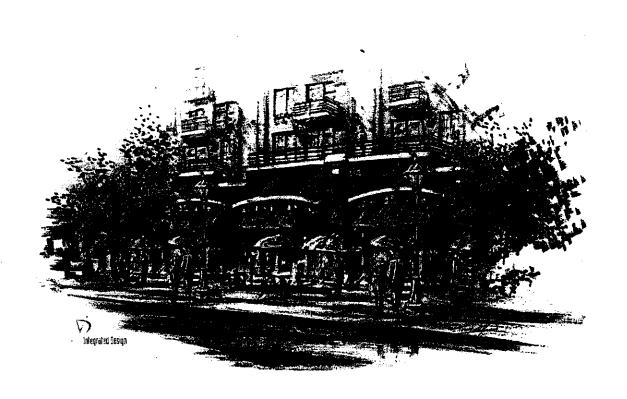
November 14, 2002 ADOPTED: November 19, 2002

Stanhope Center Pedestrian Business Overlay District Streetscape and Parking Plan



Prepared by:

Integrated Design, PA

Stanhope Center
Pedestrian Business Overlay District
Streetscape and Parking Plan

Stanhope Center is a proposed mixed-use development with residential, retail, office and recreational. The 7.01 acre development is bounded by:

- Hillsborough Street (north)
- Concord Street (west)
- Norfolk-Southern Railroad (south)
- Friendly Drive (east).

Use of the Pedestrian Business Overlay District enhances the ability to create a vibrant streetscape that is unique to this development. The Stanhope Center Streetscape and Parking Plan proposes streetscape modifications to existing streets, new public streets, new private streets, and integrates amenities that improve pedestrian quality and experience.

The applicant may request of City Council that certain existing public rights-of-ways and streets become private. These are:

- Concord Street, from Hillsborough Street south to the proposed round
- Cordial Drive is proposed as a private street.

A request will be make to abandon McKnight Street. A right-of-way exchange will be requested to remove a portion of the right-of-way encircing the cul-de-sac on Friendly Drive for new right-of-way along the Friendly Drive extension.

Stanhope Avenue will remain a public street as well as the proposed extensions of Concord Street and Friendly Drive. (See MP-1 for limits of right-of-way).

Streetscape elements, as described in this report, will be part of both the public and private street networks. The private streets and associated streetscape elements and appurtenances and streetscape elements and appurtenances within public streets will be held and maintained by a not-for-profit Property Owners Association established for the Stanhope Center development.

See Master Plan drawings for layout and locations of streetscape and parking plan.

No parking reductions are being requested. On- and off-site parking, landscaping, buildings and/or signage will not be made to conform to the Stanhope Center Streetscape and Parking Plan until the section or phase of the Master Plan is developed as defined in the PDD Master Plan. The provisions of the PBOD shall not take effect until the section is developed.

Hillsborough Street Streetscape and Parking Plan

The mixed-use building, shown as Section C on the Master Plan, fronts onto the Hillsborough Street right-of-way. This building will have a maximum height of 40' and be three stories with ground level retail and apartments above.

Streetscape Elements

Streetscape elements are per the University Village Streetscape Plan, dated 1986, and include:

On-street Parking

On-street parallel parking spaces are planned for the Hillsborough Street frontage within the project limits and will comply with the City of Raleigh's design criteria for the proposed Hillsborough Street reconstruction plan.

Sidewalks

The minimum unobstructed sidewalk width along Hillsborough Street is eight (8) feet. Sidewalks of varying widths (minimum 8') extend from the back of curb to the proposed building fronts. Portions of the sidewalks will be beyond the Hillsborough Street right-of-way. Brick paving material for sidewalks will be equal to wire-cut Cherokee flash pavers per the University Village Streetscape Plan.

Signage and Canopies

Signage will be restricted to lettering displayed on the canopies or awnings, undercanopy signs and wall signs. No ground signs will be permitted.

Canopies and awning heights shall be a minimum of 9.0' above sidewalk grade. Canopies/awnings may or may not be backlit, may be retractable and will be made of canvass, vinyl or translucent materials. The colors will be compatible with the building materials and colors.

Under-canopy signs will be permitted for pedestrian identification of individual businesses. Under-canopy signs will be hung a minimum of 9.0', unobstructed, above the grade of the sidewalk, will not exceed a height of 12" and not exceed the width of the canopy.

Walls signs will be permitted. Total maximum wall sign area per establishment is two (2) square feet per linear foot of the side of the building facing any street or common area. Area of copy (height x length) of a wall sign will not exceed 75% of the total sign area.

Canopies/awnings and under-canopy signs, which extend into public rights-of-way, will require an encroachment permit from the City of Raleigh.

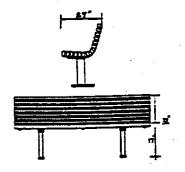
Street Trees

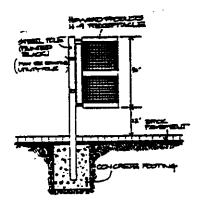
European Hornbeam is the recommended specie for street tree plantings. Trees will be planted at 2-1/2'' - 3-1/2'' caliper (measured 6" above grade). If overhead power lines are placed underground, as part of the Hillsborough Street Improvement Project, and before the trees are installed, the hornbeam may be substituted with Shumard Oak of a 3''-4'' caliper.

Street trees will be installed at a rate of 1 tree per 50 lf of roadway frontage. Tree grates and guards for the street trees will be installed per the University Village Streetscape Plan.

Street Furniture

Benches will be provided at a minimum rate of 1/200 LF of sidewalk. The bench style will be compatible with Woodplay, Inc., Woodcrafters of Florida, or other manufacturers of similar style pieces. Benches will be per the University Village Streetscape Plan.





Trash receptacles will

be placed proximate to the bench locations. Receptacle style will be compatible with Howard Products, or other manufacturers of similar style pieces. Receptacles will appear per the University Village Streetscape Plan.

Bike racks will be provided at a rate of 1/20 on- and off-street parking spaces fronting Hillsborough Street within the Overlay District. Bike racks will be bollard style, per Stanhope Center Streetscape and Parking Plan, and accommodate two bicycles per bollard. Bike rack distribution will not be greater than 1 bike rack per 200 LF.

Lighting

Light pole design, height and luminaries will be similar to the Western Lighting Standards fixtures approved for the University Village Streetscape Plan.

Streetscape Maintenance

The city will maintain the following streetscape elements:

- Curb and gutter
- Street paving
- Crosswalk striping and signals
- Bus stops
- On-street parking space striping
- Parking meters
- Street lights

A not-for-profit Property Owners Association established for the Stanhope Center development will maintain:

- Street trees, tree grates, and tree guards
- Trash receptacles
- Specialty lighting and lighting attached to buildings
- Benches.
- Encroachments within public right-of-way
- Sidewalks
- Awnings and canopies
- Bike racks
- Bollards

Individual businesses will maintain business signs.

Stanhope Center Streetscape and Parking Plan

The streetscape plan for Stanhope Village is intended to evoke the industrial past. Streets within the Overlay District and subject to the Streetscape and Parking Plan are:

- Concord Street
- Stanhope Avenue
- Friendly Drive
- Cordial Drive

Elements of the streetscape are explained and then street areas described for application. Actual manufacturer specifications will be submitted prior to final review and approval.



Sidewalks and Pedestrian Areas

Sidewalks intentionally vary in width and are a minimum of 5' wide. Specific minimum widths are noted per road section later in this report. The width variations define the pedestrian space. Functional pedestrian ways are narrower. Areas intended for pedestrian interaction are wider to facilitate this interaction.

A porous concrete interlocking paver, or similar paving material, is used for the sidewalk surface. Since sidewalk areas cover a significant area within the project, these pavers were chosen to address water quality and reduce development runoff. Color selection will be compatible with the color of the proposed buildings and

street pavers.

Pavement pattern will be running bond. A standard paver course will be used against building wall and curb. A double row of porous pavers in a color contrasting with both sidewalk and street will be used to mark both on- and off-street parking spaces. Edge restraints will be used in open space areas where no building or curb is present.

The running bond pattern permits a simple dovetail with the herringbone pattern of the street and parking areas.

Interlocking concrete porous pavers will be similar to Belgard Drainstone paver.

Street Pavement

Interlocking concrete pavers will be used for travel lanes and parking bays. The pavers will be arranged in a herringbone pattern for greater strength of the interlocking capabilities. The color selected will be compatible with, yet distinct from the sidewalk pavers.

The color differences between sidewalk and street is planned to define traffic and pedestrian zones.

Interlocking concrete pavers will be similar to Belgard Holland Stone paver. All alternate pavement systems require approval by the City of Raleigh Transportation Director prior to installation.

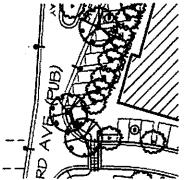


Parking Areas

Parking may be provided as on-street, off-street and in a parking deck. The on-street and off-street parking may adjoin a private street or a public street as shown on the Master Plan drawings. Parking spaces shown on the Master Plan, as on-street public parking are illustrative. It is recognized that the Raleigh City Council approves the use of on-street public parking.

On-street Parking

Parking bays will be flush to the sidewalk, enabling a multiple use of the bays for activities other than parking.



The spaces are clustered with a four-foot wide island separating the clusters. Each island is punctuated with a street tree or street light, defining the separation of the travel lane and parking bay. A three (3) foot concrete band, paralleling the travel lanes, is used to define the parking edge.

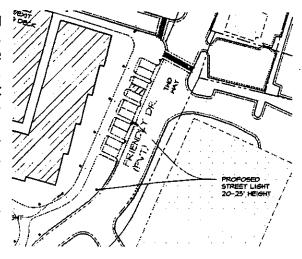
The on-street parking surface will be interlocking concrete pavers similar to Belgard Holland Stone paver, arranged in a herringbone pattern. The color and size of the pavers are the same as used for the street pavement. An

alternate color will be used to "stripe" off-street parking spaces, as described under Sidewalks.

Off-street Parking

Off-street parking is provided along remaining streets within the development. Parking spaces are perpendicular to the travel lanes and configurations vary, depending on the orientation of the street use. The spaces are clustered and a four-foot wide island separates clusters. Each island is punctuated with a street tree or light pole defining the separation of the travel lane and parking bay.

All off-street parking surfaces, except for those located within the parking deck, will be interlocking concrete pavers similar to



a Belgard Holland Stone paver, arranged in a herringbone pattern. The color and size of the pavers are the same as used for the street pavement. An alternate color will be used to "stripe" off-street parking spaces.

Signage and Canopies

Signage will be restricted to lettering displayed on the canopies or awnings, undercanopy signs and wall signs. No ground signs will be permitted.

Canopies and awning heights shall be a minimum of 9.0' above sidewalk grade. Canopies/awnings may or may not be backlit, may be retractable and will be made of canvass, vinyl or translucent materials. The colors will be compatible with the building materials and colors.

Under-canopy signs will be permitted for pedestrian identification of individual businesses. Under-canopy signs will be hung a minimum of 9.0, unobstructed, above the grade of the sidewalk, will not exceed a height of 12" and not exceed the width of the canopy.

Walls signs will be permitted. Total maximum wall sign area per establishment is two (2) square feet per linear foot of the side of the building facing any street or common area. Area of copy (height x length) of a wall sign will not exceed 75% of the total sign area.

Canopies/awnings and under-canopy signs, which extend into public rights-of-way, will require an encroachment permit from the City of Raleigh.

Street Signs

Street signage will consist of standard City of Raleigh street sign fastened to a 4-mil powder coated (dark green) aluminum tube post. The property owners association will maintain street signs and mounting poles.

Street Trees

Shumard Oaks are the recommended street tree. Trees will be planted at a minimum 3"-4" caliper measured at 6" above grade. Street trees will be planted at a minimum of 1 per 50 LF of roadway.

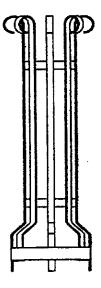
Flowering tree varieties include Crape Myrtle, Savannah Holly and Goldenrain Tree. Flowering trees will define limits of parking, frame sidewalk and create a pedestrian scale to the upper canopy of the landscape. Flowering trees will be planted at 2" caliper, as measured 6" above grade, or as multi-trunk, per species. Flowering trees will be planted at a minimum of 1 per 50 LF of roadway.



Tree grates will be either 48" circular or square, with 16" diameter expandable tree opening and 1/4' slot openings, similar to Neenah Foundry Company.



Configuration is determined by location within the Stanhope Center Streetscape and Parking Plan. Tree grates will be painted a dark green color.



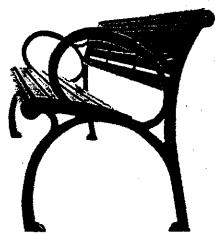
Tree guards will be installed and used n conjunction with tree grates. Tree guards will similar to Canterbury **International**, be fabricated in steel and be painted a dark green to match the tree grate.

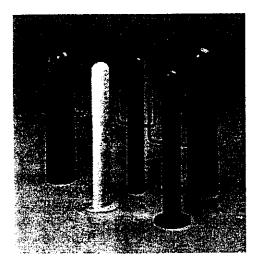
Tree grates and tree guards will be limited to tree plantings within the pedestrian way, along sidewalks and streets.

Benches will be provided at a rate of 1/200 LF sidewalk.

Benches, similar to the Planwell by Landscape Forms, will be surface mounted, 48" long with wood seat. Metal parts will be finished with powder coat in a dark green matte finish, similar to tree grates, tree guards, bollards, bike racks and light poles.

Bicycle storage includes a secured area within the parking deck and surface mounted bicycle racks.





Bicycle racks that are surface mounted will be provided at a rate of 1/20 parking spaces required for the non-residential uses within the Overlay District. Bike racks will be similar to XX and be placed within parking islands, and open space areas.

Bollards will be surface mounted and will be used to define pedestrian crossings.

Standard bike rack/bollard height is 36". Bollards/bike racks will be similar to Creative Pipe Inc. Bollard/Bike rack. Material is Schedule 40 round steel pipe, hot-dipped galvanized, powder

coated. Color will be a similar dark green color to benches, light poles, tree grates and tree guards. Bike rack/bollards are surface mounted.

Trash receptacles will be located near seating. Trash receptacles will be similar to the standard receptacle designated for the University Village Streetscape Plan

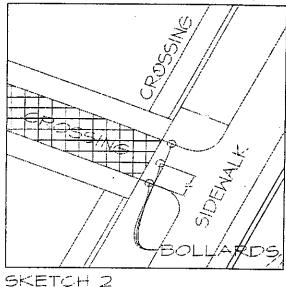
Lighting

Light fixtures will be similar to the W. J. Whatley Inc. Park Model gooseneck style, 100w-250w, either M.H. or M.V, depending on location, height of pole and lumen requirements. All lighting will conform to local codes and ordinances.



Street lighting will utilize a 20-25' pole, plus height of the luminaries. Pedestrian lighting will utilize a 12-16' pole, plus height of the luminaries. Pole finishes will be powder coated and be a similar dark green color to benches, bike racks/bollards, tree grates and tree guards.

Pedestrian street crossings will be flush with the sidewalk. Crosswalks will be interlocking concrete pavers similar in color to the sidewalk material. Street crossings



will be 6' wide flanked by a 2" concrete bevel on either side to transition the walkway to street elevation. **Bollards** will be placed at the beginning and end of the crossing to alert the pedestrian to a potential conflict.

Pedestrian crossings and intersections will meet the MUTCD standards for reflectivity.

Utility lines will be located underground.

Streetscape Maintenance

The city will maintain the following streetscape elements within public rights-of-way:

- Curb and gutter
- Crosswalk reflective striping
- Mechanized crossing signals
- Bus stops
- Parking meters
- Street lighting

A not-for-profit Property Owners **Assoc**iation established for the Stanhope Center development will maintain the following:

Within public right-of-way:

- Street pavement
- Street trees, tree grates, tree guards
- Trash receptacles
- Benches.
- Sidewalks

- Street signage
- Awnings and canopies
- Bike racks and bollards
- Encroachments

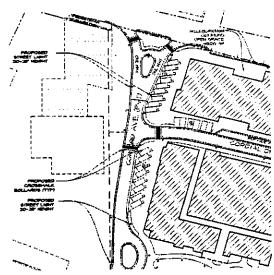
Within private streets (all items including the following):

- Curb and gutter and street pav't
- Street trees, grates and guards
- Trash receptacles
- Street lighting, specialty lighting and lighting attached to buildings
- Benches

- Sidewalks
- Street signage
- Bike racks and bollards
- Awnings and canopies

Stanhope Center Streetscape and Parking Plan Areas

Concord Street, the "Main Street" of Stanhope Village



Two-blocks long, Concord Street will remain a public right-of-way and have a 24' back-to-back pavement width. 4' wide tree islands will separate angled on-street parking bays. Parking bays and islands will be within the public right-of-way. Sidewalks will be an average of 15' wide. Streetscape elements will be constructed along the east side.

Initially, buildings will only front the east side of Concord Street and parking and sidewalks may only be installed on the east side. The Stanhope Village Small Area Plan anticipates mixed-use buildings fronting both sides of Concord Street, completing the streetscape

envelope, if participation by the property owner to the west is available.

Section C will front the east side of Concord Street. This building will be mixed-use with ground floor retail and apartments above. The building will be a maximum of 40' tall and have three stories. The building will be constructed to the edge of the 15' wide sidewalk with windows and shop fronts facing onto Concord Street (see Hillsborough Commons for description of Hillsborough Street frontage).

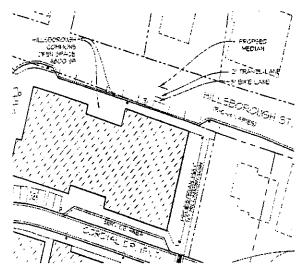
Section B will front the east side of Concord Street. This building will be mixed-use with ground floor retail/office uses fronting Concord Street. The building will have a maximum height of 70' and be five stories. The building will be constructed to the edge of the 15' sidewalk with ground level retail/office uses opening directly onto Concord Street. Apartments will be located on the upper floors. This building is part of a building wrap that surrounds an eight story parking deck. The parking deck will not exceed 70 feet with the possible exceptions of the elevator penthouse; stair enclosures and lighting that will be directed down or away from Stanhope Avenue.

The commercial segment of Concord Street terminates at a round about. This project will construct a modified round about forming a focal point for the termination of the commercial segment of Concord Street.

The streetscape for Concord Street includes the following elements:

- Porous interlocking concrete pavers for sidewalks; average 15' wide between parking and building fronts
- Interlocking concrete pavers for travel lanes and on-street parking; herringbone pattern
- Angled on-street parking bays
- Street level canopies and awnings; heights shall be a minimum of 8.0' above sidewalks; require encroachment permit from the City of Raleigh if Concord Street is dedicate right-of-way
- Benches at a ratio of 1/200 LF
- Street trees with tree grates and guards; require planting permit from the City of Raleigh Forester if Concord Street is dedicate right-of-way
- Flowering trees with tree grates and guards; require planting permit from the City of Raleigh Forester if Concord Street is dedicate right-of-way
- Bicycle racks at a ratio of 1/20 car parking required for retail contained in Building C and ½ retail space contained in Building B
- · Trash receptacles at bench locations
- Bollards at street crossing locations
- Pedestrian street crossings at grade to the adjoining sidewalks
- Utility lines located underground

Hillsborough Commons



Hillsborough Commons is that portion of private open space on the north side of Section C adjacent to the Hillsborough Street right-of-way, and the east end of Section C. The area east of Section C connects Hillsborough Street with the proposed parking deck to the south (Section B). The connector area also serves as a utility corridor.

Streetscape elements within the private sector of Hillsborough Commons include:

• Brick paving material for sidewalks adjacent to the Hillsborough Street

right-of-way will be equal to wire-cut Cherokee flash pavers per the University Village Streetscape Plan. This sidewalk will vary in width from 8' to 28'.

Interlocking concrete porous paver sidewalk along the east end of Section C; 8' minimum width

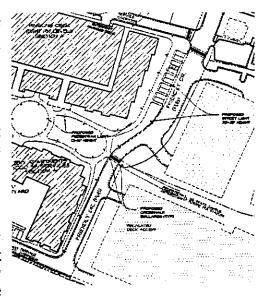
- Flowering tree plantings, tree grates and guards along the east end of Section C
- Street tree plantings, tree grates and guards along the Hillsborough frontage (See Hillsborough Streetscape and Parking Plan)
- Pedestrian scale lighting along the east end of Section C
- Street lighting along Hillsborough Street (See Hillsborough Streetscape and Parking Plan)
- Benches at a ratio of 1/200 LF of sidewalk along the east end of Section C
- Bike racks at 1 per 20 car parking required for Building C, less already provided on Hillsborough Street
- Trash receptacles; one per Hillsborough frontage (Hillsborough Streetscape and Parking Plan) and one per the east end of Section C
- Pedestrian street crossings at grade to the adjoining sidewalks
- Bollards at street crossing locations

Friendly Drive

Friendly Drive forms the eastern boundary of the development. The proposed parking deck on Cordial Drive is accessible to Friendly Drive.

Friendly Drive is currently signalized at the intersection with Hillsborough Street. Redevelopment plans for Hillsborough Street indicate a full round about proposed at this same location.

Friendly Drive is the auto-oriented street within the development. Serving a utilitarian purpose, Friendly Drive allows both cars and delivery vehicles to access the development without creating pedestrian conflicts. The University Tower and Dan Allen parking decks are accessed from Friendly Drive.



Friendly Drive will maintain the current 41' back-to-back pavement width from the intersection with Cordial Drive to the intersection with the access from the University Tower parking deck. At this point, the roadway width will transition to a 24' back-to-back pavement section at the north side of the pedestrian crossing. Paving material will change from asphalt pavement to interlocking concrete block pavers south of the pedestrian crossing adjacent to the Dan Allen parking deck.

Friendly Drive then extends southward to the proposed intersection with the Concord Street extension

Friendly Drive will remain a public road for the entire length. A request will be made to City Council to do a right-of-way exchange that will eliminate the portion of existing

right-of-way encompassing the Friendly Drive cul-de-sac for a right-of-way extension along the extension of Friendly Drive.

The proposed right-of-way will extend 5' beyond the back of curb for new roadway sections.

Right-of-way width along existing sections of roadway will vary from a minimum of 5' beyond back of curb to 5' beyond off-street parking spaces (west side of Friendly Drive) and current right-of-way locations (east side of Friendly Drive).

Sidewalks, with a minimum width of 5', are proposed along the west side of Friendly Drive. No sidewalks are anticipated along the east side of Friendly Drive. The University Tower parking deck and the Dan Allan parking deck borders the east side of Friendly Drive.

Streetscape elements for Friendly Drive include:

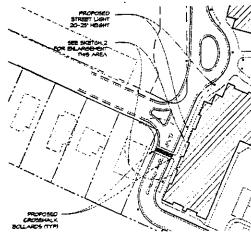
- Street tree plantings, grates and guards
- Flowering tree plantings, grates and guards
- Street lighting
- Benches at a ratio of 1/200 LF sidewalk
- Interlocking concrete porous paver sidewalk: 5' minimum width
- Pedestrian street crossings at grade to the adjoining sidewalks
- Bike racks provided at 1 per 20 car parking required for ½ the retail contained in Building B and Building A
- Bollards at street crossing locations
- Perpendicular off-street parking within the 41' back-to-back section, to be included with the right-of-way for Friendly Drive

Any plantings within the right-of-way will require a permit from the City of Raleigh Forester.

Concord Street extension

Concord Street will be extended southward from the roundabout then easterly along the southern boundary to connect with the Friendly Drive extension. Concord Street will be a public right-of-way through this section.

The Concord Street extension provides service vehicle access to Building A and an alternate vehicular access from Stanhope Village to the NC State Campus.



Sidewalks, with a minimum width of 5', are proposed along the east and north sides of Concord Street extension. The south side is adjacent to the Norfolk-Southern Railroad, and no sidewalk is anticipated.

Streetscape elements include:

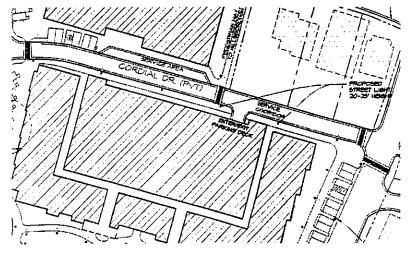
- Interlocking concrete pavers for travel lanes and on-street parking; herringbone pattern
- Perpendicular off-street parking
- Street trees, grates and guards
- Flowering trees, grates and guards
- Street lighting
- Porous interlocking concrete pavers for the sidewalk; 5' minimum width
- Pedestrian street crossings are at grade to the adjoining sidewalks
- Bollards at street crossing locations
- Bike racks provided at 1 per 20 car parking required for retail within Building A

Any plantings within the right-of-way will require a permit from the City of Raleigh Forester.

Cordial Drive

Cordial Drive, which connects Friendly Drive to Concord Street, provides access to the parking deck and functions as a service corridor to the bordering retail spaces. This road is proposed as a private street.

The majority of residential and retail parking will be contained in a multi-level (8 story) parking deck. The deck is within 200' of the buildings it is intended to serve. The deck is accessed from Cordial Drive.



A five-story building will wrap three sides of the parking deck. This wrap will front on Concord Street (see Concord Street), Stanhope Commons open space and Friendly Drive (see Friendly Drive).

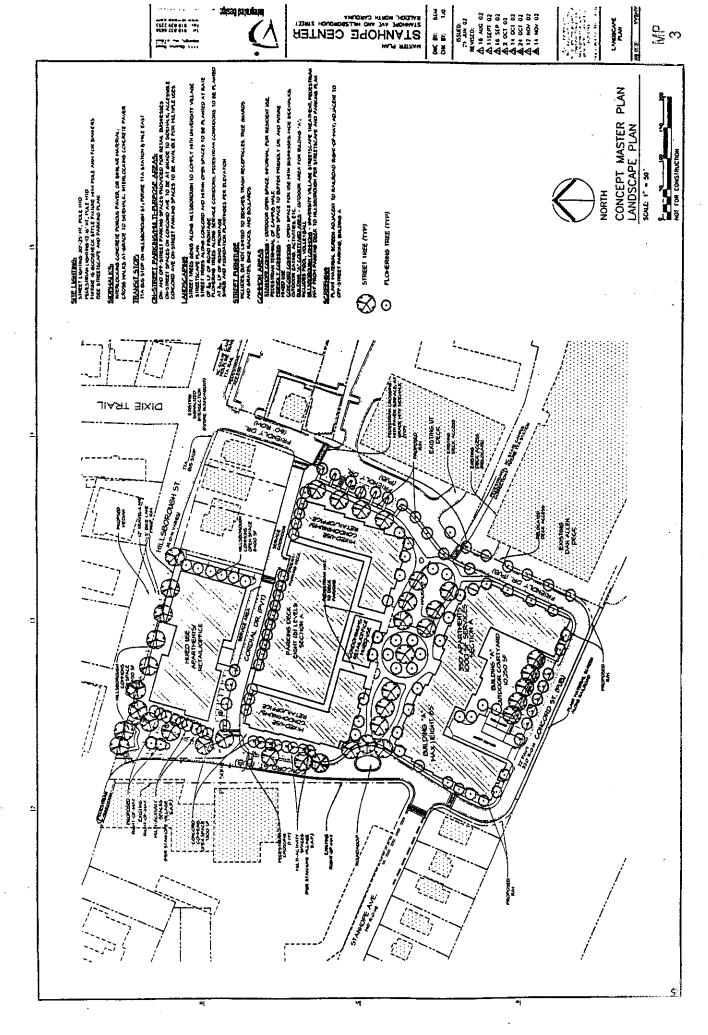
An 8' wide sidewalk is planned for the full length of the south side of Cordial Drive. A

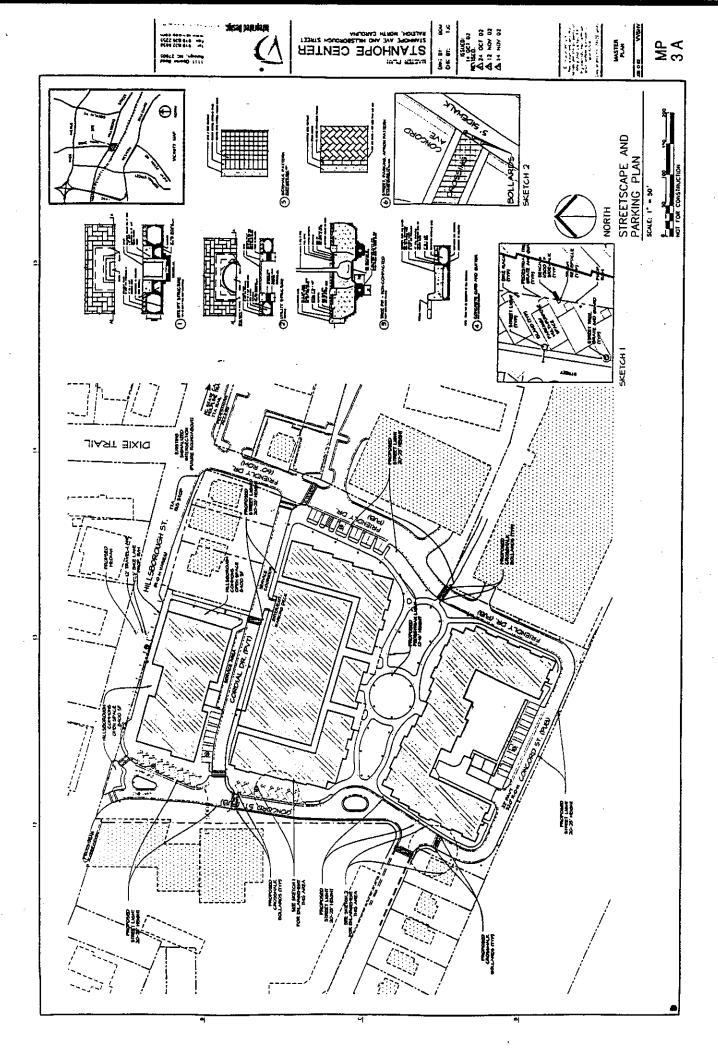
portion of the north side of Cordial Drive is not within the project area and no sidewalks will be constructed in this area. The pedestrian access from the proposed parking deck to Hillsborough Street (Hillsborough Commons) is accessed from Cordial Drive.

Streetscape elements include:

- Interlocking concrete porous pavement sidewalk (min. 8' wide)
- Street lighting
- Sidewalk trees, grates and guards
- Pedestrian street crossings at grade to the adjoining sidewalks
- Bollards at street crossing locations
- Bike storage within the parking deck
- Perpendicular off-street parking

The attached are the Landscape Master Plan (MP-3) and Streetscape Plan (MP-3A).





Proposed Trash Receptacle



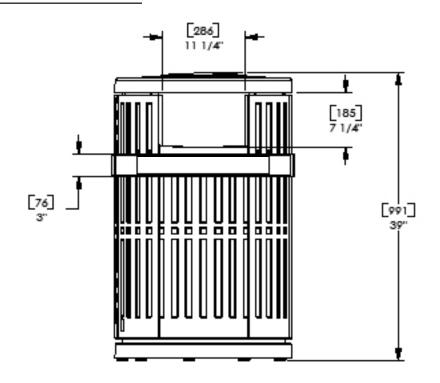
Manufacturer: Landscape Forms

Color: Anodized Finish Style: Chase Park

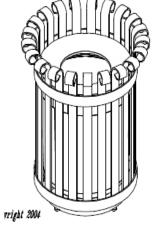
Description: 24in Diameter / 36 Gallon Side

Opening Litter

Notes: 61% Recycled Material 100% Recyclable



Current Trash Receptacle -Stanhope Center Streetscape Plan



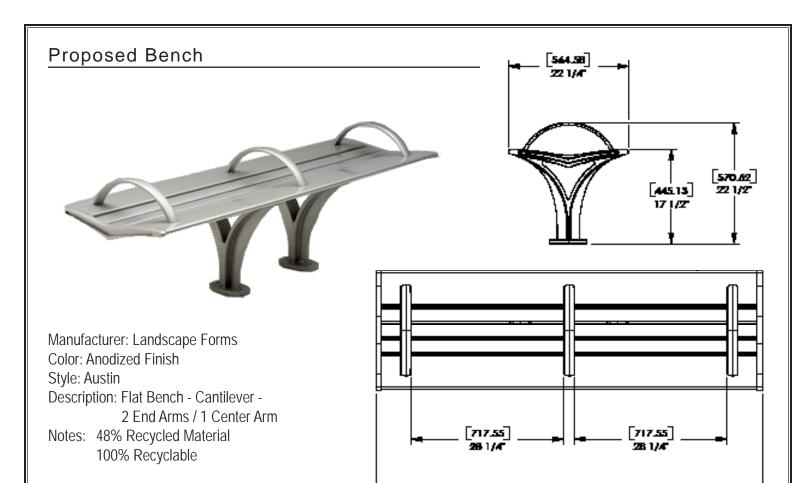
Existing Streetscape Plan Trash Receptacle Victor Stanley Concourse Series S-21

This design is simple, easy to empty, and similar to the already-common receptacles on the University Campus.

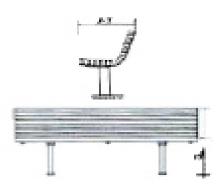
This contemporary style was selected because it is designed and built to meet the rigors of urban spaces. This design features a hinged door that swings open for easy trash removal. The closed top was requested by both the parks and recreation department and the maintenance staff to keep rain water out of the trash receptacle. This product is made from 61% recycled material and is 100% recyclable. Landscape Forms powder coat finish contains no heavy metals and has extremely low VOCs.







Current Bench -Stanhope Center Streetscape Plan



Existing Streetscape Plan Bench Woodplay, Inc.

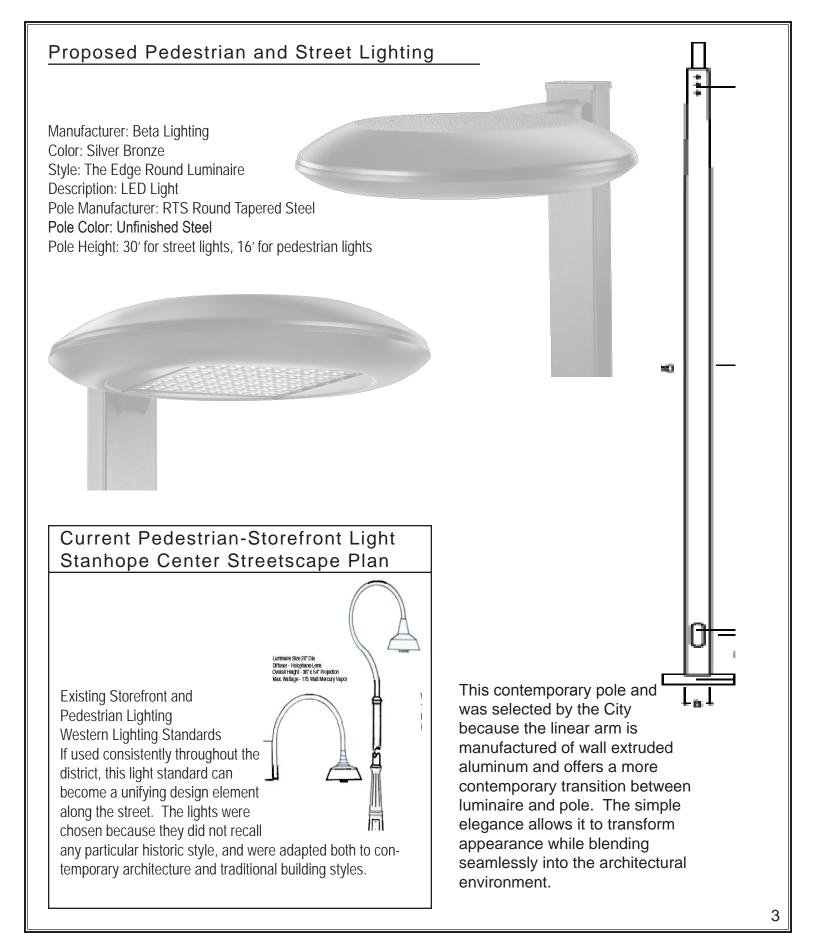
This type of bench was selected because it is simple, yet attractive, durable, and commonly available from a variety of manufacturers in this style.

This design was selected because of its balance of contemporary style and simplicity. This product is made from 48% recycled material and is 100% recyclable. Landscape Forms powder coat finish contains no heavy metals and is a hard yet flexible finish that resists rusting, chipping, peeling and fading.

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Street Furniture - Benches



Street Furniture - Pedestrian and Storefront Lighting



Proposed Bike Rack



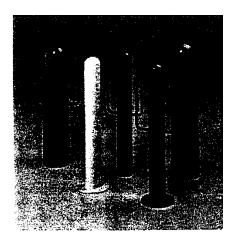
Manufacturer: Landscape Forms Color: Stainless Steel

Style: Flo Bike Rack

Notes: 91% Recycled Material 100% Recyclable

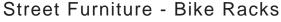
This design was selected because of its contemporary style and simplicity. This product is made of 91% recycled material and is 100% recyclable. This design is similar in character to the existing bike racks on Hillsborough Street.

Current Bike Rack -Stanhope Center Streetscape Plan



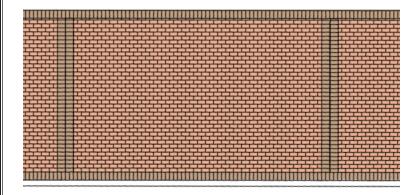
Bike racks will be bollard style, per Stanhope Streetscape and Parking Plan, and accomodate two bicycles per bollard. Bike rack distribution will not be greater than 1 bike rack per 200 LF.

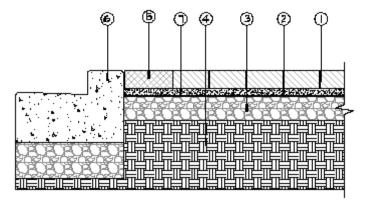
This contemporary design was selected because of its simple arching form and can accomodate all bicycle types..





Proposed Sidewalk Construction







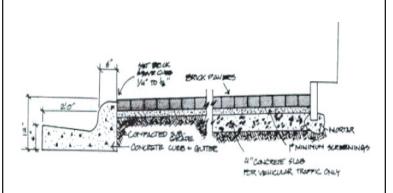
FIELD PAVER
Pine Hall Brick
Brick specification:
PATHWAY RED PAVER



ACCENT PAVER
Pine Hall Brick
Brick specification:
ENGLISH EDGE
DARK ACCENT PAVER

- ① 38° ×18° ×23° PEDESTRIAN RATED BRICK PAYER FIELD - RUNNING BOND, PATHIJAY RED
- 2 2 SAND SETTING BED
- (9) 4" COMPACTED STONE BASE
- ⊕ COMPACTED SUBGRADE
- ③ CONTINUOUS SPRICK PAYER ACCENT SAND 38' X18' X21' SPRICK PAYER BAND -DOUBLE BOLDTER COURSE, ENGLISH EDGE DARK ACCENT (REE SPECS)
- (ii) CONCRETE CURS AND GUTTER (REF ROADWAY IPLANS)
- (1) GEOTEXTILE FABRIC (REF SPECS)

Current Sidewalk Construction - Stanhope Center Streetscape Plan



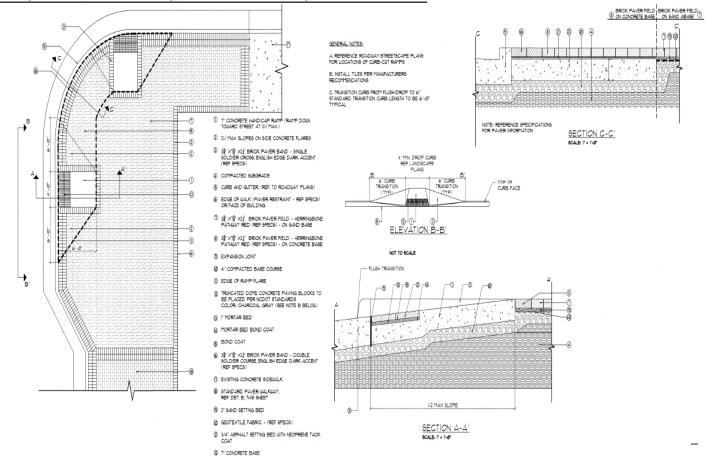
Existing Sidewalk Construction Pine Hall Brick

Brick specification:

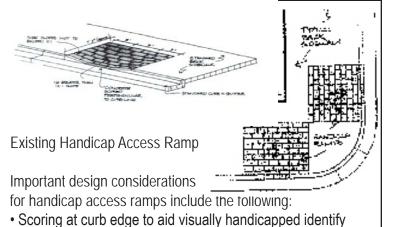
WIRE-CUT CHEROKEE FLASH PAVERS, or equivalent

This design was selected because it closely resembles the current University Village Streetscape Plan. This design provides a connection between the north and south sides of the street. The selected Pathway Red paver is a match for the paver chosen for the University Village Streetscape Plan which is no longer available.

Proposed Handicap Access Ramps



Current Handicap Access Ramps -Stanhope Center Streetscape Plan



This design was selected to meet the current NCDOT standards for ADA accessibility. The ADA approved polymer concrete detectable warning tiles aid visually handicapped identify edge of street.

subsequent ice hazard • Avoid steep slopes, sudden "lumps" or other possible

hazards to the non-handicapped as well as the handicapped

• Adequate drainage to avoid ponding at bottom of ramp, and



edge of street



Proposed Recommended Species



PANACHE SHUMARD OAK (Quercus shumardii 'QSFTC')

Location: Hillsborough Street

Shape: Rounded

Foliage: Lustrous Dark Green

Fall Color: Red



HIGHBEAM OVERCUP OAK (Quercus lyrata "QSFTC")

Location: Hillsborough Street Shape: Uniform, Dense,

Dominant Leader Foliage: Dark Green

Fall Color: Yellow-Orange



'VALYNOR' TRIDENT MAPLE (Acer buergerianum 'Valynor')

Location: Hillsborough Street Shape: Uniform, tight upright

Foliage: Dark Green Fall Color: Red

Current Recommended Species -Stanhope Center Streetscape Plan

European Hornbeam is the recommended specie for street tree plantings. Trees will be planted at 2-1/2"-3-1/2" caliper (measured 6" above grade). If overhead power lines are placed underground, as part of the Hillsborough Street Improvement Project, and before the trees are installed, the hornbeam may be substituted with a Shumard Oak of a 3"-4" caliper.

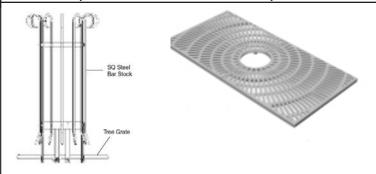
These species were selected in collaboration with the City Urban Forester and the Parks and Recreation Staff for their shape, size, and adaptation to urban settings. These trees will provide much needed shade along Hillsborough Street and will provide variety and help to unify the two sides of the street.

Proposed Tree Pits

Tree Grate specifications to remain unchanged

No tree guards to be used in the area subject to streetscape plan

Current Tree Grates and Guards - Stanhope Center Streetscape Plan

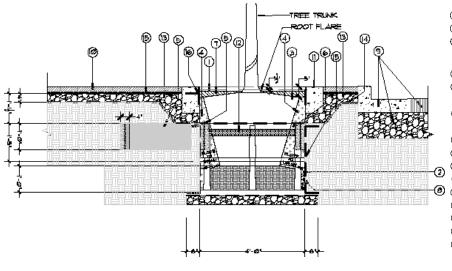


Existing Tree Grates and Guards Neenah Foundry

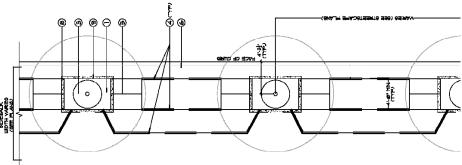
Tree grates are necessary to give the young tree access to oxygen while still allowing the space to be available for pedestrian traffic on a congested sidewalk. Three guards are necessary to protect the tree trunk from vandalism and from damage caused by bicycle locks.

Tree guards are not specified as part of the amended streetscape plan due to the often adverse impact of items chained to tree guards on the health of trees.

Proposed Tree Planting Details

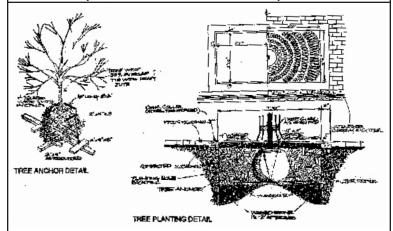


- (1) TREE PIT OPENING
- (2) CRUSHED STONE DRAIN SUMP WITH FILTER FABRIC WRAP
- (3) TREE ROOTBALL, REMOVE TOP /3 OF WIRE BASKET OR ROOTBALL STRAPS, REMOVE TOP I/2 OF BURL AP ROOTBALL COVERINGS, REMOVE ALL SYNTHETIC STRAP MATERIAL, AND COVERINGS PROM ENTIRE ROOTBALL, SET YOUR SUBSECULAR SET AND SUBSECULAR SUBSEC
- (4) BACKFILL WITH PLANTING SOIL (FER SPECIFICATIONS)
- (B) TREE PIT ROOT PATH AERATION SHEET IN TRENCH, BACKFILL TRENCH WISPECIFI SOILS EXTEND IN-LINE TO NEXT ADJACENT TREE, REF. SHEET LD-02 DET. A FO BATHLAND IT.
- (6) DEEP ROOT SILVA CELL, WITH 3" OF COMPOST BETWEEN SILVA CELL DECK, AND FLANTING SOIL BACKFILL WITH SPECIFIED SOILS, REF. SHEET LD-62" DET. A FOR LAYOUT.
- T) 2" MULCH AS SPECIFIED (DO NOT MULCH WITHIN 6" OF TREE TRUNK)
- (8) 4' DRAIN PIPE (REF ROADWAY PLANS FOR CONNECTION)
- (9) CONCRETE CURB, GUTTER, ROADWAY AND BASE (SEE ROADWAY PLANS)
- (ID) BRICK PAVER WALKWAY (SEE STREETSCAPE PLANS)
- (ii) 4' x 12' FLUSH CONCRETE EDGE
- (P) 3' COMPOST BETWEEN SILVA CELL AND PLANTING SOIL
- (3) AGGREGATE BASE COURSE
- (4) 24' WICE GEOTEXTILE, IS' MINIMUM OVERLAP PAST EXCAVATION
- (B) GEOGRID. 'J' 6' MINIMUM BELOW BACKFILL AT BASE. OVERLAP IZ' MINIMUM AT T (REFERENCE SPECIFICATIONS)
 - METAL TREE GRATE FRAME



- (1) TREE PIT OPENING 6'-8' X 4'-0' (TYP)
- 4 PVC DRAIN FIPE IN STONE DRAIN SUMP WRAPPED IN FILTER FABRIC. REFERENCE DRAINAGE PLAN FOR CONNECTING TO STORM DRAIN SYSTEM
- 3 TREE ROOTBALL
- (4) TREE PIT ROOT PATH AERATION SHEET IN 4" WIDE TRENCH, BACKFILL TRENCH WISPECIFIED SOILS EXTEND IN-LINE TO NEXT ADJACENT TREE
- (5) DEEP ROOT SILVA CELL (DOUBLE STACKED), BACKFILL WITH SPECIFIED SOILS
- (6) CONCRETE CURB AND GUTTER (SEE ROADWAY PLANS)
- 1 PAVER WALKWAY (SEE STREETSCAPE PLANS AND DETAILS)
- (A) 4" \times 12" CONCRETE CURB AROUND TREE PIT, FI USH WITH BRICK PAVING
- (9) METAL TREE GRATE FRAME

Current Tree Planting Details -Stanhope Center Streetscape Plan



All street trees are to be planted according to the detail below. PLEASE NOTE: WHEN STORM DRAINAGE IS AVAILABLE ON OR ADJACENT TO THE SITE, ALL TREE PITS MUST BE DRAINED INTO THE STORM SEWER WITH PERFORATED PVC PIPE.

The decision to use root paths and Silva Cells prevents the soil from compacting and allowing the roots more room to grow and providing much needed nutrients for larger healthier tree. The current planting detail provides no additional systems for the tree to thrive in harsh urban environments.

