# RIDGEDALE AREA PUBLIC REALM GUIDELINES

GUIDELINES FOR FORM, CHARACTER, & STREETSCAPE DESIGN

DECEMBER 2017

CITY OF MINNETONKA

# public realm

*The public realm is the space to which the general public has right of access: the setting for street life. Though public realm largely is considered streets and sidewalks it also includes places that are privately owned or operated but accessible to the general public.*

# Contents

RIDGEDALE AREA PUBLIC REALM GUIDELINES



# Introduction | Chapter 1

The Ridgedale Public Realm Guidelines are a guide to the role, function, and design of the public realm as experienced by pedestrians.

## Chapter Contents

# Chapter 1 | Introduction

## Introduction

The Ridgedale Public Realm Guidelines are a guide to the role, function, and design of the public realm as experienced by pedestrians.

## Project Area

The guidelines cover the Ridgedale area, located in the northern portion of the City of Minnetonka, adjacent to I-394 between Plymouth Road and Ridgedale Drive (*Figure 1*). The frontage road, Wayzata Boulevard, comprises the northern boundary of the study area, while the southern border is generally defined by division between the commercial area, including the Ridgedale Library and the Ridgedale YMCA and the residential area further south. The primary study area is focused on the public realm along the roadways of Plymouth Road, Ridgedale Drive, Cartway Lane, and Wayzata Boulevard, areas that support a number of commercial shopping areas and future mixed-use developments.

The guidelines are intended for use by City of Minnetonka staff, private landowners and developers, and the public. It sets out the overall vision for streets in the Ridgedale area, the relationship hierarchy among them, and detailed design on a street by street basis. Surface parking lot design, vegetation, site furnishing specifications, as well as sustainability of the neighborhood.

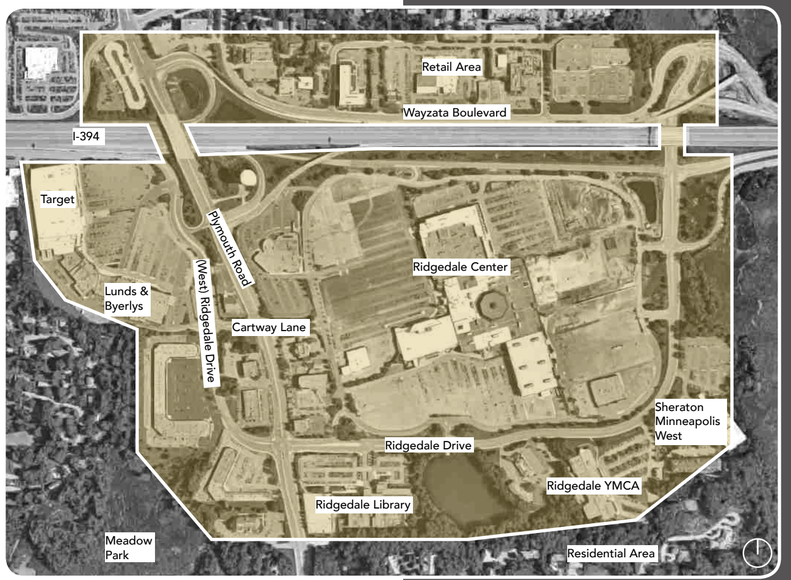



*Fig. 1: Contextual Aerial Photo*



# Guidelines Goals & Policy Context Ridgedale Area

### Policy Context

The policy context for the Ridgedale Public Realm Guidelines is established in the following plans and policies:

1. City of Minnetonka Comprehensive Plan (2009)
2. Ridgedale Village Center Study: a vision for 2035 (2012)

   Vision:

   - create an identity and sense of place for the Ridgedale district
   - build on past investments and current plans
   - provide an armature for investments and improvements over time
   - develop the public realm as a glue to link various projects and places
   - identify catalyst projects and potential locations

   Elements:

   1. Transform Retail Center into Mixed Use Community
   2. Rebuild Ridgedale Drive into Parkway
   3. Enhance Natural Features
   4. Improve Mobility and Circulation
   5. Encourage Green Practices
3. Ridgedale Area Pedestrian Plan - Phase I (2015)
   - provided inventory of the trail and sidewalk network
   - identified key origins and destinations within and adjacent to the Ridgedale area.
   - initial step in developing a comprehensive pedestrian network in the Ridgedale area.

### Next steps

This manual takes this inventory information and applies it into a set of design recommendations for the public realm for completing the pedestrian and bicycle network and streetscape in the Ridgedale area.

### Implementaion

*The design recommendations in this manual shall be used as inspiration and guidance for future development and planning in the Ridgedale area. Specific implementation and approval of designs will be on a project by project basis.*

### Design Guidelines Goals

- Create distinct, cohesive identity and sense of place through unified design themese that support the community vision.
- Create comprehensive pedestrian network to improve pedestrian access & safety.
- Improve wayfinding.
- Provide continuous tree canopy & pedestrian lighting.
- Prioritize sustainibility of the neighborhood.
- Enhanced branding.

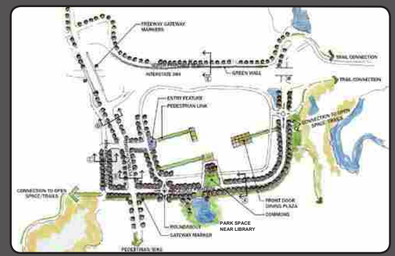



*Fig. 2: Ridgedale Center Study: a vision for 2035 (2012)*

# How to Use This Document

This document is intended to be used in conjunction with the City of Minnetonka Comprehensive Plan (2009), Ridgedale Village Center Study (2012), the Ridgedale Pedestrian Plan (2015), and other applicable municipal policies and regulations. They supplement these regulations by providing greater detail to inform the specific identity and character for this Ridgedale area.

Importantly, this document is to be used in the design of public spaces to inform the sense of place. The design guidelines provide direction during the development review process.

Cross sections, plan, and details included within these guidelines are intended to inform further detailed design, but are not to be used as an engineering document.


*Fig. 3: 1700 Plymouth Rendering*



# Key Character Areas

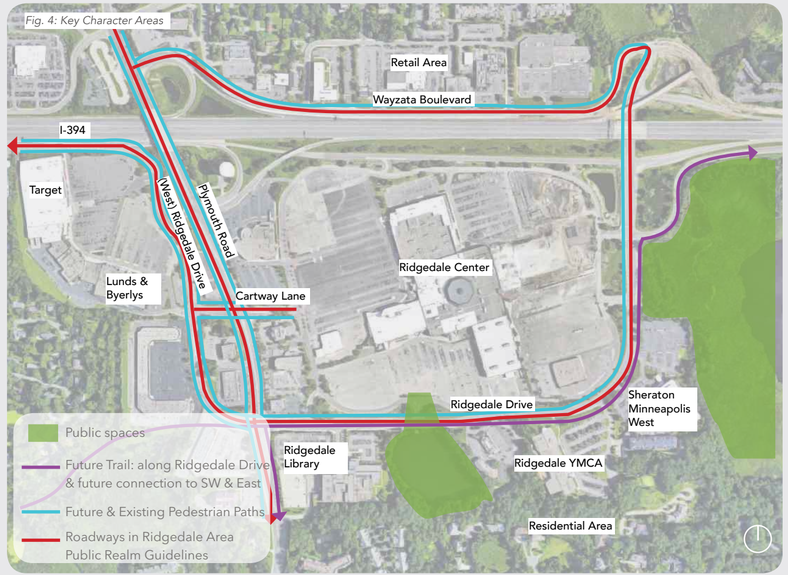
These guidelines are intended to coordinate design of the public realm to achieve a character and sense of place that expresses the area's evolution, its intentions to integrate with Ridgedale Center, and expand and improve the pedestrian facilities within the area.

## Elements of Public Realm Guidelines

1. Transform retail to mixed-use development
   - Catalyst Project: 1700 Plymouth (2017)
2. Complete Streets
   - Integrate complete streets and improve connections
   - transform Ridgedale Drive to parkway
   - improve intersections
3. Planting Improvements
   - cohesive street & intersection planting strategy
4. Create public art & gateway opportunities
5. Cohesive & comprehensive site furnishings & lighting*
6. Improve surface parking lots*
7. Screen loading & trash areas*
8. Encourage sustainable practices*

**guidelines integrated throughout the study area*

*Fig. 4: Key Character Areas*



RIDGEDALE
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# Mixed-Use Development | Chapter 2

An element of the Ridgedale Public Realm Guidelines is to transform this existing retail center into a mixed-use community.

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# Chapter 2 | Mixed-Use Development

## Mixed-Use Development Guidelines

An element of the Ridgedale Public Realm Guidelines is to transform this existing retail center into a mixed-use community, with the following guidelines:

- add new uses: upscale cinema, restaurants, range of housing, new hotel, and medical offices
- ensure that each new project adds public amenities and pedestrian connections
- improve streets and sidewalks to encourage walking and bicycle use
- enhance transit service
- over time, replace surface parking with structured parking


*Fig. 5: Precedent Images*



# Catalyst Project | 1700 Plymouth Road

**Overview**

The Ridgedale area has begun its transformation with investments in several projects: TCF, 1700 Plymouth, and the Mall. 1700 Plymouth is an upscale apartment development with retail on its first floor, built at the intersection of Plymouth Road, Cartway Lane, and West Ridgedale Drive (see *"Fig. 6: Site Context"*).

1700 Plymouth is a catalyst project for the rest of the Ridgedale area. The detailing, including paving materials, sidewalk treatment, planting materials, intersection treatment, site furnishings, and lighting, will be used within the rest of the Ridgedale area, as defined within these guidelines (see"Fig. 6: Site Context").

1700 Plymouth used details to enhance the visual experience of the corridor. Continuing this public realm treatment will create a cohesive, vibrant, and pedestrian-friendly streetscape. Future development projects will vary in scope, but all projects within this area should use this project as a reference to create a public realm that is both seamless and engages residents and visitors alike.

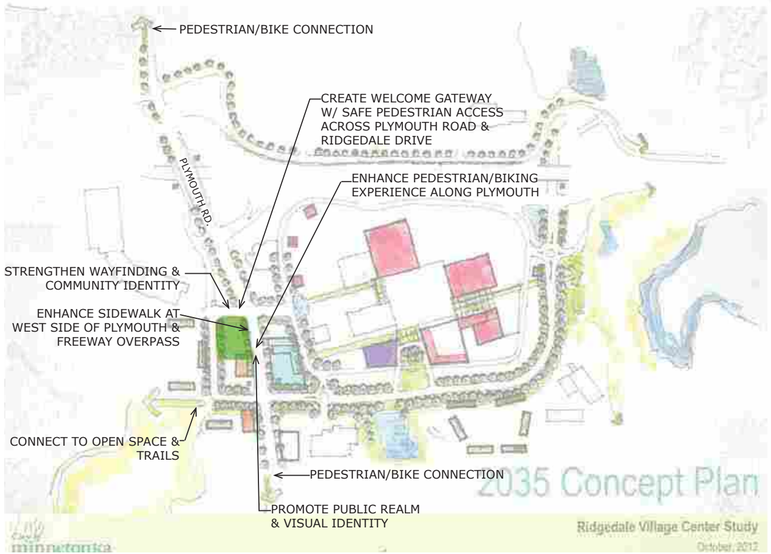



*Fig. 6: Site Context*

# 1 | Site Plan


*Fig. 7: 1700 Plymouth Road Site Plan*



# 2 | Illustrative Imagery

SIDEWALK WITH STRIPED PAVING


ake St Streetscape - Wayzata, MN


Outdoor Mall - Winter Garden, FL

GATEWAY & PEDESTRIAN PLAZA


Ellipse on Excelsior- St Louis Park, MN


Ellipse - St Louis Park, MN

SPECIAL PAVING/URBAN CHARACTER

SEASONAL POTTED PLANTS

SAFE PEDESTRIAN CROSSINGS


Woodbury Lakes Mall - Woodbury, MN


Woodbury Lakes Mall - Woodbury, MN

IMPROVED STREETSCAPE


Division Street - Portland, OR


1200 on the Mall - Minneapolis, MN

# 3|Renderings



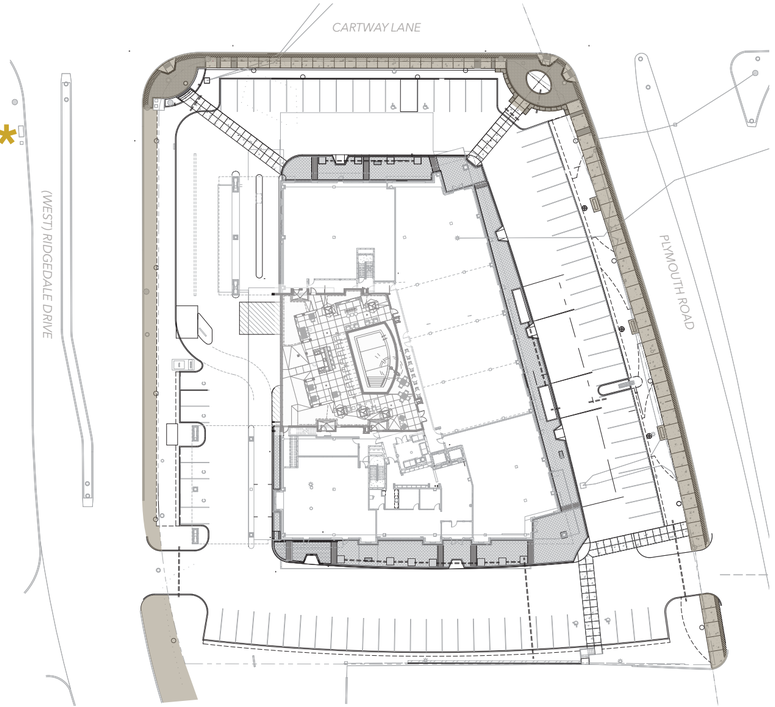
SHADE TREES
LIGHTING
ORNAMENTAL TREES
MONUMENT SIGN
PLANTINGS
BENCH
CONCRETE COLOR BANDING & BRICK WARNING STRIP
WALL
PERENNIAL FLOWER & PRAIRIE GRASS LANDSCAPING
BOLLARD
ENTRY LANDSCAPING

*Fig. 8: 1700 Plymouth - View 1*


ORNAMENTAL TREES
BIRCH TREES
SPECIAL PAVING/OUTDOOR DINING
PEDESTRIAN CROSSING
CROSSWALK
PLANTINGS
CONCRETE BANDING WITH BRICK

*Fig. 9: 1700 Plymouth - View 2*

## 4| Hardscape Elements*

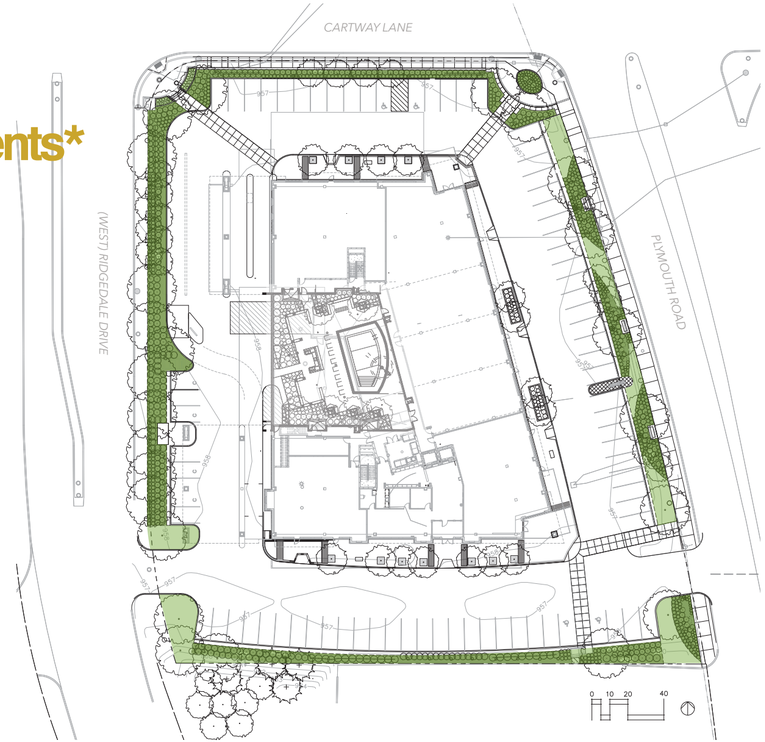



HARDSCAPE | Public Realm Area

*The hardscape elements from 1700 Plymouth are further detailed in these guidelines (*see Chapter 3 - Streets and Chapter 6 - Site Furnishings & Lighting*).



## 5| Landscape Elements*




LANDSCAPE | Public Realm Area

- sod
- Perennials/shrubs

*The landscape elements from 1700 Plymouth, including planting lists for street trees and general planting areas are further detailed in these guidelines (*see Chapter 4 - Planting*).

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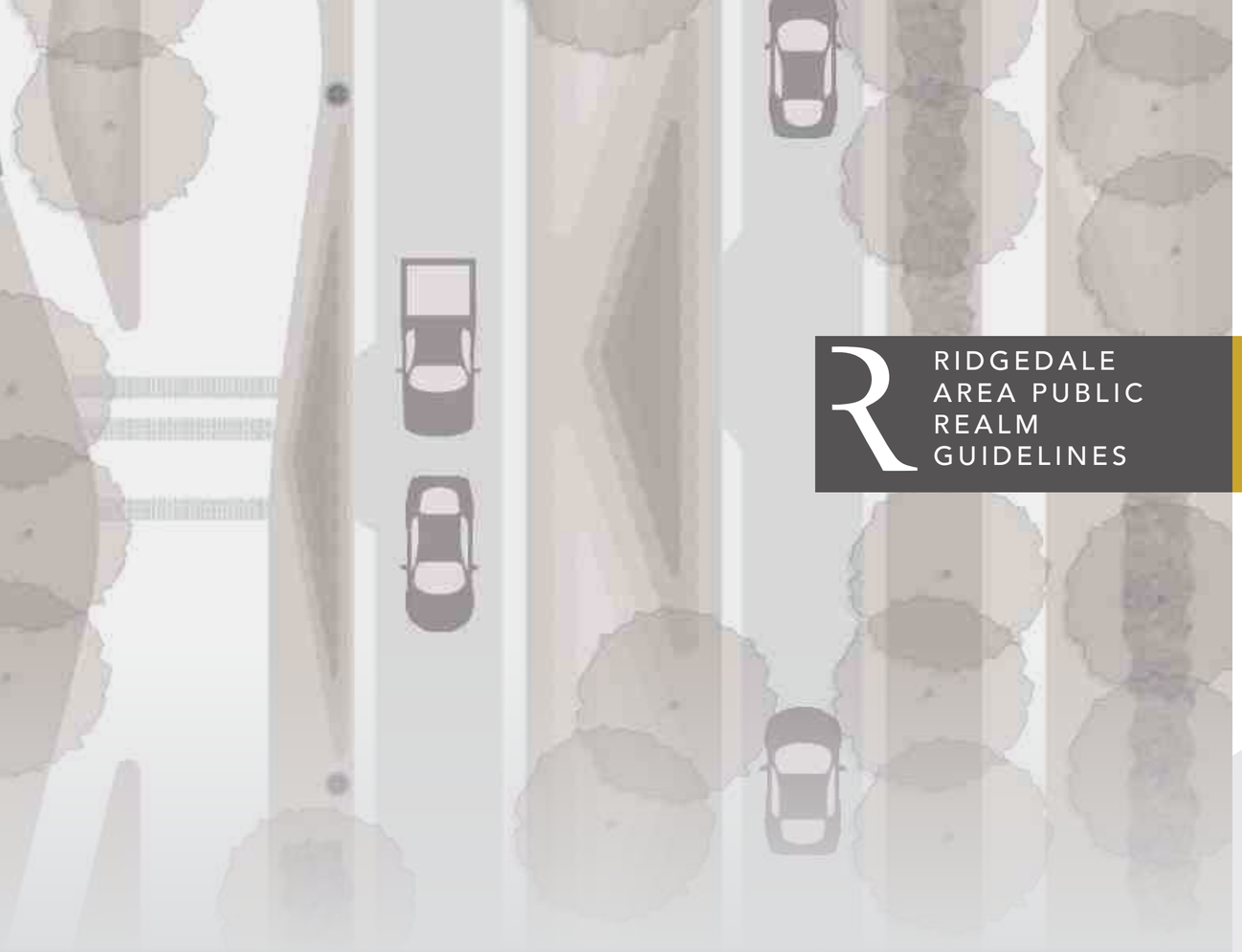


RIDGEDALE AREA PUBLIC REALM GUIDELINES





The Ridgedale Public Realm Guidelines are a guide to the role, function, and design of the public realm as experienced by pedestrians.

Chapter Contents

# Chapter 3 | Streets

**Street Network**

This section describes the character of the key streets including:

1. Plymouth Road
2. Ridgedale Drive
3. Cartway Lane
4. (West) Ridgedale Drive
5. Freeway & Wayzata Boulevard

Each street type offers unique elements relating to traffic volumes, adjacent building use, and natural features. Consistent elements including tree planting, lighting, sidewalks, and street furnishings will be incorporated throughout. All streets are subject to engineering and design.

The locations of new roads and lanes are approximate and may be adjusted during the municipal development application review process.

**For these guidelines, the portion of Ridgedale Drive west of Plymouth Road will be called (West) Ridgedale Drive to distinguish between the streetscapes.*

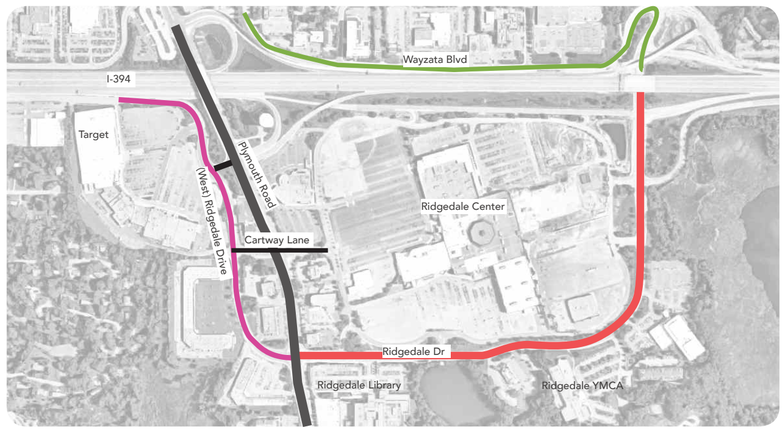



*Fig. 10: Map of Hierarchy of Streets*

Ridgedale Drive: transform into parkway (2 lanes with planted median, pedestrian walks, trail)

Plymouth Road: transform into complete street (4 lanes with turn lane and concrete median, pedestrian walks, landscape)

(West) Ridgedale Drive: transform into complete street (2 lanes & street parking, pedestrian walks, landscape)

Freeway & Wayzata Boulevard: (two lanes, pedestrian walk, vegetated retaining wall, landscape setback)

Cartway Lane: transform into complete street (Ridgedale Center gateway, pedestrian walks, 4 lanes)



# Pedestrian Network

Establishing a network of pedestrian connections through the Ridgedale area will facilitate internal circulation, improve pedestrian access to businesses, and improve connections to areas adjacent to the area. These public realm guidelines build upon work that has completed before within Phase 1 of the Ridgedale Pedestrian Plan (2015), an inventory of the existing pedestrian network that identified gaps and opportunities, and the Ridgedale Village Center Study (2012) that outlined guidelines and implementation strategies for the area.

Pedestrian walks and trail configurations should be suited to the context, road configuration, availability of land and safety objectives.

### What is good streetscape design for the Ridgedale area?

- Good streetscape design for the Ridgedale area requires streets to be planned, designed, and maintained to enable safe, convenient, and comfortable travel access for users of all ages and abilities regardless of their mode of transportation. The streetscape should facilitate placemaking by adding a human dimension to streets, cultivating a unique shopping, working, living, and socializing experience. This will allow for passive enjoyment of the street.

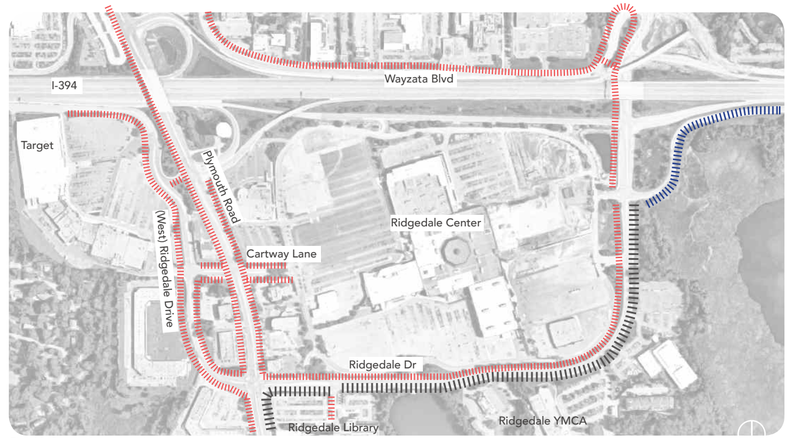



*Fig. 11: Pedestrian network*

8-10 foot wide concrete sidewalk with brick warning strip, depending on R.O.W.

12 foot shared Bicycle/Pedestrian trail

Existing Bituminous Trail - 6 foot (undersized)

# Streets 1 | Plymouth Road

A key element of these public realm guidelines is to transform Plymouth Road from a street largely lined by surface parking lots and one-story retail into multi-use developments, including active street-fronting retail. Mobility and circulating will be enhanced through the addition of continuous pedestrian walks, safe crossings, and pedestrian-scale lighting. The streetscape will be characterized by large street trees on both sides, buffering vehicle traffic and creating a fuller, continuous canopy.

Sidewalks will line both sides of the street to accommodate pedestrians accessing the commercial opportunities and residences. Sidewalks should a minimum of 8-feet wide and provide a place for ample seating and opportunities for movement.

All storefronts should be at grade with the sidewalk to provide accessibility.

Bus stops will be provided at key locations to serve the retail heart.

## Key Guidelines

- Slow traffic and focus access points
- Enhance sidewalks - minimum 8-feet wide (when possible)
- Create continuous tree canopy (40' on center spacing)
- Create continuous pedestrian lighting (80' on center spacing)
- Enhance intersections


*Fig. 12: Map of Plymouth Road public realm improvements*



# Plan & Section

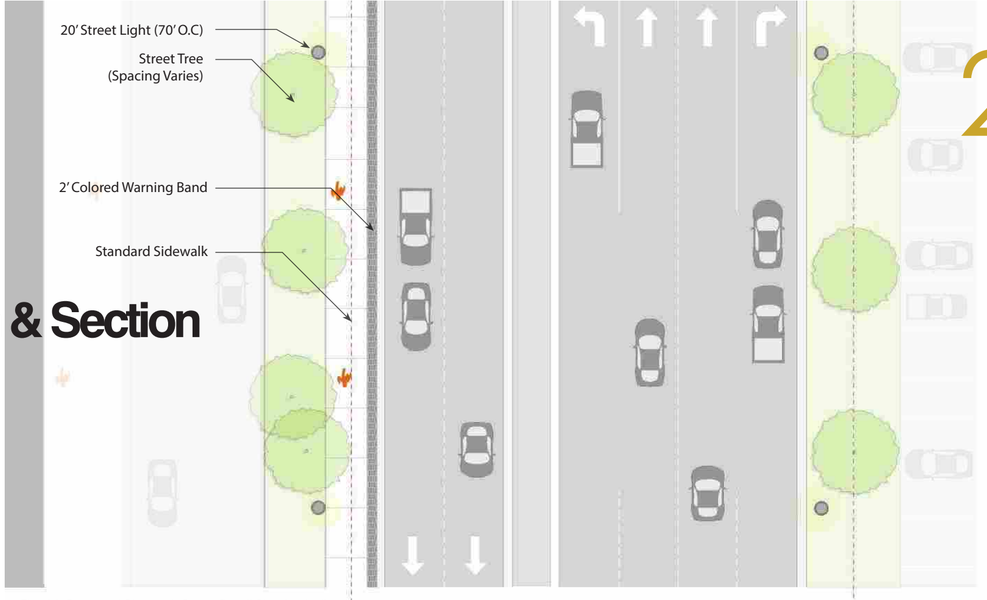



*Fig. 14: Proposed Plymouth Street Detail Plan (typical)*

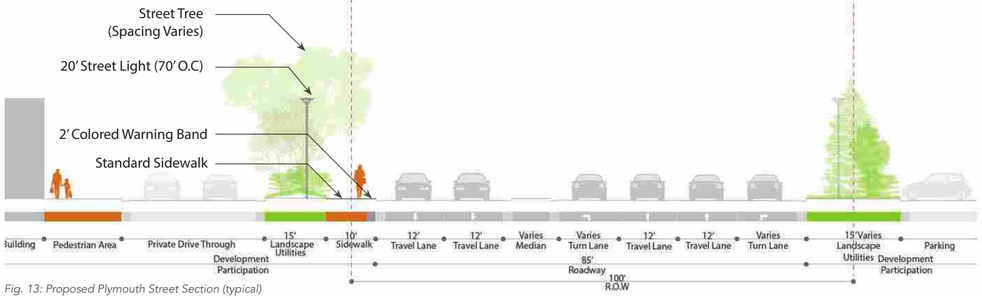



*Fig. 13: Proposed Plymouth Street Section (typical)*

# 2|Ridgedale Drive

Ridgedale Drive is the heart of the Ridgedale area, with active commercial and civic development adjacent to the street, including the Ridgedale Library, Ridgedale YMCA, and the Sheraton Hotel on the southern side and the Ridgedale Center to the north and west. Ridgedale Drive is to be rebuilt into a parkway.

The streetscape will be characterized by large street trees on both sides as well as street trees and vegetation in the median. This will provide a buffer from vehicular traffic and a continuous tree canopy.

Ridgedale Drive should act as a major pedestrian and biking connection due to the uses along both sides of the street. To meet these projected needs, the street configuration will provide extra space for a shared, separated bicycle and pedestrian trail.

The north and west side of Ridgedale Drive is expected to remain the same character for the foreseeable future; however, redevelopment on the south side should be upgraded to reflect the same character and materials.

## Key Guidelines

- Develop a consistent theme and use of materials
- Give definition to Ridgedale as a place
- Provide a sidewalk along north side of Ridgedale Drive
- Provide multipurpose trail along south edge of Ridgedale Drive, and a sidewalk on north edge of Ridgedale Drive

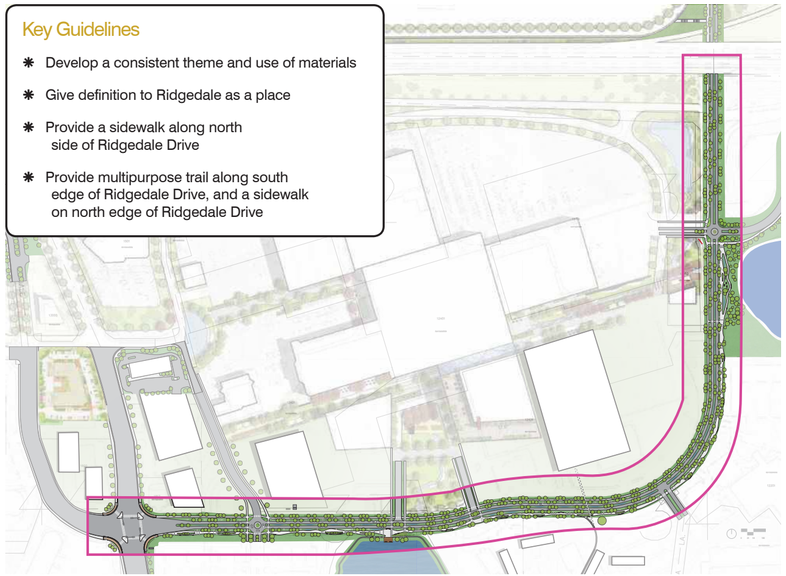


*Fig. 15: Map of Ridgedale Drive public realm improvements*



# Plan & Section

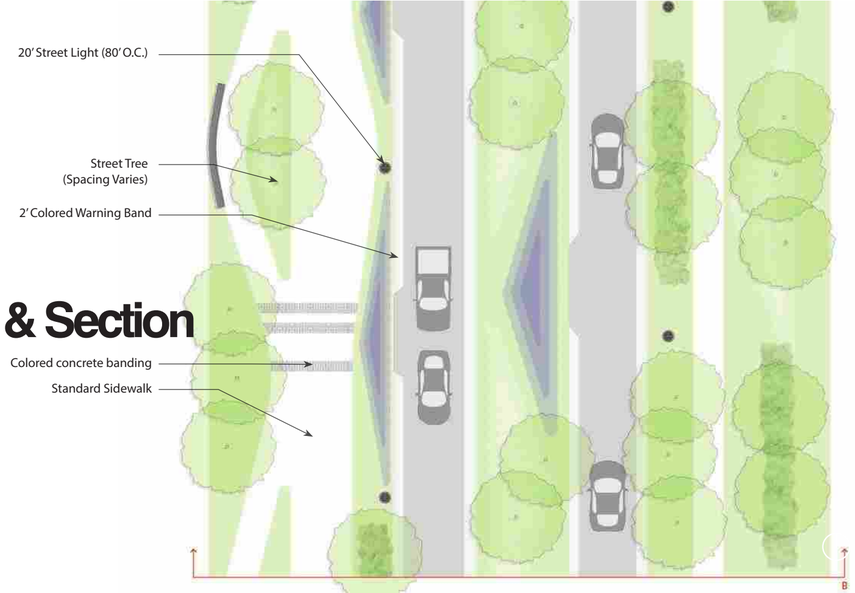
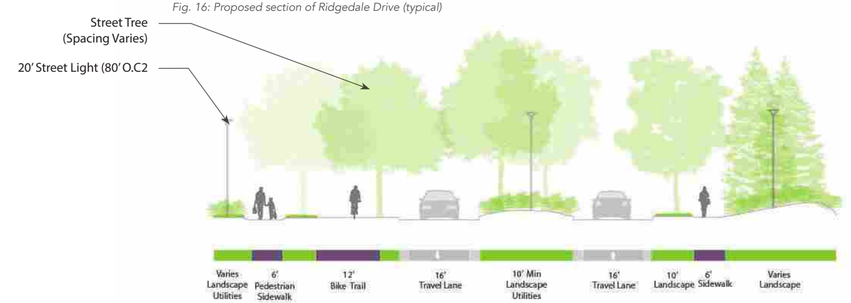



*Fig. 17: Proposed detail plan of Ridgedale Drive (typical)*

*Fig. 16: Proposed section of Ridgedale Drive (typical)*



## Future shared trail & streetscape


*Fig. 18: Rendered view of shared trail along Ridgedale Drive*


*Fig. 19: Rendered view of roundabout and streetscape on Ridgedale Drive*

*Fig. 20: Rendered view of stormwater and dog park area along Ridgedale Drive*

# 3| (West) Ridgedale Drive

(West) Ridgedale Drive is an important north-south route for access to retail shopping and mixed-use development, including Target, Lunds & Byerlys, Ridge Squares, and 1700 Plymouth. The proposed reconfigurations will significantly calm traffic and provide a safer and continuous pedestrian network.

Traffic calming measures, in addition to developing a continuous tree canopy and consistent theme and use of materials will give definition to Ridgedale as a place.

Similar to Plymouth Road and Ridgedale Drive, the streetscape along (West) Ridgedale Drive will be characterized by large street trees on both sides as well as street trees and vegetation in the median where space allows. This will provide a buffer from vehicular traffic and a continuous tree canopy.

Redevelopment is expected to happen along both sides of this roadway, transforming from largely retail to mixed use development. Redevelopment should be upgraded to reflect the a consistent character and material palette.

**For these guidelines, the portion of Ridgedale Drive west of Plymouth Road will be called (West) Ridgedale Drive to distinguish between the streetscapes.*

### Key Traffic Calming Measures

- Reducing lane widths
- Providing street parking and medians along roadway where space permits
- Reducing number of travel lanes


*Fig. 21: Map of (West) Ridgedale Drive public realm improvements*



## Plan & Section

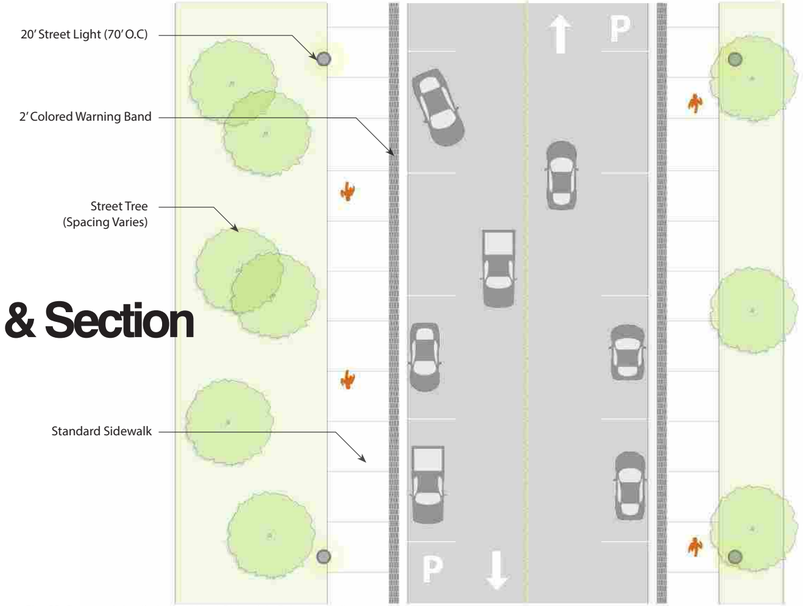
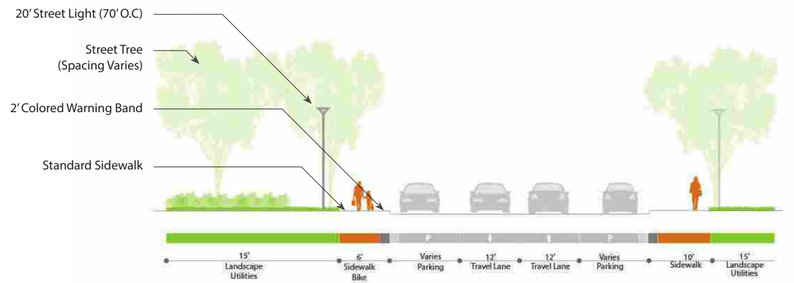



*Fig. 23: Proposed detail plan of (West) Ridgedale Drive (typical)*

*Fig. 22: Proposed section of (West) Ridgedale Drive (typical)*



# 4|Cartway Lane

Cartway Lane is an important link between Ridgedale Center on the east and retail and mixed-use development on the west. Within this short stretch of roadway, there are two large intersections and a main gateway to the Ridgedale Center. See pages 34-40 for detailed plans of design guidelines for intersections.

Cartway Lane will have similar design treatments as the connecting roadways, including pedestrian walks on both sides of the roadway, continuous tree canopy, and a center median. Reducing lane widths in conjunction with the center medians will be used to calm traffic.

Cartway Lane and Plymouth Road is a potential public gateway opportunity (see Chapter 5: Gateways, Signage, & Wayfinding).


*Fig. 24: Map of Cartway Lane public realm improvements*



## Plan & Section

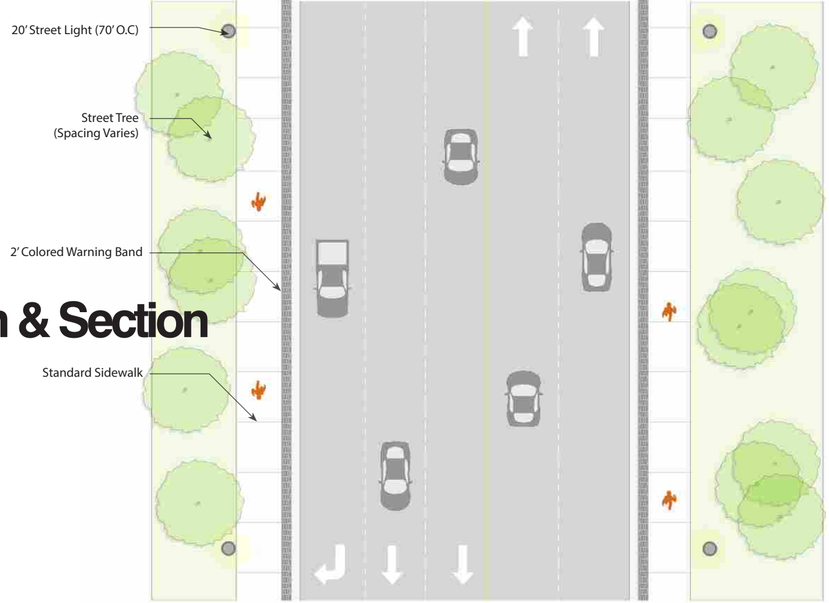
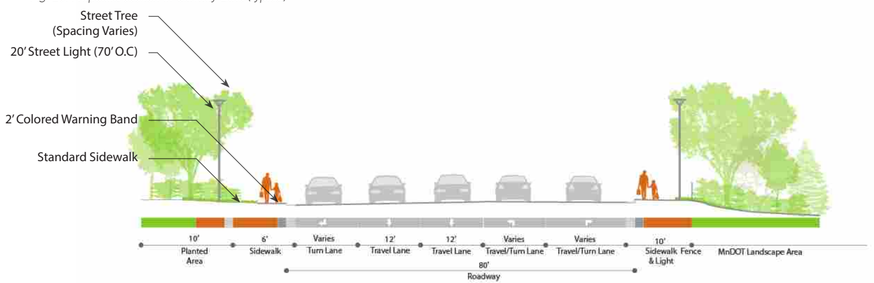



*Fig. 26: Proposed detail plan of Cartway Lane (typical)*

*Fig. 25: Proposed section of Cartway Lane (typical)*



# 5 | Wayzata Boulevard (Frontage Road)

Wayzata Boulevard is a frontage road on the north side of the Ridgedale area. The roadway is adjacent to I-394 on the south and retail to the north.

There are existing sidewalks on both sides of Wayzata Boulevard. These guidelines recommend replacing the sidewalk adjacent to I-394 with a vegetated buffer over time. The existing sidewalk is not a widely used pedestrian route and a vegetated buffer would help to screen the traffic noise and views from the retail businesses and pedestrians along the frontage road.


*Fig. 27: Map of Wayzata Boulevard public realm improvements*

## Key Guidelines

- Vegetated retaining wall
- Pedestrian walk on north side of roadway
- Street trees continuous 30' OC
- Vegetated landscape setback, including stormwater management opportunities.



# Plan & Section

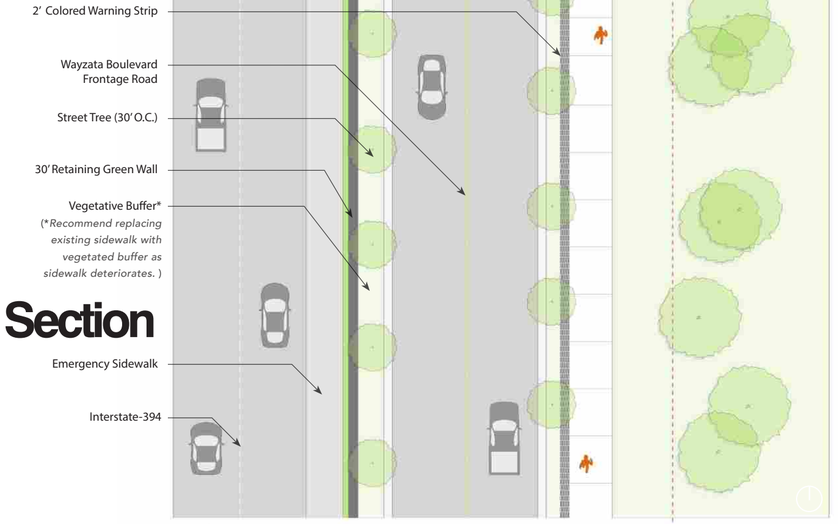
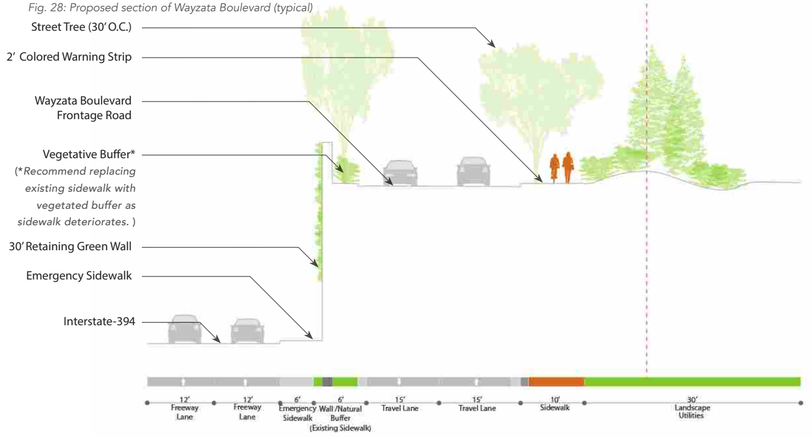



*Fig. 29: Proposed detail plan of Cartway Lane (typical)*

*Fig. 28: Proposed section of Wayzata Boulevard (typical)*



# Typical Intersections

Public realm improvements are recommended for the following main intersections in the Ridgedale area:

- Plymouth Road & Ridgehaven Drive (frontage road)
- Plymouth Road & Cartway Lane
- Plymouth Road & Ridgedale Drive

The intersections will included separated pedestrian crossings to ensure increased safety. Intersections will also be treated with:

- special paving, including a brick warning strip
- striped unit pavers (see *"Fig. 33: Brick Warning Strip" on page 40*)
- concrete seat walls (see *"Fig. 36: Precedent photos of concrete wall" on page 41*)
- planters with concrete curb
- planting beds with vibrant perennials and annuals
- street lights & pedestrian lights


*Fig. 30: Map of public realm improvements at intersections*



# 1 | Typical Intersection Details

As illustrated on *"Fig. 44: Typical Concrete Sidewalk Profile" on page 4437 through 43*, intersections will be treated with:

- planters with concrete curb (page 37)
- unit pavers (see page 38)
- concrete seat wall with cap (see page 39)
- brick warning strip (detail 2)

Planting beds, street trees, and lighting specifications will be discussed in Chapters 4: Planting and Chapter 6: Site Furnishings & Lighting, respectively.

Material Specifications

| | | |
|---|---|---|
| | Streets - Curbs | Concrete with City of Minnetonka standard curb letdowns at intersections |
| | Sidewalks | Concrete: standard concrete sidewalks in all areas<br>Scoring 8'x8' (typical); 6-8' foot width (typical) |
| P1 | Brick Warning Strip | Unit Pavers: 2' width; unit paver: Anchor Block Hollard Plus 4 x 8 x 80 mm<br>Color: Charcoal<br>Pattern: Soldier course, parallel to curb, refer to detail for number of courses. Sand joints: clean sand or stone. 100% passing No. 10. |
| P1a | Unit Paver | Unit Paver: Anchor Block Holland Plus 4 x 8 x 80 mm<br>Color: Charcoal<br>Pattern: Single Soldier Course, refer to detail |
| P2 | Intersection Paver | Unit Paver: Anchor Block Holland Plus 4 x 8 x 80 mm<br>Color: Cambray Tan<br>Pattern: Herringbone |

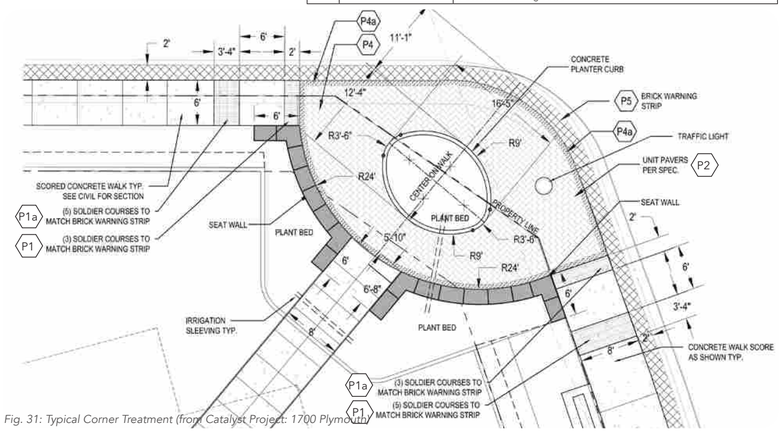



*Fig. 31: Typical Corner Treatment (from Catalyst Project: 1700 Plymouth)*

# 2| Typical Intersection Details

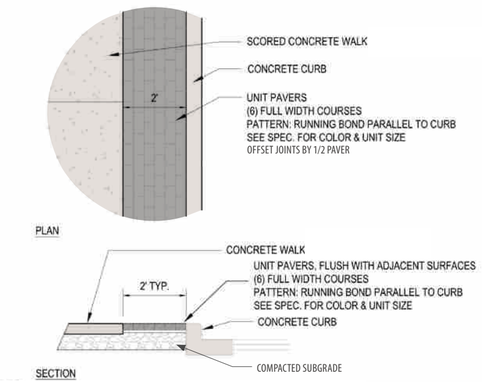



*Fig. 33: Brick Warning Strip*

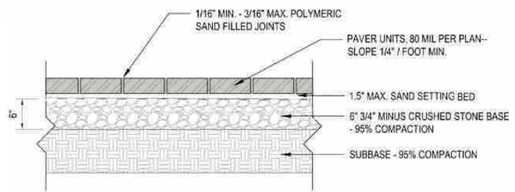



*Fig. 32: Unit Paver*



# 3| Typical Intersection Walls & Planter Curb

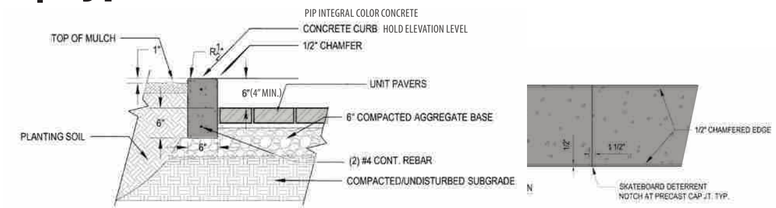



*Fig. 34: Concrete Planter Curb*

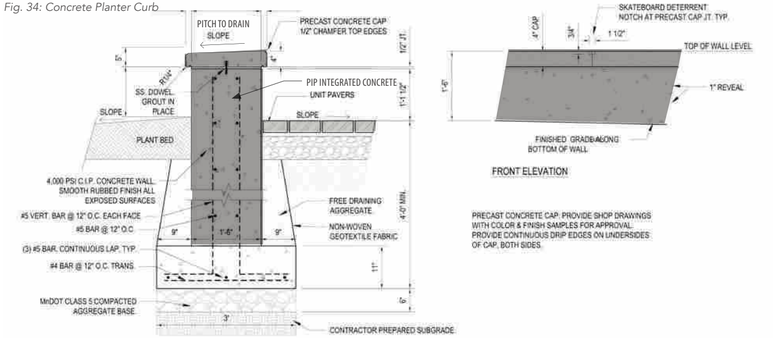



*Fig. 35: Concrete Seat Wall with Cap*

*Fig. 36: Precedent photos of concrete wall*

Material Specifications

| | | |
|---|---|---|
| | Precast Wall Cap | Fabricated by Stoneworks Architectural Precast, Inc; . www.stoneworkshop.com<br>Color: Stoneworks #1513<br>Finish: Light Sandblast |
| | PIP Integral Colored Concrete Seat Wall & Concrete Planter Curb | Manufacturer: Scofield; www.scofield.com<br>Color: Landmark Gray #2543 (or equal)<br>Finish: Cure with Lithorome color wax; Light sandblast |
| | Intersection Paver | Unit Paver: Anchor Block Holland Plus 4 x 8 x 80 mm<br>Color: Cambray Tan<br>Pattern: Herringbone |

# 4| Typical Intersection Detail Plan


*Fig. 37: Proposed detail plan of typical intersection*



# 5| Typical Intersection Rendering

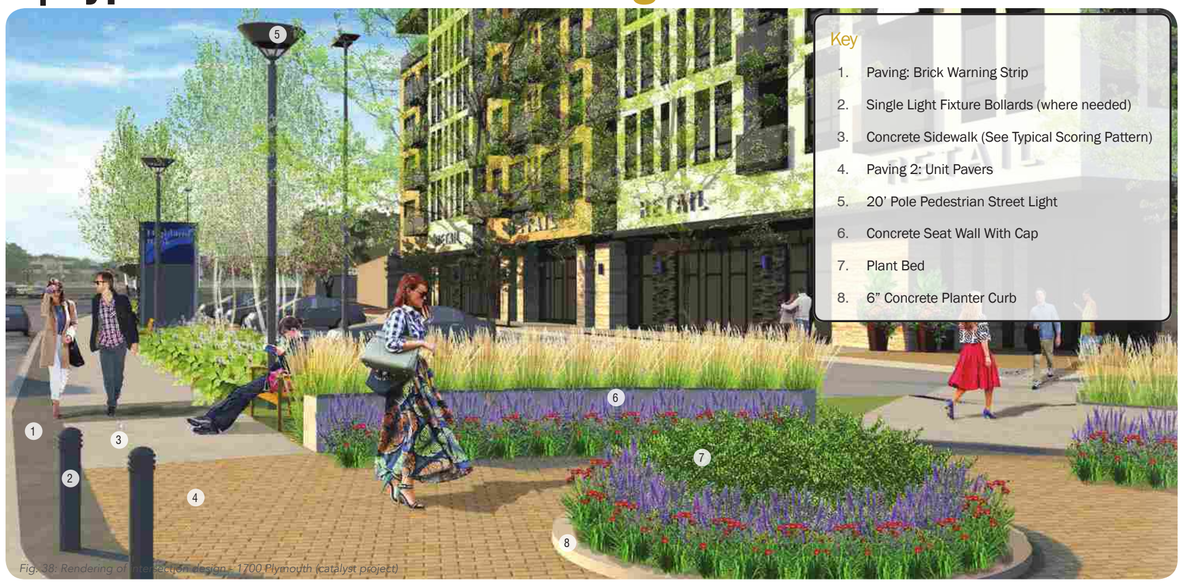



*Fig. 38: Rendering of intersection design: 1700 Plymouth (catalyst project)*

# 4| Typical Intersection A Bird's Eye View


*Fig. 40: Birdseye of typical intersection*



The design recommendations in this manual shall be used as inspiration and guidance for future development and planning in the Ridgedale area. *Specific implementation and approval of designs will be on a project by project basis.*

# Sidewalks | Materials & Specifications

## Sidewalk Materials

Paving in the street right-of-way and on adjacent private land where the public has right of passage should be integrated and seamless, to present an appearance of a generous and accessible public realm using the same paving materials and patterning of saw cuts where appropriate. Implementation will happen as opportunities arise, and there may be some variation across projects. The paving scheme should extend into entries and publicly accessible plazas and courtyards. Where driveways cross a sidewalk, the concrete paving should be patterned with a finer texture to indicate to pedestrians that vehicles may be expected to cross their path.

In the Ridgedale area, the typical paving pattern for sidewalks is a scored concrete walk (6-8 feet wide), with a 2 foot brick warning strip (see "Fig. 42: Brick Warning Strip"). The typical score for the concrete sidewalks is 8 feet x 8 feet.

Street furnishings, including benches and bike loops, will be surface mounted onto concrete pads. At intersections, depending on available space, paving materials will shift with a striped pattern from the concrete sidewalks to unit pavers (see "Fig. 44: Typical Concrete Sidewalk Profile" and "Fig. 37: Proposed detail plan of typical intersection").

## Material Specifications

| | | |
|---|---|---|
| | Streets - Curbs | Concrete with City of Minnetonka standard curb letdowns at intersections |
| | Sidewalks | Concrete: standard concrete sidewalks in all areas; scoring 8'x8' (typical); 8-10' foot width (typical) |
| P1 | Brick Warning Strip | Unit Pavers: 2' width; unit paver: Anchor Block Holland Plus 4x8x80 mm, color: Charcoal, pattern: single soldier course, running bond parallel to curb |

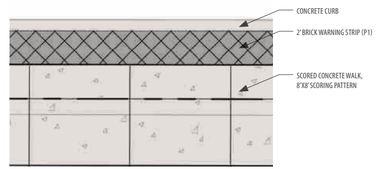



*Fig. 43: Typical Concrete Sidewalk Profile*

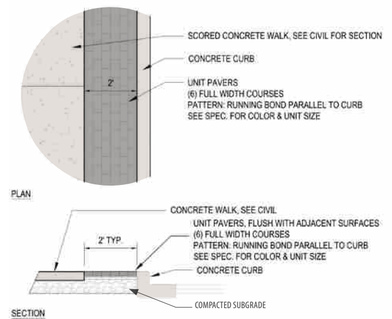



*Fig. 42: Brick Warning Strip*

*Fig. 41: Typical Concrete Sidewalk with Brick Warning Strip - 1700 Plymouth (Catalyst Project for Ridgedale Area)*





# Planting | Chapter 4

The planting strategy for the Ridgedale area will be based on a selection of low-maintenance, resilient plant species that exemplify seasonal variations in color.

Chapter Contents

# Chapter 4 | Planting

**General Planting Strategy**

The planting strategy for the Ridgedale area will be based on a selection of low-maintenance, resilient plant species that exemplify seasonal variations in color. The following plant lists are divided into:

- General Plant List
- General Use and Corner Bulge Planting
- Rain garden Plant List
- Street Trees & Park Trees
- Tree Spacing

Planting strategies in all locations should focus on providing a mix of color and seasonal variation. Perennials should be established in large clustered groups of no less than 20. This will create swathes of color and the ability to feel a progression, particularly in linear conditions along roadways. 'Creating a sequence will be important and significant mass plantings will create a field condition and the sense of immersion for pedestrians.'

Illumination and up-lighting of plants and trees is encouraged whenever possible. The following plants are also encouraged whenever possible:

- native plants,
- floral rich plants,
- and pollinator plants.


ANTHONY WATERER SPIREA


GRO-LOW FRAGRANT SUMAC


HYDRANGEA 'ANNABELLE'


ALLIUM 'SUMMER BEAUTY'



# General Plant List

| | |
|---|---|
| **Deciduous Shrubs** | |
| Dwarf Bush Honeysuckle | *Diervilla lonicera* |
| Hydrangea 'annabelle' | *Hydrangea arborescens 'annabelle'* |
| Sumac, Gro-Low Fragrant | *Rhus aromatica 'gro-low'* |
| Spirea, Anthony Waterer | *Spirea x bulmada 'anthony waterer'* |
| Lilac, Miss Kim | *Syringa pubescens subsp. patula 'miss kim'* |
| **Evergreen Shrubs** | |
| Juniper, Arcadia | *Juniperus sabina 'arcadia'* |
| Juniper, Medora | *Juniperus scopulorum 'medora'* |
| **Perennials** | |
| Allium 'Summer Beauty' | *Allium 'summer beauty'* |
| Geranium, 'Rozanne' | *Geranium 'rozanne'* |
| Switchgrass, Northwinds | *Panicum virgatum 'northwinds'* |
| Sedum, Matrona | *Sedum 'matrona'* |
| Prairie Dropseed | *Sporobolus heterolepis* |
| **Vines** | |
| Virginia Creeper | *Parthenosissus quinquifolia* |
| **Bulbs & Groundcover** | |
| Daffodils | *Daffodils* |
| Tulip Mix | *Tulip Mix* |
| Annual Flowers | *To be selected by owner* |


PRAIRIE DROPSEED


JUNIPER, ARCADIA


GERANIUM, 'ROZANNE'

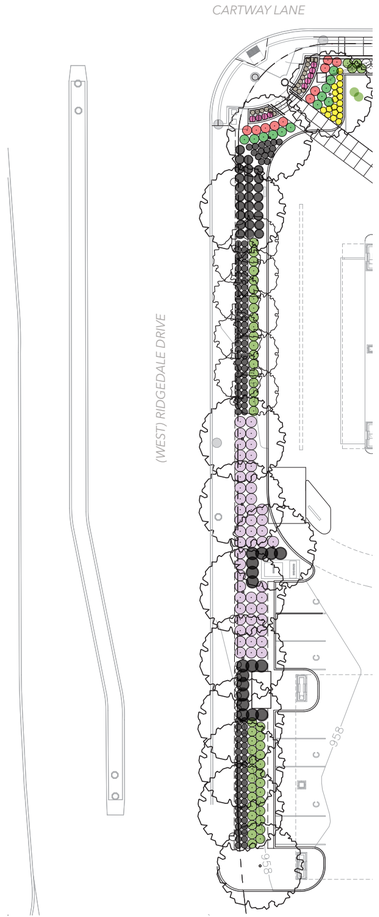

LILAC, 'MISS KIM'

# Streetscape Planting Precedents

Plant Schedule - 1700 Plymouth Road

| | Shrubs and Perennials | |
|---|---|---|
| | WG | Geranium, 'Rozanne' |
| | SP | Spirea, Anthony Waterer |
| | RS | Rose, Carefree Wonder |
| | GL | Sumac, Gro-Low Fragrant |
| | DL | Daylilly, Stella De Oro |
| | BC | Chokeberry, Glossy Black |
| | JN | Juniper, Arcadia |
| | K | Feather Reed Grass 'Karl Forester' |
| | HA | Hydrangea 'Annabelle' |

* See pages 57-59 for tree selection and spacing.

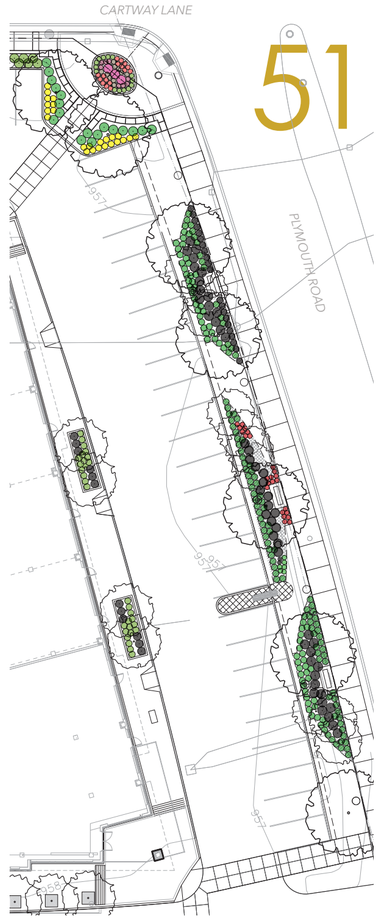





Plant Schedule - 1700 Plymouth Road

| | Shrubs and Perennials | |
|---|---|---|
| | WG | Geranium, 'Rozanne' |
| | AL | Allium 'Summer Beauty' |
| | PD | Prairie Dropseed |
| | SD | Sedum, Matrona |
| | GL | Sumac, Gro-Low Fragrant |
| | DL | Daylilly, Stella De Oro |
| | BC | Chokeberry, Glossy Black |
| | JN | Juniper, Arcadia |
| | K | Feather Reed Grass 'Karl Forester' |
| | HA | Hydrangea 'Annabelle' |
| | RS | Rose, Carefree Wonder |
| | T | Tulip Mix |
| | A | Astilbe 'Vision in Red' |
| | O | Fern, Ostrich |
| | P | Hosta Fragrant |
| | D | Daffodils |
| | DBH | Bush Honeysuckle, Dwarf |
| | SP | Spirea, Anthony Waterer |

* See pages 57-59 for tree selection and spacing.



# Corner Planting List

**Deciduous Shrubs**

| | |
|---|---|
| Chokeberry, Glossy Black | *Aronia melanocarpa 'Elata'* |
| Rose, Carefree Wonder | *Rosa 'meiptac'* |

**Perennials**

| | |
|---|---|
| Feather Reed Grass 'Karl Forester' | *Allium 'summer beauty'* |
| Daylily, Stella de Oro | *Hemerocallis 'stella de oro'* |
| Prairie Dropseed | *Sporobolus heterolepis* |

**Bulbs & Groundcover**

| | |
|---|---|
| Tulip Mix | *Tulip Mix* |


FEATHER REED GRASS 'KARL FORESTER'


STELLA DE ORO DAYLILLY


TULIP MIX


CAREFREE WONDER ROSE


PRAIRIE DROPSEED


CHOKEBERRY



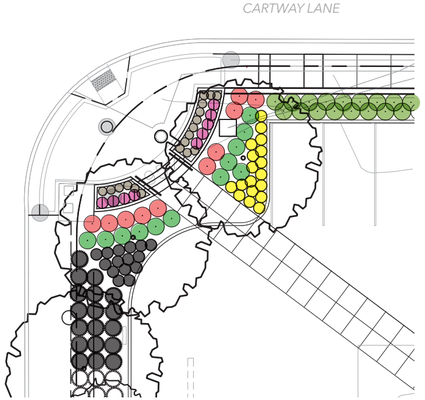
# Corner Planting Precedents

Plant Schedule - 1700 Plymouth Road

| | Enlarged Planting Plan |
|---|---|
| WG | Geranium, 'Rozanne' |
| AL | Allium 'Summer Beauty' |
| PD | Prairie Dropseed |
| SD | Sedum, Matrona |
| GL | Sumac, Gro-Low Fragrant |
| DL | Daylilly, Stella De Oro |
| BC | Chokeberry, Glossy Black |
| JN | Juniper, Arcadia |
| RS | Rose, Carefree Wonder |
| T | Tulip Mix |
| A | Astilbe 'Vision in Red' |
| O | Fern, Ostrich |
| P | Hosta Fragrant |
| D | Daffodils |
| DBH | Bush Honeysuckle, Dwarf |
| SP | Spirea, Anthony Waterer |


Plant Schedule - 1700 Plymouth Road

| | Enlarged Planting Plan |
|---|---|
| WG | Geranium, 'Rozanne' |
| SP | Spirea, Anthony Waterer |
| GL | Sumac, Gro-Low Fragrant |
| RS | Rose, Carefree Wonder |
| GL | Sumac, Gro-Low Fragrant |
| DL | Daylilly, Stella De Oro |
| BC | Chokeberry, Glossy Black |
| JN | Juniper, Arcadia |
| K | Feather Reed Grass 'Karl Forester' |
| HA | Hydrangea 'Annabelle' |



# Rain Gardens

Rain gardens will play both an aesthetic and stormwater management function in the Ridgedale area. Rain gardens should be integrated along major streets, including Plymouth Road and Ridgedale Drive.

Each rain garden should include a mix of species and focus on one theme or color selection.

The rain garden plant species *(pages 51-53)* have been chosen as they are low-maintenance and hearty while offering a consistent and unique planting palette.


'AUERO MARGINATA' HOSTA


'HONEYBELLS' HOSTA


OSTRICH FERN


GREAT BLUE LOBELIA



# Rain Garden Plant List*

Shady Garden

| | |
|---|---|
| *Wet Zone:* | |
| Ostrich Fern | *Mattecuccia pensylvanica* |
| Great blue lobelia | *Lobelia siphilitca* |
| Culver's root | *Veronicastrum virginicum* |
| *Upland Zone:* | |
| Astilbe 'Rhienland' | *Astilbe 'Rhienland'* |
| Lady's mantle | *Alchemilla mollis* |
| Hosta 'Auero Marginata' | *Hosta fortunei 'Auero Marginata'* |
| Hosta 'Honeybells' | *Hosta 'Honeybells'* |
| Wild geranium | *Geranium maculatum* |

**For these gardens, native plants are used in the wet zone. Both native and non-native plants are used in the upland zone.*


CULVER'S ROOT


ASTILBE ' RHEINLAND '


WILD GERANIUM

# Rain Garden Planting List*

Sunny Garden

| | |
|---|---|
| *Wet Zone:* | |
| 'Isanti' Dogwood | *Cornus sericea 'Isanti'* |
| 'Baileys Compact' Cranberry | *Viburnum trilobum 'Baileys Compact'* |
| Swamp milkweed | *Asclepias incarnata* |
| New England Aster | *Aster novae-angliae* |
| Purple Coneflower | *Echinacea purpurea* |
| Joe Pyeweed | *Eupatorium maculatum* |
| Ox-eye sunflower | *Heliopsis helianthoides* |
| Blue Flag | *Iris versicolor (Blue flag)* |
| Great Blue Lobelia | *Lobelia siphilitica* |
| Culver's Root | *Veronicastrum virginicum* |
| *Upland Zone:* | |
| Hydrangea 'Annabelle' | *Hydrangea arborescens 'Annabelle'* |
| Spirea 'Anthony Waterer' | *Spirea x bumalda 'Anthony Waterer'* |
| Yarrow 'Moonshine' | *Achillea filipendula 'Moonshine'* |
| Yarrow 'Fire King' | *Achillea millefolium 'Fire King'* |
| Butterfly Weed | *Asclepias tuberosa* |
| Coreopsis 'Moonbeam' | *Coreopsis 'Moonbeam'* |
| Purple Coneflower | *Echinacea purpurea* |
| Geranium 'Johnson's Blue' | *Geranium x 'Johnson's Blue'* |
| Ox-eye Sunflower | *Heliopsis helianthoides* |
| Daylily | *Hemerocallis* |
| Blazing Star 'Kobold' | *Liatris spicata 'Kobold'* |
| Salvia 'May Night' | *Salvia 'May Night'* |
| Little Bluestem | *Schizachyrium scoparium* |
| Sedum 'Autumn Joy' | *Sedum 'Autumn Joy'* |
| Blue Oat Grass | *Helictotrichon sempervirens* |
| Blue Fescue | *Festuca glauca* |


SWAMP MILKWEED


CRANBERRY BUSH


BLUE OAT GRASS


ISANTI DOGWOOD


BLUE FESCUE


LITTLE BLUESTEM


CULVER'S ROOT


JOE PYE WEED


DAY LILLY


OX EYE SUNFLOWER


BLAZING STAR KOBOLD


GERANIUM ROZANNE


BLUE FLAG IRIS


NEW ENGLAND ASTER


PURPLE CONEFLOWER

*For these gardens, native plants are used in the wet zone. Both native and non-native plants are used in the upland zone.

# Trees

Street trees will be a significant feature of all streetscapes in the Ridgedale area. Street trees will be installed in a zone adjacent to sidewalks, a buffer between the parking lots and buildings and the roadway. Where possible, streetscapes will include boulevard strips with trees and understory planting.

The tree list species have been divided into suitable street trees, per the City of Minnetonka forestry standards and more general trees for shade and screening. Street trees can also be used in park settings.

Street trees should promote a diverse community forest. Species selected should be selected in reference to existing street trees on the same or adjacent blocks with the intent to integrate new street trees with species already selected and grown on the same streetscape.


BLACK HILLS SPRUCE


NORTHERN RED OAK


GINKO


AUTUMN BLAZE MAPLE


SERVICEBERRY


SKYLINE HONEYLOCUST


SENTRY LINDEN


RIVER BIRCH


RED MAPLE

# Street Tree Selection*

## Deciduous Shade Trees

| | |
|---|---|
| Maple, 'Red Summer' | *Acer rubrum 'Hosr'* |
| Freeman Maple, Autumn Blaze | *Acer x freemanii* |
| Freeman Maple, Celebration | *Acer x freemanii* |
| Renaissance Reflection Birch | *Betula papyrifera 'Renci', Singe Stem* |
| River Birch | *Betula nigra* |
| Common Hackberry | *Celtis occidentalis* |
| Sugar Hackberry | *Celtis laevigata* |
| Gingko (male only) | *Gingko biloba* |
| Honeylocust, Skyline | *Gleditsia triacanthos var. inermis 'skycole'* |
| Aspen, Quaking | *Populus tremuloides* |
| Linden, Sentry | *Tilia americana 'mcksentry'* |
| Swamp White Oak | *Quercus bicolor* |
| Bur Oak | *Quercus macrocarpa* |
| Northern Red Oak | *Quercus rubra (borealis)* |

## Coniferous Trees

| | |
|---|---|
| Black Hills Spruce | *Picea glauca var. densata* |

## Ornamental Trees

| | |
|---|---|
| Serviceberry, Autumn Brilliance | *Amelanchier x grandiflora 'Autumn brilliance'* |
| Crabapple, Spring Snow | *Malus sp. 'Spring Snow'* |

**DIVERSE TREE PLANTINGS**

**The City of Minnetonka promotes a diverse community forest, per the following guidelines:*

- *no more than 10% of any one species (i.e. Bur Oak)*
- *no more than 20% from the same genus (i.e. Oak)*
- *no more than 30% from within same family (i.e. trees related to Oaks, including Beech and Chestnut trees)*


BUR OAK


CRABAPPLE


RENAISSANCE REFLECTION BIRCH

# Park Tree & Screening Selection

### Deciduous Trees - Shade

| | |
|---|---|
| Black Maple | *Acer nigrum* |
| Sugar Maple | *Acer saccharum* |
| Ohio Buckeye | *Aesculus glabra* |
| Bitternut Hickory | *Carya cordiformis* |
| Shagbark Hickory | *Carya ovata* |
| Kentucky Coffee Tree | *Gymnocladus dioicus* |
| Ironwood | *Ostrya virginiana* |
| Black Cherry | *Prunus serotina* |
| American Linden | *Tilia americana* |
| Littleleaf Linden | *Tilia cordata* |

### Deciduous Trees - Screen

| | |
|---|---|
| Box elder | *Acer negundo* |

### Coniferous Trees

| | |
|---|---|
| Black Hills Spruce | *Picea glauca var. densata* |

### Ornamental Trees

| | |
|---|---|
| Serviceberry, Autumn Brilliance | *Amelanchier x grandiflora 'Autumn brilliance'* |
| Crabapple, Spring Snow | *Malus sp. 'Spring Snow'* |


SUGAR MAPLE


OHIO BUCKEYE


BLACK MAPLE


SHAGBARK HICKORY

# Tree Spacing

Street tree spacing should be based on the needs of the particular species, placement within the street and the type of street.

Larger shade trees on major streets, including Plymouth Road and Ridgedale Drive, should be spaced 25 to 40 feet apart. Local streets, including Cartway Lane, Ridgedale Drive, and Wayzata Boulevard, may integrate smaller street tree species planted at 15 to 20 feet apart. These could include ornamental varietals.

*Trees should have a minimum of 2.5" caliber for installation.


*Fig. 47: Example of ornamental tree spacing*

# Soil Amending

The Ridgedale area requires soil amending for successful plant growth. Soil testing is recommended to aid in determining how to:

- adjust pH
- add fertility correcting chemicals
- incorporate organic amendments

In most projects in this area, engineered soil will likely be required from the back of curb due to existing soil quality. This should occur for the entire length of parking lots and other impervious surfaces with draintile connected to storm sewer manholes. Requirements may vary on a project by project basis depending on soil quality and type of project.


*Fig. 45: High-quality soil*


*Fig. 44: Example of custom blended engineered soils added to a planting area.*

# Tree Spacing | Precedents

Tree Schedule - 1700 Plymouth Road

| | Large Shade Trees | |
|---|---|---|
| | M | Maple, 'Red Summer' |
| | SW | Swamp White Oak |
| | H | Honeylocust, Skyline |
| | BP | Renaissance Reflection Birch |

Tree Spacing

Large Shade Trees: 25 to 40 feet center

Ornamental Trees: 15 to 20 feet on center - grove-like plantings (groupings are encouraged rather than one row)

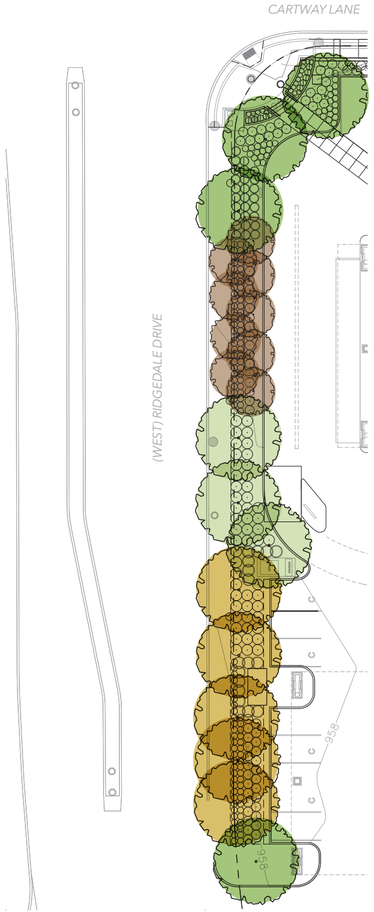



*Fig. 48: Precedent - (West) Ridgedale Pkwy & Cartway Lane (1700 Plymouth)*



Tree Schedule - 1700 Plymouth Road

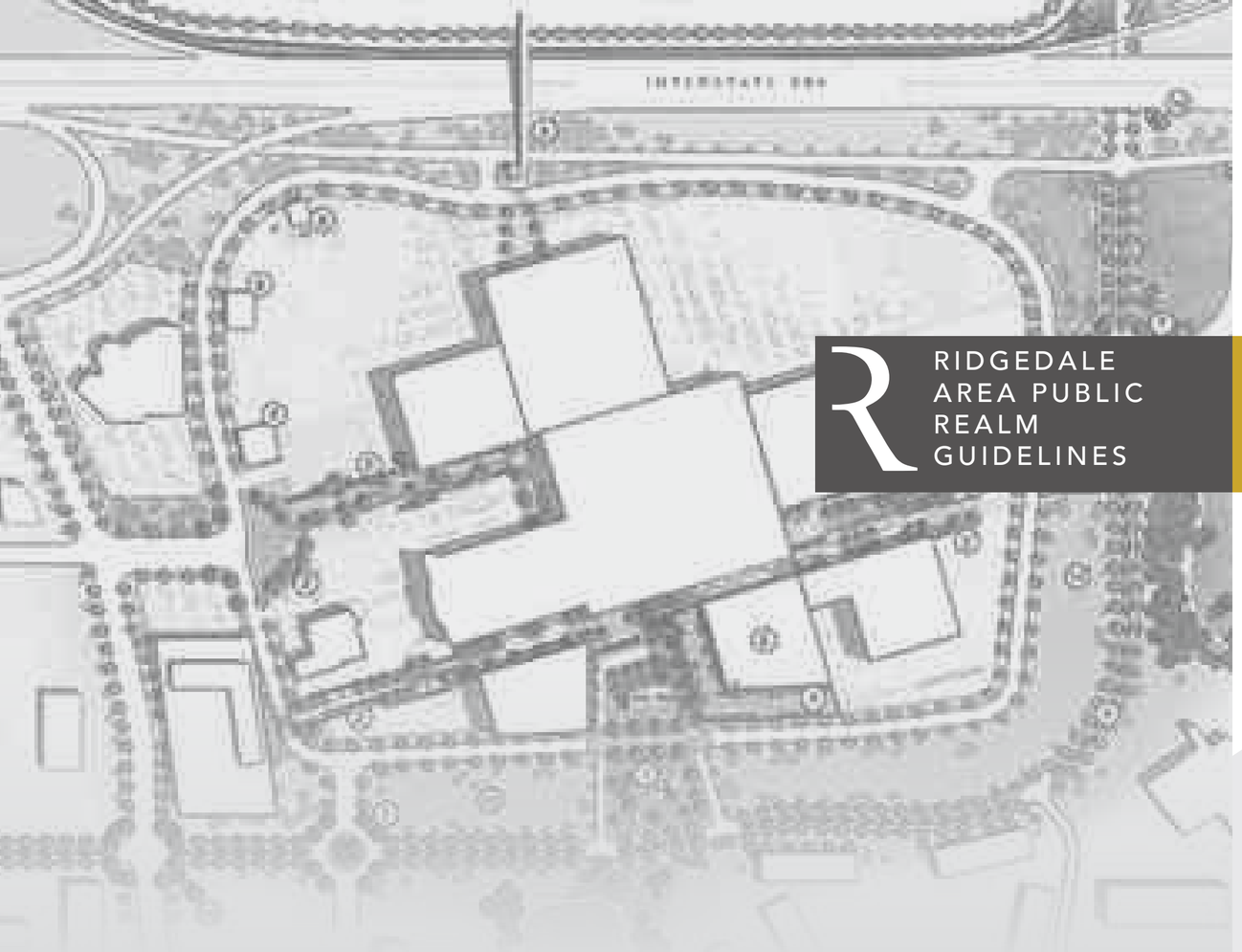
| | Large Shade Trees | |
|---|---|---|
| | QA | Quaking Aspen |
| | H | Honeylocust, Skyline |
| | BP | Renaissance Reflection Birch |

Tree Spacing

Large Shade Trees: 25 to 40 feet center

Ornamental Trees: 15 to 20 feet on center- grove-like plantings (groupings are encouraged rather than one row)


*Fig. 49: Precedent - Plymouth Road & Cartway Lane (1700 Plymouth)*



RIDGEDALE AREA PUBLIC REALM GUIDELINES



# Gateways, Signage, & Wayfinding | Chapter 5

The gateways and the public realm in the Ridgedale area can establish identity with an aesthetic and a functional role, expressed in a variety of forms.

Chapter Contents

# Chapter 5 | Gateways, Signage, & Wayfinding

## Gateways

Gateways help to establish identity of the Ridgedale area, marking a sense of arrival and create an overall distinct identity. Gateways include *(see "Fig. 53: Gateway Opportunities"*):

- overpass crossing over I-394 at Plymouth Road and Ridgedale Drive
- entrances to Ridgedale Center at Plymouth Road and two locations along Ridgedale Drive
- entering the Ridgedale area from the south along Plymouth Road

## Establishing Identity through Gateways and the Public Realm

The gateways and the public realm in the Ridgedale area can establish identity with an aesthetic and a functional role, expressed in a variety of forms, including:

- Signage and wayfinding
- Vehicular/pedestrian transition passages
- Publicly designed functional streetscape furniture (street furniture, pavement treatment, tree grates, lighting, fences, etc.)
- bus shelters, shade canopies, bridges
- natural environmental elements (i.e. landscaping, pathways).
- events, activities, and temporary works (i.e. chalk art festival, construction fence mural)
- Holiday/winter lighting on streetscapes and in plaza areas

Potential locations for places to highlight Ridgedale's identity in the Ridgedale area (*see "Fig. 56: Identity Opportunities"*):

- Plymouth Road and Ridgedale Parkway intersection
- Plymouth Road and Cartway Lane intersection
- Plymouth Road and Ridgehaven Drive intersection
- Wetland area along Ridgedale Drive, connecting to entrance of existing Ridgedale Center
- Wayfinding signage elements
- Crane Lake and wetland entrance along Ridgedale Drive
- Street furniture, lighting, pavement treatment
- Trail along Ridgedale Drive enhanced with wayfinding/interpretive signage

*Fig. 50: Holiday Lighting Precedent*

*Fig. 51: Seasonal Planters Precedent*

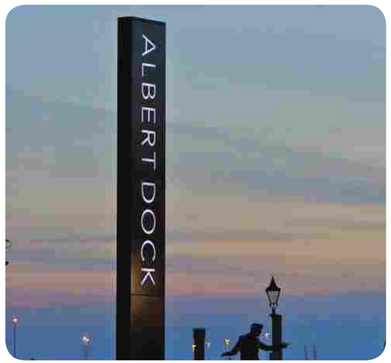



*Fig. 52: Gateway Precedent*



# Public Identity | Opportunities

Gateway Opportunities


*Fig. 53: Gateway Opportunities*

Establishing Identity in the Public Realm Opportunities


*Fig. 54: Establishing Identity in the Public Realm*

# Signage | Guidelines & Concepts

## Wayfinding

Wayfinding has the function to inform people of the surroundings in the (unfamiliar) built environment. It is important to show information at strategic points to guide people in the right directions.

The Ridgedale area wayfinding signage design guidelines are in the conceptual design phase (see *"Fig. 55: Concept 1 - Wayfinding Guidelines Ridgedale Area" on page 68 and "Fig. 56: Concepts 2 and 3 - Wayfinding Guidelines Ridgedale Area" on page 70*). The wayfinding system concepts incorporate signage for both pedestrians and vehicles, including interpretive signage, landmark beacons (to note important buildings and sites), pedestrian signage, gateways, roadway signage, parking signage, and intersection signage.

The design for the wayfinding has consistent typography, type height, icons, grid design, color and material choice to create a branded wayfinding strategy. The strategy is designed to complement and enhance the existing and proposed infrastructure in the area, including the Ridgedale Mall Center.

Wayfinding implementation can happen in phases. In some cases, the signage can be applied immediately to existing infrastructure, with additional signage added as future development takes place.

The signage concepts will go through City of Minnetonka review.

### Wayfinding Goals

- Design signs that reflect the character of the area.
- Design signs that complement but are distinct from the existing signage in the area.
- Establish flexible guidelines that can be adopted in versatile ways.



## CONCEPT 1

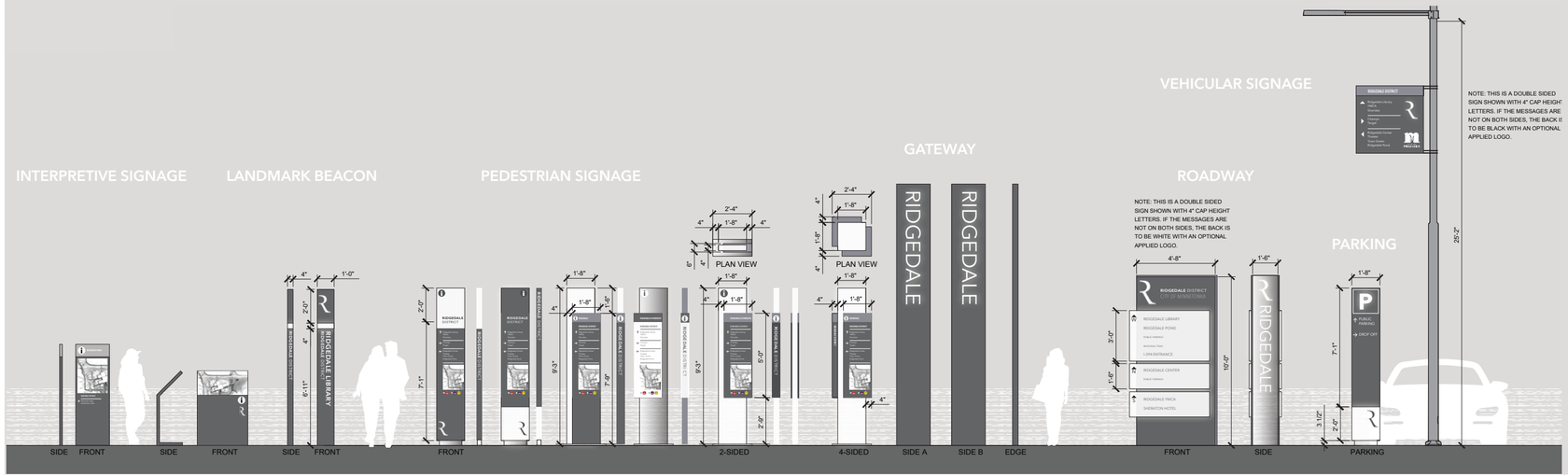
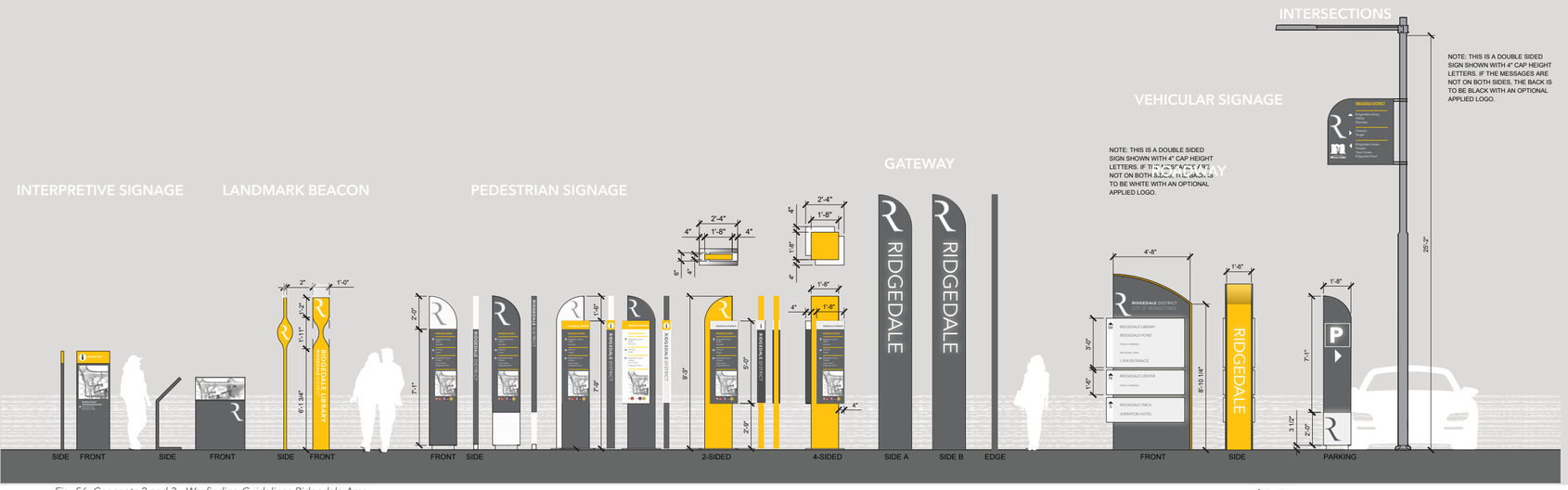



*Fig. 55: Concept 1 - Wayfinding Guidelines Ridgedale Area*

## CONCEPT 2




## CONCEPT 3

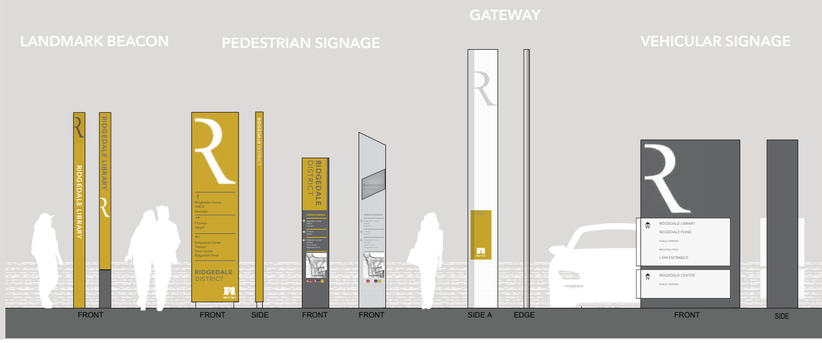



*Fig. 56: Concepts 2 and 3 - Wayfinding Guidelines Ridgedale Area*

RIDGEDALE
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# Site Furnishings & Lighting | Chapter 6

It is the intent of these public realm guidelines to create a consistent, coordinated visual theme throughout the Ridgedale area.

Chapter Contents

# Chapter 6 | Site Furnishings & Lighting

## Coordinated Furnishing Strategy

It is the intent of these public realm guidelines to create a consistent, coordinated visual theme throughout the Ridgedale area. Placement and selection of site furnishings and lighting are based on principles of simplicity and repetition, and visual language that is compatible with the Ridgedale Center.

All furniture, tree grates, paving, planters, and light fixtures should be consistent throughout the entire Ridgedale area, on all streets designated in these guidelines. All benches and receptacles should be permanent, for all season use and enjoyment. The public realm can be augmented seasonally by planters, flower baskets, banners, and holiday and event lighting.

While an increased level of pedestrian amenity and comfort is desired, furniture placement should not create visual clutter. Waste receptacles per intersection should be limited to two on opposite corners and one mid-block when urban blocks exceeds 130 feet. Bike rings should be consolidated in groups in the furniture zone and should be spaced 3 feet apart.



# Lighting

A family of LED lighting fixtures has been selected for the Ridgedale area, as highlighted in the 1700 Plymouth Road project. There are two sizes of fixtures - parking lighting with a 25 foot pole with single fixtures and sidewalk, pedestrian lighting with a 20 foot pole with a single fixture.

The fixtures are contemporary in character with flexibility to adapt size, arm extension length, and accessories like banner brackets to suit both streetscape and pedestrian applications. For consistent identity, the lighting standard should be used along streets as they redevelop as well as in park settings. Pedestrian scale lighting should be integrated into plaza areas and busier pedestrian streets, including Plymouth Road and Ridgedale Drive.

### Street Pedestrian Light

Manufacturer: BEGA or approved equal

Model: 77 186-120/277V-K3-Silver

Color: Silver

Pole: 1708GP - Silver

*Fig. 58: Street Pedestrian Light*

### Parking Light

Manufacturer: BEGA or approved equal

Model: Pole Top Luminaire, 99515, single

Color: Graphite


*Fig. 57: Parking Light - Bega Pole Top Luminaire*

# Bicycle Racks

The preferred bike rack is a simple rectangle loop design, with the preferred location between trees and adjacent to parking and bicycle lanes. Bicycle racks should be located within close proximity of building entrances.

The preferred model is the 'Emerson Bike Rack' by Landscape Forms. These bike racks can hold two bikes and can be arranged in groups.

### Bike Rack

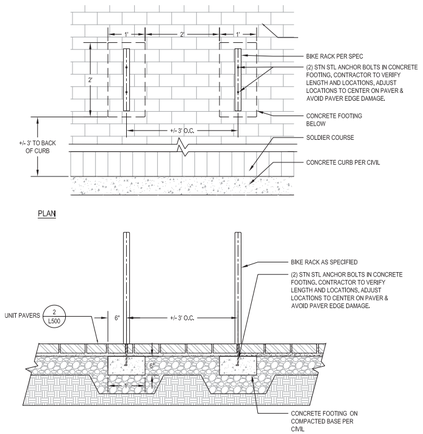
Manufacturer: Landscape Forms or approved equal

Model: Emerson Bike Rack

Color: Silver

Mounting: Surface Mount

Dimensions: 4" x 20" x 30"






# Benches

Seating should be incorporated into the public realm along sidewalks and in plaza areas. Options should include arms to accommodate accessibility needs.

The preferred model is the 'Harpo' by Landscape Forms. Benches should be placed at least 500 feet along major roadways, including Plymouth Road and Ridgedale Drive.

### Bench

Manufacturer: Landscape Forms or approved equal

Model: Harpo, 69" Length, Backed, Wood Slats

Color: Metallic

Mounting: Surface Mount or Embedded

Dimensions: 17" x 69" x 31"

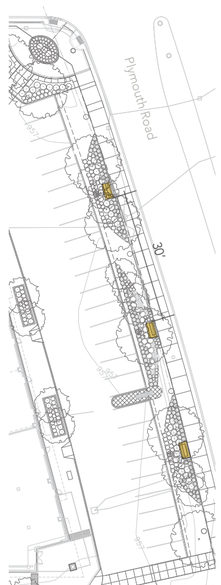



*Fig. 59: 1700 Plymouth Road Precedent: Bench placement along Plymouth Road*

# Waste Management

The standard waste management receptacle for this region is the Poe by Landscape Forms (or an approved equal). Public spaces should provide recycling receptacles in the public realm in strategic locations. These units should be the same design as the waste receptacles.

**Waste Receptacle**

Manufacturer: Landscape Forms or approved equal

Model: Poe

Color: Titanium Metal

# Bollards

Bollards may be required in the public realm, including at corner plaza areas. Lighted bollards, BEGA 77 265 (or approved equal) should be used, as they are simple and not visually overpowering.

**Bollard**

Manufacturer: BEGA or approved equal

Model: 77 265

Color: Silver

Material: Die-cast aluminum guard and crystal glass diffuser with internal top reflector



# Planters

Planters in the public realm add seasonal interest, as plantings can change throughout the year and create a continuity along the streetscape. In the spring and summer, annuals planted can add color and vibrancy along a streetscape. Winter containers can provide a colorful seasonal appeal to the landscape, using a mix of live plants, cut branches, colorful berries, and interesting evergreen foliage.

The 'Wilshire Planter' by Tournesol is a weather-resistant container that is available in a variety of sizes.

**Planter**

Manufacturer: Tournesol

Model: Wilshire Planter, 48"

Color: Shadow 425

Material: Fiberglass

RIDGEDALE AREA PUBLIC REALM GUIDELINES



# Surface Parking Lots | Chapter 7

This section provides design recommendations for surface parking lots in the Ridgedale area. This includes improving the public realm, enhancing pedestrian safety and comfort, increasing shade, enhancing the quality of landscaping, encouraging on-site stormwater management, and promoting the use of sustainable materials and technologies.

## Chapter Contents

# Chapter 7 | Surface Parking Lots

### Introduction

Typically, the emphasis in parking lot design is on accommodating vehicle movements, maximizing the number of parking spaces, and ensuring ease of maintenance and servicing. Once these functional criteria are satisfied, "left-over" spaces may or may not be landscaped or dedicated for pedestrian use.

As a result, there are often few landscaped areas within a parking lot and those that are provided tend to be insufficient in size and design to support healthy trees and vegetation. Pedestrians are also given low priority and may be left to navigate between parked cars and across wide driveways, which presents safety concerns.

When functional requirements are the only objectives considered in parking lot design, the design outcome is generally undesirable, with poor quality landscaping, unattractive streetscapes and a lack of pedestrian safety, comfort and amenity.

Conventional surface parking lots also represent an environmental challenge. Large expanses of asphalt contribute to the urban heat island effect, which raises local air temperature, elevates smog, and, in turn, increases energy demand for summer cooling.

Traditional parking lot surfaces prevent rainwater and snowmelt from being absorbed into the soil to replenish groundwater. During storms and winter thaws, impermeable pavement can produce rapid run-off which poses flooding hazards and the risk of carrying pollutants directly into our lakes, rivers and streams.

### Purpose and Objectives

This section provides design recommendations for surface parking lots in the Ridgedale area. This includes improving the public realm, enhancing pedestrian safety and comfort, increasing shade, enhancing the quality of landscaping, encouraging on-site stormwater management, and promoting the use of sustainable materials and technologies.

Before planning and building surface parking lots, the feasibility of alternatives, such as underground or structured parking, should be considered. When these alternatives are not feasible, surface parking lots should be carefully designed to enhance the urban design and environmental conditions.

#### Surface Parking Lot Objectives

- Respect the existing or planned context
- Enhance the safety and attractiveness of the public realm (adjacent streets, parks and open spaces)
- Create direct, comfortable and safe pedestrian routes
- Provide shade and high-quality landscaping
- Mitigate the urban heat island effect
- Manage stormwater quality and quantity on-site
- Incorporate sustainable materials and technologies

*Fig. 63: Stormwater management integrated into parking lot*

*Fig. 62: Shade trees, integral planting in parking lot*

*Fig. 60: Establish direct, continuous ped. network*

*Fig. 61: Shade trees, integral planting in parking lot*



# Surface Parking Lots Design Recommemations

### Design Recommendations

#### 1. Location and Layout

- Surface parking shall be located behind or beside buildings, away from primary street frontages and street corners.
- Parking spaces should not be located between the front facade line of buildings and a street edge.
- Larger parking areas shall be divided both visually and functionally into smaller parking courts.

#### 2. Lighting

- Developers are encouraged to provide a comprehensive lighting plan for any parking lot site. Lighting should create an identity for the parking lot, enhance adjacent streets and pedestrian environments and be appropriate to the location, context and scale of the areas being lit.
- Select different luminaries with a coordinated appearance to light pedestrian pathways, parking spaces, drive aisles, building and site entrances and other relevant parking lot features.
- Provide pedestrian-scaled lighting, such as bollards or lower-scale pole fixtures along pedestrian routes.
- Lighting standards (see Chapter 6 - Site Furnishings & Lighting) should be selected from the approved chart of lighting fixtures, but can include unique lighting elements further integrated into the design.

#### 3. Other Site Elements

- Locate short- and long-term bicycle parking in highly visible, well-lit, accessible and weather protected areas. Incorporate way-finding signage as appropriate.

#### 4. Vehicle Access & Circulation

- Share driveway access between adjacent sites where feasible.
- Define street access driveways and internal vehicle routes with curbed landscaped areas, tree planting and lighting.
- Ensure unobstructed motorist and pedestrian sight distance and provide clearly marked crossings at all intersections between vehicle routes and pedestrian pathways.

#### 5. Pedestrian Access & Circulation

- Establish a direct and continuous pedestrian network within and adjacent to parking lots to connect building entrances, parking spaces, public sidewalks, transit stops and other pedestrian destinations.
- Provide at least one pedestrian route between the main building entrance and the public sidewalk that is uninterrupted by surface parking and driveways.
- All pedestrian routes within a parking lot should include:
  - a barrier-free pathway, with a minimum clear width of 6 feet (wider pathways are encouraged and may be required depending on parking lot use);
  - shade trees (or a shade structure) along one or both sides of the pathway;
  - pedestrian-scale lighting to illuminate and define the route; and
  - a clear division from vehicular areas, with a change in grade, soft landscaping and a change in surface material
- Consider installing "tables" (rolled curbs bordering slightly elevated crossings) at major internal intersections to serve as a traffic calming feature and provide pedestrian priority.
- Provide enhanced pedestrian pathways along street access driveways.
- Where pedestrian routes cross street access driveways and other major drive aisles, clearly

# Surface Parking Lots Design Recommemations

mark crossings and provide unobstructed sight distance for both pedestrians and vehicles.

### 6. Landscaping

- Retain and protect existing trees, vegetation, natural slopes and native soils and integrate these features into the overall landscape plan.
- Distribute landscaping throughout the site to soften and screen parking lot edges, reinforce circulation routes, create pleasant pedestrian conditions and maximize shade and stormwater benefits.
- Consolidate soft landscaped areas, particularly in larger parking lots, to enhance tree and plant material growing conditions.
- Landscaped areas should be designed to accommodate the following:
  - trees planted with access to at least 40 cubic yards (at 3-foot depth) of good quality soil
  - trees planted at least 5 feet from curbs, sidewalks, driveways and other hard surfaces to buffer from stress caused by salt, snow piling, vehicle overhang and compacted soils
  - all other plant material, except sod or groundcover, set back a minimum 2 feet from any curb edge to protect from vehicle overhang and mechanical damage
  - high-branching, deciduous shade trees planted evenly at 15 to 20-foot intervals (or as appropriate to the selected species) to quickly establish canopy cover
- Shrubs should be provided as landscape buffers between parking lots and the streetscape, and along adjacent, potentially conflicting land uses. Shrubs should be a minimum of 2 feet high to reduce glare from headlights, but no higher than 3 feet to preserve visual porosity.
- For parking lot edges adjacent to streets, parks or other public open space, provide the following:
  - at least one row of shade trees, spaced evenly at 15 to 20-foot intervals (or as appropriate to the selected species) for the length of the parking lot edge
  - screening, consisting of continuous planting, alone or in combination with a low decorative fence/wall or a landscaped berm. Typically, keep shrubs, fences or walls to a maximum height of 1m
  - a coordinated appearance with the existing or planned streetscape treatment outlined in this Ridgedale Public Realm Guidelines
- Incorporate soft landscaped areas and trees within the parking lot to define major vehicle and pedestrian routes, provide shade and break-up the expanse of paved areas
- All soft landscaped areas should contain suitable growing medium and be sized and designed to support healthy trees and plants (refer to Chapter 4 - Planting).

*Fig. 65: Integrate planting into surface parking lots*

*Fig. 66: Aerial view of example shade tree islands*

*Fig. 67: A soft landscaped berm lessens the appearance of parked vehicles from the street*

*Fig. 68: Establish direct, continuous ped. network*

*Fig. 64: Use light-colored, permeable paving*

*Fig. 69: Bioswale incorporated into parking lot*

- Plant high-branching deciduous trees throughout the parking lot interior to provide shade for pedestrians, vehicles and surfaces:
  - provide internal shade trees at a minimum ratio of one tree planted for every five parking spaces supplied
  - distribute internal shade tree planting such that no parking space is more than 100 feet from a tree

### 7. Surfaces

- Install decorative paving or a change in paving material/color to emphasize edges, pedestrian routes and crossings, entrances, loading areas and other special features within the parking lot.
- Limit the use of dark, impervious surfaces within the parking lot:
  - use light-colored materials, such as concrete, white asphalt or light-colored pavers, in the hardscape to reduce surface temperatures and contribution to the urban heat island effect
  - install permeable/porous pavement, such as open-jointed pavers, porous concrete/ asphalt, or turf/gravel grids, as appropriate to parking lot use and conditions
- Paving should integrate with the approved paving pattern for sidewalks along streets.

### 8. Stormwater Management

- Stormwater management features should be incorporated into the surface parking lot design including both rain garden areas, bioswales, and potential pervious paver areas.
- Minimize the extent of impermeable surfaces within the parking lot (i.e. limiting the size and number of parking spaces; limiting the width of drive aisles and looking for the opportunity to share access routes; and using permeable paving where hard surfaces are required).
- Manage rainwater and snowmelt on-site with designs that encourage infiltration, evapotranspiration and water re-use (refer to Chapter 9 - Sustainability of the Neighborhood)
  - apply a “treatment train” approach
  - use permeable paving for parking spaces, drive aisles, overflow parking, snow storage areas and other hard surfaces in the parking lot
  - plant trees, shrubs and other absorbent landscaping throughout the parking lot to provide shade and places for water uptake (refer to Chapter 4 - Planting)
  - create bio-retention areas, such as swales, vegetated islands and overflow ponds
  - include catchbasin restrictors and oil/grit separators as appropriate
  - incorporate opportunities to harvest rainwater (active or passive) from rooftops and other hard surfaces for landscape irrigation
  - Where installed, bio-retention areas should be appropriately designed and located to filter, store and/or convey the expected stormwater flows from surrounding paved areas.

### 9. Snow Storage

- Provide snow storage areas away from public streets and other areas where motorist/ pedestrian sight distance and continuous landscape screening are essential.
- Hard surfaced areas used for snow storage are encouraged to have permeable paving to retain snowmelt on-site.

*Fig. 70: Snow plowed and piled in parking lot. Consideration should be given to locating these “snow dumps”, since they will contribute a significant amount of stormwater runoff.*

RIDGEDALE AREA PUBLIC REALM GUIDELINES



# Screening Loading & Trash Areas | Chapter 8

Screening and providing land use buffers for loading and trash areas is necessary for the protection and enhancement of the environment in the Ridgedale area.

Chapter Contents

# Chapter 8 | Screening Loading & Trash Areas

### Guidelines

Screening and providing land use buffers for loading and trash areas is necessary for the protection and enhancement of the environment in the Ridgedale area.

A balance needs to be struck between concealing trash bins and loading areas and locating them conveniently enough that people will use them. Providing screening for loading and trash areas ensures reasonable compatibility between land uses of differing intensity and improves the quality of the public realm.

The purpose of this section is to set minimum standards for the protection and enhancement of the environment through requirements for the design and use of landscaping for screening loading and trash areas in the Ridgedale area.

Truck loading/material handling and trash areas shall be accommodated on-site in designated areas to minimize noise, odor, and visual blight to adjacent structures, residential properties, and public streets, including major roadways such as Plymouth Road and Ridgedale Drive.

### Design Checklist

**1. Location:**

- Trash collection areas and loading areas for deliveries and servicing are provided for and do not interfere with vehicle or pedestrian access and circulation.
- Trash storage areas shall be located and arranged to minimize visibility from adjacent road rights-of-way and residential uses. In no instance shall any trash storage area be located in a front yard.
- When access to loading spaces share a common entrance with car parking facilities they should be located as close as practical to this entrance point. This avoids service and delivery vehicles unfamiliar with the building layout needing to navigate through the parking area.

**2. Screening:**

- The following should be screened from view, can not negatively impact the appearance of the building or street, and are subject to the review and approval of the Planning Department:
  - Loading
  - Storage and service areas
  - Public utility and essential service uses and structures
  - round equipment shelters, ground-mounted transformers, generators, and HVAC units, electric sub-stations, gas regulator stations, and similar facilities
- Outdoor trash storage areas shall be completely screened from view from adjoining property and public roads. Outdoor trash storage areas shall be screened on three sides with a permanent building, opaque fence, or decorative masonry wall, not less than six feet in height or at least one foot above the height of the enclosed dumpster, whichever is taller, but not to exceed eight feet in height. The decorative masonry wall shall be composed of the same or similar material as is used on the exterior of the principal building.
- The fourth side of the trash storage screening shall be equipped with an opaque lockable, steel reinforced, self-closing gate that is the same height as the enclosure around the other three sides.

**3. Convenient:**

- Trash storage areas are provided in conveniently accessible and discreet locations for occupants and service contractors. Access to these areas should be separate from the common route in and out of the building.



# Screening Loading & Trash Area Precedents

*Fig. 71: Design Checklist 1: Loading and servicing is provided for and does not interrupt or interfere with vehicle or pedestrian access*

*Fig. 72: Design Checklist 2: Trash areas are screened from view and do not negatively impact on the appearance of the building or street*

*Fig. 73: Design Checklist 3: Refuse and recycling stations are provided in convenient yet discrete locations (Beaumont Quarter, Auckland)*

The design recommendations in this manual shall be used as inspiration and guidance for future development and planning in the Ridgedale area. *Specific implementation and approval of designs will be on a project by project basis.*

RIDGEDALE AREA PUBLIC REALM GUIDELINES



# Sustainability of the Neighborhood | Chapter 9

Sustainable approaches and technologies should be integrated into all phases of the development process in the Ridgedale area.

Chapter Contents

# Chapter 9 | Sustainiblity of the Neighborhood

The design recommendations in this manual shall be used as inspiration and guidance for future development and planning in the Ridgedale area. *Specific implementation and approval of designs will be on a project by project basis.*

### General Principles of Sustainability

1. Sustainable approaches and technologies should be integrated into all phases of the development process in the Ridgedale area, including all areas of public realm and building design. The Ridgedale area falls within two watershed districts - the Bassett Creek Watershed District and the Minnehaha Creek Watershed District.
   - Environmentally responsible detailed design, construction management, and implementation are integral components of the overall tone and theme of the development concept.
2. Long term benefits should outweigh short term gains.
   - Higher initial costs for sustainable materials and technologies will be offset by the long term benefits.
   - Developers are encouraged to fully integrate green building principles into public realm and building design.
3. The design of the public realm should incorporate environmentally sensitive and energy efficient technology and materials, such as stormwater management (*Fig. 74, Fig. 75, and Fig. 76*) and reduced light pollution measures (*"Fig. 78: Dark Sky Compliant street lighting"*).

*Fig. 74: Bioswale continuous along roadway*

*Fig. 75: Increased shade trees to mitigate urban heat island*

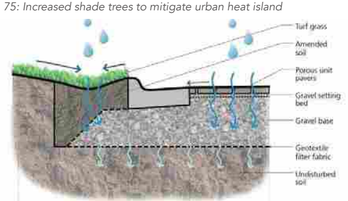



*Fig. 76: Amended topsoil to encourage infiltration of 'First Flush' off road*



# Design Elements for Sustainability

### Lighting and Solar Power

1. Light pollution reduction measures, such as cutoff LED light fixtures, or alternative 'Dark Sky Compliant' architectural lighting are encouraged for street lighting, building lighting, and along required pedestrian corridors. Building lighting shall be designed to minimize light bleed onto sidewalks or parking areas.
2. Solar power should be integrated, when feasible, into the lighting system for the streetscape and public open space.

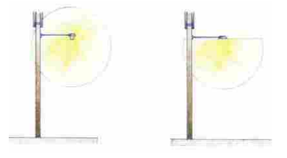



*Fig. 78: Dark Sky Compliant street lighting*


*Fig. 79: Solar powered street light*

*Fig. 77: Electric car stations*

### Sustainable Streetscape Precedent

*Fig. 80: Raingarden feature proposed along Ridgedale Drive, adjacent to the proposed shared bicycle and pedestrian trail*

# Stormwater Management

### General Principles - Bioretention

- The site should require minimal traditional catch basin / pipe infrastructure. The use of bioretention and stormwater detention / retention facilities facilitate the conveyance of stormwater effectively.
- Rain gardens shall be considered not only functional site infrastructure, but naturalized amenities that add richness, texture, and character to the open space of the site. Plant material should be selected for function and form *(see Chapter 4 - Planting).*

### Materials and Techniques

- Rain garden areas should typically comprise a minimum of 10% of the overall hardscape area to be drained. The developer is encouraged to have a maximum size of an individual garden to be 500 square feet; if a larger area requires drainage, smaller, evenly distributed gardens are more effective than a single large one.
- The developer is encouraged to avoid sedimentation in the garden by using non-erodible materials, sediment clean-outs, and flow spreaders. Run-off should be directed as sheet flow towards the rain garden. Rain gardens should have a minimum 2% cross slope. Ideal side slopes is 25% (45% maximum). Maximum ponded level is 12 inches. Maximum infiltration time for a fully ponded rain garden is 48 hours.
- Ideal rain garden bottom width dimension should be 10 feet; 2.5 feet is the minimum, with a length to width ratio of 2:1.
- Treatment soil / planting medium depth is recommended to be a minimum of 2 feet for areas without trees, and 3 feet for areas with trees. Medium should have a minimum infiltration capacity of 1.5 inches/ hour, with 0.5 inches / hour used for design purposes. A 1 inch layer of organic mulch is encouraged to minimize erosion and prevent weed growth.
- If cast-in-place concrete curbing is required, the developer should provide frequent curb cuts to facilitate drainage.
- Overflow catchment should be provided by a perforated sub-drain, check dams, and an overflow catch basin (with a perforated base for infiltration).
- Rain gardens should be planted with locally grown, locally sourced, and native plant material that is appropriate to a wet and harsh urban environment *(See Chapter 4 - Planting for Rain garden plant list)*
- A tree trench, often known as a vertical raingarden, is a system that consists of piping for water storage, structural soils and a tree. It manages stormwater runoff and promotes the use of trees in urban areas. A tree trench holds water after a rain event, providing irrigation for a tree, and preventing stormwater from entering the stormdrain. Trees can also filter out pollutants including heavy metals.



### Precedent Imagery








1. Bioswale along pedestrian trail
2. Bioswale in parking lot median
3. Rain garden adjacent to surface parking lot and sidewalk
4. Permeable Paving
5. Bioswale between sidewalk and roadway
6. Bioswale in park - a landscape amenity
7. Bioswale in parking lot median - no curb
8. Curb cuts

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# Appendix | Chapter 10

Site Furnishings Specification Sheets

Chapter Contents

# CONCORD COLLECTION

Product Data Sheet

## Poe Litter Receptacle

- Heavy duty construction (Cast and extruded aluminum).
- Litter base is cast iron for stability.
- All units are 34 gallon capacity.
- Side opening style may be specified with signage to designate collection of recyclables or waste. Choose slot, 5" diameter or standard opening.
- Black polyethylene liner ships with each unit.
- Units feature hinged side door for easy emptying.
- With or without lock.
- Shipped with freestanding glides.
- Surface mount holes provided in base.
- Recycling litter signage is available with standard wording options, available on landscapeforms.com Custom wording available for an upcharge.
- Poe ships fully assembled.

| | STYLE | DEPTH | WIDTH | HEIGHT | PRODUCT WEIGHT |
|---|---|---|---|---|---|
|  | side opening | 29" | 29" | 44" | 189 lb |
|  | side opening 5" hole | 29" | 29" | 44" | 195 lb |
|  | side opening 5" slot | 29" | 29" | 44" | 195 lb |
|  | top opening | 29" | 29" | 39" | 181 lb |

## Emerson Bike Rack

- Capacity: 2 bikes
- Cast aluminum frame.
- Cast aluminum cover plate.
- Cover plate conceals anchoring hardware and leveling glide adjustment screws
- Surface mount or embedded.
- Attachment method guards against theft.
- 4 stainless steel leveling glides are preinstalled for easy field adjustment .
- Emerson ships fully assembled.
- Bike racks must be placed 30" apart, and 24" from wall.
- Meets APBP guidelines.

| | STYLE | DEPTH | WIDTH | HEIGHT | PRODUCT WEIGHT |
|---|---|---|---|---|---|
|  | bike rack | 4" | 20" | 30" | 25 lb |









CONCORD COLLECTION

Product Data Sheet

## Hawthorne Path Light and Alcott Pedestrian Light

- Please refer to product data sheet on the more details page for technical information and specifications.

## Finishes

- All metal parts are finished with Landscape Forms' exclusive Pangard II® polyester powdercoat – a hard, yet flexible, finishing process that resists rusting, chipping, peeling and fading.
- A wide range of standard, optional and custom colors are available.

## To Specify

Visit http://pricebook.landscapeforms.com

**Designed by Robert A.M. Stern Architects**

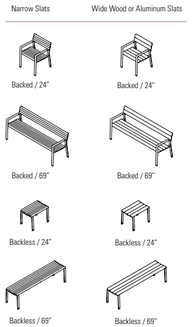




Landscape Forms, Inc. I 800.521.2546 I F 269.381.3455 I 7800 E. Michigan Ave., Kalamazoo, MI 49048

Harpo is a new bench collection from global partner Santa & Cole, a company celebrated for high design in the modernist tradition. Designed by the distinguished father-and-son team Miguel and Gonzalo Milá, the collection

includes a short and long bench, with and without back and arms. The visual language is pure, clean and architectural. The pieces are slim in profile, robust in structure. Harpo has a formed steel frame with slatted seats and backs, with a choice of wide aluminum slats or wood slats in wide and narrow widths that allows distinct aesthetic approaches. Uncommonly comfortable seating, Harpo is universally suited to streetscapes, public parks and private spaces.




SANTA & COLE

landscapeforms.com

Visit our website for product details, color charts, technical sheets, sales office locations. Download JPG images, brochure PDF, CAD details, CSI specifications

Harpo Design: Gonzalo Milá & Miguel Milá
Specifications are subject to change without notice.
Landscape Forms supports the Landscape Architecture Foundation at the Second Century level.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431 Lawndale Avenue, Kalamazoo, MI 49048

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DESIGN. CULTURE. CRAFT.



# **Wilshire** Collection

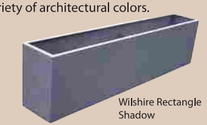
***Sometimes the simplest designs make the strongest impression***

The Wilshire Collection is nothing fancy - straight walls and a slight reveal. Put several of them together and it creates a highly effective way to configure space using live plants. The elegant straight lines disappear, emphasizing the plant, as it should be. Available in FRP fiberglass and lightweight GFRC concrete, in a huge range of sizes.

- **Lightweight FRP fiberglass and GFRC are designed to be durable despite low weight - even for heavy-traffic locations**
- **Coordinates with our self-watering container irrigation products**
- **Metallic FRP finishes will naturally weather over time, like metal containers**
- **Round, square and rectangular sizes from 18" to 120", with customization available**
- **Matching ash, trash and recyclers available**

Materials & Finishes - Metal Infused finishes (Aluminum, Bronze, Copper and Iron) combine the light weight and durability of FRP with the natural patina of real metal. The metal will oxidize naturally, depending on the location and condition of the installation. For those that love the look of the metal but want to keep the color the way it starts, we offer a Metal Matched Paint that simulates the color. Our economical standard paint finishes use a high-quality industrial grade acrylic enamel in a variety of architectural colors.

Wilshire Square Pitch



Wilshire Round MI Aluminum

Wilshire Rectangle Shadow

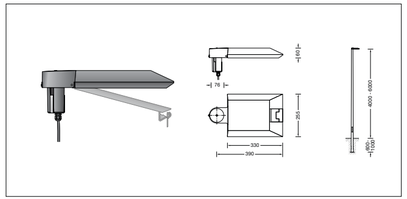
*For more information about **the Village Collection**, visit tournesolsiteworks.com/product-village collection.html*

TournesoL SITEWORKS tournesolsiteworks.com 800.542.2282

**BEGA** **99 515**

Pole top luminaire IP 66

Project · Reference number | Date




## Product data sheet

**Application**
LED pole top luminaire with asymmetrical light distribution for in-depth illumination of surfaces and smaller squares.
The used LED technique offers durability and optimal light output with low power consumption at the same time.
For mounting heights 4000 - 6000 mm.

**Product description**
Luminaire made of aluminium alloy, aluminium and stainless steel
Safety glass, antireflection-coated
Silicone gasket
Reflector made of pure anodised aluminium
Toolless closure
For pole top ø 76 mm
Inner diameter of the pole min.62 / max.70 mm
Slip fitter insert depth 90 mm
Connecting cable X05BQ-F 4 × 1 □
Cable length 6 m
LED power supply unit
220-240 V ∿ 0/50-60 Hz
DC 176-264 V
Dimmable 1-10 V
A basic isolation exists between power cable and control line
Luminaire: Protection class IP 66
Dust-tight and protection against strong water jets
Safety class II ⧈
Impact strength IK08
Protection against mechanical impacts < 5 joule
ENEC – Safety mark
CE – Conformity mark
Wind catching area: 0.03 m²
Weight: 4.4 kg

**Lamp**

| | |
|---|---|
| Module connected wattage | 23.6 W |
| Luminaire connected wattage | 26 W |
| Rated temperature | $t_a$ = 25 °C |
| Ambient temperature | $t_{a\,max.}$ = 55 °C |

**99 515**

| | |
|---|---|
| Module designation | LED-0558/840 |
| Colour temperature | 4000 K |
| Colour rendering index | $R_a$ > 80 |
| Module luminous flux | 4385 lm |
| Luminaire luminous flux | 3643 lm |
| Luminaire luminous efficiency | 140,1 lm/W |

**99 515 K3**

| | |
|---|---|
| Module designation | LED-0558/830 |
| Colour temperature | 3000 K |
| Colour rendering index | $R_a$ > 80 |
| Module luminous flux | 4285 lm |
| Luminaire luminous flux | 3560 lm |
| Luminaire luminous efficiency | 136,9 lm/W |

**Lifetime of the LED**
Ambient temperature $t_a$ = 15 °C
– at 50,000 h: L 90 B 10
– at > 500,000 h: L 70 B 50

Ambient temperature $t_a$ = 25 °C
– at 50,000 h: L 90 B 10
– at > 500,000 h: L 70 B 50

max. ambient temperature $t_a$ = 55 °C
– at 50,000 h: L 80 B 10
– at 181,000 h: L 70 B 50

**Inrush current**
Inrush current: 5 A / 100 µs
Maximum number of luminaires of this type per miniature circuit breaker:
B 10 A: 27 luminaires
B 16 A: 44 luminaires
C 10 A: 27 luminaires
C 16 A: 44 luminaires

**Article No. 99 515**
Colour temperature 4000 K.
Also available with 3000 K on request.
4000 K – article number
3000 K – article number + **K3**

Colour graphite or silver
graphite – article number
silver – article number + **A**

**Accessories**
For this luminaire we recommend the following BEGA luminaire poles:

Tapered aluminium poles · lacquered with access door and C-clamp

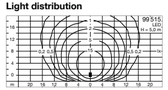
| | | |
|---|---|---|
| **70 914** | Pole with anch.section | H 4000 mm |
| **70 725** | Pole with anch.section | H 4500 mm |
| **70 915** | Pole with anch.section | H 5000 mm |
| **70 916** | Pole with anch.section | H 6000 mm |
| **70 791** | Pole with baseplate | H 4000 mm |
| **70 792** | Pole with baseplate | H 4500 mm |
| **70 794** | Pole with baseplate | H 5000 mm |

Cylindrically stepped aluminium poles, lacquered with door und C rail

| | | |
|---|---|---|
| **70 901** | Pole with anch.section | H 4000 mm |
| **70 903** | Pole with anch.section | H 5000 mm |
| **70 905** | Pole with anch.section | H 6000 mm |
| **70 900** | Pole with baseplate | H 4000 mm |
| **70 902** | Pole with baseplate | H 5000 mm |
| **70 904** | Pole with baseplate | H 6000 mm |

For suitable connection boxes please see the instructions for use of the luminaire poles.

**Light distribution**








Type: Street
Project: 1700 Plymouth Road, Highland
Options:
Modified:
Luminaire: 1708GP-Silver
Fixture EPA:
GCO: ❑
GFI: ❑

Approval:

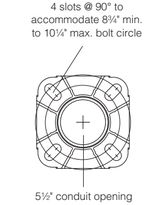
## 1708GP 3" – 6" Tapered round fixed base pole

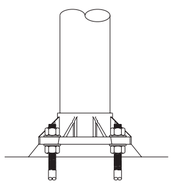
Wall thickness: .156"

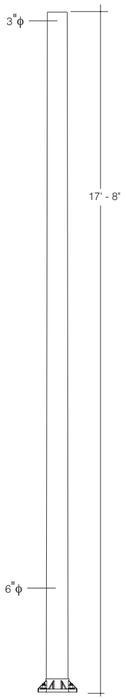
Shaft: Extruded from all new seamless 6063 aluminum alloy tubing, heat treated to a T-6 condition. Each shaft shall have a minimum 24" straight section at the top to accommodate BEGA gantry system clamps

Anchor base: Cast aluminum A356 alloy, heat treated to a T-6 condition. The anchor base casting and shaft shall be joined by a continuous circumferential weld at the inside bottom of the anchor base.

Anchor bolts: Four (4) ¾"x17" galvanized steel anchor bolts supplied with double nuts and flat washers. Maximum bolt projection 3½". A356 aluminum nut covers shall be included with each anchor base, unless otherwise specified.






## Disclaimer

BEGA/US warrants the specific anchor bolts and pole combination according to the product number(s) and description(s) indicated on this submittal sheet. Structural changes to the pole requested by the customer, including changes to pole length, may affect the compatibility of the anchor bolts and corresponding poles. BEGA/US is not responsible for the incompatibility of the anchor bolts and poles resulting from such structural changes without review by the BEGA/US engineering department. This includes, but is not limited to, any labor charges, charges for replacement materials and shipping.

**BEGA/US** 1000 BEGA Way, Carpinteria, CA 93013 [P] 805·684·0533 [F] 805·684·6682


CITY OF MINNETONKA

**Housing/fitter:** Heavy die-cast aluminum construction with heavy gauge .080" spun aluminum double wall cap with threaded device removable for relamping, finished white inside. Integral fitter slip fits 3" O.D. pole top and is secured by four (4) socket head stainless steel set screws threaded into stainless steel inserts. Die castings are marine grade, copper free (≤ 0.3% copper content) A360.0 aluminum alloy.

**Enclosure:** Tempered ⅛" clear glass, downlight only. Full one piece hydroformed specular anodized reflector directs light downward.

**Electrical:** 51.6W LED luminaire, 58 total system watts, -30° C start temperature. Integral 120V through 277V electronic LED driver, 0-10V dimming. Standard LED color temperature is 4000K with a >80 CRI. Available in 3000K (>80 CRI); add suffix K3 to order.
**Note:** Due to the dynamic nature of LED technology, LED luminaire data on this sheet is subject to change at the discretion of BEGA-US. For the most current technical data, please refer to www.bega-us.com.

**Finish:** All BEGA standard finishes are polyester powder coat with minimum 3 mil thickness. These luminaires are available in four standard BEGA colors: Black (BLK); White (WHT); Bronze (BRZ); Silver (SLV). To specify, add appropriate suffix to catalog number. Custom colors supplied on special order.

**UL** listed for US and Canadian Standards, suitable for wet locations. Protection class: IP54.

**Weight:** 32.2 lbs.

**Effective Projection Area (EPA):** 1.6 ft²

**Luminaire Lumens:** 4020

Type: Street
BEGA Product: 77 186-120/277V-K3-SILVER
Project: 1700 Plymouth Road, Highland
Voltage:
Color: Silver
Options:
Modified:


Pole-top luminaires · **asymmetrical**

| | Lamp | LEED | A | B |
|---|---|---|---|---|
| **77 186** | 51.6W LED | LZ-2 | 28 | 14¼ |

Recommended for use with 18' to 20' poles.






BEGA Lichttechnische Spezialfabrik
Hennenbusch · D - 58708 Menden

**BEGA**

Product data sheet | Garden and pathway luminaire | IP 65 | **77 265**

Project · Reference number | Date



**Application**
LED garden luminaire with directed light for the illumination at house entrances, paths, terraces and beds.
The used LED technique offers durability and optimal light output with low power consumption at the same time.

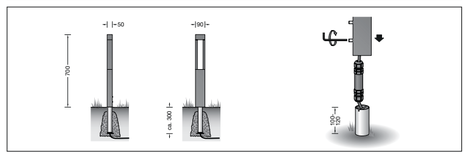
**Product description**
Luminaire made of aluminium alloy, aluminium and stainless steel
Clear safety glass
Silicone gasket
Luminaire with anchorage unit for fixing in the soil
The anchorage unit is made of galvanised steel according to EN ISO 1461
Line connector for mains supply cable up to ø 13 mm · max. 3 × 2,5□
LED power supply unit
220-240 V ∿ 0/50-60 Hz
Safety class I
Protection class IP 65
Dust-tight and protection against water jets
Impact strength IK06
Protection against mechanical impacts < 1 joule
CE – Conformity mark
Weight: 2.8 kg

**Inrush current**
Inrush current: 20 A / 170 µs
Maximum number of luminaires of this type per miniature circuit breaker:
B 10 A: 31 luminaires
B 16 A: 50 luminaires
C 10 A: 52 luminaires
C 16 A: 85 luminaires

**Light technique**
Luminaire data for the light planning program DIALux for outdoor lighting, street lighting and indoor lighting as well as luminaire data in EULUMDAT- and IES-format you will find on the BEGA web page www.bega.com.
Recommended light point interval 4 m

**Lamp**

| | |
|---|---|
| Module connected wattage | 4.2 W |
| Luminaire connected wattage | 5.8 W |
| Rated temperature | $t_s$ = 25 °C |
| Ambient temperature | $t_{s\,max}$ = 45 °C |
| Module designation | 2x LED-0234/930 |
| Colour temperature | 3000 K |
| Colour rendering index | $R_a$ > 80 |
| Module luminous flux | 510 lm |
| Luminaire luminous flux | 156 lm |
| Luminaire luminous efficiency | 26,9 lm/W |


**Lifetime of the LED**
Ambient temperature $t_s$ = 15 °C
– at 50,000 h: L 90 B 10
– at > 500,000 h: L 70 B 50

Ambient temperature $t_s$ = 25 °C
– at 50,000 h: L 90 B 10
– at 396,000 h: L 70 B 50

max. ambient temperature $t_s$ = 45 °C
– at 50,000 h: L 70 B 10
– at 118,000 h: L 70 B 50

**Article No. 77 265**
Colour graphite or silver
graphite – article number
silver – article number + **A**

**Accessories**
**70 730** Distribution box
The distribution box is meant for installation in the soil and allows a junction from the supply cable to the luminaire and through-wiring to the next luminaire.
After the electrical connection the distribution box is filled up with gel and closed.