

Planning & Urban Design Working Group

Proposed Infrastructure Guidelines: Guidelines for Public Streetscape

Chair David Carroll

Reinforce Pedestrian Activity

Pedestrian related concerns are a priority in the creation of a successful urban environment. Tourism, conventions, and daily business all create pedestrian traffic. Currently, vehicular needs dominate the streetscape at the expense of pedestrians. In some areas, discontinuous sidewalks force pedestrians into the street to compete for space. Additionally, infrastructure projects frequently ignore the adjacent streetscape and pedestrian movement. Improved wayfinding tools such as signs and graphics together with continuous and adequate sidewalks would encourage walking.

Recommendations

- Appropriately wide sidewalks should be provided from corner to corner along all property lines.
- Sidewalks should not abut the street curb. Sidewalks extending on and of private property will meet at grade.
- Blocks without pedestrian connections should be identified and prioritized for sidewalk construction.
- Develop a Way Finding Master Plan which incorporates such tools as specialty pavements, signs and graphics to facilitate pedestrian movement.
- Encourage street vendors, sidewalk cafes, etc. – food attracts pedestrian activity.
- Infrastructure edifices should address the streetscape and reinforce pedestrian activity.

Avoid Conflicts between Pedestrians and Infrastructure

Infrastructure is frequently placed in the public right-of-way. This not only results in unsightly sidewalks, but creates conflicts with pedestrian traffic. Utility boxes and poles at street corners block pedestrian traffic in a place where continuity is particularly important.

The amount of power and communication wiring attached to poles in the right-of-way will grow as development fills in and service requirements increase. New utility upgrades and service to properties should be installed below ground. Above ground support for these services is discouraged to avoid clutter at the streetscape.

Recommendations

- Infrastructure connections should be located in the furnishings zone to avoid conflict with pedestrian movement in the right-of-way and maintain accessible routes.
- Placement of infrastructure should be considered as a design element and be clearly dimensioned on site plans - where the information is available.
- Above ground infrastructure should be visually compatible with other streetscape elements.
- Utility lines (wires) should be placed underground in the public right -of-way

Install Pedestrian-Friendly Materials at Street Level

As infrastructure meets the street it comes into contact with people in a very physical way. Close up, we are able to get much more information about a design or material than we can when it is high above the street. Here we are able to see it close up, to run our hands along the sides, see ourselves reflected in the shiny places and observe the attention given to the craft in the materials. We also have a tendency to attribute to a city the attitudes projected by its primary buildings. If these seem inhospitable, the city feels hostile. If they seem well built, the city seems strong and vital. If they seem cheap and temporary, it suggests that we don't care about the quality of our environment or the people in it. It is important that the materials and construction of our infrastructure provide a level of detail and quality which is physically and emotionally comfortable for the pedestrian.

Recommendations

- Building materials at street level should be pedestrian friendly and durable.

Guidelines for Buildings

Encourage the inclusion of local character

The necessity to integrate the various infrastructural systems that organize, construct and service the metropolitan landscape is of vital importance. Infrastructure should contribute to the creation of a vibrant public realm with superior public spaces. Best design practices have shown that integration provides benefits that are social, environmental and economic.

The design of infrastructure can either divide communities, or bring them together. Urban Infrastructure performs an important social role in the city, and proper consideration should be given to the role public space plays in the formation of an accessible and civilized urban landscape, one that serves the entire urban population.

- 1- Infrastructure should recognize the historic significance of important buildings and places.
- 2 - Culturally important places are constructed incrementally over long periods of time. This aspect can reinforce the authenticity of a place while providing the basis for contemporary urban lifestyles.
- 3 - Unique, memorable, distinctive, and humane is a strong economic force and a key element in the creation and nourishment of a healthy community.
- 4- The use of quality local materials is encouraged / local character should be included in the design.
- 5 - Avoid nostalgic reproductions, but to use the materials in a meaningful manner
- 6 - Encourage the participation of local artists and artisans in detailing and materials.
- 7 - Building design should exhibit a response to the local climate. Integrate shading structures to provide desirable areas for recreation
- 8 – Promote active use and public amenities where infrastructure project interfaces the public realm. Possibility for pocket plazas and/or cultural activities to be programmable in shared public space
- 9 – Maximize use of sustainable landscape and provide distinctive spatial definition and locality defining an indistinguishable identity to its context
- 10 - Defining the scope of compatible infrastructure infill development by reference to the existing urban environment, preserving local character reduces the likelihood of opportunistic short-term, erratic and/or rampant development driven by development pressures and controlled through a reactive planning approval system, which always comes at the cost of losing at least some community values and amenity.

Infrastructure Guidelines

Rough Draft

Prepared by : Aan Garrett-Coleman, ASLA, LEED AP

Date: 8-22-17

Enhance the Streetscape

Issue

The delicate balance of the safety, aesthetic desires and comfort of the pedestrian with the necessary streetscape infrastructure including automobile circulation, mass transit infrastructure, bicycle routes and bicycle parking, maintenance activities, signage for both safety and wayfinding, utilities, stormwater management including green infrastructure, landscape improvements (including waste receptacles, benches, lighting, art installations) can be daunting. Most of these components present themselves in a streetscape condition on a regular basis and in some cases all these components in addition to use or site specific enhancements such as outdoor cafes or festival/parade streets. And; they must all share and “play nice together” in a relatively small space.

Recommendations

- Research the site and its contextual impact.
 - Dependent upon location, coordinate and research current and proposed City of Austin streetscape improvements that are contiguous, connected or in the area of the proposed infrastructure improvements
- Determine if there are existing site specific code requirements.
 - Incorporate into the streetscape any code required enhancements or components prescribed by code. (i.e. UNO District, Mueller Master Plan or Great Streets program)

- Contact Art in Public Spaces to determine if art is planned or consider incorporating art when it is feasible and/or desirable.
- Design for People
 - Whenever possible; create opportunities to activate the streetscape. (i.e. bus stops, outdoor café space, bicycle and baby stroller parking, comfortable, durable and safe seating, landscape for shade , heat island abatement, and critical aesthetic softening of the built environment to attract pedestrian use.
- Keep safety in mind
 - Provide lighting for safety to meet COA code requirements at a minimum. Make effort to insure that tree spacing and other vegetation are taking into consideration when calculating footcandles.
 - Protect the pedestrian and bicyclists from vehicular circulation with the use of bollards, curbs, and trees, etc.
- Select durable, resilient and environmentally sound products and materials
 - Design and specify materials that can be easily maintained and can hold up to vandalism and high-levels of use over time.
- Greet Infrastructure
 - The use of green infrastructure including rain gardens, bio swales/bio filtration strips, rainwater harvesting, porous pavement, etc. are highly encouraged as code allows.

Install Shade Trees, Understory Trees, and Native/Adapted Landscape Materials

Issue

Planting trees and native/adapted plant materials in an urban environment contributes to air quality, urban heat island relief, provides urban wildlife habitat and greatly enhances the overall aesthetic character of a site.

Dependent upon the site location and structure's function and context, landscape improvements can be utilized to either integrate, "celebrate", or promote interaction with infrastructure or it can be used to screen, mitigate the impact or

reduce the negativity (ie. Attractive nuisance, high-security, odor, negative aesthetic) of a structure or infrastructure improvement.

Recommendations

- Select the appropriate plant materials for the site
 - Determine whether the proposed infrastructure should encourage pedestrian interaction or viewing to either promote connectivity or views OR discourage connectivity and/or views (i.e. an electrical substation in a neighborhood may want to be screened to discourage pedestrian interaction or views; conversely a metro transfer station landscape would be designed to encourage connectivity and views)
- Provide a DEPENDABLE water source and horticulturally accurate planting conditions
 - Urban landscapes (even native landscapes) require a dependable water source (in some cases indefinitely) It is important to note that irrigation systems “do not provide water” unless they are controlled to do so. In other words; irrigation systems (preferably utilizing non-potable water) can provide back-up water so that precious mature urban landscapes are not lost in extreme drought conditions.
 - Adequate soil volume and quality of soil backfill are essential to the performance of an urban landscape especially urban trees. The use of silva cells (or similar products) are highly encouraged when space for planting volume is limited.
- Insure ADA compliance
 - Street Trees along ADA routes must be installed at a size adequate to accommodate a 72” minimum vertical clearance. (approximately 5” in caliper and approximately 14 ft tall at planting)
- Encourage planting designs that support environmental infrastructure
 - Specify resilient plants in green infrastructure solutions that assist in stormwater management and provide passive water quality through natural processes.
- Plant Tree species that are long-living; structurally sound (long term) and can withstand the radiant heat and brutal conditions of an urban setting and/or minimal maintenance.

- There are relatively few Central Texas shade trees and ornamental trees that are long-term survivors/thrivers in an urban environment. For a list of these trees; consult with the COA, Grow Green Program and Great Streets program lists of trees (however; avoid the temptation to specify Big Tooth Maple due to availability challenges)
- Protect trees and planting areas from pedestrian and vehicular damage
 - Durable edgings, tree guards, mulch rings, etc all work to provide protection from human activities and routine maintenance activities like weed-eating. Landscape shrub/groundcover areas can be protected from pedestrian damage by planting edgings or utilizing raised planter and pots.
- Be mindful of conflicts (utilities, structures, etc)
 - Trees and plants grow; therefore both initial installation size and long term
 - Often root barriers may be necessary to protect underground utilities or sidewalks/curbs/streets
- Coordinate with Site drainage
 - Landscape design should support and be coordinated with site drainage.
- Restore a native/naturalized/restored landscape (if possible)
 - A native, restored landscape that is allowed to “brown out” (go dormant) in drought and winter conditions is the most sustainable landscape achievable . A native/undisturbed or native/restored landscape contributes to the preservation of the nature and character of the Austin landscape.
 - Often these landscape opportunities are not achievable in an urban setting (especially small spaces) however; the goal of every landscape installation should be to get as close as possible to achieving as many of these characteristics as possible

Minimize Curb Cuts

Issue

The safety and comfort of people walking on a sidewalk is of greater concern than the convenience of a driver; pedestrians are the primary concern. Every time a car crosses the sidewalk there is a potential danger and inconvenience to the pedestrian. For this reason, places where cars cross the sidewalk should be minimized.

Values Supported

Values Supported
Dense Urban Character
Safety

Recommendations

- Curb cuts should be minimized, and concentrated at mid-block.
- Development downtown should place curb cuts at original alley locations where possible.
- Specialty pedestrian paving, such as pavers, should continue at a level walking surface across mid-block curb cuts.
- Overhead cover should continue across curb cuts where possible.

FIND OR TAKE FOTO

ISSUE

Protecting the safety and comfort of all pedestrians is a priority; any convenience for the driver is secondary. Whenever a vehicle crosses a sidewalk (at a curb cut) pedestrians are at risk of potential danger or inconvenience. Therefore, curb cuts should be minimized.

RECOMMENDATIONS

- Minimize curb cuts.
- Place curb cuts at original alley locations where possible.
- Install specialty paving, such as textured/colored pavers, at curb cut sidewalk locations to warn drivers of pedestrians crossing.
- Provide continuous overhead cover at curb cuts.
- Curb cuts are generally safer when farther away from street intersections, but for large-scale developments, which include large parking garages, curb cuts are preferred closer to intersections so as not to disturb pedestrian activity in front of the building.
- Design parking garage entries so curb cut is minimized and queing is provided within garage and not on the public right-of-way.

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TO BE REFORMATTED AFTER
A TEMPLATE IS SELECTED, OR
ARE WE USING
ORIGINAL FORMAT?

Provide Pedestrian-Scaled Lighting

Values Supported

Humane Character
Safety

Issue

Light quality can strongly affect the character of a place. Harsh light creates an environment which seems inhuman, while too little light creates an environment which feels unsafe.

The size and scale of lights and light poles will also impact the character of the streetscape. Light fixtures scaled to the movement of cars will suggest to pedestrians that they are in a car's environment and that they may not be safe.

Both the scale of fixture and type of lighting can easily create the sense that the sidewalks—and all of downtown—are the domain of the pedestrian.

Recommendations

- Urban Streets should be lit by pedestrian-scaled fixtures emitting warm light.
- A minimum of 1 foot candle of warm light should be provided in all space between the building face and the curb along all streets.
- Lighting may be provided through the use of pedestrian-scaled pole fixtures, or fixtures may be attached to the face of the building. The type and size of pole fixtures should be as consistent as possible along a single block.
- The City of Austin is encouraged to create a set of recommendations for street lighting, outlining areas where a consistent character should be maintained, and describing that character.



Streetlights set to the scale of the pedestrian create a comfortable space where people feel safe.

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ISSUE

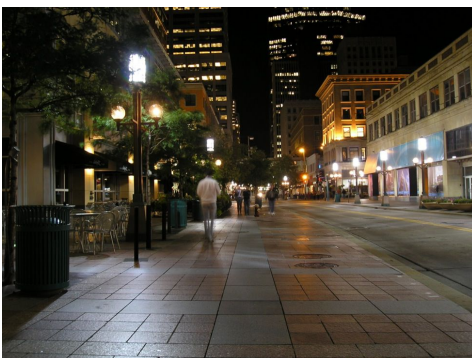
The quality of lighting has a strong effect on the character of a public space. Harsh lighting can be inhuman, while dim lighting can create a sense of insecurity and danger.

Light fixtures must be sized/scaled to be pedestrian friendly, not automobile friendly, which will encourage more pedestrian activity on our streetscapes.

The security and safety of well designed streetscape lighting is vital for the public areas to be the domain of the pedestrian, and not the automobile.

RECOMMENDATIONS

- Utilize pedestrian-scaled fixtures emitting warm light at all public streetscapes.
- Provide a minimum of one foot-candle or warm light between building face and curb at all public streetscapes.
- Provide uniform consistency with light fixtures and their placement along a single block. The Great Streets Master Plan will influence fixture type and placement for many projects.



Screen Mechanical and Utility Equipment

Values Supported

Humane Character
Economic Vitality

Issue

Mechanical equipment is necessary to the function of the buildings which comprise a successful city center. Unfortunately, space must be found for components that are sometimes large, noisy and unsightly. Mechanical equipment, particularly when added after the building is in use, can interrupt the streetscape and public views, decreasing the comfort and livability throughout the area. The same care should be applied to other utilities and dumpster/trash facilities.

ADD PHOTO

Recommendations

- Mechanical equipment should be screened from view and located away from the street edge.
- Particular attention should be given to mechanical equipment at street level. This should be screened in a way appropriate to the streetscape.

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ISSUE

Mechanical equipment takes up a large area of a building, and is usually located at the "back-of-house" where it's best suited, since the equipment is usually noisy and unattractive and generally obtrusive. Therefore, this equipment should not be located along the public streetscape side(s) of the building.

RECOMMENDATIONS

- Avoid locating mechanical equipment along the streetscape side(s) of the building.
- If mechanical equipment must be located along a streetscape, provide an aesthetically pleasing screen that hides the equipment from view and blocks any noise produced by the equipment.
- Avoid equipment locations where periodic service for the equipment does not interfere with, or endanger adjacent pedestrian activity.

Architecture & Development Working Group

Proposed Infrastructure Guidelines: Guidelines for Infrastructure Structures

Chair David Carroll

Create Quality Construction

Well-built infrastructure can provide a sense of continuity and history simply by having stood for a long period of time. This is because infrastructure can tell a history of our town as part of the urban fabric. It can remind us of our past and the story of our lives in Austin, and make us feel that we belong to something bigger than ourselves. The appearance can affect our immediate sense of pride, and our developed sense of continuity; the slower the physical world around us changes, the more permanent it feels, and the more we will feel a part of a town that existed before us and will exist after us.

A stock of quality infrastructure, which can be used for a relatively long time, can also be a better use of natural resources. If the design and construction facilitate extended use, less energy may be spent creating new building materials. Energy costs could easily be higher in the future, raising construction costs and limiting incentives for new construction.

Recommendations

- Infrastructure should be built as high-quality, long term components of the urban fabric.
- Infrastructure should be constructed as maintenance free as possible and should be designed to achieve a life span greater than seventy-five years.
- Consideration should be given to the pedestrian's visual and tactile experience in the selection and configuration of building materials.
- Consideration should be given to the design of exterior walls and skins of infrastructure. These should not be considered sacrificial surfaces to be replaced several times in the life of the infrastructure project.

From: [Halloran, Katie - BC](#)
To: [Mulholland, Katie](#)
Cc: [Carroll, David - BC](#)
Subject: Re: Urban Design/Infrastructure Guidelines due 8/23
Date: Sunday, August 27, 2017 9:58:46 PM
Attachments: [image001.png](#)

Hi Katie,

I think I'm sending material that could be ideas for draft infrastructure recommendations. I have not written up the explanatory text like the sample material provided by the Planning & Urban Design Working Group. If I can spend more time or help with future revisions, will do so at a later date.

Will also look out for your email as to whether the meeting (8/27) will continue as planned. Thanks!

Transmission line corridor development projects:

- Avoid locating new or expanding established high voltage transmission line projects along existing Core Transit Corridors, and other mixed use corridors depicted by Imagine Austin as high growth areas.
- Avoid locating new or expanding established high voltage transmission line projects in areas that include any of the following: existing or planned concentrations of multi-story residential development, multi-story mixed use development, or multi-story commercial development.
- Avoid locating new or expanding established high voltage transmission line projects in areas that would impact environmental preserves, public parks, established street trees, or schools.
- For low and high voltage electrical infrastructure projects that require removal or trimming of over XX% of existing, non-exotic street trees: establish a fund to replace lost tree canopy within a 1/4 mile by planting new street trees on a 1:1 basis.

Area Wide UDGs Applicable to Infrastructure Projects:

- Consult both growth management (development density) goals and environmental protection goals in Imagine Austin prior to approving projects that may facilitate new growth and development. Focus public investments in new water, sewer, and transportation facilities along planned transit corridors (Imagine Austin Activity Corridors) and within Imagine Austin Activity Centers. (AW.1)
- Prioritize funding for infrastructure projects that facilitate mixed use development in Imagine Austin Activity Centers and along Activity Corridors. (AW.2)
- Install educational materials and neighborhood-specific public art to integrate new or expanding infrastructure projects and reduce their impacts on streetscape. (AW.5)
- Consider project height, setbacks, and landscaping to reduce impacts of new and expanding infrastructure projects to reduce aesthetic impacts on surrounding communities. (AW.9)
- When possible, renovate and repurpose public utility structures for public enjoyment or leverage their reuse to raise funding for public purposes. (AW.11)

Guidelines for the Public Streetscape Applicable to Infrastructure Projects:

- Where possible, design project features to offer pedestrians additional protection from traffic lanes through physical barriers, including vegetation. Do not locate electrical poles, guide wires, hydrants, or other obstructions in sidewalks. (PS.1 and PS.10)
- Prior to site design completion, coordinate with other public agencies to identify and support other infrastructure or public streetscape goals and minimize interruption to right-of-way and other public land. (PS.3)
- Prior to site design completion, coordinate with other public agencies and private organizations to identify additional funding sources to install or integrate pedestrian features and features designed to support alternative modes of transportation. These features may include shade structures, bicycle parking, car share and bike share parking, electric vehicle charging stations, green infrastructure features to manage stormwater, native

landscaping, street trees, pedestrian-scaled lighting, improvements to existing transit facilities or space for planned transit facilities. (PS.4, PS.5, PS.6)

- Consider aesthetic impacts of infrastructure projects. Coordinate with impacted neighborhood and business associations to identify strategies to minimize impacts, especially at the pedestrian level. (PS.13 and PS.11)

Guidelines for Plazas and Open Spaces Applicable to Infrastructure Projects:

Public land used for a single purpose, such as an electrical substation, or a pump station, may be strategically designed to also provide water storage (through micro retention features), recreation or rest as open space (through shade, water fountains, landscaping, benches), economic stimulation (by allowing space for a food truck or other food vendor), and security (pedestrian level lighting and pathways, call boxes, modified landscaping).

- Partner with other public agencies (such as PARD and Watershed), private institutions, and businesses to leverage funding to create multi-purpose infrastructure projects. Even linear infrastructure work may support design features to lower street temperatures and improve streets for pedestrians.

From: Mulholland, Katie

Sent: Friday, August 25, 2017 12:32:13 PM

To: Halloran, Katie - BC

Cc: Koerth, Nichole

Subject: RE: Urban Design/Infrastructure Guidelines due 8/23

Hi Commissioner Halloran,

Thanks. If you send your comments before the meeting, I can forward them to the Commission. You're also welcome to bring copies.

And good idea. I'll send an email to the full Commission on Monday about any changes to the meeting.

Thanks and have a good (and safe) day!

Katie Mulholland, Senior Planner

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Learn more about Vision Zero at <http://austintexas.gov/visionzero>

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From: Halloran, Katie - BC

Sent: Friday, August 25, 2017 10:30 AM

To: Mulholland, Katie

Subject: Re: Urban Design/Infrastructure Guidelines due 8/23