SPROW

Sustainable Public Rights Of Way Subcommittee

June 16, 2020

North Central Texas Council of Governments
Environment & Development

Welcome & Introductions

Overview

- NCTCOG's mission is to assist members in planning for common needs, cooperating for mutual benefit, and recognizing regional opportunities for improving the quality of life in North Central Texas.
- The Public Works initiative is led by the Public Works Council (PWC) which strives to solve common issues amongst public works programs across the region and provide resources/training for the region.
- The Sustainable Public Rights-of-Way (SPROW) Subcommittee is under the PWC to provide support and technical advice on sustainable public works infrastructure.
- SPROW created a Roadmap that linked communities to resources on different ROW options, however it didn't say what was the best option or how it was used in the region.
- SPROW decided to create a Best Management Practices (BMP) Guidebook specifically for the North Central Texas region. They sent out a survey to see what topics should be done first, landscape planning and vegetation maintenance was selected.

Approve Summary from February 4, 2020 meeting

- The SPROW Roadmap is out-of-date and was ineffective.
- Solutions for competing space in the ROW should list pros and cons so that communities can make the best decision for their situation.
- The group should identify street cross sections that accommodate trees and utilities in the ROW
- The group wants to create a form-based tree guide that highlights what trees would work best in certain situations on the ROW, like form-based planning.

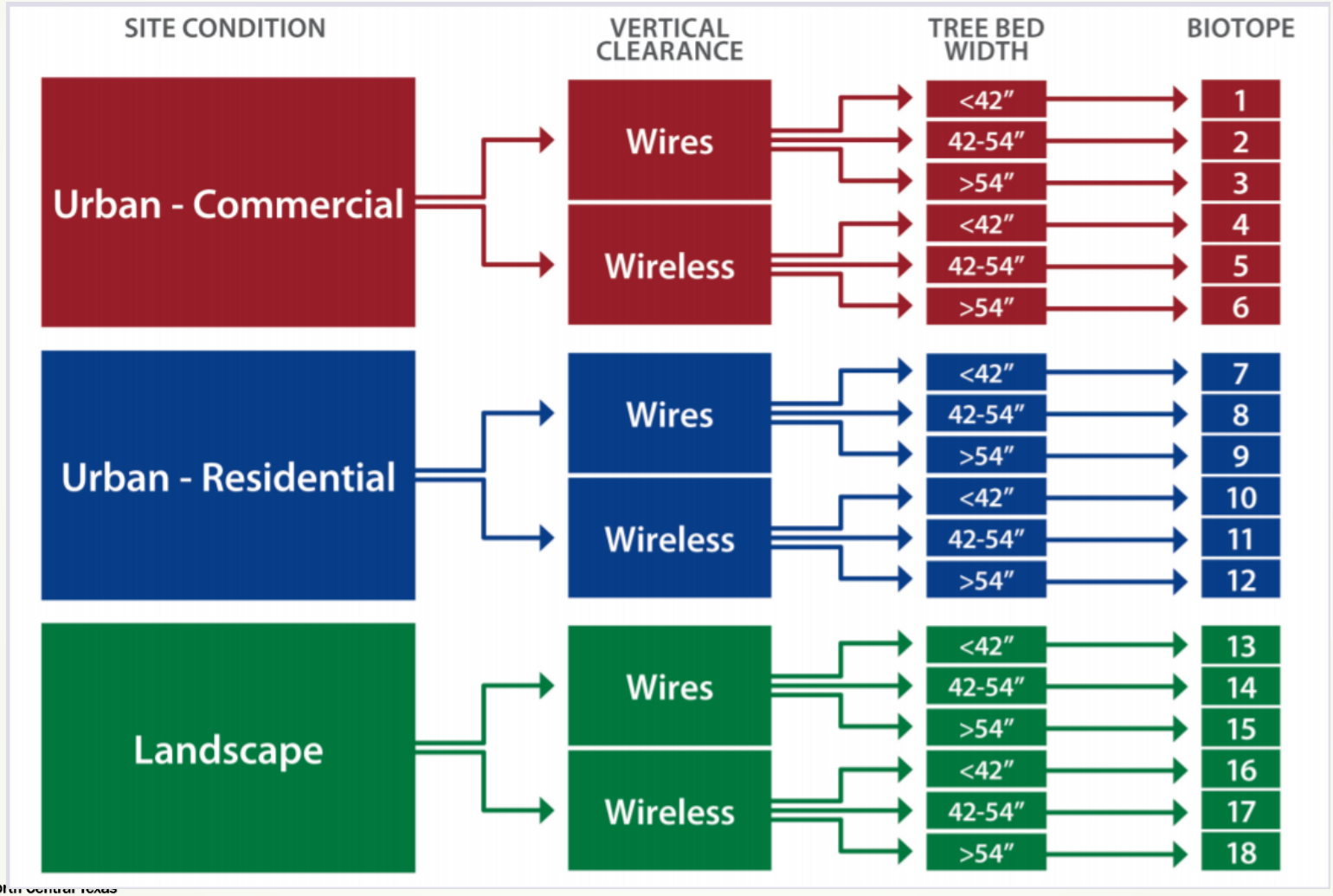
BMP Guidebook: Landscape Planning and Vegetation Maintenance

Form Based Tree List

- NCTCOG will provide resources to guide the discussion on the development of this concept that was discussed at the last meeting.

NYC Tree List

- NYC Parks Department created a tree list that was sorted by biotopes.



https://www.nycgovparks.org/pagefiles/82/streamlining-tree-selection-in-nyc.pdf

NYC Tree List

- Site Condition

  The site condition is categorized as Landscape, Urban Residential, or Urban Commercial and given a rank based on drought condition, soil compaction, and soil pollution.

  - Landscape: quiet street with a lawn strip for tree planting
  - Urban (Residential): moderate-usage urban street with a sidewalk cut-out for tree planting
  - Urban (Commercial): heavy-usage urban street with a sidewalk cut-out for tree planting

Site Condition	Landscape	Urban (Residential)	Urban (Commercial)
Drought Condition Caused by surrounding reflective surfaces, lack of nearby lawns or mature trees, lack of irrigation	Low	Medium	High
Soil Compaction caused by truck and bus traffic, pedestrian traffic, passengers unloading from vehicles	Low	Medium	High
Soil Pollution caused by pedestrian waste, pet waste, vehicular pollution, road salt	Low	Medium	High

- Vertical Clearance

  This will determine if a dwarf or ornamental tree should be planted

  - Wires: Pole to Pole electric wires less than 30' overhead
  - Wireless: No wires at all, communication wires only, or wires connecting building to main lines across the street

- Tree Bed Width

  Most planting boxes are rectangular so the bed width is what will limit tree size

NYC Tree List Biotope Examples

Biotope 3: Urban-Commercial, Wires, Tree bed > 54"

Biotope 11: Urban-Residential, Wireless Tree bed 42" -54"

Biotope 18: Landscape, Wireless, Tree bed > 54"

North Central Texas Council of Governments
Environment & Development

Atmos Tree List

Atmos Energy Approved Vegetation

The following plants are allowed on Atmos Energy's right of way. These plants have less than 4' growth potential and a non-intrusive root system. They are also local to the North Texas climate.

Shrub

Variegated Abelia
Rose Creek Abelia
Agave
Dwarf Chinese Holly
Dwarf Yaupon Holly
Dwarf Spiera
Harbor Dwarf Nandina
Compact Nandina
Flirt Nandina
Miniature Crape Myrtle
Color Guard Yucca
Cast Iron Plant
American BeautyBerry
Rosemary
Drift Rose
Barberry
Wheeler's Dwarf
Dwarf Variegated
Dwarf Indian Hawthorn
Dwarf Boxwood
Spreading Yew

Perennial

Black-Eyed-Susan
Calylophus
Autumn Salvia
Flame Acanthus
Cone Flower
Gaura
Creeping Lantana
Blackfoot Daisy
Garden Phlox
Lamb's Ear
Holly Fern
Wood Fern
Blue Mealy Sage
Daylily
Dwarf Mexican Petunia

Ornamental Grass

Gulf Muhly
Hameln's Fountain
Mexican Feather
Berkeley's Sedge

Ground cover

Asian Jasmine
Ajuga
Lirope, regular or giant
Purple Euonymus
Creeping Juniper
Creeping Rosemary
Mondo Grass

ATMOS energy®

Customer Service: 888.286.6700
atmosenergy.com/pipelinerenewal

As of 6.15.20, https://www.atmosenergy.com/pipeline-projects/d9-pipeline-replacement-project

CoServ

NORTH TEXAS TREES SUITABLE FOR PLACEMENT BELOW OVERHEAD ELECTRICAL LINES

Trees are a valuable asset to our urban landscape. But, when allowed to come into contact with overhead electrical lines, they pose a serious hazard. CoServ has a comprehensive tree line safety program to ensure safe, reliable delivery of power to each of our Members. Homeowners can contribute to the reliability of service and help reduce maintenance costs by selecting tree species that have a mature height that will not conflict with overhead lines. The following are suggested species for our area:

American Smoketree

Botanical Name	Cotinus obovatus
Growth Rate	slow
Foliage	deciduous
Height	25'
Spread	25'

Comments: *Spikes of purple to pink flowers; distinctive blue-green leaves turn brilliant fall colors.*

Carolina Buckthorn

Botanical Name	Rhamnus caroliniana
Growth Rate	moderate
Foliage	deciduous
Height	15'
Spread	15'

Comments: *Texas native, reliable fall color, attractive seeds or fruit, seeds or fruit eaten by wildlife.*

Chinese Pistache

Botanical Name	Pistacia chinensis
Growth Rate	rapid
Foliage	deciduous
Height	30'
Spread	25'

Comments: *Reliable fall color, attractive seeds or fruit, seeds or fruit eaten by wildlife.*

Crape Myrtle

Botanical Name	Lagerstroemia indica
Growth Rate	moderate
Foliage	deciduous
Height	25'
Spread	15'

Comments: *Profuse spikes of white, pink, or purple flowers through summer, and smooth, peeling bark.*

Desert Willow

Botanical Name	Chilopsis linearis
Growth Rate	rapid
Foliage	deciduous
Height	30'
Spread	25'

Comments: *Showy pink flowers through spring and summer; extremely drought-tolerant.*

Eve's Necklace

Botanical Name	Sophora affinis
Growth Rate	moderate
Foliage	deciduous
Height	30'
Spread	20'

Comments: *Texas native, showy or fragrant flower, attractive seeds or fruit.*

Fringetree

Botanical Name	Chionanthus virginicus
Growth Rate	slow
Foliage	deciduous
Height	25'
Spread	20'

Comments: *Texas native, showy or fragrant flower. White sprays of flowers in spring.*

Goldenball Leadtree

Botanical Name	Leucaena retusa
Growth Rate	moderate
Foliage	deciduous
Height	25'
Spread	15'

Comments: *Delicate foliage and round, yellow flower 'balls,' which often appear after a rain.*

Goldenrain Tree

Botanical Name	Koelreuteria paniculata
Growth Rate	moderate
Foliage	deciduous
Height	30'
Spread	20'

Comments: *Reliable fall color, showy or fragrant flower, attractive seeds or fruit.*

Hawthorn

Botanical Name	Crataegus spp.
Growth Rate	moderate
Foliage	deciduous
Height	25'
Spread	15'

Comments: *Texas native, reliable fall color, showy or fragrant flower, attractive seeds.*

As of 6.16.20, https://www.coserv.com/Portals/0/PDFs/2018-PDFs/COS_5115_TreeSelectionGuide_04-2018.pdf

Lacey Oak

Botanical Name	Quercus glaucoides or laceyi
Growth Rate	slow
Foliage	deciduous
Height	35'
Spread	30'

Comments: *New leaves are peach-colored, turning blue-green, then back to peach in the fall.*

Mexican Buckeye

Botanical Name	Ungnadia speciosa
Growth Rate	moderate
Foliage	deciduous
Height	20'
Spread	20'

Comments: *Pink flowers appear with new leaves; brown fruit husks remain through winter.*

Mexican Plum

Botanical Name	Prunus mexicana
Growth Rate	moderate
Foliage	deciduous
Height	25'
Spread	25'

Comments: *Texas native, reliable fall color, showy or fragrant flower, attractive seeds or fruit, seeds or fruit eaten by wildlife.*

Possumhaw Holly

Botanical Name	Ilex decidua
Growth Rate	slow
Foliage	deciduous
Height	15'
Spread	8'

Comments: *Striking native plant. Orange or red berries on gray branches give interest through winter.*

Prairie

Botanical Name	Rhus lanceolata
Growth Rate	moderate
Foliage	deciduous
Height	30'
Spread	20'

Comments: *Glossy leaves turn bright red in fall; white flower spikes bear red clusters of berries.*

Rusty Blackhaw

Botanical Name	Viburnum rufidulum
Growth Rate	slow
Foliage	deciduous
Height	30'
Spread	35'

Comments: *Glossy leaves turn bright red in the fall; white flower clusters develop into blue fruits.*

Texas Persimmon

Botanical Name	Diospyros texana
Growth Rate	slow
Foliage	deciduous
Height	20'
Spread	12'

Comments: *Drought-tolerant native with attractive exfoliating bark and fragrant flowers.*

Texas Redbud

Botanical Name	Cercis canadensis var 'texensis'
Growth Rate	rapid
Foliage	deciduous
Height	30'
Spread	30'

Comments: *Glossy green leaves, purple flowers, and brown seed pods provide year round interest.*

Wax Myrtle

Botanical Name	Myrica cerifera
Growth Rate	rapid
Foliage	evergreen
Height	15'
Spread	10'

Comments: *Aromatic, pale green leaves and small bluish berries.*

Yaupon Holly

Botanical Name	Ilex vomitoria
Growth Rate	moderate
Foliage	evergreen
Height	20'
Spread	20'

Comments: *Dark green, evergreen leaves and red berries on female plants. Tolerates wide range of conditions.*

CoServ®

CoServ's Tree Line Safety initiative can help you make wise decisions on initial tree investment and placement.
For more information visit CoServ.com/TreeSafety. For questions, contact vegetation@coserv.com

COS 5115

North Central Texas Council of Governments
Environment & Development

As of 6.16.20, https://www.coserv.com/Portals/0/PDFs/2018-PDFs/COS_5115_TreeSelectionGuide_04-2018.pdf

Native Plant Society of Texas Recommended Tree List

- Categorized plants by type (groundcover, small tree, shade tree, etc.)
- Lists descriptive attributes
  - E=Evergreen
  - D=Drought resistant
  - P=Tolerates poor drainage
  - S=Shade tolerant
  - B=Attracts birds or butterflies
  - F=Very showy in flower, fruit or fall foliage

Small Trees

Common Name	Key						Scientific Name
	E	D	P	S	B	F	
Carolina Buckthorn		D	P	S	B	F	Rhamnus caroliniana
Cherry Laurel	E			S	B		Prunus caroliniana
Desert Willow		D			B	F	Chilopsis linearis
Eve's Necklace		D		S		FF	Styphnolobium affine
Goldenball Leadtree		D		S	B	F	Leucaena retusa
Mexican Buckeye		D		S	B	FF	Ungnadia speciosa
Mexican Plum		D		S	B	FF	Prunus mexicana
Possumhaw			P	S	B	F	Ilex decidua
Texas Persimmon		D		S	B		Diospyros texana
Texas Redbud		D		S	B	F	Cercis canadensis texensis
Wax Myrtle	E		P	S	B		Myrica cerifera
Yaupon Holly	E		P	S	B	F	Ilex vomitoria

As of 6.16.20, https://www.txnativeplants.org/wp-content/uploads/2018/02/Recommemded-Native-Plant-List-for-website.pdf

Concept for North Texas Form Based Tree List

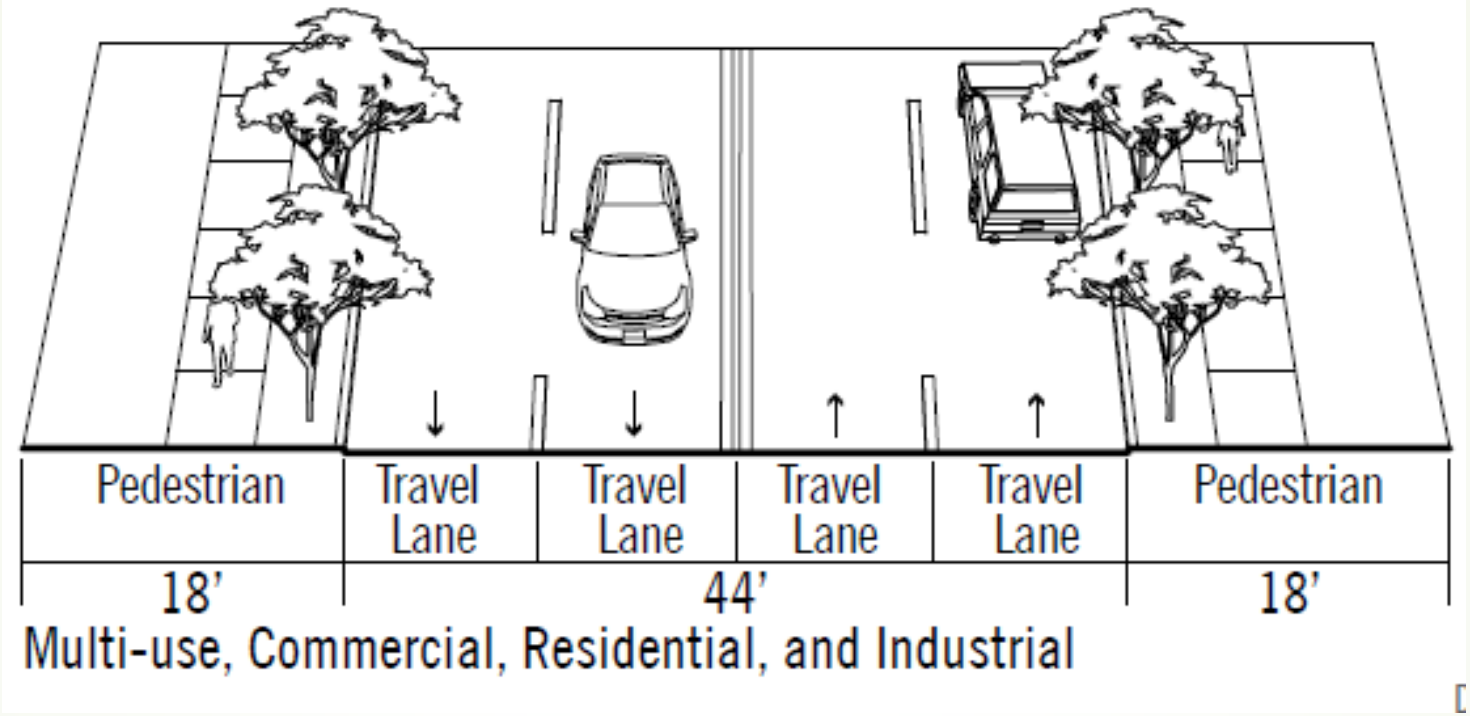
DRAFT

- The form-based tree list would categorize trees under what type of location they would be in (under utilities, in medians, etc.). The list would also include other characteristics to help identify what type of tree would work best in certain conditions (height, root depth, etc.).
  - Overhead Utilities: Trees under overhead utilities should not grow over 30'.
  - Underground Utilities: Trees above underground utilities should have a shallow or not invasive root system.
  - Medians: Trees in medians should be drought resistant, tolerate poor drainage and should not have a wide root system.

Common Name	Scientific Name	Tree Height	Root Depth	Tolerates Poor Drainage	Drought Resistant	Shade Tolerant

Street Cross Sections: Pros and Cons of Tree Placement within the ROW Discussion

NCTCOG referenced the City of Dallas' most recent Street Design Manual for today's discussion. The City of Fort Worth also showed trees in the same location on their street cross sections and other cities like Denton, Flower Mound, Rowlett, and Lewisville did not specify tree location.

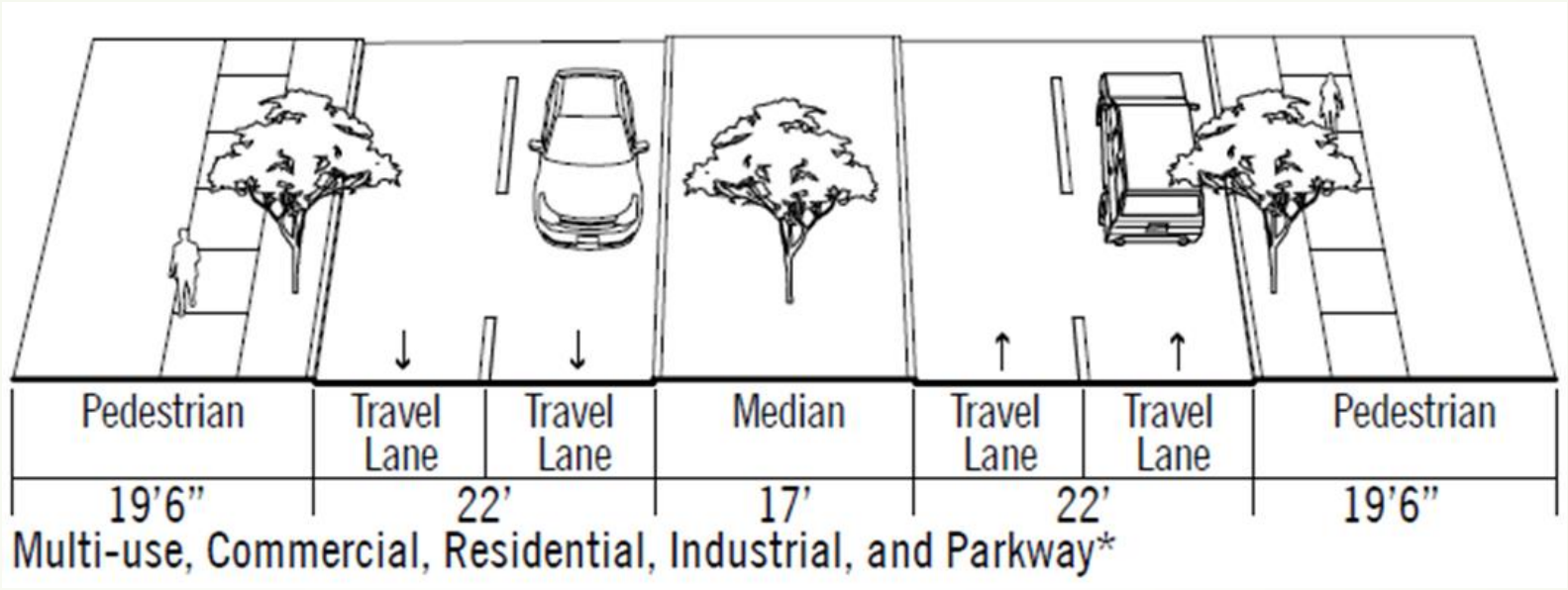


- How does placing trees in the buffer zone between the sidewalk and street affect:

-road visibility	-utility access	-curb inlets
-tree maintenance	-street overhang	-pedestrian safety
-road maintenance	-curb inlets	-street debris
-street aesthetics	- ADA accessibility	-bike/transit lanes

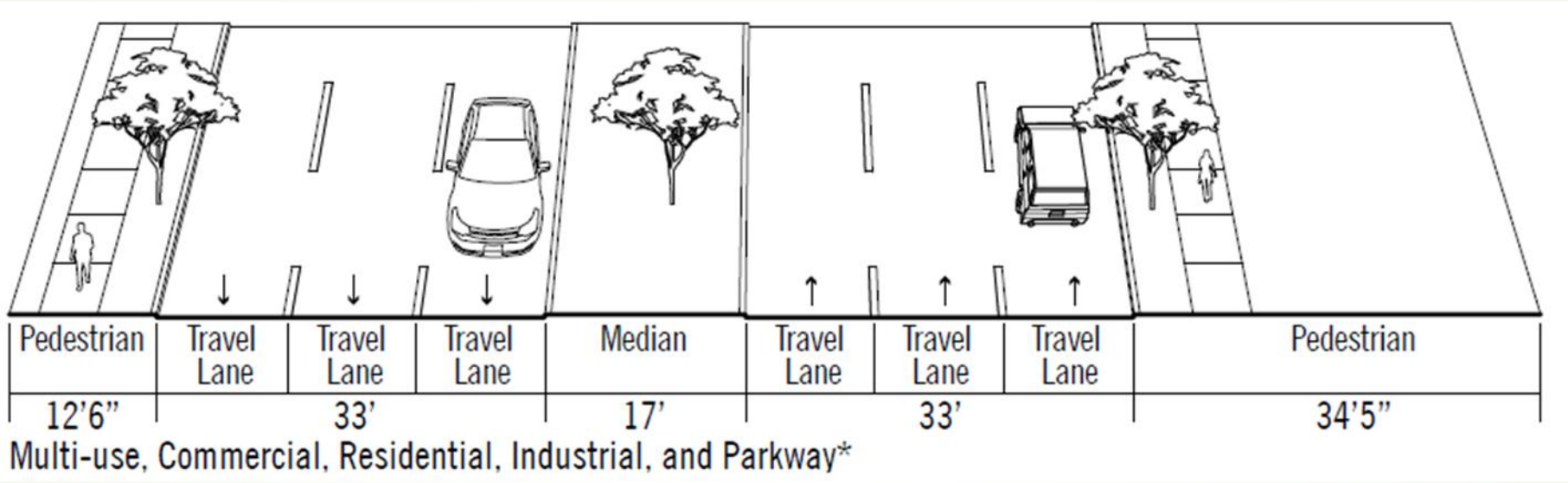
- When is it more appropriate to plant trees on the other side of the sidewalk?

https://dallascityhall.com/departments/public-works/DCH%20Documents/Public%20Works/pdf/Street%20Design%20Manual_091219.pdf, June 15, 2020, 80 Foot ROW, Figure 4-10, page 65



- How does placing trees in the buffer zone between the sidewalk and street affect:
  - -road visibility
  - -tree maintenance
  - -road maintenance
  - -street aesthetics
  - -utility access
  - -street overhang
  - -curb inlets
  - - ADA accessibility
  - -curb inlets
  - -pedestrian safety
  - -street debris
  - -bike/transit lanes
- When is it more appropriate to plant trees on the other side of the sidewalk?

https://dallascityhall.com/departments/public-works/DCH%20Documents/Public%20Works/pdf/Street%20Design%20Manual_091219.pdf, June 15, 2020, 100 Foot ROW, Figure 4-11, page 67



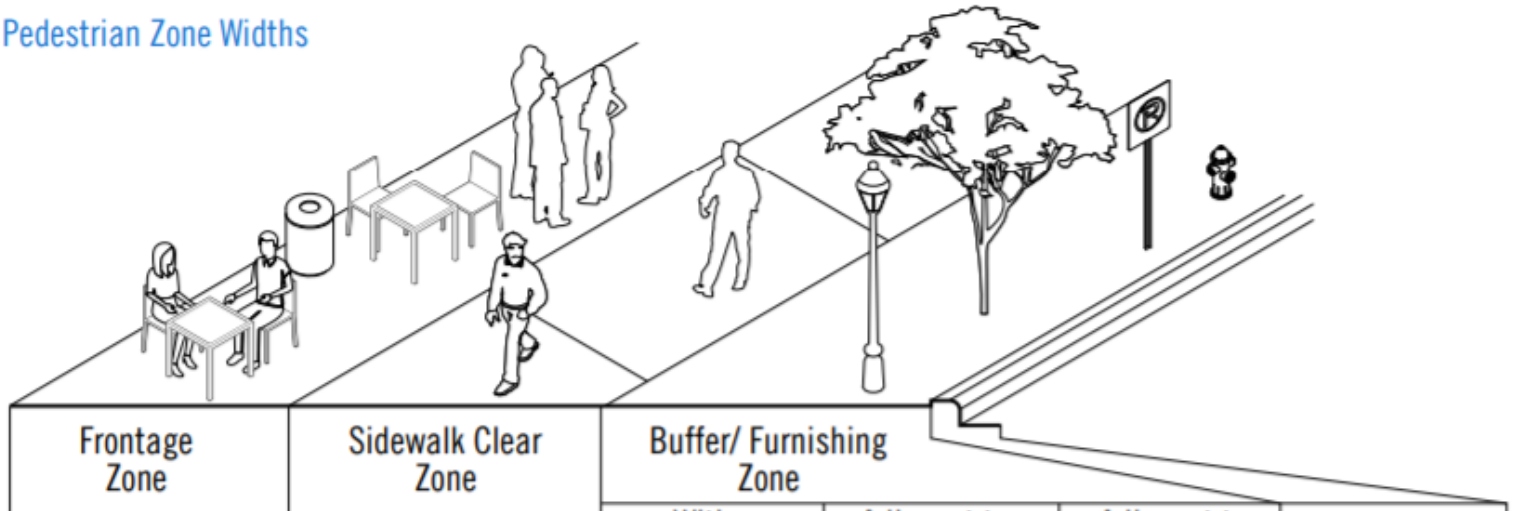
- How does placing trees in the buffer zone between the sidewalk and street affect:

-road visibility	-utility access	-curb inlets
-tree maintenance	-street overhang	-pedestrian safety
-road maintenance	-curb inlets	-street debris
-street aesthetics	- ADA accessibility	-bike/transit lanes

- When is it more appropriate to plant trees on the other side of the sidewalk?

https://dallascityhall.com/departments/public-works/DCH%20Documents/Public%20Works/pdf/Street%20Design%20Manual_091219.pdf, June 15, 2020, 130 Foot ROW, Figure 4-12, page 68

Figure 4.46 Pedestrian Zone Widths

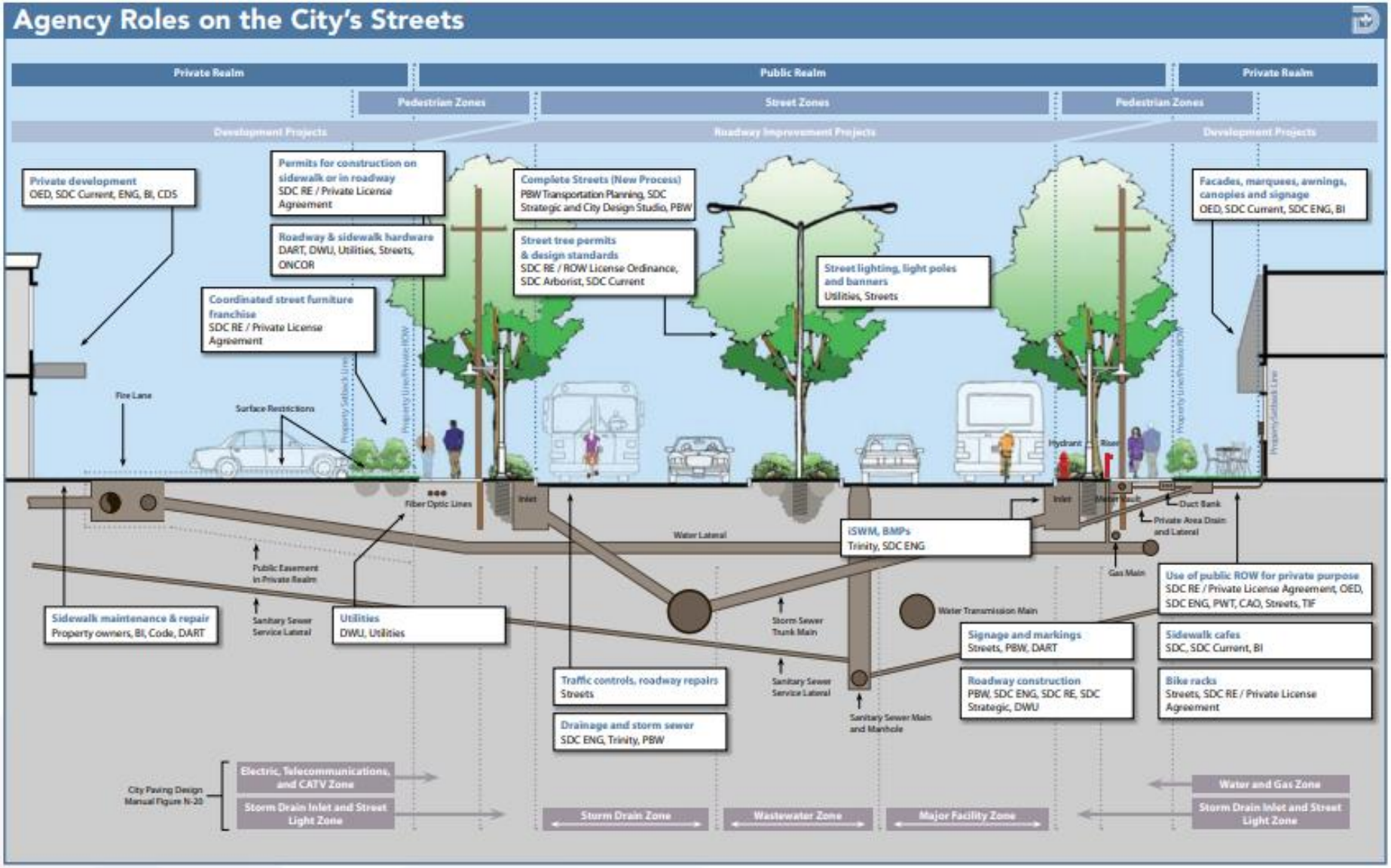


	Frontage Zone		Sidewalk Clear Zone		Buffer/ Furnishing Zone								Total Pedestrian Zone	
					With Street Tree		Adjacent to On-street Parking		Adjacent to Travel Lane		Curb			
	Min	Pref	Min	Pref	Min	Pref	Min	Pref	Min	Pref	Min	Pref	Min	Pref
Mixed-Use	-	3'	6'	6'	6'	8'	2'	6'	5'	8'	6"	2'	8'6"	19'
Commercial	-	3'	5'	6'	6'	10'	2'	6'	5'	10'	6"	2'	7'6"	20'
Residential	-	-	4'	5'	6'	10'	2'	7'	5'	10'	6"	2'	7'6"	17'
Industrial	-	-	4'	5'	6'	10'	2'	7'	5'	7'	6"	2'	7'6"	17'
Parkways	-	-	4'	5'	6'	20'	-	-	5'	20'	6"	2'	7'6"	27'
Woonerf	-	-	Shared	Shared	Shared	Shared	Shared	Shared	Shared	Shared	-	-	-	-
Alleys	-	-	-	-	-	-	-	-	-	-	6"	2'	-	-

It is recommended to have at least 5 feet of sidewalk clear width to accommodate two people walking side by side or allow two wheel chairs to pass each other. In maintaining the minimum sidewalk clear width, the landscaping should not intrude into the sidewalk space. TIF or PID district requirements may differ from the above table.

https://dallascityhall.com/departments/public-works/DCH%20Documents/Public%20Works/pdf/Street%20Design%20Manual_091219.pdf, June 15, 2020, Pedestrian Zone Widths, Figure 4.46, page 118

City of Dallas Complete Streets Design Manual



North Central Texas Council of Governments
Environment & Development

https://dallascityhall.com/government/Council%20Meeting%20Documents/d_dallascompletestreetsinitiativeanddesignmanual_combined_12022015.pdf, page 24, Multi-Disciplinary Planning and Implementation

Next Steps

- Determine action items for Subcommittee members and NCTCOG staff.

Member Roundtable

Public Works Roundup Speakers for SPROW Track

- Landscape Planning and Vegetation Maintenance
- Utilities (Coexisting Types, Franchises, Documentation, Coordinated Needs, etc.)
- Complete Streets Planning
- Green Infrastructure and Low Impact Development
- ROW Planning, Administration, and Policy (Fees, Ordinances, Incentives, and Coordination)

Next Meeting

- July 21, 2020 1:30-3:30pm
  - UberConference

Contact

Olivia Kale
Environment and Development Planner
okale@nctcog.org
817.695.9213

Mia Brown, CFM
Senior Planner of Environment and Development
mbbrown@nctcog.org
817.695.9227

Tamara Cook, AICP
Senior Program Manager, Environment & Development
tcook@nctcog.org
817.695.9221

Edith Marvin, P.E.
Director, Environment & Development
emarvin@nctcog.org
817.695.9211

Connect

Facebook.com/nctcogenv

@nctcogenv

nctcogenv

youtube.com/user/nctcoged

EandD@nctcog.org

nctcog.org/envir