

SAINT ALBANS CLOUDBURST DEMONSTRATION PROJECT

BOROUGH OF QUEENS

PROJECT ID: SEQ-SACBA/HWQ1196

COMMUNITY BOARD 12Q – PRESENTATION
Transportation Committee

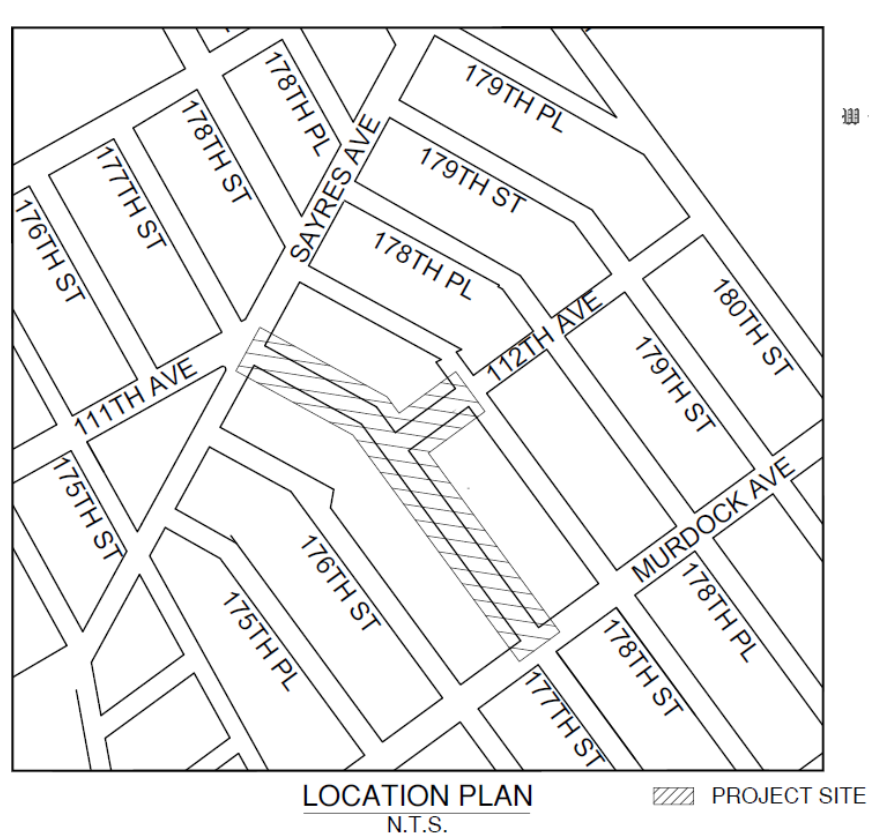
AGENDA



- **About the Project**
 - Project Data
 - Why is the Project Necessary?
 - Benefits to the Community
- **Schematic Design Overview**
- **Envision**
- **Community Impacts**
- **Community Outreach**
- **Q&A**

PROJECT SITE MAP AND LOCATION MAP

BOROUGH OF QUEENS CITY OF NEW YORK



QUEENS COMMUNITY BOARD NO. 12



SEQ-SACBA/HWQ1196 - SAINT ALBANS CLOUDBURST DEMONSTRATION PROJECT

Anticipated Construction Start: **SUMMER 2026**

Anticipated Construction Completion: **SUMMER 2028**

Management Agency: **NYC Department of Design and Construction (DDC)**

Sponsor Agencies: **NYC Department of Environmental Protection (NYCDEP) and NYC Department of Transportation (NYCDOT)**

General Contractor: **TBD**

Anticipated Construction Cost: **\$9.7M**

WHY IS THE PROJECT NECESSARY?

- Southeast Queens is a focus area to improve conditions from a long history of flooding and expand storm sewer services to neighborhoods
- DEP is examining green infrastructure to manage impacts of flooding and pilot the concept to manage storm events that exceed the sewer design storm (5-year storm)
- The St. Albans neighborhood was identified as a pilot area

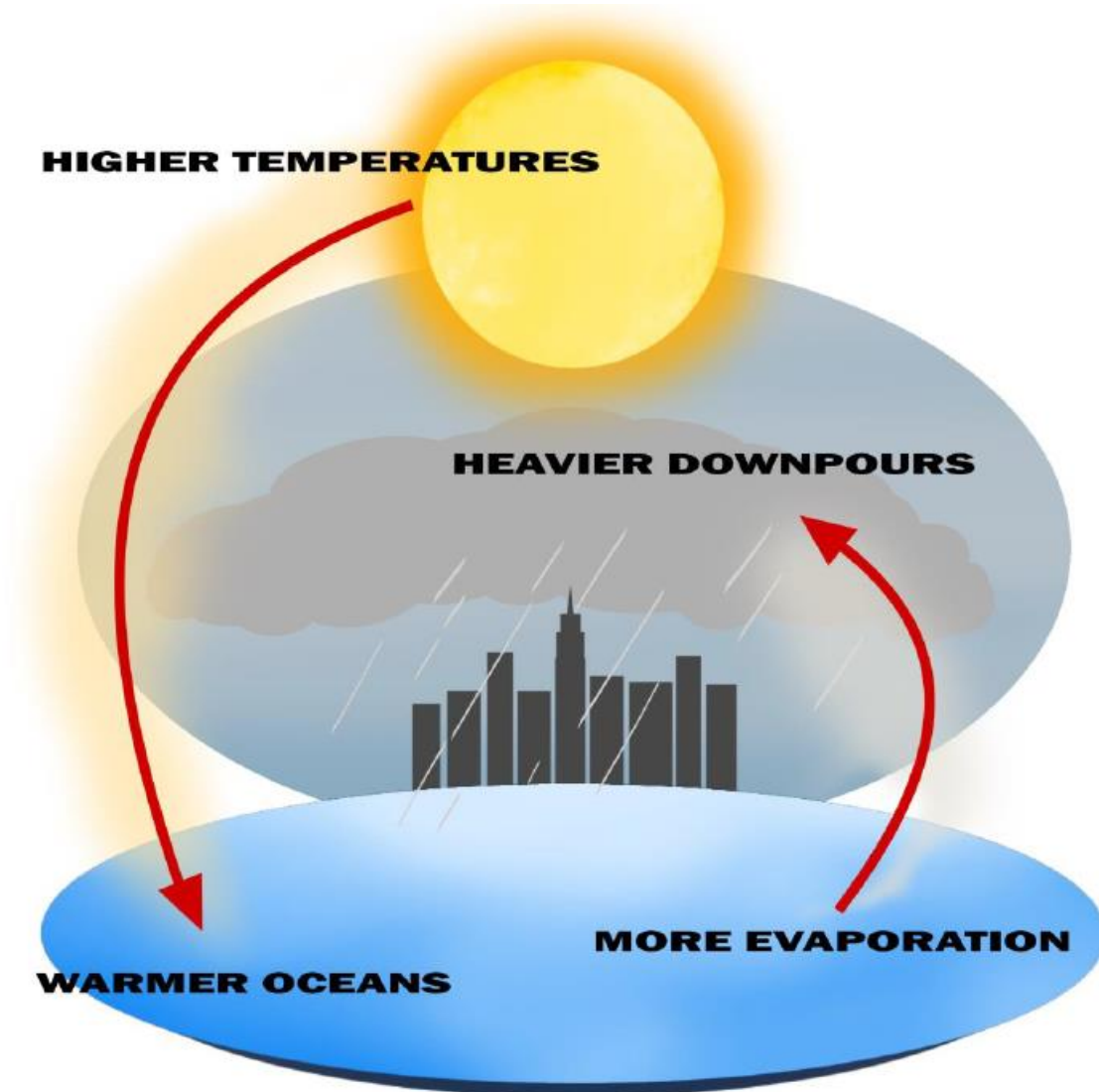


The Problem

Climate change is causing more localized flooding across NYC.



OUR CHANGING CLIMATE



Sudden, powerful storms are bringing more **intense rainfall** to New York City.

- August 2021 (Henri) – 1.94 inches in an hour
- September 2021 (Ida) – 3.15 inches in an hour
- September 29, 2023 (Ophelia) – 2.5 inches in an hour

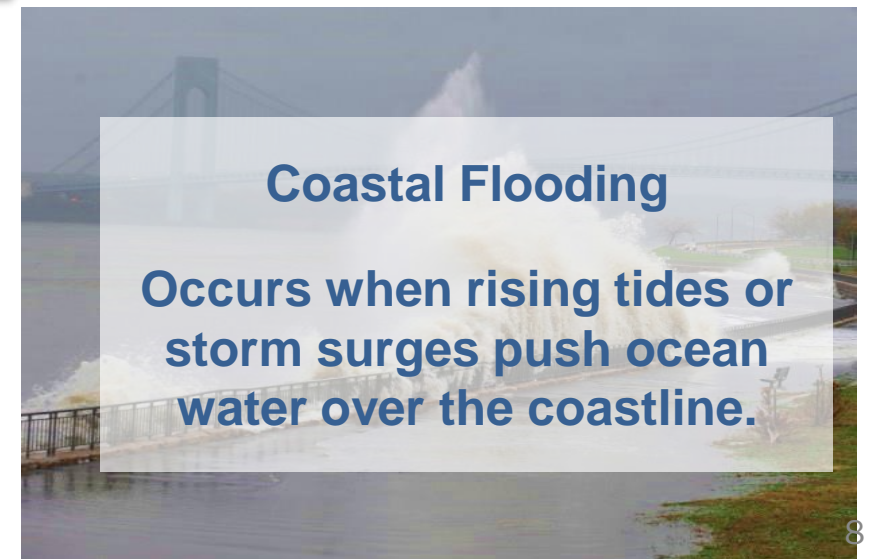
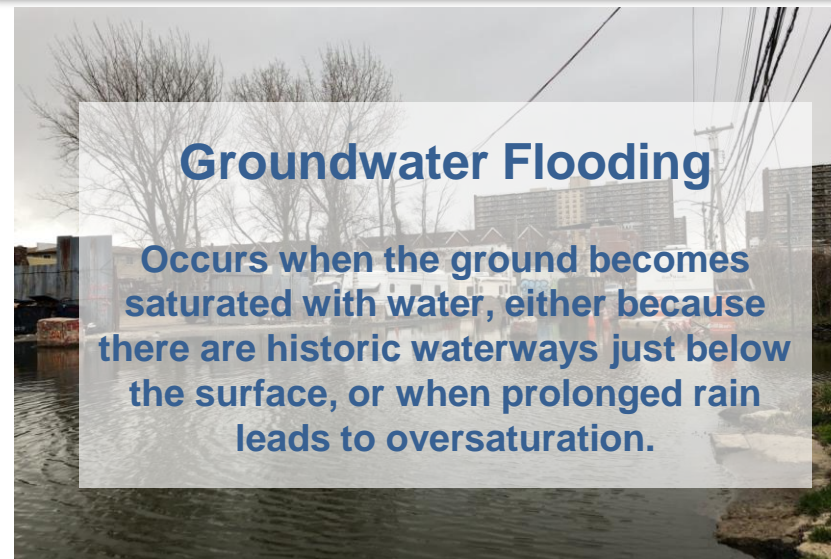
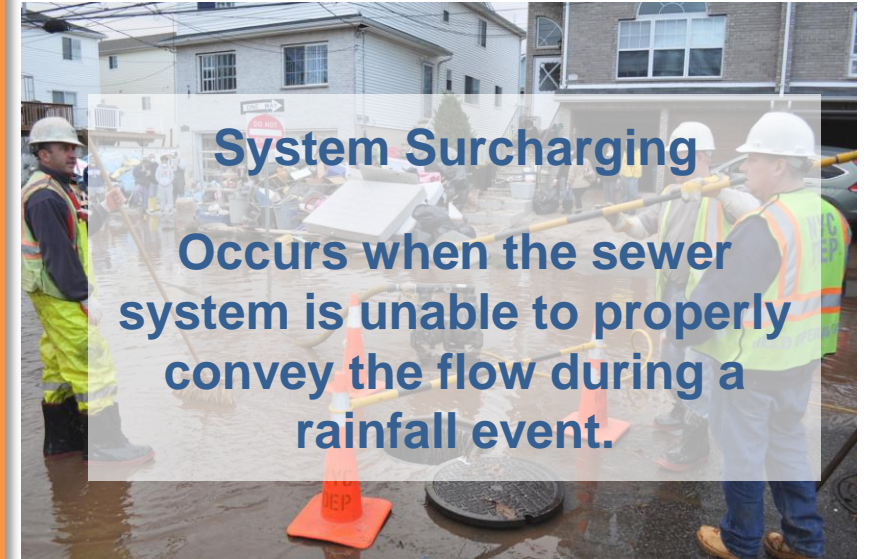
In 2023, NYC experienced **rain every 3 days**.

NOAA (National Oceanic and Atmospheric Administration) has **reclassified NYC** a “**humid subtropical**” climate.

TYPES OF FLOODING

There are several different types of flooding that New Yorkers may experience, either combined or in isolation during a flooding event.

Cloudburst Management is primarily suited to address overland flooding.



WHAT IS A CLOUDBURST?

- A cloudburst is a sudden, heavy downpour where a lot of rain falls in a short amount of time.
- Cloudbursts can cause flooding, damage property, disrupt critical infrastructure, pollute New York's waterways, and in extreme examples even cause loss of life.





What is Cloudburst Management?

Cloudburst Management is a way of absorbing, storing, and transferring stormwater to minimize flooding from heavy rain events. Cloudburst Management uses a combination of grey infrastructure, like drainage pipes and underground tanks, and green infrastructure, like trees and rain gardens. These projects consider larger volume storage, typically building for up to 2.3 inches/hour and provide CSO reduction benefits as well as stormwater resilience.

During heavy rain events, Cloudburst Management can minimize damage to property and infrastructure by reducing pressure on the sewer system.

ELEMENTS OF CLOUDBURST PROJECTS

ABSORB



STORE



TRANSFER



BENEFITS OF CLOUDBURST MANAGEMENT

Cloudburst Management benefits local communities economically, socially, and environmentally.



ECONOMIC

Reduces costly negative impacts of extreme stormwater events, such as physical damages to infrastructure.



SOCIAL

May provide public amenities and open space that can be used when it's not raining. They can also minimize flooding from heavy rain events



ENVIRONMENTAL

Improves water quality and vegetated elements reduce the amount of carbon dioxide in the atmosphere.



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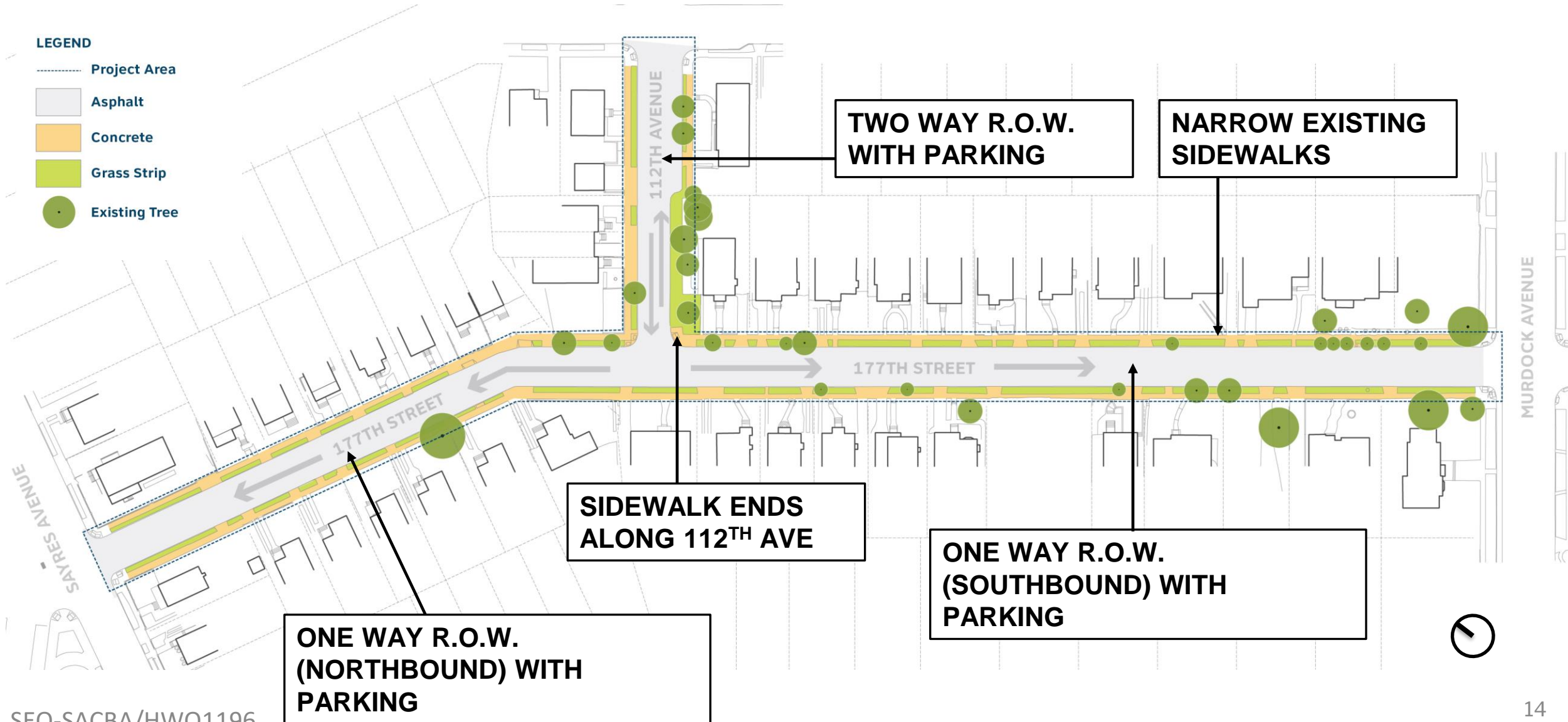


SCHEMATIC DESIGN PROPOSAL SAINT ALBANS CLOUDBURST DEMONSTRATION PROJECT

EXISTING CONDITIONS

LEGEND

- Project Area
- Asphalt
- Concrete
- Grass Strip
- Existing Tree



EXISTING CONDITIONS – 177TH STREET



177TH ST LOOKING NW



177TH ST LOOKING SE

EXISTING CONDITIONS – 177TH STREET SIDEWALK



EXISTING CONDITIONS -112TH AVENUE



112TH AVE LOOKING SOUTH



112TH AVE LOOKING NORTH

CLOUDBURST TOOLKIT



Porous Pavement

Parking lanes



Stormwater Green Street

Streets and sidewalks



Infiltration Basin

Grass strips and sidewalks



Hydraulically Connected Assets

*Grass strips, sidewalks, roadway,
parking lanes*



Depressed Gutter

Gutter across intersections

PROPOSED PROJECT

RECONSTRUCTED ONE WAY
R.O.W. WITH PARKING REMOVED
ALONG SOUTH SIDE

LEGEND

- Project Area
- Depressed Gutters
- Asphalt
- Porous Concrete
- Concrete
- Grass Strip
- Stormwater Greenstreet
- Existing Tree
- Proposed Tree

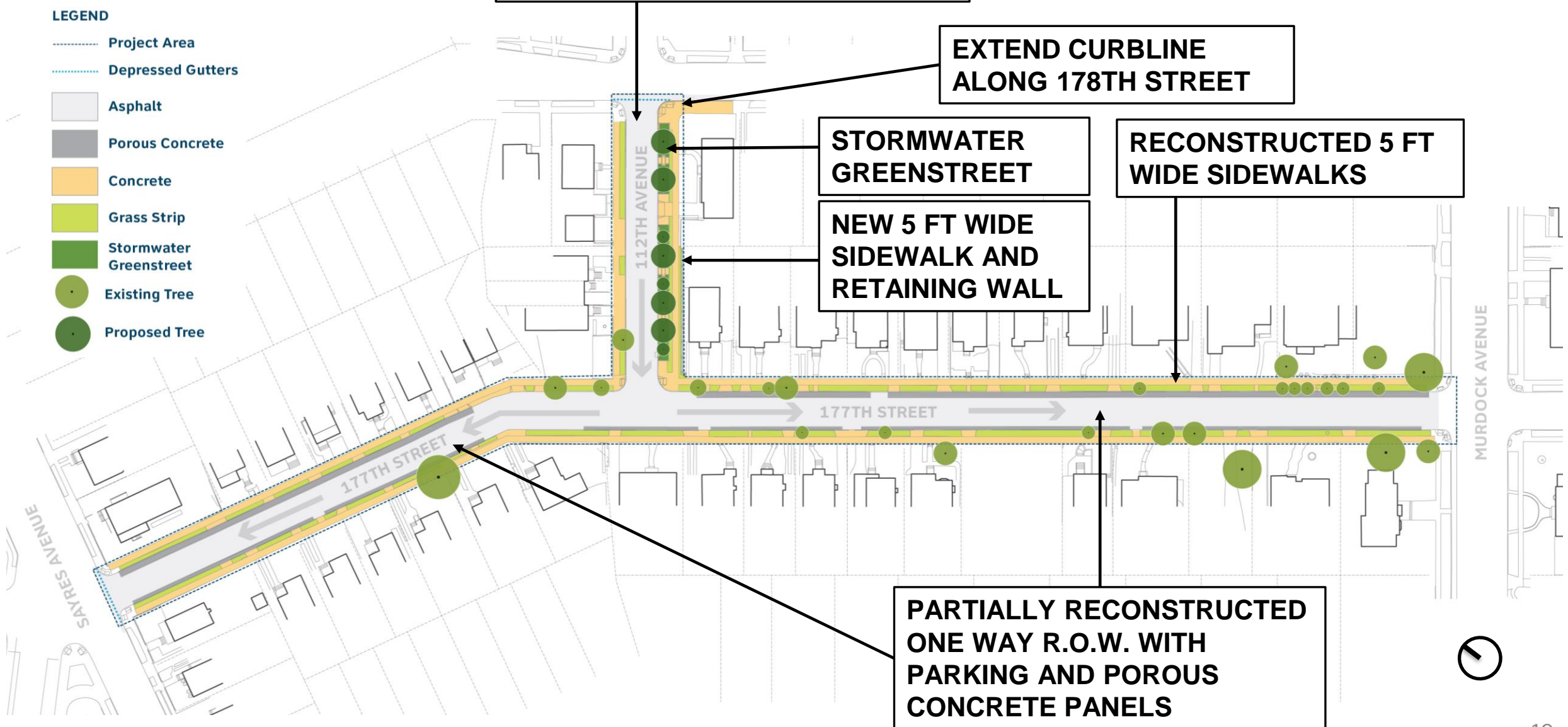
EXTEND CURBLINE
ALONG 178TH STREET

STORMWATER
GREENSTREET

RECONSTRUCTED 5 FT
WIDE SIDEWALKS

NEW 5 FT WIDE
SIDEWALK AND
RETAINING WALL

PARTIALLY RECONSTRUCTED
ONE WAY R.O.W. WITH
PARKING AND POROUS
CONCRETE PANELS



PRECEDENT: POROUS CONCRETE



PRECEDENT: STORMWATER GREENSTREET



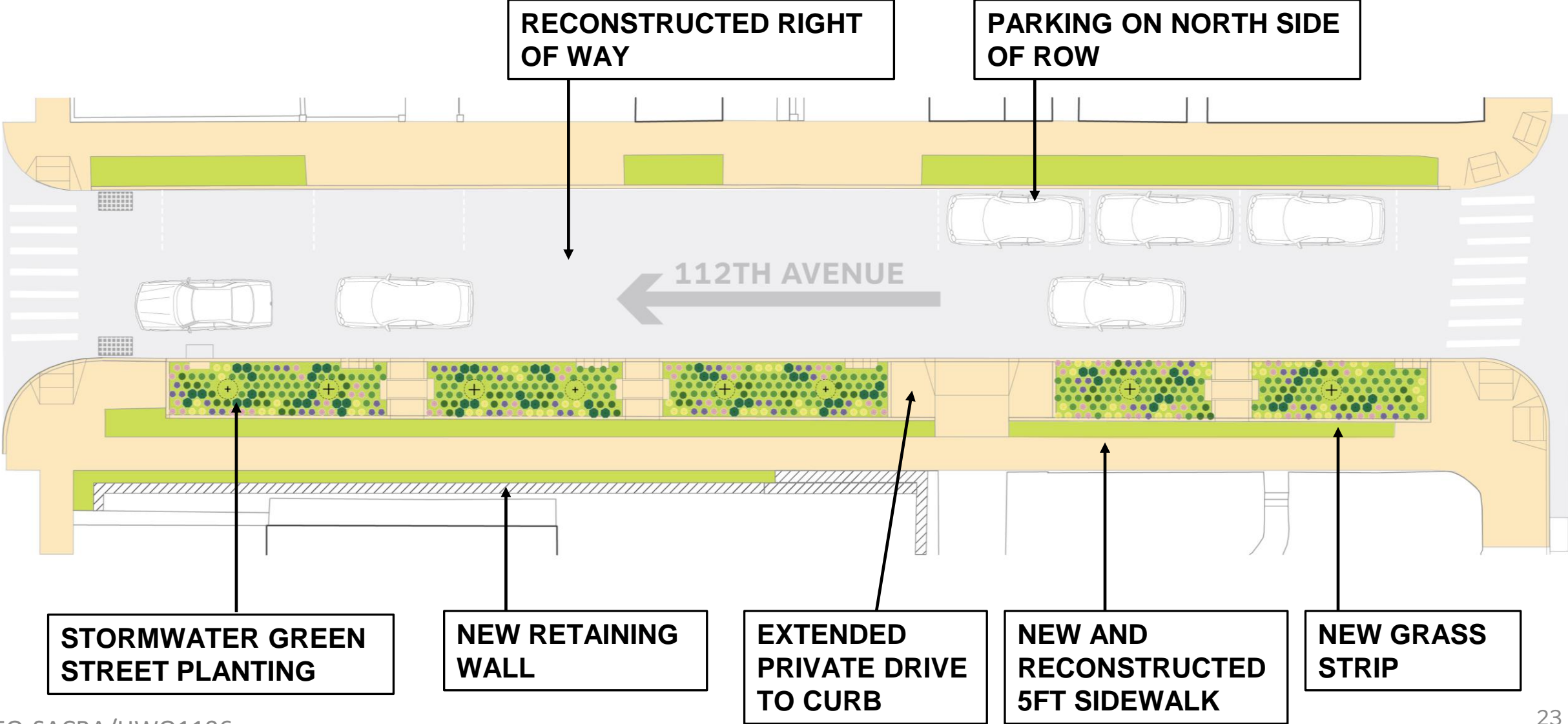


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112TH AVE STORMWATER GREENSTREET

STORMWATER GREENSTREET- UNDERSTORY PLANTING



UNDERSTORY PLANTING PALETTE



DWARF FOTHERGILLA
Fothergilla gardenii



FOX SEDGE
Carex vulpinoidea



BABY JOE PYE WEED
Eutrochium dubium 'Baby Joe'



GAYFEATHER
Liatris spicata



Blue Flag Iris
Iris versicolor

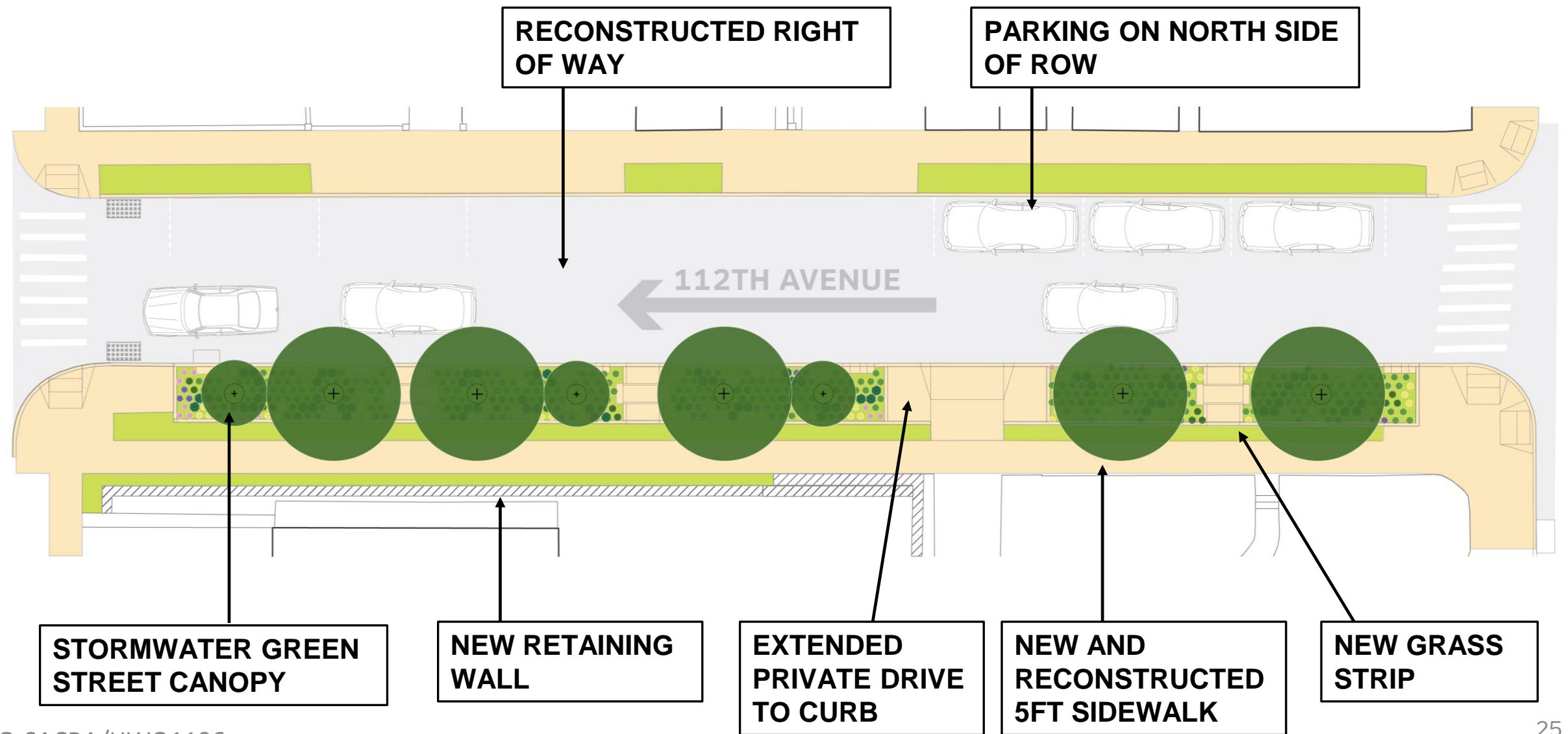


ST. JOHN'S WORT
Hypericum calycinum



ENGLISH BLUEBELLS
Hyacinthoides non-scripta

STORMWATER GREENSTREET- CANOPY



CANOPY PLANTING PALETTE

SUMMER



BLACK GUM
Nyssa Sylvatica

FALL



SUMMER



SWAMP WHITE OAK
Quercus bicolor

FALL

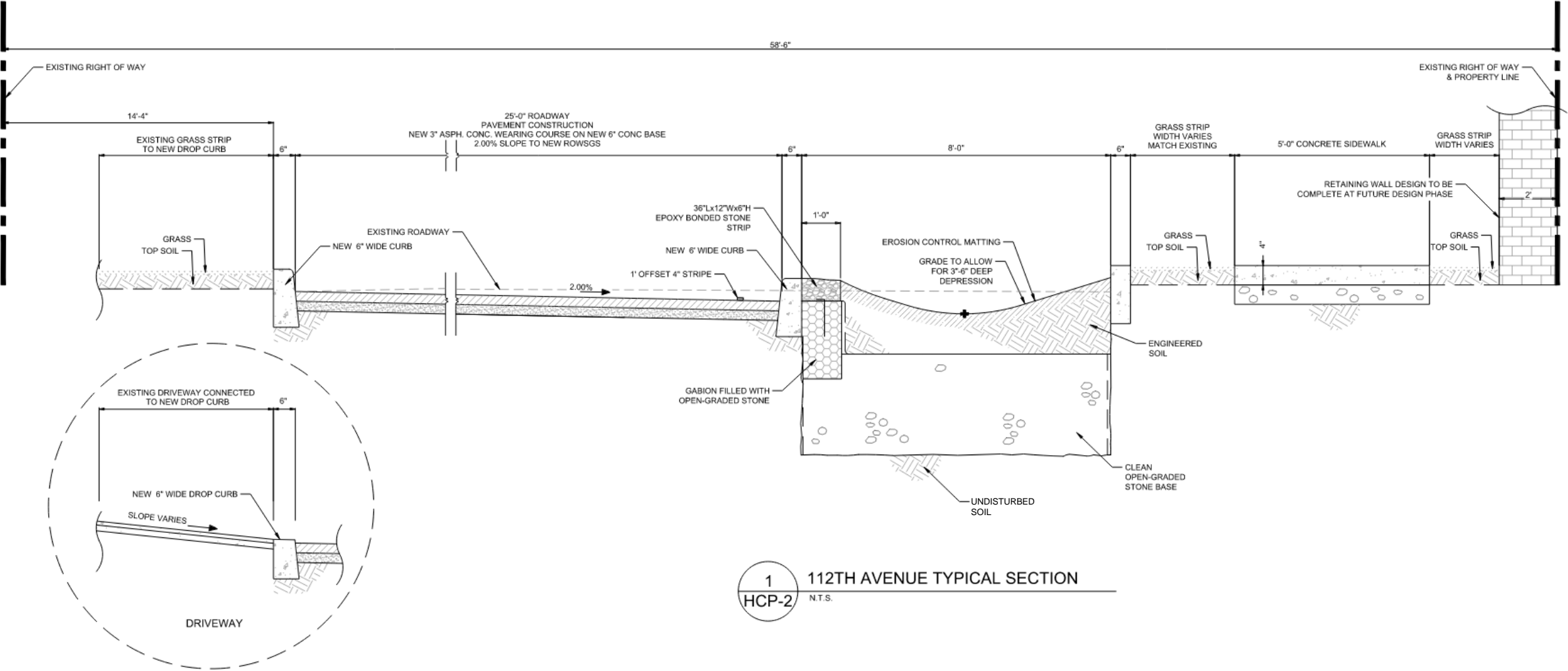


CANOPY PLANTING PALETTE

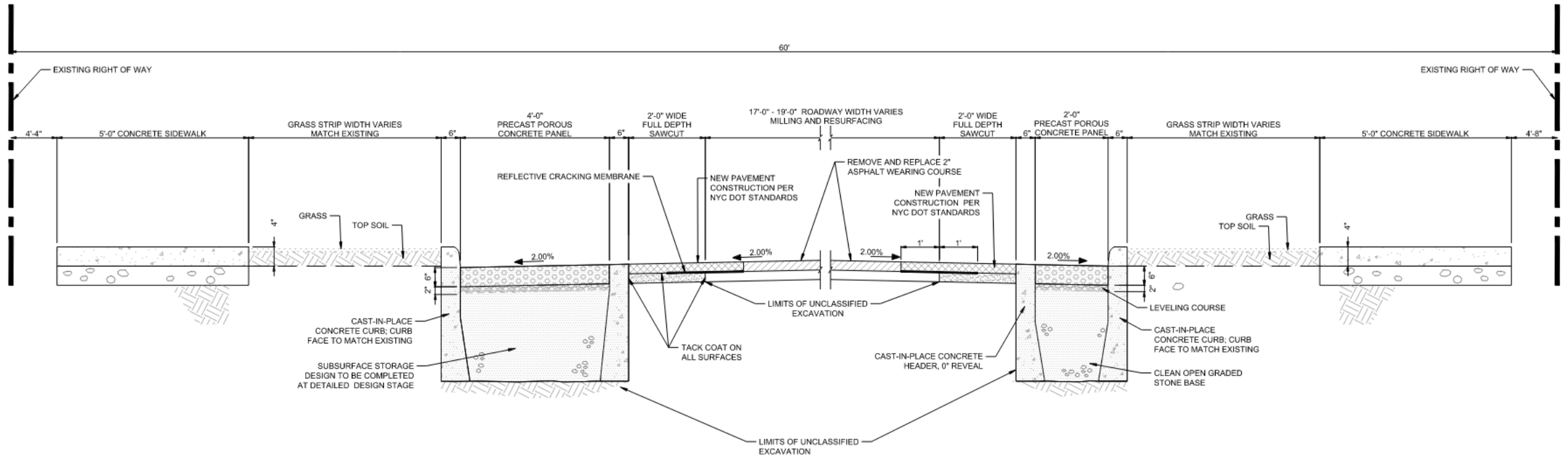


SERVICEBERRY
Amelanchier laevis 'Cumulus'

STORMWATER GREENSTREET- CROSS SECTION 112TH AVE



INFILTRATION BASIN - CROSS SECTION 177TH STREET



ENVISION

ENVISION



ENVISION

- Framework that includes 64 sustainability and resilience indicators organized around 5 categories
- Address areas such as: human well being, mobility, community development, collaboration, and resilience
- Applicable to a wide variety of infrastructure assets



Energy

Distribution
Hydroelectric
Coal
Natural Gas
Wind
Solar
Biomass



Water

Treatment
Distribution
Capture / Storage
Stormwater
Flood Control
Nutrient
Management



Waste

Solid waste
Recycling
Hazardous
Waste
Collection &
Transfer



Transportation

Airports
Roads / Highways
Bikes / Pedestrians
Railways
Transit
Ports
Waterways



Landscape

Public Realm
Parks
Ecosystem Services
Natural
Infrastructure
Environmental
Remediation



Information

Telecom
Cables
Internet
Phones
Data Centers
Sensors

ENVISION

DDC PROJECT TYPOLOGY II: AREAWIDE STORMWATER MANAGEMENT

ENVISION GOAL: GOLD AWARD



Quality of Life
14 Credits

Wellbeing, Mobility, Community



Leadership
12 Credits

Collaboration, Planning, Economy



Resource Allocation
14 Credits

Materials, Energy, Water



Natural World
14 Credits

Siting, Conservation, Ecology



Climate & Resilience
10 Credits

Emissions, Resilience





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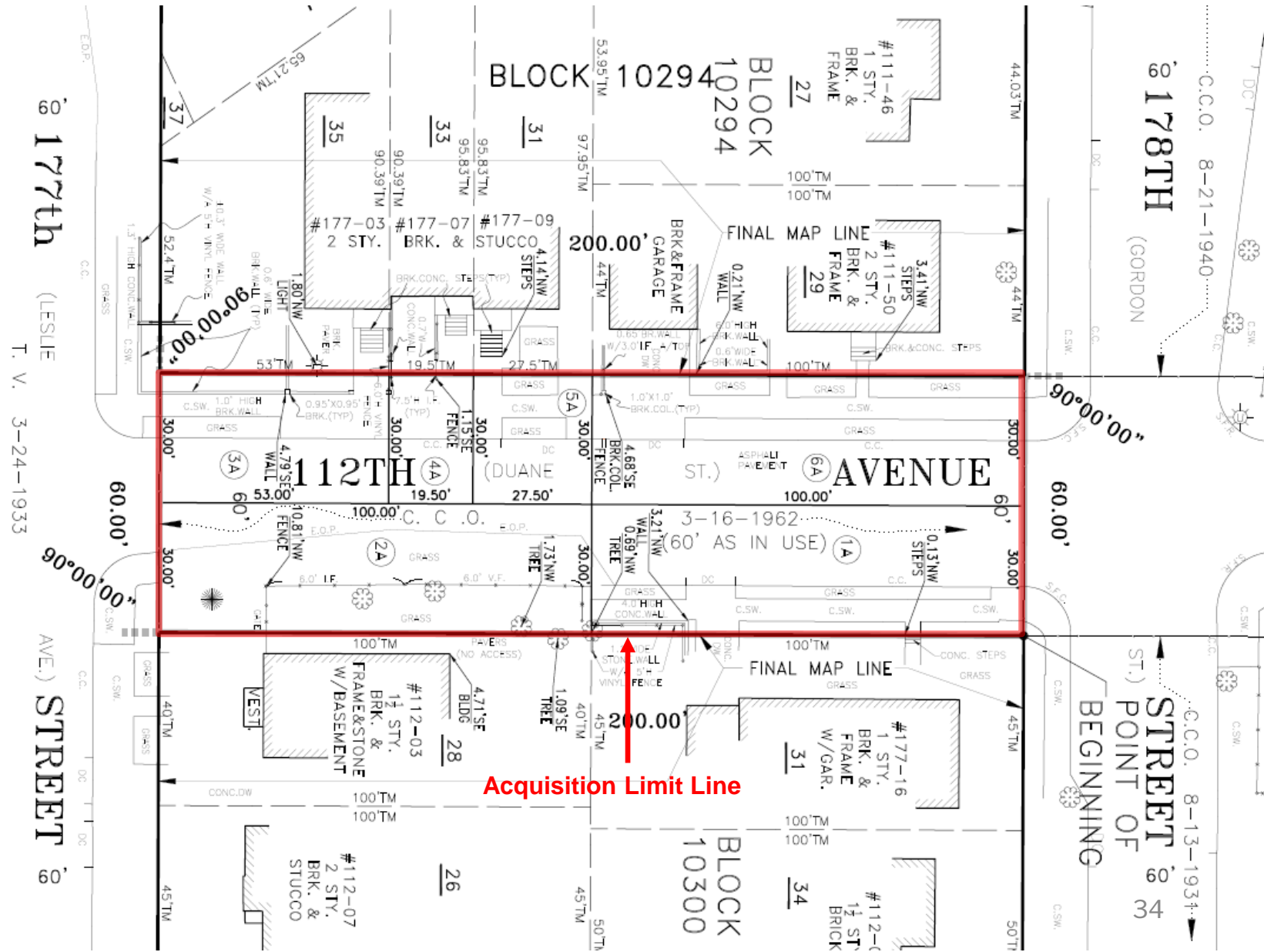
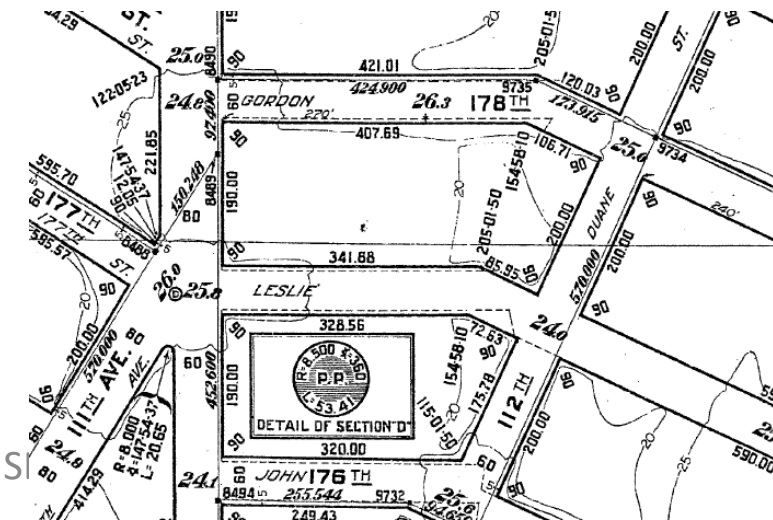


COMMUNITY IMPACTS

ACQUISITION LIMITS

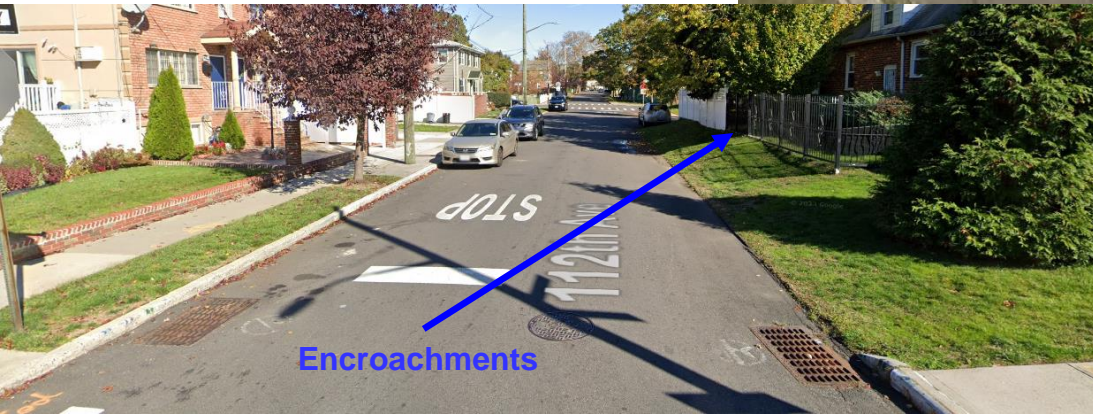
Street acquisition of 112th Avenue from 177th Street to 178th Street.

- 112th Avenue is officially mapped 60' according to the City street map adopted in 1928 below.
- City is acquiring 60' width of 112th Avenue through eminent domain.
- No portion of private land is being taken.



ENCROACHMENT IMPACTS

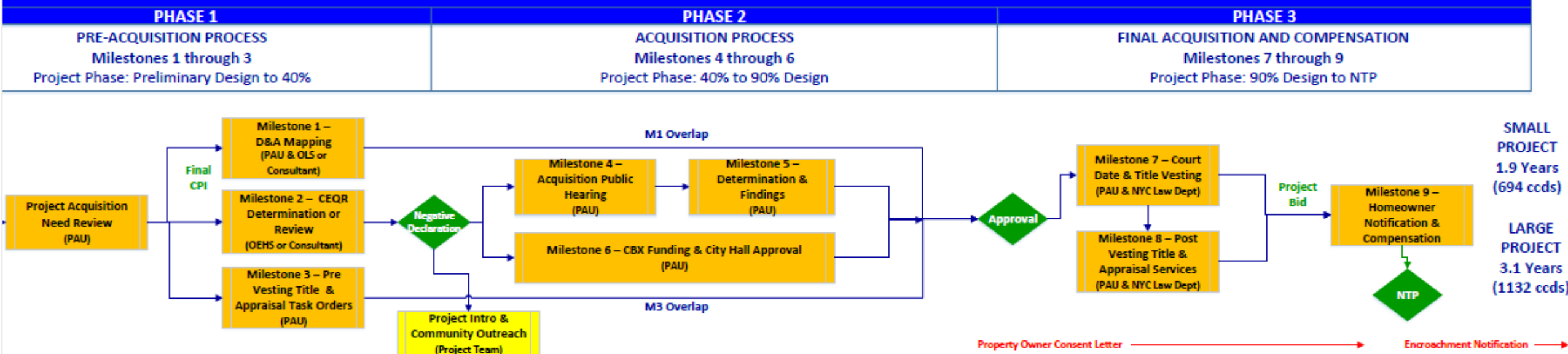
- Private improvements within the acquisition limit line will become “encroachments” once the City takes title to the street.
- Private fences and trees may be impacted by the reconstruction of 112th Avenue.
- Impacted encroachments will be compensated.



ACQUISITION MILESTONE AND SCHEDULE

- Acquisition is currently at Milestone 1 – Damage & Acquisition (D&A) mapping and Milestone 2 – City Environmental Quality Review (CEQR) determination process.
- Completion of the acquisition process can take approximately two (2) years.
- Prior to the required public hearing for street eminent domain, DDC will conduct a comprehensive community outreach program for adjacent property owners along 112th Avenue within the acquisition limit.
- The community outreach will include introducing the project and presenting the acquisition details to ensure clear communication and address any concerns.

FLOW CHART 1 – MAPPED STREET ACQUISITION, EMINENT DOMAIN



COMMUNITY IMPACTS



- Construction duration anticipated up to 24 months
- Limited instances of full street closure along 112th Avenue
- Conversion of 112th Avenue to one-way (southwest-bound)
- Permanent removal of parking along south side of 112th Avenue
- Street acquisition along 112th Avenue
- Extension of private property driveway on 112th Avenue to new curb line



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COMMUNITY OUTREACH

COMMUNITY OUTREACH DURING CONSTRUCTION

Stakeholder and community outreach activities will continue throughout the construction phase, to alert you of upcoming construction work, advisories, completion of milestones and activities, as well as community engagement events:

COMMUNITY OUTREACH PROCESS:



COMMUNITY OUTREACH



Community Construction Liaison (CCL) responsibilities are as follows:

- First point of contact, maintain on-site presence and communications.
- Identify, resolve, and/or proactively address issues and inquiries.
- Distribute advisories and weekly construction activities newsletter.
- Provide 72-hour and 24-hour (confirmation or cancellation) advisories for work impacts by email and door to door.
- Attend community board monthly DSC meetings.

THANK YOU

Q&A