CORRIDOR REVITALIZATION IN SARASOTA: A CPTED CATALYST PROPOSAL

By

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A THESIS PRESENTED TO THE GRADUATE SCHOOL
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This thesis is dedicated to my family and friends, for all their love and support.

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LIST OF ABBREVIATIONS

CPTED	Crime Prevention Through Environmental Design
HEALS	Health, Education, Law and Safety
NT	North Trail
NTRP	North Trail Redevelopment Partnership
TND	Traditional Neighborhood Design
QOL	Quality of Life

Abstract of Thesis Presented to the Graduate School
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The objective of the present study is to explore the possibilities for developing a CPTED-inspired urban catalyst project to guide a revitalization effort along a decaying urban corridor, in Sarasota, Florida. In accomplishing this, we reviewed urban revitalization projects that combined crime prevention through environmental design principles, relied on personal observations, archival research, interviews with key actors, planners, decision makers, and realtors, reviewed existing public and private plans, and analyzed the local urban morphology in order to generate a contextually-sensitive approach to proposing recommendations for improving Sarasota's Cultural Corridor. Additionally, the current zoning overlay proposal for the North Trail Corridor is critiqued for its ability to harbor the proposed catalyst project, with changes suggested.

Throughout the study and research process, we focused on modern, natural methods to incorporate CPTED at the initial stage of an urban redevelopment project. We found that implementing natural crime prevention theories at the architectural and urban-scale levels may improve users' perceptions of usability and increase actual traffic to a site. The strengths of natural approaches are that they employ means that tend not to foster a fortress environment and they may reduce the associated costs of

guardianship and post-construction mechanical prevention technology, such as monitored video feeds from CCTV.

Our findings suggest that public-private partnerships, based on CPTED principles, can be used to organize large-scale urban revitalization programs. Furthermore, we found that a catalyst project for urban redevelopment can be introduced at a specific parcel along Sarasota's North Tamiami Trail Cultural Corridor, in order to influence future redevelopment on the Trail. Our recommendations for a catalyst proposal are specific to this site, culturally and environmentally sensitive and supported by the local government's long-term vision and plans.

CHAPTER 1
INTRODUCTION

Rationale

This study focuses on the recognition of Crime Prevention Through Environmental Design (CPTED) principles in the design of a potential redevelopment/revitalization project in Sarasota, Florida. The use of crime prevention theories and strategies in the initial redevelopment design stage is important because it is initiated at the first, brainstorming and process design phases of design and planning, as is explained in the concept of natural crime prevention. We define natural aspects of crime prevention to require initial construction to have been considerate of crime prevention strategies (natural surveillance and natural access control) and considerations, and not referring to retrofit application of crime prevention theory and deterrents on existing environments.

Research has shown CPTED-guided development to improve values linked to quality of life perceptions, possibly because the principal goals of CPTED support sustainable approaches to urban design by fostering the local market's economics (Macedo, 2007; Bryant Park, 2011). As demonstrated by the Urban Land Institute (2011), and federal revitalization programs, like Minnesota HEALs and the Brooklyn Initiative, we consider urban, community and neighborhood revitalization to be a primary interest for cities across the country.

We recognize that many cities have been faced with the question of how to address decaying strip-centers, community improvement and criminal activity that affects residents' quality of life. In fact, an enclosed mall hasn't been built in the U.S. since 2006 and some popular new retail and mixed-use developments that have been built in the last few years are embracing more traditional and walkable urban

environments that allow for a great deal of flexibility in use and options for environmental engagement (Clifford, 2012). Sarasota's North Trail (Education and Cultural) Corridor has seen volunteer efforts to improve quality of life, spur economic activity and deter crime since the 1980's.

The corridor has been faced with crime and perceived economic disinvestment for over 20 years, and we recognize problematic categories to include: criminal activity, lack of local-market economic stability and difficulty in attracting businesses and investment to the area. Within the city-wide context of Sarasota there are potentially places well-suited to allow mutually-supportive land uses. Goals for the North Trail Corridor currently include: a gateway to Sarasota's Downtown Core from the Sarasota International Airport and a commercial, retail and service corridor for the diverse population of residents living and working in northwest Sarasota.

Nobody wants to be feel hostage to fear. Nobody wants to be held confined in an automobile. We consider natural crime prevention principles to be the crime deterrents integrated into the original design of space and creation of place. We recognize modern CPTED for its emphasis on the natural ways to deter crime, by using architecture, landscape architecture, interior design and urban planning to implement crime prevention strategies into the initial stages of site planning and design; furthermore, we acknowledge the natural principles of CPTED to not include retro-fit applications, and require CPTED consideration long before any construction begins. Revitalization and crime prevention literature support the review of the literature and direct the study to focus on ways to introduce natural CPTED techniques of access control, surveillance, territorial reinforcement, management and maintenance into development.

As explained, the natural approach to CPTED involves not relying on retro-fit crime-prevention applications, but using the principles of natural access control, natural surveillance, territorial reinforcement, management and maintenance at the initial design and planning stage and throughout the site's continued operations (Schneider, 2009). Furthermore, mechanical as well as guardian-based tools and programs are suggested to supplement the natural approaches, in order to maintain a non-threatening environment and attract users to an inviting place, rather than repel users from an uninviting space.

Holistic Approach to Crime Prevention

When performing a Google-search for "holistic approach to CPTED", three sites were displayed, that all led to the same report: CPTED-*Why Wouldn't We?* The highly-informative, recent special-report from the Horse Rider Press (2011) describes second-generation CPTED as, "A term referring to a more holistic approach to CPTED that includes the integration of effective social design or social development to reduce crime and victimization. Modern CPTED practices are, for the most part, 'second generation' CPTED and the term is becoming redundant." (p.4) We use the term modern CPTED to describe the most current practices. We argue that the holistic CPTED approach is arguably: using the most modern strategies to incorporate CPTED into the earliest stages of planning and design possible and having the natural strategies act to support each other so that no one deterrent or principle carries too heavy of a crime prevention burden.

Why use crime prevention through environmental design as an anchor strategy for urban improvements? What should be considered when formulating a strategy for CPTED-based urban revitalization? What modern approaches to crime prevention

should be implemented in a revitalization model? How do the contexts and existing environments of North Sarasota lend themselves to a crime prevention model? Are modern, current natural crime prevention techniques the only methods of crime prevention that should be employed? This thesis examines the above questions, while providing findings, suggestions and recommendations in an urban design proposal as a central activity node along N. Tamiami Trail, Sarasota's Education and Cultural Corridor, in the Review of the Literature.

City of Sarasota's CPTED Experience

The City of Sarasota was instrumental in using CPTED principles to generate the NT (North Trail) Zoning District Overlay, during the early 1990's, and known thereafter as the corridor. The legislation that Sarasota enacted was one of the first uses of CPTED in planning a zoning ordinance in the country (Schneider, 2011). Since then, there has been mixed views of its success and some biased reviews of its results (Schneider, 2011). What is not debatable is that the area continues to harbor a larger amount of criminal activity than many other places within the City of Sarasota (Crime Mapping, 2011). Personal experience with business owners, professionals and citizens within the corridor attracted the attention of the research team. The desire is to propose a potential way to improve the North Trail Corridor and support efforts to revitalize and redevelop the urban environment. This thesis aims to generate a hypothetical project that could be realistically implemented in order to improve Sarasota's struggling Cultural Corridor.

CPTED is a familiar concept, to the City of Sarasota, and it is a primary component of their Downtown Core vision and long-term plans (City of Sarasota, 2003; 2006). CPTED has been introduced in the discussions of local interest groups, such as

the NTRP (North Trail Redevelopment Partnership) and the Bayou Oaks Neighborhood Watch. Research has demonstrated that public and private efforts and resources can be joined under a modern crime prevention strategy and is presented in the Review of the Literature (Macedo, 2007; Bryant Park, 2011; Minnesota HEALS, 1999). With a primary goal of modern CPTED theories being to make space and place better, both the public and private stakeholders may be able to associate crime prevention principles with contextually-specific goals and objectives. Uniting a community under one overall strategy may improve efficiency of physical efforts and general effectiveness of the program.

General Intent of Study

The intents of this thesis are to explore the potential fit of an urban revitalization case study and catalyst project for Sarasota's Cultural Corridor. We propose a case study at 3333 North Tamiami Trail, in the Findings and Discussion chapter, as the most appropriate site to locate an urban redevelopment initiative, and explain our reasoning in the Findings and Discussion. The conclusions and recommendations presented in the final chapter are meant to generate support for a public-private and holistic approach to creating and implementing a renewed community revitalization strategy for a troubled yet important city corridor.

We propose tentative answers to the research questions, regarding how utilizing a CPTED-based catalyst and anchor development to help facilitate an urban revitalization movement along North Sarasota's Cultural Corridor could be designed. We propose a case study project for Sarasota, at a vital node within the corridor, so that any revitalization and CPTED-inspired environments can have their success measured and maintained. We hypothesize that integrating a renewed urban-improvement push with

CPTED, at the initial phase, might bring contextual benefits such as reduced crime, improved community-perceptions and economic circulation.

By considering the Innovation 41 Study (2006), that examined the current state of the corridor and their recommendations for an improved urban fabric, we agree that the Myrtle Node should be a town-center-based urban-attractor, with mixed-use and businesses that support the local residents. Wal-Mart © has been approved to build a Neighborhood Market store at the node, in the location of the former Winn-Dixie ©, and we propose this to be a possible threat to the Myrtle Town-Center Node vision generated from the Innovation 41 North Trail Corridor study. We propose that the best way to redirect the development of the node, in the manner best fit for the location, might be to infuse the other (west) side of the node with a mixed-use development derived from consideration of modern CPTED techniques for reducing crime and improving quality of life. Our argument is that a strong enough urban attractor will bring in more visitors to the area, support local residents' needs, generate tax-revenue for the city and spark adjacent land improvements, like the case study of Bryant Park resulted in nearby increases in real-estate value and coinciding urban renewal (Macedo, 2007)

Summary of Methods and the Case Study

The study utilizes archival research, extensive personal experience with the local pro-redevelopment business group, and interviews key actors. We reviewed existing and proposed plans from both the public and private sector within Sarasota. In order to recognize the urban form we analyzed the local urban morphology. Three case studies of public-private partnerships were used in the research to glean successful methods of integrating CPTED principles with crime prevention-based revitalization.

In order to address the major research questions of whether CPTED can be used as a guide in urban revitalization, we reviewed three case studies that demonstrate ways to accomplish urban improvement with crime prevention-based, public-private partnerships. More specifically, this study questions whether adhering to CPTED principles in a centrally located catalyst project can provide the needed spark to ignite an urban corridor's appropriate redevelopment. By additionally researching CPTED and revitalization literature, and speaking with key stakeholders, we propose the design of a case study in urban corridor revitalization, based in Sarasota's North Tamiami Trail Cultural Corridor.

By mapping the urban morphology, analyzing the current environment and proposed developments and digesting the urban vision of the corridor, the site at 3333 N. Tamiami Trail is found to be the best location for placing the initial phase of a larger-scaled revitalization initiative. By nesting the catalyst for CPTED infused redevelopment in the center of the corridor and by focusing the majority of our recommendations at the site, we aim to propose an urban revitalization catalyst concept at a manageable and appropriate scale, paying special attention to the improvement of what may be the most important activity-node along the Trail.

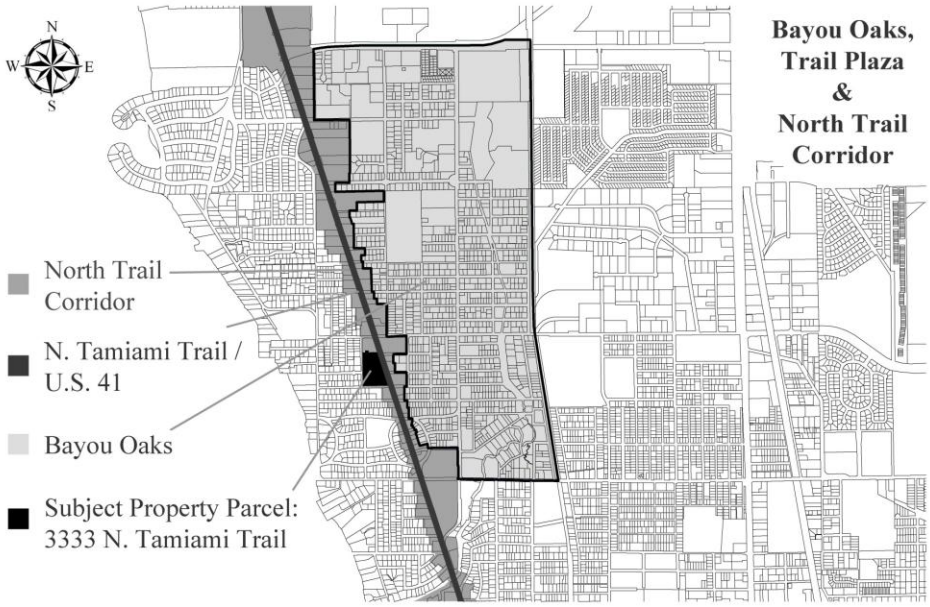


Figure 1-1. North Sarasota corridor and neighborhood map. Source: Created by author, 2011

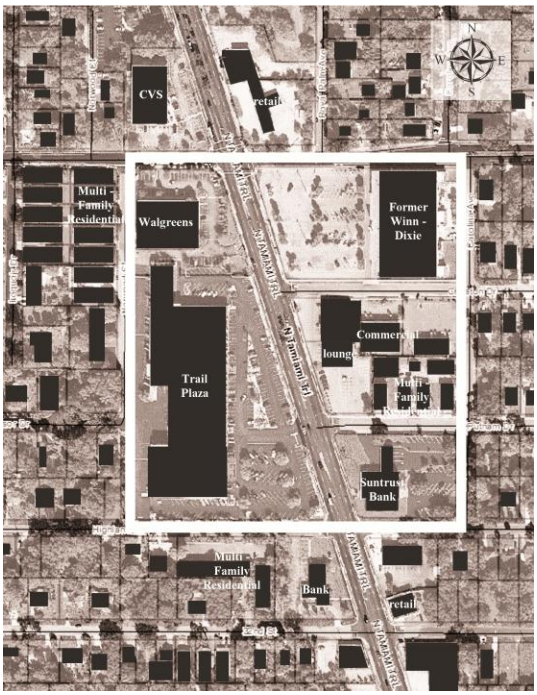


Figure 1-2. Myrtle Node morphology. Source: Created by author, 2011

CHAPTER 2
REVIEW OF THE LITERATURE

The intent of Chapter 2 is to provide a review of the literature pertaining to modern crime prevention approaches to urban revitalization, development and public-private partnership strategies based on CPTED-oriented improvement. The purpose of the literature review is to outline the theories and strategies that support a holistic crime prevention and revitalization program. Examples of modern, CPTED-inspired urban designs are presented from archival research and case studies. The case studies relevant to urban-scale revitalization practice provide examples of working solutions to real-life problems in crime and urban planning by explaining the reasoning and application of CPTED principles in urban-intervention programs.

Organization of the Chapter

The following chapter presents a brief overview of relevant criminal activity theories to modern CPTED, the main principles of modern CPTED and a set of case studies related to urban improvements, revitalization and/or CPTED. The three-D concept, rational choice, situational crime prevention and opportunity theories are used to guide considerations of what is possible for Sarasota's Cultural Corridor and provide recommendations for planning, programming and addressing urban spaces and environments. Access control, surveillance, territorial reinforcement, management and maintenance arguably comprise the main components of modern CPTED strategies and are researched in order to understand and illustrate the holistic approach to crime prevention. The literature reviewed is in the field of crime prevention, urban revitalization and public-private partnerships, and is meant to provide a framework of theoretical guidelines for successfully implementing CPTED into a revitalization strategy

and/or project. The main research question is whether a CPTED-based urban-revitalization strategy could be successful, specifically utilizing a case study, catalyst proposal in North Sarasota's Education and Cultural Corridor. Could and should a catalyst project for spurring urban improvement be located at the central node along the North Trail?

Three-D Concept

O'Shea and Awwad-Rafferty (2009) praise CPTED's three-D approach to holistic effectiveness and far-reaching ability in crime prevention contexts, by explaining that, "The CPTED 3-D approach can be the overreaching umbrella for security consideration within any context." (p.186) There are many philosophies for how designers should address space. Crowe (2000) recognizes the Three-D concept as based upon human function and dimension in space, but adds the category of assumptions at the end, to encompass the following comprehensive list of general considerations of the three-D's assumptions and concepts:

Assumptions:
- All human space has some designated purpose
- All human space has social, cultural, legal, or physical definitions
- All human space is designed to support and control the desired behaviors

Designation:
- What is the designated purpose of this space?
- What was it originally intended to be used for?
- How well does the space support its current uses? Its intended use?
- Is there conflict?

Definition:
- How is the space defined?
- Is it clear who owns it?
- Where are its borders?
- Are there social or cultural definitions that affect how the space is used?
- Are there legal or administrative rules clearly set out and reinforced in policy?
- Are there signs?
- Is there conflict or confusion between the designated purposes?

Design:

- How well does the physical design support the intended functions?
- How well does the physical design support the definition of the desired or accepted behaviors?
- Does the physical design conflict with or impede the productive use of the space or the proper functioning of the intended human activity?
- Is there confusion or conflict in the manner in which the physical design is intended to control behavior? (Crowe, 2000, p.39-40)

While the Three-D concept seemingly applies to existing environments, it is nevertheless an important tool to be used during the concept design and initial concept-planning process. If only to bring to the design table a new set of criticisms regarding good design considerations, the three-D approach would serve an important role. The adjustment process, after construction of a site and its usage actually occurs, is a vitally important step in the thorough CPTED management. The maintenance and management of crime prevention measures allows for necessary and needed adjustments to the everyday environment, and is a primary CPTED-element (Crowe, 2000; Schneider, 2011).

O'Shea and Awwad-Rafferty (2009) drive home the point that, "To each action there is a reaction; the designer should anticipate a reciprocal relationship between the public environment, security solutions, experience, and behavior." (p.207) Crime-prevention measures will need adjusting once a place becomes engaged by users and this can only be done once an environment is built, studied and managed (Schneider, 2009).

The Adaptive Criminal and Proactive Urban Designer

The natural way of integrating modern CPTED principles, through designing with a strategically constructed architectural and urban program that organizes social-interaction and experiences within environments, so users support one another. However, not everything can always be considered, in terms of identifying potential threats to proposed designs, so it would seem wise to recognize the following excerpt, from Hope (1986):

> The implementation of crime prevention measures cannot, it seems, be taken for granted. This suggests that it is necessary for those promoting crime prevention to participate in the implementation process. This is necessary for two reasons:
>
> - It seems essential to provide a 'catalyst' to promote change within organizations and to ensure that momentum continues, and
> - There is a need to adjust plans and find solutions to practical difficulties as they arise. (p.43)

Schneider and Kitchen (2007), remind professionals that abilities of ever-adaptive criminals make the struggle of keeping up to date with crime prevention practice a continuous job. Therefore, the authors admit that crime prevention adaptation in the design stages is never going to result in a final and complete measure of total crime prevention (Schneider and Kitchen, 2007).

Staying One-Step-Ahead of the Criminal

So, what do guardians have to do in order to proactively combat criminals, once an environment is created? We argue that management and continued study and maintenance of a site is imperative to its future integrity as a safe place or environment that deters criminality, and can assist in helping to spot potential threats before they become a problem. For example, criminals do not stop trying to find ways around crime

prevention barriers, so neither can crime prevention analysts, owners of space or controllers and guardians of environments (Schneider, 2009). Proactive approaches relate to revitalization strategies because it is important to not repeat mistakes and be able to envision how to improve an environment within its existing context. The revitalization of Bryant Park is an example of how it took multiple crime prevention strategies and designs to achieve a successful environment (Macedo, 2007).

Rational Choice and Situational Crime Prevention

Natural and mechanical deterrents bring increased risk to the offender, decisions made on the part of the potential criminal, situational crime prevention theory and rational choice theory establish a framework for proactively combating potential criminal activity. According to rational choice theory, crime results from behaviors designed to meet an offender's needs, and involves decision making determined by time, ability and the availability of relevant, environmental information (Newman, Clarke and Shoham, 1997). Situational crime prevention involves depersonalizing and de-psychologizing crime (Newman, Clarke and Shoham, 1997); it analyzes crimes not from a moral perspective, but supports the theory that crime is based on opportunity and a cost-benefit calculation to commit the offense, such that, "Opportunity makes the thief" (p. 189). Newman, Clarke and Shoham (1997) use de-psychologizing crime as a way to suggest that everyone should be considered to be potentially capable of criminal activity if presented with the right opportunity, and we recognize de-psychologizing crime as a way to consider criminal threats apart from any moral, ethical or personal standards.

It may be useful to think of the challenges faced by a thief who is trying to crack open a safe; the harder the safe is to crack, the longer it will take and the more risk is involved in attempting to commit the crime. Using time and barriers increase difficulty

and risk for potential criminals trying to reach a target. We hypothesize that during a criminal act, as time continues to tick away or more deterrent devices are applied (such as an increase in surveillance from new people entering the environment), more risk is involved for the offender(s). However, if there are numerous deterrents, but no guardianship and enough time to overcome the deterrents, will the preventative measures actually work to deter criminality or will they simply be extra steps that a criminal has to take in order to get what they are after? Extra steps that do not really affect the potential risk of being apprehended may likely be ineffective in deterring criminals.

An excerpt from Schneider and Kitchen (2007) illustrates a common scenario by explaining, “A valuable racing bicycle left unattended on a deserted street corner presents far more opportunity in terms of reward, and far less risk and effort, than one locked behind a showroom window in a busy shopping district.” (p.27) While it is not known how individual criminals make decisions and what rational grounds they use in determining their decision making, even when under the influence of intoxicants, it is known that criminals do in fact make decisions based on their own rationality, with a maximum pleasure or payoff and minimization of risk or pain, at least to some degree (Cornish and Clarke, 1986; Clarke and Felson, 1993; Felson, 2002, as cited by Schneider and Kitchen, 2007).

Police warn that there could be potential criminals in nearly any environment. Criminals, while often varying the locations of their targets so as to not be expected and thus caught by law enforcement may also frequent familiar locations and even the same spots (Brantingham and Brantingham, 1981). Routine activities may provide vigilant

criminals the opportunities to commit crimes, if criminals simply act upon deviant impulses without consideration of being arrested or even seen (Clarke 1995; 98). Furthermore, in generalizing most crime, Clarke (1995; 98) explains:

> Crime is the outcome of purposive behavior, designed to meet the offender's commonplace needs, such as money, status, sex, and excitement and that in meeting these needs involves the making of (sometimes quite rudimentary) decisions and choices, constrained as these are by the limits of time and ability and the availability of relevant information. (p. 145)

Hot Spots

Crime hot spots may form from localized criminal behavior and are often explained by opportunity theory. Evidence suggests that criminals sometimes exhibit random behavior, as well as characteristic, or predictable behavior (Global Report on Human Settlements, 2009). We assume that law enforcement is generally aware of crime hot spots and opportunity theories, however, we suggest that clever offenders might be aware of the many of the risk factors associated with an environment and may also be highly slippery, so as to be difficult to catch. Furthermore, we recognize that police departments do not have infinite resources for staking out common locations for low-level crime at all hours of every day, for there may be more important matters to attend to, such as having a broad presence in the community and keeping criminals alert in all environments and not simply environments that are already known for criminal association.

Reducing Opportunity for Crime

We assume that modern CPTED principles, when implemented correctly, might reduce opportunities for crime. Criminal rationality, known to be the weighing of opportunity against risk, is used by many citizens, likely without the full understanding of

the basis for its success. For example, many people ask complete strangers (who are assumed to be more or less trustworthy individuals, at the moment, and thus not potential criminals) to watch their things while they use the restroom, or step outside, so that they do not have to carry all of their items with them every time they would like to step away from their personal belongings when in a public or semi-public place. Consider being at the library and needing to use the restroom; might you ask a stranger to watch over your things?

An individual leaving behind their personal items, and sometimes very valuable ones such as a purse or laptop computer, is not only utilizing the principle that opportunistic criminals won't act when they sense a minimal threat, because the person who may be asked to watch the absent owner's belongings is a threat to getting away with a crime. Lurking potential criminals, who perceive that even though there is someone absent to whom things belong, may perceive that they may have someone else keeping an eye on the owner's property (surveillance), and we theorize that in some instances, this minimal potential threat may be a strong enough crime-deterrent to actually prevent a theft.

It is the unknown, yet ever so slight presence (deterrence) of a potential threat to criminal activity that makes us question if there is a direct relationship between criminal deterrents and crime prevention or if the relationship is subject to a holistic crime prevention approach where one deterrent may not drastically reduce crime but a comprehensive strategy might and may. We assume that the ability to thwart crime by creating minimal, yet active surveillance (threats to criminals), for example, is an important concept to be understood when considering how to design a built

environment. We recognize that design to promote and support natural surveillance, or naturally occurring surveillance, might be used as a crime deterrent, when unofficial guardians like store employees maintain a visual presence, spotting and reporting suspicious behavior when it occurs. However, as Brantingham and Brantingham (1981) argue, CPTED's reliance on the natural principles should not overestimated, for natural surveillance, as an example, will likely not work to deter crime drastically, if normal users are relied on, but crime may be noticeably reduced when businesses and employees become more involved in natural surveillance. User perception is in fact a form of surveying an environment, before even actually engaging it, and must be acknowledged when attempting to market a place as safe, welcoming and usable (Clarke, 1997).

However, the nightmare potential scenario (for criminals) in which a victim catches and brutally assaults a criminal, though remote, is always a possibility to which many potential criminals are highly aware (Clarke, 1997). The threat from immediate results of getting caught in a crime, not by the police but by the intended victim, can be a stronger crime deterrent than any long-term criminal charges that might occur in the event that the police apprehended a criminal (Clarke, 1997). In other words, we allow the possibility that an immediate threat might be a stronger crime deterrent than a long-term threat, such as length of imprisonment, for example, to influence our understanding of the impacts of certain criminal deterrents. We acknowledge that natural surveillance requirements may include all professional designers to consider CPTED in their designs and concepts, so that there is an emphasis in the design of an

environment to generate user-based surveillance, such as from employees, visitors and official guardians.

The concept of utilizing the presence of even a minimal threat, like natural surveillance, to a potential criminal occurrence, to act as a criminal deterrent device, might be as effective as any other preventative mechanism, though it not known to what degree potential criminals weigh immediate aspects of being caught by an empowered victim and assaulted, versus the consequences of being caught by law enforcement and the threat of potential imprisonment. It has been hypothesized that in the absence of a capable guardian, the natural surveillance techniques are less effective, at best (Braga and Weisburd, 2010; Brantingham and Brantingham, 1981; Mayhew, 1979).

We recognize that it may be logical to assume that official guardians and general users of place, that may or may not be highly beneficial to surveillance-based crime prevention, should be programmed into the design and planning of an environment, in order to encompass more surveillance than if only one category of user was engaged in surveillance. The role of guardianship in natural surveillance is discussed below, in the surveillance section.

Surveillance

Why is it important to have active surveillance at a site? What power does overlooking space have on preventing crime? Surveillance allows users to potentially view a crime or the threat of crime, therefore allowing them to respond in a timely manner. However, because not all users of space will respond to a criminal occurrence, it is important to have formal guardians of a site, who are trained to take action when they spot suspicious activity or deviant acts (Braga and Weisburd, 2010). Evidence suggests that potential offenders go as far as to avoid environments that are rated with

high levels of guardianship (Hannan, 1982; as cited in Braga and Weisburd, 2010). It is imperative that the responders are able to act in the quickest manner possible in order to not only thwart crime and respond to crimes, but to actually prevent criminal activity with their presence alone. Braga and Weisburd (2010) believe that, “Offenders avoid targets with evidence of high guardianship.” (p.86)

Can natural surveillance act to reduce the likelihood of criminal behavior ever potentially occurring? No. Different types of criminals hold surveillance in different regards, and different types of criminals have differing assumptions of what risks are involved in committing a crime (Braga and Weisburd, 2010). It is difficult therefor to decisively conclude any strategy as 100% effective. However, crime is related to the associated value that surveillance can bring (Braga and Weisburd, 2010). We agree that all crime is not created equal. For example, to make the assumption that certain principles, such as surveillance, access control and territorial reinforcement inflict the same risk factors on all criminals is an incorrect assertion. Eck (1994) found that certain drug dealers actually preferred apartment buildings with certain types of access control features, and that these features, while possibly preventing one type of crime, such as burglary, likely work to attract other types of crimes, such as crack-cocaine dealing (as cited in Braga and Weisburd, 2010).

In one case, some housing projects, based partly on Oscar Newman’s Defensible Space Theory, were unsuccessful in generating natural surveillance-based crime prevention, even though that was the designed intention (Braga and Weisburd, 2010). Newman unofficially defended his defensible space theory (as used in the projects) by commenting that the designers ignored key components of the holistic approach, and

therefor nullified any attempts at certain crime prevention aspects, such as the natural surveillance method (Braga and Weisburd, 2010).

Natural Surveillance as a Crime-Deterrent

We question how natural surveillance deters criminal behavior in relation to density and use. At the right density, we contend that Jane Jacobs' (1961) explanation that public and private users' and official guardians' eyes-on-the-street (or on the public realm) may act to regulate acceptable social behavior, by adding risk factors for potential offenders to overcome (such as guardian surveillance). We question that if increasing the ability for guardians to quickly react to suspicious, antisocial or deviant behavior (immediate response time), might make normal users may feel safer than they would in a less-actively managed and guarded environment may. We speculate that surveillance could be used to generate territorial ownership and managerial presence within an environment. Guardianship that is effective in preventing crime is often not completed by the public sector, such as the police, but organized and implemented by owners, managers and employees of properties, stemming from maintaining quality place-management (Braga and Weisburd, 2010).

Movement toward Natural Surveillance

Historically, access control and mechanical surveillance have been dominant crime prevention techniques of the physical design programs (Crowe 2000). Surveillance, however, unless actively displayed in the public realm, does not necessarily deter deviant behavior, if the surveillance method is only a hidden camera. It is the guardians, such as employees, who deter potential criminals and is a better method of natural surveillance than relying simply on average users (Mayhew, 1981; Hunter and Jeffery, 1992). Crowe (2000) infers that surveillance is designed to be

directed primarily at keeping intruders observed, and therefore, the primary motive of surveillance strategies should be to facilitate observation. Furthermore, other strategies, such as natural access control, can supplement surveillance measures through increasing the perception of risk for criminal activity. Access control strategies are presented further in the review of the literature.

Improving Surveillance

Surveillance techniques are comprised of many strategies and implemented via various design methods. For example, Colquhoun (2004) clarifies that the choices we make have an immediate effect on surveillance by suggesting that, “The design of the dwelling facades can aid or hinder surveillance of the dwelling from the street and vice versa.” (p.47) With regards to residential window positioning, visibility is best served in preventing crime, when the occupants can clearly view the road and garden areas, through clear windows and external users can visibly perceive occupants that may be sitting, standing or working inside the building (Colquhoun, 2004).

Furthermore, the structural features of buildings, that protrude and interfere with clear lines of visibility, such as porches and garages, are impeding crime prevention potential (Colquhoun, 2004). Even the front road should be public in nature and contain two footpaths, one on each side of the street, in order to improve surveillance (Colquhoun, 2004). Considering details of crime prevention measures at the human-scale is a large subject area and thankfully widely researched. One can consider the endless options for bicycle locking mechanisms and stations to understand that aesthetics and function can go hand-in-hand, driven by crime prevention theory.

Achieving one site objective could simultaneously support meeting another principle objective. Crowe (2000) reminds the reader that while natural surveillance has

many benefits, its objective to achieve is actual observation, a demand that requires participatory engagement with a site on the part of stakeholders, users and management. Without the users or guardians of environments to observe users and employees, there would be no strong natural surveillance mechanism. According to Crowe (2000), there are three types of surveillance strategies:

- Organized (socially with guards, police, security, policies)
- Mechanical (lighting, cameras, automatic devices)
- Natural (visually permeable public thresholds to users)

Some recent approaches to the designing of environments, like Bryant Park, has shifted the crime prevention emphasis to natural techniques and away from relying mainly on mechanical or organized security staff. Modern theories attempt to utilize the natural opportunities presented by the urban form and architectural program for deterring criminal activity. Some strategies integrate natural approaches from CPTED theory into the built environment by way of zoning and building codes, in order to improve their residents' quality of life (Gainesville, 1986; Minneapolis, 1999; Brooklyn Initiative, 1999).

Because natural surveillance strategies are being replicated, and legislation has been repeatedly enacted, it is apparent that both the public and private sectors are in fact taking preventative and even proactive measures, to deter what they consider deviant or inappropriate behavior. The CPTED shift in conceptual thinking has evolved from simply recognizing mechanical options to complex planning against criminal opportunities and design of natural techniques for access control, surveillance and territorial reinforcement (Crowe, 2000).

Architectural Lighting

We acknowledge that lighting impacts not only proposed redevelopment considerations, such as with an urban node being proposed as a catalyst project for revitalization but all scales of engagement. From restrooms to urban corridors, we argue that illumination and lighting is one of the most important considerations when analyzing CPTED and human interaction within space. Of course, to place and select good lighting, with regard to CPTED, requires more considerations than meeting minimum code requirements and standards for brightness. CPTED demands the designers think about lighting design and theory as a place-maker, boundary creator and psychological effector. Illumination techniques' impacts can arguably be as great as any other crime prevention principle, for in the absence of proper light, almost anything is possible to be occurring. Light has been shed on the subject of illumination by Crowe (2000), whereas he dwells on the broad impacts of light on human life, existence and subconscious understandings.

In fact, our eyes can play tricks on us, by incorrectly gathering data from the environment, such as with optical illusions that request that our brain respond in an opposing manner to what the reality actually is. However, our eyes are also our first introduction to an environment, thus granting our distant visual perception the ability to interpret and begin to judge environments that haven't been experienced or explained yet. In fact, before we speak, we see (Schneider, 2011). Soon after visual recognition, or possibly even before, one's other senses, like smell, may introduce environmental cues. One's ears may also perceive environmental cues, and likely before it is seen where a sound came from, if something that caused the sound can even be seen.

The natural introduction of place, through sensual deduction, and visual recognition, provides clues to the astute planner and designer as to the potential power of utilizing illumination design to improve not only initial impressions of a site, but to increase the quality of life derived from the indirect effects of proper lighting and strategic placement of luminaires. Colquhoun (2004) recommends lighting to be considered in CPTED applications, summarized as follows:

- Use consistency of lighting in applications
- Provide proper placement of lighting fixtures, angles and luminosity
- Employ protection of lighting fixtures from deviant users
- Maintain lighting fixtures, i.e. bulb replacement and adjustments
- Plan for night-time use with respect to color rendition and illumination
- Design process integration of illumination theories in architectural form

Areas such as restrooms, hallways and parking lots all need appropriate lighting. So, how does the CPTED planner become involved in proposing good lighting designs? How should design critiquing, based on characteristics of potential user needs, inspire possible solutions to foreseen threats within an architectural program? We suggest that CPTED designers further explore the potential uses for lighting in CPTED integration.

Physical Strategies to Aid Surveillance

Colquhoun (2004) explains that not only official guardians, but residents need to be involved and take action to prevent the allowance of crime, when he writes, “Residents must be able to survey what is happening in and around public spaces and inside and outside the buildings.” (p.41) Schneider and Kitchen (2007) remind practitioners that, “The field of CPTED does not need more one-size-fits-all” blanket solutions, and that every environment is unique and therefore must be considered from its own frame of reference, to which CPTED principles must also be considered under their own merit and value to a project (p. 3-4).

Through the use of permeability measures, the physical design methods suggested by Colquhoun (2007) are summarized as follows, and cover some practical applications, regarding permeability, that have become widely accepted in the field of physical crime prevention through environmental design:

- Window placement should allow the surveying of the inside and the outside.
- Streets and open-space should be visually recognized from buildings.
- Front entrances should be viewable to passersby.
- Common areas, within buildings, should be overlooked by residents, and even the street, when possible.
- Stairs and elevators should be visually permeable and able to discharge users to the fronts (or visible places)

Of course, while nobody can completely predict the totality of future environmental uses, it is an aim of CPTED to try. Bill Hillier, creator of the Space Syntax Theory, said that:

> Space syntax is a means of explaining from a sociological point of view relations between human behavior and spatial use…The more important element in the architectural experience is not visual characteristics, but the way in which the sequence of spaces is used, e.g., how these will affect patterns of pedestrian movement, economic vitality and safety (as cited in Colquhoun, 2004; p.70-71).

In proposing recommendations, to both existing and future design, environmental legibility is vital for users to grasp. Colquhoun (2004) states that, "One of the main conclusions [of Hillier's principles] is that a clear effective pattern of movement is itself one of the most effective ways to control crime in housing estates. Hillier's research has had a strong influence on the development of the concept of permeability." (p.73) Permeability is one of the most controversial aspects of new urbanism, and furthermore can conflict with urban design theories such as CPTED. While city planners and new

urbanists both may applaud permeability efforts, CPTED research may suggest that the more access routes available, the more escape routes available.

Potential for crime is theoretically greater in places that have more entry and escape points, based in the hypothesis that criminals can use them as get-away paths (Kitchen, 2005; as cited by Schneider and Kitchen, 2007). However, there is the ability for compromise when designers uses their CPTED thinking hats and question why the objective goals of permeability and natural crime prevention techniques may succeed or not succeed in an environment, and what the individual aspects are that seem to make crime deterrence techniques either potentially implementable or not usable.

The connection between user perceptions and how they use an urban space are undeniable. Schneider (2010) suggests that while many measures are possible to reduce the opportunity for crime, some techniques' potentials may be greater than others. We agree that certain techniques to reduce the public fear of crime, like design instillations such as improved street-lighting, may increase the potential risk factors for criminal activity and generate a sense of security; this is what we regard as the double-edged nature of CPTED. Therefore, we argue that generating the impression that an area is inviting might be the most important result of a lighting improvement, though we recognize that all environments are unique and may require certain environmental-improvements over others. We recognize that a small change like improved, repaired and maintained lighting, in the above example, might impact the publics' perception and help support revitalization-marketing campaigns by attracting users. We acknowledge that natural techniques thrive in a well-used environment.

Environmental Perceptions

The reduction in fear of crime can alter behavior. People naturally behave differently when they are more afraid of a place than if they are more comfortable and hold feelings of security. Crowe (2000) suggests that, “Abnormal users will feel at greater risk when there is a clear barrier for which they have to pass.” (p.133) Furthermore, Crowe (2000) insists that, “A well-used plaza will attract users and make people feel safe.” (p.133-135) A non-threatening, funneling method for entrance to a site could allow for official entryways and exit. Funneling may actually relieve some environmental stresses generated by the outside environment, if users are able to enter through a more secured environment with official peacekeepers and surveillance. For example, we speculate that entering through a castle’s walls and being suddenly protected by its border structure and guardianship may logically have provided entering users with relief from outside threats. Nonetheless, castle inhabitants’ fears of the abuses of power from the ruling parties, once inside the on the inner walls of a castle, or any environment, are completely different matters to be considered.

Permeability Considerations

Schneider and Kitchen (2007) documented that blanket gridiron design prescriptions, regarding permeability, have been shown to have negative effects. So, what exactly is the threat from high permeability and grid networks? Schneider and Kitchen (2007) explain that:

> What have been scrutinized in considerable degree are burglary patterns. Burglary is arguably the best example of an environmental design-related offense that is related to street permeability, and a long line of research connects burglary incidents with street types and incident locations. Taken together, the research…supports the contention that residences and commercial areas are more at risk when they are more exposed to external traffic. (p.47)

Schneider and Kitchen's (2007) findings support the contention that corner lots are more susceptible to break-ins, likely because their multiple escape routes, and increased exposure to traffic, make them more susceptible to crimes of opportunity and convenience. This is the same thinking that supports a hypothesis that explains why some apartment units have more ground-level thefts than at other levels (Schneider, 2010). The context for the permeability networks' integration with modern CPTED's approach, from Schneider and Kitchen (2007), is suggested in the following excerpt:

> Bothwell *et al*. (1998) acknowledge that traditional neighborhood design (TND) may indeed lead to more crimes that are dependent on accessibility, but they argue that this problem is offset by increased social controls attendant to closer interaction of neighbors. (p.47)

However, it is admitted that this balance, to their knowledge, hasn't been tested (Schneider and Kitchen, 2007). Logical application of CPTED's principles might infer that a primary goal of CPTED should be to achieve a balance between mixing uses, connecting physical space and maintaining active management that aims to create tight-knit, safe communities, in order to counter potential criminal environments with appropriate natural surveillance, natural access control and territorial reinforcement.

Social Permeability

One might argue that permeability could reference realms beyond the physical and visual, to considerations of social permeability. Can one understand and predict the level of difficulty of entrance or intrusion beyond the physical level and into the realm of social interaction of place? An environment that entices undesirables may also be an environment that repels desirable users (Crowe, 2000; Schneider, 2009). How can an environment market itself to potential users that it is welcoming, and convey a message to deviant users that they are not welcome?

On the edge of a development, design features that invoke perceptions of caring management and active maintenance, such as extra wide sidewalks, well-manicured landscaping and nice lighting may inform potential users that the internal environment is attractive and welcoming (Crowe, 2000). For example, if there is nobody eating at a restaurant when you walk by when you are looking for a place to eat, would it give the impression that it is not a place worth visiting or the impression that it would be private, fresh and well-served? Any number of factors may contribute to an impression however a long-term impression might lead to a strong opinion.

We suggest that the CPTED planner ask questions regarding the potential use environments and propose they offer design or programming strategies that would accomplish multiple objectives. For example, we argue that aesthetic improvements, like visually permeable walls with some intertwined vegetation, or see-through fences with vegetation intertwined within the frame, instead of concrete walls as borders. Of course, guardians of space need to actually view and survey an environment in order to achieve some type of natural surveillance strategy (Brantingham and Brantingham, 1981; Crowe, 2000; Schneider and Kitchen, 2007).

Roger Trancik (1986) recognized a breakdown in good urban design, when individual architectural form took priority in some cities, when he wrote about the importance of creating links between pedestrian destinations and explained that urban connections have sometimes been absent from architecture. Trancik (1986) further explains that one of the first steps in creating good architecture and planning is to look for gaps in spatial continuity, then fill them in with appropriately-interconnected spaces. The removal of wasted space, such as ground-floor parking lots, can promote the

revitalization of urban form and aid in CPTED-based development strategies, such as natural access control and surveillance.

Trancik (1986) suggests Le Corbusier as the dominant force in architecture from 1940 to 1960, and as the most influential architect of the time because of work at both architectural and urban design scales. Whether or not the works were successful is irrelevant to the fact that there was an intention within them to recognize the context in architectural formation and massing of spaces. We argue that when considering a revitalization catalyst project, ideas of scale and flow should bring forth discussions that relate to the natural crime prevention strategies that are supported from active-use. In our view, construction that ignores contextual-obligations, such as much post-modern approaches to architecture, has facilitated a fragmented, non-pedestrian-friendly environment such as Sarasota's North Trail Corridor.

CCTV Surveillance

CCTV encompasses the technology that captures video, sending the data back to a surveillance monitor and sometimes an electronic recording. It may work as a deterrent when used correctly, as cases have demonstrated. It may not work, if implemented haphazardly. For example, the analysis of crime data from the NYPD data collections in 2005 that allowed park managers to study the moderate increase of park area crime and linked to the installation of the new amenity, The Pond, a popular ice skating rink (Tracking Crime in New York City Parks, 2007). The data revealed that theft was occurring within the skating rink's changing facilities (Tracking Crime in New York City Parks, 2007). Upon realizing this, management installed a closed circuit camera system, which immediately decreased the number of incidents (Tracking Crime in New

York City Parks, 2007). Colquhoun (2004) suggests considerations that are important in order to maximize the potential for CCTV success, and are summarized as follows:

- Honest appraisals of the problems should be addressed. And are the expectations for CCTV realistic (i.e. do they require that every single move recorded on video be monitored with a 100% success rate and immediate call to police)?
- Is CCTV even a useful tool for the type of crime that is attempting to be prevented?
- Do local residents support the implementation and monitoring?
- Is law enforcement going to treat the relay of information, gathered from the surveillance, with immediate urgency and importance?
- Are the costs of not only implementation but operation and maintenance of an acceptable nature, so that it is a sustainable support mechanism?
- Is the CCTV monitored in real-time or recorded for observation in the event of a criminal occurrence?

We recognize CCTV surveillance systems for their potential to allow observation, a recorded video file of users and a potential way to screen visitors. We suggest that considerations for CCTV be combined with natural CPTED principles, such as natural access control, in order to support efficient and effective implementation and use. For example, in the following section related to access control, we present research regarding the integration of multiple crime deterrent measures and how they can feed off of each other's success.

Access Control

Controlling the access of an urban corridor comes with recognition of an urban hierarchy of space(s). The manipulation of space, path, program, boundary, and an understanding of the components and systems involved in generating positive perceptions derived from visual and physical permeability to other places that exist within and around the site is no small task. For example, what may be a complete

physical and visual barrier for an elderly woman could be neither a physical or visual barrier for a tall, young man. Those who are most apt (physically) to get away with a crime may feel they have more opportunities. Well-planned natural access control strategies in design might make it just as easy for an elderly lady to navigate and understand an environment as it would be for anyone else. Based upon the layout and configuration of the spaces within, reducing potential opportunities for criminal activity should occur at the earliest design stage, in order to promote modern CPTED principles (Crowe, 2000; Schneider and Kitchen, 2007).

Our studies focus on design measures for reducing crime, for we believe design should not be made in order to allow accessibility to all possible users at the expense of other users, but rather, design should supplement and add richness to the functionality of the site, by making the environment more usable for the most users possible. Criminology researchers, such as Crawford (2010), recognize the impossible task of accounting for all users, and remind the public that, “We are left facing the fact that no single public space can be all inclusive at all times.” (p.6) To work towards a plan that achieves the maximum benefit from minimal efforts and costs, and for even a minor demographic, as long as it’s not potentially harmful to the majority of users or even another minority group, would seem to be a valuable goal during the creation of public and semi-public environments.

There are a number of methods in which to organize accessibility and grant permeability at a site, within the urban fabric, as is obvious, so to categorize the possible strategies involved, Crowe (2000) explains that:

> Access control is a design concept directed primarily at decreasing crime opportunity. Access control strategies are typically classified as organized

(e.g. guards), mechanical (e.g. locks), and natural (e.g. spatial definition). The primary thrust of an access control strategy is to deny access to a crime target and to create a perception of risk to offenders. (p.36)

Natural Access Control

We acknowledge that natural access control methods relates to architectural moves that direct or organize space(s) so that use is restricted or reinforced in a manner naturally suited to the architecture and context. Mechanical and organized applications of access control should support operations of management, security and maintenance, but can be used along with natural principles in the architectural design stage. Supplementing the components of a crime prevention strategy and alleviating one type of crime prevention mechanism from carrying too large of a burden in crime prevention can be the role of natural access control strategies. Multiple deterrents can work in unison towards mutually cooperative arrangements to create a holistic approach to CPTED. Using overlapping strategies to reinforce each other, much like the woven fibers in tapestry gain strength from each other, could increase the efficiency and effectiveness of prevention efforts.

There are of course many ways of creating access control, such as using a concentric buffer, as could be the case in perimeter-based site plans that have open courtyards in the middle of them. Crowe (2000) suggests that natural access control assists security, by claiming that, natural access control methods, “Will promote more responsiveness by users in protecting their territory (e.g. more security awareness, reporting, reacting) and promote greater perception of risk by offenders.” (p.37) Extending his explanation of why natural access control is preferred over target hardening, Crowe (2000) continues by suggesting:

> The effort to achieve a balance between design for crime prevention and design for effective use of environments contributed to the shift in focus from organized and mechanical strategies per se to natural strategies. This is because natural strategies exploited the opportunities of the given environment both to naturally and routinely facilitate access control and surveillance, and to reinforce positive behavior in the use of the environment. (p.36)

It is important to note the author's emphasis on taking advantage of opportunities to reinforce positive behavior. Since the designer/planner needs not to come up with the perfect solution, because there often is no perfect solution or at least one fully agreed on by everyone as perfect, Crowe (2000) suggests that:

> The CPTED planner merely tries to maximize the use of natural strategies before using the more costly organized and mechanical ones that may actually serve as impediments to profitable operations [such as in the case of barricaded windows with iron bars]. The conventional security concepts of access controls and surveillance are [simply] enhanced by the emphasis on natural approaches, with the added feature of increased territorial behavior and expanded proprietary concern. (p.51)

We hypothesize a strong connection between the profitable operation of business and designs and plans that utilize the formation of territoriality and boundary, for the intended benefits of deterring crime, promoting business and economic stability and improving community perceptions.

Boundary and Territoriality

Territoriality can contribute directly to physical design and user perceptions (Schneider and Kitchen, 2007). Natural access control and surveillance methods can contribute to territorial reinforcement, thus making it a possible tool for crime prevention (Schneider and Kitchen, 2007). Discussions associated with boundaries and access control may inevitably lead to surveillance discussions, as well as territorial reinforcement considerations and a back-and-forth conversation on the effectiveness of crime prevention initiatives.

Boundary is a general term, fairly commonly used, and more or less understood by the general population. However, in order to recognize the theoretical parameters of boundaries, and the development of CPTED within urban contexts, there must be clarity in the urban program and vision. Boundary can be used as a design tool for increasing safety and deterring crime, while not compromising aesthetic or functional integrities of the architectural and urban programs (Crowe, 2000; Schneider, 2009). There are many ways to design for a safe place and actually deter criminal behavior, and those are by using the principles of the natural CPTED techniques to increase the perception of a safe environment while simultaneously increasing the perception of risk to the illegitimate-user. In doing so, there exists the hope for the environmental guardians to respond, in a timely manner, should deviant activity occur.

Crowe (2000) recognizes spatial qualities like distance as effective barriers, and suggests that the natural barrier of distance can be joined with human-scale details indicate boundaries through material reinforcement, such as by varying the pattern or materials used on the ground or by changing the landscape design to designate space. Distance between places can also be used to create a risk factor for potential criminals, so that there can be no (good) excuse for being in the wrong place and at the wrong time, and thus creating a greater risk for detection during a theoretical criminal act (Crowe, 2000). We suggest that boundary-making might also be used in design strategies in at least three ways, for example: preventing or deterring criminal- or undesirable-behavior, by aiding in or assisting in aid (should something occur that demands interaction on the part of the site management) and increasing community perceptions that a site is safe and inviting.

We propose that if borders, boundaries and territoriality may help to inform users about the appropriate uses of space, therefore inferring as to how the space is to be used, then they may also be used to clarify and inform users on how to navigate to and through an environment from the urban fabric to the interior (private) corridors. Crowe (2000) notes CPTED principles in lighting and border theories, by relating the behavior of humans to territoriality, from a historical perspective:

> Border definition and symbolic barriers were important to early humans. Sticks with skulls atop were strategically placed to signify entrance to controlled space. Drums were beaten constantly to define closed space by the distance to which the sound would travel. Accordingly, contemporary humans feel the need to identify with space, both permanently and semi-permanently. It is important to note here that the fundamental territorial nature of human beings has changed little in the last 5,000 years, and remains a powerful factor in behavioral control. (p.82)

In the above quote, the author sheds light on the concept that humans can experience border and territoriality from a number of perspectives, such as physical construction, signage, lighting, acoustics, user-behavior, management, maintenance and ownership. By emphasizing design guidelines related to the deep-rooted nature of man's attachment to place, borders can be thought of as place-makers to reinforce territoriality and increase the perception of risk factors for criminals (Crowe, 2000). Boundary can exist among all components of spatial arrangements, at spatial joints, as an ability to separate or join, and define ownership (Schneider and Kitchen, 2007). Boundary can be personal or public, semi-public or semi-private (Schneider, 2009). We recognize that boundary may be used to sign, inform and mitigate, for boundary is the demarcation of controlled access. We hypothesize that boundary is border, defined, and access control is spatial and social control, at the most initial stage.

Hallway Design

Crowe (2000) mentions many important considerations relate to lighting yet does not emphasize or stress the importance of illuminations' benefits from environmental mood setting, directional enhancement and artful lighting possibilities (like grazed lighting), when they are installed in a way that does not weaken the surveillance strategies of an environment but supports the context. Important suggestions for hallways are provided by Crowe (2000), as follows:

> Hallways may be assigned to the tenant of the adjoining internal space. Users should be influenced to mark their turf to identify their boundaries. Boundaries and turf cues should be extended to consume unassigned or undifferentiated spaces., the legitimate use of hallways and corridors need to be reinforced through policies and signs., graphics may be used to promote movement and to indicate direction., floor coverings and colors may be used to identify public versus private spaces., normal users recognize and honor others' turf and ownership cues., normal users feel safer in these areas and exhibit challenging and controlling behaviors. Abnormal users respond to these cues by avoiding these areas or with avoidance behaviors when they are in the vicinity. (p.150-151)

We argue that in an urban setting, architectural lighting design, created with the intention of not only meeting standards for safety but for enhancing the environment through psychological methods, such as mood-elevating auras and color rendition sequencing, might be mutually beneficial to program strategies, if implementation does not comprise the surveillance strategies and results in an increased use of a place (Crowe, 2000). We consider increasing the natural surveillance perceptions and inviting potential users to become engaged in a space to be a primary function within a CPTED program. Schneider (2009) suggests that intersections of hallway corridors might be improved by either curved corners or integrated with convex mirrors, so that users traveling in other directions are visually recognizable and hiding-spots and entrapment zones are eliminated.

Research has shown that hallways may especially benefit from utilizing psychological methods that strategically address corridors (Crowe, 2000). Intriguing, color-highlighting with artfully-placed hues, via grazed-lighting or spot lighting certain aspects of a site while simultaneously utilizing bright-white flood lighting, in order to maintain true color rendition in the public realm, can allow users to more clearly identify others in a more realistic manner than might occur if users were completely illuminated with colored lighting, such as is the effect with yellowing high-pressure sodium bulbs (Fennelly, 2003; Schneider, 2009). We recognize that sunlight generates a full spectrum of light waves, which in turn reflects off users' skin with good color rendition. However, in the evening, more or less true color rendition may be possible through utilizing metal-halide flood lamps, or other lights, that provide non-yellowing color spectrums and more of a white light (Crowe, 2000; Fennelly, 2003).

The choice of light fixtures, the placement of light sources and directing of illumination can dramatically impact perceptions of space and the degree to which people engage other people and place thus place. For example, Crowe (2000) mentions hallway-lighting studies performed in Louisville, Kentucky and concludes that locating the source(s) of light not in the center of hallways but at near the edges or corners and directing light toward the walls achieves the greatest perception of the size of a space as well as the best interaction among other users of the space. We could not research the study in Louisville, yet suggest that Crowe's are logical. By generating social contacts with other users, such as eye contact, and in a more comfortable way than central-lighting does, wall and corner light placement can improve how users experience a place (Crowe, 2000).

Improving spatial comfort, through the positioning, orientation and selection of luminaire can make the space seem larger and wider than a central light fixture would, and better allows for users to move in opposite directions of each other through a space, under the perception that there is plenty of room for each of them to walk (Crowe, 2000). The positive effects of thoughtful moves, such as lighting placement, can also have effects on other concerns such as noise levels (Crowe, 2000). When users walk down the hallways at the sides of them, and not in the middle of them, there was a thirty percent reduction in noise from pedestrian traffic, due to acoustic design principles and sound-wave reflection, discovered in the Louisville study (Crowe, 2000).

Public Restroom Location and Planning

The following ideas, from Crowe (2000), suggest how restroom design and placement functions in regard to safety and crime prevention:

> Restrooms should be placed in the most convenient and accessible location to increase use, which increases the perception of safety. A maze-type entry system or doors placed in a locked-open position will increase convenience and safety. Normal users will determine who is in the restroom by glancing around the privacy screen or wall. Abnormal users will feel at greater risk of detection. Customer (or student) convenience and safety should contribute to the attainment of the objectives of the space. (p.153)

In the above quote, the author neglects to mention that sound travels easier through and around an open, maze-entry-system than it does through closed-doors, especially in the case of the double-door entry system that utilizes a small room and spatial buffer to disseminate smells, views and sounds from entering the adjoining space(s) that a restroom is attached to (Smith, 1996). In the case of restrooms, good visibility is vital to counter fears of entrapment, for restrooms are often experienced

singularly and when an individual is at a heightened susceptibility to threats from potential entrapment zones and poor visibility (Schneider, 2009).

We propose that perceptions of safety in restrooms might become improved if principles of CPTED are considered in the design. In choosing the brightness, color rendition, placement and strength options of environmental lighting and proper maintenance and management responsibilities of any environment containing public users, proposals to all public restroom designs should likely adhere to similar principles as any other public space (Crowe, 2000; Smith, 1996). For example, utilizing a maze entry system in restrooms helps guardians to be more quickly alerted by sounds of threats, such as from a scream from inside the restroom, because the sound will travel farther and more clearly than it would if there were doors to muffle and block it (Schneider, 2009; Smith, 1996).

Crowe (2000) suggests that when determining architectural lighting for restrooms, if certain colors are to be used they should be related to the potential abilities that they possess. For example, Crowe (2000) identifies the following characteristics of colors: black clothing makes people feel better and appear thinner; the deeper the color-density, the more it instills trust from the consumer; orange may instill perceptions of distrust, and; bright white light allows for full spectrum reflection off of materials, which would allow the best illumination and reflection of all objects and people that are in a room.

We acknowledge that some of the above may be logical, yet do not concur Crowe's color-discussion to be absolute and complete, and recommend further study of color and lighting for use in CPTED programs and strategies. We suggest that by

combining lighting placement, illumination and color generation, maze-type natural access control and official guardianship in the form of restroom maintenance and nearby emergency assistance, public and semi-public restrooms may be territorially reinforced.

Public and Private Parking

Smith (1996) contends that lighting is the most important feature in a parking garage crime-prevention program and furthermore she concludes that, “Good lighting deters crime and produces a more secure atmosphere.” (p. 4) Suggestions for place-making and considerations for parking-places, by recognizing that threats might arise in poorly crafted parking areas, may allow the CPTED planner to help improve the environment (Crowe, 2000; Smith, 1996). CPTED theoretically integrates the principles of crime prevention through environmental design that apply to all public spaces, in order to generate the following ideas for designing parking structures, according to Crowe (2000):

> Parking is enclaved in relation to business entrances. Lateral access by vehicles is severely restricted. Aesthetic design opportunities are enhanced to screen ugly parking lots. Extreme transitional definition exists, thereby reducing escape opportunities. Parking areas may be closed with barricades at different times of the day. (p.156)

However, natural surveillance principles require the visibility of parking lots, so designers should not screen away ugly parking lots, as the passage above suggests, but utilize aesthetic design opportunities to improve both the picturesque value of parking lots and the surveillance of them, through natural mechanisms, such as overlooking windows, that potentially allow users and guardians to their vehicles and those in the parking areas. We suggest an example of closing certain areas of parking might involve opening and closing specific levels of a parking structure. In response to

the demand from delivery-vehicles of shipping bays and access to service drives, we suggest consideration of Crowe's (2000) suggests relating generally to parking:

> Barriers are used to divert parking activity to create safe locations for the late arrival. A variety of floor plans may be used depending on a parking needs assessment. Floors may be alternately closed. Aisles may be partially opened. Ground spaces should be dedicated to pedestrian oriented businesses and activities, leaving the airspace for the car. Traffic flows may be controlled to allow for angle parking to recover needed parking that is close to shops. (p.137-142)

Smith (1996) explains that ground-parking areas are roughly 1.5 times the square footage of retail, yet account for only a small portion of users at a given time, which makes them a vulnerable target for the following reasons:

- Parked cars provide hiding places and impede the distribution of lighting
- Most parking facilities are open to the public
- An offender's car is not likely to be noted as strange or memorable in a parking facility (p.2-3)

Furthermore, because the above characteristics of parking areas are inherent to most parking places, Smith (1996) suggests that:

> Although it is relatively easy and inexpensive to incorporate CPTED concepts in parking facilities at the time of construction, it is often difficult and expensive to upgrade security at a later date, especially in parking garages that may have inherent design features that inhibit security. (p.3)

Smith (1996) explains that CPTED is especially applicable in parking design because the principles of natural, passive design, such as lighting and natural access control, are particularly suited for CPTED-based design inspiration. Furthermore, active systems, like security staff and CCTV surveillance, can be designed to support the passive techniques within the architecture and site program, in areas like parking garages, for example (Smith, 1996). Furthermore, if architectural illumination is universally considered the most important feature in a parking area, Smith (1996)

stresses the importance of lighting factors that go beyond color rendition and brightness to concepts like uniformity in lighting transitions. For example, it is difficult on the eyes to have to adjust to different levels of brightness and parking areas, and where users are at a heightened susceptibility to criminals, extra caution should be taken in determining how to get light into areas like the parking spaces between cars and not simply the primary circulation path (Smith, 1996).

Territorial Reinforcement

We assume that for impacting and influencing perceptions of site ownership, or owner-involvement in a property, and the maintenance of it, territorial reinforcement principles provide designers with tools for a holistic approach. We consider the possibility that perceptions may be as important to revitalization and crime prevention as any other considerations. Crowe (2000) introduces the concept of territorial reinforcement as a guiding framework, by presenting the CPTED principle as:

> An umbrella concept, embodying all natural surveillance and [natural] access control principles. It emphasizes the enhancement of ownership and proprietary behaviors... It is perhaps most useful to think of territorial reinforcement as the umbrella concept, comprising all natural surveillance principles, which in turn comprise all access control principles. (p.52)

Thankfully, territorial reinforcement can come in many forms, as is the case with modern CPTED principles and their non-prescriptive nature (Schneider, 2009). Materials like a (CPTED-approved) fence, simply placed to indicate boundary while still allowing for visual permeability, or with a Neighborhood Residents Only sign, that warns of a policy attached to a place, and with the potential for mechanical and community oversight, multiple techniques may work in mutually beneficial directions for crime deterrence (Schneider, 2009). Furthermore, in considering territorial reinforcement,

density and associations of community, we consider how to program mixed-use projects in the following sub-section.

The objective of mixed-use should be to achieve collective efficacy (Sampson and Raudenbush, and Earls, 1998). We consider collective efficacy to be defined as a cohesion existing among community residents that can be combined with similar or shared expectations for not only informal social controls of the public realm, but in support of the methods used to maintain order. Sampson, Raudenbush and Earls (1998) say collective efficacy is a social process, and while it can inhibit both crime and disorder, it is linked to reduced violence. We recognize that disorder might be measured by direct observation, and through the somewhat subjective perceptions of neighborhood residents. The informal social control method of collective efficacy (similar in nature to the broken windows theory) focuses on what is visible in the public environment (Sampson and Raudenbush and Earls, 1998).

We argue that goals and visions of one community may vary from another's, and contextual obligations to environmental-influences, such as culture and demographic, are always unique. Geller (2003) highlights Rich Killingsworth, the Director of Active Living by Design, who says, "People must feel empowered on a level that is personal to them - individual communities have individual needs." (p.1412) When people speak of Smart Growth and what ideas the concept brings, the Executive Director of Smart Growth America, Barbara McCann proposes that, "Smart Growth is so many different things (as cited by Geller, 2003). It's not just transportation; it's a mindset towards creating a more holistic community. We've talked about quality of life. And what has been more fundamental to quality of life than physical health?" (Geller, 2003, p.1411)

We argue that territorial reinforcement considerations should be extended beyond a project's immediate site and open-up to the exterior context, including community needs and desires.

We recognize that the mixing of uses for development purposes and transportation advantages, for example, and that they two are mutually-compatible, if not mutually-supportive (City of Englewood, 2011). We argue that a sense of community may be a factor in measuring quality of life.

In considering the research on the sense of community in mixed use developments, the professionals at the American Planning Association believe that:

> Many urban problems are blamed on a declining sense of community. To assess such claims and to learn how policies affect sense of community, we need a reliable and valid measure for the construct. One test of the scale with 100 residents in single-use and mixed-use areas near one another found significantly more sense of community in the mixed-use neighborhood. A test with 32 renters in neighboring apartment buildings, one with an outdoor courtyard and the other with an interior double-loaded corridor, found significantly more sense of community in the courtyard building. Scores agreed with two other measures associated with community: number of neighbors known by name, and number of friends in the buildings. We recommend further testing in other contexts (The Psychological Sense of Community in the Neighborhood, 1995).

Schneider and Kitchen (2007) examine the relationships between crime and mixed-use developments and found that open permeability theoretically allows more routes for escape (after a criminal act), and the mixing of uses theoretically increases the likelihood of crime. Moreover, a strong sense of community (or collective efficacy) might be used as a tool for preventing crimes (Schneider, 2011). An excerpt from Schneider and Kitchen's (2007) research, regarding mixed-use and mediating threats, is:

> While mixing of land uses is valued by new urbanists and by planners generally as a means to invigorate economically and socially otherwise

> homogenous areas, and has been supported by some as a means of reducing crime (Jacobs, 1961; Newman, 1973), there are multiple studies that suggest it is not totally benign. Greenberg *et al.* (1982) and Greenberg and Rohe (1984) found that homogenous residential neighborhoods had lower rates of crime than those that combined land uses, and Dietrick's research (1977) noted that residential burglary occurred more frequently near commercial areas. A recent study by Wilcox and Quisenberry (2004) claims that the presence of businesses in neighborhoods tends to increase burglaries, though this effect is mediated by physical disorder and by levels of relative residential stability. In this context, mixing playgrounds into residential areas tends to increase burglary risk regardless of neighborhood social-structural characteristics. (p.51)

We found that territorial reinforcement includes supplementing other crime prevention strategies, and being assisted by them, grants CPTED principles a major benefit in overcoming obstacles to implementing a holistic program for crime prevention and revitalization. We suggest that understanding the concept of territorial reinforcement might help to guide design-strategies and aid in efforts to implement a renewed CPTED-based crime deterrence program. We suggest that territorial reinforcement may also be need to be considered in order to market an environment as safe, inviting and usable, and we discuss relevant case studies in the following sections on: Bryant Park, Minnesota Heals, the Brooklyn Initiative, Gainesville, FL convenience-store legislation and Englewood, Colorado's CityCenter urban transformation.

Bryant Park

The difference between inviting aesthetics and uninviting aesthetics plays a vital role in the creation of a desirable place. In order to convey to potential users that a space is safe and usable, people may need to see others using it in a manner similar to how they might. An example of how observation is used as a tool in CPTED, along with other methods, to convey a welcoming atmosphere, occurs in Midtown Manhattan, New York, at the once-infamous Bryant Park. According to Macedo (2007), in a research

study written for the United Nations, thousands use the park every day, yet it was once a criminal harbor and very threatening. A non-safe, non-inviting place, like Bryant park used to be, may clearly cater to illegitimate use (Macedo, 2007). How can the transformation of perceptions, from negative to positive, occur? How can an unsafe location become perceived as a safe location? How can the desirable users gain control over an environment?

To explain the successful Bryant Park revitalization, Macedo (2007) documents the conversion effort. Bryant Park's revitalization project was long and over-budget, yet it is the only park in New York City that receives no public funding. The present park is part of a public-private partnership and requires a great deal of maintenance, management and upkeep from the private sector. Most complaints now do not stem from crime, but are come from issues dealing with park maintenance and how the park is being operated as a business. Some of the people complaining may have not experienced Bryant Park before the redesign. Furthermore, evidence might suggest that the component of the park's being run like a business may actually be one of the most important factors to its successful revitalization and continued success.

The park is now run completely separate from public funding, through the BPRC (Bryant Park Restoration Corp.). The BPRC handles the issue of collecting revenue from patrons, in order to maintain the park's environment. To do this, although most events are in fact free, the park does hold special events that require patrons to pay for access. There are also a couple, small on-site businesses. Recognizing the park's benefits, since the revitalization effort, the surrounding real-estate market has seen dramatic improvement in rentals and values. The revitalization of Bryant Park led to an

increase in dwelling unit improvements (Macedo, 2007). Real-estate brokers have since been able to use the park as an amenity, instead of a threat to overcome.

How did the changes made to Bryant Park succeed in their crime prevention efforts after the revitalization? Instead of being an overgrown harbor for criminal activity, the landscape was tightly manicured, which allowed for clear sight lines. The solid barrier wall that helped to alienate the space from the city outside was removed, and a visually permeable fencing was installed, allowing for the park to reconnect with civilization around it. The prior design of Bryant Park, before the newest revitalization, had aimed to disassociate it from its city-environment and allow users to seclude themselves from the urban atmosphere. In the prior design, walls were put up and the park was elevated, above the ground level of the city. The design did not take into account the types of deviant uses that would become easily accomplishable in the park, because it was a disconnected space from the urban-environment surrounding it (Macedo, 2007). Prostitution and drug sales and use soared in the previous, secluded environment (Macedo, 2007).

Thankfully, by understanding why the park was attracting non-desired users, the city took action. The local government allowed a public-private partnership in which two small businesses were added, that serve park patrons with food and beverages, provide information, organize events, and manage daily revenue-generating operations. Redesign measures, that stressed constant on-site security, engaged management and maintenance of the landscape were needed to reclaim the park from the deviant users. Portable chairs were added, making customization and flexibility of place-making easy and convenient to the park's visitors. Events that draw in crowds of desirable patrons

are commonplace, which likely serves to push out undesirable users or those who did not wish to have their lifestyles or activities in the public realm. Private grounds-workers and security staff secure the impression of environmental management, by cleaning, maintaining and publicly showing that an area is cared for by its stakeholders. Bryant Park maintains physical order, and an active presence, by not allowing deviant behavior to go unreported or uncontrolled.

The park now receives 24-hour security patrolling and is always watched over by at least two security officers (Bryant Park, 2011). It has been suggested that even more effective than the design alterations to the space is the new found management and maintenance of the site (Macedo, 2007). Bryant Park suggests that territorial reinforcement principles, active management systems and engaged ownership can display caring and engaged ownership of a property. We argue that even if the greatest design implementations are theoretically discovered and installed at a site, the end result would likely be poor if there was a perceived lack of order and governance of the space and place, from the public's perspective, and further propose the importance of a holistic approach in the findings and discussion.

Minnesota HEALS

We suggest that one of the most important aspects in a community-revitalization movement is the cooperative implementation and management of crime prevention strategies. The private-sector begun to assist law enforcement and local governments in tackling crime prevention and urban revitalization, and the United States Federal Government has acknowledged a vast number of benefits that come from public-private partnerships (Reno, 1999; as cited by Whiting, 1999). When otherwise separate groups join forces, to make a community better, the rewards can be much greater than any

individual group could have achieved on their own (Reno, 1999; as cited by Whiting, 1999). Companies that actively participate in the urban renewal of their communities have seen enormous benefits and support efforts from the area residents, employees, and the local governments (Reno, 1999; as cited by Whiting, 1999). For example, Honeywell, Allina Health Systems and General Mills, some of the leaders in the Minnesota HEALS (Minnesota for Hope, Education, A Law and Safety) program, have all received community support and reported success within the HEALS program (Reno, 1999; as cited by Whiting, 1999).

Former Attorney General Janet Reno (1999) emphasized, at the first symposium on the issue (in regard to the Minnesota HEALS program), not only the effectiveness of local partnerships but the value of business's involvement in crime prevention, as follows:

> The key to success lies in the people of a community. With the proper resources, the residents of an area are far better equipped than anyone to decide what can be done to address a problem. We can do that by renewing our efforts, strengthening our partnerships, using common sense in analyzing crime problems, and designing strategies to solve them in practical ways. Politics must be kept out of crime, and the issue must be approached in a thoughtful, collegial manner. Using common sense and applying business strategies, we can make a difference (as cited by Whiting, 1999, p.17-18).

Brooklyn Redevelopment Initiative

Aside from the HEALS program, the Brooklyn Redevelopment Initiative and partnership with Pfizer, Inc. has also resulted in effective and sustainable crime prevention operation. Located at the site where the company was founded, in 1849, Pfizer had an important decision to make when the area around them was noticeably falling into decline; they could move their operation to the suburbs or stay where they were. The former District Attorney suggests to businesses, "Act as a catalyst to create

programs where there is a need. Provide the glue that keeps people talking and acting. Often business can provide new and refreshing glimpses at a community." (Reno, 1999; as cited by Whiting, 1999, p.18) Pfizer chose to stay where they were a long-running business staple in the community and actively headed an urban revitalization effort in order to make their employees and community feel safer, happier and more connected. Pfizer became a champion partner within the Brooklyn Redevelopment Initiative.

Some of the local initiatives included Pfizer security guards patrolling the neighborhood two or three times each shift and posting one of their security guards at the top of the subway stairs during morning and evening rush hours (Whiting, 1999). Pfizer, additionally, mounted security cameras in the subway and they monitor the live feed continuously, reporting all incidents immediately to the local police (Kline, 1999; as cited by Whiting, 1999). The videos from the subway cameras were given to authorities about 15 times and approximately a dozen perpetrators were apprehended due to their efforts (Kline, 1999; as cited by Whiting, 1999).

According to Pfizer's representative, Tom Kline (1999), the cameras and active management made a substantial impact in deterring crime, creating a safer environment for their employees and for the local community (as cited by Whiting, 1999). Numerous other community efforts ensued and before they knew it Pfizer had made a tremendous impact on the community and its crime rate. A substantial reduction in crime came from their revitalization effort (Kline, 1999; as cited by Whiting, 1999).

Whiting (1999) recognizes the Keys to a Successful Partnership employ many components, summarized as follows:

- Assuming the role of a catalyst is the most successful way that businesses can help to rehabilitate communities.

- Selecting a project champion or business/development to be the leader and headline the community strategies is a vital way to both manage and implement goals, objectives and strategies.
- Utilizing business's analytical, organizational and managerial abilities to frame and direct community strategies and reach out into the residential population is a vital role of the project champion.
- Appropriating, fiscally, resources to devote to the revitalization effort and allow wholehearted participation from stakeholders, supported by senior management.

We suggest that threats that are shared between residents and businesses in a community should be attacked in a cooperative manner. When the line between public and private interests can become blurred, project champions can help to organize and articulate individual concerns and focus energy and resources strategically and appropriately (Reno, 1999; as cited by Whiting, 1999). We suggest that low crime rates, productive citizens and safe-streets are all important to the businesses and residents of an environment (Whiting, 1999). In fact, Kline (1999), VP of Marketing Strategy for Pfizer insists, "You change an urban community one lot at a time – just like you change education, by teaching one student at a time." (as cited by Whiting, 1999, p.13)

Gainesville, FL Convenience Store Ordinance

Gainesville, Florida passed legislation in 1986 required most convenient stores in the city to have two clerks on duty between the hours of 8:00 PM and 4:00 AM and that the employees during those hours take a Robbery Prevention course or become certified by the City Manager or designee with 30 days of hire (Gainesville Ordinance 3318-0-87-06, 1987). Braga and Weisburd (2010) admit that, "It is unclear whether the number of employees conducting surveillance makes a difference." (p.86) Braga and Weisburd explain (2010) critical professional views and research findings from the Gainesville, Florida ordinance, and cite Clifton's (1987) claim that the ordinance did

result in fewer crimes. However, Clifton's claim was challenged by Wilson (1990) and Sherman (1991), who contended that important rival hypotheses were not considered when drawing the conclusion that it was in fact the city's legislation and resulting implementation of the new law that actually caused the reduction in robberies. The State of Florida ultimately superseded the ordinance with one of its own. We argue that the decision may have been politically- or otherwise-influenced, and not directly decided by analyzing the results from the crime data or the research findings from Gainesville.

Hunter and Jeffery (1992) support Clifton's (1987) finding, stating that the legislation was in fact the strongest evidence to support the reduction in robberies and empirically based their research, so as to give further support to the argument that more guardianship may act as a criminal deterrent (as cited by Braga and Weisburd, 2010). However, when replicating the study in Austin, Texas, LaVigne (1991) was not able to conclude the same findings as Clifton, Hunter and Jeffery (as cited in Braga and Weisburd, 2010). Regardless, we acknowledge that guardianship and surveillance of a site by employees is an important aspect to consider when developing natural surveillance strategies (Schneider and Kitchen, 2007; Smith, 1996).

We argue that the back and forth debate of research conclusions, such as in Gainesville, for example, evidence and challenged results are commonplace in the evaluation of many crime prevention theories, techniques and applications. Due to the extremely circumstantial nature of place-based criminal activity, occurrences and measures, drawing conclusive results is extremely challenging, for perceptions are unique and vary widely among users of space. We argue that finding empirical conclusions that support seemingly rational design suggestions is challenging,

especially when looking for a one-size-fits-all design strategy or universal-agreement. Much time and study is still needed before all criminologists support and create a statistically-based, complete CPTED-based set of guidelines and recommendations that should be used in a standardized manner, for crime is environmentally variable and user expectations differ from one place to another across the globe (Crowe, 2000; Schneider and Kitchen, 2002; Whiting, 1999).

There is, unfortunately, not a way to gather a complete data set of all crimes committed, for often, many crimes are not even be reported (Wekerle and Whitzman, 1995). Homicide is often used to measure, as a reliable indicator, violent crime in an area (Wekerle and Whitzman, 1995). We agree that when there is no evidence of a crime (it is not reported), then no data collection or empirical research conclusions can arguably be absolute. Consequentially, we assume that it is hard to collect data for measures of successful techniques that result in the prevention of crimes, because one of the only ways to compare crime prevention measures by using empirical evidence, is by looking at reductions in recorded crime after a preventative implementation has been installed or by inferring results, based on large, independent research surveys.

It is more costly and less effective to renovate a developed and existing parcel within an urban fabric, than it is to consider and implement preventative natural design principles and features during the initial construction phase (Colquhoun, 2004; Schneider and Kitchen, 2007; Smith, 1996). It is simply easier and more cost effective to do something correct the first time around than to have to alter an existing and complex set of systems, materiality and social programs with retro-fit applications (Schneider, 2009; Smith, 1996).

Englewood, Colorado CityCenter

In Colorado, the City of Englewood, near Denver, created a downtown, open-air CityCenter out of a regional shopping mall (City of Englewood, 2009). The public-private partnership development focuses on creating a central place and walkable streets that connect a wide mix of uses (City of Englewood, 2009). In 1997 the City of Englewood explored new urbanism and transit oriented development theories, collaborating with a local non-profit development group of planners, architects, attorneys, developers, real-estate executives and bankers (City of Englewood, 2009).

The city center resulted in 800,000 square feet of development, consisting of 300,000 square feet of offices, inter-modal transit station, 330,000 square feet of retail space, and 50,000 square feet of restaurant space (City of Englewood, 2009). There is also a Civic Center with offices, libraries, a cultural arts center and courtrooms (City of Englewood, 2009). The developmental objective of the project is to revitalize the inner suburbs (City of Englewood, 2009). Intense intra-regional retail competition caused the City to consider how they would create a sustainable retail market, to supplement the collection of tax revenue (City of Englewood, 2009). By thoughtfully and carefully calibrating an urban use structure of cultural facilities, multi-modal transit and libraries, the City aims to counter any whims in the retail market with a more sustainable approach to developing their urban environment (City of Englewood, 2009).

One of the most important strategies in the Englewood revitalization is supportive, complimentary urban uses. Parking, for example, is not required to be constructed for each parcel; parking is shared by all uses in order to reduce the high-costs of structured parking and asphalt paving (City of Englewood, 2009). Cultural activities draw crowds that are meant to support the restaurants and retailers (City of

Englewood, 2009). Big box retail shopping is accommodated for with a façade that fits the desired urban image and parking that is not centralized in a large parking lot in front of the retailer but broken up into smaller lots (City of Englewood, 2009). Additionally, the big-box retailer allowed the city to construct a pedestrian-oriented street to bisect what would have been a large parking lot in in front of the store (City of Englewood, 2009).

The City of Englewood (2009) organized six development objectives, to facilitate the urban vision and help organize efforts, summarized as follows:

- Revitalize inner suburbs
- Replace the mall footprint with a network of urban pathways, streets and parks
- Integrate new development with the bus transfer lot and light rail station
- Provide adequate parking for transit riders, shoppers and civic space users
- Integrate big-box retail appropriately
- Integrate the regional system of greenways and parks into the urban design

While we recognize that not all of Englewood's developmental objectives can transfer directly to all other revitalization projects, we regard it important to understand the comprehensive effect of the specific objectives and potential, complimentary support that they can provide each other. Furthermore, we argue that the holistic approach that Englewood took in developing revitalization objectives parallels the holistic approach to modern CPTED. For example, we conclude that ignoring the problem of ground-parking would have led to a dramatically different environment in Englewood, likely resulting in a less successful outcome because a large social need would be left to individual developers to solve, which in-turn would likely foster architecture unrelated to its contextual urban fabric and more oriented towards automobile accommodation. Individual development projects may not have to strive to create the best urban

environment ever, and may lead to a disconnected urban environment with gaps in spatial continuity (Trancik, 1986).

Much like CPTED works in a holistic manner, we suggest that urban-scale revitalization projects, with a cohesive vision, meet community needs through urban-based improvement and redevelopment strategies. In the way that CPTED principles can be mutually-supportive, the goals of the Englewood CityCenter parallel the modern CPTED approach to utilizing multiple techniques to support an larger program objective. The CityCenter does not market CPTED as a central goal in their redevelopment strategy, yet the City of Englewood offers many crime prevention, safety and community support services, such as: Neighborhood Watch, National Night Out, Citizens' Academy, Citizens' Self-Defense Classes, Emergency Preparedness, Graffiti Paint Out (and graffiti alert system), Code Enforcement, Victim Assistance, Investigative Services, and Patrol Operations and custom crime-prevention presentations (Englewood, 2009). Furthermore, we argue that we could defend much of the development to include modern CPTED principles.

A component of the City of Englewood's (2009) first goal, within their Economic Development Strategy, to assist local business through investment programs, contains three parts:

- Enterprise Zone
- Catalyst Program
- Business Makeovers

The City of Sarasota (2002) utilized a similar strategy, by implementing an Enterprise Zone along the Trail Corridor, hoping to gain business makeovers (as well as new development) however it has not introduced a strong catalyst project to the interior

corridor that might work to spur improvement from within. We recognize the City of Englewood's (2009) Economic Development Strategy, to provide a safe, healthy and attractive business environment and believe this goal to be generally applicable to appropriately fit most revitalization campaigns.

To plan for a safe environment, some may argue that CPTED concepts played a role in the planning, design and review processes in Englewood. Englewood has an entire staff-department dedicated to Building and Safety (Englewood, 2009). We conclude that Englewood's CityCenter is a possible example of how a catalyst project can spur a dramatic change in the overall urban environment. Furthermore, Englewood emphasizes the importance of recognizing the complimentary effects between the physical appearance of commercial districts and the surrounding residential community by developing design standards to enhance sense of place in corridors and business districts (Englewood Economic Development Strategy, 2003; as cited by City of Englewood, 2009).

CHAPTER 3
SUMMARY OF METHODS

Can CPTED-principles be used to guide an anchor-project and catalyst for urban revitalization development in North Sarasota's Cultural Corridor? We conducted this study in order to find out if CPTED would be an appropriate theory to base a renewed urban revitalization movement in Sarasota on. In order to discover CPTED's potential for use in revitalization campaigns, we researched the general hypotheses behind some criminal activity theories and modern crime prevention theories, such as opportunity, rational choice and situational crime prevention theories and second-generation CPTED principles (the modern, natural approach to designing proactively to deter crime).

In order to find out how other communities have approached crime prevention planning and legislation, urban renewal and mixed-use programming that relies on mutually-supportive land-uses, we looked at five case studies that we argue may provide valuable guidance for urban revitalization and crime prevention. We further used lessons from graduate studies from Schneider (2009; 2011) in Introduction to CPTED and Advanced CPTED Practices, as well as case study research from class-investigations, to provide insight into CPTED principles, methods and examples.

To determine if a CPTED-based catalyst project could be appropriately situated within the North Trail Corridor, we allowed personal experience and observations to influence our understanding of the Trail Corridor's context, current property uses and proper location for anchoring an urban-renewal catalyst project. By interviewing key actors in the current economic development partnership, we were able to discover some community concerns and perceptions, so that our conclusions and recommendations recognize some of the community concerns and desires, which we discuss in the

findings section. By performing, and presenting in the findings and discussion, a rudimentary urban morphology analysis of the urban landscape around the site that we believe to be best-suited for centralizing urban redevelopment and a CPTED-based revitalization campaign, we recognize, in the findings and discussion, the current and proposed urban-form and land-uses of a vital node along Sarasota's Cultural and Education Corridor.

From reviewing the City of Sarasota's long-term vision plans and goals, from the 2030 Vision Plan (2006), we align our proposals for Sarasota with the city's objective of creating safe, walkable places and also an official Gateway to Sarasota corridor (from the Sarasota International Airport). Through this study, our expectation is to propose how CPTED principles might be able to inspire urban renewal and environmental improvements with the implementation of an anchor/catalyst initial development, and by continuing the community revitalization effort out into the surrounding neighborhoods and businesses.

Rationale for Myrtle Node Revitalization

Geographically, the Myrtle Node is located centrally to the length of the North Trail Corridor. Through personal observations, including walking around the Myrtle Node and Cultural Corridor, marking the existing businesses and vacancies, we recognize that the west-side of the node is a fairly active location, with visitors frequenting the shops at Trail Plaza, such as: Goodwill ©, Radio Shack, Amscot ©, Sally Beauty Supply, McCurdy's Comedy Club, Dollar General Store, a copy store, an ethnic-food market, Laundromat and dry cleaner. We learned that Goodwill © likely intends to move further up the North Trail when their lease is up, and they have had their new site construction approved (Greenberg, 2011). We acknowledge that the Goodwill © store

would leave another large vacancy, if they left, at the Myrtle Node and we discuss what this would entail in our findings and discussion.

Across the street from Trail Plaza, on the north-east parcel of the Myrtle Node, sits the former Winn-Dixie © building and empty ground-level parking lot. We recognize that the absence of activity on the north-east Myrtle Node creates large urban-gap along the corridor or as Trancik (1986) suggests, a gap in spatial continuity; the periodic absence of business and/or residents and fragmentation of urban connectivity along the corridor may be a threat to the community's vision of economic revitalization (NTRP meeting, 2011). The recognition of a potential threat to the urban vision at the Myrtle Node (as determined by the Innovation41 Study (2006) and our personal observations) supported other contextual factors in our decision to propose a revitalization catalyst/anchor project at the Myrtle Node.

Directly across the corridor from the Trail Plaza, in the eastern-center of the Myrtle Node, south of the former Winn-Dixie © store (and approved site of a Wal-Mart © Neighborhood Market), are a corner store, a liquor store and a bar/lounge (Figure 3-5). There are a couple small commercial-businesses in the south-east Myrtle node as well (personal observations, 2011). The Myrtle Node has historically been a center for shopping, but the Innovation41 (2006) study found that shopping at this location is, "discount/highway-oriented, and primarily serve[s] the local community." (p.33) Innovation41 (2006) provides the recommendation that the node should be developed to:

> Serve the local community market, but with a more diverse mix of merchandise and services. The opportunity is to attract higher-density residential uses, particularly rental apartments, and mixed-income communities providing attainable workforce housing, with plazas and

> informal gathering places to shop, interact and recreate, and with public art displays. (p.33)

We believe that the recommendation from Innovation41 (2006) to attract higher-density uses, provide informal gathering places and utilize public art displays is directly in-line with what our research explains revitalization projects should include. We hypothesize that when the Innovation41 Study (2006) was conducted and then presented, the economy was in better shape than it has been since then, and we suggest that there may currently be less business activity and economic generation at the Myrtle Node than when the study was conducted. We theorize that the recommendations and vision-proposal from the Innovation41 Study (2006) are generally applicable in the current market, but suggest that they may need to be adjusted in order to spark economic investment and regain community support for a renewed urban revitalization program. We recognize the struggle in programming density in our mixed-use section of the literature review and propose recommendations in the final chapter of this study.

The Myrtle Node, bisected by the Cultural Corridor, consists of roughly 16 acres of developable property (Figure 3-4). What is now an abandoned Winn-Dixie © parcel and empty parking-lot may soon be a Wal-Mart © Neighborhood Market, with a similar site plan as the former Winn-Dixie ©. We recognize that a one-story shopping center that caters to the automobile is the type of land use that existed when Winn-Dixie © was located at the node, and we argue that the new Wal-Mart © proposal will not recognizably alter the environment; it is our assumption that this is not the best use of the Myrtle Node and may actually be a very poor use of the site, relative to urban redevelopment and connectivity. The previous assumption that considers the best and

greatest use possibilities for the Myrtle Node and drove our study to research case studies that have dramatically redesigned or improved their urban fabric through CPTED and holistically-generated revitalization campaigns, or revitalization campaigns that combine a handful of objectives under one cooperative framework, such as Englewood, CO.

Since we discovered at a NTRP meeting that the layout of the approved Wal-Mart © Neighborhood Market is a more or less a typical big-box retail layout composed of parking in the front with the structure and cargo-loading bay attached to a rear service-drive (Figure 3-5), we started researching ways that big-box retail was integrated into revitalization strategies, and discovered Englewood, Colorado's CityCenter to accommodate a big-box store, but through the use of compromising strategies, including parking-lot division. We learned that there was no open-forum discussion of the project, with the nearby-community, prior to the City of Sarasota's approval of Wal-Mart ©'s project, and we suggest that this is a mistake on the part of the city and business (NTRP meeting, 2011). This suggestion is further explored in our recommendations relating to open-forum communications between staff departments, businesses and communities.

We recognize early in our research that placing automobile-oriented businesses along the Trail may lead to an urban formation of the corridor that might threaten the potential walkability of the district as a whole, and not service the residents and community-members as well as pedestrian-oriented businesses might, especially when speaking of the Myrtle Node; this is because of the large residential population behind the businesses along the Trail and their need for nearby goods and services in safe and

secure environments. We consider development that does not conform to visions of a walkable corridor to be harmful to the overall urban network and interconnection of spaces and places throughout the district, so we propose ideas for using CPTED to inspire revitalization concepts presented in our conclusions.

We recognize that there are different usage possibilities for day and evening hours that may be mutually-beneficial and allow the sharing of resources, such as exterior seating or parking, and that Sarasota is exploring these options in consideration of their plan to propose an overlay district to the corridor (NTRP meeting, 2011). We argue that even if the Wal-Mart © Neighborhood Market, for example, were open 24 hours a day, seven days a week, the parking lot may be desolate at many times and possibly harbor factors associated with criminal environments, such as seclusion from guardianship and normal users. We find it troubling to think that some environments may not consider the public thoroughfare and we discover in our archival research that post-modern planning and architecture may have resulted in gaps in spatial continuity (see Trancik, 1986) that we suggest may be counter-productive to creating an environment associated with high quality of life associations and modern CPTED principles. Archival research online and at the UF libraries provided a collection of CPTED-based theories to apply at the initial design/redesign stage, which we use to support our findings and conclusions.

We recognize that day and night-time uses and needs may vary widely among environments and users, and explore how designers should consider diurnal usage and further, how a site may be used when the businesses on-location are closed. From our recognition that night-time community-perceptions of the walkability and safety of an environment may vary greatly at different times of the day and night, we suggest an

approach similar to the way Englewood, CO strategically located specific businesses to strategically promote each other's business, a way to support mutually-cooperative business operations and foster the type of urban environment (that they) desire. We are not aware of whether or not Wal-Mart © considered the greater urban context or community needs such as safe, walkable corridors, in North Sarasota. We suggest that the City of Sarasota, however, should be concerned with the outcome of any built environments that do not assume their urban contextual obligations to include the public use of the site, or site-perimeter, for non-customers, and leads us to suggest a catalyst project and environment that is suited for public and private users.

For example, when analyzing Sarasota's Myrtle Node, if a minimum of even 25% of an important urban node is to be virtually closed to pedestrians at night, how will the citizens who need to walk through it feel and be safe? Alternatively, if the other 75% of the urban node contains auto-oriented businesses, vacant units, a bar/lounge and expansive ground-level parking lots, how will anyone passing through the node, who is not within the confines of an automobile, feel comfortable, secure, positive or attracted to the environment? We conclude that it should be a primary concern of cities to bring dangerous or threatening public spaces to attention and in our recognition of this, we propose a redevelopment project be placed at the urban space we feel could have the most to gain from a renewal, redevelopment or revitalization strategy.

During our research, we question that if an entire urban node neglects to find a way for pedestrians and multimodal users to travel safely and enjoyably through it, is the node undoubtedly a failure as a joint in the urban fabric and not have a positive influence on its environment. Moreover, could it have a negative influence on its

environment? We assume that a project can negatively influence its environment (see Jane Jacobs (1961) and the broken windows theory) and that alternatively, the right project could positively influence its environment. Therefore, we further researched examples of projects and case studies that have influenced their communities and environments for the better. We extract the relevant lessons that we consider should be mentioned, regarding the case studies and their effective strategies. We conclude that a failed joint, in any context, may only increase the risk of more structural failures and in more than one direction; this is our consideration of how poor development hurts urban environments and their inhabitants.

Rationale for Case Study Proposal at Trail Plaza

It has been suggested, in the Innovation41 study (2006), that within Sarasota's North Trail Corridor, the existing (primarily retail) node between Myrtle St. and Highland St. is a natural activity zone in which future development should utilize and activate. Referring to the large blocks east and west of N. Tamiami Trail, south of Myrtle and north of Highland, as the Myrtle Town Center Node, the study Innovation 41 describes this specific location as, "The psychological heart of the neighborhoods where people have historically shopped and interacted." (p.33) Wal-Mart © has been approved to build an urban market on the east side of the Myrtle Node and their plan includes an expansive parking lot in front, between the store and the main road, N. Tamiami Trail (NTRP meeting, 2011). Currently, at the Myrtle Node, on the west side of the corridor, sits the Trail Plaza strip-center, with mostly lower-end retail, some vacant units and a comedy club that opens in the evening.

The Trail Plaza strip center was built decades ago and we suggest that it has faced considerable criminal activity within and around the site. A recent burglary at the

Radio Shack, on site, has led the owner, according to Mr. Greenberg (2011), to consider installing CCTV cameras, a mechanical surveillance technique, and tool that we can not necessarily recommend implementing on its own. An assumption of ours is that simply installing CCTV cameras will likely not dramatically increase community perceptions of the site and is a retro-fit crime prevention tool that, if used alone and without continuous official surveillance of the video feed, will likely not improve the quality of the environment or reduce crime. However, the owner has agreed to allow the Sarasota Police Department to install a satellite office at the Trail Plaza, in one of the vacant units, and we conclude that there may be a way for the City of Sarasota and the owner to collaborate in a public-private partnership to redevelop the Trail Plaza parcel and improve the greater Myrtle Node (Greenberg, 2011).

We learned that a satellite police office (at the Trail Plaza and Myrtle Node geographic area) would be the first satellite office for the Sarasota Police Department (Greenberg, 2011). We hypothesize that a satellite office at a CPTED-based revitalization anchor and catalyst project would mesh well with the goals of the development, objectives of community-revitalization strategies and might promote change in user perceptions regarding the safety and usability of the site. We suggest that the location is appropriate to the entire Cultural Corridor site, as the Myrtle Node is located fairly centrally to length of the corridor. While CCTV and a police presence, together, might help to reduce some of the crimes committed at and around the Trail Plaza, we regard retro-fit crime-prevention strategies to be less of a long-term solution, or proactive approach to community improvement, and more of a response and short-

term tool for combatting a fundamental problem of the site and/or surrounding urban fabric.

Our assumption that there may be a fundamental problem with the urban fabric at the node, has directed our research to consider how a new development might be built that could foster CPTED principles and also spur the many facets of community revitalization. We therefor recommend that the City of Sarasota consider a sustainable approach to combating crime and creating successful urban environments, and we recognize the principles of modern CPTED for their ability to combine community needs and goals under a strategic vision with organized objectives, from the initial design and planning stages of redevelopment. In the Findings and Discussion chapter we present a crime comparative for shopping areas in Sarasota, Florida, along Tamiami Trail.

Rationale for CPTED Consideration at Trail Plaza

By integrating CPTED principles into the North Trail Zoning District in 1991, Sarasota positioned itself as a pioneer in crime prevention planning (Appendix-A). Led by visionaries Stan and Sherry Carter, Sarasota's North Trail Corridor was the focus of attention. Since the owner of the Trail Plaza has recently volunteered to allow the Sarasota Police Department to put a satellite office in one of the open units at the plaza, we recommend further exploring options with the owner that might include public-private partnerships. Within the Myrtle Node, the following list of contextual factors led to the decision to propose a case study revitalization catalyst project at 3333 N. Tamiami Trail, Trail Plaza:

- Wal-Mart © Neighborhood Market project approved at large NE parcel
- Vacancy of Goodwill © at Trail Plaza when the lease is up, in late 2012
- Criminal activity at and around Trail Plaza has been recognized by the owner
- The first satellite police office has been volunteered at Trail Plaza

- Roughly a third of the Myrtle Node is arguably the Trail Plaza
- The Trail Plaza has historically been a shopping center and urban attractor
- McCurdy's comedy club may be looking to relocate
- Trail Plaza is a decaying strip-center at-risk of high-vacancy and increased crime
- Time to alter the Wal-Mart © project, to promote walkability and safety has passed
- The size of Trail Plaza (6 acres) is arguably large enough to build an anchor site
- Trail Plaza has historically been a destination site and a new development may spur new interest in what the site has to offer and/or improve the corridor's image

We consider an urban magnet, or urban attractor, to be a project large enough and diverse enough to reach out to a community, draw them in to the site and potentially bring in users to the area who are not local residents. The Myrtle Node location is centrally positioned on the North Trail Cultural Corridor and in a prime location for catching commuters on North Tamiami Trail as well as nearby residents (Innovation41, 2006). Inserting a catalyst project for revitalization on the west side of the Myrtle Node, at the Trail Plaza, could prevent a large, decaying property from facing empty retail spaces that we suggest would undoubtedly have a negative effect on the surrounding environment. Instead, through our experience with North Sarasota, we recognize that redeveloping the Trail Plaza may grant an opportunity to redirect the urban formations and developments, implement more sustainable business and residential considerations and begin a public-private partnership strategy that could organize revitalization efforts and potentially spur reinvestment in the community (as we present in the case study section of the literature review).

Interviews with NTRP Volunteers

Interviews with local volunteers, David Greenberg and Marjory Sykes, were conducted to provide local perspectives on the Trail Corridor's current state and future potential. The interviews were conducted by phone and in an informal narrative so that the conversations would flow naturally and their opinions would not be confined to a list

of questions. Interviews were conducted during 2011, after personal-participation in multiple North Trail Redevelopment Partnership meetings. The findings are presented in Chapter 4, with conclusions from the interviews proposed in Chapter 5.

Crime and Environmental Data-Gathering

We utilize the crime data from Crime Mapping (2012) in order to understand that there are a high number of crimes occurring around North Sarasota, Trail Plaza and also what types of crimes are occurring around the biggest parcel of the Myrtle Node (Crime Mapping, 2012). We also have informal discussions with the owner and manager of the Trail Plaza regarding current criminal events. Our interest is in understanding and presenting some data regarding the geographic location of Trail Plaza and the type of criminal environment that surrounds it. Furthermore, we compare shopping areas within Sarasota, along Tamiami Trail, in order to support our placement for a CPTED-derived urban redevelopment anchor project, and we present the study in our findings and discussion chapter.

Configuring a Proposal at the Case Study Site

Through analyzing the literature surrounding CPTED and researching case studies that we deemed relevant to our study, we discovered valuable CPTED-theories and how they can apply to urban planning, urban design, architecture, landscape architecture and interior design. By locating public-private partnership-based case studies, that have been successful in community revitalization, we formed suggestions and recommendations for our Sarasota case study proposal of a catalyst and anchor project, by weaving in what we also gleaned from interviews with key actors, meetings with the Trail's revitalization partnership and personal observations over an extended period of time, from 2009 to 2012.

We conclude that the Myrtle Node presents an interesting an appropriate intervention site to strategically allow an intervention in the form of a revitalization catalyst project, that could be used to lead the Cultural Corridor's urban renewal movement. We discuss our reasoning for choosing Sarasota's Myrtle Node and Trail Plaza as the initial anchor-site in the following chapter. We discuss our research and analysis findings, by including what we consider to be vital lessons from CPTED theory, criminal activity theories and Sarasota's context, including interviews with two local NTRP volunteers and personal observations. Furthermore, we recognize the lessons from the case studies and discuss relevance of specific approaches to crime prevention and/or revitalization. Our conclusions and recommendations are presented in the final chapter and deal mainly with how designers and planners might begin to consider how the Myrtle Node could be potentially transformed and moreover, how CPTED principles might be used for idea-generation and design-inspiration.

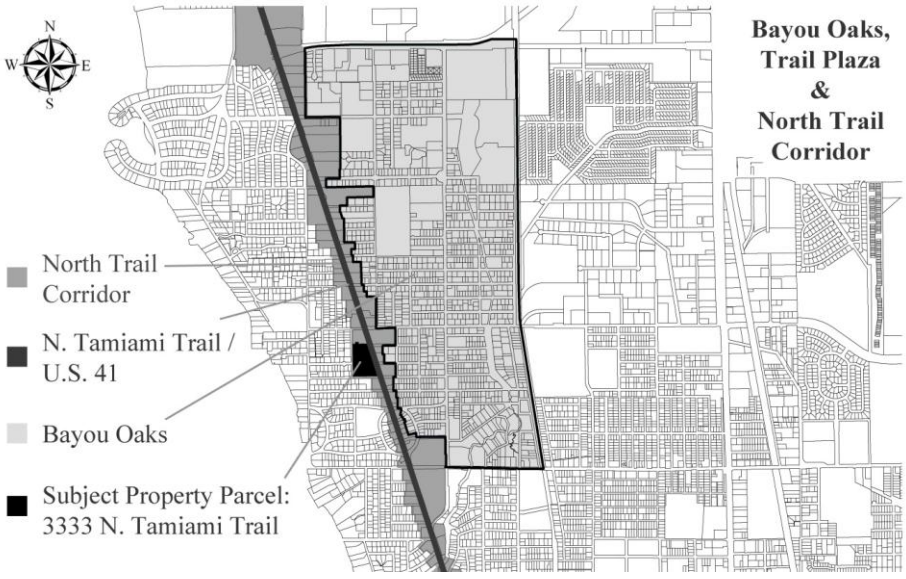


Figure 3-1. City of Sarasota and North Trail Corridor. Source: Created by author, 2011

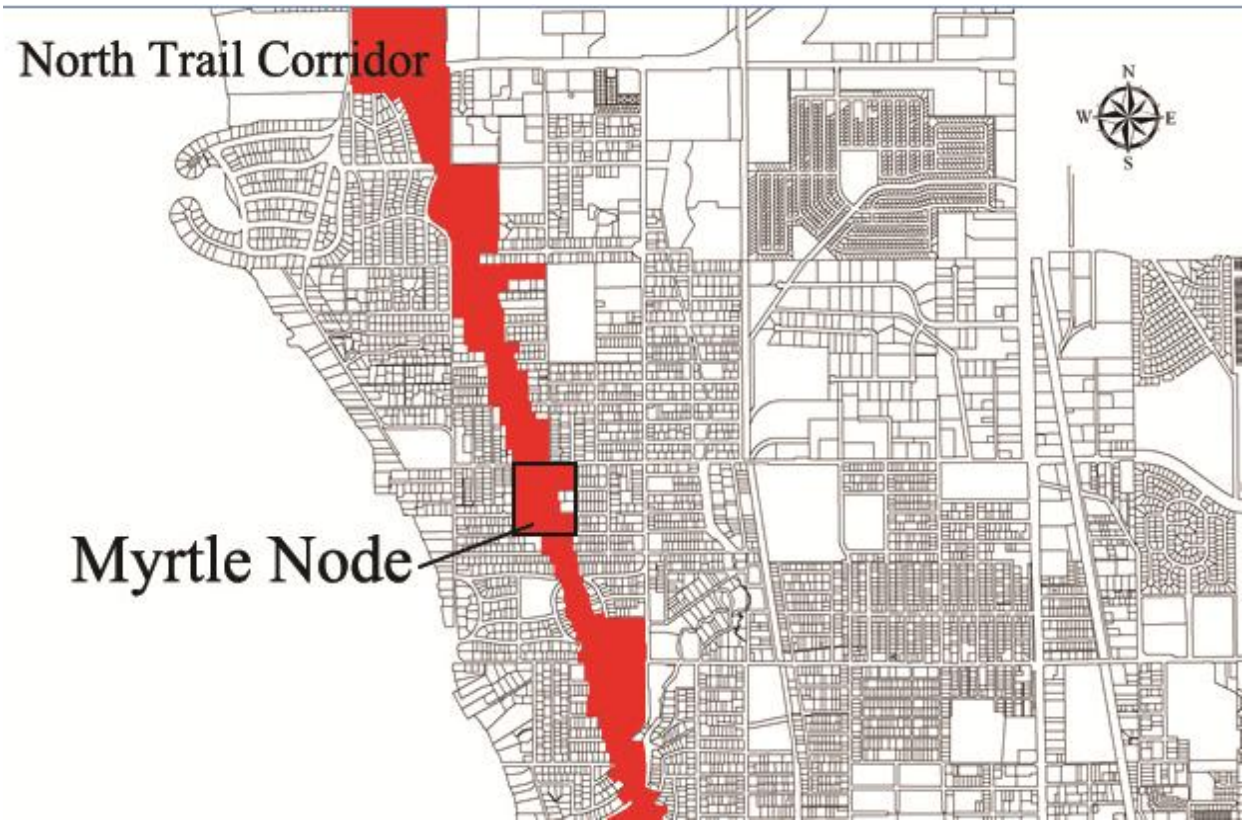


Figure 3-2. North Trail Cultural and Education Corridor. Source: Created by author, 2011

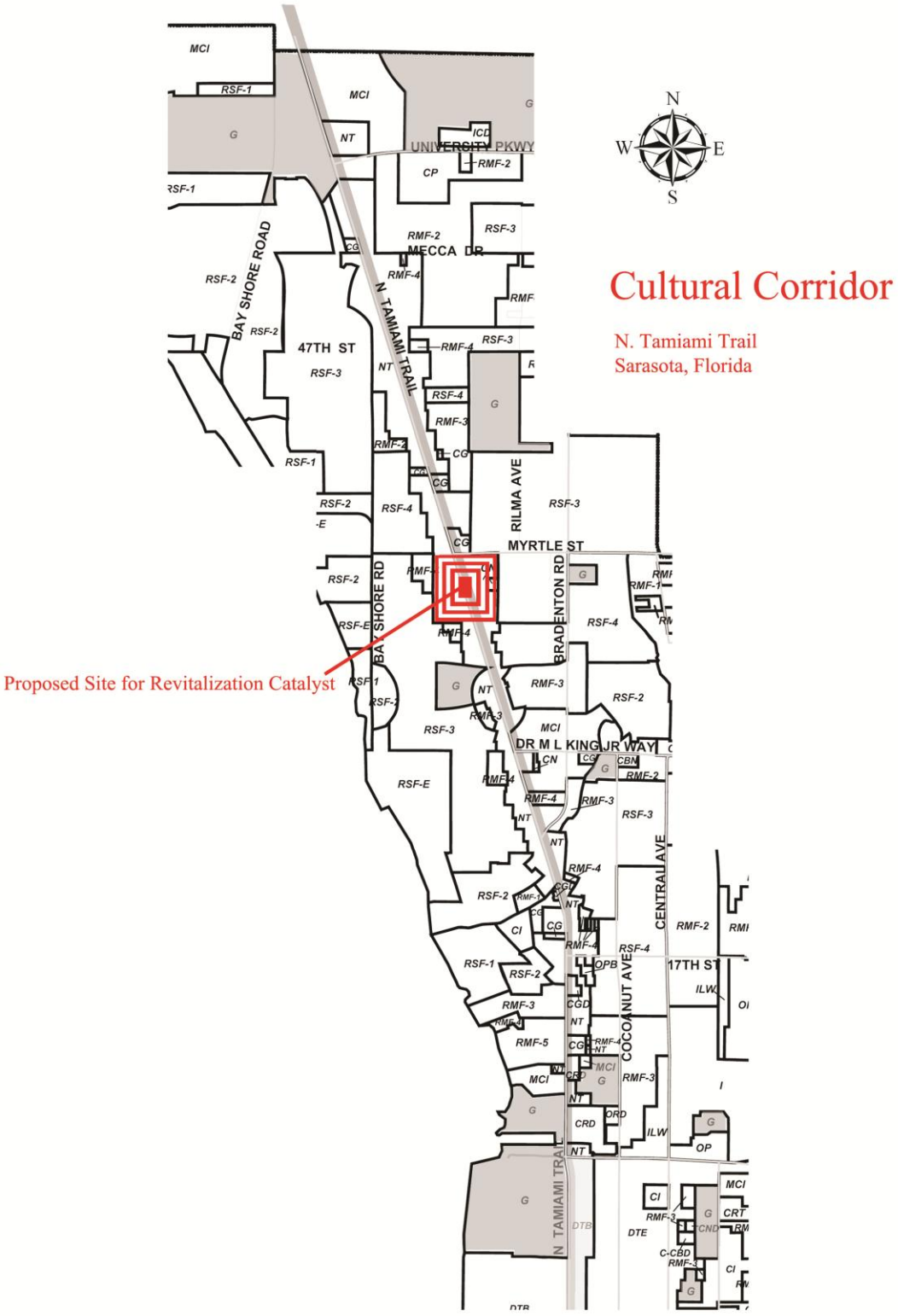


Figure 3-3. Center of Sarasota's Cultural and Education Corridor. Source: Created by author, 2011

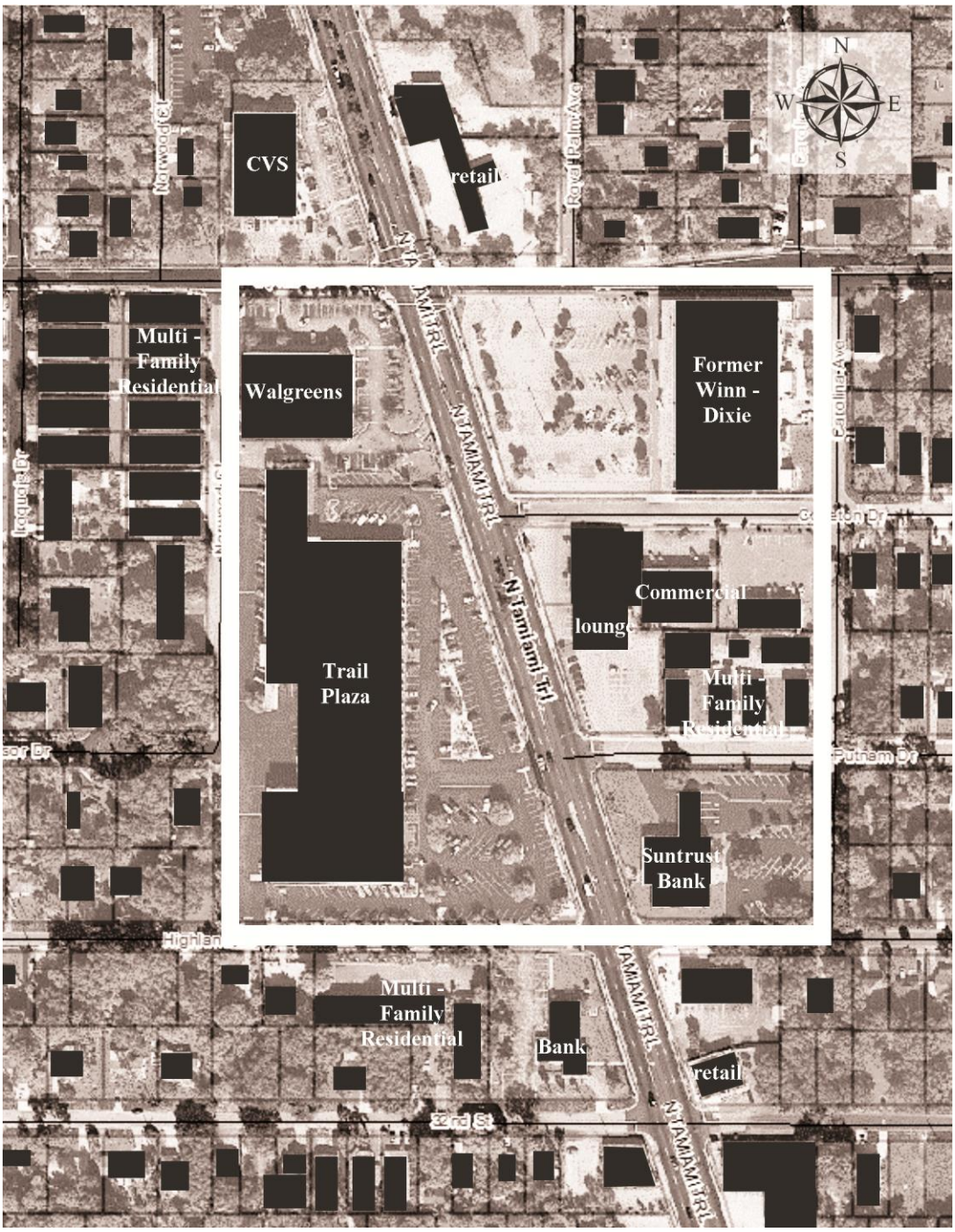


Figure 3-4. Existing urban morphology at the Myrtle Node. Source: Created by author, 2011

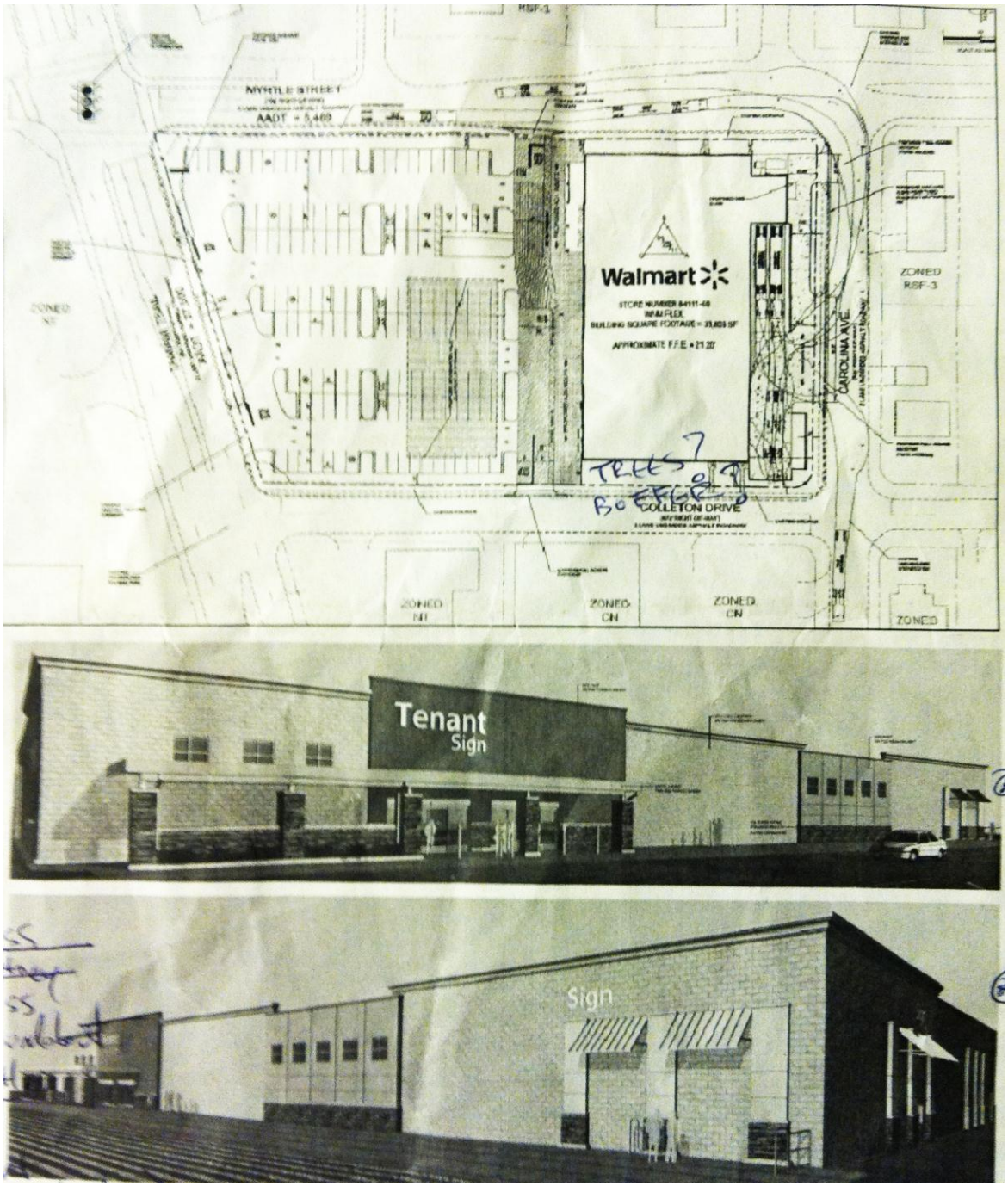


Figure 3-5. Early Wal-Mart © Neighborhood Market proposal, at the Myrtle Node.
Source: NTRP meeting, 2011

Figure 3-6. Trail Plaza, south entrance and Goodwill © store. Source: Google Street View ©, 2011

Figure 3-7. Trail Plaza east façade. Source: Google Street View ©, 2011

Figure 3-8. Trail Plaza northeast corner. Source: Google Street View ©, 2011

Figure 3-9. Trail Plaza southeast wasted space. Source: Google Street View ©, 2011

Figure 3-10. Trail Plaza southeast site border with N. Tamiami Trail and Highland Street. Source: Google Street View ©, 2011

Figure 3-11. Trail Plaza southwest service drive, entrance from Highland Street and Goodwill © store's southwest exterior. Source: Google Street View ©, 2011

Figure 3-12. Trail Plaza southwest site, taken 20 feet west from Figure 3-11. Source: Google Street View ©, 2011

Figure 3-13. Trail Plaza western site intersection with potential formal neighborhood entrance. Source: Google Street View ©, 2011

Figure 3-14. Trail Plaza western site border and central western entrance, taken 20 feet east from Figure 3-13. Source: Google Street View ©, 2011

Figure 3-15. Trail Plaza northwest site border with Norwood Court and adjacent pharmacy. Source: Google Street View ©, 2011

Figure 3-16. Former Winn-Dixie © parking lot, with Trail Plaza in the (west) background. Source: Google Street View ©, 2011

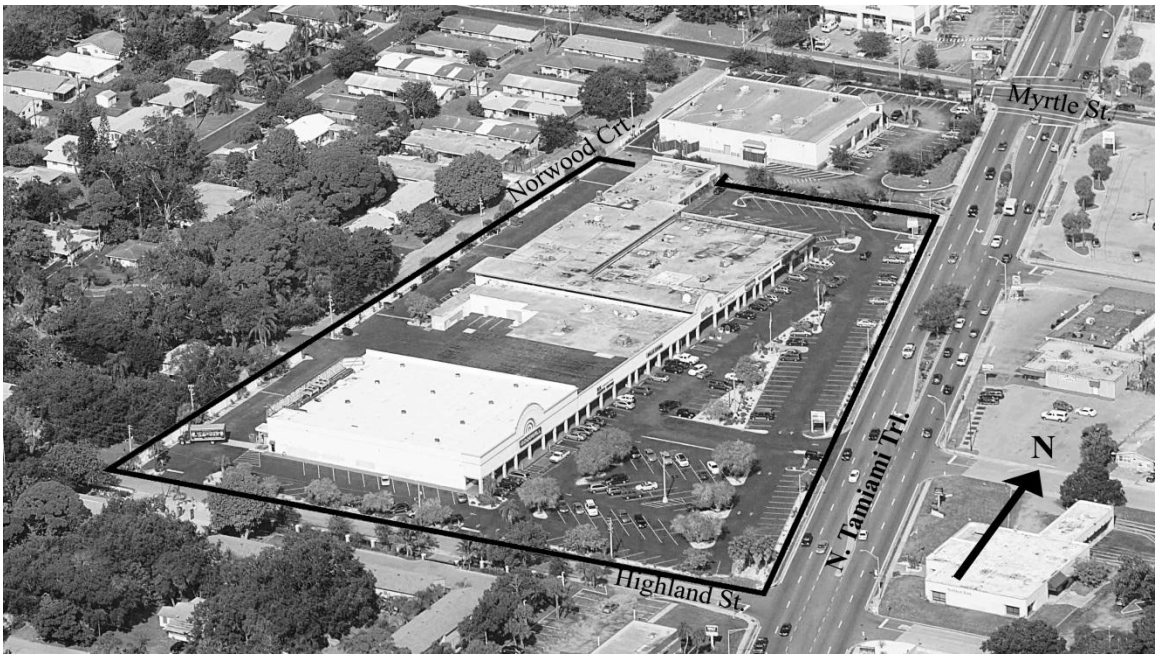


Figure 3-17. Trail Plaza aerial view, facing northwest. Source: Greenberg, 2011

Figure 3-18. Trail Plaza aerial view, facing southwest. Source: Greenberg, 2011

CHAPTER 4
FINDINGS AND DISCUSSION

We found that principles associated with modern CPTED are relevant to urban redevelopment. Public-private revitalization catalyst projects have shown us that crime prevention, safety, economic development, multimodal transportation have been integrated to support a community visions and local, market-based economies (Bryant Park, 2011; City of Englewood, 2009; Minnesota HEALS, 1999). Interviews and personal experience guided our review of North Sarasota's Education and Cultural Corridor and case study / catalyst proposal for a renewed CPTED-based approach to supporting urban improvement.

When performing a Google-search for "holistic approach to CPTED", three websites were found. The three web all linked to the same special-report from the Horse Rider Press (2011) describes second-generation CPTED as, "A term referring to a more holistic approach to CPTED that includes the integration of effective social design or social development to reduce crime and victimization. Modern CPTED practices are, for the most part, 'second generation' CPTED and the term is becoming redundant." (p.4) In our study, we use the term modern CPTED to describe the most current practices. The holistic approach is arguably achieved by using the most current strategies to incorporate CPTED into the earliest stages of planning and design possible and by having the modern, natural crime-prevention techniques work to support each other so that no one principle carries too heavy of a crime prevention burden.

Literature Review Findings

There are many theories on criminal behavior and crime prevention, but we found a few to be particularly relevant to modern CPTED application and education.

Rational Choice

Criminals may use a rational logic when considering whether to commit a crime, however, individual criminals' logic is unique and difficult if not impossible to anticipate or fully consider

Situational Crime Prevention

Conflicting interests should be separated in an appropriate way and where susceptibility to crime is high, either alternate design(s) should be considered or a heightened awareness of potential vulnerability that manifests its absence into a presence of added resources and support for other crime prevention measures should exist

Opportunity Theory

All people should be considered potential criminals if presented with a desirable-enough reward for an acceptable risk, so all public space and social environments should plan and design to prevent opportunities for easy crimes.

In recognizing that opportunity theory considers everyone a potential criminal, to some degree, we found the modern CPTED principles to fit well with deterring crime from a large array of directions while utilizing natural techniques that fit stealthily into the built environment, so that criminal opportunities are hopefully too risky to be considered rational crimes. We recognize that the categories of modern CPTED can be grouped in a number of ways. However, the following natural approaches are largely-accepted, modern, universally-accepted theories, applicable to considering a holistic crime prevention model for urban revitalization.

Natural Access Control

Use-specific architectural organization of space to support other crime prevention strategies and control boundary access without complete reliance on mechanical

devices; a strategic use of architectural form to promote mutually-exclusive uses from sharing spatial joints

Natural Surveillance

Utilization of the users of an environment (employees, visitors, guardians) to act as surveyors, and therefore a criminal deterrent; planning, design and construction that supports both drawing in users to an environment and creating space that improves environmental surveillance

Territorial Reinforcement

Recognition of the large-scale and small-scale contextual factors that may play a role in supporting a holistic crime prevention program; supporting other crime deterrents, tools and organizations, including special attention to how to improve the other principles of modern CPTED

Management

Organized program strategy focused on leadership, an anchor project and stakeholder involvement, motivated to collaborate crime prevention efforts

Maintenance

Continued crime prevention program leadership, strategy revisions and implementation of objectives through continued participation of stakeholders and project actors

Case Study Findings

While not all revitalization projects make a point to separate CPTED-principles in their methods, the case studies included in this thesis all recognize the importance of crime prevention and safety within their built environments. Through researching crime prevention theories, such as rational choice, situational crime prevention, opportunity theory and the three-D approach, we found that the modern CPTED principles

encompass many of the theoretical components of the many theories of why many crimes occur. Modern, natural crime prevention principles work in support of one another and towards the ultimate goal of increasing risk to the potential offender while decreasing their opportunity to easily commit many crimes.

Bryant Park

The public-private aspect of the park financially supports the maintenance and operational costs. The updated CPTED-based redesign incorporated modern CPTED components in order to change community perceptions of the area (Macedo, 2007). Flexibility in use seems to be a primary component of the site's program. By designing to allow for natural access control and multiple uses, the park can be open to the public or for private, special events. By having at least two official guardians of the park, the presence of authority is constantly nearby, 24 hours a day, seven days a week (Bryant Park, 2011). The park management maintains a crime prevention program, along with organized, private-sector leadership and the willingness to adjust and relate to a changing environment (Macedo, 2007).

Minnesota HEALS

The Minnesota-based public-private revitalization program saw much success in both the private and public sectors (Reno, 1999). Attorney General Janet Reno (1999) urged businesses to become catalyst to urban improvement programs and use business strategies, void of political agendas, to strengthen communities. We found that public-private partnerships can be effective and efficient, especially when revitalization-support comes at the private, public and municipal levels, under open discussions and information sharing.

Brooklyn Reinvestment Initiative

Through partnering with Pfizer, Brooklyn allowed Pfizer to champion a community revitalization program. Pfizer, a long-standing member of the community chose to stay and work to improve the environment rather than abandon it for an already established site. We found Whiting's (1999) *Keys to a Successful Partnership* to employ the following vital components: a catalyst role-player, a project leader, business analytics and social outreach, and fiscally responsible appropriation of resources.

Gainesville, FL

Convenience store crime during the night hours led Gainesville, Florida to adopt some crime prevention measures. We found that regardless of whether or not their positive results stemmed precisely from the legislation that required more than one employee during certain business hours, along with a few other requirements, was important, educational and productive. If the harm and risk on one end is minimal, and the benefits are potentially astronomical on another end of a theoretical stick, it would seem logical to implement whatever is being considered.

We question, with no disrespect, why anyone would oppose legislation that may potentially have such dramatic results as preventing personal injury or death, when the cost of the potential crime prevention mechanism comes at a low cost, such as the hourly pay of a convenience-store clerk. The question of whether crime prevention measures such as natural surveillance work is answered long after implementation, but if the crime deterrence techniques are not mutually-exclusive with other architectural and urban goals and objectives then there is likely minimal risk in using CPTED to supplement design, management and operations.

CityCenter Englewood

Urban revitalization occurs within a unique context every time. However, there has been a large decline in the use of many strip-centers and enclosed malls. Many strip-centers and malls have been replaced, such as in Englewood, however, Englewood was a pioneer in eliminating a threat to their urban vision and utilizing public-private partnerships to recreate a more traditional urban fabric, from one of the largest malls in their region (City of Englewood, 2009).

Sarasota, FL

After using CPTED principles for the North Trail Zoning Overlay District Ordinance (1991), Sarasota arguably saw a decrease in certain crime, yet the area did not see a complete, corridor revitalization. Currently, it is very difficult to locate new businesses along the North Trail Corridor (Greenberg, 2011). The current local trends in commercial real-estate and development have included low-end retail, big-box and relocation moves, though there are some locally-owned small businesses with a nice following (Greenberg, 2011). The polar ends of the roughly 2.5 mile North Tamiami Trail Education and Cultural Corridor have seemingly been pulling local businesses to the north and south ends, and the central corridor has arguably been in a continued decline (personal observations, 2006-2012). Sarasota's vision for a strong retail and mixed-use urban attractor, at the Myrtle Node, is currently threatened by the declining state of the Trail Plaza, the approved Wal-Mart © Neighborhood Market project and the absence of an urban catalyst for a community-improvement project and revitalization-project champion (leader).

Interviews with Local Actors and Project Discussion

We discovered that when the effects of crime are shared among residents and businesses in a community, they should be neutralized in a cooperative manner, to increase efficiency and effectiveness. When the line between public and private interests can become blurred, project champions can help to organize and articulate individual concerns and focus energy and resources strategically and appropriately. Whiting (1999) reminds us that safe streets, low crime rates, and productive citizens are equally important to all members of the community, residents and visitors alike. In fact, Tom Kline, VP of Marketing Strategy for Pfizer insists, "You change an urban community one lot at a time – just like you change education, by teaching one student at a time." (Kline, 1999; as cited by Whiting, 1999, p.13)

Interview with David Greenberg

Local commercial real-estate broker, and representative for Trail Plaza, David Greenberg is both an active volunteer on the NTRP (North Trail Redevelopment Partnership) and an engaged member of the North Sarasota business community. Mr. Greenberg does not pretend to speak for the entire business community but he acknowledges that many people feel as he does about the current state of the North Trail Corridor (Greenberg, 2011). We found that Mr. Greenberg's opinions are valuable because they relate largely to the issues surrounding economic revitalization and urban improvements, and represent a large portion of the community-perception.

Mr. Greenberg explained that he and other commercial real-estate agents have had difficulty in bringing new businesses to the area, due to local perceptions that the corridor is not currently a very inviting environment for companies that do not wish to market to low-end clientele or box-retail (Greenberg, 2011). We found that Mr.

Greenberg's concern for a lack of diversity in the business community may be well-founded, for three new projects along the trail might include a large Goodwill © center, a Wal-Mart © Neighborhood Market and a standalone $1 retail goods store.

We found that Mr. Greenberg is actively researching how the Trail Plaza and Cultural Corridor could be further developed. He has presented ideas for how to bring new economic investment to the area to local planners, businesses and citizens. Furthermore, Mr. Greenberg is currently working on a presentation for the local authorities and stakeholders about how enhancing the educational corridor may be a way to bring in a strong new developer; he believes that another higher-learning institution may be a good choice for a revitalization catalyst, if implemented correctly (Greenberg, 2011). We found that bringing in a higher-learning institution to spur development would likely be a positive project for the area, however, special attention to the future use of such a project would need to be highly thought out and weighed against the overall community vision and desired developmental strategy, so that a community-oriented node (such as the Myrtle Node) does not become a segregated place but a center that supports the community and their needs.

Interview with Marjory Sykes

Ms. Sykes, the Bayou Oaks and neighborhood watch representative to the NTRP, is familiar with many of the principles and benefits of CPTED, though she is admittedly not an expert, and is in-fact eager to learn more about how modern crime prevention through environmental design techniques could improve the neighborhoods' and the corridor's character. Ms. Sykes has been active in her duties, as far as her volunteer responsibilities to both Bayou Oaks and the NTRP, and she explained how she had recently met with a business man who owns five motels along the trail. When

questioned about how the meeting went and if some of her suggestions and points were well-received, she explained the owner had recognized some issues, but ultimately had mixed-feelings about implementing some CPTED-inspired redesigns on his properties (Interview with Ms. Sykes, 2011).

We found that some of the customers and usages on the corridor properties may represent characteristics that the neighborhoods are trying to eliminate. Furthermore, some of the business owner's patrons (while not directly expressed by the motel owner or Ms. Sykes) are likely to be of the deviant nature, and engaged in some of the low-level crimes that the Bayou Oaks community (among others, such as the Sarasota CPTED Task Force, North Trail Redevelopment Task Force and North Trail Redevelopment Partnership) would like to see disappear. However, while not directly stated by Ms. Sykes, a possibility may nonetheless exist for the introduction of CPTED measures at some of the corridor's motels, but may be costly and might result in reduced revenue because of a potential loss of clients, when included in the costs of implementation. Furthermore, there may be a fear on the part of the property owner of backlash from long-standing patrons of the establishments that had counted on the existing design and property- management of the sites, in order to fulfill some criminal goals, such as prostitution or illegal drug-solicitation.

It is the case of addressing an existing site, its operations and the attached social atmosphere, that makes crime prevention implementation techniques harder to introduce than when accepted and integrated into the initial planning and design stage, which comes prior to construction. In fact, what could be possible is that a lack of CPTED considerations for an urban area, as a whole, and the properties within it, could

actually promote the snowballing of a criminal atmosphere and in-turn, chase out desired users, thus creating a market that does not desire to cater to normal users but instead caters to the abnormal users or deviant users; this kind of atmosphere might make it hard to target and gain a sizable market-share that is does not desire to risk associating with deviant behavior. We found that the broken windows theory is a relevant concern for the Trail Corridor.

Ms. Sykes expressed the concern for community perceptions of a criminal element that affects residents' quality of life, and we suggest that the urban environment may harbor some criminal activity, at least as perceived by community members and our study of retail crime zones along Sarasota's Tamiami Trail (introduced in the following discussion section). We believe that it's possible, that in a district that may harbor deviant behavior, that crime- and post-crime management by police may be overburdened and incapable of addressing crimes rapidly, when they are of a low-level nature, such as minor drug-offences and repeat prostitution. We also found that businesses and management in a troubled corridor may have not only become somewhat used to a deviant or troubled atmosphere, but come to think that if they don't accept it, not necessarily supporting it, but not fighting it either, then they may not have as successful business operations as they would have, if they look the other way, when they see deviant activity.

It would seem that a bad environment, related to the previously-mentioned somewhat-criminal-environment, that small-scale business owners may not necessarily be convinced of the benefits of CPTED retrofitting on their properties, and that a new development, acting as a large catalyst, and central node that was large enough to have

an impact on its surrounding context could be a way to spur revitalization throughout a community, parcel by parcel, property by property. This thesis proposes a parcel that is large enough to making an urban impact that extends beyond the site's perimeter. It is the intention of this thesis to propose a parcel that could be redeveloped and become the revitalization catalyst, and large-scale urban project, that imposes on the surrounding context in a positive way, eventually influencing the entire urban fabric in a manner suited to normal, desired users, thus flushing out the deviant atmosphere.

From the Innovation41 (2006) study that the City of Sarasota may look to for guidance, the North Trail Corridor redevelopment effort, on the central (Myrtle) node, is explained as a vital site to the community and residents due to a vast number of resources, such as location, retail, size and scale. Also, the historically well-known reputation is a valuable element, when considering the idea of redeveloping Sarasota's North Trail Corridor and the challenges of marketing an improved environment (Innovation41, 2006).

Discussion

Crime Study of Retail Nodes along Sarasota's Tamiami Trail

To determine if there are relatively more crimes occurring in the North Tamiami Trail Corridor, and specifically around the Myrtle Node, we performed a quick analysis of comparable retail nodes, or activity nodes, along Sarasota's Tamiami Trail. Our analysis included a search for all crimes recorded within a two-mile radius of our chosen addresses. The results suggest that there are more crimes occurring in the northern Sarasota district than in the south; there are more crimes being recorded around the North Tamiami Trail Nodes than there are around the South Tamiami Trail Nodes.

Furthermore, the Myrtle Node sees a considerable amount of crime, and while not at the top of our study's list, it was a close second to an area just over a mile up the road.

During the first two-months (Jan. 1 to Feb. 29) this year, a two-mile circular-study around the following locations resulted in the corresponding number of crimes recorded by Crime Mapping (2012):

- 211 N. Tamiami Trail (North end of Trail Corridor – North Sarasota) 651 crimes
- 3300 N. Tamiami Trail (Myrtle Node – North Sarasota) 534 crimes
- 3501 S. Tamiami Trail (Southgate Mall area – Mid-Sarasota) 376 crimes
- 6555 S. Tamiami Trail (Gulf Gate Mall area – Mid-south Sarasota) 232 crimes
- 8201 S. Tamiami Trail (Sarasota Square Mall – South Sarasota) 335 crimes

The crime data presented does not show types of crime, and percentages of each crime type, which we suggest should be studied, so that potential developers in these areas will have an understanding of what types of crime are prevalent and specific CPTED principles can be used strategically. The Myrtle Node location had a very high number of crimes during the first two-months of 2012, and our location was on the west side of the node. The former Winn-Dixie © location, on the east-side of the trail node, had fewer crimes during the first two-months, with 507 (Crime Mapping, 2012).

We studied 7300 North Tamiami Trail, to the north of Trail Plaza, during the same time frame, and found 352 crimes. We then looked at 300 North Tamiami Trail and found 671 crimes, the most yet. Are findings show high numbers of crime around the Myrtle Node and high numbers of crimes to the north and the south. With this brief analysis, it seems logical to recommend the Myrtle Node location for a CPTED-guided public-private urban redevelopment anchor site and revitalization catalyst central anchor, so that community improvement grows north and south along the corridor. Of course, while our circular studies are a reflection of our measuring device, we believe

the nature of crime, crime prevention and community revitalization to occur in every direction.

Crime Data for Strategic Crime Prevention Planning

To get concrete CPTED data, it takes first an analysis of crime at a specific location in order to compare it to resulting crime. Simply comparing the difference in numbers of crimes is not enough; all the differing variables of an environment must be measured, in order to get results that are based on individual preventative measures, such as what are the most common crimes? Unfortunately, it is seemingly rare to find empirical measurements of only a single crime prevention variable, especially because the modern preference for CPTED is to utilize crime prevention principles in the planning and design stages, before a site has been developed, and in a holistically-encompassing approach to creating an environment that proactively deters criminal activity.

It is easier and less costly to utilize the principles of CPTED theory in the designing stages of a project than after the fact, in the case of a retrofit. Therefore, we would like to introduce an educated discussion to the City of Sarasota about how to utilize CPTED principles when considering any zoning and code changes to the North Trail Corridor, so that CPTED components are in place before architects get too involved in their designs to make adjustments. Furthermore, we recognize all professional designers, from architects and landscape architects to interior designers and urban planners as potentially benefitting from integrating modern CPTED principles appropriately and strategically.

Well-coordinated site management and organized maintenance of properties are essential components for the long-term sustainability of communities. CPTED theories

reach beyond asking for property owners to keep their landscapes clean, clear and well-lit. The theories request that the following stakeholders, groups and departments have open dialogue with one another, share information and combine resources: government staff, police, business and property owners, residents, and the business community (including staff, employees and security). By agreeing to common goals and a shared vision, all of the relative parties to a community revitalization project can utilize CPTED objectives to organize a community strategy for revitalization.

Trail Corridor and Trail Plaza Crime Data Discussion

The Trail Plaza, 3333 N. Tamiami Trail, may be one of the more concentrated offending locations in the general area of the North Trail Corridor, in 2011, with 9 documented crimes, in the first 45 days of the year, recorded from January 1st to February 14th, 2011 (Crime Mapping, 2012). These results make us consider the hypothesis behind the broken windows theory, in which a broken window in a building, if not replaced or repaired quickly (demonstrating ownership and active management of the property), will eventually lead to all the windows breaking in the building or at the site, effectively creating an atmosphere associated with criminality and lack of proper governance (Bratton, 1994).

Within one week, 9/3/11 to 9/9/11, Crime Mapping (2012) shows us that inside a 1-mile radius of Trail Plaza, there were 14 reported crimes, including:

The violations include the following Type-II (low-level) crimes:

- 3 Drug / Alcohol
- 1 Disturbing the Peace
- 1 Vandalism (within .2 mile)
- 1 Weapons

The violations include the following Type-I (high-level, more severe) crimes:

- 6 Assault (one within 500 feet or at the site)
- 2 Theft / Larceny (one within 500 feet or at the site)

The data above shows that while the general neighborhood is experiencing mostly low-level crimes, Trail Plaza may be experiencing more serious crime. Furthermore, ni three months, between 4/1/11 and 6/30/11, there were 58 reported crimes, including:

Within 0.2 mile radius:
- 39 reported crimes

Within 500 foot radius:
- 19 reported crimes

From April to August, 2011 within 500 feet of Trail Plaza, there were reported violations of:

- 6 crimes in April
- 8 crimes in May
- 5 crimes in June
- 10 crimes in July
- 5 crimes in August (Crime Mapping, 2012)

Between the dates of March 10th and September 5th, 2011 there were a total of 692 crimes reported within a one-mile radius of Trail Plaza (Crime Mapping, 2011). The most common crimes at the adjacencies of the site seem to be petty thefts, with some counts of fraud, which still may be considered a form of theft, for which the crime could have been identity, credit card or other. For example, one account is fraudulent use of a credit card, around 7:00 PM on 2/5/11, a Saturday evening.

Trail Plaza and Case Study Discussion

The public-private partnerships, like Bryant Park, for example, show how the public sector can help to generate a catalyst project and then allow it to become self-sustainable by the private sector, requiring no public funding for maintenance. As a case study that challenges any theory of a realistic, maximum thresholds of density and how designers and planners would need to approach a site that is more or less public

and highly populated, in order to have a healthy environment that eliminates perceptions of fear and criminal entitlement, the private management of Bryant Park provides invaluable examples. Furthermore, to prove how a revitalization catalyst can make enormous changes in a community, the Minnesota HEALS partnership shows how a sustainable revitalization effort can spread throughout a community and not only keep the benefits that were found through a CPTED inspired catalyst project, but gain more throughout the area, for decades to come.

Paralleling the design process involved in planning and architecturally programming a six-acre mixed-use, housing, retail, commercial, entertainment, restaurant, arts-venue, such as the mix of uses suggested at the CPTED catalyst project in Sarasota, this thesis began its study in an idea of how to generate revitalization and found its way to utilizing crime prevention and safety promotion strategies to not only thwart deviant users but attract desired users to an engaging, inspiring, community resource.

Through the numerous examples of ways to incorporate CPTED principles into the redevelopment of the proposed revitalization site, CPTED potentially provides all the recommendations needed in order to begin a public-private partnership, aimed to create a catalyst for urban redevelopment and improvements to the quality of life for the entire corridor. In order to gather, extract and interweave the cultures and people already existing within the community, the program at a catalyst site should function as an urban attractor, drawing on the community's population, interests and needs.

If the City of Sarasota does not desire to, or cannot find a way to, allow a public-private partnership and invest their time, money and resources, the private sector would

need to carry the entire burden of a CPTED-inspired revitalization movement. In this case, the stakeholders and surrounding community may not be able produce any kind of redevelopment, they may have their hands tied with zoning or simply lack the financing to invest in the area. From meetings with development companies that are financially capable of a project to this scale, it is known that they will not go in it alone, for it is far too risky of an investment, as is (fall 2011), and too difficult a project comparatively, when there are such easier ways to generate revenue from the site, such as putting a McDonald's outparcel in the parking lot. A McDonald's outparcel, for example, might be at least a ten or twenty year, plus, business occupation of a valuable site and may do little to help walkability, promote crime prevention and safety or alleviate traffic congestion for the community.

With a new Wal-Mart © Neighborhood Market planned for construction, nearly across the street from the catalyst proposal site, the redevelopment of the entire parcel at 3333 N. Tamiami Trail may be the last opportunity that the City of Sarasota has to generate an urban node, such as is suggested by the Innovation41 Study (2006) that explains how to revitalize the corridor. The study identified the specific node, at the 3300 block of the North Trail Corridor, as an established and expected place for urban regeneration and if the opportunity to use it as a catalyst project is not acted upon, they may not have another opportunity for decades to come. There can be a lot of crime in the period of decades and a missed opportunity to generate an economic stimulus catalyst for the North Sarasota community.

The City's planners are well aware of the impact that the Trail Plaza property has on the entire region of northeast Sarasota and this is why they included the parcel under

the newest incentivized zoning overlay district, the Enterprise Zone. Not every parcel along the corridor is zoned as such and this is especially true of the western parcels. The regulations for City redevelopment at our location are in Section 6.10.5.b.1 of the City of Sarasota's Zoning Ordinance. However, even under the conditions for extra density, the height limitations may make meeting the requirements of a mixed use parcel of this size extraordinarily difficult and risky to invest in, which is why there are currently no developers that want to come on board to redevelop properties like Trail Plaza. To generate proper CPTED techniques, let alone create the dynamic kind of environment that is required of a revitalization catalyst project, many more users will need to engage the environment, than currently do.

Students, and low-income, overburdened users, for example, arguably do not have enough purchasing power to support a retail node. For example, since the nearby school is a private school, the students likely won't have enough extra money to help generate enough revenue for the on-site businesses to earn a profit. We found that diversity is an important factor in mixed-use and directly relates to the idea of a cultural district or corridor. Since the existing corridor is far from a luxury market, ground floor leases would have to be very affordable, to entice businesses to enter, and with low-cost leases, it may be hard to speculate that a profit can be made for new developers, especially with the high-costs associated with structural, elevated parking.

The costs of creating a parking garage, compared to ground parking, are enormous and must clearly be recoverable for any developer to dare to build a parking garage, often a component of mixed-use. Without a solid profit return predictable from redevelopment, the Trail Plaza and Myrtle Node will likely continue to exist as it is, with

some minor touch-ups to paint and repairs performed as needed to a slowly decaying strip-center, served by low-end retail and primarily automobile traffic. Without a strong incentive for development, the owners of properties, such as Trail Plaza, will not make seemingly high-risk investments in the current volatile market, and the cycle of decaying business will likely continue along the Trail Corridor.

CHAPTER 5
CONCLUSIONS AND RECOMMENDATIONS

Our conclusion section provides information related to archival research, case studies, interviews, plans, personal experience, research findings and limitations. In the recommendations section we propose an urban catalyst project for Sarasota's North Trail Corridor. To inspire an ongoing discussion of how to incorporate modern CPTED principles into a corridor renewal program, we provide architectural renders and plans of CPTED-inspired urban design.

Within a redevelopment and revitalization catalyst project, in order to satisfy a mix of retail demands, diverse visitors should be welcomed and planned for. Installing design features that are accessible for persons who are minimally able, to move freely through space in the same manner as everyone else might strengthen perceptions of safety and usability. Physically challenged individuals may have the most trouble with navigating through spaces, from a general standpoint, so it is recommended that in order to keep design simple and straightforward, and CPTED considerations manageable, professionals should simply design, plan and build for them in mind as the common user; this is a fundamental theory of CPTED, that all users are considered. Furthermore, planning for handicapped users, for example, parallels the way to approach design, with considerations for deviant users.

Criminal Activity Theories

Opportunity theory, rational choice and situational crime prevention should be recognized both for their logical reasoning and for suggestions on how to understand criminal behavior, for the purpose of aiming to preemptively deter criminal activity. CPTED principles utilize a proactive approach to crime prevention and safety that

incorporates the theories of why some crimes occur and how some crimes can be deterred or prevented.

For instance, the ability of a site to respond in a timely manner is imperative, for if a protective territorial response is to truly be effective in a preventative nature, the potential for a responsive consequence (being caught, arrested or assaulted) must be not only perceived by a criminal but lead them to the conclusion that they may not be able to get away with crime unchallenged. To prevent criminal activity, a site's preventative mechanisms should convey the message to the potential criminals that the risks far outweigh the payoff. For example, if there are no private guardian authorities, nor enough time for any authorities to respond and curb a criminal event, there is not enough time to apprehend a criminal; if a criminal recognizes this, they may perceive an opportunity to commit a crime.

When there is minimal risk in committing crime, a small payoff could outweigh preventative considerations very easily. However, crimes of opportunity are not possible if a perceived opportunity does not exist. Crimes of opportunity are crimes that are related to time and space, when there is an acceptable risk perceived. Granting a perceived opportunity for engaging in a criminal event might occur from simply not presenting enough deterrents or threats to potential criminal activity. An example of a crime of opportunity is an unlocked bicycle on a street corner, in which there are no visible guardians or perceived concerns for the ownership of the bicycle.

The criminal is a highly adaptive individual and when in groups, can be even more of a threat (Schneider, 2009). How can guardians deal with the ever-adaptive criminal threat? We recognize that one approach may be to think one step ahead, and identify

problematic scenarios before complications arise. Furthermore, what can the stakeholders of a revitalization effort learn from the suggestion to stay one-step-ahead of the criminal mind? Utilize the chain of command to relay potential threats all the way to top management, so that employees who encounter problems can relay ground-level information to the management and owners. Incentives for spotting threats could be a way to get employees to become more aware of threats and more communicative in relaying their discoveries (Felson, 1995).

CPTED Principles

A reliance on one drastic crime prevention technique is not the aim of CPTED, for we conclude that a holistic approach to crime prevention is usually more appropriate to an urban setting. Incorporating multiple strategies that strengthen one another's abilities should ultimately be the goal of architecture and urban design, and CPTED programs should aim to utilize the same methods, whereas the combined project is *greater* than a sum of the components. We recommend the use of natural access control and natural surveillance strategies to inspire urban design and architecture. We conclude that territorial reinforcement should be used theoretically as glue that connects an entire crime prevention strategy.

By inspiring critical analysis of plans, designs and the built environment, territorial reinforcement strategies call for organization, crime-deterrent-supplementation techniques and inter- and inner-departmental communication. Management's role in CPTED should be to use private-sector efficiency, effectiveness and an organizational hierarchy to engage a proactive approach to crime prevention, while continuing to follow program objectives. Management should maintain a continuous crime prevention and safety program, with a tight-knit communication-structure, so that new threats are

discovered, reported and countered with appropriate criminal deterrent tools. We conclude that maintenance of crime prevention programs is arguably as important as any other aspect of crime-prevention-based efforts.

It is important to understand crime preventions' modern, holistic approach to integrating the three principles behind CPTED. The entire program of space may be improved by the intelligent organization and interplay of the crime deterrents. The holistic approach is vital to a successful and complete integration of CPTED, and similar to the philosophy that when parts that fit together are assembled, the completed package's value can be greater than the summed individual values of the pieces. For example, techniques of design that reinforce territory are important, for spatial clarity, understanding and readability of an environment, and are likely able to work in-unison with other CPTED principles.

In the case of correctly integrating CPTED principles, it is not as beneficial, we argue if even beneficial at all, to only integrate some aspects, and not take-advantage of an approach that embodies all components, such as a well-organized public-private partnership may, for example. We conclude that the success of one technique can rely drastically, if not entirely, on other principles' successful implementations and maintenance. An example of a partial, unsuccessful integration would be creating windows that overlook an area of use, an eyes on the street or natural surveillance technique, yet relying on that technique without consideration of how to get the people inside to look out their windows, might fail at generating surveillance, and possibly result in a non-existent prevention of criminal activity (Jacobs, 1961).

Crowe (2000) also explains the ways living creatures exhibit territorial behavior, to the degree which we regard it as not only important, but instinctual, to defend our territory. We argue that the intrinsic nature of beings to mark and defend their own area runs deep, and like most requirements of design, is likely easier to process and manage if accepted and used as a tool for improving the desired manipulation of program, space and user behavior rather than opposed and struggled against.

Territorial reinforcement, theoretically, supports all individuals within and around a site by diminishing unnecessary stress and work on users of an environment. We argue that an environment can become a conveyor of information and direct social-interaction from the layout and impacts of interconnected spaces within a context. For example, when an individual user is directed by a beautifully-landscaped path to a clear, well-lit transition space that emits a welcoming impression to visitors, the space is simply less to be as demanding on users than if the journey to the same location was filled with doubt, fear or concern.

We argue, for example, that if guardian-oversight is known by criminals to be relatively non-existent, the crime-prevention measure of a “No Trespassing” sign may likely be disconnected from any official support, in-turn, rendering the sign less effective or ineffective as a measure of prevention (Schneider, 2009). When crime prevention principles do not work in a holistic fashion, in support of one another, the results will not be very predictable. In Florida, for example, a “No Trespassing” sign is arguably a request on the part of the property owners, unless there is an official subscript attached to it stating that violators will be prosecuted (Fl. Statute 810.09). The statute

acknowledgment makes the sign a legally binding order and therefore able to be enforced in Florida State Court of Law (Schneider, 2009).

We recognize that the concept of territorial reinforcement reaches far beyond signage. We believe architects might argue that many types of spatial indicators could be used to invoke feelings and cue sensory reactions and user-conclusions. We acknowledge that territorial reinforcement principles are attached to management and maintenance roles, but also in the architectural forming of space and the social programming for a site's use, so that guardianship, maintenance, and natural deterrent strategies don't become overtasked in the completion of their objectives.

We found that some aspects to remember, when designing for natural crime prevention and territorial reinforcement are the importance of attracting users to an environment and the implementation of design programs that support the management and maintenance roles within a site. Crowe (2000) stresses that, "If these symbolic or psychological barriers [to crime prevention] are to succeed in controlling access by demarcating specific spaces for specific individuals, potential offenders must perceive that unwarranted intrusion will elicit protective territorial responses from those who have legitimate access." (p.38) We assume that a user's perception is a key factor in measuring the success of natural crime prevention programs. We contend that one could argue that perception is the first stage in environmental engagement, and is required of users before even entering an environment; this would infer that the CPTED designer needs to consider how well their design appeals to non-users and makes them desire to enter a site.

If developers have the option to create any theoretical layout for a project, within a city's zoning and code parameters, we suggest considering the traditional neighborhood design (TND) style of urban design that calls for a large amount of perimeter-based construction and dedicated spots for socialization and gathering. Due to a number of variables, and possibly to supplement access control, natural surveillance and territorial reinforcement techniques, perimeter-based construction has been used in countless successful cities, such as Boston, New York, and Englewood. Inner corridors, and hierarchy of urban space that consists of dedicated, public- or semi-public use, might come in many forms, such as a hardscapes, greenery, bicycle parking stations, parking structures for cars, pool-areas, and squares for social gathering. In fact, in the old castles, we argue that the interior courtyards may have been used flexibly, for many things including daily operations and formal- and informal-gatherings. We acknowledge that there are many possible uses for interior courtyards, as well as other public spaces and present the following case study discussion to include findings regarding CPTED application, revitalization strategies and public-private partnerships.

Case Studies

The case studies presented in the review of the literature deal with public-private partnerships, urban revitalization, crime prevention planning and legislation, catalyst projects and improving quality of life for members of communities. Urban revitalization programs should look to the case studies for information on how to introduce specific strategies for deterring crime and improving particular sites. CPTED principles are relevant to all scales of the built environment, from comprehensive planning to interior design, so at each level of design, we recommend proactively considering how deviant users may occupy the environment and how CPTED might propose solutions to

hypothetical conflicts. Our research on the case studies used in this study resulted in the following conclusions.

Bryant Park

A CPTED-inspired redesign of the once-infamous park sparked community revitalization and flipped community perceptions of the space; the public-private partnership is now entirely self-sufficient under the private-sector and supports a wide range of activities and flexible use.

Minnesota HEALS

A public-private community revitalization program, nationally recognized for its successful use of multiple business partners joining together to improve the environment; recognized by Janet Reno as an inspiration of what businesses can do to improve their own communities.

Brooklyn Initiative

A project-champion led example of how a private business chose to improve their existing environment, rather than relocate; Pfizer led a community revitalization program that focused on crime prevention and urban renewal, showing how the reinvestment in one's community may be a smarter investment than abandoning a site or environment.

Gainesville, FL

Convenience store crimes during the night hours pushed Gainesville to enact crime prevention legislation; requiring two workers during specific hours may have reduced crime, but was an active approach to attempting to adapt to criminal activity, in which the potential benefits should have outweighed the costs of (private) implementation.

Englewood, CO

Faced with a decaying retail center, the Englewood CityCenter project incorporated a public-private effort and incorporation of multiple objectives to work together in strengthening the overall environment; modern CPTED principles such as natural surveillance and territorial management play a large part in maintaining the urban vision.

Sarasota, FL

The North Trail Corridor has historically presented Sarasota with low-level crime and struggling revitalization strategies; the renewed interest in economic development along the Trail Corridor has led to studies of new zoning overlay districts and questions regarding the direction of construction and development. The Myrtle Node appears to be a ripe location for strategic redevelopment and is appropriately located to act as a revitalization anchor and redevelopment catalyst.

Conclusions from Interviews

David Greenberg and Marjory Sykes not only grant perspectives on the Trail Corridor, they help to inspire potential ideas for redevelopment. Our conclusions from the interviews are as follows.

Framework for conclusions

Local representatives shared their opinions on the current state of the North Trail Corridor and provided interesting perceptions regarding community revitalization, criminal activity and their perspective of the current North Trail Corridor environment. While local area volunteers, David Greenberg and Marjory Sykes, do not represent the entire community, they are respected members of the community and may help to

initiate discussions regarding stakeholder needs and community visions. Conclusions from the interviews are as follows.

David Greenberg

Mr. Greenberg, local commercial real-estate broker, explains that there has seemingly been an increase in crime at one of the properties that he represents, Trail Plaza. Mr. Greenberg further concluded that when the Goodwill © (tenant) leaves, when their lease runs out in 2012, there will be another vacancy in the strip center and a very large percentage of the entire strip-center. If another one of the main tenants (McCurdy's Comedy Club) leaves as well, there may be more vacant units than occupied spaces. We agree with Mr. Greenberg's assertion that a further increase in criminal activity may arise at Trail Plaza if there is less natural surveillance and an increase in community perceptions that the plaza is struggling. We also conclude that if the property owner and the City of Sarasota can work together to redesign and redevelop Trail Plaza, the site may be appropriate to anchor an urban revitalization catalyst project.

Marjory Sykes

Ms. Sykes, the representative of the Bayou Oaks Neighborhood program for crime prevention at NTRP meetings, is not the official spokesperson for the entire residential community along the Trail Corridor; however, she does bring a highly-informed perspective to the discussion of revitalization and community interests and needs. Ms. Sykes infers that the residents would likely support a renewed CPTED-based urban strategy for the corridor, and has acknowledged that she finds CPTED very informative and useful. When the head of a large community program likely supports development, as long as it is meant to increase factors commonly associated with high-quality of life,

then there social context is arguably ripe for presenting mutually-cooperative urban strategies and shared environmental-objectives. We argue that the community support from North Sarasota residents is strong and ripe enough to support a central project-leader's revitalization catalyst effort.

Sarasota's Education and Cultural Corridor

We conclude that Sarasota's North Trail Corridor is in need of a renewed crime prevention strategy and urban improvement movement. We conclude that if there was a strong public-private partnership and revitalization anchor at the Myrtle Node, the central node of the corridor, an outward-expanding environmental-improvement program could be continued through the rest of the trail, and to the schools at the north and south ends of the Education and Cultural Corridor.

We recognize Sarasota's CPTED-inspired NT Zoning ordinance as being proactive in terms of preventing crime, when it was created, but we also acknowledge that the current economic development partnership is facing an uphill battle in trying to alter negative perceptions of the corridor and get a more diverse mix of businesses to open in the area, in order to counter and compliment the primarily low-end retail along most of the corridor district and especially the Myrtle Node. From our case study research, we theorize that neglecting to explore opportunities for public-private partnerships and CPTED-driven urban planning and design possibilities at the Myrtle Node would be a huge missed-opportunity for the City of Sarasota to recognize the importance of the node within the Cultural Corridor and the impact that redeveloping the node might have on the surrounding residential and business communities.

Case Study Proposal Sarasota

We strongly recommend that both the City of Sarasota and the owner of the Trail Plaza research potential opportunities for working together to create a public-private partnership and revitalization anchor. There are likely opportunities for urban-improvement grants, crime-prevention grants, historical road grants, community redevelopment grants and public-private partnerships, that can be linked together to generate some of the funds needed for the design, planning and construction processes. We propose that the case study be directed at using a private-sector-project champion to organize and lead a corridor-improvement program, by locating the initial redevelopment catalyst at the most appropriate site for an urban renewal catalyst development.

For a revitalization effort to have a meaningful impact on the community, the scale of the initial catalyst project should be large enough to significantly improve the environment on its own. The impact of the initial program must be in the theoretical form of an anchor, so that sustainability, reliability and investment factors are powerful enough to change people's perceptions and spark nearby reinvestment in property and place. We conclude that any catalyst project initiated in North Sarasota should be intended as not a temporary installment, but as a long-term anchor project, community activity generator and goods and services provider.

Pre-planning consideration

The mutually reliant nature of crime prevention initiatives seems to parallel the natural development of the architectural design process. CPTED lends itself to a smooth thought process for designing, especially if professionals reach out to the community and brainstorm openly, discussing the merits of intention and the potential

effects on the environment. It might even be true that one of the reasons that potentially great architects design a project that fails is because their creations have overlooked contextual obligations to the environment, the affected communities and/or the operational use of the site.

The solution, because not engaging the public is arguably a big problem, might be suggesting concepts, designs and methods for implementing CPTED at an initial stage for the purpose of a community discussion for what a new approach to urban revitalization and an improved CPTED-based corridor strategy would consider. We conclude that the principles of CPTED should be initiated at the earliest opportunities in an urban renewal program.

Directional ambiguity or even disgust for an environment may cause confusion, generated from unmet expectations of navigation-related information or simply from a messy, un-kept atmosphere (Schneider, 2009). We recognize that zero-lot lines and traditional neighborhood design (TND) strategies both may allow for borders and urban massing to assist in territorial reinforcement strategies. Schneider and Kitchen (2007) provide a comprehensive summary of prevention theories, reinforcing the importance of clarity in an environment, by explaining that, “Moreover, CPTED, defensible space and space syntax all place significant value on clear-cut boundaries between public and private spaces, such that the creation of ambiguous spaces should be minimized whenever possible.” (p.43)

Urban form and architectural possibilities for Sarasota

Architecture, urban design and landscape architecture have produced many styles and ideologies, however, we conclude that at a minimum, most public or semi-public designs and proposals should meet or exceed the majority of social expectations with

regard to the following considerations: safety and security; lighting; natural crime prevention strategies; criminal deterrent supplementation tools; user mobility and accessibility needs; local economic market participation; legibility and clarity in signage and methods of conveying information to users; a comfortable threshold for viewing when an area is intended for surveillance; site management and maintenance, such as graffiti cleanup within 12 hours; moments of flexibility for use; quick access to assistance, such as police or security guards; context and environments, from cultural considerations to ecological sensitivities; stakeholder needs, and; ethical standards, like designing for the greatest benefits for the most people.

What are the possibilities for what can be done in North Sarasota? What can be developed at the Trail Plaza? What if an anchor project's site layout was inspired by the general castle form, including perimeter construction, interior openness and flexible usage possibilities with highly organized natural access control? The resulting development would possibly have a natural crime prevention layout, but to be truly successful in operation, there would have to be proper maintenance and environmental security, so that users understood there where consequences of acting out in a deviant nature. It is hard to deny the benefits obtained from the perimeter constructed layout of a natural surveillance-inspired development that surrounds an internal semi-public, dynamic and engaging atmosphere, such as the walls and structure of a castle likely surround a courtyard.

Since the City of Sarasota is working on a new zoning overlay for the Trail Corridor, but has not produced a final product, we propose a few recommendations for the City planners to consider, as follows.

Plane of light and sun-path

If the desire for sunlight to enter the Trail Corridor must result in some sort of requirement for building, such as having to build back as far as something is built up (for example, a second level that starts at ten feet would have to be set back ten feet from the ground level's perimeter border), then whether or not more sun is truly desirable in a hot climate like Sarasota and whether any rule would have an appropriate application for properties located on the stretch of the corridor that does not run close to true north-south.

Form-based code

We recommend that any form-based code be implemented organically and adjust to development proposals, rather than be overly strict, scaring off potential creative developers. We recognize Alkhresheh's (2007) study and recommendation that, "Urban street spaces with ratios of (3/4 and 1) evoke the highest sense of comfort and safety, while streets with high ratios of (5 and 6) and low ratios of (1/6 and 1/5) evoke the least sense of comfort and the least sense of safety." (p.97) If the support for a form-based code is overwhelming, we recommend that rather than pushing the boundaries of requirements, the opposite approach be taken, where simple and vital design standards should be met.

An example of a vital design standard would be to respect the sense of enclosure that humans find comfortable, 3:4, height to width, in which a 100 foot wide corridor space would be best suited to buildings of 75 feet. This height to width ratio is, roughly, used by one side of the Tamiami Trail in Sarasota, where the Sarasota Memorial Hospital sits roughly seven or eight stories high and within roughly twenty feet from the roadway. Adjacent to the hospital's property is the popular, walkable, Hillview Street

and district, with compatible and actively engaged retail, commercial, restaurant, bar, service and residential usages.

Ground-level parking and surveillance

If ground-level parking must be incorporated, and natural surveillance principles are proposed to govern the parking lots, there should be a requirement that the developer provide a strong argument as to why their designs don not simply meet arbitrary-standards for visual permeability, such as 50 percent, but that effective crime prevention measures are in place to deter crime in the parking lot. We recommend that businesses share parking, in order to support an efficient use of space, such as the theory behind shared leases or communal space(s). Furthermore, we do not conclude that parking is a fundamental human right in which the city needs to require developers to meet a specific standard. Parking should probably be in parking garages and not be free, in order to urge the nearby residents to leave their cars at home and support a revitalization strategy in their community, in person, on foot.

Lighting

We conclude that lighting and illumination techniques can play a major role in achieving a sense of place. Furthermore, lighting techniques can play a role in safety and marketing usability, as well as criminal activity deterrence and aesthetic crafting. Different colors can be used, but should be recognized as potentially impacting the environment and users in ways beyond simple illumination. Similarly, proper luminosity and color rendition are important characteristics of individual light fixtures and bulbs, and they should be inserted carefully into designs so as to not create a poor atmosphere.

Mixed-use and cultural diversity

If the community wishes to bring in a more diverse mix of uses, it will need to allow profitable development. If developers need a more dense mixture of leasable space, in order to be able to invest in redevelopment, we recommend the city push for an increase in the number of leasable units per acre. Furthermore, arbitrary guidelines, such as specific limitations on height, may limit developers and reduce the potential to bring in community reinvestment, if there is too large of a risk factor in earning a return on investment. If mixed-use is desired at the Myrtle Node, for example, any new zoning overlay should acknowledge the typical requirements of mixed use development, such as retail ground level(s), parking level(s), commercial and residential levels. After all, to properly fit elevated parking, retail, restaurants, bars/pubs, commercial, residential, and entertainment spaces, plenty of height is needed.

Case Study Proposal for North Sarasota

Proposal

We recommend that a case study project be introduced to Sarasota's Cultural Corridor. The area seems to be more susceptible to crime than South Sarasota (Crime Mapping, 2012). We have argued the Myrtle Node location to be the most appropriate place to locate a public-private revitalization anchor, or catalyst development. We theorize that the proposed development to the former Winn-Dixie © site for a similar big-box project and site layout threatens the future urban connectivity of the Myrtle Node and entire Trail Corridor. Additionally, we recognize that the Trail Plaza occupies what is arguably the largest portion of the Myrtle Node and that the strip-center is presently faced with crime, vacating businesses and a dilemma for how to continue operations at

the site, if there becomes an even greater lack of interest from businesses to relocate to the decaying center.

Since the owner of Trail Plaza has recognized that there are existing problems with criminal activity and deviant use at the site, and has volunteered a small space for the Sarasota Police Department to use as a satellite office, we question if the owner would also be willing to support a public-private partnership to redevelop the Trail Plaza parcel. From private discussions with the owner, we conclude that he is interested in what could be done with the property, but is not going to make the jump to being a developer on his own, without strong outside economic support and the security of knowing how a strong return on investment will be earned.

Architectural and urban design programming

Based on the research and findings, we propose an architectural program as a general example for how the subject property can be programmed in order to generate a thriving, mixed-use catalyst to further revitalization and redevelopment in the district. From utilizing natural techniques as much as possible, such as natural access control and natural surveillance strategies that may supplement not only each other but territorial reinforcement principles, the social function and program of the proposed catalyst project, in Sarasota, should rely on a holistic crime prevention approach that is aimed at generating a dynamic environment, to be used comfortably by a diverse mixture of visitors.

By supplementing the natural approach to crime prevention, with mechanical deterrents and organized security is suggested, in strategic and non-aesthetically-threatening, non-imposing ways, so that a fortress effect is not apparent in the environment. Lastly, management, organizational roles and methods to maintain the

image of an engaged site-ownership are recommended for stakeholders' considerations.

CPTED and architectural theory

Architects can base their designs on loose reasoning and abstract origins, but how can they integrate CPTED principles within unrelated and complex architectural inspirations? We suggest it is not difficult to intertwine architectural and urban design concepts with CPTED principles, and that CPTED may be used alongside other architectural-processes. For example, if a designer wants or needs to incorporate a sleeping porch into their structure, they might first look at what requirements they believe are involved in the creation of a sleeping porch and consider the CPTED principles that they would like to see implemented on the site, before beginning the brainstorming, initial design process of sketching or modeling ways to amass space and join the porch requirements with the most desirable CPTED objectives for the project.

How hard it is for architectural inspirations to integrate CPTED principles? For the sake of continuing this study, we suggest that each project is unique, but it is not overly challenging to allow for CPTED to positively influence design and planning, if simply considered CPTED from the earliest stages possible. We conclude that since the combining of CPTED and architectural creativity is not impossible, merging the theories might provide designers and planners with more ammunition to justify certain needs; by ammunition for justification, we suggest that if a certain aspect of an architect's design likely improves the environment through reducing crime and improving safety, yet is faced with zoning or code department disapproval, we suggest that the City overlook the code or zoning violations if there is also overall community support. We suggest

that relative association with successful practices in architectural design grants an urban environment with more opportunity for use and is more attractive.

Transforming from environmental-scale decisions to the human-scale, beyond the scope of the requirements of CPTED planning, takes an understanding of the urban context all the way down to the potential user activation and engagement of a site, to fully encompass the spectrum of crime prevention considerations. For instance, when CPTED's finally applied to the architectural detailing of space and function, the questioning of usage, on behalf of the CPTED consultant can be jumped into, head-on, for it's never too early to attempt to be one-step-ahead of the criminal-mind (Clarke, 1997).

Catalyst Project Proposal

The case study site for the project catalyst proposal could simply be called pArc 33, a derivative of the Trail Plaza office's address (3333 N. Tamiami Trail) and the desired CPTED-guided planning and architecture with an urban-park concept. We recommend a well-thought-out name and marketing campaign for a new urban-environment. Duany, Plater-Zyberk and Speck (2000) suggest that developments are often mislabeled and poorly named, when they have no connection to their function.

Proposed Environment and Atmosphere

We strongly encourage the creation of an energetic, dynamic atmosphere, considered by us to be vital to successful corridor-revitalization. We recognize that normal users should attract more desired users, while simultaneously repelling non-desirables. Residents, staff and users of the site should be able to feed off of each other's delight in their surroundings. Normal users attract more desired users, while simultaneously repelling non-desirables. The intersections of retail, café, entertainment,

resident, visitor and staff uses should all collide strategically, in the controlled, secure, welcoming and engaging interior environment that is central to fostering a successful development.

Spatial composition

A perimeter site plan that wraps around a large, open interior-corridor grants not only natural surveillance on itself, it reflects adjacent-users' energy back into the heart of the environment. Because of the large scale of the parcel and mixed-use availability (in the zoning code), the site should aim to fulfill as many normal service and retail needs as it can. Community needs might be a grocery store, a dry cleaner, a café and so on, and not up-scale, luxury retailers that are of no common use to the general community, due to the community's general demographic and assumed lack of purchasing power.

Flexibility in use

The interior, core environment, should be a flexible space that allows for the hosting of numerous types of events, so that residents and guests are constantly attracted to the site and engaged in what is occurring at the property. The constant marketing to engage and attract users, with the site's activities, may promote discussions of the project in the nearby communities. Developers are suggested to divide pArc 33's occupational and social program vertically, with each floor to have separate types of use, in order to generate a functional, mixed-use atmosphere. The floors might be divided by ten foot height divisions, for example, with a double-story retail ground level. The vertical division of the program might be composed of ground floor retail, services and restaurants, parking above (as a buffer on the second-level/third story), with residential units located above.

Parking

We recommend that parking should be structured, for the most part, and integrated into the construction, so that access control of cars is utilized and ground floor space is not wasted. Raised parking should help promote walkability at the ground level and allow for a denser mixture of usage than would be allowed if the site had to accommodate for an expansive parking lot, at the same level as the retail stores. Ground-level parking should ultimately be considered wasted space, and we conclude that it should be kept to a minimum, such as for allowing only short time and handicapped spaces, for example. Furthermore, if there is to be any ground-level parking, it should be located on the edge that is not bordering a major pedestrian thoroughfare, and in the proposed catalyst's case, we recommend any ground-level parking to be placed at the western border of the site.

To protect users from the harsh Florida weather, such as hot sun and unexpected rain, the ground-floor retail, that we propose, could wrap around the inner perimeter of the interior social-space(s), and have an arcade quality, whereas the entries into the shops are not open directly to the exposed weather and elements, but rather, we propose that businesses at the site open up to a sheltered arcade that in-turn connects the sun and sky. Natural light, fresh air and a comfortably-enclosed sense of space should exist in the environment's center. The double-story ground-level is proposed so that the transition from exterior to interior is smooth and inviting and related to the overall scale of the structure. Providing appropriate overhead clearance may be a method that naturally attracts users and generated user-perceptions of non-clustered, non-claustrophobic and thus more comfortable than too low a ceiling height would.

Lighting

Architectural lighting might be used to highlight divisions and provide atmospheric borders, so as to entertain users and engage their visual senses but also inform them of the site's usability. Hallway and restroom designs should be in accordance with lighting methods that create comfort in users, such as not centrally-lighting hallway corridors and allowing for full color rendition in restrooms. Furthermore, restrooms that are semi-public in nature should not create buffers that would cause entrapment zones, such as doors might, and instead utilize maze entry-systems.

Elevators and stairs

Elevators and stairwells must be visible from multiple angles where there can be natural surveillance. Furthermore, the principle of natural surveillance should be applied as much as possible. To support the natural surveillance, mechanical devices should be used, such as at the entrances/exits to the site, in order to maintain the perception of guardianship and allow official guardians to be aware of users and potential threats as they enter and exit the site. In order to achieve natural access control, the retail units, cafés, and uses at the ground level, should not open up to the exterior perimeter but to the interior atrium and arcade, so that users must first enter the complex and be somehow documented when entering, in order to access the goods, services and entertainment located at the development.

Circulation

In order to not limit the permeability and walkability of the site, however, access corridors should be, at least, at each of the four corners of the site, so that users don't have to travel noticeably out-of-their-way in order to engage the site and its offerings. Near the center of the western border, might be a primary or main entrance, to which

pick-ups and drop-offs by automobile are directed. Furthermore, the adjacent residential community, to the proposed site in Sarasota, has a roadway that leads directly up to the center of the western border and thus would align perfectly with a grand entrance location, creating a formal contextual connection with the immediate community, via urban and architectural context-driven form. The proposed location, if absolutely necessary, of the limited ground-floor parking lot, should allow a natural buffer between the residential community to the west and the main structure on the site.

Additionally, the large trees that exist at the joint where the western residential road meets the site may allow for an even greater quality buffer-zone to the site, deflecting noise and also hiding what some nearby residents may not want to see from their neighborhood or homes. The natural spatial buffer from the parking lot and the empty lots filled with trees at the western edge may additionally allow the site to be constructed to nearly any reasonable height, such as seven stories, without imposing its structure on the residential community. The wide Trail Corridor roadway (N. Tamiami Trail) relates well to taller buildings, if the generally-accepted sense of enclosure ration (3:4, Width to Height) is respected.

By concentrating visitors and site usage within the interior of the block, and allowing the users to circulate around the interior atrium/stage venue, attention and focus may be on the interior and reflect back on its own inner perimeter, so as to contribute to natural surveillance. The mixing of uses, from retail to restaurant, service, housing, entertainment, and so on, is what may allow many possibilities for activity and site engagement. Furthermore, the types of shops and entertainment should cater to the full range of daily activities and community needs, from breakfast hours to evening

hours, so that there is not a lull in activity, but rather, a constantly changing and varying atmosphere, that caters to all types of users.

Permeability

Permeability may seem too large a topic to be covered in this study, however, we suggest that the aim of CPTED need not be in the realm of perfection, but in the general area of attempting to use critical thinking skills and logic-based reasoning about how future space may be used. We acknowledge the question "How can we make an environment more successful?" as a way for the CPTED-planner to critique design proposals. We assume that an objective of crime prevention-planners can always be to improve safety and educate potential users, without the fear of not incorporating the best plan possible. We recognize that as long as a valiant effort exists to take a holistic approach to CPTED considerations, and most importantly, to continue to examine a project once implementation of crime prevention measures have begun, there exists a solid foundation for which to analyze and improve an environmental character.

Both positive and negative crime prevention potential may be related to the terms and combinations of physical and visual permeability. For example, a physically permeable space that is not visually-permeable can cause entrapment zones, hiding spots for criminals and/or the perception that a space is not safe to use. Thus, the physically but not visually permeable spatial joint may hold the potential for a normal user to turn a corner, become trapped, harassed or even assaulted.

In the case of visually permeable but not physically permeable space, a screen could be in place or a CPTED inspired barrier fence (that allows visual permeability yet acts to deter physical engagement). However, the degree to which spaces are physically permeable varies with the degree of ability, desire and risk weighing on the

part of the individual user. For example, it is easy to unclip a velour rope partition (such as used in an amusement park line or cue outside of a nightclub), yet difficult, time consuming and indiscrete to attempt to hop over or even break through a metallic-bar barrier with spikes on top, or even scale a concrete wall with cemented-in, glass shards on top.

We suggest that a goal of CPTED, in project catalyst environment, could be to negotiate between the necessary controls in boundary and aims of territoriality to achieve what is required of a comfortable, public, semi-public or semi-private environment. Further, we suggest that any redevelopment project will need to address the full range of space, from public to private and urban- to human-scales. For example, central garden areas could be semi-public or semi-private places, but if under common private-owners' natural surveillance, perimeter-based natural access control and legible hierarchy of boundaries, management may be architecturally-equipped to maintain the environment.

We recommend that permeability at the ground level should be heavily focused on the user's needs and social desires, granting easy movement within the site as well as access to the exterior community, provided in a fluid, safe and transparent way. By utilizing context lines, generated from the linear orientation of external, site references, physical permeability should be natural and straight forward, granting no hassle or annoyance, such as having to walk far out of the way in order to enter a development's interior environment.

We conclude that natural permeability should be influenced by the exterior entrances. At Trail Plaza, placing an entrance at each corner (NE, SE, NW and SW),

plus a main-entrance at the west, may be the most naturally way to funnel in users. Locating entrances relates to natural access control and guardianship, because dedicated corridor-entrances may provide places where entry-fees can be collected (during special-events) and entry-lines could form under direction and supervision.

Social composition

We conclude that the correct mix of tenant uses is not created by simply combining two types of land-use, such as residential and retail, but through the careful selection of occupants and urban design, as seen in Englewood, CO. Coupland (1997) suggests the importance of mixing land use correctly, by reinforcement theories for use and explains that diversity is in everyone's interest, because vitality is in the interest of towns and city centers. Furthermore, Coupland (1997) explains that the mixing of land uses should be the norm, rather than an exception, including diurnal, shared-use spaces and compatible placement of businesses to support a comprehensive mix of participants. To properly supplement usage, more is required of programming than adding a couple of floors of residential over a business; plenty of customers for the retail units are needed to generate and circulate revenue in order to support local businesses.

Density

In the case of introducing a mixed use environment to an area where there is currently not one, we recommend that zoning allow enough residents at a catalyst site, in order to properly support the businesses and provide for natural surveillance. Finally, if parking is to be implemented into the structure of a building or development, there should be some form of incentive to justify building such expensive space. Incentives should not necessarily be tax-related, but could be in the form of allowing extra density to overcome initial costs.

We acknowledge that in a somewhat distressed neighborhood, luxury rents and expensive leases are probably not feasible. Developers are well aware of costs and profit margins that make development and redevelopment possible, and if no clear profit is determined to be achievable, developers will not likely dare to enter such a risky market. In the case of project catalysts, and revitalization anchors, it may be wise to allow denser development and remove limitations such as height restrictions in favor of zoning and building regulations that apply to aesthetics, urban form and connectivity. Connectivity might relate to physical circulation and mobility as well as mutually-supportive and compatible uses.

Code considerations

Form-based zoning ordinances, or form-based codes, may be a way to allow better redevelopment of parcels, in areas that are ripe for revitalization. However, we caution that in standardizing types of allowable design forms and/or dedicating categories for application, the code may constrain urban and architectural design to arbitrary limitations (or limits that are not based on an individual site's needs) and are therefore highly subject to creating developments and buildings that are not adequately suited to their specific urban context. We recommend personal project reviews and a flexible building code, so that well-supported projects are realized.

By considering that buildings can be constructed to stand for an extended period of time and thus influence the surrounding environment for decades to come, we recommend that planners allow for special development-consideration in revitalization districts, so that project proposals come under unique scrutiny that goes beyond standardized code limitations. In the case of special projects that are meant to highly engage the urban context and spur revitalization, we recommend planning staff allow for

compatibility with an overlay district that allows for site-specific design review, and that the review does not fall under regular code restrictions but reaches out to the community for discussions regarding context-related needs.

We dwell on the importance of correctly mixing uses, for the success of a project as well as for the quality of life of all users of the urban environment. We recommend that an objective at the catalyst site, in Sarasota, should be to integrate, not separate. While some cities, such as San Diego, have set up strategies for avoiding uses such as skate boarding, the Sarasota's catalyst proposal's environment could invite and control activities like skateboarding, in some way, to draw in visitors and entertain users. As long as control measures, like boundaries, are used to protect normal users from things like stray skateboarders, there may be ways to integrate uses historically thought of as compatible.

We suggest that providing options, and a dynamic or changing environment, may attract users to not experience a place in haste or on someone else's time, but that users should be encouraged to take their time to try and extract as much enjoyment as reasonably possible from an environment's offerings. The essence of the proposed catalyst site in Sarasota could be to allow the users and residents to freely engage a flexible, exiting and changing- atmosphere. For example, San Diego also introduced anti-graffiti plans, but it may be better to attempt to avoid conflicts and allow tasteful graffiti at a dedicated wall, thus localizing it and embracing it, rather than contending with the impossible nature of preventing the rebellious and expressive art form. Utilizing graffiti's (artistically) attractive nature, to compliment an environment, might support a deeper connection between the people and the place.

While problems, such as crude graffiti, would need to be addressed immediately by management or guardians, by quickly removing obscene art, the management sets a precedent that it is pointless to try and make obviously distasteful art because it will be removed either before it is completed or before many people see it. As done in Gainesville, FL on the 34th St. wall, for example, graffiti is localized and more or less accepted and decriminalized. There are few examples, ever, of obscene graffiti, likely due to proper maintenance and upkeep of the wall's image by guardians and stakeholders. In this manner, people have an outlet for their expressions and are not frustrated from a lack of canvas, and are also, not likely, utilizing the sides of the buildings, as much, for their artistic expressions.

We conclude that the inner core of a mixed-use entertainment venue, for example, would need engagement from the users on a fairly consistent basis, in order to support natural surveillance, territorial reinforcement and market economics. User-engagement might be possible by maintaining a schedule of events, like: shows, concerts, plays, movies, farmers markets, traders markets, talent shows, training shops, product showcases, conference locations and associated activities for members of associations and clubs, entertainers, comedians, education forums and community meetings. We argue that Bryant Park is an inspiration to public-private mixing of use and event hosting, in order to generate users and revenue to support its operation.

Site management

We conclude that in order to successfully integrate different uses within a mixed-use environment, delicate selection of tenants is required. We recommend that living and working environments be made comfortable and structured. Management, staff operations, resident experience and visitor perception are recommended to be

integrated in ways to suggest social exchanges and communication among users. How is creating a design that fosters socialization achievable and why is it important to CPTED success? Through a cohesive social framework, a management-initiated and maintained, actively-engaged leader, such as a social director, may be a way to support site coordination and communication.

We conclude that on-site, the arrangement of uses and spaces should be designed so that residents and staff intermingle and share social exchanges, to encourage a sense of community. We suggest that the site management actively encourage and engage residents and staff to participate in functions at the site, in order to promote discussions of what there is to offer users at the site. For example, one way to achieve a social exchange between users and staff might be to implement a strategy for staff to recognize and acknowledge regulars, or familiar patrons. We recommend that the employee selection and hiring process, at a catalyst development, should be thorough and rigorous, so as to filter and well-qualify individuals best-suited for the unique staff roles at the site.

A proposed revitalization catalyst, in Sarasota, is suggested to be in-line with CPTED principles by using CPTED-inspired critical analysis of plans and changing future needs. Efforts to promote a sense of community may also work to increase users' environmental sensitivity to intruders, through natural surveillance-scrutiny of outside threats and strangers. We recommend that a catalyst project begin with community and professional brainstorming discussions and open-forum meetings, so that community interests are recognized early and immediately, in order to provide designers and architects with fuel for the creations.

The design process cannot always be led by an inspiring voice, frontrunner or project champion, such as is suggested by the Minnesota HEALS (1999) organizers. The architects and designers need flexibility to allow their designs to breathe, operate and exist without constraints, so that acceptability of crime prevention methods can be integrated at an early stage in the architectural process to allow for the easiest integration into a completed project. There are more costs involved in retrofitting a building with CPTED principles than there likely are in designing with CPTED in mind, from the beginning (Schneider, 2010). We argue that the relationships between individual users, groups of users, the site, context, built materials and structure come into play as space is experienced, and not a moment earlier or later, due to the needed action/reactionary environmental cues only truly recognizable once a project has been installed in the environment. Not all circumstances for use can be considered entirely ahead of time. We conclude that adjusting to the changing environment is a never-ending responsibility for management, staff and maintenance.

Program Evaluation

CPTED is recommended to be used to support strategies in planning and development that naturally generate moments of activity, and form organically, like the bud of a flower expands outward, from within, as it grows over time. Furthermore, like new flower-buds appear, new urban formations may emerge. Continuous evaluation and CPTED implementation analysis are vital to not only maintaining a final product, but to the initial stages of designing a project concept. From the beginning of a revitalization effort, and for many years into its operation, adjustments will need to be made, in order to secure the future success of the site and the urban context.

Furthermore, we recommend periodic urban and site evaluations, so that concerns are addressed continuously through the fine-tuning of strategies and methods.

Site Discussion

The developer's project goals should theoretically aim to not only include replacing a decaying strip-center, but symbolically and thoughtfully, aim to rejuvenate the degrading strip center's perceived worth, in terms of space, place and urban environment. Contributing to the nearby residential only enclaves and the all-around sprawled urban setting, that currently exists along the North Trail Corridor, through combining community activities, interests and needs for goods and services, by creating a catalyst node aimed at generating synergistic energy and revitalization throughout the corridor, CPTED's principles can guide urban renewal. Active social engagement from the community will not only support natural surveillance crime prevention techniques, but will supplement CPTED's effectiveness of natural access control and territorial reinforcement. However, in the mixed-use setting, a by-product of natural surveillance (if natural surveillance isn't a by-product of it) is the existence and operation of successful businesses, residences and sense of community.

We theorize a cyclical, mutually-beneficial, positive and direct relationship between CPTED and well-regarded communities and believe crime prevention, safety promotion and environmental quality are intertwined and inseparable. We hypothesize that the more people that can be attracted to a site, as long as they can be accommodated for appropriately, the greater the natural surveillance potential for the surrounding area. We argue that normal users will likely attract more desirable users and simultaneously deter undesirable behavior. In the following section, we present figures, in order to inspire creative brainstorming and critical thinking about how the Trail Corridor, Myrtle

Node and Trail Plaza should be improved and redeveloped to support urban revitalization, economic-market stimulation, tax revenue for the city and sustainable high quality-of-life perceptions.

As the case studies presented in the literature review have shown, we concur with opinions that public-private partnerships allow for large-scale urban changes to occur. We conclude from the case study research that a revitalization catalyst development project and project champion (from the private sector) are vital players of any urban-scale revitalization movement and key to sustainability and successful implementation. We believe that a revitalization catalyst's functions include not only initiating the first physical improvements, but demonstrating that site design and architecture should be driven by natural crime prevention theories, that in-turn are meant to help inspire the creation of successful environments. By building successful places, excitement and adjacent improvements are expected occur naturally and urban redevelopment should follow, while a renewed urban revitalization maintains its objectives, community support and stakeholder efforts.

CPTED professionals' goals are to not only help prevent crime but to ease in the apprehending of criminals. However, they are in an uphill battle. If society is willing to recognize that the ultimate responsibility for preventing crime is left to all members of the community, and all the stakeholders, to at least attempt to integrate the theories of crime prevention and occupational safety into designs, plans, reviews, decisions and use of space, place, place-making (programming) and surveillance, then the task may become easier to accomplish when a common ground can be found to allow for shared primary goals.

According to Clarke (1997), if any unknown user could theoretically be a potential criminal or deviant-user, then, an elderly lady snatching designer handbags or medication is likely possible, somewhere and at some time. Therefore, we conclude that the future and potential use of a space, by criminals, needs to be considered as a constant potential threat, in order for modern CPTED approaches to attempt to take advantage in preventing a complete spectrum of criminal activity. Simply put, we recommend implementing CPTED in the most amount of design as is reasonably possible, so that a holistic program can be constructed.

Knowledge Diffusion

Due to the impact of user perceptions, and such intrinsic factors such as the fear of crime in users, in our view, an aligned goal with the CPTED revitalization proposal thus becomes the marketing of the ideas, or selling and transferring of knowledge, to not only the public but everyone involved with the creation, use and maintenance of the environment. One idea, related to informing both the public and professional realm of users and programmers, is providing a public education campaign on the many design intentions at a property, such as modern crime prevention theories and the delicate spatial relationship between the environment and the most immobile, or non-agile visitors, as well as the most able users and citizens. It can be suggested that a primary objective of CPTED could be allowing the many various users to share similar safe experiences, for it is a strategy of modern CPTED to strengthen the quality of the place and increase usability for all desired users (Schneider and Kitchen, 2007).

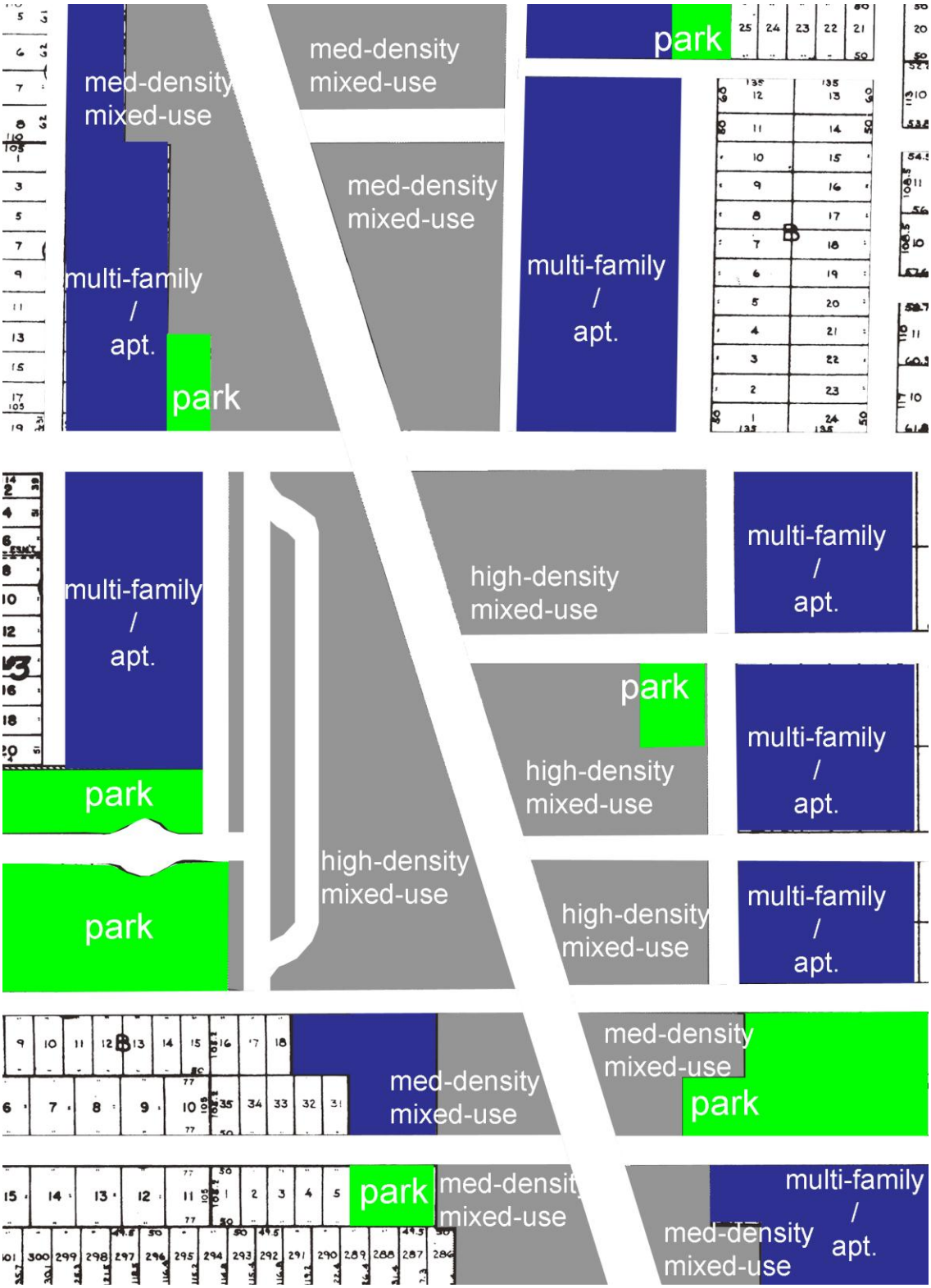


Figure 5-1. Myrtle Node concept for considering complimentary uses. Source: Created by author, 2011

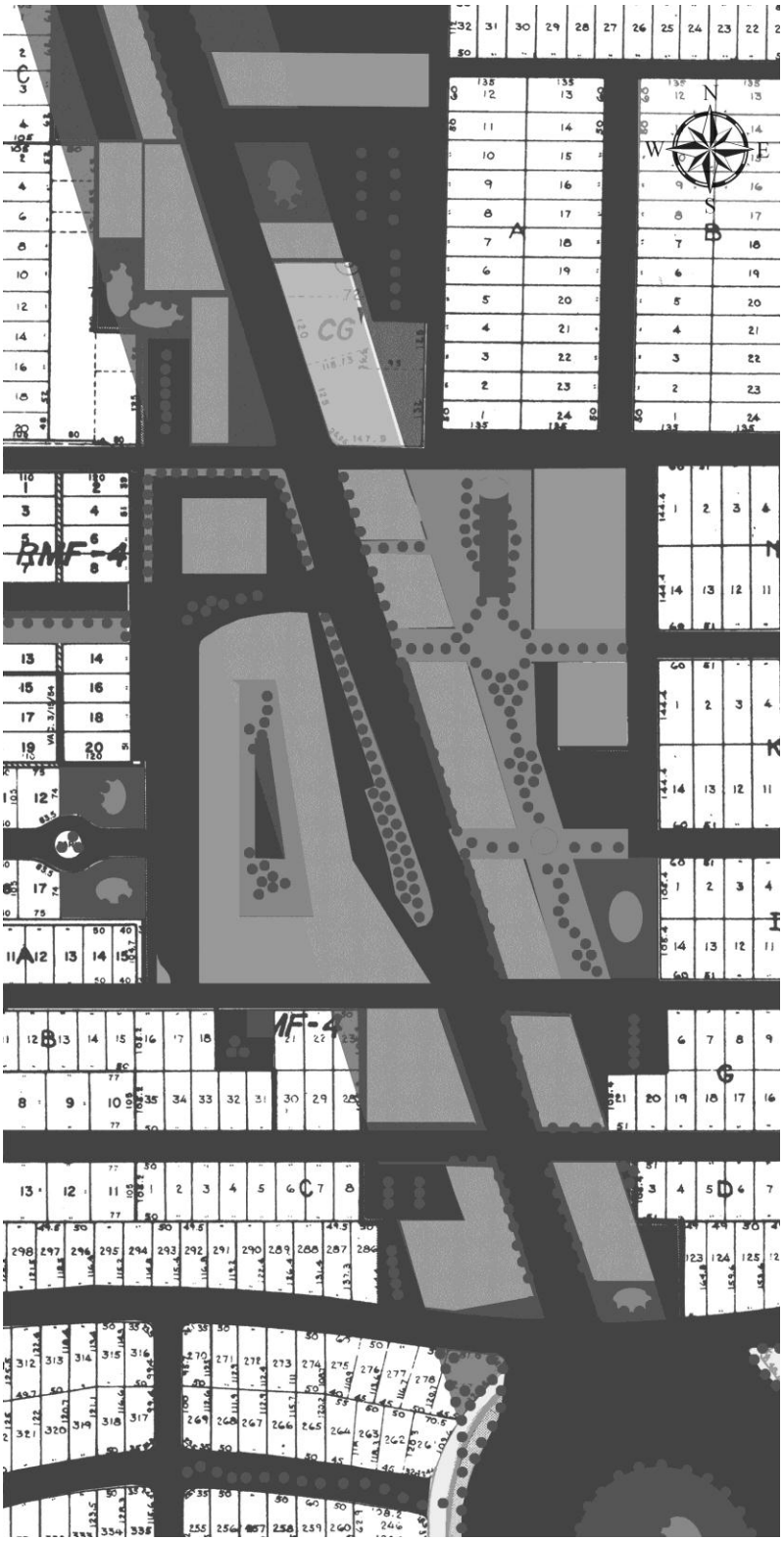


Figure 5-2. Myrtle Node concept for considering urban design. Source: Created by author, 2011

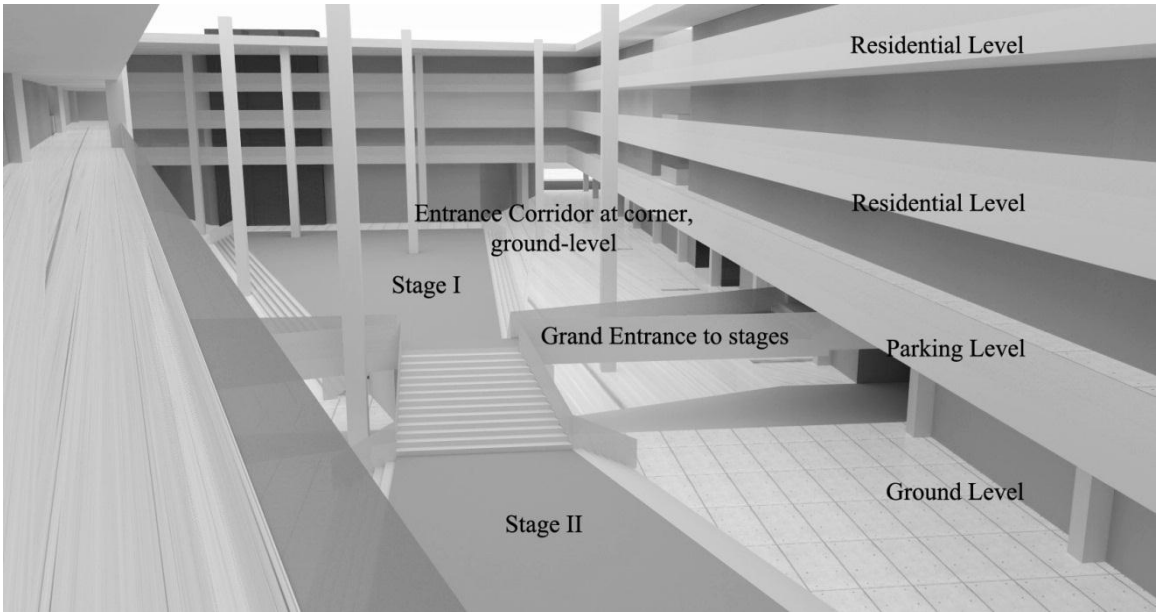


Figure 5-3. Catalyst redevelopment concept (pArc 33) development massing of space. Source: Created by author, 2011

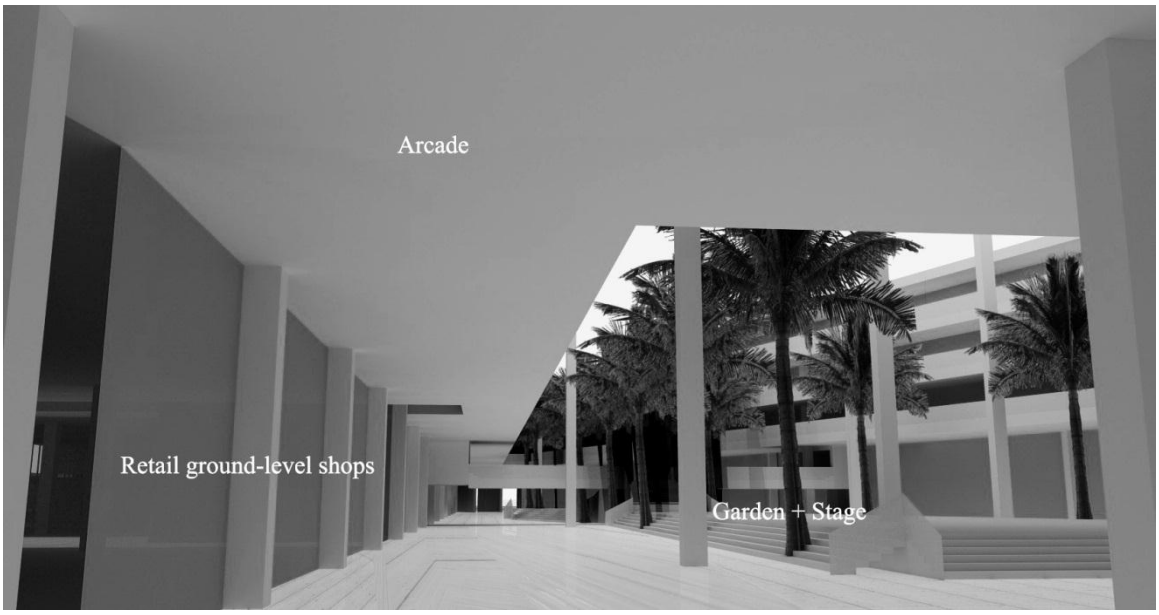


Figure 5-4. Catalyst redevelopment concept arcade buffer between retail and the stage and surrounding atrium. Source: Created by author, 2011

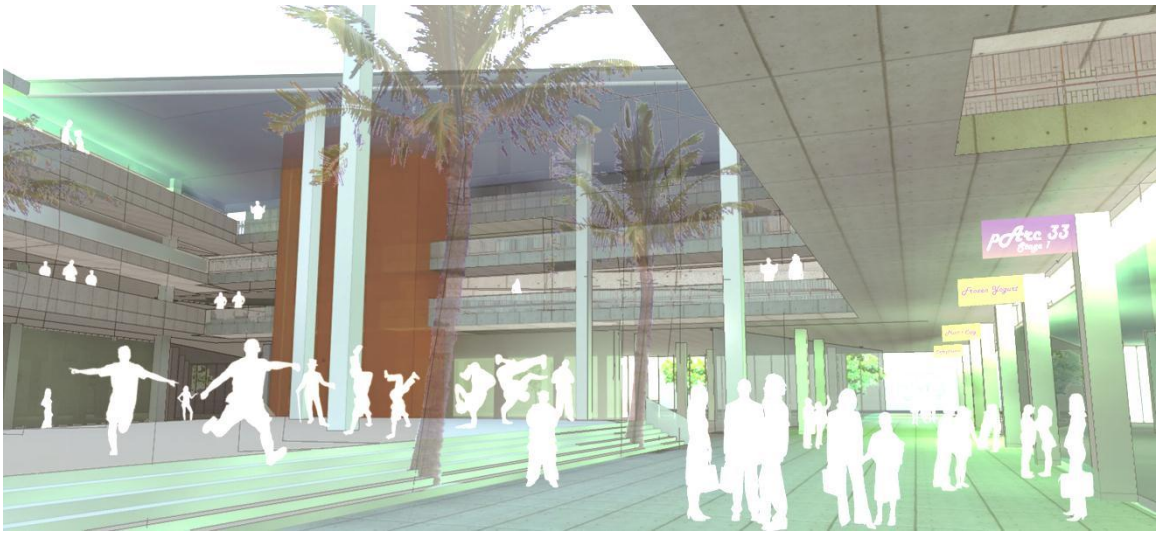


Figure 5-5. Catalyst redevelopment concept atrium and stage. Source: Created by author, 2011

Figure 5-6. Catalyst redevelopment concept integrated parking structure over retail ground level. Source: Created by author, 2011

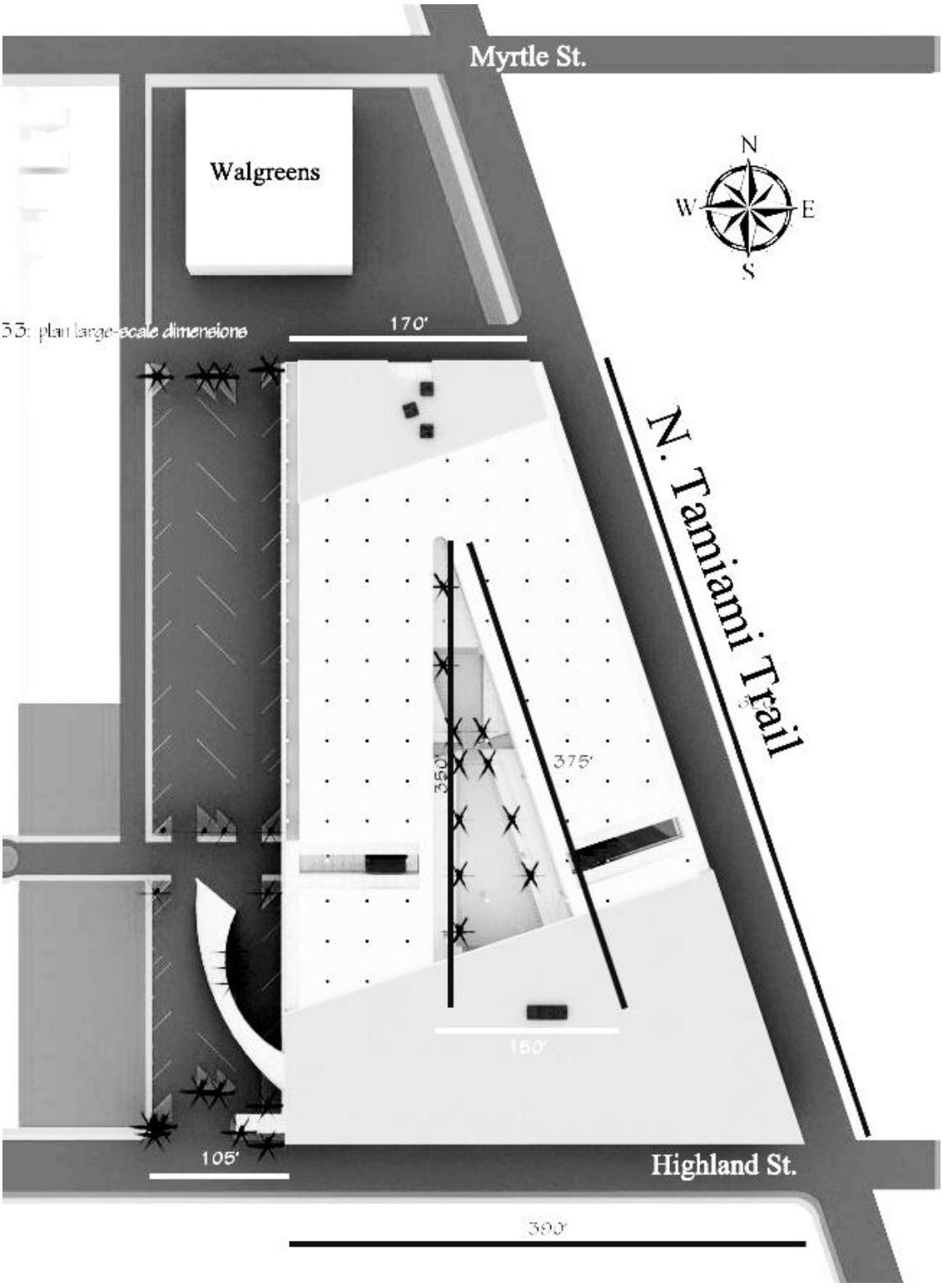


Figure 5-7. Catalyst redevelopment concept site footprint on parcel. Source: Created by author, 2011

Figure 5-8. Catalyst for redevelopment concept parking structure and pedestrian circulation ramp. Source: Created by author, 2011

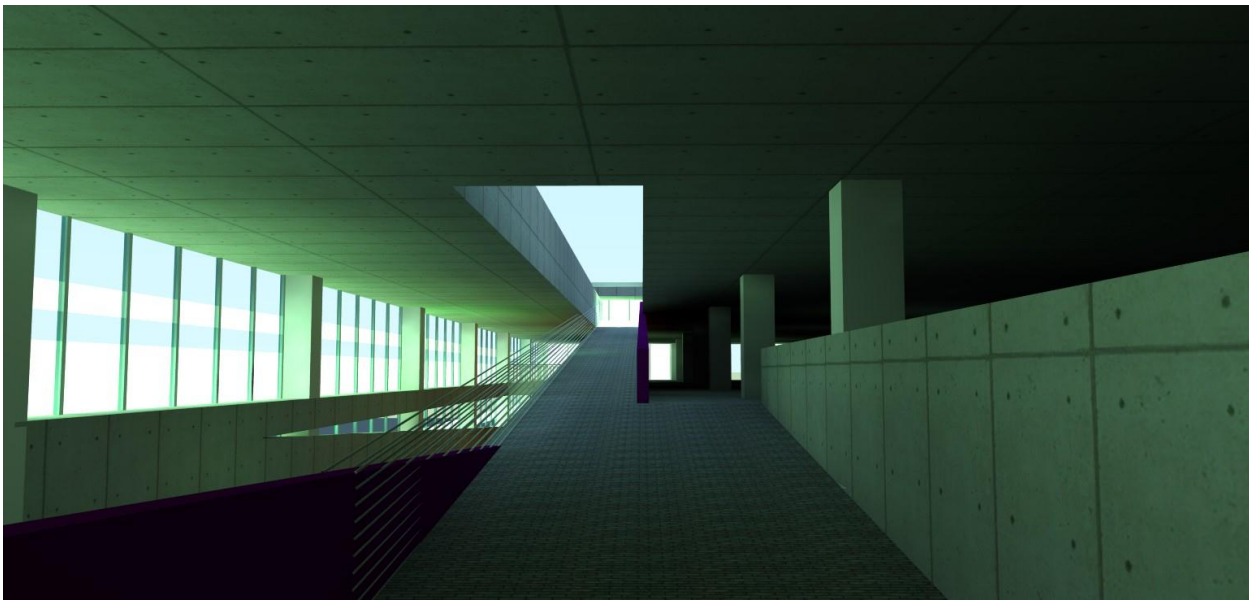


Figure 5-9. Catalyst for redevelopment concept parking structure promenade (ramp). Source: Created by author, 2011

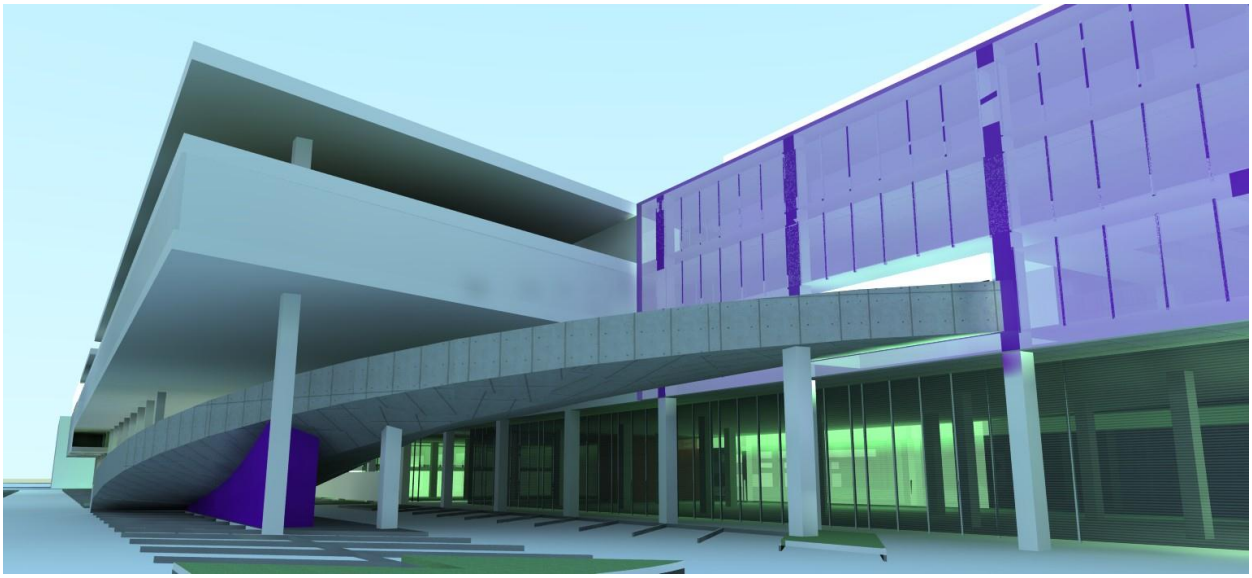


Figure 5-10. Catalyst for redevelopment concept parking structure exterior and vehicle ramp to covered parking**.** Source: Created by author, 2011

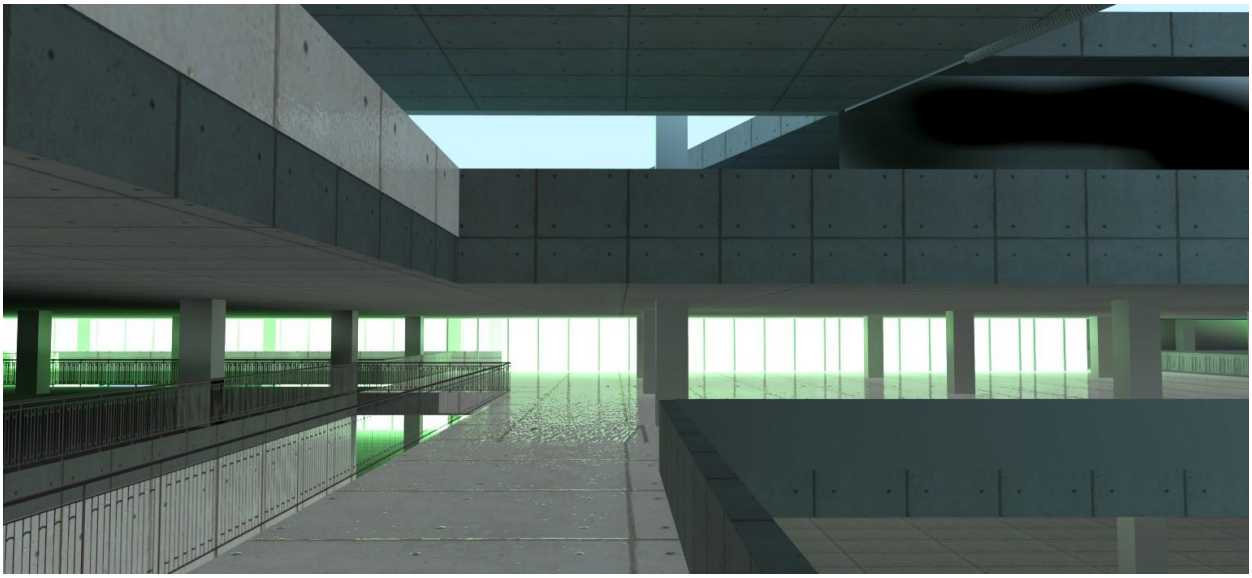


Figure 5-11. Catalyst for redevelopment concept parking structure clear visibility and surveillance strategy, facing south. Source: Created by author, 2011

Figure 5-12. Catalyst for redevelopment concept parking structure entrance, facing west. Source: Created by author, 2011

Figure 5-13. Catalyst for redevelopment concept retail visibility for natural surveillance, facing north and upon the interior atrium. Source: Created by author, 2011

Figure 5-14. Catalyst concept for natural access control and natural surveillance, and funnel entrance points at corners and the western edge main entrance. Source: Created by author, 2011

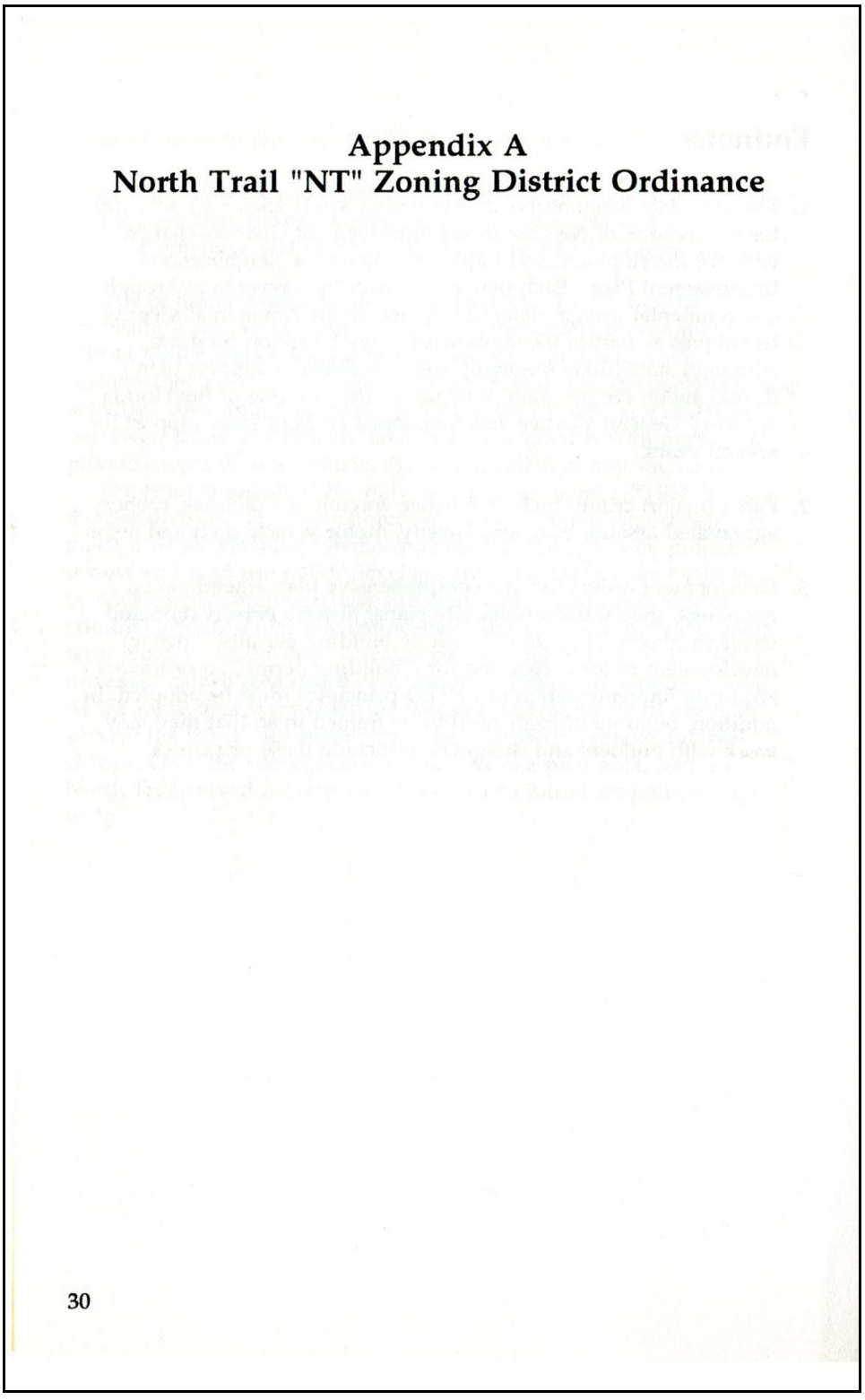
Figure 5-15. Hypothetical proposal for allowing and event and stage/venue area with surrounding natural surveillance. Source: Created by author, 2011

Figure 5-16. Proposal for catalyst site, view northeast. Source: Created by author, 2011

Figure 5-17. Catalyst project interior dynamic proposal with natural surveillance and natural access control and territorial reinforcement. Source: Created by author, 2011

APPENDIX

NORTH TRAIL ZONING DISTRICT ORDINANCE



Appendix A
North Trail "NT" Zoning District Ordinance

30

ORDINANCE 92-3562

AN ORDINANCE OF THE CITY OF SARASOTA, FLORIDA, AMENDING THE ZONING CODE OF THE CITY OF SARASOTA; BY ESTABLISHING A NEW ZONE DISTRICT TO BE KNOWN AS THE NORTH TRAIL ZONE; STATING THE INTENT AND PURPOSE OF THE NT DISTRICT; PROVIDING FOR PERMITTED PRINCIPAL AND ACCESSORY USES WITHIN SAID ZONE DISTRICT AND PROVIDING FOR USES PERMISSIBLE BY SPECIAL EXCEPTION; PROVIDING FOR DISTRICT REGULATIONS TO BE APPLIED WITHIN THE NT ZONE DISTRICT AS MORE FULLY SET FORTH HEREIN; PROVIDING FOR THE SEVERABILITY OF THE PARTS HEREOF; REPEALING ORDINANCES IN CONFLICT; PROVIDING FOR READING BY TITLE ONLY; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, on September 13, 1991, the City of Sarasota adopted the 1991 Amendments to the Sarasota City Plan (1989) which included the addition of a future land use map designated as the "North Trail impact Management Area, Future Land Use Map 12611; and,

WHEREAS, the North Trail Future Land Use Map designates certain parcels abutting the North Tamiami Trail as eligible to be rezoned to the North Trail (NT) Zone District; and,

WHEREAS, §163.3202, Florida Statutes, requires that the City of Sarasota adopt land development regulations that implement the North Trail Zone District established by the 1991 Amendments to the Sarasota City Plan; and,

WHEREAS, the Planning Board, acting in its capacity as the Local Planning Agency for the City of Sarasota, has held a public hearing to review the proposed district regulations for the North Trail (NT) Zone District and received public comment thereon; and,

WHEREAS, the Local Planning Agency has found that the district regulations for the North Trail (NT) Zone District, as set forth herein, are consistent with the Sarasota City Plan; and,

WHEREAS, the City Commission finds that the goal of the North Trail (NT) Zone District is to provide for the revitalization of the North Tamiami Trail Corridor.

NOW THEREFORE, BE IT ENACTED BY THE PEOPLE OF THE CITY OF SARASOTA, FLORIDA:

Section 1. The Zoning Code of the City of Sarasota, Florida; Article V, Building Permits, Certificates of Compliance, and Site and Development Plans; Division 5. Development Plan Review; Section 5-14, Development Plan Review Required; is hereby amended by the addition of a new subparagraph (6) to require development plan review by the Planning Board for developments located in the North Trail (NT) Zone District. Said new subparagraph (6) shall provide as follows:

"Division 5. Development Plan Review.

Section 5-14. Development Plan Review Required. Development plan review by the Planning Board in accordance with the procedures and guidelines set forth in this division shall be required for developments located in the Commercial Central Business District (CCBD), Commercial Residential Transition (CRT) Zone District, Theater and Arts District (TAD), and North Trail (NT) Zone District as follows:

* * *

(6) For all new development for permitted principal uses and structures and all uses permissible by special exception in the NT Zone District."

(7) For all repairs, renovations, or improvements to existing structures in the NT Zone District when the cost of such renovation or improvement equals or exceeds fifty (50) percent of the market value of the structure.

Section 2. The Zoning Code of the City of Sarasota, Florida; Article VIII. Districts-Regulations Applicable to Specific Districts; is hereby amended to create a new Division 26 for the North Trail Zone District consisting of Sections 8-304 through 8-325 of the Zoning Code. Said new Division 26 shall provide as follows:

"Division 26. NT - North Trail.

Section 8-304. Intent and Purpose. The North Trail (NT) zone district is a mix of neighborhood scale commercial; cultural and educational facilities; tourist accommodations and attractions; multi-family residential and mixed uses. The commercial and service activities within this zone are primarily oriented toward serving the needs of local residents, tourists and students. Development and redevelopment shall be compatible with, and preserve and enhance, the character of the adjoining neighborhoods.

The purpose of this district is to promote development and redevelopment in.a manner that creates a safe and attractive environment for specified uses as well as cultivate an attractive gateway to the City.

Section 8-305. Definition. For the purpose of this district only, certain terms or words shall be interpreted as follows:

Minor additions and alterations: For purposes of this district, a minor addition or alteration shall mean up to one thousand five hundred (1,500) square feet of additional vehicular use and gross floor area, provided that the cumulative total of separate increases to existing gross floor and vehicular use area, over a period of ten years, shall not exceed three thousand (3,000) square feet.'

Projects determined to be minor additions or alterations are exempt from Section 29.5-4, Sarasota City Code, pertaining to Engineering Review Requirements.

Section 8-306. Location. Properties eligible to be considered for rezoning to the NT district classification shall be restricted to:

Those parcels with frontage on the major arterial, North Tamiami Trail, which have been designated as eligible for NT zoning on the map entitled "North Trail IMA," Future Land Use Map No. 26 in "The 1991 Amendments to the Sarasota City Plan (1989)". Official copies of said map shall be kept on file in the office of the City Auditor and Clerk and in the Planning and Development department for public inspection and copying.

Section 8-307. Permitted principal uses and structures. Permitted principal uses and structures in the NT district shall be as follows:

(a) Retail outlets for the sale of food, clothing, pharmaceutical products, hardware, toys, books, stationery, luggage, jewelry, art, antiques, photographic equipment, sporting goods, hobby shops, pet shops, musical instruments, electronic equipment, florists, plants, gift shops, delicatessens, bakeries, furniture, office equipment, sundries, appliances, and similar products.

(b) Service establishments such as printing, catering, barber or beauty shops, interior decorators, laundries or dry cleaners, tailors or dressmakers, electronic repair shops, veterinary services in soundproof buildings with no outdoor boarding or kenneling of animals, and similar uses.

(c) Banks and financial institutions.

(d) Professional and business offices.

(e) Urgent care centers and medical clinics.

(f) Restaurants.

(g) Open-air facilities in connection with restaurants provided that:

(1) The facility is separated from adjacent residentially zoned property by an intervening building or buffer wall.

(2) Prohibited hours of operation are from 12:00 p.m. to 6:00 a.m.

(3) No amplified music or amplified entertainment shall be permitted.

(h) Houses of worship.

(i) Studios for artists, designers, photographers, musicians, sculptors, gymnasts, dancers, potters, wood and leather craftsmen, glass blowers, weavers, silversmiths and designers of ornamental and precious jewelry.

(j) Retail establishments manufacturing goods for sale on the premises, such activities being accessory and subordinate to the retail activities.

(k) Bed and breakfast inns.

(1) Commercial recreational facilities such as theaters and health clubs.

(m) Colleges or universities, including customary accessory uses.

(n) Vocational and business schools.

(o) Libraries.

(p) Parking lots, including parking garages not to exceed two (2) levels above grade, provided that all parking structures within forty (40) feet of N. Tamiami Trail future right-of-way line shall have business or commercial uses along ground floor street frontage.

(q) Hotels and motels.

(r) Mixed uses of office, retail or hotel/motel uses with residential multi-family.

(s) Multiple family dwellings.

(t) Adult congregate living facilities.

(u) Educational dormitories.

(v) Existing single family or two family dwelling units.

(w) Child care centers, provided that all requirements in Section 8-18(e), Zoning Code, are met.

(x) Specialty automobile dealers and accessory uses, and existing outdoor displays of automobiles for sale in conjunction with dealerships.

Section 8-308. Permitted accessory uses and structures. Permitted accessory uses and structures in the NT district shall be uses and structures which:

(a) Are customarily accessory and clearly incidental and subordinate to permitted or permissible uses and structures.

(b) Are located on the same lot as the permitted or permissible use or structure, or on a contiguous lot under the same ownership.

Section 8-309. Prohibited uses and structures. Prohibited uses and structures in the NT district shall be:

(a) Manufacturing activities, except as specifically permitted or permissible by special exception.

(b) Warehousing or storing, except in connection with a permitted or permissible use.

(c) Any use which is potentially dangerous, noxious or offensive to neighboring uses in the district or which impacts pedestrians by reasons of smoke, odor, noise, glare, fumes, gas, vibration, threat of fire or explosion, emission of particulate matter, interference with radio or television reception, and radiation. Performance standards of Article X apply.

(d) Pawn shops.

(e) Any other uses or structures not specifically, provisionally or by reasonable implication permitted herein.

Section 8-310. Special exceptions. Special exceptions in the NT district shall be as follows:

(a) Trade schools, provided that hours of operation are prohibited from 10:00

p.m. to 6:00 a.m.

(b) Boarding or lodging houses.

(c) Establishments not exempt under Section 8310.1(3), Zoning Code, with hours of operation between 10:00 p.m. and 6:00 a.m.

(d) Parking lots located in the buildable area between the building facade and North Tamiami Trail.

(e) Drive-in restaurants or refreshment stands.

(f) Outdoor sale and display of goods in excess of twenty-five (25) percent of the building area, provided that:

(a) Prohibited hours of operation are from 9:00 p.m. to 6:00 a.m.

(b) Outdoor sale and display area in excess of twenty-five (25) percent of the building area shall be considered as floor area for the purpose of computing minimum parking requirements.

(c) Boat, automobile and outdoor statuary sales are exempt.

(g) Radio or television stations and transmitters.

(h) Marinas, and sale of boats and outdoor displays of boats for sale in conjunction with marinas.

(i) Automotive service stations and existing accessory fuel pumps, provided that all standards set out in Article XIII of this Zoning Code shall be met.

(j) Package stores for the sale of alcoholic beverages.

(k) Bars or taverns for on-premises consumption of alcoholic beverages.

The above special exception uses and structures are subject to the requirements of Section 8-310.1 (1) through (6), Zoning Code.

Section 8-310.1 Conditions of use. The foregoing permitted principal and accessory uses and structures and special exception uses are subject to the following conditions:

(1) Development plan review is required in accordance with Section 5-14, Zoning Code. Notwithstanding the provisions of Section 5-15, Zoning Code, which do not require a public notice and hearing for development plan review when the same is not part of a petition for conditional

rezoning, all development plan reviews in the NT zone district shall require a public notice and hearing before the planning board.

(2) Exterior lighting is provided for nighttime illumination of display areas, parking lots, walkways, entrances and exits. These areas shall be lit, at a minimum, one-half hour after sunset and one-half hour before sunrise during hours of operation. The use of a photo-electric switch is highly recommended.

(3) Prohibited hours of operation are from 10:00 p.m. to 6:00 a.m., except as provided in section 8-310 (c) and (f) (a) and section 8-307 (g)(2) and 8-310.1 (5)(b), Zoning Code. Urgent care centers, colleges, universities, restaurants, theaters, hotels, and motels, residential uses, bed and breakfast inns, and existing radio and television stations, transmitters, bars, and taverns are excluded from this restriction.

(4) Preparation and storage areas shall be conducted within a completely enclosed building, except as permissible under number (6) below. Outdoor recreational facilities such as swimming pools or tennis courts are permitted.

(5) Outdoor sale and display of goods are subject to the following provisions:

(a) The square footage of the outdoor sale and display area shall not exceed twenty-five (25) percent of the square footage of the total enclosed structure, except as provided in section 8-310 (f) of this Zoning Code. Boat, automobile and statuary sales are exempt.

(b) Prohibited hours of operation are from 9:00 p.m. to 6:00 a.m.

(c) No merchandise or other goods other than boats and automobiles shall be displayed outdoors during prohibited hours of operation.

(6) Trash and garbage shall be stored within closed containers or recycling containers which are screened from general view.

Section 8-310.2 Maintenance. The foregoing permitted principal and accessory uses and structures and special exception uses are subject to the following conditions:

(1) All exterior lighting fixtures shall be maintained in an operative state.

(2) Plants shall be maintained in FL. No. 2 condition in perpetuity or replaced in kind.

(3) The owner shall be responsible for the maintenance of all landscaping and

landscaped areas, which shall be so maintained as to present- a healthy and orderly appearance and shall be kept free from refuse and debris.

Section 8-311. Maximum density. Maximum density in the NT district shall be:

(a) Multiple-family dwellings and mixed use: Thirty-five (35) dwelling units per acre.

(b) Hotels and motels, boarding and lodging houses: Fifty (50) guest rooms per acre.

(c) Adult congregate living facilities: Fifty (50) dwelling units per acre.

(d) Educational dormitories: Unrestricted, except as needed to meet all other applicable requirements.

Section 8-312. Minimum lot requirements. There shall be no minimum lot requirements in the NT district, except as needed to meet all other requirements set out in this zoning code.

Section 8-313. Maximum lot coverage. Maximum lot coverage by all buildings on any lot in the NT district shall be unrestricted, except as needed to meet all other requirements as set out in this zoning code.

Section 8-314. Minimum yard requirements.

(a) Minimum yard requirements in the NT district shall be measured from the future Right-of-way (R-O-W) , as designated on the Thoroughfare Plan. The following setbacks shall be as follows:

(1) Front: Ten (10) feet.

(2) Side yards not adjacent to residential uses: None.

(3) Side yards adjacent to residential uses (fronting on North Tamiami Trail): Eight (8) feet.

(4) Side yards adjacent to residential uses (fronting side streets intersecting with North Tamiami Trail): Fifteen (15) feet

(5) Rear: Fifteen (15) feet.

(6) Waterfront: Thirty (30) feet.

(b) Notwithstanding Section 6-15 of the Zoning Code the following encroachments are permitted in required front yards:

(1) Unenclosed balconies may extend two (2) feet on the second and third floors. Unenclosed balconies will not be used for floor area calculations.

(2) Marquees and movable awnings may extend out to five (5) feet on the first floor.

(3) Unenclosed porches or patios may extend out to the same distance of marquees and movable awnings.

Section 8-315. Maximum height of structures. No building in the NT district shall exceed twenty-five (25) feet in height. The height may be increased to thirty-five (35) feet for theaters and when the third floor is used for residential, hotels or motels. Notwithstanding the provisions of Section 6-19 (a) , Zoning Code, antennae shall not exceed fifty (50) feet.

Section 8-316. Signs. Only the following signs are permitted:

(a) Multiple-family dwellings, adult congregate living facilities, boarding and lodging houses, schools, colleges or universities:

(1) One (1) identification wall or ground sign per street frontage, not to exceed thirty-two (32) square feet in area per face.

(2) One canopy or marquee sign per building to identify individual building or facility, provided that no sign shall project more than five (5) feet from building walls and shall not exceed thirty-two (32) square feet in area.

(b) Other permitted or permissible uses:

(1) One (1) ground sign per street frontage per parcel not to exceed sixteen (16) feet in height above normal ground level with a maximum total aggregate area of one hundred and twenty (120) square feet for all faces. Such signs shall identify the businesses or services, building, or complex of buildings and shall contain no other sign matter.

(2) Wall, canopy, or marquee signs provided that no sign shall project more than five (5) feet from building walls and that the aggregate area of all these signs shall not exceed three (3) square feet of area for each foot of the building frontage occupied by the business

displaying the signs. No business shall display more than three (3) signs with a total aggregate area of more than one hundred (100) square feet regardless of building frontage.

(c) Real estate signs:

One (1) double-faced non-illuminated "for sale" or "for rent" sign for each street frontage, not exceeding sixteen (16) square feet per face.

Neon and illuminated signs are permitted.

No ground sign shall be erected within thirty-five (35) feet of any property in residential use, excluding hotels and motels.

Roof signs and off-site signs are prohibited.

Section 8-317. Minimum off-street parking requirements. Minimum off-street parking requirements in the NT district shall be as follows:

(a) Commercial or service establishments, unless otherwise listed: one (1) space for each two hundred fifty (250) square feet of floor area.

(b) Outdoor sale and display areas (including boat, automobile and outdoor statuary sales): To be determined at one-half (1/2) the requirement of the enclosed use.

(c) Restaurants, bars or taverns: One (1) space for each three (3) seats in public rooms, including open-air facilities.

(d) Theaters: One (1) space for each four (4) seats. None for theaters in shopping centers located on a parcel of property over three (3) acres in size held under unified control.

(e) Professional and business offices, medical clinics and urgent care centers: One (1) space for each one hundred seventy-five (175) square feet of floor area.

(f) Colleges or universities: Two (2) spaces per classroom, plus one (1) space for each five (5) students, one (1) space for each ten (10) seats in a place of assembly or one (1) space for each two hundred (200) square feet of floor area, whichever results in the greatest requirements, and one (1) space for each two (2) rooms in a dormitory, plus one (1) space for each two employees.

(g) Vocational, trade or business schools: One (1) space for each one hundred fifty (150) square feet of floor area.

(h) Libraries: one (1) space for each two hundred fifty (250) square feet of floor area.

(i) Hotels and motels: One (1) space for each sleeping room, plus one (1) space for each ten (10) sleeping rooms, plus two (2) spaces for the owner or manager. Additional spaces for accessory uses such as commercial service establishments and restaurants shall be provided at the ratio of one (1) space for each three (3) seats in such accessory use, and additional spaces for meeting places shall be provided at the ratio of one (1) space for each four (4) seats therein. (No parking is required for restaurants providing meal service only to guests, and not open to the general public.)

(j) Bed and breakfast inns: One (1) space for each sleeping room plus one (1) additional space for the owner-manager.

(k) Mixed Uses: As per individual use. See Section 8-318 for parking reduction.

(l) Multiple-family dwellings: One (1) space per efficiency or one bedroom unit. Two (2) spaces for two or more bedroom units.

(m) Adult congregate living facilities: one-half (1/2) space per dwelling unit. For purposes of this requirement, the number of dwelling units shall be determined by following the same procedure utilized to determine the maximum permissible dwelling unit density in an adult congregate living facility.

(n) Boarding or lodging houses: one (1) space for each bedroom, plus, where applicable, two (2) spaces for the apartment for the owner-manager.

(o) Educational dormitories: one (1) space for each two (2) bedrooms plus one (1) space per each employee.

(p) Child care centers: Two (2) spaces per employee plus one (1) space for off-street loading and unloading of children.

(q) Marinas: one (1) space for every three (3) boat berths.

(r) Other permitted or permissible uses: To be determined by general rule or by finding in the particular case.

Provision for off-street loading is required.

One (1) conveniently located, six (6) unit bicycle rack or equivalent facility is required per site.

Section 8-318. Reduction of off-street parking requirements.

(a) In an appropriate case the Planning Board may approve a reduction in the aggregate number of parking spaces for two or more adjacent parcels up to a maximum of fifteen percent (15%) of the total required spaces under the following circumstances:

(1) There is a separate business on each parcel which is in same or separate ownership;

(2) There is a single curb cut for access to be used by all the businesses on the adjacent parcels leading to a major arterial;

(3) The owner(s) of each of the businesses enter into a written agreement with the City, with enforcement running to the City, providing that the real property over which the common access runs shall never be disposed of except in conjunction with the sale of all the properties which the common access serves, as long as the common access is required. The written agreement shall be voided by the City if other access is provided for any of the businesses in accordance with the Zoning Code. This agreement shall be recorded in the Public Records; and,

(b) One (1) conveniently located six (6) unit bicycle rack in addition to that required by Section 8-317 of the Zoning Code may be substituted for one (1) parking space.

(c) The Planning Board may approve a reduction in the aggregate number of parking spaces up to a maximum of fifty percent (50%) of the total required spaces for residential uses in mixed use developments, not including hotels or motels, when the peak demand for residential use does not overlap with the peak demand for non-residential uses.

Section 8-319. Curb cut requirements.

(a) No new curb cuts are allowed on North Tamiami Trail within seventy (70) feet of the projected curbline of any intersecting public street.

(b) Two curb cuts on North Tamiami Trail may be allowed if there is not access available from a side street or alley. The total width of both driveways shall not exceed fifty percent (50%) of the property frontage on North Tamiami Trail.

(c) All other Florida Department of Transportation and City regulations regarding curb cuts and driveways shall be met.

Section 8-320. Location of off-street parking. The provisions of this section

shall apply to the NT zone district in lieu of Section 12-10(b), Zoning Code.

(a) Parking shall be permitted in required yards, except as prohibited in Section 8-320 (b) below.

(b) No parking shall be allowed in the buildable area between the building facade and North Tamiami Trail, except as provided in Section 8-310(d), Zoning Code and except for structures incorporating one full story or more of residential use.

(c) No more than twenty-five percent (25%) of the parcel frontage on North Tamiami Trail shall be utilized for parking.

Section 8-321. Landscaping, buffering, and separation requirements. The provisions of this section shall apply to the NT zone district in lieu of Sections 6-22 and 12-23 through 12-28, Zoning Code.

(1) General requirements.

(a) A landscape site plan locating and identifying all existing trees, trees to be relocated, trees to be removed, and a conceptual landscape development scheme shall be submitted at development plan review. A detailed landscape development plan shall be submitted at time of building permit application.

(b) All landscape materials shall meet or exceed the Florida Department of Agriculture Grades and Standards for Nursery Plants, Part I and Part II of a No. 1 Grade or better, as the same may be amended from time to time. All plants shall be FL. No. 1 quality at time of installation. A copy of said publication is on file at the office of the City Auditor and Clerk, and made a part hereof by reference.

(c) Water-saving techniques shall be employed as per the "Seven Steps to a Successful Xeriscape" published by the Planning Department of the Southwest Florida Water Management District, or as amended or replaced by same. (A copy of which is on file with the City Auditor and Clerk).

(d) No stormwater retention or above ground stormwater conveyance shall be permitted in the required landscaped area or future right-of-way fronting North Tamiami Trail.

(e) Chain link and wood fences are prohibited, except for recommended security purposes, as determined by CPTED review. (See Section 8-323, Zoning Code.)

(f) Gravel, stone, or rip-rap shall not be allowed in buffer or landscaped areas.

(2) Plant Material. The desired landscaping theme for the district shall consist of low ground cover and canopy trees.

(a) Shrubs and ground cover. Cold tolerant material required.

(b) Trees. Sixty percent (60%) or more of required trees shall be Quercus virginiana (Live Oak).

Recommended list of trees and palms to be used for remaining forty percent (40%) of tree requirement:

Quercus laurifolia (Laurel Oak)
Tabebuia argentia (Gold Tree)
Bauhinia purpurea (Purple Orchid Tree)
Bauhinia blakeana (Hong Kong Orchid)
Bauhinia alba (White Orchid)
Plantaus occidentalis (Sycamore)
Jacaranda mimosifolia (Jacaranda)
Ilex opaca 'East Palatka'(East Palatka Holly)
Bucidia buceras (Black Olive)

Palms. One (1) palm, described below it equivalent to one (1) required tree.

Phoenix canariensis (Canary Island Date Palm)
Phoenix reclinata (Reclinata Palm)

Palms. Three (3) palms, described below are equivalent to one (1) required tree.

Syragus romanzoffianum (Queen Palm)
Roystonea elata (Royal Palm)
Sable palmeto - Cabbage Palm (Sable Palm)
Washingtonia robusta (Washingtonian Palm)

(3) Plant size.

(a) Shrubs, ground cover. Normal mature growth height not to exceed two and one half feet (2 1/2'). Planting areas shall create a barrier to reach eighty (80) percent opaque within one year of planting.

(b) Trees. Twelve feet by six feet (12' x 6') spread with a three inch (3") caliper and five feet (5') clear trunk at time of planting. Planting areas shall be eight feet by eight feet (8' x 8') minimum per tree.

(c) Palms. Minimum clear trunk of eight feet (8').

(4) Tree credits. To qualify for tree credits, the definition of tree shall be consistent with that found in the City's Tree Protection Ordinance, Section 35-21 of the Sarasota City Code.

(a) Credit is given at the ratio of one (1) to one (1) for existing trees, in good health, meeting the tree definition. No credit shall be given to trees identified by city ordinance as nuisance trees.

(b) Credit is given at the ratio of two (2) to one (1) for existing native trees in good health with a caliper of eighteen (18") inches or greater.

(c) Credit is given at the ratio of three (3) palms to one (1) tree for existing palms meeting size requirements described in Section 8-321(3).

(5) Landscaping, Buffering and Separation Standards Table. The following table describes acceptable barriers and vegetative treatments to separate and buffer different land uses within this zone.

Zero side yards are exempt from landscape calculations and requirements.

Section 8-322. Pedestrian related design features.

(a) Direct pedestrian access shall be provided from the principal entrance of the building to the sidewalk on North Tamiami Trail or side street, if any. Pedestrian access shall be provided from rear parking facilities to the ground floor uses, either through rear or side building entrances, pedestrian ways along the perimeter of buildings, or by pedestrian throughways which connect the rear parking lots to the sidewalks along North Tamiami Trail. Pedestrian throughways may be exterior and located between buildings or may be incorporated into the interior design of a structure. Pedestrian throughway shall be a minimum of six (6) feet wide, well lighted and visually accessible from either the interior of the building or street and parking areas. The intention is to provide a safe and aesthetically pleasing environment.

(b) Parking, vehicular service areas, and all pedestrian areas shall be well lighted to provide both a secure and aesthetically pleasing environment. Lighting shall be directed away from adjacent residential properties and roadways.

(c) Combined ground floor and second floor building frontage on all front yards shall contain a minimum of fifteen (15) percent transparent or translucent materials per gross area of frontage.

LANDSCAPING, BUFFERING AND SEPARATION STANDARDS TABLE

Location	Land Use Type	Treatment	Minimum/Maximum/Other	Vegetative Standard
Adjacent to public ROW (front yards)	All, except as listed below	Trees	Not applicable	One tree per 40 linear feet of property line
	Open air facility (in conjunction with restaurant)	Fence, hedge, planter or other vegetative barrier	Height: min 2-1/2', max 5'. If using solid barrier, max. height is 2-1/2'. All other separation treatment shall be no more than 60% opaque to a max. height of 5'.	Not applicable
	Outdoor sale and display of goods	Fence, hedge, planter or other vegetative barrier	Height: min 2-1/2', max 5'. If using solid barrier, max. height is 2-1/2'. All other separation treatment shall be no more than 60% opaque to a max. height of 5'.	Not applicable
	Off street parking/vehicular use (not entirely screened by intervening building or structure, excluding alleys)	Decorative wall, planter wall, decorative fence or landscaped buffer	Height: min 2-1/2', max 5'. If using solid barrier, max. height is 2-1/2'. All other separation treatment shall be no more than 60% opaque to a max. height of 5'. 3 options: (1) Wall or fence from ground level to 2-1/2' above grade shall be 100% opaque; (2) Fence with 3' wide landscaped buffer (in front of or behind the wall); (3) 10' wide landscaped buffer	(1) Not applicable; (2) Shrubs or groundcover; (3) Shrubs or groundcover; turf does not qualify

Location	Land Use Type	Treatment	Minimum/Maximum/Other	Vegetative Standard
Within future ROW	All	Shrubs or groundcover	Shrubs and/or groundcover, max mature height of 2-1/2'	Shrubs and groundcover only; turf does not qualify
Side and rear yards adjacent to residential uses and zones (excluding hotels, motels and mixed uses)	All	Decorative wall or fence, both sides finished, trees	Height: 6'. 100% opaque. Where existing tress occur, walls or fence systems without continuous footers shall be used. Side yard treatments shall end at the front yard setback.	One canopy tree placed every 30 linear feet of abutting property line, or every 3 parking spaces. Palms do not qualify
Interior Parking	Off-street parking	Landscaped buffer areas, trees	One landscaped island for every 10 spaces total. No parking space shall be separated from a landscaped island by more than 7 parking spaces. All parking rows shall be terminated with required landscaped islands. Islands to be curbed with 6" non-mountable curb	One tree per landscaped island with shrubs or groundcover. Each landscaped island to be a min 8' wide by 12' long

Location	Land Use Type	Treatment	Minimum/Maximum/Other	Vegetative Standard
ROW intersections and accessways	All	Cross visibility	All landscaping within the triangular area shall provide an unobstructed cross visibility between 2-1/2' and 6'. No leaves or foliage to extend into the cross visibility. No traffic hazards shall be created. Landscaping, except groundcover shall not be located closer than 3' to edge of any accessway pavement. Triangular areas are defined as follows: (1) The area of property on both sides of an accessway formed by the intersection of each side of the accessway and public ROW lines, with two sides of each triangle being 10' wide in length from the point of intersection, and the third side being a line connecting the ends of the other two sides (2) The area of property located at the corner formed by the intersection of two or more public ROW's with two sides of the triangular area being 30' wide in length along the abutting public ROW lines, measured from their points of intersection, and the third side being a line connecting the other two lines.	Not applicable

Section 8-323. Crime Prevention Through Environmental Design (CPTED) Review Requirements. A CPTED review for conditional rezoning petitions, special exception petitions, and development plans is required. The CPTED development plan review must be completed and signed by one Law Enforcement and one designated CPTED trained Planner or Building official assigned to the petition prior to the petition being scheduled before the Planning Board. The development plan presented to the Planning Board and City Commission by the petitioner shall respond to all concerns noted by the CPTED reviewers.

It is the intent of the guidelines listed below to assist in the creation and maintenance of a built environment that decreases the opportunity for crime and increases the perception of safety. The CPTED review performed by the individuals listed above shall encompass but not be limited to the following principles:

(a) Provision of natural surveillance.

(1) The placement and design of physical features to maximize visibility. This will include building orientation, windows, entrances and exits, parking lots, walkways, guard gates, landscape trees and shrubs, fences or walls, signage and any other physical obstructions.

(2) The placement of persons and/or activities to maximize surveillance possibilities.

(3) Lighting that provides for nighttime illumination of parking lots, walkways, entrances and exits.

(b) Provision for natural access control.

(1) The use of sidewalks, pavement, lighting and landscaping to clearly guide the public to and from entrances and exits.

(2) The use of fences, walls or landscaping to prevent and or discourage public access to or from dark and/or unmonitored areas.

(c) Provision of territorial reinforcement.

(1) The use of pavement treatments, landscaping, art, signage, screening and fences to define and outline ownership of property.

(d) Maintenance.

(1) The use of low-maintenance landscaping and lighting treatment to

facilitate the CPTED principles of natural surveillance, natural access control and territorial reinforcement. (See also section 8310.2, Zoning Code.)

Section 8-324. Notice to Community Associations.

(a) For the purposes of this section, a community association is defined as a voluntary association of property owners, subdivision owners, professionals, entrepreneurs, and similar groups of at least ten (10) or more individuals with ownership, business, or professional interests focused on the property within the City of Sarasota located between 10th Street and the City limits along or in the vicinity of North Tamiami Trail.

(b) Any interested community association which desires to be notified of petitions to rezone property within the NT district shall file a written request with the City Auditor and Clerk. The written request shall be valid for a period of one (1) year from the date of such submittal. After the one (1) year period has expired, if the community association still desires to receive such notifications, a new written request shall be submitted on an annual basis. The request shall state the name of the association, its current officers or authorized representatives, and the address to which written notice of a petition for rezoning may be sent.

(c) Thereafter, the City Auditor and Clerk shall notify such community associations of the filing of any petition to rezone property to the NT district zone within ten (10) days after the petition has been received. Such notice shall be in writing and shall state the location of the property, the size of the parcel, the identity of the petitioner, and the petitioner's proposed use of the property. The notice shall be sent by Certified Mail, Return Receipt Requested.

(d) It is the intent of this section that the City Auditor and Clerk is providing a public service in providing written notification to the community associations described above. In the event the City Auditor and Clerk fails to give such written notice within the specified time period or gives an improper notice in any respect, such notice shall not invalidate the public hearings before either the Planning Board or the City Commission as to the subject rezoning petition or any subsequent action related thereto.

Section 8-325. Nonconforming structures and site characteristics.

(a) Notwithstanding the provisions of Article IX, Zoning Code, the following shall apply to the partial or total destruction of nonconforming structures and/or site characteristics which existed as of the date of the establishment of the NT district. A nonconforming structure or site characteristic which is destroyed by any means to an extent of twenty-five percent (25%) or less of its replacement value at the time of destruction shall not be required to comply with the NT district regulations at the time it is reconstructed. A nonconforming structure or site characteristic which is destroyed by any means to an extent of more than twenty-five percent (25%) but less than fifty percent (50%) of its replacement value at the time of destruction shall be reconstructed in conformity with the NT district regulations, with the exception of the following provisions:

(1) The nonconforming structure and its site characteristics shall be exempt from Section 8-320, "Location of off-street parking" and Section 8-321(5), Landscaping, buffering, and separation requirements, "Interior parking," and 8-315, "Maximum height of structures", of this Zoning Code.

(2) The nonconforming structure and its site characteristics shall meet, to the extent possible, Section 8-314, Minimum yard requirements, and Section 8-321(5), Landscaping, buffering, and separation requirements, "Adjacent to Future ROW" and "Within Future ROW Landscaping," of this Zoning Code.

A nonconforming structure which is destroyed by any means to an extent of more than fifty percent (50%) of its replacement value at time of destruction shall not be reconstructed except in conformity with all of the provisions of the NT district regulations.

Section 8-326. Nonconforming signs.

(a) A legally established sign which fails to conform to this district shall be allowed continued use, provided that the sign shall not be:

(1) Structurally altered so as to extend its useful life,

(2) Expanded, moved or relocated,

(3) Re-established after a change in use,

(4) Re-established after a business has been abandoned for ninety (90) days or more,

(5) Re-established after damage or destruction of more than fifty (50) percent.

(b) Sign copy and sign faces may be changed on non-conforming signs when there is no change in use of the site or when only a portion of a multiple tenant sign is being changed.

(c) Legal non-conforming signs shall not prevent the installation of conforming signs.

(d) Non-conforming signs shall either be removed within fifteen (15) years after the date of adoption of this ordinance, or shall be made to conform to the regulations of the NT zone district."

Section 3. Should any section, sentence, clause, part, or provision of this Ordinance be declared invalid or unenforceable, by a court of competent jurisdiction, the same shall not affect the validity of this Ordinance as a whole, or any part hereof other than the part declared to be invalid.

Section 4. Ordinances in conflict herewith are hereby repealed to the extent of such conflict.

Section 5. This Ordinance shall take effect immediately upon second reading.

PASSED on first reading by title only, after posting on the bulletin board at City Hall for at least three (3) days prior to first reading, as authorized by Article IV, Section 2 of the Charter of the City of Sarasota, Florida this 16th day of September 1992.

PASSED on second reading and finally adopted this 5th day of October, 1992.

Source: (Carter and Plaster, 1993)

LIST OF REFERENCES

Alkhresheh, M. M. (2007). Enclosure as a function of height-to-width ratio and scale its influence on user's sense of comfort and safety in urban street space (Unpublished doctoral dissertation). University of Florida.

Biringer, B. E., Matalucci, R. V., & O'Connor, S. L. (2007). Security risk assessment and management: A professional practice guide for protecting buildings and infrastructures. Hoboken, NJ: John Wiley.

Braga, A. A., & Weisburd, D. (2010). Policing problem places: Crime hot spots and effective prevention. New York, New York: Oxford University Press.

Brantingham, P. J., & Brantingham, P. L. (1981). Environmental criminology. Beverly Hills, CA: Sage Publications.

Bratton, W. J. (1994). The New York City Police Department's Civil Enforcement of Quality of Life Crimes. Journal of Law and Policy 3 J.L. & Pol'y, 447-450. Retrieved September 22, 2011, from http://heinonline.org

Bryant Park, NY: Publicly Owned, Privately Managed, and Financially Self-Supporting « Project for Public Spaces - Placemaking for Communities. (n.d.). Project for Public Spaces - Placemaking for Communities. Retrieved September 28, 2009, from http://www.pps.org/articles/mgmtbryantpark/

CDC - Violence Prevention Home Page - Injury. (n.d.). Centers for Disease Control and Prevention. Retrieved December 18, 2010, from http://www.cdc.gov/ncipc/dvp/CPTED.htm

City of Sarasota. (2006). 2030 vision plan. Sarasota, FL.

City of Sarasota. (2006). 2030 transportation plan. Sarasota, FL.

City of Sarasota, Zoning Dept. (2002). District 9: Special public interest overlay districts (Section VI-9012 ed., Vol. Article VI, North Trail Overlay District, pp. 23-27). Sarasota, FL: City of Sarasota.

Clapp, R. (2011, September 08). North Trail Redevelopment Partnership | Tamiami Cultural District - Clapp: North Trail gateway taking shape. North Trail Redevelopment Partnership | Tamiami Cultural District - Home. Retrieved October 10, 2011, from http://www.mytamiami.org/news/clapp-north-trail-gateway-taking-shape-html

Clarke, R. V. (1997). *Situational crime prevention: Successful case studies*. Guilderland, NY: Harrow and Heston.

Clarke, R. V., & Eck, J. (2003). Becoming a problem solving crime analyst in 55 small steps. London: Jill Dando Institute of Crime Science, University College London.

Clarke, R. V., & Felson, M. (1993). *Routine activity and rational choice*. New Brunswick, NJ: Transaction.

City of Englewood : CityCenter Englewood. (n.d.). *City of Englewood : Home*. Retrieved 2011, from http://www.englewoodgov.org/Index.aspx?page=468

Clifford, S. (2012, February 06). How about Gardening or Golfing at the Mall? - Yahoo! Finance. Retrieved from http://finance.yahoo.com/news/gardening-golfing-mall-192402034.html

Colquhoun, I. (2004). *Design out crime: Creating safe and sustainable communities*. Amsterdam: Architectural Press.

Coupland, A. (1997). Reclaiming the city: Mixed use development. London: E & FN Spon.

Crawford, C. E. (2010). Spatial policing: The influence of time, space, and geography on law enforcement practices. Durham, NC: Carolina Academic Press.

Crime Mapping - Building Safer Communities! (n.d.). Retrieved September 10, 2011, from http://www.crimemapping.com

Crowe, T. D. (2000). *Crime prevention through environmental design: Applications of architectural design and space management concepts*. Boston, MA: Butterworth-Heinemann.

Cuneo, J. (2010, July 01). Federal program helps cities address neighborhood revitalization. UrbanLand Home. Retrieved February 01, 2012, from http://urbanland.uli.org/Articles/2010/July/Cuneo

Dealing with crime and disorder in urban parks [electronic resource]. (2009). Washington, DC: Department of Justice.

Duany, A., Plater-Zyberk, E., & Speck, J. (2000). Suburban nation: The rise of sprawl and the decline of the American Dream. New York, NY: North Point Press.

EDAW Inc. (2002). Parks and connectivity master plan (Rep.). Sarasota, FL.

Felson, M. (1995). Those who discourage crime. In Crime and Place. Retrieved from http://www.jmu.edu/icle/pdf_files/Workforce/Park%20Ranger%20Literature%20Review/Those%20who%20discourage%20crime.pdf

Felson, M. (2002). *Crime and everyday life*. Thousand Oaks: Sage Publications.

Fennelly, L. J. (2003). Effective physical security. Burlington, MA: Butterworth-Heinemann.

Geller, Alyson. Smart Growth: A Prescription for Livable Cities. American Journal of Public Health: September 2003, Vol. 93, No. 9, pp. 1410-1415.

Global report on human settlements 2009 planning sustainable cities. (2009). London [etc.].: Earthscan : for UN-Habitat.

Harris, K. D., & Hamilton, J. O. (2009). Smart on crime: A career prosecutor's plan to make us safer. San Francisco, CA: Chronicle Books.

Home page. (n.d.). New Urbanism. Retrieved January 01, 2011, from http://newurbanism.org/pages/532096/

Hope, T. (1985). Implementing crime prevention measures. London: H.M.S.O.

Improving evaluation of anticrime programs. (2005). Washington, D.C.: National Academies Press.

Interview with Marjorie Sykes on CPTED [Telephone interview]. (2011).

Interview with David Greenberg on CPTED [Telephone interview]. (2011).

Jacobs, J. (1961). The death and life of great American cities. New York, NY: Random House.

Kelly-Schwartz, A. C., Stockard, J., Doyle, S., & Schlossberg, M. (2004). Is Sprawl Unhealthy?: A Multilevel Analysis of the Relationship of Metropolitan Sprawl to the Health of Individuals. Journal of Planning Education and Research, 24(2), 184-196. doi: 10.1177/0739456X04267713

Keynes, M., Hope, T., Robert, P., Zauberman, R., & Hough, M. (2009). Aspects of Deviance, Crime and Prevention in Europe (Rep. No. WP8). Retrieved from http://lodel.demo.inist.fr/crimprev/docannexe/file/334/wp8_report_milton_keynes_conf_english_version.pdf#page=165

Lab, S. P. (2000). Crime prevention: Approaches, practices, and evaluations. Cincinnati, OH: Anderson Pub.

Macedo, J. (2007). Effective Crime Prevention in New York City, USA (Rep.). New York, NY: United Nations.

Marembo, A., & Ngwenya, S. (1999). How a Neighborhood Watch operates. In Protecting ourselves: The nature & role of the neighbourhood watch (pp. 15-22). Causeway, Zimbabwe: Popular Education Collective.

Mayhew, P., & Riley, D. (1980). Crime prevention publicity: An assessment. (Great Britain, Home Office).

Mayhew, P., Clarke, R., Burrows, J., Hough, J., & Winchester, S. (1979). Crime in public view. London: H.M.S.O.

Mayhew, P., Clarke, R., Sturman, A., & Hough, J. (1976). Crime as opportunity (England, Home Office, Research Study No. 34). London: H.M.S.O.

Moore, J. A., Beebe, M., Geinzer, J., Joiner, C., & Hiatt, D. (1990). Gateway 2000 (North Tamiami Trail 1990: Urban design study, Rep.). Sarasota, FL: University of South Florida.

Morash, M., & Ford, J. K. (2002). The move to community policing: Making change happen. Thousand Oaks, CA: Sage Publications.

Newman, G. R., Clarke, R. V., & Shoham, S. G. (1997). Rational choice and situational crime prevention: Theoretical foundations. Brookfield, VT: Ashgate.

NTRP meeting. (2011, July). Sarasota.

O'Shea, L. S., & Awwad-Rafferty, R. (2009). Design and security in the built environment. New York, New York: Fairchild Books.

Plaster, S., & Carter, S. (1993). Planning for prevention: Sarasota, Florida's approach to crime prevention through environmental design. Tallahassee, FL: Florida Criminal Justice Executive Institute, Florida Dept. of Law Enforcement.

Innovation41: Transforming path into place (Charrette Opening Presentation). Sarasota, FL.

Roman, J., Dunworth, T., & Marsh, K. (2010). Cost-benefit analysis and crime control. Washington, D.C.: Urban Institute Press.

Sampson, R. J., Raudenbush, S. W., & Earls, F. (1998). *Neighborhood collective efficacy - does it help reduce violence?* Washington, DC: U.S. Dept. of Justice, Office of Justice Programs, National Institute of Justice.

Sarasota City Commission. (2007). North Trail zoning meeting survey results (Rep.). Sarasota, FL.

Schneider, R. (2009, Spring). Introduction to CPTED. Lecture presented in University of Florida, Gainesville.

Schneider, R. (2010, Fall). CPTED class lecture. University of Florida, Gainesville.

Schneider, R. (2011, Fall). Advanced CPTED Strategies. Lecture presented in University of Florida, Gainesville.

Schneider, R. H., & Kitchen, T. (2007). Crime prevention and the built environment. London: Routledge.

Schneider, R. H., & Kitchen, T. (2002). Planning for crime prevention: A transatlantic perspective. London: Routledge.

Shaw, M. (2010). Handbook on the crime prevention guidelines: Making them work (United States, United Nations, Drugs and Crime). New York, NY: United Nations.

Sherman, L. W., Farrington, D. P., Welsh, B. C., & Layton MacKenzie, D. (2002). Evidence-based crime prevention. London [u.a.: Routledge.

Simmons, D. A. (2001). Green paper on the government's proposals for crime reduction. [St. Michael, Barbados]: Government Printing Dept.

Smith, M. S. (1996). Crime prevention through environmental design in parking facilities. Washington, D.C.: U.S. Dept. of Justice, Office of Justice Programs, National Institute of Justice.

Spalek, B. (2008). Communities, identities and crime. Bristol: The Policy press.

Sturman, A., Clarke, R. V., & Mayhew, P. (1975). Crime as opportunity.

Tilley, N. (2002). Evaluation for crime prevention. Monsey, NY: Criminal Justice Press.

Tracking Crime in New York City Parks. (2007). *Scribd*. Retrieved from http://www.scribd.com/doc/51091351/Tracking-Crime-in-New-York-City-Parks

Trancik, R. (1986). Finding lost space: Theories of urban design. New York, NY: Van Nostrand Reinhold.

United States, City of Sarasota, Planning and Development Department. (1994). Sarasota 2040, the city of your dreams: City of Sarasota vision plan, November 30, 1994. Sarasota, FL: Planning & Development Dept.

United States, United Nations, Office of Drugs and Crime. (2009). Current practices in electronic surveillance in the investigation of serious and organized crime (pp. 1-4). New York, NY: United Nations.

Welsh, B., & Farrington, D. P. (2006). Preventing crime: What works for children, offenders, victims, and places. Dordrecht, The Netherlands: Springer.

Welsh, B., & Farrington, D. P. (2009). Making public places safer: Surveillance and crime prevention. New York, New York: Oxford University Press.

Wekerle, G. R., & Whitzman, C. (1995). *Safe cities: Guidelines for planning, design, and management*. New York [u.a.: VanNostrand Reinhold.

Whiting, M. (1999). Innovative public-private partnerships: Public safety initiatives. New York, NY: Conference Board.

BIOGRAPHICAL SKETCH

Daniel Greenberg, better known as Dan, grew up in Sarasota, FL. He studied architecture at the University of Florida, where he received a Bachelor of Design. He concluded his undergraduate architecture education at the Vicenza Institute of Architecture (VIA) in Italy, where he also traveled around Europe, absorbing all the urban and architectural design he could. Walkability, urban revitalization and multimodal transit where the focuses of his research. After returning from Europe, Dan enrolled in the University of Florida's Urban and Regional Planning Graduate School, where he focused on urban design, CPTED and sustainable revitalization. Dan interned with the City of Sarasota, during the semester after his first year of graduate school. During his second year of graduate school, Dan worked with Dr. Richard Schneider on multiple CPTED-based studies, reviews and proposals. In 2011, Dan performed comprehensive plan review research for Professor Gail Easley. In 2012, Dan received his Master of Arts in Urban and Regional Planning (MAURP).