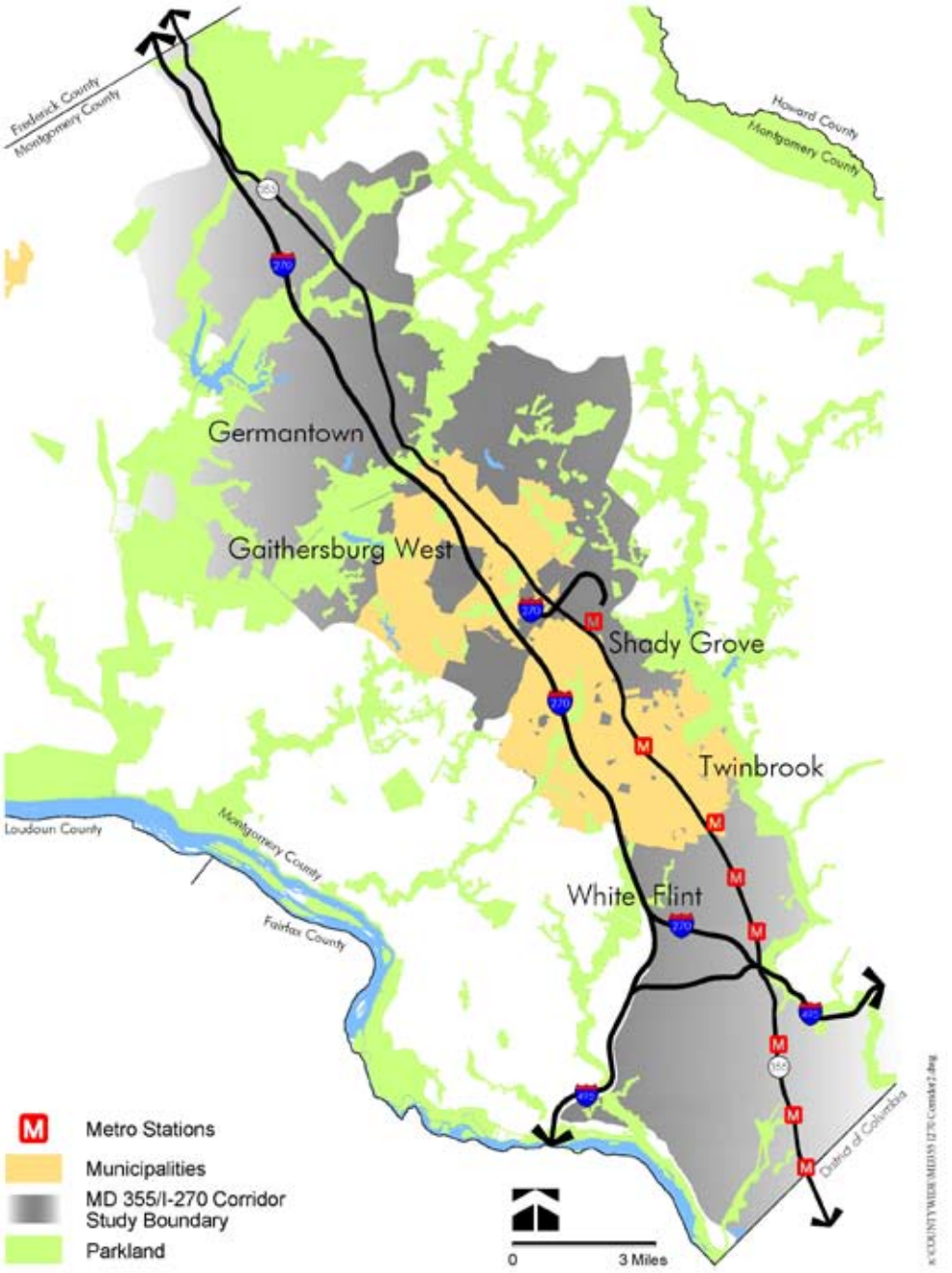
June 2010

Twinbrook

Urban Design Guidelines

Context

Montgomery County's General Plan envisioned urban centers along the I-270 corridor as places where compact, transit serviceable growth and employment opportunities could be concentrated. The County's Planning Department periodically undertakes sector planning efforts focusing on these areas, to serve as area-specific refinements to the vision outlined in the General Plan. The Urban Design Guidelines are companions to each sector plan, and provide greater detail for context-sensitive development to assist in the implementation of the Plan's vision.



Contents

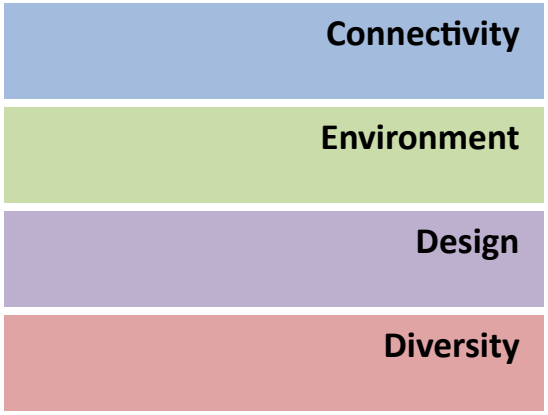
Reconfigure existing transit, streets, trails, and sidewalks to improve connectivity between neighborhoods and to provide alternatives for moving safely through the area.

Combine responsible natural resource management with public open space design to create integrated, sustainable, and compact fabric of buildings and streets.

Promote design excellence and encourage sustainable and efficient building design and construction practices.

Identify and incorporate distinctive local character into the development of new vibrant, compact centers.

Principles



How to Use the Guidelines

Urban Design Guidelines help implement the recommendations of approved and adopted master plans and sector plans. They provide information on how plan recommendations, Zoning Ordinance, and Road Code requirements can be met; the area or district context for individual sites; and best practice ideas for building and site design.

The planning process is structured in a hierarchy of decisions:

- Master and sector plan recommendations provide the vision for a specific area.
- Zoning Ordinance and other codes establish standards and regulations for development.
- Design Guidelines provide inspiration and suggestions to fulfill the Plan's vision, and serve as a problem-solving tool.

The guidelines are developed through consultation with property owners, residents, institutions, interest groups, and Executive agencies. They are approved by the Planning Board for use by planning staff in developing and evaluating proposed building projects and other applications. They will be revised and updated as necessary.

With the exception of street standards and other specific recommendations included in the Sector Plan, the Guidelines are not regulations that mandate specific forms and locations for buildings and open space. They illustrate how plan recommendations and principles might be met, and encourage applicants and public agencies to propose designs that create an attractive and successful public realm.

The examples included are intended to frame discussions regarding building design in a flexible way without prescribing specific solutions.

The Twinbrook Sector Plan is available online at
montgomeryplanning.org/community/twinbrook

Vision

Twinbrook Sector Plan

In Twinbrook, the density and proximity of retail, office, laboratory, and residential uses require attention to detail in project design. The Plan's recommendations create street-oriented buildings; side, rear, and below-grade off-street parking; street facades and uses that are pedestrian-oriented; continuous, safe, and landscaped pedestrian routes; and screening of loading and mechanical structures. Streetscape elements must include lighting, street tree planting, street furniture, and enhanced crosswalks.

Twinbrook Station Development, Rockville, MD

Successful urban centers stitch together different neighborhoods by combining newly developed areas with older, more established communities. The energy introduced by new development and the efficiency associated with new systems and services can create an attractive destination. Creating a synergy between new and old ensures longevity.

Adaptable building and urban site design is encouraged to allow a community to develop organically. Creating a flexible urban fabric is a priority for these Guidelines.

The Twinbrook Sector Plan recommends concentrating biotechnology and technology uses, adding residential uses, and retaining and maximizing existing light industrial uses that support the advanced technology industry.

The Guidelines don't issue specific design directives but highlight techniques and approaches that can help create three distinct neighborhoods in Twinbrook: street facing buildings and retail-oriented development near the Metro station, a high-tech employment district, and a manufacturing community of mixed uses.

Distinctive local character can be achieved by the creative reuse of many existing industrial structures, and by considering the long-term adaptability of any proposed construction.

Design Objectives

Connectivity

Improve how people connect to transit, services, entertainment, and nature by:

- using building facades to create a comfortable pedestrian environment along streets
- providing on-street parking wherever possible
- providing closely-spaced trees along all pedestrian oriented streets
- minimizing driveway cuts along major pedestrian routes
- creating active mid-block pedestrian connections
- improving safety at pedestrian crossings

Design

Apply sustainable principles to the way we build and how we live by:

- building adaptable facilities and spaces that can accommodate land use changes over time
- promoting compact development patterns and walkable communities
- focusing on quality buildings and spaces that will provide long term value to the community.

Environment

Reduce development impact on the natural environment by:

- creating walkable environments that reduce reliance on cars
- using innovative stormwater management techniques to meet the ESD guidelines for urban areas
- promoting energy conservation and generation as a primary building and public space design feature
- encouraging building massing that improves air flow and access to natural light
- integrating sustainable components into the design of buildings and public places (e.g., vegetated roofs, green walls, recycled content materials, etc.).

Diversity

Create a true mix of choices in how and where we live and work by:

- implementing land use patterns that create a mix of homes, jobs, shopping, and public amenities
- redeveloping Twinbrook's light industrial area to retain flexibilty for businesses to evolve.
- creating an attractive urban environment that will attract people of all ages, incomes, and ethnicities.

Adaptive Reuse in Twinbrook

While adaptability could be an applicable principle for all new development in Montgomery County, it is particularly salient in the Twinbrook Sector Plan area where building functions – living, research, government employment, small businesses and industrial uses – need to accommodate change. In the Technology Employment area, anticipated growth of laboratory functions calls for implementing adaptable design principles – high ceilings, flexible floor space arrangements, energy efficiency – to ensure long-term viability.

At 40-years-old, the 935,000-square-foot Parklawn Building is ready for rehabilitation. Further, the Twinbrook Sector Plan reaffirms a vision of the Light Industrial Area as an incubator for crucial service and small business operations. Located in the oldest part of the Twinbrook neighborhood, development in this area can strengthen the urban fabric by linking and associating with existing warehouses and industrial buildings.

Existing buildings offer opportunities for community redevelopment through adaptive reuse. Older structures can be retrofitted for new purposes when original uses become outdated. Architects can change the structure's primary function, while retaining architectural details that make the building unique.

Neighborhood Character

Twinbrook Sector Plan

The Plan specifically provides for the transformation of:

- Office buildings by rezoning the Parklawn Building property to allow adaptive reuse that would keep the building viable and generate employees, residents, and street activity at an urban scale.
- Industrial buildings by amending industrial zoning to preserve the existing mix of light industrial and retail uses, and to encourage redevelopment on existing small sites, rather than assembled lots, with minimal improvements to the public realm.

The Guidelines support the Plan's recommendations for improving the existing urban environment by fostering the creation of sustainable urban fabric. The case studies are intended to expand the discussion on the possibilities of adaptive reuse.

Types of Adaptive Reuse

Conversion

Building conversions result in a change of function, usually due to the obsolescence of the property use or the transition to a new building type.

Multi-tenant Office, San Diego, CA
Graham Downes Architecture

Refurbishment

Refurbishment projects result in an improvement of the building's performance, usually including upgrades to the exterior to improve energy efficiency and interior conditions.

304 South Gay Street, Knoxville, TN
Sanders Pace Architecture

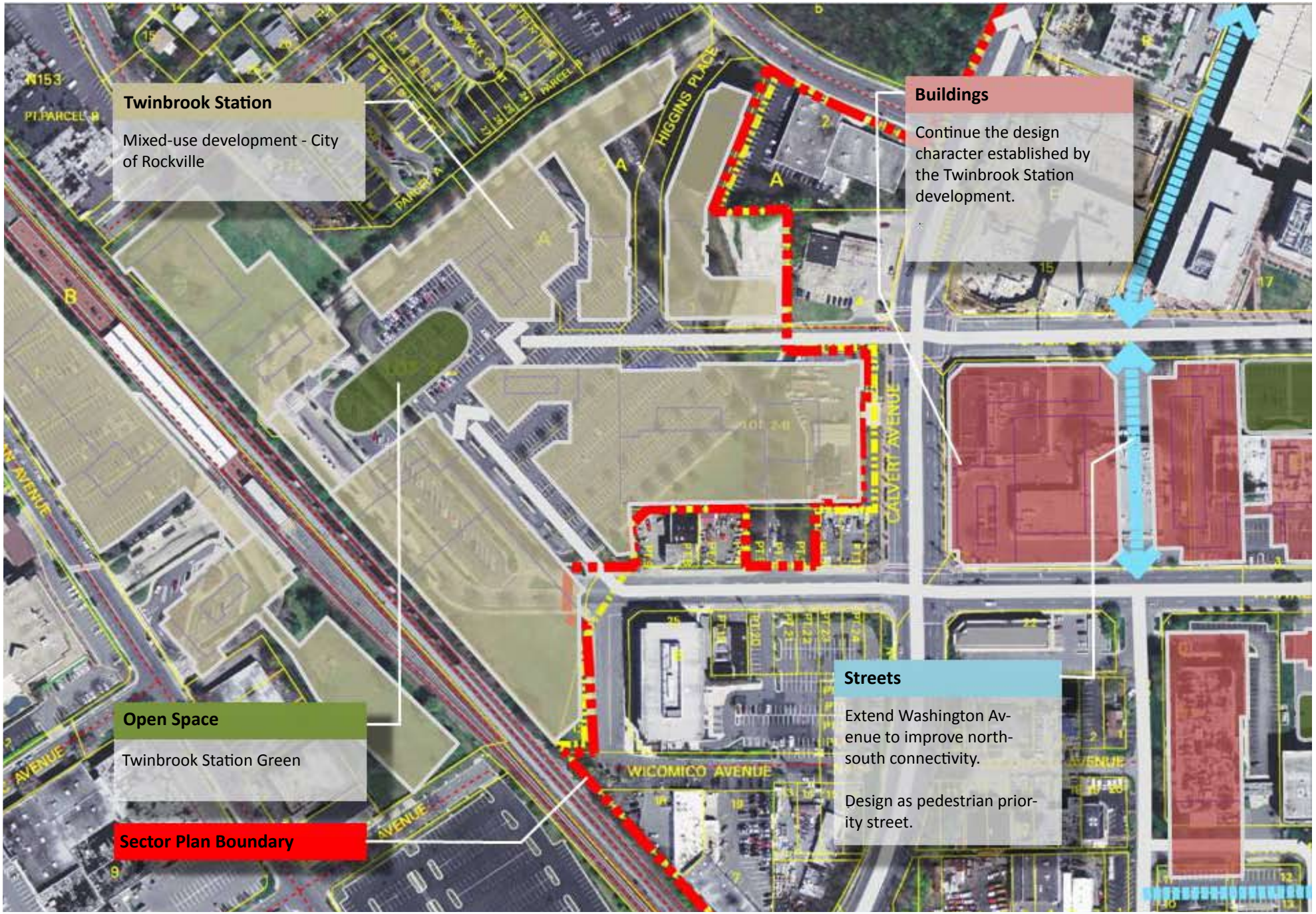
Renovation/Expansion

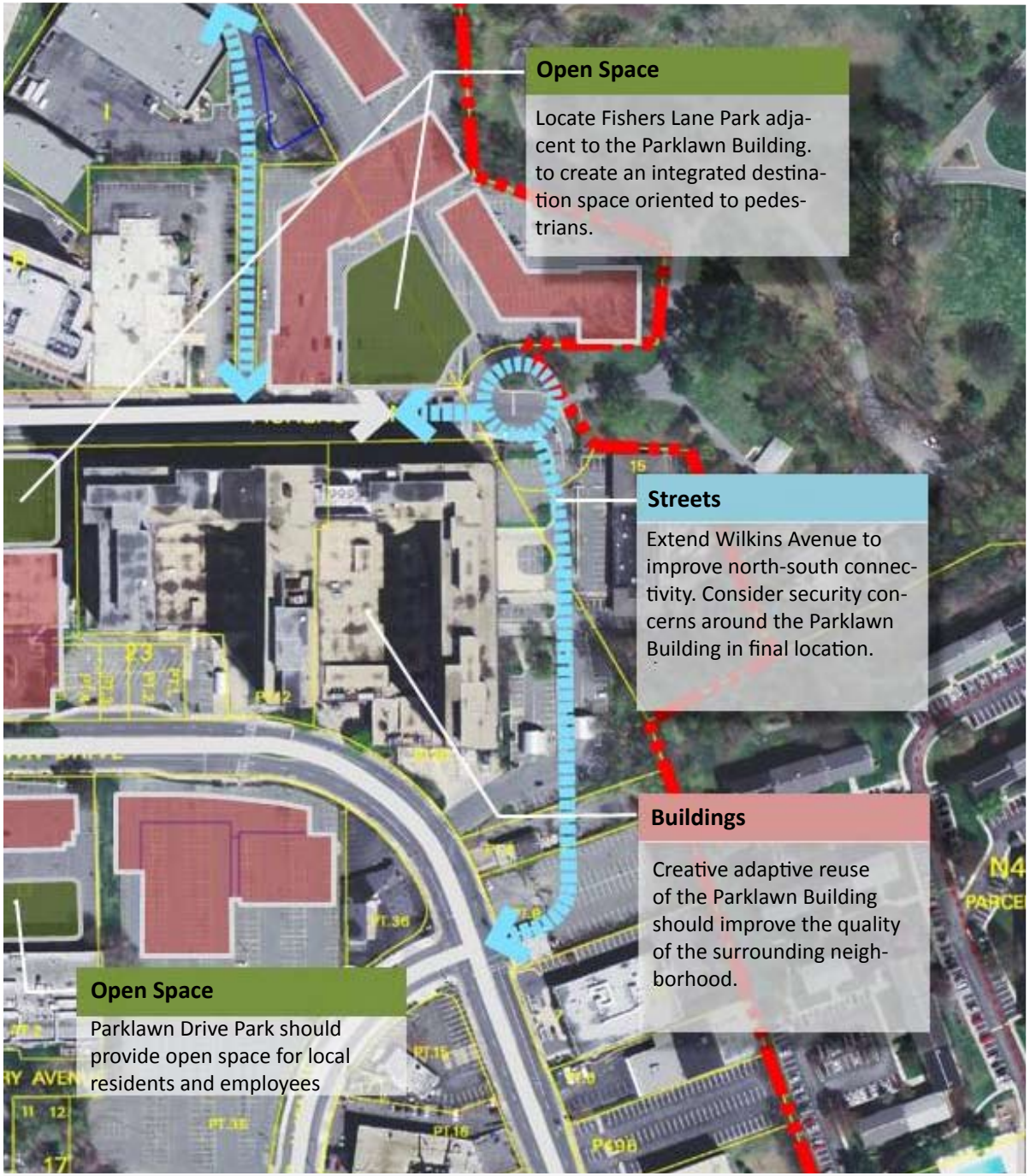
Changes in size resulting from renovation and expansion are usually the result of an increasing demand for space to improve, expand or diversify the structure's use.

Porter House, New York, NY
SHoP Archtects

Principles of Adaptive Reuse

Convertible	Adaptable	Divisible	Expandable	Flexible
How can a building be designed to allow its use to change? How can a building accommodate new functions?	How can buildings be taken apart, in part or whole, to allow for building expansion, new uses, and enhanced performance?	Can building materials be re purposed or separated and recycled?	How can buildings increase capacity and volume?	Can a building's interior space allow reconfiguration? How can the floor plan be made more efficient?


Twinbrook Station
Mixed-use development - City of Rockville
Buildings
Continue the design character established by the Twinbrook Station development.
Open Space
Twinbrook Station Green
Sector Plan Boundary
Streets
Extend Washington Avenue to improve north-south connectivity.
Design as pedestrian priority street.
HIGGINS PLACE
CALVERT AVENUE
WICOMICO AVENUE
PARCEL A
PARCEL B
PT. PARCEL B
N153



Opportunities

Twinbrook's center of activity will be its central corridor defined by Fishers Lane and Parklawn Drive. These properties and streets link the Technology Employment Area with the Twinbrook Station project and the Light Industrial Area.

Mobility options, defined street edges, appropriate open space, and pedestrian links will be key to its success.

Adjacent Development

The Twinbrook Station project establishes the character along the western edge of the Plan area's central corridor. It includes street facing buildings, retail frontages, green building design, and functional open space.

Open Space

Twinbrook Station's green will be the western anchor for the Fishers Lane corridor. The Plan recommends two additional significant public spaces (Fishers Lane Park and Parklawn Park).

Streets

Streetscape improvements will be required along public roads. Street walls should be defined by building facades.

Buildings

Key properties present possibilities for extending, improving, and establishing neighborhood character. Recognizing the potential of each district, the Guidelines' case studies illustrate redevelopment approaches.

Guidelines

Streets

Twibrook Sector Plan
Street Character - Streets are the most important open space element in defining the public realm and creating memorable places. Using buildings to create spaces defines the street as public space and provide an interesting pedestrian environment. Streets should include amenities, landscaping, and sidewalks, but most importantly, should make desired connections.

Road Code
All applicants must comply wih the Road Code. **Applicants pursuing streetscape designs inconsistent with the road code must apply for a waiver.** Portions of Parklawn Drive and Wilkins Extended may be adjusted to meet federal security requirements.

Utilities
All utilities should be accomodated underneath sidewalk paving within right-of-way limits, and be coordinated by MCDOT and utility companies.

Streetscape
Sidewalks should be at least 10 feet from curb to building, with at least 15 feet for retail streets.

Street trees and streetscaping will be provided along streets, as indicated in the Sector Plan.

Intersections
Improving the intersection of Twinbrook Parkway with Fishers Lane and Parklawn Drive is a priority to establish a safe east-west pedestrian connection from the Metro station to the Technology Employment and the Light Industrial Areas.

Improvements should include:
- special crosswalk paving
- raised and/or planted medians
- pedestrian priority signal timing.

B12, B14, B16 Unclassifed Business District Streets

Sector Plan
Min. R.O.W.: 60 ft
Lanes: 2

Guidelines
Parking: One Side
Trees: 30-35’ o.c.
Sidewalk: Minimum 10’
Setback: None
Street Wall: 42-60’ H. max
Median: None

Comments:
Wilkins Avenue extended (B14) may require a private street designation and/or a minor change in location to accomodate security requirements.

B9, B12, B13, B15 Business District Streets

Sector Plan
Min. R.O.W.: 70 ft
Lanes: 2

Guidelines
Parking: Both Sides
Trees: 30-35’ o.c.
Sidewalk: Minimum 10’
Setback: None
Street Wall: 42-60’ H. max
Median: None

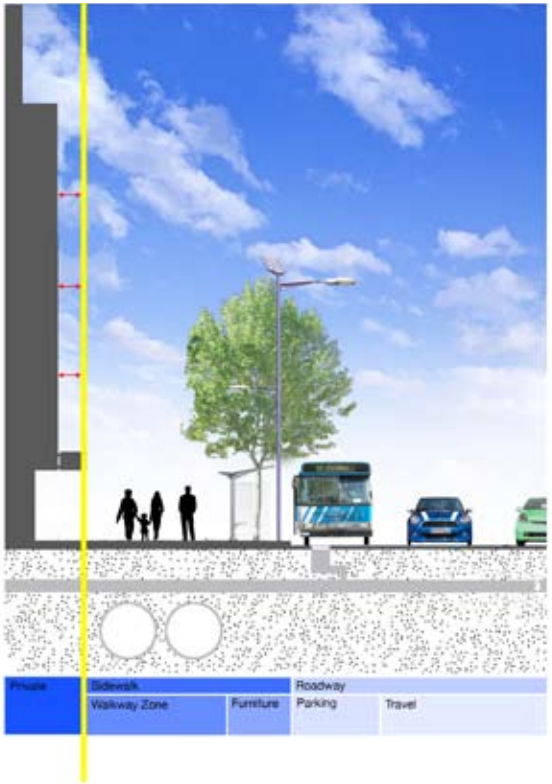
Parklawn Drive
Arterial Street

Sector Plan
Min. R.O.W.: 80 ft
Lanes: 4

Guidelines
Parking: Off-peak
Trees: 30-35’ o.c.
Sidewalk: 20’ wide
Setback: 5’ from R.O.W.
Street Wall: 45’ H. max
Median: Planted with turn lanes

Comments:
A minor shift in location is appropriate adjacent to the Parklawn Building to provide setback to meet federal security requirements.

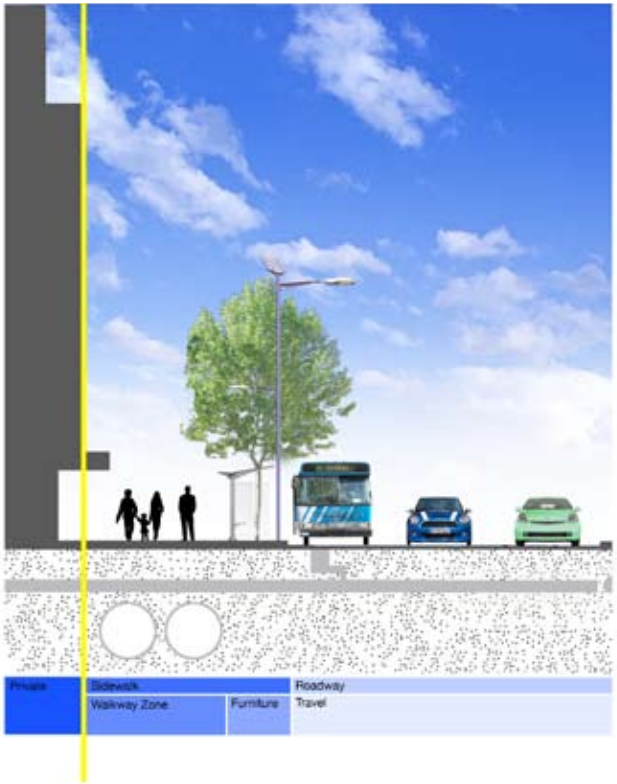
Fishers Lane
Business District Street



Sector Plan
Min. R.O.W.: 80 ft
Lanes: 4

Guidelines
Parking: Both sides
Trees: 30-35’ o.c.
Sidewalk: 20’ wide
Setback: 5’ from R.O.W.
Street Wall: 60’ H. max
Median: Left turn lane

Twinbrook Parkway
Arterial Street



Sector Plan
Min. R.O.W.: 120 ft
Lanes: 4-6

Guidelines
Parking: Off-peak*
Trees: 35-40’ o.c.
Sidewalk: 20’ wide
Setback: None
Street Wall: 45’ H. max
Median: Planted with turn lanes

Comments:
*Off-peak parking limited to segment of Twinbrook Parkway between Parklawn Drive and Fishers Lane, and additional northern segments as determined appropriate.

Open Space

Twibrook Sector Plan

- Public spaces should be intensively designed to offer varied recreation and open space options on small sites.
- Public spaces should function to support and enhance the natural environment with design features that also perform environmental functions, such as tree coverage and pervious surfaces.
- Allow public space requirements on separate sites to be combined to create larger spaces or designs with more function and visual impact than individual sites.

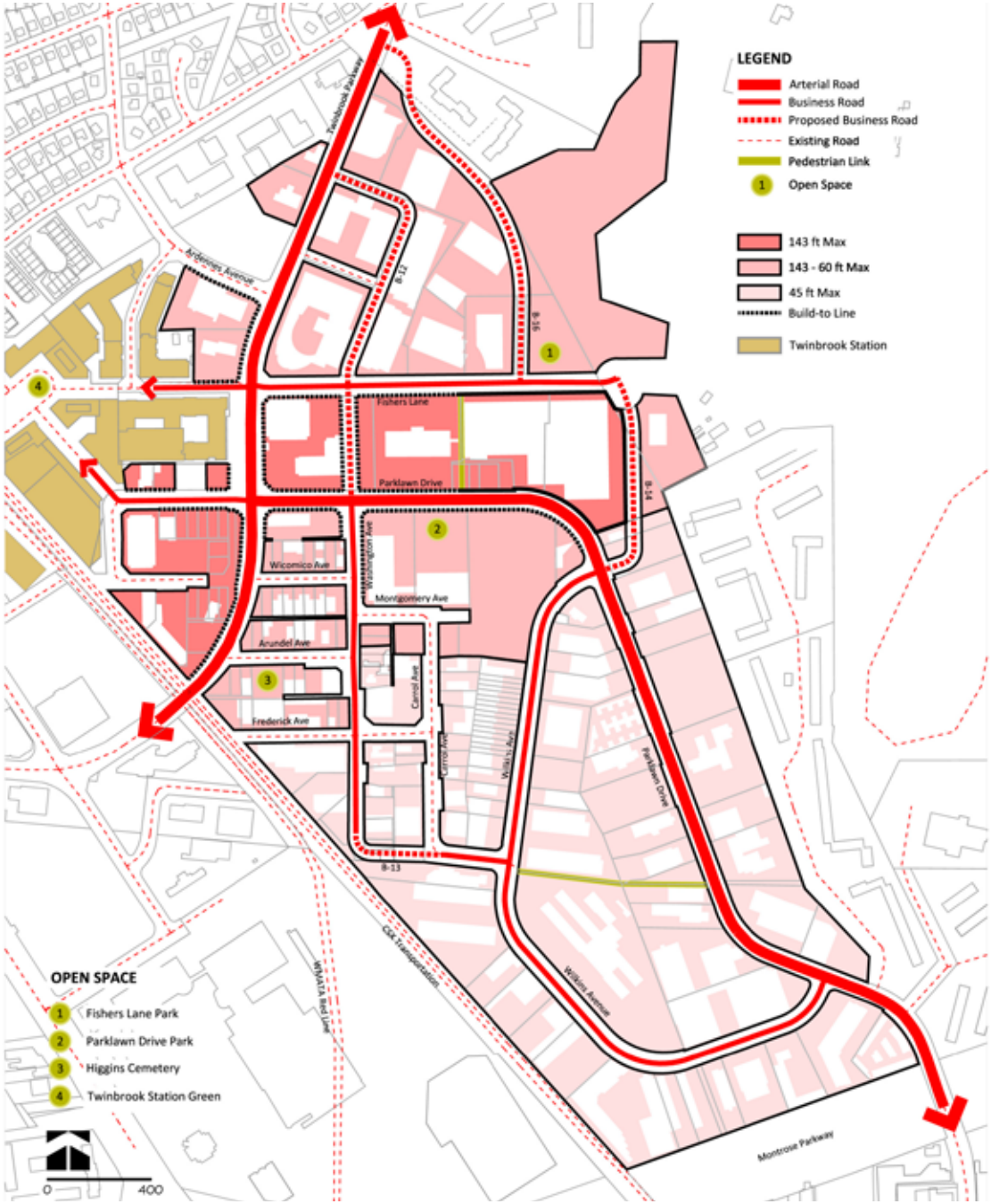
Good urban spaces create opportunities for spontaneous interaction or through programmed activities. The Plan distributes open spaces throughout Twinbrook to make them visible and accessible, and to serve as points of reference within each neighborhood.

Zoning Ordinance

Public use space required by the TMX Zone should respond to project needs and adjacent uses. Restaurant uses, for example, should provide areas for outdoor seating, retail should maintain a street wall but provide pocket parks for seating. When open space does not contribute to a development's needs, public use space should be provided off site or an in-lieu payment should be made.

Specific locations for public use space will be determined when redevelopment occurs. Considerations should include:

- visibility from primary streets
- obviously public and accessible
- landmark features such as shade structures or artwork.



Plan Recommended Open Space
Two privately developed new urban parks have been designated in the Plan area--Fishers Lane Park and Parklawn Park.

They should include :
- varied recreational opportunities
- maximum vegetated permeable area
- large open spaces
- tree canopy and pervious surface
- seating, signage, and other furnishings.

Pedestrian Links
Two through block connections--one connecting Fishers Lane with Parklawn Drive near the Parklawn Building and the other connecting Wilkins Avenue to Parklawn Drive--should be designed to improve pedestrian access.

They should include:
- retail activity that doesn't compromise retail along public streets
- windows overlooking the connections
- lighting and furnisihings
- opportunities for public art.

Public Use Space
Small public use spaces will be created under the TMX Zone's requirements for open space.

They should be:
- both active and passive
- located to not separate buildings from public streets
- visible and usable.

Outdoor public use spaces can be combined from several projects to create a larger public use area.

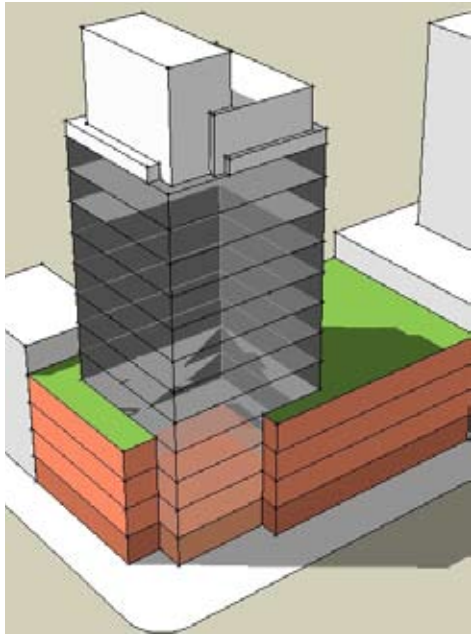
Buildings

Twinbrook Sector Plan

- Optional Method Development projects must follow the design guidelines outlined in the Plan.
- Locate buildings close to the street with parking on the rear or center of blocks.
- Create shared parking when possible.
- Redevelopment should be compatible with and connect to surrounding uses.

Building design should:

- create identifiable landmarks
- provide street walls
- help establish neighborhood character
- meet the County's LEED standards.



Rooflines

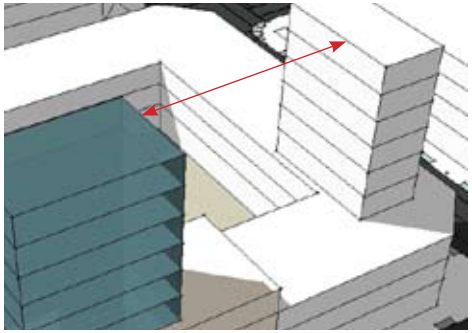
Encourage distintive building rooflines in towers.

Towers

Should be located to reduce the impact of their scale on the streets below, and to allow access to natural light and air flow.

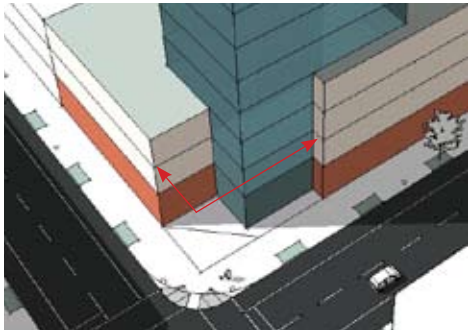
Podiums

The structure's lower floors should establish continuity with adjacent buildings. Height should vary from ***two to five*** stories, depending on location.



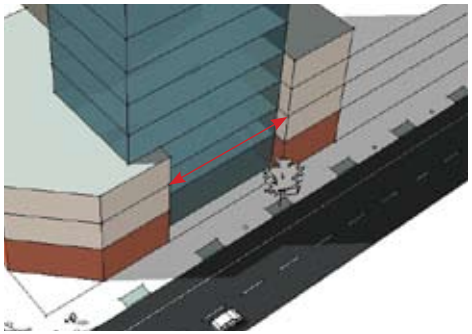
Tower Separation

Separation between adjacent towers is strongly encouraged to allow natural light and air flow.



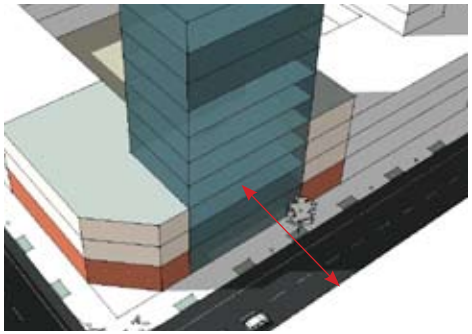
Corners

A tower's full height may be expressed at corners, as part of the building's articulation. Maintain street wall continuity through articulation.



Street Wall Recess

A tower's full height may be fully expressed at street level if related to a frontal open space or setback from right-of-way.

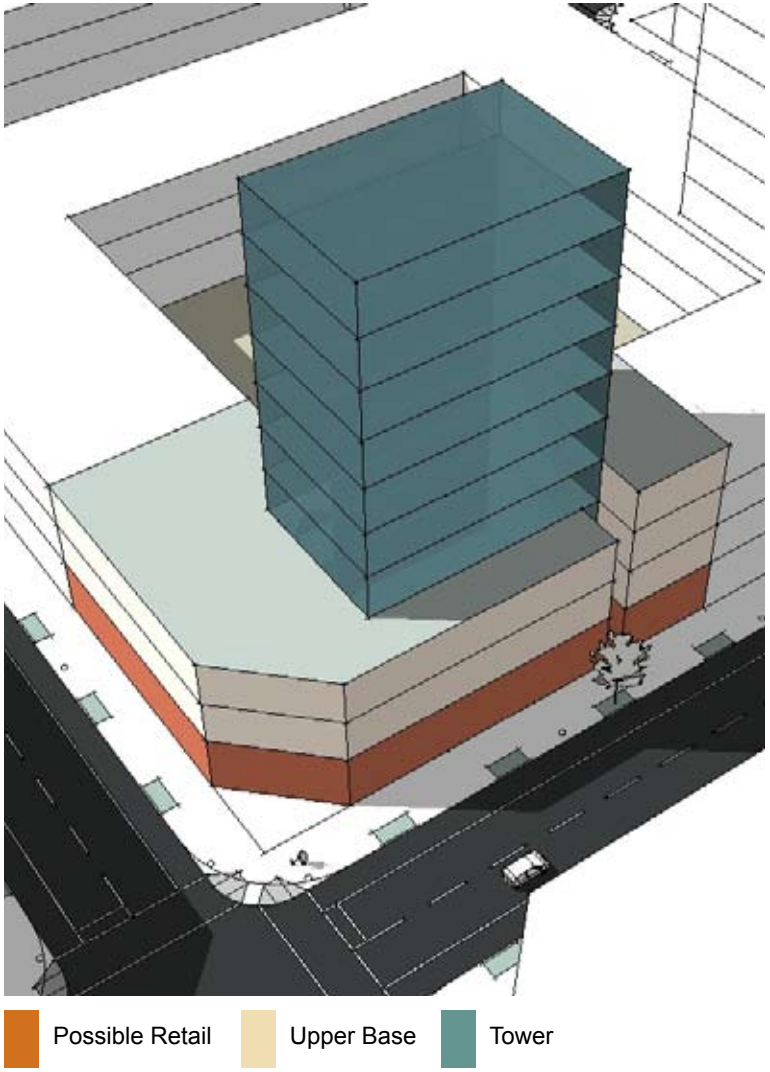


Tower Alignment

The tower's face may align with the podium face along streets with an 80-foot or greater right-of-way.

Building Towers

Locate buildings to reduce their impact on the street's pedestrian environment and on adjacent open space.



Street-Defining Buildings

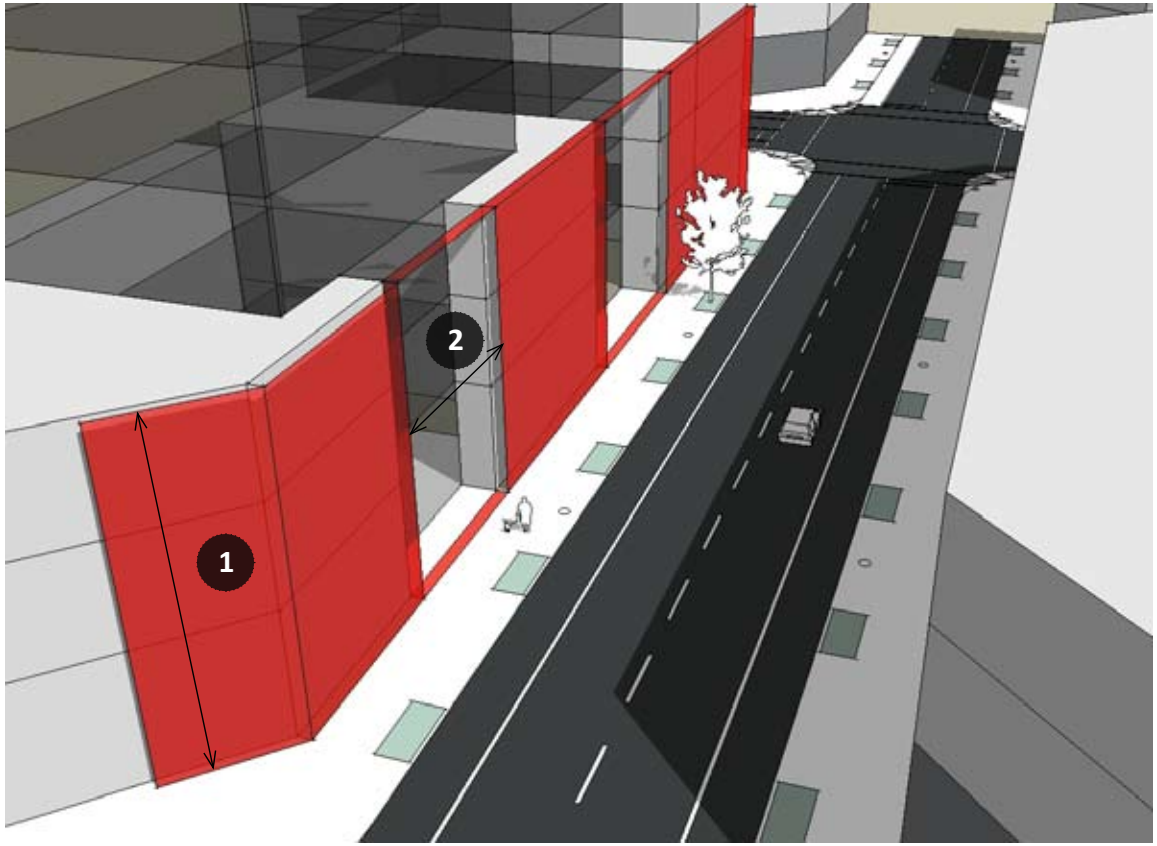
Streets should be defined by consistent street walls. Building podiums should meet build-to lines where indicated on district maps.

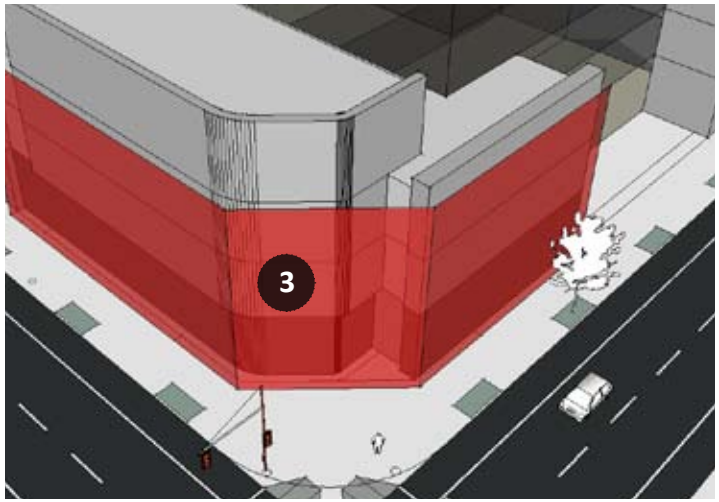
1. Podium Height - should range between ***3 and 5*** stories, as indicated on street sections.

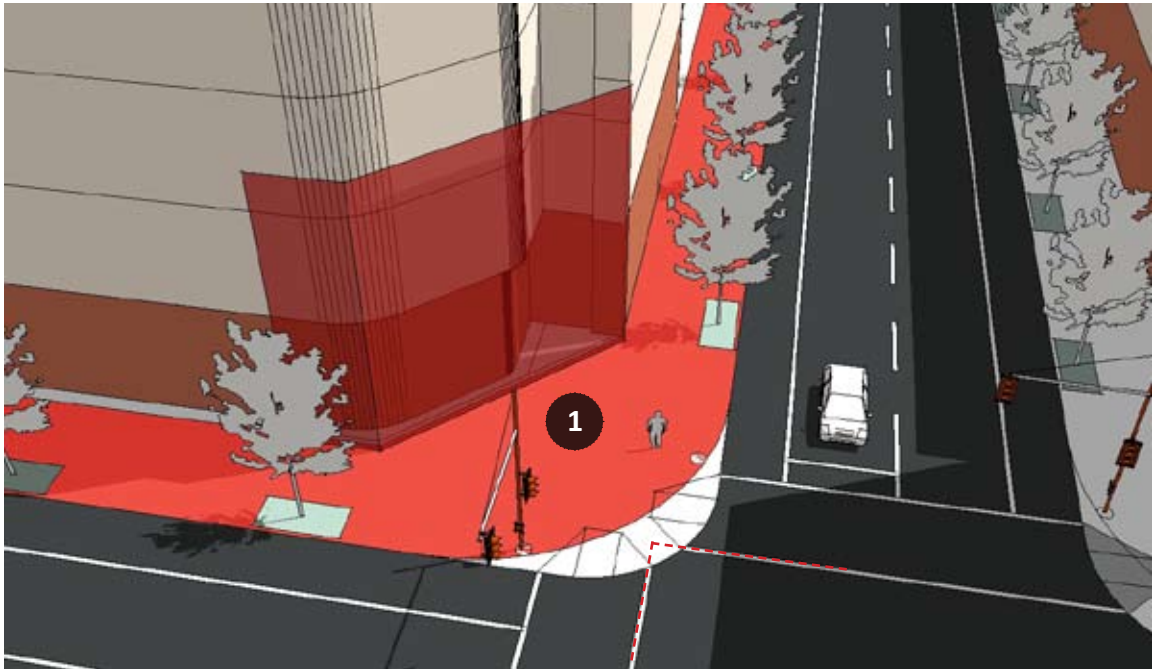
2. Street Wall - Breaks along street walls are desirable on block frontages 200 feet or longer. Breaks should be away from block corners, and infrequent on retail streets.

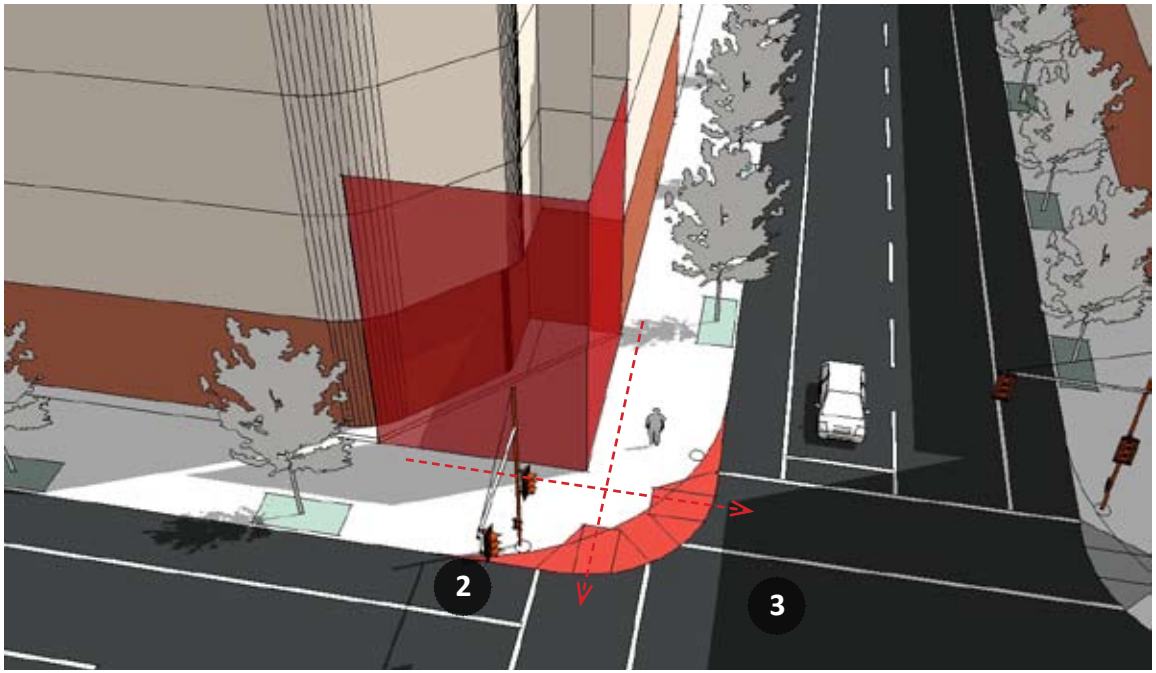
3. Podiums - Podiums should meet built-to walls at corners. Facade articulation is strongly encouraged.

Building street wall meeting built-to line.









Urban Corners

Urban corners should be safer for pedestrians and convenient for safety and service vehicles.

1. Road Code - Highlighted area indicates sidewalks and required corner truncation per MCDOT standards at the intersection of two hypothetical streets. A corner radius of 30 ft is shown. This standard is often applied using a single handicapped ramp (not shown) oriented toward the center of the intersection.

2. Design Guidelines - Corner radii should be tighter (15 feet shown), and should include a double ramp at the corner, possibly waiving the truncation requirement for most urban streets. Ramps should align with path of pedestran travel and street crossings.

3. Vehicle turning radius - Effective turning radius should be 30 feet in the recommended configuration.

Focus Elements

Parking

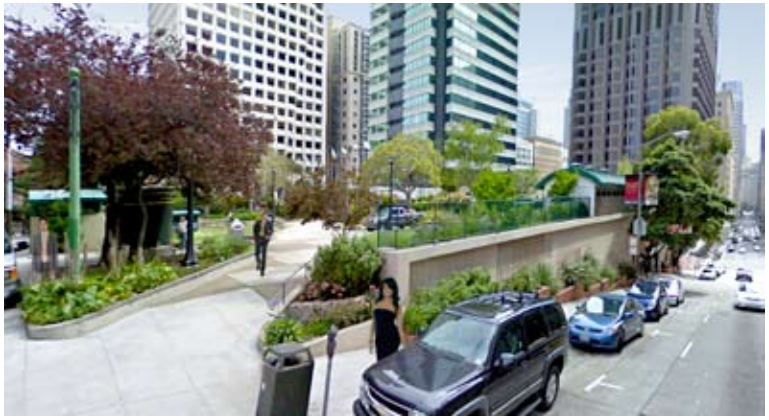
Twinbrook Sector Plan
The Plan establishes the following guidelines for parking.

- Limit parking supply through the Zoning Ordinance based on Metro Station proximity and allow parking waivers in the Light Industrial Area.
- Encourage shared and structured parking rather than surface lots.
- Locate parking mid-block, using green construction techniques and activated facades.
- Locate garages in a way that does not interrupt pedestrian activity and limits automobile traffic through pedestrian areas.

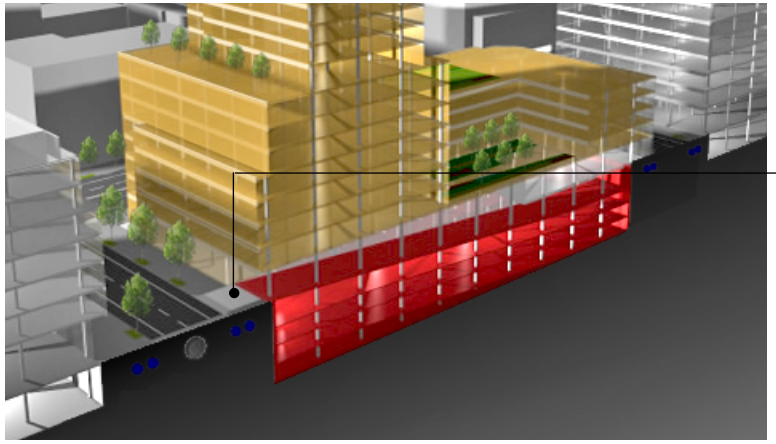
Zoning Ordinance
Parking requirements in the Twinbrook Sector Plan area are set by the Montgomery County Zoning Ordinace.

- For most uses zoned either I-4 or TMX, see Section 59-E.
- Some retail, restaurant, and office uses in the TMX Zone may be eligible for parking reductions, see Section 59-C-14.214.

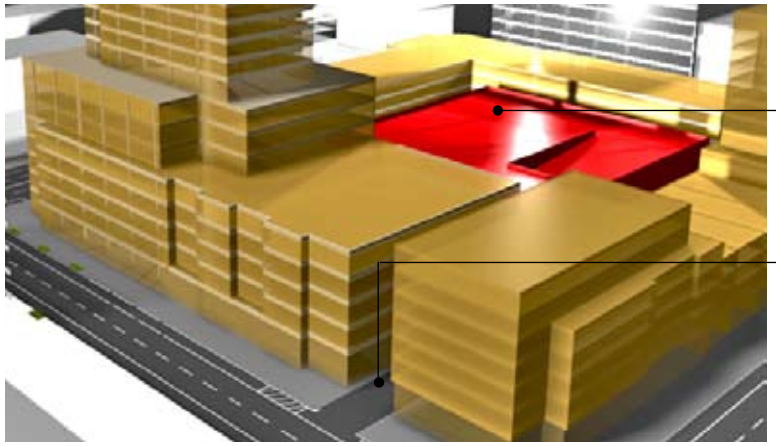
St. Marys Square Garage and Park San Francisco, CA



Using the site's sloped topography, St. Marys Garage is built into the side of a hill beneath a public park. The park is heavily vegetated to mitigate runoff, and reduces the garage's visual impact on the street.

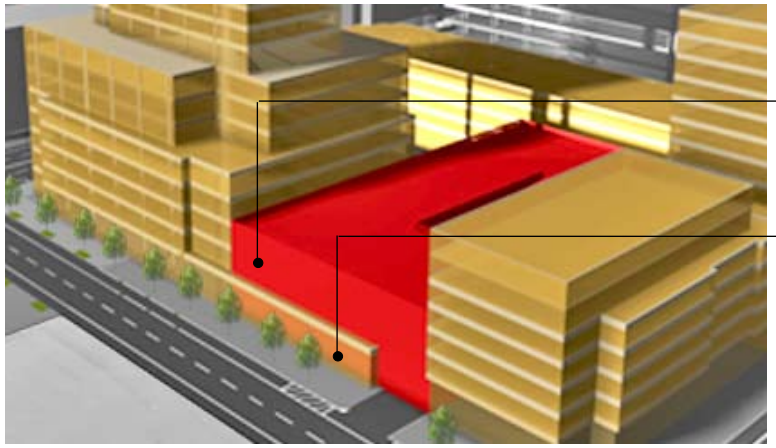


Narrow Entrance
Minimize width of entrance and egress lanes



Wrapped Parking Deck
Place garage centrally within the block

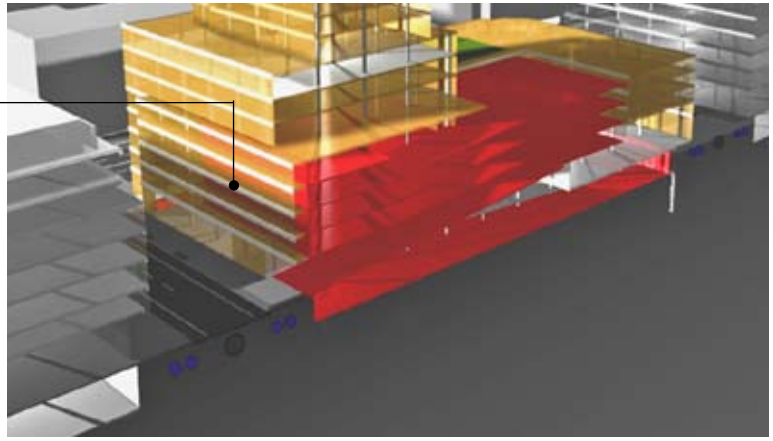
Access off Alley
Consolidate access points with adjacent properties

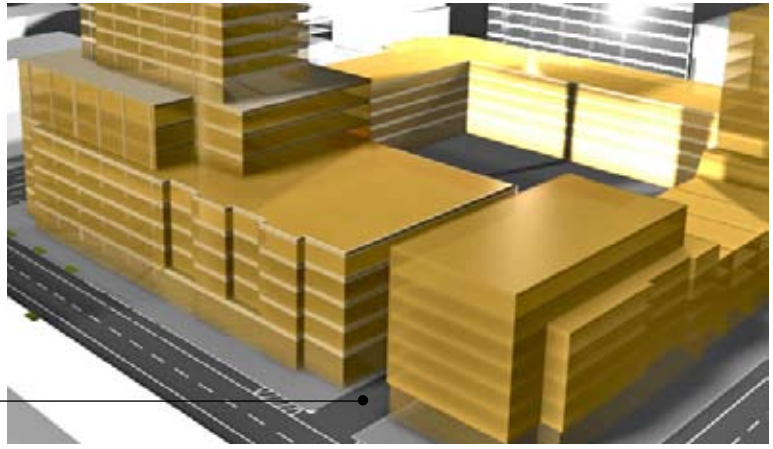


Minimize Street Exposure
Reduce the amount of the garage facade facing street

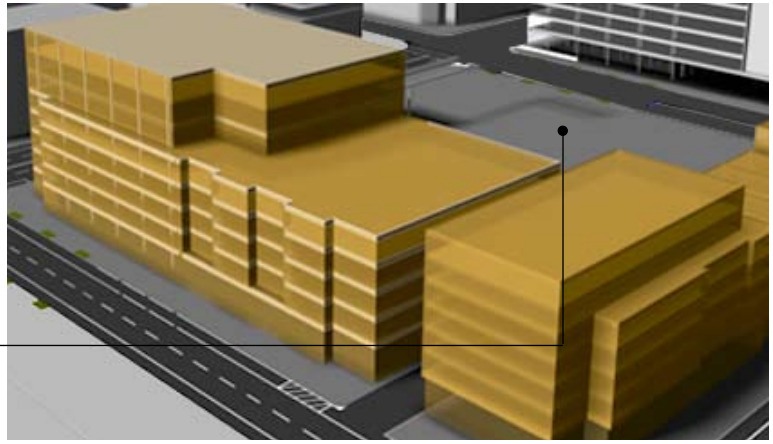
Ground Floor Frontage
If possible, activate ground floor with retail or other uses

Integrated Building Facade
Garage and building are indistinguishable





Access off Side Street
Provide side street access to minimize traffic impact



Parking Behind Building
Internalize parking structures where possible

The Contemporaine Chicago, IL

Perkins + Will

The Contemporaine creates an integrated aesthetic by applying the same materiality and design sensibility to both the podium parking structure and residential units. The buildling's ground floor is activated by retail on the primary street while the garage is accessed from a rear alley.

Parking Best Practices

Underground and Structured Parking
Parking should minimize its impact on the pedestrian environment and public realm.

- Locate entrances and exits on an alley or business district street.
- Buildings above structured parking should make facades of the garage portion of the building compatible with the rest of the structure, to enhance the overall architectural quality of the building.
- Minimize the width and height of driveways and entrances.
- Where possible, combine loading dock and garage access.

Surface Parking
Locate parking on the rear or side of building, away from primary streets and sidewalks. Surface parking should not be visible from primary streets. Considerations should also include:

- measures to reduce heat island warming
- tree canopy and permeable areas to treat stormwater.


TWINBROOK

Districts

Twinbrook Sector Plan

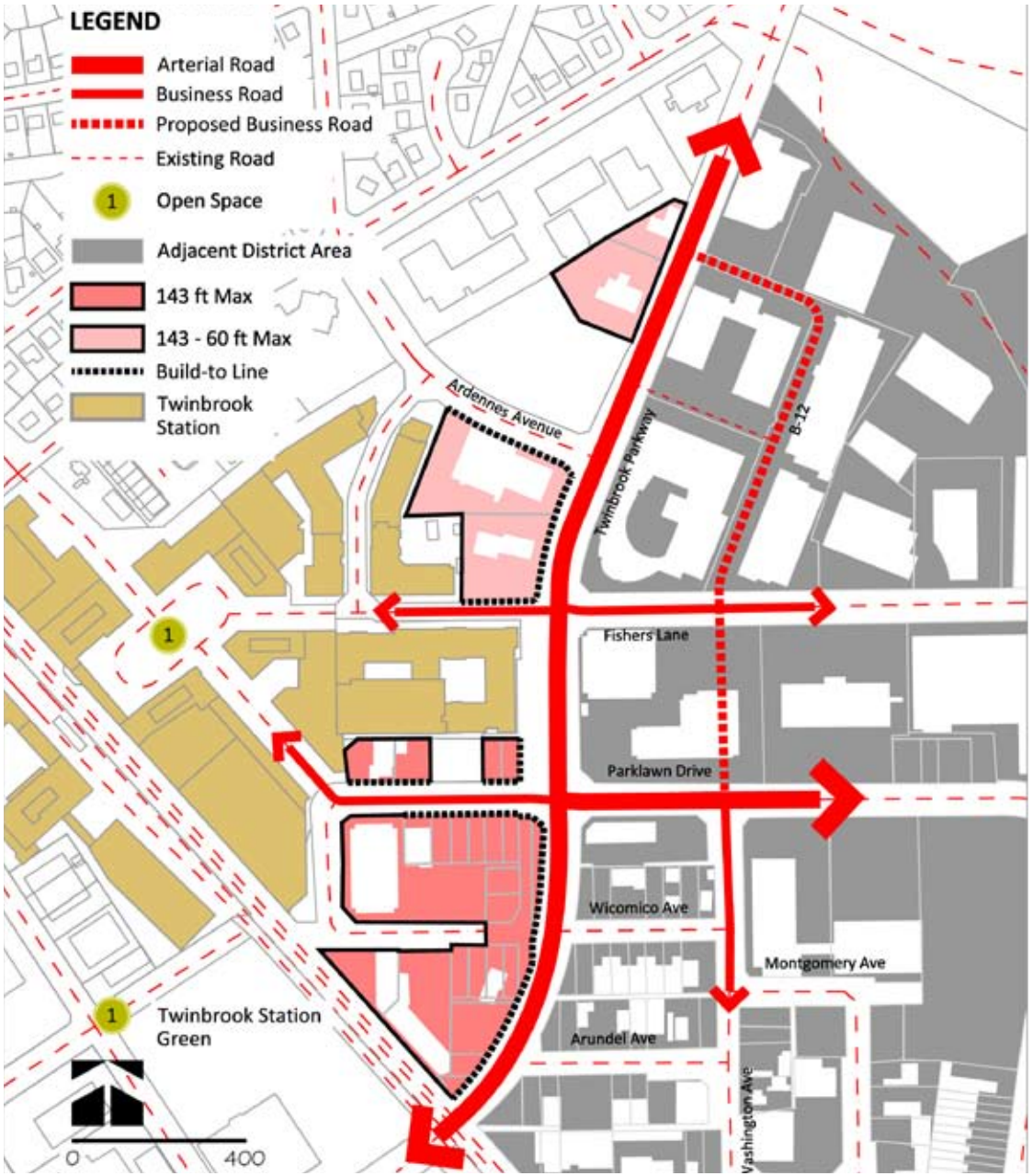
The Twinbrook Sector Plan makes recommendations for three districts:

- Metro Core Area
- Technology Employment Area
- Light Industrial Area

Plan recommendations also include:include standards for density, and percentage of housing and commercial use, along with the desired development character in each district.

The Guidelines illustrate the desired design quality and development character in each district with streets, open space, and buildingsillustrations to help visualize the neighborhood character envisioned by the Plan.

Metro Core Area



Twinbrook Sector Plan

The Metro Core District will be an area of mixed uses focused on the Twinbrook Metro Station and its emerging neighborhood.

The Metro Core District's surface parking lots and small-scale service industrial buildings should be redeveloped with housing, neighborhood-serving retail, employment uses, and active public spaces.

Connectivity

- Reconstruct Fishers Lane and Parklawn Drive as pedestrian oriented, tree-lined streets connecting to the Twinbrook Metro Station.
- Include services for a multi-modal transit hub of vehicles, bicycles, pedestrians, and transit riders.

Design

- Redevelopment should continue the design features of Twinbrook Station.
- Locate the tallest buildings near the Twinbrook Metro Station and the lowest buildings along Twinbrook Parkway and adjacent to the City of Rockville.
- Design streets, open spaces, and buildings to enhance the pedestrian experience.

Diversity

- Public use spaces should accommodate a variety of civic activities and community life.

Environment

- Development should exceed the LEED standards already established in the Building Code through green building technologies that are integral to neighborhood and building design.
- Building design should focus on adapatability, energy efficieny, and re-use.
- Focus streetfront retail on the western ends of Fishers Lane and Parklawn Drive.

Streets

- Extend Fishers Lane and Parklawn Drive as business streets west through the district, connecting to the Twinbrook Station development.
- Make significant intersection improvements at Fishers Lane and Parklawn Drive to improve connectivity and pedestrian safety between the western and eastern sides of Twinbrook Parkway.
- Off-peak parking should be considered for portions of Twinbrook Parkway.

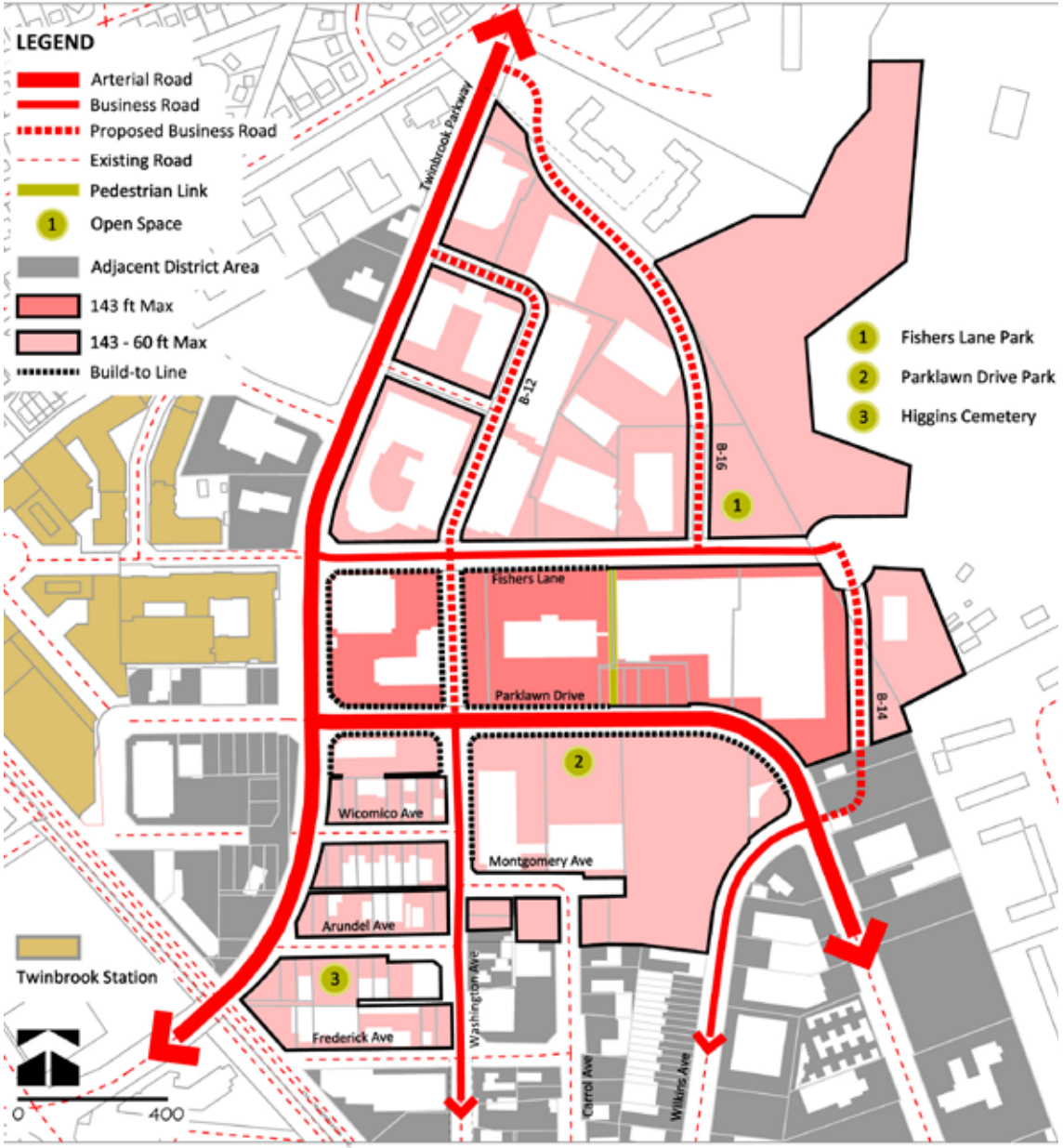
Open Space

- Public use space required by zoning.
- Provide a variety of options for active and passive recreation.
- Encourage off-site assembly of required open space and in lieu payments.
- Spaces should be functional, accessible, and substantially hardscaped.

Buildings

- Building facades should define the street and extend the character of the Twinbrook Station development.
- Encourage shared parking, located in the rear or center of the block.
- Encourage multiple storefront entries and transparent facades.

Technology Employment Area



Twinbrook Sector Plan

To create "an area with mixed uses featuring advanced technology and biotechnology activities in an area of high quality public design."

Development in the Technology Employment Area should emphasize useful open spaces, pedestrian-oriented streets, and flexible buildings to serve the needs of biotechnology and advanced technology employers.

Connectivity

- Design Fishers Lane and Parklawn Drive as active, pedestrian-oriented streets that connect to the Twinbrook Metro Station.
- Create a system of bikeways, trails, and sidewalks that connect to the active recreation areas and stream valley parks located east of Twinbrook.

Design

- Design buildings to allow the evolution of advanced technology and biotechnology industries.
- Renovate and signficantly enhance the Parklawn Building to integrate it character and function.
- Design public spaces to accommodate a variety of civic activities.
- Encourage a mix of uses to create a lively pedestrian oriented environment.

Diversity

- Encourage residential and hotel spaces to create a lively neighborhood for a variety of users.
- Locate retail where feasible along the portion of Fishers Lane closest to Twinbrook Parkway.

Environment

- Use green building technologies as an integral part of the neighborhood and building design.
- Streetscape should include closely spaced street trees.
- Create new open spaces that reduce the area's extensive imperviousness and expand the existing tree canopy.

Streets

- Streetscape improvements should be made along Fishers Lane and Parklawn Drive.
- Street design should include provisions for off-peak parallel parking.
- The locations of Parklawn Drive and Wilkins Avenue extended may be adjusted to meet federal security requirements near the Parklawn Building.
- Final routes will be determined through development review.

Open Space

Fishers Lane Park should be a counterpart to the Twinbrook Station Green near the western end of Fishers Lane. Parklawn Drive Park should be located approximately halfway between Fishers Lane Park and the Twinbrook Station green along Parklawn Drive. Required public open spaces should be functional and consolidated in selected locations.

These open spaces should include:

- approximately ¼ to ½ acre
- substantial green and pervious areas
- more than 50 percent tree canopy.

Buildings

Buildings should be designed for advanced technology industries and to accommodate the mixed uses that create a dynamic work environment.

Building elements should include:

- 143-foot maximum height along Twinbrook Parkway at Fishers Lane
- heights stepped down to 60 feet at the Plan area's northern boundary with adjacent garden apartments
- visual interest at street level and design that connects the building to the street.

Case Study

Project: 1801 K Street
Architect: Skidmore, Owings & Merrill
Reuse Type: Facade Replacement
Location: Washington, D.C.

For nearly three decades, 1801K loomed heavily over one of the District's most prominent K Street intersections. The existing facade consisted of dark steel and narrow punchout windows, anchored by a rough stone base.

In 2009, work began to replace the tired facade with a modern and efficient curtain wall. To allow the building to maintain occupancy during construction, the facade was constructed on the outside of the existing facade. The renovation also restructed the building's lobby, creating a single long corridor to accomodate an art installation that is visible from the street. Outdoor landscaping and improvements to the stone base also enhanced the character of the public realm.

Facade Replacement

In order to bear the weight of the new curtain wall, existing vertical aluminum tubes were reinforced. The new skin was hung over the existing facade, extending the floors by about 7 inches, resulting in a increase of about 650 feet per floor. The old facade was dismantled and removed by carrying it through the building.

High-Efficiency Curtain Wall

Through the use of high-performance glazing, the new curtain wall provides expanded views and increased dalyighting while minimizing solar heat gain. The airy, more transparent exterior also reduces the of the building's visual weight and mass, improving its presence on the public realm.

Key Site: Recommendations for The Parklawn Building

Loading Access: The future roadway alignment should be taken into consideration for any alterations the to loading docks and east side of the building.

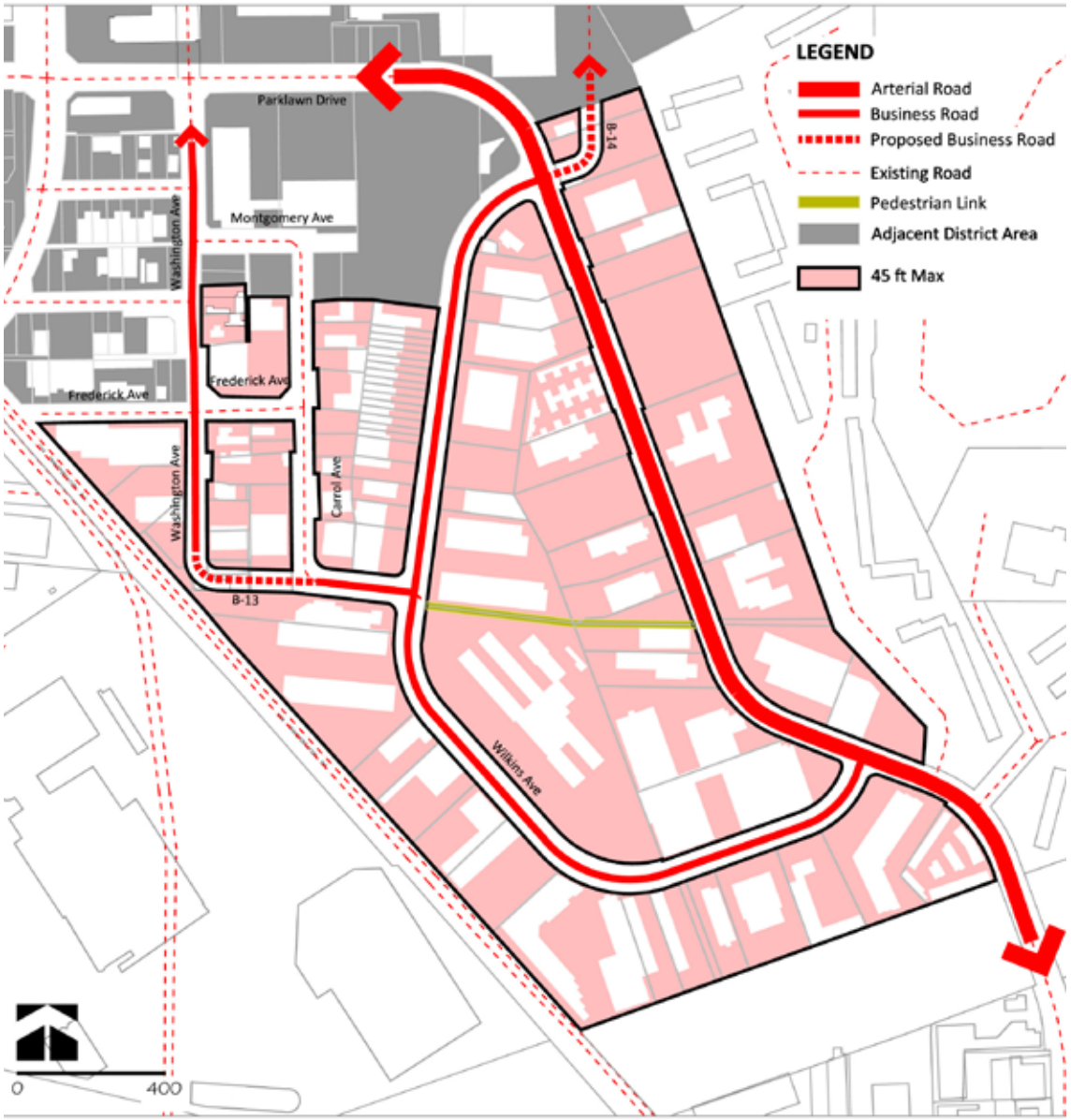
Facade Treatment: Given the building's height and mass, future renovations should attempt to lessen the visual weight and imposing appearance.

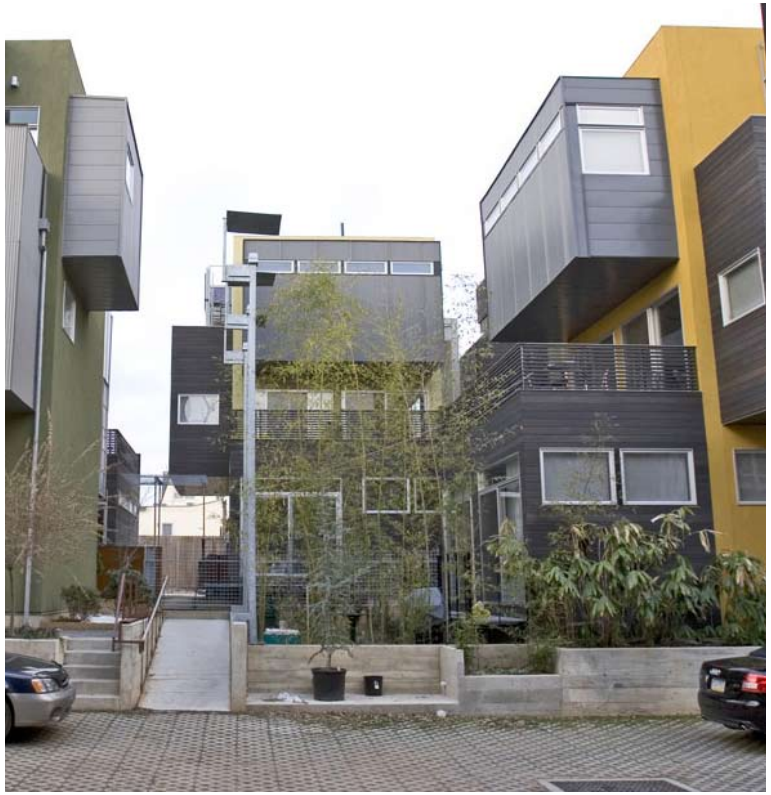
Strengthen Relationship to Street: Future site work should attempt by create a stronger connection between the building frontage, and the sidewalk to enhance the pedestrian environment.

Pedestrian Connection: Enhance access, visibility, and desirabilty of existing connection.

Improve Back Entrance: Address street with identifiable building entrance.

Light Industrial District





Twinbrook Sector Plan Goal:
To maintain the Light Industrial Area as an "area for thriving goods and service businesses." The I-4 Zone envisions low-scale buildings on small lots with a mixture of live/work space and industrial uses.

Through adaptive reuse alongside new buidling construction, development in the Light Industrial Area will continue to provide research and service commercial resources for residents and businesses.

Connectivity

- Complete the sidewalk system, particularly along Washington Street.
- Complete a new mid-block pedestrian link to improve connections within the district and to the Metro station.
- Connect to the bikeway and trail system along Montrose Parkway.

Design

- Adaptive reuse and new construction should preserve and enhance existing and potential light industrial uses.
- Create an appropriate pedestrian-oriented environment.

Diversity

- Design buildings, streets, and open spaces that meet the needs of light industrial businesses.
- Allow a limited amount of retail uses and housing for the on-site workforce.
- New development should accommodate large and small businesses.

Environment

- Incorporate green building technologies as an integral part of building and neighborhood design.
- Encourage adaptive reuse of existing buildings to reduce the carbon footprint of development in the area.

Streets

Several streets are built to standards that pre-date the Road Code. Given the Plan's recommendations to preserve the area's existing mix, these roads should remain with minimal improvements, if their performance is adequate.

Open Space

Required public open space should provide landscape features for the benefit of the building's occupants. It should visible and useful, and can be consoliated in selected locations.

Buildings

To create a more urban setting and encourage continued light industrial uses:

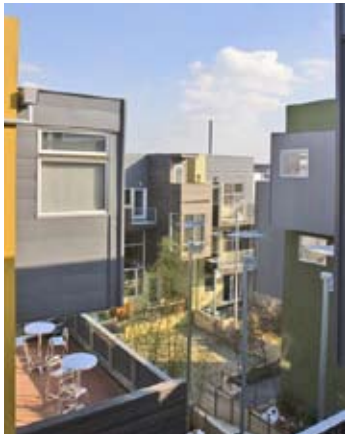
- Encourage construction of smaller buildings on existing small lots, and renovation and expansion of existing buildings.
- Focus streetscape on improving pedestrian access and safety.
- Control stormwater runoff through permeable pavers.
- Allow minimal setbacks from streets and between buildings.
- Orient buildings toward the streets.
- Encourage accessory residential units.

Case Study

Project: Rag Flats
Architect: Onion Flats
Reuse Type: Conversion and Expansion
Location: Philadelphia, PA

Rag Flats is an 11-unit residential renovation and expansion of a former rag factory in Philadelphia's Fishtown neighborhood. Designed by a small team of architects, each of whom took responsibility for one aspect of the project, Rag Flats creates an eclectic mixture of building types and styles that are carefully woven into the existing urban fabric.

In older commercial and industrial such as Twinbrook the existing neighborhood fabric can be a significant asset for new development. Much like Philadelphia's Fishtown neighborhood, these areas are composed of small lots, and numerous individual landholders which gives each block and building a unique character. Rag Flats provides an excellent example of how adaptive reuse can strength neighborhood character, and creatively provide housing in industrial contexts.



Permeable Pavement: Parking and courtyard are surrounded by buildings; reduce runoff

Photovoltaics/Green Roof/Cistern: Reduces grid energy demand, and hardscape

Materiality: Rich, diverse palette creates vibrant and interesting architectural character

Weave Urban Fabric: Diverse unit types infill vacant areas, connecting to neighborhood

Original Structure: Maintains and enhances community chactacter and culture

Case Study

Project:	Cornell Weill Medical School
Architect:	Stonehill & Taylor Architects
Reuse Type:	Conversion and Expansion
Location:	New York, NY

Constrained by a lack of leasable space in close proximity to the school's main campus, the Weill Medical School opted to purchase a parking garage (originally an automobile showroom) to be home to a 65,300 square-foot laboratory and office building. The century-old façade was maintained and refurbished, and the existing steel structure was augmented to accommodate new concrete floor slabs, adding an additional 26,300 square-feet of space two-stories above the existing roofline. The first two floors are used for administrative offices, while the third through fifth floors are devoted to laboratory space.

In Twinbrook: As land availability shrinks, the development potential of parking structures may become increasingly appealing for either ground floor conversion, or wholesale renovation. How these structures are designed today has long-lasting implications for their future use.