THE PEARL DISTRICT Portland, Oregon

The Pearl District is a 296-acre former industrial zone in Portland, Oregon. Its redevelopment is noteworthy for Willets Point because of how the combination of streets, parks, architecture, and small block sizes all contribute to the creation of a successful public realm that was created entirely from scratch with a great attention to detail. This very walkable neighborhood provides residents with numerous amenities within a short walking distance and includes a mix of housing types, neighborhood retail, and a series of small parks that provide both active and passive recreation as well as sustainable stormwater management.

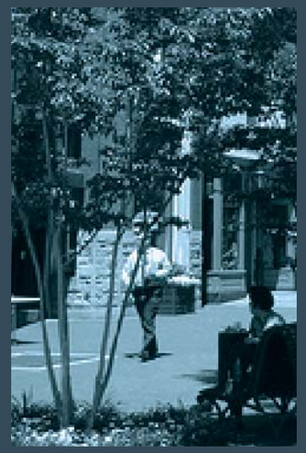
Tanner Springs Park is a stormwater management area that is also a park and neighborhood amenity

Jamison Square, a 0.96-acre neighborhood park, includes different types of active and passive recreational areas with a central water play area

STATEN ISLAND BLUE BELT Staten Island, New York

The Staten Island Bluebelt is an important example of sustainable stormwater practice in New York City. Prior to the project, the island was subject to flooding problems and large-scale septic failure was a major concern to human and ecological health. NYCDEP's Bluebelt program provides ecologically sound and cost-effective stormwater management for approximately one third of Staten Island's land area. The program preserves natural drainage corridors, including streams, ponds, and other wetland areas allowing them to perform their functions of conveying, storing, and filtering stormwater. In addition, the Bluebelts provide important community open spaces and diverse wildlife habitats. As also described in Principle 1.5, Willets Point is an important opportunity to consider green approaches to stormwater management that are appropriate for the site.

An engineered system of naturalized streams, ponds, and wetlands provide sustainable stormwater management and also provides open space for nearby communities



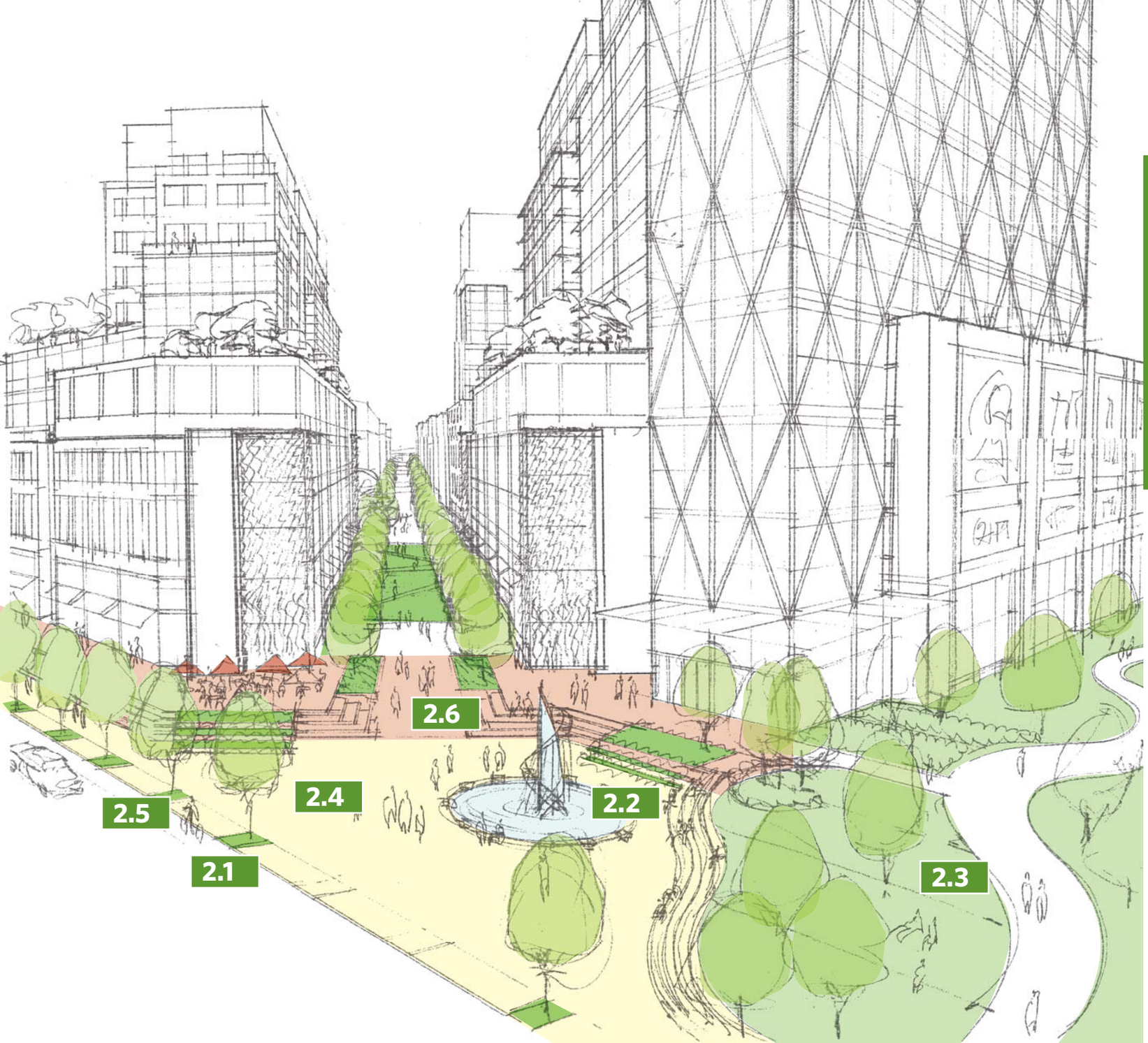
Design Quality Standards

The character and environment of Willets Point should be high-quality and environmentally sustainable. The choice of materials, details of design, and techniques of construction will have a major impact on the overall impression and success of the District. A consistent level of overall design quality should apply throughout the District.

2. Design Quality Standards: PUBLIC REALM

This chapter is organized into the following subsections:

The quality standards presented in this chapter are principles of design for achieving a sustainable and pedestrian-oriented public realm and are strongly encouraged.



The Public Realm Quality Standards promote a cohesive network of sustainable, public, friendly, and pedestrian-oriented streetscapes, plazas, and open spaces across the District.

Figure 1. View of the Southern Anchor Block Plaza, Roosevelt Avenue Greenway and 126th Street

The image at left depicts the intent of the design guidelines and is for illustrative purposes only

2.1 PEDESTRIAN-ORIENTED STREETS AND SIDEWALKS

OBJECTIVE

Streets will be among the most important public open spaces in Willets Point. "Complete Streets" should be designed to balance the needs of vehicles with those of pedestrians and cyclists. Street trees and other landscaping should have a key role in the greening and sustainability of the entire site and will define the identity of the district.

KEY PLAN

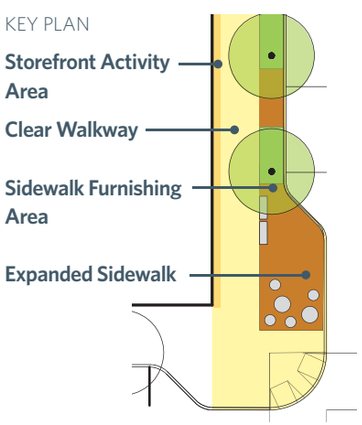


Figure 2. Typical Zones of a Street
The above image depicts the intent of the design guidelines and is for illustrative purposes only.

QUALITY STANDARDS

2.1.1 Street Design

Design and implement "complete streets" that enable motorists, bicyclists, and pedestrians of all ages to safely share the space.

- Implement a street hierarchy that balances traffic needs with space and safety for pedestrians and bicyclists.
- Consider reduced vehicular lane widths and pedestrian-oriented design strategies, where appropriate, that are based on neighborhood design standards.
- Locate on-street parking on both sides of the street to keep streets active and populated. On-street parking may be excluded at locations of Expanded Sidewalks. *See 2.1.3 Expanded Sidewalks.*
- Design all curb cuts for garage or loading entries as "curb ramps" that maintain the walkway at a continuous width and elevation for the pedestrian.
- Incorporate landscaped areas wherever appropriate to minimize paved surfaces.

2.1.2 Sidewalk Elements

Sidewalks have required dimensions per the SZD. Design the sidewalks as public open spaces that are integrated into the public realm network.

- As shown in *Figure 2*, a typical street includes a Storefront Activity Area, an unobstructed walkway, a Sidewalk Furnishing Area and may include an Expanded Sidewalk. *See 2.1.3 Expanded Sidewalks.*
- The Storefront Activity Area may be used for retail displays, cafe seating, and/or landscape.
- The clear walkway should be a minimum of 8' wide where feasible.
- The Sidewalk Furnishing Area provides space for street trees, planted areas, social seating, bike racks, lighting and other streetscape furniture. Special paving, using NYCDOT-approved materials, is encouraged to define this area.
- Certain streets also have a "Pedestrian Amenity Area" per the SZD to accommodate a grade change and provide additional seating, displays, and other amenities. *See Chapter 3 Subarea Design Guidelines.*

2.1.3 Expanded Sidewalks

Consider creating space for additional public amenities and plantings by expanding the sidewalk in place of on-street parking at key locations.

- Expand sidewalks at key locations as a pedestrian-oriented design strategy as well as for a public amenity.
- Priority locations are at intersections and mid-block crossings.
- Use expanded areas for additional furniture or as planting zones.
- Consider making planted areas part of a site-wide sustainable stormwater system.

Expanded sidewalk for plantings

Expanded sidewalk for social seating

2.2 PARKS AND PLAZAS

OBJECTIVE

A network of parks and plazas linked by walkable green streets will provide needed public open space and amenities in a dense new neighborhood, and a range of activities for residents and visitors of all ages.

QUALITY STANDARDS

2.2.1 Variety of Programmatic Uses

A network of parks and plazas with varied characteristics should define Willets Point and serve visitors as well as the residents.

- Maintain public open spaces that are open to the public and accessible according to standard NYCDPR regulations. Temporary events such as markets, festivals, or other cultural gatherings are encouraged but should not dominate the open space on a frequent or permanent basis.
- Provide a balance of active, semi-active and passive spaces for a variety of recreational opportunities for residents and visitors.
- Consider playgrounds, formal playfields or courts, dog runs, open lawn areas, open areas for events, social seating, and planted areas and viewing gardens as well as other programmatic uses.
- Locate and design trees and other plantings to support active and passive activities by providing shade as well as defining distinct spaces.

2.2.2 Specialized Elements

Specialized elements should add interest and identity to public spaces and create memorable gathering spaces.

- Consider specialized elements such as sculptural or interactive water features, specialized play features, distinctive art installations, seating and gathering areas, etc.
- Locate elements in accessible and visible locations while maintaining clear circulation routes.

2.3 TREES AND PLANTINGS

OBJECTIVE

The infusion of landscape throughout Willets Point, in open spaces, streetscapes, and building areas will soften the development and create a green identity for the District. The landscape should take advantage of opportunities for sustainable stormwater management and provide a visual delight and ecological diversity using ground cover, street trees, ornamental trees, flowers, and shrubs.

QUALITY STANDARDS

2.3.1 Street Trees

The street trees are the single greatest opportunity to provide greenery throughout the District. Trees should be carefully selected and located to ensure their long-term health and stability.

- Per the SZD, street trees of not less than 3" caliper are required for every 25' of building frontage.
- When designing the streetscape, prioritize the location of street trees at consistent intervals (every 25' suggested). Locate other streetscape elements to support this regular spacing.
- Locate street trees throughout the District to mitigate the urban heat island effect, provide shade canopy and provide greenery.
- Specify street trees that thrive in the urban enviroment. Species with simalar growth characteristics should be slected to create a cohesive and uniform site. Trees should not be Asian Longhorned Beetle (ALB) hosts. In the retail district, consider light, airy trees with upright or vase-like branching. *See the NYCDPR Street Tree Compatibility list.*
- On all Retail Streets, specify trees branched at least 6'-7' high for visibility. Intermediate or small trees should be considered at underwire locations.
- At street corners, locate trees beyond a 45 degree angle from the building corner for visibility.
- Plant trees in NYCDPR standard planted tree pits with unit pavers between each tree pit (maintenance implications should be considered). Tree pits should be 5' x 10', or as otherwise specified within Chapter 3 of this document, and should contain a minimum of 150 cubic feet of good topsoil.
- Perform percolation tests as needed to determine whether the subsoil has adequate drainage and permeability for the particular tree specified prior to planting.
- Where possible, construct tree pits as sub-surface interconnected systems ensuring improved drainage, root growth, and reduced cracking and heaving of adjacent paving areas. Provide 300 - 400 square feet of CU-Structural Soil at a depth of 36" per NYCDPR Tree Planting Standards. CU-Structural Soil is intended under paved sites to provide adequate soil volumes for tree roots in the urban environment.
- *See also the NYCDPR Tree Planting Guidelines*

Honey Locust and Zelkova tree species are recommended due to their high branching

2.3.2 Medians

A planted median can add visual interest and greenery to streets and as envisioned for the Primary Retail Street can provide an iconic identity.

- Design underplantings in the median to be a maximum of 2'-6" in height above grade for visibility and safety.
- Select plantings to be visually pleasing year-round, durable, salt-tolerant, and low maintenance.
- Shade trees, branched at least 6'-7' in height, are also encouraged.
- Mark pedestrian crossings with ornamental trees with a habit and form maximizing visibility that are also suitable for wet conditions, if appropriate.
- Provide a minimum width of 6' for the planting area in the median'.
- A concrete band of 1.5' (inclusive of the curb) should surround the perimeter of the planting bed.
- Where feasible due to newly constructed roads, consider the median for use as an on-site stormwater management system with plantings designed for stormwater conveyance.
- Consider a "Low Impact Development (LID) Drainage System" made up of interconnected planting medians to manage a 1" or greater rain event.
- Design perimeter curbs to be 7" in height. Consider openings and cast-iron gratings for drainage into the LID system.

2.3.3 Bio-swales

Bio-swales and other areas should beautify the streetscape as well as provide space for on-site sustainable stormwater management.

- Specify wet-tolerant and salt-tolerant plantings.
- Design the bio-swale system to accommodate pedestrian activities and access to parked cars.
- Capture street and sidewalk stormwater drainage with overflows to larger bio-swale components or the conventional stormwater drains.
- Size the sites to hold a minimum of 1" storm volume with a maximum ponding depth of 6"at any time. Design the sites so all water drains within 24 hours.

2.3.4 Green Walls

Green walls should be implemented carefully and be a highly visible sustainability feature and public amenity.

- Use green walls to soften architectural features, exposed parking garages, grade transitions, and non-setback walls by reducing the scale of vertical elements and mitigating the heat impact to street level public spaces.
- Include a variety of flowering and evergreen foliage materials with a minimum of 60% evergreen to provide year-round interest.
- Consider stainless steel cable or wire mesh supported systems.
- Provide adequate well-drained planting areas.
- Design green walls to contain a minimum of 2 CF of soil for every 20' high linear foot section of wall. Taller walls should have intermediate soil beds of 2 CF.
- Avoid shallow soil tray systems.
- Irrigate areas with minimum soil depths to ensure establishment and healthy sustainable growth.

2.4 HARDSCAPE MATERIALS

OBJECTIVE

A palette of durable and sustainable materials for paving, steps, ramps and other outdoor elements will establish a lasting identity for the district that is based on the most current and environmentally friendly City standards while creating a place that is recognizably a part of New York City.

QUALITY STANDARDS

2.4.1 Sidewalks

Streetscapes should feel like high-quality NYC streets.

- Use standard NYCDOT concrete pavement for the sidewalk material.
- Use light color for high Solar Reflectance Index (SRI), such as gray or tinted concrete. *See 2.4.5 Sustainable Materials and Systems.*
- Consider distinctive pavement at the Sidewalk Furnishing Area, Pedestrian Amenity Areas, important building entrances, and residential lobby entrances, using NYCDOT-approved specialty pavers or other material (maintenance implications should be considered).

2.4.2 Crosswalks

Crosswalks should establish a clear visual priority for pedestrian circulation to motorists.

- Minimize pedestrian and vehicular conflicts affording the pedestrian safe comfortable transitions with the least path of resistance.
- Consider NYCDOT-approved distinctive pavement to make crosswalks more easily identified and located by pedestrians (maintenance implications should be considered).
- Locate crosswalks to reinforce connectivity between green corridors, parks, plazas and other public spaces.
- Minimize the length of crosswalks through the use of sidewalk bulb-outs and medians, where appropriate.

2.4.3 Bicycle Facilities

Support bicycling as a high-priority mode of transportation and integral part of "complete streets".

- Use NYCDOT-approved designs, such as green-painted on-street bike lanes.
- Follow all NYCDOT regulations for striping, signage, geometry, and dimensions.

2.4.4 Plazas and Amenity Areas

Public plazas and sidewalk amenity areas should form a network of active public spaces in the district.

- Follow NYC Zoning for all plazas and pedestrian amenity areas.
- Use durable, low-maintenance, attractive materials.
- Special consideration to the durability and maintenance of the paving materials should be given in high-traffic pedestrian areas such as intersections.
- Choose a color and material palette that defines a unique and memorable identity to each of the major public spaces but creates a coherent and unified overall character for the District.
- Consider distinctive paving to mark amenity areas, entrances, special features, seating areas, walkways, or other elements, consistent with agency-approved materials.
- Provide clear, direct pedestrian routes with a minimum clear width of 8'-0".
- Locate site furnishings in a organized manner so as not to clutter the public space.

2.4.5 Sustainable Materials & Systems

Hardscape areas should contribute to the environmental sustainability of the district by providing durable spaces made of "green" materials and systems.

- Use durable, sustainable, long life cycle, low-maintenance materials.
- Consider recycled and locally sourced materials that minimize impacts on the environment.
- Use light-colored paving with a high SRI to minimize the urban heat island effect and provide a comfortable public environment. *A LEED credit requires an SRI of at least 29.*

Sustainable materials may include recycled elements

2.5 STREET FURNITURE & LIGHTING

OBJECTIVE

Street furniture and lighting can be designed to provide a high level of pedestrian amenities while creating a consistent and uncluttered design for streets and public spaces.

QUALITY STANDARDS

2.5.1 Design Criteria

Create friendly and beautiful streetscapes using NYC standards.

- Coordinate the arrangement of streetscape elements to group them in a coherent fashion to avoid cluttering.
- Develop nodes of activity with streetscape elements such as newsstands and info kiosks at key strategic locations.
- Create a distinctive identity for Willets Point by using streetscape elements such as light-pole banners and distinctive NYCDOT-approved waste receptacles and street holiday or event features.
- Consider additional streetscape elements for pedestrian orientation, such as a wayfinding signage, at 2-3 strategic locations in the retail district.

Streetscape Furniture should enhance, not clutter, the sidewalk

2.5.2 Seating

Use comfortable, accessible seating for a friendly and active public realm.

- Provide ample social seating in all public areas such as planted areas, streetscape amenity areas, plazas and parks.
- Utilize standard NYCDPR seating and consider the use of custom or artist-designed seating and tables, conforming to NYC Zoning in public spaces.
- Design and provide a variety of seating types and configurations, with shaded and sunny exposures.

2.5.3 Bicycle Racks and Shelters

Provide safe, secure, and weather-protected bicycle storage facilities to support the bicycling network.

- Provide bike racks and shelters in streetscapes and public spaces.
- Locate bike racks and shelters convenient to bicycle lanes and other facilities, but avoid interference with pedestrian circulation.
- Provide covered bicycle shelters where feasible along wider streets and larger open spaces, such as Connector Streets and the Neighborhood Park. Provide bicycle racks elsewhere throughout the District.
- Select bike racks and shelters in accordance with NYCDOT standards.

Bike shelters should be provided in key locations in open spaces and along wide streets

Bike racks should be located throughout the District

2.5.4 Lighting

Use energy efficient site lighting to support a sustainable 24-7 public realm.

- Create a district-wide night-time lighting concept that reinforces and supports night-time activity near the stadium and within the retail district, especially in public spaces.
- Provide night-time lighting in the residential area that creates a quiet and safe night-time environment.
- Use NYCDOT approved street lights and consider the latest innovative systems.
- Consider custom lighting features to accent public spaces.
- Consider the use of sustainable strategies such as the use of LED fixtures, dark-sky design to minimize night-time pollution, lighting with a natural lighting color, and solar-powered fixtures.
- Use light fixtures with a lowered height, appropriate to the human scale, in pedestrian areas.

The new NYCDOT street light with LEDs, designed by Thomas Phifer and Partners

A night-time lighting concept should animate the District with a distinct visual identity, especially in public spaces

2.6 GRADE CHANGES: STEPS AND RAMPS

OBJECTIVE

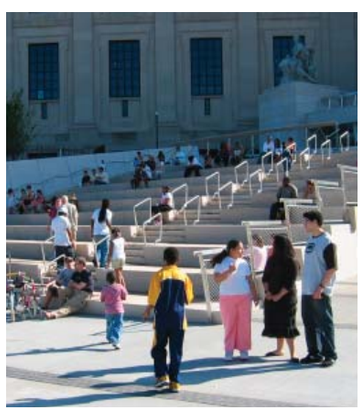
Grade changes transitioning from existing to new site elevations should be treated as opportunities to create unique public gathering spaces. Generous and gentle stair and ramp systems should be fully integrated into the design of the open spaces and include plantings, seating, and art.

QUALITY STANDARDS

2.6.1 Generous Steps

Grand stairs should be a designed as gathering space in public spaces.

- Design grade change transitions with generous open stair systems and informal seating areas.
- Consider sculptural art in the step systems to mark corners or other important nodes.
- Avoid plinth walls taller than 18" high. Use terraces or landscaped transitions instead.
- Follow all NYC Zoning regulations for steps.
- Coordinate materials with adjacent sidewalks and publicly accessible open spaces.
- Consider a distinctive palette of materials to accentuate key transitions, circulation routes, or nodes.



2.6.2 Gentle Ramps

Ramps should be accessible and fully integrated into the design of public spaces.

- Use a maximum 5% slope for all public ramps to provide gentle transitions and eliminate handrail requirements.
- Integrate ramp systems into landscapes and seating areas.
- Avoid switchback ramps.

2.6.3 Integrated Railings

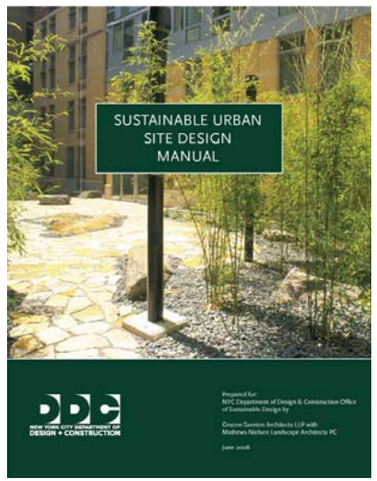
Railings should be minimized and integrated within the design palette of the District.

- Use railings where required for steps, ramps, terraces and balconies.
- Design railings to be visually pleasing, open or transparent. Avoid vertical bars.
- Consider the use of metal and/or glass.
- Incorporate seatwalls or seating niches and plantings.

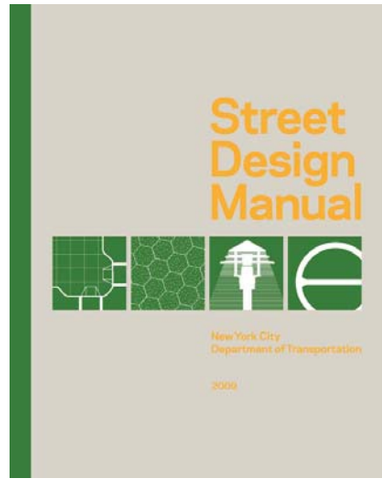
REFERENCE STANDARDS

REFERENCE DOCUMENTS

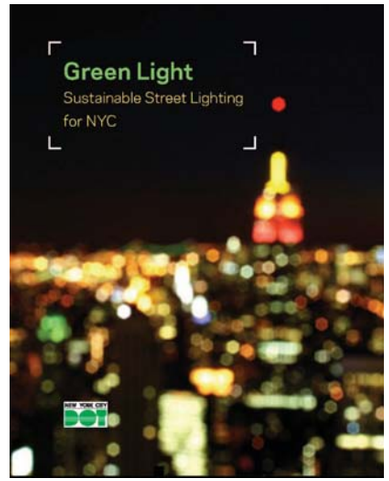
Willets Point is envisioned as an extension of the New York City street system and should look and feel like an integral part of the City with a strong emphasis on innovative sustainable design and the implementation of the latest NYC agency standards.



NYCDDC Sustainable Urban Site Design Manual



NYCDOT Street Design Manual



NYCDOT Green Light

NYC Active Design Guidelines

NYCDDC High Performance Infrastructure Guidelines

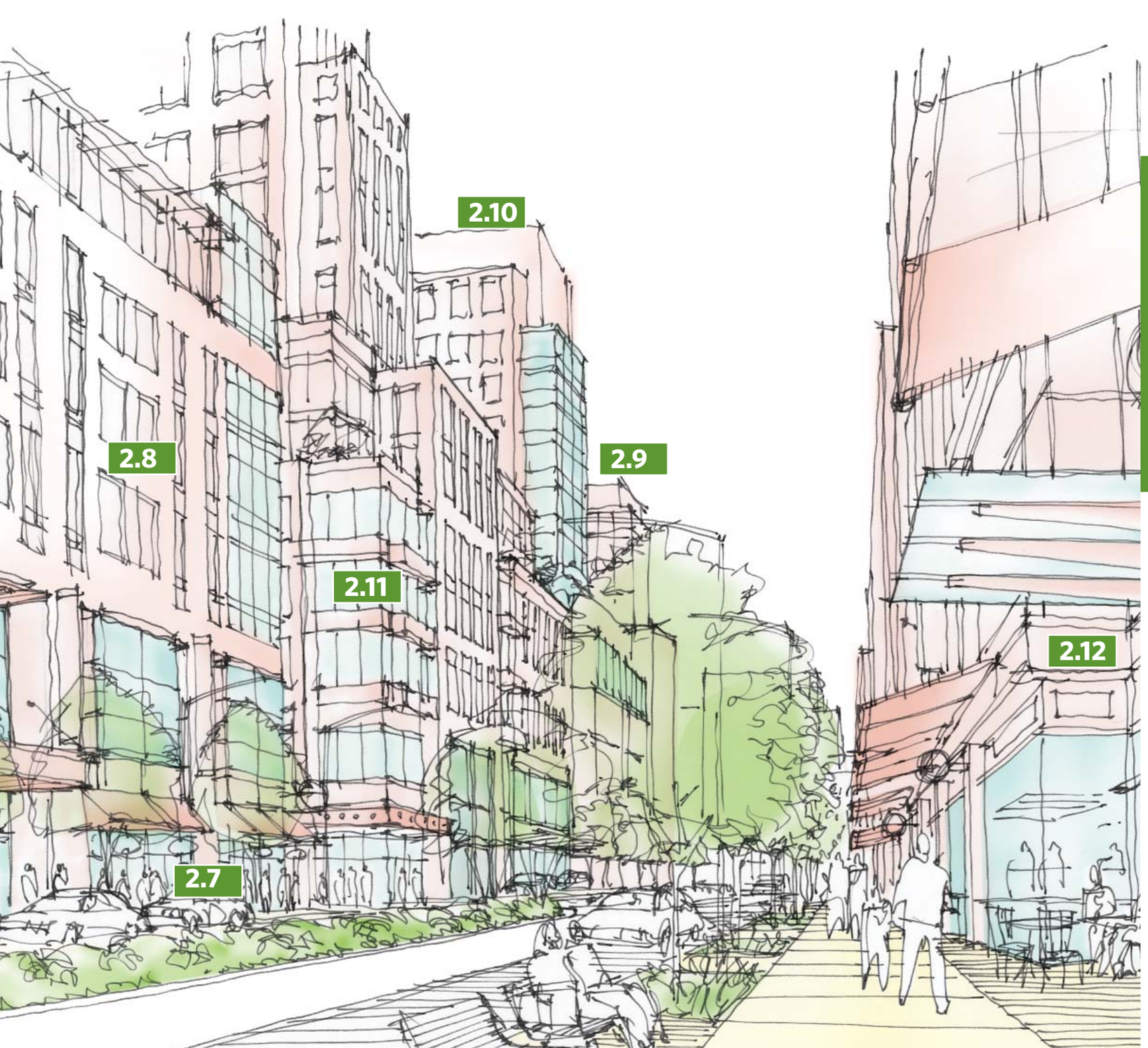
NYCDPR Tree Planting Standards

NYCDPR Park Design for the 21st Century

2. Design Quality Standards: **ARCHITECTURE**

This chapter is organized into the following subsections:

The quality standards presented in this chapter are principles of design for achieving sustainable and human-scaled buildings and are strongly encouraged.



Architecture guidelines emphasize the pedestrian experience of buildings by focusing on issues such as scale and massing, transparency and fenestration, facade articulation, recesses and balconies, signage and materials, while integrating guidelines for sustainability and performance.

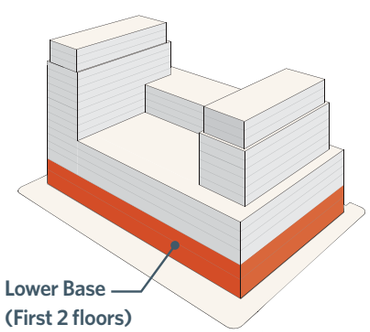
Figure 1. View of the buildings along the Primary Retail Street

The image at left depicts the intent of the design guidelines and is for illustrative purposes only

2.7 LOWER BASE: An Active Pedestrian Environment

OBJECTIVE

The ground floor, and in some cases the second floor, frame and animate the pedestrian experience. The lower base plays a key role in generating pedestrian activity at street level. The lower base of all buildings is encouraged to have active uses, such as retail or residential, that open directly to the sidewalk and be designed to create a human scale and a vibrant, safe pedestrian environment.



QUALITY STANDARDS

2.7.1 Ground Floor Retail

Create an animated pedestrian experience with a lively mix of larger and smaller establishments, and storefronts that provide with scale, interest and variety.

- Per the SZD, the maximum length of ground floor frontage occupied by any establishment is 110' along 126th Street and 65' along the Primary Retail Street . This regulation is to ensure retail establishments have varied sizes, multiple frontages and numerous entrances, creating a fine-grained scale and variety of storefront design.
- Limit larger establishments to corners, or second floors with ground floor entrances that fit into a row of storefronts.
- Mark entrances with facade recesses that create additional space for pedestrian circulation.
- Avoid establishments accessed from internal circulation and thus not contributing to street life (except for those on the third floor and above).
- Provide generous ceiling heights (20' floor-to-floor suggested at the ground floor).
- Provide canopies and awnings, particularly at corners and entrances. Fabric, metal and glass are encouraged. Vinyl, plastic/fiberglass and internally illuminated awnings are discouraged.
- Per the SZD, at least 70% of the streetwall up to 10' in height shall be glazed (50% transparent and 20% translucent). Use transparent storefront glazing to allow views into retail interiors. Avoid blocking them with large or opaque displays.
- Use roll-down security grilles inside the storefront glass with open-mesh design for visibility of store interiors and displays.
- Provide outdoor displays, merchandise carts, seating, and etc. in the "Storefront Activity Area" of the sidewalk.

2.7.2 Inactive Ground Floors

Inactive ground floor areas create "dead zones" without pedestrian activity, and should be minimized, carefully located and screened to avoid interrupting the pedestrian environment.

- Avoid inactive ground floor facades such as blank walls that lack windows and doors; mechanical access doors, louvers, and grilles; and exposed parking garages.
- Avoid inactive ground floors on facades visible from streets, parks, or open spaces, except for "Service Streets."
- If an inactive ground floor facade cannot be avoided, limit it to no more than 40' in length, screened with architectural detail, landscaping, or artwork, and locate it to avoid interrupting desirable pedestrian flows and activity.
- Seek to avoid louvers and grilles at ground and second floors. On upper levels, integrate them with the architectural design of the facade.

A series of service doors and ventilation grilles creates an unfriendly streetscape

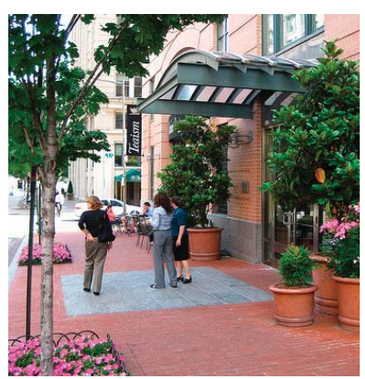
2.7.3 Ground Floor Residential

Create a lively, safe and welcoming residential street environment with pedestrian oriented lobbies, individual street entrances to ground-floor units, stoops, gardens, bay windows, and other features.

- Design street-level lobbies as the primary entrance for each residential building to serve pedestrians.
- Per the SZD, lobbies within retail facades are limited to 40' or 25% of building frontage. Design all residential lobbies to be open and transparent and limited to 40' or 25% of building frontage.
- Consider awnings over the sidewalk, preferably without supporting poles.
- Articulate lobbies with canopies, decorative landscaping, lighting, and special paving.
- Per the SZD, provide ground floor residential units with individual entrances directly from the sidewalk (in addition to, or in lieu of, internal entrances from building corridors).
- Create a setback zone at ground floor residential units to allow for stoops, porches, gardens and planted areas, bay windows and other features that increase privacy and add scale and detail for pedestrians.
- Locate the ground floor residential floor level no more than 3' above sidewalk to avoid blank lower walls or high stoops.

Ground floor residential windows should have added privacy with a planted setback

NYC AFFORDABLE HOUSING: The Eltona, Bronx



Lobbies should be emphasized with features such as special paving, a canopy, and planters

2.7.4 Parking and Loading Entrances

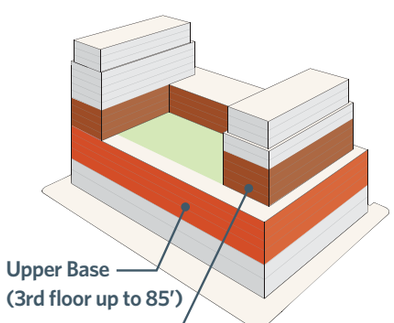
Parking, loading and other vehicular entrances to buildings interrupt the pedestrian experience and should be mitigated in scale and design.

- Loading and curb cuts are limited in location and size per the SZD. Where allowed, minimize the width of parking, loading and other vehicular entrances.
- Avoid clustering multiple vehicular entrances in one area except on "Service Streets."
- Create loading bays that are deep enough to allow docked trucks to be fully concealed within the building and not extend into the sidewalk.
- Use roll-down doors of open mesh design or integrated into the architectural design of the facade.
- Use curb ramps to allow continuity of the sidewalk for pedestrians and to slow vehicles for safety.

2.8 UPPER BASE AND MID-RISE: Variety through Massing and Articulation

OBJECTIVE

Upper base facades define the scale and character of architecture as experienced from the pedestrian point of view, while mid-rise areas continue this character to the roofline as seen against the sky. Upper base massing and articulation is a key factor in creating a sense of variety in a large development, which is particularly important for Willets Point, where height restrictions will create many similar building forms.



QUALITY STANDARDS

2.8.1 Vertical Divisions in the Streetwall

The vertical articulation of Upper Base facades should create a regular rhythm and changing visual experience for pedestrians moving along streets and sidewalks.

- Divide long facades into a series of vertical elements to create scale and rhythm in the streetwall that extends down to street level.
- Define vertical divisions by recesses or projections that break the flat facade into visually separate parts, and create depth and variation of light and shadow.
- Incorporate material or color changes in combination with recesses or projections.
- Relate vertical divisions to the internal building layout and function, such as residential units or retail storefronts.

NYC AFFORDABLE HOUSING: 1825 Atlantic Ave, Brooklyn

2.8.2 Articulation of Corners

Building corners are a key opportunity to define architectural character and improve pedestrian views and are an area for focused use of special materials and/or additional glazing.

- Increase the percentage of glazing and/or size of windows at building corners.
- Articulate corners with recesses or projections which are vertically continuous up the entire height of the facade.
- Emphasize corners through focused use of distinctive materials and changes in material and color from the rest of the facade.

NYC AFFORDABLE HOUSING: The Eltona, Bronx

2.8.3 Variation in Setback Height

Use varied setback heights to counteract the appearance of a flat and continuous parapet line among multiple buildings, and create many opportunities for interesting views and outdoor terraces.

- Vary the height of the first setback both within each building and among multiple buildings within the range permitted by zoning for each street. Avoid long, unbroken parapet/cornice lines.
- Make use of the "dormer" provision in zoning to create vertical extensions of the streetwall above the setback line. Dormers should visually relate to vertical divisions in the facade below.
- Make use of the first setback for occupied terraces to enliven the facade and create outdoor space for residents.

2.8.4 Variation in Mid-rise Rooflines

Create mid-rise parapets that define the roofline of the building against the sky, and provide an opportunity to create a varied and sculpted skyline.

- Express vertical articulation and recesses of the mid-rise facade in the roofline.
- Create a varied skyline by using a strong cornice, overhangs, variations in the parapet wall and other features.

2.8.5 Integration of Balconies

Integrate balconies and terraces into the architectural design while providing outdoor space for residents and animating the street.

- Incorporate balconies into the front leading edge of the facade. Balconies should not project beyond the front portion of the facade.
- Avoid fully projecting balconies.
- Integrate railings with other facade materials such as masonry or glass. Avoid metal bar grille railings.

Protruding balconies are discouraged

Balconies should be partially or entirely recessed into the plane of the facade or within a reentrant building corner

2.9 TOWERS: A Varied and Interesting Skyline

OBJECTIVE

A group of towers on the western side of Willets Point will accommodate a dense mix of uses and create a dramatic skyline along 126th Street. With many individual towers in a relatively small zone, each building design will consider its place in the entire composition, with thoughtful variations in color, height, placement, and architectural expression from one building to another, to avoid monotony and create a dynamic and changing skyline seen from near and far.

QUALITY STANDARDS

2.9.1 Variation in Height

Create a varied skyline with towers of different heights from one to the next and throughout the area.

- The towers in Willets Point are in a restricted height zone determined by FAA regulations, with a maximum height of 232′ AMSL as set by the PANYNJ.
- Vary tower heights throughout the district and in particular along 126th Street.
- Design a hierarchy within the towers to emphasize key gateways, intersections, and open spaces. *See 2.9.4 Priority and Contextual Towers.*

Variation in tower height, placement, and color in Vancouver, B.C.

2.9.2 Variation in Tower Placement

In addition to height variation, variety can be achieved by shifting the horizontal locations and alignments of towers from one to the next.

- Along 126th Street, shift towers within each block and from one block to the next, such that some towers are closer to 126th Street and others are set back father from the street.
- Design towers closer to 126th Street to rise without setback where permitted to emphasize their verticality. *See also 2.9.4 Priority and Contextual Towers.*
- Provide a similar variation in placement in other parts of the site.

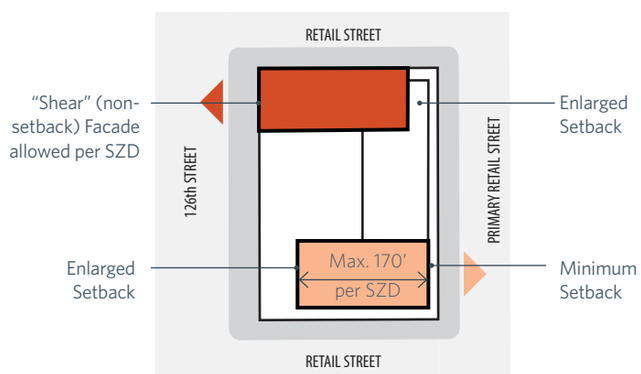


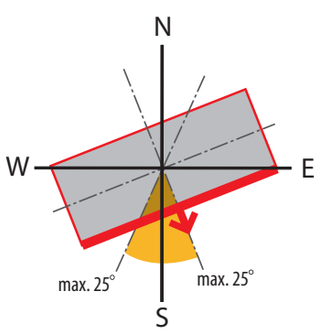
Figure 2. Diagram of tower placement
The above image depicts the intent of the design guidelines and is for illustrative purposes only

2.9.3 Solar Orientation

Orient towers optimally to the sun, maximizing energy efficiency and creating opportunities for effective sustainable design.

- Although the SZD requires 75% of residential towers in Willets Point to be oriented lengthwise in an east-west direction such that the long side faces within 25 degrees of geographic south (which aligns with the proposed street grid), design towers at a maximum 15 degree deviation from geographic south for optimal energy efficiency. *See Figure 3.*
- Once the optimal orientation is attained, design facades with appropriate glazing and shading devices to minimize heat gain and maximize daylighting and energy efficiency.

TOWER ORIENTATION ALLOWED PER SZD



TOWER ORIENTATION RECOMMENDED

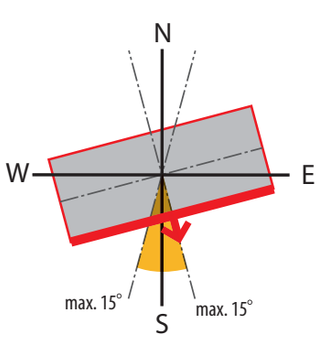


Figure 3. Plan diagram of tower height zone and location of priority towers

The above image depicts the intent of the design guidelines and is for illustrative purposes only

2.9.4 Priority and Contextual Towers

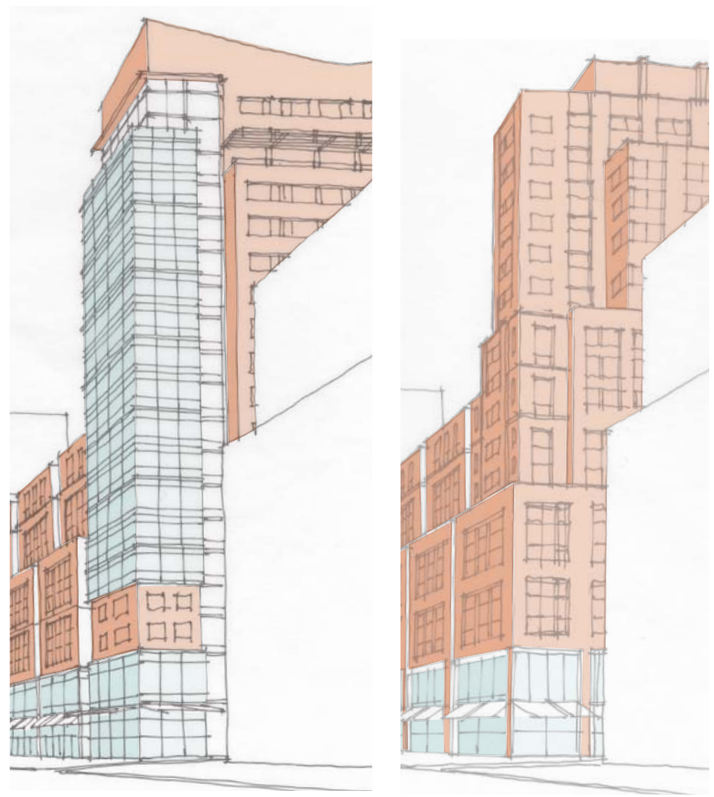
***Priority Towers** mark gateways, important intersections, and open spaces and emphasize their verticality and prominence. **Contextual Towers** are background elements that are set back from the building base and sculpted to blend into their setting.*

PRIORITY TOWERS:

- Design these towers to rise without setback from the ground up through the tower shaft to emphasize verticality.
- Provide higher percentages of glazing and transparency on the prominent facade or most visible corner(s).
- Include architectural articulation and massing that reinforces the verticality of the tower. *See Figure 4.*
- Per the SZD, these towers are allowed along 126th Street, at gateways to the site, key intersections with Connector Streets, opposite Citi Field, and facing major open spaces. *See the SZD for details.*

CONTEXTUAL TOWERS:

- These towers are all those that are not Priority Towers.
- Design them to be generally shorter than Priority Towers and to set back farther. *See 2.9.2 Variation in Tower Placement.*
- Set back these towers from the building base.
- De-emphasize verticality and sculpt the massing with well-defined setbacks to articulate mid-rise and tower portions.
- Design them to integrate visually with building bases, materials and fenestration patterns.



PRIORITY TOWER **CONTEXTUAL TOWER**

Figure 4. View of the tower types

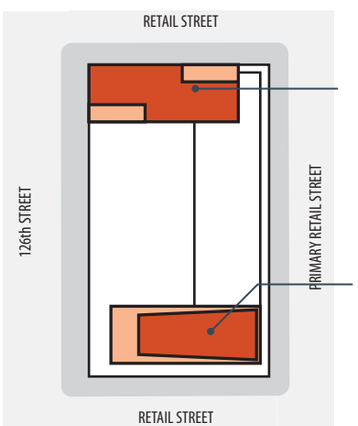
The above image depicts the intent of the design guidelines and is for illustrative purposes only

2.9 TOWERS: A Varied and Interesting Skyline

2.9.5 Distinctive Tower Tops

Tower tops, including rooftop equipment enclosures, add sculptural detail to the overall form of towers and create a varied and interesting skyline.

- Per the SZD, the last three floors of any tower may be no more than 80% of the footprint of the floor below.
- This reduced-size tower top can be designed to emphasize the verticality of Priority Towers by continuing the vertical plane of the facade on one or more sides, or to emphasize the sculpted quality of Contextual Towers by being set back on all sides. *See Figure 5.*
- Provide additional glazing and material and color changes at the tower tops to create variety and interest in the skyline. Consider architectural elements including terraces and illumination to add to the character of the skyline. Tower tops should appear integrated into the overall tower design and not read as a separate element from the tower itself.
- Screen mechanical equipment with enclosures that are fully integrated with the design of the tower top, such that they do not stand out as separate visual elements. Enclosures should be designed to complement or match the materials used for the facades of the tower below.



Example of Non-setback Tower Top
(Priority Tower)

Recommended: greater coverage of the floor below (maximum 80% per SZD) and at least 1 corner with no setback

Example of Sculpted Tower Top
(Contextual Tower)

Recommended: lesser coverage of the floor below, (minimum 50% per SZD) and sculpted form

Figure 5. Plan diagram of tower tops
The above image depicts the intent of the design guidelines and is for illustrative purposes only

2.9.6 Non-Residential Towers

Towers in Willets Point may also contain office and hotel uses.

For such towers, in addition to the guidelines proposed here, the previous guideline topics apply: *2.9.1 Variation in Height, 2.9.2 Variation in Tower Placement, and 2.9.4 Distinctive Tower Tops.*

OFFICE TOWERS

- It is recommended to limit the maximum size of any office tower located entirely above a height of 120 feet to a gross area of 30,000 square feet per floor.

HOTEL TOWERS

- It is recommended to limit the maximum length of any hotel tower facade located entirely above a height of 120 feet to 170 feet.
- It is recommended to limit the maximum size of any hotel tower located entirely above a height of 120 feet to a gross area of 25,000 square feet per floor.
- All hotel towers should follow the Orientation requirements for residential towers per the SZD, as well as guideline *2.9.3 Solar Orientation*.
- Locate hotel towers in areas with high visibility and easy access to transit, public realm amenities and the retail and dining zones of Area A. Proximity to a Convention Center is also desirable for business visitors.

Office Tower

Hotel Tower

2.10 ROOF DESIGN

OBJECTIVE

Consider the roof as the "fifth facade". Throughout the District roofs provide important architectural statements, open space opportunities for residents, and sustainability strategies.

QUALITY STANDARDS

2.10.1 Occupied Roofs

Design roof courtyard areas as a welcoming and valuable open space amenity for all of the building's occupants.

- Per the SZD, certain roof areas must be landscaped with not more than 50% covered in hardscape.
- Design the building massing to allow for solar access in the courtyard.
- Provide recreational opportunities for all age groups and occupant characteristics in the buildings.
- Consider activities in the courtyards such as: garden plots, playground, walking/jogging path, shaded and sunny sitting areas with tables and chairs, lounge chairs, and BBQ facilities.
- Screen and separate private terraces within the courtyard from the more public areas.
- Make other roof areas, such as roofs of the mid-rise, available as outdoor space for occupants.
- Include accessible landscaped areas within the courtyard as well as inaccessible garden areas. *See also green roof guidelines under 2.10.2 Unoccupied Roofs.*
- Design hardscape areas with materials of a high SRI. *A LEED credit requires materials with an SRI of at least 78 for low-sloped roofs.*

2.10.2 Unoccupied Roofs

Utilize unoccupied roof areas for sustainability features such as green or blue roofs.

- Utilize unoccupied roofs and portions of roofs for sustainability systems, including vegetated areas (for stormwater treatment), solar panels, blue roofs (rooftop stormwater detention), and wind turbines.
- For green roofs, consider Intensive Plantings Systems or Non-Accessible Extensive Plantings Systems.
- Consider connecting green roofs to a street-level LID or bio-swale system to achieve zero water discharge from the roof.
- Use the following minimum soil depth guidelines for green roof systems: Intensive roof systems: 4" sedum, 10" Lawn, 18" shrubs, 30" small trees, 42"for large trees; Extensive roof systems 4" sedum.

2.10.3 Rooftop Mechanical Equipment

Mechanical equipment should be hidden from view by an architectural expressive screen.

- Screen all mechanical equipment and elevator penthouses in a manner that is integrated with the architecture of the building. The screening element should entirely hide equipment from the street.

2.11 WALL AND WINDOW DESIGN

OBJECTIVE

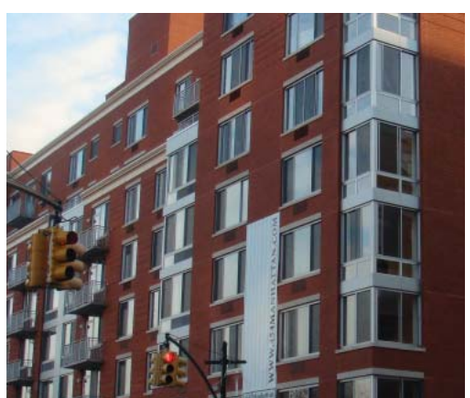
Facade design and construction will determine the long-term sustainability and durability of the development which is adjacent to some of the most notable landmarks of Queens. It will also establish the identity and character of Willets Point from the point of view of both pedestrians and the drivers. Willets Point is a site with "all fronts and no backs" - thus facade design should take into account all sides of each building.

QUALITY STANDARDS

2.11.1 Windows and Glazing

Maximize the transparency of facades to animate the streetwall and provide daylight to interior spaces.

- A minimum of **40% transparency** is encouraged for residential and commercial Upper Base, Mid-rise and Tower facades throughout the district (except as otherwise required by zoning).
- A minimum of **50% transparency** is encouraged for retail facades (except as otherwise required by zoning).
- Avoid mirrored, tinted or colored glazing.
- Transparency recommendations do not apply on Service Streets.
- Provide additional transparency at entrances, corners, or on facades overlooking parks or plazas.
- Windows with at least **20 square feet** of glazing are encouraged.
- Vary the size, shape, and pattern of windows to avoid a repetitive character.
- Make use of windows to emphasize the vertical massing and articulation of facades. *See 2.8.1 Vertical Divisions in the Streetwall.*



NYC AFFORDABLE HOUSING: Susan's Court, Manhattan

2.11.2 Facade Materials

Choose materials for aesthetics, durability, sustainability and environmental performance. Materials will create warmth, character, human scale and detail for facades, especially at ground level where pedestrians come in direct contact with the facade.

- Use materials such as unit masonry, stone, precast concrete, metal panels excluding aluminum, and glass.
- Avoid materials such as stucco, EIFS (Exterior Insulation Finish Systems), vinyl, fiberglass, aluminum, or molded plastic.
- Choose materials that contribute to high-performance building envelopes that permit new buildings to meet or exceed LEED prerequisites for minimum energy performance.
- Design the building envelope , including windows, to mitigate the impact of noise levels at the site, meeting CEQR interior noise level requirements of between 30 and 37 dB of building attenuation.

NYC AFFORDABLE HOUSING: 9 Cook Street, Brooklyn

2.11.3 Facade Detailing

Use detail on the facades to create a sense of depth and human scale and avoid large flat expanses. Structural and mechanical elements should be carefully integrated with the design or else concealed.

- Create depth and detail with shallow projections and recesses, pilasters, expression lines and window surrounds, and other details, to add interest and a variety of light, shadow, and texture to an otherwise flat facade.
- Use variations in color and material across the facades. Changes in color and material should not be flat but defined by a reveal, shadow line, recess or projection.
- Avoid exposed concrete slab edges or "eyebrows." Some slab edges may be concealed or integrated within the design.
- Avoid exposed mechanical systems or louvers for individual A/C units. Make use of centralized mechanical systems to eliminate individual units in the facade when possible.
- If individual mechanical units cannot be avoided, carefully integrate louvers within window panels rather than punched through masonry or other facade materials.
- Detail panelized materials such as masonry, stone, or precast concrete such that joints between panels as well as expansion joints are expressed with a shadow line, reveal, recess or projection that is integrated into the architectural design of the facade.

2.11.4 Perimeter Facades

The Willets Point development will be highly visible from surrounding roads, highways, subway lines, and neighborhoods such as Downtown Flushing.

- Treat Perimeter facades as front facades expressing the identity of the district, not as back facades.
- Apply the same material and design standards described throughout this chapter to these facades.
- Design and articulate facade portions below 40' in height considering the viewpoint of the pedestrian. For facade portions above, also consider the view from elevated positions and from outside the district.
- Include transparency up to 40' in height and large-scale signage above 40' on Retail facades. *See 2.12.3 Large-scale Signage.* Design residential facades with articulation and window patterns that are consistent with the other facades of the building.
- Blank walls should be avoided.

2.11.5 Parking Screening

Architectural screening is encouraged at areas where exposed parking is permitted.

- Screening may include architectural features, graphic or sculptural art, or vertical living planting systems. *See also 2.3.4 Green Walls for planting guidelines.*
- All screens should provide an effective visual shield year-round. Screens may be interactive and change with time, weather, sun-light, etc. to create a distinctive look in the daytime and night-time.
- The view of the screened area from the point of view of the pedestrian is a high priority. The view from adjacent buildings or towers should also be considered.

Detailed facade articulation


Avoid exposed slab edges, and punched A/C units


Integrate A/C units into window the panel system


Avoid "dead" walls on Perimeter Streets

2.12 SIGNAGE DESIGN

OBJECTIVE

Signage throughout the District should be treated as an architectural element, including accessory signs, advertising signs, and spectacular signs where allowed. Spectacular signage along 126th Street will contribute to a vibrant, visually dynamic retail and entertainment area with a distinctive look that adds to the destination quality of the District in both the daytime and nighttime.

QUALITY STANDARDS

2.12.1 Retail District Signage

Signage in the retail district should contribute to an intimate shopping and dining environment.

- Strategically coordinate signage with the setbacks and fenestration patterns to create an animated retail environment across Area A.
- For building facades with 2 stories of retail, locate signage primarily on the ground floor in a horizontal band that is between 10′ and 15′ from curb level. Above this horizontal band, use signage in the form of vertical projecting blade signs only.
- For building facades with more than 2 stories of retail, locate signage in a zone anywhere between 10′ and 40′ from the curb level. Design and locate the signage to be in scale with the street or the plaza that it fronts and the overall retail environment of Area A.

2.12.2 Spectacular Signage: 126th Street

Spectacular signage should define an exciting and unique character to the dining and entertainment zone of 126th Street.

- Per the SZD, along 126th Street spectacular signage is allowed between a height of 35′ and 85′ on the facade, can project 4′-6′ from the exterior wall and are otherwise unlimited in size.
- Spectacular signage may be a combination of accessory signage, illuminated and non-illuminated advertising signs with animated lighting schemes and other commercial content.
- Use spectacular signage to screen parking garages that are allowed, per the SZD, to be adjacent to streetwall. Additional screening possibilities include graphic or visual art or live vertical planting systems. *See 2.11.5 Parking Screening.*
- Use animated spectacular signage opposite Citi Field to both enhance and relate to the signage on the stadium.

2.12.3 Large-scale Signage: Perimeter Anchor Blocks

Signage on the perimeter Anchor Blocks will be highly visible and should be visually compelling and organized on the facade. They should not be billboards.

- Per the SZD, signage in Area A along Roosevelt Avenue and Northern Boulevard is allowed up to a height of 85' and with a maximum surface area of 500 sf.
- Locate signage on multi-story retail and commercial buildings along Roosevelt Avenue and Northern Boulevard.
- On the above-mentioned streets, building facades should be transparent and active up to a height of 40', with the large-scale signage located above.
- Use signage to screen exposed parking garages.
- Organize large-scale signage in a coherent fashion that is integrated into the architecture of the building facade.
- Signage should complement the existing Citi Field signage.
- Signage should not include advertising signage that would be considered prurient.

2.12.4 Residential Neighborhood Signage

The residential neighborhood signage should have an intimate feel and provide accents along the street.

- Use distinctive pedestrian-oriented signage retail establishments in the residential neighborhood, such as vertical banners or flags.
- Strategically locate signage across Area B at corners and other highly-visible locations.

2.12.5 Lighting and Performance

Illuminated signage should be energy efficient and limit light pollution.

- Use energy-efficient lighting and illumination systems , such as LED technology.
- Lighting and illumination should minimize night-time light pollution through effective shielding and orientation.
- Do not use back-light signage. Instead use signs with indirect illumination.

2.13 SPECIAL USE BUILDINGS

OBJECTIVE

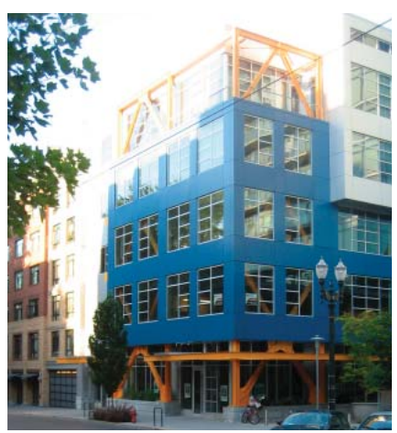
Encourage a distinct architectural identity for public buildings and utility infrastructure that maintains the architectural standard of excellence throughout the District and provides public amenities and educational resources for the Willets Point residential community and visitors.

QUALITY STANDARDS

2.13.1 Public Buildings

Public buildings that have school or community facilities should be designed and centrally located to create a visible hub of activity for residents and visitors.

- Considered as a major amenity for the residential community, the public buildings should be located at the heart of the residential area with easy access from all major residential buildings.
- Locate public buildings in proximity to the Neighborhood Park to facilitate access between them.
- Create an architectural identity of the building that is open to the community, inviting, engaging with the outdoors and visually distinctive. Provide a clearly visible and easily accessible entrance for pedestrians.
- Public facilities can be integrated into the base of a mixed-use building or separated as a stand-alone building.



2.13.2 Utility and Service Structures

Utility and service structures, such as a pump station, cogeneration plant, or park house for the Neighborhood Park may be located within the District and should be consistent the high-quality architecture of the District.

- Create infrastructure facilities that are high-performance facilities that contribute to the sustainable goals of Willets Point.
- Locate facilities to allow for flexibility and architectural integration into the district, concealed within other buildings or underground if possible.
- Consider noise, exhaust, lighting and other quality-of-life issues in relation to the residential buildings and public open spaces.
- Design stand-alone structures that provide sustainable infrastructure to have an architecture that outwardly expresses the building's function, rather than be masked behind an unrelated architectural form.
- Present a visually compelling architectural identity and incorporate public amenities, such as educational elements, water features, or sculpture.

Public art can be a strategy for creating a public face to a utility building

2.14 OVERALL DESIGN INTEGRITY

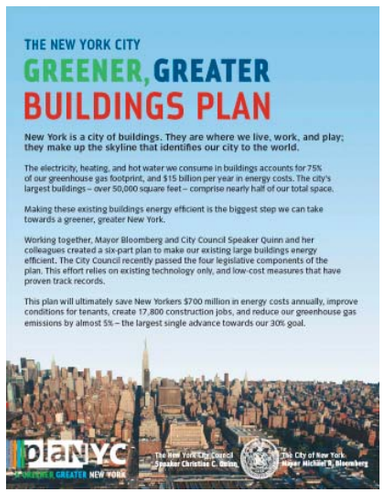
The planning, design and construction of Willets Point will establish a model mixed-use green neighborhood and mixed-income community for New York City. Even if built out over time, the architecture of the District should have a consistent level of quality while also feeling diversified and dynamic, ensuring the development avoids the feeling of a "megaproject." As described in the previous pages, variety and detail in the facades, materials, and skyline, complemented by green building techniques and a visual expression of sustainability, will create a unique identity for Willets Point. Strong variety and authenticity that feels like a natural part of New York City can be attained through a coherent master plan which is then implemented by multiple architects designing individual buildings. Each building is encouraged to have strong internal coherence and integrity of design, with variety occurring from one building to the next in the classic pattern of city building that has defined New York.

Figure 6. Overall view of Willets Point
The image at right depicts the intent of the design guidelines and is for illustrative purposes only

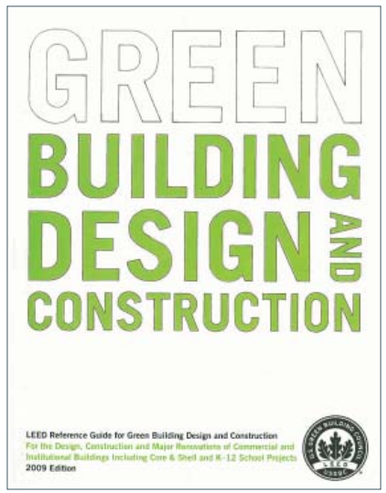
REFERENCE STANDARDS

REFERENCE DOCUMENTS

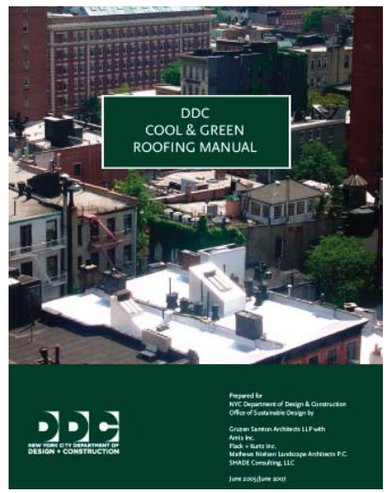
Willets Point is envisioned as an urban development utilizing the latest industry green building innovations and the most current sustainable design recommendations and standards of NYC agencies.



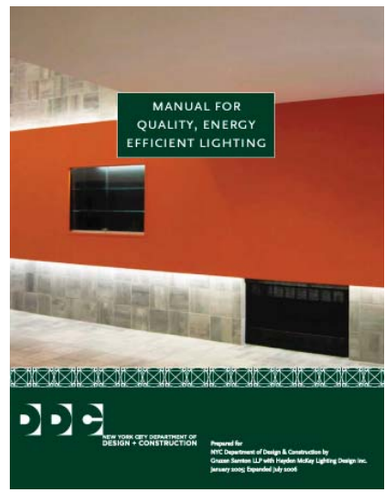
planNYC



USGBC LEED Green Building Design and Construction



NYC DDC Cool and Green Roofing Manual, June 2005 / June 2007



NYC DDC Manual for Quality, Energy Efficient Lighting, January 2005; Expanded July 2006

THIS PAGE INTENTIONALLY LEFT BLANK