

Crime Prevention Through Environmental Design (CPTED):

**Planners and Police Officers
Working Together to Create
Livable Communities**

APA-WA Fall Conference

October 5, 2010

Presenters

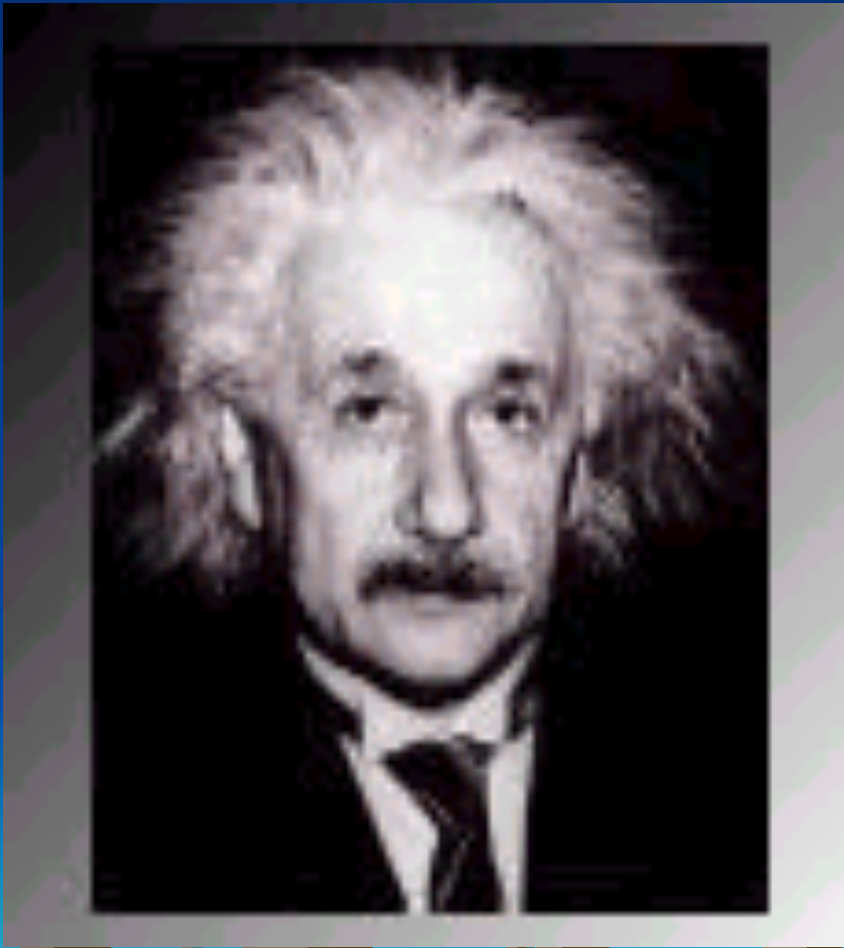
Steve Butler, FAICP, Community
Development Director, City of Mill Creek

Officer **Doug Reynolds**, CPP, ICPS
SeaTac Police Services

Why Crime Prevention?

- If a like crime can occur
 - at the same location,
 - to the same victim group, and
 - by a similar suspect type.Not a desirable situation!
- Arrest is a strategy - not the solution!

Insanity



- Doing the same thing the same way, but expecting different results.

– Albert Einstein

Why Livability?

The way we build, rebuild, and maintain our communities affects the behavior of people. That behavior influences public safety. The degree to which public safety exists affects the livability of our communities.



Cityscapes promoted by both planners and police officers



What is CPTED?

- CPTED is an acronym for **Crime Prevention Through Environmental Design**. CPTED is the design or re-design of an environment to reduce crime opportunity through natural, mechanical, and procedural means.

Key CPTED Principles

- Locational Setting and Place Considerations

1. Natural Surveillance

2. Access Control

3. Territorial Reinforcement

4. Image and Maintenance

- Importance of Lighting

Locational and Place Considerations

- Crimes occur at specific locations and places.
- CPTED is concerned with the environmental settings of crime and how crime is influenced by the proximity and juxtaposition of safe and unsafe activities, building design, and site characteristics.
- Modern CPTED must consider environmental criminological issues that impact crime opportunity at specific places.

1. Natural Surveillance

- CPTED focuses on the placement of physical features, activities, and people in such way as to maximize visibility. This includes the lighting of public spaces and walkways at night.

2. Natural Access Control

- CPTED features the physical guidance of people coming and going from a space by the judicious placement of entrances, exits, fencing, landscaping, and lighting.

3. Territorial Reinforcement

- CPTED encourages the use of physical attributes that express ownership, such as fences, pavement treatment, art, signage, and landscaping.

4. Image and Maintenance

- CPTED allows for the continued use of a space for its intended purpose and serves as an additional expression of ownership.
- CPTED is concerned with vigilant management practices that reduce crime opportunity and sustain territoriality, access control, and surveillance.

Natural Surveillance (#1)

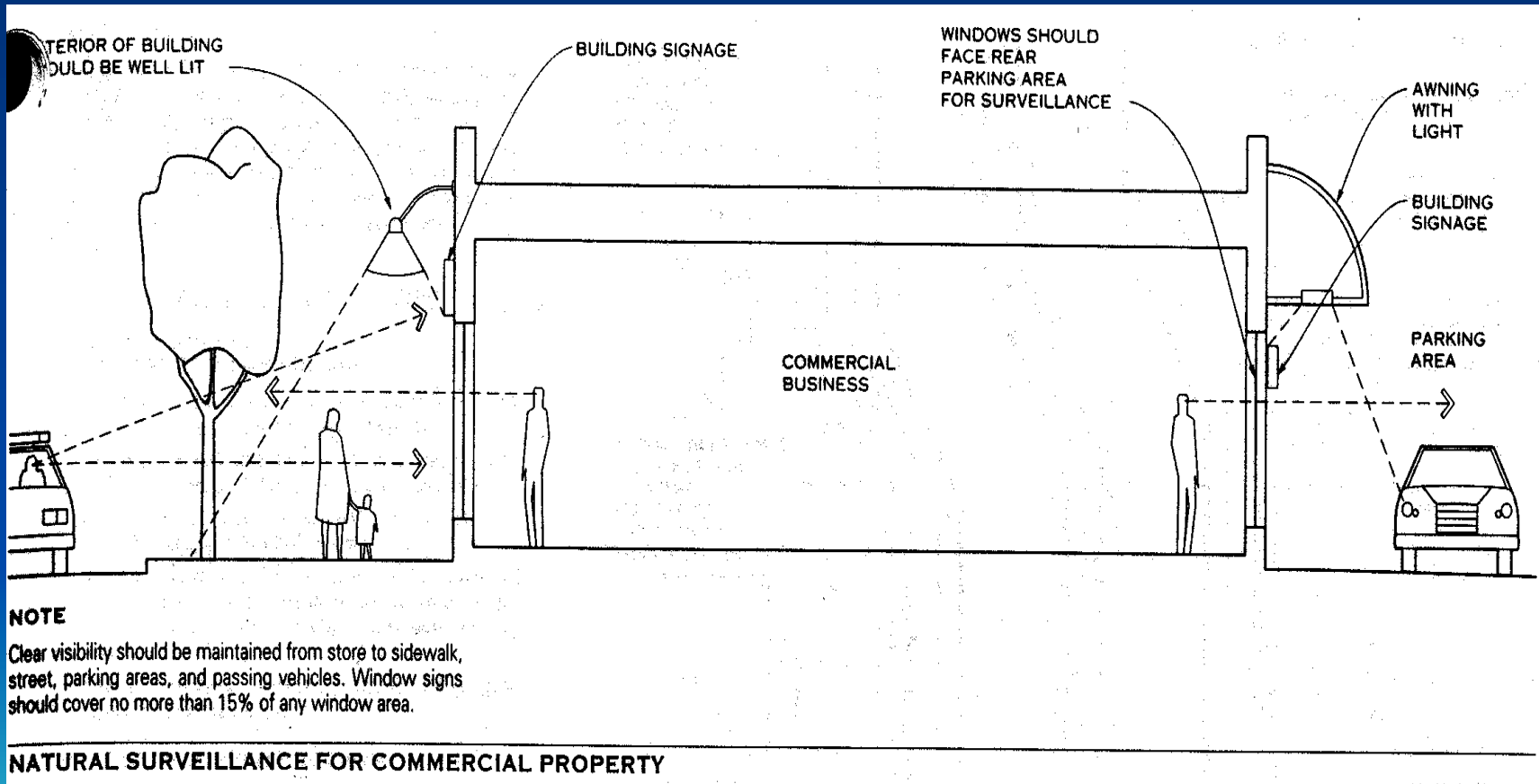
Dude! Where's My House?



CPTED “Masterpiece”



Natural Surveillance



Natural Surveillance (#1)

Commercial Landscape

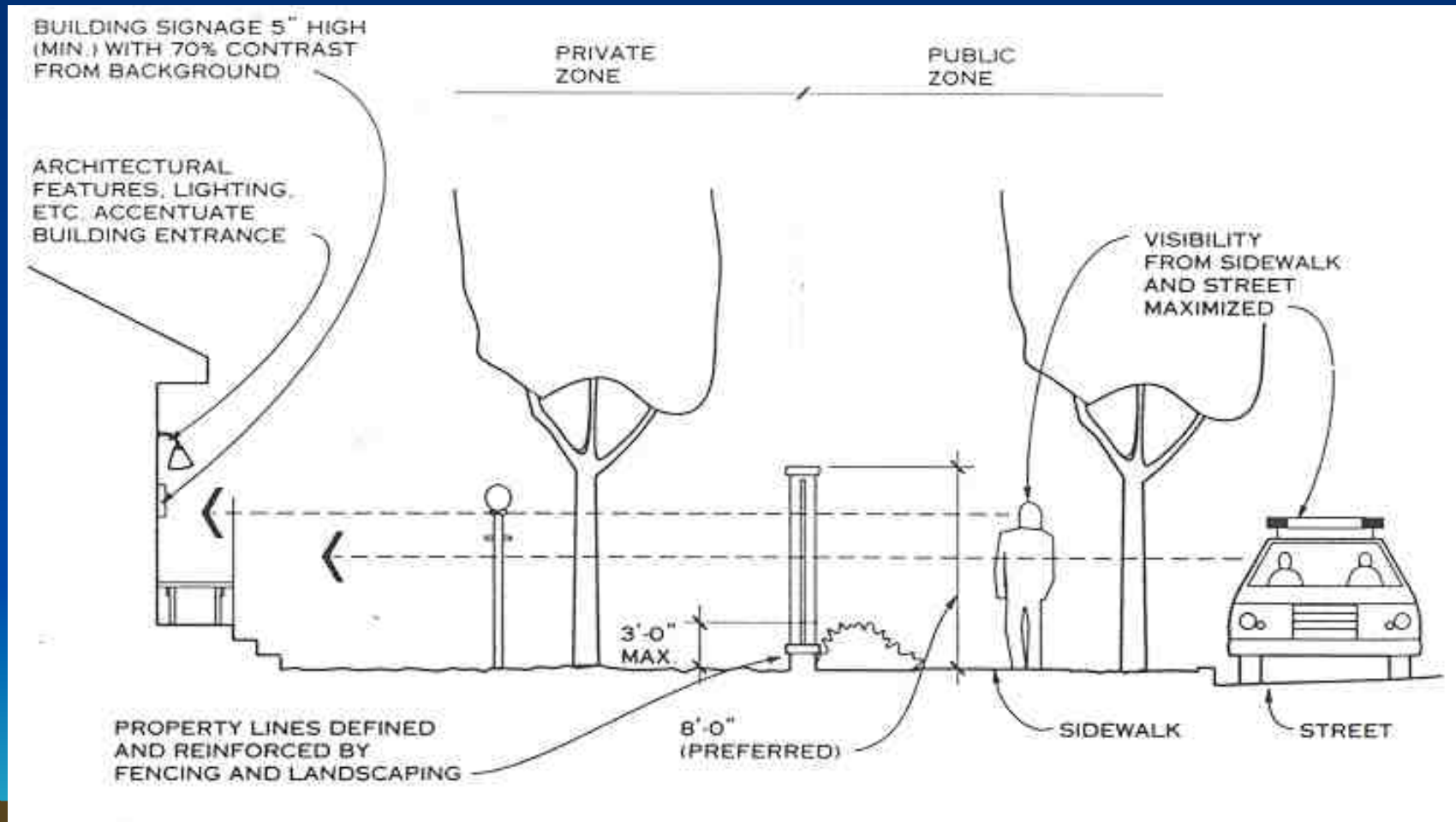


Natural Surveillance (#1)

Commercial Landscape



What Do You See?



Natural Access Control (#2)

- Decrease opportunities for criminal activity by denying access to potential targets
- Most criminal intruders will try to find a way into an area where they will not be easily observed.
- Limiting access and increasing natural surveillance keeps them out all together or, marks them as an intruder.

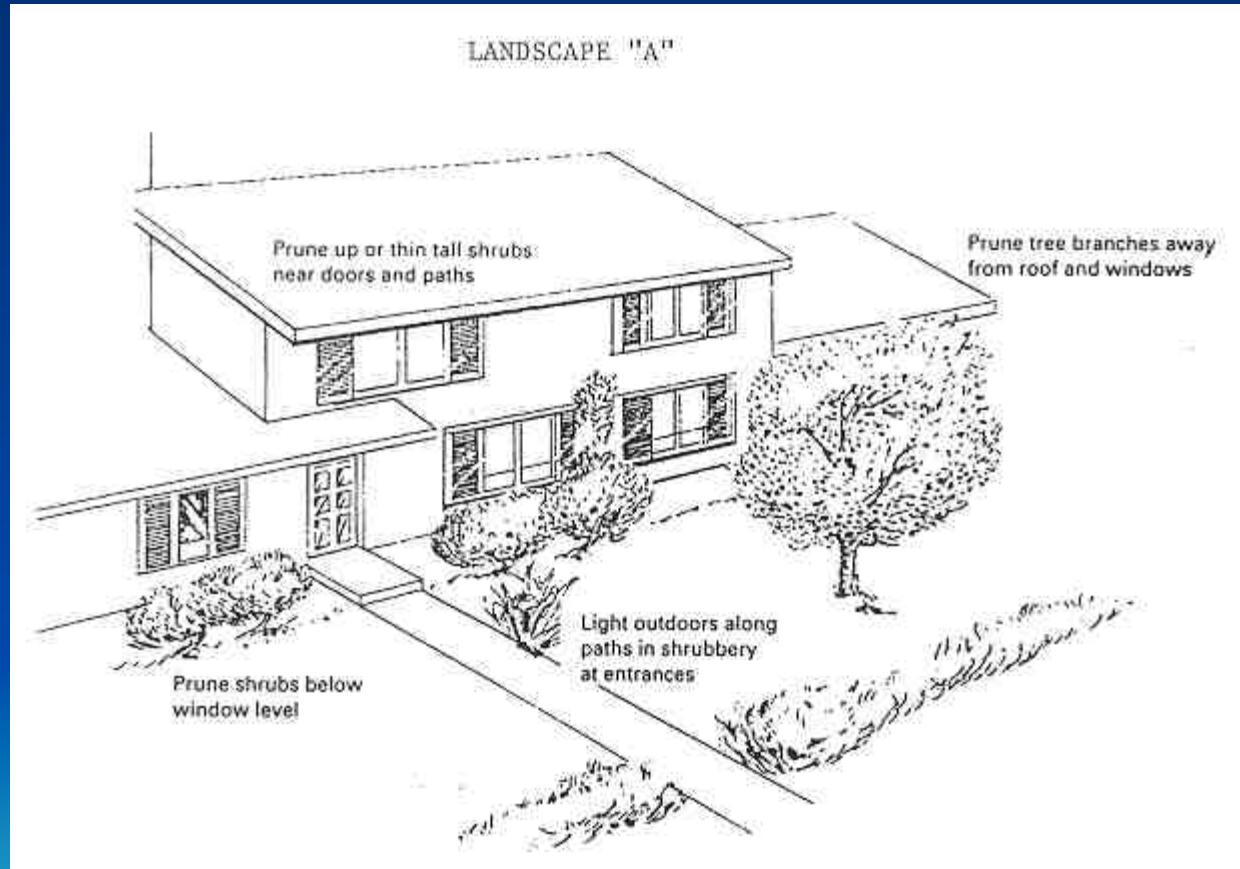
Natural Access Control

Multi-Family Residential



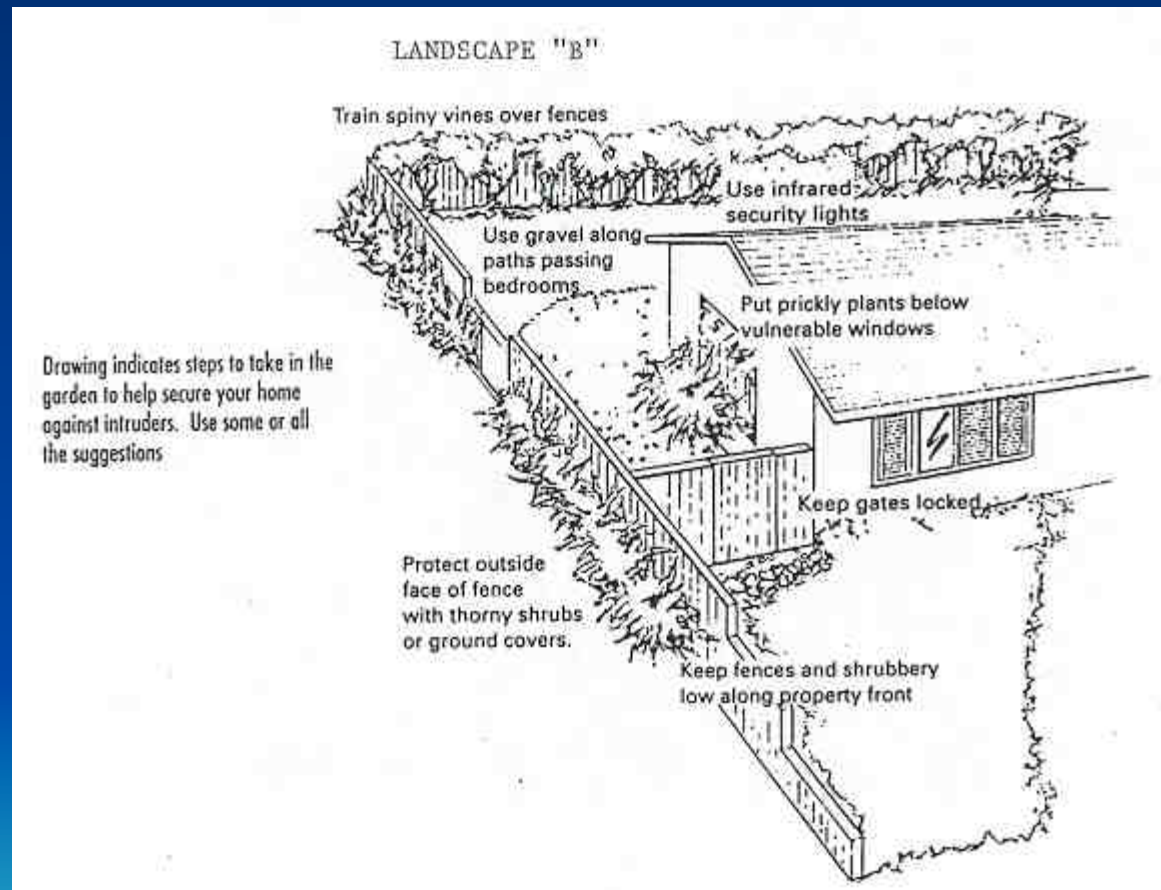
Natural Access Control

Single Family Residential



Natural Access Control

Single Family Residential



Territorial Reinforcement (#3)

- CPTED encourages the use of physical attributes such as buildings, fences, pavement treatment, signage, lighting, art and landscape to express ownership and define public, semi-public and private space.
- **“Area of Influence”**

Territorial Reinforcement (#3)

- An environment designed to clearly delineate private space does two things.
 - First, it creates a sense of ownership. Owners have a vested interest and are more likely to challenge intruders or report them to the police.
 - Second, the sense of owned space creates an environment where “strangers” or “intruders” stand out and are more easily identified.

Territorial Reinforcement

Single Family Residential



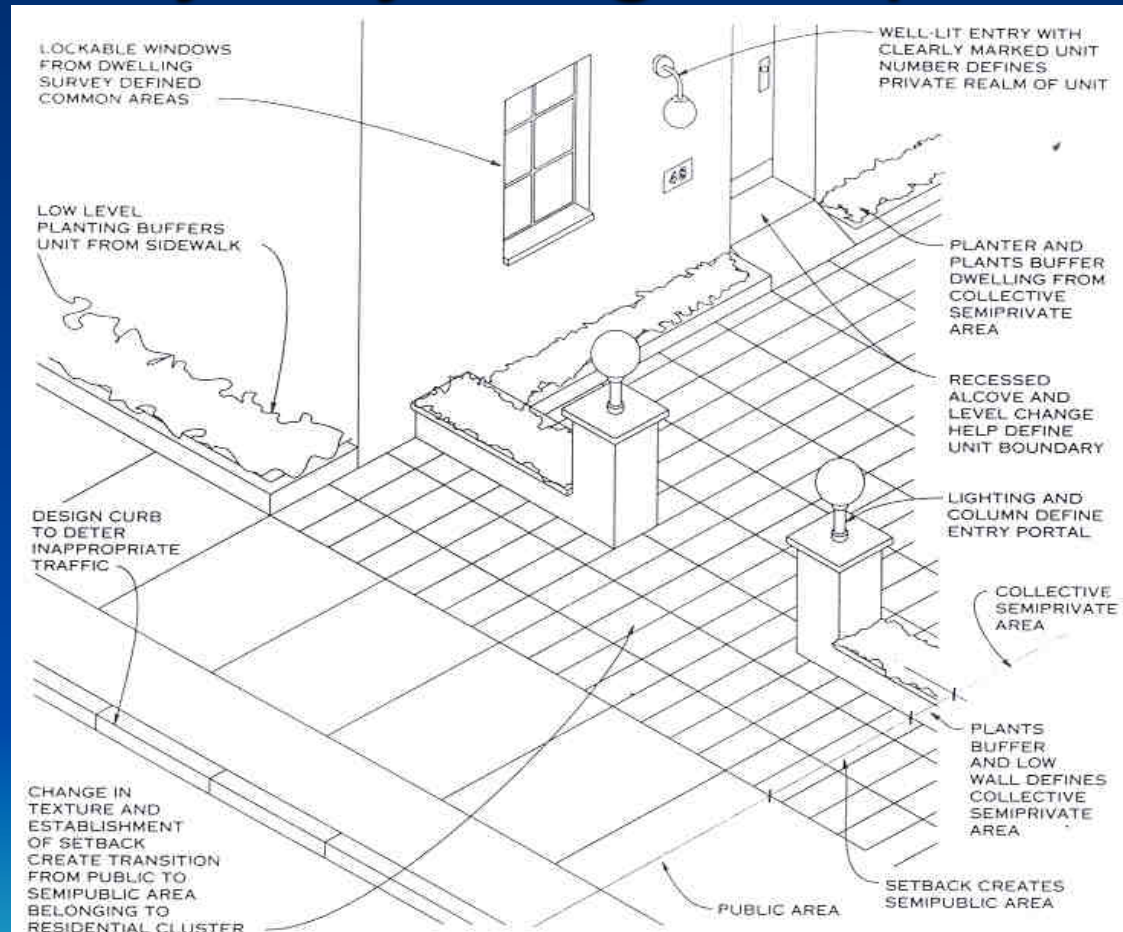
Territorial Reinforcement

Commercial Outside Seating



Territorial Reinforcement

Security Layering of Space, AIA



Territorial Reinforcement Subdivisions

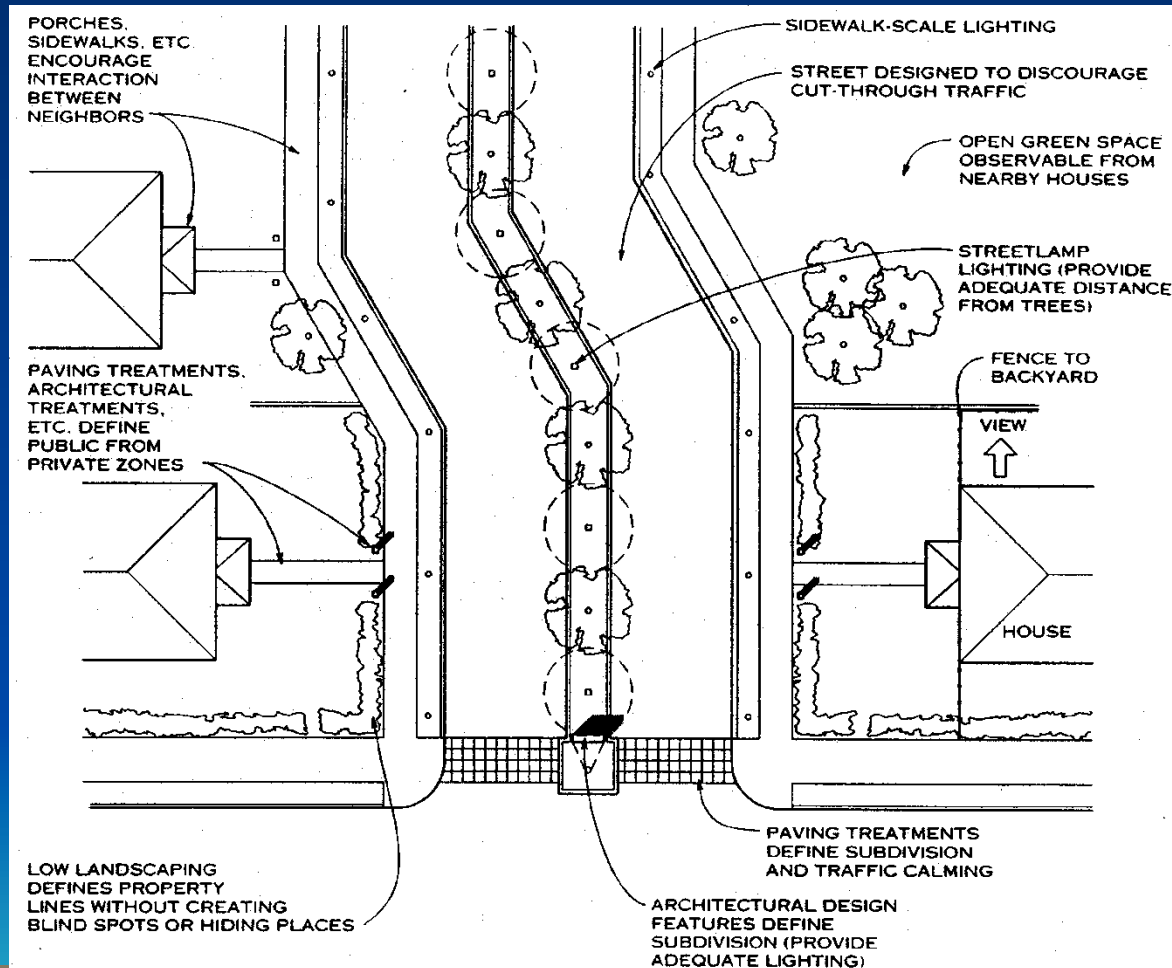


Image and Maintenance (#4)

- A well maintained home or building creates a sense of guardianship and helps deter criminals.

Image and Maintenance (#4)



Image and Maintenance



Lighting

“The single most important CPTED security feature is **lighting**. Lighting codes should meet the standards of the Illuminating Engineering Society of North America.”

Research in Brief, National Institute of Justice, April 1996

Purpose

- The advantages of darkness to the criminal:
 - Less likely that police patrols, neighbors or passerby will observe criminal activity
 - Darkness and shadow provide good cover for watching a target and for escape
 - Fear of being on the streets at night minimizes the number of potential witnesses
 - Darkness increases the ease with which criminals can use surprise to gain control of victims

Visibility

- Lighting is an important element needed to preserve visibility and help a person see potential assailants.
- Paths of travel need illumination - designed to illuminate the faces of pedestrians.
- Lighting that is too bright can diminish safety by creating a fishbowl effect.
- Quality of light is as important as quantity.

Lighting Benefits

- Less vandalism & fewer break-ins
- Improved morale & perception of safety
- Fewer assaults
- Improved curbside appeal
- Increased building value
- Improved productivity
- Increased utilization of areas
- Annualized value of legal savings from premise liability litigation

“High Flare” Gas Station



“Low Flare” Gas Station



CPTED & Zoning Codes

CPTED can be incorporated into zoning regulation in two ways:

1. *Encourage* CPTED review, based upon **guidelines**.
2. Require CPTED review, based upon adopted **standards**.

Mandatory & Non-Mandatory Review

MANDATORY REVIEW (normally by ordinance)

Benefits

- Provides opportunity to apply CPTED standards uniformly throughout the jurisdiction.

Mandatory & Non-Mandatory Review

MANDATORY REVIEW

Drawbacks

- Labor intensive
- Often seen by developers as simply another hurdle.

Mandatory & Non-Mandatory Review

NON-MANDATORY REVIEW

Benefits

- Allows agencies with limited resources to focus on critical projects.
- Less bureaucratic stigma attached.

Mandatory & Non-Mandatory Review

NON-MANDATORY REVIEW

Drawbacks

- Have to sell the benefits of CPTED. This is often difficult because the developer is most likely not the end user.

Best Time to Apply CPTED

- The best time to apply this philosophy is in the design phase, before a building or neighborhood is built.
- You can also successfully apply it later, but retrofitting an existing building or site can sometimes become costly or cost prohibitive.

SeaTac's CPTED Experience

- Council 1st briefed on benefits of CPTED
- Incorporated CPTED principles into new Zoning Code MF Design Standards
- Adopted CPTED Chapter (Zoning Code) – combo of mandatory and voluntary
- Police at pre-application conference
- Fully integrated into dev. review process
- Code enforcement can be a challenge

Lessons Learned

- Very effective to have Planning and Police partnering together to advocate for good design standards
- Push for standards over guidelines, whenever possible
- Be clear what is mandatory vs. voluntary
- Important to regularly educate business owners about requirements and benefits of CPTED

Lessons Learned (cont.)

- Helpful to also educate residents about simple CPTED techniques (such as **use of longer “dead bolts”** and **trimming of vegetation around windows**) to reduce potential for crime
- Planning and Police may disagree on some aspects of landscaping (e.g., **buffer vs. visibility**) – discuss different perspectives, and compromise if necessary

WA Cities Using CPTED

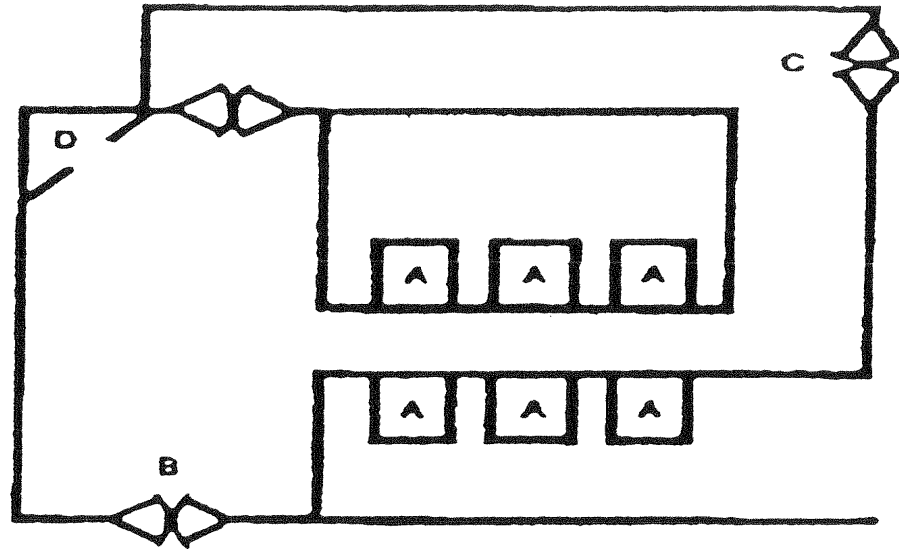
- Federal Way
- Issaquah
- Lacey
- Marysville
- SeaTac
- Tacoma
- University Place

Source: Municipal Research & Services Center

Large Group, Warm-Up Exercise:

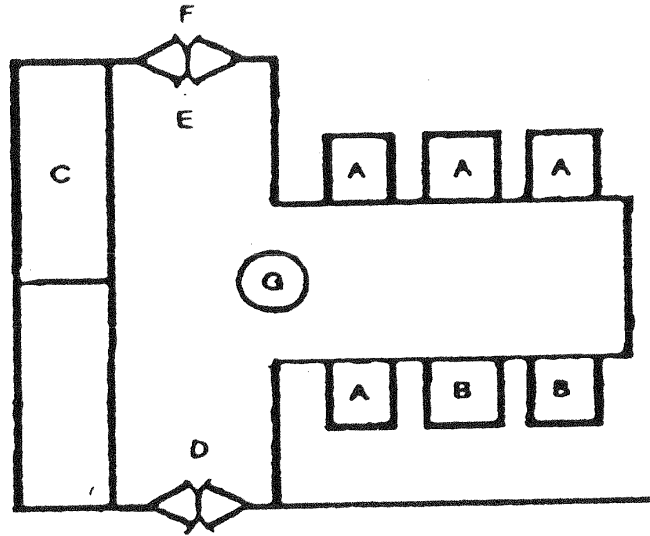
Office Building Lobby

Exercise: Enhance access control to this office building.



- A. Through elevators from below ground to working floors
- B. Main entrance
- C. Side entrance
- D. Guard booth

Exercise: How did everyone do?



- A. Elevators serving lobby and specified floors above
- B. Elevators serving lobby and floors below
- C. Rest rooms
- D. Building main entrance
- E. Main floor corridor
- F. Controlled access/egress door
- G. Receptionist/Security Guard station

Case Study #1

Elementary School



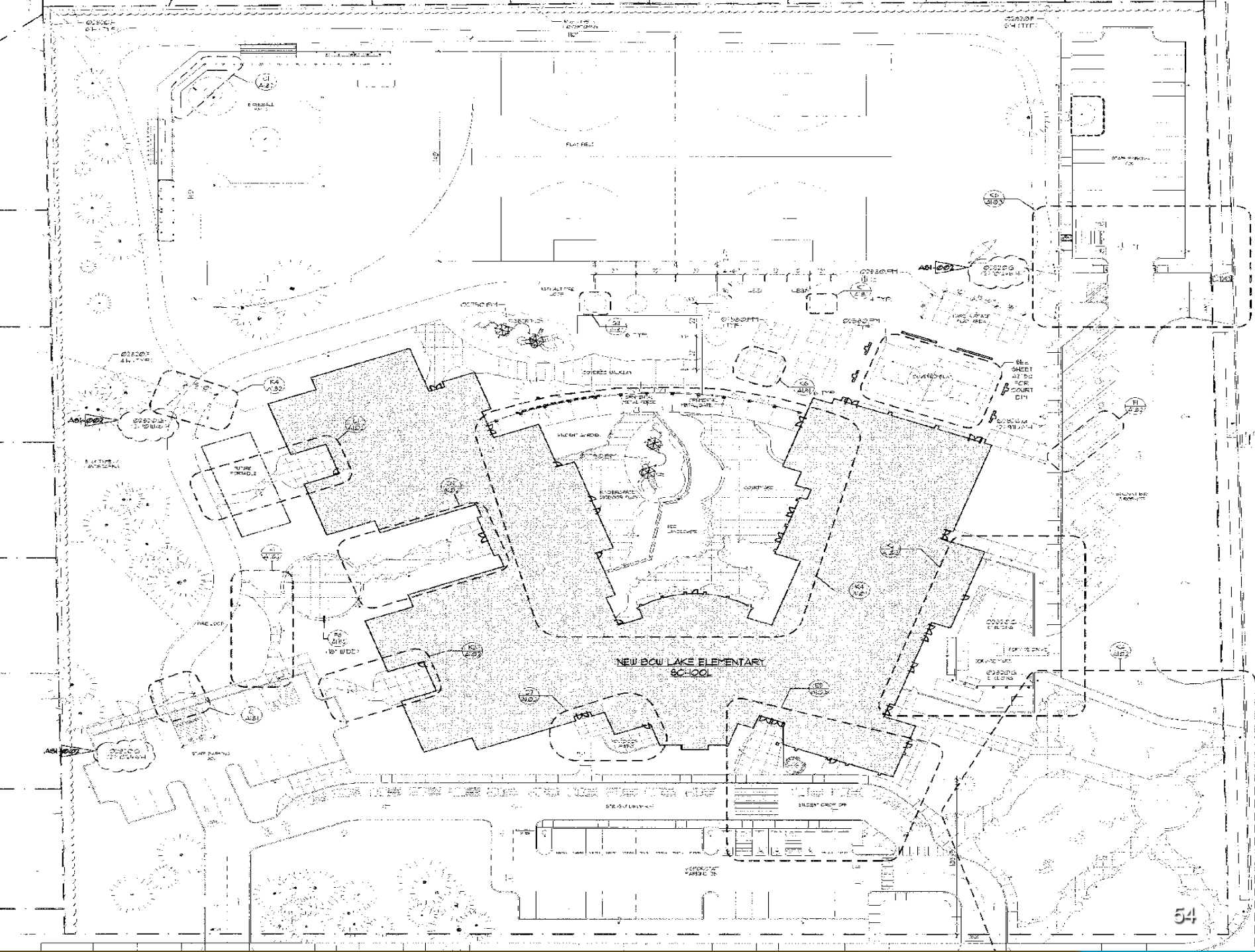
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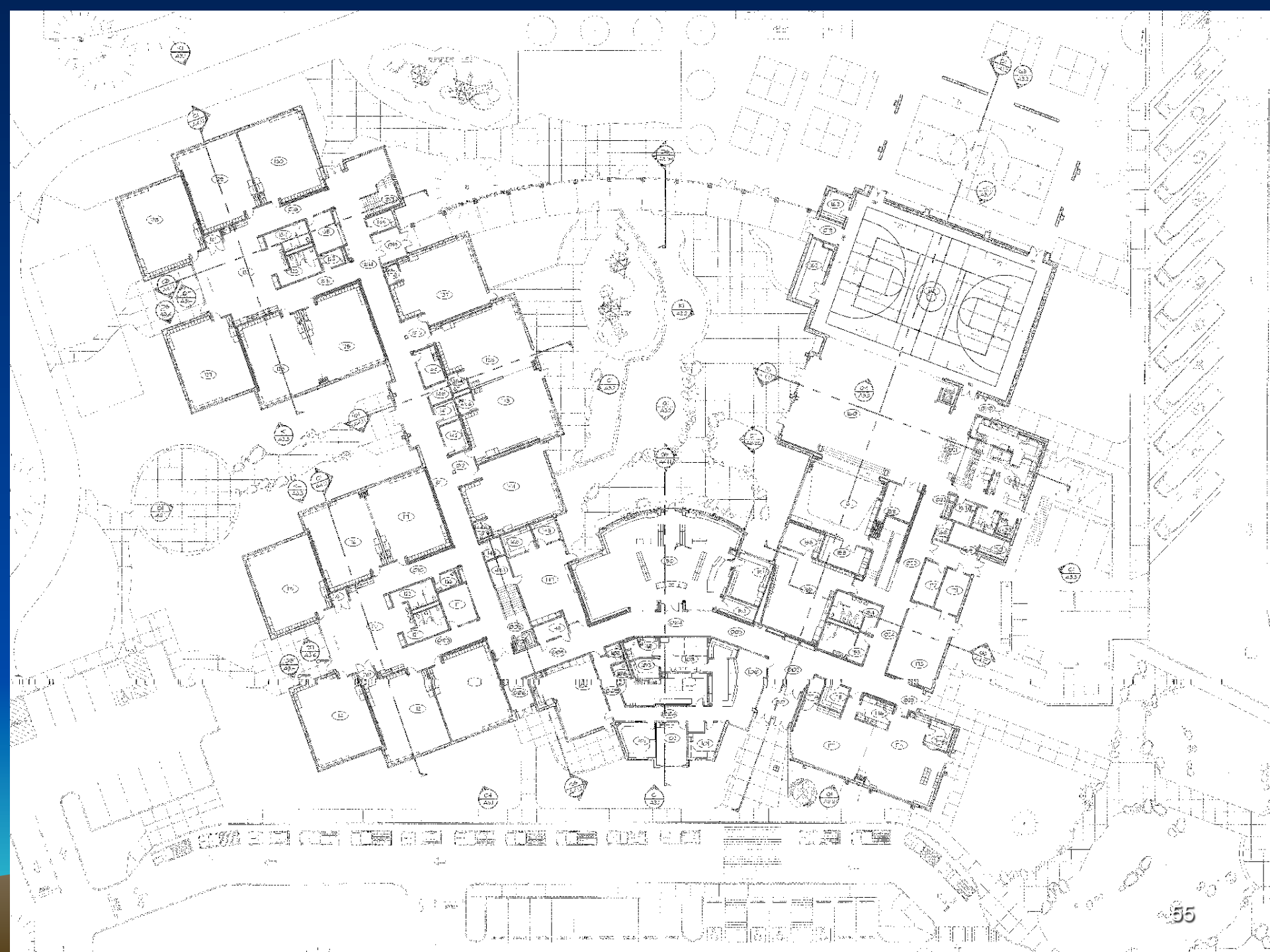
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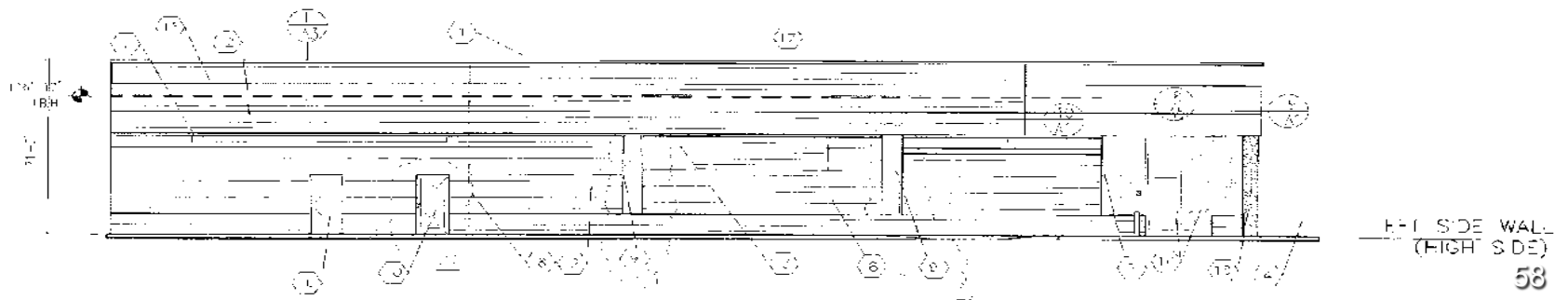
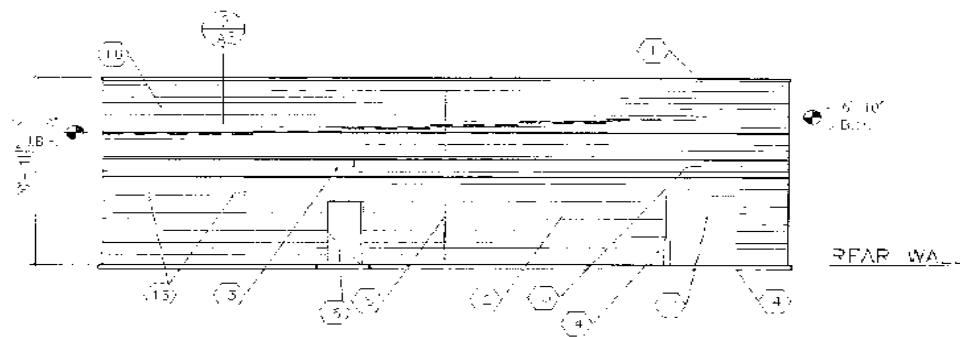
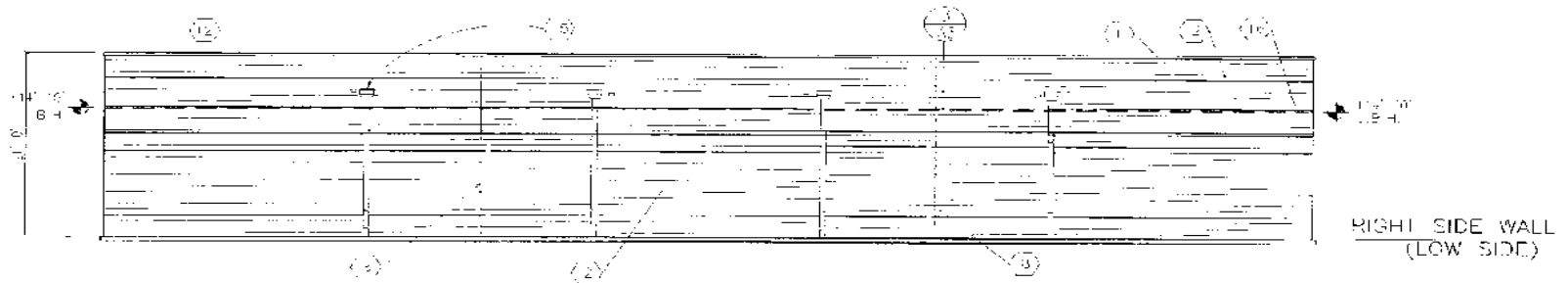
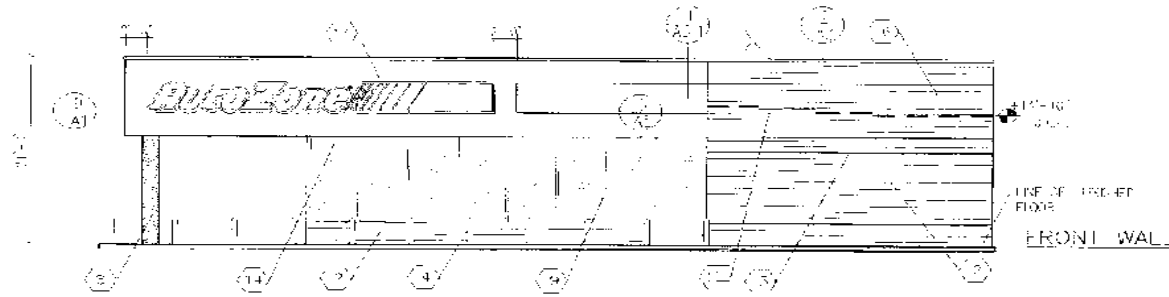
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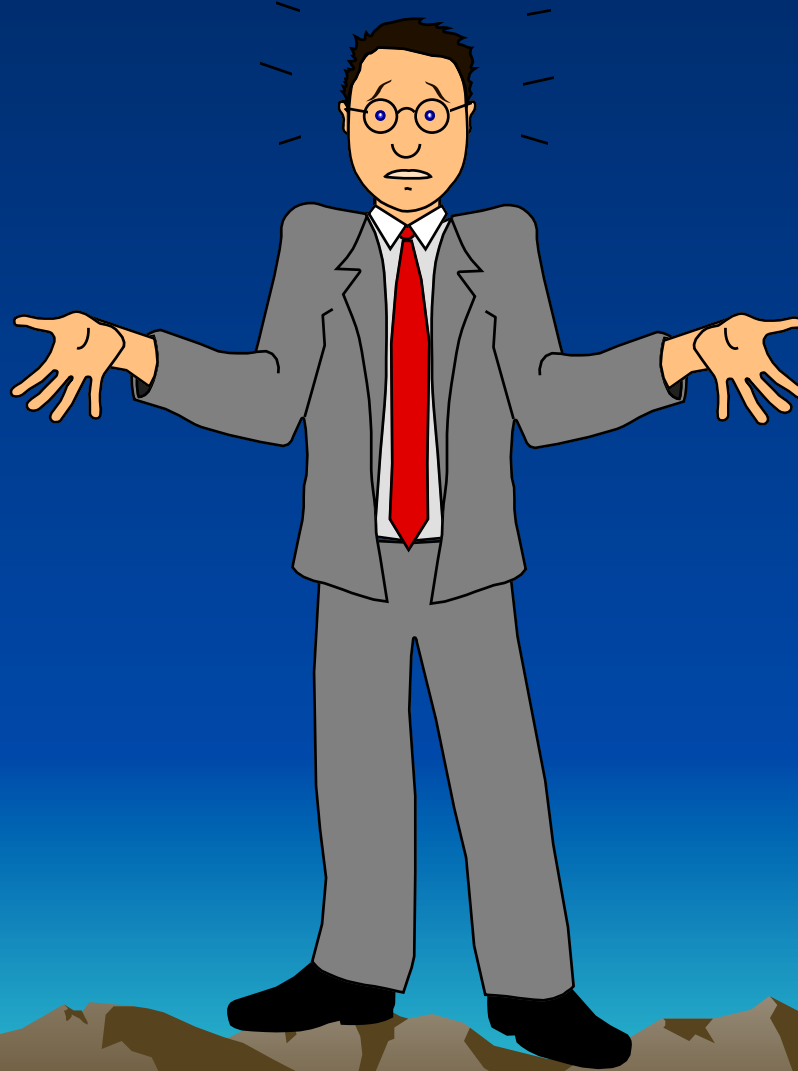


Case Study #2

“Highway Commercial” Business Use



Questions?



Bonus Activity

Outside Lighting Exercise (Voluntary)

When?

Tonight, At End of the Reception

Where?

TBD

Extra slides



WA Jurisdictions using CPTED

- Outdoor lighting regulations are currently on a city by city, or county by county basis.
- **SeaTac** has a comprehensive ordinance for outdoor and parking lot lighting.
- **Island County** has outdoor lighting regulations to curtail uplight from outdoor lighting.

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WA Jurisdictions using CPTED

- **Tumwater** is the first jurisdiction in the South Sound to adopt an ordinance aimed at reducing light pollution from outdoor lighting.
- **Sequim** has a similar ordinance.

Cityscapes promoted by both owners and police officers



Lighting Applications

- A useful rule of thumb to use when considering lighting levels for pedestrians or normal CCTV cameras, the minimum level of reflected light is:
 - For detection – 0.5 fc
 - For Recognition – 1.0 fc
 - For Identification – 2.0 fc

Lighting Economies

- The proportion of lighting costs is approximately:
 - 8 % capital items
 - 4 % maintenance
 - 88% energy

CPTED and Community Planning Processes

There are four basic steps to incorporate CPTED into planning and development review processes:

1. Train development review staff to apply CPTED principles

CPTED and Community Planning Processes

2. Include CPTED criteria in planning documents that deal with land use, such as Comprehensive Plans and Zoning Codes.
3. Include CPTED trained staff in Community Planning activities such as neighborhood revitalization efforts, special studies, sector plans, etc.

CPTED and Community Planning Process

4. **Require CPTED trained staff and CPTED criteria in contracts for Design, Planning and Engineering consultants**



CPTED LANGUAGE

Provision for 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 obstruction.

CPTED LANGUAGE

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.

CPTED LANGUAGE

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.

CPTED LANGUAGE

Provision for territorial reinforcement.

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

CPTED LANGUAGE

Maintenance.

1. The use of low-maintenance landscaping and lighting treatment to facilitate the principles of natural surveillance, natural access control and territorial reinforcement.

CPTED LANGUAGE

Pedestrian design features:

- Direct pedestrian access shall be provided from the principal entrance of the building to the sidewalk. Pedestrian access shall be provided for rear parking facilities to 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 sidewalk.

CPTED LANGUAGE

Pedestrian design features:

- Pedestrian thoroughways may be exterior and located between buildings or may be incorporated into the interior design of a structure.

CPTED LANGUAGE

- Pedestrian design features:

- Pedestrian thoroughway 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.

CPTED LANGUAGE

Landscaping:

- To provide greater visibility, demonstration of ownership (territorial reinforcement), an enhanced pedestrian environment, and a suitable buffer with the adjoining residential, the basic landscaping theme consists of low ground covers, with a **maximum height of 2.5'** and canopy trees, with a minimum lower canopy of 5' .

What Are The Boundaries?

- For a single family home?
- In a subdivision?
- In a townhouse community?
- In a multi-family condo/apt. community?
- In a commercial/mixed use building?
- On a commercial/mixed use site?

Pedestrian Oriented Developments

- Multi-level office buildings contain retail on the street level.
- Mixed-use developments contain complimentary land uses within convenient walking distances of each other and are connected by safe, reasonably direct walkways.

SUBDIVISION REGULATIONS & CPTED

Subdivision regulations determine:

- lot size and dimensions
- street and right-of-way locations and dimensions
- construction of sidewalks and other "amenities"

Which influences:

- who has access to the neighborhood and where this occurs
- separation/conflict between pedestrian and auto traffic

ZONING AND CPTED

Zoning regulates:

- use type
- development density
- lot size and dimensions
- yard setbacks
- open space
- building height, mass, bulk

Which influences:

- activities and routines (opportunities for crime)
- surveillance -- street to site, site to site, and on/around the site
- assignment of territory and the definition of public, semi-public and private spaces

SUBDIVISION REGULATIONS & CPTED

•Subdivision regulations determine:

- location and installation of utilities
- development review and approval procedures

Which influences:

- locations for street lighting
- connections with the larger community

Design Guidelines

- Location of activities and definition of public and private space
- Opportunities for surveillance
- Points of auto and pedestrian access
- Travel paths
- Links to adjacent neighborhoods



DESIGN GUIDELINES & CPTED

Design guidelines cover:

- goals and objectives for site and building performance
- site layout and the location of specific facilities

Which influences:

- mix of uses on the site
- amount of undeveloped/open space
- location of activities and the definition of public and private territories

DESIGN GUIDELINES & CPTED

Design guidelines cover:

- design of buildings, roads and driveways, parking, footpaths, etc.
- maintenance and replacement

Which influences:

- opportunities for surveillance
- points of auto and pedestrian access
- wayfinding and travel paths
- links to the adjacent neighborhood

Pedestrian Oriented Developments

- Development is guided into urban centers, which are compact, mixed use areas with shopping, work, and housing all within walking distance.



Crime Prevention and Planning

Planning and land use regulation serve several purposes including the following:

- Preserve, protect, or improve the public health, safety, and general welfare.



Crime Prevention and Planning

- Guide decisions related to the physical development of the community.
- Provide for public facilities and services.



Crime Prevention and Planning

- Stimulate community cohesion and interaction.
- Conserve and protect natural, cultural, historic, or scenic resources.

