Midway Business Park Development Plan

Greenheck Group-Tennessee Campus Design Guidlines

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MIDWAY BUSINESS PARK

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Section One: Introduction

A. OVERVIEW

Midway Business Park (MBP) has been developed to provide Knox County with an inventory of business property which is vital to attracting new companies to the area and aiding in the growth of existing companies. This Business Park will serve as an economic driver for the entire Knoxville region for many years to come, and will result in the creation of new jobs and capital investment within Knox County.

In addition to MBP's locational advantages, such as direct access to the interstate and being adjacent to a Tennessee Valley Authority electrical switching station and a Knoxville Utilities Board electrical in-feed and substation, MBP has been developed to be an exceptionally attractive and employee focused business park that will aid in the recruitment of both employers and employees to Knox County. MBP includes amenities such as paved and natural surface walking trails for recreation and exercise, as well as a covered shelter and lawn areas for use by Business Park employees and nearby residents. Business Park development standards and guidelines will ensure superb quality in building and site design with plentiful amounts of landscaping throughout.

B. PURPOSE AND INTENT

These design guidelines have been created to foster a quality built environment as well as to maintain performance standards for all development within the Business Park. Maintaining such standards will protect the investment of existing and future property owners.

Additionally, these design guidelines are intended to direct project design and to provide clear communication of what is expected and required. Property owners within MBP should inform their design team of these requirements early on in the design process. All development plans will be reviewed by operational staff of the IDB, and the Knoxville-Knox County Metropolitan Planning Commission (MPC) staff. Refer to Section 2.C for additional information on the DRB.

These design guidelines establish the minimum standards which shall be conformed to, as required by Knoxville-Knox County Chamber and MPC. They do not replace the need for conformance to any applicable federal, state, county, or local obligations or approval procedures. All structures must conform to applicable state or local building codes, zoning ordinances, or other governmental regulations to ensure the health and safety of users. If any provisions of these design guidelines are

more restrictive than the applicable codes, the provisions of the design guidelines shall apply.

Development plans for MBP are also subject to permitting through Knox County.

The operational staff of the IDB will work with each property owner to facilitate development of their site. If stumbling blocks are encountered due to specifics in the design guidelines or other County regulations, these should be brought to the attention of operational staff of the IDB to help work through them.

In all instances, do not hesitate to contact operational staff of the IDB for answers to questions or concerns. The operational staff of the IDB encourages a preliminary meeting with staff to review these guidelines.

C. PROPERTY OWNERS ASSOCIATION

All property within MBP shall be subject to the Midway Business Park Property Owner's Association Covenants which shall be recorded with the Knox County Register of Deeds.

D. GLOSSARY OF TERMS

The following definitions are applicable to the terms as they are used in the design guidelines for MBP.

- **Design Review** is a process which has been adopted by Knoxville-Knox County Chamber whereby development plans/ proposals are evaluated by the DRB for their compliance with these design guidelines.
- **Design Guidelines** are statements and graphics intended to direct the planning and development of the built environment in a particular manner or style so that the end result contributes positively to the Business Park.
- **A unified design** is where each of the individual elements, such as building orientations, building forms, materials, colors, landscaping, pavement, lighting, signs, etc., when joined together, appear as a logical and aesthetically integrated whole. The elements (of each parcel and the park) should be conceived as part of a "family," not identical in appearance but designed with similar or complementary characteristics. Some repetition of elements also contributes to a unified design, but care should be taken not to repeat entire building or landscape designs.
- **Streetscape** refers to all the elements within and adjacent to the right-of-way that contribute to the street's appearance and functionality.

- **Articulate** means to give emphasis to or distinctly mark off a particular building element. An articulated facade would be the emphasis of elements on the face of a wall—could be a change in step back, a change in material, color, etc.; anything which emphasizes that particular building face.

- **Building mass** means the building's expanse or bulk and is typically used in reference to structures of considerable size.

- **Public building face** refers to any building side which is visible from public road right-of-ways.

- **Front building face** refers to any building face which can be touched by a line drawn perpendicular to the street and/or the face(s) which contains the public entry.

- **Swales** are low lying or depressed stretches of land which carry storm water runoff. Swales are typically wide, gently sloping, and covered by grass.

- The term **setback** has been used as a prescribed distance or an area between one element and another. Within these guidelines, the term describes:

  - A **yard setback** is the minimum distance and the area measured from the property line to the interior of a parcel where buildings may be constructed.

  - A **parking setback** is the required distance and the area between the edge of parking lot pavement and the property line. Refer to Article II of the Zoning Ordinance for Knox County, Tennessee.

- A **screen** or **buffer** is intended to block undesired views and is consisting of materials effective in blocking unwanted views.

- **Caliper,** in landscape and nursery usage, is the diameter of a tree measured six inches above the ground line for up to a four inch caliper tree. The diameter is measured twelve inches above the ground line for plants which have a caliper greater than four inches.

- **Footcandle** refers to the amount of illumination on a surface at a single point. One footcandle is equal to one lumen (measurement of the amount of light energy emitted by a light source) uniformly distributed over an area of one square foot. The amount of illumination incident on a surface varies with the intensity of the source in the direction of the surface, the distance between the source and the surface, and the angle of incidence.

- The **buffer yard** is established along the property line abutting residential or agricultural property. No parking lots or structure shall be allowed within the buffer yard setback.

- **Preserved natural areas** are recorded limits within MBP which include areas deemed to be appropriate or worthy of preservation. Development is not allowed within these areas.

Section Two: Design Submission and Review

A. PERMITTING AND ZONING REQUIREMENTS

General Description

The Midway Business Park is zoned EC Employment Center. EC Employment Center zoning is intended to encourage development of business parks and other employment centers that will contribute to the future economic well-being of Knox County; to provide standards and procedures that will minimize any conflicts or adverse impacts of these developments with other properties, public roads or facilities; to provide a zoning district for use in areas meeting the locational standards for industrial parks and technology based development contained in the Knoxville-Knox County General Plan; and to provide a zoning district for business and technology park development that requires site plan review and complies with the requirements of the Farragut-Knoxville-Knox County Growth Policy Plan.

Permitted Uses

Only the following of the permitted uses listed in the EC Employment Center Zoning ordinance may be permitted in the Midway Business Park development. Where North American Industry Classification System (NAICS) codes are indicated after permitted uses, the businesses listed under that classification in the United States Office of Management and Budget North American Industry Classification System Manual, 1997 edition, and any subsequent edition, may be permitted providing all other requirements of this ordinance are fulfilled.

Construction and contracting, including:

- Building, developing and general contracting (NAICS 233).
- Heavy construction (NAICS 234).
- Special trades contractors (NAICS 235).

Manufacturing, including:

- Food manufacturing (NAICS 311), excluding: slaughter of animals and fat rendering; rice, malt and wet corn milling; soybean and other oilseed processing; fats and oil refining and blending; meat processed from carcasses; rendering and meat and poultry processing; seafood product preparation and packaging.
- Beverage and tobacco product manufacturing (NAICS 312).
- Textile mills (NAICS 313).
- Textile product mills (NAICS 314).
- Apparel manufacturing (NAICS 315).
- Leather and allied product manufacturing (NAICS 316), excluding: leather and hide tanning and finishing.
- Wood product manufacturing (NAICS 321).
- Printing and related support activities (NAICS 323).
- Pharmaceutical and medicine manufacturing (NAICS 3254), excluding: manufacturing of petrochemicals, industrial gases and ethyl alcohol; cyclic crude, intermediate, and gum and wood chemical manufacturing; synthetic rubber manufacturing; all fertilizer manufacturing and mixing; pesticide and other agricultural chemical manufacturing; explosives manufacturing; and, photographic film, paper, plate and chemical manufacturing.
- Plastics and rubber products manufacturing (NAICS 326) excluding: tire manufacturing and retreading; electroplating, plating, polishing; anodizing, and coloring; and, ammunition (except small arms) manufacturing.
- Fabricated metal product manufacturing (NAICS 332).
- Machinery manufacturing (NAICS 333).
- Computer and electronic product manufacturing (NAICS 334).
- Electrical equipment, appliance and component manufacturing (NAICS 335).
- Transportation equipment manufacturing (NAICS 336).
- Furniture and related product manufacturing (NAISC 337).
- Miscellaneous manufacturing (NAICS 339).

Wholesale trade, including:

- Wholesale trade, durable goods (NAICS 421) excluding: storage of wholesale products outside of enclosed buildings.
- Wholesale trade, non-durable goods (NAICS 422): excluding any live poultry

or livestock; and the storage of wholesale products outside of enclosed buildings.

Transportation and warehousing, including:

- Truck transportation (NAICS 484).
- Transit and ground passenger transportation (NAICS 485), excluding: school and employee bus transport.
- Pipeline transportation (NAICS 486).
- Scenic and sightseeing transportation (NAICS 487), limited only to land-based modes of transportation.
- Support activities for transportation (NAICS 488), excluding: air traffic control; other airport operations; port or harbor operations; marine cargo handling; navigational services to shipping; other support activities for water transportation; and, motor vehicle towing.
- Postal service (NAICS 491).
- Couriers and messengers (NAICS 492).
- Warehousing and storage (NAICS 493) limited to within enclosed buildings.

Information, including:

- Publishing industries (NAICS 511).
- Motion picture and sound recording industries (NAICS 512) excluding: drive-in motion picture theaters.
- Broadcasting and telecommunications (NAICS 513).
- Information services and data processing services (NAICS 514).

Finance and insurance, including:

- Monetary authorities and banks (NAICS 521).
- Credit intermediation and related activities (NAICS 522).
- Securities, commodity contracts and other financial investments (NAICS 523).
- Insurance carriers and related activities (NAICS 524).
- Funds, trusts and other financial vehicles (NAICS 525).

Real estate and rental and leasing, including:

- Real estate (NAICS 531) excluding: lessors of mini-warehouses and self-storage units.
- Rental and leasing services (NAICS 532) excluding: general rental centers; commercial air, rail, and water transportation equipment rental and leasing; construction, mining, and

forestry machinery and equipment rental and leasing.

- Lessors of other nonfinancial intangible assets, except copyrighted works (NAICS 533).

Professional, scientific and technical services (NAICS 541).

Management of companies and enterprises, including:

- Management of companies and enterprises (NAICS 551).
- Administrative and support services (NAICS 561).

Educational services (NAICS 611), excluding: elementary and secondary schools.

Health care and social assistance, including Hospitals (NAICS 622).

Other services, except public administration, including:

- Support activities for agriculture and forestry (NAICS 115).
- Support activities for mining (NAICS 213).
- Repair and maintenance (NAICS 811) excluding: general automotive repair; automotive exhaust system repair; automotive transmission repair; other automotive mechanical and electrical repair and maintenance; automotive glass replacement shops; automotive oil change and lubrication shops; car washes; and all other automotive repair and maintenance.

Public administration, including:

- Local, state and federal government offices and programs.
- Space research and technology (NAICS 927).
- National security and international affairs (NAICS 928.

Commercial telecommunications towers, consistent with the requirements of the Wireless Communications Facilities Plan (11/18/02), with any subsequent amendments, and Article 4, "Supplementary Regulations," Section 4.92, "Standards for Commercial Telecommunications Facilities," of these regulations.

As permitted in an EC Employment Center Zone development, twenty

percent (20%) of the land area within the Midway Business Park development may be set aside for retail commercial development, subject to the following conditions and requirements:

- The overall EC Employment Center Zone development must include a minimum of twenty (20) acres.
- Only the following retail commercial uses shall be permitted, provided that there shall be no sales, display or storage of merchandise outside of a fully enclosed building.
    a. Drug stores.
    b. Convenience stores, without gasoline pumps.
    c. Restaurants, without drive-through facilities.
    d. Sales of office supplies, office equipment and computers.
    e. Employment services.
    f. Hotels and motels.
    g. Accessory uses customarily incidental to any of the commercial uses listed in this section.
- The locations of commercial uses shall be integrated by means of access within the EC Employment Center Zone development.

Other uses of the same general character as those listed in this section as permitted uses and deemed appropriate by the Planning Commission.

Child day care centers, consistent with the requirements of Section 4.91, "Requirements for Child Day Care Centers and Group Day Care Homes, When Considered as Uses Permitted on Review," of these regulations.

Adult day care centers, consistent with the requirements of Section 4.98, "Requirements for Adult Day Care Centers, When Considered as Uses Permitted on Review", of these regulations.

Outdoor storage, subject to the following requirements:

- Outdoor storage shall be screened from the adjacent exterior properties and right of ways to the extent practical.
- Outdoor storage must be an accessory use to a principal use on the same site.

Landfills are prohibited.

B. DEVELOPMENT AND REVIEW PROCESS

The below guidelines shall be used as a road map for approval of potential development within the limits of the Greenheck Knoxville Campus. The IDB has the right to exempt owners/ developers from any portion or all of the below process at their discretion, with formal approval by the IDB

Site Selection Process

Step One - Choosing Midway Business Park

Review the Design Guidelines in its entirety to get a complete picture of the requirements. Will the proposed facility fit the plan and the proposed site for Midway Business Park? If so, then go to Step Two.

Step Two - Site Selection and Design

Once a site is chosen, the project's architects or engineers will review this section which outlines information the operational staff of the IDB and Metropolitan Planning Commission (MPC) staff requires for review. IDB staff will recommend a preliminary meeting with the design team to review the standards and make sure they completely understand what is expected. The project's architect or engineer should review Section 3 and make sure that the plans are in compliance with the standards.

Approval Process

Step One - DRB Review

The operational staff of the IDB may require the following process for preliminary review and approval prior to submitting the project's documents to (MPC) staff for approval.

Knoxville-Knox County Chamber Preliminary Review

The applicant should schedule a kickoff meeting with operational staff of the IDB to review the site, uses, and design intent. The applicant should be prepared to discuss preliminary development plans which should include one (1) set of the information recommended for preliminary review under the Submittals section of these requirements.

The IDB staff will make comments and recommendations and assist with scheduling a DRB meeting to review the proposed project.

Recommended Submittals (for IDP Staff Review)

It is recommended the applicant provide one (1) full set of the following plans and submittal information for preliminary operational staff of the IDB review. Submittal should include:

- Site plan showing the location of buildings, sidewalks, driveways, intersections with streets, parking areas,

screen walls and fences, yard setback requirements, buffer yards, and preserved natural areas

- Architectural plans showing general floor plans, elevations, building materials and listing floor area square footages
- Landscape plans showing proposed planting locations and any existing vegetation to be preserved if required or planned.
- Signage plans on all exterior, façade and free standing signs including information on locations, design, dimensions, colors, and lighting.
- Exterior lighting plans
- Narrative including: 1) a description of the proposed operation in enough detail to judge whether or not it is permitted under the approved Development Plan uses for MBP. This should include the extent of any noise, odor, glare, vibration, smoke, dust, gases, hazards of fire and explosion, radiation, radioactivity, electrical radiation, liquid wastes, or any other unusual performance characteristics.

Formal DRB Review

The applicant will deliver six (6) sets of required submittals to operational staff of the IDB. A DRB meeting will be planned within ten (10) working days after receipt of these submittal plans. A meeting will not be scheduled until all appropriate information is available to the DRB. At the meeting, the applicant will present their plans to the Board. The DRB will discuss the plans and the applicant will receive, via written correspondence, notification of the Board's decision and recommendations on changes the Board may require. Following this presentation, Operational staff of the IDB will issue an approval, conditional approval, or instructions regarding resubmittal. Operational staff of the IDB's approval or conditional approval letter shall be submitted as part of the MPC review.

Required Submittals

(for formal DRB and MPC reviews)

DRB requires size (6) full sets and MPC requires five (5) full sets of the following submittal information. The applicant is required to provide the following information on drawing submittals:

- Plot plan which shows the relationship of the proposed improvements to the improvements on adjacent parcels, utilities and streets.
- Survey of property clearly showing property boundaries in relation to other features
- Site plan at a scale of one inch equals forty (40) feet or less. This should show the location of buildings, sidewalks, driveways, intersections with streets, parking areas (including stall sizes and quantities), screen walls and fences, site grading and erosion control measures and utilities, yard setback requirements, buffer yards, preserved natural areas, calculated building coverage ratio, and calculated impervious surface coverage ratio.
- Architectural plans at a scale no less than one inch equals sixteen (16) feet showing elevations, all building materials, and floor plans including floor area square footages
- Landscape plans at a scale of one inch equals forty (40) feet or less that show proposed planting locations and any existing vegetation to be preserved if required or planned. Landscape plans should also include a detailed plant schedule with the plant's common and botanical name, general type of plant (i.e. evergreen, deciduous tree, flowering tree, annual flower, perennial flower, grass, etc.), minimum specified size at installation and expected size at maturity, total quantity, and symbol (if used).
- Signage plans on all exterior, façade and free standing signs including information on locations, design, dimensions, colors, and lighting.
- Exterior lighting plans including site photometrics, fixture locations and types, pole heights and colors, and descriptive data for all fixtures.
- Samples of all materials and/or paint colors used on all improvements (required by DRB, but not MPC). In lieu of

submitting material and/or paint color samples, the DRB may, at its discretion, accept an accurately colored rendering of the proposed building(s) with specific descriptions of all materials to be used.

- Narrative including: 1) a description of the proposed operation in enough detail to judge whether or not it is permitted under the approved Development Plan uses for MBP. This should include the extend of any noise, odor, glare, vibration, smoke, dust, gases, hazards of fire and explosion, radiation, radioactivity, electrical radiation, liquid wastes, or any other unusual performance characteristics; and 2) an estimate of the maximum number of employees and visitors contemplated for the business and the timing of shifts during which the employees will work.
- Information that is to be provided on the Survey, Site plan, and/or Architectural plans should include: parcel ID, address, owner, location map, zoning, north arrow and total site acreage.

Step Two - MPC Submission and Approval for Administrative Site Plans

The purpose of the administrative site plan review is to ensure that the requirements and intent of the EC Zoning Ordinance and other applicable county ordinances are met prior to the issuance of building permits. At this point in the process, the Knox County Engineering and Public Works Department and the Knox County Fire Prevention Department will conduct their initial reviews.

Administrative Review

- In administratively reviewing plans for specific sites or parcels, the staff shall approve any site plan that complies with the MBP design guidelines document, the overall MBP development plan approved by the Planning Commission, and the requirements of the Zoning Ordinance for Knox County, Tennessee and the Knoxville - Knox County Minimum Subdivision Regulations. MPC staff decisions may be appealed to the Planning Commission. Anyone aggrieved by a decision of the Planning Commission may appeal such decision to the Board of Zoning Appeals, pursuant to Article 6, “Administration, Enforcement and Interpretation”, Section 6.60, “Board of Zoning Appeals”, of these regulations.
- The Metropolitan Planning Commission shall approve, approve with conditions, or deny applications for uses on review, as described in this section and in compliance with relevant Knox County zoning and subdivision regulations.

Plans Review and Approval Process Checklist

TO BE COMPLETED BY THE APPLICANT	YES	N/A
Preliminary TDC Review		
Provide one (1) set of drawings and project narrative		
Site plan including:		
Plan scale shall be no less than 1:40		
Setbacks, yards, and preserved areas		
All easements		
Building locations		
Driveways, sidewalks, and parking areas		
Screening elements (walls, fences, berms)		
Signage plan including:		
Locations of all signs		
Signs on buildings		
Freestanding signs		
Sign Exhibit including design, dimensions, color and lighting		
Lighting plan including:		
Locations of all exterior lights		
Fixture cut sheets		
Project narrative including:		
Proposed use		
Description of proposed operational detail including extent of any noise, odor, glare, vibration, smoke, dust, gases, hazards of fire and explosion, radiation, radioactivity, electrical radiation, liquid wastes, or any other unusual performance characteristics		
An estimate of the maximum number of employees and visitors contemplated for the business and the timing of shifts during which the employees will work.		

Formal DRB Review		
Provide six (6) set of drawings and project narrative		
Existing conditions plan including:		
Plan scale shall be no less than 1:40		
Topography at maximum 2' contour intervals		
Vegetation including trees and shrubs		
Property boundary		
All easements		
Preserved Natural Areas		
Site plan including:		
Plan scale shall be no less than 1:40		
Setbacks, yards, and preserved areas		
All easements		
Building locations		
Driveways, sidewalks, and parking areas		
Screening elements (walls, fences, berms)		
Maximum lot coverage		
Impervious area ratio		
Architectural plan including:		
Plan scale shall be no less than 1:16		
Floor plate with rooms and uses		
Doors and windows		
Loading docks and service areas		
Architectural elevations including:		
Elevation scale shall be no less than 1:16		
Doors and windows		
Façade materials		
Loading docks and service areas		
Landscape plan including:		
Plan scale shall match site plan		
Existing trees to be preserved		
All easements		

	Preserved Natural Areas		
	Proposed trees, shrubs, groundcover, and lawn areas		
	Plant schedule including botanical names, common names, type of plant, installed sizes, and mature sizes		
Signage plan including:			
	Locations of all signs		
	Signs on buildings		
	Freestanding signs		
	Sign Exhibit including design, dimensions, color and lighting		
Lighting plan including:			
	Locations of all exterior lights		
	Fixture cut sheets		
	Sign Exhibit including design, dimensions, color and lighting		
Material samples including:			
	Façade materials		
	Exterior walls, fences, and railings		
	Specialty pavement such as unit pavers or colored concrete		
	Accurate renderings may be provided in lieu of samples		
Project narrative including:			
	Proposed use		
	Description of proposed operational detail including extent of any noise, odor, glare, vibration, smoke, dust, gases, hazards of fire and explosion, radiation, radioactivity, electrical radiation, liquid wastes, or any other unusual performance characteristics		
	An estimate of the maximum number of employees and visitors contemplated for the business and the timing of shifts during which the employees will work.		

MPC Submittal		
Submit completed MPC application form		
Provide required MPC submittal fee		
Provide DRB's formal response letter		
Provide five (5) sets drawings, narrative, and DRB letter		
Plot plan including:		
Plan scale shall be no less than 1:40		
Illustration of proposed improvements to the adjacent parcels, utilities, and streets.		
Existing conditions survey plan including:		
Plan scale shall be no less than 1:40		
Topography at maximum 2' contour intervals		
Vegetation including trees and shrubs		
Property boundary		
All easements		
Preserved Natural Areas		
Site plan including:		
Plan scale shall be no less than 1:40		
Setbacks, yards, and preserved areas		
All easements		
Building locations		
Driveways, sidewalks, and parking areas		
Screening elements (walls, fences, berms)		
Maximum lot coverage		
Impervious area ratio		
Architectural plan including:		
Plan scale shall be no less than 1:16		
Floor plate with rooms and uses		
Doors and windows		
Loading docks and service areas		
Landscape plan including:		
Plan scale shall match site plan		

Existing trees to be preserved		
All easements		
Preserved Natural Areas		
Proposed trees, shrubs, groundcover, and lawn areas		
Plant schedule including botanical names, common names, type of		
Signage plan including:		
Locations of all signs		
Signs on buildings		
Freestanding signs		
Sign Exhibit including design, dimensions, color and lighting		
Lighting plan including:		
Locations of all exterior lights		
Fixture cut sheets		
Sign Exhibit including design, dimensions, color and lighting		

C. DESIGN REVIEW BOARD

Operational staff of the IDB's DRB shall consist of no fewer than four (4) and no more than six (6) members. The members will include the president of Knoxville-Knox County Chamber or a designee, a licensed Architect, a registered Landscape Architect, and a licensed professional Engineer, all of whom live within Knox County. The operational staff of the IDB may also designate a professional in the construction business or a real estate developer. Once the Park is 50% occupied, an additional board member may be chosen from an operating business in the Business Park.

Each member of the Board shall serve at the pleasure of the Board of Directors of the IDB, and each such member can be removed at any time, with or without cause, by the IDB. Once 100% of the Business Park's total acreage is sold by perational staff of the IDB or its successor in interest and has been developed by a third party, then the Design Review Board may be elected by the property owners within the Business Park.

The vote of a majority of the members of the Board at a meeting shall constitute the action of the Board on any matter before it; provided, however, in no event shall a vote of less than three (3) members (either affirmative of negative and not both) constitute the act of the Board. Each Design Review Board member has the responsibility, upon recognizing the potential for the appearance of a conflict or the existence of a real conflict of interest between the member's position and the issue being decided, to declare that he has a conflict of interest on the matter of question. Any member who declares a conflict of interest may continue his involvement in the discussion of the issue but shall excuse himself from voting on the matter.

Approval of plans and improvements shall be at the sole discretion of the Design Review Board. By purchasing property in the Business Park, each Owner accepts the authority of these standards and agrees to the Design Review Board's authority.

The rationale for Board approval, conditions or denial shall be included in the minutes of the Board meeting at which decisions are made. Correspondence regarding denials to applicants shall cite the specific section of the Design Standards and Restrictive Covenants for the Business Park or other basis for denial.

Section Three: Design Guidelines

Applicants should refer to the Zoning Ordinance for Knox County, Tennessee and to the Midway Business Park (MBP) Design Guidelines, as amended from time-to-time, for specific requirements. Where there are differences in requirements, applicant should use the most stringent requirement.

A. OBJECTIVES

These design objectives guide the Park's overall plan and should be used to guide the development of individual parcels.

- Foster a unified design which supports the Midway Business Park concept and serves as a planning and design example for future business parks.
- Locate buildings and parking so that any appropriate existing vegetation is maintained and utilized as screening and buffering.
- Minimize the operational and visual intrusion of loading and storage areas by screening them and by locating them where they will be least visible and least disruptive to private properties surrounding the Business Park boundary.
- Where topographic constraints limit the effectiveness or practicality of screening exterior or rooftop elements, including mechanical units and loading docks, the developer shall make reasonable efforts to coordinate landscaping screening with adjacent property owners as an alternate to rooftop screening of mechanical equipment.
- Create an internal vehicular and pedestrian circulation system which facilitates separation of commercial and employee traffic.
- Foster superior quality in architecture and landscape design throughout the Park while emphasizing low maintenance requirements.
- Incorporate design solutions which will serve to minimize and/or mitigate the potential impact of on-site uses.

B. SITE ENVELOPE

Development shall be sited with minimal negative impact on the land and surroundings and to highlight areas of architectural or natural interest.

- Site buildings and parking areas to preserve as much of the existing vegetation as possible, utilizing it as a natural buffer or screen.
- Site development where the topography is least restrictive—requiring the least amount of site excavation.
- Orient buildings, parking, storage, and loading areas to reduce poor views, noise, and glare off-site. When this is not feasible because of the operational needs of the individual users, the operational needs shall be met and additional steps to mitigate the potential negative effects shall be required—screening, buffering, etc.

Building Setbacks

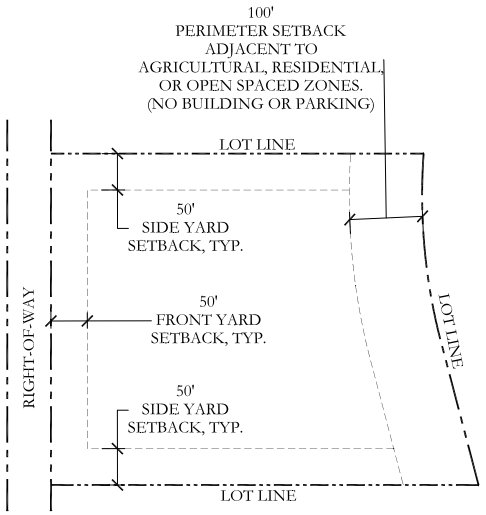
INTENT:

The setbacks required shall provide sufficient space around development to contribute to the appearance of open space and provide some separation between uses.

GUIDELINES:

REQUIRED MINIMUM SETBACKS		
Yard Location	**Minimum Setback**	**Document References**
Front	50 Feet *	3.F
Side	50 Feet *	3.F
Rear	50 Feet *	3.F
Buffer Yard Abutting Agricultural or Residential Zone	100 Feet *	3.G

** EXCEPT AS OTHERWISE INDICATED ON THE DEVELOPMENT SITE PLAN*



YARD SETBACKS
(NO BUILDING OR ACCESSORY STRUCTURES)

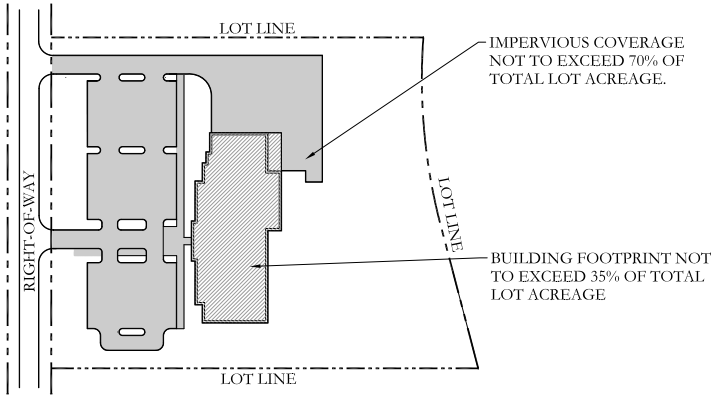
Development Density / Building Height

INTENT:

Density of development on the site shall ensure sufficient open green areas.

GUIDELINES:

DEVELOPMENT DENSITY	
Maximum Lot Coverage (divide area of a lot covered by a building by the gross area of the lot)	</= 35%
Impervious Area Ratio (divide gross area of all impervious surfaces—buildings, roads, parking lots, sidewalks, and other pavement—by the gross area of the lot)	</= 70%
Maximum Building Height (refer to the Building Height paragraph in Section F)	</= 45 Feet *subject to change



MAXIMUM LOT COVERAGE AND IMPERVIOUS AREA

C. PRESERVED NATURAL AREAS

INTENT:

The Preserved Natural Areas (PNA) are areas of significant ecological value and/or desirable to remain preserved and/or protected to the extent practical. These areas include steep slopes, riparian zones, rock outcrops, depression and other topographic characteristics. The project design will work to identify these areas within the limits of the campus for use as platted buffer areas, view shed corridors and natural areas as part of the campus character and amenities. Site grading will be developed to minimize impacts to these identified areas to the extent possible.

GUIDELINES:

- Grading will be designed to reduce impacts to the natural areas
- Natural areas identified and where grading impacts are unavoidable due to site topographic and boundary constraints will be revegetated with natural species
- The campus developer will work with adjacent property owners on increased buffer zone vegetation where encroachments occur
- Natural areas may be included in the lot coverage and impervious ratio calculations

D. GRADING, DRAINAGE, AND STORM WATER MANAGEMENT

INTENT:

Grading, drainage, and storm water management techniques shall be used which limit erosion, establish proper drainage, and accommodate development with limited impacts on the site or adjacent sites. The results of any grading, drainage, and/or storm water management shall be visually pleasing.

GUIDELINES:

- All construction shall comply with Knox County, State, and Federal requirements.
- Cut or fill slopes greater than 3:1 are discouraged. Slopes shall not exceed 2:1. Where slopes exceed 3:1, they shall be planted with ground cover, meadow seed, or other acceptable plant material as approved by the DRB and MPC staff.
- Ensure adequate drainage by maintaining to the greatest extent practical a minimum 2% slope across lawn areas and a minimum 1% slope on paved areas. In locations where driveways, walks, and parking areas cross drainage ways, culverts shall be provided to allow for natural drainage.
- Integrate grading and drainage features for each parcel with the Business Park's overall storm water management system. Storm water systems shall meet all the Knox County requirements and all the state and federal requirements. Combined storm water and sanitary sewers shall not be permitted.
- Minimize the amount of cut and fill and tree loss with site sensitive development and grading practices. Provide a gentle grade change at site boundaries between excavation on site and existing grades off site.
- Swales should be designed with a rounded bottom and with a gentle transition to existing grade. Grade all dry storm water management areas to follow natural forms and with gradual side slopes so they appear as naturally occurring land forms. Water tolerant vegetation is the encouraged ground cover for swales except in locations runoff velocities do not allow. Stone may be used to line swales as needed. Waivers to this requirement will be considered by the DRB when sustainable design methods (such as low impact design) are used. Refuse and broken concrete shall not be permitted in swales.
- Grading shall not occur within the Preserved Natural Area except for trails, sanitary wastewater utility facilities, a driveway within with 50' wide driveway easement shown on Lots 1, 11 and 12 and as otherwise noted on the concept plan.

E. UTILITIES

INTENT:

Utilities shall be located to reduce the visual intrusion of equipment and where they are least susceptible to damage from weather and/or moving vehicles.

GUIDELINES:

- All new utility lines and service connections shall be located underground. When it is not feasible to do so, dark, neutral colors shall be used on poles and fixtures and they shall be located a safe distance from traffic areas.
- All above-ground utility structures, including those attached to poles or buildings (meters, transformers, etc.), shall be approved by the DRB.
- Screen above ground utilities and/or wall-mounted utilities with architectural elements (building setbacks, walls, fences, architectural building attachments) and/or landscaping.
- Both Tennessee Valley Authority (TVA) and Knoxville Utilities Board (KUB) own utility easements throughout the Business Park. Refer to each of their own guidelines and restrictions regarding all construction and development within TVA and KUB easements.
- Septic tanks and drain fields shall not be allowed.

Questions about TVA's power line easement in the Park should be directed to the TVA's Electrical Systems Engineering Department.

F. ARCHITECTURE

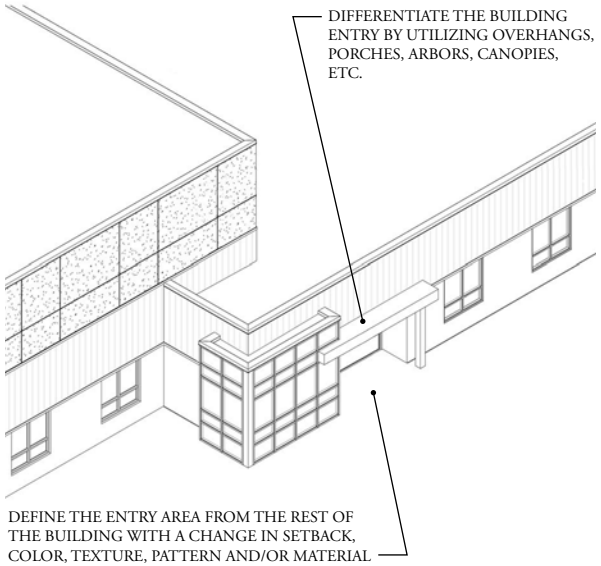
Building Entry Areas

INTENT:

The building entry shall be clearly defined and shall provide space for safe and easy movement between the indoors and the outdoors.

GUIDELINES:

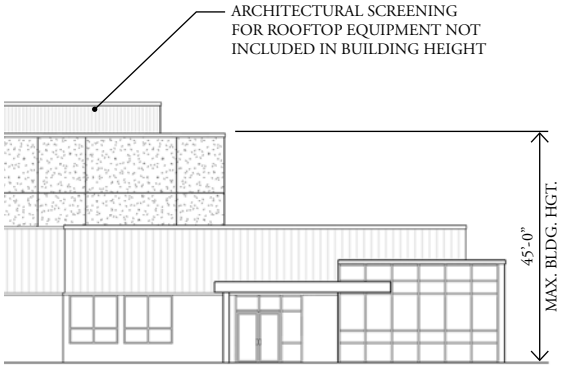
- Differentiate the entry area from the rest of the building face with a change in step back, color, texture, pattern, and/or material.
- Delineate a space outside the entry with plant materials, mounding, walls, paving, or overhead features to create a transition space between the entry and the outdoors.
- Differentiate the paving at the entry from the sidewalks or parking areas by changing the width, the color, the material, the scoring pattern, or the finish.
- Use overhead features such as building overhangs, porches, arbors, canopies, etc. to define the entry and to provide overhead protection in the transition space. Tree canopies can also provide the overhead feature in the transition area.



BUILDING ENTRY

Building Height

Building height shall be in accordance with height limitations for the applicable zone” EC zone currently limits to 45 foot max height. Planning has agreed to review future zoning revision to provide an appropriate use matrix for building height (ie office, hotel uses to 75 feet, manufacturing 45 feet..etc.)



BUILDING HEIGHT
****REFER TO THE BUILDING HEIGHT PARAGRAPH IN SECTION F***

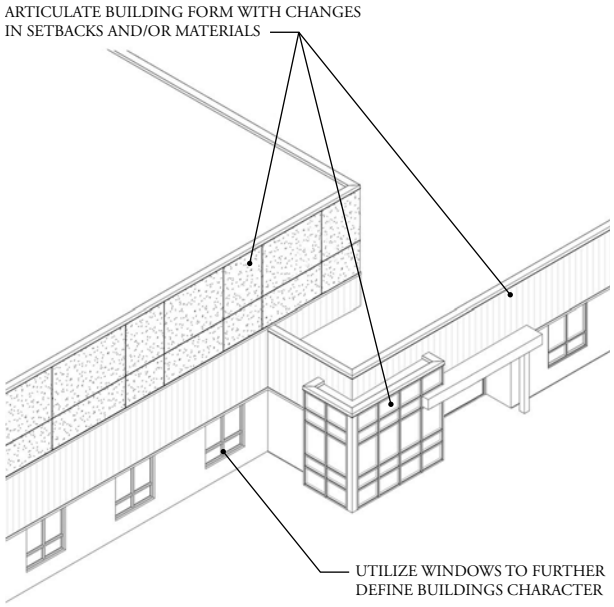
Building Form

INTENT:

The building form shall reduce the apparent mass of large buildings, give buildings visual interest, and relate buildings to the site and to other buildings within the business park.

GUIDELINES:

- When the building use allows, reflect the character of the physical setting through building forms by using low, horizontal forms when buildings are in open areas and more vertical, compact forms in wooded area.
- Articulate the building base through a change in setbacks and/or materials. Walls which extend out from buildings and into the site help unify buildings with the site.
- Utilize windows to establish a relationship between indoors and outdoors and to further define the building's character. Where windows pose security issues, secure locations and/or special glass (glass block, tinted, etc.) should be used, rather than completely removing windows from the building face.
- Provide a distinctly different architectural treatment at the ground or lower levels of buildings to reduce the building mass. Examples of ways to differentiate the base include: articulating the building base, changing materials, colors, or textures, using overhangs, and window detailing.
- Emphasize architectural elements such as roof lines, windows, and entries to help break up large building faces and blank walls into smaller identifiable parts.
- Utilize plant materials, of an effective size and scale, to visually break up large building faces and blank walls into smaller identifiable parts. Plant materials shall be used when architectural elements are not emphasized.
- Any building face which is visible from a public right-of-way shall not be blank. Architectural elements and/or landscaping of a scale which will be effective in breaking up the blank wall shall be used.
- Use some uniformity (not repetition) of building details, scale, proportions, textures, materials, colors and overall building forms throughout the corporate center.
- Treatments for breaking up building mass and façade may include landscaping elements, in addition to building elements.



BUILDING FORM

Building Materials

INTENT:

Materials shall be used to establish a look of quality and permanence and to create some visual interest in buildings, walls, and fences. Materials shall also be used to contribute to a unified park design.

GUIDELINES:

- Use materials which will age without deteriorating given a minimum level of maintenance.
- Use materials consistently throughout the park to further unify the overall park design.
- Building materials which are encouraged include: brick, stone, stone veneers, and stucco type materials. Metal is acceptable in limited amounts, however all metal buildings are unacceptable.
- Repeat the building face materials and patterns on architectural or screening walls, retaining walls, and other hardscape features.
- Use primary and secondary materials of different colors and textures to add architectural interest

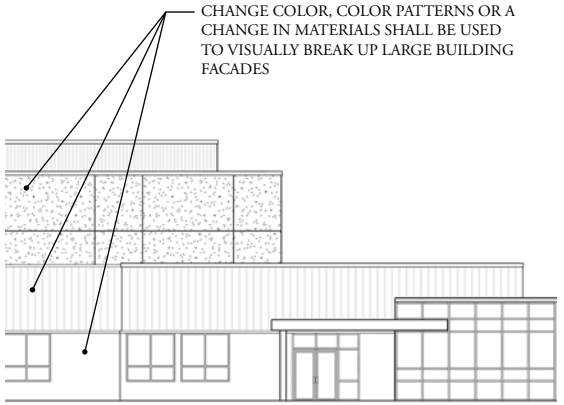
Colors

INTENT:

Colors shall be used to establish an appearance of quality, to provide visual interest to buildings, walls, and fences, and to contribute to a unified park design. Building colors shall blend with the natural landscape and shall not be in sharp contrast with other buildings in the business park.

GUIDELINES:

- Colors recommended for primary building coverage include neutral earth tones which have subdued color intensity.
- Accent colors (colors other than the primary building color) shall be used in limited amounts relative to the primary building color. Accents are encouraged, and should be used to emphasize architectural elements such as windows and doors, and/or in patterns on the building face. Buildings which are all one color are undesirable.
- A change in color, color patterns, or a change in materials shall be used to visually break up large building facades.
- Repeat the primary building color on walls which extend into the site or are used for screening. If accent colors are used on the wall they should be the same accent colors which are on the building.
- Radical use of intense or bright colors and/or color patterns is unacceptable.
- All color schemes are subject to review and approval by the DRB.



BUILDING MATERIALS

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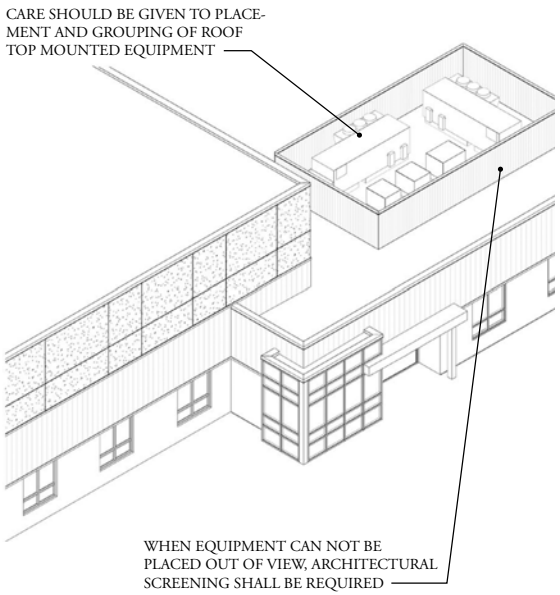

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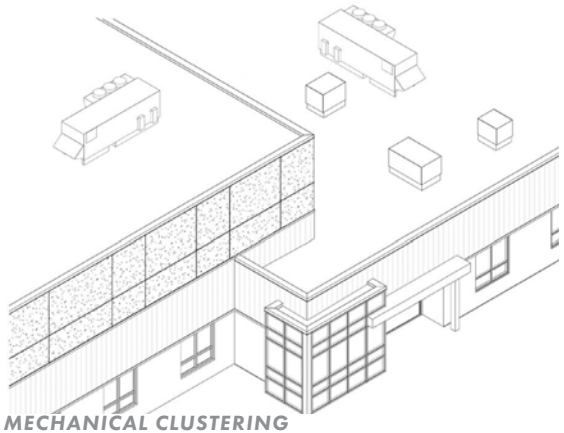


MECHANICAL CLUSTERING

Roof

INTENT:

The visibility of rooftop mechanical equipment shall be decreased so the overall appearance of the building is improved.

GUIDELINES:

- Utilize low profile rooftop equipment and locate it to the center and rear of buildings, out of view from public roads. When equipment cannot be placed out of view, architectural screening shall be required that is equal to or between one (1) and two (2) feet greater in height than the equipment to be screened.
- Rooftop equipment shall be screened with sloped roof lines, parapet walls and/or other architectural features when such equipment cannot be physically placed out of view from public roads, building entry areas, and neighborhood properties. These architectural features shall be designed to appear as part of the overall building design—repeating building forms, materials, and colors. Special consideration shall be given to appropriate and effective screening features when rooftops can be viewed from above by neighboring properties.
- Although architectural screening is required for all rooftop mounted equipment, care should be given to the placement and grouping of such equipment so as to minimize the amount of screen required.
- The DRB shall require all rooftop equipment be painted the same color when it can be proven to the DRB that the requirements for location and/or screening are physically impossible or will result in unnecessary hardship. The color shall be approved by the DRB.
- Roofs may be sloped or flat. Acceptable materials include membrane ballast, EPDM, metal (non-reflective only), TPO, green/planted and others. Roofscapes shall be organized and clean.
- Where topographic constraints limit the effectiveness or practicality of screening exterior or rooftop elements, including mechanical units and loading docks, the developer shall make reasonable efforts to coordinate landscaping screening with adjacent property owners as an alternate to rooftop screening of mechanical equipment.

Accessory Structures (Service/Storage)

INTENT:

Service/storage areas (service storage areas, loading areas, refuse containers, and all ground-mounted service equipment, chillers, condensing units, transformers, trash collection equipment, etc.) shall be located and/or screened so they are safe and not visible from building entry areas, roadways, and neighboring properties. Service/storage accessory structures shall be located / screened so they are safe and not visible from adjacent properties / right of ways.

GUIDELINES:

- Locate service/storage areas, loading, and refuse containers within the buildings. When such functions cannot be housed within the building, they shall be located where they are least visible from adjacent properties, building entry areas (both on-site and from neighboring buildings), or from roadways.
- All accessory structures shall be screened. Materials typically used for screening include earth mounding, plantings, walls, and fences—used individually or in some combination. To be effective, the height shall be sized to screen the accessory structure or items being stored, but at a minimum, plantings, walls, and fences shall be at least six (6) feet high. Proposed earth mounding shall be evaluated for effective screen height and natural appearance.
- Walls and or fences shall be used to screen service/storage areas when the service/storage area is visible from non-service areas of adjacent properties, building entrances (both on and off site) and/or from public right-of-ways.
- Service/storage and loading areas (including the pavement) shall not encroach within the required front, side, or rear yards.
- Loading areas shall be located and designed so that no part of the vehicle extends outside the property line while loading or unloading.
- Replicate the forms, colors, and materials of the primary buildings in the design of all accessory structures and screening walls.
- Locate antennas, satellite dishes, and other transmission equipment where they are least visible from all rights-of-way and building entrance areas (on and off site). Mounting the equipment to non-public building faces or to roof areas which are screened from public view is encouraged.
- Any transmission equipment which must be visible, for functional reasons, shall be painted to blend into its surroundings and shall be screened with architectural or landscape materials consistent with the building and landscape design. When safety/security is an issue, ground mounted equipment shall be secured with walls and/or fences.

Energy Conscious Design

- Where possible, energy conscious design strategies shall be employed. Energy conscious design may include, but should not be limited to, solar energy, green roofs, geothermal hvac systems, low flow plumbing fixtures, etc.

G. CIRCULATION

Pedestrian Circulation

Sidewalks and Trails

INTENT:

Pedestrian circulation shall be accommodated by a clearly identifiable path which shall be separated from vehicular circulation to the greatest extent feasible. The Midway Business Park includes a trail system and associated easements within the Business Park boundary. The trails include paved and unpaved trails. Paved trails are located along roadways in the Business Park.

GUIDELINES:

- Walkways for pedestrian circulation shall be 6' wide minimum. Concrete sidewalks are recommended.
- Provide changes of materials and striping as necessary to delineate pedestrian circulation when it does not occur on sidewalks. Unit pavers, stamped concrete, colored thermoplastic overlays are recommended.
- In parking areas provide clear paths of travel from the parking stalls to the front door. Provides sidewalks within medians and provide thermoplastic overlays when pedestrian paths intersect vehicular paths such as asphalt drive aisles.
- Additionally, in locations where the MBP paved trail easement crosses an individual lot a pedestrian connection shall be provided to connect to the MBP trail.
- Public pedestrian facilities will be located along public right of ways and located in a manner to provide the public and the developer with safe, secure and accessible pedestrian facilities. Pedestrian facilities shall be constructed as part of the overall development concept and should not be finalized until safety, security and accessibility can be adequately addressed by the developer and the IDB. Approximately 8000 LF of public pedestrian facilities are envisioned. Actual numbers will be determined by topographic, functionality and accessibility during design.

Vehicular Circulation

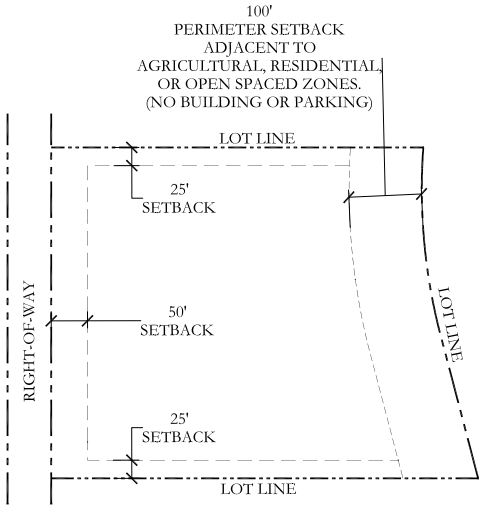
Entrance Areas

INTENT:

Entrances to both the park and the parcels shall be clearly defined, attractive, and safe. Refer to Knox County Access Control and Driveway Design Policy, 1996 or latest edition.

GUIDELINES:

- Permanent driveway pavement materials shall not include gravel or lose aggregate. Driveways, roads, walks and parking shall be paved with concrete, asphalt or pavers upon completion of construction. Temporary facilities may utilize crushed stone base, maintained and graded to eliminate tracking of mud or soil on adjacent paved areas.
- Highlight entrances (at the curb cut) with special landscaping, lighting, and identification signs. The use of special paving to further delineate the entry is encouraged. All paving should be able to support anticipated loads.
- Adequate sight distances shall be maintained at all entrances.
- Turning radii, into and within, each parcel shall be designed to accommodate the largest vehicles anticipated on each site and is subject to Knox County Engineering review and regulations.
- At entrances where the pavement width exceeds thirty-six (36) feet, landscaped medians, a minimum width of ten (10) feet, shall be provided. Total width of entrance may increase by median width.
- Provide a visitor drop-off area near visitor entrances. Special landscaping and/or a change in pavement material are encouraged in and around the drop-off zone.
- Parking along entry drives shall not be permitted.



PARKING SETBACKS

Parking Areas

INTENT:

Parking areas shall be safe, convenient, and efficient and shall have reduced negative physical and visual impacts on the site and the surroundings.

GUIDELINES:

REQUIRED MINIMUM SETBACKS		
Yard Location	**Minimum Setback**	**Document References**
Front	50 Feet *	3.G
Side	25 Feet *	3.G
Rear	25 Feet *	3.G
Buffer Yard Abutting Agricultural or Residential Zone	100 Feet *	3.H

**** EXCEPT AS OTHERWISE INDICATED ON THE DEVELOPMENT SITE PLAN***

- Parking areas shall be set back a minimum of twelve (12) feet from all building edges. This setback shall be landscaped with trees, shrubs, and ground cover, as well as pedestrian walkways.
- Locate parking where it is convenient to building entrances and, as much as possible, where it has little negative impact on natural amenities and the overall appearance of the development. Innovative design concepts to improve parking area appearance and environmental friendliness are encouraged.
- Utilize berms, landscaped medians, and islands to break large parking areas into smaller lots and to shade and screen vehicles. Where medians or islands utilize existing vegetation, they are exempt from the following requirements, but shall be reviewed for effectiveness in screening, shading, and breaking up parking areas.
- For parking located at the front of building, medians shall be used between every two (2) double aisles of parking. Minimum median width is eight (8) feet and the length shall be, at a minimum, equal to the length of the parking aisles it divides. Medians shall be planted and shall include plantings of a type and number which are effective in shading and breaking up the parking areas. Parking at the sides or rear of a building will be design to maximize flow and flexibility of both passenger vehicles and logistics equipment.
- For parking located at the front of buildings, landscaped islands shall be provided at the ends of parking bays and throughout the parking area. A minimum of one island per twelve (12) continuous parking stalls is required. Islands shall contain at least one (1) shade tree. Large islands that can accommodate several trees

are preferable to multiple smaller islands. The minimum width for islands is eight (8) feet, minimum length eighteen (18) feet.

- All parking areas shall be paved and curbed. No parking is allowed on streets or drives, or any place other than paved parking spaces. Alternate designs shall be approved by the Knox County Engineering and Public Works Department.
- The number of required parking spaces shall be determined by referring to the Zoning Ordinance for Knox County, Tennessee.
- For parking located at the front of building the minimum size of a parking space and other parking lot dimensions shall be as specified in the Zoning Ordinance for Knox County, Tennessee. Parking at the sides or rear of a building will be design to maximize flow and flexibility of both passenger vehicles and logistics equipment.

Loading Docks and Service Areas:

- It is preferred that all loading docks are located at the rear of the building; however they may be located at the side of the building as noted herein. For those sites that adjoin property within the Shackelford Estates development, loading docks may be located on the side of the building when appropriately screened from public roads, and approved by the DRB and MPC staff. Where the size and/or shape of the building and property, or some physical characteristic of the property (i.e., topography, wetlands, sinkholes, etc.), make it infeasible to locate a loading dock at the rear of a building, the loading dock may be located at the side of a building providing that landscaping is used to screen the loading dock from neighboring properties and public rights-of-way.
- All loading docks shall be set back and permanently screened, either by landscaping, berming or architectural screens, from neighboring properties and public view to minimize the effect of their appearance from neighboring building sites.
- Vehicle maneuvering for loading and unloading shall not be permitted on abutting rights-of-way.

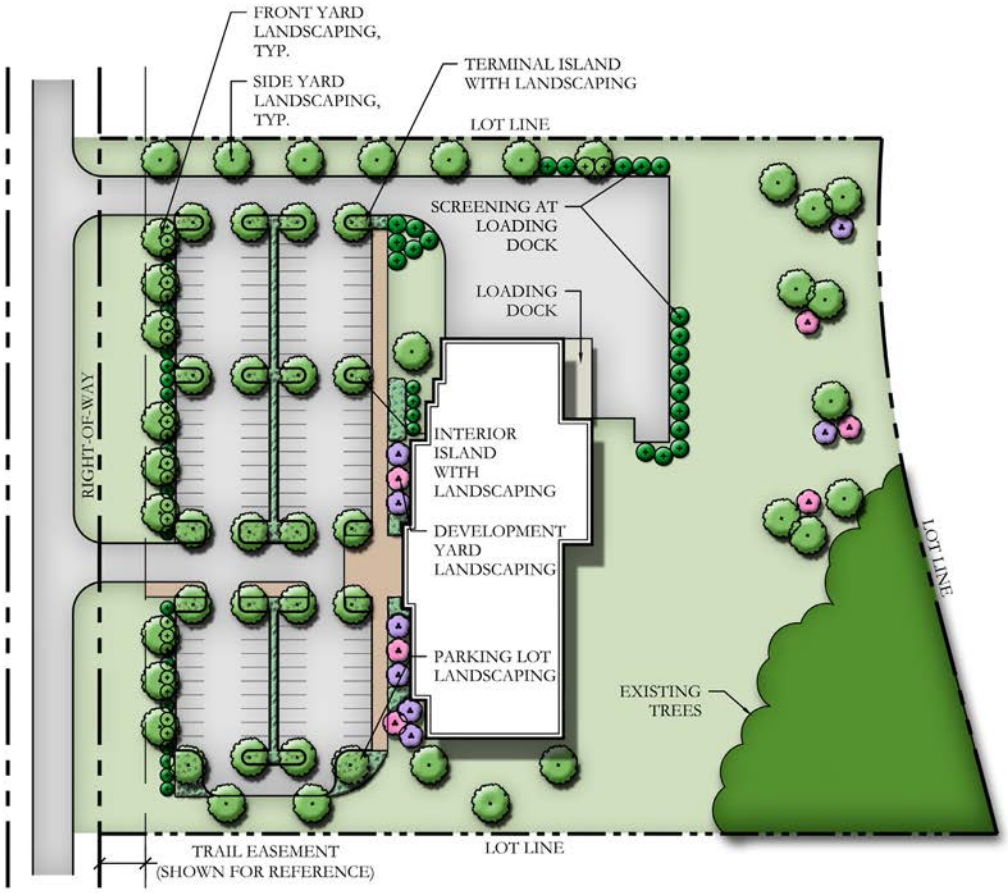
H. PLANTING

A landscaping plan shall be submitted as a part of any application for plan approval. The species lists for plant material is located in the Plant Schedule (pg. 38-40). The following minimum standards shall apply:

* For planting within TVA and KUB easements the applicant shall contact the appropriate entity for regulations and requirements.

Parking Areas

- Parking areas shall contain one thousand (1,000) square feet of landscaping for every twenty thousand (20,000) square feet, or fraction thereof, of paved parking area.
- For each five thousand (5,000) square feet of parking area, or fraction thereof, a tree shall be provided that will obtain a minimum height of forty (40) feet at maturity. Trees planted in islands may count toward this requirement.
- One (1) tree reaching a minimum 40' height at maturity shall be planted in all interior and terminal islands.
- Parking areas fronting public streets shall contain one (1) tree maturing at a minimum height of forty (40) feet per every 50 linear feet of frontage and at a minimum one (1) evergreen shrub maturing at 3' height minimum for every 20 linear feet of frontage.



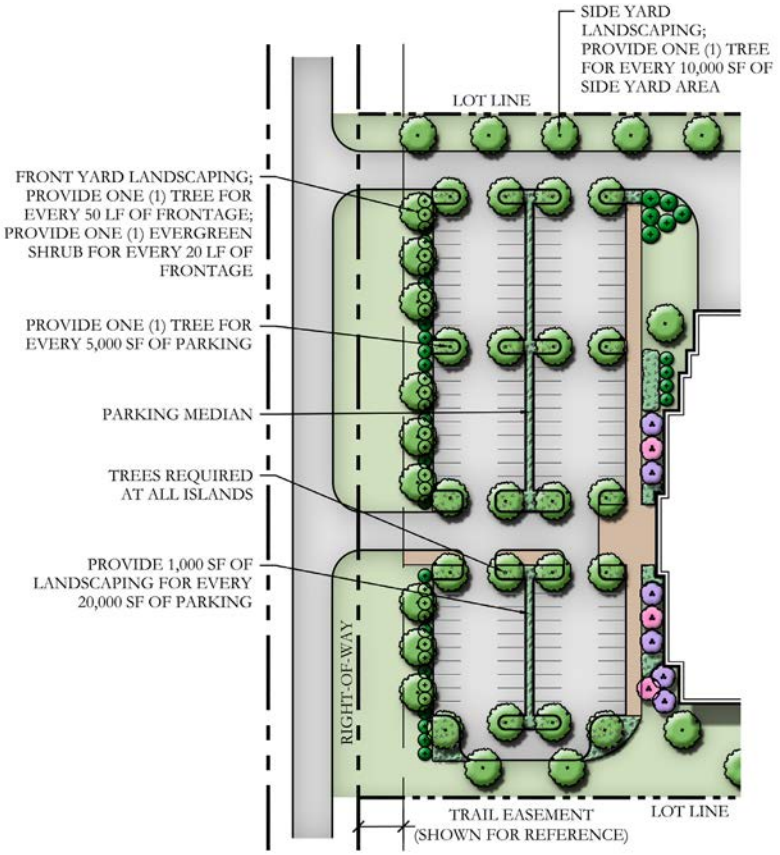
TYPICAL LANDSCAPE PLAN

Loading and Service Areas

- Loading and Service areas shall be screened with evergreen plantings at minimum eight (8) feet in height.

Refuse Collection and Outdoor Storage Areas

- Refuse collection: Screen shall be one (1) foot height higher the refuse container enclosure.
- Outdoor storage (where permitted): Screen shall be minimum six (6) feet in height.
- For these operations, adequate screening can be either natural or architectural material which obscures the line of sight from vehicles, pedestrians, and first story windows. Storage, loading and refuse container screening shall be of a material and design compatible with the overall architecture of the associated structure. The trees and shrubs shall cover a minimum of fifty (50) percent of the fence or architectural material in order to soften the screen.
- Berms, which have a minimum height of three (3) feet at any point, are strongly encouraged as a technique to screen on-site activities and to provide a buffer between those activities and adjacent properties. Berms should vary in height to provide



PARKING LOT LANDSCAPING

interest. The plan materials previously identified should be used in landscaping berms.

- Existing trees to be preserved to provide buffer and other screening shall be identified on the landscaping plan.

Buffer Yards

The **buffer yard** is established along the property line abutting residential or agricultural property.

- The following standards shall apply in buffer yards unless otherwise denoted on the Development Site Plan:

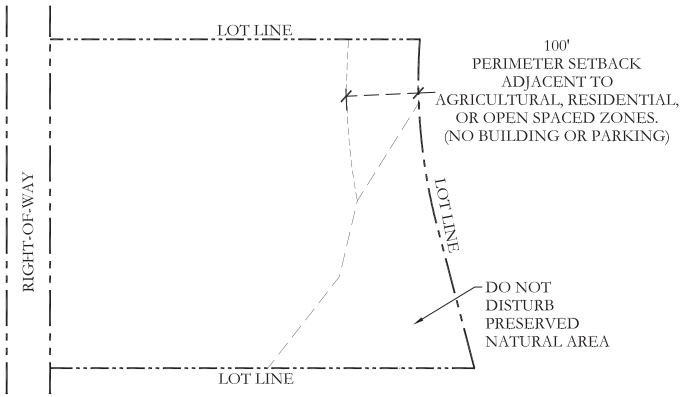
  - Minimum width: One hundred (100) feet adjacent to residential zones and agricultural and open space zones.

  - Within buffer yards, individual property owners shall be required to maintain the following minimum landscaping and screening requirements. A combination of medium and large evergreen trees and evergreen shrubs, which will provide an eighty (80) percent screen at maturity from adjoining properties to a height of forty-five (45) feet, shall be planted in the buffer yard. Existing trees and planting that act as a natural buffer shall be supplemented as needed.

Setback Yards

- Any required setback yard shall be landscaped with various sizes of native trees. Four (4) large maturing trees and four (4) medium or small maturing trees shall be provided per acre of required yard setback areas.

- Grass or other natural ground cover shall be used in the required setback yard. The majority of the area around buildings shall be landscaped with shrubs, and yards shall be maintained in such a manner as to provide a park-like setting for the Business Park.



PRESERVED NATURAL AREA AND 100′ PERIMETER SETBACK

Plant Materials

INTENT:

Existing and new plant materials shall be effective in relating development to the site, defining space, screening undesirable views, breaking up large building faces, and providing adequate shade in parking and pedestrian areas. Plant materials and landscape design shall contribute to a unified park appearance and shall be consistent with the Business Park common area landscaping.

GUIDELINES:

- Use planting designs which reinforce the overall planting scheme of the Business Park and which are well integrated with planting plans on adjoining sites.
- Use plantings which have a quality, year-round appearance around entrance areas and entry signs. Plantings should include a mix of evergreen and deciduous materials.
- Use landscaping in the foreground and background of entry signs to highlight the signs and to visually anchor them to the site.
- Maintain as many of the existing trees as possible with sensitive site lay out and building design.
- Continue the lines, forms, masses, and spaces of buildings with plant materials and planting configurations.
- Repeat planting forms, and/or materials to create a unified planting appearance.
- Mass plants, as opposed to using individual plantings, to provide visual continuity among planting areas - unless the individual is a specimen plant, intended to attract attention. Also, keep the number of different materials used in mass plantings low (but not one type only) to unify the design. A random mix of plants scattered about the site is undesirable.
- Use plantings around the base of buildings to reduce the building mass and to break up large blank walls—choose plant materials with heights, forms, and foliage which will effectively accomplish this.
- Mix shade trees and lower growing trees and shrubs on berms, medians, and islands to effectively shade and screen parking areas.
- The use of approved native plant material is strongly encouraged.
- Choose plant materials with high resistance to disease, insects, and storm damage in addition to qualities such as seasonal color, overall form, and/or ornamental qualities. A fast growth rate is also desirable in new plant material.

Obtain plant materials from businesses which are primarily a plant nursery, and use the largest caliper, height, or spread available for each plant. Minimum acceptable sizes at the time of installation are shown in the following table.

PLANT MATERIAL MINIMUM SPECIFICATIONS	
Shade Tree	3 inch caliper
Evergreen Tree	6 feet height
Ornamental Tree	8 feet height
Large Deciduous Shrubs	3 foot height, 2 foot spread
Evergreen Shrubs	18-24 inch height and spread
Low Spreading Shrubs	18 inch spread

- All planting stock and planting methods shall conform to the standards of the American Association of Nurserymen, latest edition.

All landscaping shall be properly maintained. Any tree, shrub or ground cover which does not survive shall be replaced with the same or similar planting material. The owner of the parcel, where the failing plant exists, is responsible for replacement and shall do so in a timely manner (60 days maximum). The operational staff of the IDB (or subsequent owners' association) will maintain and replace failed landscape material in public areas of the Business Park including the Park entry and within rights-of-way.

PLANT SCHEDULE- OVERALL SITE					
QTY	SYM	BOTANICAL NAME	COMMON NAME	SIZE MIN.	NOTES
STREET TREES					
	QL	*Quercus Lyrata 'Highbeam'*	Highbeam Overcup Oak	3" Cal. Min.	B & B
	QP	*Quercus phellos 'High Tower'*	Hightower Willow Oak	3" Cal. Min.	B & B
	TC	*Tilia cordata*	Little Leaf Linden	3" Cal. Min.	B & B
	UA	*Ulmus americana*	Valley Forge American Elm	3" Cal. Min.	B & B
DECIDUOUS TREES- BUFFER PLANTING					
	AR	*Acer rubrum* 'Armstrong'	Armstrong Red Maple	3" Cal. Min.	B & B
	LS	*Liquidambar styraciflua 'Rotundiloba'*	Rotundiloba Sweetgum	3" Cal. Min.	B & B
	LT	*Liriodendron tulipifera*	Tulip Poplar	3" Cal. Min.	B & B
	NS	*Nyssa sylvatica*	Black Gum	3" Cal. Min.	B & B
	PL	*Platanus occidentalis*	American Sycamore	3" Cal. Min.	B & B
UNDERSTORY TREES- BUFFER PLANTING					
	AL	*Amelanchier laevis*	Allegheny Serviceberry	8' HT.	B&B; Full Crown; Multi-Stemmed
	CC	*Cercis canadensis 'Forest Pansy'*	Forest Pansy' Redbud	8' HT.	B&B; Full Crown
	CCH	*Cercis canadensis 'Hearts of Gold'*	Hearts of Gold' Redbud	8' HT.	B&B; Full Crown
	CV	*Crataegus viridis*	Green Hawthorn	8' HT.	B&B; Full Crown
EVERGREEN TREES- BUFFER PLANTING					
	JV	*Juniperus virginiana*	Eastern Red Cedar	8' HT.	B&B; Full to Ground
	PS	*Pinus strobus*	White Pine	8' HT.	B&B; Full to Ground
MEADOW SEED MIX					
	AG	*Andropogon gerardii*	Big Bluestem		
	CL	*Chasmanthium latifolium*	River Oats		
	PV	*Panicum virgatum*	Switchgrass		
	RH	Rudbeckia hirta	Black Eyed Susan		
	SN	Sorgastrum nutans	Indangrass		

PLANT SCHEDULE- INDIVIDUAL SITE					
QTY	SYM	BOTANICAL NAME	COMMON NAME	SIZE	NOTES
DECIDUOUS TREES					
	AR	*Acer rubrum* 'Armstrong'	Armstrong Red Maple	3" Cal. Min.	B & B
	LS	*Liquidambar styraciflua 'Rotundiloba'*	Rotundiloba Sweetgum	3" Cal. Min.	B & B
	LT	*Liriodendron tulipifera*	Tulip Poplar	3" Cal. Min.	B & B
	NS	*Nyssa sylvatica*	Black Gum	3" Cal. Min.	B & B
	PL	*Platanus occidentalis*	American Sycamore	3" Cal. Min.	B & B
	QL	*Quercus Lyrata 'Highbeam'*	Highbeam Overcup Oak	3" Cal. Min.	B & B
	QP	*Quercus phellos 'High Tower'*	Hightower Willow Oak	3" Cal. Min.	B & B
	TC	*Tilia cordata*	Little Leaf Linden	3" Cal. Min.	B & B
	UA	*Ulmus americana*	Valley Forge American Elm	3" Cal. Min.	B & B
UNDERSTORY TREES					
	AL	*Amelanchier laevis*	Allegheny Serviceberry	8' HT.	B&B; Full Crown; Multi-Stemmed
	CC	*Cercis canadensis 'Forest Pansy'*	Forest Pansy' Redbud	8' HT.	B&B; Full Crown
	CCH	*Cercis canadensis 'Hearts of Gold'*	Hearts of Gold' Redbud	8' HT.	B&B; Full Crown
	CV	*Crataegus viridis*	Green Hawthorn	8' HT.	B&B; Full Crown
EVERGREEN TREES					
	IE	*Ilex x* 'Emily Bruner'	Emily Bruner Holly	8' HT.	B&B; Full to Ground
	JV	*Juniperus virginiana*	Eastern Red Cedar	8' HT.	B&B; Full to Ground
	MG	*Magnolia grandiflora*	Bracken's Brown Beauty	8' HT.	B&B; Full to Ground
	PS	*Pinus strobus*	White Pine	8' HT.	B&B; Full to Ground
DECIDUOUS SHRUBS					
	CO	*Cephlanthus occidentalis*	Common Buttonbush	3 Gal	
	CA	*Clethra alnifolia*	Hummingbird Summersweet	3 Gal	
	FG	*Fothergilli gardenii* 'Mt. Airy'	Mt Airy Fothergilla	3 Gal.	
	HQ	*Hydrangea quercifolia*	Oakleaf Hydrangea	3 Gal.	
	IV	*Ilex verticillata Nana* 'Red Sprite'	Red Sprite Winterberry	3 Gal	
	IV	*Itea virginica* 'Little Henry'	Little Henry Virginia Sweetspire	3 Gal	
	RA	*Rhus aromatica 'Gro Low'*	Dwarf Fragrant Sumac	3 Gal.	

EVERGREEN SHRUBS					
	BS	*Buxus sempervirens*	Common Boxwood	5 Gal.	
	CH	*Cephalotaxus harringtonia* 'Dukes	Duke Gardens Yew	5 Gal.	
	IG	*Ilex glabra*	Compacts Inkberry	5 Gal.	
	PL	Prunus laurocerasus 'Otto Luyken'	Otto Luyken Laurel	3 Gal.	
PERENNIALS AND GRASSES					
	AH	*Amsonia hubrechtii*	Willowleaf bluestar	1 Gal.	
	EP	*Echinacea purpurea* 'Kim's Knee High'	Kim's Knee High Coneflower	1 Gal.	
	HC	*Hypericum calcycinum*	St. Johns Wort	3 Gal	
	MC	*Muhlenbergia capillaris*	Muhly Grass	1 Gal.	
	RH	*Rudbeckia hirta*	Black-eyed Susan	1 Gal.	
	SS	*Schyzachyrium scoparium*	The Blues Little Bluestem	1 Gal.	
	HV	*Heuchera villosa*	Autumn Bride Heuchera	1 Gal.	

I. LANDSCAPE ELEMENTS

INTENT:
Landscape elements shall relate to and complement the architecture and landscape design of each parcel and shall be integrated with the park's overall landscape design.

GUIDELINES:

- Design walls and fences to be compatible with the architecture of the buildings they serve by repeating forms, materials, colors, textures, and/or patterns complementary to and consistent with the primary building. Use a consistent design in walls and fences which are within a given parcel or grouping of buildings.
- Use earth berms to provide screening (alone or in combination with plant material) and to provide visual interest in the landscape. Berm use and placement should enhance the overall Business Park design. Design and shape built landforms (berms, medians) to be gently rolling—appearing as an extension of the natural landform. Built landforms with hard edges or an erratic series of small undulations are undesirable.
- Integrate planting designs with the design of walls and fences so that each complements the other.
- Locate fenced areas to the side and/or rear of parcels. Fencing shall not be permitted between a front building face and the road rights-of-way.
- All fencing materials are subject to review for appropriateness. Chain link fence should be used for security reasons only, and should be vinyl coated in a dark color to minimize its visual impact. No barbed wire or razor wire permitted.

J. SIGNAGE

INTENT:
Signs used in the Business Park shall provide clear, logical, and consistent directional information; reinforce an orderly traffic pattern and flow; be legible from moving automobiles; and be located where time is allowed for decisions to be made for appropriate maneuvers.

- The design guidelines used in the Business Park shall be used consistently throughout the Park to provide a unified appearance. The guidelines specify standards for size, color, form, type style and type size, logo placement, type locations, message content, materials, and general sign locations for each type of sign. Business signs shall be consistent with the sign design guidelines for the Business Park.

GUIDELINES:

- All sign types shall conform in size and dimension to the Zoning Ordinance for Knox County, Tennessee and the MBP Design Guidelines, unless otherwise noted.
- Each building shall be limited to one free-standing sign of not more than one hundred (100) square feet of sign area and not exceeding six (6) feet in height. For doubled-faced signs, a maximum of fifty (50) square feet will be permitted per side. Each sign must be ground mounted with a fully enclosed base.
- Free-standing signs shall be located no closer than ten (10) feet from the street right-of-way line, or fifteen (15) feet from the edge of pavement, whichever is greater so long as the sign is not located in the street right-of-way.
- One (1) face sign will be permitted at one (1) square foot of sign area for each foot of building frontage, up to maximum of one hundred (100) square feet per building. The sign shall not extend above the parapet wall. Multi-tenant buildings may be approved for more than one (1) sign, provided that all other requirements of this section are met.
- Additional signs may be permitted if approved by both the DRB and the Planning Commission through the Use-on-Review procedure, provided that scaled drawings of the signs indicate they will not detract from the Midway Business Park development. The development plan must clearly show that because of unusual topography, building locations and relationships of development with multiple structures, additional signs are essential to

inform and direct the public.

- No sign may have flashing, intermittent or animated illumination.
- Billboards and other advertising signs are prohibited.
- Finishes should be matte or flat as opposed to glossy or reflective finishes,
- The number of colors on each sign shall be limited to three,
- The message on the sign shall be limited to a maximum of corporate name, logo, street address, and parent company, except where otherwise allowed.
- Signs may be internally illuminated or not illuminated.
- Signage shall follow as noted, however, wayfinding, directional and informational signage functionality shall not be limited by the restrictions outlined.
- Signs shall be internally illuminated through the use of Light Emitting Diode (LED) technology. Internally illuminated signs shall not be mounted on a building wall that faces a property line that abutting privately owned property beyond the boundary of the Business Park. The signs shall be designed so that when illuminated at night, only the letters and or logos of the sign are visible. This shall be accomplished by one of the following methods:
  - Channel letters where the raceways, conduits, and other electrical components are concealed from public view, or
  - Cabinet design with an opaque and non-reflective background with translucent letters and logos.
- No light shall emanate through the background, the borders, sides, or any other surface of the sign or its supporting structure.

Temporary Signs

- One construction sign and one “for sale” / “for lease” sign is permitted per parcel. Signs shall not exceed thirty-two (32) square feet.

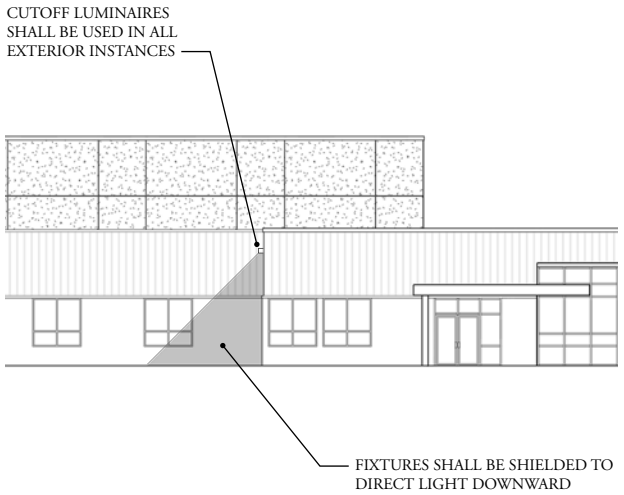
K. LIGHTING

INTENT:
Light shall be provided for the safe and efficient movement of people and vehicles with minimal light/glare off site. Lighting features shall contribute to a unified Center appearance while also distinguishing individual businesses.

GUIDELINES:

- Provide lighting, as needed for safe movement, along roadways and entry drives; throughout parking areas; at site, parcel, and building entrance areas; and along pedestrian walkways.
- Lighting intensity shall not exceed the following:
  - Parking lots – 2.5 foot candles
  - Use areas and entrances - 5 footcandles
  - Sidewalks, paths, and steps - average of 1 footcandle
  - At perimeter lot lines adjacent to privately owned agricultural or residential zoning 0.0 footcandles. Property owned by public utilities is not included in the 0.0 footcandle requirement.
  - Changes in illumination requirements will be considered when they are consistent with recommendations by the current Institute of Electrical Standards for office and industrial uses.
- Light sources shall be LED with core temperatures between 3,200 and 3,800 kelvin. Neutral colored poles of a dark color are desired. All hardware should be vandal proof and colored to match the pole and fixture color.
- Use special fixtures at building entrance areas to help establish identity for each business. All light fixtures should be chosen to be compatible with the overall Business Park lighting design. Full cut-off fixtures are required.
- Locate lights to avoid glare or excessive light spillage on adjacent sites and direct exterior lighting away from adjoining properties. Glare, whether direct or reflected, shall not be visible at any property line.
- Cut-off luminaries shall be used for all parking, road, and security lights to reduce the amount of glare and light spillage. The bulb shall be concave or flat and shall not be visible from the side.
  - Shield light sources from view of adjacent privately owned agricultural and residential properties where feasible.

- No pole light shall exceed 30 feet in height. Recommended range for the height of lights are:
  - Roadways and parking areas—25-30 feet
  - Intermediate landscape lights and Pedestrian lights—8-16 feet
  - Pathway lights—less than 4 feet
- Use building illumination and architectural lighting to articulate and highlight particular building features. Indirect lighting (no light source visible), overhead down lighting, and/or interior illumination which does not spill outside are encouraged.
- For Wall Pack units, Full cutoff fixtures shall be utilized



LIGHTING CUTOFF