



SYNERGO
 15995 SW 74th Ave
 Suite 200
 Tigard, Oregon
 97224
 503.425.9541
 www.teamsynergo.com

PRELIMINARY

SYNERGO, LLC.
 15995 SW 74th Ave
 Tigard, OR

City Of Spokane

 Spokane Washington

Drawn by: RZAINAB
 Checked by: ECALDWELL
 Project #: 19000
 Date: 07.02.2024

CITY OF SPOKANE

350 N Post St,
 Spokane WA 99201

DESIGN:
 SYNERGO, LLC.
 15995 SW 74th Ave, Suite 200
 Tigard, Oregon 97224
 503.425.9541

ENGINEERING:
 MILLER CONSULTING
 ENGINEERS, Inc.
 9600 SW Oak St Suite 400,
 Portland OR 97223
 503.246.1250

Sheet contents:

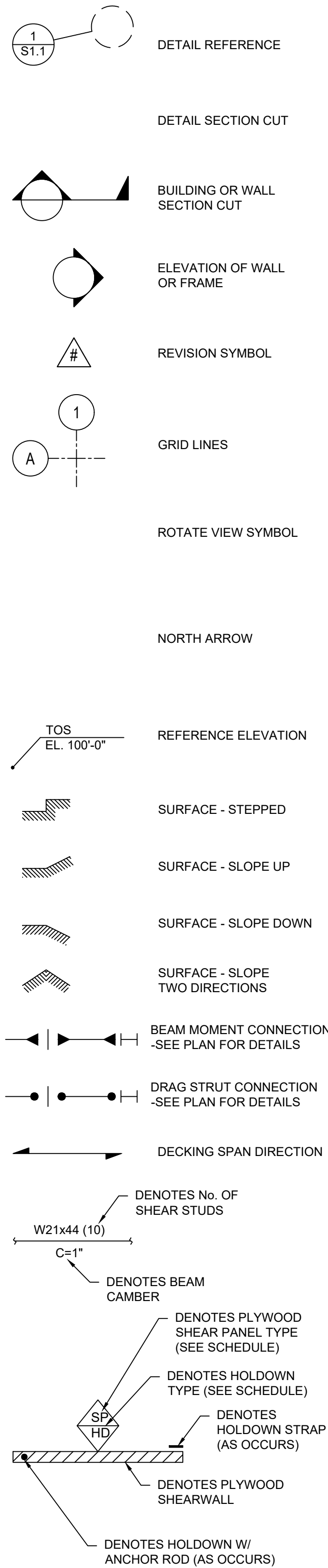
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T1.01

STRUCTURAL ABBREVIATIONS

AB ANCHOR BOLT
ADDL ADDITIONAL
AFF ABOVE FINISH FLOOR
ALT ALTERNATE
ARCH ARCHITECTURAL
ATR ALL THREAD ROD
BLDG BUILDING
BLKG BLOCKING
BM BEAM
BN BOUNDARY NAIL
BOF BOTTOM OF FOOTING
BOT BOTTOM
BRNG BEARING
BSMT BASEMENT
BTWN BETWEEN
C CAMBER
CIP CAST IN PLACE
CJ CONTROL OR CONSTRUCTION JOINT
CJP COMPLETE JOINT PENETRATION
CL CENTERLINE
CLG CEILING
CLR CLEAR
CMU CONCRETE MASONRY UNIT
COL COLUMN
CONC CONCRETE
CONN CONNECTION
CONST CONSTRUCTION
CONT CONTINUOUS
DBA DEFORMED BAR ANCHOR
DBL DOUBLE
DF/L DOUGLAS FIR-LARCH
DIA DIAMETER
DIAG DIAGONAL
DIST DISTANCE
DL DEAD LOAD
DN DOWN
DTL DETAIL
DWG DRAWING
(E) EXISTING
EA EACH
EF EACH FACE
EL ELEVATION
EN EDGE NAIL
EOR ENGINEER OF RECORD
EQ EQUAL
EW EACH WAY
EXT EXTERIOR
FF FINISH FLOOR
FN FIELD NAIL
FLR FLOOR
FDN FOUNDATION
FT FEET
FTG FOOTING
GA GAUGE
GALV GALVANIZED
GLB GLUE LAMINATED BEAM
GWB GYPSUM WALL BOARD
HDG HOT-DIP GALVANIZED
HDR HEADER
HF HEM-FIR
HT HEIGHT
HORIZ HORIZONTAL
HSA HEADED STUD ANCHOR
HSS HOLLOW STRUCTURAL SECTION
ID INSIDE DIAMETER
IN INCH
INT INTERIOR
JST JOIST
JT JOINT
K KIP(S)
KSI KIPS PER SQUARE INCH
L ANGLE
LLH LONG LEG HORIZONTAL
LLV LONG LEG VERTICAL
LONG LONGITUDINAL
LVL LAMINATED VENEER LUMBER
LWC LIGHT WEIGHT CONCRETE
MAX MAXIMUM
MIN MINIMUM
MIR MIRROR
NIC NOT IN CONTRACT
NOM NOMINAL
NTE NOT TO EXCEED
NTS NOT TO SCALE
(N) NEW
OC ON CENTER
OD OUTSIDE DIAMETER
OPP OPPOSITE
OWJ OPEN WEB JOIST
PAF POWDER ACTUATED FASTENER
PERP PERPENDICULAR
PJP PARTIAL JOINT PENETRATION
PL PLATE
PSI POUNDS PER SQUARE INCH
PSF POUNDS PER SQUARE FOOT
PT PRESSURE TREATED
QTY QUANTITY
RAD RADIUS
REF REFERENCE
REINF REINFORCING
REQD REQUIRED
REV REVISED, REVISION
SC SLIP CRITICAL
SHT SHEET
SHT'G SHEATHING
SIM SIMILAR
SMS SHEET METAL SCREW
SOG SLAB ON GRADE
SQ SQUARE
SS STAINLESS STEEL
STD STANDARD
STL STEEL
T&B TOP AND BOTTOM
T&G TONGUE AND GROVE
TOC TOP OF CONCRETE
TOS TOP OF STEEL
TOF TOP OF FOOTING
TOW TOP OF WALL
TYP TYPICAL
UNO UNLESS NOTED OTHERWISE
VERT VERTICAL
VIF VERIFY IN FIELD
W WITH
W/O WITHOUT
WF WIDE FLANGE
WP WORK POINT
WWR WELDED WIRE REINFORCING

STRUCTURAL DRAWING SYMBOLS



STRUCTURAL NOTES:

GENERAL
THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION AND CORRELATION OF ALL ITEMS AND WORK NECESSARY FOR COMPLETION OF THE PROJECT AS INDICATED BY THE CONTRACT DOCUMENTS.

THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. UNLESS OTHERWISE SPECIFICALLY NOTED, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION OR CONSTRUCTION LOADS.

THESE PLANS, SPECIFICATIONS, ENGINEERING AND DESIGN WORK ARE INTENDED SOLELY FOR THE PROJECT SPECIFIED HEREIN. MILLER CONSULTING ENGINEERS DISCLAIMS ALL LIABILITY IF THESE PLANS AND SPECIFICATIONS OR THE DESIGN, ADVICE AND INSTRUCTIONS ATTENDANT THERETO ARE USED ON ANY PROJECT OR AT ANY LOCATION OTHER THAN THE PROJECT AND LOCATION SPECIFIED HEREIN.

NON STRUCTURAL PORTIONS OF PROJECT, INCLUDING BUT NOT LIMITED TO PLUMBING, FIRE SUPPRESSION, ELECTRICAL, MECHANICAL, LAND USE, SITE PLANNING, EROSION CONTROL FLASHING AND WATER-PROOFING ARE BEYOND THE SCOPE OF THESE DRAWINGS AND ARE PROVIDED BY OTHERS.

BUILDING CODE
ALL PHASES OF THE WORK SHALL CONFORM TO THE 2022 CALIFORNIA BUILDING CODE, INCLUDING ALL REFERENCE STANDARDS, UNLESS NOTED OTHERWISE.

DESIGN LOADS

LIVE LOAD REDUCTION FOR BEAMS AND COLUMNS WAS NOT USED. DESIGN FOR MECHANICAL LOADS INCLUDES ONLY THOSE INDICATED ON STRUCTURAL DRAWINGS. THE FOLLOWING ARE THE DESIGN REQUIREMENTS:

Table with 2 columns: OCCUPANCY CATEGORY (II), OCCUPANCY (A-5), DESIGN DEAD LOADS (DECKS: 10 PSF), FLOOR LIVE LOAD (DECKS: 40 PSF).

STRUCTURAL STEEL

DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS (AISC 360-05).

STEEL STRUCTURE COLUMNS: 12" HSS SQUARE TUBE FOR COLUMNS.

ALL STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO THE FOLLOWING MATERIAL STANDARDS:

ALL OTHER SECTIONS AND PLATES: ASTM A36
3/8" Ø SUPER SWAGED WIRE ROPE

UNLESS NOTED OTHERWISE, ALL BOLTS TO BE GALVANIZED ASTM A307 AND ALL ANCHOR RODS TO BE GALVANIZED ASTM F1554 GRADE 36, WITH MATCHING NUTS. UNLESS CONNECTION IS NOTED AS SLIP-CRITICAL OR PRETENSIONED, NUTS SHALL BE TIGHTENED TO A SNUG TIGHT CONDITION PER RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS (RCSC) SPECIFICATION FOR STRUCTURAL JOINTS, SECTION 8.1.

ALL STRUCTURAL STEEL SHALL HAVE ONE SHOP COAT OF PRIMER, EXCEPT SURFACES TO BE EMBEDDED IN CONCRETE OR MASONRY, OR STEEL TO BE GALVANIZED. EMBEDDED SURFACES SHALL BE FREE OF CONTAMINANTS. ALL EXPOSED STRUCTURAL STEEL TO HAVE ONE FINISH COAT OF RUST INHIBITING PAINT, COLOR BY OWNER.

ALL ZINC (GALV.) COATINGS ON IRON AND STEEL PRODUCTS SHALL CONFORM TO ASTM A123. REPAIRS OF GALVANIZED COATINGS ARE TO CONFORM TO ASTM A780. HOT DIP GALVANIZED COATINGS ON ASTM A325 FASTENER ASSEMBLIES SHALL CONFORM TO ASTM A153. SURFACE PREPARATION OF GALVANIZED STEEL TO RECEIVE A FINISH COAT OF PAINT SHALL CONFORM TO ASTM D6386.

WOOD FRAMING

ALL STRUCTURAL WOOD COLUMNS AND BEAMS TO BE DOUGLAS FIR/LARCH (DF/L), #1 UNLESS NOTED OTHERWISE. ALL JOISTS, PURLINS, AND GIRTS TO BE DF/L #2 AND BETTER UNLESS NOTED OTHERWISE. ALL BLOCKING AND NON-STRUCTURAL FRAMING TO BE CONSTRUCTION GRADE AND BETTER.

ALL PREFABRICATED METAL TIMBER CONNECTORS AND HANGERS SHALL BE FULLY BOLTED AND/OR NAILED AS INDICATED BY MANUFACTURER, UNLESS NOTED OTHERWISE. ALL CONNECTORS, HANGERS AND FASTENERS SHALL BE CORROSION PROTECTED PER MANUFACTURER'S RECOMMENDATIONS.

PRESSURE TREATED LUMBER
ALL STRUCTURAL WOOD MEMBERS EXPOSED TO WEATHER OR AS NOTED ON DRAWINGS OR AS REQUIRED BY IBC SECTION 2303.1.8, SHALL BE PRESERVATIVE TREATED IN ACCORDANCE WITH AMERICAN WOOD-PRESERVERS ASSOCIATION USING (ACQ, CA-B, DOT) STANDARD U1 AND M4 FOR SPECIES, PRODUCT, PRESERVATIVE, AND END USE.

FASTENERS IN CONTACT WITH PRESERVATIVE-TREATED MATERIAL SHALL BE IN ACCORDANCE WITH IBC SECTION 2304.9.5. TIMBER CONNECTORS/FASTENERS IN CONTACT WITH PRESERVATIVE-TREATED MATERIAL SHALL HAVE PROTECTIVE COATINGS AS RECOMMENDED BY CONNECTOR/FASTENER MANUFACTURER.

ALL TRIMMED SECTIONS, CUTS, DAPS, OR HOLES IN PRESSURE TREATED MATERIALS SHALL BE TREATED WITH COPPER NAPHTHENATE, IN ACCORDANCE WITH AWPAs STANDARD M4. FOR ADDITIONAL REQUIREMENTS, SEE IBC SECTION 2304.11 FOR PROTECTION AGAINST DECAY AND TERMITES.

WOOD POLES
CLASS 1 DF POLES

SOIL BEARING
GREATER THAN 2000 PSF. TIP BEARING. ANY SKIN FRICTION TO HELP RESIST DOWNWARD THRUST FROM ZIP AND GUY WIRE:

LATERAL SOIL BEARING: 300 PSF MIN PLUS A 1/3 INCREASE FOR WIND AND SEISMIC.

CONCRETE FOOTING:
DIMENSIONS: 14"x6"x4"
DEAD MAN ANCHOR 20,000 ULTIMATE CAPACITY.

TENSION CABLE:
TENSION IN CABLE 1/2" SUPER SWAGED ZIP:
- DESIGN LOAD 1 RIDER = 6000 LBS
- 2 PERSON RESCUE + RIDER = 12,000 LBS
- 1200 FEET WITH MINIMUM OF 30 FEET SAG

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Spokane

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Empty table with 10 columns and 10 rows.

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SP1.01

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S0.01

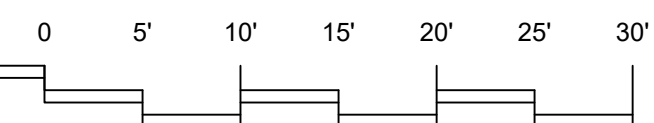
N Monroe St

W Main Ave

Note: the end platform (Zip B) is shown 75' too far west.
 Actual location is 259684.786184, 2478713.096619. Site
 plan is more accurate. - RMB

SITE PLAN

1" = 60'-0"



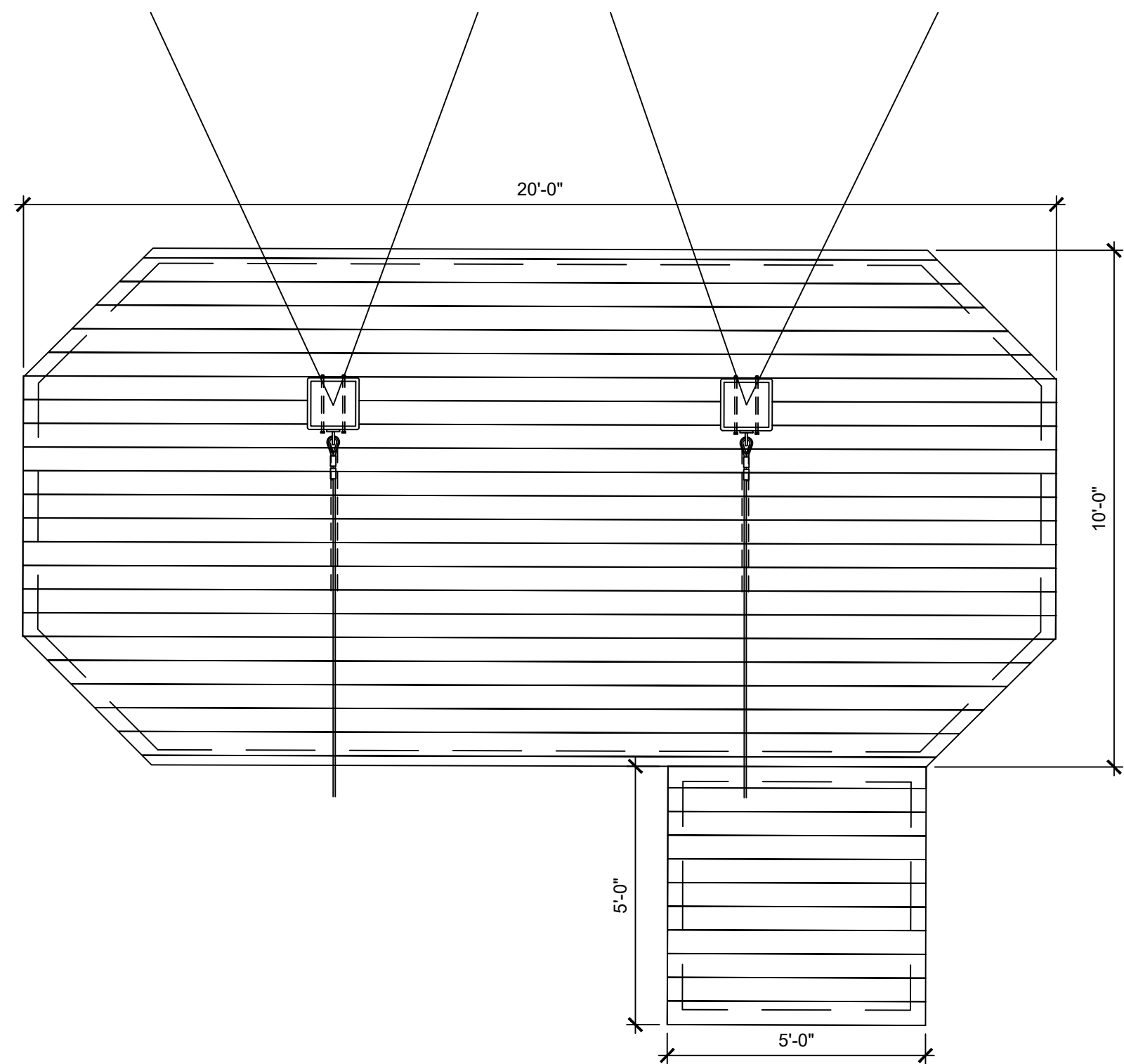
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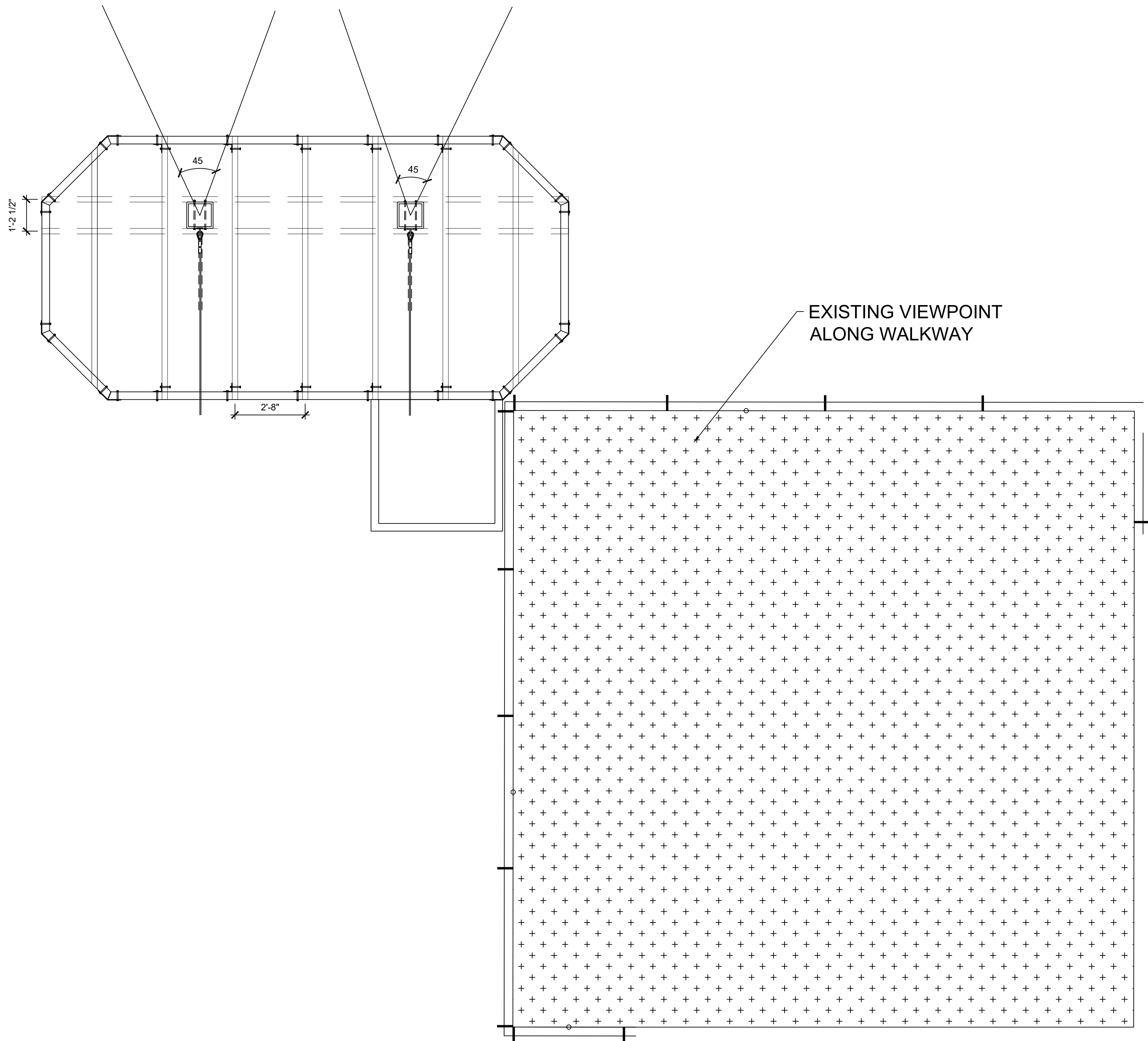
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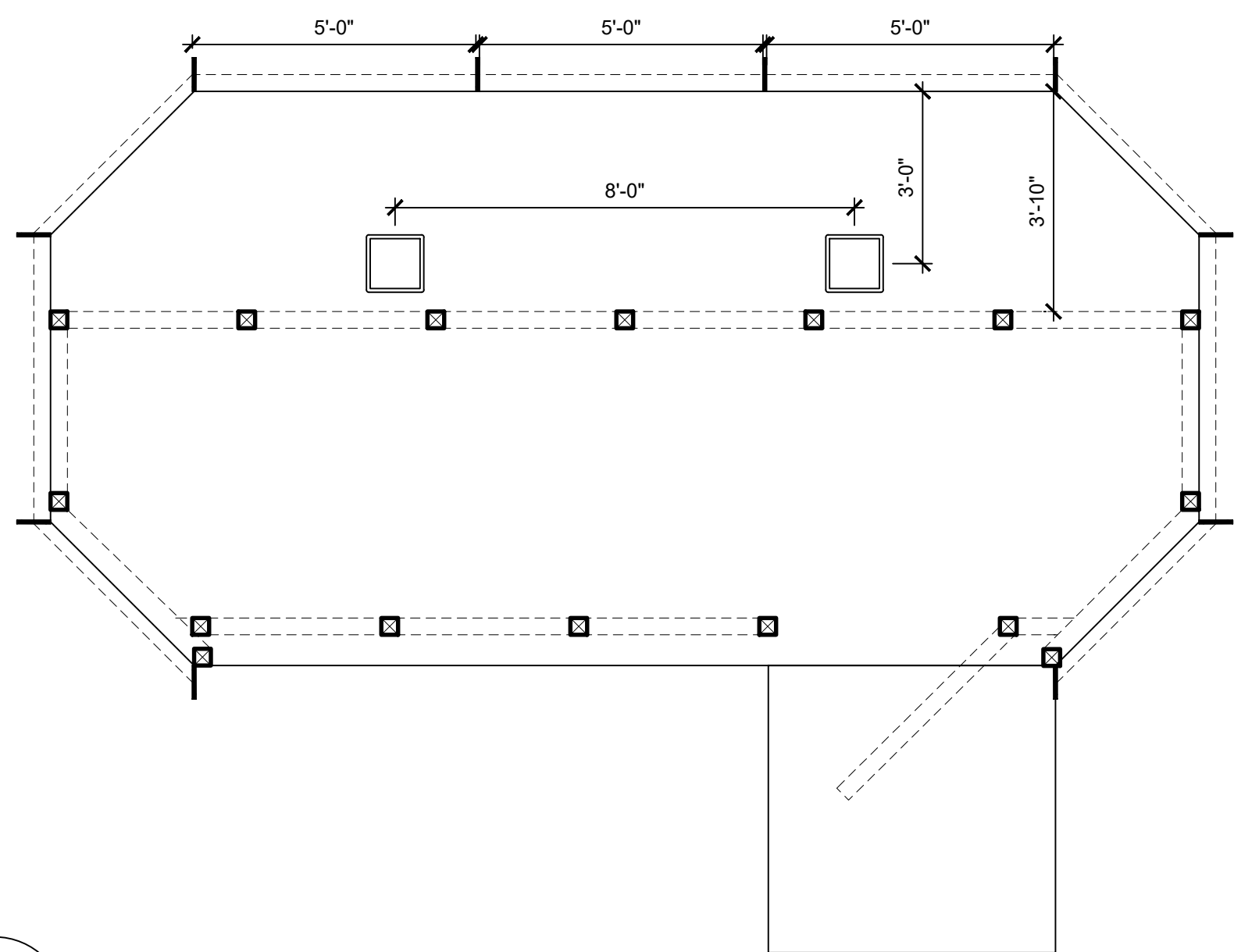
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1 S1.01 START PLATFORM DECKING PLAN



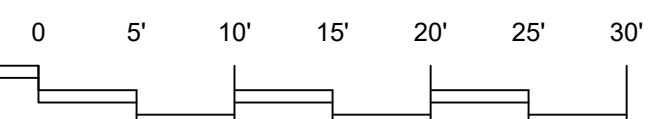
2 S1.01 START PLATFORM FRAME PLAN



3 S1.01 START PLATFORM RAILING PLAN

START PLATFORM PLAN

3/8" = 1'-0"



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S1.01

NOTES:

**ALL DIMENSIONS
ARE NOT FINAL
NOR FOR
CONSTRUCTION**

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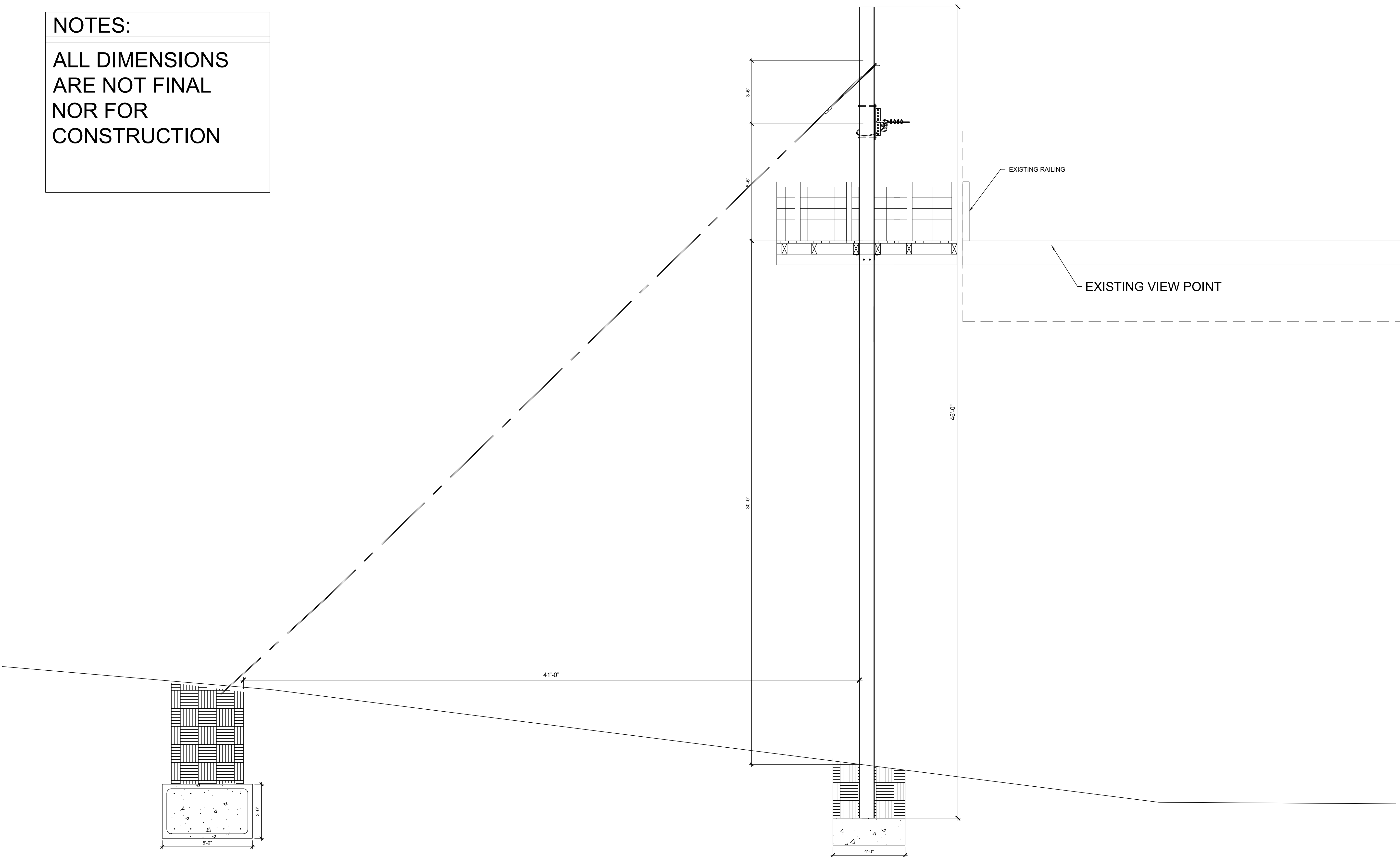
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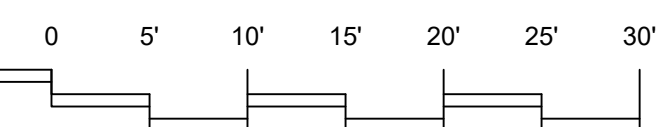
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S1.02

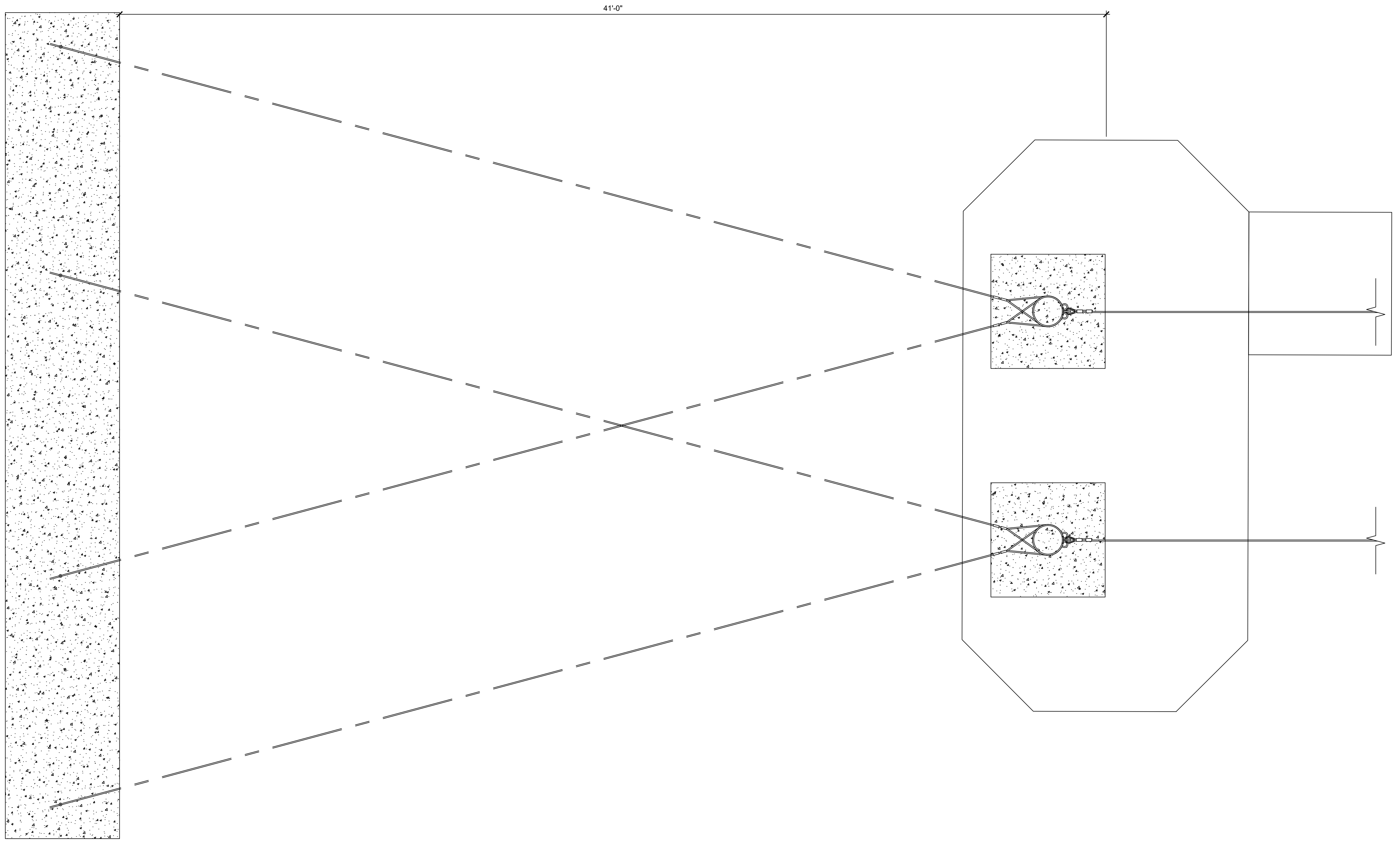


START PLATFORM ELEVATION

1/2" = 1'-0"



NOTES:
CONCRETE
FOOTING DIM:
14'X6'X4'
DEADMAN
ANCHOR 20,000
ULTIMATE
CAPACITY



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START PLATFORM FOOTING PLAN

1/2" = 1'-0" 0 5' 10' 15' 20' 25' 30'

S1.03

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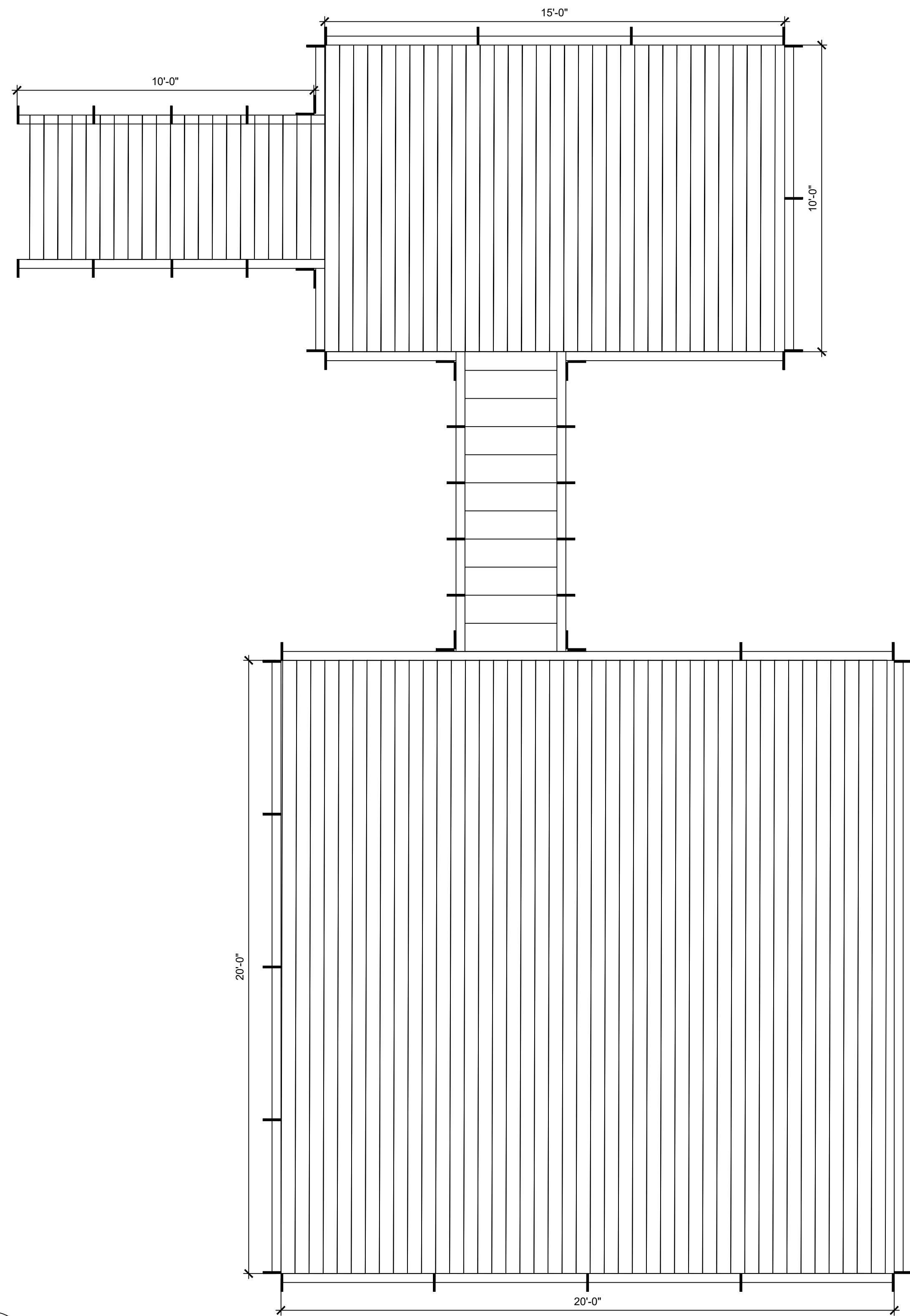
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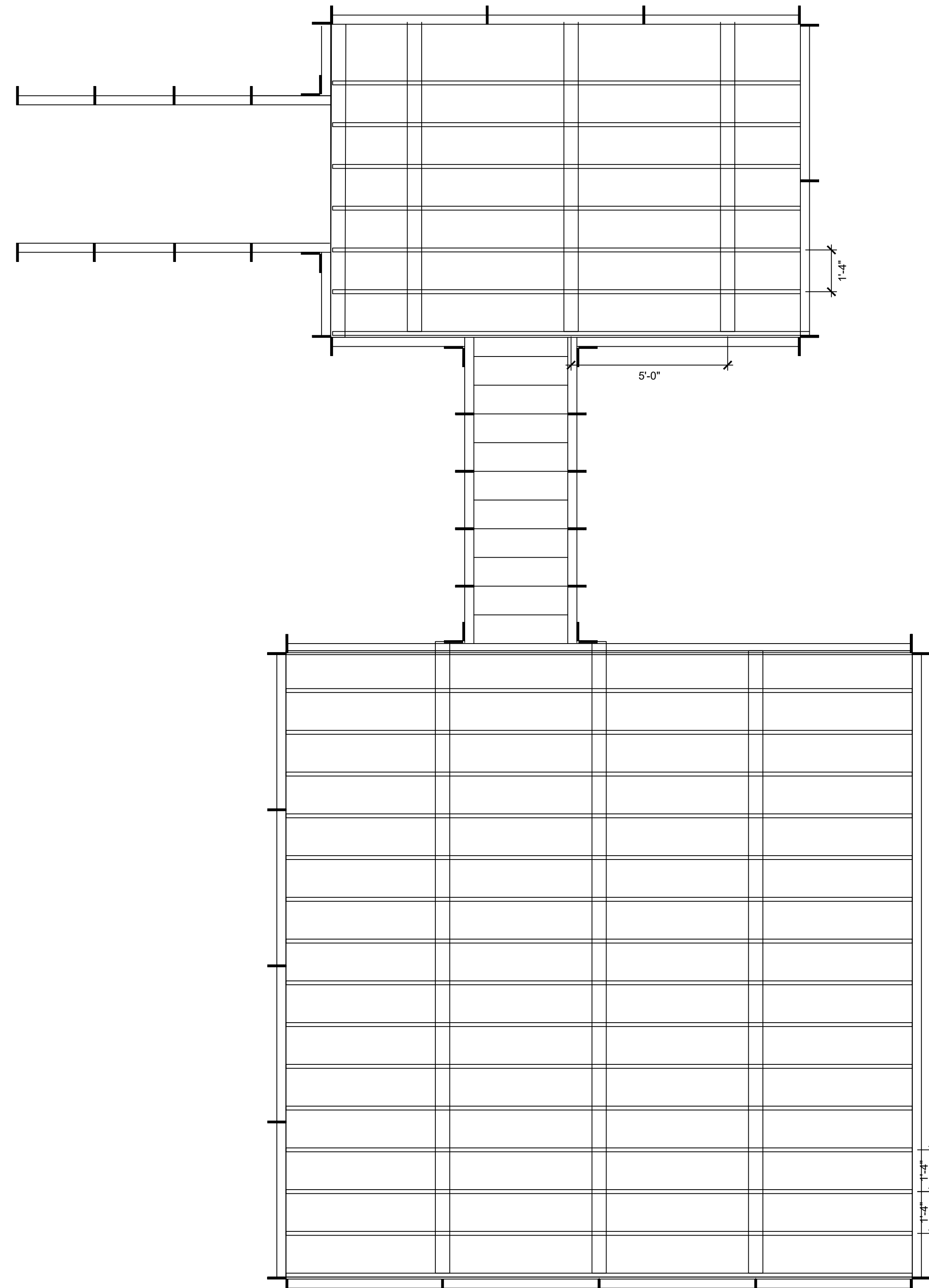
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S2.01



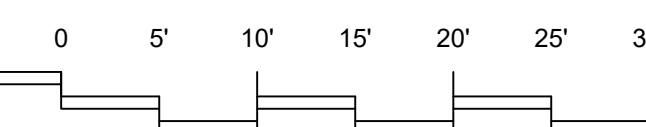
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S2.01 END PLATFORM RAILING AND DECKING PLAN



2
S2.01 END PLATFORM FRAMING PLAN

END PLATFORM PLAN

1/2" = 1'-0"

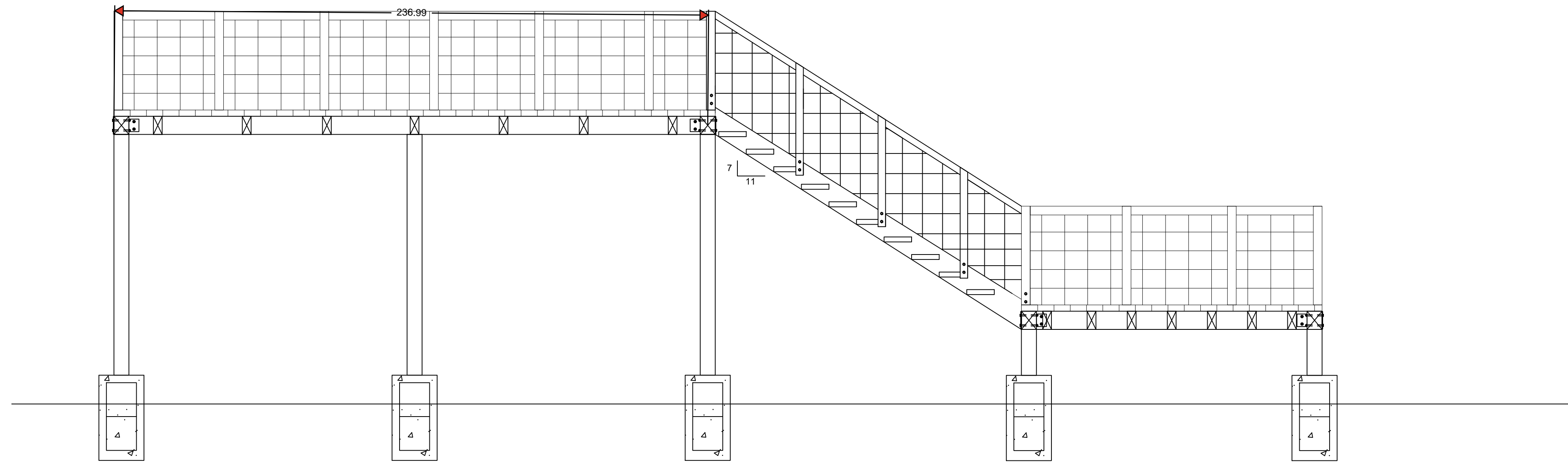


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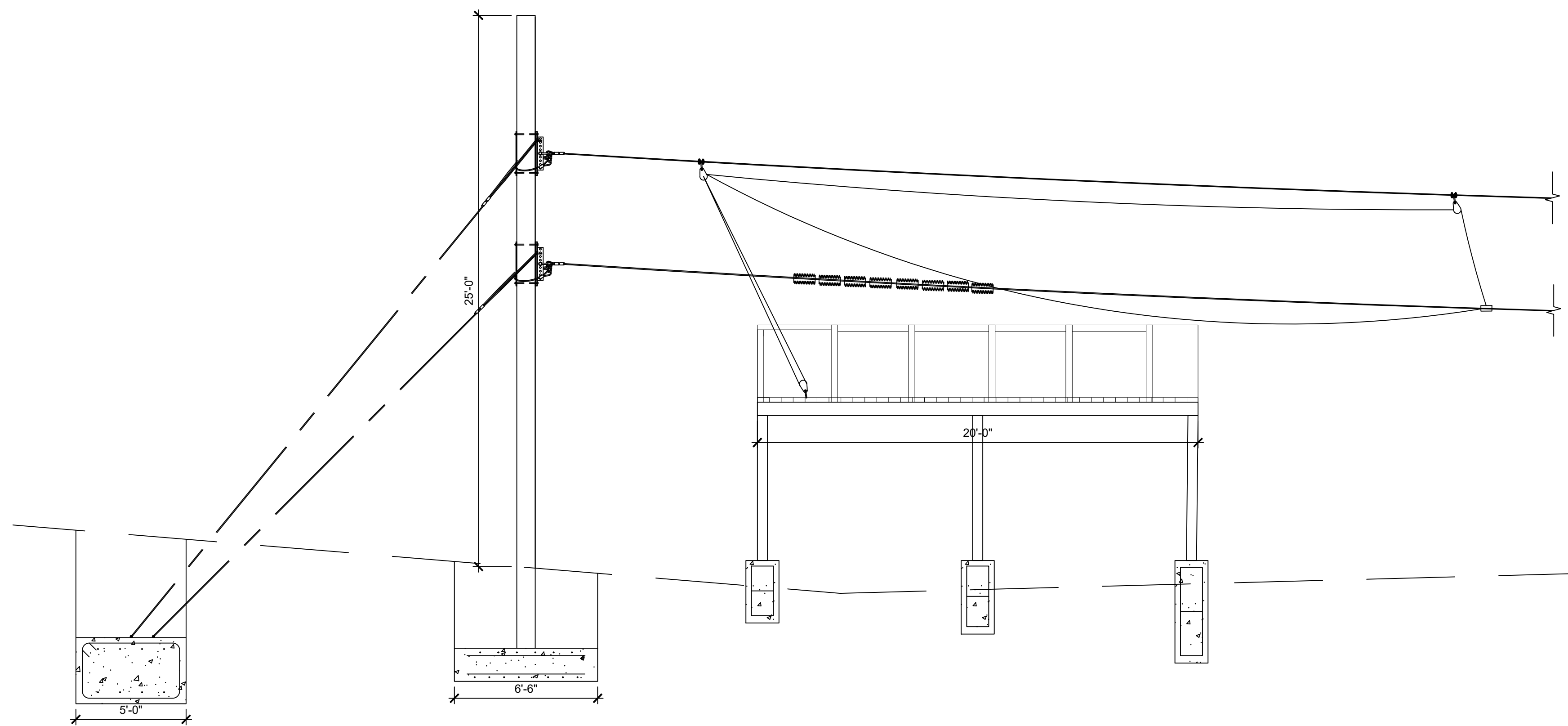
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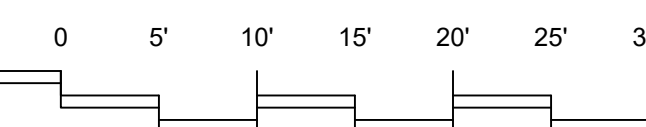
1
 S2.02
 END PLATFORM ELEVATION



2
 S2.02
 END PLATFORM ZIP LINE ELEVATION

END PLATFORM ELEVATION

1/2" = 1'-0"



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S2.02

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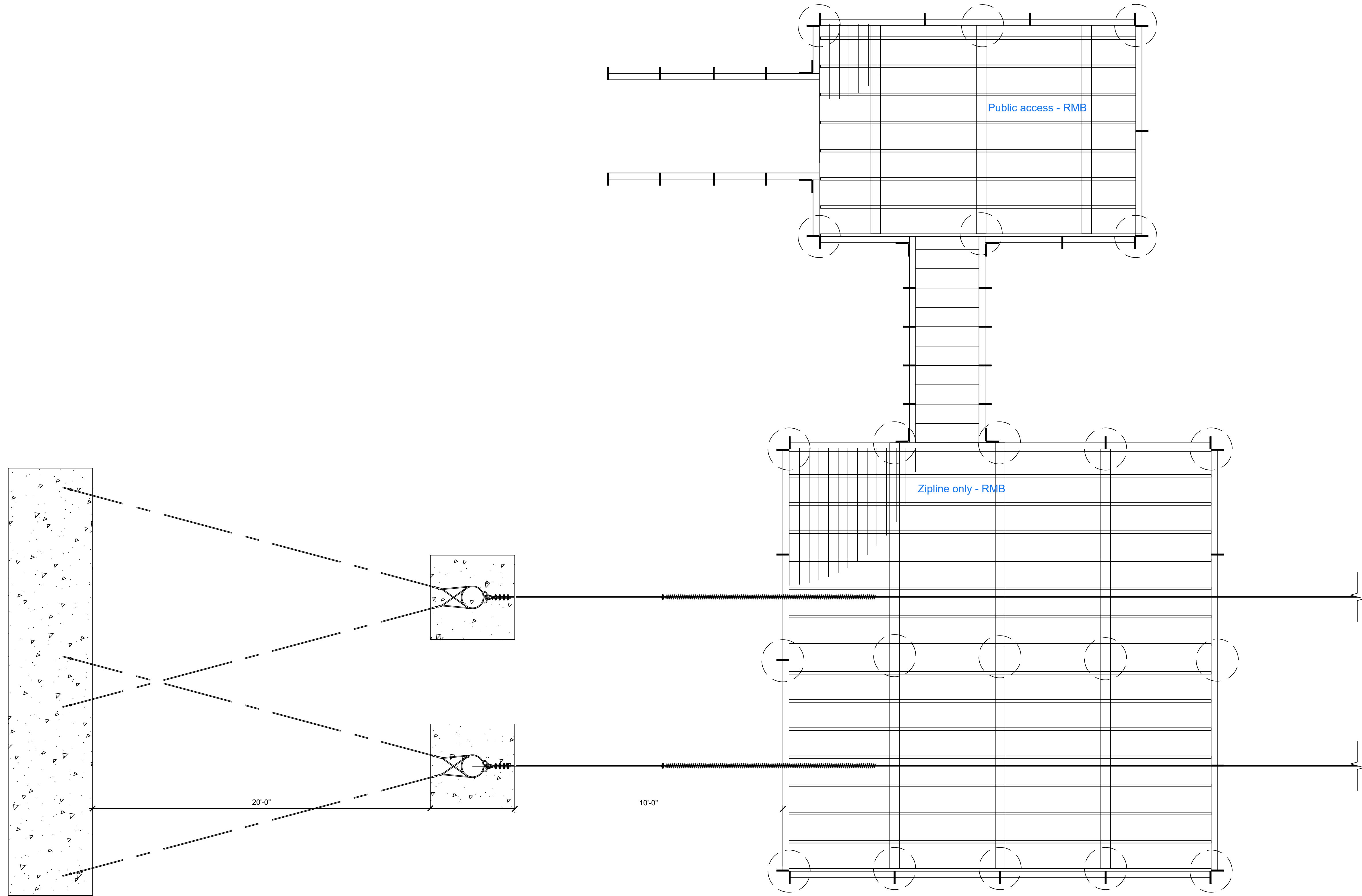
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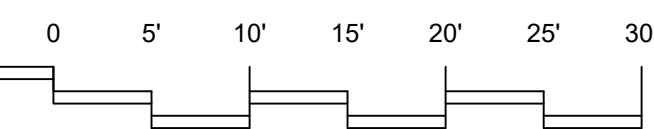
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S2.03



END PLATFORM FOOTING PLAN

3/8" = 1'-0"



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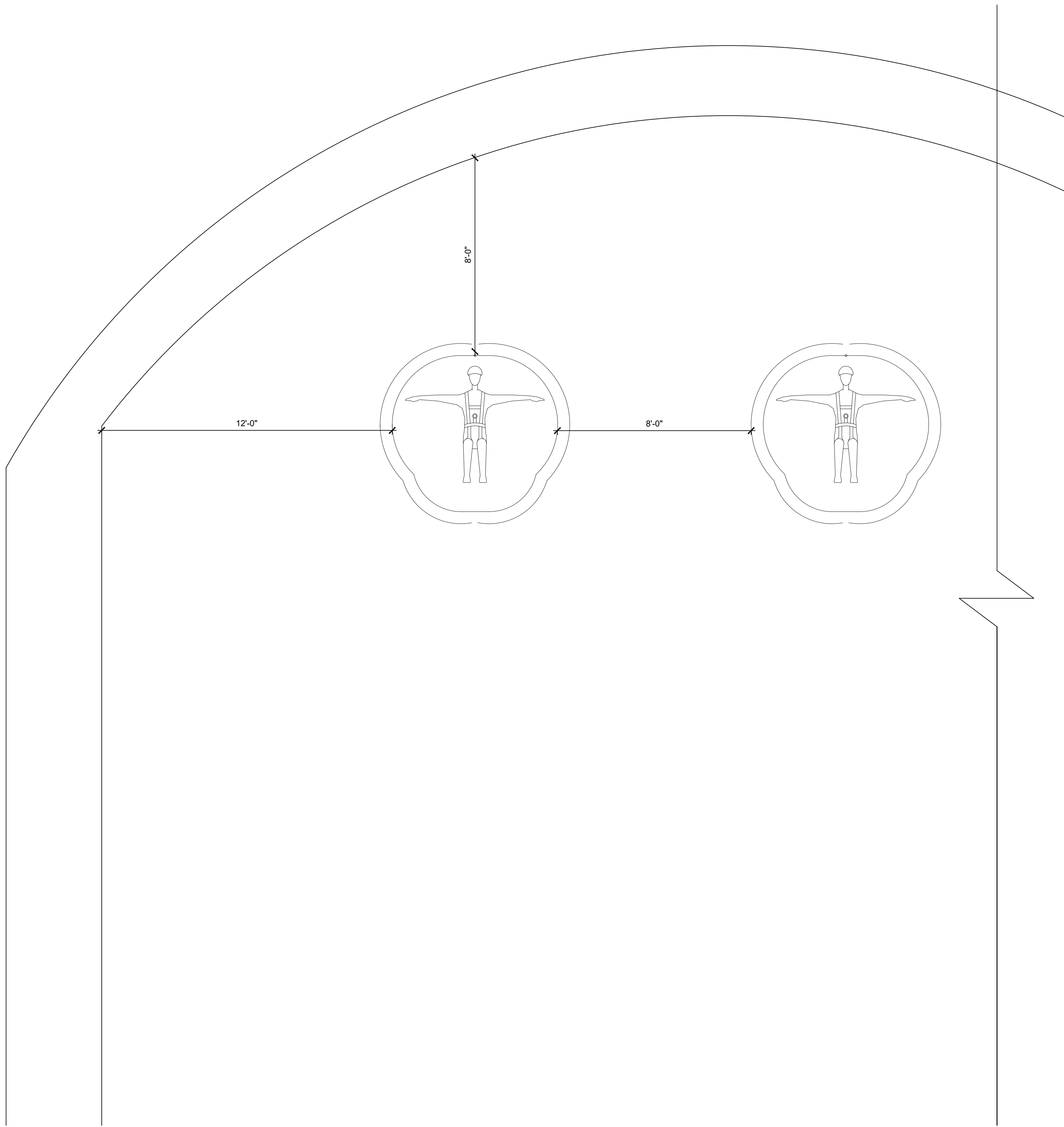
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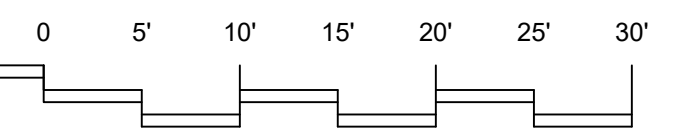
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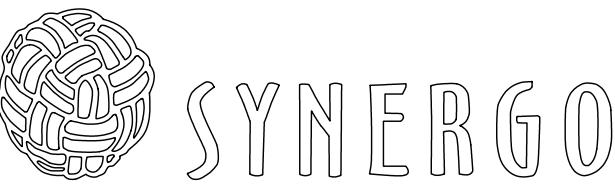
NOTES:
 Bridge arch NTS
 Minimum clearance
 12'~ Concrete wall
 8'~ Concrete roof



RIDER PROFILE CLEARANCE

3/8" = 1'-0"





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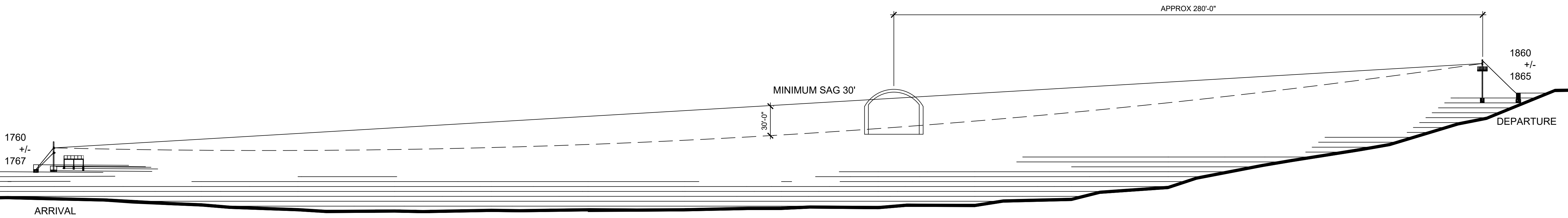
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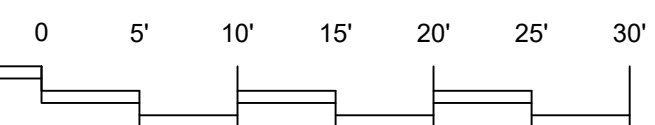
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S3.02

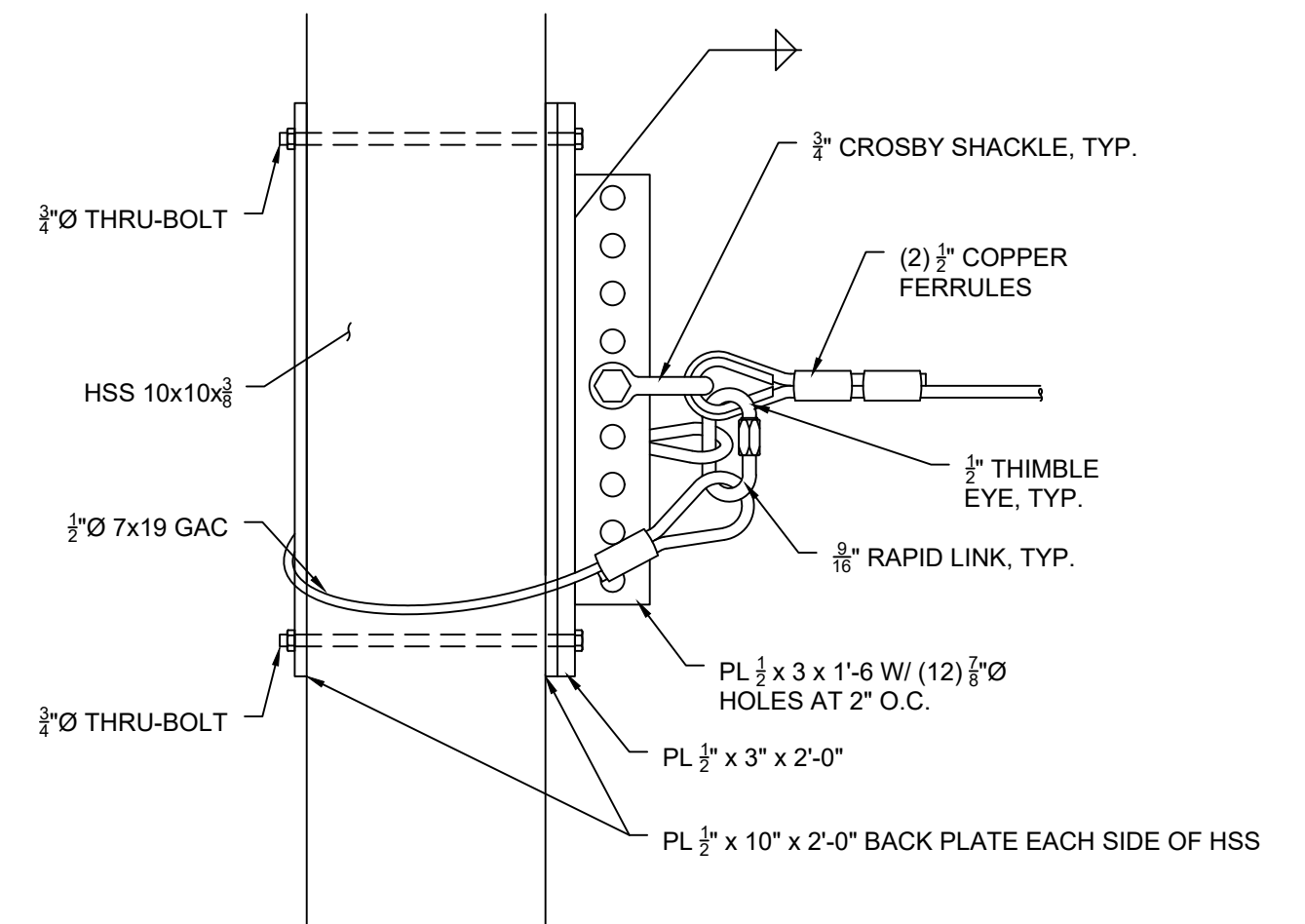


ZIP LINE ELEVATION

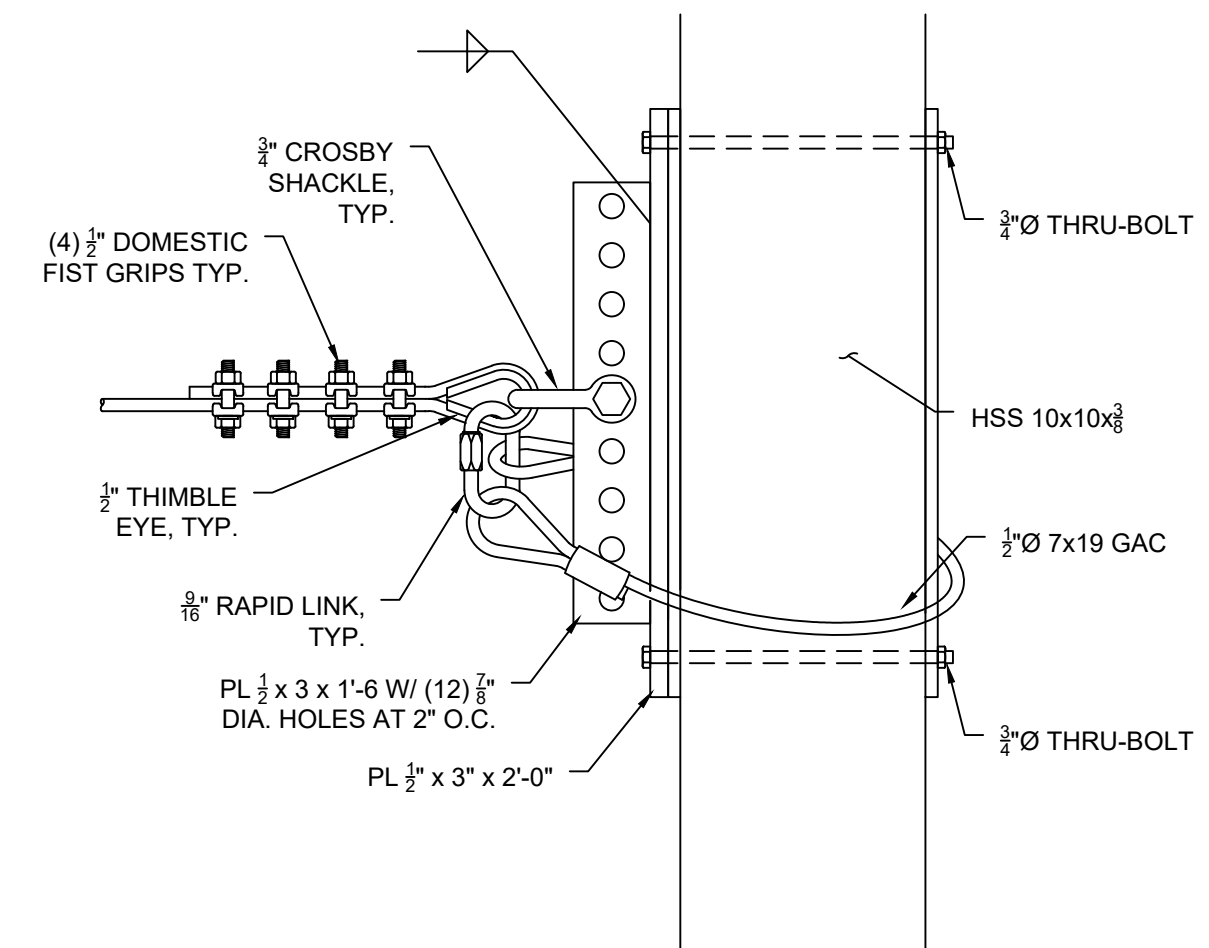
1"=60'-0"



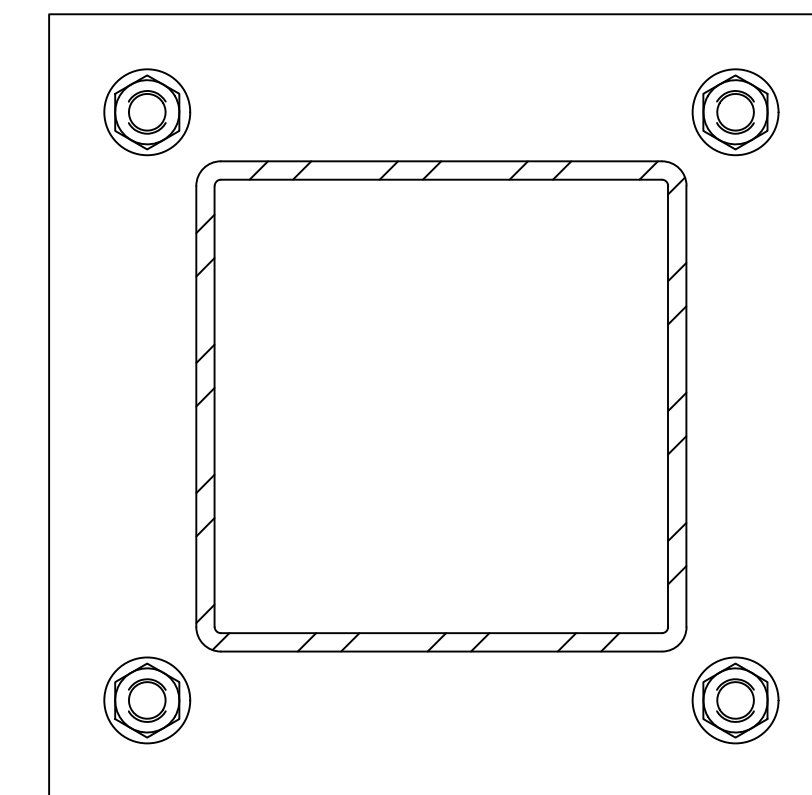
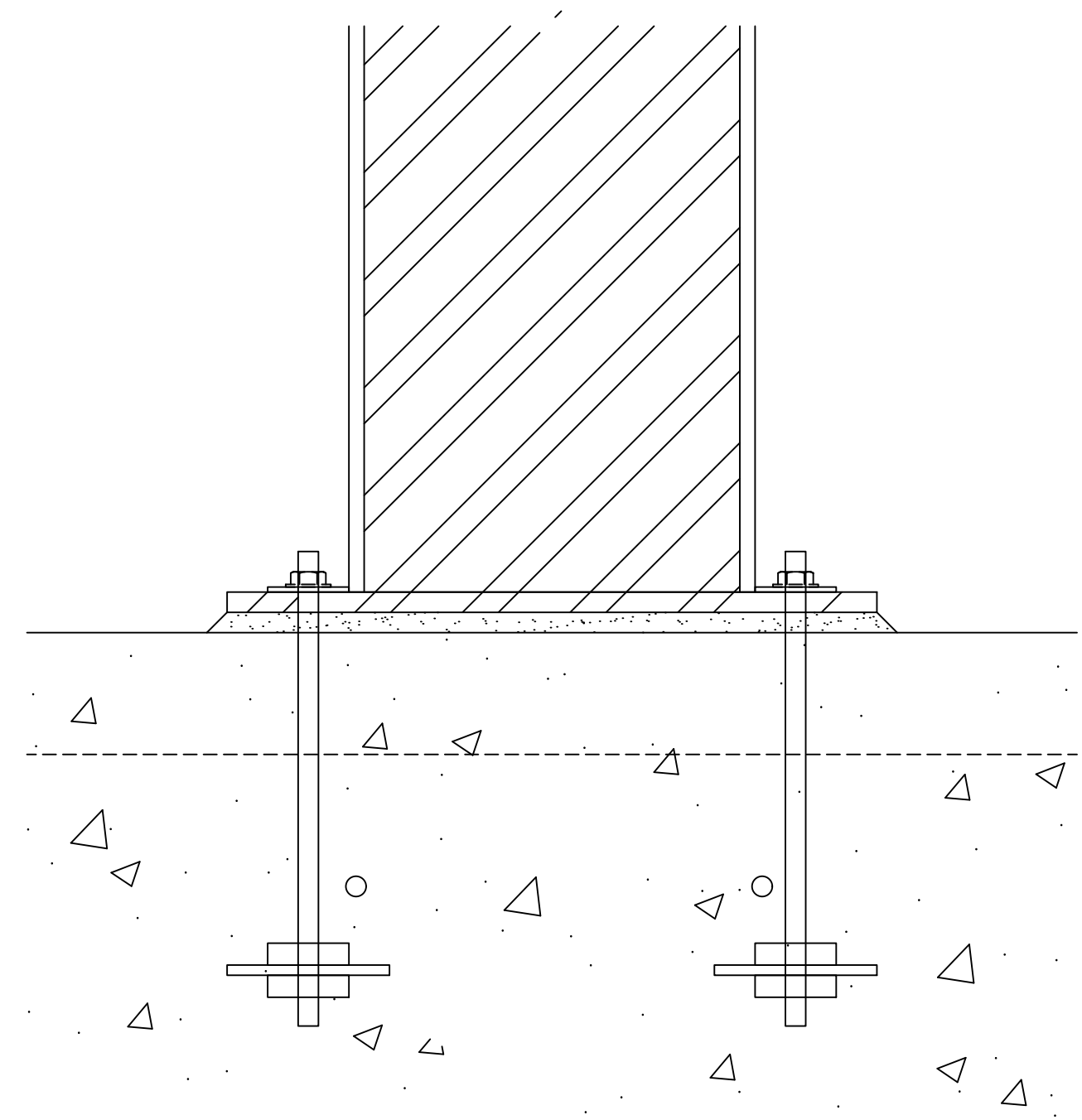
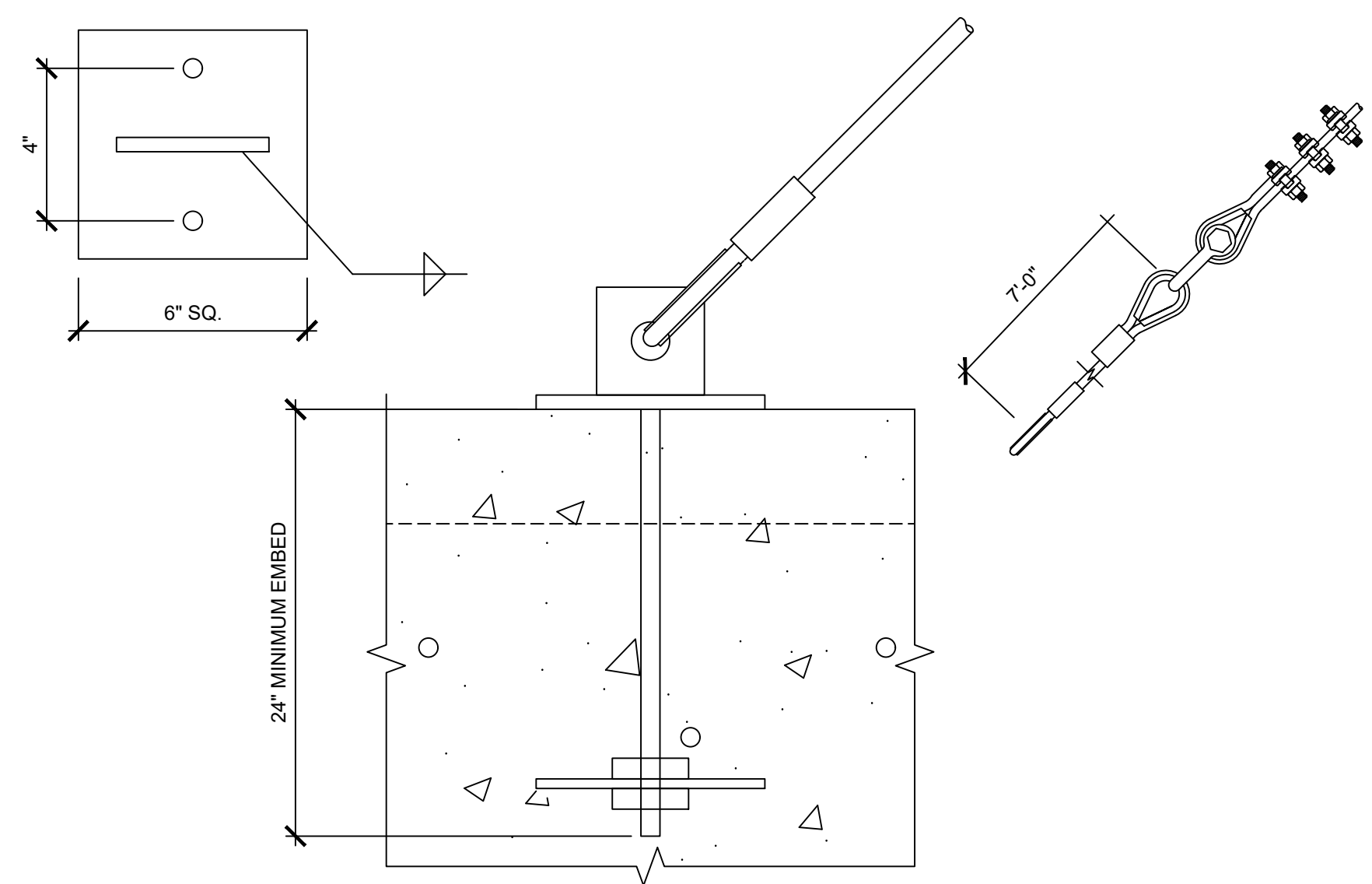
NOTES:
 DETAILS ARE NOT FINALIZED NOR FOR CONSTRUCTION



1 ZIP LINE CABLE CONNECTION (LANDING)
 S1.03

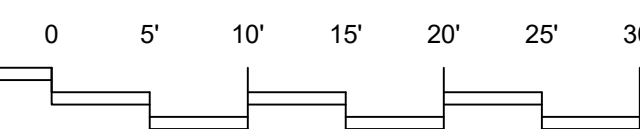


2 ZIP LINE CABLE CONNECTION (LAUNCH)
 S1.03



FOOTING AND ZIP LINE DETAILS

NTS



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