



**Purchasing Division**  
*Finance Department*  
Room 120  
411 West First Street  
Duluth, Minnesota 55802

218-730-5340  
purchasing@duluthmn.gov

**Addendum 4**  
**Solicitation 23-AA07**  
**Duluth Coastal Infrastructure Rehabilitation Project**

This addendum serves to notify all bidders of the following changes to the solicitation documents:

Please see the attached documents for changes to the plans and specs and answers to questions.

Please acknowledge receipt of this Addendum by checking the acknowledgment box within the [www.bidexpress.com](http://www.bidexpress.com) solicitation.

Posted: **August 17, 2023**



Consulting Engineers P.A.

---

August 17, 2023

**Re: Duluth Coastal Infrastructure Rehabilitation – Addendum #4**

AMI Project # 211016

**1. Landscape**

On sheet L201 there was an annotation error. The confirmed distance of the wall mounted monument sign is to be 17' from the curved radii. On sheet L202 the confirmed manufacturer for the Adirondack chairs is LOLA and the product is Adirondack Chair Flat or approved equal as specified in the construction documents.

**2. Landscape**

On sheet L202, the bike rack near the blue bridge shall be surface mounted with the interlinked version. Other bike racks on the site are embedded. Revised sheets are attached to this addendum.

**3. Landscape**

The preferred pergola manufacturer and specifications have been updated on sheet L502. This updated sheet is included in this addendum.

**4. Question:**

*Please provide weld details and side details at the SSP/connect at alcove per Detail 3/CT405.*

**Answer:**

The updated alcove detail sheets are included in this addendum.

**5. Question:**

*Is epoxy coated rebar required in any of the concrete work? The only place that mentions it is for the boardwalk grade beams but that detail isn't consistent with the detail next to it.*

**Answer:**

All rebar specified in the Civil (C) and Landscape (L) plan sheets shall be epoxy coated. All other rebar specified in the Civil Transportation (CT) and Structural (S) sheets shall be uncoated (plain).

**6. Question:**

*There are 6 UHMW backing plates, the length is around 10 feet, what is the width and thickness of each backing plate?*

**Answer:**

Steel panel width dimension is based on PZC18 SSP in the drawings with the fender centered on out-pan. Contractor shall field verify dimensions of steel panel based on

SSP section and fender locations. The width of the backing plate is 12in and the thickness is 1.25in.

**7. Question:**

*Electrical alternate AAE01 Irvin power & communications cabinet shows existing one but does not say to replace. Can you clarify what we need to do with this?*

**Answer:**

Sheet E111 includes the existing Irvin power cabinet to remain. The alternate is for the power and communications cabinet #3.

**8. Question:**

*Electrical alternate AAE02 power pedestal is that referring to keynote 1 on E112 and does this include pipe and wire with pedestal or just the pedestal itself?*

**Answer:**

The alternate includes the pipe and wire to pedestal.

**9. Question:**

*On branch circuit size legend on E113, light pole BW-2 shows that there is a 50 amp receptacle but does not show it on the electrical print only in the legend. Which one is right?*

**Answer:**

The plan is correct, light pole BW-2 does not include receptacles (20A and 50A).

**10. Question:**

*On sheet CT011, the marine pile coatings refers to the "corrosive zone as noted on drawings". Can you please define the "corrosive zone" and/or add it to the drawings?*

**Answer:**

The marine pile coatings is in reference to the steel sheet pile only. The corrosive zone is the area on the steel sheet pile which will be coated with a high-performance coating.

**11. Question:**

*Will Dynamic Pile Testing (PDA) be included in the owner testing scope?*

**Answer:**

See addendum #3 Question #22.

**12. Question:**

*Will layout/survey be provided by owner?*

**Answer:**

Layout/survey will be provided by owner.

**13. Question:**

*As a follow-up to Addendum 2, Question 28: How can the owner/engineer expect the contractors to anticipate/be accountable for unforeseen obstructions and have it be incidental to the project cost?*

**Answer:**

The Contractor is responsible for clearing the top 5-feet of the drive line of debris. Any

debris encountered within the top 5-feet of the drive line will be considered incidental to the sheet pile installation. AMI completed a dive inspection of the mudline in 2021 to document debris along the surface of the mudline. Debris documented included tires, timber piles & other miscellaneous timber debris, small miscellaneous steel debris, riprap, cinder blocks, fencing, and miscellaneous concrete debris. Debris documented during the dive inspection was along the top and AMI did not probe into the underlying layers of the mudline. The amount and type of debris documented during AMI 2021 dive inspection is attached to this addendum for contractor's reference. In the dive notes, station 0+00 matches the stationing presented in the civil transportation drawings. Contractor is responsible for determining means and methods and the amount of effort required to clear the drive line of debris.

Once the driveline has been cleared, the Owner/Engineer will verify that no other obstructions are present along the surface of the mudline which will affect the installation of the steel sheet pile. Any debris encountered below 5-feet will be handled on a case-by-case basis during construction.

**14. Question:**

*Will the owner furnished waler be painted? The prep of the beam is referenced on Sheet CT400, Detail 1, Note 2, but not the paint.*

**Answer:**

The Owner furnished waler will not be painted. The surface prep of the beam referenced on Sheet CT400, Detail 1, Note 2 is the preparation of the faying surface of the channel and the SSP for bolt pre-tensioning.

**15. Question:**

*Are there any more detailed drawings of the alcove opening pertaining to the written descriptions? What is the intent of the sheet pile cutoff and reuse?*

**Answer:**

Updated drawings for the alcove sheets no. CT/405 and CT/406 are included in this addendum. The intent of the sheet pile cutoff and reuse is to install the wide flange beam that will support the SSP on the water side.

**16. Question:**

*Can the owner confirm specification section 31 62 16 section 3.2A – "Piles should be corrosion protected by hot dip galvanization." Is this accurate? Would the new 16" x 0.5" pipe piles need galvanizing as well?*

**Answer:**

The pipe piles can be bare steel, they do not need to be hot dip galvanized.

**17. Question:**

*Will there be a new bid form provided with changes from addenda?*

**Answer:**

A new bid form has been uploaded to bid express which reflects the issued addendums.

**18. Question:**



*Are the “H-pile frame Pile Cap” concrete encapsulations of the H-pile A-frame at each bollard location intended to be included in bid item CT11?*

**Answer:**

An additional bid line item for the H-pile frame Pile Cap concrete encapsulations has been added to the bid form [CT38 – H-Pile frame Pile Cap, quantity 17 (EACH)].

**19. Question:**

*Drawing 3/CT405, are there any more details on the steel grate hinged cover?*

**Answer:**

The design of the steel grate hinged cover on drawing 3/CT405 will be Contractor’s responsibility. Updated plan sheets for CT405 and CT406 are included in this addendum to provide bidders with a level of expectations and may be altered as necessary by the Contractor. Contractor shall submit drawings and calculations signed by a Professional Engineer in the State of Minnesota for review & approval.

**20. Question:**

*Should the boardwalk and nailer fasteners be 305 or 316 stainless steel?*

**Answer:**

Due to the potential for salt exposure, 316 stainless steel should be used for fasteners.

**21. Question:**

*Can a bid item be made for skate stoppers by the each?*

**Answer:**

A bid item (L41) was included for the skate stoppers by the each as they are individually attached. The updated bid form will be attached to this addendum. The structural plans have been updated to include the skatestoppers on sheets S102 and S303. The updated sheets are included in this addendum. Total quantity for the skatestoppers is 350.

**22. Question:**

*We talked to skate stopper and the product specified is not something they make; can you clarify the product desired?*

**Answer:**

The information is included in the *wall detail* SKATESTOPPER GORILLA012 in Clear Anodize. The product data sheet is attached to this addendum. The updated specifications are included in this addendum.

**23. Question:**

*Can the EDA sign be placed on temporary fence panel in lieu of the posts detail shown?*

**Answer:**

The EDA sign must be placed per the post details on sheet G003.

**24. Question:**

*Page L202 the table refers to an ADA drinking fountain. The model sheet referred to on 4/L502 is NOT ADA accessible per the manufacturer. Can you clarify what fountain is desired? The color (matte charcoal) is also not an option provided by the supplier, can you clarify color?*

**Answer:**

The drinking fountain was replaced with the model 10145SM – ADA version. The updated landscape sheets are attached to this addendum.

**25. Question:**

*What is the loading requirement for the two helical piles at the Alcove area?*

**Answer:**

The loading requirement for the two helical piles at the Alcove area is 142 kip minimum angular service capacity.

**26. Question:**

*Per Section SCT-8 (31 62 16) Sheet Piling, 2.3 Pile Accessories – Driving points are called out, but only if “required.” Please clarify if driving points will be required for the H-piles and 16” pipe piles.*

**Answer:**

The Contractor shall make the determination if driving points will be required for the H-piles and 16” pipe piles based on the available information and Contractor’s experience. Deposits of boulders and cinder blocks are present in the project area near the surface.

**27. Question:**

*Addendum 1 changed the steel sheet pile from PZC 18 to DZ 95 and subsequently the out-pan spacing has changed. Please provide new anchor layout and tie-back loading information.*

**Answer:**

The tie-back loading information is the same. The Engineer accounted for a potential wider sheet pile section in the design process. A new anchor & sheet pile layout will not be provided and is the responsibility of the Contractor.

**28. Question:**

*Addendum 3, Question #4 discusses permits required. What scope of work within this project requires City Building Permits?*

**Answer:**

The scope of work within this project that requires city building permits is as listed, but not comprehensive. Storm Wall, Cul-de-sac retaining wall, monument sign foundation, pergola foundation, light pole foundations. The Owner/Engineer will secure the building permits for these elements. The Contractor is responsible for determining and obtaining all remaining permits.

**29. Question:**

*Addendum 2, Question #6 references the Ipe boardwalk quantity. Is bid item C28 salvage boardwalk 5793 SF to be included in bid item C83 install 14041 SF along with the salvaged decking included in the response for Addendum 2, question #6?*

**Answer:**

Bid item C28 is not included with bid item C83. Bid item C28 will be removed in panels according to existing stringer lengths and delivered to the City of Duluth. Bid item C83 only includes the salvaged IPE identified in Addendum #2.

**30. Question:**

*The bid quantity for item CT21 appears to be incorrect. The drawings show the toe of the HP12x53 at elevation 559.5 and top of pile elevation at 603.5' (44' long pile). I count 26 total H-Piles. Shouldn't the bid quantity be 1144 LF?*

**Answer:**

There are 28 total H-piles at 45' long (piles come in 5' increments). The bid quantity should be 1260 LF. The bid form has been updated and attached to this addendum.

**31. Question:**

*Would the Engineer be open to alternatives to helical pile tie-back? Based on the little geotechnical information provided and 16ft depth borings along the seawall, achieving the required high capacities with helicals is extremely risky and potentially not possible due to potential obstructions (debris/boulders) or bed rock presence.*

**Answer:**

Alternative tie-back systems may be submitted to the Engineer for review & approval. The Contractor is responsible for the design of the alternatives. If the alternative is not approved, the Contractor must account for the use of helicals in their bid. Helical anchors were utilized in this project to limit the area of disturbance.

**32. Question:**

*If alternatives to helical tie-backs are not allowed, will the contractor be compensated for obstructions encountered during helical pile installation?*

**Answer:**

See answer #31.

**33. Question:**

*In lieu of the helicals for the tiebacks of the dockwalls are we able to use contractor designed tiebacks?*

**Answer:**

See answer #31.

**34. Question:**

*In lieu of the helicals at the retaining walls are we able to use contractor designed micropiles?*

**Answer:**

The Contractor may submit alternatives for the retaining walls to the Engineer for review & approval. The Contractor is responsible for the design of the alternatives. If the alternative is not approved, the Contractor must account for the use of helicals in their bid.

**35. Question:**

*What is the amount of "hydrogel" that needs to be used in the CU-STRUCTURAL SOIL mixture?*

**Answer:**

The amount of hydrogel that needs to be used in the CU-STRUCTURAL SOIL mixture is proprietary for the product, see the product specifications.

**36. Question:**

*What is the gradation of the "Drainable Base OGAB" or is it class 5?*

**Answer:**

The gradation of the Open Grade Drainable Base (OGAB) is provided per section 3136 of the MnDOT 2020 Standard Specifications.

**37. Question:**

*What is the "Granular Fill" specs?*

**Answer:**

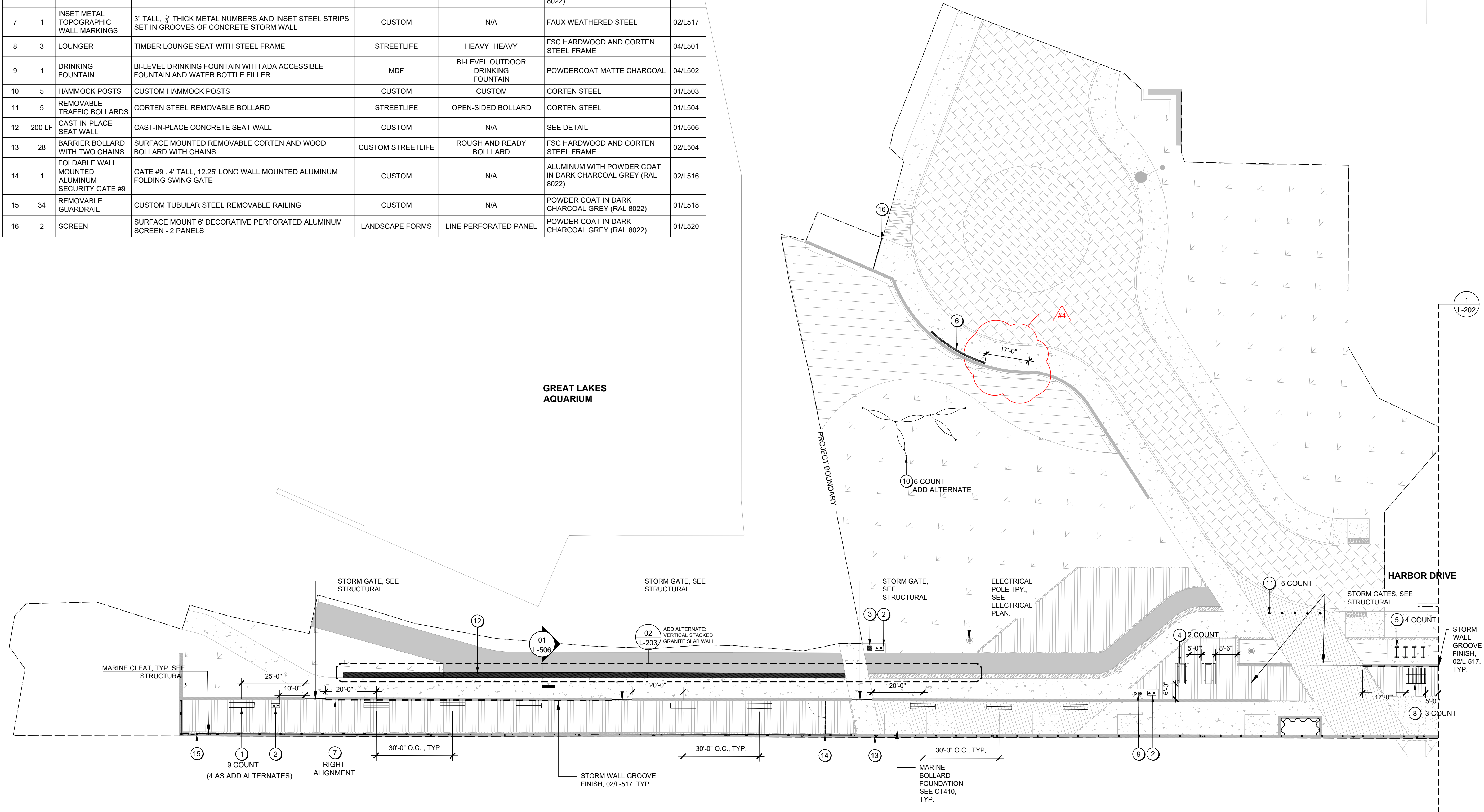
Granular Fill shall be Open Graded Drainable Base (OGAB). See question 36.

**38. Coating System**

Contractor is responsible for touching up coatings damaged during the unloading process, the installation of the sheet pile, or attachment of other marine structural systems (fenders, dock cap, timber rub rail, bollard foundations, ladders, etc.). The steel sheet pile procured by the city will be coated with Interzone 954 prior to arriving at the project site. Contractor is responsible for coating steel material, not procured by the city, which will be exposed to the water within the coating limits specified in detail 4/CT404. Items to be coated that are the responsibility of the contractor include, but is not limited to, pneumatic fender steel backer plate, sheet pile connectors, ladders, and structural members of the sheet pile alcove. Contractor shall follow coating manufacturers recommendations for installations and repair.

4/22/2023 4:53 PM  
N:\2021\0108\_Dublin Baywalk\21058 WORKING\AUTOCAD\SHEETS\21058 Plan Sheets.dwg  
© COPYRIGHT - AMI CONSULTING ENGINEERS P.A., 2004

FURNISHING SCHEDULE							
KEY	QTY	PRODUCT TYPE	DESCRIPTION	MANUFACTURER (OR APPROVED EQUAL)	PRODUCT (OR APPROVED EQUAL)	FINISH	DETAIL
1	9	BACKED BENCH	9' TIMBER BENCH WITH BACK	STREETLIFE	DRIFTER 118"	FSC HARDWOOD AND CORTEN STEEL FRAME	02/L501
2	6	TRASH AND RECYCLE RECEPTACLES	SURFACE MOUNT 35 GALLON ALUMINUM TRASH RECEPTACLE WITH RAIN GUARD	STREETLIFE	BOX BINS WITH RAIN GUARD	POWDER COAT IN DARK CHARCOAL GREY (RAL 8022)	03/L503
3	1	PARK WAYFINDING SIGN	PARK SYSTEM STANDARD WAYFINDING : OWNER TO PROVIDE AND INSTALL SIGNS. LOCATION FOR REFERENCE ONLY	CUSTOM	N/A	N/A	N/A
4	2	PICNIC TABLE	9' TIMBER TABLE WITH BENCHES	STREETLIFE	DRIFTER PICNIC SETS 118"	FSC HARDWOOD AND CORTEN STEEL FRAME	01/L502
5	4	BIKE RACK	EMBEDDED CORTEN STEEL BIKE RACK WITH ALL BLACK BUMPER STRIP	STREETLIFE	CORTEN BICYCLE RACKS	CORTEN STEEL	03/L502
6	1	WALL MOUNTED MONUMENT SIGN	WALL MOUNTED WHITE OAK SLAT WITH ALUMINUM PANEL	CUSTOM	N/A	ALUMINUM WITH POWDER COAT IN DARK CHARCOAL GREY (RAL 8022)	01/L513
7	1	INSET METAL TOPOGRAPHIC WALL MARKINGS	3" TALL, 3/8" THICK METAL NUMBERS AND INSET STEEL STRIPS SET IN GROOVES OF CONCRETE STORM WALL	CUSTOM	N/A	FAUX WEATHERED STEEL	02/L517
8	3	LOUNGER	TIMBER LOUNGE SEAT WITH STEEL FRAME	STREETLIFE	HEAVY- HEAVY	FSC HARDWOOD AND CORTEN STEEL FRAME	04/L501
9	1	DRINKING FOUNTAIN	BI-LEVEL DRINKING FOUNTAIN WITH ADA ACCESSIBLE FOUNTAIN AND WATER BOTTLE FILLER	MDF	BI-LEVEL OUTDOOR DRINKING FOUNTAIN	POWDERCOAT MATTE CHARCOAL	04/L502
10	5	HAMMOCK POSTS	CUSTOM HAMMOCK POSTS	CUSTOM	CUSTOM	CORTEN STEEL	01/L503
11	5	REMOVABLE TRAFFIC BOLLARDS	CORTEN STEEL REMOVABLE BOLLARD	STREETLIFE	OPEN-SIDED BOLLARD	CORTEN STEEL	01/L504
12	200 LF	CAST-IN-PLACE SEAT WALL	CAST-IN-PLACE CONCRETE SEAT WALL	CUSTOM	N/A	SEE DETAIL	01/L506
13	28	BARRIER BOLLARD WITH TWO CHAINS	SURFACE MOUNTED REMOVABLE CORTEN AND WOOD BOLLARD WITH CHAINS	CUSTOM STREETLIFE	ROUGH AND READY BOLLARD	FSC HARDWOOD AND CORTEN STEEL FRAME	02/L504
14	1	FOLDABLE WALL MOUNTED ALUMINUM SECURITY GATE #9	GATE #9 : 4' TALL, 12.25' LONG WALL MOUNTED ALUMINUM FOLDING SWING GATE	CUSTOM	N/A	ALUMINUM WITH POWDER COAT IN DARK CHARCOAL GREY (RAL 8022)	02/L516
15	34	REMOVABLE GUARDRAIL	CUSTOM TUBULAR STEEL REMOVABLE RAILING	CUSTOM	N/A	POWDER COAT IN DARK CHARCOAL GREY (RAL 8022)	01/L518
16	2	SCREEN	SURFACE MOUNT 6" DECORATIVE PERFORATED ALUMINUM SCREEN - 2 PANELS	LANDSCAPE FORMS	LINE PERFORATED PANEL	POWDER COAT IN DARK CHARCOAL GREY (RAL 8022)	01/L520



1 L-201 SOUTHERN BAYWALK FURNISHING PLAN ENLARGEMENT



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

NAME: TERRY MINARIK  
SIGNATURE: *Terry Minarik*  
DATE: 6/22/2023  
LIC. No.: 42242

REV. BY:	DESCRIPTION	REV.	DATE
TM	ISSUED FOR BID		6/22/2023
TM	ADDENDUM #4		8/16/2023

SITE FURNISHINGS ENLARGEMENT PLAN 1

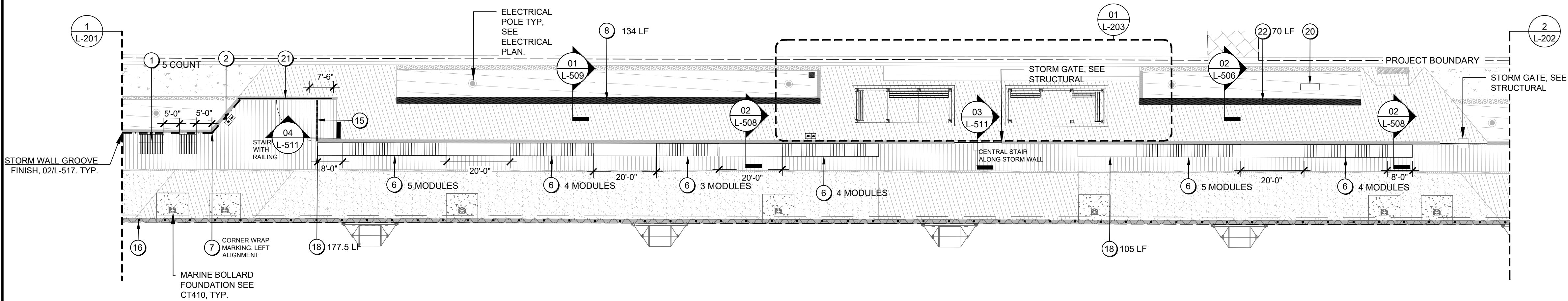
JOB No: 21058  
DATE: 6/22/2023  
DRAWN BY: M.Convery  
DESIGNED BY: T.Minarik

SHEET:  
L201

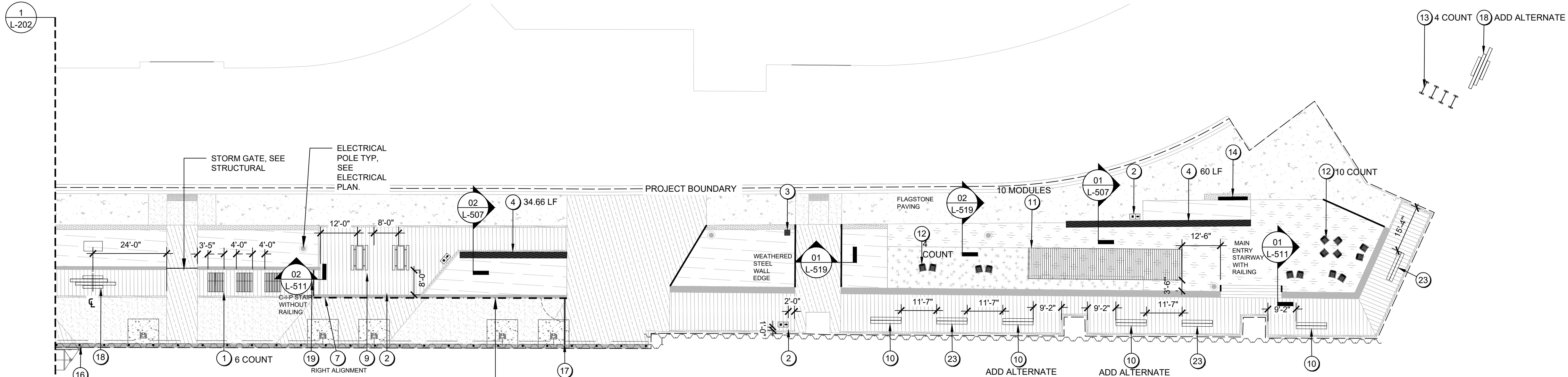


4/22/2023 4:53 PM  
N:\2021\21058-Duluth Baywalk\21058-WORKING-AUTOCAD\SHEETS\21058 Plan Sheets.dwg  
© COPYRIGHT - AMI CONSULTING ENGINEERS P.A., 2008

FURNISHING SCHEDULE							
KEY	QTY	PRODUCT TYPE	DESCRIPTION	MANUFACTURER (OR APPROVED EQUAL)	PRODUCT (OR APPROVED EQUAL)	FINISH	DETAIL
1	5	LOUNGERS	TIMBER LOUNGE SEAT WITH STEEL FRAME	STREETLIFE	HEAVY- HEAVY	FSC HARDWOOD AND CORTEN STEEL FRAME	04/L501
2	6	TRASH AND RECYCLE RECEPTACLES	SURFACE MOUNT 35 GALLON ALUMINUM TRASH RECEPTACLE WITH RAIN GUARD	STREETLIFE	BOX BINS WITH RAIN GUARD	POWDER COAT IN DARK CHARCOAL GREY (RAL 8022)	03/L503
3	2	PARK WAYFINDING SIGN	PARK SYSTEM STANDARD WAYFINDING : OWNER TO PROVIDE AND INSTALL SIGNS. LOCATION FOR REFERENCE ONLY	CUSTOM	N/A	N/A	N/A
4	1	STANDARD CAST-IN-PLACE SEAT WALL	2'X22" CAST-IN-PLACE CONCRETE SEAT WALL	CUSTOM	N/A	SEE DETAILS	01-02/L507
5	3	BACKED BENCH	9' TIMBER BENCH WITH BACK	STREETLIFE	DRIFTER BENCH 118"	FSC HARDWOOD AND CORTEN STEEL FRAME	02/L501
6	25	WIDE SEAT WALL TOPPER	47"X79" WOOD SLAT SEAT TOPPER	STREETLIFE	HIGHLIFE III TOP SEATS	FSC HARDWOOD II- VIRGIN	01/L508
7	2	INSET METAL TOPOGRAPHIC WALL MARKINGS	3" TALL, 1/4" THICK METAL NUMBERS AND INSET STEEL STRIP IN GROOVES IN CONCRETE STORM WALL	CUSTOM	CUSTOM	FAUX WEATHERED STEEL	02/L517
8	134 LF	2" SEAT WALL	CAST-IN-PLACE CONCRETE SEAT WALL	CUSTOM	NA	SEE DETAIL	01/L509
9	2	PICNIC TABLE	9' TIMBER TABLE WITH BENCHES	STREETLIFE	DRIFTER PICNIC SETS 118"	FSC HARDWOOD AND CORTEN STEEL FRAME	01/L502
10	4	BACKLESS BENCH	9' TIMBER BENCH	STREETLIFE	DRIFTER BENCH 118"	FSC HARDWOOD AND CORTEN STEEL FRAME	03/L501
11	10	MODULAR WAVE BENCHES	METAL AND WOOD MODULAR WAVE BENCHES	STREETLIFE	SOLID SURF ISLES	FSC HARDWOOD II AND CORTEN STEEL FRAME	02/L503
12	14	ADIRONDACK CHAIR	COMMERCIAL GRADE MOVABLE ADIRONDACK CHAIR	LOLL	ADIRONDACK CHAIR (FLAT)	LOW SHEEN MATTE BLACK	02/L501
13	4	BIKE RACK	CORTEN STEEL BIKE RACK WITH ALL BLACK BUMPER STRIP - INTERLINKED VERSION SURFACE MOUNT	STREETLIFE	CORTEN BICYCLE RACKS	CORTEN STEEL	03/L502
14	1	FREESTANDING MONUMENT SIGN	WHITE OAK SLAT WITH ALUMINUM PANEL	CUSTOM	N/A	WHITE OAK AND ALUMINUM	01/L514
15	1	SOLID WALL MOUNTED ALUMINUM SECURITY GATE #6	GATE 6: 4' TALL, 13.25' LONG WALL MOUNTED ALUMINUM SWING GATE	CUSTOM	N/A	ALUMINUM WITH POWDER COAT IN DARK CHARCOAL GREY (RAL 8022)	01/L516
16	82	BARRIER BOLLARDS WITH TWO CHAINS	SURFACE MOUNTED REMOVABLE CORTEN AND WOOD BOLLARD WITH CHAINS	STREETLIFE	N/A	FSC HARDWOOD AND CORTEN STEEL FRAME	02/L504
17	1	FOLDABLE WALL MOUNTED ALUMINUM SECURITY GATE #1	GATE 1: 4' TALL, 14.5' LONG WALL MOUNTED ALUMINUM SWING GATE	CUSTOM	N/A	ALUMINUM WITH POWDER COAT IN DARK CHARCOAL GREY (RAL 8022)	02/L516
18	282.5 LF	WIDE SEAT WALL	4' WIDE CAST-IN-PLACE CONCRETE SEAT WALL	CUSTOM	N/A	SACK-RUB	02/L508
19	1	SOLID WALL MOUNTED ALUMINUM SECURITY GATE #2	GATE 2: 4' TALL, 8.25' LONG WALL MOUNTED ALUMINUM SWING GATE	CUSTOM	N/A	ALUMINUM WITH POWDER COAT IN DARK CHARCOAL GREY (RAL 8022)	01/L516
20	1	FINE PERFORATED WEATHER STEEL MESH WATER METER ENCLOSURE	4'X2'X6' CUSTOM PERFORATED STEEL ENCLOSURE	CUSTOM	N/A	FINE PERFORATED WEATHER STEEL MESH	03/L518
21	29.5 LF	SURFACE MOUNTED TOP RAILING	MODERN RECTANGULAR 2"X2" WEATHERED TUBULAR STEEL HANDRAIL WELDED TO 4"X4" MOUNTING PLATES.	CUSTOM	N/A	FAUX WEATHERED STEEL	01/L517
22	70 LF	3' SEAT WALL	3' TALL CAST-IN-PLACE CONCRETE SEAT WALL	CUSTOM	N/A	SEE DETAIL	02/L506



1 L-202 CENTER BAYWALK FURNISHING PLAN ENLARGEMENT 1"=20'



2 L-202 NORTHERN BAYWALK FURNISHING PLAN ENLARGEMENT 1"=20'



Consulting Engineers P.A.

SEH

AVRES  
MECHANICAL ELECTRICAL  
PLUMBING (MEP)

HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

TERRY MINARIK

DATE: 4/22/2023

LIC. No.: 4294

REV. BY:	TM	TM			
DESCRIPTION	ISSUED FOR BID	ADDENDUM #4			
REV:					
DATE:	6/22/2023	8/16/2023			

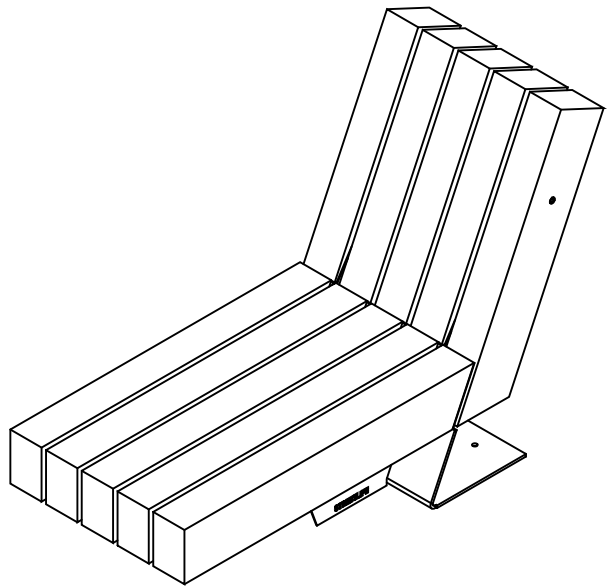
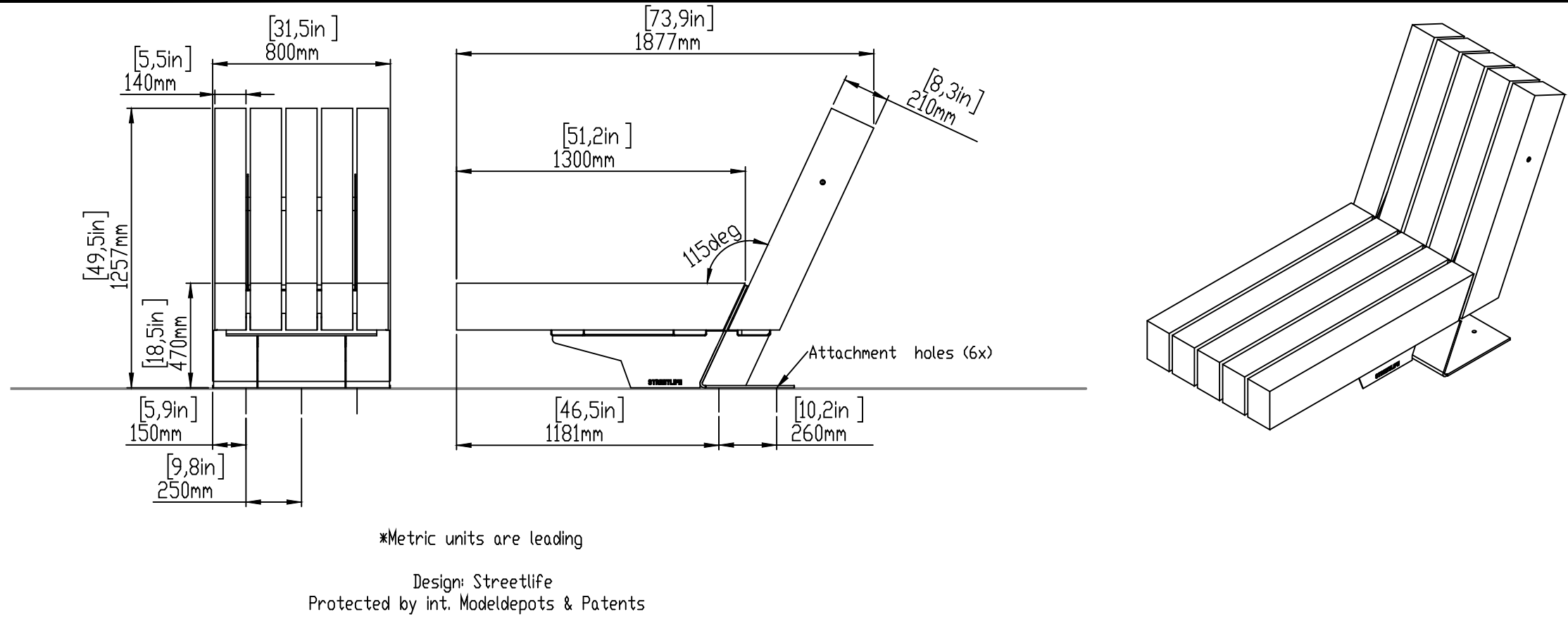
SITE FURNISHINGS ENLARGEMENT PLAN 2

JOB No: 21058  
DATE: 04/28/2023  
DRAWN BY: M.Convery  
DESIGNED BY: T.Minarik

SHEET:  
**L202**



8/16/2023 9:27 AM  
N:\2021\21058\_Dublin Baywalk\21058\_WORKING\A500\CAD\SHEETS\21058\_Site Details.dwg  
© COPYRIGHT - AMI CONSULTING ENGINEERS P.A., 2006



#### DESIGN INTENT

##### STREETLIFE DESIGNS

HEAVY-HEAVY LOUNGER

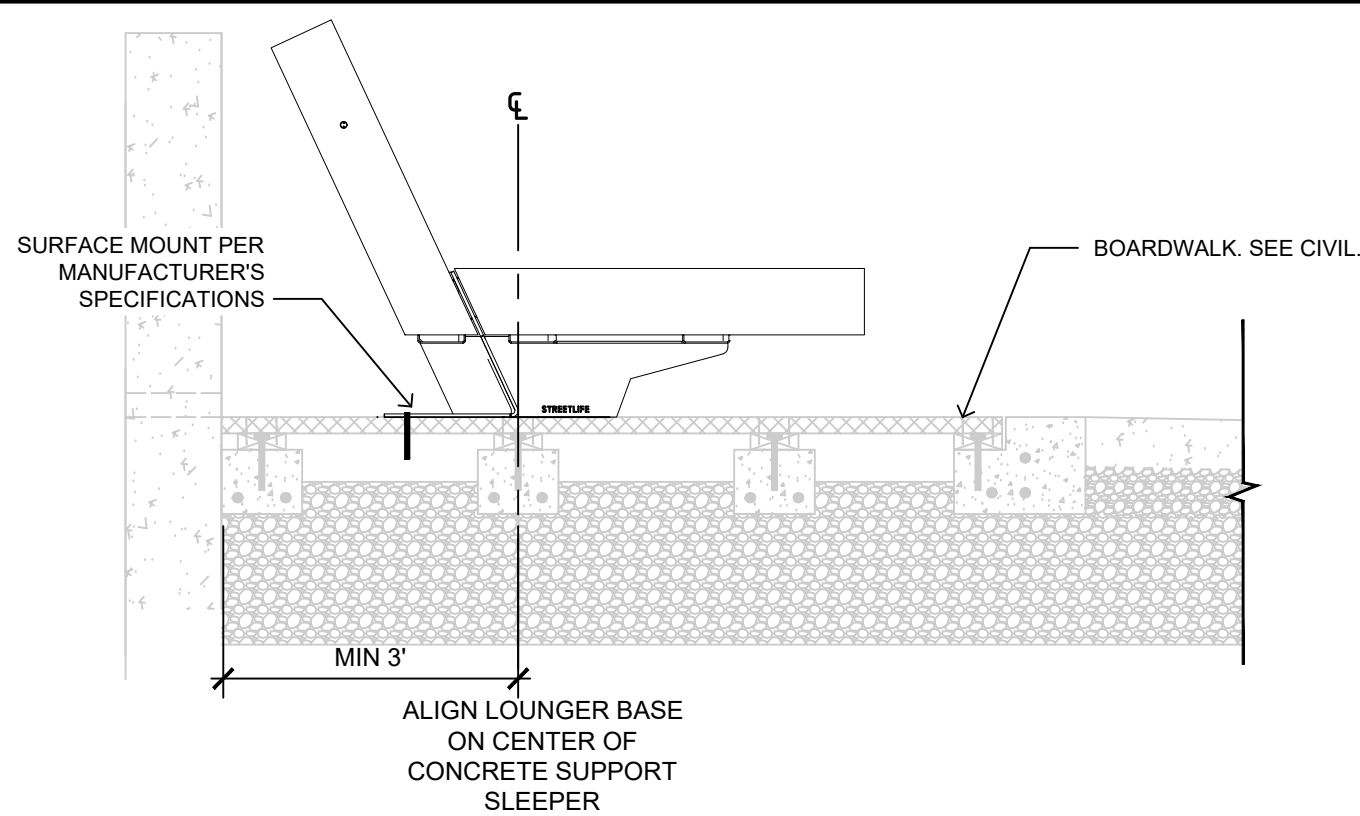
PRODUCT NO. HHLNG-80

CONTACT: Sonno Wijes  
swijes@streetlife.com

NOTES:

1. MATERIALS  
1.1. FSC HARDWOOD III-VIRGIN CORE
- 1.2. CORTEN STEEL
2. SURFACE MOUNTED TO BOARDWALK

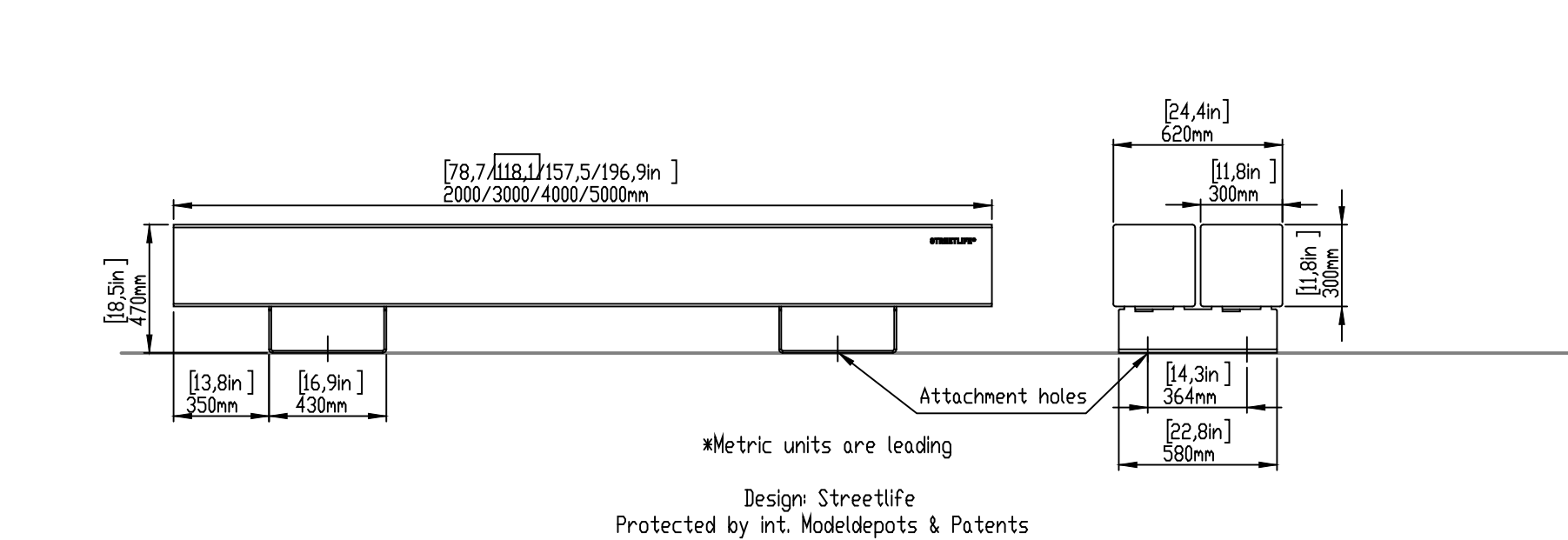
OR APPROVED EQUAL



SECTION OF BENCH SURFACE MOUNT TO BOARDWALK

#### 04 L501 LOUNGER DETAIL

1/2" = 1'-0"



#### DESIGN INTENT

##### STREETLIFE DESIGNS

TWO TIMBER DRIFTER BENCH

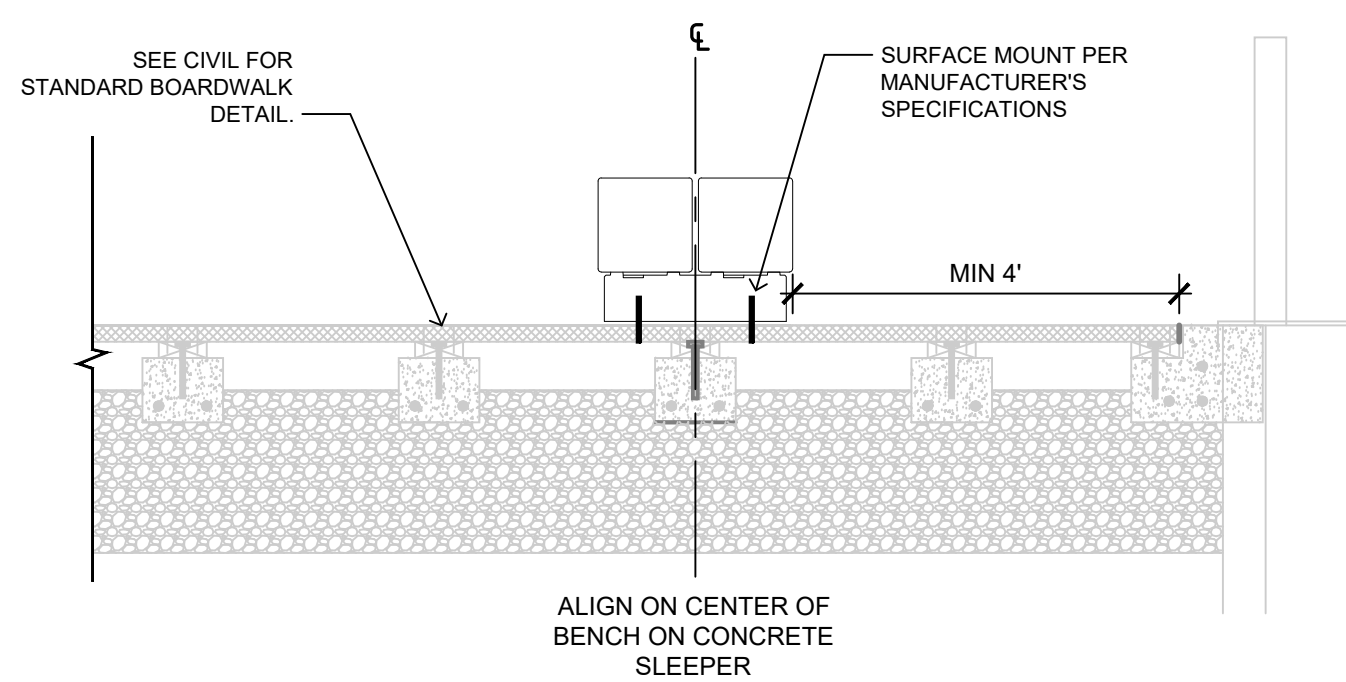
PRODUCT NO. DB-L2-300

CONTACT: Sonno Wijes  
swijes@streetlife.com

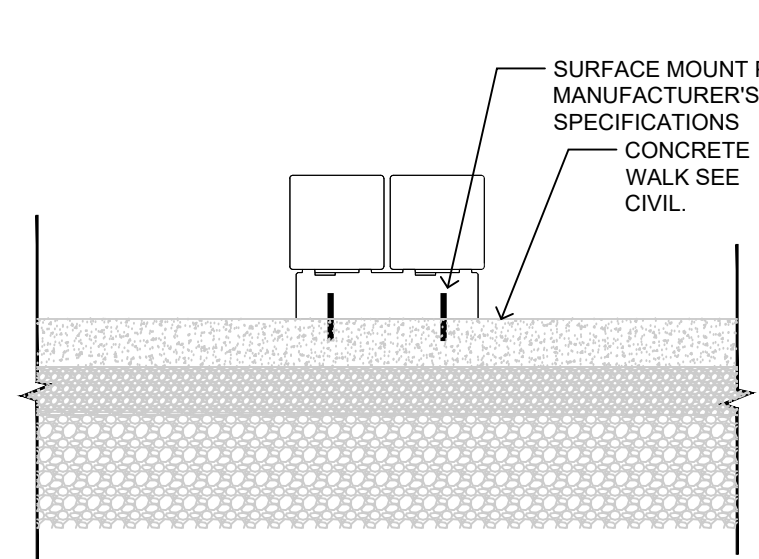
NOTES:

1. MATERIALS  
1.1. FSC HARDWOOD III-VIRGIN CORE
- 1.2. CORTEN STEEL
2. SURFACE MOUNTED TO BOARDWALK OR CONCRETE. REFER TO PLAN.

OR APPROVED EQUAL



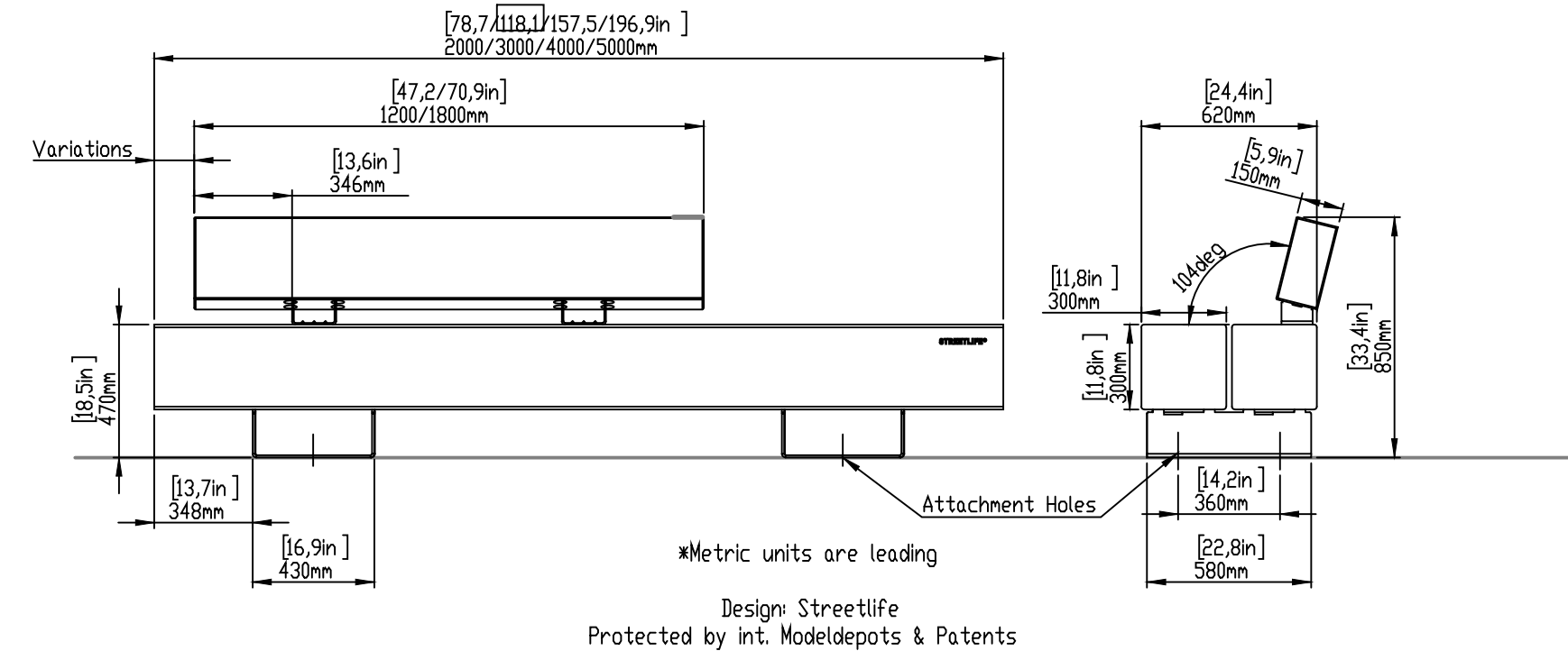
SECTION OF BENCH SURFACE MOUNT TO BOARDWALK



SECTION OF BENCH SURFACE MOUNT TO CONCRETE

#### 03 L501 BACKLESS BENCH 1 DETAIL

1/2" = 1'-0"



#### DESIGN INTENT

##### STREETLIFE DESIGNS

TWO TIMBER DRIFTER BENCH WITH BACK

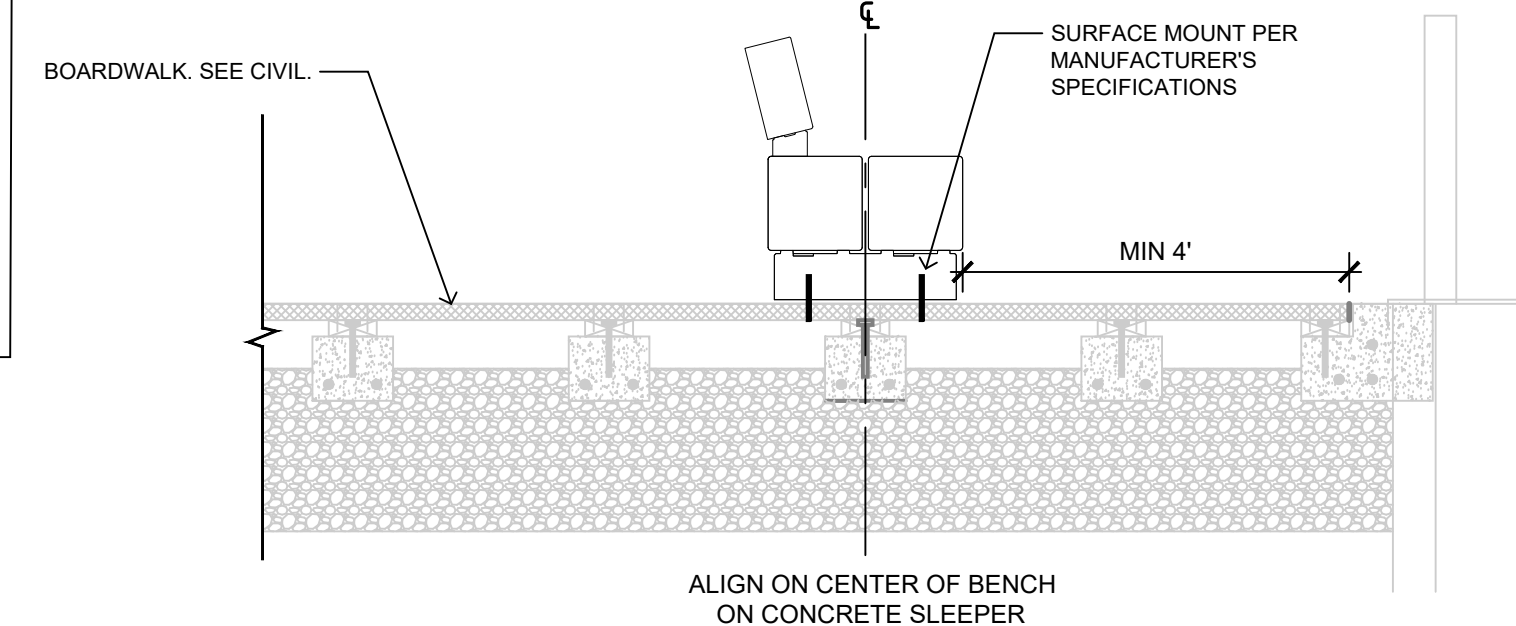
PRODUCT NO. DB-L2-300

CONTACT: Sonno Wijes  
swijes@streetlife.com

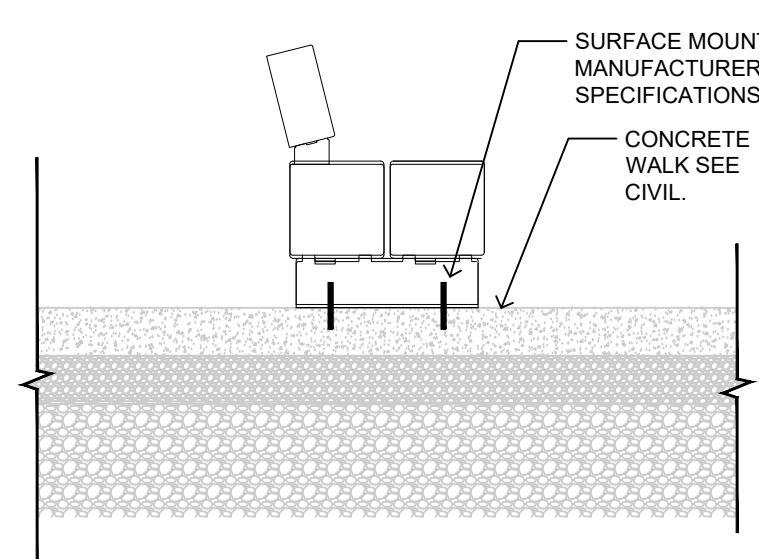
NOTES:

1. MATERIALS  
1.1. FSC HARDWOOD III-VIRGIN CORE
- 1.2. CORTEN STEEL
2. SURFACE MOUNTED TO BOARDWALK OR CONCRETE. REFER TO PLAN.

OR APPROVED EQUAL



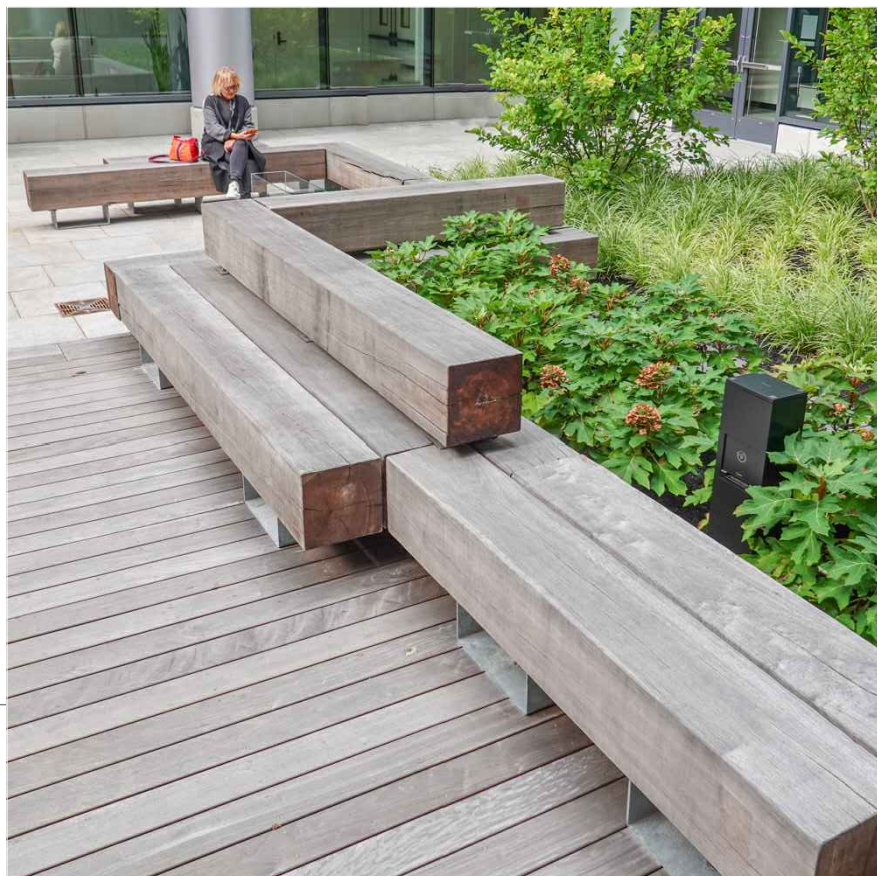
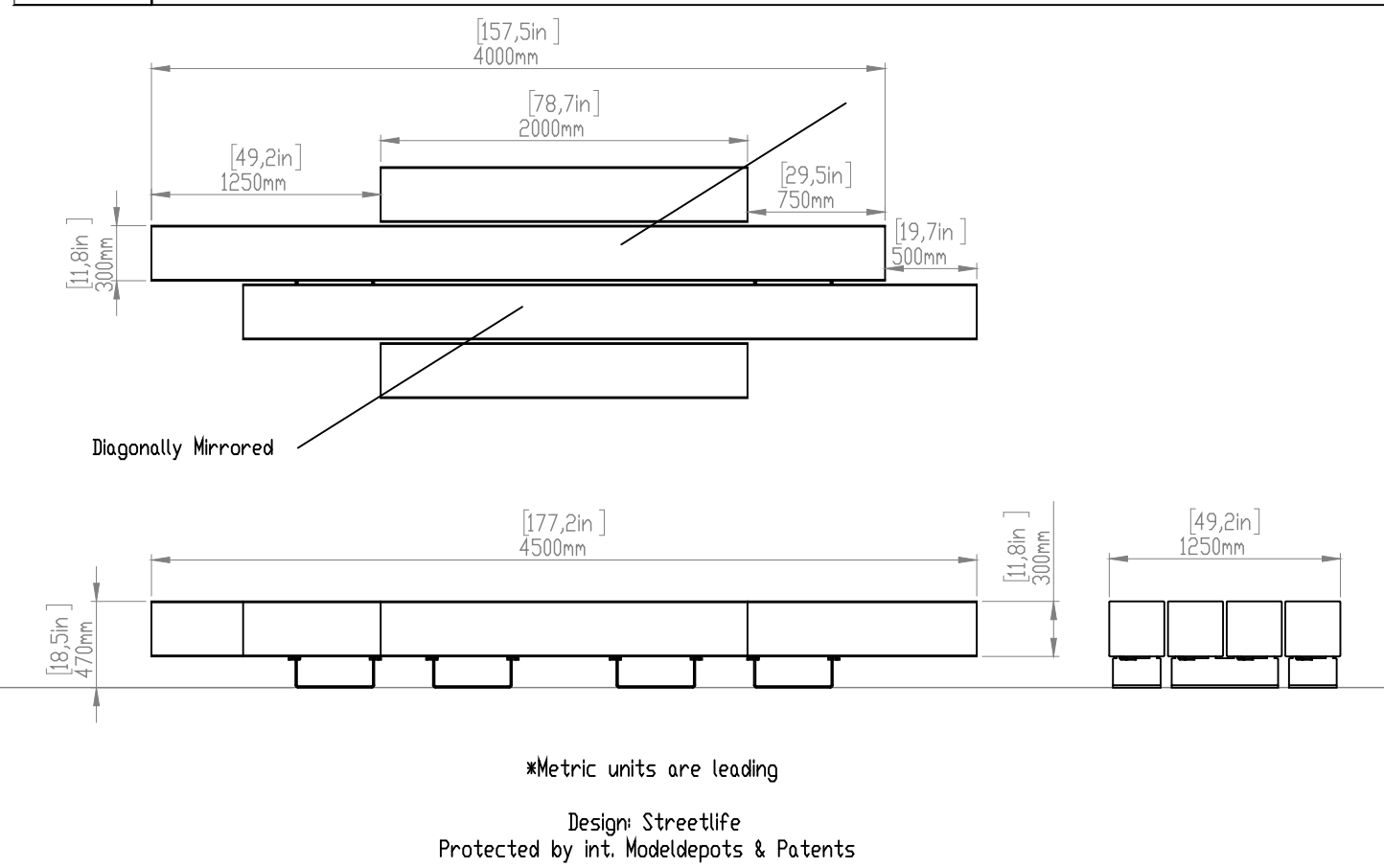
SECTION OF BENCH SURFACE MOUNT TO BOARDWALK



SECTION OF BENCH SURFACE MOUNT TO CONCRETE

#### 02 L501 BACKED BENCH DETAIL

1/2" = 1'-0"



#### DESIGN INTENT

##### STREETLIFE DESIGNS

DRIFTER STRUCTURE

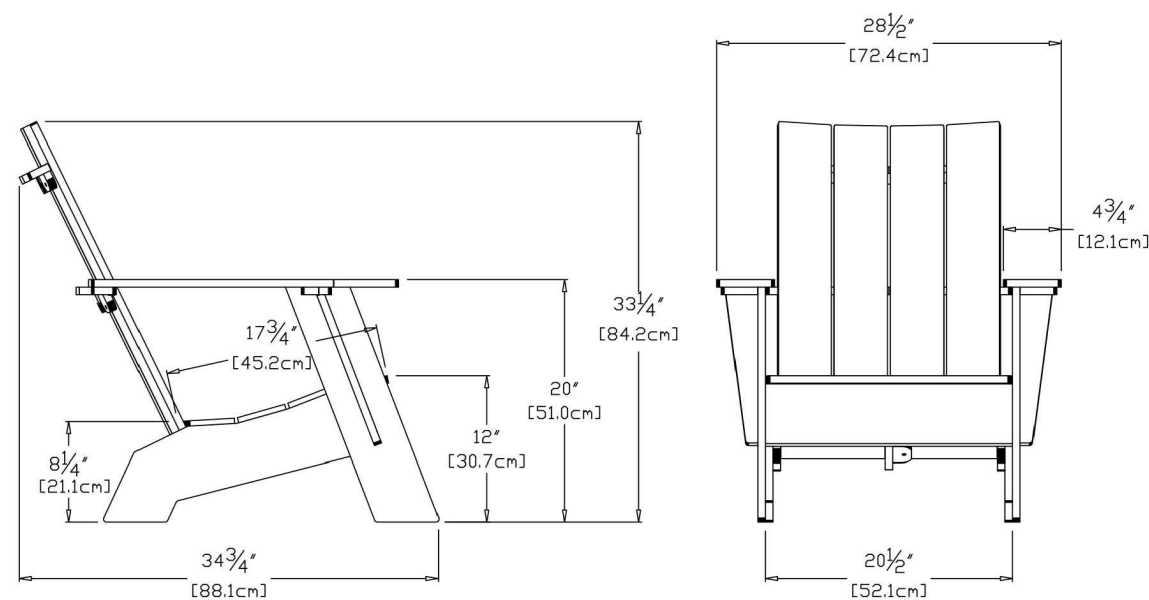
PRODUCT REF. NO. DB-STR-H-400-125

CONTACT: Sonno Wijes  
swijes@streetlife.com

NOTE:

1. MATERIALS  
1.1. FSC HARDWOOD III-VIRGIN CORE
- 1.2. CORTEN STEEL
2. FREESTANDING.

OR APPROVED EQUAL



#### DESIGN INTENT

##### LOLL DESIGNS

4-SLAT ADIRONDACK CHAIR (FLAT)

CONTACT: sales@lollidesigns.com

ALTERNATIVE: LANDSCAPE FORMS

AMERICANA CHAIR

CONTACT: Mike Konieczny

MikeK@landscapeforms.com

NOTE:

1. COLOR: LOW SHEEN MATTE BLACK
2. CHAIRS TO BE FREESTANDING.

OR APPROVED EQUAL

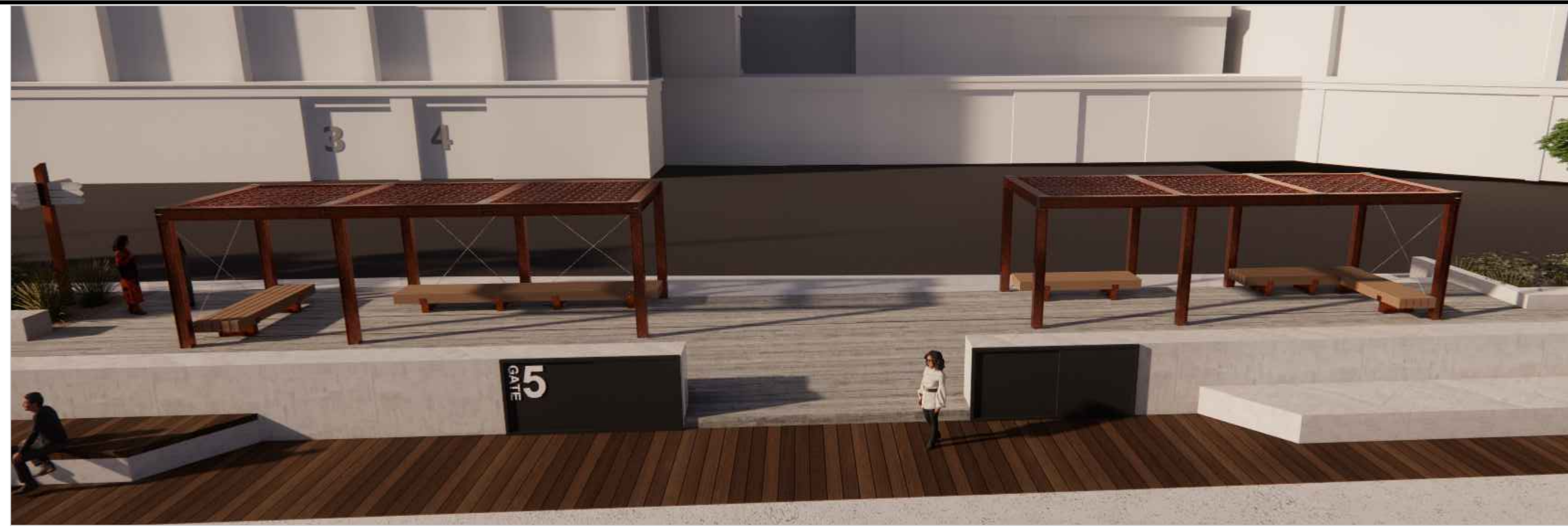
#### 01 L501 STACKED BENCH

3/4" = 1'-0"

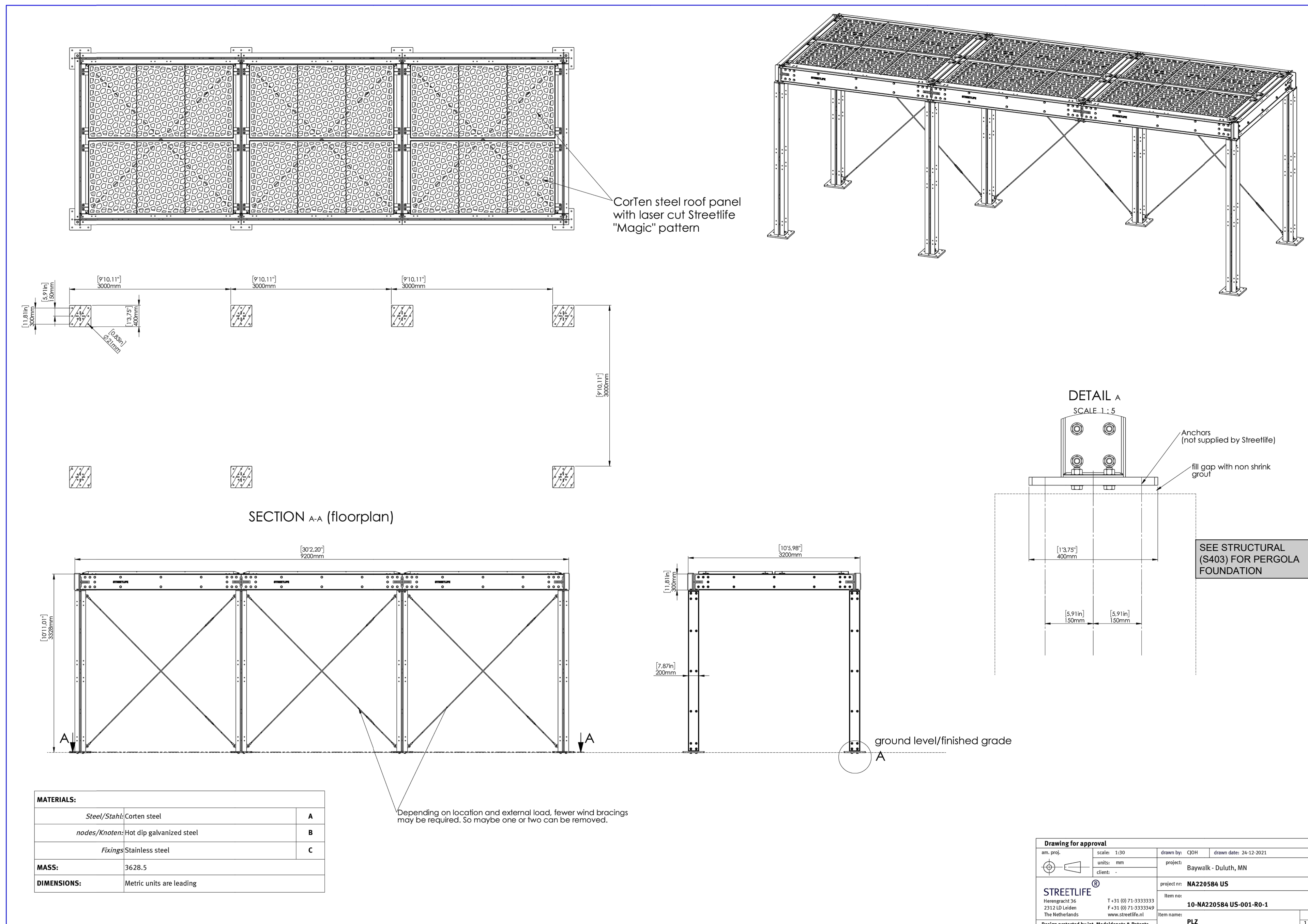
#### 02 L501 ADIRONDACK CHAIR

REV. BY:	DESCRIPTION	DATE	REV.
TM	ISSUED FOR BID	6/22/2023	
TM	ADDENDUM #4	8/16/2023	





## DESIGN INTENT



SHOP DRAWINGS REQUIRED

## DESIGN INTENT

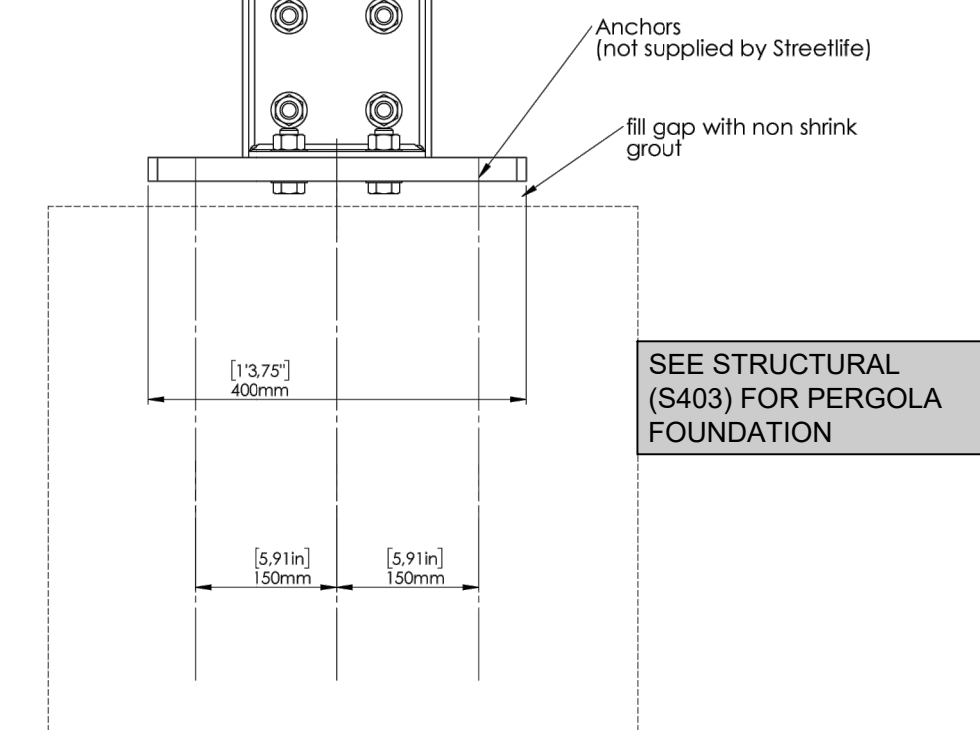
DRIFTER STRUCTURE  
PRODUCT REF. NO.  
PLZ-SHA-900-600,  
PLZ-SHA-ROOF-CT  
**CONTACT:** Sonno Witjes  
switjes@streetlife.com

NOTE


1. MATERIALS
  - 1.1. CORTEN STEEL
2. STRETCH STEEL ROOF INFILL IN WEATHERING STEEL (CORTEN)
3. DELIVERED UNWEATHERED
4. MOUNTED PER MANUFACTURER'S SPECIFICATIONS
5. INCLUDE LED COLUMN SURFACE MOUNTED LED SPOTLIGHTS. LIGHT MOUNTING SHOULD BE COORDINATED WITH PERGOLA MANUFACTURER PRIOR TO FABRICATION BASED LIGHTING MANUFACTURER'S SURFACE MOUNTING SPECIFICATIONS. SEE ELECTRICAL FOR LIGHT SCHEDULING.
6. ALL BRACING LOCATIONS SHOULD BE COORDINATED WITH LANDSCAPE ARCHITECT AND MANUFACTURER PRIOR TO FABRICATION.

OR APPROVED EQUAL

DETAIL A  
SCALE 1:5



SEE STRUCTURAL  
(S403) FOR PERGOLA  
FOUNDATION

<b>Drawing for approval</b>		drawn by: CJQH	drawn date: 26-12-2021
am. proj.	scale: 1:30	project:	
	units: mm		Baywalk - Duluth, MN
	client: -	project no:	<b>NA220584 US</b>
<b>STREETLIFE</b> ®	T +31 (0) 71-7333333	item no:	<b>10-NA220584 US-001-R-01</b>
Harengracht 36	F +31 (0) 71-7333349	item name:	<b>PLZ</b>
2312 LD London	<a href="http://www.streetlife.nl">www.streetlife.nl</a>		
The Netherlands			
Project code: <a href="#">http://www.streetlife.nl/Modelisten-Actiesheet/</a>			

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

TERRY MINARIK

11

DATE: 6/23/2023  
NATURE: \_\_\_\_\_  
LIC No: 42042

DATE:	REV:	DESCRIPTION	REV. BY:
8/25/2023		ISSUED FOR BID	TM
8/16/2023		ADDENDUM #4	TM

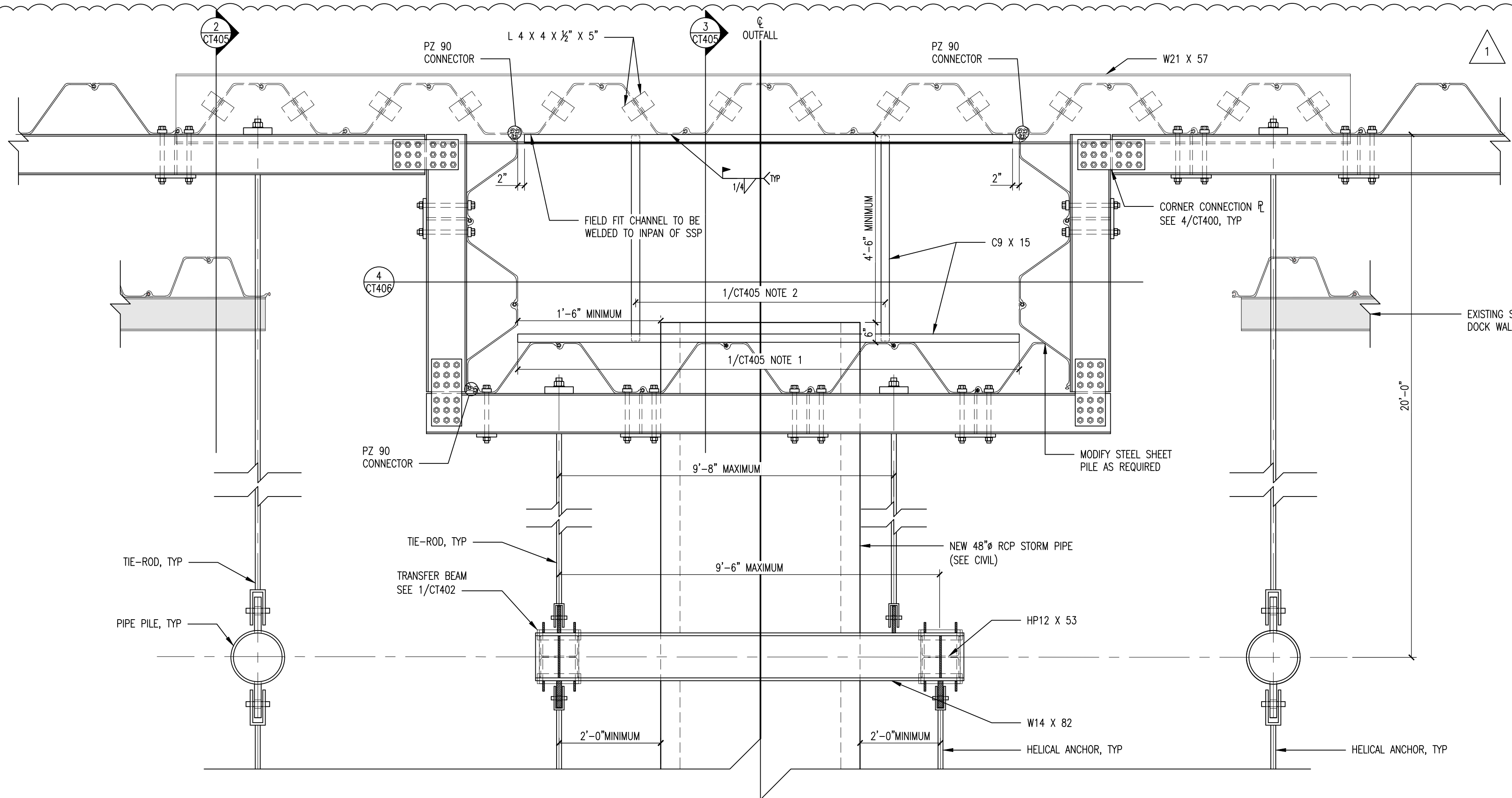
SITE DETAILS: PERGOLA

JOB No: 21058  
DATE: 6/22/2023  
DRAWN BY: M. Convery  
DESIGNED BY: T. Minarik

SHEET:

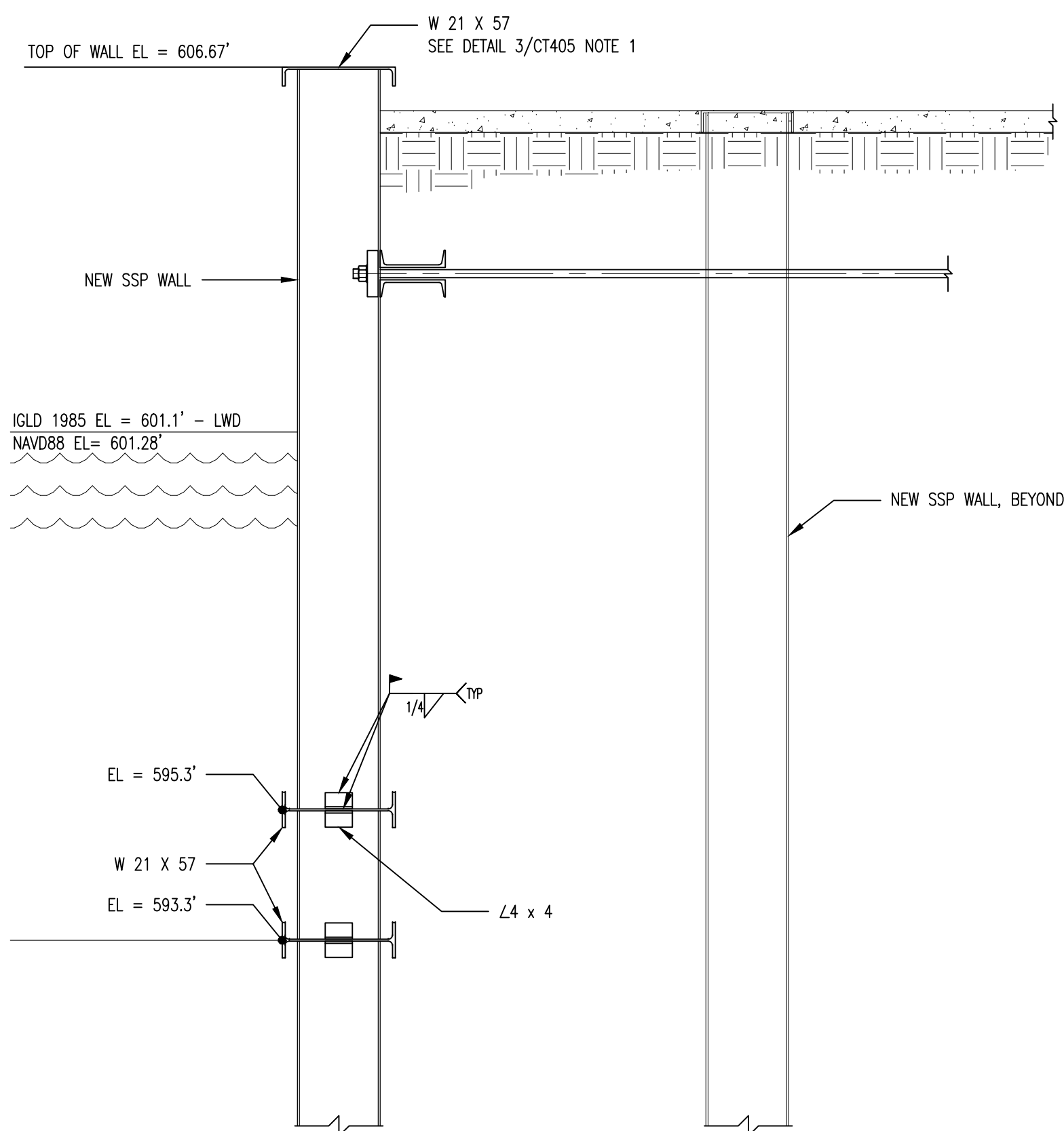
**L505**





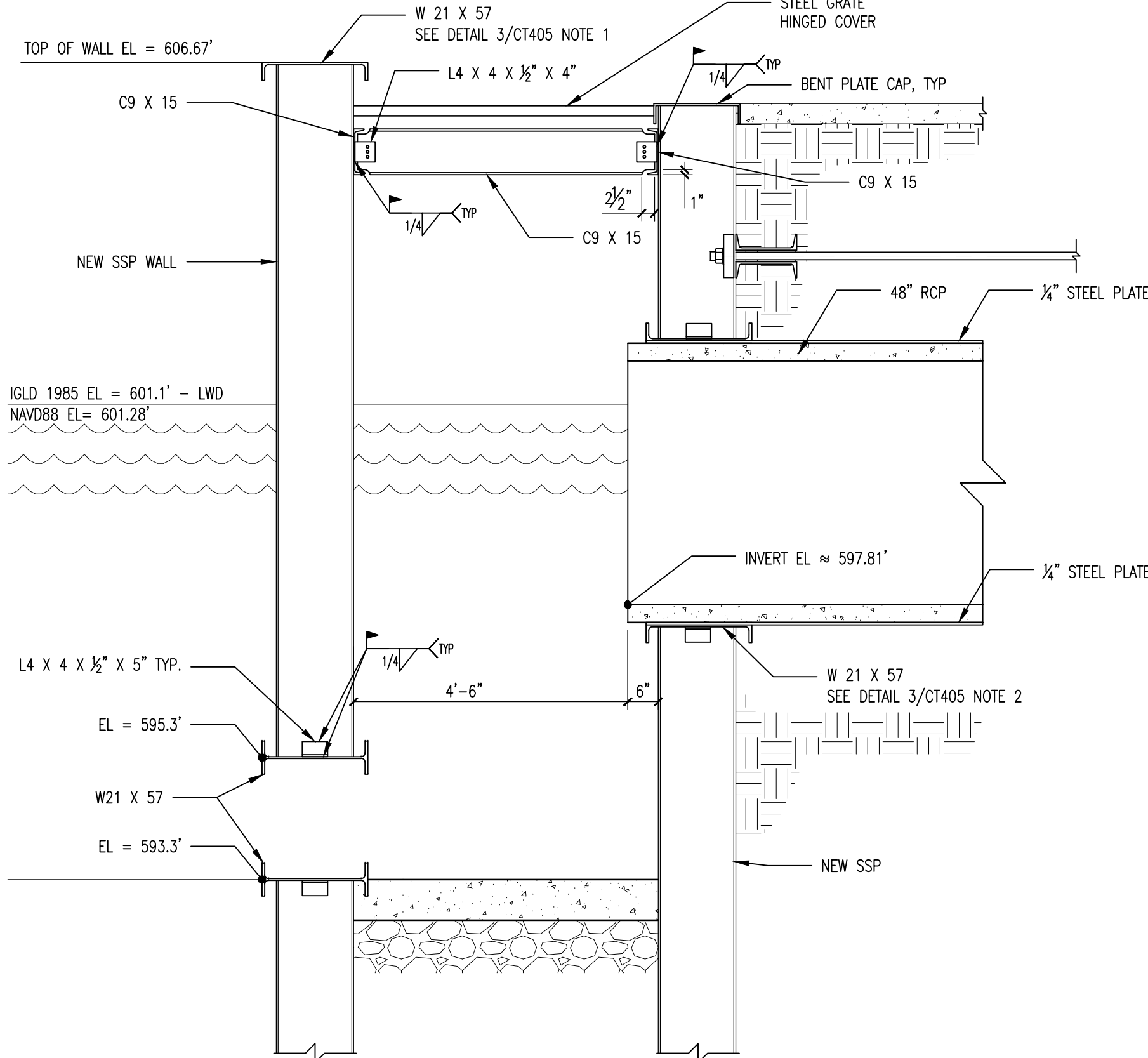
1 SSP OUTFALL PIPE ALCOVE PLAN BELOW WALKING SURFACE

- 1/2" = 1'-0"
1. CHANNELS SHALL BE FITTED TO FULL LENGTH OF SSP ALCOVE.
  2. DISTANCE BETWEEN LONGITUDINAL CHANNELS WILL BE DEPENDENT ON THE SIZE OF THE LIFT STATION HATCH DOOR ACCESS COVER.



2 SSP OUTFALL PIPE ALCOVE SECTION

1/2" = 1'-0"



3 SSP OUTFALL PIPE ALCOVE SECTION

1/2" = 1'-0"

#### CONSTRUCTION SEQUENCE

1. CLEAR DRIVE LINE PER PROJECT PLANS AND SPECIFICATIONS.
2. LOCATE THE NEW 48" DIAMETER STORM SEWER PIPE AND OUTFALL VIA TOPOGRAPHIC SURVEY EQUIPMENT.
3. SUBMIT PROPOSED PLAN TO ENGINEER FOR REVIEW & APPROVAL FOR THE NEW SSP ALCOVE BASED ON ACTUAL LOCATION OF OUTFALL AND ALIGNMENT WITH NEW & EXISTING SHEET PILE.
4. INSTALL NEW STEEL SHEET PILE (SSP) DOCK WALL WITH SHEET PILE CONNECTORS AS SPECIFIED IN THE PROJECT PLANS & SPECIFICATION AND AGREED UPON LAYOUT.
5. EXCAVATE ALONG THE BACKSIDE OF THE EXISTING DOCK WALL TO COMPLETE THE REQUIRED PARTIAL DEMOLITION OF EXISTING DOCK WALL. CONTRACTOR SHALL USE CAUTION TO NOT DAMAGE THE EXISTING DOCK WALL TIE-BACK SYSTEM.
6. INSTALL THE TIEBACK SYSTEM FOR THE NEW DOCK WALL UP TO EITHER SIDE OF PROPOSED ALCOVE STRUCTURE.
7. EXCAVATE ALONG BACKSIDE OF THE EXISTING SSP DOCK WALL WITHIN THE LIMITS OF THE SSP ALCOVE TO ELEVATION 592.3'.
8. REMOVE EXISTING SHEET PILE AND TIE-BACK SYSTEM ONLY AS MUCH AS REQUIRED TO INSTALL NEW SSP ALCOVE STRUCTURE. SEE PLAN FOR ADDITIONAL INFORMATION.
9. INSTALL SILT CURTAIN ON THE OUTSIDE OF THE NEW SHEET PILE DOCK WALL AROUND THE LIMITS OF THE NEW ALCOVE STRUCTURE.
10. CUT OUTER SHEET PILE WALL AT ELEVATION 593.3' FOR BOTTOM EDGE OF ALCOVE OPENING. THE CUT SHEET PILE SHALL EXTEND A MINIMUM OF (4) SHEET PILES BEYOND EACH SIDE OF THE ALCOVE OPENING. SAVE CUT PORTIONS OF NEW SHEET PILE.
11. INSTALL BOTTOM WIDE FLANGE BEAM ON TOP OF ALL THE CUT SHEET PILES.
12. CONNECT THE BOTTOM WIDE FLANGE BEAM TO THE SHEET PILE AS SPECIFIED IN THE PROJECT PLANS.
13. CUT AN (8) SECTIONS OF SHEET PILE THAT ARE APPROXIMATE 2'-6" LONG OUT FOR PREVIOUSLY REMOVED SHEET PILE TO CREATE A "FILLER" SECTION THAT SPANS BETWEEN THE WIDE FLANGE BEAMS OF THE ALCOVE OPENING. CONTRACTOR SHALL VERIFY THE EXACT LENGTH OF SSP "FILLER" SECTION TO BE INSTALLED. TRIM REMAINING SHEETS OF PREVIOUSLY REMOVED SHEET PILE BY THE SAME LENGTH AS THE SSP "FILLER" SECTION.
14. INSTALL (8) SSP "FILLER" SECTIONS AT THE SPECIFIED LOCATION ON TOP OF THE BOTTOM WIDE FLANGE BEAM.
15. INSTALL MIDDLE WIDE FLANGE BEAM ON TOP OF SSP "FILLER" SECTIONS.
16. CONNECT THE MIDDLE WIDE FLANGE BEAM TO THE SSP "FILLER" SECTIONS AS SPECIFIED IN THE PROJECT PLANS.
17. INSTALL TRIMMED SECTIONS OF PREVIOUSLY REMOVED SHEET PILE ON TOP OF THE TOP WIDE FLANGE BEAM.
18. INSTALL TOP WIDE FLANGE BEAM ON TOP OF TRIMMED SECTIONS OF SSP.
19. CONNECT THE TOP WIDE FLANGE BEAM TO THE TRIMMED SECTIONS OF SSP AS SPECIFIED IN THE PROJECT PLANS.
20. INSTALL NEW SHEET PILE TO FORM THE ALCOVE STRUCTURE.
21. INSTALL NEW TIE-BACK SYSTEM AROUND THE PERIMETER OF THE ALCOVE STRUCTURE.
22. INSTALL NEW CONCRETE SEAL AT THE BASE OF THE ALCOVE STRUCTURE VIA TREMIE PROCEDURES OR UTILIZING ANTI-WASHOUT ADMIXTURES IN THE CONCRETE.
23. CUT OPENING IN OUTFALL STRUCTURE FOR NEW OUTFALL PIPE.
24. PLACE CONCRETE GROUT BAG AROUND PERIMETER OF THE OUTFALL ON THE LANDSIDE OF THE ALCOVE TO FILL UP ANY POTENTIAL VOIDS AROUND THE OUTFALL OPENING IN THE SHEET PILE.
25. BACKFILL TO THE GRADES SPECIFIED IN THE PROJECT PLANS & SPECIFICATIONS.
26. INSTALL FINAL SURFACES, HANDRAILS, AND ACCESS HATCHES TO THE ALCOVE STRUCTURE AS SPECIFIED IN THE PROJECT PLANS & SPECIFICATIONS.

REV. BY:	DESCRIPTION	REV:	DATE:
CAD	ISSUED FOR BID	0	06/23/23
CAD	GENERAL REVISIONS	1	07/20/23

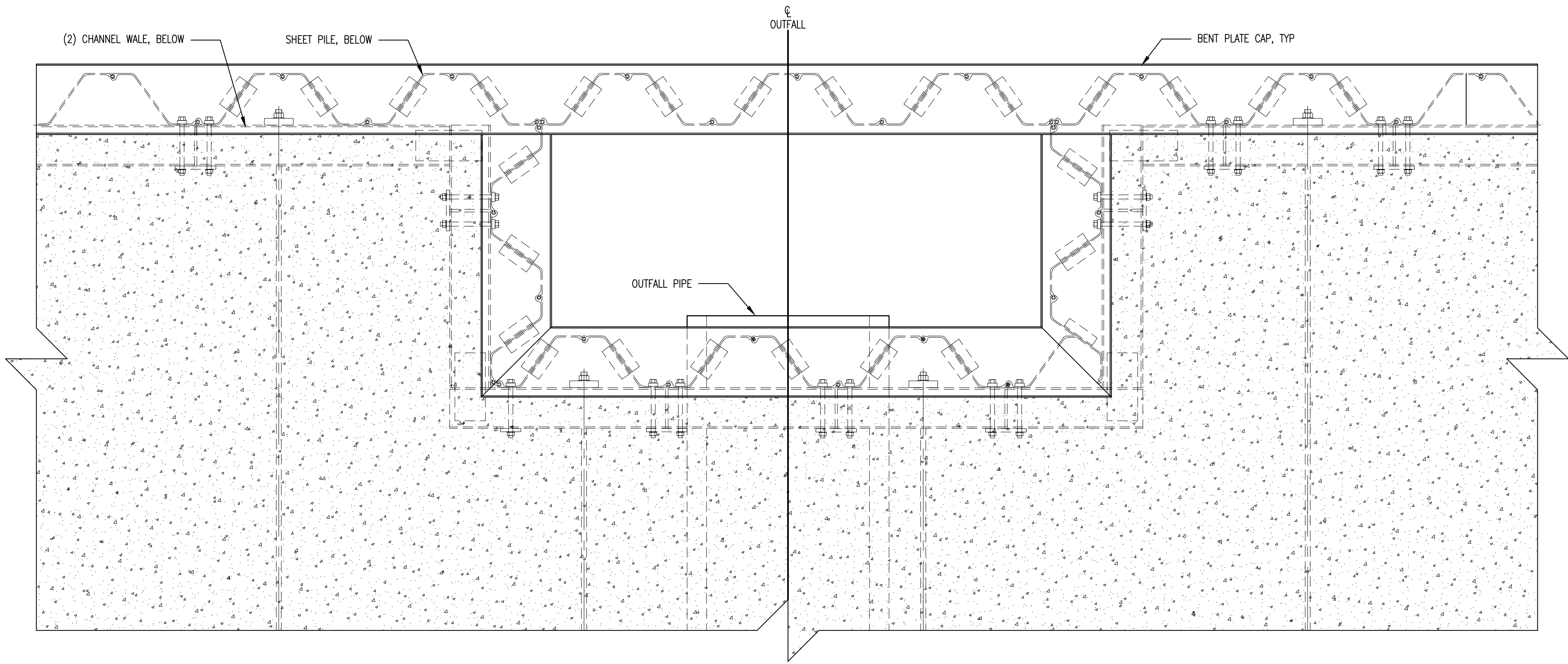
DULUTH COASTAL INFRASTRUCTURE REHABILITATION PROJECT 350 HARBOR DRIVE DULUTH, MINNESOTA	ALCOVE DETAILS
--	----------------

JOB No: 211016  
DATE: 06/23/23  
DRAWN BY: SAJ  
DESIGNED BY: CAD

SHEET:  
**CT405**



8/4/2023, 10:10 AM  
2:\2021\211016 City of Duluth BECC Sewer Mainline Structural\3\_CAD\2023 PLANS\CT400 - DETAILS.dwg  
© COPYRIGHT - AMI CONSULTING ENGINEERS P.A., 2023

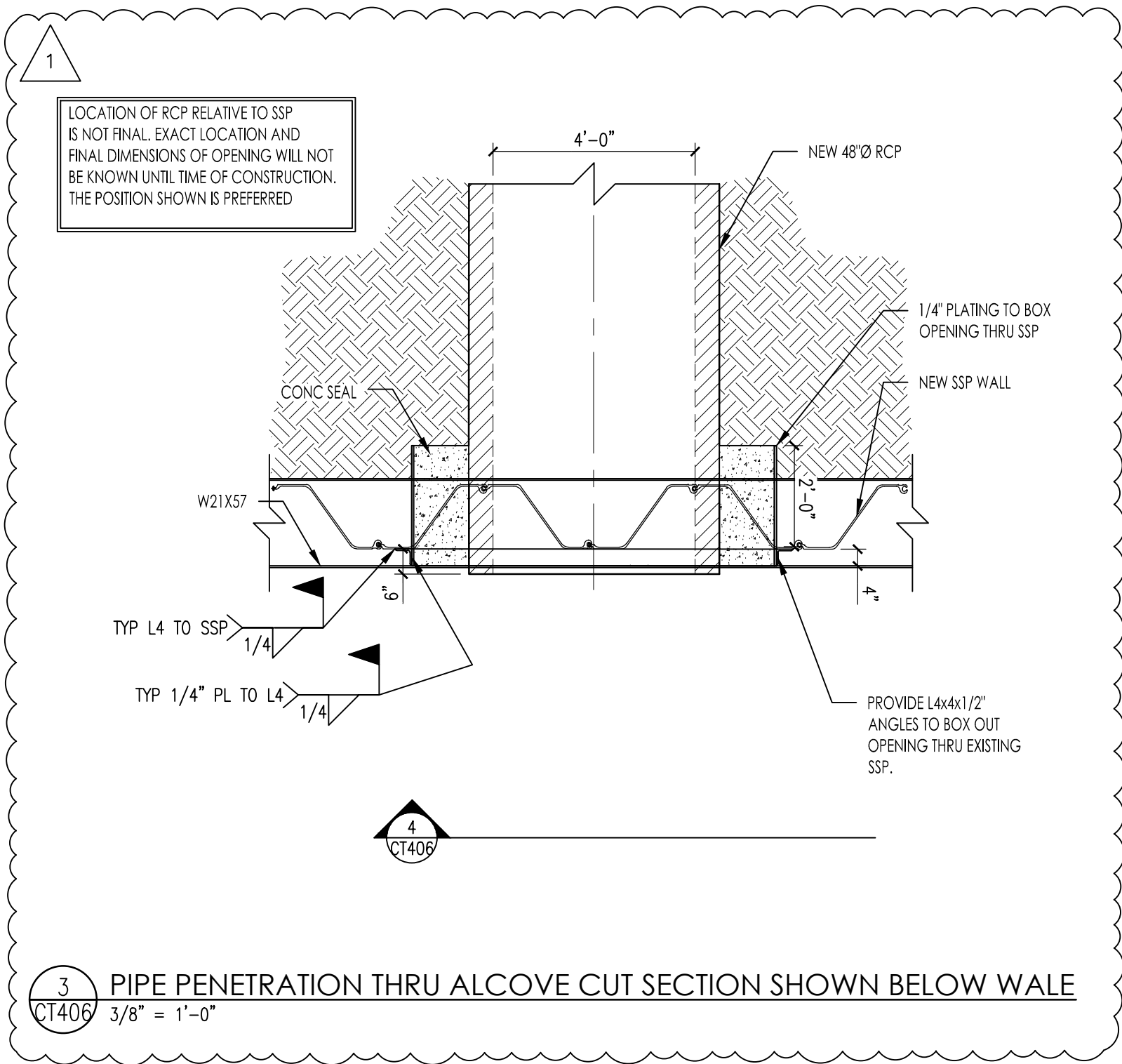


NOTES:  
1. CONTRACTOR SHALL PROVIDE A LIFT STATION HATCH DOOR ACCESS COVER WITH A MAXIMUM DIMENSION OF 4 - 1/2' X 12' THAT IS RATED FOR A UNIFORM SURCHARGE OF 250 PSF. CONTRACTOR IS RESPONSIBLE FOR ENSURING FIT AND DESIGN OF ACCESS HATCH SUPPORT. CONTRACTOR SHALL SUBMIT SIGNED AND STAMPED DRAWINGS AND CALCULATIONS FOR ACCESS HATCH.

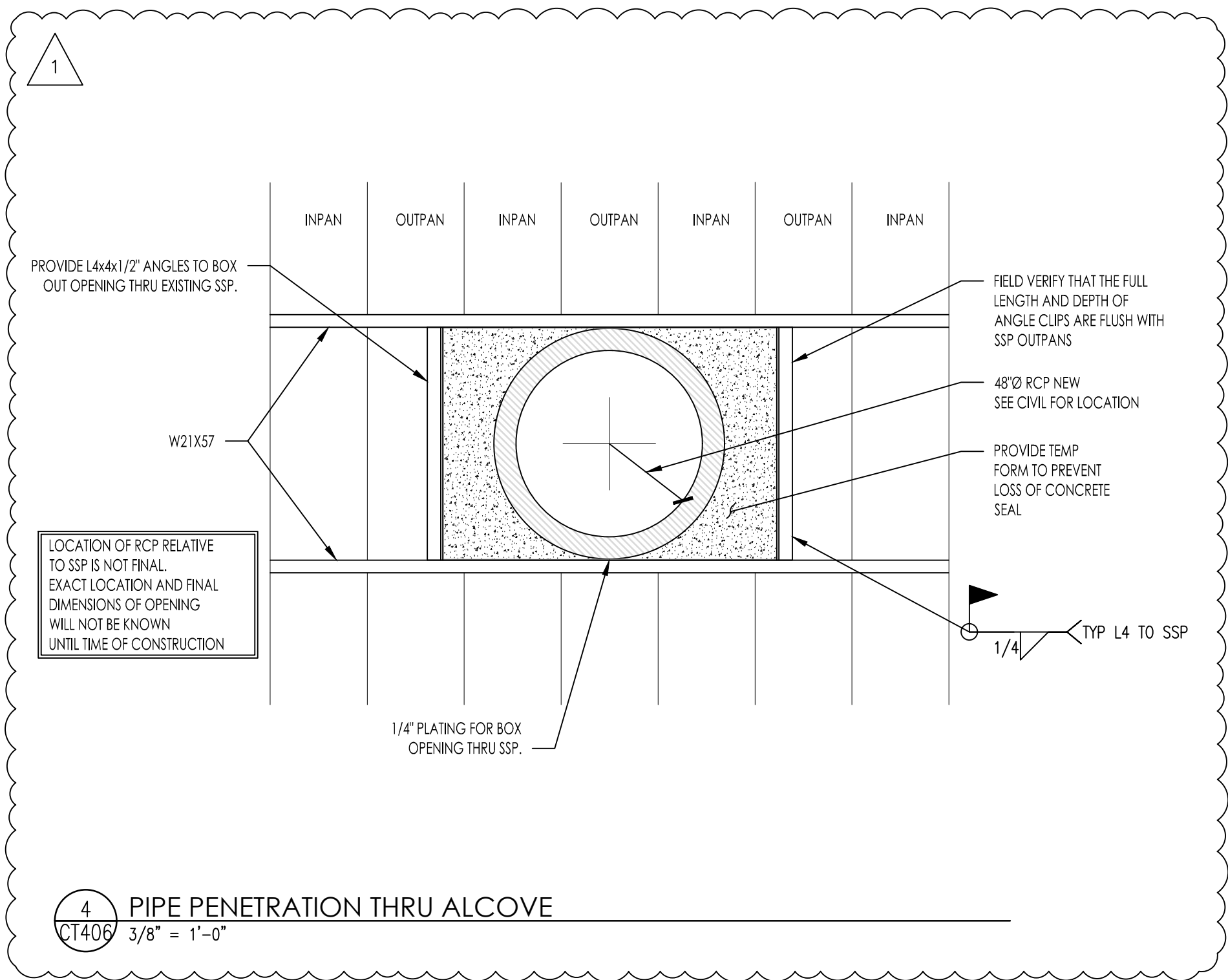
1 SSP OUTFALL PIPE ALCOVE PLAN AT WALKING SURFACE  
1/2" = 1'-0"



2 LIFT STATION ACCESS COVER



3 PIPE PENETRATION THRU ALCOVE CUT SECTION SHOWN BELOW WALE  
3/8" = 1'-0"



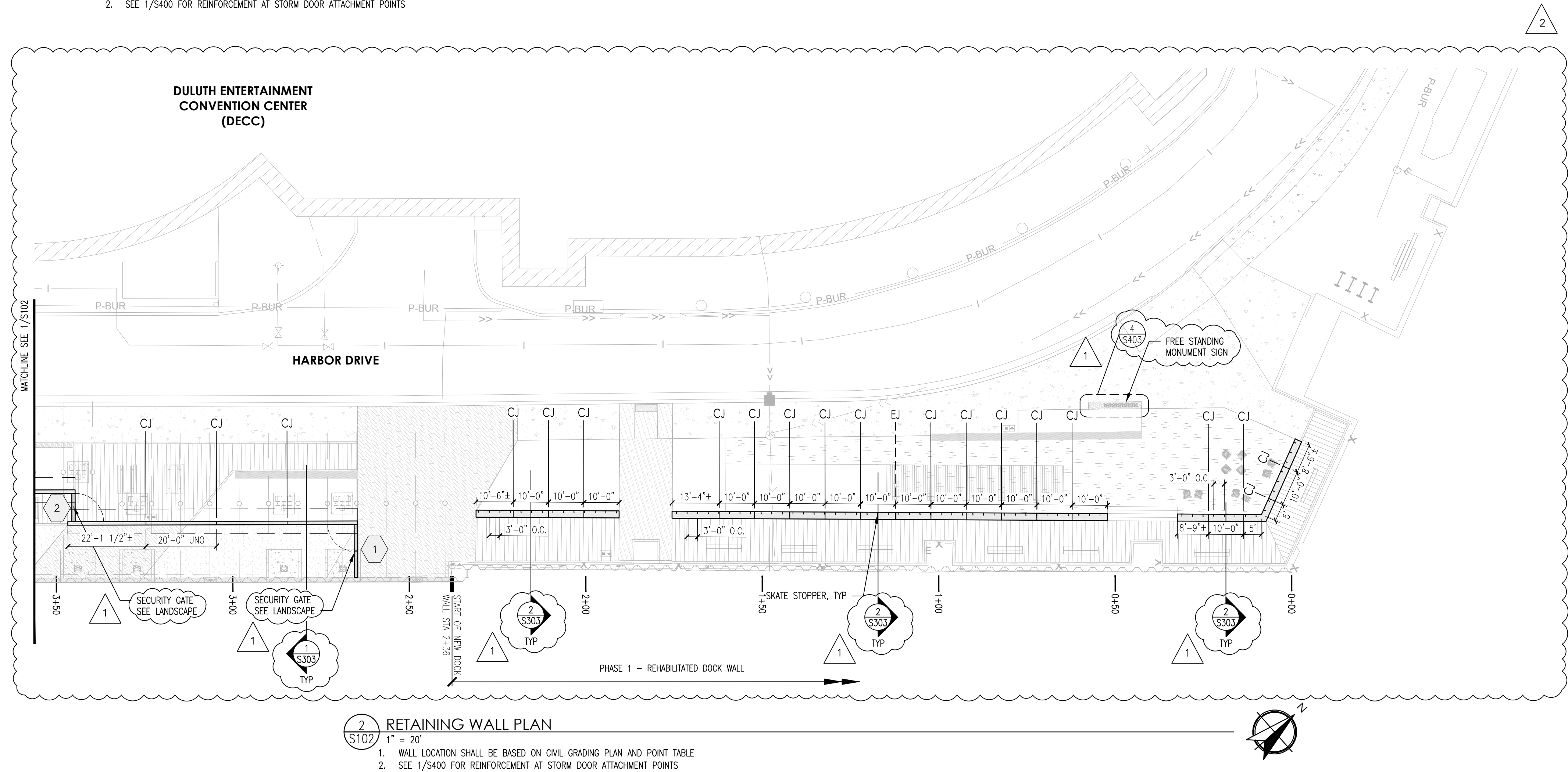
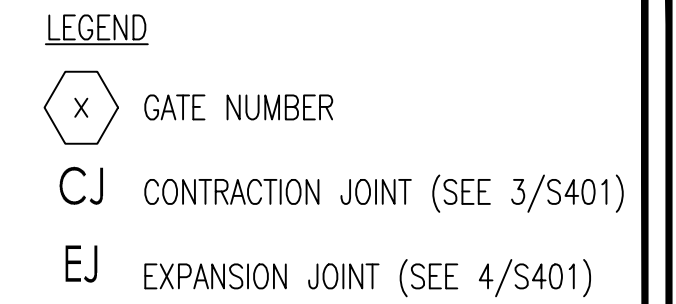
4 PIPE PENETRATION THRU ALCOVE  
3/8" = 1'-0"

REV. BY:	DESCRIPTION	REV.	DATE:
CAD	ISSUED FOR BID	0	06/23/23
CAD	GENERAL REVISIONS	1	07/20/23

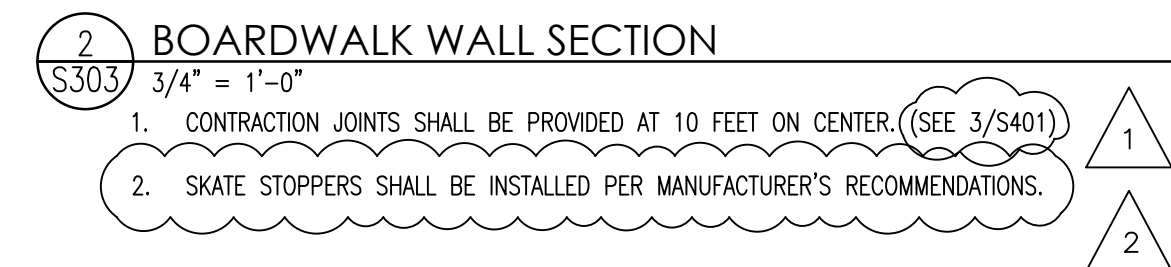
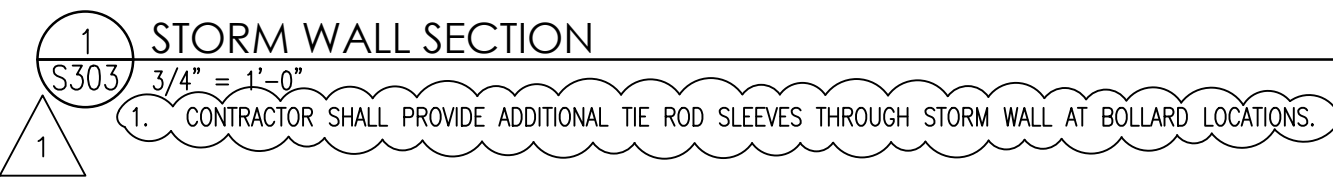
STATION	DISTANCE FROM EXISTING WALL	DESCRIPTION
3+20 TO 3+45	4'	5 TIRES
4+57	4' TO 12'	WOOD DEBRIS, PLYWOOD
4+68	3'	TIRE
4+68	2' TO 4'	TIMBER DEBRIS
4+88	1'	12" TIMBER PILE EXTENDS 13" ABOVE MUDLINE
4+95	4'-4"	12" TIMBER PILE EXTENDS 17" ABOVE MUDLINE
5+05	10' TO 12'	STEEL DEBRIS
5+30	0	MISC DEBRIS
5+60	3.5'	12" TIMBER PILE EXTENDS 13" ABOVE MUDLINE
5+65	3'	12" TIMBER PILE EXTENDS 13" ABOVE MUDLINE
6+50	8'	LARGE PILE OF DEBRIS
6+65	6'	LARGE PILE OF DEBRIS
6+81	4'	(3) TIMBER PILES EXTEND 6" TO 12" ABOVE MUDLINE
7+00	3'	12" TIMBER PILE EXTENDS 6" TO 12" ABOVE MUDLINE
7+03	2'	12" TIMBER PILE EXTENDS 6" TO 12" ABOVE MUDLINE
7+07	4'	12" TIMBER PILE EXTENDS 6" TO 12" ABOVE MUDLINE
7+09	4'	12" TIMBER PILE EXTENDS 6" TO 12" ABOVE MUDLINE
7+18	2'	(2) TIMBER PILES EXTEND 6" TO 12" ABOVE MUDLINE
7+75	0	MISC DEBRIS
7+98	6' TO 10'	CONCRETE & STEEL DEBRIS
8+15	6' TO 10'	LARGE PILE OF DEBRIS
8+20	2'	(2) TIMBER PILES EXTEND 6" ABOVE MUDLINE
8+45	0	16" TIMBER PILE EXTENDS 3' ABOVE MUDLINE
8+65	3'	12" TIMBER PILE EXTENDS 30" ABOVE MUDLINE
8+70	0 TO 3.5'	(2) 16" TIMBER PILE EXTEND TO 3.5' BELOW WATERLINE
8+75	0	12" TIMBER PILE EXTENDS 7' ABOVE MUDLINE
8+75	0	STEEL DEBRIS
8+85	0	12" TIMBER PILE EXTENDS 2' ABOVE MUDLINE
8+85	4' TO 8.5'	LARGE PILE OF DEBRIS
8+90	0	12" TIMBER PILE EXTENDS 2' ABOVE MUDLINE
8+92	0	12" TIMBER PILE EXTENDS 3' ABOVE MUDLINE
8+97	0	12" TIMBER PILE EXTENDS 3' ABOVE MUDLINE
9+00	1' TO 2'	(2) TIMBER PILES EXTEND 18" ABOVE MUDLINE
9+00	1'	METAL DEBRIS
9+05	0	(2) TIMBER PILES EXTEND 24" ABOVE MUDLINE
9+15	0	(7) TIMBER PILES EXTEND 1' TO 7' ABOVE MUDLINE
9+30	1.5'	14" TIMBER PILE EXTENDS 28" ABOVE MUDLINE
9+39	0	10" TIMBER PILE EXTENDS 24" ABOVE MUDLINE
9+70	0	10" TIMBER PILE EXTENDS 24" ABOVE MUDLINE
9+97	0	START OF RIP RAP & MISC DEBRIS
10+00	10' TO 15'	RIP RAP, CONCRETE, CINDER BLOCKS
10+30	10' TO 15'	RIP RAP, CONCRETE, CINDER BLOCKS
10+50	0	AGGREGATE
10+58	0	RIP RAP
11+05	4'	TIRE, CONCRETE DEBRIS

STATION	DISTANCE FROM EXISTING WALL	DESCRIPTION
11+20	1.5'	CLUSTER OF PILES
12+60	0	RIP RAP, TIMBER DEBRIS, BRICKS
13+10	0	TRANSITION TO CRUSHED ROCK
13+10	0	CHAINLINK FENCE, CONCRETE & TIMBER DEBRIS
13+45	0	TRANSITION FROM CRUSHED ROCK TO RIP RAP
13+45	0	CONCRETE & STEEL DEBRIS









# PRODUCT DETAILS

## Gorilla 012

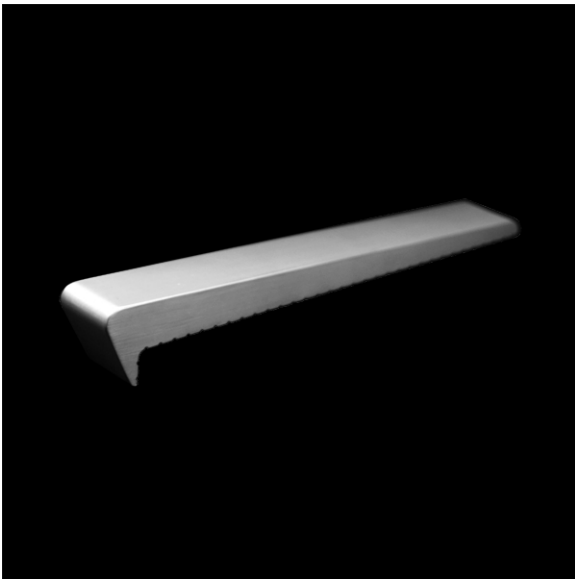
(Gorilla Line- Surface Mount Aluminum)



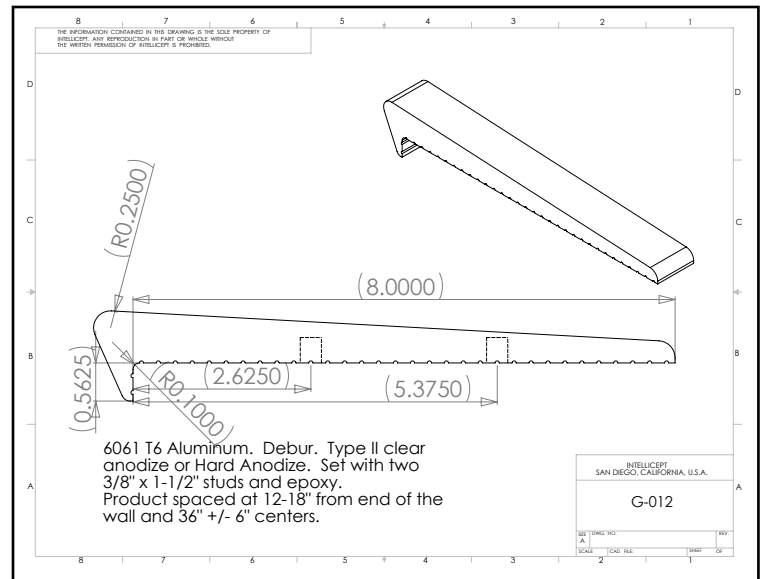
1547 N. Cuyamaca, El Cajon, CA 92020  
Tel 619-447-6374 Fax 619-447-6396

[www.skatestoppers.com](http://www.skatestoppers.com)

**Description:** This extruded aluminum part is designed for walls from 0" - 3/8" radius edge. Gorilla 012 is most commonly used on granite, marble, stone, block, brick, or other surfaces with a hard corner. This part uses two concealed G PIN anchors.



(shown in Clear Anodize)



**Material:** 6061-T6 Aluminum

**Finish:** Hard tumbled to remove all machined and/or cut edges. Aluminum finish includes Type II Clear Anodize or Hard Anodize.

**Corner Radius:** For square corner from 0" - 3/8" radius.

**Outside Dimensions:** 1-1/8" (wide) x 8" (deep) x 1-1/8" (tall)

**Anchoring:** Anchored with two concealed G PIN anchors. Use anchors in conjunction with two-part epoxy.

**Product Spacing:** 12"-18" from end of planters/walls and approximately 36" centers. Do not apply at grout joints.

## **SA-8 / SECTION 323300 - SITE FURNISHINGS**

### **PART 1 GENERAL**

#### **1.01 SECTION INCLUDES**

- A. Benches
  - 1. Backed Bench
  - 2. Backless Bench 1
  - 3. Backless Bench 2
  - 4. Stacked Bench
- B. Bike Rack
- C. Bollards
  - 1. Barrier Bollards
  - 2. Removable Traffic Bollards
- D. Hammock Posts
- E. Loungers
- F. Pergola
- G. Picnic Table
- H. Seat Topper
- I. Skate Deterrents.
- J. Trash and recycle receptacles
- K. Wave wall

#### **1.02 REFERENCE STANDARDS**

- A. ASTM A36/A36M - Standard Specification for Carbon Structural Steel 2014.
- B. ASTM A500/A500M - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes 2013.

#### **1.03 SUBMITTALS**

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide manufacturer's specifications and descriptive literature, installation instructions, and maintenance information.
- C. Shop Drawings: Indicate plans for each unit or groups of units, elevations with model number, overall dimensions; construction, and anchorage details.
- D. Samples: Submit two sets of manufacturer's available colors for metal and wood furnishings.

### **PART 2 PRODUCTS**

#### **2.01 BENCHES**

- A. Backed Bench
  - 1. Manufacturer: Streetlife Street Furniture: <https://www.streetlife.nl/us>
    - a. Model: 118" Two-Timber Drifter Bench with Back
    - b. Finish: FSC Hardwood III with Corten Steel Frame
    - c. Contact: Sonno Witjes [switjes@streetlife.com](mailto:switjes@streetlife.com)
    - d. Surface mount per manufacturer's specifications
  - 2. OR APPROVED EUQAL
- B. Backless Bench 1
  - 1. Manufacturer: Streetlife Street Furniture: <https://www.streetlife.nl/us>
    - a. Model: 118" Two-Timber Drifter Bench
    - b. Product Number: DB-L2-300



- c. Finish: FSC Hardwood III with Corten Steel Frame
  - d. Contact: Sonno Witjes [switjes@streetlife.com](mailto:switjes@streetlife.com)
  - e. Surface mount per manufacturer's specifications
- 2. OR APPROVED EQUAL
- C. Backless Bench 2
  - 1. Manufacturer: Streetlife Street Furniture: <https://www.streetlife.nl/us>
    - a. Model: Heavy-Heavy Backless Bench
      - 1) Product Number: HD-IND-L4
    - b. Finish: FSC Hardwood III with Corten Steel Frame
    - c. Contact: Sonno Witjes [switjes@streetlife.com](mailto:switjes@streetlife.com)
    - d. Surface mount per manufacturer's specifications
  - 2. OR APPROVED EQUAL
- D. Stacked Bench
  - 1. Manufacturer: Streetlife Street Furniture: <https://www.streetlife.nl/us>
    - a. Drifter Structure Two level
      - 1) Product Number DB-STR-H1-450-125
    - b. Finish: FSC Hardwood III with Corten Steel Frame
    - c. Contact: Sonno Witjes [switjes@streetlife.com](mailto:switjes@streetlife.com)
    - d. Freestanding
  - 2. OR APPROVED EQUAL

## **2.02 BIKE RACK**

- A. Embedded Bike Rack
  - 1. Manufacturer: Streetlife Street Furniture: <https://www.streetlife.nl/us>
    - a. Corten Bike Rack
  - 2. Finish: Corten Steel Frame with Black Rubber Bumper
  - 3. Contact: Sonno Witjes [switjes@streetlife.com](mailto:switjes@streetlife.com)
  - 4. Embedded installation per manufacturer's specifications

## **2.03 BOLLARDS**

- A. Barrier Bollards
  - 1. Manufacturer: Streetlife Street Furniture: <https://www.streetlife.nl/us>
  - 2. Model: Customized Rough and Ready Surface Mounted Removable Bollard
  - 3. Finish: FSC Hardwood III with Corten Steel Frame
  - 4. Contact: Sonno Witjes [switjes@streetlife.com](mailto:switjes@streetlife.com)
  - 5. Install per manufacturer's specifications.
- B. Removable Traffic Bollards
  - 1. Manufacturer: Streetlife Street Furniture: <https://www.streetlife.nl/us>
  - 2. Model: Open Removable Bollard
  - 3. Finish: Corten Steel Frame
  - 4. Contact: Sonno Witjes [switjes@streetlife.com](mailto:switjes@streetlife.com)
  - 5. Embedded installation per manufacturer's specifications.

## **2.04 HAMMOCK POSTS**

- A. Custom hammock post

## **2.05 LOUNGERS**

- A. Lounger Seating
  - 1. Manufacturer: Streetlife Street Furniture: <https://www.streetlife.nl/us>
  - 2. Model: Heavy-Heavy Lounger
  - 3. Product Number: HH-LNG-80
  - 4. Finish: FSC Hardwood III with Corten Steel Frame

5. Contact: Sonno Witjes [switjes@streetlife.com](mailto:switjes@streetlife.com)
6. Surface Mount per manufacturer's specifications.

## 2.06 PERGOLA

- A. Corten Pergola
  1. Manufacturer: Streetlife Street Furniture: <https://www.streetlife.nl/us>
    - a. Model: Customized Plaza Shade, see construction documentation for shade customized components, dimensions and alignment.
    - b. Finish: Corten Steel Frame with hot-dip galvanized hardware. Laser cut roof panels.
    - c. Contact: Sonno Witjes [switjes@streetlife.com](mailto:switjes@streetlife.com)
    - d. Install per manufacturer's specifications.
  2. OR APPROVED EQUAL

## 2.07 PICNIC BENCHES

- A. Picnic Bench Set
  1. Manufacturer: Streetlife Street Furniture: <https://www.streetlife.nl/us>
    - a. Model: 118" Drifter Picnic Table Set
      - 1) Product Number: DB-PS-L3-300
    - b. Finish: FSC Hardwood III with Corten Steel Frame
    - c. Contact: Sonno Witjes [switjes@streetlife.com](mailto:switjes@streetlife.com)
    - d. Surface Mount per manufacturer's specifications.
  2. OR APPROVED EQUAL

## 2.08 SEAT TOPPER

- A. Prefabricated solid wood top seat with support bracing.
  1. Manufacturer: Streetlife Street Furniture: <https://www.streetlife.nl/us>
    - a. Model: Highlife III top seats 47" deep x 79" long modules
    - b. Finish: FSC Hardwood III with Stainless Steel Bracing
    - c. Contact: Sonno Witjes [switjes@streetlife.com](mailto:switjes@streetlife.com)
    - d. Surface Mount per manufacturer's specifications.
  2. OR APPROVED EQUAL

## 2.09 SKATE DETERRENTS

- A. Skate Deterrents
  1. Manufacturer: Skate Stopper <http://www.skatestoppers.com/>
    - a. Model: GORILLA012
    - b. Finish: Clear Anodize
  2. OR APPROVED EQUAL

## 2.10 TRASH AND RECYCLE RECEPTACLES

1. Manufacturer: Streetlife Street Furniture: <https://www.streetlife.nl/us>
  - a. Model: 19" closed wall box Bin with Rain Cover
  - b. Finish: Weathered Steel
  - c. Contact: Sonno Witjes [switjes@streetlife.com](mailto:switjes@streetlife.com)
  - d. Surface Mount per manufacturer's specifications
2. OR APPROVED EQUAL

## 2.11 WAVE WALL

1. Manufacturer: Streetlife Street Furniture: <https://www.streetlife.nl/us>
  - a. Model: Modular Mobile Surf Island
    - 1) Standard width of a module is ca.150 cm. The standard length is ca.300 cm
  - b. Finish: FSC Hardwood III with Corten Steel Frame
  - c. Contact: Sonno Witjes [switjes@streetlife.com](mailto:switjes@streetlife.com)

2. OR APPROVED EQUAL

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Verify that mounting surfaces, preinstalled anchor bolts, or other mounting devices are properly installed; and ready to receive site furnishing items.
- B. Do not begin installation until unacceptable conditions are corrected.

**3.02 INSTALLATION**

- A. Install site furnishings in accordance with approved shop drawings, and manufacturer's installation instructions as indicated on drawings.

**END OF SECTION**







BID PROPOSAL FORM

The purpose of this BID PROPOSAL FORM is to present Unit Costs for installation of each system and materials not purchased by Owner. Miscellaneous materials required by the Contractor not on the bid form shall remain the responsibility of the contractor and are to be included in the Unit Costs for this project. Contractor is responsible for providing final quantities of materials based on their bid.

NOTE: All costs are to be considered final installed or final installed & removal costs. Include cost for all materials not purchased by owner, hardware, shipping, fabrication, labor, equipment, insurance, permits state and local taxes, overhead and profit to properly install items listed under each system. Contractor shall determine earthwork quantities necessary to construct the project per the Construction Documents and as indicated in the Geotechnical Report.

LINE ITEM NO.	SPEC ITEM NO.	ITEM DESCRIPTION		UNIT	TOTAL ESTIMATED QUANTITIES	QUANTITIES				UNIT PRICE	COST				TOTAL ESTIMATED COST
						BAYWALK	ROADWAY	EDA	STORM SEWER		BAYWALK	ROADWAY	EDA	STORM SEWER	
MOBILIZATION & MATERIAL HANDLING															
1	2021.501	EDA FUNDED MOBILIZATION		LUMP SUM	1			1							
2	2021.501	NON-EDA FUNDED EDA MOBILIZATION		LUMP SUM	1	1									
3	na	MATERIAL HANDLING		LUMP SUM	1	1									
MOBILIZATION & MATERIAL HANLING SUBTOTAL															
CIVIL															
C1	2101.502	GRUBBING		TREE	44	44									
C2	2104.502	REMOVE PLANTER		EACH	3	3									
C3	2104.502	REMOVE CONCRETE PLANTER		EACH	5	5									
C4	2104.502	SALVAGE BENCH		EACH	3	3									
C5	2104.502	SALVAGE BOUY		EACH	1	1									
C6	2104.502	SALVAGE SIGN		EACH	8	1	7								
C7	2104.502	REMOVE MANHOLE		EACH	2				2						
C8	2104.502	REMOVE CATCH BASIN		EACH	7				7						
C9	2104.502	REMOVE HYDRANT		EACH	2	1	1								
C10	2104.502	REMOVE GATE VALVE AND BOX		EACH	1		1								
C11	2104.502	SALVAGE LIGHTING UNIT		EACH	12	11	1								
C12	2104.502	REMOVE LIGHT FOUNDATION		EACH	12	11	1								
C13	2104.503	REMOVE CURB AND GUTTER		LIN FT	140		140								
C14	2104.503	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)		LIN FT	389	10	379								
C15	2104.503	SAWING CONCRETE PAVEMENT (FULL DEPTH)		LIN FT	1285	88	1197								
C16	2104.503	REMOVE WATER MAIN		LIN FT	244	90	154								
C17	2104.503	REMOVE SEWER PIPE (STORM)		LIN FT	618				618						
C18	2104.503	REMOVE RETAINING WALL		LIN FT	141	141									
C19	2104.503	REMOVE FENCE		LIN FT	353	353									
C20	2104.507	REMOVE RIPRAP		CU YD	249	249									
C21	2104.518	REMOVE CONCRETE RUBBLE		SQ FT	5400	5400									
C22	2104.518	REMOVE CONCRETE PAVEMENT		SQ FT	25848		25848								
C23	2104.518	REMOVE BITUMINOUS PAVEMENT	(P)	SQ FT	840		840								
C24	2104.518	REMOVE PAVEMENT		SQ FT	2093		2093								
C25	2104.518	REMOVE BITUMINOUS WALK		SQ FT	2134	2134									
C26	2104.518	REMOVE CONCRETE SIDEWALK		SQ FT	29514	29514									
C27	2104.518	REMOVE CONCRETE DRIVEWAY PAVEMENT	(P)	SQ FT	159		159								
C28	2104.618	SALVAGE BOARDWALK		SQ FT	5793	5793									
C29	2104.602	SALVAGE STATUE AND BASE		EACH	1	1									
C30	2104.602	REMOVE STATUE FOUNDATION		EACH	1	1									
C31	2104.602	REMOVE STEEL PILES		EACH	72	72									
C32	2104.602	REMOVE CONCRETE POSTS		EACH	62	62									
C33	2106.507	COMMON EMBANKMENT (CV)		CU YD	2296	2296									
C34	2106.507	EXCAVATION - COMMON	(P)	CU YD	8557	7724	833								
C35	2108.504	GEOTEXTILE FABRIC TYPE 4		SQ YD	4590	4590									
C36	2108.504	GEOTEXTILE FABRIC TYPE 7		SQ YD	7538	7252	286								
C37	2211.507	AGGREGATE BASE (CV) CLASS 5	(P)	CU YD	1914	1336	578								
C38	2212.507	DRAINABLE AGGREGATE BASE, TYPE OGAB	(P)	CU YD	4619	4619									
C39	2301.502	DOWEL BAR		EACH	969		969								
C40	2301.503	INTEGRANT CURB DESIGN B6		LIN FT	505		505								

C41	2301.503	INTEGRANT CURB DESIGN D4		LIN FT	91		91							
C42	2301.504	CONCRETE PAVEMENT 8"		SQ YD	1465		1465							
C43	2301.508	SUPPLEMENTAL PAVEMENT REINFORCEMENT		POUND	1320		1320							
C44	2301.602	DRILL & GROUT REINF BAR (EPOXY COATED)		EACH	389		389							
C45	2302.503	JOINT & CRACK REPAIR (TYPE B3)		LIN FT	200		200							
C46	2302.503	FULL DEPTH REPAIR (TYPE CD-LV)		LIN FT	200		200							
C47	2302.504	PARTIAL DEPTH REPAIR (TYPE BA)		SQ YD	65		65							
C48	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (3,C)		TON	80	50	30							
C49	2411.607	CONCRETE STEPS		CU YD	141	141								
C50	2451.607	MEDIUM FILTER AGGREGATE (CV)		CU YD	707	707								
C51	2503.503	12" RC PIPE SEWER DESIGN 3006 CLASS V		LIN FT	204				204					
C52	2503.503	15" RC PIPE SEWER DESIGN 3006 CLASS V		LIN FT	38				38					
C53	2503.503	30" RC PIPE SEWER DESIGN 3006 CLASS V		LIN FT	101				101					
C54	2503.503	48" RC PIPE SEWER DESIGN 3006 CLASS V		LIN FT	231				236					
C55	2503.602	CONNECT TO EXISTING STORM SEWER		EACH	8				8					
C56	2504.602	HYDRANT ASSEMBLY		EACH	2	1	1							
C57	2504.602	CONNECT TO EXISTING WATER MAIN		EACH	3	1	2							
C58	2504.602	2" CORPORATION STOP		EACH	2	2								
C59	2504.602	1" CURB STOP AND BOX		EACH	2	2								
C60	2504.602	1" BLOW-OFF		EACH	2	2								
C61	2504.602	ABOVE GROUND METER AND BACKFLOW PREVENTER		LUMP SUM	1	1								
C62	2504.603	2" TYPE PE PIPE		LIN FT	166	166								
C63	2504.603	8" WATERMAIN DUCTILE IRON CL 52		LIN FT	98		98							
C64	2504.604	3" POLYSTYRENE INSULATION		SQ YD	90		90							
C65	2506.502	CASTING ASSEMBLY		EACH	12				12					
C66	2506.502	ADJUST FRAME AND RING CASTING		EACH	2	1	1							
C67	2506.503	CONSTRUCT DRAINAGE STRUCTURE DESIGN 48-4020		LIN FT	34				34					
C68	2506.503	CONSTRUCT DRAINAGE STRUCTURE DESIGN 60-4020		LIN FT	13				13					
C69	2506.503	CONSTRUCT DRAINAGE STRUCTURE DESIGN 72-4020		LIN FT	6				6					
C70	2506.503	CONSTRUCT DRAINAGE STRUCTURE DESIGN 84-4020		LIN FT	24				24					
C71	2520.507	LEAN MIX BACKFILL		CU YD	27	7	20							
C72	2521.518	4" CONCRETE WALK		SQ FT	14713	9511	5202							
C73	2521.518	6" CONCRETE WALK		SQ FT	19988	19647	341							
C74	2531.503	CONCRETE CURB AND GUTTER DESIGN B624		LIN FT	56		56							
C75	2531.503	CONCRETE CURB AND GUTTER DESIGN D424		LIN FT	951		951							
C76	2531.503	CONCRETE CURB DESIGN V6		LIN FT	13	13								
C77	2531.504	6" CONCRETE DRIVEWAY PAVEMENT		SQ YD	17		17							
C78	2531.618	TRUNCATED DOMES		SQ FT	82	50	32							
C79	2540.601	PREFABRICATED LOADING DOCK		LUMP SUM	1	1								
C80	2540.603	BOARDWALK - CONCRETE BEAM		LIN FT	5271	5271								
C81	2540.603	BOARDWALK - OUTER CONCRETE BEAM		LIN FT	1601	1601								
C82	2540.603	TIMBER NAILER		LIN FT	6872	6872								
C83	2540.618	INSTALL BOARDWALK		SQ FT	14041	14041								
C84	2540.618	FLAGSTONE WITH DECOMPOSED GRANITE		SQ FT	2757	2757								
C85	2545.511	LIGHTING UNIT TYPE SPECIAL		EACH	1		1							
C86	2545.515	LIGHT FOUNDATION TYPE SPECIAL		EACH	1		1							
C87	2545.523	2" NON-METALLIC CONDUIT		LIN FT	192		192							
C88	2545.531	UNDERGROUND WIRE 1 COND NO 8		LIN FT	808		808							
C89	2545.531	UNDERGROUND WIRE 1 COND NO 12		LIN FT	110		110							
C90	2564.518	SIGN PANELS TYPE C		SQ FT	64		64							
C91	2564.602	INSTALL SIGN		EACH	1		1							
C92	2573.501	STABILIZED CONSTRUCTION EXIT		LUMP SUM	2	1	1							
C93	2573.502	CULVERT END CONTROLS		EACH	1	1								
C94	2573.502	STORM DRAIN INLET PROTECTION		EACH	16	16								
C95	2573.503	SEDIMENT CONTROL LOG TYPE STRAW		LIN FT	629	629								
C96	2573.503	FLOTATION SILT CURTAIN TYPE STILL WATER		LIN FT	148	148								
C97	2574.507	COMMON TOPSOIL BORROW		CU YD	252	252								
C98	2582.503	4" SOLID LINE PAINT (WR)		LIN FT	217		217							

C99	2582.503	4" DOUBLE SOLID LINE PAINT (WR)		LIN FT	1104		1104							
C100	2582.518	CROSSWALK PAINT GROUND IN (WR)		SQ FT	178		178							
CIVIL SUBTOTAL														
CIVIL TRANSPORTATION														
CT1	SCT-09	Steel Sheet Pile Installation (Installation)		SF	63250		63250							
CT2	SCT-02	Double Channel Wale (Installation)		LF	1210		1210							
CT3	SCT-07	Steel Pipe Piles (Installation)		LF	5198		5198							
CT4	SCT-06	Tie Rods and Hardware		LF	3700		3700							
CT5	SCT-08	Helical Anchors		EACH	162		162							
CT6	SCT-02	Bent Plate Steel Pile Cap (Installation)		LF	1210		1210							
CT7	na	Chain Guardrail Along Dock Wall		EACH	110		110							
CT8	na	Solid Guardrail Along Dock Wall		LF	276		276							
CT9	SCT-01	Concrete Storm Retaining Wall		CY	620		620							
CT10	SCT-04	Storm Doors @ Retaining Wall Opening Locations (8 total)		LS	1		1							
CT11	SCT-11	New Bollards and New Foundations		EACH	17		17							
CT12	SCT-07	Steel H Pile for Bollards HP 12 x 63 @ Bollard Locations		LF	1938		1938							
CT13	na	Steel H Pile A Frame HP 14 x 89 @ Bollard Locations		LF	3927		3927							
CT14	na	New Dock Cleats		EACH	26	26								
CT15	na	Open Graded Aggregate Base		CY	3350	3350								
CT16	SCT-03	Single Row Timber (Rub Rail Fender)		LF	1030		1030							
CT17	na	Safety Ladder		EACH	10	10								
CT18	SCT-10	Fenders		EACH	4	4								
CT19	na	Fender Panel Mounting		EACH	4	4								
CT20	SCT-02	Transfer Beam over H-Piles (Materials & Installation)		LF	215		215							
CT21	SCT-07	Steel H Piles HP 12 x 53 for Transfer Beam		LF	1260		1073							
CT22	SCT-02	Corner Brace W12x45		LF	25	25								
CT23	na	Existing Dock Demolition - Cut and Remove Existing SSP		LF	962		962							
CT24	na	Existing Dock Demolition - Remove Existing Structures in Conflict		LF	204		204							
CT25	na	Existing Dock Demolition - Remove existing failed sheet pile		LS	1		1							
CT26	SCH-01	Bedding Stone		TN	100	100								
CT27	SCH-01	Filter Stone		TN	375	375								
CT28	SCH-01	Armor Stone		TN	510	510								
CT29	2108.504	Geotextile		SY	500	500								
CT31	2574.507	Topsoil Borrow		CY	50	50								
CT32	na	Outfall Alcove		LS	1	1								
CT33	na	Seawall Openings for Storm Pipes & Cooling Pipe		EACH	4	4								
CT34	na	Flowable Fill Sheet Pile Outpans		CY	14	14								
CT35		6" Corrugated Steel Pipe		LF	16	16								
CT36		Excavation - Rock		LS	1	1								
CT37		Salvage - Rock		LS	1	1								
CT38	SCT-01	H-Pile frame pile cap for bollard tiebacks		EA	17		17							
CIVIL TRANSPORTATION SUBTOTAL														
LANDSCAPE														
L1	SA-8	Pergola		EA	1	1								
L2	na	Weathered Steel Wall Edge		LF	90	90								
L3	SA-6	Artificial Turf		SF	800	800								
L4	SA-9	Turf Sod		SQ	20418	20418								
L5	na	Planting Bed - Native Perennials		0	0	0								
L6	SA-10	Hardwood Mulch - 3"		CY	80	80								
L7	SA-10	Topsoil - 4"		CY	350	350								
L8	SA-10	#1 Perennial		EA	2435	2435								
L9	SA-10	#2 Perennial		EA	165	165								
L10	na	Structural Soils		CY	450	450								
L11	SA-10	Planting Soils		CY	1000	1000								
L12	SA-10	Coniferous Tree		EA	3	3								
L13	SA-10	Deciduous Trees		EA	25	25								
L14	SA-10	Steel Planting Bed Edging		LF	150	150								
L15	na	Water Meter Enclosure		EA	1	1								

L16	SA-8	Trash/Recycling Receptable		EA	16	16								
L17	SA-8	Backless Bench 2		EA	6	6								
L18	SA-8	Bike Racks		EA	8	8								
L19	SA-8	Drinking Fountains		EA	1	1								
L20	SA-8	Backless Bench		EA	2	2								
L21	SA-8	Backed Bench		EA	8	8								
L22	SA-8	Wave Seating		EA	10	10								
L23	SA-8	Stacked Bench Seating		EA	1	1								
L24	SA-8	Picnic Table		EA	4	4								
L25	SA-8	Lounge Seating		EA	17	17								
L26	SA-8	Seat topper		EA	25	25								
L27	SA-8	LOLL Adirondack Chairs		EA	14	14								
L28	na	Seat Wall (2'x2') with decorative finish		LF	134	134								
L29	na	Seat Wall (3'x2') with decorative finish		LF	70	70								
L30	na	Seat Wall (20"x2')		LF	295	295								
L31	SA-2	Wall Mounted Monument Sign		EA	1	1								
L32	SA-2	Freestanding Monument Sign		EA	1	1								
L33	na	Inset Topographic Metal Wall Markings		EA	3	3								
L34	SA-7	Solid Wall Mounted Security Gate		EA	2	2								
L35	SA-7	Foldable Wall Mounted Security Gate		EA	2	2								
L36	na	Seat Wall (4'x2')		LF	282.5	282.5								
L37	SA-1	Railings		EA	4	4								
L38	SA-8	Removable Traffic Bollard		EA	5	5								
L39	SA-1	Surface Mounted Bar Railing		LF	30	30								
L40		Cobblestone Paver		SF	950	950								
L41		Skate Stoppers		EA	350	350								
LANDSCAPE SUBTOTAL														
STRUCTURAL														
S1	2104.501	Remove Great Lakes Aquarium Loading Dock Retaining Wall		LS	1	1								
S2	na	Remove & Replace GLA Loading Dock Concrete Pavement		LS	1	1								
S3	SCT-01	New Retaining Wall at Cul-de-sac		CY	165	165								
S4	SCT-08	New Retaining Wall at Cul-de-sac Helical Piles		Each	25	25								
S5	SCT-01	Boardwalk Retaining Wall Section		CY	56	56								
S6	SCT-01	Pergola Foundations		CY	24	24								
STRUCTURAL SUBTOTAL														
ELECTRICAL														
E1	265600	DECORATIVE POLE LIGHTING		EACH	11	11								
E2	260500	RELOCATE EXISTING POST TOP LIGHTING		EACH	2	2								
E3	260533	VENDOR POWER & COMMUNICATIONS CABINETS		EACH	2	2								
E4	na	UTILITY WORK (4" CONDUIT PROVISIONS ONLY)		LIN FT	0	0								
E5	262416	200A CIRCUIT BREAKERS		EACH	2	2								
E6	260519	SITE LIGHTING WIRE #8		LIN FT	1500	1500								
E7	260533	SITE LIGHTING CONDUIT 2"		LIN FT	1500	1500								
E8	260519	VENDOR CABINET FEEDER #4/0		LIN FT	500	500								
E9	260533	VENDOR FEEDER CONDUIT 3"		LIN FT	500	500								
E10	262726	20A POLE MTD RECEPT		EACH	6	6								
E11	262726	50A POLE MTD RECEPT		EACH	6	6								
E12	260519	20A POLE MTD RECEPT WIRE #6		LIN FT	1000	1000								
E13	260533	20A POLE MTD RECEPT CONDUIT 2"		LIN FT	1000	1000								
E14	260519	50A POLE MTD RECEPT WIRE #6		LIN FT	1000	1000								
E15	260533	50A POLE MTD RECEPT CONDUIT 2"		LIN FT	1000	1000								
E16	271500	SECURITY CAMERA FIBER		LIN FT	500	500								
E17	271500	SECURITY CAMERA CAT 5E		LIN FT	1500	1500								
E18	271500	VENDOR FIBER		LIN FT	500	500								
E19	270500	VENDOR RUGGED SWITCH		EACH	2	2								
E20	270500	VENDOR CABINET PUNCH DOWN		EACH	4	4								
E21	260533	HAND HOLES		EACH	6	6								
E22	265600	PERGOLA LIGHTING FEATURE		EACH	1	1								



E23	265600	STEP LIGHTING		EACH	2	2								
E24	260500	MARINE PEDESTALS - RE-INSTALL VISTA		EACH	2	2								
E25	260500	DEMOLITION		EACH	1	1								
E26	265600	RETAINING WALL LIGHTING		EACH	9	9								
E27	265600	WAVE WALL LIGHTING		EACH	21	21								
E28	260943	LIGHTING CONTROL SYSTEM		EACH	1	1								
ELECTRICAL SUBTOTAL														
											BAYWALK	ROADWAY	EDA	STORM SEWER
TOTAL PROJECT COST														
TOTAL BASE BID (WRITTEN OUT IN WORDS)														
ADD ALTERNATES - Order of Add Alternatives will be determined by the City based on bid price														
AACT35	SCT-10	Fenders		EACH	2	2								
AACT36		Fender Panel Mounting Frame		EACH	2	2								
AAL01		Stacked Granite wall (60 feet)		LUMP SUM	1	1								
AAL02		Seat Wall (2'x2')		LF	132	132								
ABL01		Custom Hammock Poles		EA	6	6								
ACL01		Backless Bench		EA	2	2								
ACL02		Backed Bench		EA	4	4								
ACL03		Stacked Bench Seating		EA	1	1								
ADL01		Perforated Metal Panel		EA	2	2								
AAE01		IRVIN POWER & COMMUNICATIONS CABINET		EACH	1	1								
AAE02		POWER PEDESTAL		EACH	1	1								
ADD ALTERNATE TOTAL														