

TOWNHOUSE DESIGN MANUAL

I. SITE PLANNING

Streetscape - The transition from public to private spaces

A. The transition from a pedestrian oriented streetscape to multi-story buildings shall emphasize pedestrian scale architectural elements such as porches, plantings of varying heights, and use pedestrian oriented entries, courts, and lighting. It is possible to make the transition to the site, building and individual unit in many different physical ways. For example, a sidewalk could lead through a gate to a private yard and then to a porch before reaching the front door of the townhouse. The most successful solution will consist of a combination of the above suggested symbolic definers or other comparable mechanisms.

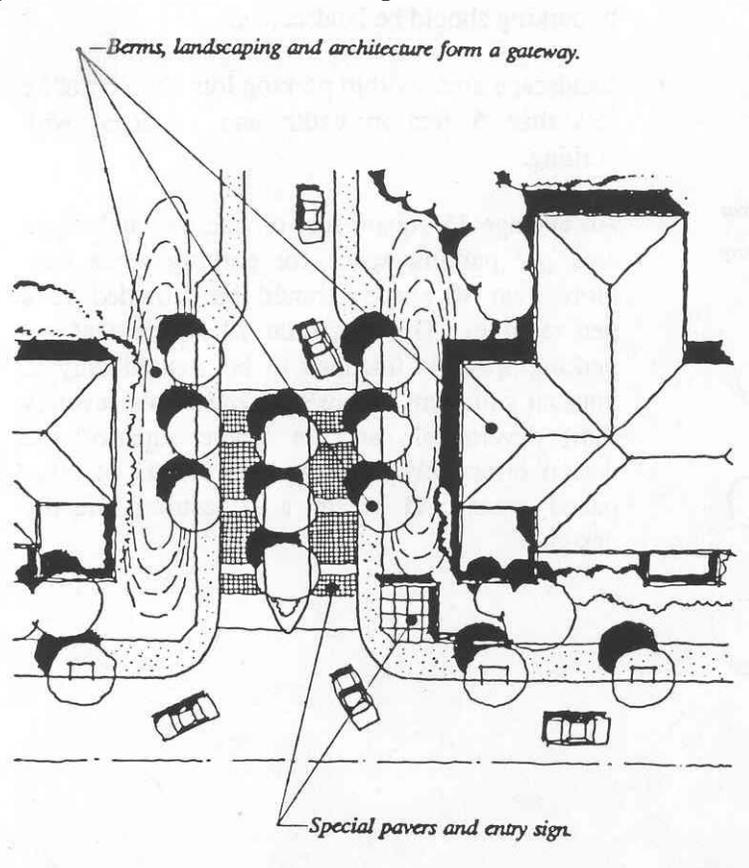


Fig. 1: Project entry provides an immediate sense of high quality design.

B. Provide a clearly defined building or courtyard entry from the primary street.

1. Use distinctive architectural elements and materials to indicate the entry such as a change in paving material, low wall, steps, trellis, or arbor.
2. Define the transition space from the sidewalk to the entry with a terrace, plaza, or landscaped area.
3. Consider turning the end unit (or pair of units) to face the public street, see Figure 20.

Natural Environment – Retain natural site amenities

C. Incorporate existing healthy and attractive vegetation into project design by locating buildings to maximize significant tree retention on slopes, retain tree stands, and minimize disturbance of sensitive areas. Retaining large stature trees and tree stands on site very significantly improves the integration of new developments into Tukwila's mature neighborhoods.



Fig. 2: Site buildings and roads to retain mature trees.

D. Landform grading should be used when feasible to reflect the natural topography and retain mature trees.

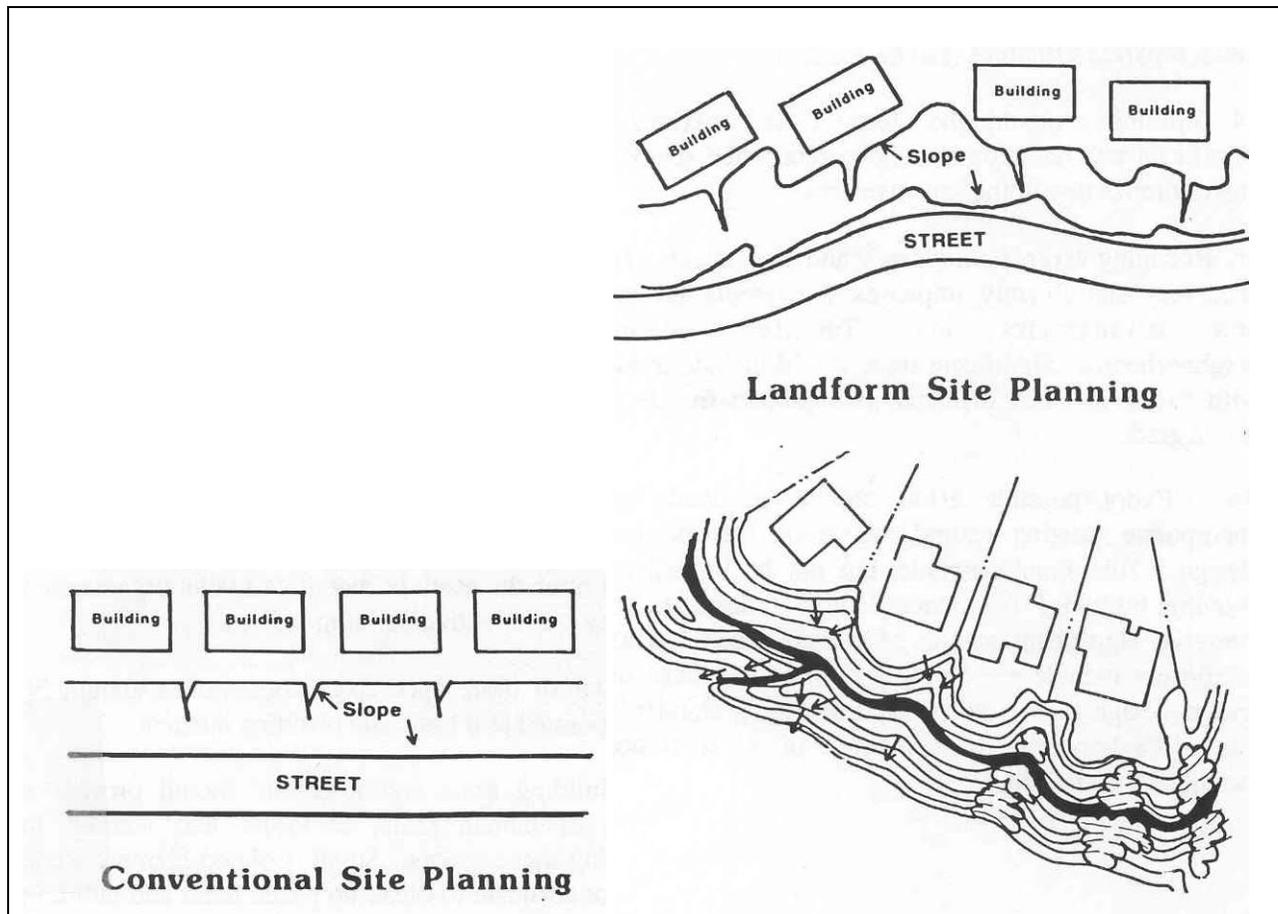


Fig. 3: Comparison of conventional and landform site grading.

E. Site coverage on slopes should be minimized to reduce visual impact. Site coverage limitations are not as significant on flat sites where lower buildings may be preferable to maximize architectural harmony with nearby structures and the streetscape.

F. Site design should be integrated with the neighborhood. Project design integration should include coordination of circulation, landscaping, recreation spaces, and building location with the surrounding area. A visual distinction using landform, landscaping, or materials may separate a project from the general neighborhood. However, high "fortress" walls should be avoided and buildings should not turn their backs to the street.

Circulation – Pedestrian

G. A comprehensive system of pedestrian sidewalks should link all building/unit entries, parking lots, recreation areas and the project entries with the area-wide sidewalk system.

H. Sidewalks should be a minimum of six feet wide between public roadway and the junction where pedestrian traffic begins to disperse. This would allow one pedestrian to pass another and remain on the sidewalk. A minimum four foot wide sidewalk may then be acceptable.

I. Sidewalk crossings of on-site roadways should be distinguished by a different material and slightly raised to prevent runoff from flowing across them.

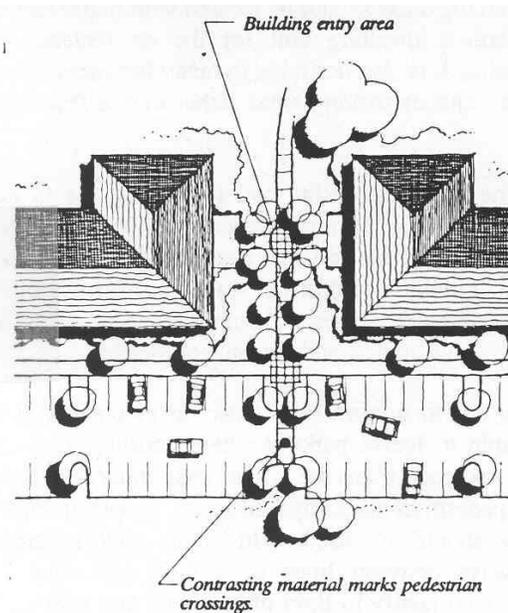


Fig. 4: Key sidewalk intersections and segments are marked with contrasting pavers.

J. Buildings should be separated at least 8 feet from driveways and parking spaces where facing windowed walls (but not the entry) of ground units and have a minimum 13 foot separation when facing the entry of ground units.

K. Separate buildings from common walkways by at least 8 feet in the structure's front and rear, and a minimum 4 feet on its side.

L. Separation guidelines do not apply to incidental structures such as trellises, 18 inch roof eaves, chimneys, covered walks, and pedestrian oriented amenities.

Circulation – Vehicular

M. Design the on-site vehicle circulation system as follows:

- A maximum of two vehicle access points, depending on parcel characteristics and difficulty of access, to reduce traffic impacts and the site area devoted to roads instead of architecture and landscape/recreation space,
- Create very low volume cul-de-sacs to allow multiple use as street oriented social/recreation areas, and
- Stress shared driveways between adjacent developments.

Parking

N. Locate parking to minimize conflicts between autos and pedestrians. Driveways should avoid crossing pedestrian walkways and paths from residence to children's play area. In large parking lots, provide pedestrian walkways to allowing people to move safely. Additional space should be provided to prevent cars from overhanging curbs, driveways or pedestrian walkways.

O. Separate driveway parking areas with landscape islands to create an individual unit entry and reduce the appearance of large areas of paving.



Fig. 5: Separation of driveways with landscape islands.

P. Provide the majority of the required parking spaces in attached garages (tandem parking allowed), underground parking, and underbuilding parking when grades permit at least partial screening.

Q. Minimize the prominence of surface parking by using architecture and landscaping to break up or screen parking areas, moving parking to the side or rear, and breaking up large parking areas into smaller ones.



Fig. 6: Parking located so that it is screened by buildings.

R. Supplemental parking areas should be located within 200 feet of the farthest dwelling unit served for the convenience of residents.

S. The optimum design for a parking area is not necessarily the one which parks the maximum number of vehicles. The design should also provide ample stall and aisle widths, lengths, pedestrian walks, adequate turning radii, reasonable grades, efficient movement of traffic, pleasant appearance, and convenient location.

T. Four to six space parking lots are pedestrian and human in character, while over twelve cars become car dominated. The critical number seems to be ten. This marks the breaking point between a human lot and a sea of cars. Small lots can be accomplished by breaking large parking areas into sections that serve no more than 10 to 12 cars. Landscape islands and areas should be located to protect cars as well as to break up seas of asphalt.

Solar Orientation

U. To maximize the warming effect of solar radiation in winter months and maximize shade in the summer months:

1. Utilize deciduous trees for summer shade and winter sun
2. Orient active living spaces to the south.
3. Design building overhangs to shield the high summer sun and expose the area to the lower winter sun.

Crime Prevention

V. Employ the Concept of Defensible Space to reduce opportunities for crime. "Defensible space" is a term used to describe a series of physical design characteristics that maximizes resident control of behavior--particularly crime. A residential development designed under defensible space guidelines clearly defines all areas as either public, semi-private or private. In so doing, it determines who has the right to be in each space, and allows residents to be confident in responding to any questionable activity or persons within their complex. Residents are thus encouraged to extend their private realms, establish their zone of influence which inevitably results in a heightened sense of responsibility towards the care and maintenance of these outdoor areas.

W. The following series of techniques can be used to create defensible space and consequently reduce crime. They are summarized in:

- Defining zones of privacy (public, semi-private, private) with real or symbolic barriers. This allows residents to identify "strangers".
- Establishing perceived zones of influence (allowing residents to extend their private realms).
- Providing surveillance opportunities.

Additional design considerations include the following:

- Orient windows so that areas vulnerable to crime can be easily surveyed by residents.
- Locate mailboxes, garbage collection enclosures and common play areas in such a way that they are easily observed by others. Mailboxes should not be located in dark alcoves out of sight
- Establish a system for identifying the location of each residential unit and common facilities at the project entry.
- Lighting. More light is not necessarily indicative of better and safer lighting. Lighting levels should be carefully selected and oriented so that areas vulnerable to crime are accented. Provide lighting in areas of heavy pedestrian or vehicular traffic and in areas which are dangerous if unlit, such as stairs and ramps, intersections or where abrupt changes in grade occur. Areas that have high crime potential should be well lighted so that people traveling through them at night may feel secure.
- Locate plant materials such as high shrubs so that surveillance of semi-public and semi-private areas is not blocked. This will provide the opportunity for crime.
- Use visually open fencing materials such as wrought iron bars or wooden pickets to define space between the street and building.

X. Sticker shrubs may discourage crime activities. Low shrubs and umbrella trees (where the canopy is maintained above 5 feet from the ground) will allow surveillance opportunities, hence reducing the potential for criminal behavior.

II. BUILDING DESIGN

Neighborhood Compatibility

A. Minimize the appearance of building scale differences between proposed townhouses and existing neighborhood residential units that conform to current zoning. Portions of multi-family developments adjoining areas zoned for single family should maintain a scale, facade and orientation similar to single family uses for compatibility with existing structures. A project site plan and cross-sections should show the footprint of all adjacent structures within 100 feet of the property line to help evaluate compatibility.

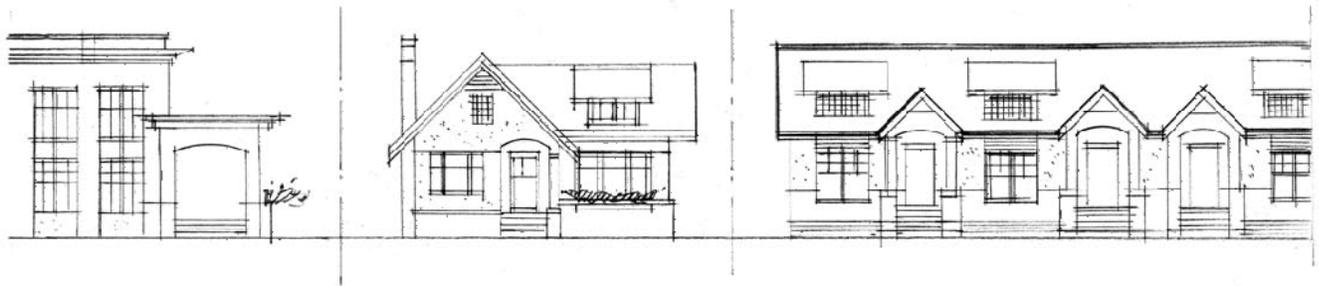


Fig. 7: Incorporation of elements from neighboring structures into townhouse design.

B. Reflect the architectural character of neighboring residences (within 300' on the same street) where it provides a positive example through use of related building features including scale/mass, height, the proportions of entries, windows and other openings (fenestration), color, materials, and shapes.

1. Step the roof on the building perimeter segments to transition between a proposed taller building and an existing residential structure.
2. Replicate or approximate roof forms and pitch found on existing residential structures in the neighborhood.
3. Use window patterns and proportions similar to those on existing residential structures in the neighborhood.
4. Use building facade materials similar to those used on existing residential buildings in the neighborhood.
5. Maintain a consistent relationship to the street (i.e., building setbacks and entryways) as existing buildings.

Offsets, changes in materials, and other fine detailing are used to provide architectural interest.



Fig. 8: Detailing and modulation are used to reduce the scale of the building.

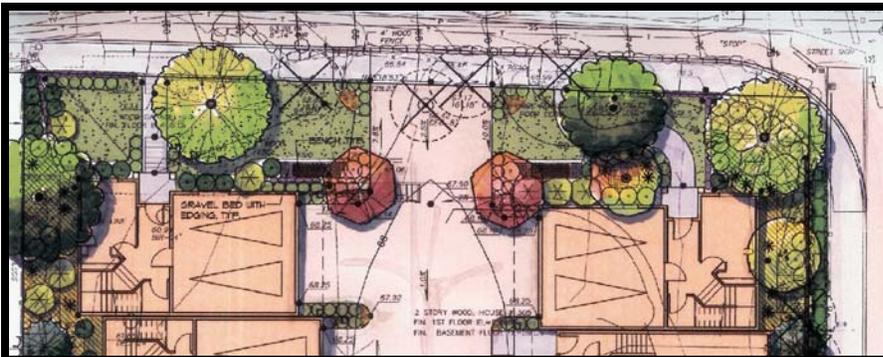
Building Entrances

C. Avoid the use of exterior stairways to second stories that are visible from the street.

Do this:



Site Plan:



Not this:

Fig. 9: Relationship of entry to street level.

D. Townhouse units shall have an individual entrance, with entrance vestibules, canopies or porches to give identity to each unit and provide weather protection. The main entrance to units adjacent to a public street shall be accessed from and face the street.



Fig. 10 : Individual entry porch.

Building Elevations

E. Attached townhouses shall read as a unified building mass, maintaining a common architectural language across the entire length of units. This mass shall be varied by changes in unit orientation, color/material variations, shifts in roof profile, and variation at corner units. Windows, bays, balconies, and other articulation could also be used to express the individuality of each unit.

- F. Each building shall incorporate treatments that "complete" the end and corner units, including:
1. an extended base or ground floor units
 2. a protrusion, porch or bay that wraps the corner, or
 3. an embedded corner tower



Fig. 11: Expressing individual units through modulation and roof forms.

G. A 3-story blank wall, even if at the narrow end of a building, does not reflect acceptable design quality. Use architectural relief and fine detailing to break up monotonous surfaces.

H. Avoid applied ornamentation which is not related to building structure or architectural design. This would include arbitrary, inconsistent forms and decoration; uninterrupted floating horizontal elements; and large blank surfaces.

Windows

I. Provide relief, detail, and visual rhythm on the facade with well-proportioned windows.

1. Use window patterns, proportions, and orientation consistent with neighboring residences.
2. Use multiple-pane windows.
3. Provide windows that are designed to create shadows (either deeply recessed or protruding).
4. Use visually significant window elements (i.e. frame dimensions, lintels, casings, sills, and trim).
5. Locate windows so that the occupants from one residence cannot look directly into an adjacent residence.

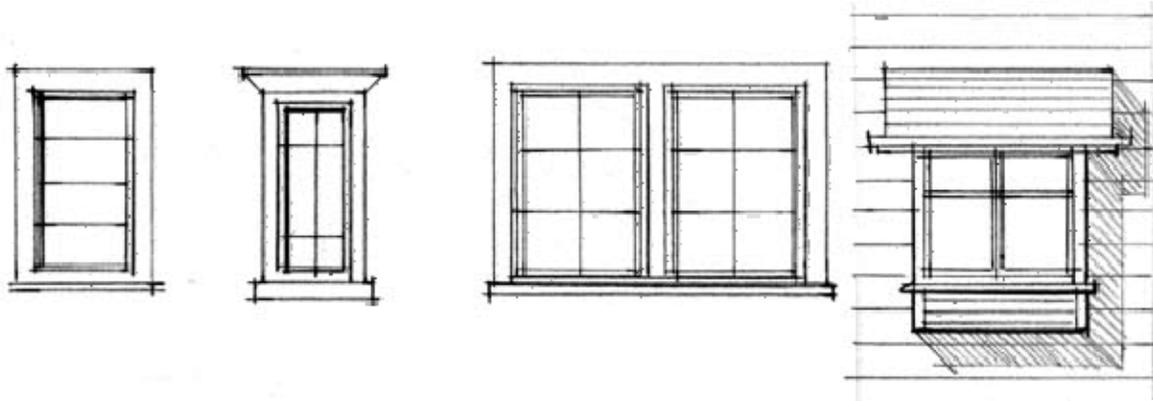


Fig. 12: Window form examples.

Roofline

J. Vary the roofline along the building length to reflect individual units. This can be achieved using:

- separate roof forms
- a combination of roof types, such as shed, gabled and hipped roofs)
- gables and dormers

K. Pitched and continuous sloping roof forms are encouraged. Flat roofs shall be discouraged. Where flat roofs are used, they should be detailed with parapets or roof overhangs, and detailed with brackets, corbels or other decorative supports.



Fig. 13: Roof form variation.

Building Massing

L. More prominent sites and buildings require a higher level of design quality. This would include projects which are located near hill tops or intersections, or which include large visible building masses.

M. Use building and roof modulation and articulation to reduce the appearance of large building masses.

1. Modulate the building facade with features such as porches, balconies, building wall relief, and bay windows.
2. Provide roof elements such as gables, eyebrow roof forms or dormers.
3. Incorporate prominent cornice, soffit, or fascia details that emphasize the top of the building.
4. Provide prominent roof overhangs.
5. Articulate the roof with rafter tails and brackets.



Fig. 14: Differentiation of individual units through building and roof modulation to reduce the appearance of large building masses.

Material and Colors

N. Construct building exteriors of durable and maintainable materials that are attractive even when viewed up close. Use building materials that have texture, pattern, or lend themselves to a high quality of detailing. Appropriate materials are horizontal lap siding, shingles, brick, stone, stucco, ceramic or terra cotta tile.

O. Use a variety of complementary colors on building exteriors. Reserve brightly saturated colors for accent or trim features.

Garage Design

P. Design garages and carports so that they do not dominate the dwelling's facade.

1. Locate garages and carports behind residences, stepped back from the building's street facade, or provide a side entry (perpendicular to the street).
2. Design driveways to be as narrow as possible and/or shared where possible to minimize impervious surface and to minimize disruption of the sidewalk and planting strip by curb cuts.
3. Incorporate windows into garage sidewalls whenever they face the street so that they appear to contain habitable space.
4. Incorporate garage door elements which reduce the apparent size of the doors, such as panels and windows.
5. Use materials and colors that match the residence.



Fig. 15: Side entry garage with windows.

III. LANDSCAPE/SITE TREATMENT

Landscape Design

A. Plants can be used to curtail erosion, to soften the built environment, define or emphasize open space, give privacy, block wind and lessen the effects of solar radiation.

B. Although the landscape plan should reflect plants at maturity, landscaping should be considered as a design element harmonizing site plans and building design only to the extent of its effect in five years. This could mean using significantly larger initial plant stock for those project designs which rely heavily upon landscaping to provide relief for building and site design or screen the project.

C. Select and site landscape materials to produce a hardy and drought-resistant landscape area consistent with project design. Selection should include consideration of soil type and depth, spacing, exposure to sun and wind, slope and contours of the site, building walls and overhangs, and compatibility of new plant material with existing vegetation to be preserved on the site.

D. Install all plant materials to current nursery industry standards. Landscape plant material should be properly guyed and staked to current industry standards. Planting of trees in compacted soils is prohibited unless minimum 12 inch gravel drain sumps are installed under each tree to a minimum of 36 inch depth, or the subgrade soil beyond the planting pit is rototilled to a 9 inch depth to the drip line or edge of planter, whichever is less.

E. Plant shrubs used to define spaces or separate environments as a staggered double row whenever possible. This provides the significant depth especially necessary to separate environments such as parking areas from grassed fields and building entries.

F. Limit shrub beds to a maximum of two feet wide per typical row of nursery stock plants, in order to minimize barked area and maximize live ground cover. A typical five foot wide barked planting bed for a single row of shrubs is not acceptable.

Protection of Existing Trees

G. The survival and general health of a tree depends as much on the condition of its root system as it does on the factors influencing the above-ground portion. This vital root system extends out to, and sometimes beyond the tree's drip line (the outermost reach of branches). Any significant disturbance to the root area, such as high surface compaction, root severing, over-watering and/or removal of organic material in which the tree has composted over several years, will almost certainly kill the tree. Tree removal and replacement would be required after a few seasons of progressive deterioration.

H. Protect significant trees during construction with a chain-link fence or plastic vinyl construction fence at the drip line. Install the protection fence prior to issuance of grading permit. Removal or destruction of fencing should be cause for a Stop Work Order until reviewed by City staff.

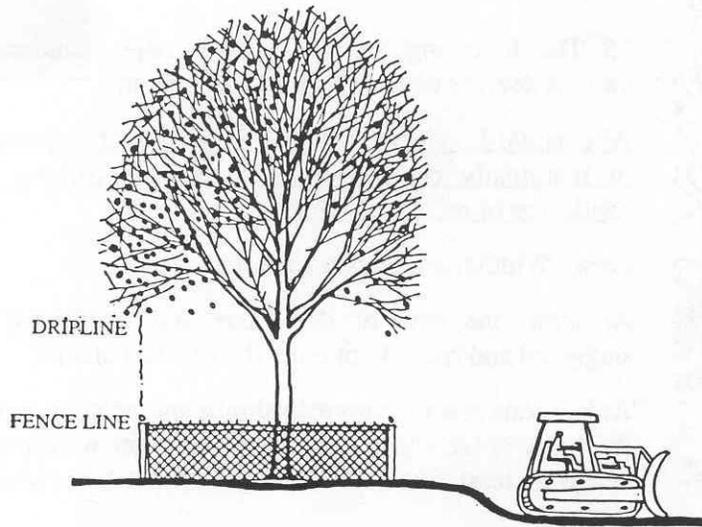


Fig. 16: Tree protected with a chain link fence at the drip line during construction.

Design for Screening and Separation

I. Full privacy requires an opaque fence or evergreen barrier at least six feet high or above eye level, depending on the angle of view. Noise reduction requires a dense fence (i.e., concrete/masonry) wall or berm in addition to plantings.

J. Area separation requires a continuous physical barrier not less than three feet high. A greater degree of separation would require a higher opaque barrier. A separation planting strip could be deciduous or evergreen.

K. Provide a privacy fence along side and rear yards if adjoining single family zoning. This should be 6 feet high sight-obscuring wood (or equivalent) fence with exterior materials and colors consistent with building architecture.

Outdoor Space Design

L. Outdoor space tends to be unusable when it is simply the "leftovers" after buildings are placed on the land. Outdoor spaces should have a definite functional shape, be internally designed to fulfill that function, and be functionally associated with a specific unit or unit group (see "Defensible Space" in Site Plan guidelines).

M. Complexes with 10 or more units must provide an on-site recreation space for children with at least one area designed for children aged 5-12, see TMC 18.52.060. This area should be characterized by interactive group equipment which tests skills. The Parks and Recreation Director should be consulted in the review of acceptable design proposals.

N. The child play area should reflect the design elements below:

1. Visually accessible to casual surveillance by passersby and residents. This is a key element in facility safety and generally requires a central location.

2. Provide separation of play areas from general passersby for security.
3. Easy safe access from residence to play area(s)
4. Hard surface areas for wheeled toys and tricycles.
5. Equipment with zones to satisfy the specific sensory and skill needs up to age 12.
6. Use water and sand if limited to two materials. These provide more possibilities for play and fun than all asphalt deserts combined. The ability to move over, under, around or through something affords a child control. He can change his relationship to it.
7. A child should be able to control his level of involvement with others. Make small sheltered areas for solitary play, larger spaces for group play.
8. An adjacent sitting area for monitoring the children.

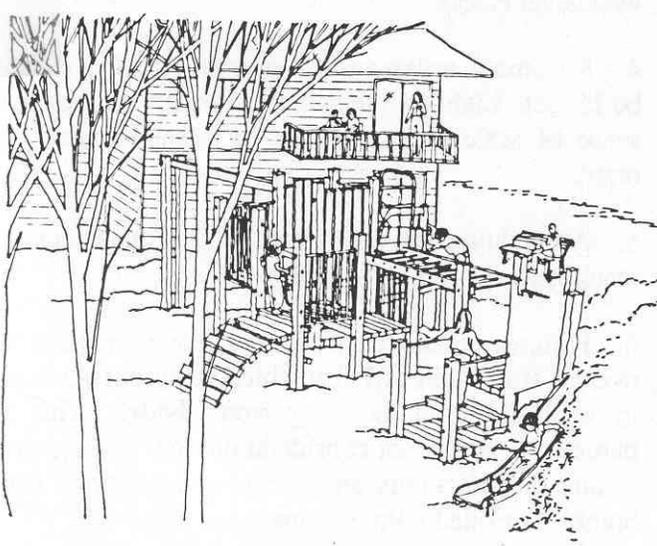


Fig. 17: A recreation space for the 5-12 year old group which facilitates group interaction and skill testing.

O. Linkages with existing public trail and park facilities should be made where possible, either through immediate construction or agreement to jointly participate in the coordinated provision of such a linkage at a later date.

IV. MISCELLANEOUS STRUCTURES/STREET FURNITURE

Lighting

A. Reflect project architectural design considerations in all exterior lighting (i.e., distribution, intensity, and pattern).

B. Maximum parking area light standard height is 20 feet or the height of the building; whichever is less.

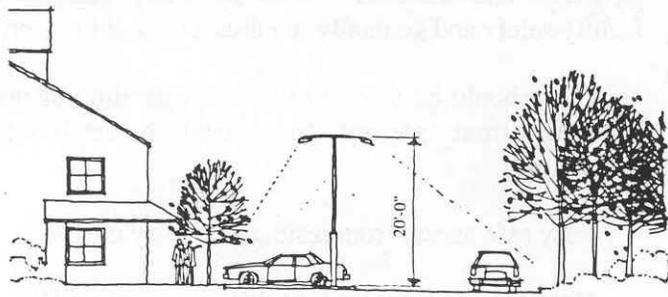


Fig. 18: Parking lot lighting.

C. Maximum walkway and grounds lighting is 15 feet. Light fixture height is limited to enhance a sense of scale and enclosure for common areas at night.

D. Provide all lighting standards with glare cut-off features to avoid off-site spill-over.

E. Place fixtures so that light patterns overlap at a height of 7 feet which is sufficiently high to vertically illuminate a person's body.

F. At hazardous locations, such as changes of grade, use lower level supplemental lighting or additional overhead units. Where low-level lighting (below 5 feet) is used, fixtures should be placed in such a way that they do not produce glare. Most eye levels occur between 3 feet 8 inches for wheelchair users and 6 feet for standing adults.

G. Where walkway lighting is provided primarily by low fixtures provide sufficient peripheral lighting to illuminate the immediate surroundings. Peripheral lighting contributes to a feeling of security in an individual because he can see into his surroundings to determine whether or not passage through an area is safe. Such an area should be lighted so that the object or person may be seen directly or in silhouette.

Fencing, Walls, and Screening

H. All fencing, walls, and screening should reflect building architecture and be harmonious with adjacent project designs. This includes consideration of proportion, color, texture, and materials. Design perimeter fencing to be attractive from both sides.

Service Areas

I. Screen all exterior maintenance equipment, including HVAC equipment, electrical equipment, storage tanks, satellite dishes, and garbage dumpsters from off-site and on-site common area view in an architecturally integrated manner.

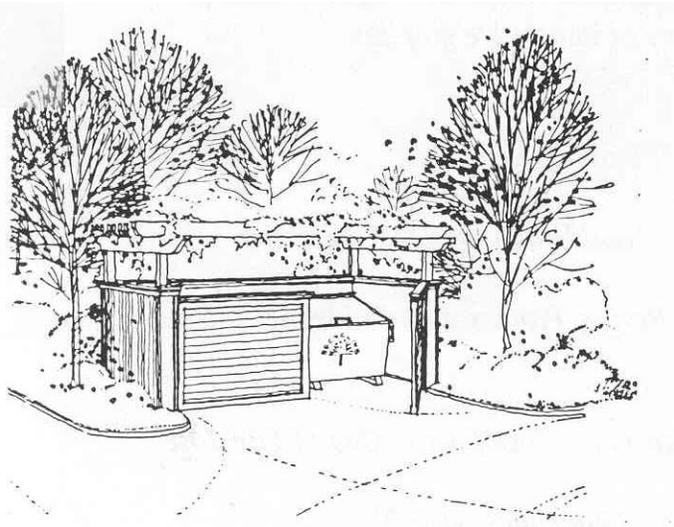
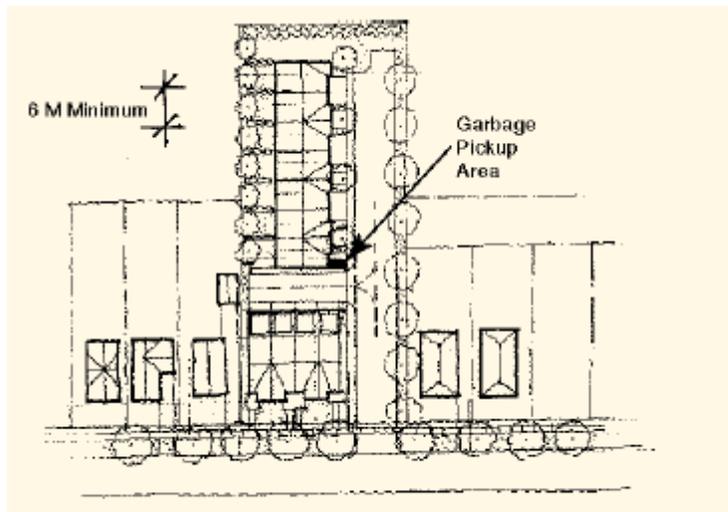


Fig. 19: Dumpsters are sited and screened to minimize prominence.

J. Several small dumpsters adjacent to buildings such as garages are preferable to a single large free standing site. Dumpsters should have solid architectural wall screening only to the container height to minimize its prominence.



Garbage pickup area for new development

Fig. 20: Garbage collection area screened from public street.

K. Recycling containers and areas should conform to King County standards or as amended by Tukwila standards.

Street Furniture

L. Carry out the project's design concept with the choice of street furniture.

M. Foster opportunities for social gathering by residents in shared open spaces by the provision of seating and other amenities. Separate vehicular traffic from pedestrian-oriented areas with the use of bollards and other barrier features.