RELEASED FOR CONSTRUCTION
As Noted on Plans Review

Development Services Department
Lee's Summit, Missouri
03/18/2022

Joe Frogge Digitally signed by Joe Frogge DN: CN=Joe Frogge, OU=Development, OU=LS Users, DC=COLS, DC=LOC Date: 2022.03.18 13:46:22-05'00'

LAKEWOOD STORAGE

NE PORT DRIVE LEE'S SUMMIT, MO 64064

2018 International Building Code Analysis

12.16.2021

Occupancy Classification (311.2) Group S-1 Moderate Hazardous Storage
Group B Business

1st Floor	Storage (S-1)	33,300 S.F.
1st Floor	Office (B)	1,113 S.F.
2nd Floor	Storage (S-1)	34,766 S.F.
3rd Floor	Storage (S-1)	34,394 S.F.
Total Building		**103,573 S.F.**

*Occupant load (Table 1004.5):

1st Floor	Storage: (1/300 gross merc/stor)	111
1st Floor	Office: (1/150 gross business)	7
2nd Floor	Storage: (1/300 gross merc/stor)	116
3rd Floor	Storage: (1/300 gross merc/stor)	115
Total Building		**349**

***Note: Bldg. 1 is 75% unoccupied space with the remainder being: Corridors, Electrical Room, Riser Room, Stairs/Elevator, etc.**

**Toilet Count (Table 2902.1): 1 per 100 — Men: 1 Water Closet, 1 Lavatory; Women: 1 Water Closet, 1 Lavatory; General: Hi/Lo D.F., Service Sink

****Request for consideration to decrease the Occupant Load Count to an actual number of occupants for whom each occupied space, floor, or building is designed. The change in Occupancy Load Variance Request is driven solely by the Toilet Room Calculations.**

Construction Type (Table 601):		**Type II-B**
Height Allowed (Table 504.4: 3 stories allowed):		**3 story provided**
Floor Area Allowed (Table 506.2):	S-1	**52,500 S.F. Allowable**
Sprinkler System (903.2.9):		**Required / Provided**
Standpipe System (905):		**Required / Provided**
Fire Separation (Table 508.4):		**None Required / None Provided**
Fire Alarms (907.1):		**None Required / None Provided**
Rated Corridors (Table 1020.1):		**None required/ None provided**
Exiting (1022.1):	Exits req. per floor: 2	**Exits provided 2/floor min.**
(Table 1017.2):	Exit Distance	**250' allowable**
(1024.2):	Exit width req. 44"	**60"width provided**
Fire Resistance Rating Exterior Walls (Table 602):		**None Required / None Provided**

DALLENBACH·COLE
ARCHITECTURE

12.16.2021
JEFFREY S. DALLENBACH, AIA
MISSOURI REGISTRATION
NO. A-2020036988

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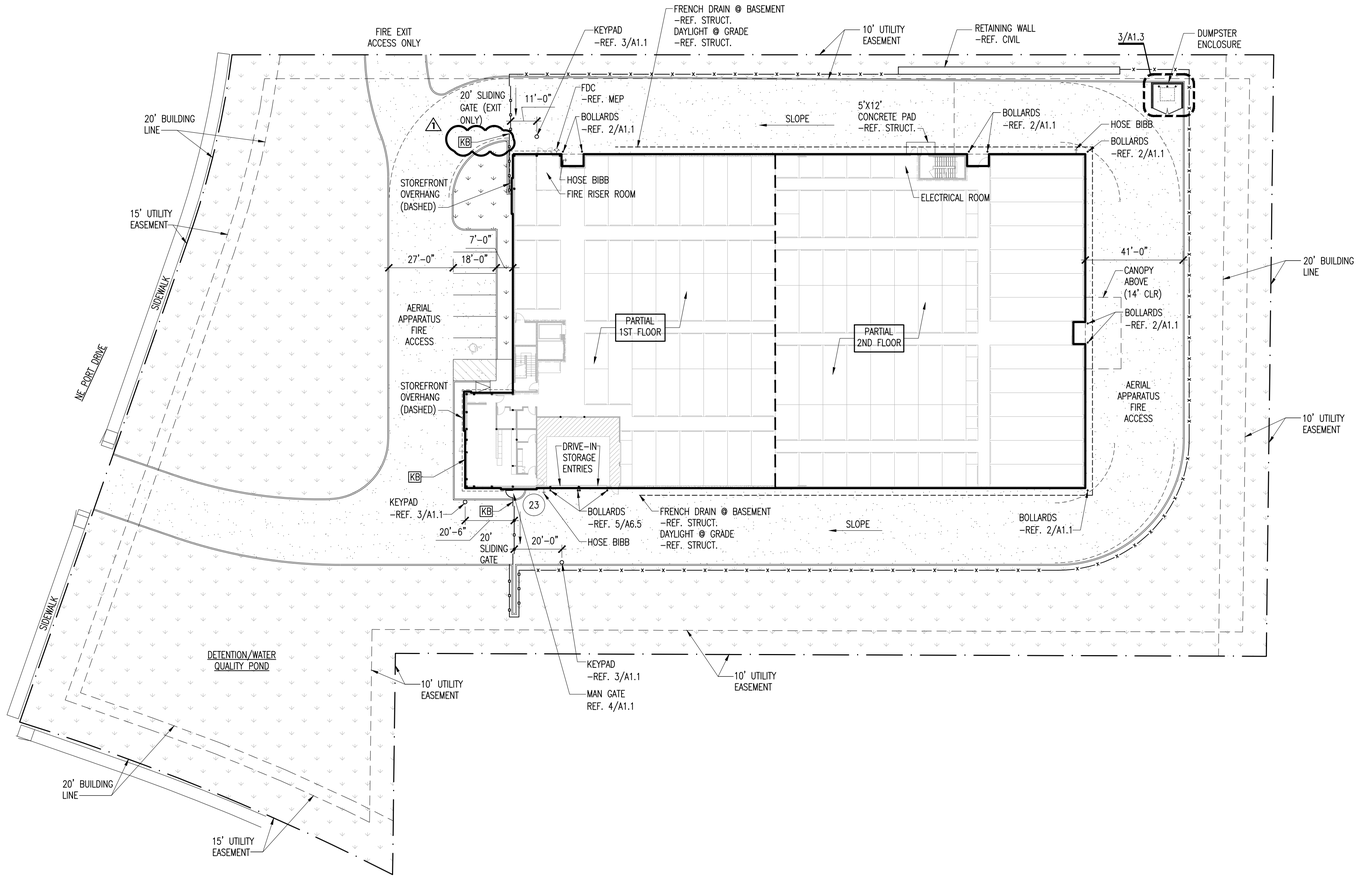
LOCATION MAP

GENERAL NOTES:

1. THE GENERAL CONTRACTOR SHALL HAVE PARTIAL USE OF THE PREMISES FOR CONSTRUCTION OPERATIONS. CONFINE APPARATUS, OPERATIONS OF WORKMEN, AND STORAGE OF MATERIAL TO THE AREAS DEFINED BY THE OWNER.
2. ALL WORK SHALL BE PERFORMED TO COMPLY WITH THE 2018 INTERNATIONAL BUILDING CODE, 2018 INTERNATIONAL MECHANICAL CODE, 2017 NATIONAL ELECTRICAL CODE, 2018 INTERNATIONAL PLUMBING CODE, 2018 INTERNATIONAL FIRE CODE, ALL CITY ADOPTED AMENDMENTS, AND ANY OTHER APPLICABLE CODES AND BUILDING STANDARDS AS ADOPTED BY THE CITY OF LEE'S SUMMIT, MO.
3. THE CONTRACTOR AND OWNER SHALL BE RESPONSIBLE FOR FINAL MATERIAL AND PRODUCT SELECTIONS. THE CONSTRUCTION DOCUMENTS INDICATE GENERAL DESIGN INTENT BUT MAY NOT DEFINE ALL STANDARDS AND PRODUCTS REQUIRED FOR THE FULL PERFORMANCE AND CONSTRUCTION OF THE PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR REVIEW AND APPROVAL OF SUBMITTALS AND SHOP DRAWINGS FROM THE SUBCONTRACTORS AND FOR COMPLIANCE WITH APPLICABLE INDUSTRY STANDARDS, CITY CODES, AND ORDINANCES. FOLLOWING CONTRACTOR APPROVAL OF SUBMITTALS AND SHOP DRAWINGS, SUBMITTAL TO OWNER FOR FINAL REVIEW IS REQUIRED.
4. COORDINATION OF SUBMITTALS FOR FABRICATION, PURCHASING, TESTING, DELIVERY, WITH OTHER SUBMITTALS AND RELATED CONSTRUCTION OPERATIONS IS THE RESPONSIBILITY OF THE CONTRACTOR. SUBMITTALS TO INCLUDE QUALITY CONTROL PROCEDURES, DESIGN DATA, CERTIFICATIONS, MANUFACTURER'S INSTRUCTIONS, AND WARRANTY INFORMATION (1 YEAR MINIMUM).
5. THE CONTRACTOR IS RESPONSIBLE FOR OVERSIGHT OF ALL PHASES OF THE PROJECT IN RELATION TO APPLICABLE INDUSTRY STANDARDS FOR THE MATERIALS AND PRODUCTS INCORPORATED INTO THE PROJECT.
6. THE GENERAL CONTRACTOR WITH OWNER TO COORDINATE ALL TESTING AND/OR INSPECTIONS WITH OWNER HIRED COMPANIES UNLESS NOTED OTHERWISE.
7. CONTRACTOR TO COORDINATE OVERHEAD DUCTWORK, CONDUIT, ETC. SUBCONTRACTOR TO PROVIDE SHOP DRAWINGS FOR COORDINATION PURPOSES.
8. ALL DRAWINGS AND SPECIFICATIONS ARE PART OF THE CONSTRUCTION DOCUMENTS. CONSTRUCTION DOCUMENTS, INCLUDING ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, ETC. ARE TO BE USED TOGETHER. ANY DISCREPANCIES BETWEEN THE DOCUMENTS OR EXISTING CONDITIONS ARE TO BE REPORTED TO THE ARCHITECT FOR INTERPRETATION AND/ OR CLARIFICATION PRIOR TO PROCEEDING WITH ANY WORK RELATED TO THE DISCREPANCY.
9. NECESSARY FRAMING AND/OR BLOCKING IS REQUIRED FOR ALL WALL MOUNTED ITEMS. ALL WOOD PRODUCTS TO BE FIRE RETARDANT.
10. FIRE-RETARDANT-TREATED WOOD SHALL BE PERMITTED IN NON-BEARING PARTITIONS WHERE THE REQ. FIRE-RESISTANCE RATING IS 2 HOURS OR LESS, NON BEARING EXTERIOR WALLS WHERE NO FIRE RATING IS REQ., AND ROOF CONSTRUCTION INCLUDING GIRDERS, TRUSSES, FRAMING AND DECKING PER IBC 603.1. FIRE-RETARDANT-TREATED WOOD TO COMPLY WITH IBC 2303.2 STANDARDS.
11. CONTRACTOR IS RESPONSIBLE FOR SAFETY, SECURITY AND PROTECTION OF EXISTING IMPROVEMENTS THROUGHOUT THE DURATION OF CONSTRUCTION.
12. ALL WORK TO BE PERFORMED IN COMPLIANCE WITH AIA DOCUMENT A201-2017 GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION WHICH BECOMES PART OF THE CONTRACT DOCUMENTS FOR THIS PROJECT.
13. A GEOTECHNICAL REPORT WAS PREPARED FOR THIS PROJECT WHICH IS INCLUSIVE OF DESIGN RECOMMENDATIONS. ENGINEERING DESIGN WAS COMPLETED BASED ON THE GEOTECHNICAL DESIGN RECOMMENDATIONS AND A COPY OF THE GEOTECHNICAL REPORT CAN BE OBTAINED FROM THE OWNER FOR REFERENCE.

LIST OF DRAWINGS

PROJECT NO. 2035 LAKEWOOD STORAGE



TRUE NORTH

PLAN NORTH

1 SITE PLAN
SCALE: 1" = 30'-0"

SITE PLAN LEGEND

	BUFFERS/ EASEMENTS
	PROPERTY LINES
	6'-0" HIGH, ORNAMENTAL IRON FENCE
	LARGE STONE BORDER –REF. CIVIL DRAWINGS
	CONCRETE PAVING –REF. CIVIL DWGS.
	LANDSCAPE AREA –REF. LANDSCAPE DRAWINGS
	6" STEEL PIPE BOLLARD –REF. 2/A1.1
	4" STRIPES PAINTED ON PAVING AT 2'-0" O.C.
KB	KNOX BOX – MODEL #3261 PER CITY REQUIREMENTS ⚠1

SITE PLAN NOTES

1. REFER CIVIL DRAWINGS FOR RECORDED PLAT/SURVEY FOR PROPERTY BOUNDARIES, EASEMENTS, SETBACKS, ETC. REPORT ANY DISCREPANCIES TO ARCHITECT PRIOR TO CONSTRUCTION.

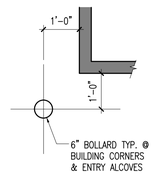
2. REFER CIVIL DRAWINGS FOR ALL DRIVE, PARKING, AND CURB LOCATIONS, DETAILS, AND DIMENSIONAL INFORMATION.

3. NOT USED.

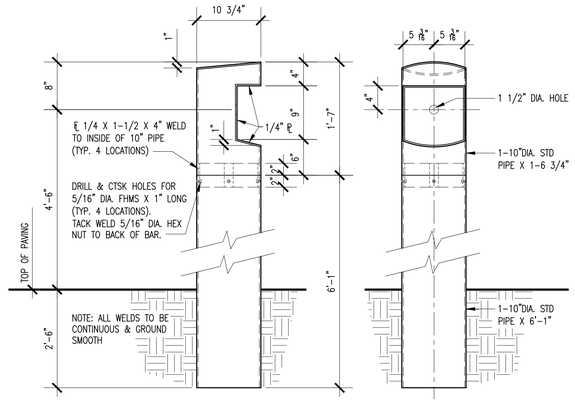
4. PROVIDE CONCRETE FILLED STEEL TUBE BOLLARD AT BUILDING CORNERS AND BUILDING ENTRIES AT DRIVE AREAS (REF. DETAIL 2/A1.1 FOR LOCATIONS, CIVIL FOR DETAIL).

5. REFER LANDSCAPE DRAWINGS FOR EXTENTS OF REQUIRED LANDSCAPING.

6. SECURITY CONTRACTOR TO PROVIDE MANUAL FAIL SAFE OPERATION, KEY BOX, AND 20'-0" GATE OPENING FOR ELECTRICAL GATE PER FIRE MARSHALL REQUIREMENTS.

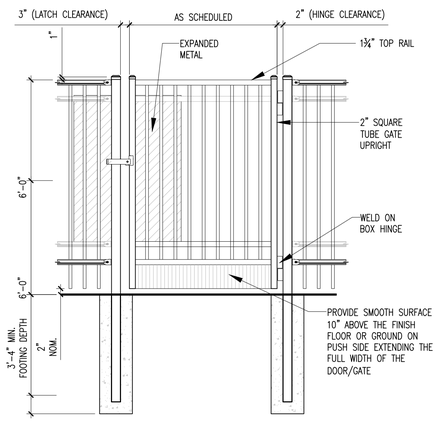


2 BOLLARD DETAIL
SCALE: 1/2" = 1'-0"



3 KEYPAD BOLLARD DETAIL
SCALE: 1" = 1'-0"

NOTE: PROVIDE KEY LOCK ON OUTSIDE OF GATE & FREE EXIT ON INSIDE OF MAN GATE AT MAIN ENTRY. 1'-6" RADIUS OF EXPANDED METAL W/ SAME FINISH AS GATE TO BE PROVIDED AT LATCH. PROVIDE 5"-7" WELDED HINGES.



4 IRON MAN GATE ELEVATIONS
SCALE: 1/2" = 1'-0"

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ARCHITECT
01.20.2022
JEFFREY S. DALLENBACH, AIA
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LAKEWOOD STORAGE

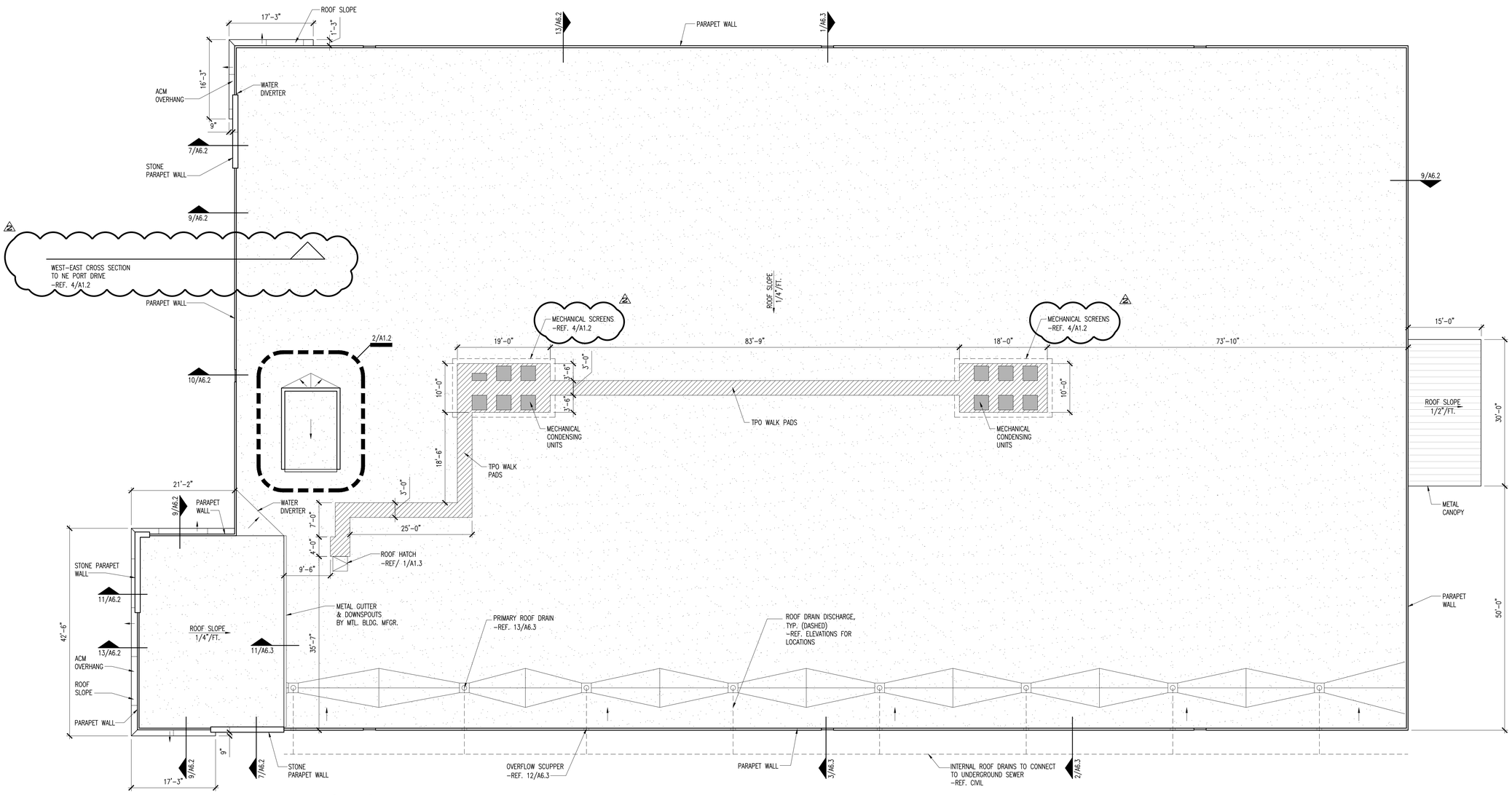
NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : VP

REVISIONS:
⚠1 CITY COMMENTS 01.20.2022

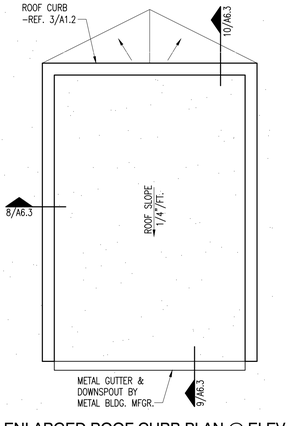
SITE PLAN

SHEET NO.
A1.1



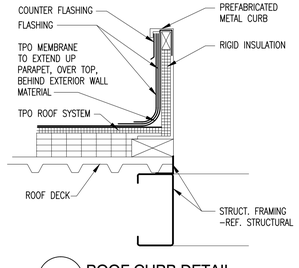
1 ROOF PLAN
SCALE: 3/32" = 1'-0"

PLAN NORTH

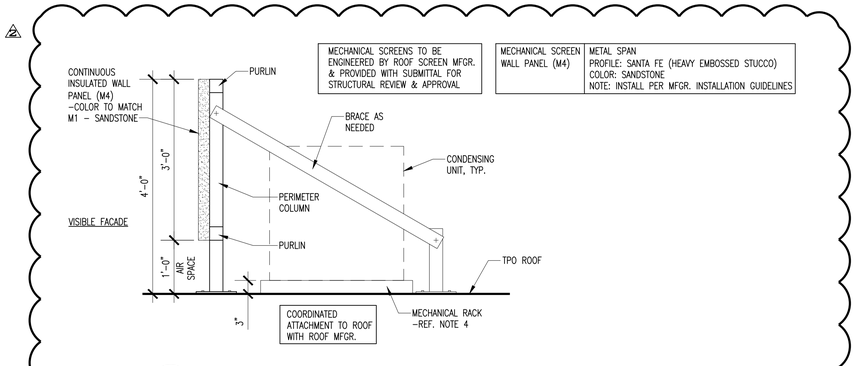


2 ENLARGED ROOF CURB PLAN @ ELEV.
SCALE: 1/4"=1'-0"

NORTH



3 ROOF CURB DETAIL
SCALE: NTS



4 MECHANICAL SCREENS DETAIL
SCALE: NTS

ROOF PLAN LEGEND

	TPO ROOF
	TPO WALK PAD
	MBCI BATTENLOK ROOF 24 GA.

ROOF PLAN NOTES

1. ROOF INSULATION – REFER TO SHEETS A6.1 – A6.5 FOR GENERAL NOTES FOR ROOF INSULATION VALUES.
2. PRIMARY & SECONDARY INTERNAL ROOF DRAINS TO CONNECT TO UNDERGROUND SEWER & TO BE SIZED/SPACED BY TPO ROOF CONTRACTOR. –REF. CIVIL
3. TPO ROOF CONTRACTOR TO CONFIRM/EXPAND ON TAPER PATTERN.
4. MECHANICAL CONDENSING UNITS TO BE BUILT UP SO THAT RACK DOES NOT IMPEDE WATER FLOW.

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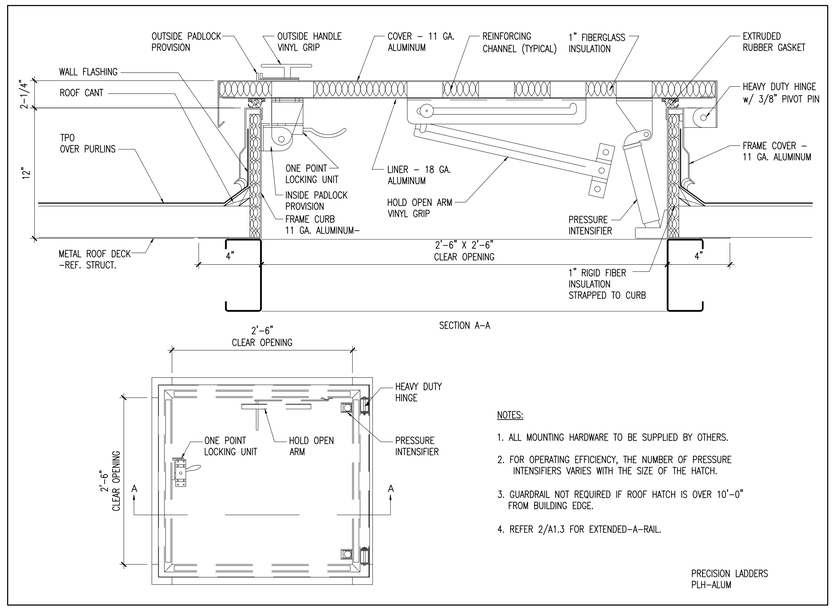
1 CITY COMMENTS 01.20.2022
2 CITY COMMENTS 03.17.2022

ROOF PLAN

SHEET NO.
A1.2

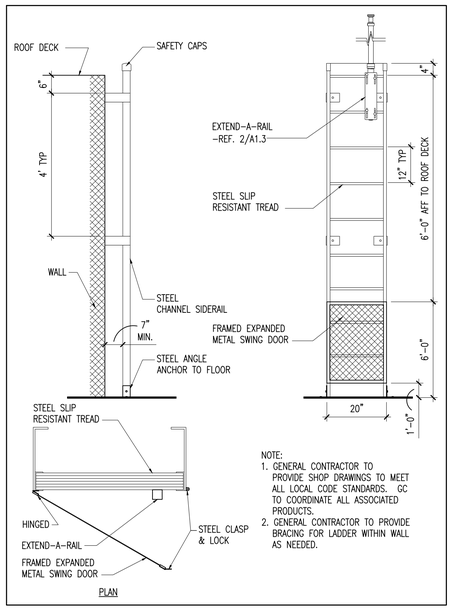


NOTES:

1. ALL MOUNTING HARDWARE TO BE SUPPLIED BY OTHERS.
2. FOR OPERATING EFFICIENCY, THE NUMBER OF PRESSURE INTENSIFIERS VARIES WITH THE SIZE OF THE HATCH.
3. GUARDRAIL NOT REQUIRED IF ROOF HATCH IS OVER 10'-0" FROM BUILDING EDGE.
4. REFER 2/A1.3 FOR EXTENDED-A-RAIL.

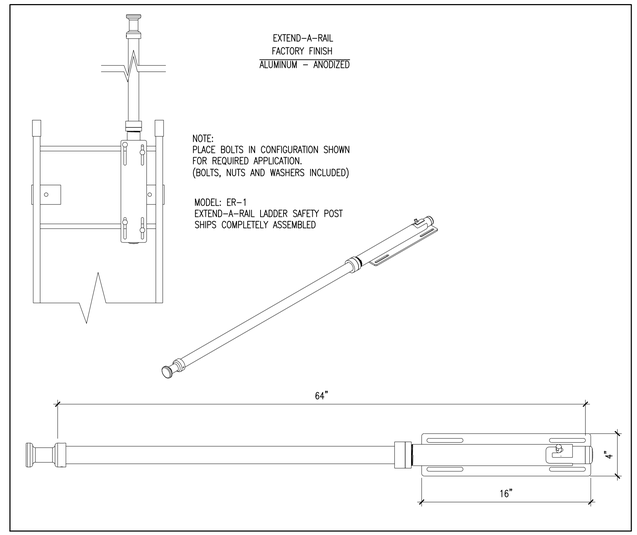
PRECISION LADDERS
PLH-ALUM

1 ROOF HATCH DETAIL
SCALE: 1/2"=1'-0"

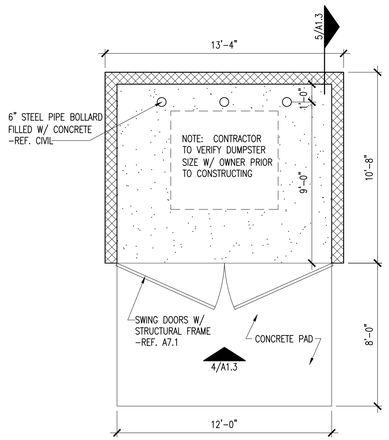


NOTE:
1. GENERAL CONTRACTOR TO PROVIDE SHOP DRAWINGS TO MEET ALL LOCAL CODE STANDARDS. GC TO COORDINATE ALL ASSOCIATED PRODUCTS.
2. GENERAL CONTRACTOR TO PROVIDE BRACING FOR LADDER WITHIN WALL AS NEEDED.

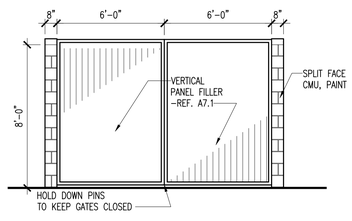
1A ROOF LADDER DETAIL
SCALE: 1/2"=1'-0"



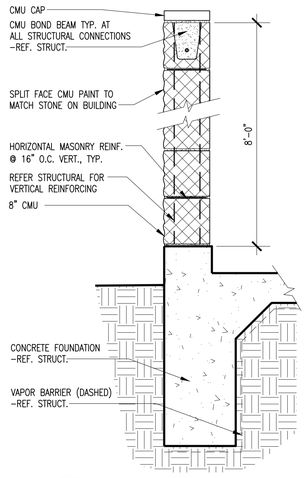
2 SAFTEY HANDRAIL DETAIL
SCALE: 1/2"=1'-0"



3 DUMPSTER ENCLOSURE
SCALE: 1/4"=1'-0"



4 DUMPSTER GATE ELEVATION
SCALE: 1/4"=1'-0"

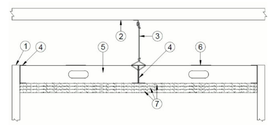


5 DUMPSTER WALL
SCALE: 1"=1'-0"

UL FIRE RATED ASSEMBLIES

HORIZONTAL ASSEMBLY UL FIRE DETAIL (ELEV. MACH. RM & FIRE RISER RM)

UL# I504 — 1-HOUR FIRE RATING REQUIRED

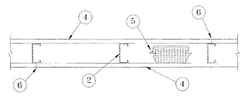


1. SUPPORTING STRUCTURE 1
2. SUPPORTING STRUCTURE 2
3. HANGER WIRE
4. C-CHANNELS
5. STEEL STUDS
6. STEEL STRAP
7. 3 LAYERS 5/8" TYPE 'X' GYPSUM BOARD

NOTE: GYPSUM BOARD:
7: THREE LAYERS OF NOM. 5/8 IN. THICK GYPSUM BOARD INSTALLED WITH LONG DIMENSION PERPENDICULAR TO THE STEEL STUDS OR FRAMING MEMBERS. BASE SECURED TO STUDS AND PERIMETER CHANNELS WITH 1 IN. LONG TYPE S STEEL SCREWS SPACED MAX 16 IN. OC. MIDDLE LAYER SECURED TO THE STUDS OR FRAMING FROM BASE LAYER JOINTS. FACE LAYER SECURED TO THE STUDS OR FRAMING MEMBERS AND PERIMETER SUPPORTS WITH 2-1/4 LONG TYPE S STEEL SPACED MAX. 12 IN. OC. FACE LAYER EDGE AND END JOINTS STAGGERED A MIN. 16 IN. FROM MIDDLE LAYER JOINTS.
NATIONAL GYPSUM CO – TYPE FSW

METAL STUD UL FIRE DETAIL (FIRE RISER RM)

UL# U419 — 1-HOUR FIRE RATING REQUIRED



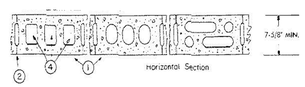
1. FLOOR AND CEILING RUNNERS
2. STEEL STUDS
3. LATERAL SUPPORT MEMBERS
4. GYPSUM BOARD
5. BATTS AND BLANKETS
6. JOINT TAPE AND COMPOUND
7. CAULKING AND SEALANTS

NOTE: FASTENERS / SCREW PATTERNS:
5D: GYPSUM BOARD – 5/8" IN. THICK, 48 IN. WIDE, APPLIED VERTICALLY OR HORIZONTALLY. SECURED AS DESCRIBED IN ITEM 6. FOR USE WITH ITEMS 1 AND 2 ONLY.

6: FASTENERS – FOR USE WITH ITEMS 2 AND 2F – TYPE S OR S-12 STEEL SCREWS USED TO ATTACH PANELS TO STUDS (ITEM 2) OR FURRING CHANNELS (ITEM 7).
SINGLE LAYER SYSTEM: 1 IN. LONG FOR 1/2 AND 5/8 IN. THICK PANELS OR 1-1/4 IN. LONG FOR 3/4 IN. THICK PANELS, SPACES 8 IN. OC WHEN PANELS ARE APPLIED HORIZONTALLY, 8 IN. OC ALONG VERTICAL AND BOTTOM EDGES AND 12 IN. OC IN THE FIELD WHEN PANELS ARE APPLIED VERTICALLY.

CMU WALL UL FIRE DETAIL (STAIR, ELEV., & MACH. RM.)

UL# U905 — 1-HOUR FIRE RATING REQUIRED



1. CONCRETE BLOCKS
2. MORTAR
3. PORTLAND CEMENT STUCCO OR GYPSUM PLASTER (OPTIONAL)
4. LOOSE MASONRY FILL
5. FOAMED PLASTIC (OPTIONAL)

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STATE OF MISSOURI — JEFFREY S. DALLENBACH — NUMBER A-2020036988 — PROFESSIONAL ENGINEER — 01.20.2022
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MISSOURI REGISTRATION NO. A-2020036988

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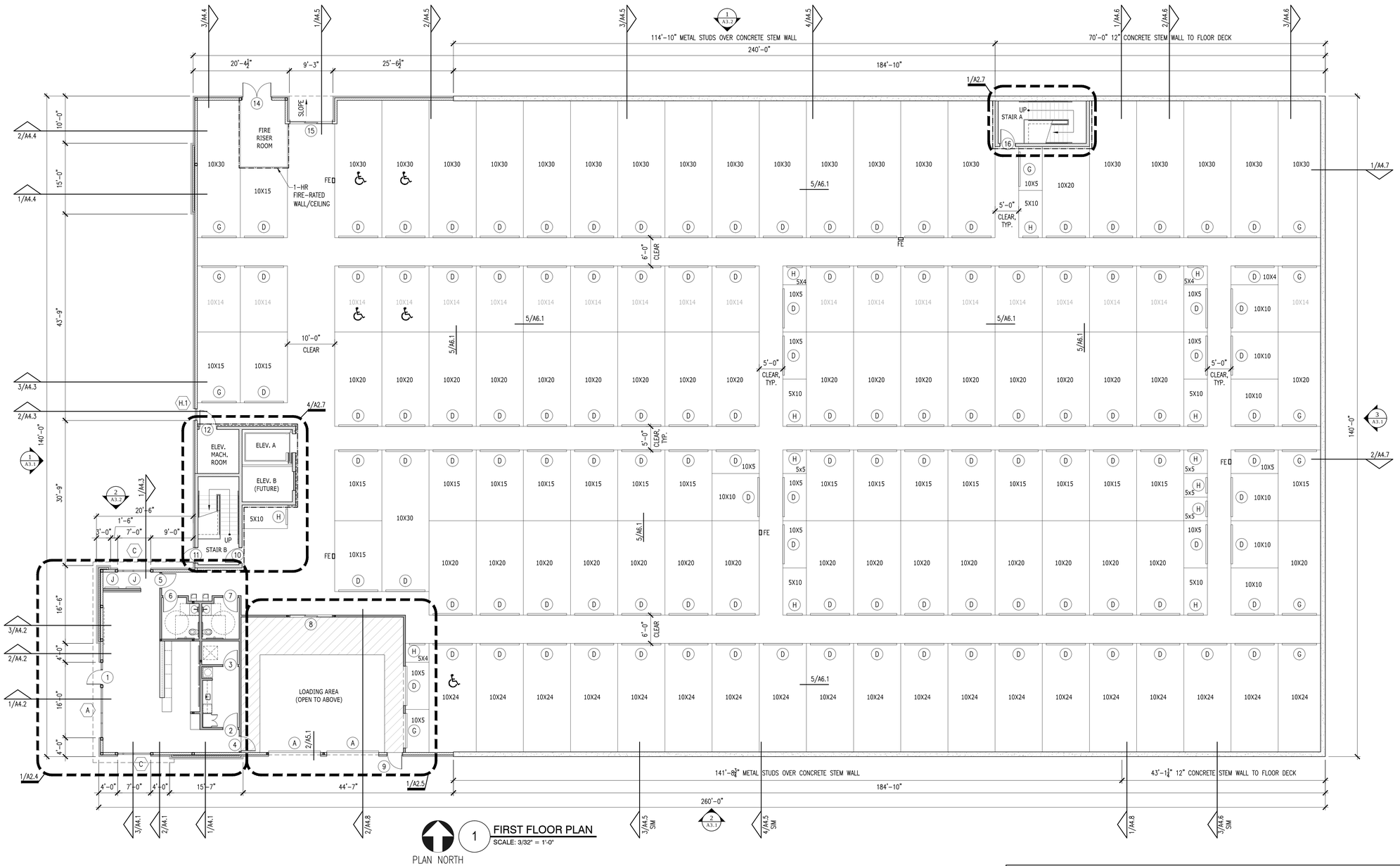
1 CITY COMMENTS 01.20.2022

ROOF DETAILS

SHEET NO.
A1.3



1 FIRST FLOOR PLAN
SCALE: 3/32" = 1'-0"

PLAN NORTH

FLOOR PLAN LEGEND	
	METAL PARTITION SYSTEM (CORRIDOR SIDE OF PARTITION EXCEPT WHERE NOTED OTHERWISE) HALLWAYS TO BE JANUS CORRUGATED METAL PARTITIONS TYP. –REFER DETAIL 5/A6.1
	EXTERIOR SHEATHING OVER METAL STUDS –REF. ELEVATIONS SHEET FOR EXTENTS OF EXTERIOR FINISHES.
	GYP. BD. ON METAL STUD FRAMING –REFER PARTITION TYPES, SHEET A6.1
	1–HOUR FIRE–RATED WALL @ STAIRS, ELEVATOR, AND FIRE RISER ROOM
	12" CONCRETE STEM WALL
	INSULATED METAL PARTITION SYSTEM REFER TO DETAIL SHEET 4/A6.1

GENERAL NOTES (TYPICAL ALL SHEETS)

1. INTERIOR AND EXTERIOR STORAGE UNIT SIGNAGE TO BE APPROVED BY OWNER. SIGNAGE TO BE PROVIDED AND INSTALLED BY GENERAL CONTRACTOR.
2. GENERAL CONTRACTOR TO COORDINATE ALL FOUNDATION PENETRATIONS WITH STRUCTURAL ENGINEER.
3. ROOF PANELS TO BE 60 MIL TPO ROOF TO MEET LOCAL WIND LOAD REQUIREMENTS ENGINEERED BY METAL BUILDING MANUFACTURER.
4. GENERAL CONTRACTOR/TPO ROOFING SUBCONTRACTOR TO SIZE/SPACE INTERNAL ROOF DRAINS AS REQUIRED TO MEET LOCAL REQUIREMENTS. SECONDARY ROOF DRAINS TO BE PROVIDED. GENERAL CONTRACTOR TO COORDINATE CONNECTION TO UNDERGROUND STORM DRAIN.
5. GENERAL CONTRACTOR IS TO SUBMIT ALL SAMPLES OF PRODUCTS, ETC. TO OWNER FOR APPROVAL/ SELECTION OF ALL COLORS, FINISHES, ETC. PRIOR TO PURCHASE AND INSTALLATION
6. ALL EXTERIOR WALL DIMENSIONS ARE TO FOUNDATION (INCL. LUG) UNLESS NOTED OTHERWISE. 3RD FLOOR EXTERIOR WALL DIMENSIONS ARE TO FINISH MATERIAL. ALL INTERIOR DIMENSIONS ARE TO OUTER FACE OF MATERIAL USED UNLESS NOTED OTHERWISE.
7. NOT USED.
8. PROVIDE & INSTALL FIRE EXTINGUISHERS (FE) WALL CABINETS. RECESS CABINETS @ 48" A.F.F. RECESSED, FLUSH WITH WALL AT ALL INTERIOR APPLICATIONS. MOUNT TO PIERS, 48" A.F.F. IN HEAVY DUTY OUTDOORS FIRE EXTINGUISHER CABINET AT ALL EXTERIOR APPLICATIONS. LOCATE ONE CLASS 2–A FIRE EXTINGUISHER SO THAT MAX. TRAVEL DISTANCE IS 75 L.F. W/ A MINIMUM OF 1 FOR EVERY 11,250 S.F. PER TABLE 906.3(1) OF THE 2015 INTERNATIONAL FIRE CODE OR AS DIRECTED BY LOCAL AUTHORITIES HAVING JURISDICTION. (KEYED ON FLOOR PLANS) FURR OUT WALL AT FE LOCATIONS W/ 6" METAL STUDS AND METAL WALL PANEL EACH SIDE.
9. FLOOR FINISH CONCRETE TO BE POLISHED CONCRETE IN CORRIDORS ONLY. (EXCLUDING STORAGE UNITS)
10. BUILDING MUST COMPLY W/ LOCAL AMERICAN W/ DISABILITIES ACT –REF. SHEET A2.6
11. FURR OUT WALL IN ELECTRICAL ROOMS TO RECESS ELECTRICAL PANEL.
12. ALL INTERIOR CMU TO BE PAINTED SW PRO CLASSIC B31 SERIES PAINT EXCLUDING INSIDE OF INDIVIDUAL STORAGE UNITS. ALL CMU INSIDE INDIVIDUAL STORAGE UNITS NOT TO BE PAINTED OR SEALED.
13. FIRE RISER ROOM TO HAVE 1–HR FIRE–RATED WALLS AND CEILING. REFER UL FIRE–RATED ASSEMBLES, SHEET A1.3
14. GENERAL CONTRACTOR TO COORDINATE STANDPIPE/FIRE SPRINKLER DESIGN WITH ROOM SIZE AND CONFIGURATION.

SELF STORAGE UNITS MARKED WITH A HANDICAP SYMBOL TO BE ACCESSIBLE AND FOLLOW ACCESSIBILITY STANDARDS	
TABLE 225.3	
TOTAL SPACES IN FACILITY	MINIMUM NUMBER OF SPACES REQUIRED TO BE ACCESSIBLE
1 TO 200	5%, BUT NOT LESS THAN 1
201 AND OVER	10, PLUS 2% OF THE TOTAL NUMBER OF UNITS OVER 200
SECTION 225.3.1 DISPERSION.	
INDIVIDUAL SELF–SERVICE STORAGE SPACES SHALL BE DISPERSED THROUGHOUT THE VARIOUS CLASSES OF SPACES PROVIDED. WHERE MORE CLASSES OF SPACES ARE PROVIDED THAN THE NUMBER REQUIRED TO BE ACCESSIBLE, THE NUMBER OF SPACES SHALL NOT BE REQUIRED TO EXCEED THAT REQUIRED BY TABLE 225.3. SELF–SERVICE STORAGE SPACES COMPLYING WITH TABLE 225.3 SHALL NOT BE REQUIRED TO BE DISPERSED AMONG BUILDINGS IN A MULTI–BUILDING FACILITY.	
ACCESSIBLE UNITS MUST MEET THE FOLLOWING CRITERIA:	
403.3 ACCESSIBLE ROUTE	THE RUNNING SLOPE OF WALKING SURFACES NOT STEEPER THAN 1:20. THE CROSS SLOPE OF WALKING SURFACES SHALL NOT BE STEEPER THAN 1:48.
404.2.5 THRESHOLDS	1/2" HIGH MAXIMUM
404.2.7 DOOR HARDWARE	OPERABLE PARTS OF HARDWARE SHALL BE 34" MIN. AND 48" MAX. ABOVE FINISHED FLOOR OR GROUND
404.2.9 DOOR OPENING FORCE	5 POUNDS MAXIMUM
ACCESSIBLE UNITS MUST ALSO PROVIDE ACCESSIBLE ROUTES TO ACCESSIBLE MEANS OF EGRESS, PARKING SPACES, AND COMMON USE ELEMENTS & FACILITIES (TOILET ROOMS, DRINKING FOUNTAINS, ETC.).	
PROVIDE JANUS ADA KIT (THREE STRAPS AND ACCESSIBLE SIGN) –JANUS TO INSTALL	
ADA CALCULATIONS: 590 UNITS –200 UNITS 390 UNITS X .02 = 7.8 SPACES + 10 SPACES = 18 SPACES REQUIRED	

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STATE OF MISSOURI
JEFFREY'S DALLENBACH NUMBER A-2020056988
ARCHITECT
12.16.2021
JEFFREY K. DALLENBACH, AIA
MISSOURI REGISTRATION NO. A-2020056988

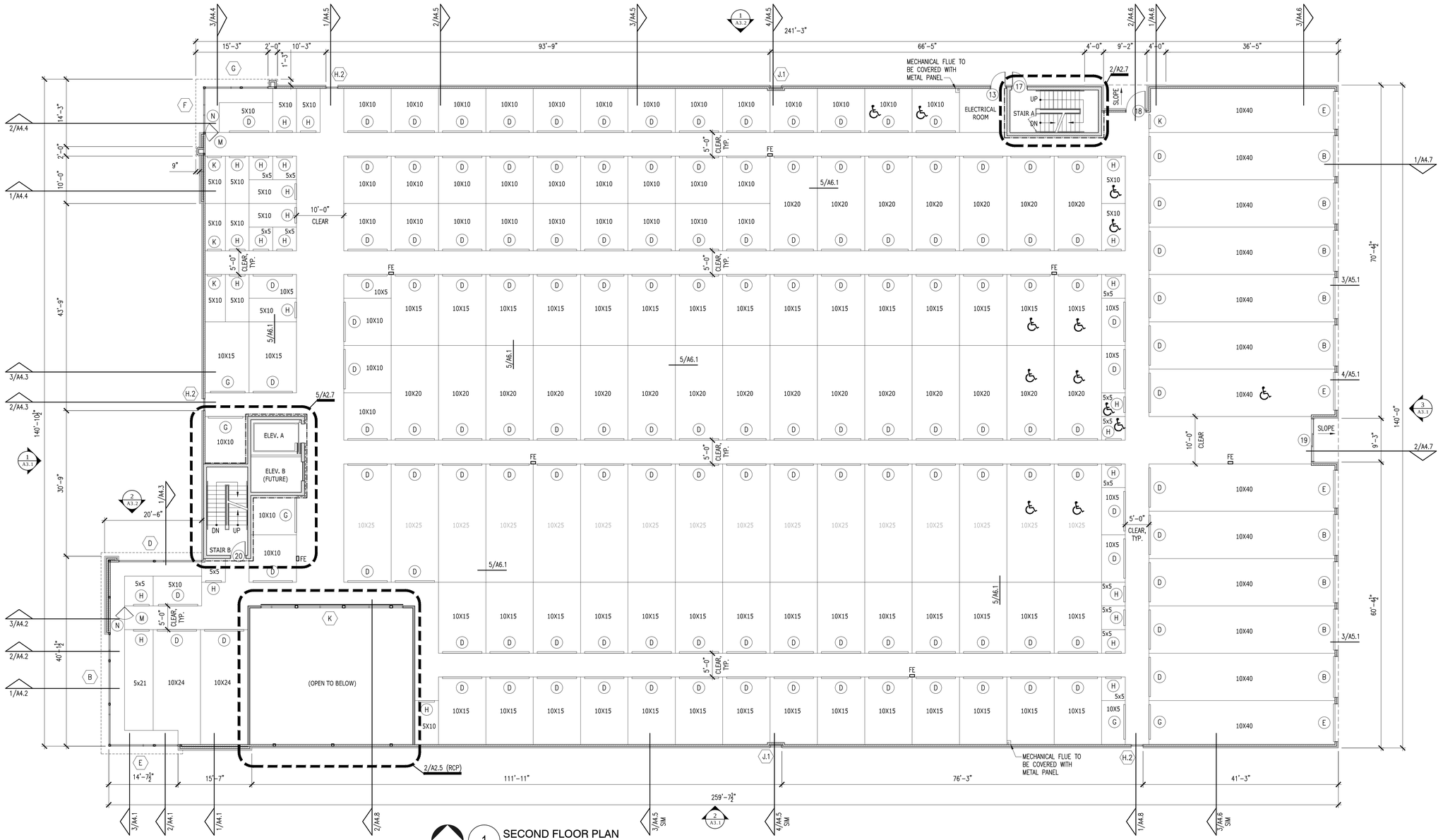
LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : VP
REVISIONS:

1ST FLOOR PLAN

SHEET NO.
A2.1



PLAN NORTH

1 SECOND FLOOR PLAN
SCALE: 3/32" = 1'-0"

FLOOR PLAN LEGEND

	METAL PARTITION SYSTEM (CORRIDOR SIDE OF PARTITION EXCEPT WHERE NOTED OTHERWISE) HALLWAYS TO BE JANUS CORRUGATED METAL PARTITIONS TYP. –REFER DETAIL 5/A6.1
	EXTERIOR SHEATHING OVER METAL STUDS –REF. ELEVATIONS SHEET FOR EXTENTS OF EXTERIOR FINISHES.
	GYP. BD. ON METAL STUD FRAMING –REFER PARTITION TYPES, SHEET A6.1
	1–HOUR FIRE–RATED WALL @ STAIRS, ELEVATOR, AND FIRE RISER ROOM
	12" CONCRETE STEM WALL
	INSULATED METAL PARTITION SYSTEM REFER TO DETAIL SHEET 4/A6.1

GENERAL NOTES (TYPICAL ALL SHEETS)

1. INTERIOR AND EXTERIOR STORAGE UNIT SIGNAGE TO BE APPROVED BY OWNER. SIGNAGE TO BE PROVIDED AND INSTALLED BY GENERAL CONTRACTOR.
2. GENERAL CONTRACTOR TO COORDINATE ALL FOUNDATION PENETRATIONS WITH STRUCTURAL ENGINEER.
3. ROOF PANELS TO BE 60 MIL TPO ROOF TO MEET LOCAL WIND LOAD REQUIREMENTS ENGINEERED BY METAL BUILDING MANUFACTURER.
4. GENERAL CONTRACTOR/TPO ROOFING SUBCONTRACTOR TO SIZE/SPACE INTERNAL ROOF DRAINS AS REQUIRED TO MEET LOCAL REQUIREMENTS. SECONDARY ROOF DRAINS TO BE PROVIDED. GENERAL CONTRACTOR TO COORDINATE CONNECTION TO UNDERGROUND STORM DRAIN.
5. GENERAL CONTRACTOR IS TO SUBMIT ALL SAMPLES OF PRODUCTS, ETC. TO OWNER FOR APPROVAL/ SELECTION OF ALL COLORS, FINISHES, ETC. PRIOR TO PURCHASE AND INSTALLATION
6. ALL EXTERIOR WALL DIMENSIONS ARE TO FOUNDATION (INCL. LUG) UNLESS NOTED OTHERWISE. 3RD FLOOR EXTERIOR WALL DIMENSIONS ARE TO FINISH MATERIAL. ALL INTERIOR DIMENSIONS ARE TO OUTER FACE OF MATERIAL USED UNLESS NOTED OTHERWISE.
7. NOT USED.
8. PROVIDE & INSTALL FIRE EXTINGUISHERS (FE) WALL CABINETS. RECESS CABINETS @ 48" A.F.F. RECESSED, FLUSH WITH WALL AT ALL INTERIOR APPLICATIONS. MOUNT TO PIERS, 48" A.F.F. IN HEAVY DUTY OUTDOORS FIRE EXTINGUISHER CABINET AT ALL EXTERIOR APPLICATIONS. LOCATE ONE CLASS 2–A FIRE EXTINGUISHER SO THAT MAX. TRAVEL DISTANCE IS 75 L.F. W/ A MINIMUM OF 1 FOR EVERY 11,250 S.F. PER TABLE 906.3(1) OF THE 2015 INTERNATIONAL FIRE CODE OR AS DIRECTED BY LOCAL AUTHORITIES HAVING JURISDICTION. (KEYED ON FLOOR PLANS) FURR OUT WALL AT FE LOCATIONS W/ 6" METAL STUDS AND METAL WALL PANEL EACH SIDE.
9. FLOOR FINISH CONCRETE TO BE POLISHED CONCRETE IN CORRIDORS ONLY. (EXCLUDING STORAGE UNITS)
10. BUILDING MUST COMPLY W/ LOCAL AMERICAN W/ DISABILITIES ACT –REF. SHEET A2.6
11. FURR OUT WALL IN ELECTRICAL ROOMS TO RECESS ELECTRICAL PANEL.
12. ALL INTERIOR CMU TO BE PAINTED SW PRO CLASSIC B31 SERIES PAINT EXCLUDING INSIDE OF INDIVIDUAL STORAGE UNITS. ALL CMU INSIDE INDIVIDUAL STORAGE UNITS NOT TO BE PAINTED OR SEALED.
13. FIRE RISER ROOM TO HAVE 1–HR FIRE–RATED WALLS AND CEILING. REFER UL FIRE–RATED ASSEMBLES, SHEET A1.3
14. GENERAL CONTRACTOR TO COORDINATE STANDPIPE/FIRE SPRINKLER DESIGN WITH ROOM SIZE AND CONFIGURATION.

♿	SELF STORAGE UNITS MARKED WITH A HANDICAP SYMBOL TO BE ACCESSIBLE AND FOLLOW ACCESSIBILITY STANDARDS
TABLE 225.3	
TOTAL SPACES IN FACILITY	MINIMUM NUMBER OF SPACES REQUIRED TO BE ACCESSIBLE
1 TO 200	5%, BUT NOT LESS THAN 1
201 AND OVER	10, PLUS 2% OF THE TOTAL NUMBER OF UNITS OVER 200
SECTION 225.3.1 DISPERSION.	
INDIVIDUAL SELF–SERVICE STORAGE SPACES SHALL BE DISPERSED THROUGHOUT THE VARIOUS CLASSES OF SPACES PROVIDED. WHERE MORE CLASSES OF SPACES ARE PROVIDED THAN THE NUMBER REQUIRED TO BE ACCESSIBLE, THE NUMBER OF SPACES SHALL NOT BE REQUIRED TO EXCEED THAT REQUIRED BY TABLE 225.3. SELF–SERVICE STORAGE SPACES COMPLYING WITH TABLE 225.3 SHALL NOT BE REQUIRED TO BE DISPERSED AMONG BUILDINGS IN A MULTI–BUILDING FACILITY.	
ACCESSIBLE UNITS MUST MEET THE FOLLOWING CRITERIA:	
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404.2.5 THRESHOLDS	1/2" HIGH MAXIMUM
404.2.7 DOOR HARDWARE	OPERABLE PARTS OF HARDWARE SHALL BE 34" MIN. AND 48" MAX. ABOVE FINISHED FLOOR OR GROUND
404.2.9 DOOR OPENING FORCE	5 POUNDS MAXIMUM
ACCESSIBLE UNITS MUST ALSO PROVIDE ACCESSIBLE ROUTES TO ACCESSIBLE MEANS OF EGRESS, PARKING SPACES, AND COMMON USE ELEMENTS & FACILITIES (TOILET ROOMS, DRINKING FOUNTAINS, ETC.).	
PROVIDE JANUS ADA KIT (THREE STRAPS AND ACCESSIBLE SIGN) –JANUS TO INSTALL	
ADA CALCULATIONS: 590 UNITS –200 UNITS 390 UNITS X .02 = 7.8 SPACES + 10 SPACES = 18 SPACES REQUIRED	

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STATE OF MISSOURI
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12.16.2021
JEFFREY K. DALLENBACH, AIA
MISSOURI REGISTRATION NO. A–2020036988

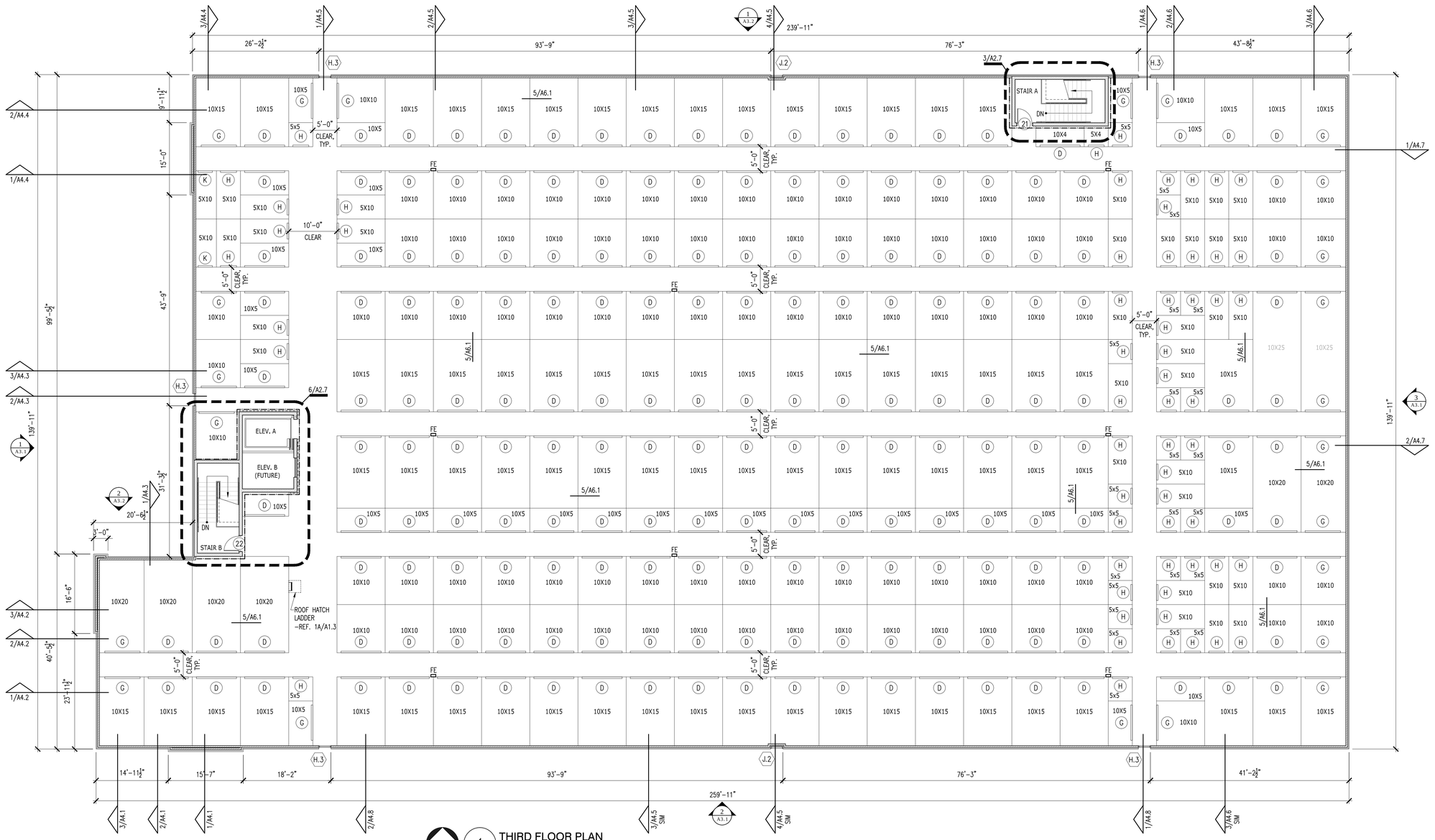
LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : VP
REVISIONS:

2ND FLOOR PLAN

SHEET NO.
A2.2



1 THIRD FLOOR PLAN

SCALE: 3/32" = 1'-0"

PLAN NORTH

FLOOR PLAN LEGEND

	METAL PARTITION SYSTEM (CORRIDOR SIDE OF PARTITION EXCEPT WHERE NOTED OTHERWISE) HALLWAYS TO BE JANUS CORRUGATED METAL PARTITIONS TYP. -REFER DETAIL 5/A6.1
	EXTERIOR SHEATHING OVER METAL STUDS -REF. ELEVATIONS SHEET FOR EXTENTS OF EXTERIOR FINISHES.
	GYP. BD. ON METAL STUD FRAMING -REFER PARTITION TYPES, SHEET A6.1
	1-HOUR FIRE-RATED WALL @ STAIRS, ELEVATOR, AND FIRE RISER ROOM
	12" CONCRETE STEM WALL
	INSULATED METAL PARTITION SYSTEM REFER TO DETAIL SHEET 4/A6.1

GENERAL NOTES (TYPICAL ALL SHEETS)

1. INTERIOR AND EXTERIOR STORAGE UNIT SIGNAGE TO BE APPROVED BY OWNER. SIGNAGE TO BE PROVIDED AND INSTALLED BY GENERAL CONTRACTOR.
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404.2.7 DOOR HARDWARE	OPERABLE PARTS OF HARDWARE SHALL BE 34" MIN. AND 48" MAX. ABOVE FINISHED FLOOR OR GROUND
404.2.9 DOOR OPENING FORCE	5 POUNDS MAXIMUM
ACCESSIBLE UNITS MUST ALSO PROVIDE ACCESSIBLE ROUTES TO ACCESSIBLE MEANS OF EGRESS, PARKING SPACES, AND COMMON USE ELEMENTS & FACILITIES (TOILET ROOMS, DRINKING FOUNTAINS, ETC.).	
PROVIDE JANUS ADA KIT (THREE STRAPS AND ACCESSIBLE SIGN) -JANUS TO INSTALL	
ADA CALCULATIONS: 590 UNITS -200 UNITS 390 UNITS X .02 = 7.8 SPACES + 10 SPACES = 18 SPACES REQUIRED	

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STATE OF MISSOURI
JEFFREY K. DALLENBACH
DALLENBACH NUMBER A-2020056988
ARCHITECT

12.16.2021
JEFFREY K. DALLENBACH, AIA
MISSOURI REGISTRATION NO. A-2020056988

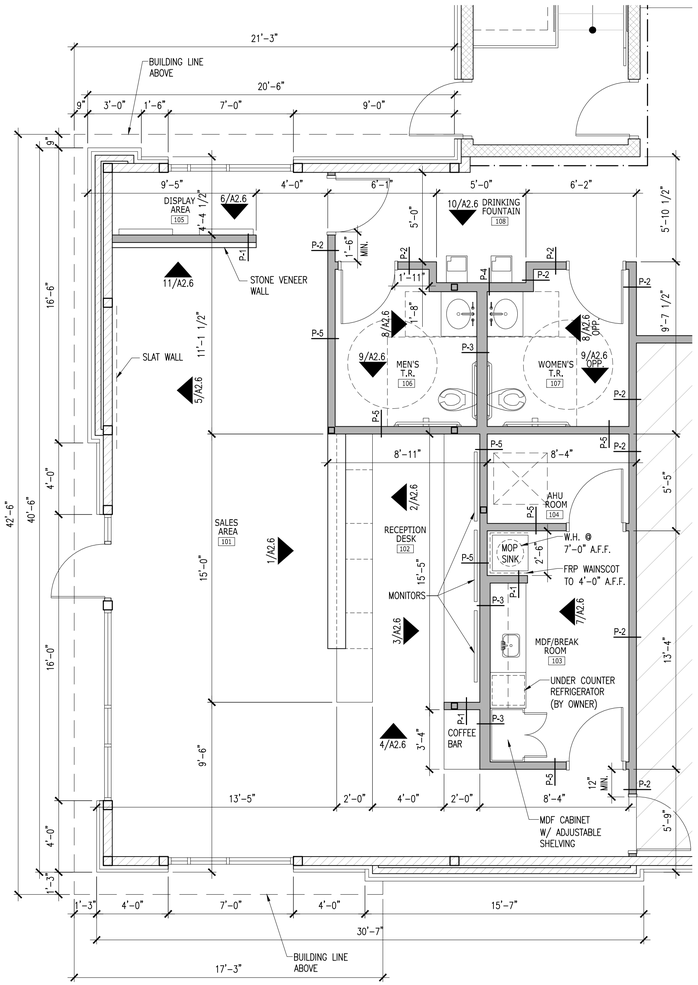
LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : VP
REVISIONS:

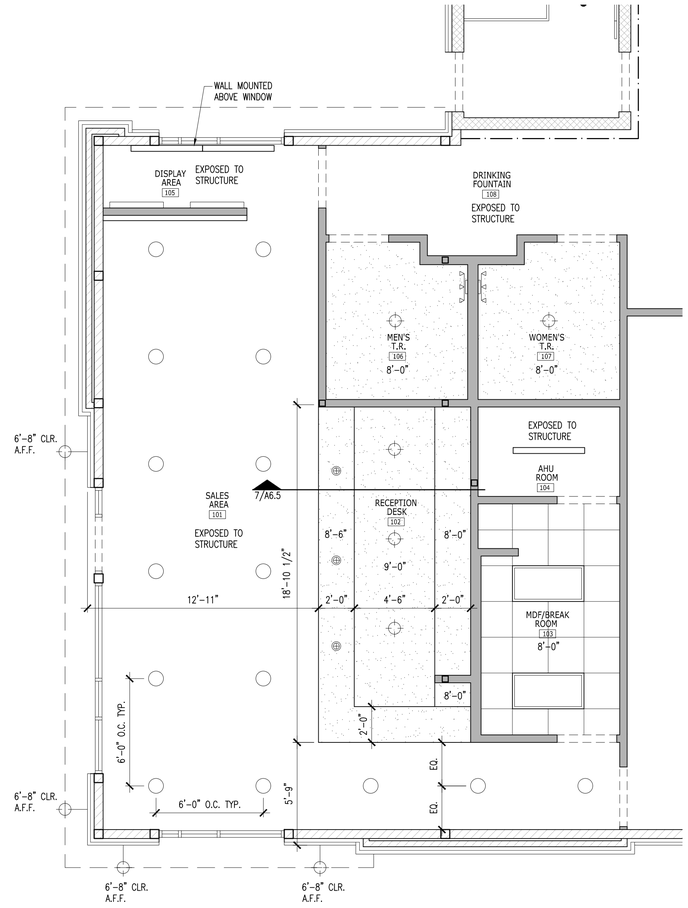
3RD FLOOR PLAN

SHEET NO.
A2.3



1 OFFICE FLOOR PLAN
SCALE: 1/4" = 1'-0"

PLAN NORTH



2 REFLECTED CEILING PLAN
SCALE: 1/4" = 1'-0"

PLAN NORTH

ENLARGED FLOOR PLAN LEGEND	
	METAL PARTITION SYSTEM (CORRIDOR SIDE OF PARTITION EXCEPT WHERE NOTED OTHERWISE) HALLWAYS TO BE JANUS CORRUGATED METAL PARTITIONS TYP. –REFER CORRUGATED HALLWAY SYSTEM A6.1
	METAL STUD WALL FRAMING
	INTERIOR METAL STUD WALL FRAMING –REFER PARTITION TYPES SHEET A6.1
	4" STRIPES PAINTED ON PAVING @ 2'-0" O.C. COLOR: SAFETY YELLOW

GENERAL NOTES

1. REFERENCE SHEET A6.1 FOR PARTITION TYPES (P–#)
2. BUILDING MUST COMPLY W/ LOCAL AMERICAN W/ DISABILITIES ACT –REF. SHEET A2.6

REFLECTED CEILING PLAN LEGEND			
	SUSPENDED PAINTED GYP. BD. CEILING		EXTERIOR WALL SCONCE –WALL MOUNTED
	2' X 2' OPEN GRID CEILING		VANITY LIGHT
	4' LED LIGHT		PENDANT LIGHT
	2' X 4' LED LIGHT –RECESSED		LARGE PENDANT LIGHT
	RECESSED LIGHT		MEP DIFFUSER

NOTES:
1. REFER MEP FOR FIXTURE SPECIFICATIONS.
2. COORDINATE LIGHT FIXTURES AND MECHANICAL SUPPLY/RETURN PRIOR TO INSTALLATION.
3. PAINT UNDERSIDE OF FLOOR DECK, EXPOSED STRUCTURE AND DUCTS IN OFFICE WHERE VISIBLE. (CALL OUT PT COLOR ON A7.1)

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STATE OF MISSOURI
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12.16.2021
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MISSOURI REGISTRATION NO. A-2020056988

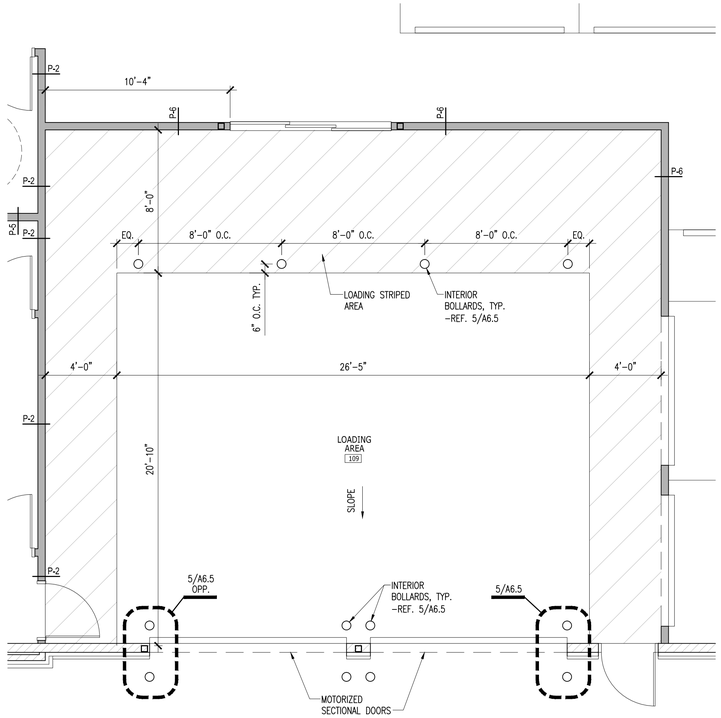
LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : VP
REVISIONS:

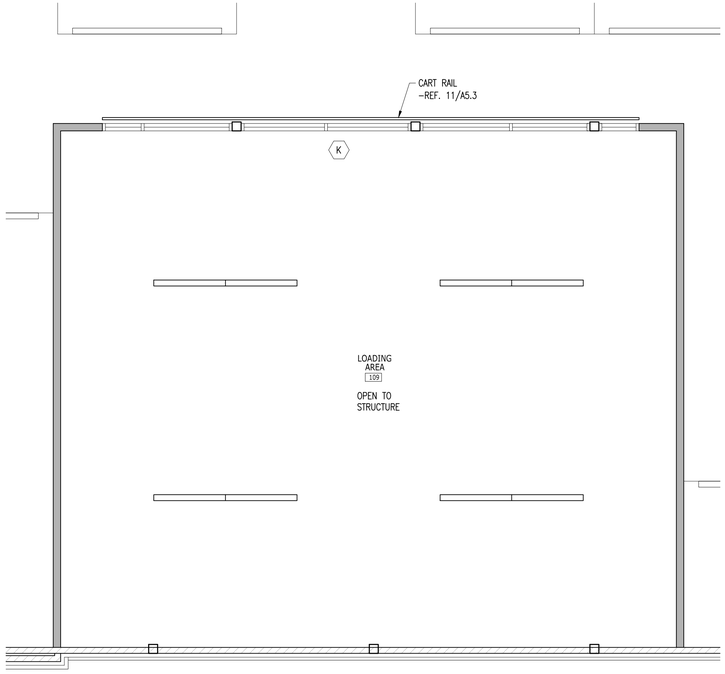
OFFICE PLAN & RCP

SHEET NO.
A2.4



1 LOADING AREA FLOOR PLAN
SCALE: 1/4" = 1'-0"

PLAN NORTH



2 REFLECTED CEILING PLAN
SCALE: 1/4" = 1'-0"

PLAN NORTH

ENLARGED FLOOR PLAN LEGEND	
	METAL PARTITION SYSTEM (CORRIDOR SIDE OF PARTITION EXCEPT WHERE NOTED OTHERWISE) HALLWAYS TO BE JANUS CORRUGATED METAL PARTITIONS TYP. -REFER CORRUGATED HALLWAY SYSTEM A6.1
	METAL STUD WALL FRAMING
	INTERIOR METAL STUD WALL FRAMING -REFER PARTITION TYPES SHEET A6.1
	4" STRIPES PAINTED ON PAVING @ 2'-0" O.C. COLOR: SAFETY YELLOW

GENERAL NOTES
1. REFERENCE SHEET A6.1 FOR PARTITION TYPES (P-#)
2. BUILDING MUST COMPLY W/ LOCAL AMERICAN W/ DISABILITIES ACT -REF. SHEET A2.6

REFLECTED CEILING PLAN LEGEND			
	SUSPENDED PAINTED GYP. BD. CEILING		EXTERIOR WALL SCONCE -WALL MOUNTED
	2' X 2' OPEN GRID CEILING		VANITY LIGHT
	4' LED LIGHT		PENDANT LIGHT
	2' X 4' LED LIGHT -RECESSED		LARGE PENDANT LIGHT
	RECESSED LIGHT		MEP DIFFUSER

NOTES:
1. REFER MEP FOR FIXTURE SPECIFICATIONS.
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LAKEWOOD STORAGE

NE PORT DRIVE
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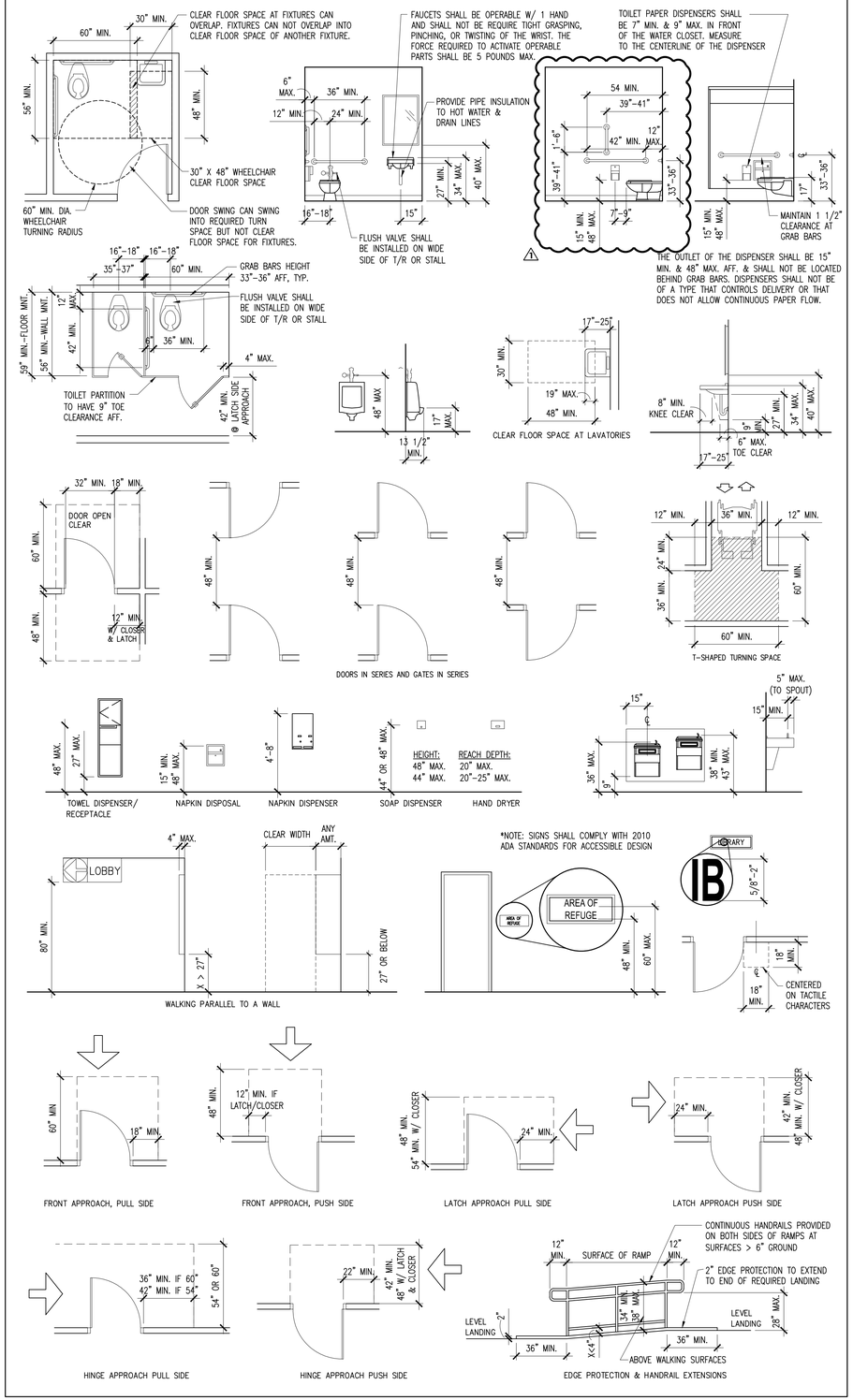
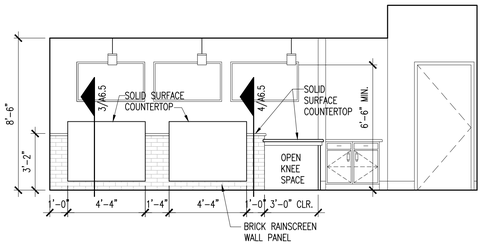
ENLARGED PLAN & RCP

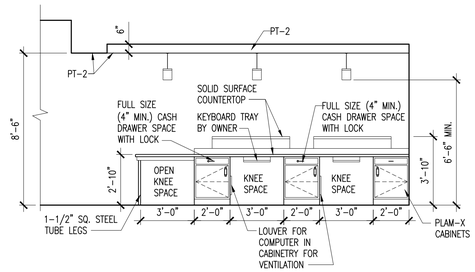
SHEET NO.
A2.5

2010 - ADA STANDARDS FOR ACCESSIBLE DESIGN

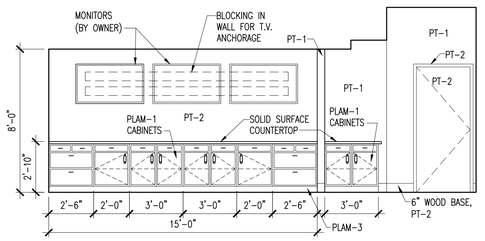




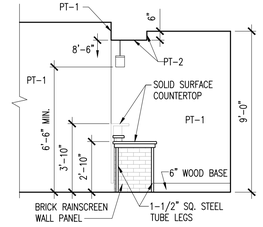
1 RECEPTION DESK ELEVATION
SCALE: 1/4" = 1'-0"



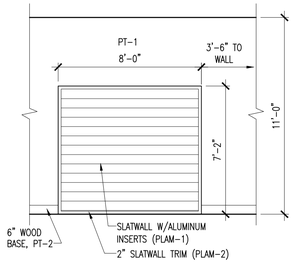
2 RECEPTION DESK ELEVATION
SCALE: 1/4" = 1'-0"



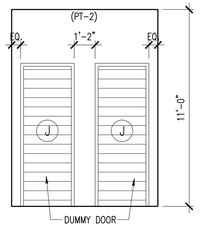
3 MONITOR WALL ELEVATION
SCALE: 1/4" = 1'-0"



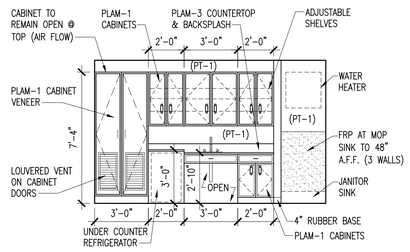
4 RECEPTION DESK ELEVATION
SCALE: 1/4" = 1'-0"



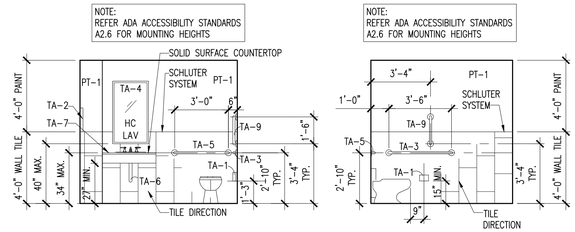
5 SLAT WALL ELEVATION
SCALE: 1/4" = 1'-0"



6 DISPLAY WALL ELEVATION
SCALE: 1/4" = 1'-0"

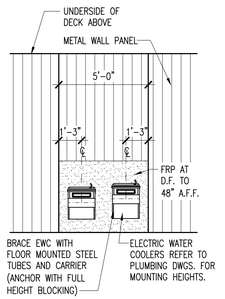


7 MDF/BREAK ROOM ELEVATION
SCALE: 1/4" = 1'-0"

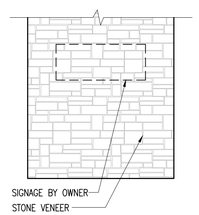


8 TOILET ROOM ELEVATION
SCALE: 1/4" = 1'-0"

9 TOILET ROOM ELEVATION
SCALE: 1/4" = 1'-0"



10 DRINKING FOUNTAIN ELEVATION
SCALE: 1/4" = 1'-0"



11 BRICK WALL ELEVATION
SCALE: 1/4" = 1'-0"

TOILET ACCESSORIES		
MARK	ITEM	HEIGHT
TA-1	TOILET TISSUE DISPENSER	19" CL
TA-2	HAND DRYERS	48" MAX.
TA-3	42" HORIZONTAL GRAB BAR	34" CL
TA-4	MIRROR	40"
TA-5	36" HORIZONTAL GRAB BAR	34" CL
TA-6	LAVATORY PIPING INSULATION	N/A
TA-7	FEMININE NAPKIN DISPOSAL	48" MAX.
TA-8	SOAP DISPENSER	44" MAX.
TA-9	18" VERTICAL GRAB BAR	40" CL

NOTES
1. FOR CONTROLS OR REACH, HEIGHT IS MAX.
2. FOR MIRRORS, HEIGHT IS TO BOTTOM OF REFLECTIVE EDGE.
3. FOR GRAB BARS, HEIGHT IS TO CENTER OF HORIZONTAL BAR.
4. ALL DESIGN MUST COMPLY W/ LOCAL AMERICAN'S W/DISABILITIES ACT – REF. SHEET A2.6
5. BLOCKING FOR ACCESSORIES BY GENERAL CONTRACTOR
6. SOAP DISPENSER TO BE INSTALLED OVER COUNTERTOP

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STATE OF MISSOURI
JEFFREY S. DALLENBACH
DALLENBACH NUMBER
A-2020056988
REGISTERED ARCHITECT
01.20.2022
JEFFREY S. DALLENBACH, AIA
MISSOURI REGISTRATION
NO. A-2020056988

LAKEWOOD STORAGE

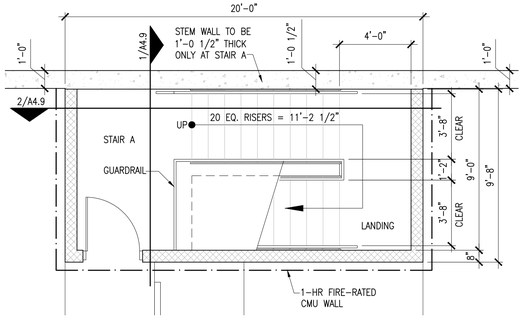
NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : VP

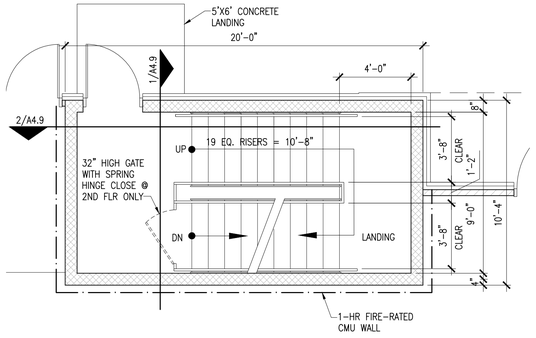
REVISIONS:
1 CITY COMMENTS 01.20.2022

ADA & INT. ELEV

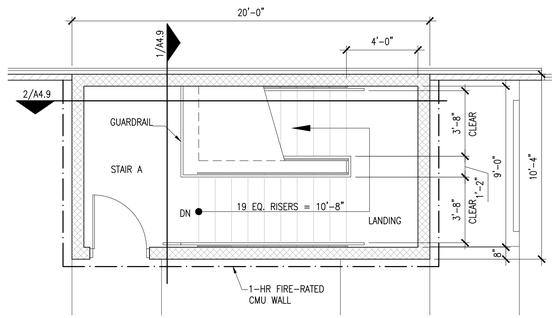
SHEET NO.
A2.6



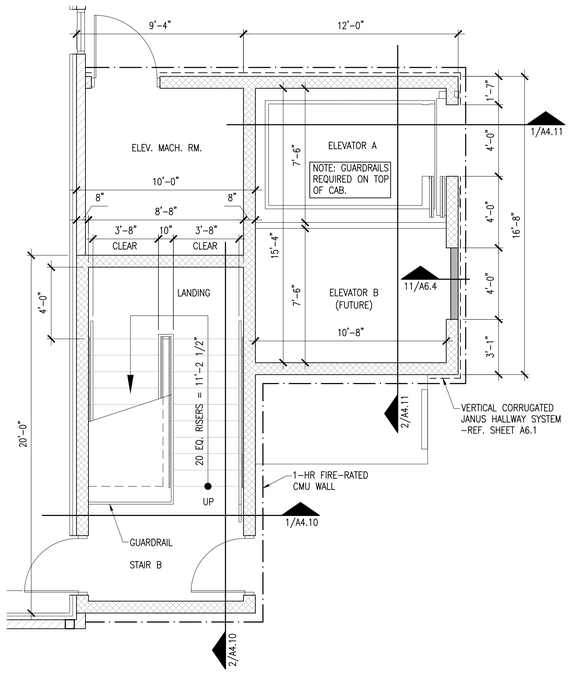
1 1ST FLOOR STAIR A
SCALE: 1/4" = 1'-0"



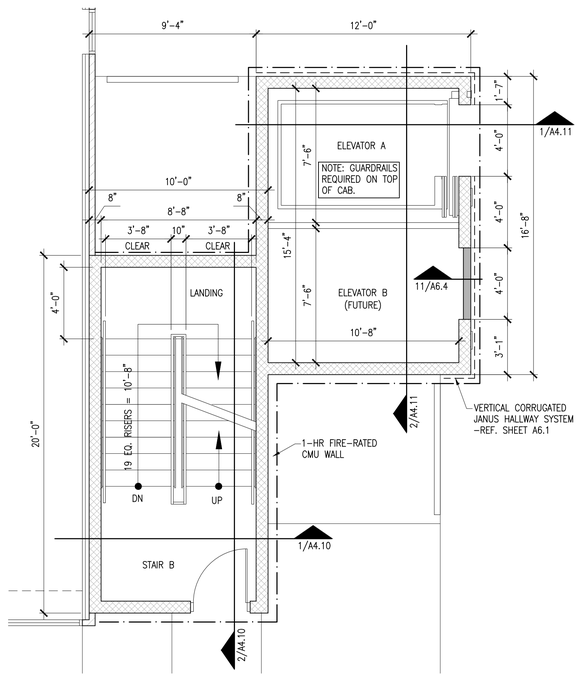
2 2ND FLOOR STAIR A
SCALE: 1/4" = 1'-0"



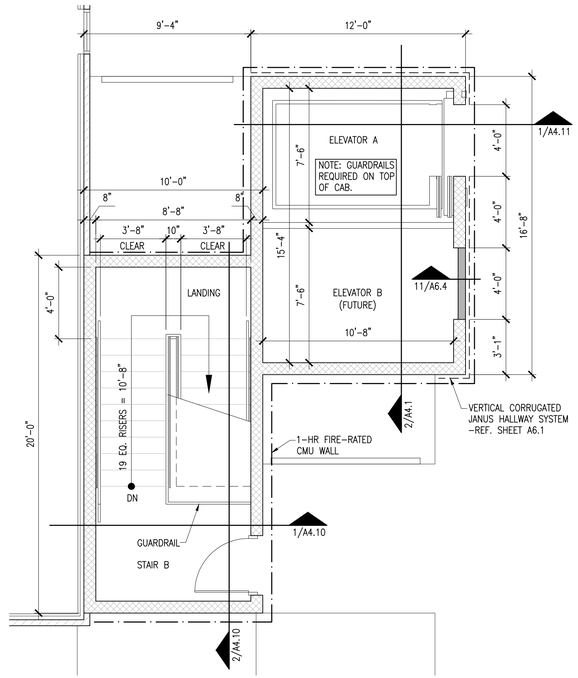
3 3RD FLOOR STAIR A
SCALE: 1/4" = 1'-0"



4 1ST FLOOR STAIR B / ELEV. A & B
SCALE: 1/4" = 1'-0"



5 2ND FLOOR STAIR B / ELEV. A & B
SCALE: 1/4" = 1'-0"



6 3RD FLOOR STAIR B / ELEV. A & B
SCALE: 1/4" = 1'-0"

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STATE OF MISSOURI
JEFFREY S. DALLENBACH
NUMBER A-2020056988
ARCHITECT

12.16.2021
JEFFREY S. DALLENBACH, AIA
MISSOURI REGISTRATION NO. A-2020056988

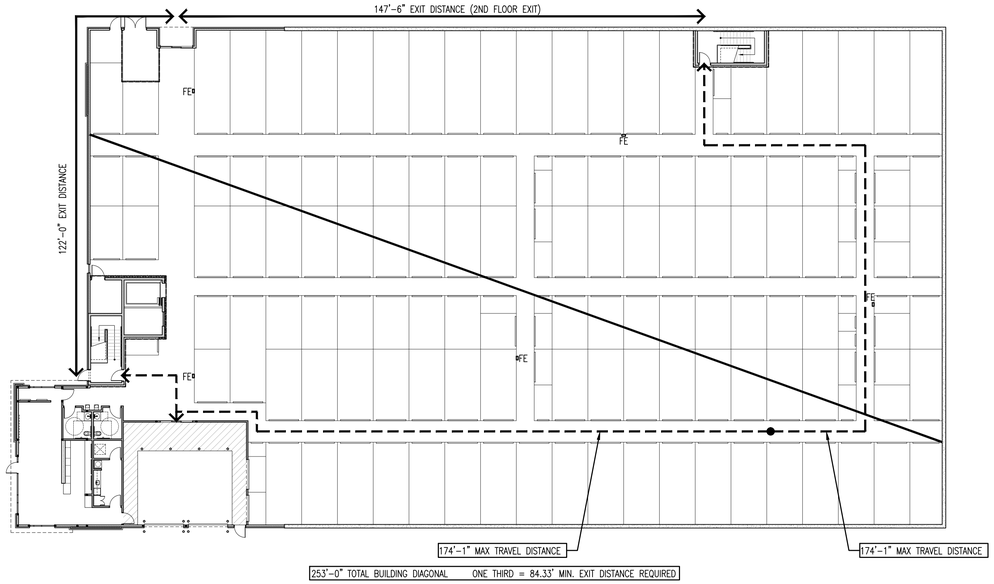
LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

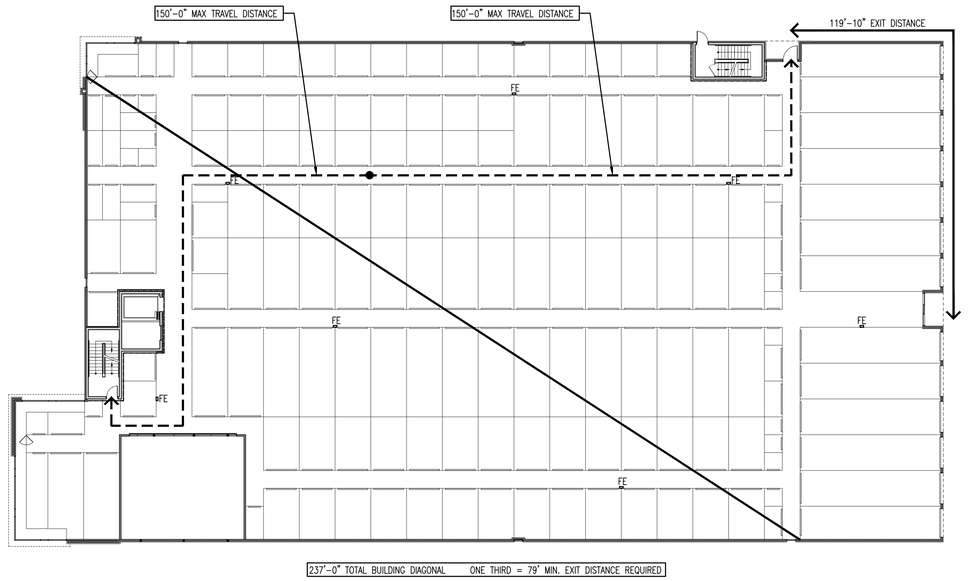
PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : VP
REVISIONS:

ENLARGED PLANS

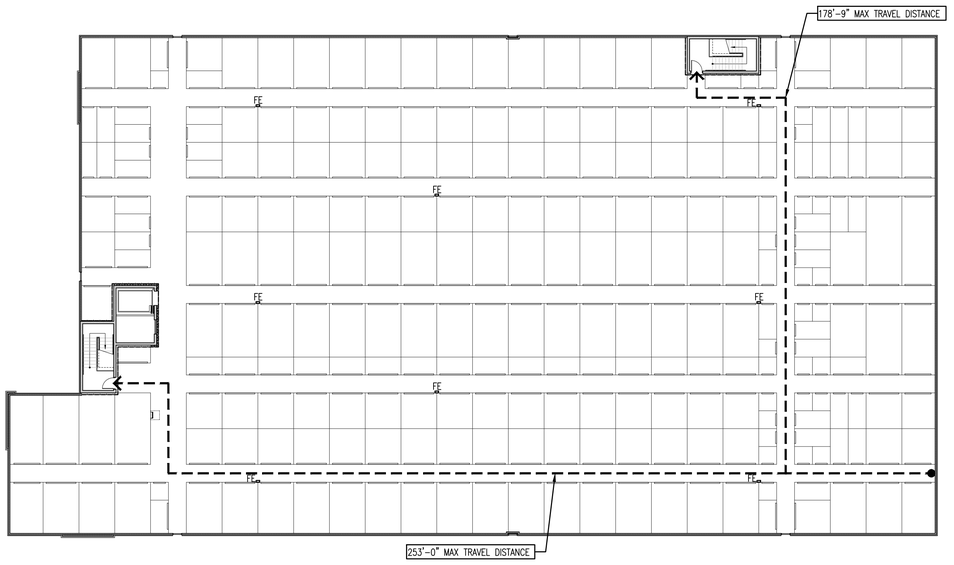
SHEET NO.
A2.7



1 1ST FLOOR EGRESS PLAN
SCALE: 1" = 20'-0"



2 2ND FLOOR EGRESS PLAN
SCALE: 1" = 20'-0"



3 3RD FLOOR EGRESS PLAN
SCALE: 1" = 20'-0"

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Lee's Summit, Missouri
05/02/2022

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STATE OF MISSOURI
JEFFREY'S DALLENBACH NUMBER A-2020056988
ARCHITECT
12.16.2021
JEFFREY K. DALLENBACH, AIA
MISSOURI REGISTRATION NO. A-2020056988

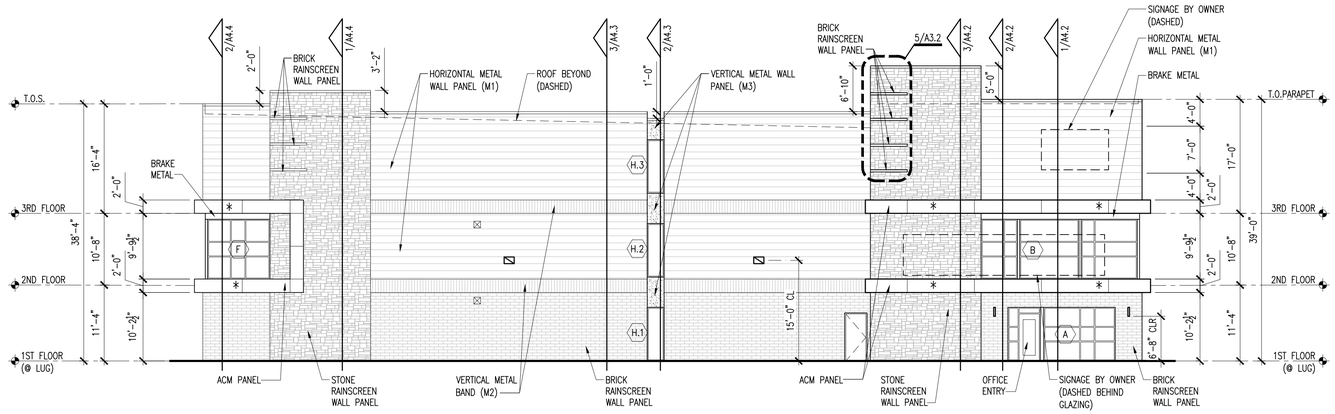
LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

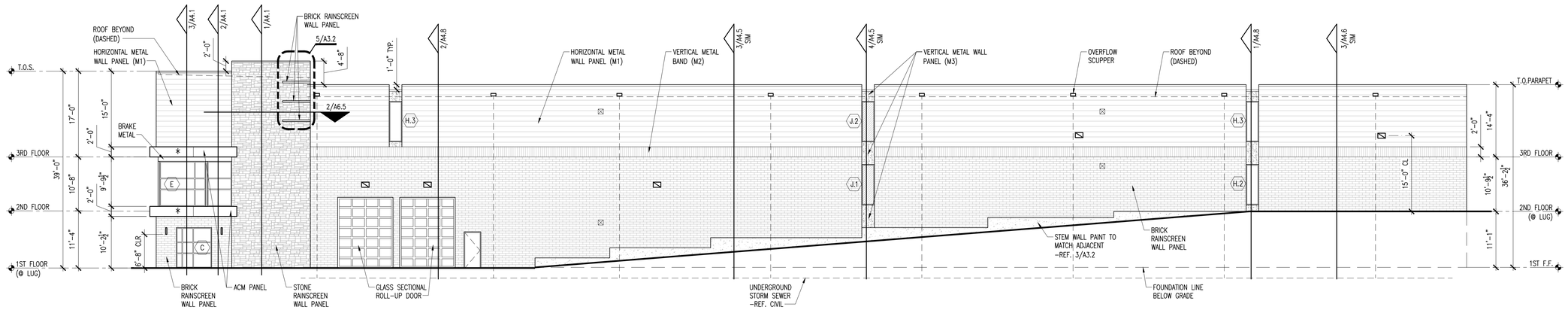
PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : VP
REVISIONS:

EGRESS PLANS

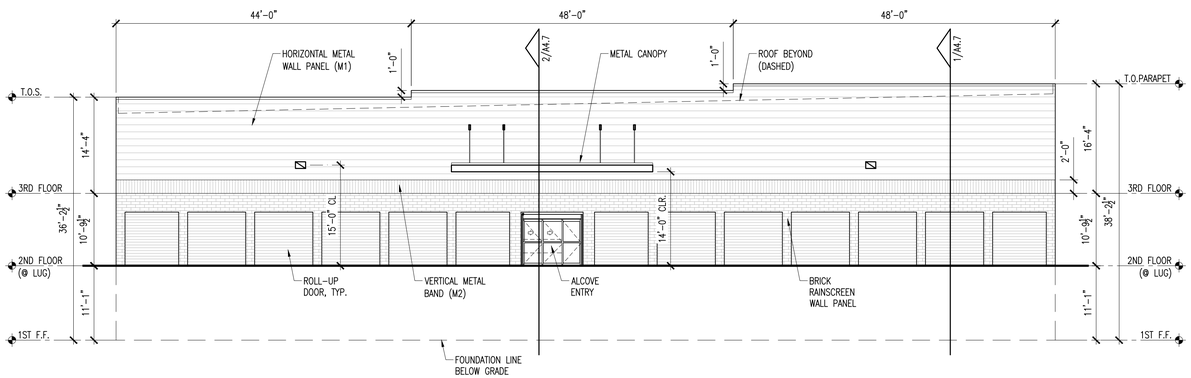
SHEET NO.
A2.8



1 WEST ELEVATION
SCALE: 3/32" = 1'-0"



2 SOUTH ELEVATION
SCALE: 3/32" = 1'-0"



3 EAST ELEVATION
SCALE: 3/32" = 1'-0"

ELEVATION LEGEND	
	HORIZONTAL METAL WALL PANEL (M1)
	VERTICAL METAL BAND (M2)
	VERTICAL METAL WALL PANEL (M3)
*	ACM – ALUMINUM COMPOSITE MATERIAL PANEL
	BRICK RAINSCREEN WALL PANEL
	STONE RAINSCREEN WALL PANEL
	EXTERIOR LIGHT FIXTURE –REF. MEP
	OVERFLOW SCUPPER –REF. 12/A6.3
⊠	OUTSIDE AIR LOCATIONS –REF. MEP

ELEVATION NOTES

1. METAL COPING, TRIM, AND FLASHING TO MATCH COLOR OF ADJACENT MATERIAL.
2. ROOF MATERIAL TO BE TPO ROOF SYSTEM SLOPED AT 1/4" FT WITH INTERNAL ROOF DRAINS TO CONNECT TO UNDERGROUND SEWER
3. OVERFLOW SCUPPERS TO BE 2" ABOVE LOWEST POINT OF ROOF.
4. REFER SHEET A7.1 FOR EXTERIOR PAINT COLORS.
5. PAINT MAN DOOR TO MATCH ADJACENT MATERIAL UNLESS NOTED OTHERWISE.
6. GENERAL CONTRACTOR/SIGNAGE COMPANY TO PROVIDE ANCHORAGE, BLOCKING, & WATERPROOFING FOR SIGNAGE.
7. MAX PARAPET HEIGHT TO BE 2'–6" WITHOUT STRUCTURAL SUPPORT.

RELEASED FOR CONSTRUCTION
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03/08/2022

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STATE OF MISSOURI
JEFFREY S. DALLENBACH
NUMBER A-2020056988
ARCHITECT
12.16.2021
JEFFREY S. DALLENBACH, AIA
MISSOURI REGISTRATION
NO. A-2020056988

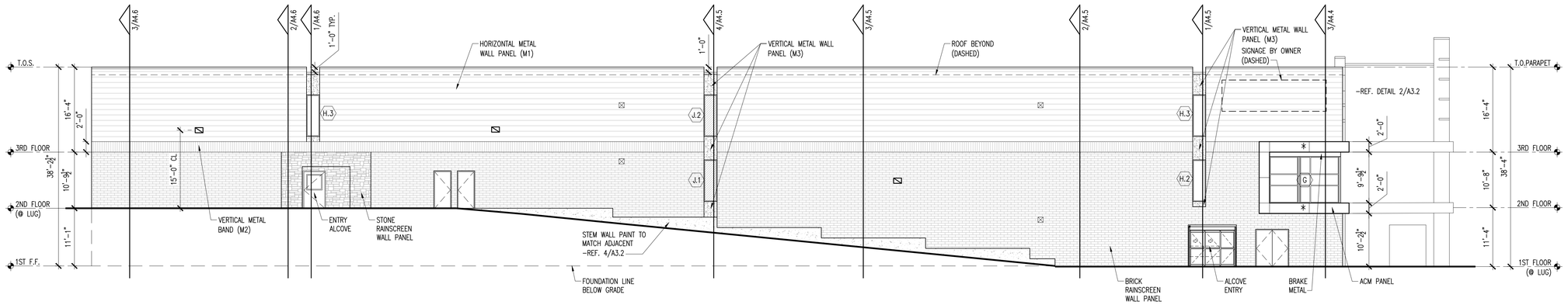
LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

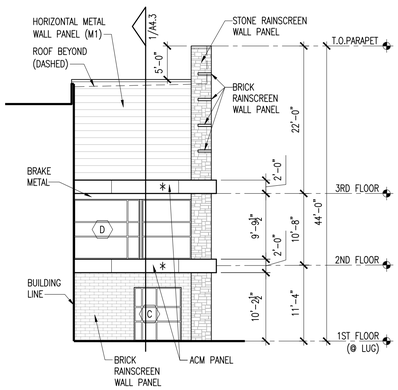
PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : VP
REVISIONS:

EXTERIOR ELEVATIONS

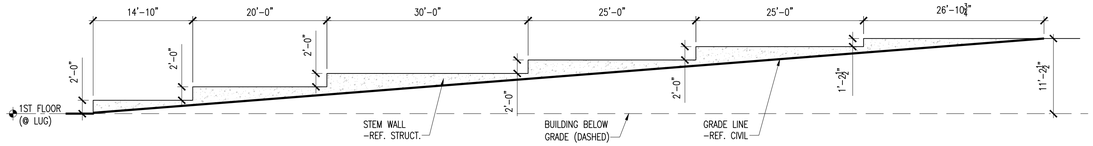
SHEET NO.
A3.1



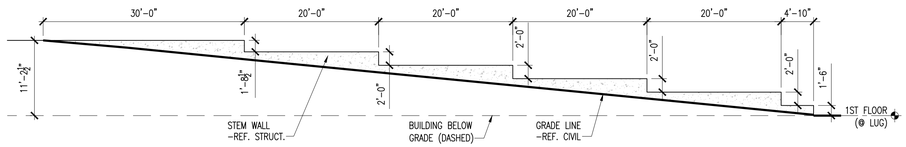
1 NORTH ELEVATION
SCALE: 3/32" = 1'-0"



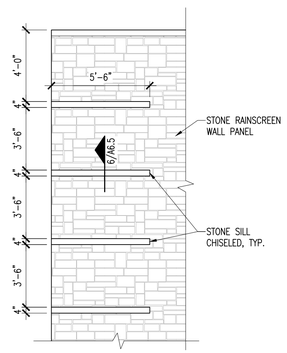
2 NORTH ELEVATION
SCALE: 3/32" = 1'-0"



3 SOUTH STEM WALL
SCALE: 3/32" = 1'-0"



4 NORTH STEM WALL
SCALE: 3/32" = 1'-0"



5 STONE BAND ELEVATION
SCALE: 1/4" = 1'-0"

ELEVATION LEGEND	
	HORIZONTAL METAL WALL PANEL (M1)
	VERTICAL METAL BAND (M2)
	VERTICAL METAL WALL PANEL (M3)
*	ACM – ALUMINUM COMPOSITE MATERIAL PANEL
	BRICK RAINSCREEN WALL PANEL
	STONE RAINSCREEN WALL PANEL
⊠	EXTERIOR LIGHT FIXTURE –REF. MEP
▭	OVERFLOW SCUPPER –REF. 12/A6.3
⊠	OUTSIDE AIR LOCATIONS –REF. MEP

ELEVATION NOTES

1. METAL COPING, TRIM, AND FLASHING TO MATCH COLOR OF ADJACENT MATERIAL.
2. ROOF MATERIAL TO BE TPO ROOF SYSTEM SLOPED AT 1/4" FT WITH INTERNAL ROOF DRAINS TO CONNECT TO UNDERGROUND SEWER
3. OVERFLOW SCUPPERS TO BE 2" ABOVE LOWEST POINT OF ROOF.
4. REFER SHEET A7.1 FOR EXTERIOR PAINT COLORS.
5. PAINT MAN DOOR TO MATCH ADJACENT MATERIAL UNLESS NOTED OTHERWISE.
6. GENERAL CONTRACTOR/SIGNAGE COMPANY TO PROVIDE ANCHORAGE, BLOCKING, & WATERPROOFING FOR SIGNAGE.
7. MAX PARAPET HEIGHT TO BE 2'-6" WITHOUT STRUCTURAL SUPPORT.

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
03/02/2022

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315 NINTH STREET - SUITE 1
SAN ANTONIO, TEXAS 78215
WWW.DALLENBACHCOLE.COM
P 210.439.2224

STATE OF MISSOURI
JEFFREY S. DALLENBACH
NUMBER A-2020056988
ARCHITECT
12.16.2021
JEFFREY S. DALLENBACH, AIA
MISSOURI REGISTRATION
NO. A-2020056988

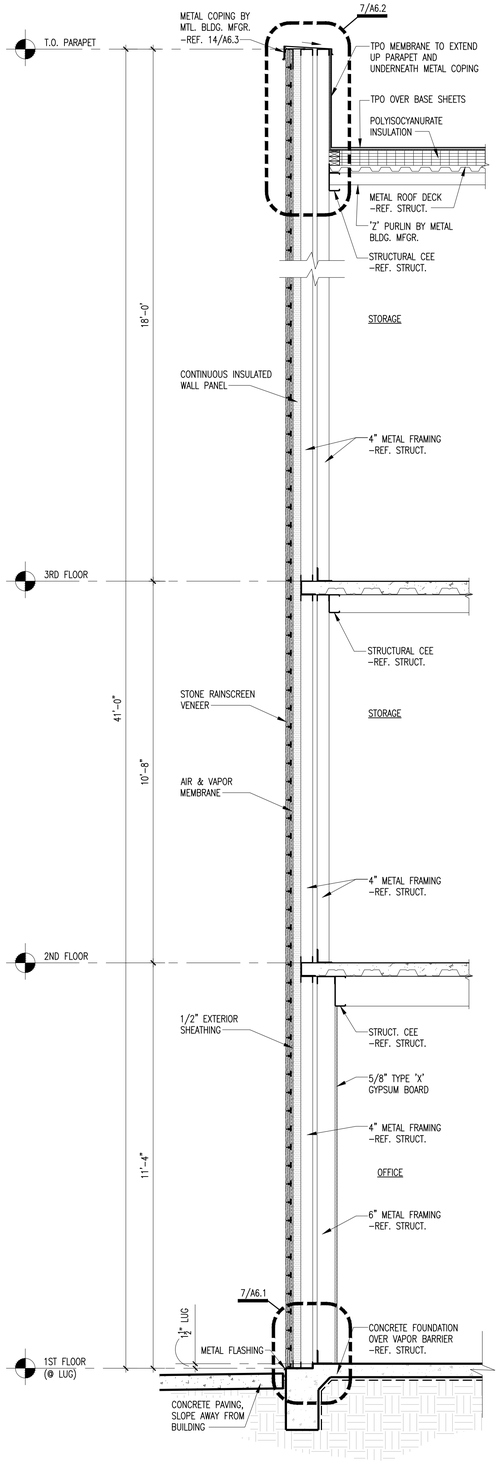
LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

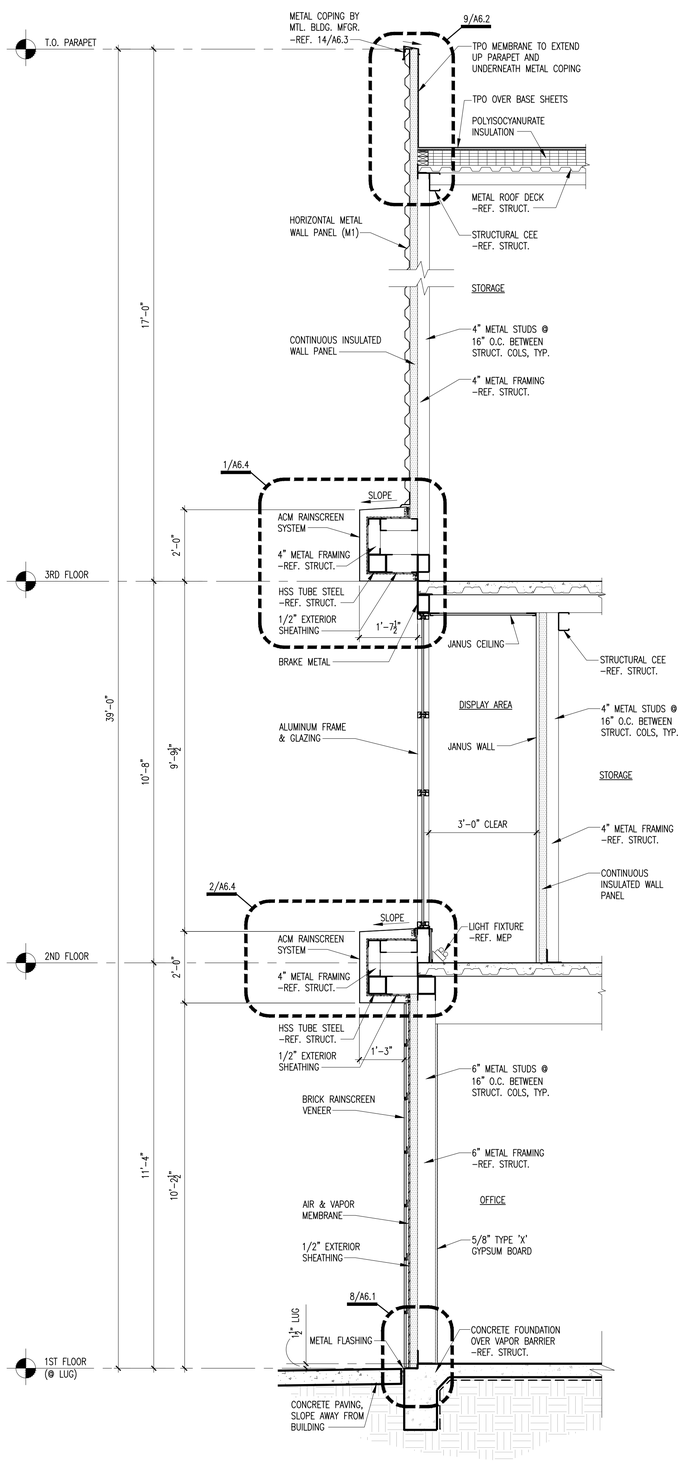
PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : VP
REVISIONS:

EXTERIOR ELEVATIONS

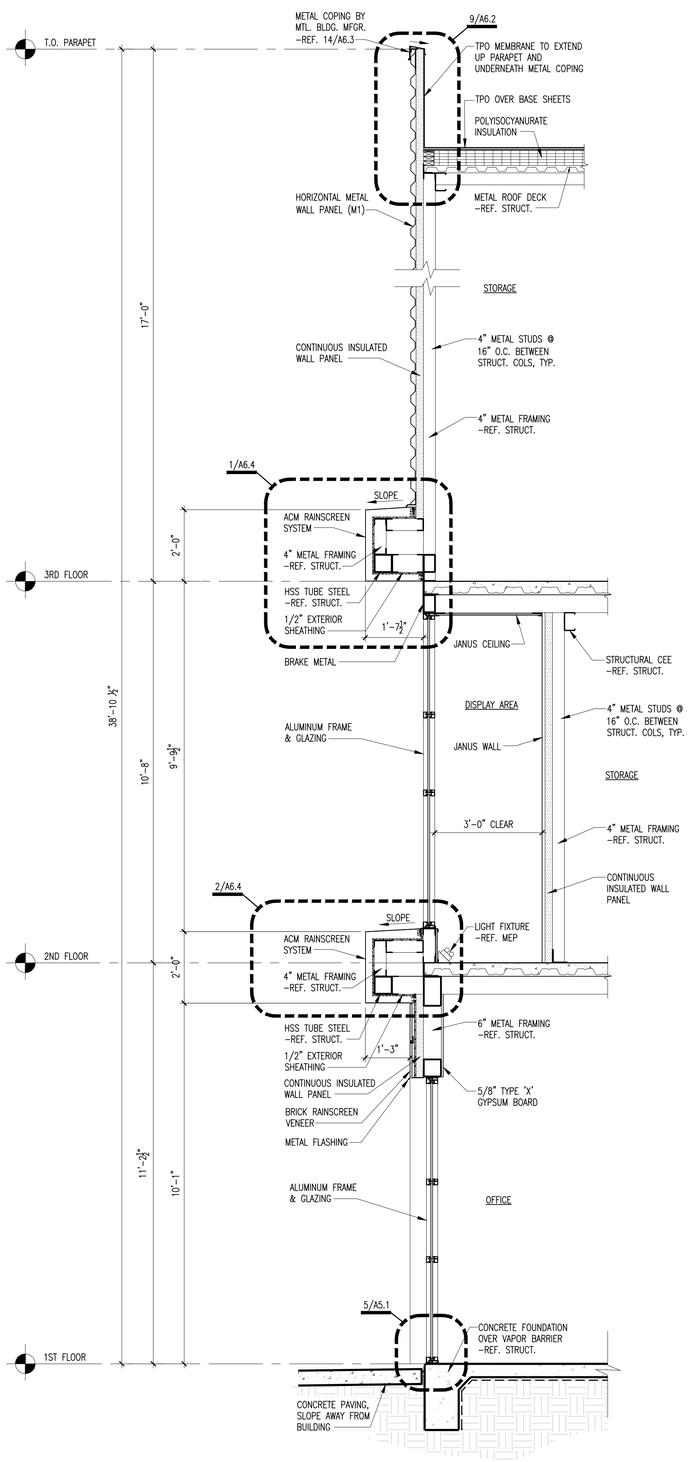
SHEET NO.
A3.2



1 WALL SECTION
SCALE: 1/2" = 1'-0"



2 WALL SECTION
SCALE: 1/2" = 1'-0"



3 WALL SECTION
SCALE: 1/2" = 1'-0"

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Lee's Summit, Missouri
03/02/2022

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STATE OF MISSOURI
JEFFREY'S DALLENBACH NUMBER A-2020036988
ARCHITECT
12.16.2021
JEFFREY K. DALLENBACH, AIA
MISSOURI REGISTRATION NO. A-2020036988

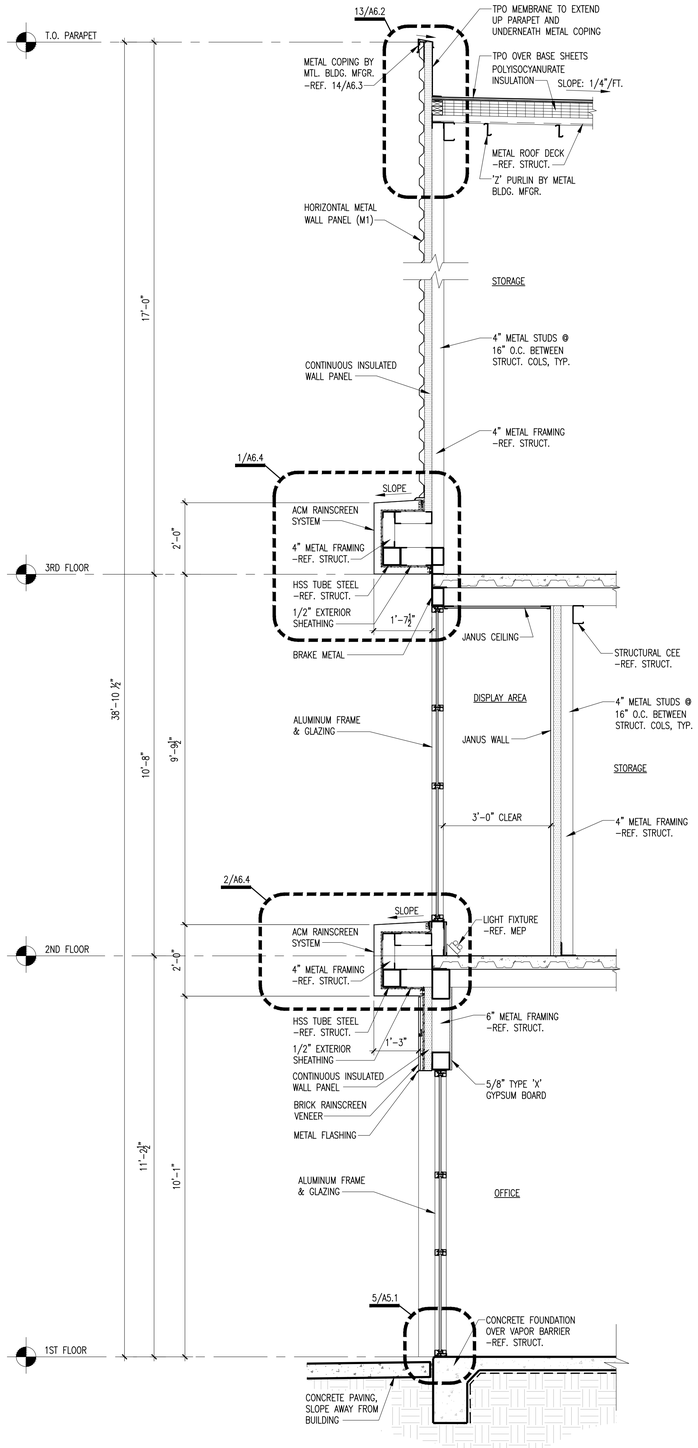
LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

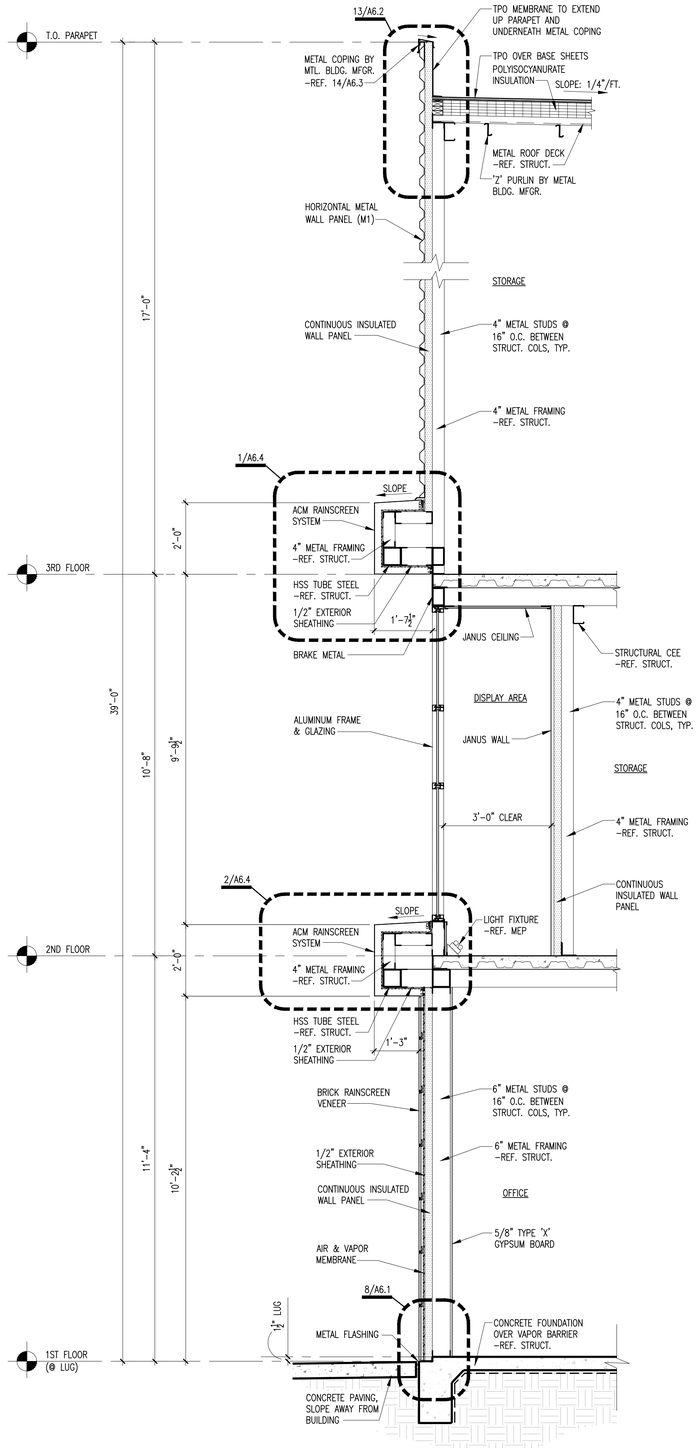
PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : VP
REVISIONS:

WALL SECTIONS

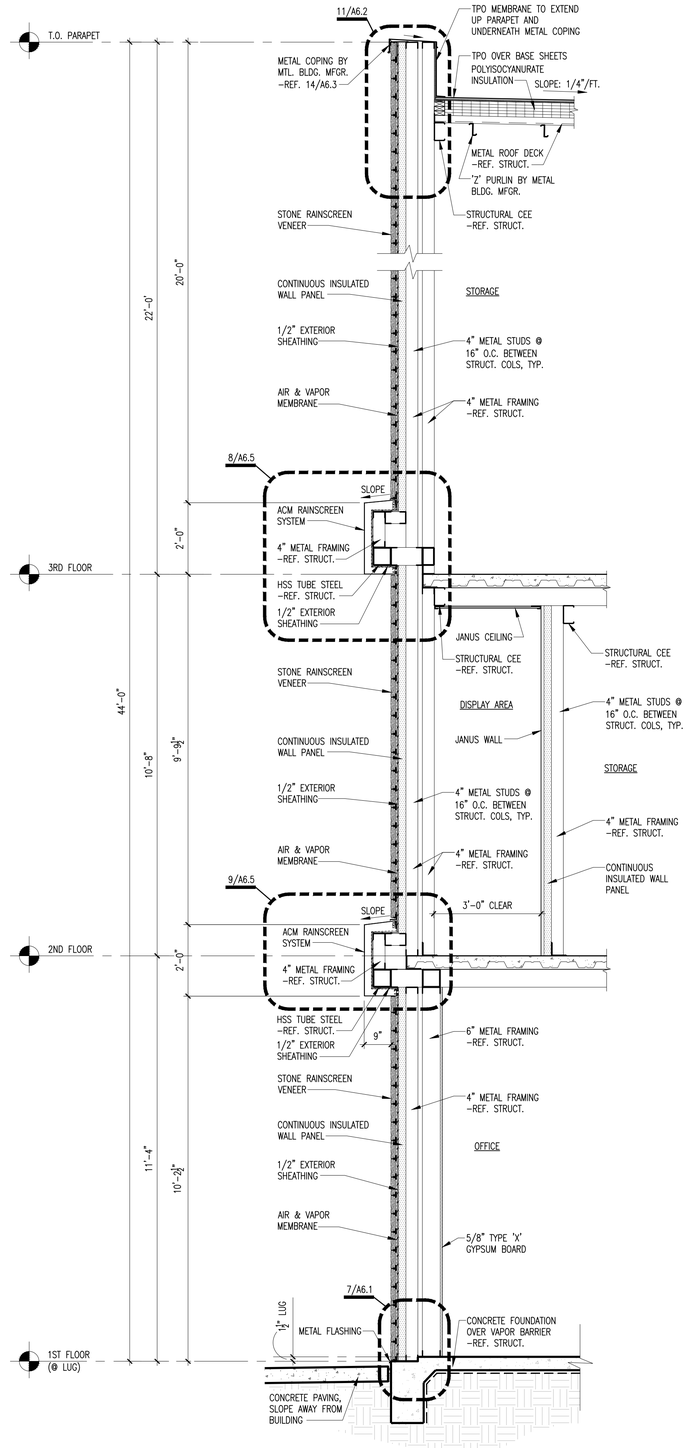
SHEET NO.
A4.1



1 WALL SECTION
SCALE: 1/2" = 1'-0"



2 WALL SECTION
SCALE: 1/2" = 1'-0"



3 WALL SECTION
SCALE: 1/2" = 1'-0"

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03/02/2022

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STATE OF MISSOURI
JEFFREY S. DALLENBACH NUMBER A-2020036988
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12.16.2021
JEFFREY S. DALLENBACH, AIA
MISSOURI REGISTRATION NO. A-2020036988

LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
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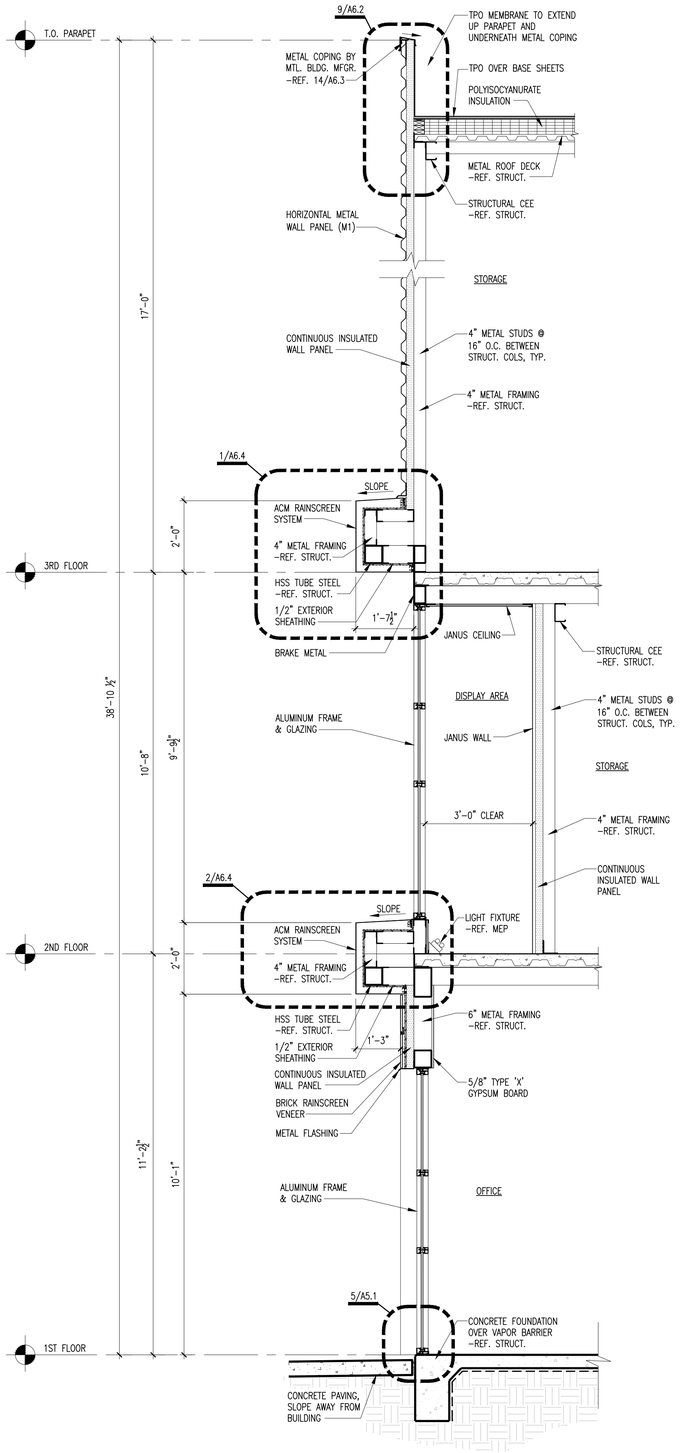
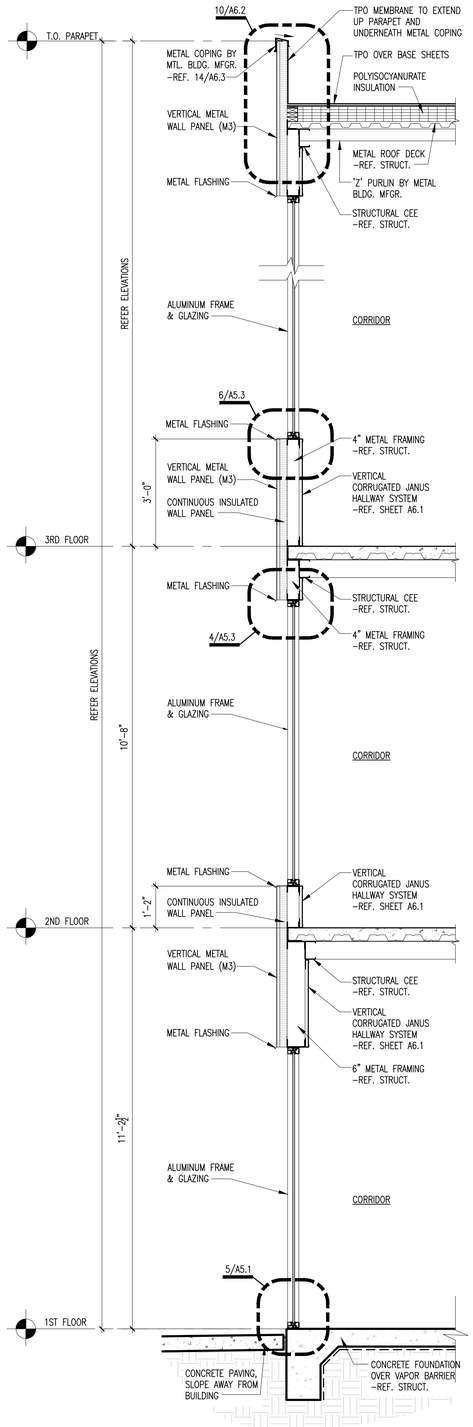
REVISIONS:

WALL SECTIONS

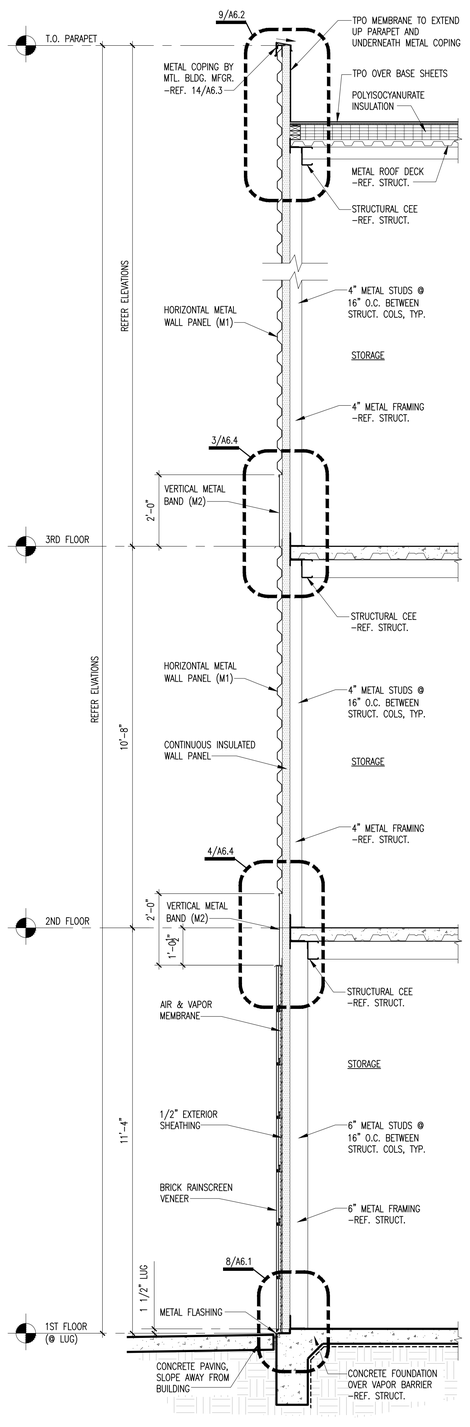
SHEET NO.
A4.2



1 WALL SECTION
SCALE: 1/2" = 1'-0"



2 WALL SECTION
SCALE: 1/2" = 1'-0"



3 WALL SECTION
SCALE: 1/2" = 1'-0"

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STATE OF MISSOURI
JEFFREY S. DALLENBACH
DALLENBACH NUMBER A-2020056988
ARCHITECT
12.16.2021
JEFFREY S. DALLENBACH, AIA
MISSOURI REGISTRATION NO. A-2020056988

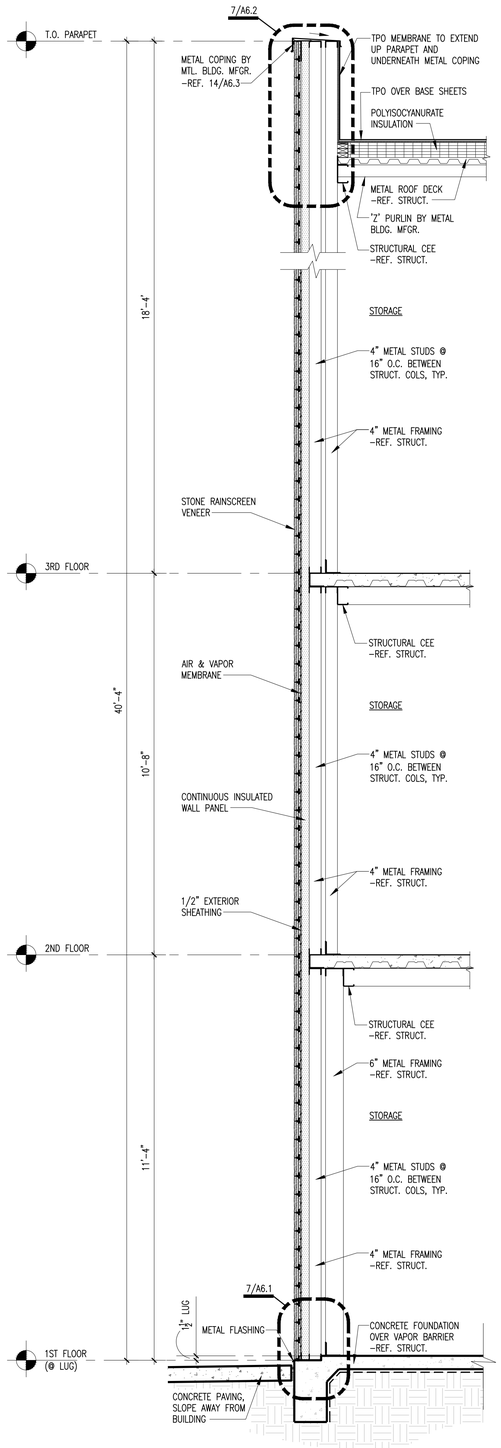
LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

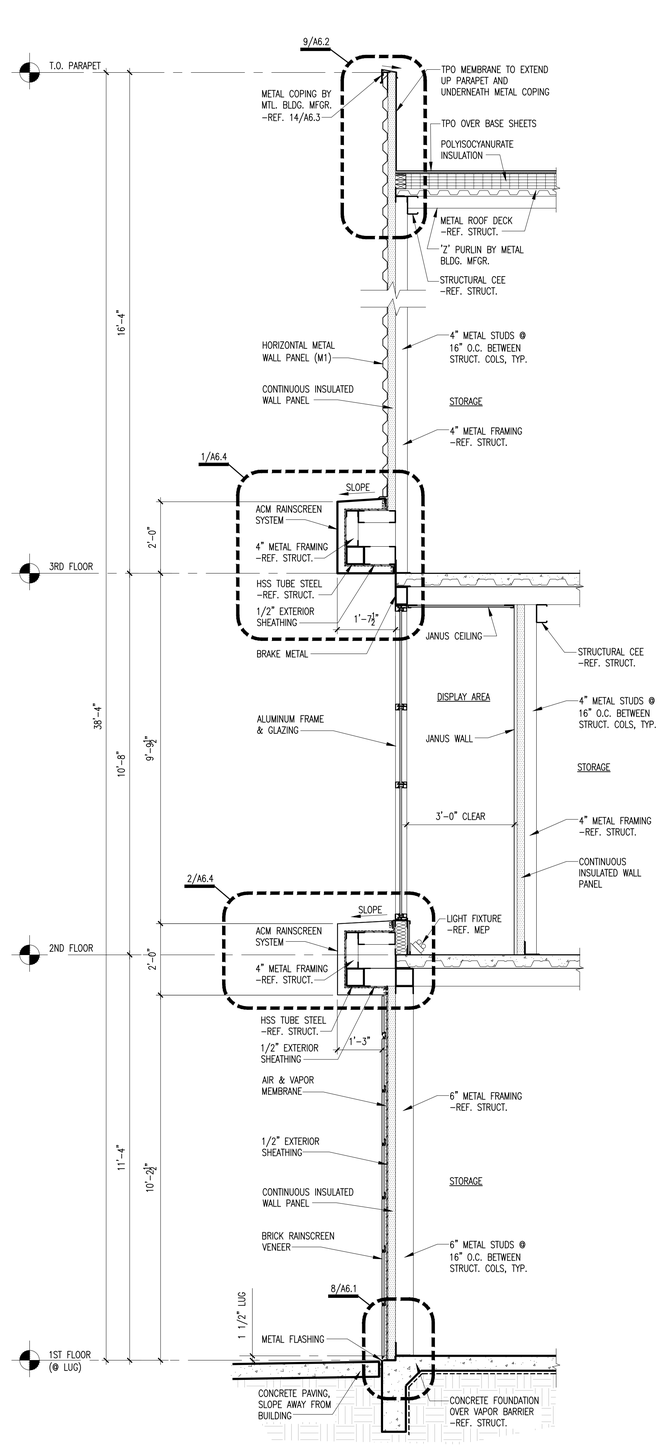
PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : VP
REVISIONS:

WALL SECTIONS

SHEET NO.
A4.3



1 WALL SECTION
SCALE: 1/2" = 1'-0"



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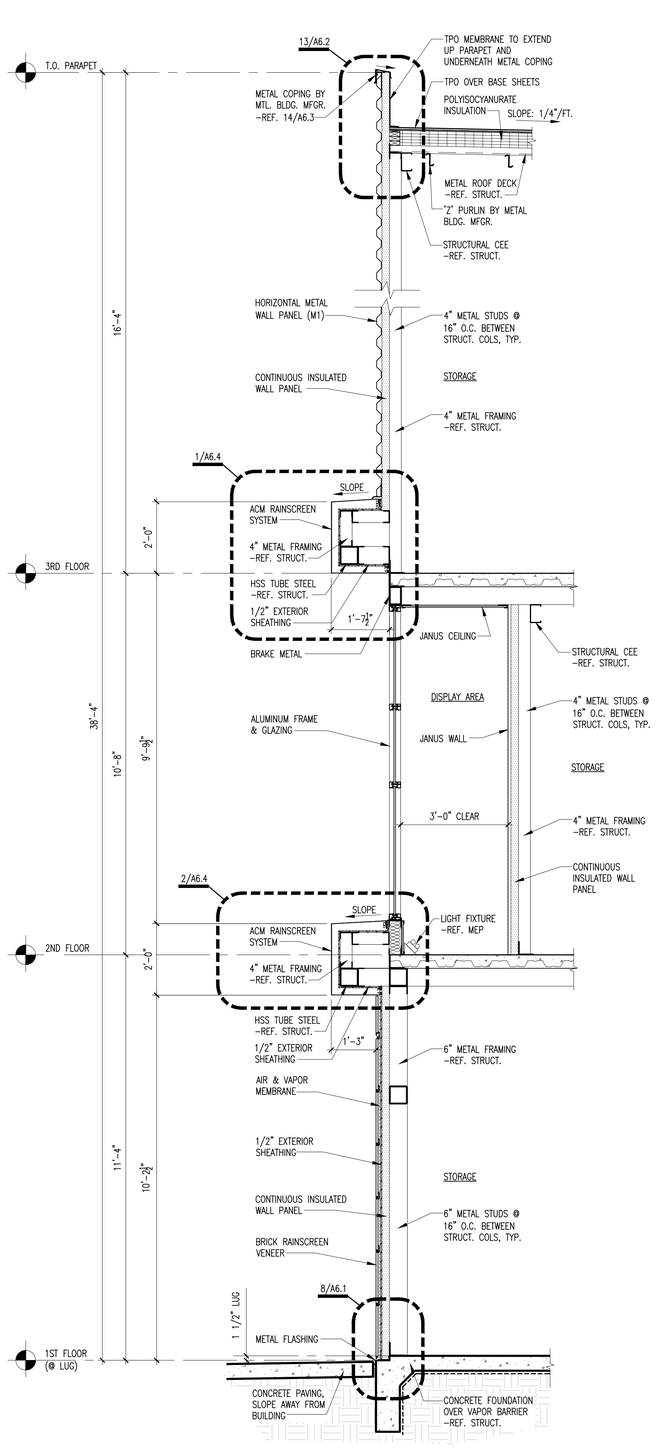

3 WALL SECTION
SCALE: 1/2" = 1'-0"

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03/02/2022

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315 NINTH STREET - SUITE 1
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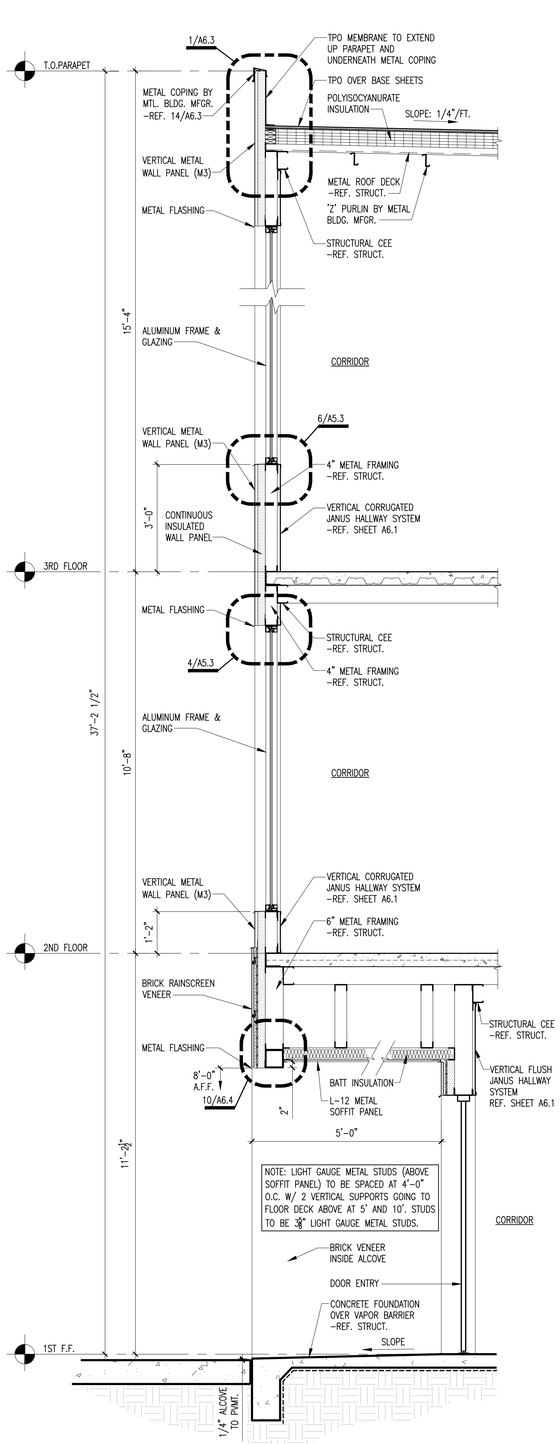
REVISIONS:

WALL SECTIONS

SHEET NO.
A4.4



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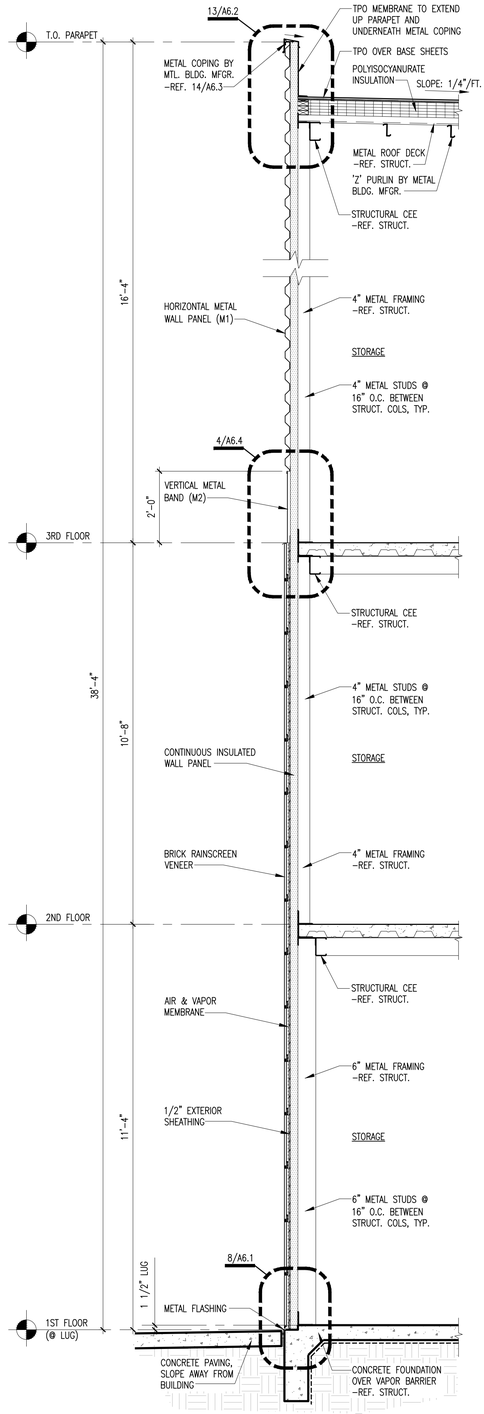

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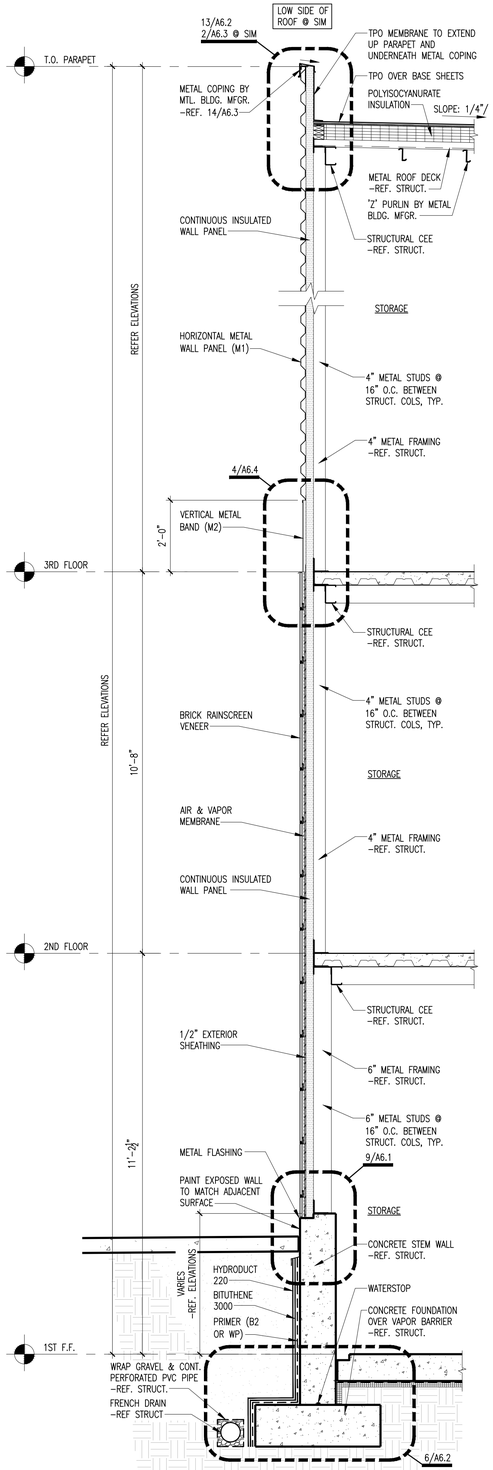

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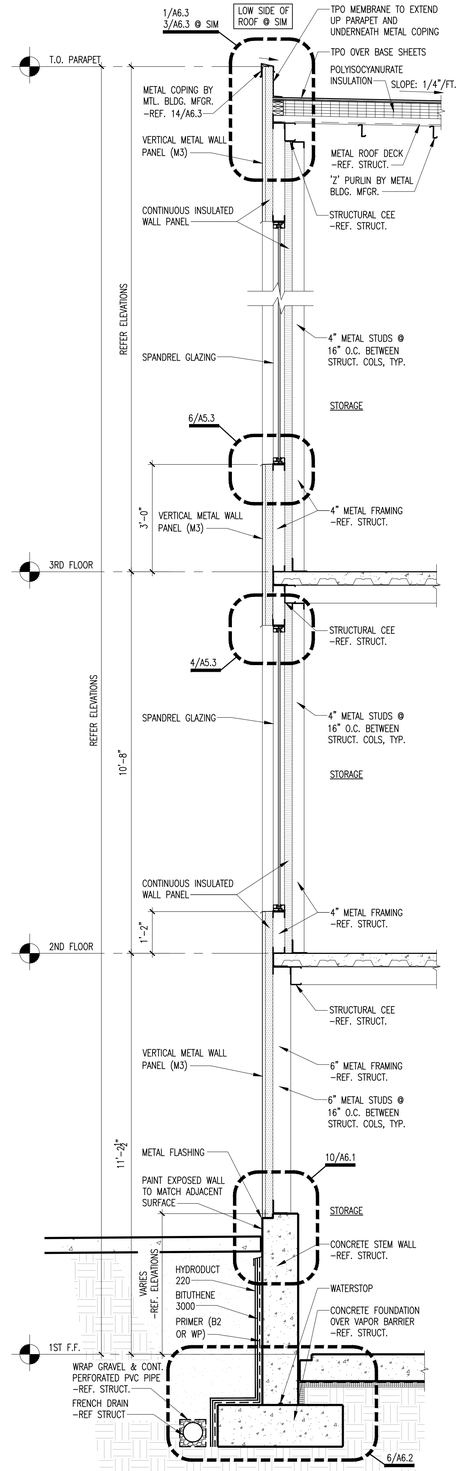

4 WALL SECTION
SCALE: 1/2" = 1'-0"

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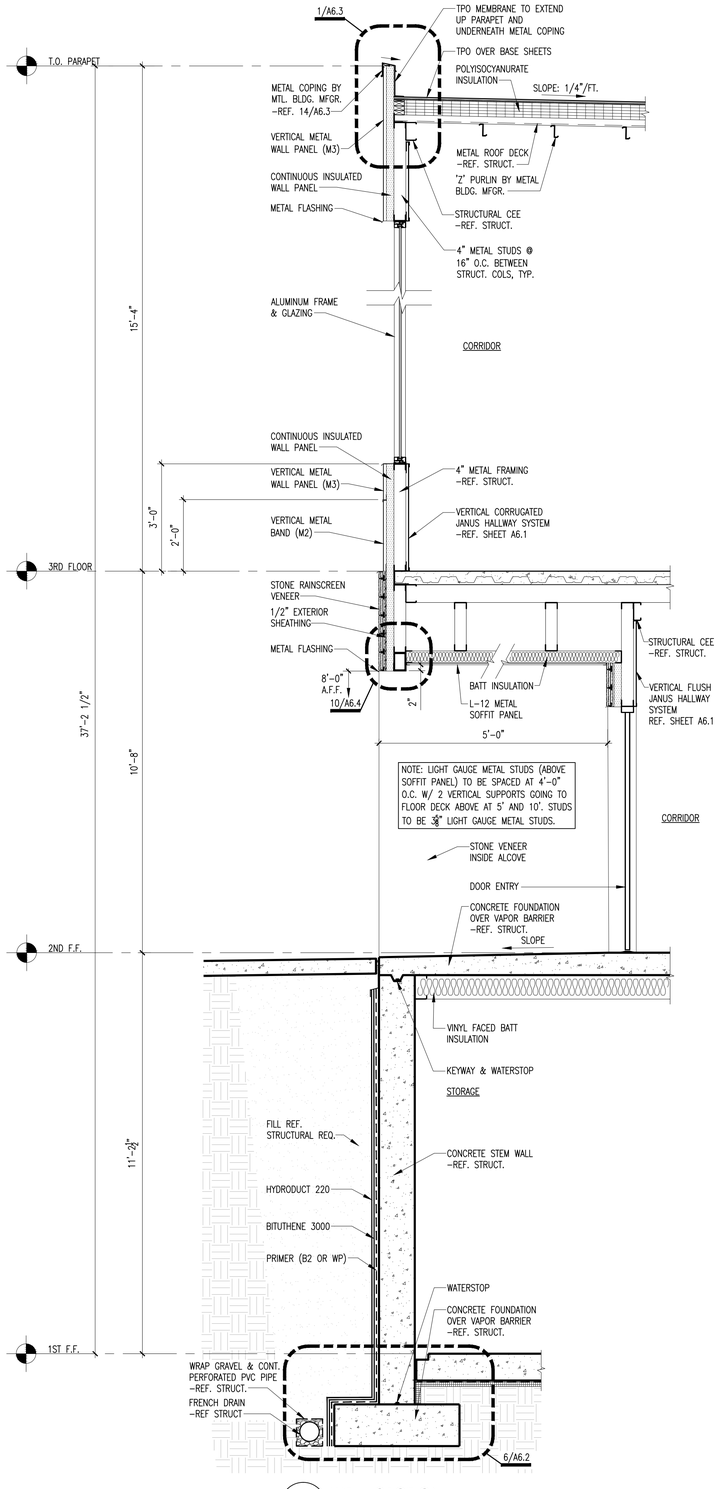
WALL SECTIONS

SHEET NO.
A4.5



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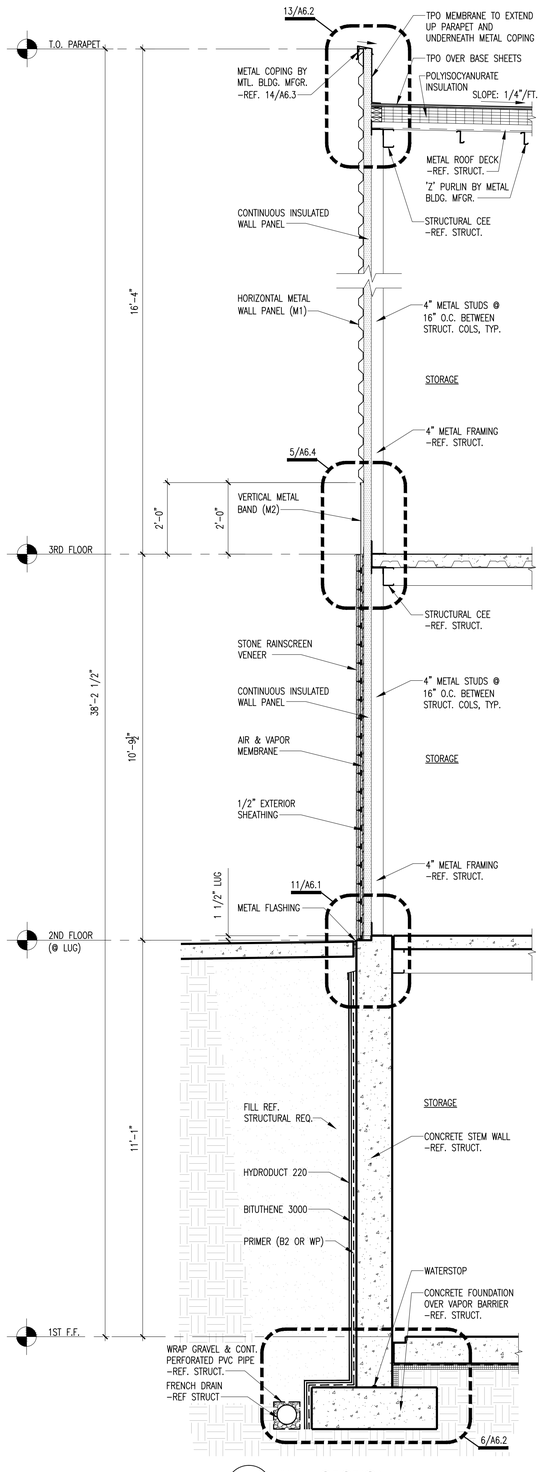

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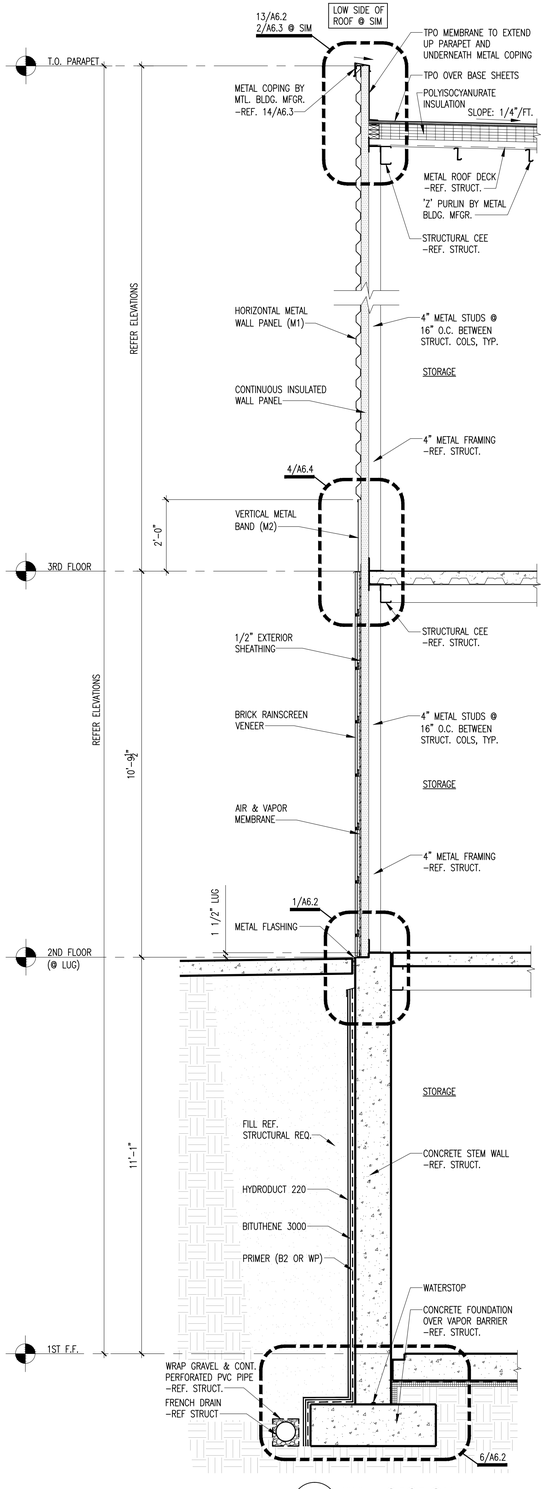

3 WALL SECTION
SCALE: 1/2" = 1'-0"

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STATE OF MISSOURI
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LAKEWOOD STORAGE

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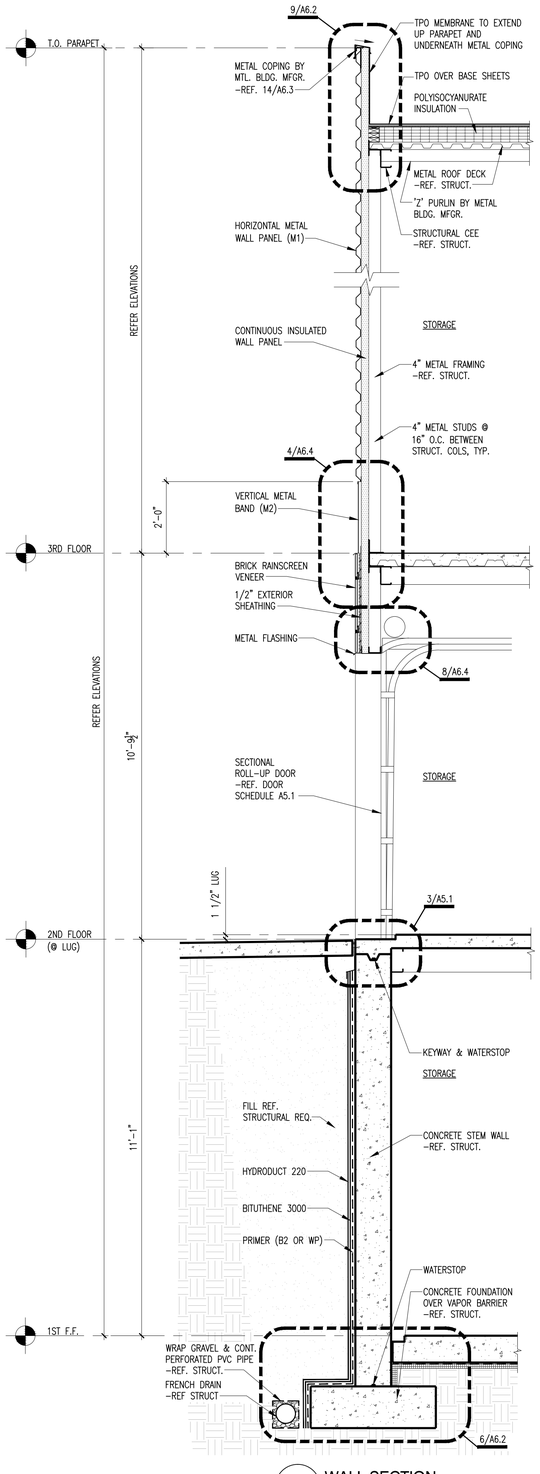
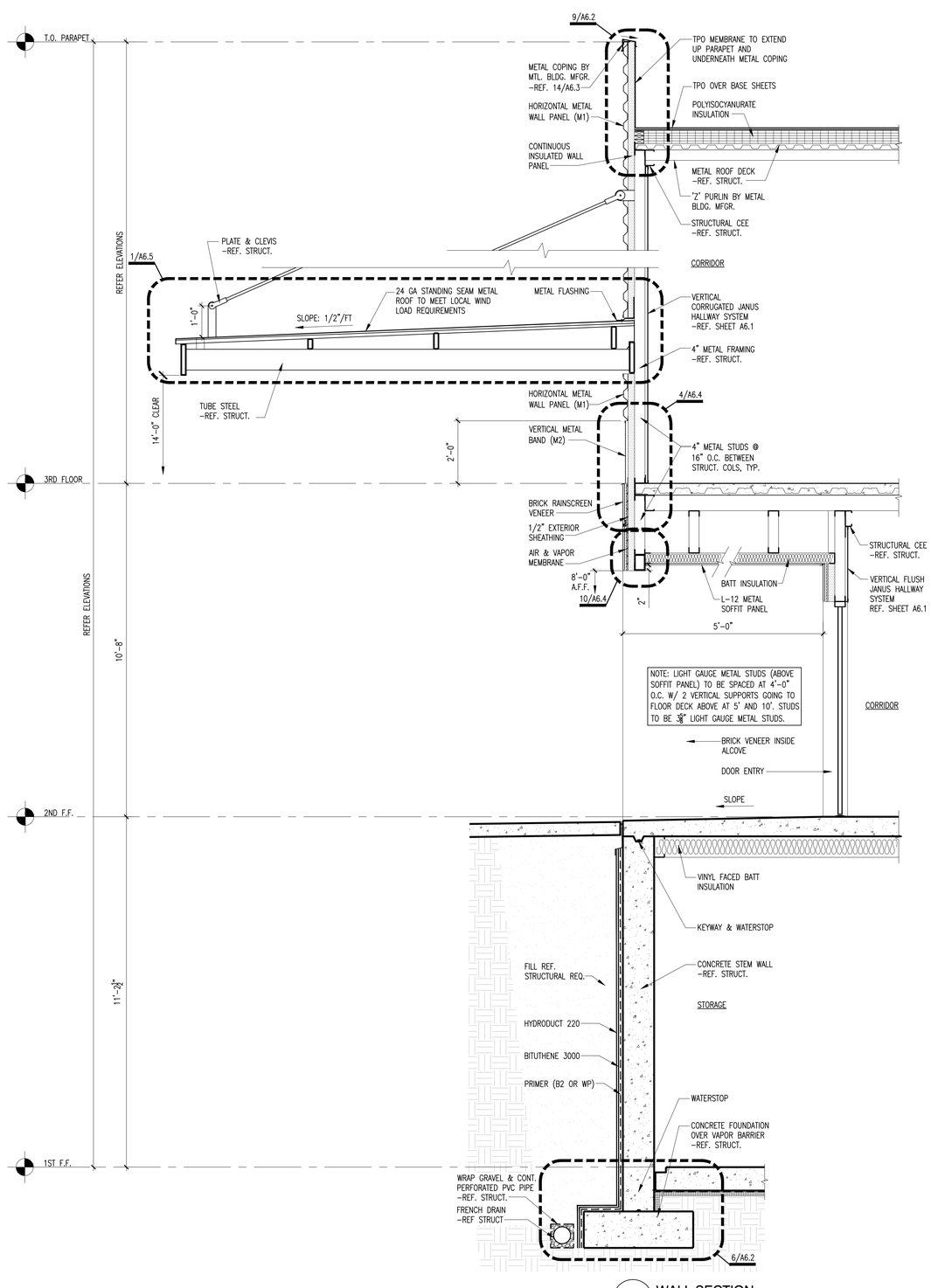
REVISIONS:

WALL SECTIONS

SHEET NO.
A4.6



1 WALL SECTION
SCALE: 1/2" = 1'-0"



2 WALL SECTION
SCALE: 1/2" = 1'-0"

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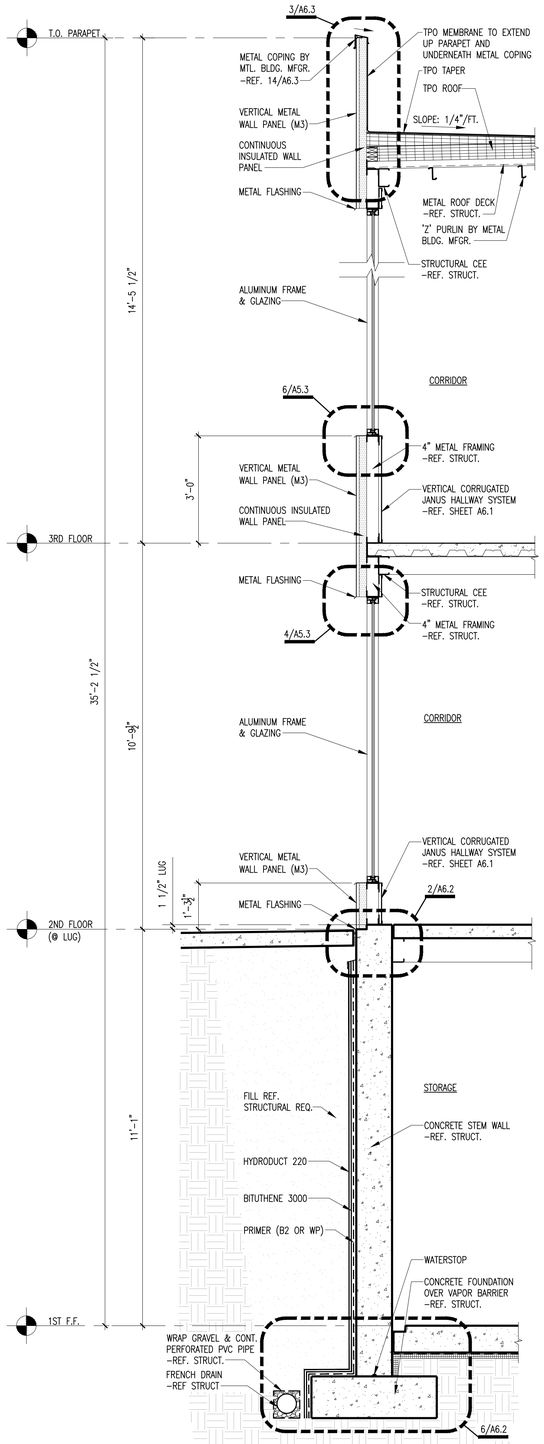
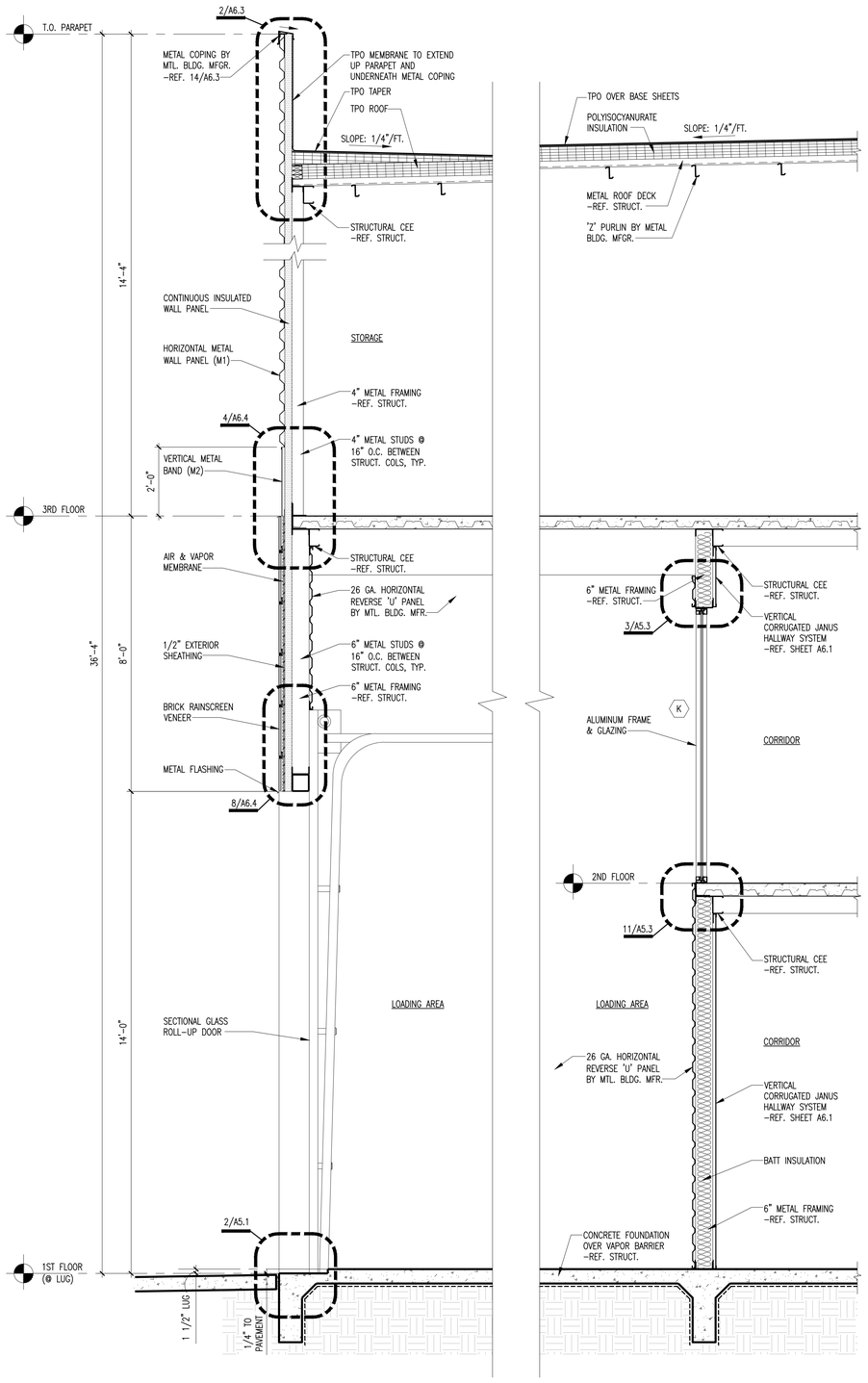
WALL SECTIONS

SHEET NO.
A4.7



1 WALL SECTION
SCALE: 1/2" = 1'-0"



2 WALL SECTION
SCALE: 1/2" = 1'-0"

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PROJECT NO. 2035
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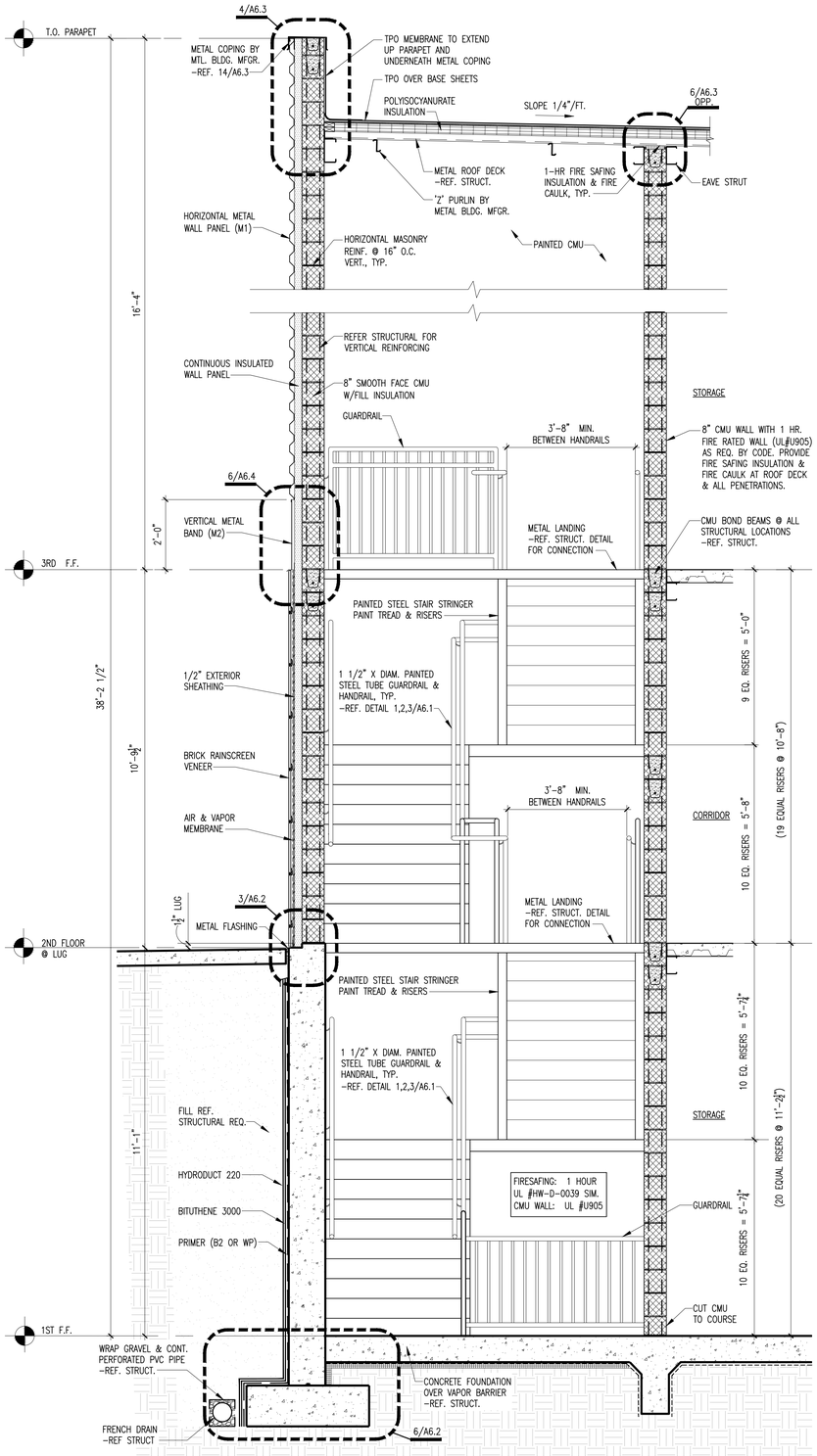
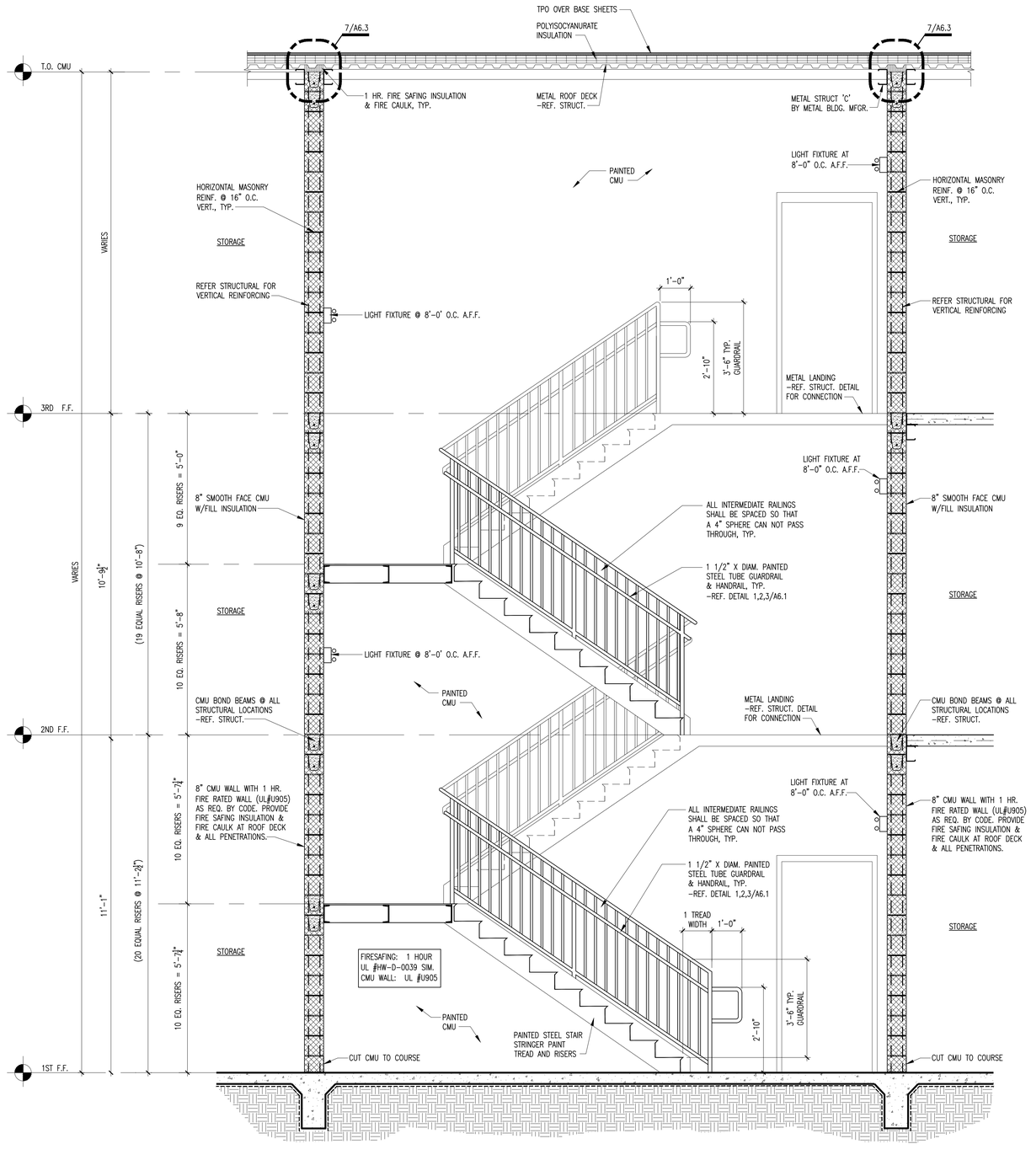
DRAWN : VP
REVISIONS:

WALL SECTIONS

SHEET NO.
A4.8



1 STAIR A SECTION
SCALE: 1/2" = 1'-0"



2 STAIR A SECTION
SCALE: 1/2" = 1'-0"

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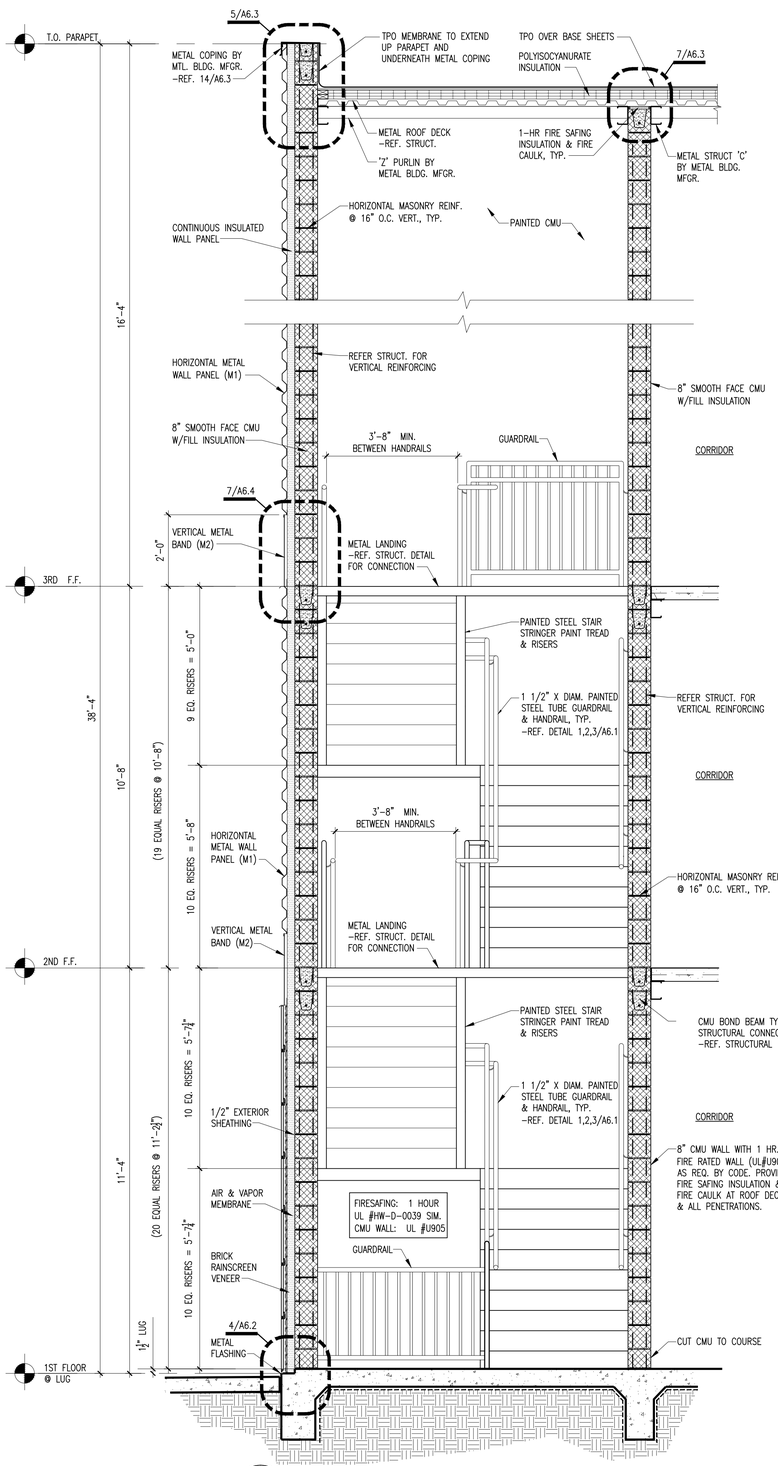
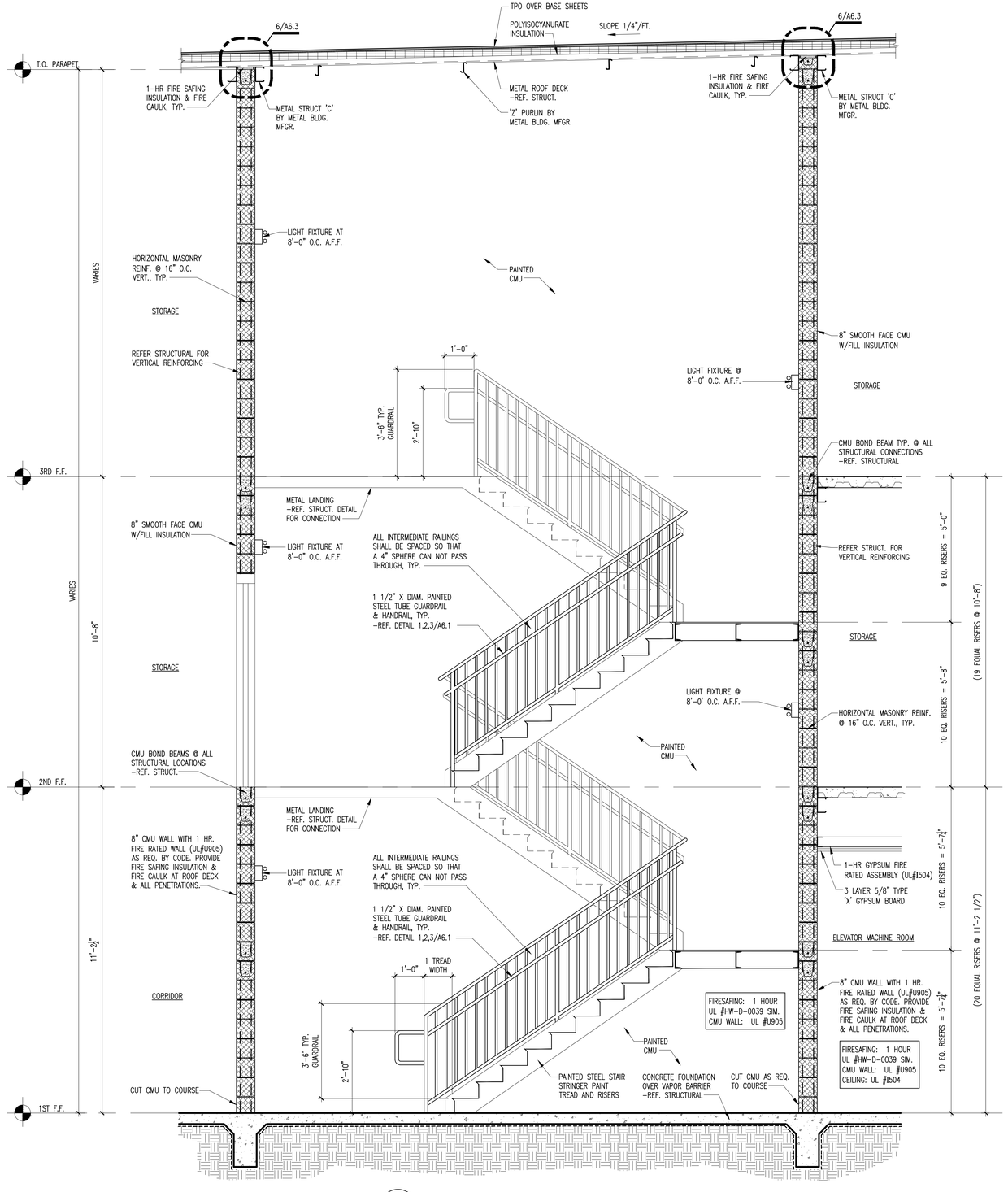
REVISIONS:

STAIR A SECTIONS

SHEET NO.
A4.9



1 STAIR B SECTION
SCALE: 1/2" = 1'-0"



2 STAIR B SECTION
SCALE: 1/2" = 1'-0"

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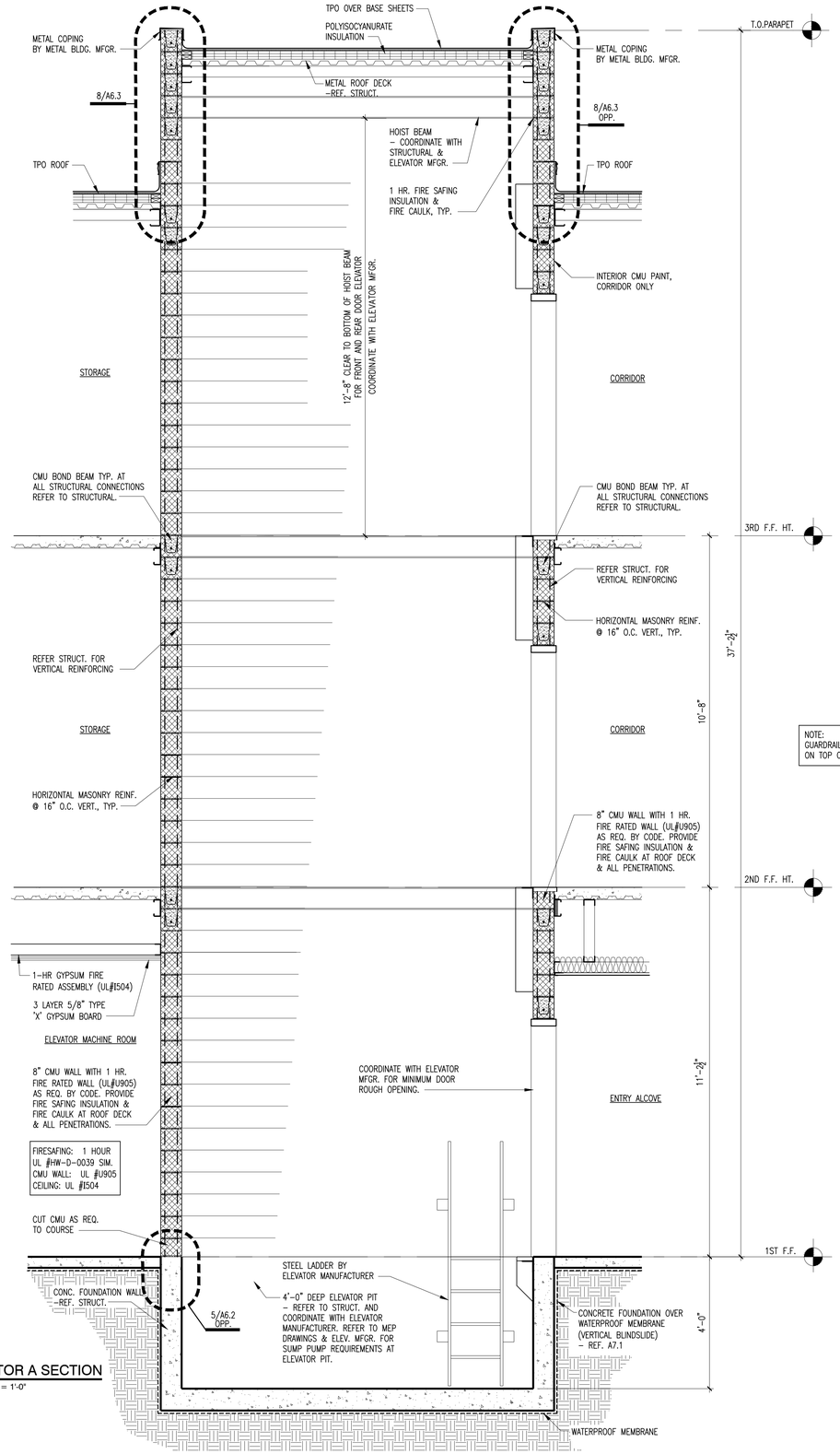
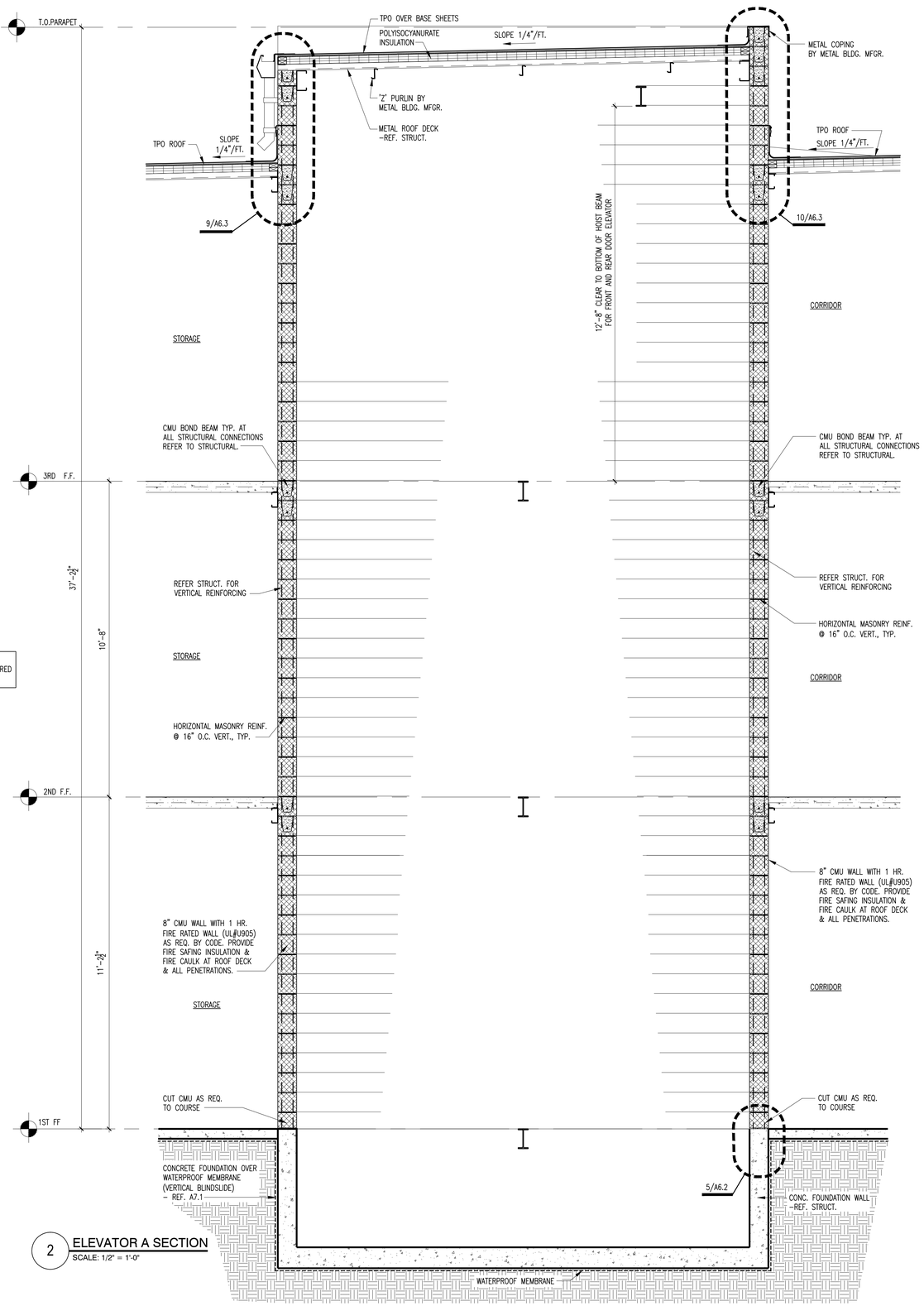
STAIR B SECTIONS

SHEET NO.
A4.10



1 ELEVATOR A SECTION
SCALE: 1/2" = 1'-0"



2 ELEVATOR A SECTION
SCALE: 1/2" = 1'-0"

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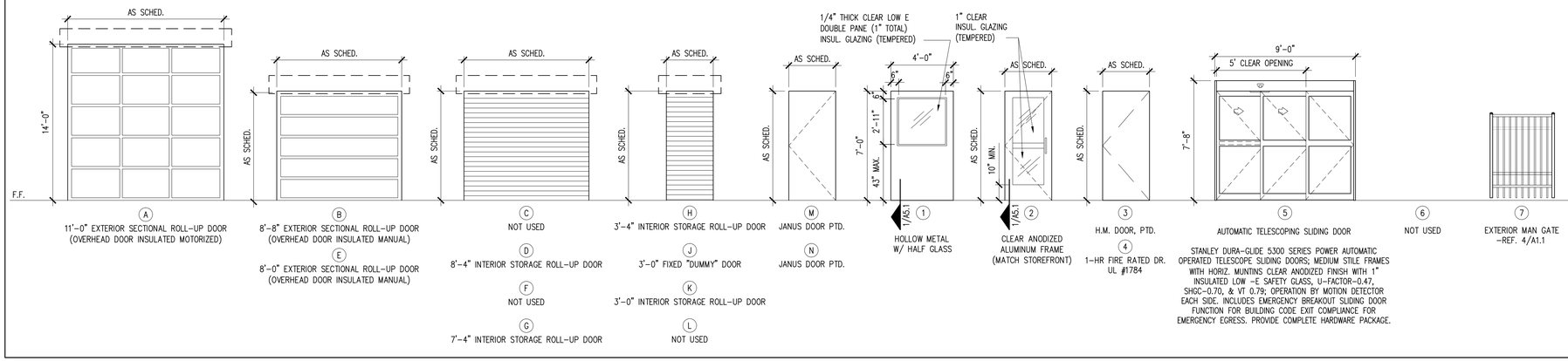
ELEV. A & B SECTIONS

SHEET NO.
A4.11

DOOR TYPES



(A) 11'-0" EXTERIOR SECTIONAL ROLL-UP DOOR (OVERHEAD DOOR INSULATED MOTORIZED)

(B) 8'-8" EXTERIOR SECTIONAL ROLL-UP DOOR (OVERHEAD DOOR INSULATED MANUAL)

(E) 8'-0" EXTERIOR SECTIONAL ROLL-UP DOOR (OVERHEAD DOOR INSULATED MANUAL)

(C) NOT USED

(D) 8'-4" INTERIOR STORAGE ROLL-UP DOOR

(F) NOT USED

(G) 7'-4" INTERIOR STORAGE ROLL-UP DOOR

(H) 3'-4" INTERIOR STORAGE ROLL-UP DOOR

(J) 3'-0" FIXED "DUMMY" DOOR

(K) 3'-0" INTERIOR STORAGE ROLL-UP DOOR

(L) NOT USED

(M) JANUS DOOR PTD.

(N) JANUS DOOR PTD.

(1) HOLLOW METAL W/ HALF GLASS

(2) CLEAR ANODIZED ALUMINUM FRAME (MATCH STOREFRONT)

(3) H.M. DOOR, PTD.

(4) 1-HR FIRE RATED DR. UL #1784

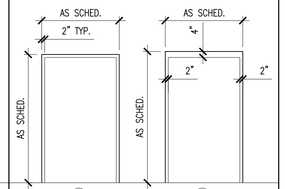
(5) AUTOMATIC TELESCOPING SLIDING DOOR

STANLEY DURA-GLIDE 5300 SERIES POWER AUTOMATIC OPERATED TELESCOPE SLIDING DOORS; MEDIUM STILE FRAMES WITH HORIZ. MUNTINS CLEAR ANODIZED FINISH WITH 1" INSULATED LOW -E SAFETY GLASS, U-FACTOR-0.47, SHGC-0.70, & VT 0.79; OPERATION BY MOTION DETECTOR EACH SIDE. INCLUDES EMERGENCY BREAKOUT SLIDING DOOR FUNCTION FOR BUILDING CODE EXIT COMPLIANCE FOR EMERGENCY EGRESS. PROVIDE COMPLETE HARDWARE PACKAGE.

(6) NOT USED

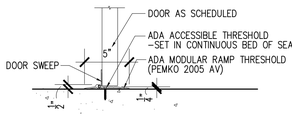
(7) EXTERIOR MAN GATE -REF. 4/A1.1

FRAME TYPES

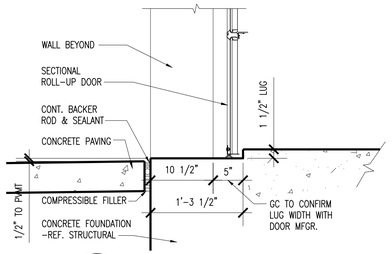


(1) H.M. FRAME, PAINT

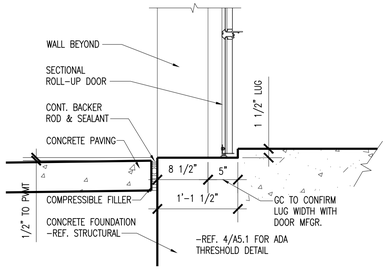
(2) H.M. FRAME, PAINT



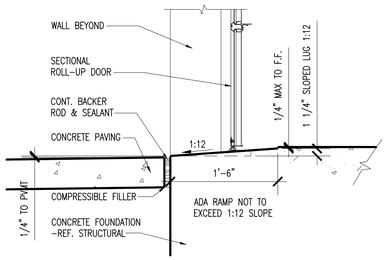
1 THRESHOLD DETAIL
SCALE: 1 1/2" = 1'-0"



2 THRESHOLD DETAIL @ PULL IN BAYS
SCALE: 1" = 1'-0"



3 THRESHOLD DETAIL @ EXIT UNITS
SCALE: 1" = 1'-0"



4 THRESHOLD DETAIL (ADA)
SCALE: 1" = 1'-0"

FINISH SCHEDULE

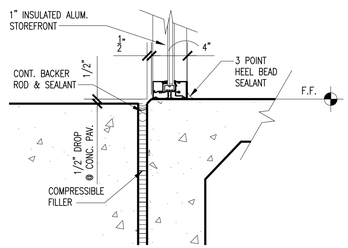
			FLOOR		WALLS				CEILING		KEYED NOTES
FIRST FLOOR			MATERIAL	BASE	NORTH	SOUTH	EAST	WEST	HEIGHT	TYPE	
OFFICE	101	SALES AREA	PC	WD	PT-1	PT-1	-	PT-1	-	ES	-
	102	RECEPTION DESK	PC	WD	PT-1	PT-1	PT-1/PT-2	-	VARIES	GYP.	-
	103	MDF / BREAK ROOM	PC	RUBBER	PT-1	PT-1	PT-1	PT-1	8'-0"	LAY-IN	2
	104	AHU ROOM	PC	-	PT-1	PT-1	PT-1	PT-1	-	ES	-
	105	DISPLAY AREA	PC	WD	PT-1	PT-1	PT-1	-	-	ES	3
	106	MENS T.R.	PFT	-	PT-1/PWT	PT-1/PWT	PT-1/PWT	PT-1/PWT	8'-0"	GYP.	1,2
	107	WOMENS T.R.	PFT	-	PT-1/PWT	PT-1/PWT	PT-1/PWT	PT-1/PWT	8'-0"	GYP.	1,2
	108	DRINKING FOUNTAIN	PC	-	JANUS	JANUS	JANUS	JANUS	-	ES	-
	109	LOADING AREA	SLT	-	JANUS	JANUS	JANUS	JANUS	-	ES	-

KEYED NOTES:
1. PORCELAIN TILE WAINSCOT TO 4'-0" A.F.F.
2. ACOUSTICAL BATT INSULATION ABOVE CEILING.
3. DUMMY DOORS PER FLOOR PLANS.

GENERAL NOTES:
A. GENERAL CONTRACTOR TO SUBMIT ALL FINISH SELECTIONS TO OWNER AND ARCHITECT FOR APPROVAL PRIOR TO ORDERING
B. REF. SHEET A7.1 FOR SPECIFICATIONS.
C. GENERAL CONTRACTOR TO PROVIDE ALLOWANCE FOR CERAMIC TILE IN ROOMS 101-105 AS AN ALTERNATE

LEGEND:

ES	EXPOSED STRUCTURE
GRID	2X2 CEILING GRID ONLY
GYP	5/8" TYPE 'X' GYPSUM BOARD
JANUS	JANUS WALL SYSTEM
LAY-IN	2x2 LAY-IN ACOUSTICAL CEILING
PC	POLISHED CONCRETE
PFT	PORCELAIN FLOOR TILE
PT-1	INTERIOR OFFICE PAINT
PT-2	INTERIOR OFFICE PAINT - ACCENT
PWT	PORCELAIN WALL TILE
RUBBER	RUBBER WALL BASE
WD	PAINTED WOOD BASE
SLT	SEALANT WITH TRAFFIC COATING



5 STOREFRONT DETAIL
SCALE: 1 1/2" = 1'-0"

DOOR NOTES

1: DOOR HARDWARE TO BE APPROVED BY OWNER BASED ON SUBCONTRACTOR SUBMITTAL.

2: CONTRACTOR TO COORDINATE DOOR HARDWARE AND FRAMES WITH SECURITY EQUIPMENT AND MAGNETIC HOLD OPEN DEVICES.

3: PROVIDE MIN. INTERIOR & EXTERIOR ACCESSIBLE HARDWARE, THRESHOLDS, SIGNAGE, ETC. TO COMPLY W/ ADA ACCESSIBILITY STANDARDS. REFERENCE FLOOR PLANS FOR LOCATIONS.

4: NOT USED

5: NOT USED

6: STORAGE ROLL-UP DOORS-PROVIDE ALUM. HANDLES W/ SLIDE BAR LATCH TO FRAME, CONTINUOUS ALUM. BOTTOM PULL BAR, WEATHER SEALS (EXTERIOR) AND REMOVABLE CYLINDER LOCK W/ EMERGENCY OVERRIDE LATCH OPERATOR TO OPERATOR.

7: GLAZING IN ALL EXTERIOR DOORS TO BE INSULATED LOW-E GLAZING W/ 1/4" DOUBLE PANES W/ 1/2" AIR SPACE (1" TOTAL) (TEMPERED).

8: THRESHOLDS 1/2" LUGS NOT REQUIRED AT ALCOVE ENTRIES.

9: READILY VISIBLE DURABLE SIGN POSTED ON THE EGRESS SIDE ON OR ADJACENT TO THE DOOR STATING: "THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED" -REF. SHEET A2.6 FOR INSTALLATION INSTRUCTIONS.

10: FIRE RATED DOORS TO BE SELF CLOSING OR AUTOMATIC CLOSING.

11: READILY VISIBLE DURABLE SIGN POSTED ON EGRESS SIDE ADJACENT TO DOOR STATING: "EXIT" IN TACTILE LETTERS & BRAILLE -REF SHEET A2.6 FOR INSTALLATION INSTRUCTIONS.

12: READILY VISIBLE DURABLE SIGN POSTED ON ENTRY SIDE OF DOOR STATING "ROOM NAME" IN TACTILE LETTERS AND BRAILLE - REF. SHEET A2.6 FOR INSTALLATION INSTRUCTIONS.

13: ROLL UP DOORS TO MEET LOCAL WIND LOAD REQUIREMENTS.

14: CONSTRUCTION CORES TO REMAIN - REKEYING/MASTER KEYING BY OWNER

15: 3'-0" CLEAR MAN GATE - ORNAMENTAL IRON APPLIED METAL SECURITY MESH AT GATE AND ADJACENT FENCE PANEL EXTEND FULL LENGTH OF EITHER SIDE OF LOCKSET. LEVER HARDWARE PER ADA REQUIREMENTS.

16: SLIDING DOOR OPENING TO BE ON SAME SIDE AS MAN DOOR ADJACENT.

17: DOORS TO COMPLY WITH ENERGY CODES SHOWN ON SHEET A7.1.

18: DOORS TO COMPLY WITH LOCAL WIND LOAD CAPACITY.

STORAGE DOOR SCHEDULE

MARK	WIDTH	HEIGHT	DOOR TYPE	FRAME TYPE	REMARKS
(A)	11'-0"	14'-0"	EXT. SECT.	-	17,28
(B)	8'-8"	8'-0"	EXT. SECT.	-	17,28
(C)			NOT USED		
(D)	8'-4"	7'-0"	INT. ROLL-UP	-	17
(E)	8'-0"	8'-0"	EXT. SECT.	-	17,28
(F)			NOT USED		
(G)	7'-4"	7'-0"	INT. ROLL-UP	-	17
(H)	3'-4"	7'-0"	INT. ROLL-UP	-	17
(J)	3'-0"	7'-0"	DUMMY DOOR	-	9,17
(K)	3'-0"	7'-0"	INT. ROLL-UP	-	17
(L)			NOT USED		
(M)	3'-0"	7'-0"	JANUS SWING	-	17
(N)	3'-0"	7'-0"	JANUS SWING	-	17,29

DOOR SCHEDULE

LOCATION	MARK	WIDTH	HEIGHT	DOOR TYPE	FRAME TYPE	REMARKS
OFFICE ENTRY	(1)	3'-0"	7'-0"	2	STFT	1,2,3,5,8,9,11,15,16,17,18,23
MDF ROOM	(2)	3'-0"	7'-0"	3	1	11,15,20
AHU ROOM	(3)	3'-0"	7'-0"	3	1	7,10,11,20
OFFICE / LOADING	(4)	3'-0"	7'-0"	1	1	11,15,20
OFFICE / STORAGE	(5)	3'-0"	7'-0"	3	1	11,15,20
TOILET ROOM	(6)	3'-0"	7'-0"	3	1	11,14,20,24
TOILET ROOM	(7)	3'-0"	7'-0"	3	1	11,14,20,24
SLIDING DOOR	(8)	9'-0"	7'-8"	5L	-	3,13,19,21,22,30
LOADING EXIT	(9)	3'-0"	7'-0"	1	1	1,2,3,8,10,11,12,16,19,24
STAIR B - 1ST FLR	(10)	3'-0"	7'-0"	4	1	1,2,6,10,11,19,24
STAIR B - EXIT	(11)	3'-0"	7'-0"	3	1	1,2,3,8,10,11,12,16,19,24
ELEV. MACHINE RM	(12)	3'-6"	7'-0"	3	1	2,6,10,11,20
ELECTRICAL ROOM	(13)	3'-0"	7'-0"	3	1	2,3,8,10,11,12,16,20
FIRE RISER ROOM	(14)	6'-0" PR	7'-0"	3	1	2,3,8,10,11,12,16,20
SLIDING DOOR	(15)	9'-0"	7'-8"	5R	-	3,13,19,21,22,27
STAIR A - 1ST FLR	(16)	3'-0"	7'-0"	4	2	1,2,6,10,11,19,24
STAIR A - EXIT	(17)	3'-0"	7'-0"	3	2	1,2,3,8,10,11,12,16,19,24
ALCOVE ENTRY	(18)	4'-0"	7'-0"	1	1	1,2,3,4,10,11,12,13,16,19,24
SLIDING DOOR	(19)	9'-0"	7'-8"	5R	-	3,13,19,21,22,27
STAIR B - 2ND FLR	(20)	3'-0"	7'-0"	4	2	1,2,6,10,11,19,24
STAIR A - 3RD FLR	(21)	3'-0"	7'-0"	4	2	1,2,6,10,11,19,24
STAIR B - 3RD FLR	(22)	3'-0"	7'-0"	4	2	1,2,6,10,11,19,24
MAN GATE	(23)	3'-0"	6'-0"	7	-	1,2,24,25

REMARKS::
1: PANIC HARDWARE
2: DOOR CLOSER
3: WEATHER STRIPPING / THRESHOLD -REF. DETAIL 1/A5.1
4: MAGNETIC HOLD OPEN DOORS W/ 15 MINUTE TIMER
5: DEADBOLT
6: FIRE RATED - 1-HR (REF. NOTE 10)
7: VENTED AT AHU LOCATIONS
8: DRIP FLASHING
9: FIXED "DUMMY DOORS
10: STORAGE LOCKSET
11: DOOR STOP
12: INSULATED
13: KEY PAD
14: TR LOCKSET
15: OFFICE LOCKSET
16: DOOR SWEEP
17: COLOR: REF. SHEET A7.1
18: DOOR SIGNAGE @ ENTRY (REF. NOTE 9)
19: DOOR SIGNAGE @ EXITS (REF. NOTE 11)
20: DOOR SIGNAGE @ IDENTIFYING ROOMS (REF. NOTE 12)
21: STANLEY ACCESS CONTROL (PANIC BAR & ELECTRIC LOCK)
22: STANLEY TIMER
23: MAIL-SLOT
24: KICKPLATE ON PUSH SIDE
25: MAN GATE KEYSET
26: NOT USED
27: RIGHT HAND OPENING
28: INSULATED SECTIONAL ROLL-UP DOOR
29: CLASP ON LATCH PUSH SIDE
30: LEFT HAND OPENING

⚠1 CITY COMMENTS 01.20.2022

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STATE OF MISSOURI
JEFFREY S. DALLENBACH
DALLENBACH NUMBER A-2020056988
PROFESSIONAL ARCHITECT
01.20.2022
JEFFREY S. DALLENBACH, AIA
MISSOURI REGISTRATION NO. A-2020056988

LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : VP

REVISIONS:
⚠1 CITY COMMENTS 01.20.2022

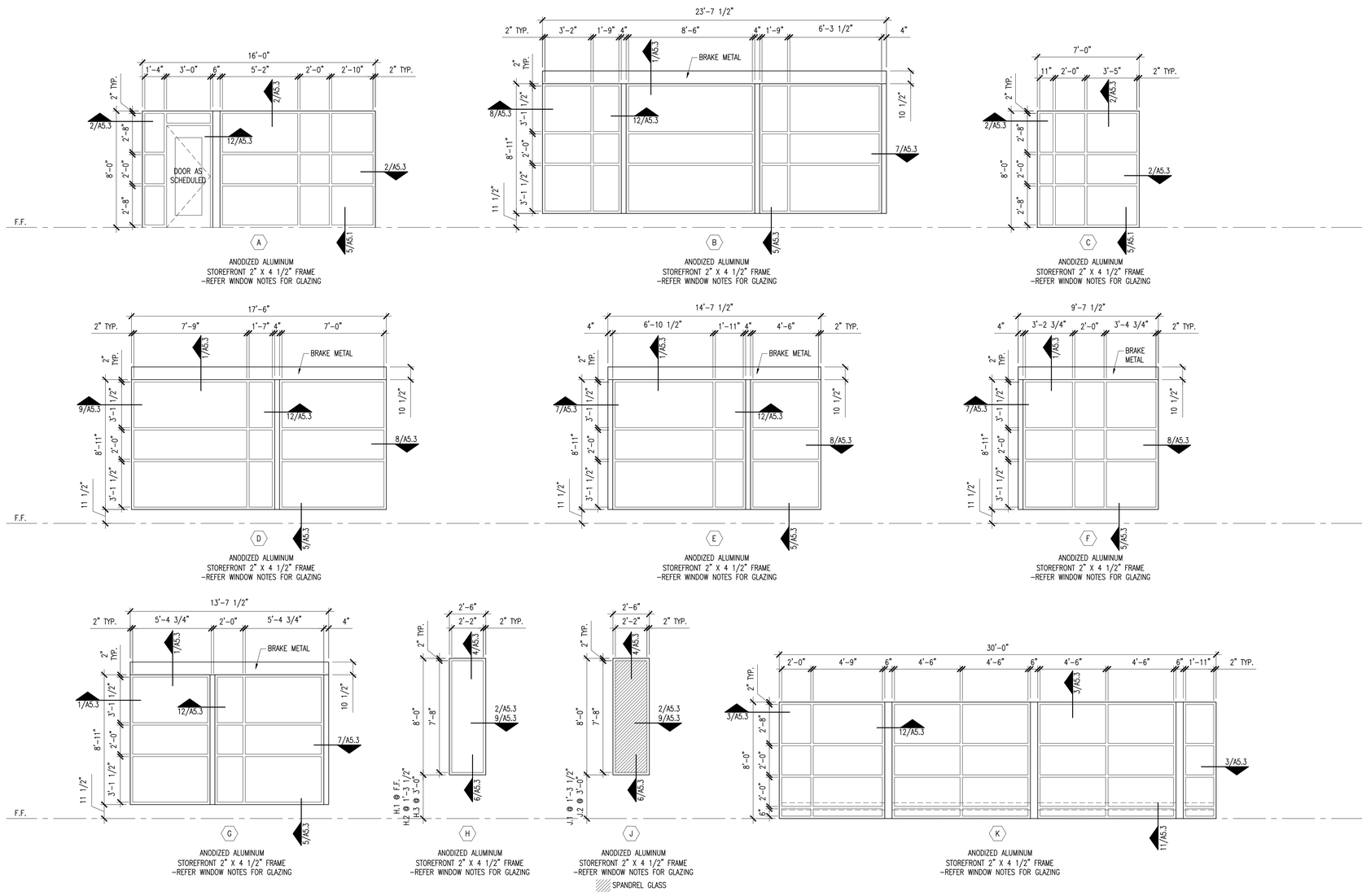
WDW/DOOR SCHEDULES

SHEET NO.
A5.1

WINDOW NOTES

1. VERIFY ALL ROUGH OPENING DIMENSIONS IN RELATION TO STRUCTURAL DRAWINGS. FRAME SIZES TO BE ADJUSTED AS NECESSARY FOR PROPER SHIM, FLASHING, AND THERMAL EXPANSION.
2. SAFETY (TEMPERED) GLAZING IS REQUIRED IN AN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR WHERE THE NEAREST EXPOSED EDGE OF THE GLAZING IS WITHIN A 24-INCH ARC OF EITHER VERTICAL EDGE OF THE DOOR IN A CLOSED POSITION AND WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES ABOVE THE WALKING SURFACE (IBC 2406.3.6).
3. STOREFRONT INSULATED LOW-E GLAZING TO BE 1/4" DOUBLE PANES WITH 1/2" AIR SPACE(1" TOTAL)(TEMPERED).
4. EXTERIOR INSULATED LOW-E GLAZING TO BE 1/4" DOUBLE PANES WITH 1/2" AIR SPACE (1" TOTAL) (TEMPERED).
5. FLASH AND WEATHERSTRIP ALL EXTERIOR WINDOWS TO PROVIDE WATER RESISTANT ASSEMBLY.
6. WINDOW DIMENSION @ FIRST FINISHED FLOOR IS FROM LUG TO SILL.
7. WINDOW AND DOOR DIMENSIONS ARE ROUGH OPENINGS. DOORS, FRAMES, WINDOWS, ETC. ARE TO BE SIZED TO ALLOW SHIMS AND TOLERANCES TO MEET INDUSTRY STANDARDS AND THERMAL EXPOSION (DEFINE IN SHOP DRAWINGS).
8. STOREFRONTS TO BE ANODIZED ALUMINUM.

WINDOW TYPES



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LAKEWOOD STORAGE

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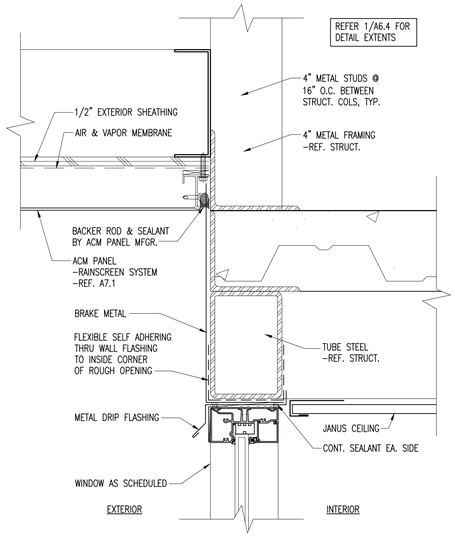
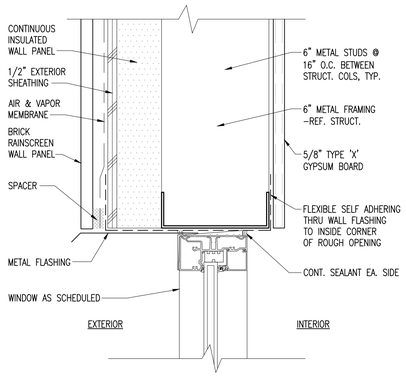
WINDOW TYPES

SHEET NO.
A5.2



1 HEAD DETAIL (JAMB SIM.)
SCALE: 3" = 1'-0"



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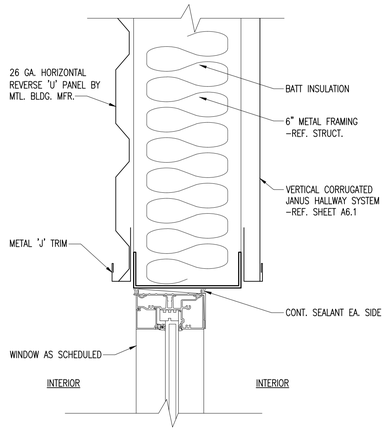

3 HEAD DETAIL (JAMB SIM.)
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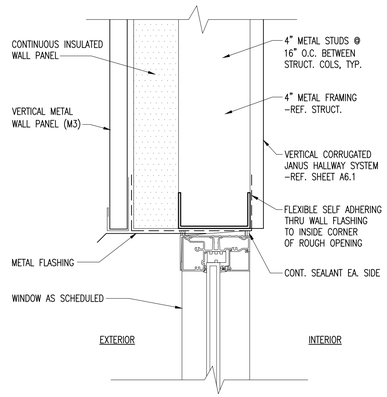

4 HEAD DETAIL
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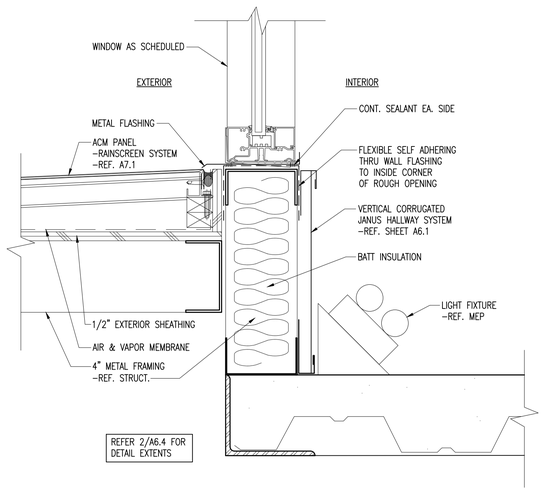
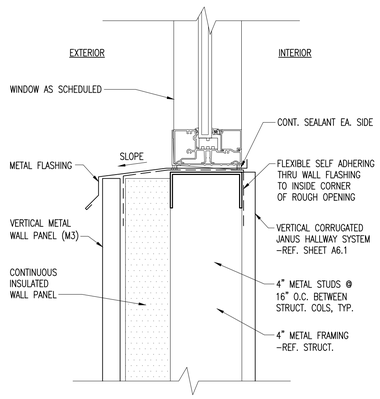
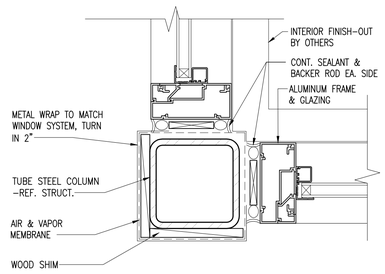


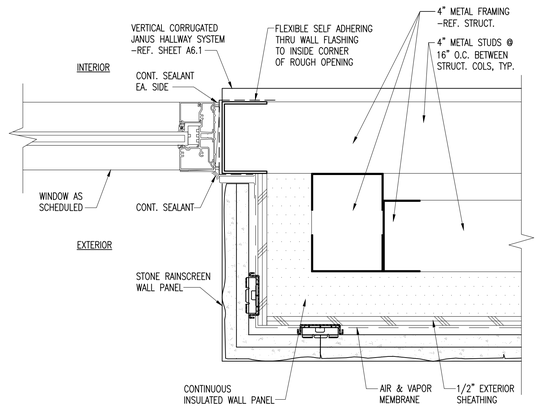
5 SILL DETAIL
SCALE: 3" = 1'-0"



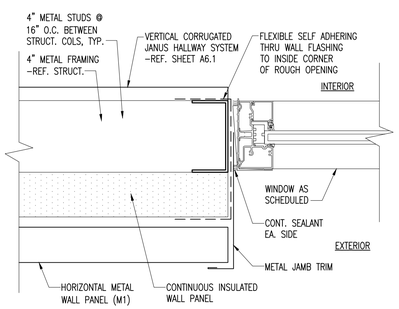
6 SILL DETAIL
SCALE: 3" = 1'-0"



7 CORNER DETAIL
SCALE: 3" = 1'-0"

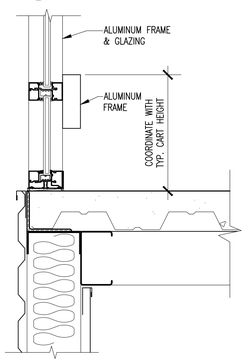


8 JAMB DETAIL
SCALE: 3" = 1'-0"

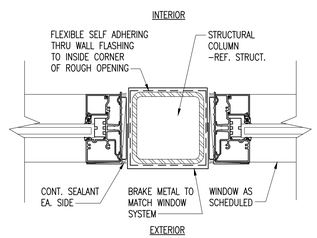


9 JAMB DETAIL
SCALE: 3" = 1'-0"

10 NOT USED
SCALE: 1 1/2" = 1'-0"



11 CART RAIL SECTION
SCALE: 1 1/2" = 1'-0"



12 COLUMN DETAIL
SCALE: 1 1/2" = 1'-0"

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LAKEWOOD STORAGE

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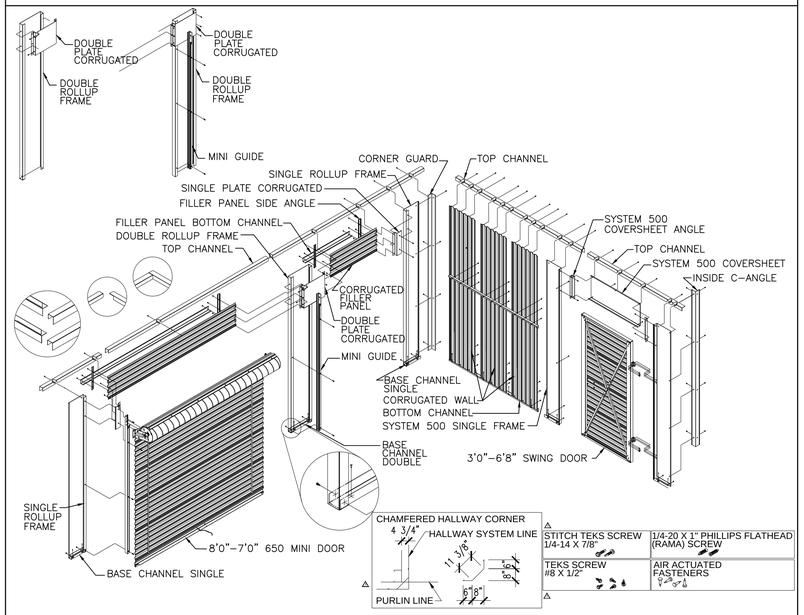
WINDOW DETAILS

SHEET NO.
A5.3

CORRUGATED HALLWAY SYSTEM



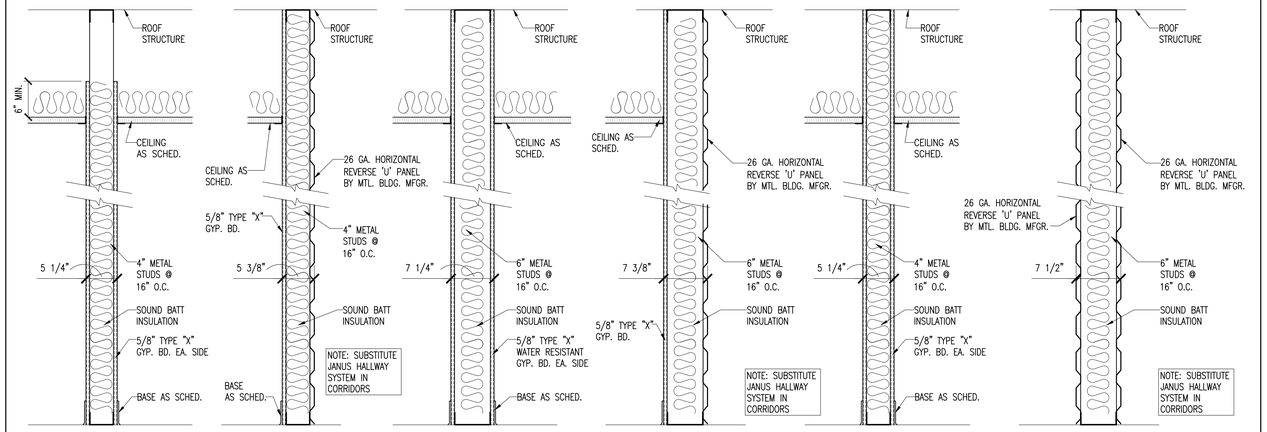
STITCH TEKS SCREW 1/4-14 X 7/8"	1/4-20 X 1" PHILLIPS FLATHEAD (RAMA) SCREW
TEKS SCREW #8 X 1/2"	AIR ACTUATED FASTENERS

JANUS/STORAGE SCHEDULE

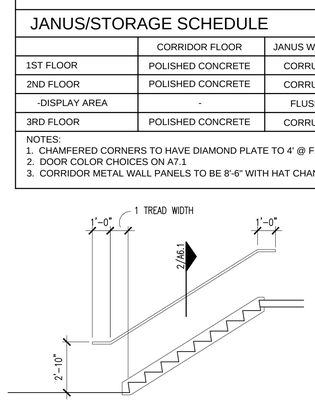
	CORRIDOR FLOOR	JANUS WALLS	COLOR	CORNERS	CMU WALLS	CEILING	CEILING HEIGHT
1ST FLOOR	POLISHED CONCRETE	CORRUG.	WHITE	CHAMFERED	PAINTED	NONE	-
2ND FLOOR	POLISHED CONCRETE	CORRUG.	WHITE	CHAMFERED	PAINTED	NONE	-
-DISPLAY AREA	-	FLUSH	WHITE	CHAMFERED	-	FLUSH	10'-9"
3RD FLOOR	POLISHED CONCRETE	CORRUG.	WHITE	CHAMFERED	PAINTED	NONE	-

NOTES:
1. CHAMFERED CORNERS TO HAVE DIAMOND PLATE TO 4' @ F.F. & 12" BASE IN HIGH TRAFFIC AREA - COLOR: WHITE
2. DOOR COLOR CHOICES ON A7.1
3. CORRIDOR METAL WALL PANELS TO BE 8'-6" WITH HAT CHANNELS SPACED @ 12" O.C. ABOVE.

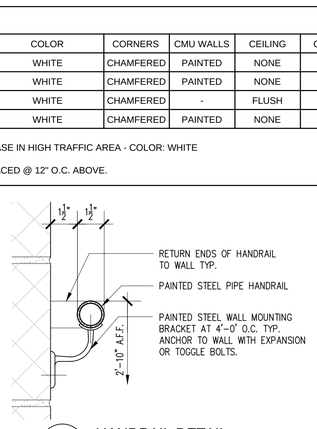
PARTITION TYPES



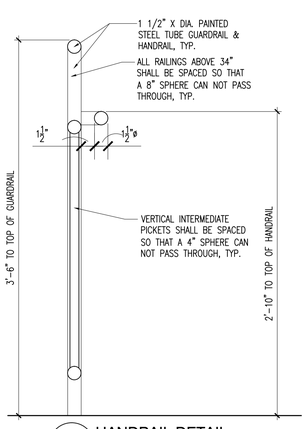
* 5/8" TYPE 'X' WATER RESISTANT GYPSUM BOARD TO BE USED IN ALL WET AREAS



1 STAIR DETAIL
SCALE: 1/4" = 1'-0"

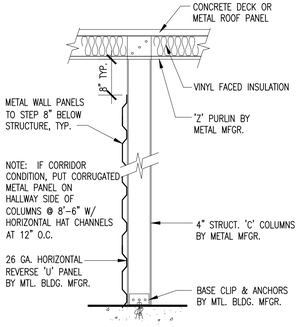


2 HANDRAIL DETAIL
SCALE: 3" = 1'-0"



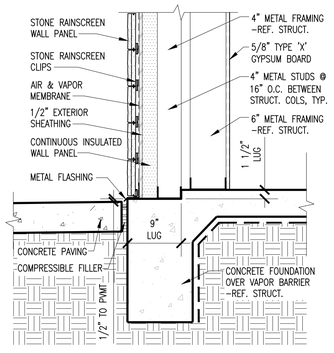
3 HANDRAIL DETAIL
SCALE: 1 1/2" = 1'-0"

4 NOT USED
SCALE: 1" = 1'-0"

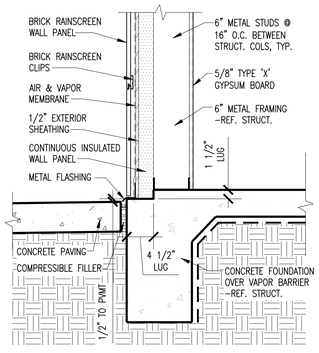


5 PARTITION/COL. CONNECTION
SCALE: 1" = 1'-0"

6 NOT USED
SCALE: 1" = 1'-0"



7 FOUNDATION DETAIL
SCALE: 1" = 1'-0"



8 FOUNDATION DETAIL
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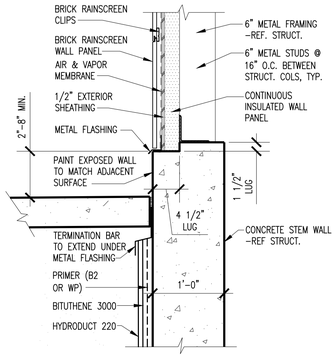
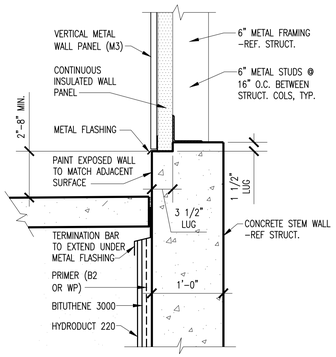
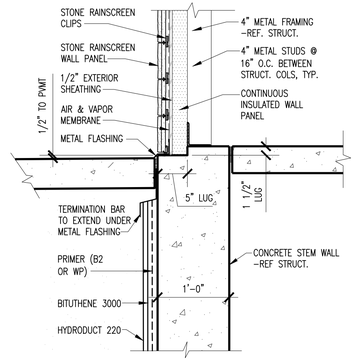


9 FOUNDATION DETAIL
SCALE: 1" = 1'-0"



10 FOUNDATION DETAIL
SCALE: 1" = 1'-0"



11 FOUNDATION DETAIL
SCALE: 1" = 1'-0"

GENERAL NOTES

1. ALL ENGINEERING, SIZING, CONNECTIONS, FASTENERS, AND DETAILING NOT PROVIDED ON STRUCTURAL DRAWINGS TO MEET LOCAL BUILDING CODES AND ARE TO BE PROVIDED BY METAL BUILDING MANUFACTURER.
2. CLOSURES, TAPE SEALER AND ALL OTHER WATERPROOFING MATERIALS TO BE PROVIDED BY METAL BUILDING MANUFACTURER TO ENSURE WATER TIGHT CONSTRUCTION.
3. STORAGE CORRIDOR FLOORS TO BE POLISHED CONCRETE. (NOT STORAGE UNITS)
4. CORRIDOR METAL WALL PANELS TO BE 8'-6" WITH HAT CHANNELS SPACED @ 12" O.C. ABOVE.
5. METAL PANELS INSIDE STORAGE UNITS TO EXTEND TO 8" BELOW THE UNDERSIDE OF THE DECK ABOVE, STEP WALL HEIGHT WHERE NECESSARY.
6. ALL EXTERIOR SHEATHING 1/2" DENSGLASS GOLD WITH AIR AND MOISTURE MEMBRANE, UNLESS NOTED OTHERWISE ON A7.1.

ROOF INSULATION: R-25.5 @ TPO ROOF

- CONTINUOUS RIGID INSULATION ENTIRELY ABOVE ROOF DECK TO BE AT R-25 + 1/2" COVERBOARD

WALL INSULATION:

- 8" CMU - FILL CELLS TO R-11 - STORAGE
- 6" METAL STUDS - R-19 BATT INSULATION IN WALLS - 1ST FLOOR
- 4" METAL STUDS - R-11 BATT INSULATION IN WALLS - 2ND/3RD FLOOR

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LAKEWOOD STORAGE

NE PORT DRIVE
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PROJECT NO. 2035
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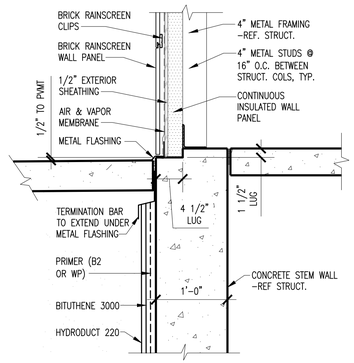
REVISIONS:

BUILDING DETAILS

SHEET NO.
A6.1



1 FOUNDATION DETAIL
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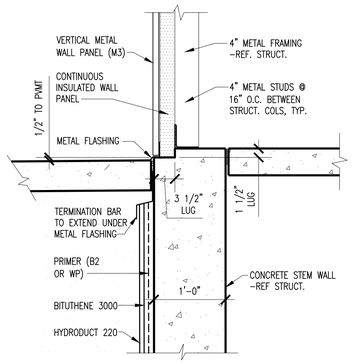
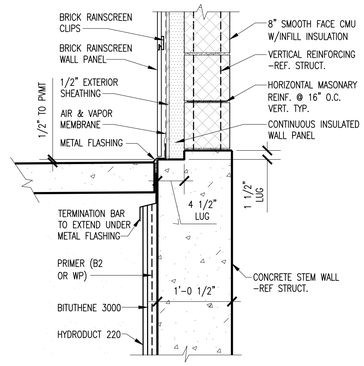
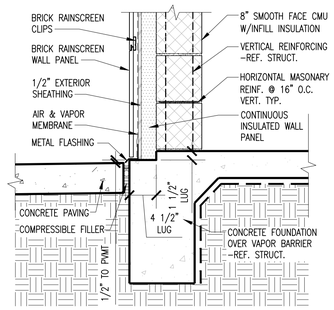


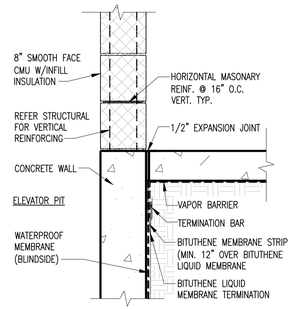
2 FOUNDATION DETAIL
SCALE: 1" = 1'-0"



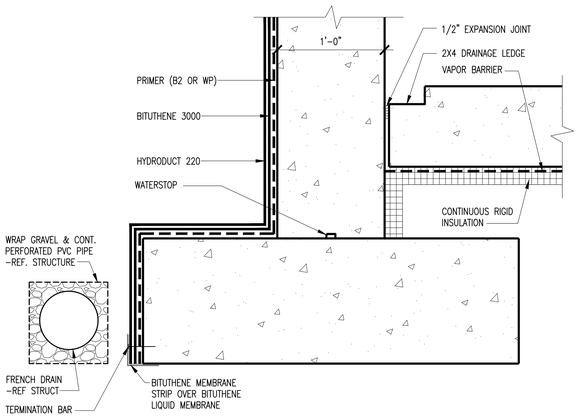
3 FOUNDATION DETAIL
SCALE: 1" = 1'-0"



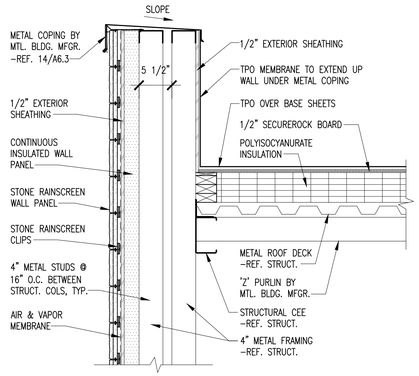
4 FOUNDATION DETAIL
SCALE: 1" = 1'-0"



5 FOUNDATION DETAIL
SCALE: 1" = 1'-0"

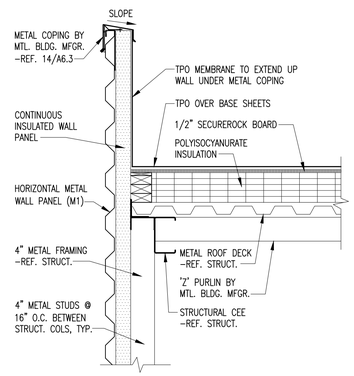


6 FOUNDATION DETAIL
SCALE: 1 1/2" = 1'-0"

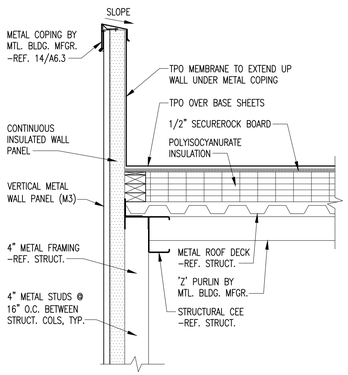


7 PARAPET RAKE DETAIL
SCALE: 1" = 1'-0"

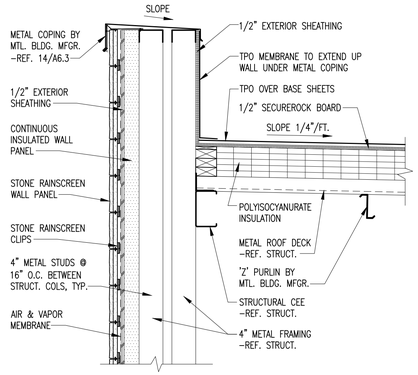
8 NOT USED
SCALE: 1" = 1'-0"



9 PARAPET RAKE DETAIL
SCALE: 1" = 1'-0"

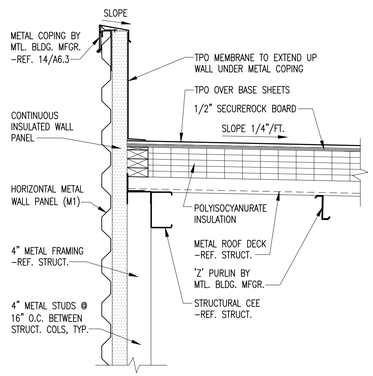


10 PARAPET RAKE DETAIL
SCALE: 1" = 1'-0"



11 PARAPET HIGH EAVE DETAIL
SCALE: 1" = 1'-0"

12 NOT USED
SCALE: 1" = 1'-0"



13 PARAPET HIGH EAVE DETAIL
SCALE: 1" = 1'-0"

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- 4" METAL STUDS – R–11 BATT INSULATION IN WALLS – 2ND/3RD FLOOR

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STATE OF MISSOURI
JEFFREY'S DALLENBACH NUMBER A-2020056988
ARCHITECT
12.16.2021
JEFFREY W. DALLENBACH, AIA
MISSOURI REGISTRATION NO. A–2020056988

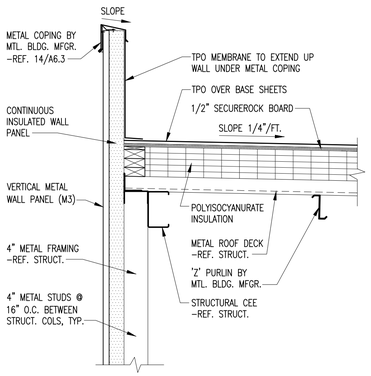
LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

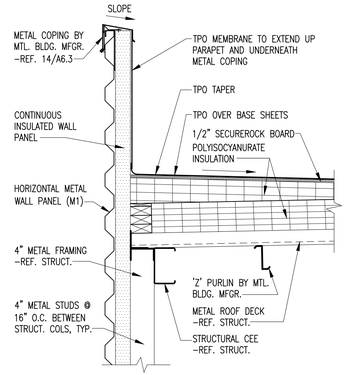
PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : VP
REVISIONS:

BUILDING DETAILS

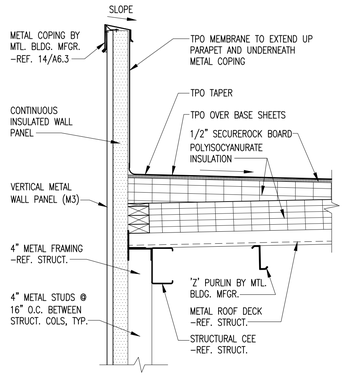
SHEET NO.
A6.2



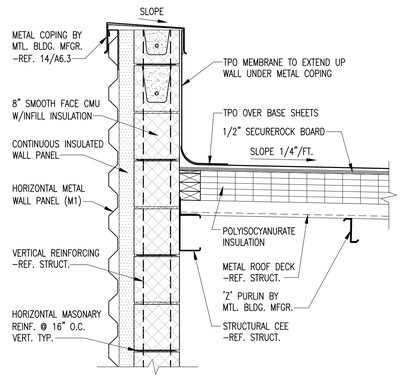
1 PARAPET HIGH EAVE DETAIL
SCALE: 1" = 1'-0"



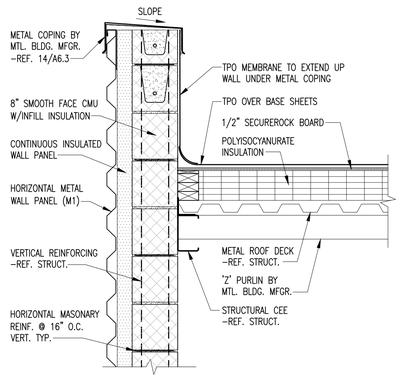
2 PARAPET SLOPE DETAIL
SCALE: 1" = 1'-0"



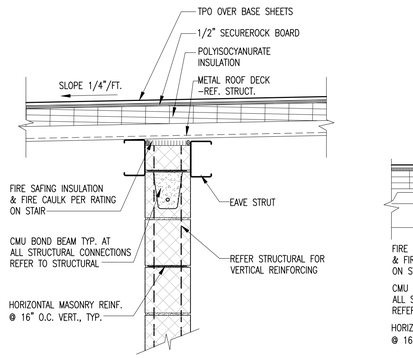
3 PARAPET SLOPE DETAIL
SCALE: 1" = 1'-0"



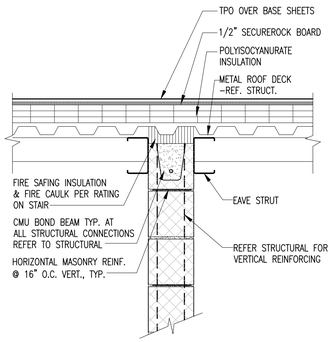
4 PARAPET HIGH EAVE DETAIL
SCALE: 1" = 1'-0"



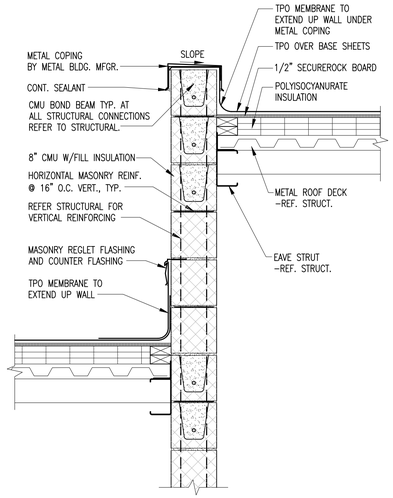
5 PARAPET RAKE DETAIL
SCALE: 1" = 1'-0"



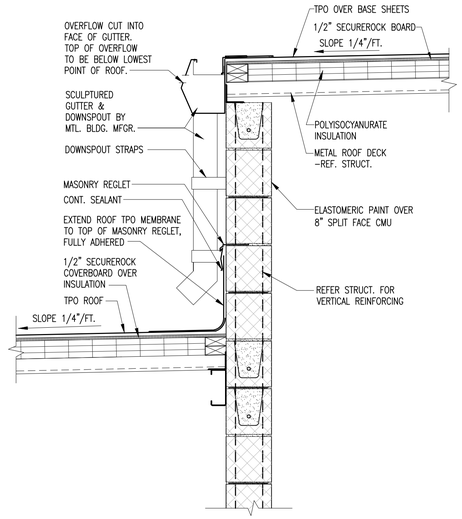
6 STAIR DETAIL
SCALE: 1" = 1'-0"



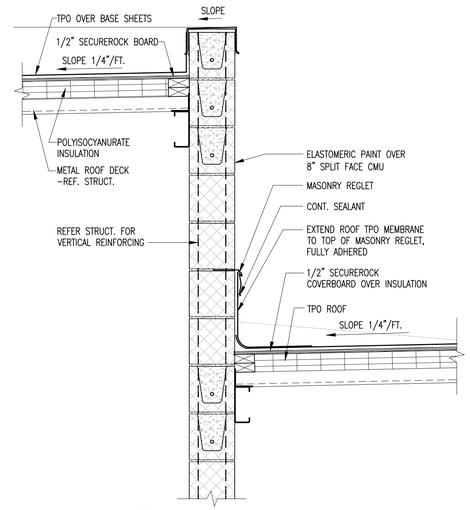
7 STAIR DETAIL
SCALE: 1" = 1'-0"



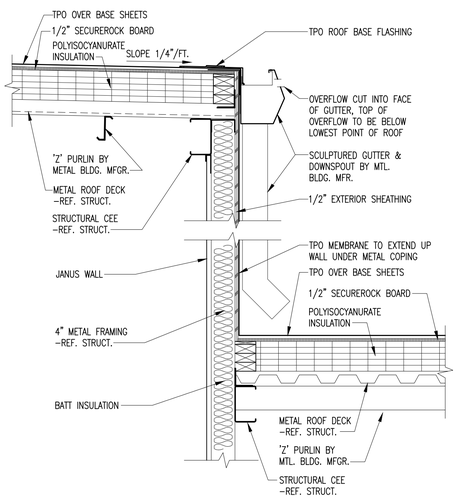
8 ELEVATOR PARAPET DETAIL
SCALE: 1" = 1'-0"



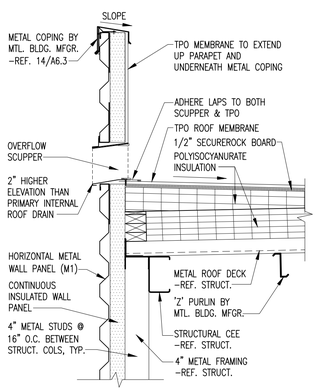
9 ELEVATOR PARAPET DETAIL
SCALE: 1" = 1'-0"



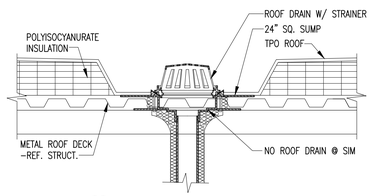
10 ELEVATOR PARAPET DETAIL
SCALE: 1" = 1'-0"



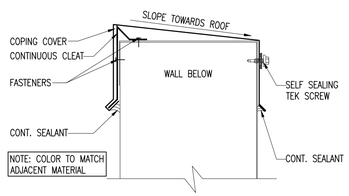
11 ROOF DETAIL
SCALE: 1" = 1'-0"



12 OVERFLOW SCUPPER DETAIL
SCALE: 1" = 1'-0"



13 ROOF DRAIN DETAIL
SCALE: 1" = 1'-0"



14 METAL COPING DETAIL
SCALE: 3" = 1'-0"

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STATE OF MISSOURI
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LAKEWOOD STORAGE

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PROJECT NO. 2035
DATE : 12.16.2021
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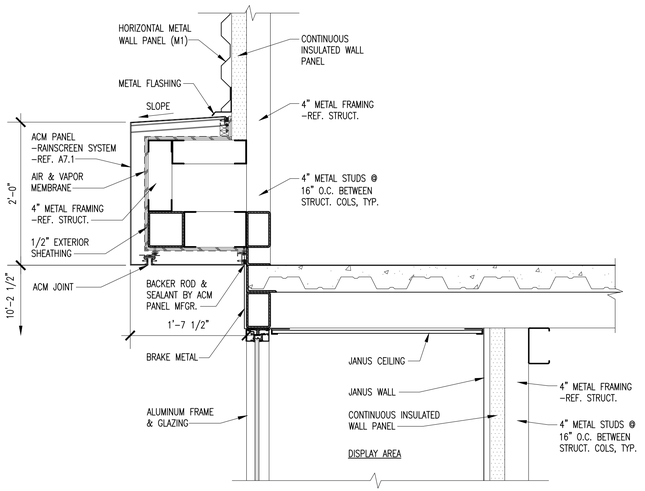
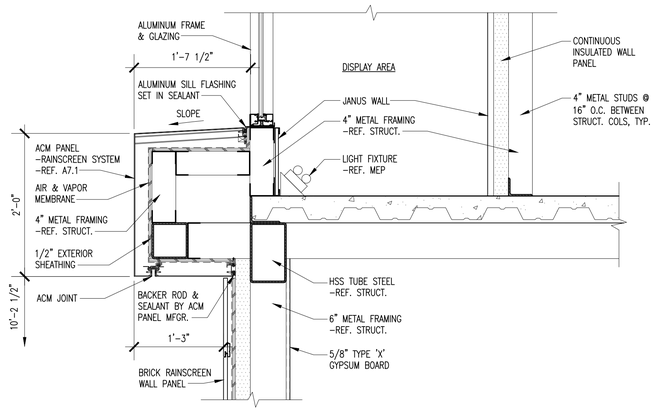
BUILDING DETAILS

SHEET NO.
A6.3



1 ACM DETAIL
SCALE: 1" = 1'-0"



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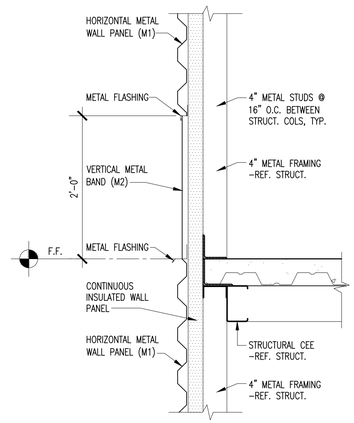
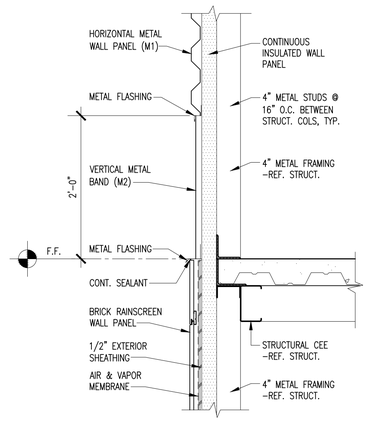
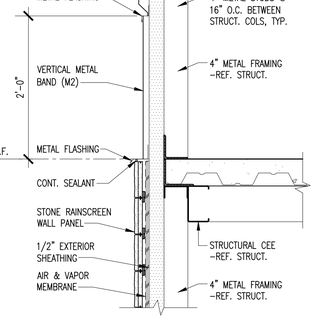
SCALE: 1" = 1'-0"



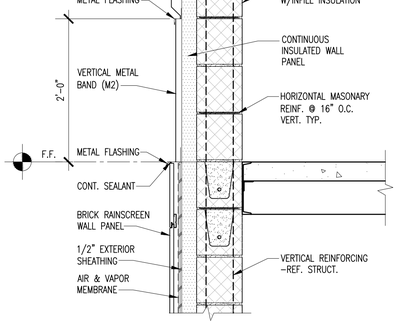
3 BANDING DETAIL
SCALE: 1" = 1'-0"



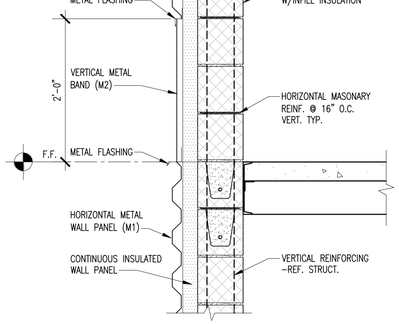
4 BANDING DETAIL
SCALE: 1" = 1'-0"



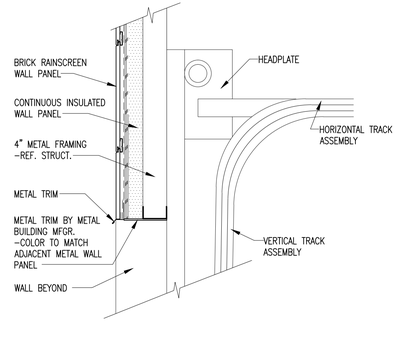
5 BANDING DETAIL
SCALE: 1" = 1'-0"



6 BANDING DETAIL
SCALE: 1" = 1'-0"

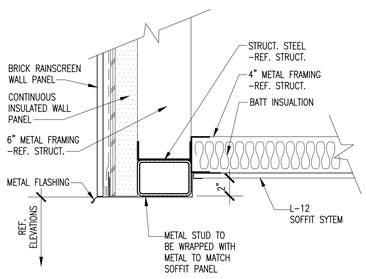


7 BANDING DETAIL
SCALE: 1" = 1'-0"

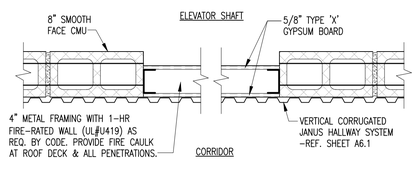


8 ROLL-UP DOOR DETAIL
SCALE: 1" = 1'-0"

9 NOT USED
SCALE: 1" = 1'-0"



10 ALCOVE HEADER DETAIL
SCALE: 1 1/2" = 1'-0"



11 INFILL DETAIL
SCALE: 1" = 1'-0"

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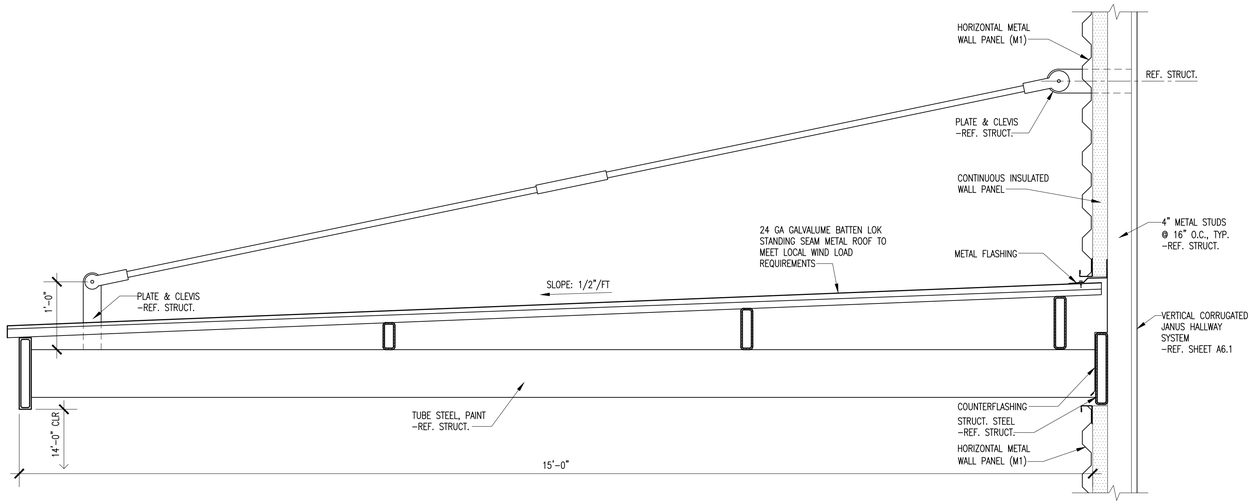
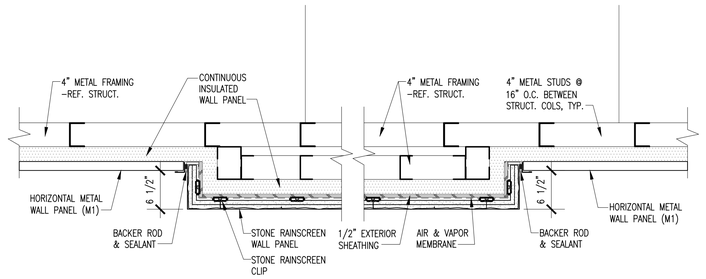
PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : VP
REVISIONS:

BUILDING DETAILS

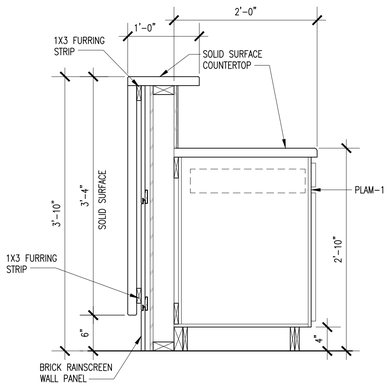
SHEET NO.
A6.4



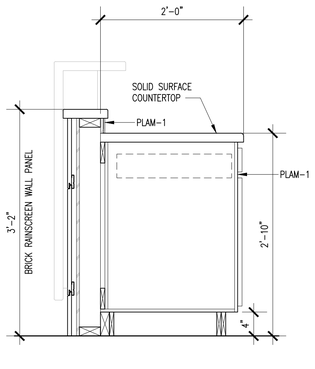
1 CANOPY DETAIL
SCALE: 1" = 1'-0"



2 TRANSITION DETAIL (PLAN)
SCALE: 1" = 1'-0"



3 MILLWORK DETAIL
SCALE: 1" = 1'-0"



4 MILLWORK DETAIL
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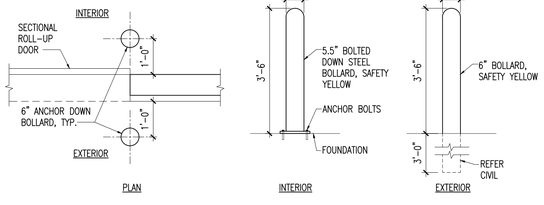
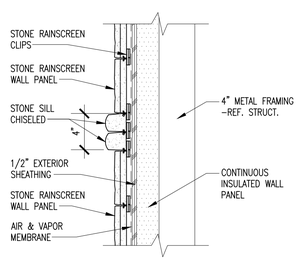
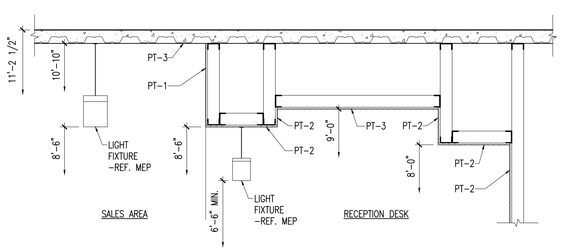


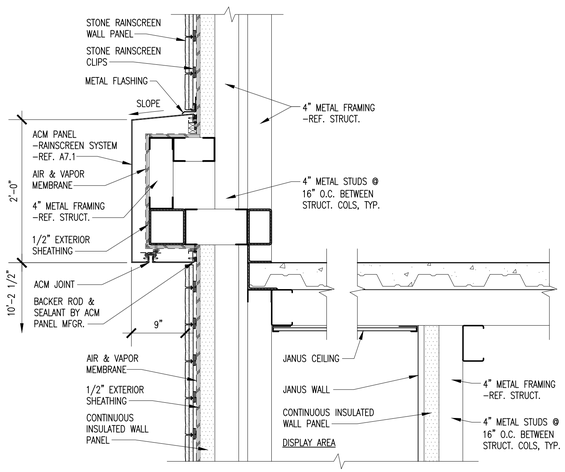
5 BOLLARD DETAIL, TYP. @ LOADING AREA
SCALE: 1/2" = 1'-0"



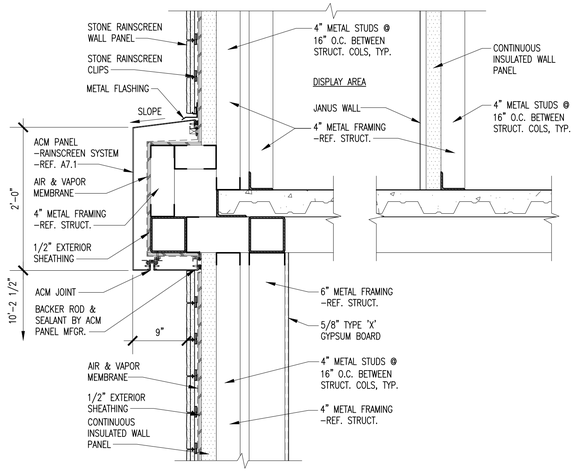
6 SILL CHISELED BAND DETAIL
SCALE: 1 1/2" = 1'-0"



7 INTERIOR OFFICE SECTION
SCALE: 1/2" = 1'-0"



8 ACM DETAIL
SCALE: 1" = 1'-0"



9 ACM DETAIL
SCALE: 1" = 1'-0"

GENERAL NOTES

1. ALL ENGINEERING, SIZING, CONNECTIONS, FASTENERS, AND DETAILING NOT PROVIDED ON STRUCTURAL DRAWINGS TO MEET LOCAL BUILDING CODES AND ARE TO BE PROVIDED BY METAL BUILDING MANUFACTURER.
2. CLOSURES, TAPE SEALER AND ALL OTHER WATERPROOFING MATERIALS TO BE PROVIDED BY METAL BUILDING MANUFACTURER TO ENSURE WATER TIGHT CONSTRUCTION.
3. STORAGE CORRIDOR FLOORS TO BE POLISHED CONCRETE. (NOT STORAGE UNITS)
4. CORRIDOR METAL WALL PANELS TO BE 8'–6" WITH HAT CHANNELS SPACED @ 12" O.C. ABOVE.
5. METAL PANELS INSIDE STORAGE UNITS TO EXTEND TO 8" BELOW THE UNDERSIDE OF THE DECK ABOVE, STEP WALL HEIGHT WHERE NECESSARY.
6. ALL EXTERIOR SHEATHING 1/2" DENSGLASS GOLD WITH AIR AND MOISTURE MEMBRANE, UNLESS NOTED OTHERWISE ON A7.1.

ROOF INSULATION: R–25.5 @ TPO ROOF

- CONTINUOUS RIGID INSULATION ENTIRELY ABOVE ROOF DECK TO BE AT R–25 + 1/2" COVERBOARD

WALL INSULATION:

- 8" CMU – FILL CELLS TO R–11 – STORAGE
- 6" METAL STUDS – R–19 BATT INSULATION IN WALLS – 1ST FLOOR
- 4" METAL STUDS – R–11 BATT INSULATION IN WALLS – 2ND/3RD FLOOR

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STATE OF MISSOURI
JEFFREY K. DALLENBACH
NUMBER A-2020036988
ARCHITECT
12.16.2021
JEFFREY K. DALLENBACH, AIA
MISSOURI REGISTRATION NO. A–2020036988

LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : VP
REVISIONS:

BUILDING DETAILS

SHEET NO.
A6.5

EXTERIOR FINISHES	
ORNAMENTAL IRON FENCE	6'-0" HIGH ORNAMENTAL IRON FENCE FENCE TO MATCH AMERISTAR - MONTAGE PLUS COLOR: BLACK
SLIDING GATE	GATE TO MATCH AMERISTAR - MONTAGE PLUS SUBMIT SHOP DRAWINGS 3-RAIL CLASSIC, 6'-0" TALL X 20' OPENING ROLL GATE COLOR: BLACK
MAN GATE	GATE TO MATCH AMERISTAR - MONTAGE PLUS SUBMIT SHOP DRAWINGS 3-RAIL CLASSIC STEEL PANEL GATE. -REF. A5.1 DOOR SCHEDULE FOR HARDWARE COLOR: BLACK
EXTERIOR BOLLARDS	3' HIGH A.F.F., 6" DIAMETER STEEL POLE WITH CONCRETE FILL & ROUND TOP COLOR: SAFETY YELLOW
INTERIOR BOLLARDS	ULINE - OR APPROVED EQUAL 5.5" SURFACE MOUNTED STEEL BOLLARD COLOR: SAFETY YELLOW
CMU - SMOOTH FACE	SMOOTH FACE CMU W/ DRYBLOCK ADMIXTURE SIZE: 8X8X16 INSULATION: FILL CELLS TO R-11 MORTAR: W/ DRYBLOCK ADMIXTURE
HORIZONTAL METAL WALL PANEL (M1)	METL SPAN PROFILE: 7.2 SINGLE-SKIN WALL PANEL COLOR: SANDSTONE NOTE: INSTALL PER MANUFACTURER'S INSTALLATION GUIDELINES
VERTICAL METAL BAND (M2)	METL SPAN PROFILE: VERTICAL PBD SINGLE-SKIN WALL PANEL COLOR: POLAR WHITE NOTE: INSTALL PER MANUFACTURER'S INSTALLATION GUIDELINES
VERTICAL METAL WALL PANEL (M3)	METL SPAN PROFILE: CF ARCHITECTURAL VERTICAL COLOR: SLATE GRAY NOTE: INSTALL PER MANUFACTURER'S INSTALLATION GUIDELINES
ACM (ALUMINUM COMPOSITE PANEL)	ALPOLIC/PE 4MM COLOR: MST WHITE JOINT SYSTEM: RAINSCREEN NOTE: INSTALL PER MANUFACTURER'S INSTALLATION GUIDELINES
BRICK RAINSCREEN WALL PANEL	NICHIHA VINTAGE BRICK SERIES COLOR: ALEXANDRIA BUFF NOTE: INSTALL PER MANUFACTURER'S INSTALLATION GUIDELINES
STONE RAINSCREEN WALL PANEL	NICHIHA KURASTONE SERIES COLOR: STACKED STONE 'MOUNTAIN' NOTE: INSTALL PER MANUFACTURER'S INSTALLATION GUIDELINES
CONTINUOUS INSULATED WALL PANEL	METL SPAN PROFILE: CF ARCHITECTURAL VERTICAL COLOR: POLAR WHITE THICKNESS: 2 1/2" NOTE: INSTALL PER MANUFACTURER'S INSTALLATION GUIDELINES
BRAKE METAL	COLOR: PT-2
EXTERIOR SHEATHING	GEORGIA PACIFIC OR APPROVED EQUAL DENSGLASS GOLD THICKNESS: 1/2"
AIR & VAPOR MEMBRANE	GCP APPLIED TECHNOLOGIES PERM-A-BARRIER WALL MEMBRANE
ALUMINUM WINDOW & STOREFRONT FRAME	COLOR: ANODIZED ALUMINUM GENERAL CONTRACTOR TO PURCHASE BOTH ALUMINUM WINDOW AND STOREFRONT FROM SAME MANUFACTURER TO MATCH COLOR
GLAZING - CLEAR @ WINDOWS	SOLARBAN 90 COLOR: CLEAR + CLEAR VISIBILITY: 51%, U-VALUE: .29, SHGC: .23 1/4" GLAZING, 1/2" AIR SPACE, 1/4" GLAZING (1" TOTAL), TEMPERED
GLAZING - SPANDREL	OPACI-COAT 300 COLOR: #3-967 'BLACK-GRAY' SOLARBAN 60 VISIBILITY: 51%, U-VALUE: .29, SHGC: .23 1/4" GLAZING, 1/2" AIR SPACE, 1/4" GLAZING (1" TOTAL), TEMPERED
EXTERIOR DOOR & FRAME PAINT	SHERWIN WILLIAMS ALCOVE DOOR / DOOR FRAME COLOR: PT-2 SERVICE DOOR / DOOR FRAME COLOR: PT-1 NOTE: PAINT BOTH SIDES OF EXT. DOOR SAME COLOR
EXPOSED CANOPY STRUCTURE	SHERWIN WILLIAMS COLOR: PT-1
METAL TRIM, FLASHING, CANOPY TRIM, & COPING	MBCI 24 GA. COLOR: COLOR TO MATCH ADJACENT MATERIAL 'PAINT GRADE'
METAL SOFFIT PANEL (AT ENTRY ALCOVES)	MBCI 24 GA. L-12 SOFFIT PANEL COLOR: SIG 200 'SOLAR WHITE'
PREFINISHED SCUPPERS	MBCI 24 GA. COLOR: COLOR TO MATCH ADJACENT MATERIAL 'PAINT GRADE'
GLASS SECTIONAL ROLL-UP DOOR	C.H.I. OVERHEAD DOOR MODEL: 3297 (INSULATED) SIZE: 11' WIDE X 14' HIGH COLOR: COLOR TO MATCH METL SPAN 'SLATE GRAY' INSTALL PER SPECIFICATIONS
EXTERIOR SECTIONAL ROLL-UP COMMERCIAL DOOR	C.H.I. OVERHEAD DOOR MODEL: 3222 (INSULATED) COLOR: COLOR TO MATCH JANUS CEDAR RED INSTALL PER SPECIFICATIONS
TPO ROOF	JOHNS MANVILLE - MECHANICALLY ATTACHED TPO ROOFING SYSTEM (UL CLASS A) -ROOF DECK (REF. STRUCT.) -COLOR: WHITE -JM ENRGY 3 POLYISOCYANURATE ROOF INSULATION, R-25 -JM SECUROCK GYPSUM-FIBER ROOF BOARD, MECHANICALLY ATTACHED, ½" THICK, R-0.5 -JM TPO .060 MIL (MINIMUM) THICK WHITE REINFORCED TPO MEMBRANE -REFLECTIVITY: 0.77 -EMISSIVITY: 0.87 -20 YEAR MANUFACTURER ROOF WARRANTY AND 2 YEAR INSTALLER WARRANTY -INSTALL PER MANUFACTURER SPECIFICATIONS
METAL ROOF PANEL @ CANOPY	MBCI BATTENLOK 24 GA. COLOR: GALVALUME

EXTERIOR FINISHES (CONTINUED)	
ROOF HATCH	PRECISION ROOF HATCH MODEL: PH-A SIZED PER CONSTRUCTION DOCUMENTS INSTALL PER SPECIFICATIONS
ROOF CURB	LM CURBS
EXTEND-A-RAIL	PRECISION ALUMINUM LADDER
ROOF HATCH LADDER	PRECISION FIXED VERTICAL ALUMINUM LADDER MODEL: FL-133 SIZED PER CONSTRUCTION DOCUMENTS INSTALL PER SPECIFICATIONS
DUMPSTER METAL DOOR PANEL	METL SPAN MODEL: CS-260 SINGLE-SKIN COLOR: COLOR TO MATCH JANUS CEDAR RED PROFILE: VERTICAL
DUMPSTER CMU WALL	SPLIT FACE CMU SIZE: 8X8X16 COLOR: PT-1
WALL INSULATION (CMU) WALL INSULATION (6" STUD) WALL INSULATION (4" STUD) ABOVE CEILING @ OFFICE ROOF INSULATION	FILL CELLS TO R-11 R-19 BATT INSULATION (ONLY BEHIND BRICK & STONE VENEER) R-13 BATT INSULATION (ONLY BEHIND BRICK & STONE VENEER) ACOUSTICAL BATT INSULATION R-25.5 RIGID INSULATION ENTIRELY ABOVE ROOF DECK
NOTE: GENERAL CONTRACTOR TO PROVIDE PRODUCT SPECIFIED OR APPROVED EQUAL	

EXTERIOR PAINT SHERWIN WILLIAMS	
PAINT	COLOR
PT-1	SW 6062 'RUGGED BROWN' / 'VINTAGE LEATHER'
PT-2	SW 7019 'GAUNTLET GRAY"

INTERIOR FINISHES - STORAGE OFFICE / ACCESSORY SPACES	
POLISHED CONCRETE	CONSOLIDECK CONCRETE POLISHING SYSTEM W/ 1800 GRIT FINISH MINIMUM W/ BLENDED DENSIFYER, PROSOCO SEALER, AND SPRAY GUARD
PORCELAIN WALL TILE - PWT (TOILET ROOMS)	DALTILE LINDEN POINT - LP19 BIANCO SIZE: 12 X 24 PATTERN: RUNNING BOARD
WALL GROUT (TOILET ROOMS)	CUSTOM BUILDING PRODUCTS COLOR: #380 HAYSTACK SIZE: MFGR. RECOMMEND
BRICK RAINSCREEN WALL PANEL (RECEPTION DESK)	NICHIHA VINTAGE BRICK SERIES COLOR: ALEXANDRIA BUFF NOTE: INSTALL PER MANUFACTURER'S INSTALLATION GUIDELINES
STONE RAINSCREEN WALL PANEL (SALES AREA WALL)	NICHIHA KURASTONE SERIES COLOR: STACKED STONE 'MOUNTAIN' NOTE: INSTALL PER MANUFACTURER'S INSTALLATION GUIDELINES
SOLID SURFACE RECEPTION DESK COUNTERTOP	WILSON ART COLOR: 9100GS (3) 'COCONUT OIL' EDGE: PENCIL ROUND
PLASTIC LAMINATE - (PLAM-1) CABINETS, SLAT WALL	WILSON ART COLOR: 7983-38 'BOARDWALK OAK'
PLASTIC LAMINATE - (PLAM-2) SLAT WALL TRIM	WILSON ART COLOR: D96-60 'SHADOW'
PLASTIC LAMINATE - (PLAM-3) BREAK ROOM COUNTERTOP	WILSON ART COLOR: D427-60 'LINEN' EDGE: PENCIL ROUND
WOOD WALL BASE (OFFICE ONLY)	STYLE: 6" FLAT STRAIGHT EDGE COLOR: PT- 2
RUBBER WALL BASE	4" ROPPE WALL BASE COLOR: 129 'DOLPHIN'
SLAT WALL	WILSON ART COLOR: PLAM-1 W/ ALUMINUM INSERTS
CEILING GRID SYSTEM	ARMSTRONG METALWORKS MESH - WOVEN WIRE MESH PANEL: NICKEL CHROME, PERFORATION: 1 CELL WOVEN EDGE TRIM: AXIOM KNIFE EDGE, PROFILE: 5/8" , WHITE GRID:PRELUDE 15/16 EXPOSED TEE GRID, WHITE
ACOUSTIC CEILING TILE	ARMSTRONG 2X2 FINE FISSURED ANGLED TEGULAR SQUARE LAY-IN COLOR: WHITE (WH), MEDIUM TEXTURE GRID: PRELUDE 15/16 EXPOSED TEE GRID, WHITE
UNDERSIDE OF CEILING, STRUCTURE, AND DUCT @ OFFICE	COLOR: PT- 3

INTERIOR FINISHES - STORAGE	
ROLL-UP DOORS COMMERCIAL - INTERIOR	JANUS INTERNATIONAL MODEL: 650 COLOR: HIGH GLOSS WHITE INSTALL PER MFGR. INSTALLATION INSTRUCTIONS
POLISHED CONCRETE (IN CORRIDOR, NOT UNITS)	CONSOLIDECK CONCRETE POLISHING SYSTEM W/ 1800 GRIT FINISH MINIMUM W/ BLENDED DENSIFYER, PROSOCO SEALER, AND SPRAY GUARD
DUMMY DOORS & TRIM (BEHIND GLAZING IN OFFICE)	JANUS INTERNATIONAL - CONTINUOUS SHEET ROLLING DOOR MODEL 650 COLOR: LIGHT STONE SIZE: REF. DOOR SCHEDULE SHEET A5.1 INSTALL PER SPECIFICATIONS TRIM: LIGHT STONE
STAIR STRUCTURE	SHERWIN WILLIAMS COLOR: PT-4
INTERIOR CMU AT STORAGE (EXCLUDING STORAGE UNITS)	SHERWIN WILLIAMS COLOR: PT-3
HOLLOW METAL DOORS & FRAMES @ STAIR	SHERWIN WILLIAMS COLOR: PT-4
NOTE: GENERAL CONTRACTOR TO PROVIDE PRODUCT SPECIFIED OR APPROVED EQUAL	

INTERIOR PAINT SHERWIN WILLIAMS		
PAINT	COLOR	LOCATION
PT-1	SW 7551 'GREEK VILLA'	WALL FIELD COLOR, TOILET ROOMS
PT-2	SW 7025 'BACKDROP'	ACCENT WALL, OFFICE DOORS, DOOR TRIM, & WOOD BASE
PT-3	SW 6170 'TECHNO GRAY'	UNDERSIDE OF DECK (CEILING)
PT-4	SW 7019 'GAUNTLET GRAY"	STAIR STRUCTURE / UPPER STAIR DOORS

TOILET ROOM ACCESSORIES	
TOILET TISSUE DISPENSER	BOBRICK - SURFACE-MOUNTED MULTI ROLL TOILET TISSUE DISPENSER MODEL: B-4288 CONTURA SERIES FINISH: SATIN-FINISH STAINLESS STEEL
HAND DRYER	XLERATOR HAND DRYER MODEL: XL-BW INCLUDE: ADA COMPLIANT RECESS KIT FINISH: STAINLESS STEEL
42" HORIZONTAL GRAB BARS 36" HORIZONTAL GRAB BARS	BOBRICK- 1/4" DIAMETER W/ SNAP FLANG COVER MODEL: B-5806 FINISH: STAINLESS STEEL
MIRROR	BOBRICK - CHANNEL-FRAME MIRROR MODEL: B-165 2436 SIZE: 24X36 FIINISH: STAINLESS STEEL W/ BRIGHT-POLISH FINISH
SOAP DISPENSER	GOJO MODEL: ADX-7

WATERPROOFING	
WATERPROOFING SYSTEM (BASEMENT WALLS)	GCP APPLIED TECHNOLOGIES -HYDRODUCT 220 -BITUTHENE 3000 -PRIMER (B2 OR WP)
VAPOR BARRIER (UNDER SLAB)	GCP APPLIED TECHNOLOGIES -FLORPRUFE 120 COORDINATE WITH STRUCTURE -10 MIL - REF. STRUCT.
WATERSTOP (KEYWAY TRANSITIONS)	GCP APPLIED TECHNOLOGIES -ADCOR WATERSTOP
WATERPROOFING MEMBRANE (UNDER ELEVATOR PIT)	GCP APPLIED TECHNOLOGIES -BLINDSIDE -PREPRUFE 160R (VERTICAL) -PREPRUFE 300 (HORIZONTAL)
NOTE: GENERAL CONTRACTOR TO PROVIDE PRODUCT SPECIFIED OR APPROVED EQUAL	

SPECIFICATION NOTES

1. GENERAL CONTRACTOR TO PROVIDE PRODUCT SPECIFIED OR SUBMIT EQUIVALENT PRODUCT TO ARCHITECT/ OWNER FOR APPROVAL.
2. GENERAL CONTRACTOR TO PROVIDE 8'X8' MOCK-UP OF ALL EXTERIOR FINISHES FOR OWNER & ARCHITECT'S APPROVAL. GC TO COORDINATE WITH ARCHITECT FOR SPECIFIC SECTIONS. MOCK-UP TO BE COMPLETED PRIOR TO 30% OF PROJECT COMPLETION. NO EXTERIOR FINISHES TO BE ORDERED OR INSTALLED PRIOR TO MOCK-UP APPROVAL.
3. GENERAL CONTRACTOR TO SUBMIT PAINT SAMPLE FOR OWNER APPROVAL PRIOR TO PAINTING INTERIOR WALLS.
4. ENGINEERED DESIGN LOADS - STAIRS/HANDRAILS/GUARDS: PER SECTIONS 1009/1012/1013 AND TABLE 1607.1/SECTION 1607 2012 IBC, ENGINEERED DESIGN LOADS FOR THE ABOVE MENTIONED ITEMS SHALL BE PROVIDED IN THE PLAN SET SUBMITTAL. FOR STAIRS THE UNIFORM LOAD REQUIRED IS 100 PSF AND THE CONCENTRATED LOAD REQUIRED FOR THE STAIRS TREADS IS 300LBS. FOR HANDRAIL ASSEMBLIES AND GUARDS THE APPLIED LOAD AND CONCENTRATED LOADS ARE 50 PLF (ANY DIRECTION AT THE TOP) AND 200 POUNDS (ANY DIRECTION AT THE TOP), RESPECTIVELY. FOR INTERMEDIATE RAILS THE HORIZONTALLY APPLIED NORMAL LOAD IS 50 POUNDS ON ANY AREA EQUAL TO ONE SQUARE FOOT, INCLUDING OPENINGS AND SPACE BETWEEN RAILS.
5. GRAB BARS - DESIGN LOADS/ENGINEERED LAYOUT AND DETAILS: PER SECTION 1607.8.2 2012 IBC, GRAB BARS SHALL BE DESIGNED TO RESIST A SINGLE CONCENTRATED LOAD OF 250LBS. APPLIED IN ANY DIRECTION. PROVIDE DESIGN CRITERIA FOR GRAB BARS AND STRUCTURAL CONNECTIONS ON THE PLANS FOR THE NEW RESTROOMS. ENGINEERED DESIGN LOADS/LAYOUT AND DETAILS MUST BE SEALED/SIGNED/DATED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF TEXAS.

ALTERNATES

1. GENERAL CONTRACTOR TO PROVIDE ALLOWANCE FOR CERAMIC TILE IN ROOMS 101-105 AS AN ALTERNATE.
2. UNIT LIGHTING ALLOWANCE.

ELEVATOR SPECIFICATIONS	
	ELEVATOR A (FUTURE B)
ELEVATOR MODEL	ENDURA 45A, QTY. 1
RATED CAPACITY	4,500 LBS.
RATED SPEED	130 FT./MIN. UP / 150 FT./MIN DOWN
OPERATION SYSTEM	TAC32
TRAVEL	21'- 10 1/2"
LANDINGS	3 TOTAL
OPENINGS	FRONT: 3
CLEAR CAR INSIDE	5' - 8" WIDE X 7' - 9 1/2" DEEP
CAB HEIGHT	8'-0" NOM., W/ CEILING HT. OF 7'-4"
HOISTWAY ENTRANCE SIZE	4'-0" WIDE X 7'-0" HIGH
DOOR TYPE	TWO SPEED FRONT OPENING
POWER CHARACTERISTICS	480 VOLTS, 3 PHASE, 60 HZ.
SEISMIC REQUIREMENTS	ZONE 2
FIXTURE & BUTTON STYLE	VANDAL RESISTANT SIGNAL FIXTURES
CAB WALL COLOR	GRAYSTONE 464
CAB CEILING FRAME COLOR	F-119 CHALKBOARD
CAB DOOR COLOR	#4 STAINLESS STEEL

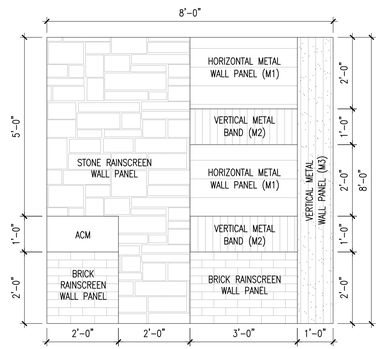
GENERAL NOTES:

1. GENERAL CONTRACTOR TO PROVIDE PRODUCT SPECIFIED OR APPROVED EQUAL.
2. MANUFACTURER: THYSSENKRUPP ELEVATOR, BASIS OF DESIGN IS THE ENDURA 45 A HOLELESS HYDRAULIC ELEVATOR PRODUCT.
3. WARRANTY/MAINTENANCE: 12 MONTH PERIOD
4. HOISTWAY ENTRANCES: DOORS AND FRAMES ON ALL LANDINGS SHALL BE APPLIED POWDER COAT PAINT. HOISTWAY SILL ASSEMBLIES SHALL BE SELF-SUPPORTING EXTRUDED ALUMINUM.
5. CAR ENCLOSURE: CAB TYPE TKS, REINFORCED COLD-ROLLED STEEL WITH A POWDER COATED FINISH. CEILING SHALL BE SUSPENDED TYPE, FLUORESCENT LIGHTING WITH TRANSLUCENT DIFFUSER MOUNTED IN A POWDER COAT PAINTED METAL FRAME. CAB FRONTS AND RETURN SHALL BE PROVIDED IN A #4 BRUSHED STAINLESS STEEL. CAR DOOR FINISH SHALL BE A #4 BRUSHED STAINLESS STEEL FINISH WITH STAINLESS STEEL KICK PLATES. CAB SILLS SHALL BE EXTRUDED ALUMINUM. HANDRAIL SHALL BE 2" FLAT METAL BAR ON SIDE AND REAR WALLS AND HAVE A #4 STAINLESS STEEL FINISH. BUMPER RAILS SHALL BE 4" FLAT METAL BAR ON SIDE AND REAR WALLS AND HAVE A #4 STAINLESS STEEL FINISH.
6. CAR OPERATING STATION: THE MAIN CAR CONTROL IN EACH CAR SHALL CONTAIN THE DEVICES REQUIRED FOR SPECIFIC OPERATION MOUNTED IN AN INTEGRAL SWING RETURN PANEL REQUIRING NO APPLIED FACEPLATE. SWING RETURN SHALL HAVE A BRUSHED STAINLESS STEEL FINISH. PUSHBUTTONS THAT ILLUMINATE USING LONG LASTING LED'S SHALL BE INCLUDED FOR EACH FLOOR SERVED. AN EMERGENCY COMMUNICATIONS SYSTEM, INTEGRAL PHONE SYSTEM SHALL BE PROVIDED. A COLUMN MOUNTED CAR RIDING LANTERN SHALL BE INSTALLED.
7. CONTROL SYSTEM: AUTOMATIC LIGHT AND FAN SHUT DOWN CONTROL SYSTEM SHALL BE INCLUDED. AN "EMERGENCY BATTERY LOWERING OPERATION" (10DOC) SHALL BE INCLUDED IN THE ELEVATOR OPERATION. THE EMERGENCY BATTERY LOWERING OPERATION SHALL LOWER THE ELEVATOR IN TIME OF POWER LOSS AND OPEN THE CAB DOOR ALLOWING FOR PASSENGERS TO EXIT.
8. HALL STATIONS: PROVIDE BUTTONS WITH BLUE-ILLUMINATING LED HALOS TO INDICATE THAT A CALL HAS BEEN REGISTERED AT THAT FLOOR FOR THE INDICATED DIRECTION. PROVIDE 1 SET OF PUSHBUTTON RISERS WITH FACEPLATES HAVING A #4 BRUSHED STAINLESS STEEL FINISH. PHASE 1 FIREFIGHTER'S SERVICE KEY SWITCH, WITH INSTRUCTIONS, SHALL BE INCORPORATED INTO THE HALL STATION AT THE DESIGNATED LEVEL. SPECIAL EQUIPMENT; CARD READER PROVISIONS SHALL BE INCLUDED IN ALL CONTROLLERS AND SPACE MADE AVAILABLE IN THE ELEVATOR CAB FOR A SURFACE MOUNTED DEVICE.
9. ELEVATOR FLOOR: RAISED RUBBER TILE.
10. GUARDRAILS REQUIRED ON TOP OF ELEVATOR CAB.

MOCK WALL

NOTES:
1. INCLUDE SAMPLES OF METAL SCUPPER, FLASHING & TRIM

2. COPING TO MATCH ADJACENT MATERIAL U.N.O. ON ELEVATIONS



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03/10/2022

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STATE OF MISSOURI
JEFFREY'S DALLENBACH NUMBER A-2020056968
ARCHITECT
12.16.2021
JEFFREY K. DALLENBACH, AIA
MISSOURI REGISTRATION NO. A-2020056968

LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : VP
REVISIONS:

BLDG. SPECS.

SHEET NO.
A7.1

NE PORT DRIVE

LAKEWOOD STORAGE

LEE'S SUMMIT, MISSOURI 64064

DRAWING INDEX:

SHEET NUMBER:	DESCRIPTION:
COVER	DRAWINGS INDEX
S0.1	GENERAL NOTES
S0.2	LIGHT GAGE FRAMING NOTES
S0.3	MASONRY NOTES
S0.4	TESTING & INSPECTION REQUIREMENTS
S0.5	ROLL-UP DOOR INSTALLATION
F1.1	CONCRETE NOTES
F2.1 - F2.2	FOUNDATION PLANS
F2.3 - F2.4	LUG AND ANCHOR BOLT PLAN
F2.5	LUG AND ANCHOR BOLT DETAILS
FD1.1 - FD1.4	FOUNDATION DETAILS
S1.1 - S1.2	1ST FLOOR FRAMING PLAN
S2.1 - S2.2	2ND FLOOR FRAMING PLANS
S3.1 - S3.2	3RD FLOOR FRAMING PLANS
S4.1 - 4.2	ROOF FRAMING PLANS
S5.1 - S5.2	ROOF DECK PLANS
S6.1-S6.8	EXTERIOR FRAMING ELEVATIONS
S7.1-S7.12	COLUMN LINE FRAMING ELEVATIONS
S8.1	ENLARGED FRAMING PLANS
D1.1-D1.10	DETAILS

Force Engineering & Testing Inc.
19530 RAMBLEWOOD DRIVE HUMBLE, TX 77338
(281) 540-6603 Fax: (281) 540-9966

Ultimate Wind Pressures

Wind Loads - Components & Cladding : h ≤ 60'

Kh (case 1) =	1.01	h =	33.5 ft	0.2h = 6.7 ft
Base pressure (qh) =	**26.0 psf**	0.6h =	20.1 ft	
Minimum parapet ht =	1.5 ft	GCpi =	+/-0.18	
Roof Angle (θ) =	1.2 deg	qi = qh =	26.0 psf	
Type of roof =	Monoslope			

Roof

Area	Surface Pressure (psf) 10 sf	20 sf	50 sf	100 sf	200 sf	350 sf	500 sf	1000 sf
Negative Zone 1	-48.9	-45.6	-41.4	-38.2	-34.9	-32.3	-30.7	-30.7
Negative Zone 1'	-28.1	-28.1	-28.1	-28.1	-24.2	-21.0	-19.0	-16.0
Negative Zone 2	-64.5	-60.3	-54.8	-50.7	-46.5	-43.2	-41.1	-41.1
Negative Zone 3	-87.8	-79.6	-68.6	-60.3	-52.0	-45.3	-41.1	-41.1
Positive All Zones	16	16	16	16	16.0	16.0	16.0	16.0
Overhang Zone 1&1'	-44.2	-43.4	-42.4	-41.6	-34.9	-29.4	-26.0	-26.0
Overhang Zone 2	-59.8	-54.3	-46.9	-41.4	-35.9	-31.4	-28.6	-28.6
Overhang Zone 3	-83.2	-73.5	-60.7	-51	-41.4	-33.6	-28.6	-28.6

Overhang pressures in the table above assume an internal pressure coefficient (Gcpi) of 0.0
Overhang soffit pressure equals adj wall pressure (which includes internal pressure of 4.7 psf)

Parapet

qp = 26.7 psf

Solid Parapet Pressure		Surface Pressure (psf) 10 sf	20 sf	50 sf	100 sf	200 sf	500 sf
CASE A:	Zone 2 :	85.6	80.0	72.7	67.2	61.6	54.3
	Zone 3 :	109.6	99.8	86.9	77.0	67.2	54.3
CASE B :	Interior zone :	-50.5	-48.0	-44.6	-42.0	-39.5	-36.1
	Corner zone :	-57.8	-53.9	-48.8	-45.0	-41.2	-36.1

Walls

Area	GCp +/- GCpi 10 sf	100 sf	200 sf	500 sf	Surface Pressure at h 10 sf	100 sf	200 sf	500 sf
Negative Zone 4	-1.17	-1.01	-0.96	-0.90	-30.4	-26.3	-25.0	-23.4
Negative Zone 5	-1.44	-1.12	-1.03	-0.90	-37.4	-29.2	-26.7	-23.4
Positive Zone 4 & 5	1.08	0.92	0.87	0.81	28.1	23.9	22.7	21.1

Note: GCp reduced by 10% due to roof angle <= 10 deg.

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
03/18/2022

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LAKEWOOD STORAGE
NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

COVER SHEET
SHEET NO.
COVER

GENERAL NOTES:

1. APPLICABLE STRUCTURAL CODE: INTERNATIONAL BUILDING CODE 2018

2. DESIGN LOADS:
   - ROOF DEAD LOAD: 10 PSF
   - ROOF COLLATERAL LOAD: 0 PSF
   - ROOF LIVE LOAD: 20 PSF
   - FLOOR DEAD LOAD: 45 PSF

   FLOOR LIVE LOAD:
   - LIGHT STORAGE: 125 PSF
   - CORRIDORS: 100 PSF/200# CONCENTRATED

   RAIN LOADS:
   - R= 5 PSF

   SNOW LOADS:
   - GROUND SNOW LOAD: 20.0 PSF
   - SNOW. EXP. FACTOR, Ce= 1.0
   - ISNOW IMP. FACTOR, Is= 1.0
   - THERMAL FACTOR, Ct= 1.0
   - ROOF SNOW LOAD: 20.0 PSF

   WIND LOADS:
   - ULTIMATE WIND SPEED: 109 MPH
   - NOMINAL WIND SPEED: 84.4 MPH
   - WIND IMP. FACTOR, Iw= 1.0
   - WIND CONDITION: ENCLOSED
   - INT. PRESSURE COEFFICIENT: +/- 0.18
   - WIND EXPOSURE: "C"

   SEISMIC DESIGN:
   - SEISMIC DESIGN CATEGORY: A
   - SEISMIC IMP. FACTOR, Ie= 1.0
   - SITE CLASS: B
   - Ss: 10.0%g S1: 6.8%g
   - EQUIVALENT LATERAL FORCE ANALYSIS

   BASIC SEISMIC FORCE RESISTING SYSTEM: LIGHT FRAME WALLS W/SHEAR PANELS
   SEISMIC DESIGN BASE SHEAR (U.N.O.), V= 0.010*W Cs= 0.010 R= 6.5 Ie= 1.0
   TOTAL BASE SHEAR 64 KIPS

   A. ALL ROOF COMPONENTS SHALL BE DESIGNED FOR THE APPROPRIATE DESIGN PRESSURE FOR THE TRIBUTARY AREA AS INDICATED ON THE DESIGN CHART
   B. ALL DOORS SHALL MEET THE WIND LOAD RESISTANCE FROM IBC 2009. REFER TO THE LOAD CHARTS FRO COMPONENT AND CLADDING FOR DESIGN PRESSURES
   C. HANDRAILS AND GUARDS SHALL BE DESIGNED IN ACCORDANCE WITH TABLE 1607.1 ON THE INTERNATIONAL CODE AS FOLLOWS:
      1. HANDRAILS ASSEMBLIES AND GUARDS SHALL BE DESIGNED TO SUPPORT A LATERAL LOAD OF 50 POUNDS PER LINEAR FOOT APPLIED IN ANY DIRECTION AT THE TOP AND TO TRANSFER THIS LOAD THROUGH THE SUPPORTS TO THE STRUCTURE
      2. HANDRAILS ASSEMBLIES AND GUARDS SHALL BE DESIGNED TO SUPPORT A CONCENTRATED LOAD OF 200 POUNDS PER LINEAR FOOT APPLIED IN ANY DIRECTION AT THE TOP AND TO TRANSFER THIS LOAD THROUGH THE SUPPORTS TO THE STRUCTURE
   D. STAIR THREADS SHALL BE DESIGNED TO SUPPORT A MINIMUM OF A 300 POUND CONCENTRATED LOAD
      DEFLECTION CRITERIA:
      - STRUCTURAL STANDING SEAM ROOF SYSTEM: L/240
      - PURLIN FRAMING SYSTEM: L/240 TOTAL LOAD
      - COMPOSITE DECK SYSTEM: L/360 TOTAL LOAD
      - STUD WALL SYSTEM: H/240 (EIFS)
      - STUD WALL SYSTEM: H/120 (METAL FINISHES)

3. USE OF DRAWINGS:
   A. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT JOB SITE BEFORE COMMENCING WITH WORK, AND SHALL REPORT ANY DISCREPANCIES TO FORCE ENGINEERING & TESTING.
   B. OMISSIONS AND CONFLICTS BETWEEN VARIOUS ELEMENTS OF THE DRAWINGS, NOTES, AND DETAILS SHALL BE BROUGHT TO THE ATTENTION OF FORCE ENGINEERING & TESTING AND RESOLVED PRIOR TO STARTING WORK.
   C. DO NOT USE SCALED DIMENSIONS FROM THE DRAWINGS. WHERE NO DIMENSIONS ARE PROVIDED, CONSULT WITH FORCE ENGINEERING & TESTING FOR CLARIFICATION PRIOR TO PRECEDING WITH THE WORK.
   D. DETAILS SHOWN SHALL BE INCORPORATED INTO THE PROJECT AT ALL APPROPRIATE LOCATIONS WHETHER CALLED OUT OR NOT.
   E. NO ADDITIONS OR ALTERATIONS SHALL BE MADE TO DRAWINGS BEARING THE ENGINEERS SEAL WITHOUT THE PERMISSION OF THE ENGINEER.

4. ALTERATION OF STRUCTURAL MEMBERS NO STRUCTURAL MEMBER, EITHER HOT ROLLED STEEL OR COLD FORMED STEEL, SHALL BE ALTERED IN ANY WAY BY ANY TRADE WITHOUT THE SPECIFIC WRITTEN PERMISSION OF FORCE ENGINEERING & TESTING, INC.

5. DESIGN AND/OR FABRICATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S STANDARD PRACTICES AND INTERPRETATIONS OF THE FOLLOWING CODES:
   14TH. EDITION AISC STEEL CONSTRUCTION MANUAL ASD, 2007 AISI COLD-FORMED STEEL DESIGN MANUAL, 2000 AWS 1.1 STRUCTURAL WELDING CODE-STEEL AND ANY OTHER CODE LISTED WITHIN THE DESIGN INFORMATION.

6. MATERIALS

	ASTM DESIGNATION	MINIMUM YIELD
HOT ROLLED MILL SHAPES	A992	Fy= 50 ksi
HOLLOW PLATE/FLAT BAR	A572 OR A529	Fy= 50 ksi
HOLLOW STRUCTURAL SECTIONS	A500 OR B500	Fy= 46 ksi
COLD-FORMED LIGHT GAUGE SHAPES	A653 GR 55	Fy= 55 ksi
CABLE BRACING	A475	EXTRA HIGH STRENGTH
ROD BRACING	A36	Fy= 36 ksi
ROOF AND WALL SHEETING	A792	Fy= 50, 80 ksi
MACHINE BOLTS	A307	
HIGH STRENGTH BOLTS	A325	
ANCHOR BOLTS (BY OTHERS)	A36	Fy= 36 ksi
CSI CFD2 FLOOR DECK	A653 (G90)	Fy= 50 ksi
EXTERIOR STRUCTURAL STUDS	A653 SQ (G90)	Fy= 33 ksi
CSI TYPE B DECK	A653 (G90)	Fy= 40 ksi

7. SPECIAL NOTES:
   PIPE LOAD WITH WATER

SIZE	WEIGHT MAX.	SPACING OF HANGERS
4" DIA.	17 PLF	10'-0"
6" DIA.	32 PLF	10'-0"
8" DIA.	50 PLF	10'-0"
10" DIA.	75 PLF	10'-0"
12" DIA.	100 PLF	5'-0"

   ARCHITECTURAL BARRIER ACT LOADS:

ITEM	REQUIRED CAPACITY
GRAB BAR	250 POUNDS ANY DIRECTION
TUB OR SHOWER SEAT	250 POUNDS ANY DIRECTION
FASTENER & MOUNTING DEVIES	250 POUNDS ANY DIRECTION

   STAIR TREADS, RAILING AND GUARD RAILS:

ITEM	REQUIRED CAPACITY
TREADS	300 POUNDS AT CENTER
TOP RAILS	50 PLF HORIZONTALLY
OTHERS RAILS, FILLERS & CONNECTIONS	25 PSF HORIZONTALLY
HAND RAILS	200 POUNDS ANY DIRECTION

8. FINISH:
   A. ALL COLD-FORMED STRUCTURAL FRAMING MEMBERS SHALL BE SHOT BLASTED, GIVEN ONE COAT (0.5 MILS) OF PREMIUM POLYESTER-BASED RED PRIMER, THEN OVEN BAKED PRIOR TO ANY FABRICATION. THE PRIMER CONTAINS A "WAX" TYPE LUBRICANT TO FACILITATE ROLL FORMING AND DETER MARRING DURING THESE OPERATIONS. HAIR LINE CRAZING WHICH MAY OCCUR DURING FORMING OPERATIONS IS CONSIDERED NORMAL.
   B. ALL OTHER STRUCTURAL FRAMING MEMBERS SHALL BE CLEANED IN ACCORDANCE WITH THE AISC CODE OF STANDARD PRACTICE AND GIVEN ONE SHOP COAT (1.0 MILS) OF STANDARD RED-OXIDE PRIMER DESIGNED FOR SHORT TERM FIELD PROTECTION DURING THE ERECTION PROCESS. ALL STANDARD RED-OXIDE PRIMER SHALL MEET THE PERFORMANCE SPECIFICATIONS OF FEDERAL SPECIFICATION TT-P-636D AND TT-P-664.
   C. ALL STRUCTURAL STUDS SHALL HAVE A MIN G60 ZINC COATING (.60oz/Ft^2) TOTAL ON BOTH SIDES.
   D. ALL NON-STRUCTURAL STUDS SHALL HAVE A MIN G40 ZINC COATING (.40oz/Ft^2) TOTAL ON BOTH SIDES.
   E. WHEN EXPOSED, ALL COLD-FORMED STRUCTURAL ZEES, CEES, AND STUDS SHALL HAVE A MINIMUM OF G90 ZINC COATING (.90oz/Ft^2) TOTAL ON BOTH SIDES.

9. ALL ANCHOR BOLT CONNECTIONS ARE A MINIMUM OF F1554-36 UNLESS NOTED. ALL STRUCTURAL FASTENERS ARE A MINIMUM OF #12 DIAMETER SCREWS UNLESS NOTED.

10. COMPOSITE DECK SLABS
   A. CONCRETE IN THE FOLLOWING AREAS SHALL HAVE NATURAL SAND FINE AGGREGATES, NORMAL WEIGHT COARSE AGGREGATES CONFORMING TO ASTM C33, TYPE 1 PORTLAND CEMENT AND SHALL HAVE THE FOLLOWING DESIGNATED COMPRESSIVE STRENGTH (FC) AFTER 28 DAYS COMPOSITE DECK SLABS: 4000psi
   B. CHORLIDE ADMIXTURES OR ADMIXTURES CONTAINING CHORLIDE SALTS SHALL NOT BE ADDED UNDER ANY CIRCUMSTANCES TO THE CONCRETE. SUCH ADDITIVES HAVE PROVEN DELETERIOUS TO STEEL AND STEEL FINISHES.
   C. REINFORCEMENT: 6X6-W1.4 x W1.4 WWR OR EQUIVALENT STEEL FIBER REINFORCING.

11. A325 BOLT TIGHTENING REQUIREMENTS
   ALL HIGH STRENGTH BOLTS ARE A325 UNLESS SPECIFICALLY NOTED OTHERWISE. ALL STRUCTURAL A325 BOLTS WITH HEAVY HEX NUTS FOR THE RIGID FRAME ARE TO BE INSTALLED USING THE TURN-OF-THE-NUT METHOD SPECIFIED IN THE "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS" IN THE AISC MANUAL. UNLESS NOTED OTHERWISE, ALL BOLTED CONNECTIONS ARE DESIGNED AS BEARING TYPE CONNECTIONS WITH BOLT THREADS NOT EXCLUDED FROM THE SHEAR PLANE.

12 ERECTION NOTES
   A. ALL BRACING SHOWN ON THE DRAWINGS FOR THIS STEEL FRAMING SYSTEM IS REQUIRED AND SHALL BE INSTALLED BY THE ERECTOR AS A PERMANENT PART OF THE STRUCTURE ("CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" IN THE AISC MANUAL; SECTION 7.9)
   B. TEMPORARY SUPPORTS, SUCH AS GUYS, BRACES, FALSEWORK, CRIBBING OR OTHER ELEMENTS REQUIRED FOR THE ERECTION OPERATION SHALL BE DETERMINED AND FURNISHED BY THE ERECTOR ("CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" IN THE AISC MANUAL; SECTION 7.9). ERRORS WHICH REQUIRE MAJOR CHANGES IN THE MEMBER CONFIGURATION ARE TO BE REPORTED IMMEDIATELY TO
   C. ENGINEER OF RECORD BY THE CONTRACTOR TO ENABLE WHOEVER IS RESPONSIBLE EITHER TO CORRECT THE ERROR OR TO MOST EFFICIENT AND ECONOMIC METHOD OF CORRECTION TO BE USED BY OTHERS ("CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" IN THE AISC MANUAL; SECTION 7.12).

   D. ERECTION TOLERANCES ARE SET FORTH IN AISC CODE OF STANDARD PRACTICE 7.11 EXCEPT THAT INDIVIDUAL MEMBERS ARE CONSIDERED PLUMB, LEVEL AND ALIGNED IF THE DEVIATION DOES NOT EXCEED 1:300. VARIATIONS IN FINISHED OVERALL DIMENSIONS OF STRUCTURAL STEEL FRAMING ARE DEEMED WITHIN THE LIMITS OF GOOD PRACTICE WHEN THEY DO NOT EXCEED THE CUMULATIVE EFFECT OF ROLLING, FABRICATING, AND ERECTION TOLERANCES.
   E. AS A GENERAL RULE FIELD WELDING IS NOT USED TO ASSEMBLE THE STEEL FRAMING SYSTEM. IN CASES WHERE THE DRAWINGS INDICATE FIELD WELDING AND IN CASES WHERE APPROVED CORRECTIONS ARE TO BE MADE BY FIELD WELDING THE FOLLOWING REQUIREMENTS SHALL BE MET:
      1. WELDERS MUST BE QUALIFIED BY AN INDEPENDENT TESTING AGENCY, WITH SUITABLE DOCUMENTATION TO AWS D1.1 STRUCTURAL WELDING CODE – STEEL OR AWS D1.3 STRUCTURAL WELDING CODE SHEET STEEL AS APPLICABLE, FOR THE PROCESSES, POSITIONS, AND MATERIAL INVOLVED.
      2. ALL WELDS MUST BE MADE IN CONFORMANCE TO A DOCUMENTED AND APPROVED WELDING PROCEDURE SPECIFICATION (WPS). ALL JOINTS WHICH ARE NOT PREQUALIFIED MUST BE SUPPORTED BY A CERTIFIED PROCEDURE QUALIFICATION RECORD (PQR) BY AN INDEPENDENT TESTING AGENCY.
   F. STEEL DECK INSTALLATION SHALL BE IAW APPROVED ERECTION DRAWINGS.
      1. ENDS OF DECK UNITS SHALL BE LAPPED NO LESS THAN 2 INCHES OVER SUPPORTS.
      2. ATTACHMENT OF DECK TO SUPPORTS SHALL BE A MIN. (2) #12-14 x 3/4" HWH INTO THE BEARING WALL TOP TRACK PER LOW FLUTE. OVER FULL BEARING HEADERS, USE A MIN. OF (1) #12-14 x 3/4" HWH PER LOW FLUTE. (36/7 PATTERNS) OVER STEEL BEAMS USE A MIN. (1) 1/4-20x1-1/2" DP5 PER FLUTE OR HILTI X-HSN 24 (37/7 PATTERN)
      3. SIDELAP FASTENERS SHALL BE AT MAXIMUM OF 12" O.C. BETWEEN BEARING WALL FRAMES. USE #12-14 x 3/4" HWH FOR SIDELAP FASTENERS.

   G. CONCRETE PLACEMENT
      1. DECK SHALL BE FREE OF SOIL, DEBRIS, STANDING WATER, LOOSE MILL SCALE AND ALL OTHER FOREIGN MATTER
      2. CONCRETE SHALL BE PLACED FROM A LOW LEVEL IN A UNIFORM MANNER OVER THE SUPPORTING STRUCTURE AND SPREAD TOWARDS THE CENTER OF THE DECK SPAN.
      3. CONCRETE SHALL BE PLACED IN THE OPPOSITE DIRECTION TO WHICH THE SHEETS WERE LAID TO AVOID CONCRETE LEAKAGE.
      4. CONCRETE FINISHING SHALL BE DONE WITH "WALK-BEHIND" POWER TROWELS: 1200 LB FINISH RIDER OR BUGGIES ARE NOT ALLOWED.
      5. SLUMP SHALL BE 3 TO 5 INCHES
      6. BATCH TO PLACEMENT TIME SHALL BE LESS THAN 90 MINUTES.
      7. CONCRETE PUMP TEMPERATURE CHANGE OF 50 TO 90 DEGREES FAHRENHEIT.
      8. AIR CONTENT OF 0 TO 3%

13. MECHANICALLY ATTACHED ULTRA PLY TPO MEMBRANE ROOF SYSTEM
   A MAIN FIELD OF ROOF FM I-90 RATED ASSEMBLY SEE ROOFNAV 260654-0-0.
   B. PERIMETER AND CORNER OF ROOF USE FM I-120 RATED ASSEMBLY SEE ROOFNAV 254071-0-0

14. COMPONENT BRACING PLANS ARE NOT INCLUDED WITH THESE PERMIT DOCUMENTS. ANY ARCHITECTURAL COMPONENTS OR ANY PLUMBING, MECHANICAL OR ELECTRICAL FIXTURE MUST BE DESIGN FOR SEISMIC LOADING PER THE STRUCTURAL DESIGN CRITERIA LISTED IN THESE PLANS BY THE SPECIALTY SYSTEMS DESIGN ENGINEER OR ARCHITECT.

15 ** SHOP DRAWINGS **
   1. THE TERM "SHOP DRAWINGS" INCLUDES FABRICATION, MANUFACTURING, ERECTION AND SETTING DRAWINGS, BROCHURES, CERTIFICATES, AND PRODUCT DATA DESCRIBING MATERIALS AND EQUIPMENT. SHOP DRAWINGS SHALL INCLUDE ALL PERTINENT INFORMATION REQUIRED FOR THE ENGINEER TO FULLY EVALUATE THE MATERIALS BEING REPRESENTED BY THE SUBMITTAL INLCLUDING THE PHYSICAL PROPERTIES, DIMENSIONS, LOCATIONS AND METHOD OF INSTALLATION
   2. SHOP DRAWINGS WILL BEAR THE REVIEW STAMP OF THE CONTRACTOR INDICATING THAT HE HAS REVIEWED THE DRAWINGS FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS; COORDINATE ITEMS INCLUDED IIN THE SUBMITTAL WITH RELATED ITEMS; AND VERIFIED AND COORDINATED DIMENSIONS.
   3. REPRODUCTIONS OF THE ENGINEERING DRAWINGS WILL NOT BE ACCEPTABLE AS SHOP DRAWINGS.
   4. ANY SHOP DRAWING NOT CONFORMING TO THESE REQUIREMENTS WILL BE CAUSE FOR REJECTION AND WILL BE RETURNED WITHOUT ANY FURTHER ACTION.

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
03/18/2022

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LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

GENERAL NOTES

SHEET NO.
S0.1

GENERAL NOTES: LIGHT-GAUGE STEEL FRAMING

MATERIALS & STANDARDS:

1. STEEL FRAMING MEMBERS MUST CONFORM TO THE REQUIREMENTS OF AISI SPECIFICATIONS. FOR THE DESIGN OF COLD-FORMED STRUCTURAL MEMBERS (AISI-86).
2. MATERIAL MUST CONFORM TO ONE OF THE FOLLOWING: ASTM A653, A792, OR A 875.
3. MINIMUM YIELD STRENGTH (FY) = 55,000 PSI
4. ALL STRUCTURAL MEMBERS SHALL BEAR IDENTIFICATION WITH THE FOLLOWING INFORMATION: MANUFACTURER'S NAME, MINIMUM THICKNESS IN MILS OF UNCOATED STEEL, COATING WEIGHT, MINIMUM YIELD STRENGTH (KIPS PER SQUARE INCH).
5. STRUCTURAL FRAMING MEMBERS SHALL BE HOT-DIP GALVANIZED (G60) OR HAVE EQUIVALENT CORROSION-RESISTANT COATING. NON-STRUCTURAL MEMBERS SHALL BE HOT-DIP GALVANIZED (G40) OR HAVE EQUIVALENT CORROSION-RESISTANT COATING.
6. MATERIAL THICKNESS SHALL CONFORM TO THE FOLLOWING SCHEDULE:

GAUGE	MILS	MIN. THICKNESS (INCHES)
25	18	0.018
22	27	0.027
20	33	0.033
18	43	0.043
16	54	0.054
14	68	0.068
12	97	0.097

FABRICATION:

1. C-SECTION STRUCTURAL MEMBERS SHALL COMPLY WITH THE FOLLOWING DIMENSIONAL REQUIREMENTS:

NOMINAL MEMBER SIZE	INDUSTRY DESIGNATOR	WEB DEPTH (INCHES)	MIN. FLANGE WIDTH (INCHES)	MIN. LIP SIZE (INCHES)
2 X 4	350S162-T	3.5	1.625	0.5
2 X 6	550S162-T	6	1.625	0.5
2 X 8	800S162-T	8	1.625	0.5
2 X 10	1000S162-T	10	1.625	0.5
2 X 12	1200S162-T	12	1.625	0.5

2. "T" IS THE UNCOATED MATERIAL THICKNESS IN MILS. "S" INDICATES STUDS AND JOIST SECTIONS WITH LIPS. MAXIMUM FLANGE SIZE PERMITTED IS 2 1/2"
3. TRACKS: COMPLY WITH THE ABOVE DIMENSIONAL REQUIREMENTS EXCEPT WITH A MINIMUM FLANGE OF 1 1/4" , AND NO LIP.
4. WEB PUNCHOUTS: PUNCHOUTS SHALL NOT EXCEED 1 1/2" WIDTH X 4" LENGTH, LOCATED AT WEB CENTERLINE.

CUTTING, NOTCHING & HOLE STIFFENING:

1. FLANGES SHALL NOT BE CUT OR NOTCHED WITHOUT ENGINEER'S APPROVAL.
2. WEB HOLES SHALL BE NO CLOSER THAN 12" TO BEAM OR JOIST BEARING AND SHALL BE LIMITED TO THE FOLLOWING:
   A. DEPTH: ONE-HALF (½) THE WEB DEPTH
   B. LENGTH: 4" OR WEB DEPTH, WHICHEVER IS GREATER
3. WEB HOLES CLOSER THAN 12" TO THE JOISTS BEARING OR 18" TO BEAM/HEADER BEARING SHALL BE REINFORCED WITH #8 SCREWS AT 1" SPACING ALONG EDGES.

FASTENERS:

1. SCREWS:

A. ALL SCREWS SHALL BE SELF-DRILLING / TAPPING SCREWS, WITH HEAD STYLES, THREADS AND POINT TYPES ACCORDING TO MANUFACTURER.
B. USE #8 MINIMUM UNLESS OTHERWISE SPECIFIED
C. MAINTAIN A MINIMUM CENTER-TO-CENTER OR EDGE DISTANCE OF THREE (3) DIAMETERS.
D. INSTALL SO THAT:
   (I) A MINIMUM OF THREE (3) THREADS PENETRATE THROUGH THE STEEL.
   (II) SCREWS PENETRATE COMPONENTS WITHOUT CAUSING PERMANENT SEPARATION.
   (III) HOLES OR THREADS ARE NOT STRIPPED.

2. BOLTS:

A. ALL BOLTS SHALL MEET OR EXCEED ASTM-A307, INSTALLED WITH STANDARD NUTS AND WASHERS.
B. MAINTAIN A MINIMUM DISTANCE OF 1 1/2 TIMES BOLT DIAMETER TO EDGE OF CONNECTED STEEL MEMBER.
C. BOLT HOLE DIAMETER SHALL NOT EXCEED BOLT DIAMETER BY MORE THAN 1/16".

STUD WALLS:

1. ALL BE SHALL BE SPACED AT 24" O.C. IF INLINE WITH STRUCTURAL MEMBERS ABOVE.
2. STUDS SHALL NOT BE SPLICED WITHOUT ENGINEER'S APPROVAL.

CONSTRUCTION GUIDELINES:

1. WHERE POSSIBLE, ALL STRUCTURAL MEMBERS SHALL BE ALIGNED VERTICALLY (IN-LINE FRAMING) TO TRANSFER LOADS IN A DIRECT PATH TO THE FOUNDATION SYSTEM.
2. BEARING SURFACES FOR JOISTS, RAFTERS AND TRUSSES SHALL BE UNIFORM AND LEVEL.
3. ALL LOAD BEARING STUDS, INCLUDING KING AND JACK STUDS, SHALL BE SEATED IN THE TRACKS WITH A MAXIMUM GAP OF 1/8" BETWEEN THE END OF THE STUD & THE WEB OF THE TRACK.
4. TRACK MEMBERS SHALL NOT BE USED FOR ANY LOAD CARRYING APPLICATIONS WITHOUT ENGINEER'S APPROVAL.
5. CUTTING METHODS WHICH CAUSE SIGNIFICANT HEATING OF THE STEEL OR DAMAGE TO THE COATINGS SHALL ONLY BE USED WHEN THE GALVANIZED COATING IS REPAIRED.
6. A SILL SEALER, OR EQUIVALENT, SHALL BE PROVIDED BETWEEN THE UNDERSIDE OF THE WALL WHEN FASTENED DIRECTLY TO CONCRETE.
7. PLUMBING LINES: COPPER AND PLASTIC PIPES SHALL BE SEPARATED FROM STEEL FRAMING BY NON-CONDUCTIVE GROMMETS OR OTHER EQUIVALENT MEANS.
8. ELECTRICAL WIRING: A GROMMET BUSHING, CONDUIT OR EQUIVALENT WIRE PROTECTION SHALL BE INSTALLED IN THE SERVICE HOLE OR PUNCH-OUT BEFORE ELECTRICAL WIRING IS PULLED THROUGH.
9. BRACING:
   A. TEMPORARY BRACING AND/OR SHORING MUST BE PROVIDED UNTIL PERMANENT BRACING HAS BEEN INSTALLED.
   B. STEEL FRAMING ERECTOR IS CAUTIONED THAT MOST STEEL FRAMING MEMBERS ARE INADEQUATE TO SUPPORT LOADS IF NOT PROPERLY BRACED. CONSEQUENTLY, STRAPPING AND BRIDGING MUST BE IN PLACE AND SHEATHING MUST BE CAREFULLY APPLIED. MOVEMENT OF LABORERS ON UNSHEATHED, UNBRACED AND UNBRIDGED MEMBERS SHOULD NOT BE PERMITTED.

GENERAL NOTES: STRUCTURAL AND MISC... STEEL

(THESE NOTES SHALL CONTROL UNLESS NOTED OTHERWISE ON PLANS AND DETAILS.)

1. CONFORM TO THE FOLLOWING MATERIAL SPECIFICATIONS:
   - STRUCTURAL & MISC... SHAPES: ASTM A-50
   - PIPE COLUMNS: ASTM A-53-B, ASTM A-68-II
   - HSS TUBE COLUMNS: ASTM A-500-B
2. ALL DETAILING SHALL BE IN CONFORMANCE WITH STANDARDS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC).
3. UNLESS OTHERWISE NOTED, PROVIDE FRAMED BEAM CONNECTIONS IN ACCORDANCE WITH PART 4, AISC MANUAL - 3/4" ASTM A-325 BOLTS.
4. FIELD CONNECTIONS SHALL BE EQUIVALENT TO STANDARD BOLTED CONNECTIONS USING 3/4" ASTM A-325 BOLTS UNLESS OTHERWISE SHOWN . IF CONNECTION BOLTS ARE IN SINGLE SHEAR, BOLTS SHALL BE PLACED IN TWO VERTICAL ROWS. CONNECTIONS SHALL BE BOLTED OR WELDED - SEE DETAILS.
5. WELDING SHALL CONFORM TO THE "CODE FOR WELDING IN BUILDING CONSTRUCTION" BY THE AMERICAN WELDING SOCIETY, LATEST EDITION. WELDS NOT CALLED OUT ON DRAWINGS SHALL BE 1/4" CONTINUOUS FILLET WELDS. WELDING ELECTRODES SHALL CONFORM TO AWS A5.1 OR A5.5 E70XX.

FASTENER SCHEDULE:

(MINIMUM UNLESS NOTED OTHERWISE IN DETAILS OR PLANS.)

CONNECTED COMPONENTS	FASTENER TYPE & SIZE	SPACING AND/OR NUMBER	REMARKS
STUD WALLS:			
STUD TO TOP AND BOTTOM TRACKS	#8 SCREWS	2	EA. END OF STUD/EACH FLANGE
PLYWOOD (OR OSB) SHEATHING TO STUDS	#8 SCREWS	6" EDGE 12" FIELD	
FLOOR JOISTS/DECK:			
JOIST TO WALL TRACK	#8 SCREWS	2 EACH JOIST	BUNGLE-OR FLAT-HEAD; MIN.. HEAD DIA. = 0.315"
WEB STIFFENER TO JOIST	#8 SCREWS	4	
FLOOR DECK TO JOIST	#8 SCREWS	6" EDGE 12" FIELD	

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
03/18/2022

Force Engineering & Testing Inc.
19530 RAMBLEWOOD DRIVE HUMBLE, TX 77338
(281) 540-6603 Fax: (281) 540-9966

STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
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I am approving this document
2021.12.15 02:59:00 -06'00'

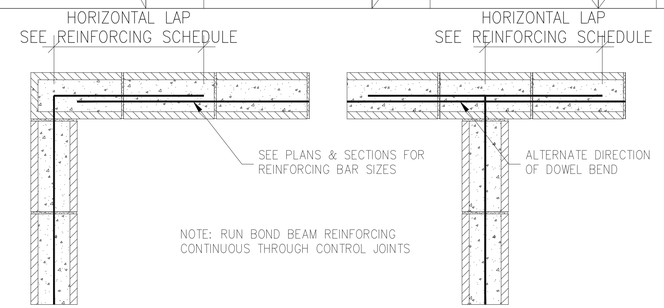
LAKEWOOD STORAGE
NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

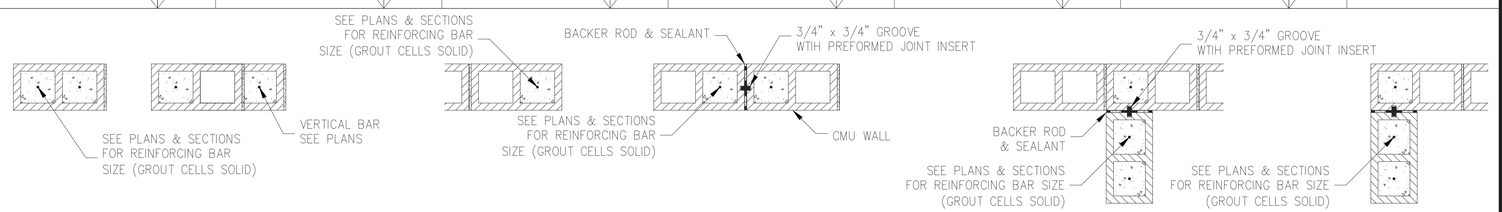
PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

LIGHT GAGE NOTES

SHEET NO.
S0.2

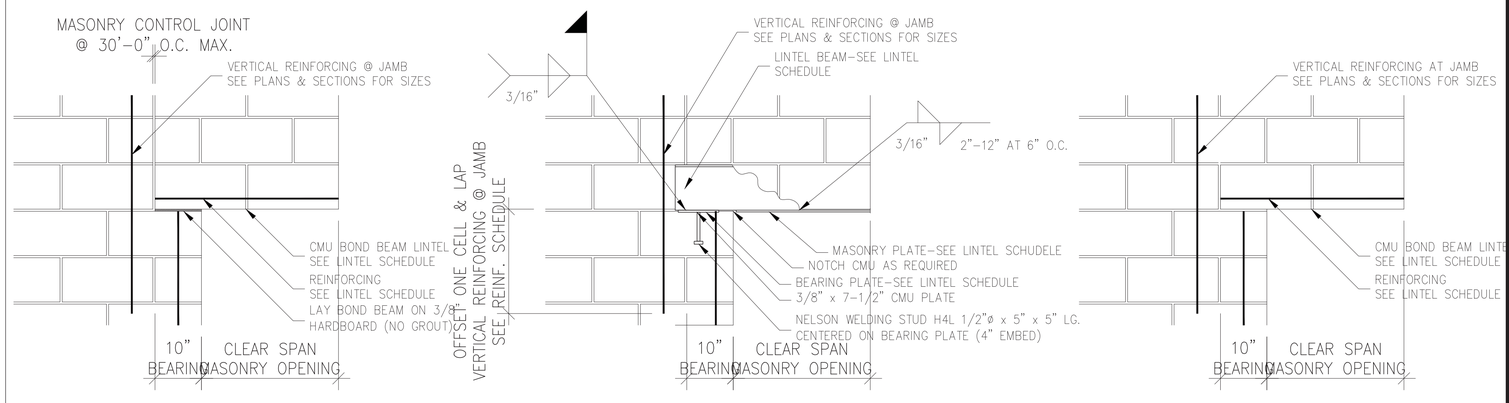
DESCRIPTION: LINTEL 1 (L1)	DESCRIPTION: LINTEL 2 (L2)	DESCRIPTION: LINTEL 3 (L3)	DESCRIPTION: LINTEL 4 (L4)	DESCRIPTION: LINTEL 5 (L5)	DESCRIPTION: LINTEL 6 (L6)	DESCRIPTION: LINTEL 7 (7)	DESCRIPTION: LINTEL 8 (L8)	DESCRIPTION: LINTEL 9 (9)	DESCRIPT.: LINTEL 10 (L10)
8" X 8" CMU BOND BEAM LINTEL REINFORCED WITH (1) #5 BARS BARS CONTINUOUS AT BOTTOM. GROUT SOLID W/ 2000 PSI CONCRETE.	8" or 10" X 16" CMU BOND BEAM LINTEL REINFORCED WITH (1) #5 BARS CONTINUOUS AT TOP AND BOTTOM. PROVIDE #3 VERTICAL BARS AT 8" O.C. GROUT SOLID W/ 2000 PSI COURSE GROUT	W 16 X 26 STEEL BEAM LINTEL WITH 7" WIDE X 5/16" THK. PLATE WELDED TO BOTTOM FLANGE. WITH WALL TIES AT 16" O.C.	8" or 10" X 24" CMU BOND BEAM LINTEL REINFORCED WITH (1) #5 BARS CONTINUOUS AT TOP AND BOTTOM. PROVIDE #3 VERTICAL BARS AT 16" O.C. GROUT SOLID W/ 2000 PSI COURSE GROUT	8" or 10" X 32" CMU BOND BEAM LINTEL REINFORCED WITH (2) #5 BARS CONTINUOUS AT TOP AND BOTTOM. PROVIDE #3 VERTICAL BARS AT 8" O.C. GROUT SOLID W/ 2000 PSI COURSE GROUT	8"or 10" X 32" CMU BOND BEAM LINTEL REINFORCED WITH (1) #4 BARS CONTINUOUS AT TOP AND BOTTOM. PROVIDE #3 STIRRUPS BARS AT 16" O.C. GROUT SOLID W/ 2000 PSI COURSE GROUT	8" or 10" X 40" CMU BOND BEAM LINTEL REINFORCED WITH (1) #4 BARS CONTINUOUS AT TOP AND BOTTOM. PROVIDE #3 STIRRUPS BARS AT 16" O.C. GROUT SOLID W/ 2000 PSI COURSE GROUT	8" or 10" X 40" CMU BOND BEAM LINTEL REINFORCED WITH (2) #4 BARS CONTINUOUS AT TOP AND BOTTOM. PROVIDE #3 STIRRUPS AT 24" O.C. MAX. & #3 STIRRUPS AT 8" O.C. MAX. OVER PIER GOUT SOLID W/ 2000 PSI COURSE GROUT	8" or 10" X 48" CMU BOND BEAM LINTEL REINFORCED WITH (2) #5 BARS CONTINUOUS AT TOP AND BOTTOM. PROVIDE #3 VERTICAL BARS AT 16" O.C. GROUT SOLID W/ 2000 PSI COURSE GROUT	W 12 X 14 STEEL BEAM LINTEL WITH 7" WIDE X 5/16" THK. PLATE WELDED TO BOTTOM FLANGE. WITH WALL TIES AT 16" O.C.
REMARKS	REMARKS	REMARKS	REMARKS	REMARKS	REMARKS	REMARKS	REMARKS	REMARKS	REMARKS
8" MINIMUM BEARING REQ'D EACH END, PROVIDE VERTICAL REINFORCING THE SAME SIZE AND SPACING AS ADJACENT WALL.	8" MINIMUM BEARING REQ'D EACH END, PROVIDE	7" x 7" x 1/2" THK BEARING PLATE WITH NELSON STUD EACH END. ATTACH CMU TO BEAM W/ BLOCK TIES AT 16" O.C.	8" MINIMUM BEARING REQ'D EACH END, PROVIDE	8" MINIMUM BEARING REQ'D EACH END, PROVIDE	8" MINIMUM BEARING REQ'D EACH END, PROVIDE	8" MINIMUM BEARING REQ'D EACH END, PROVIDE	8" MINIMUM BEARING REQ'D EACH END, PROVIDE	8" MINIMUM BEARING REQ'D EACH END, PROVIDE	7" x 7" x 1/2" THK BEARING PLATE WITH NELSON STUD EACH END. ATTACH CMU TO BEAM W/ BLOCK TIES AT 16" O.C.





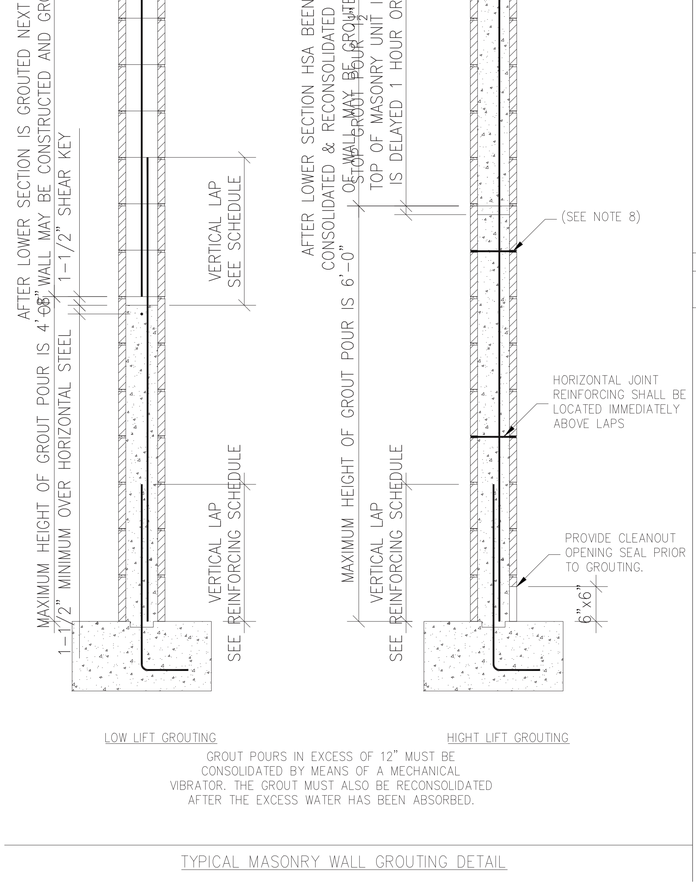
REINF. AT SINGLE PILASTERS | OPENING | CONTROL JOINT | INTERSECTION | CORNER

TYPICAL MASONRY VERTICAL REINFORCING DETAILS



TYPICAL JAMB ELEVATION W/CONTROL JOINT | TYPICAL STEEL LINTEL BEAM ELEVATION | TYPICAL JAMB ELEVATION

TYPICAL BOND BEAM LINTEL DETAILS



TYPICAL MASONRY WALL GROUTING DETAIL

LOW LIFT GROUTING

1. ALL MASONRY AND GROUTING PROCEDURES SHALL BE IN COMPLIANCE WITH THE LATEST EDITION OF THE BUILDING CODE FOR MASONRY STRUCTURES, A.C.I. 530
2. ALL BLOCK MASONRY WALLS SHALL BE LAID WITH TYPE 'S' HIGH STRENGTH MORTAL (1800 PSI) BOUGHT PREMIXED BY THE BAG OR MIXED TO THE FOLLOWING PROPORTIONS:
* 1 BAG MASONRY CEMENT
*1/2 BAG PORTLAND CEMENT
*4 1/2 CUBIC FEET OF SAND BY VOLUME
3. ALL HOLLOW CMU BLOCK MASONRY SHALL BE GRADE 'N' LOAD BEARING UNITS IN ACCORDANCE WITH ASTM C-90 SPECIFICATIONS (MIN. ULTIMATE NET CONCRETE STRENGTH = 2500 PSI.***
4. ALL GROUT FOR VERTICAL REINFORCING AND BOND BEAMS SHALL BE 2,000 PSI COARSE GROUT, 8" – 10" SLUMP
5. ALL REINFORCING HOLLOW UNIT MASONRY SHALL BE BUILT TO PRESERVE THE UNOBSTRUCTED VERTICAL CONTINUITY OF THE CELLS TO BE FILLED. WALL AND CROSS WEBS FORMING SUCH CELLS TO BE FILLED SHALL BE FULL-BEDDED IN MORTAL TO PREVENT LEAKAGE OF GROUT. ALL HEAD (OR END) JOINTS SHALL BE SOLIDLY FILLED WITH MORTAR FOR A DISTANCE IN FROM THE FACE OF THE WALL OR UNIT NOT LESS THAN THE THICKNESS OF THE LONGITUDINAL FACE SHELLS. BOND SHALL BE PROVIDED BY LAPPING UNITS IN SUCCESSIVE VERTICAL COURSES OR BY EQUIVALENT MECHANICAL ANCHORAGE.
6. VERTICAL CELLS TO BE FILLED SHALL HAVE VERTICAL ALIGNMENTS SUFFICIENT TO MAINTAIN A CLEAR, UNOBSTRUCTED CONTINUOUS VERTICAL CELL MEASURING NOT LESS THAN 2 INCHES BY 3 INCHES. NO MORTAR PROJECTIONS INTO THE CELL MAY EXCEED 1/4".
7. ALL CELLS CONTAINING REINFORCEMENT SHALL BE FILLED SOLID WITH GROUT. GROUT SHALL BE PLACED IN LIFTS OF 4 FEET MAXIMUM HEIGHT. ALL GROUT SHALL BE CONSOLIDATED APPROXIMATELY 5 TO 10 MINUTES AFTER POURING, BY VIBRATING, AND BEFORE PLASTICITY IS LOST. WHEN THE GROUTING IS STOPPED FOR ONE HOUR OR LONGER HORIZONTAL CONSTRUCTION JOINTS SHALL BE FORMED BY STOPPING THE POUR OF GROUT NOT LESS THAN 1/2 INCH BELOW THE TOP OF THE UPPERMOST UNIT GROUTED. HORIZONTAL STEEL SHALL BE FULLY EMBEDDED BY GROUT IN AN UNINTERRUPTED POUR.
8. PROVIDE HORIZONTAL JOINT REINFORCING AT 24" ON CENTER. ALL HORIZONTAL JOINT REINFORCING SHALL BE DURAWALL-TRUSS TYPE MIN. WIRE GATE NO. 8 OR APPROVED EQUAL.
9. THE CONTRACTOR SHALL SUBMIT HIS COLD WEATHER MASONRY PROCEDURES FOR APPROVAL IF THE AMBIENT TEMPERATURES ARE BELOW 40 DEGREES FAHRENHEIT.
10. ALL VERTICAL REINFORCING STEEL SHALL LAP 48 BAR DIAMETERS UNLESS OTHERWISE NOTED ON PLANS, SECTIONS OR DETAILS.

HIGH LIFT GROUTING

11. THE CONTRACTOR MAY ELECT TO USE HIGH LIFT GROUTING AS AN ALTERNATE. IF THE HIGH LIFT GROUTING IS USED, THE FOLLOWING ADDITIONAL CONDITIONS APPLY:
A.) THE CONTRACTOR SHALL SUBMIT HIS HIGH LIFT GROUTING PROCEDURE OF APPROVAL PRIOR TO CONSTRUCTION.
B.) CLEANOUTS OPENING, AT LEAST 6 SQUARE INCHES, SHALL BE PROVIDED AT THE BOTTOM OF ALL CELLS TO BE FILLED AT EACH POUR OF GROUT. THE CLEANOUTS SHALL BE SEALED AFTER INSPECTION AND BEFORE GROUTING.
C.) VERTICAL REINFORCEMENT SHALL BE HELD IN POSITION AT TOP AND BOTTOM AND AT INTERVALS NOT EXCEEDING 200 DIAMETERS OF THE REINFORCEMENT. THE REINFORCEMENT SHALL BE HELD IN PROPER LOCATION WITH PREFABRICATED BAR POSITIONERS. ONE SHALL BE PLACED IMMEDIATELY ABOVE THE LAP OF THE FOUNDATION DOWELS.
D.) GROUT IN MAXIMUM LIFTS OF 6 FEET, CONSOLIDATE AT INITIAL PLACEMENT AND RECONSOLIDATE AFTER INITIAL WATER LOSS. A MECHANICAL VIBRATOR SHALL BE USED FOR ALL CONSOLIDATION. DELAY TWENTY-FIVE TO FORTY-FIVE MINUTES BETWEEN SUCCESSIVE LIFTS TO ALLOW EXCESS GROUT WATER TO BE ABSORBED. RECONSOLIDATE BEFORE EACH SUCCESSIVE LIFT WHILE GROUT IS STILL IN A PLASTIC STATE.

12. ALL GROUT SHALL BE NONMETALLIC SHRINKAGE-RESISTANT GROUT PROVIDED BY A MANUFACTURER APPROVED IN WRITING BY THE STRUCTURAL ENGINEER AND INSTALLED AND MIXED PER THE MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS. ALL GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (fc) AT 28 DAYS EQUAL TO 5000 PSI.

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
See Comment Sheet(s)
03/18/2022

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STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

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LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

MASONRY NOTES

SHEET NO.
S0.3

TESTING & INSPECTION REQUIREMENTS					
REQUIRED INSPECTION VERIFICATION OR TEST	APPLICABILITY FOR PROJECT	VERIFICATION MONITORING FREQUENCY	IBC SECTION & REFERENCE CRITERIA	INSPECTOR QUALIFICATIONS	CONTACT FOR TESTING/INSPECTION
SOILS (SLAB ON GRADE)			IBC 1704.7.1		
A. SUB-GRADE 1. VISUAL OBSERVATION AT THE CONTRACTORS EXPENSE, INSTRUMENT READINGS SHALL BE TAKEN BY LICENSED SURVEYOR TO VERIFY FINAL SUBGRADE ELEV. AND SLOPE	APPLICABLE	PERIODIC	GEOTECHNICAL REPORT, BLDG PAD, GENERAL NOTES	QUALIFICATIONS BASED ON ASTM D3740 LICENSED SURVEYOR	TESTING LAB
2. PROOF ROLLING OBSERVATIONS PROOF ROLLING SHALL BE MONITORED BY A GEOTECHENGR. THE GEOTECH ENGR SHALL APPROVE THE TYPE OF PROOFROLLING EQUIP. AND PROCEDURES	APPLICABLE	CONTINUOUS	GEOTECHNICAL REPORT, BLDG PAD, GENERAL NOTES	QUALIFICATIONS BASED ON ASTM D3740	TESTING LAB
3. MOISTURE CONDITIONING & RECOMPACTION: PROVIDE (1) DENSITY TEST FOR EACH 2000 S.F. REFER TO NOTES ON BLDG PAD FOR TESTING SPECIFICATIONS	APPLICABLE	PERIODIC	GEOTECHNICAL REPORT, BLDG PAD, GENERAL NOTE	QUALIFICATIONS BASED ON ASTM D3740	TESTING LAB
B. CHEMICAL INJECTION QUALITY CONTROLLED TESTING & EVALUATION PRIOR TO INJECTION SHALL BE PERFORMED BY THE GEOTECH ENGR. TO DETERMINE THE EFFECTIVENESS OF THE EFFECTIVENESS OF THE CHEMICAL INJECTION PROCESS. THE GEOTECH FORM SHALL MONITOR THE INJECTION PROCESS TO VERIFY AREA COVERAGE, DEPTH, AND SWELL TEST RESULTS.		CONTINUOUS	GEOTECHNICAL REPORT, BLDG PAD, GENERAL NOTE	QUALIFICATIONS BASED ON ASTM D3740	TESTING LAB
C. DURING FILL PLACEMENT VISUAL OBSERVATION: DURING PLACEMENT & COMPACTION OF FILL, SPECIAL INSPECTOR SHALL DETERMINE THAT THE FILL MATERIAL BEING USED & THE MAX. LIFT THICKNESS COMPLY W/ PROJECT REQUIREMENTS. PIT RUN MATERIALS SHALL BE VISUALLY MONITORED BY THE TEST LAB W/ ADDT'L SAMPLES TESTING EACH DAY, OR MORE OFTEN IF MATERIALS APPEAR TO VARY.	APPLICABLE	PERIODIC	BC 1704.7.2 GEOTECHNICAL REPORT, BLDG PAD, GENERAL NOTES	QUALIFICATIONS BASED ON ASTM D3740 LICENSED SURVEYOR	TESTING LAB
D. EVALUATION OF IN-PLACE DENSITY OF FILL PROVIDE (1) DENSITY TEST FOR EACH 2000 S.F. REFER TO NOTES ON BLDG PAD FOR TESTING SPECIFICATIONS	APPLICABLE	CONTINUOUS	GEOTECHNICAL REPORT, BLDG PAD, GENERAL NOTES	QUALIFICATIONS BASED ON ASTM D3740	TESTING LAB
E. TRENCH BACKFILLING TRENCH BACKFILLING WITH CLAY CAP AND PLACING OF CLAY PLUG SHALL BE MONITORED BY GEOTECH ENGR. W/ A WRITTEN REPORT SENT TO STRUCTURAL ENGR.	APPLICABLE	PERIODIC			TESTING LAB
C. DURING FILL PLACEMENT VISUAL OBSERVATION: DURING PLACEMENT & COMPACTION OF FILL, SPECIAL INSPECTOR SHALL DETERMINE THAT THE FILL MATERIAL BEING USED & THE MAX. LIFT THICKNESS COMPLY W/ PROJECT REQUIREMENTS. PIT RUN MATERIALS SHALL BE VISUALLY MONITORED BY THE TEST LAB W/ ADDT'L SAMPLES TESTING EACH DAY, OR MORE OFTEN IF MATERIALS APPEAR TO VARY.	APPLICABLE	PERIODIC	BC 1704.7.2 GEOTECHNICAL REPORT, BLDG PAD, GENERAL NOTES	QUALIFICATIONS BASED ON ASTM D3740 LICENSED SURVEYOR	TESTING LAB
D. EVALUATION OF IN-PLACE DENSITY OF FILL PROVIDE (1) DENSITY TEST FOR EACH 2000 S.F. REFER TO NOTES ON BLDG PAD FOR TESTING SPECIFICATIONS	APPLICABLE	CONTINUOUS	GEOTECHNICAL REPORT, BLDG PAD, GENERAL NOTES	QUALIFICATIONS BASED ON ASTM D3740	TESTING LAB
E. TRENCH BACKFILLING TRENCH BACKFILLING WITH CLAY CAP AND PLACING OF CLAY PLUG SHALL BE MONITORED BY GEOTECH ENGR. W/ A WRITTEN REPORT SENT TO STRUCTURAL ENGR.	APPLICABLE	PERIODIC			TESTING LAB
2A. PILE FOUNDATIONS			IBC 1704.8	LICENSED GEOTECH ENGINEER	
2B. SHALLOW FOUNDATIONS A. THE GEOTECH ENGR. OR A QUALIFIED E.I.T. UNDER THE DIRECT SUPERVISION OF THE GEOTECH ENGR. SHALL BE PRESENT DURING THE EXCAVATION OF THE FORST PIER SHAFT. 1. VERIFY THE BEARING STRATUM IS ENCOUNTERED AT THE ANTICIPATED DEPTHS. 2. ADDRESS UNFORESEEN SUBSURFACE CONDITIONS , IF ANY. 3. VERIFY CONFORMANCE W/FOUNDATION RECOMMENDATIONS PROVIDED IN THE PROJECT GEOTECH REPORT & THE STRUCTURAL DWGS.	APPLICABLE	PERIODIC	IBC 1704.9 GEOTECHNICAL REPORT, GENERAL NOTES	GRADUATE ENGINEER ** QUALIFICATIONS BASED ON ASTM E329 & ASTM C1077	TESTING LAB
B. ALL FTGS SHALL BE OBSERVED & MONITORED BY A REPRESENTATIVE OF THE GEOTECH ENGR. W/ A COMPLETE SITE OF STR. DWGS THAT ARE TO REMAIN W/ THE GEOTECH ENGR. OR HIS REPRESENTATIVE. 1. CHECK REINF. SIZES, QTY, AND CLEARANCES. 2. CHECK FTG DEPTH & SIZE. 3. CHECK CONCRETE AS SPECIFIED IN CONCRETE SECTION NOTES.	APPLICABLE	CONTINUOUS	GEOTECHNICAL REPORT, FND. DWGS, DETAILS, GENERAL NOTES	QUALIFICATIONS BASED ON ASTM E329 & ASTM C1077	TESTING LAB
C. DURING FILL PLACEMENT VISUAL OBSERVATION: DURING PLACEMENT & COMPACTION OF FILL, SPECIAL INSPECTOR SHALL DETERMINE THAT THE FILL MATERIAL BEING USED & THE MAX. LIFT THICKNESS COMPLY W/ PROJECT REQUIREMENTS. PIT RUN MATERIALS SHALL BE VISUALLY MONITORED BY THE TEST LAB W/ ADDT'L SAMPLES TESTING EACH DAY, OR MORE OFTEN IF MATERIALS APPEAR TO VARY.	APPLICABLE	PERIODIC	BC 1704.7.2 GEOTECHNICAL REPORT, BLDG PAD, GENERAL NOTES	QUALIFICATIONS BASED ON ASTM D3740 LICENSED SURVEYOR	TESTING LAB
D. EVALUATION OF IN-PLACE DENSITY OF FILL PROVIDE (1) DENSITY TEST FOR EACH 2000 S.F. REFER TO NOTES ON BLDG PAD FOR TESTING SPECIFICATIONS	APPLICABLE	CONTINUOUS	GEOTECHNICAL REPORT, BLDG PAD, GENERAL NOTES	QUALIFICATIONS BASED ON ASTM D3740	TESTING LAB
3. CONCRETE CONSTRUCTION					
A. REINFORCING STEEL PROVIDE PERIODIC INSPECTION OF REINFORCING SIZES, SPACING, REBAR GRADE, & PLACEMENT @ THE FOLLOWING FREQUENCY: COLUMNS: 10% BEAMS: 30% JOISTS: 10% OTHER MEMBERS: RANDOMLY @ 20%	APPLICABLE	PERIODIC	IBC 1704.4, ACI 318: CH 35, 7.1-7.7, CONCRETE & REINF. GENERAL NOTES	QUALIFICATIONS BASED ON ASTM E329	FORCE ENGINEERING & TESTING, INC.
B. REINFORCING STEEL WELDING NO FIELD WELDING PERMITTED	APPLICABLE		AWS D1.4 ACI 318: 3.5.2	CERTIFIED WELDER	FORCE ENGINEERING & TESTING, INC.
C. BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO & DURING PLACEMENT OF CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASED.	NOT APPLICABLE	CONTINUOUS	IBC 1704.4	CWI OR ASSOCIATE CWI	
D. VERIFY USE OF CONCRETE MIX DESIGN. (EACH CONCRETE POUR)	APPLICABLE	PERIODIC	ACI 318-CH 4, 5.2-5.4	QUALIFICATIONS BASED ON ASTM C1077	FORCE ENGINEERING & TESTING, INC.
E. SAMPLING OF MESH CONCRETE. 1. ALL CONCRETE TESTING IS TO BE MADE AFTER WATER, IF ANY, IS ADDED AT SITE. 2. PROVIDE A SET OF (4) CYLINDERS TO BE TAKEN FOR EVERY 75 CUBIC YDS. OF CONCRETE. 3. MONITOR SLUMP & AIR CONTENT OF CONCRETE & NOTIFY DELIVERY DRIVER IF SLUMP DEVIATES MORE THAN +/- 1 INCH FROM RECOMMENDED VALUE. CONTACT SUPPLIER FOR FURTHER DIRECTIONS.	APPLICABLE	PERIODIC	ACI 318-CH 4, 5.2-5.4	QUALIFICATIONS BASED ON ASTM C1077	FORCE ENGINEERING & TESTING, INC.
F. PLACEMENT OF CONCRETE & SHOTCRETE.	NOT APPLICABLE	CONTINUOUS	ACI 318 - CH 5.9, 5.10	QUALIFICATIONS BASED ON ASTM C1077	
G. MAINTENANCE OF SPECIFIED CURING TEMP. & TECHNIQUES (EACH CONCRETE POUR)	APPLICABLE	PERIODIC	ACI 318 - CH 5.11, 5.13	QUALIFICATIONS BASED ON ASTM C1077	TESTING LAB
H. PRESTRESSED CONCRETE 1. APPLICATION OF PRE-STRESSING FORCE. 2. GROUTING OF BOUNDED PRESTRESSING TENDONS IN SEISMIC-FORCE RESISTING SYSTEMS	NOT APPLICABLE	CONTINUOUS		QUALIFICATIONS BASED ON ASTM C1077	
I. ERECTION OF TILT-UP CONCRETE MEMBERS.	NOT APPLICABLE	PERIODIC		TECHNICIAN TRAINED IN FIELD OF WORK & HAS AT LEAST TWO YEARS OF EXPERIENCE	
J. POST TENSIONED CONCRETE.					
1. VERIFY IN-SITU CONCRETE STRENGTH PRIOR TO STRESSING OF TENDONS.	NOT APPLICABLE	EACH POUR		QUALIFICATIONS BASED ON ASTM E329	NOT APPLICABLE
2. THE POST-TENSIONING ENGINEER OR A MEMBER OF HIS STAFF SHALL INSPECT THE TENDON PLACEMENT & CHAIRING TO ENSURE COMPLIANCE W/THE INTENT OF THE DESIGN.	NOT APPLICABLE	PERIODIC		QUALIFICATIONS BASED ON ASTM E329	NOT APPLICABLE
3. CONTINUOUS INSPECTION IS REQUIRED DURING ALL STRESSING ACTIVITIES.	NOT APPLICABLE	CONTINUOUS		QUALIFICATIONS BASED ON ASTM E329	NOT APPLICABLE
4. RECORDS OF ALL JACKING FORCES & ELONGATINS SHALL BE MADE IN ACCORDANCE W/PTI FIELD MANUAL & RECORDS SHALL BE PROMPTLY SUBMITTED TO THE ARCHITECT & ENGINEER.	NOT APPLICABLE	CONTINUOUS		QUALIFICATIONS BASED ON ASTM E329	NOT APPLICABLE
K. REMOVAL OF SHORES. VERIFY IN-SITU CONCRETE STRENGTH PRIOR TO REMOVAL.	NOT APPLICABLE	CONTINUOUS DURING EACH CONCRETE POUR	ACI 318 - CH 5.6, 5.8	QUALIFICATIONS BASED ON ASTM C1077	NOT APPLICABLE
4. STEEL CONSTRUCTION			IBC 1704.7.1		
A. MATERIAL VERIFICATION OF HIGH STRENGTH BOLTS, NUTS & WASHERS. 1. ID MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONST. DOCS. 2. MFGRS CERTIFICATE OF COMPLIANCE REQ'D.	APPLICABLE	PERIODIC	STRUCTURAL STEEL NOTES; APPLICABLE ASTM MATERIAL SPECS; AISC 33, SECTION A3.4; AISC LRFD SECTION A33	CWI/ASSOCIATE/TECHNICAL GRADUATE AWS OR SRSI	TESTING LAB
B. HIGH-STRENGTH BOLTING. 1. BEARING TYPE CONNECTIONS.	APPLICABLE	PERIODIC	IBC 1704.3.3; STRUCTURAL STEEL NOTES	CWI/ASSOCIATE/TECHNICAL GRADUATE AWS OR SRSI	TESTING LAB
2. SLIP-CRITICAL CONNECTIONS.	NOT APPLICABLE	PERIODIC	AISC LRFD SECTION M2.5	CWI/ASSOCIATE/TECHNICAL GRADUATE AWS OR SRSI	TESTING LAB
C. MATERIAL VERIFICATION OF STRUCTURAL STEEL. 1. I.D. MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONST DOCS.	APPLICABLE	PERIODIC	IBC 1708.4; STRUCTURAL STEEL NOTES	CWI/ASSOCIATE/TECHNICAL GRADUATE AWS OR SRSI	TESTING LAB
2. MFGRS CERTIFICATE OF COMPLIANCE REQUIRED	APPLICABLE	PERIODIC	AISC,ASD,SECTION A3.6 AISC LRFD SECTION A3.5	CWI/ASSOCIATE/TECHNICAL GRADUATE AWS OR SRSI	TESTING LAB

REQUIRED INSPECTION VERIFICATION OR TEST	APPLICABILITY FOR PROJECT	VERIFICATION MONITORING FREQUENCY	IBC SECTION & REFERENCE CRITERIA	INSPECTOR QUALIFICATIONS	CONTACT FOR TESTING/INSPECTION
CONTINUED.....					
E. WELDING OF STRUCTURAL STEEL. 1. COMPLETE & PARTIAL PENETRATION GROOVE WELDS.	NOT APPLICABLE	CONTINUOUS	IBC 1704.3.1; STRUCTURAL NOTED	CWI/ASST/LICENSED ENGINEER	TESTING LAB
2. MULTI PASS FILLET WELDS	NOT APPLICABLE	CONTINUOUS	AWS D1.1	CWI/ASST/LICENSED ENGINEER	TESTING LAB
3. SINGLE-PASS FILLET WELDS > 5/16"	APPLICABLE	CONTINUOUS	AWS D1.1	CWI/ASST/LICENSED ENGINEER	TESTING LAB
4. SINGLE-PASS FILLET WELDS </=5/16"	NOT APPLICABLE	PERIODIC	AWS D1.1	CWI/ASST/LICENSED ENGINEER	TESTING LAB
5. FLOOR & DECK WELDS.	NOT APPLICABLE	PERIODIC	AWS D1.3	CWI/ASST/LICENSED ENGINEER	TESTING LAB
F. WELDING OF REINFORCMING STEEL. 1. VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN A706.	NOT APPLICABLE	PERIODIC		CWI/ASST/TECHNICIAN W/AT LEAST (1) YEAR OF FIELD EXPERIENCE	
2. REINFORCING STEEL-RESISTING FLEXURAL & AXIAL FORCES IN INTERMEDIATE & SPECIAL MOMENT FRAMES, & BOUNDARY ELEMENTS OF SPECIAL REINFORCING CONCRETE SHEAR WALLS & SHEAR REINFORCEMENT.	NOT APPLICABLE	CONTINUOUS		CWI/ASST/TECHNICIAN W/AT LEAST (1) YEAR OF FIELD EXPERIENCE	
3. SHEAR REINFORCEMENT	NOT APPLICABLE	CONTINUOUS		CWI/ASST/TECHNICIAN W/AT LEAST (1) YEAR OF FIELD EXPERIENCE	
4. OTHER REINFORCING STEEL	NOT APPLICABLE	PERIODIC		CWI/ASST/TECHNICIAN W/AT LEAST (1) YEAR OF FIELD EXPERIENCE	
G. STEEL FRAME JOINTS DETAILS COMPLIANCE W/APPROVED CONST. DOCS. 1. DETAILS SUCH AS BRACING & STIFFENING.	NOT APPLICABLE	PERIODIC	IBC 1704.3.2; STRUCTURAL STEEL DWGS		TESTING LAB
2. MEMBER LOCATIONS	NOT APPLICABLE	PERIODIC	IBC 1704.3.2; STRUCTURAL STEEL DWGS		TESTING LAB
3. APPLICATION OF JOINT DETAILS @ EACH LOCATION	NOT APPLICABLE	PERIODIC	IBC 1704.3.2; STRUCTURAL STEEL DWGS		TESTING LAB
5. INSPECTION OF FABRICATORS FOR STRUCTURAL STEEL					
SPECIAL INSPECTIONS SHALL NOT BE REQUIRED WHERE THE WORK IS DONE ON THE PREMISES OF A FABRICATOR WHO IS REGISTERED & APPROVED TO PERFORM SUCH WORK W/O SPECIAL INSPECTION I.E., "AISC CERTIFIED". AT COMPLETION OF THE FABRICATION, THE "APPROVED" FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE BLDG CODE OFFICIAL AND THE ENGINEER IN RESPONSIBLE CHARGE STATING THAT THE WORK WAS PERFORMED IAW THE APPROVED CONST. DOCUMENTS	NOT APPLICABLE	PERIODIC	IBC 1704.3.2; & 1704.2.2; AISC CERTIFICATION PROGRAM	LICENSED PROFESSIONAL ENGINEER CERTIFIED BY AISC CERTIFICATION PROGRAM	TESTING LAB
6. MASONRY CONSTRUCTION					
LEVEL 1 INSPECTION	APPLICABLE		IBC 1704.5.2	QUALIFICATION BASED ON ASTM C1093	TESTING LAB
A. AS MASONRY CONST BEGINS, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE 1. PROPORTIONS OF SITE-PREPARED MORTAR.	APPLICABLE	PERIODIC	ACI 530.1 ART 2.6A	QUALIFICATION BASED ON ASTM C1093	TESTING LAB
2. CONST OF MORTAR JOINTS.	APPLICABLE	PERIODIC	ACI 530.1 ART 3.3B	QUALIFICATION BASED ON ASTM C1093	TESTING LAB
3. LOCATION OF REINFORCEMENT & CONNECTORS.	APPLICABLE	PERIODIC	ACI 530.1 ART 3.4, 3.6A	QUALIFICATION BASED ON ASTM C1093	TESTING LAB
4. PRESTRESSING TECHNIQUE	NOT APPLICABLE	PERIODIC	ACI 530.1 ART 3.6A	QUALIFICATION BASED ON ASTM C1093	TESTING LAB
5. GRADE & SIZE OF PRESTRESSING TENDONS & ANCHORAGES.	NOT APPLICABLE	PERIODIC	ACI 530.1 ART 2.4B, 2.4H	QUALIFICATION BASED ON ASTM C1093	TESTING LAB
2. THE INSPECTION PROGRAM SHALL VERIFY: 1. SIZE & LOCATION OF STRUCTURAL ELEMENTS.	NOT APPLICABLE	PERIODIC	ACI 530.1 ART 3.3G	QUALIFICATION BASED ON ASTM C1093	TESTING LAB
2. TYPE, SIZE, & LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONST.	APPLICABLE	PERIODIC	ACI 530 SEC 1.2.2(e), 2.14,3.1.6	QUALIFICATION BASED ON ASTM C1093	TESTING LAB
3. SPECIFIED SIZE, GRADE & TYPE OF REINFORCEMENT	APPLICABLE	PERIODIC	ACI 530.1 ART 2.4, 3.4	QUALIFICATION BASED ON ASTM C1093	TESTING LAB
4. WELDING IF REINFORCING BARS	NOT APPLICABLE	CONTINUOUS	ACI 530 SEC 2.1.10.7.2,3.3.3.4(b)	QUALIFICATION BASED ON ASTM C1093	TESTING LAB
5. PROTECTION OF MASONRY DURING COLD WEATHER (BELOW 40 DEG.) OR HOT WEATHER (ABOVE 90 DEG.)	APPLICABLE	PERIODIC	ACI 530.1 ART 1.8C, 1.8D	QUALIFICATION BASED ON ASTM C1093	TESTING LAB
6. APPLICATION OF PRESTRESSING FORCE	NOT APPLICABLE	PERIODIC	ACI 530.1 ART 3.6B	QUALIFICATION BASED ON ASTM C1093	TESTING LAB
3. PRIOR TO GROUTING, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE: 1. GROUT SPACE IS CLEAN	APPLICABLE	PERIODIC	ACI 530.1 ART 3.2	QUALIFICATION BASED ON ASTM C1093	TESTING LAB
2. PLACEMENT OF REINFORCEMENT AND CONNECTORS & PRESTRESSING TENDONS AND ANCHORAGES	APPLICABLE	PERIODIC	ACI 530.1 ART 3.4	QUALIFICATION BASED ON ASTM C1093	TESTING LAB
3. PROPORTIONS OF SITE-PREPARED GROUT & PRESTRESSING GROUT FOR BONDED TENDONS	APPLICABLE	PERIODIC	ACI 530.1 ART 2.6B	QUALIFICATION BASED ON ASTM C1093	TESTING LAB
4. CONSTRUCTION OF MORTAR JOINTS	APPLICABLE	PERIODIC	ACI 530.1 ART 3.3B	QUALIFICATION BASED ON ASTM C1093	TESTING LAB
D. GROUT PLACEMENT SHALL BE VERIFIED TO ENSURE COMPLIANCE W/CODE & CONST DOCS.	APPLICABLE	PERIODIC	ACI 530.1 ART 3.5	QUALIFICATION BASED ON ASTM C1093	TESTING LAB
1. GROUTING OF PRESTRESSING BONDED TENDONS.	NOT APPLICABLE	CONTINUOUS	ACI 530.1 ART 3.4	QUALIFICATION BASED ON ASTM C1093	TESTING LAB
E. PREPARATION OF ANY REQUIRED GROUT SPECIMENT, MORTAR SPECIMENS, AND/OR PRISMS SHALL BE OBSERVED.	APPLICABLE	PERIODIC	ACI 530.1 ART 1.4	QUALIFICATION BASED ON ASTM C1093	TESTING LAB
F. COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF THE CONST DOCS & THE APPROVED SUBMITTALS SHALL BE VERIFIED	APPLICABLE	PERIODIC	ACI 530.1 ART 1.5	QUALIFICATION BASED ON ASTM C1093	TESTING LAB

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
03/18/2022

Force Engineering & Testing Inc.
19530 RAMBLEWOOD DRIVE HUMBLE, TX 77338
(281) 540-6603 Fax: (281) 540-9966

STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
on=Johnathan Green, o=US, o=Force Engineering & Testing Inc.
email=jgreen@forceengineering.com
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LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

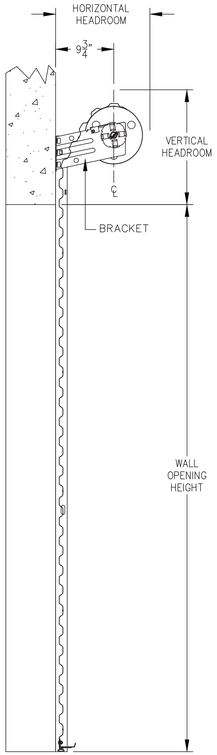
TESTING & INSPECTION

SHEET NO.
S0.4

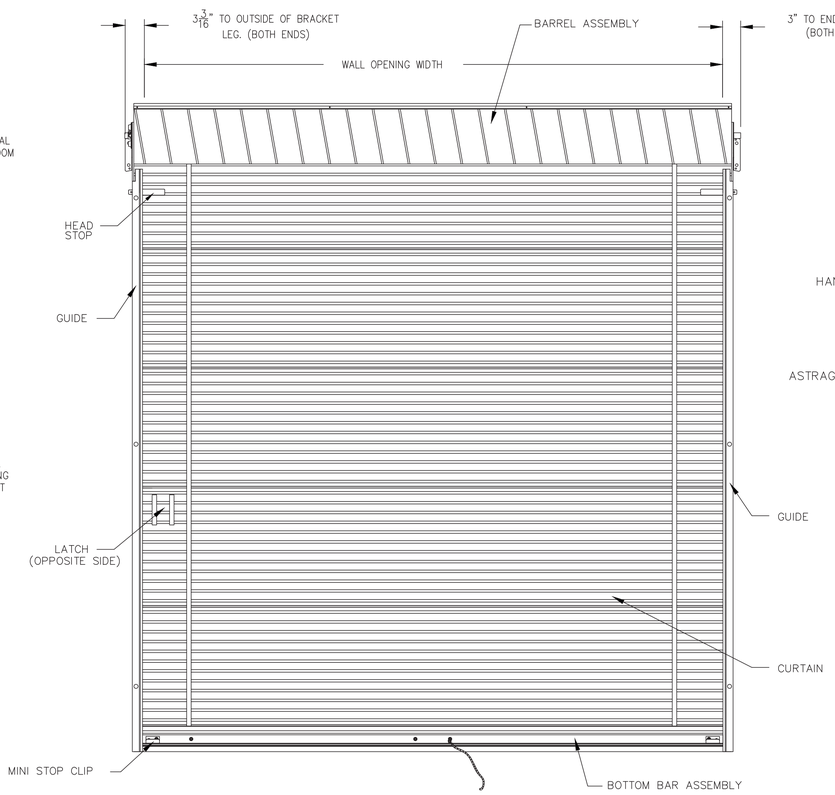
HEADROOM REQUIRED

OPENING HEIGHT	VERTICAL HEADROOM	HORIZONTAL HEADROOM
THRU 7'-4"	15-1/2"	17"
OVER 7'-4" THRU 8'-8"	16"	17-1/2"
OVER 8'-8" THRU 10'-0"	17"	18-1/4"

1. CLEARANCES SHOWN ARE MAXIMUMS, LESSER CLEARANCES MAY BE POSSIBLE.
2. ALL OPENING PREPARATION AND FIELD PAINTING SHALL BE PROVIDED BY OTHERS.
3. CURTAIN FINISH SHALL BE SILICON POLYESTER PRE-PAINT OVER GALVANIZED GRADE 80 STEEL.
4. GUIDES, BRACKETS, BOTTOM BAR ANGLE, HEAD STOPS AND HANDLES ARE ZINC COATED.
5. UNLESS OTHERWISE NOTED, LOCKING SHALL BE BY SINGLE MINI SLIDE LATCH BOLTED TO CURTAIN AND SUITABLE FOR DOUBLE PADLOCKS AND SINGLE CYLINDER LOCK BY OTHERS.
6. LATCH COVER IS YELLOW ZINC (STAINLESS STEEL OPTIONAL) AND SLIDE IS MAGNETIC STAINLESS.
7. SERIES 650I IS AN INSULATED SERIES 650.

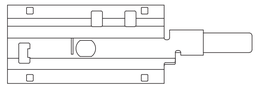


END VIEW



INSIDE ELEVATION

MINI LATCH

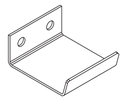


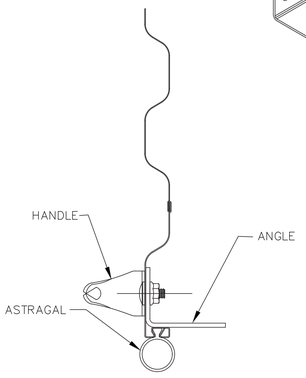
OUTSIDE OF DOOR VIEW

MINI LATCH CYLINDER LOCK BACK PLATE
(ONLY USED WITH CYLINDER LOCK)

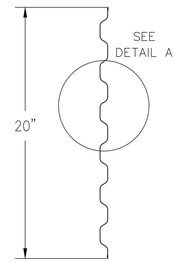
INSIDE OF DOOR VIEW

MINI STOP CLIP

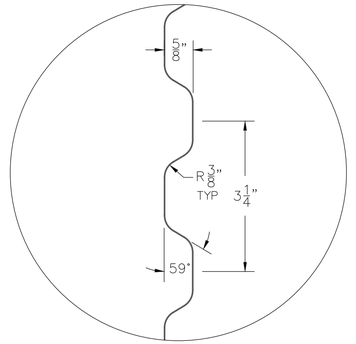




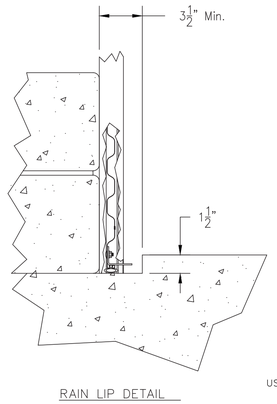
BOTTOM BAR ASSEMBLY



CURTAIN PANEL

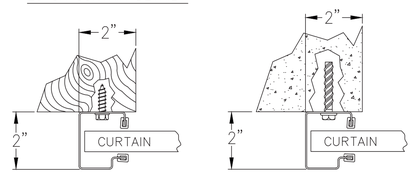


DETAIL A



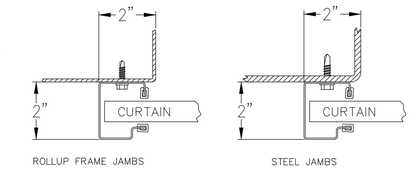
RAIN LIP DETAIL

26 GA CURTAIN DETAIL



WOOD JAMBS
USING 1/4-10 X 1" LAG

CONCRETE/MASONRY JAMBS
USING 1/4" X 1-3/4" POWERS WEDGE-BOLT



ROLLUP FRAME JAMBS
USING 1/4-14 X 7/8" STITCH TEKS

STEEL JAMBS
USING 1/4-14 X 1" TEKS

18 GA GUIDE MOUNTING DETAIL

MINI DOOR SERIES: 650

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
03/18/2022

Force Engineering & Testing Inc.
19530 RAMBLEWOOD DRIVE HUMBLE, TX 77338
(281) 540-6603 Fax: (281) 540-9966

STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
cn=Johnathan Green, o=US, ou=Force Engineering & Testing Inc.
email=jgreen@forceengineeringtesting.com
I am approving this document
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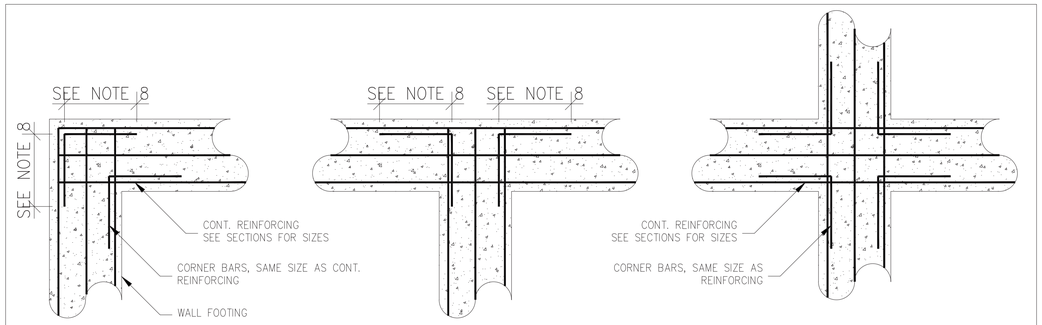
LAKEWOOD STORAGE
NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

ROLL-UP DOORS

SHEET NO.
S0.5



TYPICAL GRADE BEAM REINFORCING DETAILS

A. FOUNDATION AND SLAB ON GRADE

1. THE SUBSURFACE AND SHALLOW FOUNDATION DESIGN ARE BASED UPON ON A REPORT PREPARED BY KTI PROJECT NO. 219188G DATED JANUARY 8, 2020 & ADDENDUM #1 DATED JULY 19, 2021. THE CONTRACTOR SHALL PERFORM EXCAVATIONS, FOOTING CONSTRUCTION, AND PREPARATION OF THE SUBGRADE UNDER THE SLAB ON GRADE IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL REPORT AND THE PROJECT SPECIFICATIONS.
2. THE FOUNDATIONS HAVE BEEN DESIGNED FOR THE FOLLOWING ALLOWABLE SOIL BEARING PRESSURES BASED ON THE ABOVE GEOTECHNICAL REPORTS AT THE TIME THE REPORT WAS PREPARED
   - STRUCTURAL FOUNDATION/SLAB ——— 5000 PSF
   - SHALLOW SPREAD FOOTING NET ALLOWABLE LOAD ——— 5000 PSF
   - ISOLATED FOOTINGS ——— 5000 PSF
3. FOUNDATION CONDITIONS NOTED DURING CONSTRUCTION, WHICH DIFFER FROM THOSE DESCRIBED IN THE GEOTECHNICAL REPORT SHALL BE REPORTED TO THE ARCHITECT, GEOTECHNICAL ENGINEER AND FORCE ENGINEERING & TESTING BEFORE FURTHER CONSTRUCTION IS ATTEMPTED.
4. GENERAL CONTRACTOR SHALL NOTIFY THE ARCHITECT AND FORCE ENGINEERING & TESTING, 24 HOURS PRIOR TO PLACEMENT OF CONCRETE IN THE FOOTINGS.
5. FOUNDATIONS SHALL BEAR ON EITHER LIMESTONE BEDROCK OR COMPACTED MDOT TYPE 5 AGGREGATE FILL PLACED AT 95% STANDARD PROCTOR DENSITY. IN NO CASE SHALL FOUNDATION BEAR ON BOTH SITE SOILS AND BEDROCK MATERIALS.
6. THE FLOOR SUBGRADE SHALL BE PROPERLY COMPACTED AND PROOFROLLED AND SHALL BE FREE OF STANDING WATER, MUD AND FROZEN SOIL.
7. A VAPOR BARRIER WITH A PERFORMANCE EQUIVALENT TO A 10 MIL VISQUEEN SHALL BE PLACED BENEATH THE SLAB ON GRADE.
8. SLABS ON GRADE SHALL HAVE CONSTRUCTION JOINTS OR CRACK CONTROL JOINTS AT EACH COLUMN LINE IN EACH DIRECTION. ADDITIONAL CRACK CONTROL JOINTS SHALL BE PROVIDED, SUCH THAT NO AREA BOUNDED BY CONSTRUCTION AND/OR CRACK CONTROL JOINTS CONTAINS MORE THAN 400 SQ.FT. OF SLAB AREA, THE SPACING OF THE JOINTS DOES NOT EXCEED 36 TIMES THE SLAB THICKNESS, AND THE RESULTING ASPECT RATIO OF THE DIMENSIONS OF SLAB AREA DOES NOT EXCEED 1.5 TO 1. CRACK CONTROL JOINTS SHALL BE MADE USING A "SOFT-CUT" CONCRETE SAW AS SOON AS THE SLAB WILL SUPPORT THE WEIGHT OF THE SAW AND OPERATOR WITHOUT DISTURBING THE FINAL FINISH. THE CRACK CONTROL JOINTS SHALL BE CUT A MAXIMUM WIDTH OF 1/8 INCH AND A MINIMUM DEPTH OF 1/4 OF THE SLAB THICKNESS. REFER TO THE DRAWINGS FOR INFORMATION ON CONTROL JOINTS, CONSTRUCTION JOINTS, REINFORCEMENT DETAILS AND JOIT SEALANT DETAILS.
9. NOT USED
10. ALL SOIL SURROUNDING AND BENEATH ALL FOOTINGS, SLABS. ETC. SHALL BE PROTECTED AGAINST FROST OR FREEZING DURING CONSTRUCTION.
11. OWNER/CONTRACTOR ASSUMES FULL RESPONSABILITY FOR FOUNDATION DESIGN WHEN A GEOTECHNICAL REPORT IS NOT PROVIDED TO THE ARCHITECT AND/OR ENGINEER.
12. OWNER/CONTRACTOR ASSUMES FULL RESPONSABILITY FOR ONSITE SOIL CONDITIONS. REPORT IS NOT PROVIDED TO THE ARCHITECT AND/OR ENGINEER.
13. THE CONSTRACTOR SHOULD EMPLY PROFESSIONAL GEOTECHNICAL ENGINEER TO INSPECT THE FOUNDATION AND BEARING LEVEL AND VERIFY THAT THE MATERIAL ON WHICH THE FOUNDATIONS WILL BEAR HAS AT LEAST THE ABOVE NOTED CAPACITY AND GIVE GIVE RECOMMENDATIONS FOR SUBGRADE PREPARATION. STRICTLY FOLLOW GEOTECHNICAL ENGINEERS RECOMMENDATIONS FOR SUBBASE AND FOOTING BEARING MATERIAL AND PREPARATION AS SPECIFIED.
14. IMMEDIATELY NOTIFY THE ENGINEER AND/OR ARCHITECCT IF UNSUITABLE SOIL OR SOIL CONDITIONS AT VARIANCE WITH THE GEOTECHNICAL REPORT IS DISCOVERED AT THE FOOTING ELEVATIONS SPECIFIED.
15. NO BACKFILL SHALL BE PLACED AGAINST WALLS UNTIL WALLS AND SLABS (OR HORIZONTAL BEAMS AND STRUTS) SUPPORTED THEREON HAVE ATTAINED DESIGN STRENTH OR PRIOR TO THE COMPLETE INSTALLATION OF THE LATERAL LOAD RESISTING SYSTEM.
16. BACKFILL BEHIND ALL RETAINING AND/OR BASEMENT WALL WITH FREE DRAINING GRANULAR FILL AND PROVIDE SUBSURFACE DRAINAGE AS REQUIRED. ALL BACKFILL MATERIAL SHALL CONFORM STRICTLY WITH THE RECOMMEDATIONS GIVEN IN THE GEOTECHNICAL REPORT MENTIONED ABOVE OR PER A PROFESSIONAL GEOTECHNICAL ENGINEER'S FIELD INSTRUCTIONS.
17. PROVIDE VERTICAL CONTROL JOINTS IN RETAINING WALLS AS INDICATED. PROVIDE ADDITIONAL JOINTS AS REQUIRED SO THE SPACING BETWEEN JOINTS DOES NOT EXCEED A SPACING OF 3.0 x WALL HEIGHT (25 FEET MAXIMUM). PROVIDE EXPANSION JOINTS AT EVERY FOURTH CONTROL JOINTS, UNLESS OTHERWISE NOTED.
18. THE EXISTENCE OF UNDERGROUND STRUCTURES AND/OR UTILITIES IS NOT KNOWN. IT IS THE CONTRACTOR'S RESPONSABILITY TO COORDINATE WITH THE OWNER OR NECESSARY AUTHORITIES THE LOCATIONS OF ALL EXISTING UNDERGROUND STRUCTURES AND/OR ULTILITIES.
19. WHERE FOOTINGS ARE IN CLOSE PROXIMITY OF SEWWERS, DRAINS, CONDUITS, PIPES, ETC. THE BOTTOM OF FOOTING SHALL BE SET AT OR BELOW THE INVERT ELEVATION OF THE ADJACENT ELEMENT.

JOINT NOTES:

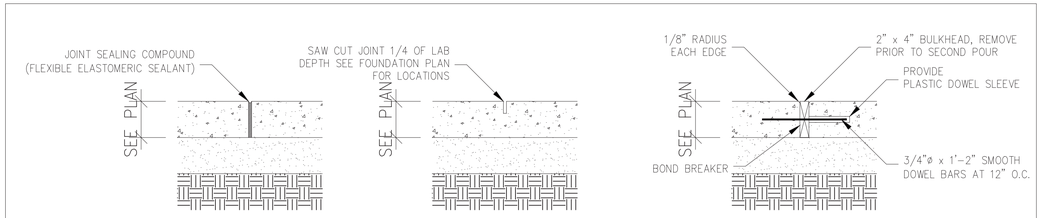
1. JOINT LOCATIONS SHOWN ARE RECOMMENDATION ONLY. CONTRACTOR IS RESPONSIBLE FOR PROVIDING SUFFICIENT SLAB SHRINKAGE JOINTING JOINTING TO PREVENT UNACCEPTABLE CRACKING. ALL JOINTS SHOULD NOT FALL BELOW OR WITHIN 18" OF A POST LINE OR BEARING WALL. THE SUBSURFACE INFORMATION AND FOUNDATION DESIGN ARE BASED UPON A REPORT BY: INTERTEK/PSI PROJECT NO. 3381473 DATED NOV. 30, 2016.
2. SAW CUT JOINTS AS SOON AS THE SLAB WILL SUPPORT THE WEIGHT OF THE SAW AND OPERATOR WITHOUT DISTURBING THE FINAL FINISH. THE DEPTH OF SAW CUT JOINTS SHALL BE 1/4 OF THE SLAB THICKNESS, UNLESS OTHERWISE NOTED.
3. LENGTH-TO-WIDTH RATIO OF JOINT SPACING SHALL NOT EXCEED 1.5:1
4. CONTROL JOINT SHALL BE SUBSTITUTED FOR ANY CONST JOINT OMITTED BY CONTRACTOR. PROVIDE DOWELED CONST JOINT AT THE END OF CONC PLACEMENT FOR EACH POUR.
5. PROVIDE 2-#4 X 4'-0" LONG @ 4" OC AT MID-DEPTH OF SLAB AT CORNERS OF BLOCK-OUTS AND ARE RE-ENTRANT CORNER WHERE CJ'S DO NOT OCCUR.
6. JUST PRIOR TO PROJECT COMPLETION, CLEAN OUT JOINTS IN ALL TRAFFIC AREAS WITH DRY COMPRESSED AIR.

CONCRETE NOTES

B. CONCRETE

1. CONCRETE IN THE FOLLOWING AREAS SHALL HAVE NATURAL SAND FINE AGGREGATE AND NORMAL WEIGHT COARSE AGGREGATES CONFORMING TO ASTM C33, TYPE I PORTLAND CEMENT CONFORMING TO ASTM C150, AND SHALL HAVE THE FOLLOWING COMPRESSIVE STRENGTH (FC') AT 28 DAYS:
   - FOOTINGS ——— 3000 PSI
   - GRADE BEAMS ——— 3000 PSI
   - SLAB ON GRADE ——— 4000 PSI
   - MONO-LITHIC ——— 4000 PSI
2. DETAILING OF CONCRETE REINFORCEMENT BARS AND ACCESSORIES SHALL CONFORM TO THE RECOMMENDATIONS OF ACI 315 "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT" AND ACI SP-66 "DETAILING MANUAL". PLACING OF REINFORCING BARS SHALL CONFORM TO THE RECOMMENDATIONS OF ACI 315R "MANUAL OF ENGINEERING AND PLACING DRAWINGS FOR REINFORCED CONCRETE STRUCTURES" AND CRSI "MANUAL OF STANDARD PRACTICE".
3. MIXING, TRANSPORTING, AND PLACING OF CONCRETE SHALL CONFORM TO ACI 301.
4. MINIMUM CONCRETE COVER PROTECTION FOR REINFORCEMENT BARS SHALL BE AS FOLLOWS: (SEE ACI 318 SECTION 7.7 FOR CONDITIONS NOT NOTED)
   - CONCRETE EXPOSED TO WEATHER
     - #5 BARS AND SMALLER ——— 2 INCHES
     - ALL OTHER BARS ——— 2 INCHES
   - CONCRETE CAST AGAINST EARTH ——— 3 INCHES
   - GRADE BEAMS:
     - TOP ——— 2 INCHES
     - BOARD FORMED SIDES ——— 2 INCHES
     - EARTH FORMED SIDES ——— 3 INCHES
     - BOTTOM ——— 3 INCHES
   - SLAB ON GRADE
     - SINGLE LAYER OR TOP LAYER ——— 2 INCHES
     - BOTTOM LAYER CAST AGAINST SOIL ——— 3 INCHES
     - BOTTOM LAYER NOT CAST AGAINST SOIL ——— 2 INCHES
   - BEAMS ——— 2 INCHES
   - WALL BELOW GRADE (BACKFILLED SIDE) ——— 2 INCHES
   - WALL BELOW GRADE (NO BACKFILL) ——— 1 INCH

   PROVIDE STANDARD BAR CHAIRS AND SPACERS AS REQUIRED TO MAINTAIN CONCRETE PROTECTION SPECIFIED.
5. CONCRETE REINFORCEMENT BARS SHALL CONFORM TO ASTM A615, GRADE 60.
6. WELDING OF REINFORCEMENT BARS, WHEN ACCEPTED BY THE STRUCTURAL ENGINEER, SHALL CONFORM TO THE AMERICAN WELDING SOCIETY STANDARD D1.4. ELECTRODES FOR SHOP AND FIELD WELDING OF REINFORCEMENT BARS SHALL CONFORM TO ASTM A233, CLASS E90XX.
7. REINFORCEMENT DESIGNATED AS "CONTINUOUS" MAY BE SPLICED USING TYPE "B" SPLICES. REINFORCEMENT BAR SPLICE LENGTHS IN BEAMS WHICH ARE LOCATED AT THE CENTERLINE OF SUPPORTS FOR BOTTOM BARS AND AT MIDSPAN FOR TOP BARS MAY BE 48 BAR DIAMETERS, UNLESS NOTED OTHERWISE. PROVIDE STANDARD ACI HOOKS FOR TOP AND BOTTOM BARS AT DISCONTINUOUS ENDS OF ALL GRADE BEAMS. ENDS OF ALL GRADE BEAMS.
8. HORIZONTAL FOOTING AND HORIZONTAL WALL REINFORCEMENT SHALL BE CONTINUOUS AND SHALL HAVE 90-DEGREE BENDS AND EXTENSIONS, OR CORNER BARS OF EQUIVALENT SIZE LAPPED 36 BAR DIAMETERS, AT CORNERS AND INTERSECTIONS.
9. HORIZONTAL JOINTS WILL NOT BE PERMITTED IN CONCRETE CONSTRUCTION EXCEPT AS SHOWN ON THE CONTRACT DOCUMENTS. VERTICAL JOINTS MAY OCCUR AT CENTER OF SPANS AT LOCATIONS REVIEWED BY FORCE ENGINEERING & TESTING, INC..
10. CONDUIT, PIPES, AND SLEEVES EMBEDDED IN CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF ACI 318, CHAPTER 6.3.
11. ALL CONCRETE SHALL BE NORMAL WEIGHT CONCRETE (144 PCF+) CONFORMING TO ASTM C94 WITH ALL CEMENT CONFORMING TO ASTM C150, TYPE I OR II. MAXIMUM AGGREAGATE SIZE SHALL BE 1-1/2" FOR FOOTING AND 3/4" FOR WALLS AND SLABS, CONFORMING TO ASTM C33.
12. ALL CONCRETE SHALL BE A MINIMUM COMPRESSIVE STRENGTH (fc) AT 28 DAYS, SLUMP AND MAXIMUM WATER/CEMENT RATION REQUIREMENTS.
    - A. ALL CONCRETE, U.N.O: ——— 3000 PSI ——— 2' - 4" SLUMP W/C RATIO = .58
    - B. CONCRETE FILL: ——— 2500 PSI ——— 2' - 4" SLUMP W/C RATIO = .58
    - C. SLABS: ——— 4000 PSI ——— 2' - 4" SLUMP W/C RATIO = .53
13. OBTAIN EACH TYPE OF CEMENT OF THE SAME BRAND FROM THE SAME MANUFACTURER'S PLANT, EACH AGGREGATE FROM ONE SOURCE, AND EACH ADMIXTURE FROM THE SAME MANUFACTURER.
14. ALL CONCRETE EXPOSED TO WEATHER SHALL HAVE ENTRAINED AIR IN ACCORDANCE WITH SECTION 1904 OF THE IBC.
15. FOR AIR ENTRAINED CONCRETE - MAXIMUM W/C RATIO = .44 AGGREGATE FROM ONE SOURCE, AND EACH ADMIXTURE FROM THE SAME MANUFACTURER.
16. ALL ADMIXTURES SHALL CONFORM TO ASTM C260, C494, C618, C989 AND C1017 (LISTING IS NOT ALL INCLUSIVE).



TYPICAL ISOLATION JOINT DETAIL | TYPICAL CRACK CONTROL JOINT DETAIL (C.C.J.) | TYPICAL SLAB CONSTRUCTION JOINT DETAIL-U.N.O. (C.J.)

TYP. LAP SPLICE AND DEVELOPMENT LENGHT SCHEDULE FOR STRUCTURAL MASONRY

BAR SIZE	ANY BAR W/CLEAR SPACING TO ALL ADJACENT PARALLEL BARS AND CLEAR COVER TO THE BLOCK SURFACE OF AT LEAST (5) BAR DIAMETERS	ANY BAR W/AT LEAST 4" CLEAR SPACING TO ALL ADJACENT PARALLEL BARS AND 4" CLEAR COVER TO THE BLOCK SURFACE	ANY BAR W/AT LEAST 3" CLEAR SPACING TO ALL ADJACENT PARALLEL BARS AND 3" CLEAR COVER TO THE BLOCK SURFACE	ANY BAR W/AT LEAST 2" CLEAR SPACING TO ALL ADJACENT PARALLEL BARS AND 2" CLEAR COVER TO THE BLOCK SURFACE	ANY BAR W/AT LEAST 1 3/4" CLEAR SPACING TO ALL ADJACENT PARALLEL BARS AND 1 3/4" CLEAR COVER TO THE BLOCK SURFACE	ANY BAR W/ONLY 1" CLEAR SPACING TO ALL ADJACENT PARALLEL BARS
	Ld AND SPLICE					
fm = 1500psi, fy = 6000psi						
#4	21	21	21	26	29	36
#5	26	26	27	40	45	45
#6	40	40	50	54	54	54
#7	46	51	63	63	63	63
#8	61	72	72	72	72	72

NOTES:

1. REINFORCING MAY BE CONSIDERED TO BE SPLICED WHEN IN CONTACT OR WHEN THE BARS ARE SPACED NO FURTHER APART THAN 1/5 THE REQUIRED LAP LENGTH INDICATED AND NEVER FURTHER APART THAN 8"
2. THE CLEAR SPACING NOTED ABOVE SHALL BE MAINTAINED BETWEEN ADJACENT PAIRS OF SPLICED BARS AND THE CLEAR COVER NOTED ABOVE SHALL BE MAINTAINED AT BAR SPLICES.
3. CLEAR SPACING AND CLEAR COVER NOTED ABOVE ARE MINIMUMS. LARGER SPACING AND COVERS ARE ACCEPTABLE. SELECT THE SPLICE LENGTH BASED ON THE WORST CASE OF SPACING OR COVER.
4. ALL TABULATED VALUES ARE IN INCHES.

TYP. LAP SPLICE AND DEVELOPMENT LENGHT SCHEDULE

BAR SIZE	MISC. BARS		TOP BARS (see note #3)		HOOKED BARS	BAR SIZE	MISC. BARS		TOP BARS (see note #3)		HOOKED BARS
	Ld	SPLICE	Ld	SPLICE	Ldh		Ld	SPLICE	Ld	SPLICE	Ldh
fc = 3000psi						fc = 4000psi					
#3	17	23	22	29	9	#3	15	20	19	25	8
#4	22	29	29	38	11	#4	19	25	25	33	10
#5	28	37	36	47	14	#5	24	32	31	41	12
#6	33	43	43	56	17	#6	29	38	37	49	15
#7	48	63	63	82	20	#7	42	55	54	71	17
#8	55	72	72	94	22	#8	48	63	62	81	19
#9	62	81	81	106	25	#9	54	71	70	91	22
#10	70	91	91	119	28	#10	61	80	79	103	25
#11	78	102	101	132	31	#11	67	88	87	114	27

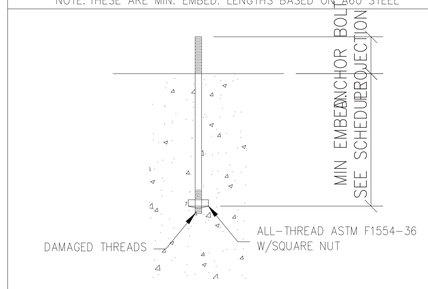
NOTES:

1. VALUES FOR UNCOATED REINFORCING AND NORMAL WEIGHT CONCRETE WITH CLEAR SPACING > db, CLEAR COVER > db AND MINIMUM STIRRUPS OR TIES THROUGHOUT Ld OR CLEAR SPACING > 2db AND CLEAR COVER > db.
2. DEVELOP ALL REINFORCING IN STRUCTURAL SLABS WITH MINIMUM DEVELOPMENT LENGTH Ld.
3. TOP BAR = HORIZONTAL BAR WITH MORE THAN 12" OF FRESH CONCRETE BELOW (EXCLUDING WALL HORIZONTAL REINFORCING) OR AS NOTED ON DOCUMENTS AS "TOP BAR"
4. ALL TABULATED VALUES ARE IN INCHES.

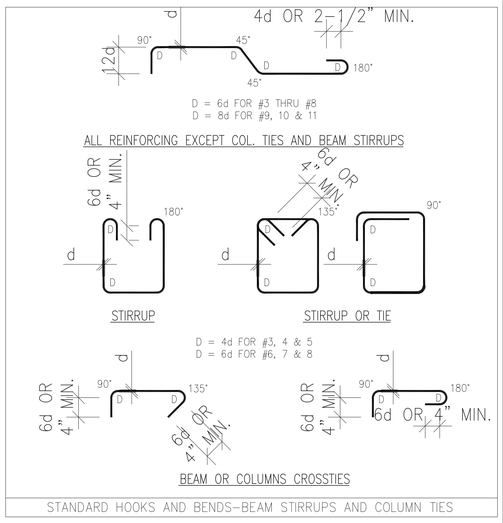
BOLT DIA.	MINIMUM EMBEDMENT
5/8" DIA.	10"
3/4" DIA.	13"
1" DIA.	21"
1-1/4" DIA.	28"
1-1/2" DIA.	32"

ANCHOR BOLT SCHEDULE

NOTE: THESE ARE MIN. EMBED. LENGTHS BASED ON A60 STEEL



ANCHOR BOLT DETAIL



STANDARD HOOKS AND BENDS-BEAM STIRRUPS AND COLUMN TIES

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LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
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REVISIONS:

CONCRETE NOTES

SHEET NO.
F1.1

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FOUNDATION PLAN

SHEET NO.
F2.1

FOUNDATION PLAN

CO = CLEANOUT FOR FRENCH DRAIN; SEE DETAIL 4 ON DWG FD1.3.

SEE 2/FD1.1 FOR FOR FOOTING SCHEDULE

FOUNDATION PLAN

CO = CLEANOUT FOR FRENCH DRAIN;
SEE DETAIL 4 ON DWG FD1.3.

SEE 2/FD1.1 FOR FOR FOOTING SCHEDULE

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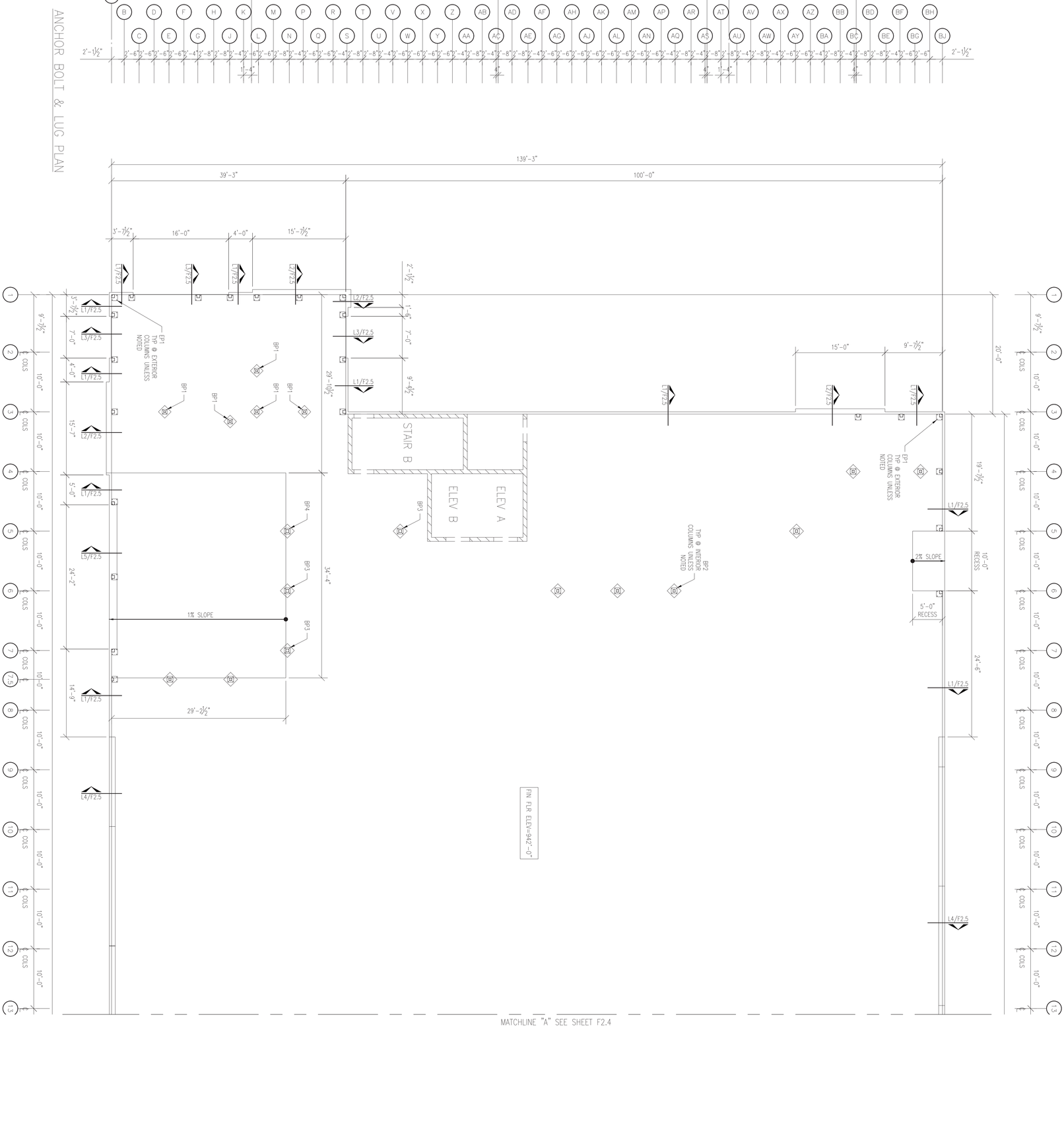
FOUNDATION PLAN

SHEET NO.
F2.2



LAKEWOOD STORAGE

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A.B. & LUG PLAN

SHEET NO. F2.3

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ANCHOR BOLT & LUG PLAN

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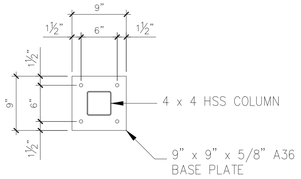
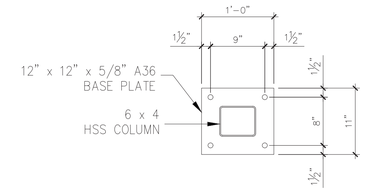
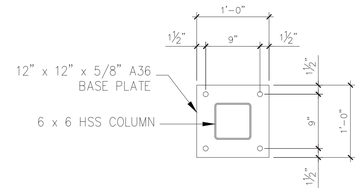
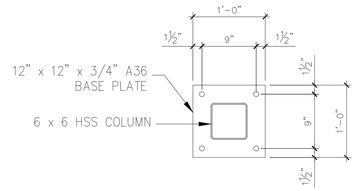
A.B. & LUG PLAN

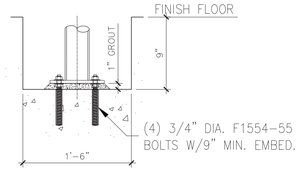
SHEET NO.
F2.4



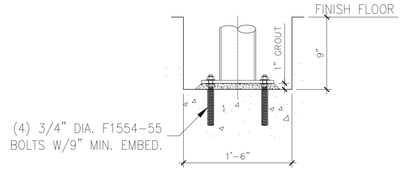




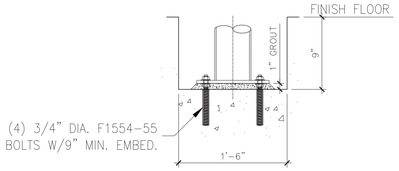




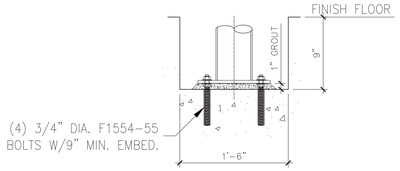
BASE PLATE 1 – BP1



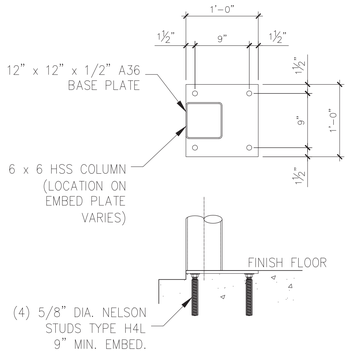
BASE PLATE 2 – BP2



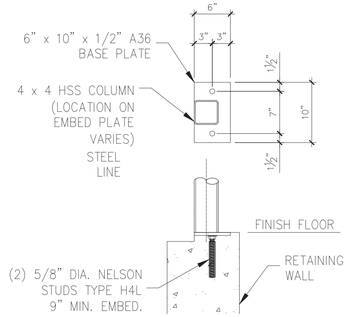
BASE PLATE 3 – BP3



BASE PLATE 4 – BP4



EMBED PLATE 1 – EP1



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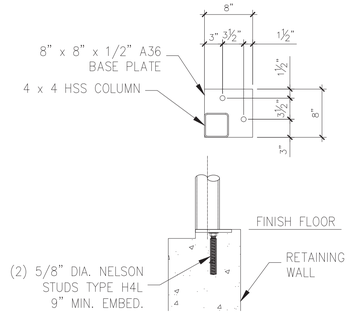

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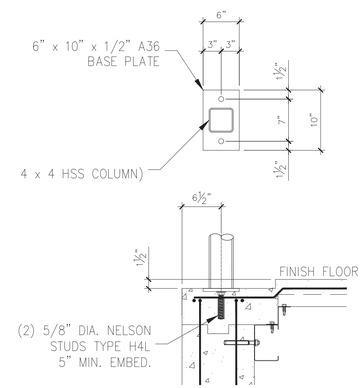

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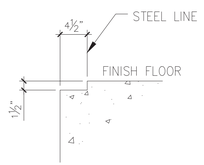
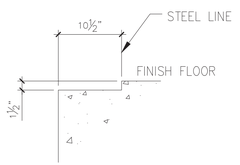
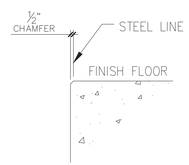


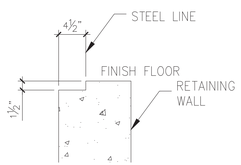
LUG DETAIL 1 – L1



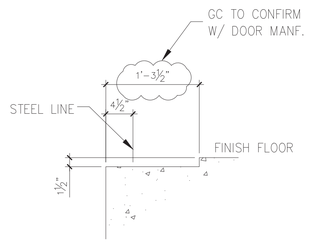
LUG DETAIL 2 – L2



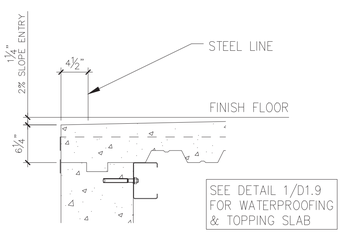
LUG DETAIL 3 – L3



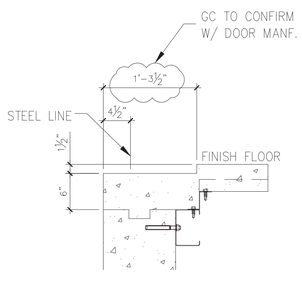
LUG DETAIL 4 – L4



LUG DETAIL 5 – L5



LUG DETAIL 6 – L6



LUG DETAIL 7 – L7

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LAKEWOOD STORAGE

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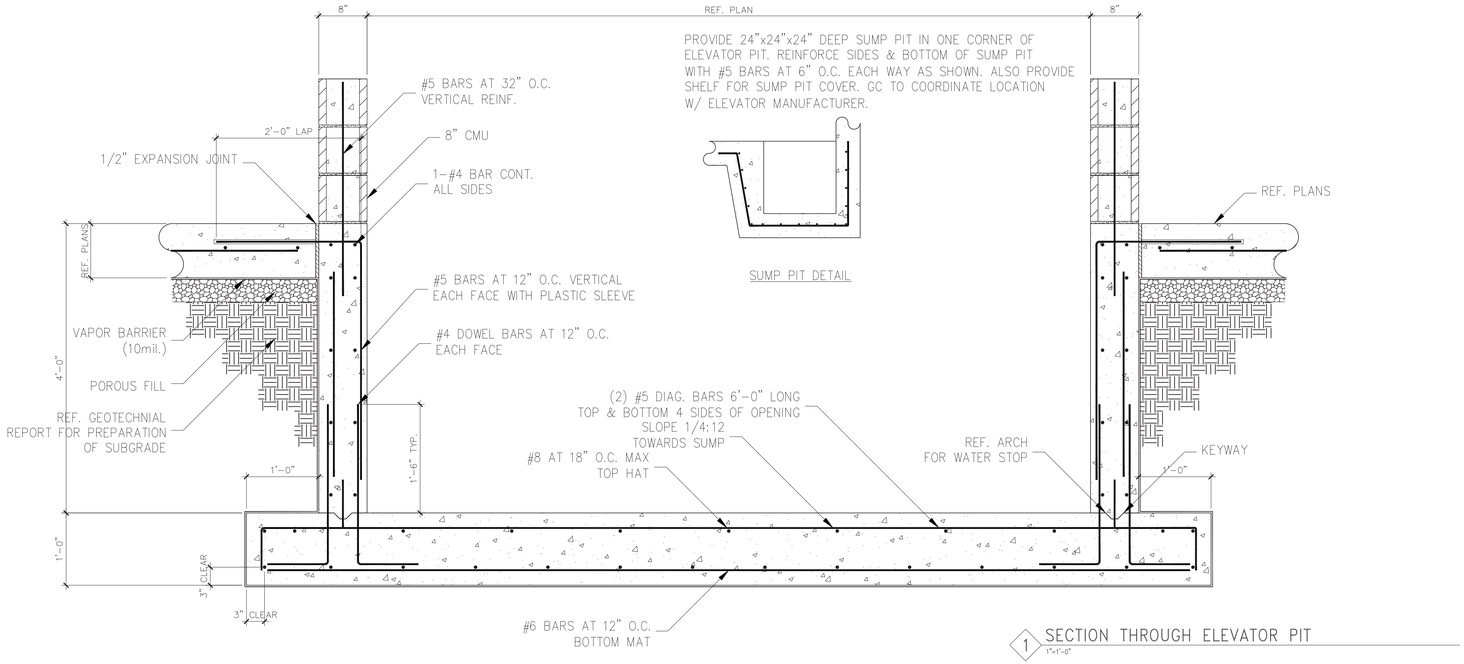
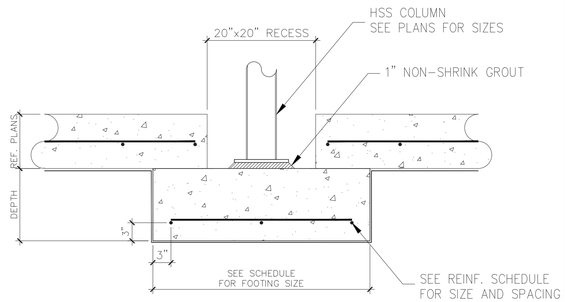
F2.5

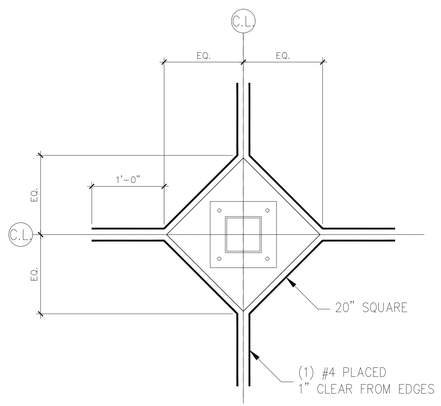


1 SECTION THROUGH ELEVATOR PIT
1"=1'-0"



FOOTING SCHEDULE (FTG.)				
FOOTING	SIZE	DEPTH	REINF.	MAT TYPE
A	2-6" x 2-6"	12"	3-#5 EA WAY	SINGLE
B	3-0" x 3-0"	12"	4-#5 EA WAY	SINGLE
C	3-6" x 3-6"	12"	4-#5 EA WAY	SINGLE
D	4-0" x 4-0"	12"	5-#5 EA WAY	SINGLE

2 FOOTING SCHEDULE
1"=1'-0"



3 FOOTING RECESS REINFORCING
1"=1'-0"

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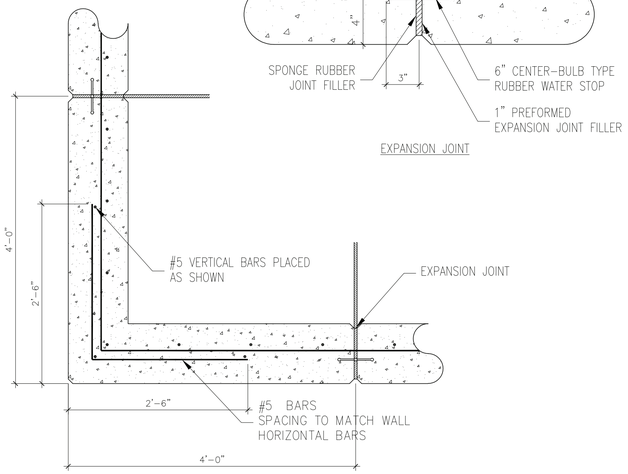
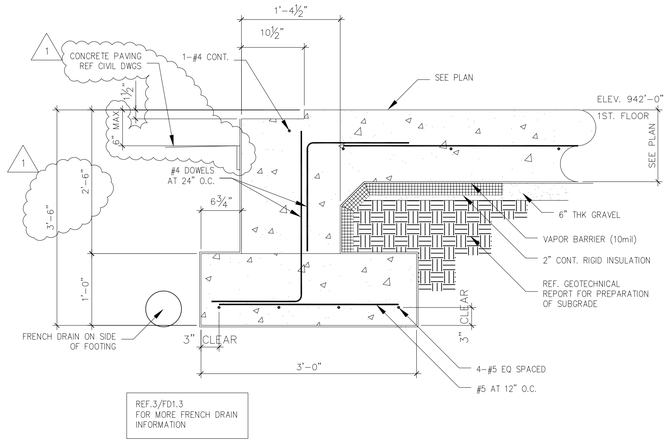
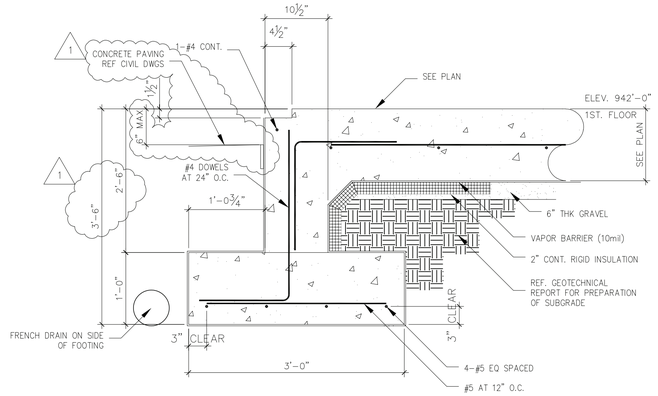


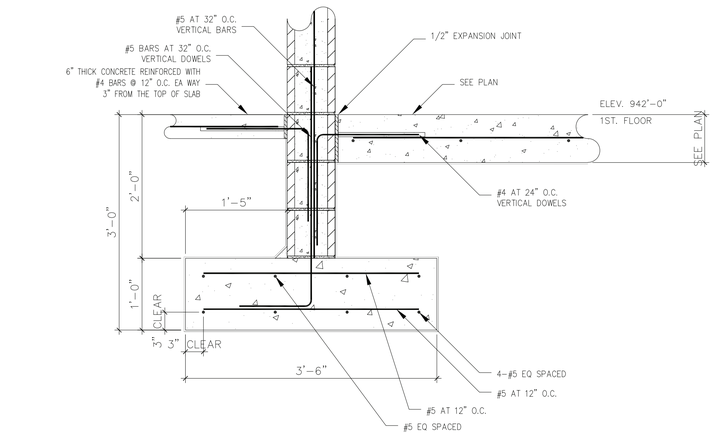
1 OUTSIDE CORNER CONCRETE WALL JOINT
1"=1'-0"



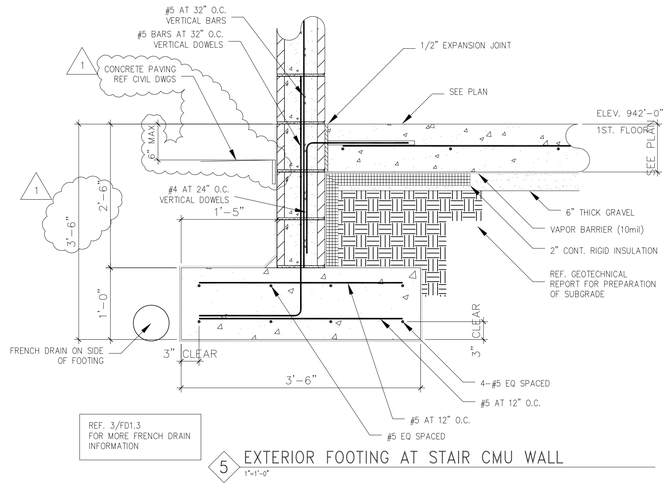
2 EXTERIOR FOOTING
1"=1'-0"



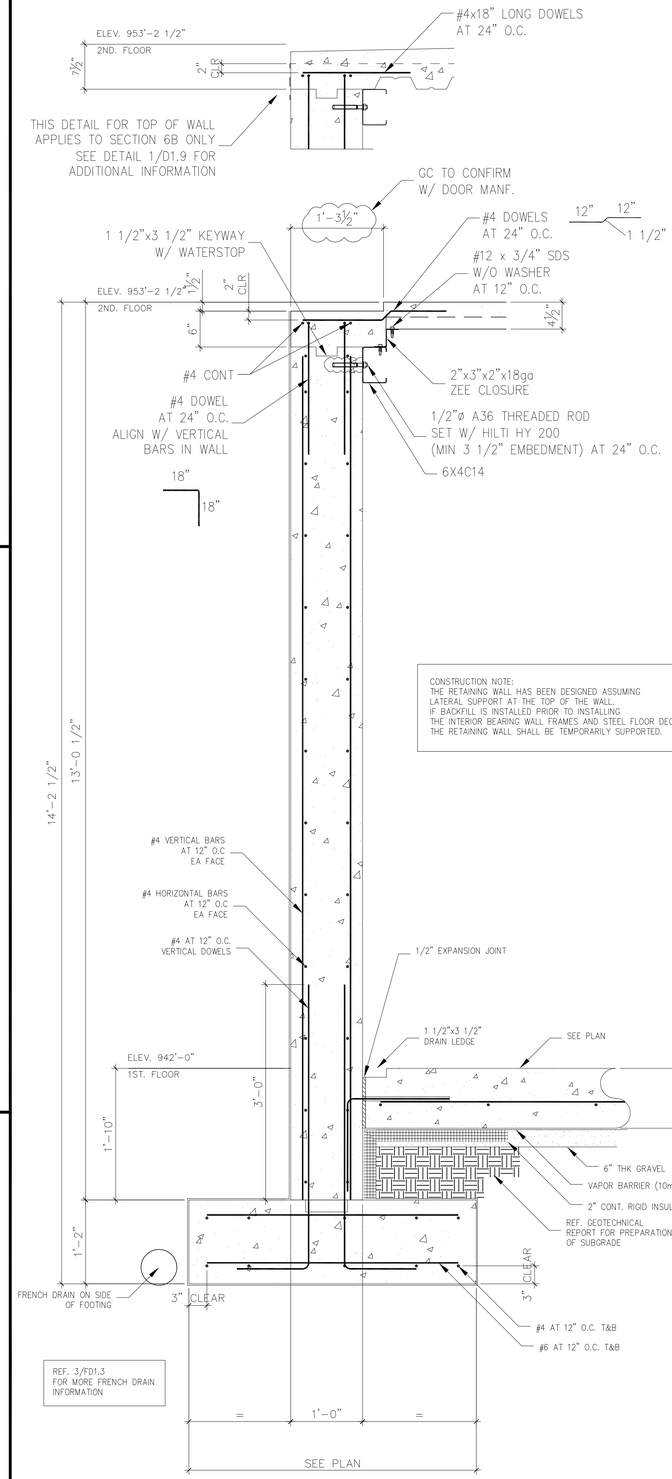
3 EXTERIOR FOOTING
1"=1'-0"



4 INTERIOR FOOTING AT STAIR CMU WALL
1"=1'-0"



5 EXTERIOR FOOTING AT STAIR CMU WALL
1"=1'-0"



6A EXTERIOR FOOTING AT RETAINING WALL (AS SHOWN)
1"=1'-0"

6B EXTERIOR FOOTING AT RETAINING WALL (AS NOTED)
1"=1'-0"

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LAKEWOOD STORAGE

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CONCRETE DETAILS

SHEET NO.
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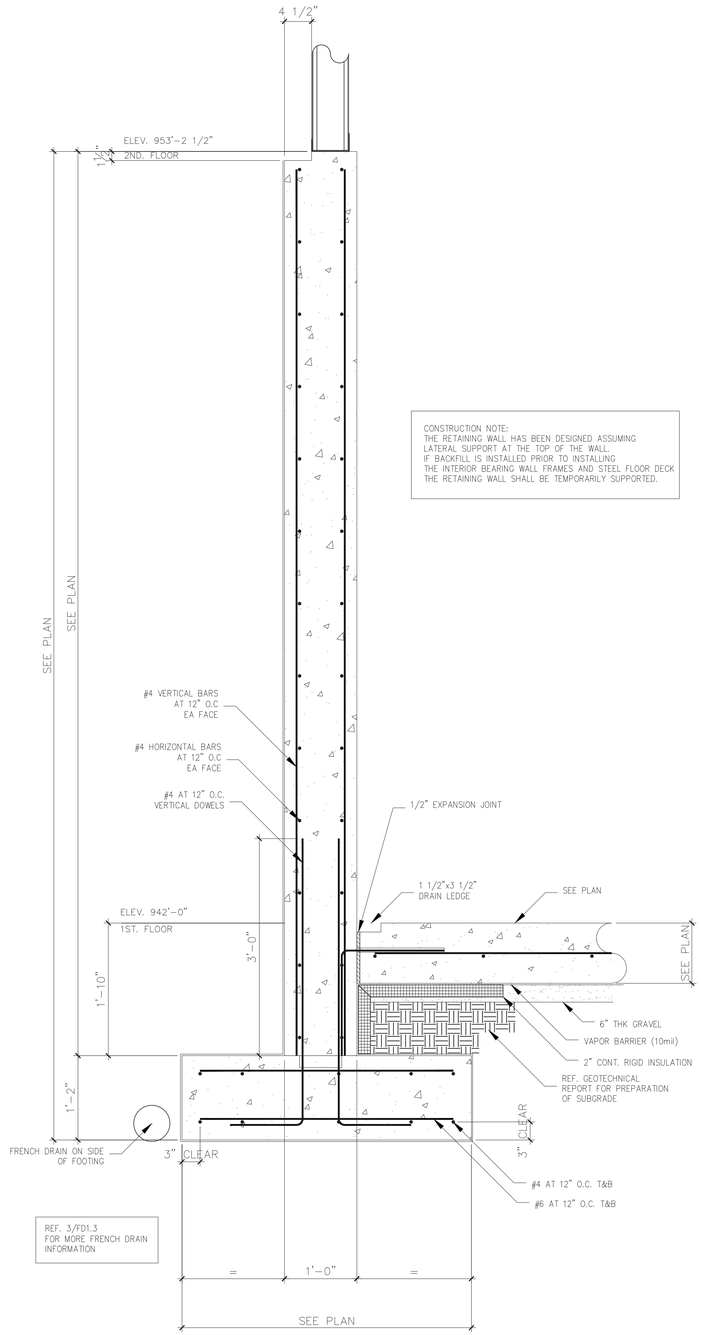
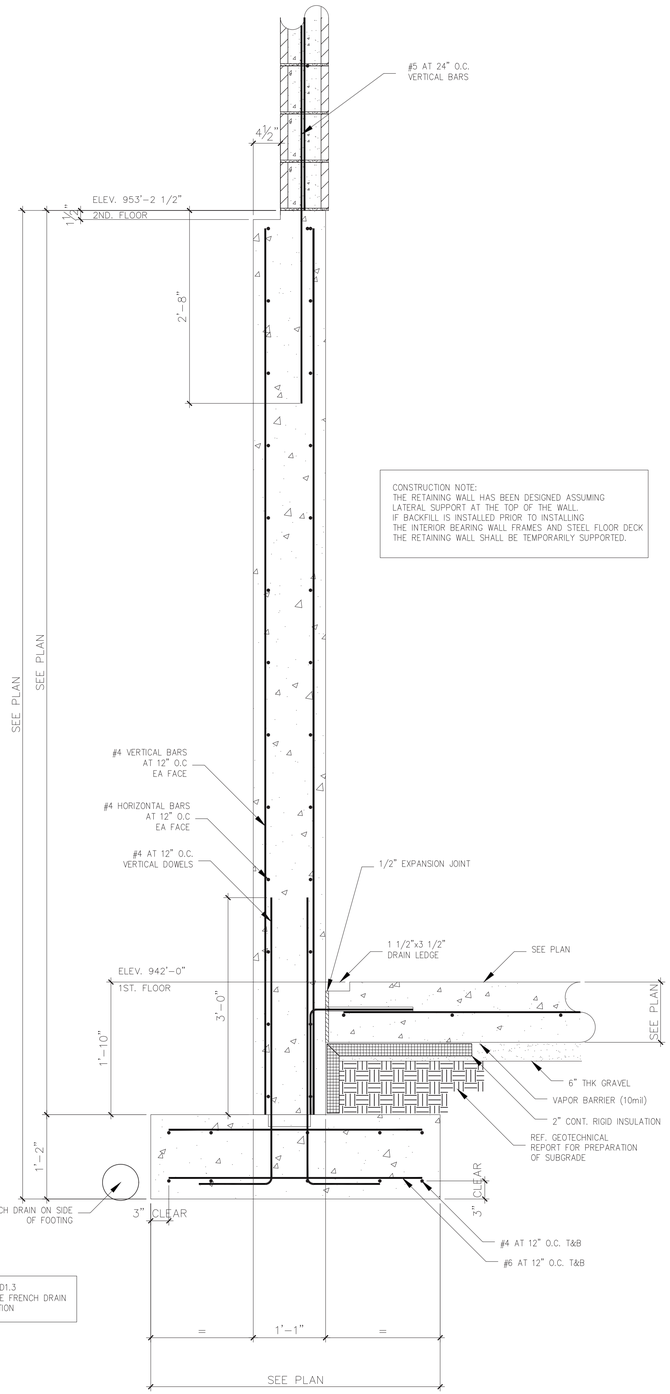


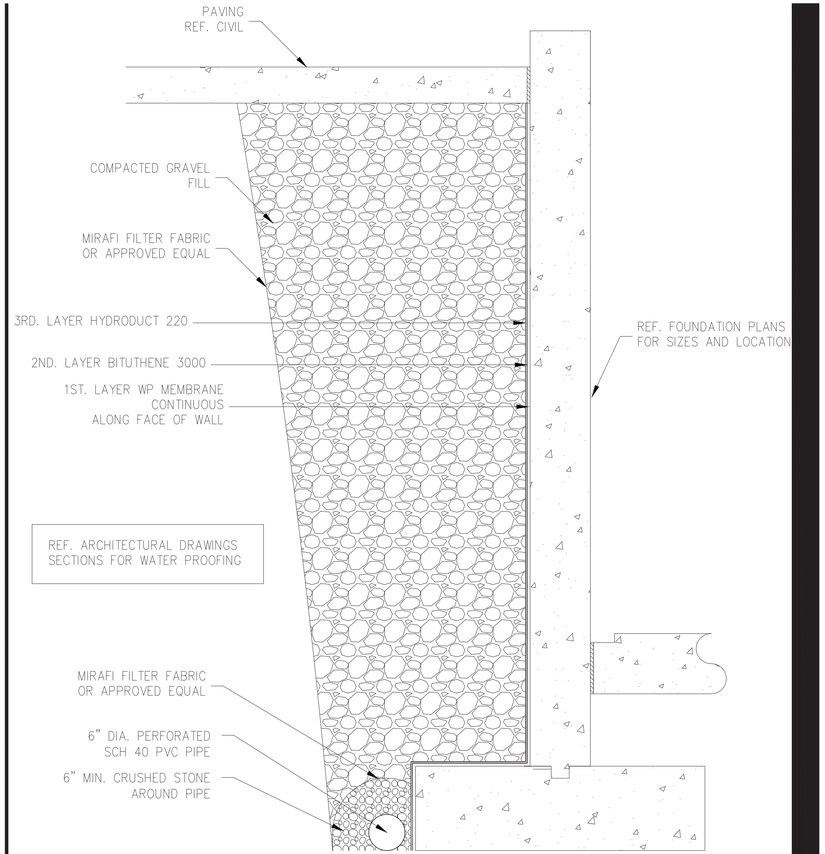
CONSTRUCTION NOTE:
THE RETAINING WALL HAS BEEN DESIGNED ASSUMING LATERAL SUPPORT AT THE TOP OF THE WALL. IF BACKFILL IS INSTALLED PRIOR TO INSTALLING THE INTERIOR BEARING WALL FRAMES AND STEEL FLOOR DECK THE RETAINING WALL SHALL BE TEMPORARILY SUPPORTED.

1 EXTERIOR FOOTING AT RETAINING WALL
1"=1'-0"

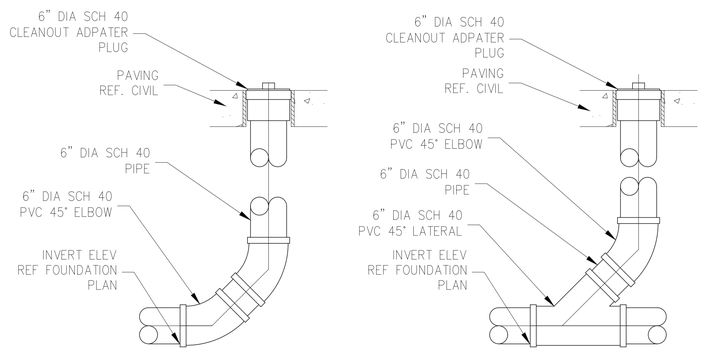


CONSTRUCTION NOTE:
THE RETAINING WALL HAS BEEN DESIGNED ASSUMING LATERAL SUPPORT AT THE TOP OF THE WALL. IF BACKFILL IS INSTALLED PRIOR TO INSTALLING THE INTERIOR BEARING WALL FRAMES AND STEEL FLOOR DECK THE RETAINING WALL SHALL BE TEMPORARILY SUPPORTED.

2 EXTERIOR FOOTING AT RETAINING WALL
1"=1'-0"



3 FRENCH DRAIN SECTION
1"=1'-0"



4 FRENCH DRAIN CLEANOUTS
1"=1'-0"

NOTES:
1) CLEANOUTS REQUIRED AT CHANGES OF DIRECTION AND START OF FRENCH DRAINS
2) MAX SPACING OF CLEANOUTS IS 150'-0".

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Lee's Summit, Missouri
03/18/2022

Force Engineering & Testing Inc.
19530 RAMBLEWOOD DRIVE HUMBLE, TX 77338
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STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
on=Johnathan Green, o=US, ou=Force
Engineering & Testing Inc.
email=jgreen@forceengineeringtesting.com
I am approving this document
2021.12.15 12:53:25 -06'00'

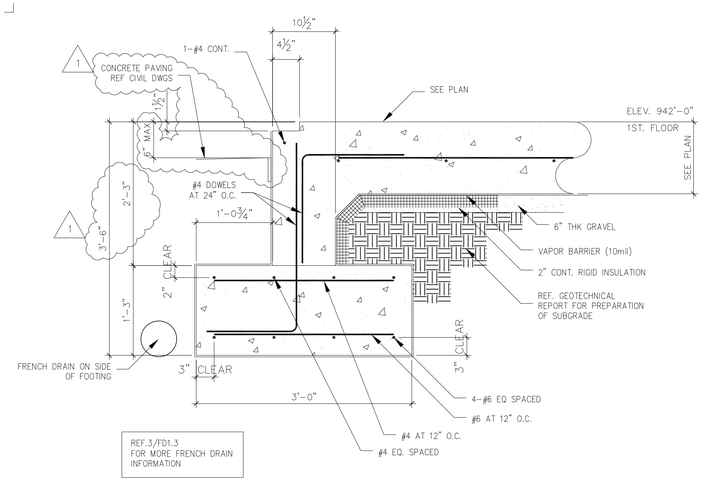
LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

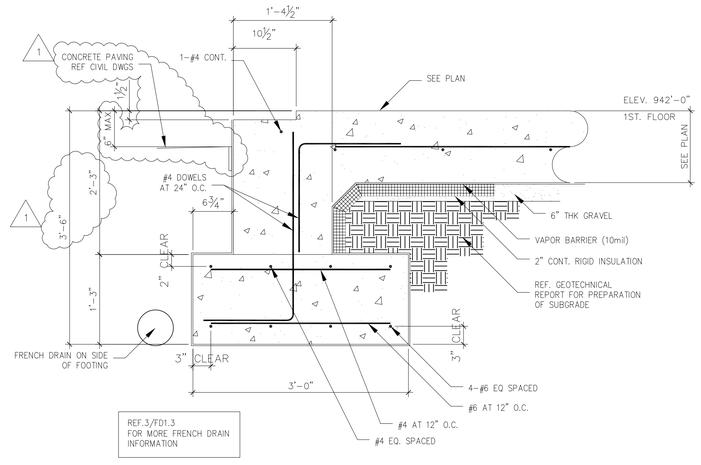
PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

CONCRETE DETAILS

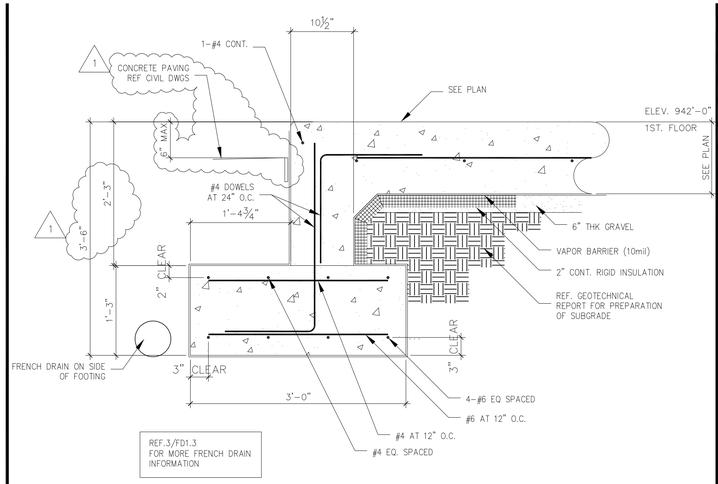
SHEET NO.
FD1.3



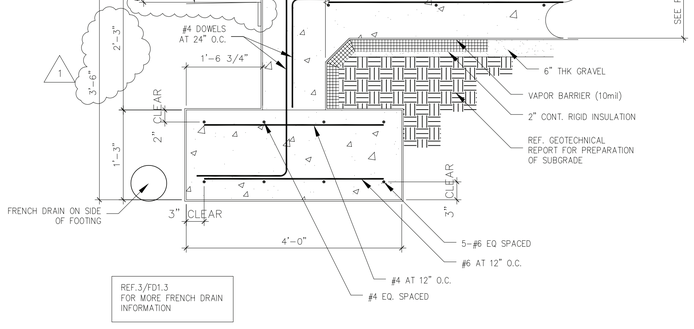
1 EXTERIOR FOOTING
1"=1'-0"



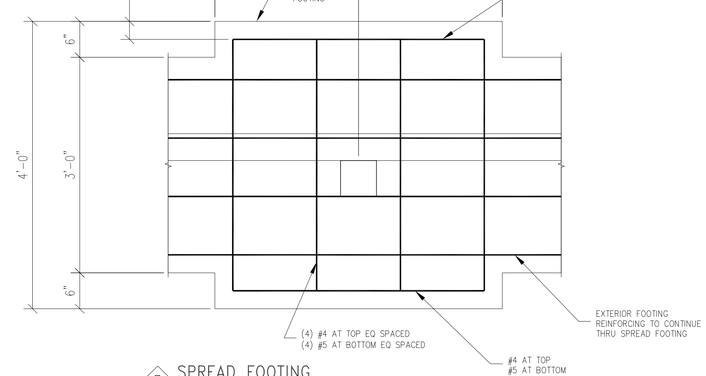
2 EXTERIOR FOOTING
1"=1'-0"



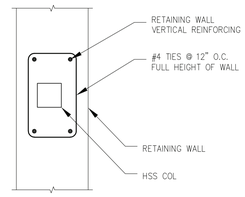
3 EXTERIOR FOOTING
1"=1'-0"



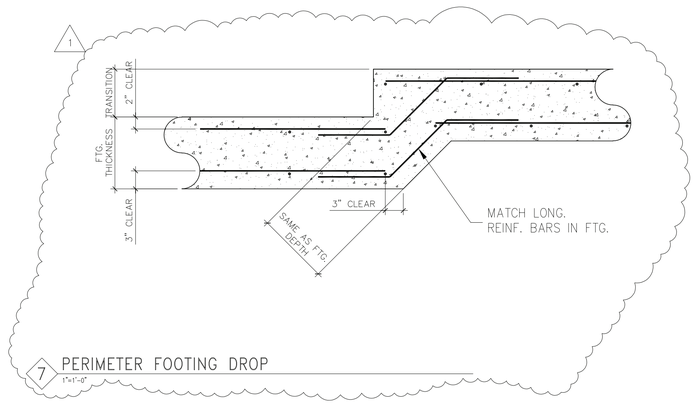
4 EXTERIOR FOOTING
1"=1'-0"



5 SPREAD FOOTING
1"=1'-0"



6 ADDITIONAL WALL REINFORCING AT HSS COLUMN
1"=1'-0"



7 PERIMETER FOOTING DROP
1"=1'-0"

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PROFESSIONAL ENGINEER

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2022.01.19 16:17:22 -05'00'

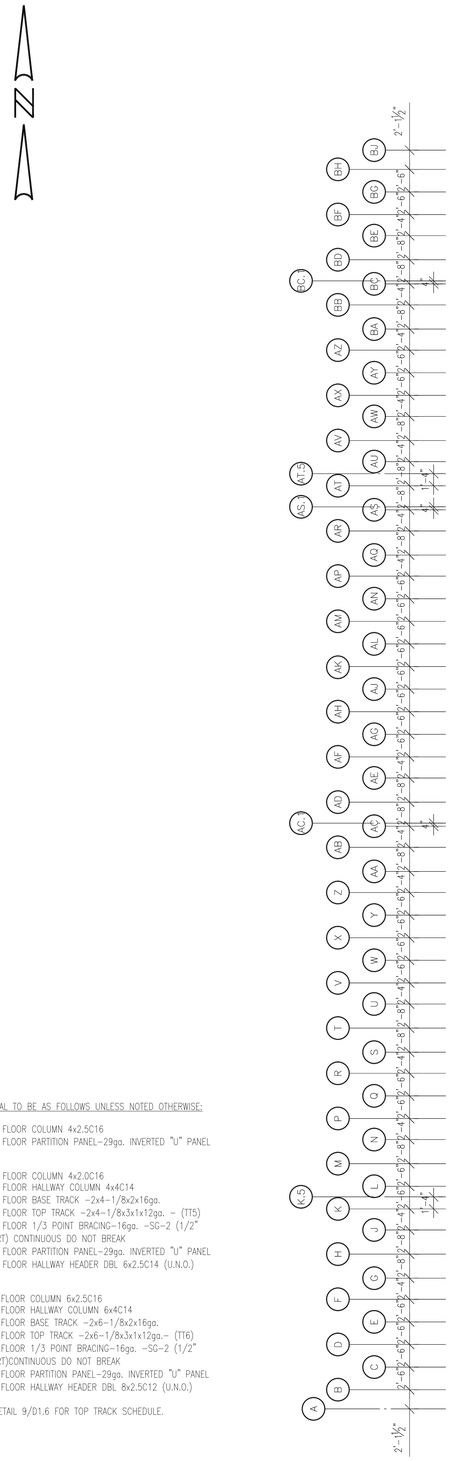
LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:
1

CONCRETE DETAILS

SHEET NO.
FD1.4



MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL

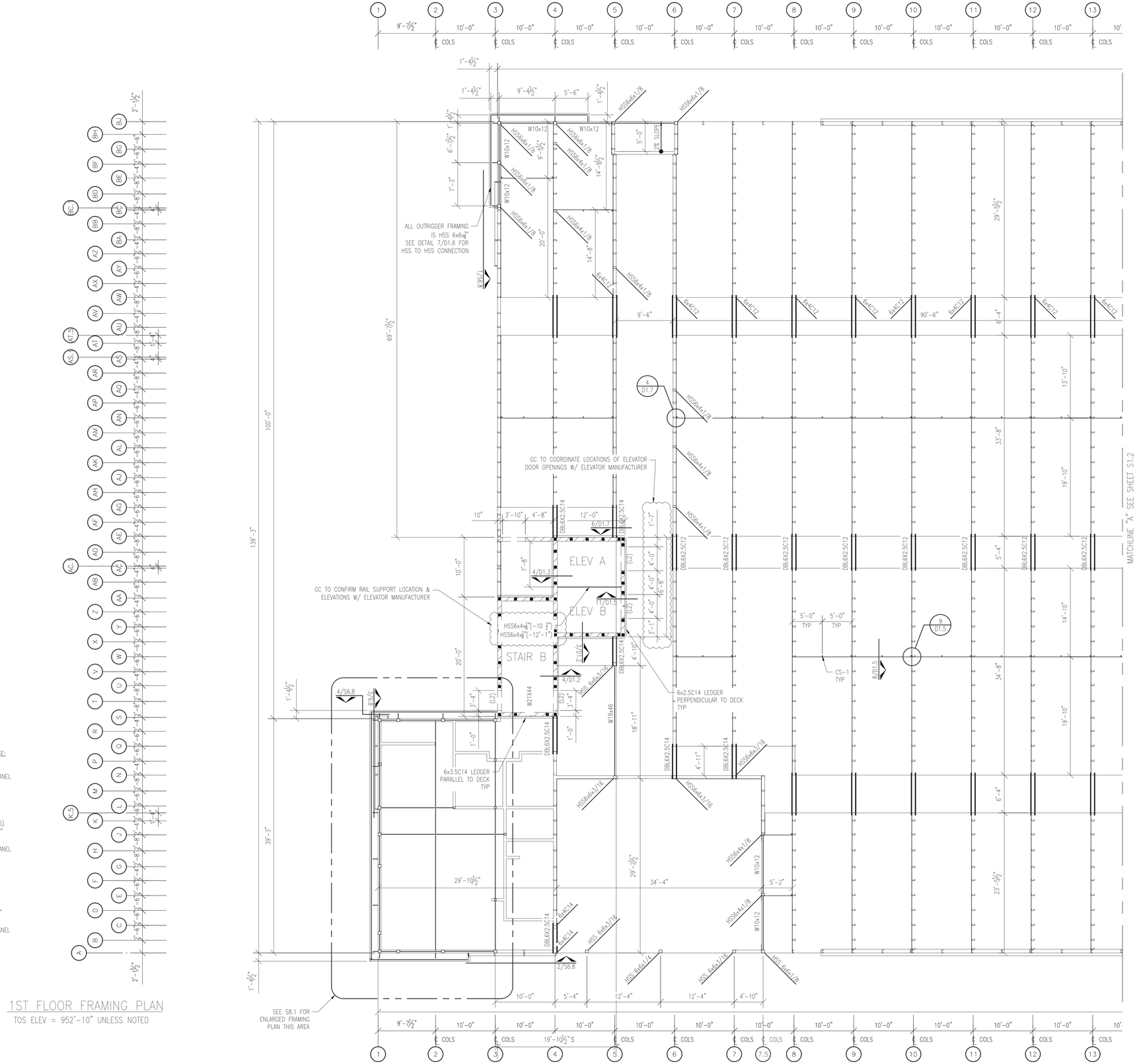
-2ND. FLOOR COLUMN 4x2.0C16
-2ND. FLOOR HALLWAY COLUMN 4x4C14
-2ND. FLOOR BASE TRACK -2x4-1/8x2x16ga.
-2ND. FLOOR TOP TRACK -2x4-1/8x3x1x12ga. - (TT5)
-2ND. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT) CONTINUOUS DO NOT BREAK
-2ND. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-2ND. FLOOR HALLWAY HEADER DBL 6x2.5C14 (U.N.O.)

-1ST. FLOOR COLUMN 6x2.5C16
-1ST. FLOOR HALLWAY COLUMN 6x4C14
-1ST. FLOOR BASE TRACK -2x6-1/8x2x16ga.
-1ST. FLOOR TOP TRACK -2x6-1/8x3x1x12ga.- (TT6)
-1ST. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT)CONTINUOUS DO NOT BREAK
-1ST. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-1ST. FLOOR HALLWAY HEADER DBL 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

1ST FLOOR FRAMING PLAN

TOS ELEV = 952'-10" UNLESS NOTED



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Force Engineering & Testing Inc.
19530 RAMBLEWOOD DRIVE HUMBLE, TX 77338
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STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
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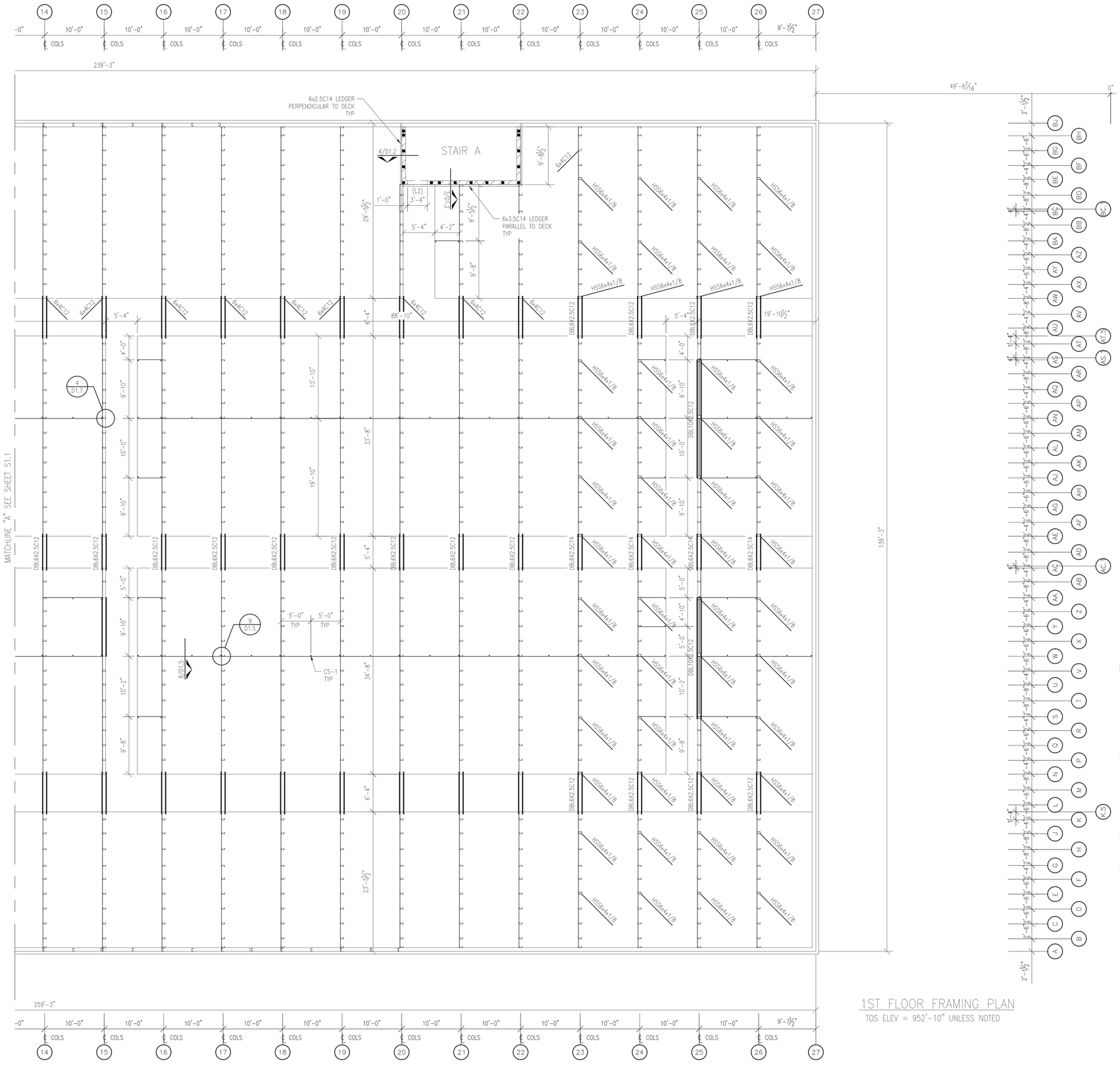
LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

1ST FLOOR FRAMING

SHEET NO.
S1.1



1ST FLOOR FRAMING PLAN

TOS ELEV = 952'-10" UNLESS NOTED

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL

-2ND. FLOOR COLUMN 4x2.0C16
-2ND. FLOOR HALLWAY COLUMN 4x4C14
-2ND. FLOOR BASE TRACK -2x4-1/8x2x16ga.
-2ND. FLOOR TOP TRACK -2x4-1/8x3x1x12ga. - (TT5)
-2ND. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT) CONTINUOUS DO NOT BREAK
-2ND. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-2ND. FLOOR HALLWAY HEADER DBL 6x2.5C14 (U.N.O.)

-1ST. FLOOR COLUMN 6x2.5C16
-1ST. FLOOR HALLWAY COLUMN 6x4C14
-1ST. FLOOR BASE TRACK -2x6-1/8x2x16ga.
-1ST. FLOOR TOP TRACK -2x6-1/8x3x1x12ga.- (TT6)
-1ST. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT)CONTINUOUS DO NOT BREAK
-1ST. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-1ST. FLOOR HALLWAY HEADER DBL 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

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Development Services Department
See Comments Dated
03/18/2022

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STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
Date: 2021.12.15 07:51:50 -06'00'

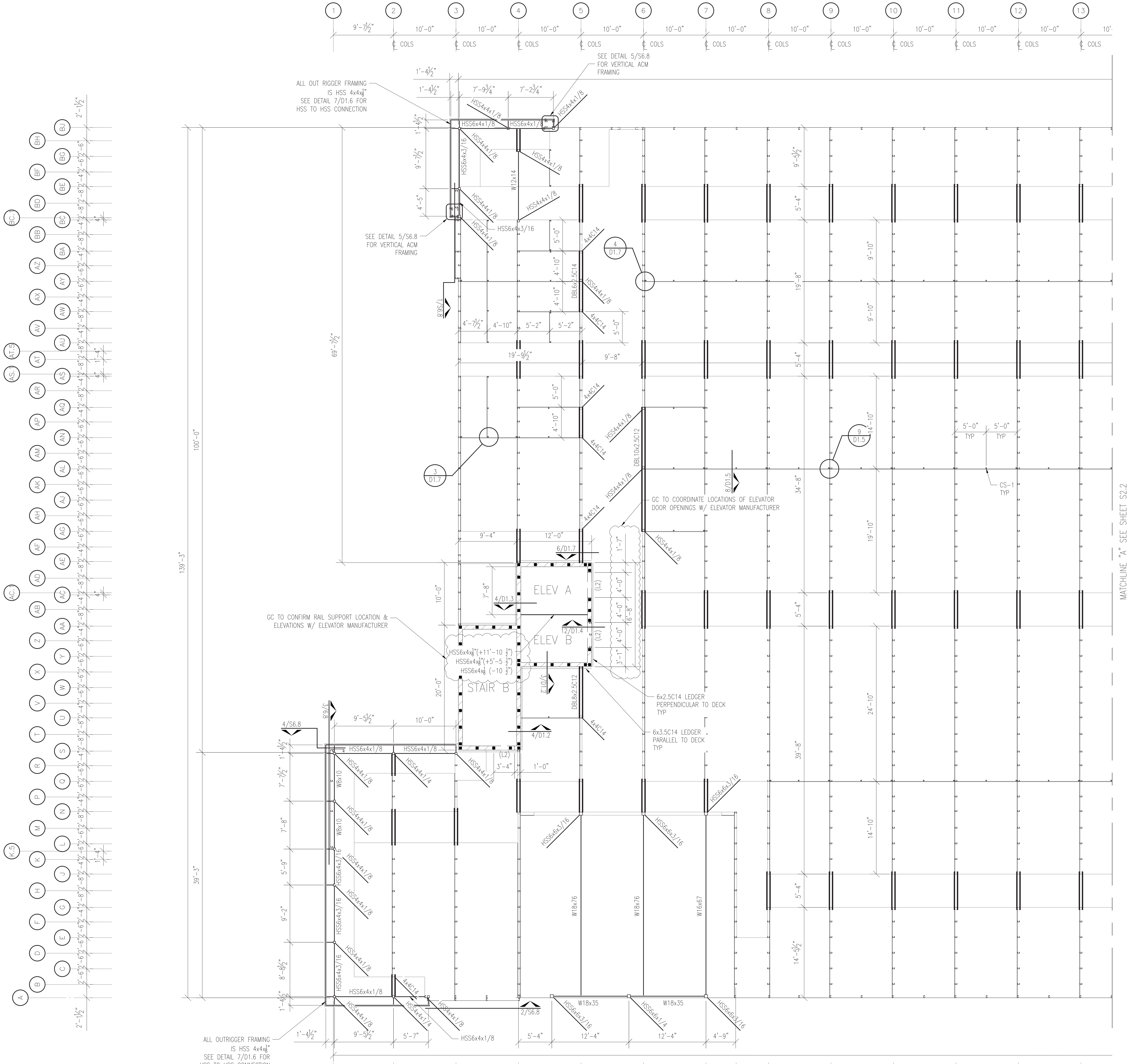
LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

1ST FLOOR FRAMING

SHEET NO.
S1.2



2ND FLOOR FRAMING PLAN
TOS ELEV = 963'-6" UNLESS NOTED

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL

-2ND. FLOOR COLUMN 4x2.0C16
-2ND. FLOOR HALLWAY COLUMN 4x4C14
-2ND. FLOOR BASE TRACK -2x4-1/8x2x16ga.
-2ND. FLOOR TOP TRACK -2x4-1/8x3x1x12ga. - (TT5)
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-1ST. FLOOR HALLWAY COLUMN 6x4C14
-1ST. FLOOR BASE TRACK -2x6-1/8x2x16ga.
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-1ST. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-1ST. FLOOR HALLWAY HEADER DBL 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

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PROFESSIONAL ENGINEER

Johnathan Green
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LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
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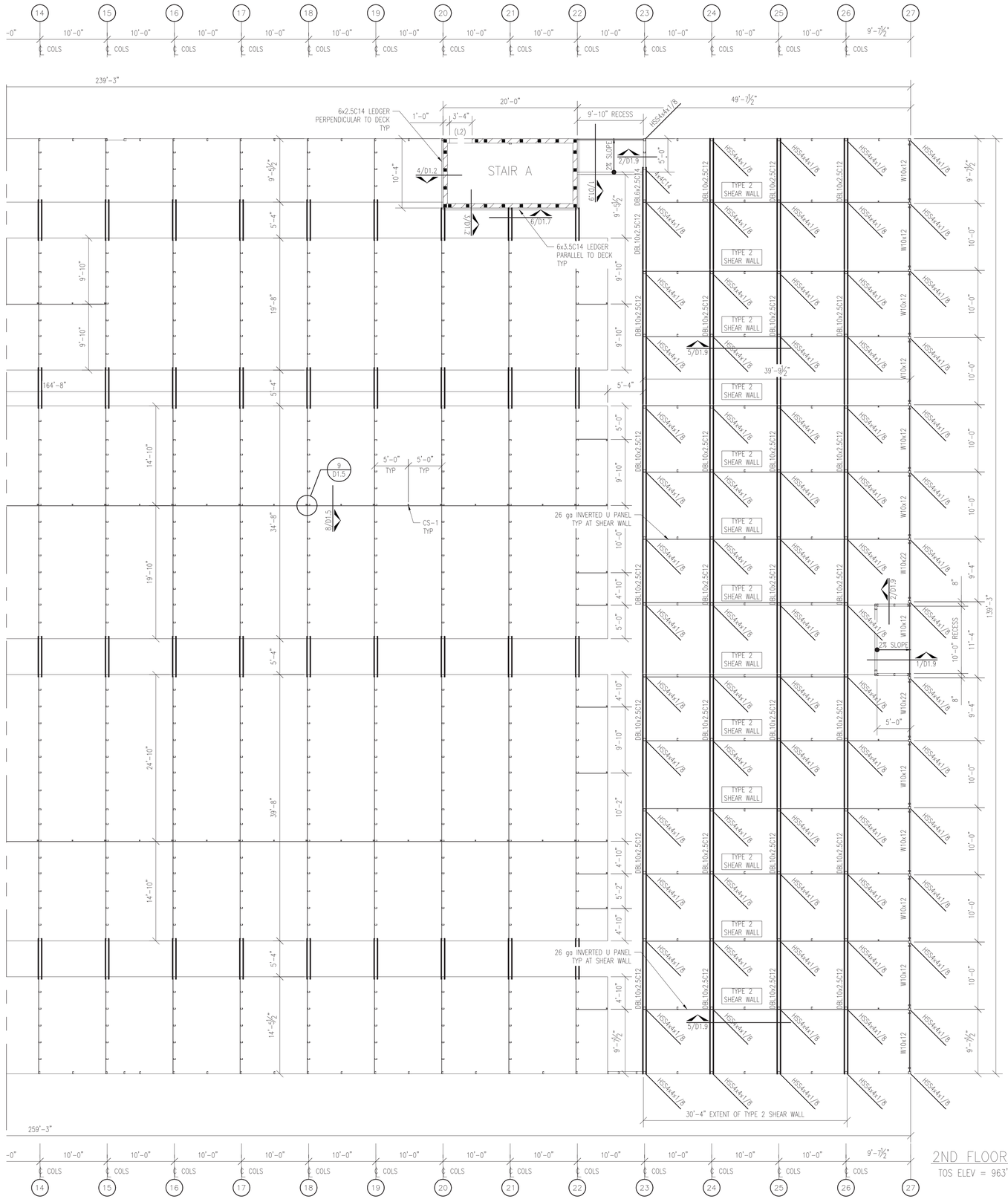
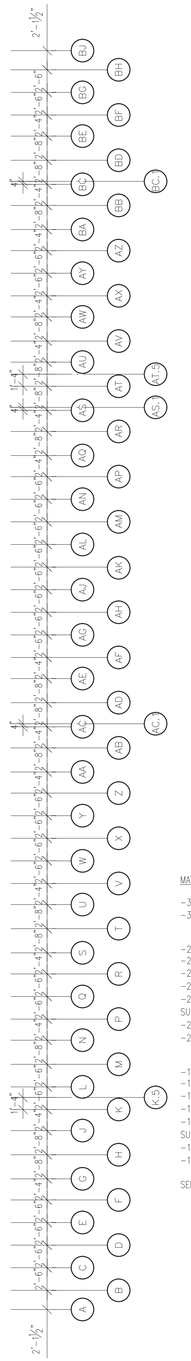
2ND FLOOR FRAMING

SHEET NO.
S2.1



2ND FLOOR FRAMING PLAN

TOS ELEV = 963'-6" UNLESS NOTED



MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL

-2ND. FLOOR COLUMN 4x2.0C16
-2ND. FLOOR HALLWAY COLUMN 4x4C14
-2ND. FLOOR BASE TRACK -2x4-1/8x2x16ga.
-2ND. FLOOR TOP TRACK -2x4-1/8x3x1x12ga. - (TT5)
-2ND. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT) CONTINUOUS DO NOT BREAK
-2ND. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-2ND. FLOOR HALLWAY HEADER DBL 6x2.5C14 (U.N.O.)

-1ST. FLOOR COLUMN 6x2.5C16
-1ST. FLOOR HALLWAY COLUMN 6x4C14
-1ST. FLOOR BASE TRACK -2x6-1/8x2x16ga.
-1ST. FLOOR TOP TRACK -2x6-1/8x3x1x12ga.- (TT6)
-1ST. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT)CONTINUOUS DO NOT BREAK
-1ST. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-1ST. FLOOR HALLWAY HEADER DBL 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

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Lee's Summit, Missouri
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STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
Date: 2021.10.12 01:51:08 -05'00'

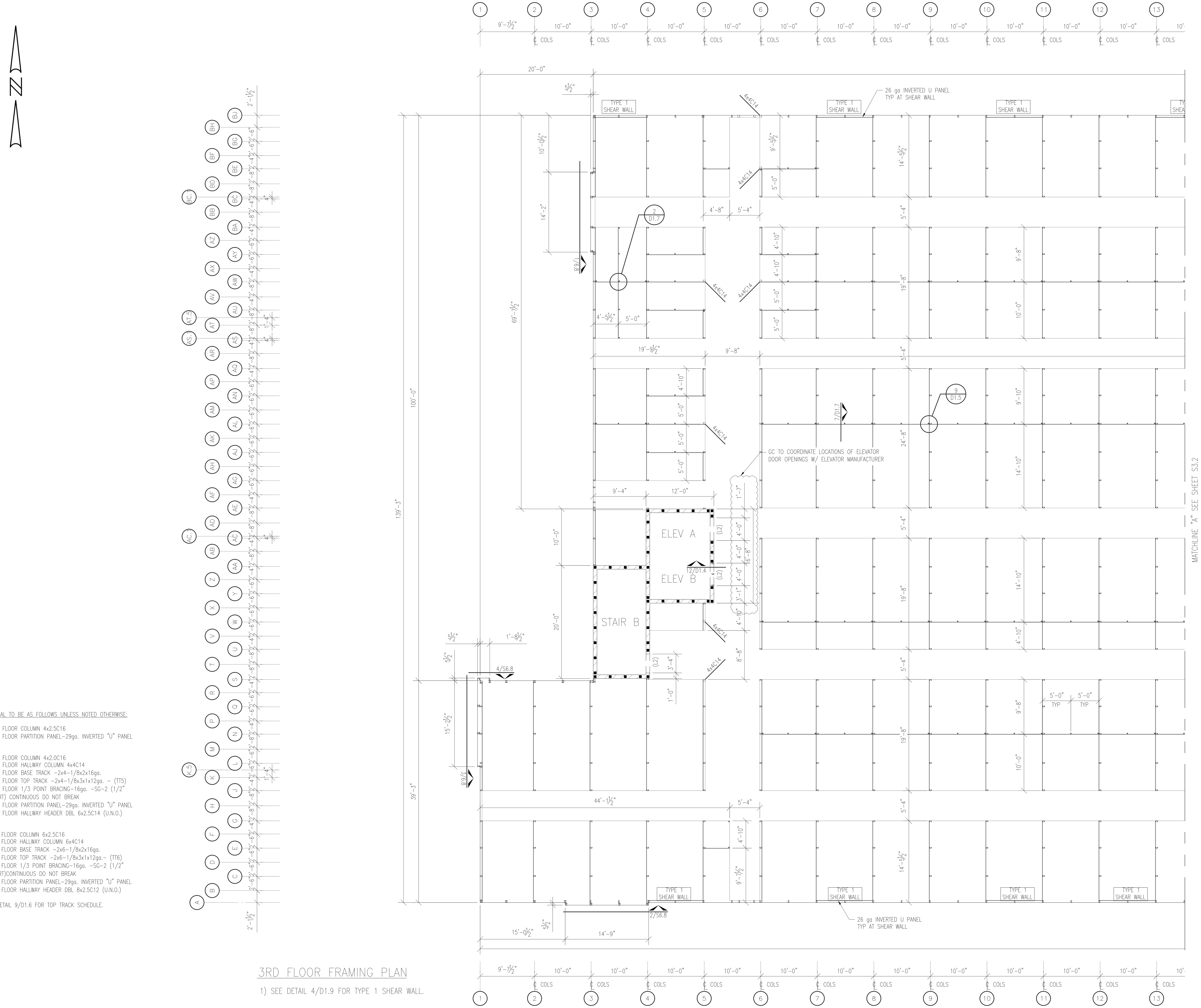
LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

2ND FLOOR FRAMING

SHEET NO.
S2.2



MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

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- -2ND. FLOOR HALLWAY COLUMN 4x4C14
- -2ND. FLOOR BASE TRACK -2x4-1/8x2x16ga.
- -2ND. FLOOR TOP TRACK -2x4-1/8x3x1x12ga. - (TT5)
- -2ND. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT) CONTINUOUS DO NOT BREAK
- -2ND. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
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- -1ST. FLOOR COLUMN 6x2.5C16
- -1ST. FLOOR HALLWAY COLUMN 6x4C14
- -1ST. FLOOR BASE TRACK -2x6-1/8x2x16ga.
- -1ST. FLOOR TOP TRACK -2x6-1/8x3x1x12ga.- (TT6)
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- -1ST. FLOOR HALLWAY HEADER DBL 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

3RD FLOOR FRAMING PLAN

1) SEE DETAIL 4/D1.9 FOR TYPE 1 SHEAR WALL.

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LAKEWOOD STORAGE

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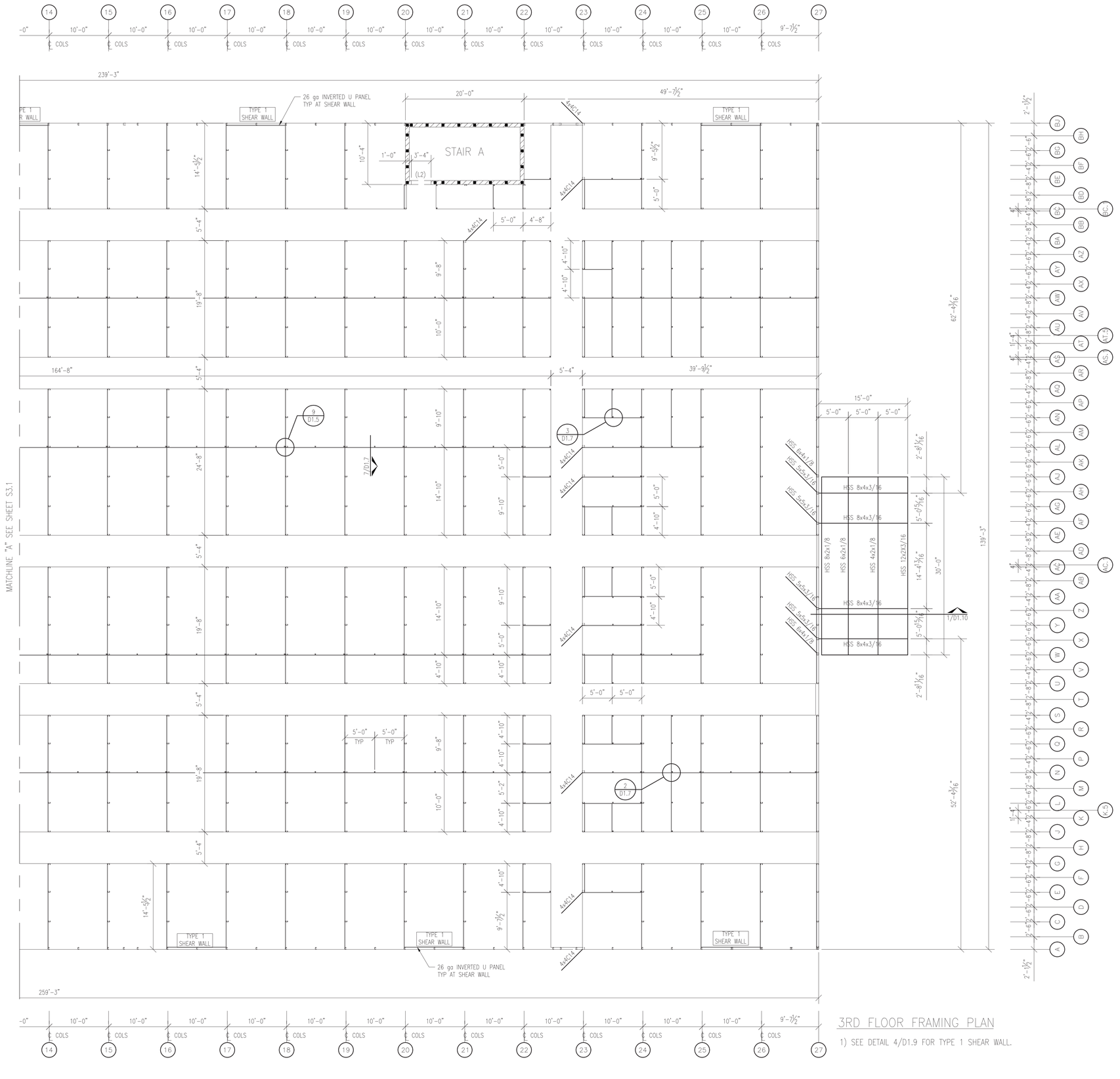
PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

3RD FLOOR FRAMING

SHEET NO.

S3.1



3RD FLOOR FRAMING PLAN

1) SEE DETAIL 4/D1.9 FOR TYPE 1 SHEAR WALL.

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL

-2ND. FLOOR COLUMN 4x2.0C16
-2ND. FLOOR HALLWAY COLUMN 4x4C14
-2ND. FLOOR BASE TRACK -2x4-1/8x2x16ga.
-2ND. FLOOR TOP TRACK -2x4-1/8x3x1x12ga. - (TT5)
-2ND. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT) CONTINUOUS DO NOT BREAK
-2ND. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
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-1ST. FLOOR HALLWAY COLUMN 6x4C14
-1ST. FLOOR BASE TRACK -2x6-1/8x2x16ga.
-1ST. FLOOR TOP TRACK -2x6-1/8x3x1x12ga.- (TT6)
-1ST. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT)CONTINUOUS DO NOT BREAK
-1ST. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-1ST. FLOOR HALLWAY HEADER DBL 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

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NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
dn=Johnathan Green, o=US, ou=Force
Engineering & Testing Inc.
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LAKEWOOD STORAGE

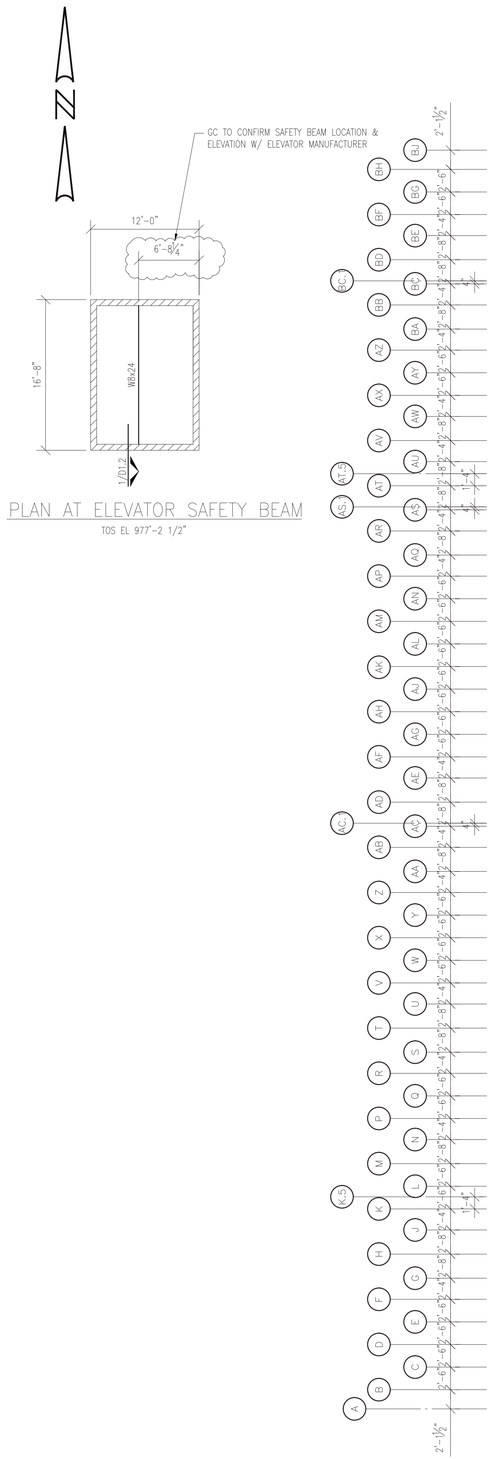
NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

3RD FLOOR FRAMING

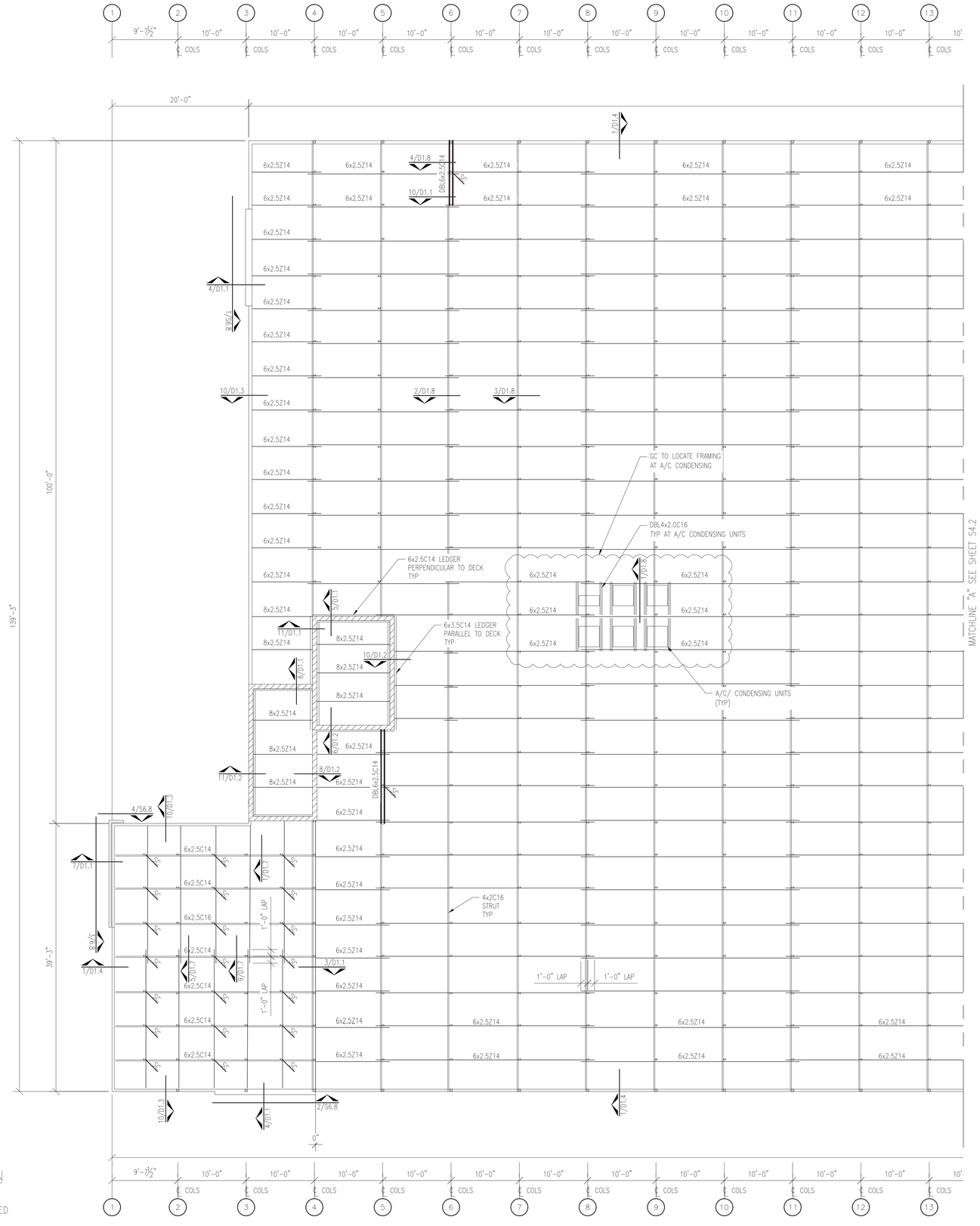
SHEET NO.

S3.2



PLAN AT ELEVATOR SAFETY BEAM

TOS EL 977'-2 1/2"



ROOF FRAMING PLAN

MATERIAL NOTES:
1) PULRINS ARE 6x2.5Z16 UNLESS NOTED
2) SC= 4x2C16 STUB COLUMN

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STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2012045657
PROFESSIONAL ENGINEER

Johnathan Green
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2021.12.10 02:49:57 -06'00'

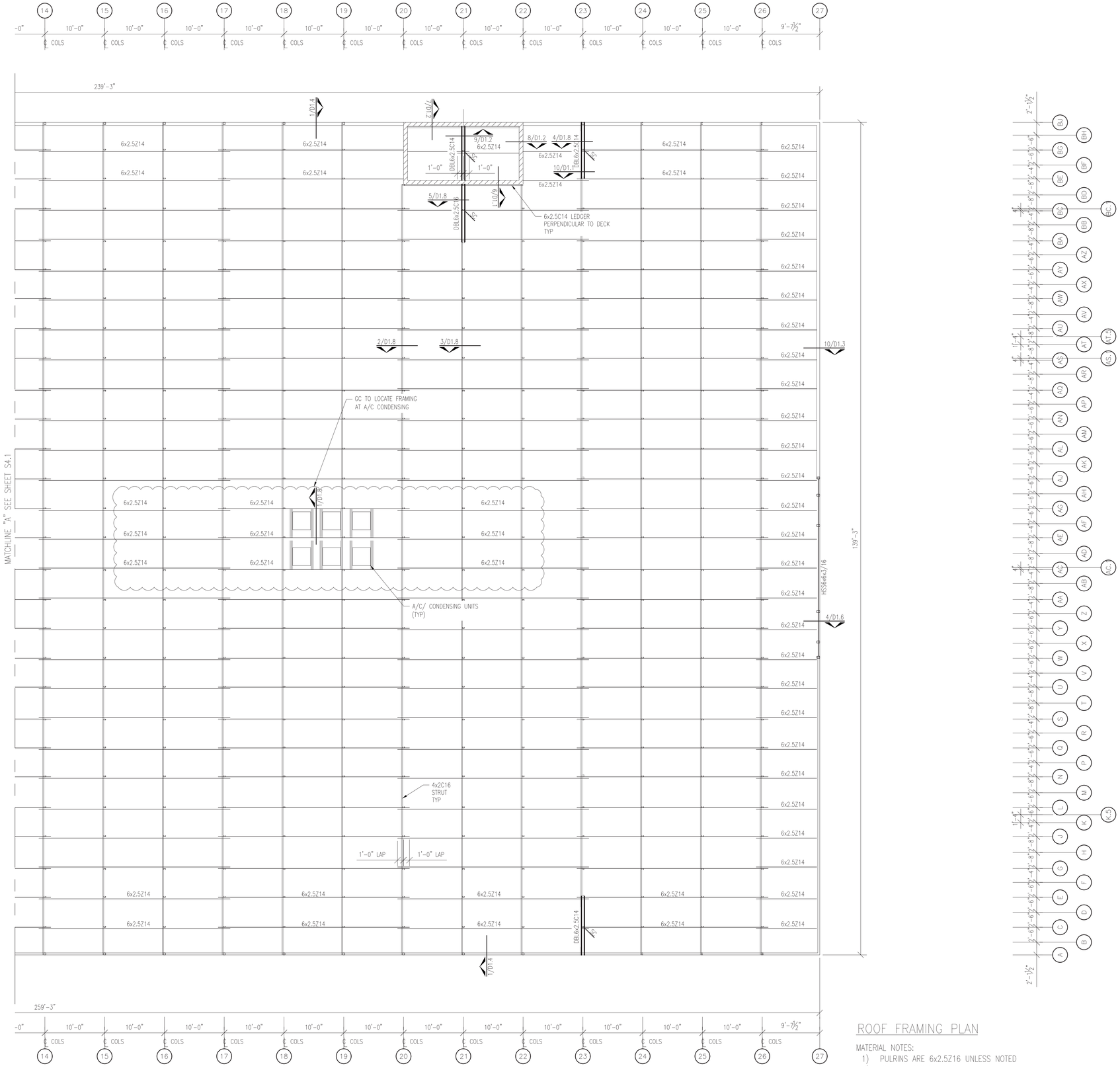
LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

ROOF FRAMING

SHEET NO.
S4.1



ROOF FRAMING PLAN

MATERIAL NOTES:
1) PULRINS ARE 6x2.5Z16 UNLESS NOTED
2) SC= 4x2C16 STUB COLUMN

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
03/18/2022

Force Engineering & Testing, Inc.
19530 RAMBLEWOOD DRIVE HUMBLE, TX 77338
(281) 540-6603 Fax: (281) 540-9966

STATE OF MISSOURI
JOHNATHAN GREEN
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LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
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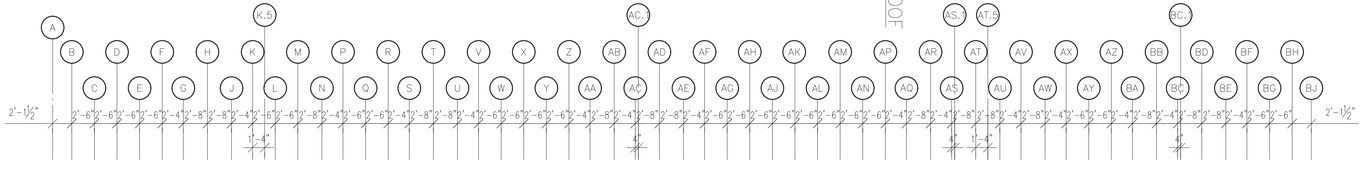
ROOF FRAMING

SHEET NO.
S4.2

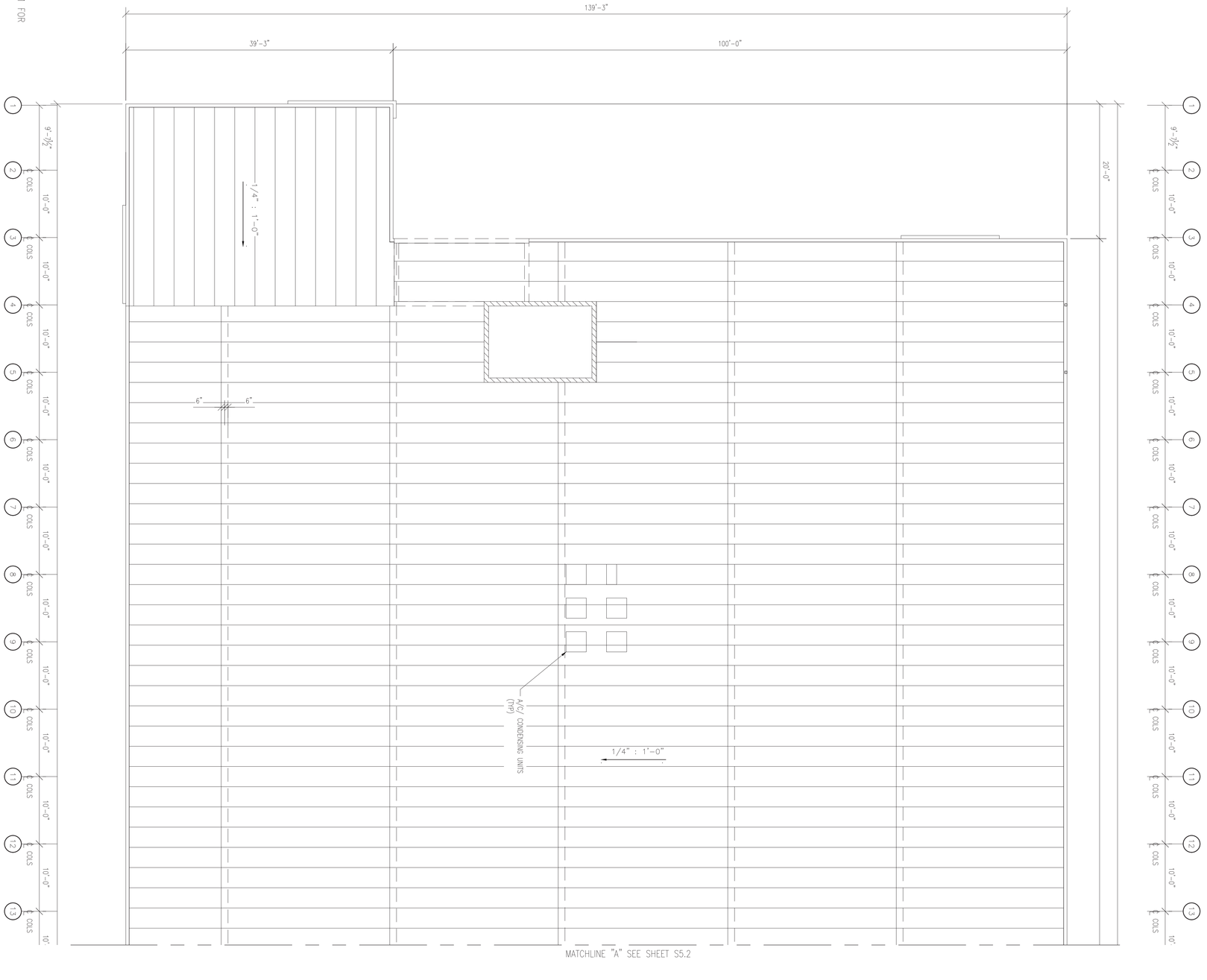
ROOF DECK PLAN AT ELEVATOR ROOF

1/4" : 1'-0"



ROOF DECK PLAN

MATERIAL NOTES:
1) 22GA 1.5 B DECK; SEE DETAIL 2/D1.1 FOR ATTACHMENT



MATCHLINE "A" SEE SHEET S5.2

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LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

ROOF DECK

SHEET NO. S5.1

PROJECT NO. 2035
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STATE OF MISSOURI PROFESSIONAL ENGINEER JONATHAN G. FORCE NUMBER PE-2021045687

Force Engineering & Testing Inc.
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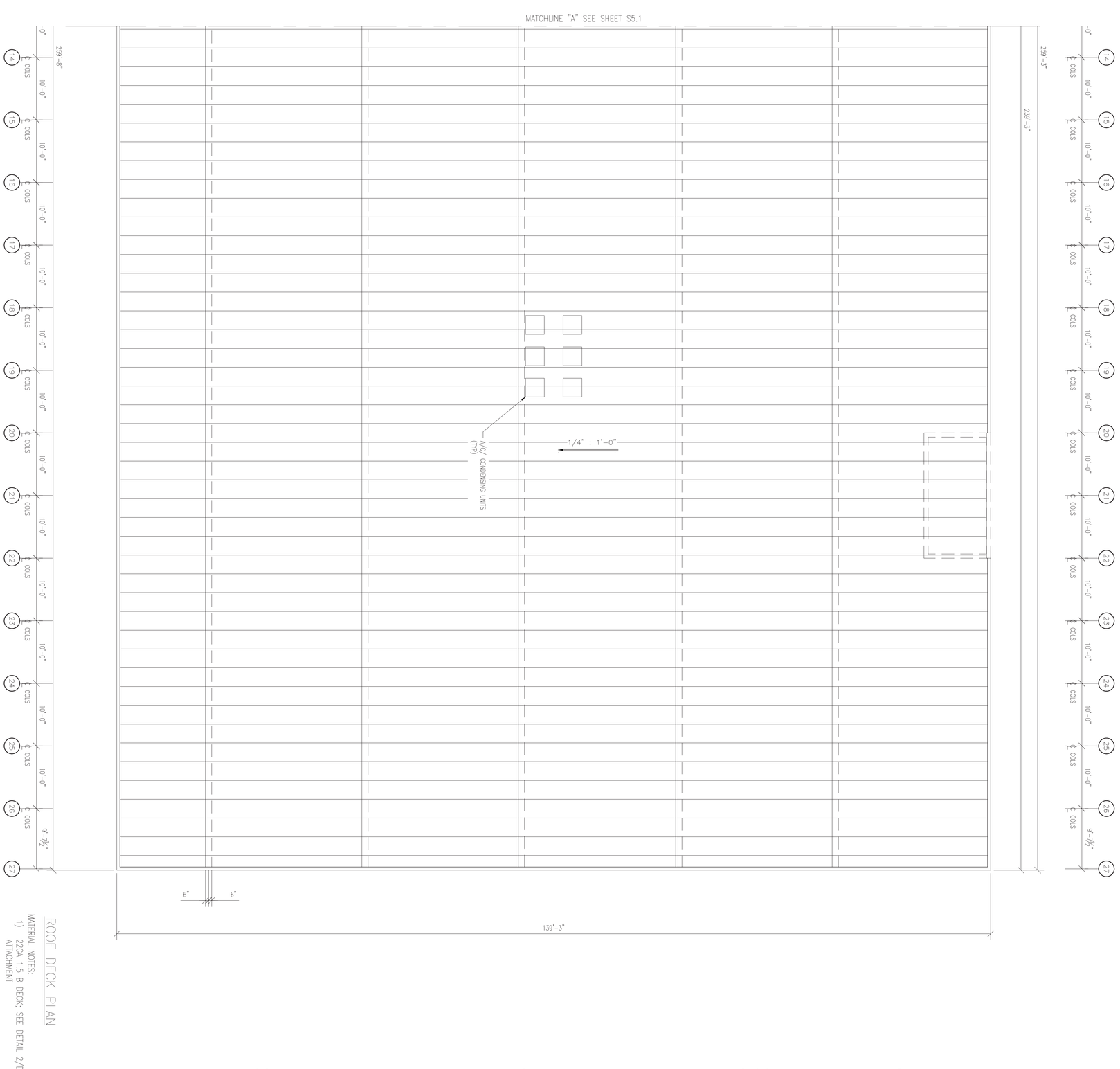

ROOF DECK PLAN

MATERIAL NOTES:
1) 22GA 1.5 B DECK; SEE DETAIL 2/D1.1 FOR ATTACHMENT

LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

ROOF DECK

SHEET NO. S5.2

REVISIONS:

DRAWN :

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PROJECT NO. 2035

JONATHAN G. FORCE
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PE-2021045687
STATE OF MISSOURI
PROFESSIONAL ENGINEER

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03/18/2022

FRAMING ELEVATION @ COLUMN LINE A
(LOOKING NORTH)

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.0C16 @ 5'-0" O.C. MAX
-3RD. FLOOR GIRT 4x2.0C16 @ 5'-9" O.C. MAX
-3RD. FLOOR WINDOW JAMB 4x2.0C16
-3RD. FLOOR WINDOW HEADER/SILL 4x2.0C16
-3RD. FLOOR TOP TRACK 3x4 1/8x3x14ga TT1

-2ND. FLOOR COLUMN 4x2.0C16 @ 5'-0" O.C. MAX
-2ND. FLOOR GIRT 4x2.0C16 @ 5'-4" O.C. MAX
-2ND. FLOOR WINDOW JAMB 4x2.0C16
-2ND. FLOOR WINDOW HEADER/SILL 4x2.0C16
-2ND. FLOOR TOP TRACK 3x4 1/8x3x14ga TT1

-1ST. FLOOR COLUMN 6x2.0C16 @ 5'-0" O.C. MAX
-1ST. FLOOR GIRT 4x2.0C16 @ 5'-8" O.C. MAX
-1ST. FLOOR TOP TRACK 3x6 1/8x3x14ga TT2
-1ST. FLOOR BASE ANGLE 3x3x14ga

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

DENOTES THE LOCATION OF SHEAR WALL SHEATHING. ALL SHEAR WALL SHEATHING IS USED FOR LATERAL BRACING OF THE STRUCTURE. SHEAR WALL SHEATHING SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.

DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 12/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 9/D1.8

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LAKEWOOD STORAGE

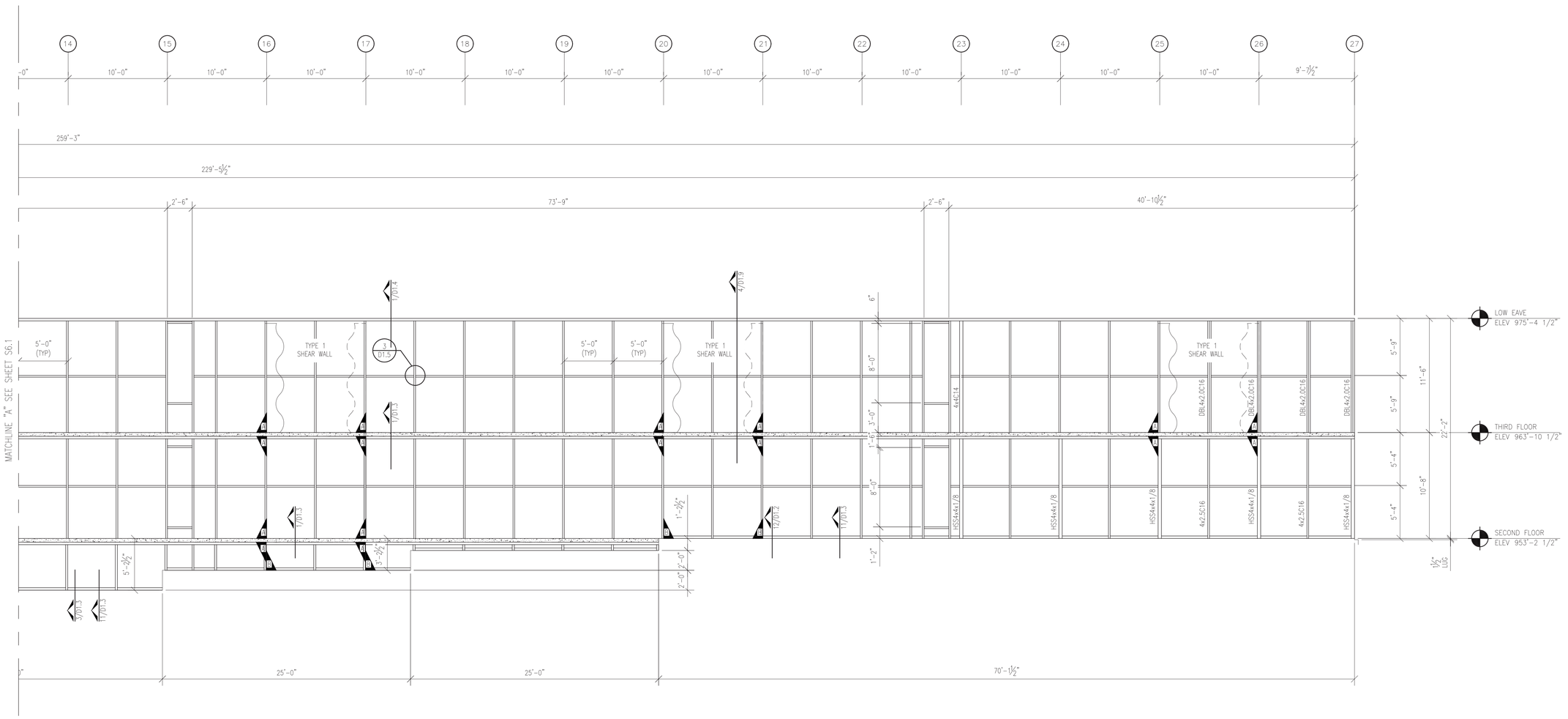
NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING ELEVATIONS

SHEET NO.

S6.1



FRAMING ELEVATION @ COLUMN LINE A
(LOOKING NORTH)

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.0C16 @ 5'-0" O.C. MAX
-3RD. FLOOR GIRT 4x2.0C16 @ 5'-9" O.C. MAX
-3RD. FLOOR WINDOW JAMB 4x2.0C16
-3RD. FLOOR WINDOW HEADER/SILL 4x2.0C16
-3RD. FLOOR TOP TRACK 3x4 1/8x3x14ga TT1

-2ND. FLOOR COLUMN 4x2.0C16 @ 5'-0" O.C. MAX
-2ND. FLOOR GIRT 4x2.0C16 @ 5'-4" O.C. MAX
-2ND. FLOOR WINDOW JAMB 4x2.0C16
-2ND. FLOOR WINDOW HEADER/SILL 4x2.0C16
-2ND. FLOOR TOP TRACK 3x4 1/8x3x14ga TT1

-1ST. FLOOR COLUMN 6x2.0C16 @ 5'-0" O.C. MAX
-1ST. FLOOR GIRT 4x2.0C16 @ 5'-8" O.C. MAX
-1ST. FLOOR TOP TRACK 3x6 1/8x3x14ga TT2
-1ST. FLOOR BASE ANGLE 3x3x14ga

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

DENOTES THE LOCATION OF SHEAR WALL SHEATHING. ALL SHEAR WALL SHEATHING IS USED FOR LATERAL BRACING OF THE STRUCTURE. SHEAR WALL SHEATHING SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.

DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 12/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 9/D1.8

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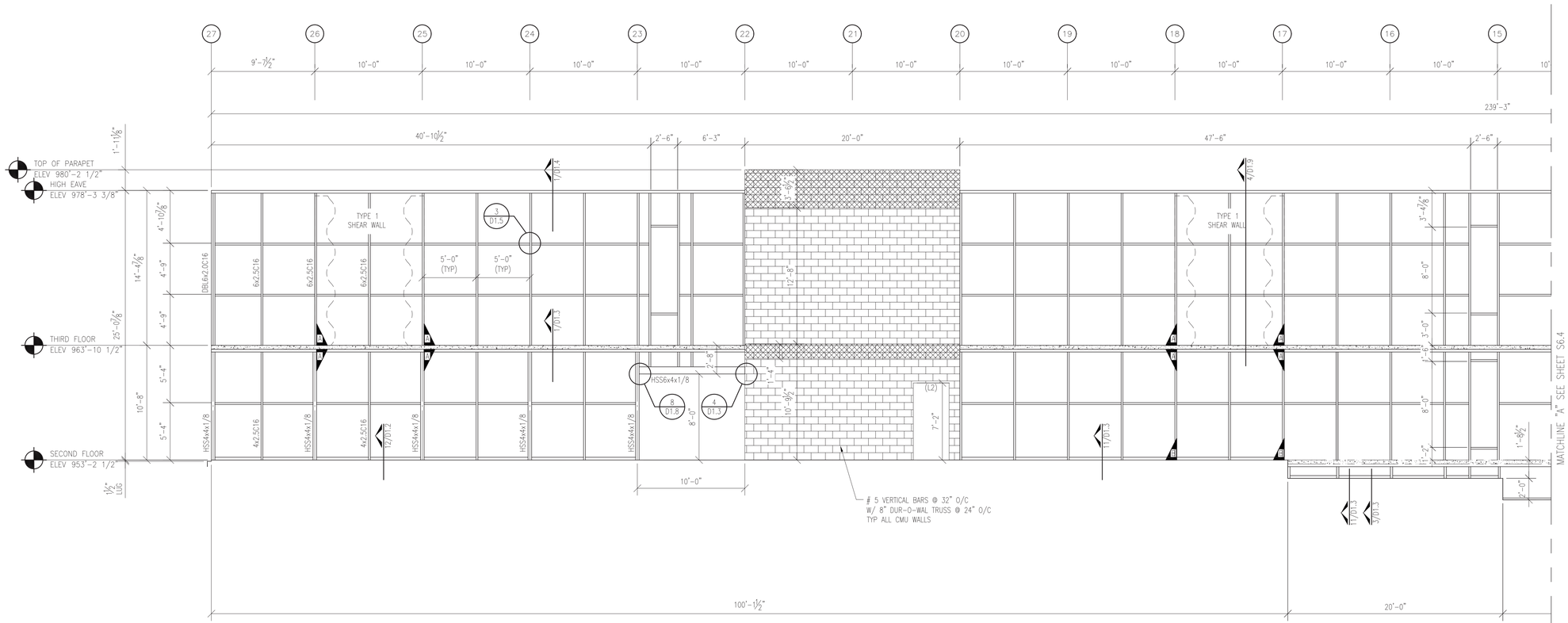
LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING ELEVATIONS

SHEET NO.
S6.2



FRAMING ELEVATION @ COLUMN LINE BJ

(LOOKING SOUTH)

DENOTES THE LOCATION OF BOND BEAM (BOND BEAMS ARE CONTINUOUS AROUND STAIR UNLESS NOTED)

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 6x2.0C16 @ 5'-0" O.C. MAX
-3RD. FLOOR GIRT 4x2.0C16 @ 4'-11" O.C. MAX
-3RD. FLOOR WINDOW JAMB 6x2.0C16
-3RD. FLOOR WINDOW HEADER/SILL 6x2.0C16
-3RD. FLOOR TOP TRACK 3x6 1/8x3x1x14ga TT2

-2ND. FLOOR COLUMN 4x2.0C16 @ 5'-0" O.C. MAX
-2ND. FLOOR GIRT 4x2.0C16 @ 5'-4" O.C. MAX
-2ND. FLOOR WINDOW JAMB 4x2.0C16
-2ND. FLOOR WINDOW HEADER/SILL 4x2.0C16
-2ND. FLOOR TOP TRACK 3x4 1/8x4x14ga TT1

-1ST. FLOOR COLUMN 6x2.0C16 @ 5'-0" O.C. MAX
-1ST. FLOOR GIRT 4x2.0C16 @ 5'-8" O.C. MAX
-1ST. FLOOR TOP TRACK 3x6 1/8x3x14ga TT2
-1ST. FLOOR BASE ANGLE 3x3x14ga

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

DENOTES THE LOCATION OF SHEAR WALL SHEATHING. ALL SHEAR WALL SHEATHING IS USED FOR LATERAL BRACING OF THE STRUCTURE. SHEAR WALL SHEATHING SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.

DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 12/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 9/D1.8

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PROFESSIONAL ENGINEER

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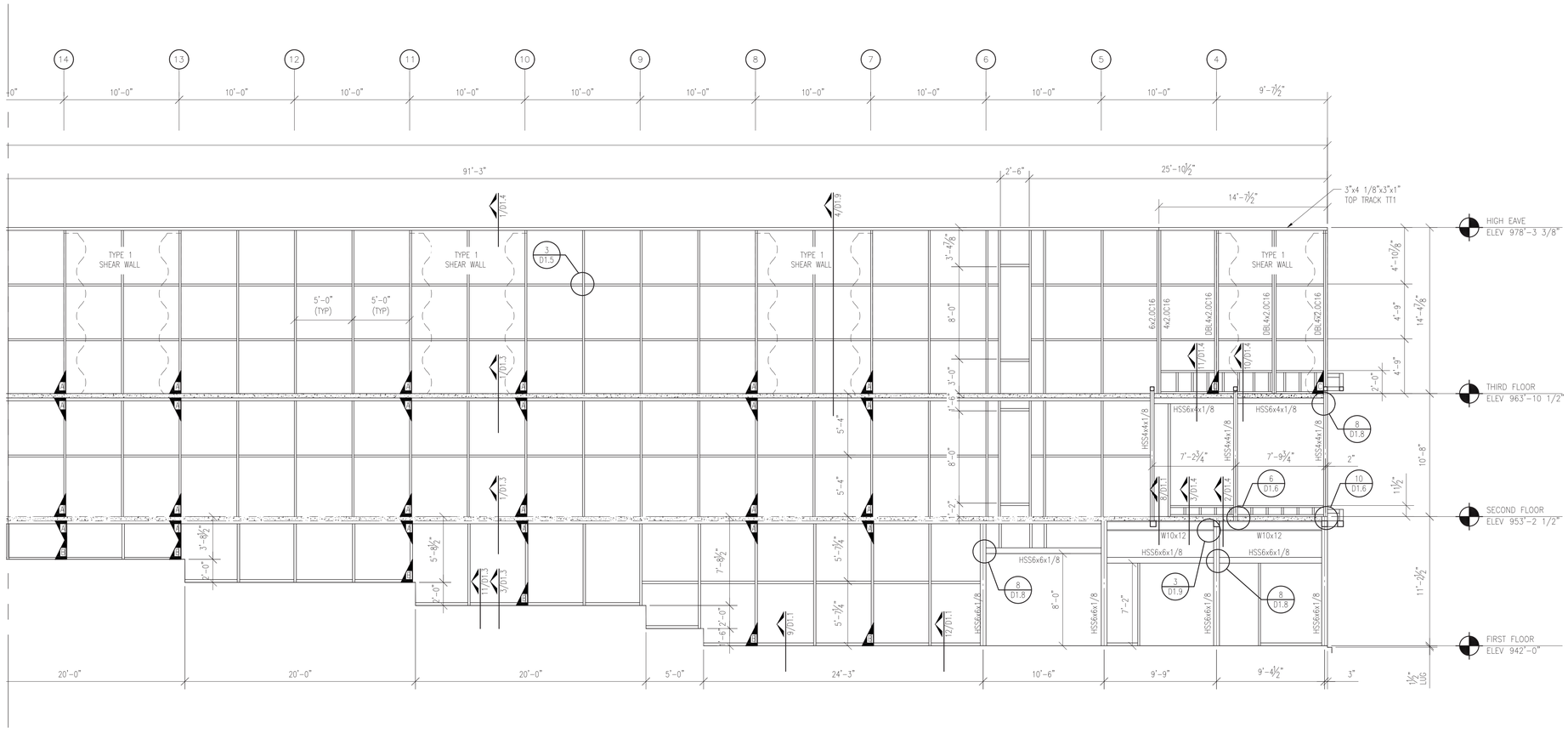
LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING ELEVATIONS

SHEET NO.
S6.3



FRAMING ELEVATION @ COLUMN LINE BJ
(LOOKING SOUTH)

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 6x2.0C16 @ 5'-0" O.C. MAX
-3RD. FLOOR GIRT 4x2.0C16 @ 4'-11" O.C. MAX
-3RD. FLOOR WINDOW JAMB 6x2.0C16
-3RD. FLOOR WINDOW HEADER/SILL 6x2.0C16
-3RD. FLOOR TOP TRACK 3x6 1/8x3x1x14ga TT2

-2ND. FLOOR COLUMN 4x2.0C16 @ 5'-0" O.C. MAX
-2ND. FLOOR GIRT 4x2.0C16 @ 5'-4" O.C. MAX
-2ND. FLOOR WINDOW JAMB 4x2.0C16
-2ND. FLOOR WINDOW HEADER/SILL 4x2.0C16
-2ND. FLOOR TOP TRACK 3x4 1/8x4x14ga TT1

-1ST. FLOOR COLUMN 6x2.0C16 @ 5'-0" O.C. MAX
-1ST. FLOOR GIRT 4x2.0C16 @ 5'-8" O.C. MAX
-1ST. FLOOR TOP TRACK 3x6 1/8x3x14ga TT2
-1ST. FLOOR BASE ANGLE 3x3x14ga

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

DENOTES THE LOCATION OF SHEAR WALL SHEATHING. ALL SHEAR WALL SHEATHING IS USED FOR LATERAL BRACING OF THE STRUCTURE. SHEAR WALL SHEATHING SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.

DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 12/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 9/D1.8

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Johnathan Green
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I am approving this document
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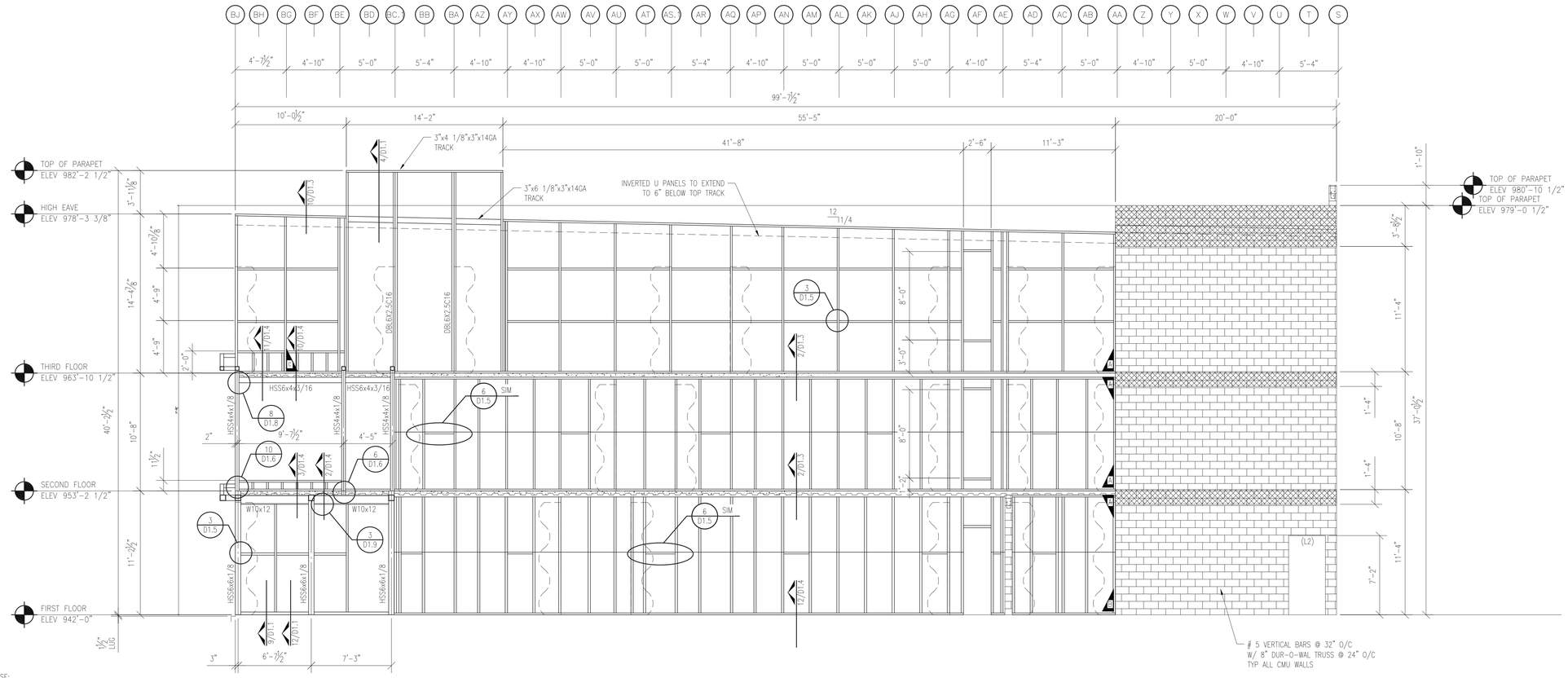
LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING ELEVATIONS

SHEET NO.
S6.4



MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 6x2.5C16 @ 5'-0" O.C.
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-3RD. FLOOR GIRT 6x2.0C16
-3RD. FLOOR TOP CHANNEL 3x6 1/8x6 1/8x14ga TT4
-3RD. FLOOR BOTTOM TRACK 2x6 1/8x2x16ga

-2ND. FLOOR COLUMN 4x2.0C16 @ 2'-6" O.C.
-2ND. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-2ND. FLOOR BRIDGING 4x2.0C16 @ MIDPOINT
-2ND. FLOOR TOP TRACK 3x4 1/8x3x14ga TT1
-2ND. FLOOR MID POINT BRACING 2x16ga FLAT STRAP CONTINUOUS DO NOT BREAK
-2ND. FLOOR WINDOW JAMB 4x2.0C16
-2ND. FLOOR WINDOW HEADER 4x2.0C16
-2ND. FLOOR BOTTOM TRACK 2x4 1/8x2x16ga

-1ST. FLOOR COLUMN 6x2.0C16 @ 2'-6" O.C.
-1ST. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-1ST. FLOOR BRIDGING 6x2.0C16 @ MIDPOINT
-1ST. FLOOR TOP TRACK 3x6 1/8x3x14ga TT2
-1ST. FLOOR MID POINT BRACING 2x16ga FLAT STRAP CONTINUOUS DO NOT BREAK
-1ST. FLOOR WINDOW JAMB 6x2.0C16
-1ST. FLOOR WINDOW HEADER 6x2.0C16
-1ST. FLOOR BOTTOM TRACK 2x6 1/8x2x16ga

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

DENOTES THE LOCATION OF BEARING WALL SHEATHING. ALL BEARING WALL SHEATHING IS USED AS SHEAR WALLS FOR LATERAL BRACING OF THE STRUCTURE. BEARING WALL SHEATHING SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.

DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 12/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 9/D1.8

FRAMING ELEVATION @ COLUMN LINE 3
(LOOKING EAST)

DENOTES THE LOCATION OF BOND BEAM (BOND BEAMS ARE CONTINUOUS AROUND STAIR UNLESS NOTED)

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LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
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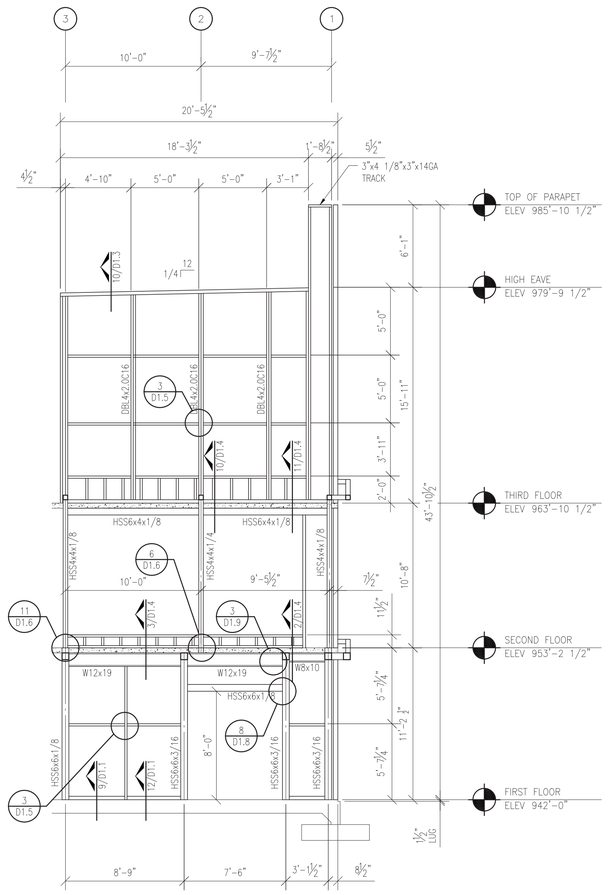
FRAMING ELEVATIONS

SHEET NO.
S6.5



FRAMING ELEVATION @ COLUMN LINE S

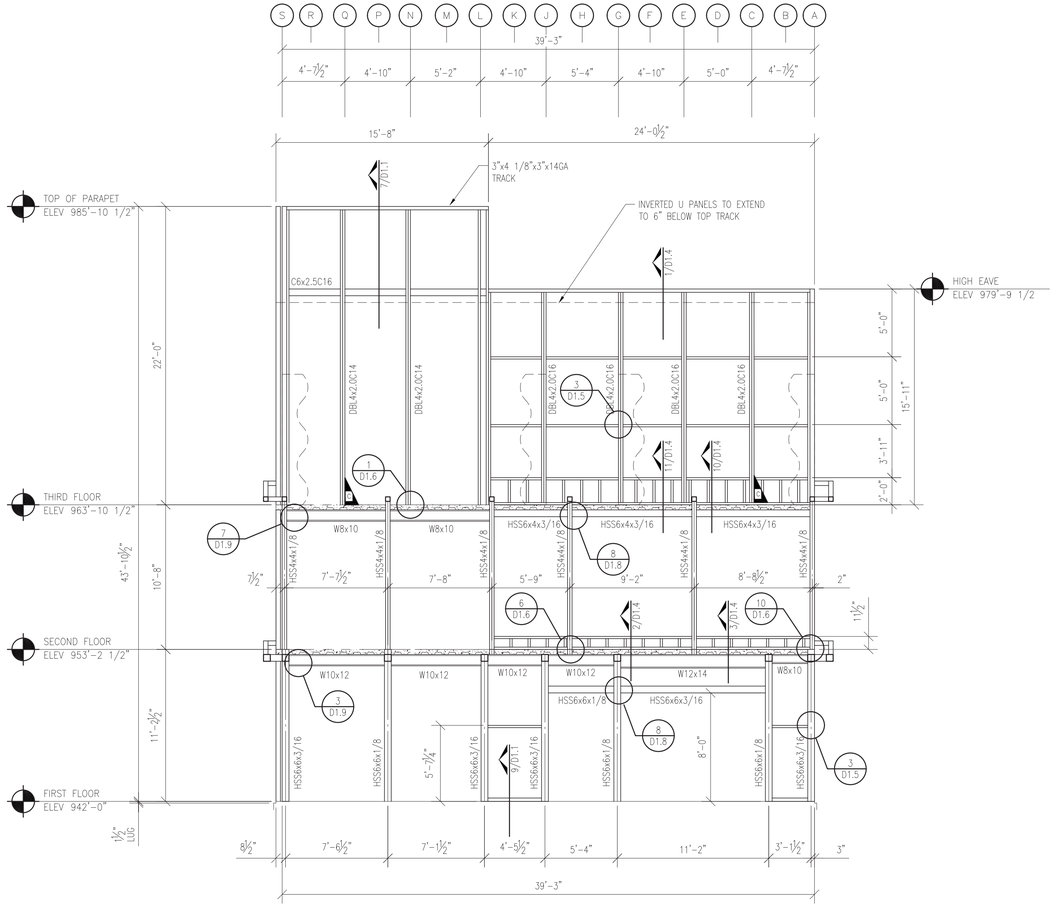
(LOOKING SOUTH)

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16 @ 5'-0" O.C. MAX
-3RD. FLOOR GIRT 4x2.0C16 @ 5'-0" O.C. MAX
-3RD. FLOOR TOP TRACK 3x4 1/8x6 1/8x14ga TT3

-1ST. FLOOR COLUMN 6x2.0C16 @ 5'-0" O.C. MAX
-1ST. FLOOR GIRT 4x2.0C16 @ 5'-8" O.C. MAX
-1ST. FLOOR BASE ANGLE 3x3x14ga.

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.



FRAMING ELEVATION @ COLUMN LINE 1

(LOOKING EAST)

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16 @ 5'-0" O.C. MAX
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-3RD. FLOOR GIRT 4x2.0C16 @ 5'-0" O.C. MAX
-3RD. FLOOR TOP TRACK 3x4 1/8x4x14ga TT1

-1ST. FLOOR GIRT 4x2.0C16 @ 5'-8" O.C. MAX
-1ST. FLOOR BASE ANGLE 3x3x14ga.

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

DENOTES THE LOCATION OF BEARING WALL SHEATHING. ALL BEARING WALL SHEATHING IS USED AS SHEAR WALLS FOR LATERAL BRACING OF THE STRUCTURE. BEARING WALL SHEATHING SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.

DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 7/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 9/D1.8

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Date: 2021.12.15 07:46:18 -06'00'
I am approving this document

LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035

DATE : 12.15.2021

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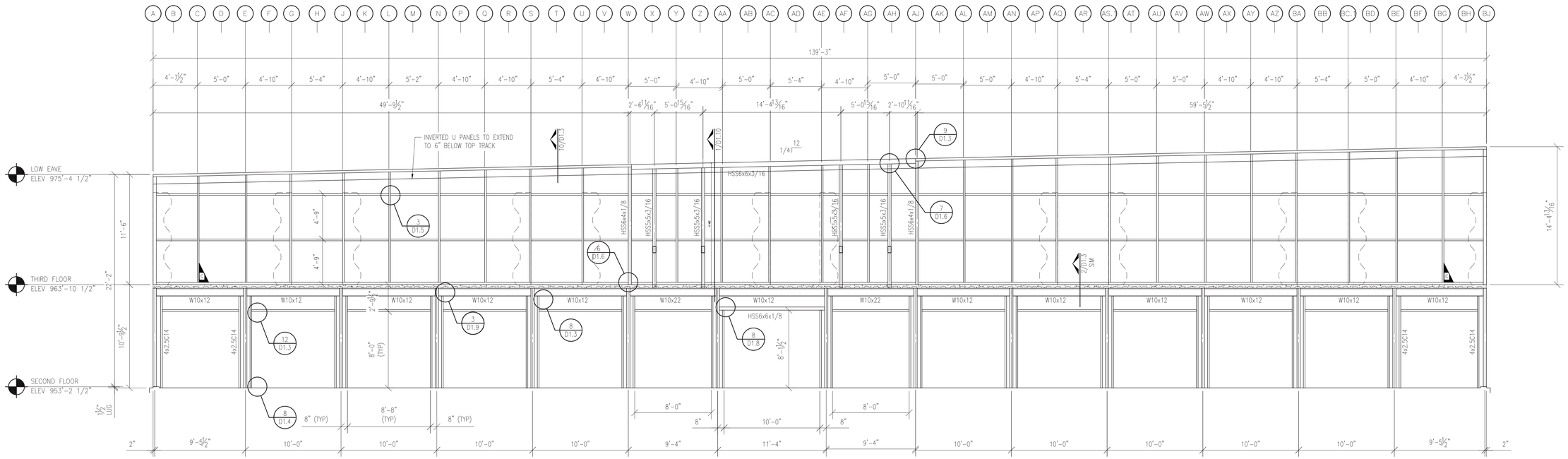
REVISIONS:

FRAMING ELEVATIONS

SHEET NO.

S6.6



FRAMING ELEVATION @ COLUMN LINE 27
(LOOKING WEST)

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 6x2.5C16 @ 5'-0" O.C. MAX
-3RD. FLOOR GIRT 6x2.0C16
-3RD. FLOOR TOP TRACK 3x6 1/8x6 1/8x14ga TT4
-3RD. FLOOR BOTTOM TRACK 2x6 1/8x2x16ga

-2ND. FLOOR COLUMN HSS 4x4x1/8"
-2ND. FLOOR DOOR JAMB 4x2.5C16
-2ND. FLOOR DOOR HEADER 4x2.0C16

DENOTES THE LOCATION OF BEARING WALL SHEATHING. ALL BEARING WALL SHEATHING IS USED AS SHEAR WALLS FOR LATERAL BRACING OF THE STRUCTURE. BEARING WALL SHEATHING SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.

DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 7/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 9/D1.8

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Department
Lee's Summit, Missouri
03/18/2022

Force Engineering & Testing Inc.
19530 RAMBLEWOOD DRIVE HUMBLE, TX 77338
(281) 540-6603 Fax: (281) 540-9966

STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
cn=Johnathan Green, o=US, o=Force Engineering and Testing, email=jgreen@forceengineeringtesting.com
Date: 2021.12.15 07:46:01 -06'00'

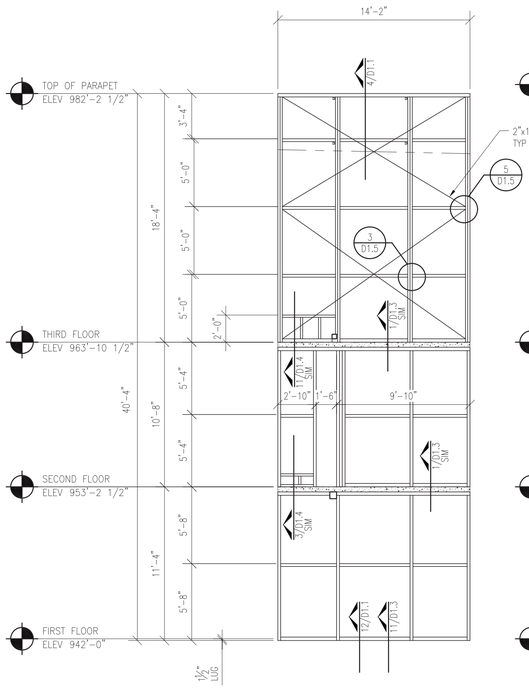
LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING ELEVATIONS

SHEET NO.
S6.7



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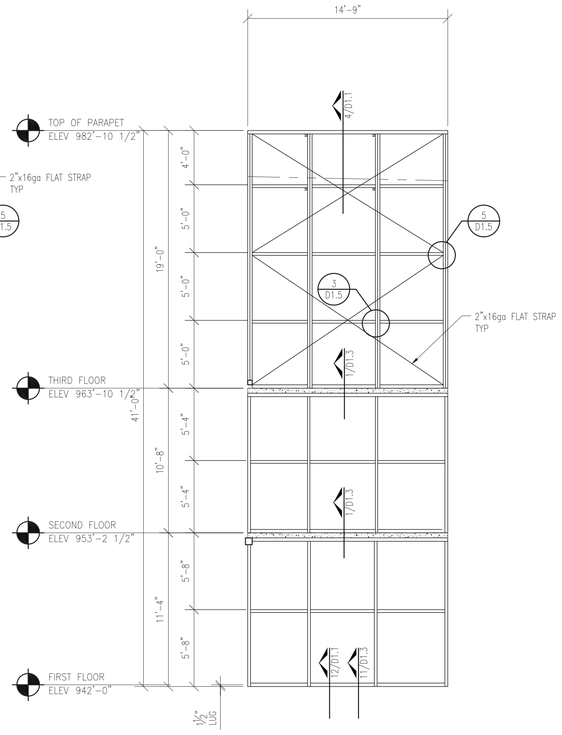

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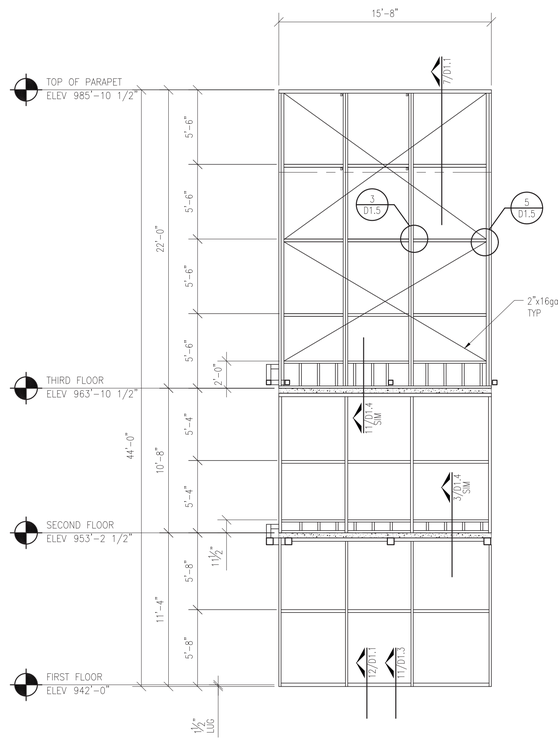

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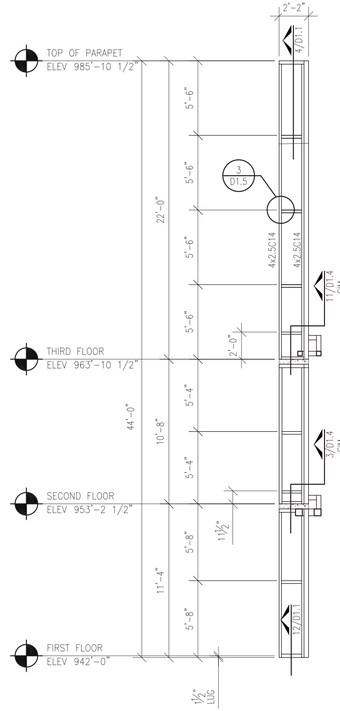
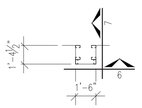
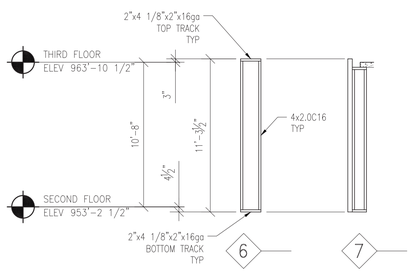


4 FRAMING ELEVATION



5 PLAN AT VERTICAL ACM FRAMING



6 7

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN DBL 4x2.5C14 @ 5'-0" O.C. MAX
-3RD. FLOOR GIRT 4x2.0C16
-3RD. FLOOR TOP TRACK 3x4 1/8x3x14ga

-2ND. FLOOR COLUMN 4x2.0C16 @ 5'-0" O.C. MAX
-2ND. FLOOR GIRT 4x2.0C16 @ 5'-4" O.C. MAX
-2ND. FLOOR TOP TRACK 3x4 1/8x3x14ga TT1

-1ST. FLOOR COLUMN 4x2.5C14 @ 5'-0" O.C. MAX
-1ST. FLOOR GIRT 4x2.0C16 @ 5'-8" O.C. MAX
-1ST. FLOOR TOP TRACK 3x4 1/8x3x14ga TT1
-1ST. FLOOR BASE ANGLE 3x3x14ga

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

RELEASED FOR CONSTRUCTION
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Acceptance does not relieve contractor of responsibility for compliance with ordinances, plans and specifications.
Lee's Summit, Missouri
03/18/2022

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JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
DN: cn=Johnathan Green, o=US, o=Force Engineering and Testing, email=jgreen@forceengineeringtesting.com
Reason: I am approving this document
2021.12.15 12:49:41 -06'00'

LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
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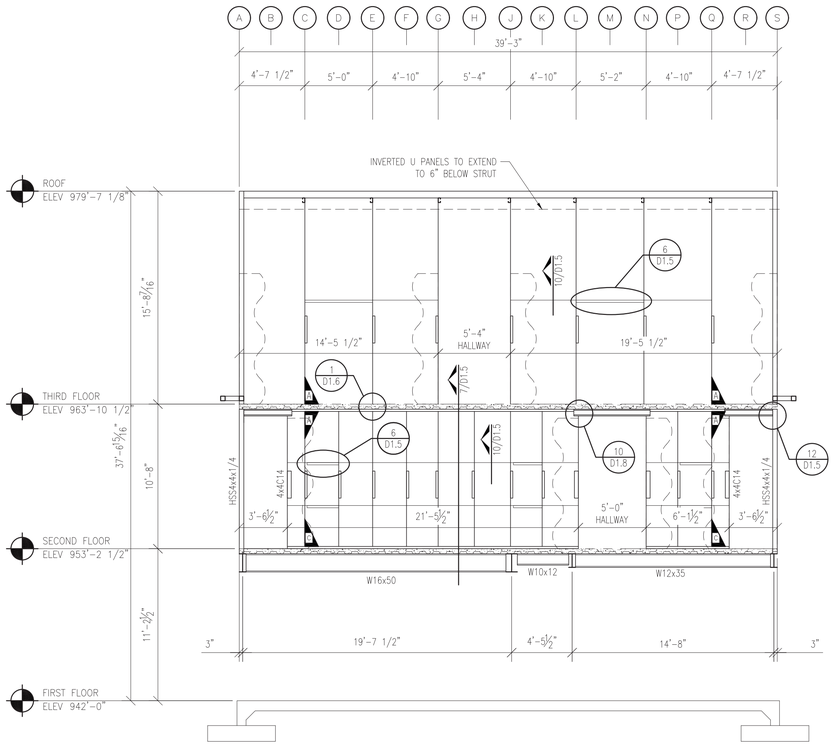
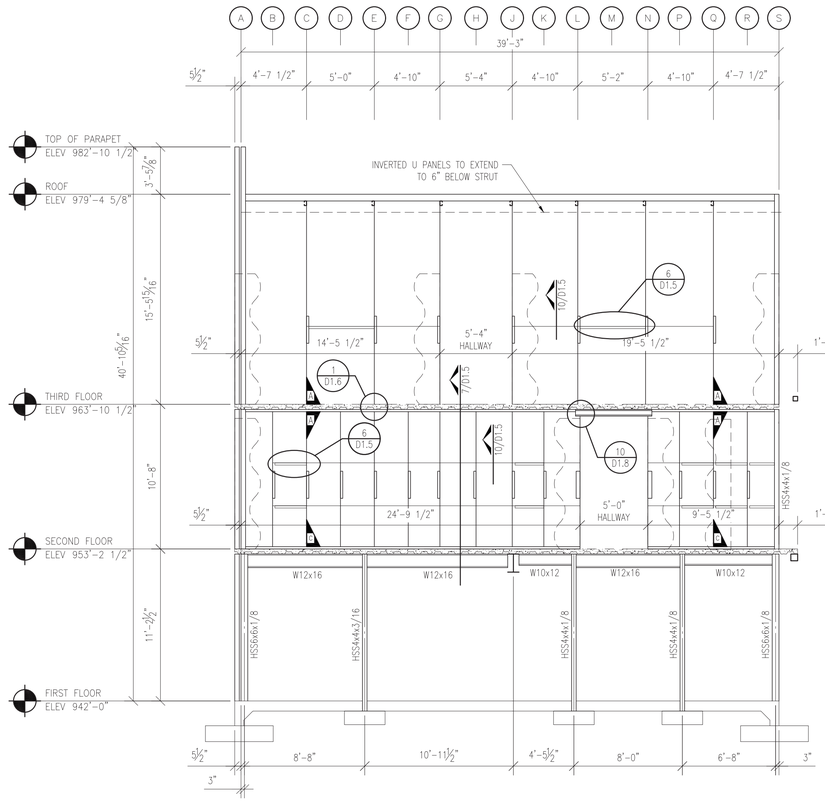
REVISIONS:

FRAMING ELEVATIONS

SHEET NO.
S6.8



FRAMING ELEVATION @ COLUMN LINE 2
(LOOKING WEST)



FRAMING ELEVATION @ COLUMN LINE 3
(LOOKING WEST)

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL

-2ND. FLOOR COLUMN 4x2.0C16
-2ND. FLOOR HALLWAY COLUMN 4x4C14
-2ND. FLOOR BASE TRACK -2x4-1/8x2x16ga.
-2ND. FLOOR TOP TRACK -2x4-1/8x3x1x12ga. - (TT5)
-2ND. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT) CONTINUOUS DO NOT BREAK
-2ND. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-2ND. FLOOR HALLWAY HEADER DBL 6x2.5C14 (U.N.O.)

-1ST. FLOOR COLUMN 6x2.5C16
-1ST. FLOOR HALLWAY COLUMN 6x4C14
-1ST. FLOOR BASE TRACK -2x6-1/8x2x16ga.
-1ST. FLOOR TOP TRACK -2x6-1/8x3x1x12ga.- (TT6)
-1ST. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT)CONTINUOUS DO NOT BREAK
-1ST. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-1ST. FLOOR HALLWAY HEADER DBL 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

DENOTES THE LOCATION OF BEARING WALL SHEATHING. ALL BEARING WALL SHEATHING IS USED AS SHEAR WALLS FOR LATERAL BRACING OF THE STRUCTURE. **BEARING WALL SHEATHING SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.**

DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 7/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 9/D1.8

ERECTION NOTES:

1) SEE DETAIL 2/D1.5 COMPOSITE DECK DETAIL
2) SEE DETAILS 1/D1.5 & 3/D1.6 FOR TYPICAL DECK ATTACHMENT DETAILS.
3) SEE DETAIL 1/D1.1 FOR PARTITION PANEL ATTACHMENT DETAIL.
4) SEE DETAIL 7/D1.3 FOR 1ST AND 2ND FLOOR BOTTOM TRACK SPLICE.
5) SEE DETAIL 6/D1.3 FOR 1ST AND 2ND FLOOR TOP TRACK SPLICE.
6) TOP TRACK SHALL BE CONTINUOUS ACROSS ALL HEADERS. IF THE TRACK IS NOT CONTINUOUS ACROSS HEADER, THE HEADER MUST BE STITCHED TO METAL DECK PER DETAIL 8/D1.6.
7) SEE DETAIL 3/D1.9 FOR TYPICAL W-BEAM SHEAR PLATE CONNECTIONS.

RELEASED FOR CONSTRUCTION
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Development Services Department
Lee's Summit, Missouri
03/18/2022

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PROFESSIONAL ENGINEER

Johnathan Green
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I am approving this document
2022.10.10 02:40:01 -05'00'

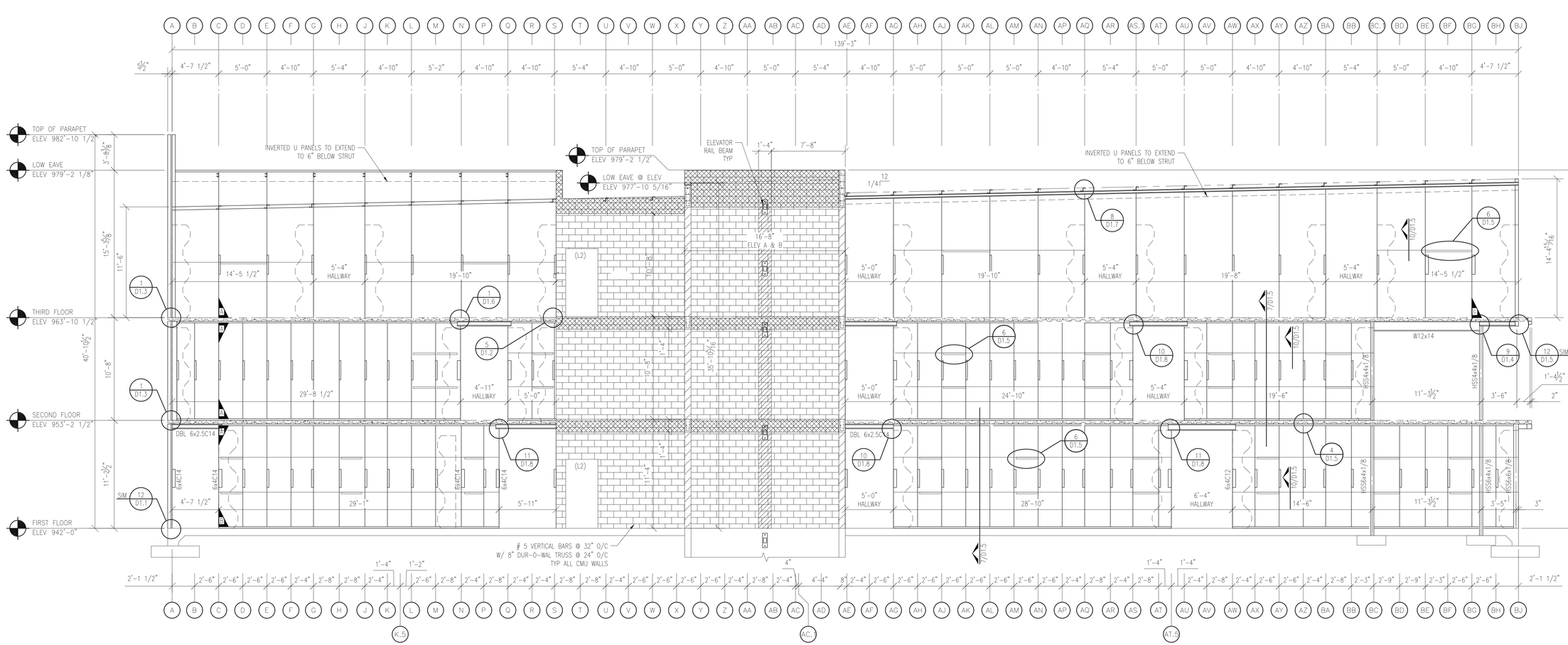
LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING ELEVATIONS

SHEET NO.
S7.1



FRAMING ELEVATION @ COLUMN LINE 4

(LOOKING WEST)

DENOTES THE LOCATION OF BOND BEAM (BOND BEAMS ARE CONTINUOUS AROUND STAIR)

DENOTES THE LOCATION OF GROUT FILLED CELLS FOR ELEVATOR RAIL BEAM

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL

-2ND. FLOOR COLUMN 4x2.0C16
-2ND. FLOOR HALLWAY COLUMN 4x4C14
-2ND. FLOOR BASE TRACK -2x4-1/8x2x16ga.
-2ND. FLOOR TOP TRACK -2x4-1/8x3x1x12ga. - (TT5)
-2ND. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT) CONTINUOUS DO NOT BREAK
-2ND. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-2ND. FLOOR HALLWAY HEADER DBL 6x2.5C14 (U.N.O.)

-1ST. FLOOR COLUMN 6x2.5C16
-1ST. FLOOR HALLWAY COLUMN 6x4C14
-1ST. FLOOR BASE TRACK -2x6-1/8x2x16ga.
-1ST. FLOOR TOP TRACK -2x6-1/8x3x1x12ga.- (TT6)
-1ST. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT)CONTINUOUS DO NOT BREAK
-1ST. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-1ST. FLOOR HALLWAY HEADER DBL 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

DENOTES THE LOCATION OF BEARING WALL SHEATHING. ALL BEARING WALL SHEATHING IS USED AS SHEAR WALLS FOR LATERAL BRACING OF THE STRUCTURE. BEARING WALL SHEATHING SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.

DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 7/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 9/D1.8

ERECTION NOTES:

1) SEE DETAIL 2/D1.5 COMPOSITE DECK DETAIL
2) SEE DETAILS 1/D1.5 & 3/D1.6 FOR TYPICAL DECK ATTACHMENT DETAILS.
3) SEE DETAIL 1/D1.1 FOR PARTITION PANEL ATTACHMENT DETAIL.
4) SEE DETAIL 7/D1.3 FOR 1ST AND 2ND FLOOR BOTTOM TRACK SPLICE.
5) SEE DETAIL 6/D1.3 FOR 1ST AND 2ND FLOOR TOP TRACK SPLICE.
6) TOP TRACK SHALL BE CONTINUOUS ACROSS ALL HEADERS. IF THE TRACK IS NOT CONTINUOUS ACROSS HEADER, THE HEADER MUST BE STITCHED TO METAL DECK PER DETAIL 8/D1.6.
7) SEE DETAIL 3/D1.9 FOR TYPICAL W-BEAM SHEAR PLATE CONNECTIONS.

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PROFESSIONAL ENGINEER

Johnathan Green
cn=Johnathan Green, o=US, ou=Force Engineering & Testing, Inc., email=jgreen@forceengineeringtesting.com
I am approving this document
2021.12.15 02:44:39 -06'00'

LAKEWOOD STORAGE

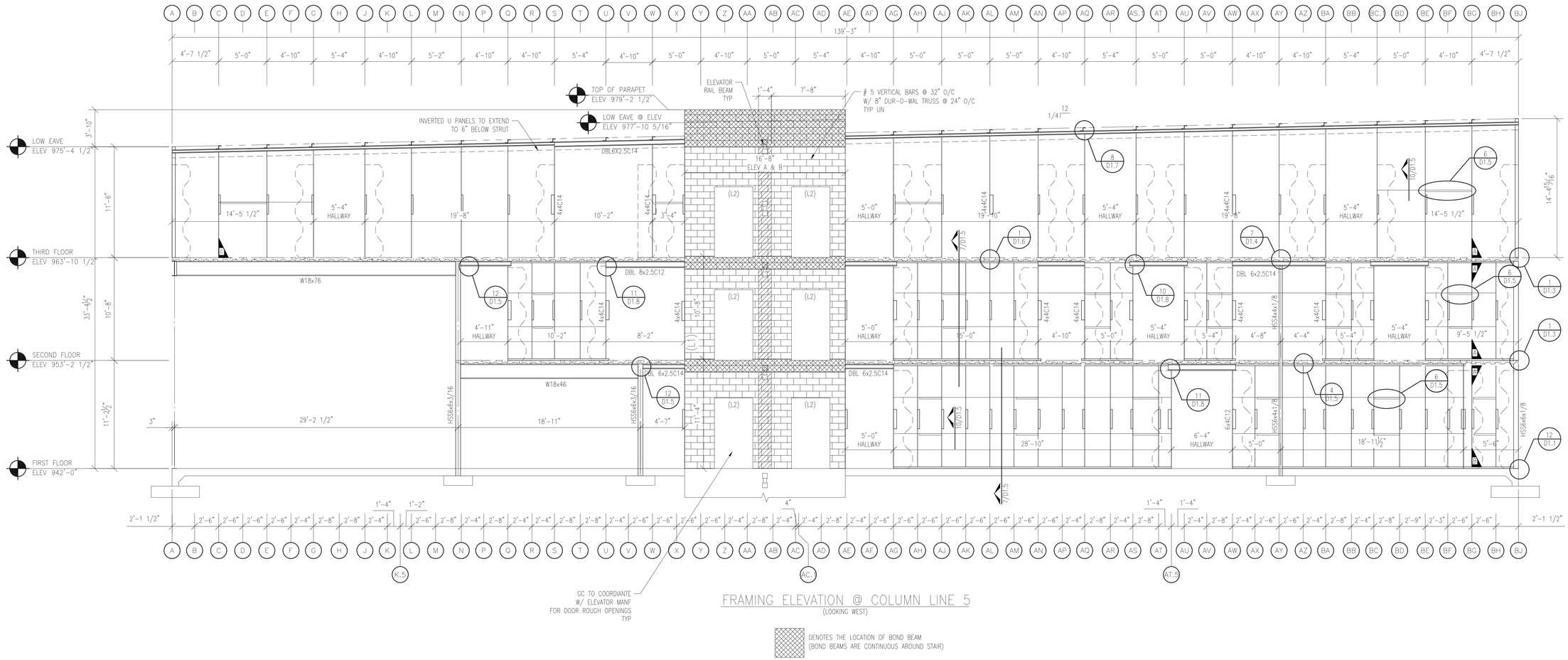
NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING ELEVATIONS

SHEET NO.

S7.2



FRAMING ELEVATION @ COLUMN LINE 5
(LOOKING WEST)

DENOTES THE LOCATION OF BOND BEAM
(BOND BEAMS ARE CONTINUOUS AROUND STAIR)

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL

-2ND. FLOOR COLUMN 4x2.0C16
-2ND. FLOOR HALLWAY COLUMN 4x4C14
-2ND. FLOOR BASE TRACK -2x4-1/8x2x16ga.
-2ND. FLOOR TOP TRACK -2x4-1/8x3x1x12ga. - (TT5)
-2ND. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT) CONTINUOUS DO NOT BREAK
-2ND. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-2ND. FLOOR HALLWAY HEADER DBL 6x2.5C14 (U.N.O.)

-1ST. FLOOR COLUMN 6x2.5C16
-1ST. FLOOR HALLWAY COLUMN 6x4C14
-1ST. FLOOR BASE TRACK -2x6-1/8x2x16ga.
-1ST. FLOOR TOP TRACK -2x6-1/8x3x1x12ga.- (TT6)
-1ST. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT)CONTINUOUS DO NOT BREAK
-1ST. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-1ST. FLOOR HALLWAY HEADER DBL 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

DENOTES THE LOCATION OF BEARING WALL SHEATHING. ALL BEARING WALL SHEATHING IS USED AS SHEAR WALLS FOR LATERAL BRACING OF THE STRUCTURE. BEARING WALL SHEATHING SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.

DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 7/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 9/D1.8

ERECTION NOTES:

1) SEE DETAIL 2/D1.5 COMPOSITE DECK DETAIL
2) SEE DETAILS 1/D1.5 & 3/D1.6 FOR TYPICAL DECK ATTACHMENT DETAILS.
3) SEE DETAIL 1/D1.1 FOR PARTITION PANEL ATTACHMENT DETAIL.
4) SEE DETAIL 7/D1.3 FOR 1ST AND 2ND FLOOR BOTTOM TRACK SPLICE.
5) SEE DETAIL 6/D1.3 FOR 1ST AND 2ND FLOOR TOP TRACK SPLICE.
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7) SEE DETAIL 3/D1.9 FOR TYPICAL W-BEAM SHEAR PLATE CONNECTIONS.

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I am approving this document
2021.12.15 02:44:22 -06'00'

LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
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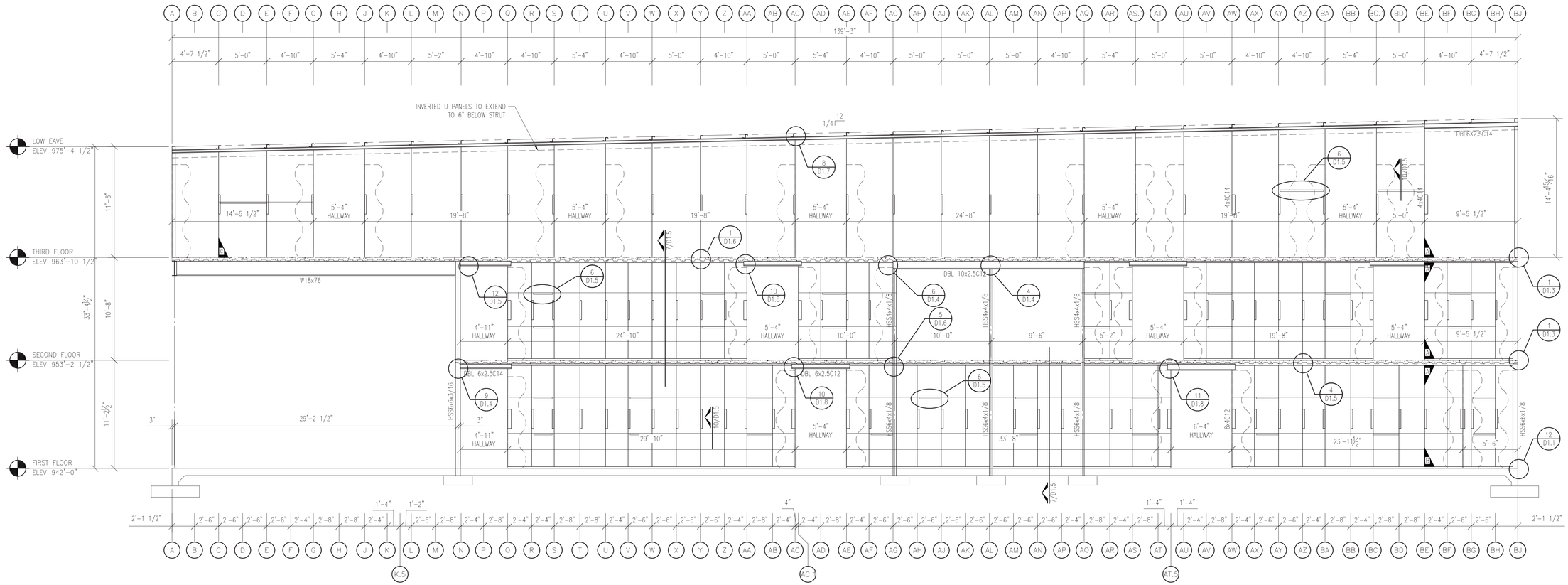
REVISIONS:

FRAMING ELEVATIONS

SHEET NO.

S7.3



MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL

-2ND. FLOOR COLUMN 4x2.0C16
-2ND. FLOOR HALLWAY COLUMN 4x4C14
-2ND. FLOOR BASE TRACK -2x4-1/8x2x16ga.
-2ND. FLOOR TOP TRACK -2x4-1/8x3x1x12ga. - (TT5)
-2ND. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT) CONTINUOUS DO NOT BREAK
-2ND. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-2ND. FLOOR HALLWAY HEADER DBL 6x2.5C14 (U.N.O.)

-1ST. FLOOR COLUMN 6x2.5C16
-1ST. FLOOR HALLWAY COLUMN 6x4C14
-1ST. FLOOR BASE TRACK -2x6-1/8x2x16ga.
-1ST. FLOOR TOP TRACK -2x6-1/8x3x1x12ga.- (TT6)
-1ST. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT)CONTINUOUS DO NOT BREAK
-1ST. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-1ST. FLOOR HALLWAY HEADER DBL 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

DENOTES THE LOCATION OF BEARING WALL SHEATHING. ALL BEARING WALL SHEATHING IS USED AS SHEAR WALLS FOR LATERAL BRACING OF THE STRUCTURE. BEARING WALL SHEATHING SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.

DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 7/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 9/D1.8

ERECTION NOTES:
1) SEE DETAIL 2/D1.5 COMPOSITE DECK DETAIL
2) SEE DETAILS 1/D1.5 & 3/D1.6 FOR TYPICAL DECK ATTACHMENT DETAILS.
3) SEE DETAIL 1/D1.1 FOR PARTITION PANEL ATTACHMENT DETAIL.
4) SEE DETAIL 7/D1.3 FOR 1ST AND 2ND FLOOR BOTTOM TRACK SPLICE.
5) SEE DETAIL 6/D1.3 FOR 1ST AND 2ND FLOOR TOP TRACK SPLICE.
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7) SEE DETAIL 3/D1.9 FOR TYPICAL W-BEAM SHEAR PLATE CONNECTIONS.

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LAKEWOOD STORAGE

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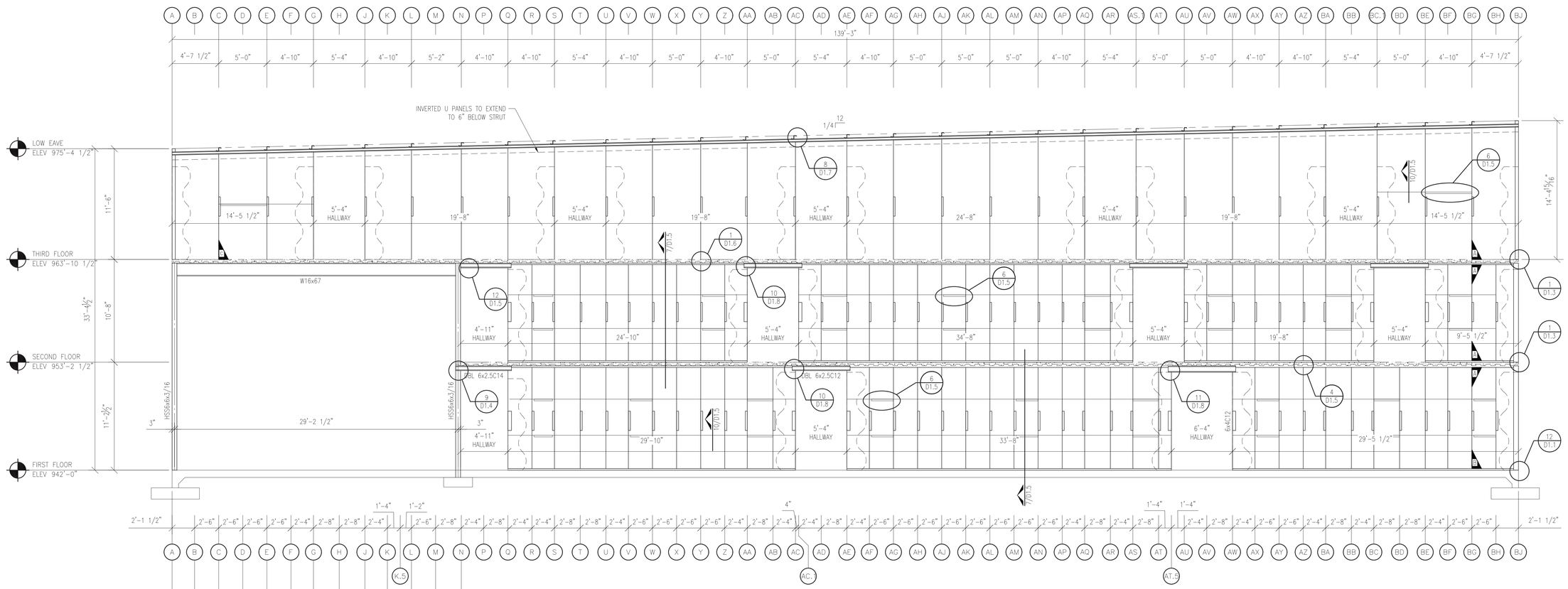
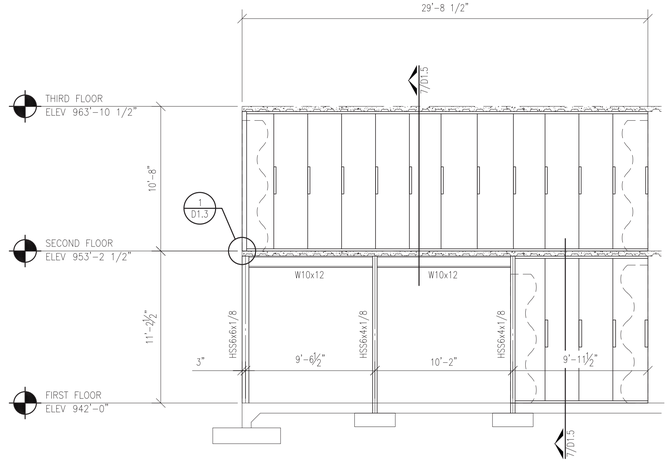
FRAMING ELEVATIONS

SHEET NO.
S7.4



FRAMING ELEVATION @ COLUMN LINE 7
(LOOKING WEST)



FRAMING ELEVATION @ COLUMN LINE 7.5
(LOOKING WEST)

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL

-2ND. FLOOR COLUMN 4x2.0C16
-2ND. FLOOR HALLWAY COLUMN 4x4C14
-2ND. FLOOR BASE TRACK -2x4-1/8x2x16ga.
-2ND. FLOOR TOP TRACK -2x4-1/8x3x1x12ga. - (TT5)
-2ND. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT) CONTINUOUS DO NOT BREAK
-2ND. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-2ND. FLOOR HALLWAY HEADER DBL 6x2.5C14 (U.N.O.)

-1ST. FLOOR COLUMN 6x2.5C16
-1ST. FLOOR HALLWAY COLUMN 6x4C14
-1ST. FLOOR BASE TRACK -2x6-1/8x2x16ga.
-1ST. FLOOR TOP TRACK -2x6-1/8x3x1x12ga.- (TT6)
-1ST. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT)CONTINUOUS DO NOT BREAK
-1ST. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-1ST. FLOOR HALLWAY HEADER DBL 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

DENOTES THE LOCATION OF BEARING WALL SHEATHING. ALL BEARING WALL SHEATHING IS USED AS SHEAR WALLS FOR LATERAL BRACING OF THE STRUCTURE. BEARING WALL SHEATHING SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.

DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 7/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 9/D1.8

ERECTION NOTES:
1) SEE DETAIL 2/D1.5 COMPOSITE DECK DETAIL
2) SEE DETAILS 1/D1.5 & 3/D1.6 FOR TYPICAL DECK ATTACHMENT DETAILS.
3) SEE DETAIL 1/D1.1 FOR PARTITION PANEL ATTACHMENT DETAIL.
4) SEE DETAIL 7/D1.3 FOR 1ST AND 2ND FLOOR BOTTOM TRACK SPLICE.
5) SEE DETAIL 6/D1.3 FOR 1ST AND 2ND FLOOR TOP TRACK SPLICE.
6) TOP TRACK SHALL BE CONTINUOUS ACROSS ALL HEADERS. IF THE TRACK IS NOT CONTINUOUS ACROSS HEADER, THE HEADER MUST BE STITCHED TO METAL DECK PER DETAIL 8/D1.6.
7) SEE DETAIL 3/D1.9 FOR TYPICAL W-BEAM SHEAR PLATE CONNECTIONS.

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
See Comment Resolutions
03/18/2022

Force Engineering & Testing Inc.
19530 RAMBLEWOOD DRIVE HUMBLE, TX 77338
(281) 540-6603 Fax: (281) 540-9966

STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
DN: cn=Johnathan Green, o=US, ou=Force Engineering and Testing, email=jgreen@forceengineeringtesting.com
Reason: I am the author of this document
2021-12-15 10:43:41 -06'00'

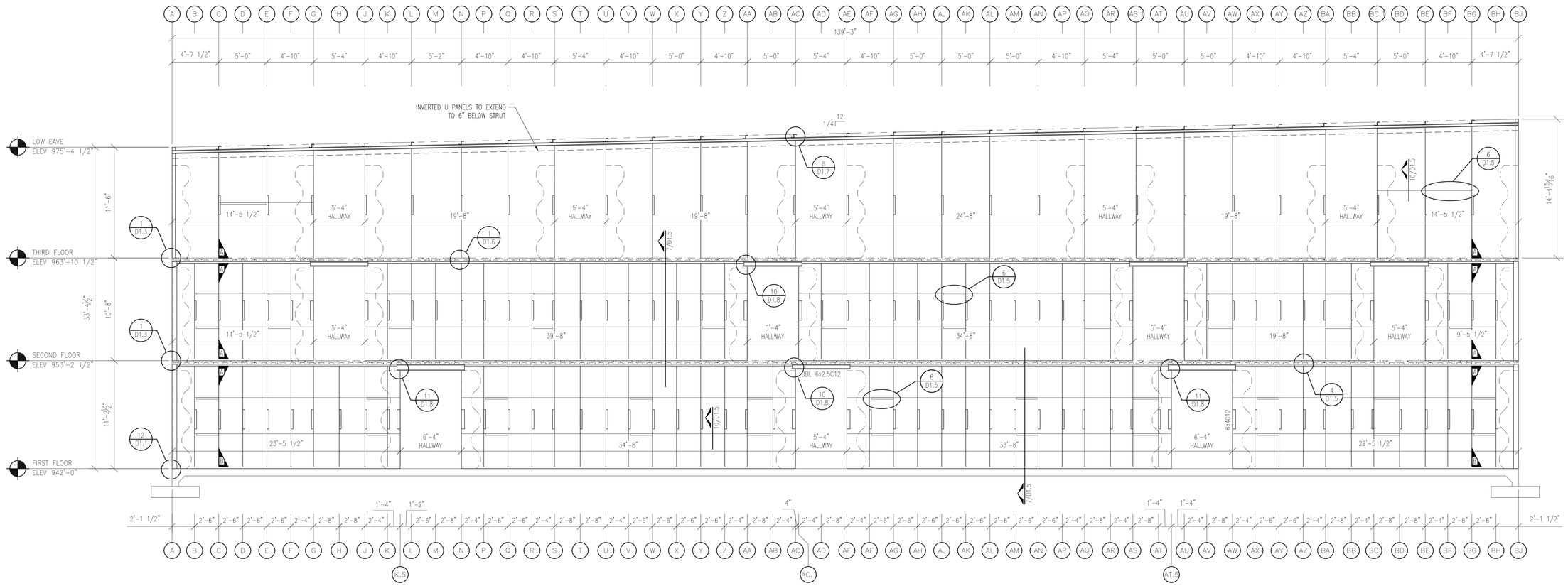
LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING ELEVATIONS

SHEET NO.
S7.5



FRAMING ELEVATION @ COLUMN LINE 8
(LOOKING WEST)

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL

-2ND. FLOOR COLUMN 4x2.0C16
-2ND. FLOOR HALLWAY COLUMN 4x4C14
-2ND. FLOOR BASE TRACK -2x4-1/8x2x16ga.
-2ND. FLOOR TOP TRACK -2x4-1/8x3x1x12ga. - (TT5)
-2ND. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT) CONTINUOUS DO NOT BREAK
-2ND. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-2ND. FLOOR HALLWAY HEADER DBL 6x2.5C14 (U.N.O.)

-1ST. FLOOR COLUMN 6x2.5C16
-1ST. FLOOR HALLWAY COLUMN 6x4C14
-1ST. FLOOR BASE TRACK -2x6-1/8x2x16ga.
-1ST. FLOOR TOP TRACK -2x6-1/8x3x1x12ga.- (TT6)
-1ST. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT)CONTINUOUS DO NOT BREAK
-1ST. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-1ST. FLOOR HALLWAY HEADER DBL 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

DENOTES THE LOCATION OF BEARING WALL SHEATHING. ALL BEARING WALL SHEATHING IS USED AS SHEAR WALLS FOR LATERAL BRACING OF THE STRUCTURE. BEARING WALL SHEATHING SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.

DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 7/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 9/D1.8

ERECTION NOTES:

1) SEE DETAIL 2/D1.5 COMPOSITE DECK DETAIL
2) SEE DETAILS 1/D1.5 & 3/D1.6 FOR TYPICAL DECK ATTACHMENT DETAILS.
3) SEE DETAIL 1/D1.1 FOR PARTITION PANEL ATTACHMENT DETAIL.
4) SEE DETAIL 7/D1.3 FOR 1ST AND 2ND FLOOR BOTTOM TRACK SPLICE.
5) SEE DETAIL 6/D1.3 FOR 1ST AND 2ND FLOOR TOP TRACK SPLICE.
6) TOP TRACK SHALL BE CONTINUOUS ACROSS ALL HEADERS. IF THE TRACK IS NOT CONTINUOUS ACROSS HEADER, THE HEADER MUST BE STITCHED TO METAL DECK PER DETAIL 8/D1.6.
7) SEE DETAIL 3/D1.9 FOR TYPICAL W-BEAM SHEAR PLATE CONNECTIONS.

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Development Services Department
Lee's Summit, Missouri
03/18/2022

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STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
dn=Johnathan Green, o=US, o=Force Engineering and Testing, e=mail=green@forceengineeringtesting.com
I am approving this document
2021.12.15 02:43:17 -06'00'

LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
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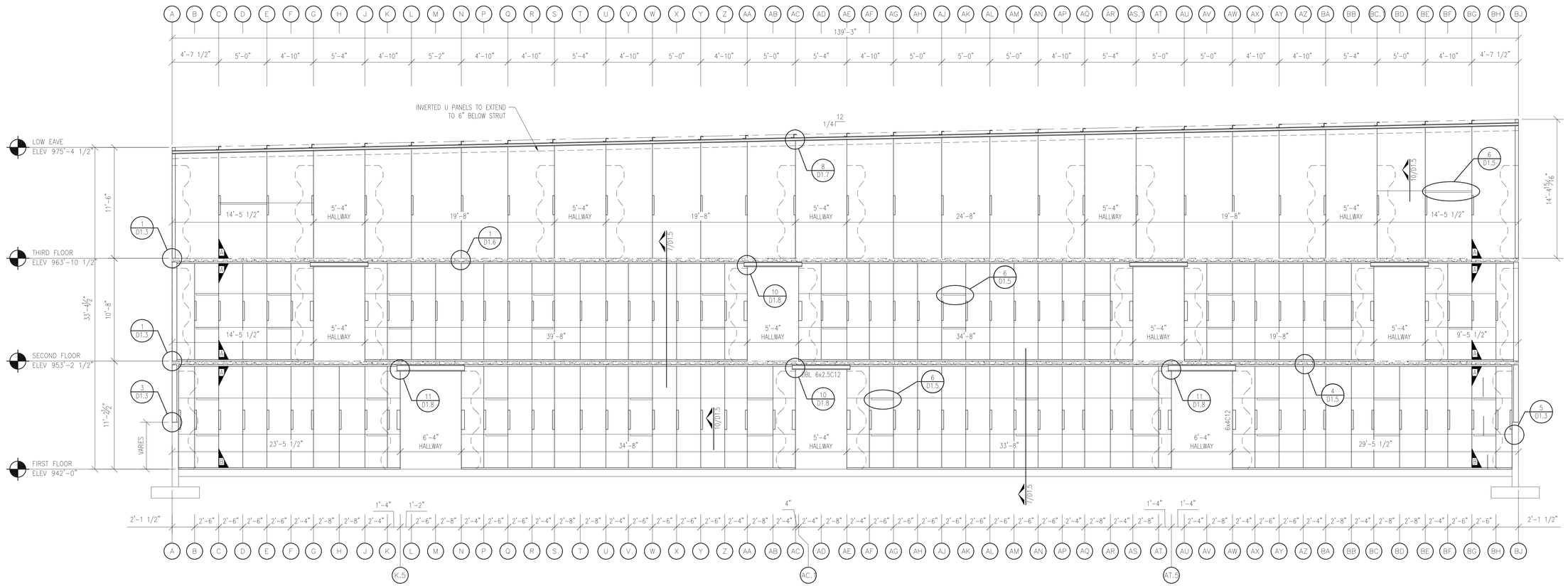
REVISIONS:

FRAMING ELEVATIONS

SHEET NO.
S7.6



FRAMING ELEVATION @ COLUMN LINES 9-19
(LOOKING WEST)

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL

-2ND. FLOOR COLUMN 4x2.0C16
-2ND. FLOOR HALLWAY COLUMN 4x4C14
-2ND. FLOOR BASE TRACK -2x4-1/8x2x16ga.
-2ND. FLOOR TOP TRACK -2x4-1/8x3x1x12ga. - (TT5)
-2ND. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT) CONTINUOUS DO NOT BREAK
-2ND. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-2ND. FLOOR HALLWAY HEADER DBL 6x2.5C14 (U.N.O.)

-1ST. FLOOR COLUMN 6x2.5C16
-1ST. FLOOR HALLWAY COLUMN 6x4C14
-1ST. FLOOR BASE TRACK -2x6-1/8x2x16ga.
-1ST. FLOOR TOP TRACK -2x6-1/8x3x1x12ga.- (TT6)
-1ST. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT)CONTINUOUS DO NOT BREAK
-1ST. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-1ST. FLOOR HALLWAY HEADER DBL 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

DENOTES THE LOCATION OF BEARING WALL SHEATHING. ALL BEARING WALL SHEATHING IS USED AS SHEAR WALLS FOR LATERAL BRACING OF THE STRUCTURE. BEARING WALL SHEATHING SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.

DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 7/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 9/D1.8

ERECTION NOTES:
1) SEE DETAIL 2/D1.5 COMPOSITE DECK DETAIL
2) SEE DETAILS 1/D1.5 & 3/D1.6 FOR TYPICAL DECK ATTACHMENT DETAILS.
3) SEE DETAIL 1/D1.1 FOR PARTITION PANEL ATTACHMENT DETAIL.
4) SEE DETAIL 7/D1.3 FOR 1ST AND 2ND FLOOR BOTTOM TRACK SPLICE.
5) SEE DETAIL 6/D1.3 FOR 1ST AND 2ND FLOOR TOP TRACK SPLICE.
6) TOP TRACK SHALL BE CONTINUOUS ACROSS ALL HEADERS. IF THE TRACK IS NOT CONTINUOUS ACROSS HEADER, THE HEADER MUST BE STITCHED TO METAL DECK PER DETAIL 8/D1.6.
7) SEE DETAIL 3/D1.9 FOR TYPICAL W-BEAM SHEAR PLATE CONNECTIONS.

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PROFESSIONAL ENGINEER

Johnathan Green
dn=Johnathan Green, o=US, ou=Force Engineering & Testing Inc, e=johngreen@forceengineeringtesting.com
I am approving this document
2021.12.15 12:42:58 -06'00'

LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
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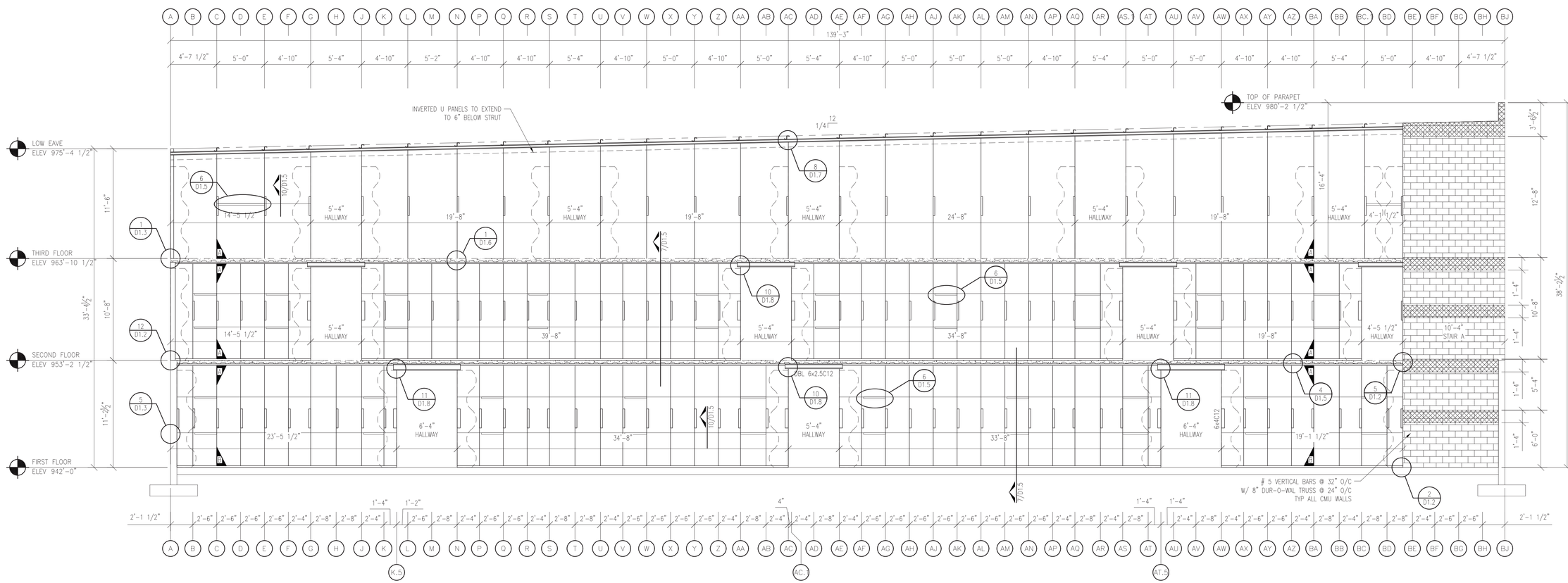
REVISIONS:

FRAMING ELEVATIONS

SHEET NO.
S7.7



FRAMING ELEVATION @ COLUMN LINE 20 & 22

(LOOKING WEST)

DENOTES THE LOCATION OF BOND BEAM
(BOND BEAMS ARE CONTINUOUS AROUND STAIR)

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL

-2ND. FLOOR COLUMN 4x2.0C16
-2ND. FLOOR HALLWAY COLUMN 4x4C14
-2ND. FLOOR BASE TRACK -2x4-1/8x2x16ga.
-2ND. FLOOR TOP TRACK -2x4-1/8x3x1x12ga. - (TT5)
-2ND. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT) CONTINUOUS DO NOT BREAK
-2ND. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-2ND. FLOOR HALLWAY HEADER DBL 6x2.5C14 (U.N.O.)

-1ST. FLOOR COLUMN 6x2.5C16
-1ST. FLOOR HALLWAY COLUMN 6x4C14
-1ST. FLOOR BASE TRACK -2x6-1/8x2x16ga.
-1ST. FLOOR TOP TRACK -2x6-1/8x3x1x12ga.- (TT6)
-1ST. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT)CONTINUOUS DO NOT BREAK
-1ST. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-1ST. FLOOR HALLWAY HEADER DBL 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

DENOTES THE LOCATION OF BEARING WALL SHEATHING. ALL BEARING WALL SHEATHING IS USED AS SHEAR WALLS FOR LATERAL BRACING OF THE STRUCTURE. BEARING WALL SHEATHING SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.

DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 7/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 9/D1.8

ERECTION NOTES:

1) SEE DETAIL 2/D1.5 COMPOSITE DECK DETAIL
2) SEE DETAILS 1/D1.5 & 3/D1.6 FOR TYPICAL DECK ATTACHMENT DETAILS.
3) SEE DETAIL 1/D1.1 FOR PARTITION PANEL ATTACHMENT DETAIL.
4) SEE DETAIL 7/D1.3 FOR 1ST AND 2ND FLOOR BOTTOM TRACK SPLICE.
5) SEE DETAIL 6/D1.3 FOR 1ST AND 2ND FLOOR TOP TRACK SPLICE.
6) TOP TRACK SHALL BE CONTINUOUS ACROSS ALL HEADERS. IF THE TRACK IS NOT CONTINUOUS ACROSS HEADER, THE HEADER MUST BE STITCHED TO METAL DECK PER DETAIL 8/D1.6.
7) SEE DETAIL 3/D1.9 FOR TYPICAL W-BEAM SHEAR PLATE CONNECTIONS.

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STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
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LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
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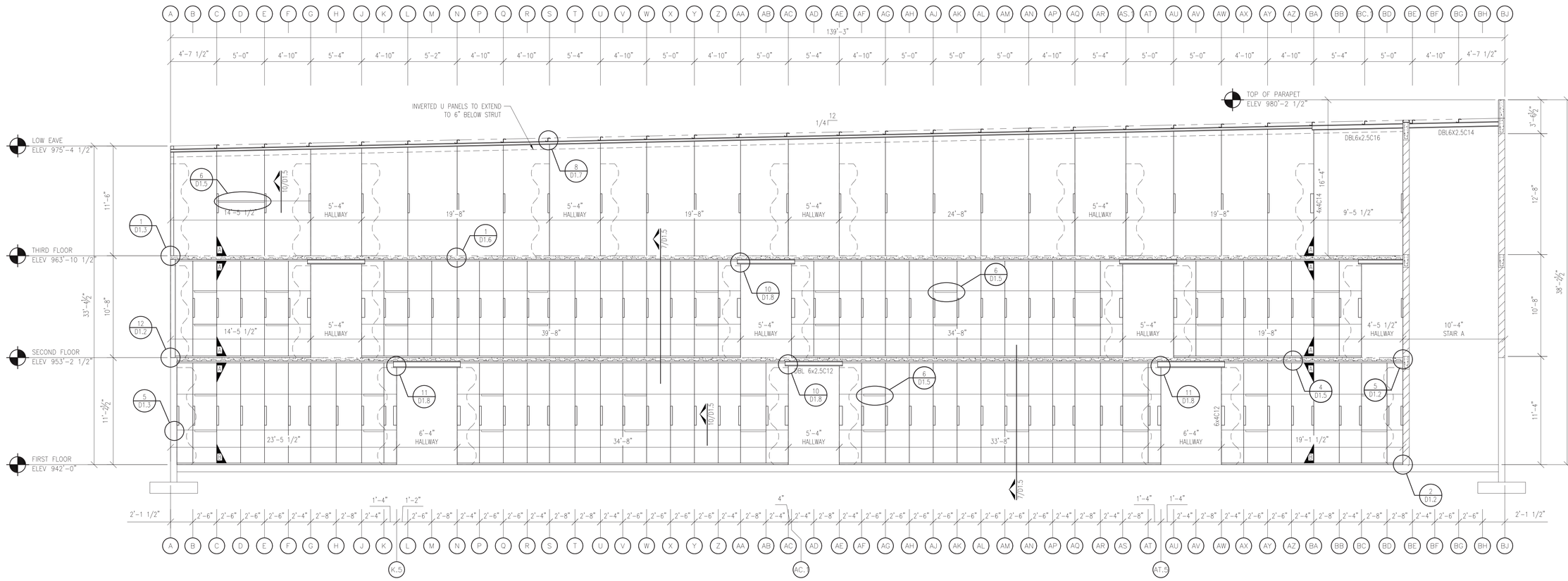
REVISIONS:

FRAMING ELEVATIONS

SHEET NO.
S7.8



FRAMING ELEVATION @ COLUMN LINES 21
(LOOKING WEST)

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL

-2ND. FLOOR COLUMN 4x2.0C16
-2ND. FLOOR HALLWAY COLUMN 4x4C14
-2ND. FLOOR BASE TRACK -2x4-1/8x2x16ga.
-2ND. FLOOR TOP TRACK -2x4-1/8x3x1x12ga. - (TT5)
-2ND. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT) CONTINUOUS DO NOT BREAK
-2ND. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-2ND. FLOOR HALLWAY HEADER DBL 6x2.5C14 (U.N.O.)

-1ST. FLOOR COLUMN 6x2.5C16
-1ST. FLOOR HALLWAY COLUMN 6x4C14
-1ST. FLOOR BASE TRACK -2x6-1/8x2x16ga.
-1ST. FLOOR TOP TRACK -2x6-1/8x3x1x12ga.- (TT6)
-1ST. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT)CONTINUOUS DO NOT BREAK
-1ST. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-1ST. FLOOR HALLWAY HEADER DBL 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

DENOTES THE LOCATION OF BEARING WALL SHEATHING. ALL BEARING WALL SHEATHING IS USED AS SHEAR WALLS FOR LATERAL BRACING OF THE STRUCTURE. BEARING WALL SHEATHING SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.

DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 7/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 9/D1.8

ERECTION NOTES:
1) SEE DETAIL 2/D1.5 COMPOSITE DECK DETAIL
2) SEE DETAILS 1/D1.5 & 3/D1.6 FOR TYPICAL DECK ATTACHMENT DETAILS.
3) SEE DETAIL 1/D1.1 FOR PARTITION PANEL ATTACHMENT DETAIL.
4) SEE DETAIL 7/D1.3 FOR 1ST AND 2ND FLOOR BOTTOM TRACK SPLICE.
5) SEE DETAIL 6/D1.3 FOR 1ST AND 2ND FLOOR TOP TRACK SPLICE.
6) TOP TRACK SHALL BE CONTINUOUS ACROSS ALL HEADERS. IF THE TRACK IS NOT CONTINUOUS ACROSS HEADER, THE HEADER MUST BE STITCHED TO METAL DECK PER DETAIL 8/D1.6.
7) SEE DETAIL 3/D1.9 FOR TYPICAL W-BEAM SHEAR PLATE CONNECTIONS.

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STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
Date: 2021.10.15 12:42:21 -06'00'

LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
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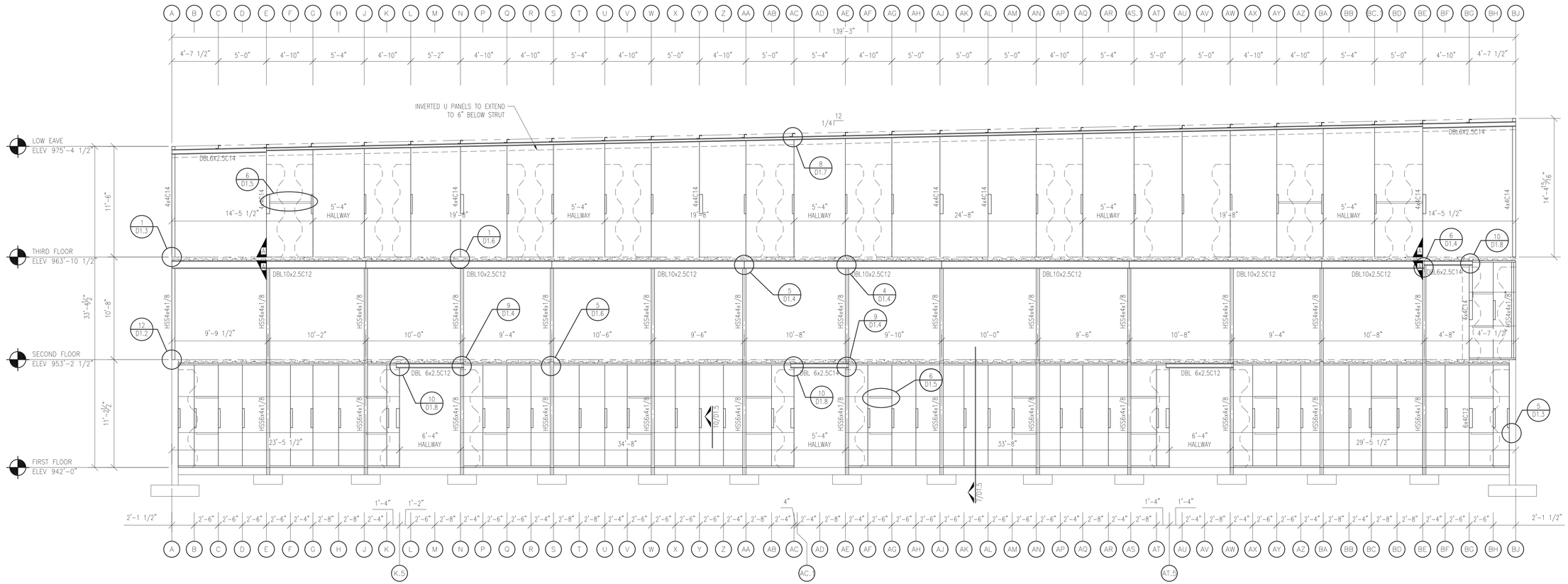
FRAMING ELEVATION

SHEET NO.
S7.9



MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL

-2ND. FLOOR COLUMN 4x2.0C16
-2ND. FLOOR HALLWAY COLUMN 4x4C14
-2ND. FLOOR BASE TRACK -2x4-1/8x2x16ga.
-2ND. FLOOR TOP TRACK -2x4-1/8x3x1x12ga. - (TT5)
-2ND. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT) CONTINUOUS DO NOT BREAK
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-2ND. FLOOR HALLWAY HEADER DBL 6x2.5C14 (U.N.O.)

-1ST. FLOOR COLUMN 6x2.5C16
-1ST. FLOOR HALLWAY COLUMN 6x4C14
-1ST. FLOOR BASE TRACK -2x6-1/8x2x16ga.
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-1ST. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-1ST. FLOOR HALLWAY HEADER DBL 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

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DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 7/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 9/D1.8

ERECTION NOTES:
1) SEE DETAIL 2/D1.5 COMPOSITE DECK DETAIL
2) SEE DETAILS 1/D1.5 & 3/D1.6 FOR TYPICAL DECK ATTACHMENT DETAILS.
3) SEE DETAIL 1/D1.1 FOR PARTITION PANEL ATTACHMENT DETAIL.
4) SEE DETAIL 7/D1.3 FOR 1ST AND 2ND FLOOR BOTTOM TRACK SPLICE.
5) SEE DETAIL 6/D1.3 FOR 1ST AND 2ND FLOOR TOP TRACK SPLICE.
6) TOP TRACK SHALL BE CONTINUOUS ACROSS ALL HEADERS. IF THE TRACK IS NOT CONTINUOUS ACROSS HEADER, THE HEADER MUST BE STITCHED TO METAL DECK PER DETAIL 8/D1.6.
7) SEE DETAIL 3/D1.9 FOR TYPICAL W-BEAM SHEAR PLATE CONNECTIONS.

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Johnathan Green
Date: 2021.12.15 10:42:01 -06'00'

LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

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FRAMING ELEVATION

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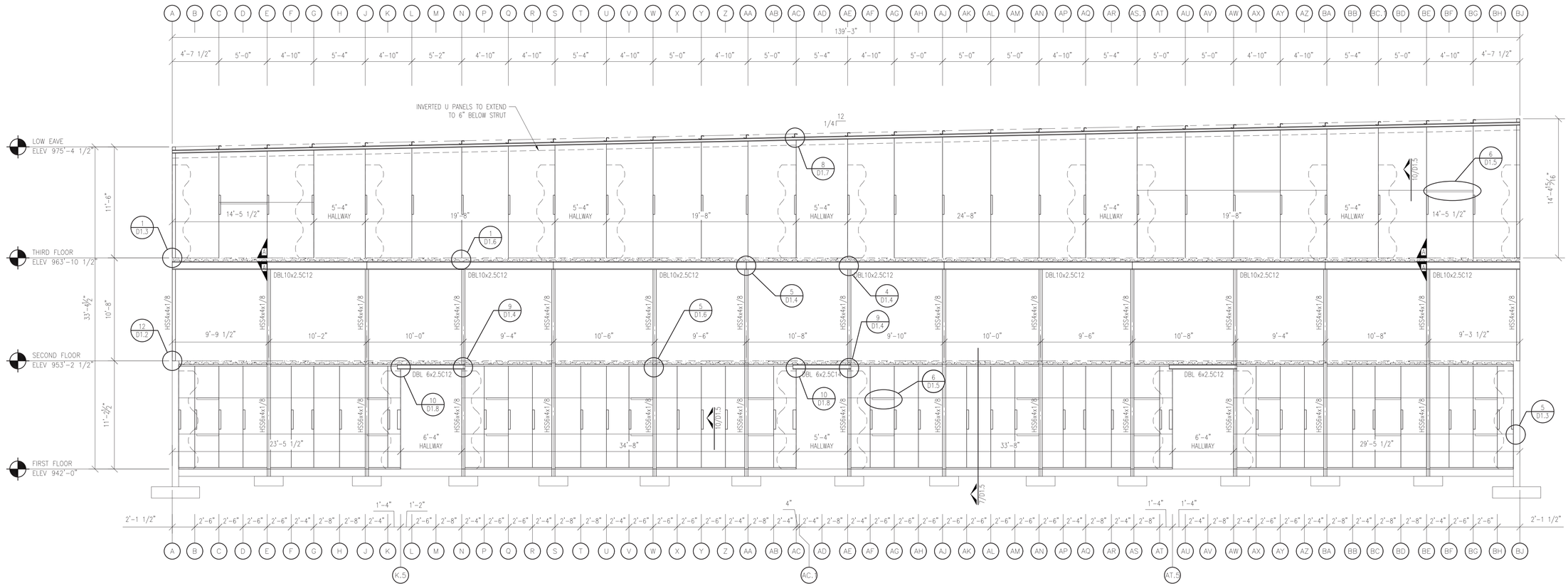

FRAMING ELEVATION @ COLUMN LINES 24 & 26

(LOOKING WEST)

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL

-2ND. FLOOR COLUMN 4x2.0C16
-2ND. FLOOR HALLWAY COLUMN 4x4C14
-2ND. FLOOR BASE TRACK -2x4-1/8x2x16ga.
-2ND. FLOOR TOP TRACK -2x4-1/8x3x1x12ga. - (TT5)
-2ND. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT) CONTINUOUS DO NOT BREAK
-2ND. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-2ND. FLOOR HALLWAY HEADER DBL 6x2.5C14 (U.N.O.)

-1ST. FLOOR COLUMN 6x2.5C16
-1ST. FLOOR HALLWAY COLUMN 6x4C14
-1ST. FLOOR BASE TRACK -2x6-1/8x2x16ga.
-1ST. FLOOR TOP TRACK -2x6-1/8x3x1x12ga.- (TT6)
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-1ST. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-1ST. FLOOR HALLWAY HEADER DBL 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

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DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 7/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 9/D1.8

ERECTION NOTES:

1) SEE DETAIL 2/D1.5 COMPOSITE DECK DETAIL
2) SEE DETAILS 1/D1.5 & 3/D1.6 FOR TYPICAL DECK ATTACHMENT DETAILS.
3) SEE DETAIL 1/D1.1 FOR PARTITION PANEL ATTACHMENT DETAIL.
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7) SEE DETAIL 3/D1.9 FOR TYPICAL W-BEAM SHEAR PLATE CONNECTIONS.

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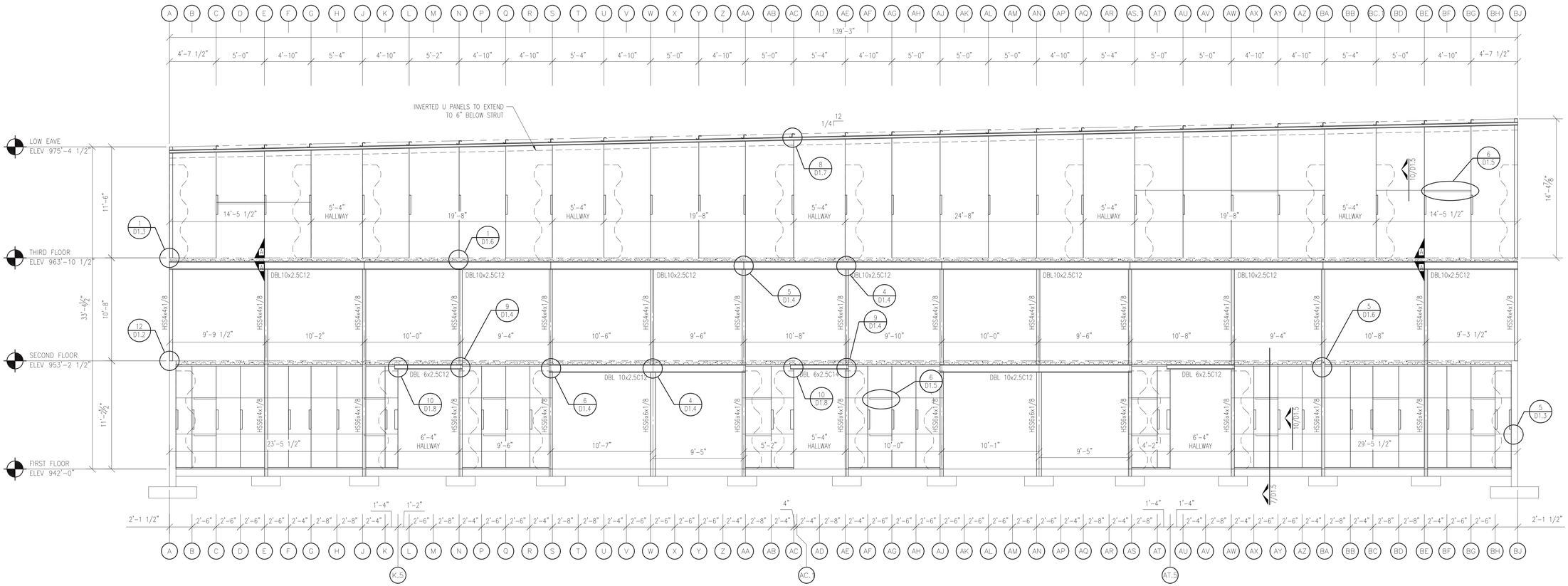
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING ELEVATION

SHEET NO.

S7.11



FRAMING ELEVATION @ COLUMN LINE 25
(LOOKING WEST)

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL

-2ND. FLOOR COLUMN 4x2.0C16
-2ND. FLOOR HALLWAY COLUMN 4x4C14
-2ND. FLOOR BASE TRACK -2x4-1/8x2x16ga.
-2ND. FLOOR TOP TRACK -2x4-1/8x3x1x12ga. - (TT5)
-2ND. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT) CONTINUOUS DO NOT BREAK
-2ND. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-2ND. FLOOR HALLWAY HEADER DBL 6x2.5C14 (U.N.O.)

-1ST. FLOOR COLUMN 6x2.5C16
-1ST. FLOOR HALLWAY COLUMN 6x4C14
-1ST. FLOOR BASE TRACK -2x6-1/8x2x16ga.
-1ST. FLOOR TOP TRACK -2x6-1/8x3x1x12ga.- (TT6)
-1ST. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT)CONTINUOUS DO NOT BREAK
-1ST. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-1ST. FLOOR HALLWAY HEADER DBL 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

DENOTES THE LOCATION OF BEARING WALL SHEATHING. ALL BEARING WALL SHEATHING IS USED AS SHEAR WALLS FOR LATERAL BRACING OF THE STRUCTURE. BEARING WALL SHEATHING SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.

DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 7/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 9/D1.8

ERECTION NOTES:
1) SEE DETAIL 2/D1.5 COMPOSITE DECK DETAIL
2) SEE DETAILS 1/D1.5 & 3/D1.6 FOR TYPICAL DECK ATTACHMENT DETAILS.
3) SEE DETAIL 1/D1.1 FOR PARTITION PANEL ATTACHMENT DETAIL.
4) SEE DETAIL 7/D1.3 FOR 1ST AND 2ND FLOOR BOTTOM TRACK SPLICE.
5) SEE DETAIL 6/D1.3 FOR 1ST AND 2ND FLOOR TOP TRACK SPLICE.
6) TOP TRACK SHALL BE CONTINUOUS ACROSS ALL HEADERS. IF THE TRACK IS NOT CONTINUOUS ACROSS HEADER, THE HEADER MUST BE STITCHED TO METAL DECK PER DETAIL 8/D1.6.
7) SEE DETAIL 3/D1.9 FOR TYPICAL W-BEAM SHEAR PLATE CONNECTIONS.

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
03/18/2022

Force Engineering & Testing, Inc.
19530 RAMBLEWOOD DRIVE HUMBLE, TX 77338
(281) 540-6603 Fax: (281) 540-9966

STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
on=Johnathan Green, ou=US, o=Force Engineering and Testing, email=jgreen@forceengineeringandtesting.com
I am approving this document
2021.12.15 12:41:17 -06'00'

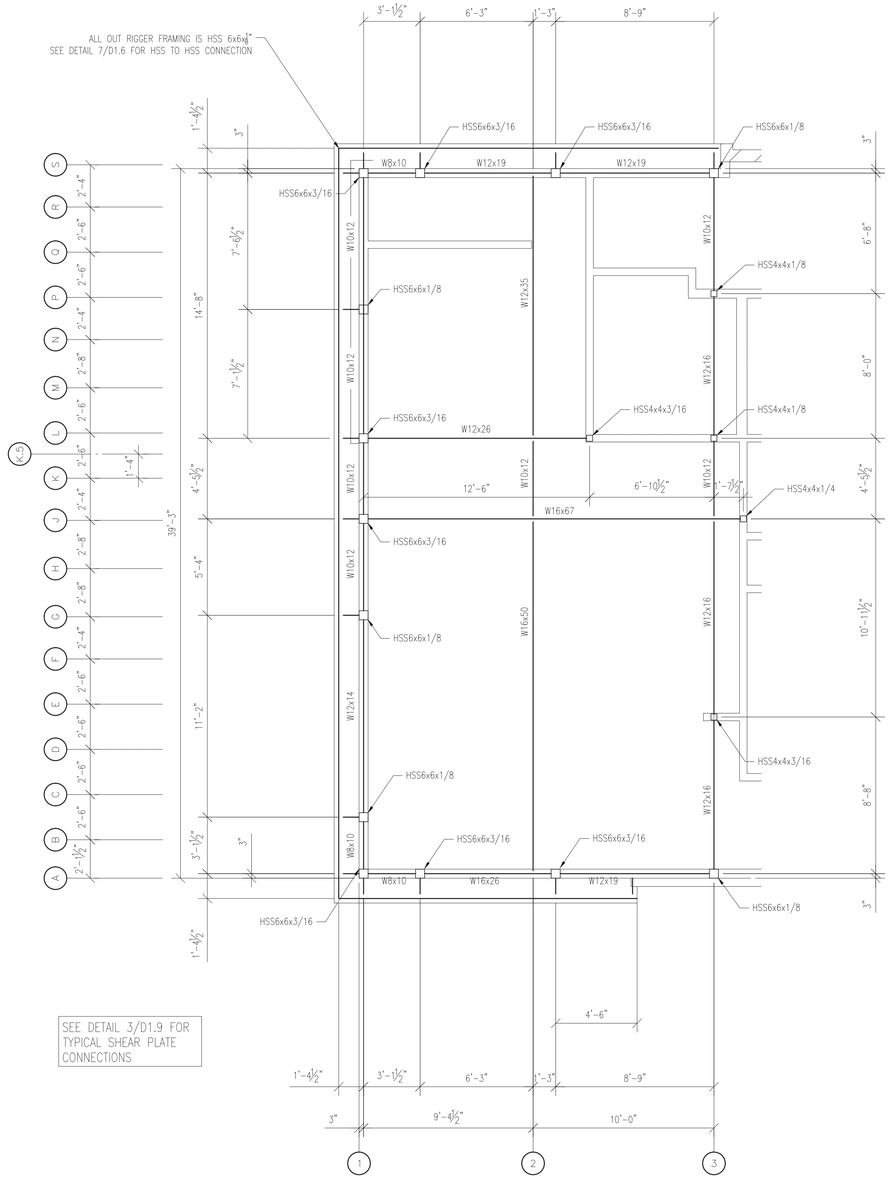
LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING ELEVATION

SHEET NO.
S7.12



2ND FLOOR FRAMING PLAN @ OFFICE
(TOS ELEV 952'-10" UNO)

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JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

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2021.12.15 02:40:42 -06'00'

LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
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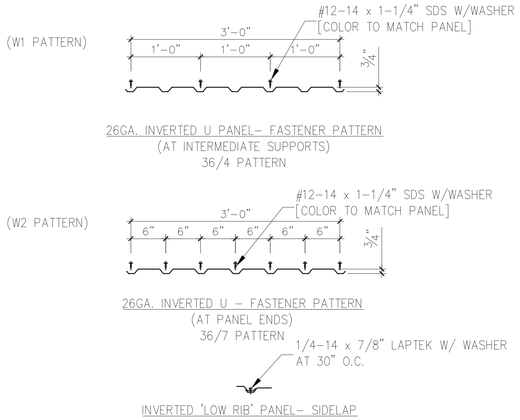
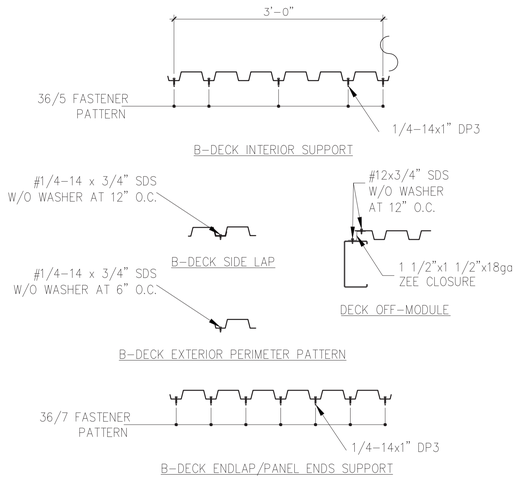
FRAMING PLANS

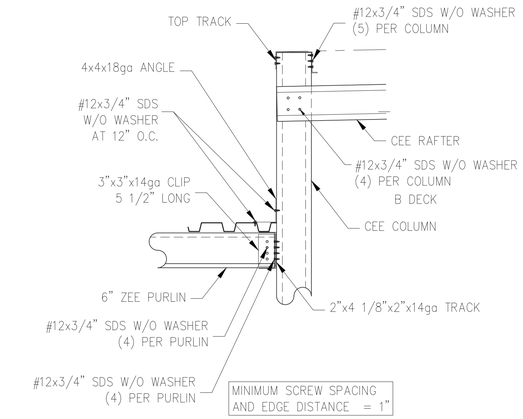
SHEET NO.
S8.1



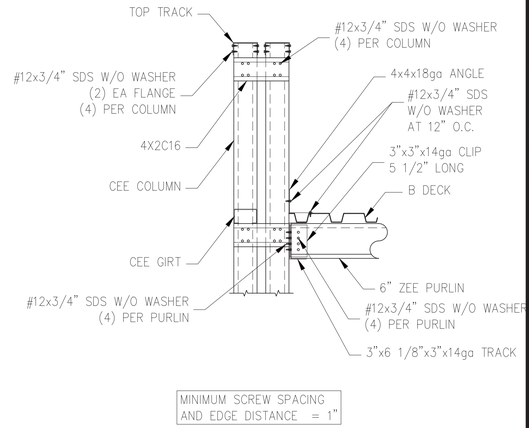
1 PARTITION PANEL ATTACHMENT
1"=1'-0"



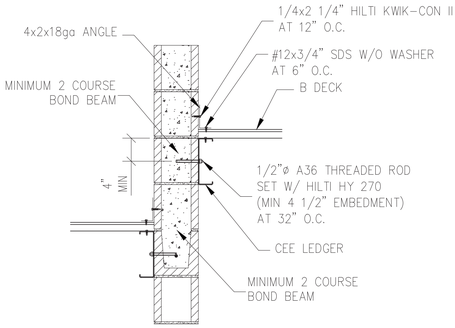
2 1.5 B-DECK ATTACHMENT
1"=1'-0"



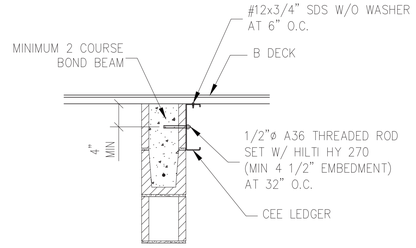
3 LOW EAVE AT UPPER ROOF
1"=1'-0"



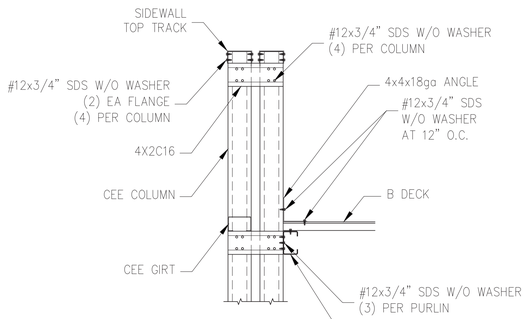
4 RAKE PARAPET
1"=1'-0"



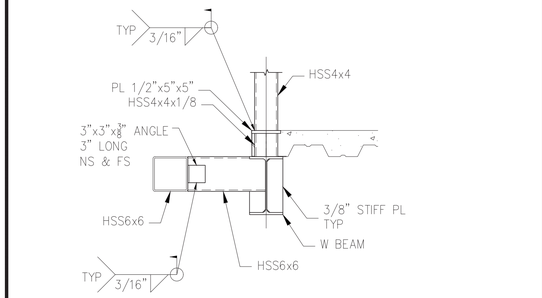
5 HIGH EAVE PARAPET AT ELEVATOR
1"=1'-0"



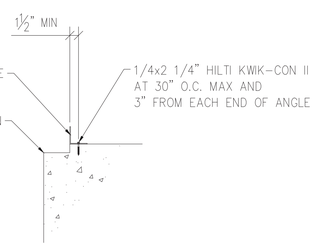
6 CEE LEDGER TO CMU WALL AT STAIR
1"=1'-0"



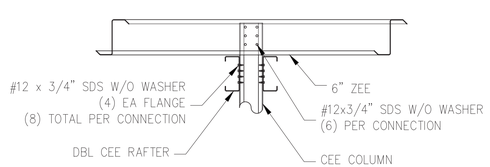
7 HIGH EAVE PARAPET
1"=1'-0"



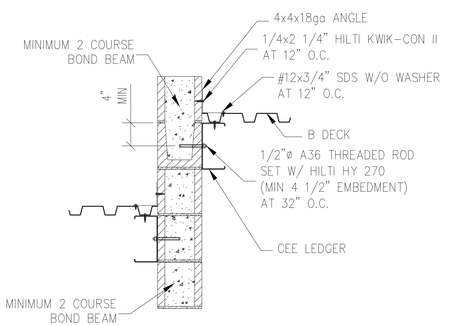
8 HSS COLUMN TO W BEAM
HSS COLUMN TO W BEAM



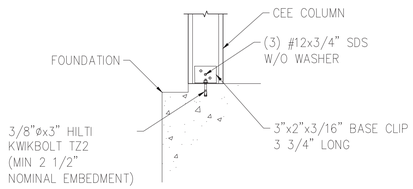
9 1ST FLOOR BASE ANGLE
1"=1'-0"



10 DBL CEE RAFTER TO COLUMN
1"=1'-0"



11 RAKE PARAPET AT ELEVATOR
1"=1'-0"



12 1ST FLOOR EXTERIOR COLUMN
1"=1'-0"

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NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
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2021.12.15 02:40:21 -06'00'

LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
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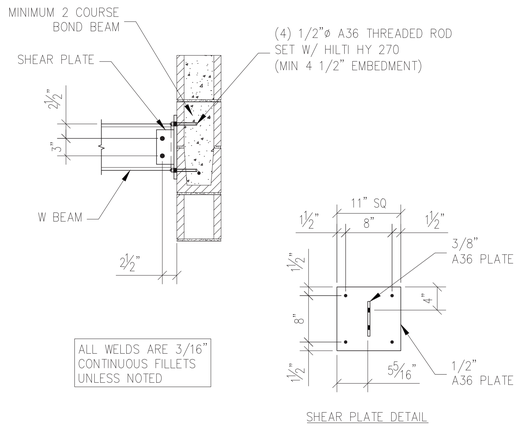
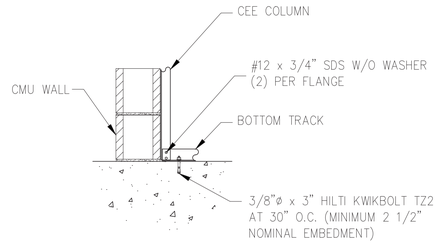
FRAMING DETAILS

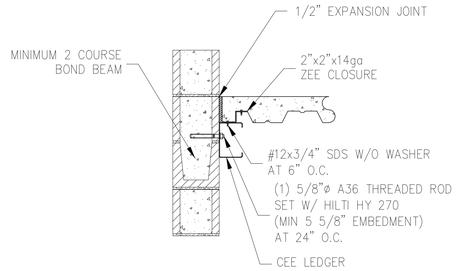
SHEET NO.
D1.1



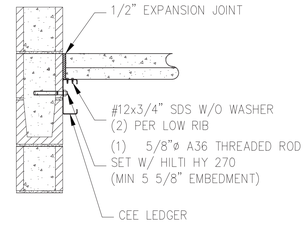
1 ELEVATOR SAFETY BEAM TO CMU
1"=1'-0"



2 1ST FLOOR BEARING WALL AT CMU
1"=1'-0"



3 CMU LEDGER PARALLEL TO DECK
1"=1'-0"



4 CMU LEDGER PERPENDICULAR TO DECK
1"=1'-0"

5 2ND & 3RD FLOOR BEARING WALL AT CMU
1"=1'-0"

6 LOW EAVE AT ELEVATOR
1"=1'-0"

7 CEE LEDGER TO CMU WALL AT HIGH EAVE PARAPET
1"=1'-0"

8 PURLIN CONNECTION TO CMU WALL AT STAIR
1"=1'-0"

9 RAFTER CONNECTION AT CMU WALL
1"=1'-0"

10 PURLIN CONNECTION TO CMU WALL AT ELEVATOR
1"=1'-0"

11 CEE LEDGER TO CMU WALL AT RAKE PARAPET
1"=1'-0"

12 2ND FLOOR EXTERIOR COLUMN AT RETAINING WALL
1"=1'-0"

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I am approving this document
2021.12.15 02:40:51 -06'00'

LAKEWOOD STORAGE

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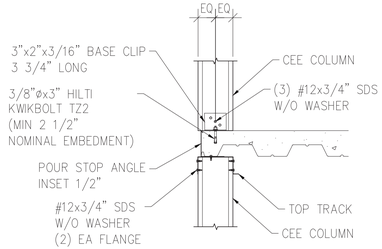
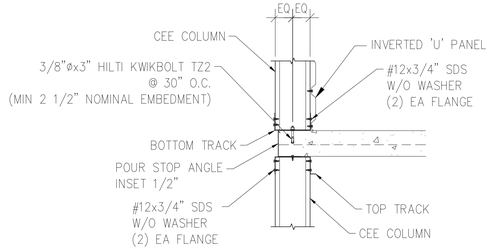
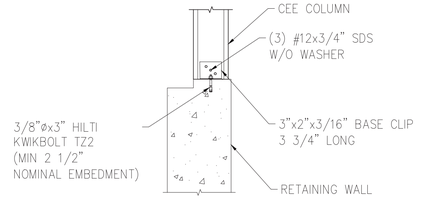
SHEET NO.
D1.2



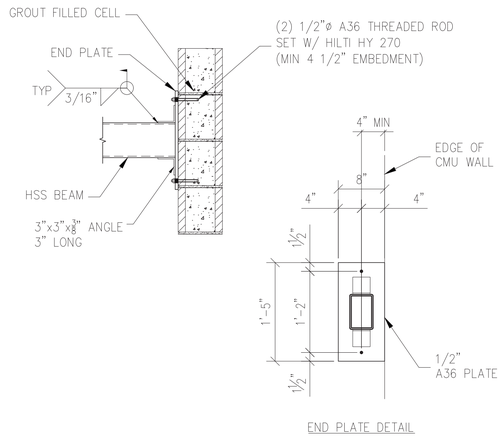
1 2ND & 3RD FLOOR AT EXTERIOR WALL (PARALELL TO DECK)
1"=1'-0"



2 2ND & 3RD FLOOR AT EXTERIOR WALL (PERP TO DECK)
1"=1'-0"

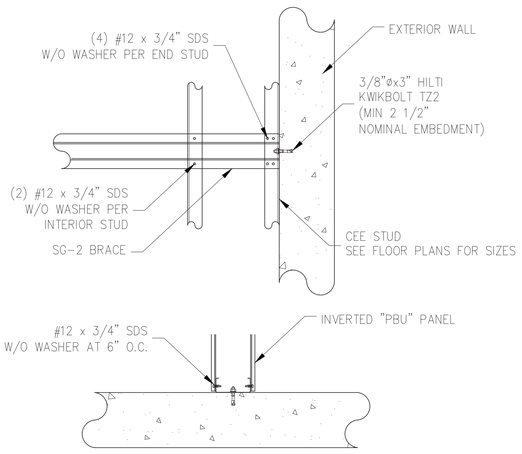


3 1ST FLOOR EXTERIOR COLUMN AT RETAINING WALL
1"=1'-0"

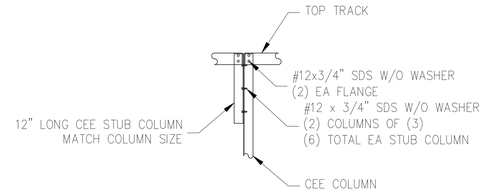


END PLATE DETAIL

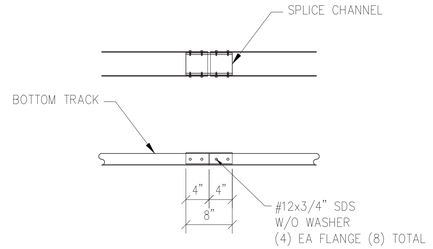
4 HSS BEAM TO CMU
1"=1'-0"



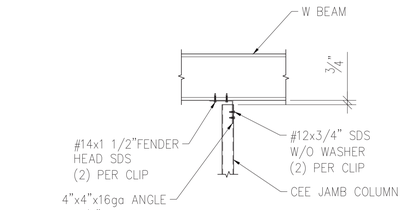
5 CEE COLUMN TO CONCRETE WALL
1"=1'-0"



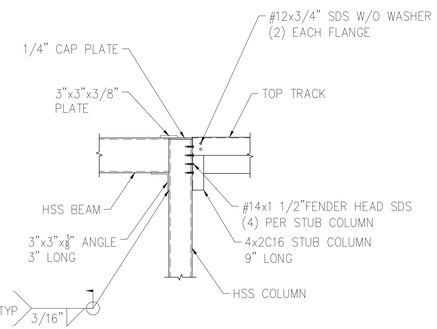
6 TOP TRACK SPLICE
1"=1'-0"



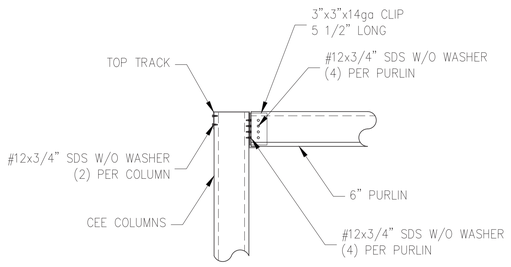
7 BOTTOM TRACK SPLICE
1"=1'-0"



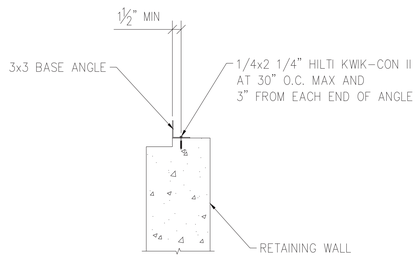
8 JAMB TO W BEAM
1"=1'-0"



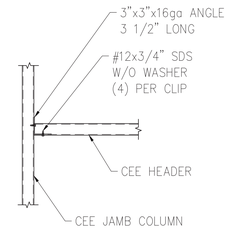
9 HSS BEAM TO HSS COLUMN
1"=1'-0"



10 RAKE
1"=1'-0"



11 BASE ANGLE AT RETAINING WALL
1"=1'-0"



12 HEADER TO JAMB
1"=1'-0"

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Johnathan Green
dn:Johnathan Green, c=US, o=Force Engineering and Testing, email=jgreen@forceengineeringtesting.com
Date: 2021.12.15 07:39:42 -06'00'

LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

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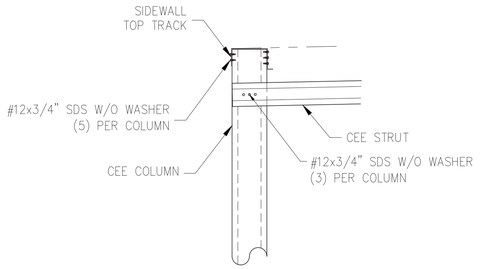
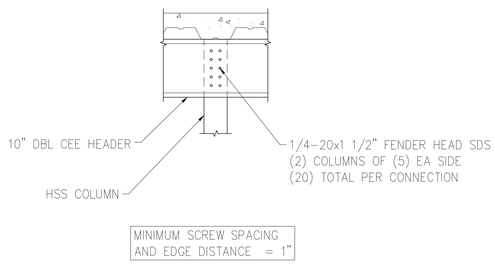
FRAMING DETAILS

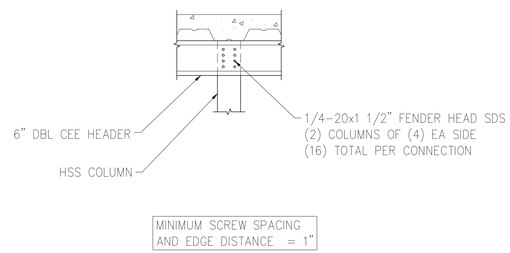
SHEET NO.
D1.3



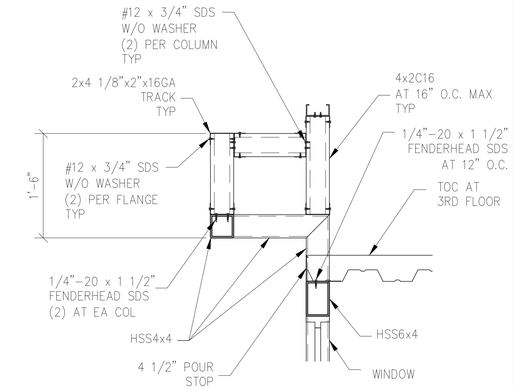
1 EAVE FRAMING
1"=1'-0"



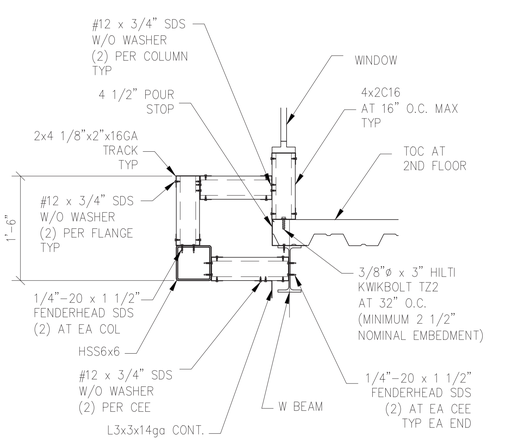
4 10" DBL CEE HEADER TO HSS COLUMN
1"=1'-0"



7 6" DOUBLE CEE HEADER TO HSS COLUMN
1"=1'-0"



10 SECTION THRU DISPLAY AREA AT 3RD FLOOR
1"=1'-0"



2 SECTION THRU DISPLAY AREA AT 2ND FLOOR
1"=1'-0"

5 10" DBL CEE HEADER TO HSS COLUMN
1"=1'-0"

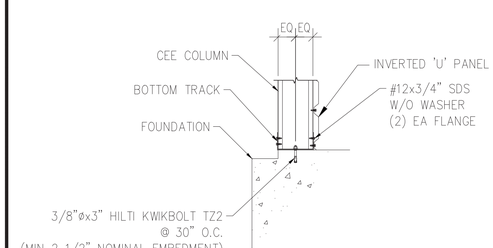
8 JAMB CONNECTION TO FOUNDATION
1"=1'-0"

11 SECTION THRU DISPLAY AREA AT 3RD FLOOR
1"=1'-0"

3 SECTION THRU DISPLAY AREA AT 2ND FLOOR
1"=1'-0"

6 10" DBL CEE HEADER TO HSS COLUMN
1"=1'-0"

9 6" DBL CEE HEADER TO HSS COLUMN
1"=1'-0"



12 1ST FLOOR AT EXTERIOR ENDWALL
1"=1'-0"

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Lee's Summit, Missouri
03/18/2022

Force Engineering & Testing Inc.
19530 RAMBLEWOOD DRIVE HUMBLE, TX 77338
(281) 540-6603 Fax: (281) 540-9966

STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
dn: cn=Johnathan Green, o=US, ou=Force Engineering and Testing, email=jgreen@forceengineeringandtesting.com
I am approving this document
2021.12.15 02:28:23 -06'00'

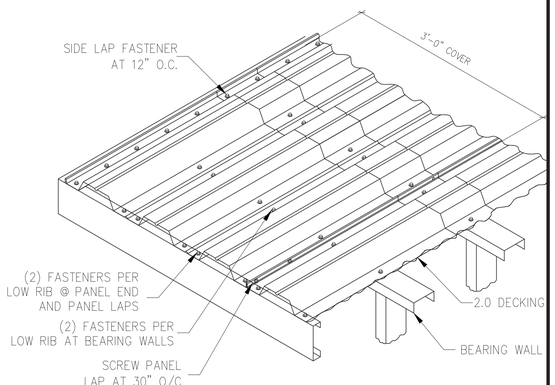
LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

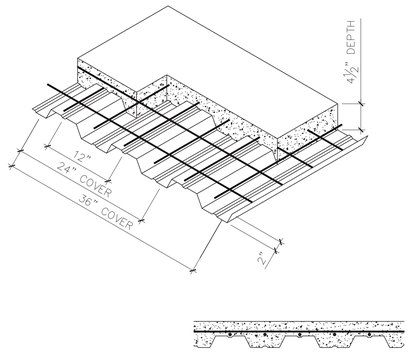
FRAMING DETAILS

SHEET NO.
D1.4



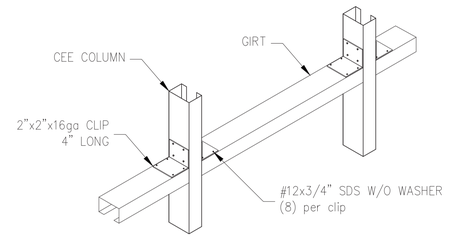
FASTENERS:
1) #12 x 3/4" SDS W/ WASHER @ GAGE STEEL
2) HILTI X-U UKS FASTENER AT 8" O.C. ALONG CONCRETE LEDGER

1 TYPICAL COMPOSITE DECK ATTACHMENT
2



DESIGN THICKNES 0.0474 FY=33 KSI 18ga G-60 COMPOSITE FLOOR DECKING
FOR 4-1/2" COMPOSITE SLAB (4000 psi CONCRETE)
REINFORCEMENT: 6X6-W1.4 x W1.4 WWR
OR EQUIVALENT STEEL FIBER REINFORCING.

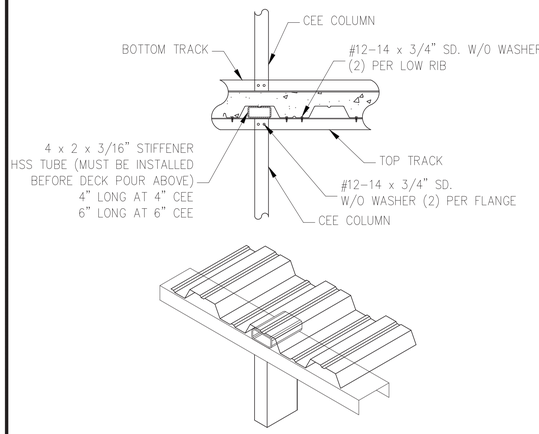
2 TYPICAL COMPOSITE SLAB DETAIL
1"=1'-0"



NOTE:
USE #14x1 1/2" FENDER HD
SDS INTO HSS MEMBERS

3 EXTERIOR WALL GIRT
1"=1'-0"

NOT REQUIRED ON TOP FLOORS.



4 DECK STIFFENER
1"=1'-0"

5 FLAT STRAP TO COLUMN
1"=1'-0"

NOTE:
USE #14 FENDER HEAD WHEN
CONNECTING SG2x16ga TO HSS

6 INTERIOR BRIDGING TO COLUMN
1"=1'-0"

"ALL BEARING WALL SHEATHING IS USED AS SHEAR WALLS FOR
LATERAL BRACING OF THE STRUCTURE"

7 BEARING COLUMN 1ST & 2ND FLOOR
1"=1'-0"

8 PARTITION COLUMN AT 1ST AND 2ND FLOOR
1"=1'-0"

9 PARTITION INTERSECTION
1"=1'-0"

10 SG2 BRACE TO COLUMN
1"=1'-0"

11 INFILL WALL AT ELEVATOR DOOR
1"=1'-0"

12 6" DBL CEE HEADER TO HSS COLUMN
1"=1'-0"

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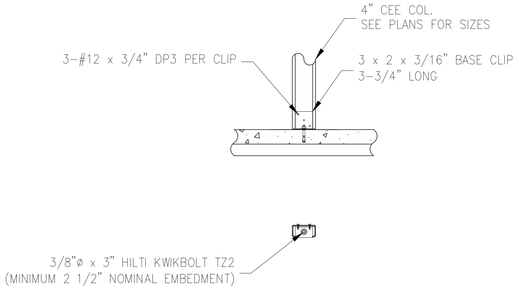
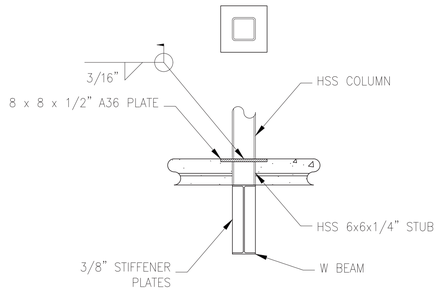
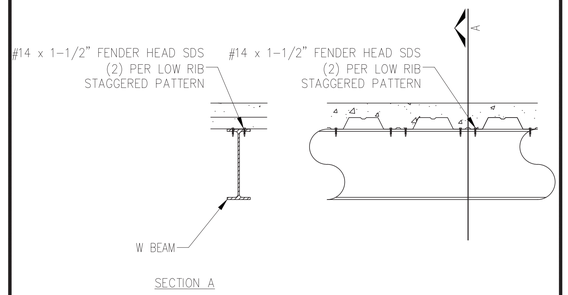


1 3RD FLOOR BEARING COLUMN
1"=1'-0"



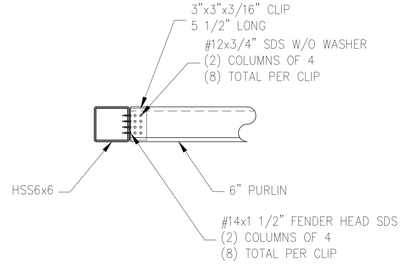
ALL WELDS ARE 3/16" CONTINUOUS FILLETS UNLESS NOTED

2 HSS COLUMN TO W BEAM
1"=1'-0"

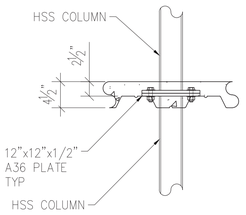


SECTION A

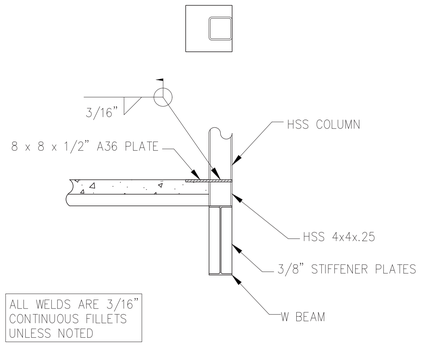
3 TYP. DECK TO BEAM CONN.
1"=1'-0"



4 PURLIN TO HSS BEAM
1"=1'-0"

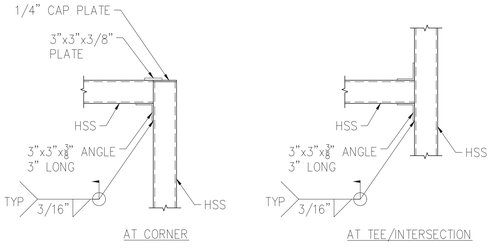


5 HSS COLUMN SPLICE
1"=1'-0"



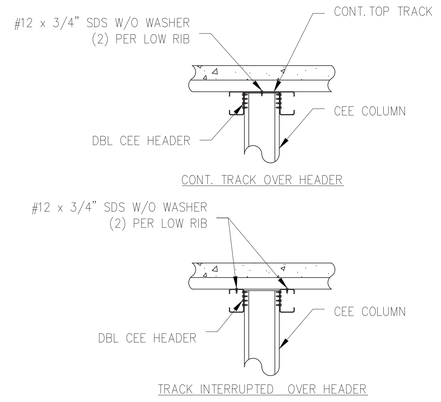
ALL WELDS ARE 3/16" CONTINUOUS FILLETS UNLESS NOTED

6 EXTERIOR COL. TO BEAM CONN.
1"=1'-0"



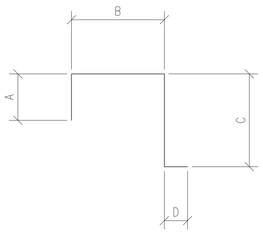
ALL WELDS ARE 3/16" CONTINUOUS FILLETS UNLESS NOTED

7 TYPICAL HSS TO HSS CONNECTION
1"=1'-0"



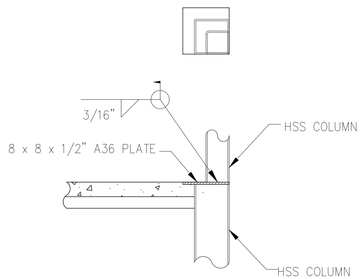
ERECTORS NOTE:
TOP TRACK TO BE CONTINUOUS ACROSS HEADER AT ALL LOCATIONS. IF TRACK NOT CONTINUED, HEADER MUST STITCHED TO METAL DECK PER DETAIL.

5 TOP TRACK CONNECTION AT HEADER
1"=1'-0"



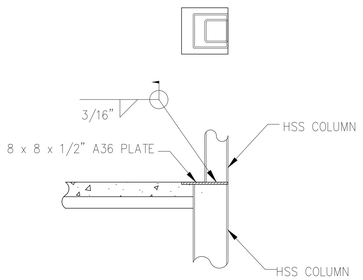
MARK	GAUGE	A	B	C	D
TT1	14	3"	4 1/8"	3"	1"
TT2	14	3"	6 1/8"	3"	1"
TT3	14	3"	4 1/8"	6 1/8"	1"
TT4	14	3"	6 1/8"	6 1/8"	1"
TT5	12	2"	4 1/8"	3"	1"
TT6	12	2"	6 1/8"	3"	1"

9 TOP TRACK SCHEDULE
1"=1'-0"



ALL WELDS ARE 3/16" CONTINUOUS FILLETS UNLESS NOTED

10 HSS COLUMN TO COLUMN
1"=1'-0"



ALL WELDS ARE 3/16" CONTINUOUS FILLETS UNLESS NOTED

11 HSS COLUMN TO COLUMN
1"=1'-0"

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Johnathan Green
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LAKEWOOD STORAGE

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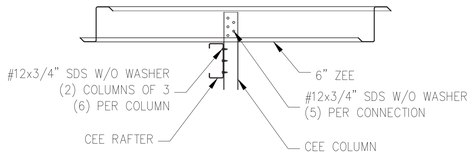
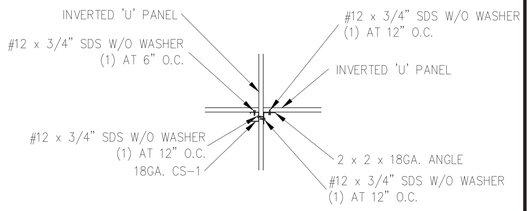
FRAMING DETAILS

SHEET NO.
D1.6

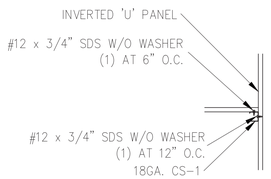


MINIMUM SCREW SPACING
AND EDGE DISTANCE = 1"

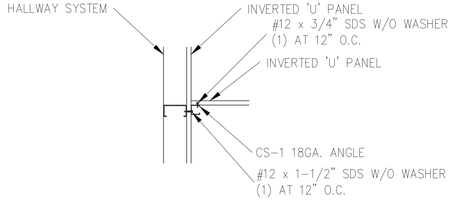
1 PULRIN CONNECTION TO COLUMN – UPPER ROOF
1"=1'-0"



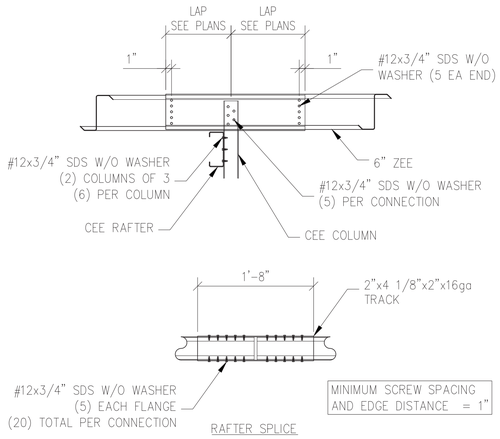
2 PARTITION INTERSECTION
1"=1'-0"



3 PARTITION INTERSECTION
1"=1'-0"

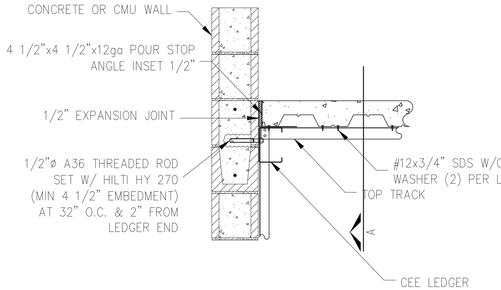


4 PARTITION INTERSECTION
1"=1'-0"



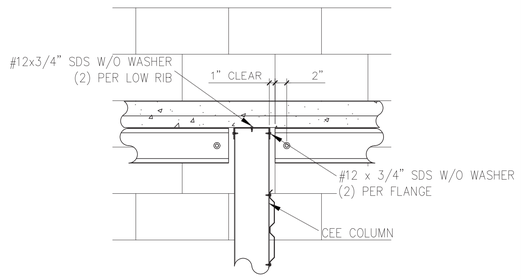
MINIMUM SCREW SPACING
AND EDGE DISTANCE = 1"

5 PURLIN LAP AT COLUMN – UPPER ROOF
1"=1'-0"

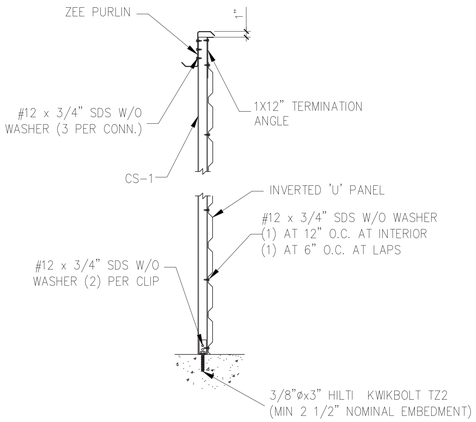


THIS CONDITION APPLIES EVERYWHERE IT APPLIES WHERE THE CEE LEDGER INTERSECTS A BEARING WALL

6 DBL HEADER INTO CMU AT CEE LEDGER
1"=1'-0"

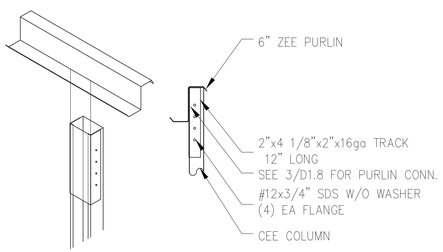


SECTION "A"

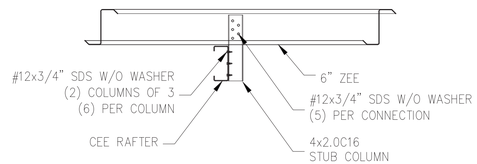


"PARTITION PANELS ARE NOT USED AS SHEAR WALLS U.N.O."

7 CS1 TO PURLIN CONNECTION
1"=1'-0"



8 PURLIN CONNECTION TO COLUMN
1"=1'-0"



MINIMUM SCREW SPACING
AND EDGE DISTANCE = 1"

9 PULRIN CONNECTION TO STUB COLUMN – UPPER ROOF
1"=1'-0"

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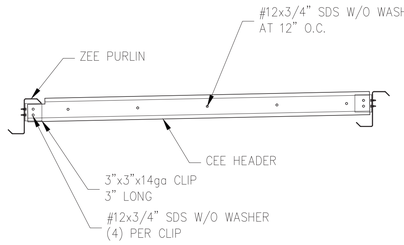
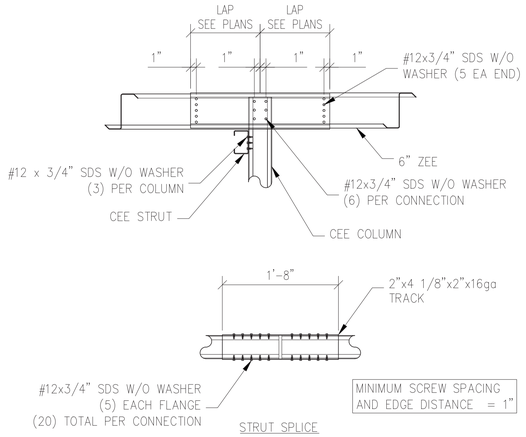
FRAMING DETAILS

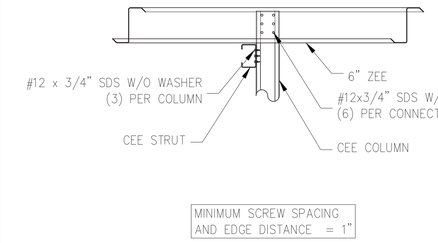
SHEET NO.
D1.7



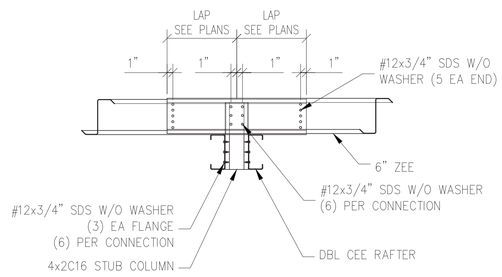
1 FRAMING AT A/C CONDENSING UNIT
1"=1'-0"



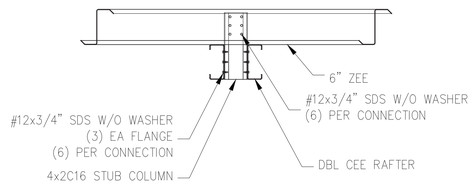
2 PURLIN LAP AT COLUMN
1"=1'-0"



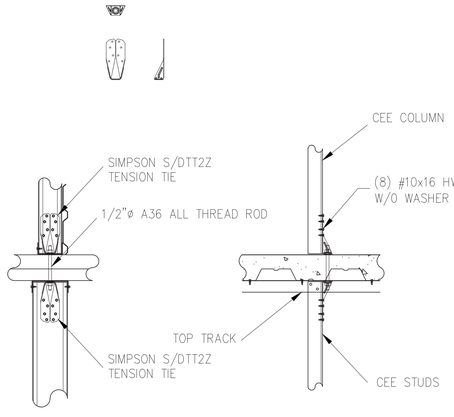
3 PULRIN CONNECTION TO COLUMN
1"=1'-0"



4 PURLIN LAP AT STUB COLUMN
1"=1'-0"

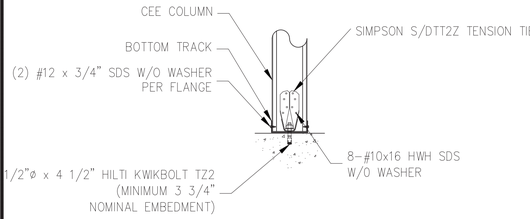


5 PURLIN CONN TO STUB COLUMN
1"=1'-0"

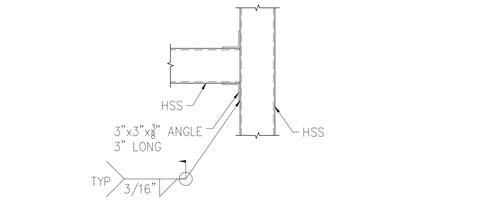


"ALL SHEATHING IS USED FOR SHEAR PER PFC-5570 TABLE 3"

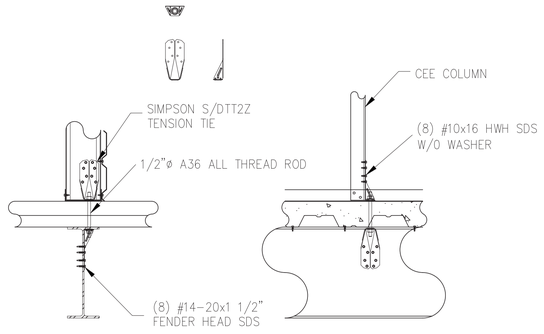
6 2ND & 3RD FLOOR SHEAR WALL ANCHOR
1"=1'-0"



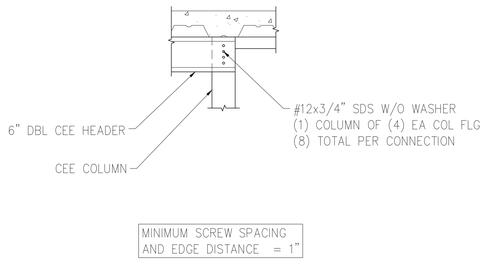
7 1ST FLOOR SHEAR WALL ANCHOR
1"=1'-0"



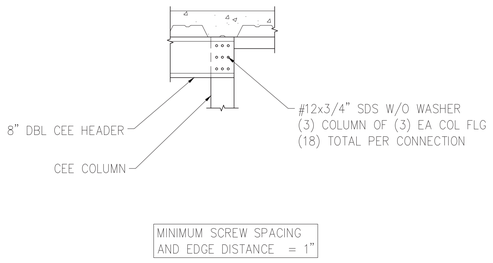
8 HSS BEAM TO COLUMN
1"=1'-0"



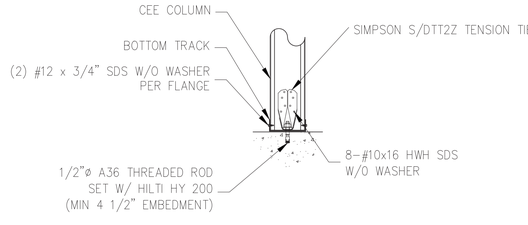
9 SHEAR WALL ANCHOR TO W BEAM
1"=1'-0"



10 6" DBL CEE HEADER AT CEE COLUMN
1"=1'-0"



11 8" DBL CEE HEADER AT CEE COLUMN
1"=1'-0"



12 1ST FLOOR SHEAR WALL ANCHOR
1"=1'-0"

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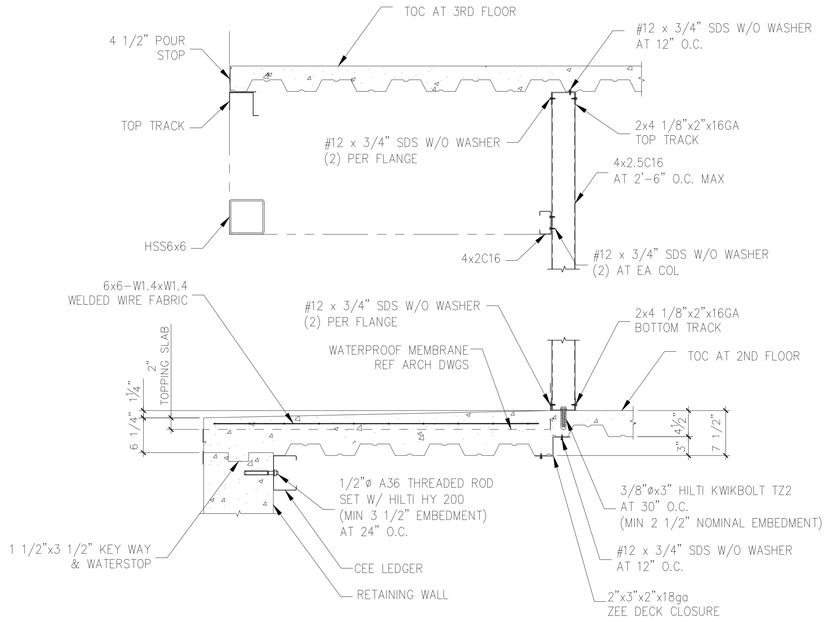
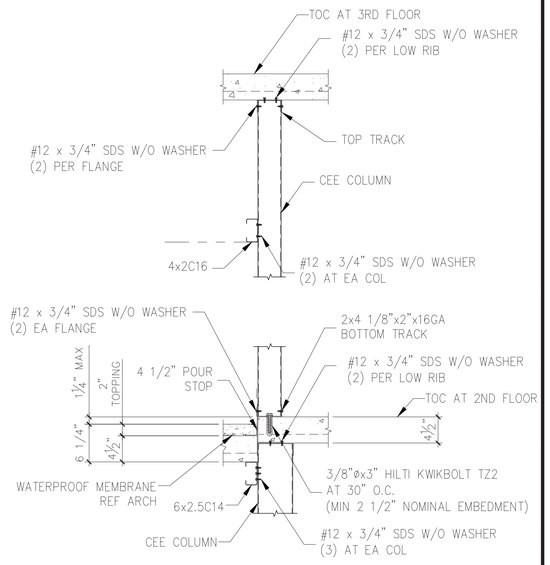
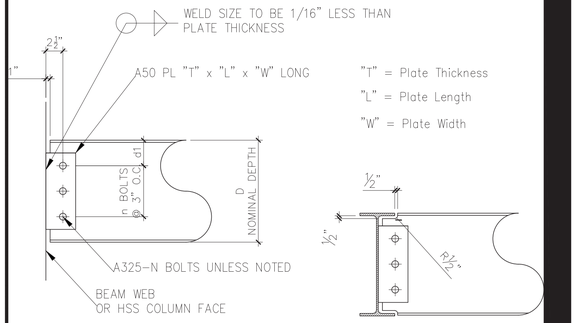


1 SECTION THRU 2ND FLOOR ALCOVE
1"=1'-0"

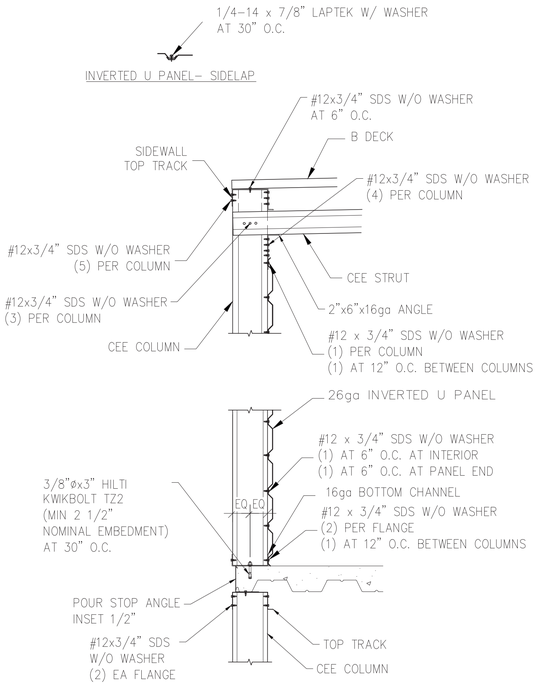


2 SECTION THRU 2ND FLOOR ALCOVE
1"=1'-0"

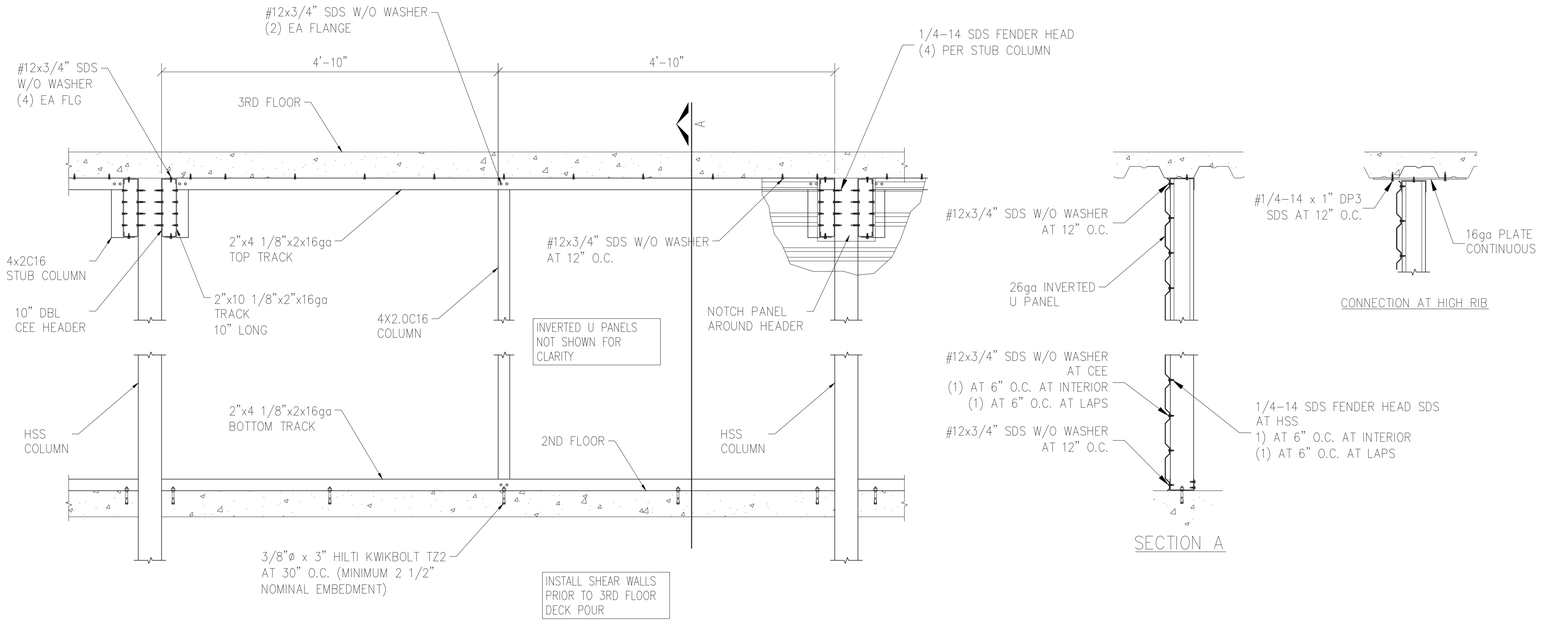


3 SHEAR PLATE CONNECTION
1"=1'-0"

SHEAR PLATE SCHEDULE							
D	d1	n	NUMBER OF ROWS	BOLT DIA.	T	L	W
8"	2 1/2"	2	1 OF 2	3/4"	1/4"	6"	4"
10"	2 1/2"	2	1 OF 2	3/4"	5/16"	6"	4"
12"	3"	3	1 OF 3	3/4"	5/16"	9"	4"
14"	2 1/2"	4	1 OF 4	3/4"	5/16"	12"	4"
16"	3"	4	1 OF 4	3/4"	5/16"	12"	4"
18"	3"	5	1 OF 5	3/4"	5/16"	15"	4"
21"	3"	6	1 OF 6	3/4"	5/16"	18"	4"
24"	3"	7	1 OF 7	3/4"	3/8"	21"	4"



4 SECTION AT TYPE 1 SHEAR WALL
1"=1'-0"



5 SECTION AT TYPE 2 SHEAR WALL
1"=1'-0"

SECTION A

Force Engineering & Testing Inc.
19530 RAMBLEWOOD DRIVE HUMBLE, TX 77338
(281) 540-6603 Fax: (281) 540-9966

STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
dn=Johnathan Green, c=US, o=Force Engineering and Testing, email=jgreen@forceengineeringtesting.com
I am approving this document
2021.12.15 02:27:47 -06'00'

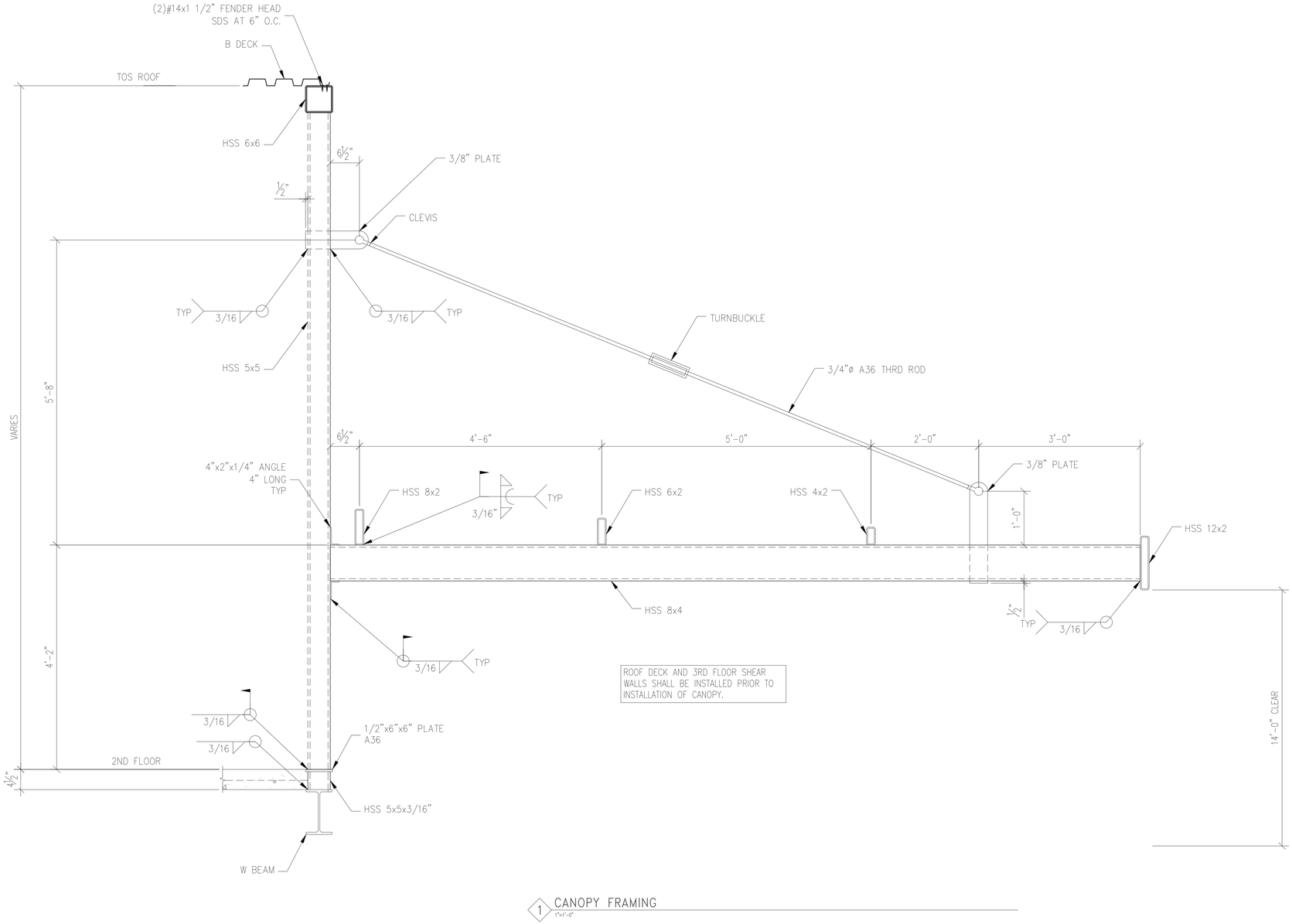
LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING DETAILS

SHEET NO.
D1.9



1 CANOPY FRAMING
1"=1'-0"

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03/18/2022

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(281) 540-6603 Fax: (281) 540-9966

STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
cn= Johnathan Green, o=US, ou=Force Engineering and Testing, e=wall@forceengineeringtesting.com
I am approving this document
2021.12.15 02:37:25 -06'00'

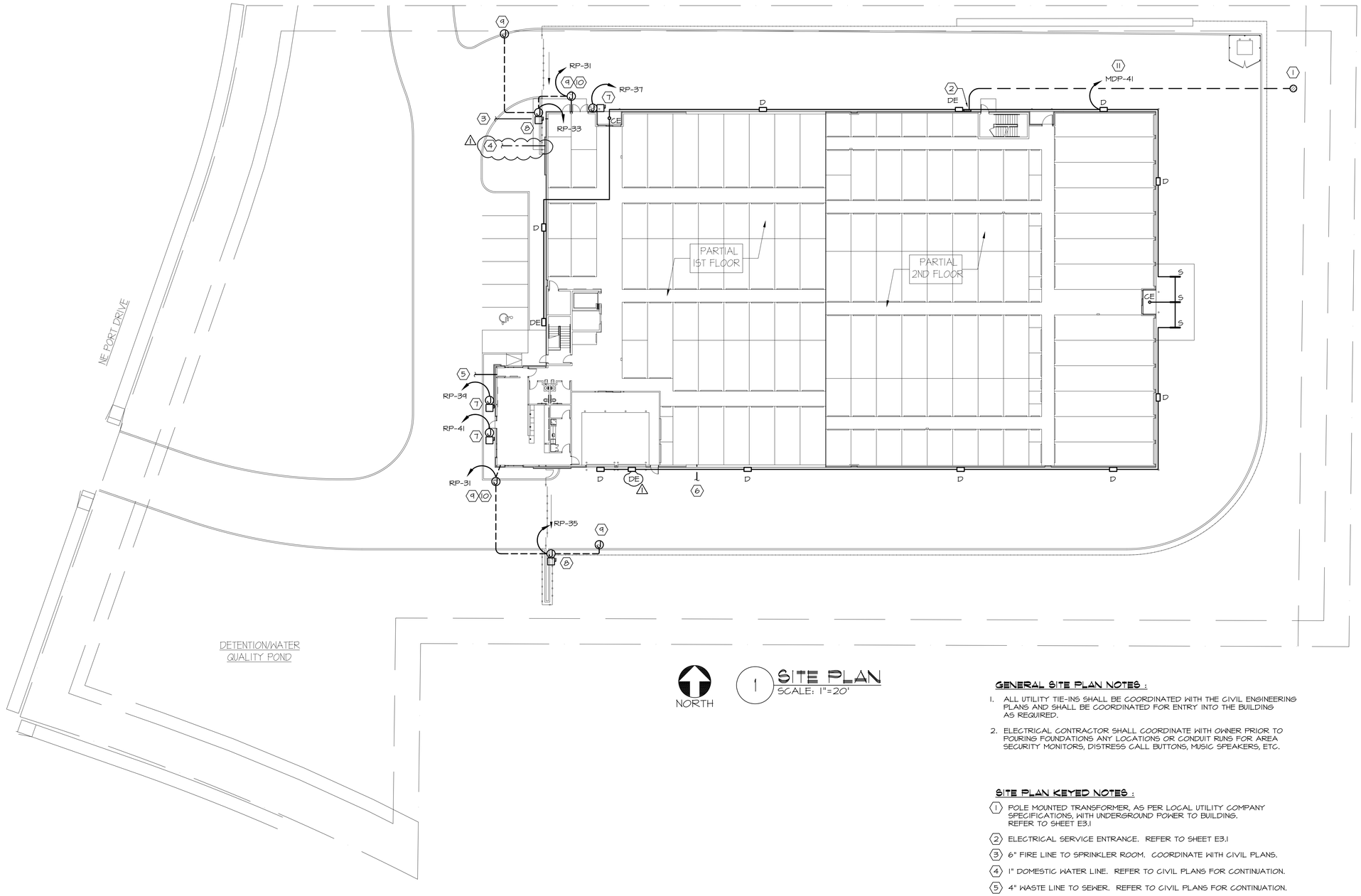
LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING DETAILS

SHEET NO.
D1.10



1 SITE PLAN
SCALE: 1"=20'

GENERAL SITE PLAN NOTES :

1. ALL UTILITY TIE-INS SHALL BE COORDINATED WITH THE CIVIL ENGINEERING PLANS AND SHALL BE COORDINATED FOR ENTRY INTO THE BUILDING AS REQUIRED.
2. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OWNER PRIOR TO POURING FOUNDATIONS ANY LOCATIONS OR CONDUIT RUNS FOR AREA SECURITY MONITORS, DISTRESS CALL BUTTONS, MUSIC SPEAKERS, ETC.

SITE PLAN KEYED NOTES :

(1) POLE MOUNTED TRANSFORMER, AS PER LOCAL UTILITY COMPANY SPECIFICATIONS, WITH UNDERGROUND POWER TO BUILDING. REFER TO SHEET E3.1

(2) ELECTRICAL SERVICE ENTRANCE. REFER TO SHEET E3.1

(3) 6" FIRE LINE TO SPRINKLER ROOM. COORDINATE WITH CIVIL PLANS.

(4) 1" DOMESTIC WATER LINE. REFER TO CIVIL PLANS FOR CONTINUATION.

(5) 4" WASTE LINE TO SEWER. REFER TO CIVIL PLANS FOR CONTINUATION.

(6) 4" CONDENSATE WASTE LINE TO STORM. REFER TO CIVIL PLANS FOR CONTINUATION.

(7) J-BOX & 30A/2P/120V/NF/N-3R DISCONNECT SWITCH FOR BUILDING SIGN. FINAL CONNECTION BY ELECTRICAL CONTRACTOR. COORDINATE MOUNTING LOCATIONS WITH SIGN INSTALLER. RUN CIRCUIT THRU PHOTOCELL.

(8) J-BOX & 30A/2P/120V/NF/N-3R DISCONNECT SWITCH FOR MOTORIZED GATE. COORDINATE LOCATION W/ INSTALLER.

(9) PROVIDE ONE (1) 1" CONDUIT FOR UNDERGROUND DATA & 120V POWER FOR ENTRY KEYPADS. COORDINATE LOCATION ON-SITE.

(10) RUN ONE (1) EMPTY 2" CONDUIT W/ PULL STRING UNDERGROUND BETWEEN GATE OPERATOR AND BUILDING, AND ONE (1) 1" EMPTY CONDUIT W/ PULLSTRING BETWEEN GATE CONTROLLER AND ASSOCIATED KEYPAD(S).

(11) RUN CIRCUIT SWITCHLEG THRU PHOTOCELL MOUNTED ON ROOF, WITH TIMECLOCK OVERRIDE. COORDINATE EXTERIOR LIGHTING WITH ARCHITECTURAL PLANS/ELEVATIONS FOR MOUNTING HEIGHTS AND LOCATIONS.

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STATE OF MISSOURI
D.J. PENN
NUMBER E-28507
REGISTERED PROFESSIONAL ENGINEER
1/20/2022

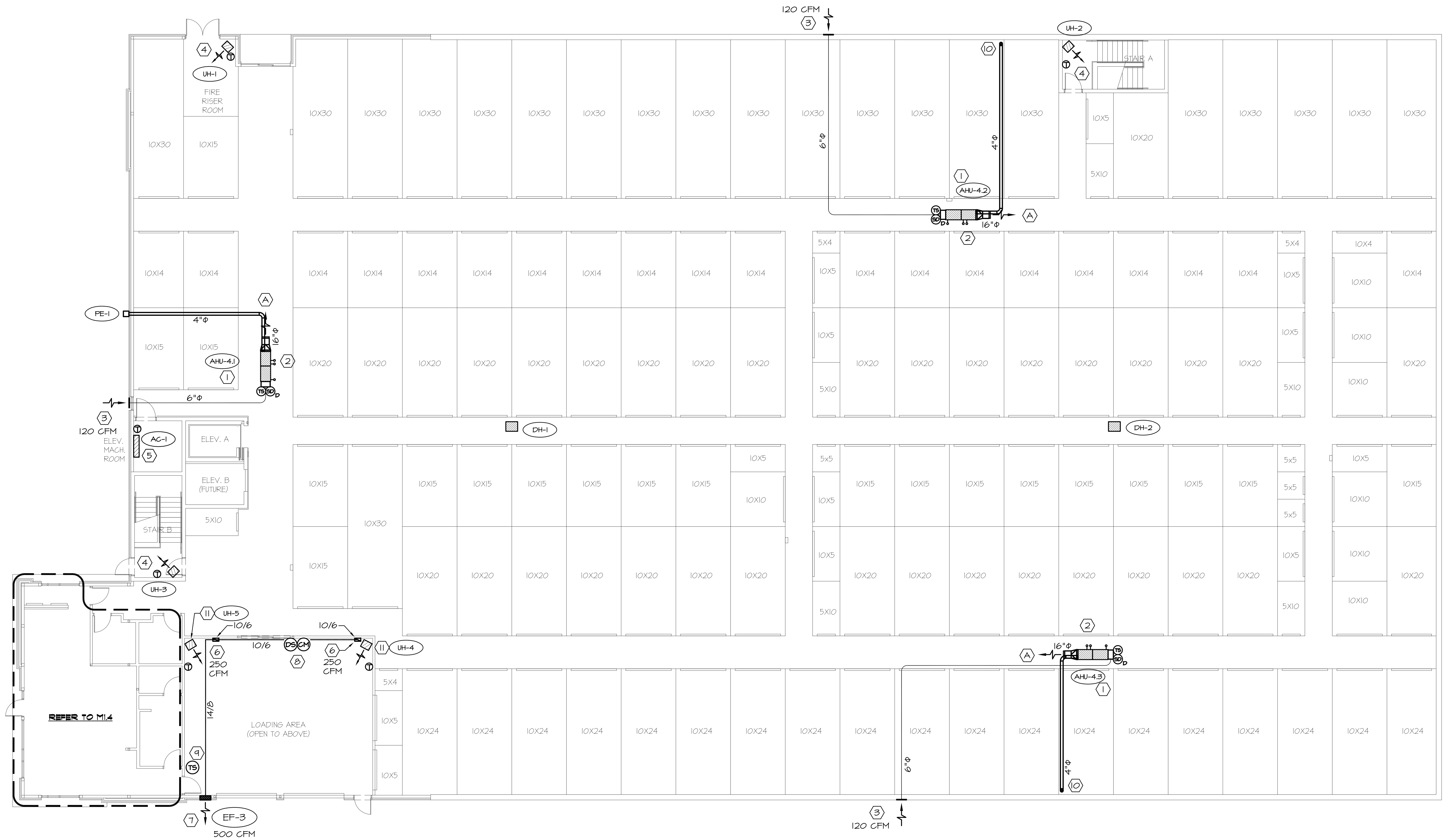
LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : DJP
REVISIONS:

SITE PLAN

SHEET NO.
MEP1



1ST FLOOR - MECHANICAL PLAN
SCALE: 3/32"=1'-0"

COORDINATION NOTE :

THE GENERAL CONTRACTOR SUPERINTENDENT SHALL PAY CLOSE ATTENTION TO THE COORDINATION BETWEEN THE SPRINKLER CONTRACTOR & MECHANICAL CONTRACTOR.

ALL SUB-CONTRACTORS ARE TO COORDINATE THEIR WORK WITH THE OTHER DISCIPLINES TO PROVIDE SPACE FOR THE LAYOUT OF EQUIPMENT, LIGHTS, DUCTWORK, SPRINKLERS, ETC.

THE SPRINKLER CONTRACTOR & MECHANICAL CONTRACTOR SHALL COORDINATE CLOSELY.

GENERAL MECHANICAL NOTES :

1. RUN REFRIGERANT LINES SIZED ACCORDING TO MANUFACTURER'S RECOMMENDATION BASED ON THE FINAL ROUTING OF THE THE LINES FROM THE AHU TO CU LOCATED OUTSIDE. RUN DOWN IN WALL TO 24" A.F.G. & PENETRATE OUTSIDE WALL. PROVIDE WALLCAP & WEATHERPROOFING AT ENTRY POINT (QUICKFLASH #A/C U-B @ BRICK/STONE WALLS AND #A/C U-S @ METALS WALLS).
2. RUN THE CONDENSATE DRAIN LINE FROM EACH AIR HANDLING UNIT TO HUB DRAIN LOCATED NEAR UNIT. COORDINATE LOCATION ON-SITE.
3. ALL DUCTWORK IN UN-CONDITIONED SPACES SHALL BE INSULATED AS PER INTERNATIONAL MECHANICAL CODE.

EXHAUST SYMBOLS :

- (CM) CARBON MONOXIDE SENSOR
- (DS) NO_2 DIESEL (NITROGEN DIOXIDE) SENSOR
- (TS) TEST STATION

MECHANICAL KEYED NOTES :

1. HANG AIR HANDLING UNIT HIGH IN CORRIDOR. PROVIDE A SHORT SECTION OF SUPPLY DUCT WITH GRILLE AS SPECIFIED ON OPENING. COORDINATE LOCATION OF HUMIDISTAT W/ PROJECT MANAGER ON-SITE. INSTALL SMOKE DETECTOR @ RETURN AIR.
2. RUN REFRIGERANT LINES TO CONDENSING UNIT OUTSIDE. COORDINATE LOCATION & ROUTING ON-SITE.
3. 12/12 OUTSIDE AIR INTAKE LOUVER SHALL BE WEATHERPROOF & PAINTED TO MATCH ADJACENT SURFACE. COORDINATE WITH ARCHITECT. LOUVER SHALL BE PROVIDED W/ AN INSECT SCREEN & PLENUM. CONNECT OUTSIDE AIR DUCT TO RETURN AIR DUCT. PROVIDE A MANUAL BALANCING DAMPER AND GRAVITY BACKDRAFT DAMPER IN THE DUCT. BALANCE THE OUTSIDE AIR CFM AS SCHEDULED.
4. MOUNT UNIT HEATER HIGH IN CORNER, COORDINATE LOCATION ON-SITE. THERMOSTAT SET TO MAINTAIN 45 DEGREES F. MINIMUM.
5. MOUNT DUCT FREE A/C UNIT HIGH ON WALL. MOUNT THERMOSTAT @48" A.F.F. COORDINATE UNIT LOCATION WITH EQUIPMENT IN ROOM. RUN REFRIGERANT LINES TO CONDENSING UNIT OUTSIDE.
6. RUN NON-INSULATED SHEET METAL DUCT FOR FUME EXHAUST. RUN AS HIGH AS POSSIBLE. RUN EXPOSED ON WALL DOWN TO 2'-0" A.F.F. REFER TO DETAIL, SHEET M2.1
7. RUN 14/10 NON-INSULATED SHEET METAL DUCT AS HIGH AS POSSIBLE TO EXHAUST FAN. PROVIDE TRANSITION DUCT AS REQUIRED. MAINTAIN 10'-0" CLEARANCE FROM ANY AIR INTAKE/MAKEUP. REFER TO DETAIL, SHEET M2.1
8. MOUNT CARBON MONOXIDE & NITROGEN DIOXIDE SENSORS AT 2'-0" A.F.F. CONNECT TO BOTH EXHAUST FANS (EF-1 & EF-2). IF ANY SENSORS IS ACTIVATED THEN BOTH FANS SHALL TURN ON.
9. PROVIDE A TEST STATION FOR THE SENSORS & EXHAUST FANS. THE SENSOR SUPPLIER SHALL COORDINATE THIS DESIGN. PROVIDE DESIGN FOR APPROVAL BY OWNER & ENGINEER PRIOR TO ANY WORK.
10. 4"Φ FLUE UP TO 2ND FLOOR.
11. MOUNT UNIT HEATER HIGH IN CORNER, COORDINATE LOCATION ON-SITE. THERMOSTAT SET TO MAINTAIN **45 DEGREES F. MINIMUM.**

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STATE OF MISSOURI
D.J. PENN
NUMBER E-28507
REGISTERED PROFESSIONAL ENGINEER
12/16/2021

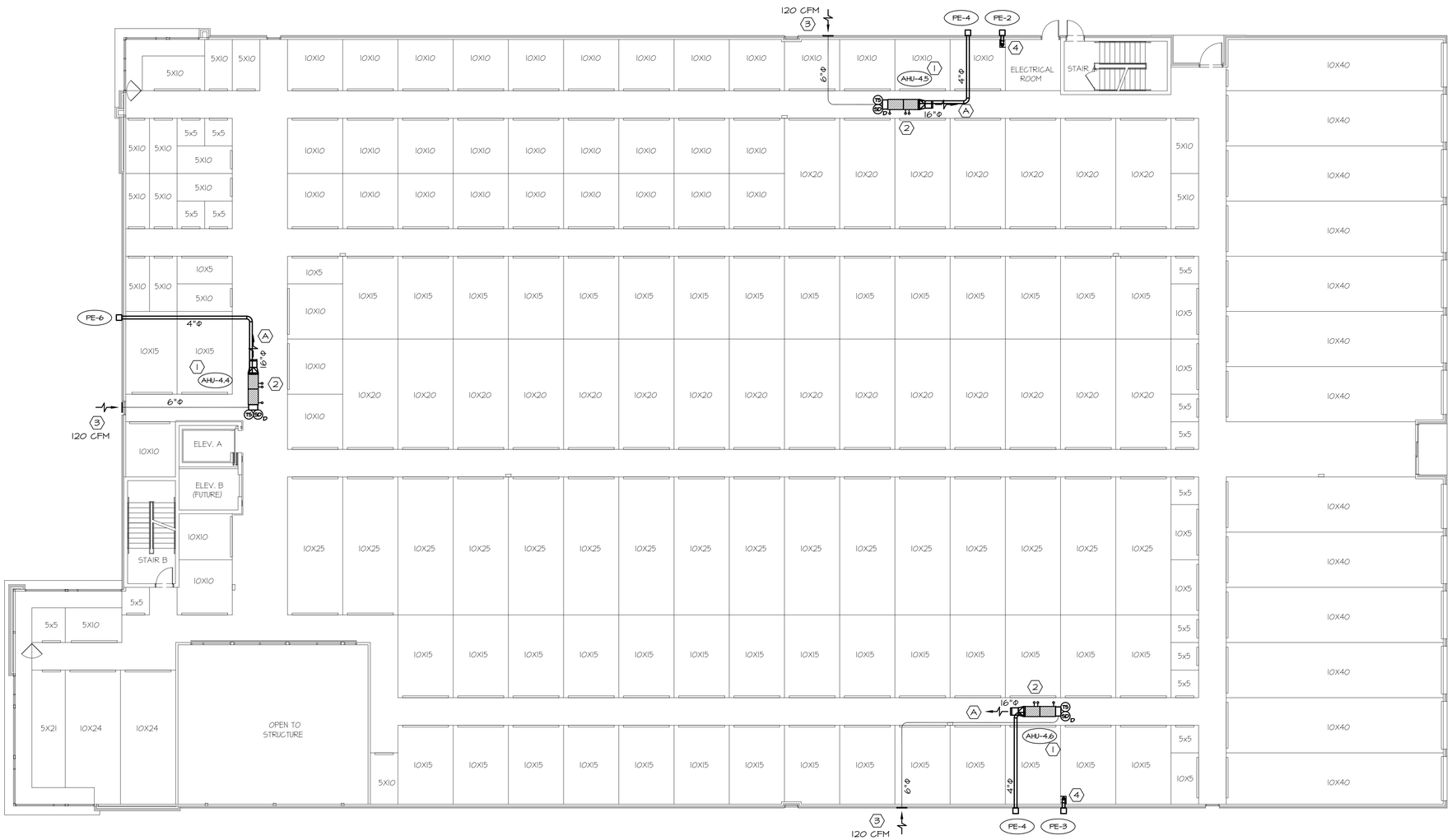
LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : DJP
REVISIONS:

1ST FLOOR MECHANICAL

SHEET NO.
M1.1



COORDINATION NOTE :

THE GENERAL CONTRACTOR SUPERINTENDENT SHALL PAY CLOSE ATTENTION TO THE COORDINATION BETWEEN THE SPRINKLER CONTRACTOR & MECHANICAL CONTRACTOR.

ALL SUB-CONTRACTORS ARE TO COORDINATE THEIR WORK WITH THE OTHER DISCIPLINES TO PROVIDE SPACE FOR THE LAYOUT OF EQUIPMENT, LIGHTS, DUCTWORK, SPRINKLERS, ETC.

THE SPRINKLER CONTRACTOR & MECHANICAL CONTRACTOR SHALL COORDINATE CLOSELY.

1 2ND FLOOR - MECHANICAL PLAN

SCALE: 3/32"=1'-0"

GENERAL MECHANICAL NOTES :

1. RUN REFRIGERANT LINES SIZED ACCORDING TO MANUFACTURER'S RECOMMENDATION BASED ON THE FINAL ROUTING OF THE THE LINES FROM THE AHU TO CU LOCATED OUTSIDE. RUN DOWN IN WALL TO 24" A.F.G. & PENETRATE OUTSIDE WALL. PROVIDE WALLCAP & WEATHERPROOFING AT ENTRY POINT (QUICKFLASH #A/C U-B @ BRICK/STONE WALLS AND #A/C U-S @ METALS WALLS).
2. RUN THE CONDENSATE DRAIN LINE FROM EACH AIR HANDLING UNIT TO HUB DRAIN LOCATED NEAR UNIT. COORDINATE LOCATION ON-SITE.
3. ALL DUCTWORK IN UN-CONDITIONED SPACES SHALL BE INSULATED AS PER INTERNATIONAL MECHANICAL CODE.

MECHANICAL KEYED NOTES :

1. HANG AIR HANDLING UNIT HIGH IN CORRIDOR. PROVIDE A SHORT SECTION OF SUPPLY DUCT WITH GRILLE AS SPECIFIED ON OPENING. COORDINATE LOCATION OF HUMIDISTAT W/ PROJECT MANAGER ON-SITE. INSTALL SMOKE DETECTOR @ RETURN AIR.
2. RUN REFRIGERANT LINES TO CONDENSING UNIT OUTSIDE. COORDINATE LOCATION & ROUTING ON-SITE.
3. 12/12 OUTSIDE AIR INTAKE LOUVER SHALL BE WEATHERPROOF & PAINTED TO MATCH ADJACENT SURFACE. COORDINATE WITH ARCHITECT. LOUVER SHALL BE PROVIDED W/ AN INSECT SCREEN & PLENUM. CONNECT OUTSIDE AIR DUCT TO RETURN AIR DUCT. PROVIDE A MANUAL BALANCING DAMPER AND GRAVITY BACKDRAFT DAMPER IN THE DUCT. BALANCE THE OUTSIDE AIR CFM AS SCHEDULED.
4. 4"Φ FLUE UP FROM 1ST FLOOR.

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Lee's Summit, Missouri
03/28/2022

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STATE OF MISSOURI
DJ PENN
NUMBER E-38507
REGISTERED PROFESSIONAL ENGINEER
12/16/2021

LAKEWOOD STORAGE

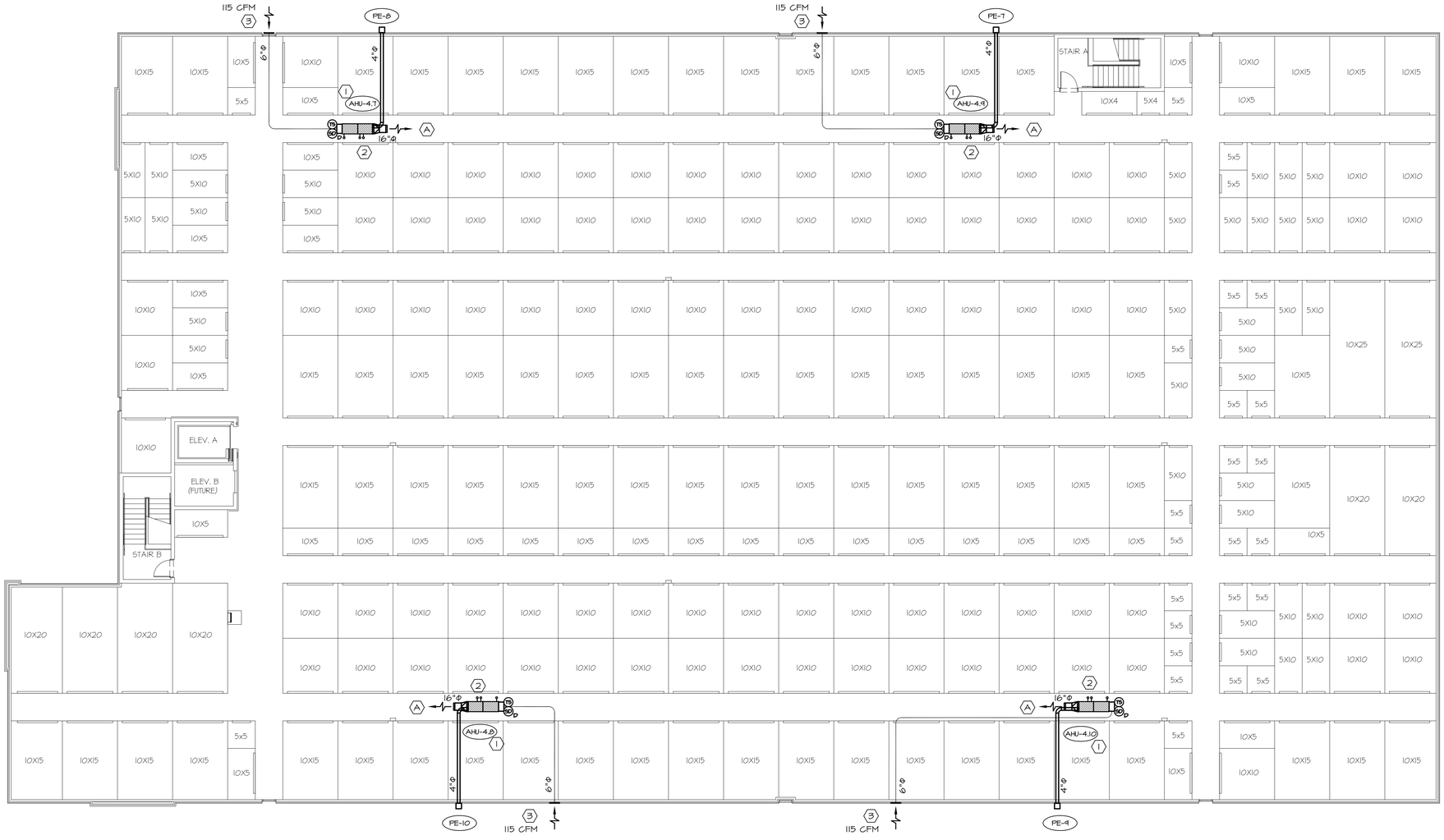
NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : DJP
REVISIONS:

2ND FLOOR MECHANICAL

SHEET NO.

M1.2



1 **3RD FLOOR - MECHANICAL PLAN**
SCALE: 3/32"=1'-0"

COORDINATION NOTE :

THE GENERAL CONTRACTOR SUPERINTENDENT SHALL PAY CLOSE ATTENTION TO THE COORDINATION BETWEEN THE SPRINKLER CONTRACTOR & MECHANICAL CONTRACTOR.

ALL SUB-CONTRACTORS ARE TO COORDINATE THEIR WORK WITH THE OTHER DISCIPLINES TO PROVIDE SPACE FOR THE LAYOUT OF EQUIPMENT, LIGHTS, DUCTWORK, SPRINKLERS, ETC.

THE SPRINKLER CONTRACTOR & MECHANICAL CONTRACTOR SHALL COORDINATE CLOSELY.

GENERAL MECHANICAL NOTES :

1. RUN REFRIGERANT LINES SIZED ACCORDING TO MANUFACTURER'S RECOMMENDATION BASED ON THE FINAL ROUTING OF THE THE LINES FROM THE AHU TO CU LOCATED OUTSIDE. RUN DOWN IN WALL TO 24" A.F.G. & PENETRATE OUTSIDE WALL. PROVIDE WALLCAP & WEATHERPROOFING AT ENTRY POINT (QUICKFLASH #A/C U-8 @ BRICK/STONE WALLS AND #A/C U-5 @ METALS WALLS).
2. RUN THE CONDENSATE DRAIN LINE FROM EACH AIR HANDLING UNIT TO HUB DRAIN LOCATED NEAR UNIT. COORDINATE LOCATION ON-SITE.
3. ALL DUCTWORK IN UN-CONDITIONED SPACES SHALL BE INSULATED AS PER INTERNATIONAL MECHANICAL CODE.

MECHANICAL KEYED NOTES :

1. HANG AIR HANDLING UNIT HIGH IN CORRIDOR. PROVIDE A SHORT SECTION OF SUPPLY DUCT WITH GRILLE AS SPECIFIED ON OPENING. COORDINATE LOCATION OF HUMIDISTAT W/ PROJECT MANAGER ON-SITE. INSTALL SMOKE DETECTOR @ RETURN AIR.
2. RUN REFRIGERANT LINES TO CONDENSING UNIT OUTSIDE. COORDINATE LOCATION & ROUTING ON-SITE.
3. 12/12 OUTSIDE AIR INTAKE LOUVER SHALL BE WEATHERPROOF & PAINTED TO MATCH ADJACENT SURFACE. COORDINATE WITH ARCHITECT. LOUVER SHALL BE PROVIDED W/ AN INSECT SCREEN & PLENUM. CONNECT OUTSIDE AIR DUCT TO RETURN AIR DUCT. PROVIDE A MANUAL BALANCING DAMPER AND GRAVITY BACKDRAFT DAMPER IN THE DUCT. BALANCE THE OUTSIDE AIR CFM AS SCHEDULED.

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Development Services Department
Lee's Summit, Missouri
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STATE OF MISSOURI
DJ PENN
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12/16/2021

LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : DJP
REVISIONS:

3RD FLOOR MECHANICAL

SHEET NO.
M1.3

GENERAL MECHANICAL NOTES :

1. RUN REFRIGERANT LINES SIZED ACCORDING TO MANUFACTURER'S RECOMMENDATION BASED ON THE FINAL ROUTING OF THE THE LINES FROM THE AHU TO CU LOCATED OUTSIDE. RUN DOWN IN WALL TO 24" A.F.G. & PENETRATE OUTSIDE WALL. PROVIDE WALLCAP & WEATHERPROOFING AT ENTRY POINT (QUICKFLASH #A/C U-B @ BRICK/STONE WALLS AND #A/C U-S @ METALS WALLS).
2. RUN THE CONDENSATE DRAIN LINE FROM AIR HANDLING UNIT TO FLOOR SINK LOCATED NEAR BY.
3. ALL DUCTWORK IN UN-CONDITIONED SPACES SHALL BE INSULATED AS PER INTERNATIONAL MECHANICAL CODE.
4. EXPOSED DUCTWORK SHALL BE PAINTED TO MATCH CEILING STRUCTURE. COORDINATE WITH ARCHITECTURAL PLANS.

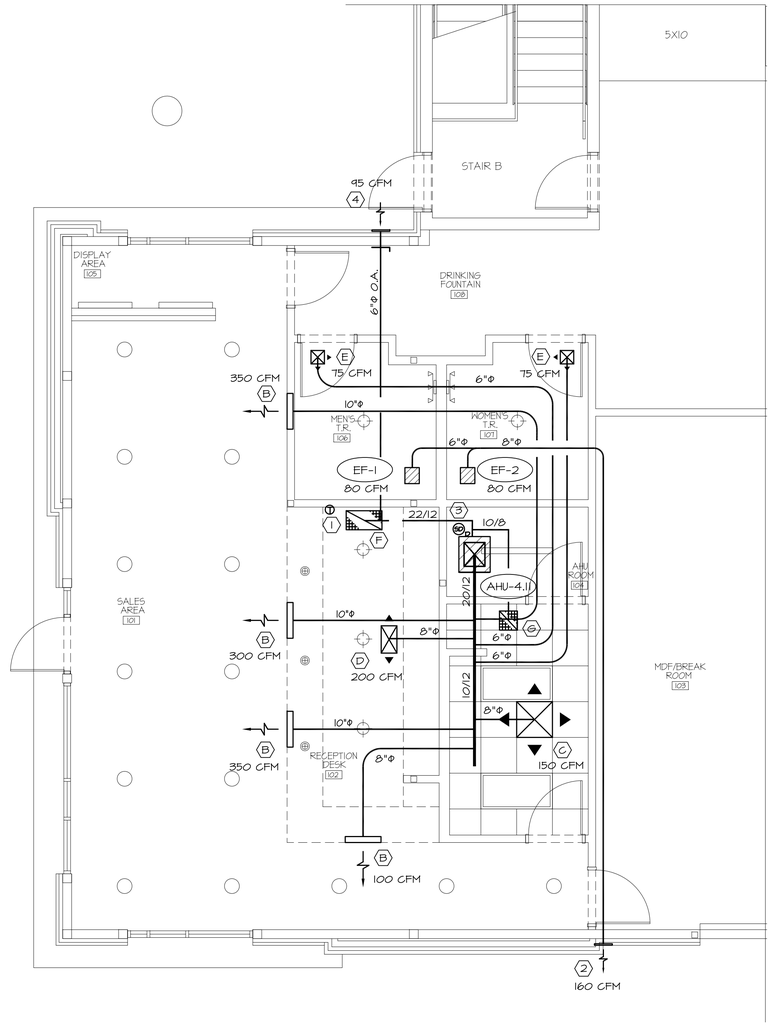
MECHANICAL KEYED NOTES :

(1) COORDINATE LOCATION OF THERMOSTAT W/ PROJECT MANAGER ON-SITE. MOUNT @48" A.F.F.

(2) 12/12 EXHAUST LOUVER. LOUVER SHALL BE WEATHERPROOOF, PAINTED TO MATCH ADJACENT SURFACE & PROVIDE WITH INSECT SCREEN.

(3) PROVIDE SMOKE DETECTOR IN RETURN AIR DUCT.

(4) 12/12 OUTSIDE AIR INTAKE LOUVER SHALL BE WEATHERPROOF & PAINTED TO MATCH ADJACENT SURFACE. COORDINATE WITH ARCHITECT. LOUVER SHALL BE PROVIDED W/ AN INSECT SCREEN & PLENUM. CONNECT OUTSIDE AIR DUCT TO RETURN AIR DUCT. PROVIDE A MANUAL BALANCING DAMPER AND GRAVITY BACKDRAFT DAMPER IN THE DUCT. BALANCE THE OUTSIDE AIR CFM AS SCHEDULED.



1 OFFICE - MECHANICAL PLAN
SCALE: 1/4"=1'-0"

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12/16/2021

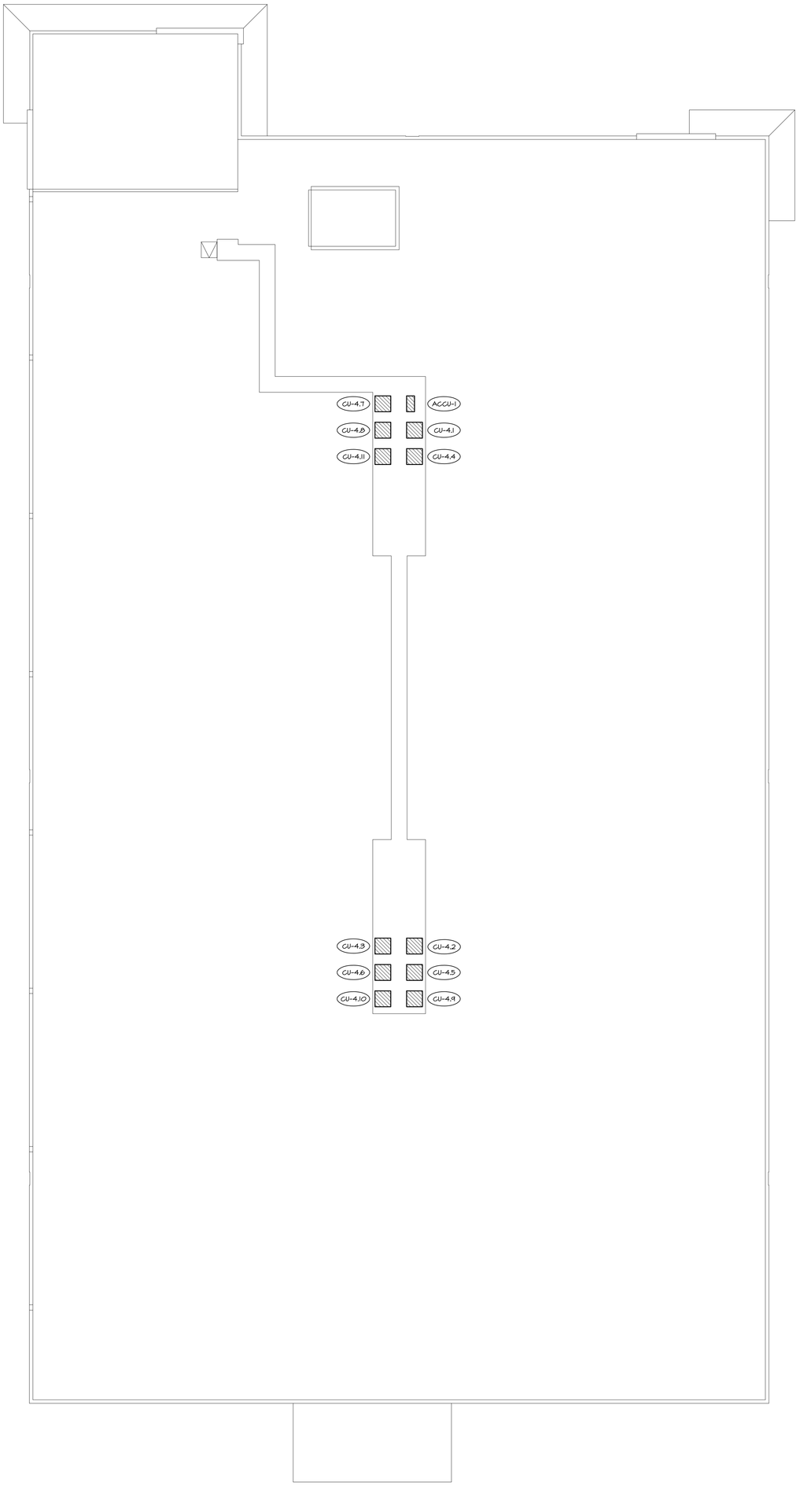
LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : DJP
REVISIONS:

OFFICE MECHANICAL

SHEET NO.
M1.4



1 ROOF - MECHANICAL PLAN
SCALE: 3/32"=1'-0"

LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

ROOF MECHANICAL
SHEET NO. M1.5

PROJECT NO. 2035
DATE: 12.16.2021
DRAWN: DJP
REVISIONS:

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CONDENSING UNIT SCHEDULE

MARK	CU-4.1 thru 4.11
TYPE	AIR COOLED
MIN. CAPACITY (MBTUH)	48
VOLTS/PHASE	480/3
MIN. CIRCUIT AMPACITY	9
MAX. OVERCURRENT PROTECTION	15
AIR COOLED CONDENSER	
AMBIENT TEMP. (F°)	95
MANUFACTURER	RHEEM
MODEL	RAI448ADINB
SEER	14.0
OPERATING WEIGHT	221
NOTES	1

NOTE :
1. ALL REFRIGERANT LINES SHALL BE SIZED AS PER MANUFACTURER'S RECOMMENDATIONS.

AIR HANDLING UNIT SCHEDULE

MARK	AHU-4.1 thru 4.10	AHU-4.11
TYPE	HORIZONTAL	VERTICAL
SUPPLY AIR FLOW (CFM)	1600	1600
EXT. STATIC PRESS. (IN.WG)	0.48	0.48
DRIVE TYPE	DIRECT	DIRECT
FAN SPEED (RPM)	HIGH	HIGH
MOTOR SIZE (HP)	3/4	3/4
COOLING COIL		
TYPE	DX	DX
MIN. SENSIBLE CAPACITY (MBH)	34	34
MIN. TOTAL CAPACITY (MBH)	46	46
ENT. DRY BULB TEMP. (F)	80	80
ENT. WET BULB TEMP. (F)	67	67
MINIMUM ROWS	-	-
MAXIMUM FINS PER INCH	-	-
HEATING		
GAS INPUT (MBH)	75	75
GAS OUTPUT (MBH)	60	60
VOLTS - PHASE	115/1	115/1
MINIMUM CIRCUIT AMPS	13	13
MAX. OVERCURRENT PROTECTION	15	15
MANUFACTURER	RHEEM	RHEEM
COOLING COIL MODEL	RCFP-HM4824CC	RCFP-HM4824CC
HORIZONTAL ADAPTER	RXHH-A04	RXHH-A04
FURNACE MODEL NO.	R802T-A0754117MXA	R802T-A0754117MXA
OPERATING WEIGHT	215	215
NOTES	1,2,3,4	1,2,3,4

NOTE:
1. **FURNISH FULLY AUTOMATIC HUMIDISTAT WITH AUTO-CHANGEOVER.**
2. PROVIDE SINGLE POINT ELECTRICAL CONNECTION.
3. PROVIDE SMOKE DETECTOR IN RETURN AIR DUCT AND CONNECT TO LOCAL FIRE ALARM ANNUNCIATOR.
4. LONG LINE SETS MAY BE REQUIRED.

MECHANICAL/SERVICE WATER SYSTEMS FUNCTIONAL TESTING/COMMISSIONING

THE CONTRACTOR SHALL COMPLETE THE TASKS BELOW TO COMMISSION THE MECHANICAL AND SERVICE WATER SYSTEMS AND CONTROL SYSTEM AND SUBMIT WRITTEN DOCUMENTATION DETAILING THE TASKS BELOW. FOR EACH TASK, LIST THE DATE PERFORMED, PERSON COMPLETING THE TASK, THE INITIAL SETTING/CONDITION, LIST OF SPECIFIC EQUIPMENT, APPLIANCES OR SYSTEMS TO BE TESTED AND DESCRIPTION OF OF THE TESTS TO BE PERFORMED. ACTIONS PERFORMED, AND FINAL SETTING CONDITION. SUBMIT DOCUMENTATION AT OR BEFORE SUBSTANTIAL COMPLETION TO FACILITATE OBTAINING THE CERTIFICATE OF OCCUPANCY.

1. ENSURE ALL MECHANICAL SYSTEMS AND WATER SYSTEMS INSTALLED AND ARE FUNCTIONAL.
2. PERFORM A SYSTEM AND BALANCING IN ALL MECHANICAL SYSTEMS.
3. TEST ALL AIR DEVICES, SUPPLY AND RETURN DUCT AIR FLOWS, FAN MOTORS AMPS.
4. ENSURE THERMOSTATS, TEMPERATURE SENSORS, ECONOMIZERS, SERVICE WATER HEATING CONTROL SYSTEMS ARE CALIBRATED AND FUNCTIONAL AND OPERATE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
5. ENSURE AIR OUTLETS AND ZONE TERMINAL DEVICES ARE EQUIPPED WITH MEANS OF AIR BALANCING IN ACCORDANCE WITH CHAPTER 6 OF THE IMC CODE AND COMPLY WITH 2015 IECC SECTION C408 SYSTEM COMMISSIONING.
6. EQUIPMENT SHALL DEMONSTRATE THE INSTALLATION AND OPERATION OF COMPONENTS.

ELEVATOR ROOM AC

AC-1 / ACCU-1 — MITSUBISHI ELECTRIC DUCT FREE SPLIT SYSTEM; 30,000 BTUH, SEER = 16.0
INDOOR UNIT #MSY-D30NA-8; 1 AMP
OUTDOOR UNIT #MUY-D30NA-1;
(21A MCA) 25A/208V/1Φ

UNIT HEATER

UH-1 — CONTRACTOR SHALL INSTALL AN ELECTRIC TYPE UNIT HEATER IN THE SPRINKLER ROOM CONNECTED TO A THERMOSTAT IN THE ROOM. UNIT HEATER SHALL BE A DAYTON #3UG13 (GRAINGER #3UG13) W/ 3.2 KW ELECTRIC HEAT @14.9 AMPS/208V/1Φ.

UH-2 / UH-3 — CONTRACTOR SHALL INSTALL AN ELECTRIC TYPE UNIT HEATER IN THE STAIRWELL CONNECTED TO A LOCKABLE THERMOSTAT. UNIT HEATER SHALL BE A DAYTON #3UG13 (GRAINGER #3UG13) W/ 3.2 KW ELECTRIC HEAT @14.9 AMPS/208V/1Φ.

UH-4 / UH-5 — CONTRACTOR SHALL INSTALL AN ELECTRIC TYPE UNIT HEATER IN THE LOADING AREA CONNECTED TO A LOCKABLE THERMOSTAT. UNIT HEATER SHALL BE A DAYTON #3UG13 (GRAINGER #3UG13) W/ 5.0 KW ELECTRIC HEAT @20.9 AMPS/208V/1Φ.

AIR DEVICE SCHEDULE

(A) 20" DIAMETER EYE-BALL NOZZLE SUPPLY DIFFUSER
PROVIDE #01 ALUMINUM COLOR.
TITUS MODEL #TND-AA-01.

(B) 2' SIDE WALL "FLOWBAR" SLOT DIFFUSER
TITUS MODEL #FL15-2-JT W/ 10" INLET
JET THROW WITH TITUS PLENUM.

(C) 24" X 24" 4-WAY LAY-IN SUPPLY AIR DIFFUSER
W/ ROUND NECK AND OPPOSED BLADE DAMPER.
TITUS MODEL #TM5, FRAME TYPE 3.

(D) 6" X 12" 2-WAY SUPPLY AIR DIFFUSER
W/ ROUND NECK AND OPPOSED BLADE DAMPER.
TITUS MODEL #TDC, FRAME TYPE 1, PATTERN #A2.

(E) 9" X 9" 2-WAY SUPPLY AIR DIFFUSER
W/ ROUND NECK AND OPPOSED BLADE DAMPER.
TITUS MODEL #TDC, FRAME TYPE 1, PATTERN #G2.

(F) 12" X 24" LAY-IN RETURN AIR GRILLE
1" x 1" x 1" CUBE CORE CONSTRUCTION
TITUS MODEL #50F, FRAME TYPE 3.

(G) 10" X 10" RETURN AIR GRILLE
1" x 1" x 1" CUBE CORE CONSTRUCTION
TITUS MODEL #50F, FRAME TYPE 1.

FAN SCHEDULE

MARK	EF - 1 & 2	EF-3
SERVICE	EXHAUST	EXHAUST
CONTROL	SWITCH	REFER TO GARAGE EXHAUST
TYPE	CEILING MOUNTED	WALL
AIR FLOW (CFM)	80	400-940
TOTAL S. P. (IN. W.G.)	0.50	1.1
SOUND CRITERIA (SONES)	3.4	XXXX
DRIVE TYPE	DIRECT	DIRECT
FAN SPEED (RPM)	1000	1725
MOTOR SIZE	100 WATTS	1/2 HP
VOLTS - PHASE	120/1	120/1
MANUFACTURER	COOK	GREENHECK
MODEL	GC-144	SEI-14-436-VG
APPROX WEIGHT (LBS)	15	35
NOTES:	1,2,3	REFER TO GARAGE EXHAUST

NOTES:
1. PROVIDE UNIT W/ GRAVITY BACKDRAFT DAMPER.
2. UNIT TO BE PROVIDED WITH FACTORY "PREWIRED" APPROVED MOTOR DISCONNECT DEVICES & MOTOR OVERLOAD PROTECTION.
3. UNIT CONTROLLED WITH LIGHTS IN ROOM.

GARAGE EXHAUST

THE GARAGE EXHAUST FAN SHALL BE MOUNTED HIGH ON THE WALL & MAINTAIN 10'-0" FROM ANY AIR INTAKE. THE EXHAUST FAN SHALL BE WALL MOUNTED & PROVIDED W/ A WEATHERHOOD W/ BIRDSCREEN, A GRAVITY DAMPER & AN INTERIOR GUARD.

CONTROLS SHALL COMPLY WITH 2018 IBC & 2018 IMC. CARBON MONOXIDE & NITROGEN DIOXIDE SENSORS SHALL BE UL-2075 LISTED.
THE FAN SHALL HAVE 2 SPEEDS. WHEN THE LIGHTS ARE "ON", THE FAN SHALL RUN ON LOW SPEED. WHEN THE CARBON MONOXIDE OR NITROGEN DIOXIDE DETECTORS ARE ACTIVATED, THE EXHAUST FAN SHALL RUN AT HIGH SPEED (0.75 CFM/SF EXHAUST).

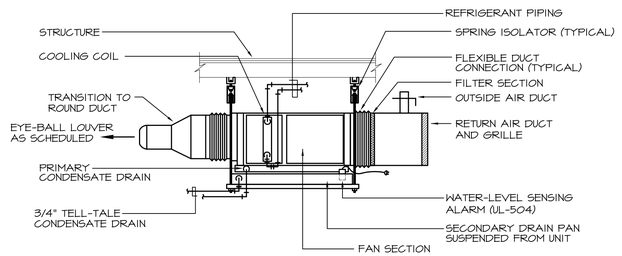
THE CONTRACTOR SHALL PROVIDE CUT SHEETS FOR ALL FANS TO THE ARCHITECT & OWNER FOR APPROVAL PRIOR TO ORDERING OR ANY WORK. THE FANS MUST BE APPROVED BY ARCHITECT/ OWNER PRIOR TO ANY WORK.

FURNACE POWER EXHAUST

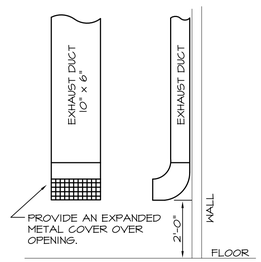
PE-1 THRU PE-10 — FIELD CONTROLS #PVG-100
4" VENT: UP TO 100,000 BTU INPUT @ 550°F
115V/1Φ, 2.1 AMPS

DEHUMIDIFIER SCHEDULE

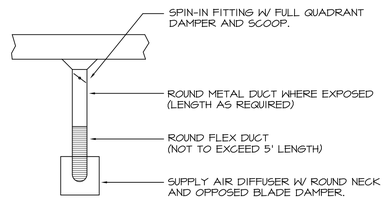
DH-1 — CONTRACTOR SHALL INSTALL A DEHUMIDIFIER HIGH ABOVE STORAGE UNIT.
FRAL #FDK-1005; 1100 CFM, 1500 W @ 208V/1Φ.



1 AIR HANDLING UNIT DETAIL
NO SCALE



2 EXHAUST DUCT DETAIL
NO SCALE



3 SUPPLY AIR DIFFUSER DETAIL
NO SCALE

DJ PENN
1301 Solana Blvd.
Bldg. 1, Suite 1420
Westlake, TX 76262
+1 817 410 2858
WWW.DONPENN.COM

DP EC

STATE OF MISSOURI — DJ PENN — NUMBER E-28507 — REGISTERED PROFESSIONAL ENGINEER
12/16/2021

LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : DJP
REVISIONS:

MECHANICAL SCHEDULES

SHEET NO.
M2.1

GENERAL
A. THE GENERAL CONDITIONS OF THE GENERAL SPECIFICATIONS, ALONG WITH ALL APPLICABLE INSTRUCTIONS TO BIDDERS SHALL FORM A PART OF THIS SECTION OF THE SPECIFICATIONS.

B. REFERENCE IS MADE TO REQUISITES FOR BIDDERS AND CONTRACTORS UNDER OTHER SECTIONS OF THESE SPECIFICATIONS, WHICH SHALL BE CONSIDERED BINDING, UNLESS OTHERWISE NOTED UNDER THIS SECTION.

SCOPE
EACH CONTRACTOR SHALL THOROUGHLY ACQUAINT HIMSELF WITH THE CONSTRUCTION DETAILS BEFORE SUBMITTING HIS BIS AS NO ALLOWANCES WILL BE MADE BECAUSE OF THE CONTRACTOR'S UNFAMILIARITY WITH THESE DETAILS. ALL PERFORMANCE OF CONSTRUCTION SHALL BE AS REQUIRED BY THE PAGE OF THE GENERAL CONSTRUCTION.

INSPECTION OF SITE
ALL PROPOSALS SHALL PRECLUDE THAT CONTRACTOR IS FAMILIAR WITH JOBSITE CONDITIONS AND UTILITY LOCATIONS AND THE LACK OF SPECIFIC INFORMATION ON THE DRAWINGS SHALL NOT RELIEVE THE CONTRACTOR OF ANY RESPONSIBILITY.

PERMITS
ALL PERMITS AND LICENSES NECESSARY FOR THE PROPER EXECUTION OF THE WORK SHALL BE SECURED AND PAID FOR BY THE SUBCONTRACTOR INVOLVED.

CODE REQUIREMENTS
ALL WORK UNDER THIS CONTRACT SHALL COMPLY WITH THE PROVISIONS OF THE SPECIFICATIONS, DRAWINGS OR AS DIRECTED BY THE OWNER, AND SHALL SATISFY ALL APPLICABLE CODES, ORDINANCES, OR REGULATIONS OF THE GOVERNING BODIES, WHETHER SO SHOWN OR NOT, AND ALL MODIFICATIONS REQUIRED BY SUCH AUTHORITIES SHALL BE MADE BY THE CONTRACTOR WITHOUT ANY ADDITIONAL COST TO THE OWNER.

MATERIALS AND WORKMANSHIP
A. ALL MANUFACTURED ARTICLES, MATERIALS, AND EQUIPMENT SHALL BE APPLIED AS RECOMMENDED BY THE MANUFACTURERS, AND UNLESS OTHERWISE SPECIFIED SHALL BE NEW, AND FREE FROM ANY DEFECTS. ALL LIKE MATERIALS USED SHALL BE OF THE SAME MANUFACTURE AND QUALITY UNLESS OTHERWISE SPECIFIED.

B. ALL WORK UNDER THIS CONTRACT SHALL BE PERFORMED BY COMPETENT WORKMEN AND EXECUTED IN A NEAT AND WORKMANLIKE MANNER. WORK SHALL BE PROPERLY PROTECTED DURING CONSTRUCTION, AND ON COMPLETION, THE INSTALLATION SHALL BE THOROUGHLY CLEANED AND ALL DEBRIS PRESENT AS A RESULT OF THIS CONTRACT SHALL BE REMOVED FROM THE PREMISES.

CODES AND REGULATIONS
EACH SUBCONTRACTOR SHALL COMPLY WITH ALL LAWS, ORDINANCES, RULES AND REGULATIONS BEARING ON THE CONDUCT OF THE WORK AS DRAWN OR SPECIFIED. IF A SUBCONTRACTOR OBSERVES THAT THE DRAWINGS AND SPECIFICATIONS ARE AT A VARIANCE, HE SHALL PROMPTLY NOTIFY THE GENERAL CONTRACTOR AND THE OWNER IN WRITING. IF ANY SUBCONTRACTOR PERFORMS ANY WORK KNOWING IT TO BE CONTRARY TO LAWS, ORDINANCES, RULES AND REGULATIONS AND WITHOUT GIVING SUCH NOTICE, THE SUBCONTRACTOR SHALL BEAR ALL COSTS ARISING THEREFROM.

PROTECTION OF WORK AND PROPERTY
A. EACH SUBCONTRACTOR SHALL CONTINUOUSLY MAINTAIN ADEQUATE PROTECTION OF ALL HIS WORK FROM DAMAGE AND SHALL PROTECT THE TENANT'S PROPERTY FROM INJURY OR LOSS ARISING FROM HIS WORK. HE SHALL MAKE GOOD ANY SUCH DAMAGE, INJURY, OR LOSS, EXCEPT SUCH AS MAY BE DIRECTLY DUE TO CAUSES BEYOND HIS CONTROL AND NOT TO HIS FAULT OR NEGLIGENCE. HE SHALL ADEQUATELY PROTECT ADJACENT PROPERTY AS WELL.

B. EACH SUBCONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE SAFETY OF THEIR EMPLOYEES ON THE WORK AND SHALL COMPLY WITH ALL PROVISIONS OF FEDERAL, STATE AND LOCAL BUILDING CODES AND SAFETY LAWS TO PREVENT ACCIDENTS OR INJURY TO PERSONA ON OR ADJACENT TO THE PREMISES WHERE THE WORK IS BEING PERFORMED. EACH SUBCONTRACTOR SHALL MAINTAIN ALL INSURANCE REQUIRED TO PROTECT HIMSELF, TENANT AND TENANT FOR THE DURATION OF THE WORK AGAINST PROPERTY DAMAGE AND PUBLIC LIABILITY.

CHANGES IN THE WORK
THE TENANT, WITHOUT INVALIDATING THE CONTRACT, MAY ORDER EXTRA WORK OR MAKE CHANGES BY ALTERING, ADDING TO OR DEDUCTING FROM THE WORK, THE CONTRACT SUM BEING ADJUSTED ACCORDINGLY.

COOPERATION
ALL WORK UNDER THESE SPECIFICATIONS SHALL BE ACCOMPLISHED IN CONJUNCTION WITH OTHER CONTRACTORS AND TRADES OF THIS PROJECT IN A MANNER WHICH WILL ALLOW EACH CONTRACTOR AND TRADE ADEQUATE TIME AT THE PROPER STAGE OF CONSTRUCTION TO FULFILL HIS CONTRACTS. REFERENCE SHALL BE MADE TO THE TENANT FOR INSTRUCTIONS SHOULD ANY QUESTIONS ARISE BETWEEN TRADES AS TO THE PLACING OF LINES, DUCTS, CONDUITS, FIXTURES, OR EQUIPMENT, OR SHOULD IT APPEAR DESIRABLE TO REMOVE ANY GENERAL CONSTRUCTION WHICH WOULD AFFECT THE APPEARANCE OF STRENGTH OF THE STRUCTURE.

SUBSTITUTION OF MATERIALS
MANUFACTURER'S NAMES ARE LISTED HEREIN TO ESTABLISH A STANDARD. THE PRODUCTS OF OTHER MANUFACTURERS WILL BE ACCEPTABLE, IF IN THE OPINION OF THE TENANT, THE SUBSTITUTE MATERIAL IS OF A QUALITY AS GOOD OR BETTER THAN THE MATERIAL SPECIFIED, AND WILL SERVE WITH EQUAL EFFICIENCY AND DEPENDABILITY, THE PURPOSE FOR WHICH THE ITEMS SPECIFIED WERE INTENDED.

SHOP DRAWINGS
SHOP DRAWINGS AND CATALOGUE DATA ON ALL MAJOR ITEMS OF EQUIPMENT AND SYSTEMS, AND SUCH OTHER ILLUSTRATIVE MATERIAL AS MAY BE CONSIDERED NECESSARY BY THE TENANT, SHALL BE SUBMITTED BY THIS CONTRACTOR IN ADEQUATE TIME TO PREVENT DELAY AND CHANGES DURING CONSTRUCTION.

DRAWINGS AND SPECIFICATIONS
A. THE DRAWINGS SHOW DIAGRAMMATICALLY THE LOCATIONS OF THE VARIOUS LINES, DUCTS, CONDUITS, FIXTURES, AND EQUIPMENT AND THE METHOD OF CONNECTING AND CONTROLLING THEM. IT IS NOT INTENDED TO SHOW EVERY CONNECTION IN DETAIL AND ALL FITTINGS REQUIRED FOR A COMPLETE SYSTEM.

B. SHOULD ANY CHANGES BE DEEMED NECESSARY BY THE CONTRACTOR IN ITEMS SHOWN ON CONTRACT DRAWINGS, THE SHOP DRAWINGS, DESCRIPTIONS, AND THE REASON FOR THE PROPOSED CHANGES SHALL BE SUBMITTED TO THE OWNER FOR APPROVAL.

RESPONSIBILITY
A. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE SATISFACTORY AND COMPLETE EXECUTION OF ALL WORK INCLUDED IN HIS CONTRACT. HE SHALL PRODUCE COMPLETE FINISHED OPERATING SYSTEMS AND PROVIDE ALL INCIDENTAL ITEMS REQUIRED AS PART OF HIS WORK, REGARDLESS OF WHETHER SUCH ITEM IS PARTICULARLY SPECIFIED OR INDICATED.

B. CONTRACTOR SHALL SUPPLY TO ARCHITECT AND OWNER A CERTIFIED BALANCE REPORT AT COMPLETION OF PROJECT.

HEATING, VENTILATING AND AIR CONDITIONING
GENERAL
A. THE WORK COVERED BY THIS SECTION OF THESE SPECIFICATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE RESPECTIVE DRAWINGS, INFORMATION, OR INSTRUCTIONS TO BIDDERS, AND THE GENERAL CONDITIONS, ADDENDA, OR DIRECTIVES WHICH MAY BE ISSUED BY THE OWNER, HEREWITH, OR OTHERWISE, SHALL BE COMPLIED WITH IN EVERY RESPECT.

B. THE LISTING HEREIN OF AN ARTICLE OR MATERIAL, OPERATION OR METHOD, REQUIRES THAT THE CONTRACTOR SHALL FURNISH AND INSTALL EACH ITEM LISTED, UNLESS SPECIFICALLY NOTED TO THE CONTRARY. THE CONTRACTOR SHALL PERFORM EACH OPERATION PRESCRIBED OR LISTED ACCORDING TO THE CONDITIONS STATED.

EXAMINATION OF SITE
ALL CONTRACTORS SUBMITTING PROPOSALS FOR THIS WORK SHALL FIRST EXAMINE THE SITE AND ALL CONDITIONS THEREON AND/OR THEREIN. ALL PROPOSALS SHALL TAKE INTO CONSIDERATION ALL SUCH CONDITIONS AS MAY AFFECT THE WORK UNDER THIS CONTRACT.

SCOPE
FURNISH ALL MATERIALS, EQUIPMENT, AND LABOR NECESSARY FOR A COMPLETE FULLY OPERATIVE HEATING, VENTILATING, AND AIR CONDITIONING SYSTEM EXCEPT AS SPECIFICALLY EXCLUDED BY THE DRAWINGS, AND/OR TENANT'S DIRECTIONS.

EQUIPMENT
A. AIR CONDITIONING UNITS - UNITS SHALL BE FACTORY ASSEMBLED AND PRE-TESTED INCLUDING FANS, MOTORS, COILS, FILTERS, VARIABLES PITCH DRIVES, ETC. ALL UNITS SHALL BE EQUIPPED WITH AN ECONOMIZER PACKAGE AND RELIEF DAMPER. UNITS SHALL HAVE NET CAPACITY RATINGS DETERMINED AT THE SPECIFIED DESIGN CONDITIONS. THESE NET CAPACITY RATINGS SHALL BE DETERMINED BY DEDUCTING FOR MOTOR HEAT. THE AIR CONDITIONING UNITS SUPPLIED SHALL HAVE A TOTAL SYSTEM ENERGY RATIO (EER) AS PER CITY CODE. THIS EER SHALL BE DETERMINED BY DIVIDING THE NET CAPACITY AS DEFINED ABOVE BY THE TOTAL INPUT WATTAGE. THE TOTAL INPUT WATTAGE IS TO INCLUDE THE WATTAGE OF ALL FAN MOTORS AND ASSOCIATED EQUIPMENT. CONTRACTOR HILL FURNISH VIBRATION ISOLATION AS REQUIRED AND RECOMMENDED BY EQUIPMENT MANUFACTURER.

B. AIR COOLED CONDENSING UNITS - UNITS SHALL BE FACTORY ASSEMBLED AND PRE-TESTED, AND WILL INCLUDE HEAVY GALVANIZED STEEL HOUSING FINISHED WITH BAKED ENAMEL. AIR COOLED CONDENSERS WITH COPPER TUBES AND ALUMINUM FINS, CONTROL PANEL, COMPRESSOR HIGH AND LOW PRESSURE CUTOUTS, MUFFLERS, CRANKCASE HEATERS, LIQUID RECEIVE, ETC. COMPRESSORS SHALL BE OF THE HERMETICALLY SEALED OR SEMI-HERMETICALLY SEALED TYPE. (LOW AMBIENT CONTROL STD.)

C. CENTRAL STATION AIR HANDLING EQUIPMENT - (IF SCHEDULED ON DRAWINGS) SHALL BE LOW TO MEDIUM PRESSURE SINGLE ZONE DRAW-THRU UNITS EQUAL TO TRANE OR CARRIER. THEY SHALL BE COMPLETE WITH COOLING AND/OR HEATING COILS AND ACCESSORIES AS SPECIFIED ON THE PLANS.

RELIEF AIR FANS
1. GRAVITY RELIEF - EQUAL TO BREIDERT TYPE "RLO" WITH INTEGRAL BACKDRAFT DAMPER AND INSECT SCREEN.

2. POWER RELIEF - EQUAL TO BREIDERT TYPE "LO-SET" SET WITH MOTORIZED DAMPER AND INTEGRAL BACKDRAFT DAMPER AND INSECT SCREEN.

D. ELECTRIC STRIP HEATER - EACH STRIP HEATER SHALL BE CONSTRUCTED TO SLIP INTO THE DUCT THROUGH A RECTANGULAR OPENING IN THE SIDE. EACH STRIP HEATER SHALL BE FURNISHED COMPLETE WITH BUILT-IN MAGNETIC CONTACTORS, AIR FLOW SWITCH, AND FACTORY PREWIRED TO TERMINAL STRIPS FOR LINE AND CONTROL CONNECTIONS IN THE FIELD. A THERMAL CUTOUT SHALL BE FURNISHED WITH EACH STRIP HEATER TO PROTECT THE HEATER AGAINST AIR FAILURE. THE COMPLETE HEATING UNIT SHALL BE LISTED BY UNDERWRITER'S LABORATORIES, INC. COILS SHALL BE ARRANGED FOR MINIMUM TWO-STAGE CONTROL 10KW AND ABOVE.

E. FILTERS - FILTERS SHALL BE OF THE THROW AWAY TYPE WHEREVER POSSIBLE. IF FILTERS ARE OF NECESSITY THE PERMANENT TYPE, THEN THEY MUST BE OF THE CLEANABLE, HIGH VELOCITY TYPE AND SHALL BE AMERICAN AIR FILTERS, AIR MAYS, EVANS, OR APPROVED EQUAL. FILTERS SHALL BE OF THE OPTIMUM THICKNESS AND DESIGN FACE VELOCITY SHALL NOT EXCEED 550 FPM. INSTALLATION OF THE AIR CONDITIONING UNIT SHALL BE SUCH SO AS TO NOT IMPEDE ACCESS TO THE FILTERS. IF THE FILTERS ARE IN FRAME HOLDERS, THEN SUCH HOLDERS SHALL BE PROVIDED WITH A LEFT HANDLE.

G. ALL SINGLE STAGE UNITS WILL BE EQUIPPED WITH MULTI-STAT HUMIDISTAT. A DUAL STAGE UNIT WILL BE EQUIPPED WITH A DAY/NIGHT HUMIDISTAT ARRANGEMENT.
DESIGN AND STANDARD CONDITIONS FOR HUMIDISTAT OPERATION WILL BE AS FOLLOWS:

COOLING: 75 F MINIMUM OCCUPIED COOLING TEMPERATURE
85 F COOLING NIGHT SETBACK.

HEATING: 72 F MAXIMUM OCCUPIED HEATING TEMPERATURE
55 F HEATING NIGHT SETBACK.

DUCTWORK
A. SQUARE AND RECTANGULAR DUCTWORK SHALL BE CONSTRUCTED OF NEW GALVANIZED PRIME GRADE SHEET STEEL OF THE FOLLOWING GAUGES:

DUCT SIZE	GAUGE
12" AND LESS	NO. 26 U.S. GAUGE
13" TO 30"	NO. 24 U.S. GAUGE
31" TO 54"	NO. 22 U.S. GAUGE
55" TO 84"	NO. 20 U.S. GAUGE
85" AND OVER	NO. 18 U.S. GAUGE

B. SQUARE AND RECTANGULAR DUCTWORK SHALL BE CONSTRUCTED AS FOLLOWS:

SIZE	METHOD
17" AND LESS	"S" AND DRIVE CLEATS
18" TO 30"	"L" STANDING SEAMS ON 3'-0" CENTERS
31" TO 54"	1-1/4" STANDING SEAMS ON 3'-0" CENTERS

ROUND DUCTWORK SHALL BE CONSTRUCTED OF NEW GALVANIZED PRIME GRADE SHEET STEEL OF THE FOLLOWING GAUGES:

DUCT SIZE (DIAMETER)	DUCTS	FITTINGS
8" AND LESS	24	22
9" TO 18"	22	20
19" TO 30"	20	18

ALL 90 DEGREE ELBOWS FOR ROUND DUCTWORK SHALL BE FIVE (5) PIECE. ALL LONGITUDINAL SEAMS SHALL BE FORMED BY PITTSBURGH LOCKS. JOINTS SHALL BE SWAGGED WITH ONE-HALF INCH (1/2") OVERLAP.

C. ALL SUPPLY AIR DUCTS (HEATING AND COOLING) AND RETURN AIR DUCTS AND OUTSIDE AIR DUCTS SHALL BE GALVANIZED STEEL WITH MINIMUM 1-1/2" THICK ACOUSTICAL AND THERMAL INSULATION WITH AN R-VALUE OF 6.0 ALL EXHAUST AND RELIEF AIR DUCTS SHALL BE GALVANIZED STEEL.

D. CONTRACTOR HILL INSTALL INSECT SCREENS ON ALL DUCT OPENINGS WHICH LEAD TO OR ARE OUTDOORS. INSECT SCREENS SHALL BE 10 GAUGE, ONE-HALF INCH (1/2") MESH IN REMOVABLE GALVANIZED STEEL FRAMES.

E. ALL DUCTWORK SHALL BE DESIGNED IN ACCORDANCE WITH THE PROCEDURES DESCRIBED IN THE AMERICAN SOCIETY OF HEATING REFRIGERATION AND AIR CONDITIONING ENGINEERS GUIDE (2013 ASHRAE 90.1) AND FABRICATED AND INSTALLED IN ACCORDANCE WITH THE LATEST METHODS RECOMMENDED IN THE SHEETMETAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA) LOW VELOCITY DUCT MANUAL, LATEST EDITION.

HANGERS AND SUPPORTS
A. ALL HORIZONTAL DUCTS HAVING A DIMENSION OF 40 INCHES AND LESS SHALL BE SUPPORTED BY MEANS OF BAND IRON HANGERS OF NO. 18 U.S. GAUGE ATTACHED TO THE DUCT BY MEANS OF RIVETS, SCREWS, OR CLAMPS, AND FASTENED TO STRUCTURE ABOVE BY TOGGLE BOLTS OR OTHER MEANS. EACH SECTION OF DUCTWORK SHALL HAVE AT LEAST ONE PAIR OF SUPPORTS. VERTICAL DUCTS SHALL BE SUPPORTED WITH 1/4" x 1-1/4" x 1-1/4" ANGLES WHERE THEY PASS THROUGH THE FLOOR LINES.

B. ALL HORIZONTAL DUCTS HAVING A DIMENSION OF 40 INCHES AND MORE SHALL BE SUPPORTED BY MEANS OF ANGLE IRON TRAPEZE HANGERS. EACH SECTION OF DUCTWORK SHALL HAVE AT LEAST ONE PAIR OF SUPPORTS.

FLASHING
A. CONTRACTOR WILL PROVIDE WATER TIGHT 24 GA. SHEET METAL FLASHINGS AT ALL EXTERIOR WALLS AND ROOF PENETRATIONS.

B. ALL CUTTING OF ROOF OPENINGS, SUPPORTS FOR ROOF OPENINGS, PITCH PANS, ROOF CURBS, FLASHINGS, COUNTER FLASHINGS, REPAIR TO ROOF, ETC. ASSOCIATED WITH HVAC SUBCONTRACTOR SHALL BE THE RESPONSIBILITY AND PART OF THE CONTRACT HVAC SUBCONTRACTOR. HE SHALL EMPLOY THE OWNER'S ROOFERS FOR THIS WORK SO AS TO MAINTAIN THE ROOF BOND.

DAMPERS
A. SPLITTER DAMPERS SHALL BE FABRICATED OF SHEET STEEL NOT LESS THAN NO. 16 U.S. GAUGE WITH THE LEADING EDGE HEMMED. EACH DAMPER SHALL BE LARGE ENOUGH TO COVER THE SMALLER OF THE TWO OPENINGS IT CONTROLS. DAMPERS SHALL BE CONTROLLED AS FOLLOWS:

EXPOSED OR ACCESSIBLE DUCTWORK - LOCKING QUADRANTS EQUAL TO YOUNG REGULATOR NO. 1 WITH DAMPER ROD END BEARINGS ON OPPOSITE END.

CONCEALED DUCTWORK - LOCKING QUADRANT EQUAL TO YOUNG REGULATOR NO. 315 (CHROMIUM PLATED WITH DAMPER ROD END BEARINGS ON BOTH ENDS).

B. VOLUME DAMPERS SHALL BE OF THE OPPOSED INTERLOCKING TYPE AS MANUFACTURED BY AMERICAN FOUNDRY AND FURNACES CO. (AFFCO) OR EQUAL. BLADES SHALL BE OF NO. 16 GAUGE SHEET METAL AND SHALL NOT EXCEED 48" IN LENGTH OR 12" IN WIDTH. BLADES SHALL BE ON ONE-HALF INCH (1/2") DIAMETER RUSTPROOF AXLE. BEARINGS SHALL BE OF THE SELF-LUBRICATING FERRULE TYPE.

C. JOB FABRICATED TURNING VANES SHALL BE ACCEPTABLE IN SQUARE ELBOWS. PROVIDE AND INSTALL BARBER-COLMAN AIRTURNS OR EQUAL. TURNING VANES SHALL BE OF THE SAME GAUGE METAL AS THE DUCT IN WHICH THEY ARE INSTALLED. RADIUS ELBOWS SHALL HAVE A CENTER-LINE RADIUS OF ONE AND ONE-HALF (1-1/2) TIMES THE DUCT WIDTH.

FIBROUS GLASS DUCT SYSTEMS OPTION
AT HIS OPTION, THE CONTRACTOR MAY FURNISH OWENS-CORNING BOOFR OR BOOFRK OR EQUAL FOR ALL SUPPLY AND RETURN DUCTHORK WHERE THE AIR VELOCITY IS UNDER 2400 FPM, STATIC PRESSURE IS 2" OR LESS AND THE AIR TEMPERATURE IS 250 F OR LESS. SYSTEM SHALL BE FABRICATED, REINFORCED AND INSTALLED ACCORDING TO THE "SMACNA" PUBLICATION - FIBROUS GLASS DUCT CONSTRUCTION STANDARDS, FOURTH EDITION, 1975.

ALL JOINTS ARE TO BE SEALED WITH 2-1/2" "SMACNA" APPROVED PRESSURE SENSITIVE ALUMINUM TAPE MEETING AFTS 100-73 STANDARDS AND THE REQUIREMENTS OF U.L. 181. APPLICATION SHALL BE IN ACCORDANCE WITH AFTS 101-73. (REFER TO MANUFACTURER'S INSTRUCTION SHEET FOR SPECIFIC DETAILS FOR U.L. 181 REQUIREMENTS.) RECOMMEND FASSON 0805. DO NOT APPLY AT TEMPERATURE BELOW 32 F.

DUCTWORK - EXCEPTIONS
DUCTWORK FOR EXHAUSTING AIR OR OUTSIDE SUPPLY AIR SHALL BE ALL METAL AND CONSTRUCTED ACCORDING TO RECOMMENDED PRACTICES AS FOUND IN THE LATEST ISSUE OF ASHRAE.

SUPPORT OF DUCT SYSTEM
DUCTWORK SHALL BE SUPPORTED AT ALL TURNS AND TRANSITIONS AND NOT MORE THAN 8' O.C. FOR STRAIGHT DUCTS UP TO 35" TO 54" MAXIMUM DIMENSION, 6' O.C. AND DUCTS OVER 60: MAXIMUM DIMENSION, 4' O.C.

HANGER DESIGN SHALL BE AS DESCRIBED IN THE LATEST EDITION OF THE "SMACNA" MANUAL. REINFORCEMENT MEMBERS MAY BE USED TO SUPPORT THE DUCT SYSTEM PROVIDED DETAILS OUTLINED IN THE AFOREMENTIONED DOCUMENTS ARE ADHERED TO.

REINFORCEMENT
ALL DUCTS REQUIRING REINFORCEMENT SHALL BE REINFORCED ACCORDING TO THE LATEST EDITION OF "SMACNA" MANUAL.

MATERIALS FOR REINFORCEMENT MEMBERS SHALL BE GALVANIZED STEEL. ALL SCREWS AND WASHERS SHALL BE PLATED OR GALVANIZED.

ACCESSORY ITEMS
ALL MANUAL DAMPERS, FIRE DAMPERS, TURNING VANES, REGISTER CONNECTIONS, ACCESS DOORS OR OTHER ASSOCIATED ACCESSORIES SHALL BE INSTALLED ACCORDING TO THE LATEST PUBLICATION OF "SMACNA" MANUAL.

PIPING
A. PIPING AND FITTINGS SHALL BE OF THE HEIGHTS AND TYPES SHOWN ON THE DRAWINGS. SIZES SHOWN ON THE DRAWINGS ARE NOMINAL PIPE SIZES.

B. ALL PIPING SHALL BE INSTALLED PARALLEL TO, OR AT RIGHT ANGLES WITH THE BUILDING WALLS AND PARTITIONS AND SHALL BE INSTALLED WITH THE PROPER PITCH.

C. ALL PIPING SHALL BE UPENDED AND ROUNDED TO REMOVE ANY FOREIGN MATTER PRESENT AND SHALL BE SWABBED IF NECESSARY.

PLUMBING
MATERIALS
A. SANITARY SEWER - CAST IRON OR SCH. 40 PVC MAY BE USED UNLESS OWNER OR CITY REQUIREMENTS DIFFER. VENTS SHALL BE SCH. 40 PVC UNLESS OWNER OR CITY REQUIREMENTS REQUIRE CAST IRON. 40

B. DOMESTIC WATER AND HOT WATER PIPING SHALL BE COPPER TYPE "L" INSULATED WITH ARMAFLEX OR EQUIVALENT INSULATING TO A THICKNESS OF 1".

C. GAS PIPING SHALL BE BLACK STEEL SCHEDULED 40 WITH SCREWED FITTINGS.

D. CHILLED WATER SUPPLY AND RETURN PIPING SHALL BE GALVANIZED STEEL PIPE (STANDARD WALL) OR TYPE "M" HARD COPPER TUBING. ALL PIPING SHALL BE INSULATED WITH 1" THICK OWENS CORNING FIBERGLASS 25 ASJ/SSL OR EQUAL.

HANGERS AND SUPPORTS
HORIZONTAL PIPING SHALL BE SUPPORTED AT INTERVALS NOT TO EXCEED 10'-0" WITH SWIVEL SPLIT PIPE HANGERS EQUAL TO CRANE NO. 194F OR GRINNELL NO. 104. VERTICAL PIPING SHALL BE SUPPORTED BY MEANS OF WROUGHT IRON CLAMPS SUSPENDED FROM THE UNDERSIDE OF STRUCTURE WITH HANGER RODS.

CLEANOUTS
CLEANOUTS SHALL BE AS MANUFACTURED BY JOSAM, ZURN MFG. CO. OR EQUAL AND SHALL BE INSTALLED AT ALL BENDS, ANGLES, AND ENDS OF ALL WASTE AND SEWER LINES, AS CALLED FOR ON THE DRAWINGS, AND AS REQUIRED BY LOCAL CODES. ALL CLEANOUTS SHALL BE BROUGHT TO GRADE, AND IN ALL CASES, SHALL BE PROVIDED WITH SUFFICIENT SPACE FOR RODDING.

VALVES
ALL VALVES SHALL BE BRASS AND MANUFACTURED BY CRANE, NIBCO, STOCKHAM, LUNKENHEIMER, NORDSTROM, GRINNELL OR EQUAL.

SPRINKLER SYSTEM

A. SHOP DRAWINGS - THE SPRINKLER CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE OWNER'S INSURANCE CARRIER & TO THE APPROPRIATE RATING BUREAU FOR THEIR APPROVAL. A COPY OF THE APPROVAL LETTER FROM THE RATING BUREAU SHALL BE FORWARDED TO THE OWNER.

B. SPRINKLER HEADS - SHOW WINDOWS - HIGH TEMPERATURE, CHROME PLATED, COMPLETELY RECESSED TYPE. SALES AREA - CHROME PLATED, SEMI-RECESSED TYPE. STORAGE, TOILET AND WORK AREAS WITH CEILINGS - BRASS, PENDANT TYPE. STORAGE AND WORK AREAS WITHOUT CEILINGS - BRASS UPRIGHT TYPE. (REFER TO DWG. M.1)

ROUGH-INS
FOR SECOND LEVEL LOCATIONS, THE GENERAL CONTRACTOR SHALL RUN ALL LINES REQUIRED FOR PLUMBING ROUGH-INS TIGHT AGAINST THE UNDERSIDE OF THE SECOND FLOOR LEVEL. THE SECOND FLOOR STRUCTURAL SLAB SHALL BE CORED AS REQUIRED TO INSTALL THESE ITEMS AT THE LOCATIONS SHOWN ON THE PLANS.

TESTING AND ADJUSTING
CONTRACTOR WILL DEMONSTRATE OPERATION OF SYSTEM TO FULL SATISFACTION OF OWNER, WILL BALANCE AIR FLOW IN ACCORDANCE WITH AIR QUANTITIES ON DRAWINGS AND WILL RECORD VOLUME READINGS IN ACCORDANCE WITH ASHRAE AND PROVIDE SAME TO OWNER. GAS PIPING SHALL WITHSTAND AIR PRESSURE TESTING PER UNIFORM PLUMBING CODE.

GUARANTEE
ALL MATERIALS, EQUIPMENT, AND WORKMANSHIP SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER DATE OF ACCEPTANCE. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND ACCEPTANCE BY OWNER SHALL BE A CONDITION OF THIS CONTRACT. ALL WORK FOUND TO BE DEFECTIVE SHALL BE REPAIRED OR REPLACED BY THIS SUBCONTRACTOR WITHOUT ADDITIONAL CHARGE TO THE OWNER.

MECHANICAL
TEMPORARY SERVICES
THE CONTRACTOR SHALL PROVIDE THE FOLLOWING SPECIFIC ITEMS OF TEMPORARY SERVICES:
A. TELEPHONE - THE GENERAL CONTRACTOR SHALL INSTALL A JOB SITE TELEPHONE AND NOTIFY OWNER & ARCHITECT OF THE TELEPHONE NUMBER AND THE NAME OF THE SUPERINTENDENT.

B. TEMPORARY WATER - WATER REQUIRED IN THE PERFORMANCE OF THE CONTRACT SHALL BE PROVIDED AND PAID FOR BY THE CONTRACTOR. WATER USED FOR HUMAN CONSUMPTION SHALL CONFORM TO REQUIREMENTS OF STATE AND LOCAL AUTHORITIES FOR POTABLE WATER.

C. TEMPORARY ELECTRICITY - TEMPORARY ELECTRIC SERVICE REQUIRED IN THE PERFORMANCE OF THE CONTRACT SHALL BE FURNISHED AND PAID FOR BY THE CONTRACTOR WHO SHALL FURNISH, INSTALL, AND MAINTAIN ALL TEMPORARY OVERHEAD CONSTRUCTION, METERS, DROPS, AND OTHER WIRING AND FITTINGS FOR BOTH LIGHT AND POWER AT LOCATIONS REQUIRED IN THE WORK AND SHALL BEAR THE COST OF MAKING THE SERVICE CONNECTIONS. BEFORE FINAL ACCEPTANCE, TEMPORARY ELECTRICAL SERVICE FACILITIES INSTALLED BY THE CONTRACTOR SHALL BE REMOVED AND THE SERVICE CONNECTIONS SEVERED IN ACCEPTABLE MANNER.

D. TEMPORARY HEAT - WHEN REQUIRED FOR PROPER INSTALLATION OR PROTECTION OF ANY PORTION OF THE WORK, THE CONTRACTOR SHALL FURNISH AND INSTALL TEMPORARY HEATING UNITS AS APPROVED BY THE OWNER OR LOCAL AUTHORITY.

NOTE FOR GENERAL CONTRACTOR
IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO MAKE USE OF APPLICABLE NOTES AND SPECIFICATIONS LISTED ON THIS SHEET AS THEY MAY PERTAIN TO THE SPECIFIC JOB.

WATER HAMMER ARRESTORS

A. INSTALL STAINLESS STEEL BELLOWS TYPE WATER HAMMER ARRESTORS ON WATER LINES CONNECTED TO FLUSH VALVES AND TO GROUPS OF FIXTURES. PROVIDE ACCESS DOORS AT ALL WATER HAMMER ARRESTOR LOCATIONS, SIMILAR TO WADE. SELECTION OF WATER HAMMER ARRESTORS SHALL BE PER PLUMBING AND DRAINAGE INSTITUTE RATING FOR FIXTURE UNIT CAPACITY SERVED. REFER TO PLUMBING RISERS OR PLANS FOR LOCATION AND SIZE.

WATER PIPING

A. PROVIDE WATER CUT-OFF GATE VALVE AND A WALL HYDRANT DRAIN ON WATER SUPPLY LINE WHERE IT ENTERS BUILDING. PROVIDE CUT-OFF GATE VALVES TO ZONE BUILDING AS REQUIRED AND AS INDICATED ON DRAWINGS.

B. PROVIDE WATER HAMMER ARRESTORS WHERE INDICATED ON DRAWINGS.

C. NOTIFY ENGINEER ONE WEEK PRIOR TO STERILIZATION OF DOMESTIC WATER PIPING SYSTEM SO THAT PROCEDURE MAY BE WITNESSED.

D. BEFORE STERILIZING, THOROUGHLY FLUSH ALL DOMESTIC WATER LINES.

E. DISINFECT LINES WITH FLUID CHLORINE OR HYPOCHLORITE. INTRODUCE SUFFICIENT CHLORINE TO PROVIDE AN INITIAL CONCENTRATION OF 50 P.P.M. DISINFECT FOR 24 HOUR PERIOD, OPENING AND CLOSING VALVES IN SYSTEM AT VARIOUS POINTS DURING DISINFECTION. FOLLOWING CHLORINATION, THOROUGHLY FLUSH COMPLETE SYSTEM UNTIL REPLACEMENT WATER IS COMPARABLE IN QUALITY TO WATER FROM THE WATER SUPPLY SYSTEM. SUBMIT CERTIFICATION THAT SPECIFICATION AND ALL ORDINANCES AND REGULATIONS HAVE BEEN COMPLIED WITH.

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STATE OF MISSOURI
DJ PENN
NUMBER E-28807
REGISTERED PROFESSIONAL ENGINEER
12/16/2021

LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : DJP
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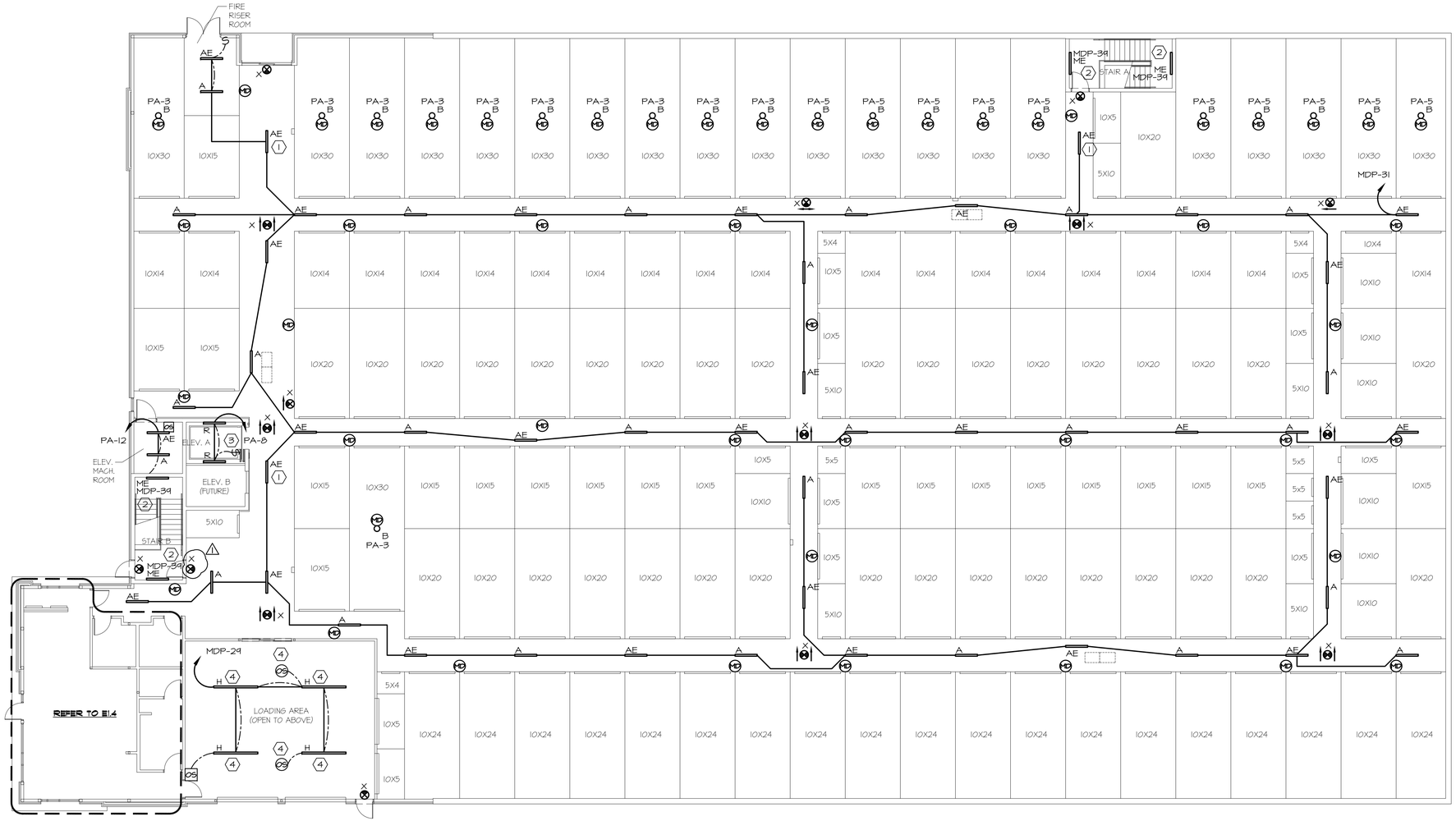
MECHANICAL SPECIFICATIONS

SHEET NO.
M3.1



1 1ST FLOOR - LIGHTING PLAN
SCALE: 3/32"=1'-0"

COORDINATION NOTE :

THE GENERAL CONTRACTOR SUPERINTENDENT SHALL PAY CLOSE ATTENTION TO THE COORDINATION BETWEEN THE SPRINKLER CONTRACTOR & MECHANICAL CONTRACTOR.

ALL SUB-CONTRACTORS ARE TO COORDINATE THEIR WORK WITH THE OTHER DISCIPLINES TO PROVIDE SPACE FOR THE LAYOUT OF EQUIPMENT, LIGHTS, DUCTWORK, SPRINKLERS, ETC.

THE SPRINKLER CONTRACTOR & MECHANICAL CONTRACTOR SHALL COORDINATE CLOSELY.

NOTE : ME
ALL HALLWAY LIGHTING SHALL BE ON MOTION DETECTORS. COORDINATE ALL MOTION DETECTOR LOCATIONS & LIGHTS TO BE ACTIVATED WITH OWNER PRIOR TO FINAL INSTALLATION.

GENERAL LIGHTING NOTES :

1. REFER TO SHEET "MEP1" FOR EXTERIOR LIGHTING.
2. ALL STORAGE UNIT LIGHTING "B" CONTROLLED WITH OCCUPANCY SENSORS.
3. ALL EXIT & EMERGENCY LIGHTS SHALL BE CONNECTED TO NEAREST GENERAL LIGHTING CIRCUIT AND REMAIN UN-SWITCHED.

KEYED LIGHTING NOTES :

1. LIGHT FIXTURE TO REMAIN "ON" AT ALL TIMES.
2. LIGHT FIXTURE TO REMAIN "ON" AT ALL TIMES. MOUNT BOTTOM OF FIXTURE @ 8'-0" AFF.
3. LIGHT MOUNTED IN ELEVATOR PIT. LOCATE SWITCH @ ACCESS TO PIT. COORDINATE ON-SITE. ELEVATOR HOISTWAY LIGHTING SHALL NOT BE CONNECTED TO THE LOAD SIDE OF THE GFCI RECEPTACLE.
4. MOUNT ON STRUCTURE ABOVE. FIELD COORDINATE LOCATION.

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LAKEWOOD STORAGE

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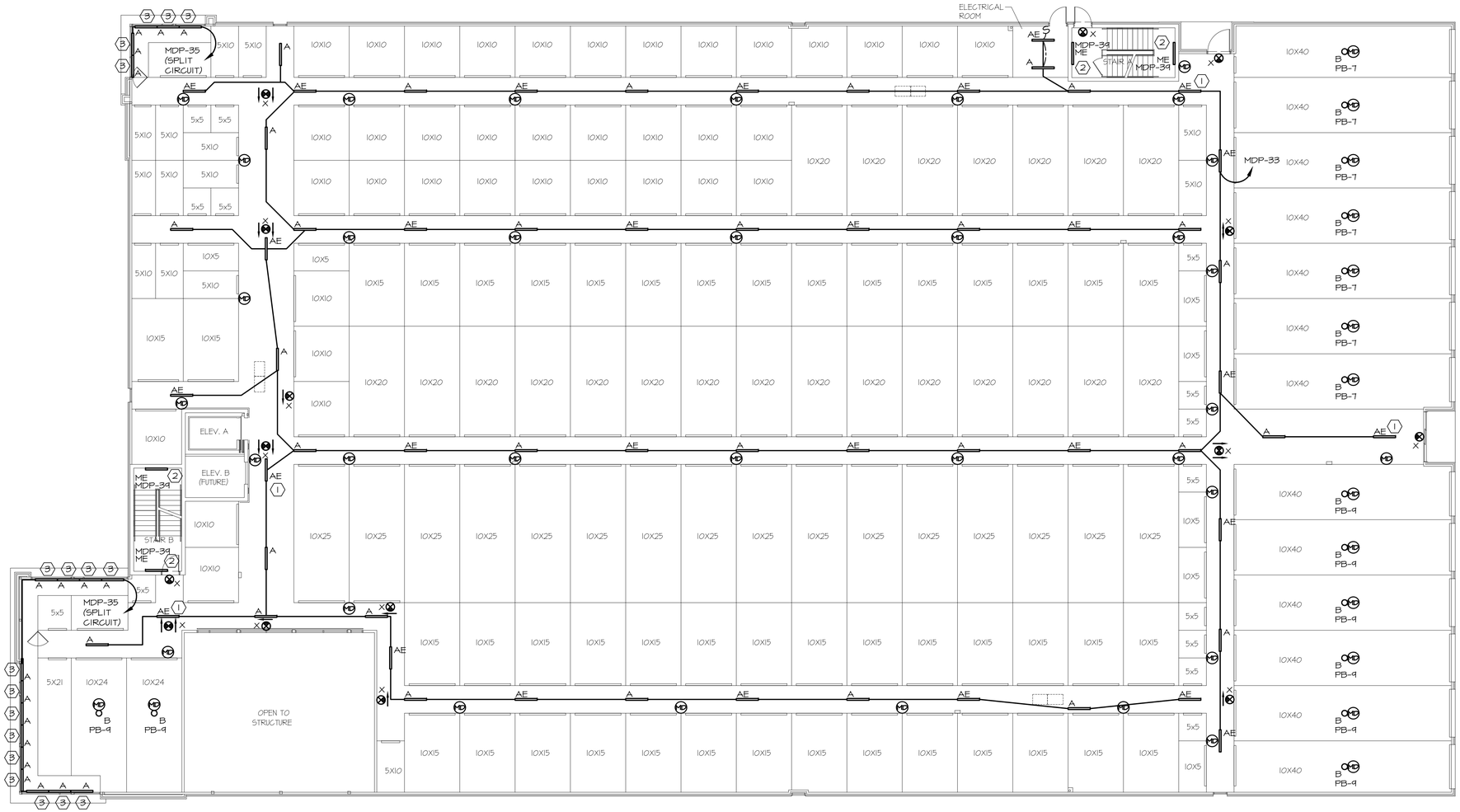
1ST FLOOR LIGHTING

SHEET NO.
E1.1



COORDINATION NOTE :

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THE SPRINKLER CONTRACTOR & MECHANICAL CONTRACTOR SHALL COORDINATE CLOSELY.

NOTE : (MD)
ALL HALLWAY LIGHTING SHALL BE ON MOTION DETECTORS. COORDINATE ALL MOTION DETECTOR LOCATIONS & LIGHTS TO BE ACTIVATED WITH OWNER PRIOR TO FINAL INSTALLATION.

1 2ND FLOOR - LIGHTING PLAN

SCALE: 3/32"=1'-0"

GENERAL LIGHTING NOTES :

1. REFER TO SHEET "MEP1" FOR EXTERIOR LIGHTING.
2. ALL STORAGE UNIT LIGHTING "B" CONTROLLED WITH BUILT-IN OCCUPANCY SENSORS.
3. ALL EXIT & EMERGENCY LIGHTS SHALL BE CONNECTED TO NEAREST GENERAL LIGHTING CIRCUIT AND REMAIN UN-SWITCHED.

KEYED LIGHTING NOTES :

(1) LIGHT FIXTURE TO REMAIN "ON" AT ALL TIMES.

(2) LIGHT FIXTURE TO REMAIN "ON" AT ALL TIMES. MOUNT BOTTOM OF FIXTURE @ 8'-0" AFF.

(3) LIGHT FIXTURE TO REMAIN "ON" AT ALL TIMES. MOUNT FIXTURES ABOVE WINDOW.

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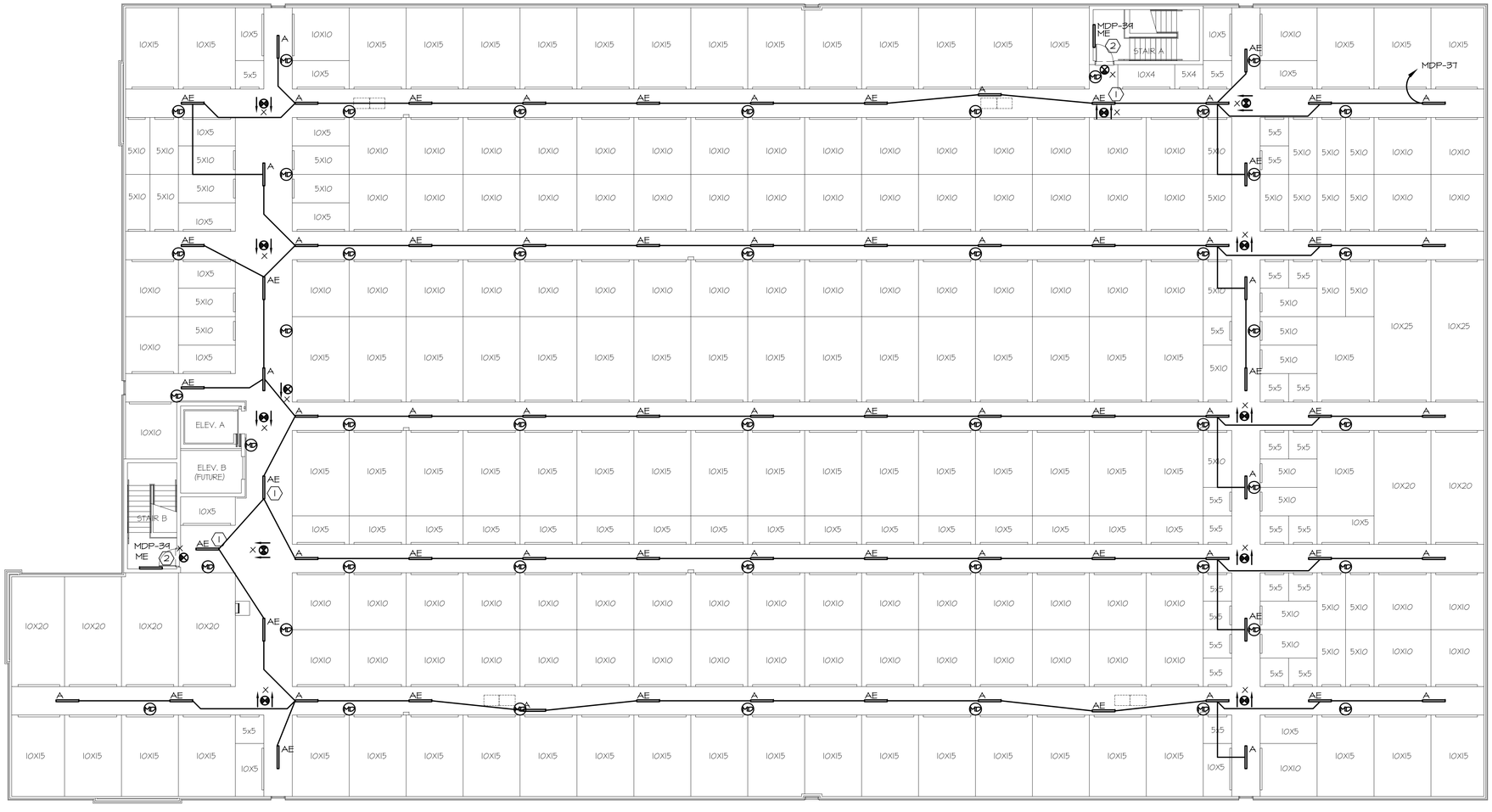
2ND FLOOR LIGHTING

SHEET NO.
E1.2



COORDINATION NOTE :

THE GENERAL CONTRACTOR SUPERINTENDENT SHALL PAY CLOSE ATTENTION TO THE COORDINATION BETWEEN THE SPRINKLER CONTRACTOR & MECHANICAL CONTRACTOR.

ALL SUB-CONTRACTORS ARE TO COORDINATE THEIR WORK WITH THE OTHER DISCIPLINES TO PROVIDE SPACE FOR THE LAYOUT OF EQUIPMENT, LIGHTS, DUCTWORK, SPRINKLERS, ETC.

THE SPRINKLER CONTRACTOR & MECHANICAL CONTRACTOR SHALL COORDINATE CLOSELY.

NOTE : (MS)
ALL HALLWAY LIGHTING SHALL BE ON MOTION DETECTORS. COORDINATE ALL MOTION DETECTOR LOCATIONS & LIGHTS TO BE ACTIVATED WITH OWNER PRIOR TO FINAL INSTALLATION.

1 3RD FLOOR - LIGHTING PLAN

SCALE: 3/32"=1'-0"

GENERAL LIGHTING NOTES :

1. REFER TO SHEET "MEP1" FOR EXTERIOR LIGHTING.
2. ALL STORAGE UNIT LIGHTING "B" CONTROLLED WITH BUILT-IN OCCUPANCY SENSORS.
3. ALL EXIT & EMERGENCY LIGHTS SHALL BE CONNECTED TO NEAREST GENERAL LIGHTING CIRCUIT AND REMAIN UN-SWITCHED.

KEYED LIGHTING NOTES :

(1) LIGHT FIXTURE TO REMAIN "ON" AT ALL TIMES.

(2) LIGHT FIXTURE TO REMAIN "ON" AT ALL TIMES. MOUNT BOTTOM OF FIXTURE @ 8'-0" AFF.

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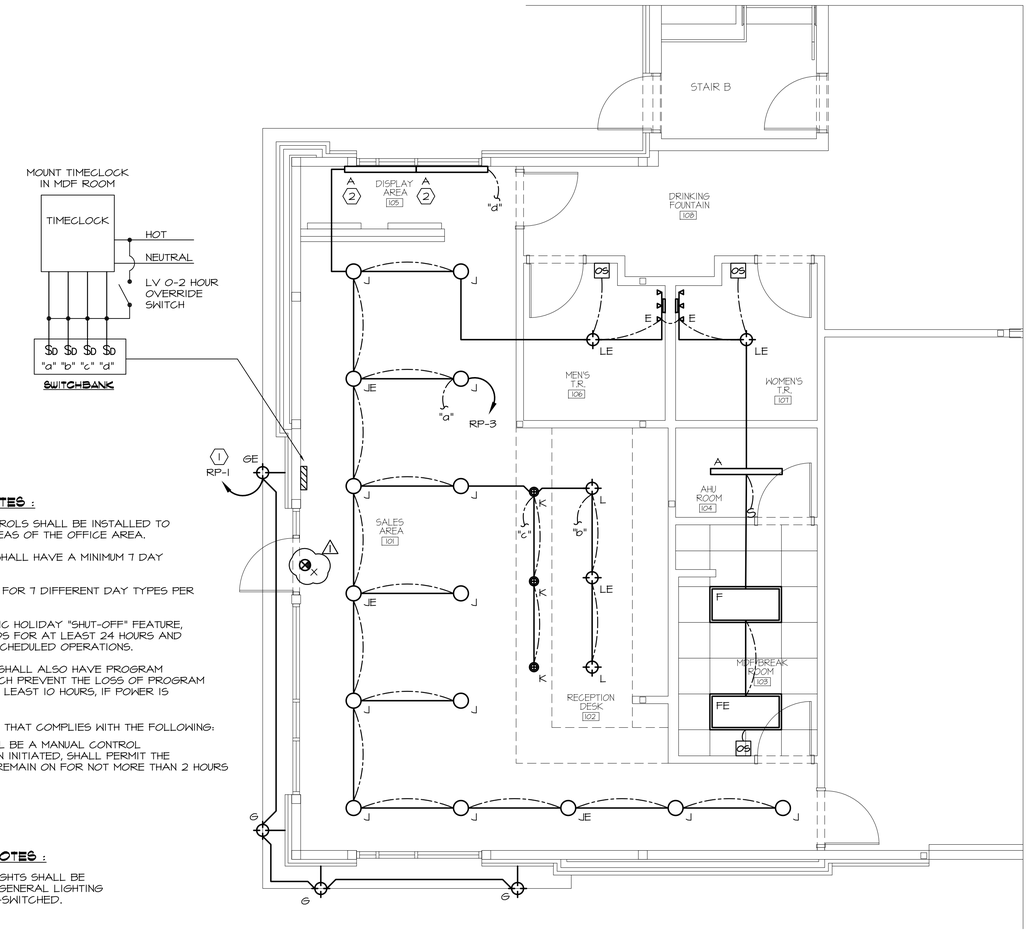
3RD FLOOR LIGHTING

SHEET NO.

E1.3



LIGHTING CONTROL NOTES :

AUTOMATIC TIME SWITCH CONTROLS SHALL BE INSTALLED TO CONTROL LIGHTING IN ALL AREAS OF THE OFFICE AREA.

1. AUTOMATIC TIME SWITCHES SHALL HAVE A MINIMUM 7 DAY CLOCK, AND
2. BE CAPABLE OF BEING SET FOR 7 DIFFERENT DAY TYPES PER WEEK, AND
3. INCORPORATE AN AUTOMATIC HOLIDAY "SHUT-OFF" FEATURE, WHICH TURNS OFF ALL LOADS FOR AT LEAST 24 HOURS AND THEN RESUMES NORMALLY SCHEDULED OPERATIONS.
4. AUTOMATIC TIME SWITCHES SHALL ALSO HAVE PROGRAM BACK-UP CAPABILITIES, WHICH PREVENT THE LOSS OF PROGRAM AND TIME SETTINGS FOR AT LEAST 10 HOURS, IF POWER IS INTERRUPTED.

INCLUDE AN OVERRIDE SWITCH THAT COMPLIES WITH THE FOLLOWING:

1. THE OVERRIDE SWITCH SHALL BE A MANUAL CONTROL
2. THE OVERRIDE SWITCH, WHEN INITIATED, SHALL PERMIT THE CONTROLLED LIGHTING TO REMAIN ON FOR NOT MORE THAN 2 HOURS

GENERAL LIGHTING NOTES :

1. ALL EXIT & EMERGENCY LIGHTS SHALL BE CONNECTED TO NEAREST GENERAL LIGHTING CIRCUIT AND REMAIN UN-SWITCHED.

KEYED LIGHTING NOTES :

(1) RUN CIRCUIT SWITCHLEG THRU PHOTOCELL MOUNTED ON ROOF, WITH TIMECLOCK OVERRIDE. COORDINATE EXTERIOR LIGHTING WITH ARCHITECTURAL PLANS/ELEVATIONS FOR MOUNTING HEIGHTS AND LOCATIONS.

(2) LIGHT FIXTURE TO REMAIN "ON" AT ALL TIMES. MOUNT FIXTURES ABOVE WINDOWS, BELOW CEILING. COORDINATE WITH ARCHITECTURAL PLANS.

1 OFFICE LIGHTING PLAN
SCALE: 1/4"=1'-0"

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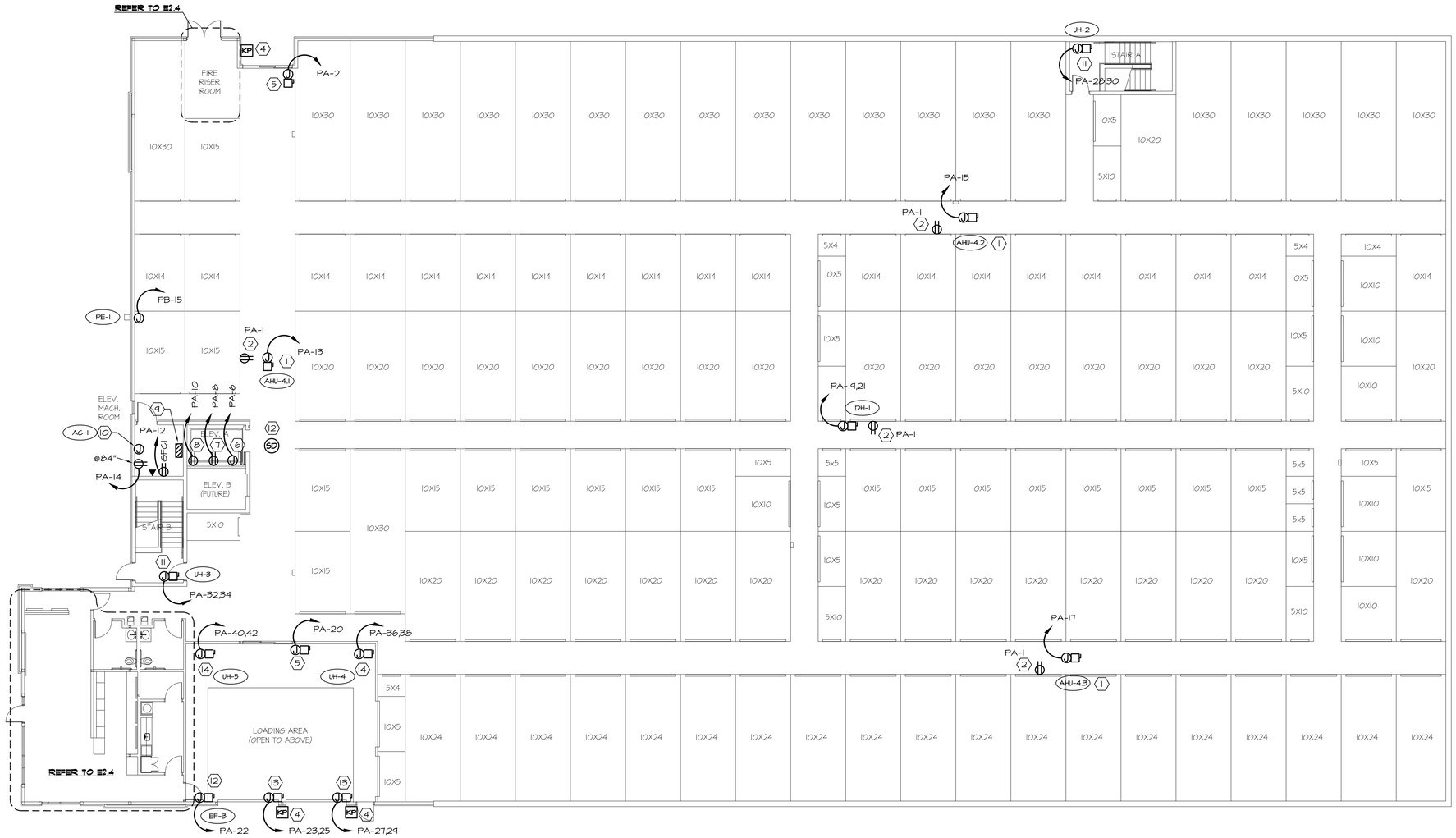
OFFICE LIGHTING

SHEET NO.
E1.4



1 1ST FLOOR - POWER PLAN
SCALE: 3/32"=1'-0"

ELEVATOR GENERAL NOTES :

THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL FINAL REQUIREMENTS W/ THE STATE ELEVATOR INSPECTOR BUT NOTE THE FOLLOWING:

THE POWER FEEDER SHALL BE 1'-0" CLEAR FROM THE FLOOR.
THERE SHALL BE A DEDICATED GFCI RECEPTACLE IN THE PIT.
A DEDICATED GFCI IN THE ELEVATOR CONTROL ROOM.
A DEDICATED PHONE LINE TO THE CONTROLLER.
A DEDICATED PHONE LINE TO ADT ALARM PANEL.
A SMOKE DETECTOR IN THE ELEVATOR CONTROL ROOM & THE LOBBY ON EACH FLOOR THAT WHEN ACTIVATED WILL SEND A RECALL SIGNAL TO THE ELEVATORS.
THE LIGHT IN THE ELEVATOR PIT SHALL BE PROVIDED W/ A 2-POLE DISCONNECT SWITCH LOCATED IN THE ELEVATOR EQUIPMENT ROOM CAPABLE OF BEING LOCKED.
THE SHUNT TRIP SHALL BE LOCATED IN THE ELEVATOR EQUIPMENT ROOM.

POWER KEYED NOTES :

1. J-BOX & 30A/2P/120V/FUSED 20A/N-1 DISCONNECT SWITCH FOR AIR HANDLING UNIT.
2. MOUNT OUTLET IN CORRIDOR ABOVE DOOR HEIGHT. COORDINATE LOCATION.
3. REFER TO "ELEVATOR GENERAL NOTES" ON THIS SHEET.
4. SECURITY KEYPAD @ 48" AFF. E.C. TO COORDINATE LOCATION AND MOUNTING HEIGHT WITH SECURITY INSTALLER. PROVIDE 3/4" CONDUIT W/ PULLSTRING TO ACCESSIBLE CEILING, CORRIDOR CEILING IS NOT ACCESSIBLE, COORDINATE ON-SITE.
5. J-BOX & 30A/2P/120V/NON-FUSED/N-1 DISCONNECT SWITCH FOR DOOR MOTOR. COORDINATE WITH INSTALLER.
6. PROVIDE A DEDICATED BRANCH CIRCUIT FOR THE ELEVATOR CAR LIGHTING. FIELD COORDINATE LOCATION W/ ELEVATOR EQUIPMENT SUPPLIER.
7. GFCI OUTLET IN HOISTWAY. LIGHTING IN HOISTWAY SHALL NOT BE CONNECTED TO LOAD SIDE OF THE GFCI RECEPTACLE.
8. DEDICATED DUPLEX RECEPTACLE FOR SUMP PUMP. REFER TO DETAIL 1/MEP2.
9. 100A/3P/480V/N-1 FUSED 100A ENCLOSED DISCONNECT PROVIDED WITH SHUNT TRIP AS PER ELEVATOR CODE. **CONTRACTOR SHALL VERIFY W/ ELEVATOR INSTALLER PRIOR TO ORDERING ANY GEAR.**
10. J-BOX FOR CONNECTION TO AC UNIT, POWERED THRU CONDENSING UNIT.
11. J-BOX & 30A/2P/208V/FUSED 25A/N-1 DISCONNECT SWITCH FOR UNIT HEATER.
12. J-BOX & 30A/2P/120V/FUSED 20A/N-1 DISCONNECT SWITCH FOR EXHAUST FAN.
13. J-BOX & 30A/2P/208V/FUSED 20A/N-1 DISCONNECT SWITCH FOR ROLL-UP DOOR MOTOR. COORDINATE CONTROLS WITH INSTALLER.
14. J-BOX & 30A/2P/208V/FUSED 30A/N-1 DISCONNECT SWITCH FOR UNIT HEATER.

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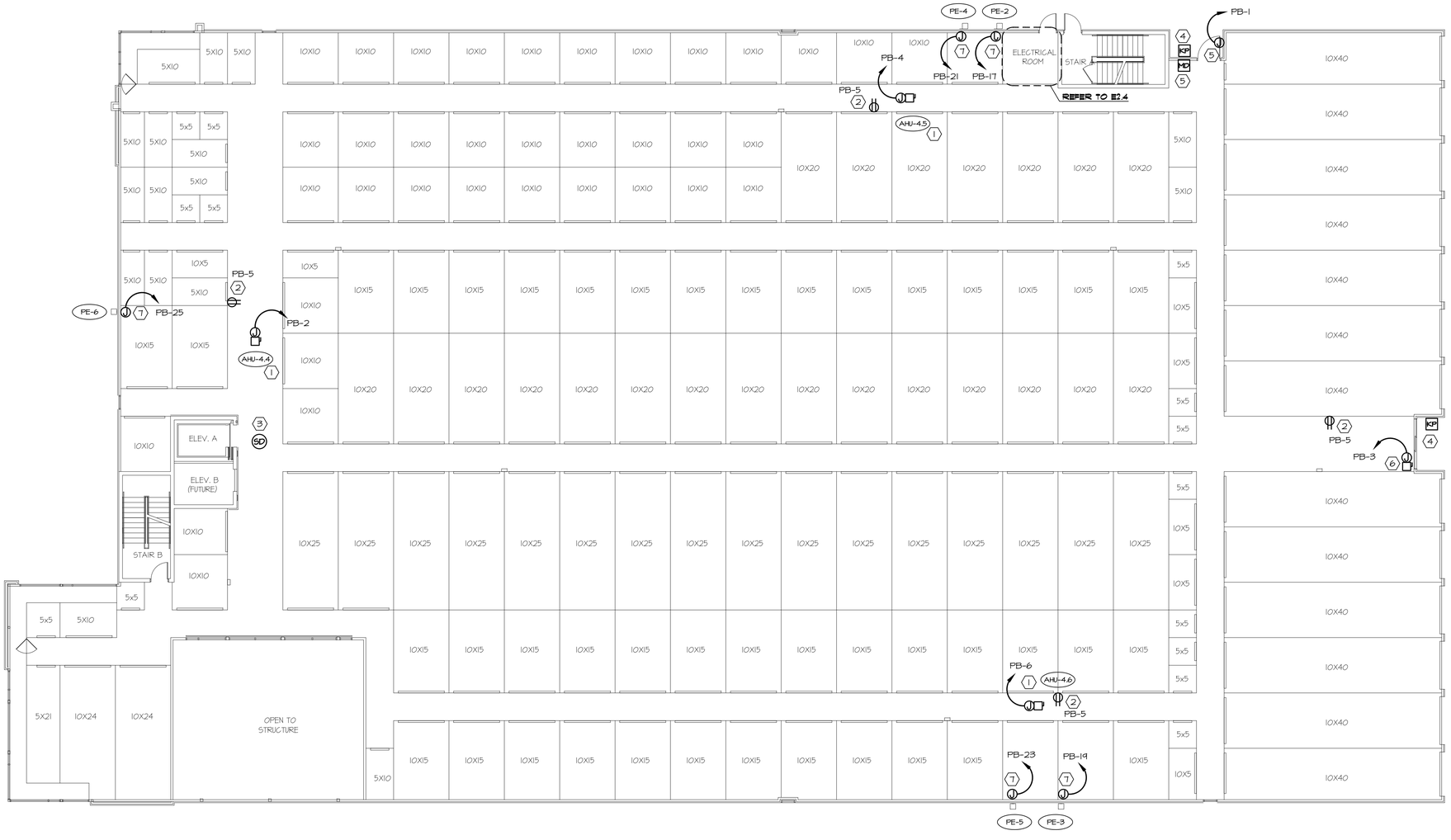
1ST FLOOR POWER

SHEET NO.
E2.1



1 2ND FLOOR - POWER PLAN
SCALE: 3/32"=1'-0"

ELEVATOR GENERAL NOTES :

THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL FINAL REQUIREMENTS W/ THE STATE ELEVATOR INSPECTOR BUT NOTE THE FOLLOWING:

THE POWER FEEDER SHALL BE 1'-0" CLEAR FROM THE FLOOR.
THERE SHALL BE A DEDICATED GFCI RECEPTACLE IN THE PIT.
A DEDICATED GFCI IN THE ELEVATOR CONTROL ROOM.
A DEDICATED PHONE LINE TO THE CONTROLLER.
A DEDICATED PHONE LINE TO ADT ALARM PANEL.
A SMOKE DETECTOR IN THE ELEVATOR CONTROL ROOM & THE LOBBY ON EACH FLOOR THAT WHEN ACTIVATED WILL SEND A RECALL SIGNAL TO THE ELEVATORS.
THE LIGHT IN THE ELEVATOR PIT SHALL BE PROVIDED W/ A 2-POLE DISCONNECT SWITCH LOCATED IN THE ELEVATOR EQUIPMENT ROOM CAPABLE OF BEING LOCKED.
THE SHUNT TRIP SHALL BE LOCATED IN THE ELEVATOR EQUIPMENT ROOM.

POWER KEYED NOTES :

1. J-BOX & 30A/2P/120V/FUSED 20A/N-1 DISCONNECT SWITCH FOR AIR HANDLING UNIT.
2. MOUNT OUTLET IN CORRIDOR ABOVE DOOR HEIGHT. COORDINATE LOCATION.
3. REFER TO "ELEVATOR GENERAL NOTES" ON THIS SHEET.
4. SECURITY KEYPAD @ 48" AFF. E.C. TO COORDINATE LOCATION AND MOUNTING HEIGHT WITH SECURITY INSTALLER. PROVIDE 3/4" CONDUIT W/ PULLSTRING TO ACCESSIBLE CEILING, CORRIDOR CEILING IS NOT ACCESSIBLE, COORDINATE ON-SITE.
5. E.C PROVIDED/INSTALLED J-BOX FOR MAGNETIC DOOR HOLD OPEN ACTIVATED WITH MOTION SENSOR AT ENTRY. E.C. TO COORDINATE LOCATION AND MOUNTING HEIGHT W/ OWNER. MOTION SENSOR SHALL REMAIN SEPARATE OF LIGHTING MOTION SENSORS. E.C. TO PROVIDE ALTRONIX #ALI25UL POWER SUPPLY/CONVERTER CABINET IN MAIN ELECTRICAL ROOM.
6. J-BOX & 30A/2P/120V/NON-FUSED/N-1 DISCONNECT SWITCH FOR DOOR MOTOR. COORDINATE WITH INSTALLER.
7. J-BOX FOR POWER VENT POWER. COORDINATE WITH INSTALLER.

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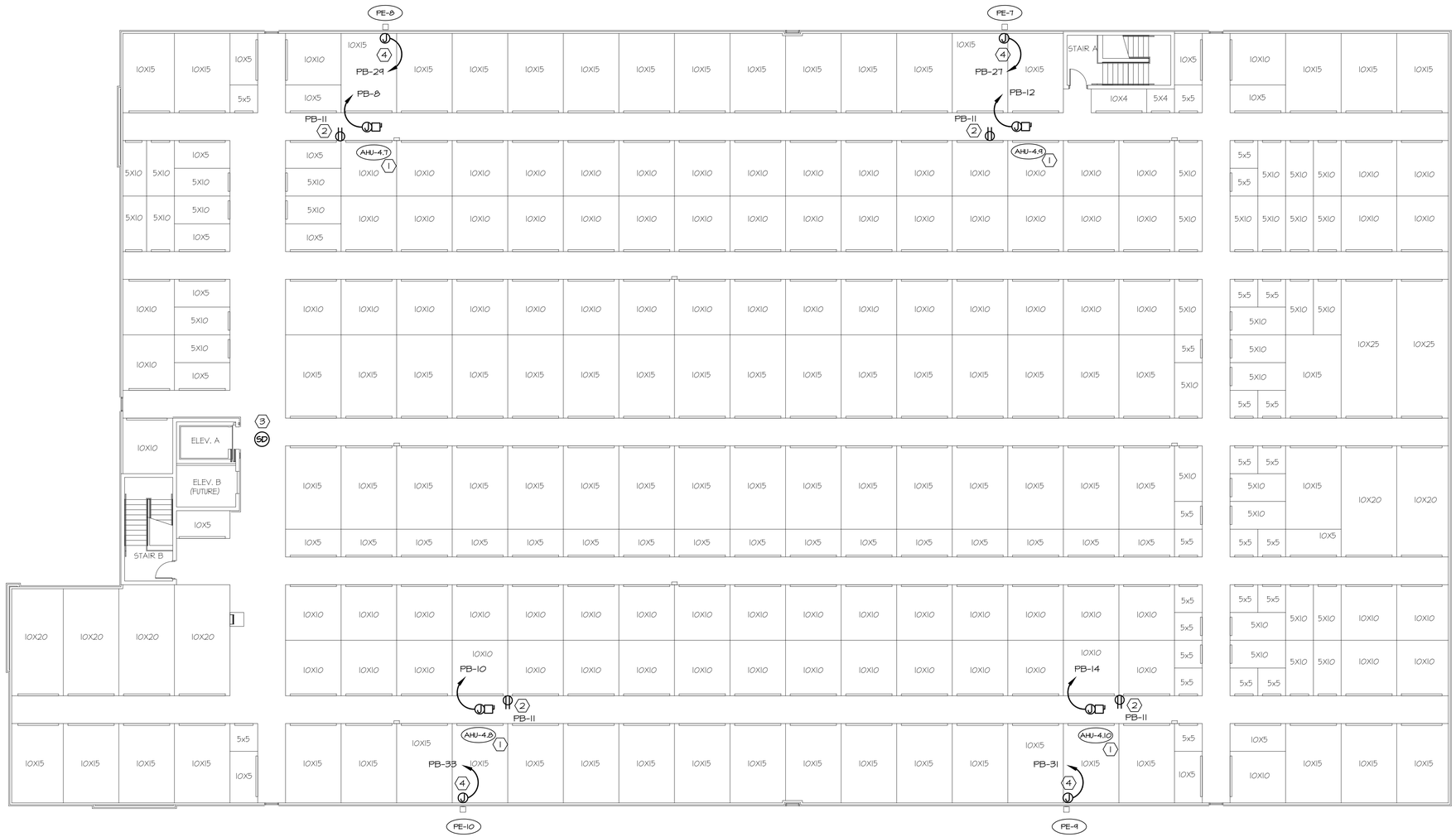
2ND FLOOR POWER

SHEET NO.
E2.2



ELEVATOR GENERAL NOTES :

THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL FINAL REQUIREMENTS W/ THE STATE ELEVATOR INSPECTOR BUT NOTE THE FOLLOWING:

THE POWER FEEDER SHALL BE 7'-0" CLEAR FROM THE FLOOR.
THERE SHALL BE A DEDICATED GFCI RECEPTACLE IN THE PIT.
A DEDICATED GFCI IN THE ELEVATOR CONTROL ROOM.
A DEDICATED PHONE LINE TO THE CONTROLLER.
A DEDICATED PHONE LINE TO ADT ALARM PANEL.
A SMOKE DETECTOR IN THE ELEVATOR CONTROL ROOM & THE LOBBY ON EACH FLOOR THAT WHEN ACTIVATED WILL SEND A RECALL SIGNAL TO THE ELEVATORS.
THE LIGHT IN THE ELEVATOR PIT SHALL BE PROVIDED W/ A 2-POLE DISCONNECT SWITCH LOCATED IN THE ELEVATOR EQUIPMENT ROOM CAPABLE OF BEING LOCKED.
THE SHUNT TRIP SHALL BE LOCATED IN THE ELEVATOR EQUIPMENT ROOM.

1 3RD FLOOR - POWER PLAN

SCALE: 3/32"=1'-0"

POWER KEYED NOTES :

1. J-BOX & 30A/2P/120V/FUSED 20A/N-1 DISCONNECT SWITCH FOR AIR HANDLING UNIT.
2. MOUNT OUTLET IN CORRIDOR ABOVE DOOR HEIGHT. COORDINATE LOCATION.
3. REFER TO "ELEVATOR GENERAL NOTES" ON THIS SHEET.
4. J-BOX FOR POWER VENT POWER. COORDINATE WITH INSTALLER.

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DP CE

STATE OF MISSOURI
DJ PENN
NUMBER E-38507
REGISTERED PROFESSIONAL ENGINEER
12/16/2021

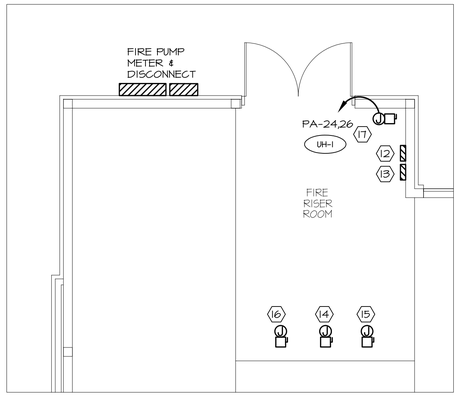
LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

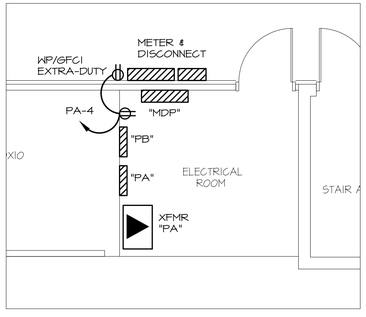
PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : DJP
REVISIONS:

3RD FLOOR POWER

SHEET NO.
E2.3



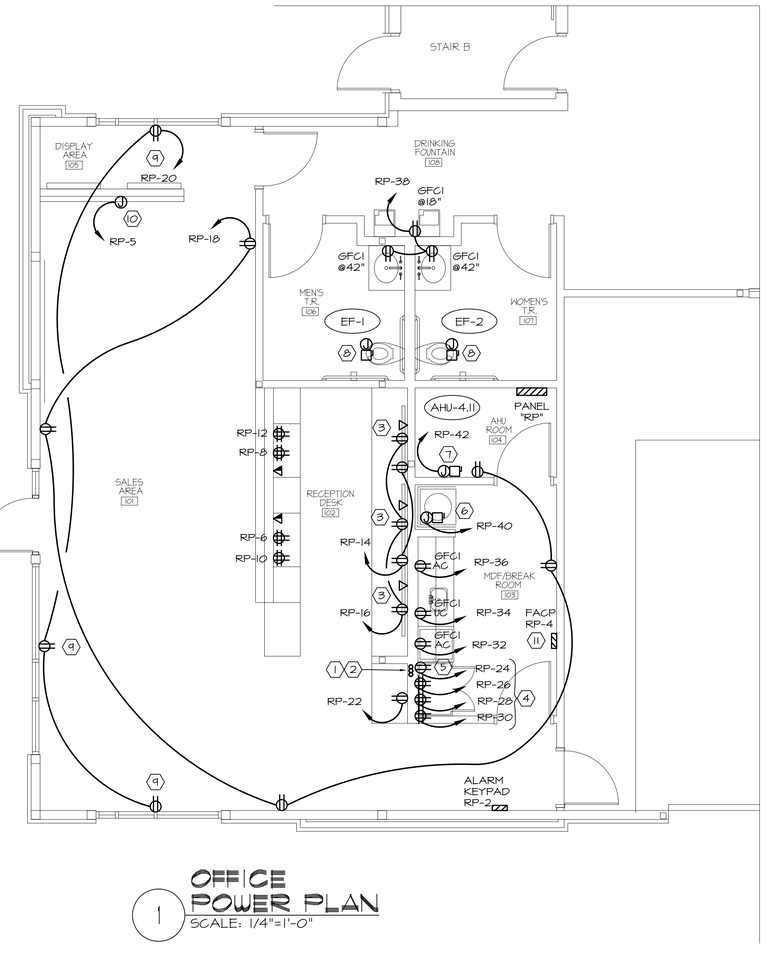
3 FIRE RISER ROOM
SCALE: 1/4"=1'-0"



2 ELECTRICAL ROOM
SCALE: 1/4"=1'-0"

POWER KEYED NOTES :

1. PROVIDE (2) 2" CONDUITS TO CABINETRY REAR WALL OF MDF/BREAK ROOM FOR SECURITY/TV/DATA. COORDINATE W/ SECURITY CONTRACTOR & GENERAL CONTRACTOR.
2. PROVIDE NECESSARY CONDUIT FROM CABINETRY TO OPERATOR GATES. COORDINATE WITH SECURITY CONTRACTOR & GENERAL CONTRACTOR.
3. DUPLEX OUTLETS AND CATV OUTLETS FOR MONITORS. MOUNT BEHIND MONITOR, 73" AFF. GC TO COORDINATE HEIGHTS/ LOCATIONS/QUANTITIES WITH OWNER AND MANAGEMENT COMPANIES.
4. OUTLETS TO BE MOUNTED IN MDF CABINET. COORDINATE WITH INSTALLER.
5. DEDICATED DUPLEX RECEPTACLE FOR TELEPHONE BOARD.
6. J-BOX & 30A/2P/120V/NF/N-1 DISCONNECT SWITCH FOR WATER HEATER.
7. J-BOX & 30A/2P/120V/FUSED 20A/N-1 DISCONNECT SWITCH FOR AIR HANDLING UNIT.
8. J-BOX & 30A/2P/120V/NF/N-1 DISCONNECT SWITCH FOR EXHAUST FAN. FAN TO BE POWERED AND CONTROLLED WITH LIGHTS IN ROOM.
9. DUPLEX RECEPTACLE FLUSH MOUNTED ABOVE WINDOW.
10. J-BOX FOR INTERIOR SIGN. COORDINATE LOCATION AND MOUNTING HEIGHT WITH INSTALLER.
11. THE LOCATION OF THE HVAC DUCT DETECTORS MUST BE CLEARLY INDICATED AT THE FIRE ALARM PANEL.
12. FIRE PUMP CONTROLLER. REFER TO SPRINKLER SHOP DRAWINGS.
13. JOCKEY PUMP CONTROLLER. REFER TO SPRINKLER SHOP DRAWINGS.
14. J-BOX & 200A/3P/480V/FUSED 200A/N-4 DISCONNECT SWITCH FOR FIRE PUMP. COORDINATE WITH SPRINKLER SHOP DRAWINGS.
15. J-BOX & 30A/3P/480V/FUSED 20A/N-4 DISCONNECT SWITCH FOR JOCKEY PUMP. COORDINATE WITH SPRINKLER SHOP DRAWINGS.
16. J-BOX & 30A/3P/208V/NF/N-4 DISCONNECT SWITCH FOR BOOSTER PUMP.
17. J-BOX & 30A/2P/208V/FUSED 25A/N-1 DISCONNECT SWITCH FOR UNIT HEATER.



1 OFFICE POWER PLAN
SCALE: 1/4"=1'-0"

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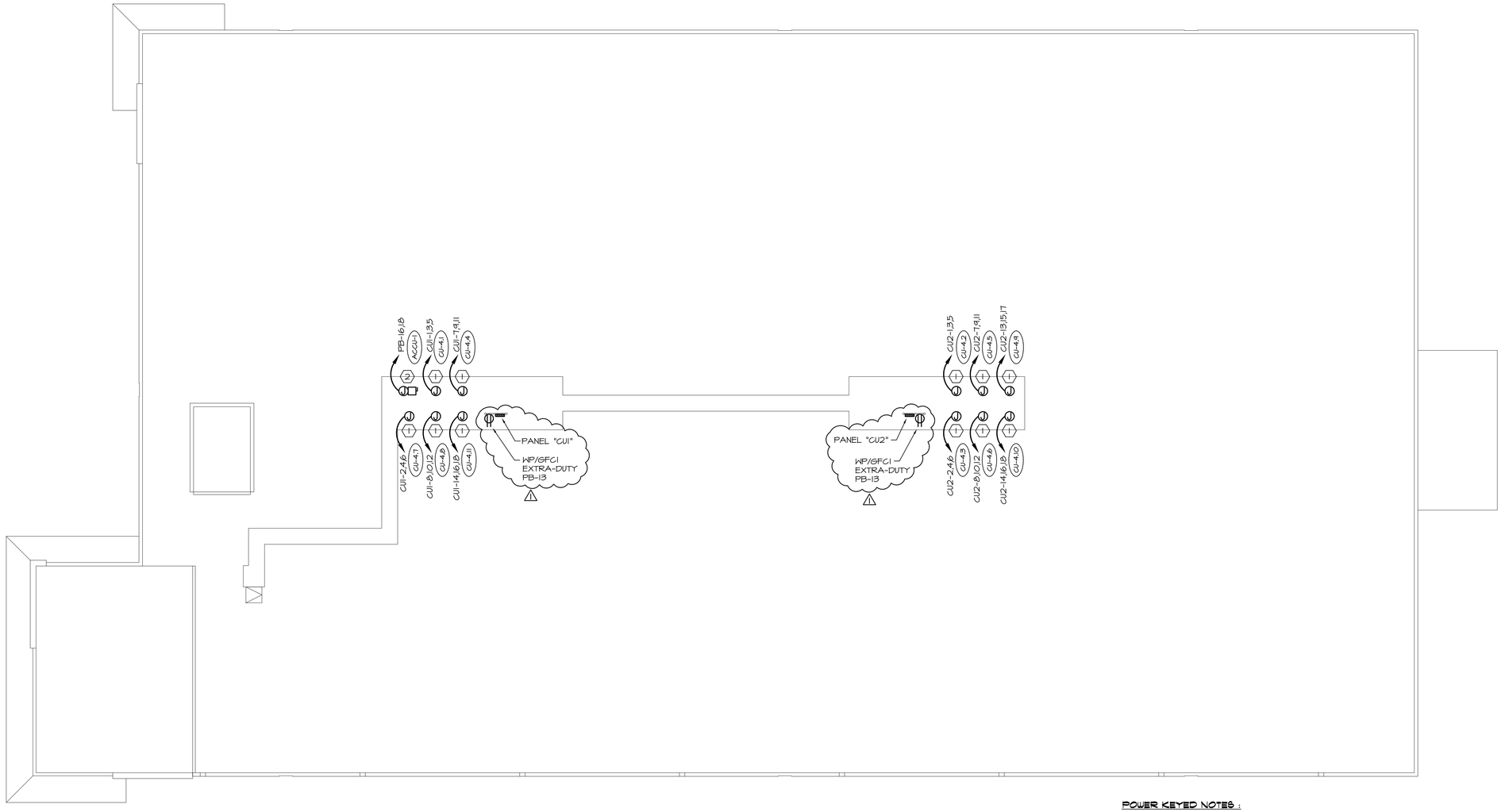
LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : DJP
REVISIONS:

OFFICE POWER

SHEET NO.
E2.4



1 ROOF - POWER PLAN
SCALE: 3/32"=1'-0"

POWER KEYED NOTES :

1. J-BOX FOR CONNECTION TO CONDENSING UNIT. DISCONNECT MEANS IN PANELBOARD WITHIN 50 FEET.
2. J-BOX & 30A/2P/208V/FUSED 25A/N-3R DISCONNECT SWITCH FOR CONDENSING UNIT.

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
03/28/2022

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DP EE

STATE OF MISSOURI
D.J. PENN
NUMBER E-28507
REGISTERED PROFESSIONAL ENGINEER
1/20/2022

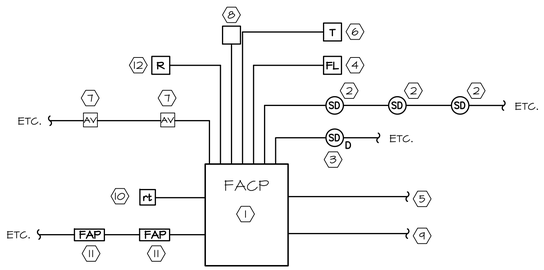
LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : DJP
REVISIONS:

ROOF POWER

SHEET NO.
E2.5



2 TYPICAL FIRE ALARM CONTROL DIAGRAM
NO SCALE

FIRE ALARM KEYED NOTES:

1. FIRE ALARM CONTROL PANEL WITH 24-HOUR BATTERY BACKUP
2. AREA SMOKE DETECTORS
3. DUCT SMOKE DETECTORS
4. SPRINKLER FLOW DETECTOR
5. WIRE TO RELAY TO SHUT DOWN HVAC UNITS
6. SPRINKLER FLOW DETECTOR TAMPER SWITCH
7. AUDIO/VISUAL ALARM DEVICES
8. ADDRESSABLE INTERFACE DEVICE (MONITOR ZAM) INSTALLED IN JUNCTION BOX
9. 120V POWER SUPPLY
10. REMOTE TEST & ALARM STATION
11. MANUAL FIRE ALARM PULL
12. RELAY FOR CONNETION OF DOOR HOLDER POWER SUPPLY.

FIRE ALARM NOTES

THE COMPLETE FIRE ALARM SYSTEM SHALL BE DESIGNED BY THE FIRE ALARM SUB-CONTRACTOR AND SUBMITTED TO THE OWNER, ARCHITECT & ENGINEER FOR REVIEW. THE BID SHALL BE HANDLED BY AN ALLOWANCE.

ALL THE ITEMS SHOWN HERE & ON THE ELECTRICAL POWER SHEETS ARE FOR REFERENCE ONLY. THE FIRE ALARM CONTRACTOR SHALL PREPARE A SET OF DOCUMENTS FOR REVIEW BY THE CITY, OWNER'S INSURANCE CARRIER, ETC. AND SHALL COMPLY WITH NFPA-72, ADA 702.

REFER TO THE MECHANICAL SHEETS FOR DUCT DETECTOR LOCATIONS.

DUCT DETECTORS MUST ACTIVATE AS A GENERAL ALARM AND NOT A SUPERVISORY/TROUBLE SIGNAL

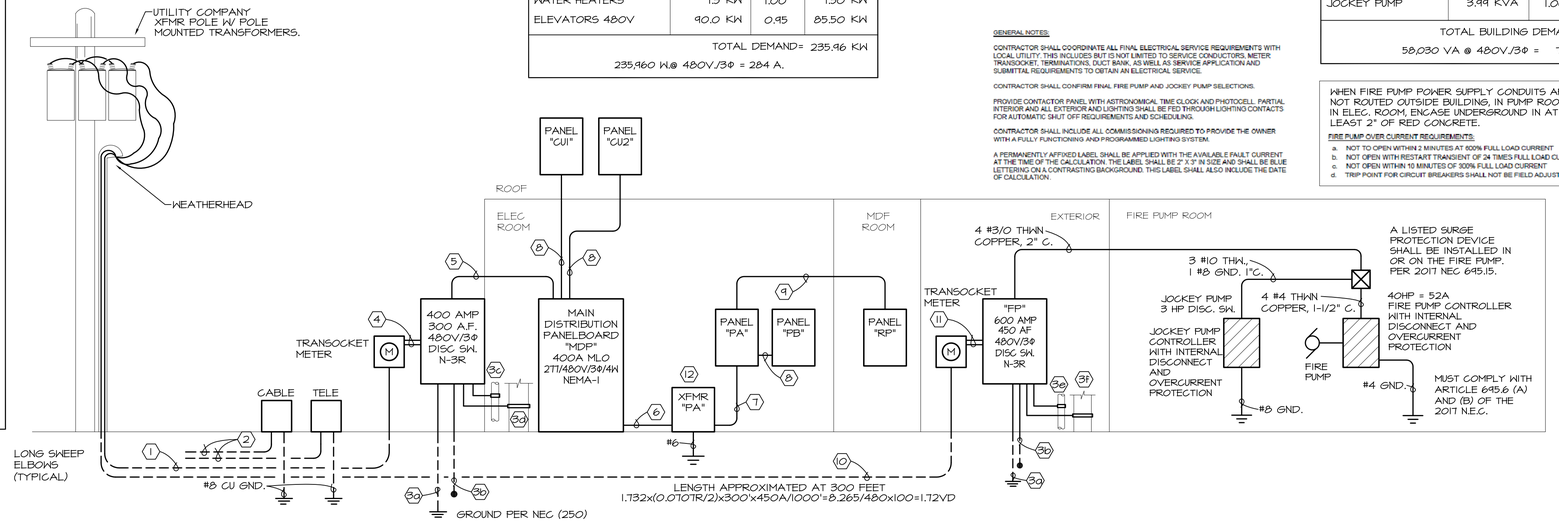
LIGHTING FUNCTIONAL TESTING/COMMISSIONING

THE CONTRACTOR SHALL COMPLETE THE TASKS BELOW TO COMMISSION THE LIGHTING CONTROL SYSTEM AND SUBMIT WRITTEN DOCUMENTATION DETAILING THE TASKS BELOW. FOR EACH TASK, LIST THE DATE PERFORMED, PERSON COMPLETING THE TASK, THE INITIAL SETTING/CONDITION, ACTIONS PERFORMED, AND FINAL SETTING CONDITION. SUBMIT DOCUMENTATION AT OR BEFORE SUBSTANTIAL COMPLETION TO FACILITATE OBATAINING THE CERTIFICATE OF OCCUPANCY.

1. ENSURE ALL LIGHTING FIXTURES HAVE LAMPS INSTALLED AND ARE FUNCTIONAL.
2. TEST ALL EXIT SIGNS, EMERGENCY LIGHTING FIXTURES, AND EMERGENCY BALLASTS FURNISHED INTEGRAL TO FIXTURES.
3. ENSURE ALL OCCUPANCY SENSORS HAVE BEEN INSTALLED AND ARE OPERATIONAL.
4. ENSURE ALL WALLBOX AND SCENE CONTROLLERS ARE INSTALLED AND OPERATIONAL.
5. ENSURE ALL PHOTOCELLS ARE INSTALLED AND OPERATIONAL.
6. TEST EACH INDIVIDUAL DEVICE FOR OCCUPANCY SENSOR TYPES.
7. VERIFY THE FOLLOWING:
   - 7.1. SENSORS HAVE BEEN LOCATED AND AIMED PER THE MANUFACTURER'S RECOMMENDATIONS
   - 7.2. STATUS INDICATORS ON DEVICES ARE OPERATIONAL AND CORRECT.
   - 7.3. DEVICES CONTROL LIGHTING FIXTURES AS INDICATED ON DRAWINGS.
   - 7.4. TIME DELAYS HAVE BEEN SET AS INDICATED ON THE DRAWINGS.
   - 7.5. MOVEMENT IN ADJACENT AREAS AND/OR CYCLING OF HVAC SYSTEMS DOES NOT FALSE TRIGGER SENSORS

ELECTRICAL RISER KEYED NOTES :

1. UNDERGROUND SERVICE LATERAL FROM POLE MOUNTED TRANSFORMERS. INSTALLED PER UTILITY COMPANY STANDARDS. (2-SETS) 3 #3/0 AL THW (H), 1 #3/0 CU THW (N)., 3" C. LONG SWEEP RADIUS ELBOWS ONLY.
2. 2" CONDUITS FOR TELEPHONE & CABLE SERVICE. COORDINATE SERVICE FROM STREET TO BUILDING WITH LOCAL PROVIDER.
3a. #6 CU. GND. TO 3/4"x 8'-0" DRIVEN GROUND ROD. INSTALL PER NEC 250.
3b. #4 GND. TO FOUNDATION REBAR. INSTALL PER NEC 250.
3c. #2 GND. TO COLD WATER PIPE. INSTALL PER NEC 250.
3d. #2 CU. GND. TO BUILDING STEEL. INSTALL PER NEC 250.
3e. #1/0 GND. TO COLD WATER PIPE. INSTALL PER NEC 250.
3f. #1/0 CU. GND. TO BUILDING STEEL. INSTALL PER NEC 250.
4. 3 #350 KCMIL CU THW (H), 1 #350 KCMIL CU THW (N)., 3" C.
5. 4 #350 KCMIL CU THW., 1 #1/0 GND., 3" C.
6. 3 #1 THW, 1 #6 GND., 1-1/2" C.
7. 4 #3/0 THW, 1 #6 GND., 2" C.
8. 4 #2 THW, 1 #8 GND., 1-1/2" C.
9. 4 #2/0 THW, 1 #8 GND., 2" C.
10. (2-SETS) 3-300 KCMIL AL THW(H), 1-300 KCMIL AL THW(N), EACH IN 3" C. (RED DYE CONCRETE ENCASED) UNDER DRIVEWAY
11. (2-SETS) 3 #4/0 CU THW(H), 1 #4/0 CU THW(N), EACH IN 3" C.
12. 75 KVA DRY TYPE TRANSFORMER
    480 V. "DELTA" PRIMARY
    120/ 208 V. "WYE" SECONDARY
    MOUNT ON FLOOR.
    #6 CU. GND. TO BUILDING STEEL
    SQUARE D #EXNT5T3H



1 ELECTRICAL RISER DIAGRAM
NO SCALE

ELECTRICAL SYMBOLS LEGEND

- 120V DUPLEX RECEPTACLE - 16" A.F.F. AC = ABOVE COUNTER
- 120V QUAD RECEPTACLE - 16" A.F.F.
- TELEPHONE RECEPTACLE - 16" A.F.F.
- PHONE/DATA RECEPTACLE - 16" A.F.F.
- CABLE T.V. ANTENNA OUTLET
- FLOOR MOUNTED DUPLEX RECEPTACLE
- MD MOTION DETECTOR
- KP KEYPAD
- FP FIRE ALARM MANUAL PULL STATION
- AV AUDIO/VISUAL DEVICE @ 84"A.F.F.
- V VISUAL DEVICE @ 84"A.F.F.
- S WALL SWITCH - 48" A.F.F.
- S3 THREE-WAY WALL SWITCH - 48" A.F.F.
- S_T WALL SWITCH W/ 15 MIN. TIMER - 48" A.F.F.
- OS CEILING MOUNTED OCCUPANCY SENSOR
- OS WALL MOUNTED OCCUPANCY SENSOR
- DISCONNECT SWITCH
- JUNCTION BOX
- P-1 HOMERUN W/ CIRCUIT CALLOUT
- ELECTRICAL PANELBOARD
- CD CO2 DETECTOR - CEILING MOUNTED
- SD SMOKE DETECTOR - CEILING MOUNTED
- SD_D DUCT SMOKE DETECTOR.
- T THERMOSTAT - 48" A.F.F.

LOAD ANALYSIS "MDP"

LOAD	CONNECTED	FACTOR	DEMAND
SIGNAGE	3.6 KW	1.25	4.50 KW
LIGHTING 120V	1.3 KW	1.25	1.63 KW
LIGHTING-SENSOR 120V	5.1 KW	1.00	5.10 KW
LIGHTING 277V	10.53 KW	1.25	13.16 KW
CONV. OUTLETS	10.0 KW	1.00	10.00 KW
CONV. OUTLETS	4.05 KW	0.50	2.03 KW
AIR COND. 480V	82.34 KW	1.00	82.34 KW
HEATING 480V	-0- KW	1.00	-0- KW
AIR COND. 208V	20.81 KW	1.00	20.81 KW
HEAT 208V	19.6 KW	1.00	-0- KW
MOTOR	1.55 KW	1.25	1.94 KW
MOTORS	7.45 KW	1.00	7.45 KW
WATER HEATERS	1.5 KW	1.00	1.50 KW
ELEVATORS 480V	90.0 KW	0.95	85.50 KW
TOTAL DEMAND=			235.96 KW

235,960 W.@ 480V./3Φ = 284 A.

LIGHTING FIXTURE SCHEDULE

TYPE	LAMPS	MOUNTING	VOLTAGE	DESCRIPTION/ CATALOG NO.
A	44W LED	SURFACE	120/277	4' LED STRIP LSI #SDL4-LED-60L-FL-UNV-DIMI-40-80CRI
AE	44W LED	SURFACE	120/277	4' LED STRIP W/ 90 MIN. EMERGENCY BATTERY BACKUP LSI #SDL4-LED-60L-FL-UNV-DIMI-40-80CRI-EMIO
B	150W E26	SURFACE	120	LIGHT FIXTURE W/ MOTION DETECTOR. LEVITON #49875
CE	24W LED	RECESSED	MVOLT	LED EXTERIOR RECESSED DOWNLIGHT W/ 90 MINUTE EMERGENCY BATTERY BACKUP LITHONIA #LDN6-35/20-L06AR-LD-MVOLT-EZIO-EL
D	46W LED	WALL	MVOLT	LED EXTERIOR WALL-PACK LITHONIA #DSXW1-LED-20C-700-40K-T2M-MVOLT-DNAXD
DE	46W LED	WALL	MVOLT	EXTERIOR WALL-PACK W/90 MINUTE BATTERY BACKUP LITHONIA #DSXW1-LED-20C-700-40K-T2M-MVOLT-ELCW-DNAXD
E	21W LED	WALL	120/277	24" LED VANITY FIXTURE. MOUNT @ 7'-2" AFF WAC #WS-77624-30-AL
F	46W LED	LAY-IN	120/277	2'X4' LED TROFFER LITHONIA #2FSL4-60L-EZI-LP840
FE	46W LED	LAY-IN	120/277	2'X4' LED TROFFER W/ 90 MIN. EMERGENCY BATTERY BACKUP LITHONIA #2FSL4-60L-EZI-LP840-EL7L
G	12W LED	WALL	120	EXTERIOR SCONCE VISA LIGHTING #OW5524-L35K-MVOLT-BRNZ
GE	12W LED	WALL	120	EXTERIOR SCONCE W/ 90 MINUTE BATTERY BACKUP VISA LIGHTING #OW5524-L35K-MVOLT-BRNZ IOTA #ILB-SL-CP08-HE, BATTERY BACKUP
H	60W LED	SURFACE	120/277	8' LED STRIP LSI #SDL8-LED-80L-FL-UNV-DIMI-40-80CRI
J	35W LED	PENDANT	MVOLT	LED PENDANT LITHONIA #LDN6CYL-40-30-L06-AR-LD-MVOLT-GZIO-PM-DWH
JE	35W LED	PENDANT	MVOLT	LED PENDANT W/ 90 MINUTE BATTERY BACKUP LITHONIA #LDN6CYL-40-30-L06-AR-LD-MVOLT-GZIO-PM-DWH IOTA #ILB-SL-CP08-HE, BATTERY BACKUP
K	17W LED	PENDANT	120	LED PENDANT PRUDENTIAL LTG. #SDOT-LED35-HO-NU-TMA-SC-UNV-EBCPIG-TMA-DMOI
L	27W LED	RECESSED	MVOLT	LED RECESSED DOWNLIGHT LITHONIA #LDN6-40/25-L06AR-LD-MVOLT-EZIO
LE	27W LED	RECESSED	MVOLT	LED RECESSED DOWNLIGHT W/ 90 MINUTE BATTERY BACKUP LITHONIA #LDN6-40/25-L06AR-LD-MVOLT-EZIO-EL
ME	39W LED	SURFACE	120/277	4' LED WALL MOUNTED FIXTURE W/ 90 MIN. EMERGENCY BATTERY BACKUP LSI #SDL4-LED-50L-FL-UNV-DIMI-40-80CRI-EMIO
R	56W LED	SURFACE	MVOLT	4.5' LED FIXTURE LITHONIA #VAP-6000LM-FST-MD-MVOLT-GZIO-40K-80CRI
S	56W LED	SURFACE	MVOLT	4.5' LED FIXTURE LITHONIA #VAP-6000LM-FST-MD-MVOLT-GZIO-40K-80CRI
X	LED	UNIVERSAL	120/277	EXIT LIGHT W/ 90 MINUTE BACKUP BATTERY LITHONIA #EXR-LED-EL-M6 CONTRACTOR SHALL COORDINATE # OF SIDES, MOUNTING & DIRECTIONAL ARROWS W/ PLAN & LOCAL INSPECTOR, COORDINATE PRIOR TO INSTALLATION.

NOTES:

1. ALL LIGHT FIXTURES SHALL BE SUBMITTED & APPROVED BY THE OWNER PRIOR TO THE ORDER OR INSTALLATION OF ANY FIXTURE.

FIRE PUMP LOAD ANALYSIS "FP"

LOAD	CONNECTED	FACTOR	DEMAND
FIRE PUMP	43.23 KVA	1.25	54.04 KVA
JOCKEY PUMP	3.99 KVA	1.00	3.99 KVA
TOTAL BUILDING DEMAND=			58.03 KVA

58,030 VA @ 480V./3Φ = 70 A.

GENERAL NOTES:

CONTRACTOR SHALL COORDINATE ALL FINAL ELECTRICAL SERVICE REQUIREMENTS WITH LOCAL UTILITY. THIS INCLUDES BUT IS NOT LIMITED TO SERVICE CONDUCTORS, METER TRANSOCKET, TERMINATIONS, DUCT BANK, AS WELL AS SERVICE APPLICATION AND SUBMITTAL REQUIREMENTS TO OBTAIN AN ELECTRICAL SERVICE.

CONTRACTOR SHALL CONFIRM FINAL FIRE PUMP AND JOCKEY PUMP SELECTIONS.

PROVIDE CONTACTOR PANEL WITH ASTRONOMICAL TIME CLOCK AND PHOTOCELL. PARTIAL INTERIOR AND ALL EXTERIOR AND LIGHTING SHALL BE FED THROUGH LIGHTING CONTACTS FOR AUTOMATIC SHUT OFF REQUIREMENTS AND SCHEDULING.

CONTRACTOR SHALL INCLUDE ALL COMMISSIONING REQUIRED TO PROVIDE THE OWNER WITH A FULLY FUNCTIONING AND PROGRAMMED LIGHTING SYSTEM.

A PERMANENTLY AFFIXED LABEL SHALL BE APPLIED WITH THE AVAILABLE FAULT CURRENT AT THE TIME OF THE CALCULATION. THE LABEL SHALL BE 2" X 3" IN SIZE AND SHALL BE BLUE LETTERING ON A CONTRASTING BACKGROUND. THIS LABEL SHALL ALSO INCLUDE THE DATE OF CALCULATION.

WHEN FIRE PUMP POWER SUPPLY CONDUITS ARE NOT ROUTED OUTSIDE BUILDING, IN PUMP ROOM OR IN ELEC. ROOM, ENCASE UNDERGROUND IN AT LEAST 2" OF RED CONCRETE.

FIRE PUMP OVER CURRENT REQUIREMENTS:

a. NOT TO OPEN WITHIN 2 MINUTES AT 600% FULL LOAD CURRENT
b. NOT OPEN WITH RESTART TRANSIENT OF 24 TIMES FULL LOAD CURRENT
c. NOT OPEN WITHIN 10 MINUTES OF 300% FULL LOAD CURRENT
d. TRIP POINT FOR CIRCUIT BREAKERS SHALL NOT BE FIELD ADJUSTABLE.

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
05/20/2022

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STATE OF MISSOURI
D.J. PENN
NUMBER E-28507
REGISTERED PROFESSIONAL ENGINEER
12/16/2021

LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : DJP
REVISIONS:

ELECTRICAL RISER

SHEET NO.
E3.1

PANELBOARD "MDP"

277/480 VOLT / 3 PHASE / 4 WIRE — 400A MAIN LUGS ONLY — MOUNTING: SURFACE
1 SECTION: SINGLE LUGS — NEMA-1 — 65,000 A.I.C. RATING

WIRE	CKT	DESCRIPTION	C.B.	φA LOAD	φB LOAD	φC LOAD	C.B.	DESCRIPTION	CKT	WIRE
#2	1	PANEL "CU1"	100	12475 / 22550			125	TRANSFORMER "P1"	2	#1
#2	3	"			12475 / 26071			"	4	#1
#2	5	"	3			12475 / 26334	3	"	6	#1
#2	7	PANEL "CU2"	100	14970 / -			-	-	8	-
#2	9	"			14970 / -		-	-	10	-
#2	11	"	3			14970 / -	-	-	12	-
-	13	-	-	- / -			-	-	14	-
-	15	-	-		- / -		-	-	16	-
-	17	-	-			- / -	-	-	18	-
-	19	-	-	- / -			-	-	20	-
-	21	-	-		- / -		-	-	22	-
-	23	-	-			- / -	-	-	24	-
-	25	-	-	- / -			-	-	26	-
-	27	-	-		- / -		-	-	28	-
#12	29	LOADING AREA LIGHTS	20			240 / -	-	-	30	-
#12	31	1ST FLOOR - CORRIDOR LIGHTS	20	2508 / 15000			100	FUTURE ELEVATOR	32	-
#12	33	2ND FLOOR - CORRIDOR LIGHTS	20		2546 / 15000			"	34	-
#12	35	2ND FLOOR - DISPLAY LIGHTS	20			748 / 15000	3	"	36	-
#12	37	3RD FLOOR - CORRIDOR LIGHTS	20	3300 / 15000			100	ELEVATOR	38	#2
#12	39	STAIRWELL LIGHTS	20		340 / 15000			"	40	#2
③ #12	41	EXTERIOR LIGHTS	20			744 / 15000	3	"	42	#2
		VA LOAD PER PHASE		85803	86502	85516		CONNECTED LOAD = 257.82 KVA DEMAND LOAD = 235.96 KVA		284 AMPS

NOTES:
1. PROVIDE A TYPED INDEX CARD IDENTIFYING ALL CIRCUITS.

PANELBOARD "CU1"

277/480 VOLT / 3 PHASE / 4 WIRE — 100A MAIN LUG ONLY — MOUNTING: SURFACE
1 SECTION: SINGLE LUGS — NEMA-3R — 14,000 A.I.C. RATING

WIRE	CKT	DESCRIPTION	C.B.	φA LOAD	φB LOAD	φC LOAD	C.B.	DESCRIPTION	CKT	WIRE
#12	1	CU-4.1	15	2445 / 2445			15	CU-4.7	2	#12
#12	3	"			2445 / 2445			"	4	#12
#12	5	"	3			2445 / 2445	3	"	6	#12
#12	7	CU-4.4	15	2445 / 2445			15	CU-4.8	8	#12
#12	9	"			2445 / 2445			"	10	#12
#12	11	"	3			2445 / 2445	3	"	12	#12
-	13	-	-	- / 2445			15	CU-4.11	14	#12
-	15	-	-		- / 2445			"	16	#12
-	17	-	-			- / 2445	3	"	18	#12
-	19	-	-	- / -			-	-	20	-
-	21	-	-		- / -		-	-	22	-
-	23	-	-			- / -	-	-	24	-
-	25	-	-	- / -			-	-	26	-
-	27	-	-		- / -		-	-	28	-
-	29	-	-			- / -	-	-	30	-
		VA LOAD PER PHASE		12475	12475	12475		CONNECTED LOAD = 37.43 KVA DEMAND LOAD = 37.43 KVA		45 AMPS

NOTES:
1. PROVIDE A TYPED INDEX CARD IDENTIFYING ALL CIRCUITS.

PANELBOARD "CU2"

277/480 VOLT / 3 PHASE / 4 WIRE — 100A MAIN LUG ONLY — MOUNTING: SURFACE
1 SECTION: SINGLE LUGS — NEMA-3R — 14,000 A.I.C. RATING

WIRE	CKT	DESCRIPTION	C.B.	φA LOAD	φB LOAD	φC LOAD	C.B.	DESCRIPTION	CKT	WIRE
#12	1	CU-4.2	15	2445 / 2445			15	CU-4.3	2	#12
#12	3	"			2445 / 2445			"	4	#12
#12	5	"	3			2445 / 2445	3	"	6	#12
#12	7	CU-4.5	15	2445 / 2445			15	CU-4.6	8	#12
#12	9	"			2445 / 2445			"	10	#12
#12	11	"	3			2445 / 2445	3	"	12	#12
#12	13	CU-4.9	15	2445 / 2445			15	CU-4.10	14	#12
#12	15	"			2445 / 2445			"	16	#12
#12	17	"	3			2445 / 2445	3	"	18	#12
-	19	-	-	- / -			-	-	20	-
-	21	-	-		- / -		-	-	22	-
-	23	-	-			- / -	-	-	24	-
-	25	-	-	- / -			-	-	26	-
-	27	-	-		- / -		-	-	28	-
-	29	-	-			- / -	-	-	30	-
		VA LOAD PER PHASE		14970	14970	14970		CONNECTED LOAD = 44.91 KVA DEMAND LOAD = 44.91 KVA		54 AMPS

NOTES:
1. PROVIDE A TYPED INDEX CARD IDENTIFYING ALL CIRCUITS.

PANEL KEYED NOTES:

1. LOCK-ON BREAKER
2. DEDICATED CIRCUIT W/ SEPARATE GROUND
3. RUN CIRCUIT THRU PHOTOCELL

PANELBOARD "PA"

120/208 VOLT / 3 PHASE / 4 WIRE — 200A MAIN BREAKER — MOUNTING: SURFACE
1 SECTION: SINGLE LUGS — NEMA-1 — 10,000 A.I.C. RATING

WIRE	CKT	DESCRIPTION	C.B.	φA LOAD	φB LOAD	φC LOAD	C.B.	DESCRIPTION	CKT	WIRE
#12	1	OUTLETS-1ST FLOOR	20	900 / 400			20	DOOR MOTOR-1ST FLOOR	2	#6
#12	3	LIGHTING-STORAGE 1ST FLOOR	20		1500 / 360		20	OUTLETS-ELECTRICAL ROOM	4	#12
#12	5	LIGHTING-STORAGE 1ST FLOOR	20			1500 / 200	20	ELEVATOR CAR LIGHTS/FAN	6	#10
-	7	-	-	- / 242			20	ELEVATOR PIT OUTLET/LIGHTS	8	#10
-	9	-	-		- / 600		20	ELEVATOR SUMP PUMP	10	#4
-	11	-	-			- / 240	20	ELEVATOR RM.-OUTLET/LT	12	#10
#4	13	AHU-4.1	20	1445 / 180			20	CONDENSATE PUMP	14	#10
#8	15	AHU-4.2	20		1445 / -		-	-	16	-
#6	17	AHU-4.3	2			1445 / -	-	-	18	-
#10	19	DEHUMIDIFIER DH-1	20	775 / 600			20	LOADING AREA DOOR MOTOR	20	#4
#10	21	"	2		775 / 500		20	EF-3	22	#4
#6	23	ROLL-UP DOOR MOTOR	20			500 / 1600	25	UNIT HEATER-1	24	#8
#6	25	"	2	500 / 1600			2	"	26	#8
#6	27	ROLL-UP DOOR MOTOR	20		500 / 1600		25	UNIT HEATER-2	28	#10
#6	29	"	2			500 / 1600	2	"	30	#10
#2	31	PANEL "PB"	100	6430 / 1600			25	UNIT HEATER-3	32	#6
#2	33	"			7204 / 1600		2	"	34	#6
#2	35	"	3			7044 / 2500	30	UNIT HEATER-4	36	#4
#2/0	37	PANEL "RP"	100	5278 / 2500			2	"	38	#4
#2/0	39	"			7431 / 2500		30	UNIT HEATER-5	40	#4
#2/0	41	"	3			6655 / 2500	2	"	42	#4
		VA LOAD PER PHASE		22550	26071	26334		CONNECTED LOAD = 74.96 KVA DEMAND LOAD = 54.96 KVA		153 AMPS

NOTES:
1. PROVIDE A TYPED INDEX CARD IDENTIFYING ALL CIRCUITS.

PANELBOARD "PB"

120/208 VOLT / 3 PHASE / 4 WIRE — 100A MAIN LUGS ONLY — MOUNTING: SURFACE
1 SECTION: SINGLE LUGS — NEMA-1 — 10,000 A.I.C. RATING

WIRE	CKT	DESCRIPTION	C.B.	φA LOAD	φB LOAD	φC LOAD	C.B.	DESCRIPTION	CKT	WIRE
#12	1	DOOR HOLD-2ND FLOOR	20	100 / 1445			20	AHU-4.4	2	#4
#10	3	DOOR MOTOR-2ND FLOOR	20		400 / 1445		20	AHU-4.5	4	#10
#10	5	OUTLETS-2ND FLOOR	20			720 / 1445	20	AHU-4.6	6	#6
#10	7	LIGHTING-STORAGE 2ND FLOOR	20	1050 / 1445			20	AHU-4.7	8	#6
#10	9	LIGHTING-STORAGE 3RD FLOOR	20		1050 / 1445		20	AHU-4.8	10	#4
#10	11	OUTLETS-3RD FLOOR	20			720 / 1445	20	AHU-4.9	12	#10
#10	13	OUTLETS-ROOF	20	360 / 1445			20	AHU-4.10	14	#6
#6	15	PE-1	15		145 / 2184		25	ACCU-1	16	#6
#10	17	PE-2	15			145 / 2184	2	"	18	#6
#6	19	PE-3	15	145 / -			-	-	20	-
#10	21	PE-4	15		145 / -		-	-	22	-
#6	23	PE-5	15			145 / -	-	-	24	-
#6	25	PE-6	15	145 / -			-	-	26	-
#8	27	PE-7	15		145 / -		-	-	28	-
#6	29	PE-8	15			145 / -	-	-	30	-
#6	31	PE-9	15	145 / -			-	-	32	-
#6	33	PE-10	15		145 / -		-	-	34	-
-	35	-	-			- / -	-	-	36	-
-	37	-	-	- / -			-	-	38	-
-	39	-	-		- / -		-	-	40	-
-	41	-	-			- / -	-	-	42	-
		VA LOAD PER PHASE		6430	7204	7044		CONNECTED LOAD = 20.68 KVA DEMAND LOAD = 20.72 KVA		58 AMPS

NOTES:
1. PROVIDE A TYPED INDEX CARD IDENTIFYING ALL CIRCUITS.

PANELBOARD "RP"

120/208 VOLT / 3 PHASE / 4 WIRE — 100A MAIN LUGS ONLY — MOUNTING: SURFACE
1 SECTION: SINGLE LUGS — NEMA-1 — 10,000 A.I.C. RATING

WIRE	CKT	DESCRIPTION	C.B.	φA LOAD	φB LOAD	φC LOAD	C.B.	DESCRIPTION	CKT	WIRE	
③ #12	1	EXTERIOR LIGHTS	20	48 / 100			20	ALARM	2	#12	1,2
#12	3	RETAIL LIGHTS/FANS	20		1177 / 100		20	FACP	4	#12	1,2
#12	5	INTERIOR SIGN	20			200 / 360	20	OUTLETS-POS	6	#12	1,2
-	7	-	-	- / 360			20	OUTLETS-POS	8	#12	1,2
-	9	-	-		- / 360		20	OUTLETS-COUNTER	10	#12	
-	11	-	-			- / 360	20	OUTLETS-COUNTER	12	#12	
-	13	-	-	- / 360			20	OUTLETS-BACK COUNTER	14	#12	
-	15	-	-		- / 540		20	OUTLETS-MONITORS	16	#12	
-	17	-	-			- / 900	20	OUTLETS-SALES	18	#12	
-	19	-	-	- / 540			20	OUTLETS-WINDOW	20	#12	
-	21	-	-		- / 800		20	OUTLET-COFFEE BAR	22	#12	
-	23	-	-			- / 180	20	TELEPHONE BOARD	24	#12	1,2
-	25	-	-	- / 360			20	MDF-OUTLET	26	#12	1,2
-	27	-	-		- / 360		20	MDF-OUTLET	28	#12	1,2
-	29	-	-			- / 360	20	MDF-OUTLET	30	#12	1,2
#12	31	GATE KEYPADS	20	200 / 1200			20	OUTLET-MICROWAVE	32	#12	
#10	33	GATE MOTOR	20		600 / 800		20	OUTLET-REFRIGERATOR	34	#12	
#12	35	GATE MOTOR	20			600 / 1200	20	OUTLET-COFFEE	36	#12	
③ #10	37	BUILDING SIGN	20	1200 / 410			20	OUTLETS-TOILET RMS/DF	38	#12	
③ #12	39	BUILDING SIGN	20		1200 / 1500		20	WATER HEATER	40	#12	
③ #12	41	BUILDING SIGN	20			1200 / 1445	20	AHU-4.11	42	#12	
		VA LOAD PER PHASE		5278	7431	6655		CONNECTED LOAD = 19.31 KVA DEMAND LOAD = 20.52 KVA		57 AMPS	

NOTES:
1. PROVIDE A TYPED INDEX CARD IDENTIFYING ALL CIRCUITS.

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
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03/28/2022

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STATE OF MISSOURI — DJ PENN — NUMBER E-38807 — REGISTERED PROFESSIONAL ENGINEER
12/16/2021

LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : DJP
REVISIONS:

ELECTRICAL SCHEDULES

SHEET NO.
E3.2

GENERAL ELECTRICAL NOTES: (AS APPLICABLE)

G1. COMPLETE SYSTEMS: PROVIDE LABOR, MATERIALS, EQUIPMENT, AND TRANSPORTATION TO RECEIVE, INSTALL, ADJUST, AND PUT INTO OPERATION COMPLETE ELECTRICAL SYSTEMS IN ACCORDANCE WITH THE INTENT OF THE CONTRACT DOCUMENTS. PROVIDE PRODUCTS NOT MENTIONED BUT OBVIOUSLY NECESSARY AND INCIDENTAL TO THE COMPLETION OF THIS WORK.

G2. SCOPE: WORK SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING: MECHANICAL WORK AS REQUIRED FOR COORDINATION, POWER DISTRIBUTION, FIRE ALARM SYSTEM, AND INSTALLATION OF MATERIALS.

G3. UTILITIES: COORDINATE WITH ALL UTILITY SERVICES. NOTIFY UTILITIES OF COMMENCEMENT OF WORK. MAKE ALL ARRANGEMENTS FOR TEMPORARY SERVICES. PROVIDE ALL WORK AND MATERIALS NECESSARY TO COMPLY WITH ALL UTILITY REGULATIONS AND REQUIREMENTS.

G4. PERMITS: OBTAIN ALL NECESSARY PERMITS TO BEGIN AND CONTINUE WITH WORK. PAY ALL ASSOCIATED FEES FOR PERMITS AND OTHER MUNICIPAL AND GOVERNING REQUIREMENTS.

G5. EXPERIENCE: ALL WORK DONE SHALL BE PERFORMED BY QUALIFIED ELECTRICIANS, UNDER THE SUPERVISION AND DIRECTION OF A SUPERINTENDENT HAVING SUCCESSFUL EXPERIENCE INSTALLING AND SUPERVISING EQUIPMENT AND SYSTEMS OF SIMILAR TYPE AND SIZE AS INDICATED BY CONTRACT DOCUMENTS.

G6. REGULATIONS: ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH CURRENT RULES, REGULATIONS, AND INDUSTRY STANDARDS OF THE N.E.C., UL, IPCEA, NEMA, NFPA, OSHA, NATIONAL ELECTRICAL SAFETY CODE, AND ANY LOCAL CODES, LAWS, ADA OR ORDINANCES.

IN THE EVENT THAT A DISCREPANCY IS FOUND IN THE CONTRACT DOCUMENTS THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.

G7. COSTS AND CONDITIONS: EXAMINE AND BECOME FAMILIAR WITH ALL CONTRACT DOCUMENTS IN THEIR ENTIRETY. SURVEY THE PROJECT AND BECOME FAMILIAR WITH EXISTING CONDITIONS AND SCOPE OF WORK. ALL COSTS SUBMITTED SHALL BE BASED ON A THOROUGH KNOWLEDGE OF ALL WORK AND MATERIALS REQUIRED. ANY ADDITIONAL COSTS DUE TO FAILURE TO COMPLY WITH THIS REQUIREMENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

G8. SPECIFICATIONS: BECOME FAMILIAR WITH ALL SPECIFICATIONS, DESIGN CRITERIA, AND EQUIPMENT REQUIREMENTS PRIOR TO ANY EQUIPMENT PURCHASE OR INSTALLATION. REFERENCE SPECIFICATIONS FOR DEVICES, MATERIALS AND WORKMANSHIP REQUIREMENTS. ADDITIONAL REQUIREMENTS ARE GIVEN IN THESE NOTES AND THE DRAWINGS. THERE SHALL BE NO DEVIATION FROM SPECIFICATIONS WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.

G9. COORDINATION: COORDINATE WORK WITH ALL OTHER TRADES. GIVE SPECIAL CONSIDERATION TO COORDINATING INSTALLATION OF LIGHTING, SPRINKLER PIPING, AND DUCTWORK. COORDINATE WALL OUTLET LOCATIONS WITH MILLWORK. COORDINATE WALL SWITCHES WITH DOOR SWINGS. VERIFY EXACT LOCATION, COLOR AND FINISH OF OUTLETS AND DEVICES WITH INTERIOR DESIGNER, ARCHITECT, OR DESIGNATED TENANT REPRESENTATIVE PRIOR TO INSTALLATION.

G10. PRODUCTS: ALL PRODUCTS SHALL BE NEW, SPECIFICATION GRADE. PRODUCTS OF A SIMILAR NATURE SHALL BE OF THE SAME TYPE AND MANUFACTURER. PROVIDE THE STANDARD PRODUCTS OF MANUFACTURERS REGULARLY ENGAGED IN THE PRODUCTION OF SPECIFIED PRODUCTS, UNLESS OTHERWISE REQUIRED BY DRAWINGS. ALL PRODUCTS SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH NATIONALLY RECOGNIZED AND ACCEPTED STANDARDS AND PROCEDURES.

G11. COMPATIBILITY: ALL NEW ELECTRICAL DISTRIBUTION EQUIPMENT SHALL MATCH AND BE COMPATIBLE WITH EXISTING EQUIPMENT, BY MANUFACTURER TYPE, APPLICATION, AND SHORT CIRCUIT RATING.

G12. IDENTIFICATION: ALL ELECTRICAL DISTRIBUTION EQUIPMENT, TRANSFORMERS, PANELBOARDS AND OTHER ENCLOSED EQUIPMENT SHALL BE IDENTIFIED AS INDICATED IN THE CONTRACT DOCUMENTS. SAID IDENTIFICATION SHALL CONSIST OF PERMANENTLY ATTACHED ENGRAVED LAMINATED PLASTIC NAMEPLATES. EACH BRANCH CIRCUIT OVERCURRENT PROTECTION DEVICE SHALL BE IDENTIFIED BY CIRCUIT NUMBER AND SCHEDULED INSIDE PANEL DOOR. EACH BRANCH CIRCUIT SPLICE OR TERMINATION SHALL BE IDENTIFIED BY PANEL AND CIRCUIT DESIGNATION SHOWN ON THE JUNCTION OR OUTLET BOX, OR UPON INDIVIDUAL WIRES IN CASES WHERE MORE THAN ONE OF EACH PHASE CONDUCTOR OCCUR.

G13. WIRING: ALL CONDUCTORS CARRYING GREATER THAN 50 VOLTS SHALL BE MINIMUM #12 AWG, SOLID, CU, SOFT DRAWN OF 98% CONDUCTIVITY, UNLESS NOTED OTHERWISE.

INSULATION: PROVIDE TYPE THW, THWN, THHN, OR XHHW TYPE INSULATIONS. COORDINATE INSULATION TYPES WITH CONDITIONS, NEC REQUIREMENTS, AND CONDUIT FILL REQUIREMENTS. ALL WIRING SIZES ARE BASED ON 60° C OR 75° C INSULATION, ACCORDING TO CURRENT RATING, REGARDLESS OF ACTUAL INSULATION USED. TYPE "AC" OR "MC" CABLE IS ACCEPTABLE ONLY WITH TYPE THHN INSULATION.

HOME RUNS: PROVIDE MINIMUM # 10 AWG WIRING ON ALL HOMERUNS GREATER THAN 100 FEET.

NEUTRALS: SIZE ALL NEUTRALS FULL UNLESS SPECIFICALLY REDUCED ON PLANS. PROVIDE OVERSIZED NEUTRALS FOR FEEDERS AND SEPARATE NEUTRALS FOR BRANCH CIRCUITS SERVING DIGITAL COMPUTER EQUIPMENT.

COLORS:

PHASE:	208V WYE	240V DELTA	480V
A	BLACK	BLACK	BROWN
B	RED	ORANGE (HIGH LEG)	ORANGE
C	BLUE	BLUE	YELLOW
NEUTRAL	WHITE	WHITE	WHITE W/ COLORED STRIP
GROUND	GREEN	GREEN	GREEN

G14. GROUNDING: ALL CIRCUITS SHALL BE RUN WITH A #12 AWG INSULATED GREEN COPPER GROUND WIRE, UNLESS OTHERWISE NOTED. USE OF CONDUIT AS A GROUND IS UNACCEPTABLE.

AT SERVICE: PROVIDE BONDING JUMPER BETWEEN GROUND BUS AND NEUTRAL BUS. PROVIDE GROUNDING ELECTRODE CONDUCTORS AND GROUNDING ELECTRODES PER NEC.

G15. CONDUIT: ALL WIRING SHALL BE IN CONDUIT, MINIMUM 1/2" (E.M.T. IS ACCEPTABLE WITH COMPRESSION FITTINGS ONLY). FLEXIBLE METAL CONDUIT IS ACCEPTABLE ONLY WITH SEPARATE INSULATED GROUND WIRE, AND ONLY FOR SWITCH DROPS OR LIGHTING FIXTURE WHIPS. ENT, ALUMINUM CONDUIT, NM ("ROMEX"), NMC, AND SNM ARE NOT ACCEPTABLE.

RIGID CONDUIT: CONDUIT OVER 2" IN DIAMETER, OR EXPOSED TO WEATHER, OR EXPOSED TO POTENTIAL DAMAGE; OR USED FOR SERVICE ENTRANCE SHALL BE GALVANIZED RIGID STEEL TYPE.

PVC CONDUIT: PVC CONDUIT, MINIMUM SCHEDULE 40, IS ACCEPTABLE ONLY FOR USE BELOW GRADE, AND ONLY WHEN INSTALLED WITH WIDE RADIUS RIGID STEEL TURNS.

ROUTING: CONDUIT ROUTING SHOWN IS SYMBOLIC AND DIAGRAMMATIC INSTALL CONDUIT TO FIT ACTUAL FIELD CONDITIONS.

BELOW GRADE: COVER METALLIC CONDUIT BELOW GRADE WITH ASPHALTUM OR BITUMASTIC TAPE. SEAL JOINTS AGAINST WATER.

G16. CONDUIT FITTINGS: ALL FITTING SHALL BE COMPRESSION OR THREADED TYPE. USE OF SET SCREW FITTINGS IS NOT ACCEPTABLE.

G17. CIRCUIT BREAKERS: ALL BRANCH CIRCUIT OVERCURRENT PROTECTION DEVICES SHALL BE 20 AMPERE INVERSE TIME TYPE CIRCUIT BREAKERS UNLESS NOTED OTHERWISE. 120/240 VOLT CIRCUIT BREAKERS SHALL BE RATED AT 10,000 AIC MINIMUM. MULTI- POLE BREAKERS SHALL BE INTEGRAL UNITS. USE OF HANDLE TIES IS NOT ACCEPTABLE.

G18. FUSES: ALL FUSES 600 AMPERES OR LESS SHALL BE UL LISTED, CLASS RK1 OR J, LOW-PEAK, DUAL ELEMENT, TIME DELAY, 600 VOLT. ACCEPTABLE MANUFACTURERS: BUSSMAN, GOULD SHAWMUT.

G19. PENETRATIONS: ALL PENETRATIONS THROUGH FIRE-RATED SLABS AND PARTITIONS SHALL BE FIRE PROOFED TO THE SAME OR GREATER RATING THAN THAT OF THE SLAB OR PARTITION. WHERE CONFLICTS OCCUR, NOTIFY ARCHITECT OR INTERIOR DESIGNER.

G20. ALTERNATES & SUBSTITUTIONS: SUBMIT FOR APPROVAL ALTERNATES OF ALL ITEMS SPECIFIED ON THESE DRAWINGS. THE CONTRACTOR SHALL BEAR THE BURDEN OF SHOWING PROOF THAT ALTERNATES REQUESTED FOR SUBSTITUTION PERFORM IN AN EQUAL OR SUPERIOR MANNER TO THE SPECIFIED ITEM. INFORMATION SUBMITTED FOR ENGINEER'S CONSIDERATION SHOULD INCLUDE PERFORMANCE CHARACTERISTICS, ILLUSTRATION OF FIELD APPLICATION, AND COMPARISON OF THE SPECIFIED ITEM TO THE INTENDED ALTERNATE.

"ALTERNATE" REFERS TO A LUMINAIRE, FIXTURE, DEVICE, EQUIPMENT ITEM, OR MANUFACTURER OTHER THAN THAT SPECIFIED ON THE DRAWINGS OR IN THE SPECIFICATIONS.

G21. SHOP DRAWINGS & SUBMITTALS: SUBMIT MANUFACTURERS' STANDARD PRODUCT INFORMATION, PERFORMANCE SPECIFICATIONS, PHYSICAL DIMENSIONS, AND OTHER INFORMATION NECESSARY FOR ENGINEER TO INSURE COMPLIANCE WITH SPECIFICATIONS. SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO ORDERING AND INSTALLING ANY EQUIPMENT.

G22. PROJECT RECORD DOCUMENTS: UPON COMPLETION OF WORK, PREPARE LIGHTING AND POWER PROJECT RECORD DOCUMENTS ("AS-BUILTS") ON A SUITABLY REPRODUCIBLE MEDIUM (MYLAR OR VELLUM). PRESENT COMPLETED DRAWINGS TO TENANT, AND TWO SETS OF PRINTS TO INTERIOR DESIGNER OR ARCHITECT. "AS-BUILT" DRAWINGS SHALL INCLUDE ALL BRANCH CIRCUIT WORK, ANY PANELBOARD INFORMATION AVAILABLE, FINAL SWITCHING, ETC.

G23. WARRANTY: WARRANT ALL MATERIALS, EQUIPMENT AND INSTALLATION FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE BY TENANT.

TEMPORARY SERVICES
THE CONTRACTOR SHALL PROVIDE THE FOLLOWING SPECIFIC ITEMS OF TEMPORARY SERVICES.

A. TELEPHONE - THE GENERAL CONTRACTOR SHALL INSTALL A JOB SITE TELEPHONE AND NOTIFY ARCHITECT & OWNER OF THE TELEPHONE NUMBER AND THE NAME OF THE SUPERINTENDENT.

B. TEMPORARY WATER - WATER REQUIRED IN THE PERFORMANCE OF THE CONTRACT SHALL BE PROVIDED AND PAID FOR BY THE CONTRACTOR. WATER USED FOR HUMAN CONSUMPTION SHALL CONFORM TO REQUIREMENTS OF STATE AND LOCAL AUTHORITIES FOR POTABLE WATER.

C. TEMPORARY ELECTRICITY - TEMPORARY ELECTRIC SERVICE REQUIRED IN THE PERFORMANCE OF THE CONTRACT SHALL BE FURNISHED AND PAID FOR BY THE CONTRACTOR WHO SHALL FURNISH, INSTALL, AND MAINTAIN ALL TEMPORARY OVERHEAD CONSTRUCTION, METERS, DROPS, AND OTHER WIRING AND FITTINGS FOR BOTH LIGHT AND POWER AT LOCATIONS REQUIRED IN THE WORK AND SHALL BEAR THE COST OF MAKING THE SERVICE CONNECTIONS. BEFORE FINAL ACCEPTANCE, TEMPORARY ELECTRICAL SERVICE FACILITIES INSTALLED BY THE CONTRACTOR SHALL BE REMOVED AND THE SERVICE CONNECTIONS SEVERED IN ACCEPTABLE MANNER.

D. TEMPORARY HEAT - WHEN REQUIRED FOR PROPER INSTALLATION OR PROTECTION OF ANY PORTION OF THE WORK, THE CONTRACTOR SHALL FURNISH AND INSTALL TEMPORARY HEATING UNITS AS APPROVED BY THE OWNER OR LOCAL AUTHORITY.

PANELBOARDS: (AS APPLICABLE)

THE ELECTRICAL CONTRACTOR SHALL REVIEW THE ELECTRICAL DRAWINGS FOR SPECIFIC PANELBOARD REQUIREMENTS. THE PANEL BOARD SCHEDULE SPECIFY VOLTAGE CHARACTERISTICS, MAINS, LUG SIZE, LOCATION AND NUMBER, BRANCH CIRCUIT SIZE NUMBER AND LOCATION. ALSO MOUNTING METHOD AND TRIM.

APPROVED MANUFACTURERS ARE SQUARE "D", WESTINGHOUSE, GENERAL ELECTRIC, OR EQUAL.

THE ABOVE EQUIPMENT SHALL BE FACTORY ASSEMBLED UNIT ONLY NOT ASSEMBLY OF MISCELLANEOUS PARTS.

PANELBOARD ENCLOSURE SHALL BE CODE GAUGE GALVANIZED SHEET STEEL, WITH CORNERS LAPPED AND RIVETED OR FORMED THE ENCLOSURE SHALL BE PAINTED AS SPECIFIED HEREIN.

PANELBOARD TRIM SHALL BE FOR SURFACE OR RECESSED MOUNTING MOUNTING AS INDICATED BY THE PANEL SCHEMATICS. TRIM SHALL BE FULL FINISH SHEET STEEL FASTENED TO CABINET (ENCLOSED) BY APPROVED ADJUSTABLE CLAMPS.

PANELBOARD HINGES SHALL BE SEMI-CONCEALED FIVE KNUCKLE STEEL WITH NONFERROUS PINS, 180 DEGREE OPENING, AND LOCATE NOT MORE THAN 4" FROM TOP AND BOTTOM NOR GREATER THAN 26" ON CENTER.

PANELBOARD HARDWARE SHALL BE CHROME PLATED FLUSH TYPE COMBINATION LOCK AND CATCH WITH TWO KEYS. DOORS OVER 43" HIGH SHALL HAVE CHROME PLATED VAULT HANDLE. BUILT-IN LOCK AND 3 POINT CATCH FASTENING DOOR AT TOP, CENTER AND BOTTOM

PANELBOARD DIRECTORY HOLDER SHALL BE A METAL FRAME WITH NON-BREAKER TRANSPARENT COVER AND TYPE WRITTEN LIST OF CIRCUITS SHOWING POINTS SUPPLIED.

PANELBOARD NAME PLATES SHALL BE LAMINATED MICARTA, AND FURNISHED ON EACH PANEL TO INDICATE THE PANEL, AND PANEL VOLTAGE VOLTAGE.

PANELBOARD MOUNTING HEIGHT SHALL BE 6'-6" MAXIMUM FROM FINISHED FLOOR TO CENTER LINE OF TOP SWITCH OR CIRCUIT BREAKER UNLESS INDICATED OTHERWISE.

CIRCUIT BREAKERS QUICK-MAKE, QUICK-BREAK, THERMAL MAGNETIC WITH NON-WELDING TYPE CONTACTS. BREAKERS SHALL BE BOLTED TO THE PANEL BUS, UNLESS NOTED OTHERWISE. BREAKERS SHALL BE TRIP SET TO 20 AMPS.

TWO AND THREE POLE CIRCUIT BREAKERS TO BE COMMON TRIP.

LIGHTING CIRCUIT BREAKER TO BE "SWD" RATED.

GROUNDING AND BONDING: (AS APPLICABLE)

FURNISH AND INSTALL A COMPLETE WIRED GROUNDING SYSTEM MINIMUM #12 AWG, GREEN. CONDUIT GROUNDS ARE NOT ACCEPTABLE

WHERE REQUIRED, EMT CONNECTORS OR FLEXIBLE CONDUIT FITTINGS SHALL BE BONDED USING A CONDUIT LOCKNUT. T & B SERIES #106, OR EQUAL, UL LISTED.

GROUND TERMINAL RODS SHALL BE NOT LESS THAN 1/2" DIAMETER AND 8 FEET LONG SHALL BE MADE OF COPPER CLAD STEEL.

CONDUIT SYSTEM SHALL BE ELECTRICALLY CONTINUOUS. ALL ENCLOSURES AND NON-CURRENT CARRYING METALS TO BE GROUNDED ALL LOCK NUTS MUST CUT THROUGH ENAMELED OR PAINTED SURFACES ON ENCLOSURES. WHERE ENCLOSURES AND NON CURRENT CARRYING METALS ARE ISOLATED FROM THE CONDUIT SYSTEM USE BONDING JUMPERS WITH APPROVED CLAMPS.

ALL NEW RECEPTACLES SHALL BE BONDED TO A GROUND CONDUCTOR USING A #12 AWG. MINIMUM BONDING JUMPER BETWEEN RECEPTACLE TERMINAL AND GROUND CONDUCTOR. METAL-TO-METAL CONTACT ACCEPTABLE FOR OTHER SURFACES BOXES OR FLUSH TYPE BOXES, BOXES OR FLUSH TYPE BOXES.

MOTOR AND EQUIPMENT TERMINAL BOXES SHALL BE GROUNDED BY THE USE OF A MANUFACTURER-SUPPLIED GROUND LUG OR BY DRILLING AND TAPPING A HOLE FOR A GROUND SCREW. REMOVE PAINT PRIOR

LIGHTING FIXTURES SHALL BE GROUNDED BY THE USE OF A PIGTAIL FASTENED ON BARE METAL THAT IS FREE OF PAINT.

GENERAL LIGHTING NOTES: (AS APPLICABLE)

L1. FIXTURE TYPES: REFERENCE LIGHTING FIXTURE SCHEDULE AND REFLECTED CEILING PLAN FOR COMPLETE DESCRIPTION OF EACH FIXTURE TYPE. LIGHT FIXTURES ARE IDENTIFIED BY LETTERS AND SYMBOLS.

L2. SWITCH LOCATIONS: TYPICAL SWITCHING SHALL BE AS SHOWN.

L3. EXIT SIGNS: FURNISH EXIT SIGNS WITH INTEGRAL 90 MINUTE NICKEL-CADMIUM BATTERY BASED EMERGENCY POWER SOURCE.

L4. EMERGENCY LIGHTING: SUPPLY EMERGENCY FIXTURES WITH INTEGRAL 90 MINUTE BATTERY

L5. FIXTURE LOCATIONS: REFERENCE REFLECTED CEILING PLAN FOR EXACT LOCATIONS OF LIGHT FIXTURES. COORDINATE INSTALLATION IN FIELD WITH TENANT AND ENGINEER. COORDINATE AIMING OF ADJUSTABLE FIXTURES IN FIELD WITH TENANT

L6. INSTALLATION: WIRE FROM JUNCTION BOXES TO FIXTURES OR SWITCHES AS INDICATED. ADDITIONAL JUNCTION BOXES MAY BE REQUIRED BEYOND THOSE SHOWN.

L7. SUPPORT ALL FIXTURES ACROSS CEILING TEES OR FROM STRUCTURE ABOVE. IN NO CASE SHALL CEILING TILES OR PLASTER CEILING SUPPORT ANY FIXTURE.

GENERAL POWER NOTES: (AS APPLICABLE)

P1. GENERAL: VERIFY EXACT LOCATION OF OUTLETS AND DEVICES WITH TENANT PRIOR TO INSTALLATION. PROVIDE OUTLET BOXES, DEVICES, COVER PLATES, AND FLANGES AS REQUIRED.

P2. COORDINATION: MOUNT ALL OUTLETS AT 18" A.F.F. UNLESS NOTED OTHERWISE. REFERENCE ARCHITECT'S DRAWINGS, PLANS & ELEVATIONS FOR ALL HEIGHTS, DIMENSIONS, AND CONFIGURATIONS OF DEVICES NOT INDICATED ON THESE DRAWINGS. REFERENCE SAME DRAWINGS FOR EQUIPMENT NOT IDENTIFIED.

P3. CONVENIENCE OUTLETS: ALL CONVENIENCE OUTLETS SHOWN SHALL BE NEMA TYPE 5-20R, SPECIFICATION GRADE (HUBBELL #5352) DUPLEX RECEPTACLES WITH COVER PLATES TO MATCH EXISTING. VERIFY COLOR WITH ARCHITECT.

ACCEPTABLE MANUFACTURERS:

HUBBELL
LEVITON
PASS & SEYMOUR

FLOOR SERVICE BOXES: PROVIDE STEEL CITY CONCEALED SERVICE FLOOR BOXES CONFIGURED AS INDICATED ON PLAN. PROVIDE POWER, COMMUNICATIONS, DATA & SECURITY WHERE SHOWN. PROVIDE #GAB CAST PRESET FOR WORK IN CONCRETE.

P4. IG & GFCI RECEPTACLES: ALL ISOLATED GROUND DEVICES (IG) AND GROUND FAULT INTERRUPT (GFCI) DEVICES SHALL BE RATED 20 AMPERES AND SHALL HAVE AN DEDICATED INSULATED GREEN GROUND WIRE. THE GROUND WIRE SHALL BE RUN CONTINUOUS AND UNSPLICED BETWEEN DEVICE AND PANEL GROUND BUS.

ISOLATED GROUND RECEPTACLES SHALL BE UL LISTED 20 AMPERE (HUBBELL #IG-5352).

GROUND FAULT RECEPTACLES SHALL BE UL LISTED, RATED 20 AMPERES (HUBBELL #GF-5362).

P5. TIME CLOCKS: PROVIDE INTERMATIC 24-HOUR, 7-DAY TIME CLOCK TO CONTROL SIGNS, LIGHTING, AND OTHER CYCLIC LOADS IDENTIFIED BY TENANT'S REPRESENTATIVE. PROVIDE CONTACTORS AS REQUIRED. VERIFY EXACT LOCATION AND WIRING REQUIREMENTS. TIMECLOCK TO REMAIN "ON" BETWEEN THE HOURS OF DUSK TO 12:00 AM MINIMUM.

P6. INSTALLATION: DROP FROM JUNCTION BOXES TO DEVICES AS INDICATED ADDITIONAL JUNCTION BOXES MAY BE REQUIRED BEYOND THOSE SHOWN

P7. EQUIPMENT EXPOSED TO WEATHER SHALL BE WEATHERPROOF.

POWER RISER GENERAL NOTES:

P1. ELECTRICAL CONTRACTOR SHALL COLOR CODE FEEDER CONDUCTORS AT THE METER CENTER TO DESIGNATE PHASE NEUTRAL & GROUND.

P2. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY EXACT K.A.I.C. RATINGS OF THE LANDLORD'S DISTRIBUTION EQUIPMENT. PROVIDE SERIES RATED EQUIPMENT.

P3. ELECTRICAL CONTRACTOR SHALL BALANCE ALL PANELS AND ELECTRICAL EQUIPMENT TO 10% (+/-) BETWEEN PHASES: A/B, B/C, A/C REGARDLESS OF CIRCUITING INDICATED.

P4. PROPER CLEARANCE MUST BE MAINTAINED ABOUT ELECTRICAL EQUIPMENT PER N.E.C. FIELD VERIFY EXACT MOUNTING SPACE AVAILABLE IN THE ELECTRICAL ROOM PRIOR TO INSTALLATION OF ELECTRICAL EQUIPMENT.

P5. CONTRACTOR SHALL MAKE ALL FINAL ELECTRICAL CONNECTIONS.

P6. PANELBOARD(S) TO BE EQUIPPED WITH BOLT-ON BREAKERS.

SPECIAL SYSTEMS NOTES: (AS APPLICABLE)

S1. TELEPHONE SYSTEM: PROVIDE BACKBOARDS, CONDUITS, AND PULL STRINGS. COORDINATE WORK WITH TELEPHONE COMPANY AND TELEPHONE CONTRACTOR. COORDINATE CONDUIT ROUTING WITH FIELD CONDITIONS. PROVIDE CONDUIT FOR TRUNKS. PROVIDE CONDUIT FOR RUNS EXPOSED TO WEATHER OR DAMAGE. VERIFY NUMBER OF INCOMING LINES WITH OWNER.

S2. TELEPHONE/DATA RECEPTACLES: FURNISH AND INSTALL PULL STRINGS FROM OUTLETS TO 6" ABOVE CEILING. VERIFY EXACT REQUIREMENTS WITH TELEPHONE EQUIPMENT SUPPLIER AND INSTALLER. FURNISH AND INSTALL MATERIALS NOT PROVIDED BY TELEPHONE CONTRACTOR.

S3. FIRE ALARM: VERIFY FIRE ALARM REQUIREMENTS IN FIELD WITH LOCAL AUTHORITY HAVING JURISDICTION. FURNISH AND INSTALL NEW INITIATION AND ANNUNCIATION DEVICES. PROVIDE WIRE AND CONDUIT FOR TYING NEW FIRE ALARM INITIATING AND SIGNALING DEVICES TO NEAREST AVAILABLE FIRE ALARM INITIATING ZONE.
MEET ALL ADA REQUIREMENTS.

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STATE OF MISSOURI
DJ PENN
NUMBER E-28807
REGISTERED PROFESSIONAL ENGINEER
12/16/2021

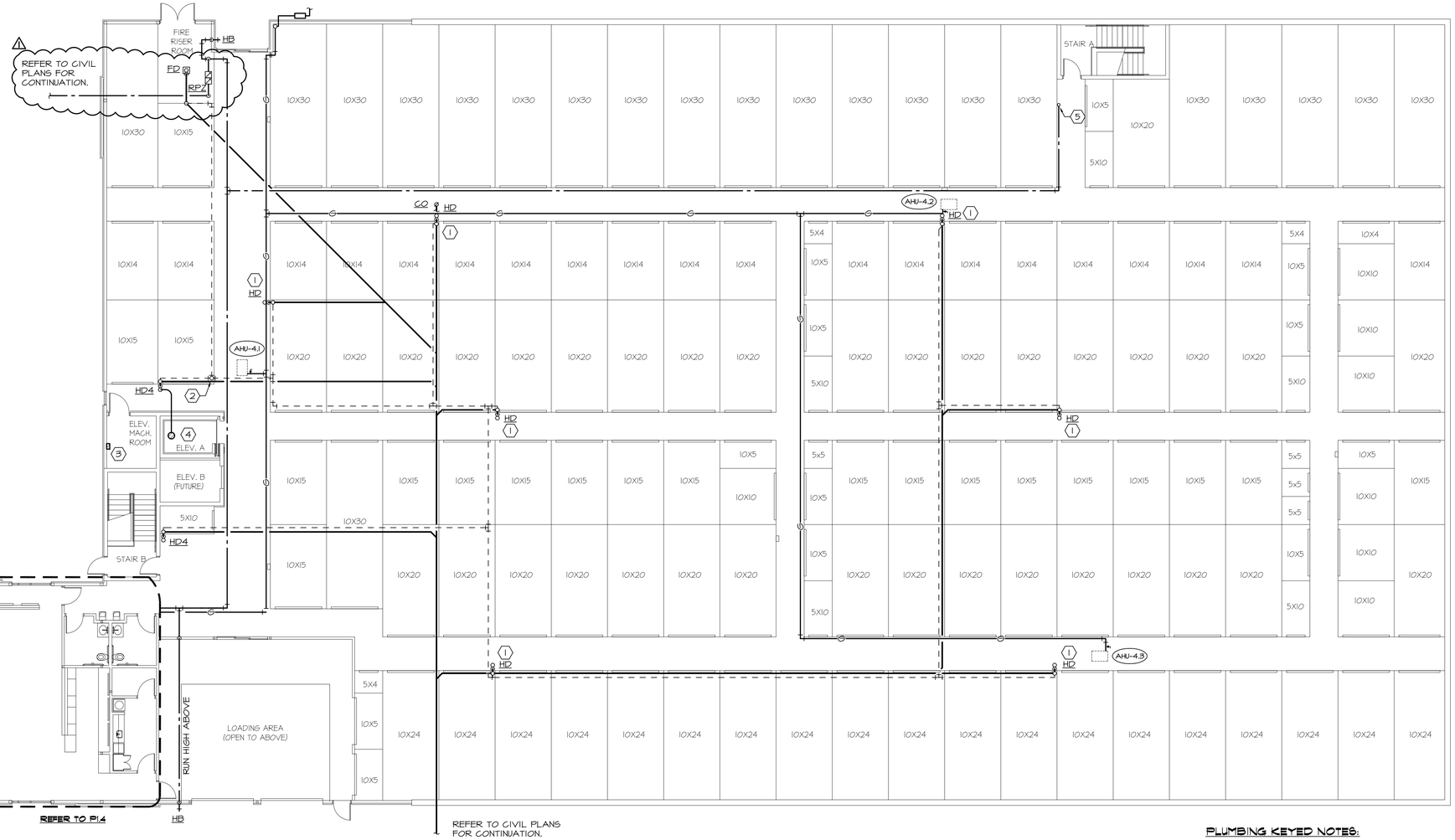
LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : DJP
REVISIONS:

ELECTRICAL SPECIFICATIONS

SHEET NO.
E4.1



1 1ST FLOOR - PLUMBING PLAN
SCALE: 3/32"=1'-0"

PLUMBING KEYED NOTES:

1. HUB DRAIN FOR CONDENSATE DRAIN LINES, MOUNTED HIGH IN CORRIDOR. MAINTAIN AIR GAP.
2. RUN 2" VENT THRU ROOF. COORDINATE ROUTING WITH UPPER FLOOR.
3. RUN 3/4" CONDENSATE LINE FROM CONDENSATE PUMP TO HUB DRAIN. EQUAL TO DAYTON #3HGE6; 82 GPH @ 5' HEAD, 51 GPH @ 15' HEAD
4. SUMP PUMP FOR ELEVATOR SHAFT. RUN 2" DRAIN LINE TO 4" HUB DRAIN. REFER TO DETAIL 2/P2.1.
5. 3/4" C.W. LINE UP TO 2ND FLOOR.
6. XX" GAS LINE UP TO 2ND FLOOR.

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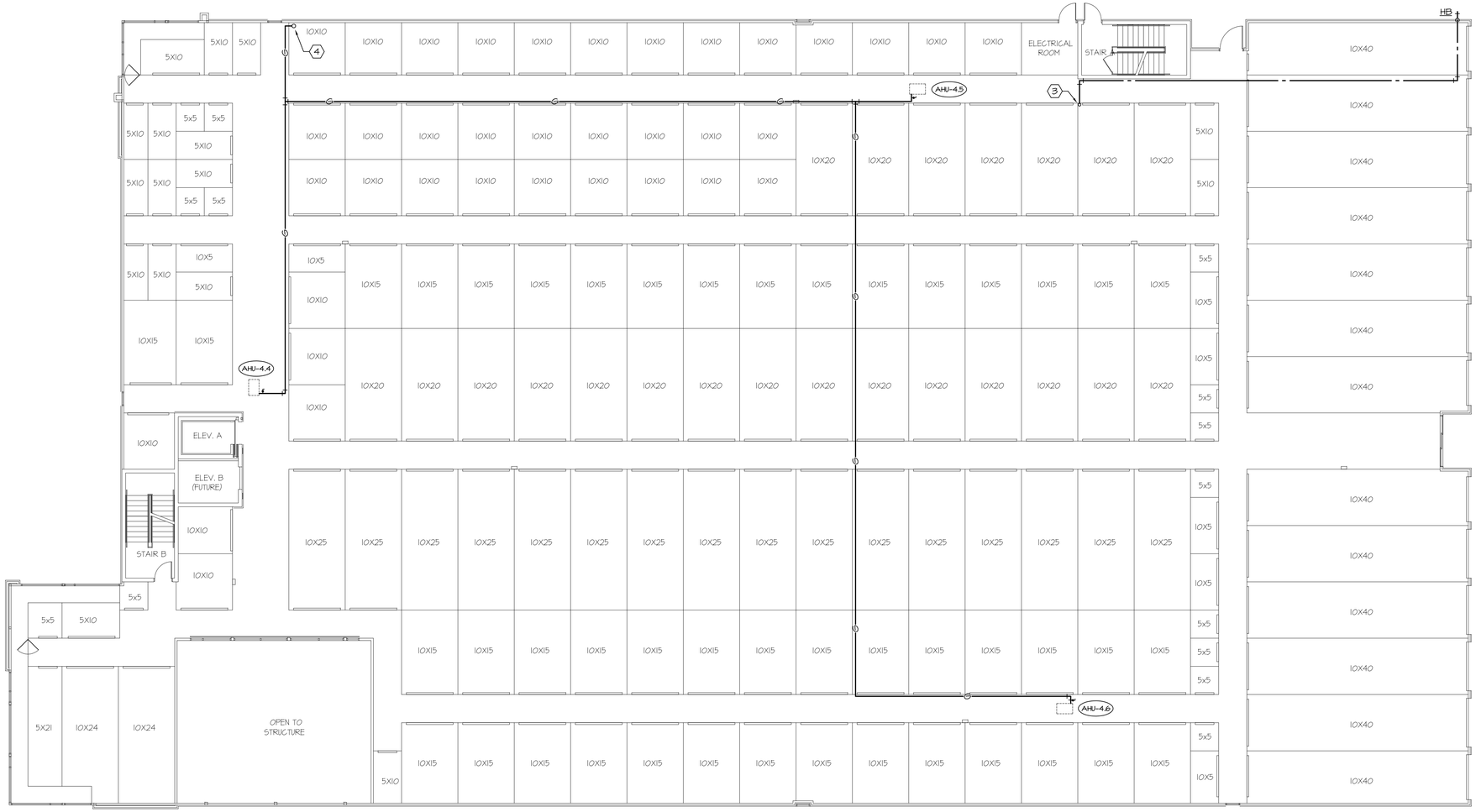
1ST FLOOR PLUMBING

SHEET NO.

P1.1



1 2ND FLOOR - PLUMBING PLAN
SCALE: 3/32"=1'-0"

PLUMBING KEYED NOTES:

1. HUB DRAIN FOR CONDENSATE DRAIN LINES, MOUNTED HIGH IN CORRIDOR. MAINTAIN AIR GAP.
2. RUN 2" VENT THRU ROOF. COORDINATE ROUTING WITH UPPER FLOOR.
3. 3/4" C.W. LINE UP FROM 1ST FLOOR.
4. XX" GAS LINE UP FROM 1ST FLOOR. XX" GAS LINE UP TO 3RD FLOOR.

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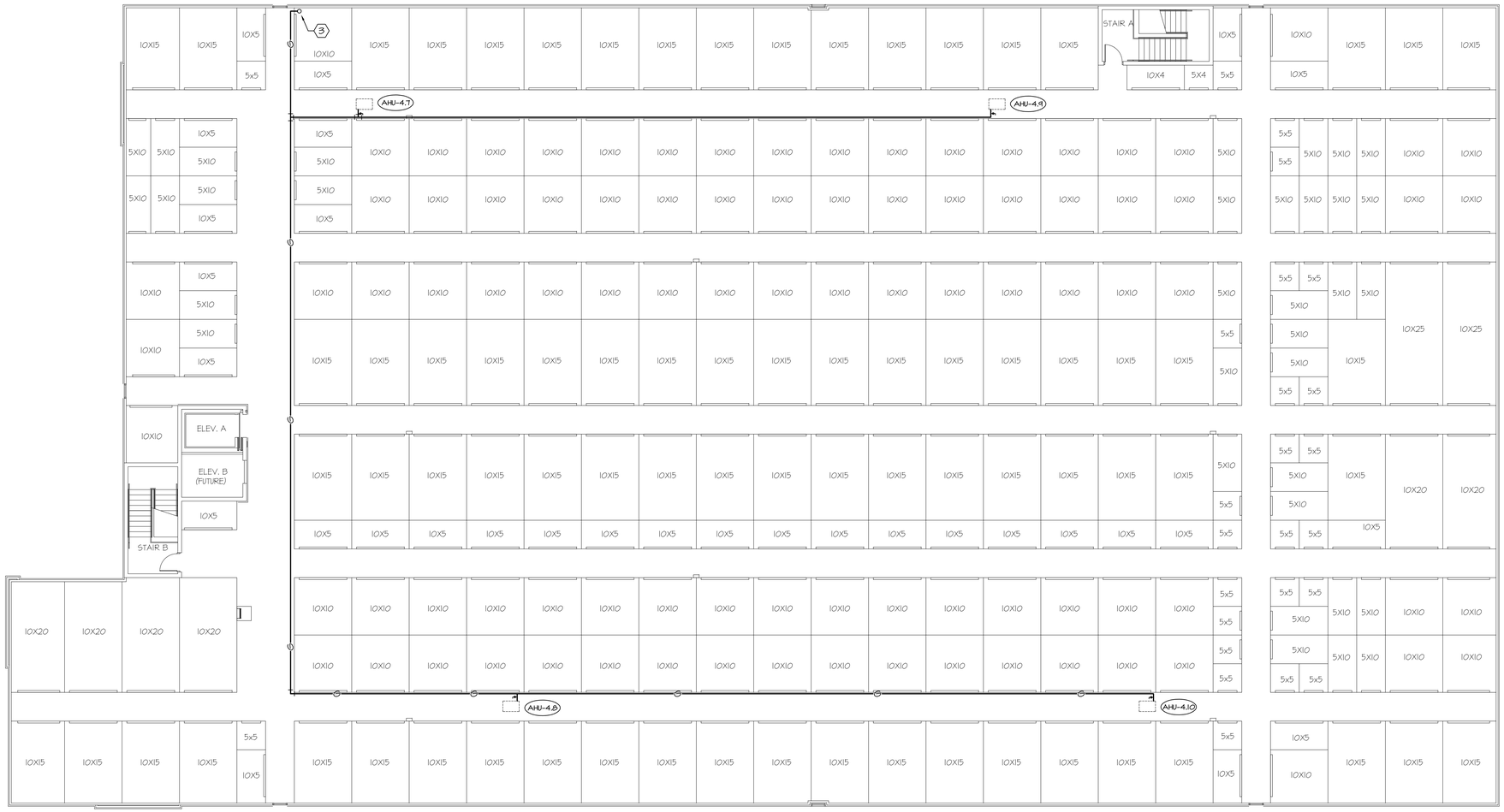
2ND FLOOR PLUMBING

SHEET NO.
P1.2



1 3RD FLOOR - PLUMBING PLAN
SCALE: 3/32"=1'-0"

PLUMBING KEYED NOTES:

1. HUB DRAIN FOR CONDENSATE DRAIN LINES, MOUNTED HIGH IN CORRIDOR. MAINTAIN AIR GAP.
2. RUN 2" VENT THRU ROOF. COORDINATE ROUTING WITH UPPER FLOOR.
3. XX" GAS LINE UP FROM 2ND FLOOR.

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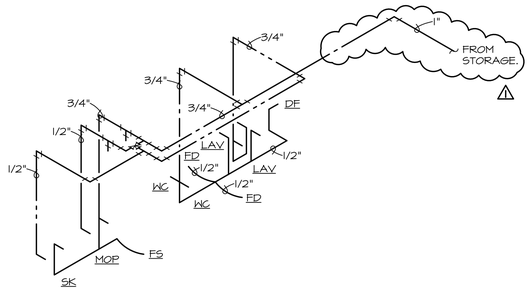
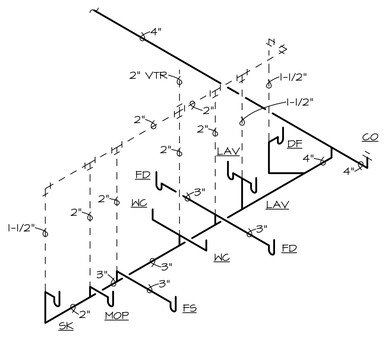
3RD FLOOR PLUMBING

SHEET NO.
P1.3



3 COLD WATER RISER
NO SCALE



2 WASTE & VENT RISER
NO SCALE

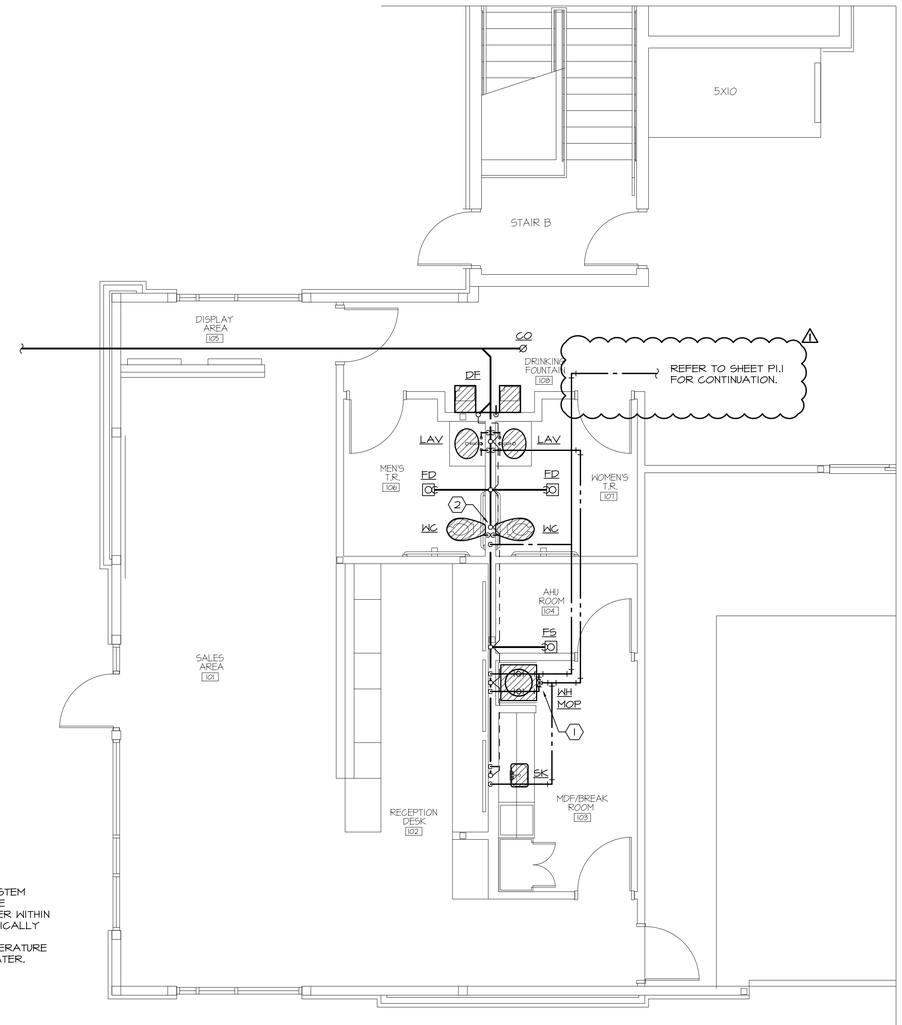
GENERAL PLUMBING NOTES :

1. CONTROLS FOR CIRCULATING HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE AND WHEN THERE IS NO DEMAND FOR HOT WATER.

PLUMBING KEYED NOTES:

(1) PROVIDE & INSTALL 3/4" ANTI-SCALDING THERMOSTATIC MIXING VALVE ON HOT WATER LINE FEEDING PUBLIC RESTROOM LAVATORIES. SET TO 110° MAX. MUST CONFORM TO ASSE 1070.

(2) RUN 2" VENT THRU ROOF. COORDINATE ROUTING WITH UPPER FLOOR.



1 OFFICE PLUMBING PLAN
SCALE: 1/4"=1'-0"

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LAKEWOOD STORAGE
NE PORT DRIVE
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OFFICE PLUMBING

SHEET NO.

P1.4

FIRE RESISTANCE DIRECTORY (BXRH)

THROUGH-PENETRATION FIRESTOP SYSTEMS (XHEZ)—*Continued*

System No. C-AJ-1014

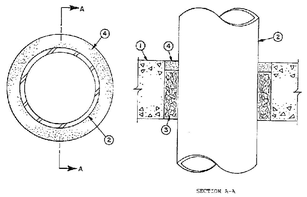
(Formerly System No. 133)

F Rating—2 Hr

T Rating—0 Hr

L Rating At Ambient—Less Than 1 CFM/sq ft (See Item 4)

L Rating At 400 F—Less Than 1 CFM/sq ft (See Item 4)



1. **Floor or Wall Assembly**—Min 3-1/4 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified **Concrete Blocks***. Max diam of circular opening is 6 in. See **Concrete Block** (CAZT) category in the Fire Resistance Directory for names of manufacturers.
2. **Through Penetrants**—One metallic pipe or conduit to be centered within the firestop system. A nom annular space of 3/4 in. is required within the firestop system. Pipe or conduit to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes or conduits may be used:
   A. **Steel Pipe**—Nom 4 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. **Conduit**—Nom 4 in. diam (or smaller) steel electrical metallic tubing or steel conduit.
3. **Packing Material**—Min 4 pcf mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or from both surfaces of wall as require to accommodate the required thickness of fill material. Min thickness of packing material in floors and walls to be 2-3/4 in. and 2-1/4 in., respectively.
4. **Fill, Void or Cavity Material*—Sealant**—Min 1/2 in. thickness of fill material applied within annulus, flush with top surface of floor or with both surfaces of wall. As an alternate, the permanent forming material (Item 3) may be omitted if the fill material thickness is increased to a min 1-1/2 in.

   Minnesota Mining & Mfg. Co.—Types FB-2000, FB-2000+, FB-2003 (floors only). (Note: L Ratings apply only when FB-2000+ is used.)

*Bearing the UL Classification Marking

3 UL FIRE PENETRATION DETAIL
NOT TO SCALE

SERVICE WATER SYSTEMS FUNCTIONAL TESTING/COMMISSIONING PLAN

THE CONTRACTOR SHALL COMPLETE THE TASKS BELOW TO COMMISSION THE SERVICE WATER SYSTEMS AND CONTROL SYSTEM AND SUBMIT WRITTEN DOCUMENTATION DETAILING THE TASKS BELOW. FOR EACH TASK, LIST THE DATE PERFORMED, PERSON COMPLETING THE TASK, THE INITIAL SETTING/CONDITION, LIST OF SPECIFIC EQUIPMENT, APPLIANCES OR SYSTEMS TO BE TESTED AND DESCRIPTION OF OF THE TESTS TO BE PERFORMED. ACTIONS PERFORMED, AND FINAL SETTING CONDITION. SUBMIT DOCUMENTATION AT OR BEFORE SUBSTANTIAL COMPLETION TO FACILITATE OBTAINING THE CERTIFICATE OF OCCUPANCY.

1. ENSURE ALL WATER SYSTEMS INSTALLED AND ARE FUNCTIONAL.

2. ENSURE SERVICE WATER HEATING CONTROL SYSTEMS ARE CALIBRATED AND FUNCTIONAL AND OPERATE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

3. EQUIPMENT SHALL DEMONSTRATE THE INSTALLATION AND OPERATION OF COMPONENTS.

PIPING MATERIAL SCHEDULE

TYPE	MATERIALS
WATER LINES	COPPER TYPE "L" OR CROSS-LINKED POLYETHYLENE (PEX) W/ 1" THICK ARMAFLEX OR EQUIVALENT INSULATION
WASTE LINE	ABS SCHEDULE 40 OR CAST IRON
VENT LINE	ABS SCHEDULE 40 OR COPPER PIPING
CONDENSATE	PVC SCHEDULE 40

PIPING LEGEND

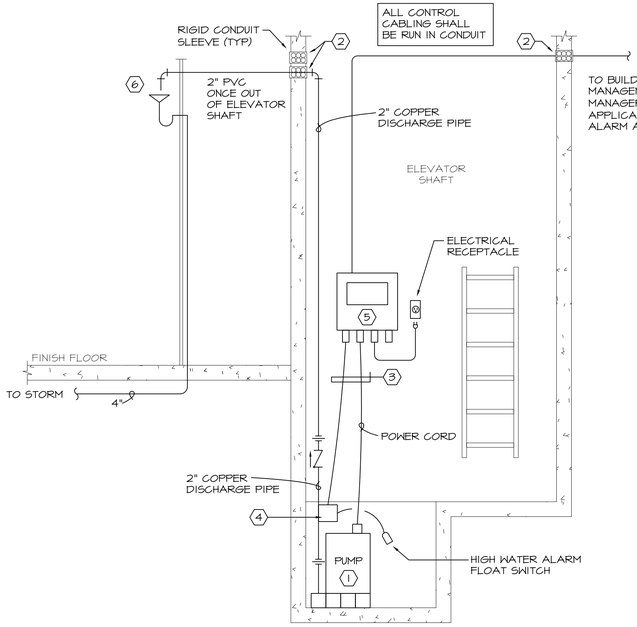
SYMBOL	TYPE
——— - ———	COLD WATER
——— - - ———	HOT WATER
———	WASTE LINE
— — — — — — — — —	VENT LINE

PLUMBING FIXTURE CONNECTION SCHEDULE

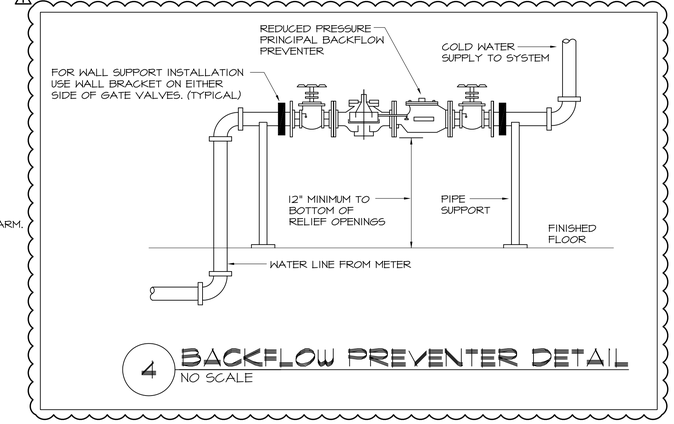
MARK	FIXTURE	CW	HW	W	V	REMARKS
WC	WATER CLOSET (HANDICAP)	1/2"	-	4"	2"	a. KOHLER #K-25077; ELONGAED WATER CLOSET; WHITE CHINA; 1.28 GAL. PER FLUSH. b. McGUIRE #2166LK 1/2" ANGLE SUPPLIES. c. CHURCH #295C WHITE, OPEN FRONT SEAT.
LAV	LAVATORY (HANDICAP)	1/2"	1/2"	2"	1-1/2"	a. KOHLER #K-2030; WALL MOUNTED; WHITE CHINA; 20"x 18"; 8" CENTERS b. CHICAGO FAUCET #404-VE2805-317ABCP, 0.5 GPM; 4" WRIST BLADES c. CHROME PLATED GRID STRAINER. d. 17 GA., 1 1/2" P-TRAP. e. 1/2"x 3/8" STOPS & SUPPLIES; CHROME PLATED. f. WADE SERIES 520 CARRIER. g. TRUEBRO #102 P-TRAP AND SUPPLY PIPING INSULATION KIT.
FD	FLOOR DRAIN	1/2"	-	3"	2"	a. WADE # 1100STD 6" DIA. CAST IRON FLOOR DRAIN PROVIDE 1/2" TRAP PRIMER
FS	FLOOR SINK	1/2"	-	3"	2"	a. WADE # 9113-EF6; 8x8x6 CAST IRON FLOOR SINK W/ 6"ø FUNNEL, ALUMINUM DOME STRAINER AND NICKEL BRONZE HINGED TOP. PROVIDE 1/2" TRAP PRIMER.
DF	WATER COOLER	1/2"	-	2"	1-1/2"	a. ELKAY #EZSTL8C; WALL MOUNT, BARRIER-FREE ACCESS, ADA COMPLIANT
MOP	MOP SINK	1/2"	1/2"	3"	1-1/2"	a. WILLIAMS #SBC-1800 "HILOW" 24"x24"x12" W/ STAINLESS STEEL CAP b. WILLIAMS #T-10-VB; SINK FITTING W/ VACUUM BREAKER, 3/4" HOSE THREADED OUTLET; PAIL HOOK W/ WALL SUPPORT c. PROVIDE STAINLESS STEEL BACK PANEL.
SK	BREAK SINK	1/2"	1/2"	2"	1-1/2"	a. ELKAY #LRAD1720S5; SINGLE BOWL; 18 GAUGE; DROP-IN 14"x14" BOWL b. DELTA FAUCET #28716LF, LEVER HANDLES, 1.8 GPM; 5" SWING SPOUT. c. 3" PERFORATED GRID STRAINER; ELKAY #LK-8.. d. 1/2"x3/8" STOPS AND SUPPLIES; CHROME PLATED. ELKAY #2165 LK.
HD	HUB DRAIN	-	-	3"	1-1/2"	a. PROVIDE 3" HUB DRAIN HIGH IN CORRIDOR.
HD4	HUB DRAIN	-	-	4"	2"	a. PROVIDE 4" HUB DRAIN HIGH IN CORRIDOR.
TD	TRENCH DRAIN	-	-	4"	2"	---
HB	HOSE BIBB	3/4"	-	-	-	a. ZURN #1300; ENCASED, ANTI-SIPHON W/ NON-FREEZE TYPE INTEGRAL BACKFLOW PREVENTER
CO	CLEANOUT	-	-	4"	-	a. WADE # 6000, CAST IRON W/ THREADED ADJUSTABLE HOUSING PROVIDE WITH TEE-NYE FITTING.
DCO	HEAVY-DUTY DOUBLE CLEANOUT SAMPLE PORT	-	-	4"	-	a. WADE # 6000Z, CAST IRON W/ THREADED ADJUSTABLE HOUSING PROVIDE WITH SINGLE RISER
TMV	THERMOSTATIC MIXING VALVE	3/4"	3/4"	-	-	a. SYMMONS "MAXLINE" #T-230-CK; LEAD FREE, TAMPER RESISTANT

NOTES

1. ALL FIXTURES SHALL HAVE AN INDIVIDUAL SHUTOFF VALVE.
2. ALL FIXTURES SHALL BE PROVIDED W/ A SHOKTROL.
3. INSTALL A METER AND/ OR BACKFLOW PREVENTOR AS PER LOCAL CODE.



2 ELEVATOR SUMP PUMP SYSTEM DETAIL
NOT TO SCALE



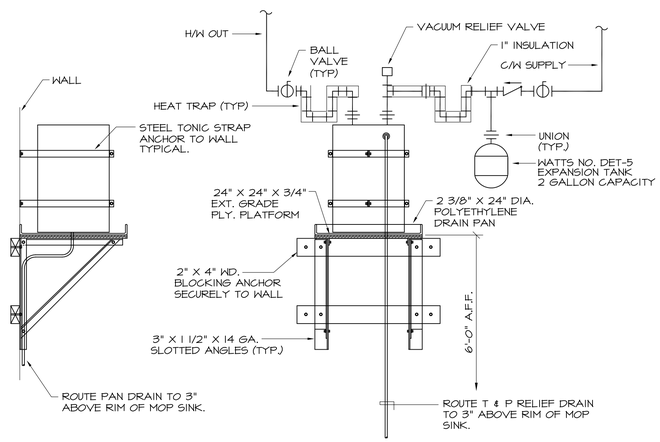
4 BACKFLOW PREVENTER DETAIL
NO SCALE

SEQUENCE OF OPERATION:

1. WATER ENTERS SUMP.
2. FLOAT SWITCH INITIATES SUMP, PUMP, AND ALARM AT MANAGER'S OFFICE
3. WATER DISCHARGES THROUGH NORMALLY OPEN SOLENOID VALVE (A) TO HUB DRAIN AND STORM.
4. WHEN WATER CONTINUES TO RISE, HIGH WATER ALARM FLOAT SWITCH SOUNDS ALARM AT MANAGER'S OFFICE.

ELEVATOR PUMP KEYED NOTES:

1. LIBERTY PUMPS #ELV290, SUBMERSIBLE PUMP SYSTEM 50 GPM, 3/4 HP, 115VOLT, 2" DISCHARGE CONNECTION
2. PROVIDE WEATHERPROOF SEAL EQUAL TO LINK-SEAL.
3. PROBE CABLE AND POWER CABLE.
4. PRESET LEVEL HOLDER WITH HIGH LIQUID ALARM FLOAT, HIGH LEVEL PROBE, AND PUMP "ON" & PUMP "OFF" PROBE . CLAMP DEVICE TO PUMP DISCHARGE PIPING.
5. LIBERTY PUMPS #ELV-290 OILTECTOR SYSTEM, 115V/1Ø, CONTROL SYSTEM WITH BUILT-IN AUDIBLE AND VISUAL ALARM WHEN PUMP DOES RUN DUE TO HIGH LIQUID ALARM. PROVIDE SILENCING BUTTON FOR AUDIBLE ALARM BUILT INTO PANEL. PANEL SHALL HAVE ADDITIONAL CONTACTOR FOR A REMOTE ALARM LOCATION.
6. HUB DRAIN N CORRIDOR. MAINTAIN AIR GAP.



1 WATER HEATER-1
NO SCALE

WATER HEATER SCHEDULE

MARK	RECOVERY GPH	RECOVERY RISE°F	STORAGE GALLONS	LINING	MAXIMUM INPUT BTUH	REMARKS
WH-1	10	60	20	GLASS	1.5 KW @ 120V/1Ø	STATE #PCE-20-10M5A

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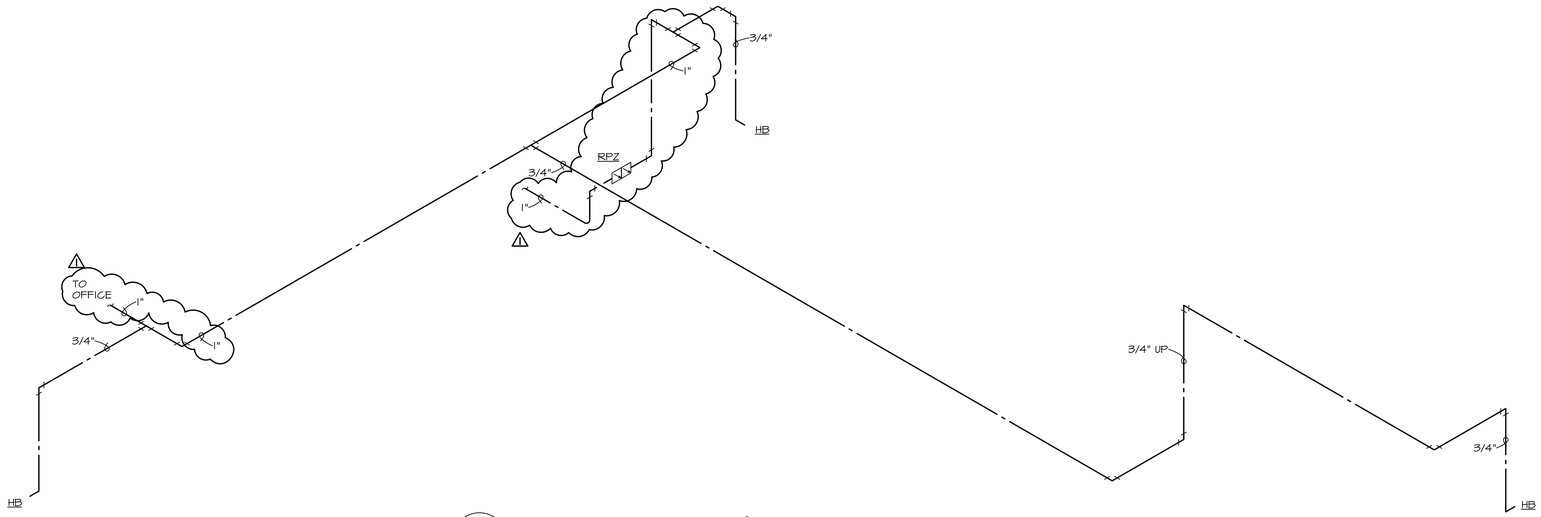
REVISIONS:

PLUMBING SCHEDULES

SHEET NO.

P2.1



1 COLD WATER RISER
NO SCALE

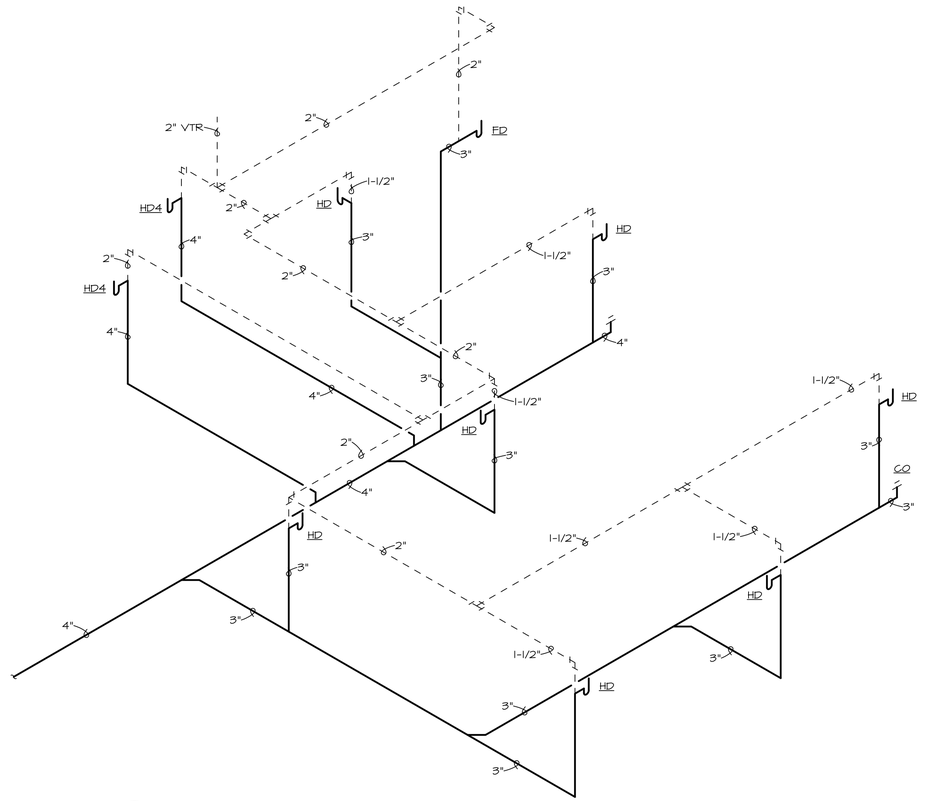
WATER METER FIXTURE CALCULATIONS			
FIXTURE	F.U. FIXTURE	# OF FIXTURES	TOTAL F.U.
WATER CLOSET	5.0	2	10.0
LAVATORY	2.0	2	4.0
DRINKING FOUNTAIN	0.25	1	0.25
BREAK SINK	1.4	1	1.4
MOP SINK	3.0	1	3.0
TOTAL WATER FIXTURE UNITS = 18.65 F.U.			

BASED ON PREDOMINANTLY FLUSH TANKS
THE WATER DEMAND ESTIMATE = 13.0 GPM

WATER SIZE REQUIRED = 1"

DRAINAGE FIXTURE CALCULATIONS			
FIXTURE	F.U. FIXTURE	# OF FIXTURES	TOTAL F.U.
WATER CLOSET	4.0	2	8.0
LAVATORY	1.0	2	2.0
DRINKING FOUNTAIN	0.5	1	0.5
BREAK SINK	2.0	1	2.0
MOP SINK	3.0	1	3.0
FLOOR DRAIN	2.0	3	6.0
FLOOR SINK	2.0	1	2.0
HUB DRAIN	2.0	9	18.0
TOTAL WASTE FIXTURE UNITS = 41.5 F.U.			

RECOMMENDED PIPE SIZE REQUIRED @ 0.125/FT SLOPE = 4"



2 WASTE & VENT RISER
NO SCALE

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
03/28/2022

1301 Solana Blvd.
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DP CE

STATE OF MISSOURI
D.J. PENN
NUMBER E-28507
REGISTERED PROFESSIONAL ENGINEER
1/20/2022

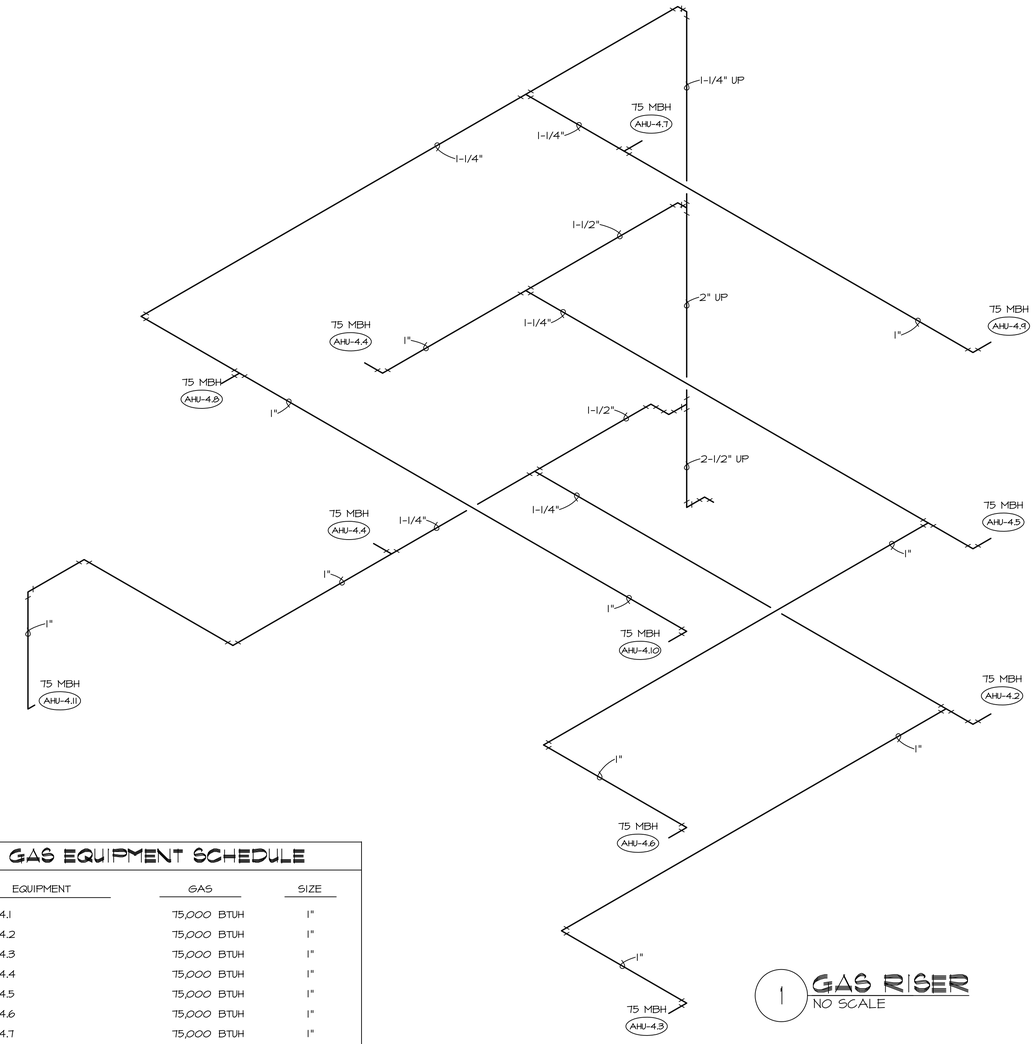
LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : DJP
REVISIONS:

PLUMBING RISERS

SHEET NO.
P2.2



GAS EQUIPMENT SCHEDULE

EQUIPMENT	GAS	SIZE
AHU-4.1	75,000 BTUH	1"
AHU-4.2	75,000 BTUH	1"
AHU-4.3	75,000 BTUH	1"
AHU-4.4	75,000 BTUH	1"
AHU-4.5	75,000 BTUH	1"
AHU-4.6	75,000 BTUH	1"
AHU-4.7	75,000 BTUH	1"
AHU-4.8	75,000 BTUH	1"
AHU-4.9	75,000 BTUH	1"
AHU-4.10	75,000 BTUH	1"
AHU-4.11	75,000 BTUH	1"

TOTAL SPACE DEMAND = 825,000 BTUH 2-1/2" @ 350 '

ALL GAS EQUIPMENT SHALL BE PROVIDED WITH AN INDIVIDUAL SHUT-OFF VALVE AND A FLEXIBLE QUICK DISCONNECT.

GAS PRESSURE SHALL BE 0.5". CONTRACTOR SHALL VERIFY METERING AND PRESSURE REGULATOR REQUIREMENTS WITH LOCAL GAS COMPANY.

1 GAS RISER
NO SCALE

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STATE OF MISSOURI
DJ
PENN
NUMBER
E-38507
REGISTERED PROFESSIONAL ENGINEER
12/16/2021

LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
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REVISIONS:

PLUMBING RISERS

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P2.3