

PIER 58 90% DESIGN COMMISSION

PRESENTATION OUTLINE

INTRODUCTION

- PROJECT TEAM
- WATERFRONT PROGRAM

APPROACH

- COMMUNITY ENGAGEMENT
- PROVIDING NEW CONNECTIONS
- INTEGRATING INTO ADJACENT PROJECTS
- DESIGN OBJECTIVES

60% DESIGN COMMENTS REVIEW

- REVIEW OF 60% PIER 58 DESIGN
- REVIEW OF PLAYGROUND CONCEPT DESIGN
- SUMMARY OF 60% SDC RECOMMENDATIONS



PIER 58 90% DESIGN COMMISSION

PRESENTATION OUTLINE

90% PROGRAM + DESIGN

- SOUTH BAR
 - FITZGERALD FOUNTAIN
 - SALVAGED FITZGERALD FOUNTAIN
 - MATERIALS
 - LIGHTING
 - TREE GROVE
 - WALKWAY TO GROVE
 - SEATING STEPS
 - SOIL CELLS
 - MOVABLE SEATING + CAPACITY
 - TREES
 - PLANTING BUFFER
 - WEST SLOPED LAWN
 - PASS THROUGH TO PIER 57
 - LAWN LAYOUT + CAPACITY
 - MATERIALS
 - WESTERN SEATING STEPS
 - HANDRAILS

CENTRAL GATHERING SPACE

- PROGRAMMING
- POWER
- LIGHTING
- CANOPY ANCHORS
- MOVABLE TIMBER BENCH
- BASALT SEATING
- PAVING, JOINTING + DRAINAGE
- GUARDRAILS

PLAYGROUND

- CONCEPT REVIEW + SDC + PARKS COMMENTS
- REFINED DESIGN
 - DESIGN UPDATE
 - MATERIALS
 - SAFETY SURFACING
 - CONNECTION DETAILS
 - PERMANENT SEATING
 - LIGHTING



INTRODUCTION

INTRODUCTION

PROJECT TEAM

CLIENT / CITY

DESIGN TEAM / CONSULTANTS

SEATTLE OFFICE OF THE WATERFRONT AND CIVIC PROJECTS

SEATTLE PARKS AND RECREATION

SEATTLE OFFICE OF ARTS & CULTURE

SEATTLE DEPARTMENT OF TRANSPORTATION

FRIENDS OF WATERFRONT SEATTLE

JAMES CORNER FIELD OPERATIONS

JACOBS

EARTHSCAPE

WSP

DRAGONFLY

LAND MORPHOLOGY

JMB CONSULTING

DARK LIGHT

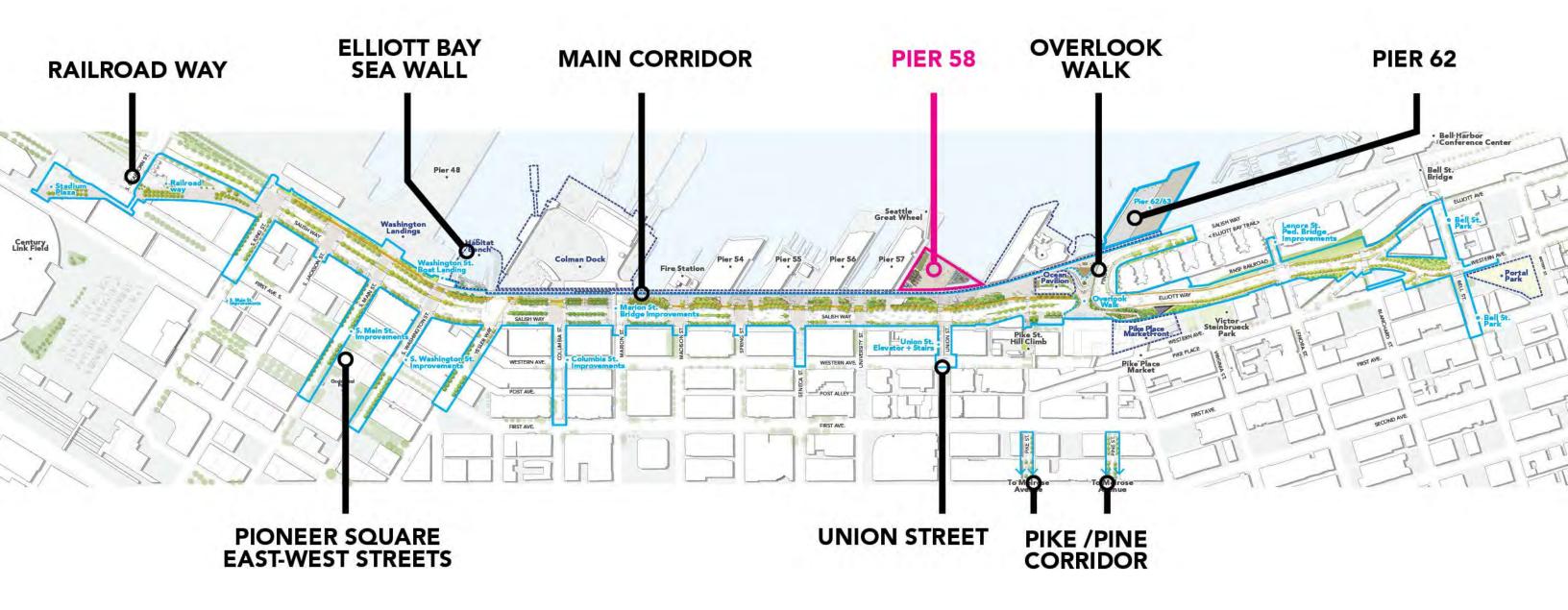
GREENE FACADES

VALERIE SEGREST

VIC EKLAND

INTRODUCTION

WATERFRONT PROGRAM



APPROACH







1 1 0 A SHARE EL SAVE

197 views • Nov 13, 2020



APPROACH

COMMUNITY ENGAGEMENT: WHAT WE'VE HEARD SINCE JAN. 2021

WELCOME ALL AGES, MOBILITIES AND COMMUNITIES

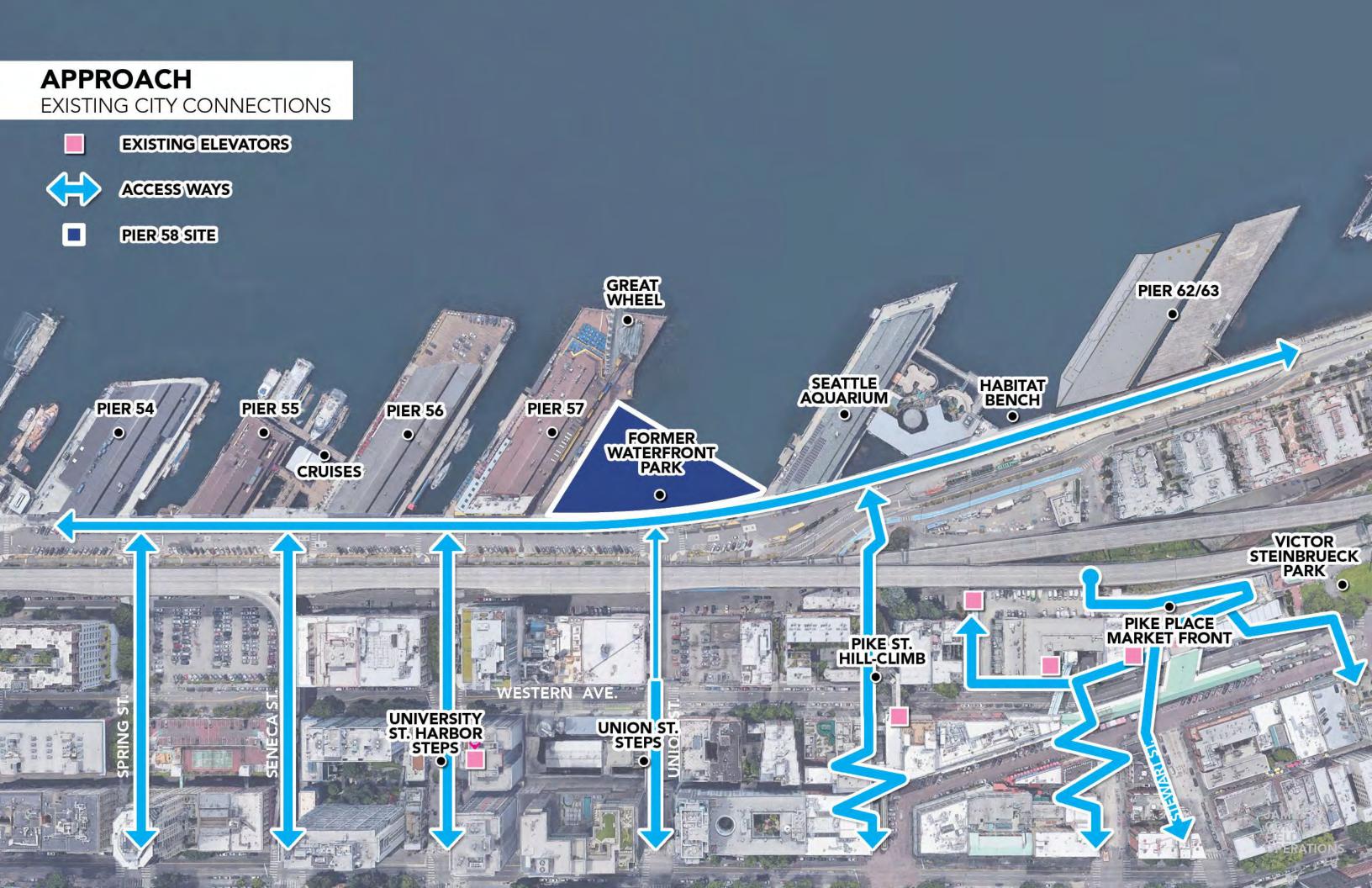
USE NATURAL MATERIALS

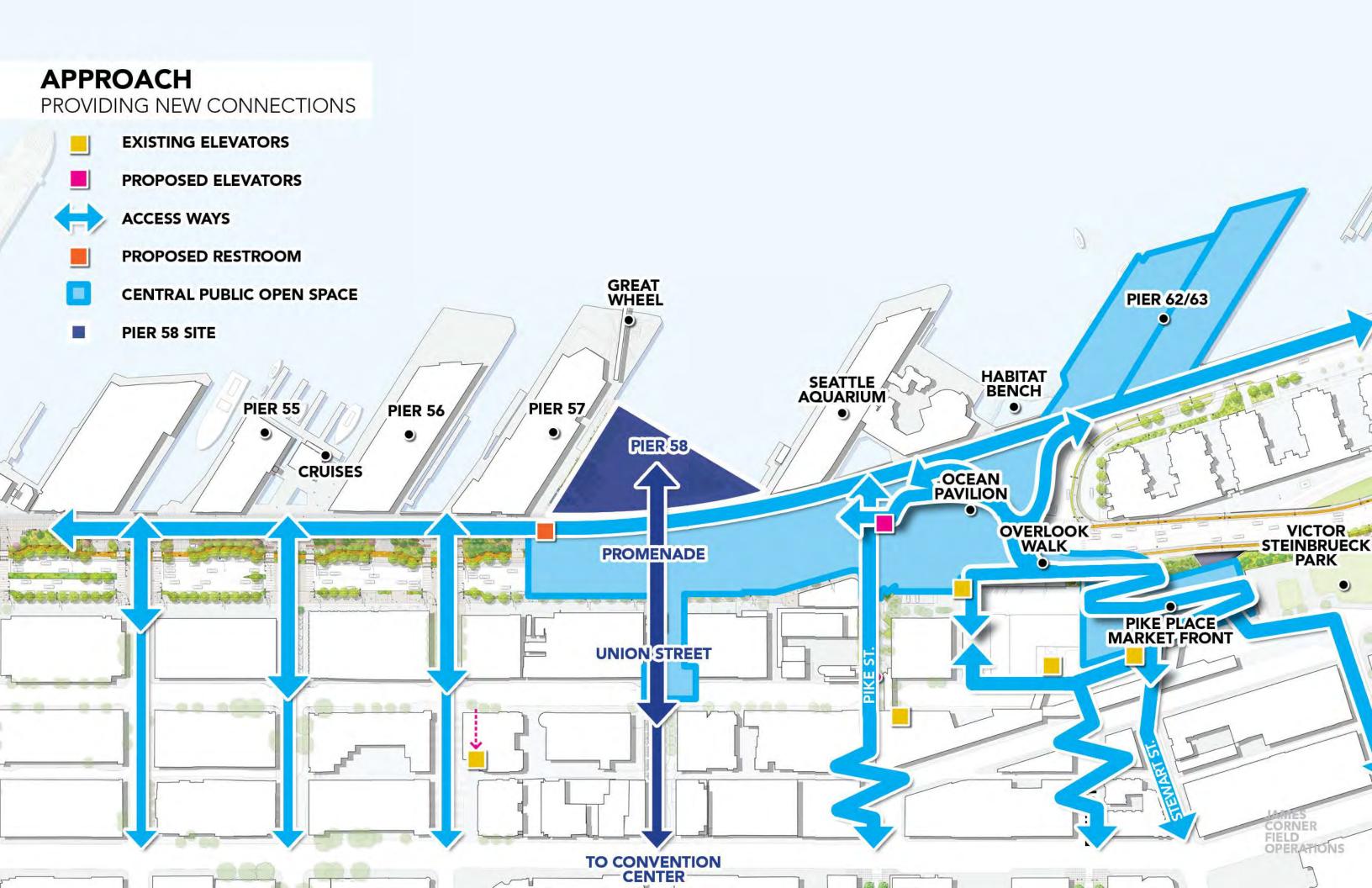
PROVIDE GREENERY AND SHADE

PROVIDE A VARIETY OF SEATING OPPORTUNITIES FOR SOCIALIZING AND VIEWING

ADDRESS SAFETY

PROVIDE FOR A VARIETY OF USES, EVENTS AND PROGRAM

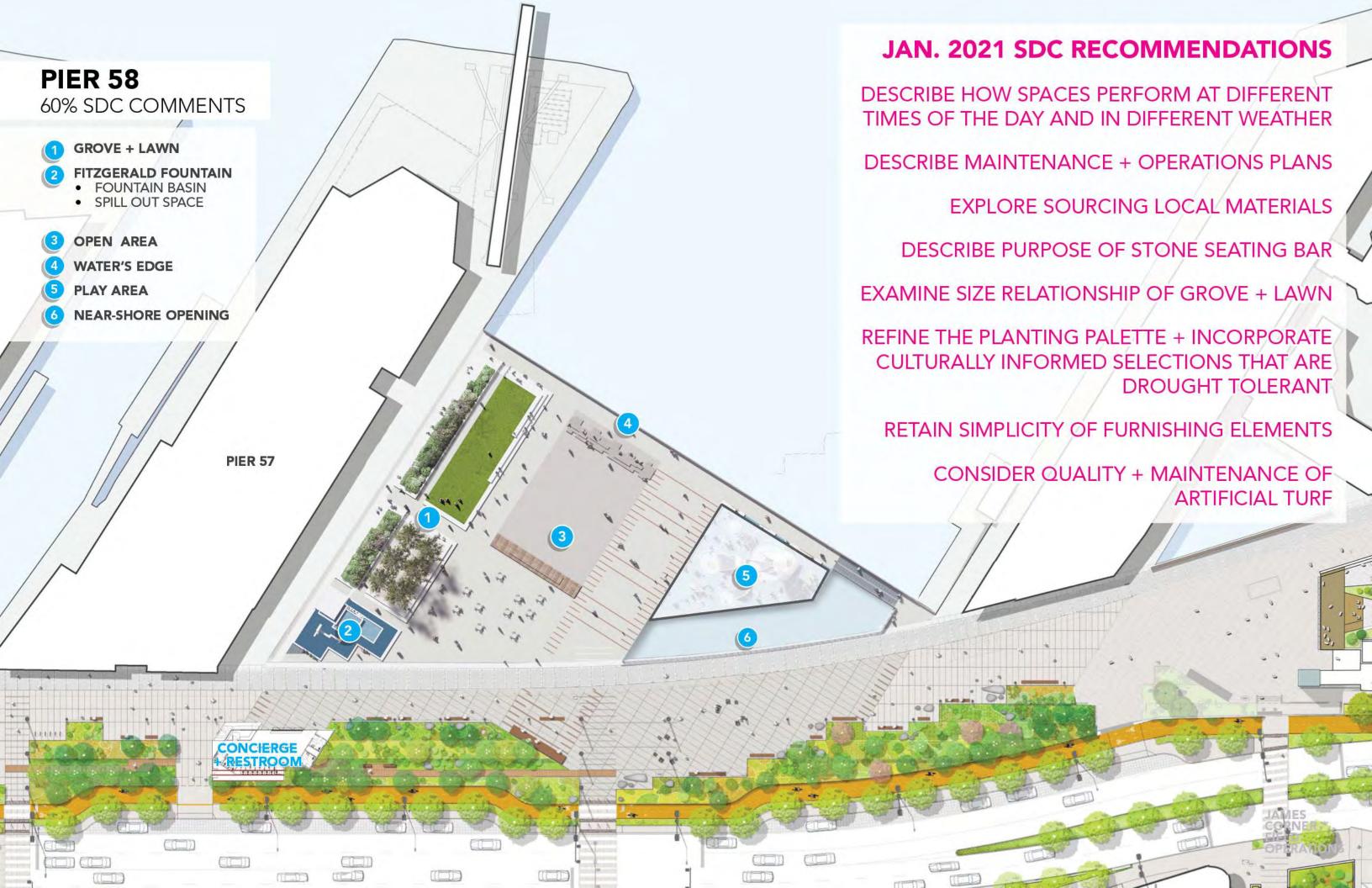






PIER 58 60% DESIGN COMMENTS







PIER 58 UPDATED PROGRAM



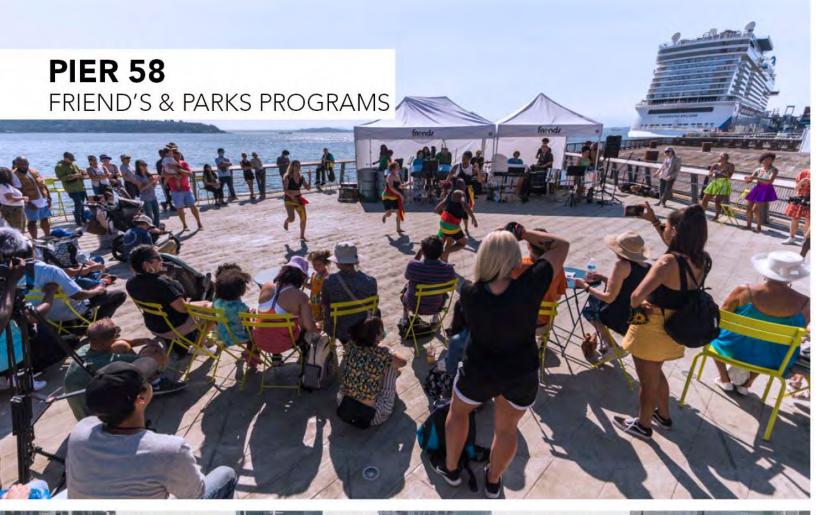














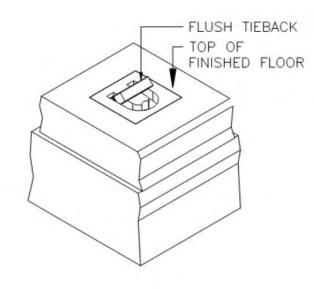


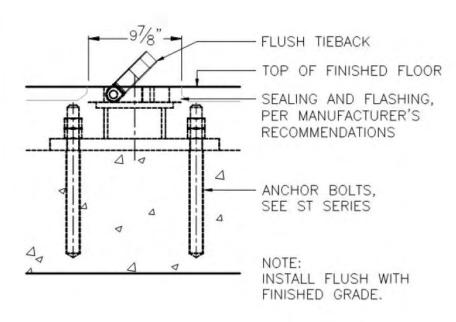












CANOPY ANCHORS



- (2) 240V / 50AMP, OR
- (4) 120V / 20AMP

* (1) 240V / 50AMP, + . (2) 120V / 20AMP

WHEN SHUT IT IS FLUSH WITH THE PAVEMENT SURFACE, SO THESE CAN BE PLACED ANYWHERE THEY ARE NEEDED.

WHEN OPEN UNIT IS 12" TALL







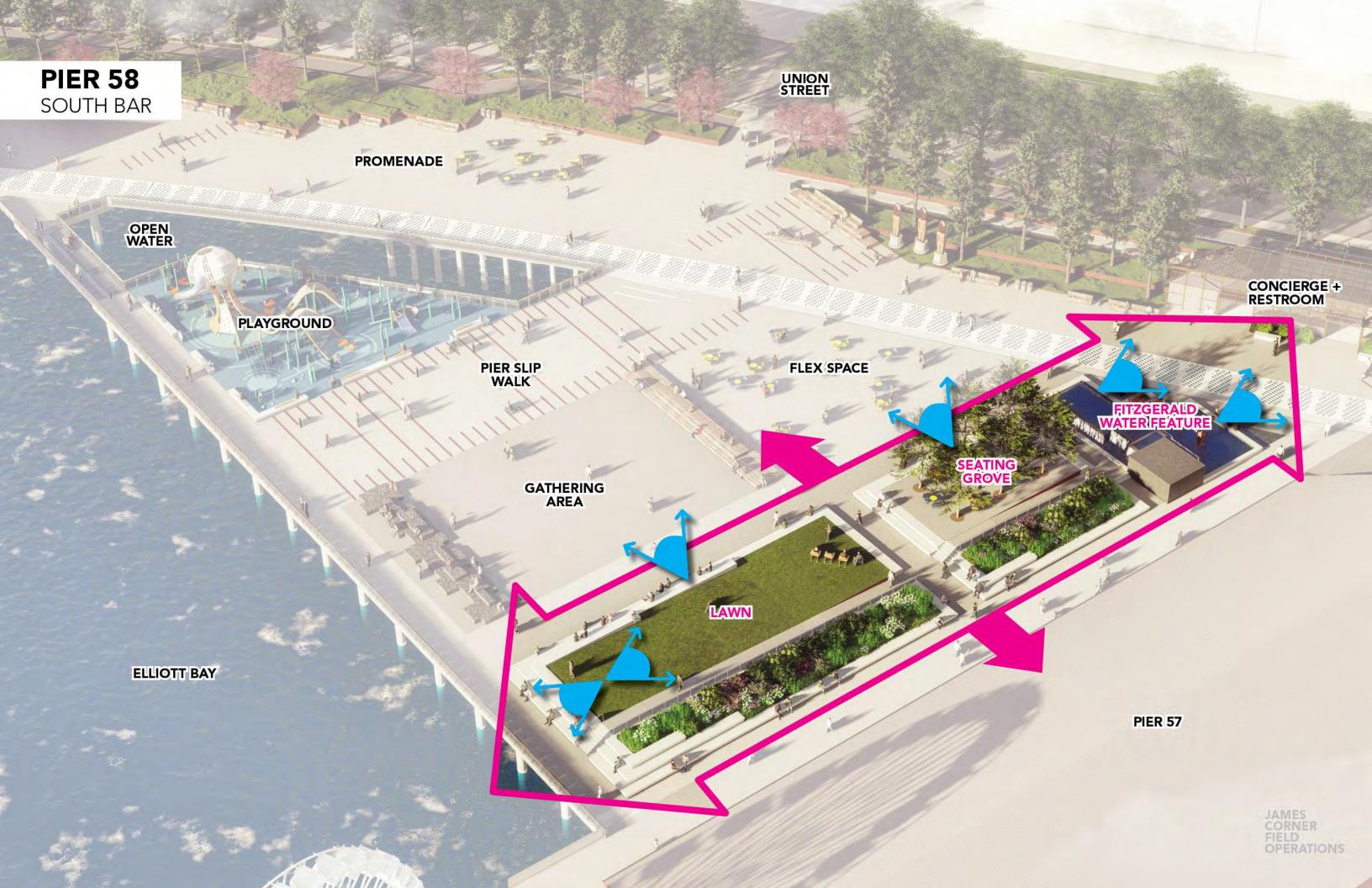


POP-UP POWER RECEPTACLE



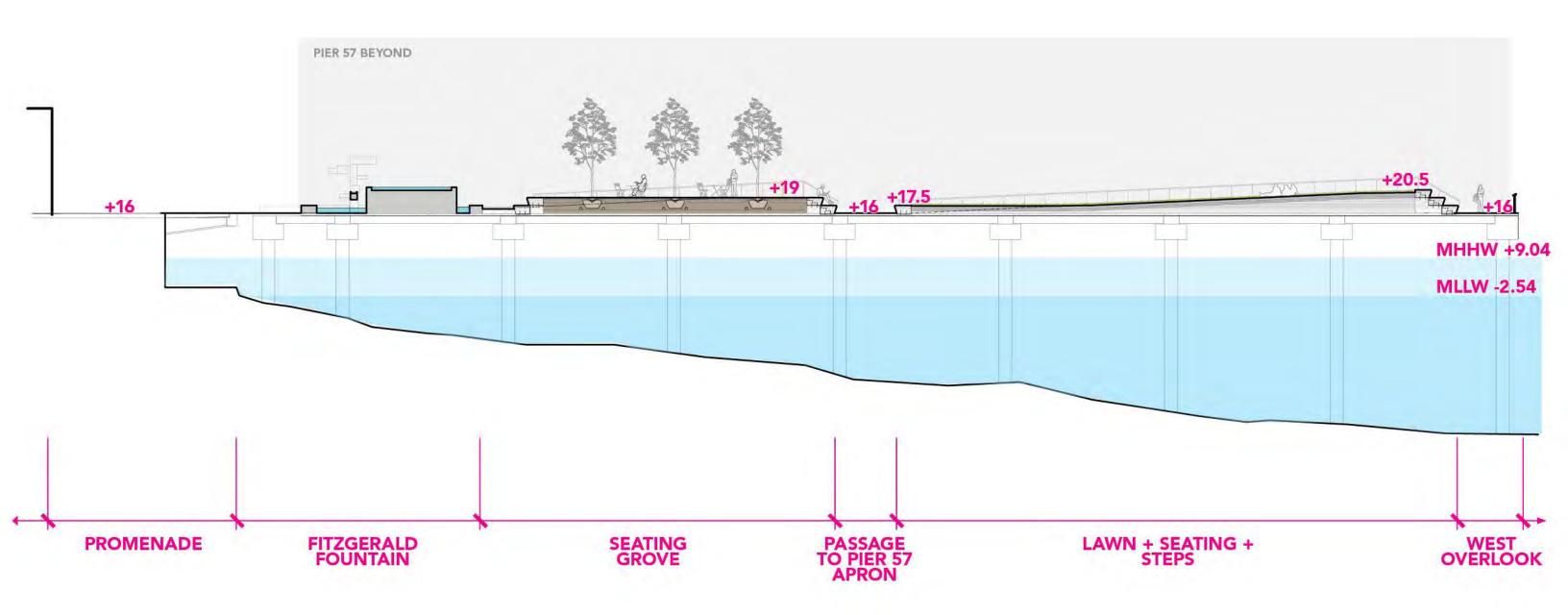
PIER 58 90% DESIGN



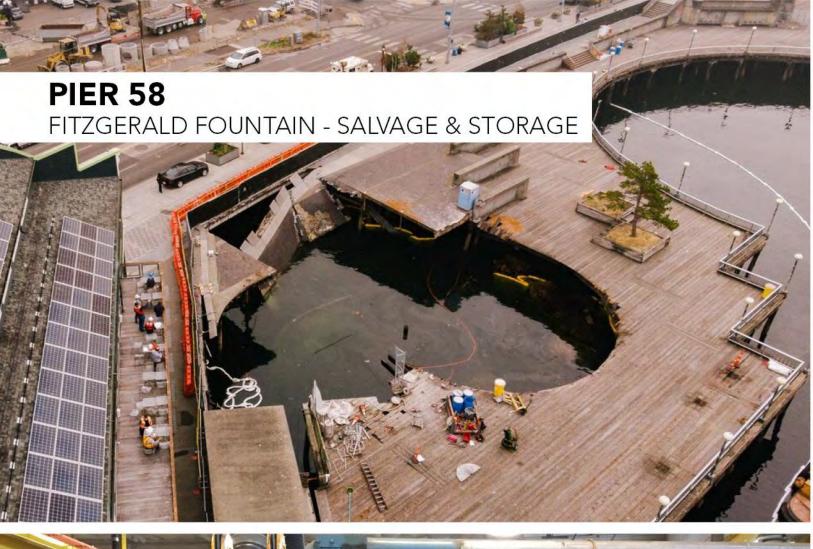




PIER 58 SOUTH BAR - ELEVATION LOOKING SOUTH



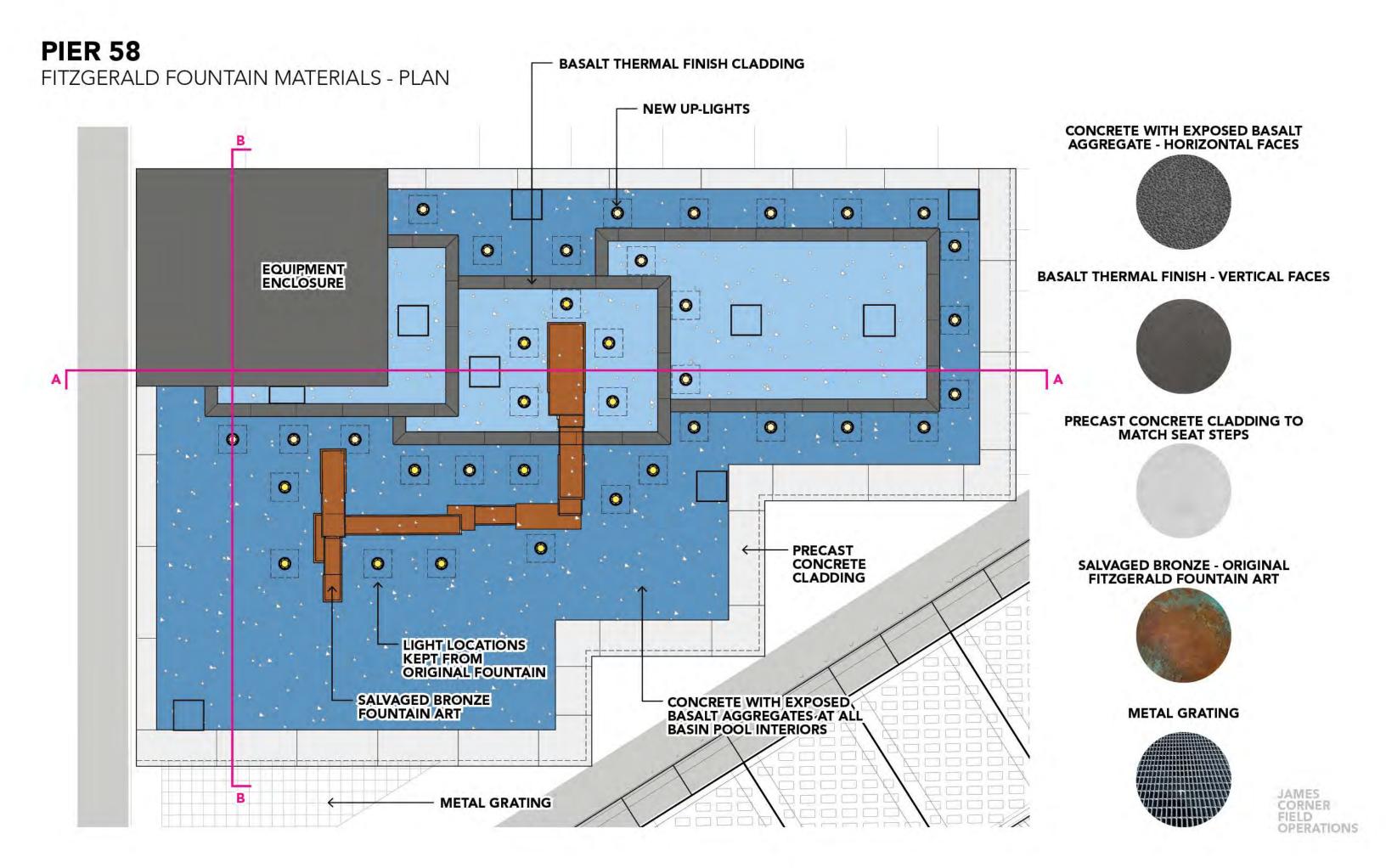


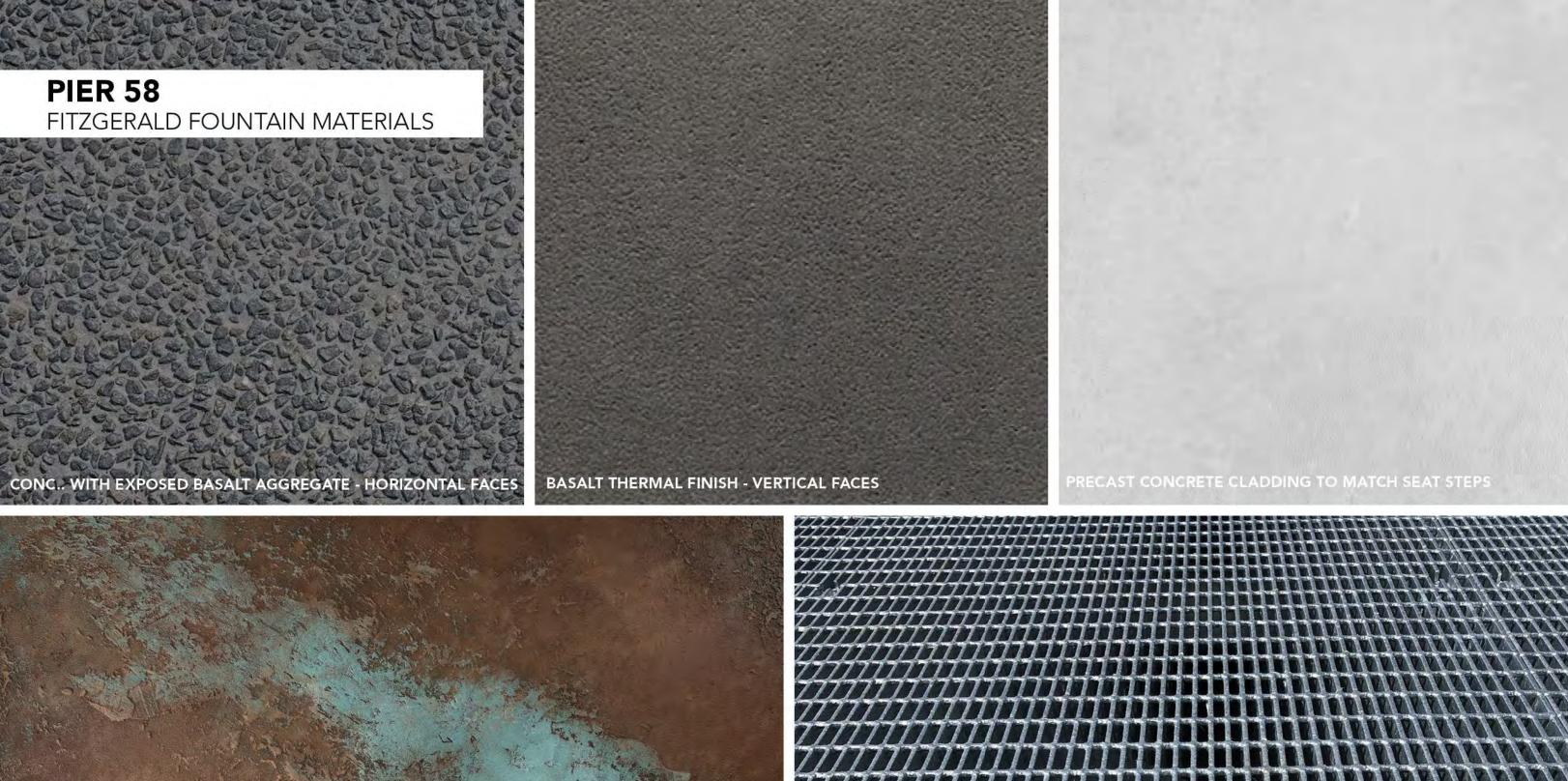




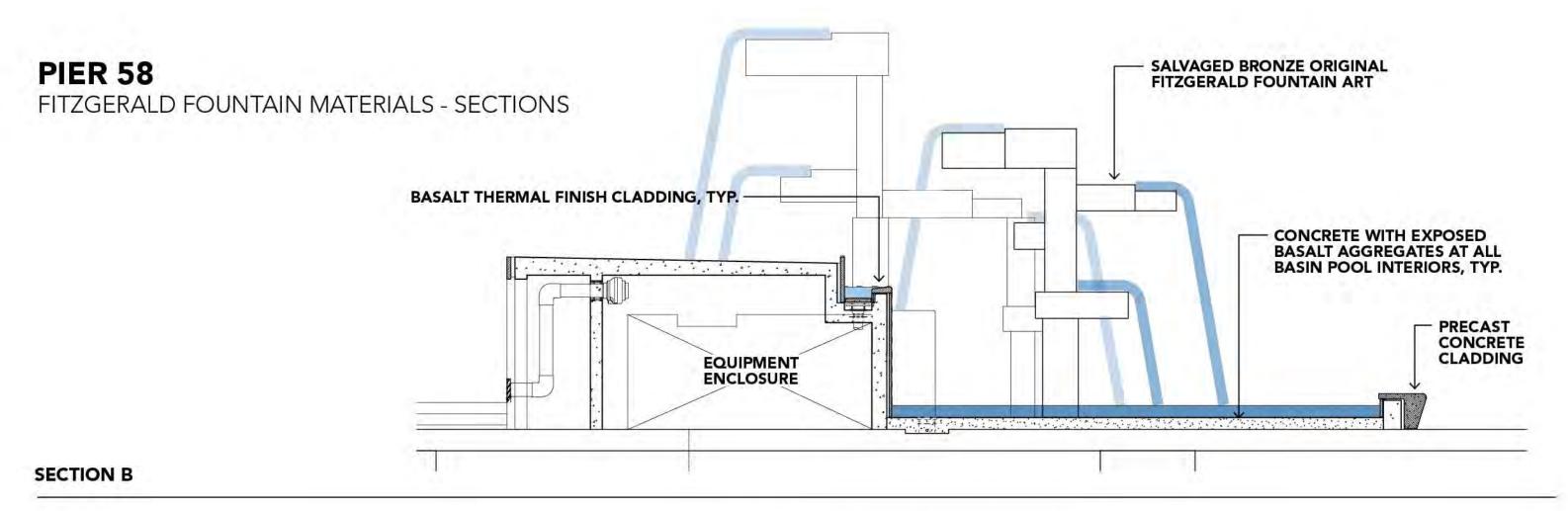


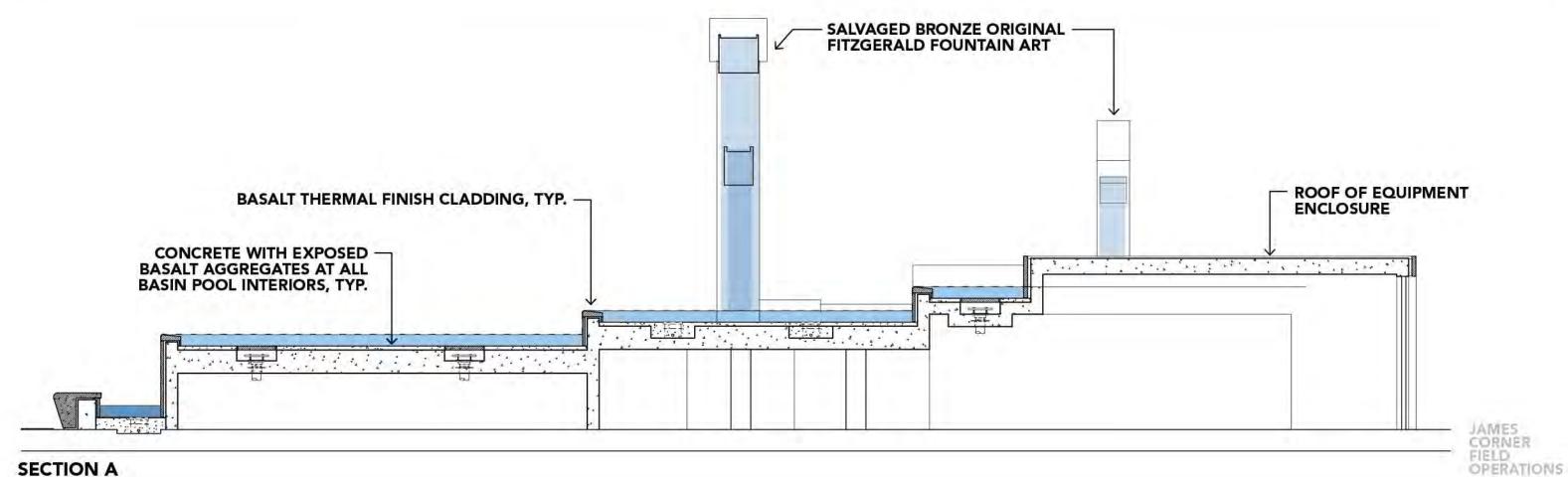


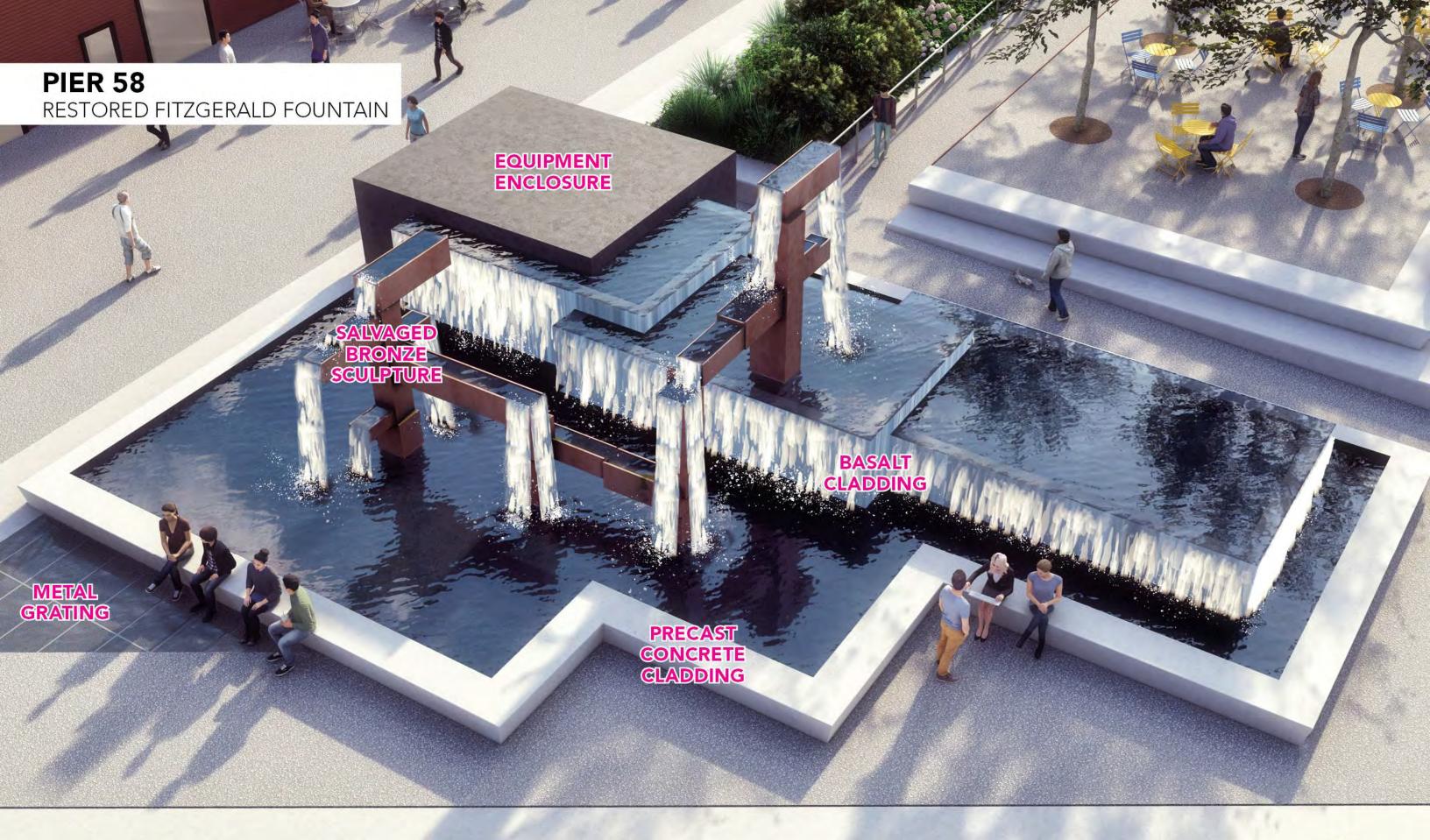






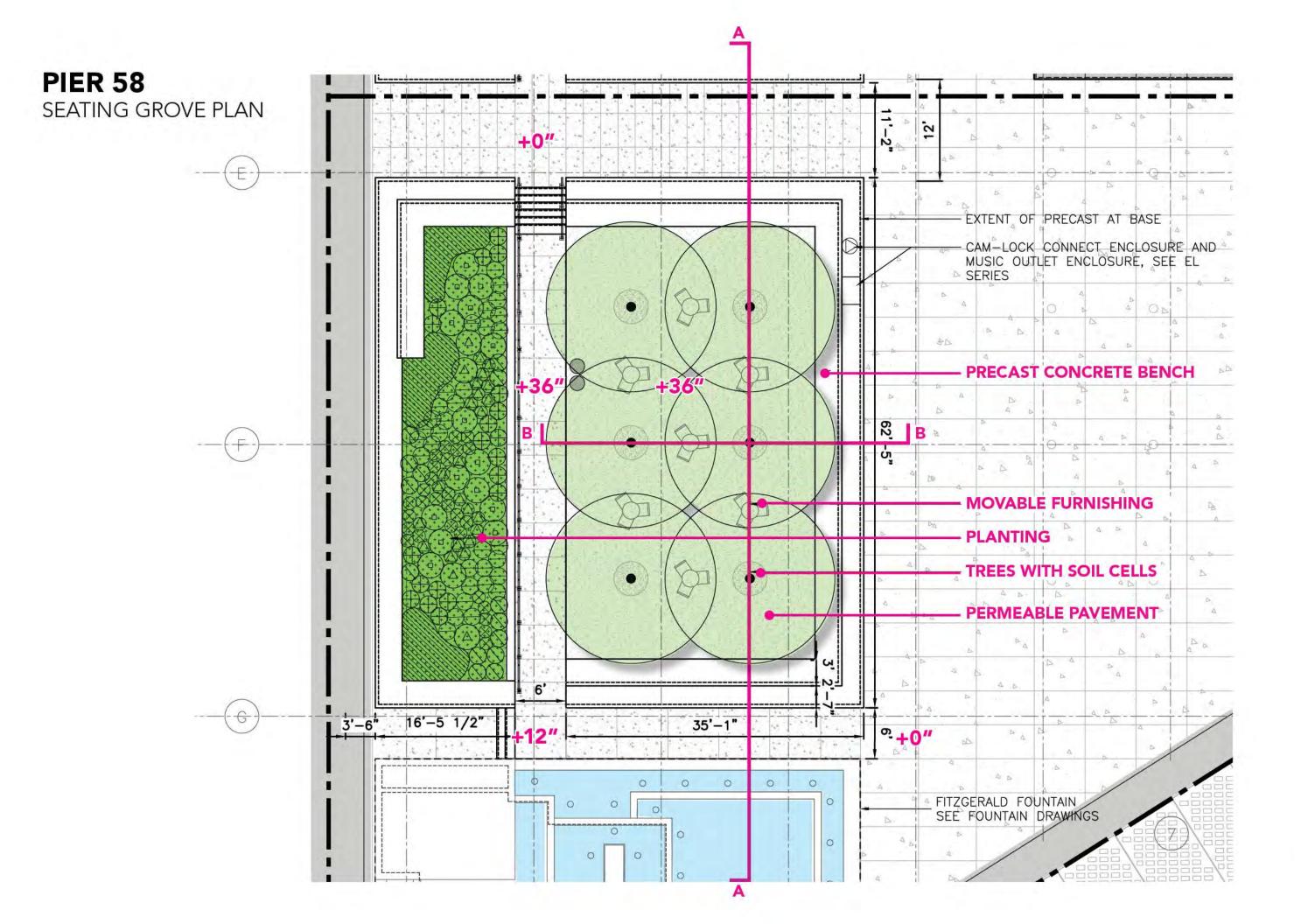


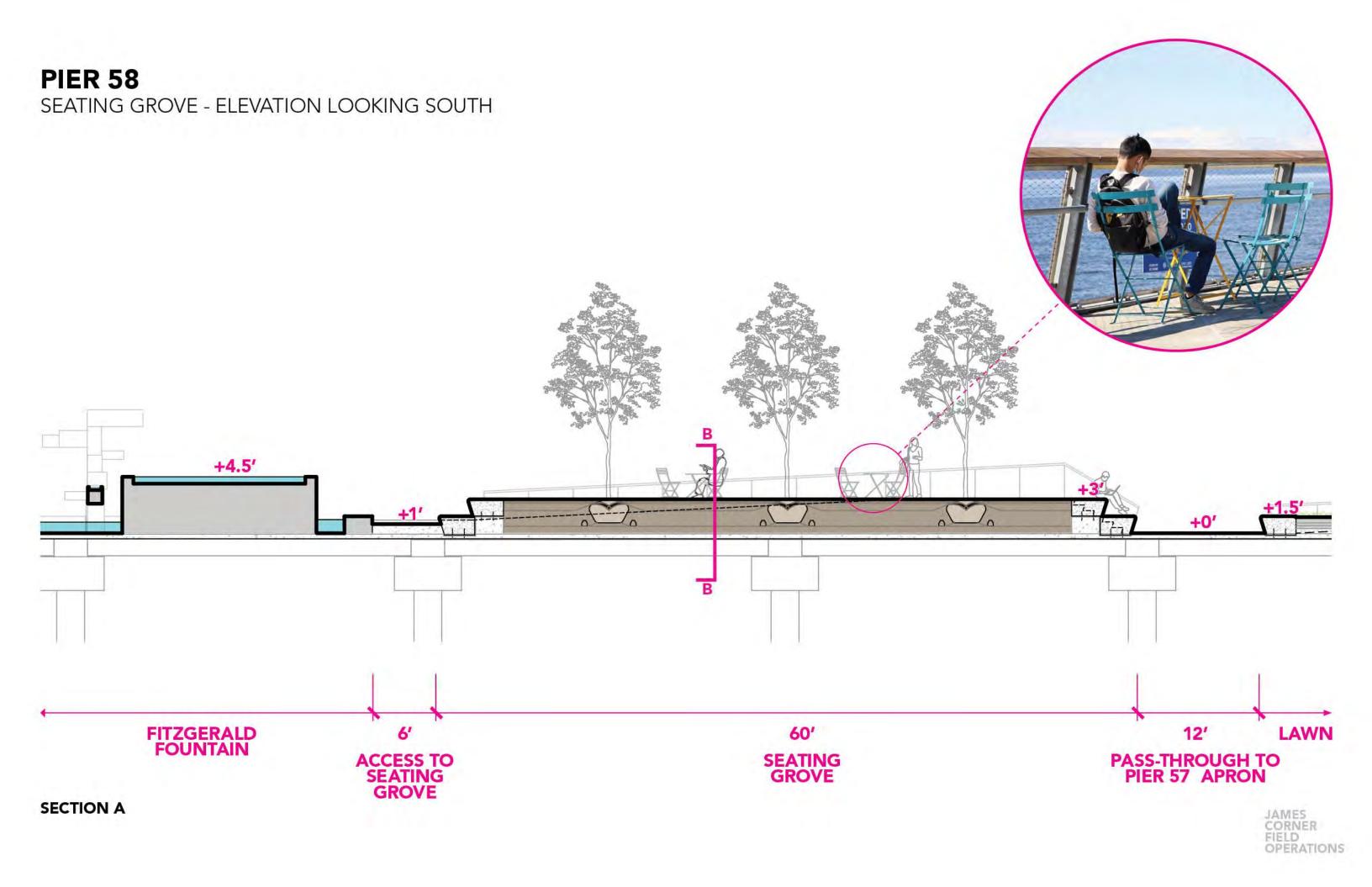


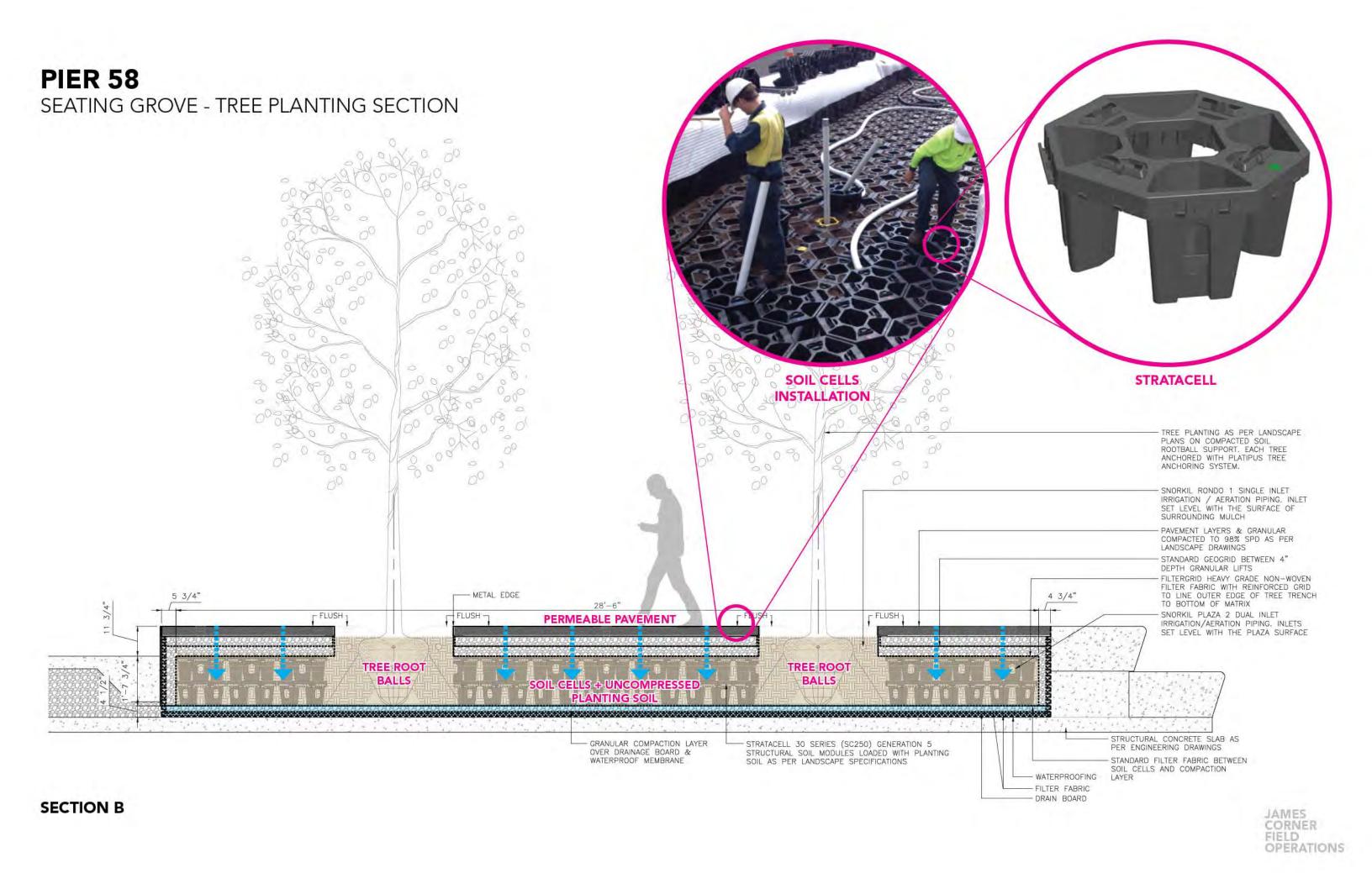




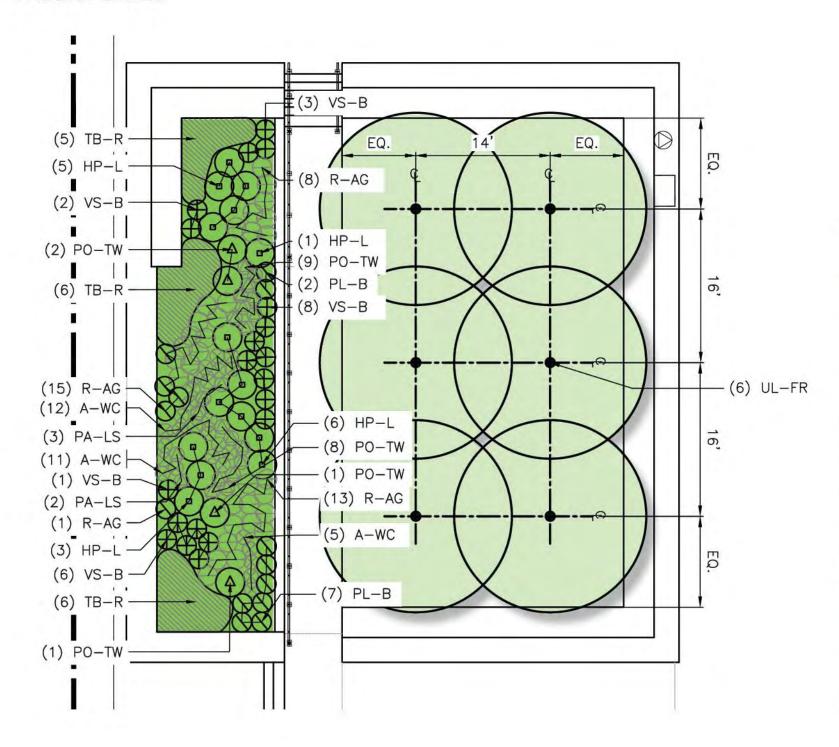








TREE SPECIES



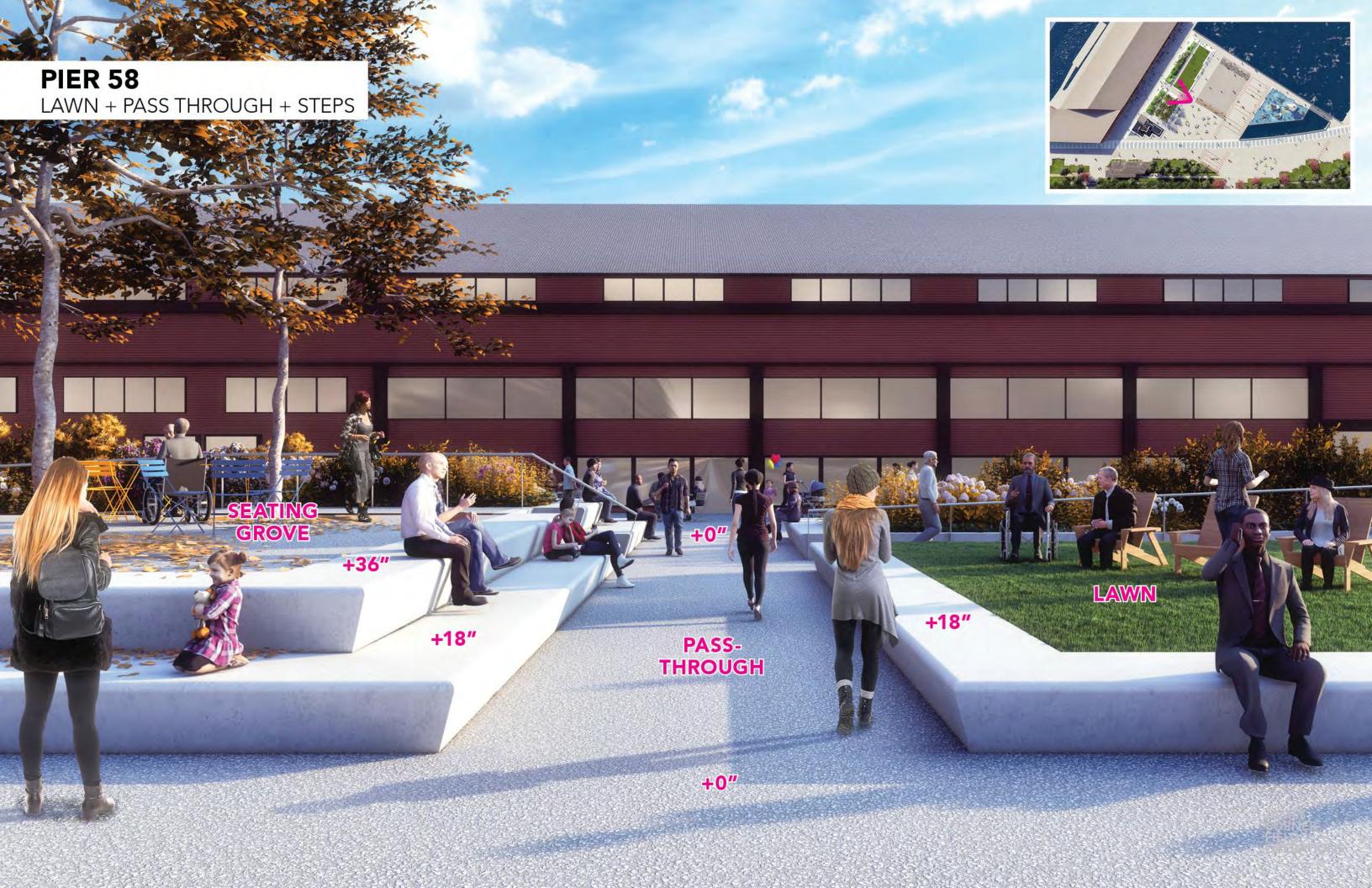


ULMUS 'FRONTIER' FRONTIER ELM

INSTALLATION SIZE: 4" CAL 20 YR HEIGHT: 20-25'

JAMES CORNER FIELD OPERATIONS



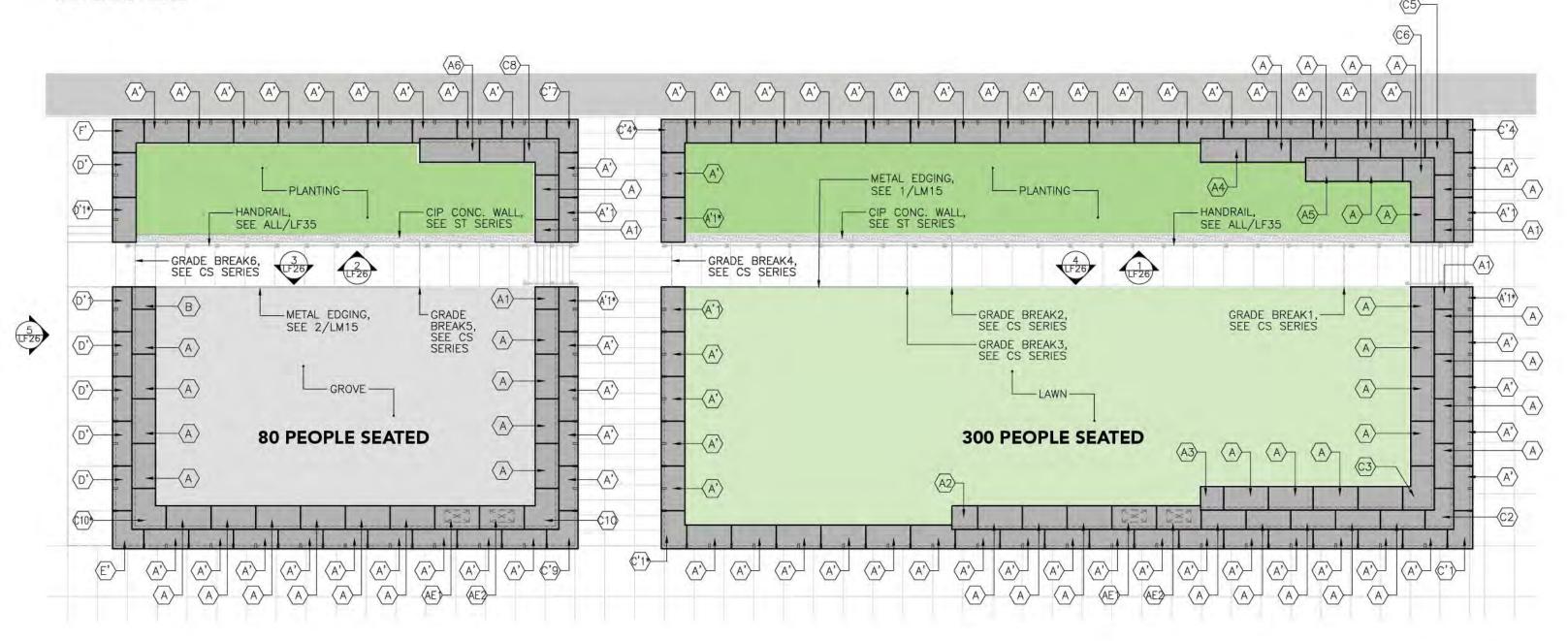


PRECAST BENCH LAYOUT

*GENERAL NOTE:

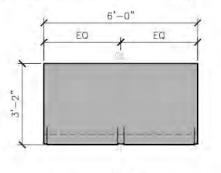
1. REFER TO LF27, LF28 FOR PRECAST CONCRETE BENCH MODULES

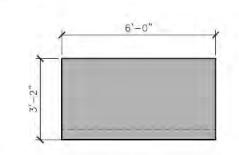
2. REFER TO LF29 FOR PRECAST CONCRETE BENCH SKATE STOPPER AND PROFILE

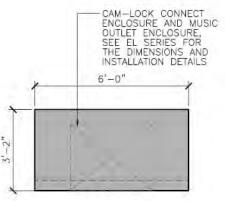


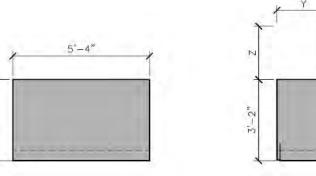
PRECAST BENCH UNITS

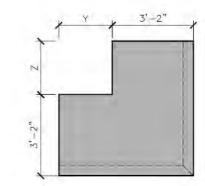
- 1) X': PRECAST CONCRETE SEATING STEP MODULE X WITH SKATE STOPPER.
 2) X*: MIRROR SHAPE OF PRECAST CONCRETE SEATING STEP MODULE X
 3) V.I.F ALL DIMENSIONS.
 4) REINFORCEMENT TO BE COORDINATED AND DESIGNED BY FABRICATOR
 5) SEE CS SERIES FOR ALL FINISHED GRADE ELEVATIONS

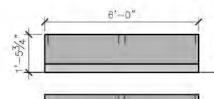




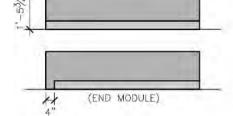




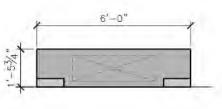


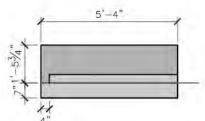


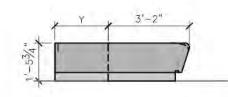
(END MODULE)

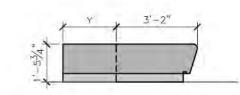


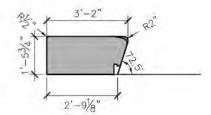
6'-0"

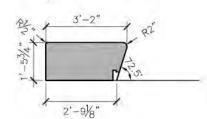


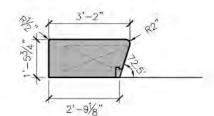


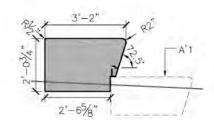


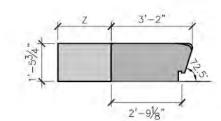


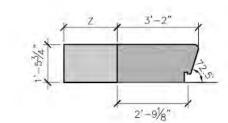






















TYPE A'

A'1 : END PIECE—NO SKATE STOPPER AT THE END OF THE MODULE, 4"CAP AT THE LINEAR LIGHTING FIXTURE

TYPE A

A1 : LENGTH 36.0" A2 : LENGTH 41.2" A3 : LENGTH 37.2" A4 : LENGTH 73.2" A5 : LENGTH 84.1"

A6 : LENGTH 96.2"

TYPE AE1, AE2

TYPE B

TYPE C'

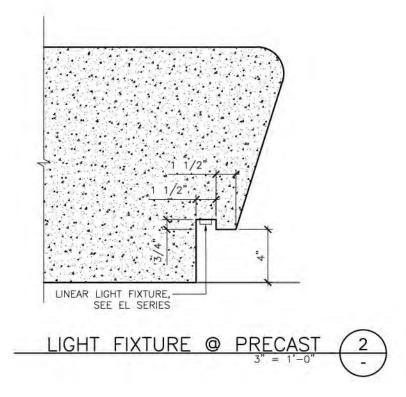
C'1: Y=3.0", Z=23.0" C'1*: Y=23.0", Z=3.0" C'4: Y=15.5", Z=3.0" C'4: Y=3.0", Z=15.5" C'7: Y=15.5", Z=12.5" C'9: Y=12.5", Z=23.0" C'9*: Y=23.0", Z=12.5"

TYPE C

C2 : Y=8.0", Z=28.0" C3 : Y=13.0", Z=33.0" C5 : Y=20.5", Z=8.0" C6 : Y=25.5", Z=13.0" C8 : Y=20.5", Z=17.5" C10: Y=17.5", Z=28.0" C10*: Y=28.0", Z=17.5"

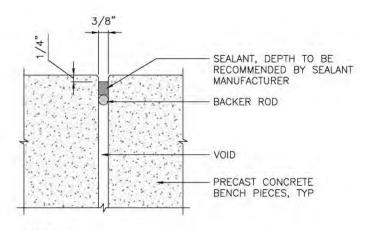
CORNER FIELD **OPERATIONS**

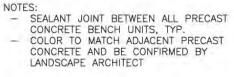
PRECAST BENCH DETAILS



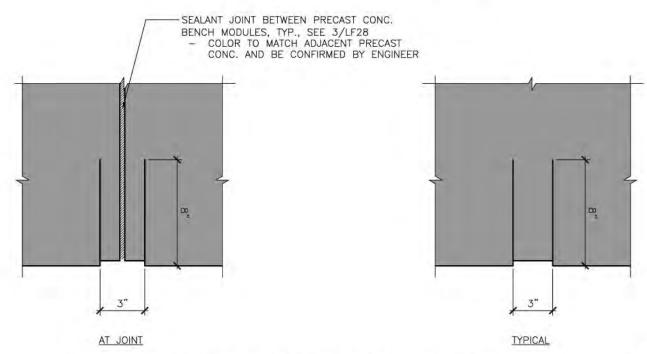


AXON (NTS)





SECTION 8"



PRECAST CONCRETE BENCH SKATE STOPPER DETAILS

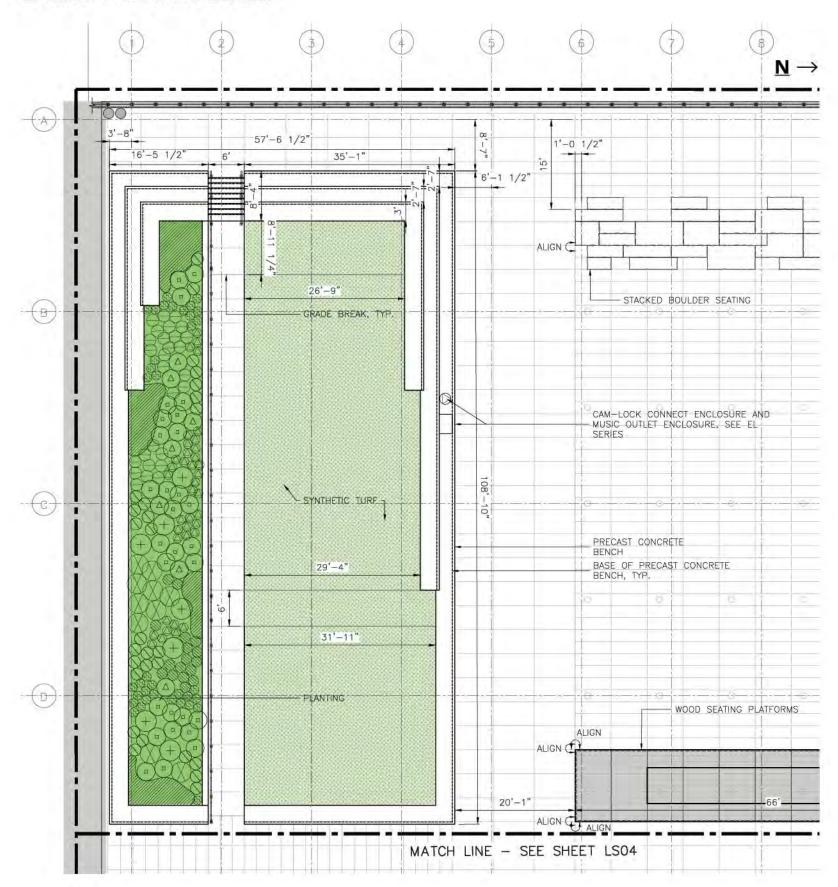
1

SEALANT JOINT @ PRECAST





LAWN + SOUTH EDGE



LAWN CAPACITY:

2,875 SQ FT 300 PEOPLE SEATED

PLANTING AT SOUTH EDGE

SHRUBS

Chamaecyparis obtusa 'Nana Gracilis'
Cornus x kousa
Hydrangia paniculata 'Limelight'
Physocarpus opulifolius 'Tiny Wine'
Podocarpus lawrencei 'Blue Gem'
Taxus baccata 'Rependens'
Vaccinium 'Sunshine Blue'

Dwarf Hinoki Cypress Redtwig Dogwood Panicle Hydrangea Dwarf Ninebark Blue Mountain Plum-Pine Spreading English Yew Blueberry

PERENNIALS

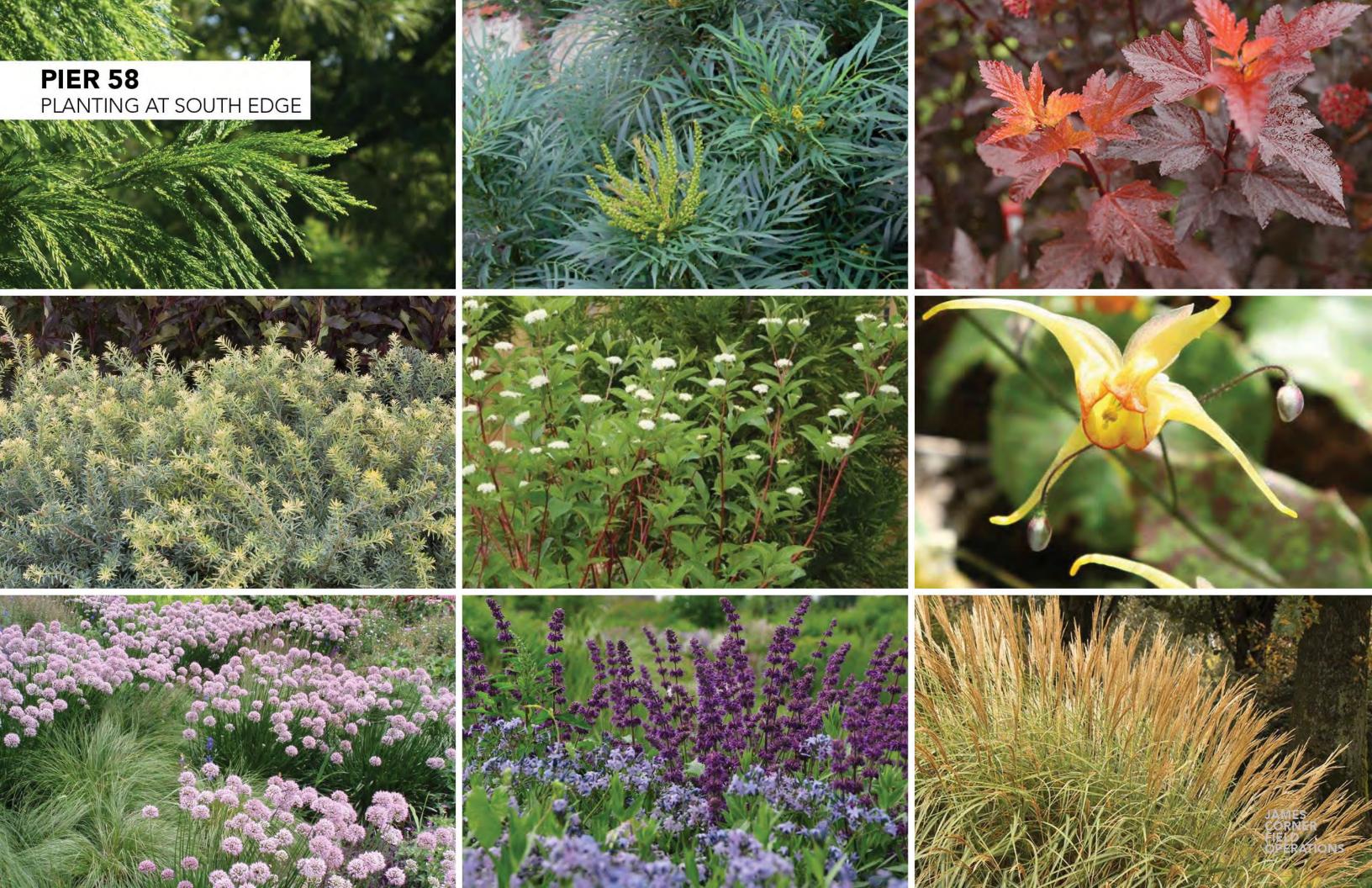
Allium 'Wind City'
Perovskia atriplicifolia 'Little Spire'
Persicaria amplexicaulis 'Firetail
Rudbeckia 'American Gold Rush'

Ornamental Onion Compact Russian Sage Bisort Hybrid Rudbeckia

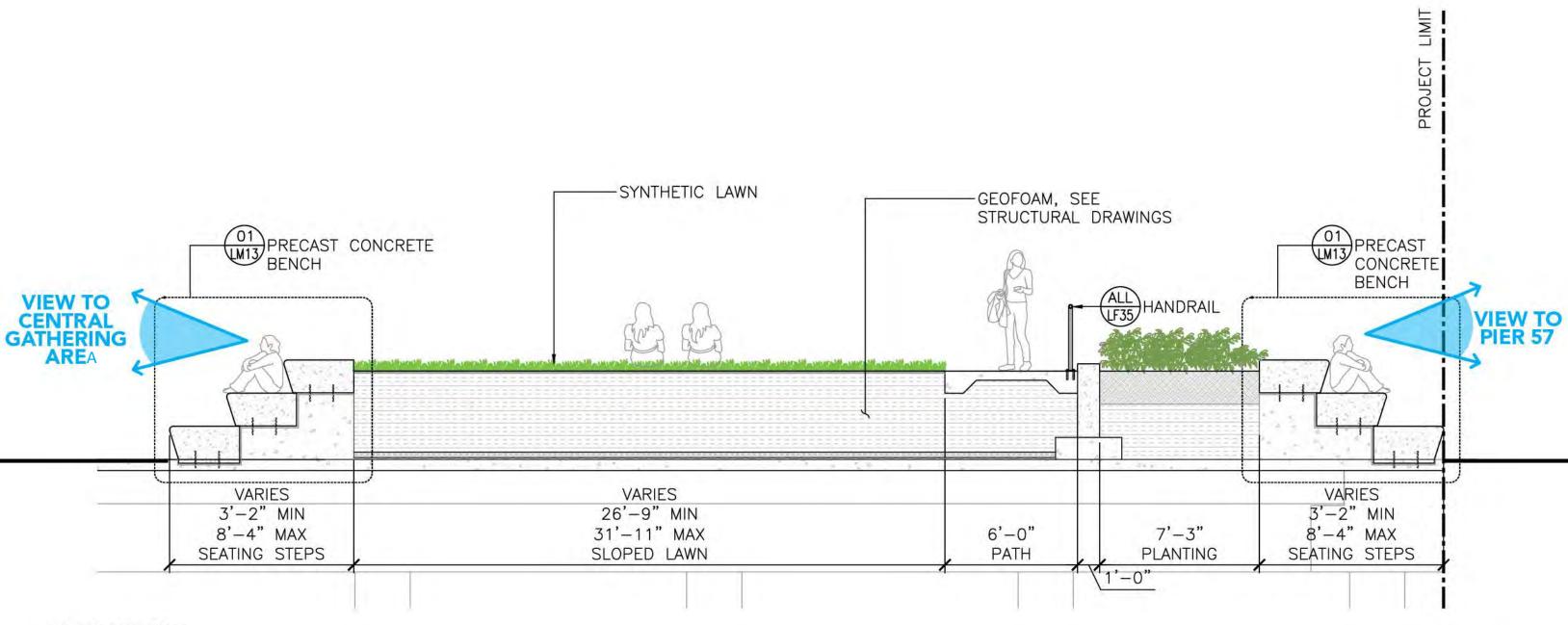
GRASSES

Miscanthus sinensis 'Adagio' Hakonechloa marca Adagio Maiden Grass Japanese Forest Grass





PIER 58 LAWN

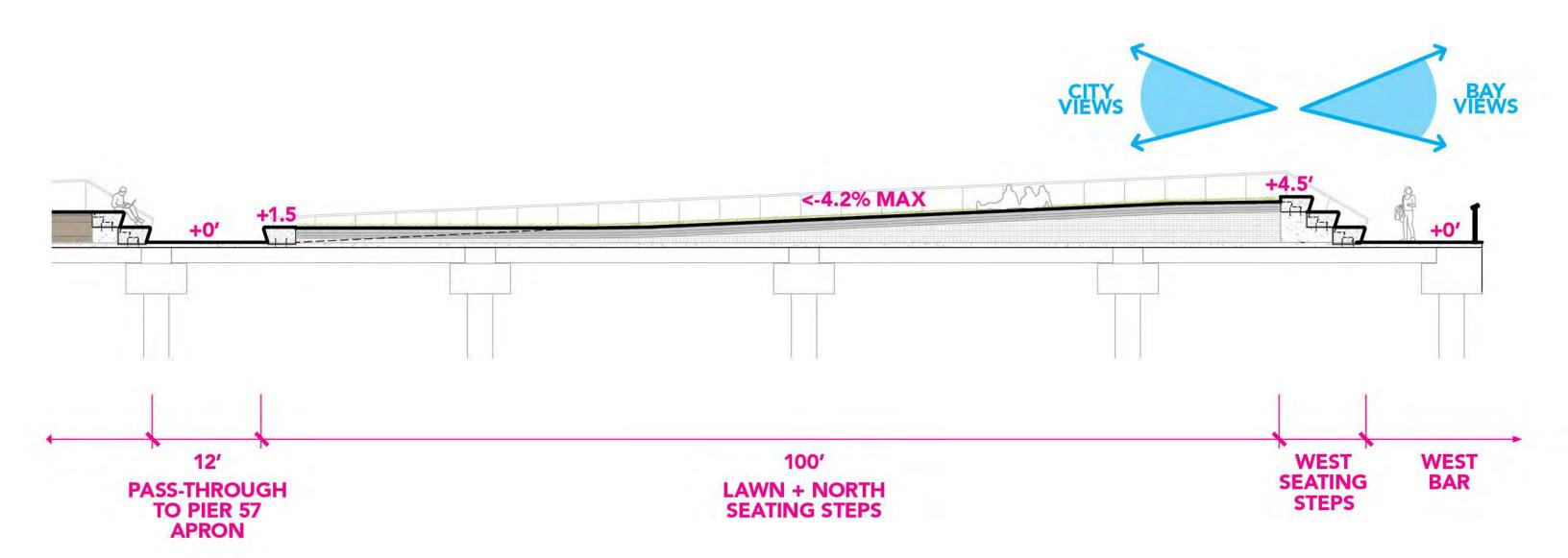


CROSS SECTION

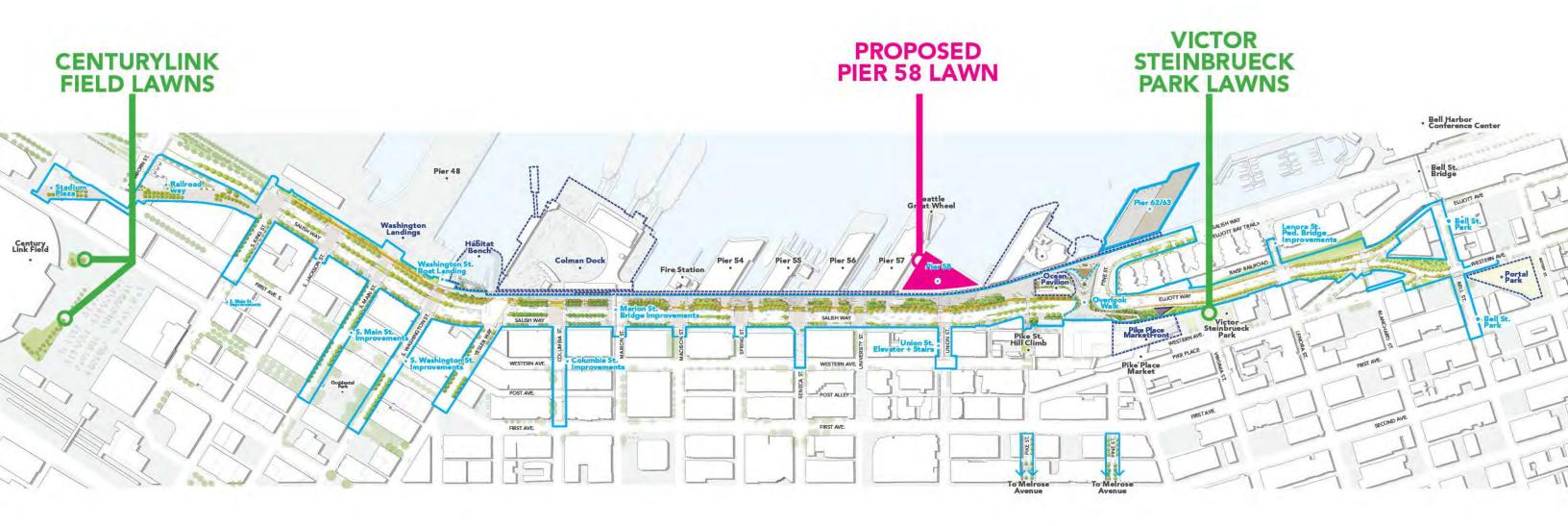
JAMES CORNER FIELD OPERATIONS

PIER 58

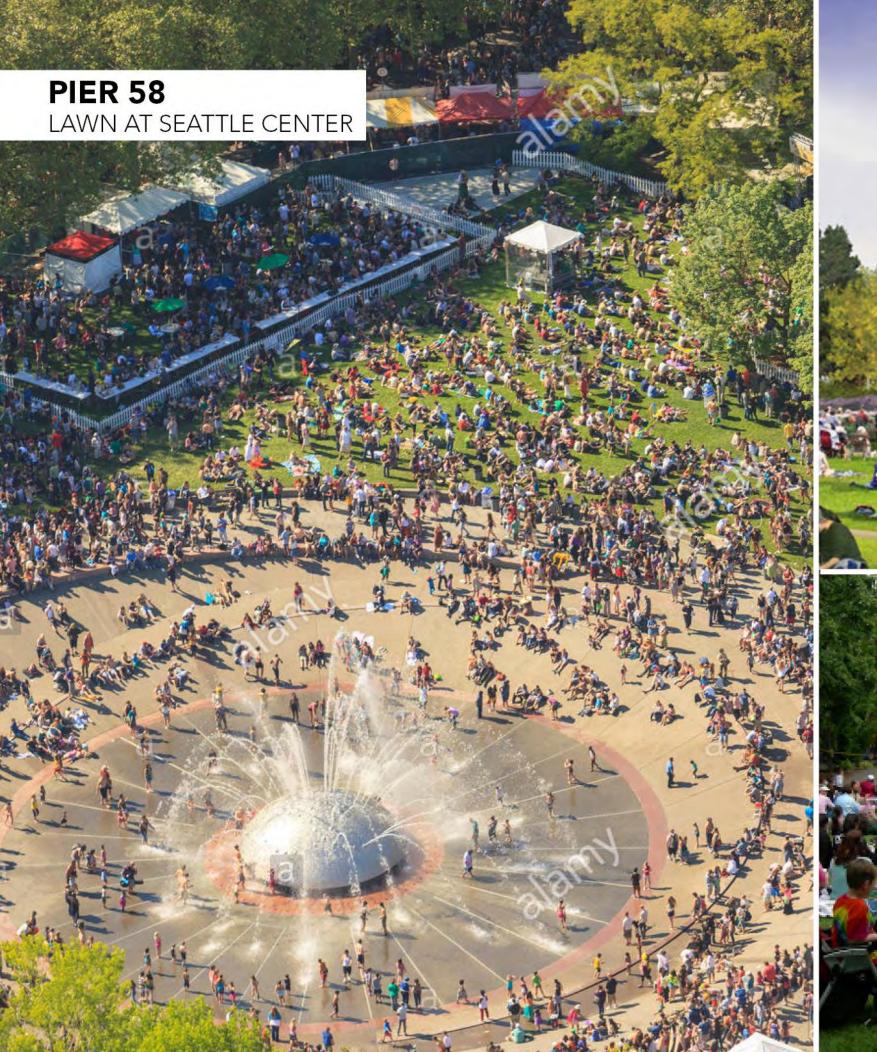
LAWN + STEPS



PIER 58
OTHER LAWNS DOWNTOWN























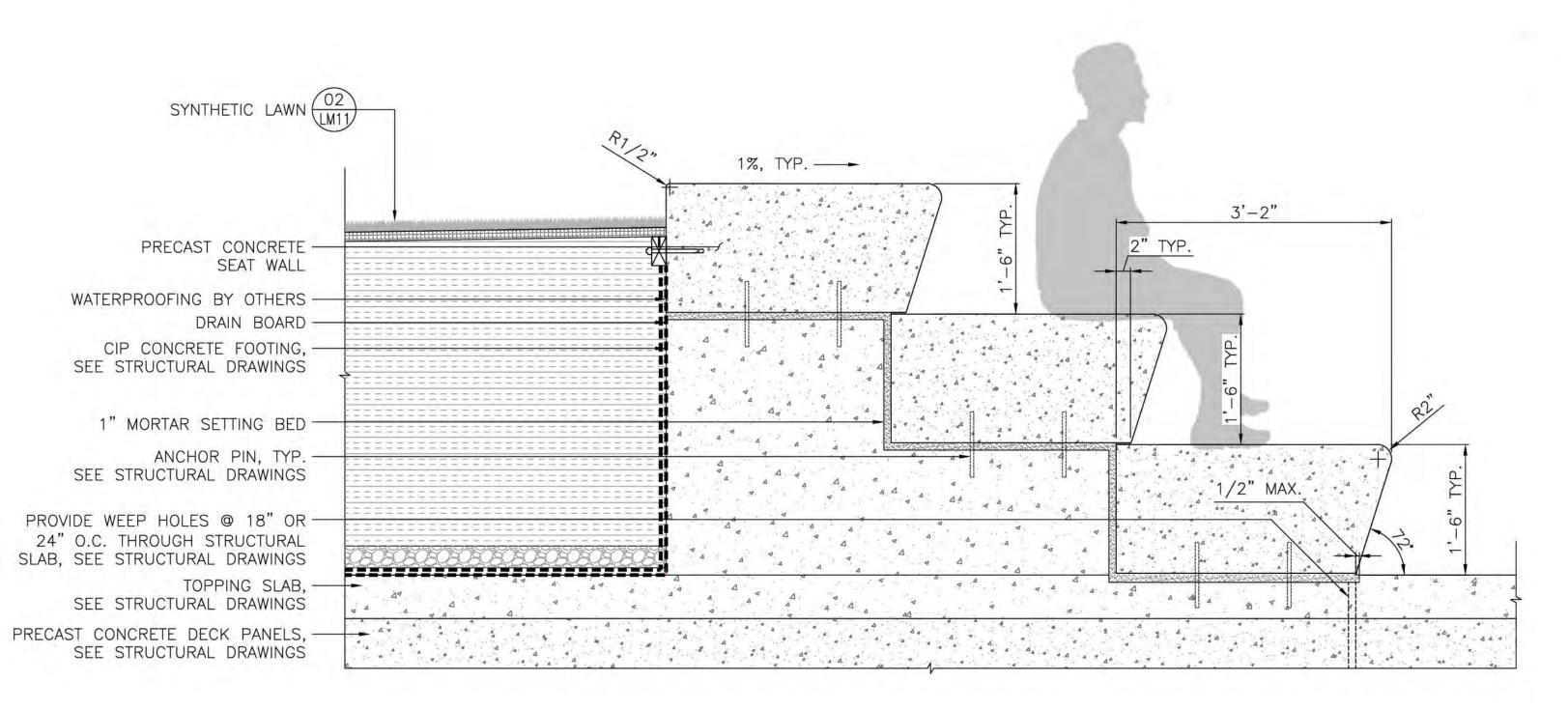




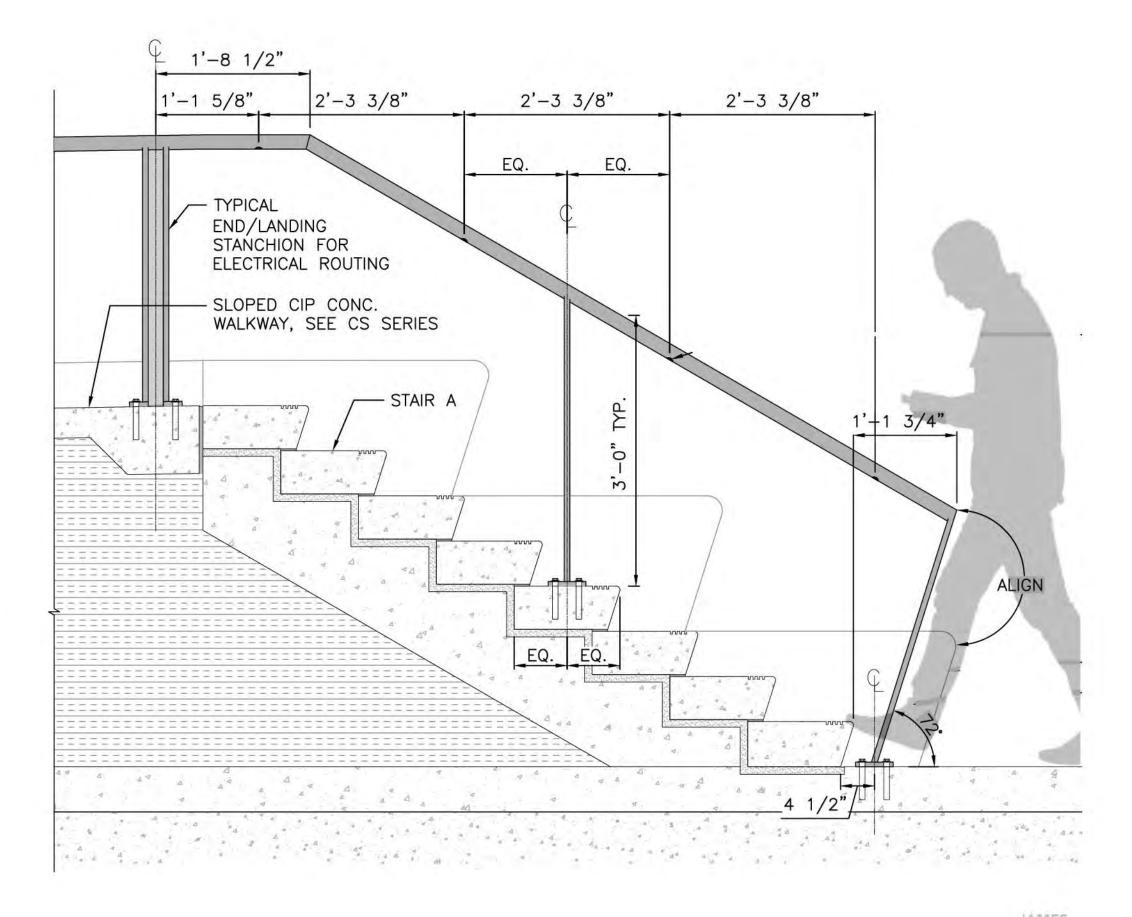


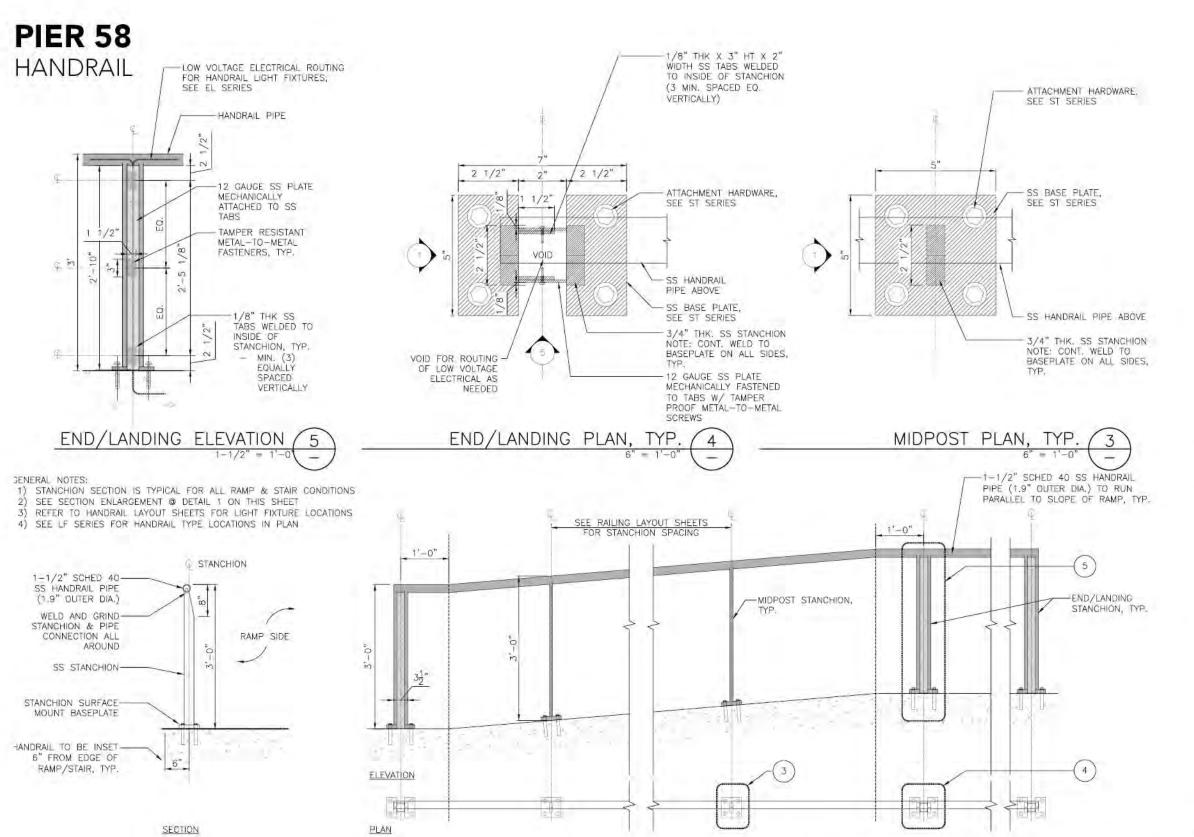
PIER 58

WESTERN SEATING STEPS

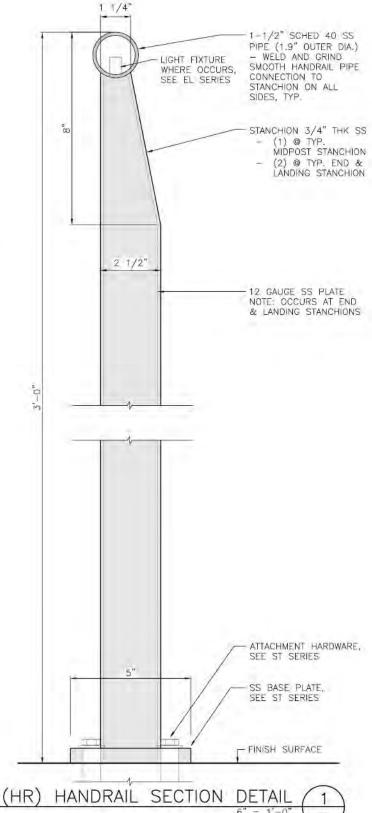


PIER 58
WESTERN STAIRS + HANDRAIL

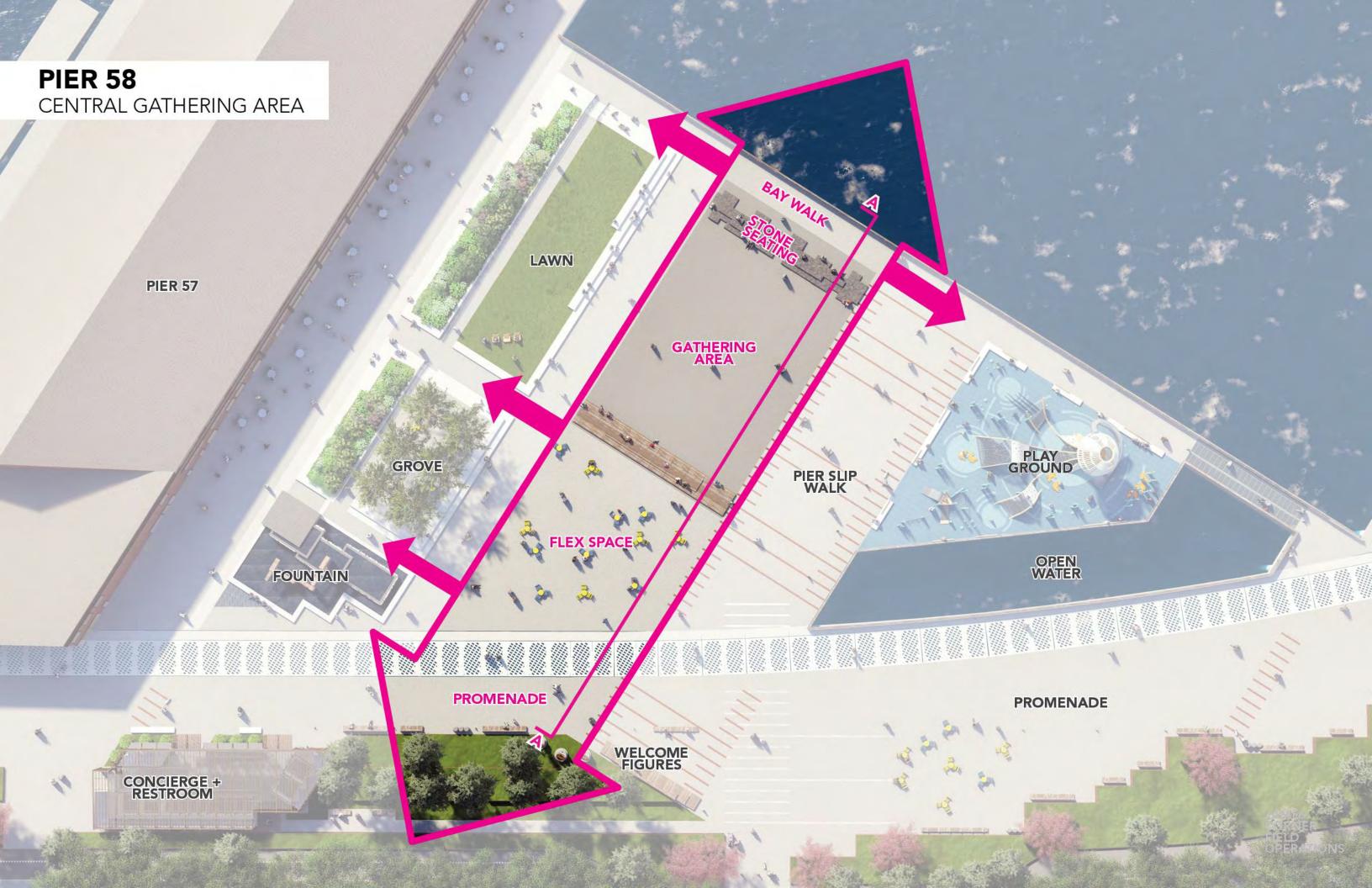




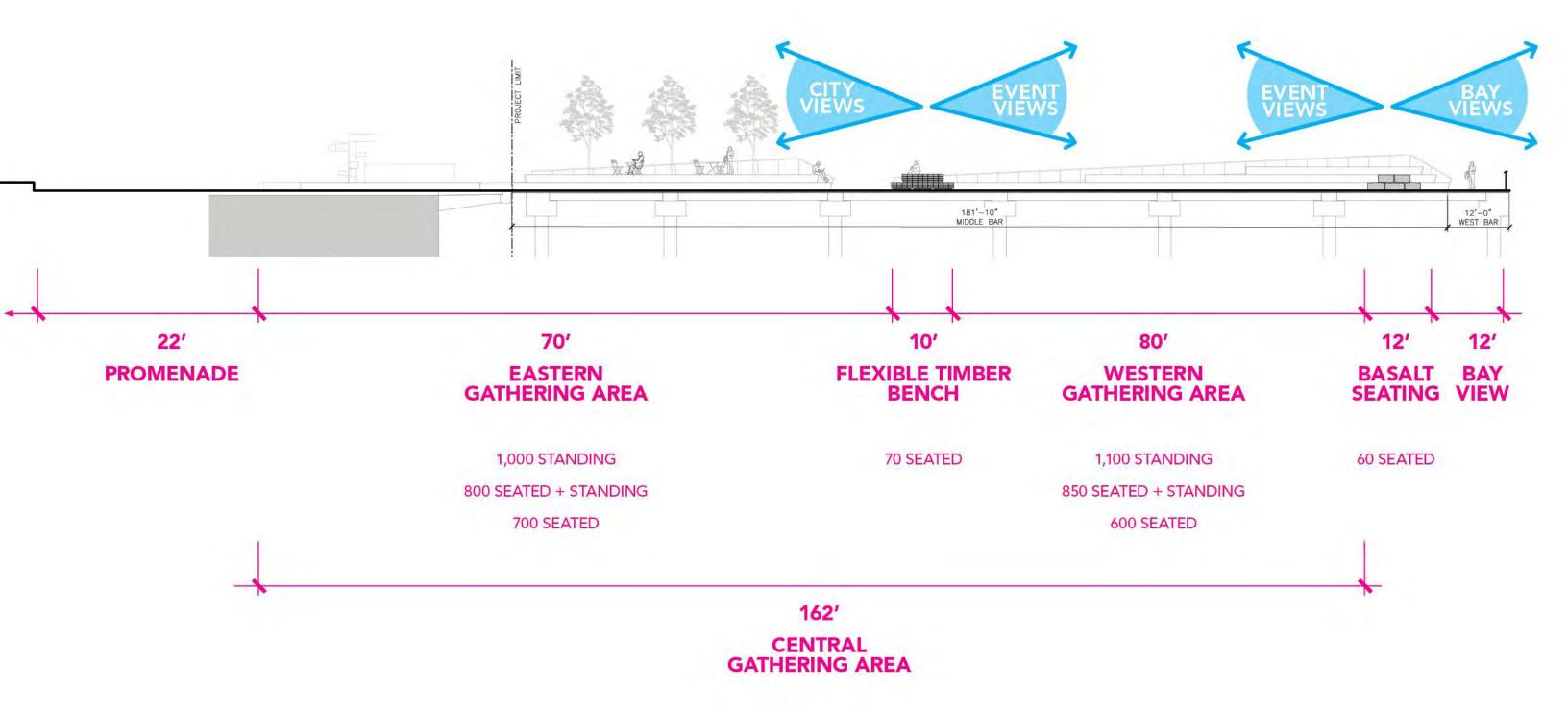
(HR) HANDRAIL TYPICAL DETAILS



CORNER FIELD OPERATIONS



PIER 58
CENTRAL GATHERING AREA

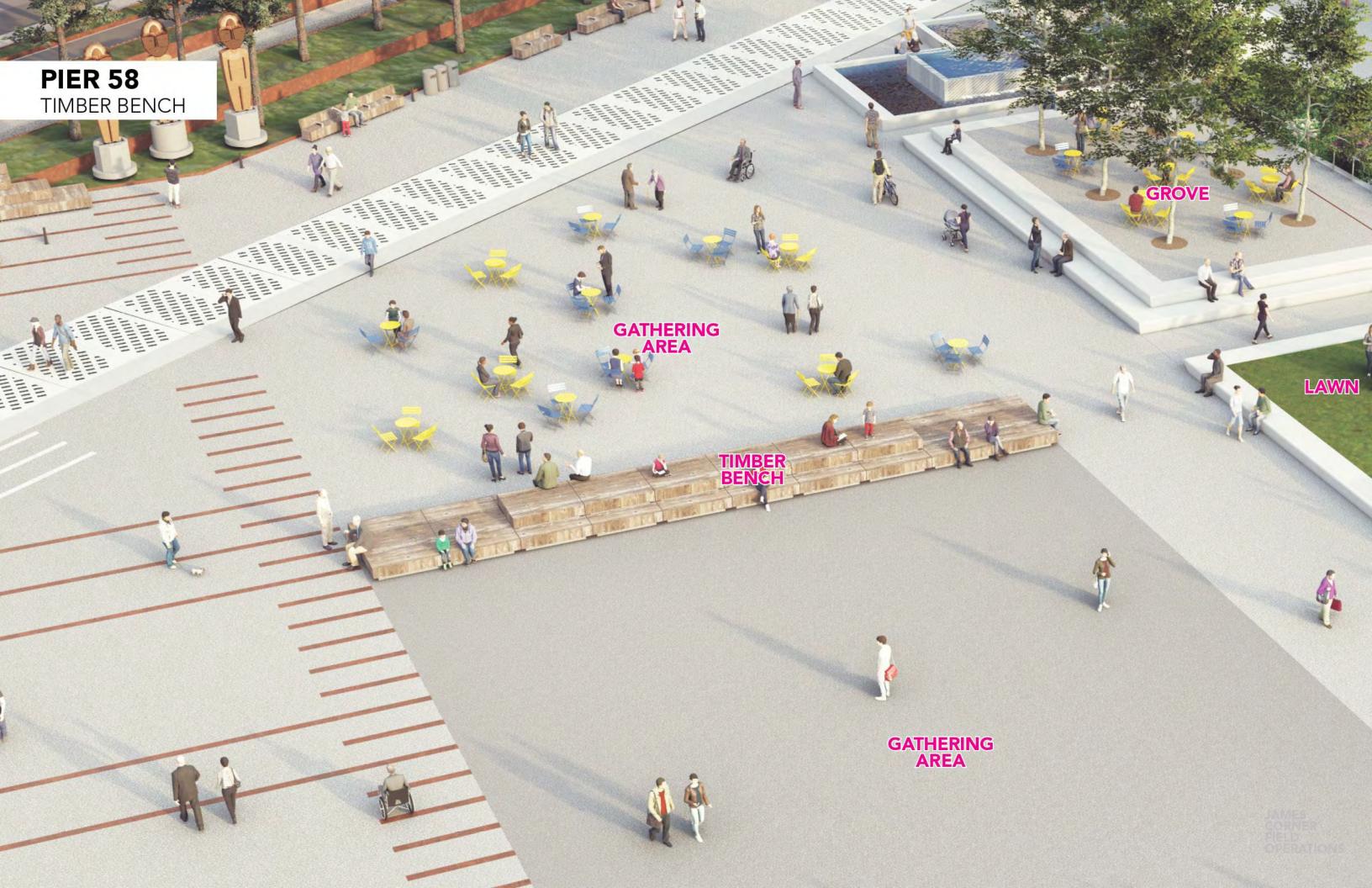


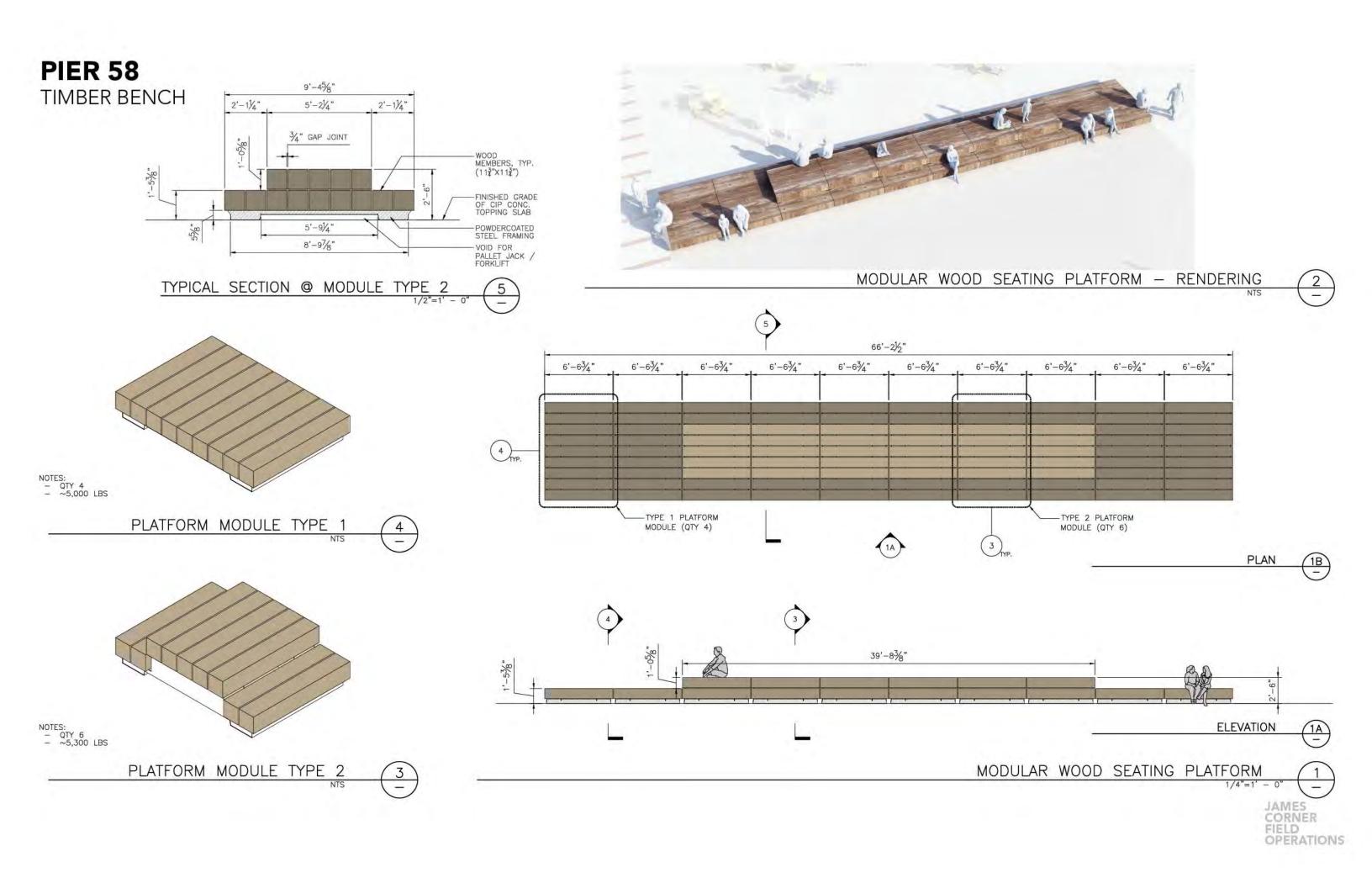
2,400 STANDING

1,800 SEATED + STANDING

1,200 SEATED

JAMES CORNER FIELD OPERATIONS

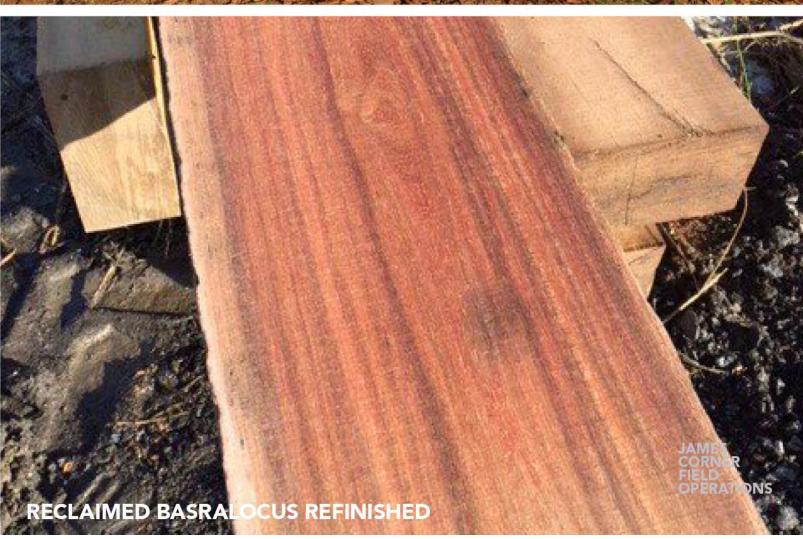






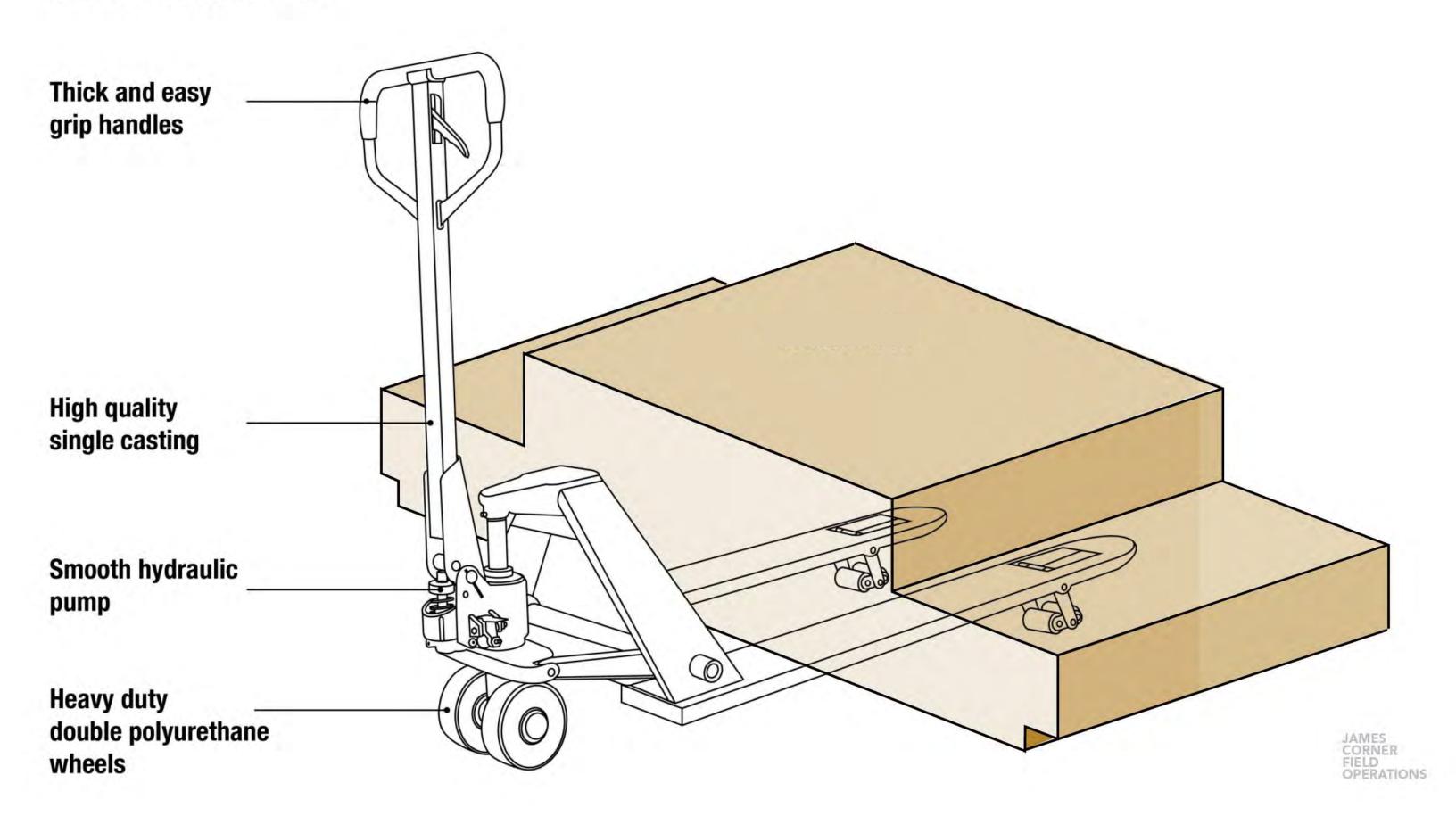






PIER 58

TIMBER BENCH PALLET JACK

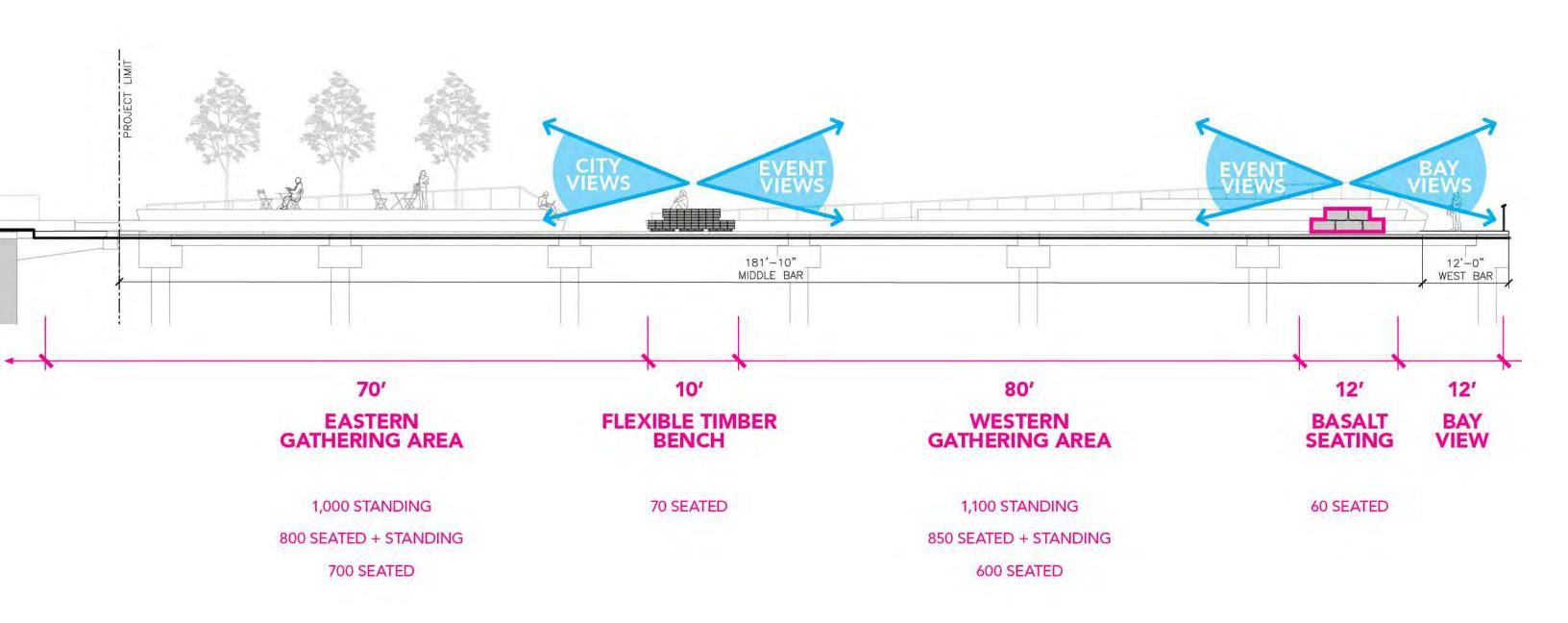


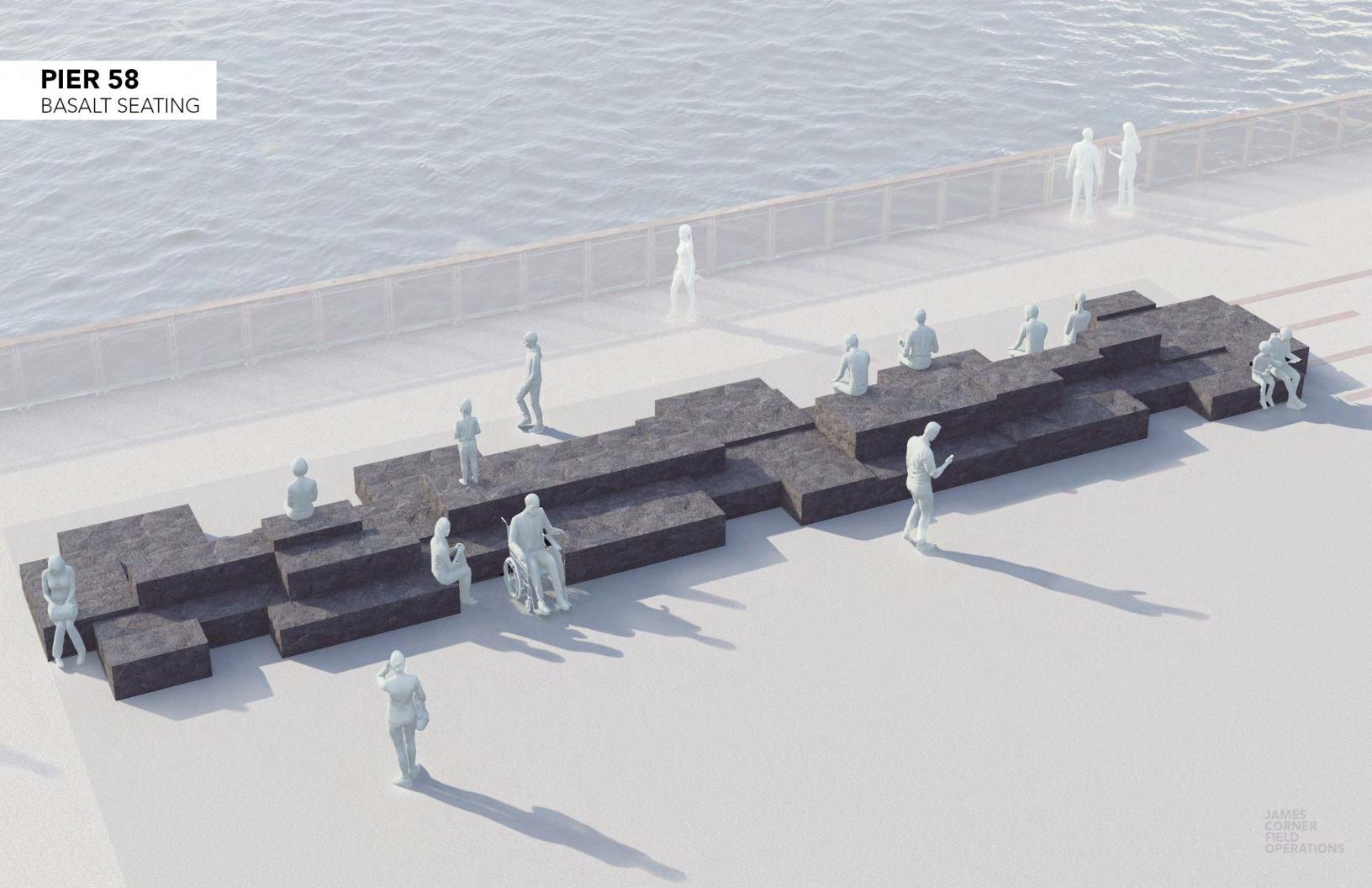


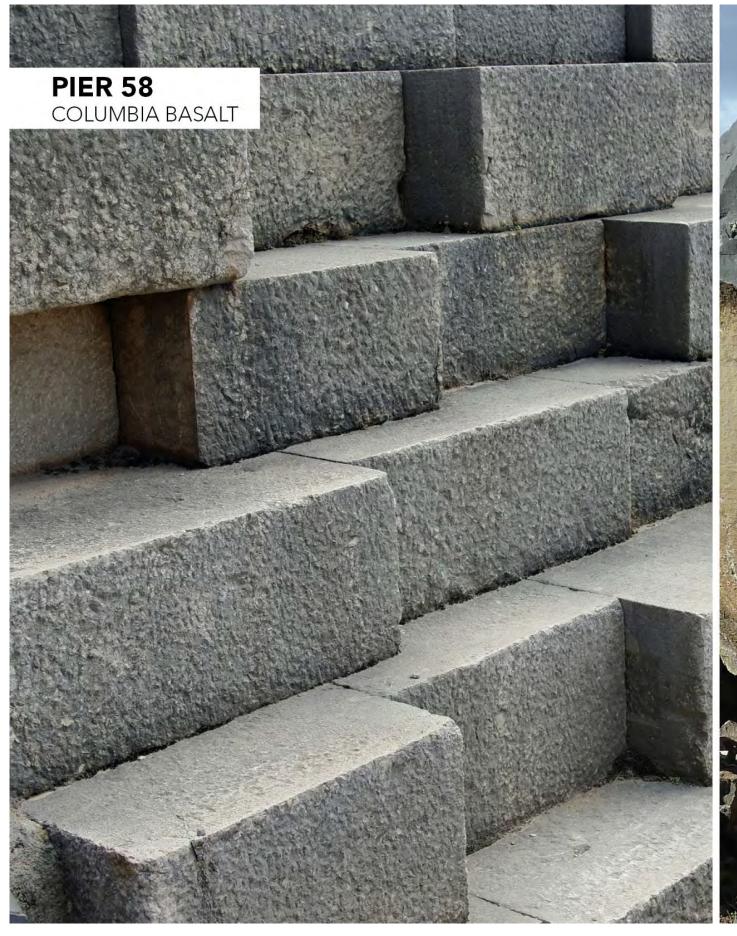




PIER 58 BASALT SEATING

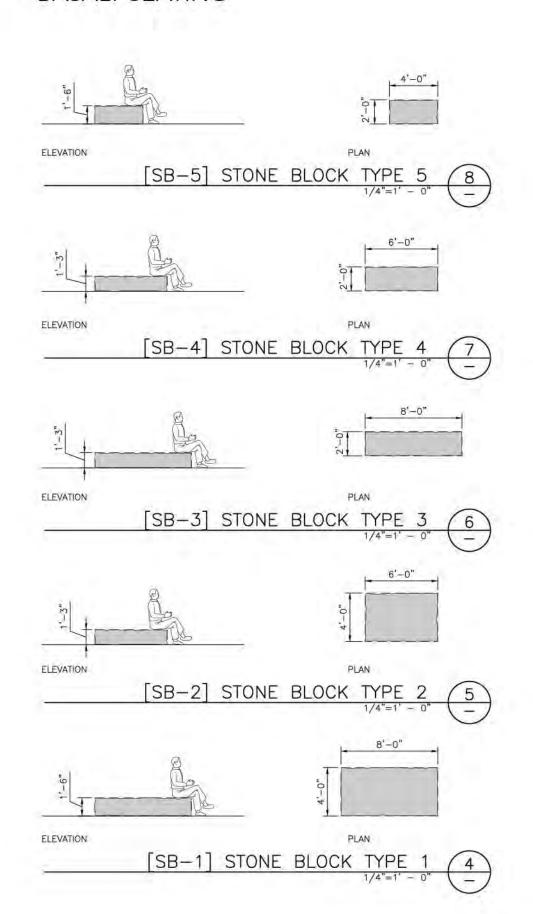


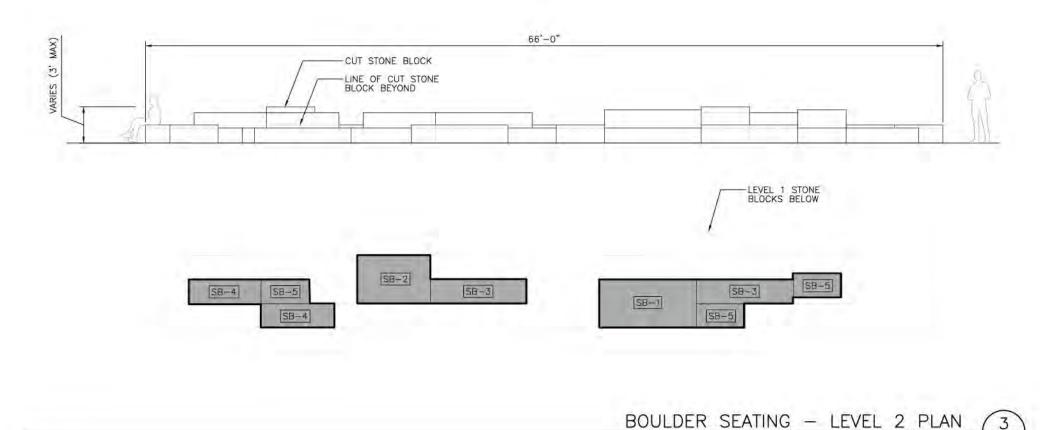


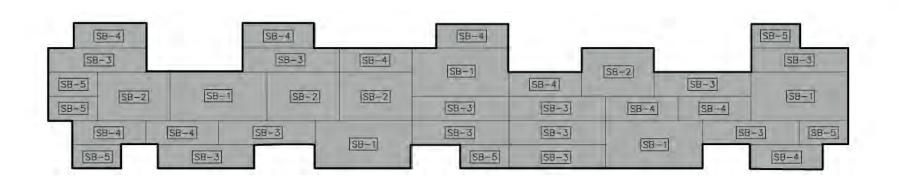


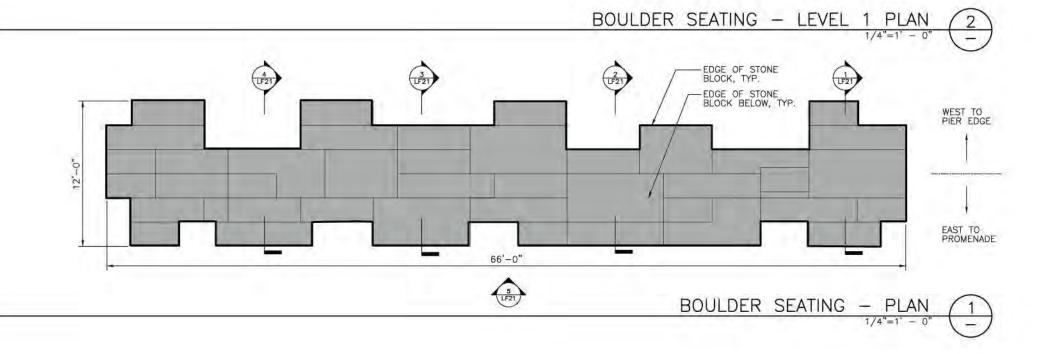


PIER 58 BASALT SEATING



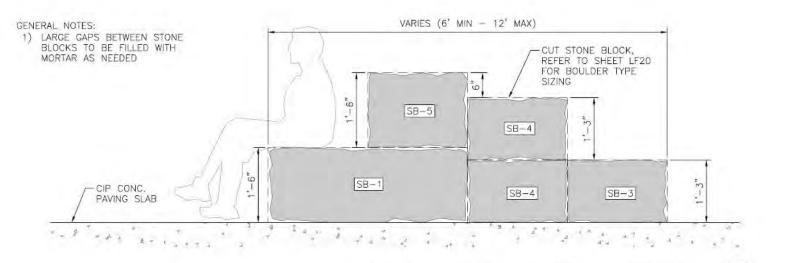


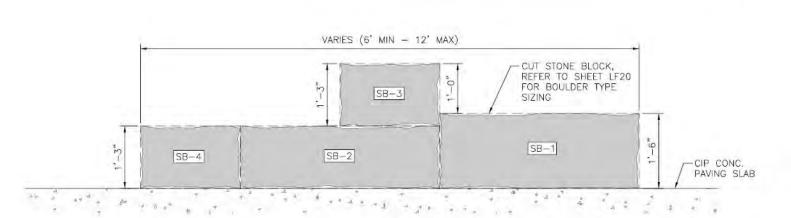




PIER 58

BASALT SEATING

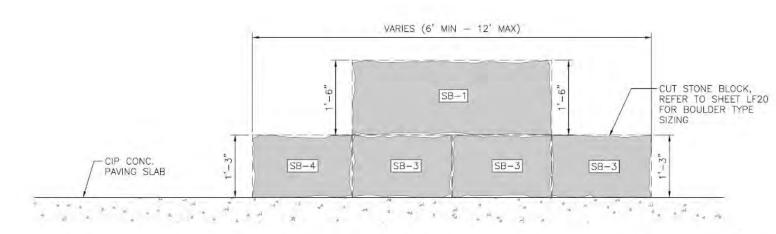




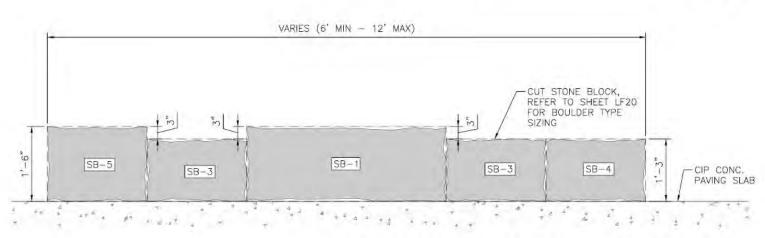


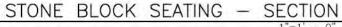
STONE BLOCK SEATING - SECTION























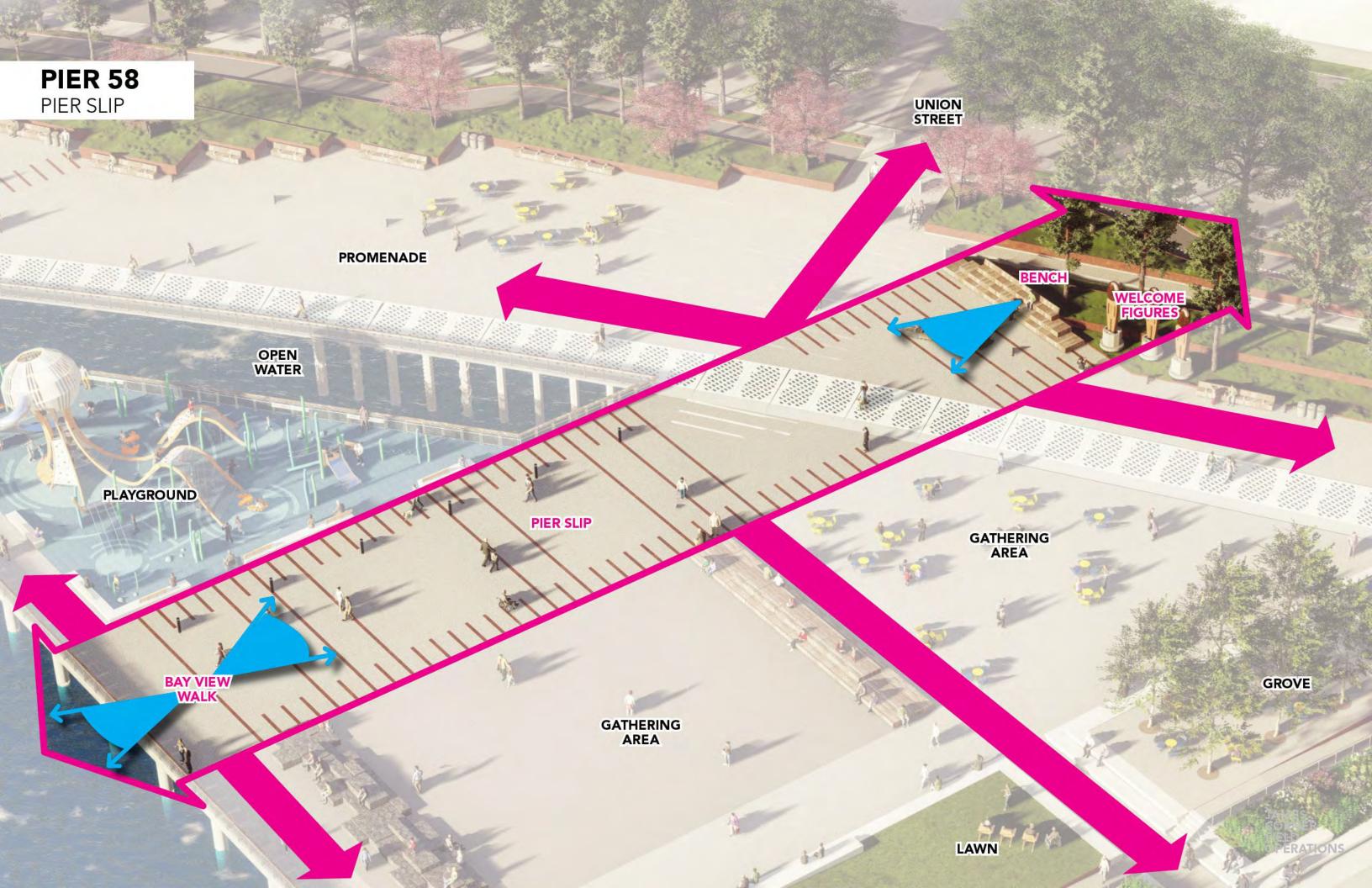




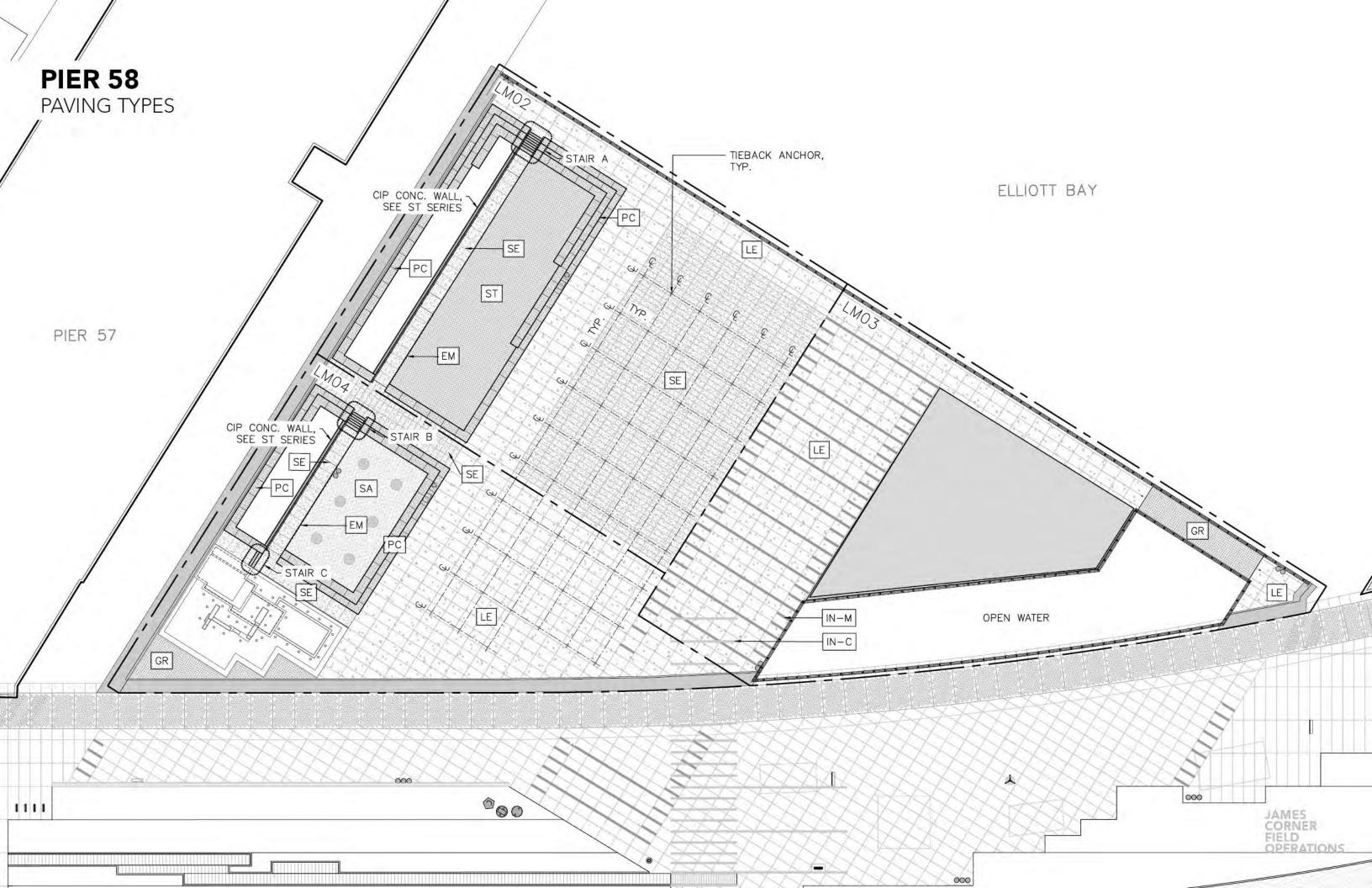


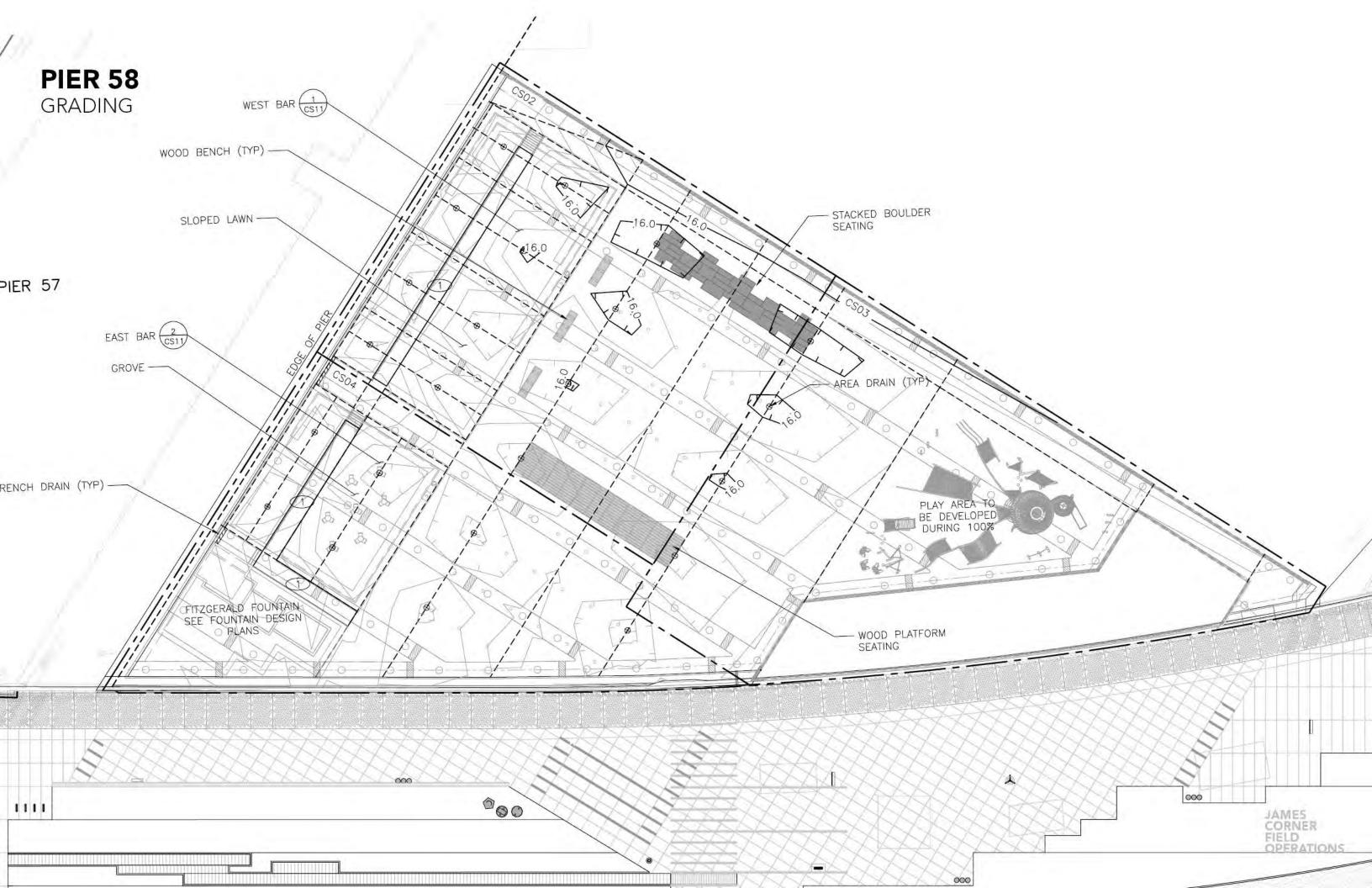




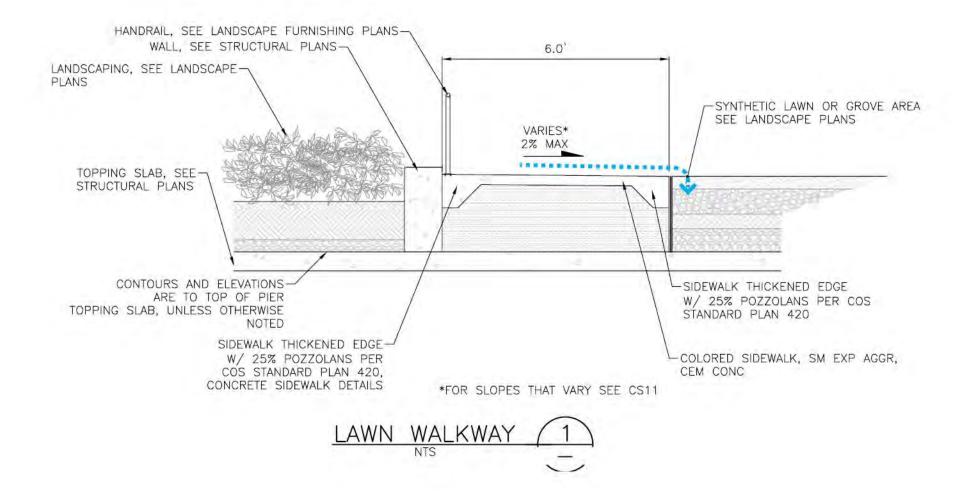


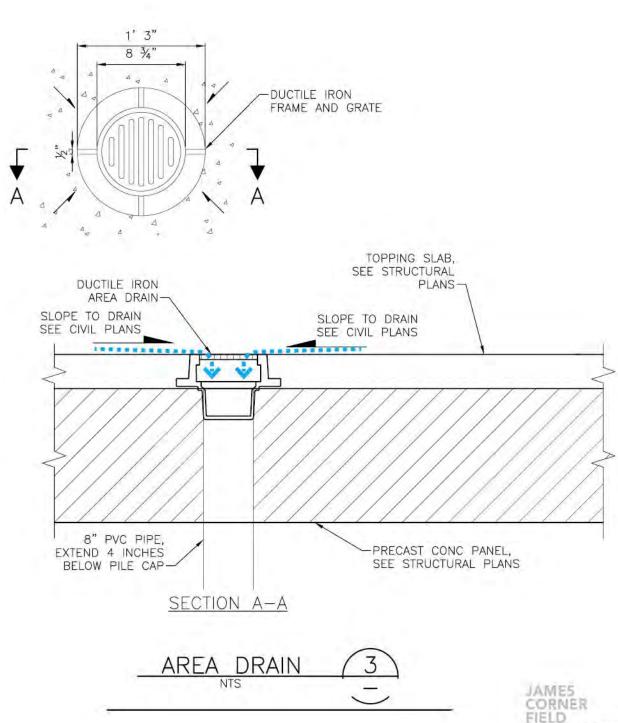






PIER 58 DRAINAGE

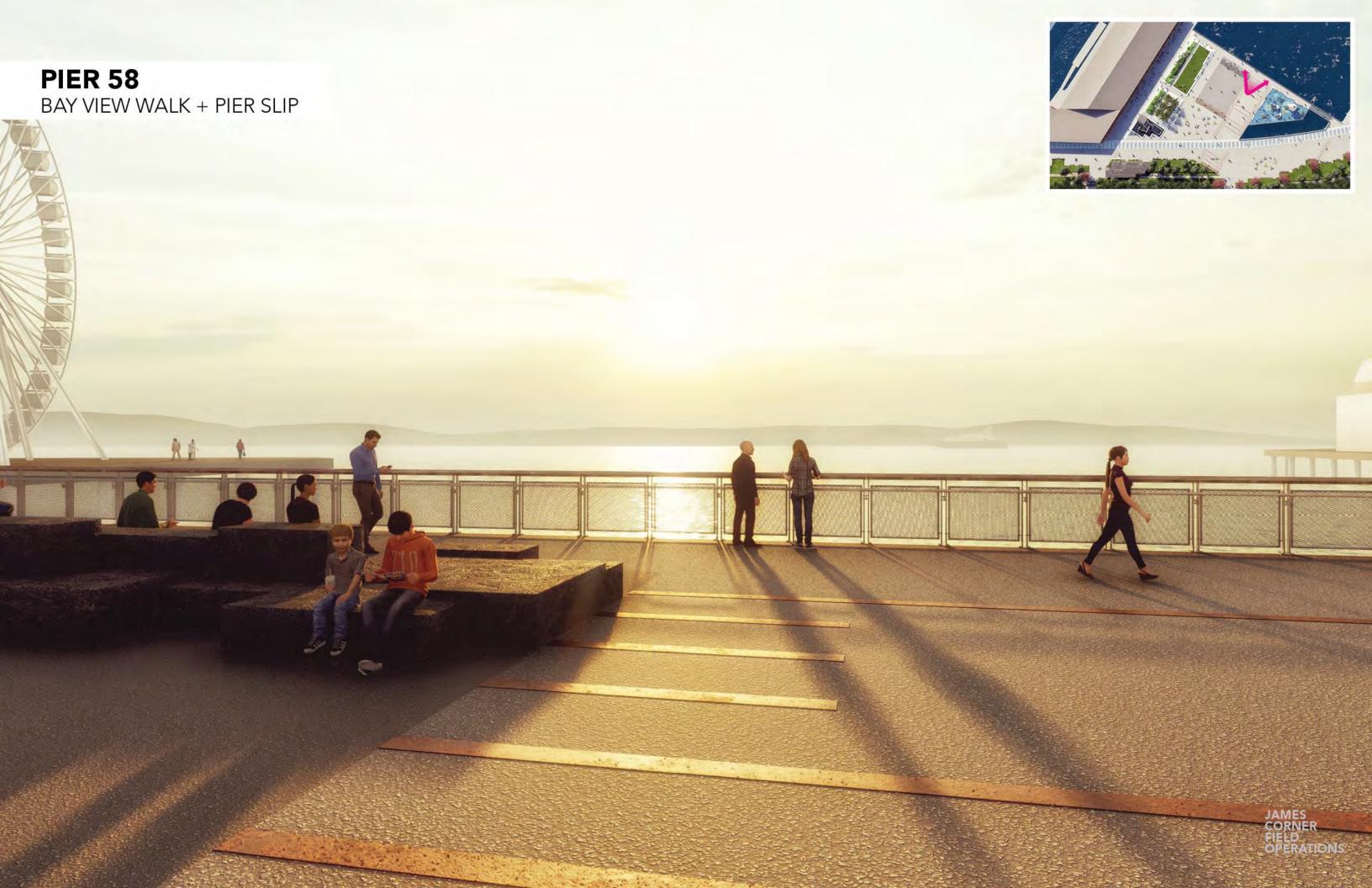




OPERATIONS

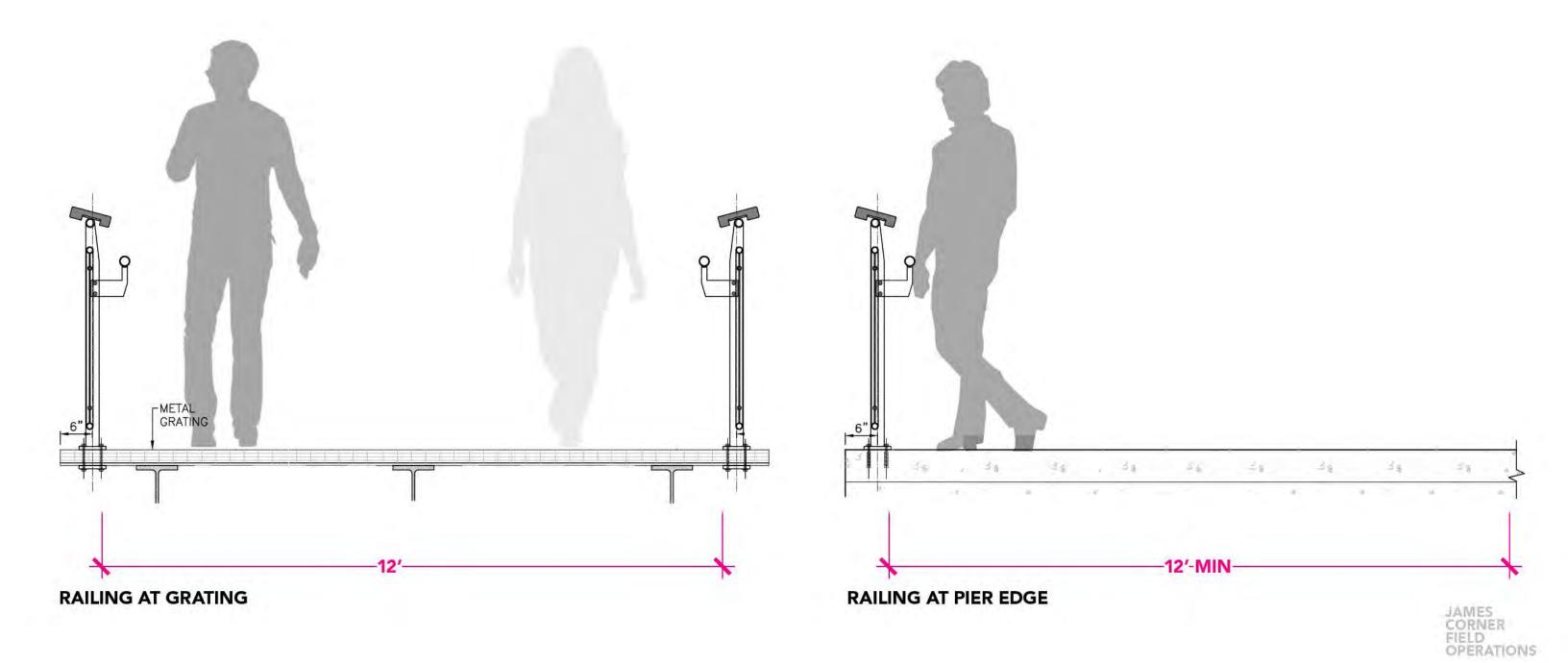




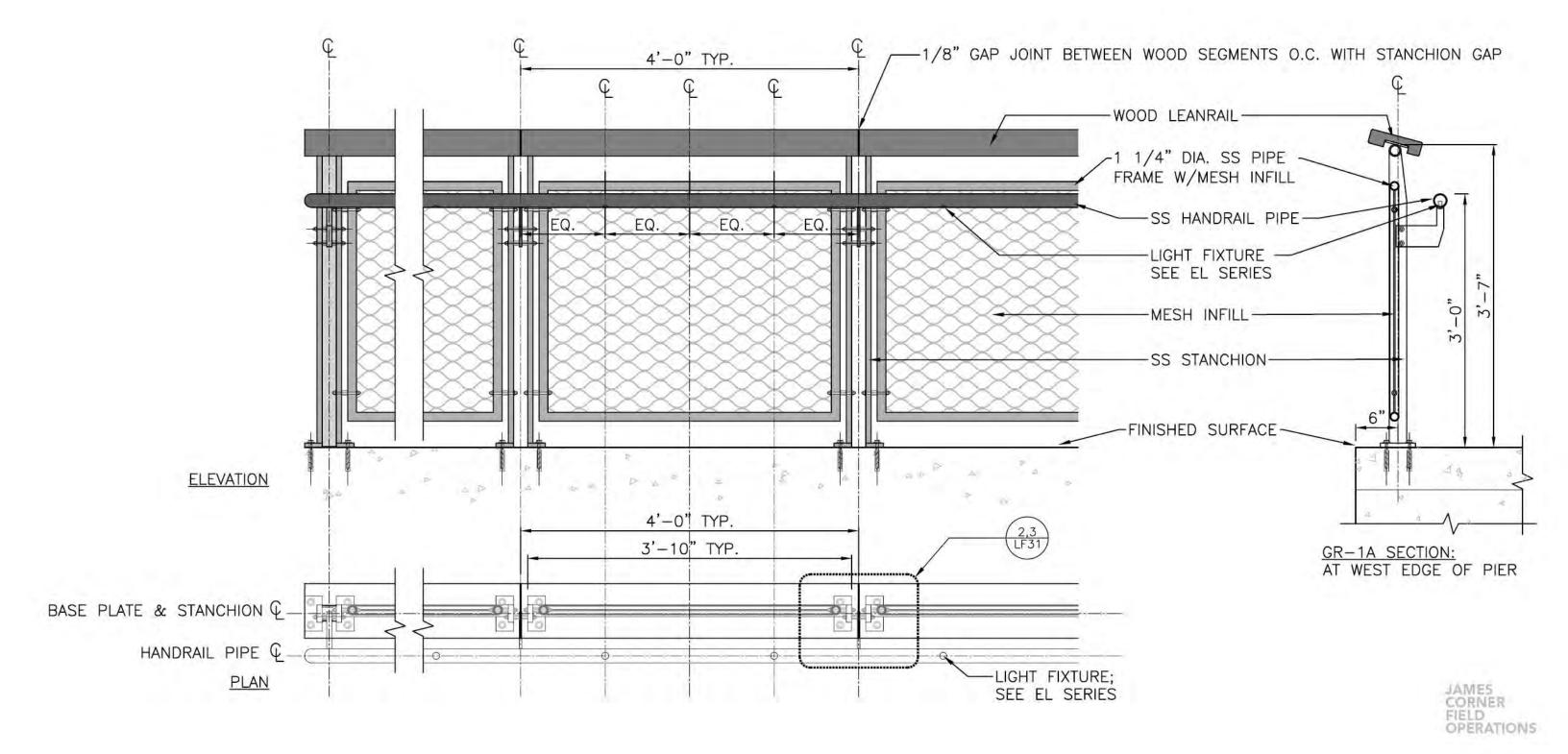


PIER 58 BAY VIEW WALK UNION STREET PROMENADE GROVE PIER 57 CENTRAL GATHERING PIER SLIP AREA LAWN PLAYGROUND PLAYGROUND SEATING AQUARIUM CONNECTOR BRIDGE BASALT STONE STEPS LAWN SEATING STEPS PIER 57 / GREAT WHEEL

PIER 58
GUARDRAIL TYPES



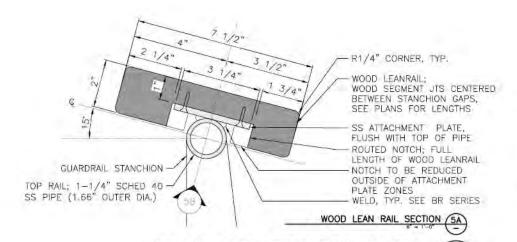
PIER 58
GUARDRAIL DETAILS

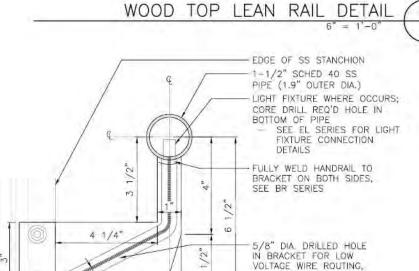


PIER 58

GUARDRAIL DETAILS

4 1/2"





3/4"

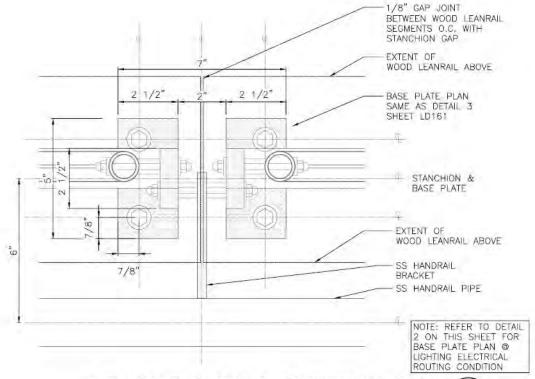
— 3/4" THK SS HANDRAIL BRACKET
WHERE REQUIRED FOR LIGHT
FIXTURE LV CABLE ROUTING
— 3/8" THK SS HANDRAIL
BRACKET AT ALL OTHER
LOCATIONS, TYP.

FASTENERS BETWEEN STANCHIONS & HANDRAIL BRACKET

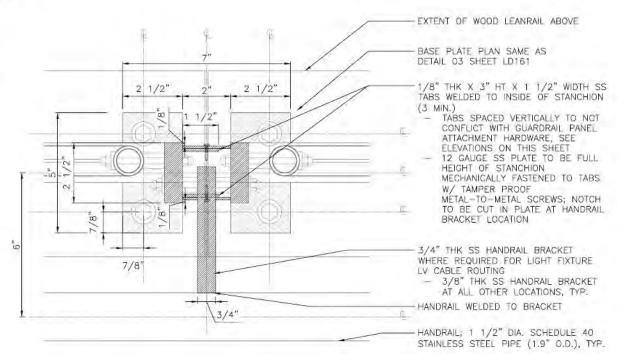
VERIFY DIA. WITH WIRE

HANDRAIL BRACKET DETAIL



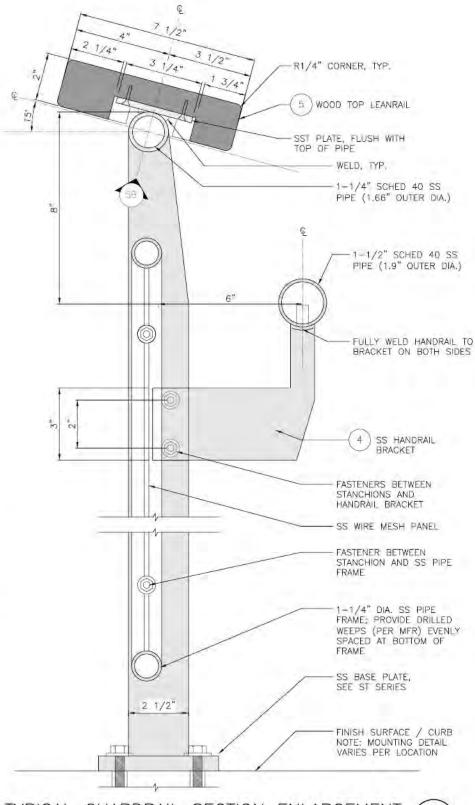


TYP. BASE PLATE & STANCHION PLAN



TYP. PLAN @ ELECTRICAL ROUTING CONDITION







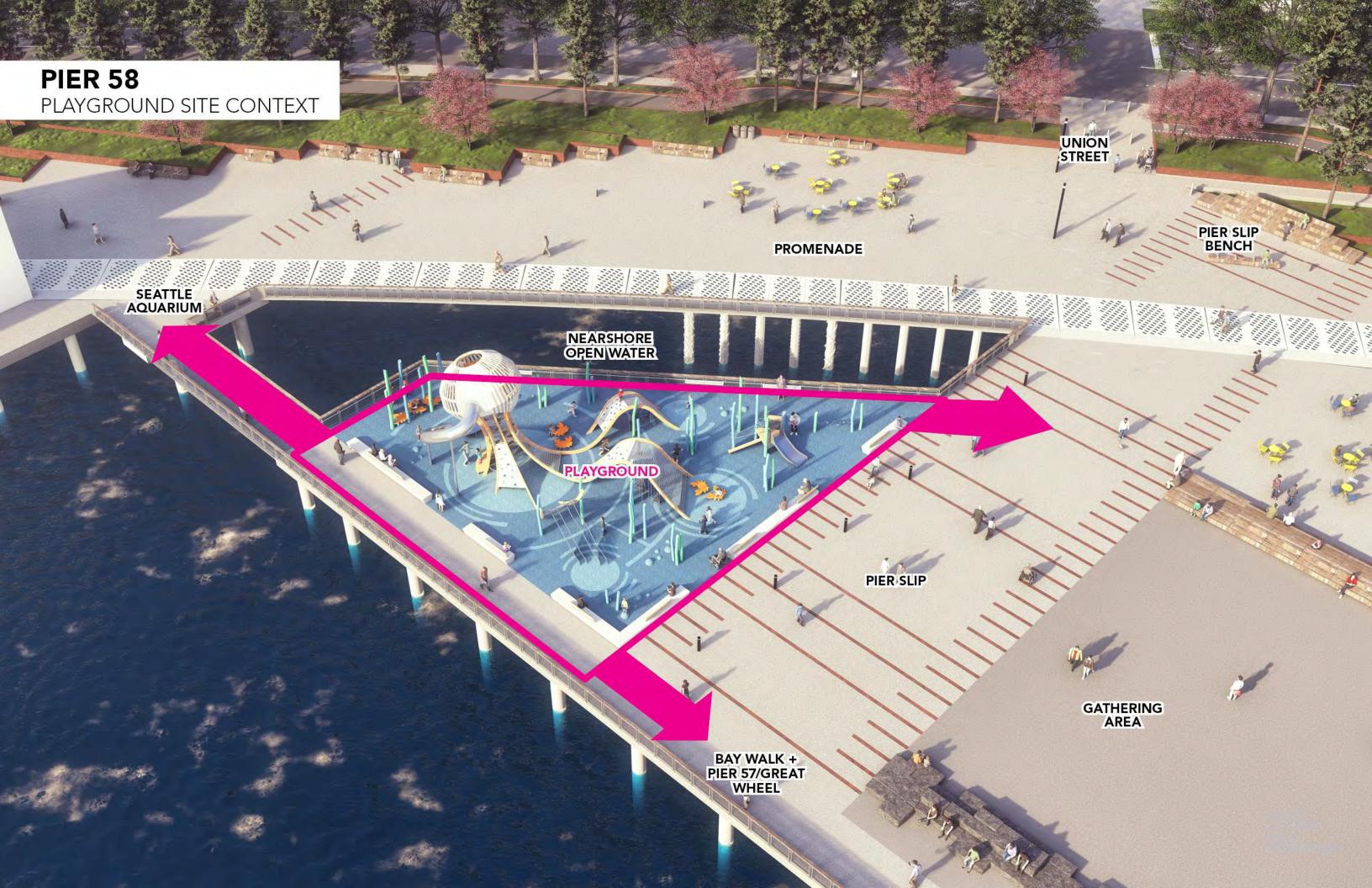




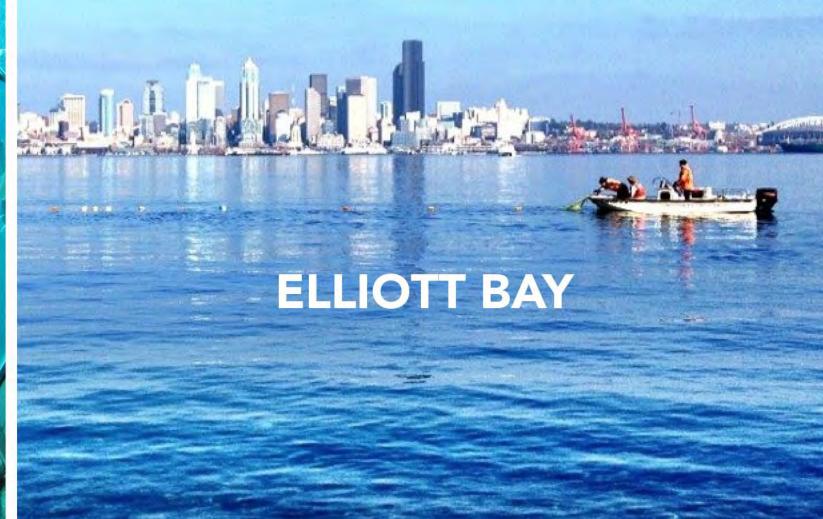


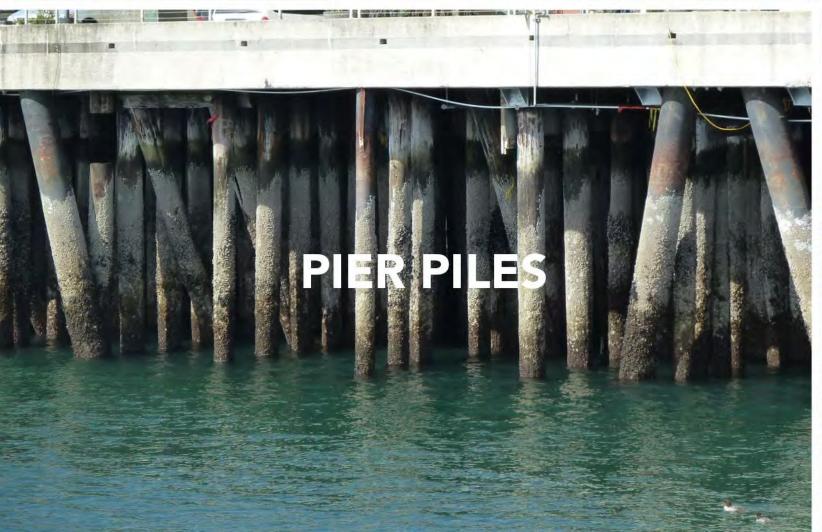


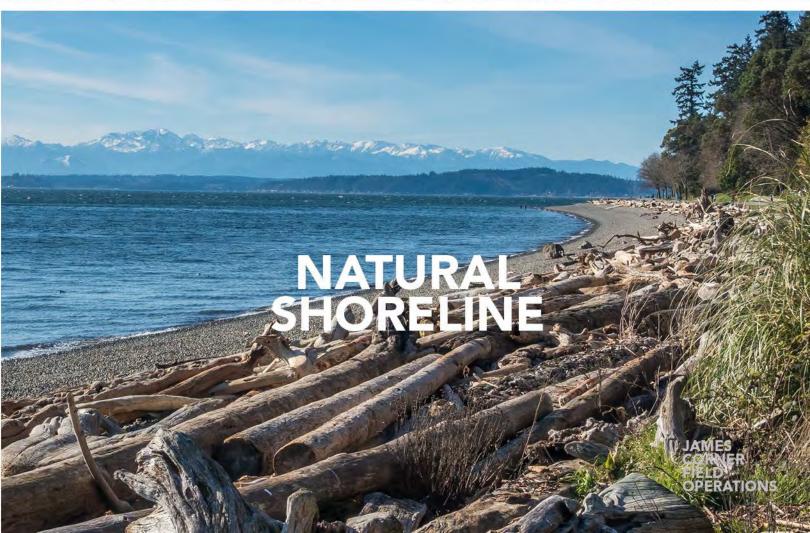
















As the waterfront continues to grow and evolve, your feedback is essential in creating the new experience. Now's your chance to provide feedback on th... See More



Help shape Pier 58's new park and playspace by taking the design survey! Located on downtown's waterfront, the 5,000-square-foot playground is one ele... See More

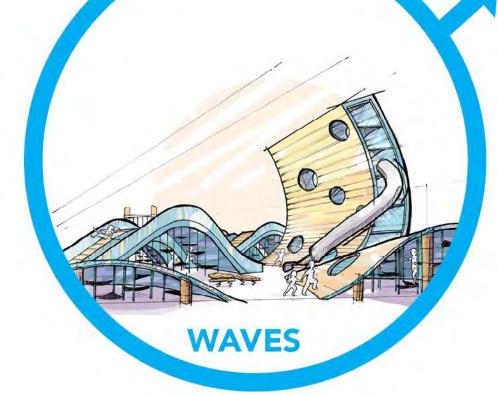


PIER 58 PLAYGROUND

DEVELOPMENT FROM 3 CONCEPTS



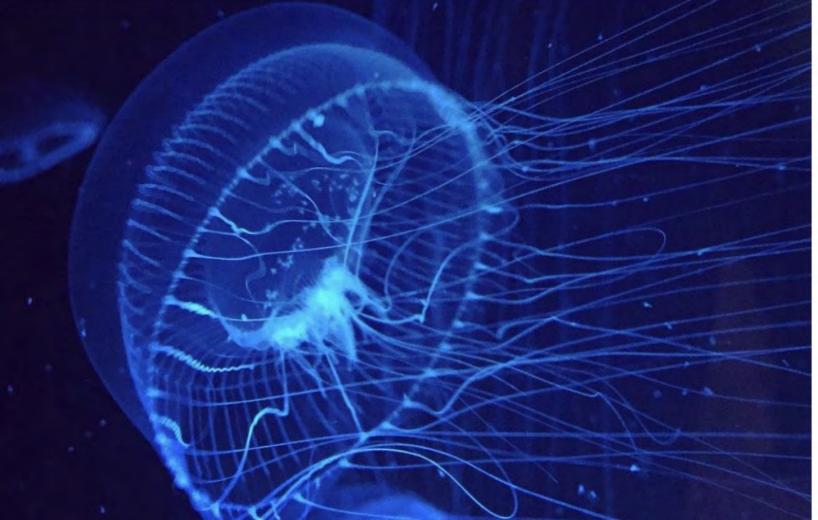




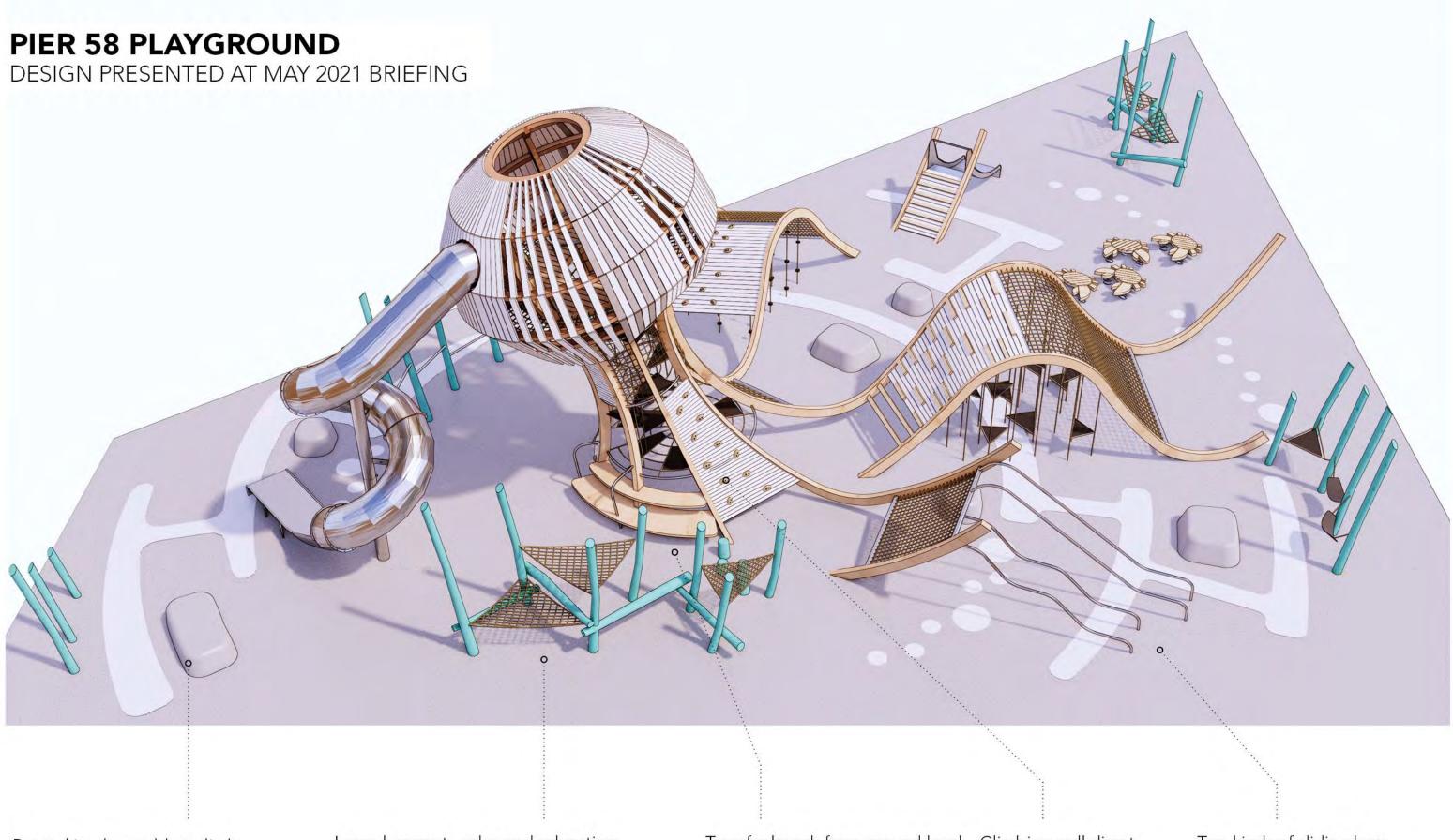












Poured in place rubber climbequipment and furniture, Seating Large hangout - relax and education (aquarium)

 with climbing logs and triangle rope nets facing Elliott bay Transfer bench from ground level to the 1st spider web in the Jelly tower Climbing wall direct access to 2nd level in Jelly tower

Two kinds of sliding bars

PIER 58 PLAYGROUND

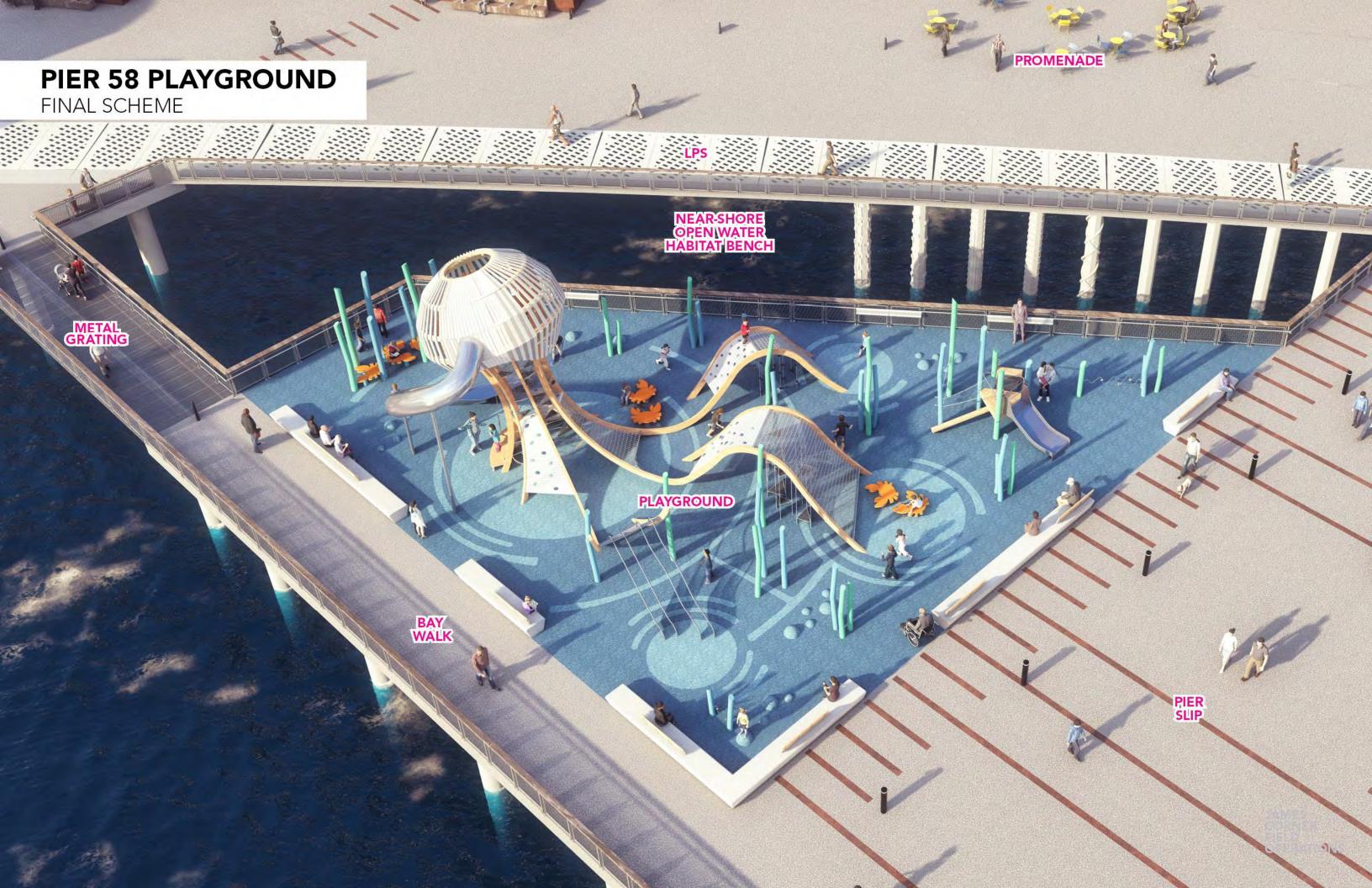
SDC COMMENTS FROM MAY 2021 BRIEFING

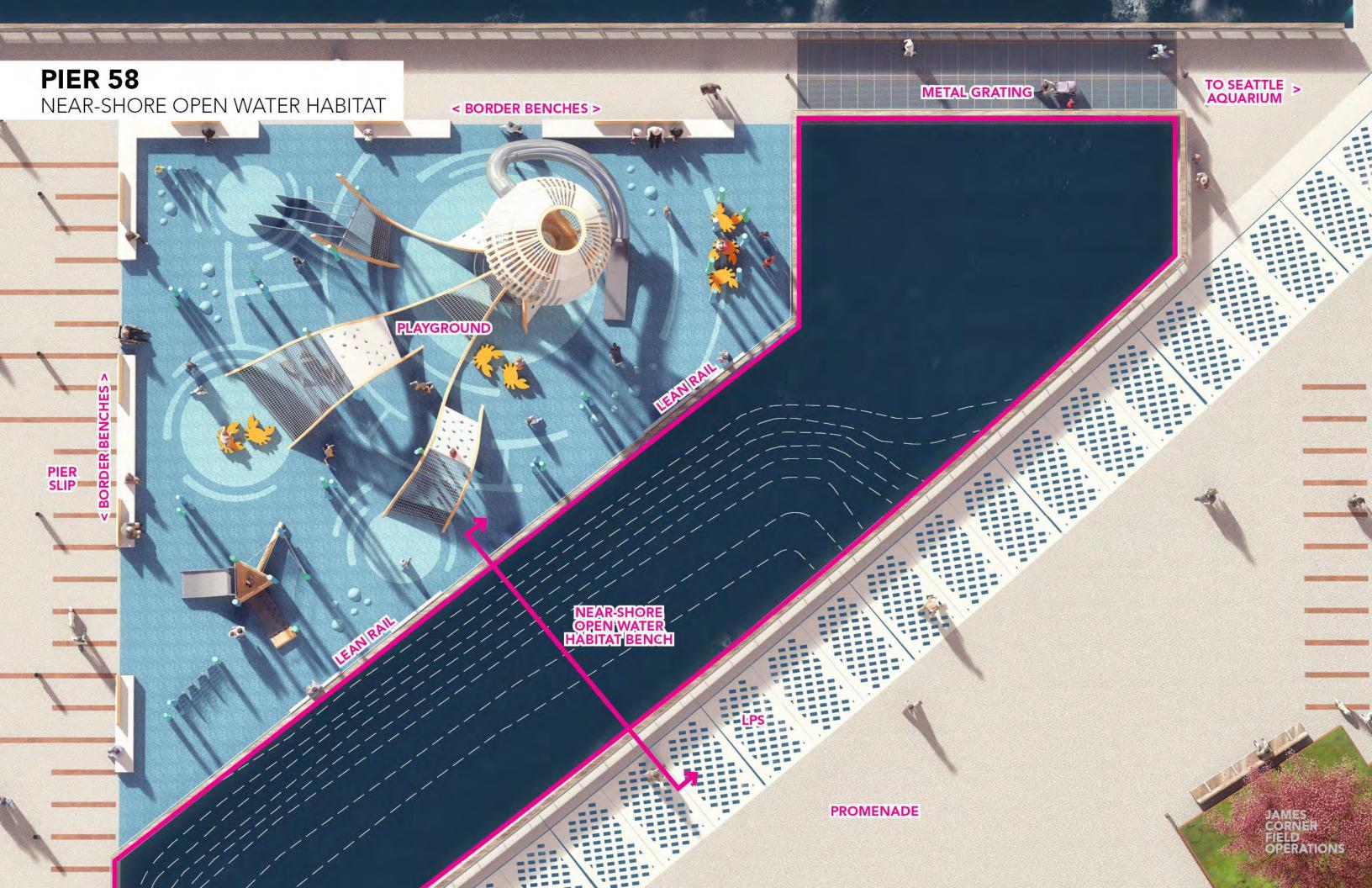
- TOP OF THE JELLY FISH SHOULD BE AS OPEN AS POSSIBLE
- PROVIDE SEATING AROUND THE PERIMETER FOR CAREGIVERS WHO DO NOT WANT TO JOIN IN THE PLAY
- PROVIDE BACKRESTS ON THE ADULT SEATING, EVEN IF IT IMPACTS THE POROSITY OF THE SITE
- PROVIDE REGULAR SLIDES, NOT JUST RAIL SLIDES, AND SMALLER SLIDES IN ADDITION TO THE BIG ONES
- CONSIDER HOW A PERSON IN A WHEELCHAIR WOULD MOVE THROUGH OR UNDER THE WAVE AREA
- REFINE THE SLIDE DESIGN TO MAKE THE STRUCTURAL SOLUTION MORE ELEGANT
- PROVIDE SEATING FOR KIDS ALONG THE PERIPHERY FOR THOSE WHO DON'T WANT TO MOVE INTO THE FRAY
- PROVIDE A POP OF COLOR TO GUIDES KIDS THROUGH THE SITE
- ANALYZE WHETHER THERE IS ENOUGH SPACE FOR PEOPLE ALONG THE RAILINGS TO COME AND LOOK AT THE WATER
- AT THE 90% DESIGN, ALLOW ENOUGH TIME TO DISCUSS THIS ELEMENT OF THE PIER 58 PLANS

PIER 58 PLAYGROUND

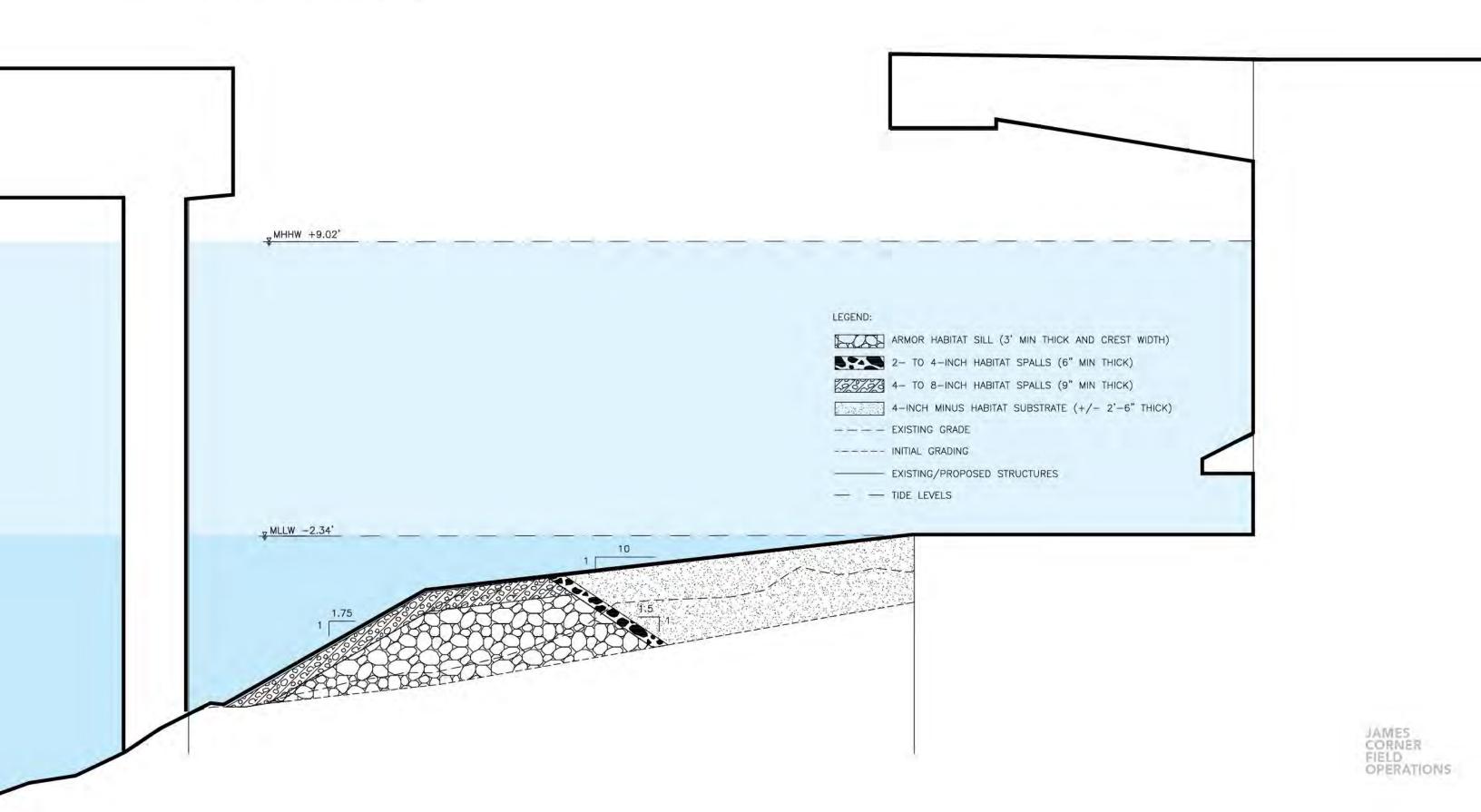
PARK'S AND ADA COMMENTS

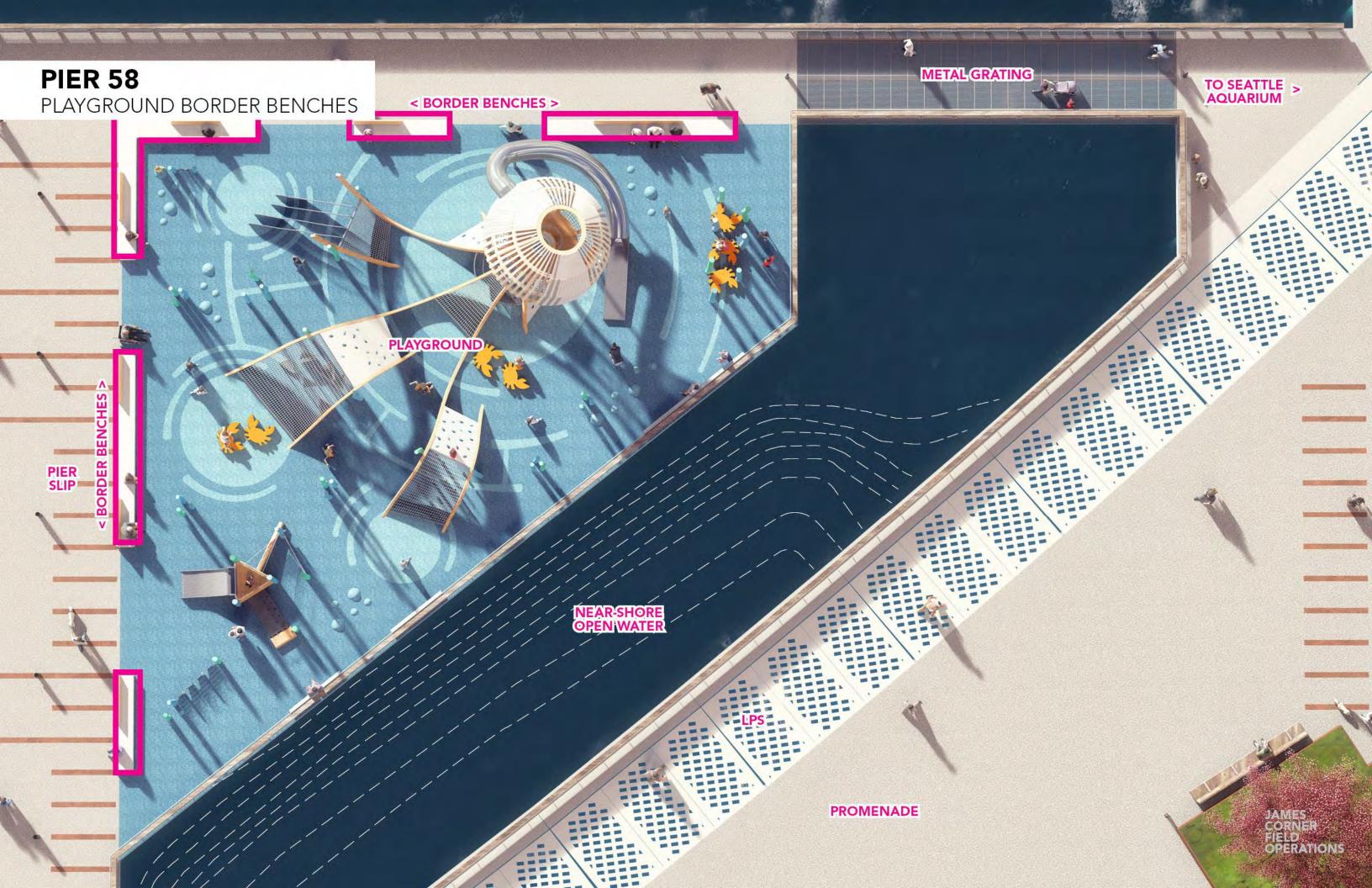
- LONG TERM MAINTENANCE STRATEGY SHOULD ENSURE SAFETY AND INTEGRITY OF OVERALL PLAY STRUCTURE
- ENSURE ALL EQUIPMENT AND SURFACES COMPLY WITH ASTM AND ADA CODES
- PROVIDE FOOTING AND ATTACHMENT DETAILS
- ENSURE WOOD DOES NOT SPLINTER OR ROT IN MARINE ENVIRONMENT
- INCLUDE TRANSFER STATIONS TO FACILITY CHILDREN IN WHEELCHAIRS
- IDENTIFY FALL HEIGHTS AND ENSURE SAFETY SURFACING MEETS REQUIREMENTS.
- PROVIDE STRUCTURAL CERTIFICATION OF ALL PLAY EQUIPMENT





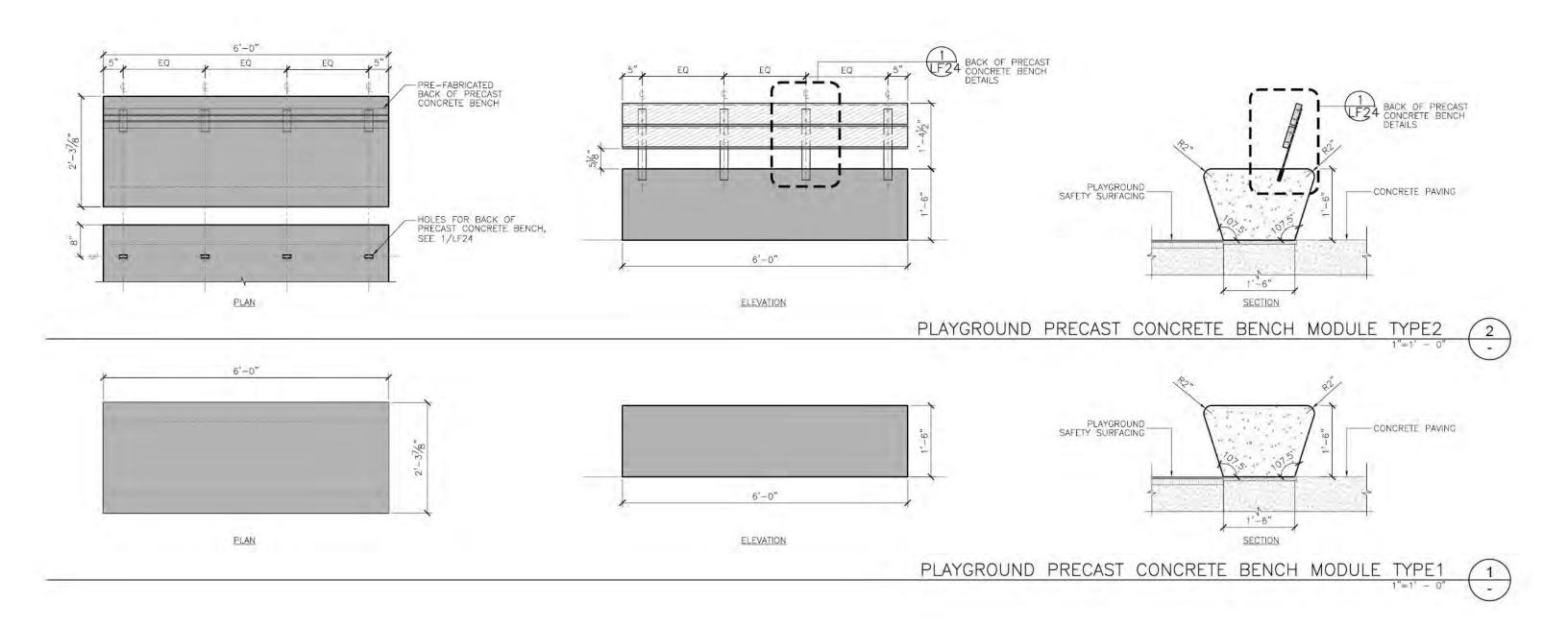
PIER 58 NEAR-SHORE OPEN WATER HABITAT

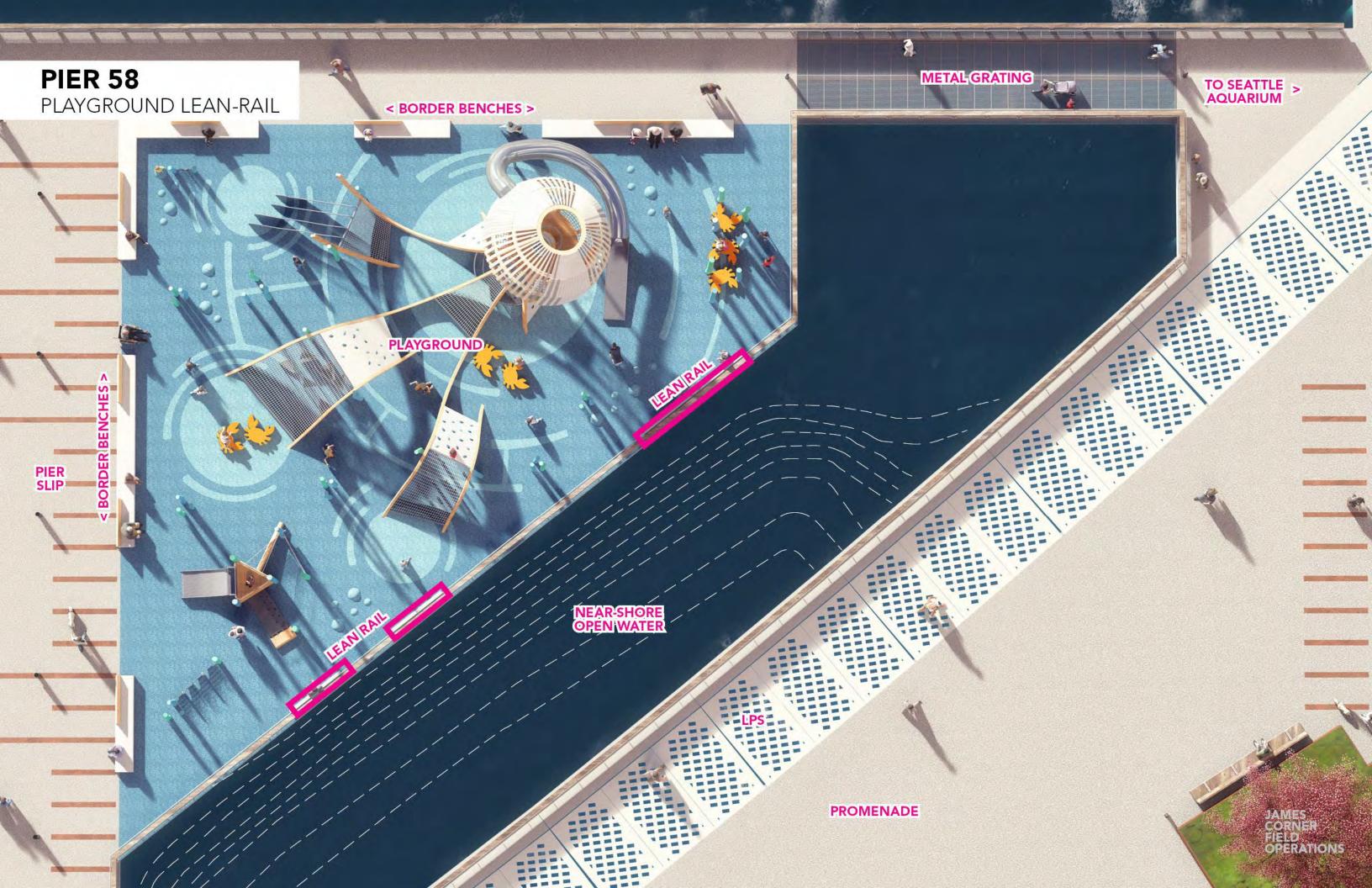




PIER 58

PLAYGROUND BORDER BENCHES



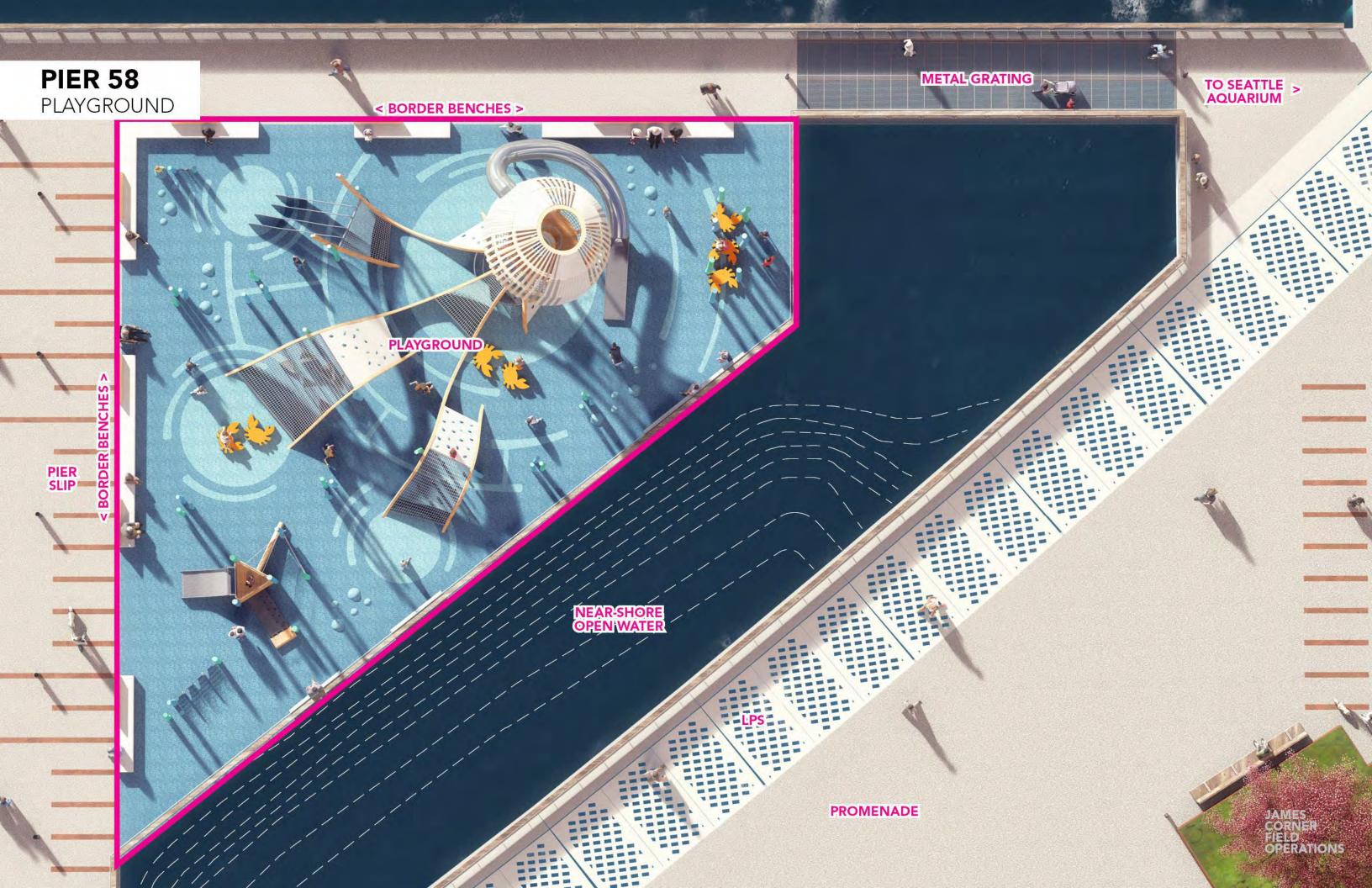




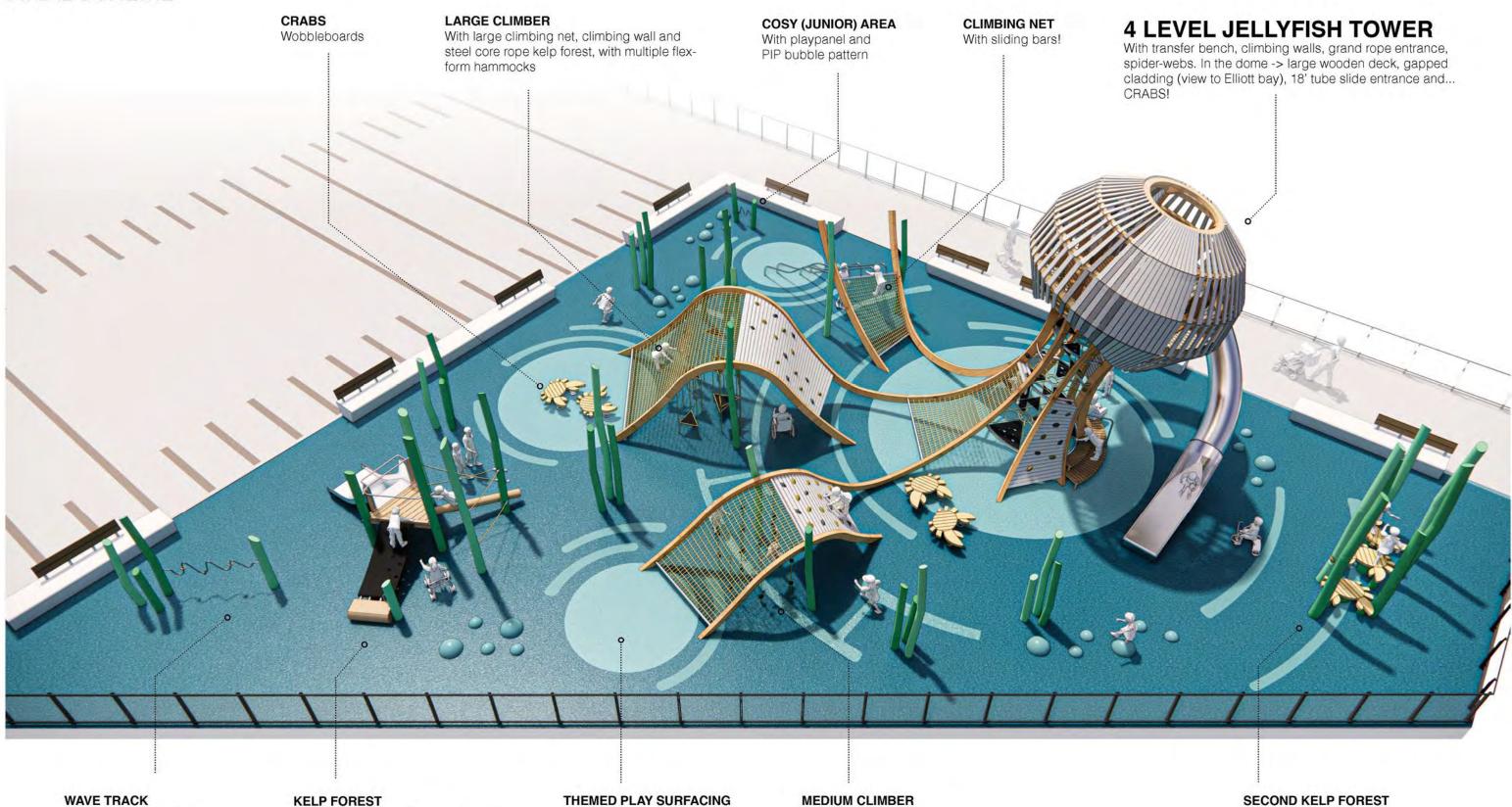








FINAL SCHEME



with slide platform, Stainless Steel Slide, rope challange & ADA flexform access

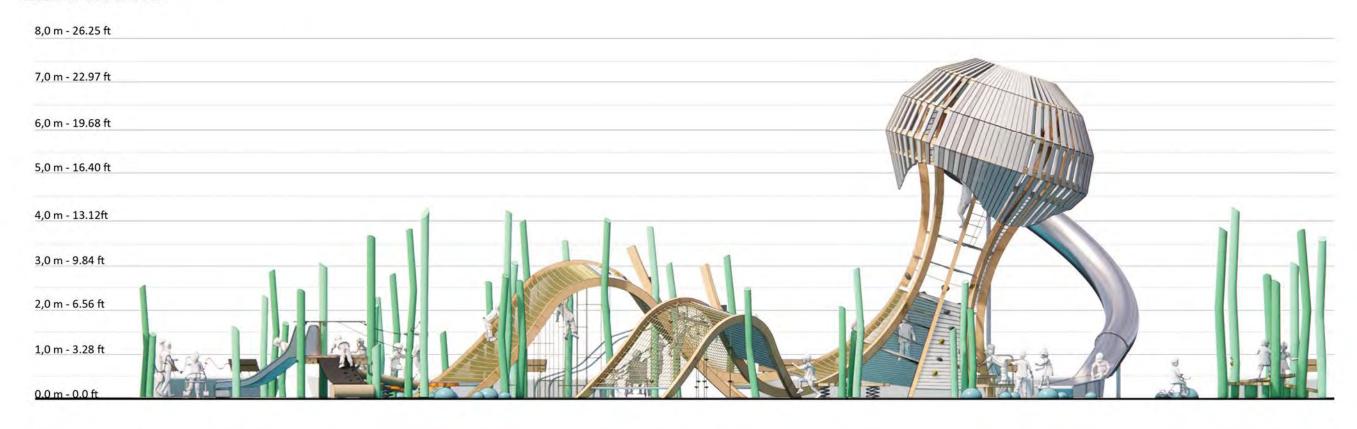
with slide platform, Stainless Steel Slide, rope challange & ADA flexform access

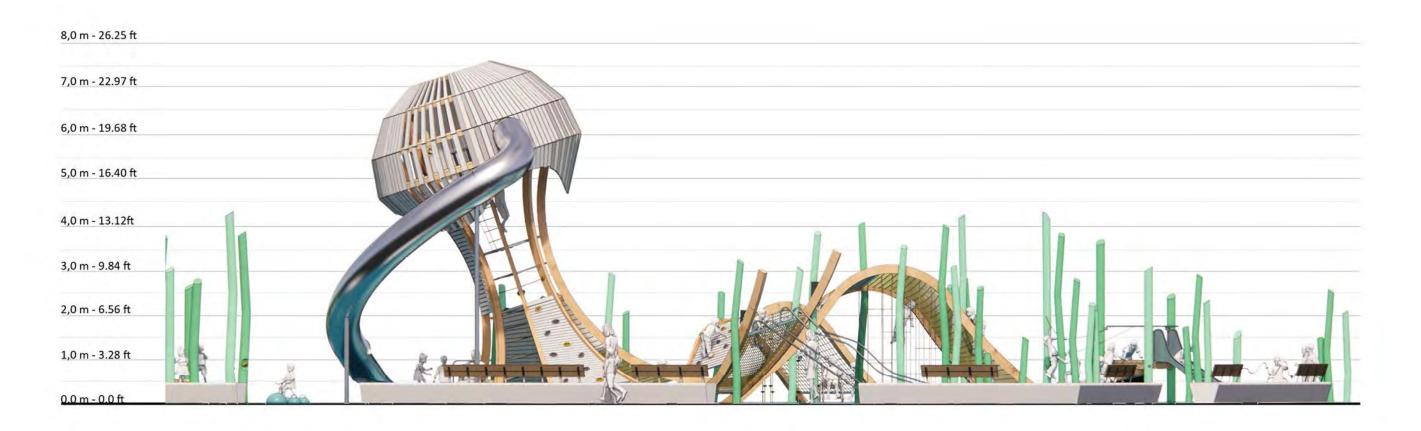
With bubble steppers, droplets and ripple parcour

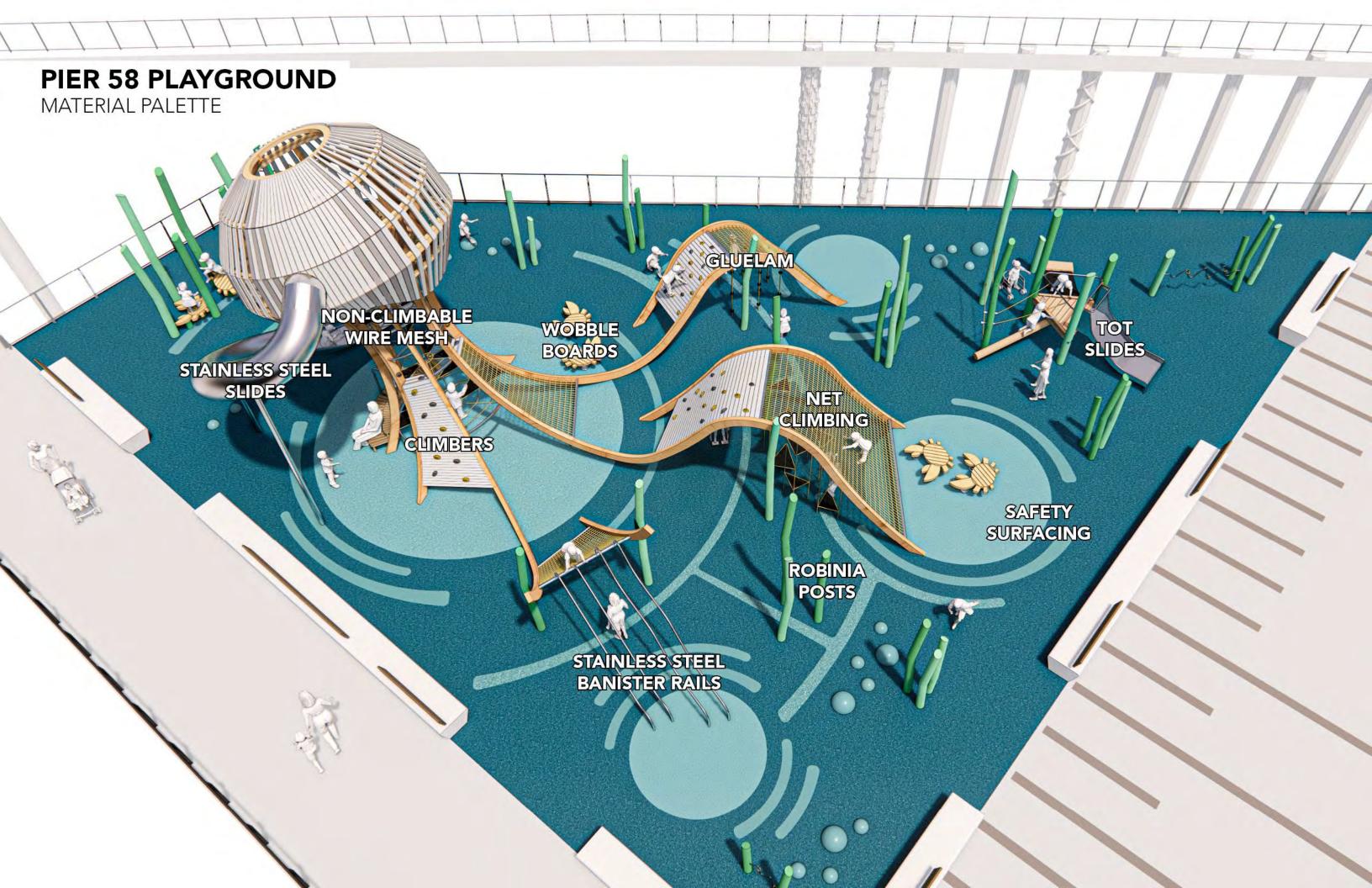
With climbing net, climbing wall and Steel-core rope Kelp forest with plastic climbing holds

With crab shaped platforms

ELEVATIONS















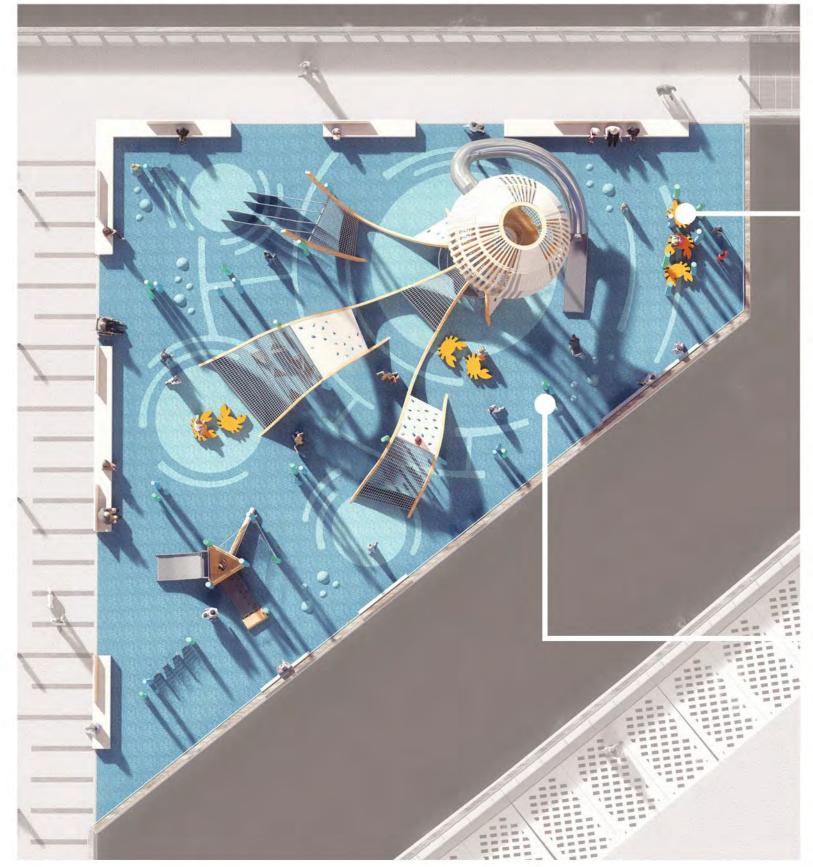


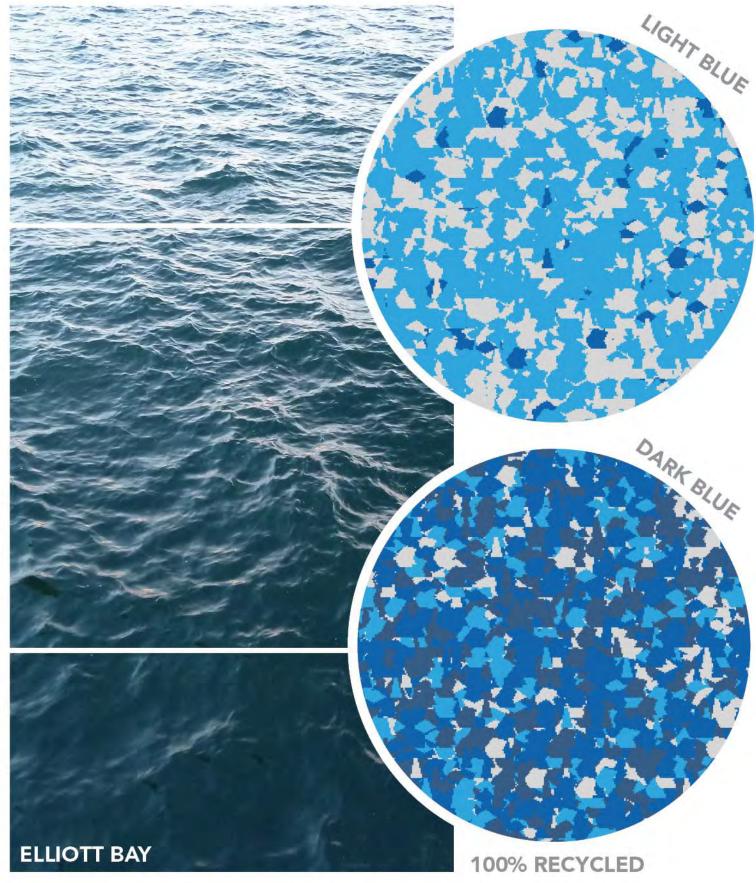


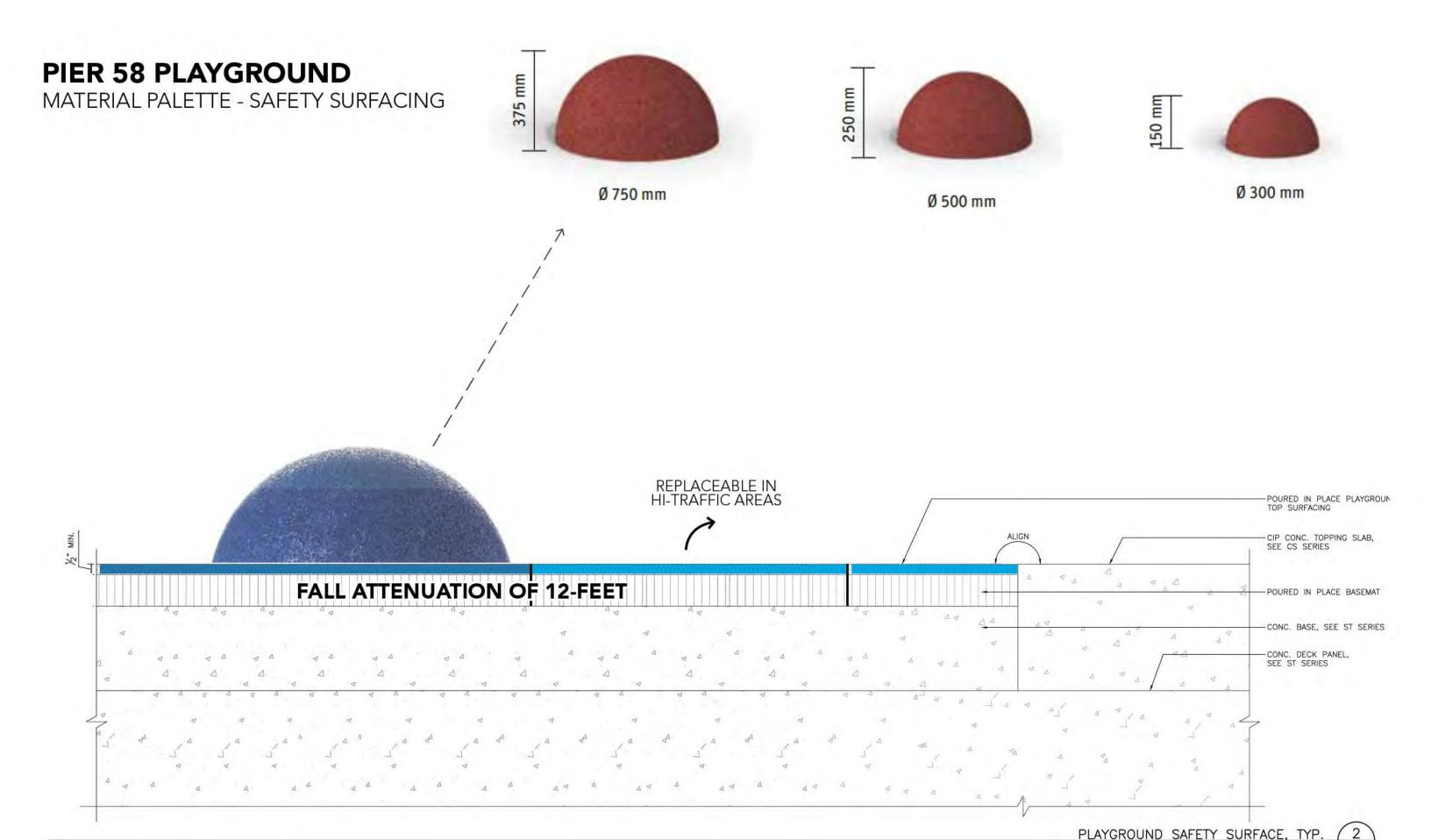




MATERIAL PALETTE - SAFETY SURFACING





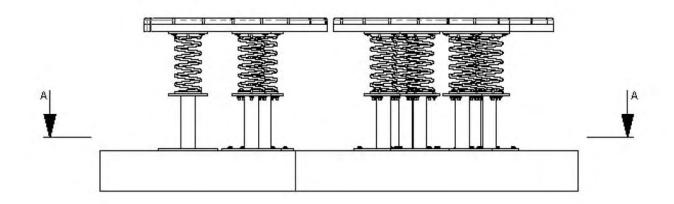






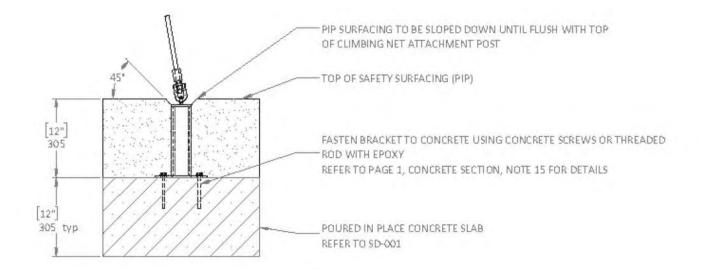


CONNECTION DETAILS

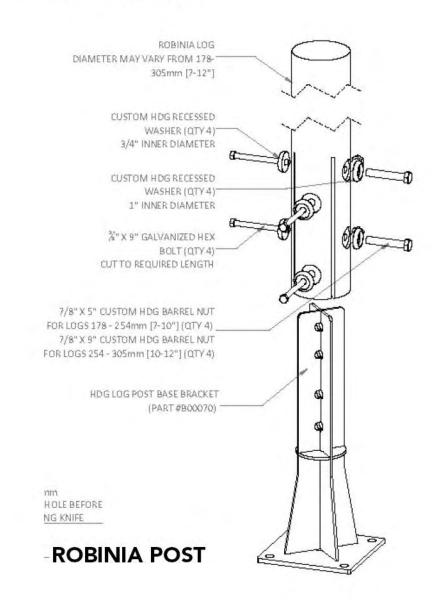


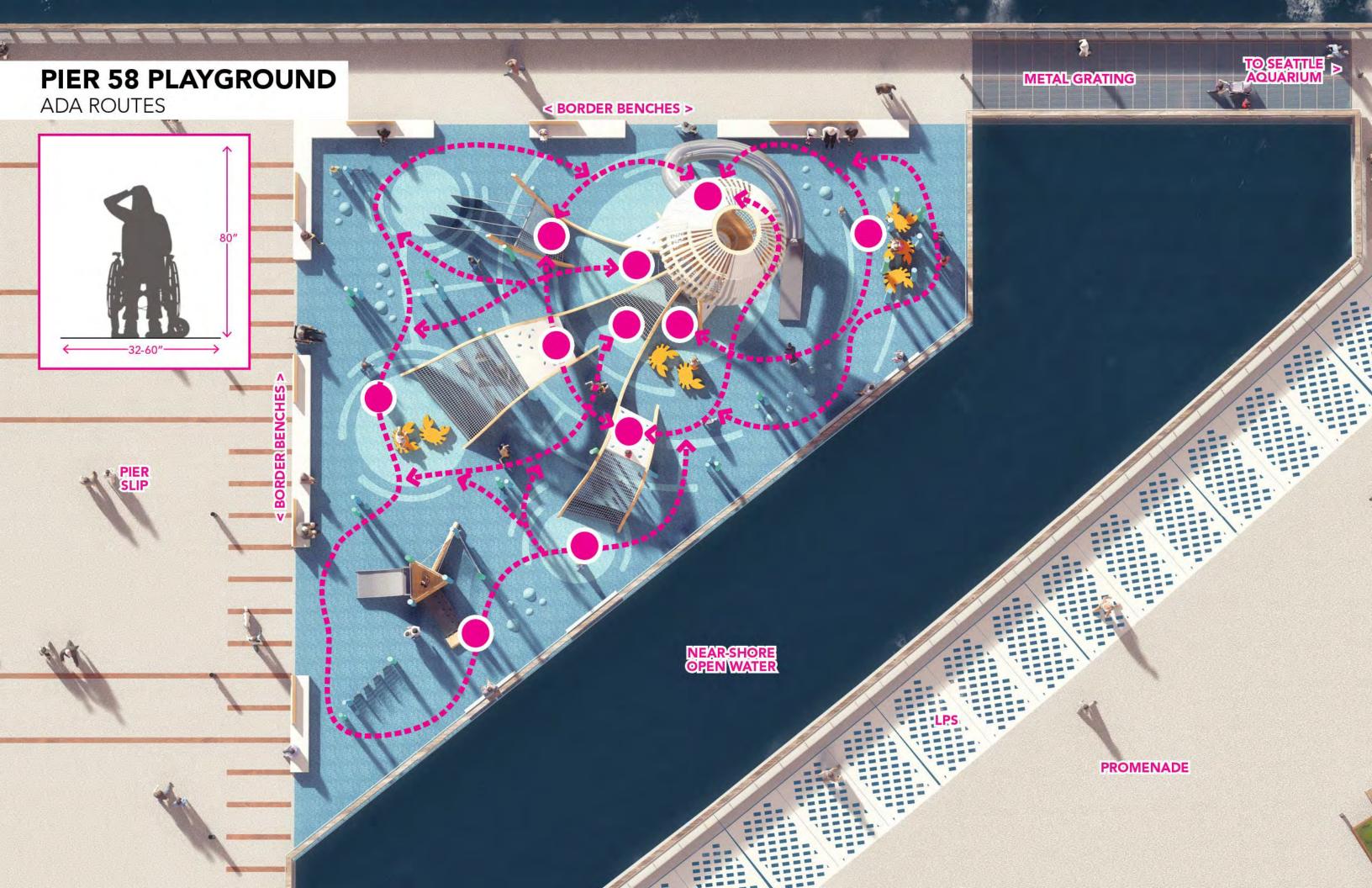
WOBBLE BOARD

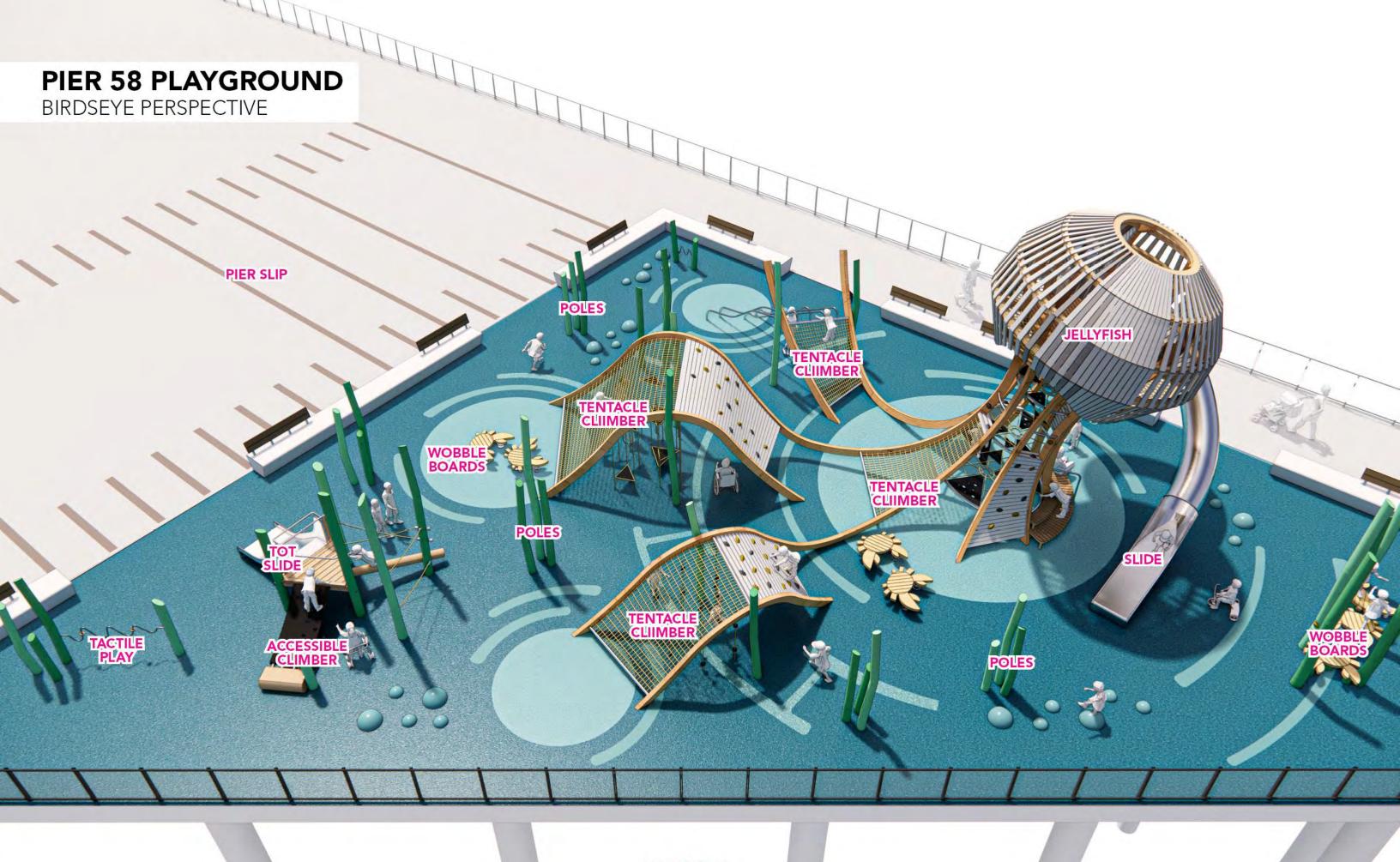




ROPE / CHAIN









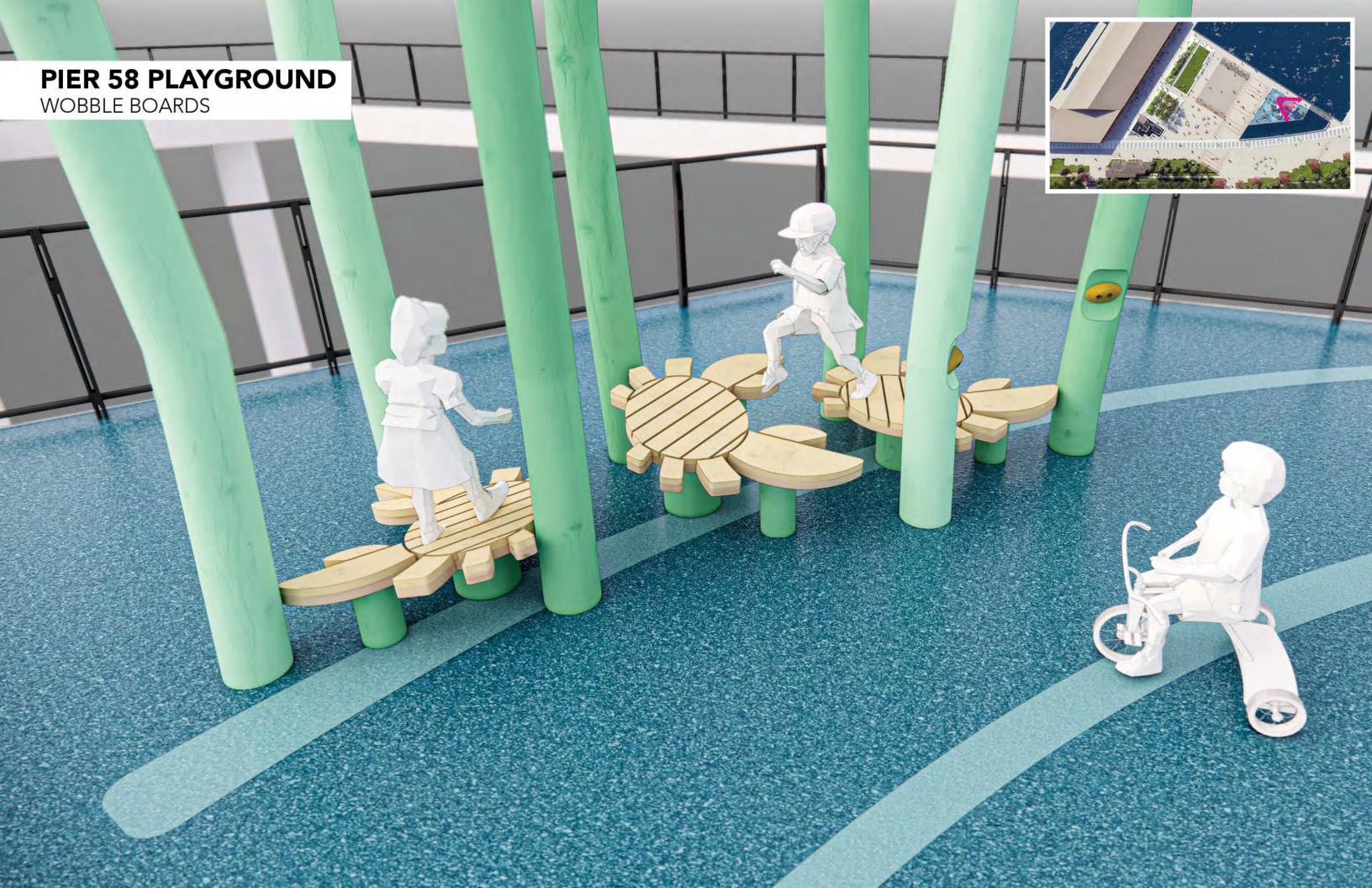


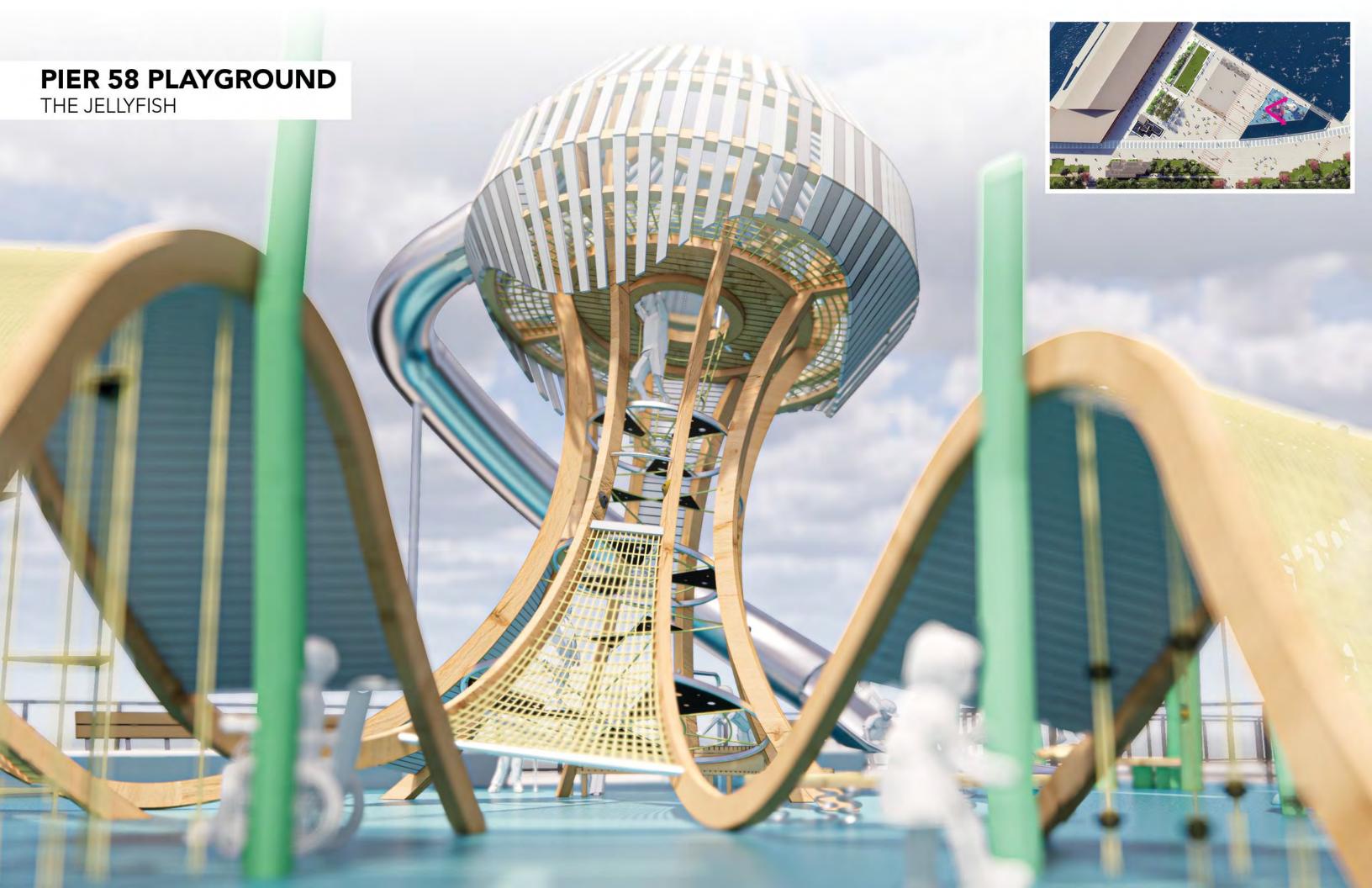








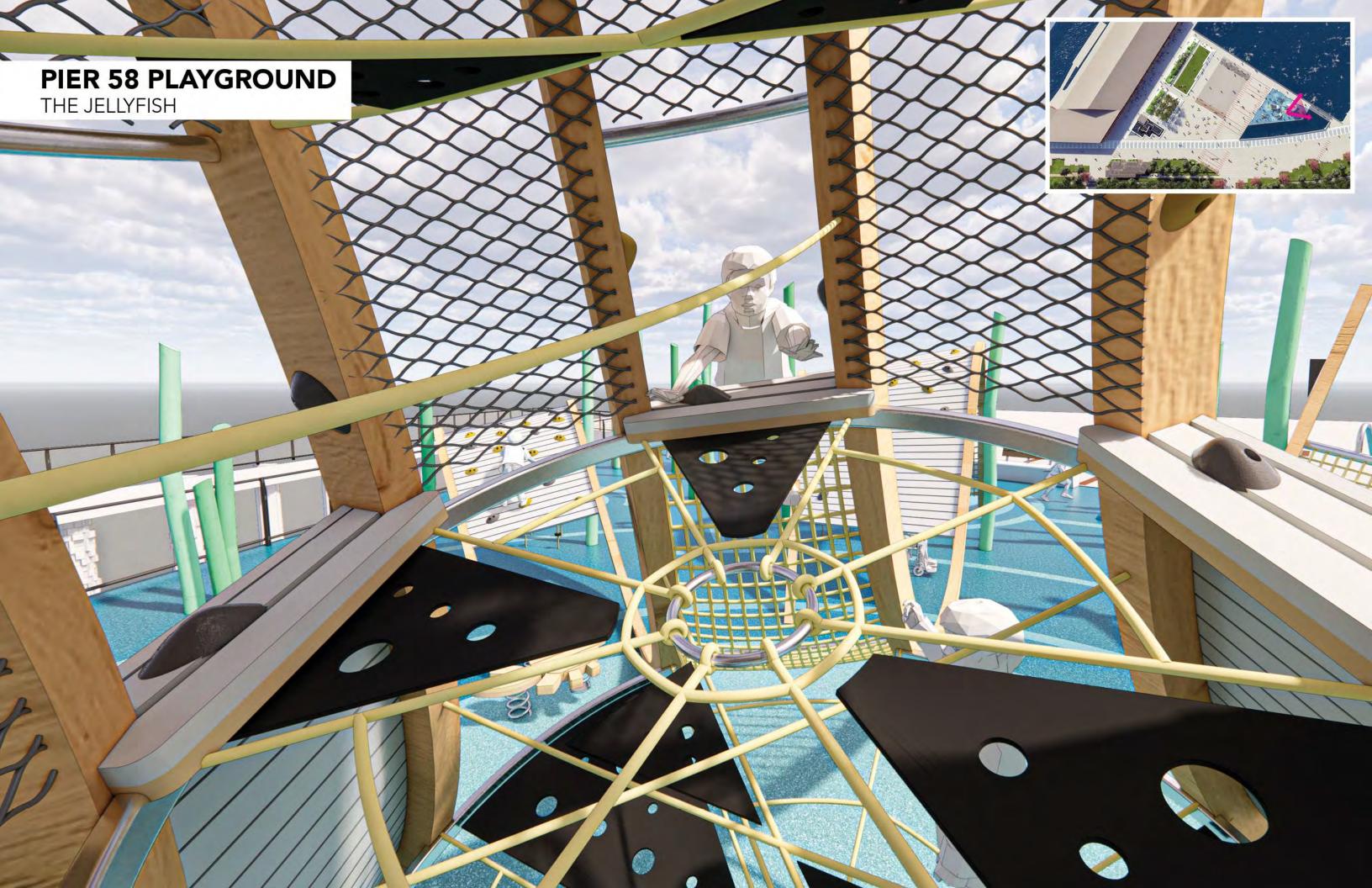




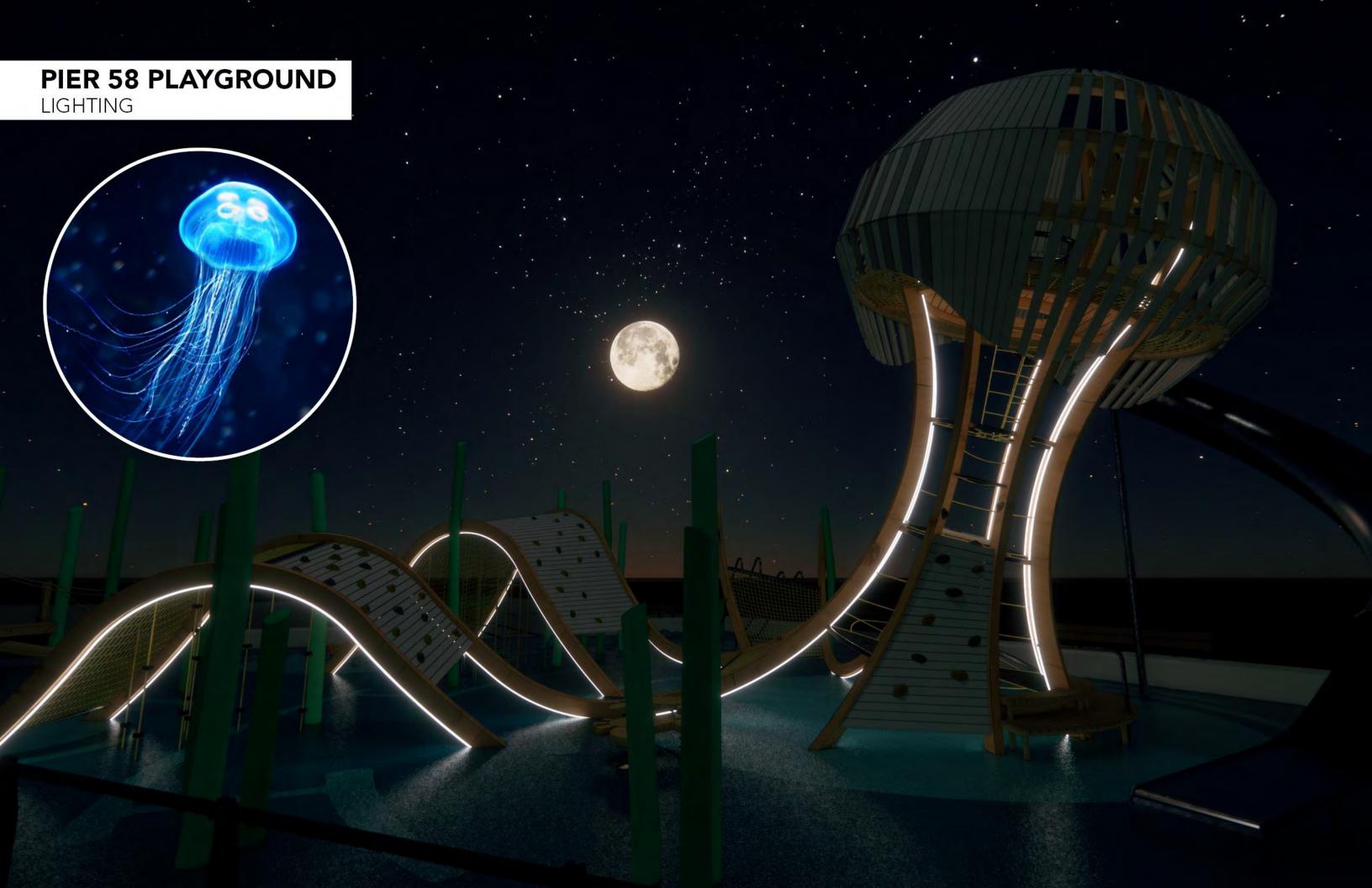










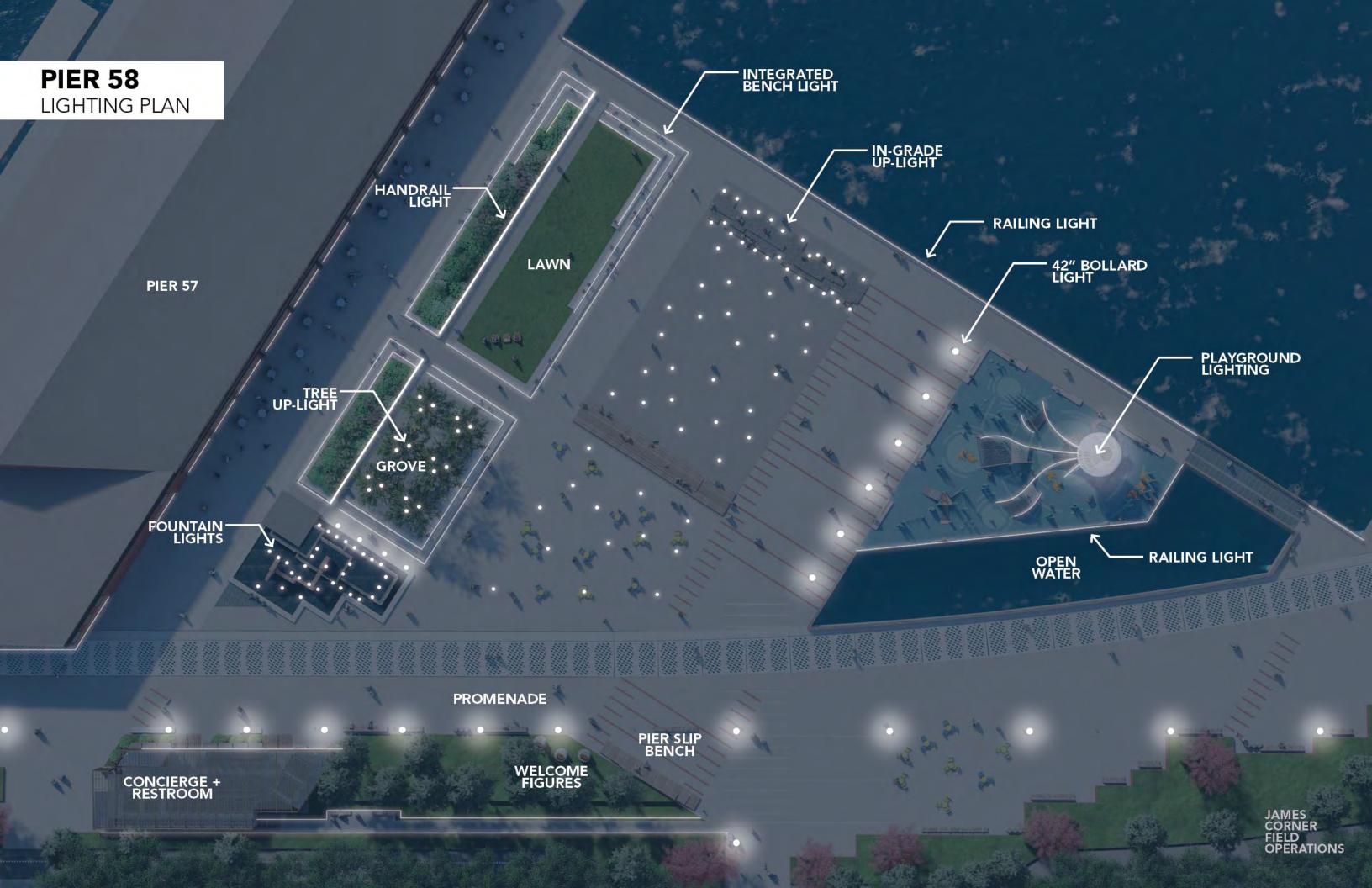












PIER 58

BOLLARD LIGHTING DETAILS

Post construction: One piece extruded aluminum, 3/16" wall thickness with a one peice base, internally welded into an assembly. Provided with lockable access door. Die castings are marine grade, copper free (≤ 0.3% copper content) A360.0 aluminum alloy. Designed to accept BEGA LED system bollard heads of 10 3/8" in diameter.

Integrated components: Bollard tube provided with integrated 20A duplex GFCI receptacle behind lockable door, safety lock with two (2) keys. Optionally available with magnetic closure instead of safety lock. GFI covers are intended for portable tools or other portable equipment connected to the outlet when attended. Wet location listed when cover is closed. Optionally available with USB receptacle.

Anchor base: Heavy cast aluminum, slotted for precise alignment. Mounts to BEGA 79 818 anchorage kit. Bollard secures to base with one stainless steel set screw. The mounting system allows the luminaire to be adjusted independent of anchor bolt orientation.

Finish: All BEGA standard finishes are polyester powder coat with minimum 3 mil thickness. Available in four standard BEGA colors: Black (BLK); White (WHT); Bronze (BRZ); Silver (SLV). To specify, add appropriate suffix to catalog number. Custom colors supplied on special order.

Note: See below for compatible LED system bollard heads. See specifications for details.

CSA certified to U.S. and Canadian standards, suitable for wet locations. Protection class IP65







Optional USB & GFCI



Optional USB port

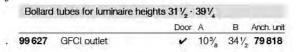
Type: **BEGA Product:**

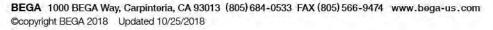
> Project: Voltage:

Color:

Options: Modified:







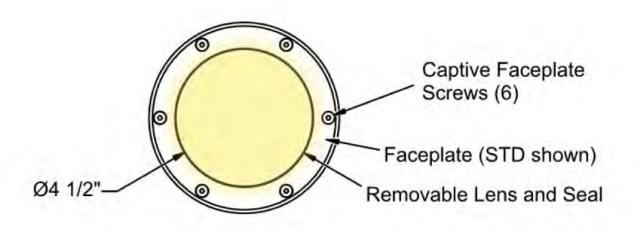


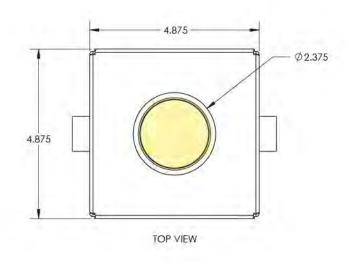
240 V OUTLET

JAMES CORNER FIELD **OPERATIONS**

PIER 58

IN-GRADE LIGHTING DETAILS

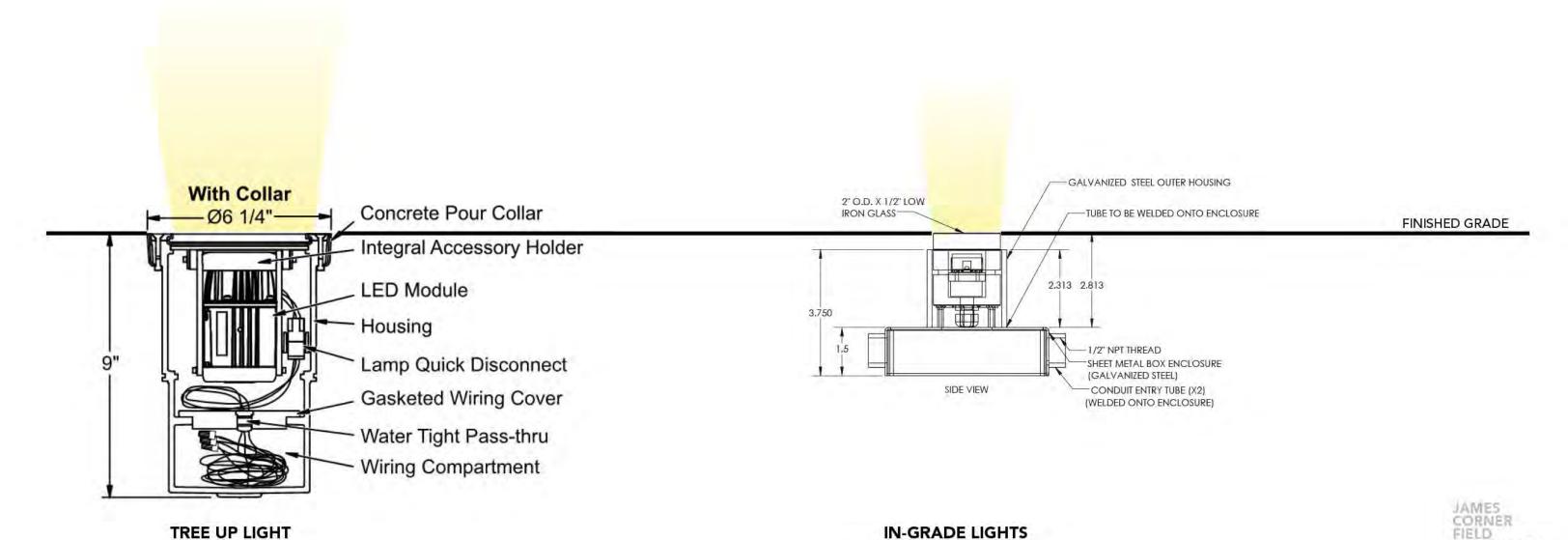




IN-GRADE LIGHTS

FIELD

OPERATIONS



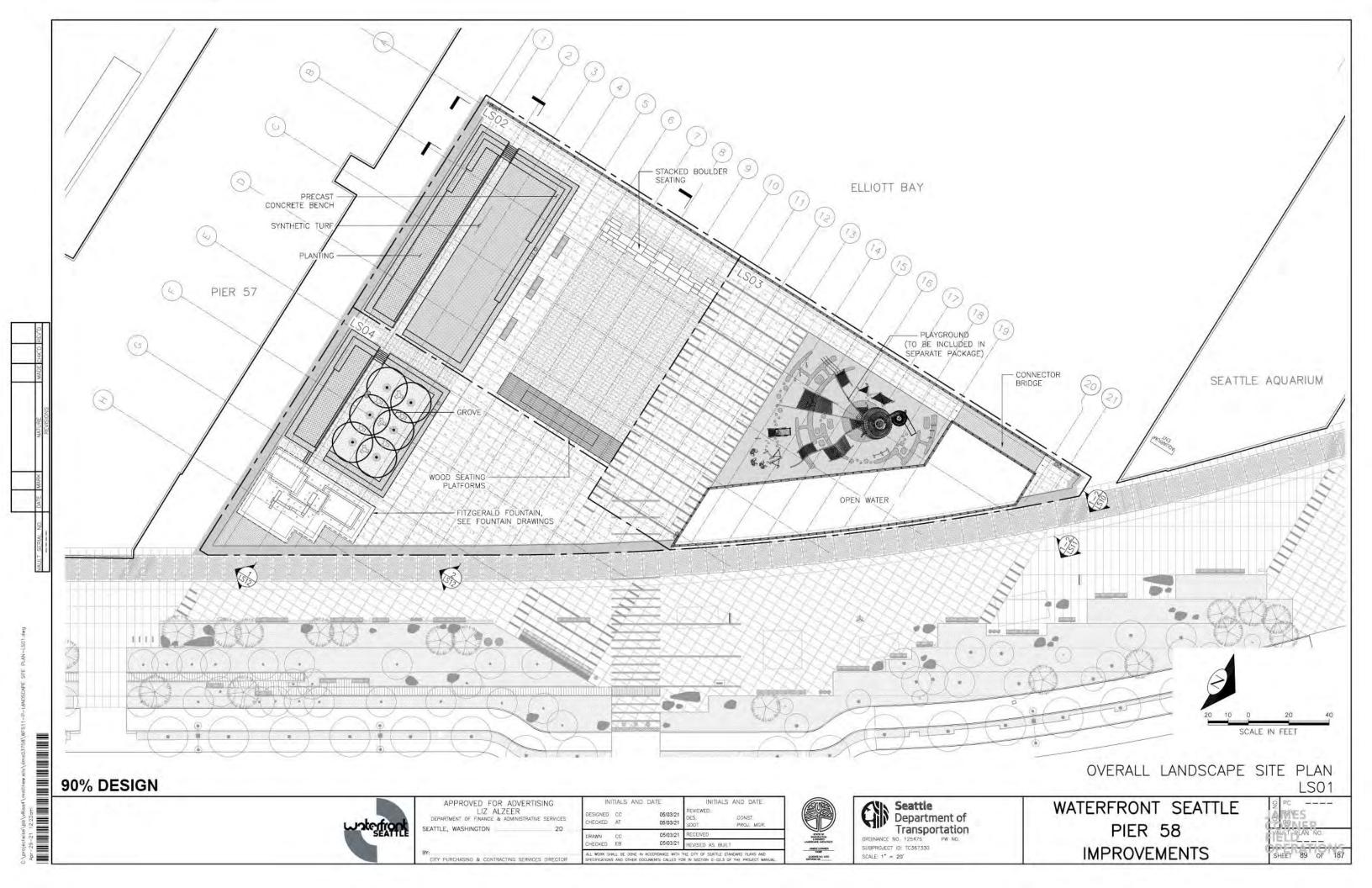
-R1/4" CORNER, TYP. **PIER 58** (5) WOOD TOP LEANRAIL IN-FURNISHING LIGHTING DETAILS SST PLATE, FLUSH WITH TOP OF PIPE - WELD, TYP. -1-1/4" SCHED 40 SS PIPE (1.66" OUTER DIA.) -1-1/2" SCHED 40 SS PIPE (1.9" OUTER DIA.) **PUCK LIGHT** FULLY WELD HANDRAIL TO BRACKET ON BOTH SIDES 4 SS HANDRAIL BRACKET FASTENERS BETWEEN STANCHIONS AND HANDRAIL BRACKET SS WIRE MESH PANEL FASTENER BETWEEN
STANCHION AND SS PIPE
FRAME LIGHT STRIP -1-1/4" DIA. SS PIPE FRAME; PROVIDE DRILLED WEEPS (PER MFR) EVENLY SPACED AT BOTTOM OF SS BASE PLATE, SEE ST SERIES 2 1/2" FINISH SURFACE / CURB NOTE: MOUNTING DETAIL VARIES PER LOCATION FINISHED GRADE

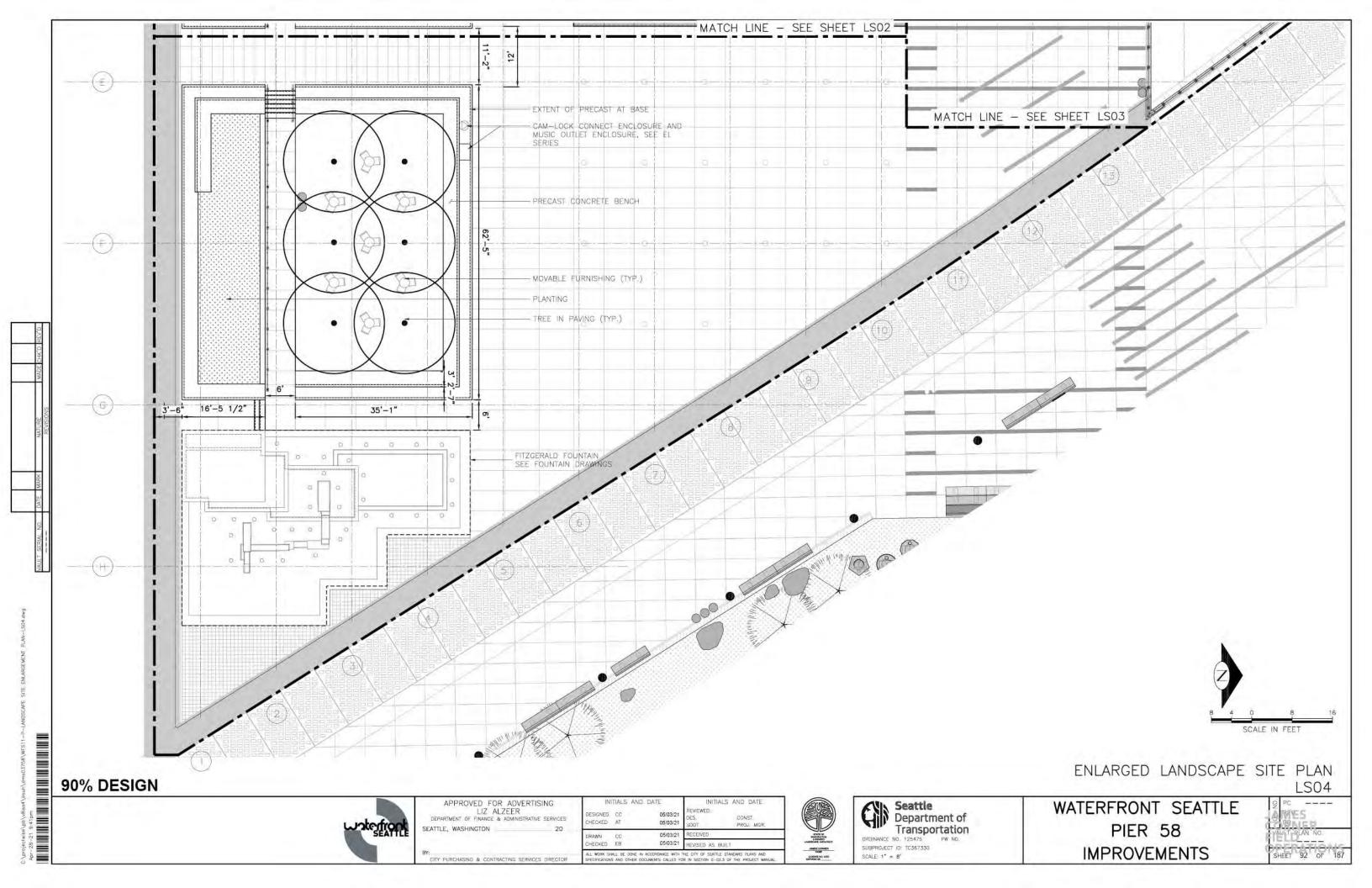
LINEAR LIGHT FIXTURE, SEE EL SERIES

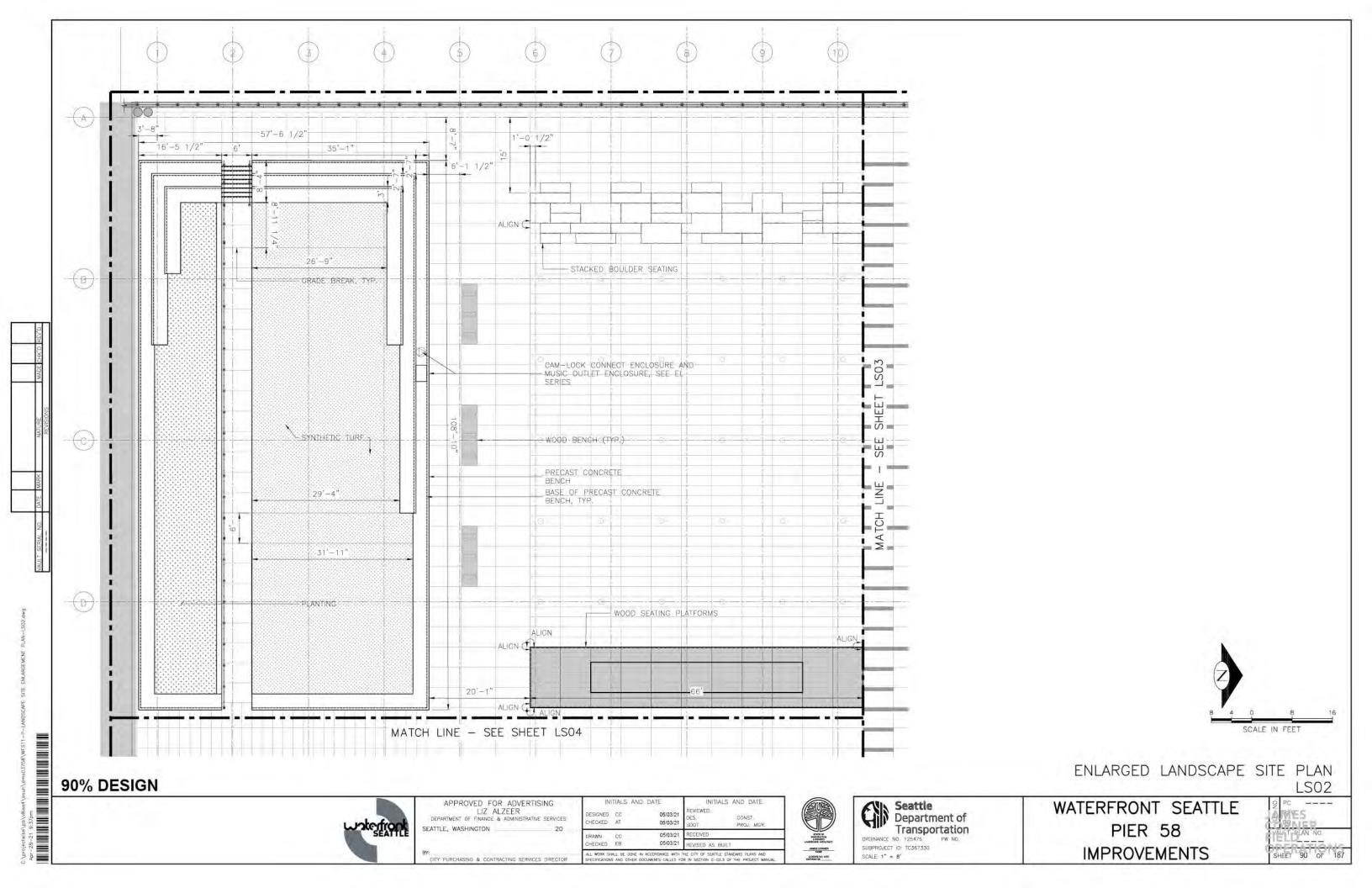


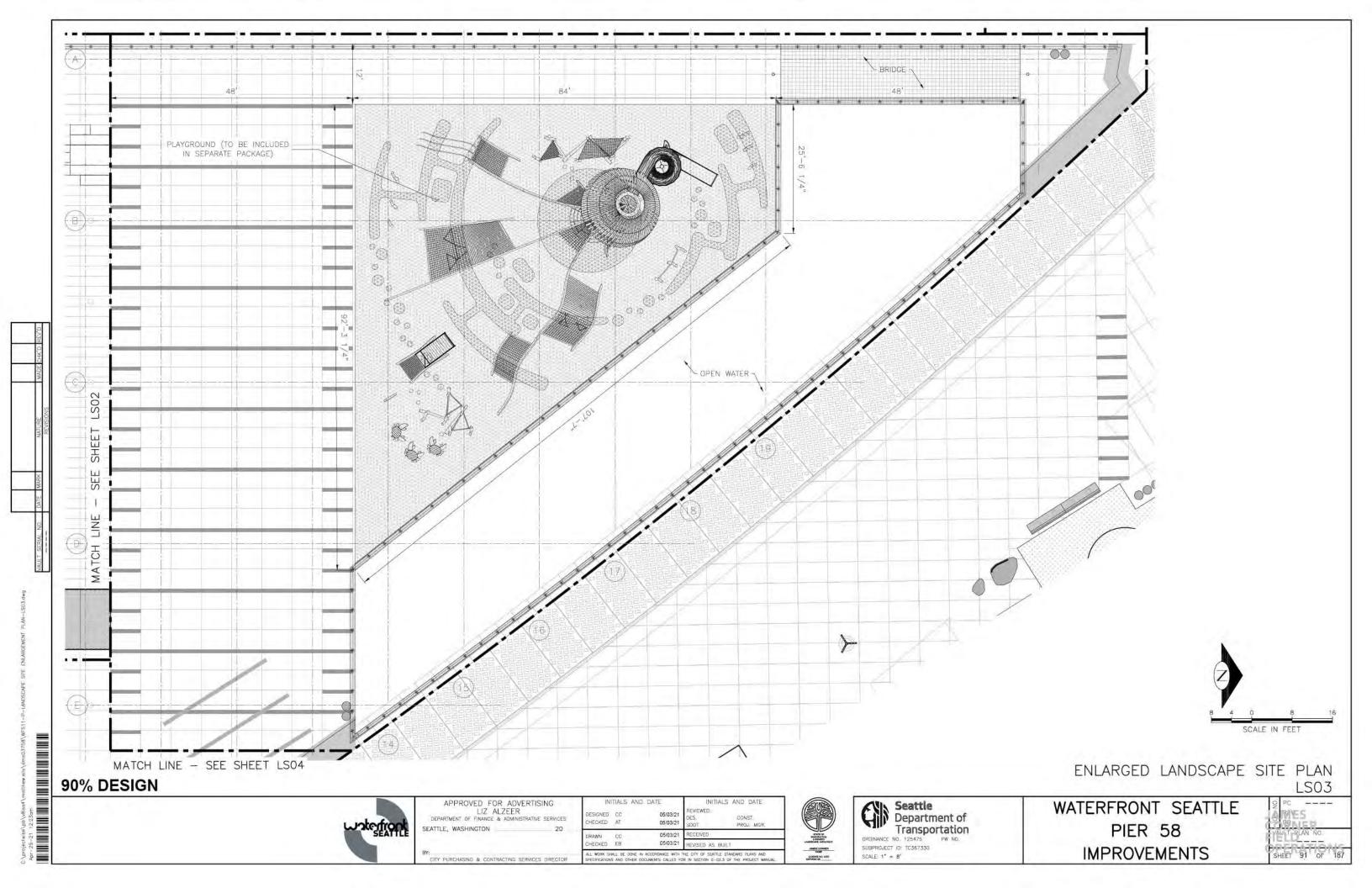


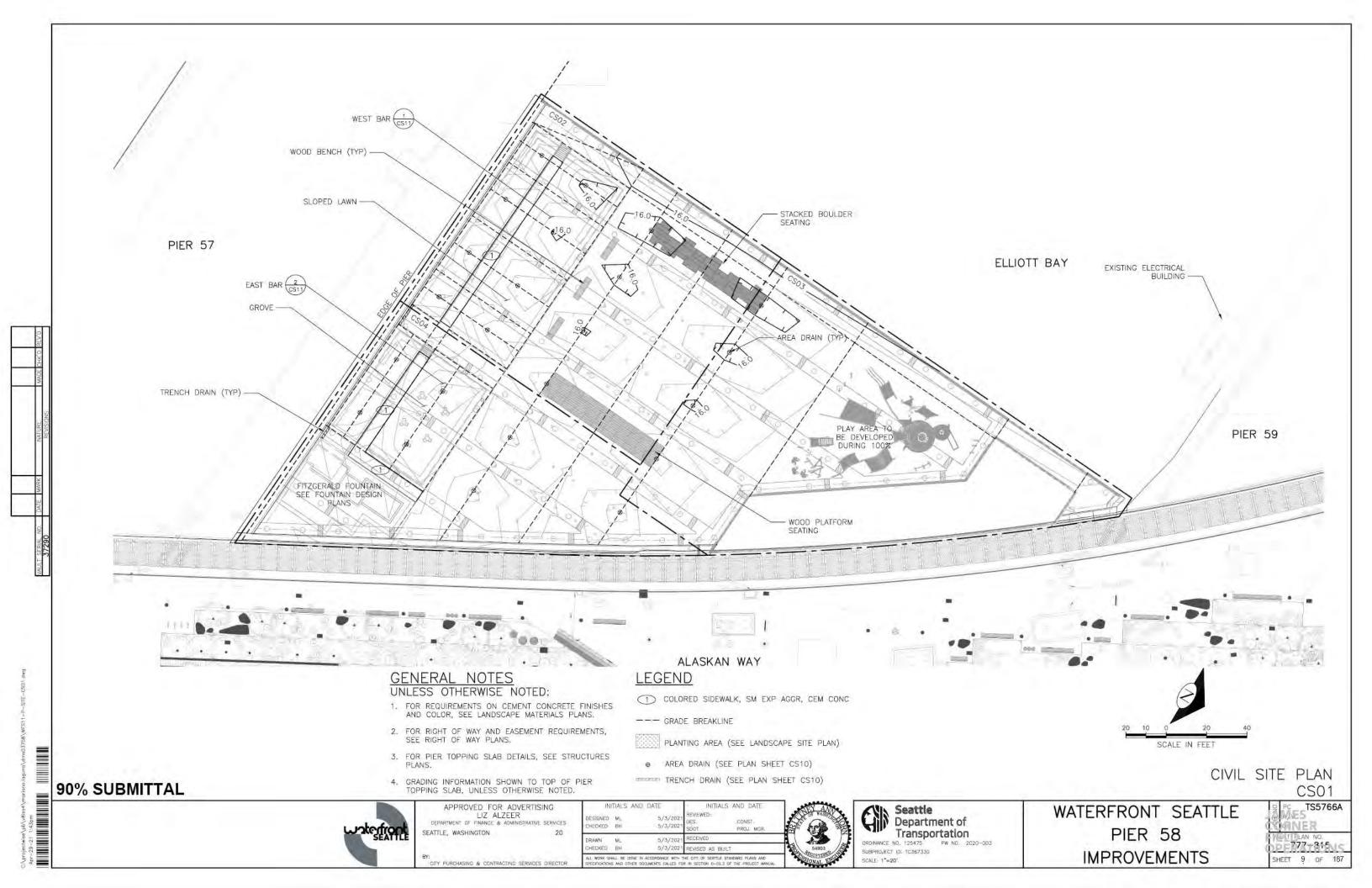
END

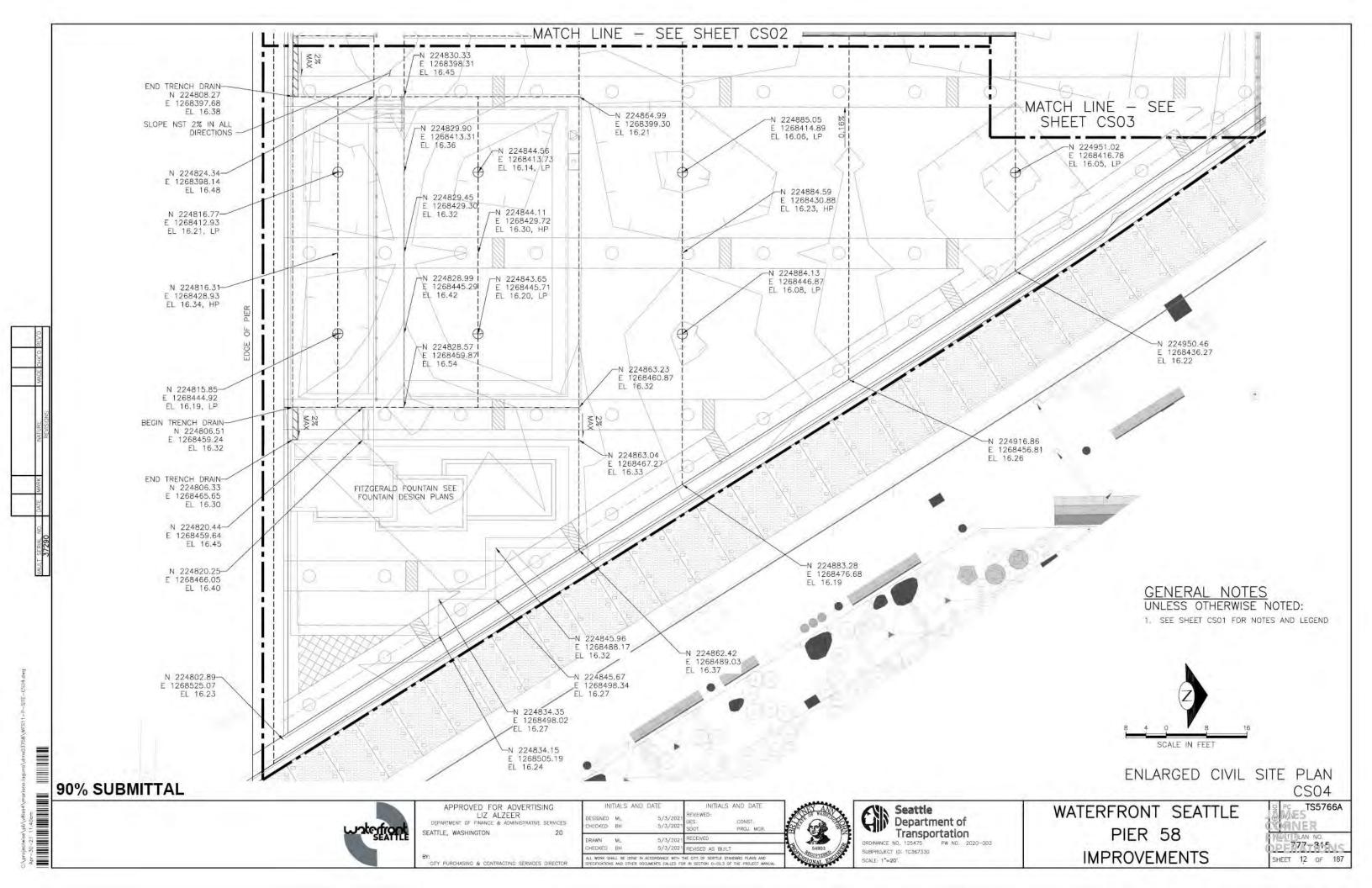


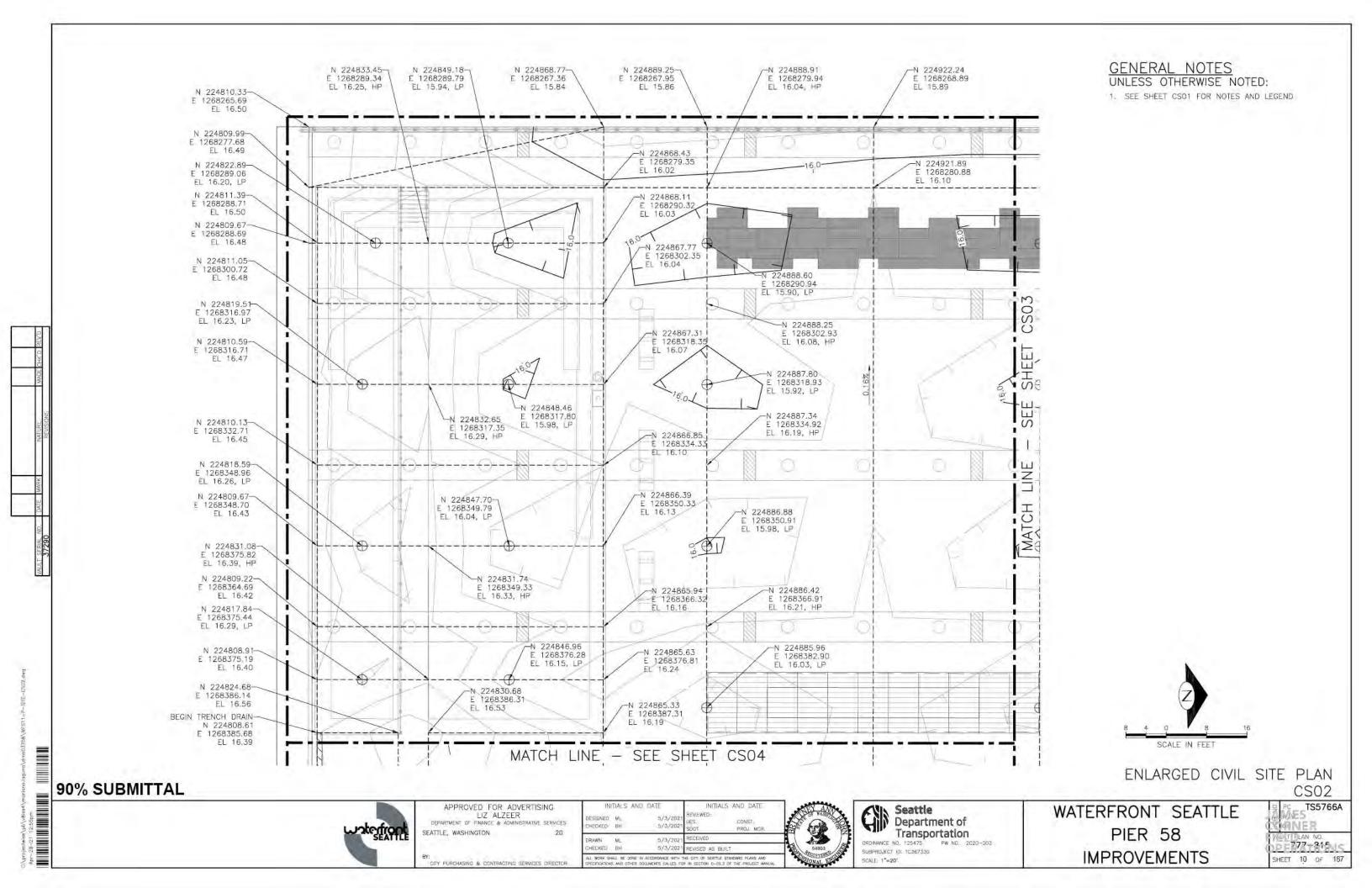


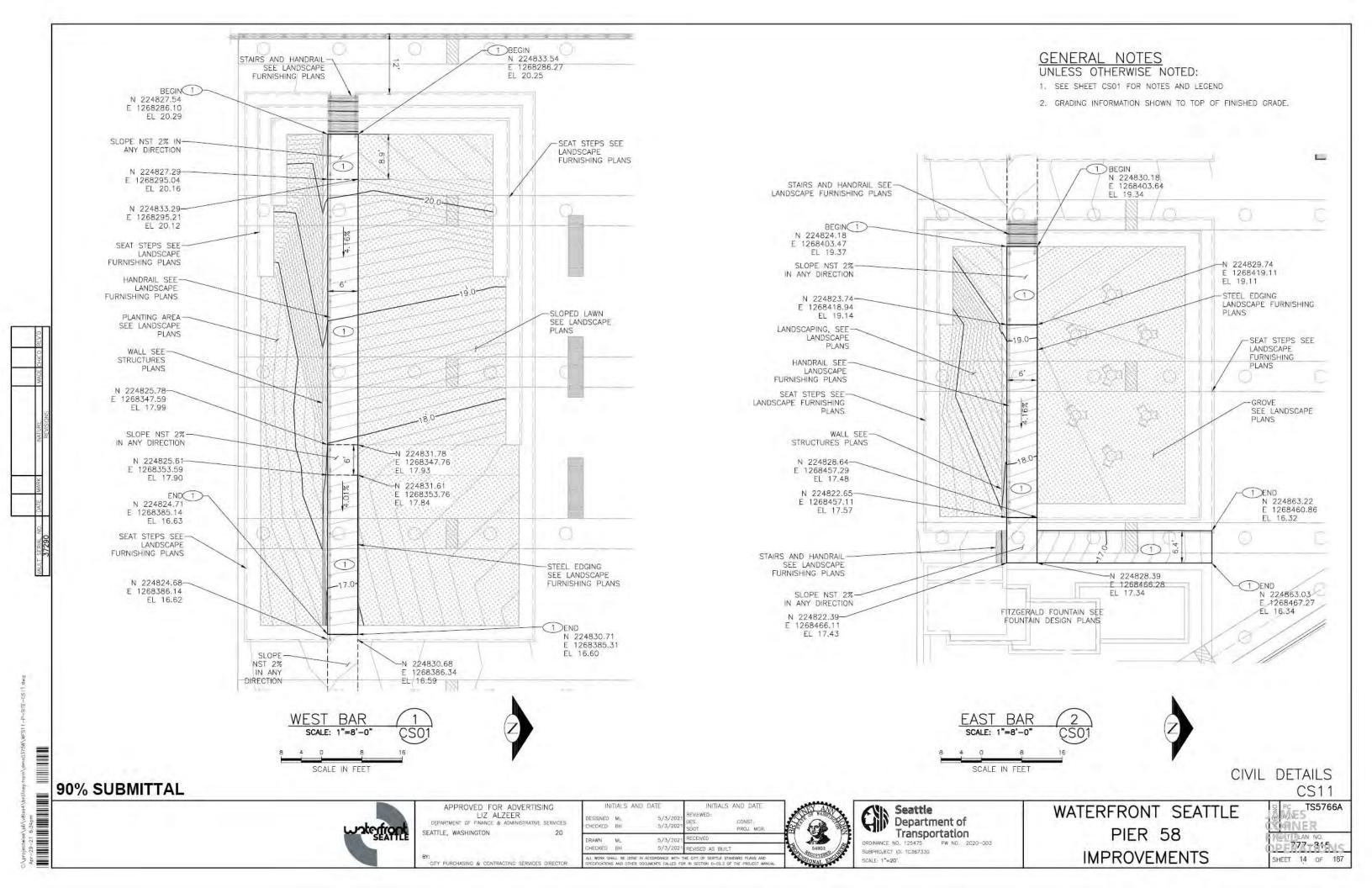


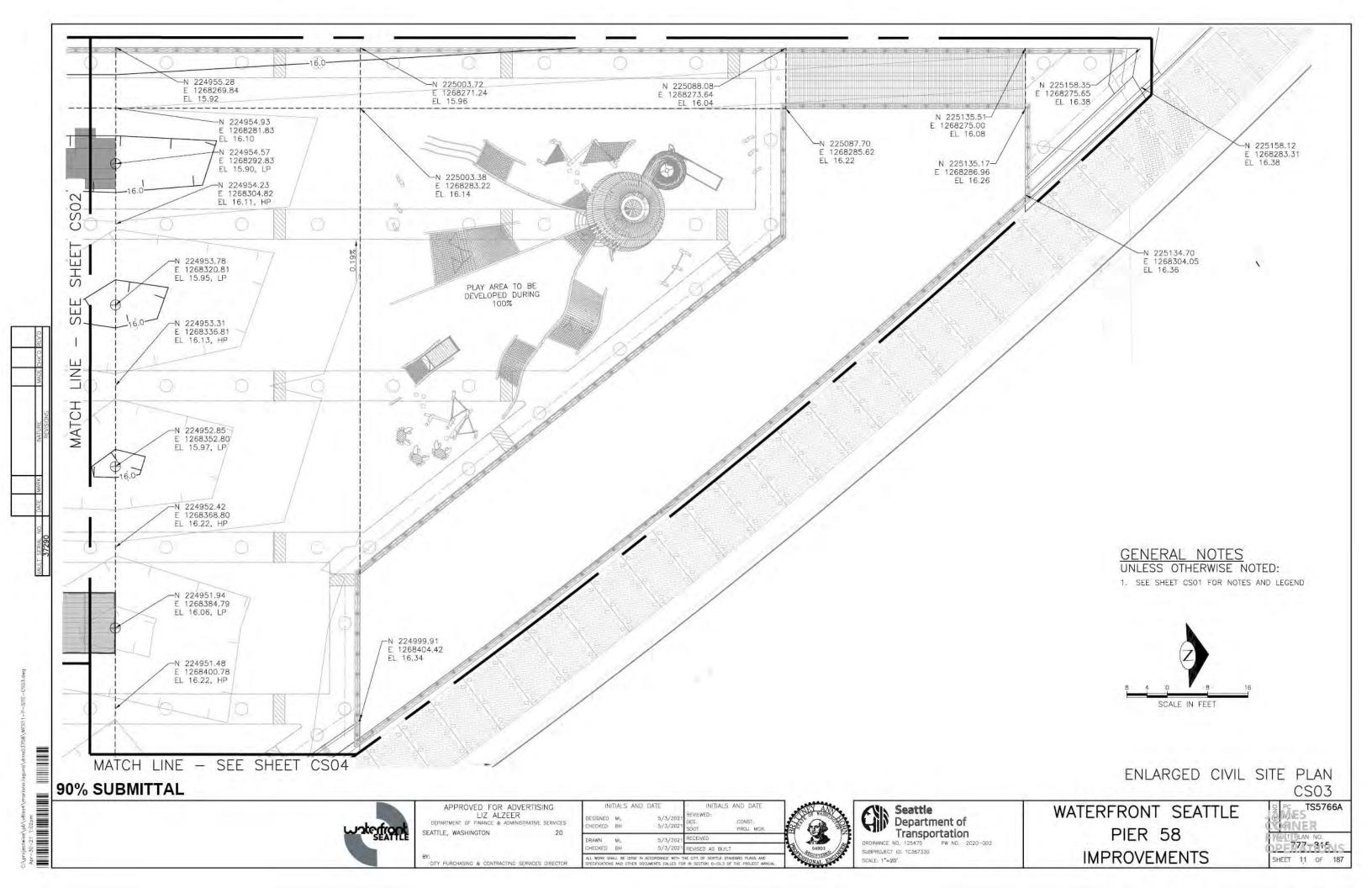


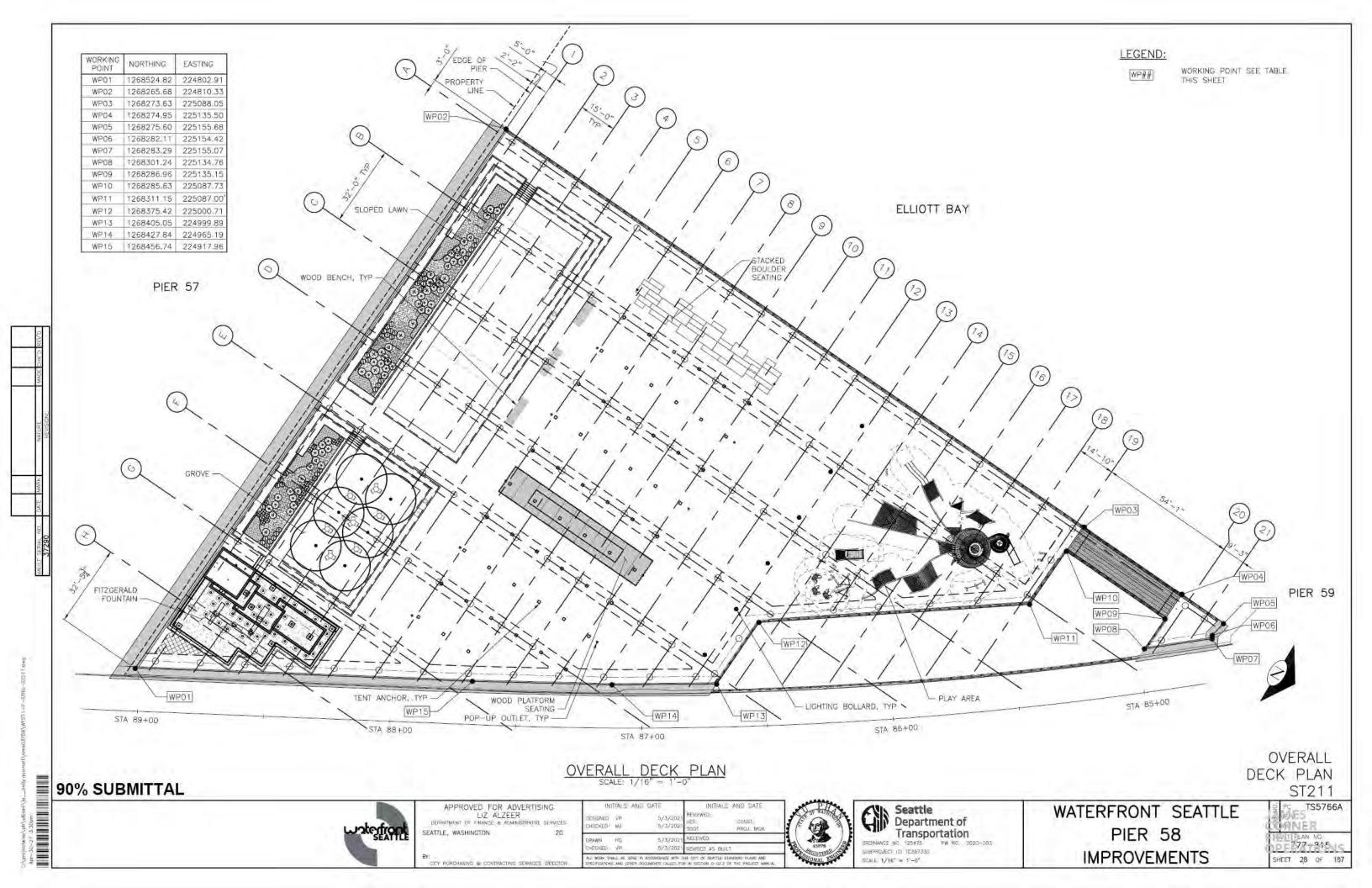


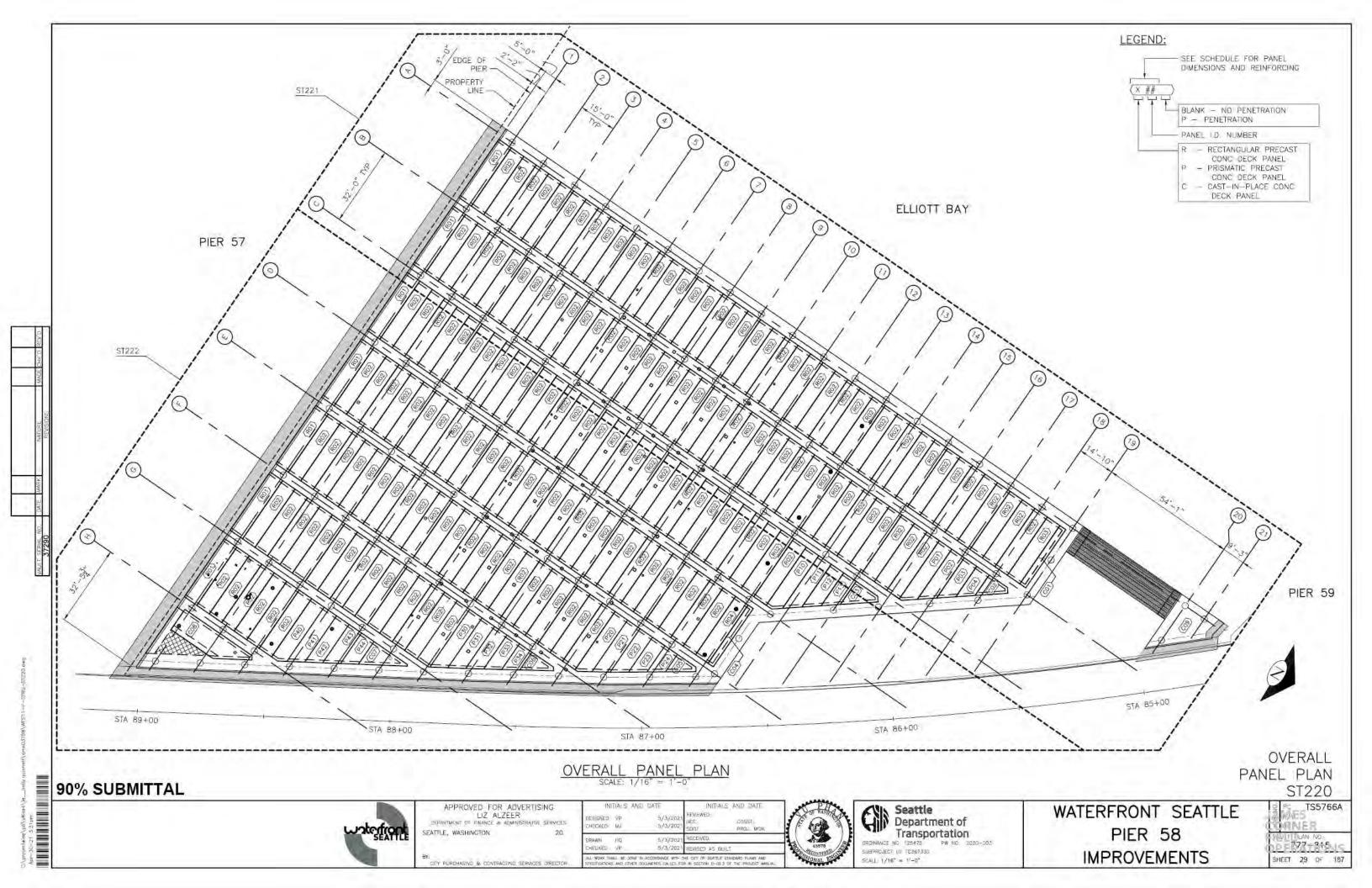












PIER 58 PLAYGROUND

SDC COMMENTS FROM MAY 2021 BRIEFING

Pier 58: Playground 50% Concept Design Review

Response to SDC Subcommittee Comments - Reviewed June 25, 2021

1. Design the head/top of the jelly fish to be as open as possible.

Openings in the head of the Jellyfish have been increase by an additional 20% for increased visual porosity.

2. Consider providing seating around the perimeter for caregivers who do not want to join in the play

Concrete seat walls have been provided around the perimeter of the play area.

3. Provide backrests on the adult seating, even if it impacts the porosity of the site

Backrests have been provided on the concrete seat walls.

4. Consider providing regular slides, not just rail slides, and smaller slides in addition to the big ones

A play area for children of 2-5 years has been provided in the southwest corner of the playground that includes a 3' height junior slide with additional accessory components.

5. Consider how a person in a wheelchair would move through or under the wave area

An accessible route has been provided under the wave structures.

6. Refine the slide design to make the structural solution more elegant

The slide design has been revised to curve in one direction to mimic the tentacle geometry.

7. Consider providing seating for kids along the periphery for those who don't want to move into the fray

In addition to the perimeter seat walls, stationary crab shaped platforms have been provided at the bottom of the large tube slide that will serve as an informal seating opportunity.

8. Consider providing a pop of color, perhaps a ribbon that guides kids who are less of the choose-your-own-adventure types through the site

The color of the surfacing has been revised from neutral grey tones to blue. This will provide a pop of color that will clearly delineate the play surface from the adjacent plaza while provide additional bubble ripple patterns for the children to explore.

9. Analyze whether there is enough space for people along the railings to come and look at the water

Lean rails have been provided to provide additional seating / resting opportunities

10. At the 90% design, allow enough time to discuss this element of the Pier 58 plans

The playground area will be a significant portion of the 90% SDC review.



PIER 58 PLAYGROUND

PARK'S AND ADA COMMENTS

Pier 58: Playground 50% Concept Design Review

From	Comment	Response
Shwe-jen Hwang	What's the warranty? who is the manufacturer? what's the life time of the play equipment?	See Earthscape "Why Wood" document with Warranty and Lifetime Expectancy information. (Page 6-7, 9)
Shwe-jen Hwang	How would long term repair and maintenance occur to ensure safety and integrity of overall play structure?	 See Earthscape "Why Wood" document with Wood Maintenance and Parts Replacement Statement (page 4-5). Replacement parts can be provided in advance and stocked. The structure will be designed to allow component replacement.
Shwe-jen Hwang	Identify fall height and ensure safety surfacing meet the fall height requirement.	Final design drawings will identify maximum fall height for safety surfacing. The fall height will not exceed 12 feet.
Shwe-jen Hwang	Ensure no head entrapment hazards for all openings including the flexible openings. ASTM 1487 6.1 head and neck entrapment	The nets will either have a 3.5" grid or a 10+" grid. Cladding board spacing will be a max of 3".
Shwe-jen Hwang	Need age appropriate signs	4" diameter steel plaque will be affixed to all playground equipment with name and contact information of manufacturer and intended age range.
Shwe-jen Hwang	Is this the only item for age 2 to 5? please expand the play events for age 2 to 5 to serve this age group better. they have different needs, scale, and follow different rules. it could be a little octopus to tie the theme.	The 2-5 area in the SW corner has been expanded. We have also added some Jr Crab steppers on the N side. These are not affixed to springs. The main feature will contain many ground level elements geared toward a 2-12 range experience.
Shwe-jen Hwang	ensure slide design meet ASTM 1487 8.5 slides for exit zone, min. exist height, min. 4" slide bed height, slide entry, min. 16" slide chute width, etc.	The final slide design will meet all ASTM 1487 requirements.
Shwe-jen Hwang	ensure 21" clearance zone for slide ASTM 1487 6.4.1. entanglement-slide	Slide exit will be clear of any poured in place mounds.
Shwe-jen Hwang	Provide guardrails or protective barriers at platform. ASTM 14877.5.5.1 guardrails or protective barriers are required on elevated surfaces that are greater than 20 in. (508 mm) above the protective surfacing when intended for use by 2-through 5-year-olds, on elevated surfaces greater than 30 in. (760 mm) above the protective surfacing when intended for use by 5-through 12-year-olds	A platform with guardrail / protective barrier has been included on the toddler slide in accordance with ASTM 1487-17.

Shwe-jen Hwang	Provide structural integrity certification for the play equipment by a licensed professional engineer. per ASTM 1487 12.6. alternatives to testing for structural integrity:12.6.1 instead of the tests in 12.3.1 – 12.5.2, it is acceptable that a licensed architect or a licensed professional engineer certify the integrity of the equipment if it were to be subjected to the aforementioned test loads (see 12.3.1 – 12.5.2).	Earthscape works with licensed third party engineers to assure structural integrity to meet or exceed requirements of the ASTM 1487-17
Shwe-jen Hwang	Ensure slide design meet ASTM 1487 8.5	Final slide design will meet requirements
Shwe-jen Hwang	Provide footing/attachment details for the play structure, wood shall not contact the moisture ground, provide footing/attachment detail.	Typical footing details will be included in final design package. Stainless steel brackets will be used to elevate the wood structures +/- 1" above the safety surfacing.
Shwe-jen Hwang	Parks maintenance has concern about log rotten and splinter. what kind of wood is this?	Log posts are black locust, or Robinia, hardwood. The wood is very durable and similar to tropical hardwoods, but native to North America. It is naturally fungi, rot and termite resistant. See "Why Wood" document for further information.
Shwe-jen Hwang	is any of the surfaces more than the designated play surface of 2"x2"?	The top of the glularn tentacles would be considered a designated play surface but will be below the maximum fall height.
Shwe-jen Hwang	Can users climb to the top?	Users can climb up to the top through the interior of the Jellyfish only. The outside of the Jellyfish will be designed to be non-climbable utilizing a tight woven stainless-steel mesh above the designated fall height.
Shwe-jen Hwang	Is this opening? what's the opening widths?	The maximum gap in the cladding around the head of the Jellyfish will be 3 inches.
Shwe-jen Hwang	Provide anchor attachment	Typical rope anchor attachment will be provided in the final design package
Shwe-jen Hwang	Provide handhold to help with transition.	Handholds will be provided to help with transition.
Shwe-jen Hwang	What's the opening sizes? ensure no head entrapment issue.	Max gap between steps will be 3".
Shwe-jen Hwang	If this is more than 2"x2" designated play surfacing, then safety surfacing shall be provided at floor.	Top of structural ribs will be angled and beveled.

Redi Karameto	Recommend providing more openings (perforated?) on the outer shell for CPTED design.	- Openings will be increased by 20% - Lighting will be included
Nick Borer	Ensure tight construction controls on poured in place surfacing	This will be included in playground surfacing specification
Nick Borer	Consider poured in place surfacing in high wear areas, allow for "clean" replacement	 Area at base of slide will be a solid color (no patterning) as this is a high wear area and may need replacement. investigate suppliers (Gametime) for denser surfacing at high use areas. Pam will send product information. Patterns will additionally create play opportunities on the surface
Deryl Baily	Concerned with wood rot and damage in such a high use area	- Glulam is constructed using Alaskan Yellow Cedar. - Wood will be elevated out of the surfacing to prevent sitting moisture. - Wood pieces can be replaced in several weeks if needed. Wood stops 1" above finished grade to create air gap.
Deryl Baily	Concerned with slick surface when wet	Steps will be given a uniform texture to give better grip when wet.
Pam Alspaugh	Please have custom equipment constructed by major play equipment manufacturer to ensure quality and safety. Meet SPR requirements for warranty. Provide engineering calculations per ASTM F-1487	- Earthscape has successfully completed over 200 custom playgrounds across North America. See "Why Wood" document with warranty information Earthscape works with licensed third party engineers to assure structural integrity to meet or exceed requirements of the ASTM 1487-17
Pam Alspaugh	Ensure timber can be replace independently in case of vandalism by fire.	Wood can be replaced in several weeks if needed This playground will have security large glulam timbers and robinia logs are not easily combustible
Pam Alspaugh	Ensure timber will hold up in marine environment	See "Why Wood" document. For added protection the AYC glulam will have a sealant on it to guard against moisture between layers. Scheduled inspections should review and touch up if showing high wear.
Pam Alspaugh	Open visibility more to allow for supervisor visibility.	Openings will be increased by 20%
Pam Alspaugh	Fall height requires greater than 1 1/2" fall attenuation surface layer.	All surfacing will be rated to support the maximum fall height
Pam Alspaugh	Consider using rubber mounds installed separately, (they are	Rubber mounds have been replaced with hemispheres

	available). They would be longer lasting than Playbound synthetic surfacing. The rubber surfacing will fail quickly with the backs of shoes when people are sitting on them.	
Pam Alspaugh	Ensure kids can't climb where they will fall onto hard surfaces	Climbing into the head of the jellyfish will be designed as a 3D net matrix to ensure no falls onto hard surfaces.
Pam Alspaugh	Add a transfer station to facilitate children in wheelchairs to transfer to lower net level.	The first step into the lower net platform is designed to be at transfer station height between 11-17". A grab bar will be provided for hand support. Steps above will have an 8" rise.
Pam Alspaugh	Consider another material for the steps. Wood steps on play equipment gets slippery and we need to install a scuffy, ugly surface for safety.	Steps will be given uniform texture to add grip and prevent standing water.
Pam Alspaugh	Top of wood should be greater than 30 degrees or less than 2"X2" so not to be designated play surface requiring safety surfacing on deck.	The slide entrance is now lower inside the head of the structure. Slide entrance will have 14" minimum clearance and have guardrail. The top of structural ribs will be angled and beveled.

