

**GREEN INFRASTRUCTURE TABLE**

	CHZ, low branches	SZ Min	Water-seeking/ taking	Native	Canopy	Deciduous	Green Performance		
							CO2 (lbs)	Storm water (gal)	Cooling (kWhr)
<b>Sample Large Trees</b>	12'	>7ft	T	Y	Hi Med	Y	553	273	56
Sycamore	15'	>7ft	S	Y	Hi Med	Y	553	273	56
Elm	15'	>7ft	T	Y	Hi Full	Y	553	273	56
Chestnut	12'	>7ft	S	Y	Hi Full	Y	553	273	56
Oak (Red)	12'	>7ft	S	Y	Med Med	Y	553	273	56
Beech	15'	>7ft	T	Y	Hi Med	Y	553	273	56
Norway Spruce	0'	>10ft	S	N	Full to Ground	E	553	273	56
<b>Sample Medium Trees</b>	10'	>5ft	T	Y	Med Med	Y	304	150	14
Maple	12'	>5ft	S	Y	Hi Med	Y	304	150	14
Cherry	12'	>5ft	S	Y	Hi Med	Y	304	150	14
Bradford Pear	10'	>5ft	T	Y	Med Full	Y	304	150	14
Honey Locust	12'	>5ft	S	Y	Med sparse	Y	304	150	14
Gingko	10'	>5ft	T	N	Med Med	Y	304	150	14
Linden	10'	>7'	T	N	Med Full	Y	304	150	14
White Pine	1'	>5ft	S	Y	Med to Ground	E	304	150	14
<b>Sample Small Trees</b>	4'	>4ft	T	Y	Med Med	Y	136	67	2.5
Dogwood	3'	>4ft	T	Y	Med Sparse	Y	136	67	2.5
Prunus	5'	>4ft	S	Y	Hi Med	Y	136	67	2.5
Service Berry	5'	>4ft	S	Y	Hi Full	Y	136	67	2.5
Crabapple	3'	>4ft	S	Y	Med Med	Y	136	67	2.5
Fir	3'	>4ft	T	Y	Med Full	E	136	67	2.5
<b>Understory</b>									
Boxwood	0'	4'	T	N	Med Med	E/Y			
Yew	0'	4'	T	N	Low Sparse	E			
Cedar	0'	4'	T	N	Low Med	E			
Hemlock	0'	4'	S	N	Low Full	E			
Arbor Vitae	0'	4'	T	N	Low Med	E			
Privet	2'	4'	S	N	Hi Full	Y			
<b>Groundcover and Swale</b>									
Bluegrass	0	2'	S	Y	<6"	n/a			
Reeds	0	2'	S	N	3'	n/a			
Sedum	0	2'	T	Y	<3"	n/a			
Periwinkle	0	2'	S	Y	<5"	E			



Small Tree Canopy

Full Canopy

Understory

Understory Hedges

**GREEN INFRASTRUCTURE ELEMENTS**

Some of the green infrastructure elements of the streetscape include:

**Small Trees** may be used in alleys, off-street corridors and parks. They have mostly an aesthetic appeal, but can also be used for functional/edible landscaping for an area, provided someone or some group takes on the task of maintaining and using the "fruits" of the trees.

**Medium Trees** constitute the bulk of the street trees within the Regional Center, mostly because of the space requirements for larger trees.

**Large Trees** should be planted wherever possible as they are critical to the performance of the green infrastructure system, consuming nearly twice the stormwater and CO2 that medium trees do. Furthermore, they add icon status to streets graced with them and the associated wayfinding, legibility and placemaking qualities.

**Understory elements** can include hedges and shrubs. These are good for buffering or low-screening (e.g. a parking lot), provided they do not exceed a height that screens view over them. Visibility across buffer areas is critical to maintaining safety. Planting boxes can be used to separate neighboring Pedestrian Activity Zones. In the public realm, they should never screen eye view from the street or the building.

**Groundcover and Swales** serve many functions including slowing of rainwater absorption, maintaining cleanliness and cooling of the street as well as being a repository for snow in winter. As a result, plant choice should be tolerant to salt, sand and waste including animal waste.

**URBAN FOREST, PLANTING SYSTEMS AND GREEN INFRASTRUCTURE**

For multi-modal systems to work, they need to entice users to use them. A key component of making these places inviting is an effective and functional urban forest and planting system.

An urban forest consists of the trees within an urban area and includes tree-lined roadways, open green spaces, undeveloped forests, parks, along with other public and private spaces. The Urban Forest System is a tool that promotes walkability and district identity by making walking more safe and comfortable. Distances are perceived to be shorter when the pedestrians attention is focused on scenic views and routes are clearly perceived as safe, convenient, and attractive. The planting structure should also be designed to make the system safer, more attractive, cooler in the summer, shielded from wind in the winter, and better able to handle stormwater.

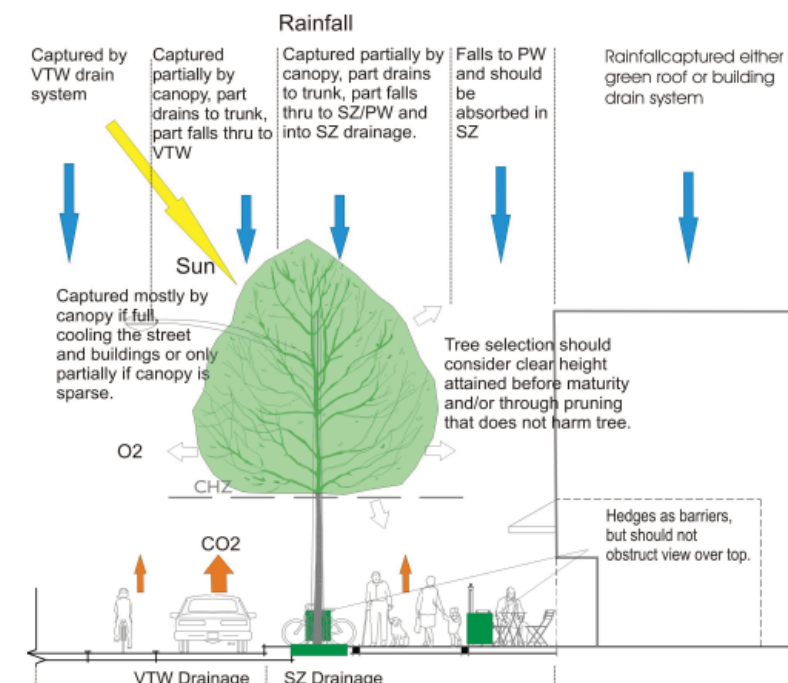
There are thus different elements of the streetscape that serve the green infrastructure in different ways. These include, clear zone height, separation zone width (to allow room for the roots and their sustenance), the nature of the plant/tree roots (e.g. will they destroy sewage pipes in search of water, tree canopy (rainwater and CO2 capture, sunlight filtering, etc.). Additionally, there is a certain performance that each element of the streetscape can serve: whether or not the plants require more maintenance in terms of dropping their leaves or whether they will help buffer noise, absorb CO2 and rainwater, allow light through the canopy and so forth. Any choice of planting should avoid non-native invasive selections.

**DISCUSSION OF COMPONENT ZONES**

The Component Zone Summary Table (recto verso) lists minimum component zone dimensions applicable to the Multi-Modal Districts and Multi-Modal Corridors. Please refer to the full guidelines for recommendations, clarifications and exceptions. Note that guidelines are offered, even if the minimum option does not show the guideline in the text.

**LIST OF ABBREVIATIONS**

- CHZ Clear Height Zone
- S Water Seeking
- T Water Taking
- Y/N Native/Non-Native
- Y/E Deciduous/Evergreen
- CO2 Annual Carbon Dioxide Capture per annum
- SZ Minimum Separation Zone
- R/B Regional/Bus Rapid Transit
- C/S Circulator/Shuttle/Van



**COMPONENT ZONE SUMMARY TABLE**

Please note the following table indicates minimum component zone dimensions applicable to the Pedestrian Districts and Multi-Modal Corridors. Please refer to the full guidelines for recommendations, clarifications and exceptions. Note that guidelines are offered, even if the minimum option does not show the guideline in the text.

Key	Typology	BW		BTW		CHZ		FZ		MUW	PAZ	PW	SPZ		SZ	VTW	
		Bicycle Way		Bus Transit Way		Clear Height Zone		Frontage Zone		Multi-Use Way	Pedestrian Activity Zone	Pedestrian Way	Street Parking Zone		Separation Zone	Vehicle Travel Way	
MULTI-MODAL PEDESTRIAN DISTRICTS				R/B	S/C	VTW	BW/PW/MUW	Next To PW	Next to MUW				Shared w/ VTW	Not Shared	SZ/Median	Curbside/ Pkg Lane	Non Curbside
MMD1.CBD	Central Business	5'-0"		11'-0"	10'-6"	9'-0"	9'-0"	0'-6"	2'-0"	12'-0"	encouraged	10'-0"	10'-0"	8'-0"	7'/10'	10'-0"	11'-0"
MMD2.VMU	Village Mixed-Use	5'-0"		11'-0"	10'-6"	9'-0"	9'-0"	0'-6"	2'-0"	12'-0"	encouraged	6'-0"	10'-0"	8'-0"	7'/10'	10'-0"	11'-0"
MMD3.CUL	Cultural	5'-0"		11'-0"	10'-6"	9'-0"	9'-0"	0'-6"	2'-0"	12'-0"	encouraged	6'-0"	10'-0"	8'-0"	7'/10'	10'-0"	11'-0"
MMD4.CAM	Campus	5'-0"		11'-0"	10'-6"	9'-0"	9'-0"	0'-6"	2'-0"	10'-0"	encouraged	6'-0"	10'-0"	8'-0"	7'/10'	10'-0"	11'-0"
MMD5.TOD	Transit-Oriented	5'-0"		11'-0"	10'-6"	9'-0"	9'-0"	0'-6"	2'-0"	12'-0"	encouraged	8'-0"	10'-0"	8'-0"	7'/10'	10'-0"	11'-0"
MMD6.VRD	Village Residential	5'-0"		11'-0"	10'-6"	8'-0"	8'-0"	0'-6"	2'-0"	10'-0"	encouraged	5'-0"	N/A	7'-0"	5'/10'	26' c/c	N/A
MULTI-MODAL CORRIDORS																	
MMT.1	MM Modern Boulevard	5'-0"		11'-0"	11'-0"	12'-0"	12'-0"	1'-0"	N/A	N/A	encouraged	7'-0"	N/A	7'-0"	5'/7'/20'	10'/8'	10'-0"
MMT.2a	MM Pedestrian/Urban	5'-0"		N/A	N/A	9'-0"	12'-0"	0'-6"	N/A	N/A	encouraged	10'-0"	10'-6"	8'-0"	7'/10'	10'-6"	11'-0"
MMT.2b	MM Pedestrian/Suburban	5'-0"		N/A	N/A	9'-0"	12'-0"	0'-6"	N/A	N/A	encouraged	8'-0"	N/A	8'-0"	7' (14'wBTW)	12'-0"	12'-0"
MMT.3	MM Social Street	shared roadway		N/A	N/A	9'-0"	9'-0"	1'-0"	1'-0"	shared roadway	encouraged	shared roadway	N/A	8'-0"	7'-0"	10'-0"	10'-0"
MMT.4	MM Modern Parkway	MUW recom.		11'-0"	10'-0"	12'-0"	12'-0"	N/A	2'-0"	12'-0"	allowed	N/A	N/A	9'-0"	7'/10'	12'-6"	11'-0"
MMT.5a(&b)	MM Commuter/Urban	5'-0"		11'-0"	8'-0"	9'-0"	9'-0"	0'-6"	N/A	N/A	allowed	6'-0"	9'-0"	8'-0"	5'-0"	11'-0"	11'-0"
MMT.5c	MM Commuter/Suburban	MUW recom.		11'-0"	8'-0"	9'-0"	9'-0"	0'-6"	2'-0"	12'-0"	transitional	8'-0"	N/A	N/A	7'-0"	12'-6"	11'-0"
MMT.6a	MM Connector/Urban	5'-0"		11'-0"	8'-0"	9'-0"	9'-0"	0'-6"	N/A	N/A	transitional	5'-6"	10'-0"	8'-0"	1'/10'	10'-0"	10'-0"
MMT.6b	MM Connector/Suburban	MUW recom.		11'-0"	8'-0"	9'-0"	9'-0"	0'-6"	2'-0"	10'-0"	transitional	8'-0"	N/A	8'-0"	7'-0"	11'-0"	11'-0"
MMT.7a	MM Urban Link	5'-0"		N/A	10'-0"	9'-0"	9'-0"	0'-6"	N/A	N/A	encouraged	6'-0"	9'-0"	7'-0"	7'-0"	10'-0"	10'-0"
MMT.7b	MM Suburban Link	MUW recom.		N/A	N/A	9'-0"	9'-0"	0'-6"	2'-0"	12'-0"	transitional	8'-0"	N/A	7'-0"	7'-0"	10'-0"	10'-0"
MMT.7c	MM Rural Link	MUW recom.		N/A	N/A	12'-0"	12'-0"	N/A	N/A	8'-0"	discouraged	8'-0"	N/A	7'-0"	0'	12'-0"	12'-0"
MMT.8	MM Quiet Street	shared roadway		N/A	N/A	9'-0"	9'-0"	N/A	N/A	shared roadway	allowed	shared roadway	N/A	8'-0"	5'-0"	10'-0"	N/A
MMT.9	MM Bicycle Boulevard	shared roadway		N/A	N/A	9'-0"	9'-0"	N/A	N/A	shared roadway	allowed	N/A	N/A	8'-0"	N/A	26' c/c (18') 8'	N/A
MMT.10a	MM Off-Street	MUW recom.		N/A	N/A	9'-0"	9'-0"	N/A	2'-0"	12'-0"	encouraged	N/A	N/A	N/A	5'-0"	N/A	N/A
MMT.10b	MM Transit Off-Street	MUW recom.		16'-0"	N/A	9'-0"	9'-0"			12'-0"	encouraged	N/A	N/A	N/A	5'-0"	varies	N/A
MMT.11a	MM Service Commercial	shared roadway		N/A	N/A	9'-0"	9'-0"	4'-0"	N/A	shared roadway	allowed	shared roadway	shared roadway	shared roadway	N/A	10'-0"	N/A
MMT.11b	MM Service Residential	shared roadway		N/A	N/A	9'-0"	9'-0"	7'-6"	N/A	shared roadway	allowed	shared roadway	shared roadway	shared roadway	N/A	10'-0"	N/A