# Acknowledgments

## City of Des Moines
- City of Des Moines
  - Kyle Larson
  - Pam Myhre
  - Matt Anderson
  - Kathy Kahoun
  - Gary Fox
  - Jennifer Rouse

## Drake Neighborhood Association
- David Courard-Hauri
- Bill Lahay
- Larry James, Jr.

## Drake Business Association
- Jennifer Sayers

## Drake University
- Vicky Payseur
- Jacqui DiGiacinto
- Dolph Pulliam
- Hans Hanson
- Jolene Schmidt
- Nancy Strutztenberg
- Rhea Ann Frost
- John Smith

## Consulting Team
- Genus Landscape Architects
  - Brett Douglas, ASLA
  - Jennifer Richmond, ASLA
  - Laura Peters, ASLA
  - Beau Johnson

- Kirkham Michael Engineers
  - Shawn Foutch, PE
  - Scott Almeida

- Horticulture Consultant
  - Lynn Kuhn, Perennial Gardens

# Table of Contents

1. **Planning Process**
   - 3
   - Summary of Recommendations
   - 4
   - Planning Context
   - 5
   - Site Analysis
   - 6
   - Public Process
   - 8

2. **Planning Vision**
   - 10
   - Project Objectives
   - 11
   - Kit of Parts
   - 13
   - Site Furnishings
   - 14
   - Median Plant Palette
   - 16
   - Plant Palette
   - 17

3. **Neighborhood Gateways**
   - 18
   - Gateway Locations
   - 19
   - Gateway Concepts
   - 23

4. **Forest Avenue Vision Plan**
   - 24
   - Forest Avenue Plan
   - 26
   - Concept Sections
   - 30

5. **University Avenue Vision Plan**
   - 33
   - Drake University District Streetscape
   - 34
   - Drake University District - Median Concepts
   - 40
   - Dogtown District Streetscape
   - 43
   - Dogtown Parking Study
   - 43
   - East Gateway District Streetscape
   - 44

**Appendix A:** Opinion of Probable Cost
The Drake Area Streetscape Project is intended to provide direction for better integrating Drake University with the Drake neighborhood and surrounding commercial areas. As a result of a community supported vision developed during the project’s planning process, the concept plan provides a framework to accomplish this overarching goal. To begin, gēnus [landscape architects] was retained to facilitate a dynamic planning process as the lead consultant. This report documents our team’s five month process, which began in October of 2006. Background was sought through review of previously completed studies, interviews with local experts, meetings with project Stakeholders and formal Public Input Opportunities.

The recommendations strive to achieve a balance between the needs and desires of the Drake Neighborhood Association, the Drake Business Association and Drake University. Mutually beneficial improvements are proposed and may be phased to accommodate available funding, spur momentum for continuing future phases, address the most pressing issues identified during the Stakeholder and Public input component of the process, and ultimately create a district distinctly recognizable and welcoming to all.

Central features of this document include Vision Plans for both University Avenue and Forest Avenue, recommendations for Gateway locations, and a palette of materials for both plantings and site furnishings. Once implemented, the consistency found within the components of the Concept Plan will provide the framework needed to achieve a more visually and physically integrated Project Area.
SUMMARY OF RECOMMENDATIONS

To meet the goals and objectives expanded upon within this document, the Consultant Team offers the following recommendations in an effort to assist Stakeholders with the prioritizing and advancing implementation.

These recommendations are made with the understanding that the overall concept plan will be implemented in phases and that no improvement should preclude or make more difficult the following phase. Also significant to this effort is addressing the differing needs and desires of the multiple Stakeholder groups.

1 Safety
The enhanced safety, especially when concerning the interface between pedestrians and vehicles, was a constant theme noted within all opportunities to gain insight from Stakeholders and the public. Thus attention to improving both actual and perceived safety and comfort within pedestrian environments is the top priority of all components of this concept plan.

Included in this area is the introduction or enhancement of crosswalks, lighting, appropriate parking and sidewalk setback dimensions and the introduction of a median in key sections of University Avenue. These improvements are documented within both the Forest and University Vision Plan sections of this document.

2 Bury Utilities
A second constant theme noted by both Stakeholders and the public is the need to provide a more aesthetically dynamic environment. This statement can be interpreted in many ways; however, a consensus was reached that within much of the University Avenue corridor, the overhead utility lines should be placed underground as part of the initial phase to ease the installation of future improvements.

3 Memorial Park
In an effort to address the lack of public open space within the heart of the study area, the Consultant Team proposes the introduction of a park-like setting on the site of the former Memorial Hall. Per the most recent Drake University Master Plan, this space is slated to be future surface parking. By compromising on the amount of parking, this space could develop into a community amenity that unites the entire neighborhood, University population and Dogtown business district. This recommendation is detailed further within the University Avenue Vision Plan - Drake University District section.

4 Public Art
Quickly seeing measurable results to build support for current work and momentum for future phases is the third common request. The Consultant Team has addressed this by recommending the incorporation of public art within the Project Area very early in implementation. We support the idea of a kick-off project, such as bus stop shelter design competition, to reach out to the greater community for the benefit of the Drake Area.

5 Dogtown Parking
Increasing the amount of readily available parking within the Dogtown district will be essential to this special area’s long term success. Although multiple modes of transportation are encouraged within this Concept Plan, automobile parking is recognized as a necessary component to support the Drake Area’s businesses. Potential parking additions are elaborated on within this document on page 51, Dogtown Parking Study. It should be noted that no site survey was available for this study, thus it is a conceptual plan meant to spur additional design study in a subsequent project.

6 Bike Route on Forest Avenue
Supporting multi-modal transportation opportunities is a priority of this Concept Plan. Thus when the Consultant Team discovered a missing link within the City’s bicycle route system, we were compelled to address this issue. With the expansion of Drake Stadium, a connection between the designated bicycle routes on 34th and 25th Streets was lost. Further traffic analysis is needed, but conceptually an east-west route completing this connection is expressed within the Forest Avenue Vision Plan section of this report. This element of the overall Concept Plan was supported by 100% of all who responded to the questionnaire provided at the second public meeting.

7 Neighborhood Markers
As part of the Consultant Team’s initial scope, locations and implementation potential for district-scale gateways was addressed. During this process we were informed by the Drake Neighborhood Association informed that a need for neighborhood-scale markers had been identified. Initial locations and design were discussed within the organization and shared with the Consultant Team. It is recommended the design and implementation of these markers at locations identified jointly by the neighborhood association and Consultant Team be completed.

8 Drake University Front Lawn Succession Plantings
The University’s campus is a green oasis in an area dominated by hardscape. The original elms and oaks are either no longer part of the fabric of campus or are very quickly approaching maturity. A focused planting effort to support the long-term vitality of Drake’s front lawn canopy is suggested. This effort could begin with an inventory of existing vegetation and an evaluation of its condition, then culminate in a phased plan to achieve long-term success.
Prior to our on-site data collection, the Consultant Team obtained and reviewed the following documents as a source for base information and inventory data:

- Drake University Campus Master Plan – 1996
- Drake University Campus Master Plan – 2005
- Forest Avenue Corridor Market Assessment, 2005
- A History so Rich: Drake Neighborhood Virtual Tour
- Drake University Student Housing Project Drawings
- Hubbell Development
- City of Des Moines Mapping – Aerial, GIS
- City of Des Moines Comprehensive Plan and Zoning Ordinances
- Sanborn Maps (Insurance Maps, 1890s – 1950s)
- Trolley Line Maps & Drake University Historic Register
- Application
- Drake Stadium Renovation Plans

In addition to these documents, initial site impressions and first-hand experiences are extremely valuable in creating a successful streetscape concept plan, particularly for an area with such abundant cultural and historic resources. Interviews with local experts including civic leaders, neighborhood advocates and a historian were conducted to gain further insight into the nuances of the Drake Area.

Taking full advantage of each of these efforts and resources helped to shape the planning process early in this endeavor and improve the Consultant Team’s knowledge of existing and proposed land use conditions; traffic volumes and proposed road improvements; natural physical conditions such as topography, and soil conditions; and the Project Area’s settlement and development patterns.
SITE ANALYSIS

In addition to the importance of understanding the Project Area’s rich history, a thorough knowledge of its existing conditions and approved future improvements is equally essential to a successful concept plan and resulting implementation. Extending this review beyond the Project Area boundaries is key to gaining a clear picture of the true potential of Concept Plan recommendations.

The composite site inventory graphic shown to the right is a compilation of all layers examined during review of previously prepared, related planning studies and site reconnaissance gathered in the field. Diagrams further to the right feature individual layers, expressing the patterns and exposing shortfalls of the Project Area’s existing conditions. Identification and inventory of the following were explored during site analysis:

- Overhead Utility Lines
- Identity & Wayfinding Signage
- Traffic Signalization & Crosswalks
- Vegetation Mapping
- Pavement & Drainage Conditions
- Site Furnishings

Noteworthy realizations and recommendations resulting from the site analysis include:

- Location of appropriate gateways and potential hierarchy of neighborhood-scale versus district-scale improvements.
- Lack of existing east-west bicycle route connection between 25th and 34th Streets.
- Lack of street trees along Forest and University Avenues.
- Need for succession tree plantings at numbered streets.
- Ability to reinforce potentially significant connections between destinations within the Project Area.
- Need to address the visual impact of the extensive areas of surface parking through various screening methods.
- Significance of University Avenue transit corridor and its impact on Dogtown and the Neighborhood.
- Need for flexibility in accommodating potential future improvements (i.e. implementation of DART study findings, separation of combined sewer, etc.).
SITE ANALYSIS

TRANSIT & GATEWAYS

University Avenue
Forest Avenue
Gateways
Bus Route
Bicycle Trails
Long Term Bike Lane
Existing Bike Route
Existing Shared Use Trail
Planned Bike Route

FUTURE/CURRENT DEVELOPMENTS

Hubbell
Neighborhood Development Corporation

VEGETATION & PARKING

Tree-lined Streets
Vegetated Open Space
Surface Parking

PROJECT AREA DISTRICTS

Dogtown
Drake Neighborhood
Drake University

planning process

DRAKE AREA STREETSCAPE
PUBLIC PROCESS

A TRANSPARENT APPROACH TO PLANNING

Public and stakeholder input is perhaps this project’s most important task. A broadly shared sense of authorship in the plan will be key to a successful implementation. Public participation occurred at two levels:

A Stakeholder Committee comprised of representative members of all four stakeholder groups (the City of Des Moines, Drake University, the Drake Neighborhood Association and the Drake Business Association) provided key contributions and oversight through regular meetings with the Consultant Team.

Two Public Input Opportunities, which were widely advertised and open to all participants, provided a venue for broader interaction with neighbors, business owners and other invested citizens.

During the first Stakeholder Committee meeting, overall project aspirations were discussed, as were specific thoughts regarding traffic and transportation, parking, lighting, signage/identity, Dogtown/business district, University Avenue and Forest Avenue. This dialogue resulting in the basis for establishing Concept Plan goals and objectives:

- This is “Drake” - recognizable identity, sense of place
- Build synergy between the Campus, Neighborhood and Business District
- Automobiles must be accommodated, but not dominate
- Embrace and foster cultural diversity
- Create pedestrian scale environments
- Embrace Drake’s neighborhood character

Additional Stakeholder Committee meetings helped to guide the decisions necessary to formulate the Concept Plan and to assist with understanding Stakeholder priorities. This insight is critical to achieving a plan best suited to how components of the project may be implemented.

The first Public Input Opportunity allowed the Consultant Team to introduce themselves to the larger neighborhood and business community. The project scope, initial goals, site analysis and gateway locations were presented and feedback given. Additionally, two important questions were answered through the vote-by-dot method:

1. Improving which project area zone should be the highest priority?
2. Which improvements are most valuable?

The second Public Input Opportunity was formatted in a way that allowed attendees the chance to visit five stations, which each featured a focus area of the project:

1. Gateways
2. University Avenue
3. Business District Parking
4. Forest Avenue
5. Site Furnishings

A Consultant Team member at each station engaged in dialogue with attendees to garner feedback. Each person was also asked to complete a handout developed especially for this meeting. This information was tabulated and presented at the final Stakeholder Committee meeting to assist with the final decisions influencing this Concept Plan.

WHAT IMPROVEMENTS ARE MOST VALUABLE TO THE DRAKE NEIGHBORHOOD?

![Image of improvement options]

<table>
<thead>
<tr>
<th>Plant Material</th>
<th>Enhanced Pavement</th>
<th>Infrastructure</th>
<th>Public Art</th>
<th>Safety</th>
<th>Signage / Wayfinding</th>
<th>Site Furnishings</th>
<th>Lighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Street Trees</td>
<td>- Crosswalks</td>
<td>- Utilities</td>
<td>- Multi-Racial</td>
<td>- Improve Low Light Areas</td>
<td>- Kiosks</td>
<td>- Benches</td>
<td>- Ornamental Posts &amp; Lamps</td>
</tr>
<tr>
<td>- Flowers / Shrubs</td>
<td>- Sidewalks</td>
<td>- Parking</td>
<td>- Whimsical</td>
<td>- Traffic Calming</td>
<td>- Banners</td>
<td>- Bike Racks</td>
<td>- Pedestrian Scale</td>
</tr>
<tr>
<td>- Hanging Baskets</td>
<td>- Streets</td>
<td>- General Pavement</td>
<td>- 2 &amp; 3 Dimensional</td>
<td>- Pedestrian Crossings</td>
<td>- Gateways</td>
<td>- Bins</td>
<td>- Vehicle Scale</td>
</tr>
</tbody>
</table>

This is "Drake" - recognizable identity, sense of place
Build synergy between the Campus, Neighborhood and Business District
Automobiles must be accommodated, but not dominate
Embrace and foster cultural diversity
Create pedestrian scale environments
Embrace Drake’s neighborhood character
WHAT WE HEARD  
Public and Stakeholder Input Summary

University Avenue
- Building on the unique history of the area is important, as is respecting the modern and contemporary introductions to the Neighborhood and University.
- Expressions should say “This is DRAKE”.
- Respecting the past is equally important as projecting a progressive image.
- Find opportunities for unique elements that express character and sense of place.

Dogtown
- Well established with logo and branding in place.
- Improved parking and access is needed to support the business community.
- An environment that is more pedestrian friendly is desired to encourage people to linger.
- Facade unification will improve identity and influence future architecture development.

Forest Avenue
- Current image is cold, boring and a challenge for pedestrians to navigate.
- A walkable connection to King School is highly desirable.
- Lacks identity and could benefit from a streetscape treatment that unifies the corridor.

Signage & Identity
- Consistent appearance assists with identity & wayfinding.
- A seamless transition between the Neighborhood and University is important.
- Build off of success of other local projects, but create own identity for this area.
- Introduce kiosks and banners to provide a venue to announce events and display signage.
- Ornamental fixtures would help strengthen identity and provide pedestrian scale.

Traffic
- Calming measures are needed to improve safety and support economic development.
- Interest in improving appearance of blockade at closed streets.
- Support improvements that encourage bus and bicycle ridership.
- Current on-street parking policy limits availability during rush hour and longer term.

Contextual Solutions
- Viewed by many as the “front door” of the University and Neighborhood.
- Burying overhead utilities is of great interest to all stakeholder groups.
- Pavement and material changes could contribute to the unique identity of the area.

WHICH SITE FURNISHING FAMILY DO YOU PREFER?

FAMILY #1 - contemporary
FAMILY #2 - traditional
FAMILY #3 - historic
FAMILY #4 - customized
The vision developed for the Drake Area Streetscape Concept Plan corresponds to a general and productive trend of building positive “town and gown” relationships across the country. With shifts in student housing arrangements and changing demographics of enrollments, the once-clear definition of campus and city have become blurred at many colleges and universities. This project is no different in its efforts to blur the lines between Drake University, the Drake Neighborhood and the business district, especially within the Dogtown blocks.

The Consultant Team has had previous opportunity to explore this town and gown condition in many places and apply appropriate precedent to inspire ideas and expand thoughts influencing this Concept Plan. Principals enhancing the planning process include:

- College and University areas offer the opportunity for a unique visual identity.
- Share the University with the City; welcome students into the community.
- Connectivity with institutional definition may present a challenge.
- Automobiles must be accommodated, but they cannot dominate.
- Pedestrian environments are highly desired.
- Universities often foster greater cultural diversity than the community at-large.
- Housing needs are varied.
DRAKE AREA STREETSCAPE

This is DRAKE

The Drake Neighborhood is a unique area of Des Moines that should be recognizably different than any other area of the City.

Take full advantage of the positive qualities that make Drake standout.

Housing
Embrace Drake’s Neighborhood Character

Establish a recognizable and consistent identity on secondary streets throughout the neighborhood.

Replant tree lined streets.

Public art as part of a neighborhood walking path.

Cultural Diversity
Celebrate and Cultivate

Support the diversity that exists among Drake University and the Neighborhood.

Support a variety of festivities year-round for all.
BUILD SYNERGY

Campus ←→ Community

- Merge the boundaries of all districts within the Project Area.
- Support becoming thought of as the “hometown” university.
- Place gateways strategically to unite these districts and to welcome people to this area.
- Draw from unique visual qualities for design inspiration.
- Include solutions to improve parking and pedestrian access.

AUTOMOBILES

Accommodate, not dominate

- Offer diversity of transit options (bike, bus, walk, car).
- Provide parking in strategic locations for bike and car.
- Reduce impact from the existing “moat” of parking around Drake campus.

CREATE PEDESTRIAN SCALE ENVIRONMENTS

- Trees
- Awnings
- Shelters
- Site Furnishings
- Public Art
- Lighting
SITE WALLS
A series of seat walls are recommended along the north side of University Avenue as a means to mitigate existing topography and protect mature trees. These walls help to define an edge to Drake University, while creating a more public feel for the campus. The walls also form niches for public art and social activities, and may be used in conjunction with paving and site furnishings to establish key nodes for identity and way-finding. The extension of site walls to the south side of University Avenue is an opportunity to integrate these forms into the fabric of the Project Area.

Bus shelters promote the use of Des Moines’ public transportation system and provide the opportunity to create an indelible first or last impression for those traveling to or from the Drake Neighborhood via bus. The bus shelter should be compatible with the architecture of the Drake Neighborhood, as well as the selected lights, benches and litter receptacles. The Consultant Team supports the idea of a public art kick-off project that includes a bus stop shelter design competition. Pre-designed shelters are also available in a variety of styles.

Existing Conditions: Drake University Campus Edge

Existing Conditions: Bluestone paving at 25th & University Avenue

Bus Shelter: Solar Powered

Bus Shelter: Traditional Design

Exemplary Image: Integration of Social Space and Creation of Edge
SITE FURNISHINGS

Pathway lighting assists in wayfinding and enhancing a sense of place unique to the Project Area.

Cooper EPIC: Typical light pole heights and potential accessories.

LED fixture exhibit an efficient lamp option with a high CRI rating.

KIM Solitaire: Traditional, pedestrian scale design compliments a wide range of architectural styles.

Lighting incorporated into site walls illuminates the walkways and plazas creating an increased sense of safety and refined aesthetic.

KIM Archetype: A Mid American approved overhead fixture for roadway lighting.

LIGHTING

Quality lighting is essential in creating safe, secure environments and can greatly enhance the aesthetic qualities of a community. These benefits could be realized in the Drake Neighborhood by replacing existing mismatched, outdated lighting with a more decorative fixture.

Several levels of lighting are recommended to serve both pedestrians and vehicles. Street lighting would be placed at intersections and at intervals of approximately 100' between corners to achieve the IES standard lighting levels for urban streets. Poles will stand +/- 28' tall and, depending on location, would be single or double-headed. Pedestrian-scale lighting with poles 12’-16’ tall in select districts supports the development of a more pedestrian-friendly corridor and lively commercial district. Both of these fixtures would be of the same family and could accommodate banners, planted baskets, signals and other appropriate accessories. Accent lighting should be encouraged to create distinctive and memorable urban spaces. All fixtures should be selected based upon their appearance, quality of light, ease of maintenance and efficiency.

The ability of a light source to reproduce accurate colors of objects being lit by the source is measured by its Color Rendering Index (CRI); higher ratings indicate a superior source. The Consultant Team understands that MidAmerican’s standard lamps are high pressure sodium (HPS), which have an inferior CRI rating in comparison to light other options such as metal halide (MH) lamps or LED lamps. In response to safety concerns raised by both stakeholders and public, MH or LED lamps, which produce “white light”, would be the preferred choice to enhance facial recognition and perceived safety by the pedestrian.
**SEATING**

Providing benches and outdoor seating opportunities are key components in creating a pedestrian-friendly environment that encourages people to linger. Stakeholders in the Drake neighborhood preferred that the character of the bench convey a traditional and timeless character that is neither historic nor trendy, respecting Drake’s unique history while continuing to promote a progressive image.


**LITTER RECEPTACLE**

Litter receptacles are essential in providing a well-maintained streetscape appearance and can contribute greatly to the overall aesthetic of a district. Litter receptacles should be concentrated near busy entrances and gathering areas such as restaurants, bus stops and entertainment venues. The litter receptacle should be of similar character as the benches.


**PLANTER**

Container plantings provide rich, seasonal displays of color and texture at the pedestrian scale. When used effectively, planters create inviting building entrances, add interest to outdoor dining areas and may be decorative barriers to impede vehicular access. Planters should include a variety of ornamental plants that can be exchanged with the seasons and may vary between districts. Custom designs would strengthen the unique character of the Drake Neighborhood and should be explored as part of a second design phase, in collaboration with key Stakeholders.
A SUSTAINABLE APPROACH TO URBAN PLANTING DESIGN

The Drake Area Streetscape Project is an opportunity to showcase how urban plantings can be colorful and dynamic, yet low maintenance. This approach to planting design originated in Europe where land is not as plentiful as in the United States. Urban plantings can be sustainable if the design responds to available resources that are defined prior to the final design phase of the project. The available resources that should be evaluated include:

- maintenance personnel
- personnel hours
- personnel training
- maintenance equipment resources

Characteristics of a Sustainable Urban Landscape

The plantings must be sustainable over time. The final planting design should be based on predetermined maintenance costs, in terms of both materials and labor. Plants should be a combination of native and ornamental hybrids, and selected according to compatible cultural requirements and growth habits. Using naturalistic plant "communities" provides a dynamic, sustainable garden while minimizing maintenance.

Maintenance Example:
8’ x 12’ area or 216 square feet
47 compatible plants plus 350-400 bulbs
Occasional weeding and selective pruning
Cut back entire area mid-March before bulbs come up

Labor per season = Approx. 5 hours
(excludes mulching, recommended every 3-4 years)

Note: Labor hours will be adjusted according to final plant selections and location.

IRRIGATION

A standard irrigation system is not recommended for this type of landscape. However, the Consultant Team does recommend installing a quick-coupler system or other type of temporary system that may be used upon installation and during the initial 1 to 2 years of establishment. Once the plants are established, the system would only be put to use during a drought and potentially in the spring to help leach salt spray from the soil.

The cost of this type of system at the time of construction will ultimately be less than the cost of mobilizing a water tank to the site during the establishment period, early spring to flush the soil of salts and during periods of drought. The use of a water tank typically produces inconsistent results at best.

SOILS

Generally speaking, the soil mix would be comprised of screened topsoil with low organic content. No compost would be added. A granular would be added for drainage, such as course sand, vermiculite or pea gravel. The soil mix could be finalized once the plants are selected for specific areas.
## TREES

- Princeton Sentry Ginkgo - *Ginkgo biloba* 'Princeton Sentry'
- Columnar Sugar Maple - *Acer saccharum* 'Columnare'
- Columnar Norway Maple - *Acer platanoides* 'Columnare'
- Dynasty Elm - *Ulmus parvifolia* 'Dynasty'
- Autumn Gold or Magyar Ginkgo - *Ginkgo biloba* 'Autumn Gold' or *Ginkgo biloba* 'Magyar'

## SHRUBS

- Crimson Pygmy Barberry - *Berberis thunbergii atro. 'Nana'
- Pears Deautzia - *Deautzia gracilis* 'Duncan'
- Gemo St. Johnswort - *Hypericum kalmianum* 'Gemo'
- Red Sprite Winterberry - *Ilex verticillata* 'Red Sprite'
- Dwarf Little Henry Virginia Sweetspire - *Spiraea virginica* 'Sprich'
- Summer Wine Ninebark - *Physocarpus opulifolius* 'Seward'
- Gro-Low Fragrant Sumac - *Rhus aromatica* 'Gro-Low'

## PERENNIALS

- Walter Funcke Yarrow - *Achillea hybrida* 'Walter Funcke'
- Blue Ice Amsonia - *Amsonia tabernaemontana* 'Blue Ice'
- Woods Series Asters - *Aster dumosus*
- False Indigo - *Baptisia 'Purple Smoke'*
- Lesser Calamintha - *Calamintha nepeta* ssp. *nepeta*
- Golden Showers Coreopsis - *Coreopsis verticillata* 'Golden Showers'
- Rubin Glow Coreopsis - *Echinacea purpurea* 'Rubin Glow'
- Striatum Hardy Geranium - *Geranium sanguineum* var. *striatum*
- Blue Star False Aster - *Kalmia angustifolia* 'Blue Star'
- Walker’s Low Catmint - *Nepeta racemosa* 'Walker’s Low'
- Husker Red Beardtongue - *Penstemon digitalis* 'Husker Red'
- Wesuwe Salvia - *Salvia nemorosa* 'Wesuwe'
- Bertram Anderson Stonecrop - *Sedum* 'Bertram Anderson'
- Aztec Gold Veronica - *Veronica prostrata* 'Aztec Gold'

## GRASSES

- Northern Sea Oats - *Chasmanthium latifolium*
- Flame Grass - *Miscanthus sinensis* 'Purpureus'*
- Heather Pride Purple Moor Grass - *Molinia caerulea* 'Heideblau'
- Fountain of Rays Moor Grass - *Molinia caerulea* 'Moorhexe'
- Northwind Switch Grass - *Panicum virgatum* 'Northwind'
- Little Bluestem - *Schizachyrium scoparium*
- Blue Moor Grass - *Sesleria caerulea*
- Dwarf Prairie Dropseed - *Sporobolus heterolepis* 'Tara'

## ANNUALS

- Alyssum - *Reseeds*
- Bronzeleaf Begonia - *Shade tolerant*
- Profusion Series Zinnia - *Dwarf*
- Victoria Blue Salvia

## BULBS

- Arctic Gold Daffodil - *Narcissus*
- Red Riding Hood - *Tulipa truncata*
- Allium - *Allium atropurpureum*
- Yellow Allium - *Allium flavum*
- Summer Beauty Allium - *Allium turgidum* 'Summer Beauty'
- Camassia - *Camassia quamash*
- Glory of the Snow - *Chionodoxa forbesii*
- Crocus - *Crocus*
- Grape Hyacinth - *Muscaria armeniacum* 'Mid-spring'

Note: These plant lists do not specify which plants are appropriate for the salt splash zone.
Neighborhoods are composed of the buildings and places in which we live, work, relax, shop and socialize. These buildings and places are parts of a complex social and cultural context. Within this context, key entry points, or “gateways”, should be encouraged along major streets and intersections to announce arrival into the Drake Neighborhood.

Neighborhood gateways serve many purposes. They begin to establish a recognizable and consistent visual identity to be found throughout the neighborhood, uniting contrasting areas with a common theme. Gateways promote city beautification and green space, and may captivate the public with artistic interest and create a more inviting atmosphere for residents and visitors alike.

Two levels of neighborhood gateways are suggested. At primary intersections along University and Forest Avenues, gateway markers should be designed with motorists, bicyclists and pedestrians in mind. Elements such as public art and plantings should be large enough in scale to be perceived at a distance by drivers. Information and directional signs should be provided that can be read and easily identified by a motorist or bicyclist who is slowed or stopped at an intersection. At secondary intersections, neighborhood markers define the entrances into the Drake Area residential neighborhoods. These markers are of a smaller scale than those at the primary entrances, but the two should be consistent in character and materials to provide a cohesive image.

90% of all who responded to the questionnaire provided at the second public meeting preferred that the gateway be lit. In response to which materials are most appropriate for gateways in the Drake Neighborhood, the incorporation of brick and feature plantings garnered the majority of interest.
GATEWAY A: BEAVER AVENUE & FOREST AVENUE
Secondary Gateway - Reaching out to NW Quadrant of Neighborhood
- Highly visible intersection
- Available green space similar to Carpenter Square (Gateway G)
- Encompasses extent of retail on Forest Avenue and residential neighborhood
- Historical significance as military route between Fort Des Moines and Camp Dodge
GATEWAY B:
19TH STREET & FOREST AVENUE

Secondary or Primary Gateway
- Possibility of assembling green space NW and NE corners
- Encompasses defined east boundary of Drake Neighborhood
- Supports walkable connection to King School from the Neighborhood
- Economic development tool for overall neighborhood - STITCH together varied elements

GATEWAY C:
31ST STREET & UNIVERSITY AVENUE

Primary Gateway
- Highly visible intersection
- Available green space at northwest and potentially northeast corners
- Gathering area already in place at southeast corner
- Streetscape improvements will work in conjunction with gateway
GATEWAY D:
25TH STREET & UNIVERSITY AVENUE

Primary Gateway

- Significant intersection in regards to both Drake University and business district / Dogtown
- Gathering area already in place at northwest corner
- Streetscape improvements will work in conjunction with gateway
- Significance as original entry to Drake University and trolley route

GATEWAY E:
19TH STREET & UNIVERSITY AVENUE

Primary Gateway

- Highly visible intersection with opportunities for low-profile median plantings
- Available green space at southeast corner
- Encompasses defined east boundary of Drake Neighborhood
- Reduces potential to exclude residences or businesses within the Neighborhood
GATEWAY LOCATIONS

GATEWAY F: 31ST STREET & KINGMAN BOULEVARD
Secondary Gateway

- Significant intersection in approach to the Drake Neighborhood from Interstate-235
- Green space available in boulevard
- Opportunity to express boundary of Kingman Place Historic District

GATEWAY G: CARPENTER SQUARE
Secondary Gateway

- Highly visible intersection
- Available green space similar to Forest Avenue & Beaver Avenue intersection (Gateway 1)
- Gathering area already in place - Carpenter Square
- Presently thought of as a gateway by the Neighborhood
Neighborhood markers must reflect the scale of the space in which they are to be located. At intersections such as that of Kingman Boulevard and 31st Street, masonry piers with an urn full of vibrant plants are suggested to announce the entrance to the Drake Neighborhood. These markers could be placed on each side of the street, as well within the median.

The size and scale of markers for primary intersections or gateways must be large enough to be recognizable by motorists on these primary streets. The column may be constructed of stone or brick and inlaid with a plaque or insignia. Decorative planters are available in a wide variety of styles. Accent lighting may also be desirable to further increase visibility of the markers.

At key secondary intersections, neighborhood markers are of a smaller scale than those at the primary entrances, but the two should be consistent in materials and provide a cohesive image. Like the primary markers, this marker may be constructed of stone or brick with a decorative planter and an identity inlay. All markers will be located outside of the intersection vision triangle for safety purposes.

A slight modification to the concept above, the option to the left incorporates an illuminated lantern, surrounded by annual plantings at the ground level for seasonal color. If lighted markers are used, a monthly power cost would be paid by the Neighborhood.
Intersection of 25th Street & Forest Avenue looking west. Should the east-west bicycle route be approved, this intersection would be its east edge. The building at the northwest corner will likely be removed in the future to allow for a more suitable view of the Knapp Center.

Intersection of 30th Street & Forest Avenue looking east at the northwest corner of Drake’s campus. Implementation of the Vision Plan would replace the standard light fixtures and poles with decorative poles and fixtures consistent with those used throughout the Project Area.

View west at 24th Street along Forest Avenue, existing conditions. With the introduction of the proposed palette of new lighting, benches, waste receptacles, bicycle racks, planters and street trees, this view will be in line with the goal of a unified and cohesive streetscape.
This 16-block corridor of Forest Avenue, between 34th and 19th Streets, can be likened to a patchwork quilt of single-family homes, multi-family residential properties, smaller scale commercial uses and University properties. Additionally, many of the University’s large destination facilities, including the Knapp Center, Drake Stadium and Field House, are located on the north side of this corridor. Events held at these require great amounts of parking, which is continuously at a premium for the University, but is felt most greatly during the surge of visitors attending sporting and entertainment venues.

Forging connections among these varied uses was a consistent theme within dialogue with the Stakeholders and Public. The importance of linkages continued during the planning process and is manifested in the resulting Forest Avenue Vision Plan. Each of the Streetscape Concepts address at least two of the three top-tier goals expressed for Forest Avenue:

- Provide a more clear and safe link between the King School and Drake University’s campus.
- Restore an east-west bicycle route connection between 34th Street and 25th Street.
- Introduce a visually consistent pallet of materials to unify the physical appearance of Forest Avenue.

Although achievable, the lofty goals outlined above require buy-in and cooperation from several different City Departments and private entities. Additionally, this portion of the Project Area will require traffic flow and safety studies to ensure that the selected alternative will provide a good level of service to both vehicles and pedestrians. Refinements to the plans, such as left turn lanes and signalized intersections will be applied to the selected alternative following these studies.
Beaver Avenue to 34th Street

- Establish gateway feature at existing islands within Forest Avenue.
- Improve vertical sight lines at intersection of Beaver and Forest Avenues.
- Southern east-bound lane becomes turn only to transition to proposed bicycle and parking lanes.
- Begin use of new light fixtures and consolidation of utility poles and overhead lines.
- Install appropriate proposed standard Drake Area site furnishings including benches, bike racks, litter receptacles and planters.

34th Street to 33rd Street

- East-west bicycle route begins on Forest Avenue at its connection to 34th Street, a designated north-south bicycle route.
- Improve vertical sight lines at intersection of Beaver and Forest Avenues.
- Introduce significant pedestrian/bicycle crosswalk at east 34th Street and Forest Avenue crossing.
- On-street parking available at all hours on the south side of Forest Avenue; eliminated on north side.
- Continue utilization of new light fixtures and consolidation of utility poles and overhead lines.
- Improve street tree canopy with infill plantings in ROW.
- Minimal width of ROW north of Forest on 34th Street.
- Minimal width of ROW north of Forest on 33rd Street.
- Minimal width of ROW north of Forest.
- Minimal width of ROW.
- Encourage / provide resources for storefront improvements, especially at 3217 to 3203 Forest Avenue.
- Implement / enforce parking lot screening requirements for commercial properties, including OPC.
- Encourage / provide resources for street-level improvements.
- Install appropriate proposed standard Drake Area site furnishings including benches, bike racks, litter receptacles and planters.

33rd Street to 32nd Street

- East-west bicycle route on Forest Avenue continues.
- On-street parking available at all hours on the south side of Forest Avenue; eliminated on north side.
- Continue utilization of new light fixtures and consolidation of utility poles and overhead lines.
- Improve street tree canopy with infill plantings in ROW.
- Minimal width of ROW.
- Minimal width of ROW.
- Minimal width of ROW.
- Minimal width of ROW.
- Encourage / provide resources for storefront improvements, especially at 3121 Forest Avenue.
- Implement / enforce parking lot screening requirements for commercial properties, including OPC.
- Encourage / provide resources for street-level improvements.
- Install appropriate proposed standard Drake Area site furnishings including benches, bike racks, litter receptacles and planters.

32nd Street to 31st Street

- East-west bicycle route.
- On-street parking available at all hours on the south side of Forest Avenue; eliminated on north side.
- Continue utilization of new light fixtures and consolidation of utility poles and overhead lines.
- Improve street tree canopy with infill plantings in ROW.
- Minimal width of ROW.
- Minimal width of ROW.
- Minimal width of ROW.
- Minimal width of ROW.
- Encourage / provide resources for storefront improvements, especially at 3121 Forest Avenue.
- Implement / enforce parking lot screening requirements for commercial properties, including OPC.
- Encourage / provide resources for street-level improvements.
- Install appropriate proposed standard Drake Area site furnishings including benches, bike racks, litter receptacles and planters.

31st Street to 30th Street

- East-west bicycle route.
- On-street parking available at all hours on the south side of Forest Avenue; eliminated on north side.
- Continue utilization of new light fixtures and consolidation of utility poles and overhead lines.
- Improve street tree canopy with infill plantings in ROW.
- Minimal width of ROW.
- Minimal width of ROW.
- Minimal width of ROW.
- Minimal width of ROW.
- Encourage / provide resources for storefront improvements, especially at 3121 Forest Avenue.
- Implement / enforce parking lot screening requirements for commercial properties, including OPC.
- Encourage / provide resources for street-level improvements.
- Install appropriate proposed standard Drake Area site furnishings including benches, bike racks, litter receptacles and planters.
• East-west bicycle route on Forest Avenue continues.
• On-street parking available at all hours on the south side of Forest Avenue; eliminated on north side.
• Continue utilization of new light fixtures and consolidation of utility poles and overhead lines.
• Improve street tree canopy with infill plantings in ROW on 32nd Street north and south of Forest Avenue.
• Minimal width of ROW north of Forest on 32nd Street continues.
• Implement proper signalization for bicycle route at intersection of Forest Avenue and 30th Street.
• Install striping to accompany current crosswalk signage at east crossing of 29th Street and Forest Avenue.
• Repair / replace brick sidewalk at 27th Street and Forest Avenue to ensure compliance with accessible surfaces requirements.
• Continue utilization of new light fixtures and consolidation of utility poles and overhead lines.
• Introduce appropriate native plantings in storm water basin creating a rain garden to improve water quality.
• Implement bus stop amenities including a shelter for both the stop on the north side of Forest Avenue and a shelter for the stop on the south side.
• Install appropriate proposed standard Drake Area site furnishings including benches, bike racks, litter receptacles and planters.

30th Street to 29th Street
• East-west bicycle route on Forest Avenue continues.
• Implement proper signalization for bicycle route at intersection of Forest Avenue and 30th Street.
• On-street parking available at all hours on the south side of Forest Avenue; eliminated on north side.
• Continue utilization of new light fixtures and consolidation of utility poles and overhead lines.
• Introduce appropriate native plantings in storm water basin creating a rain garden to improve water quality.
• Implement bus stop amenities including a shelter for both the stop on the north side of Forest Avenue and a shelter for the stop on the south side.
• Install appropriate proposed standard Drake Area site furnishings including benches, bike racks, litter receptacles and planters.

29th Street to 28th Street
• East-west bicycle route on Forest Avenue continues.
• On-street parking available at all hours on the south side of Forest Avenue; eliminated on north side.
• Continue utilization of new light fixtures and consolidation of utility poles and overhead lines.
• Improve street tree canopy with infill plantings in ROW on 29th Street north and south of Forest Avenue.
• Implement proper signalization for bicycle route at intersection of Forest Avenue and 29th Street.
• Install striping to accompany current crosswalk signage at east crossing of 29th Street and Forest Avenue.
• Implement bus stop amenities including a shelter for both the stop on the north side of Forest Avenue and a shelter for the stop on the south side.
• Install appropriate proposed standard Drake Area site furnishings including benches, bike racks, litter receptacles and planters.

3rd Street to 2nd Street
• East-west bicycle route on Forest Avenue continues.
• On-street parking available at all hours on the south side of Forest Avenue; eliminated on north side.
• Continue utilization of new light fixtures and consolidation of utility poles and overhead lines.
• Improve street tree canopy with infill plantings in ROW on 3rd Street north and south of Forest Avenue.
• Implement / enforce parking lot screening requirements for commercial properties, including Subway and McDonald’s.
• Encourage / provide resources for storefront improvements, primarily at the auto care facility.
• Continue utilization of new light fixtures and consolidation of utility poles and overhead lines.
• Install striping to accompany current crosswalk signage at east crossing of 2nd Street and Forest Avenue.
• Implement bus stop amenities including a shelter for both the stop on the north side of Forest Avenue and a shelter for the stop on the south side.
• Install appropriate proposed standard Drake Area site furnishings including benches, bike racks, litter receptacles and planters.

D R A K E  A R E A  S T R E E T S C A P E
Implement bus stop amenities including a shelter signage at east crossing of 29th Street and Forest Avenue.

Install appropriate proposed standard Drake Area site furnishings including benches, bike racks, litter receptacles and planters.

Install striping to accompany current crosswalk rows on 29th Street north of Forest Avenue.

Improve street tree canopy with infill plantings in ROW on 29th Street south of Forest Avenue.

Consolidation of utility poles and overhead lines.

Continue utilization of new light fixtures and side.

On-street parking available at all hours on the south side of Forest Avenue; eliminated on north side.

On-street parking available at all hours on the north side of Forest Avenue, eliminated on south side.

Implement proper signalization for bicycle route at intersection of Forest Avenue and 29th Street.

Install appropriate proposed standard Drake Area site furnishings including benches, bike racks, litter receptacles and planters.

Install appropriate proposed standard Drake Area site furnishings including benches, bike racks, litter receptacles and planters.

Continue utilization of new light fixtures and side.

On-street parking available at all hours on the north side of Forest Avenue, eliminated on south side.

East-west bicycle route on Forest Avenue continues.

Current on-street parking arrangement to remain on both the north and south sides of Forest Avenue.

Improve street tree canopy with infill plantings in ROW on 29th Street north and south of Forest Avenue.

Improve street tree canopy with infill plantings in ROW on 23rd Street south of Forest Avenue.

Install appropriate proposed standard Drake Area site furnishings including benches, bike racks, litter receptacles and planters.

Introduce vegetated ROW along the south side of Forest Avenue.

Implement / enforce parking lot screening requirements for commercial properties, including the Post Office and 201 Forest Avenue.

Repair / replace curb, vegetated ROW and sidewalk on the north and south sides of Forest, especially the east portions of these blocks, to achieve a consistent sidewalk width and condition.

Introduce appropriate native plantings in storm water basin creating a rain garden to improve water quality.

Install appropriate proposed standard Drake Area site furnishings including benches, bike racks, litter receptacles and planters.

Introduce appropriate native plantings in storm water basin creating a rain garden to improve water quality.

Install appropriate proposed standard Drake Area site furnishings including benches, bike racks, litter receptacles and planters.

Introduce appropriate native plantings in storm water basin creating a rain garden to improve water quality.

Install / enforce parking lot screening requirements for commercial properties, including Campus Security.

Introduce vegetated ROW at east half of blocks.

Repair / replace brick sidewalk at 27th Street to 26th Street.

Improve street tree canopy with infill plantings in ROW on 27th Street south of Forest Avenue.

Install / enforce parking lot screening requirements for commercial properties, including the print shops Christian Printers and the lot at the southeast corner of 21st and Martin Luther King Jr. Parkway.

Introduce appropriate native plantings in storm water basin creating a rain garden at terminus of 23rd Street within space.

Implement / enforce parking lot screening requirements for commercial properties, including the King School.

Install appropriate proposed standard Drake Area site furnishings including benches, bike racks, litter receptacles and planters.

Install / enforce parking lot screening requirements for commercial properties, including 21st Street to Martin Luther King Jr. Parkway.

NOTE: City-initiated redevelopment to be implemented within the properties on the north and south sides of Forest Avenue.
22nd Street to 21st Street
- Continue utilization of new light fixtures and consolidation of utility poles and overhead lines.
- Current on-street parking arrangement to remain on both the north and south sides of Forest Avenue.
- Improve street tree canopy with infill plantings in ROW on 22nd Street north of Forest Avenue.
- Implement / enforce parking lot screening requirements for commercial properties.
- Repair / replace curb, vegetated ROW and sidewalk on the east and west sides of 22nd Street to achieve a consistent curb line.
- Install appropriate proposed standard Drake Area site furnishings including benches, bike racks, litter receptacles and planters.
- Implement pocket parks or community-maintained gardens at terminus of 22nd Street within space resulting from closing the street.

21st Street to Martin Luther King Jr. Parkway
- Continue utilization of new light fixtures and consolidation of utility poles and overhead lines.
- Current on-street parking arrangement to remain on both the north and south sides of Forest Avenue.
- Improve street tree canopy with infill plantings in ROW on 21st Street north and south of Forest Avenue.
- Implement / enforce parking lot screening requirements for commercial properties, including Chick-fil-A and the lot at the southeast corner of 21st and Forest.
- Eliminate excessive curb-cuts at Christian Printers and the lot at the southwest corner of 21st and Forest; replace driveways with sidewalk and vegetation ROW.
- Introduce vegetated ROW at east half of buffer to provide buffer for pedestrians from vehicular traffic.
- Repair / replace brick sidewalk on 21st Street to ensure compliance with accessible surface requirements.
- Install appropriate proposed standard Drake Area site furnishings including benches, bike racks, litter receptacles and planters.

Martin Luther King Jr. Parkway to 19th Street
- Establish gateway feature at intersection of Martin Luther King Jr. Parkway and Forest Avenue.
- Continue utilization of new light fixtures and consolidation of utility poles and overhead lines up to east boundary of the King School property.
- Current on-street parking arrangement to remain on both the north and south sides of Forest Avenue.
- Implement / enforce parking lot screening requirements for commercial properties, including the gravel lot.
- Eliminate excessive curb cuts at the gravel lot replacing driveways with sidewalk and vegetation ROW.
- Introduce vegetated ROW along the south side of Forest Avenue to provide buffer for pedestrians from vehicular traffic.
- Install appropriate proposed standard Drake Area site furnishings including benches, bike racks, litter receptacles and planters.
FOREST AVENUE - CONCEPT SECTIONS

SUMMARY

Multi-use trail introduced between 25th and 34th Streets provides an east-west link between designated bicycle routes and facilitates stronger connection between King School and Drake University. Key points:

- Reduces travel lanes from two each way to one each way.
- Moves the south curb line 5' – 6' north to accommodate the width of the multi-use trail.
- Allows for one lane of designated on-street parking.
- Includes public art, improved lighting, crosswalks and site furnishings.
- Vegetated buffer presents opportunity for ornamental street tree plantings.
- Cost of improvements: $$$$

CONCEPT A - SUMMARY

Multi-use trail introduced between 34th and 25th Streets, with continued sidewalk improvements continuing east, provides an east-west link between designated bicycle routes and facilitates stronger connection between King School and Drake University. Key points:

- Reduces travel lanes from two each way to one each way.
- Moves the south curb line 5' – 6' north to accommodate the width of the multi-use trail.
- Allows for one lane of designated on-street parking.
- Includes public art, improved lighting, crosswalks and site furnishings.
- Vegetated buffer presents opportunity for ornamental street tree plantings.
- Cost of improvements: $$
**FOREST AVENUE - CONCEPT SECTIONS**

---

**CONCEPT B - SUMMARY**

On-street bicycle lanes introduced between 25th and 34th Streets provides an east-west link between designated bicycle routes. Key points:

- Reduces travel lanes from two each way to one each way.
- Retains the current curb line and associated infrastructure.
- Allows for one lane of designated on-street parking.
- Includes public art, improved lighting, crosswalks and site furnishings.
- Street tree succession plantings and use of decorative planters may be incorporated.
- Cost of improvements: $$

---

<table>
<thead>
<tr>
<th>VIEW</th>
<th>5’- 8’</th>
<th>+/- 10’</th>
<th>6’</th>
<th>11’</th>
<th>11’</th>
<th>6’</th>
<th>5’- 10’</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEST</td>
<td>walk</td>
<td>parking</td>
<td>bike</td>
<td>drive lane</td>
<td>drive lane</td>
<td>bike</td>
<td>sidewalk</td>
</tr>
</tbody>
</table>

---

**FOREST AVENUE - CONCEPT SECTIONS**

---

D R A K E  A R E A  S T R E E T S C A P E
**FOREST AVENUE - CONCEPT SECTIONS**

**CONCEPT C - SUMMARY**

Forest Avenue retains its current 4-lane street section for the length of the project area between Beaver Avenue and 19th Street. Key points:

- Retains the current curb line and associated infrastructure.
- On-street parking could be allowed on both sides with no rush hour restrictions, or no modifications to available on-street parking may be made.
- Includes public art, improved lighting, crosswalks and site furnishings.
- Street tree succession plantings and use of decorative planters may be incorporated.
- Cost of improvements: $

<table>
<thead>
<tr>
<th>VIEW</th>
<th>5' - 10'</th>
<th>+/- 11'</th>
<th>+/- 11'</th>
<th>+/- 11'</th>
<th>5' - 10'</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEST</td>
<td>walk</td>
<td>parking or drive lane</td>
<td>drive lane</td>
<td>drive lane</td>
<td>existing sidewalk</td>
</tr>
</tbody>
</table>
University Avenue is an interesting melange of land uses ranging from single-family homes to long stretches of Drake University properties. This corridor is highly visible and well-traveled, connecting the far ends of the City of Des Moines. The heart of this concept plan occurs along this route, between 31st Street and Martin Luther King Parkway. This 11-block area is considered by many to be the front door to both Drake University and the nexus of the Drake Neighborhood. The Streetscape Concepts address at least two of the three top-tier goals expressed for University Avenue:

- Provide a means for improved pedestrian safety.
- Integrate the University campus, Drake Neighborhood and Business District.
- Introduce a visually consistent pallet of materials to unify the physical appearance of University Avenue.

Buy-in and cooperation from several different City Departments, County Agencies and private entities will be required to realize the full potential of this portion of the Project Area. Additionally, this portion of the Project Area will require traffic flow and safety studies to ensure that the selected alternative will provide a good level of service to both vehicles and pedestrians. Refinements to the plans will be applied to the selected alternative following these studies.

Finally, because University Avenue is a major transit route with additional service being considered by DART, the selected streetscape concept must be flexible enough to accommodate the potential transit service. Plant material, site furnishings, public art, signage and other additions will not interfere with visibility or compromise pedestrian or vehicle safety.
**Plan Enlargement: Bluestone Site Wall at New Bus Shelter.** Site walls create spaces that facilitate social interaction and support the introduction of public art into the Project Area.

**Plan Enlargement: Memorial Park.** Located at the site of the former Memorial Hall, this proposed open space will provide both Neighborhood residents and University students with a public space to gather, while still addressing the University’s need for parking.

---

**Drake University District Streetscape**

**University Avenue Vision Plan**

31st to 30th Street

Phase 1 - Establish gateway feature at intersection of University Avenue and 31st Street with focus on improved crosswalks and potentially a feature at the northwest corner.

Incorporate consistent street tree plantings along 31st Avenue.

Begin vegetated parkway and consistent sidewalk on north side of University Avenue, including a seatwall at the northeast corner of 30th Street.

Begin use of new light fixtures and consolidation/undergrounding of utility poles and overhead lines on both the north and south sides of University Avenue.

On-street parking remains available during current restricted hours on the north and south sides of University Avenue following all phases of improvements.

Implement/enforce parking lot screening requirements for properties including Walgreens and Drake University.

Install appropriate proposed standard Drake Area bus stop improvements and site furnishings including benches, bike racks, litter receptacles and planters on north side of University Avenue.

Phase 2 - Begin installation of vegetated boulevard within unused sections of the existing center turn lane. Replace the curb on the north side of University Avenue.

Phase 3 - Install appropriate proposed standard Drake Area bus stop improvements and site furnishings including benches, bike racks, litter receptacles and planters on south side of University Avenue.

30th to 29th Street

Phase 1 - Continue vegetated parkway and consistent sidewalk on north side of University Avenue, including a seatwall and bluestone paving south of Goodwin-Kirk Residence Hall.

Continue use of new light fixtures and consolidation/undergrounding of utility poles and overhead lines on both the north and south sides of University Avenue.

On-street parking remains available during current restricted hours on the north and south sides of University Avenue following all phases of improvements.

Install appropriate proposed standard Drake Area bus stop improvements and site furnishings including benches, bike racks, litter receptacles and planters on north side of University Avenue.

Phase 2 - Continue installation of vegetated boulevard within unused sections of the existing center turn lane. Replace the curb on the north side of University Avenue.

Phase 3 - Install appropriate proposed standard Drake Area bus stop improvements and site furnishings including benches, bike racks, litter receptacles and planters on south side of University Avenue.
Phase 1 - Continue vegetated pathway and consistent sidewalk on north side of University Avenue, including a seatwall and bluestone paving at mid-block crossing and south of Morehouse Residence Hall.

Continue use of new light fixtures and consolidation/undergrounding of utility poles and overhead lines on both the north and south sides of University Avenue.

On-street parking remains available at all hours on the north and south side of University Avenue following all phases of improvements.

Implement / enforce parking lot screening requirements for existing Drake University parking south of University Avenue and at Campus Cleaners.

Install appropriate proposed standard Drake Area bus stop improvements and site furnishings including benches, bike racks, litter receptacles and planters on north side of University Avenue.

Phase 2 - Continue installation of vegetated boulevard within unused sections of the existing center turn lane. Replace the curbs on the north side of University Avenue.

Phase 3 - Lower grade at site of future parking structure to street level. Begin vegetated pathway and consistent sidewalk on south side of University Avenue, including a seatwall and bluestone paving at mid-block crossing and west of Campus Cleaners.

Install appropriate proposed standard Drake Area bus stop improvements and site furnishings including benches, bike racks, litter receptacles and planters on south side of University Avenue.

Phase 1 - Continue vegetated pathway and consistent sidewalk on north side of University Avenue, including a seatwall and bluestone paving south Cowles Library and at the terminus of 27th and 26th Streets.

Continue use of new light fixtures and consolidation/undergrounding of utility poles and overhead lines on both the north and south sides of University Avenue.

On-street parking remains available at all hours on the north and south side of University Avenue following all phases of improvements.

Implement / enforce parking lot screening requirements for existing Drake University parking south of University Avenue and at Campus Cleaners.

Install appropriate proposed standard Drake Area bus stop improvements and site furnishings including benches, bike racks, litter receptacles and planters on north side of University Avenue.

Phase 2 - Continue installation of vegetated boulevard within unused sections of the existing center turn lane. Replace the curbs on the north side of University Avenue.

Phase 3 - Lower grade at site of future parking structure to street level. Begin vegetated pathway and consistent sidewalk on south side of University Avenue, including a seatwall at the United Methodist Student Center and the west corner of 26th Street.

Install appropriate proposed standard Drake Area bus stop improvements and site furnishings including benches, bike racks, litter receptacles and planters on south side of University Avenue.

Memorial Park Option - Park improvements including a seatwall and bluestone paving at the east corner of 26th Street, walkways, lawn, site furnishings and parking area south of the park.

Phase 1 - Continue vegetated pathway and consistent sidewalk on north side of University Avenue, including a seatwall and bluestone paving at mid-block crossing and south of Morehouse Residence Hall.

Continue use of new light fixtures and consolidation/undergrounding of utility poles and overhead lines on both the north and south sides of University Avenue.

On-street parking remains available during current restricted hours on the north and south sides of University Avenue following all phases of improvements.

Implement / enforce parking lot screening requirements for existing Drake University parking south of University Avenue and at Campus Cleaners.

Install appropriate proposed standard Drake Area bus stop improvements and site furnishings including benches, bike racks, litter receptacles and planters on north side of University Avenue.

Phase 2 - Continue installation of vegetated boulevard within unused sections of the existing center turn lane. Replace the curbs on the north side of University Avenue.

Phase 3 - Lower grade at site of future parking structure to street level. Begin vegetated pathway and consistent sidewalk on south side of University Avenue, including a seatwall at the United Methodist Student Center and the west corner of 26th Street.

Install appropriate proposed standard Drake Area bus stop improvements and site furnishings including benches, bike racks, litter receptacles and planters on south side of University Avenue.
CONCEPT A - SUMMARY

An 18 to 20-foot wide boulevard is introduced between 31st and 25th Streets providing opportunity for improved pedestrian safety and connection between Drake’s campus, the neighborhood and business district.

KEY POINTS

- Moves the north curb line 12’ north into Drake’s campus to accommodate the width of the boulevard.
- Travel lanes remain two each way with current hours of on-street parking to remain in place.
- A consistent 7-foot wide sidewalk is provided on the north side, with the south curb and walk left in place.
- Includes public art, improved lighting, crosswalks and site furnishings.
- Burial of existing overhead utility lines is an option.
- Cost of improvements: $$$$
University Avenue retains its current 4-lane street section with the addition of a vegetated median between 31st Street and 25th Street.

KEY POINTS
- Retains the current curb lines and associated infrastructure with no modification to on-street parking hours.
- An 8 to 11-foot wide vegetated median is introduced within the sections of unused center turn lane.
- Includes public art, improved lighting crosswalks, and site furnishings.
- Burial of existing overhead utility lines is an option.
- Cost of improvements: $$$
CONCEPT C - SUMMARY

University Avenue retains its current 4-lane street section while moving the north sidewalk into Drake’s property to create a more inviting campus edge and separation between pedestrians and vehicles.

KEY POINTS

- Retains the current curb lines and associated infrastructure.
- No modifications to on-street parking hours are proposed.
- An 8 to 12-foot wide vegetated parkway with a consistent 7-foot wide sidewalk improves safety.
- Includes custom seatwalls, public art, improved lighting, crosswalks and site furnishings.
- Burial of existing overhead utility lines is an option.
- Cost of improvements: $$
This option combines attributes of Concept B and C including the vegetated median, widened north parkway and consistent sidewalk along Drake’s campus.

**KEY POINTS**

- Retains the current curb lines and associated infrastructure.
- An 8 to 12-foot wide vegetated parkway with a consistent 7-foot wide sidewalk improves safety.
- Parking pull-offs could be introduced within the parkway, with no change to available hours otherwise.
- An 8 to 11-foot wide vegetated median is introduced within the sections of unused center turn lane.
- Includes custom seatwalls, public art, improved lighting, crosswalks and site furnishings.
- Burial of existing overhead utility lines is an option.
- Cost of improvements: $$$
DRAKE UNIVERSITY DISTRICT - MEDIAN CONCEPTS

Option D

Native Perennials and Ornamental Cultivars
university avenue vision plan

D R A K E  A R E A  S T R E E T S C A P E

25th Street to 24th Street
Phase 1 - Establish gateway feature at the intersection of University Avenue and 25th Street with focus on improved crosswalks and enhanced paving.

Introduce angle parking on 25th Street. Public art, site furnishings and plantings will be included at the open areas created at intersections as a result of the additional parking. Replant missing and damaged street trees.

Continue use of new light fixtures and consolidation/undergrounding of utility poles and overhead lines on both the north and south sides of University Avenue.

On-street parking remains available during current restricted hours on the north and south sides of University Avenue following all phases of improvements.

Create seating opportunities at the northeast corner of 25th Street and within the planting area south of the Kinne Center.

Install appropriate proposed standard Drake Area bus stop improvements and site furnishings including benches, bike racks, litter receptacles, and planters on north and south sides of University Avenue.

Phase 2 - Continue installation of vegetated boulevard within unused sections of the existing center turn lane.

24th Street to 23rd Street
Phase 1 - Introduce angle parking on 24th Street. Public art, site furnishings and plantings will be included at the open areas created at intersections as a result of the additional parking. Replant missing and damaged street trees.

Continue use of new light fixtures and consolidation/undergrounding of utility poles and overhead lines on both the north and south sides of University Avenue.

On-street parking remains available during current restricted hours on the north and south sides of University Avenue following all phases of improvements.

Create seating opportunities at the northeast corner of 24th Street and within the planting area south of the Kinne Center.

Install appropriate proposed standard Drake Area bus stop improvements and site furnishings including benches, bike racks, litter receptacles, and planters on north and south sides of University Avenue.

Phase 2 - Continue installation of vegetated boulevard within unused sections of the existing center turn lane.

Plan Enlargement: Intersection of University Avenue and 25th Street. Enhanced paving enhances the sense of place for the Drake Neighborhood and Dogtown. Corner treatments incorporate plantings, seating and public art.

Plan Enlargement: Intersection of University Avenue and 25th Street. Enhanced paving enhances the sense of place for the Drake Neighborhood and Dogtown. Corner treatments incorporate plantings, seating and public art.
Assess and propose street vegetation.
- Retains the current curb lines and associated infrastructure.
- No modifications are proposed to on-street parking hours.
- Introduce vegetated edge between streetscape and apartment property.
- Introduce vegetated edge along with seating area to front of parking lot north of university.
- Burial of existing overhead utility lines is an option.

An 8 to 12-foot wide vegetated median is introduced within the sections of unused center turn lane.
- Assess and propose street vegetation.
- Retains the current curb lines and associated infrastructure.
- No modifications are proposed to on-street parking hours.
- Burial of existing overhead utility lines is an option.
The Dogtown Parking Study Options are based on information and mapping data available during the concept plan phase. Prior to selecting final option(s), a survey will be requested so that dimensions critical to safe and effective operation can be verified. Back-in angle parking will also be considered where applicable.

- **Option A**
  - Existing number of parking spaces = 0 (except on Sunday)
  - Proposed number of spaces = 12 (no restrictions)
  - Number of existing trees removed = 12

- **Option B**
  - Existing number of parking spaces = 7 (2 hr, 9 - 4 pm, M-F)
  - Proposed number of spaces = 12 (no restrictions)
  - Provides additional space at intersection for improvements
  - Number of existing trees removed = 1

- **Option C**
  - Existing number of parking spaces = 5 (2 hr, 9 - 4 pm, M-F)
  - Proposed number of spaces = 11 - 13 (no restricted hours)
  - Provides additional space at intersection for improvements
  - Existing loading area removed
  - Narrows sidewalk in front of theater and businesses
  - Number of existing trees removed = 4

- **Option D**
  - Existing number of parking spaces = 5 (2 hr, 9 - 4 pm, M-F)
  - Proposed number of spaces = 12 (no restricted hours)
  - Provides additional space at intersection for improvements
  - Number of existing trees removed = 2
  - Access to empty lot via adjacent, connected drives or alley

- **Option E**
  - Existing number of parking spaces = 11 (no restrictions)
  - Proposed number of spaces = 21 (no restricted hours)
  - Provides additional space at intersection for improvements
  - Number of existing trees removed = 4
  - Narrows sidewalk in front of businesses

- **Option F**
  - Existing number of parking spaces = 8 (2 hr, 9 - 4 pm, M-F)
  - Proposed number of spaces = 19 (no restricted hours)
  - Provides additional space at intersection for improvements
  - Number of existing trees removed = 8
  - Parallel parking on west side of 25th Street eliminated
  - Narrows sidewalk in front of businesses
University Avenue: 25th Street to 19th Street

- Utilization of new light fixtures and consolidation of utility poles and overhead lines.
- Current on-street parking arrangement to remain on both the north and south side of University Avenue.
- Improve street tree canopy with shrub plantings in ROW on 25th Street north of University Avenue.
- Encourage / provide resources for property owners to plant trees behind sidewalk along University Avenue.
- Implement / enforce parking lot screening requirements for commercial properties, including Kum & Go.
- Implement bus stop amenities including a bench for stops on the north and south side of University Avenue.
- Introduce appropriate native plantings in storm water basin creating a rain garden to improve water quality.
- Replace gravel with lawn at ROW of 23rd Street north of University Avenue.
- Introduce / provide resources for storefront improvements along University Avenue and 23rd Street.
- Improve street tree canopy with shrub plantings in ROW on 22nd Street north of University Avenue.
- Encourage / provide resources for property owners to plant trees behind sidewalk along University Avenue.
- Implement / enforce parking lot screening requirements for commercial properties, including the Laundry Center and Casa Car Wash.
- Implement bus stop amenities including a bench for stops on the north and south side of University Avenue.
- Introduce appropriate native plantings in storm water basin creating a rain garden to improve water quality.
- Replace gravel with lawn at ROW of 21st Street north and south of University Avenue.
- Improve street tree canopy with shrub plantings in ROW on 21st Street north and south of University Avenue.
- Encourage / provide resources for property owners to plant trees behind sidewalk along University Avenue.
- Implement / enforce parking lot screening requirements for commercial properties, including the Gas Station.
- Introduce vegetated ROW along the north side of University Avenue to provide buffer for pedestrians from vehicular traffic.
- Implement bus stop amenities including a bench for stop on the north side of University Avenue.
- Improve street tree canopy with shrub plantings in ROW on University Avenue and 21st Street.
- Encourage / provide resources for storefront improvements along University Avenue.
- Establish gateway feature at intersection of University Avenue and 19th Street.
- Continue utilization of new light fixtures and consolidation of utility poles and overhead lines.
- Current on-street parking arrangement to remain on both the north and south side of University Avenue.
- Improve street tree canopy with shrub plantings in ROW on 21st Street north and south of University Avenue.
- Encourage / provide resources for property owners to plant trees behind sidewalk along University Avenue.
- Implement / enforce parking lot screening requirements for commercial properties, including the Laundry Center and Casa Car Wash.
- Implement bus stop amenities including a bench for stops on the north and south side of University Avenue.
- Introduce appropriate native plantings in storm water basin creating a rain garden to improve water quality.
- Replace gravel with lawn at ROW of 21st Street north and south of University Avenue.
- Improve street tree canopy with shrub plantings in ROW on 21st Street north and south of University Avenue.
- Encourage / provide resources for property owners to plant trees behind sidewalk along University Avenue.
- Implement / enforce parking lot screening requirements for commercial properties, including the Gas Station.
- Introduce vegetated ROW along the north side of University Avenue to provide buffer for pedestrians from vehicular traffic.
- Implement bus stop amenities including a bench for stop on the north side of University Avenue.
- Improve street tree canopy with shrub plantings in ROW on University Avenue and 21st Street.
- Encourage / provide resources for storefront improvements along University Avenue.
- Establish gateway feature at intersection of University Avenue and 19th Street.
- Continue utilization of new light fixtures and consolidation of utility poles and overhead lines.
- Current on-street parking arrangement to remain on both the north and south side of University Avenue.
- Improve street tree canopy with shrub plantings in ROW on 21st Street north and south of University Avenue.
- Encourage / provide resources for property owners to plant trees behind sidewalk along University Avenue.
- Implement / enforce parking lot screening requirements for commercial properties, including the Laundry Center and Casa Car Wash.
- Implement bus stop amenities including a bench for stops on the north and south side of University Avenue.
COST OPINION - BASIC ASSUMPTIONS

Accuracy
The level of detail and accuracy of pricing in this opinion of probable cost are consistent with the degree of completeness of the documents used for estimating purposes. The document used to prepare this estimate includes the Concept Plan components shown within this document and information provided by the Consultant Team members. Additional information was obtained through discussion with the Client, Stakeholders and industry contacts.

Bid Conditions
This project has been estimated as a complete project with separate subtotals for individual portions of work for informational purposes only. If the project is bid in phases, the total estimated costs will be higher.

Items Affecting the Cost Estimate
Items which may change the probable construction costs include, but are not limited to:
- Modifications to the scope of work included in this estimate.
- Restrictive technical specification or excessive contract conditions.
- Any specified item of equipment, material, or product that cannot be obtained from at least three different sources.

Escalation
Unit costs included herein are reflective of current costs with no escalation included. A labor and material escalation factor will need to be added once a construction period has been determined.

Exclusions
Items excluded from this estimate include professional design, engineering and permitting fees.

Probable Cost Opinion Objective
This cost opinion is intended to be used as a tool for decision making and managing construction costs during the next phases of the project. It is prepared using industry contacts, experience, and the best judgment of the professional consultants. This estimate is intended to reflect an amount close to what would be the low bid of the project with respect to the present level of design and documentation with consideration given to the current market conditions. The consultant has no control over market conditions, wage rates, or any contractor’s method of determining prices or quantities. Therefore, the consultant cannot and does not guarantee this cost opinion will not vary from the actual cost of construction.
### Drake Area Streetscape Project

**Opinion of Probable Cost: Forest Avenue**

**March 2007**

**Total Site Area: 16 Blocks (6,225 linear feet)**

#### GENERAL

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**BEAVER AVENUE TO 34TH STREET**

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**34TH STREET TO 32ND STREET**

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**32ND STREET TO 29ST STREET**

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**29ST STREET TO 28ST STREET**

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**31ST STREET TO 30TH STREET**

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**30TH STREET TO 29TH STREET**

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**28TH STREET TO 27TH STREET**

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**27TH STREET TO 26TH STREET**

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**COST OPINION - FOREST AVENUE**

### Drake Area Streetscape Project

**Opinion of Probable Cost: Forest Avenue**

**March 2007**

**Total Site Area: 16 Blocks (6,225 linear feet)**

#### GENERAL

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**BEAVER AVENUE TO 34TH STREET**

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**34TH STREET TO 32ND STREET**

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**32ND STREET TO 29ST STREET**

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**29ST STREET TO 28ST STREET**

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**31ST STREET TO 30TH STREET**

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**30TH STREET TO 29TH STREET**

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**28TH STREET TO 27TH STREET**

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**27TH STREET TO 26TH STREET**

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**26TH STREET TO 25TH STREET**

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Drake Area Streetscape Project

### 29TH STREET TO 28TH STREET

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 28TH STREET TO 27TH STREET

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 27TH STREET TO 26TH STREET

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 26TH STREET TO 25TH STREET

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 25TH STREET TO 24TH STREET

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 24TH STREET TO 23RD STREET

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 23RD STREET TO 22ND STREET

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 22ND STREET TO 21ST STREET

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 21ST STREET TO 20TH STREET

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 20TH STREET TO 19TH STREET

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 19TH STREET TO 18TH STREET

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 18TH STREET TO 17TH STREET

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 17TH STREET TO 16TH STREET

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 16TH STREET TO 15TH STREET

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 15TH STREET TO 14TH STREET

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 14TH STREET TO 13TH STREET

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 13TH STREET TO 12TH STREET

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 12TH STREET TO 11TH STREET

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 11TH STREET TO 10TH STREET

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 10TH STREET TO 9TH STREET

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 9TH STREET TO 8TH STREET

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 8TH STREET TO 7TH STREET

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 7TH STREET TO 6TH STREET

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 6TH STREET TO 5TH STREET

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 5TH STREET TO 4TH STREET

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 4TH STREET TO 3RD STREET

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 3RD STREET TO 2ND STREET

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 2ND STREET TO 1ST STREET

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 1ST STREET TO 0TH STREET

<table>
<thead>
<tr>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### COST OPINION - FOREST AVENUE

#### 22ND STREET TO 21ST STREET

<table>
<thead>
<tr>
<th>Description</th>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Street Lights</td>
<td>2 ea</td>
<td>$4,900.00</td>
<td>$9,800.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consolidation of Utility Poles &amp; Lines</td>
<td>4 ea</td>
<td>$10,000.00</td>
<td>$40,000.00</td>
<td>remove &amp; replace existing pole</td>
<td></td>
</tr>
<tr>
<td>New Street Trees</td>
<td>16 ea</td>
<td>$265.00</td>
<td>$4,240.00</td>
<td>21st Street ROW</td>
<td></td>
</tr>
<tr>
<td>Parking lot screening</td>
<td>120 ft</td>
<td>$35.00</td>
<td>$4,200.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pavement Improvements</td>
<td>2,840 sf</td>
<td>$12.50</td>
<td>$35,500.00</td>
<td>Forest Avenue, north side</td>
<td></td>
</tr>
<tr>
<td>Demo &amp; Excavation</td>
<td>1,512 sf</td>
<td>$12.50</td>
<td>$19,395.00</td>
<td>21st Street east and west sides</td>
<td></td>
</tr>
<tr>
<td>Tree: 2 ea</td>
<td>$7,000.00</td>
<td>$14,000.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bike Racks: 2 ea</td>
<td>$2,000.00</td>
<td>$4,000.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planters: 2 ea</td>
<td>$3,000.00</td>
<td>$6,000.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal:</strong></td>
<td></td>
<td></td>
<td><strong>$115,280.00</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### 21ST STREET TO MARTIN LUTHER KING JR. PARKWAY

<table>
<thead>
<tr>
<th>Description</th>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Street Lights</td>
<td>2 ea</td>
<td>$4,900.00</td>
<td>$9,800.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consolidation of Utility Poles &amp; Lines</td>
<td>5 ea</td>
<td>$6,000.00</td>
<td>$30,000.00</td>
<td>remove &amp; replace existing pole</td>
<td></td>
</tr>
<tr>
<td>New Street Trees</td>
<td>16 ea</td>
<td>$395.00</td>
<td>$6,320.00</td>
<td>21st Street North &amp; South</td>
<td></td>
</tr>
<tr>
<td>Parking lot screening</td>
<td>120 ft</td>
<td>$35.00</td>
<td>$4,200.00</td>
<td>Christian Hillside</td>
<td></td>
</tr>
<tr>
<td>Pavement: 7 ea</td>
<td></td>
<td>$120.00</td>
<td>$840.00</td>
<td>1 ft diameter, 8&quot; &amp; 12&quot;</td>
<td></td>
</tr>
<tr>
<td>Parking lot screening</td>
<td>120 ft</td>
<td>$35.00</td>
<td>$4,200.00</td>
<td>Christian Hillside</td>
<td></td>
</tr>
<tr>
<td>Demo &amp; Excavation</td>
<td>1,580 sf</td>
<td>$12.50</td>
<td>$19,750.00</td>
<td>22nd Street east and west sides</td>
<td></td>
</tr>
<tr>
<td>Tree: 2 ea</td>
<td>$7,000.00</td>
<td>$14,000.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bike Racks: 2 ea</td>
<td>$2,000.00</td>
<td>$4,000.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planters: 2 ea</td>
<td>$3,000.00</td>
<td>$6,000.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal:</strong></td>
<td></td>
<td></td>
<td><strong>$115,880.00</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### TOTAL FOREST AVENUE - BEAVER AVENUE TO 10TH STREET

<table>
<thead>
<tr>
<th>Description</th>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gateway Enhancements</td>
<td>1 ea</td>
<td>$50,000.00</td>
<td>$50,000.00</td>
<td></td>
<td>at MLK &amp; Forest Ave intersection</td>
</tr>
<tr>
<td>New Street Light</td>
<td>2 ea</td>
<td>$4,900.00</td>
<td>$9,800.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consolidation of Utility Poles &amp; Lines</td>
<td>3 ea</td>
<td>$6,000.00</td>
<td>$18,000.00</td>
<td>remove &amp; replace existing pole</td>
<td></td>
</tr>
<tr>
<td>Parking lot screening</td>
<td>120 ft</td>
<td>$35.00</td>
<td>$4,200.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pavement Improvements</td>
<td>2,840 sf</td>
<td>$12.50</td>
<td>$35,500.00</td>
<td>Forest Avenue, north side</td>
<td></td>
</tr>
<tr>
<td>Demo &amp; Excavation</td>
<td>1,512 sf</td>
<td>$12.50</td>
<td>$19,395.00</td>
<td>22nd Street east and west sides</td>
<td></td>
</tr>
<tr>
<td>Tree 2 ea</td>
<td>$7,000.00</td>
<td>$14,000.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bike Racks 2 ea</td>
<td>$2,000.00</td>
<td>$4,000.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planters 2 ea</td>
<td>$3,000.00</td>
<td>$6,000.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal:</strong></td>
<td></td>
<td></td>
<td><strong>$108,770.00</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**AVERAGE COST PER BLOCK:** $1,876,026.35

**15% DESIGN CONTINGENCY:** $232,565.25

**TOTAL COST OPINION:** $2,108,591.60

**AVG. COST PER LINEAR FOOT:** $301.37

**AVG. COST PER BLOCK:** $351.57

---

**Appendix A**

---

**COST OPINION - FORREST AVENUE**

**TOTAL SITE AREA:** 16 Blocks (6,225 linear feet)

**AVERAGE COST PER BLOCK:** $117,251.65

**AVERAGE COST PER LINEAR FOOT:** $301.37

**PROBABLE COST OPINION TOTAL:** $1,876,026.35

**BASE BID SUBTOTAL:** $1,502,430.00

**15% DESIGN CONTINGENCY:** $232,565.25

**TOTAL COST OPINION:** $1,876,026.35

**AVG. COST PER BLOCK:** $117,251.65

**AVG. COST PER LINEAR FOOT:** $301.57

---

**49 Appendix A**

---

**DRAKE AREA STREETSCAPE**
## Cost Opinion - University Avenue

Drake Area Streetscape Project  
Opinion of Probable Cost: University Avenue  
March 2007  
Total Site Area: 12 Blocks (4,630 linear feet)

### PHASE 1: NORTH SIDE IMPROVEMENTS

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Survey</td>
<td>1</td>
<td></td>
<td>$1,000.00</td>
<td>$1,000.00</td>
<td>entire University Avenue corridor project area</td>
</tr>
<tr>
<td>Tree Protection</td>
<td>10</td>
<td>ea</td>
<td>$500.00</td>
<td>$5,000.00</td>
<td>University Avenue corridor project area</td>
</tr>
<tr>
<td>Sidewalk</td>
<td>12</td>
<td></td>
<td>$1,215.00</td>
<td>$14,580.00</td>
<td>as necessary</td>
</tr>
<tr>
<td>Hardscape</td>
<td>12</td>
<td></td>
<td>$29,000.00</td>
<td>$290,000.00</td>
<td>University Avenue corridor project area</td>
</tr>
<tr>
<td>Plant Material</td>
<td>1</td>
<td></td>
<td>$80,000.00</td>
<td>$80,000.00</td>
<td>as necessary</td>
</tr>
<tr>
<td>Tree Protection</td>
<td>8</td>
<td>ea</td>
<td>$500.00</td>
<td>$4,000.00</td>
<td>University Avenue corridor project area</td>
</tr>
<tr>
<td>Median Lawn</td>
<td>8,075</td>
<td>sf</td>
<td>$2.50</td>
<td>$20,187.50</td>
<td>sod at medians</td>
</tr>
<tr>
<td>Brick at Median Curb</td>
<td>1,998</td>
<td>sf</td>
<td>$12.00</td>
<td>$23,971.98</td>
<td>University Avenue corridor project area</td>
</tr>
<tr>
<td>Sidewalk</td>
<td>10,500</td>
<td>sf</td>
<td>$2.00</td>
<td>$21,000.00</td>
<td>University Avenue corridor project area</td>
</tr>
<tr>
<td>Tree Protection</td>
<td>1</td>
<td></td>
<td>$25,000.00</td>
<td>$25,000.00</td>
<td>as necessary</td>
</tr>
<tr>
<td>Overhead Utilities &amp; New Lines</td>
<td>1</td>
<td>al</td>
<td>$25,000.00</td>
<td>$25,000.00</td>
<td>University Avenue corridor project area</td>
</tr>
<tr>
<td>Tree Protection</td>
<td>1</td>
<td></td>
<td>$1,000,000.00</td>
<td>$1,000,000.00</td>
<td>as necessary</td>
</tr>
<tr>
<td>Overhead Utilities &amp; New Lines</td>
<td>1</td>
<td>al</td>
<td>$1,000,000.00</td>
<td>$1,000,000.00</td>
<td>University Avenue corridor project area</td>
</tr>
<tr>
<td>Plant Material</td>
<td>1</td>
<td></td>
<td>$40,000.00</td>
<td>$40,000.00</td>
<td>as necessary</td>
</tr>
<tr>
<td>Stairs at Parking</td>
<td>6</td>
<td>ea</td>
<td>$3,000.00</td>
<td>$18,000.00</td>
<td>approx. 600 ft</td>
</tr>
<tr>
<td>Seat Walls</td>
<td>120</td>
<td>sq ft</td>
<td>$55.00</td>
<td>$6,600.00</td>
<td>University Avenue corridor project area</td>
</tr>
<tr>
<td>Sidewalk</td>
<td>20,500</td>
<td>ft</td>
<td>$20.00</td>
<td>$410,000.00</td>
<td>University Avenue corridor project area</td>
</tr>
<tr>
<td>Median Lawn</td>
<td>840</td>
<td>sf</td>
<td>$2.00</td>
<td>$1,680.00</td>
<td>University Avenue corridor project area</td>
</tr>
<tr>
<td>Sidewalk</td>
<td>10,150</td>
<td>sf</td>
<td>$2.00</td>
<td>$20,300.00</td>
<td>University Avenue corridor project area</td>
</tr>
<tr>
<td>Brick at Median Curb</td>
<td>1,998</td>
<td>sf</td>
<td>$12.00</td>
<td>$23,971.98</td>
<td>University Avenue corridor project area</td>
</tr>
<tr>
<td>Landscaping</td>
<td>12,550</td>
<td>sf</td>
<td>$1.00</td>
<td>$12,550.00</td>
<td>University Avenue corridor project area</td>
</tr>
<tr>
<td>Sidewalk</td>
<td>2,270</td>
<td>ft</td>
<td>$20.00</td>
<td>$45,400.00</td>
<td>University Avenue corridor project area</td>
</tr>
<tr>
<td>Sidewalk</td>
<td>575</td>
<td>ft</td>
<td>$5.00</td>
<td>$2,875.00</td>
<td>University Avenue corridor project area</td>
</tr>
</tbody>
</table>

**Subtotal**: $2,351,664.95

**General Allowance**: $1,000,000.00

**Probable Cost Opinion Total**: $3,351,664.95

**Average Cost Per Linear Foot**: $1,785.34

---

### PHASE 2: SOUTH SIDE IMPROVEMENTS

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tree Protection</td>
<td>1</td>
<td></td>
<td>$500.00</td>
<td>$500.00</td>
<td>University Avenue corridor project area</td>
</tr>
<tr>
<td>Sidewalk</td>
<td>10</td>
<td></td>
<td>$200.00</td>
<td>$2,000.00</td>
<td>University Avenue corridor project area</td>
</tr>
<tr>
<td>Hardscape</td>
<td>10</td>
<td></td>
<td>$29,000.00</td>
<td>$290,000.00</td>
<td>University Avenue corridor project area</td>
</tr>
<tr>
<td>Plant Material</td>
<td>1</td>
<td></td>
<td>$80,000.00</td>
<td>$80,000.00</td>
<td>as necessary</td>
</tr>
<tr>
<td>Tree Protection</td>
<td>1</td>
<td></td>
<td>$1,000,000.00</td>
<td>$1,000,000.00</td>
<td>University Avenue corridor project area</td>
</tr>
<tr>
<td>Sidewalk</td>
<td>10,150</td>
<td>sf</td>
<td>$2.00</td>
<td>$20,300.00</td>
<td>University Avenue corridor project area</td>
</tr>
<tr>
<td>Stairs at Parking</td>
<td>6</td>
<td>ea</td>
<td>$3,000.00</td>
<td>$18,000.00</td>
<td>approx. 600 ft</td>
</tr>
<tr>
<td>Seat Walls</td>
<td>600</td>
<td>ft</td>
<td>$12.00</td>
<td>$7,200.00</td>
<td>University Avenue corridor project area</td>
</tr>
<tr>
<td>Sidewalk</td>
<td>20,500</td>
<td>ft</td>
<td>$20.00</td>
<td>$410,000.00</td>
<td>University Avenue corridor project area</td>
</tr>
<tr>
<td>Sidewalk</td>
<td>700</td>
<td>ft</td>
<td>$20.00</td>
<td>$14,000.00</td>
<td>University Avenue corridor project area</td>
</tr>
<tr>
<td>Sidewalk</td>
<td>2,270</td>
<td>ft</td>
<td>$20.00</td>
<td>$45,400.00</td>
<td>University Avenue corridor project area</td>
</tr>
<tr>
<td>Seat Walls</td>
<td>300</td>
<td>ea</td>
<td>$12.00</td>
<td>$3,600.00</td>
<td>University Avenue corridor project area</td>
</tr>
<tr>
<td>Tree Protection</td>
<td>1</td>
<td></td>
<td>$1,000,000.00</td>
<td>$1,000,000.00</td>
<td>as necessary</td>
</tr>
<tr>
<td>Overhead Utilities &amp; New Lines</td>
<td>1</td>
<td>al</td>
<td>$1,000,000.00</td>
<td>$1,000,000.00</td>
<td>University Avenue corridor project area</td>
</tr>
<tr>
<td>Tree Protection</td>
<td>1</td>
<td></td>
<td>$1,000,000.00</td>
<td>$1,000,000.00</td>
<td>University Avenue corridor project area</td>
</tr>
<tr>
<td>Overhead Utilities &amp; New Lines</td>
<td>1</td>
<td>al</td>
<td>$1,000,000.00</td>
<td>$1,000,000.00</td>
<td>University Avenue corridor project area</td>
</tr>
<tr>
<td>Plant Material</td>
<td>1</td>
<td></td>
<td>$40,000.00</td>
<td>$40,000.00</td>
<td>University Avenue corridor project area</td>
</tr>
<tr>
<td>Street Furniture</td>
<td>100</td>
<td>ft</td>
<td>$125.00</td>
<td>$12,500.00</td>
<td>University Avenue corridor project area</td>
</tr>
<tr>
<td>Parking Signage</td>
<td>1</td>
<td></td>
<td>$100,000.00</td>
<td>$100,000.00</td>
<td>University Avenue corridor project area</td>
</tr>
<tr>
<td>Tree Protection</td>
<td>1</td>
<td></td>
<td>$1,000,000.00</td>
<td>$1,000,000.00</td>
<td>University Avenue corridor project area</td>
</tr>
<tr>
<td>Overhead Utilities &amp; New Lines</td>
<td>1</td>
<td>al</td>
<td>$1,000,000.00</td>
<td>$1,000,000.00</td>
<td>University Avenue corridor project area</td>
</tr>
<tr>
<td>Tree Protection</td>
<td>1</td>
<td></td>
<td>$1,000,000.00</td>
<td>$1,000,000.00</td>
<td>University Avenue corridor project area</td>
</tr>
<tr>
<td>Overhead Utilities &amp; New Lines</td>
<td>1</td>
<td>al</td>
<td>$1,000,000.00</td>
<td>$1,000,000.00</td>
<td>University Avenue corridor project area</td>
</tr>
<tr>
<td>Plant Material</td>
<td>1</td>
<td></td>
<td>$40,000.00</td>
<td>$40,000.00</td>
<td>University Avenue corridor project area</td>
</tr>
</tbody>
</table>

**Subtotal**: $2,353,735.00

**General Allowance**: $1,000,000.00

**Probable Cost Opinion Total**: $3,353,735.00

**Average Cost Per Linear Foot**: $1,788.45

---

**Note**: All quantities, costs, and prices are estimates based on current market conditions and may vary depending on actual site conditions and prevailing rates at the time of construction.
## Drake Area Streetscape

<table>
<thead>
<tr>
<th>Description</th>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Preparation</td>
<td>1</td>
<td>al</td>
<td>$20,000.00</td>
<td>$20,000.00</td>
<td>grading</td>
</tr>
<tr>
<td>Utilities</td>
<td>1</td>
<td>al</td>
<td>$20,000.00</td>
<td>$20,000.00</td>
<td>protect / relocate existing as necessary</td>
</tr>
<tr>
<td>Roadway</td>
<td>1</td>
<td>al</td>
<td>$9,000.00</td>
<td>$9,000.00</td>
<td></td>
</tr>
<tr>
<td>Sidewalk</td>
<td>1</td>
<td>al</td>
<td>$20,000.00</td>
<td>$20,000.00</td>
<td></td>
</tr>
<tr>
<td>Trees</td>
<td>31</td>
<td>ea</td>
<td>$100.00</td>
<td>$3,100.00</td>
<td></td>
</tr>
<tr>
<td>Sawcut Pavement</td>
<td>1,100</td>
<td>ft</td>
<td>$2.50</td>
<td>$2,750.00</td>
<td></td>
</tr>
<tr>
<td>Street Lighting</td>
<td>10</td>
<td>ea</td>
<td>$4,000.00</td>
<td>$40,000.00</td>
<td></td>
</tr>
<tr>
<td>Demolition Sidewalk</td>
<td>10,500</td>
<td>sf</td>
<td>$2.00</td>
<td>$21,000.00</td>
<td></td>
</tr>
<tr>
<td>Tree</td>
<td>3</td>
<td>ea</td>
<td>$500.00</td>
<td>$1,500.00</td>
<td>or shrubs</td>
</tr>
<tr>
<td>Street Pavement</td>
<td>660</td>
<td>sf</td>
<td>$1.00</td>
<td>$660.00</td>
<td></td>
</tr>
<tr>
<td>Hardscaping Sidewalk</td>
<td>10,500</td>
<td>sf</td>
<td>$5.00</td>
<td>$52,500.00</td>
<td></td>
</tr>
<tr>
<td>Sidewalk</td>
<td>10,500</td>
<td>sf</td>
<td>$5.00</td>
<td>$52,500.00</td>
<td></td>
</tr>
<tr>
<td>Curb at Median</td>
<td>1,100</td>
<td>ft</td>
<td>$30.00</td>
<td>$33,000.00</td>
<td></td>
</tr>
<tr>
<td>Plant Material</td>
<td>700</td>
<td>ft</td>
<td>$50.00</td>
<td>$35,000.00</td>
<td></td>
</tr>
<tr>
<td>Street</td>
<td>12</td>
<td>ea</td>
<td>$300.00</td>
<td>$3,600.00</td>
<td></td>
</tr>
<tr>
<td>Median Lawn</td>
<td>660</td>
<td>sf</td>
<td>$2.50</td>
<td>$1,650.00</td>
<td>sod</td>
</tr>
<tr>
<td>Street Planting</td>
<td>100</td>
<td>sf</td>
<td>$12.00</td>
<td>$1,200.00</td>
<td></td>
</tr>
<tr>
<td>Site Fencing</td>
<td>1,100</td>
<td>ft</td>
<td>$40.00</td>
<td>$44,000.00</td>
<td></td>
</tr>
<tr>
<td>Signage Relocation/Replacement</td>
<td>1</td>
<td>al</td>
<td>$10,000.00</td>
<td>$10,000.00</td>
<td></td>
</tr>
<tr>
<td>Planters</td>
<td>10</td>
<td>ea</td>
<td>$3,000.00</td>
<td>$30,000.00</td>
<td>3 groups of 3: planter, soil mix, irrigation &amp; vegetation</td>
</tr>
<tr>
<td>Public Art</td>
<td>1</td>
<td>al</td>
<td>$50,000.00</td>
<td>$0.00</td>
<td></td>
</tr>
<tr>
<td>SUBTOTAL</td>
<td></td>
<td></td>
<td></td>
<td>$351,808.61</td>
<td></td>
</tr>
</tbody>
</table>

### Doigtown Parking

<table>
<thead>
<tr>
<th>Description</th>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional On-street Parking</td>
<td>1</td>
<td>al</td>
<td>$150,000.00</td>
<td>$150,000.00</td>
<td>scheme dependent</td>
</tr>
<tr>
<td>SUBTOTAL</td>
<td></td>
<td></td>
<td></td>
<td>$150,000.00</td>
<td></td>
</tr>
</tbody>
</table>

### 23rd Street to Martin Luther King Jr. Parkway

<table>
<thead>
<tr>
<th>Description</th>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost per Block for Proposed Improvements</td>
<td>3</td>
<td>al</td>
<td>$200,000.00</td>
<td>$200,000.00</td>
<td></td>
</tr>
<tr>
<td>SUBTOTAL</td>
<td></td>
<td></td>
<td></td>
<td>$200,000.00</td>
<td></td>
</tr>
</tbody>
</table>

### Total University Avenue

<table>
<thead>
<tr>
<th>Description</th>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total University Avenue: 23rd Street to MLK Jr. Parkway</td>
<td></td>
<td></td>
<td></td>
<td>$970,188.42</td>
<td></td>
</tr>
<tr>
<td>Cost per Block for Proposed Improvements</td>
<td>3</td>
<td>al</td>
<td>$200,000.00</td>
<td>$200,000.00</td>
<td></td>
</tr>
<tr>
<td>SUBTOTAL</td>
<td></td>
<td></td>
<td></td>
<td>$200,000.00</td>
<td></td>
</tr>
</tbody>
</table>

### Average Cost Per Block

<table>
<thead>
<tr>
<th>Description</th>
<th>Qty</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Subtotal</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Cost Per Block</td>
<td></td>
<td></td>
<td></td>
<td>$161,698.07</td>
<td></td>
</tr>
<tr>
<td>AVERAGE COST PER LINEAR FOOT</td>
<td></td>
<td></td>
<td></td>
<td>$417.29</td>
<td></td>
</tr>
</tbody>
</table>