

# Utilizing Form-Based Codes to Create Sustainable Suburban Growth Corridors

CREATING PLACES WHERE **HDR** PEOPLE WANT TO BE



[www.hdrinc.com](http://www.hdrinc.com)  
[alycen.whiddon@hdrinc.com](mailto:alycen.whiddon@hdrinc.com)

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**Transportation corridors often diminish quality of life.**



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**Destroys natural resources and changes the character of rural areas**



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**Harms The Environment By Wiping Out Natural Resources, Adding Impervious Surfaces, And Polluting The Water System**



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**How Does Corridor Degradation Happen?**



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**Conventional Codes Often Prevent "Smart Growth" Developments By**



- Destroying natural assets
- Promoting auto-oriented design
- Ignoring economic realities
- Limiting nodal density
- Prohibiting mixed-uses
- Discouraging TND and New Urbanist development
- Encouraging ugly disconnected sprawl!

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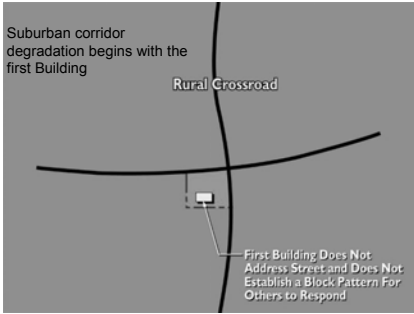
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## Since the beginning of time, market centers began where travel routes cross

Suburban corridor degradation begins with the first Building



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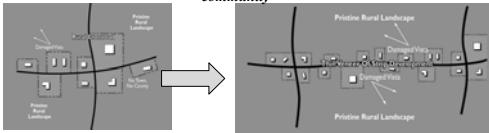
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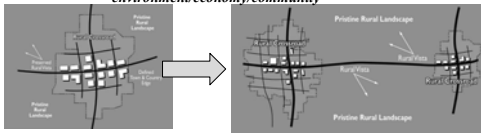
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## Form Based Codes Support Smart Growth

*Conventional Sprawl: low density = degradation of environment and community*



*Smart Growth Approach: greater density = sustainable environment/economy/community*



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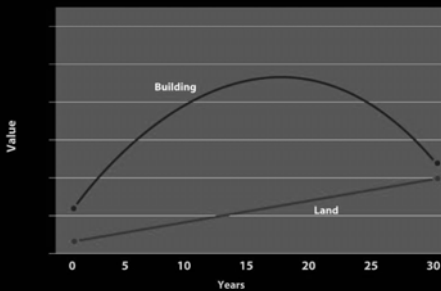
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## Long-term Value Effects Of Conventional Strip Development



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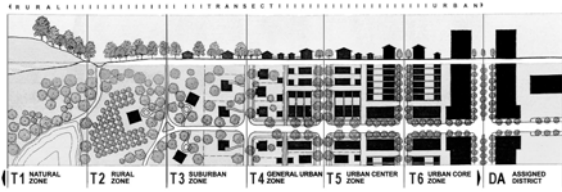
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**The Transect is an ordering system that provides a common language for describing the character of sustainable development**



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Title: Calibrated Transect Illustration  
Source: Louis Kahn

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**In Practice, Consecutive Numerals of Zones Do Not Need To Be Adjacent**



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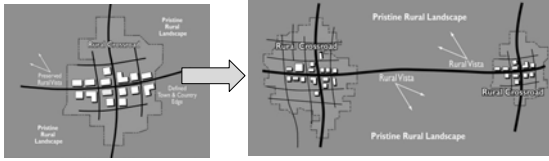
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## Form Based Codes Support a Smart Growth Approach



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## Rural crossroads – T-2



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## Establishing design guidelines



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**Infill Codes Can Ensure That, Over Time, All New Development Implements The Community's Vision**  
**Intersection of collector streets can support greater density T-3**



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**Intersections with collector streets support even greater density T-4**



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**Form based codes can support smart growth**

- Preserve open space, farmland, natural beauty and critical environmental areas

- Focus development in compact nodes
- Reconnect with environment
- Rural multiuse trails
- Scenic view preservation

**T-1**



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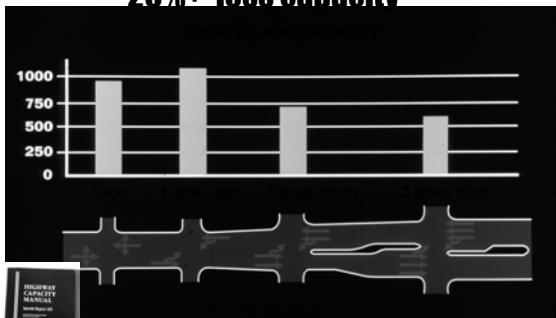
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## Each additional travel lane has 25%+ less capacity



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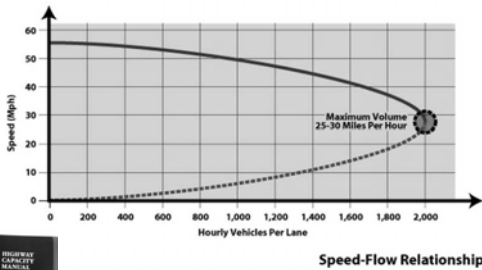
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## Local streets have even greater capacity than arterials



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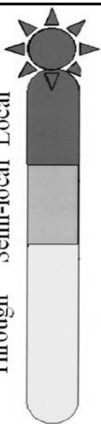
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Through  
Semi-local  
Local



### Local Trips

- Both origin and destination are in corridor
- Makes turns into and out-off driveways
- Example: Trip from home to the grocery store to get milk
- Best candidate for local network capture

### Semi-Local Trips

- Either origin or destination is in corridor
- Makes turns into and out-off driveways and into side streets
- Example: Trip from home to work
- Good candidate for local network capture

### Through Trips

- Neither origin nor destination is in corridor
- Interested in quickest option, seeks fastest route
- Doesn't turn into or out-off driveways or side streets

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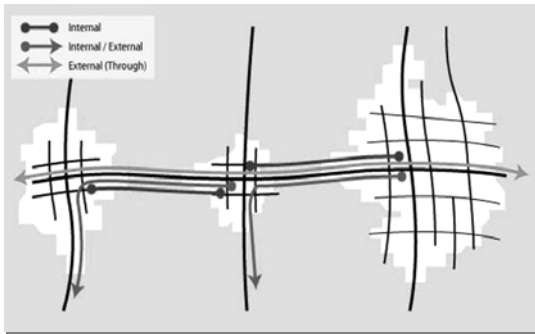
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## Form based codes can support efficient, sustainable transportation networks



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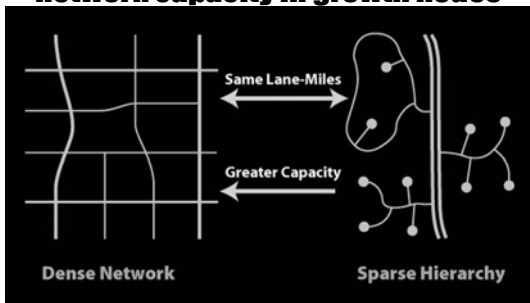
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## Form based codes can build network capacity in growth nodes



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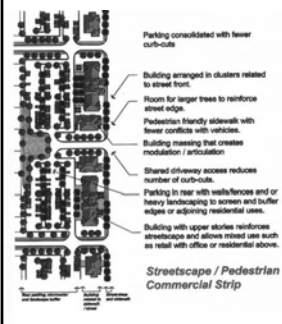
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### Smart Growth Corridor Features



### Conventional Strip Corridor Features



8.3 Suggested new design standards by Landis, Atkins for Magnet Road in Jacksonville and Atlantic Beach seek to overcome typical problems by incremental changes.

8.4 Typical commercial strip development in Florida, as designed by Landis, Atkins.

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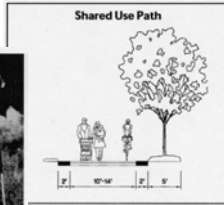
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# Form-based codes can support context sensitive design



Taken from: *GDOT Pedestrian & Streetscape Guide*

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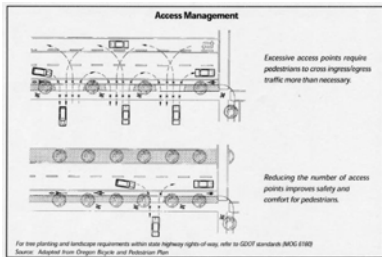
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# Form-based codes can support context sensitive design



Taken from: *GDOT Pedestrian & Streetscape Guide*

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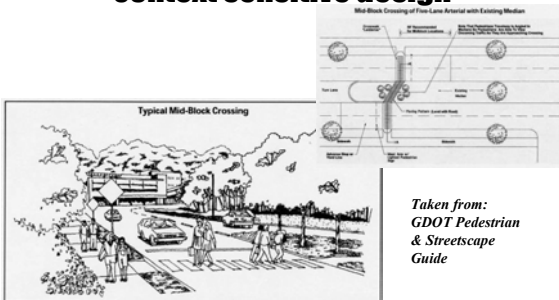
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# Form-based codes can support context sensitive design



Taken from: *GDOT Pedestrian & Streetscape Guide*

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# Stone Mountain Highway, a 7-mile suburban Corridor



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# Nodal Development



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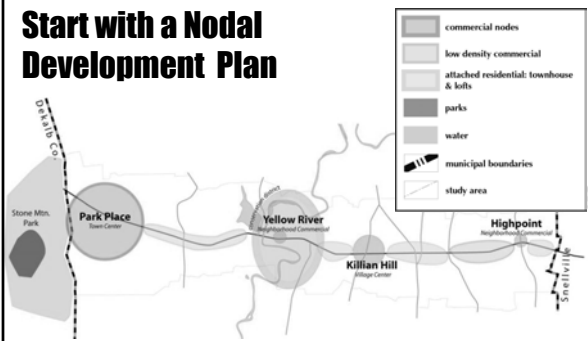
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# Start with a Nodal Development Plan



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# Nodal Development

- Water
- Park Space
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Commercial
- Mixed Use Residential
- New Urban Trail
- New Multi-Use Trail
- New Secondary Road
- New Road
- New Walkway
- New Public Space
- Proposed Public Light



Park Place

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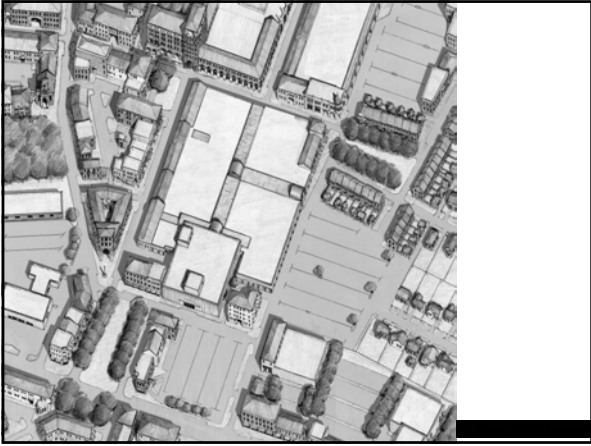
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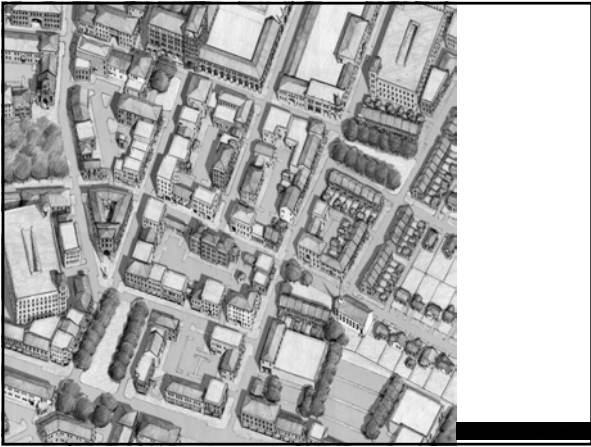
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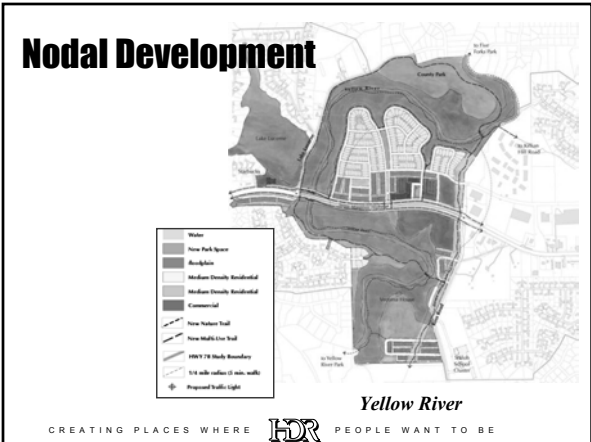
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## Nodal Development



*Highpoint*

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CREATING PLACES WHERE **HDR** PEOPLE WANT TO BE

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## Proposed Gwinnett Revitalization Districts Transect nodes tied to street /intersection type

	Residential	Local	Suburban	Neighborhood	Community	Total
	11	12	13	14	15	16
<b>Permitted Uses</b>						
Residential	*	*	*	*	*	*
Office				*	*	*
Public Facility		*	*	*	*	*
Food/Service		*	*	*	*	*
Accessory Use		*	*	*	*	*
Art/Gallery		*	*	*	*	*
Retail and Service		*	*	*	*	*
Office		*	*	*	*	*
Public and Semi-Public	*	*	*	*	*	*
<b>Density</b>						
Overall Density	5	2.2	8	12	22	28
<b>Sidewalks</b>						
Total Width	20'	15'-10"	15'-10"	15'-10"	15'-10"	15'-10"
Landscaping Zone	0'	0'	5'-8"	5'-8"	5'-8"	5'-8"
<b>Buildings</b>						
Front Setback**	0'	0'-10"	0'-5"	0'-5"	0'-5"	0'-5"
Building Height (Front Elevation)	0'	0'	0'	0'	0'	0'
Back Setback - Minimum	0'	0'-5"	0'-5"	0'-5"	0'-5"	0'-5"
Back Setback - Maximum	0'	0'-5"	0'-5"	0'-5"	0'-5"	0'-5"
Height - Maximum	0'	0'	0'	0'	0'	0'
Height - Minimum	0'	0'	0'	0'	0'	0'
<b>Parks and Plazas</b>						
0-10' Plazas	0%	0%	0%	0%	0%	0%
10-20' Plazas	0%	0%	0%	0%	0%	0%
20-30' Plazas	0%	0%	0%	0%	0%	0%
<b>Sign Allowance</b>						
Maximum Sign Permit	0'	0'	0'-5"	0'-5"	0'-5"	0'-5"
Overhead Sign Allowance	0'	0'	0'	0'	0'	0'

\*Includes all permitted uses defined in Section 1308 C-2 General Business District ( A ) Retail and Service Uses.

\*\*Includes all permitted uses defined in Section 1308 C-2 General Business District ( B ) Office Uses.

\*\*\*Includes all permitted uses defined in Section 1308 C-2 General Business District \*Retail and Service and Office uses are only permitted along arterial streets and within 600' feet of any street intersection.

\*\*Front setbacks should be measured from the back of the required sidewalk. Corner lots have two front yards.

\*Buildings continuous first floor storefronts have a front setback of 0-15ft.

**Businesses limited by size and type within each node**

- Retail establishments
- Pharmacies
- Grocery stores
- Restaurants
- Gasoline service stations



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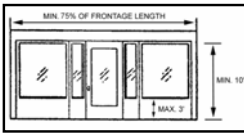
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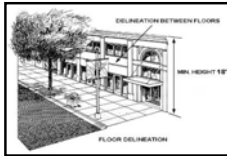
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**Storefront Street Requirements Within Village/Town Center**



- Windows shall comprise a minimum of 75% of street frontage
- All street, ground level development fronting shall have the following requirements
- Clear, unpainted or otherwise treated glass
- No more than a 20 foot length of blank wall



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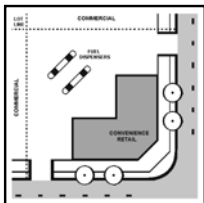
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**Gasoline Service Stations**



- A maximum of 4 fuel pumps (or 8 fueling position spaces)
- Fuel pumps, canopy, or associated service area shall not be located between building and the street

- No car washes or automobile maintenance garages permitted



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## Bicycle Parking

- Bicycle/moped spaces located within the street furniture zone or at least as close as the closest automobile space
- At least one (1) bicycle/moped parking space for every 20 automobile parking spaces
- No fewer than 3 bicycle/moped parking spaces



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## HIGHWAY 411 Concept Plan Connecting Rome and Cartersville



A 27-mile 4-lane divided rural GDOT Highway.

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This could be your future of your rural landscape



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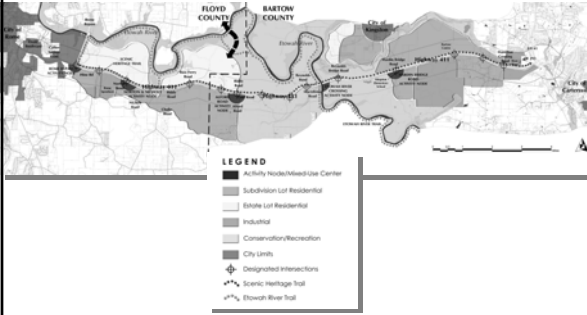
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# Concept Plan identifies development nodes and conservation areas.



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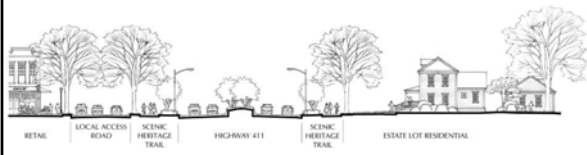
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# Future Character of Highway 411 at nodes

PROPOSED FUTURE SECTION OF HIGHWAY 411



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# Future Character of Highway 411 at nodes

PROPOSED FUTURE SECTION OF HIGHWAY 411



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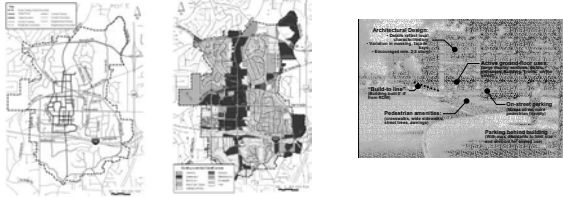
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## Form-based Codes are critical to successful plan implementation



### Develop a Plan

- Identify natural asset protection
- Define nodal development locations
- Define the future infrastructure network

### Amend Zoning

- Establish corridor's form and land use
- Based on analysis of district's distinct character

### Build to Code

- Apply design standards
- Apply street typologies and standards
- Implement amenities
- Support through public investment

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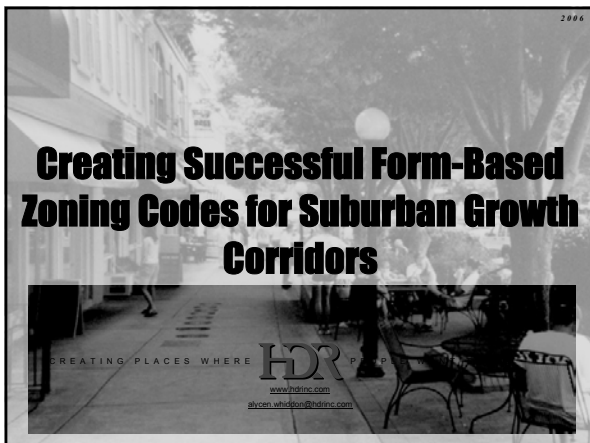
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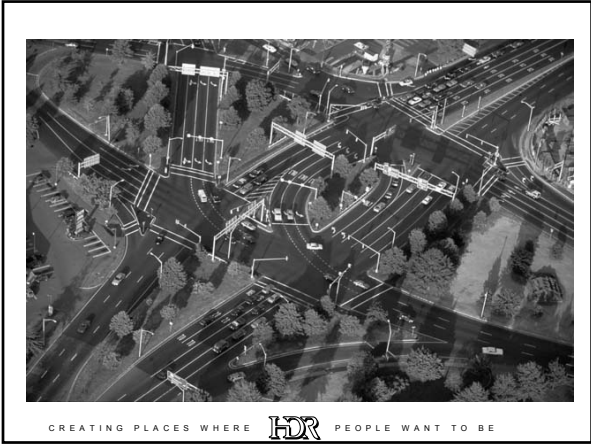
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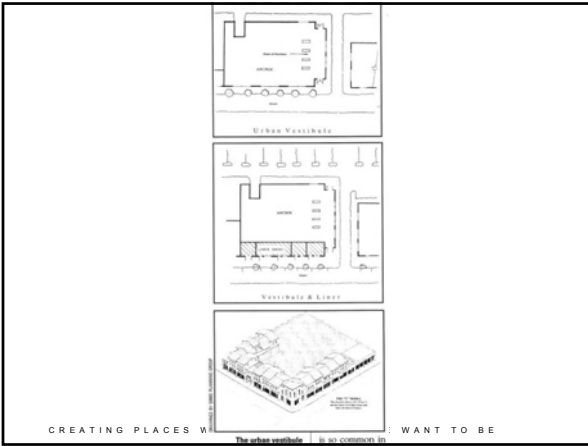
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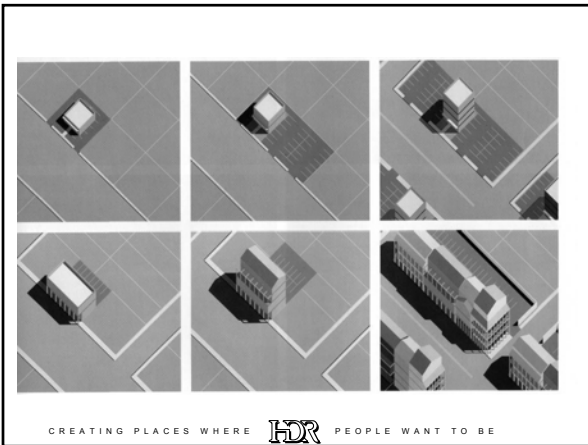
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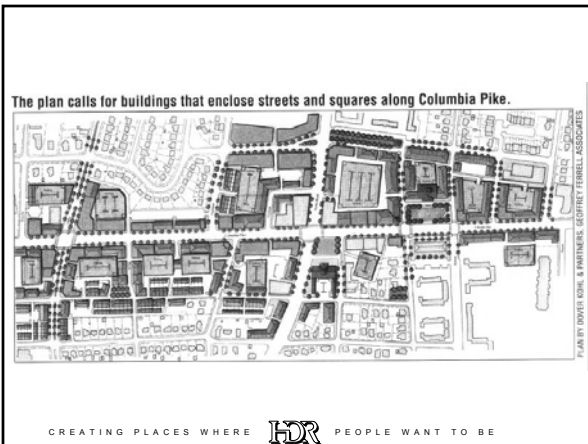
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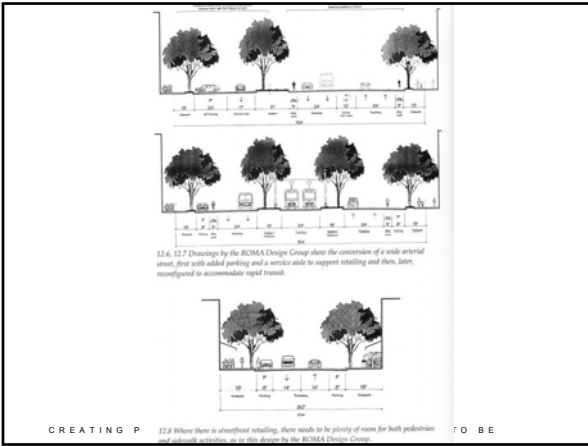
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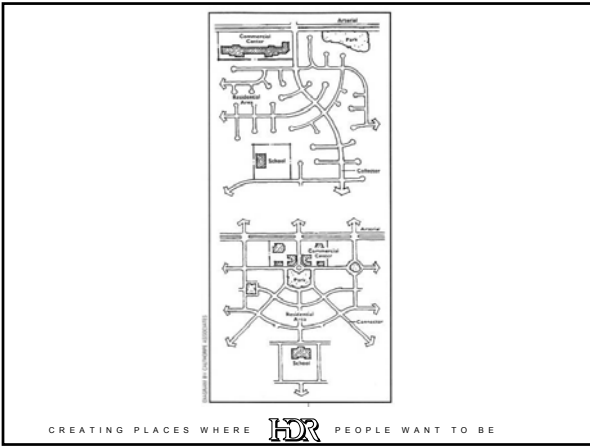
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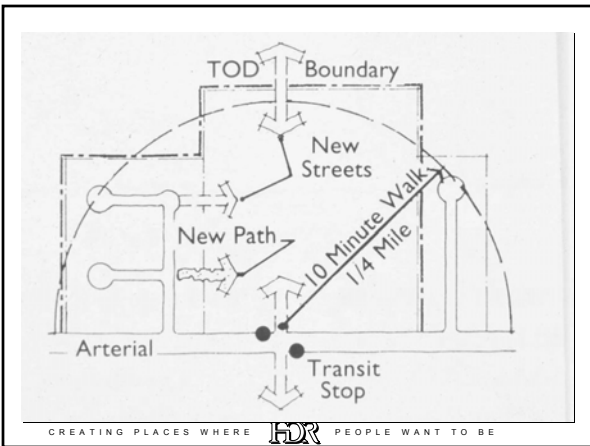
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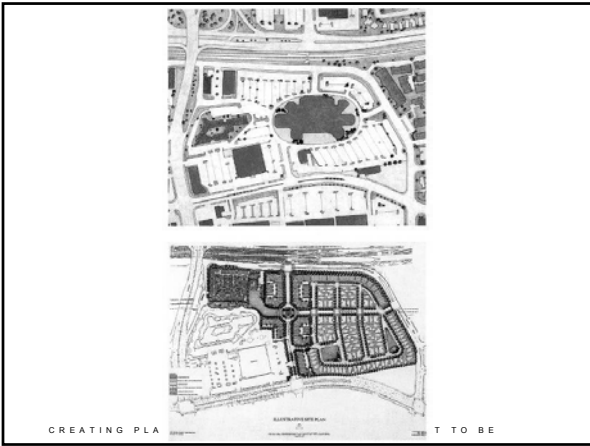
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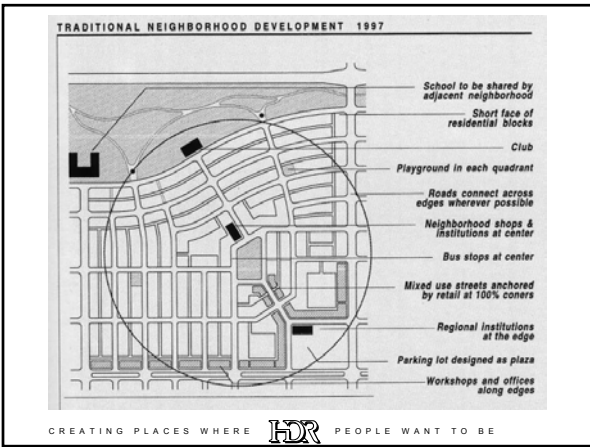
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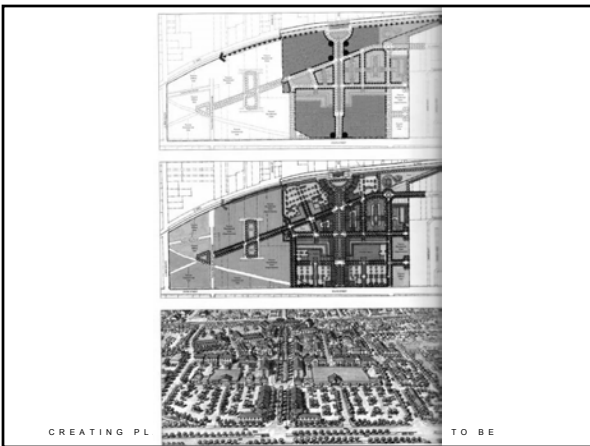
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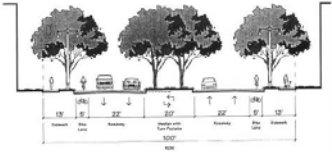
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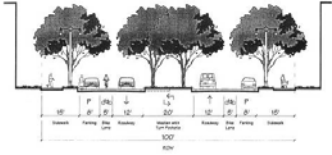
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12.14, 12.15 Arterial streets can be treated as boulevards, as in these drawings by the ACMA Design Group. The landscaped median makes it much easier for pedestrians to cross the street.




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