Chapter I: The Built Environment

Introduction

Corporations and planners have in common the fact that they are both charged with projecting the impacts of their actions 5, 10 and 20 years into the future. A retailer's investors count on the decisions that are made today adding up to profits at some future point in time. A city planner's investors - the residents and businesses of the neighborhoods and cities that they are planning for - expect that the overall health of the community, and their individual well-being, will grow with time. Competition is ripe in both of these markets. If the corporation or planners fail, they will lose their investors to other, more successful offerings.

One of the challenges planners face in this regard is in shaping the design of buildings, neighborhoods and cities. Planners must strive to ensure that what is built today will not become prematurely obsolete and thus lead to a loss of residents and businesses. At the same time, they may seek to limit the amount of development, managing a sustainable level of growth that is appropriate to the community at hand. For examples, planners need look no further than some of the physically segregated, auto-oriented retail environments that have been built over the last several decades. While they may be retail formats that many shoppers demand today, these typologies have been over built and signs of transition are already evident.

Inherent to this dilemma is the fact that many of these retailers are building structures in stark contrast to those that benefited from the long-term foresight of builders from a century ago. A big box made of corrugated metal and cinder block, set hundreds of feet back from the nearest road, with embellishment only suitable to a specific brand or corporation does not smack of permanence or of a life span beyond its first tenant's lifetime. Many of our nation's most treasured buildings, on the other hand, were built more than 100 years ago and will likely remain standing for another 100.

The enduring quality of these buildings is evidenced by their ability to be reused dozens of times over. Turn-of-the-century warehouses have become offices, artists' lofts and residential condominiums. Their longevity is further supported by the fact that they exist in tightly woven, mixed-use neighborhoods where many resources are shared and users of all types keep buildings occupied and streets and sidewalks active.

There may yet be a use for the obsolete malls, strip centers and big boxes of today, but the current trend is to operate them until they are no longer profitable and then either abandon them or tear them down and build anew. Many communities consider themselves lucky if the latter is the case, particularly in slow or no-growth regions like Northeast Ohio. This method is not sustainable economically or environmentally. New strategies have already begun to address this problem and others are evolving, even as these poorly conceived, short-sighted developments continue to spread across much of the country. It is essential that planners and legislators address these issues and pursue progressive solutions to building and site design; sustainable site planning; zoning reformation; investment in sustainable building practices; and finance of sustainable development.

Sustainability and Building

Architecture and Building

Sustainable development occurs under several different types of contexts and eludes having one definition. The most familiar aspect of sustainability is the ever popular phrase of "green building." Green building is most simply understood as a physical structure constructed utilizing energy saving techniques during its construction as well as its ability to consume limited amounts of energy and have a longer, more usable lifetime than other formats (a "big-box" per se). Many people may not consider the programmatic elements, other than saving energy, that are part of green building design or what ways green design can save energy, aside from cutting down the need for heating and cooling the internal parts of a structure. Understanding green building goes beyond simple design principles. We must also consider aspects such as material intensities and site planning.

LEED stands for Leadership in Energy and Environmental Design. The use of LEED standards is a relatively new effort that promotes the development of environmentally friendly buildings and rates the efficiency of new buildings based on a point system. Buildings can attain a certified, silver, gold, or platinum level of certification according to how many points are achieved though the various stages of construction. Many people are familiar with green building elements like green roofs, but points can be awarded for things like density, location to mass transit and on-site remediation. There are many different types of LEED rating systems for the various types of development that occur in society. LEED-H for homes, LEED-NC for new construction and LEED-ND for neighborhood developments are a few examples. LEED-ND is a category that is relatively new and rests on an important theory that even though a building alone can be considered sustainable by design, one must consider the context in which it rests. LEED-ND is described by the US Green Building Council (USGBC) as

> "…hav[ing] a similarly positive effect on development trends to revitalize existing urban areas, decrease land consumption, decrease vehicle miles traveled, improve air quality, decrease polluted stormwater runoff, and create mixed-income, walkable communities...LEED-ND will address location, linkage to other communities, and infrastructure issues that other LEED programs haven't touched on."[2]

LEED-ND particularly stands out with its newly innovative approach to address issues that go beyond structural efficiency. One of the more interesting elements of LEED-ND is its specification of the actual location of developments and the attention to community design issues. The development of LEED standards are notable for the collaborative approach taken towards their development. For example, LEED-ND did not always incorporate the importance of location and community design and received heavy criticism because of it. However, because of the open and collaborative design approach taken by the USGBC, these elements were later added. Other characteristics of the LEED-ND rating system are its integration of smart growth initiatives, new urbanism and green design.

[2] USGBC – U.S. Green Building Council. 2006. U.S. Green Building Council. April 2006. <http://www.usgbr.org>.

One of the most important factors of LEED-ND has been the introduction of the importance of siting. Not only is growth important because of its impacts on a region's air and water quality, but also because of how it can lead to sprawling communities.

> "The negative environmental, social, and economic impacts [of sprawl] are affecting more and more people on a daily basis. Long-distance commutes and traffic tie-ups contribute to worsening health-related issues, such as air pollution and increased asthma and other breathing related illnesses. More impervious roadways, rooftops, driveways, and parking lots mean more flooding and water pollution, and runoff that have nowhere to go and plenty of toxins to pick up on its way."[3]

This is why 25% the points that can possibly be earned by LEED-ND projects are attributed to location itself. "Location is crucial because it determines whether, and how far, people have to drive to get there…transportation accounted for 28 percent of U.S. energy consumption in 2004, it makes sense to pay attention to how a development affect transportation patterns."[4]

Keeping sprawl in check means paying attention to density and diversity. Good density is typically defined by sustainability advocates as high density. One of the biggest payoffs (but not always recognized as so) of dense development is the preservation of land acquired by using less of it. Smart growth proponents are already promoting such land use behaviors and many municipalities offer density bonuses for developers who develop PUD, or Planned Unit Developments, densely.

Another measure of benefits returned through dense development is the reduction of taxes a home owner may experience in more dense areas because of the less a local government has to extend their utilities to remote or leap-frog developments. Further, dense development can increase the possibility for creating diversity in housing supply.

> "…people can stay in an area throughout their lives and change dwellings without moving very far as they graduate from college, raise families, and eventually retire…diverse housing stock can also help integrate communities by class, race, and age, leading to a higher population density that comes from building both small and large homes…that makes the neighborhood more able to support everything from boutiques to bus systems."[5]

<u>Material Intensity</u>

There is no question that construction, use, and demolition of a building has tremendous environmental impacts. As we start to consider the specific elements that impact the

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[3] Kollin, Cheryl. "The winds of change are blowing through the building community, fueled by consumer demand and discerning practitioners." *American Forests*. Spring 2005. April 2006. <http://american forests.org/productsandpubs/magazine/archives/2005spring/communities.php>.

[4] Kelly, Carolyn. "Rating System Asks: Where You At?." Michigan Land Institute. October 20, 2005. April 2005. <http://www.mlui.org/print.asp?fileid=16929>.

[5] Kelly, Carolyn. "Rating System Asks: Where You At?." Michigan Land Institute. October 20, 2005. April 2005. <http://www.mlui.org/print.asp?fileid=16929>.

environment, we eventually come to the issue of materials. A building is, in its very essence, a composition of materials assembled to create a functional form. As we begin to think about material composition, we have to consider the design choices we make with them. Those design choices must include material selection that is based on a consideration of origin and how it may affect future adaptable uses of the building. The consciousness of a material's origin, production, use-period, and final discarding is also known as having a Life Cycle Awareness of that material.

Through Life Cycle awareness we can make better decisions as we create materials for use in our buildings. Humans are increasingly realizing the interconnectedness to the natural world and our responsibility to work as closely as possible with the natural process. To further illustrate, we must understand that in the natural process there is no waste generated. Even what we may consider a "waste" product of an organism's life cycle has a purpose. Waste that is created by humans through unnatural resource extraction and material production does not have its place in the natural process.

What is it exactly is the life cycle we need to be aware of? The life cycle entails quarrying and refining of raw materials; production and manufacturing of raw materials; manufacturing raw materials into components; use of components on a construction site; use of the building; and finally the demolition, reuse and disposal of the building. Historically, our human society has been limited in our ability to extract resources and materials. However, due to technological advances, we have eliminated many of the limits on what we can build and what we want to build it with. Frankly, sustainability is not just our ability to look into the future and make better judgments, but also our ability to look at our current status as well.

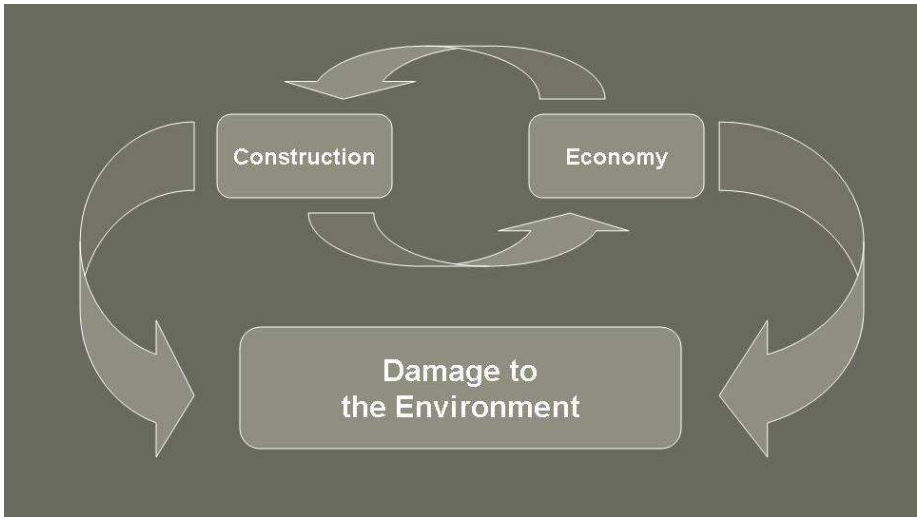

Figure 1.1

Land Use Strategies

Communities that seek to build a sustainable retail landscape have many options to work with. In addition to strategies that work within the structures themselves, the foundation for many of these tools can be found in comprehensive planning and zoning statutes. State zoning enabling legislation gives municipalities and counties the responsibility and authority through

which sustainable retail form can be promoted. The state legislation can go further, spelling out goals and objectives to be developed in local legislation.

Beyond the state legislation, it is up to each municipality to establish its own principles and codes to ensure sustainable development criteria are met. Through comprehensive planning and community goal-setting, communities can establish the appropriate design standards for retail facilities in their community. By tapping into the authority of "police power," which is the legal basis for land use regulation,[6] the community is setting a framework for legislation that can enforce the type of development that they have deemed desirable or appropriate, so long as it can be proven to protect the health, safety and welfare of its residents. Zoning and planning boards may be hard pressed to deny a building permit or development proposal for an undesirable project without the force of these regulations.

Worldwide, progressive land use legislation is demonstrating awareness of the impacts of building and neighborhood form and function on the environment, the economy, social networks, and the overall health of communities. Examples range from seemingly subjective measures like aesthetics, to the precision of maximum store size limits. A growing number of communities have begun to recognize the obsolescence of their zoning code and have adopted new "smart" or "form-based" codes that encompass retail and mixture of uses, while others are attempting to concentrate development around infrastructure improvements and transit. Still others have enacted zoning regulations that are focused specifically on ensuring energy efficiency in the built environment. One theme rings true throughout these examples: regulation and successful implementation are most plausible when the process includes positive planning and collaboration across jurisdictions, regulators, property owners, planning officials, and the community at large.

Aesthetics

A number of communities have been able to enforce their land use regulations on the sole basis of aesthetics. The protection of neighborhood character and stability, often as they relate to historically significant structures and neighborhoods or to economic diversity and function, has been deemed a sufficient application of the police power of legislative bodies.[7] In many cases, the argument for aesthetics comes in relation to franchise retailers, where brand identity is often built into their structures. These free-standing, "cookie-cutter" buildings can prove unsustainable, as they have no real relation to their surroundings and are unlikely to be re-used should they go vacant. Building or project size can also be a factor in the aesthetics argument.[8] The ability of a proposed project to blend into its surroundings, where they are deemed to be worthy of preservation, can prove important in the permitting process where strict regulations have been established. Under these criteria, a standardized drive-thru franchise or an auto-oriented strip center may not be allowed in a district where pedestrian-based form is well-established. Well-planned communities have been able to enforce regulations that have led developers and franchises to fit appropriately into the context of the existing built environment.

[6] Curtin, Daniel J., Jr. 2005. "Regulating Big Box Stores: The Proper Use of the City or County's Police Power and its Comprehensive Plan." *Vermont Journal of Environmental Law*. 6: 34.
[7] Ibid. at 36-41.
[8] Murphy, James. 2004. "Vermont's Act 250 and the Problem of Sprawl." *Albany Law Environmental Outlook Journal*. 9: 223-227.

Size Caps

Placing a size cap on store sizes is another method that has been implemented across the country to promote a more sustainable building form. Smaller building footprints allow for a better mixture of uses, enhanced walkability and a greater possibility of reuse if the built structure is vacated. Additionally, in smaller communities with limited buying power, the potential exists for a single retailer of sufficient size to capture a substantial percentage of consumer dollars, leaving the pre-existing retailers with an insufficient share of the market for survival. This is a bad scenario for a number of reasons, not the least of which are the benefits of thriving small businesses and local ownership, which have been well documented.[9] Large format retailers do not generally exist in districts with a true diversity of retail options, nor do they typically inhabit neighborhoods with public open spaces, functional sidewalks, access to public transit, or a mixture of housing types. For these reasons and many others, they have been deemed an unsustainable retail typology by many communities.

In the early 1990s, Ashland, Oregon established a 45,000 square foot cap on retail stores. Hailey, Idaho enacted a 36,000 square foot cap in the mid-1990s and Rockville, Maryland added their own 65,000 square foot limit in 2000.[10] In Northeast Ohio, the City of Westlake has successfully implemented its limitation on retailers over 65,000 square feet. Dozens of other similar regulations exist nationwide, many of which have withstood challenges in the courts. So long as their foundations are soundly based within the limitations of the legislature's police power, they fare well. However, if they are found to be arbitrary or directed at a single retailer, the retailer's challenge may prove successful.

Other community approaches to the "big box" format include acceptance with conditions[11] and incorporation into existing urban environments. As the market continues to exhibit demand for these mega-stores, it is imperative that communities who cannot abolish them regulate them otherwise to fit more appropriately into their surroundings. This can entail architectural features, building materials, LEED principles, pedestrian access, or site plan criteria relating to parking placement, setbacks, and public amenities. As is the case with most of these regulations, however, the power of the policy is only as strong as the region's ability to work together in enforcing them. If one community has strict guidelines, but its neighbor has none, a retailer may simply pick up and move down the road to the next town, contributing to their tax base, but still draining consumer dollars and leaving its substantial ecological footprint on the broader community.

A more incentive based approach might lead a city or region to encourage retailers to locate in existing commercial areas and ideally, to reuse existing structures. Historic and new markets tax credits are potential sources for these incentives, as are fast-track approvals, reduced parking requirements, and density bonuses for developers. There is evidence of a growing trend in this regard across the country. A recent article cited Wal-Mart's plans to expand into low-

[9] Mitchell, Stacy. 2006. *Big-Box Swindle: The True Cost of Mega-Retailers and the Fight for America's Independent Businesses*. Boston: Beacon Press.

[10] Ibid. at 212.

[11] Merriam, Dwight H. 2005. "Breaking Big Boxes: Learning from the Horse Whisperers." *Vermont Journal of Environmental Law*. 6: 17-22.

income urban areas across the United States.[12] Home Depot recently opened a flagship store in Manhattan that fits snugly into a historic mixed-use structure. Elsewhere, "big-box" retailers have become ground floor tenants in mixed-use developments in downtowns and inner city neighborhoods where income density (and the return of the middle and upper classes) outweighs relatively small per-capita incomes.

Ultimately, if a more sustainable building type cannot be enforced, establishment of reuse clauses or demolition provisions as conditions of project approval can be useful. With the developer or retailer's commitment to these contingencies, it is more likely that a community can prevent the building from sitting vacant should the proposed use fail.

Smart and Form-Based Code

Many communities have begun to acknowledge that their zoning codes are outdated and have enabled the type of development that they now seek to deter. The Euclidian zoning of the past, which separated uses and led to the proliferation of countless sterile, automobile-dependent communities, is being replaced in some communities by "smart" and "form-based" zoning codes. There are other names for this type of land use legislation, including "new urbanism" and "traditional neighborhood development." The common theme among them is a return to the idea of mixed uses and building forms that create lively streets where social interaction comes more naturally and people are able to live, work and recreate in a single place.

River Falls, Wisconsin's Traditional Neighborhood Development (TND) Ordinance is a response to the 1999 Wisconsin Smart Growth Act's requirements that such TNDs be developed by local governments by 2002. The ordinance applies to land annexed to the city consisting of more than 40 acres and to designated neighborhood centers that coincide with the sewer service and water quality management plan. The ordinance adopts principles that were typical to the city in the 1940s with the intention of allowing "for development of fully integrated, mixed use pedestrian oriented neighborhoods."[13] Residential uses in the "mixed-use area" are to be within a 15-minute walk of commercial, civic and open spaces. All modes of transit are promoted, with an emphasis on pedestrian circulation, bicycles and public transit. Parking facilities are to be located beside or behind buildings or in garages and shared supply is encouraged. A number of additional design standards relating to the built environment are laid out in the code, each promoting a diverse, vibrant, attractive, and accessible community.

Form-based codes are more specifically geared towards articulating standards for a particular physical form, as opposed to the Euclidian use standard. These codes are either active or planned in a number of communities, including Charleston, South Carolina; Denver, Colorado; Miami, Florida; and Arlington County, Virginia. Much like the SmartCode[14] or TND, the

[12] Miara, James. 2007. "Retail in Inner Cities." *Urban Land*. 66: 98.

[13] Nolon, John R. 2006. *Compendium of Land Use Laws for Sustainable Development*. Cambridge University Press.

[14] Emerson, Chad. 2006. "Making Main Street Legal Again: The SmartCode Solution to Sprawl." Berkeley Electronic Press. http://law.bepress.com/expresso/eps/954.

objective is to create an urban form that is walkable, transit friendly, dense, and diverse. In

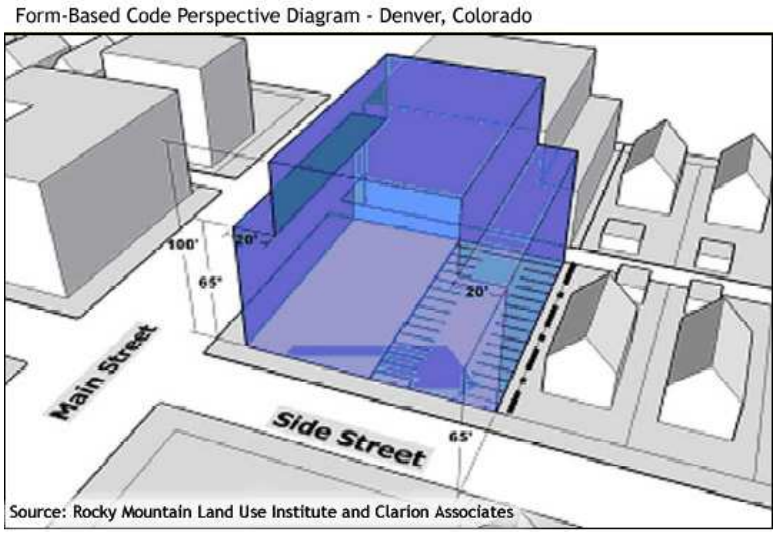

Figure 1.2

Charleston, the code requires that buildings meet with sidewalks and that parking be relegated to the rear of buildings and in on-street spaces. There are no minimum parking or lot-size requirements and no limitations on density.[15] In Arlington County, the form-based codes are not mandatory, but have been used in the vast majority of recent development proposals, due in part to incentives such as an expedited review process.[16]

Form-based codes present a predictable set of rules for developers that have ideally be created through a comprehensive planning and public input process. "They are ideal for jurisdictions seeking a fundamental change in urban form and character – for instance, when redeveloping areas that have become obsolete or which were poorly planned at the outset."[17] In Cleveland, form-based codes are being developed for the Lorain and Detroit Avenue corridors on the West Side. The historic form of these commercial thoroughfares provides a model that the community has deemed desirable and the new overlay zoning code will provide a streamlined tool with which to proceed with future development. If implemented effectively, they may serve as a model for the entire region. Form-based codes have, in fact, been discussed as a way to advance the regional planning process, where regional development and infrastructure patterns are not readily planned for at the local level.

Transit Oriented Development

There are many logical reasons for concentrating development around transit infrastructure. Among them are efficiency of transportation modes, the equity of access to amenities, and maximization of public infrastructure investments. Mass transit vehicles, whether buses, trains, circulator shuttles, ferries, or otherwise, produce far less aggregate emissions than the equivalent private automobiles that could have otherwise been used. They require little or no parking spaces, thus leaving more room for development or open space. Ideally, all members of a community can access transit and reach destinations within a complete network. The

[15] Lanford, Brent. 2003. "The Future of Civic Life: New Rules Concerning Urban Design Could Make Sprawl a Thing of the Past." CharretteCenter. http://www.charrettecenter.com. Reprinted from *Charleston City Paper*.
[16] Madden, Mary E. and Bill Spikowski. 2006. "Place Making with Form-Based Codes." *Urban Land*. September.
[17] Ibid. at 176.

infrastructure often exists, as in Cleveland, but is grossly underutilized. By concentrating development along existing transit corridors or at nodes, the public expenditure on transit can be better justified and can lead to overall ridership increases and better service provision.

A number of communities, including Cleveland, have begun to capitalize on investments in public transit infrastructure and can expect to see expanded networks as a result, along with growing property values adjacent to transit amenities. One example, Oregon's statewide Transportation Planning Rule (TPR), requires al local governments to adopt their own standards for provision of a safe, convenient and economic transportation system. Implementation of transportation plans takes place alongside state and regional plans and incorporates all modes. A transit oriented development (TOD) in the Portland suburb of Gresham capitalized upon an existing light rail line in its Civic Neighborhood Plan, which presented a stark contrast from the site's pre-existing "regional shopping center" designation and strong adherence to TPR requirements.[18]

Under the new code, a set of TOD zoning classifications are split into districts based on density and allowable uses, with an emphasis on a mixture of office, retail and residential uses. Allowable density grows with proximity to light rail stations, minimum lot sizes are eliminated, and parking space requirements are reduced. Aesthetic considerations include windows fronting sidewalks, entrances oriented towards the street, and a set of strong architectural review standards. The first phase of development consisted of nearly 300,000 square feet of office and retail space and 662 residential units. Phase two projects 250,000 square feet of office space, 400,000 square feet of retail, and 1,600 new homes. Because it is built with the pedestrian placed before the automobile and with convenient access to amenities and public transportation, the Gresham Civic Neighborhood promises to have a much smaller ecological footprint, as well as a more sustainable retail component that can be supported by neighborhood residents both as consumers and employees. The earlier "regional shopping center" classification would have led to a single-use, auto-oriented shopping center in this high capacity location.

Another example of TOD is Montgomery County, Maryland's mixed-use "transit station zones."[19] The objective of these zones is to concentrate multiple housing types, with an emphasis on multi-family, around transit amenities and commercial uses. The TS-R "residential" zone allows for convenience and neighborhood retail via special use permits, while the TS-M "mixed" zone focuses on existing commercial or mixed-use districts where automobile usage can be minimized and community self-sufficiency can be promoted through a better mixture of uses. Both of these TOD strategies will enable the development of communities of choice where more residential, retail, recreation, and transportation options will contribute to a better quality of life for residents.

[18] Sullivan, Edward J. 2005. "Cudgels and Collaboration: Commercial Development Regulation and Support in the Portland, Oregon-Vancouver, Washington Metropolitan Region." *Vermont Journal of Environmental Law*. 6: 74-80.

[19] Siek, Amanda. 2002. "Smart Cities: A Detailed Look at Land Use Planning Techniques that are Aimed at Promoting Both Energy and Environmental Conservation." *Albany Law Environmental Outlook Journal*. 7: 54-57.

The Greater Cleveland Regional Transit Authority's (GCRTA) development of TOD guidelines and strategy represents a positive shift in a region where development is all too often created with the "car is king" mentality. The reality is that there are a large number of residents in Northeast Ohio who do not or would prefer not to use their automobiles for every trip. Retail trips account for a massive amount of the region's vehicle miles traveled and developing retail around transit nodes would help to alleviate this necessity. Historic retail developments like Shaker Square and Tower City Center are clear examples of projects built around transit amenities. Lorain Avenue, Saint Clair and Broadway typify retail corridors built along streetcar lines – a typology that has struggled for some time in this region. Recent projects like Steelyard Commons and Crocker Park have incorporated bus stations and extended routes into their plans, but others, like Legacy Village, have gone so far as to prohibit GCRTA buses from entering their property. New retail projects should at least attempt to incorporate bus routes into their plans, but a greater ideal would be to develop with existing infrastructure, such as rapid stations and bus transfer points, in mind. GCRTA's strategy for joint development along the Red Line and Euclid Corridor are a step in the right direction, but a more concerted effort among municipalities, developers and the transit authority is needed.

Energy Efficiency

State legislatures and local planning bodies are increasingly incorporating energy conservation as one of the primary objectives in their comprehensive plans. Legislative focus areas include energy efficient design, incentivising the appropriate location of development, consumption of energy in construction, and alternative energy sources.[20] In Port Arthur, Texas, energy efficient zoning code for new developments requires passive solar orientation, coupled with a mixture of landscape features, to prevent overheating. Dade County, Florida boasts similar legislation, adding orientation towards cool breeze sources, with the goal of reducing energy consumption. San Diego, California has adopted an ordinance requiring that new development in unincorporated parts of the county use solar energy systems to heat water.

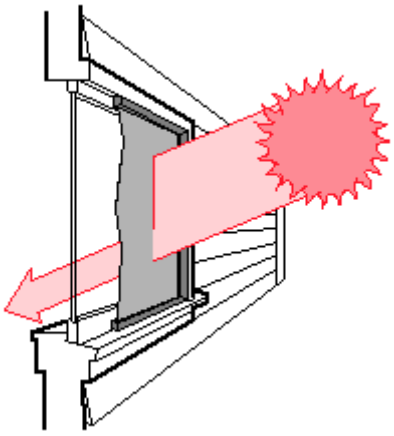

Figure 1.3

[21]

While this applies most readily to residential developments, the legislation could surely be extended to commercial areas as well. Selection and proper platting of a development site is critical to each of these regulations. Poor location within regional infrastructure networks could

[20] Ibid. at 50.
[21] http://oikos.com/esb/34/Screens.GIF

quickly cancel out each of the benefits of these policies. Street alignments and circulation networks are also significant factors to ensuring that the aforementioned regulations are effective.

There are certainly cases where existing infrastructure and site plans constrain these strategies, but many opportunities will arise as retail development continues throughout Northeast Ohio. Brunswick's LEED certified Giant Eagle store, the first supermarket in the US to achieve this status, is an example of a project that took these factors into account. In cases where sites are large or clear, energy efficient site design strategies should be pursued. As this paper will describe in a later section, the results can lead not only to better use of natural resources, but also to a more impressive bottom line.

This set of regulations and examples is certainly not exhaustive. New methods are being developed every day to address unsustainable patterns of development throughout the world. Challenges and opposition, usually in the form of property rights advocates, will inevitably rise to meet them. It is up to the communities themselves to drive the market demand for better design and to advocate for a strong vision of sustainable development that legislative and planning officials can then implement through a series of progressive land use reforms and other methods.

Impacts

Land Use – The Cleveland Context

Over the past 40 years Cleveland has experienced a sharp decline in population. Much of the population has moved outward, creating urban sprawl. The decline of our urban core has left many retail establishments vacant. Most of the retail development that has taken place over the past 40 years in the US has been in the suburbs of major metropolitan cities such as Cleveland. With persistent new retail development, many environmental and ecological issues have arisen. With respect to rapidly expanding retail development, concerns like storm water run-off and sediment flow into streams and rivers are significant.

Some concerns about urban sprawl, big box development, and the environment in Cleveland are:

- Increased traffic congestion and resulting air quality issues. [22]
- Building structure inconsistency with community character. [23]
- Impact on community and economy when retailer goes out of business or relocates.[24]

The City of Cleveland has three districts for retail; Local Retail, General Retail and a Shopping Center District. There are many other districts, such as Planned Unit Developments (PUD) and Mixed-Use Districts that are zoned and created for higher densities. By allowing for higher densities, planners can create pedestrian friendly and transit oriented neighborhoods. The City of Cleveland, through its Citywide Plan and Zoning Plan, can create incentives for existing businesses to remain in these neighborhoods and downtown and to attract new businesses to these areas.

[22] http://www.newrules.org/retail
[23] Ibid
[24] Ibid

Impact Fees and Sustainability

On the other hand, requiring new development to pay "impact fees," rather than subsidizing or otherwise enticing them with incentives, is a way to foster compact neighborhoods and infill development. In this way, planners can lessen infrastructure costs and upgrade and improve what is already there.[25]

Using impact fees to promote sustainability on retail projects can be achieved in Northeast Ohio by requiring that all developments pursue LEED principles, having a full inspection by their municipality to enforce this, and by requiring through zoning, that all new buildings pursue the following criteria:

Water

-Indoor water conservation
-Composting toilets
-Pervious materials
-Harvested rainwater
-On-premise irrigation

Energy

-Passive Solar Design
-Landscaping for Energy Conservation
-Earth Sheltered Design
-Solar Hot Water, Heating and Cooling Systems
-Gas Water Heating Systems
-Fans
-Energy Recovery Ventilator
-Programmable Thermostat
-Energy Efficient Lighting

Building materials

-Dimensional Lumber
-Wood Treatment
-Engineered Structural Materials
-Engineered Sheet Materials
-Engineered Siding and Trim
-Non-Toxic Termite Control
-Earth Materials
-Floor Coverings
-Wood Flooring
-Roofing
-Structural Wall Panels
-Insulation
-Windows and Doors

[25] Save Our Land, Save Our Towns, by Thomas Hylton. (RB Books, 1995).

-Cabinets[26]

Local governments should also require a regional environmental and impact review of large-scale development projects. The reviews should be conducted by Environmental Boards and other representatives from the affected region. Retailers should also increase communication efforts to help state and local officials understand that creating sound zoning code helps the city curve unwanted businesses to the downtown area and strengthens the businesses that are already there.

Policy Recommendations

Implementation of policy recommendations can be achieved by following the City of Cleveland's Comprehensive Plan (Road Map). The City's road map covers all essential development opportunities and zoning criteria. Zoning codes establish the rules that advance and implement the policies set forth in the comprehensive plan.

Create programs, initiatives or activities which are considered leading edge or exceptional models for others to follow. Develop the concept of achieving a minimum standard for a construction project, such as LEED certification, to possess the following basic qualities: acceptable aesthetics, solid construction using appropriate materials, and safety set standards of practices, which will include administrative rules, guidelines, policies and procedures.[27]

City governments, such as Cleveland and other surrounding municipalities, should be willing to endorse a regional planning review board or a regional government agency to review large developments over a standard square foot to ensure that the region is not over-retailed and the region is practicing environmentally sustainable policies.

By redeveloping the inner-city. we can help the environment recover from the benefits that were lost over the years. At the same time, this will help curtail the massive retail development in the outer suburbs. Some plans and programs that can curtail excessive retail development are:

- Enact zoning rules that establish size limits for retail zoning.
- Cap store sizes to help sustain the vitality of small-scale, pedestrian-oriented business districts, which in turn nurture local business development.
- Establishing limits for parking areas
- Increase investments in and access to public transportation.

<u>Investment</u>

The additional cost, or perceived additional cost, represents the most significant barrier for sustainable development and its market uptake. As seen in the Turner Construction Survey, Figure A, executive respondents claim "Higher Construction Costs" as the most discouraging element to green construction. Dr. Gary Pivo of the University of Arizona and Dr. Paul McNamara, from Prudential Investments, in their 2005 publication "Responsible Property

[26] Better Models for Development in Virginia, by Edward T. McMahon with Sara Hollberg and Shelley Mastran.
[27] See footnote 24

Investing," emphasize the power of this negative perception held by the real property investment community in their assertion that "… despite a lack of strong evidence either way, experience suggests that there is currently a tendency for real estate investors to perceive that investing responsibly results in higher costs with no immediate increase in asset value. As such, investing responsibly is perceived as dilutive to investment returns and is not, therefore, undertaken willingly.[28]" The available evidence, however, suggests that these assumptions are without merit. In fact, a fairly thorough literature review returned no articles or books that argued in opposition to the long term cost savings of sustainable development. Pivo and McNamara (2005) claim that "There is enough research evidence available currently to show that it is not axiomatic that investing responsibly will harm investment performance…"[29]Even if there was, in fact, convincing evidence to the contrary it might be worth questioning the current domains employed by fiduciaries in measuring investment returns.

Pivo, et. al. suggest two alternative hypotheses and considerations that could be used by institutional investors, in measuring investment returns that might enhance the value of sustainable development from the perspective of the investor. The first is the "Universal Owner Hypothesis" which acknowledges that investors with high levels of diversification have a stake in the whole economy. Some of the most significant benefits of sustainable development are seen in the form of increased worker health and productivity, which can dramatically increase the returns of tenants, [30]and might have only a direct impact for the property owner, aside from the potential of correlated increases in property valuation and rents. To the extent, however, that the owner of the property has a financial stake, or holdings, in the tenant company, their overall investment portfolio might be enhanced by such green improvements, that were not beneficial to the real estate segment of their portfolio. The Resident Participant Hypothesis (RPH) is slightly more reaching in its assessment but is worth noting. RPH suggests that a resident of a community that is also an investment fund participant might see the sustainable commitment in their community as a positive investment even despite its performing less well than other real estate funds, in effect adding to market demand.

The most current analyses of costs associated with green development suggest a premium over conventional design ranging from .66% for LEED "Certified[31]" buildings to 6.5% for LEED "Platinum" buildings[32]. Sustainability "guru" Ken Yeang, of Llewellyn Davis Yeang, estimates that for some office buildings the cost premium is between 10% and 20 %-- These estimates were by far the highest seen, and were in reference to office buildings in Europe.[33] These costs have been shown to be decreasing over time as economies of scale and increasing

[28] Paul McNamara & Gary Pivo, "Responsible Property Investing," *International Real Estate Review* 8, no. 1 (2005):128-143.
[29] Ibid.
[30] *White Paper on Sustainability, Do Green Buildings cost more to build?* (Oakbrook, Illinois: Building Design and Construction, 2003) https://www.usgbc.org/Docs/Resources/BDCWhitePaperR2.pdf.
[31] LEED has levels of compliance ranging from Certified, the least strict, to Platinum, the strictest, Platinum Certification is rare, and thus only one was used in Kats analysis.
[32] Gregory Kats, *Green Building Costs and Financial Benefits*, Massachusetts Technology Collaborative, 2003
[33] "Green Rhetoric Exceeds Reality: a Dublin Conference called for sustainability in offices, but Agents are a Stumbling Block," *Building Design*, May 19, 2006, http://etextb.ohiolink.edu:20080/bin/gate.exe?f=doc&state=s0a4b1.3.4

knowledge in the different areas of green development lower prices. In fact Seattle has seen the cost of Silver LEED certified buildings drop from 3-4% several years ago to 1-2% today. Likewise 3 Silver LEED buildings in Portland Oregon built in 1995, 1997, and 2000 exhibited cost premiums of 2%, 1%, and 0%, respectively[15]. In Gregory Kats, Managing Principal of Capital E, analysis of sustainable schools he found that 4 out of 33 schools had paid no cost premium for their sustainable designs and 8 paid less than 1% more than conventional design.

Some aspects of design have little or no additional first costs to that of conventional design including site orientation, window and overhang placement,[34] and waterless toilets[35]. Other sustainable systems-- as mentioned by Marylynn Placet and Beverly Dyer in an article entitled "The Business Case for Sustainable Design and Construction," prepared for the U.S. Department of Energy-- that may cost more in the design phase, such as an insulated shell, can be offset by the reduced cost of a smaller mechanical system. This concept is known as "right sizing" of infrastructure and mechanical systems. In addition material costs can be reduced during the construction phase by dimensional planning—a strategy to design for minimizing framing needs, carpet etc.[36]

The dynamism of the fledgling sustainable building and design fields is such that empirical research on costs and benefits are rendered obsolete rapidly. In addition the cost is quite lucid depending on the ability of a local economy to handle the process, the experience of the developer, and the degree to which sustainable design is incorporated. Even still, Dr. McNamara addressed this point, in his response to the survey question "Does the extra cost associated with sustainable development increase the return on investment in the long term?, saying "I think one has to recognize that there is no automatic presumption these days that the extra costs are very material. Even if they are, I think there is a lot that can be done to improve performance at low or near no cost. This makes the economics easier."

In addition to savings on operational expenses many firms stand to save money on increased worker productivity. It has been exhaustively documented that design considerations in the workplace dramatically alter worker productivity and health. The Carnegie Mellon University Center for Building Performance compiled a list of studies regarding the relationships between Air Quality, High Performance Lighting, and Improved Temperature controls as they correlate with health and productivity. The following chart suggests that careful design considerations can have a profound impact on employee efficiency. While the exact financial impacts produced by an increase in worker productivity and health vary firm to firm, and are difficult to quantify, they exist.

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[34]State of California Integrated Waste Management Board *Sustainable (Green) Building: Project Design Cost Issues*, http://www.ciwmb.ca.gov/GreenBuilding/Design/CostIssues.htm#Primers.
[35] Jim Allen Going Green Pays Off, *Buildings*, 98, no. 7 (2004):32, http://www.buildings.com/Articles/detail.asp?ArticleID=1970
[36] U.S. Department of Energy, Energy Efficiency and Renewable Energy, Dyer, Beverly & Marylynn Placet *The Business Case for Sustainable Design and Construction, by Marylynn Placet et. al.* Washington D.C.: Government Printing Office, 2003. http://www.eere.energy.gov/femp/technologies/sustainable_federalfacilities.cfm

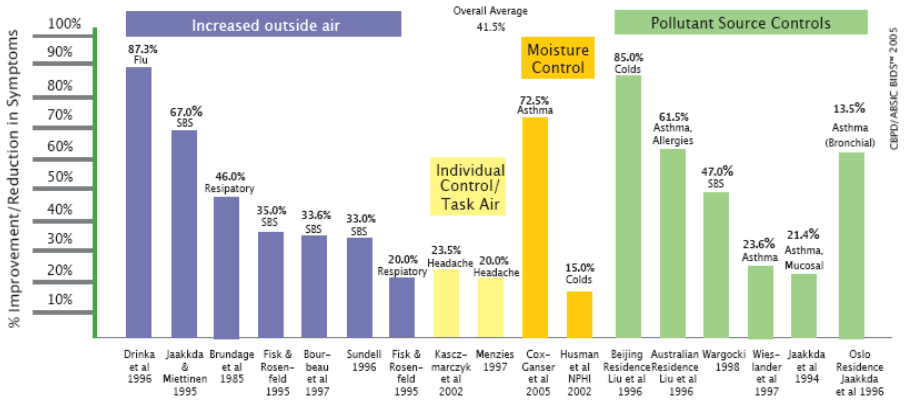

Figure 1.4

Source: Carnegie Mellon University Center for Building Performance, 2005

In a case study of Verifone's distribution center in Southern California, the United States Green Building Council found that in addition to reducing energy by 59% they also saw a 47% decrease in employee absenteeism and a 5% increase in worker productivity, by improving the mechanical systems, introducing daylight, reducing volatile organic compounds (VOC) and introducing ergonomic furnishings."[37] Another study found that the installation of skylights in retail facilities led to an increase in sales of up to 40% over other stores without skylights.[38] Any general claims made as to the financial benefits of increased health and productivity would be misleading given the range of possibilities and the lack of a reliable/long-term measuring tool, but it is apparent that an increase in productivity is a result of better design and it seems obvious that this would have a positive effect on the financial bottom line. It is also difficult to gauge to what extent this increase would pass on to the developer in the form of increasing returns.

Value Added

In theory sustainable development can add value and improve returns in several different ways. First, government, at all levels is increasingly adding pressure to holding companies regarding their social and environmental responsibility. As Yolande Barnes, Director of Research at Savills,[39] notes "[g]overnments response to increasing climate change which is likely to take the form of *stricter* regulation on industry could bode well for the institutional investor interested in alternative energy.[40] Similarly, Jon Emery, Head of UK development and construction for Hammerson, said that "[Hammerson is] looking to how tough the building regulations will be in five or ten years time…we're investors and we're trying to get there early."[41] In reference to institutional property holding companies, Dr. Gary Pivo, of the University of Arizona, claims that "…there is a need to critically review the timescales by which they conduct their fiduciary duties and investment analyses. In a world where general concerns over environmental and social issues are certain to grow and policy responses toughen, fund

[37] US Green Building Council *Building Momentum, National Trends and Prospects for High-Performance Green Buildings*, (Washington D.C., 2003)

[38] Heschong-Mahone Group, *Skylighting and Retail Sales: An Investigation into the Relationship Between Daylighting and Human Performance* (Fair Oaks, CA: on behalf of the California Board for Energy Efficiency Third Party Programme, 1999).

[39] Savills London

[40] Italics added by author for emphasis

[41] Hammerson Launches Green Construction Drive: Developer to Review Building Consultants and Remove Air Conditioning From it's Shopping Centers" *Property Week.* 71(21) P. 53. May, 26, 2006, http://etextb.ohiolink.edu:20080/bin/gate.exe?f=doc&state=gre8qq.2.12

managers need to set the avoidance of small costs in the short term against the potential for major deleterious investment impacts in the medium and long term. Such 'short-termism' could be deemed to run contrary to fiduciary responsibilities over the medium term." [42]Second, development that approaches local concerns considerately and with the blessing of the community and its officials is obviously more likely to receive subsidies and expedited permits than indifferent development. Third, multiple opportunities exist to enhance operational efficiencies and increase competitiveness when the high cost of resource consumption is thoroughly addressed, and these opportunities are becoming more affordable as economies of scale develop around them. Fourth, strong reputation benefits can be achieved. And fifth, responsible producers can increase their knowledge of these practices early providing a long term competitive advantage.

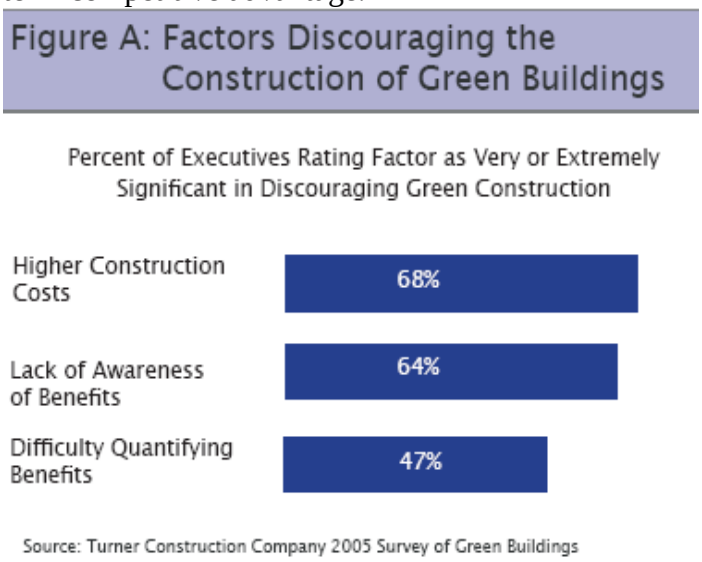

Figure 1.5

Turner Construction Company[43], an industry leader in sustainable building construction, surveyed top executives regarding their opinions about the factors most discouraging to green construction. There were three separate factors for which respondents selected answers from a Likert scale. Figure 1.5 displays the percentage that answered either "very" or "extremely" discouraging.

According to this survey 47% of respondents suggested that the difficulty quantifying benefits was very or extremely discouraging to green construction. While long term, or retrospective studies focusing on this matter are unavailable- given the novelty of these design concepts- there have been significant attempts at quantifying future benefits.

The most easily quantified financial benefits of green design deal with energy and water efficiency, though attempts have been made concerning other benefits. Some of the more accepted and cited studies have used Net Present Value (NPV) calculations that seek to determine the present value (in current dollars) of sustainable design implementations that can be used as a comparison tool with first cost premiums. Gregory Kats, managing principal of Capital

[42] Paul McNamara. & Gary Pivo "Responsible Property Investing" (Power Point), http://www.u.arizona.edu/~gpivo/Toronto%20Presentation_files/frame.htm
[43] Turner Construction Company- http://www.turnerconstruction.com

E[44] and advisor to the states of Massachusetts and California,[45] has worked extensively on developing a model that assesses the future values of sustainable design elements. Kats, in his most recent analysis, on sustainable schools, has separated the design elements into five separate categories: energy savings, emissions savings, water savings, operations and maintenance savings, and productivity and health value. A discount rate is used to more accurately determine the present value of future benefits. In Kats analysis a discount rate of

Table 1.1

Table 1: Financial benefits of Green Building Kats Approach		
Category	**20 Yr NPV**	
Energy Savings	$5.80	per sq ft
Emissions Savings	$1.20	per sq ft
Water Savings	$0.50	per sq ft
Operations and Maintenance Savings	$8.50	per sq ft
Productivity and Health Value	$36.90 to $55.30	per sq ft
Subtotal	$52.90 to $71.30	per sq ft
Average Extra Cost of Building Green	(-$3.00 to -$5.00)	per sq ft
Total 20-Year Net Benefit	**$50 to $65**	per sq ft
Source Capital E		

7 percent was used (5 percent real interest rate plus 2 percent inflation). The study found that the initial sustainable first cost premium of $3 per square foot was more than compensated by the NPV of energy saving designs of $9 per square foot, not to mention the additional $2 per square foot value of emissions and wastewater savings. Kats also attempted to calculate the NPV of increased earnings and teacher retention, for which he determined $49, and $4 per square foot, respectively. Lastly, he figured that the reduction in asthma, cold and flu resulting from a more healthy building would result in an $8 per square foot value.[46] The last five categories for which he calculated savings are certainly the most difficult to put in financial terms and should be handled accordingly. Energy, emissions, and wastewater savings are more tangible and thus more easily quantified. Kats, in a 2004 report prepared for the Massachusetts Technology Collaborative[47], analyzed data, provided by building representatives and architects, on 33 green buildings across the U.S. He found that these buildings while exhibiting a slight cost premium promised future cost savings. The average annual cost of energy in a Massachusetts building was, at the time of study, $2 per square foot. So by estimating an average 28% (see below) energy reduction in a 100,000 square foot office building the owner would realize a cost savings of $56,000 a year. Above is a breakdown of the savings or the added value using Kats' discounted future cash flow approach to arrive at NPV. With a twenty year present value of expected energy savings at a 5 percent real discount rate this

[44] A national clean energy design firm
[45] On the Costs and Benefits of Green Design
[46] Gregory Kats, *Greening America's Schools Costs and Benefits*, Capital E Group, 2006
[47] *White Paper on Sustainability, Do Green Buildings cost more to build?* (Oakbrook, Illinois: Building Design and Construction, 2003) https://www.usgbc.org/Docs/Resources/BDCWhitePaperR2.pdf.

Table 2: Reduced Energy Use in Green Buildings as Compared with Conventional Buildings				
	Certified	Silver	Gold	Average
Evergy Efficiency (above standard code)	18%	30%	37%	28%
On-Site Renewable Energy	0%	0%	4%	2%
Green Power	10%	0%	7%	6%
Total	**28%**	**30%**	**48%**	**36%**
Source USGBC, Capital E Analysis				

Table 1.2

represents a present value of about three quarters of a million dollars[48]. According to the United States Green Building Council (USGBC) review of 60 LEED[49] rated buildings green buildings are

- On average 28 percent more energy efficient
- Characterized by even lower electricity peak consumption
- More likely to generate renewable energy on-site
- More likely to purchase grid power generated from renewable energy sources (green power and/or tradable renewable certificates) see Table 1.2

Table 3: Financial Benefits of Green Building Pivo and McNamara Approach						
	Investment per SF	Rate of Energy Savings	Annual Savings Per sq ft	Savings per 100,000 SF Office Building	Asset Value Increase at a 10% Cap Rate	Simple Payback
Janitorial Services	$0.01	5%	$0.14	$13,500	$135,000	IMMEDIATE
Operations & Maintenance	$0.05	9%	$0.20	$19,800	$198,000	4 MONTHS
Lighting	$1.04	16%	$0.36	$36,000	$360,000	3 YEARS
Heating Cooling & Ventilation	$1.21	9%	$0.21	$20,700	$207,000	6 YEARS
All Combined	$2.30	40%	$0.90	$90,000	$900,000	2.5 YEARS
Source: Dr. Gary Pivo and Dr. Paul McNamara						

Table 1.3

Dr. Gary Pivo and Dr. Paul McNamara have also developed a process for determining value increase of properties via energy efficiency.[50] Rather than discounted cash flows and net present value calculations they used the annual combined projected savings of four energy efficiency components (Janitorial Services, Operations & Management, Lighting, and Heating Ventilation & Cooling) divided by a 10% capitalization rate to determine the asset value increase, see Table 1.3. For example, the total investment for all four energy efficient components is equal to $2.30 per square foot. The energy savings for this analysis is 40% over conventional design which results in annual savings of $.90 per square foot. Again if we assume a 100,000 square foot building the annual savings are $90,000 and at a 10% cap rate would increase the property value by $900,000. If the energy savings and costs were evaluated and capitalized into the building value and returned after 10 years, the internal rate of return on investment is 41%. In the short term the simple payback on the first cost premium would be neutralized within 2.5 years. Both sustainable janitorial services and operations and maintenance

[48] Gregory Kats, *Green Building Costs and Financial Benefits*, Massachusetts Technology Collaborative, 2003
[49] LEED is the Leadership in Environmental and Energy Design
[50] Paul McNamara & Gary Pivo, "Responsible Property Investing," *International Real Estate Review* 8, no. 1 (2005):128-143.

implementations, not entirely included in Kats analysis (not grouped with energy efficiency[51]), more than pay for themselves in less than six months, see Table 3.

There are other factors that an astute investor will want to consider. Many of the additional considerations require foresight by the investor. An article in the July 2005 edition of Energy and Power Management notes that "[i]nvestment firms totaling more than $4 billion in assets under management are looking at companies EnergyStar performance for signs of superior overall management quality[52]." In this sense the effect of environmentally responsible investment might have an impact on reputation and indirectly on bottom-line.

Conclusion

Sustainable Development requires strategies that respond favorably to social and environmental issues while simultaneously satisfying investor goals and financial responsibilities. The evidence suggests that in the case of energy, and operations and maintenance timely investments will enhance returns. If it could be shown that sustainable development as a whole actually enhanced investment returns, then this would be unproblematic since it would become a fiduciary duty to do so. Given the complexity of the process and the far reaching effect that many of the elements have, however, an accurate financial analysis of all the benefits as it relates to investment returns is not yet possible.

By contrast, if it could be shown that there was no demonstrable gain or loss associated with investing in sustainable development, then real estate investors would face a moral choice as to whether to invest in this manner. Increased energy efficiency was thoroughly documented as the most easily quantified way to enhance returns. Because of the inchoate sustainable building process, many of the other benefits are harder to quantify and therefore are less reliable for measuring increased returns. As Roderick Wille of Turner Construction said "The biggest paybacks (which unfortunately are difficult to accurately quantify) are in areas of increased productivity, better learning (in schools), less sickness and absenteeism among occupants and these are usually related to less costly design features such as increased daylighting and better indoor air quality."[53] Overall sustainable design elements are increasingly implemented in development and institutional investors are more aggressively investing in environmentally responsible property[54], which suggests that the market demand is present and therefore that the preliminary financial analyses were correct in their projections. Jeff Hines claims that "…the green market is gaining steam as the public becomes more aware of its benefits." As this knowledge continues to filter into the mainstream it can be expected that green developments' cost premium will dissipate.

Finance

Cities across the rust belt are struggling with disinvestment in the inner-city core while development on the fringe continues unabated. This is just as true with retail as it follows the

[51] Other discrepancies between Pivo et. al and Kats are mitigated by the difference in electricity cost assumptions, The older Kats article assumed $.08 per kw/h and Pivo assumed $.09 per kw/h.
[52] "Three Dimensions of Energy Opportunities: Boost Profits and Asset Value." *Energy and Power Management* July 2005, 30, no. 7.
[53] Response to questionnaire distributed by author
[54] "Hines forms green fund with CalPERS" Retrieved from http://proxy.ulib.csuohio.edu;2065/universe/printdoc

rooftops. As this process continues, historic retail nodes within urbanized areas become underutilized, vacant, and abandoned. Although, these central cities may be losing population, a spatial mismatch is created between remaining city residents and the retail needed to support them. This spatial mismatch is shown in the Retail Analysis that was completed in 1999 for the Northeast Ohio region that shows Cleveland being under-represented in regards to retail while suburban locations are greatly over-represented. Not only is this a concern of access and ethics but also a concern of environmental degradation. Centralized retail in historic nodes is more environmentally conscious then the greenest LEED certified shopping center in exurban communities. This is true in part because of embodied energy (emergy) within buildings, meaning the materials used to build have an energy cost and the demolition and landfill storage of construction debris has inherent energy loss. In addition to this, most new construction is only accessible by car and new and expanded roads and services must be constructed to meet need. The fact that historic retail nodes are already in a built environment means that re-investing in these areas for retail means minimal additional stress to the ecological system of the region (run-off, impervious services) would be incurred if these areas were re-invested in. With this being said, it is important to understand that if the central city is declining and the retail stock is functionally obsolete, there is a need to re-examine the use of these retail structures and the land they occupy.

Sustainability

The Cleveland region has a complex retail structure and the city of Cleveland is a good example of a shrinking city in a no-growth region and the effects this has on retail options for residents. Cleveland City has 46 identified retail nodes and large swaths of retail that follow linear routes along historic trolley lines. In the 2020 City Wide Plan: Connecting Cleveland, the city planning department recognizes the issues involved including: poor quality and limited variety of retailing, mismatch between residents' spending power and shopping opportunities, and absence of "big draw" retail anchors to name a few[55]. Their policy initiatives include such items as building smart (strategically), consolidating into "town centers," and preservation as a means of having competitive retail. The city of Cleveland is recognizing its need for sustainable retail. However, due to the continued fractured way the region approaches retail, each city vying for their piece of the retail pie, the city will continue to struggle to attract and maintain a high quality mix of retail.

Well designed new urbanism retail centers such as Crocker Park and to a lesser extent Legacy Village still represent a repackaged shopping mall on the outer fringe rather than a truly sustainable model. Although built as walk-able town centers, they generate massive amounts of car trips, are on the fringe of the urban area, and in the case of Crocker Park, is a greenfield development (Legacy Village is partially on an old industrial site). The fact remains that the most sustainable development is re-use and adaptation of historic structures in the urban core.

Impacts

Addressing the spatial mismatch between retail and the residents of the urban communities within the region would have an impact on the amount of car trips and the

[55] City of Cleveland Planning Department, "Goals and Policies: Retail." http://planning.city.oh.us (accessed 4/12/2007).

continuation of retail being built further and further from Cleveland. Many current initiatives exist within the city to create retail options for residents. Many of these should continue to be pursued such as the many Main Street initiatives that exist across the region and the Storefront program[56] that offers incentives to repair retail businesses in the city of Cleveland. Another important tool to encourage development in the city as opposed to the fringe is the ability to use historic tax credits and preservation easements to developers. Rethinking the retail structure within the city of Cleveland is also important.

Policy

Four policies should be implemented or enhanced to re-invest in retail in inner city communities throughout Greater Cleveland and specifically inner-city Cleveland:

- Historic Tax Credits for Commercial Buildings and Preservation Easements
- Enhancement of the Storefront Program, Restore Cleveland and Mainstreet Initiatives
- Cluster development in retail nodes in the city
- Thinning out retail in other areas

Historic tax credits and preservation easements should be pursued to give a competitive advantage to retail developers to look at the city of Cleveland to do projects. As was stated earlier, the environmental costs of tearing down buildings are greater than the benefits building LEED-certified. The preservation easement and historic tax credits are tools that can be used to greatly reduce the cost of rehabilitating a building. Much of the benefit is seen in the way of reduced taxes on the property but in some cases, according to Rollin Stanley, Planning Director for St. Louis, can account for 40% of the cost of a project[57]. A structure must be certified historic for the incentives as outlined by the National Trust for Historic Preservation. In the case of preservation easements the structure must be "donated" to a qualified nonprofit organization for the purpose of "protecting the property's conservation and preservation values[58]."

The Storefront Program at the end of 2006 accounted for over 2000 rehabbed storefronts and $44 million in private investment from participants[59]. The city offers a percentage of the renovation costs to make businesses more appealing and increase their street presence. Supporting local retailers is extremely advantageous. Cleveland's "Got It in the Neighborhood" campaign outlines the many benefits of shopping at locally owned businesses including: for every $100 spent at a locally owned business$45 goes back into the community while at a chain store only $14 comes back and neighborhood businesses support non-profits 350% more than non-locally owned businesses. Main Street programs should be encouraged throughout the

[56] Ohio Historical Society, "Ohio Historic Preservation Office." http://www.ohiohistory.org (accessed 4/11/2007).
[57] Morrison, Hunter & Stanley, Rollin. 2007. Strategies for Rebuilding Urban Environments. American Planning Association Conference. Lecture.
[58] National Trust for Historic Preservation, "Preservation Easements." http://nationaltrust.org (accessed 4/12/2007).
[59] Schuemann, Nancy Loyan, "Back to Form: Slavic Village-Broadway Capitalizes on Storefront Renovation Program." November 2005. http://www.propertiesmag.com/current/2005 (accessed 4/12/2007).

metropolitan area to reinvigorate historic downtowns as well as neighborhood retail nodes in Cleveland. Participating main streets in the program after ten years have averaged over $14 million in investment in the physical environment, over 60 new businesses created, and over 250 jobs created[60]. The continuation of programs with this level of success is extremely important to the vitality of historic retail districts and their success could make retailing in urban areas competitive within the suburban strip mall style development.

It is important to note that retail in the city of Cleveland as well as surrounding inner ring suburbs such as Lakewood, might be designed in an obsolete fashion or following historic patterns of travel (streetcar) that are no longer relevant. It is important to begin to be strategic in these communities about where the best locations for a vibrant retail mix are. Building smart and consolidating retail are two policies in Cleveland's 2020 Plan. This is extremely important in that it allows for a clustering of retail activity that draws to people to shop in the area and can provide the diverse retail needs of people in one location. The Plan also identifies "strategically located shared parking" as a goal and this is extremely important for convenience. By having a one-stop shopping atmosphere where most goods people need are in a small area, it will be easier for retail nodes within the older communities to compete with the big box style retail located farther out.

Finally, and perhaps most importantly, it is important to begin to thin out the retail in other areas, specifically in the city of Cleveland. This is where the city can be creative. Due to lack of funds for demolitions, it is important to begin to leverage other available resources. Hunter Morrison, Professor at Youngstown State University, has proposed taking an entire abandoned Youngstown neighborhood and returning it to its natural state as a wetland. Not only does this deal with abandoned and vacant property, green the city, and help with ecological issues, but it also leverages funds through need for developers to pay for wetlands mitigation. Imagine driving down a grand Cleveland boulevard with parks and wetlands abutting well-positioned retail centers. Not only could Cleveland compete with cluster retail in historic structures, but the environment would actually be improved through creating a more sustainable retail model in Cleveland and if that is successful perhaps it could begin to slow the expansive growth of retail on the fringe. True urbanism at its best.

[60] National Trust for Historic Preservation, "Main Street: Revitalizing Your Commercial District." http://nationaltrust.org (accessed 4/12/2007).