

A P P E N D I X

APPENDIX 1: STREET NAME AND ADDRESS ASSIGNMENT STANDARDS

A-1-1 PURPOSE AND AUTHORITY

The purpose of this Appendix is to provide for the orderly assignment of street addresses to protect the safety of the general public by facilitating the finding of individual dwellings and businesses for the delivery of public and private goods and services. The Planning Department is the only agency with authority to assign or modify street addresses within the City.

A-1-2 STREET ADDRESS SYSTEM

A-1-2.1 Establishment of Grid System

Market Street and Elm Street are the base lines used in numbering a street in a north/south or east/west direction. Streets running north and south from Market Street shall be numbered starting with the 100 block. Streets running east and west from Elm Street shall be numbered starting with the 100 block.

A-1-2.2 Odd-Even Numbers

Going north and south from Market Street and east and west from Elm Street, EVEN addresses will be on the right hand side of the street while ODD addresses will be on the left hand side of the street.

A-1-2.3 Vacant Properties

Because there is no way of determining how many structures will eventually be built on vacant land within a block, addresses will be assigned so as to provide the flexibility to accommodate change.

A-1-2.4 Corner Lots

Corner lots are assigned two (2) numbers since the unit could face either street. The owner or developer shall be assigned the street address that accommodates the front entrance of the structure at the time of permit application.

A-1-2.5 Street Address Assignment

- (A) Primary Address: Each unit of property will be assigned a primary address. Primary addresses will consist of up to five (5) numerals and will be determined by the block in which the property is located. The determination of block length will be by the City. Single family structures (attached or

detached) and townhouses are assigned individual street numbers for each unit.

(B) Secondary Address:

- 1) **Duplexes and Multifamily Dwellings:**
Apartments, duplex buildings, and condominiums are assigned secondary addresses. The secondary address will follow the primary address and a dash and will consist of a number and/or letter. An example would be "1621-A Smith Street" with "1621" being the primary address and "A" being the secondary address. The first unit on the first floor would be "1621-1A Smith Street"; the first unit on the second floor would be "1621-2A Smith Street"; etc.
- 2) **Nonresidential Buildings:** Office, commercial, and industrial buildings with more than one tenant are also assigned secondary addresses. The secondary address will be a suite number. The first unit on the first floor would be addressed "1621 Smith Street, Suite 101"; the first unit on the second floor would be addressed "1621 Smith Street, Suite 201"; etc.

(C) Timing: Approval of a final plat is required for single family developments before numbers are assigned. For all other developments, addresses are assigned following preliminary plat or site plan approval. The Enforcement Officer is furnished with an approved plat or site plan on which to assign addresses. The plat or site plan will be kept on file in the Planning Department.

A-1-2.6 Letters Not Used

The letters "I" and "O" will not be used in street addresses.

A-1-3 POSTING OF ADDRESSES

Posting of addresses by the property owner shall be in accordance with Section 26-43 (Posting of Number) of the City Code. Arabic numerals (not spelled-out numbers) shall be used.

A-1-4 CHANGE OF EXISTING ADDRESS

In assigning new addresses, as few existing addresses as possible will be changed. There shall be a processing fee for address changes not initiated by the City.

A-1-4.1 Reasons for Change

Existing addresses may be changed for just cause. Examples of just cause are:

- (A) Street frontage where no addresses were left for vacant lot(s);
- (B) Street name change approved by the City;
- (C) Person unknowingly using the wrong address;
- (D) Rural route and box number being changed to urban street address; and
- (E) Present street address series incorrect or misleading.

A-1-4.2 Notification

The Planning Department will notify all affected local government departments, utility service companies, and the U.S. Postal Service of any new assignment of or change in street address.

A-1-5 STREET NAMES

A-1-5.1 New Streets

The developer shall submit names for new streets contained within proposed developments in accordance with Article VI (Subdivisions: Procedures and Standards). The Technical Review Committee shall approve all street names with right of appeal to the Planning Board.

A-1-5.2 Street Name Changes

Proposed name changes for public and private streets shall be submitted to the Planning Board for its approval. There shall be a processing fee for name changes not initiated by the City.

A-1-6 STREET NAME PREFIX AND SUFFIX

A-1-6.1 Prefixes

- (A) North and South: These prefixes shall only be used for the northern and southern portions of roadways that cross Market Street.
- (B) East and West: These prefixes shall only be used for the eastern and western portions of roadways that cross Elm Street.

- (C) N.C. Highway: This prefix shall be used for all State numbered highways.
- (D) U.S. Highway: This prefix shall be used for all federal numbered routes or roadways (excluding those on the Interstate System).
- (E) Interstate Highway: This prefix shall be used for all federal numbered routes or roadways on the Interstate System.

A-1-6.2 Suffixes

- (A) Street: This suffix shall be used for roadways running generally in a north-south direction.
- (B) Avenue: This suffix shall be used for roadways running generally in an east-west direction.
- (C) Drive, Trail, or Trace: These suffixes shall be used for roadways which follow a wandering alignment in different directions.
- (D) Road: This suffix shall be used for roadways running generally in a diagonal direction or connecting urban areas.
- (E) Boulevard or Parkway: These suffixes shall be used for divided roadways on which the travelways are mostly separated by a park or open median strip.
- (F) Court, Point, or Cove: These suffixes shall be used for cul-de-sacs having circular turnarounds.
- (G) Way or Dale: These suffixes shall be used for short roadways with an exit from one end only (dead end) with no potential for extension.
- (H) Circle: This suffix shall be used for short roadways that are circular or semi-circular in form and intersect the roadways from which they emanate at two different places.
- (I) Place, Lane, or Terrace: These suffixes shall be used for short roadways generally not over a block in length (exit from both ends) with no regard to predominant direction.

A-1-7 STREET NAME SIGNS

For new public and private streets, street name signs shall be installed to standards found in Section 6-13.3(P) and 6-13.3(Q).

APPENDIX 2: MAP STANDARDS

A-2-1 NUMBER OF REVIEW AND FILING COPIES TO BE SUBMITTED

<u>MAP</u>	<u>REVIEW</u> <u>Prints</u>	<u>FILING</u> <u>(After Plan Approval)</u>		<u>Mylar or Sepia Copy</u>	<u>Mylar As-Builts</u>
		<u>Prints</u>	<u>Mylar Original</u>		
Sketch Plan	9	4			
Preliminary Plat					
Major Subdivision	9	4			
Minor Subdivision	4	4			
Final Plat	10	10	1	1	
Exclusion Map ^a	4	4			
Annexation Map	9		1("D" drawing)	1	
Plot Plan (for building permit) ^b	2				
Site Plans/Group Developments:	9 sets	4 sets			
* Site Layout Sheet					
* Water & Sewer Utility Sheet					
* Grading & Erosion Control/Watershed Control Plan Sheet					
* Landscaping Plan Sheet					
Street & Utility Construction Plans & Profiles	4 sets	7 sets			1 set
Watershed Control Plan	4				
Grading & Erosion Control Plan	5				

^a If a plat is to be recorded, see Final Plat for number of copies to be submitted.
^b Refer to Section 3-11.1 (Applicability) to determine when a plot plan is required.

A-2-2 REQUIRED INFORMATION ON MINOR AND MAJOR SUBDIVISIONS, EXCLUSIONS, ANNEXATIONS, EROSION CONTROL/WATERSHED CONTROL PLANS, AND SITE PLANS/GROUP DEVELOPMENTS

Maps and/or plans submitted to the Planning Department for review shall contain the following information. An "X" indicates required information. Information required on Site Plan sheets is indicated as follows: "A" means inclusion on all sheets, "S" means inclusion on Site Layout sheet, "U" means inclusion on Utility sheet, "E" means inclusion on Erosion Control/Watershed Control sheets, and "L" means inclusion on Landscaping sheet. Depending on the scale or complexity of the development, any or all the sheets may be combined. Additional information may be required for approval of the Site Plan. The Enforcement Officer may waive specific requirements when he determines they are not necessary to complete the review. A site layout sheet meeting the requirements of Article VI may serve as a preliminary subdivision plat. "ECP" means Erosion Control Plan; "WCP" means Watershed Control Plan.

<u>Information</u>	<u>Minor & Major Subdivisions</u>						
	<u>Sketch Plan</u>	<u>Prelim Plat</u>	<u>Final Plat</u>	<u>Exclusion Map</u>	<u>Annexation Map</u>	<u>ECP/WCP</u>	<u>Site Plan/Group Dev</u>
Map or plan size: Shall not exceed a maximum size of 24" by 36"	X	X				X	A
May be drawn on more than one sheet with appropriate match lines	X	X	X	X		X	A
Use standard 18" by 24" sheet for plats to be recorded, with borders as required by County Register of Deeds; draw original on drafting film, matte both sides, with a thickness of 3 to 4 mil			X				
Title Block containing: Name of development	X	X	X			X	A
Type of map or plan (sketch plan, preliminary plan, etc.)	X	X	X	X	X	X	A

Information

Title Block containing (continued):

	Minor & Major Subdivisions						
	<u>Sketch Plan</u>	<u>Prelim Plat</u>	<u>Final Plat</u>	<u>Exclusion Map</u>	<u>Annexation Map</u>	<u>ECP/ WCP</u>	<u>Site Plan/ Group Dev</u>
Location (including address, city, township, county, & state)	X	X	X	X	X	X	A
Date map prepared and revised	X	X	X	X	X	X	A
Scale of drawing in feet per inch (drawing shall not be at a scale of less than 1 inch = 200 feet)	X	X	X	X	X	X	A
Bar graph		X	X	X	X	X	A
Name, address, and telephone number of preparer (licensed surveyor, engineer, or architect)	X	X	X	X	X	X	A
Owner's name, address, and daytime telephone number	X	X	X	X	X	X	A
Developer's name, address, and daytime telephone number (if different from owner's)	X	X	X			X	A
Zoning of property and of adjoining properties	X	X	X				S,L
Existing land use of property and of adjoining properties	X	X		X			S,L
Plat book or deed book references		X	X	X	X		S
Names of adjoining property owners (or subdivisions or developments of record with plat book reference)		X	X	X	X		S
Tax map, block, & parcel(s) numbers	X	X	X	X	X		S

Information

Vicinity map showing location of site relative to surrounding area (typically drawn in upper right hand corner at a scale of 1 inch = 2000 feet)

City limits, county lines, and other jurisdiction lines, if any (showing existing and new city limits on annexation maps)

Registration & seal of land surveyor

North arrow & orientation (North arrow shall not be oriented towards bottom of map)

Source of property boundaries signed and sealed by registered land surveyor, engineer, or architect

Boundaries of the property:

Represented distinctly and accurately and showing all distances

Tied to nearest street intersection or U.S.G.S. monument

Showing locations of intersecting boundary lines of adjoining properties

Location and descriptions of all monuments, markers, and control corners

	Minor & Major Subdivisions						
	<u>Sketch Plan</u>	<u>Prelim Plat</u>	<u>Final Plat</u>	<u>Exclusion Map</u>	<u>Annexation Map</u>	<u>ECP/WCP</u>	<u>Site Plan/Group Dev</u>
Vicinity map showing location of site relative to surrounding area (typically drawn in upper right hand corner at a scale of 1 inch = 2000 feet)	X	X	X		X	X	A
City limits, county lines, and other jurisdiction lines, if any (showing existing and new city limits on annexation maps)	X	X	X	X	X		A
Registration & seal of land surveyor			X				
North arrow & orientation (North arrow shall not be oriented towards bottom of map)	X	X	X	X	X	X	A
Source of property boundaries signed and sealed by registered land surveyor, engineer, or architect		X					S
Boundaries of the property:							
Represented distinctly and accurately and showing all distances		X	X	X	X	X	A
Tied to nearest street intersection or U.S.G.S. monument		X	X				S
Showing locations of intersecting boundary lines of adjoining properties		X	X	X	X		S
Location and descriptions of all monuments, markers, and control corners			X				

Information

Existing property lines (if existing property lines are to be changed, label as "old property lines" and show as dashed lines)

Dimensions, location, and use of all existing and proposed buildings; distances between buildings measured wall-to-wall at the closest point; distance from building wall measured at right angle to closest property line

Proposed building locations for twin home or zero side setback developments

Name of any property or building on the National Register of Historic Places or of any locally designated historic property

Railroad lines and rights-of-way

Watercourses, ponds, lakes, and streams

Marshes, swamps, and other wetlands

Areas to be dedicated or reserved for the public or a local jurisdiction

Areas designated as common area or open space under control of an Owners' Association

Location, dimensions, and details of proposed clubhouses, pools, tennis courts, tot lots, or other common area recreation facilities

Location of floodway & floodway fringe lines from Flood Insurance Rate Maps and cross-section elevations

	Minor & Major Subdivisions Sketch Plan	Prelim Plat	Final Plat	Exclusion Map	Annexation Map	ECP/ WCP	Site Plan/ Group Dev
Existing property lines (if existing property lines are to be changed, label as "old property lines" and show as dashed lines)	X	X	X	X			S
Dimensions, location, and use of all existing and proposed buildings; distances between buildings measured wall-to-wall at the closest point; distance from building wall measured at right angle to closest property line	X	X		X			S
Proposed building locations for twin home or zero side setback developments	X	X					
Name of any property or building on the National Register of Historic Places or of any locally designated historic property		X	X	X			S
Railroad lines and rights-of-way	X	X	X	X	X	X	A
Watercourses, ponds, lakes, and streams	X	X	X	X	X	X	A
Marshes, swamps, and other wetlands	X	X				X	A
Areas to be dedicated or reserved for the public or a local jurisdiction	X	X	X				A
Areas designated as common area or open space under control of an Owners' Association	X	X	X				S
Location, dimensions, and details of proposed clubhouses, pools, tennis courts, tot lots, or other common area recreation facilities							S,L
Location of floodway & floodway fringe lines from Flood Insurance Rate Maps and cross-section elevations	X	X	X	X	X	X	A

Information

	Minor & Major Subdivisions Sketch Plan	Prelim Plat	Final Plat	Exclusion Map	Annexation Map	ECP/ WCP	Site Plan/ Group Dev
Existing and proposed topography on property and 100 feet beyond property showing existing contour intervals of no greater than 5 feet (2 feet where available); and label at least two contours, including all 10 foot contours from mean sea level	X	X				X	U,E
Proposed lot lines & dimensions	X	X	X	X			
Lots numbered consecutively		X	X	X			S
Square footage of all proposed lots under one (1) acre in size		X	X	X	X		
Acreage for all lots over one acre		X	X	X	X		
Site calculations including:							
Acreage in total tract	X	X	X	X	X	X	A
Acreage in public drainageway and open space		X	X			X	S,L
Total number of lots proposed	X	X	X				S
Linear feet in streets		X	X		X		S
Area in newly dedicated right-of-way		X	X				S
Location of areas approved by County Health Department for land application, soil evaluation table (found in Section A-2-3), and approval signatures from Health Department, for projects not served by public sewer and water		X	X				S
Manufactured dwelling parks:							
Show location of manufactured dwelling spaces and whether for single- or double-wide dwellings							S
Show typical diagram of manufactured dwelling space							S
Location of designated recreation areas and facilities							S

Information

Dimensions and location of all parking areas; total provided & minimum required number of parking spaces; driveways; service areas; off-street loading facilities; and pedestrian walkways

S,L

Location of each parking space, angle of parking, & typical dimensions

S

Street data illustrating:

Existing and proposed rights-of-way (R/W) within and adjacent to property showing:

R/W Lines

X X X X X X S

total R/W width

X X X X X X S

R/W width from centerline of existing streets

X X X X X X S

Existing and proposed streets showing:

pavement or curb lines

X X X X S

pavement width (face-to-face)

X X X X S

cul-de-sac pavement radius

X X X X S

existing & proposed street names (refer to street name standards)

X X X X X X A

Information

Minor & Major Subdivisions
 Sketch Prelim Final Exclusion Annexation ECP/ Site Plan/
Plan Plat Plat Map Map WCP Group Dev

Location, dimension, & type of all easements

X X X X X X A

Utility Layout Plan showing connections to existing systems, line sizes, material of lines, location of fire hydrants, blowoffs, valves, manholes, catch basins, force mains, etc. for the following types of utility lines:

Sanitary sewer

X

U

Water distribution

X

U

Storm sewer

X

U

Erosion control information including:

Construction sequence

X

E

Areas to be disturbed, number of disturbed acres, and percentage of tract disturbed

X

E

% slope

X

E

Areas to be left undisturbed, number of acres, type of ground cover, and % natural or stabilizing vegetation on tract

X

E

Total impervious surface area including streets, roofs, patios, parking areas, sidewalks, & driveways

X

E

Information

Erosion control information including (continued):

The shortest distance to the nearest applicable floodway identified on the applicable Federal Emergency Management Agency (FEMA) Map

X

E

Soil erosion and sedimentation control measures, including the design, locations, dimensions, and calculations

X

E

Permanent watershed protection controls including ponds, maintenance and access, water quality conservation easements, and natural filtration and infiltration areas

X

X

S,E

Stormwater network including swales, culverts, inlet and outlet structures with grades, elevations, dimensions, and hydraulic calculations

X

U,E

Seeding specifications including seedbed preparation, seeding rates, and schedule

X

E

Soil types as shown in the Guilford County Soil Survey

X

E

	Minor & Major Subdivisions			Exclusion Map	Annexation Map	ECP/WCP	Site Plan/Group Dev
	Sketch Plan	Prelim Plat	Final Plat				
The shortest distance to the nearest applicable floodway identified on the applicable Federal Emergency Management Agency (FEMA) Map						X	E
Soil erosion and sedimentation control measures, including the design, locations, dimensions, and calculations						X	E
Permanent watershed protection controls including ponds, maintenance and access, water quality conservation easements, and natural filtration and infiltration areas			X			X	S,E
Stormwater network including swales, culverts, inlet and outlet structures with grades, elevations, dimensions, and hydraulic calculations						X	U,E
Seeding specifications including seedbed preparation, seeding rates, and schedule						X	E
Soil types as shown in the Guilford County Soil Survey						X	E

Information

Minor & Major Subdivisions Sketch <u>Plan</u>	Prelim <u>Plat</u>	Final <u>Plat</u>	Exclusion <u>Map</u>	Annexation <u>Map</u>	ECP/ <u>WCP</u>	Site Plan/ <u>Group Dev</u>
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Erosion control information including
(continued):

Engineering certification statement if
required by Ordinance

X

X

E

Landscaping Information including:

Location of Street Planting Yard, Planting
Yards, and parking lot plantings

S,L

Location, species, size (caliper or DBH),
number, spacing, and height of trees &
shrubs in planting areas (if existing
vegetation is to be preserved, indicate
approximate height & species mix)

L

Size of Planting Yards, walls, berms,
& fences

S,L

Provisions for soil stabilization,
plant protection, & maintenance access

L

Location & description of barriers to
protect any vegetation from damage both
during & after construction

L

Location and dimensions of central mail
structure(s)

S

Location and screening of dumpsters/
compactors (show pad dimensions)

S,L

Information

Location and size of existing freestanding signs

Certificates:

(See A-2-3 Map Certificates for format. Certificates should be placed along left border of map)

Survey and Accuracy signed by surveyor and attested by Notary Public (maximum allowable error: 1:5,000 or 20 seconds per angle)

Ownership and Dedication signed by owner(s)

Approval for Recordation

Approval by Division of Highways of the N. C. Department of Transportation

Statement that no approval is required by Division of Highways of the N.C. Department of Transportation

Acknowledgement of Notary Public by County Register of Deeds

Soil Evaluation Table (if applicable)

Minor & Major Subdivisions						
<u>Sketch Plan</u>	<u>Prelim Plat</u>	<u>Final Plat</u>	<u>Exclusion Map</u>	<u>Annexation Map</u>	<u>ECP/WCP</u>	<u>Site Plan/Group Dev</u>

X

S

X

X

X

X

X

X

X

A-2-3 MAP CERTIFICATES

(A) Survey and Accuracy (attested by Notary Public):

"I, _____, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM (AN ACTUAL SURVEY MADE UNDER MY SUPERVISION) (DEED DESCRIPTION RECORDED IN BOOK _____, PAGE _____ ETC.)(OTHER); THAT THE ERROR OF CLOSURE IS 1:_____; THAT THE BOUNDARIES NOT SURVEYED ARE SHOWN AS BROKEN LINES PLOTTED FROM INFORMATION FOUND IN BOOK _____, PAGE _____; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S.47-30 AS AMENDED. WITNESS MY ORIGINAL SIGNATURE, REGISTRATION NUMBER, AND SEAL THIS ____ DAY OF _____, A.D. 19__.

SEAL OR STAMP

SURVEYOR

REGISTRATION NUMBER

"NORTH CAROLINA, _____ COUNTY
I, A NOTARY PUBLIC OF THE COUNTY AND STATE AFORESAID, CERTIFY THAT _____, A REGISTERED LAND SURVEYOR, PERSONALLY APPEARED BEFORE ME THIS DAY AND ACKNOWLEDGED THE EXECUTION OF THE FOREGOING INSTRUMENT. WITNESS MY HAND AND OFFICIAL STAMP OR SEAL, THIS ____ DAY OF _____, 19__.

NOTARY PUBLIC

SEAL OR STAMP MY COMMISSION EXPIRES:

_____ "

(B) Ownership and Dedication:

THE UNDERSIGNED HEREBY ACKNOWLEDGE(S) THIS PLAT AND ALLOTMENT TO BE _____ FREE ACT AND DEED AND HEREBY DEDICATE(S) TO PUBLIC USE AS STREETS, PLAYGROUNDS, PARKS, DRAINAGEWAY AND OPEN SPACES, AND EASEMENTS FOREVER ALL AREAS SO SHOWN OR INDICATED ON SAID PLAT, AND AUTHORIZE(S) THE (CITY) (TOWN) (COUNTY) OF _____ TO RECORD THIS PLAT IN THE OFFICE OF THE REGISTER OF DEEDS OF GUILFORD COUNTY, N.C.

WHEN GRADE OF ADJACENT PROPERTY DOES NOT CONFORM TO THE STREET GRADE, AN EASEMENT IS IN EFFECT FOR THE PURPOSE OF SLOPING EMBANKMENTS FROM STREET GRADE LEVEL AT THE PROPERTY LINE HAVING A SLOPE RATIO OF THREE FEET HORIZONTAL FOR EACH FOOT OF VERTICAL DIMENSION.

SIGNED

(C) Approval for Recordation:

APPROVED BY THE PLANNING DEPARTMENT OF _____, NORTH CAROLINA ON THE ____ DAY OF _____, 19__ PURSUANT TO THE _____ DEVELOPMENT ORDINANCE.

PLANNING DIRECTOR

CITY CLERK

(D) Approval by Division of Highways of the North Carolina Department of Transportation (NCDOT):

DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROPOSED SUBDIVISION ROAD
CONSTRUCTION STANDARDS CERTIFICATION

APPROVED _____
DISTRICT ENGINEER

DATE _____

(E) Statement No Approval Is Required by NCDOT Division of Highways:

THIS PLAT DOES NOT A REQUIRE CERTIFICATE OF APPROVAL BY THE DIVISION OF HIGHWAYS AS PROVIDED IN GSS. 136-102.6, SUBSECTION (g).

SIGNED _____
PLANNING DIRECTOR

Date _____

(F) Acknowledgement of Notary Public by County Register of Deeds:

NORTH CAROLINA - GUILFORD COUNTY
THE FOREGOING CERTIFICATE(S) OF

A NOTARY PUBLIC OF SAID COUNTY IS
(ARE) CERTIFIED TO BE CORRECT

THIS ____ DAY OF _____, 19__

REGISTER OF DEEDS

DEPUTY REGISTER OF DEEDS

(G) Surveyor's Certification (Plat Shall Contain One of The Following):

1. That the survey creates a subdivision of land within the area of a county or municipality that has an ordinance that regulates parcels of land;
2. That the survey is located in such portion of a county or municipality that is is unregulated as to an ordinance that regulates parcels of land;
3. That the survey is of an existing parcel or parcels of land;
4. That the survey is of another category, such as the recombination of existing parcels, a court-ordered survey, or other exception to the definition of subdivision;
5. That the information available to the surveyor is such that the surveyor is unable to make a determination to the best of his or her professional ability as to provisions contained in 1-4 above.

SIGNED AND SEALED

(H) Soil Evaluation Table:

If any lots are not provided with municipal sanitary sewer service, the final plat shall show the following Certificate of Approval from the Environmental Health Division:

THE APPROVED RECORDED AREAS WERE EVALUATED UNDER JANUARY 1, 1990 RULES AND REGULATIONS AND ARE VALID UNTIL SUCH TIME THAT THESE RULES CHANGE. THIS APPROVAL DOES NOT CONSTITUTE AN IMPROVEMENT PERMIT.

° Lot # °	° Application ° Rate	° Available ° Area (Sq. Ft.)	° Type of ° System	° Date °	° Sanitarian °
°	°	°	°	°	°
°	°	°	°	°	°
°	°	°	°	°	°
°	°	°	°	°	°

The approved area will be circled on the plat; and if multiple areas are available on the lot, they will be designated with letters.

**APPENDIX 3: REQUIRED INFORMATION FOR STREET AND UTILITY PLAN
AND PROFILE SHEETS**

Information:

Stormwater drainage calculations shall be submitted with site drainage sheet along with construction plans and profiles on all projects.

Map size:

Plans and profiles submitted shall be on sheets 24" x 42" in size. Plans and profiles submitted for public streets or utilities shall be from mylar sheets furnished by the City.

Cover sheet (e.g. preliminary plan) showing layout of overall development (key map with sheet index required for all projects involving over 10 sheets)

Vicinity map on cover sheet (typically drawn in upper right corner)

User fee schedule at top of cover sheet

Name and limits of roadway or utility line

Name of development

Owner's name

Location (including city, township, county, and state)

Date sheet prepared and revised

Name, address, and telephone number of plan preparer (registered engineer)

Engineer's seal registered and licensed in North Carolina

North arrow and orientation (sheets will not be accepted for review with north facing toward the bottom of sheet)

Profile vertical and horizontal scales:

Public streets and utilities (horizontal scale: 1"=40';
vertical scale: 1"=4')

Private streets and utilities (horizontal scale: 1"=40';
vertical scale: 1"=4')

Intersecting property lines and lot numbers of lots adjoining the streets

Existing and proposed railroads and rights-of-way

Existing and proposed watercourses, culverts, and storm drains

Right-of-way lines and right-of-way width dimensions

Existing and proposed street lines and pavement widths

Existing and proposed cul-de-sac lines with radius of pavement and of right-of-way

Existing and proposed street names

Typical street cross-section

Location and dimension of all utility and other easements

Utility layouts for: sanitary sewer lines, storm sewer lines, water distribution lines, and other drainage facilities illustrating connections to existing utility systems, indicating line or pipe sizes and materials, locations of fire hydrants, valves, blowoffs, manholes, and curb inlets

Show entire intersection on one plan and profile sheet

Show all storm sewer lines in extended view in profile on same street as plan view

Centerline stationing on both plan and profile. Stationing shall run from left side of sheet to right. Show limits of construction and station number

Plan and profile of stubbed streets shall be extended approximately 200 feet beyond limits of construction

Independent stationing of water and sanitary sewer lines

Elevations where storm sewer, sanitary sewer, or water lines cross

Work not done by contractor shall be indicated by note and arrow

Elevation and station at all match lines and intersections

Profile grade (in percent)

Existing topography on profile shown by dashed line

Top of curb elevation (in plan view) indicating curb radii, point of curvature, and point of tangency

Design engineering data for all curves (horizontal and vertical)

Intersecting grades and drainage flows on side streets shown for
approximately 300 feet

Detail sheets showing manholes, fire hydrants, catch basins,
street cross-sections, etc.

Approval notation (as designated by City)

APPENDIX 4: MINIMUM LOT SIZES IN RM AND GO DISTRICTS

The following table applies the minimum lot area requirements of Table 30-4-6-4 to show the minimum lot area to accommodate a given number of dwelling units and, conversely, the maximum number of dwelling units on a tract of a given area. The user should be aware that the figures in this table set absolute maximums; one should not assume that a number in the table represents a "right" to that number of dwelling units or even an "expected achievable density" on a particular tract.

Every multifamily development is required to meet all applicable standards in Section 30-4-6.2 (Multifamily Districts) and in other sections of this Ordinance. The probability that a given tract can attain the maximum number of dwelling units shown in the table increases if: 1) the tract is large; 2) it has a regular shape; 3) it has good topography; 4) a new development, rather than an addition to an existing development, is proposed; 5) the zoning district is one of the lower-density multifamily zones; and 6) the developer is flexible about building type (as opposed to being committed to one-story construction, for example).

Refer to the definition of lot area (Section 30-2-2.9), to Section 30-4-6.2(C)3 (Multifamily Developments Divided by Streets), and to Section 30-4-6.2(C)4 (Multifamily Developments Including Dedicated Drainageway and Open Space), all of which may have a bearing on the number of dwelling units permitted.

None of the RM or GO districts is directly comparable, in terms of maximum density, to any previous City zoning district. More often than not, the maximum density figure for a given tract will be different (lower or higher) than it was under previous zoning. If an existing development built in conformance with a previous ordinance now has more dwelling units than the new zoning district would permit on an identically sized tract, that development is simply nonconforming. There is no requirement to remove dwelling units. Conversely, if the new zoning district would permit more dwelling units than what was built under the previous ordinance, it would be possible in theory to add dwelling units. In practice, however, it is apt to prove quite difficult - for two reasons. First, the original plan of development probably utilized the entire site, as opposed to setting aside room for expansion; an effort to place additional units into a space not designed to accommodate them would likely not promote beneficial development of the community. Secondly, the mere fact that an identically sized vacant tract in the same zoning district could be developed with a higher number of dwelling units under this Ordinance is not grounds for approval of any modification or variance.

MINIMUM LOT SIZES

DU's	ZONING DISTRICTS									
	RM-5		RM-8		RM-12 & GO-M		RM-18		RM-26 & GO-H	
	ACRES	SQ.FT	ACRES	SQ.FT	ACRES	SQ.FT	ACRES	SQ.FT	ACRES	SQ.FT
1	0.195	8500	0.161	7000	0.161	7000	0.115	5000	0.115	5000
2	0.402	17500	0.275	12000	0.253	11000	0.207	9000	0.161	7000
3	0.597	26000	0.367	16000	0.344	15000	0.275	12000	0.207	9000
4	0.797	34712	0.492	21445	0.428	18630	0.331	14420	0.245	10675
5	0.997	43424	0.617	26890	0.511	22260	0.387	16840	0.284	12350
6	1.197	52136	0.742	32335	0.594	25890	0.442	19260	0.322	14025
7	1.397	60848	0.867	37780	0.678	29520	0.498	21680	0.360	15700
8	1.597	69560	0.992	43225	0.761	33150	0.553	24100	0.399	17375
9	1.797	78272	1.117	48670	0.844	36780	0.609	26520	0.437	19050
10	1.997	86984	1.242	54115	0.928	40410	0.664	28940	0.476	20725
11	2.197	95696	1.367	59560	1.011	44040	0.720	31360	0.514	22400
12	2.397	104408	1.492	65005	1.094	47670	0.775	33780	0.553	24075
13	2.597	113120	1.617	70450	1.178	51300	0.831	36200	0.591	25750
14	2.797	121832	1.742	75895	1.261	54930	0.887	38620	0.630	27425
15	2.997	130544	1.867	81340	1.344	58560	0.942	41040	0.668	29100
16	3.197	139256	1.992	86785	1.428	62190	0.998	43460	0.706	30775
17	3.397	147968	2.117	92230	1.511	65820	1.053	45880	0.745	32450
18	3.597	156680	2.242	97675	1.594	69450	1.109	48300	0.783	34125
19	3.797	165392	2.367	103120	1.678	73080	1.164	50720	0.822	35800
20	3.997	174104	2.492	108565	1.761	76710	1.220	53140	0.860	37475
21	4.197	182816	2.617	114010	1.844	80340	1.275	55560	0.899	39150
22	4.397	191528	2.742	119455	1.928	83970	1.331	57980	0.937	40825
23	4.597	200240	2.867	124900	2.011	87600	1.387	60400	0.976	42500
24	4.797	208952	2.992	130345	2.094	91230	1.442	62820	1.014	44175
25	4.997	217664	3.117	135790	2.178	94860	1.498	65240	1.053	45850
26	5.197	226376	3.242	141235	2.261	98490	1.553	67660	1.091	47525
27	5.397	235088	3.367	146680	2.344	102120	1.609	70080	1.129	49200
28	5.597	243800	3.492	152125	2.428	105750	1.664	72500	1.168	50875
29	5.797	252512	3.617	157570	2.511	109380	1.720	74920	1.206	52550
30	5.997	261224	3.742	163015	2.594	113010	1.775	77340	1.245	54225
31	6.197	269936	3.867	168460	2.678	116640	1.831	79760	1.283	55900
32	6.397	278648	3.992	173905	2.761	120270	1.887	82180	1.322	57575
33	6.597	287360	4.117	179350	2.844	123900	1.942	84600	1.360	59250
34	6.797	296072	4.242	184795	2.928	127530	1.998	87020	1.399	60925
35	6.997	304784	4.367	190240	3.011	131160	2.053	89440	1.437	62600
36	7.197	313496	4.492	195685	3.094	134790	2.109	91860	1.476	64275
37	7.397	322208	4.617	201130	3.178	138420	2.164	94280	1.514	65950
38	7.597	330920	4.742	206575	3.261	142050	2.220	96700	1.552	67625
39	7.797	339632	4.867	212020	3.344	145680	2.275	99120	1.591	69300
40	7.997	348344	4.992	217465	3.428	149310	2.331	101540	1.629	70975
41	8.197	357056	5.117	222910	3.511	152940	2.387	103960	1.668	72650
42	8.397	365768	5.242	228355	3.594	156570	2.442	106380	1.706	74325
43	8.597	374480	5.367	233800	3.678	160200	2.498	108800	1.745	76000
44	8.797	383192	5.492	239245	3.761	163830	2.553	111220	1.783	77675
45	8.997	391904	5.617	244690	3.844	167460	2.609	113640	1.822	79350
46	9.197	400616	5.742	250135	3.928	171090	2.664	116060	1.860	81025
47	9.397	409328	5.867	255580	4.011	174720	2.720	118480	1.899	82700
48	9.597	418040	5.992	261025	4.094	178350	2.775	120900	1.937	84375
49	9.797	426752	6.117	266470	4.178	181980	2.831	123320	1.975	86050
50	9.997	435464	6.242	271915	4.261	185610	2.887	125740	2.014	87725
51	10.197	444176	6.367	277360	4.344	189240	2.942	128160	2.052	89400
52	10.397	452888	6.492	282805	4.428	192870	2.998	130580	2.091	91075
53	10.597	461600	6.617	288250	4.511	196500	3.053	133000	2.129	92750
54	10.797	470312	6.742	293695	4.594	200130	3.109	135420	2.168	94425

MINIMUM LOT SIZES

DU's	ZONING DISTRICTS									
	RM-5		RM-8		RM-12 & GO-M		RM-18		RM-26 & GO-H	
	ACRES	SQ.FT.	ACRES	SQ.FT.	ACRES	SQ.FT.	ACRES	SQ.FT.	ACRES	SQ.FT.
55	10.997	479024	6.867	299140	4.678	203760	3.164	137840	2.206	96100
56	11.197	487736	6.992	304585	4.761	207390	3.220	140260	2.245	97775
57	11.397	496448	7.117	310030	4.844	211020	3.275	142680	2.283	99450
58	11.597	505160	7.242	315475	4.928	214650	3.331	145100	2.322	101125
59	11.797	513872	7.367	320920	5.011	218280	3.387	147520	2.360	102800
60	11.997	522584	7.492	326365	5.094	221910	3.442	149940	2.398	104475
61	12.197	531296	7.617	331810	5.178	225540	3.498	152360	2.437	106150
62	12.397	540008	7.742	337255	5.261	229170	3.553	154780	2.475	107825
63	12.597	548720	7.867	342700	5.344	232800	3.609	157200	2.514	109500
64	12.797	557432	7.992	348145	5.428	236430	3.664	159620	2.552	111175
65	12.997	566144	8.117	353590	5.511	240060	3.720	162040	2.591	112850
66	13.197	574856	8.242	359035	5.594	243690	3.775	164460	2.629	114525
67	13.397	583568	8.367	364480	5.678	247320	3.831	166880	2.668	116200
68	13.597	592280	8.492	369925	5.761	250950	3.887	169300	2.706	117875
69	13.797	600992	8.617	375370	5.844	254580	3.942	171720	2.744	119550
70	13.997	609704	8.742	380815	5.928	258210	3.998	174140	2.783	121225
71	14.197	618416	8.867	386260	6.011	261840	4.053	176560	2.821	122900
72	14.397	627128	8.992	391705	6.094	265470	4.109	178980	2.860	124575
73	14.597	635840	9.117	397150	6.178	269100	4.164	181400	2.898	126250
74	14.797	644552	9.242	402595	6.261	272730	4.220	183820	2.937	127925
75	14.997	653264	9.367	408040	6.344	276360	4.275	186240	2.975	129600
76	15.197	661976	9.492	413485	6.428	279990	4.331	188660	3.014	131275
77	15.397	670688	9.617	418930	6.511	283620	4.387	191080	3.052	132950
78	15.597	679400	9.742	424375	6.594	287250	4.442	193500	3.091	134625
79	15.797	688112	9.867	429820	6.678	290880	4.498	195920	3.129	136300
80	15.997	696824	9.992	435265	6.761	294510	4.553	198340	3.167	137975
81	16.197	705536	10.117	440710	6.844	298140	4.609	200760	3.206	139650
82	16.397	714248	10.242	446155	6.928	301770	4.664	203180	3.244	141325
83	16.597	722960	10.367	451600	7.011	305400	4.720	205600	3.283	143000
84	16.797	731672	10.492	457045	7.094	309030	4.775	208020	3.321	144675
85	16.997	740384	10.617	462490	7.178	312660	4.831	210440	3.360	146350
86	17.197	749096	10.742	467935	7.261	316290	4.887	212860	3.398	148025
87	17.397	757808	10.867	473380	7.344	319920	4.942	215280	3.437	149700
88	17.597	766520	10.992	478825	7.428	323550	4.998	217700	3.475	151375
89	17.797	775232	11.117	484270	7.511	327180	5.053	220120	3.514	153050
90	17.997	783944	11.242	489715	7.594	330810	5.109	222540	3.552	154725
91	18.197	792656	11.367	495160	7.678	334440	5.164	224960	3.590	156400
92	18.397	801368	11.492	500605	7.761	338070	5.220	227380	3.629	158075
93	18.597	810080	11.617	506050	7.844	341700	5.275	229800	3.667	159750
94	18.797	818792	11.742	511495	7.928	345330	5.331	232220	3.706	161425
95	18.997	827504	11.867	516940	8.011	348960	5.387	234640	3.744	163100
96	19.197	836216	11.992	522385	8.094	352590	5.442	237060	3.783	164775
97	19.397	844928	12.117	527830	8.178	356220	5.498	239480	3.821	166450
98	19.597	853640	12.242	533275	8.261	359850	5.553	241900	3.860	168125
99	19.797	862352	12.367	538720	8.344	363480	5.609	244320	3.898	169800
100	19.997	871064	12.492	544165	8.428	367110	5.664	246740	3.937	171475
101	20.197	879776	12.617	549610	8.511	370740	5.720	249160	3.975	173150
102	20.397	888488	12.742	555055	8.594	374370	5.775	251580	4.013	174825
103	20.597	897200	12.867	560500	8.678	378000	5.831	254000	4.052	176500
104	20.797	905912	12.992	565945	8.761	381630	5.887	256420	4.090	178175
105	20.997	914624	13.117	571390	8.844	385260	5.942	258840	4.129	179850
106	21.197	923336	13.242	576835	8.928	388890	5.998	261260	4.167	181525
107	21.397	932048	13.367	582280	9.011	392520	6.053	263680	4.206	183200
108	21.597	940760	13.492	587725	9.094	396150	6.109	266100	4.244	184875

MINIMUM LOT SIZES

DU's	ZONING DISTRICTS									
	RM-5		RM-8		RM-12 & GO-M		RM-18		RM-26 & GO-H	
	ACRES	SQ.FT.	ACRES	SQ.FT.	ACRES	SQ.FT.	ACRES	SQ.FT.	ACRES	SQ.FT.
109	21.797	949472	13.617	593170	9.178	399780	6.164	268520	4.283	186550
110	21.997	958184	13.742	598615	9.261	403410	6.220	270940	4.321	188225
111	22.197	966896	13.867	604060	9.344	407040	6.275	273360	4.360	189900
112	22.397	975608	13.992	609505	9.428	410670	6.331	275780	4.398	191575
113	22.597	984320	14.117	614950	9.511	414300	6.387	278200	4.436	193250
114	22.797	993032	14.242	620395	9.594	417930	6.442	280620	4.475	194925
115	22.997	1001744	14.367	625840	9.678	421560	6.498	283040	4.513	196600
116	23.197	1010456	14.492	631285	9.761	425190	6.553	285460	4.552	198275
117	23.397	1019168	14.617	636730	9.844	428820	6.609	287880	4.590	199950
118	23.597	1027880	14.742	642175	9.928	432450	6.664	290300	4.629	201625
119	23.797	1036592	14.867	647620	10.011	436080	6.720	292720	4.667	203300
120	23.997	1045304	14.992	653065	10.094	439710	6.775	295140	4.706	204975
121	24.197	1054016	15.117	658510	10.178	443340	6.831	297560	4.744	206650
122	24.397	1062728	15.242	663955	10.261	446970	6.887	299980	4.782	208325
123	24.597	1071440	15.367	669400	10.344	450600	6.942	302400	4.821	210000
124	24.797	1080152	15.492	674845	10.428	454230	6.998	304820	4.859	211675
125	24.997	1088864	15.617	680290	10.511	457860	7.053	307240	4.898	213350
126	25.197	1097576	15.742	685735	10.594	461490	7.109	309660	4.936	215025
127	25.397	1106288	15.867	691180	10.678	465120	7.164	312080	4.975	216700
128	25.597	1115000	15.992	696625	10.761	468750	7.220	314500	5.013	218375
129	25.797	1123712	16.117	702070	10.844	472380	7.275	316920	5.052	220050
130	25.997	1132424	16.242	707515	10.928	476010	7.331	319340	5.090	221725
131	26.197	1141136	16.367	712960	11.011	479640	7.387	321760	5.129	223400
132	26.397	1149848	16.492	718405	11.094	483270	7.442	324180	5.167	225075
133	26.597	1158560	16.617	723850	11.178	486900	7.498	326600	5.205	226750
134	26.797	1167272	16.742	729295	11.261	490530	7.553	329020	5.244	228425
135	26.997	1175984	16.867	734740	11.344	494160	7.609	331440	5.282	230100
136	27.197	1184696	16.992	740185	11.428	497790	7.664	333860	5.321	231775
137	27.397	1193408	17.117	745630	11.511	501420	7.720	336280	5.359	233450
138	27.597	1202120	17.242	751075	11.594	505050	7.775	338700	5.398	235125
139	27.797	1210832	17.367	756520	11.678	508680	7.831	341120	5.436	236800
140	27.997	1219544	17.492	761965	11.761	512310	7.887	343540	5.475	238475
141	28.197	1228256	17.617	767410	11.844	515940	7.942	345960	5.513	240150
142	28.397	1236968	17.742	772855	11.928	519570	7.998	348380	5.552	241825
143	28.597	1245680	17.867	778300	12.011	523200	8.053	350800	5.590	243500
144	28.797	1254392	17.992	783745	12.094	526830	8.109	353220	5.628	245175
145	28.997	1263104	18.117	789190	12.178	530460	8.164	355640	5.667	246850
146	29.197	1271816	18.242	794635	12.261	534090	8.220	358060	5.705	248525
147	29.397	1280528	18.367	800080	12.344	537720	8.275	360480	5.744	250200
148	29.597	1289240	18.492	805525	12.428	541350	8.331	362900	5.782	251875
149	29.797	1297952	18.617	810970	12.511	544980	8.387	365320	5.821	253550
150	29.997	1306664	18.742	816415	12.594	548610	8.442	367740	5.859	255225
151	30.197	1315376	18.867	821860	12.678	552240	8.498	370160	5.898	256900
152	30.397	1324088	18.992	827305	12.761	555870	8.553	372580	5.936	258575
153	30.597	1332800	19.117	832750	12.844	559500	8.609	375000	5.975	260250
154	30.797	1341512	19.242	838195	12.928	563130	8.664	377420	6.013	261925
155	30.997	1350224	19.367	843640	13.011	566760	8.720	379840	6.051	263600
156	31.197	1358936	19.492	849085	13.094	570390	8.775	382260	6.090	265275
157	31.397	1367648	19.617	854530	13.178	574020	8.831	384680	6.128	266950
158	31.597	1376360	19.742	859975	13.261	577650	8.887	387100	6.167	268625
159	31.797	1385072	19.867	865420	13.344	581280	8.942	389520	6.205	270300
160	31.997	1393784	19.992	870865	13.428	584910	8.998	391940	6.244	271975
161	32.197	1402496	20.117	876310	13.511	588540	9.053	394360	6.282	273650
162	32.397	1411208	20.242	881755	13.594	592170	9.109	396780	6.321	275325

MINIMUM LOT SIZES

DU's	ZONING DISTRICTS									
	RM-5		RM-8		RM-12 & GO-M		RM-18		RM-26 & GO-H	
	ACRES	SQ.FT.	ACRES	SQ.FT.	ACRES	SQ.FT.	ACRES	SQ.FT.	ACRES	SQ.FT.
163	32.597	1419920	20.367	887200	13.678	595800	9.164	399200	6.359	277000
164	32.797	1428632	20.492	892645	13.761	599430	9.220	401620	6.397	278675
165	32.997	1437344	20.617	898090	13.844	603060	9.275	404040	6.436	280350
166	33.197	1446056	20.742	903535	13.928	606690	9.331	406460	6.474	282025
167	33.397	1454768	20.867	908980	14.011	610320	9.387	408880	6.513	283700
168	33.597	1463480	20.992	914425	14.094	613950	9.442	411300	6.551	285375
169	33.797	1472192	21.117	919870	14.178	617580	9.498	413720	6.590	287050
170	33.997	1480904	21.242	925315	14.261	621210	9.553	416140	6.628	288725
171	34.197	1489616	21.367	930760	14.344	624840	9.609	418560	6.667	290400
172	34.397	1498328	21.492	936205	14.428	628470	9.664	420980	6.705	292075
173	34.597	1507040	21.617	941650	14.511	632100	9.720	423400	6.744	293750
174	34.797	1515752	21.742	947095	14.594	635730	9.775	425820	6.782	295425
175	34.997	1524464	21.867	952540	14.678	639360	9.831	428240	6.820	297100
176	35.197	1533176	21.992	957985	14.761	642990	9.887	430660	6.859	298775
177	35.397	1541888	22.117	963430	14.844	646620	9.942	433080	6.897	300450
178	35.597	1550600	22.242	968875	14.928	650250	9.998	435500	6.936	302125
179	35.797	1559312	22.367	974320	15.011	653880	10.053	437920	6.974	303800
180	35.997	1568024	22.492	979765	15.094	657510	10.109	440340	7.013	305475
181	36.197	1576736	22.617	985210	15.178	661140	10.164	442760	7.051	307150
182	36.397	1585448	22.742	990655	15.261	664770	10.220	445180	7.090	308825
183	36.597	1594160	22.867	996100	15.344	668400	10.275	447600	7.128	310500
184	36.797	1602872	22.992	1001545	15.428	672030	10.331	450020	7.167	312175
185	36.997	1611584	23.117	1006990	15.511	675660	10.387	452440	7.205	313850
186	37.197	1620296	23.242	1012435	15.594	679290	10.442	454860	7.243	315525
187	37.397	1629008	23.367	1017880	15.678	682920	10.498	457280	7.282	317200
188	37.597	1637720	23.492	1023325	15.761	686550	10.553	459700	7.320	318875
189	37.797	1646432	23.617	1028770	15.844	690180	10.609	462120	7.359	320550
190	37.997	1655144	23.742	1034215	15.928	693810	10.664	464540	7.397	322225
191	38.197	1663856	23.867	1039660	16.011	697440	10.720	466960	7.436	323900
192	38.397	1672568	23.992	1045105	16.094	701070	10.775	469380	7.474	325575
193	38.597	1681280	24.117	1050550	16.178	704700	10.831	471800	7.513	327250
194	38.797	1689992	24.242	1055995	16.261	708330	10.887	474220	7.551	328925
195	38.997	1698704	24.367	1061440	16.344	711960	10.942	476640	7.590	330600
196	39.197	1707416	24.492	1066885	16.428	715590	10.998	479060	7.628	332275
197	39.397	1716128	24.617	1072330	16.511	719220	11.053	481480	7.666	333950
198	39.597	1724840	24.742	1077775	16.594	722850	11.109	483900	7.705	335625
199	39.797	1733552	24.867	1083220	16.678	726480	11.164	486320	7.743	337300
200	39.997	1742264	24.992	1088665	16.761	730110	11.220	488740	7.782	338975
201	40.197	1750976	25.117	1094110	16.844	733740	11.275	491160	7.820	340650
202	40.397	1759688	25.242	1099555	16.928	737370	11.331	493580	7.859	342325
203	40.597	1768400	25.367	1105000	17.011	741000	11.387	496000	7.897	344000
204	40.797	1777112	25.492	1110445	17.094	744630	11.442	498420	7.936	345675
205	40.997	1785824	25.617	1115890	17.178	748260	11.498	500840	7.974	347350
206	41.197	1794536	25.742	1121335	17.261	751890	11.553	503260	8.013	349025
207	41.397	1803248	25.867	1126780	17.344	755520	11.609	505680	8.051	350700
208	41.597	1811960	25.992	1132225	17.428	759150	11.664	508100	8.089	352375
209	41.797	1820672	26.117	1137670	17.511	762780	11.720	510520	8.128	354050
210	41.997	1829384	26.242	1143115	17.594	766410	11.775	512940	8.166	355725
211	42.197	1838096	26.367	1148560	17.678	770040	11.831	515360	8.205	357400
212	42.397	1846808	26.492	1154005	17.761	773670	11.887	517780	8.243	359075
213	42.597	1855520	26.617	1159450	17.844	777300	11.942	520200	8.282	360750
214	42.797	1864232	26.742	1164895	17.928	780930	11.998	522620	8.320	362425
215	42.997	1872944	26.867	1170340	18.011	784560	12.053	525040	8.359	364100
216	43.197	1881656	26.992	1175785	18.094	788190	12.109	527460	8.397	365775

MINIMUM LOT SIZES

DU's	ZONING DISTRICTS									
	RM-5		RM-8		RM-12 & GO-M		RM-18		RM-26 & GO-H	
	ACRES	SQ.FT.	ACRES	SQ.FT.	ACRES	SQ.FT.	ACRES	SQ.FT.	ACRES	SQ.FT.
217	43.397	1890368	27.117	1181230	18.178	791820	12.164	529880	8.435	367450
218	43.597	1899080	27.242	1186675	18.261	795450	12.220	532300	8.474	369125
219	43.797	1907792	27.367	1192120	18.344	799080	12.275	534720	8.512	370800
220	43.997	1916504	27.492	1197565	18.428	802710	12.331	537140	8.551	372475
221	44.197	1925216	27.617	1203010	18.511	806340	12.387	539560	8.589	374150
222	44.397	1933928	27.742	1208455	18.594	809970	12.442	541980	8.628	375825
223	44.597	1942640	27.867	1213900	18.678	813600	12.498	544400	8.666	377500
224	44.797	1951352	27.992	1219345	18.761	817230	12.553	546820	8.705	379175
225	44.997	1960064	28.117	1224790	18.844	820860	12.609	549240	8.743	380850
226	45.197	1968776	28.242	1230235	18.928	824490	12.664	551660	8.782	382525
227	45.397	1977488	28.367	1235680	19.011	828120	12.720	554080	8.820	384200
228	45.597	1986200	28.492	1241125	19.094	831750	12.775	556500	8.858	385875
229	45.797	1994912	28.617	1246570	19.178	835380	12.831	558920	8.897	387550
230	45.997	2003624	28.742	1252015	19.261	839010	12.887	561340	8.935	389225
231	46.197	2012336	28.867	1257460	19.344	842640	12.942	563760	8.974	390900
232	46.397	2021048	28.992	1262905	19.428	846270	12.998	566180	9.012	392575
233	46.597	2029760	29.117	1268350	19.511	849900	13.053	568600	9.051	394250
234	46.797	2038472	29.242	1273795	19.594	853530	13.109	571020	9.089	395925
235	46.997	2047184	29.367	1279240	19.678	857160	13.164	573440	9.128	397600
236	47.197	2055896	29.492	1284685	19.761	860790	13.220	575860	9.166	399275
237	47.397	2064608	29.617	1290130	19.844	864420	13.275	578280	9.205	400950
238	47.597	2073320	29.742	1295575	19.928	868050	13.331	580700	9.243	402625
239	47.797	2082032	29.867	1301020	20.011	871680	13.387	583120	9.281	404300
240	47.997	2090744	29.992	1306465	20.094	875310	13.442	585540	9.320	405975
241	48.197	2099456	30.117	1311910	20.178	878940	13.498	587960	9.358	407650
242	48.397	2108168	30.242	1317355	20.261	882570	13.553	590380	9.397	409325
243	48.597	2116880	30.367	1322800	20.344	886200	13.609	592800	9.435	411000
244	48.797	2125592	30.492	1328245	20.428	889830	13.664	595220	9.474	412675
245	48.997	2134304	30.617	1333690	20.511	893460	13.720	597640	9.512	414350
246	49.197	2143016	30.742	1339135	20.594	897090	13.775	600060	9.551	416025
247	49.397	2151728	30.867	1344580	20.678	900720	13.831	602480	9.589	417700
248	49.597	2160440	30.992	1350025	20.761	904350	13.887	604900	9.628	419375
249	49.797	2169152	31.117	1355470	20.844	907980	13.942	607320	9.666	421050
250	49.997	2177864	31.242	1360915	20.928	911610	13.998	609740	9.704	422725
251	50.197	2186576	31.367	1366360	21.011	915240	14.053	612160	9.743	424400
252	50.397	2195288	31.492	1371805	21.094	918870	14.109	614580	9.781	426075
253	50.597	2204000	31.617	1377250	21.178	922500	14.164	617000	9.820	427750
254	50.797	2212712	31.742	1382695	21.261	926130	14.220	619420	9.858	429425
255	50.997	2221424	31.867	1388140	21.344	929760	14.275	621840	9.897	431100
256	51.197	2230136	31.992	1393585	21.428	933390	14.331	624260	9.935	432775
257	51.397	2238848	32.117	1399030	21.511	937020	14.387	626680	9.974	434450
258	51.597	2247560	32.242	1404475	21.594	940650	14.442	629100	10.012	436125
259	51.797	2256272	32.367	1409920	21.678	944280	14.498	631520	10.051	437800
260	51.997	2264984	32.492	1415365	21.761	947910	14.553	633940	10.089	439475
261	52.197	2273696	32.617	1420810	21.844	951540	14.609	636360	10.127	441150
262	52.397	2282408	32.742	1426255	21.928	955170	14.664	638780	10.166	442825
263	52.597	2291120	32.867	1431700	22.011	958800	14.720	641200	10.204	444500
264	52.797	2299832	32.992	1437145	22.094	962430	14.775	643620	10.243	446175
265	52.997	2308544	33.117	1442590	22.178	966060	14.831	646040	10.281	447850
266	53.197	2317256	33.242	1448035	22.261	969690	14.887	648460	10.320	449525
267	53.397	2325968	33.367	1453480	22.344	973320	14.942	650880	10.358	451200
268	53.597	2334680	33.492	1458925	22.428	976950	14.998	653300	10.397	452875
269	53.797	2343392	33.617	1464370	22.511	980580	15.053	655720	10.435	454550
270	53.997	2352104	33.742	1469815	22.594	984210	15.109	658140	10.473	456225

MINIMUM LOT SIZES

DU's	ZONING DISTRICTS									
	RM-5		RM-8		RM-12 & GO-M		RM-18		RM-26 & GO-H	
	ACRES	SQ.FT.	ACRES	SQ.FT.	ACRES	SQ.FT.	ACRES	SQ.FT.	ACRES	SQ.FT.
271	54.197	2360816	33.867	1475260	22.678	987840	15.164	660560	10.512	457900
272	54.397	2369528	33.992	1480705	22.761	991470	15.220	662980	10.550	459575
273	54.597	2378240	34.117	1486150	22.844	995100	15.275	665400	10.589	461250
274	54.797	2386952	34.242	1491595	22.928	998730	15.331	667820	10.627	462925
275	54.997	2395664	34.367	1497040	23.011	1002360	15.387	670240	10.666	464600
276	55.197	2404376	34.492	1502485	23.094	1005990	15.442	672660	10.704	466275
277	55.397	2413088	34.617	1507930	23.178	1009620	15.498	675080	10.743	467950
278	55.597	2421800	34.742	1513375	23.261	1013250	15.553	677500	10.781	469625
279	55.797	2430512	34.867	1518820	23.344	1016880	15.609	679920	10.820	471300
280	55.997	2439224	34.992	1524265	23.428	1020510	15.664	682340	10.858	472975
281	56.197	2447936	35.117	1529710	23.511	1024140	15.720	684760	10.896	474650
282	56.397	2456648	35.242	1535155	23.594	1027770	15.775	687180	10.935	476325
283	56.597	2465360	35.367	1540600	23.678	1031400	15.831	689600	10.973	478000
284	56.797	2474072	35.492	1546045	23.761	1035030	15.887	692020	11.012	479675
285	56.997	2482784	35.617	1551490	23.844	1038660	15.942	694440	11.050	481350
286	57.197	2491496	35.742	1556935	23.928	1042290	15.998	696860	11.089	483025
287	57.397	2500208	35.867	1562380	24.011	1045920	16.053	699280	11.127	484700
288	57.597	2508920	35.992	1567825	24.094	1049550	16.109	701700	11.166	486375
289	57.797	2517632	36.117	1573270	24.178	1053180	16.164	704120	11.204	488050
290	57.997	2526344	36.242	1578715	24.261	1056810	16.220	706540	11.243	489725
291	58.197	2535056	36.367	1584160	24.344	1060440	16.275	708960	11.281	491400
292	58.397	2543768	36.492	1589605	24.428	1064070	16.331	711380	11.319	493075
293	58.597	2552480	36.617	1595050	24.511	1067700	16.387	713800	11.358	494750
294	58.797	2561192	36.742	1600495	24.594	1071330	16.442	716220	11.396	496425
295	58.997	2569904	36.867	1605940	24.678	1074960	16.498	718640	11.435	498100
296	59.197	2578616	36.992	1611385	24.761	1078590	16.553	721060	11.473	499775
297	59.397	2587328	37.117	1616830	24.844	1082220	16.609	723480	11.512	501450
298	59.597	2596040	37.242	1622275	24.928	1085850	16.664	725900	11.550	503125
299	59.797	2604752	37.367	1627720	25.011	1089480	16.720	728320	11.589	504800
300	59.997	2613464	37.492	1633165	25.094	1093110	16.775	730740	11.627	506475
301	60.197	2622176	37.617	1638610	25.178	1096740	16.831	733160	11.666	508150
302	60.397	2630888	37.742	1644055	25.261	1100370	16.887	735580	11.704	509825
303	60.597	2639600	37.867	1649500	25.344	1104000	16.942	738000	11.742	511500
304	60.797	2648312	37.992	1654945	25.428	1107630	16.998	740420	11.781	513175
305	60.997	2657024	38.117	1660390	25.511	1111260	17.053	742840	11.819	514850
306	61.197	2665736	38.242	1665835	25.594	1114890	17.109	745260	11.858	516525
307	61.397	2674448	38.367	1671280	25.678	1118520	17.164	747680	11.896	518200
308	61.597	2683160	38.492	1676725	25.761	1122150	17.220	750100	11.935	519875
309	61.797	2691872	38.617	1682170	25.844	1125780	17.275	752520	11.973	521550
310	61.997	2700584	38.742	1687615	25.928	1129410	17.331	754940	12.012	523225
311	62.197	2709296	38.867	1693060	26.011	1133040	17.387	757360	12.050	524900
312	62.397	2718008	38.992	1698505	26.094	1136670	17.442	759780	12.088	526575
313	62.597	2726720	39.117	1703950	26.178	1140300	17.498	762200	12.127	528250
314	62.797	2735432	39.242	1709395	26.261	1143930	17.553	764620	12.165	529925
315	62.997	2744144	39.367	1714840	26.344	1147560	17.609	767040	12.204	531600
316	63.197	2752856	39.492	1720285	26.428	1151190	17.664	769460	12.242	533275
317	63.397	2761568	39.617	1725730	26.511	1154820	17.720	771880	12.281	534950
318	63.597	2770280	39.742	1731175	26.594	1158450	17.775	774300	12.319	536625
319	63.797	2778992	39.867	1736620	26.678	1162080	17.831	776720	12.358	538300
320	63.997	2787704	39.992	1742065	26.761	1165710	17.887	779140	12.396	539975
321	64.197	2796416	40.117	1747510	26.844	1169340	17.942	781560	12.435	541650
322	64.397	2805128	40.242	1752955	26.928	1172970	17.998	783980	12.473	543325
323	64.597	2813840	40.367	1758400	27.011	1176600	18.053	786400	12.511	545000
324	64.797	2822552	40.492	1763845	27.094	1180230	18.109	788820	12.550	546675

MINIMUM LOT SIZES

DU's	ZONING DISTRICTS									
	RM-5		RM-8		RM-12 & GO-M		RM-18		RM-26 & GO-H	
	ACRES	SQ.FT.	ACRES	SQ.FT.	ACRES	SQ.FT.	ACRES	SQ.FT.	ACRES	SQ.FT.
325	64.997	2831264	40.617	1769290	27.178	1183860	18.164	791240	12.588	548350
326	65.197	2839976	40.742	1774735	27.261	1187490	18.220	793660	12.627	550025
327	65.397	2848688	40.867	1780180	27.344	1191120	18.275	796080	12.665	551700
328	65.597	2857400	40.992	1785625	27.428	1194750	18.331	798500	12.704	553375
329	65.797	2866112	41.117	1791070	27.511	1198380	18.387	800920	12.742	555050
330	65.997	2874824	41.242	1796515	27.594	1202010	18.442	803340	12.781	556725
331	66.197	2883536	41.367	1801960	27.678	1205640	18.498	805760	12.819	558400
332	66.397	2892248	41.492	1807405	27.761	1209270	18.553	808180	12.858	560075
333	66.597	2900960	41.617	1812850	27.844	1212900	18.609	810600	12.896	561750
334	66.797	2909672	41.742	1818295	27.928	1216530	18.664	813020	12.934	563425
335	66.997	2918384	41.867	1823740	28.011	1220160	18.720	815440	12.973	565100
336	67.197	2927096	41.992	1829185	28.094	1223790	18.775	817860	13.011	566775
337	67.397	2935808	42.117	1834630	28.178	1227420	18.831	820280	13.050	568450
338	67.597	2944520	42.242	1840075	28.261	1231050	18.887	822700	13.088	570125
339	67.797	2953232	42.367	1845520	28.344	1234680	18.942	825120	13.127	571800
340	67.997	2961944	42.492	1850965	28.428	1238310	18.998	827540	13.165	573475
341	68.197	2970656	42.617	1856410	28.511	1241940	19.053	829960	13.204	575150
342	68.397	2979368	42.742	1861855	28.594	1245570	19.109	832380	13.242	576825
343	68.597	2988080	42.867	1867300	28.678	1249200	19.164	834800	13.281	578500
344	68.797	2996792	42.992	1872745	28.761	1252830	19.220	837220	13.319	580175
345	68.997	3005504	43.117	1878190	28.844	1256460	19.275	839640	13.357	581850
346	69.197	3014216	43.242	1883635	28.928	1260090	19.331	842060	13.396	583525
347	69.397	3022928	43.367	1889080	29.011	1263720	19.387	844480	13.434	585200
348	69.597	3031640	43.492	1894525	29.094	1267350	19.442	846900	13.473	586875
349	69.797	3040352	43.617	1899970	29.178	1270980	19.498	849320	13.511	588550
350	69.997	3049064	43.742	1905415	29.261	1274610	19.553	851740	13.550	590225
351	70.197	3057776	43.867	1910860	29.344	1278240	19.609	854160	13.588	591900
352	70.397	3066488	43.992	1916305	29.428	1281870	19.664	856580	13.627	593575
353	70.597	3075200	44.117	1921750	29.511	1285500	19.720	859000	13.665	595250
354	70.797	3083912	44.242	1927195	29.594	1289130	19.775	861420	13.704	596925
355	70.997	3092624	44.367	1932640	29.678	1292760	19.831	863840	13.742	598600
356	71.197	3101336	44.492	1938085	29.761	1296390	19.887	866260	13.780	600275
357	71.397	3110048	44.617	1943530	29.844	1300020	19.942	868680	13.819	601950
358	71.597	3118760	44.742	1948975	29.928	1303650	19.998	871100	13.857	603625
359	71.797	3127472	44.867	1954420	30.011	1307280	20.053	873520	13.896	605300
360	71.997	3136184	44.992	1959865	30.094	1310910	20.109	875940	13.934	606975
361	72.197	3144896	45.117	1965310	30.178	1314540	20.164	878360	13.973	608650
362	72.397	3153608	45.242	1970755	30.261	1318170	20.220	880780	14.011	610325
363	72.597	3162320	45.367	1976200	30.344	1321800	20.275	883200	14.050	612000
364	72.797	3171032	45.492	1981645	30.428	1325430	20.331	885620	14.088	613675
365	72.997	3179744	45.617	1987090	30.511	1329060	20.387	888040	14.126	615350
366	73.197	3188456	45.742	1992535	30.594	1332690	20.442	890460	14.165	617025
367	73.397	3197168	45.867	1997980	30.678	1336320	20.498	892880	14.203	618700
368	73.597	3205880	45.992	2003425	30.761	1339950	20.553	895300	14.242	620375
369	73.797	3214592	46.117	2008870	30.844	1343580	20.609	897720	14.280	622050
370	73.997	3223304	46.242	2014315	30.928	1347210	20.664	900140	14.319	623725
371	74.197	3232016	46.367	2019760	31.011	1350840	20.720	902560	14.357	625400
372	74.397	3240728	46.492	2025205	31.094	1354470	20.775	904980	14.396	627075
373	74.597	3249440	46.617	2030650	31.178	1358100	20.831	907400	14.434	628750
374	74.797	3258152	46.742	2036095	31.261	1361730	20.887	909820	14.473	630425
375	74.997	3266864	46.867	2041540	31.344	1365360	20.942	912240	14.511	632100
376	75.197	3275576	46.992	2046985	31.428	1368990	20.998	914660	14.549	633775
377	75.397	3284288	47.117	2052430	31.511	1372620	21.053	917080	14.588	635450
378	75.597	3293000	47.242	2057875	31.594	1376250	21.109	919500	14.626	637125

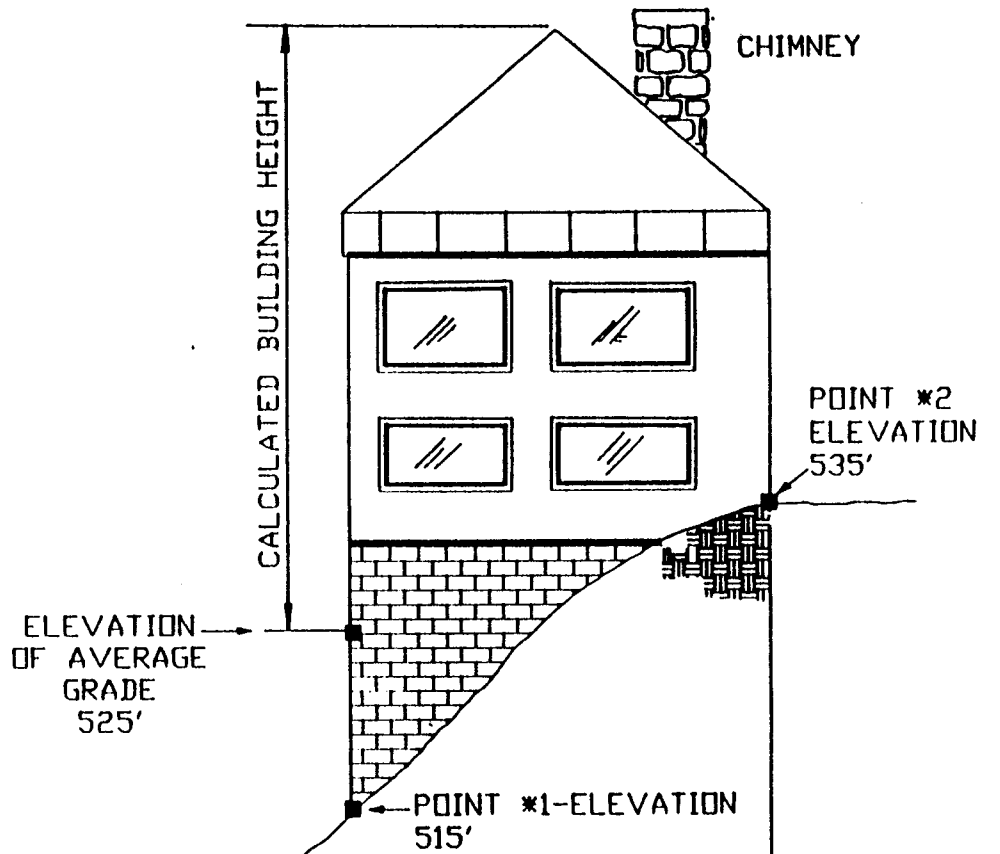
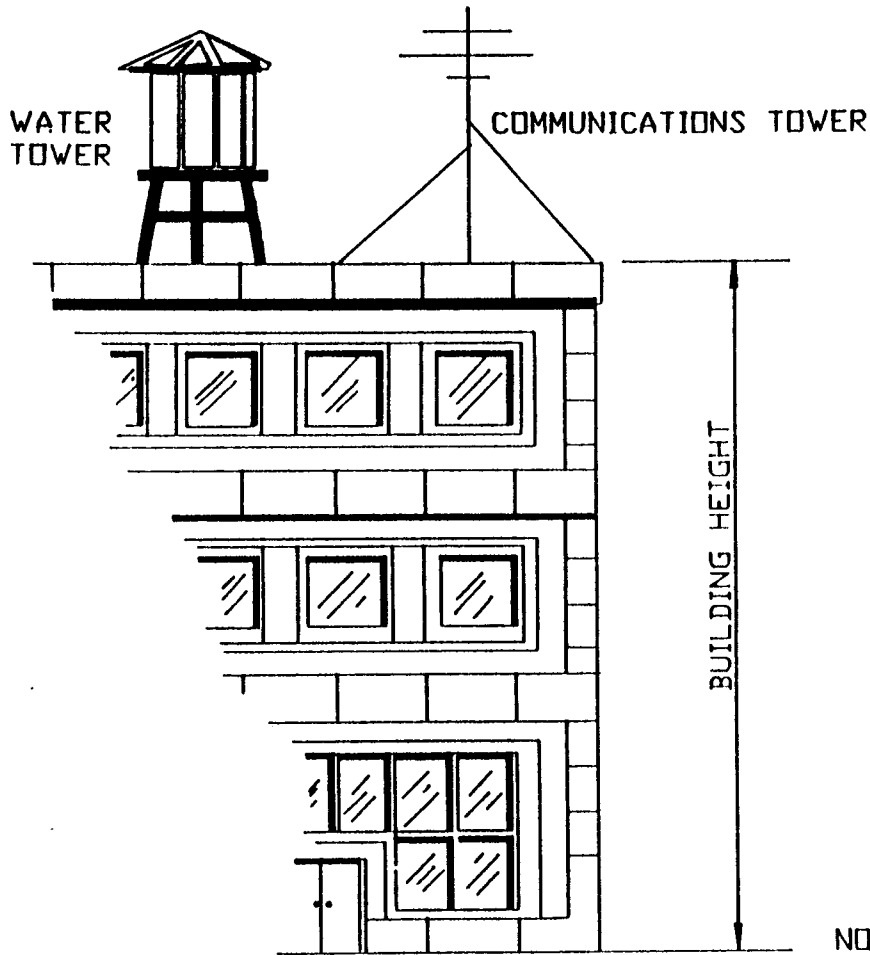
MINIMUM LOT SIZES

DU's	ZONING DISTRICTS									
	RM-5		RM-8		RM-12 & GO-M		RM-18		RM-26 & GO-H	
	ACRES	SQ.FT.	ACRES	SQ.FT.	ACRES	SQ.FT.	ACRES	SQ.FT.	ACRES	SQ.FT.
379	75.797	3301712	47.367	2063320	31.678	1379880	21.164	921920	14.665	638800
380	75.997	3310424	47.492	2068765	31.761	1383510	21.220	924340	14.703	640475
381	76.197	3319136	47.617	2074210	31.844	1387140	21.275	926760	14.742	642150
382	76.397	3327848	47.742	2079655	31.928	1390770	21.331	929180	14.780	643825
383	76.597	3336560	47.867	2085100	32.011	1394400	21.387	931600	14.819	645500
384	76.797	3345272	47.992	2090545	32.094	1398030	21.442	934020	14.857	647175
385	76.997	3353984	48.117	2095990	32.178	1401660	21.498	936440	14.896	648850
386	77.197	3362696	48.242	2101435	32.261	1405290	21.553	938860	14.934	650525
387	77.397	3371408	48.367	2106880	32.344	1408920	21.609	941280	14.972	652200
388	77.597	3380120	48.492	2112325	32.428	1412550	21.664	943700	15.011	653875
389	77.797	3388832	48.617	2117770	32.511	1416180	21.720	946120	15.049	655550
390	77.997	3397544	48.742	2123215	32.594	1419810	21.775	948540	15.088	657225
391	78.197	3406256	48.867	2128660	32.678	1423440	21.831	950960	15.126	658900
392	78.397	3414968	48.992	2134105	32.761	1427070	21.887	953380	15.165	660575
393	78.597	3423680	49.117	2139550	32.844	1430700	21.942	955800	15.203	662250
394	78.797	3432392	49.242	2144995	32.928	1434330	21.998	958220	15.242	663925
395	78.997	3441104	49.367	2150440	33.011	1437960	22.053	960640	15.280	665600
396	79.197	3449816	49.492	2155885	33.094	1441590	22.109	963060	15.319	667275
397	79.397	3458528	49.617	2161330	33.178	1445220	22.164	965480	15.357	668950
398	79.597	3467240	49.742	2166775	33.261	1448850	22.220	967900	15.395	670625
399	79.797	3475952	49.867	2172220	33.344	1452480	22.275	970320	15.434	672300
400	79.997	3484664	49.992	2177665	33.428	1456110	22.331	972740	15.472	673975

APPENDIX 5: ILLUSTRATIONS

The following illustrations are designed to provide a visual explanation to selected Sections of this Ordinance. If any illustration appears to be in conflict with this Ordinance, the text within this Ordinance shall rule. Below is a list of each illustration that appears in this Appendix and the Section of this Ordinance that it illustrates.

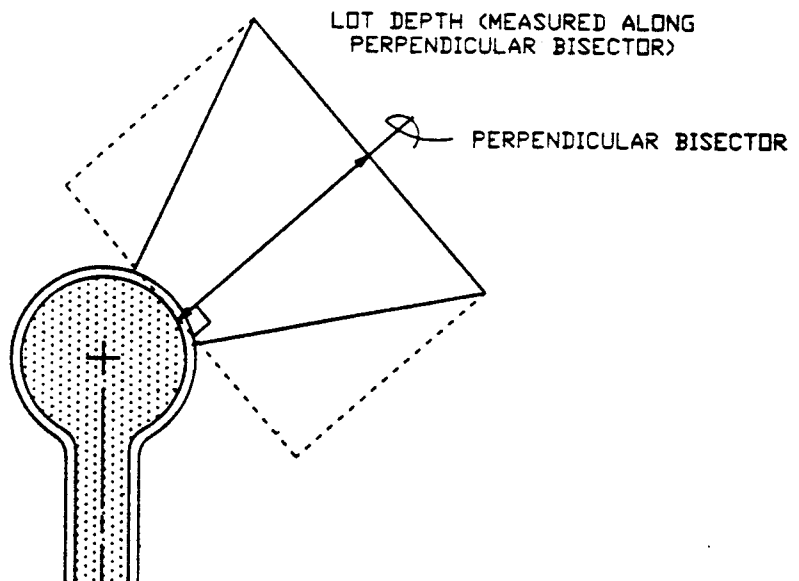
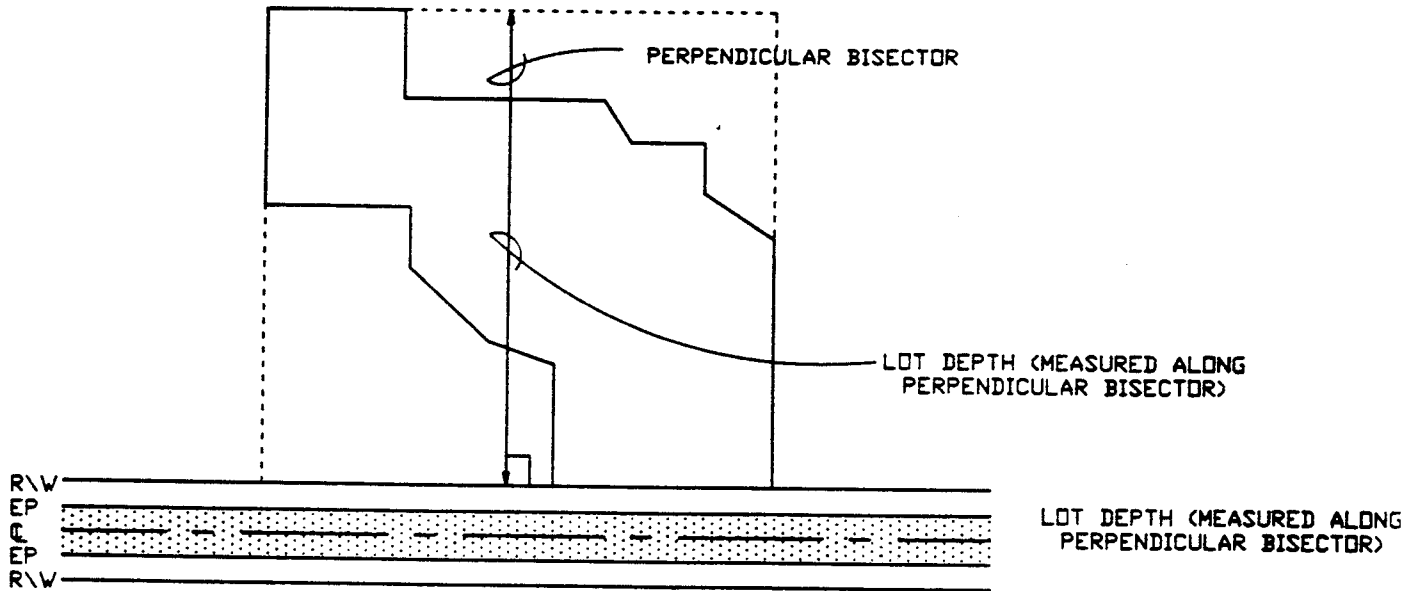
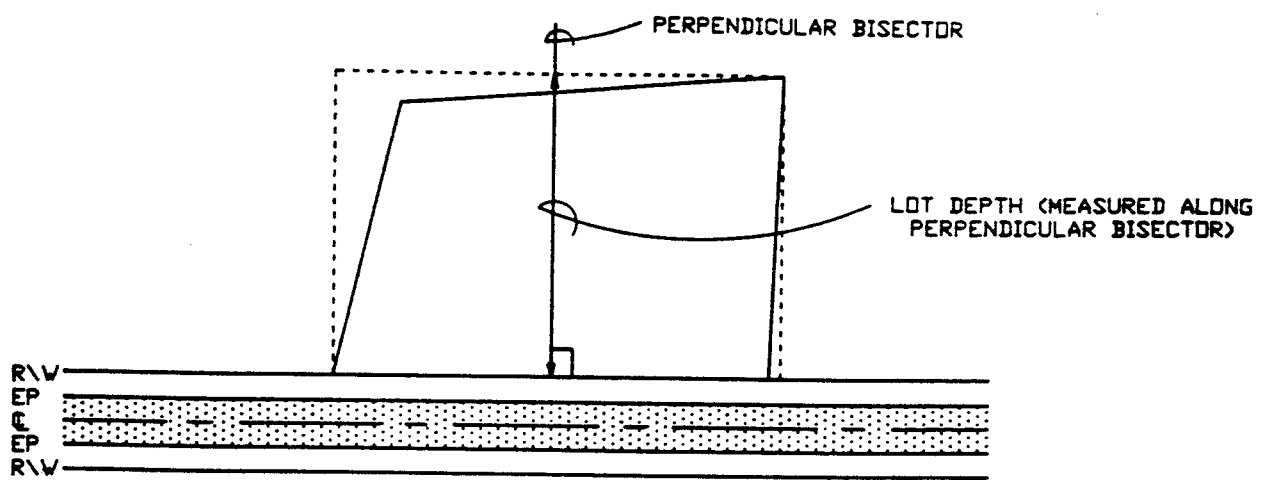
<u>No.</u>	<u>Illustration</u>	<u>Section Illustrated</u>
A-5.1	Measurement of Building Height	30-2-2.1
A-5.2	Measurement of Lot Depth	30-2-2.9
A-5.3	Minimum Lot Width	30-2-2.9
	Determination of Minimum Building Line.....	30-2-2.9
A-5.4	Determination of Setbacks	30-2-2.10
A-5.5	Street Classifications	30-2-2.12
A-5.6	Zero Side Setback	30-4-6.1(C)(2)
A-5.7	Lots Adjoining Public Open Space.....	30-4-6.1(D)(2)
A-5.8	Yard Space Triangles	30-4-6.2(C)(2)(a)
A-5.9	Accessory Buildings and Structures.....	30-4-8
A-5.10	Structure Encroachments into Required Setbacks	30-4-7.4(B)
A-5.11	Flag Lot	30-6-13.2(H)
A-5.12	Single Family Detached Cluster Development	30-4-6.1(B)
A-5.13	Accessory Dwelling Units on Single Family Lots	30-5-2.3
A-5.14	Typical Manufactured Dwelling Space	30-5-2.50(C)
A-5.15	Application of Landscaping Requirements	Tables 30-5-4-1 and 30-5-4-2
A-5.16	Street Planting Yard	Table 30-5-4-2
A-5.17	Type A & B Planting Yards	Table 30-5-4-2
A-5.18	Type C & D Planting Yards	Table 30-5-4-2
A-5.19	Parking Lot Plantings	30-5-4.4(E), Table 30-5-4-2
A-5.20	Handicap Parking Requirements	30-5-3.1(D)
A-5.21	Loading and Stacking Arrangements	30-5-3.7(C)(2), Table 30-5-3-2
A-5.22	Parking in Residential Districts	30-5-3.5(C)
A-5.23	Flood Hazard Boundaries	30-7-5.4
A-5.24	Rural Family Occupation	30-5-2.67
A-5.25	Fence or Wall Height for Residential Uses	30-4-9.6(A)
A-5.26	Parking Space Geometric Design Standards	Table 30-5-3-2
A-5.27	Property Separation and Use Separation	30-5-2.2(A)
A-5.28	Drainageway and Open Space Dedication	30-6-13.7(C)
A-5.29 to A-5.39	RESERVED	
A-5.40	Calculation of Sign Area and Height	30-5-5.7
A-5.41	Types of Signs	30-2-2.11
A-5.42	Spacing Requirements Between Freestanding Signs	Table 30-5-5-2
A-5.43	Protest Petition 100-Foot Wide Buffer.....	30-3-12.2(L)



• CALCULATE AVERAGE GRADE FROM POINT #1 TO POINT #2
 $(515' + 535' = 1050' + 2 = 525')$

MEASUREMENT OF BUILDING HEIGHT

NO SCALE

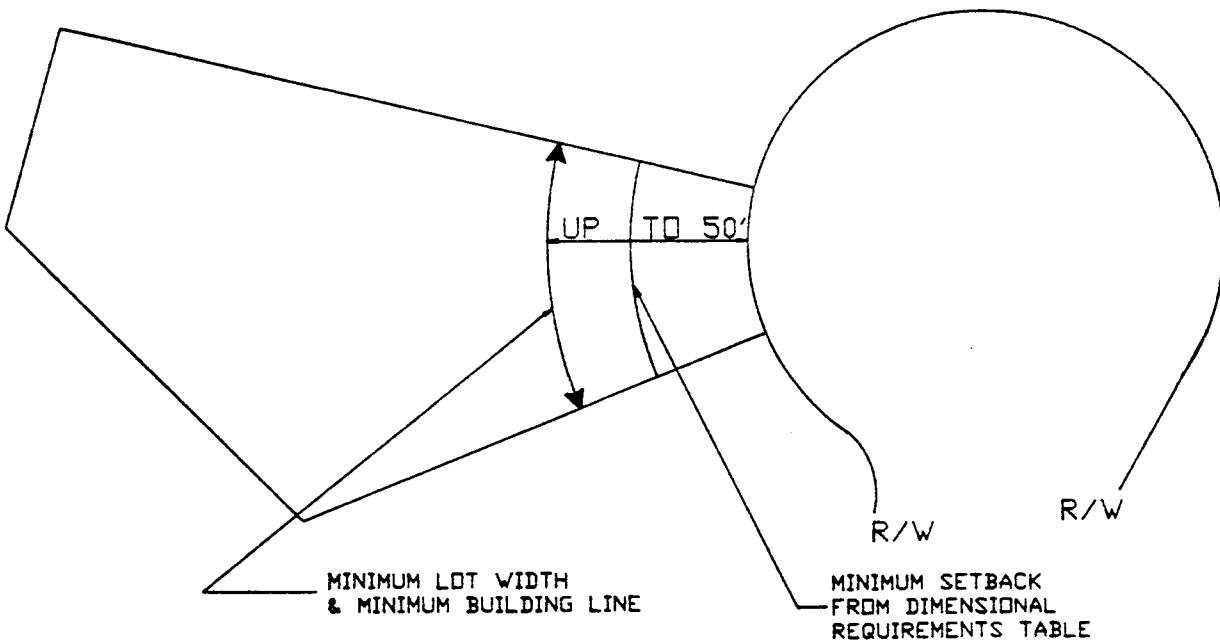
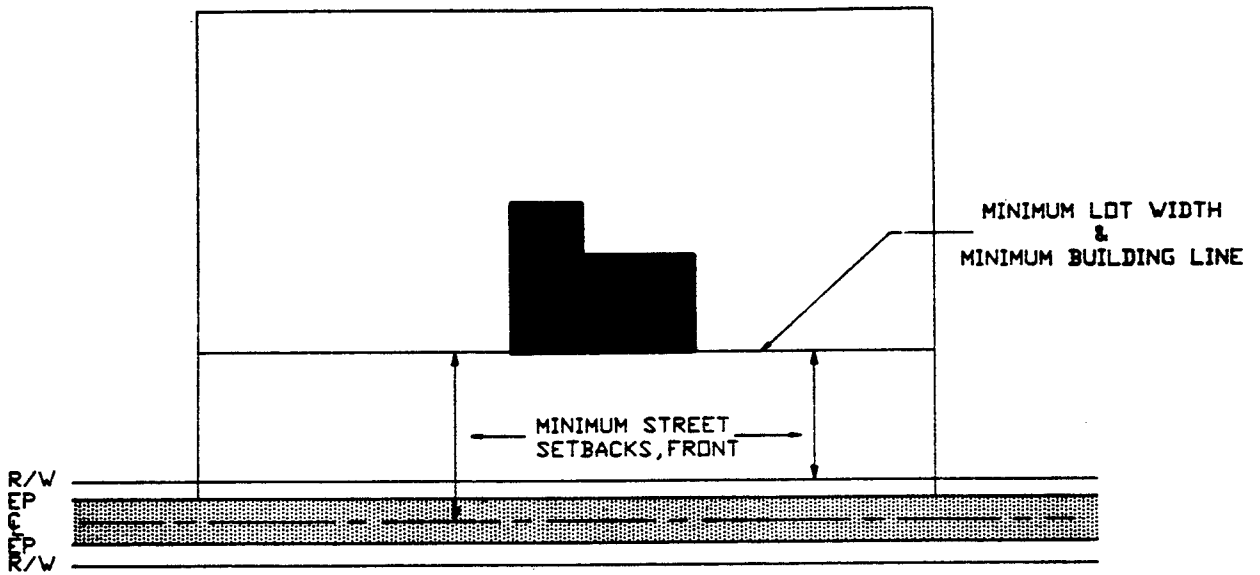


- ENCLOSE THE LOT IN THE SMALLEST POSSIBLE RECTANGLE.
- DRAW A PERPENDICULAR BISECTOR THROUGH THE RECTANGLE.
- THE LOT DEPTH IS MEASURED ALONG THE PERPENDICULAR BISECTOR.

MEASUREMENT OF LOT DEPTH

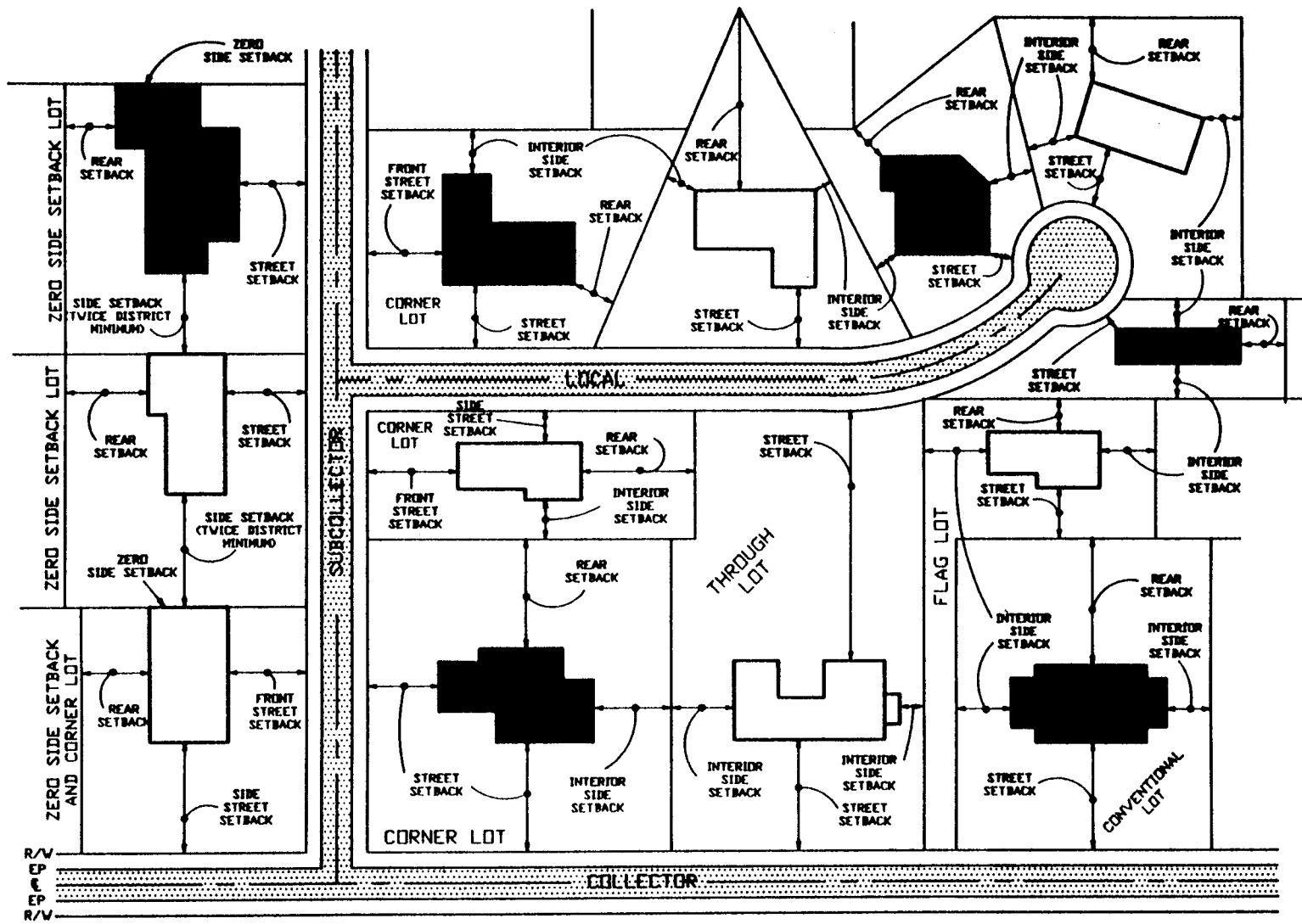
MINIMUM LOT WIDTH

NO SCALE

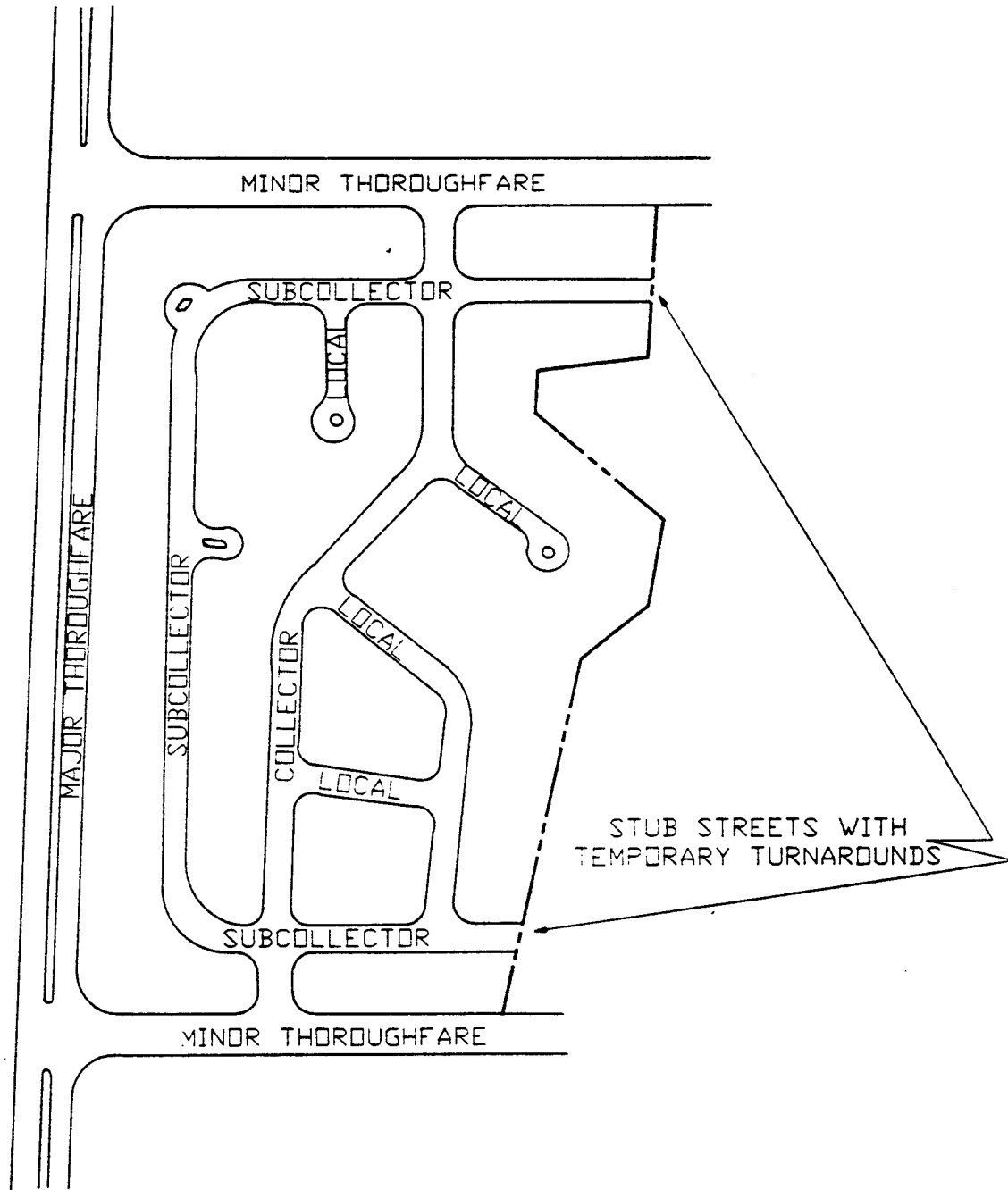


DETERMINATION OF MINIMUM BUILDING LINE

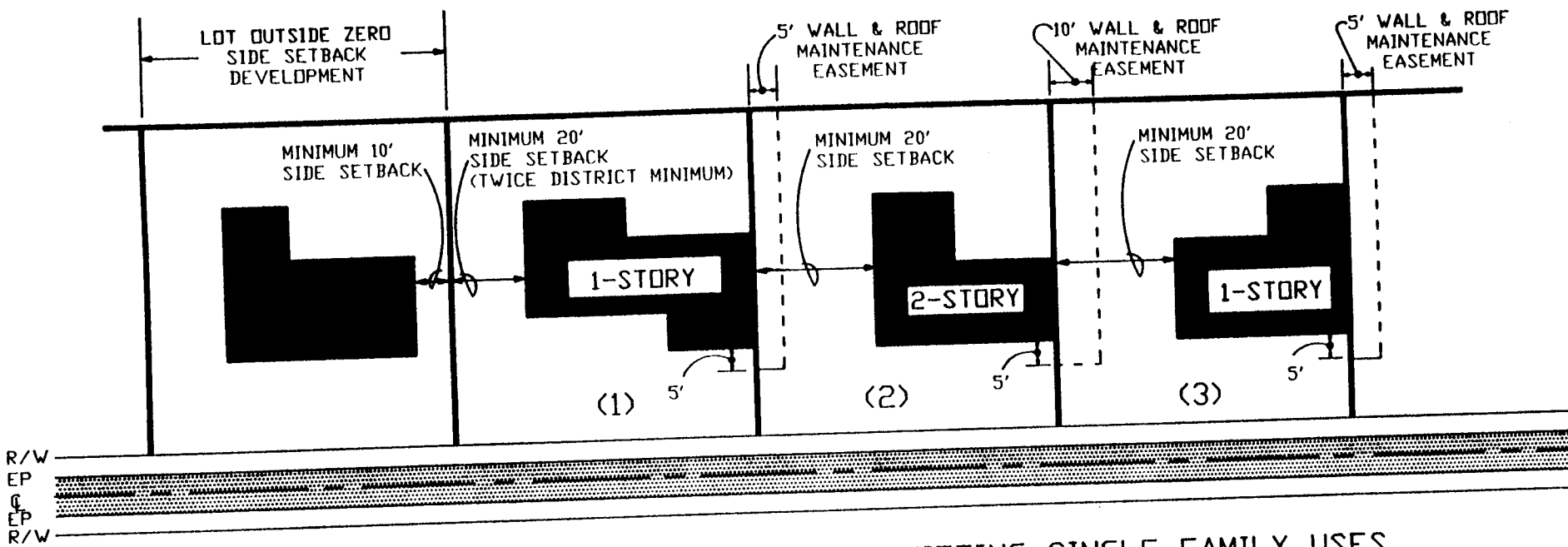
NO SCALE



DETERMINATION OF SETBACKS



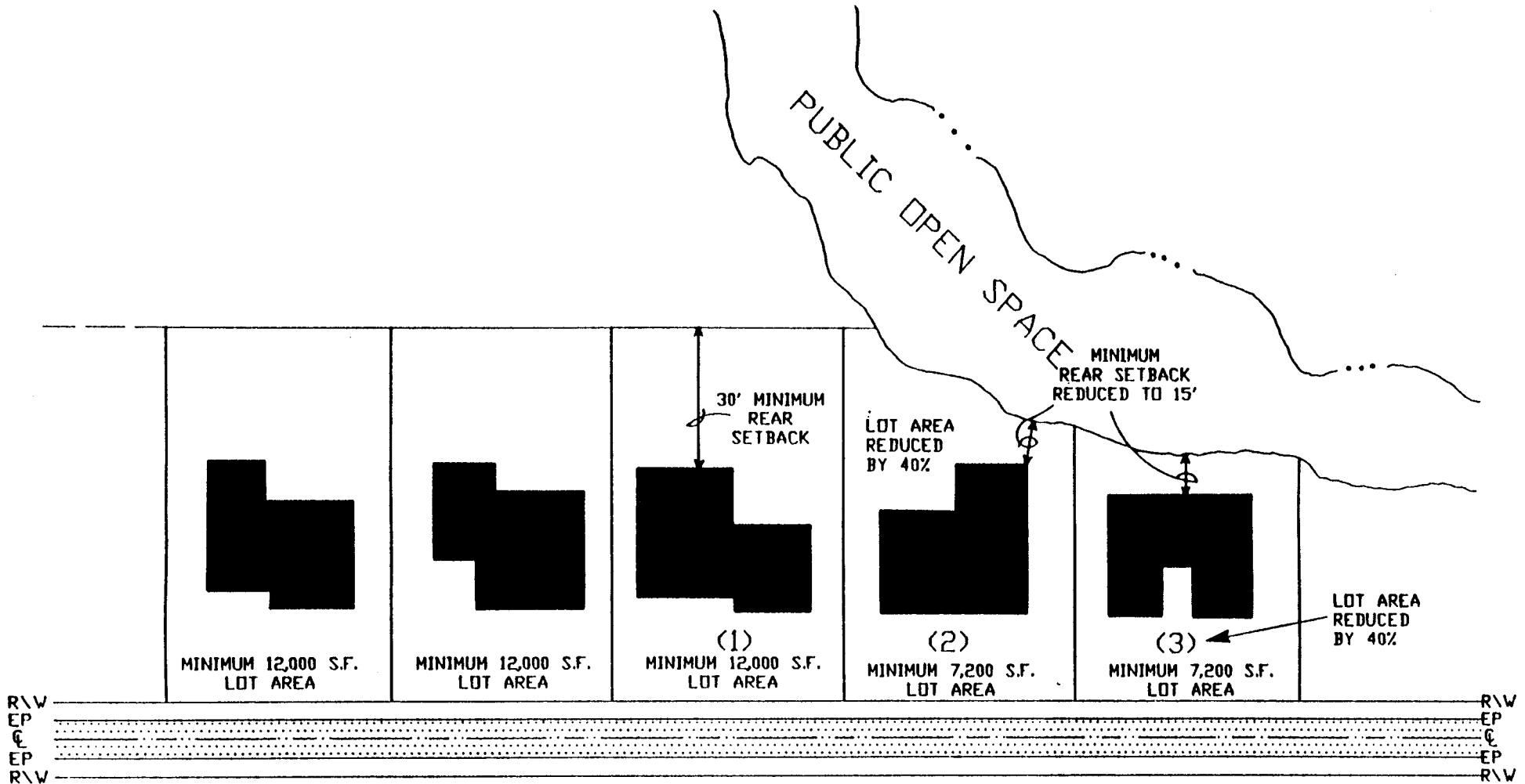
STREET CLASSIFICATIONS



- CAN BE USED IN ANY DISTRICT PERMITTING SINGLE FAMILY USES.
- TRACT MUST CONTAIN TEN (10) OR MORE CONTIGUOUS LOTS SERVED WITH PUBLIC SEWER.
- ILLUSTRATION BASED ON RS-12 ZONING.

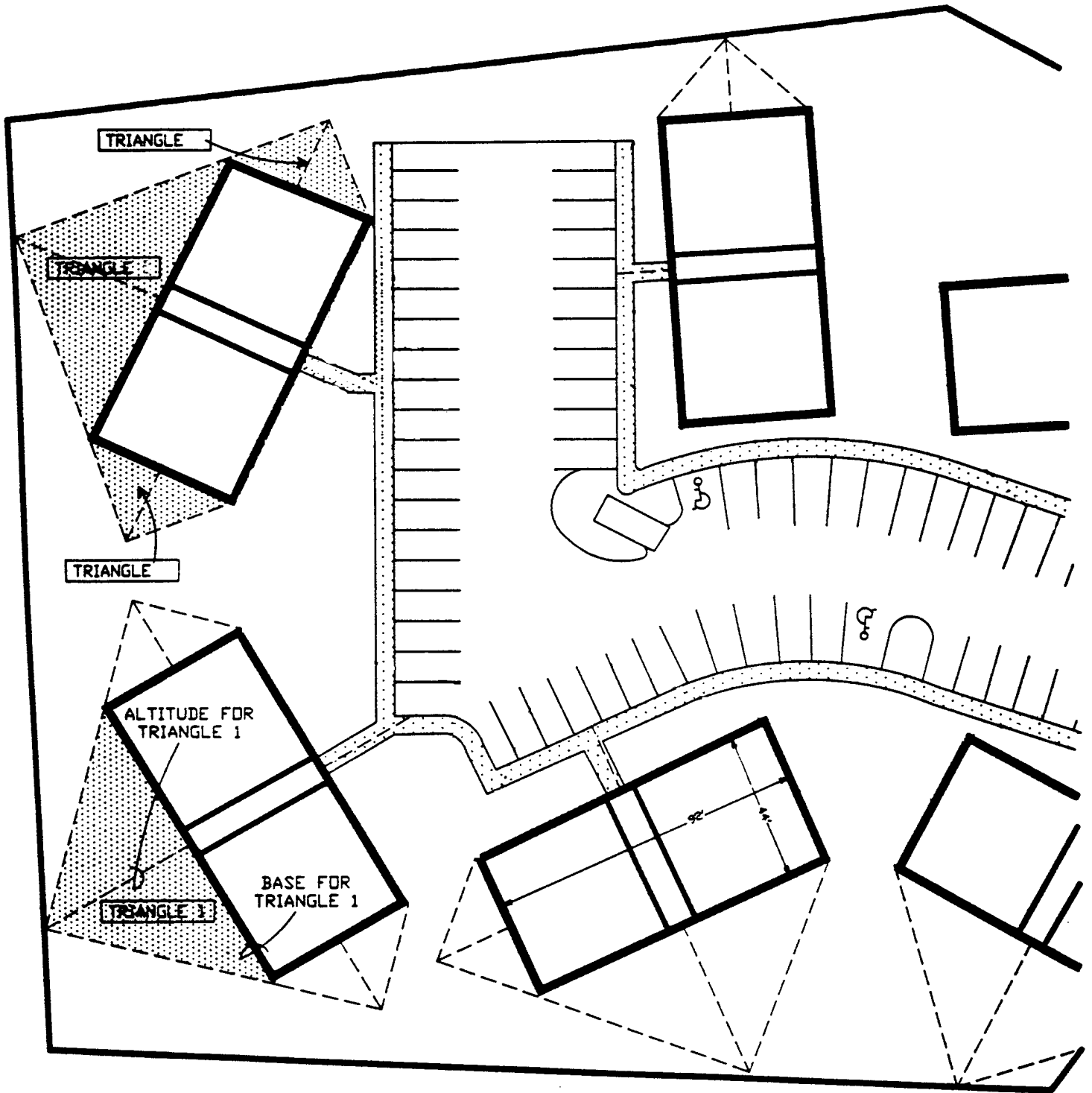
ZERO SIDE SETBACK

NO SCALE



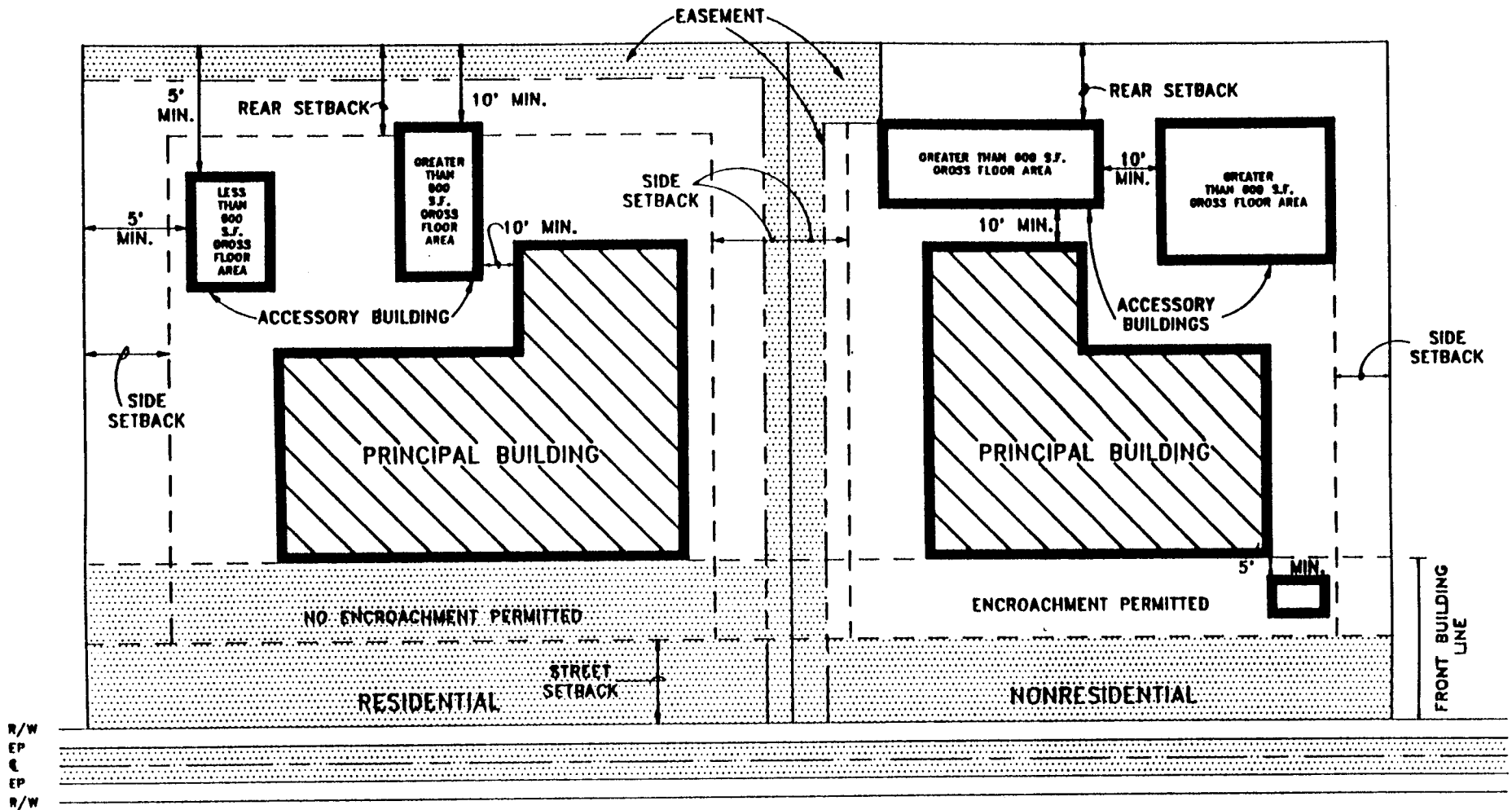
- SINGLE FAMILY LOTS WITH PUBLIC SEWER.
- ILLUSTRATION BASED ON RS-12 ZONING.
- NOTE TO BE PLACED ON PLAT "LOTS 2 & 3 HAVE BEEN REDUCED IN AREA IN ACCORDANCE WITH SECTION ___ OF THE CITY DEVELOPMENT ORDINANCE. ALL OTHER DIMENSIONAL REQUIREMENTS OF THE ORDINANCE SHALL APPLY."

LOTS ADJOINING PUBLIC OPEN SPACE



IN THIS ILLUSTRATION ALL BUILDINGS ARE 2-STORY.
 REFER TO ARTICLE IV OF THIS ORDINANCE TO DETERMINE YARD SPACE TRIANGLES.

YARD SPACE TRIANGLES



- NO ENCROACHMENT IN SHADED AREAS.
- THE HEIGHT OF ALL ACCESSORY STRUCTURES AND BUILDINGS SHALL CONFORM TO THE DIMENSIONAL REQUIREMENTS OF THE PRINCIPAL BUILDING.
- RESIDENTIAL ILLUSTRATION APPLIES ONLY TO SINGLE FAMILY DETACHED DWELLINGS, TWO-FAMILY DWELLINGS, FAMILY CARE FACILITIES, AND BOARDING AND ROOMING HOUSES.

ACCESSORY BUILDINGS AND STRUCTURES

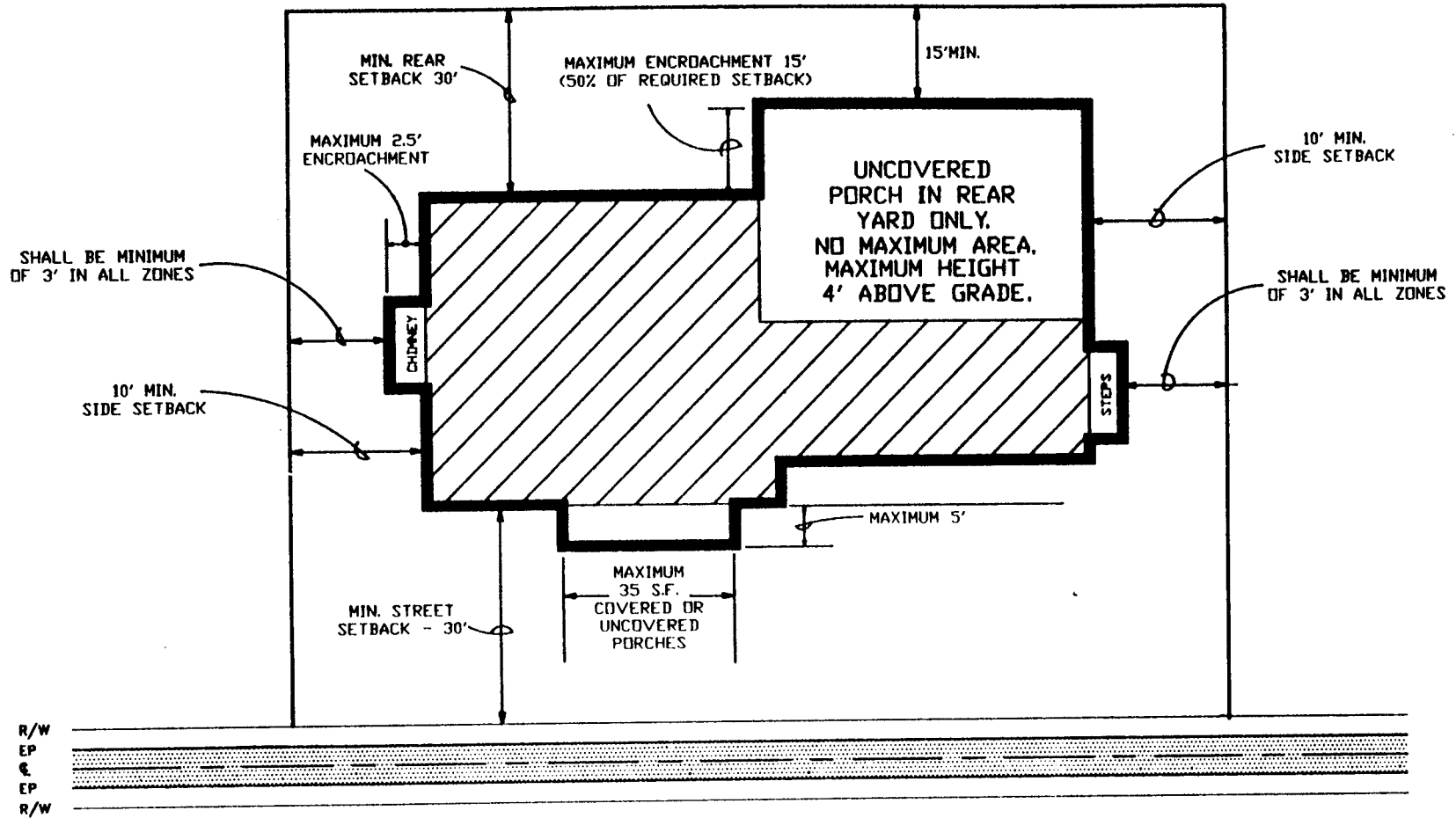
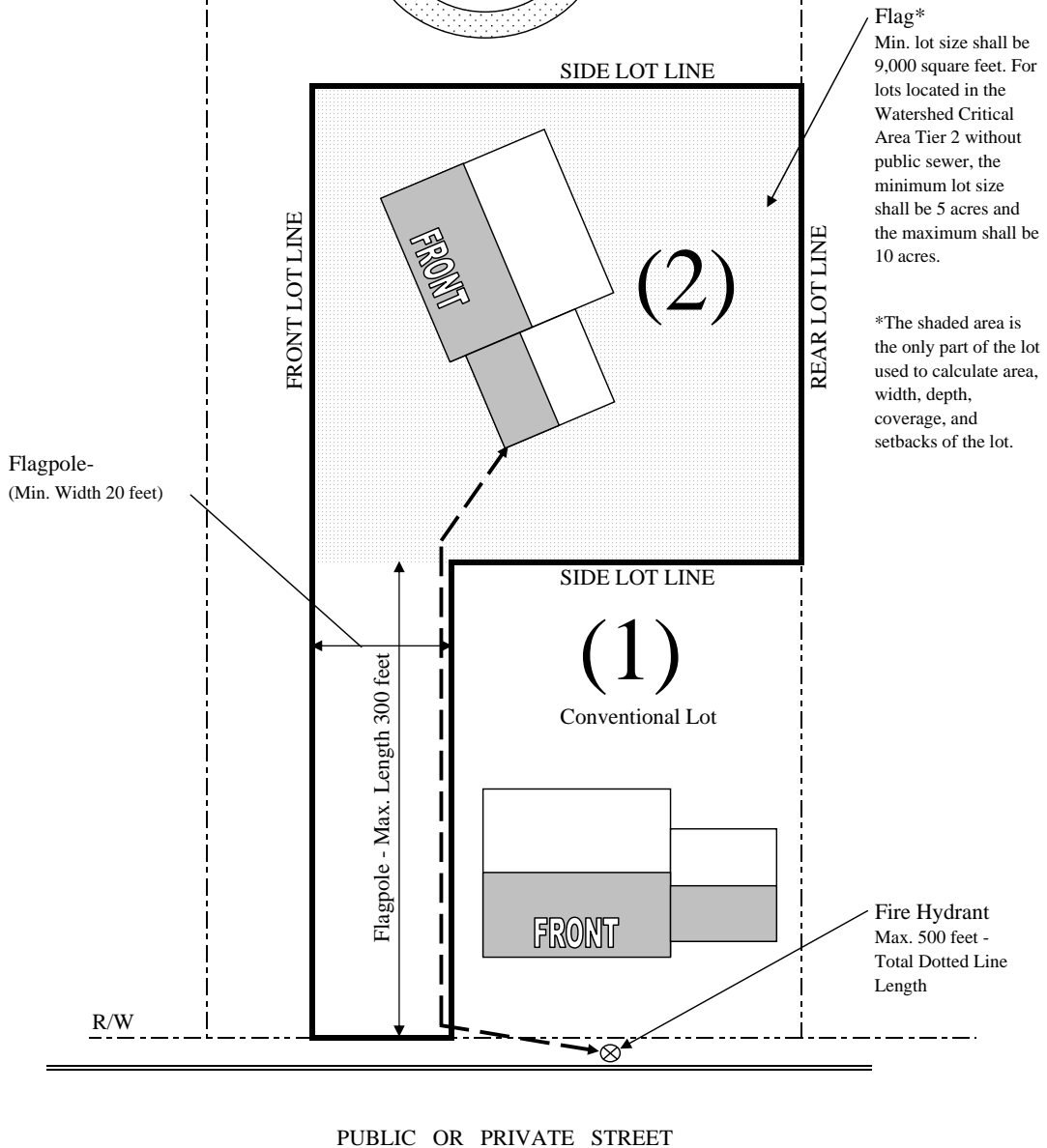
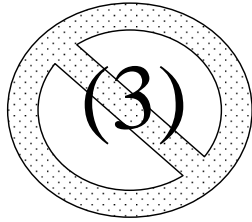


ILLUSTRATION BASED ON RS-12 ZONING AND LOCAL STREET

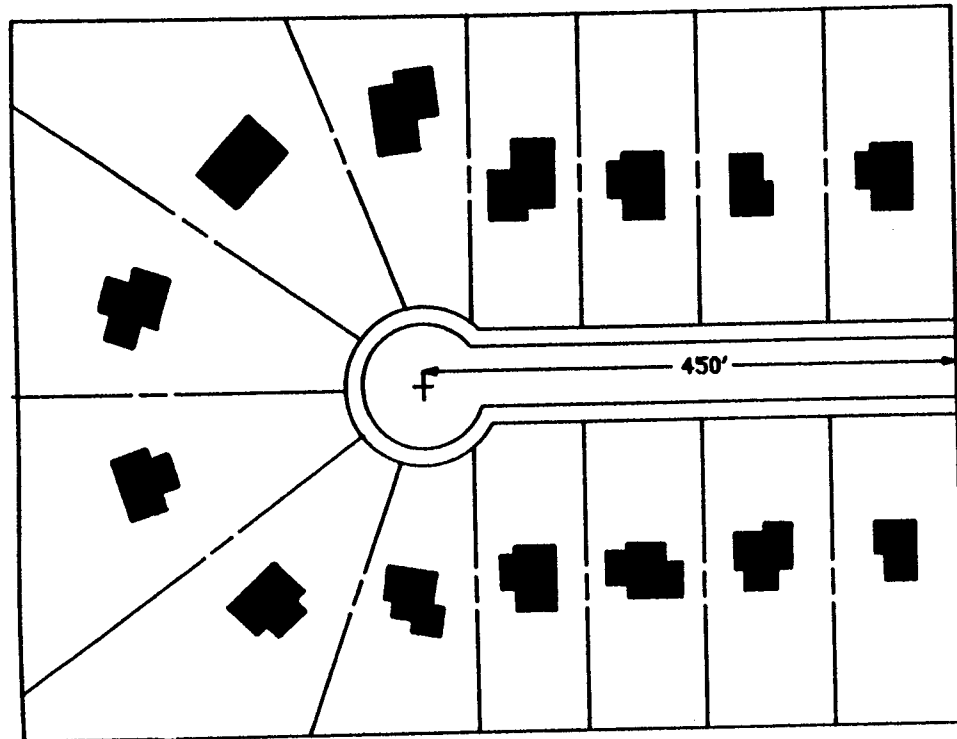
STRUCTURE ENCRDACHMENTS INTO REQUIRED SETBACKS

NO SCALE

This lot not permitted. Flag portion of lot must be behind a conventional lot, not behind a flag lot.

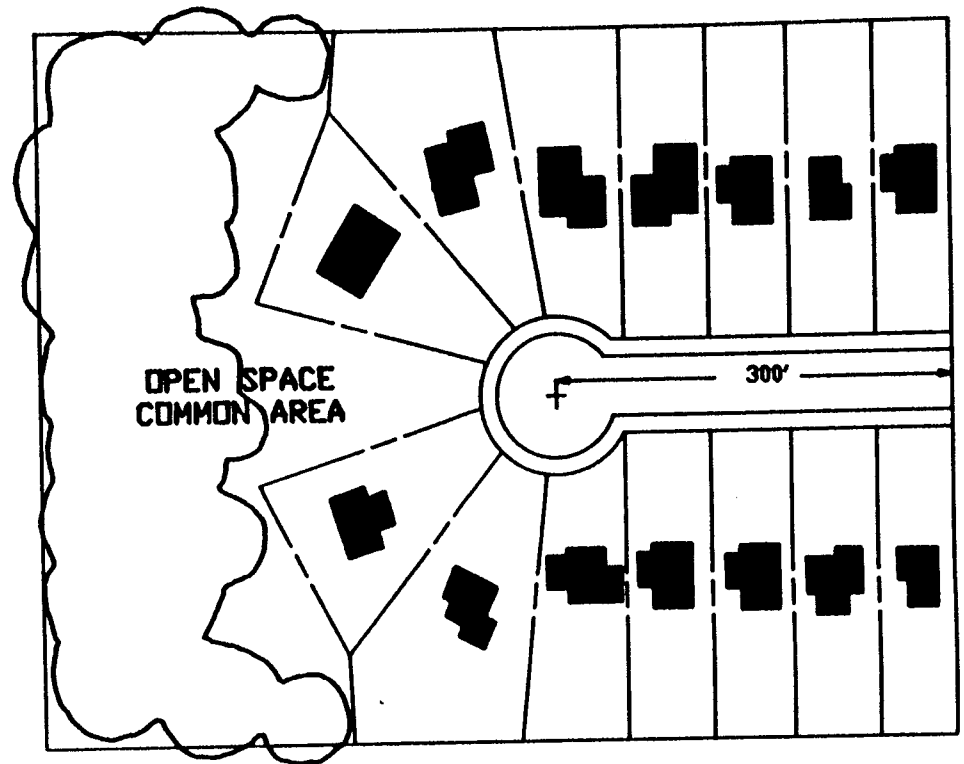


FLAG LOT



**PORTION OF
CONVENTIONAL SINGLE FAMILY DETACHED SUBDIVISION**

- 5 ACRES
- 14 LOTS
- 12,000 S.F. MINIMUM LOT SIZE

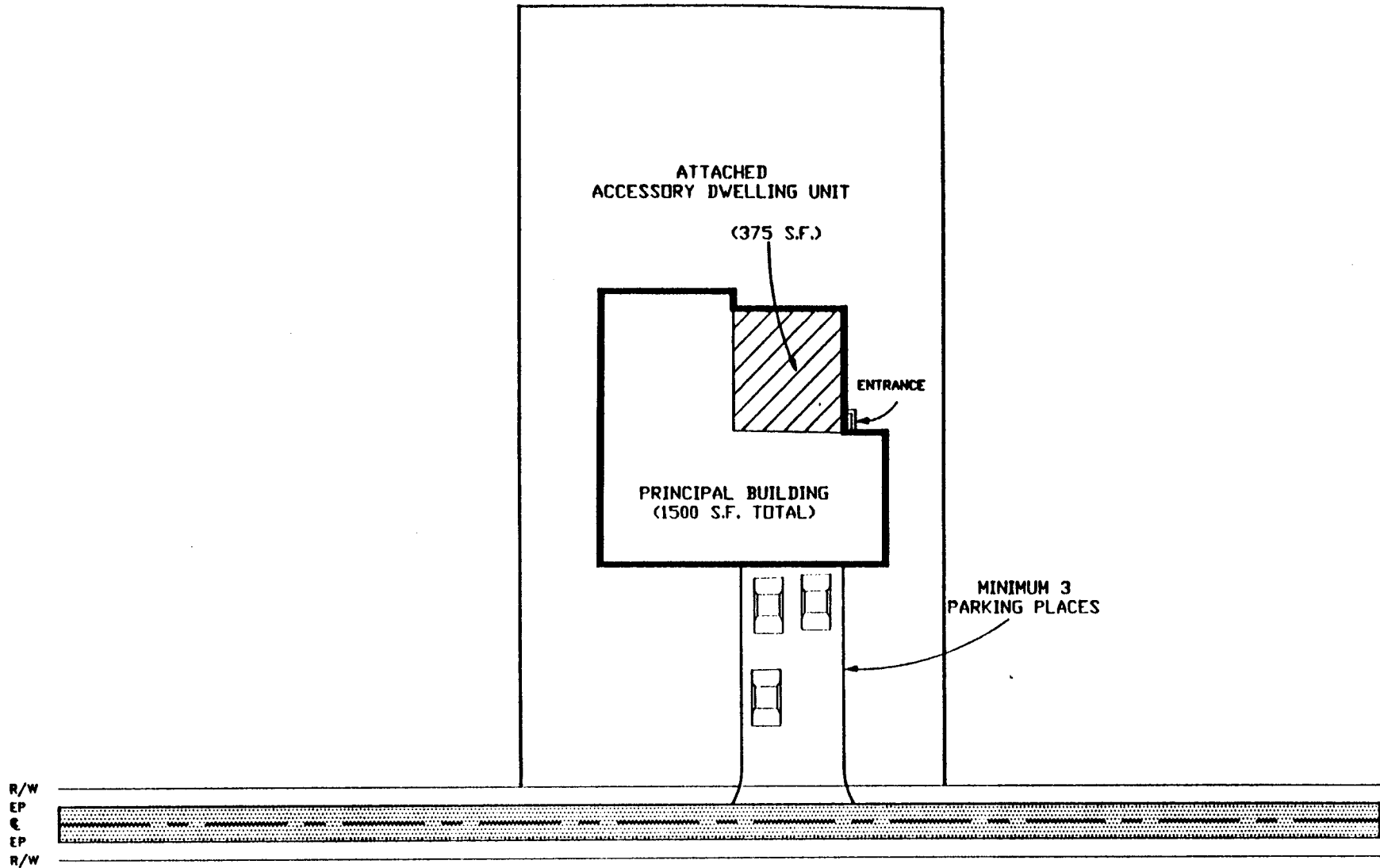


**PORTION OF
CLUSTER DEVELOPMENT SINGLE FAMILY DETACHED SUBDIVISION**

- 5 ACRES
- 14 LOTS
- 7,000 S.F. MINIMUM LOT SIZE
- MINIMUM OPEN SPACE/COMMON AREA : 15% OF TOTAL TRACT

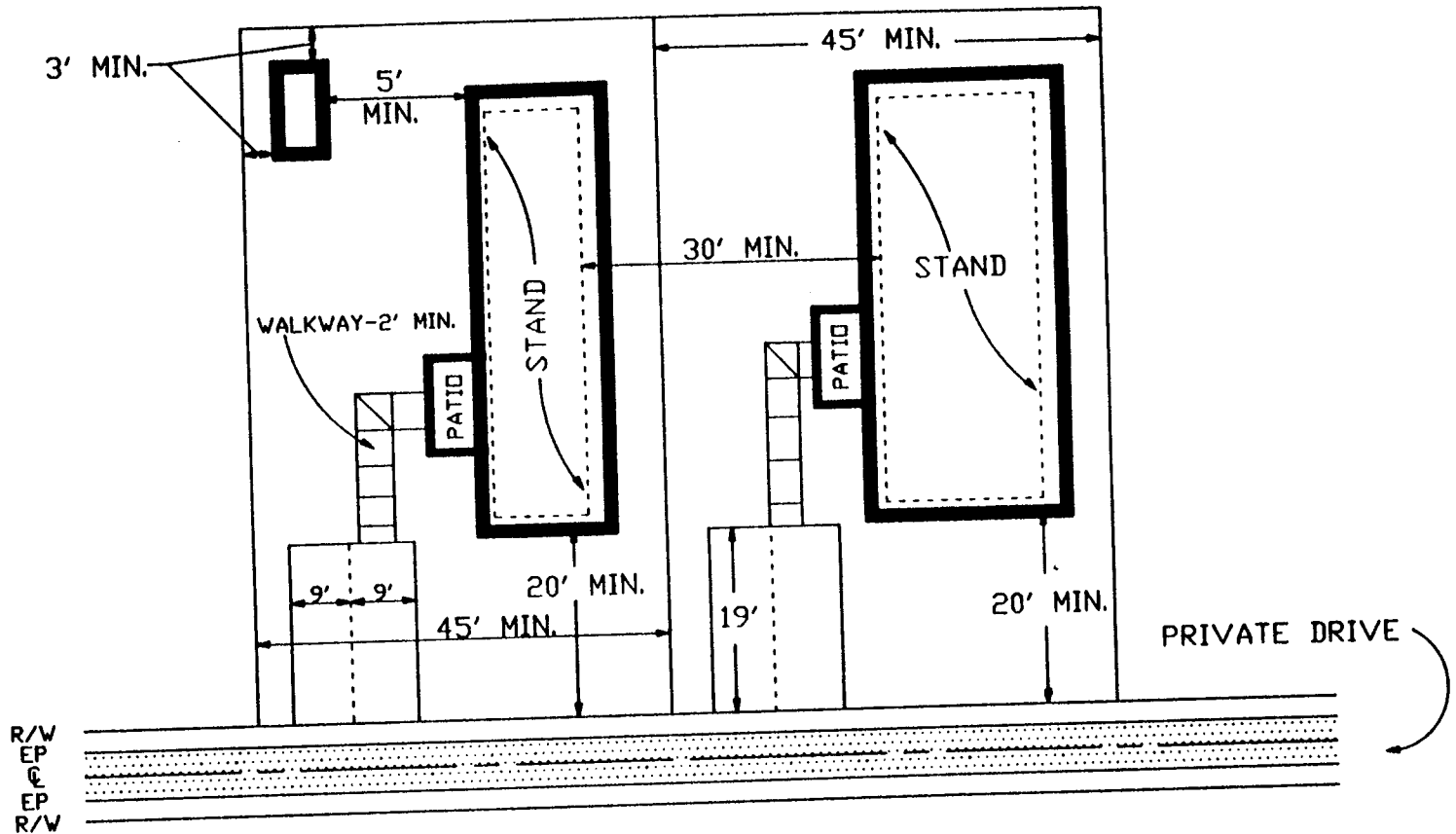
SINGLE FAMILY DETACHED CLUSTER DEVELOPMENT

- *OPEN SPACE/COMMON AREA COULD BE FLOODPLAIN AREAS, RECREATIONAL AREAS, BUFFER AREA FROM HIGHWAY OR INCOMPATIBLE USE.
- *ILLUSTRATION BASED ON RS-12 ZONING.



- BASED ON RS-12 ZONING.
- AN ACCESSORY DWELLING UNIT WITHIN PRINCIPAL BUILDING SHALL BE A MINIMUM OF 250 S.F. AND A MAXIMUM OF 25% OF THE HEATED FLOOR AREA OF PRINCIPAL BUILDING.
- SEE ARTICLE V FOR ADDITIONAL REQUIREMENTS.

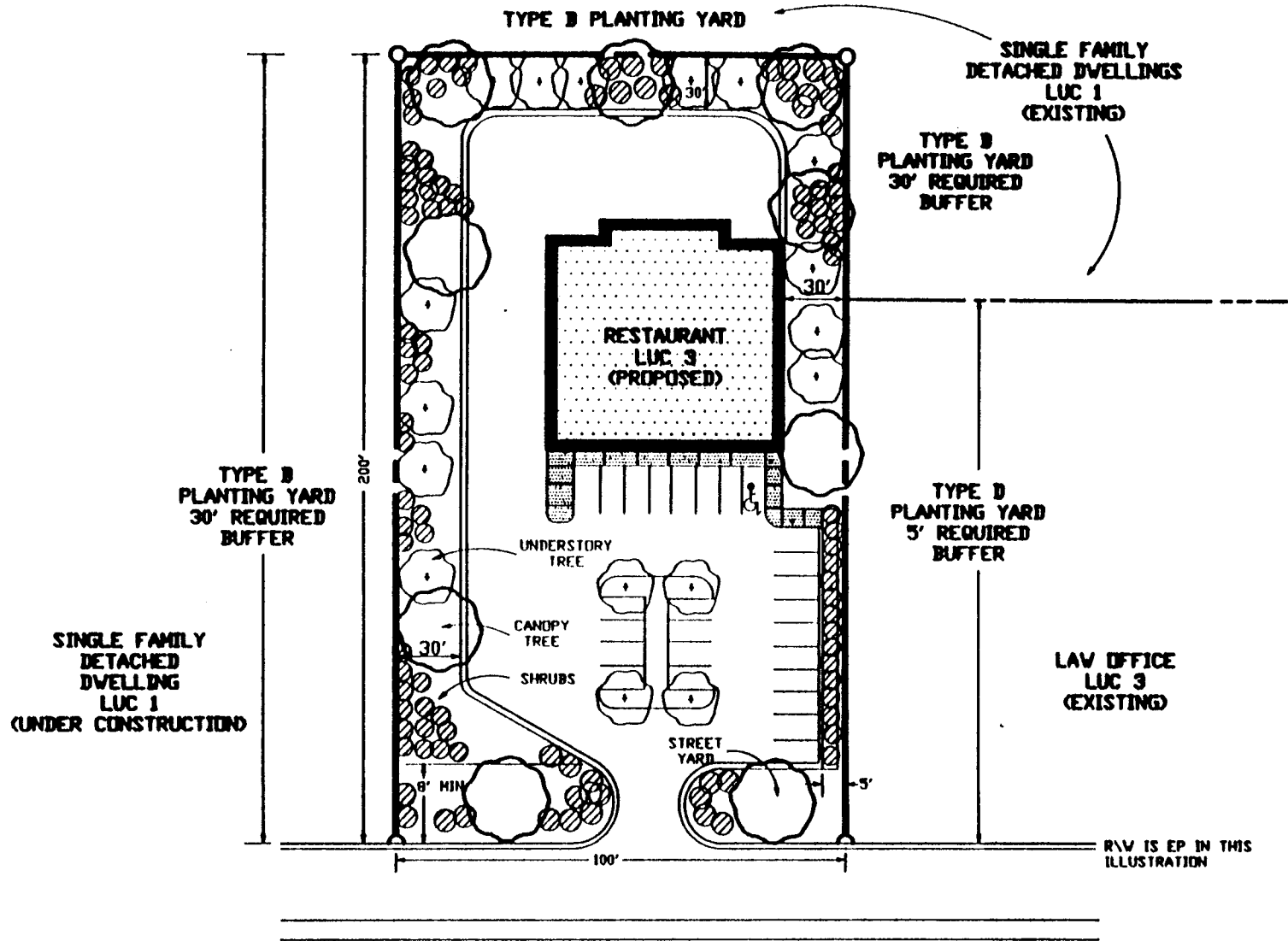
ACCESSORY DWELLING UNITS ON SINGLE FAMILY LOTS



- IF THE MANUFACTURED DWELLING SPACE IS SERVED WITH AN ON-SITE INDIVIDUAL SEPTIC TANK SYSTEM, THE SPACE SHALL MEET COUNTY HEALTH DEPARTMENT MINIMUM LOT SIZE STANDARDS.
- ALL STANDS SHALL BE A MINIMUM SIZE OF 13'x60'.
- ALL PATIOS SHALL BE A MINIMUM SIZE OF 240 S.F.
- SPACE SIZE MINIMUM 5,000 S.F.

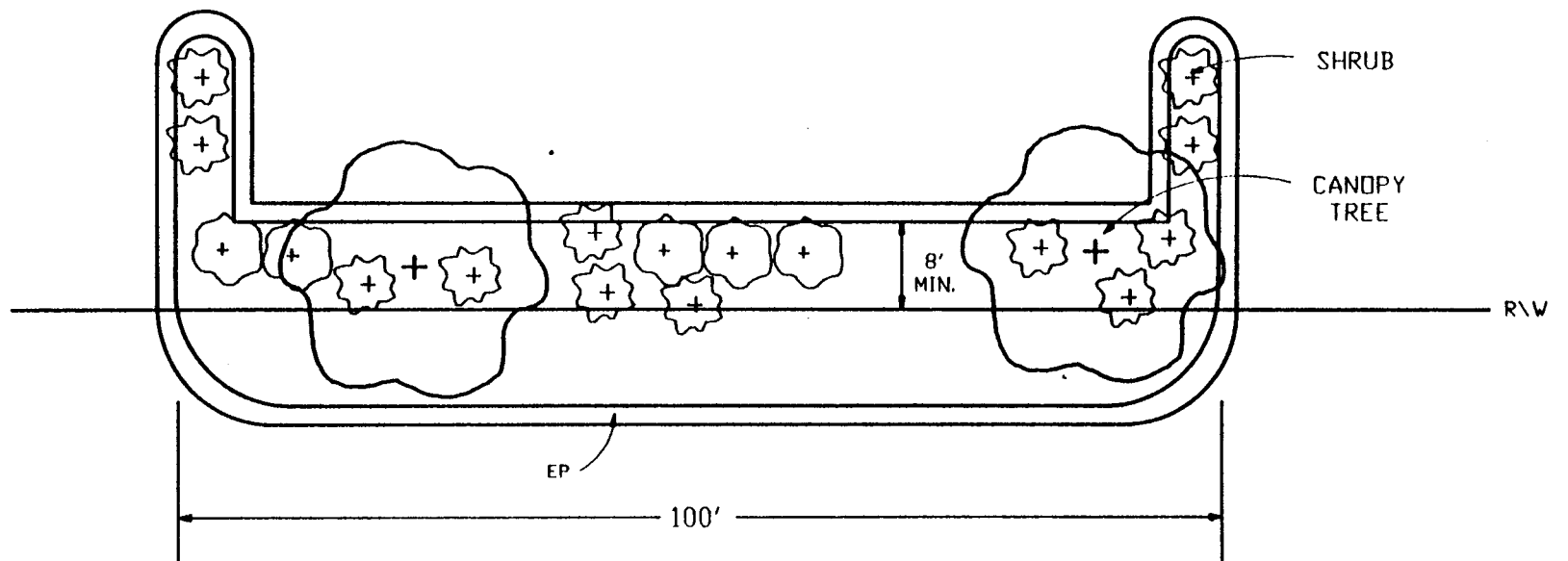
TYPICAL MANUFACTURED DWELLING SPACE

NO SCALE



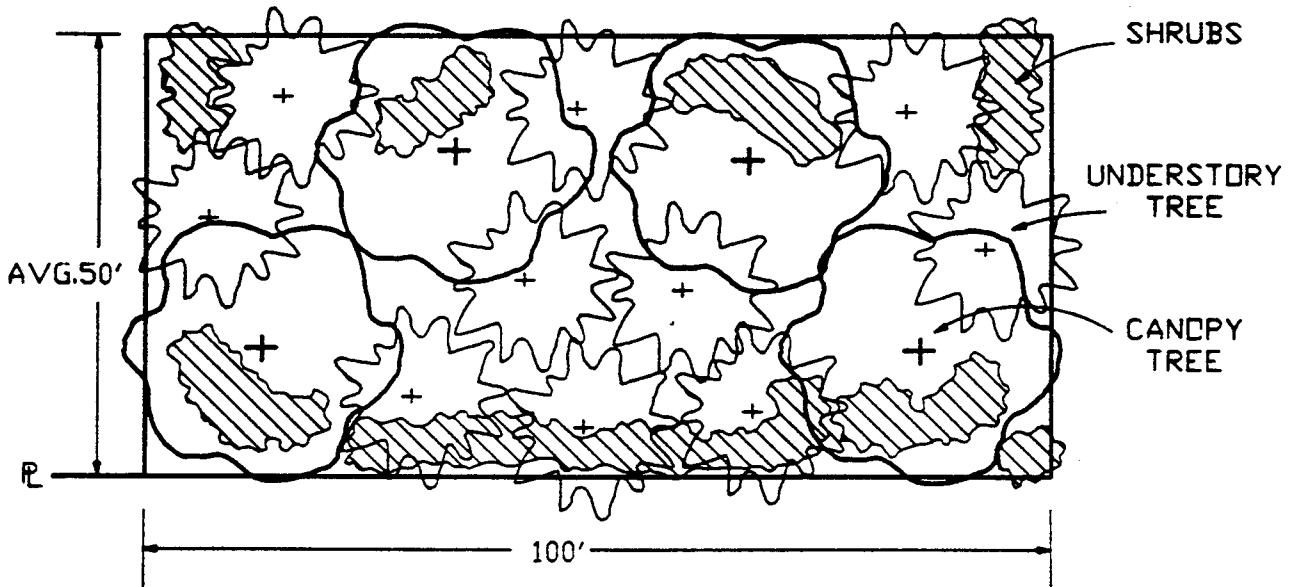
APPLICATION OF LANDSCAPING REQUIREMENTS

* PLANTS ARE SHOWN AT MATURE GROWTH.



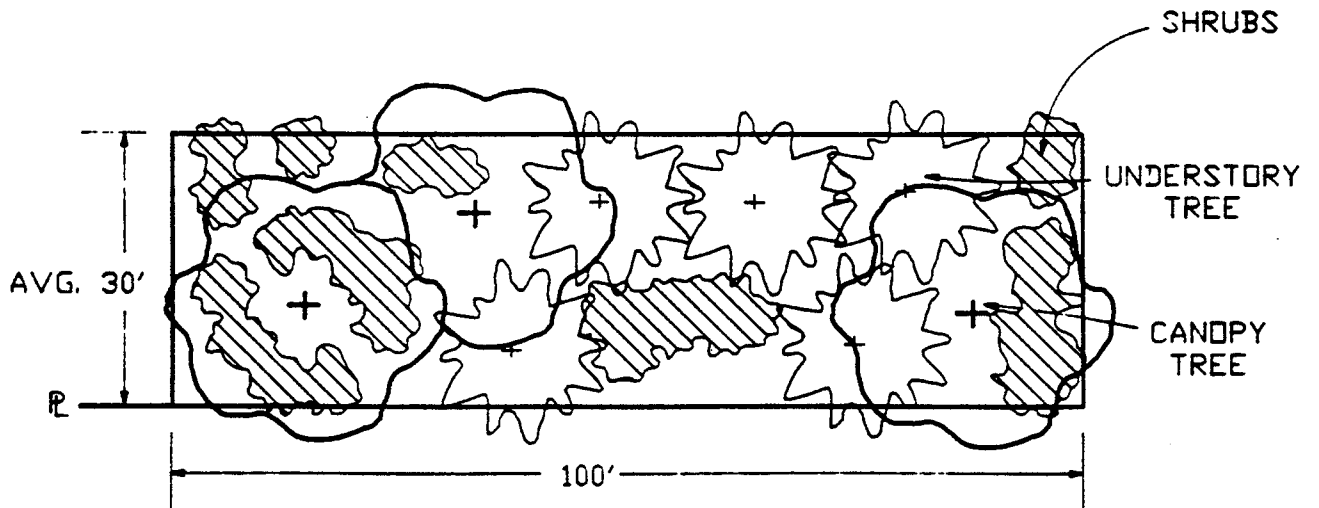
- 8' MINIMUM WIDTH, 25' MAXIMUM WIDTH
- PLANTINGS: 2 CANOPY TREES PER 100'
- 17 SHRUBS PER 100'

STREET PLANTING YARD



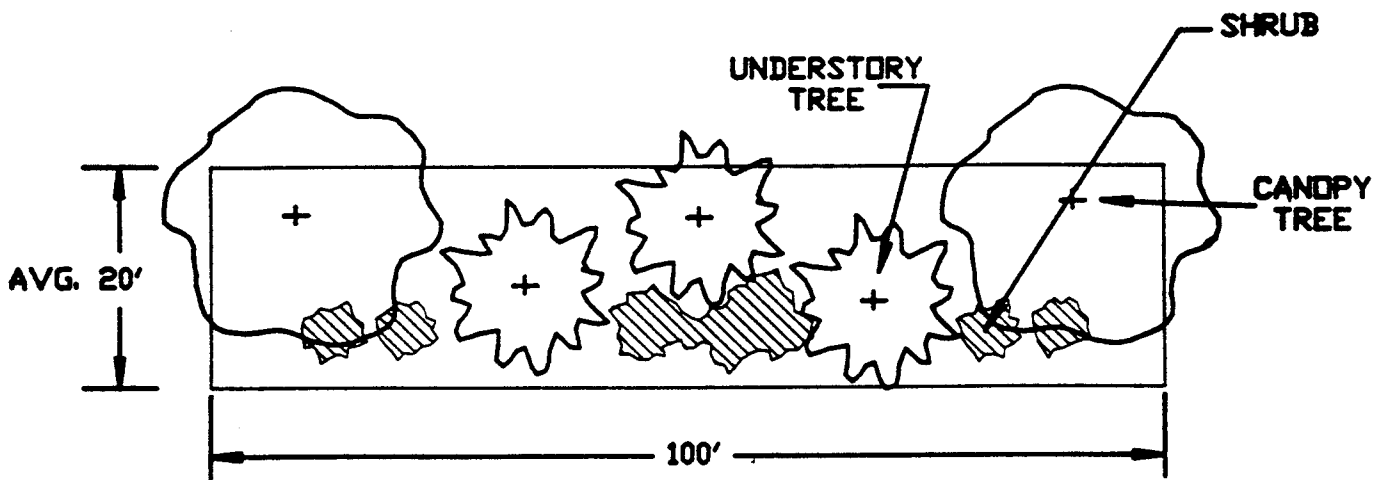
- 40' MINIMUM WIDTH, 75' MAXIMUM WIDTH
- PLANTINGS: 4 CANOPY TREES PER 100'
- 10 UNDERSTORY TREES PER 100'
- 33 SHRUBS PER 100'

TYPE A PLANTING YARD



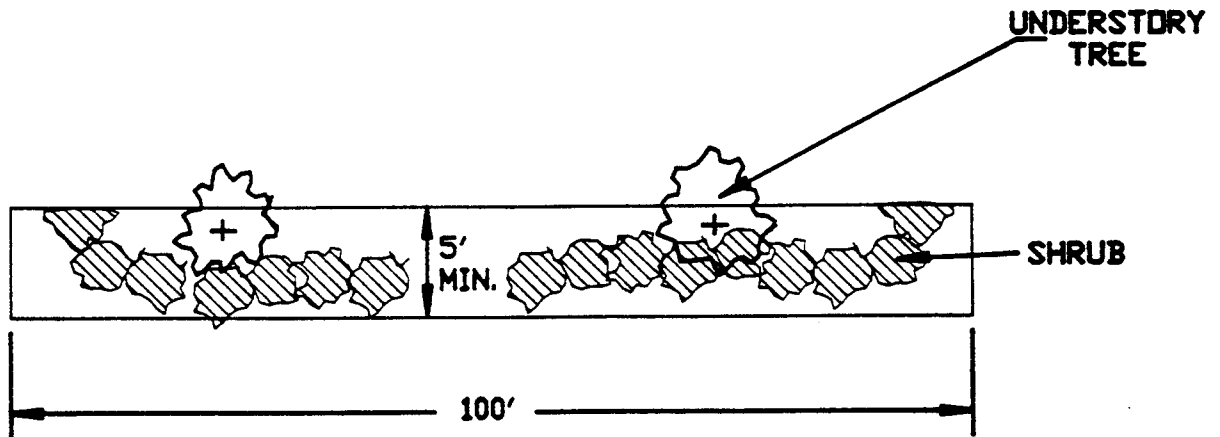
- 25' MINIMUM WIDTH, 50' MAXIMUM WIDTH
- PLANTINGS: 3 CANOPY TREES PER 100'
- 5 UNDERSTORY TREES PER 100'
- 25 SHRUBS PER 100'

TYPE B PLANTING YARD



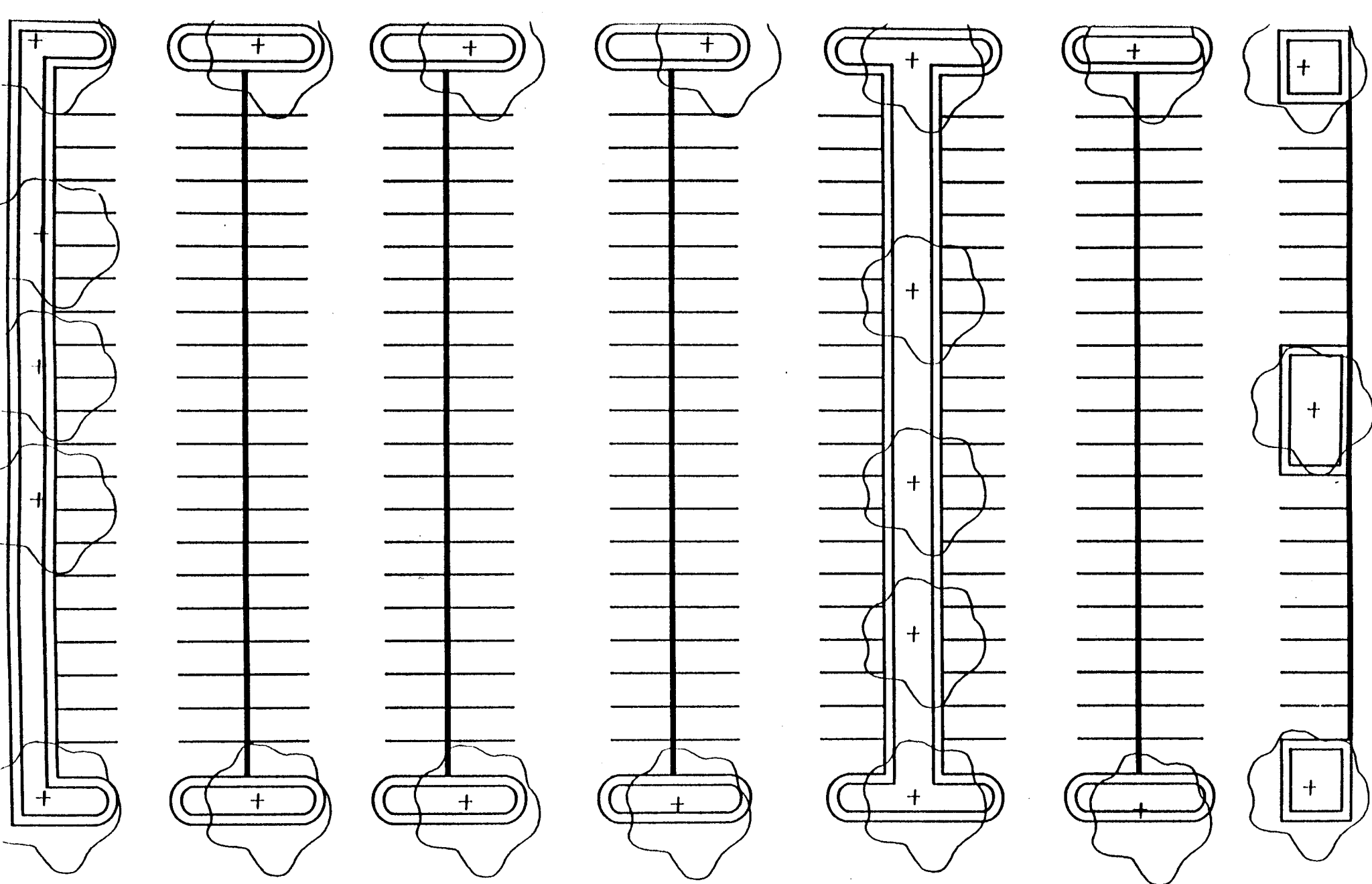
- 15' MINIMUM WIDTH, 40' MAXIMUM WIDTH
- PLANTINGS: 2 CANOPY TREES PER 100'
- 3 UNDERSTORY TREES PER 100'
- 17 SHRUBS PER 100'

TYPE C PLANTING YARD



- PLANTINGS:
- 2 UNDERSTORY TREES PER 100'
 - 18 SHRUBS PER 100'

TYPE D PLANTING YARD

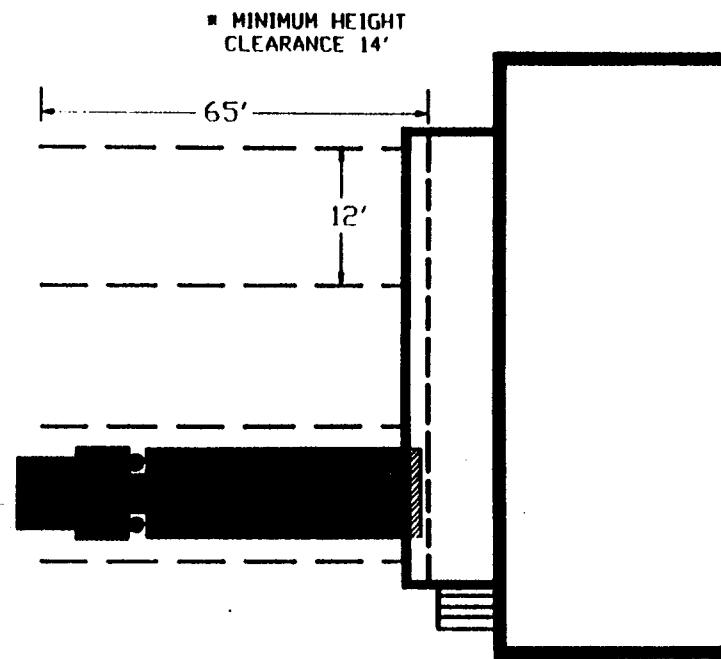


PARKING LOT PLANTINGS

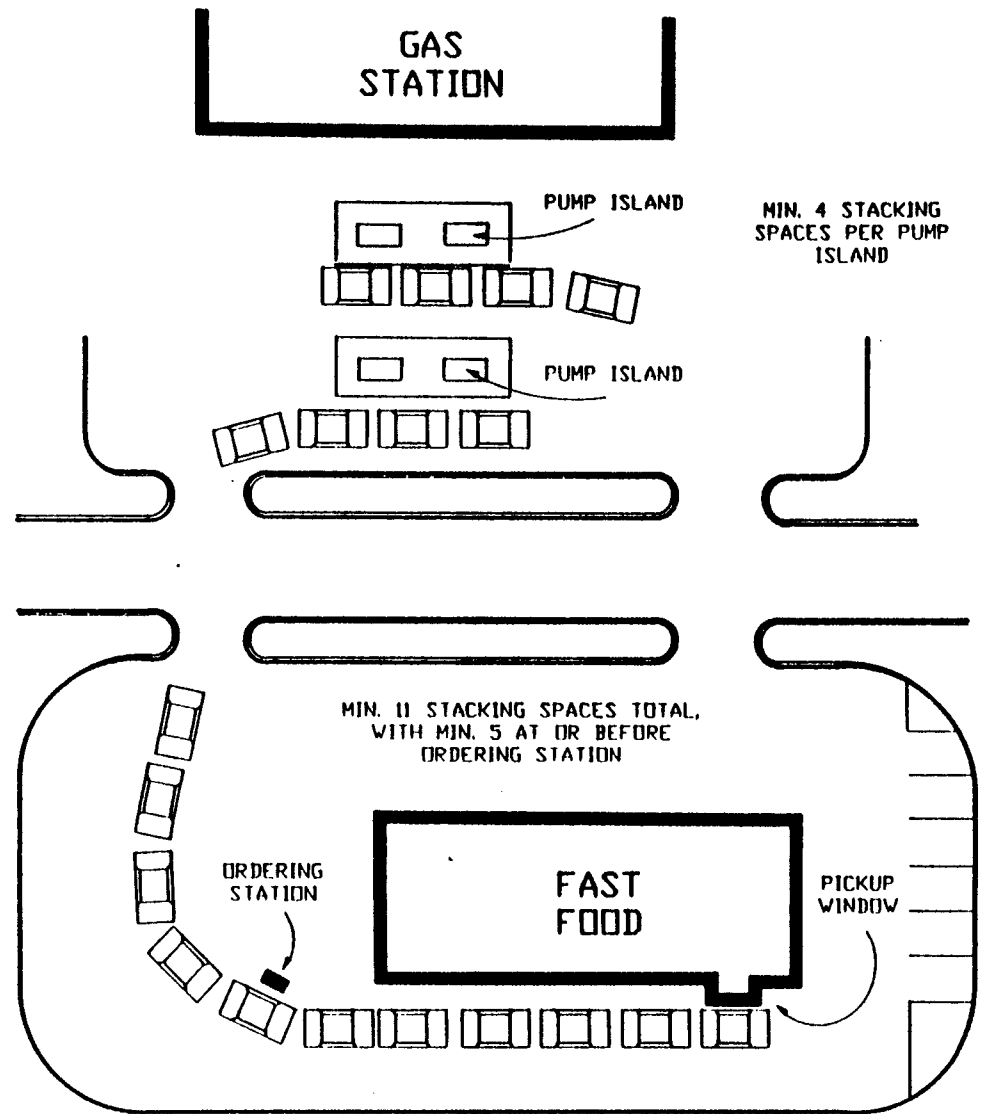
- 1 CANOPY TREE PER 12 PARKING SPACES.
 - REQUIRED CANOPY TREE AREA SHALL BE DISTRIBUTED THROUGHOUT.
- THE ILLUSTRATION ABOVE CONTAINS EXAMPLES OF POSSIBLE ARRANGEMENTS.

NO SCALE

A-5.19

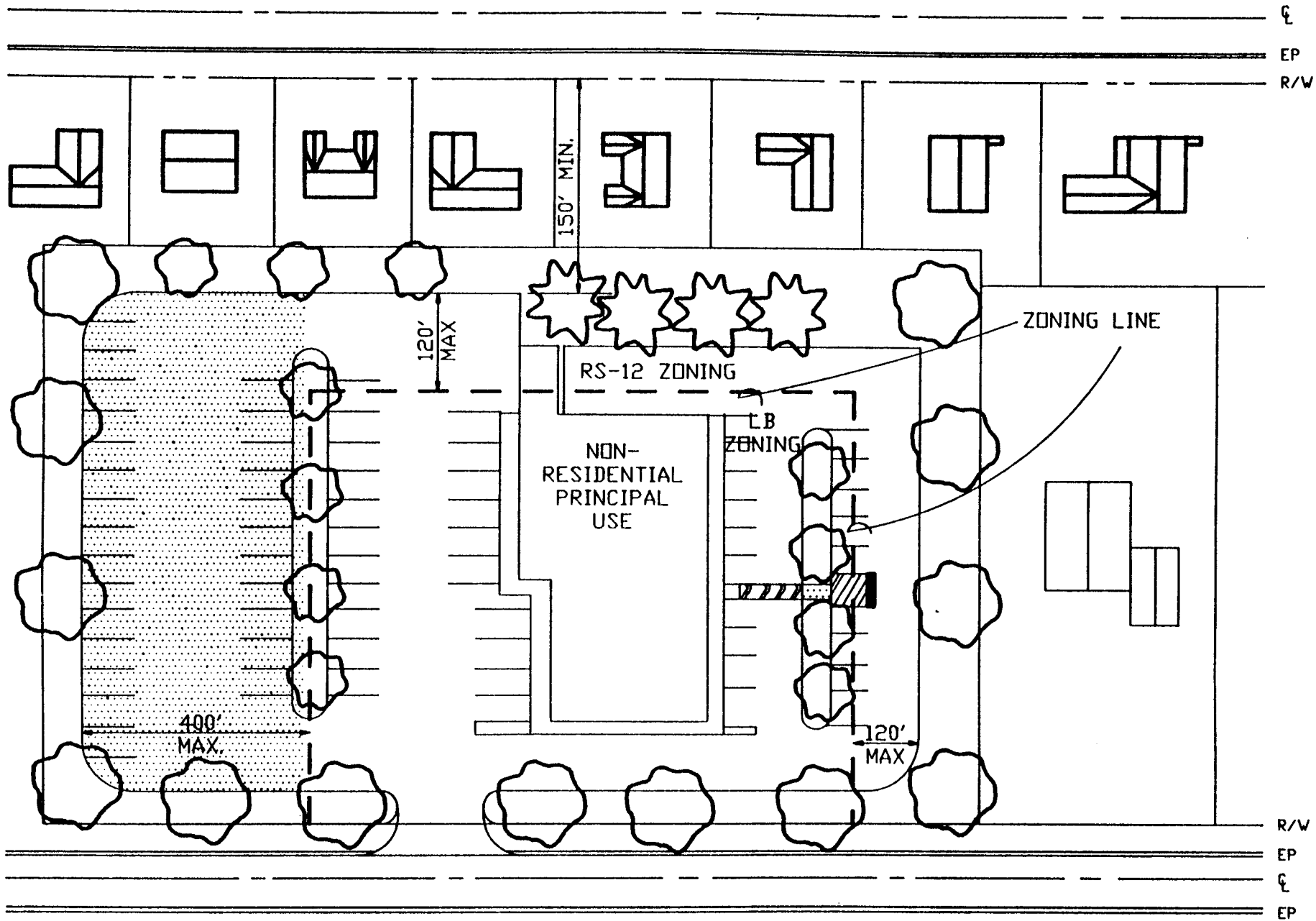


LOADING SPACE DIMENSIONS



STACKING ARRANGEMENTS




LOADING AND STACKING ARRANGEMENTS



PARKING IN RESIDENTIAL DISTRICTS

- MAXIMUM EXTENSION OF PARKING FOR A NON-RESIDENTIAL USE IN A RESIDENTIAL DISTRICT SHALL BE 120'. 400' (SEE SHADED AREA) IF APPROVED BY A SPECIAL USE PERMIT.
- PARKING MAY EXTEND NO CLOSER THAN 150' TO ANY STREET UPON WHICH THE PRINCIPAL USE WOULD NOT BE PERMITTED DRIVEWAY ACCESS.

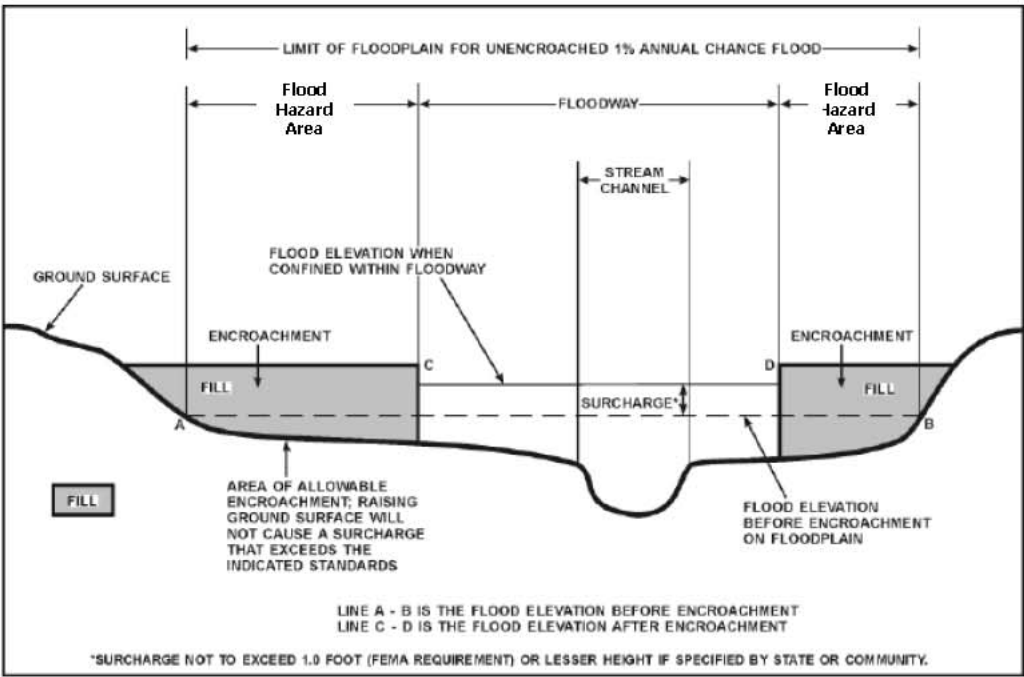
Special Flood Hazard Area

-  Floodway boundary
-  1% annual chance flood boundary (Zone AE)
-  0.2% annual chance flood boundary

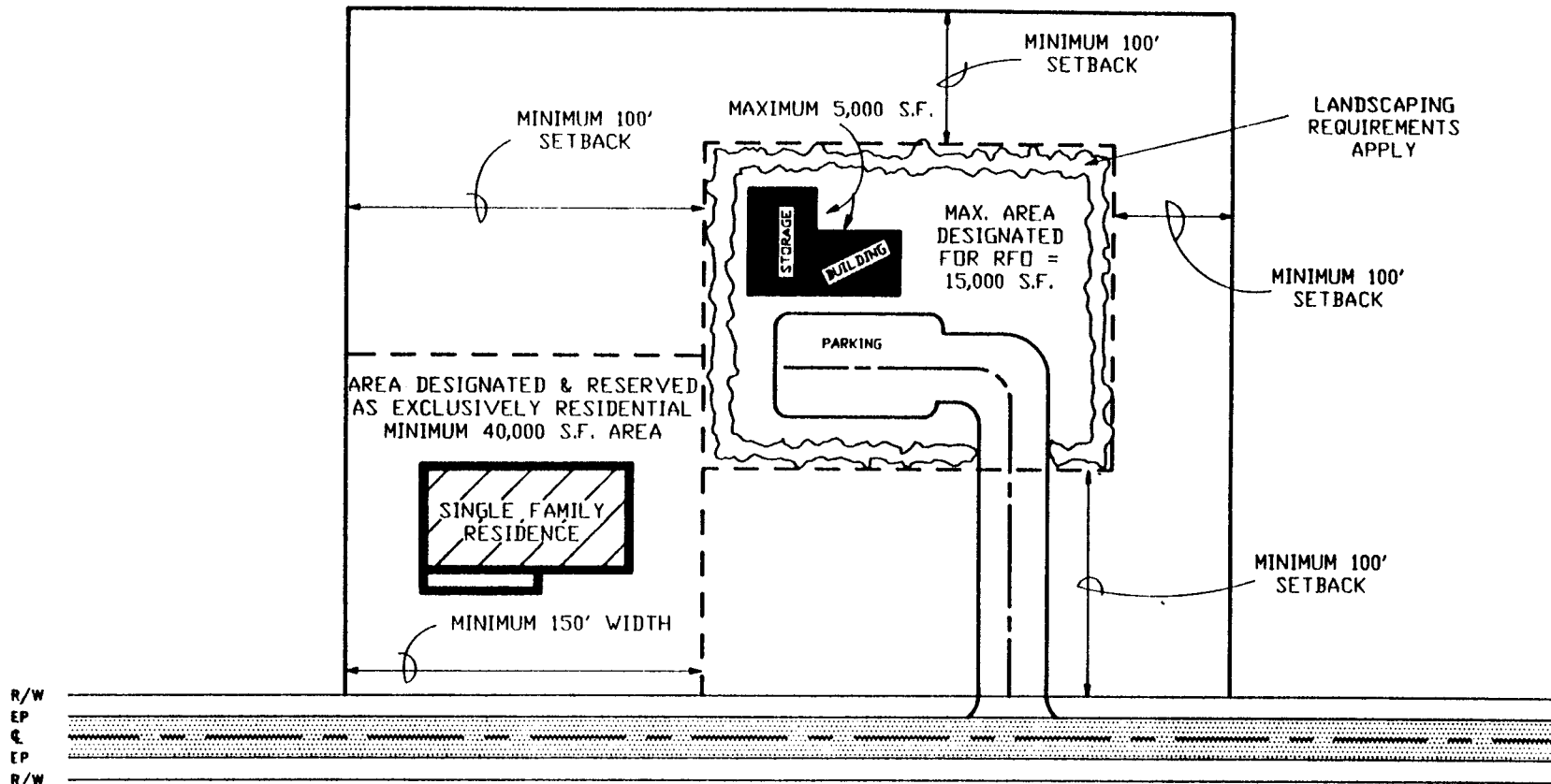
No structures or filling permitted in the floodway.

Structures located in the 1% annual chance flood boundary must have their lowest floor elevated to the regulatory flood protection elevation.

The area located within the 1% annual chance future conditions flood hazard area is regulated by the Flood Damage Prevention Section of the Ordinance.



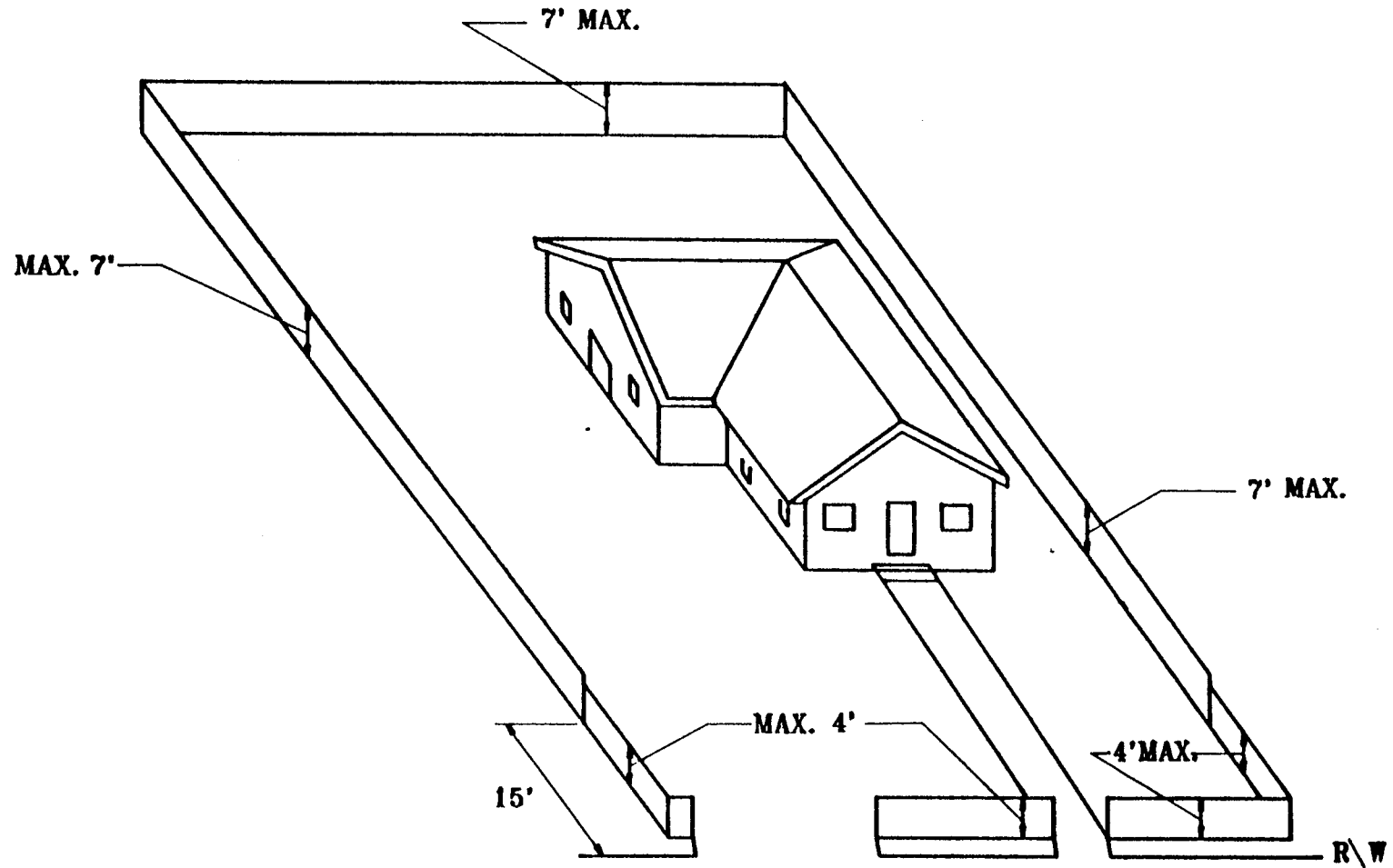
SPECIAL FLOOD HAZARD AREA BOUNDARIES



- PERMITTED ONLY IN AGRICULTURAL DISTRICT.
- MAXIMUM 5,000 S.F. BUILDING(S) COVERAGE
- ANYTHING ASSOCIATED WITH A RURAL FAMILY OCCUPATION, EXCLUDING ACCESS, SHALL BE 100' FROM ALL PROPERTY LINES.
- SEE SECTION 30-5-2 FOR ADDITIONAL DEVELOPMENT STANDARDS.
- MINIMUM LOT SIZE 2 ACRES.

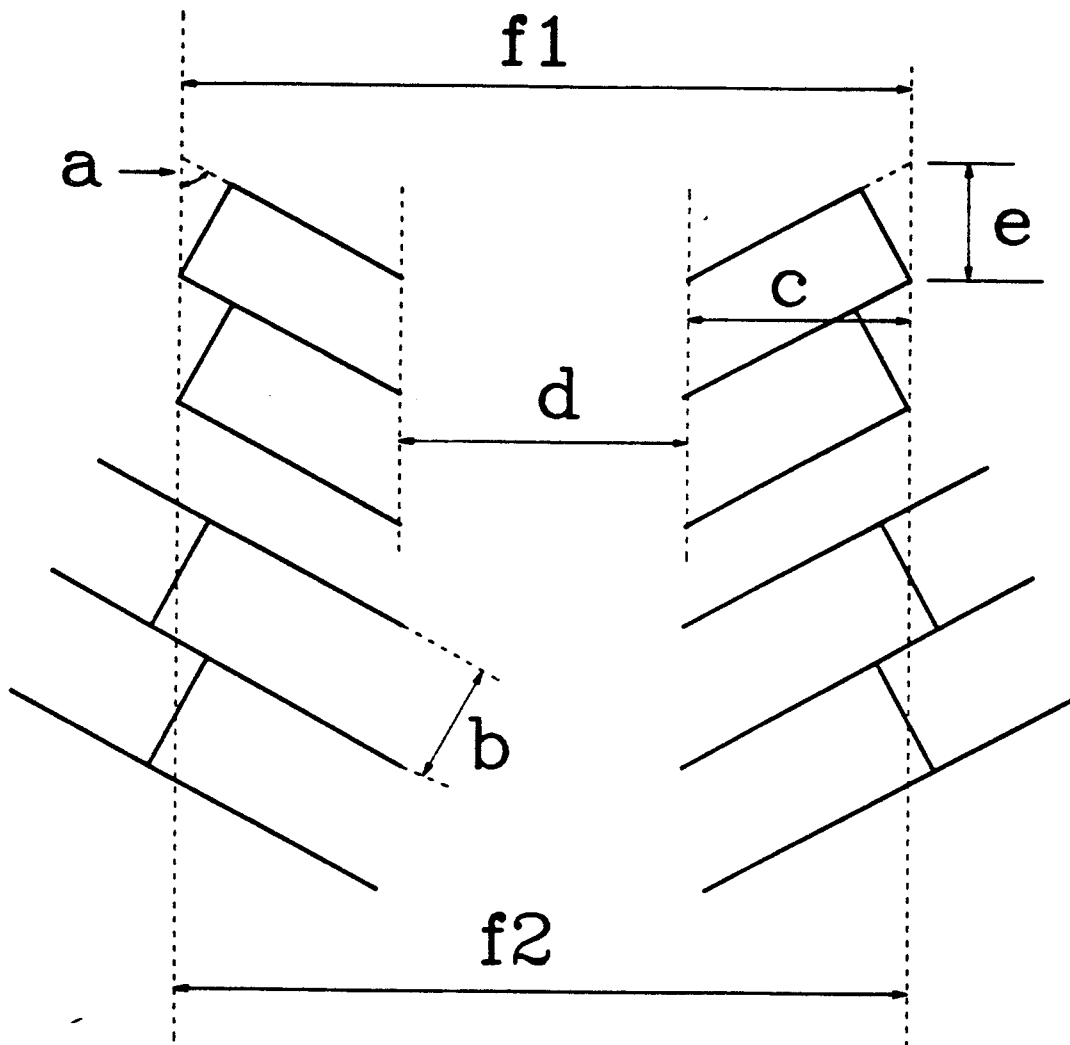
RURAL FAMILY OCCUPATION

FENCE OR WALL HEIGHT FOR RESIDENTIAL USES

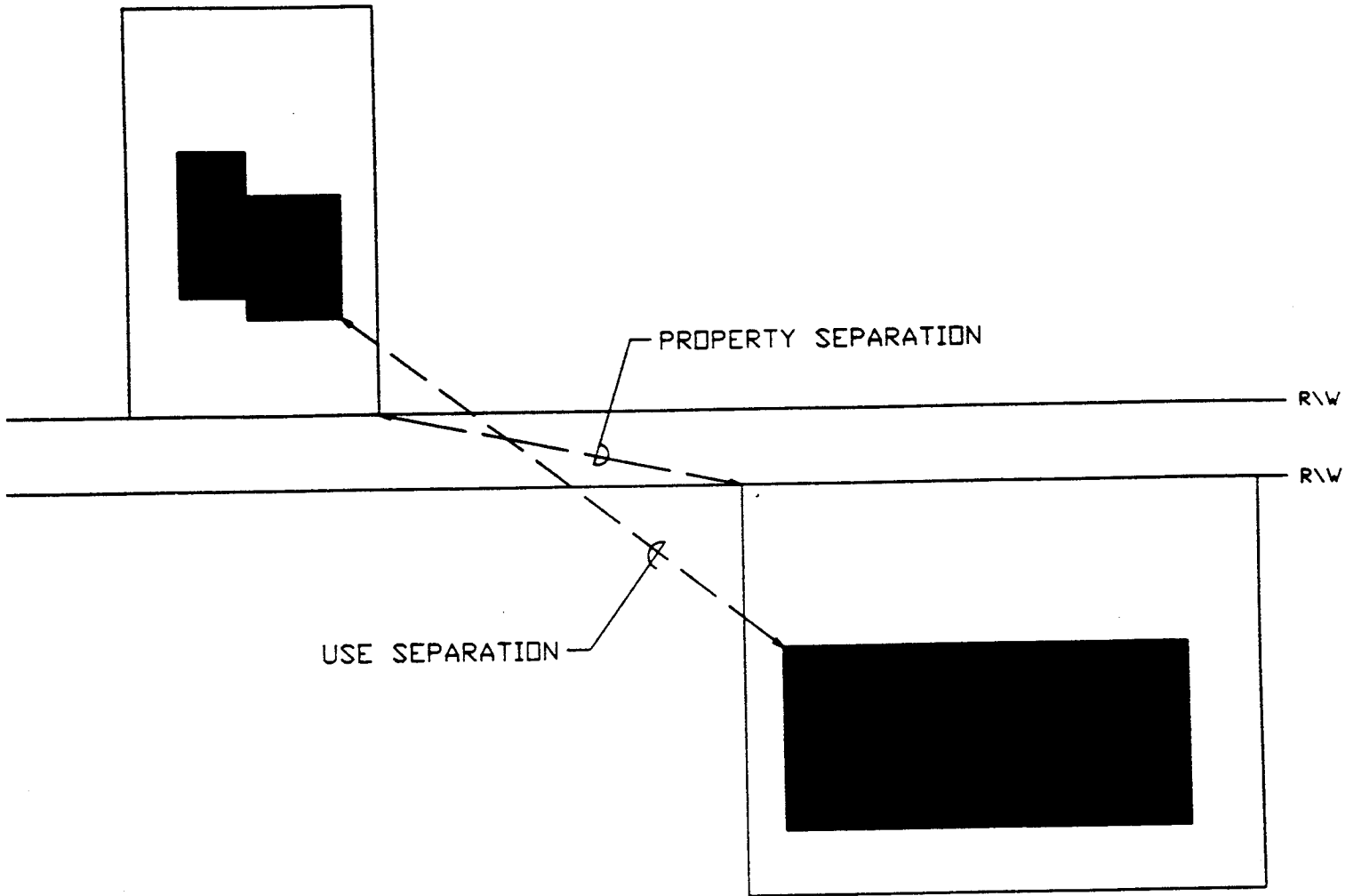


IF CORNER LOT, ALSO SEE CORNER VISIBILITY REGULATIONS

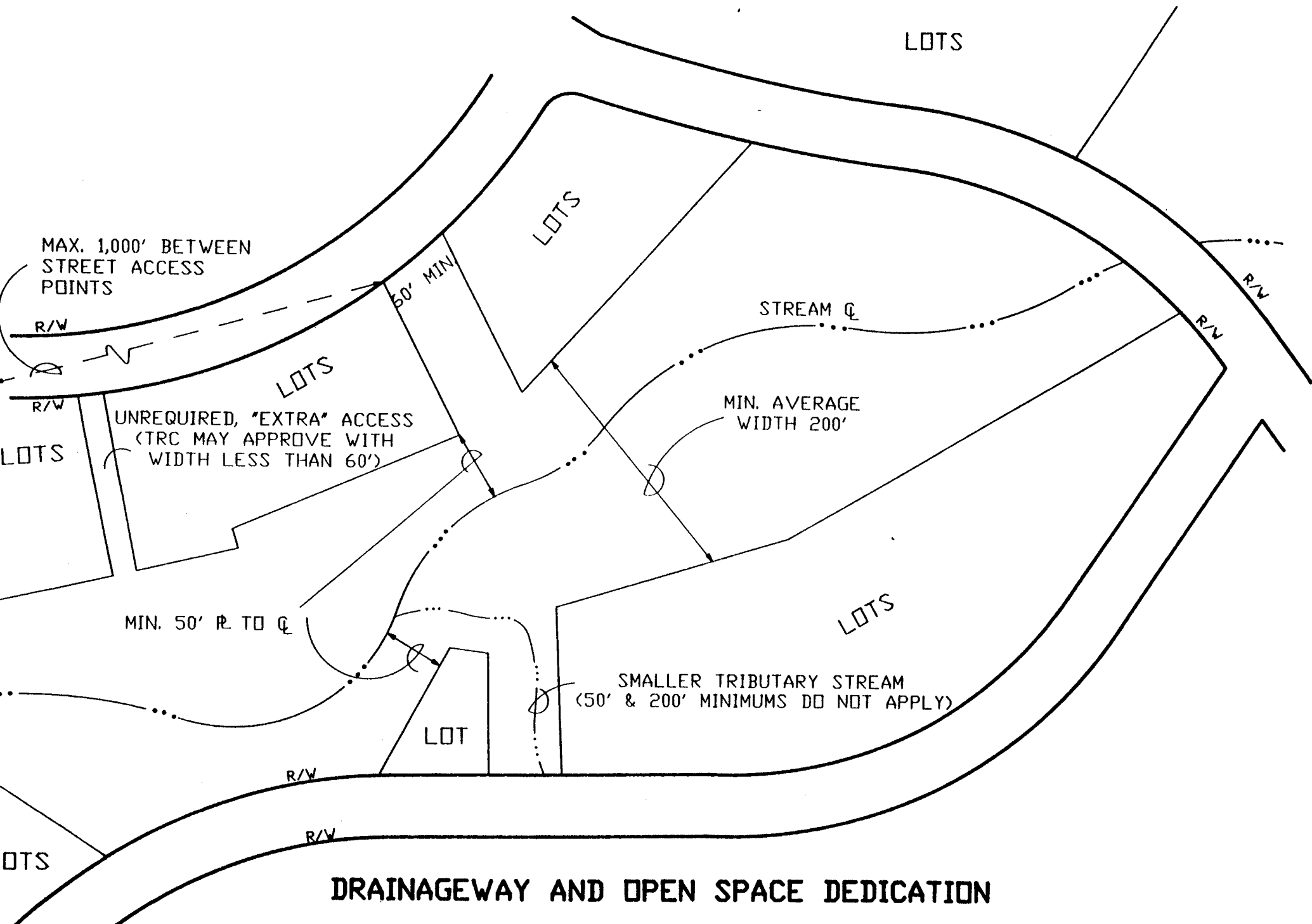
PARKING SPACE GEOMETRIC DESIGN STANDARDS



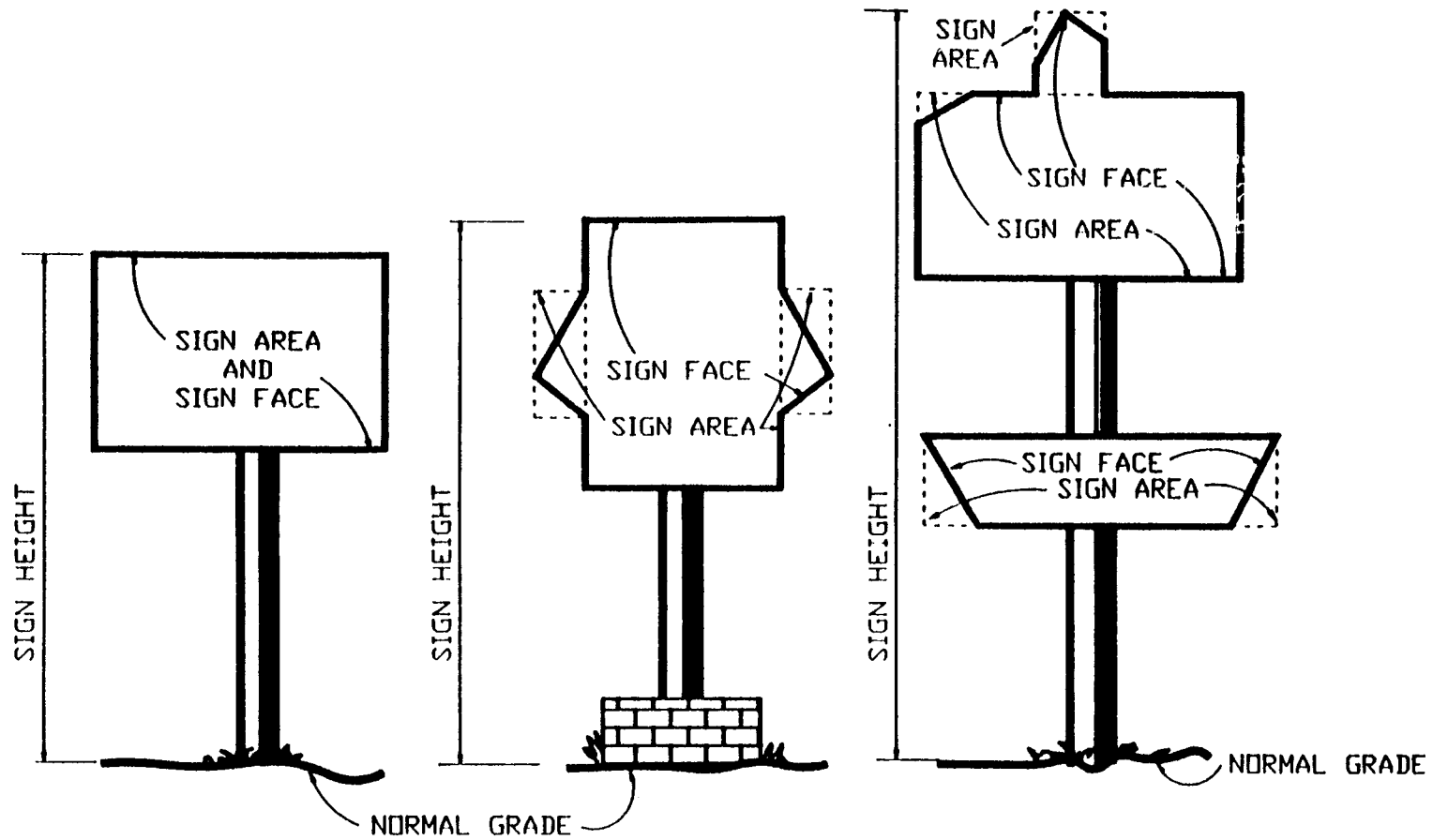
SEE COLUMN HEADINGS OF TABLE 5-3-2
FOR MEANINGS OF LETTERS.



PROPERTY SEPARATION AND USE SEPARATION

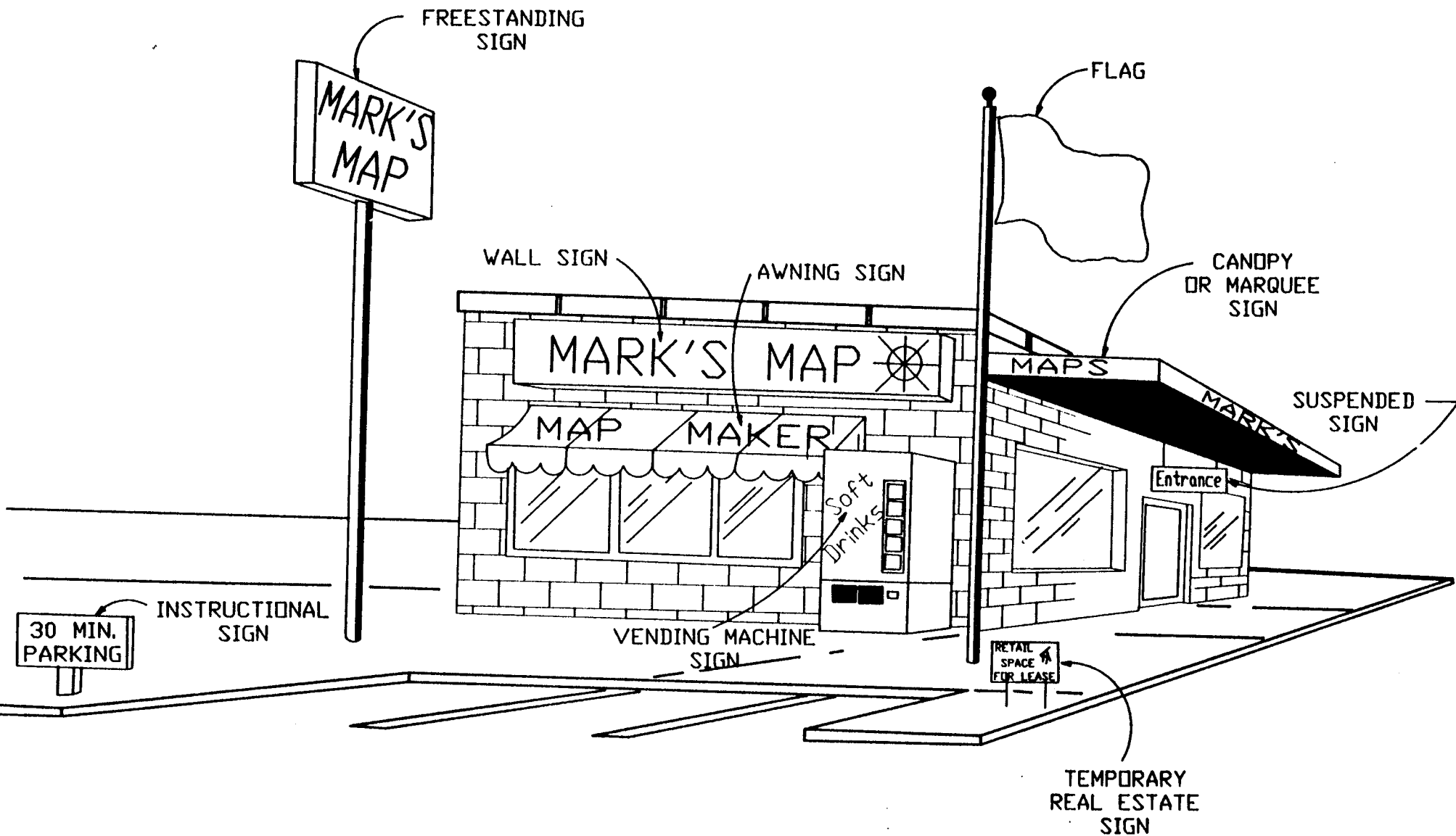


DRAINAGEWAY AND OPEN SPACE DEDICATION



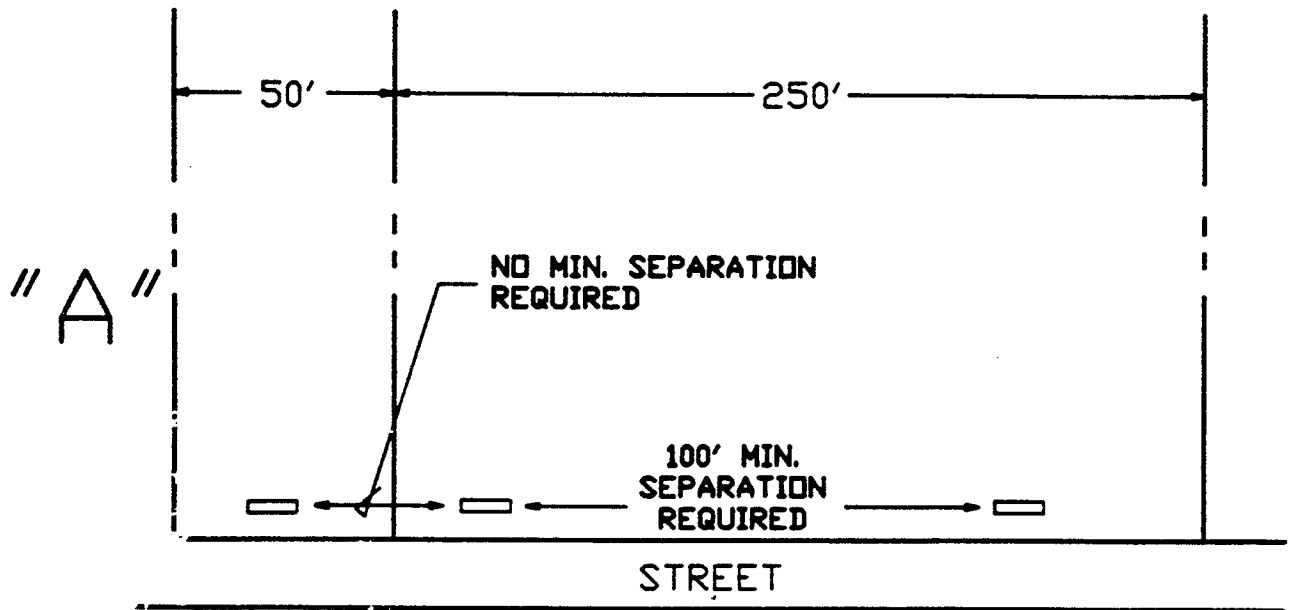
• CALCULATE AREA OF SMALLEST SQUARE, CIRCLE, RECTANGLE, OR COMBINATION THEREOF, THAT CAN ENCOMPASS THE SIGN FACE.

CALCULATION OF SIGN AREA AND HEIGHT

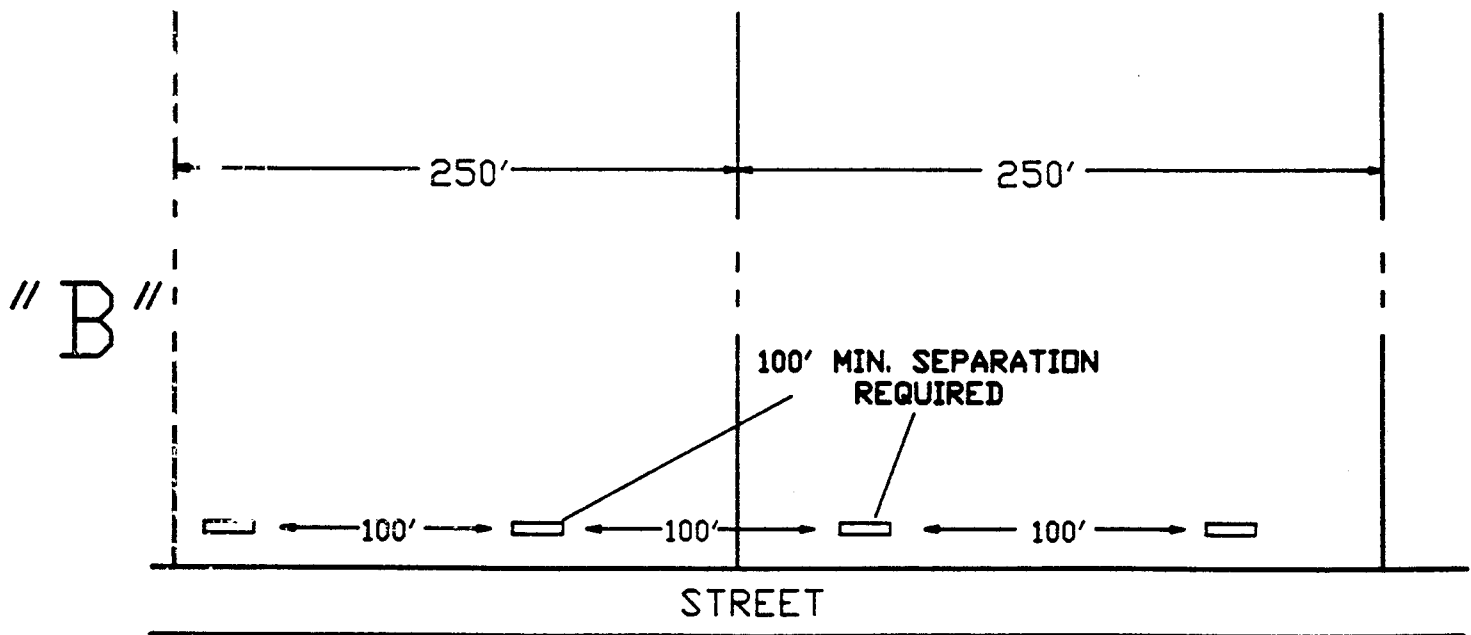


TYPES OF SIGNS

• ILLUSTRATION FOR SIGN TYPES ONLY, NOT AN ILLUSTRATION OF CONFORMING USES.

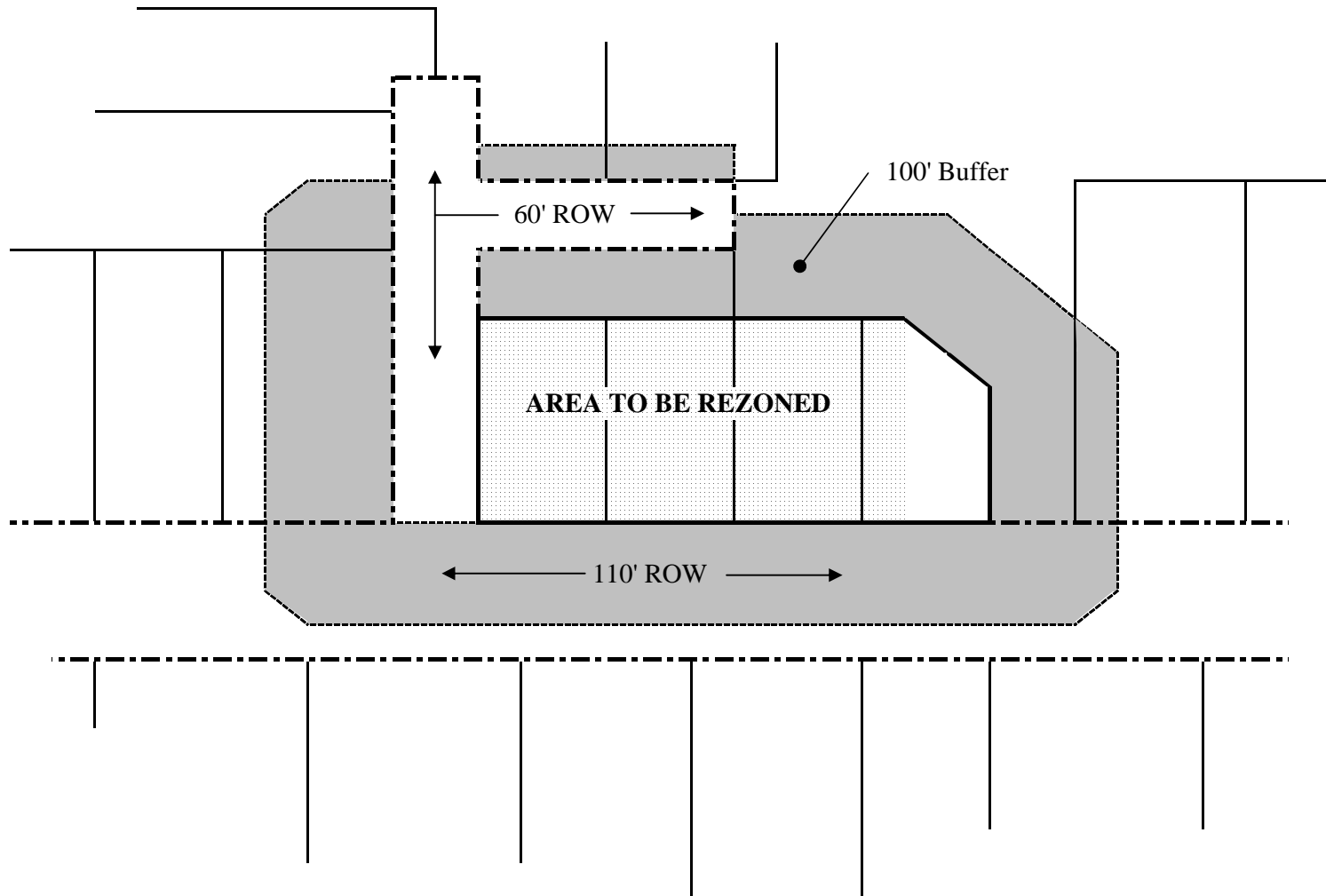


PROPERTY WITH TWO FREESTANDING SIGNS
ADJACENT TO PROPERTY WITH ONE SIGN



TWO PROPERTIES WITH TWO FREESTANDING
SIGNS ADJACENT TO EACH OTHER

PROTEST PETITION 100-FOOT WIDE BUFFER (“BASE AREA”)



APPENDIX 6: LANDSCAPING

Canopy Trees

Scientific Name	Common Name	Water Wise	E/D	Ht (Feet)	Exposure
<i>Abies firma</i>	Japanese fir	No	E	40 to 70	Sun
<i>Acer platanoides</i>	Norway maple	Yes	D	40 to 50	Sun
<i>Acer pseudo-platanus</i>	Sycamore maple	Yes	D	40 to 60	Sun
<i>Acer rubrum</i>	Red maple	Yes	D	40 to 60	Sun, partial shade
<i>Acer saccharum</i>	Sugar maple	No	D	50 to 75	Sun, partial shade
<i>Acer x freemanii</i>	Freeman maple	Yes	D	50 to 65	Sun
<i>Aesculus flava</i>	Yellow buckeye	No	D	50 to 70	Sun, partial shade
<i>Aesculus hippocastanum</i>	Common horse chestnut	No	D	50 to 75	Sun, partial shade
<i>Alnus glutinosa</i>	Common alder	Yes	D	40 to 60	Sun, partial shade
<i>Betula jacquemontii</i>	Jacquemontii birch; Whitebarked himalayan birch	No	D	30 to 50	Sun
<i>Betula lenta</i>	Sweet birch	Yes	D	40 to 55	Sun, partial shade
<i>Betula nigra</i>	River birch	No	D	40 to 70	Sun, partial shade
<i>Calocedrus decurrens</i>	Incense cedar	Yes	E	30 to 70	Sun, light shade
<i>Carpinus betulus</i>	European hornbeam	Yes	D	40 to 60	Sun, partial shade
<i>Carpinus betulus 'fastigiata'</i>	Upright European hornbeam	Yes	D	40 to 60	Sun, partial shade
<i>Carpinus caroliniana</i>	American hornbeam, Ironwood	Yes	D	20 to 30	Sun, partial shade
<i>Carya illinoensis</i>	Pecan	Yes	D	70 to 100	Sun, light shade
<i>Castanea sativa</i>	Spanish chestnut	Yes	D	80 to 100	Sun
<i>Catalpa speciosa</i>	Northern catalpa	Yes	D	40 to 70	Sun, partial shade
<i>Cedrus atlantica 'Glauca'</i>	Blue atlas cedar	Yes	E	60 to 100	Sun, partial shade
<i>Cedrus deodara</i>	Deodar cedar	Yes	E	40 to 70	Sun, light shade
<i>Cedrus libani</i>	Cedar of Lebanon	Yes	E	40 to 60	Sun
<i>Celtis occidentalis</i>	Hackberry	Yes	D	40 to 60	Sun
<i>Cercidiphyllum japonicum</i>	Katsuratree	No	D	40 to 60	Sun
<i>Chamaecyparis obtusa</i>	Hinoki falsecypress	No	E	50 to 75	Sun, light shade
<i>Chamaecyparis pisifera</i>	Japanese falsecypress	No	E	50 to 70	Sun
<i>Cunninghamia lanceolata</i>	China fir	No	E	30 to 75	Sun, partial shade
<i>Eucommia ulmoides</i>	Hardy rubber tree	Yes	D	40 to 60	Sun
<i>Fagus grandifolia</i>	American beech	No	D	50 to 80	Sun, partial shade
<i>Fraxinus americana</i>	White ash	Yes	D	60 to 80	Sun
<i>Fraxinus pennsylvanica</i>	Green ash	Yes	D	50 to 60	Sun
<i>Ginkgo biloba (male)</i>	Ginkgo	Yes	D	40 to 70	Sun
<i>Gleditsia triacanthos</i>	Honeylocust	Yes	D	30 to 70	Sun
<i>Gleditsia triacanthos inermis</i>	Thornless honeylocust	Yes	D	30 to 70	Sun
<i>Gordonia lasianthus</i>	Loblolly bay	No	E	30 to 50	Sun, partial shade
<i>Gymnocladus dioica</i>	Kentucky coffeetree	Yes	D	60 to 75	Sun
<i>Ilex opaca</i>	American holly	Yes	E	30 to 60	Sun, partial shade
<i>Juniperus virginiana</i>	Eastern redcedar	Yes	E	30 to 40	Sun
<i>Kalopanax pictus</i>	Castor-aralia	Yes	D	40 to 60	Sun
<i>Larix keampferi</i>	Japanese larch	No	D	50 to 70	Sun
<i>Liquidambar styraciflua</i>	Sweetgum	Yes	D	60 to 100	Sun, partial shade
<i>Liriodendron tulipifera</i>	Tuliptree, Yellow poplar	No	D	40 to 100	Sun
<i>Magnolia acuminata</i>	Cucumbertree magnolia	No	D	50 to 80	Sun, partial shade
<i>Magnolia grandiflora</i>	Southern magnolia	Yes	E	40 to 80	Sun, partial shade
<i>Metasequoia glyptostroboides</i>	Dawn redwood	Yes	D	50 to 90	Sun
<i>Nyssa sylvatica</i>	Black gum	No	D	40 to 60	Sun, partial shade
<i>Picea abies</i>	Norway spruce	No	E	40 to 60	Sun
<i>Picea glauca</i>	Alberta spruce	Yes	E	40 to 60	Sun, light shade
<i>Picea pungens</i>	Colorado blue spruce	Yes	E	30 to 90	Sun
<i>Pinus echinata</i>	Shortleaf pine	Yes	E	80 to 100	Sun
<i>Pinus elliotii</i>	Slash pine	Yes	E	60 to 80	Sun
<i>Pinus flexilis</i>	Limber pine	Yes	E	30 to 60	Sun, partial shade

Scientific Name	Common Name	Water Wise	E/D	Ht (Feet)	Exposure
<i>Pinus heldreichii</i>	Bosnian pine	Yes	E	70 to 90	Sun
<i>Pinus nigra</i>	Austrian pine	Yes	E	30 to 60	Sun
<i>Pinus rigida</i>	Pitch pine	Yes	E	40 to 60	Sun
<i>Pinus sylvestris</i>	Scotch pine	Yes	E	30 to 70	Sun
<i>Pinus taeda</i>	Loblolly pine	Yes	E	30 to 40	Sun, partial shade
<i>Pinus thunbergiana</i>	Japanese black pine	Yes	E	50 to 70	Sun
<i>Pinus virginiana</i>	Virginia pine	Yes	E	15 to 40	Sun
<i>Platanus acerifolia</i>	London plane tree	Yes	D	60 to 80	Sun
<i>Quercus acutissima</i>	Sawtooth oak	Yes	D	30 to 45	Sun, light shade
<i>Quercus alba</i>	White oak	Yes	D	60 to 100	Sun
<i>Quercus bicolor</i>	Swamp white oak	Yes	D	50 to 60	Sun, partial shade
<i>Quercus coccinea</i>	Scarlet oak	Yes	D	50 to 80	Sun
<i>Quercus falcata</i>	Southern red oak	Yes	D	70 to 90	Sun
<i>Quercus hemisphaerica</i>	Darlington oak	Yes	D	40 to 60	Sun, partial shade
<i>Quercus imbricaria</i>	Shingle oak	Yes	D	50 to 60	Sun
<i>Quercus laurifolia</i>	Laurel oak	Yes	D	40 to 60	Sun
<i>Quercus lyrata</i>	Overcup oak	Yes	D	35 to 45	Sun
<i>Quercus macrocarpa</i>	Bur oak	Yes	D	70 to 80	Sun
<i>Quercus nigra</i>	Water oak	Yes	D	50 to 75	Sun, partial shade
<i>Quercus nuttallii</i>	Nuttall oak	Yes	D	40 to 60	Sun
<i>Quercus palustris</i>	Pin oak	Yes	D	60 to 80	Sun
<i>Quercus phellos</i>	Willow oak	Yes	D	60 to 80	Sun
<i>Quercus prinus</i>	Chestnut oak	Yes	D	60 to 70	Sun
<i>Quercus rubra</i>	Red oak	Yes	D	60 to 75	Sun
<i>Quercus shumardii</i>	Shumard oak	Yes	D	40 to 60	Sun
<i>Quercus stellata</i>	Post oak	Yes	D	40 to 50	Sun
<i>Quercus virginiana</i>	Live oak	Yes	E	30 to 50	Sun
<i>Salix matsudana</i>	Scarlet Curls, Tortuosa	No	D	40 to 50	Sun
<i>Sassafras albidum</i>	Sassafras	Yes	D	30 to 60	Sun, partial shade
<i>Taxodium ascendens</i>	Pond cypress	Yes	D	70 to 80	Sun
<i>Taxodium distichum</i>	Baldcypress	Yes	D	50 to 100	Sun
<i>Tilia americana</i>	American linden	Yes	D	60 to 100	Sun
<i>Tilia cordata</i>	Littleleaf linden	Yes	D	30 to 50	Sun
<i>Tilia tomentosa</i>	Silver linden	Yes	D	40 to 70	Sun
<i>Tsuga canadensis</i>	Canadian hemlock	No	E	30 to 80	Sun, partial shade
<i>Tsuga caroliniana</i>	Carolina hemlock	No	E	30 to 70	Sun, partial shade
<i>Ulmus americana cvs.</i>	American Elm cvs: Liberty Elm, Valley Forge Elm	Yes	D	75 to 125	Sun, partial shade
<i>Ulmus parvifolia</i>	Lacebark elm, Chinese elm	Yes	D	40 to 50	Sun
<i>Zelkova serrata</i>	Zelkova	Yes	D	50 to 80	Sun, partial shade

Understory Trees

Scientific Name	Common Name	Water Wise	E/D	Ht (Feet)	Exposure
<i>Abies koreana</i>	Korean fir	No	E	15 to 30	Sun
<i>Acer barbatum</i> (A. <i>saccharum</i> ssp. <i>floridanum</i>)	Southern sugar maple	Yes	D	20 to 25	Sun
<i>Acer buergeranum</i>	Trident maple	Yes	D	25 to 35	Sun
<i>Acer campestre</i>	Hedge maple	Yes	D	25 to 35	Sun, light shade
<i>Acer cissifolium</i>	Ivy-leaved maple	No	D	20 to 30	Sun, partial shade
<i>Acer ginnala</i>	Amur maple	Yes	D	15 to 20	Sun, partial shade
<i>Acer griseum</i>	Paperbark maple	No	D	20 to 30	Sun, partial shade
<i>Acer japonicum</i>	Fullmoon maple	No	D	20 to 30	Sun, partial shade
<i>Acer leucoderme</i>	Whitebark maple, Chalk maple	Yes	D	25 to 30	Sun, partial shade
<i>Acer maxmowiczianum</i>	Nikko maple	No	D	20 to 30	Sun
<i>Acer palmatum</i>	Japanese maple	No	D	15 to 25	Sun, partial shade
<i>Acer spicatum</i>	Mountain maple	No	D	10 to 30	Sun, partial shade
<i>Acer triflorum</i>	Three-flower maple	No	D	20 to 30	Sun, partial shade
<i>Acer truncatum</i>	Purple blow maple	Yes	D	20 to 25	Sun
<i>Aesculus californica</i>	California buckeye	Yes	D	20 to 30	Sun, partial shade
<i>Aesculus glabra</i>	Ohio buckeye	No	D	20 to 40	Sun, partial shade
<i>Aesculus pavia</i>	Red buckeye	Yes	D	10 to 20	Sun, partial shade
<i>Aesculus sylvatica</i>	Painted buckeye	No	D	5 to 15	Sun, partial shade
<i>Alnus japonica</i>	Japanese alder	Yes	D	12 to 25	Sun, partial shade
<i>Alnus serrulata</i>	Tag alder	Yes	D	15 to 20	Sun, partial shade
<i>Amelanchier alnifolia</i>	Serviceberry	No	D	15 to 25	Sun, partial shade
<i>Amelanchier arborea</i>	Downy serviceberry	No	D	10 to 25	Sun, partial shade
<i>Amelanchier canadensis</i>	Shadbush	No	D	15 to 20	Sun, partial shade
<i>Amelanchier x grandiflora</i>	Apple serviceberry cvs: Autumn Brilliance, Princess Diana, etc.	No	D	20 to 25	Sun, partial shade
<i>Carpinus japonica</i>	Japanese hornbeam	Yes	D	20 to 30	Sun, partial shade
<i>Carpinus orientalis</i>	Oriental hornbeam	Yes	D	15 to 25	Sun, shade
<i>Cercis canadensis</i>	Eastern redbud	Yes	D	20 to 30	Sun, partial shade
<i>Cercis canadensis ssp retisus</i>	Oklahoma redbud	Yes	D	20 to 30	Sun, partial shade
<i>Cercis canadensis ssp. texensis</i>	Texas redbud	Yes	D	15 to 20	Sun, partial shade
<i>Cercis chinensis</i>	Chinese redbud	Yes	D	8 to 12	Sun
<i>Chionanthus retusus</i>	Chinese fringe tree	Yes	D	15 to 25	Sun, partial shade
<i>Chionanthus virginicus</i>	Fringe tree	No	D	12 to 20	Sun, partial shade
<i>Cladrastis kentuckea</i>	Yellowwood	Yes	D	30 to 45	Sun
<i>Cornus florida</i>	Flowering dogwood	No	D	15 to 20	Partial shade
<i>Cornus kousa</i>	Kousa dogwood	No	D	20 to 30	Sun, partial shade
<i>Cornus mas</i>	Cornelain cherry dogwood	Yes	D	20 to 25	Sun, partial shade
<i>Cornus Stellar hybrids</i>	Stellar dogwood	No	D	15 to 30	Sun, partial shade
<i>Corylus avellana 'Contorta'</i>	Lauders walking stick	No	D	12 to 20	Sun
<i>Cotinus coggygria</i>	Smoketree	Yes	D	10 to 15	Sun
<i>Cotinus hybrids</i>	Smoketree cvs: Grace	Yes	D	10 to 15	Sun
<i>Cotinus obovatus</i>	American smoke tree	Yes	D	10 to 15	Sun
<i>Crataegus crus-galli</i>	Cockspur hawthorn	Yes	D	20 to 30	Sun
<i>Crataegus laevigata</i>	Scarlet hawthorn, English hawthorn	Yes	D	20 to 25	Sun
<i>Crataegus phaenopyrum</i>	Washington hawthorn	Yes	D	25 to 30	Sun
<i>Crataegus x lavalleyi</i>	Lavalle hawthorn	Yes	D	15 to 30	Sun
<i>Crateegus viridis</i>	Green hawthorn	Yes	D	15 to 20	Sun, light shade
<i>Cryptomeria japonica</i>	Cryptomeria	Yes	E	50 to 60	Sun, light shade
<i>Cryptomeria japonica</i>	Cryptomeria cvs: Sekkan-Sugi, etc.	No	E	15 to 30	Sun, light shade
<i>Cupressus arizonica</i>	Arizona cypress	Yes	E	30 to 40	Sun
<i>Cupressus sempervirens</i>	Italian cypress	Yes	E	20 to 30	Sun
<i>Cydonia sinensis</i>	Chinese quince	No	D	10 to 20	Sun, partial shade
<i>Euscaphis japonica</i>	Korean sweetheart tree	Yes	D	20	Sun, partial shade

Scientific Name	Common Name	Water Wise	E/D	Ht (Feet)	Exposure
<i>Firmiana simplex</i>	Chinese parasol tree	No	D	30 to 45	Sun
<i>Halesia carolina, H. tetraptera</i>	Carolina silverbell	No	D	20 to 40	Sun, partial shade
<i>Halesia diptera</i>	Two-winged silverbell	No	D	15 to 30	Sun, partial shade
<i>Heptacodium miconiodes</i>	Seven-son flower	Yes	D	10 to 20	Sun, partial shade
<i>Hovenia dulcis</i>	Japanese raisin tree	Yes	D	30	Sun, light shade
<i>Ilex cassine</i>	Dahoon holly	Yes	E	20 to 30	Sun, partial shade
<i>Ilex decidua</i>	Possumhaw	Yes	D	20 to 30	Sun, partial shade
<i>Ilex pedunculosa</i>	Long stalk holly	Yes	E	20 to 30	Sun, partial shade
<i>Ilex vomitoria 'Pendula'</i>	Weeping yaupon holly	Yes	E	20 to 25	Sun, partial shade
<i>Ilex x 'Nellie R. Stevens'</i>	Nellie R. Stevens holly	Yes	E	20 to 40	Sun, partial shade
<i>Ilex x 'Carolina Sentinal'</i>	Carolina Sentinal holly	No	E	20 to 25	Sun, partial shade
<i>Ilex x attenuata</i>	<i>Ilex</i> cvs: Savannah, Foster, Sunny Foster, East Palatka, etc.	Yes	E	20 to 30	Sun, partial shade
<i>Juniperous saliciola</i>	Southern red cedar	Yes	E	30 to 40	Sun
<i>Juniperous scopulorum</i>	Rocky Mountain juniper cvs: Blue Haven, Skyrocket, Wichita Blue	Yes	E	15 to 40	Sun
<i>Koelreuteria bipinnata</i>	Southern Goldenraintree	Yes	D	20 to 30	Sun
<i>Koelreuteria paniculata</i>	Goldenraintree	Yes	D	20 to 40	Sun
<i>Lagerstroemia fauriei</i>	Japanese crapemyrtle	Yes	D	20 to 30	Sun
<i>Lagerstromia indica</i>	Crapemyrtle	Yes	D	15 to 30	Sun
<i>Lagerstromia indica x fauriei</i>	Crapemyrtle cvs: Choctaw, Muskogee, Natchez, Tuscarora, etc.	Yes	D	15 to 30	Sun
<i>Lithocarpus henryi</i>	Henry tanbark oak	Yes	E	25 to 30	Sun, partial shade
<i>Maackia amurensis</i>	Amur maackia	Yes	D	20 to 30	Sun
<i>Maclura pomifera</i>	Osage-orange	Yes	D	20 to 40	Sun
<i>Magnolia grandiflora 'Little Gem'</i>	Little Gem magnolia	Yes	E	15 to 20	Sun
<i>Magnolia hybrids</i>	<i>Magnolia</i> cvs: Ann, Betty, Judy, Mary Nell, Galaxy, etc	No	D	10 to 30	Sun
<i>Magnolia liliiflora</i>	Lily magnolia	No	D	12 to 15	Sun
<i>Magnolia macrophylla</i>	Bigleaf magnolia	No	D	30 to 40	Sun, partial shade
<i>Magnolia sieboldii</i>	Oyama magnolia	No	D	10 to 20	Partial shade
<i>Magnolia stellata</i>	Star magnolia	No	D	10 to 20	Sun
<i>Magnolia virginiana</i>	Sweetbay magnolia	No	E	10 to 60	Sun, partial shade
<i>Magnolia x soulangiana</i>	Saucer magnolia	No	D	15 to 25	Sun, partial shade
<i>Malus spp.</i>	Crabapple	Yes	D	15 to 25	Sun
<i>Morus australis 'Unryo'</i>	Contorted mulberry	Yes	D	20 to 30	Sun
<i>Nyssa ogeche</i>	Ogeche gum	No	D	30 to 50	Sun, partial shade
<i>Ostrya virginiana</i>	American hophornbeam or Ironwood	Yes	D	25 to 40	Sun, partial shade
<i>Oxydendrum arboreum</i>	Sourwood	Yes	D	20 to 30	Sun, partial shade
<i>Parrotia persica</i>	Persian ironwood	Yes	D	20 to 40	Sun, light shade
<i>Persea borbonia</i>	Redbay	Yes	E	15 to 40	Sun, partial shade
<i>Phellodendron amurense</i>	Amur cork tree	Yes	D	30 to 45	Sun
<i>Photinia serrulata</i>	Chinese photinia	Yes	E	20 to 30	Sun
<i>Picea glauca (dwarf cultivars)</i>	Spruce cvs: Conica, etc	Yes	E	10 to 20	Sun, light shade
<i>Pinus bungeana</i>	Lacebark pine	Yes	E	30 to 50	Sun
<i>Pinus cembra</i>	Swiss stone pine	Yes	E	30 to 40	Sun
<i>Pinus korariensis</i>	Korean pine	Yes	E	30 to 40	Sun, partial shade
<i>Pinus mugo</i>	Mugo pine	Yes	E	15 to 20	Sun, partial shade
<i>Pinus wallichiana</i>	Himalayan pine	Yes	E	30 to 50	Sun, partial shade
<i>Pistacia chinensis</i>	Chinese pistache	Yes	D	25 to 40	Sun
<i>Poncirus trifoliata</i>	Hardy orange	Yes	D	8 to 20	Sun
<i>Prunus 'Snow Goose'</i>	Snow Goose cherry	No	D	20	Sun
<i>Prunus campanulata</i>	Taiwan cherry	No	D	20 to 30	Sun, partial shade
<i>Prunus caroliniana</i>	Carolina laurelcherry	No	E	20 to 40	Sun, partial shade
<i>Prunus cerasifera</i>	Purple leaf plum	No	D	15 to 25	Sun

Scientific Name	Common Name	Water Wise	E/D	Ht (Feet)	Exposure
<i>Prunus mume</i>	Japanese apricot	No	D	10 to 20	Sun, partial shade
<i>Prunus percica</i> (Corinthian hybrids)	Corinthian peach	No	D	20 to 25	Sun
<i>Prunus sargentii</i>	Sargent cherry	No	D	20 to 40	Sun
<i>Prunus serrulata</i>	Japanese cherry	No	D	15 to 25	Sun, partial shade
<i>Prunus subhirtella</i>	Higon cherry	No	D	20 to 40	Sun
<i>Prunus x 'Okame'</i>	Okame cherry	No	D	15 to 30	Sun
<i>Prunus x blireana</i>	Blireana cherry	No	D	15 to 20	Sun
<i>Prunus x cistena</i>	Purple leaf plum	No	D	7 to 14	Sun
<i>Prunus x yedoensis</i>	Yoshino cherry	No	D	30 to 40	Sun, light shade
<i>Pseudolarix amabilis</i>	Golden-larch	No	D	20 to 40	Sun
<i>Ptelea trifolia</i>	Hop tree	Yes	D	15 to 20	Sun, partial shade
<i>Pyrus calleryana</i>	Pear cvs: Cleveland, Aristocrat, Redspire, Holmford	Yes	D	30 to 40	Sun
<i>Rhamnus caroliniana</i>	Carolina buckthorn	Yes	D	15 to 30	Sun
<i>Rhus typhina</i>	Staghorn sumac	Yes	D	15 to 25	Sun
<i>Robinia pseudoacacia</i>	Black locust	Yes	D	30 to 50	Sun
<i>Salix babylonica</i>	Weeping willow	No	D	30 to 50	Sun
<i>Sinojackia rehderiana</i>	Jacktree	No	D	15 to 20	Sun, partial shade
<i>Stewartia rostrata</i>	Upright stewartia	No	D	15	Sun, partial shade
<i>Stewartia koreana</i>	Korean stewartia	No	D	20 to 30	Sun, partial shade
<i>Stewartia ovata</i>	Mountain stewartia	No	D	10 to 15	Sun, light shade
<i>Stewartia pseudocamellia</i>	Japanese stewartia	No	D	20 to 40	Sun, partial shade
<i>Styrax japonica</i>	Japanese snowbell	No	D	20 to 30	Sun, partial shade
<i>Styrax malacodendron</i>	Silky stewartia	No	D	10 to 15	Partial shade
<i>Styrax obassia</i>	Fragrant snowball	No	D	20 to 30	Sun, partial shade
<i>Syringa reticulata</i>	Japanese tree lilac	No	D	20 to 30	Sun
<i>Thuja occidentalis</i>	Eastern arborvitae	No	E	10 to 30	Sun
<i>Thuja occidentalis</i>	American arborvitae	No	E	40 to 60	Sun
<i>Thuja orientalis</i>	Oriental arborvitae	No	E	18 to 25	Sun
<i>Thuja plicata</i>	Giant arborvitae	No	E	50 to 80	Sun, partial shade
<i>Thuja x 'Green Giant'</i>	Green Giant arbor	No	E	40 to 60	Sun
<i>Trachycarpus fortunei</i>	Windmill palm	Yes	E	15 to 35	Sun, partial shade
<i>Trochodendron aralioides</i>	Wheel tree	No	D	10 to 20	Partial shade
<i>Ulmus alata</i>	Winged elm	Yes	D	30 to 40	Sun
<i>Vitex agnus-castus</i>	Vitex chastetree	Yes	D	15 to 20	Sun
<i>Ziziphus jujuba</i>	Common jujuba	Yes	D	15 to 20	Sun

Shrubs

Scientific Name	Common Name	Water Wise	E/D	Ht (Feet)	Exposure
<i>Abelia chinensis</i>	Chinese abelia	Yes	semi	5 to 7	Sun, partial shade
<i>Abelia hybrids</i>	Abelia cvs: Edward Goucher, Little Richard, Sunrise, etc.	Yes	semi	Varies	Sun, partial shade
<i>Abelia x grandiflora</i>	Glossy abelia	Yes	semi	3 to 6	Sun, partial shade
<i>Abeliophyllum distichum</i>	White forsythia	Yes	semi	3 to 5	Sun, partial shade
<i>Abies concolor (dwarf cultivars)</i>	White fir	Yes	E	Varies	Sun, partial shade
<i>Aesculus parviflora</i>	Bottlebrush buckeye	Yes	D	8 to 12	Sun, partial shade
<i>Agava americana</i>	Century plant	Yes	E	3 to 6	Sun
<i>Amorpha canescens</i>	Leadplant	Yes	D	2 to 4	Sun
<i>Aucuba japonica</i>	Aucuba	Yes	E	6 to 10	Partial shade
<i>Berberis julianae</i>	Wintergreen barberry	Yes	E	6 to 8	Sun, partial shade
<i>Berberis koreana</i>	Korean barberry	Yes	D	4 to 6	Sun, partial shade
<i>Berberis thunbergii</i>	Japanese barberry	Yes	D	3 to 6	Sun, partial shade
<i>Berberis thunbergii var. atropurpurea</i>	Red barberry, Rose glow barberry	Yes	D	3 to 6	Sun, partial shade
<i>Berberis triacanthophora</i>	Threespine barberry	Yes	E	3 to 5	Sun, partial shade
<i>Berberis verruculosa</i>	Warty barberry	Yes	E	3 to 4	Sun, partial shade
<i>Berberis x chenaultii</i>	Chenault barberry	Yes	E	3 to 4	Sun
<i>Berberis x gladwynensis 'William Penn'</i>	William Penn barberry	Yes	E	3 to 4	Sun, partial shade
<i>Berberis x mentorensis</i>	Mentor barberry	Yes	D	5	Sun, partial shade
<i>Buddleia alternifolia</i>	Alternate-leaf butterfly-bush	Yes	D	10 to 20	Sun
<i>Buddleia davidii</i>	Butterfly-bush	Yes	D	10 to 15	Sun
<i>Buddleia golbosa</i>	Orange ball tree	Yes	semi	10 to 15	Sun
<i>Buddleia lindleyana</i>	Lindley butterfly-bush	Yes	E	4 to 6	Sun
<i>Buddleia loricata</i>	Butterfly-bush	Yes	E	4 to 5	Sun
<i>Buxus harlandii</i>	Harland boxwood	Yes	E	4 to 6	Sun
<i>Buxus hybrids</i>	Boxwood cvs: Green Mountain, Green Velvet, Wintergreen	Yes	E	2 to 4	Partial shade
<i>Buxus sempervirens</i>	Common boxwood	Yes	E	15 to 20	Partial shade
<i>Buxus sempervirens 'Suffruticosa'</i>	English boxwood	Yes	E	2 to 4	Partial shade
<i>Buxus sinica var. japonica</i>	Japanese boxwood	Yes	E	3 to 6	Partial shade
<i>Buxus sinica (B. microphylla)</i>	Little leaf boxwood	Yes	E	3 to 4	Partial shade
<i>Callicarpa americana</i>	American beautyberry	Yes	D	3 to 8	Sun, partial shade
<i>Callicarpa bodinieri</i>	Bodinier beautyberry	Yes	D	6 to 10	Sun, partial shade
<i>Callicarpa dichotoma</i>	Purple beautyberry	Yes	D	3 to 4	Sun, partial shade
<i>Callicarpa japonica</i>	Japanese beautyberry	Yes	D	4 to 6	Sun, partial shade
<i>Callistemon citrinus</i>	Lemon bottlebrush	Yes	E	10 to 15	Sun
<i>Camellia sasanqua</i>	Sasanqua camellia	Yes	E	6 to 10	Sun, partial shade
<i>Camellia sinensis</i>	Tea camellia	Yes	E	4 to 6	Partial shade
<i>Caryopteris x clandonensis</i>	Blue mist shrub, Blue caryopteris	Yes	D	2 to 3	Sun
<i>Ceanothus americanus</i>	New Jersey tea	Yes	D	3 to 4	Sun, partial shade
<i>Ceanothus x pallidus</i>	Ceanothus	Yes	D	3 to 4	Sun
<i>Cedrus deodara (dwarf cultivars)</i>	Cedar cvs: Snow Sprite, Compacta, etc.	Yes	E	Varies	Sun
<i>Cephalotaxus harringtonia</i>	Japanese plum yew	Yes	E	5 to 10	Partial shade
<i>Cornus sericea; (C. stolonifera)</i>	Redosier dogwood	Yes	D	7 to 9	Sun, partial shade
<i>Cotoneaster apiculatus</i>	Cranberry cotoneaster	Yes	D	3	Sun, partial shade
<i>Cotoneaster dammeri</i>	Bearberry cotoneaster	Yes	E	1 to 2	Sun
<i>Cotoneaster divaricatus</i>	Spreading cotoneaster	Yes	D	5 to 6	Sun
<i>Cotoneaster horizontalis</i>	Rockspray cotoneaster	Yes	E	2 to 3	Sun
<i>Cotoneaster lacteus</i>	Parney cotoneaster	Yes	E	6 to 10	Sun, partial shade
<i>Cotoneaster microphyllus</i>	Little-leaf cotoneaster	Yes	E	2 to 3	Sun, partial shade
<i>Cotoneaster salicifolia</i>	Willowleaf cotoneaster	Yes	E	10 to 15	Sun, partial shade
<i>Cytisus scoparius</i>	Scotch broom	Yes	D	5 to 6	Sun, partial shade

Scientific Name	Common Name	Water Wise	E/D	Ht (Feet)	Exposure
<i>Deutzia gracilis</i>	Slender deutzia	Yes	D	3 to 4	Sun, partial shade
<i>Deutzia hybrids</i>	Deutzia cvs: Pink Minor, Strawberry Fields, Magician, etc.	Yes	D	2 to 4	Sun, partial shade
<i>Diervilla sessilifolia</i>	Southern bush-honeysuckle	Yes	D	3 to 5	Sun, partial shade
<i>Elaeagnus fruitlandi</i>	Elaeagnus	Yes	E	10	Sun, partial shade
<i>Elaeagnus pungens</i>	Thorny elaeagnus	Yes	E	10 to 15	Sun, partial shade
<i>Elaeagnus x ebbingii</i>	Elaeagnus	Yes	E	8 to 10	Sun, partial shade
<i>Euonymus americana</i>	Strawberry bush	Yes	D	4 to 6	Partial shade
<i>Euonymus japonicus</i>	Japanese euonymus	Yes	E	5 to 10	Sun, partial shade
<i>Euonymus kiautschovicus</i>	Spreading euonymus	Yes	E	8 to 10	Sun, partial shade
<i>Fontanesia fortunei</i>	Fortune's fontanesia	Yes	D	10 to 15	Sun, partial shade
<i>Forsythia x hybrids</i>	Forsythia cvs: Beatrix Farrand, Lynwood Gold, Golden Times, Spring Glory, etc.	Yes	D	Varies	Sun, partial shade
<i>Forsythia x intermedia</i>	Border forsythia	Yes	D	8 to 10	Sun, partial shade
<i>Fothergilla gardenii</i>	Dwarf fothergilla	Yes	D	2 to 3	Sun, partial shade
<i>Fothergilla major</i>	Large fothergilla	Yes	D	6 to 12	Partial shade
<i>Gardenia augusta (G. jasminoides)</i>	Gardenia	Yes	E	4 to 6	Sun, partial shade
<i>Genista pilosa</i>	Silky-leaf woadwaxen	Yes	D	1 to 3	Sun
<i>Hamamelis mollis</i>	Chinese witchhazel	Yes	D	10 to 15	Partial shade to shade
<i>Hamamelis vernalis</i>	Vernal witchhazel	Yes	D	6 to 10	Sun, partial shade
<i>Hydrangea quercifolia</i>	Oakleaf hydrangea	Yes	D	4 to 6	Sun, partial shade
<i>Ilex 'China Boy', 'China Girl'</i>	China holly	Yes	E	8 to 10	Sun, partial shade
<i>Ilex cornuta</i>	Holly cvs: Carissa, Burford, Rotunda, Needlepoint, etc.	Yes	E	2 to 15	Sun
<i>Ilex cornuta cvs.</i>	Holly cvs: Burfordii, D'Or, O' Spring	Yes	E	10 to 25	Sun, partial shade
<i>Ilex crenata cvs.</i>	Holly cvs: Hetz, Helli, etc.	Yes	E	4 to 10	Sun, partial shade
<i>Ilex decidua</i>	Possomhaw holly	Yes	D	7 to 15	Sun, partial shade
<i>Ilex glabra</i>	Inkberry holly	Yes	E	6 to 8	Sun, partial shade
<i>Ilex latifolia</i>	Lusterleaf holly	Yes	E	20 to 25	Sun, partial shade
<i>Ilex vomitoria</i>	Yaupon holly	Yes	E	15 to 20	Sun, partial shade
<i>Ilex vomitoria cvs.</i>	Holly cvs: Nana, Schillings, Katherine, etc.	Yes	E	Varies	Sun, partial shade
<i>Ilex x 'Nellie R. Stevens'</i>	Nellie Stevens holly	Yes	E	15 to 25	Sun, partial shade
<i>Ilex x 'Emily Bruner'</i>	Emily Bruner holly	Yes	E	15 to 20	Sun, partial shade
<i>Ilex x 'Mary Nell'</i>	Mary Nell holly	Yes	E	10 to 20	Sun, partial shade
<i>Ilex x koehneana</i>	Koehne holly	Yes	E	Varies	Sun, partial shade
<i>Indigofera amblyantha</i>	Indigofera	Yes	D	4 to 6	Sun
<i>Indigofera heterantha</i>	Himalayan indigo	Yes	D	4 to 6	Sun
<i>Itea virginica</i>	Virginia sweetspire	Yes	D	3 to 5	Sun, partial shade
<i>Jasminum floridum</i>	Showy jasmine	Yes	E	3 to 5	Sun, partial shade
<i>Jasminum humile</i>	Italian yellow jasmine	Yes	E	5 to 7	Partial shade
<i>Jasminum nudiflorum</i>	Winter jasmine	Yes	D	3 to 4	Sun, partial shade
<i>Juniperus chinensis</i>	Chinese juniper cvs: Wintergreen, Spartan, Hooks, etc.	Yes	E	12 to 50	Sun
<i>Juniperus chinensis (dwarf cultivars)</i>	Chinese juniper cvs: Procumbens Nana, Berkshire, Sargentii, Hetzi	Yes	E	3 to 12	Sun
<i>Juniperus communis</i>	Common juniper	Yes	E	5 to 10	Sun
<i>Juniperus conferta cvs.</i>	Juniper cvs: Blue Lagoon, Blue Pacific, Boulevard, etc.	Yes	E	1 to 2	Sun
<i>Juniperus davurica cvs.</i>	Parsons juniper	Yes	E	2 to 3	Sun
<i>Juniperus horizontalis</i>	Juniper cvs: Blue Vase, Blue Chip, Wiltonii, etc.	Yes	E	1 to 2	Sun
<i>Juniperus hybrids</i>	Juniper cvs: Saybrook Gold, etc.	Yes	E	Varies	Sun

Scientific Name	Common Name	Water Wise	E/D	Ht (Feet)	Exposure
<i>Juniperus procumbens</i>	Japanese garden juniper	Yes	E	.5 to 1.5	Sun
<i>Juniperus rigida</i>	Needle juniper	Yes	E	15 to 20	Sun
<i>Juniperus sabina</i>	Savin juniper	Yes	E	4 to 6	Sun
<i>Juniperus scopulorum (dwarf cultivars)</i>	Juniper cvs: Blue Creeper, Skyrocket, etc.	Yes	E	Varies	Sun
<i>Juniperus squamata cvs.</i>	Juniper cvs: Holger, Blue Elf, Calgary Carpet, Blue Satr, etc.	Yes	E	Varies	Sun
<i>Juniperus virginiana cvs.</i>	Juniper cvs: Blue Mountain, Blue Cloud, Grey Owl, etc.	Yes	E	Varies	Sun
<i>Juniperus x media</i>	Juniper cvs: Seagreen, Old Gold, etc.	Yes	E	Varies	Sun
<i>Kalmia latifolia</i>	Mountain laurel	Yes	E	4 to 8	Sun, partial shade
<i>Kolkwitzia amabilis</i>	Beautybush	Yes	D	6 to 10	Sun
<i>Lagerstroemia indica and hybrids</i>	Crapemyrtle cvs: New Orleans, Centennial, Chica, Tonto, Acoma	Yes	D	5 to 15	Sun
<i>Lantana camera</i>	Lantana	Yes	D	1 to 5	Sun
<i>Lavandula angustifolia</i>	Common lavender	Yes	E	1 to 2	Sun
<i>Lavandula x intermedia</i>	Hybrid lavender	Yes	E	1 to 2	Sun
<i>Lespedeza bicolor</i>	Shrub bushclover	Yes	D	6 to 10	Sun
<i>Lindera benzoin</i>	Spice bush	Yes	D	6 to 12	Sun, partial shade
<i>Lonicera fragrantissima</i>	Winter honeysuckle	Yes	D	6 to 10	Sun, partial shade
<i>Lonicera nitida</i>	Boxleaf honeysuckle	Yes	E	6 to 8	Sun, partial shade
<i>Lonicera pileata</i>	Privet honeysuckle	Yes	E	2 to 3	Sun, partial shade
<i>Loropetalum chinensis</i>	Loropetalum	Yes	E	6 to 12	Sun, partial shade
<i>Loropetalum hybrids</i>	Loropetalum cvs: Plum Delight, Ruby, Fire Dance, etc.	Yes	E	4 to 10	Sun, partial shade
<i>Mahonia aquifolium</i>	Oregon grape holly	Yes	E	3 to 6	Partial shade
<i>Mahonia bealei</i>	Leatherleaf mahonia	Yes	E	6 to 7	Partial shade
<i>Mahonia fortunei</i>	Chinese mahonia	Yes	E	5 to 6	Partial shade
<i>Mahonia x media</i>	Mahonia cvs: Buckland, Charity, Faith, etc.	Yes	E	8 to 15	Partial shade
<i>Michelia figo</i>	Banana shrub	Yes	E	6 to 10	Sun, Partial shade
<i>Myrica cerifera</i>	Southern waxmyrtle	Yes	E	10 to 15	Sun, partial shade
<i>Myrica pennsylvanica</i>	Northern bayberry	Yes	E	5 to 12	Sun, partial shade
<i>Nandina domestica</i>	Nandina	Yes	E	6 to 8	Sun, partial shade
<i>Nandina domestica (dwarf cultivars)</i>	Nandina cvs: Wood's Dwarf, Nana, Fire Power, Gulf Stream, etc.	Yes	E	2 to 4	Sun, partial shade
<i>Perovskia atriplicifolia</i>	Russian sage	Yes	E	3 to 5	Sun
<i>Photinia serrulata</i>	Chinese photinia	Yes	E	20 to 25	Sun, partial shade
<i>Physocarpus opulifolius</i>	Ninebark	Yes	D	5 to 10	Sun, partial shade
<i>Picea abies (dwarf cultivars)</i>	Spruce cvs: Little Gem, Pendula, etc.	Yes	E	Varies	Sun
<i>Picea glauca (dwarf cultivars)</i>	Spruce cvs: Conica, etc.	Yes	E	Varies	Sun
<i>Picea pungens (dwarf cultivars)</i>	Spruce cvs: Globosa, Montgomery, Bakeri, Fat Albert, Foxtail, etc.	Yes	E	Varies	Sun
<i>Pinus mugo</i>	Mugo pine	Yes	E	15 to 20	Sun, partial shade
<i>Pinus mugo (dwarf cultivars)</i>	Pine cvs: Pumilio, Mughus	Yes	E	Varies	Sun
<i>Pinus nigra (dwarf cultivars)</i>	Pine cvs: Arnold Sentinel, Monstrosa, etc.	Yes	E	3 to 5	Sun
<i>Pinus rigida</i>	Pine cvs: Sherman Eddy, etc	Yes	E	15 to 20	Sun
<i>Pinus sylvestris (dwarf cultivars)</i>	Pine cvs: Nana, Hillside Creeper, etc.	Yes	E	Varies	Sun
<i>Pinus thunbergii (dwarf cultivars)</i>	Pine cvs: Nana, Thunderhead	Yes	E	Varies	Sun
<i>Pittosporum tobira</i>	Japanese pittosporum	Yes	E	10 to 12	Sun, partial shade
<i>Podocarpus macrophyllus var. maki</i>	Shrubby podocarpus	Yes	E	20 to 35	Sun, partial shade
<i>Potentilla fruticosa</i>	Shrubby potentilla	Yes	D	1 to 4	Sun, partial shade
<i>Prunus laurocerasus</i>	English laurel	Yes	E	10 to 18	Sun, partial shade

Scientific Name	Common Name	Water Wise	E/D	Ht (Feet)	Exposure
<i>Punica granatum</i>	Pomegranate	Yes	D	12 to 15	Sun, partial shade
<i>Pyracantha coccinea</i>	Scarlet firethorne	Yes	E	6 to 18	Sun
<i>Pyracantha hybrids</i>	Pyracantha cvs: Mohave, Mojave, Red Elf, Tiny Tim, etc.	Yes	E	Varies	Sun
<i>Pyracantha koidzumii</i>	Formosa pyracantha	Yes	E	8 to 12	Sun
<i>Raphiolepis hybrids</i>	Hawthorn cvs: Gulfgreen, Cuppertone	Yes	D	3 to 6	Sun
<i>Rhamnus fragula</i>	Alder buckthorn	Yes	D	10 to 12	Sun, partial shade
<i>Raphiolepis x delacourii</i>	Indian hawthorn, Yeddo hawthorn	Yes	E	3 to 4	Sun, partial shade
<i>Rhaphidophyllum hystrix</i>	Needle palm	Yes	E	6 to 8	Sun, partial shade
<i>Rhododendron austrinum</i>	Florida azalea	Yes	D	8 to 10	Partial shade
<i>Rhododendron calendulaceum</i>	Flame azalea	Yes	D	4 to 8	Partial shade
<i>Rhodotypos scandens</i>	Black jetbead	Yes	D	3 to 6	Sun, partial shade
<i>Rhus aromatica</i>	Sumac	Yes	D	2 to 6	Sun, partial shade
<i>Rhus glabra</i>	Smooth sumac	Yes	D	10 to 15	Sun
<i>Rhus michauxii</i>	Michaux's sumac	Yes	D	2 to 3	Sun
<i>Rhus typhina</i>	Staghorn sumac	Yes	D	15 to 25	Sun
<i>Rosa chinensis</i>	China rose	Yes	D	6 to 8	Sun
<i>Rosa 'Knock Out'</i>	Knock Out rose	Yes	D	4 to 5	Sun
<i>Rosa rugosa</i>	Rugosa rose	Yes	D	4 to 6	Sun
<i>Rosmarinus officinalis</i>	Rosemary	Yes	E	2 to 4	Sun
<i>Ruscus aculeatus</i>	Butcher's broom	Yes	E	1.5 to 3	Partial shade
<i>Sabal minor</i>	Dwarf palmeto	Yes	E	3 to 5	Sun
<i>Santolina chamaecyparissus</i>	Santolina, Lavender cotton	Yes	E	1 to 2	Sun
<i>Sarcococca confusa</i>	Sweet Box	Yes	E	3 to 5	Partial shade
<i>Sarcococca hookeriana</i>	Himalayan sarcococca	Yes	E	4 to 6	Partial shade
<i>Sarcococca orientalis</i>	Oriental sweetbox	Yes	E	2 to 3	Partial shade
<i>Sarcococca ruscifolia</i>	Fragrant sarcococca	Yes	E	2 to 3	Partial shade
<i>Sinojackia rehderiana</i>	Jacktree	Yes	D	15 to 20	Sun, partial shade
<i>Spiraea cantoniensis</i>	Double Reeves spirea	Yes	D	4 to 6	Sun, partial shade
<i>Spiraea japonica</i>	Japanese spirea	Yes	D	4 to 5	Sun, partial shade
<i>Spiraea nipponica 'Snowmound'</i>	Snowmound spirea	Yes	D	3 to 5	Sun, partial shade
<i>Spiraea prunifolia</i>	Bridalwreath spirea	Yes	D	4 to 9	Sun, partial shade
<i>Spiraea thunbergii</i>	Thunberg spirea	Yes	D	3 to 5	Sun, partial shade
<i>Spiraea x bumalda</i>	Bumalda spirea	Yes	D	2 to 3	Sun, partial shade
<i>Spiraea x vanhouttei</i>	Vanhoutte spirea	Yes	D	6 to 8	Sun, partial shade
<i>Syringa pekinensis</i>	Peking lilac	Yes	D	15	Sun
<i>Taxus chinensis</i>	Chinese yew	Yes	E	5 to 10	Sun, partial shade
<i>Teucrium chamaedrys</i>	Wall germander	Yes	E	1 to 1.5	Sun
<i>Ulmus galbra 'Horizontalis'</i>	Tabletop scotch elm	Yes	D	15	Sun
<i>Viburnum acerifolium</i>	Maple-leaf viburnum	Yes	D	4 to 6	Partial shade
<i>Viburnum awabuki</i>	Chindo Viburnum	Yes	E	10 to 15	Sun, partial shade
<i>Viburnum pilcatum var tomentosum</i>	Doublefile viburnum	Yes	E	8 to 10	Sun, partial shade
<i>Viburnum tinus</i>	Laurustinus	Yes	E	6 to 12	Sun, partial shade
<i>Viburnum x pragense</i>	Pragense viburnum	Yes	E	8 to 10	Sun, partial shade
<i>Vitex agnus castus</i>	Chastetree	Yes	D	15 to 20	Sun
<i>Vitex negundo</i>	Chastetree	Yes	D	10 to 20	Sun
<i>Xanthorrhiza simplicissima</i>	Yellowroot	Yes	D	2 to 3	Sun, partial shade
<i>Yucca filamentosa</i>	Adam's needle yucca	Yes	E	2 to 4	Sun
<i>Yucca flaccida</i>	Weakleak yucca	Yes	E	1 to 2	Sun
<i>Yucca gloriosa</i>	Soanish dagger yucca	Yes	E	6 to 8	Sun

APPENDIX 7

Transportation Impact Studies (TIS) Guidelines

Introduction

Consideration of the transportation impacts of a proposed development is inherent in any development-related decision. The governmental body approving rezonings, subdivisions, and site plans has to consider, at least implicitly, how the development will be accessed and how it will affect the transportation network and surrounding land uses. Informed consideration and approval of new development requires analysis of its transportation impacts. The only way to accurately assess the impacts of a project is to do a systematic, site-specific, traffic analysis of the transportation elements proposed for the site. Such analysis, uniformly performed and reviewed, allows consistent and equitable evaluation of proposed developments.

Purpose

The purpose of a Transportation Impact Study (TIS) is to assess the impacts of a proposed development on the transportation system. It is to provide information to evaluate and identify (1) ways to enable the proposed developments to not significantly degrade the surrounding transportation system, (2) potential problems with the transportation system, (3) viable improvements to mitigate problems that are identified, and (4) the required timing and funding sources for the needed improvements.

When Required

A Transportation Impact Study (TIS) may be required by the City of Greensboro Department of Transportation (GDOT) for any development I property that meets the criteria set forth in Section 30-3-20 of the Unified Development Ordinance (UDO). The process for performing and submitting the TIS is set forth in the UDO and these guidelines.

Study Approach

STUDY AREA

GDOT and applicant for rezoning or development approval shall agree upon a reasonable study area surrounding a proposed development. In general, the study should analyze all signalized intersections where the site traffic constitutes 10% of any approach volume. Other intersections

A-7.1

This is a staff document that will be included in the appendix of the Development Ordinance (UDO) but will not involve official council action.

with existing LOS deficiencies or where accident data and/or operational and geometric factors indicate safety concerns may require analysis.

ANALYSES REQUIRED

The TIS shall analyze all identified intersections in the study area and the site driveways for five (5) conditions:

- (1) Existing conditions based on traffic counts conducted within 12 months prior to submittal unless other base data is approved by GDOT. GDOT shall provide all counts performed by GDOT as part of the regular count program and any counts submitted with prior TIS's.
- (2) Existing conditions plus previously approved developments. GDOT will provide information on developments to be included in the TIS. This analysis may assume any proposed transportation improvements (public or private) which may reasonably be expected to be in place or under construction by occupancy of the proposed project.
- (3) Conditions in (2) above plus the traffic to be generated by the proposed site. Levels of service of all analyzed intersections should be discussed. If minimum Levels-of-Service are not maintained, improvements necessary to maintain minimum LOS should be addressed in (4) below.
- (4) If additional improvements are necessary to maintain the minimum level-of-service (LOS), these shall be addressed in detail. Additional lanes, signal modifications or additions, required storage bays, and other transportation improvements should be discussed. Analysis of all intersections where improvements are proposed should be included.
- (5) Conditions in (3) or (4) above, as applicable, plus growth of existing traffic to one year beyond the proposed completion of the project or a minimum five years for rezonings. GDOT shall approve or provide traffic growth rates to be used in this analysis.

TRIP GENERATION RATES

The trip generation rates shall be based on trip generation rates contained in the latest edition of Trip Generation published by the Institute of Transportation Engineers or any local trip generation rates either published or approved by GDOT. Additional trips shall be determined by subtracting the gross trip generation of the existing use from the gross trip generation of the proposed use. The additional trip calculation shall apply to property that is occupied at the time of submittal or has been occupied at any time prior to submittal.

A-7.2

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PASS-BY TRIPS AND INTERNAL CAPTURE

Traffic from some types of development includes pass-by trips (trips that are already on the adjacent road and simply make a stop at the new development). Other mixed-use developments may include internal capture trips (trips that are made entirely within the boundary of the proposed development creating no external impact). Pass-by and internal capture trips shall be established by GDOT and the engineer preparing the TIS.

MODAL SPLIT

Modal split is the allocation of trips to different modes of transportation: automobiles, busses, rail, bicycle, and pedestrian. In areas where there is heavy reliance on transit, modal split can be a significant factor. Because Greensboro has a limited transit network and limited bicycle commuting, modal split will seldom be a significant factor. No adjustments for modal split will be allowed unless the developer submits justification for a modal split assumption and receives GDOT concurrence prior to performing the TIS.

TRIP DISTRIBUTION

Once the trips generated by a development are determined, they must be distributed onto the road network. Directional trip distribution shall be established by GDOT and the engineer preparing the TIS.

HOURS TO BE ANALYZED

As a minimum, a TIS must analyze the AM and PM peak-hour of the adjacent road network. Other periods, such as the mid-day peak-hour, weekend, or other special analysis may be required in some cases as determined by GDOT based on unique site characteristics or special situations.

LEVEL-OF-SERVICE REQUIREMENT

In order to determine required improvements, a target level-of-service must be selected. Identification of improvements necessary to maintain a level-of-service (LOS) D or better is required; provided, however, this provision shall not be construed to require the applicant for rezoning or approval of development of the property for which the TIS is performed to cause improvements to be required except those contiguous to the property for which the TIS is performed.

ANALYSIS METHODS

Intersections shall be analyzed using Highway Capacity Software (HCS) based on the *Highway Capacity Manual* (HCM Special Report 209) for most studies. If a number of intersections in a coordinated system are impacted, a GDOT approved analysis method for coordinated systems may be required at GDOT's discretion. A diskette containing the HCS analyses shall be submitted with the report.

PROCESS

A licensed professional engineer that has completed the GDOT self-certification form shall prepare the TIS. The TIS must follow these guidelines and shall address the proposed land use, the trip generation there from, site access, modal splits if appropriate, impacts on the transportation system from the proposed development, and physical improvements or enforceable management strategies to mitigate negative impacts.

The TIS process shall begin with a pre-submittal conference between the engineer preparing the TIS and GDOT. This meeting shall establish the study area, the trip distribution, the traffic counts to be utilized, approved developments in the area, pass-by and internal capture percentages, modal splits, additional hours of analyses, if required (other than AM and PM peak), and resolve any other questions specific to the site. The engineer may propose approaches or assumptions for any and all discretionary items for GDOT concurrence. Engineers and developers should address the attached checklist prior to the pre-submittal conference.

Once the scope and factors to be utilized are identified, the TIS shall be completed and submitted concurrently with the appropriate development proposal.

REPORT FORMAT AND APPROVAL

To aid in the review process, a recommended TIS format is established and maintained by GDOT. A copy of the recommended format will be provided to the traffic consultant at the Pre-submission Conference.

TRANSPORTATION IMPACT STUDY

Pre-submission Conference Checklist

Prior to a pre-submission conference for a TIS the engineer preparing the report should have available or be prepared to discuss:

- Site location map
- Site layout showing points of access and traffic circulation
- Data on proposed land use and a preliminary trip generation estimate
- Proposed study area boundary
- Proposed trip directional distribution
- Proposed pass-by and internal capture trip adjustments
- Proposed modal split, if appropriate
- Proposed method of analysis for coordinated signal systems, if appropriate
- Proposed build out year of project/phases

These items shall be submitted to GDOT 48 hours prior to the conference.

At the conclusion of the pre-submittal conference, the following items should be decided for the purpose of the study:

- Site access points and type (full or partial)
- Study area boundaries and intersections to be analyzed
- Availability of existing traffic counts and additional intersections to be counted
- Hours to be analyzed including site-specific special requirements
- Analysis methods
- Trip distribution
- Pass by and internal capture trip adjustments
- Modal split adjustments
- Build-out year for analysis or phases
- Approved developments to be included Background traffic growth rate(s)
- Programmed public and private improvements to be assumed to be in place at build-out of the project or project phases