# ARTICLE 3. PUBLIC WORKS

## 3.1 THOROUGHFARES

### 3.1.1 Instructions

a. Thoroughfares are intended for use by vehicular and pedestrian traffic and to provide access to lots and civic spaces. Thoroughfares shall generally consist of vehicular lanes and public frontages.
b. Thoroughfares shall be designed in context with the physical form and desired design speed of the Transect Zones through which they pass. The public frontages of thoroughfares that pass from one Transect Zone to another should be adjusted accordingly or, alternatively, the Transect Zone may follow the alignment of the thoroughfare to the depth of one lot, retaining a single public frontage throughout its trajectory. See Table 4.
c. Pedestrian comfort shall be a primary consideration of the thoroughfare in Transect Zones T3 through T5. Design conflict between vehicular and pedestrian movement generally shall be decided in favor of the pedestrian.
d. The thoroughfare network shall be designed to define blocks not exceeding the size prescribed in Table 2b. The perimeter shall be measured as the sum of lot frontage lines.
e. All thoroughfares shall terminate at other thoroughfares, forming a network. Cul-de-sacs shall be subject to approval in the regulating plan to accommodate specific site conditions only but are generally discouraged and if approved, shall not be longer than 150 feet as measured from the center through street to the center of the vehicular turn around. Any approved cul-de-sac shall include a pedestrian or bicycle through-connection as described in the Spawl Repair Manual (1910, Tachieva). A copy of the Sprawl Repair Manual is available for reference in the Planning Department.
f. Each lot shall front a vehicular thoroughfare, except that 19% of the lots within each Transect Zone may front a Cross Block Passage.
g. Designated B-Grid streets may qualify for a Warrant for a 10% deviation from one of the specified public frontage requirements when 75% of the lots fronting the B-Grid street meet at least one of the exceptional design standards listed in Appendix A.
h. Standards for paths and bicycle trails shall conform to guidelines as outlined in the Town of Leland Comprehensive Bike Plan.
i. Standards for thoroughfares within Special Districts shall be defined by Table 10.

### 3.1.2 Vehicular Lanes

a. General To All Zones T1, T2, T3, T4, T4O, T5
    i. Thoroughfares may include vehicular lanes in a variety of widths for parked and for moving vehicles, including bicycles. The standards for vehicular lanes shall be as shown in Table 3.
    ii. A bicycle network consisting of bicycle trails, bicycle routes, bicycle lanes, and multi-use paths should be provided throughout the community. The community bicycle network shall be connected to existing or proposed regional networks wherever possible and as shown in the adopted Town of Leland Comprehensive Bicycle Plan.

### 3.1.3 Public Frontages

a. General To All Zones T1, T2, T3, T4, T4O, T5
    i. The Public Frontage contributes to the character of the Transect Zone, and includes the types of sidewalks, curbs, planters, bikeways, lighting, and street trees.
    ii. Public Frontages should be designed as shown in Table 5 and Table 6 and allocated within Transect Zones as specified in Table 2c.
    iii. Within the Public Frontages, the prescribed types of public planting and public lighting

shall be as shown in Table 5, Table 6, Table 7 and Table 8. The spacing may be adjusted by Warrant to accommodate specific site conditions, if it is within a twenty percent deviation.

iv. Landscape Plans shall be prepared for existing and proposed landscape elements in conjunction with the design, development, and construction documents for Thoroughfares.

v. Proposed street tree height and type shall be appropriate for the Frontage conditions, with canopy branching height following the clearance requirements of 3.1.3.a.vi. Measurements shall be taken at the bottom of the main canopy.

vi. Trees with existing or potential canopy covering sidewalks, driveways, paths, plazas, alleys, lanes, parking space or street pavements shall be of a type that, at maturity or with minor pruning at installation, provide a clear height of eight (8) feet for sidewalks and paths, twelve (12) feet for driveways, parking spaces, and fifteen (15) feet for streets and loading areas, exclusive of tree grates or planting areas with gravel mulch. Evergreen trees shall be 24-36" minimum clear of any sidewalk or pavement edge at the Lot line.

b. Specific To Zones T1, T2, T3

i. The Public Frontage shall include trees of various species, naturalistically clustered, as well as understory.

ii. The introduced landscape shall consist primarily of native species requiring minimal irrigation, fertilization and maintenance.

c. Specific To Zones T4, T4O, T5

The introduced landscape shall consist primarily of durable species tolerant of soil compaction.

d. Specific To Zone T4

The public frontage shall include trees planted in a regularly-spaced allee pattern of single or alternated species with shade canopies of a height that, at maturity, clears at least one story.

e. Specific To Zones T4O, T5

i. The public frontage shall include trees planted in a regularly-spaced allee pattern of single species with shade canopies of a height that, at maturity, clears at least one story. At retail frontages, the spacing of the trees may be irregular, to avoid visually obscuring the shopfronts.

ii. Streets with a right-of-way width of 40 feet or less shall be exempt from the tree requirement.

## TABLE 3. VEHICULAR LANE DIMENSIONS.

This table assigns lane widths to Transect Zones. The Target Speed is the determinant for each of these sections. The most typical assemblies are shown in Table 4.

| TARGET SPEED | TRAVEL LANE WIDTH | T1 | T2 | T3 | T4 | T4O | T5 | PT |
|---|---|---|---|---|---|---|---|---|
| Below 19 mph | 8 feet | ■ | ■ | ■ | | | | 6/1.5 |
| 19-25 mph | 9 feet | ■ | ■ | ■ | ■ | | | 6/1.5 |
| 25-35 mph | 10 feet | ■ | ■ | ■ | ■ | ■ | ■ | 8/2 |
| 25-35 mph | 10 feet | ■ | ■ | | | ■ | ■ | 8/2 |
| Above 35 mph | 12 feet | ■ | ■ | | | ■ | ■ | 8/3 |
| TARGET SPEED | PARKING LANE WIDTH | | | | | | | |
| 19-25 mph | (Angle ) 17 feet | | | | | ■ | ■ | |
| 19-25 mph | (Parallel) 7 feet | | | | ■ | | | |
| 25-35 mph | (Parallel) 8 feet | | | ■ | ■ | ■ | ■ | |
| Above 35 mph | (Parallel) 9 feet | | | | | ■ | ■ | |
| TARGET SPEED | EFFECTIVE TURNING RADIUS | (See Table 22b) | | | | | | |
| Below 19 mph | 5-10 feet | | | ■ | ■ | ■ | ■ | |
| 19-25 mph | 10-15 feet | ■ | ■ | ■ | ■ | ■ | ■ | |
| 25-35 mph | 15-19 feet | ■ | ■ | ■ | ■ | ■ | ■ | |
| Above 35 mph | 19-30 feet | ■ | ■ | | | | | |

■ BY RIGHT

PT=Pavement thickness

PT=Base Course/Asphalt (in inches)

## TABLE 4. VEHICULAR LANE/PARKING ASSEMBLIES.

The projected Target Speeds determine the dimensions of the Vehicular Lanes and Turning Radii assembled for Thoroughfares.

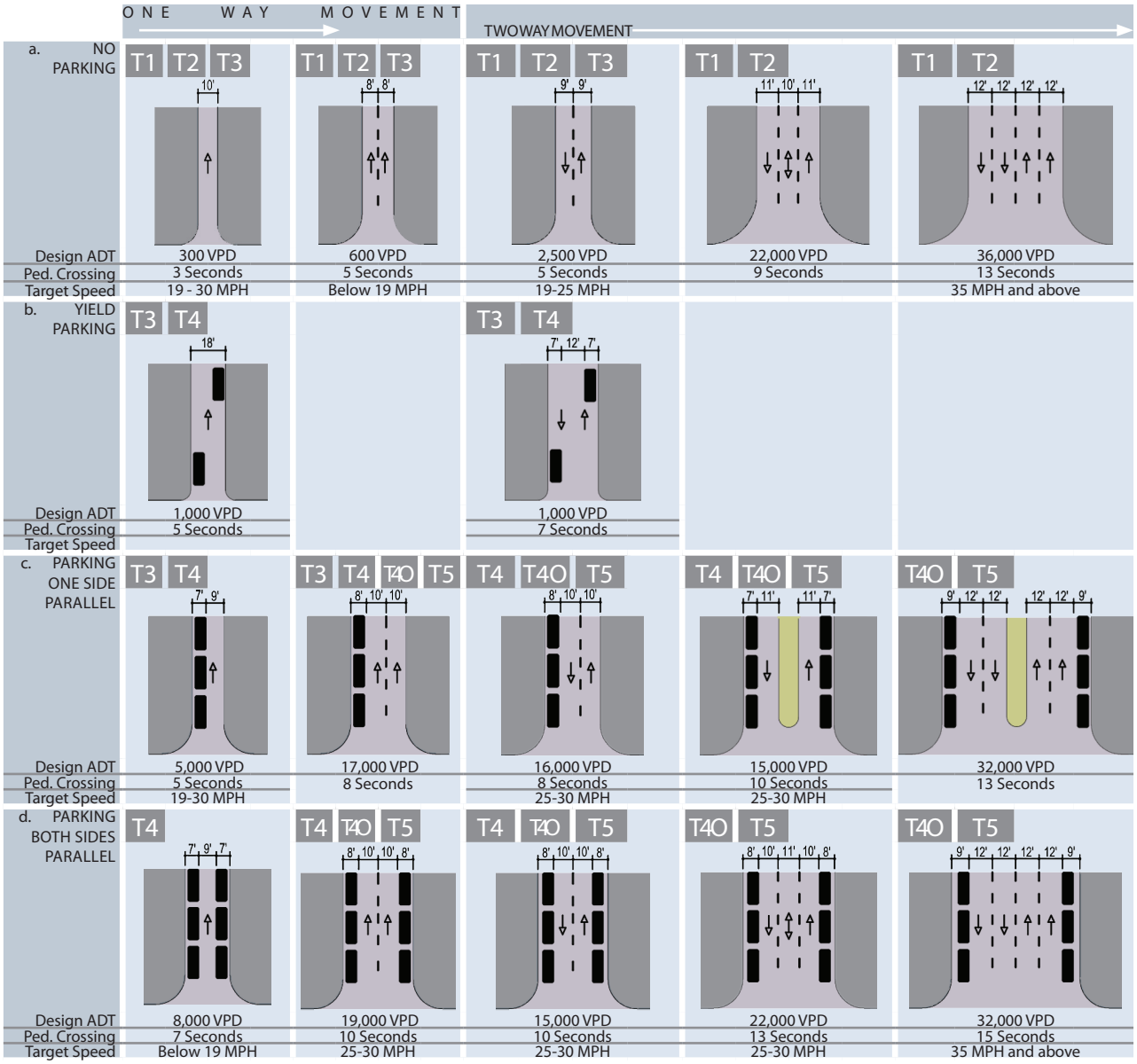
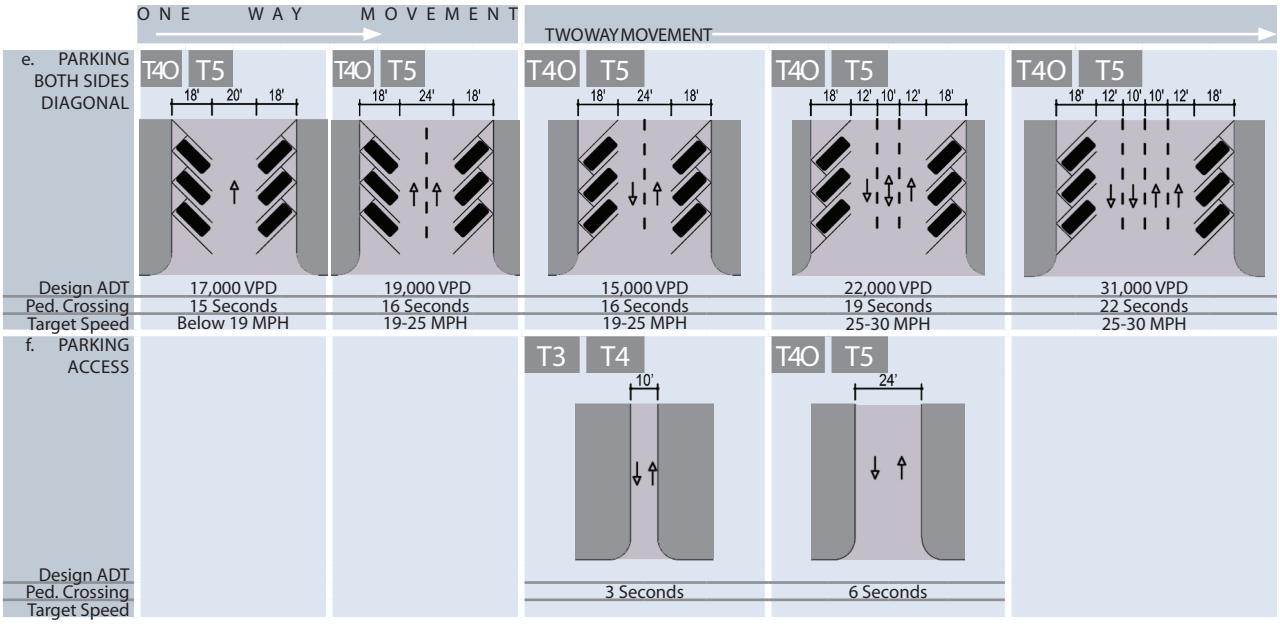


TABLE 4. VEHICULAR LANE/PARKING ASSEMBLIES CONTINUED.



## TABLE 5. PUBLIC FRONTAGES - GENERAL.

The Public Frontage is the area between the private Lot line and the edge of the vehicular lanes. Dimensions are given in Table 3.

a. (HW) For Highway: This Frontage has open Swales drained by percolation, Bicycle Trails and no parking. The landscaping consists of the natural condition or multiple species arrayed in naturalistic clusters. Buildings are buffered by distance or berms.

b. (RD) For Road: This Frontage has open Swales drained by percolation and a walking Path or Bicycle Trail along one or both sides and Yield parking. The landscaping consists of multiple species arrayed in naturalistic clusters.

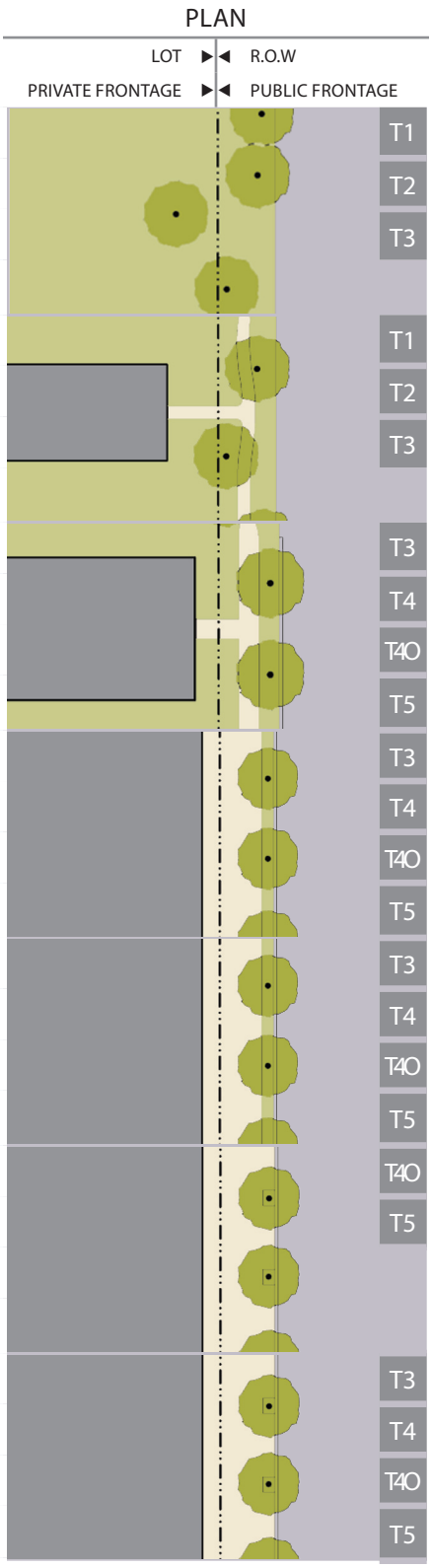
c. (ST) For Street: This Frontage has raised Curbs drained by inlets and Sidewalks separated from the vehicular lanes by individual or continuous Planters, with parking on one or both sides. The landscaping consists of street trees of a single or alternating species aligned in a regularly spaced Allee, with the exception that Streets with a right-of-way (R.O.W.) width of 40 feet or less are exempt from tree requirements.

d. (DR) For Drive: This Frontage has raised Curbs drained by inlets and a wide Sidewalk or paved Path along one side, related to a Greenway or waterfront. It is separated from the vehicular lanes by individual or continuous Planters. The landscaping consists of street trees of a single or alternating species aligned in a regularly spaced Allee.

e. (AV) For Avenue: This Frontage has raised Curbs drained by inlets and wide Sidewalks separated from the vehicular lanes by a narrow continuous Planter with parking on both sides. The landscaping consists of a single tree species aligned in a regularly spaced Allee.

f. (CS) (AV) For Commercial Street or Avenue: This Frontage has raised Curbs drained by inlets and very wide Sidewalks along both sides separated from the vehicular lanes by separate tree wells with grates and parking on both sides. The landscaping consists of a single tree species aligned with regular spacing where possible, but clears the storefront entrances.

g. (BV) For Boulevard: This Frontage has Slip Roads on both sides. It consists of raised Curbs drained by inlets and Sidewalks along both sides, separated from the vehicular lanes by Planters. The landscaping consists of double rows of a single tree species aligned in a regularly spaced Allee.



## TABLE 6. PUBLIC FRONTAGES - SPECIFIC.

This table assembles prescriptions and dimensions for the public frontage elements - curbs, walkways and planters – relative to specific thoroughfare types within Transect Zones. Table 6a assembles all of the elements for the various street types.

R U R A L I I I I I I I I I I I I I I I I I T R A N S E C T I I I I I I I I I I I I I I I I I U R B A N

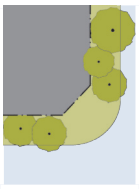
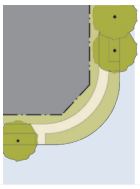
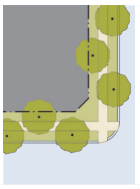
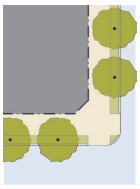
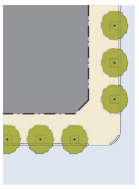
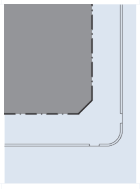
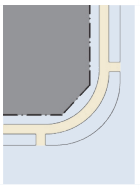
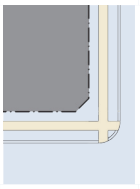
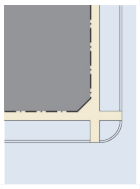
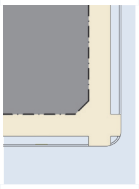
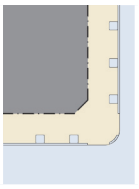
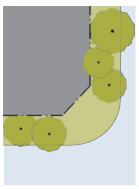
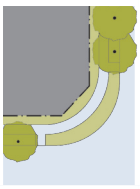
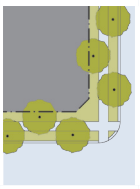
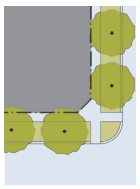
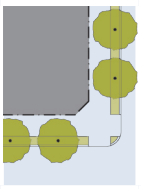
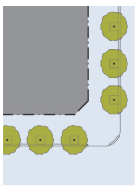
| TRANSECT ZONE | T1 | T2 | T3 | T1 | T2 | T3 | T3 | T4 | T4 | T4O | T5 | T4O | T5 | T4O | T5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Public Frontage Type | HW & RD | | | RD &sST | | | ST-DR-AV | | ST-DR-AV-BV | | | CS-DR-AV-BV | | | |
| a. Assembly: The principal variables are the type and dimension of Curbs, walkways, Planters and landscape. |  | | |  | | |  | |  | | |  | |  | |
| Total Width | 16-24 feet | | | 12-24 feet | | | 12-17 feet | | 12-17 feet | | | 17-24 feet | | 17-30 feet | |
| b. Drainage: The detailing of the edge of the vehicular pavement, incorporating drainage. |  | | |  | | |  | |  | | |  | |  | |
| Type<br>Radius | Open Swale<br>10 - 30 feet | | | Open Swale<br>10 - 30 feet | | | Raised Curb<br>5 - 19 feet | | Raised Curb<br>5 - 19 feet | | | Raised Curb<br>5 - 19 feet | | Raised Curb<br>5 - 19 feet | |
| c. Walkway: The portion of the Thoroughfare dedicated exclusively to pedestrian activity. |  | | |  | | |  | |  | | |  | |  | |
| Type<br>Width | Path Optional<br>n/a | | | Path<br>4 - 8 feet | | | Sidewalk<br>4 - 8 feet | | Sidewalk<br>4 - 8 feet | | | Sidewalk<br>12 - 19 feet | | Sidewalk<br>12 - 19 feet | |
| d. Planter: The portion of the Thoroughfare accommodating street trees and other landscape. |  | | |  | | |  | |  | | |  | |  | |
| Arrangement<br>Species<br>Planter Type<br>Planter Width | Clustered<br>Multiple<br>Swale<br>8 - 16 feet | | | Clustered<br>Multiple<br>Swale<br>8 - 16 feet | | | Regular<br>Alternating<br>Planter<br>8 - 12 feet | | Regular<br>Single<br>Planter<br>8 - 12 feet | | | Regular<br>Single<br>Planter<br>5 - 9 feet | | Opportunistic<br>Single<br>Tree Wells<br>4 - 9 feet | |
| e. Landscape: The recommended plant species. (See Table 7) | | | | | | | | | | | | | | | |
| f. Lighting: The recommended Public Lighting. (See Table 8) | | | | | | | | | | | | | | | |

TABLE 7. PUBLIC PLANTING.
This table shows seven common types of Tree shapes and their appropriateness for thoroughfare type and Transect Zone.

| | HW | RD | ST | ST | DR | DR | AV | AV | CS | BV | BV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | T1 | T1 | T3 | T5 | T3 | T4O | T3 | T4O | T4O | T3 | T4O |
| | T2 | T2 | T4 | | T4 | T5 | T4 | T5 | T5 | T4 | T5 |
| | T3 | T3 | | | | | | | | | |
| Columnar  | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Oval  | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | ■ | ■ |
| Rounded  | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | ■ | ■ |
| Conical  | ■ | ■ | ■ | | ■ | | ■ | | | ■ | |
| Spreading  | ■ | ■ | ■ | | ■ | | ■ | | | ■ | |
| Vase  | ■ | ■ | ■ | | ■ | | ■ | | | ■ | |

The adopted Tree and Landscape Ordinance contains common and botanical names of species recommended for plantings.

TABLE 8. PUBLIC LIGHTING.
Lighting varies in brightness and also in the character of the fixture according to the Transect.

| | T1 | T2 | T3 | T4 | T4O | T5 | SD |
|---|---|---|---|---|---|---|---|
| Cobra Head  | ■ | | | | | | ■ |
| Pipe  | ■ | ■ | ■ | | | | |
| Post  | | ■ | ■ | ■ | | | |
| Column  | | | ■ | ■ | ■ | ■ | |

a. The Town's Street Light Acceptance policy as adopted by resolution of the Town Council shall apply.