

Lake Union Steam Plant Garage Addition

SEATTLE, WASHINGTON
LANDMARK REVIEW | JUNE 2020

W
COLLINS
VERMAN



ALEXANDRIA

Contents

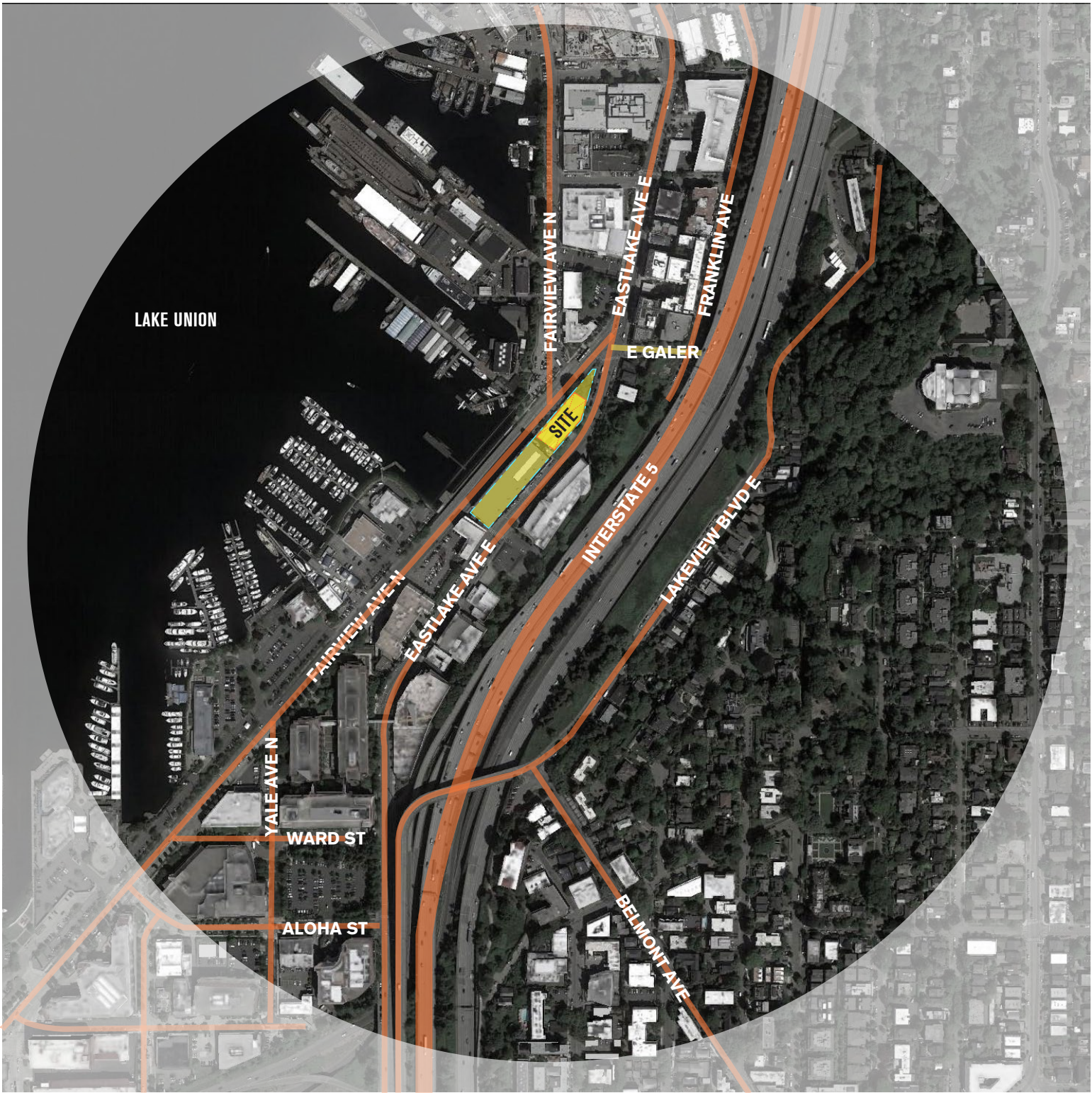
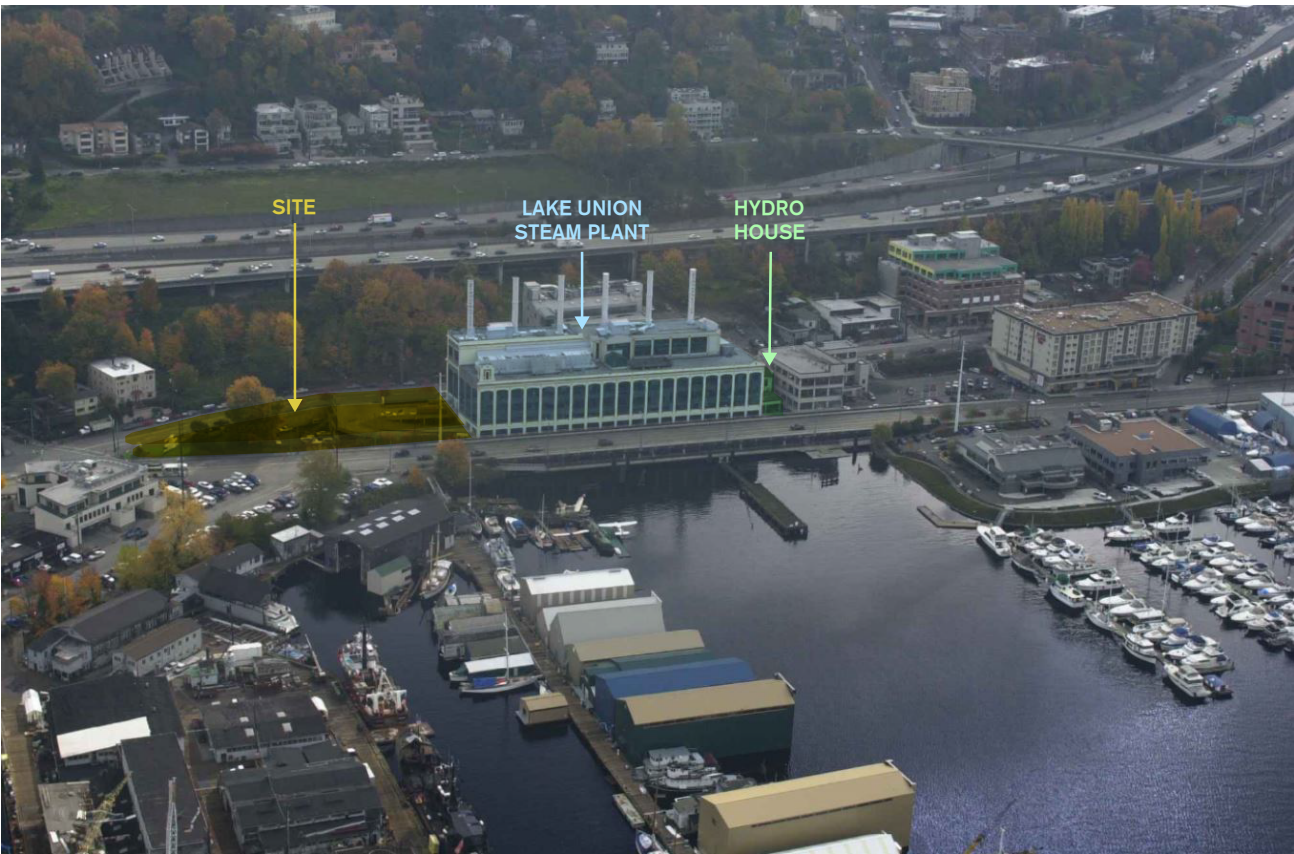
SITE CONTEXT.....	2
PROJECT DESCRIPTION.....	3
BUILDING HISTORY.....	4
EXISTING SITE.....	5
EXISTING SITE PHOTOS.....	6
PROJECT IN CONTEXT.....	9
DESIGN COMPARISON.....	11
ELEVATIONS.....	13
OVERALL SITE PLAN.....	20
PLANS.....	21
SECTIONS.....	19
CONNECTION DETAILS AT STEAM PLANT.....	25
DESIGN DETAILS.....	26
MATERIAL + COLOR PALETTE.....	36
LANDSCAPE.....	38
LIGHTING.....	41

Site Context

The project site is located in the Eastlake neighborhood of Seattle on a wedge shaped property shared with the historic Lake Union Steam Plant and Hydro House. Pinned between Lake Union to the west and I-5 to the north, the site hosts waterfront views and serves as a connection point between Eastlake Avenue East and Fairview Avenue.

The area was initially inhabited by Coast Salish tribes and known as "Little Lake" until Euro-American arrival and settlement transitioned the area into an industrial district. Lake Union was used primarily for industrial transportation purposes by numerous sawmills, shipbuilders, tanneries and ironworks. Extensive growth followed the opening of the Lake Union Ship Canal, the Locks and the Montlake Cut in 1916. During this time, the Lake Union Hydroelectric Plant and subsequent additions were built to provide power to a developing population. The building ceased service as a steam generation plant in 1987.

In 1993, the bioengineering firm ZymoGenetics acquired the Lake Union Steam Plant and established their company headquarters and research center. The neighborhood has been in a transitional phase since and has become a base for biotechnology companies. In 2019, the property changed hands from ZymoGenetics to Fred Hutch. This change of tenants necessitates an expansion to the existing parking garage to meet the growing demands of the neighborhood.



VICINITY PLAN_SCALE: NTS

Project Description

The proposed project is for the site immediately north of the Lake Union Steam Plant. At that location currently there is a submerged surface parking lot (31 stalls), above which there are 2 garage entry/exit ramps and service area with loading dock. The ramps serve the existing 2-level garage beneath the building from a curb cut off Eastlake Avenue. These items were created as a part of the 1993 renovation of the building and would be replaced with this project. [See pages 6-8 for photos].

The objective of this project is to provide new off-street parking capacity for the landmark building and to rejuvenate the northern portion of the site. The intent of the design is to deliver as many new stalls below grade efficiently -- utilizing existing retaining walls and minimizing above-grade elements to preserve views to the building and Lake Union.

The solution illustrated here has 3 main components:

1. Below-grade garage of 2 levels aligned with existing garage floors
2. Landscaped lid over garage also providing a replacement loading / building service area
3. Landscaped garden with E-W connecting walk

GARAGE

The mostly below grade new structure would accommodate approximately 122 vehicles and would connect with the existing 2 level garage through existing north wall openings. Beyond the removal of the aforementioned ramps no changes would occur to the existing garage.

THE LID

New landscaped planters will help screen the top level of stalls from both building and neighborhood views above. This elevated deck with low vehicle-restraint walls would be approximately 9-11' above the adjacent sidewalk of Fairview Ave. Additionally, the lid would be held at least 4" off the existing building for seismic isolation purposes. Southern-most parking stalls will be separated from the historic structure by 10-12' with a planter.

GARDEN

Located at the northern end of the triangular site this area would be regraded near the garage and re-landscaped. The steel sculpture and lawn currently residing in this area will remain. A new connecting walk between the sidewalks of Eastlake and Fairview will provide more direct access for pedestrians. This walk will be flanked by native low shrub and ornamental grass plantings within a grade-level set of cascading bio-retention planters.

AREA OF CONTACT
at North elevation of
steam plant



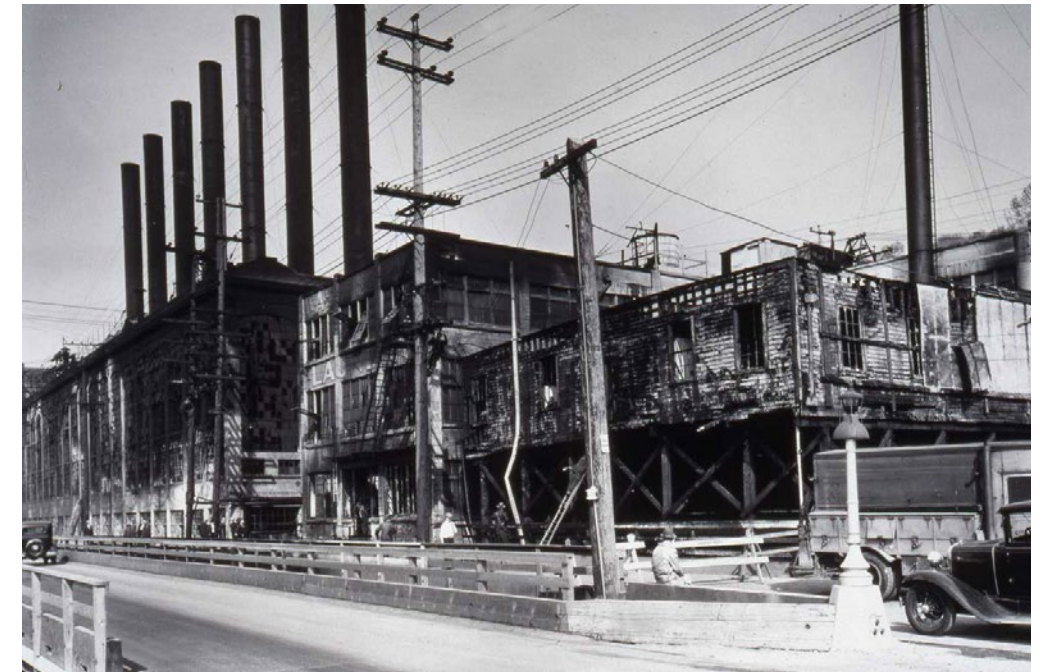
Building History



Hydro House and Auxiliary Steam Plant, view across Eastlake Avenue, 1917. Courtesy of Seattle Now & Then.



View from Lake Union, 1930. Courtesy of Seattle Municipal Archives, 78085.



Southwest corner of Steam Plant after a fire on April 30th, 1935. Courtesy of Seattle Now & Then.

Historic Significance

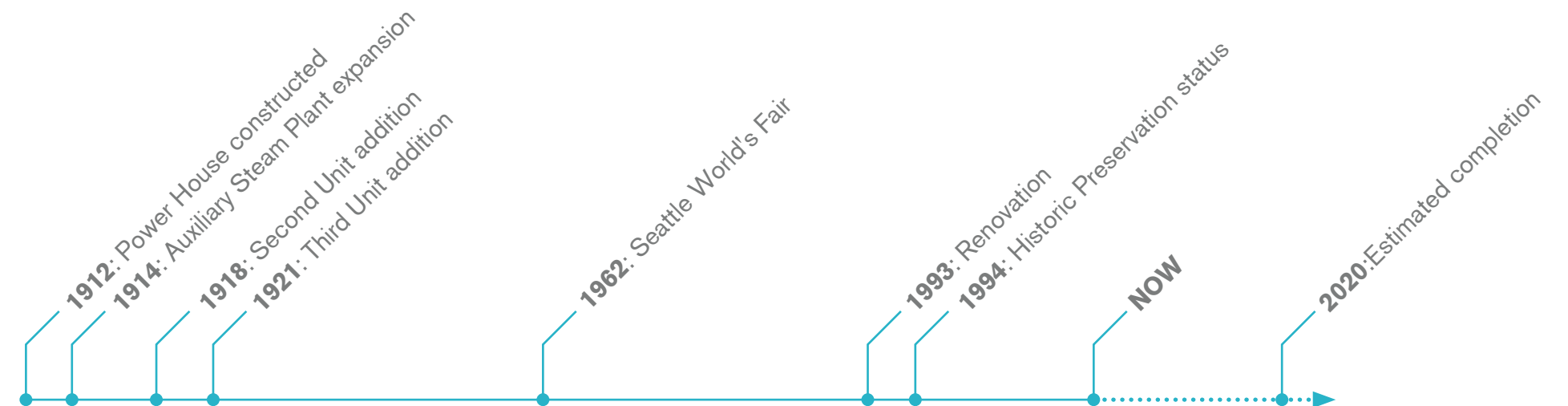
The South Lake Union Steam Plant at 1201 Eastlake Avenue was constructed in Seattle in 1912. Originally known as the "Power House", the plant employed hydro power and went through several additions and renovations between 1912 and 1921 by Seattle City Light (SCL). The Steam Plant's construction is evidence of a regional and national public utility movement that developed during the late 1800s Progressive Era. Seattle City Light commissioned the building, and several other electric generating plants, as a part of a greater goal of establishing public power facilities in a burgeoning Seattle.

The building was designed by architect Daniel R. Huntington, operated as a steam plant until 1987, and was declared a city landmark in 1994.

The Steam Plant required an extensive renovation in 1994 when biotechnology company, ZymoGenetics, acquired tenancy. The plant's seven original smokestacks were removed in 1991 due to attrition, and six decorative replacement stacks were installed during the renovation in 1994.

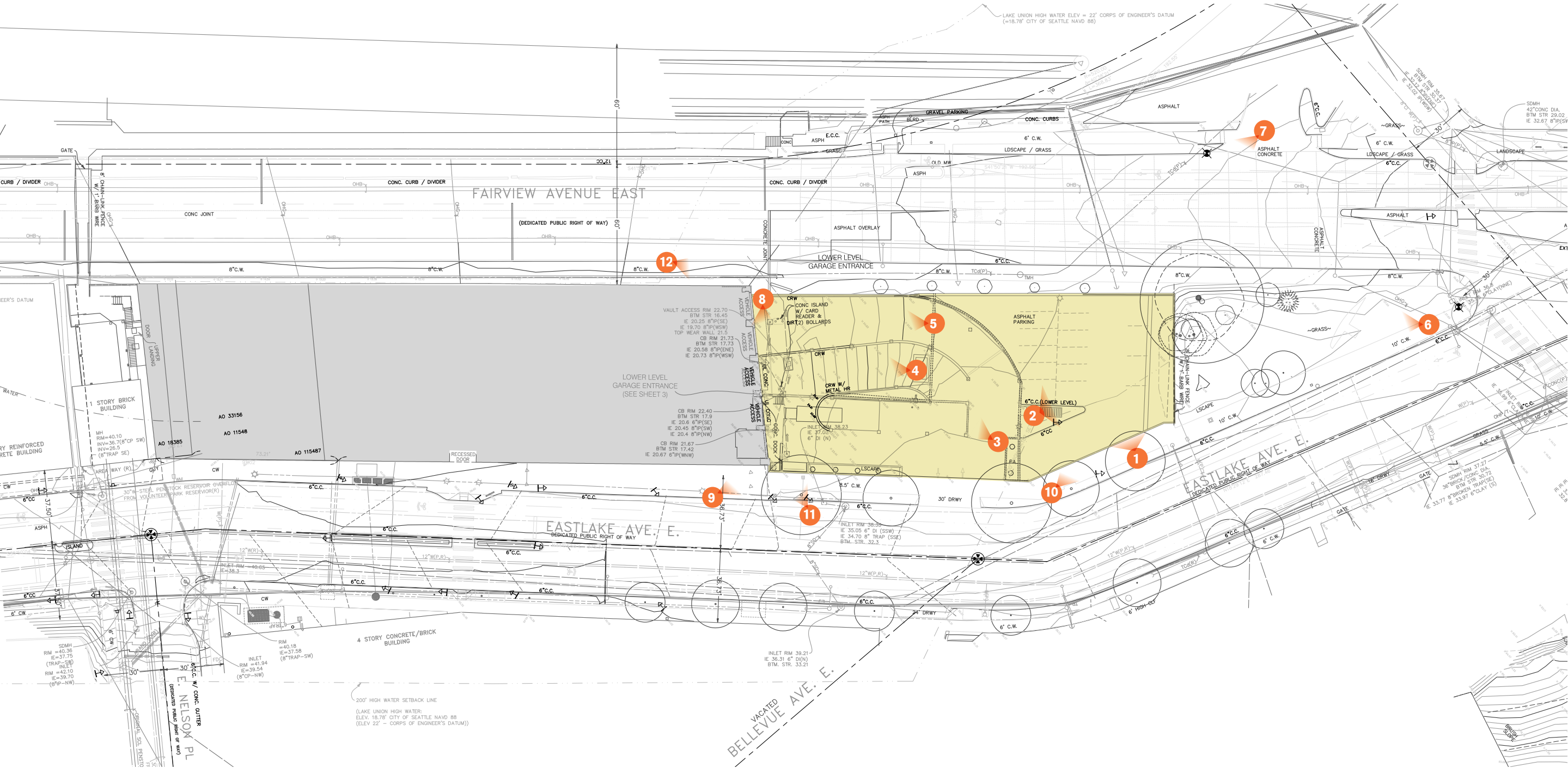
In 2019, the company decided not to continue the lease.

Timeline



Source: City of Seattle Landmark Nomination: Lake Union Steam Plant, Susan Boyle.

Existing Site



Overall Site Survey

Not to scale

Existing Site Photos



Existing submerged surface parking lot, looking west towards Lake Union.



Existing submerged surface parking lot, looking north.

Existing Site Photos



North façade & loading/service area.



Lower level garage ramp.



Upper level garage ramp.



Steel sculpture at north lawn.



Looking southwest across Fairview Avenue.

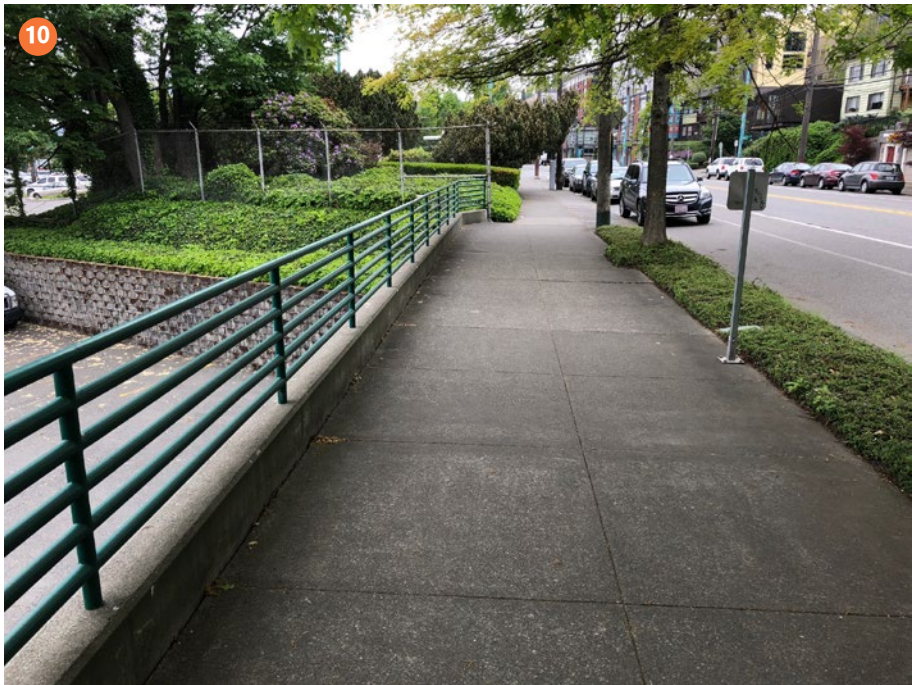


Upper level garage ramp with loading dock & compactor beyond.

Existing Site Photos



Eastlake Avenue sidewalk looking north (south-end of site).



Eastlake Avenue sidewalk looking north (mid-site).



North façade at loading dock from Eastlake Avenue sidewalk.



Fairview Avenue sidewalk looking north (south-end of site).



Fairview Avenue sidewalk looking north (mid-site).



Northwest corner of Steam Plant from Fairview Avenue sidewalk.

Project in Context



Looking west to Lake Union.

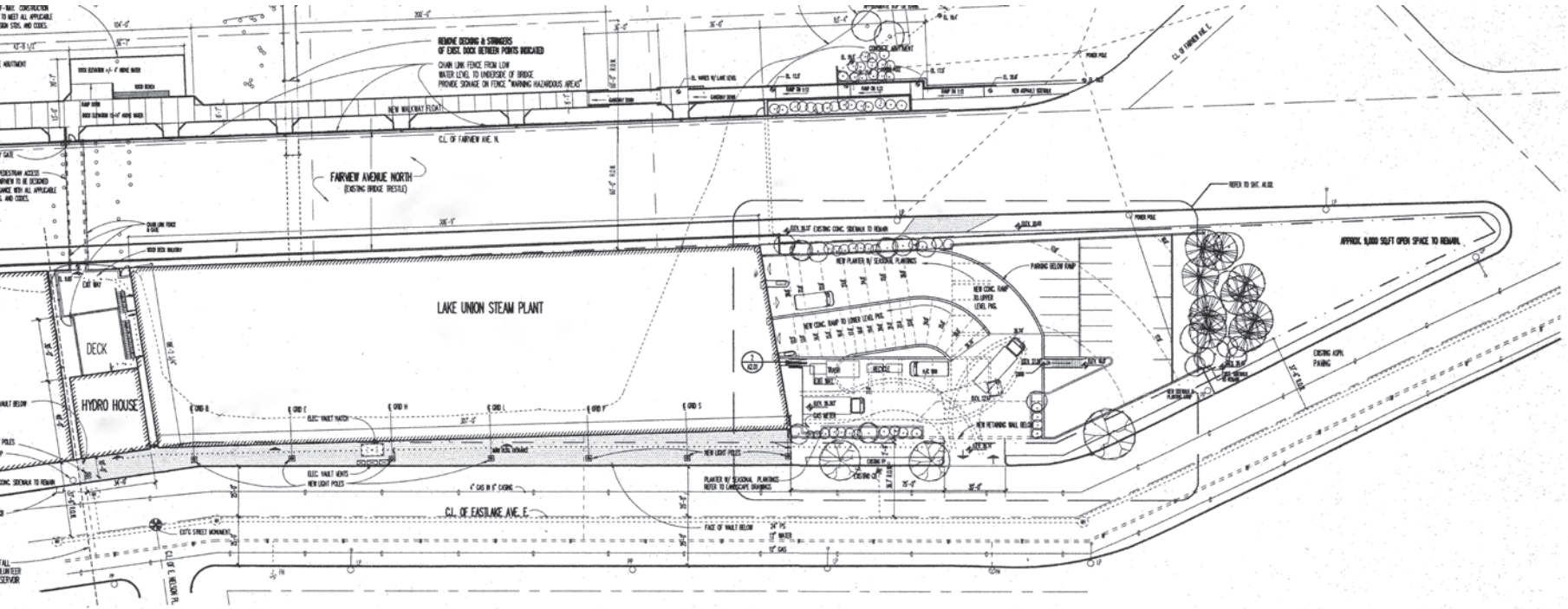
Project in Context



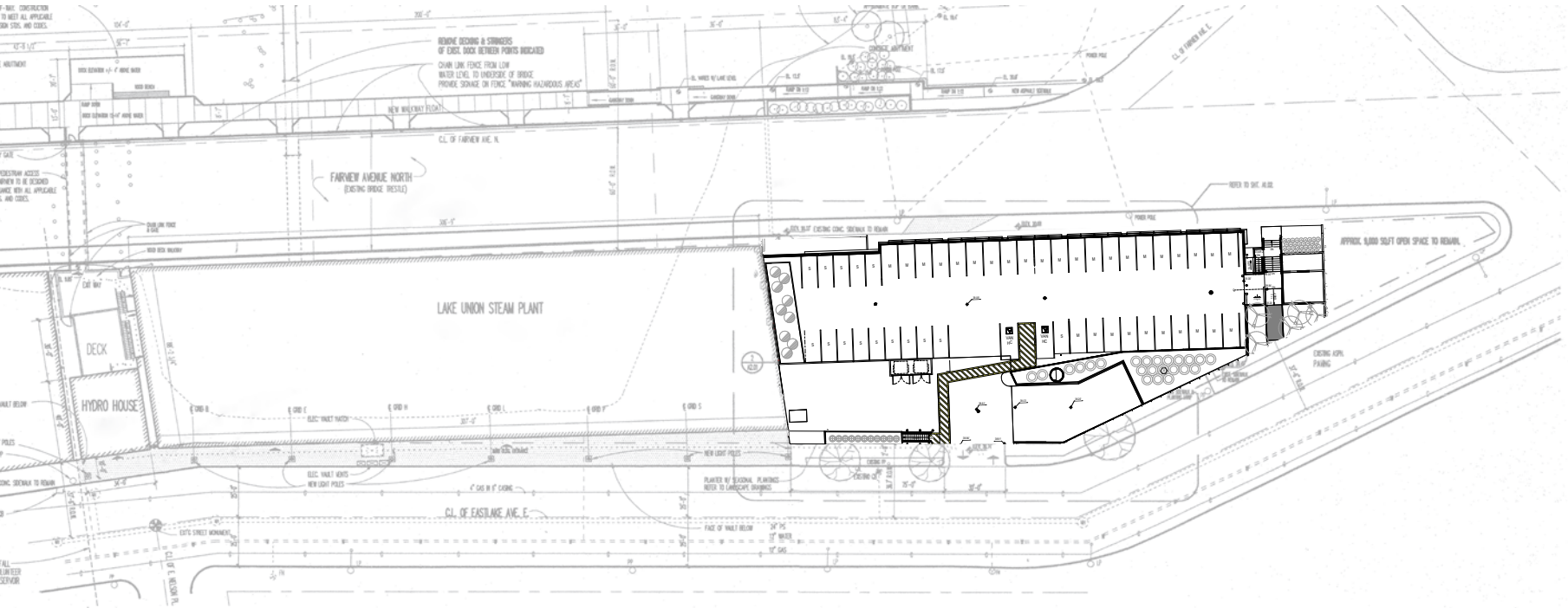
Looking south on Fairview Avenue.

Design Comparison

Site Plan



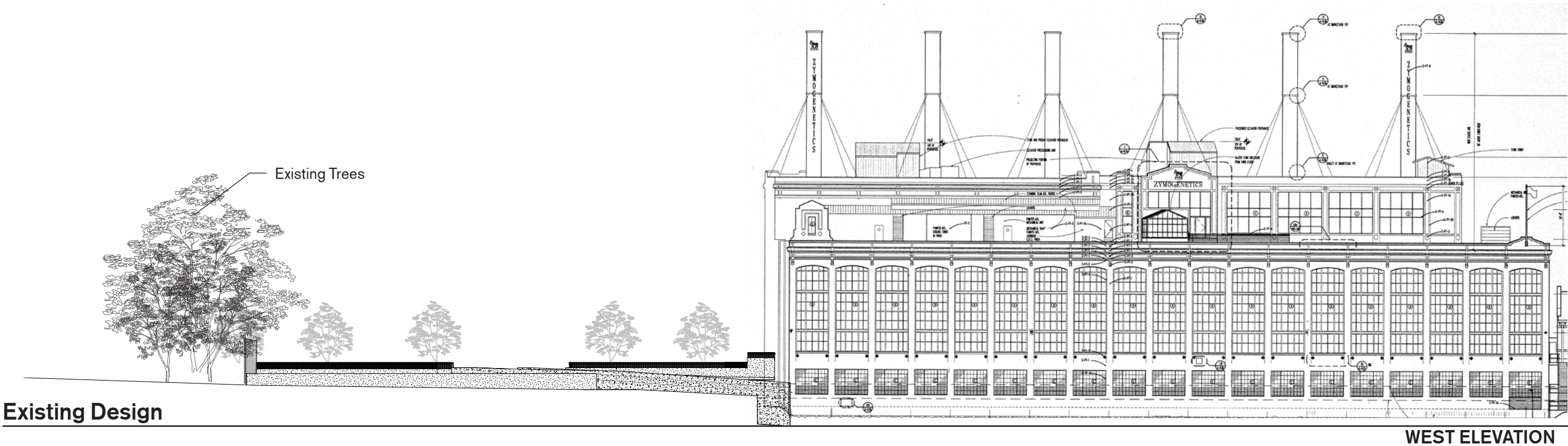
Existing Design



Proposed Design

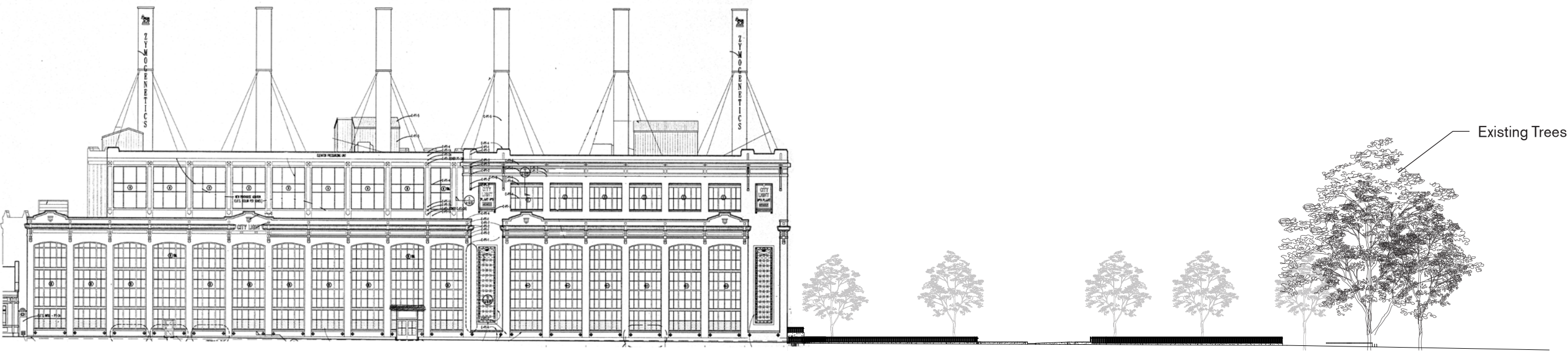
Design Comparison

West Elevation



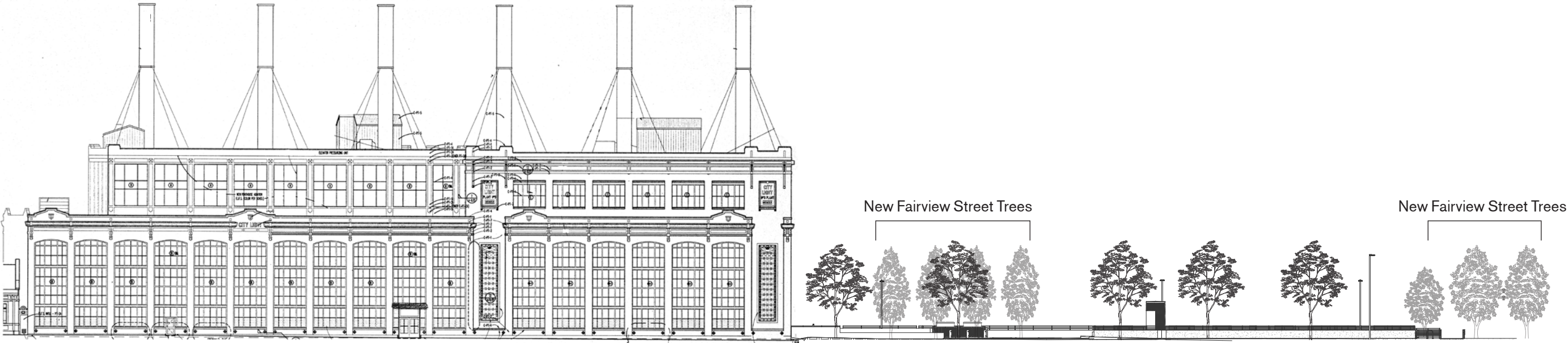
Design Comparison

East Elevation



Existing Design

EAST ELEVATION



Proposed Design

EAST ELEVATION

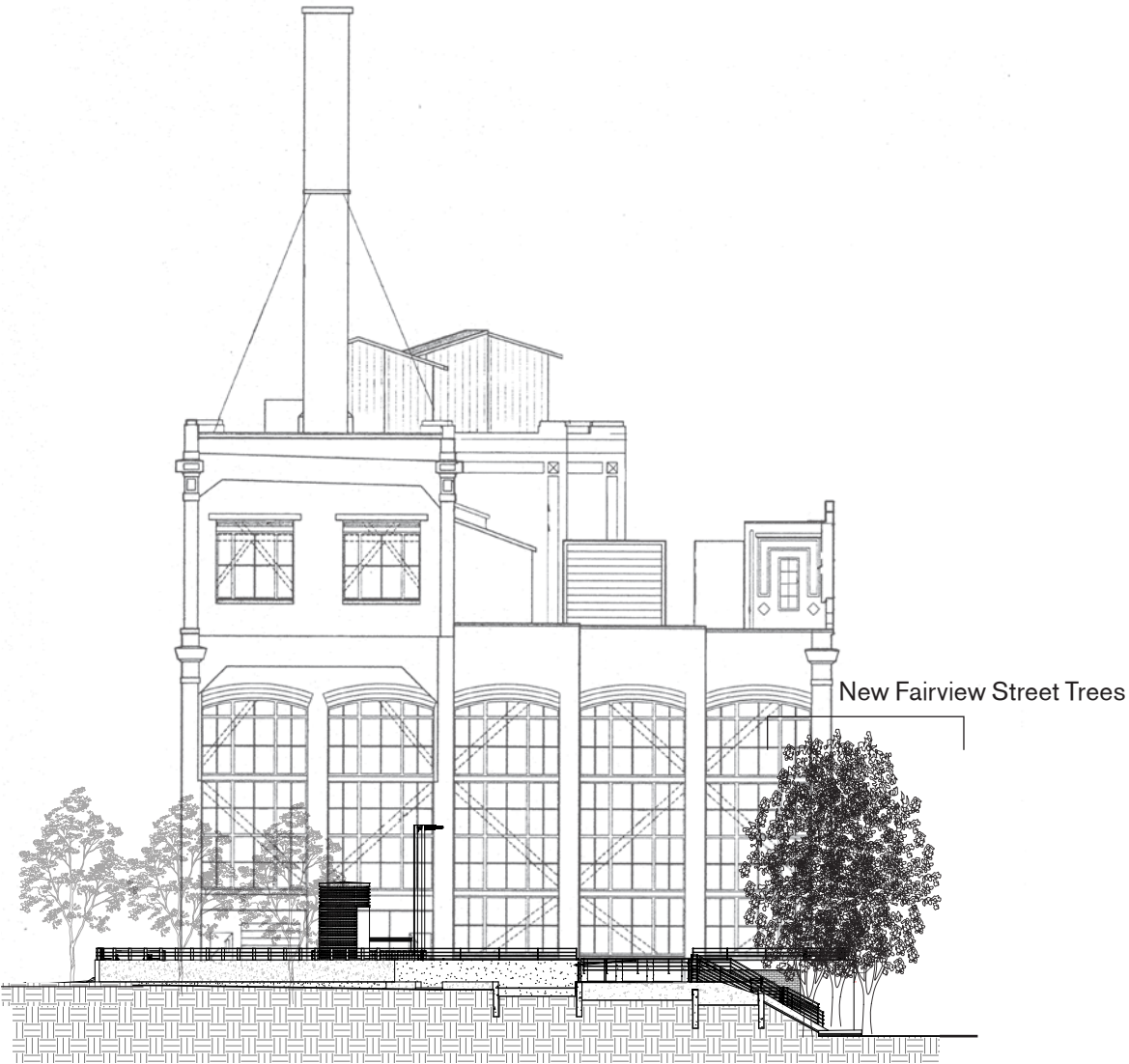
Design Comparison

North Elevation



Existing Design

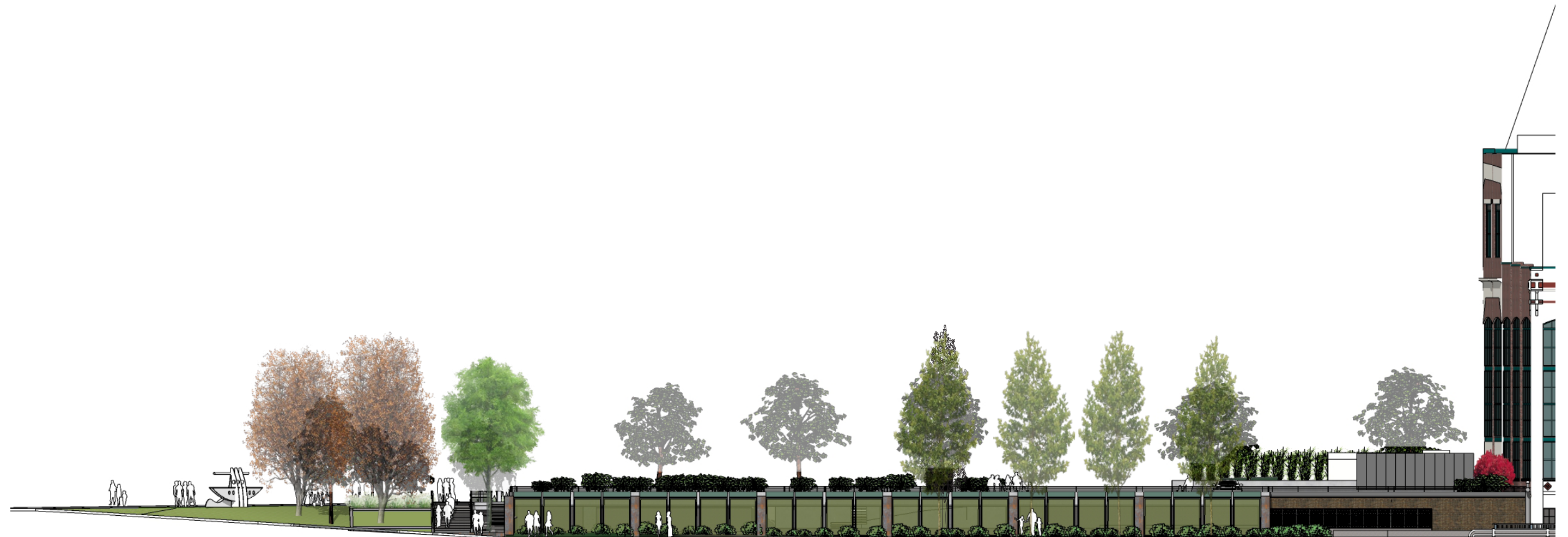
NORTH ELEVATION



Proposed Design

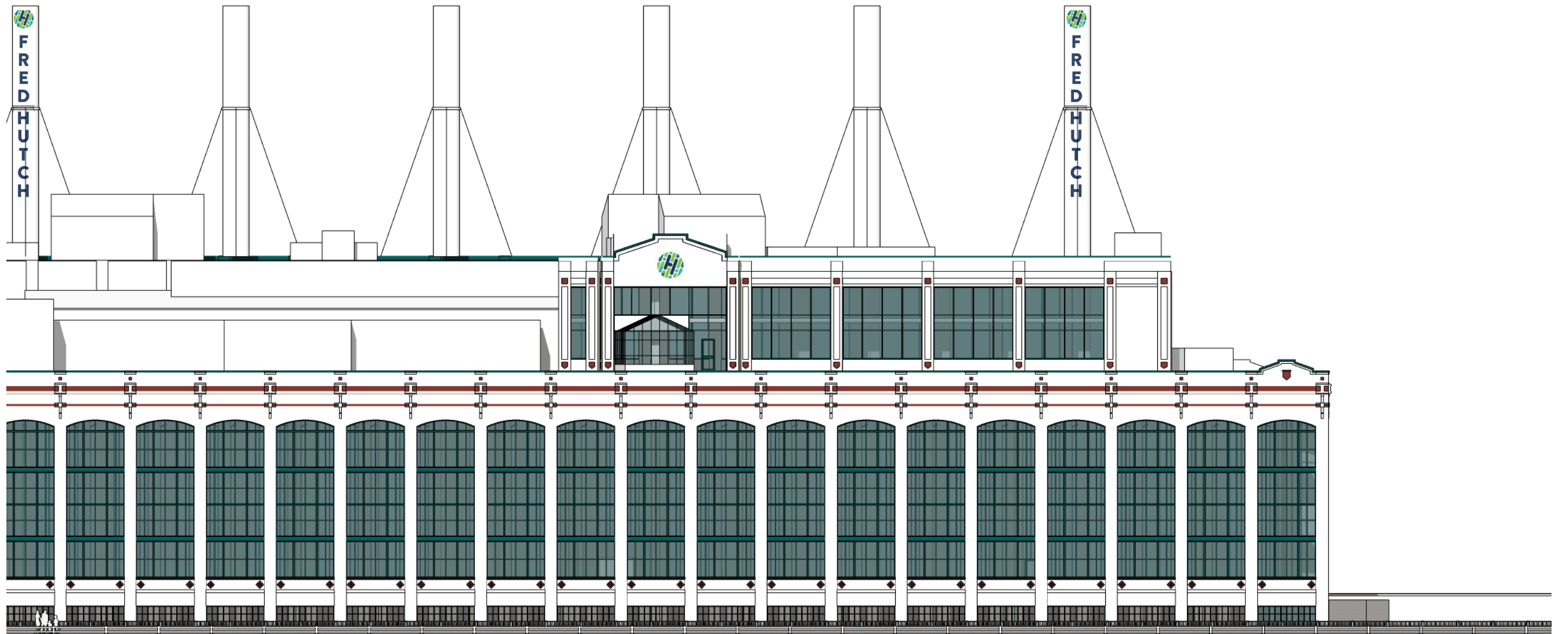
NORTH ELEVATION

Elevations



Full West Elevation

Not to scale



Project Study

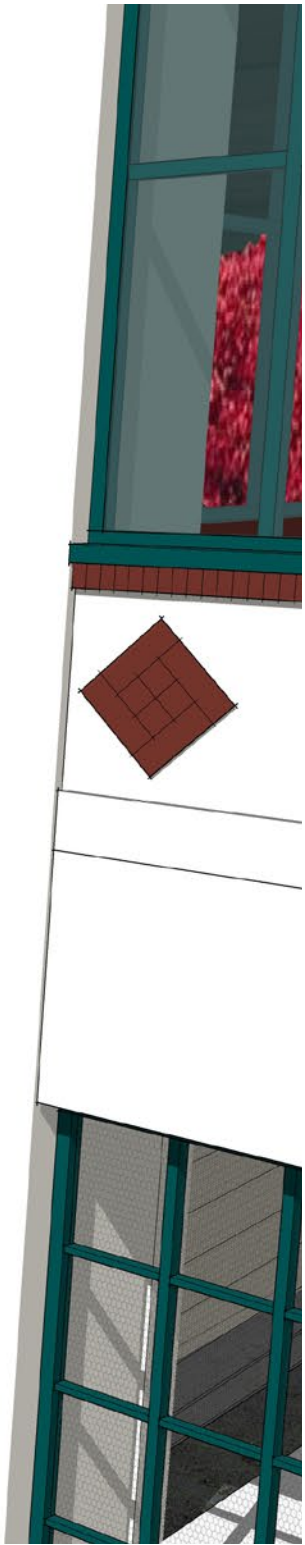


North Study View

Not to scale

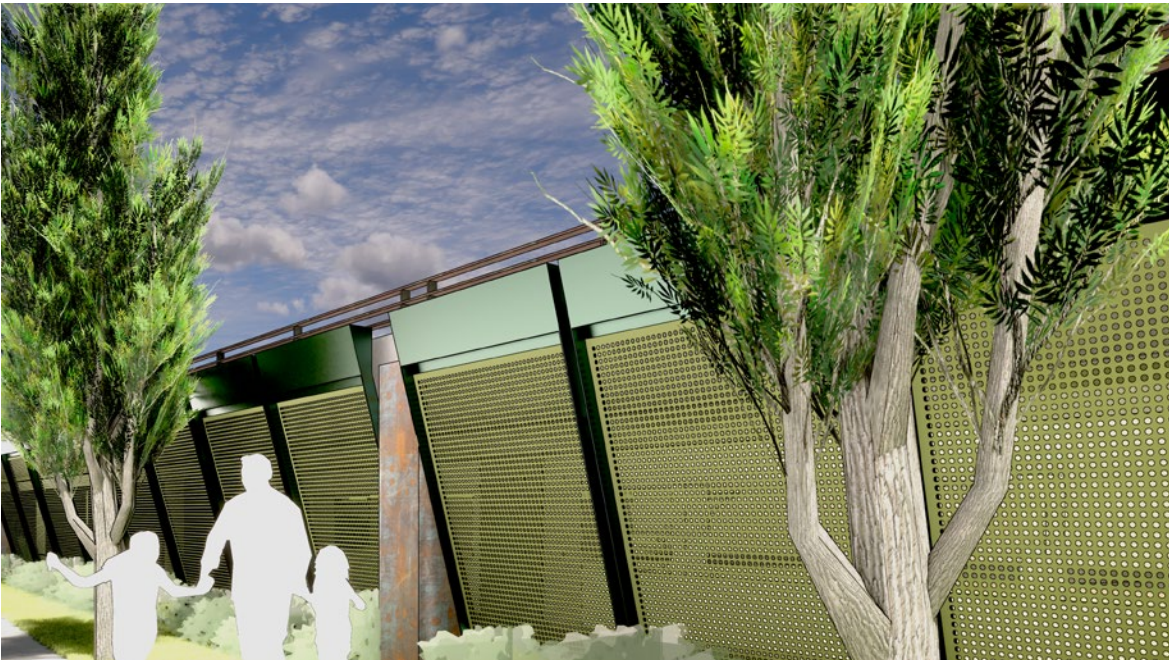
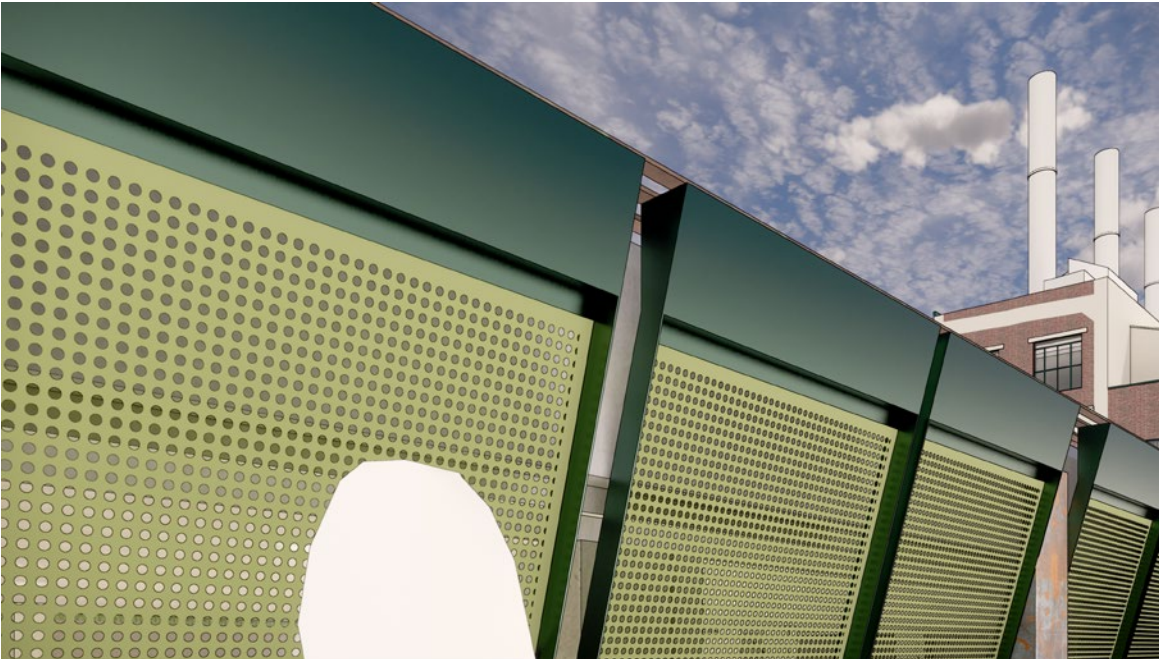


SW Study View
Not to scale



Design Detail

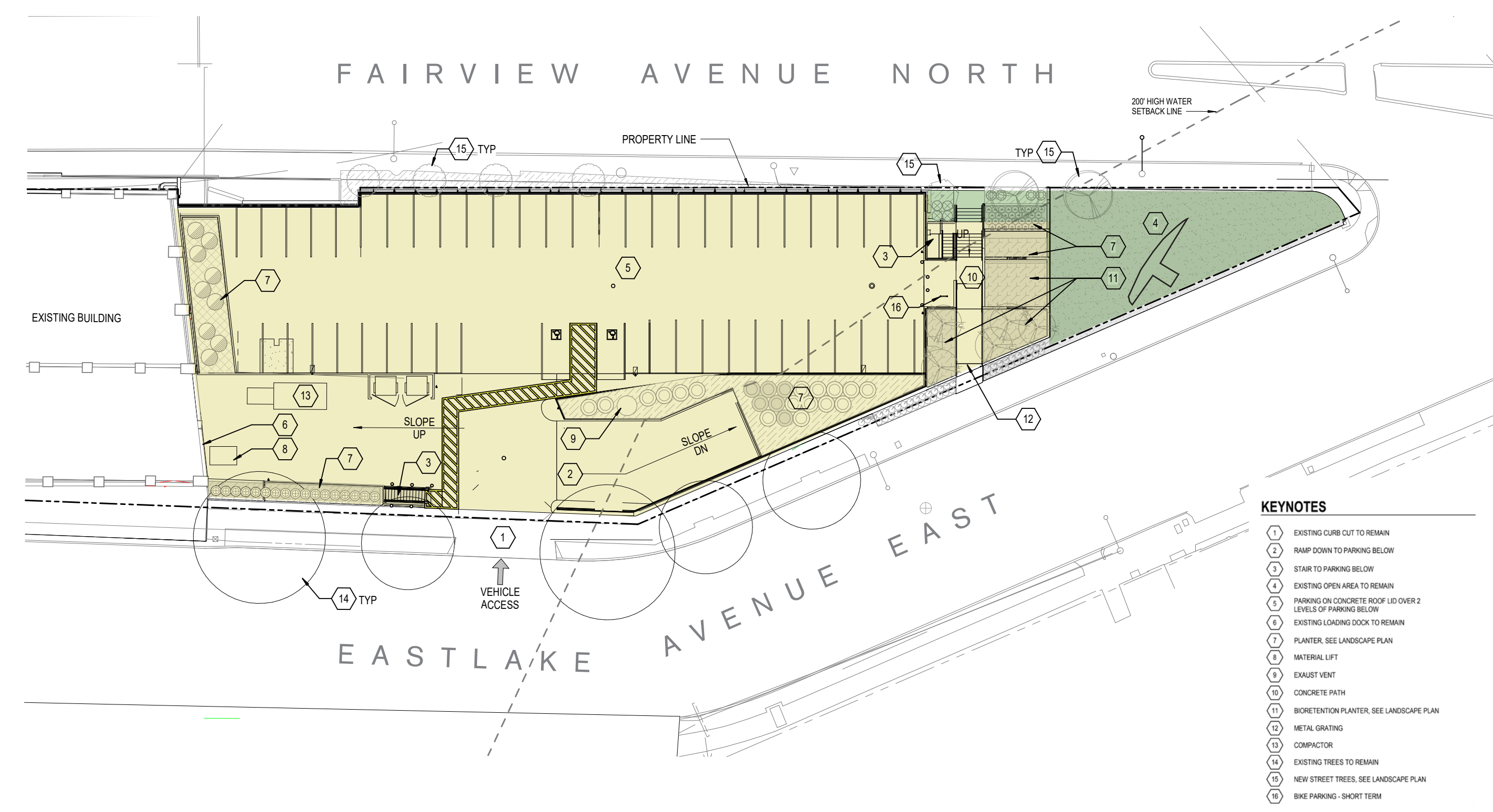
Sidewalk context/views

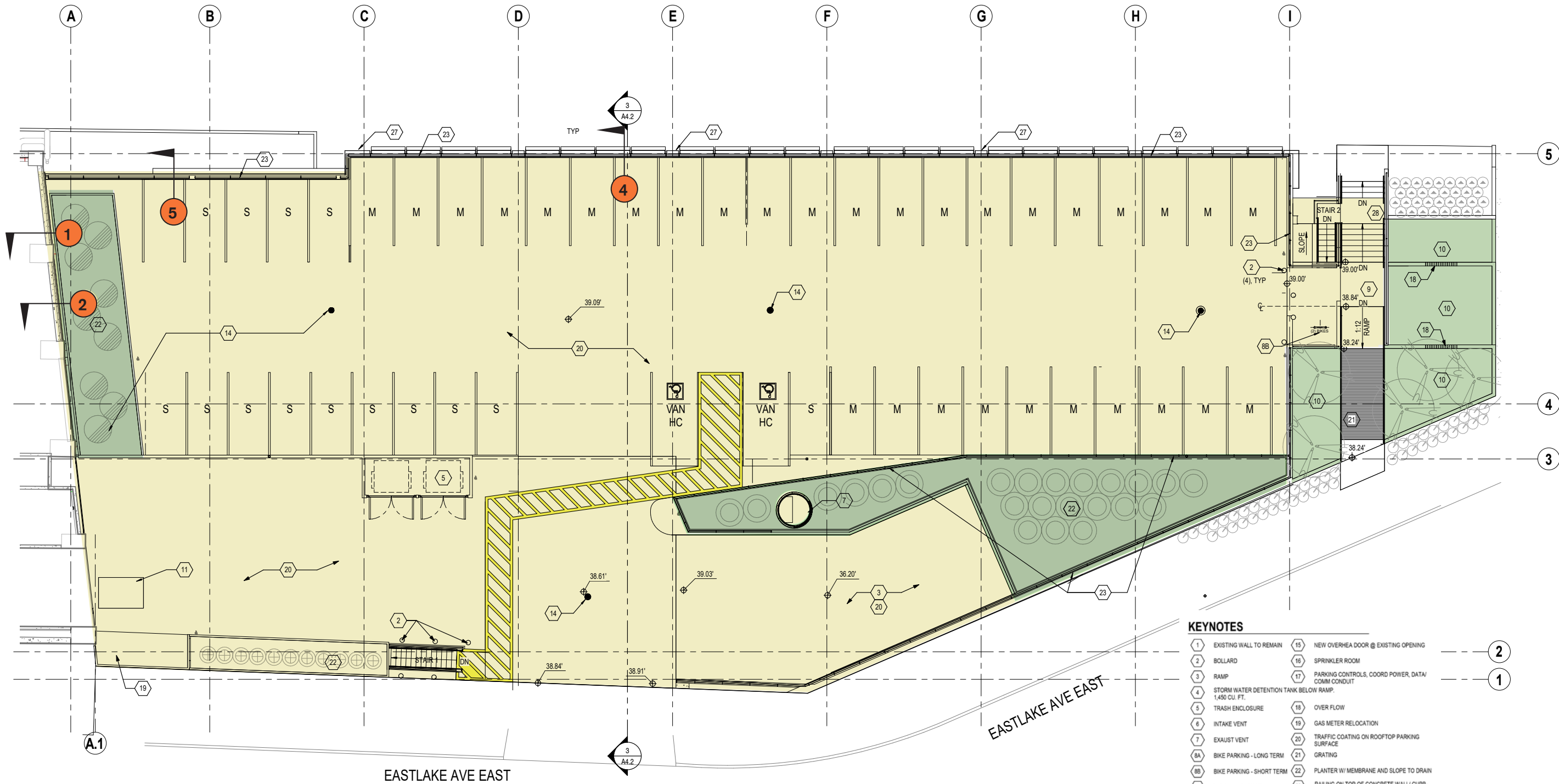


Views of Roof Parking from Fairview sidewalk

*View from eye-level/ approx 5'8" above sidewalk

Overall Site Plan





Roof Parking Plan

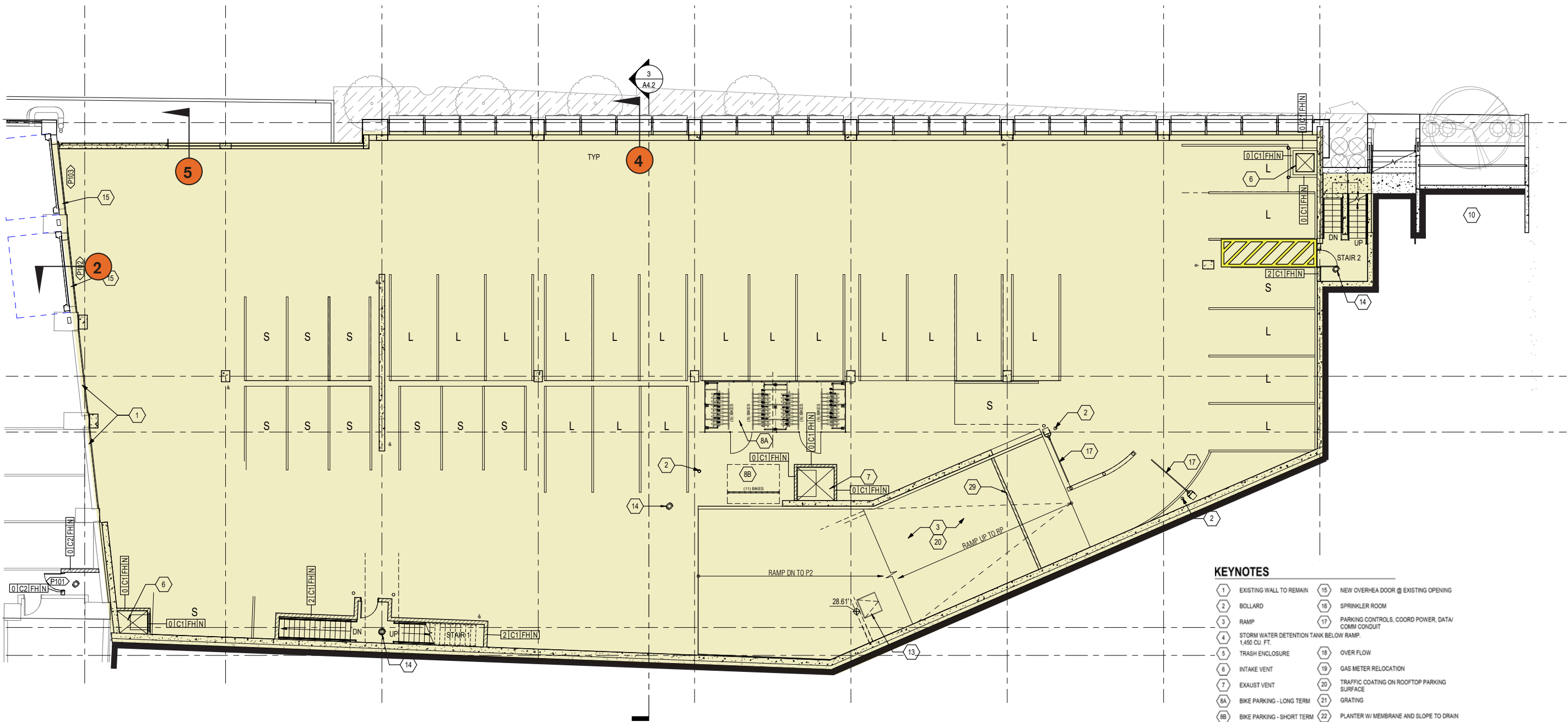
Not to scale

 **Detail sections:** see pages 21-24

KEYNOTES

1	EXISTING WALL TO REMAIN	15	NEW OVERHEA DOOR @ EXISTING OPENING	— — — 2
2	BOLLARD	16	SPRINKLER ROOM	
3	RAMP	17	PARKING CONTROLS, COORD POWER, DATA/ COMM CONDUIT	— — — 1
4	STORM WATER DETENTION TANK BELOW RAMP. 1,450 CU. FT.			
5	TRASH ENCLOSURE	18	OVER FLOW	
6	INTAKE VENT	19	GAS METER RELOCATION	
7	EXHAUST VENT	20	TRAFFIC COATING ON ROOFTOP PARKING SURFACE	
8A	BIKE PARKING - LONG TERM	21	GRATING	
8B	BIKE PARKING - SHORT TERM	22	PLANTER W/ MEMBRANE AND SLOPE TO DRAIN	
9	CONCRETE WALKWAY	23	RAILING ON TOP OF CONCRETE WALL/ CURB- SEE DETAIL ON SHEET A4.3	
10	BIORETENTION PLANTER	27	SCUPPER OVERFLOW LOCATION	
11	MATERIAL LIFT	28	SEE LANDSCAPE DRAWINGS FOR STAIR DETAIL	
12	SUMP & PUMP ROOM	29	TRENCH DRAIN, SEE PLUMBING	
13	SUMP PIT ACCESS HATCH	30	6" CONC CURB	
14	FLOOR/ ROOF DRAIN	31	GARAGE LIGHT POLES, SEE ELECTRICAL	

Plans

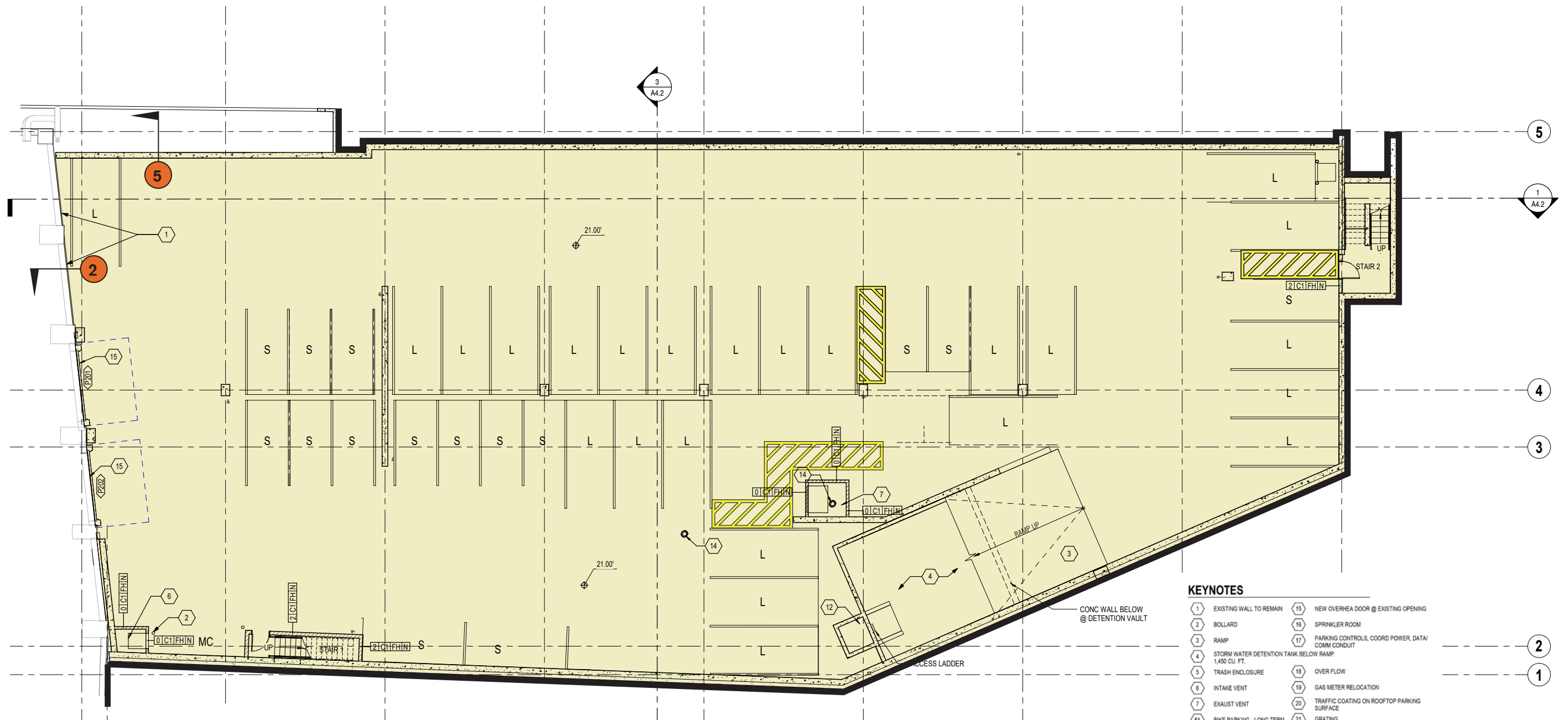


P1 Plan
Not to scale

 **Detail sections:** see pages 21-24

KEYNOTES	
1 EXISTING WALL TO REMAIN	15 NEW OVERHEAD DOOR @ EXISTING OPENING
2 BOLLARD	16 SPRINKLER ROOM
3 RAMP	17 PARKING CONTROLS, COORD POWER, DATA/ COMM CONDUIT
4 STORM WATER DETENTION TANK BELOW RAMP, 1,450 CU. FT.	18 OVER FLOW
5 TRASH ENCLOSURE	19 GAS METER RELOCATION
6 INTAKE VENT	20 TRAFFIC COATING ON ROOFTOP PARKING SURFACE
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9 CONCRETE WALKWAY	24 SCUPPER OVERFLOW LOCATION
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12 SUMP & PUMP ROOM	27 6" CONC CURB
13 SUMP PIT ACCESS HATCH	28 GARAGE LIGHT POLES, SEE ELECTRICAL
14 FLOOR/ ROOF DRAIN	

Plans

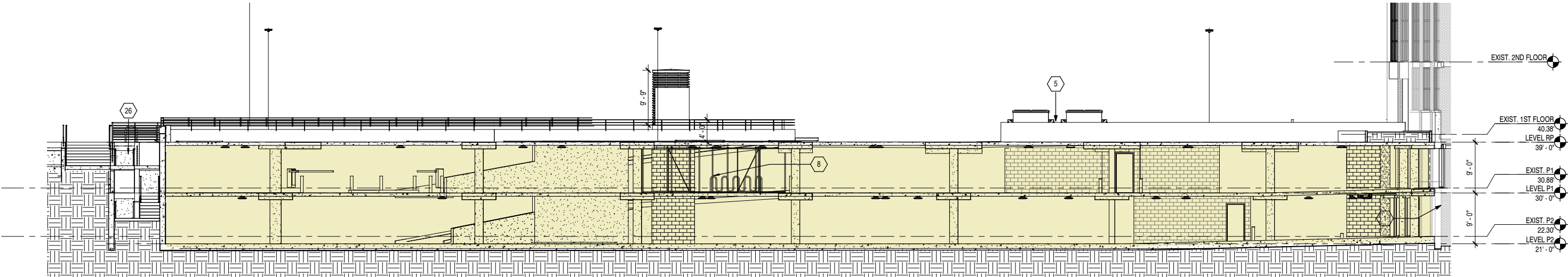


P2 Plan

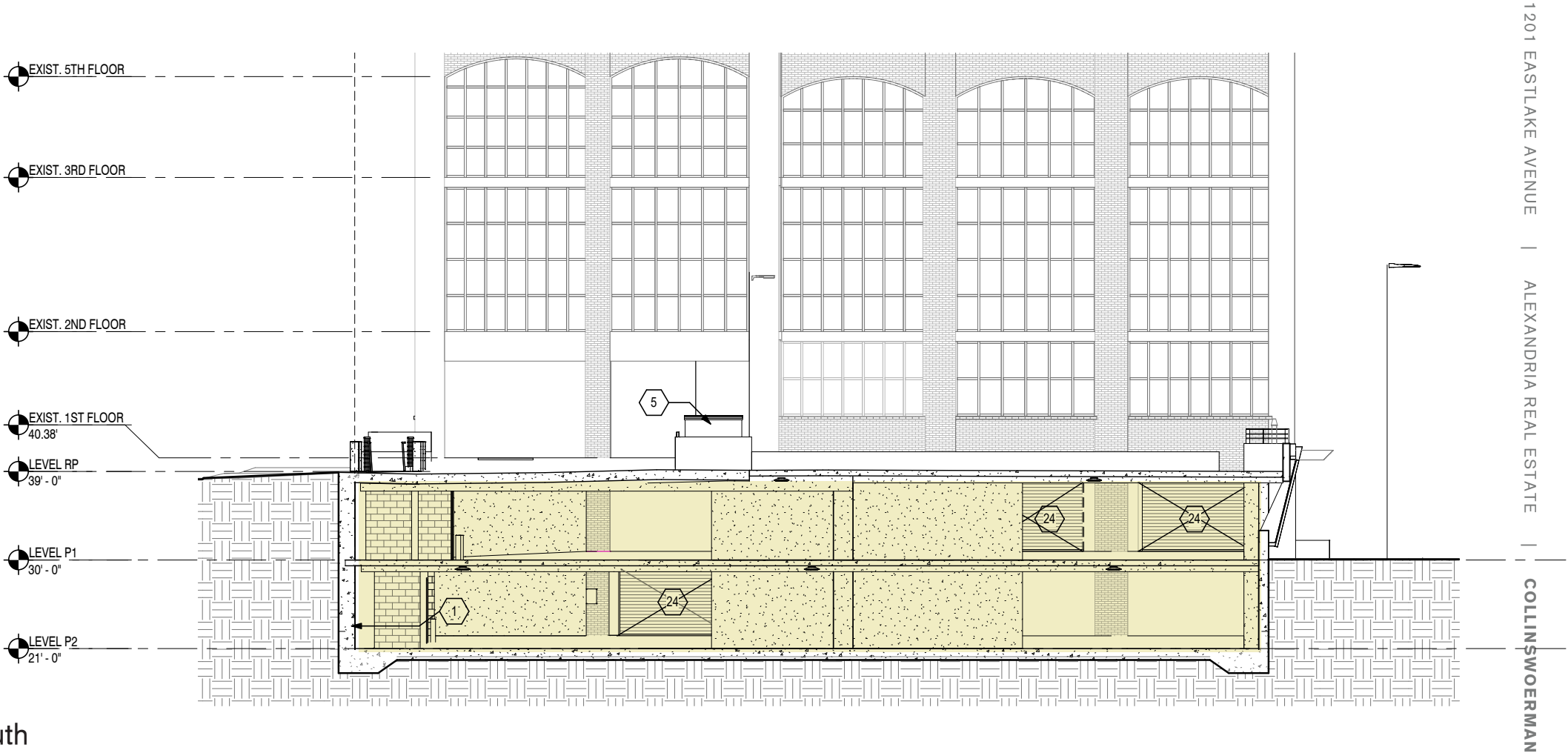
Not to scale

 **Detail sections:** see pages 21-24

Sections



N/S Section looking East

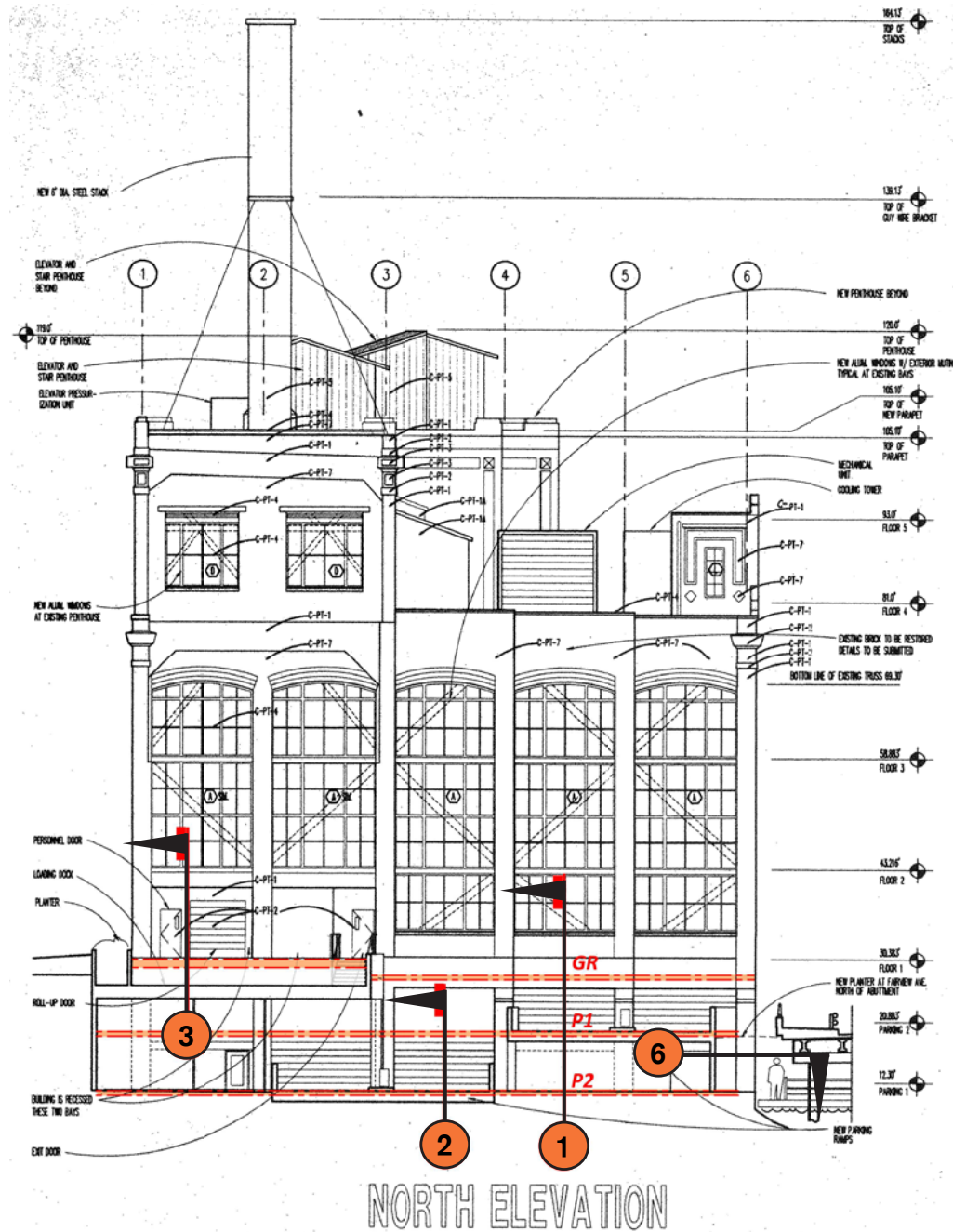


Sections

Not to scale

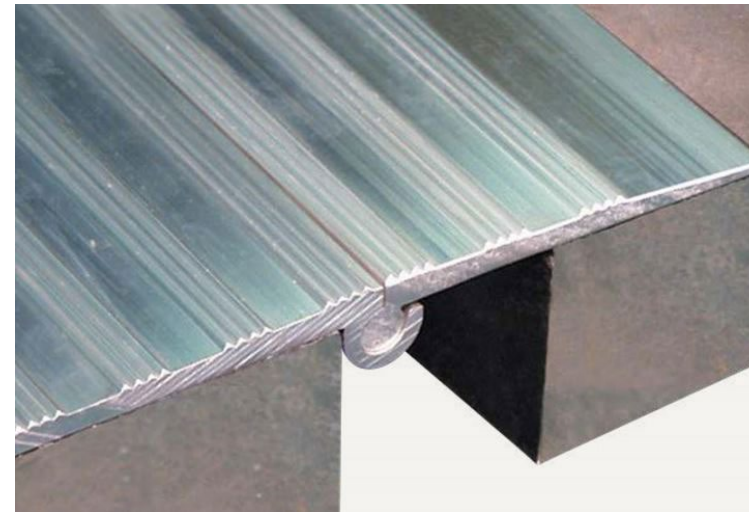
E/W Section looking South

Connection Details at Steam Plant



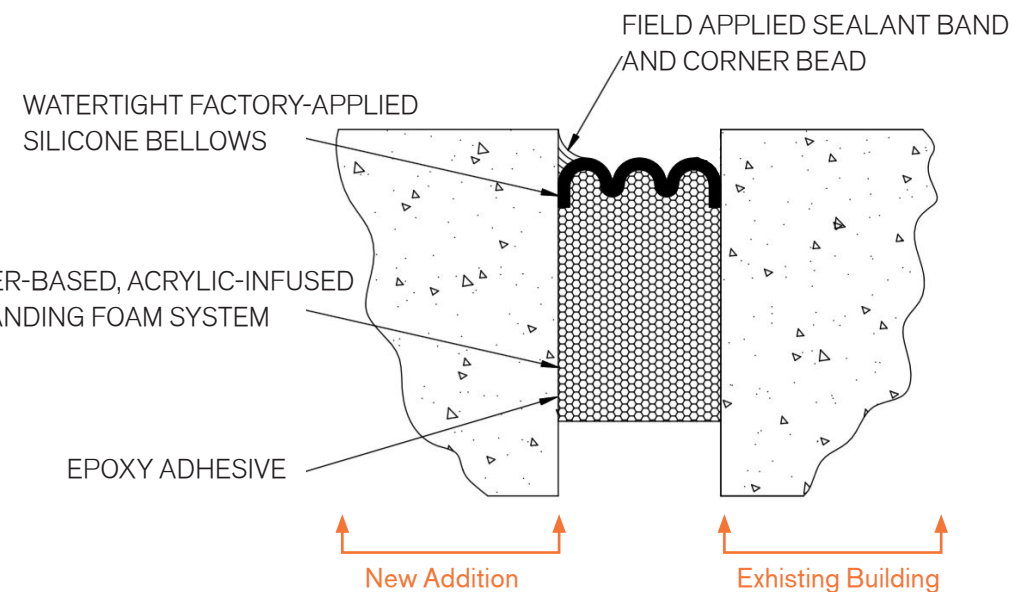
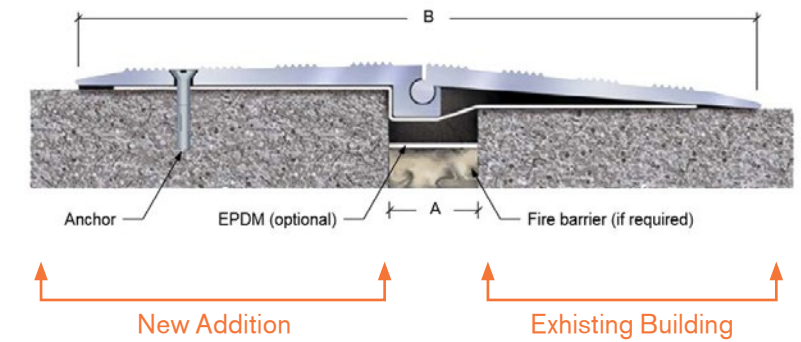
Detail Sections: Connection to Steam Plant

Not to scale

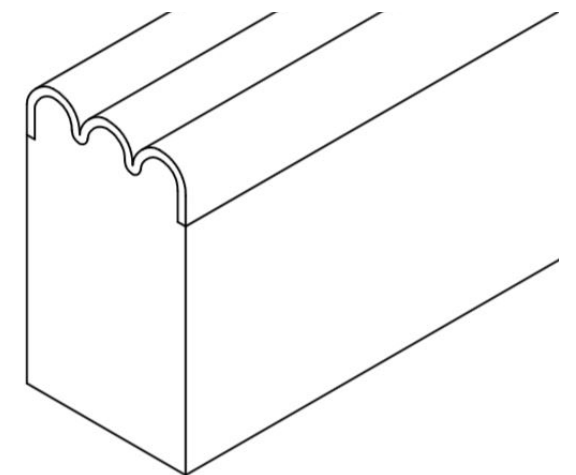


Expansion Joint Hinged System Details

Material: 6063-T6 Aluminum
 Finish: Mill
 Movement: Thermal- Horizontal and Vertical
 Mounting: Surface
 Joint Size: 2 inches to 6 inches

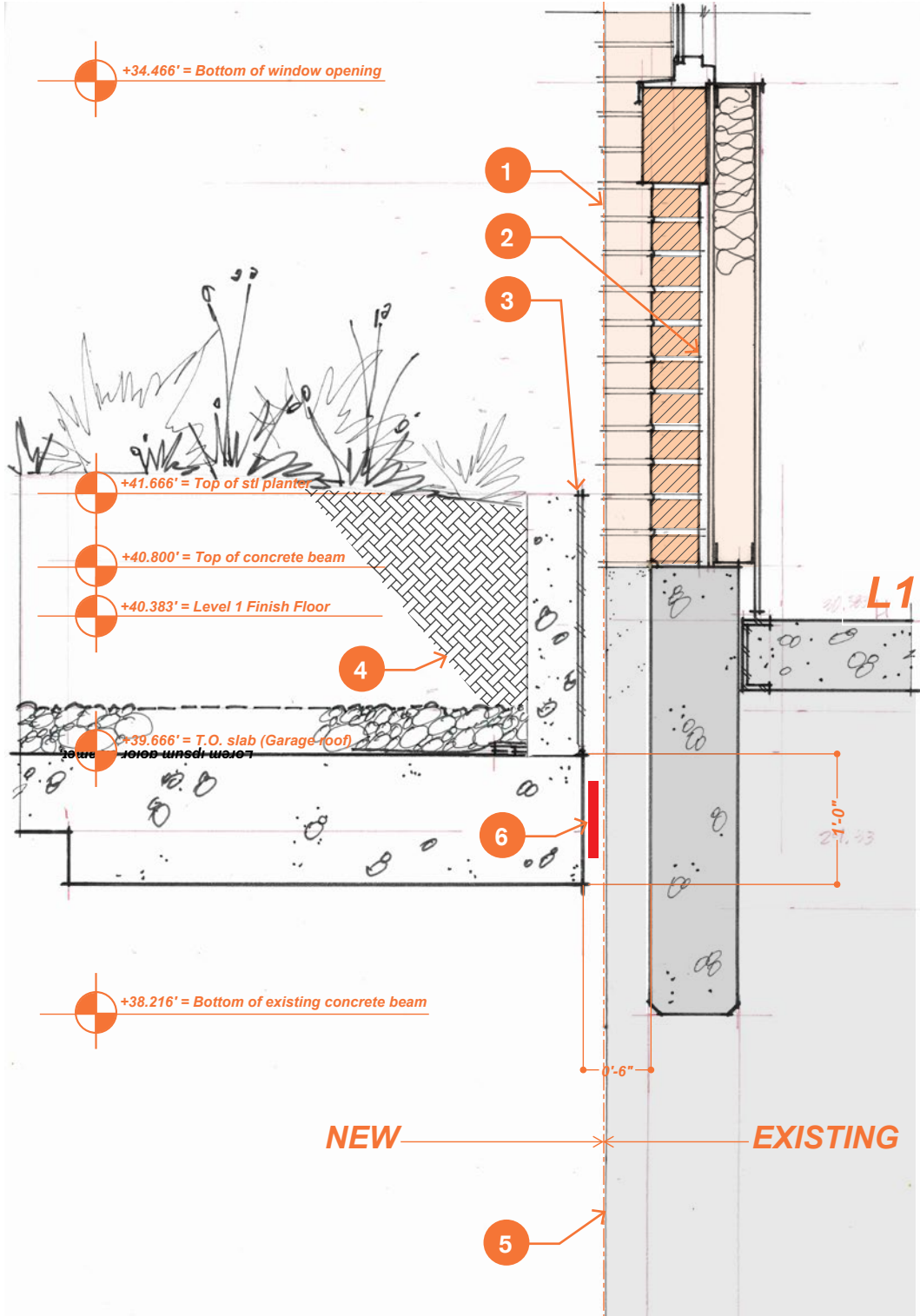


Floor to Floor Connection



Detail Sections

- 1 Orthogonal brick pier beyond (4.25" projection)
- 2 Existing wall assembly to remain - no change
- 3 Concrete planter
- 4 Landscape, soil, fabric filter and crushed stone
- 5 Orthogonal concrete pier beyond (4.25" projection)
- 6 Expansion joint

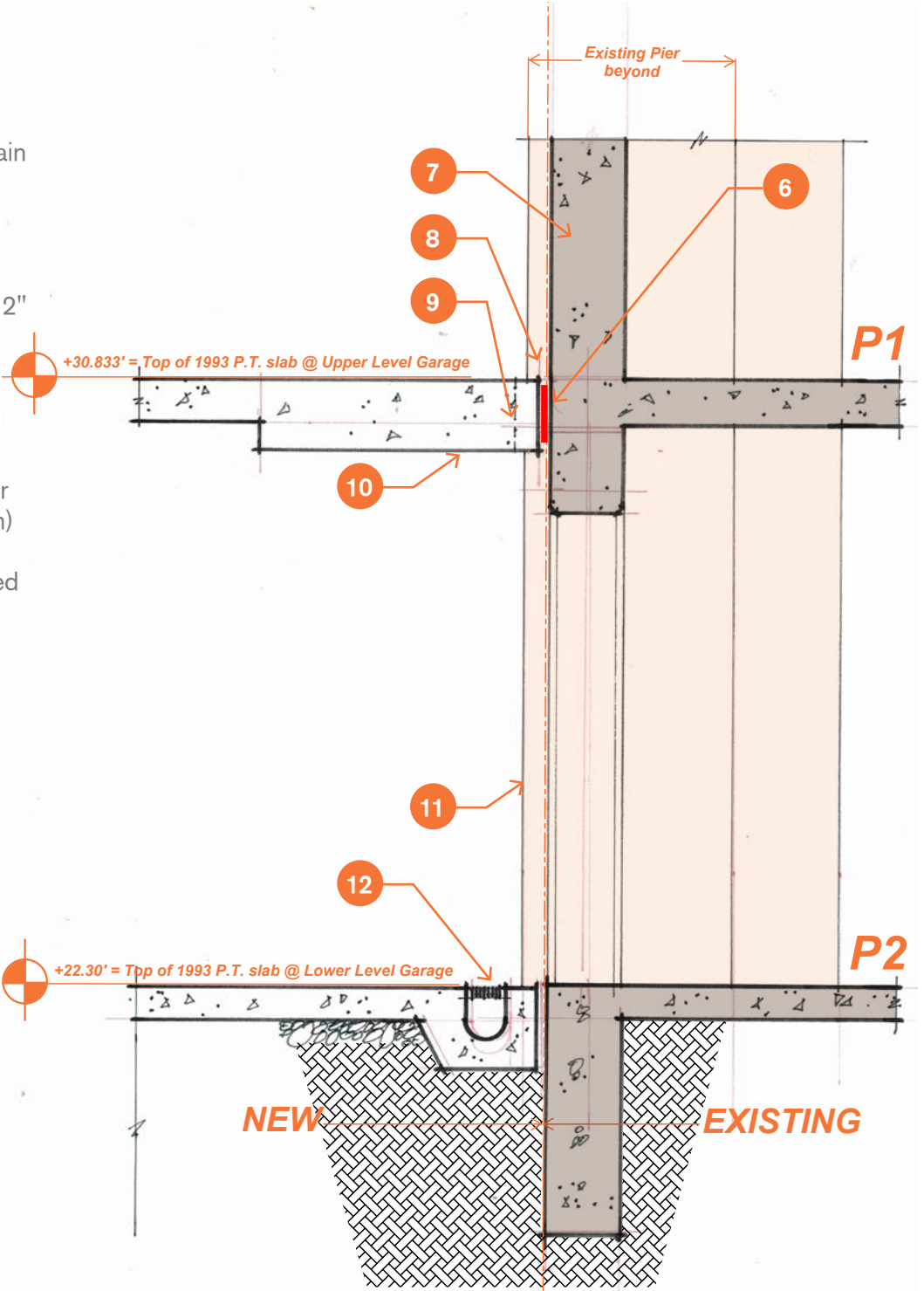


Section 01

Section 01 looking East at North Facade

1 - 1/2" = 1' when printed at 100%

- 7 Existing 12" concrete shearwall [1993] to remain
- 8 2" seismic joint w/compressible filler
- 9 New slab to be notched 2" at existing pier beyond
- 10 New 7" concrete slab with 5" drop at edge
- 11 Orthogonal concrete pier beyond (4.25" projection)
- 12 Trench drain in new keyed concrete slab



Section 02

Section 02 looking East at North Facade

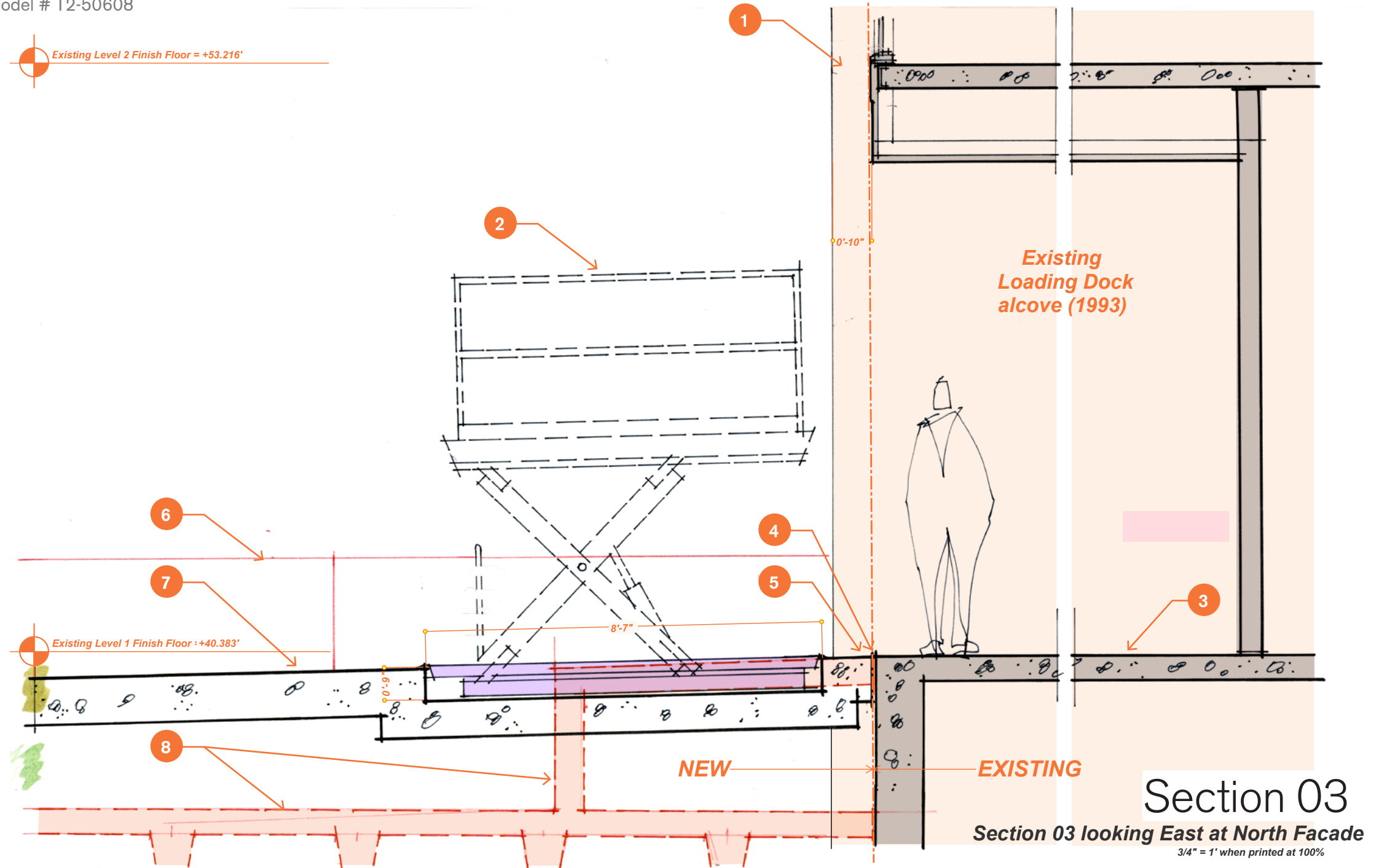
3/4" = 1' when printed at 100%

Details

Not to scale

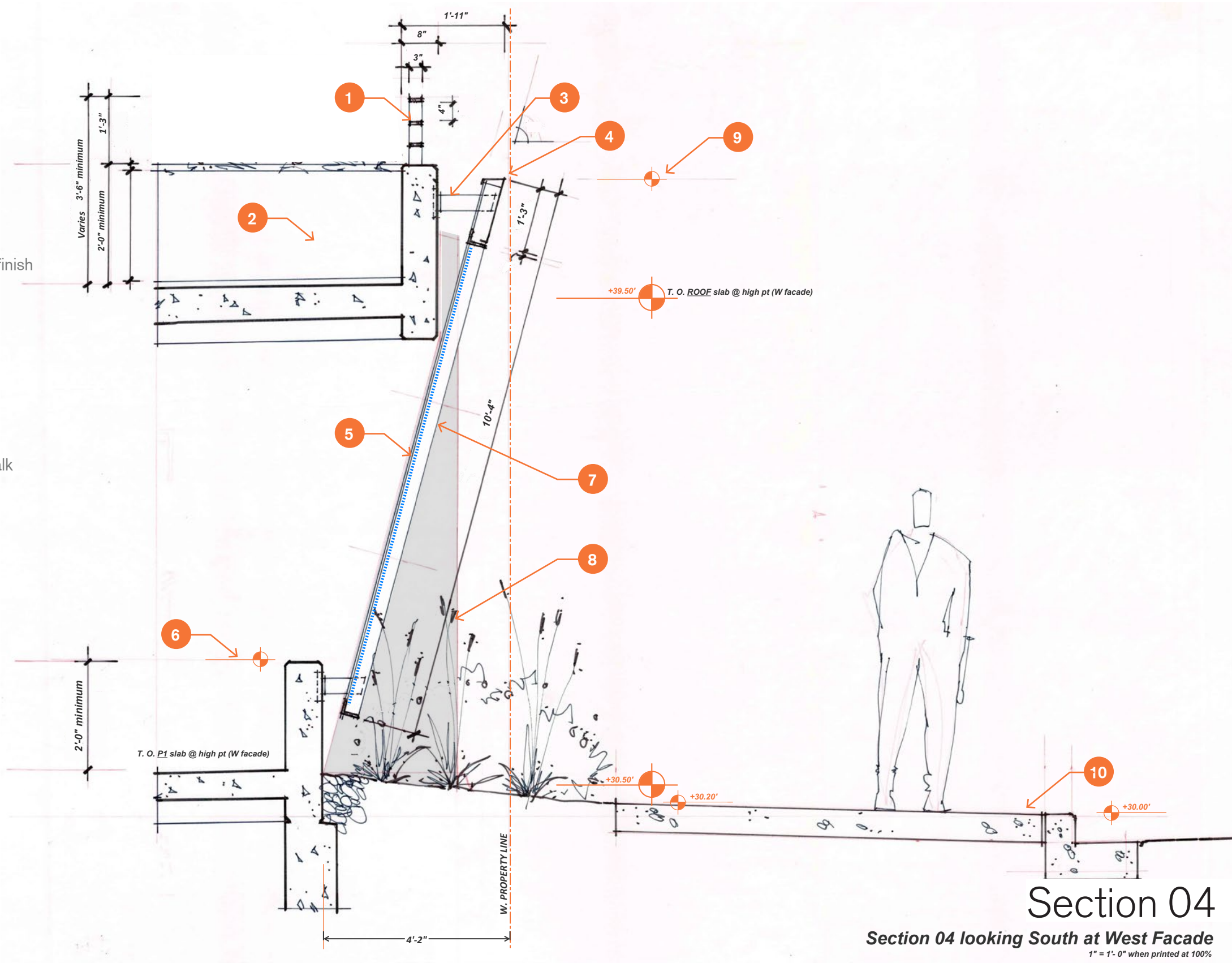
Detail Sections

- 1 Face of existing concrete orthogonal pier beyond
- 2 New 5,000lb capacity Recessed Dock Lift (shown dashed in maximum open position). Mfr: Advance Lifts Model # T2-50608
- 3 Existing Building to remain -- no changes
- 4 2" hinged expansion joint
- 5 Saw-cut 1993 slab
- 6 New concrete wall at west side of planter beyond
- 7 New 12" concrete slab (Garage roof) sloped at x/1'
- 8 Removed 1993 concrete slab and loading dock



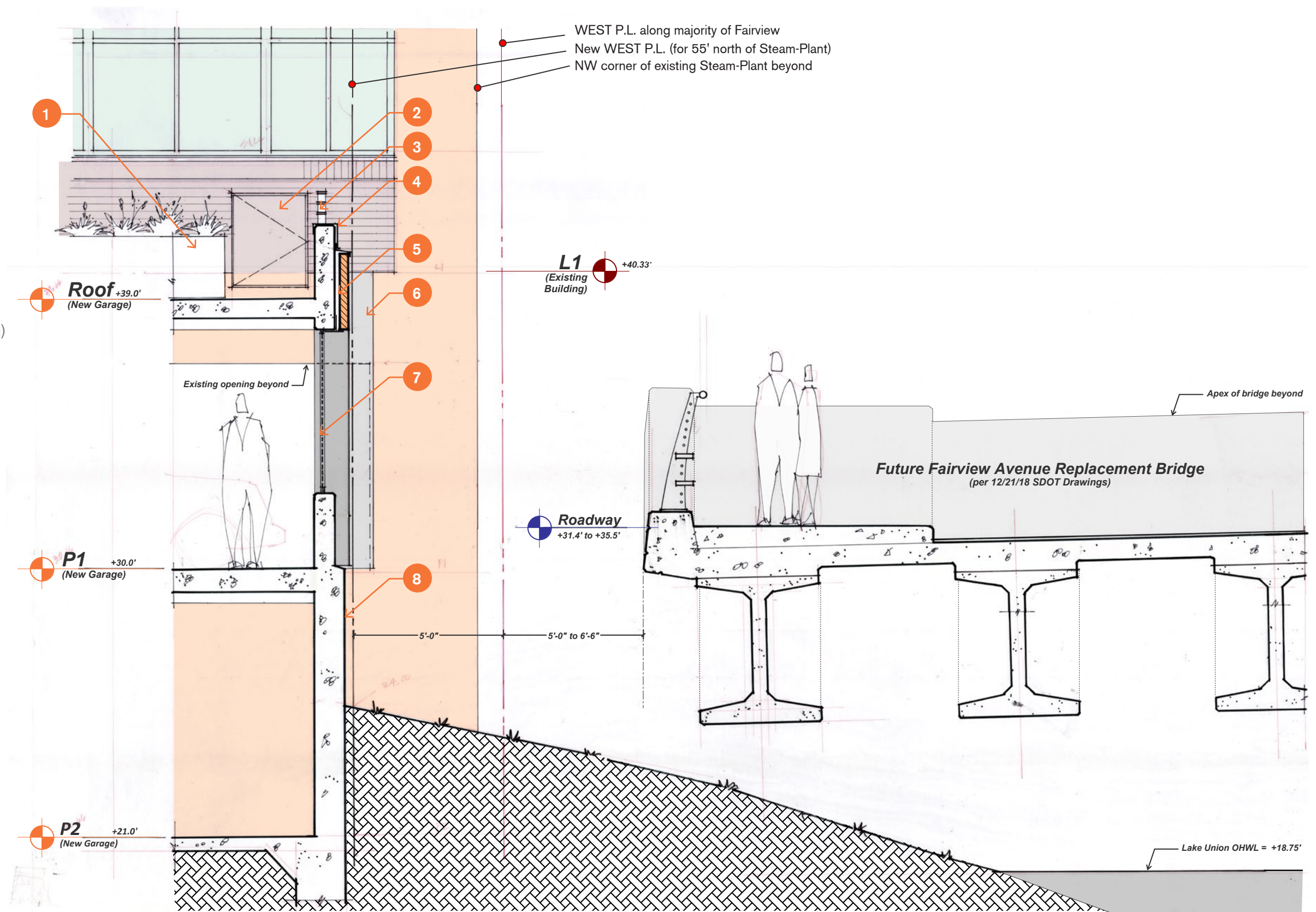
Detail Sections

- 1 3/8" flat bar rail
- 2 Concrete vehicle restraining upturn wall beyond
- 3 3/8" stl plate bracket beyond
- 4 14 gauge brake-metal trim
- 5 12 gauge laser cut stl panel w/ powder coat paint finish
- 6 Top of wall constant elev (level)
- 7 3/8" stl plate frame beyond
- 8 1/4" stl plate "pilaster" beyond
- 9 Top of wall constant elev (level)
- 10 Existing or SDOT replaced 8' wide Fairview sidewalk



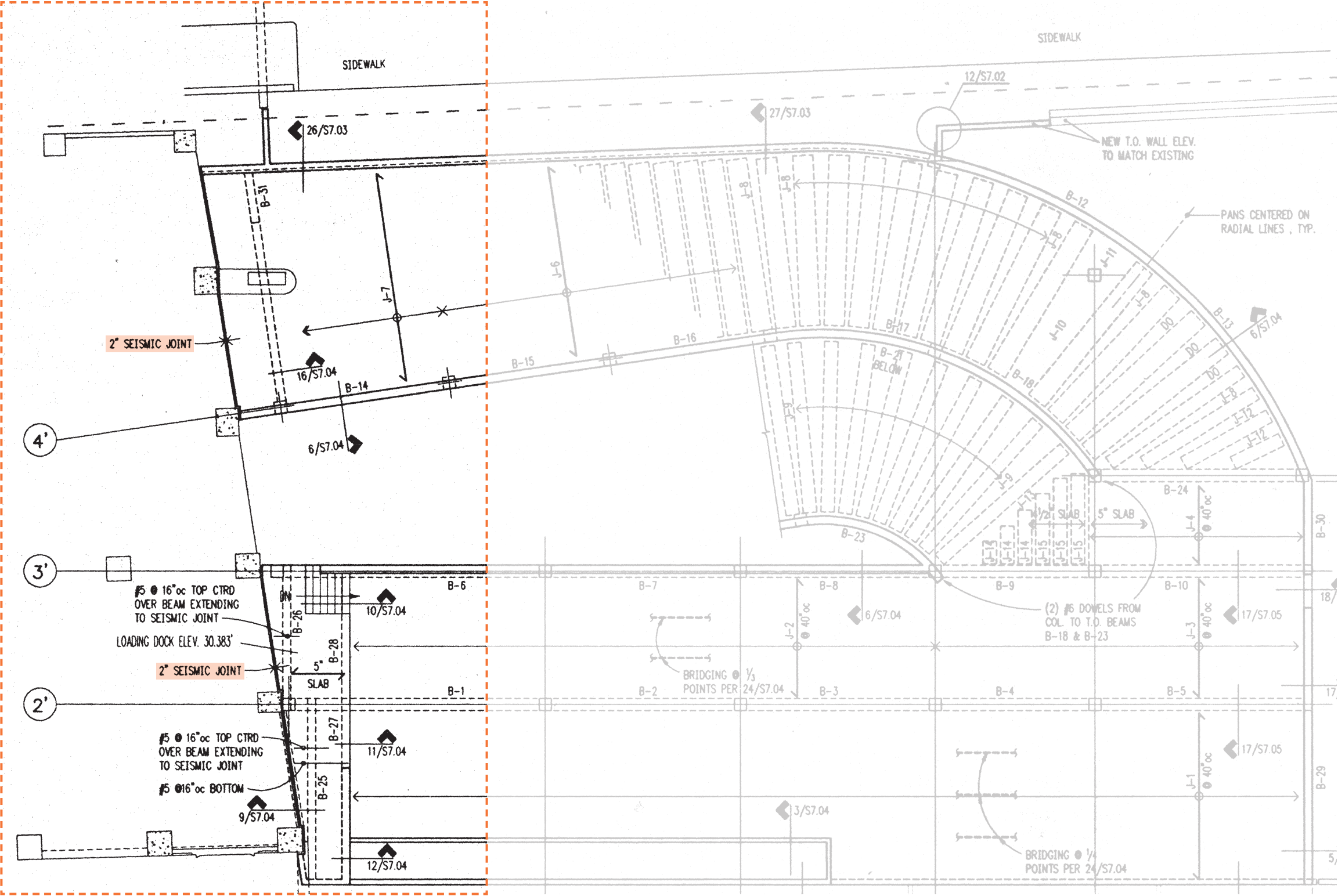
Detail Sections

- 1 New Planter beyond
- 2 Steel maintenance gate
- 3 Metal rail
- 4 Metal cap
- 5 Brick veneer
- 6 Steel plate enclosure at opening beyond (no attachment to existing)
- 7 Metal security screen, Type 2
- 8 Concrete foundation wall

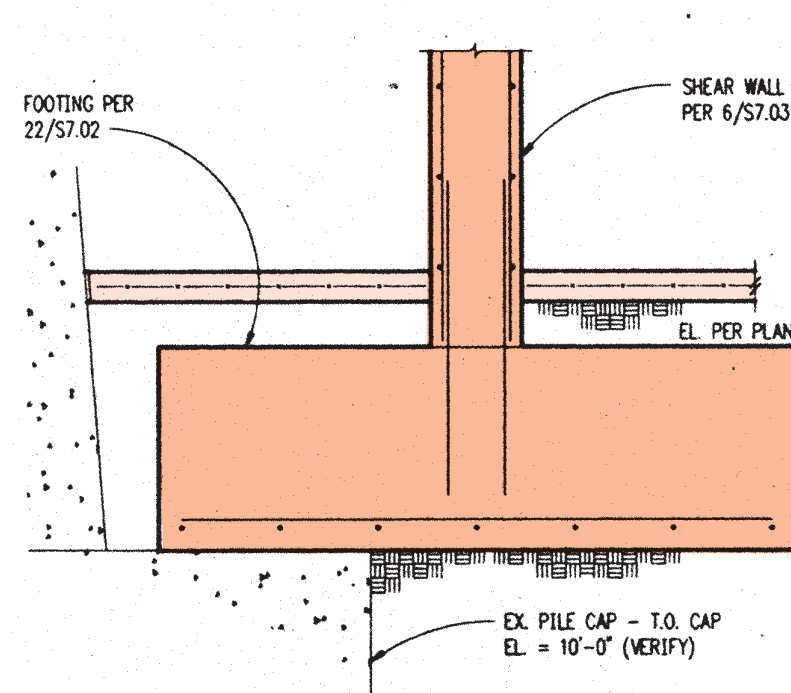


Section 05 Section 05 looking South at West Facade
3/4" = 1' when printed at 100%

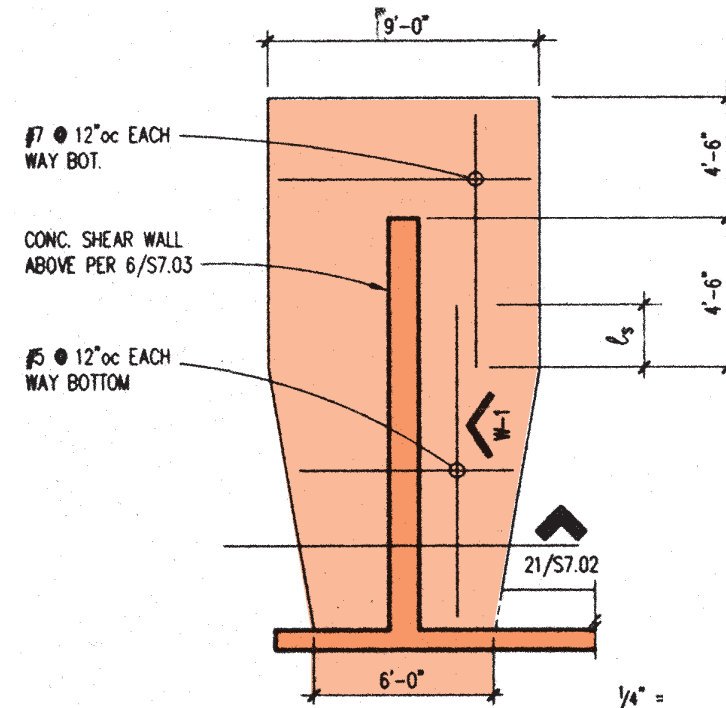
Existing Upper Ramp Framing Plan



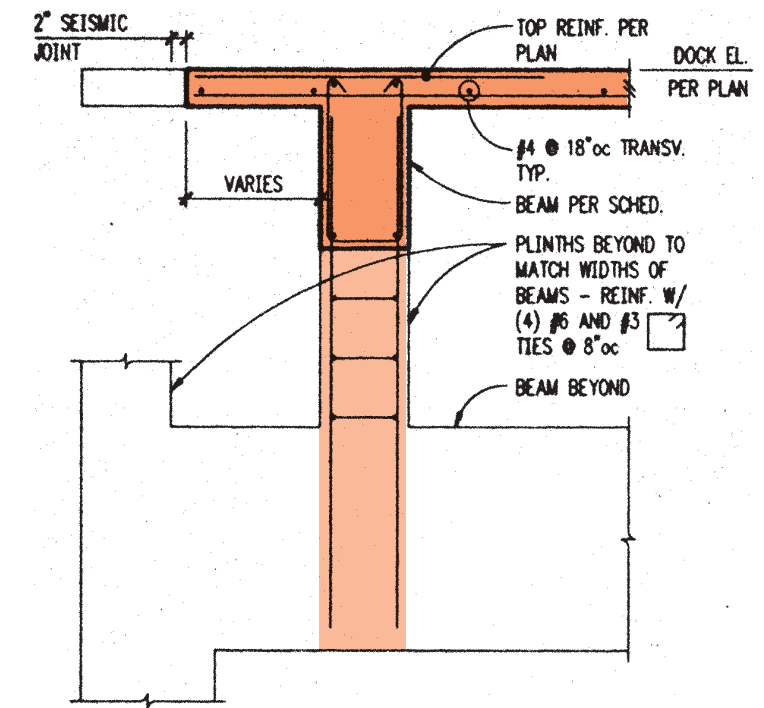
Existing Section and Plan Details



SHEARWALL FOOTING
Section Detail



SHEARWALL FOOTING
Plan Detail



SHEARWALL & LOADING BAY
Section Detail

Design Details

- 1

Concrete pier at existing building corner
- 2

Generator exhaust pipe (per 7.12.19 Landmarks Board approval)
- 3

Fuel tank vent pipe (per 7.12.19 Landmarks Board approval)
- 4

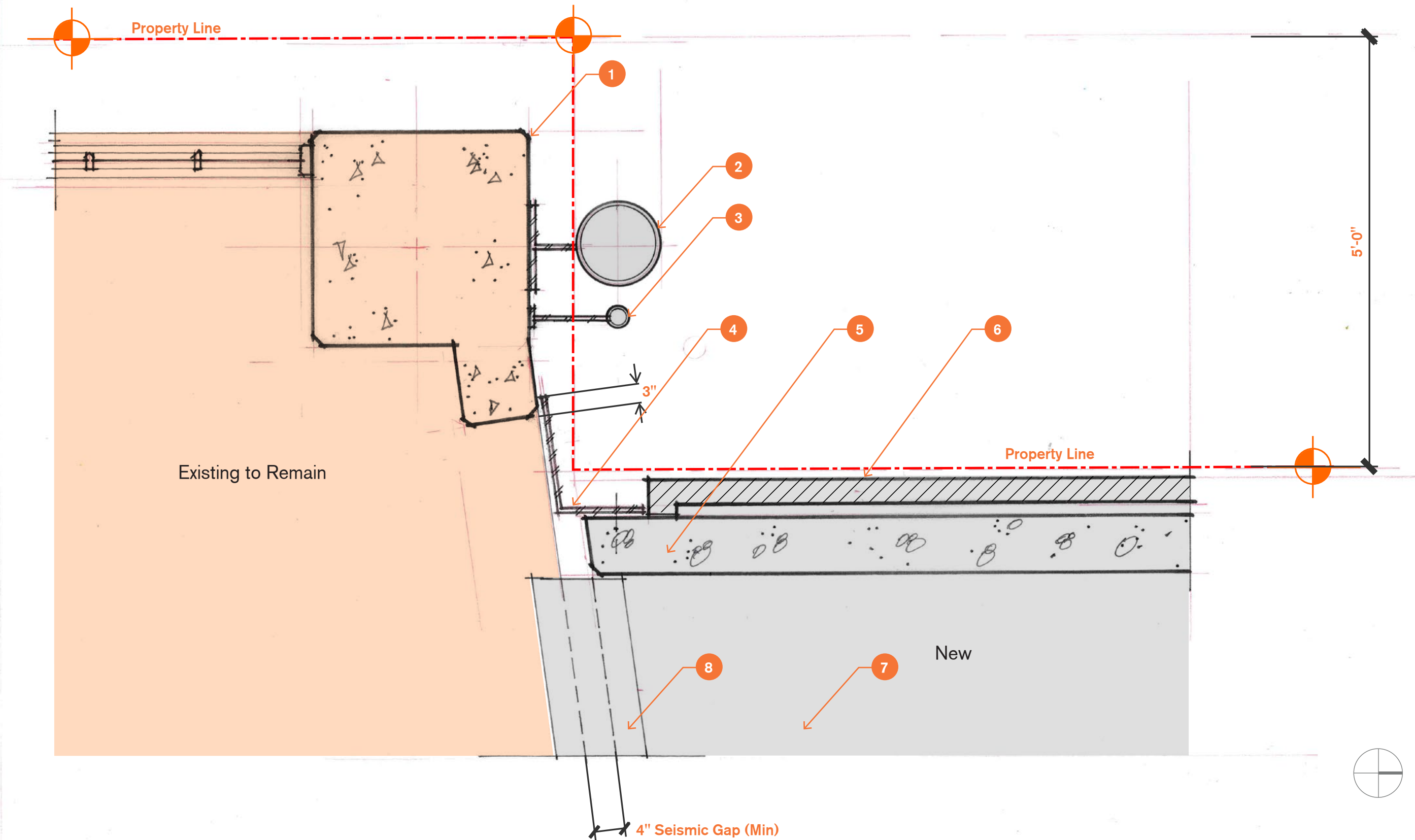
3/8" steel closure plate (attached to new construction only)
- 5

Cast-in-place concrete wall
- 6

Brick veneer
- 7

Concrete slab at L1 below
- 8

Seismic joint cover (see page 20)



Design Details



New garage at existing North West corner



North planter separation against existing building.



Approximate location of new garage West Facade

Design Details

- 1

1/4" steel plate brow at masonry opening
- 2

Expanded metal security screen (type 2), powder coat paint finish
- 3

Steel maintenance gate beyond (adjacent to planter)
- 4

Metal rail to code
- 5

Metal flasshing/ Cap
- 6

16ga steel plate enclosure at existing opening edge
- 7

Generator exhaust vent (per approved 6/19 Landmark submission)
- 8

Concrete foundation wall
- 9

Brick veneer masonry



Design Details

- 1

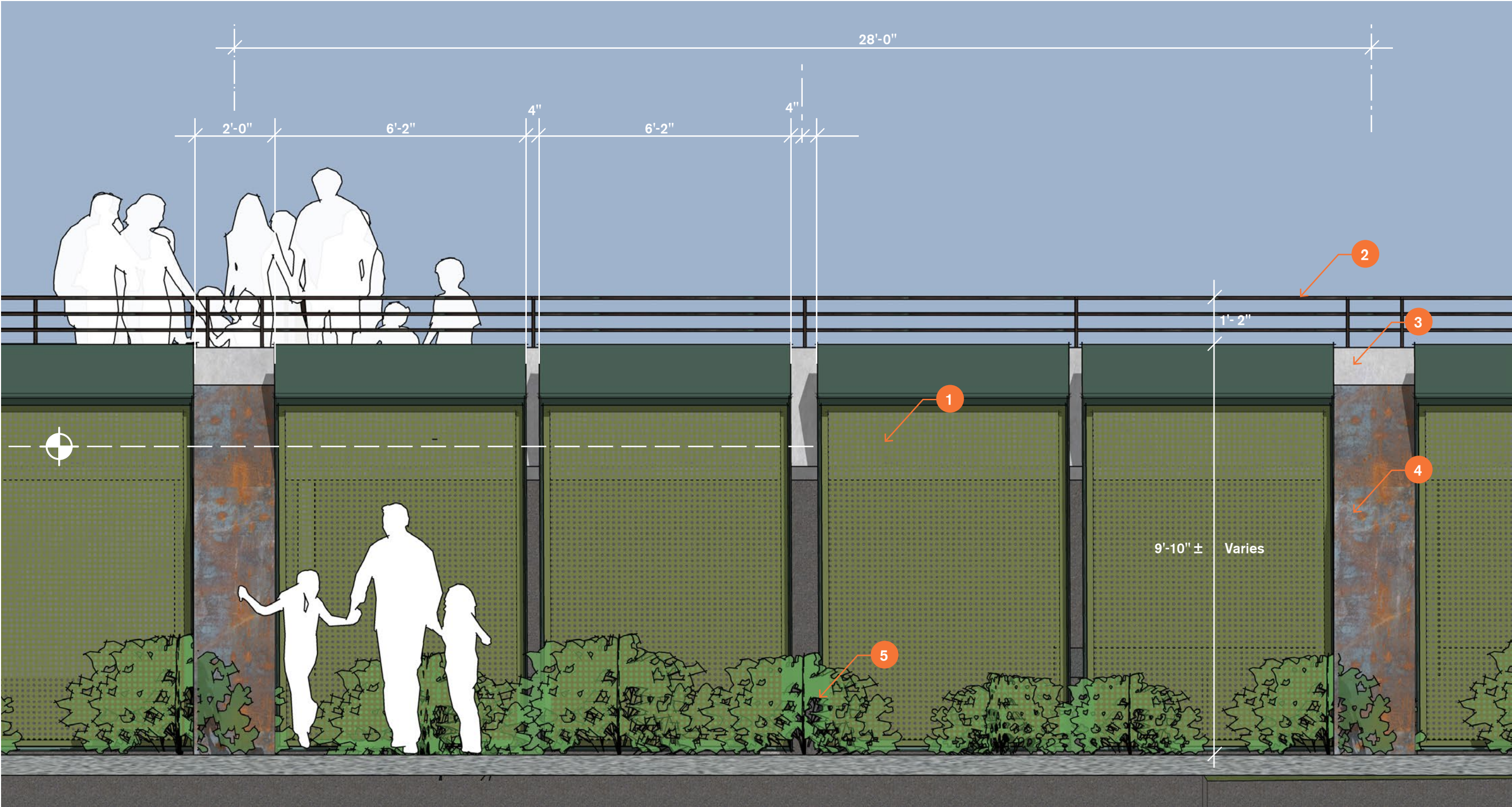
Mini-matrix pattern 16ga perforated steel panel in steel angle frame. Powder coat paint finish
- 2

Metal rail to code
- 3

Concrete vehicle restraining upturn wall beyond
- 4

Metal panel pilaster
- 5

New landscape planting from sidewalk edge to base of garage



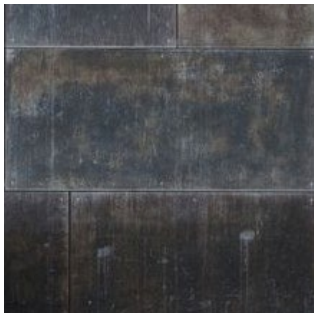
Detail at typical bay.

Materials + Color Palette

Schematic View + Material Options



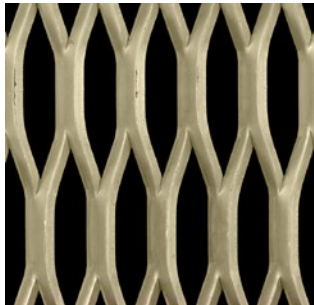
1 Brick veneer
Mutual Materials



2 Metal panel 01



3 Metal panel 02,
P1 paint



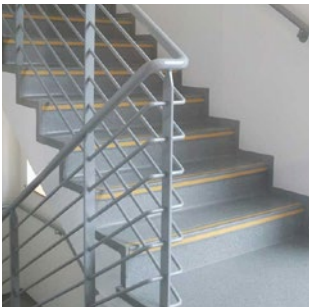
4 Expanded aluminum
security panel,
P3 paint



5 Perforated metal
panel, P2 paint



6 Steel railing 01



7 Steel railing 02



8 Steel bollards

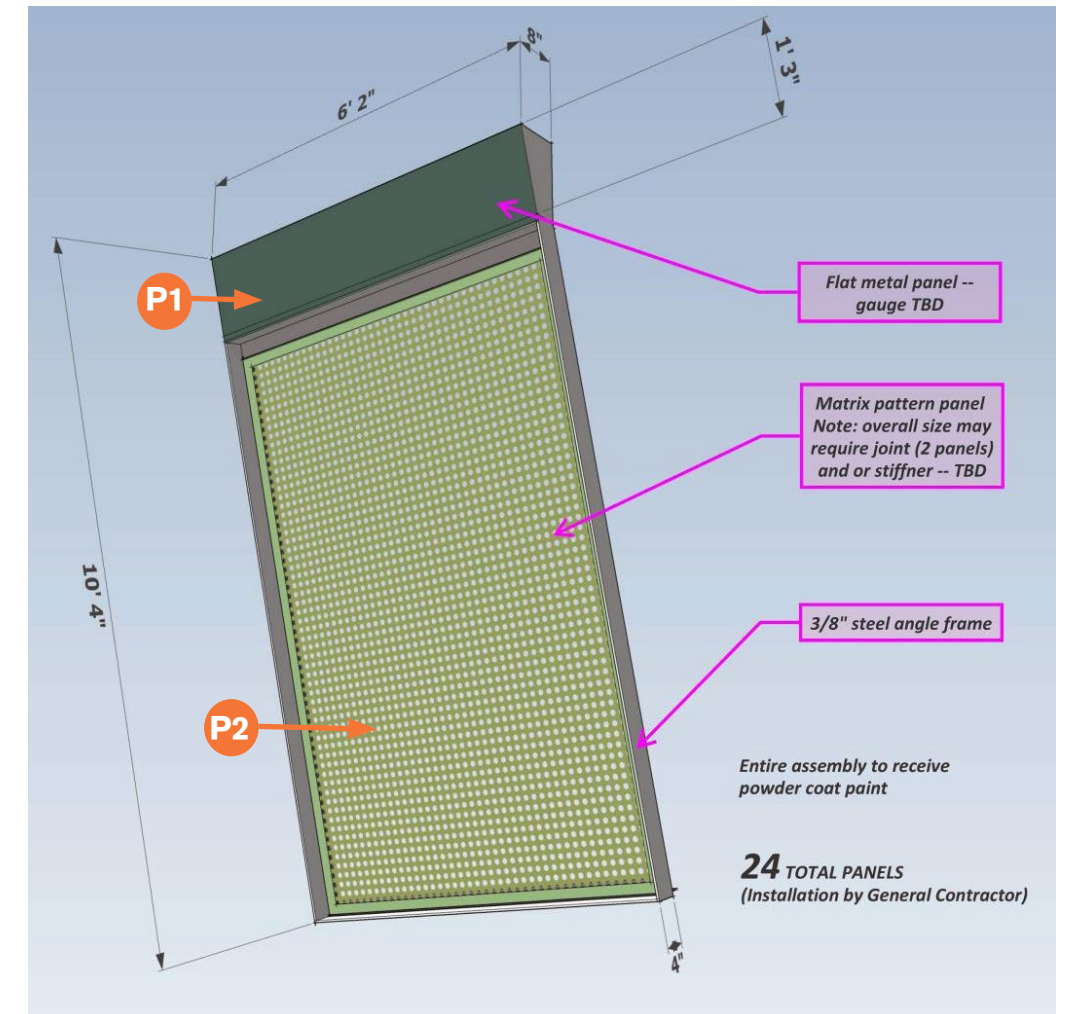
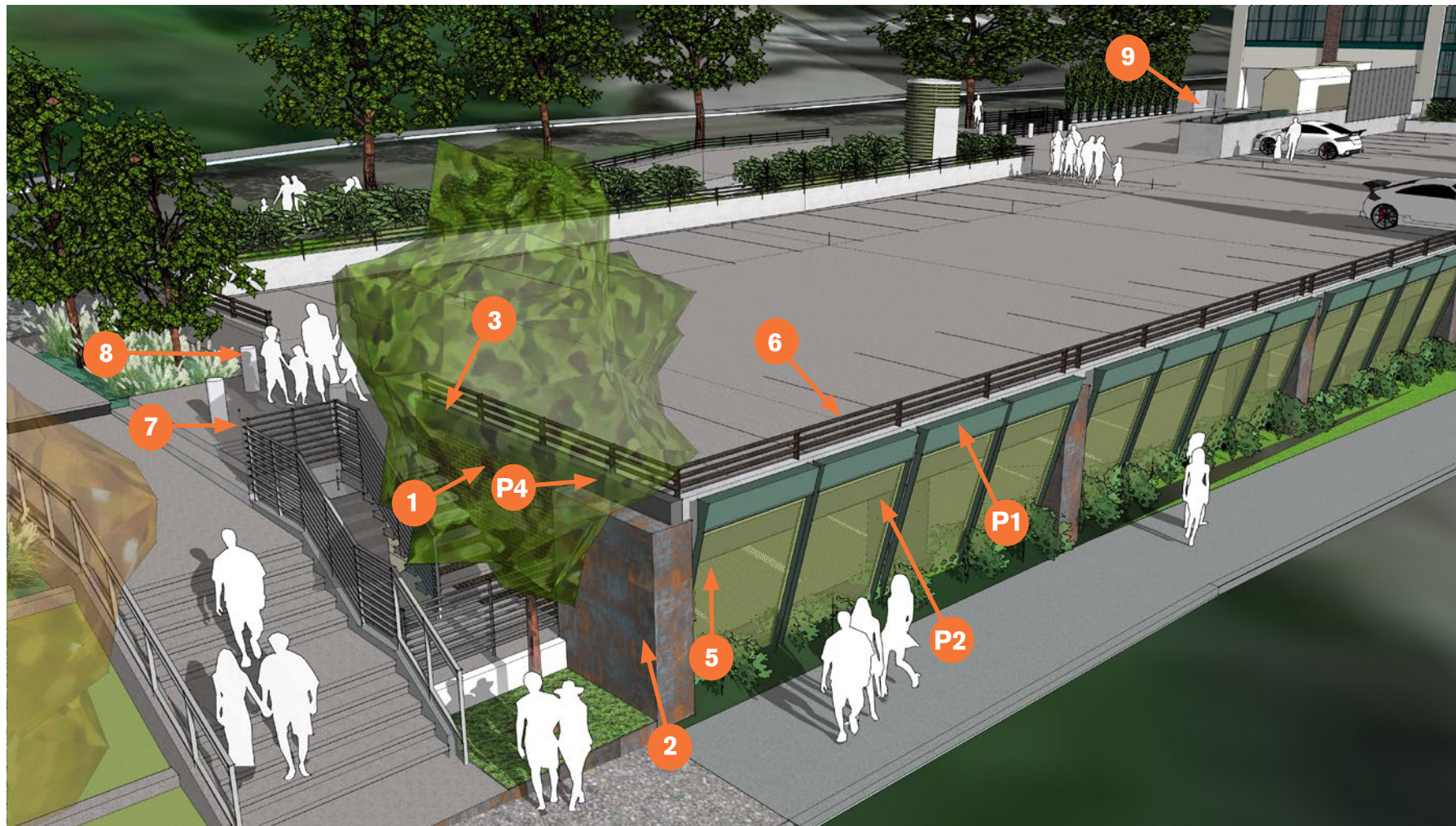


9 Dock lift



Materials + Color Palette

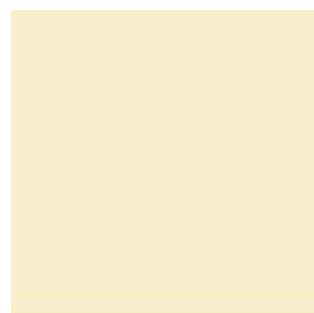
Schematic View + Material Options



P1 Lafayette Green HC-135
Benjamin Moore



P2 Louisburg Green HC-113
Benjamin Moore



P3 Antiquity OC-107
Benjamin Moore



P4 Racoon Fur 2126-20
Benjamin Moore

Landscape

SITE LANDSCAPE



TREE REPLACEMENT SUMMARY

TOTAL TREE CANOPY REMOVED: 2,620 SF

TREE REPLACEMENT CANOPY PROVIDED ON-SITE: 2,826 SF	
4	EUROPEAN BEECH X 113 SF CANOPY =452 SF
2	SOUR GUM X 314 SF CANOPY =628 SF
5	CASCARA X 314 SF CANOPY =1,570 SF
1	JAPANESE STEWARTIA X 176 SF CANOPY =176 SF

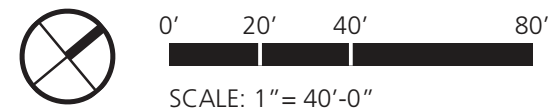
REPLACEMENT TREES:

SYM	QTY	DESCRIPTION
	4	FAGUS SYLVATICA 'DAWYCK PURPLE' (EUROPEAN BEECH) *12' DIAMETER MATURE CANOPY (113 SF)
	2	NYSSA SYLVATICA 'BLACK TUPELO' (SOUR GUM) *20' DIAMETER MATURE CANOPY (314 SF)
	5	RHAMNUS PURSHIANA (CASCARA) *20' DIAMETER MATURE CANOPY (314 SF)
	1	STEWARTIA PSEUDOCAMELLIA (JAPANESE STEWARTIA) *15' DIAMETER MATURE CANOPY (176 SF)

EXCEPTIONAL TREE LIST:

TREE ID	SCIENTIFIC NAME	COMMON NAME	DBH (inches)	RETAIN	REMOVE
1083	Acer macrophyllum	Bigleaf Maple	30.2		X
1084	Acer macrophyllum	Bigleaf Maple	31.9		X
1085	Acer macrophyllum	Bigleaf Maple	44.0		X

The tree replacement summary and exceptional tree list is based on the arborist report prepared by Tree Solutions Inc, dated 05.09.2019



Landscape Plan

Not to scale

PLANTING PALETTE



1 Calamagrostis x acutiflora 'Karl Foerster'



2 Carex obnupta



3 Cornus sericea 'Baileyi'



4 Cornus sericea 'Midwinter Fire'



5 Fagus sylvatica 'Dawyck Purple'



6 Iris missouriensis



7 Juncus balticus



8 Mahonia repens



9 Nyssa sylvatica 'Black Tupelo'



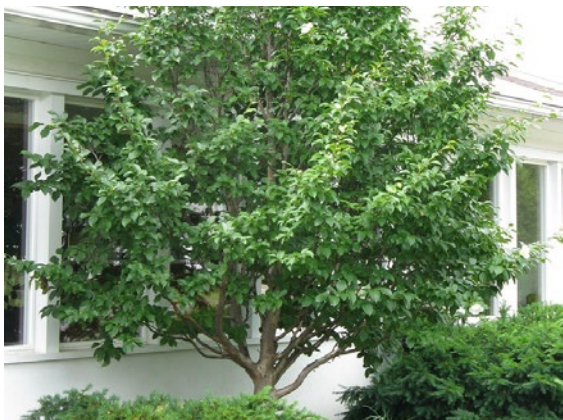
10 Polystichum munitum



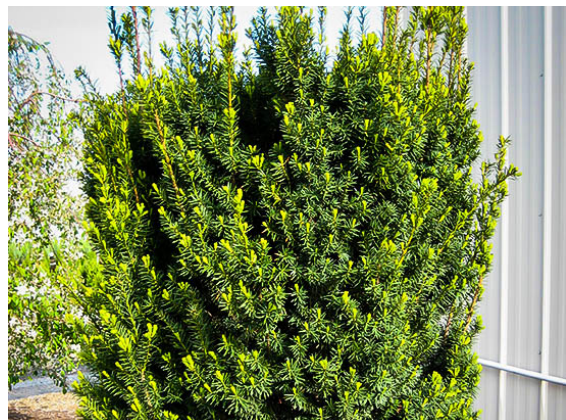
11 Rhamnus purshiana



12 Ribes sanguineum 'King Edward VII'



13 Stewartia pseudocamellia



14 Taxus x media 'Hicksii'



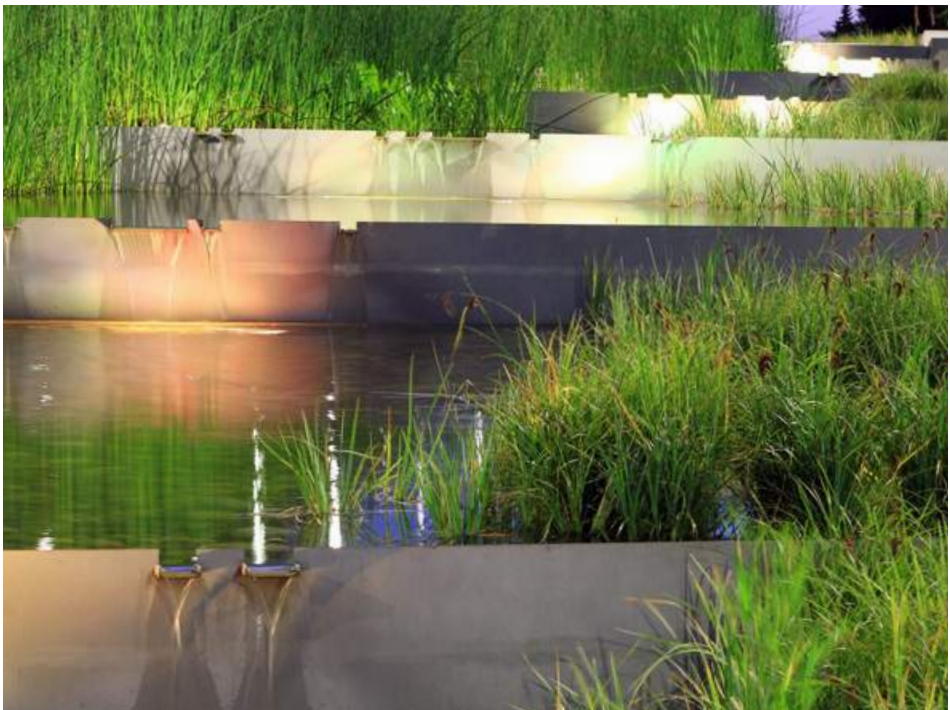
15 Vaccinium ovatum

Landscape

BIORETENTION PRECEDENTS



Concept Sketch



The pedestrian experience at the corner of Eastlake Ave E and Fairview Ave N is enhanced by bioretention planters. The terraced planters detain stormwater from the new parking garage and flow into one another via functional weirs. A grated walkway extends over the first planter in the series of three, providing access to the parking garage and concrete stairs down to Fairview Ave N.

Landscape

EcoForm small LED area luminaire

Site & Area Poles: 4" Straight Square Steel with White Paint Finish

Finish: Bronze

Location: Roof Parking

Type: P5

Manufacturer: Lightolier/SIGNIFY

Color: 4000K



SoftView LED parking garage luminaire

Finish: White

Location: Level P2, Level P1

Types: P5, P1, P1A, P5A

Manufacturer: Gardco/SIGNIFY

Color: 4000K

