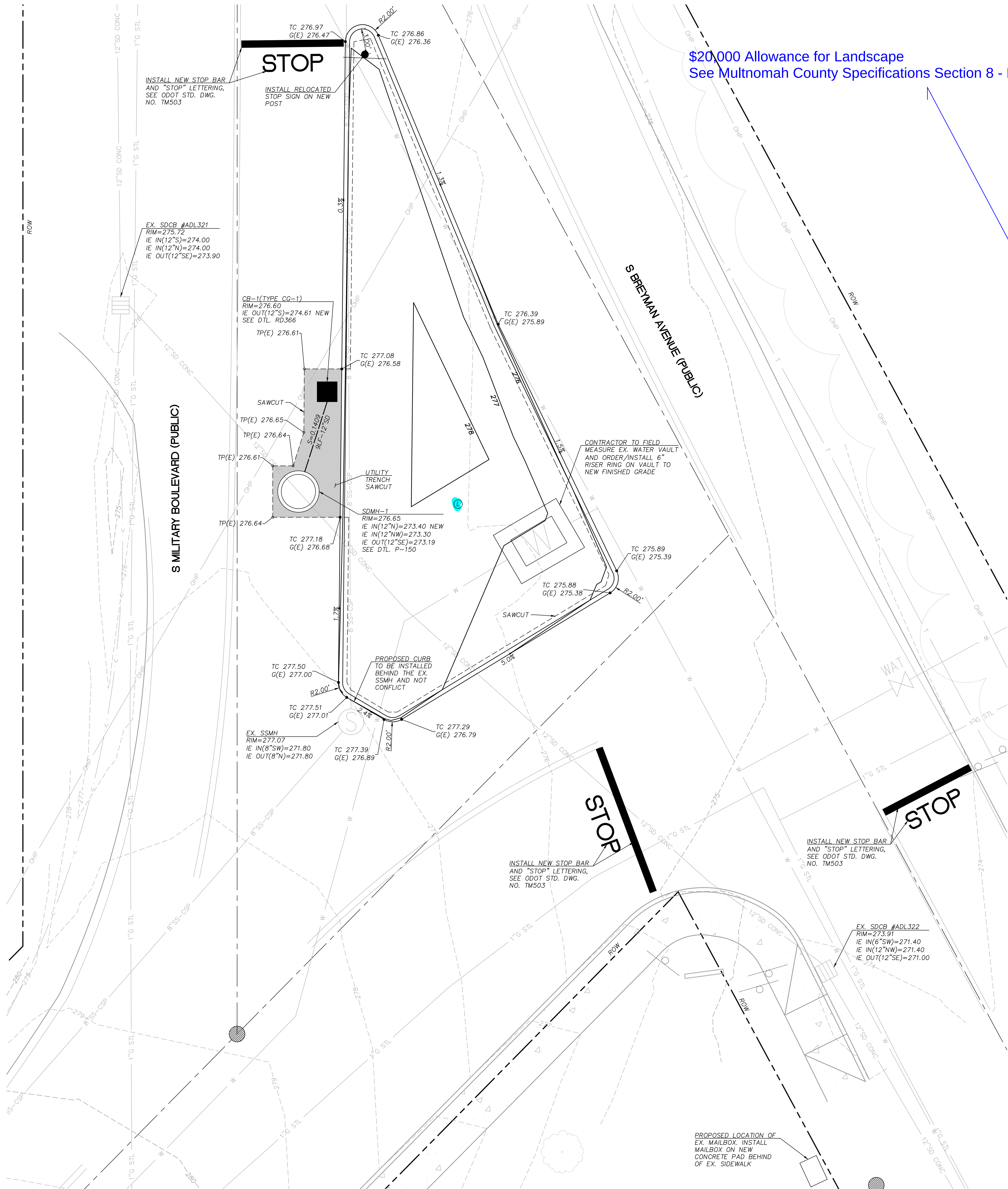
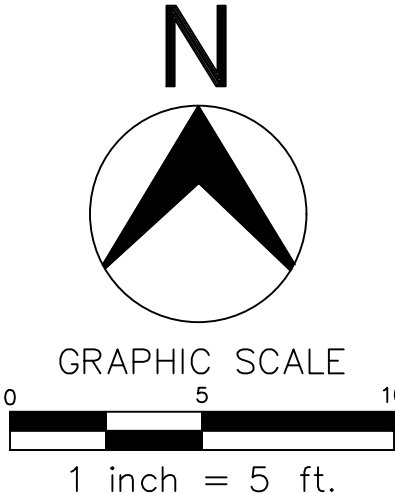
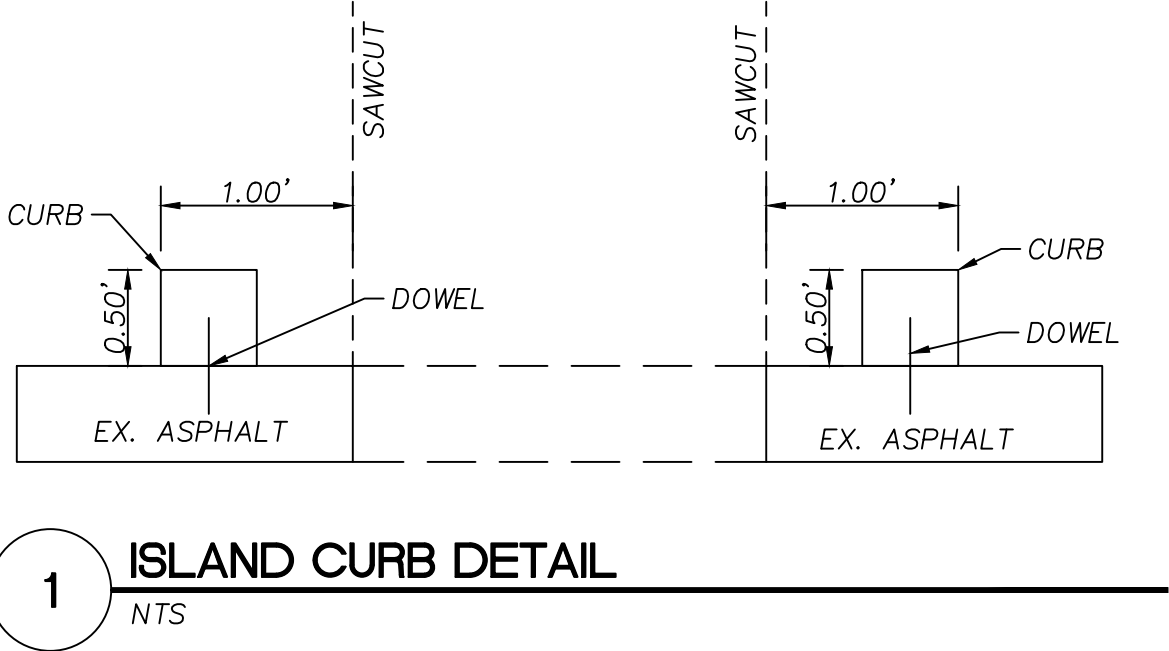




\$20,000 Allowance for Landscape
See Multnomah County Specifications Section 8 - Landscape Treatments

SHEET LEGEND		
ITEM	DESCRIPTION	REFERENCE
	ONSITE ASPHALT PAVEMENT	SEE PBOT STD. DWG. NO. P-506
	STANDARD CURB	SEE DTL 1, SHT C102
	STORM DRAIN (SD)	SEE PBOT STD. DWG. NO. P-262
	CATCH BASIN (CB)	SEE ODOT STD. DWG. NO. RD366
	STORM DRAIN MANHOLE (SDMH)	SEE PBOT STD. DWG. NO. P-150
	LANDSCAPE	SEE L-SHTS
	SIGN	
	PROPOSED CONTOUR	
	EXISTING CONTOUR	
TC XXX.XX GRADE AT TOP OF CURB		
FG XXX.XX FINISH GRADE		
TP XXX.XX GRADE AT TOP OF PAVEMENT		
BW XXX.XX GRADE AT BOTTOM OF WALL		
TW XXX.XX GRADE AT TOP OF WALL		
G XXX.XX GRADE AT GUTTER		
(E) EXISTING		
X.XX% SLOPE ARROW		
GB GRADE BREAK		



Humber Design Group, Inc.

REGISTERED PROFESSIONAL ENGINEER
18684
OREGON
J. HUMBER
DIV. 10

EXPIRES 6-30-27

LAYOUT AND PAVING PLAN - OVERALL

RIVERDALE ELEMENTARY SCHOOL
RIVERDALE SCHOOL DISTRICT
1733 S BREYMAN AVENUE, PORTLAND, OR 97219

PROJECT NO. TBG001

DESIGN BY: JG

DESIGN BY: AT

REVIEWED BY: DJH

DATE: 02/27/2026

REV

DATE

DESCRIPTION

BY

DATE

DESCRIPTION

PROJECT NO. TBG001

DESIGN BY: JG

DESIGN BY: AT

REVIEWED BY: DJH

DATE: 02/27/2026

REV

DATE

DESCRIPTION

BY

DATE

DESCRIPTION

SHEET NO.

C102

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Apr 27, 2026 - 3:12pm

SECTION 8 - LANDSCAPE TREATMENTS

8.0 LANDSCAPE TREATMENTS

Landscape treatments in the right-of-way shall be based on the classification of the street and the base land use zone in which the street is located. Landscaping should exist within the framework of the Metro design guidelines which:

- 1) Provide a safe environment
- 2) Support regional multi-modal travel
- 3) Support economic vitality
- 4) Create pedestrian and bicycle accessibility
- 5) Support social contact
- 6) Provide orientation and identity to the region
- 7) Provide for physical comfort and spatial orientation

The following sections are intended as a guideline of practices which should be followed in order to achieve regional goals.

8.1 MEDIAN LANDSCAPING

All medians with a minimum width of 1.2 m - 1.8 m should be considered for landscaping. All landscape treatments should consider a combination of trees, shrubs and groundcovers. Planting themes should be designated for transportation corridors linking individual districts with a unifying plant characteristic, i.e., bloom color, habit, or fall color. When specifying thematic planting material, monocultures should be avoided, particularly those species susceptible to disease and weather conditions. Medians used for pedestrian refuge should be designed for short-term use only with plant material for cooling and dust control and pedestrian-scale lighting. The design of these spaces should facilitate safe pedestrian crossing with lighting and accent paving to delineate a safe crossing zone visually clear to motorists and pedestrians alike.

Street Trees - Medians wider than 1.8 m should have street tree plantings. Trees should be planted according to the minimum on center distances appropriate to the tree and the size of tree should correlate with the width of the median (refer to Figure 8.1.1 Plant Material matrix). The habit, scale and placement of street trees should relate to the character of an area or district and categorized as either high density urban (Figure 8.1.2) or low density suburban (Figure 8.1.3). These terms should be used to loosely define an area, requiring final interpretation by the County Engineer. Street tree placement should also respond to the more repetitious and ordered urban environment with formal plantings of regularly-spaced trees depending on densities and the type of vehicle traffic. For medians narrower than 3.6 m wide, trees may be arranged in a triangular pattern to create the illusion of a wider median and to spread the tree canopies increasing cooling and dust control. Plantings in medians wider than 3.6 m may have a double row of street trees arranged in a linear pattern to create a strong, formal visual effect as well as to maximize tree canopy for cooling and dust control.

Lower density suburban areas (low use mix and low end of allowed density range) should have round-headed to broad tree canopies to provide shade and dust control while responding to lower densities and shorter structures of the built environment and remnants of countryside often remaining within this development type. Street tree placement should also respond to the lower density suburban environment with naturally occurring patterns of irregularly-spaced trees arranged in a roughly triangular pattern for maximization of tree canopy cooling and dust control.

Shrubs and Groundcovers - All medians used for pedestrian refuge shall have low plant masses within 1.5 m of pedestrian crossings to enhance visibility for safety and criminal deterrence (Figure 8.1.4). Medians used only as buffers should have medium (1.1 m – 1.7 m) plant masses to block lights of oncoming traffic, decrease dust and heat, and enhance the aesthetics of the roadway. Plantings may comprise of evergreen year-round or provide seasonal interest with fall color, blooms or fruits, and at maturity maintain growth within planting area (refer to Figure 8.1.1 Plant Material matrix). Plant placement shall also adhere to clear sight line requirements as well as any other relevant County safety measures.

Table 8.1.1a**Recommendation List
STREET TREES**

COMMON NAME	SCIENTIFIC NAME	HEIGHT	SPREAD	TEMPERAMENT	COLORING
Green Ash	Fraxinus Pennsylvanica Lanceolata			Early Cultivator, bottom of slope near water	Glossy green leaves, yellow fall color
Marshall Ash	Fraxinus Pennsylvanica Marshall	15 m	13.5 m	Adaptable, irregular and asymmetrical in shape, seedless	Dark glossy green leaves
Summit Ash	Fraxinus Pennsylvanica Summit	13.5 m	7.5 m	Uniform branching to narrow oval, open, light , dry foliage, seedless	Fast growing
Patmore Ash	Fraxinus Pennsylvanica Palmore	15 m	12 m	Symmetrical upright branches forming an oval head, extremely hardy, seedless	Dark green glossy leaves
Emerald Ash	Fraxinus Pennsylvanica Emerald	13.5 m	12 m	Roundheaded, heavily furrowed bark and hardy in hot, dry weather	Medium green leaves, yellow fall color
Dr. Pirone Ash	Fraxinus Agustifolia Doctor Pirone	10.5 m		Excellent, strong up-sweeping branches, good crotches. Can be used in 1.2 m beds or over tree lawn	Beautiful bright glossy green leaves
Autumn Applause Ash	Fraxinus Americana Autumn Applause	13.5 m	7.5 m	Small, dense, oval form	Purple fall color
Rosehill Ash	Fraxinus Americana Rosehill	15 m	10.5 m	Fast growing, upright form with open branching, seedless	Purple fall color
Flowering Ash	Fraxinus	7.5 m to 9 m	7.5 m	Exceptional, fragrant flowers, roundheaded	Dark green leaves
Golden Desert Ash	Fraxinus Oxycarpa Aureafolia	7.5 m	5.5 m to 6 m	Handsome, distinctively different and of great ornamental value. Excellent where site factors limit the use of large growing trees.	Rich golden bark, green leaves turning gold in July
Rancho Roundhead Ash	Fraxinus Excelsior Rancho	7.5 m to 9 m	6 m to 7.5 m	Suitable for low overhead wire conditions and can be used in parking strips (narrow as 1.2 m), adaptable to most soil conditions.	
Amur Chokecherry	Prunus Maacki	7.5 m to 9 m		Good foliage, the white flowers are typical of chokecherry that hang in	White flowers, golden flaky

COMMON NAME	SCIENTIFIC NAME	HEIGHT	SPREAD	TEMPERAMENT	COLORING
				graceful raceme, extremely hardy	bark
Kwanzan Flowering Cherry	Prunus Serrulata Kwanzan	10.5 m to 12 m	9 m	Grafted on a 6 1/2 mazzard, understock provides immediate clearance on streets greatly reducing maintenance	Rosy/pink flowers, leaves are red when young
Alberti Cherry	Prunus Padus Alberti	6 m	9 m	Upright, oval and very floriferous. Has spikes of flowers 50 mm to 100 mm in length and hearty in this region	White flowers
Rancho Columnar Sargent Cherry	Prunus Sargenti Rancho	7.5 m to 9 m	3.6 m	Strong and handsome, can be used in a 0.9 m tree lawn, incredibly it survives storm damage. Ascending branches with strong crotches	Rose/pink flowers, spectacular red fall color
Redbark Cherry	Prunus Serrula	9 m		The bark is magnificent, bright and shinny	Red
September Goldenrain	Koelreuteria Paniculata September Goldenrain	10.5 m	6 m to 7.5 m	Intense flower blooms in late August, early September, the panicle is large and densely branched and is roundheaded	Sulphur yellow flower
Lavalle Hawthorn	Crataegus Lavelle	9 m	7.5 m	Prized ornamental street tree, oval headed and best used for low overhead wire situations	Rich shining green leaves, white flowers coral color berries
Globe-Headed European Hornbeam	Carpinus Betulus Pyramidalis	7.5 m to 9 m	5.4 m	Tight, compact and roundheaded.	
Japanese Tree Lilac	Syringa Amurensis Japonica	7.5 m	3.6 m to 4.5 m	Ideal for narrow parkways, a slow grower with tough, hardy and beautiful large flowers that bloom in June, roundheaded	White flowers
Bicentennial Linden	Tilia Cordata Bicentennial	10.5 m	5.4 m to 6 m	A tight pyramidal form, small leaves	Rich color
Rancho Littleleaf Linden	Tilia Cordata Rancho	9 m	4.8 m	Early branching habits and different from other Littleleaf Lindens, branch pattern is flat, fan-like and departs from the trunk in whorls that gracefully curl upward to build a nice,	Dark green leaves

COMMON NAME	SCIENTIFIC NAME	HEIGHT	SPREAD	TEMPERAMENT	COLORING
				compact crown of small and finely serrated leaves	
Redmond Linden	Tilia Americana Redmond	10.5 m	7.5 m	Rapidly growing, densely pyramidal and symmetrical with large leaves	
Greenspire Linden	Tilia Cordata Greenspire	12 m	10.5 m	Pyramidal and symmetrical with uniform branching	
Amur Maple	Acer Ginnala	6 m		A fine, sturdy roundheaded tree, flower spikes give the tree an exotic look and bloom to 150 mm in August, a small slow growing tree	White flowers
Almira Norway Maple	Acer Platanoides Almira	4.8 m in 30 years	3.6 m to 4.5 m	Excellent for use under low wire situations, an informal dwarf globe selection	
Armstrong II Red Maple	Acer Rubrum Armstrong II	9 m max height	2.4 m	An improved variety and superior to other Armstrong Red Maples, it has a tighter form, narrower crotches and tight ascending branches, the strong branches and narrow silhouette make it resistant to ice and storm damage and requires practically no maintenance, a good selection for vary narrow streets with a 0.9 m parkway and 1.5 m to 2.1 m setback from the sidewalk, ideal for business streets with shallow setbacks and business signs, the root system is greatly restricted to eliminate future sidewalk and curb problems	
Cavalier Norway Maple	Acer Platanoides Cavalier	12 m	13.5 m	Compact, roundheaded, a fine selection of the Norway Maple it should be spaced at a minimum of 12 m	Yellow fall color
Cleveland II Norway Maple	Acer Platanoides Cleveland II	9 m to 10.5 m	6 m	An improved maple with superior branching habits, the branches are closely spaced along the trunk giving the effect of a	

COMMON NAME	SCIENTIFIC NAME	HEIGHT	SPREAD	TEMPERAMENT	COLORING
				dense, compact head with oval form	
Crimson Sentry Maple	Acer Platanoides Crimson Sentry	7.5 m	4.5 m	Compact, dense and pyramidal to oval shape	Deep purple leaves changing to maroon in fall
Crimson Kind Maple	Acer Platanoides Crimson King	12 m	10.5 m	Oval when young becoming roundheaded in maturity	Deep purple leaves
Deborah Maple	Acer Platanoides Deborah	13.5 m	12 m	Broad oval shape	Reddish purple leaves in spring, bronze green in summer and bronze in the fall
Emerald Queen Maple	Acer Platanoides Emerald Queen	15 m	12 m	Dense oval with upright spreading branches	Deep green summer leave color, bright yellow in the fall
Olmsted Norway Maple	Acer Platanoides Olmsted			Extremely narrow, columnar shape. Excellent for heavy traffic street	Deep green leaves
Royal Red Maple	Acer Platanoides Royal Red				
Schlesinger Red Maple	Acer Rubrum Schlesinger				
Schedleri Maple	Acer Platanoides Schedleri				
Superform Maple	Acer Platanoides Superform	13.5 m	12 m	Broad oval to rounded shape, well behaved, uniformed branching and symmetrical	
Columnar Norway Maple	Acer Platanoides Columnare	10.5 m	4.5 m	Compact narrow form of the Norway maple and is ideal for streets with narrow parkways and close building situations	
English Hedge Maple	Acer Campestre	7.5 m	5.4 m to 6 m	Sturdy and compact-headed, the branches come off the trunk and proceed about 200 mm to 250 mm and then sharply curve upward, it is an ideal shade tree	

COMMON NAME	SCIENTIFIC NAME	HEIGHT	SPREAD	TEMPERAMENT	COLORING
Faassen Black Norway Maple	Acer Platanoides Faassen's		10.5 m	Roundheaded	Deep Red
Autumn Flame Maple	Acer Rubrum Autum Flame	10.5 m	10.5 m	Dense, rounded, small front and hardy, a slow grower with small leaves, best in small leaves, best in small yards or cul-de-sacs	
Bowhall Red Maple	Acer Rubrum Bowhall	12 m	4.5 m	Upright, very narrow column, tightly formed	Good fall color
October Glory Red Maple	Acer Rubrum October Glory	12 m	10.5 m	Broad oval to rounded, midwinter and hot summer prep is the best application	Glossy medium green leavers turning to deep red and purple in fall
Scarlet Sentinel Red Maple	Acer Rubrum Scarlet Sentinel	12 m	6 m	Upright and narrow branching pattern giving bold appearance	
Gerling Red Maple	Acer Rubrum Schlesinger	10.5 m	6 m to 6.6 m	Broad-leaf pyramidal	
Globe-head Norway Maple	Acer Platanoides Globosum	4.5 m	5.4 m	Grafted on a 2.1 m standard, this is ideal under low overhead wires in a 4.5 m parkway to provide vehicular and pedestrian branch clearance, a very formal looking tree, appropriate for small cul-de-sac front yards	
Pyramidal Sycamore Maple	Acer Psuedoplatanus Pyramidalis	9 m to 10.5 m	5.4 m	Rich leaves, strong up-sweeping branches and good crotches	
Red Sunset Red Maple	Acer Rubrum Red Sunset	13.5 m	10.5 m to 12 m	Up right and oval	Bright orange-red fall coloring holding for several weeks
Scanlon Red Maple	Acer Rubrum Scanlon	10.5 m	7.5 m	Extensively used on narrow setbacks, since the branches are compact, it is conical shaped	Dark green leaves that turns to brilliant orange, amber and red in fall
Tilford Red Maple	Acer Rubrum Tilford	10.5 m	7.5 m	Roundheaded, excellent fine textured branches and small foliage	
	Acer Pseudoplatanus				Deep rich

COMMON NAME	SCIENTIFIC NAME	HEIGHT	SPREAD	TEMPERAMENT	COLORING
Spaethii Maple	Altopurpureum	12m	9 m	Roundheaded	green leaves with burgundy colored under parts of the leaf
Columnar Sugar Maple	Acer Secharum				
Green Mt. Sugar Maple	Acer Saccharum	13.5 m	10.5 m	Broadly, oval, very hardy	Dark green leaves turns orange in fall
Legacy Sugar Maple	Acer Accharum	15 m	10.5 m	Oval, very symmetrical and tough leaves resistant to wind tatter	Glossy, dark green leaves, turn orange/red in fall
Parkway Maple	Acer Platanoides Parkway	12 m	7.5 m	Oval with good central leader. Faster growing than other Norway Maples	
Queen Elizabeth Maple	Acer Campestre Queen Elizabeth			Small, upright, oval and varying habit, small leaves with wavy margins, good selection for front yard on cul-de-sacs	Dark glossy green
Green Column Maple	Acer Nigrum Green Column	15 m	6 m	Upright, narrow oval with good resistance to heat and dry conditions, leaf shape is unique	Excellent fall color
Commorating Sugar Maple	Acer Succharum				
Columbia Queen Mt. Ash	Sorbus Aucuparia Columbia Queen	10.5 m	4.5 m to 5.4 m	Vigorous grower with a cone shaped head	Dark green leaves with red heavy fruit clusters
Hybrid Mt. Ash	Pyramidal Oakleaf Mt. Ash, Sorbus Hybrida Pyramidalis	10.5 m	2.4 m to 3 m	A tight compact branching structure	
Northern Red Oak	Quercus Borealis	30 m	25.5 m to 27 m'	Roundheaded and large broad leaf	Red fall color
Chanticleer Flowering Pear	Pyrus Calleryanda Chanticleer, Arisotcrat Pear	10.5 m	4.8 m to 5.4 m		Glossy green leaves in summer, white flowers, fall plum color
Rancho Pear	Pyrus Calleryana Rancho			The apex crown is blunt, compact and handsome. An important trait is it colors-up at least 10 days	

COMMON NAME	SCIENTIFIC NAME	HEIGHT	SPREAD	TEMPERAMENT	COLORING
				earlier than the chanticleer	
Trinity Pear	Pyrus Calleryana Trinity	9 m	6 m	Roundheaded, profusion of delicate flowers blooming in early May, small sparse fruit	Green waxy leaves
Skyrocket Oak	Quercus Skyrocket	9 m	3 m	Extremely Columnar	Leaves persist through winter
Fruitless Mulberry	Morus Alba Kingpin	9 m	6 m	Roundheaded	Bright green leaves, fall lemon color
Zelkova Greenvase	Zelkova Serratta Greenvase	15 m	15 m	Developed as a replacement for the Elm, it's disease resistant, yet has structural characteristics similar to the Elm. It has small leaflets and requires a 15 m space in a neighborhood with homes of appropriate scale and proportion	

Updated: 2/4/99

Figure 8.1.2



Figure 8.1.3

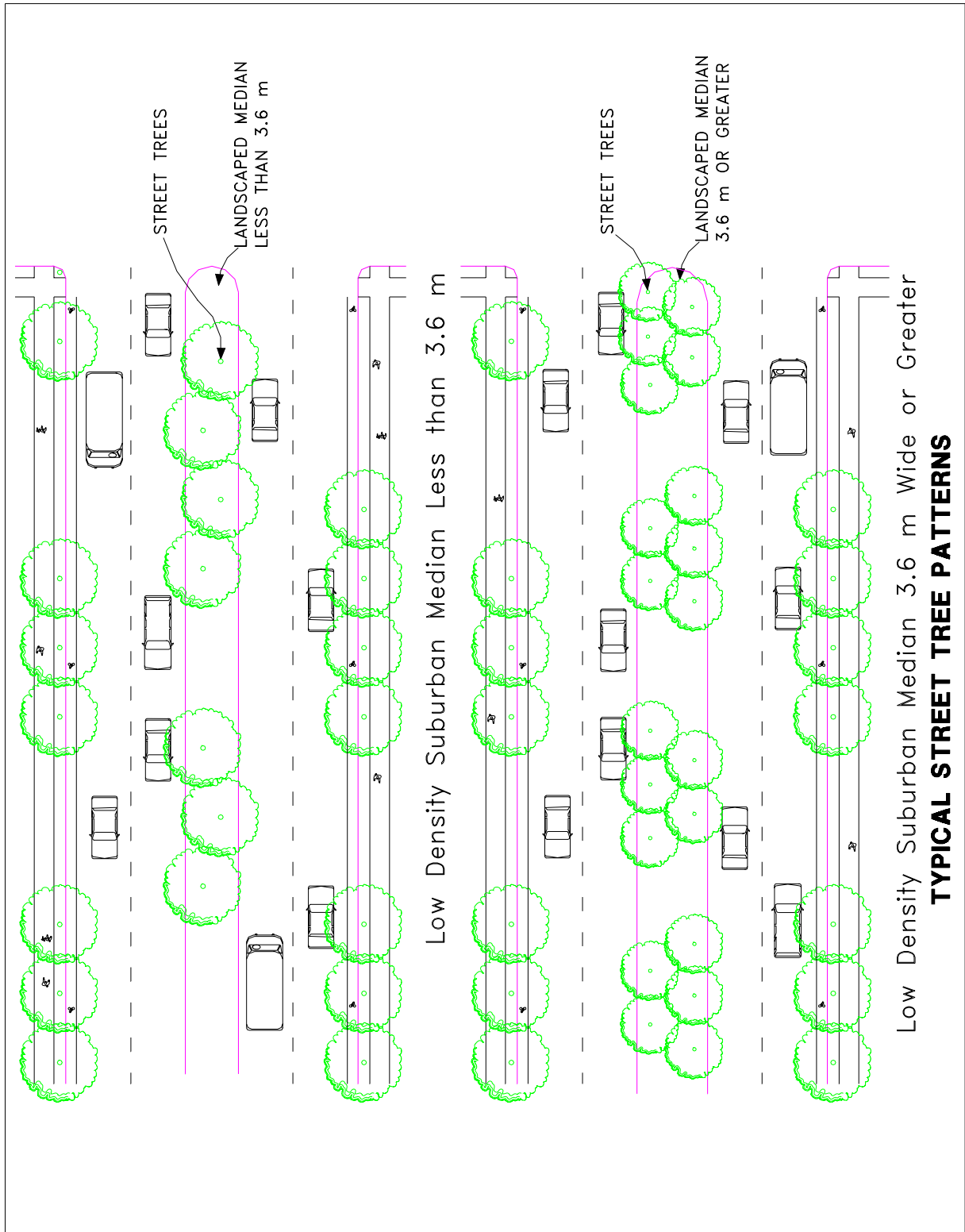
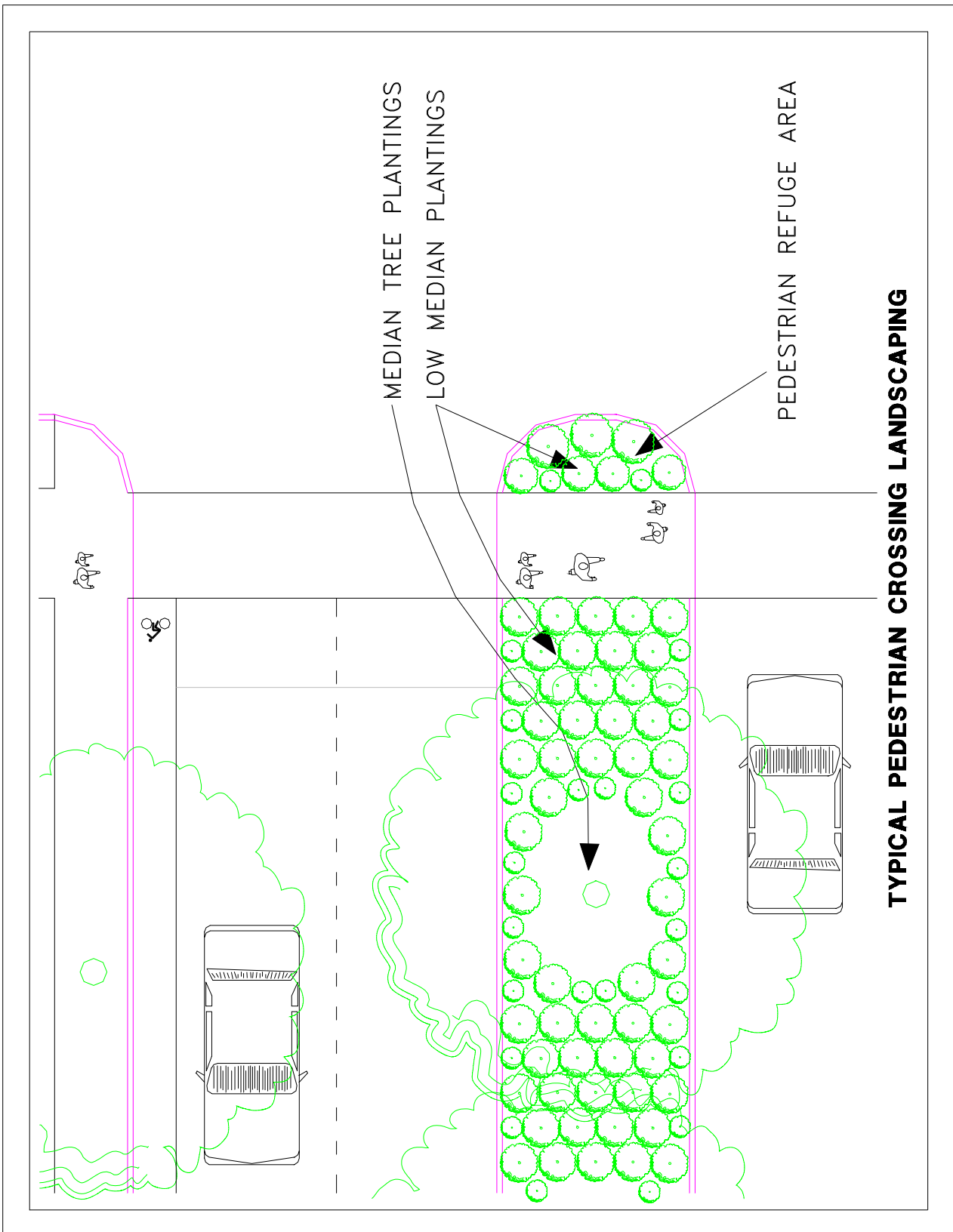


Figure 8.1.4



8.2 PEDESTRIAN SPACE LANDSCAPING

Pedestrian spaces include sidewalks and planting strips. Planting strips provide a physical and psychological buffer for pedestrians from traffic with plant material that reduces heat and dust creating a more comfortable pedestrian environment. Planting strips also provide areas for street furniture for pedestrian comfort and safety, i.e., benches, waste receptacles and pedestrian-scale lighting. These spaces should be designed for short as well as long-term use. Elements of pedestrian spaces shall not obstruct sight lines and shall adhere to any other required County safety measures.

Planting strips should have different arrangements and combinations of plant material when adjacent to on-street parking. Planting strips which do not have adjacent parking should have a combination of groundcovers, low shrubs and trees (Figure 8.2.1). Planting strips adjacent to on-street parking should have trees protected with tree grates. (Figure 8.2.2). District themes or corridor themes linking individual districts should be followed utilizing a unifying plant characteristic, i.e. bloom color, habit, or fall color. When specifying thematic plant material, monocultures should be avoided, particularly those species susceptible to disease.

Street Trees - All planting strips should have street trees. Planting strips which do not have adjacent parking should have a combination of groundcovers, low shrubs and trees. (Figure 8.2.1). Planting strips adjacent to on-street parking should have trees protected with tree grates. (Figure 8.2.2). Trees must be planted according to the minimum on center distances appropriate to the tree and the size of tree should correlate with the width of the street (refer to Figure 8.1.1 Plant Material matrix). The habit, scale and placement of street trees should correlate with the character of an area or district and categorized as either higher density urban or lower density suburban (refer to Figure 8.1.1 Plant Material matrix). Street tree placement should also respond to the more repetitious and ordered urban environment with formal plantings of regularly-spaced trees depending on densities and the type of vehicle traffic. Lower density suburban areas (low use mix and low end of allowed density range) should have round-headed to broad tree canopies to provide shade and dust control while responding to lower densities and shorter structures as well as remnants of countryside often remaining between this development type. Street tree placement should also respond to the lower density suburban environment with naturally occurring patterns of irregularly-spaced trees arranged in a roughly triangular pattern for maximization of tree canopy cooling and dust control (Figure 8.1.2).

Shrubs and Groundcovers - Planting strips without adjacent parking should have low planting masses to enhance visibility, discourage criminal activity, and provide a physical as well as psychological buffer from passing traffic (Figure 8.1.4). Plantings may comprise of evergreen year-round or provide seasonal interest with fall color or blooms, and at maturity maintain growth within planting area. All plant placement shall adhere to clear sight line requirements as well as any other relevant County safety measures.

Figure 8.2.1

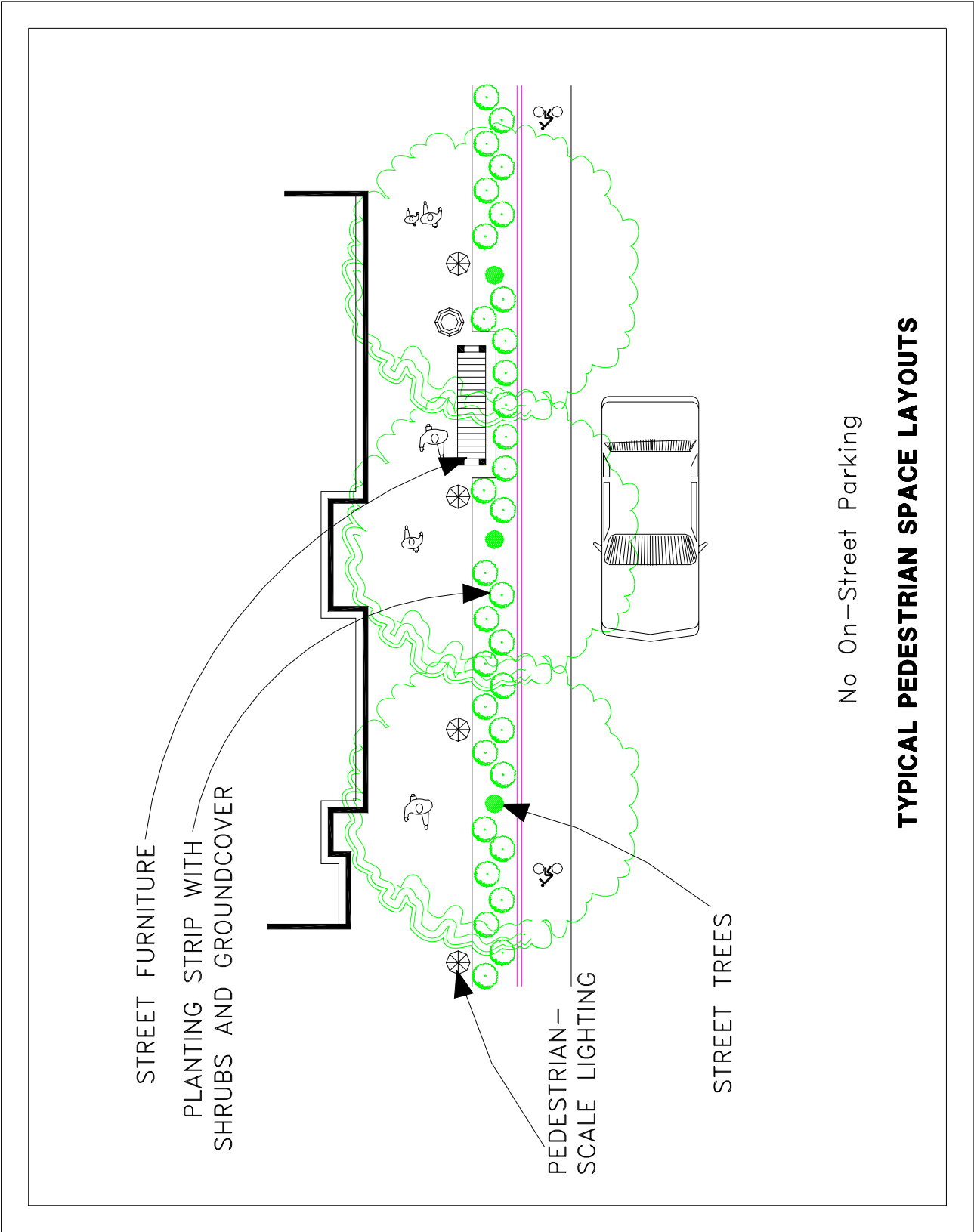
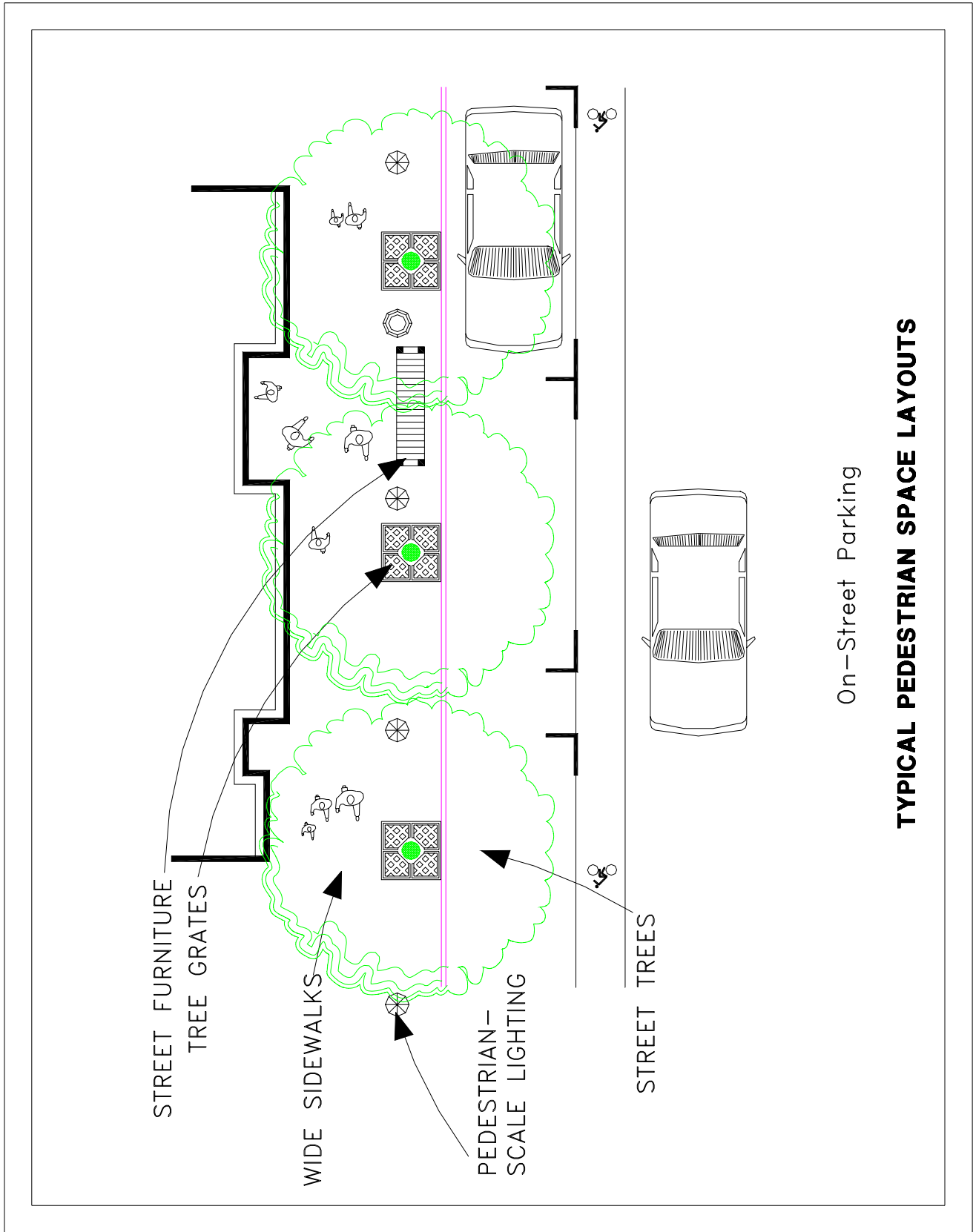


Figure 8.2.2



Lighting - Pedestrian-scale lighting should be installed along sidewalks and in medians used for pedestrian refuge. Pole lights as well as bollard lighting may be specified, however the amount and type of pedestrian activity during evening hours, i.e. transit stops, nighttime service districts, should ultimately determine the type of fixture chosen. Luminaire styles should match the area/district theme or existing luminaires and should not conflict with existing building or roadway lights causing glare. Lighting heights and styles should be chosen to prevent glare and to designate a clear and safe path and discourage vandalism (Figure 8.2.1). Lighting should be placed near the curb to provide maximum illumination for spaces furthest from building illumination. Spacing should correspond to that of the street trees to prevent tree foliage from blocking light.

Street Furniture - Street furniture such as benches and waste receptacles should be provided for spaces near sidewalks. Furniture should be sited in areas with the heaviest pedestrian activity, i.e. transit stops, shopping districts/centers. Benches should be arranged to facilitate conversation between individuals with L-shaped arrangements and should face the area focal point, i.e. shops, fountain, plaza, and divert attention away from nearby traffic. Other street furniture such as bus shelters should be sited and provided by the responsible transportation agency.

Paved Surface Details - Paving and curb cuts shall facilitate safe pedestrian crossing and meet all ADA requirements for accessibility. Accent paving may be used at key intersections to clearly define the pedestrian crosswalk and not impede wheelchair accessibility or conflict with surfacing for sight-impaired individuals. Accent paving should include scored or colored asphalt or concrete surfaces in contrast from the predominant paving type as well as any modular paving units.

County Transportation staff shall define which locations are considered key intersections according to traffic flow, amount and type of pedestrian activity, and width of crossing. Curb cuts shall be provided for accessibility at sidewalk corners per ADA guidelines.

8.3 SWALE

All swales shall be landscaped. Plant material shall filter storm water runoff and improve the aesthetics of the roadway. Plantings shall be easily maintained, non-toxic, non-invasive plants designed to cover all surfaces of the swale to prevent erosion (refer to Figure 8.1.1 Plant Material matrix). Street trees shall be prohibited within the depression of the swale. All plant placement shall adhere to clear sight line requirements as well as any other relevant County safety measures.

Installation - Earthwork of all swales shall meet the minimum slope and water retention requirements as defined by County engineering standards. Grading shall be prohibited during wet periods particularly during the months of November through February unless an exception is granted by the County Engineer. Soil erosion shall be controlled by County approved methods immediately following grading. Slopes shall be protected from erosion with a layer of filter fabric and seeded with *Carex* grass seed, or other equal substitute, for long-term storm water runoff filtration purposes. Grass seed substitutions may be considered by the County Engineer if the proposed material is non-invasive, low maintenance, and equal to *Carex* in terms of filtration capability. Density and method of seeding shall be in accordance with grower recommendations to achieve complete and uniform coverage.

8.4 MAINTENANCE

All landscapes shall be maintained for the duration of the planting to encourage health of plant material as well as public health and safety. A maintenance schedule detailing fertilizing, weeding and watering requirements shall be provided on all landscape plans as individual water requirements of plants and planting density affects frequency and duration of maintenance activities. All street trees and shrubs shall be pruned to maintain health and structure of the plant material for public safety purposes.

Irrigation - All plant material shall be maintained with an automatic irrigation system or hand-watered during long periods of hot weather as recommended. Two different types of irrigation systems may be installed subject to final approval by the County Engineer. Conventional pop-up spray heads are the most typical irrigation application in this area. They are most beneficial for delivering large amounts of water over large areas for a short duration. Drip irrigation systems are installed below grade and provide water to roots via an underground conduit which slowly emits water into the soil. These systems are particularly useful because of their low water-usage, deep-watering, which encourages deep rooting protecting curbs and paved surfaces, and low potential for over watering, which often causes erosion and slick paved surfaces. Because of this, drip irrigation is the preferred system for small and/or narrow planting areas. However, soils must be analyzed prior to installation because emitters are subject to clogging in some soils and may be difficult to reach for replacement and/or maintenance.

Pruning - All street trees shall be pruned according to the National Arborist Association (N.A.A.) standards. These standards describe methods of hazard pruning, crown reduction and two different intensities of general pruning practices. Maturing trees shall be routinely maintained to provide clearance underneath the canopy and to develop a central leader and strong limbs. Lowest limbs shall be removed to provide a minimum clearance of 2.4 m between sidewalk and lowest limb and a minimum clearance of 3 m between roadway surface and lowest limb. This shall eliminate limbs blocking pedestrian and vehicular traffic and views. Trees shall also be pruned if the crown conflicts with utility lines or other structures while preserving its overall shape and structural integrity. All shrubs shall be pruned if foliage or limbs extend into the path of pedestrian or vehicular traffic. Natural shrub habit shall be maintained, prohibiting "poodling" or "bonsai" pruning styles.

Fertilizing - All landscapes shall be fertilized to maintain health of plant material. At a minimum, landscapes shall be fertilized at installation. Organic fertilizers shall be required for all applications to prevent contaminant increase in storm water runoff. In planted areas which are intended to filter storm water runoff or areas adjacent to natural water bodies, fertilizers shall be "environmentally safe" as determined by the Environmental Protection Agency and amount shall be regulated to prevent nutrient increase in water bodies which may lead to algae blooms and habitat degradation.

Weeding - All landscapes shall be weeded to eliminate competition during establishment of plant material as well as for aesthetic purposes. At a minimum, landscapes shall be weeded until established and weeded two times per year thereafter.