

APPENDIX A: DESIGN STANDARDS

Business Park(s)

Design and Development Guidelines/Covenants:

City of Muskego

Purpose of the Guidelines

The City of Muskego recognizes the importance of quality design in preserving the community's distinctive natural setting and high quality of life; in promoting sustainable design practices; and in maintaining competitiveness within area real estate markets. The purpose of the Business Park Design and Development Standards is to assure quality site planning and building design that unifies the natural and built features of the community; conforms to local building traditions and tastes; minimizes environmental impacts; and establishes benchmarks for future design. The standards place particular emphasis on preserving and accenting the many landforms and other natural features that contribute to the community's rural imagery.

The standards are presented more as a series of 'best practices' than measurable standards; therefore, the applicability of guidelines will require interpretation on a case-by-case basis. Precise standards for such things as building height, lot dimensions, lot coverage, floor area ratio, and other measurable standards are found in the City Zoning Ordinance and are herein incorporated by reference. Any inconsistencies between the standards set forth in these guidelines, and the City's zoning or subdivision ordinance shall be superseded by the latter. Exemptions from certain of the standards may be appropriate where the spirit and intent of the guidelines can be effectively achieved through alternative means.

Environmental Conservation & Other Eco-Friendly Design Practices

The City of Muskego strongly encourages environmental conservation and other sustainable design practices in all new projects. Such practices as: sod roofs to both minimize stormwater runoff and to reduce heat gain; berming and coving of structures to achieve geo-thermal efficiencies and visual screening (provided that existing landforms aren't radically altered); sensitive siting and orientation of structures to take advantage of natural light, solar heat and power, and to provide heat and wind protection; are encouraged. The City may permit slight deviations from those standards that are purely aesthetic in nature, to accommodate such measures.

Sustainable environmental techniques that are encouraged or required may include the following:

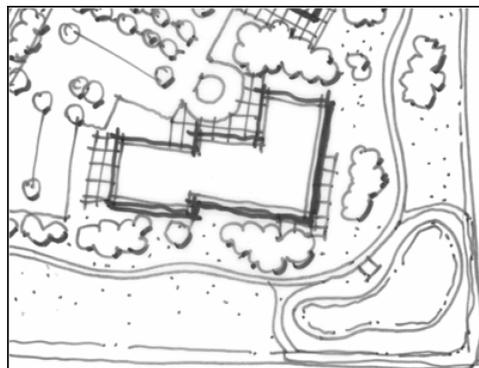
- Stormwater retention ponds
- Infiltration and bio-infiltration swales
- Pervious low use parking areas and parking lot islands
- Reductions in paved surfaces to reduce runoff
- Rooftop stormwater infiltration
- Vegetated stream buffers
- Energy efficient building materials
- Alternative/renewable 'clean' energy use
- Alternative transportation access

Site Layout & Lot Coverage

Site design should be responsive to adjacent buildings and landforms. Development shall be fitted to the natural landscape and adhere to *least invasive* development practices. Existing natural features such as ridges, slopes, tree lines, and viewsheds should be protected and serve as the major organizing elements of the design plan. Site prep work such as grading, excavation, filling, and contouring should be minimized and all unnecessary disturbance to existing vegetation and wooded areas should be avoided. Special care shall be given to relating proposed buildings to other structures, both existing and planned. Special attention shall be given to preserving large areas of open space, and assembling smaller fragments of open space into larger natural corridors and preserves. Every effort should be made to reduce viewshed encroachment and stormwater runoff. Energy conservation measures, as well as alternative energy and transportation use will be given special consideration in plan review. Building footprints, parking areas, and other hardscape features should cover no more than **60%** of any development site per the zoning ordinance. In addition, land disturbance shall not extend beyond **75'** from the perimeter of all buildings. All sites should provide pedestrian and bicycle access to adjacent public rights-of-way. All on-site access roads shall be separated from parking areas by a raised walkway, planting area or combination thereof.



- Unified natural and built features
- Preserved natural features
- Preserved and enhanced natural corridors
- Distinct outdoor spaces
- Irregular and organic shaped retention ponds
- Incorporated existing natural features



- Site features organized by natural features
- Visitor parking near front or side
- Employee parking near rear or side



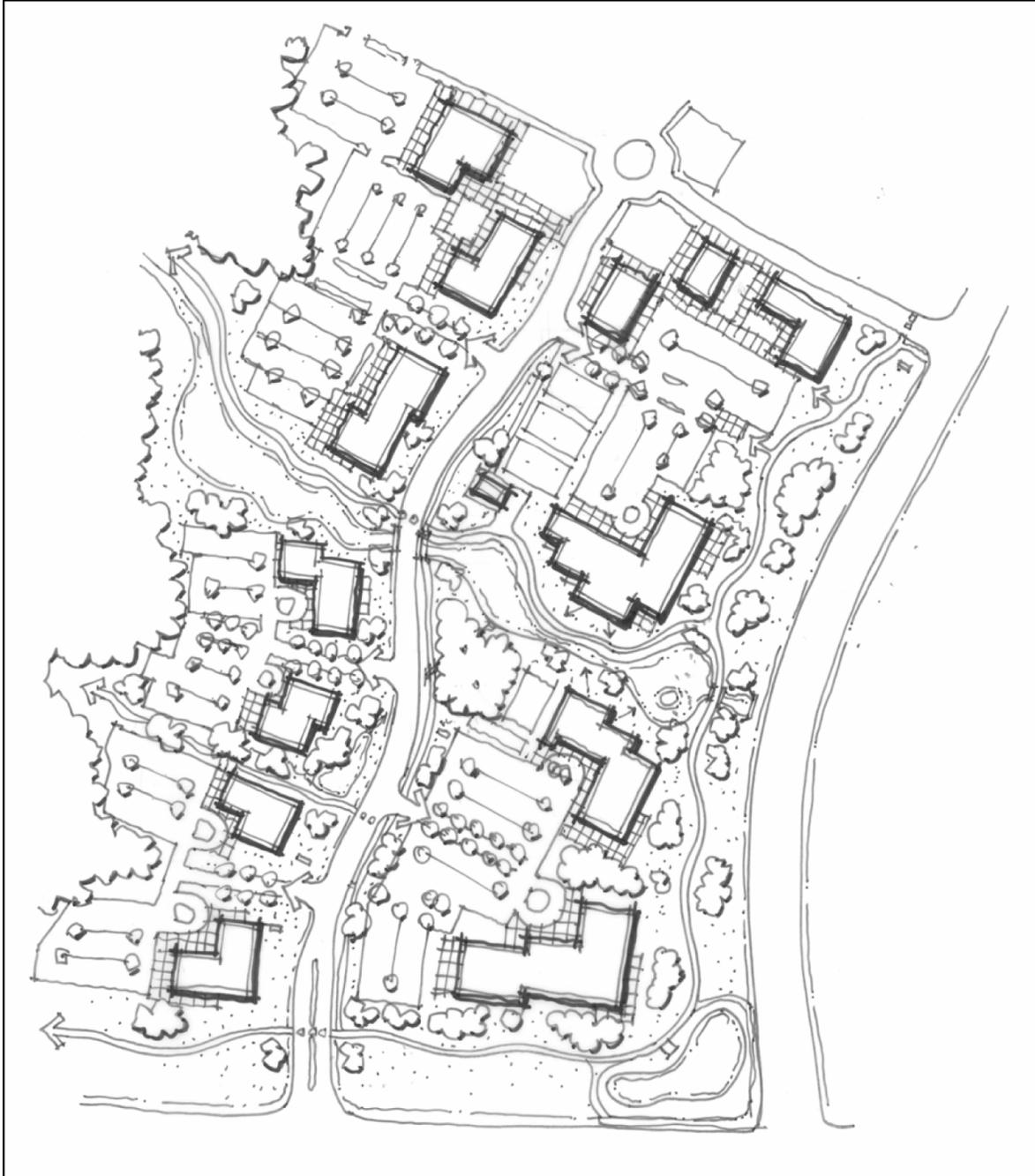
- Preserved open space
- Shared outdoor recreation areas
- Distinct outdoor spaces



- Pedestrian and bicycle access to adjacent R.O.W.
- High design standards for high visibility sites

Stormwater Graphic

Hypothetical Business Park: Key Design Elements



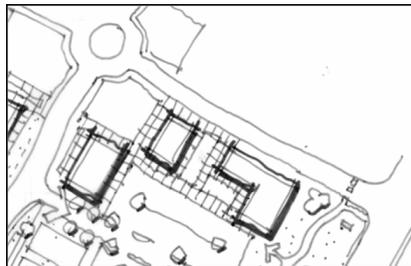
- Pedestrian and bicycle access to adjacent R.O.W.
- Distinct building groups
- Shared entry drives
- Distinct outdoor spaces
- Retail complex at entry to business park
- Organized campus of common spaces and individual sites
- Connections to natural corridors and trail systems
- Pedestrian and bicycle trail system

Building arrangement, orientation, and massing

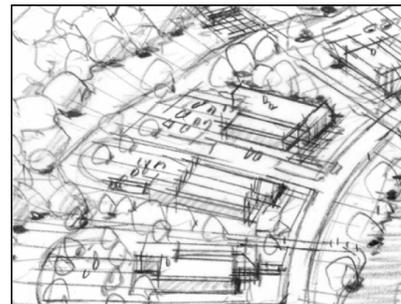
Individual structures within the business park should not be designed or sited in isolation, but rather as part of distinct building groups that exhibit a general similarity of scale, orientation and proportion. All visible building elevations (sides), especially those with direct street frontage, should be embellished with multiple windows, clearly marked entrances, and variations (protrusions and recessions) in the façade surface, strongly defined roof lines and window/door openings, landscaping, and the use of multiple building materials. Rectangular, horizontal, and asymmetrical building shapes are generally favored over vertical structures, rounded building shapes, and those that exhibit a regularity or lack of differentiation in form, materials, and details.

Building heights shall not exceed the limitations set forth in the zoning ordinance. As a general rule, taller structures shall be placed toward the interior of the site, and stepped back from the street.

The City encourages the use of shared parking and outdoor recreational areas, and special consideration will be afforded plans that attempt to accommodate them. Buildings that attempt to utilize solar heat/power, distributed energy, and/or co-generation will also be given special allowances as to building orientation, surface materials, and appurtenances. Wherever possible, buildings should be grouped or sited with other buildings and landscape features to create distinct outdoor spaces. Special care will be given to the protection of views and solar access. No building should exceed the square footage limitations or floor area ratio requirements prescribed in the Zoning Ordinance. Building setbacks should also adhere to those prescribed in the zoning ordinance.



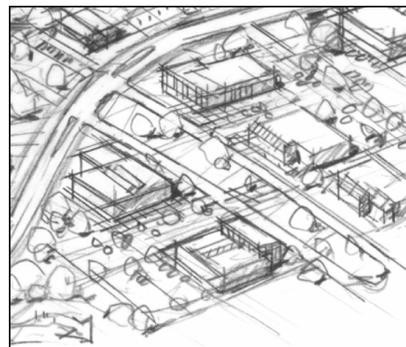
- Distinct building groups
- Retail complex at entry to business park



- Shared entry drives
- Shared parking areas
- Building fronts exposed to view
- Service and parking areas in less visible portions of sites

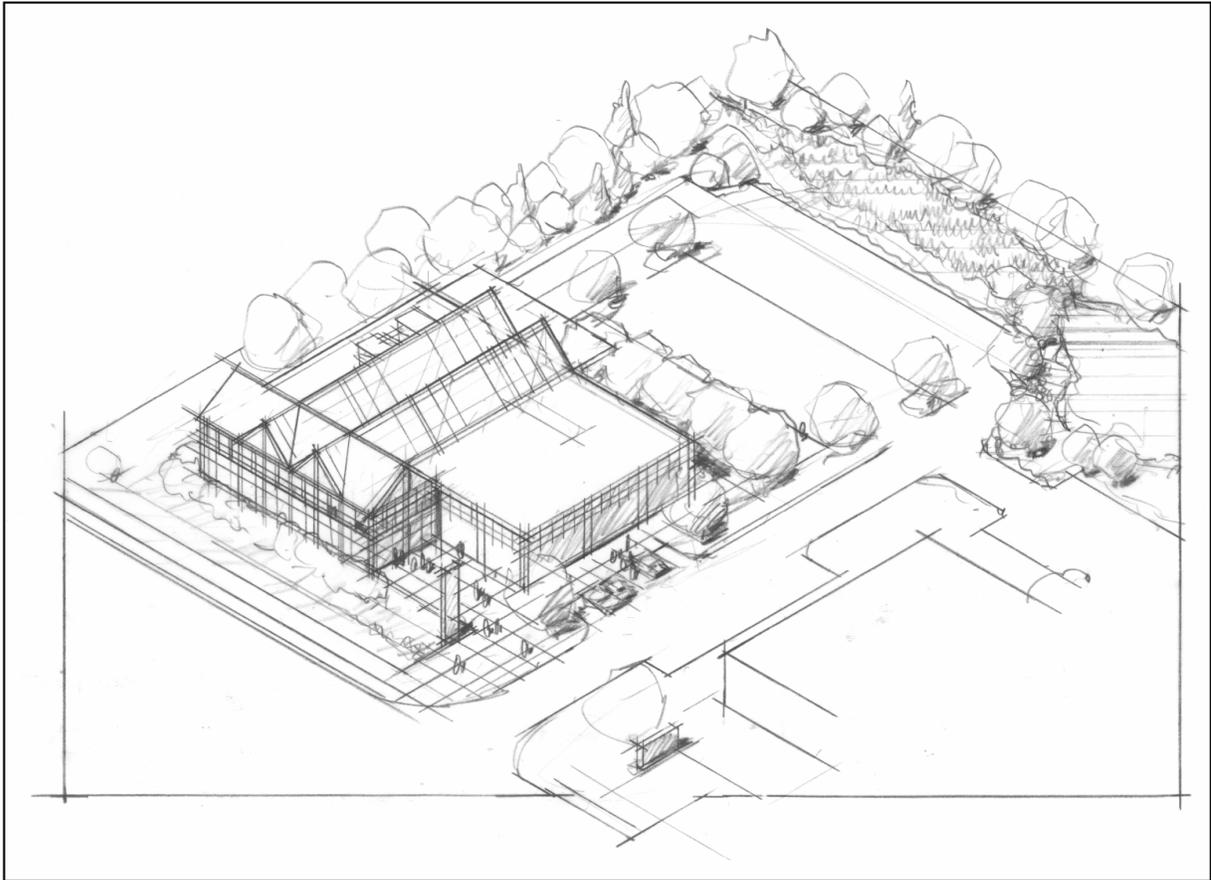


- High design standards for high visibility sites
- Building fronts exposed to view
- Irregular and organic shaped retention ponds surrounded by natural vegetation



- Distinct building groups
- Distinct outdoor spaces
- Small parking lot configurations

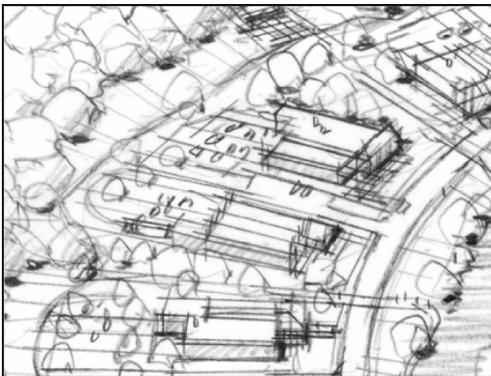
Conceptual Site Layout



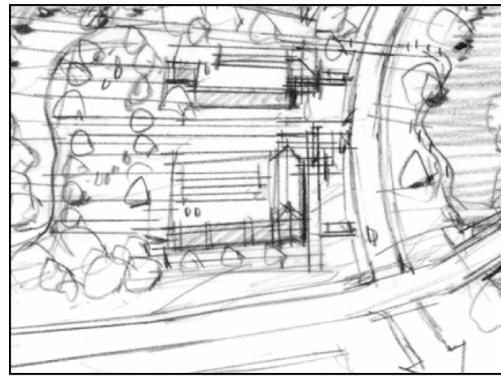
- Front office distinguished from production/warehousing
- Minimized impervious surfaces
- Building face to street
- Horizontal and asymmetrical building shapes
- Special site design allowances for alternative energy uses
- Service and parking areas in less visible portions of sites
- Strongly defined building bases and rooflines
- Massing of larger structures broken down
- Utilize structural components as design elements
- Relieve appearance of large walls with variations of façade treatment
- Limited exterior surface materials
- Landscape screens undesirable building and site areas
- Diverse mix of compatible landscape materials
- Berms in parking and loading areas
- Landscaping within parking areas and at perimeters
- Screened building appurtenances
- Screened ground mounted equipment
- Solar devices exempt from screening requirements
- Small parking lot configurations
- Visitor parking near front or side
- Employee parking near rear or side
- Storage areas indoor
- Ground or wall mounted signs
- Organic and informal landscaping

Entryway and View-Terminating Sites

Buildings and sites with the greatest overall visibility will be held to the highest standards of design. Such buildings would include those near the entrances of the Business Park (i.e. monument buildings), structures that close views within the park (generally those that are directionally on-line with streets and view corridors); corner buildings; building that occupy high points or clearings within the park; and those that encroach upon a viewshed as identified in the *City of Muskego Conservation Plan*. Special care must be taken to either camouflage or accent the most visually prominent surfaces of these buildings depending upon the nature of the exposed activity and whether the site lines are internal to the business park or extend beyond its boundaries. For example, front facades that are visually prominent within or just outside the park (e.g. entryway buildings, corner buildings, and those that close views within the park), should be accentuated through architectural treatments, lighting, and landscaping, while *all* building surfaces that are potentially seen from *outside* the park should be camouflaged to the extent practicable. The fronts of buildings will generally require less screening than the sides and backs of buildings. In general, building fronts should be exposed to view and highlighted except where visible from outside the park. In all cases, loading, storage, and parking areas should be kept away from the most visible portions of the site, and otherwise screened from view.



- Shared entry drives
- Shared parking areas
- Building fronts exposed to view
- Service and parking areas in less visible portions of sites



- High design standards for high visibility sites

Architecture

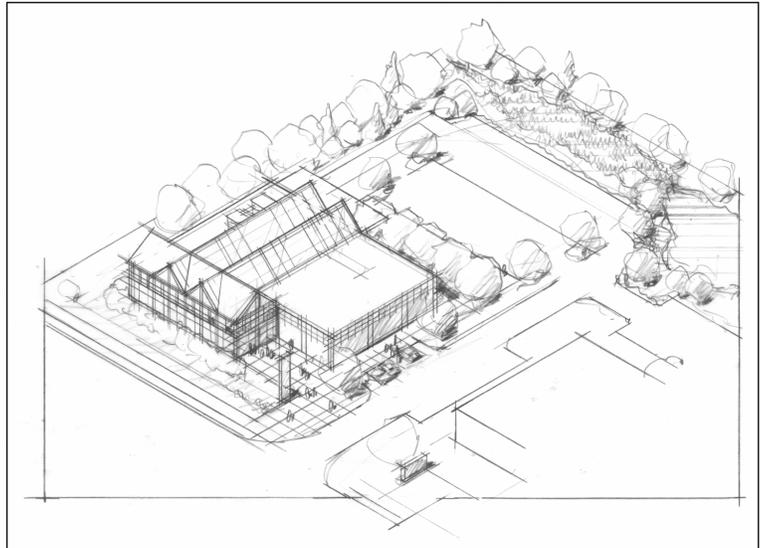
Buildings should express the structure's main use but avoid the outward appearance of spartan or utilitarian design. All sides of buildings should be designed with a similar attention to detail. Franchise architecture shall be subdued and be relational in scale, roofline, color, and form to nearby buildings. Strip centers and buildings consisting predominantly of prefabricated components are discouraged.

Simple shapes that reflect the nature and variety of interior functions are preferred. Front offices of buildings designed primarily for light manufacturing, assembly, or warehousing should be clearly expressed on the exterior through changes of materials, surface texture, color, window dimensions or through protrusions/recessions in the façade surface. Building bases and rooflines should be strongly defined and contrasted from other façade elements. The massing of large structures should be broken down into smaller volumes and divided by piers, bays, banks of windows, and changes in roof shape or roof-line. Major structural components such as piers, bays, and roof trusses may be used as exterior design elements. All visible sides of a building including all office, plant, and warehouse enclosures, should exhibit a unified architectural treatment. Long blank walls, unrelieved with window/door openings, structural bays, changes of materials, texture and other variations in the façade surface are discouraged along with 'curtain wall' office construction. Where windows on side/rear elevations are not practical for security or other reasons, clearstory windows should be used to provide interior light and exterior decoration.

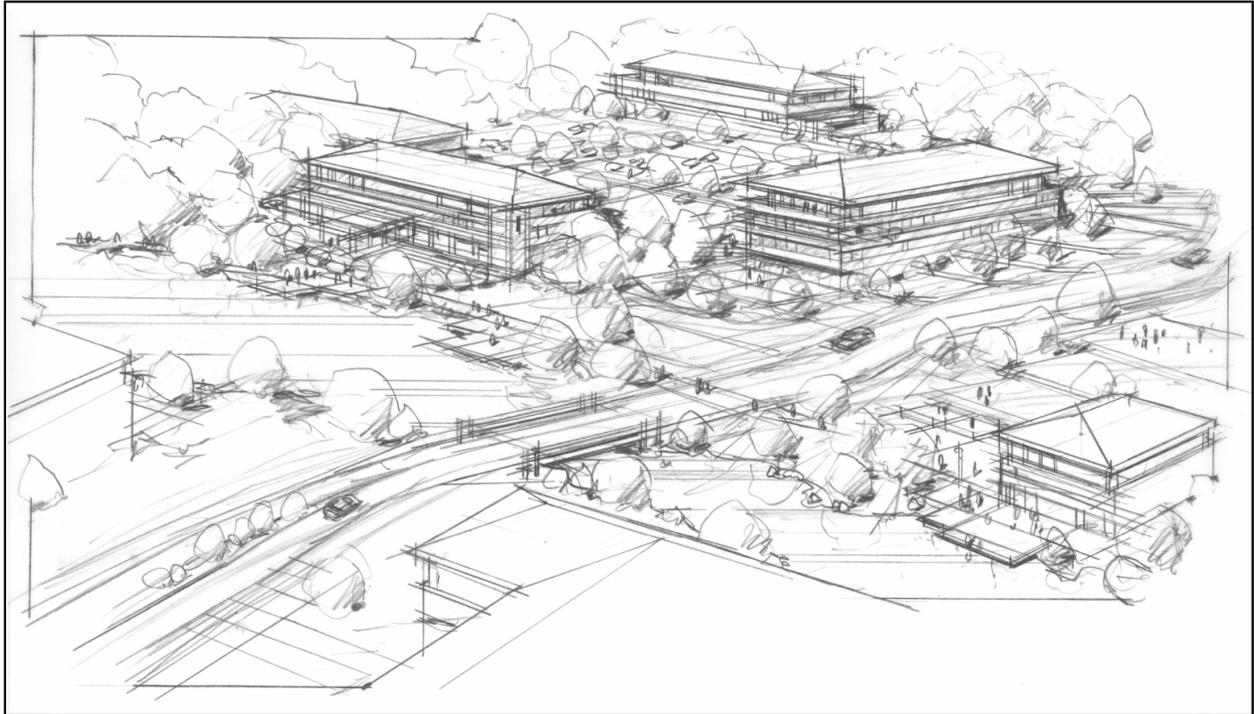
Special consideration will be given to developments that utilize solar, distributed energy, and co-generation (combined heat and power) and other sustainable design/alternative energy techniques. Buildings in the business park should not exceed the height and floor area limitations set forth in the Zoning Ordinance.

Building Materials

Exterior surfaces may include brick, stone, wood, concrete, glass or decorative architectural metals. Examples include face brick, smooth or textured precast or poured concrete panels; cut stone; textured and/or colored metal panels and trim; and clear or lightly tinted glass. Architectural block, wood siding, reflective glass, corrugated metal panels, and synthetic materials, are prohibited. The front and side-walls of all structures facing a street should consist mostly of decorative masonry or other decorative material.



Office Business Park: Design Character and Key Elements



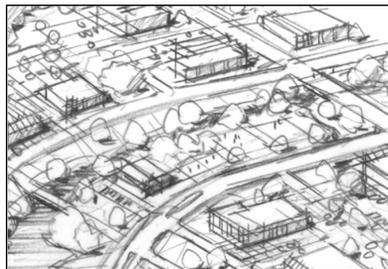
- Site features organized by natural features
- Unified natural and built features
- Preserved natural features
- Preserved open space
- Preserved and enhanced natural corridors
- Distinct building groups
- Shared parking areas
- Shared outdoor recreation areas
- Protection of views
- Protection of solar access
- Building fronts exposed to view
- Service and parking areas in less visible portions of sites
- Irregular and organic shaped retention ponds
- Utilities located underground
- Landscaping unifies adjacent building sites
- Organized campus of common spaces and individual sites
- Connections to natural corridors and trail systems
- Minimized impervious surfaces
- Horizontal and asymmetrical building shapes
- Strongly defined building bases and rooflines
- Maximum building height: Three-stories
- Select exterior surface materials
- Landscape screens undesirable building and site areas
- Diverse mix of compatible landscape materials
- Landscaping within parking areas and at perimeters
- Ground or wall mounted signs
- Organic and informal landscaping

Landscaping

Site plans should conform to the natural landscape and incorporate existing landscape features. The landscape plan should also seek to unify adjacent building sites and public areas, and screen side or ‘back-lot’ activities such as parking, loading, service and storage. Special care should also be taken to create attractive transitions between the ‘built’ and natural landscape features of the site and adjacent sites. Visually prominent sites such as park entrances, fixed-view sites, and street corners should be given special emphasis in both building and landscape design. Landscaping should exhibit organic and informal qualities rather than appearing overly manicured, formal, or ornamental. Groups of trees and understory shrubs should be used to frame major façade elements such as entrances, banks of windows, and pedestrian areas; or to screen blank walls, parking and loading areas, and storage yards. A mix of hearty, indigenous landscape materials that provide variation in height, color, texture, density, and drought/disease resistance, should be used.

The landscape plan should strive to capture as much stormwater runoff on-site as possible. Rain gardens, sod roofs, and infiltration basins are encouraged for this purpose. Retention ponds should offer amenity value and appear irregular and organic in shape. Berms may be used to screen parking and loading areas, and to provide visual separation between the natural and built elements of the park provided that they exhibit a natural profile and contour. All setbacks and planting strips should adhere to the standards set forth in the City’s zoning ordinance. Trees shall be required at a ratio of no less than one per each **500** square feet of landscape area along the building perimeter. Landscaping is also required within parking areas and along parking lot perimeters (see Parking below).

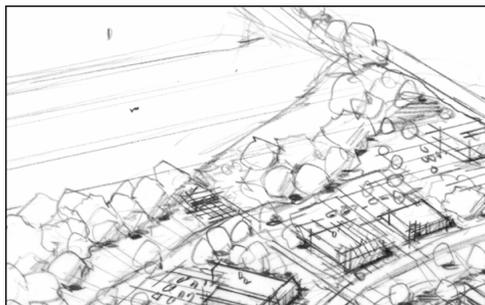
All landscape plans and planting materials shall comport with the City’s Forestry Plan, and be approved be reviewed and approved by the City Forester.



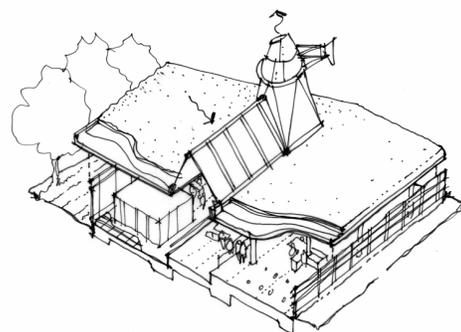
- Preserved open space
- Pedestrian and bicycle access to adjacent R.O.W.
- Shared outdoor recreation areas



- Unified natural and built features
- Preserved natural features
- Preserved and enhanced natural corridors
- Distinct outdoor spaces
- Irregular and organic shaped retention ponds
- Incorporated existing natural features



- Preserved vegetation
- Distinct outdoor spaces
- Landscaping unifies adjacent building sites
- Connections to natural corridors and trail systems



Signs

All commercial signs should be ground or wall mounted. Internally lit signs should be constructed of high quality, durable materials with a low degree of transparency and radiance. They should compliment the architecture of the building through a related sense of proportion, detail, color, and use of materials. Wall signs will not be permitted to extend beyond the roofline. Roof mounted signs, pole signs, and all forms of product advertising are not permitted. Window signs consisting of etched lettering on glass may be permitted at the main entrance to the building in addition to the main sign. Temporary signs, not to include movable letter boards, may be permitted on a temporary basis with the approval of the Planning Commission Sign content may include the name and logo of the enterprise only.

All directional and parking control signs should be unobtrusive and consistent in format. Sign content should be restricted to the minimum necessary to communicate essential information.

Wayfinding signs, if used, should be strategically placed at major community entries and at major “decision-points” in the road network. They should also use a consistent color/symbol palette.

Utilities

All utilities shall be located underground. All visible building appurtenances, including roof-mounted equipment should be screened from view. Such equipment includes anything associated with power generation and transmission or HVAC units. Rooftop equipment should be screened with parapet walls or individual shelters. Ground mounted equipment should be screened either with dense landscaping, opaque fencing, or walls and shelters that complement the architecture of the building. Rooftop solar devices are exempt from this requirement except where they may result in excessive glare or the obstruction of views.

All rooftop radio, TV, cellular, and microwave towers and antennas should comply with the stealth requirements of the City’s Wireless Facilities Ordinance.

Lighting

Exterior lighting should be subdued to avoid light penetration to surrounding neighborhoods, and to preserve Muskego’s night sky. Lighted areas should be limited to primary building access points only. Except for minor accent lighting near major entrances and prominent architectural features, buildings should be darkened in the evenings to avoid ‘glowing’. All exterior lighting, including the lighting of signs, shall consist of indirect or hidden light sources. Only cutoff light fixtures should be used to avoid light spillage. Wall mounted security lighting may be used only in service areas where direct light and glare is contained within the service area. Exterior lighting should consist of high-pressure sodium lights only.

Parking

The City discourages large, oversized parking lots, and encourages the shared use of parking facilities wherever possible. Expansive parking lots along the street-front are especially discouraged. It is recommended that parking areas be broken up into smaller pads and segregated by use (i.e. employee or visitor). Visitor parking should be configured on small lots and located near the front or sides of buildings. Larger employee and service lots should be located toward the rear of buildings and screened from view. All parking areas, including employee parking, should feature landscaping along the



- Shared entry drives
- Shared parking areas
- Building fronts exposed to view
- Service and parking areas in less visible portions of sites

perimeter and on planting islands arranged within the lots. (A general rule of thumb is one tree island for each linear row of ten parking spaces.) The extent of landscaping should be in proportion to the visibility of the lot from nearby streets, buildings, and natural areas. Generally visitor lots should receive the greatest amount of design treatment due to their greater visibility and use. Tree islands should comply with the dimensional requirements of the zoning ordinance and be planted with canopy trees for shade and vertical dimension. All parking surfaces shall consist of durable, all weather materials.

Loading Areas

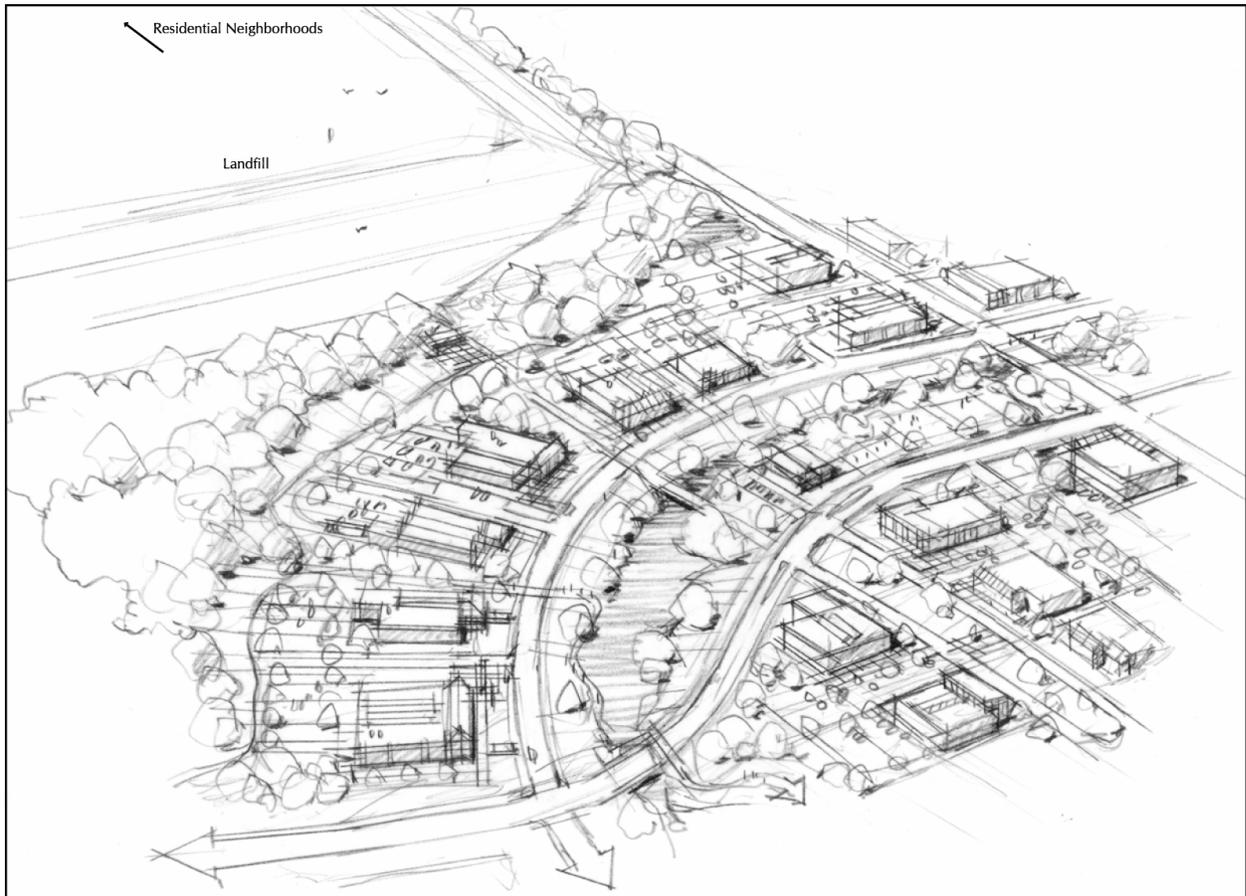
Loading and service areas shall be located on the sides of buildings least open to view from public rights-of-way, adjacent buildings, and view corridors. These areas shall be further screened by dense landscaping and by walls and opaque fences that complement the architecture of the building.

Storage Areas

All storage areas shall be indoors and fully enclosed. Freestanding storage structures shall mimic the design of the main structure and observe all architectural guidelines described above. Outdoor storage of materials and equipment is prohibited.

All trash receptacles shall be placed to the rear of the site and screened by masonry walls. Opaque fencing may be used for gates only. All enclosures should match the color and materials of the primary building.

Production-oriented Business Park: Key Design Elements



- Unified natural and built features
- Preserved vegetation
- Preserved open space
- Pedestrian and bicycle access to adjacent R.O.W.
- Distinct building groups
- Distinct outdoor spaces
- Building fronts exposed to view
- Irregular and organic shaped retention ponds
- Utilities located underground
- Landscaping unifies adjacent building sites
- Organized campus of common spaces and individual sites
- Connections to natural corridors and trail systems
- Pedestrian and bicycle trail system