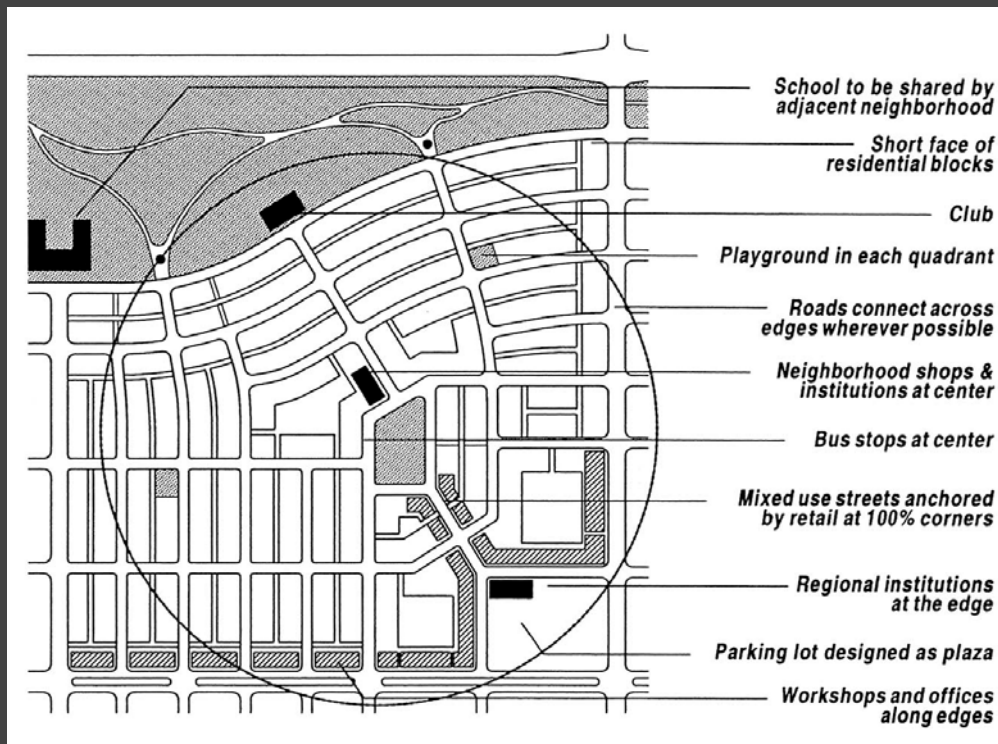


THE REGION OF
CITY, TOWNS, VILLAGES, AND HAMLETS

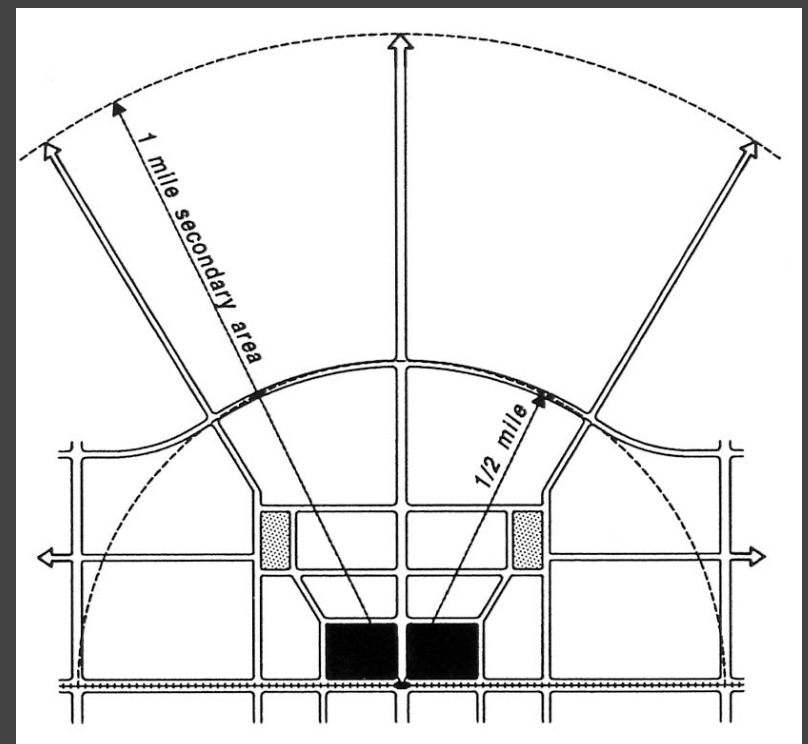
DPZ



PEDESTRIAN SHED IS INCREMENT OF PLANNING




1/4 mile



1/2 mile

THREE SCALES OF THE SMARTCODE




**EAST EDISTO
FORM DISTRICT
MASTER PLAN**

DORCHESTER COUNTY, SOUTH CAROLINA

DRAFT 11-1-09

Tuxedo Reserve

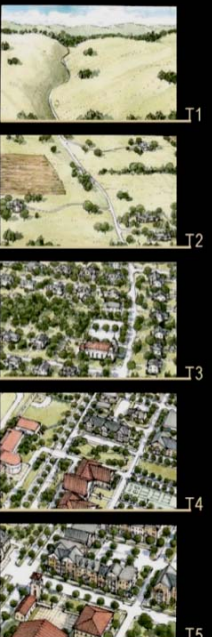



TUXEDO RESERVE SMARTCODE v9.2

27 AUGUST 2008


**SOUTH HAYWARD BART/
MISSION BOULEVARD
HAYWARD, CALIFORNIA
SMARTCODE**

JANUARY 15, 2010, DRAFT



T1
T2
T3
T4
T5

THREE SCALES OF THE SMARTCODE




**EAST EDISTO
FORM DISTRICT
MASTER PLAN**

DORCHESTER COUNTY, SOUTH CAROLINA

DRAFT 11-1-09

Tuxedo Reserve

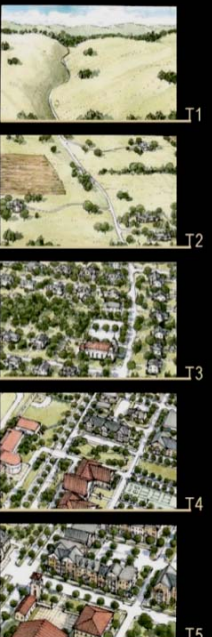



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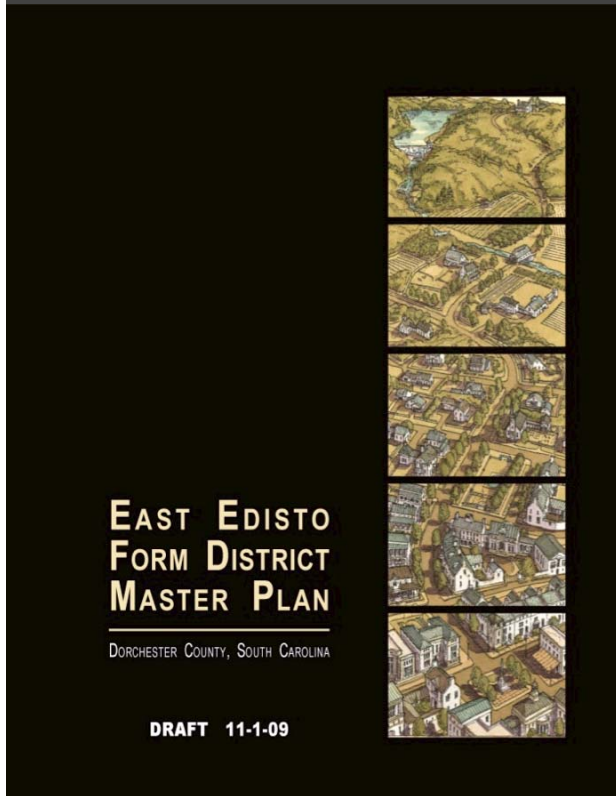
JANUARY 15, 2010, DRAFT



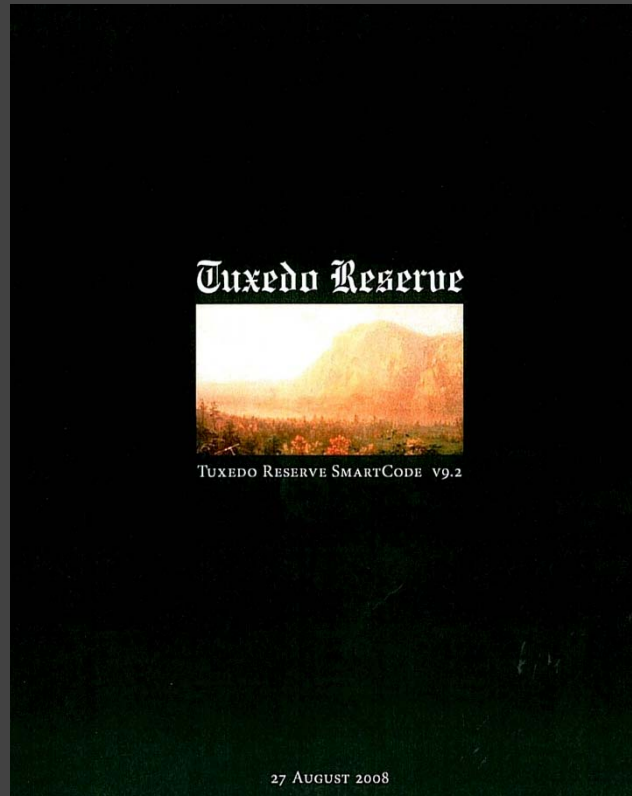
T1
T2
T3
T4
T5

REGIONAL PLAN
78,000 acres
South Carolina

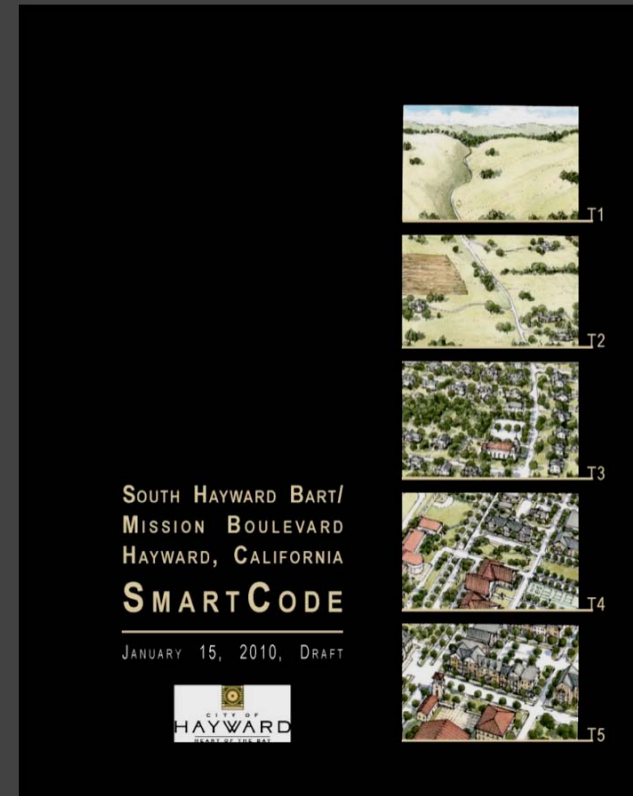
THREE SCALES OF THE SMARTCODE



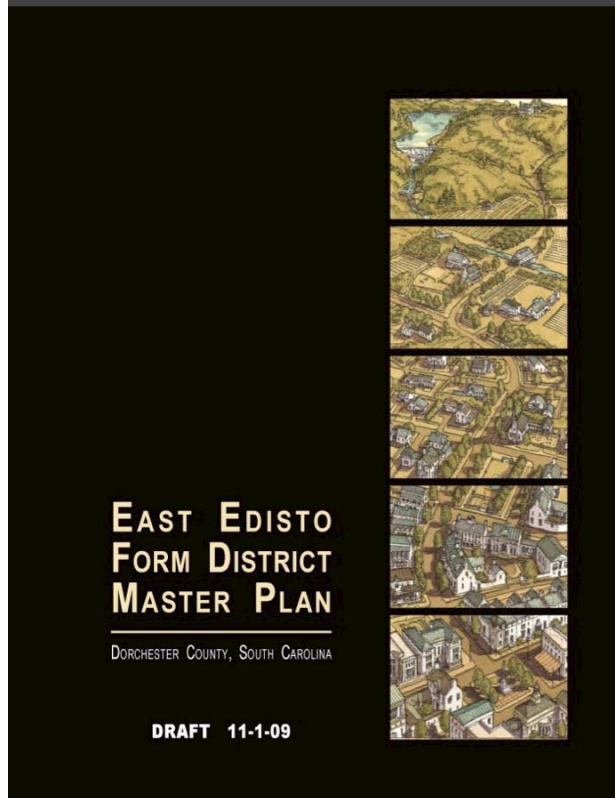
REGIONAL PLAN
78,000 acres
South Carolina



NEW COMMUNITY PLAN
1,270 acres
New York

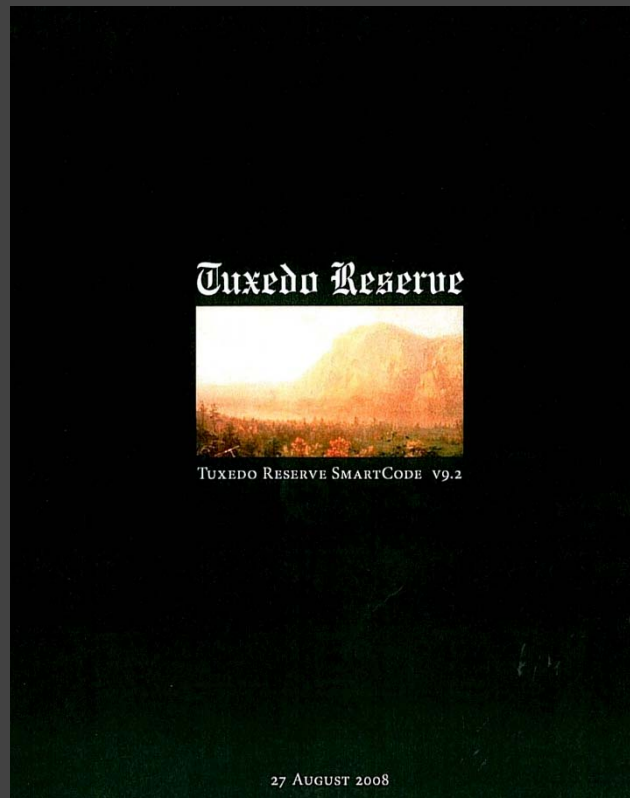


THREE SCALES OF THE SMARTCODE



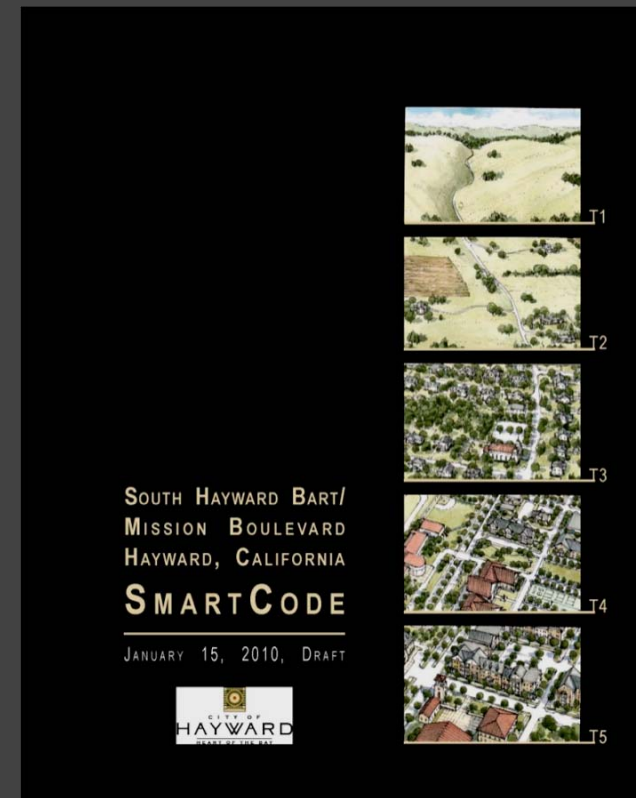
REGIONAL PLAN

78,000 acres
South Carolina



NEW COMMUNITY PLAN

1,270 acres
New York



INFILL PLAN

240 acres
California

LOCAL TRANSECTS



T1



T2



T3



T4



T5

REGIONAL & NEW COMMUNITY PLANS

LOCAL TRANSECTS



T1



T2



T3



T4



T5



T3-1



T3-2



T4-1



T4-2



T5-1



T5-2

REGIONAL & NEW COMMUNITY PLANS

NEW COMMUNITY

LOCAL TRANSECTS



T1



T2



T3



T4



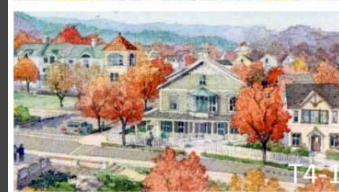
T5



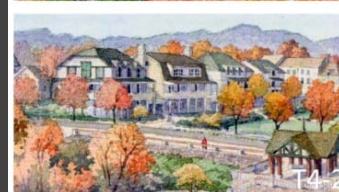
T3-1



T3-2



T4-1



T4-2



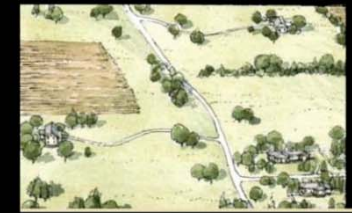
T5-1



T5-2



T1



T2



T3



T4



T5

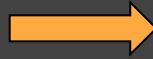
REGIONAL & NEW COMMUNITY PLANS

NEW COMMUNITY

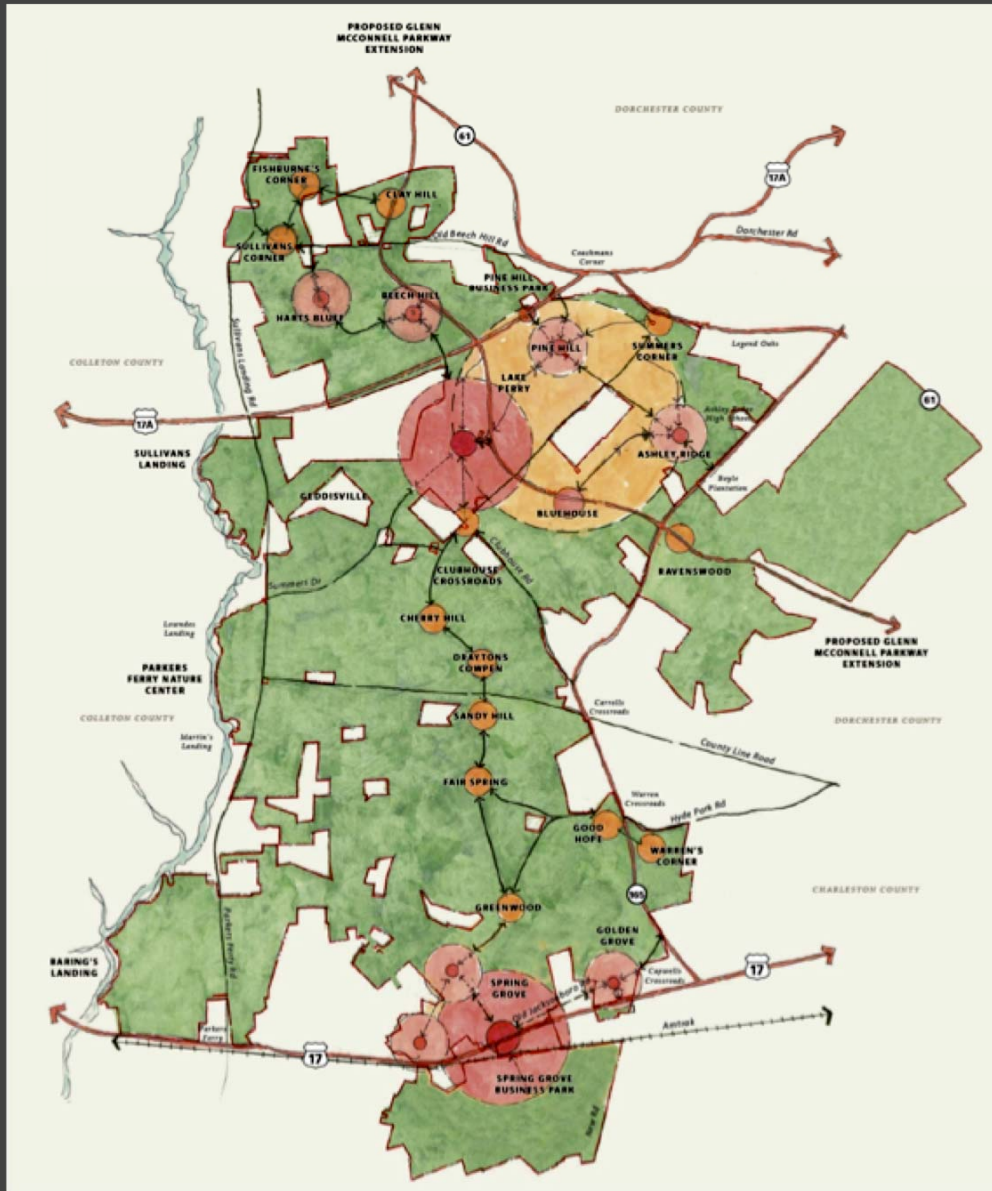
INFILL

REGULATING PLANS

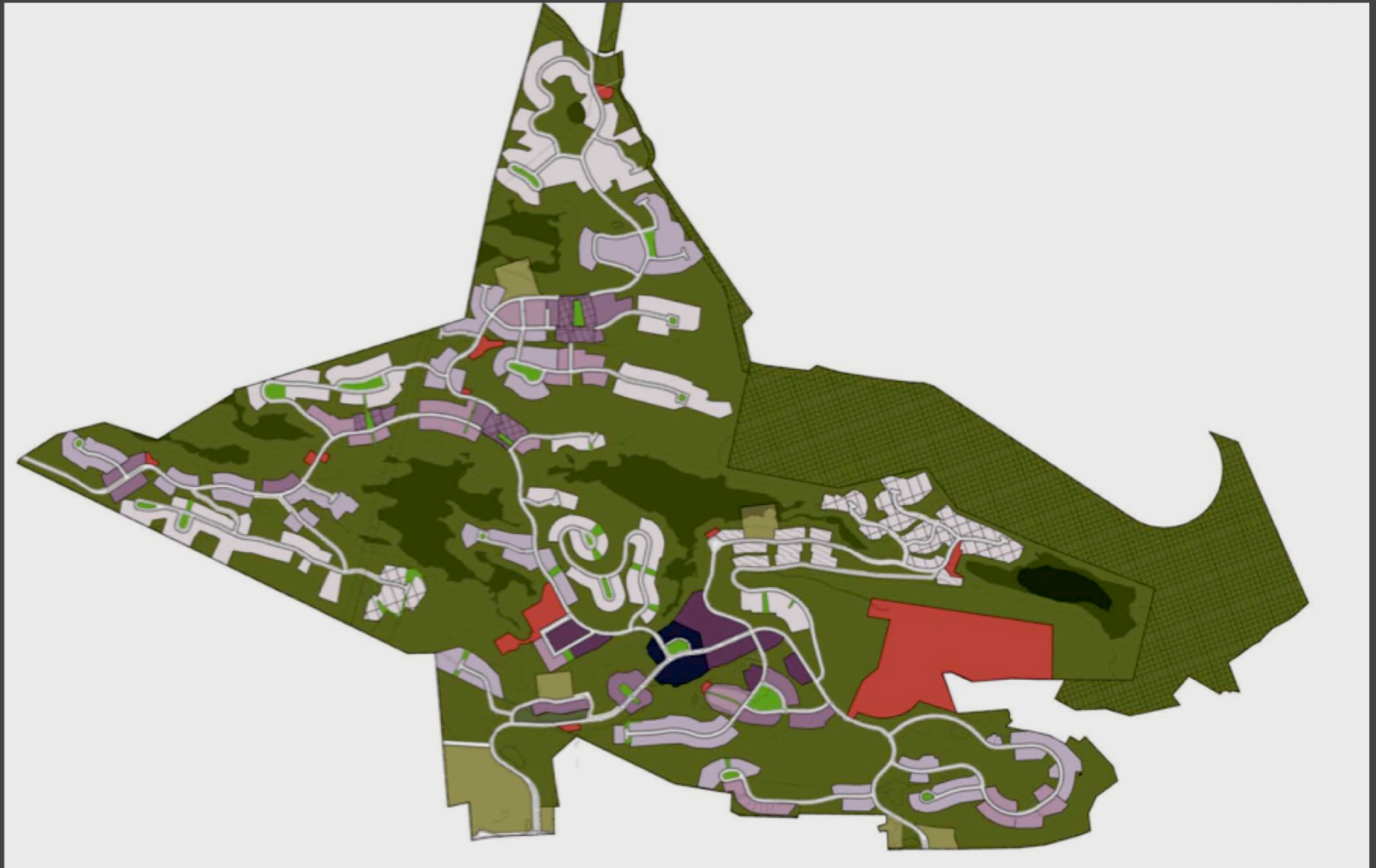
REGIONAL PLAN



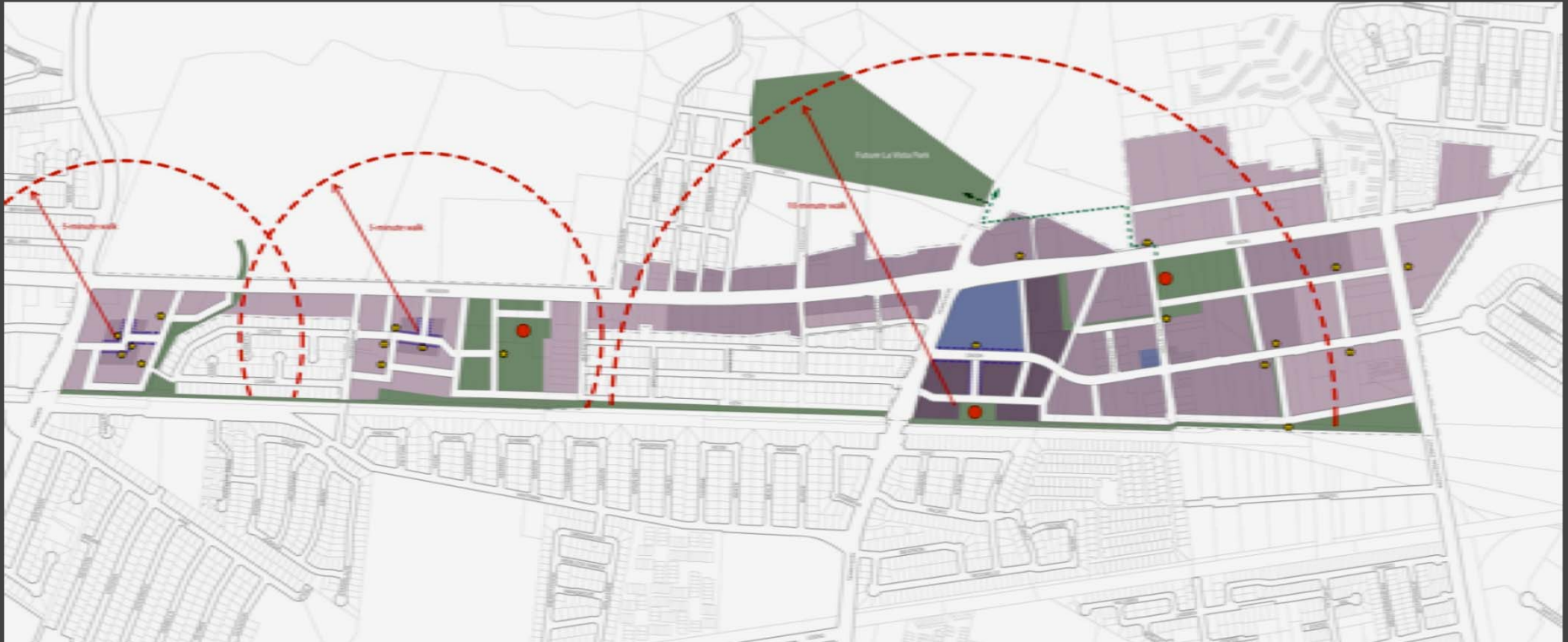
REGULATING PLANS

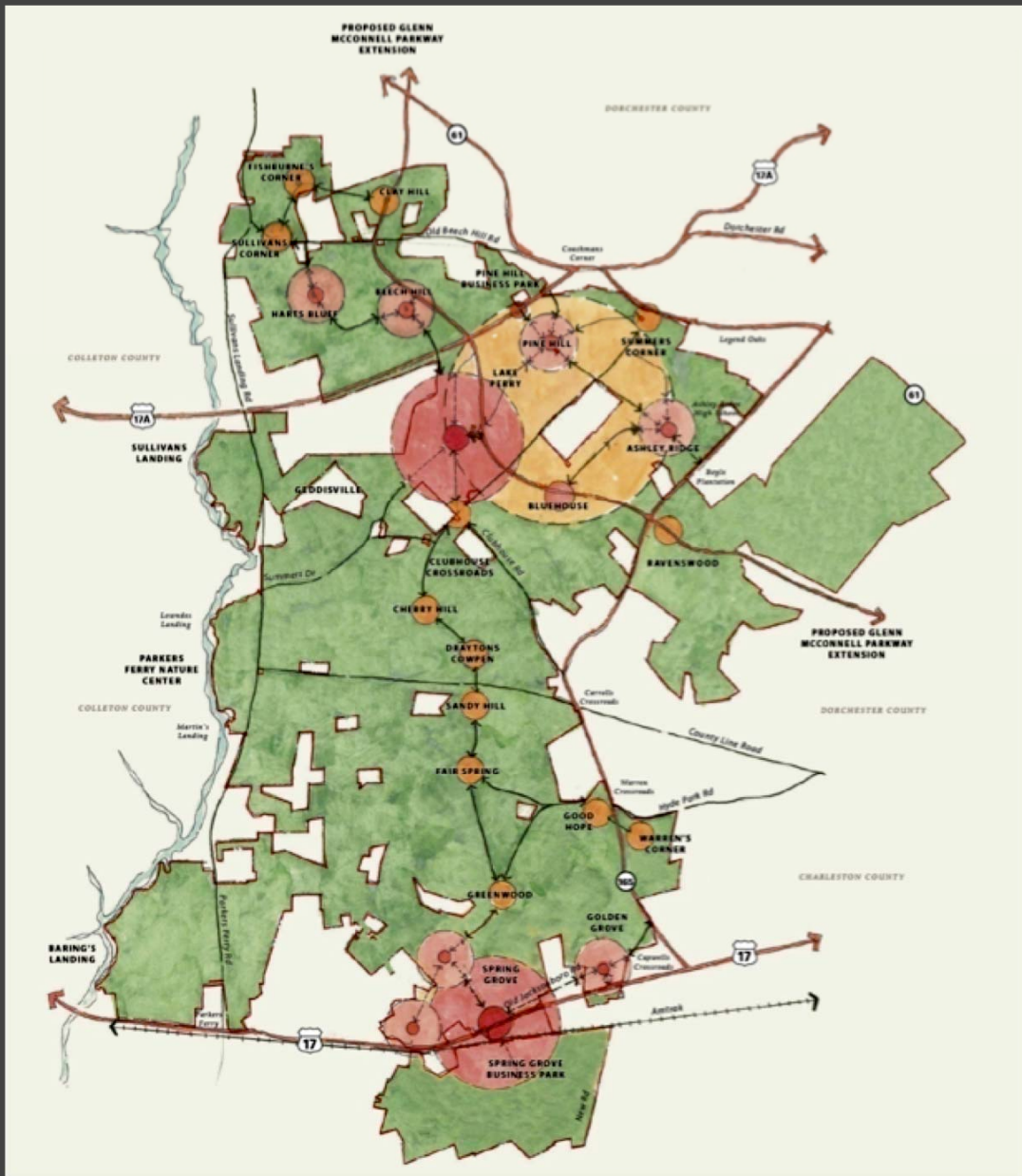


NEW COMMUNITY REGULATING PLAN



INFILL REGULATING PLAN





REGIONAL PLAN
78,000 acres



NEW COMMUNITY PLAN
1,270 acres



INFILL PLAN
240 acres

WHY START WITH THE MODEL SMARTCODE?

DNA OF BEST-LOVED TOWNS & CITIES







MORE THAN 30 PLUG-IN MODULES

TABLE 12A. SUSTAINABILITY - WIND POWER

FORM-BASED CODE

South Hayward BART / Mission Boulevard

Sustainability - Wind Power. This table prescribes opportunities for the placement of types of wind-powered devices within the Transect.

	T1	T2	T3	T4	T5	T6	Specifications
Wind Farm 							
Horizontal Axis 							
Vertical Axis 				•	•		
Public Furniture 				•	•		






FORM-BASED CODE

TABLE 12B. SUSTAINABILITY - SOLAR ENERGY

South Hayward BART / Mission Boulevard

Sustainability - Solar Energy. This table shows opportunities for the placement of types of solar-powered devices within the Transect.

	T1	T2	T3	T4	T5	T6	Specifications
<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 collectors tracking the sun on two axes, but it concentrates the energy at the focal point of a separate dish.



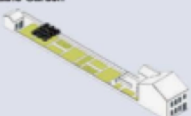
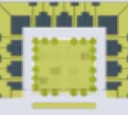
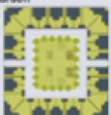




TABLE 12C. SUSTAINABILITY - FOOD PRODUCTION

FORM-BASED CODE

South Hayward BART / Mission Boulevard

Sustainability - Food Production. This table shows ways of incorporating types of food production along the Transect.

	T1	T2	T3	T4	T5	T6	Specifications
Farm 							
Agricultural Plots 							
Vegetable Garden 				*			
Urban Farm 				*	*		
Community Garden 				*	*		
Green Roof - Extensive - Semi Intensive - Intensive 				*	*		
Vertical Farm 					*		



FORM-BASED CODE TABLE 12D. LIGHT IMPRINT STORM DRAINAGE MATRIX (RECOMMENDATIONS)

South Hayward BART / Mission Boulevard



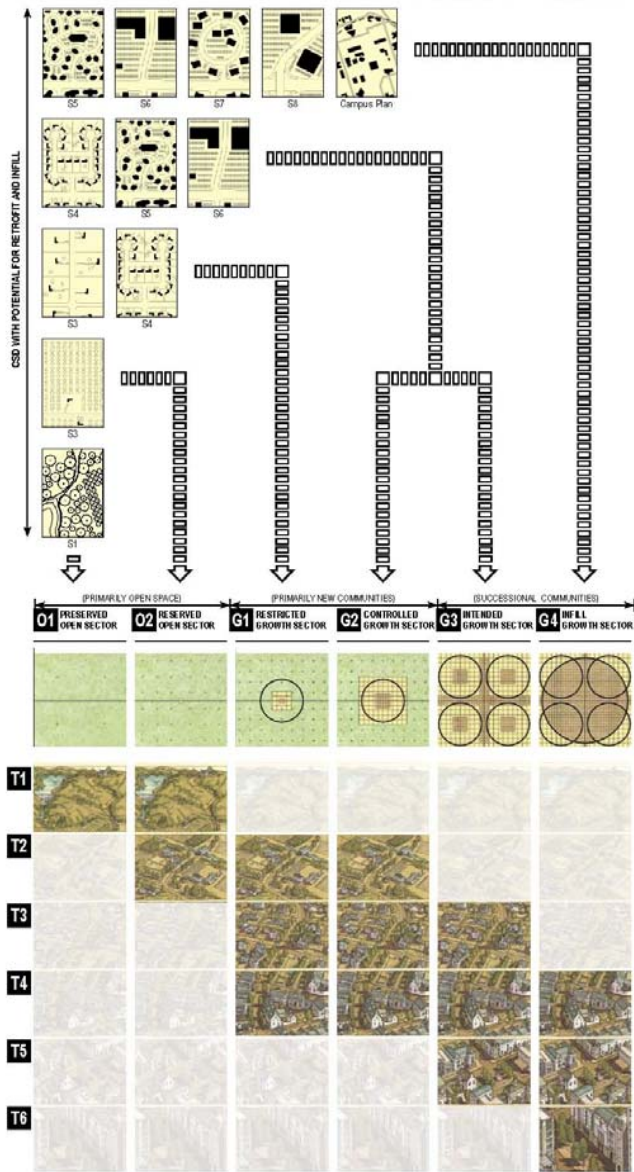
	T1	T2	T3	T4	T5	T6	Min. Cost
a. PAVING							
Compacted Earth				not permitted	not permitted		L 0
Wood Plank				not permitted	not permitted		H \$\$\$
Plastic Brick/Interlock				permitted	not permitted		L 0
Crushed Stone/Shell				permitted	not permitted		M 0
Cast/Precast Concrete Paver Block				permitted	permitted		L \$\$
Grassed Cellular Plastic				permitted	permitted		M \$\$\$
Grassed Cellular Concrete				permitted	permitted		M \$\$\$
Perforated Asphalt				permitted	permitted		L \$\$
Asphalt				permitted	permitted		L 0
Concrete				permitted	permitted		L \$\$
Perforated Concrete				permitted	permitted		L 0
Stamped Asphalt				permitted	permitted		L \$\$\$
Stamped Concrete				permitted	permitted		L \$\$\$
Pre Cast				permitted	permitted		M 0
Stone/Masonry Paving Blocks				permitted	permitted		L \$\$\$
Wood Paving Blocks on Concrete				not permitted	permitted		L \$\$\$
Asphalt Paving Blocks				not permitted	permitted		M 0
b. CHANNELING							
Retained Creek				not permitted	not permitted		L 0
Trenching				not permitted	not permitted		M 0
Vegetative Swale				not permitted	not permitted		L 0
Drainage Ditch				not permitted	not permitted		L 0
Stone/Rip Rap Channels				permitted	not permitted		L \$\$
Vegetative/Stone Swale				permitted	permitted		L 0
Grassed Cellular Plastic				permitted	permitted		M \$\$\$
Grassed Cellular Concrete				permitted	permitted		M \$\$\$
Sockway Trench				permitted	permitted		M \$\$\$
Slope Arrows				permitted	permitted		M \$\$\$
French Drain				permitted	permitted		M 0
Shallow Channel Footpath/Rainwater Catcher				permitted	permitted		L 0
Concrete Pipe				permitted	permitted		L \$\$
Culvert				permitted	permitted		L 0
Flushing Strip Trench				permitted	permitted		L 0
Masonry Trench				permitted	permitted		L 0
Canal				permitted	permitted		H \$\$\$
Sculpted Watercourse, L.A. covecades				not permitted	permitted		M \$\$\$
Concrete Trough				not permitted	permitted		L 0
Archimedes Screw				not permitted	permitted		L \$\$\$
c. STORAGE							
Infiltration Pond				not permitted	not permitted		L 0
Retention Basin with Sloping Bank				not permitted	not permitted		L 0
Retention Basin with Fence				permitted	not permitted		L 0
Retention Hollow				permitted	not permitted		M 0
Retention Pond				permitted	not permitted		L 0
Vegetation Purification Bed				permitted	permitted		M 0
Flowing Park				permitted	permitted		M 0
Retention Pond				permitted	permitted		M 0
Landscaped Tree Well				permitted	permitted		L 0
Pool/Fountain				permitted	permitted		H \$\$\$
Underground Vault/Pipe/Chimney-Compacted Metal				permitted	permitted		L 0
Underground Vault/Pipe/Chimney-Pre-cast Concrete				permitted	permitted		L 0
Underground Vault/Pipe/Chimney-Cast in place Concrete				permitted	permitted		L 0
Grated Tree Well				not permitted	permitted		L 0
Underground Vault/Pipe/Chimney-Plastic				not permitted	permitted		L \$\$\$
Pond Basin				not permitted	permitted		M \$\$\$
d. FILTRATION							
Wetland/Swamp				not permitted	not permitted		L 0
Filtration Ponds				not permitted	not permitted		L 0
Shallow Marsh				not permitted	not permitted		M 0
Surface Landscaping				not permitted	not permitted		L 0
Natural Vegetation				permitted	permitted		L 0
Constructed Wetland				not permitted	not permitted		M 0
Bio-Retention Swale				not permitted	not permitted		M \$\$\$
Purification Biotope				permitted	not permitted		H 0
Green Finger				permitted	permitted		L \$\$\$
Roof Garden				permitted	permitted		M \$\$\$
Rain Garden				permitted	not permitted		M 0
Retention Pond				permitted	not permitted		L 0
Grassed Cellular Concrete				permitted	not permitted		M \$\$\$
Waterways				permitted	permitted		H \$\$\$

NOTE - Abundance is classified as L=Low, M=Medium and H=High.



RETROFIT - INFILL

SUBURBAN RETROFIT AND INFILL - A LEXICON OF ADVANCED TECHNIQUES



DPZ
 © 1998 Smart Growth Center & Center
 June 22, 1998

RETROFIT - INFILL

SUBURBAN RETROFIT AND INFILL - A LEXICON OF ADVANCED TECHNIQUES



DPZ
 © 1998 Smart Growth Center & Center
 June 22, 1998

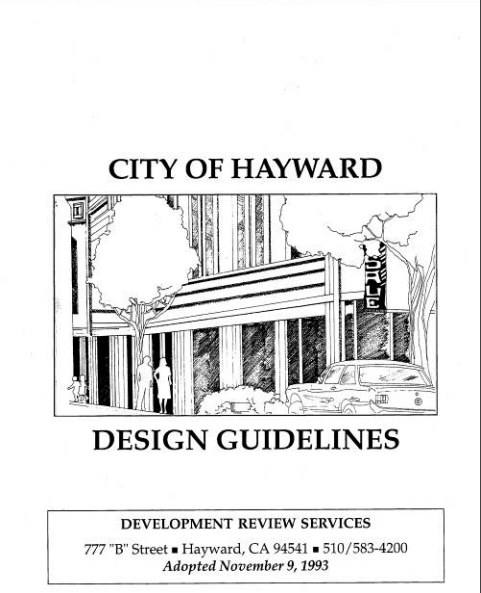
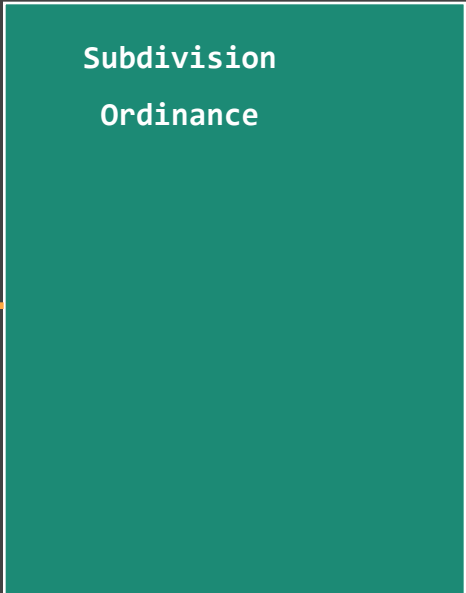
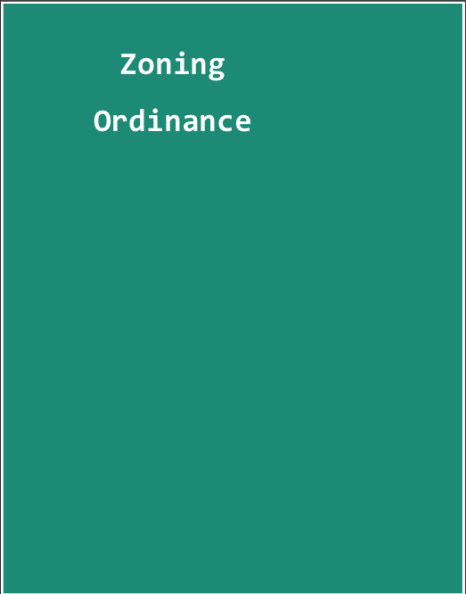
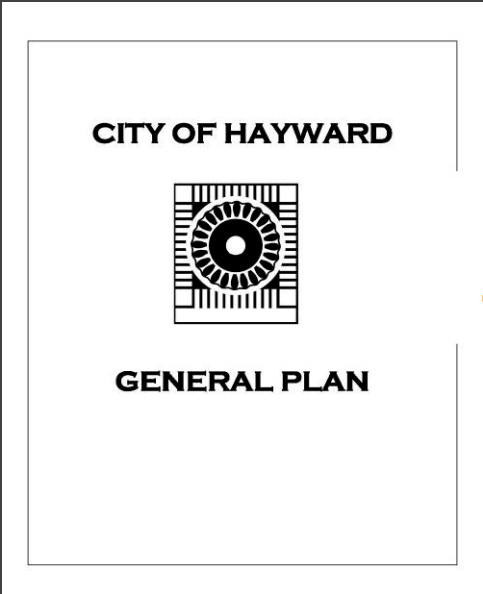
AGRICULTURAL URBANISM



DPZ



DPZ



CITY OF HAYWARD

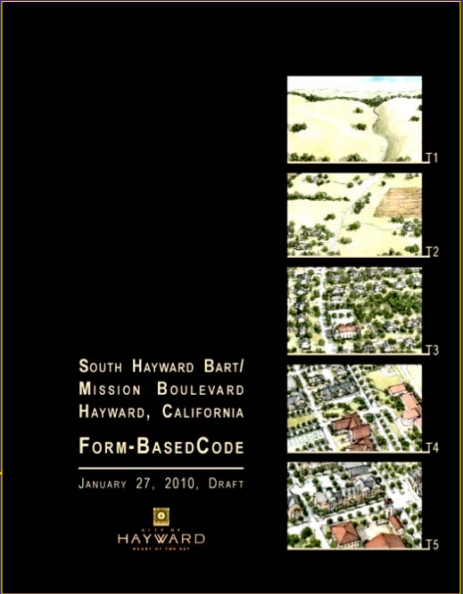
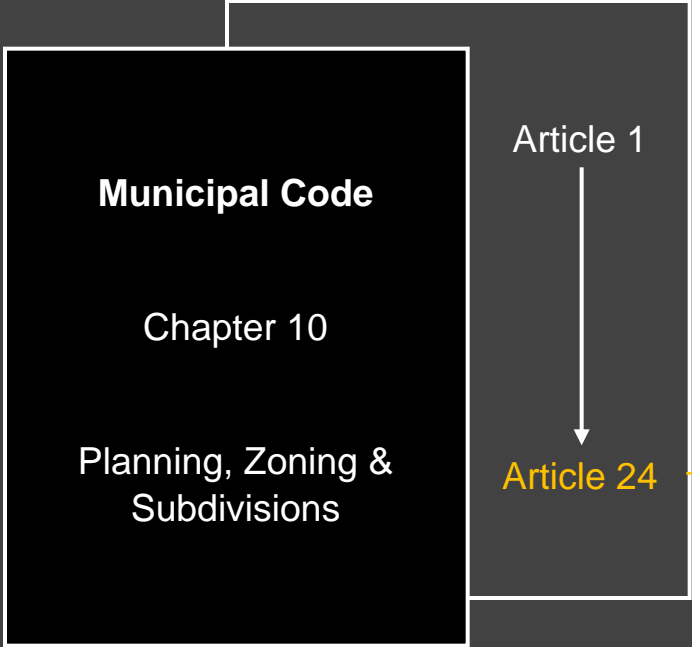


GENERAL PLAN

SOUTH HAYWARD BART/
MISSION BOULEVARD
HAYWARD, CALIFORNIA
FORM-BASED CODE

JANUARY 27, 2010, DRAFT





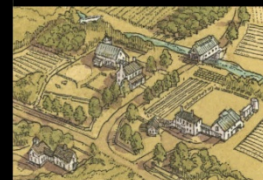
WHAT'S MISSING?

CALIFORNIA
SMARTCODE
VERSION 1.0

Author: Hall Alminana, Kevin Colin & Lisa Porras



T1



T2



T3



T4



T5



T6

General Plan

CA Environmental Quality Act

Regional Transportation Plans

Air Quality Plans

Planning & Zoning Law

Airport Compatibility Plans

Coastal Act

SB 375

General Plan

CA Environmental Quality Act

Regional Transportation Plans

Air Quality Plans

Planning & Zoning Law

Airport Compatibility Plans

Coastal Act

SB 375

General Plan

Specific Plans

Capital Improvement Plans

Mobility Plans

Zoning Regulations

Subdivision Regulations

Design Guidelines

Redevelopment Plans

**State /
Regional**

**Local
Implementation**

**CA Environmental Quality
Act**

**Regional Transportation
Plan**

Air Quality Plans

Planning & Zoning Law

**Airport Compatibility
Plan**

Coastal Act

SB 375

General Plan

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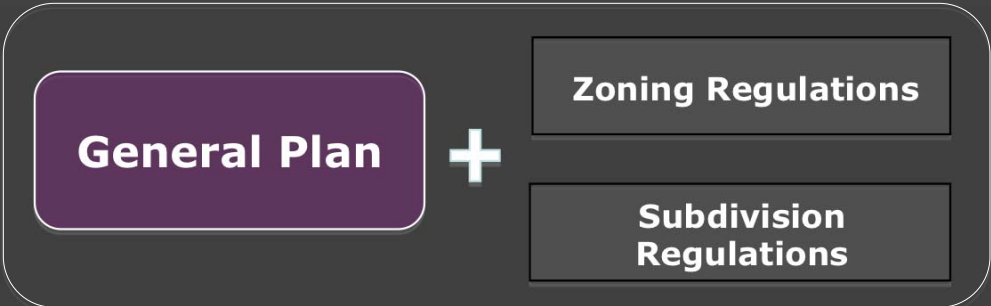
Subdivision Regulations

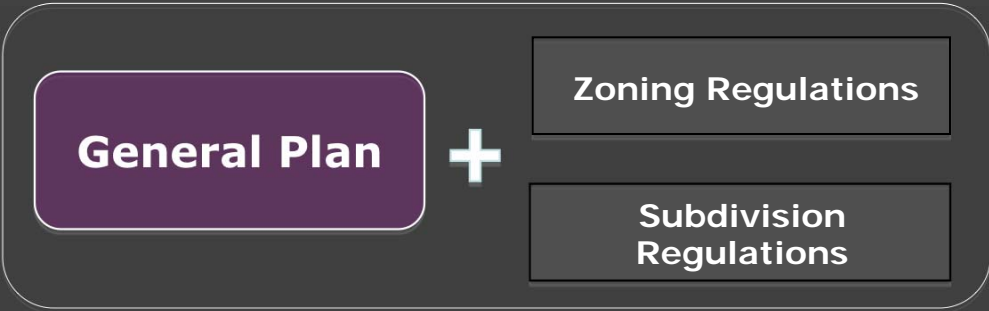
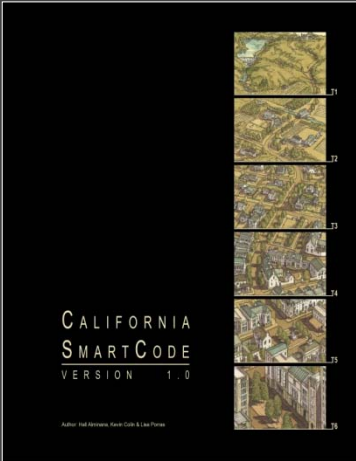
Zoning Regulations

Mobility Plans

Design Guidelines

Redevelopment Plans



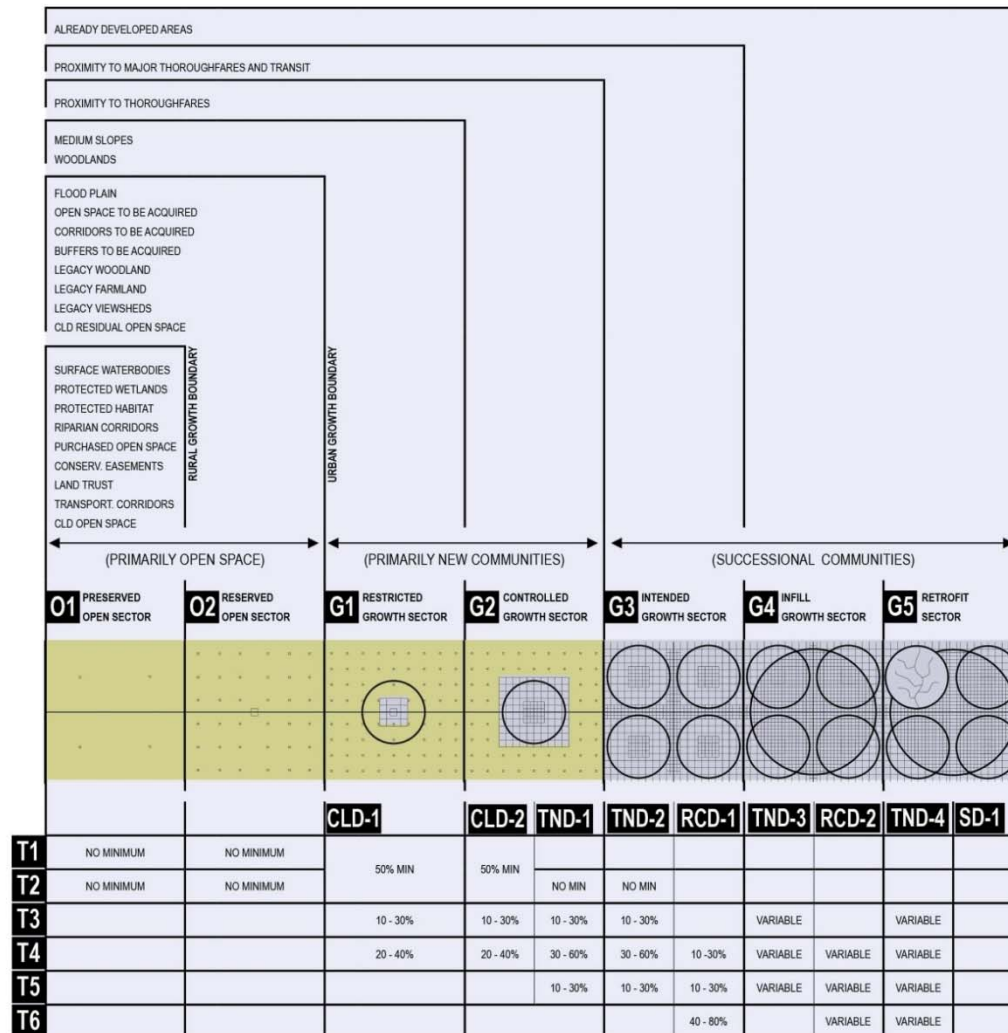


CALIFORNIA SMARTCODE

ARTICLE 2. GENERAL PLAN ELEMENTS

Municipality

TABLE 2A: Sector / Community Unit Type / Zoning Allocations. In concert with Figure 1 (Sector Plan), Table 2A defines the geography, including both natural and infrastructure elements, determining areas that are or are not suitable for development. Table 2A allocates Community Unit types to Growth Sectors. Table 2A allocates the permissible quantity of T-zones per Pedestrian Shed within Community Unit types. Allowed development intensity is further defined through the allocation of T-zones to Community Unit Types in Table 2B.



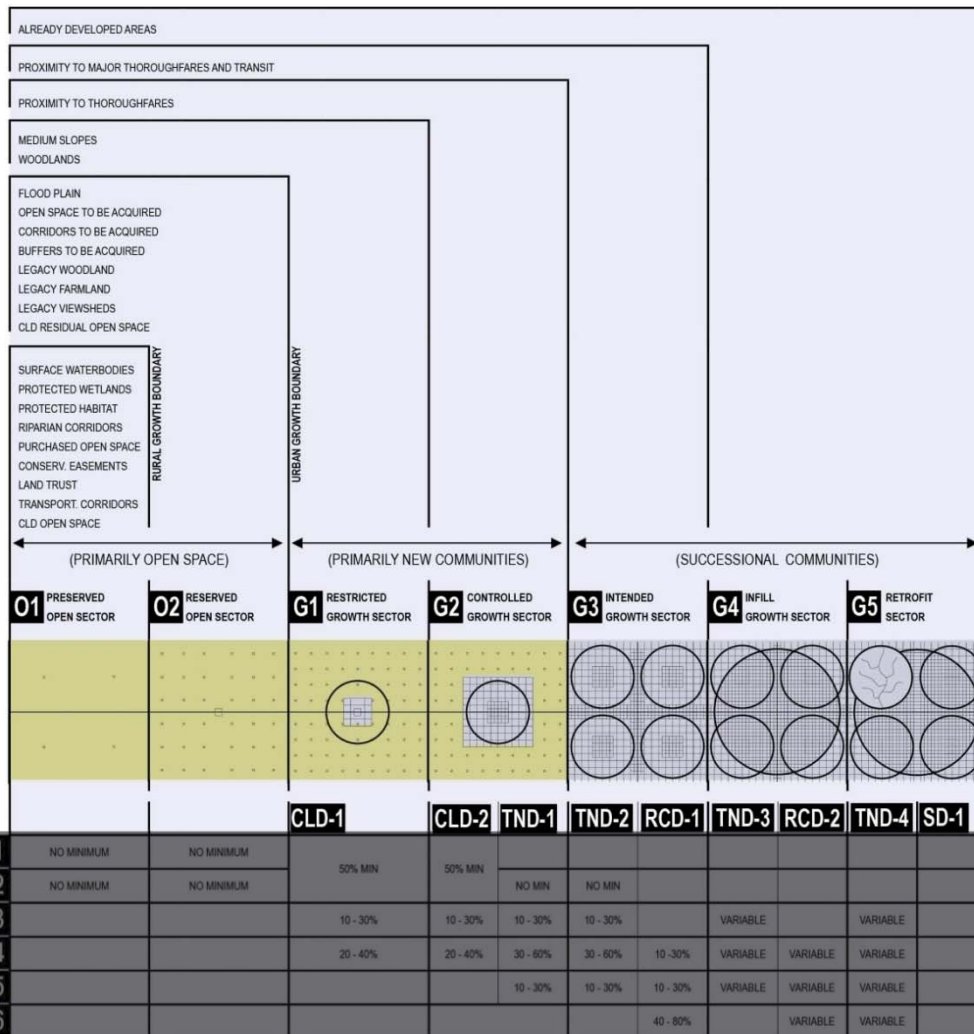
Article 2

CALIFORNIA SMARTCODE

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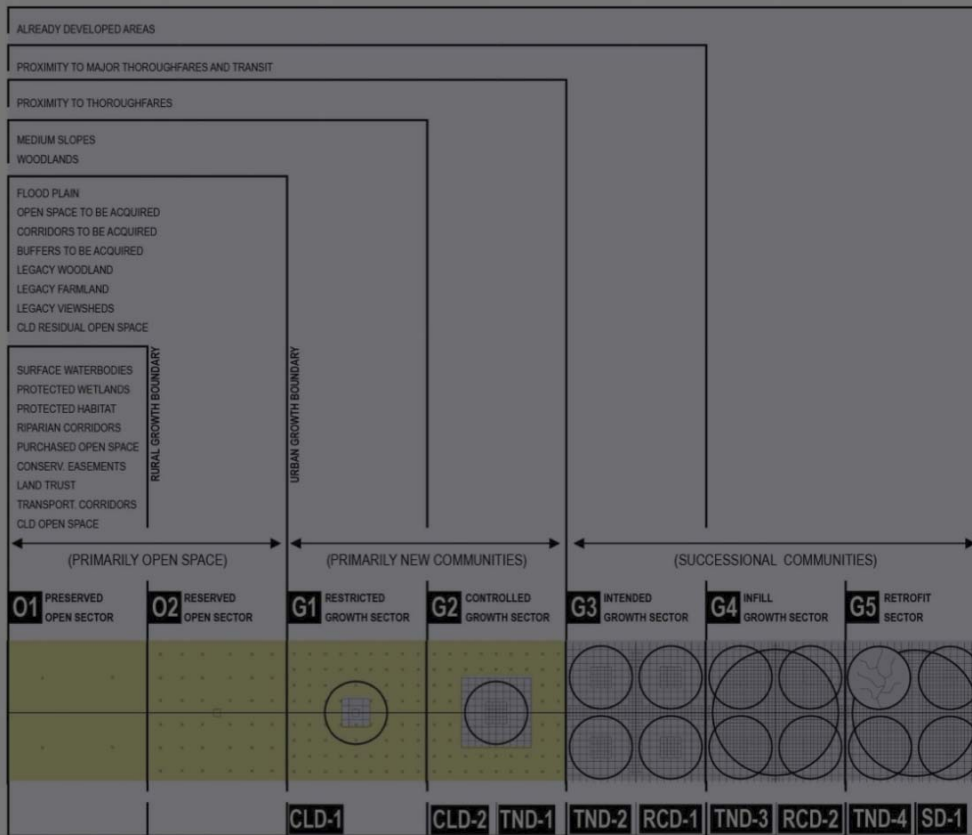
Plan

CALIFORNIA SMARTCODE

ARTICLE 2. GENERAL PLAN ELEMENTS

Municipality

TABLE 2A: Sector / Community Unit Type / Zoning Allocations. In concert with Figure 1 (Sector Plan), **Table 2A** defines the geography, including both natural and infrastructure elements, determining areas that are or are not suitable for development. **Table 2A** allocates Community Unit types to Growth Sectors. **Table 2A** allocates the permissible quantity of T-zones per Pedestrian Shed within Community Unit types. Allowed development intensity is further defined through the allocation of T-zones to Community Unit Types in **Table 2B**.



T1	NO MINIMUM	NO MINIMUM									
T2	NO MINIMUM	NO MINIMUM			NO MIN	NO MIN					
T3			50% MIN	50% MIN	10 - 30%	10 - 30%		VARIABLE		VARIABLE	
T4			20 - 40%	20 - 40%	30 - 60%	30 - 60%	10 - 30%	VARIABLE	VARIABLE	VARIABLE	
T5					10 - 30%	10 - 30%	10 - 30%	VARIABLE	VARIABLE	VARIABLE	
T6							40 - 80%		VARIABLE	VARIABLE	

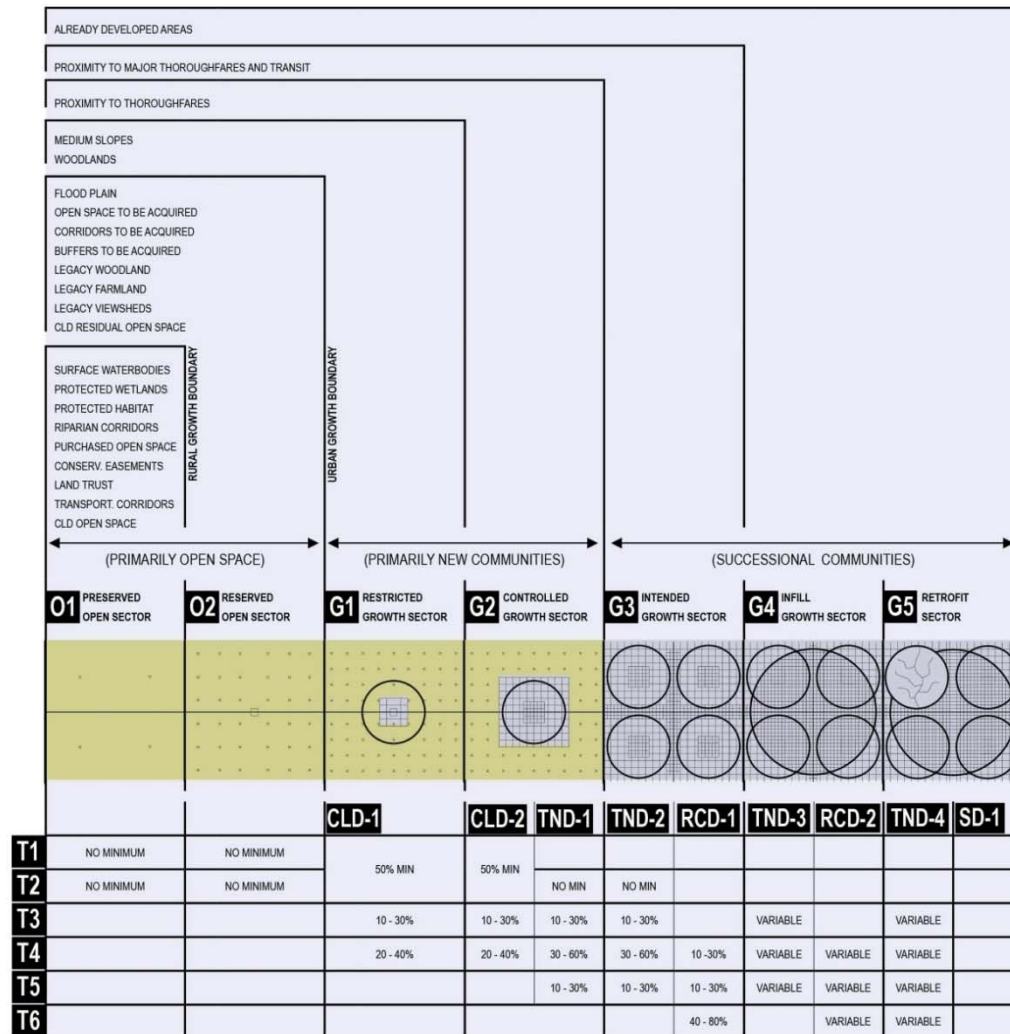
Code

CALIFORNIA SMARTCODE

ARTICLE 2. GENERAL PLAN ELEMENTS

Municipality

TABLE 2A: Sector / Community Unit Type / Zoning Allocations. In concert with Figure 1 (Sector Plan), Table 2A defines the geography, including both natural and infrastructure elements, determining areas that are or are not suitable for development. Table 2A allocates Community Unit types to Growth Sectors. Table 2A allocates the permissible quantity of T-zones per Pedestrian Shed within Community Unit types. Allowed development intensity is further defined through the allocation of T-zones to Community Unit Types in Table 2B.

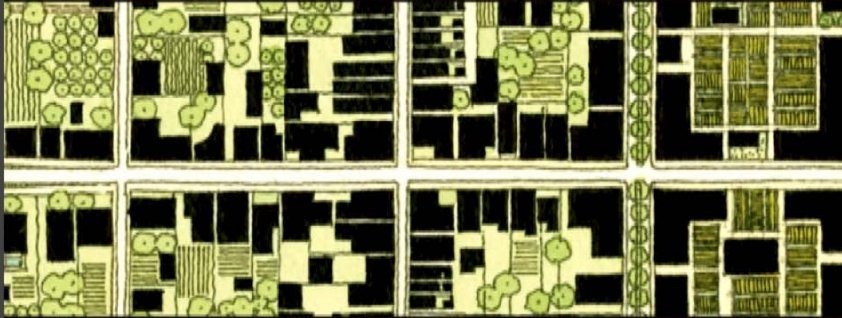


Plan

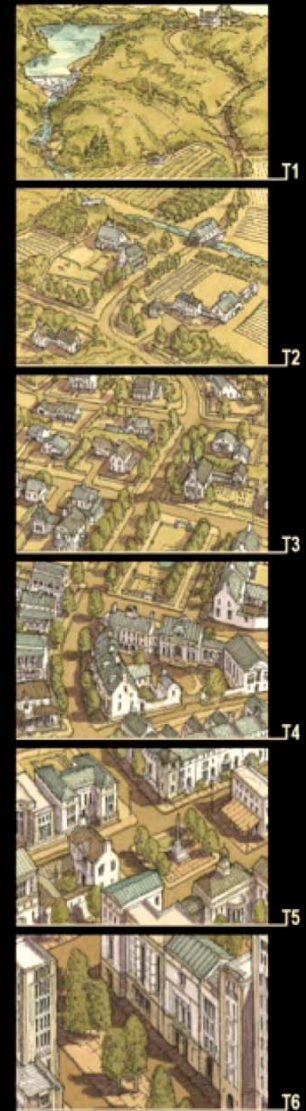
Code

RESOURCES

The Smart Growth Manual



From the authors of *Suburban Nation*
Andres Duany
and Jeff Speck
with Mike Lydon



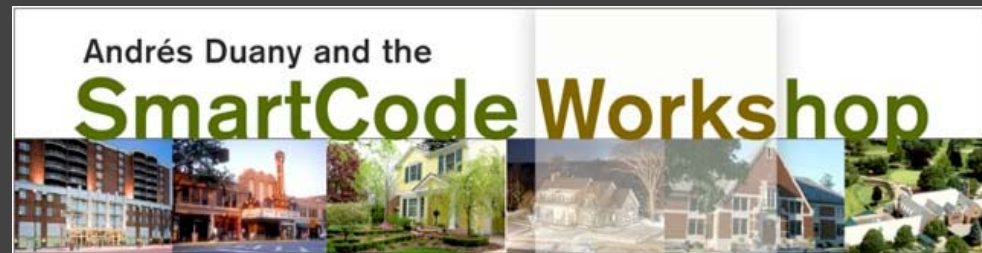
SMART CODE
VERSION 9 AND MANUAL

www.SmartCodeCentral.com

CLASSES & WORKSHOPS



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Congress for the New Urbanism
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WELCOME TO SMARTCODE CENTRAL

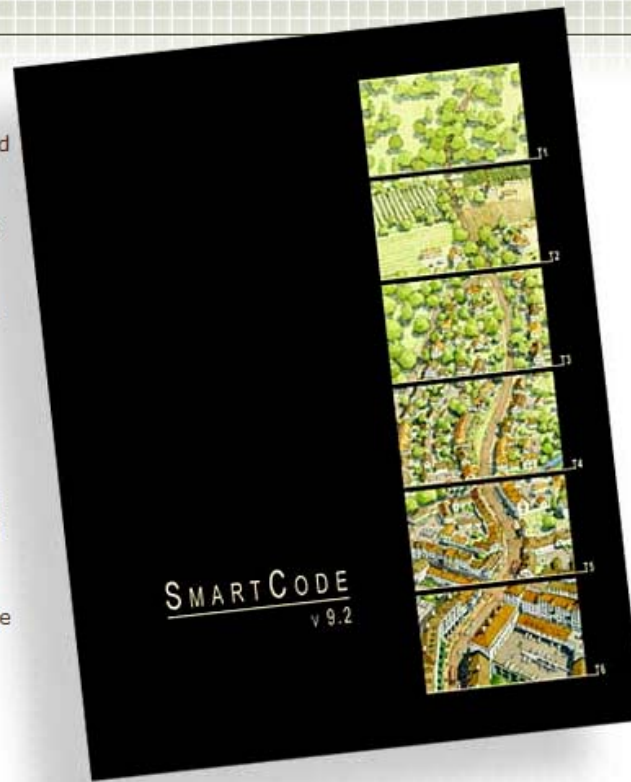
The SmartCode is a model transect-based development code available for all scales of planning, from the region to the community to the block and building. The code is intended for local calibration to your town or neighborhood. As a form-based code, the SmartCode keeps towns compact and rural lands open, while reforming the destructive sprawl-producing patterns of separated use zoning.

SmartCode Central collects all the important components of transect-based planning in one place. We provide files of the latest versions of the model [SmartCode](#) and supplementary [Modules](#), including new sustainability standards. We also link to calibrators, attorneys, and town planners who do significant work with the SmartCode.

The SmartCode was released by [Duany Plater-Zyberk and Company \(DPZ\)](#) in 2003, after two decades of research and implementation. The code is open source and free of charge.

The non-profit [Center for Applied Transect Studies \(CATS\)](#) was founded in 2007 to promote understanding of the built environment as part of the natural environment, through the planning methodology of the rural-to-urban transect. The SmartCode is the foundational tool for implementation of this methodology.

All diagrams ©DPZ & Co.



The 2008 *SmartCode v9 and Manual* is now available from [New Urban News Publications](#).

News: The transect-based model SmartCode wins a 2009 CNU [Charter Award](#)

Now available for download: the [Sustainable Urbanism Performance-based SmartCode Module](#) by Farr Associates

www.SmartCodeCentral.org

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SUPPORT CATS

RETROFIT & AGRICULTURAL URBANISM

Major transect-based initiatives supported by CATS address Suburban Retrofit and Agricultural Urbanism. These are significantly more detailed than other Modules, as they include sample plans and protocols. Proposals for future initiatives are encouraged.



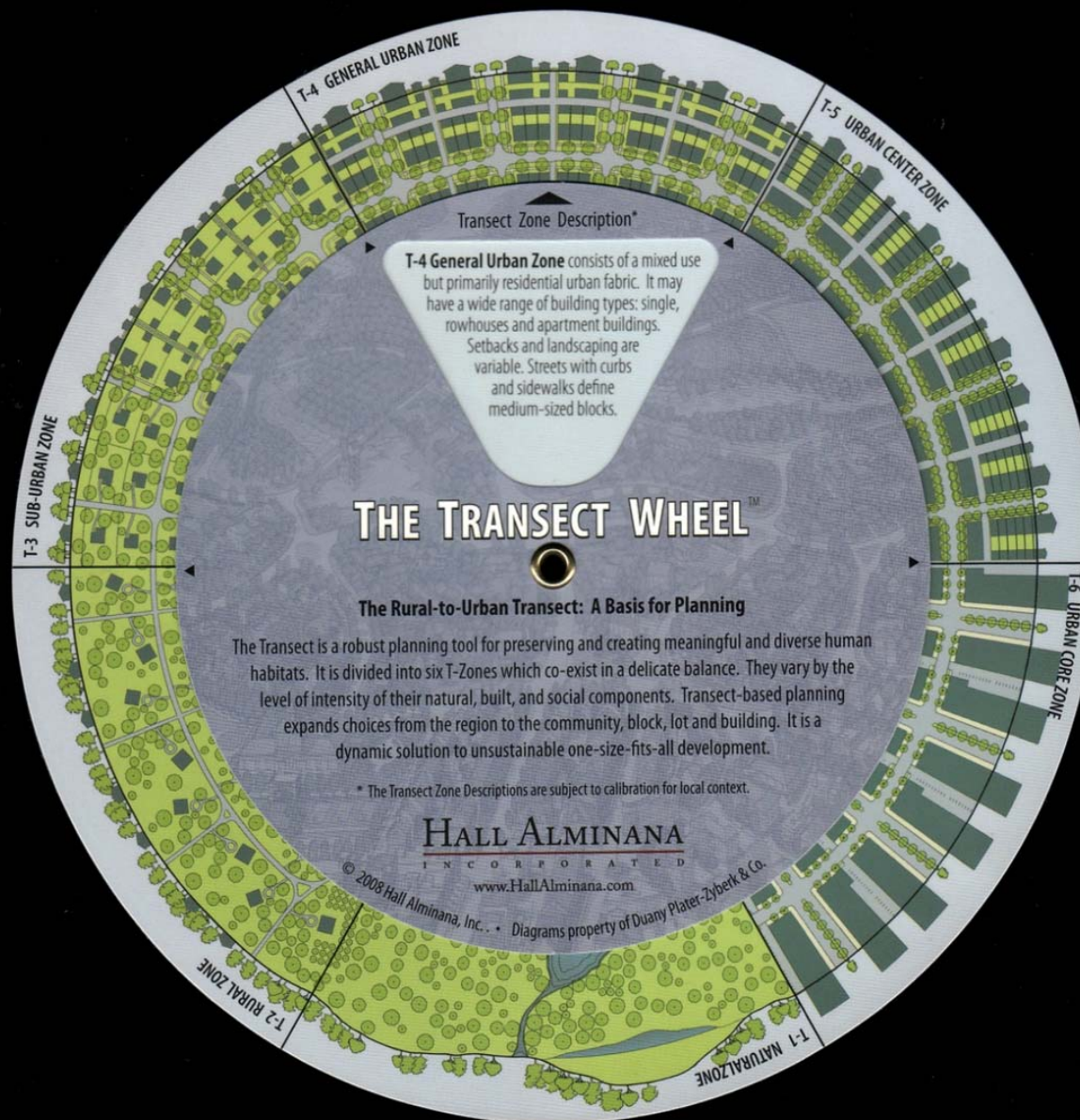
Suburban Retrofit-Infill and Sprawl Repair

Today we are faced with an overwhelming amount of single-use development, at best auto-dependent, at worst abandoned and deteriorating. Sprawl will not mature independently into vibrant, sustainable communities, so transformation needs to be guided and regulated. In recent years, many New Urbanists have been working on a range of design, implementation and finance techniques to enable suburban retrofit and infill.

While Mashpee Commons is a pioneering New Urbanist model for greyfield redevelopment, a more comprehensive suburban retrofit initiative was presented at several Open Source sessions at CNU XVI in Austin, Texas in 2008. Over the course of several days about 25 practitioners contributed to topics ranging from re-forming the regional scale to restructuring single-use enclaves, and finally to transitional building types. The key points of these conversations have been integrated into plans for an instruction manual to repair suburban sprawl.

The Sprawl Repair Manual will provide a toolkit of standard techniques to categorize existing problem areas and tailor solutions to context. The goal is a successful retrofit to complete, reconnect and repair sprawl types such as malls, shopping centers, isolated subdivisions, townhouse/apartment complexes, and office parks, ultimately to be included within a coherent neighborhood structure.

www.Transect.org



Thank you!



HALL ALMINANA
I N C O R P O R A T E D

Laura Hall, Principal