

SHELTER LOGIC

**1601 INDUSTRIAL PARK WAY
PUYALLUP, WA 98371**

DRAWING INDEX

SHEET	DRAWING TITLE
1	TITLE SHEET
2	BUILDING LAYOUT
3	RACKING ELEVATIONS
4	HIGH PILE STORAGE PLAN
5	SED 1 OF 1 CONSTRUCTION DETAILS

SEISMIC ENGINEERING

STRUCTURAL ENGINEERING & DESIGN
1815 WRIGHT AVE
LA VERNE, CA 91750

BOB SHARIFI

PHONE: (909) 596-1315

PROJECT MANAGER

INTEGRATED WAREHOUSE SOLUTIONS
402 PRINCELAND CT. UNIT 1
CORONA, CA 92879
DAVE SCHAADT

PHONE: (951) 205-3380

CONSULTING COMPANY



INTEGRATED WAREHOUSE SOLUTIONS
402 PRINCELAND CT. UNIT 1
CORONA, CA 92879
MARY LABANICS

PHONE: (951) 279-0550

SPRINKLER DESIGN

FIRE PROTECTION CRITERIA:

Commodity: Portable Shelters: Class I and II commodity combined with cartoned non-expanded Group A Plastics.

Storage Method: non-encapsulated, cartoned and palletized on open shelf racking + solid pile floor stack.

Maximum Top of Storage:

- Pallet Racking - 25ft
- Solid Pile - 18ft

High Pile Storage Square Footage: 114,781 Sq Ft (rack and solid pile combined)

Sprinkler System: ESFR K-17 Pendant

Ceiling Height: 40'

Code Reference: NFPA-13 2022 Edition Table 23.3.1 ESFR Sprinkler Ceiling Only Options for Solid Pile, Palletized, Single/Double/Multiple-Row Rack Storage for Class I-IV and Cartoned Non-Expanded Group A Plastics

LARGEST PILE DIMENSIONS:

81'-4" X 50'-11" X 18'-0" HIGH

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

City of Puyallup
Building
REVIEWED FOR COMPLIANCE
RayC
07/11/2023
3:26:00 PM

PRCTI20230908

Do not load or use racks until inspection approval is completed.

THE APPROVED CONSTRUCTION PLANS AND ALL ENGINEERING MUST BE POSTED ON THE JOB AT ALL INSPECTIONS IN A VISIBLE AND READILY ACCESSIBLE LOCATION.

Approval of submitted plans is not an approval of omissions or oversight by this office or noncompliance with any applicable regulations of local government. The contractor is responsible for making sure that the building complies with all applicable building codes and regulations of the local government.

See engineering calculation for code references to the 2018 IBC

Permit with L&I and install exit path illuminate and exit signs for the revised and updated floor plans. Testing of the system will be required prior to use of the rack storage. See IBC chapter 10 for lighting requirements.

Provide load limit placards in each rack area, type, and/or shelf with variation in load limits per engineers design. Placards to be durably constructed and posted for inspection. See RMI standards for details.

Separate permits required for office demolition.

Special Inspection is required. See engineering notes.

Integrated Warehouse Solutions WEST
402 PRINCELAND CT. UNIT 1
CORONA, CA 92879
Phone: 951-279-0550 Fax: 951-279-2264

Project Name and Address

SHELTERLOGIC
1601 INDUSTRIAL PARK WAY
PUYALLUP, WA 98371

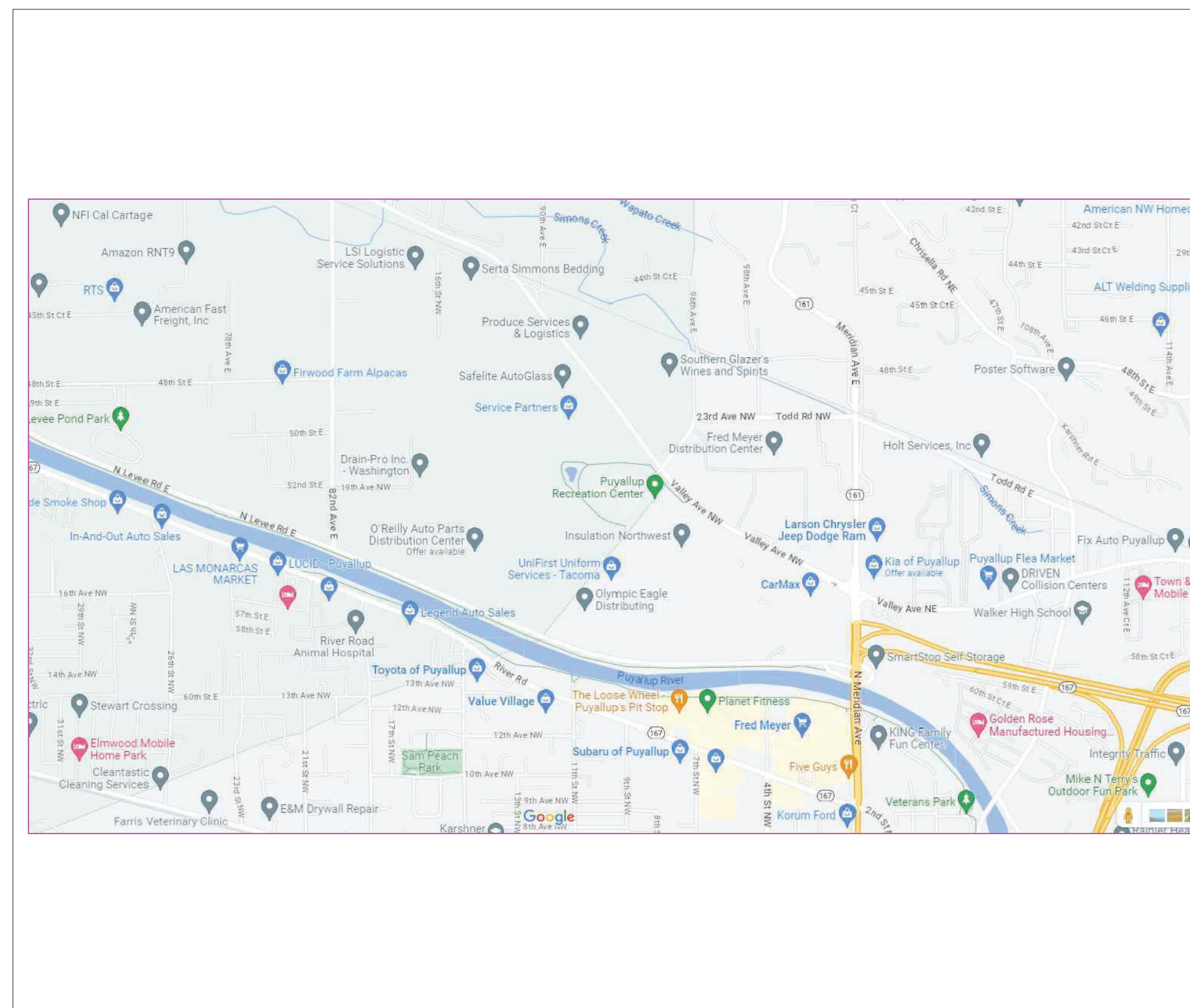
Project	SHELTER LOGIC	Sheet	
Date	06-16-2023		1 of 5
Scale	NTS		



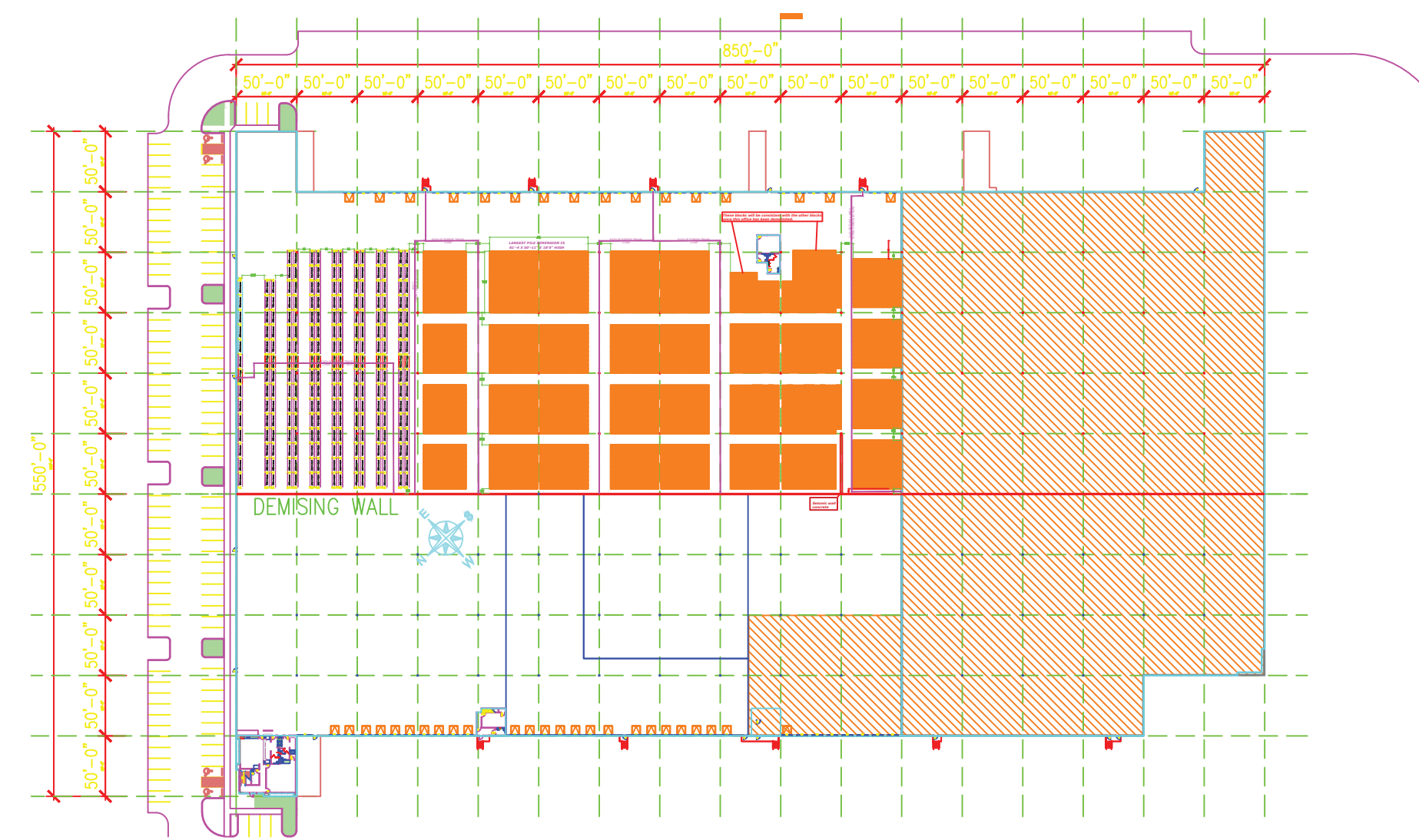
Enhao Zhang
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Date: 2023.06.22 13:52:17 -07'00'

THE P.E. CERTIFICATION PROVIDED HEREIN REFERS TO THE AGENCY OF THE STORAGE RACK STRUCTURAL COMPONENTS ONLY. ALL OTHER AREAS ARE OUTSIDE THE SCOPE OF WORK OF THIS CERTIFICATION.

VICINITY MAP



KEY PLAN



SCOPE OF WORK

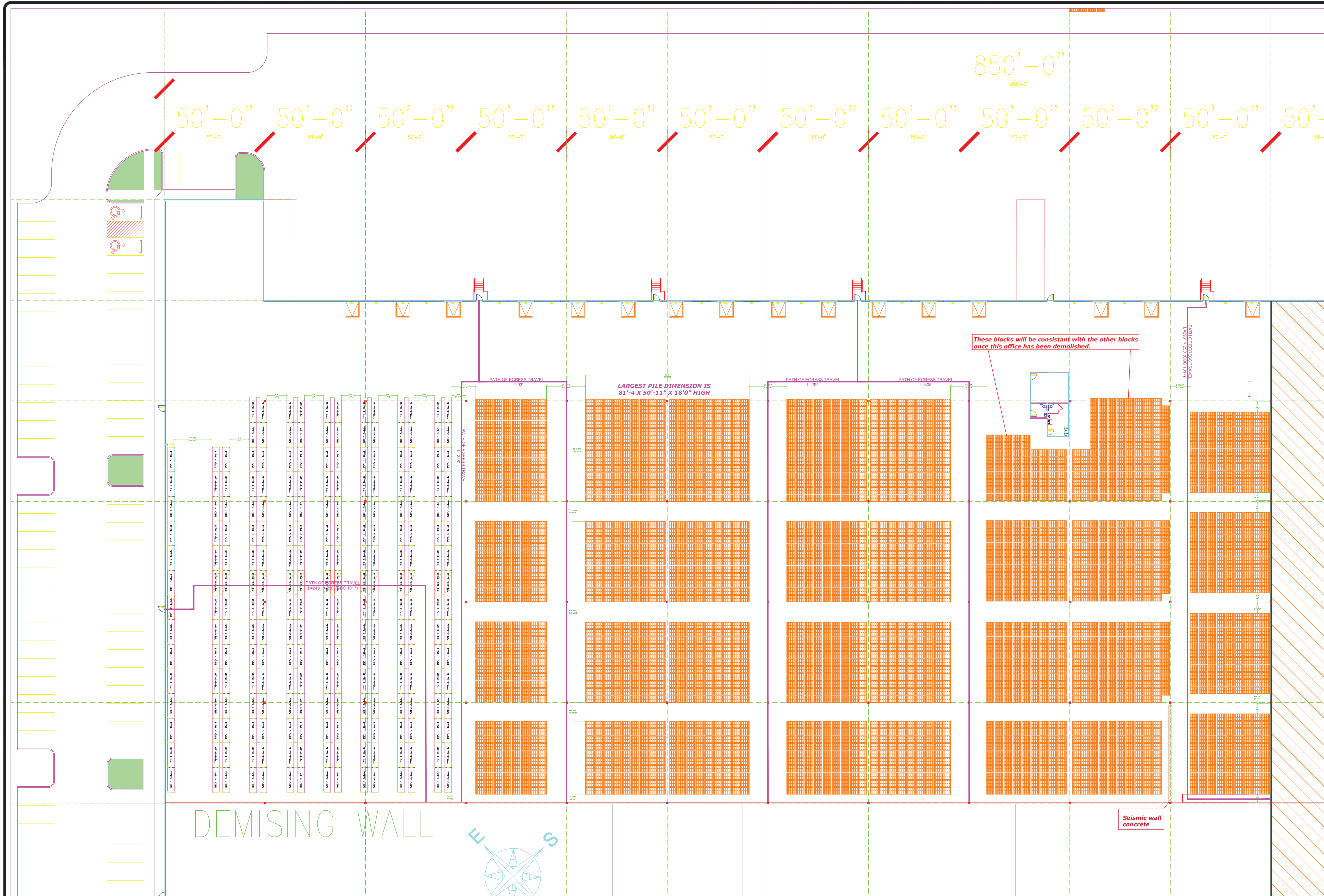
SCOPE OF WORK:

THE SCOPE OF WORK IS FOR INSTALLATION OF STORAGE RACKS IN AN EXISTING BUILDING. THE PLANS PURPOSE IS TO ESTABLISH THE STORAGE/STRUCTURAL REQUIREMENTS FOR THE TENANT AND BUILDING WHICH COMPLIES WITH THE APPLICABLE BUILDING CODE REQUIREMENTS. ANY AND ALL MODIFICATIONS TO THE BUILDING ARE THE SOLE RESPONSIBILITY OF THE OWNER/TENANT. THE OWNER/TENANT SHALL OBTAIN A LICENSED CONTRACTOR TO PERFORM SUCH WORK ALONG WITH THE NECESSARY PERMITS FOR SUCH WORK.

FIRE DESIGN CRITERIA PER NFPA 13 2022 EDITION

BUILDING DESIGN INFORMATION:

GOVERNING BUILDING CODE: 2022
CONSTRUCTION TYPE: III-B
CBC BUILDING OCCUPANCY: B, S-1
APN/PARCEL ID: 042021-2076
YEAR BUILT: 2007
ZONING: ML
BUILDING SQUARE FOOTAGE: 379,000
TENANT SPACE SQUARE FOOTAGE: 141,500
PALLET RACK SQUARE FOOTAGE: 33,171
SOLID PILE SQUARE FOOTAGE: 81,610
BUILDING CEILING HEIGHT: 40'-0"



City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic



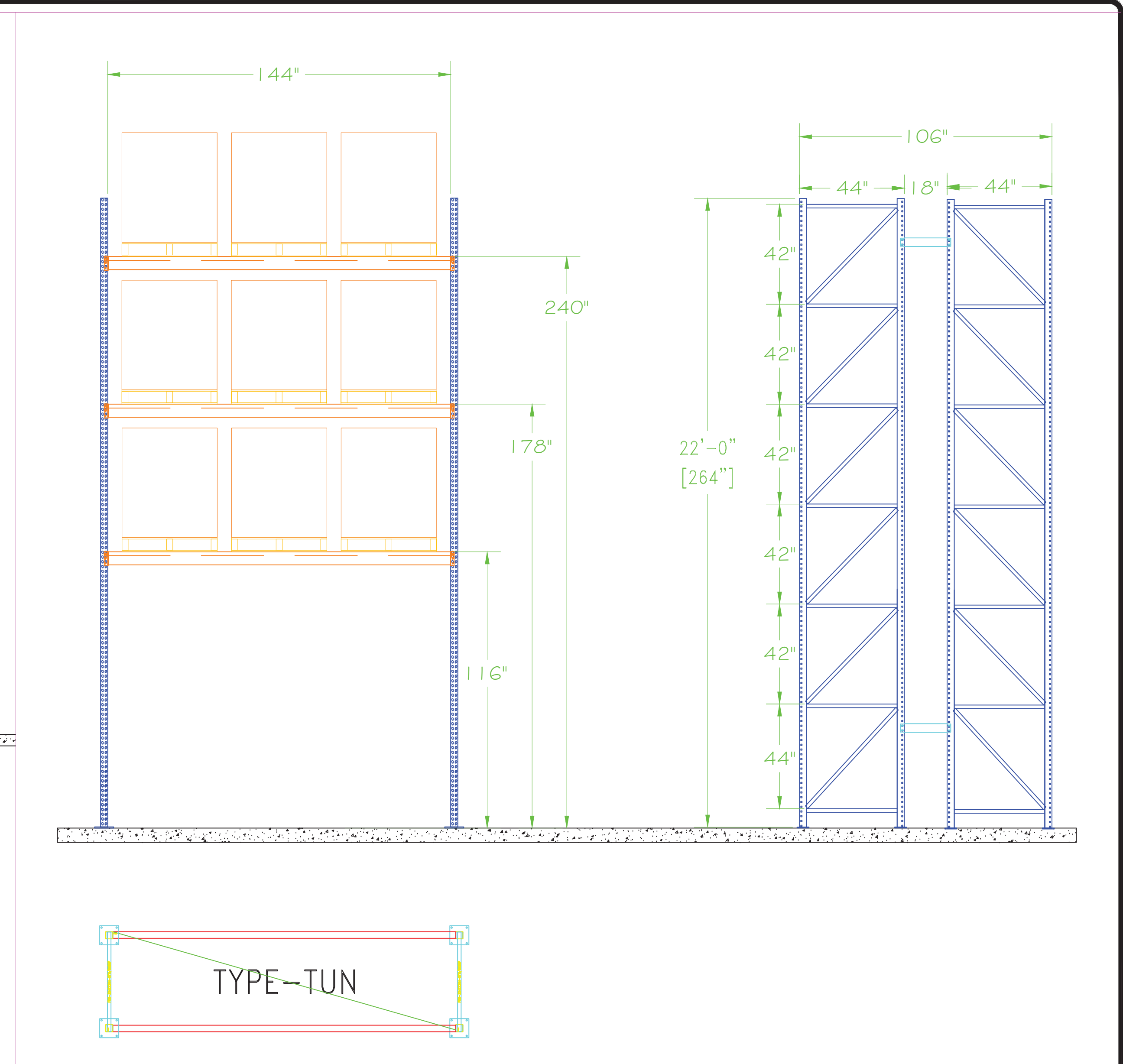
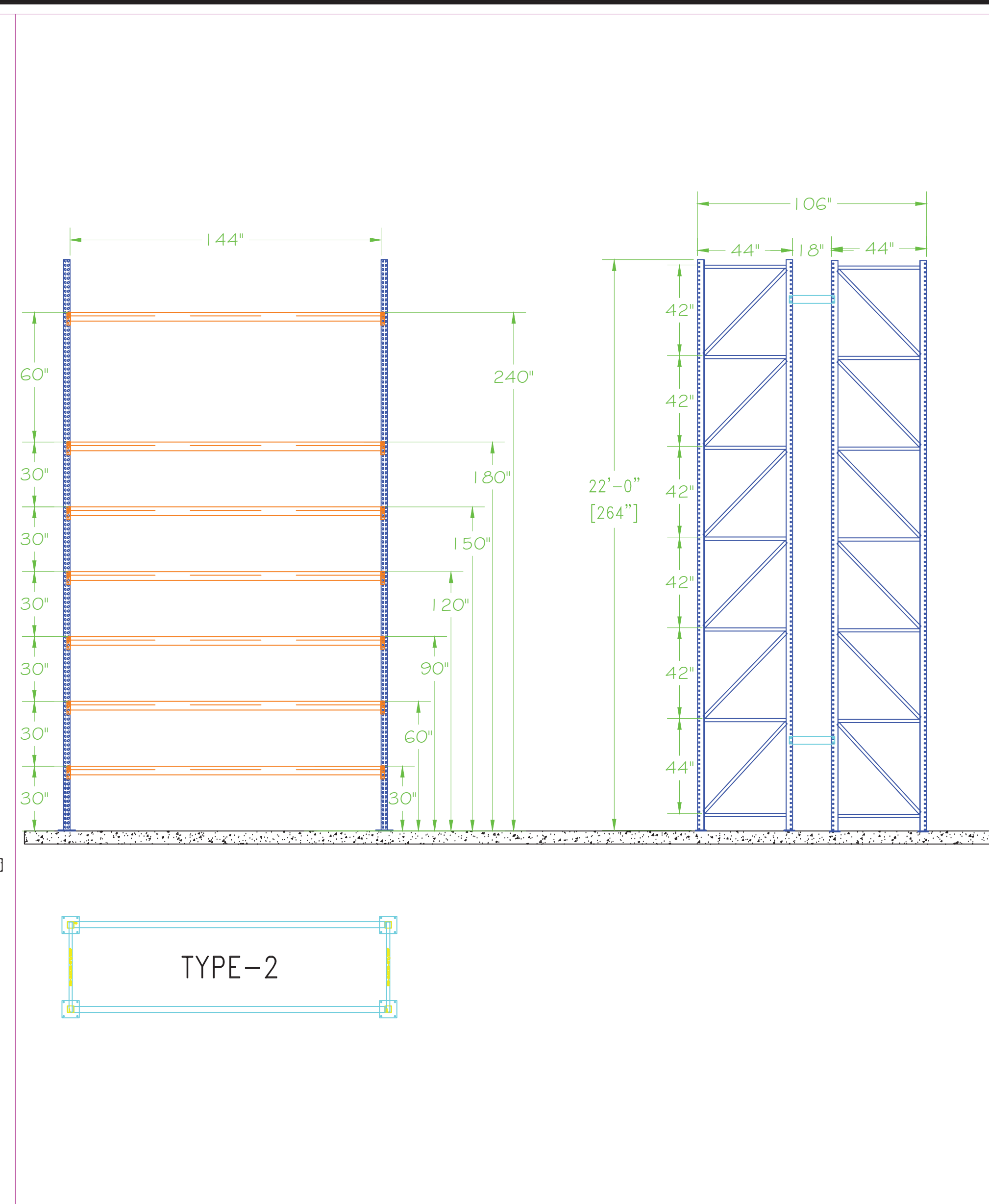
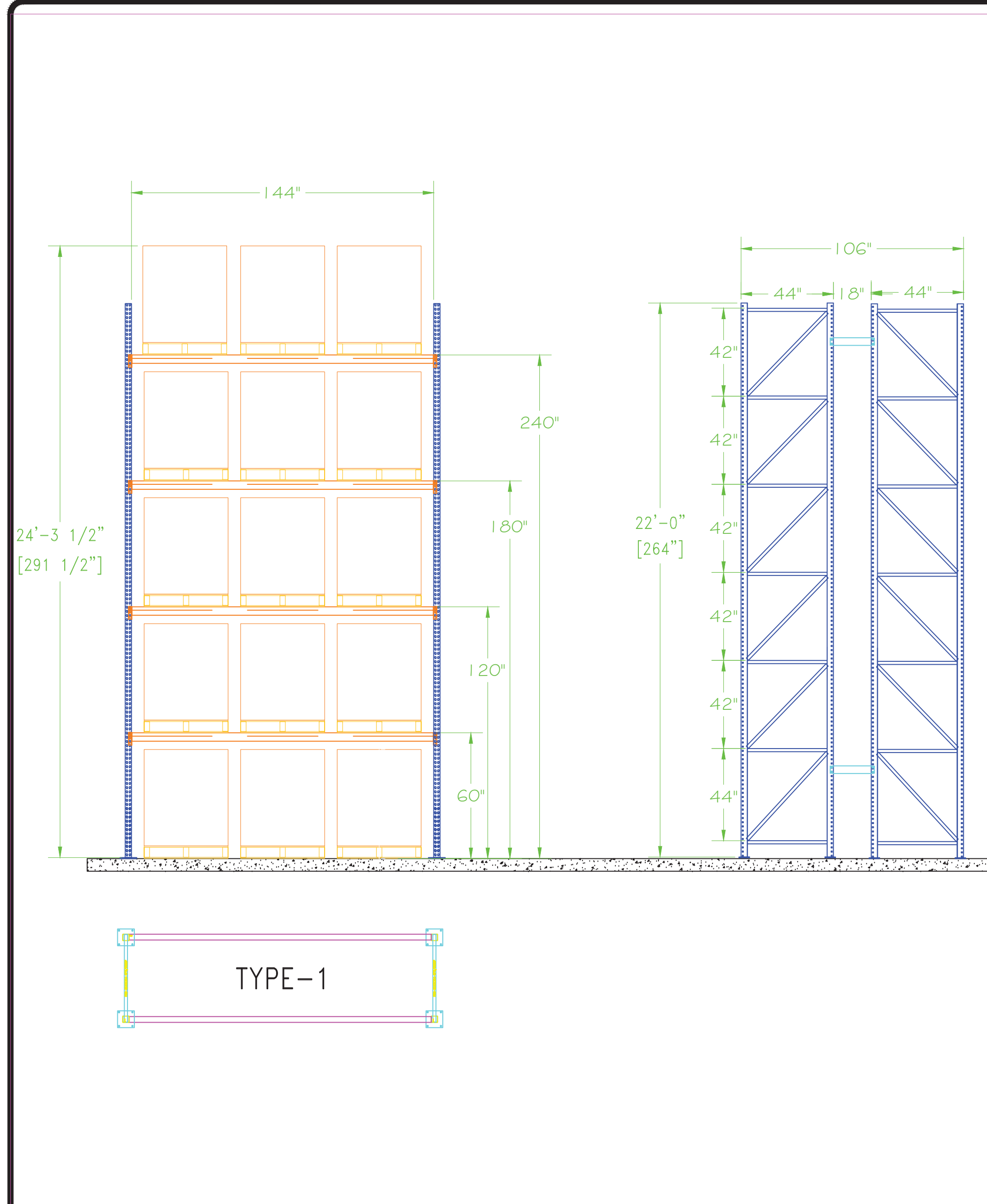
THE FE CERTIFICATION PROVIDED HEREIN RELATES TO THE AREA(S) OF THE STORAGE BACK STRUCTURAL COMPONENTS ONLY. ALL OTHER AREAS ARE OUTSIDE THE SCOPE OF WORK OF THIS CERTIFICATION.

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Date: 2023.06.22 13:51:51 -0700'

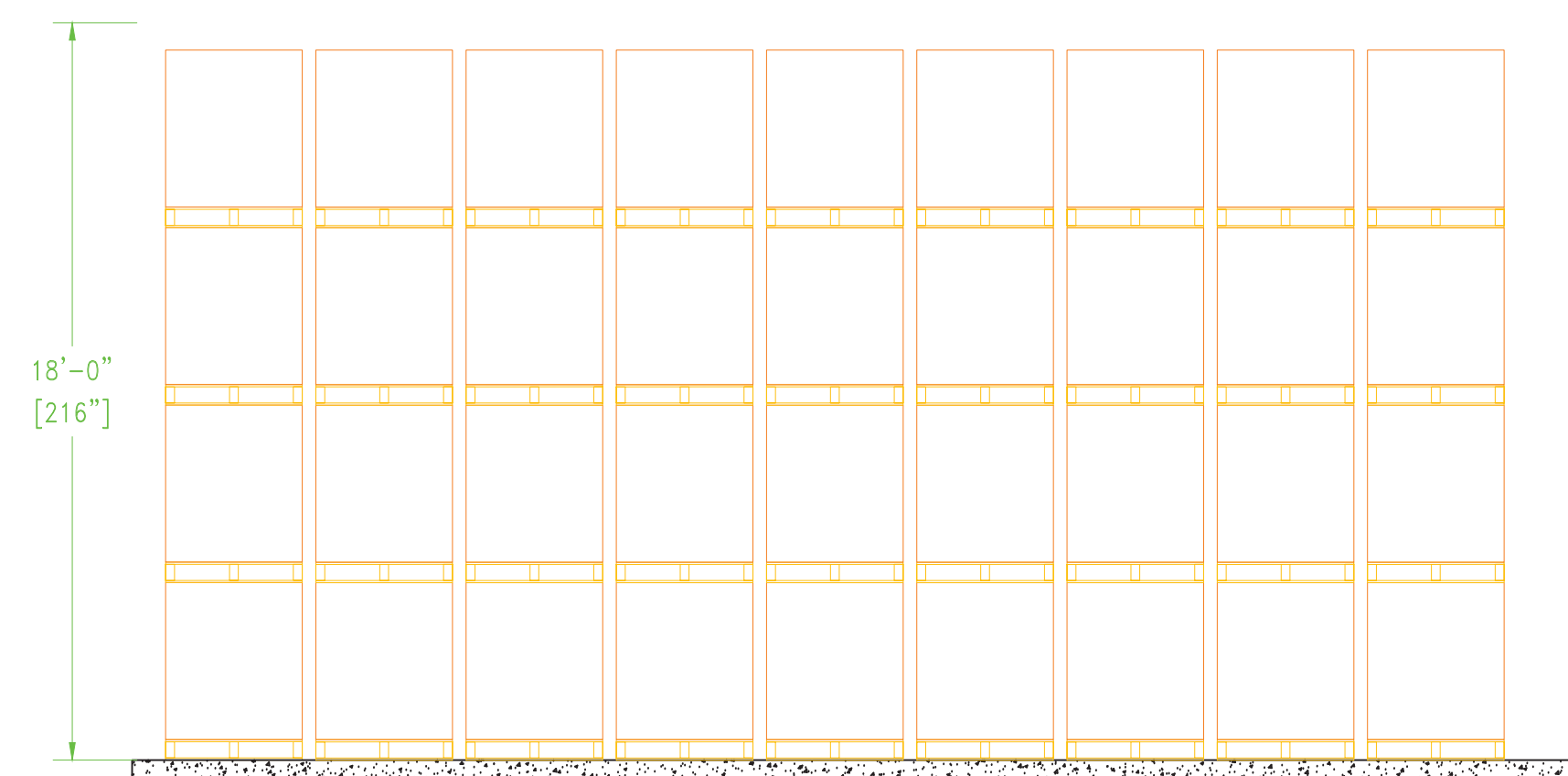
Integrated Warehouse Solutions WEST
402 E. Princland Ct. Unit 1 Corona, CA 92879
Phone: 951-279-0550 Fax: 951-279-2264

SHELTER LOGIC
1601 Industrial Parkway
Puyallup, WA 98371

DRAWN BY	D.SCHAADT	DATE	06-16-23
CHECKED BY	---	DATE	---
APPROVED BY	---	DATE	---
SCALE	NTS		
DRAWING NO.	SHEET NO.		2 OF 5



SOLID PILE STORAGE



LARGEST PILE DIMENSION IS 81'-4 X 50'-11" X 18'0" HIGH

City of Puyallup Development & Permitting Services ISSUED PERMIT			
Building	Planning	Engineering	Public Works
Fire	Traffic		



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SHELTER LOGIC

1601 Industrial Parkway
Puyallup, WA 98371



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THE P.E. CERTIFICATION PROVIDED HEREIN PERTAINS TO THE ADEQUACY OF THE STORAGE BACK STRUCTURAL COMPONENTS ONLY. ALL OTHER AREAS ARE OUTSIDE THE SCOPE OF WORK OF THIS CERTIFICATION.

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CHECKED BY	---	DATE	---
APPROVED BY	---	DATE	---
SCALE	NTS		
DRAWING NO.	SHEET NO. 3 OF 5		



SCOPE OF WORK:

THIS PLAN IS NOT INTENDED FOR CONSTRUCTION, IT IS A HIGH PILED STORAGE DESIGN AND REPORT. ITS PURPOSE IS TO ESTABLISH THE STORAGE REQUIREMENTS FOR THE TENANT AND BUILDING WHICH COMPLIES WITH THE APPLICABLE NFPA 13, 2022 FIRE CODE REQUIREMENTS. ANY AND ALL MODIFICATIONS TO THE BUILDING ARE THE SOLE RESPONSIBILITY OF THE OWNER/TENANT. THE OWNER/TENANT SHALL OBTAIN A LICENSED CONTRACTOR TO PERFORM SUCH WORK. ALONG WITH THE NECESSARY PERMIT FOR SUCH WORK.

SMOKE VENT INFORMATION AND CALCULATION

PLEASE NOTE THAT NO SMOKE/HEAT VENTS ARE NOT REQUIRED

WAREHOUSE AND SPRINKLER INFORMATION:

BUILDING CEILING HEIGHT: 40'-0"
 FIRE SPRINKLER DENSITY - K-17 @ 52 PSI / ESFR
 K-17 SPRINKLER HEAD WITH A TEMPERATURE 214 DEGREES
 OCCUPANCY CLASS - B, S-1
 BUILDING CONSTRUCTION TYPE- TYPE III-B
 TOTAL BUILDING SQUARE FOOTAGE- 379,000
 TENANT WAREHOUSE FOOTAGE- 141,500
 HIGH PILE STORAGE FOOTAGE- 114,781

GENERAL NOTES

- 1.) Portable fire extinguishers shall be provided in accordance with NFPA STANDARD 10
- 2.) This review did not include the analysis of any hazardous materials to be present. If there are any hazardous materials present in excess of the maximum allowable quantities per control area, the applicant shall complete a copy of the Sumner Fire Departments Hazardous Materials Information Form and return it to the Fire Department for review and approval prior to introducing and such materials into the building.
- 3.) Clearance between the top of storage and fire sprinkler head deflector shall be a minimum of 36" per NFPA 13, 2022 edition

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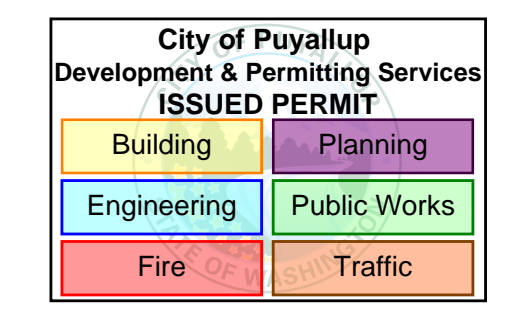
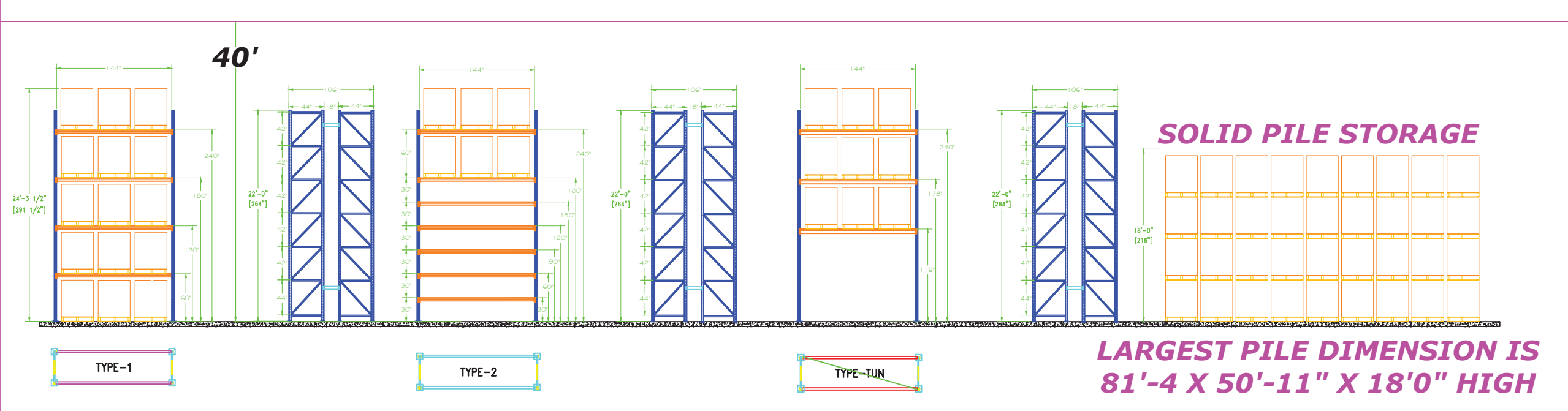
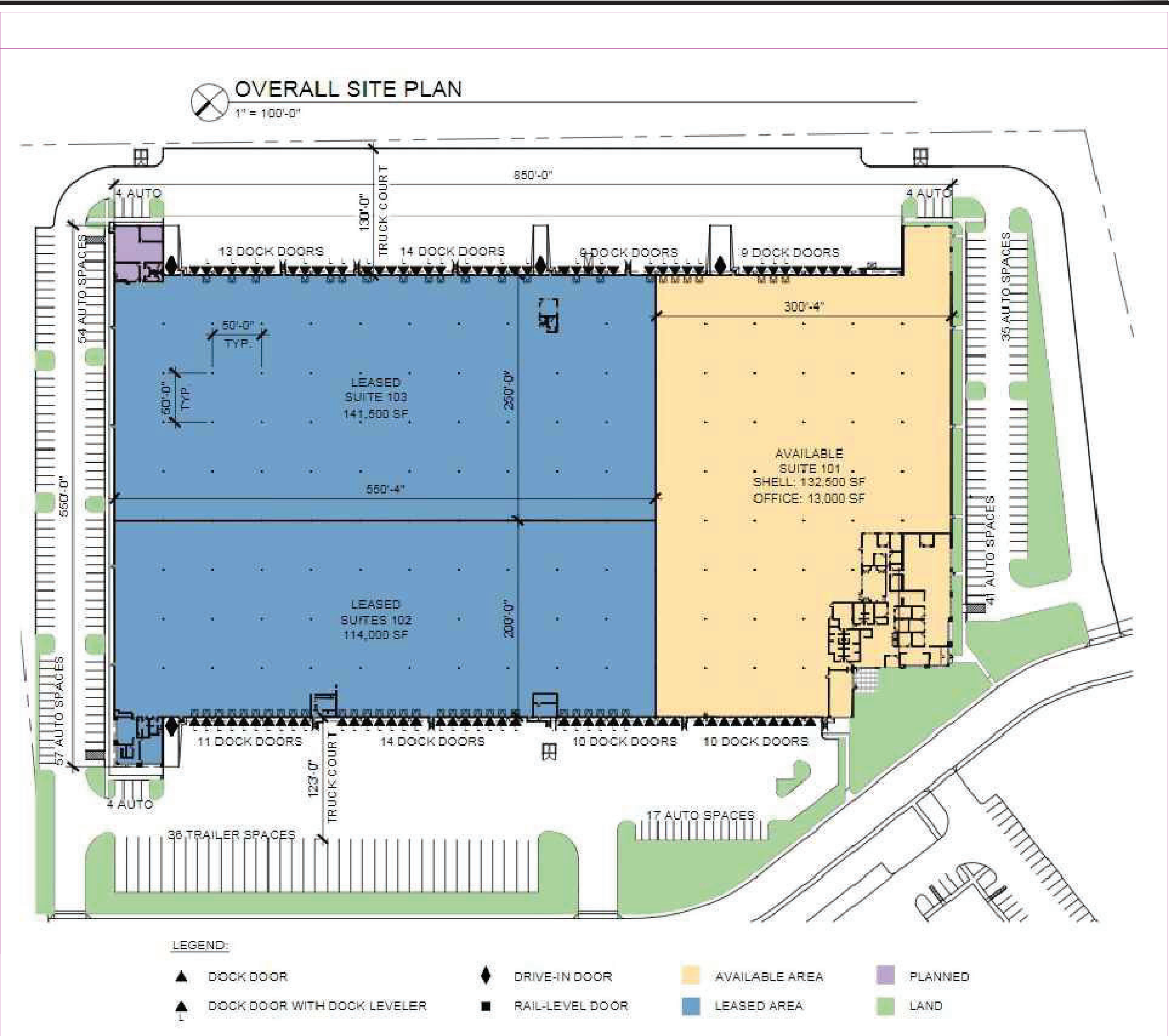
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Code Reference: NFPA-13 2022 Edition Table 23.3.1 ESFR Sprinkler Ceiling Only Options for Solid Pile, Palletized, Single/Double/Multiple-Row Rack Storage for Class I-IV and Cartoned Non-Expanded Group A Plastics

LARGEST PILE DIMENSIONS:

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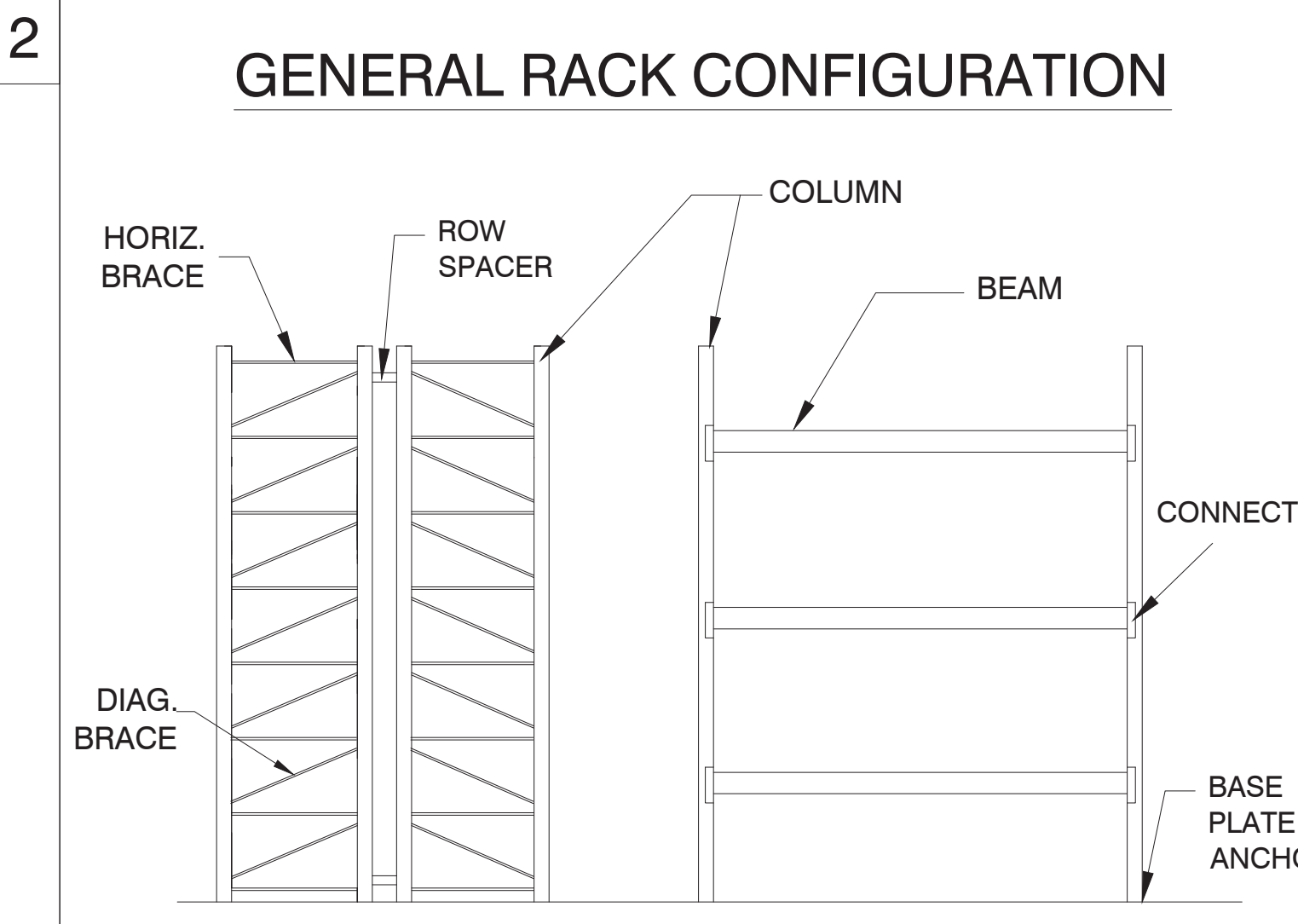
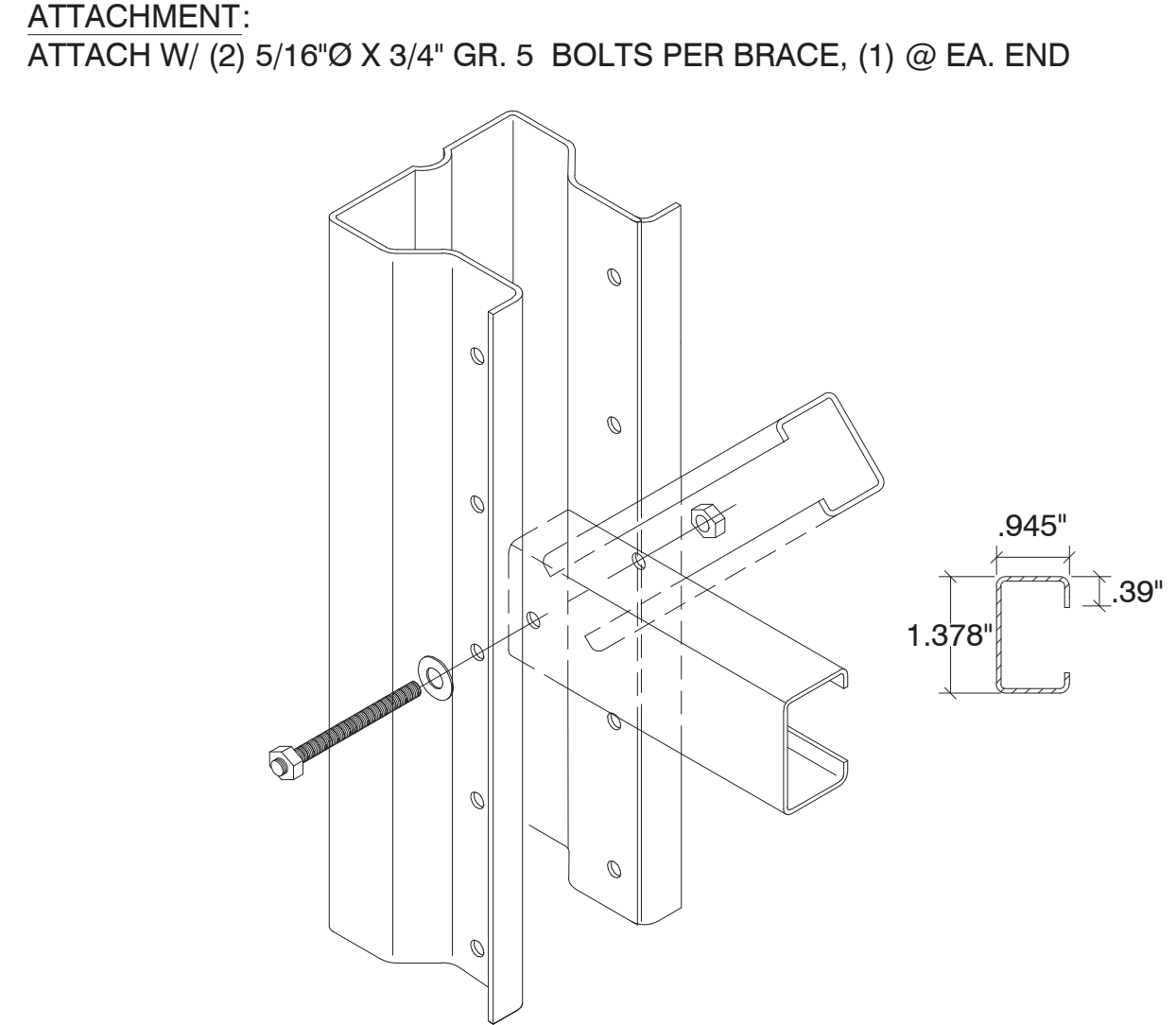
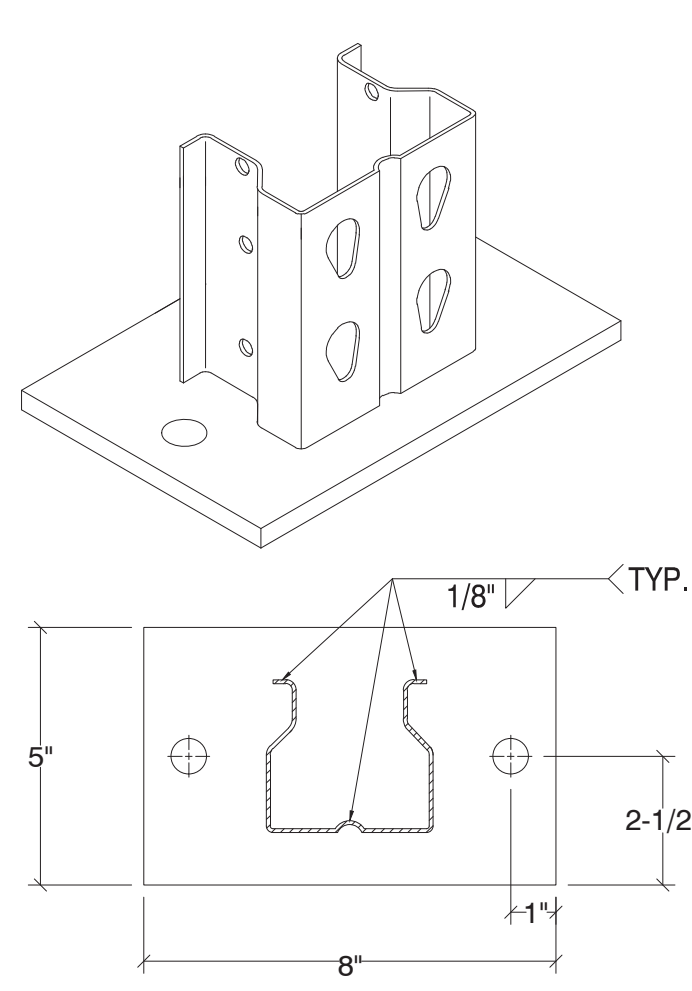
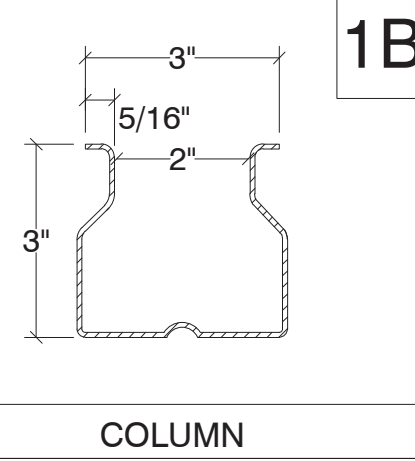
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SHELTER LOGIC
 1601 Industrial Parkway
 Puyallup, WA 98371

PREPARED FOR: _____

DRAWN BY: D.SCHAADT DATE: 06-16-23
 CHECKED BY: --- DATE: ---
 APPROVED BY: --- DATE: ---
 FILE: _____

SCALE: NTS
 DRAWING NO: _____ SHEET NO: 4 OF 5



GENERAL PROJECT NOTES

- DESIGNED PER REQUIREMENTS OF THE 2021 IBC, ASCE 7-16, SECTION 15.5.3, & 2012 RMI RACK DESIGN MANUAL
- SEISMIC CRITERIA $S_s = 1.285$, $S_1 = 0.443$, $F_a = 1.000$, $F_v = 1.857$
 $I_p = 1.0$ (NO PUBLIC ACCESS), $S_{ds} = 0.857$, $S_{d1} = 0.548$, OCCUPANCY CATAG. III
 SITE CLASS D, SEISMIC DESIGN CATAG. D
- STORAGE CAPACITY:
 TYPES 1, T = 3600 LBS PER LEVEL TYP.
 TYPE 2 = 650 LBS PER LEVELS 1-3, 3000 LBS LVLS 4-7.
- ANCHORS : HILTI KWIKBOLT TZ ESR# 1917, OR POWERS SD2 ESR#2502
 AS USED IN CALCULATIONS OR ICC & ENGINEER APPROVED EQUAL.
 1/2" \varnothing x 3-1/4" MIN. EMBED.
 50 FT-LBS TORQUE (HILTI KWIKBOLT TZ)
 40 FT-LBS TORQUE (POWERS SD2)
 (2) ANCHORS PER BASE PLATE.
- PERIODIC SPECIAL INSPECTION IS REQUIRED DURING ANCHOR INSTALLATION. ANCHORS SHALL BE INSTALLED PER ICC ESR#1917.
- EXISTING S.O.G. CONCRETE THICKNESS & COMPRESSIVE STRENGTH, 6" x 2500 PSI
- SOIL BEARING PRESSURE 750 PSF.
- ALL RACK INSTALLATIONS AND RACKS MANUFACTURED IN CONFORMITY WITH THIS STANDARD SHALL DISPLAY IN ONE OR MORE CONSPICUOUS LOCATIONS A PERMANENT PLAQUE EACH NOT LESS THAN 50 SQUARE INCHES IN AREA AND SHOWING THE MAXIMUM PERMISSIBLE UNIT LOAD IN CLEAR, LEGIBLE PRINT.
- ALL BOLTS GR. 5 OR BETTER, INSTALL TO SNUG TIGHT FIT OR BETTER
- ALL WELDING PERFORMED IN THE SHOP OF AN APPROVED FABRICATOR BY AWS CERTIFIED WELDERS USING E70XX ELECTRODE OR BETTER. NO FIELD WELDING PERFORMED. SPECIAL INSPECTION IS REQUIRED ONLY FOR ANY FIELD WELDING.
- THE CLEAR SPACE BELOW SPRINKLERS SHALL BE A MIN. OF 18" BETWEEN TOP OF THE STORAGE AND THE CEILING SPRINKLER DEFLECTOR.
- THE PRODUCT SHOWN ON THE DETAILS HEREIN IS ASSUMED TO BE IN GOOD, UNDATED CONDITION. THE PRODUCT MUST BE FREE OF ANY DAMAGE AND/OR FABRICATION DEFICIENCIES OR IRREGULARITIES. IT IS THE RESPONSIBILITY OF THE OWNER, USER, PRODUCT PROVIDER AND/OR INSTALLER OF THE COMPONENTS TO NOTIFY SED, INC IN WRITING, OF ANY DAMAGE, DEFICIENCIES OR IRREGULARITIES.
- IT IS THE RESPONSIBILITY OF THE OWNER AND/OR USER OF THE COMPONENTS SHOWN HEREIN TO NOTIFY SED, INC OF ANY DAMAGE OR DEFICIENCIES IN THE SYSTEM DURING USE. THIS INCLUDES SUCH OCCURRENCES SUCH AS IMPACT DAMAGE TO THE COMPONENTS FROM FORKLIFT OR HEAVY MACHINERY, IMPACT FROM DROPPED LOADS ON THE SYSTEM, DAMAGE TO SYSTEMS BY IMPROPER USE OR INSTALLATION, ETC. THE USER OF THE PRODUCT MUST NOTIFY SED, INC IN WRITING SHOULD ANY DAMAGE OR DEFICIENCY OCCUR TO THE PRODUCT SHOWN HEREIN. IT IS THE RESPONSIBILITY OF THE OWNER AND/OR USER TO MAINTAIN THE SAFETY AND PROPER USE OF THE STORAGE PRODUCT SHOWN HEREIN.
- IT IS THE RESPONSIBILITY OF THE OWNER/USER OF THE STORAGE SYSTEM SHOWN HEREIN TO REPAIR OR REPLACE ANY COMPONENT THAT IS DAMAGED OR OTHERWISE DEFICIENT.
- THE OWNER SHALL MAINTAIN THE STRUCTURAL INTEGRITY OF THE RACK SYSTEM BY ASSURING PROPER OPERATIONAL, HOUSE KEEPING AND MAINTENANCE PROCEDURES, BUT NOT LIMITED TO THE FOLLOWING:
 a. PROHIBIT ANY OVER LOADING OF ANY PALLET POSITIONS AND OF OVERALL RACK SYSTEMS.
 b. REGULARLY INSPECT FOR DAMAGE. IF DAMAGE IS FOUND, IMMEDIATELY UNLOAD THE AFFECTED AREA AND REPLACE OR REPAIR ANY DAMAGED COLUMNS, BEAMS, OR OTHER STRUCTURAL COMPONENTS.
 c. REQUIRE ALL PALLETS TO BE MAINTAINED IN GOOD, SAFE, OPERATING CONDITION.
 d. ENSURE THAT PALLETS ARE PROPERLY PLACED ONTO PALLET LOAD SUPPORT MEMBERS IN PROPERLY STACKED AND STABLE POSITION.
 e. REQUIRE THAT ALL GOODS STORED ON EACH PALLET TO BE PROPERLY STACKED AND STABLE.
 f. PROHIBIT DOUBLE STACKING OF ANY PALLET POSITION, INCLUDING THE TOP MOST POSITION, UNLESS THE RACK SYSTEM IS SPECIFICALLY DESIGNED FOR SUCH LOADING.
 g. THE OWNER AND/OR USER OF THE RACK SYSTEM MUST PROVIDE MEASURES TO MITIGATE DAMAGE TO THE STORAGE RACK BY USE OF IMPACT PROTECTIVE DEVICES IN AREAS WHERE FORKLIFT AND/OR HEAVY MACHINERY ARE IN USE.
 h. ENSURE THAT THE RACKS ARE NOT MODIFIED OR REARRANGED IN A MANNER NOT WITHIN THE ORIGINAL DESIGN CONFIGURATION.

NOTES:
 USE 12 GA COL. @ TYPES 1, T
 USE 13 GA COL. @ TYPE 2
 COLUMN/BASE LOCATIONS.

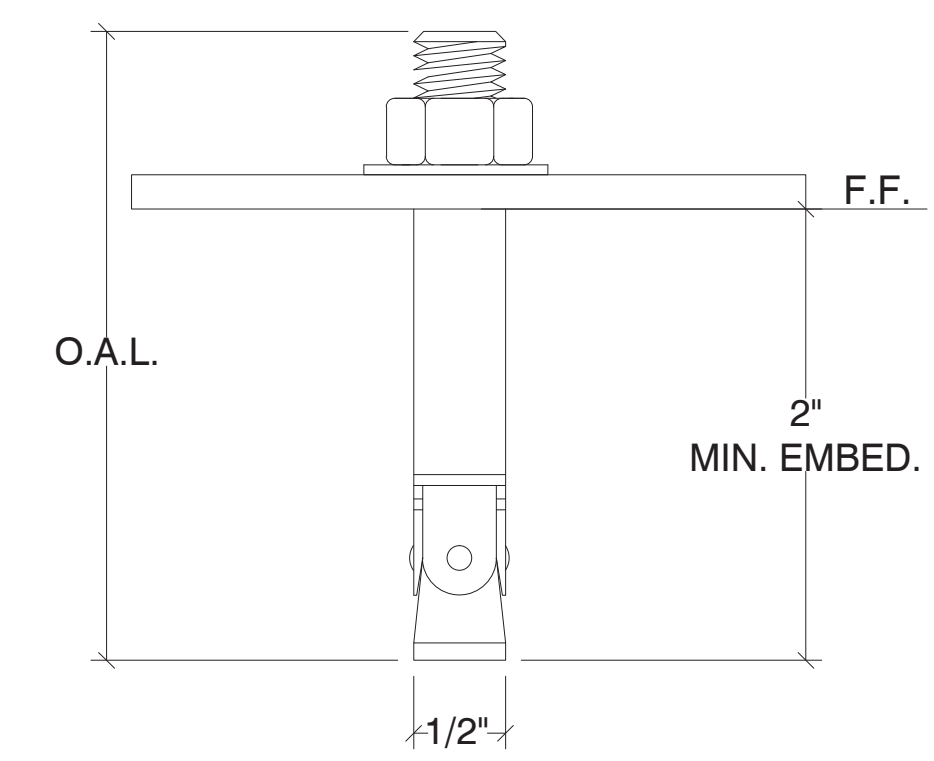
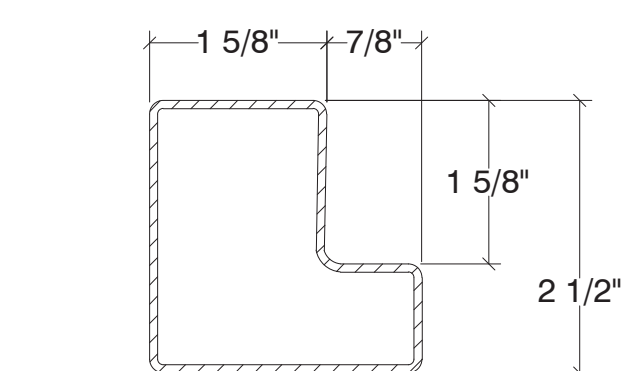
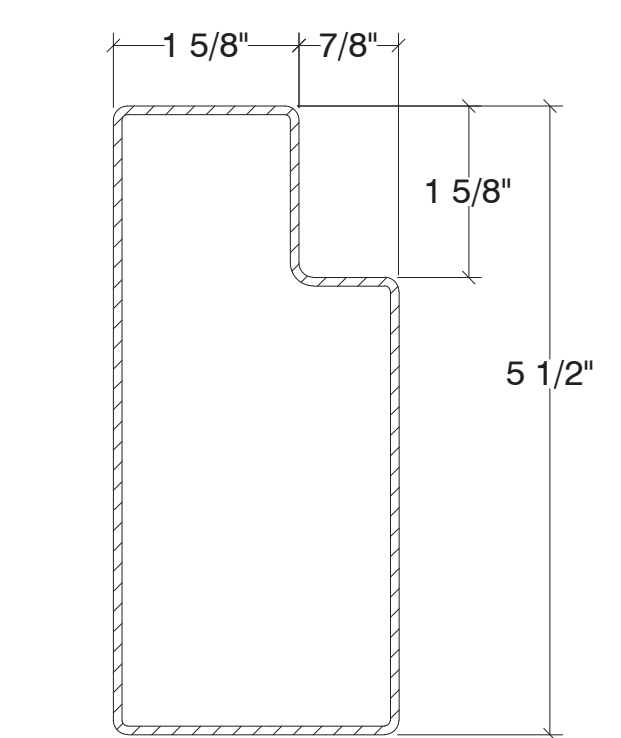
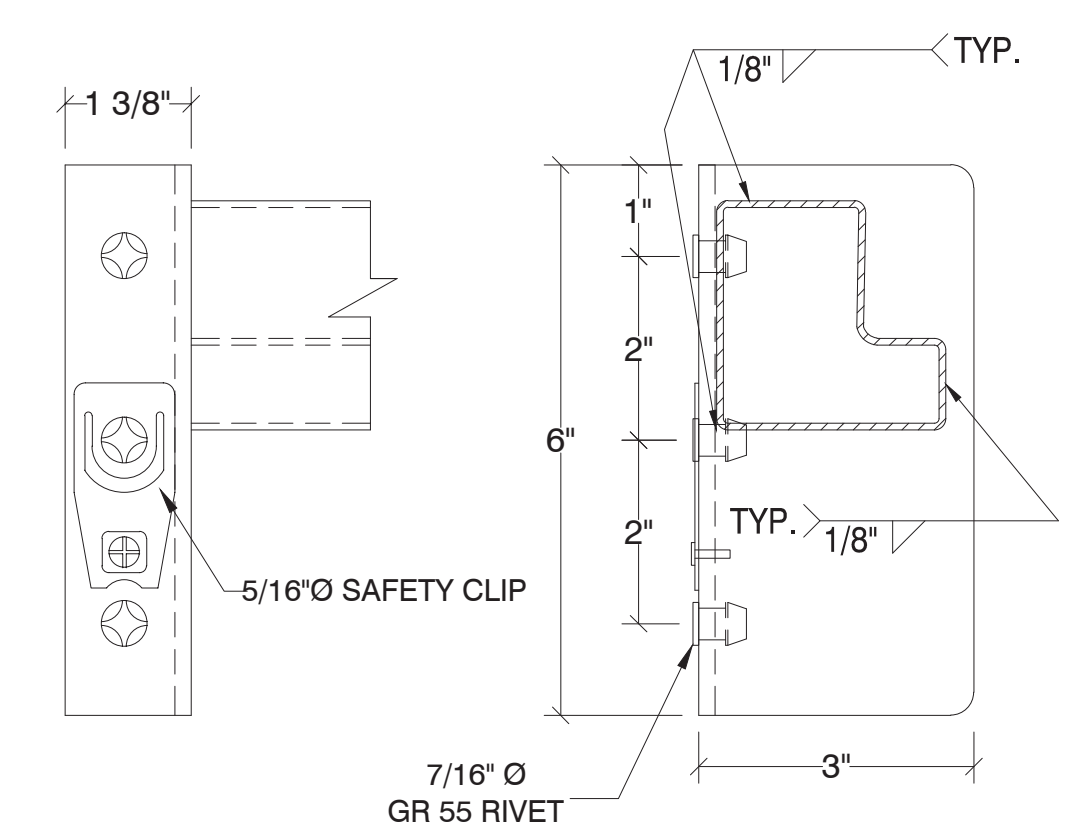
DESCRIPTION	COLUMN: UMH C3313TD
MATERIAL	13 GAGE THK STEEL
DESCRIPTION	BASE PLATE: 8" x 5"
MATERIAL	3/8" THICK PLATE.
STEEL YIELD	ASTM A36, Fy=36,000 PSI

DESCRIPTION	COLUMN: UMH C3312TD
MATERIAL	12 GAGE THK STEEL
DESCRIPTION	BRACING: HORIZ. & DIAG.
MATERIAL	16 GAGE STEEL
STEEL YIELD	ASTM A570, Fy=55,000 PSI

NOTES:
 USE @ ALL UMH BRACE LOCATIONS TYP.

DESCRIPTION	BRACING: HORIZ. & DIAG.
MATERIAL	16 GAGE STEEL
STEEL YIELD	ASTM A570, Fy=55,000 PSI

NOT A DEPICTION OF THIS PROJECT



DESCRIPTION	3-PIN CONNECTOR
MATERIAL	7 GAGE
STEEL YIELD	ASTM A570, Fy=55,000 PSI

NOTES:
 USE @ ALL UMH BEAM TO COLUMN CONNECTION LOCATIONS TYP.

DESCRIPTION	5-1/2" BEAM (SB556)
MATERIAL	16 GAGE
STEEL YIELD	ASTM A570, Fy=55,000 PSI

NOTES:
 USE @ TYPE 2 LVLS 1-3 BEAM LOCATIONS.

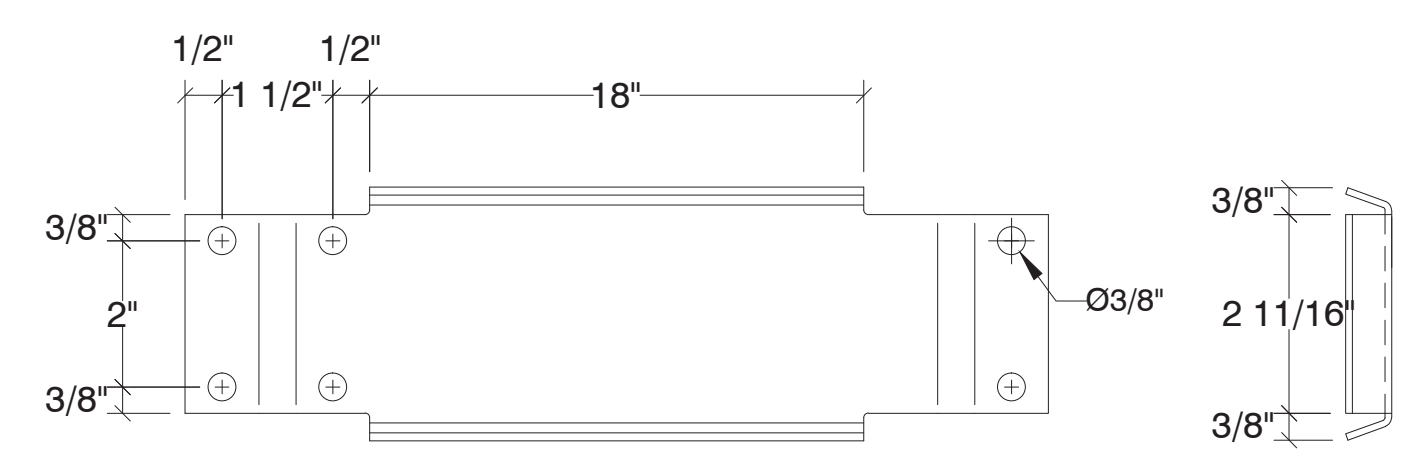
DESCRIPTION	2-1/2" BEAM (SB256)
MATERIAL	16 GAGE
STEEL YIELD	ASTM A570, Fy=55,000 PSI

NOTES:
 CONFIRM O.A.L. OF ANCHORS WITH INSTALLER TO ENSURE REQUIRED EMBEDMENT IS OBTAINED.

DESCRIPTION	HILTI KWIKBOLT TZ ANCHOR
SIZE	1/2" \varnothing X 3-1/4" MIN. EMBED.
ESR#	1917

NOTES:
 SEE NOTE #4 ABOVE FOR ANCHOR SPECS.

SEE ATTACHED INTEGRATED WASTE SOLUTIONS DWG. FOR STORAGE RACK ELEVATIONS

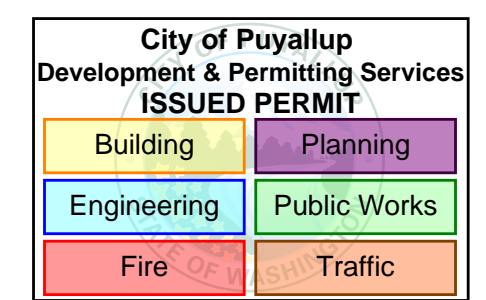


DESCRIPTION	STORAGE RACK ELEVATIONS
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NOTES:
 USE (3) ROW SPACERS DOUBLE ROW UNITS

DESCRIPTION	ROW SPACER
MATERIAL	14 GAGE
STEEL YIELD	ASTM A570, Fy=55,000 PSI

NOTES:
 ATTACH WITH (4) 5/16" GR. 5 BOLTS, (2) @ EACH END



Enhao Zhang
 Digitally signed by Enhao Zhang
 Date: 2023.06.22 13:56:21 -07'00'

REVISION

DATE	REV.

STRUCTURAL ENGINEERING & DESIGN INC.
 1195 WRIGHT AVE. LA VERNE, CA. 91750 PH. 909.596.1351 FAX. 909.596.7166

SHELTER LOGIC
 1601 INDUSTRIAL PARKWAY
 PUYALLUP, WA 98371

CUSTOMER: INTEGRATED WASTE SOLUTIONS
 DATE: 06/19/2023
 DRAWN BY: JLM
 ENG. BY: MJZ
 MFG.: UMH
 TYPE: STORAGE RACK

JOB NO. 23-0509-5
 SHEET NO. SED 1 OF 1