

STREETSCAPE NARRATIVE

ver. October 5, 2020





Street and streetscape contributing to community.

INTRODUCTION

The Anchorage Downtown Lighting & Signals Upgrade (Project No. 14-48) effort is likely to result in a significant level of disturbance to the existing sidewalk and streetscape within the project area. This may create opportunities where the replacement of impacted areas can result in direct improvements, or be coordinated with other efforts to achieve benefit. This narrative document is a summarized overview of typical streetscape goals, with additional detail provided for specific options that have been identified: trees within the streetscape, and interpretive elements. Historical information and existing conditions are provided for urban trees as context for that discussion.

A good streetscape:

A good streetscape provides: beauty and comfort, facilitates commerce, and contributes toward sustainability in many ways (including economic, ecological and maintenance). A streetscape can also contribute to a sense of place, and create a desirable place to use and experience.



Street and streetscape contributing to community.

STREETSCAPE FACTORS

Good streetscape design balances the pressures and variables that influence any given area. The factors provided below give a general overview, and are not intended to be detailed or exhaustive. Other factors may exist, but these are the main ones that relate to current discussions for this project.

Visual Complexity

Provide a visually harmonious streetscape, with visual hierarchy to elements and a sense of order. This should be compatible with the potential wide variety of adjacent business and facility aesthetics. Streetscape elements (lighting, furniture, amenities) should be consistent and (typically) limited in variety.

Pedestrians (Ease Of Movement)

Provide sidewalk open widths relative to expected pedestrian use. In order to minimize potential competition for this space, additional space should be provided at the front and back of the sidewalk to accommodate business and public uses that might otherwise intrude on pedestrian movement.

Design with universal access in mind. Americans with Disability Access guidelines establish minimum requirements and recommendations, and should be exceeded wherever possible to achieve barrier free design if not universal design.

Pedestrians (Ease Of Access From Vehicles)

Allow for movement between vehicles and sidewalks. Provide sufficient clear sidewalk area next to vehicles to allow door swing, access in and out of vehicles, and access to the main sidewalk area.

Safety (Crime Prevention Through Environmental Design – CPTED)

Follow CPTED principles, with emphasis on allowing clear sightlines for active and passive surveillance. A clear area between 24" and 72" (min.) off the ground should be maintained, reducing the possibility for hiding.

Safety (Pedestrian Protection)

Provide implied or actual separation between vehicles and pedestrians in the form of continuous vertical separation (curbing/walls/bollards), implied separation (vertical objects such as light poles or trees), or horizontal distance.

Lighting

Provide for minimum lighting levels for safety, and provide a lighting design that contributes to a vibrant and attractive streetscape. For Anchorage, this should have an explicit focus on winter lighting. Provide convenient electric outlets for seasonal lighting (pole and ground mounted).

Maintenance (Ongoing)

Provide sufficient clear sidewalk width for equipment movement without danger for potential damage to streetscape elements. All seasons must be considered.

Maintenance (Lighting, Meters, Utilities)

As streetscapes are improved, ensure that conduit, junction boxes, and other infrastructure is in place to allow maintenance, flexible use, and utility growth/changes without significant construction impacts. Choose streetscape elements that can be maintained easily.

Longevity (Materials & Installation)

Identify the desired life-span for project components, and determine materials and fabrication qualities that achieve those lifespans. Where components could be removed and reinstalled (such as benches), prioritize durability and high-quality.

Ensure that construction documents detail installations correctly to ensure longevity, maintain warranties, and ensure that streetscape installations operate as a 'system' where each part works well with others. Ensure that construction period administration and inspections verify (and enforce) the desired level of quality for components and installation.

Business Benefits (Usable Space)

Provide space for occasional or ongoing business-use in front of buildings. This contributes to an engaging/lively environment, and allows for flexibility (such as what we've discovered as a result of COVID 19 and social distancing).

Business Benefits (Ease Of Wayfinding)

Maintain or improve views from the street to buildings, businesses, or points of interest. Views and sightlines are critical to businesses success.

Amenities (Bicycle Parking)

Provide convenient and quality bicycle parking.

Amenities (Seating)

Provide seating, with a significant proportion of seating having backs and armrests (critical for the elderly or people with physical limitations). Seating provides places for people to rest, relax and socialize.

Amenities (Artwork/Interpretation)

Prioritize aesthetic and educational opportunities within the streetscape to increase its attractiveness, interest, and function as a desired destination.

OPPORTUNITIES - STREET TREES

Critical for success:

- As much planting soil as possible
- Protection from physical and chemical damage
- Long-term maintenance commitment

Importance To Do Things Right (editorial)

There is a very poor track record for trees in Downtown Anchorage. 4th, 5th and 6th Avenue have a very large number of locations where previous street tree locations have been filled in with concrete where the trees failed. These locations include some where great effort and cost were expended on technical solutions intended to provide for good tree health. These areas likely failed due to the unintended consequences of maintenance around them (physical and chemical damage), or the lack of critical long-term maintenance. Any proposed tree plantings in Downtown Anchorage need to realistically assess the ability to commit to the long-term viability of trees, or err on the side of not providing them. There is a visible blight related to failed and failing tree installations within the area that will take significant effort to correct.

Background:

Downtown Anchorage has well over twenty years of trying to improve the viability and success of street tree plantings. These have typically related to protecting trees from physical damage (including snow clearing activities), protecting trees from chemical damage from snow-melt chemicals, and providing trees with the soil characteristics they need to survive and hopefully grow: soil volume, quality, air, and moisture. Before these improvements, tree plantings in sidewalks were typical 4'x4' tree pits with metal grates.

Physical and chemical damage has been 'solved' by providing above-grade curbs or planter walls that create an area around the tree protected from physical harm or chemicals washing into them.

Aspects that relate to soil characteristics are more challenging as trees need as many square feet of soil as they can get, typically at a depth of 18 to 24 inches. This need for real estate can be contrary to the space needed for pedestrians, businesses, and vehicle access.

Technology has helped through placing this soil volume under sidewalks with suspended concrete slab sidewalks over uncompressed soil below (5th Avenue around the Glacier Brewhouse & 4th Avenue north of the downtown fire station), and the use of structural soil cells below sidewalks (east of the Dena'ina convention center and Town Square Park). Structural soil cells maintain uncompressed soils below more traditionally installed pavement above. These areas still allow physical and chemical damage, unless heated concrete is used (like the Dena'ina sidewalks). Above grade planting



Tree pit and grate - 4th Avenue



Tree pit (concrete filled) - 4th Avenue



Suspended slab (concrete filled) - 5th Avenue



Suspended slab - 4th Avenue at Fire Station



Elevated planter - Dena'ina Center



Soil cells - Dena'ina Center



Elevated planter - E Street



Soil cells - Town Square Park

beds have seen varying levels of success, but have limitations to their size due to pedestrian circulation and parking needs for getting into and out of cars. Successful above-grade planters exist throughout downtown, west of the Dena'ina Center, where there is no parking. Their success has related to their size and depth of soils.

More recent, smaller planters (approx. 6'x4' soil surface) exist on 4th Avenue with limited soil volume, but more than a typical 4'x4' urban tree planting pit. These installations recognized that the trees planted within them might have a 5-10 year maximum life-span, needing to be replanted in the future.

All tree plantings in the downtown would benefit from a higher level of care and maintenance. Even the trees that have been provided with significant soil volume and protection show stress and limitations on their growth, which could be improved with better maintenance.

Suspended Slabs

The suspended slabs on 5th Avenue have failed to result in tree survival, possibly due to insufficient water, chemical infiltration, physical damage, or material accumulation within the pits that could result in trunk rot/issues. These trees are in front of businesses, and the sidewalks receive a higher level of active maintenance to keep them clear. The suspended slabs on 4th Avenue have resulted in good tree survival (but show evidence of stress). There are no adjacent businesses, and this area does not receive the same amount of attention.

Soil Cells

The trees in soil cells (east of the Dena'ina center and at the E Street side of Town Square Park) are doing well.

Raised Planters

The trees in raised planters (east of the Dena'ina center and at the E Street side of Town Square Park) are doing well. These are useful examples, as they can be compared to trees placed in soil cells during the same project installation. Of note for the Dena'ina center are the larger caliper trees in soil cells that received a larger soil volume than the planters.

The trees along 4th Avenue in the new raised planters have mixed results, notably between the different tree species used. In general, these tree plantings exhibit evidence of stress and their expected lifespan of 5-10 years will appear to be accurate.

There are numerous other planter installation of trees throughout the downtown. There is a visible correlation between soil volume and tree health.

Contiguous Soils

Tree placement should be prioritized in large areas of soil, or areas of soil that are interconnected. Linear streetscape plantings that can occur within medians, or where continuous planting beds can be placed between sidewalks and streets, and a good opportunity to provide soil volume.

Tree Placement

If trees will be placed within the streetscape (tree wells or tree planters), their design and placement should relate to consistency and aesthetics within the overall street corridor and its streetscape elements. Adjustment may be beneficial where there are opportunities with adjacent uses or businesses.

Visibility of building entrances and signage should be prioritized. Views should also consider ground floor building windows where visibility provides a benefit (displays or positive views of activities within). Tree plantings should be coordinated with areas of blank facade, where a higher level of privacy within may be desirable, or where the shading benefit of trees provides benefit.

Where feasible, significant streetscape elements such as tree plantings (wells or planters) should be coordinated with adjacent property owners/users. As the use of adjacent buildings may change over time, emphasis should be given to overall streetscape goals and the flexibility of improvements to accommodate a variety of needs.

To be consistent with visual complexity and ease of access, tree placement should be coordinated with all other vertical street elements (light poles, benches, litter bins, street lights, and similar) and horizontal elements (such as utility boxes or access). Where possible, elements should be integrated to



Elevated planter (new type) - 4th Avenue



Standard tree pit - 6th Avenue



Standard tree pit - City Hall



Elevated planter - 4th Avenue at Fire Station

reduce their impact on pedestrian movement and simplify the visual environment.

Tree Experts

In 2006, the local chapter of the American Society of Landscape Architects brought up James Urban, a noted urban tree expert.

It was his opinion that Anchorage had planted too many trees, too frequently. He thought that we should have larger areas for tree plantings to develop to their mature height. He suggested finding the right tree for the right place. If there were trees in grates adjacent to a large planter area, he suggested just increasing the planting area's size and moving the tree in the grate to the planting area. Soil resources were an important key to watch for when considering where to plant our urban trees. In his tree tour and his conference lecture, he noted that we need to use a combination of strategies to get the roots of the tree to the soil resources. Large planting pits, trenches running under sidewalks to large

planter beds, or structural soils were all alternatives to the small planting pit in which we place our urban street trees.

- Plant the Easy Places First: develop design options that plant trees in large soil volumes;
- Make Bigger Planting Spaces: balance the size of the paved and soil areas;
- Respect the Base of the Tree: do not pave up to base; no tree grates or guards to damage trunk of tree;
- Make Space for Roots: design spaces for roots under pavement and utilize different strategies as conditions change (a 6" diameter tree needs 400 cubic feet of soil, and a 16" diameter tree needs 1,000 cubic feet); use trenches, larger planting pits, structural soil, or soil cells;
- Select the Right Place: put the right tree in the right place; a 3" tree caliper is a well-sized tree to place in the urban environment, balancing being large enough to withstand the environment, with being young enough to establish in a reasonable time frame.
- Establish Reasonable Tree and Soil Budgets: balance design quality of all elements in the landscape; put street trees and street lights on equal level in terms of costs because the trees are as valuable as the lighting; and
- Design for Maintenance: create designs that can be maintained, and commit to that maintenance.

OPPORTUNITIES - INTERPRETIVE

Recognition/Interpretation Of People (Such As Historic/Famous Musers)

There are typically two ways of doing this: consolidated or distributed. The distributed approach requires the identification of numerous locations throughout an area appropriate to receive a standardized fabrication. Each location receives a single fabrication that recognizes one (or a small number) of people. An excellent example of this is the Hollywood Walk of Fame. The consolidated approach requires a single location for all recognition, generally with a larger fabrication (or multiple fabrications) and a more significant emphasis on the overall theming of a larger space. A good example of this is a themed space such as a memorial, with Hostetler Park's Victims of Violent Crime being a local example.

Within a streetscape, the distributed approach's success relates to the quantity, placement, and possible integration of fabrications with other items within the area. Success is related to size, type and messaging of the fabrication; the expected final quantity of fabrications; the available locations for initial construction and future expansion/placement; ease of fabrication and installation; and how well any fabrication fits in with existing and adjacent conditions and uses. The main challenge of this approach is finding locations where the general goals of a good streetscape aren't compromised. The main benefit of this approach is a wider branding of an area, with the message spread throughout.

Within a streetscape, the consolidated approach's success depends on the availability of an appropriate space that is developed with a specific theme. Success is related to finding the right space and size, type, and messaging of the space's components. The main challenge of this approach is finding the right space that allows strong theming. The main benefit of this approach is reducing the complexity of a streetscape and having a strongly branded single experience.

A significant challenge that both approaches face is how to plan for future additions. There are many ways to achieve this, but perhaps it is less complicated within a consolidated approach where the space already allocated and designed for expansion.



Dispersed Recognition/interpretation



Consolidated memorial with planned expansion



Brass inlay in concrete (Valdez)

Aesthetic/Interpretive Elements (Such As Dog Print Medallions In Pavement)

Whether used in a distributed or consolidated way, pavement inlay can be a successful way to add interpretive and aesthetic value. Ease of installation and longevity depend on factors such as size, material, and design. These are generally best installed at the time of concrete installation. They do introduce the possibility of water infiltration and freeze/thaw degradation of concrete. The extent of that risk depends on design, quality control during installation, and maintenance activities (potential impact from plow blades to influence of snowmelt chemicals).

District Recognition

It is understood that there are processes in place for the official designation of districts. For branding and wayfinding within a district, street signs and banners are a typical way to identify and celebrate the district theme. These can be made even more effective with interpretation and/or aesthetic elements that reinforce the theme.

OPPORTUNITIES - STREETScape ELEMENTS MISCELLANEOUS

Coordination of Elements

As discussed previously, any elements used within the streetscape need to be well-coordinated and integrated when possible. This relates to all Streetscape Factors previously discussed, and likely more aspects not covered.

Color and Material

Color and materials of all elements should be thoughtfully coordinated. Some elements will respond to MOA design standards, downtown-specific standards, or to more localized guidance that will respond to visual branding related to overlays such as designated districts. This level of coordination applies to all elements within the streetscape, including but not limited to signal lights, street lights, pedestrian lighting, seating, litter bins, bicycle racks, planters, and similar.

Paving

Much of Downtown Anchorage uses jointing geometries that create areas of banding surrounding panels. For visual definition, they use brushed concrete and exposed aggregate concrete. Exposed aggregate concrete is more difficult to walk on and is being discouraged. With this in mind, it should not be used within main areas of pedestrian movement, but could be considered toward the edges, or within side areas if its aesthetic benefit is beneficial.

ADDITIONAL TREE IDEAS/RECOMMENDATIONS

Trees

Prioritize trees. If trees are considered to be critical within the downtown streetscape, they need to receive a high priority. Knowing that protection from physical and chemical damage and soil volume and quality are critical, at a minimum, a few key locations for plantings should be identified.

An incomplete start at creative problem solving is provided below. Before we provide any more street tree plantings in Downtown Anchorage, there should be an effort where those locals with relevant expertise come together to review past success and failure and provide ideas to consider.

Incomplete Brainstorming:

- Identify locations where pedestrian space can be constrained to allow providing larger planting areas. Ideally these areas would only be those where adjacent demands on open sidewalk area would be low.
- Identify areas where larger planting beds can be provided without impacting pedestrian needs, or where a balance can be found where they improve pedestrian use.
- Remove parking spaces in a few locations to provide 8'x20' planting areas with a soil depth of 24". This would allow for a single tree to mature to a reasonably significant size. This would allow additional sidewalk space for businesses that would otherwise be dedicated to tree planters/grates.
- Emphasize planting areas as pocket parks by integrating seating.
- If parking spaces are removed, provide bicycle parking as a way to make another mode of transportation more convenient.
- Such planting areas can also be integrated with interpretation, theming, recognition, and other urban uses.
- Identify streets that have lower traffic or parking requirements and prioritize them for tree plantings. Converting vehicle space (drive lanes or parking) may be easier in these locations.
- Urban vegetation relates to more than trees. If an area is too small for the long-term viability of a tree, it still might have a higher purpose as a planting bed for shrubs, perennials, or annuals. In the absence of sidewalk-level plantings, hanging baskets, business-maintained window boxes, movable planters, and other strategies are also viable ways to seasonally have the benefits of plantings.

Editorial

Many variables contribute to the success of an urban street tree, so assessing our existing conditions can be challenging. We have enough lessons to understand that achieving long term viability for our street trees is very difficult.

In our climate and downtown urban conditions, what role is desired for trees?

Our conditions require a trade-off between allocating sidewalk space to trees (above ground planters) and the use of expensive infrastructure that maintains pedestrian space (optimizing below ground root zones). Both have risk/benefit to achieve actual tree goals. It is likely a better approach to create vibrant urban streetscapes optimized for people (space and amenities) and focus trees in certain areas where conditions are optimized for them (soil volume and minimal disturbances). This could result in better streetscapes and a better urban forest. Investing in infrastructure where the "reason for being" is dead within 3-10 years is not sustainable and creates obvious blight as a product of tree decline, death, and (maybe) replacement. For the past 18 years of my experience, Downtown Anchorage has always had dead and dying trees, empty tree grates, and now a large number of tree areas that are now concrete squares. Whether this is noticed or not, it contributes negatively to the downtown environment.

A beautiful streetscape without trees is much more intentional than a streetscape that has suffering trees.