DRAFT

LAKE ELMO BRANDING AND THEMING STUDY

APRIL 2013

THE CITY OF LAKE ELMO

DAMONFARBERASSOCIATES

LIST OF PARTICIPANTS

Lake Elmo City Council

Lake Elmo Planning Commission

I-94 Corridor Work Group

Village Work Group

Residents & Business Owners of Lake Elmo

Damon Farber Associates

On behalf of Damon Farber Associates, I would like to thank you for this opportunity to develop the Lake Elmo Branding and Theming Study. We hope this document will be a valuable asset to your community in the future as you continue to establish a kit of parts that create a strong visual identity for the gateways, streets, sidewalks, and open spaces in Lake Elmo.

Sincerely,

Tom Whitlock, PLA, ASLA

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Process 1

PROCESS

The planning process for the Lake Elmo Branding and Theming Study included participation by members of the Lake Elmo City Council, Planning Commisssion, I-94 Work Group, Village Work Group, concerned residents and business owners and City Staff. The study was organized around a series of visioning sessions to uncover the images, views, architecture and landscapes that best define Lake Elmo.

The Project Team members met on a monthly basis between October 2012 and April 2013 offering input and guidance to the consultant team. The Branding and Theming Study seeks to establish a 'Kit of Parts' to be used on future public realm initiatives based upon the wishes and desires of the community.

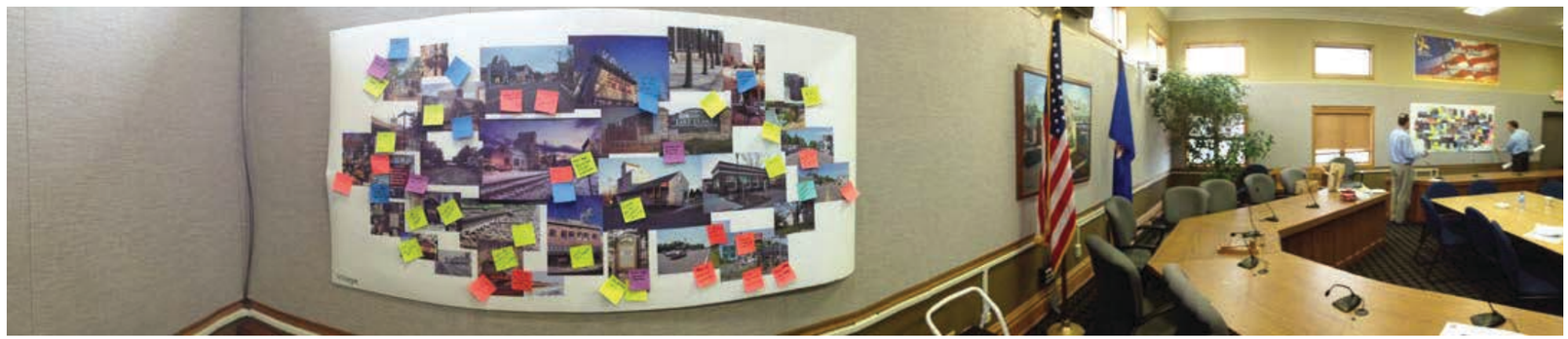
At times, various community members expressed concerns over specific elements of the 'Kit of Parts', but the vision seeks to define a broad set of ideas for the future of public and private investment in the streets, parks and sidewalks the people travel every day to reinforce the already strong character of Lake Elmo. In fact, as people shared their views about the Lake Elmo aesthetic, it became evident that they all share a great desire to enhance the identity that is highly treasured and critical to the future health of the community.

It is the goal of this study to reflect the common vision shared by the community and provide positive direction for the future of the Public Realm. While community members may continue the debate after completion of the study, it should be done in the context of a commonly held vision. In this way, a mission statement should provide the way for shared values and a basis for cooperation as the community addresses future growth and public realm dilemmas within the city.

LAKE ELMO VISIONING - DECEMBER 2012

prairie

farm



village

Mission Statement 2

MISSION STATEMENT

The Lake Elmo Branding and Theming Study seeks to establish a kit of parts that will create a strong visual identity for the gateways, streets, sidewalks and open spaces of Lake Elmo that reinforces the unique agricultural and open space heritage of the community.

DESIGN PRINCIPLES

- Elements and furnishings will reflect a connection to the land through material and form
- Elements and furnishings will be detailed and placed with a simplicity of purpose and function that pays tribute to the Lake Elmo agrarian heritage.
- Landscapes will reflect the native prairie, lakes and big woods that help define Lake Elmo as a special community within a metropolitan area.
- Elements and furnishings will be comfortable and functional.
- The Kit of Parts must have an authenticity that creates a memorable and lasting impression for visitors, residents and business owners.

existing view

STREETSCAPE GOALS

To create a high quality and attractive environment throughout Downtown Lake Elmo that evokes a sense of pride, care and safety for people who live, work and visit in Lake Elmo. To keep Downtown Lake Elmo business environment competitive by implementing major pedestrian improvements that:

- encourage and expand pedestrian use of Downtown
- reinforce current private and public sector investments
- encourage new investment

view with streetscape amenities - seating, pedestrian lighting, signage, and vegetation

STREETSCAPE DESIGN

The Design Guidelines were created to assist Lake Elmo City Staff, community business, and developers in creating memorable public spaces within Lake Elmo. The guidelines for Lake Elmo will standardize a design approach that will create public space that represents the Lake Elmo brand and is easy to maintain.

This booklet provides the necessary tools to plan open space enhancements and provides helpful information to be used in the streetscapes, the kit of parts that make up a streetscape, the special situations that can be considered, and streetscape design examples. These concepts and standards are guidelines for laying out Lake Elmo's streetscape improvements and the successful implemented streetscape project.

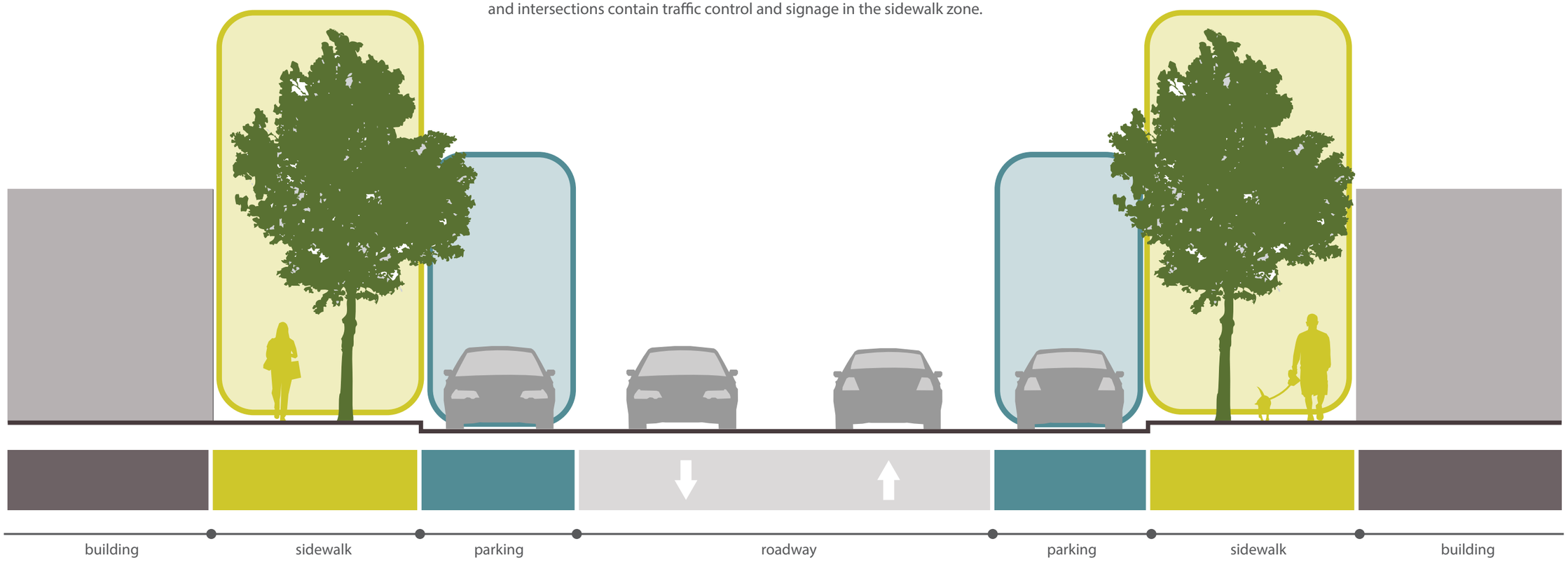
STREETSCAPE ZONES

The streetscape in Lake Elmo may include many zones or areas such as vehicle travel and parking lanes, bicycle lanes, sidewalks, street trees, street furniture, utility lines, planting and signage. Streetscapes can include many elements, so it is helpful to divide them into three zones. The **Sidewalk** is the front of every business and residence. In residential areas of Lake Elmo, it is the place where you meet your neighbors, interact or enjoy a stroll. In commercial districts, this zone is a transition zone where pedestrians exit from cars to enter businesses along the street. Larger sidewalks can also accommodate outdoor cafes, sidewalk sales, and other commercial uses. **Parking** allows convenience for shoppers who travel by car to visit local businesses in the commercial area. The **Roadway** is for vehicular use and accommodates the movement of vehicles and bicycles through the streetscape. While each zone is different, the zones can interact with each other. A pedestrian crossing the street interacts with all zones. Street lighting located in a sidewalk overlaps the parking and roadway zones and intersections contain traffic control and signage in the sidewalk zone.

There are many aspects of the public space to consider when designing a streetscape in Lake Elmo including:

- Sidewalk widths
- Commercial and residential uses
- Pedestrian safety and comfort
- Pedestrian volume and movement
- Parking requirements and restrictions
- Vehicular traffic
- Four-season enhancement
- Accessibility and flexibility
- Attractiveness

These characteristics affect how a streetscape is designed, constructed, and its ability to attract pedestrians, residents, and business patrons.



Placement & Pattern in the Streetscape 3

STREETSCAPE COMPONENTS

Streetscapes in Lake Elmo can be divided into zones based on use. Each zone contains numerous components that will overlap and serve multiple streetscape zones. The placement of streetscape components should be carefully considered and integrated to create a streetscape identity for Lake Elmo. When these components are used properly, identity can be created which reflects a unique character for the community that can expand beyond the streetscape and promoting economic development.

PRIMARY STREETSCAPE COMPONENTS

Establishing the character in the streetscape is the responsibility of two primary streetscape components:

- **Lighting** - this establishes the light levels on the streetscape and visual rhythm along the streetscape. The vertical presence of light poles and lights create a strong visual presences in the street.
- **Trees** - this establishes a daytime rhythm and character with color and shade. The vertical nature of these components is noticed by pedestrians and motorists alike.

There are other components that add detail and texture to a streetscape. These components include:

- Street furniture, including benches, trash receptacles and bicycle racks
- Vertical elements including banners, poles, signage and kiosks
- Public art elements
- Sidewalk and roadway surfaces
- Traffic control devices

PLACEMENT WITHIN THE STREETSCAPE

When various streetscape components are used along a typical block, the streetscape creates a particular rhythm depending on the use, placement, and emphasis of different components. For any given typical block in Lake Elmo, there are a variety of potential options for layout. This layout of components is loosely arranged along an artificial line that generally runs parallel to the street curbing. It is best when the layout of the street lighting, trees and similar vertical elements align with this imaginary line and other various streetscape components are organized around them. Various conditions in Lake Elmo, including building and street alignments can create obstacles along this line and results in the need to vary placement of components in the streetscape. What is most important is to create a rhythm and a purpose to the placement of these components.

LIGHTING

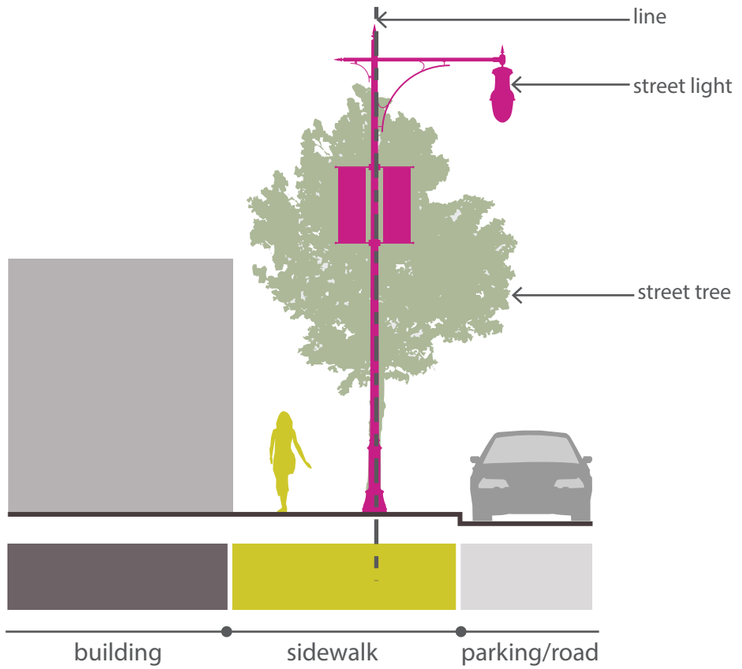
As one of the primary streetscape components, lights set the character of the nighttime look of the streetscape. The spacing between light poles should be a function of lighting levels and rhythm with other objects in the streetscape such as planters, trees, and signage.

Pedestrian lights and street lights will have different spacings due to the area covered by the light source. The number of footcandles needed to light an area can be adjusted to accommodate residential areas, and storefront lighting in commercial districts.

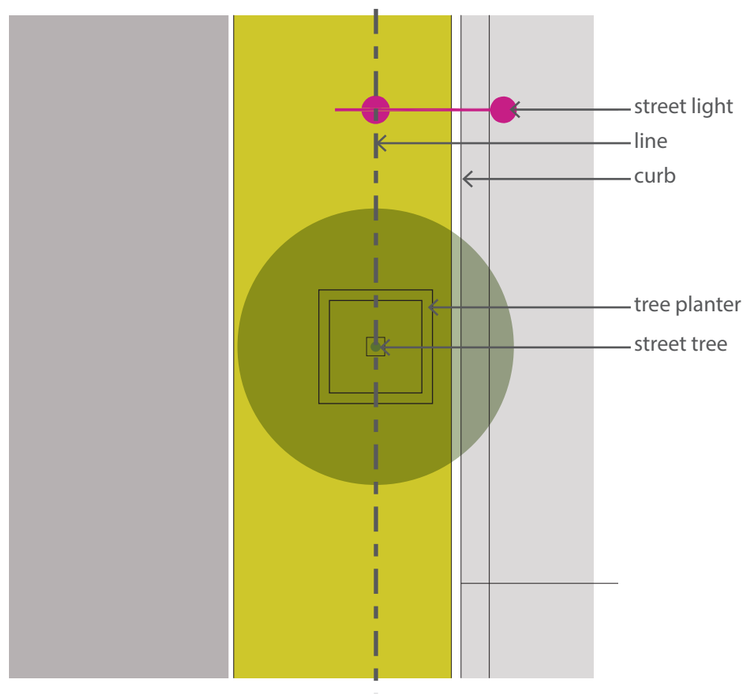
TREES

When space permits, trees can be planted in streetscapes. Layout of the trees along the line helps to reinforce the rhythm of the streetscape. Trees should be used in sufficient numbers to create a strong visual statement. The canopy of tree will create a strong canopy effect in the streetscape. Larger trees allow for visual access to businesses and signage that front along the streetscape. Large trees can be pruned to maintain visibility at lower levels. Trees can also be used to carry twinkle lights for seasonal and holiday night-time effect.

Elevation



Plan



CREATING A PATTERN IN THE STREETSCAPE

STREETSCAPE

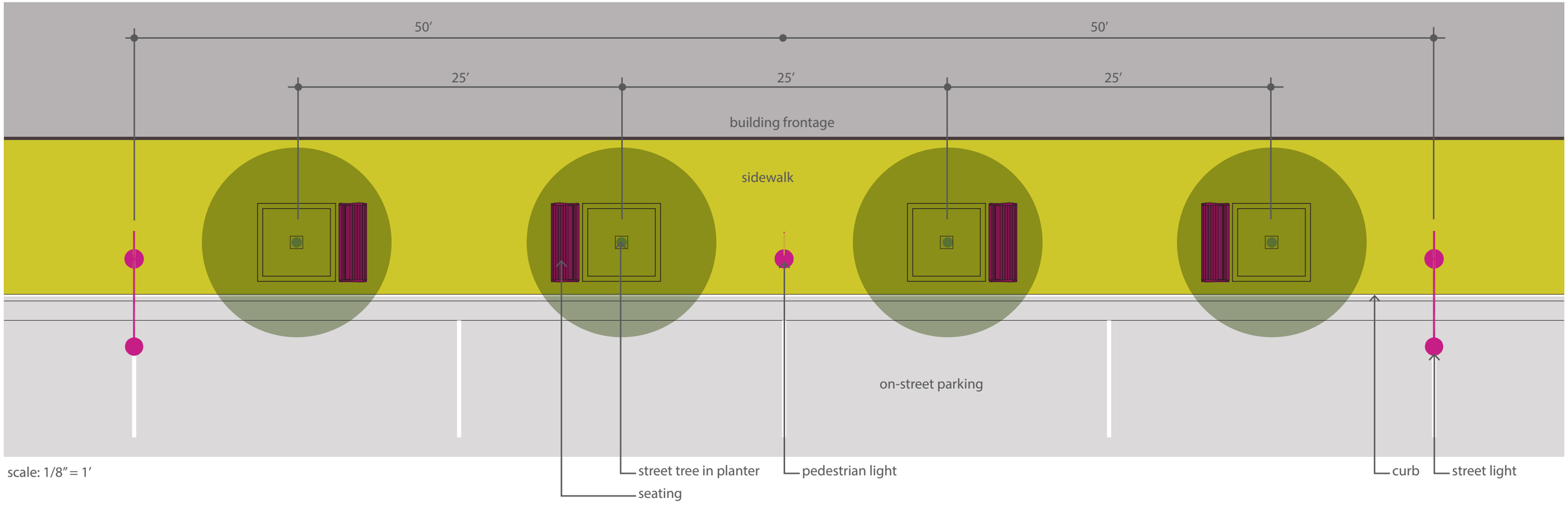
The combination of components that can be placed in the streetscape design creates the environment. A good streetscape design achieves a balance between all components, with the placement of each component being adjusted in relationship to the others until a functional, attractive design is achieved.

BREAKS IN THE STREETSCAPE

Once a component line is established, it must be adjusted to reflect the existing conditions in Lake Elmo for each block in the streetscape. Breaks in the line can occur for the following reasons:

- Driveways
- Existing utilities
- Existing trees
- Intersections
- Overhanging signs and canopies
- Building entrances
- Public spaces and existing landscape

These existing conditions disrupt the line and need to be accommodated by either shifting individual components along the street, or eliminating them all together.



MAINTENANCE & COMMUNITY INVOLVEMENT

STREETSCAPE INVESTMENTS

The success or failure of any public room improvement depends on continued and regular maintenance. Maintenance may come from the community of Lake Elmo, through maintenance agreements, or through budgets allocated by the City of Lake Elmo to conduct maintenance.

The investment in Lake Elmo's public realm should not be a short-term project, but one that will have a lasting positive impact. Unfortunately, the natural elements and winter conditions in which we live take a toll on streetscape improvements. Materials, furnishings, and plantings used in the streetscape should be selected for durability as well as ease of maintenance, servicing, and replacement. Eventually all streetscape elements will need maintenance including repair and replacement. This is most common of landscape plantings which require regular watering and active maintenance to appear thriving and attractive.

COMMUNITY OWNERSHIP & MAINTENANCE

The success or failure of any public realm depends on regular maintenance. This includes:

- Cleaning and repair of surfaces
- Painting, refinishing, refurbishment and replacement of streetscape furniture
- Regular maintenance of landscape such as pruning, removing and replacing plants as needed
- Soil enrichment program.
- Care and repair of irrigation system, if required
- Repairs to pavements to eliminate tripping hazards.

Community "ownership" and maintenance of the streetscape (either through voluntary work such as weeding, watering, and general repair, or through monetary assessments for contracted work) is essential to the long-term viability of the public realm. While the City of Lake Elmo plays a role in streetscape maintenance and upkeep, a public/private partnership is critical to a project's success.

Streetscape Requirements 4

STREETSCAPE REQUIREMENTS

The repetition of standard components in the streetscape defines its overall feel and character; however, successfully accommodating existing and special conditions is equally important. Dealing with these conditions provides a challenge but also increase the safety, accessibility, and overall functionality within the public realm.

SIDEWALK TYPES

Sidewalk width establishes the character since it is the location in which most of the components are set. Narrow spaces have bigger limitations on the scale and size of components that can be placed within the streetscape, while wider sidewalks offer more options.

The following categories have been created to illustrate the extent of streetscape improvements in Lake Elmo that can take place within a given sidewalk width:

- Less than 9' wide
- 9'-12' wide
- Greater than 12' wide

SIDEWALKS LESS THAN 9 FEET WIDE

Sidewalks less than 9 feet wide are the most challenging due to the limited space available for pedestrians and the installation of streetscape components. The edges created at the buildings and curbs can create tight pedestrian areas of 5 feet or narrower. There is very little space for making improvements. When laying out components in sidewalks this narrow, it is important to maintain a minimum sidewalk width of 5 feet. A minimum of 3 feet clear of unobstructed sidewalk is required per the Americans with Disabilities Act Accessibility Guidelines. Streetscapes within a narrow sidewalk can include:

- Enhanced sidewalk pavement treatments
- Vertical elements such as banners and light poles
- Hanging baskets on light poles
- Private planter boxes along buildings or hanging from adjacent buildings
- At intersections, "bump-outs" and planters
- Decorative or wayfinding street signs and kiosks

Some issues facing streetscape components in narrow sidewalks are:

- the need to maintain adequate doorsweeps (space next to curb to allow car door swing); and
- placement of traffic signals and large planters to maintain a clear line of sight at corners with bump-outs.

Curb bump-outs can limit the effect of a narrow sidewalk by offering extra space for benches, trees or planters. Curb bump-outs are typically not placed at busy signalized intersections because this eliminates the right turn on red for automobiles.

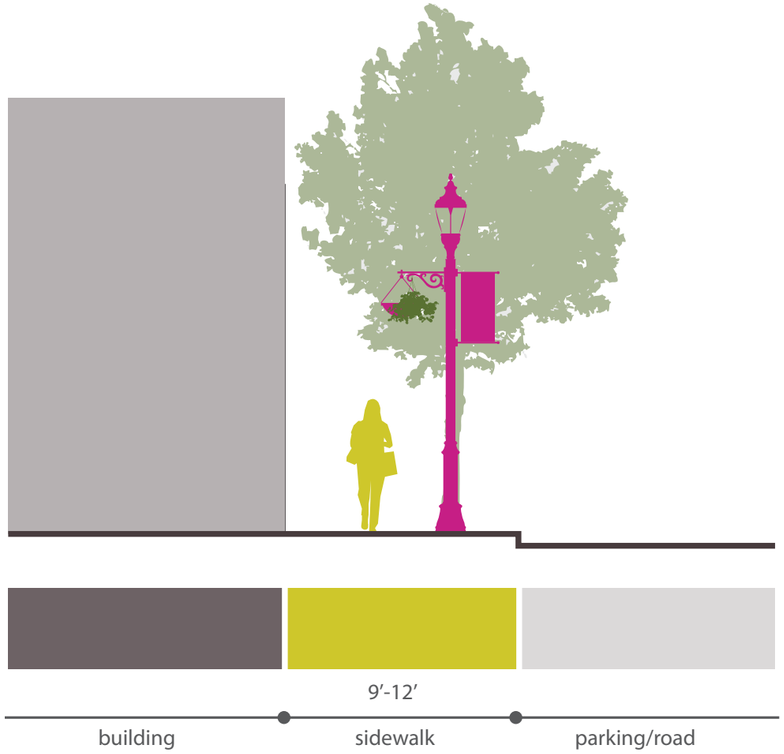
The maintenance of hanging baskets and planter pots can be costly and will require a significant commitment by the Lake Elmo businesses and residents. A community commitment to maintenance is critical if such improvements are to be included in the public realm.

SIDEWALKS 9 TO 12 FEET WIDE

Where land adjacent to the street includes parking lots or other open spaces, thought should be given to share the land on the private side of the property line with the street. Where possible, shade trees could be incorporated into those spaces so narrow streetscapes can benefit from the shade created by the off-streetscape plantings.

Sidewalks that are 9' - 12' wide offer flexibility. This width allows for an ADA accessible route as well as a tree to be planted in tree pits that are either open, curbed, or covered with tree grates. Heavy traffic areas should provide a well defined walkable surface.

Care should be taken so that plantings do not obstruct a 5' - 7' clear walking path for pedestrians, wheelchairs and strollers. For 8'-10' wide sidewalks, longer, rectangular tree pits are recommended. A tree pit of 3' x 6' aligned parallel to the curb can leave a 5' - 7' clear zone for pedestrian flow. For sidewalks in the 10'-12' wide range, wider (4'x 6' or 5'x 5') tree pits are recommended. Sidewalks of this size can accommodate short benches (depending on the orientation), small kiosks, and small community signage. Placement should be carefully considered to not interfere with pedestrian movements.



SIDEWALKS LARGER THAN 12 FEET

This sidewalk width offers the most flexibility. Care must be taken to preserve pedestrian flow and accommodate various levels of service. Larger greenspace areas are possible because of the available width. Planters should be as long and continuous as possible while still providing sufficient business and pedestrian access from the parking areas. These planters can be raised, curbed planters which offer a better way to protect landscape plantings from salt and damage due to pedestrian traffic.

Pedestrians and delivery service in Lake Elmo should have access from parking spaces and loading zones. Utilities and other components in the streetscape will also determine the location and frequency of breaks between planters. It is also important to maintain clear sight lines when installing planters, especially at intersections. The level of maintenance the business and community groups are willing to perform should be considered when determining the quantity and size of the planters and the landscape treatments to be installed in each planter.

In addition to more green space, wide sidewalks can usually accommodate more street furniture and amenities, including benches, bicycle racks, vertical elements and public art. The City of Lake Elmo may also encourage uses such as outdoor cafes and street vendors.

PARKING

One of the key objectives of the Lake Elmo public realm is to promote neighborhood commercial, economic, and social development. To successfully promote this in Lake Elmo, parking is an essential component. Most of Lake Elmo's streets have parking on at least one side of the street, although there are several cases where on-street parking is partially or completely restricted. These include:

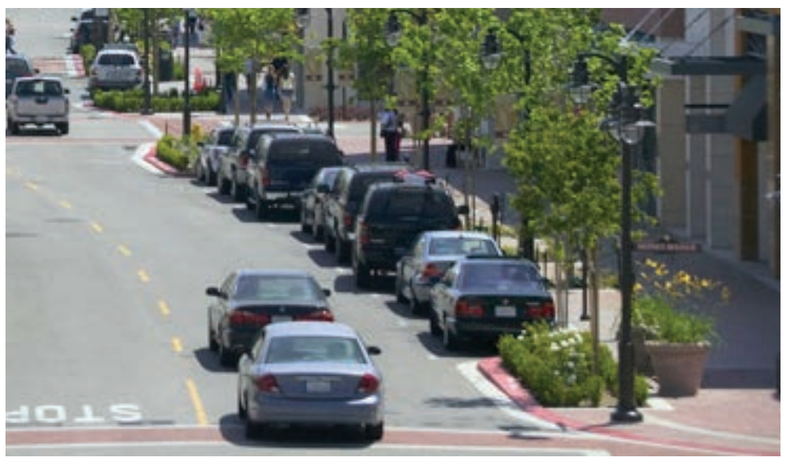
- High traffic streets
- Snow routes, on snow days
- Fire hydrants
- Loading zones
- At intersections in Lake Elmo

Commercial areas typically have parallel parking. A limited amount of angled parking occurs in the downtown, and may be appropriate on side streets adjacent to these commercial areas. Angled stalls present a significant safety challenge by requiring the driver to back out into oncoming traffic. Larger vehicles can obstruct the view of oncoming vehicles, making a backing maneuver even more difficult. Large vehicles may also project into the adjacent travel lane, creating a traffic hazard.

In many areas of Lake Elmo, parallel parking spaces are not striped into separate stalls but combined into a parallel parking zone and drivers are free to use the parallel parking lane as needed. Because the length of spaces is not delineated, car spaces will vary. This can create challenges for streetscape design given the interrelationship between parking and sidewalk components like trees and lights.

Dimensions may vary, but only slightly: an 8' wide by 22' long parking space provides good room for maneuvering. Parking stalls that are at the ends of the block can be down-sized to 8' wide by 17'-20' long. Parking stalls at the end of the block are also useful for rear or side-lift van accessible parking, where additional space is often beneficial.

Parking stalls can affect the overall streetscape layout due to the influence of passenger doors opening into the sidewalk and roadway areas. Passenger doors of parked vehicles open outward over the curb and into the adjacent sidewalk. Door sweeps (minimum 24") should be accommodated in the placement and arrangement of streetscape components in the pedestrian area. Placing components in this area can restrict or limit the opening of passenger side doors, causing damage to both the doors and to the streetscape components and can restrict accessibility.



CORNER TREATMENTS

More streetscape components are concentrated at corners than anywhere else in the streetscape. Corner treatments are a design challenge or opportunity for streetscape elements to overlap:

- Light poles and control boxes
- Traffic signal poles, lights and control boxes
- Pedestrian signal poles (when required)
- Regulatory signage
- Wayfinding signage
- Curb ramps
- Trash receptacles and seating
- Planters and landscaping

In the middle of this pedestrians gather to make decisions on direction. Pedestrians waiting to cross in one direction must make way for pedestrians entering the corner from the other direction.

To highlight the importance of these areas, streetscape treatments may be upgraded at corners, including the use of special pavements, seating, lighting, and other street furniture components in Lake Elmo. These components need to be carefully integrated with the other elements–lighting, traffic control devices, and regulatory signage in order to not add to the visual and physical clutter.

Streetscape treatments can extend to building corners, window corners, other logical building breaks, or alleys. The goal is to end the streetscape in a way that blends within the context of the Lake Elmo neighborhood and its immediate surroundings.

CURB BUMP-OUTS

As a variation on standard corner treatments, bump-outs create additional pedestrian space in place of vehicular surfaces. Bump-outs can be used at intersections on side streets or at the middle of the block. A typical bump-out is 7' wide by 20'-30' long. A bump-out can provide the following advantages:

- It shortens the distance that a pedestrian must travel to cross a street. Pedestrians will feel safer in these expanded pedestrian zones.
- It increases the sight distance between motorist and pedestrians crossing the street.
- It creates additional pedestrian space that can be used for amenities, and landscape treatments.

In addition, bump-outs need to be carefully coordinated with the various City of Lake Elmo departments especially those departments responsible for maintenance and snow removal. A few slight design changes can make maintenance, such as street sweeping or snow-removal, easier and more effective.

Note: As with all streetscape plantings and larger streetscape components, a clear sightline from 2.5' to 6' should be maintained so pedestrians and storefront windows are visible from the street. Curb bump-outs are also generally not used at signalized intersections because they prevent right-on-red turns from the parking lane.

Bump-outs should have green spaces included where possible. These greenspaces should be enclosed with curbing that protects the plantings from pedestrian damage and increase snow removal awareness of the location of bump-outs. These raised planting curbs should be set back from the street curb to allow for snow storage.

CROSSWALKS

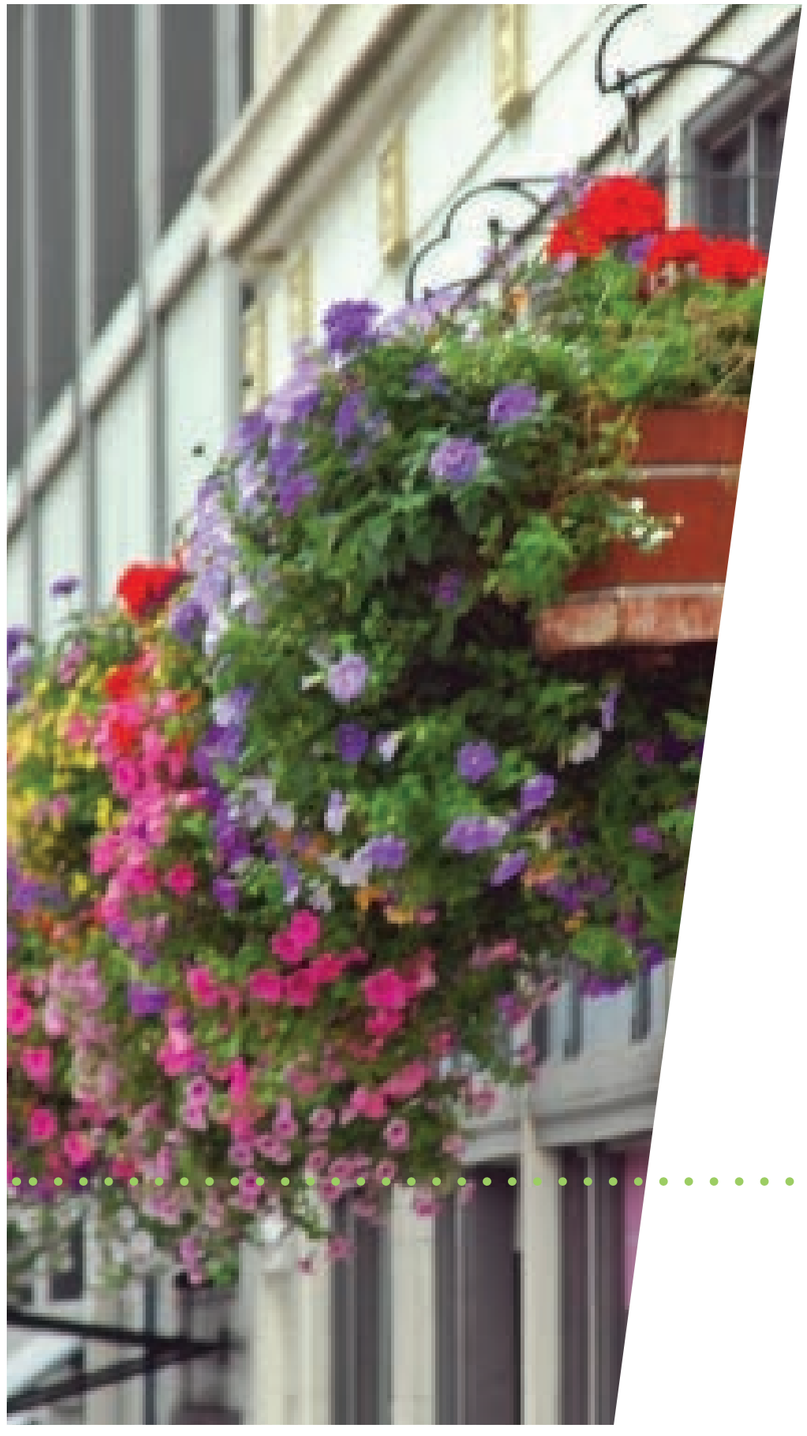
Crosswalks are where pedestrians are legally allowed to cross city streets. The Minnesota State Manual on Uniform Traffic Control Devices provides guidelines for marked crosswalks, as well as standards and guidelines for crossing improvements. This document should be used in combination with professional judgment and specific traffic engineering analysis on a case-by-case basis when designing crosswalks. Pedestrians have the right to cross the street in the safest way possible, and crosswalks should be designed accordingly (Source: "Guide for the Planning, Design, and Operation of Pedestrian Facilities, AASHTO Draft August 17, 2001).

At intersections in Lake Elmo, crosswalks should be defined as an extension of a designated walkway or pedestrian pathway across an intersection, whether marked or not. Marked crosswalks can consist of two white parallel lines perpendicular to the direction of traffic or with multiple lines parallel to traffic flow. Crosswalks vary in width and should align with the edge of the right-of-way (usually the property line) and a line extended from 2' back of the curb face.

Typically crosswalks are 6'-10' wide and should merge at the corners of the intersection, where there is a double or single curb cut that aligns with the crosswalk. In special situations where it is common to have crowds, the crosswalk sizes can be increased to accommodate large numbers of pedestrians. Crosswalks can become an important component in the Lake Elmo streetscape environment by physically and visually linking opposite sides of the street.

In some cases in Lake Elmo it may be acceptable to install a crosswalk at the middle of the block where this is a logical crossing point. Since vehicles may not expect a crossing in an area where they generally are not required to stop, these areas should be studied and well-marked with high visibility pavement markings. A series of ladder-style parallel bars running in the direction of traffic, are typically used in combination with traffic calming devices, such as warning signs, increased lighting and curb bump-outs.

Driveways into parking lots, garages, and other properties often create a challenge for the streetscape layout. Driveways and alley aprons need to be treated as a pedestrian surface; the pedestrian surface should appear to be unbroken (driveways are flared with no curb returns or grade separations) as the pedestrian travels through the streetscape and across the driveway. This includes continuation of the sidewalk pattern and treatments across the width of the driveway or alley. Driveways and alley aprons must be constructed according to City of Lake Elmo design standards and using heavy-duty pavement to withstand heavy wheel loads created by refuse trucks, fire trucks, and similar vehicles.



5 Streetscape Components

STREETSCAPE COMPONENTS

In order to develop a complete streetscape image in the public realm, standardization of street furniture is required. Special consideration must be given to the appropriateness of all street furniture. While most street furniture is optional, and considered an improvement, too many components or an incorrectly located component may be a detriment to the streetscape. The primary goal of street furniture is to add functional and aesthetic enhancement without creating visual clutter. Street furniture items identified for Lake Elmo include the following:

- Lighting
- Landscape
- Planters
- Benches
- Trash receptacles
- Bike Racks
- Bollards
- Signage

LIGHTING

The primary purpose of street lights are to provide nighttime visibility, whether it is for the pedestrian or the car. The need to light the streets for cars is for safety, however, lighting can be used to emphasize the pedestrian focus of the downtown especially in the low light winter months.

- Lighting should create an identity Lake Elmo development and/or special areas.
- Lighting should promote a unique character for the streets in the commercial district, through the design style of the light poles, bases, fixtures, and attachments.
- Street and/or pedestrian light poles should be aligned with and centered between street trees.
- The lights should be designed to incorporate elements to reduce glare and direct light down and away from adjoining private property.
- Lighting can greatly influence the perception of safety as well as the character and the use of a particular area. Safely lighting both the street and sidewalk are important goals.

The first objective in lighting downtown Lake Elmo is to evenly light travel lanes with the minimum lighting required by the by local ordinance. Pedestrian walks should then be provided with pools of light at a higher level of lighting than the road surface. Lighting from storefront displays can be used as a supplement to pedestrian-scale pole lighting to provide pedestrian lighting.

Streets should not be lit to the point that building interiors are negatively affected. Pole height, luminaire type, and luminaire power will all affect light levels in buildings. Lighting should provide a safe and secure environment for motorists, bicyclists, and pedestrians.

Lighting can serve many purposes beyond street poles:

- Architectural - The unique architectural details on the downtown buildings can be highlighted with up lighting.
- Retail Display - Storefronts and restaurants can bring attention to their retail displays through lighting.
- Landscaping can be enjoyed at night when it is well lit.
- Creating a 24 hour environment. If we want people to feel safe in the downtown at all times, proper light is necessary.

All three areas of the streetscape and public realm, roadway, sidewalk, and parking, must be properly lit. One of the goals is to move overhead wires in the downtown of Lake Elmo to underground service. This change will remove from the landscape the mass of overhead wires that often defines the City street.

When designing a streetscape lighting in Lake Elmo, photometric studies should be performed in order to determine the appropriate height, wattage, and spacing of each light within a streetscape project area.

Two distinct styles of streetlights will be used throughout downtown Lake Elmo: vehicular and pedestrian streetlights.

VEHICULAR LIGHTING

Vehicular light should be designed to provide illumination over large areas of the right-of-way as efficiently as possible. Vehicular lighting varies in height but is usually about 25-30' in height and has high wattage luminaires. Lights should have a full cut off or semi-cut off fixture. This means that they direct the light down onto the roadway and sidewalk, instead of up or out. This saves electricity and helps maintain "dark skies."

These types of lights also reduce glare and increase driver visibility. The light for roadways should distribute light in an oval pattern along the length of the street. This concentrates light on the right-of-way where it is needed, as opposed to the building facades, and allows for greater spacing of fixtures, thereby reducing costs.

The light that will be used in Lake Elmo is a historic style downlight fixture by Sternberg Lighting model 1914 LED Libertyville Series. The light fixture will be powder coated black. The pole will be a historic style by Sternberg Lighting model 7700 Birmingham Series. The pole is constructed of cast aluminum and powder coated black. Various decoration and options are available and can be selected prior to installation.

PEDESTRIAN LIGHTING

Almost as important as vehicular lighting is pedestrian lighting. While pole lights illuminate both the vehicular and sidewalk zones to required levels, they often don't provide the "face-to-face" lighting pedestrians prefer. Face-to-face lighting refers to an illumination level that enables a pedestrian to comfortably see the features of oncoming pedestrians and provides a sense of safety. The poles are approximately 16' in height. Since the pole is shorter and is not a cut-off or a semi-cut-off fixture, it can produce glare. For this reason a lower wattage lamp should be used.

The Single Acorn fixture is usually staggered in between the taller vehicular pole. Since it throws light up and out, it is not recommended where there are many second story residential units.

The light that will be used in Lake Elmo is a historic style caged acorn by Sternberg Lighting model A880SR LED Town Square Series. The light fixture will be powder coated black. The pole will be a historic style by Sternberg Lighting model 7700 Birmingham Series. The pole is constructed of cast aluminum and powder coated black. Various decoration and options are available and can be selected prior to installation.

LIGHTING ENHANCEMENTS

Light poles can also be used to provide other streetscape amenities, including:

- **Hanging Baskets.** The poles can be equipped with a special bracket that will support hanging baskets for additional landscape opportunities.
- **Banners and Permanent Community Identifiers.** Poles can accommodate banners or permanent Lake Elmo community identifiers.
- **Holiday Lighting.** Outlets for holiday lighting can be provided on the poles.

Due to concern about the effects holiday lights have on the trees if they remain year round, holiday lighting on trees is only allowed from November 15 to March 15. After March 15 the lights should be removed.

TREE & PLANT MATERIALS

Landscape adds four-season color, interest, and texture to the public realm. The goal is to develop the public landscape to provide a better quality of life for Lake Elmo and visitors. It is important to consider a variety of items to ensure a successful landscape.

The intent of the landscape should be a priority of the design process. What is this landscape intended to do? Whether the intent is to control traffic, screen or enhance views, provide a background for an adjacent use, or just to soften the existing streetscape, the intended use and its desired effect should be considered in the choice of what is eventually implemented.

Plant heights can vary and should be considered to ensure safety and security in the streetscape. Some hybrid varieties have been developed over the years to create a wide range of size, color, and texture choices for the streetscape designer.

COLOR IN THE LANDSCAPE

Color is probably the most striking design feature of the landscape. It can draw attention to a single plant or a mass of plants. It can create an atmosphere of warmth or a cooling effect.

Color should be used carefully in the layout of the landscape. Light and cool colors (blues and greens) represent a calm, thoughtful landscape. These colors also appear farther away, or recede from the viewer. Bright and warm colors (reds, yellows, oranges) excite people and may guide the viewer through a landscape. These colors appear nearer to, or to advance toward, the viewer.

MAINTENANCE OF PLANT MATERIALS

Maintenance should also be considered in the choice of plant materials. A maintenance free landscape does not exist; all landscapes, even those labeled as low maintenance require a degree of attention to tend to the needs of live plant materials including:

- spring cleanup of prior season's growth
- removal of refuse blown into planting beds
- replacement of damaged or dead plant materials
- periodic tending to plant installations including weeding, pruning and similar activities

Streetscapes are some of the harshest environments in which to expect plant materials to survive and given the need to keep streets clear of snow and ice in winter, plant material with a high salt tolerance should be used. Lake Elmo should maintain a list of plant materials that have been successfully used in various projects. Adding to this list can be done yearly and by contact with local contractors and nurseries.

The availability of water and the presence of underdrainage can help in ensuring the long-term survivability of plantings. Water - manually applied or via an irrigation system – is often used to help flush out any salts that may accumulate over the winter snow events in early spring and supplement during drought events in the summer. The drainage systems help carry this water away to keep the salts from accumulating in the lower soil layers.

MAINTENANCE OF PLANT MATERIALS CONT.

Although it is still recommended that salt tolerant plants be used in this environment, other design features can be incorporated into the public realm to help ensure the survivability of plants in the streetscape. One method is to use raised curbs around trees, raised planter beds, and separations between planter beds and parked cars (approximately two feet), can be used to increase the distance of the plants from the road.

Providing the proper planting soils in planted areas is very important. Standard topsoil should not be used alone; it must be augmented with materials to increase the drainage characteristics of the soils. One recommended soil mix may include the following:

- 50% topsoil (by volume)
- 30-40% sand (by volume)
- 10-20% organic mulch (by volume)

Mulch should also be used after plant installations; hardwood bark mulch for trees and shrubs and a finer material for perennials helps maintain soil moisture. In combination with proper planting soils, proper drainage can help ensure good plant growth. In areas of the city where soils drain freely, providing extra drainage systems is not necessary. Where subsoils do not drain freely and water will accumulate in planters or tree pits, removing the water with underdrains is critical to plant survival. Underdrains can be constructed of either perforated polyethylene or PVC pipe and connected to the storm sewer system. One of the most important aspects of landscape maintenance is the availability of water to supplement natural precipitation.

Irrigation can be either by automatic irrigation or hand watering. Automatic irrigation consists of underground piping connected to pop-up sprinklers or drip lines located in the planters. These systems are maintained by Lake Elmo and perform automatically, usually at night. The hand watering method uses quick-couplers with hose bibs. A standard garden hose can be attached to these for manual watering of the planters.

The hose bib is a separate piece that is easily installed and removed to prevent undesired use. Although the City of Lake Elmo maintains the piping, the hose bib may be kept with the Business District or members of the community who may help with responsibility for maintenance.

TREE SETBACKS AT INTERSECTIONS

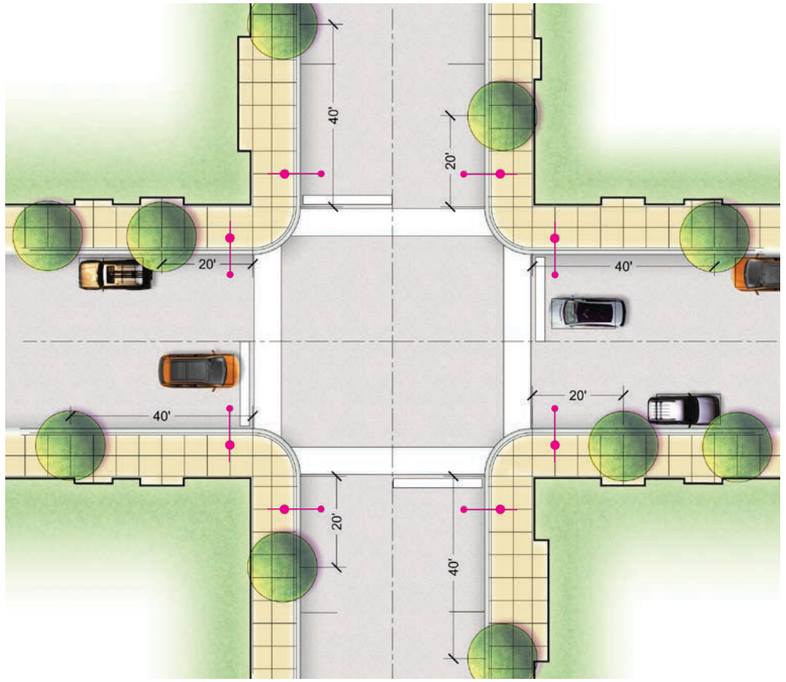
Given the need for illumination of the roadways and sidewalks at night, the lighting elements generally take precedence over trees in establishing the initial framework for the public realm.

At intersections, there are a couple of clearance requirements depending on the traffic direction:

- Near-side clearance - 40 feet from property line
- Far-side clearance - 20 feet from property line.

This helps to ensure that trees are not planted where views to traffic signs and signals are blocked. Intersections are where pedestrian conflicts with traffic most often occur. Pedestrians use this space to make decisions on crossing the street, changing direction of travel, avoiding traffic and other related activities.

At light pole locations, a 20-foot tree clearance from street light poles should be respected. This is to help ensure that trees do not interfere with light distribution patterns.



PLANTERS

Streetscape planters come in a wide range of styles and sizes. When placing planters, it is important to consider pedestrian movement. In Lake Elmo, areas with high pedestrian traffic should have a more accessible passage space greater than the 32" minimum required by law. In addition to freestanding planters, light standards and other street amenities must comply with this movement requirement.

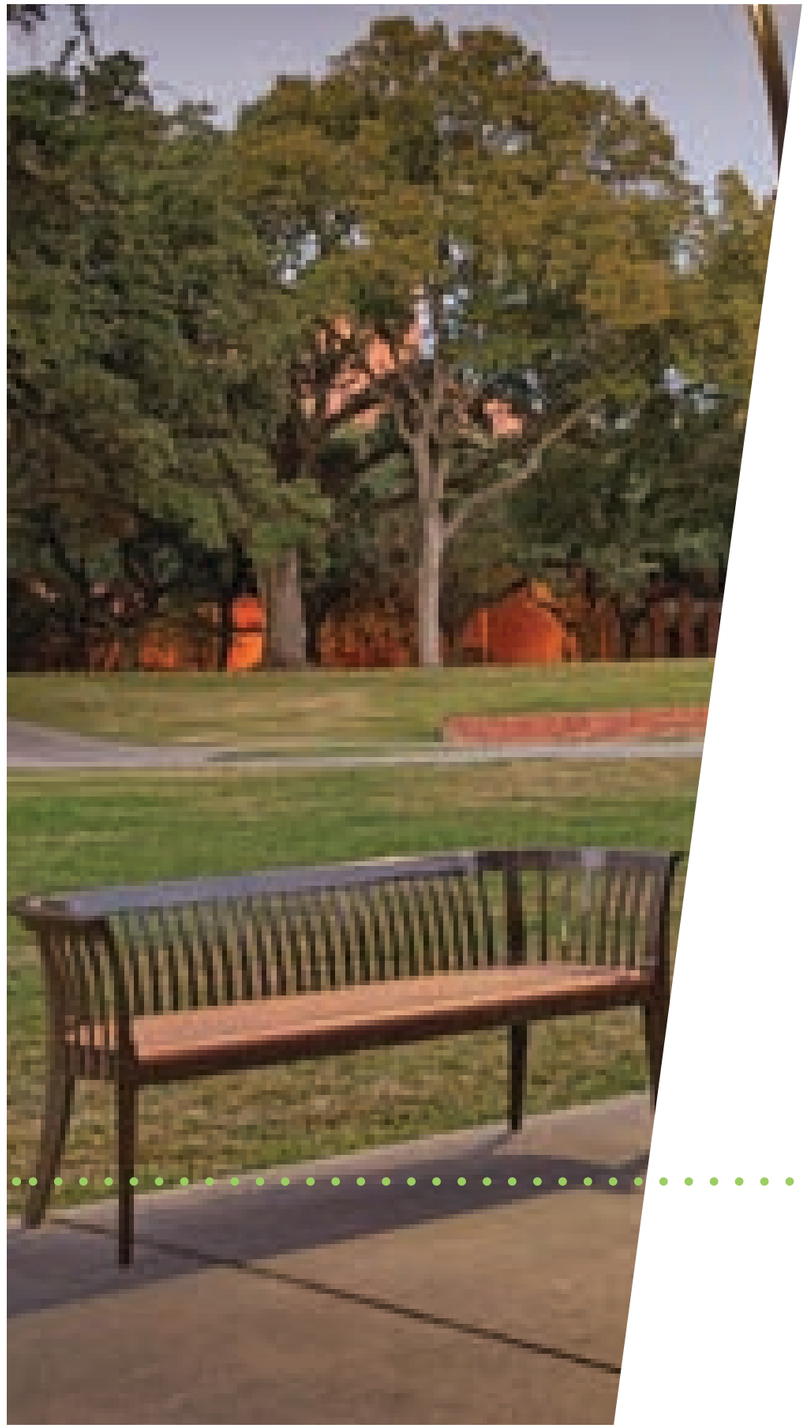
Free-standing planters come in a variety of sizes and shapes and can be wood, precast concrete or a synthetic material, such as glass fiber reinforced concrete (GFRC). The planters for Lake Elmo are placed above ground and rest on the sidewalk, adding color and texture in tight areas or where underground conditions prevent in-ground planters from being installed.

Caution shall be taken to maintain the accessible route when placing free-standing planters. Care should be taken during installation to keep planters level. Planters may be decorated for interest in all seasons, such as pine boughs for winter and forced bulbs for spring.

HANGING BASKETS

Hanging baskets add interest and color to a streetscape and are a way to introduce plant materials when there is limited space for trees or planters. Hanging baskets are desirable in retail districts, main streets, and neighborhood shopping districts with an intimate scale.

Hanging baskets can be purchased and installed by the City of Lake Elmo, with sponsoring organizations conducting ongoing maintenance responsibility. Both free-standing planters and hanging baskets require constant maintenance and frequent watering. The ability of the community stakeholders or Business District to maintain these elements is a critical factor in the decision to include them in the streetscape design.



Street Furniture 6

STREET FURNITURE

Street furniture includes those components that pedestrians, motorists and bicyclists need in the streetscape including benches, trash receptacles, bicycle racks and other accessory components. Long term durability and ease of maintenance is of primary concern. Fitting the overall theme and character identified for Lake Elmo and keeping in mind the following streetscape components have been identified.

BENCHES - Melville by Landscape Forms

The public realm is like an "outdoor room" in many ways. Benches and other street furniture were carefully selected for comfort of the user and still stand up to extreme weather and everyday use.

A number of considerations were used in the selection of benches:

- Style: timeless style that can span many periods and architectural styles
- Materials: cast aluminum with a durable powdercoated finish and a wood seat
- Backs and armrests for comfort; intermediate armrests on long benches
- Construction to provide for water drainage and to discourage skateboard grinding

For new Lake Elmo streetscape projects a standard bench with several variations for use in the public realm is the Landscape Forms Melville Bench in cast aluminum, with wood seat. The bench is timeless and works well in nearly every situation. These benches were selected for their exceptional strength and durability under the most extreme environmental conditions and their vandal-proof protection against destruction and defacing.

TRASH RECEPTACLES - Poe by Landscape Forms

Like benches, trash receptacles need to be considered carefully for two different users: pedestrians and maintenance personnel. The standard trash receptacle has the following characteristics:

- heavy duty cast aluminum and iron
- high quality powder coat finish
- 34-gallon capacity
- surface mount
- side opening or top opening

This trash receptacle has a 34-gallon capacity with an interior pull out liner. It is fabricated from iron and aluminum with a powdercoated finish.

BICYCLE RACKS- Emerson by Landscape Forms

Encouraging bicycle traffic begins with providing safe corridors to bicycle riders and proper places where bicycles can be secured against theft. This bicycle rack is surface mounted to the sidewalk pavement. These racks should be ganged together in groups of three or more, parallel to each other about 24-30 inches apart. The bicycle racks are fabricated from cast aluminum finished in a high quality powdercoat and are approximately 20 inches across and 30 inches high after mounting.

BOLLARDS - Historic style cast or aluminum

Bollards are simple streetscape elements that have two primary functions:

- to separate areas without creating full barriers like fencing
- to protect high-value elements from deliberate or accidental vehicle collision damage

Heavier duty cast decorative bollard is desirable in the streetscape and many light pole manufacturers offer bollards as companion pieces to the light pole, or standard components in a complementary "kit of parts."

In the Lake Elmo Downtown, a cast bollard element should be employed in the streetscape. This bollard design is reserved for this particular district.

FENCES

There are three types of fence options identified for use in the Lake Elmo Streetscape:

- white picket style 4' ornamental fence
- white post and rail style horse fence
- ornamental 4' metal fence

The white picket fence will be used in the residential properties located in the downtown area and accented with seasonal planting. The fence should be constructed of wood and painted white, if acceptable to the planning committee a pvc style fence may be used as well to limit long tern maintenance.

Then ornamental metal fence is an option for the downtown business district to keep in character with the historic style of the site furnishings and light poles. This too can be accented with seasonal planting.

The white post and rail fence would be used in gateway applications and along major commercial and residential districts.

SIGNAGE

Signage within the public realm brings a unique identity to a neighborhood or commercial district. This character can be drawn from many different sources: cultural ethnicity, architectural styles or elements, special cultural or historic institutions, or the general historical background of a community.

Signage can be used repeatedly in a variety of forms throughout Lake Elmo, such as:

- Large, single-use elements placed at entry areas, such as gateways
- Two flanking elements, columns or markers placed on either side of the street, typically located on the sidewalk
- Smaller, repetitive elements such as fabric banners or permanent pole identifiers
- Directional or informational signage
- Custom streetscape components or modifications to standard streetscape components to include identity elements, such as medallions placed on furnishings or unique finishes and colors.

The support poles for all Lake Elmo signage will reflect the character represented in the historic lighting identified earlier in.

"Gateways" and Area Markers: An area marker or gateway is generally a large sculptural sign placed at a community entry point or at either end of a streetscape or along a streetscape. These elements serve the purpose of marking the entrance ways and throughways into the commercial/retail district

Kiosks: The purpose of a kiosk is to present information about both the commercial/ retail area, as well as map points of interest and highlight local events taking place within the area. The kiosk may present permanent information or include a case that allows change-out of information.

Banners and Pole Identifiers: Banners can be rectangular metal, vinyl, or treated fabric signs that are mounted in flag fashion on one or two sides of the light standards along a streetscape. Although banners can be changed seasonally or for special events, both pole identifiers and banners can represent the unique character of a community group, its individual identities, or commercial members.

Informational or Directional Signage: Signs are made of metal, that is mounted on one or two sides of the light standards along a streetscape or on specific sign poles. Informational and directional signage can represent the unique character of a community through the use of color, specific font or an image.

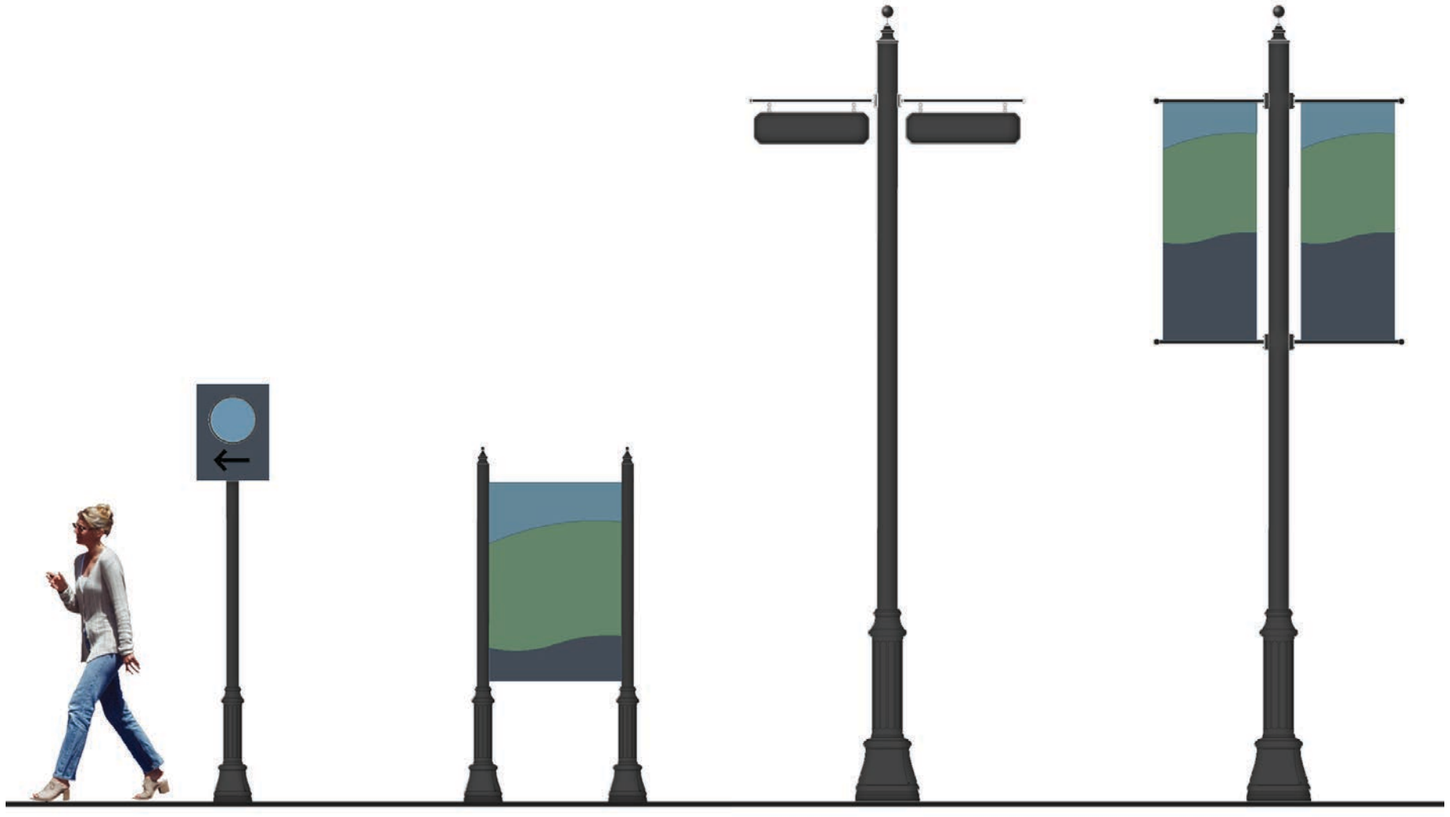
Public Art: Public art is another way that Lake Elmo can distinguish itself in the public realm. Care should be taken when designing a streetscape, to create opportunities for both temporary and permanent public art. Public art may complement the history or culture of the area, or create a new experience or interest.

Public art can be designed as part of but not limited to:

- Benches and other forms of seating
- Walls or borders (murals, ghost signs, lettering, insets)
- "Kit of parts" streetscape components such as tree grates
- Planters and other methods of "greening"
- Landscape enhancements, both natural and hardscape
- Lighting

SIGNAGE - KIT OF PARTS

The signage kit of parts reflects the theme and character identified for the Lake Elmo community which reflects a rural/historic context. The elements of sky, land, and water bring color and the essence of the rural context to the signage. The historic posts symbolize the ideas of community and settlement in the Lake Elmo area.

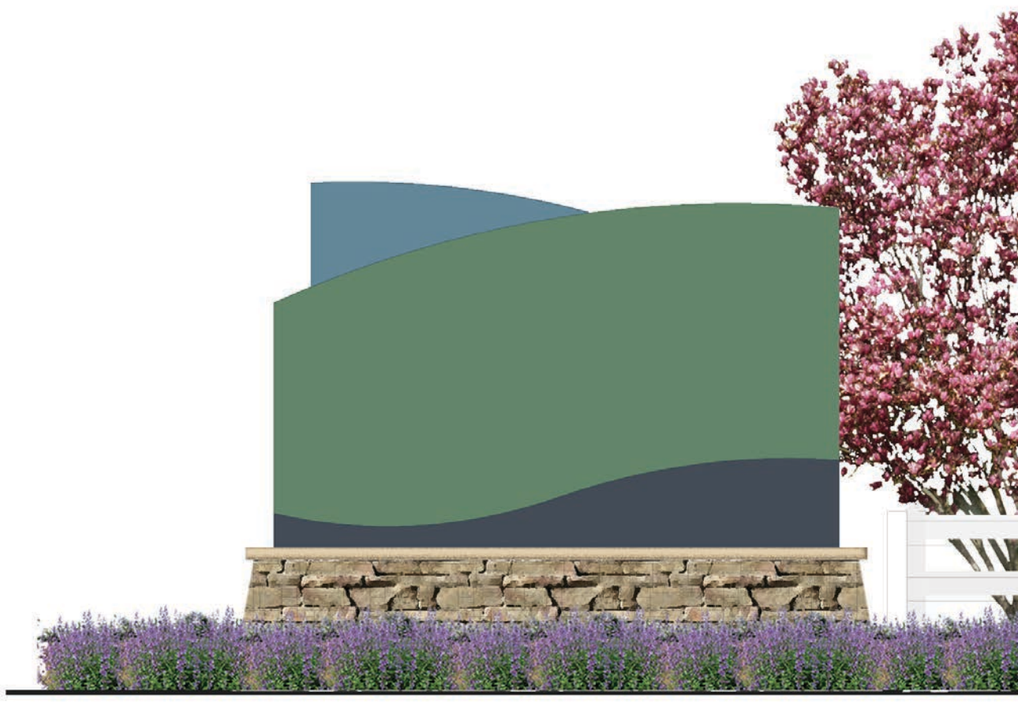


PARKING SIGN
10' HEIGHT

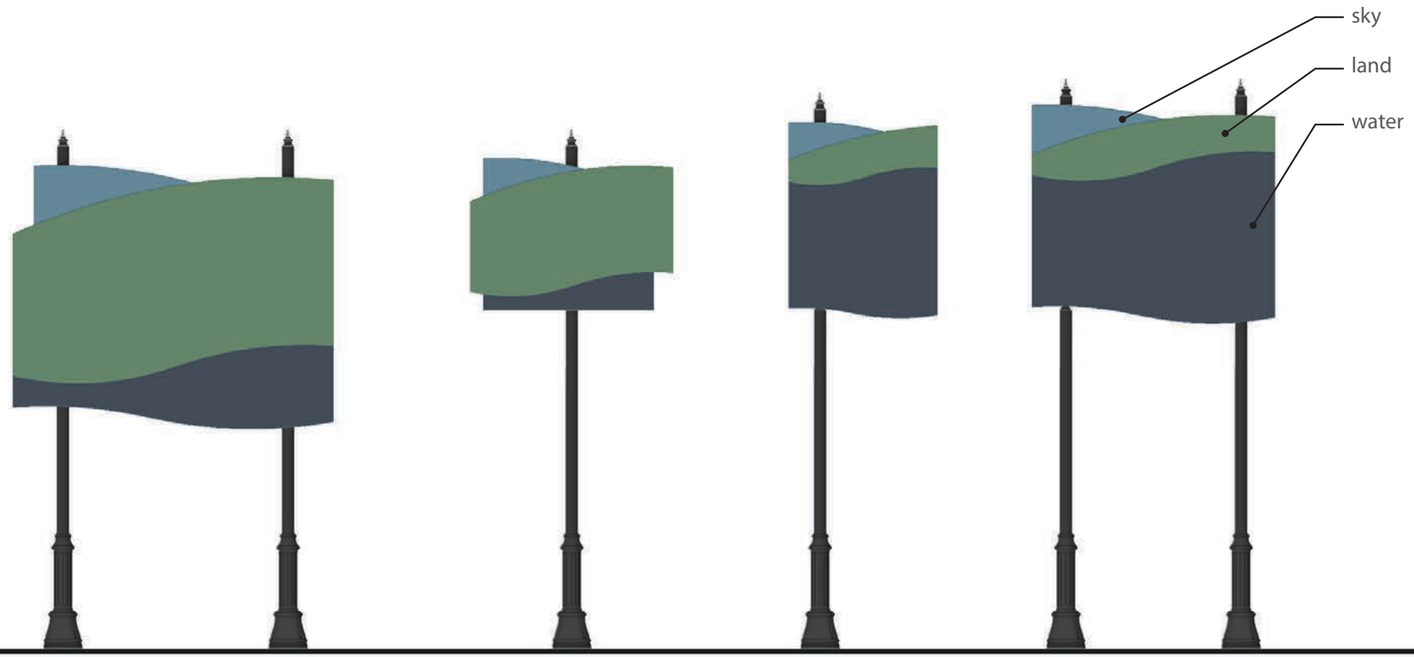
KIOSK
8' HEIGHT

STREET POLE
16' HEIGHT

BANNER POLE
16' HEIGHT



GATEWAY SIGN
10' HEIGHT



ENTRY SIGN

SECONDARY ENTRY SIGN

LANDMARK DIRECTIONAL SIGN

LARGE LANDMARK LOCATION SIGN

PRIVATE STREETSCAPE COMPONENTS

As outdoor dining continues to become more popular, many restaurants are bringing dining areas into the streetscape. The use of privately-owned fences that surround the outdoor dining areas contain the activity and help define the public realm.

The challenge in these private streetscape areas is to balance the needs of the public using the sidewalk with the desire to stimulate and encourage outdoor activities that bring in business.

Finding the balance can be a difficult task. Each location is unique and will have different pedestrian movements and volumes as well as physical constraints and limitations. Providing a clear, unobstructed pathway is a critical component of any sidewalk cafe. In areas with high pedestrian volumes, this minimum width should be approximately 6 feet. This would allow two approaching pedestrians to pass each other. In areas where there is lighter pedestrian volumes, that minimum width may be able to be reduced to 4 to 5 feet. Where sidewalk cafes are long, a wider width could be more comfortable.

The structures that define the outdoor dining areas should be consistent throughout the downtown to create a uniform downtown character and provide similar layout opportunities.

7 Implementation

IMPLEMENTATION PLAN

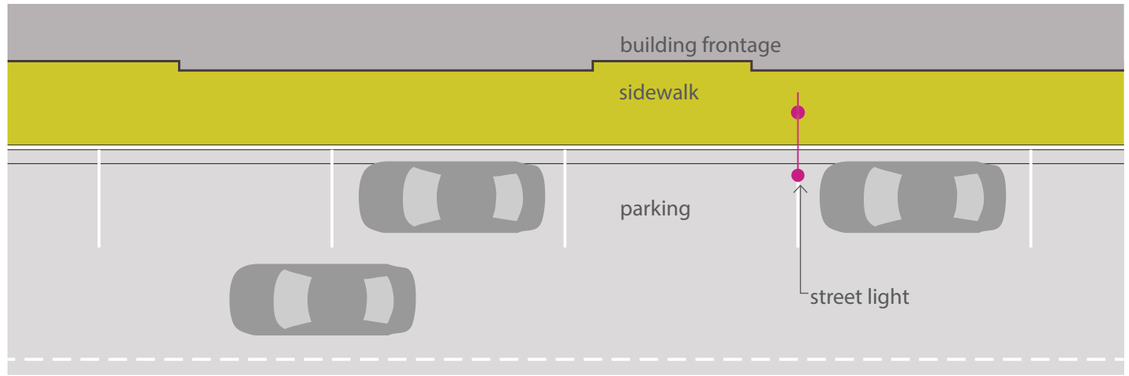
The following pages are examples of how some of the major streetscape elements can be combined. Given the potential number of possible combinations, the following examples are a very small sampling of the potential streetscape design possibilities. When developing new concepts for actual streetscapes, designers and engineers must consider all of the existing conditions and characteristics when developing concepts for a specific project. A thorough inventory and analysis of the existing conditions is a critical task at the beginning of any streetscape design project.


UNION PACIFIC

SIDEWALKS

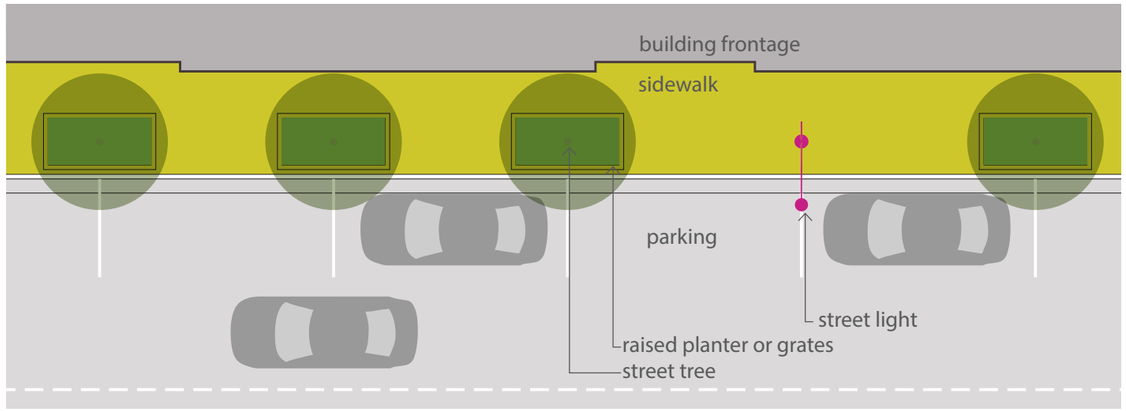
SIDEWALKS LESS THAN 9 FEET

In the most basic of all of the concepts, the streetscape is very narrow and simply created with standard finish concrete sidewalk. The narrow width limits installing street trees as the canopies will interfere with store fronts. In streetscapes with this width, it is often advantageous to take advantage of abutting properties to provide landscape components. Parking lots and open spaces that abut the streetscape can often be utilized to provide some sense of landscape in these situations.



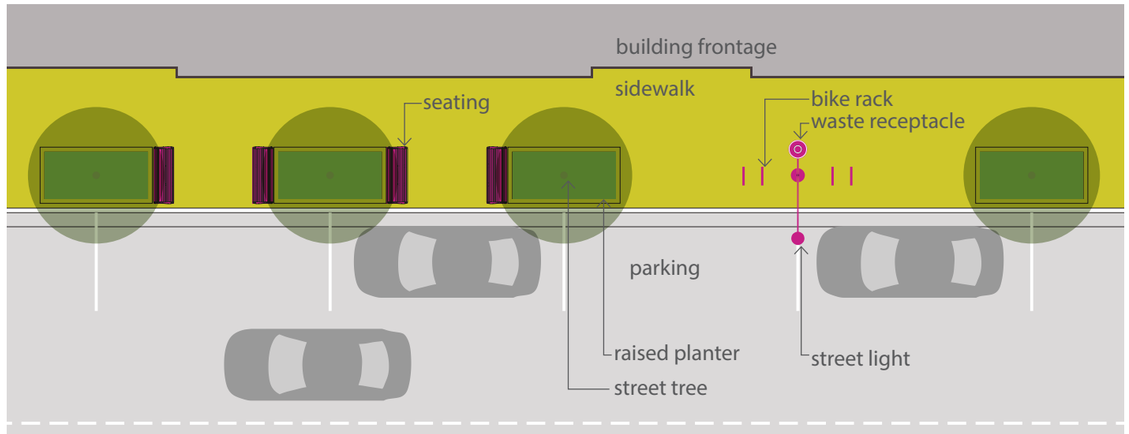
SIDEWALKS 9 TO 12 FEET

In this mid-range sidewalk concept, street trees are introduced. These trees are planted in curbed planters with landscape plantings in the tree pits. These tree pits could be expanded somewhat lengthwise depending on the amount of space available.



SIDEWALKS GREATER THAN 12 FEET

In the wider sidewalks, the landscape areas can be expanded to include raised planters with trees, shrubs, perennials and groundcovers. Benches can be included in spaces between the planters. Bicycle racks can be included in the wider areas around light poles. In this concept, the raised planters are set 18 inches back from the face of curb. This helps to accommodate car doors swings and movement along the curb.

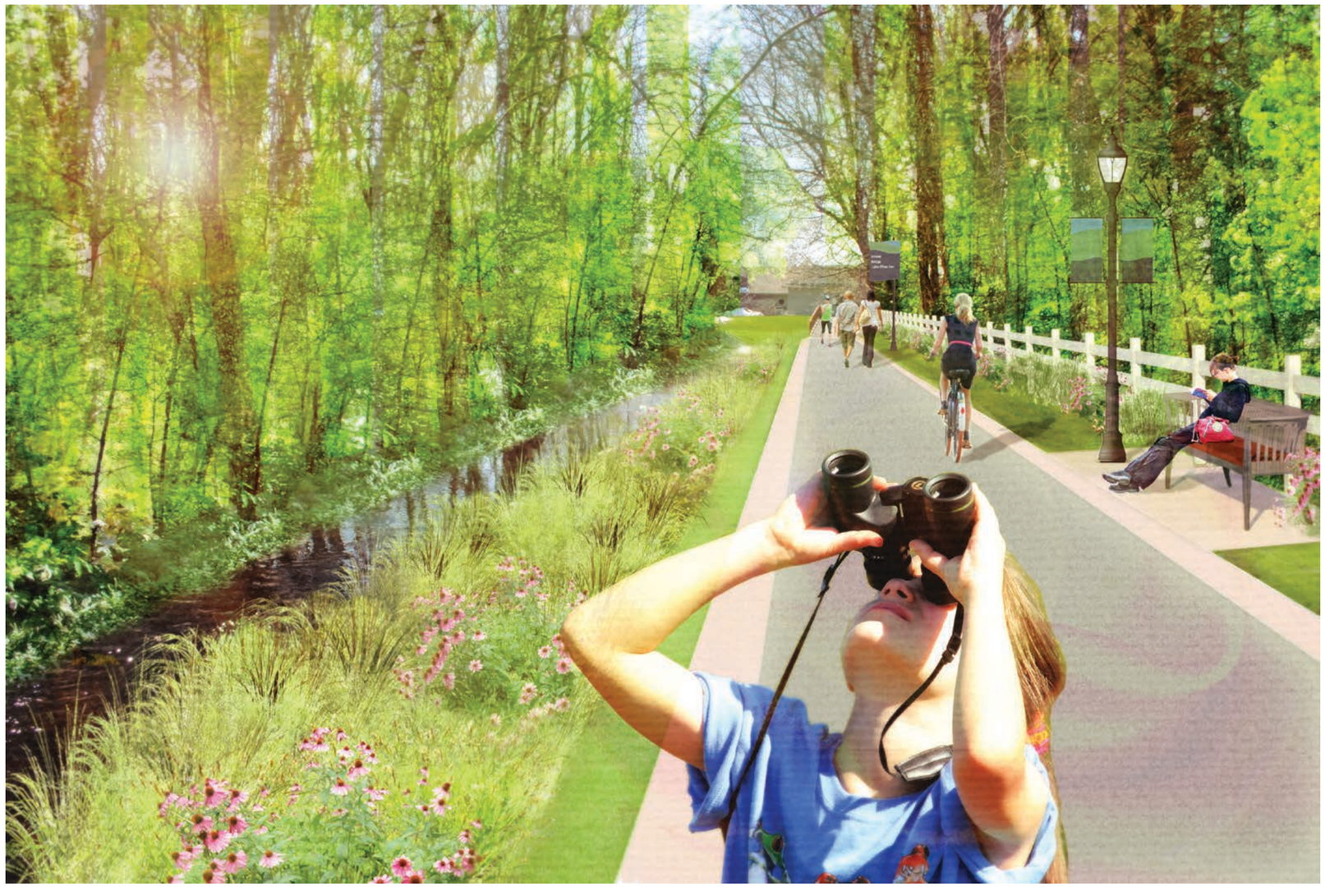


IMPLEMENTATION OF COMPONENTS IN DOWNTOWN DRAINAGE WAY & TRAIL

The kit of parts provides an important tool box for the City of Lake Elmo to use as public realm improvement projects present themselves. The drainage way and trail that extends from Highway 5 to Lake Elmo Avenue presents one such opportunity. The illustration below depicts the existing conditions and a proposed image that incorporates elements of the kit of parts, like signage, seating, landscaping and fencing to present a positive visual image and one that is uniquely representative of Lake Elmo.

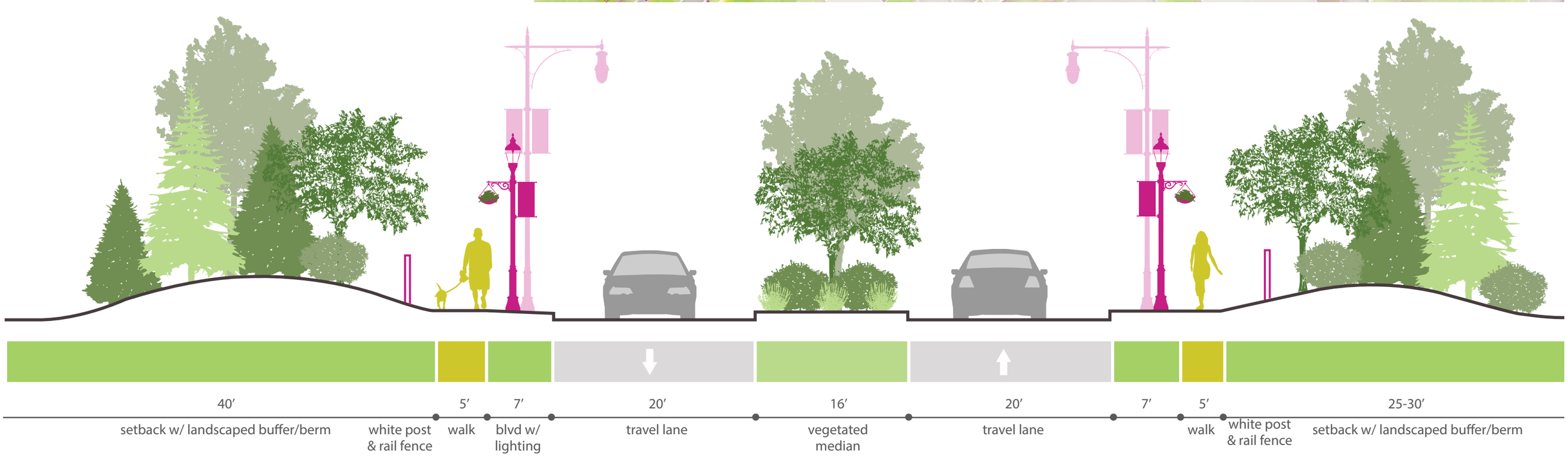
existing view

view with streetscape amenities - seating, pedestrian lighting, signage, and vegetation



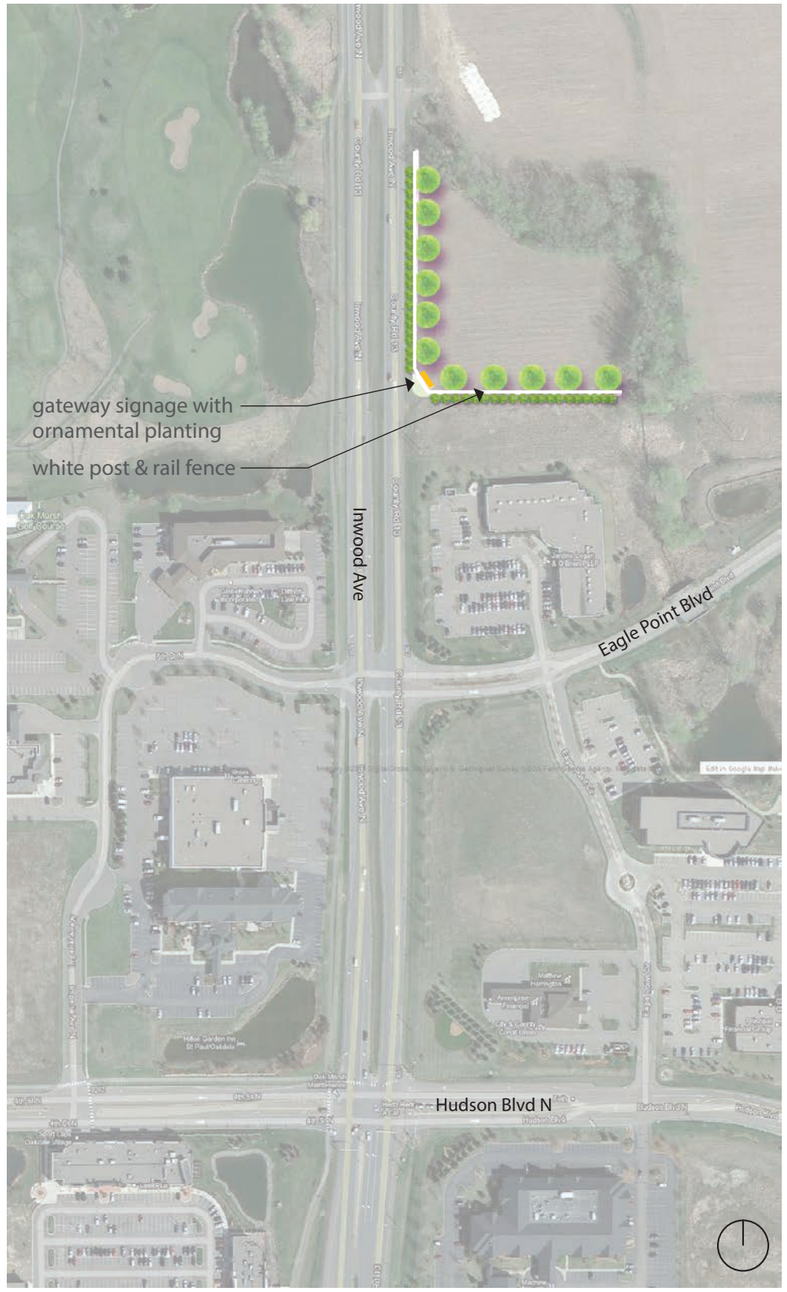
IMPLEMENTATION OF STREETSCAPE COMPONENTS IN DEVELOPMENT ALONG I-94

The proposed parkway, streets and public areas of potential new development along the I-94 corridor creates an opportunity to integrate elements of the Kit of Parts. The illustration below depicts how a proposed parkway can integrate fencing, landscaping and signage that expands the 'Brand' identity of Lake Elmo and helps new development integrate with the desired aesthetic.

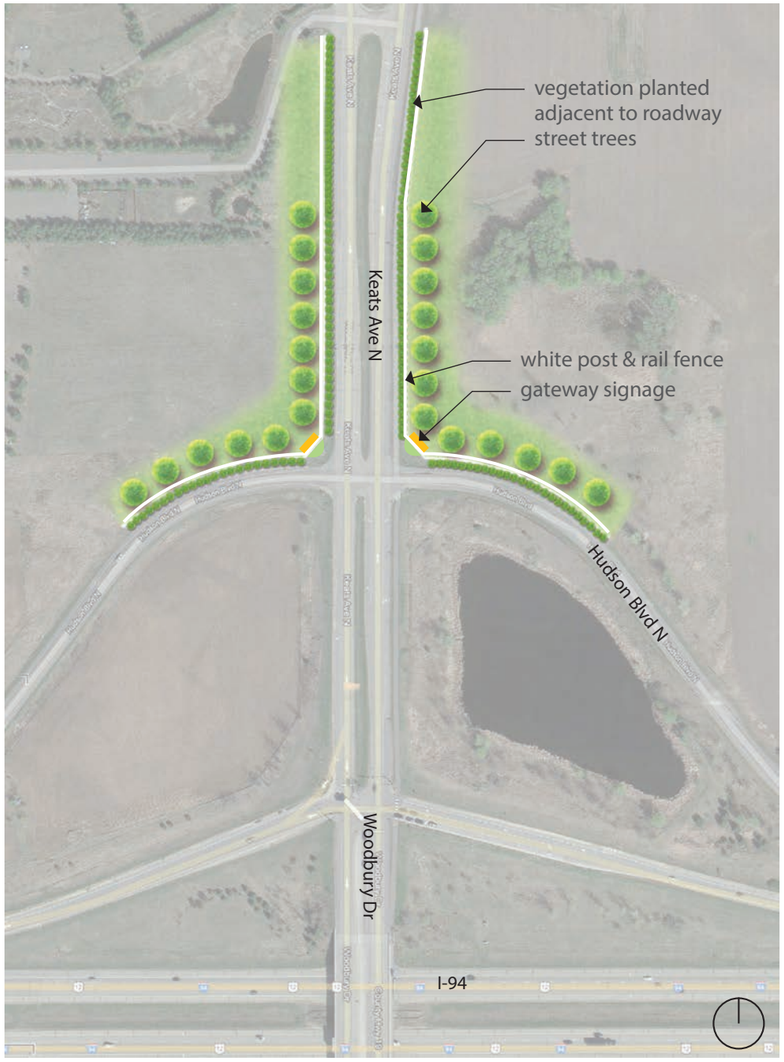


GATEWAYS

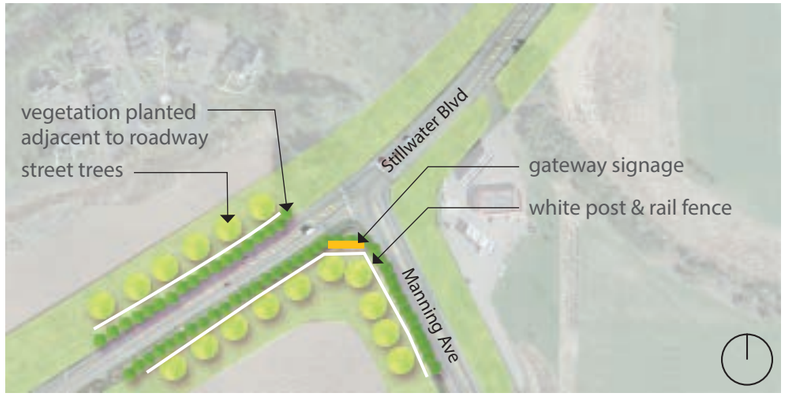
Inwood Avenue North at Interstate 94



Woodbury Drive at Interstate 94



Stillwater Boulevard at Manning Avenue



ROUNDABOUT - STILLWATER BOULEVARD AT 34TH STREET