LEE'S SUMMIT JOINT OPERATIONS FACILITY

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086



PACKAGE 2: CONSTRUCTION SET

NOVEMBER 1, 2024

HOEFER WELKER

HW PROJECT NO: 138191

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PACKAGE 2: CONSTRUCTION SET

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

REVISION DATES:

STATE OF MISSOURI
CHRISTOPHER KRUMREI
NUMBER A-2016011211
ARCHITECT

PROFESSIONAL SEAL

G-001

ISSUE DATE: NOVEMBER 1, 2024
HOEFER WELKER #: 138191

DRAWING INDEX

3/4" = 1'-0"
1 1/2" = 1'-0"
1" = 1'-0"
3/4" = 1'-0"
1/2" = 1'-0"
3/8" = 1'-0"
1/4" = 1'-0"
1/8" = 1'-0"
1/16" = 1'-0"

ABBREVIATIONS

A/C	AIR CONDITIONING
A/V	AUDIO VISUAL
ACOUST	ACOUSTICAL
ACP	ACOUSTICAL CEILING PANEL
AD	AREA DRAIN
ADD	ADDENDUM
ADJ	ADJUSTABLE / ADJACENT
AFF	ABOVE FINISH FLOOR
AHJ	AUTHORITIES HAVING JURISDICTION
AHU	AIR HANDLING UNIT
ALT	ALTERNATE
ALUM	ALUMINUM
ANOD	ANODIZED
AP	ACCESS PANEL
APC	ARCH PRECAST CONCRETE
APPROX	APPROXIMATE
ARCH	ARCHITECT / ARCHITECTURAL
ATTEN	ATTENUATION
AUTO	AUTOMATIC
AVG	AVERAGE
---	---
BD	BOARD
BIT	BITUMINOUS
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BENCHMARK / BEAM
BO	BOTTOM OF
BOC	BACK OF CURB
BOT	BOTTOM
BR	RESILIENT BASE
BRG	BEARING
BRK	BRICK
BRKT	BRACKET
BSMT	BASEMENT
BT	TILE BASE
BTWN	BETWEEN
BV	INTEGRAL COVED BASE
BVL	BEVELED
BW	BOTH WAYS
C	---
CA	ACOUSTICAL CEILING TILE
CAB	CABINET
CAP	CAPACITY
CB	CATCH BASIN
CCTV	CLOSED CIRCUIT TV
CE	PAINTED GYP CEILING - EPOXY
CF	CUBIC FEET
CFM	CUBIC FEET PER MINUTE
CG	CORNER GUARD
CI	CAST IRON
CIP	CAST IN PLACE
CJ	CONTROL JOINT
CL	CENTERLINE
CLG	CEILING
CLOS	CLOSET
CLR	CLEAR / CLEARANCE
CM	CENTIMETER
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MANSONRY UNIT (S)
CO	CLEAN OUT
COL	COLUMN
COMB	COMBINATION
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCT / CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
COORD	COORDINATE
CORR	CORRIDOR
CP	CONCRETE PIPE
CP	PAINTED GYP CEILING
CS	COUNTERSINK
CSMT	CASEMENT
CTR	COUNTER
CU	CUBIC
CW	COLD WATER
---	---
DBL	DOUBLE
DEMO	DEMOLISH / DEMOLITION
DEPT	DEPARTMENT
DF	DRINKING FOUNTAIN
DH	DOUBLE HUNG
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DISP	DISPENSER
DMT	DEMOUNTABLE
DN	DOWN
DR	DOOR
DS	DOWNSPOUT
DTL	DETAIL
DWG	DRAWING
---	---
E	EAST
EA	EACH
EF	EXHAUST FAN
EJ	EXPANSION JOINT
EL	ELEVATION
ELAST	ELASTOMERIC
ELEC	ELECTRICAL
ELEV	ELEVATOR
EMERG	EMERGENCY
EP	ELECTRICAL PANELBOARD
EQ	EQUAL
EQUIP	EQUIPMENT
ESC	ESCALATOR
EST	ESTIMATE
ETR	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPANSION / EXPANDED
EXT	EXTERIOR
---	---
FA	FIRE ALARM
FAB	FABRICATE
FB	FACE BRICK
FBO	FURNISHED BY OWNER
FC	CARPET
FCT	VINYL COMPOSITION TILE
FD	FLOOR DRAIN
FDN	FOUNDATION
FDV	FIRE DEPARTMENT VALVE
FE	FIRE EXTINGUISHER AND BRACKET
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FLOOR
FF&E	FIXTURES / FURNITURE / EQUIPMENT
FFE	FINISH FLOOR ELEVATION
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FIN	FINISH / FINISHED
FIXT	FIXTURE

ABBREVIATIONS

FLG	FLASHING
FLR	FLOOR
FLUOR	FLUORESCENT
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOG	FACE OF GYPSUM BOARD / WALL
FOM	FACE OF MASONRY
FOS	FACE OF STUDS
FR	FIRE RESISTANT
FRM	FRAME (D), (ING)
FS	FLOOR SINK
FT	FLOOR TILE
FT	FOOT / FEET
FTG	FOOTING
FURR	FURRING
FUT	FUTURE
FV	FIELD VERIFY
FVC	FIRE VALVE CABINET
FVT	VINYL TILE
FX	FINISHED CONCRETE
FZ	TERRAZZO
---	---
GA	GAUGE
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GFRC	GLASS FIBER REINF CONC
GL	GLASS / GLAZING
GOVT	GOVERNMENT
GPM	GALLON PER MINUTE
GYP	GYPSUM
---	---
HB	HOSE BIBB
HC	HOLLOW CORE
HD	HEAD
HDBD	HARDBOARD
HDR	HEADER
HDW	HARDWARE
HDWD	HARDWOOD
HK	HOOK
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HPT	HIGH POINT
HR	HOUR
HS	HIGH STRENGTH
HT	HEIGHT
HTG	HEATING
HTR	HEATER
HVAC	HEATING VENTING AIR CONDITIONING
HW	HOT WATER
HWH	HOT WATER HEATER
---	---
ID	INSIDE DIAMETER
IN	INCH
INCAND	INCANDESCENT
INCL	INCLUDE (D), (ING)
INFO	INFORMATION
INST	INSTALL / INSTALLATION
INSUL	INSULATE / INSULATION
INT	INTERIOR
INV	INVERT
---	---
JAN	JANITOR
JB	JUNCTION BOX
JC	JANITOR CLOSET
JST	JOIST
JT	JOINT
---	---
KIT	KITCHEN
KP	KICK PLATE
---	---
L	LONG / LENGTH
LAB	LABORATORY
LAV	LAVATORY
LBS	POUNDS
LF	LINEAR FOOT (FEET)
LH	LEFT HAND
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LPT	LOW POINT
LRG	LARGE
LT(G)	LIGHT(ING)
LVR	LOUVER
LWC	LIGHTWEIGHT CONCRETE
---	---
M	METER (S)
MAS	MASONRY
MAX	MAXIMUM
MBR	MEMBER
MECH	MECHANICAL
MED	MEDIUM
MEMB	MEMBRANE
MFG	MANUFACTURING
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
ML	PLASTIC LAMINATE MILLWORK
MN	NATURAL STONE COUNTERTOPS
MO	MASONRY OPENING
MOD	MODULAR
MS	SOLID SURFACE COUNTERTOPS
MTD	MOUNTED
MTG	MOUNTING
MTL	METAL
MULL	MULLION
---	---
N	NORTH
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NRC	NOISE REDUCTION COEFFICIENT
NTS	NOT TO SCALE
---	---
OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OVERHEAD / OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE
ORD	OVERFLOW ROOF DRAIN
OZ	OUNCE
---	---
PA	PUBLIC ACCESS
PB	PANEL BOARD
PC	PRECAST CONCRETE
PERF	PERFORATE (D)
PERM	PERMANENT

ABBREVIATIONS

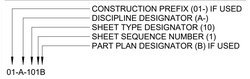
PERP	PERPENDICULAR
PL	PLATE / PROPERTY LINE
PLAS	PLASTER
PLUMB	PLUMBING
PLYWD	PLYWOOD
PNL	PANEL
POLY	POLYETHYLENE
PREFAB	PREFABRICATE (D)
PREFIN	PREFINISHED
PRELIM	PRELIMINARY
PREP	PREPARE (D)
PROJ	PROJECT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PAINT; PRESSURE TREATED
PTD	PAINTED
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
---	---
QTY	QUANTITY
---	---
R	RISER / RADIUS / REVERSED
R/W	RIGHT OF WAY
RA	RETURN AIR
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
RE	REFERENCE / REFER TO
REC (D)	RECEIVE (D)
REF	REFRIGERATOR
REINF	REINFORCE (D), (ING)
REQD	REQUIRED
REQMT	REQUIREMENT
REV	REVISED / REVISION
RFG	ROOFING
RH	RIGHT HAND
RM	ROOM
RO	ROUGH OPENING
RTU	ROOF TOP UNIT
---	---
S	SOUTH
SA	ACOUSTICAL WALL PANEL
SAN	SANITARY SEWER
SC	SOLID CORE
SCH	SCHEDULE
SCN	SCREEN
SECT	SECTION
SF	SQUARE FOOT (SQ FT)
SHM	SECURITY HOLLOW METAL
SHT	SHEET
SIM	SIMILAR
SOF	SPRAY-ON FIREPROOFING
SOG	SLAB ON GRADE
SP	TOILET PARTITION
SP HD	SPRINKLER HEAD
SPEC	SPECIFICATION (S)
SPKR	SPEAKER
SQ	SQUARE
SS	STAINLESS STEEL
SS	SILLS
STC	SOUND TRANSM COEFFICIENT
STD	STANDARD
STG	SEATING
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURE / STRUCTURAL
SUBFLR	SUBFLOOR
SUSP	SUSPENDED
SW	WINDOW TREATMENTS
SWGR	SWITCH GEAR
SY	SQUARE YARD (SQ YD)
SYM	SYMMETRICAL
SYS	SYSTEM
---	---
T	TREAD
T&B	TOP & BOTTOM
T&G	TONGUE & GROOVE
TEL	TELEPHONE
TEMP	TEMPORARY / TEMPERED
THK	THICK (NESS)
THRU	THROUGH
TKBD	TACKBOARD
TO	TOP OF
TOC	TOP OF CURB / CONCRETE
TOD	TOP OF DECK
TOM	TOP OF MANSONRY
TOP	TOP OF PARAPET
TOS	TOP OF STEEL
TOW	TOP OF WALL
TRANSF	TRANSFORMER
TRANSM	TRANSMISSION
TV	TELEVISION
TYP	TYPICAL
---	---
UH	UNIT HEATER
UNFIN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
---	---
VB	VAPOR BARRIER (VPR BR)
VERT	VERTICAL
VEST	VESTIBULE
VIF	VERIFY IN FIELD
VTR	VENT THROUGH ROOF
---	---
W	WEST, WIDTH, WIDE, WATER
W/	WITH
W/IN	WITHIN
W/O	WITHOUT
WC	WATER CLOSET
WD	WOOD
WE	WALL PAINT - EPOXY
WH	WALL HYDRANT
WNDW	WINDOW
WP	WALL PAINT
WR	WATER RESISTENT
WT	WALL TILE, WEIGHT
WV	WALL COVERING
---	---
YD	YARD
---	---
&	AND
@	AT

SYMBOLS:

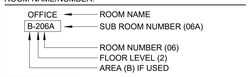
DISCIPLINE DESIGNATORS:

G- (GENERAL)	AF (FURNITURE / EQUIPMENT)
C- (CIVIL)	AG (GRAPHICS)
L- (LANDSCAPE)	QF (EQUIPMENT FOOD SERVICE)
S- (STRUCTURAL)	QH (EQUIPMENT HOSPITAL)
AS (ARCHITECTURAL SITE)	P- (PLUMBING)
XD (DEMOLITION)	M- (MECHANICAL)
A- (ARCHITECTURAL)	E- (ELECTRICAL)
AC (ARCHITECTURAL CEILINGS)	T- (TECHNOLOGY)
AI (ARCHITECTURAL FINISHES)	

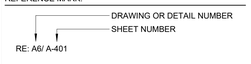
SHEET NUMBER:



ROOM NAME/NUMBER:



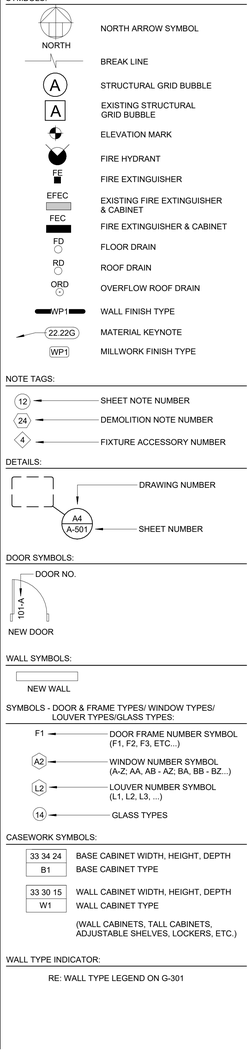
REFERENCE MARK:



ROOM FINISH TAG KEY LEGEND:



SYMBOLS:



NOTE TAGS:

DETAILS:

DOOR SYMBOLS:

WALL SYMBOLS:

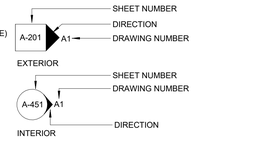
SYMBOLS - DOOR & FRAME TYPES/ WINDOW TYPES/ LOUVER TYPES/GLASS TYPES:

CASEWORK SYMBOLS:

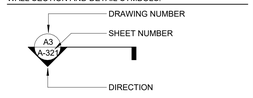
WALL TYPE INDICATOR:

RE: WALL TYPE LEGEND ON G-301

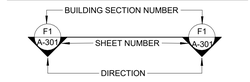
ELEVATION SYMBOLS:



WALL SECTION AND DETAIL SYMBOLS:



BUILDING SECTIONS:



REVISION MARK/ CLOUD:



GENERAL INFORMATION NOTES:

1. ALL CONTRACTORS AND THEIR SUPERVISORY PERSONNEL SHALL REVIEW THE GENERAL ANDSUPPLEMENTARY CONDITIONS TO THE CONTRACT.
2. ALL WORK SHALL CONFORM WITH APPLICABLE BUILDING CODES, REGULATIONS AND ORDINANCES.
3. CONTRACTOR SHALL OBTAIN ALL REQUIRED BUILDING AND OCCUPANCY PERMITS.
4. CONTRACTOR SHALL BECOME FULLY ACQUAINTED WITH CONDITIONS RELATED TO THE WORK.
5. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE MEANS, METHODS, AND SEQUENCES OF CONSTRUCTION AND THE SAFETY OF ALL CONSTRUCTION PERSONNEL AND VISITORS.
6. DRAWINGS CONTAINED IN THIS SET SHALL NOT BE REPRODUCED FOR SHOP DRAWINGS. COPIES OF THESE DRAWINGS SUBMITTED AS SHOP DRAWINGS WILL BE REJECTED AND RETURNED TO THE CONTRACTOR.
7. EACH INSTALLER MUST EXAMINE SUBSTRATE AND/OR CONDITIONS UNDER WHICH THE WORK WILL BE INSTALLED AND REPORT TO THE CONTRACTOR IN WRITING ANY CONDITIONS DETRIMENTAL TO THE PROPER AND TIMELY EXECUTION OF THAT INSTALLERS WORK. DO NOT PROCEED UNTIL UNSATISFACTORY CONDITIONS ARE CORRECTED. COMMENCING WITH INSTALLATION SHALL CONSTITUTE ACCEPTANCE OF THE SUBSTRATE AND/OR CONDITIONS.
8. DO NOT SCALE DRAWINGS: FOLLOW WRITTEN DIMENSIONS AND NOTES. CONTACT ARCHITECT FOR CLARIFICATIONS, IF REQUIRED.
9. DIMENSIONS SHOWN ON THE FLOOR PLAN ARE TO THE FACE OF MASONRY (FOM), FACE OF CONCRETE WALLS (FOC), AND COLUMN GRID LINES, UNLESS NOTED OR SHOWN OTHERWISE.
10. FOR METAL STUD CONSTRUCTION DIMENSIONS SHOWN ON THE FLOOR PLAN ARE TO THE FACE OF GYP. BOARD/ WALL (FOG), UNLESS NOTED OR SHOWN OTHERWISE.
11. NOTE: ALL WALL THICKNESSES ARE ACTUAL DIMENSIONS.
12. "TYPICAL" AS USED IN THESE DOCUMENTS, SHALL MEAN THAT THE CONDITION OR DIMENSION IS REPRESENTATIVE OF, OR THE SAME, FOR SIMILAR CONDITIONS THROUGHOUT.
13. IF THERE IS A DISCREPANCY BETWEEN SMALL SCALE AND LARGE SCALE DRAWINGS, (PLAN, SECTION, & DETAIL DRAWINGS, ETC.) - CONTACT ARCHITECT FOR CLARIFICATION. FOR BIDDING PURPOSES: THE MOST EXPENSIVE AND/OR STRICTEST REQUIREMENTS SHALL GOVERN. FOR CLARIFICATIONS DURING CONSTRUCTION: THE MOST EXPENSIVE AND/OR STRICTEST REQUIREMENTS, AS INDICATED BY THE ARCHITECT, SHALL GOVERN.
14. ANY DISCREPANCIES BETWEEN THE DRAWINGS AND SPECIFICATIONS - CONTACT ARCHITECT FOR CLARIFICATION. FOR BIDDING PURPOSES: THE MOST EXPENSIVE AND/OR STRICTEST REQUIREMENTS SHALL GOVERN. FOR CLARIFICATIONS DURING CONSTRUCTION: THE MOST EXPENSIVE AND/OR STRICTEST REQUIREMENTS, AS INDICATED BY THE ARCHITECT, SHALL GOVERN.
15. ANY DISCREPANCIES BETWEEN THE DRAWINGS AND ACTUAL CONDITIONS SHALL BE REPORTED TO THE ARCHITECT IN WRITING FOR RESOLUTION, PRIOR TO PROCEEDING WITH THE WORK.
16. ANY AND ALL DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT IN WRITING FOR RESOLUTION, PRIOR TO PROCEEDING WITH THE WORK. IN THESE INSTANCES: NO CHANGE ORDERS OR EXTENSIONS OF TIME WILL BE ALLOWED OR ACCEPTED FOR PROCEEDING WITH THE WORK WITHOUT THE ARCHITECT 'S WRITTEN DIRECTION AND APPROVAL. ALSO - CONTRACTOR MUST REPAIR AND/OR REPLACE ANY UNAUTHORIZED WORK, AS INDICATED BY THE ARCHITECT, AT NO ADDITIONAL COST TO THE OWNER.
17. ALL DISSIMILAR METAL MATERIALS SHALL BE ISOLATED WITH AN APPROVED NONMETAL ISOLATION MATERIAL.
18. OPEN EXTERIOR JOINTS AROUND WINDOW AND DOOR FRAMES, BETWEEN WALLS AND FOUNDATIONS, BETWEEN WALL PANELS, AND AT PENETRATIONS OF UTILITIES THROUGH THE BUILDING ENVELOPE, ETC. - SHALL BE SEALED, CAULKED, FLASHED OR WEATHER-STRIPPED AS REQUIRED FOR COMPATIBILITY WITH ADJACENT MATERIALS & TO ELIMINATE AIR LEAKAGE AND WATER ENTRY.
19. PROVIDE SEALANT AND/OR CAULKING BETWEEN DISSIMILAR ADJOINING INTERIOR MATERIALS. (I.E. WINDOW SILLS TO GYP. BD., ACT CEILINGS TO MASONRY WALLS, ETC.)
20. DOOR OPENINGS NOT LOCATED BY DIMENSION SHALL BE CENTERED IN WALL SHOWN OR LOCATED 4 INCHES FROM FINISH WALL TO EDGE OF DOOR FRAME, ALWAYS ALLOWING A MINIMUM OF 16" FROM THE PULL SIDE OF THE DOOR TO THE INTERSECTING WALL.
21. CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES AND THEIR SERVICE CONNECTIONS WITH THE PROPER UTILITY COMPANY.
22. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE FINAL SIZE AND DEPTH OF THE ELEVATOR PIT, SHAFT, RAIL SUPPORT, HOIST SUPPORT, OVERRUN AND MISC. ELEVATOR REQUIREMENTS WITH THE SELECTED ELEVATOR MANUFACTURER/ SUPPLIER.
23. CONTRACTOR SHALL COORDINATE SIZE, LOCATIONS AND NUMBER OF ALL ROOF OPENINGS AND ROOF ACCESSORIES WITH ALL OTHER TRADES. REFER TO THE ARCHITECTURAL, STRUCTURAL, PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS.
24. LOCATIONS AND SIZES OF ALL CONCRETE MECHANICAL AND ELECTRICAL PADS SHALL BE COORDINATED BY THE MECHANICAL AND ELECTRICAL CONTRACTORS, WITH THE SELECTED EQUIPMENT MANUFACTURER/SUPPLIER, AND ARE TO BE APPROVED BY THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.
25. EXCEPT AT FIRE-RATED PARTITIONS, ALL WALL AND COLUMN GYPSUM BOARD FACING SHALL BE HELD AT 5/8 INCH BELOW STRUCTURE, UNLESS DETAILED OR NOTED OTHERWISE.
26. AT ALL TELECOMMUNICATION ROOMS: PROVIDE 3/4" X 8'-0" HIGH FIRE-RETARDANT-TREATED WOOD SHEATHING OR PROVIDE PLYWOOD OVER NON-COMBUSTIBLE SHEATHING; BOTTOM TO BE LOCATED AT 4" A.F.F. VERIFY LENGTHS AND LOCATIONS WITH ELECTRICAL DRAWINGS.
27. GLASS DOORS, ADJACENT PANELS AND ALL GLAZED OPENINGS WITHIN 1'-6" OF THE FLOOR, AND WITHIN A 24-INCH ARC OF EITHER VERTICAL EDGE OF A DOOR, ETC., SHALL BE SAFETY GLAZING AS APPROVED FOR IMPACT BY APPLICABLE BUILDING CODES, AND SHALL BE LABELED AS SUCH.
28. ALL CEILING HEIGHTS AS SHOWN ON PLANS AND DETAILS ARE FROM SLAB OR TILE FLOOR (FINISHED FLOOR) TO FINISH CEILING.
29. PROVIDE INDEPENDENT FRAMING & ATTACHMENTS TO THE STRUCTURE – ADEQUATE TO SUPPORT THE CEILING SYSTEM, LIGHT FIXTURES, DUCTS, DIFFUSERS, SPRINKLER PIPING AND BUS DUCTS.
30. ALL CLOSETS AND ALCOVES WITHOUT A SPACE IDENTIFICATION NUMBER SHALL HAVE THE SAME FINISHES AS ADJOINING SPACES.
31. CONTRACTOR TO INSTALL WOOD BLOCKING AND PLYWOOD AS REQUIRED FOR THE MOUNTING OF ALL TOILET ACCESSORIES, MILLWORK/ CASEWORK, AV EQUIPMENT, AND MEP ITEMS ETC.
32. RE: SPECIFICATIONS FOR ALL REQUIRED TESTING AND INSPECTIONS.
33. ANY/ ALL PROPRIETARY PRODUCTS DESCRIBED AND/OR DRAWN IN THE DOCUMENTS (BUT NOT SPECIFIED) ARE TO MEET THE MANUFACTURER 'S STANDARD CRITERIA WHICH IS NOT LIMITED TO THE FOLLOWING: PERFORMANCE REQUIREMENTS, QUALITY ASSURANCE REQUIREMENTS, APPLICABLE CODES AND INDUSTRY STANDARDS, FABRICATION, ASSEMBLY, HANDLING, DELIVERY, STORAGE, INSTALLATION, OPERATION, ADJUSTMENTS, ETC. PROVIDE THE MANUFACTURER 'S STANDARD WARRANTY AND STANDARD FINISH WARRANTY. PROVIDE PRODUCT DATA, SHOP DRAWINGS, SAMPLES, AND MAINTENANCE DATA AS REQUIRED. REFER TO DIVISION 01 SPEC. SECTIONS WHICH ALSO APPLY - SUCH AS SUBSTITUTION PROCEDURES, SUBMITTAL PROCEDURES, QUALITY REQUIREMENTS, REFERENCES, EXECUTION, AND CLOSEOUT PROCEDURES. NOTE: ANY SUBSTITUTIONS MUST MEET THE DESIGN INTENT, AS WELL AS THE CRITERIA DESCRIBED ABOVE.

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

PACKAGE 2: CONSTRUCTION SET

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

REVISION DATES:

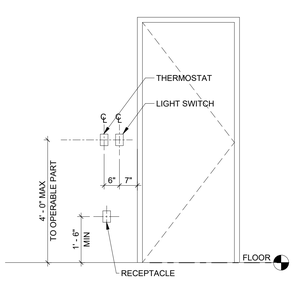
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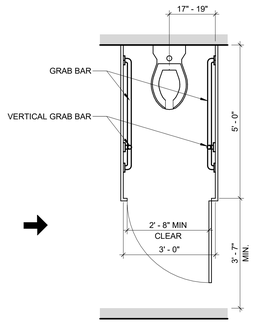
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ISSUE DATE: NOVEMBER 1, 2024
HOEFER WELKER #: 138191

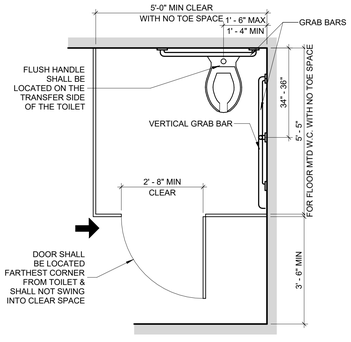
GENERAL INFORMATION



H8 SWITCH @ DOOR
1/2" = 1'-0"

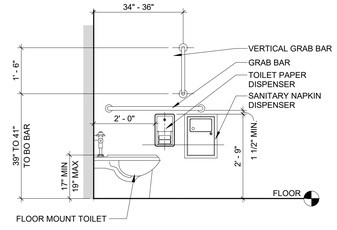


AMBULATORY ACCESSIBLE TOILET

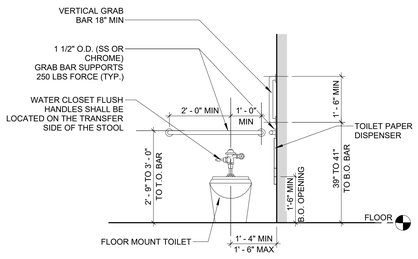


ACCESSIBLE TOILET @ PARTITIONS

GRAB BARS:
1 1/2" O.D. (SS)
SUPPORTS MIN 500 LBS FORCE (TYP)

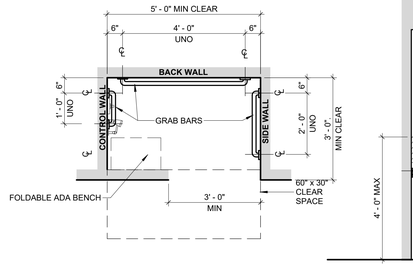


SECTION

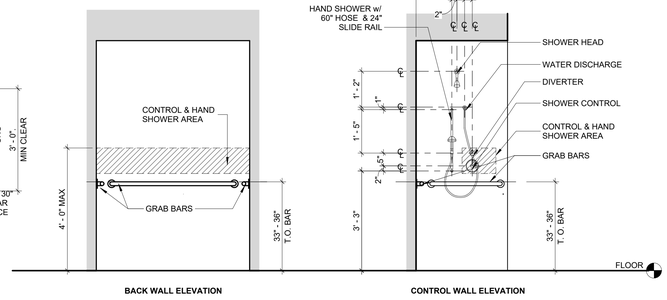


ELEVATION

H1 WATER CLOSET & GRAB BARS
1/2" = 1'-0"



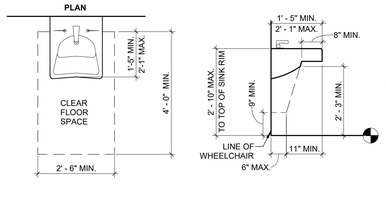
PLAN

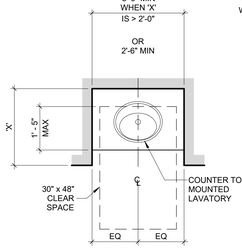


BACK WALL ELEVATION

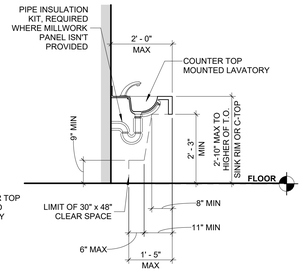
CONTROL WALL ELEVATION

F1 ALTERNATE ROLL-IN SHOWER
1/2" = 1'-0"

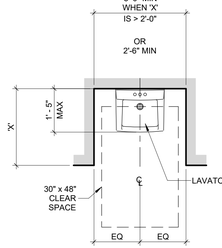




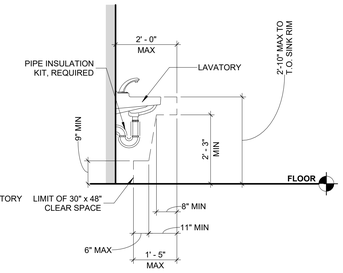
IN-COUNTER SINK - PLAN



IN-COUNTER SINK - SECTION



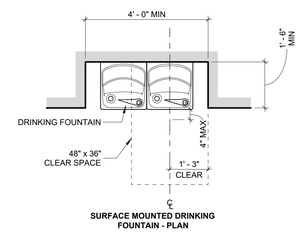
WALL HUNG LAVATORY - PLAN



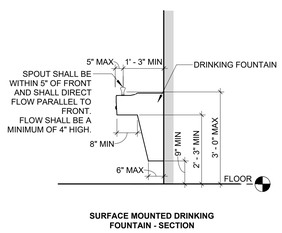
WALL HUNG LAVATORY - SECTION

C8 WALL HUNG LAVATORY CLEARANCES
1/2" = 1'-0"

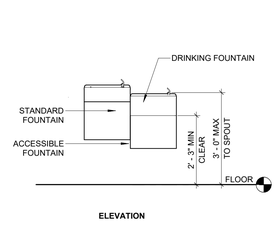
C1 LAVATORIES
1/2" = 1'-0"



SURFACE MOUNTED DRINKING FOUNTAIN - PLAN



SURFACE MOUNTED DRINKING FOUNTAIN - SECTION



ELEVATION

A1 DRINKING FOUNTAINS
1/2" = 1'-0"

GENERAL NOTES - ACCESSIBILITY GUIDELINES:

1. NOTE: ALL DIMENSIONS ARE MEASURED FROM FLOOR, UNLESS NOTED OR SHOWN OTHERWISE.
2. ADA UNOBSTRUCTED REACH RANGES: FORWARD REACH = 48" MAX & 15" MIN SIDE REACH = 48" MAX & 15" MIN.
3. ELEVATORS: STD CALL BUTTONS: 35" TO 48" TO C.L. & PROTRUDE 1" MAX. ADA CALL BUTTONS: 42" TO C.L. (TYP) & 48" MAX (3/4" SMALLEST DIM). ADA VISIBLE SIGNALS: 72" MIN. TO C.L. (2 1/2" SMALLEST DIM). TACTILE SIGNAL ON HOISTWAY: 60" TO BASE OF CHARACTERS W/ TACTILE STAR & 2" HIGH CHARACTERS.
4. DOOR HARDWARE (TO CENTER OF HARDWARE): STD MOUNTING HEIGHTS: PUSH PLATES = 42", PULL HANDLES = 42", KNOBS/ LEVERS = 40", PANIC EXIT = 42" CENTERLINE OF BAR. KICKPLATES: WIDTH = DOOR WIDTH MINUS 2", CENTER, HEIGHT = 16" FROM B.O. DOOR. THRESHOLDS: STD = 1/2" MAX. AT EXT SLIDING DOORS = 3/4" MAX. ADA HARDWARE = 34" MIN TO 48" MAX
5. DRINKING FOUNTAINS & EWC'S (TO SPOUT): STD = 40" TYP, 42" MAX. ADA =36" MAX (27" MIN CLEAR KNEE SPACE)
6. COUNTERTOPS (TO SINK RIM/ COUNTERTOP): ADA = 28" MIN TO 34" MAX.
7. WATER CLOSETS (TO TOP OF SEAT): STD = 14" TO 15". ADA (TO TOP OF SEAT) = 17" TO 19". ADA FLUSH CONTROLS = 44" MAX
8. URINALS (TO RIM): STD = 24" MAX. ADA =17" MAX. ADA FLUSH CONTROLS = 44" MAX
9. LAVATORIES (TO SINK RIM/ COUNTERTOP): STD = 36" MAX. ADA = 34" MAX (29" MIN CLEAR KNEE SPACE)
10. MIRRORS (TO B.O. REFLECTIVE SURFACE): STD = VARIES. ADA = 40" MAX
11. GRAB BARS: ADA (TO T.O. OF BAR): WATER CLOSETS = 33" MIN TO 36" MAX. SHOWERS = 33" MIN TO 36" MAX (FROM B.O. SHOWER). BATHTUBS: TOP BAR = 33" MIN TO 36" MAX B.O. BAR = 9" ABOVE TOP OF TUB.
12. SHOWER HEADS (FROM FLOOR TO HEAD): STD = 72" TO 84". ADA = SPRAY UNIT W/ HOSE 60" LONG MIN.
13. ADA FIXED SHOWER HEAD = 48" AFF
14. SHOWER ROD (FROM FLOOR TO C.L.): STD = 78" MAX
15. TOILET ROOM PARTITIONS: TOILETS = 12" TO BOT & 70" TO TOP. URINALS = 18" TO BOT & 60" TO TOP.
16. TOILET PAPER DISPENSERS (TO OUTLET): STD = 24". ADA = 15" MIN TO 48" MAX
17. WALL MOUNTED SOAP DISPENSERS (TO C.L. OF PUSH BUTTON): STD = 40". ADA = VARIES. RE: OBSTRUCTED AND UNOBSTRUCTED REACH RANGES. ADA SIDE REACH = 46" MAX ABOVE SINK IN COUNTER.
18. PAPER TOWEL DISPENSER (TO TOWEL SLOT): STD = 40" MAX. ADA FORWARD REACH = 48" MAX & 15" MIN. ADA SIDE REACH = 48" MAX & 15" MIN. RE: OBSTRUCTED AND UNOBSTRUCTED REACH RANGES. ADA SIDE REACH = 46" MAX. ABOVE SINK IN COUNTER.
19. WARM AIR HAND DRYER (TO PUSH SWITCH): STD = 44" MAX. ADA FORWARD REACH = 48" MAX & 15" MIN. ADA SIDE REACH = 48" MAX & 15" MIN
20. SANITARY NAPKIN DISPENSER (TO C.L. OF COIN SLOT): STD = 40" MAX. ADA FORWARD REACH = 48" MAX & 15" MIN. ADA SIDE REACH = 48" MAX & 15" MIN
21. SANITARY NAPKIN DISPOSAL (TO TOP OF UNIT): STD = 28" MAX. ADA = 19" MIN TO 24" MAX (TO OPNG)
22. TOILET SEAT COVER DISPENSERS (TO OPNG): STD = 40" MAX. ADA FORWARD REACH = 48" MAX & 15" MIN. ADA SIDE REACH = 48" MAX & 15" MIN
23. SHELVES: ADA = 48" MAX
24. COAT HOOKS: STD = 68". ADA = 48" MAX
25. CHALKBOARDS, TACKBOARDS,& MARKERBOARDS: STD = 32" TO 39" (TO B.O. BOARD OR CHALKTRAY). STD = 80" (RECOMMENDED, TO TOP OF BOARD)
26. THERMOSTATS & CONTROL DEVICES (TO TOP): ADA
27. FORWARD REACH = 48" MAX. ADA SIDE REACH = 48" MAX
28. LIGHT SWITCHES & CARD READERS (TO C.L.): LOCATE 6" FROM DOOR JAMB. ADA = 48" MAX
29. CONVENIENCE RECEPTACLES – ELECT/ TELEPHONE/ DATA (TO C.L.): STD = 18". ADA = 15" MIN
30. EXIT LIGHTS - WALL MOUNTED: 2" MIN BELOW CLG. 2" MIN ABOVE DOOR FRAME. EQUAL SPACE FROM CLG TO TOP OF FRAME.
31. FIRE EXTINGUISHERS (TO TOP, UNO): GROSS WT 40 LBS OR LESS = 60" MAX. GROSS WT MORE THAN 40 LBS = 42" MAX. ADA = 40" MAX (B.O. CABINET)
32. FIRE ALARM PULL STATIONS (TO LEVER): STD = 48" MAX. ADA FORWARD REACH = 48" MAX. ADA SIDE REACH = 48" MAX
33. SMOKE AND/OR HEAT DETECTORS: STD = CLG HT.
34. HORN/ SPEAKER/ VISUAL SIGNALS: STD = 80" AFF OR 6" BELOW CLG - WHICHEVER IS LOWER.
35. ROOM SIGNAGE (TO C.L.): STD = 60" HIGH AFF & WITHIN 18" OF LATCH SIDE OF DOOR.
36. ALL MINIMUM AND MAXIMUM DIMENSIONS ARE MEASURED FROM THE FACE OF FINISHED WALL, NOT THE FACE OF THE SUBSTRATE.
37. WHEN MAX, MIN OR DIMENSIONAL RANGE IS GIVEN, THE CONSTRUCTION TOLERANCE DURING INSTALLATION MUST FIT WITHIN THE GIVEN RANGE, MAX OR MIN DIMENSION. NO EXCEPTIONS.
38. PROVIDE KNEE PROTECTION ON EXPOSED WATER SUPPLIES, P-TRAP AND DRAIN PIPING.
39. PROVIDE BLOCKING INSIDE WALL FOR ALL HORIZONTAL AND VERTICAL GRAB BARS EVEN WHEN THEY ARE NOT INSTALLED AS PART OF PROJECT SCOPE OF WORK (TYP.)

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

PACKAGE 2: CONSTRUCTION SET

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

REVISION DATES:

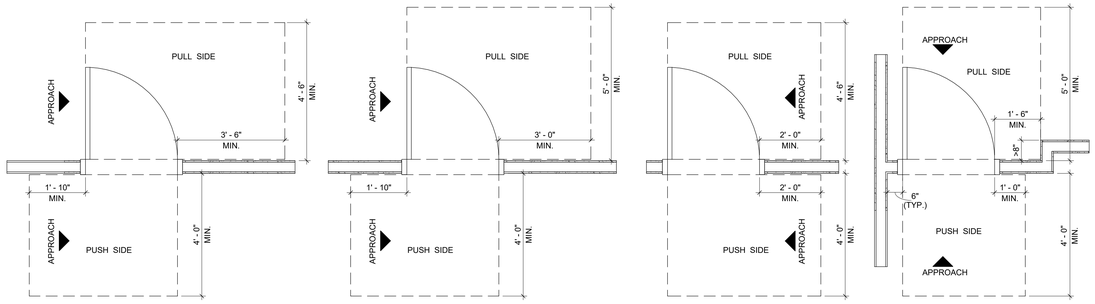
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CHRISTOPHER KRUMREI
NUMBER A-2016012111
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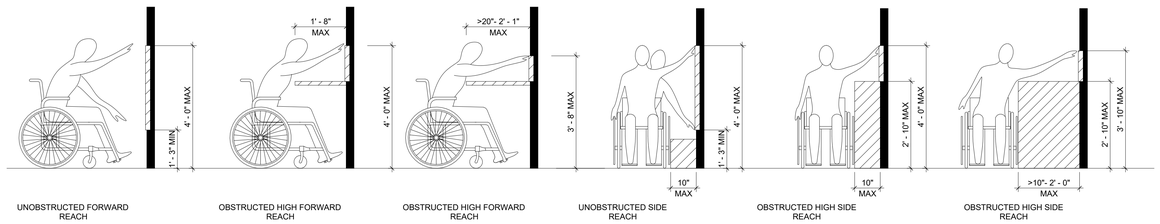
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ISSUE DATE: NOVEMBER 1, 2024
HOEFER WELKER #: 138191

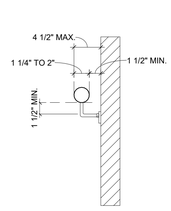
ACCESSIBILITY GUIDELINES



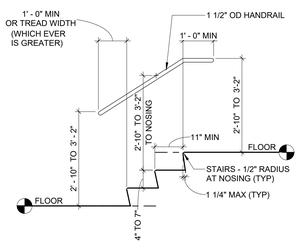
G1 TYP. DOOR JAMB & DOOR APPROACH CLEARANCES
1/2" = 1'-0"



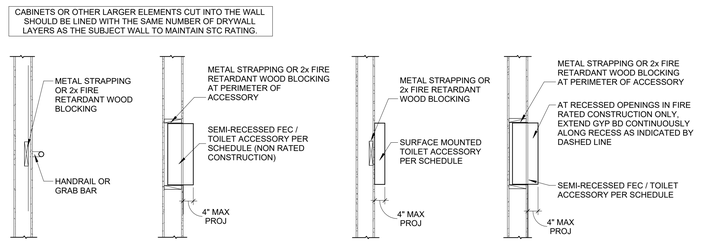
E1 REACH RANGE
1/2" = 1'-0"



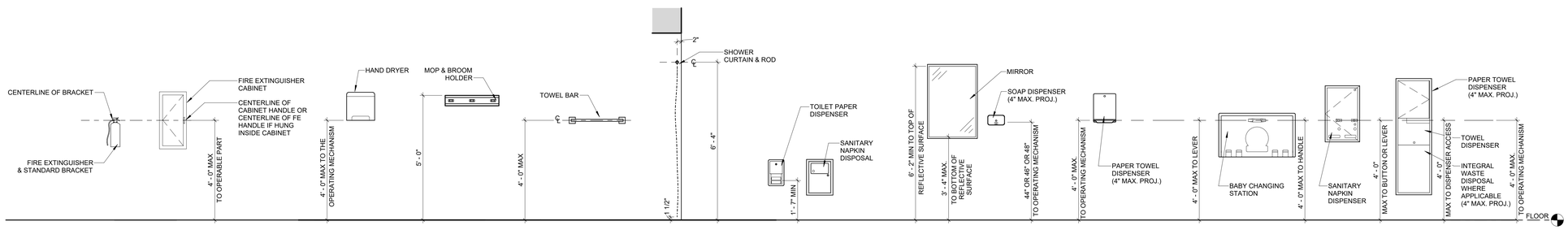
C8 HANDRAIL CLEARANCES
1 1/2" = 1'-0"



C6 HANDRAIL @ STAIRS
1/2" = 1'-0"



C1 TYPICAL BLOCKING DETAILS
1/2" = 1'-0"



A1 TOILET ACCESSORIES
1/2" = 1'-0"

GENERAL NOTES - ACCESSIBILITY GUIDELINES:

1. NOTE: ALL DIMENSIONS ARE MEASURED FROM FLOOR, UNLESS NOTED OR SHOWN OTHERWISE.
2. ADA UNOBSTRUCTED REACH RANGES: FORWARD REACH = 48" MAX & 15" MIN SIDE REACH = 48" MAX & 15" MIN.
3. ELEVATORS: STD CALL BUTTONS: 35" TO 48" TO C.L. & PROTRUDE 1" MAX. ADA CALL BUTTONS: 42" TO C.L. (TYP) & 48" MAX (3/4" SMALLEST DIM). ADA VISIBLE SIGNALS: 72" MIN. TO C.L. (2 1/2" SMALLEST DIM). TACTILE SIGNAL ON HOISTWAY: 60" TO BASE OF CHARACTERS W/ TACTILE STAR & 2" HIGH CHARACTERS.
4. DOOR HARDWARE (TO CENTER OF HARDWARE): STD MOUNTING HEIGHTS: PUSH PLATES = 42", PULL HANDLES = 42", KNOBS/ LEVERS = 40", PANIC EXIT = 42" CENTERLINE OF BAR, KICKPLATES: WIDTH = DOOR WIDTH MINUS 2", CENTER, HEIGHT = 16" FROM B.O. DOOR. THRESHOLDS: STD = 1/2" MAX. AT EXT SLIDING DOORS = 3/4" MAX. ADA HARDWARE = 34" MIN TO 48" MAX
5. DRINKING FOUNTAINS & EWC'S (TO SPOUT): STD = 40" TYP. 42" MAX. ADA =36" MAX (27" MIN CLEAR KNEE SPACE)
6. COUNTERTOPS (TO SINK RIM/ COUNTERTOP): ADA = 28" MIN TO 34" MAX
7. WATER CLOSETS (TO TOP OF SEAT): STD = 14" TO 15". ADA (TO TOP OF SEAT) = 17" TO 19". ADA FLUSH CONTROLS = 44" MAX
8. URINALS (TO RIM): STD = 24" MAX. ADA =17" MAX. ADA FLUSH CONTROLS = 44" MAX
9. LAVATORIES (TO SINK RIM/ COUNTERTOP): STD = 36" MAX. ADA = 34" MAX (29" MIN CLEAR KNEE SPACE)
10. MIRRORS (TO B.O. REFLECTIVE SURFACE): STD = VARIES. ADA = 40" MAX
11. GRAB BARS: ADA (TO T.O. OF BAR): WATER CLOSETS = 33" MIN TO 36" MAX. SHOWERS = 33" MIN TO 36" MAX (FROM B.O. SHOWER). BATHTUBS: TOP BAR = 33" MIN TO 36" MAX B.O. BAR = 9" ABOVE TOP OF TUB.
12. SHOWER HEADS (FROM FLOOR TO HEAD): STD = 72" TO 84". ADA = SPRAY UNIT W/ HOSE 60" LONG MIN.
13. ADA FIXED SHOWER HEAD = 48" AFF
14. SHOWER ROD (FROM FLOOR TO C.L.): STD = 78" MAX
15. TOILET ROOM PARTITIONS: TOILETS = 12" TO BOT & 70" TO TOP. URINALS = 18" TO BOT & 60" TO TOP.
16. TOILET PAPER DISPENSERS (TO OUTLET): STD = 24". ADA = 15" MIN TO 48" MAX
17. WALL MOUNTED SOAP DISPENSERS (TO C.L. OF PUSH BUTTON): STD = 40". ADA = VARIES. RE: OBSTRUCTED AND UNOBSTRUCTED REACH RANGES. ADA SIDE REACH = 46" MAX ABOVE SINK INCOUNTER.
18. PAPER TOWEL DISPENSER (TO TOWEL SLOT): STD = 40" MAX. ADA FORWARD REACH = 48" MAX & 15" MIN. ADA SIDE REACH = 48" MAX & 15" MIN. RE: OBSTRUCTED AND UNOBSTRUCTED REACH RANGES. ADA SIDE REACH = 46" MAX. ABOVE SINK IN COUNTER.
19. WARM AIR HAND DRYER (TO PUSH SWITCH): STD = 44" MAX. ADA FORWARD REACH = 48" MAX & 15" MIN. ADA SIDE REACH = 48" MAX & 15" MIN
20. SANITARY NAPKIN DISPENSER (TO C.L. OF COIN SLOT): STD = 40" MAX. ADA FORWARD REACH = 48" MAX & 15" MIN. ADA SIDE REACH = 48" MAX & 15" MIN
21. SANITARY NAPKIN DISPOSAL (TO TOP OF UNIT): STD = 28" MAX. ADA = 19" MIN TO 24" MAX (TO OPNG)
22. TOILET SEAT COVER DISPENSERS (TO OPNG): STD = 40" MAX. ADA FORWARD REACH = 48" MAX & 15" MIN. ADA SIDE REACH = 48" MAX & 15" MIN
23. SHELVES: ADA = 48" MAX
24. COAT HOOKS: STD = 68". ADA = 48" MAX
25. CHALKBOARDS, TACKBOARDS,& MARKERBOARDS: STD = 32" TO 39" (TO B.O. BOARD OR CHALKTRAY). STD = 80" (RECOMMENDED, TO TOP OF BOARD)
26. THERMOSTATS & CONTROL DEVICES (TO TOP): ADA
27. FORWARD REACH = 48" MAX. ADA SIDE REACH = 48" MAX
28. LIGHT SWITCHES & CARD READERS (TO C.L.): LOCATE 6" FROM DOOR JAMB. ADA = 48" MAX
29. CONVENIENCE RECEPTACLES - ELECT/ TELEPHONE/ DATA (TO C.L.): STD = 18". ADA = 15" MIN
30. EXIT LIGHTS - WALL MOUNTED: 2" MIN BELOW CLG. 2" MIN ABOVE DOOR FRAME. EQUAL SPACE FROM CLG TO TOP OF FRAME.
31. FIRE EXTINGUISHERS (TO TOP, UNO): GROSS WT 40 LBS OR LESS = 60" MAX. GROSS WT MORE THAN 40 LBS = 42" MAX. ADA = 40" MAX (B.O. CABINET)
32. FIRE ALARM PULL STATIONS (TO LEVER): STD = 48" MAX. ADA FORWARD REACH = 48" MAX. ADA SIDE REACH = 48" MAX
33. SMOKE AND/OR HEAT DETECTORS: STD = CLG HT.
34. HORN/ SPEAKER/ VISUAL SIGNALS: STD = 80" AFF OR 6" BELOW CLG - WHICHEVER IS LOWER.
35. ROOM SIGNAGE (TO C.L.): STD = 60" HIGH AFF & WITHIN 18" OF LATCH SIDE OF DOOR.
36. ALL MINIMUM AND MAXIMUM DIMENSIONS ARE MEASURED FROM THE FACE OF FINISHED WALL, NOT THE FACE OF THE SUBSTRATE.
37. WHEN MAX, MIN OR DIMENSIONAL RANGE IS GIVEN, THE CONSTRUCTION TOLERANCE DURING INSTALLATION MUST FIT WITHIN THE GIVEN RANGE, MAX OR MIN DIMENSION. NO EXCEPTIONS.
38. PROVIDE KNEE PROTECTION ON EXPOSED WATER SUPPLIES, P-TRAP AND DRAIN PIPING.
39. PROVIDE BLOCKING INSIDE WALL FOR ALL HORIZONTAL AND VERTICAL GRAB BARS EVEN WHEN THEY ARE NOT INSTALLED AS PART OF PROJECT SCOPE OF WORK (TYP.)

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

PACKAGE 2: CONSTRUCTION SET

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

REVISION DATES:

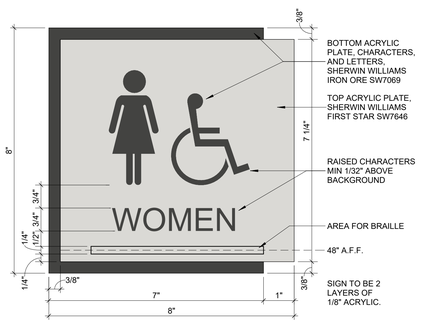
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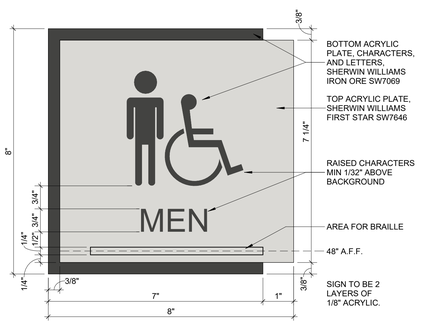
G-022

ISSUE DATE: NOVEMBER 1, 2024
HOEFER WELKER #: 138191

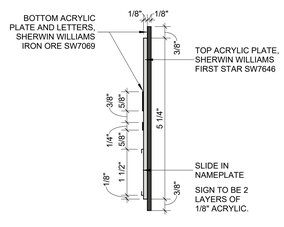
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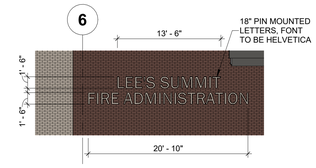
E10 SIGNAGE - TOILET WOMEN (W-RR)
6" = 1'-0"



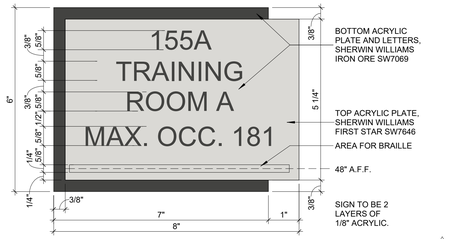
E7 SIGNAGE - TOILET MEN (M-RR)
6" = 1'-0"



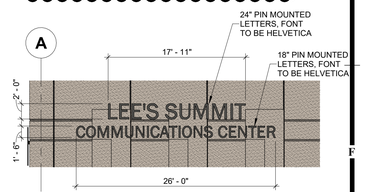
E5 SIGNAGE - ROOM NAME SECTION
6" = 1'-0"



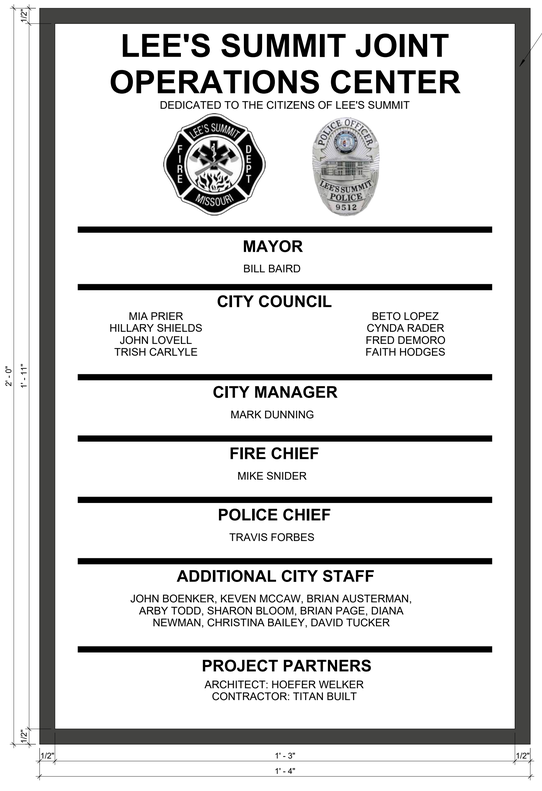
E3 EXTERIOR SIGNAGE - WEST
1/8" = 1'-0"



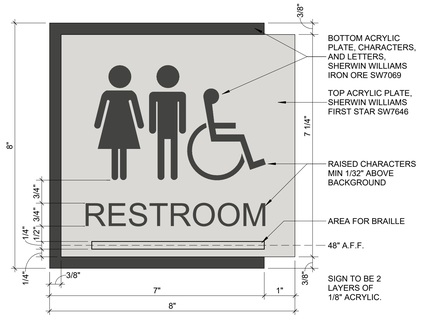
H1 SIGNAGE - ASSEMBLY
6" = 1'-0"



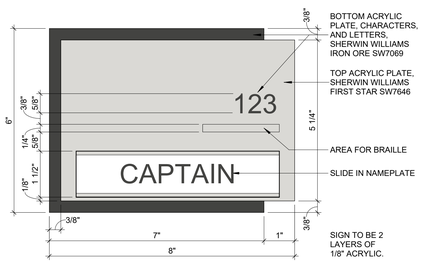
E1 EXTERIOR SIGNAGE - SOUTH
1/8" = 1'-0"



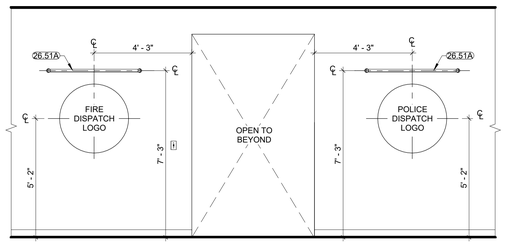
A10 SIGNAGE - DEDICATION
6" = 1'-0"



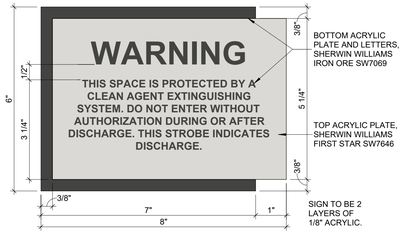
C7 SIGNAGE - TOILET UNISEX (RR)
6" = 1'-0"



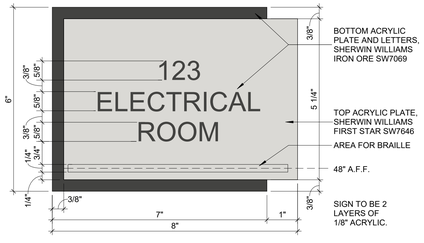
C5 SIGNAGE - OFFICE
6" = 1'-0"



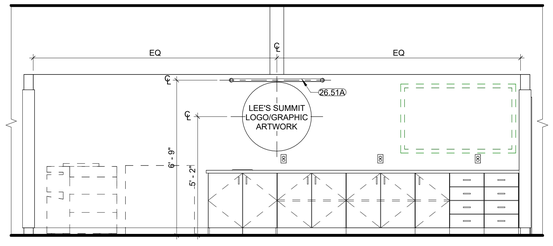
C1 010 COPY/WORK - W SIGNAGE
3/8" = 1'-0"



A7 SIGNAGE - FM200
6" = 1'-0"



A5 SIGNAGE - ROOM NAME
6" = 1'-0"



A1 010 COPY/WORK - E SIGNAGE
3/8" = 1'-0"

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

PACKAGE 2: CONSTRUCTION SET

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

REVISION DATES:

4	ADDENDUM 4	11/26/2024

STATE OF MISSOURI
CHRISTOPHER KRIMRIE
NUMBER A-2010001121
11/26/24
ARCHITECT

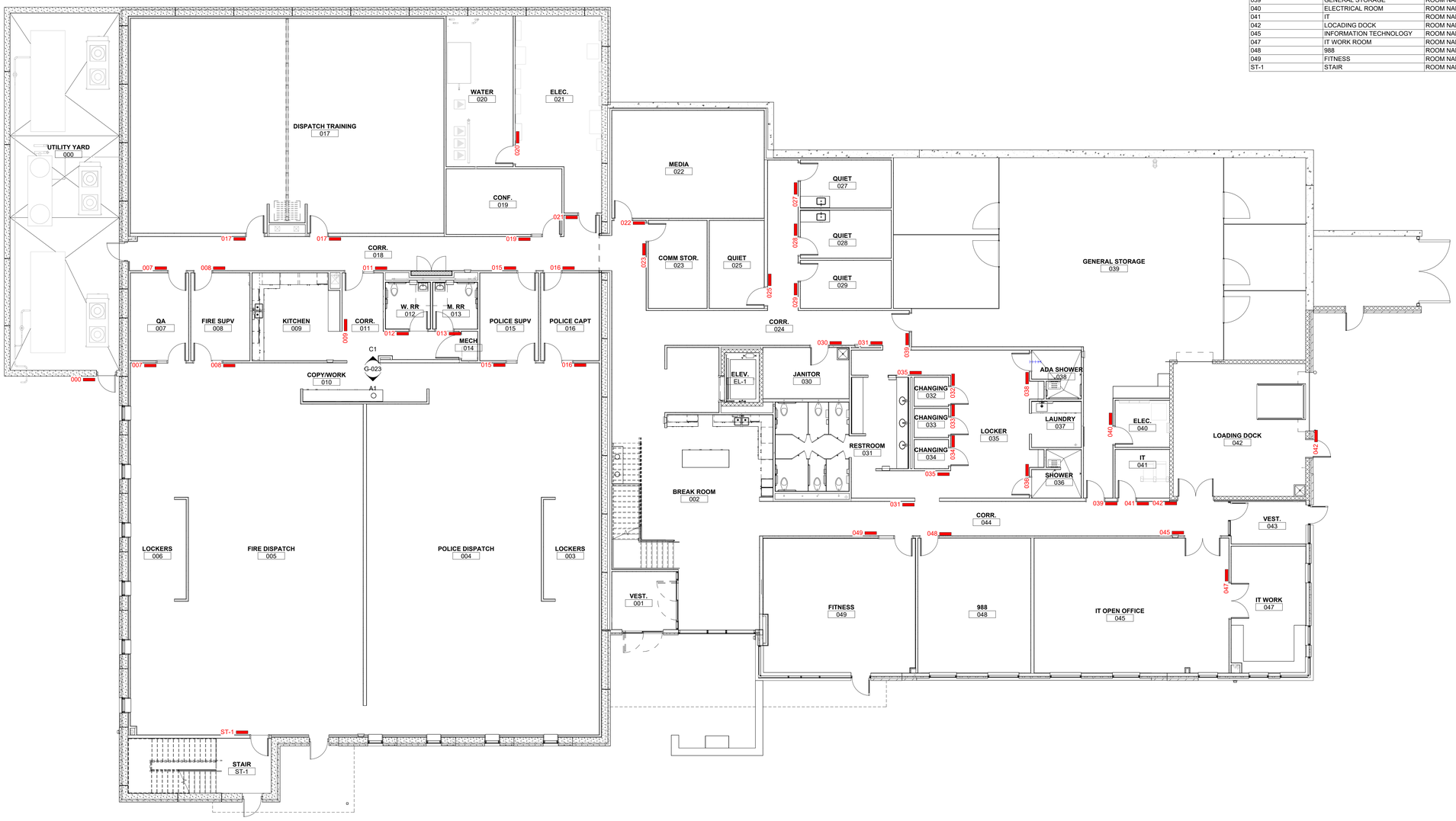
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G-023

ISSUE DATE: NOVEMBER 1, 2024
HOEFER WELKER #: 138191

SIGNAGE AND GRAPHIC ELEVATIONS

SIGNAGE SCHEDULE - LOWER LEVEL		
ROOM NUMBER	SIGN NAME	SIGNAGE TYPE
000	UTILITY YARD	ROOM NAME
007	QUALITY ASSURANCE	OFFICE
008	FIRE SUPERVISOR	OFFICE
009	KITCHEN	ROOM NAME
011	COMMUNICATIONS CENTER	ROOM NAME
012	WOMEN	TOILET WOMEN (W-RR)
013	MEN	TOILET MEN (M-RR)
015	POLICE SUPERVISOR	OFFICE
016	POLICE CAPATIN	OFFICE
017	DISTPATCH TRAINING	OFFICE
019	CONFERENCE	ROOM NAME
020	WATER ROOM	ROOM NAME
021	ELECTRICAL ROOM	ROOM NAME
022	MEDIA ROOM	ROOM NAME
023	COMMUNICATIONS STORAGE	ROOM NAME
025	QUIET ROOM	ROOM NAME
027	QUIET ROOM	ROOM NAME
028	QUIET ROOM	ROOM NAME
029	QUIET ROOM	ROOM NAME
030	JANITOR	ROOM NAME
031	RESTROOM	TOILET UNISEX (RR)
032	CHANGING	ROOM NAME
033	CHANGING	ROOM NAME
034	CHANGING	ROOM NAME
035	LOCKER ROOM	ROOM NAME
036	SHOWER	ROOM NAME
038	ADA SHOWER	ROOM NAME
039	GENERAL STORAGE	ROOM NAME
040	ELECTRICAL ROOM	ROOM NAME
041	IT	ROOM NAME
042	LOCADING DOCK	ROOM NAME
045	INFORMATION TECHNOLOGY	ROOM NAME
047	IT WORK ROOM	ROOM NAME
048	988	ROOM NAME
049	FITNESS	ROOM NAME
ST-1	STAIR	ROOM NAME



A1 LOWER LEVEL SIGNAGE PLAN
1/8" = 1'-0"

NORTH

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

PACKAGE 2: CONSTRUCTION SET

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CHRISTOPHER KRUMREI
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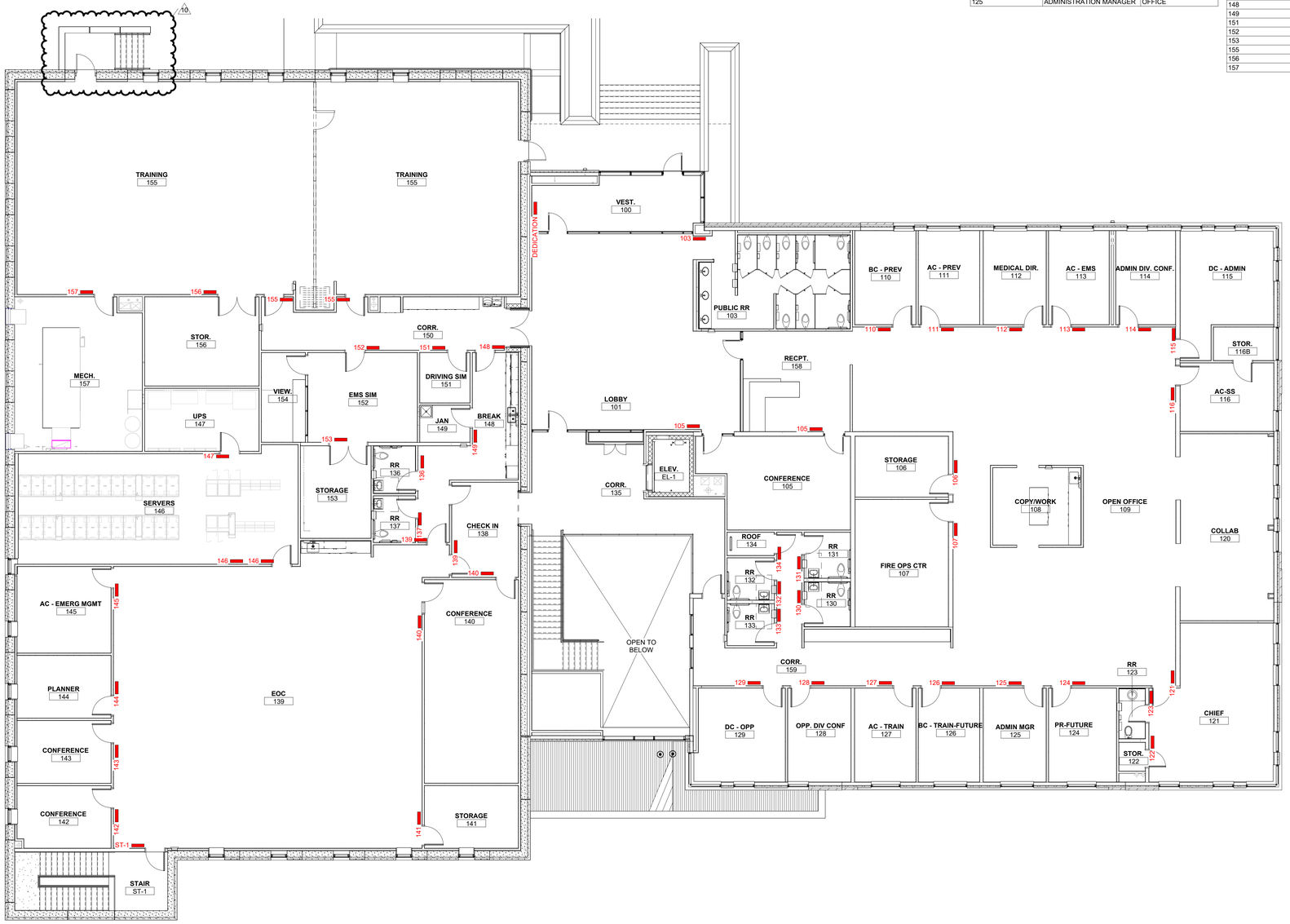
G-024

ISSUE DATE: NOVEMBER 1, 2024
HOEFER WELKER #: 138191

LOWER LEVEL - SIGNAGE PLAN

SIGNAGE SCHEDULE - MAIN LEVEL		
ROOM NUMBER	SIGN NAME	SIGNAGE TYPE
103	PUBLIC RESTROOM	TOILET UNISEX (RR)
105	CONFERENCE	ROOM NAME
106	STORAGE	OFFICE
107	FIRE OPERATIONS CENTER	ROOM NAME
110	BATTALION CHIEF PREVENTION	OFFICE
111	ASSISTANT CHIEF PREVENTION	OFFICE
112	MEDICAL DIRECTOR	OFFICE
113	ASSISTANT CHIEF EMS	OFFICE
114	ADMINISTRATIVE CONFERENCE	ROOM NAME
115	DEPUTY CHIEF ADMINISTRATION	OFFICE
116	ASSISTANT CHIEF SUPPORT SERVICES	OFFICE
116B	STORAGE	ROOM NAME
121	FIRE CHIEF	OFFICE
122	STORAGE	ROOM NAME
123	RESTROOM	TOILET UNISEX (RR)
124	PUBLIC RELATIONS	OFFICE
125	ADMINISTRATION MANAGER	OFFICE

SIGNAGE SCHEDULE - MAIN LEVEL		
ROOM NUMBER	SIGN NAME	SIGNAGE TYPE
126	BATTALION CHIEF TRAINING	OFFICE
127	ASSISTANT CHIEF TRAINING	OFFICE
128	OPERATIONS DIVISION CONFERENCE	ROOM NAME
129	DEPUTY CHIEF OPERATIONS	OFFICE
130	RESTROOM	TOILET UNISEX (RR)
131	RESTROOM	TOILET UNISEX (RR)
132	RESTROOM	TOILET UNISEX (RR)
133	RESTROOM	TOILET UNISEX (RR)
134	ROOF ACCESS	ROOM NAME
139	EMERGENCY OPERATIONS CENTER	ROOM NAME
140	CONFERENCE	ROOM NAME
141	STORAGE	ROOM NAME
142	CONFERENCE	ROOM NAME
143	CONFERENCE	ROOM NAME
144	PLANNER	OFFICE
145	ASSISTANT CHIEF EMERGENCY MANAGEMENT	OFFICE
146	SERVER ROOM	ROOM NAME/FM200
147	UPS	ROOM NAME
148	BREAK ROOM	ROOM NAME
149	JANITOR	ROOM NAME
151	DRIVING SIMULATOR	ROOM NAME
152	EMS SIMULATOR	ROOM NAME
153	STORAGE	ROOM NAME
155	TRAINING ROOM	ASSEMBLY
156	STORAGE	ROOM NAME
157	MECHANICAL	ROOM NAME



A1 MAIN LEVEL SIGNAGE PLAN
1/8" = 1'-0"

NORTH

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

PACKAGE 2: CONSTRUCTION SET

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

REVISION DATES:

4	ADDENDUM 4	11/26/2024
10	CCD 002	1/24/2025

STATE OF MISSOURI
CHRISTOPHER KRUMREI
NUMBER A-2016011211
ARCHITECT
12/4/24

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G-025

ISSUE DATE: DECEMBER 20, 2024
HOEFER WELKER #: 138191

MAIN LEVEL - SIGNAGE PLAN

CODE INFORMATION:
PROJECT:LEE'S SUMMIT JOINT OPERATIONS FACILITY
LOCATION: LEE'S SUMMIT, MO

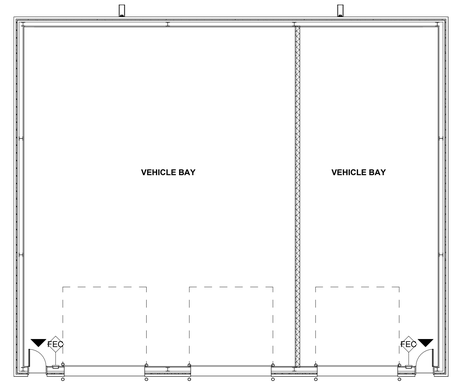
ARCHITECT:
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4622 PENNSYLVANIA AVE. SUITE 1400
KANSAS CITY, MO 64112

APPLICABLE CODES:	
APPLICABLE BUILDING CODE:	**2018 INTERNATIONAL BUILDING CODE**
APPLICABLE MECHANICAL CODE:	**2018 INTERNATIONAL MECHANICAL CODE**
APPLICABLE PLUMBING CODE:	**2018 INTERNATIONAL PLUMBING CODE**
APPLICABLE ELECTRICAL CODE:	**2017 NATIONAL ELECTRICAL CODE**
APPLICABLE FIRE CODE	**2018 INTERNATIONAL FIRE CODE**
APPLICABLE ACCESSIBILITY CODE:	**2009 ICC/ANSI A117.1**

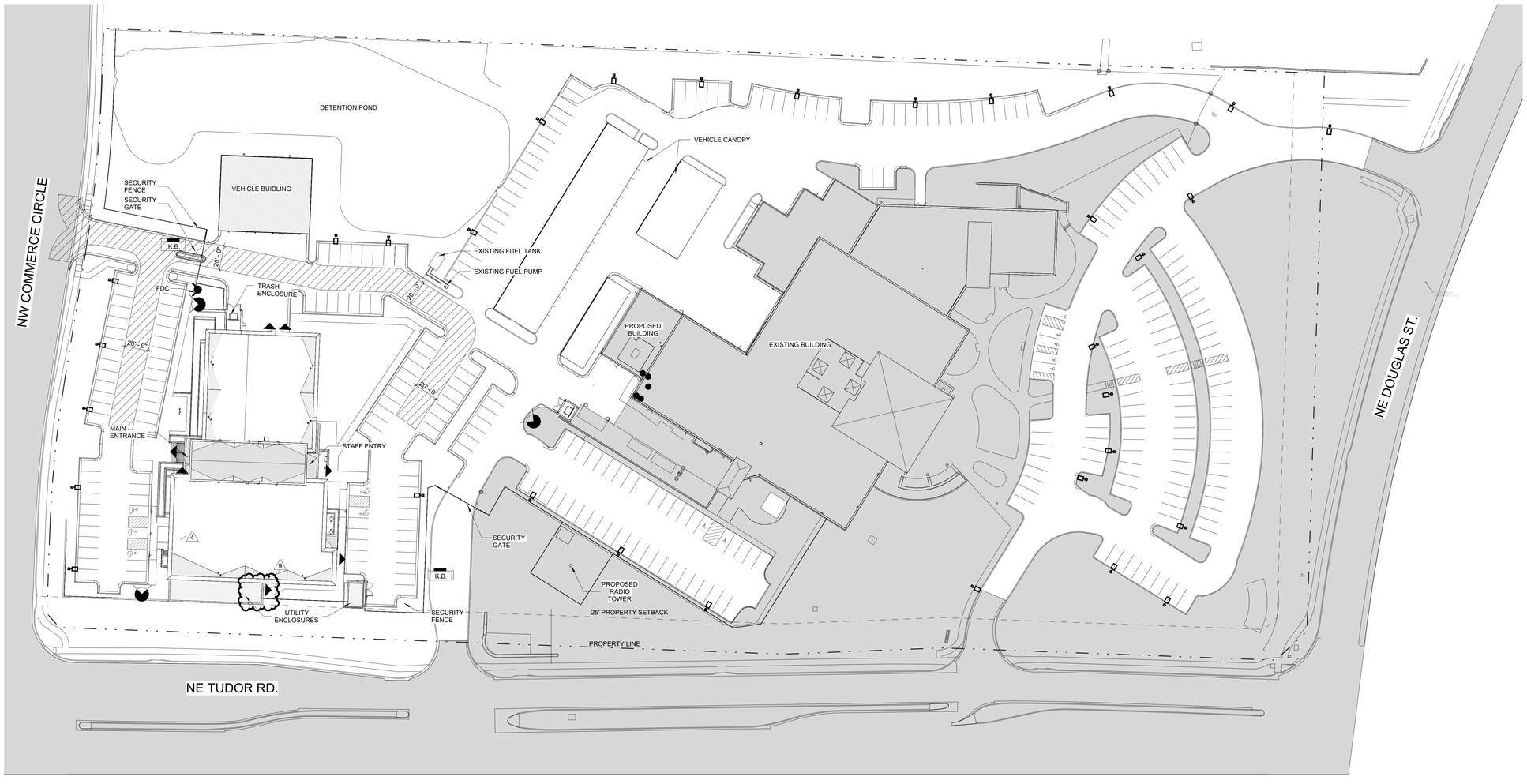
ISSUE (TABLE/ SECTION/ REFERENCE):	**REQUIREMENT:**	**TABLE/SECTION/REFERENCE:**
BUILDING/PROJECT USE:	VEHICLE STORAGE (NOT A REPAIR GARAGE)	SECTION 311
CONSTRUCTION TYPE :	TYPE VB (FULLY SPRINKLED)	TABLE 601
OCCUPANCY CLASSIFICATION:	S-2 STORAGE	SECTION 311

BUILDING AREA:	**REQUIREMENT:**	**TABLE/SECTION/REFERENCE:**
BASE ALLOWABLE AREA	54,000 SF PER FLOOR	TABLE 506.2
ACTUAL GROSS FLOOR AREA	4,724 SF	
BUILDING HEIGHT:		
ALLOWABLE STORIES ABOVE GRADE	3 STORIES	TABLE 504.4
ALLOWABLE HEIGHT	60'	TABLE 504.3
ACTUAL NUMBER OF STORIES ABOVE GRADE	1 STORIES	
ACTUAL HEIGHT IN FEET ABOVE GRADE	21'-0"	
OCCUPANT LOAD - GSF:		
TOTAL BUILDING OCCUPANTS	4,724 SF / 300 = 16 OCCUPANTS	TABLE 1004.5
EXIT TRAVEL DISTANCE - FULLY SPRINKLED):		
S OCCUPANCY	250'	TABLE 1017.2
COMMON PATH OF TRAVEL	100'	SECTION 1006.2.1
DEAD END CORRIDOR	50'	SECTION 1020.4
EXIT WIDTH:		
EXIT DOOR WIDTH REQUIRED	16 TOTAL OCCUPANTS X .15 = 3"	SECTION 1005.3.2
EXIT DOOR WIDTH PROVIDED	2 DOORS X 33" = 66"	

FIRE RESISTIVE REQUIREMENTS (TABLE/ SECTION/ REFERENCE):	**REQUIREMENTS CONSTRUCTION TYPE IIB:**	**TABLE/SECTION/REFERENCE**
EXTERIOR BEARING WALLS	0 HRS	TABLE 601
EXTERIOR OPENINGS	NO LIMIT	TABLE 716.1
EXTERIOR NON-BEARING WALLS	0 HRS	TABLE 601
INTERIOR BEARING WALLS	0 HRS	TABLE 601
INTERIOR NON-BEARING WALLS	0 HRS	TABLE 601
STRUCTURAL FRAME	0 HRS	TABLE 601
FLOOR CONSTRUCTION	0 HRS	TABLE 601
ROOF	0 HRS	TABLE 601
CORRIDORS	0 HRS	TABLE 1018.1



G1 VEHICLE BUILDING LIFE SAFETY
3/32" = 1'-0"



NORTH

A1 LIFE SAFETY SITE PLAN
1" = 40'-0"

GENERAL NOTES - ARCHITECTURAL SITE:

1. RE: SHEET G-011 FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. ARCHITECTURAL ELEVATION 100'-0" = CIVIL ELEVATION 1024.67'.
3. ALL SIDEWALKS SHALL SLOPE 1/4 INCH PER FOOT AWAY FROM THE BUILDING, UNLESS NOTED OTHERWISE.
4. ALL GRADES SHALL SLOPE AWAY FROM THE BUILDING AT 5 PERCENT FOR THE FIRST 10 FT.
5. LOCATIONS AND SIZES OF ALL CONCRETE MECHANICAL AND ELECTRICAL PADS SHALL BE COORDINATED BY THE MECHANICAL AND ELECTRICAL CONTRACTORS, WITH THE SELECTED EQUIPMENT MANUFACTURER / SUPPLIER; AND ARE TO BE APPROVED BY THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.

SITE LIFE SAFETY LEGEND

- FIRE TRUCK ROUTE THROUGH SITE
- PROPERTY LINE
- FIRE HYDRANT
- FIRE DEPARTMENT CONNECTION
- BUILDING EGRESS
- K.B. — KNOX BOX

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PACKAGE 2: CONSTRUCTION SET

REVISION DATES:

4	ADDENDUM 4	11/26/2024
9	CCD 001	1/29/2025

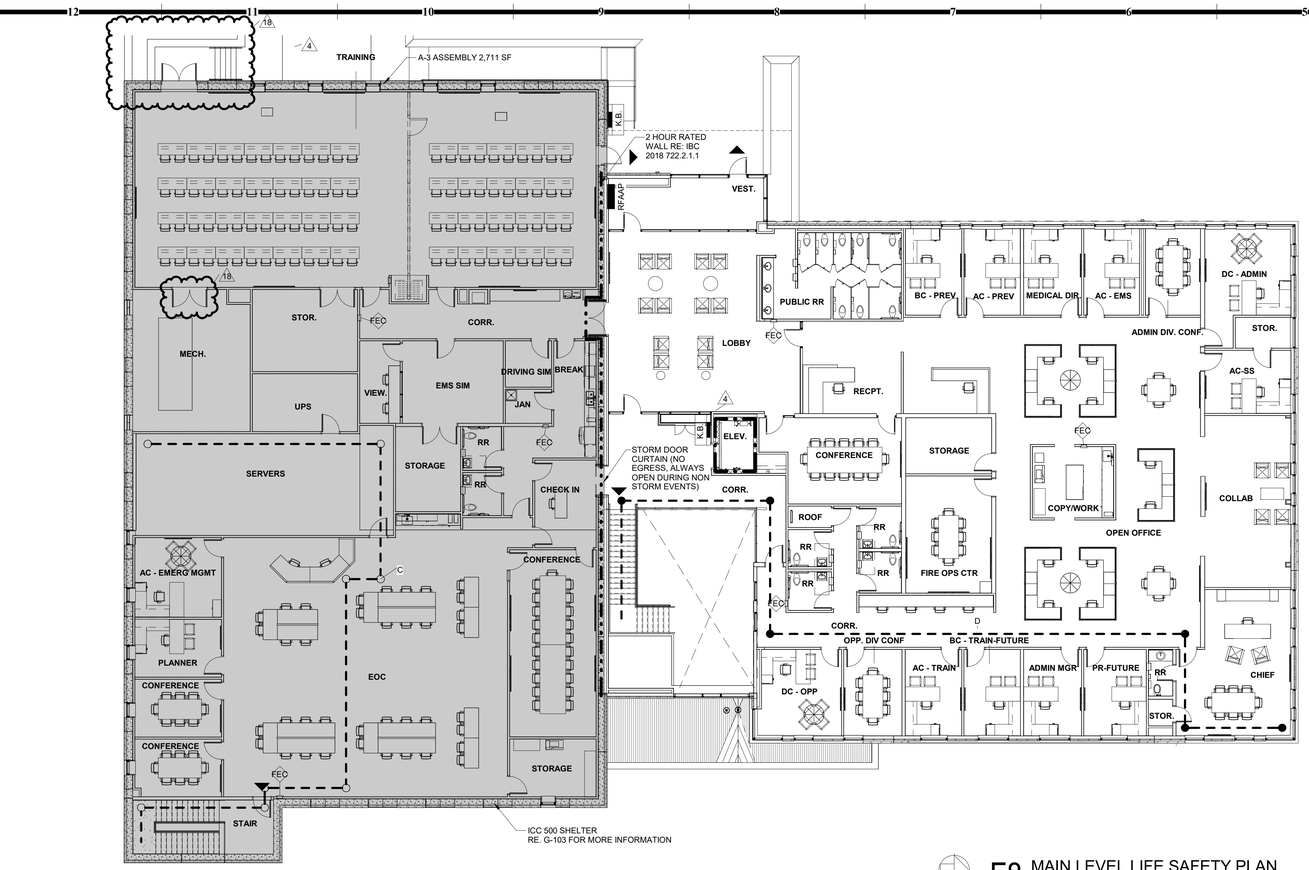
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1/23/24

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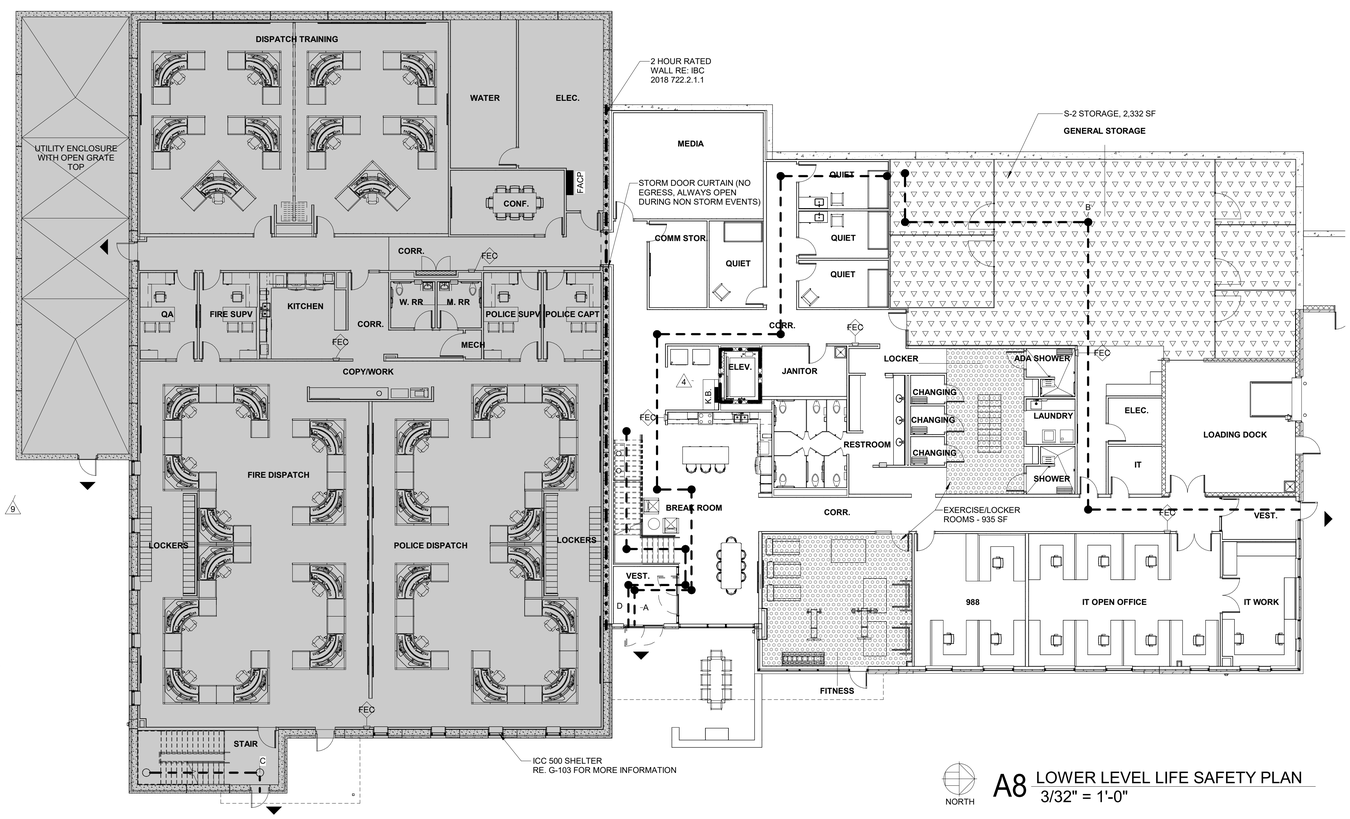
G-101

ISSUE DATE: DECEMBER 20, 2024
HOEFER WELKER #: 138191

LIFE SAFETY SITE PLAN



F8 MAIN LEVEL LIFE SAFETY PLAN
3/32" = 1'-0"



A8 LOWER LEVEL LIFE SAFETY PLAN
3/32" = 1'-0"

CODE INFORMATION:
PROJECT:LEE'S SUMMIT JOINT OPERATIONS FACILITY
LOCATION: LEE'S SUMMIT, MO

ARCHITECT:
HOEFER WELKER
4622 PENNSYLVANIA AVE. SUITE 1400
KANSAS CITY, MO 64112

APPLICABLE CODES:

APPLICABLE BUILDING CODE:	**2018 INTERNATIONAL BUILDING CODE**
APPLICABLE MECHANICAL CODE:	**2018 INTERNATIONAL MECHANICAL CODE**
APPLICABLE PLUMBING CODE:	**2018 INTERNATIONAL PLUMBING CODE**
APPLICABLE ELECTRICAL CODE:	**2017 NATIONAL ELECTRICAL CODE**
APPLICABLE FIRE CODE	**2018 INTERNATIONAL FIRE CODE**
APPLICABLE ACCESSIBILITY CODE:	**2009 ICC/ANSI A117.1**
APPLICABLE STORM SHELTER CODE:	**2014 ICC 500**

ISSUE (TABLE/ SECTION/ REFERENCE):	**REQUIREMENT:**	**TABLE/SECTION/REFERENCE:**
BUILDING/PROJECT USE:	BUSINESS	SECTION 304
CONSTRUCTION TYPE :	TYPE IIB (FULLY SPRINKLED)	TABLE 601
OCCUPANCY CLASSIFICATION:	A-3 - ASSEMBLY	SECTION 303.4
USE CLASSIFICATION	B - BUSINESS	SECTION 304

BUILDING AREA:	**REQUIREMENT:**	**TABLE/SECTION/REFERENCE:**
BASE ALLOWABLE AREA - NON SEPARATED MIXED USE		
A OCCUPANCY ALLOWABLE:	28,500 SF PER FLOOR	TABLE 506.2
ACTUAL GROSS FLOOR AREA		
LOWER LEVEL	21,817 SF	
MAIN LEVEL	21,822 SF	
TOTAL	43,639 SF	

BUILDING HEIGHT:		
ALLOWABLE STORIES ABOVE GRADE	3 STORIES	TABLE 504.4
ALLOWABLE HEIGHT	75'	TABLE 504.3
ACTUAL NUMBER OF STORIES ABOVE GRADE	2 STORIES	
ACTUAL HEIGHT IN FEET ABOVE GRADE	40'-8"	

OCCUPANT LOAD - GSF:		
LOWER LEVEL		
B OCCUPANCY	18,550 SF / 150 = 124 OCCUPANTS	TABLE 1004.5
B OCCUPANCY - EXERCISE/LOCKER ROOMS	935 SF / 50 = 19 OCCUPANTS	TABLE 1004.5
S-2 OCCUPANCY	2,332 SF / 300 = 8 OCCUPANTS	TABLE 1004.5
LOWER LEVEL TOTAL OCCUPANTS	151 TOTAL LOWER LEVEL OCCUPANTS	
MAIN LEVEL		
B OCCUPANCY	19,111 SF / 150 = 128 OCCUPANTS	TABLE 1004.5
A-3 OCCUPANCY	2,711 SF / 15 = 181 OCCUPANTS	TABLE 1004.5
MAIN LEVEL TOTAL OCCUPANTS	309 TOTAL MAIN LEVEL OCCUPANTS	
TOTAL BUILDING OCCUPANTS	460 TOTAL BUILDING OCCUPANTS	

EXIT TRAVEL DISTANCE - FULLY SPRINKLED):		
A OCCUPANCY	250'	TABLE 1017.2
COMMON PATH OF TRAVEL	75'	SECTION 1006.2.1
DEAD END CORRIDOR	20'	SECTION 1020.4
B OCCUPANCY	300'	TABLE 1017.2
COMMON PATH OF TRAVEL	100'	SECTION 1006.2.1
DEAD END CORRIDOR	50'	SECTION 1020.4

EXIT WIDTH:		
LOWER LEVEL EXIT DOOR WIDTH REQUIRED	151TOTAL OCCUPANTS X .15 = 23"	SECTION 1005.3.2
EXIT DOOR WIDTH PROVIDED	4 DOORS X 33" = 132"	
MAIN LEVEL EXIT DOOR WIDTH REQUIRED	309 TOTAL OCCUPANTS X .15 = 47"	SECTION 1005.3.2
EXIT DOOR WIDTH PROVIDED	2 DOORS X 33" = 66"	
EXIT STAIR WIDTH REQUIRED	309/4 "OCCUPANTS X .20 = 16" @ EACH STAIR	SECTION 1005.3.1
EXIT STAIR WIDTH PROVIDED	2 STAIRS 47" + 55" = 102"	

FIRE RESISTIVE REQUIREMENTS (TABLE/ SECTION/ REFERENCE):	**REQUIREMENTS CONSTRUCTION TYPE IIB:**	**TABLE/SECTION/REFERENCE**
EXTERIOR BEARING WALLS	0 HRS	TABLE 601
EXTERIOR OPENINGS	NO LIMIT	TABLE 716.1
EXTERIOR NON-BEARING WALLS	0 HRS	TABLE 601
INTERIOR BEARING WALLS	0 HRS	TABLE 601
INTERIOR NON-BEARING WALLS	0 HRS	TABLE 601
STRUCTURAL FRAME	0 HRS	TABLE 601
FLOOR CONSTRUCTION	0 HRS	TABLE 601
ROOF	0 HRS	TABLE 601
CORRIDORS	0 HRS	TABLE 1018.1
SHAFT WALLS	1 HRS	TABLE 713.4
EXIT ACCESS STAIRWAYS	0 HRS	TABLE 1019.3
STORM SHELTER	2 HRS	2014 ICC 500 601.1

PLUMBING FIXTURES REQUIRED CHART (IBC 2018 TABLE 2902.1):

OCCUPANT LOADS:	MALE	FEMALE	UNISEX
B - TOTAL OCCUPANT LOAD = 305 OCCUPANTS	153	153	-
A - TOTAL OCCUPANT LOAD = 181 OCCUPANTS	91	91	-
WATER CLOSETS (IBC 2018 TABLE 2902.1):			
B - OCCUPANT WATER CLOSETS REQUIRED			
(1 PER 25 FOR THE FIRST 50 & 1 PER 50 FOR THE REMAINDER EXCEEDING 50)	5	5	-
A - OCCUPANT WATER CLOSETS REQUIRED (1 PER 125 MALE, 1 PER 65 FEMALE)	1	2	-
TOTAL WATER CLOSETS REQUIRED	6	7	-
TOTAL WATER CLOSETS PROVIDED	1	1	20
LAVATORIES (IBC 2018 TABLE 2902.1):			
B - OCCUPANT LAVATORIES REQUIRED			
(1 PER 40 FOR THE FIRST 80 & 1 PER 80 FOR THE REMAINDER EXCEEDING 80)	3	3	-
A - OCCUPANT LAVATORIES REQUIRED (1 PER 200)	1	1	-
TOTAL LAVATORIES REQUIRED	4	4	-
LAVATORIES PROVIDED	1	1	12

DRINKING FOUNTAINS (IBC 2018 TABLE 2902.1):	
B - OCCUPANTS - (1 PER 100 TOTAL OCCUPANTS)	4
A - OCCUPANTS - (1 PER 500 TOTAL OCCUPANTS)	1
TOTAL DRINKING FOUNTAINS REQUIRED	5
TOTAL DRINKING FOUNTAINS (DF), AND FILTERED WATER (FW) PROVIDED	5 (2 DF + 3 FW)
SERVICE SINK (1 PER FLOOR)	2

LIFE SAFETY LEGEND

- DIRECTION OF EGRESS TRAVEL
- FEC — FIRE EXTINGUISHER CABINET
- RFAAP — REMOTE FIRE ALARM ANNUNCIATOR PANEL
- FACP — FIRE ALARM CONTROL PANEL
- FDC — FIRE DEPARTMENT CONNECTION
- K.B. — KNOX BOX
- 1 HOUR RATED WALL
- 2 HOUR RATED WALL
- STORM SHELTER
- A-3 ASSEMBLY
- S-2 STORAGE
- B-EXERCISE/LOCKER ROOMS

CODE REQUIRED SIGNAGE NOTE:

1. CODE REQUIRED SIGNAGE PER ALL APPLICABLE CODES AND AUTHORITIES HAVING JURISDICTION INCLUDING BUT NOT LIMITING TO IBC, IFC, NFPA, ICC A117.1, ADAGA, FGI, AND AHJ REGULATIONS SHALL BE PROVIDED.
2. CODE REQUIRED SIGNAGE IS DESIGNED, SPECIFIED, AND INSTALLED BY CONTRACTOR.
3. CODE REQUIRED SIGNAGE IS REQUIRED TO BE INSTALLED PRIOR TO REQUESTING FINAL INSPECTION IN ORDER TO OBTAIN CERTIFICATE OF OCCUPANCY
4. CODE REQUIRED SIGNAGE MUST BE VERIFIED PER PROJECT. SOME EXAMPLES OF CODE REQUIRED SIGNAGE INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:
   - A. REQUIRED ACCESSIBLE SIGNAGE:
     - a. ADA PARKING SPACES
     - b. ACCESSIBLE PASSENGER LOADING ZONES
     - c. ACCESSIBLE TOILETS
     - d. FAMILY OR ASSISTED-USE TOILET AND BATHING ROOMS
     - e. ACCESSIBLE DRESSING ROOMS
   - B. DIRECTIONAL SIGNAGE INCLUDING:
     - a. AT EACH SEPARATE SEX TOILET AND BATHING ROOM INDICATING THE LOCATION OF THE NEAREST FAMILY/ ASSISTED USE TOILET OR BATHING ROOM
     - b. ALL EXITS AND EXIT STAIRWAYS SERVING A REQUIRED ACCESSIBLE SPACE
     - c. DIRECTIONAL SIGNAGE AT ELEVATOR LANDINGS TO SHOW EXIT LOCATIONS
   - C. OTHER CODE SIGNAGE INCLUDING:
     - a. ELEVATOR TWO-WAY COMMUNICATING SYSTEMS
     - b. INTERIOR EXIT STAIRWAYS AND RAMPS, FLOOR LEVEL SIGNAGE INCLUDING STAIR WITH ROOF ACCESS
     - c. ELECTRICAL ROOMS
     - d. COMMUNICATION/ DATA ROOMS
     - e. MAXIMUM CAPACITY AT ASSEMBLY AREAS

EGRESS (MAXIMUM TRAVEL...	
TYPE	**DISTANCE**
Egress Path A	134' - 0"
Egress Path B	127" - 1"
Egress Path C	174' - 5"
Egress Path D	208' - 8"

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

PACKAGE 2: CONSTRUCTION SET

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

REVISION DATES:

4	ADDENDUM 4	11/26/2024
9	CCD 001	1/29/2025
18	CCD 003	5/5/2025

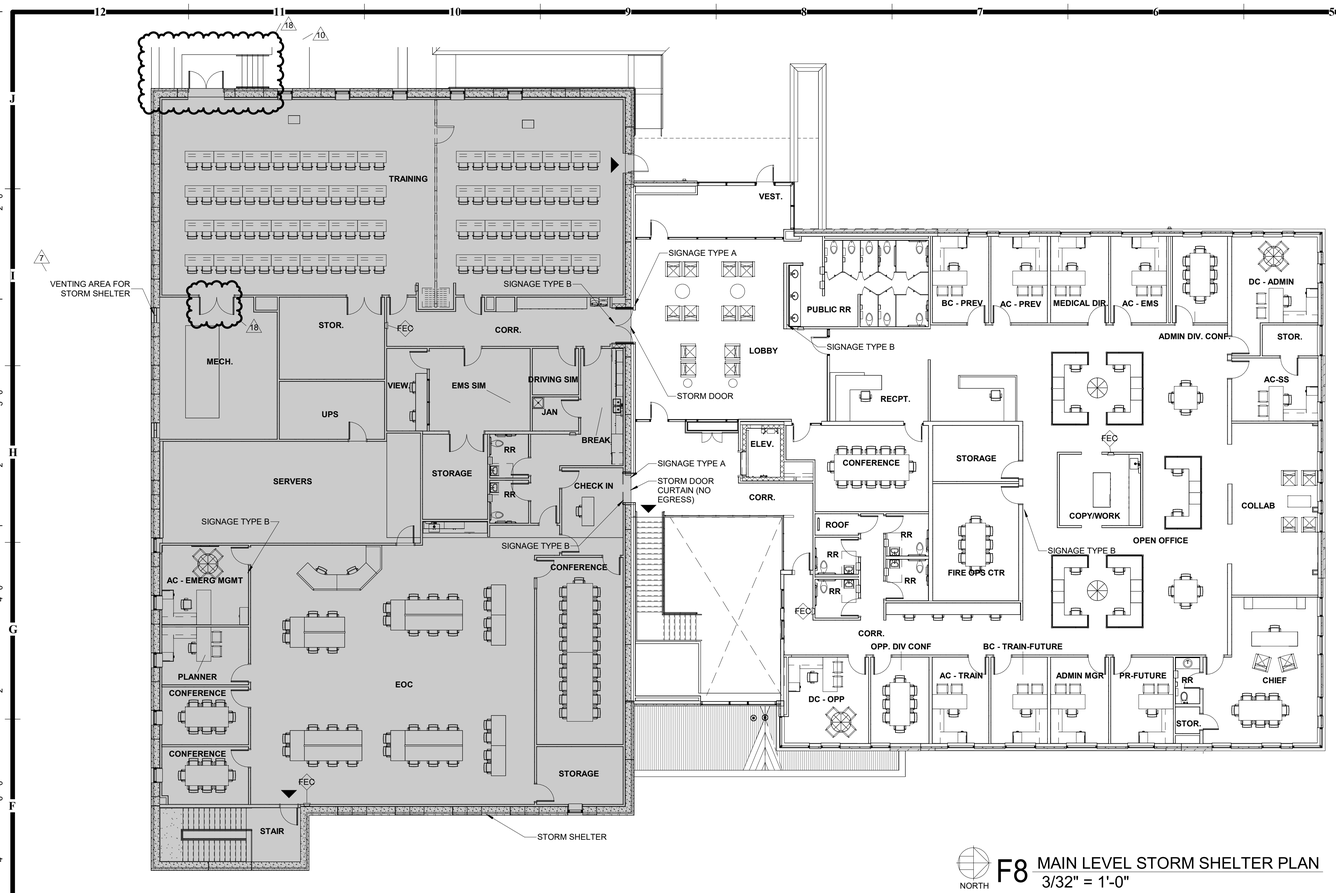
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CHRISTOPHER KRUMREI
NUMBER A-2016013211
5/5/25
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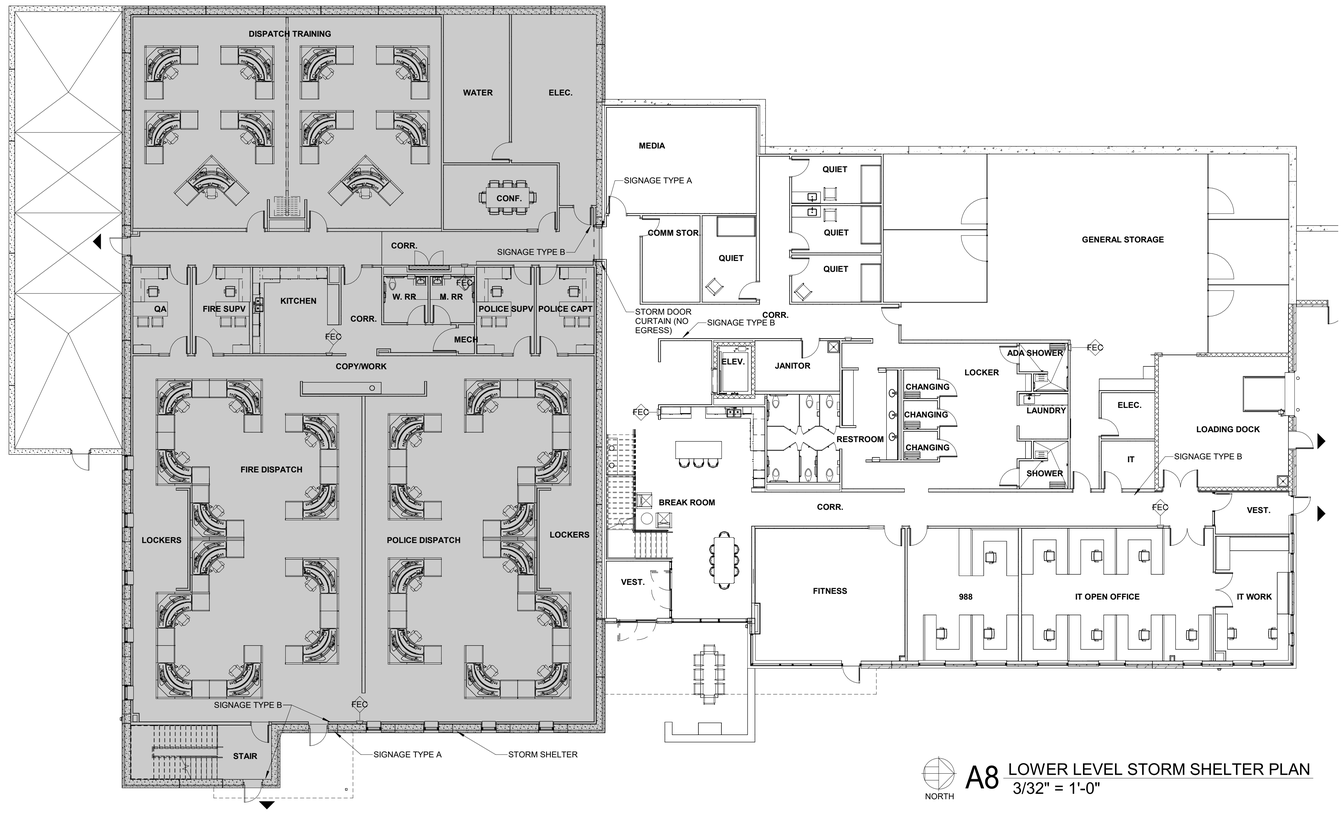
G-102

ISSUE DATE: DECEMBER 20, 2024
HOEFER WELKER #: 138191

LIFE SAFETY PLANS



NORTH **F8** MAIN LEVEL STORM SHELTER PLAN
3/32" = 1'-0"



NORTH **A8** LOWER LEVEL STORM SHELTER PLAN
3/32" = 1'-0"

SHELTER OCCUPANCY

OCCUPANCY OF SHELTER:

THE OCCUPANCY OF THE SHELTER IS BASED ON THE TOTAL STAFF OCCUPANCY OF ALL BUILDINGS ON THE SITE:
TOTAL SHELTER OCCUPANCY = 100 OCCUPANTS

SHELTER AREA REQUIRED:
99 STANDING/SEATED x 5 OLF = 495 SF
1 WHEELCHAIRS x 10 OLF = 10 SF
TOTAL = 505 SF

STORM SHELTER AREA PROVIDED = 11,767 SF

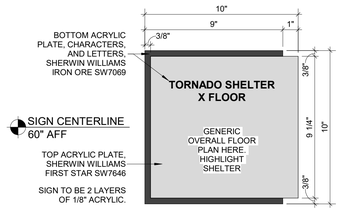
REQUIRED SHELTER SANITATION FACILITIES:

TOILETS
REQUIRED
1 TOILETS REQUIRED PER 50 OCCUPANTS = 2
PROVIDED = 4 TOILETS

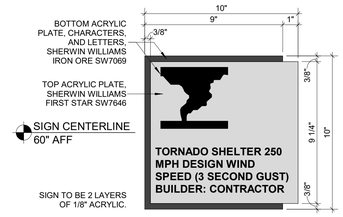
HANDWASHING
REQUIRED
1 PER 100 OCCUPANTS (TABLE 702.2) = 1
PROVIDED = 4 LAVATORIES

REQUIRED DESIGN INFORMATION

1. SHELTER TYPE: COMMUNITY
2. WIND DESIGN CONFORMS TO THE PROVISIONS OF ICC 500-2014, ICC/NSSA STANDARD FOR THE DESIGN AND CONSTRUCTION OF STORM SHELTERS.
3. SHELTER DESIGN WIND SPEED: 250 MPH
4. WIND EXPOSURE CATEGORY: RE S-000. (7)
5. INTERNAL PRESSURE COEFFICIENT: RE S-000.
6. TOPOGRAPHIC FACTOR: RE S-000.
7. DIRECTIONAL FACTOR: RE S-000.
8. THE SHELTER IS NOT WITHIN AN AREA SUSCEPTIBLE TO FLOODING IN ACCORDANCE WITH ICC-500 2014 CHAPTER 4.
9. CLOSEST 500 YR (1%)
   FLOOD ELEVATION: **936**
   SHELTER ELEVATION: **1010**
10. SHELTER ENVELOPE MEETS THE PRESSURE AND MISSILE IMPACT TEST REQUIREMENTS IDENTIFIED IN 2014 ICC 500, CHAPTERS 3 AND 8. REFERENCE STRUCTURAL DOCUMENTS FOR WALL AND FLOOR SLAB CONSTRUCTION. REFERENCE MECHANICAL DOCUMENTS FOR LOUVERS. REFERENCE ARCHITECTURAL DOCUMENTATION FOR DOORS AND OVERHEAD COILING DOOR INFORMATION.
11. REFERENCE THIS SHEET FOR STORM SHELTER PLANS.
12. REFERENCE A-301 FOR STORM SHELTER ELEVATIONS
13. LOWEST SHELTER FLOOR ELEVATION: **1010'**
    CORRESPONDING DATUM: **85' - 4"**
14. REQUIRED OCCUPANT LOAD OF SHELTER: **100**.
15. USABLE STORM SHELTER FLOOR AREA: **11,767 SF**
16. VENTING AREA PROVIDED AND LOCATIONS WITHIN SHELTER: **VENTING AREA IS 2,072 IN^2. STORM SHELTER IS MECHANICALLY VENTED TO IMC 2018 STANDARDS. LOCATION SHOWN ON F8/G-103.**
17. CALCULATIONS FOR NUMBER OF SANITATION FACILITIES IN COMMUNITY SHELTER (PER 2014 ICC-500, TABLE 702.2) REFERENCE "REQUIRED SHELTER PLUMBING FIXTURES" CALCULATION ABOVE. **4** TOILETS AND **2** LAVATORIES ARE REQUIRED.
18. MINIMUM FOUNDATION CAPACITY: RE S-000. (7)
19. SHELTER INSTALLATION REQUIREMENTS, INCLUDING ANCHOR LOCATIONS AND MINIMUM REQUIRED CAPACITY AT EACH ANCHOR: REF STRUCTURAL DOCUMENT



G3 STORM SHELTER SIGN TYPE B
3" = 1'-0"



G1 STORM SHELTER SIGN TYPE A
3" = 1'-0"

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PACKAGE 2: CONSTRUCTION SET

REVISION DATES:

7	ASI 004	2/12/2025
10	CCD 002	1/24/2025
18	CCD 003	5/5/2025

STATE OF MISSOURI
CHRISTOPHER KRUMREI
NUMBER A-2016013211
5/5/25
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G-103

ISSUE DATE: DECEMBER 20, 2024
HOEFER WELKER #: 138191

STORM SHELTER COMPLIANCE

GENERAL NOTES - GRID GEOMETRY PLANS:

1. RE: SHEET G-011 FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. DIMENSIONS FOR EDGE OF SLAB, SLAB OPENINGS, SLAB DEPRESSIONS, AND/ OR THICKENED SLABS ARE SHOWN ON THE STRUCTURAL DRAWINGS.
3. WP = WORK POINTS.
4. CONTRACTOR IS TO START THE BUILDING LAYOUT FROM THE FIRST WORK POINT, THEN THE NEXT, ETC, - TO ESTABLISH THE GRID GEOMETRY FOR THE BUILDING.
5. WORK POINTS ARE TO BE COORDINATED FROM THE (G-11111 SHEETS) ARCHITECTURAL GRID GEOMETRY PLAN(S) - FOR THE CIVIL AND STRUCTURAL DRAWINGS.
6. WORK POINTS ON CIVIL DRAWINGS SHOW THEIR ASSOCIATED LONGITUDE AND LATITUDE - FOR CORRECT PLACEMENT OF THE BUILDING ON THE SITE.
7. ANY DISCREPANCIES BETWEEN THE ARCHITECTURAL DRAWINGS AND THE CIVIL OR STRUCTURAL DRAWINGS SHALL BE REPORTED TO THE ARCHITECT IN WRITING FOR RESOLUTION, PRIOR TO PROCEEDING WITH THE WORK.

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PACKAGE 2: CONSTRUCTION SET

REVISION DATES:

3	ADDENDUM 3	11/18/2024
9	CCD 001	1/29/2025

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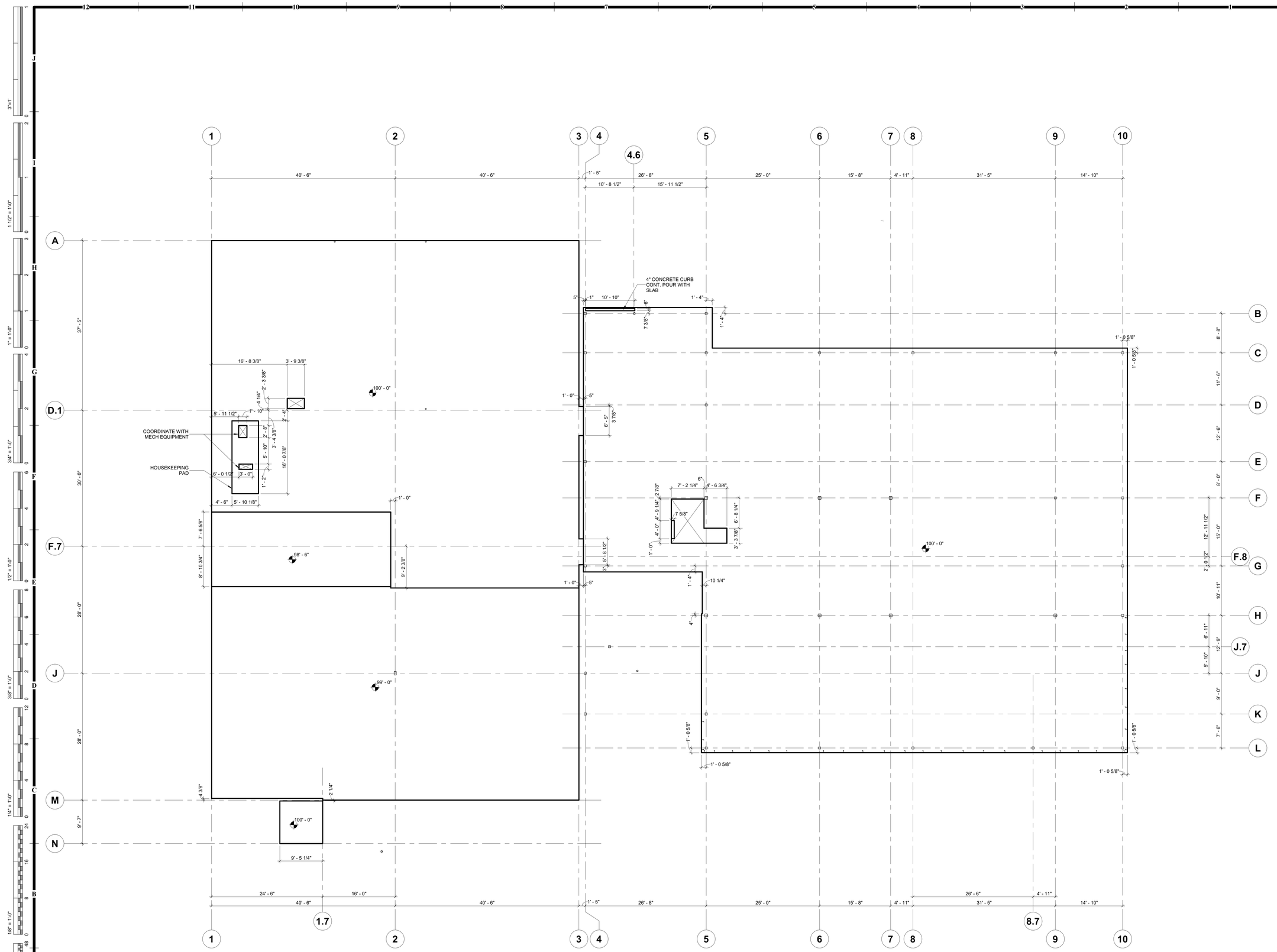
ISSUE DATE: DECEMBER 20, 2024
HOEFER WELKER #: 138191

GRID GEOMETRY PLAN

A1 LOWER LEVEL GRID GEOMETRY PLAN
1/8" = 1'-0"

NORTH

1/30/2025 9:44:10 AM Autodesk Docs://138191-LeesSummitJointOpsCtr/138191_A23_LeesSummitJointOpsCtr.rvt



NORTH

A1 MAIN LEVEL GRID GEOMETRY PLAN
1/8" = 1'-0"

GENERAL NOTES - GRID GEOMETRY PLANS:

1. RE: SHEET G-011 FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. DIMENSIONS FOR EDGE OF SLAB, SLAB OPENINGS, SLAB DEPRESSIONS, AND/ OR THICKENED SLABS ARE SHOWN ON THE STRUCTURAL DRAWINGS.
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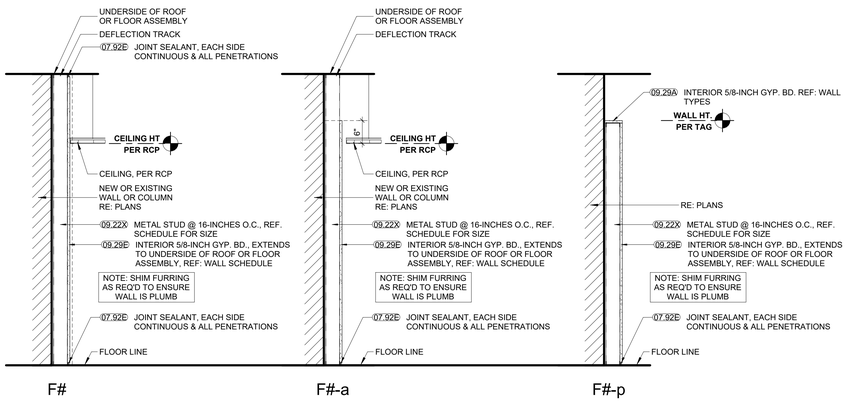
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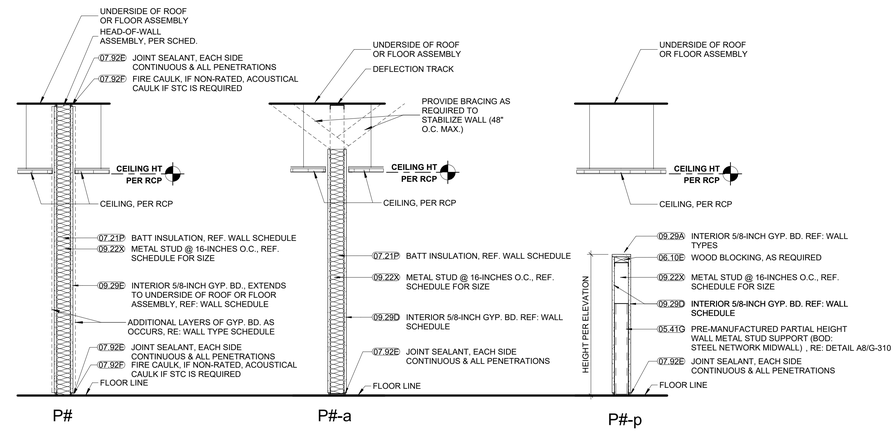
ISSUE DATE: NOVEMBER 1, 2024
HOEFER WELKER #: 138191

GRID GEOMETRY PLAN



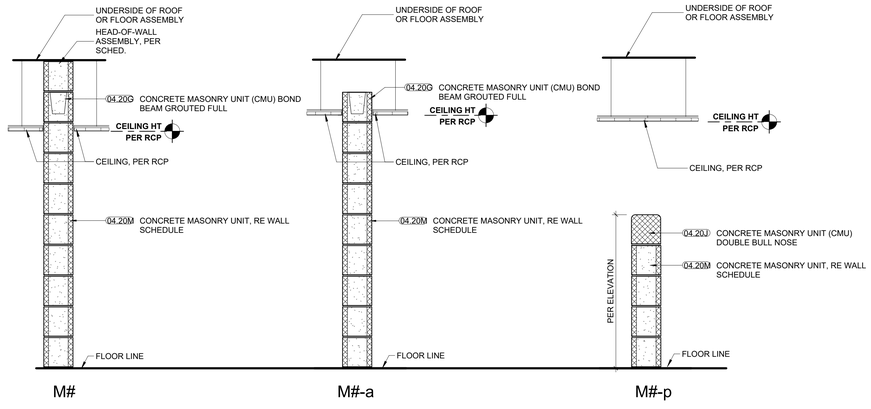
F = FURRING PARTITION TYPE

MARK	TOTAL THICKNESS	STUD SIZE	FIRE RATING (HR) OR EXTENTS	MODIFIER	GYPSUM_BOARD	INSULATION THICKNESS
F0-a	1 1/2"	7/8"	a = EXTEND GYP 6" MIN ABOVE CEILING	-	1 LAYER OF 5/8", ONE SIDE	-
F1-a	2 1/4"	1 5/8"	a = EXTEND GYP 6" MIN ABOVE CEILING	-	1 LAYER OF 5/8", ONE SIDE	-
F1-av	2 7/8"	1 5/8"	a = PARTIAL HEIGHT WALL (RE: ELEVATIONS)	v = 2 LAYERS GYPSUM BOARD ON FITNESS SIDE, 1 LAYER ON OTHER	1 LAYER OF 5/8", ONE SIDE	-
F3	4 1/4"	3 5/8"	-	-	1 LAYER OF 5/8", ONE SIDE	3 1/2"
F3-a	4 1/4"	3 5/8"	a = EXTEND GYP 6" MIN ABOVE CEILING	-	1 LAYER OF 5/8", ONE SIDE	3 1/2"
F3-av	4 7/8"	3 5/8"	a = PARTIAL HEIGHT WALL (RE: ELEVATIONS)	v = 2 LAYERS GYPSUM BOARD ON FITNESS SIDE, 1 LAYER ON OTHER	1 LAYER OF 5/8", ONE SIDE	3 1/2"
F3-p	4 1/4"	3 5/8"	p = PARTIAL HEIGHT WALL (RE: ELEVATIONS)	-	1 LAYER OF 5/8", ONE SIDE	-
F6	6 5/8"	6"	-	-	1 LAYER OF 5/8", ONE SIDE	6"
F6-a	6 5/8"	6"	a = EXTEND GYP 6" MIN ABOVE CEILING	-	1 LAYER OF 5/8", ONE SIDE	6"



P = PARTITION TYPE

MARK	TOTAL THICKNESS	STUD SIZE	FIRE RATING (HR) OR EXTENTS	MODIFIER	GYP BOARD	INSULATION THICKNESS	UL #
P3	4 7/8"	3 5/8"	-	-	1 LAYER OF 5/8", BOTH SIDES	3 1/2"	
P3-a	4 7/8"	3 5/8"	a = EXTEND GYP 6" MIN ABOVE CEILING	-	1 LAYER OF 5/8", BOTH SIDES	3 1/2"	
P3-b	5 3/8"	3 5/8"	-	b = BALLISTIC RATED LEVEL III	1 LAYER OF 5/8", BOTH SIDES	3 1/2"	
P3-p	4 7/8"	3 5/8"	p = PARTIAL HEIGHT WALL (RE: ELEVATIONS)	-	1 LAYER OF 5/8", BOTH SIDES	-	
P3-v	5 1/2"	3 5/8"	-	v = 2 LAYERS GYPSUM BOARD ON FITNESS SIDE, 1 LAYER ON OTHER	2 LAYERS 5/8 ONE SIDE, 1 LAYER 5/8 ONE SIDE	3 1/2"	
P6	7 1/4"	6"	-	-	1 LAYER OF 5/8", BOTH SIDES	6"	
P6-a	7 1/4"	6"	a = EXTEND GYP 6" MIN ABOVE CEILING	-	1 LAYER OF 5/8", BOTH SIDES	6"	
P6-v	7 7/8"	6"	-	v = 2 LAYERS GYPSUM BOARD ON FITNESS SIDE, 1 LAYER ON OTHER	2 LAYERS 5/8 ONE SIDE, 1 LAYER 5/8 ONE SIDE	6"	
P8	9 1/4"	8"	-	-	1 LAYER OF 5/8", BOTH SIDES	6"	



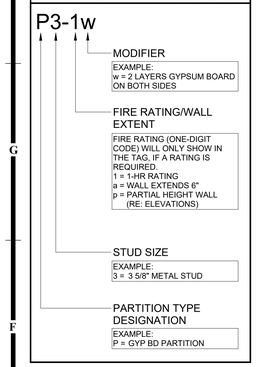
M = MASONRY PARTITION TYPE

MARK	TOTAL THICKNESS	FIRE RATING (HR) OR EXTENTS	MODIFIER	UL #
M8	7 5/8"	-	-	
M8-1	7 5/8"	1 HOUR	-	U905
M8-2	7 5/8"	2 HOUR	-	U905

MATERIAL KEYNOTES

04.20G	CONCRETE MASONRY UNIT (CMU) BOND BEAM GROUTED FULL
04.20J	CONCRETE MASONRY UNIT (CMU) DOUBLE BULL NOSE
04.20M	CONCRETE MASONRY UNIT, RE WALL SCHEDULE
05.41G	PRE-MANUFACTURED PARTIAL HEIGHT WALL METAL STUD SUPPORT (BOD: STEEL NETWORK MIDWALL)
06.10E	WOOD BLOCKING, AS REQUIRED
07.21P	BATT INSULATION, REF. WALL SCHEDULE
07.92E	JOINT SEALANT, EACH SIDE CONTINUOUS & ALL PENETRATIONS
07.92F	FIRE CAULK, IF NON-RATED, ACOUSTICAL CAULK IF STC IS REQUIRED
09.22X	METAL STUD @ 16-INCHES O.C., REF. SCHEDULE FOR SIZE
09.29A	INTERIOR 5/8-INCH GYP. BD. REF: WALL TYPES
09.29D	INTERIOR 5/8-INCH GYP. BD. REF: WALL SCHEDULE
09.29E	INTERIOR 5/8-INCH GYP. BD., EXTENDS TO UNDERSIDE OF ROOF OR FLOOR ASSEMBLY, REF: WALL SCHEDULE

PARTITION TYPE LEGEND:



GENERAL WALL TYPE NOTES:

1. RE: SHEET G-011 FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. RE: LIFE SAFETY PLAN(S) FOR RATED WALL LOCATIONS.
3. RE: WALL TYPE DETAIL SHEET FOR TYPICAL WALL DETAILS, HEAD-OF-WALL DETAILS, AND ADDITIONAL WALL TYPE INFORMATION.
4. COORDINATE METAL STUD GAUGE WITH PRE-APPROVED EQUIPMENT ANCHORAGE. WHERE A DISCREPANCY OCCURS, THE MORE STRINGENT REQUIREMENT SHALL GOVERN.
5. WHERE "ACOUSTIC SEALANT" IS INDICATED ON WALL TYPES: PROVIDE ACOUSTIC (SOUND) SEALANT ABOVE TOP TRACK, UNDER BOTTOM TRACK, AND AT ALL PENETRATIONS (BOTH SIDES).
6. WHERE "FIRE CAULK" IS INDICATED ON WALL TYPES: PROVIDE FIRE-RATED SEALANT ABOVE TOP TRACK, UNDER BOTTOM TRACK, AT ALL PENETRATIONS (BOTH SIDES), AND AS REQUIRED BY FIRE RATING UL NUMBER.
7. EXTEND FIRE-RATED WALL CONSTRUCTION BEHIND NON-RATED RECESSED OR BUILT-IN EQUIPMENT: SUCH AS FIRE EXTINGUISHER CABINETS (FEC), ELECTRICAL WATER COOLERS (EWC), ELECTRICAL PANELS, ETC., UNLESS NOTED OTHERWISE. REFER TO THE 5-SIDED BOX DETAIL ON THE WALL TYPE DETAILS SHEET.
8. PROVIDE AND INSTALL ALL STIFFENERS, BRACING, BACK-UP PLATES AND SUPPORTING BRACKETS REQUIRED FOR THE INSTALLATION OF ALL CASEWORK AND OF ALL FLOOR MOUNTED OR SUSPENDED MECHANICAL, ELECTRICAL OR LABORATORY EQUIPMENT.
9. WHERE HVAC OR OTHER MECHANICAL, ELECTRICAL AND PLUMBING ITEMS PENETRATE PARTITIONS: STUDS SHALL BE BRACED AND FRAMED TO STRUCTURE AS REQUIRED TO PROVIDE ADEQUATE SUPPORT. ALL PENETRATIONS THROUGH ACOUSTICAL AND FIRE RATED WALLS SHALL BE SEALED TO PROVIDE FIRE, SMOKE, AND/OR ACOUSTICAL ISOLATION OF SPACES WITH APPROPRIATE ACOUSTICAL/ FIRESTOP MATERIAL.
10. THERE SHALL BE NO BACK-TO-BACK ELECTRICAL, TELEPHONE, OR OTHER OUTLETS, EXCEPT WHERE SPECIFICALLY SHOWN.
11. WALL BASE IS NOT SHOWN ON ALL WALL TYPES FOR CLARITY. REFER TO FINISH SCHEDULE.
12. PROVIDE MOISTURE AND MOLD RESISTANT GYPSUM BOARD AT ALL WET LOCATIONS.
13. EXCEPT AT FIRE-RATED PARTITIONS, ALL WALL AND COLUMN GYPSUM BOARD FACING SHALL BE HELD AT 5/8 INCH BELOW STRUCTURE, UNLESS NOTED OR SHOWN OTHERWISE.
14. PROVIDE MOISTURE AND MOLD RESISTANT GYPSUM BOARD AT THE INTERIOR SIDE OF ALL EXTERIOR WALLS.
15. STC AND STC TEST NUMBERS ASSUME 20 GA STUDS AT 16" O.C. AT COLD FORMED METAL FRAMING. WOOD FRAMING IS ALSO ASSUMED TO BE AT 16"O.C. CMU TEST REPORTS ASSUME HOLLOW UNITS (NO GROUT OR SAND).

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

PACKAGE 2: CONSTRUCTION SET

REVISION DATES:

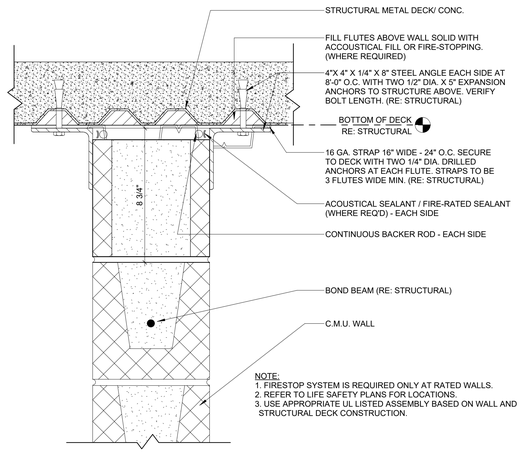


PROFESSIONAL SEAL

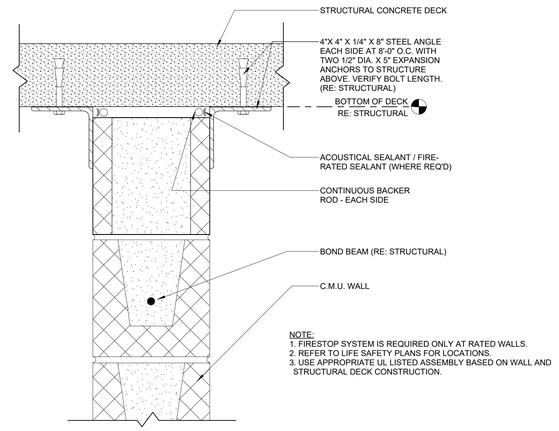
G-301

ISSUE DATE: NOVEMBER 1, 2024
HOEFER WELKER #: 138191

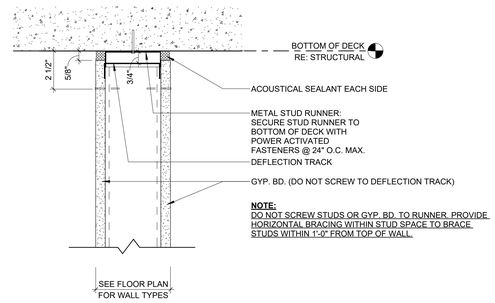
PARTITION TYPES



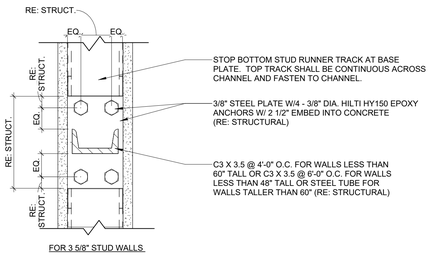
E8 TOP OF MASONRY WALL AT METAL DECK.
3" = 1'-0"



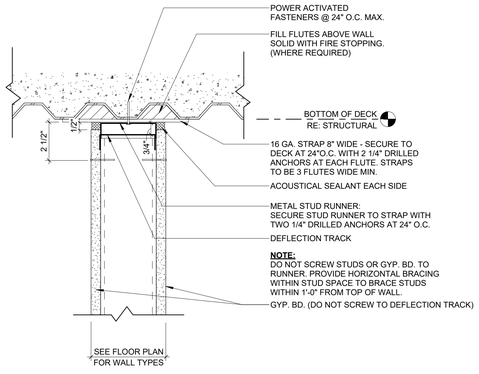
E5 TOP OF MASONRY WALL AT CONCRETE DECK
3" = 1'-0"



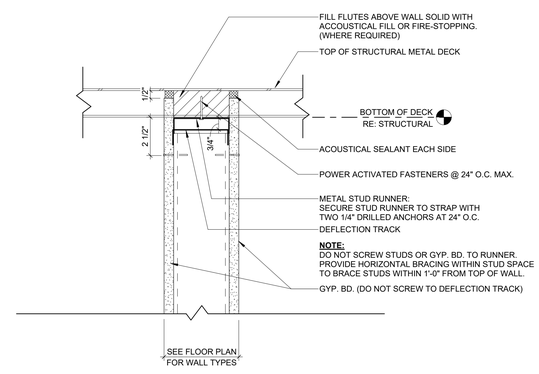
E1 HEAD OF STUD WALL AT CONC. DECK
3" = 1'-0"



A8 BASE PLATE & ANCHORAGE PLAN DTLS. @ WALL TYPE "F"
3" = 1'-0"



A5 TOP OF WALL - PARALLEL TO METAL DECK
3" = 1'-0"



A1 TOP OF WALL - PERP. TO METAL DECK
3" = 1'-0"

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2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

PACKAGE 2: CONSTRUCTION SET

REVISION DATES:

STATE OF MISSOURI
CHRISTOPHER KRUMREI
A-2016011211
ARCHITECT

PROFESSIONAL SEAL

G-310

ISSUE DATE: NOVEMBER 1, 2024
HOEFER WELKER #: 138191

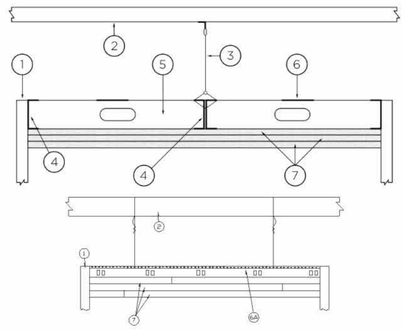
PARTITION TYPE DETAILS

Design No. **I504**

June 13, 2024

Ceiling Membrane Rating - 1 Hr.
Load Restriction - Limited to the Dead Weight of the Assembly
*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

1 Hour System



1. **Supporting Structure #1 —** Fire-resistance rated. Suitable point of attachment of C-Channels (Item 4).

2. **Supporting Structure #2 —** If necessary - Suitable point of attachment of hanger wire (Item 3).

3. **Hanger Wire —** If necessary - Min. 8 gauge steel wire, hung from holes punched in C-Channel (Item 4). Hanger wire spaced nominally 24 in. OC.

4. **C-Channels —** Used to support steel studs at both ends. Min. 3-5/8 in. deep with min. 1-1/4 in. legs and formed from min. No. 20 MSG galv. steel. Perimeter channels attached to a fire-resistance rated supporting structure (Item 1) with fasteners spaced not greater than 24 in. O.C. at both the top and bottom of the vertical leg. When used with Items 2 and 3, C-Channel secured back to back with 1/2 in. Type S screws spaced 24 in. OC along centerline of C-Channels. Where C-Channels form a butt joint, screws placed at both top and bottom of both sides of butt joint.

5. **Steel Studs —** Min. 3-5/8 in. wide with min. 1-5/8 in. legs containing folded back flanges and formed from min. No. 20 MSG galv. Steel. Studs to be cut 3/8 in. to 5/8 in. less than the clear span between the vertical legs of the perimeter channels. Studs spaced a max. 16 in. OC. At each end of the stud, the top and bottom legs shall be secured to the perimeter channel with one 3/8 in. long pan-head steel screw. Studs are used at each end of the horizontal barrier to terminate the assembly at the adjoining wall. These end studs shall be secured to the adjoining wall in the same manner as the perimeter channels (Item 4). Maximum unsupported length of studs not to exceed 8 ft. 1 in.

6. **Steel Strap —** Min 4 in. wide formed from min. No. 20 MSG galv. Steel. Secured perpendicular to the studs at the centerline of the span using one 3/8 in. long pan-head steel screw. Strips to overlap one full stud bay at splice locations. As an alternate to the steel strap, C-Channels (Item 4) may be substituted and installed in the same manner as the steel straps. If a continuous piece is not used, abut channels on each side of the centerline of the span and overlap one full stud bay.

6A. **Framing Members* —** As an alternate to items 3, 4, 5, and 6 - Main runners, cross tees, cross channels and wall angle as listed below:
a. **Main Runners —** Nom 10 or 12 ft long , 15/16 in. or 1-1/2 in. wide face, spaced 4 ft OC. Main runners suspended by min 12 SWG galv steel hanger wires spaced 24 in. OC, twist tied to supporting structure.

b. **Cross Tees —** Nom 4 ft long, 1-1/2 in. wide face, installed perpendicular to the main runners, spaced 16 in. OC. The cross tees or cross channels may be riveted or screw attached to the wall angle or channel to facilitate the ceiling installation.

c. **Cross Channels —** Nom 4 ft long, installed perpendicular to main runners, spaced 16 in. OC.

d. **Wall Angle or Channel —** — Painted or galv steel angle with 1 in. legs or channel with 1 in. legs, 1-9/16 in. deep attached to walls at perimeter of ceiling with fasteners 16 in. OC. To support steel framing member ends and for screw-attachment of the gypsum panel.
ARMSTRONG WORLD INDUSTRIES INC — Type DFR-8000.

7. **Gypsum Board* —** 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 Members* and perimeter supports with 1-5/8 in. long Type S steel screws spaced max. 16 in. OC. Middle layer edge and end joints staggered a min. 16 in. from base layer joints. Face layer secured to the studs or Framing Members* and perimeter supports with 2-1/4 in. long Type S steel screws 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, FSW-6, FSW-C, eXP-C

8. **Joint Tape and Compound —** Not Shown — (Optional, Not Required On Joints or Screw Heads) — Vinyl, dry or premixed joint compound, applied in two coats to joints and screw heads: paper tape, nom. 2 in. wide, embedded in first layer of compound over all joints.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2024-06-13

Design No. U905

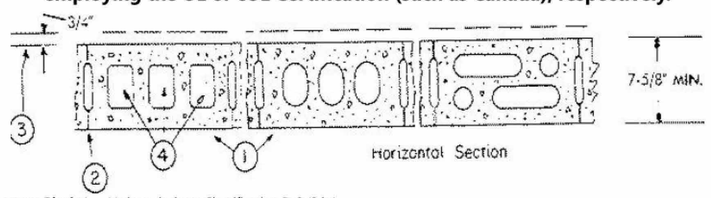
November 09, 2020

Bearing Wall Rating — 2 HR.

Nonbearing Wall Rating — 2 HR

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



1. **Concrete Blocks* —** Various designs. Classification D-2 (2 hr).
See **Concrete Blocks** category for list of eligible manufacturers.

2. **Mortar —** Blocks laid in full bed of mortar, nom. 3/8 in. thick, of not less than 2-1/4 and not more than 3-1/2 parts of clean sharp sand to 1 part Portland cement (proportioned by volume) and not more than 50 percent hydrated lime (by cement volume). Vertical joints staggered.

3. **Portland Cement Stucco or Gypsum Plaster —** Add 1/2 hr to classification if used. Where combustible members are framed in wall, plaster or stucco must be applied on the face opposite framing to achieve a max. Classification of 1-1/2 hr. Attached to concrete blocks (Item 1).

4. **Loose Masonry Fill —** If all core spaces are filled with loose dry expanded slag, expanded clay or shale (Rotary Kiln Process), water repellant vermiculite masonry fill insulation, or silicone treated perlite loose fill insulation add 2 hr to classification.

5. **Foamed Plastic* —** (Optional-Not Shown) — 1-1/2 in. thick max, 4 ft wide sheathing attached to concrete blocks (Item 1).
ATLAS ROOFING CORP — "EnergyShield Pro Wall Insulation", "EnergyShield Pro 2 Wall Insulation", EnergyShield CGF Pro and EnergyShield Ply Pro

CARLISLE COATINGS & WATERPROOFING INC — Type R2+ SHEATHE

DUPONT DE NEMOURS, INC. — Types Thermax Sheathing, Thermax Light Duty Insulation, Thermax Heavy Duty Insulation, Thermax Metal Building Board, Thermax White Finish Insulation, Thermax ci Exterior Insulation, Thermax XARMOR ci Exterior Insulation, Thermax IH Insulation, Thermax Plus Liner Panel, Thermax Heavy Duty Plus (HDP), TUFF-R™ ci Insulation, Thermax Butler Stylwall Insulation Board and Thermax Morton Heavy Duty Insulation Board

FIRESTONE BUILDING PRODUCTS CO L L C — "Enverge™ CI Foil Exterior Wall Insulation" and "Enverge™ CI Glass Exterior Wall Insulation"

HUNTER PANELS, A DIVISION OF CARLISLE CONSTRUCTION MATERIALS, LLC — Types "Xci-Class A", "Xci Foil (Class A)", "Xci 286"

RMAX, A BUSINESS UNIT OF SIKA CORPORATION — Types "TSX-8500", "ECOMAXci FR", "TSX-8510", "ECOMAX xi FR White", "ECOMAXci", "ECOMAXci FR Air Barrier", "Thermasheath-XP", "Thermasheath", "Durasheath", "Thermasheath-3", "Durasheath-3".

JOHNS MANVILLE — Type "AP Foil-Faced Foam Sheathing"

5A. **Building Units* —** As an alternate to Items 5, min. 1-in thick polyisocyanurate composite foamed plastic insulation boards, nom. 48 by 48 or 96 in.
HUNTER PANELS, A DIVISION OF CARLISLE CONSTRUCTION MATERIALS, LLC — "Xci NB", "Xci Ply"

RMAX, A BUSINESS UNIT OF SIKA CORPORATION — "Thermasheath-SI", "ECOBASEci", "ThermaBase-CI", "ECOMAXci FR Ply", "ECOMAXci Ply".

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2020-11-09

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LEE'S SUMMIT JOINT OPERATIONS FACILITY
2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

FINAL DEVELOPMENT PLAN

REVISION DATES:
20 ASI 012 6/20/2025

PROFESSIONAL SEAL

G-311

ISSUE DATE: OCTOBER 16, 2024
HOEFER WELKER #: 138191

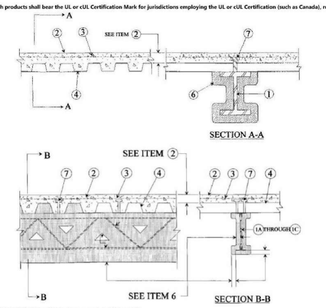
UL LISTINGS

Design No. D902

November 2, 2021

Restrained Assembly Ratings — 1, 1-1/2, 2 and 3 Hr.
Unrestrained Assembly Ratings — 0, 1, 1-1/2, 2 or 3 Hr. (See Items 4 & 6)
Unrestrained Beam Ratings — 1, 1-1/2, 2 and 3 Hr.
This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide XKUV or XKDV7.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



1. **Beam —** W8X28, W8x24, W6x32 or W6x9, min size, see Items 6 through 6F.

1A. **Steel Joists —** (Not Shown) — As an alternate to Item 1 — Composite or non-composite min 8¼" or erin depth and weight shall be 8 in. and 4.9 lb/ft respectively. May be uncoated or provided with a shop coat of paint. Designed per S.J.I. specifications for a max design stress of 30, 000 psi (30 ksi). Welded or bolted to end supports. The top chords shall consist of two angles measuring 1-1/4 by 1-1/4 by 0.127 in. thick. Bottom chords shall consist of two round bars measuring 0.566 in. in diam. or two angles measuring 1 by 1 by 0.125 in. thick. Bearing plates shall consist of two angles measuring 1-1/2 by 2 by 0.188 in. thick and 5-11/16 in. long. Web members shall consist of 0.565 in. diam bars.

1B. **Steel Joists —** (Not Shown) — As an alternate to Item 1 — Composite or non-composite min 12K5 or min depth and weight shall be 12 in. and 7.1 lb/ft respectively. May be uncoated or provided with a shop coat of paint. Designed per S.J.I. specifications for a max design stress of 30, 000 psi (30 ksi). Welded or bolted to end supports. Top chords shall consist of two angles measuring 1-1/2 by 1-1/2 by 0.156 in. thick. Bottom chord shall consist of two round bars measuring 0.875 in. in diam. or two angles measuring 1 by 1 by 0.125 in. thick. Bearing plates shall consist of two angles measuring 2 by 2 by 0.192 in. thick and shall be min 4-15/16 in. long. The second web member at each end shall consist of 0.654 in. diam round bar. All remaining web members, including the end web members, shall consist of 0.774 in. diam round bars. Bridging per S.J.I. specifications is required when non composite joists are used.

1C. **Steel Joists —** (Not Shown) — As an alternate to Item 1 — Composite or non-composite min 12K5 or min depth and weight shall be 12 in. and 7.1 lb/ft respectively. May be uncoated or provided with a shop coat of paint. Designed per S.J.I. specifications for a max design stress of 30, 000 psi (30 ksi). Welded or bolted to end supports. Top chords shall consist of two angles measuring 1-1/2 by 1-1/2 by 0.156 in. thick. Bottom chord shall consist of two round bars measuring 0.875 in. in diam. or two nangles measuring 1 by 1 by 0.125 in. thick. The second web member at each end shall consist of 0.654 in. diam round bar. All remaining web members, including the end web members, shall consist of 0.774 in. diam round bars. Bridging per S.J.I. specifications is required when non-composite joists are used.
Note: Additional beams or joists from the N series designs may be substituted for the listed beam item 1) or joist (item 1A) respectively. When joists are substituted, the restrained rating of the joist must be equal to or greater than the restrained rating of the assembly. Additional beam and joist substitution requirements are in the front of the Fire Resistance Directory - III. FLOOR-CEILINGS AND ROOF-CEILING, item 7. Steel Joist or W. BEAMS.

2. **Normal Weight or Light Weight Concrete —** Normal weight concrete, carbonate or siliceous aggregate, 3500 psi compressive strength, vibrated. Light weight concrete, expanded shale or slate aggregate by rotary-klin method or expanded clay aggregate by rotary-klin or sintered-grate method, or pelletized expanded blast furnace slag aggregate, 3000 psi compressive strength, vibrated, 4 to 7 per cent entrained air.

Restrained Assembly Rating Hr	Concrete (Type)	Concrete Unit Weight pcf	Concrete Thkns In.
1	Normal Weight	147-153	3-1/2
1-1/2	Normal Weight	147-153	4
2	Normal Weight	147-153	4-1/2
3	Normal Weight	147-153	5-1/4
1	Light Weight	107-113	2-1/2
1	Light Weight	107-120	2-5/8
1-1/2	Light Weight	107-113	3
2	Light Weight	107-113	3-1/4
2	Light Weight	107-116	3-1/4*
2	Light Weight	114-120	3-1/2
3	Light Weight	107-113	4-3/16
3	Light Weight	114-120	4-7/16

* With 2 and 3 in. deep steel floor units only.

3. **Welded Wire Fabric —** 6x6 - W1.4xW1.4.

3A. **Negative Reinforcement —** (Optional, Not Shown) Used in lieu of Item 3 and with Items 3B or 3C. For floor spans with concrete cast continuous over the supporting beams. Deformed bars designed to resist the support moments of the concrete slab in accordance with the latest ACI Building Code Specifications.

3B. **Fiber Reinforcement ** —** (Not Shown) — Required with Item 3A. Engineered synthetic fibers added to concrete mix to control shrinkage cracks in concrete. Fibers added to concrete mix at rate of 1 lb of fiber for each cubic yard of concrete.
PROPEX OPERATING COMPANY L L C — Fibermesh 150 and Fibermesh 300.

3C. **Fiber Reinforcement ** —** (Not Shown) — Required with Item 3A. Any fiber reinforcement bearing the UL Classification Marking for Fire Resistance, Classified for use in lieu of welded wire fabric.
See **Fiber Reinforcement** (CBX2) Category for names of manufacturers.

4. **Steel Floor and Form Units* —** Composite or non-composite, 1-1/2, 1-5/8, 2 or 3 in. deep galv units or 4-1/2 in. deep non-composite galv units. Fluted units may be phos/oxd. Min gauges are 22 MSG for fluted and 20/20 for cellular and partial cellular units. The following combinations of units may be used:
(1) All 24, 26, 28 or 36 in. wide cellular or partial cellular.

(2) All fluted.

(3) One or two 3 in. deep, 12 in. wide, 18/18 MSG min cellular alternating with 3 in. deep fluted or other cellular.

(4) Any listed of fluted and 24, 26, 28 or 36 in. wide cellular or partial cellular.

(5) Corrugated, nom 1-5/16 or 2 in. deep, 39 in. wide, 24 MSG min galv units with shear wires factory welded to deck corrugations. Welded to supports 12 in. OC through welding washers. For shear wire spacing of 8 in. or less the steel deck stress shall not exceed 20 KSI. For shear wire spacing greater than 8 in. OC but less than or equal to 12 in. OC steel deck stress shall not exceed 12 KSI.

ASC STEEL DECK, DIV OF ASC PROFILES L L C — 32 in. wide Types NH-32, NMN-32, NHP-32; 36 in. wide, Types BHI-36, BHN-36, BHN-35-1/4, BHF-36, BHP-36A, 2MM-36, 2MNS-36, 2MHP-36, 2MNP-36A, 3MXH-36, 3MHP-36, 3MWP-36A, 3MIN-36, 3WHP-36A, 3W-36, 3WF-36, 3WP-36, 3GD3P-36, DG3WP-36. All units may be galvanized or Prime Shield. Non-cellular decks may be vented designated with a "V" suffix to the product name. Cellular deck top and bottom sections may be riveted together (designated with "PC") vs. arc spot welded, "-P."

CANAM GROUP INC — 24 in. wide Type P-2432 composite or 36 in. wide Type P-3623, P-3606, P-3615 and 24 in wide Type P-2432 composite, Type P-3606 and P-3615 non-composite; 24 or 36 in. wide Type 3 in. LOK-Floor; 36 in. wide Types 1.5B, 1.5BI, 1.5BL and 1.5BL.

CANAM STEEL CORP — 24 in. wide Type P-2432 composite or 36 in. wide Type P-3623, P-3606, P-3615 and 24 in wide Type P-2432 composite, Type P-3606 and P-3615 non composite

CANAM STEEL CORP — 12 or 24 in. wide, Types 1-1/2, 2, or 3 in. LOK-Floor and LOK-Floor Cell; 36 in. wide, Types 2 or 3 in. LOK-Floor and LOK-Floor Cell; 24, 30 or 36 in. wide, Type 1-1/2 in. B-LOK and B-LOK Cell; 24 in. wide, Types N-LOK and N-LOK Cell

CENTRIA, A DIVISION OF NCI GROUP, INC — QL Types, 24 in. wide, 3 or 3 inverted, UKX, 21 or 21 inverted, 2 in. 99, 121, AKX, NKX. TKX 24 or 30 in. wide GKX, GK9X, GKX-A, 36 in. wide 2 in. 99, AKX, 9KXX; 12 in. wide NKT, TKC; 12 in. wide non-composite Sec 12. Side joints of 99, 121, TKC, TKX, 9KXX may be welded together 60 in. OC. Side joints of 99, AKX, 9KXX, GKX, GKX-A, TKX may be fastened together with min 1 in. long No. 10x14 self-drilling, self-tapping steel screws 36 in. OC.

CHEA TEH CONSTRUCTION MATERIAL CO LTD — 24 or 36 in. wide Mac-Lok 3 and Jr. wide CFD-3

DECK WEST INC — 36 in. wide Type B-DW, Inverted B-DW, BA-DW, Inverted BA-DW, 2-DW or 3-DW. Side joints of Type 2-DW and 3-DW may be fastened together with min 1 in. long No. 12 x 14 self-drilling, self-tapping steel screws 36 in. OC

DESIGN ASSISTANCE CONSTRUCTION SYSTEMS INC — 36 in. wide Type DACS1.5CD, or 24 in. wide Type DACS2.0CD, or DACS3.0CD

EPIC METALS CORP — 24 in. wide Types EC150, EC150 Inverted, EC300, EC366, ECP150, ECP300, ECP396, ECA; 30 in. wide Types BCB150, BCB150 36 in. wide Types EC156, EC266, ECP266

KAM INDUSTRIES LTD, DBA CORDECK — 24 in. wide, Types 2 or 3 in. WDR

MARLYN STEEL DECKS INC — Type 1.5 CF, 2.0 CF or 3.0 CF

NEW MILLENNIUM BUILDING SYSTEMS L L C — 24 or 36 in. wide Types 2.0CD, 3.0CD, 2.0CTD, 3.0CTD, 3.0CFDES; 24, 30 or 36 in. wide Types 1.5CD, 1.5CDF, 1.5CFD. Fluted units may be phos/painted or galvanized.

ROOF DECK INC — 36 in. wide Types LOK-1-1/2, LOK-1-5/8; 24 in. wide Types LOK-2, LOK-3

STEEL MASTERS INTERNATIONAL DEPENDABLE STEEL — 36 in. wide Types 2WH 36, 3WH-36. Units may be phos/painted or galvanized.

VALLEY JOIST-DECK — 24 or 36 in. wide Types WVC 1-1/2 or WVC 2

VERCO DECKING INC - A NUCOR CO — FORMLOK® deck types PLB, B, BR, PLN3, N3, PLN, N, FLW2, W2, PLW3, W3. Units are min 24 in. wide and may be galvanized, phos/oxid., or mill finish. Units may be cellular or acoustical cellular, with the suffix "CD" or "CD-AC" added to the product name, respectively. All non-cellular deck may be vented or non-vented. 12 in. wide PLW2, W2, PLW3 or W3 units may be blended with 24 or 36 in. wide PLW2, W2, PLW3 or W3 units, respectively; or Types PLN3-CD, N3-CD, PLN3, N3.

VULCRAFT, DIV OF NUCOR CORP — 24, 30 or 36 in. wide Types 1.5VL, 1.5VLI, 1.5PLVLI, 1.5VLP, 1.5 VLR, 1.5PLVLP; 24 or 36 in. wide Types 1.5VLPA, 1.5PLVLPA, 2VLI, 2.0PLVLI, 2VLI, 3VLI, 3.0PLVLI, 3VLI, 2VLP, 2.0PLVLP, 3VLP, 3.0PLVLP, 2VLPA, 2.0PLVLPA, 3VLPA, 3.0PLVLPA. Types 1.5VL, 1.5VLI, 1.5PLVLI, 1.5 VLR, 1.5VLPA, 1.5PLVLPA, 2VLI, 2.0PLVLI, 2VLI, 3VLI, 3.0PLVLI, 3VLI units may be phos/oild. 24 or 36 in. wide Types 2VLI, 3VLI units + + may be used for max 2 hr Restrained Assembly Rating. 36 in. wide Types 1.5 SB. 1.5 SBI, 24 or 36 in wide Types 2.0 SB, 3.0 SB, 36 in. wide Type High Strength 1.5 SBI. 36 in. wide Type High Strength 1.5 SBN Units may be phos/oxd

Spacing of welds attaching units to supports shall be 12 in. OC for 32, 24, 36 in. wide units, four welds per sheet for 30 in. wide units; 6 in. OC for 18 in. wide and Sec. 32 units. Unless specified otherwise for specific units types, adjacent units button-punched or welded together 36 in. OC along side joints. For **3 Hr Rating**, units with overlapping type side joints welded together 24 in. OC max.

When a superimposed load of 250 PSF is desired the spacing of welds or button-punches shall not exceed 24 in. OC along side joints.

+ + Side joints of Types 2VLI or 3VLI units may be fastened together with No. 8-3/4 in. long self-drilling 5ek screws driven diagonally from the top side through the joint of the units at 36 in. O. C. max.

Alternate Construction — Non-composite units of the same type listed above may be used provided allowable loading is calculated on the basis of non-composite design.

The Unrestrained Assembly Rating is equal to the Unrestrained Beam Rating (See Item 6) for a max 3 Hr and is limited to the following units and limitations:

(a) 1-1/2, 2 and 3 in. deep, 24 or 36 in. wide, 22 MSG or thicker fluted with clear spans not more than 7 ft, 8 in.

(b) 1-1/2, 2 and 3 in. deep, 24 or 36 in. wide, 20 MSG or thicker fluted with clear spans not more than 8 ft, 8 in.

(c) 1-1/2 and 2 in. deep, 24 or 36 in. wide, 16 MSG or thicker fluted and 18/18 MSG or thicker cellular with clear spans not more than 9 ft, 11 in.

(d) 3 in. deep, 36 in. wide, 18 MSG or thicker fluted and 24 in. wide, 20/18 MSG or thicker cellular with clear spans not more than 13 ft, 2 in.
For assemblies utilizing 3-1/4 in. light weight concrete topping with a max Restrained Assembly Rating of 2 Hr, the Unrestrained Assembly Rating is equal to the Unrestrained Beam Rating (See Item 6) and is limited to the following floor units and spans:

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(a) 1-1/2, 2 and 3 in. deep, 24 or 36 in. wide, 22 MSG fluted and 20/20 MSG cellular with clear spans not more than 9 ft, 6 in.

(b) 2 and 3 in. deep, 24 or 36 in. wide, 20 MSG fluted and 20/20 MSG cellular with clear spans not more than 10 ft, 0 in.

(c) 3 in. deep, 24 in. wide, 20 MSG fluted and 20/20 MSG cellular with clear spans not more than 13 ft, 2 in.

4A. **Steel Floor and Form Units** —** As an alternate to Item 4. Nom 8 or 9 in. deep composite, galv steel units, Min thickness 0.0375 inch (20 MSG). Side joints of adjacent units fully overlapping, fastened together by using 1-1/4 in. long self-drilling, self-tapping steel screws driven through Shear-Bond Clips (not shown) at 13-3/4 in. OC. Steel end closures flashings (not shown) made of min 0.026 inch thick (16 MSG) galv steel, fixed to the steel work before decking is placed.
In addition to the Steel Floor and Form Units, the following components are required:

(a) Welded Wire Fabric — 6 X 6 - Min wire thickness W2.9 X W2.9 slab reinforcement. As an alternate, max 4 bars spaced 12-in. OC in both directions shall be used. When re-bars are used, the concrete slab thickness shall be increased a minimum 5/16 in.

(b) Rib Reinforcement —Min. #4 rebar. Min concrete cover below the steel reinforcement shall be 1-9/16 in. Reinforcement support chairs spaced at max 41-1/2 inches OC.

The flute areas above the beam/joist are to be : (1) filled with concrete, (2) filled with Spray-Applied Fire Resistive Material or (3) the beam/joist coated with Spray-Applied Fire Resistive Material installed as described in the design to thickness required when all cellular Steel Floor and Form Units are used.

See Design No. D989 for a typical illustration of the components. Consult the deck manufacturer for comprehensive load tables and design parameters referencing UL Design D989.

BAILEY METAL PRODUCTS LTD — Type COMSLAB™ 210 and COMSLAB™ 225, Steel End Closure Flashing

5. **Joist Cover —** (Use with fluted units optional — Not Shown) — 2 in. wide cloth adhesive tape applied following the contour of the units.

6. **Spray-Applied Fire Resistive Materials* —** Applied by spraying with water to the final thicknesses shown below. When fluted steel deck is used and the fire protection thickness selected is based on all fluted deck, the area between the steel deck and the top flange of the steel beam shall be filled. When fluted steel deck is used and the steel beam is sprayed with the thicknesses applicable to cellular or blended units, the area between the steel deck and the top flange of the steel beam shall be plugged. Beam surfaces must be clean and free of dirt, loose scale, and oil. Min average density of 13 pcf with min. individual density of 11 pcf for Types II, II HS, or DC/P. Min average and min individual densities of 22 pcf and 19 pcf, respectively, for type HP. For method of density determination, refer to Design Information Section. The thickness of the Spray-Applied Fire Resistive Materials on the Structural Members (Item 1, 1A, or 1B) shall be as follows:

Restrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Concrete Type	Min Thkns Spray Applied Resistive Mtl, In: W6x9 When Deck Is All Fluted	W6x9 When Deck Is Blend or All Cellular	W8x28 When Deck Is All Fluted	W8x28 When Deck Is Blend or All Cellular	Joist Item 1A When Deck Is Fluted Cellular or Blend	Joist Item 1B When Deck Is Fluted Cellular or Blend
1	1	NW	9/16,15/16*	9/16, 1*	3/8,5/8*	3/8,11/16*	1+	—
1-1/2	1	NW	9/16,15/16*	9/16, 1*	3/8,5/8*	3/8,11/16*	1-9/16	—
2	1	NW	9/16,15/16*	9/16, 1*	3/8,5/8*	3/8,11/16*	2-1/16	—
2	2	NW	1-1/8	1-3/16	3/4	13/16	2-1/16	—
2	3	NW	1-3/4	1-7/8	1-3/16	1-5/16	—	3-1/4
3	1-1/2	NW	3/4	3/4	1/2	1/2	—	3-1/4
3	2	NW	1-1/8	1-3/16	3/4	13/16	—	3-1/4
3	3	NW	1-3/4	1-7/8	1-3/16	1-5/16	—	3-1/4
1	1	LW	9/16,15/16*	5/8, 1*	3/8,5/8*	7/16,11/16*	1-1/8+	—
1-1/2	1	LW	9/16,15/16*	5/8, 1*	3/8,5/8*	7/16,11/16*	1-3/4	—
2	1	LW	9/16,15/16*	5/8, 1*	3/8,5/8*	7/16,11/16*	2-1/4	—
2	2	LW	1-7/16	1-7/16	1	1	2-1/4	—
2	3	LW	2-1/4	2-5/16	1-9/16	1-5/8	—	3-1/4
3	1-1/2	LW	15/16	1	5/8	11/16	—	3-1/4
3	2	LW	1-7/16	1-7/16	1	1	—	3-1/4
3	3	LW	2-1/4	2-5/16	1-9/16	1-5/8	—	3-1/4

* This thickness applies when optional Item 12 or 13 are used over 3-1/4 in. light weight concrete topping.
** This thickness applies when optional Item 12 or 13 are used over 3-1/4 in. light weight concrete topping.
+ When bottom chords consist of 1 by 1 by 0.125 in. thick steel angles, the thickness of spray-applied fire resistive material shall be increased by 1/4 in. on the bottom chord only.

ISOLATEK INTERNATIONAL — Type D-CJF, HP, II or Type II HS. Investigated for exterior use. Type EBS or Type X adhesive/surface sealer optional.

6A. **Spray-Applied Fire Resistive Materials* —** Alternate to Item 6. See table below for appropriate thicknesses. When fluted steel deck is used and the fire protection thickness selected is based on all fluted deck, the area between the steel deck and the top flange of the steel beam shall be filled. When fluted steel deck is used and the steel beam is sprayed with the thicknesses applicable to cellular or blended units, the area between the steel deck and the top flange of the steel beam shall be plugged. Prepared by mixing with water and spray-applied in one or more coats to beam surfaces which must be clean and free of dirt, loose scale and oil. Min average density of 17.5 pcf with min individual value of 17.0 pcf. For method of density determination, see Design Information Section, Sprayed Material.

Restrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Min Thkns Applied Resistive Mtl, In: W6x9 When Deck Is All Fluted	W6x9 When Deck Is Blend or All Cellular	W8x28 When Deck Is All Fluted	W8x28 When Deck Is Blend or All Cellular
1, 1-1/2, 2	1	1/2, 5/8*	1/2, 5/8*	5/16, 7/16*	5/16, 7/16*
2	2	1	1-1/16	11/16	11/16
2	3	1-6/16	1-7/8	1-1/16	1-5/16
3	1-1/2	3/4	13/16	1/2	9/16
3	2	1	1-1/16	11/16	11/16
3	3	1-6/16	1-7/8	1-1/16	1-5/16

* This thickness applies when optional Item 12, 13 are used over 3-1/4 in. light weight concrete topping.

ISOLATEK INTERNATIONAL — Type 280

6B. **Spray-Applied Fire Resistive Materials* —** Alternate to Items 6 and 6A. Prepared by mixing with water. Spray-applied in one or more coats to beam surfaces to a min final thickness as shown in the tables below. Beam surfaces must be clean and free of dirt, loose scale and oil. When fluted steel deck is used and the fire protection thickness selected is based on all fluted deck, the area between the steel deck and the top flange of the steel beam shall be filled. When fluted steel deck is used and the steel beam is sprayed with the thicknesses applicable to cellular or blended units, the area between the steel deck and the top flange of the steel beam shall be plugged. Min average and min individual density of 15 pcf and 14 pcf respectively for Types 300, 300AC, 300 ES, 300 HS, 300 N, 300D, 300DES, and 5A. For Types 400, 400 AC and 400 ES min average and min individual density of 22 pcf and 19 pcf respectively. Min avg density of 44 pcf with min ind value of 40 pcf for Types M-II and 5G. Min avg density of 47 pcf, with min individual value of 43 pcf for Type M-II/F. The thickness of the material on the Structural Members (Item 1 and 1C) shall be as follows:

Restrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Min Thkns Spray Applied Resistive Mtl, In: W6x9 When Deck Is All Fluted	W6x9 When Deck Is Blend or All Cellular	W8x28 When Deck Is All Fluted	W8x28 When Deck Is Blend or All Cellular	Joist (Item 1C) When Deck Is Fluted Cellular or Blend
1	1	1/2 , 5/8*	1/2 , 5/8*	5/16, 7/16*	5/16, 7/16*	9/16+
1-1/2	1	1/2 , 5/8*	1/2 , 5/8*	5/16, 7/16*	5/16, 7/16*	1
2	1	1/2 , 5/8*	1/2 , 5/8*	5/16, 7/16*	5/16, 7/16*	1-3/8
2	2	1	1-3/16	11/16	13/16	1-3/8
2	3	1-9/16	1-7/8	1-1/16	1-5/16	2-1/4
3	1-1/2	3/4	13/16	1/2	9/16	2-1/4
3	2	1	1-3/16	11/16	13/16	2-1/4
3	3	1-9/16	1-7/8	1-1/16	1-5/16	2-1/4

* This thickness applies when optional Item 12 or 13 are used over 3-1/4 in. light weight concrete topping.
+ When bottom chords consist of 1 in. by 1 in. by 0.125 in. thick steel angles, the thickness of spray-applied fire resistive material shall be increased by 1/4 in. on the bottom chord only.

BERLIN CO LTD — Types 300, 300HS, 300N, 5B, or 400 Type M-II, 5G and M-II/F

GREENTECH ASIA PACIFIC SDN BDH — Types 100, 100HS, 100HS, or 400; Type M-II, or M-II/F

GREENTECH THERMAL INSULATION PRODUCTS MFG CO L L C — Types 300, 300AC, 400, or 400AC; Type M-II, TG and M-II/F

ISOLATEK INTERNATIONAL — Types 300, 300AC 300ES, 300HS, 300N, 5B, 400, 400AC, 400ES, 3000 or 3000ES; Type M-II, TG and M-II/F

NEWKEM PRODUCTS CORP — Types 300, 300ES, 300N, 400, or 5B; Type M-II, TG and M-II/F

6C. **Intumescent Fire-resistive Materials* —** As an alternate to Items 6 through 6B. For use with fluted steel floor and form units only. Min. size WBx24 or W6x12 beams shall be primed with a phenolic modified alkyd primer, a metal alkyl primer, an acrylic primer or an epoxy primer at a nominal thickness of 2 mil. Coating spray or brush applied in accordance with the manufacturer's instructions at the min dry thickness as shown in the table below. The thickness shown below includes the primer thickness. Flutes above beam to be completely filled with minimum 6 pcf mineral wool insulation, or the top flange of the beam to be protected with the same thickness of coating as required on the beam.

Minimum Dry Thickness mils	Minimum Dry Thickness mm	Beam Size	Unrestrained Beam Rating Hr	Restrained Assembly Rating Hr
53	1.34	WBx24	1	2
95	2.41	WBx24	1-1/2	3
73	1.83	W6x12	1	2
123	3.10	W6x12	1-1/2	3

BERLIN CO LTD — Type W9 3. Investigated for Interior General Purpose. Type W8 4. Investigated for Interior General Purpose. Type W9A4. Investigated for Exterior Use with top coat as described in Item 6E

GREENTECH ASIA PACIFIC SDN BDH — Type W8 3. Investigated for Interior General Purpose. Type W9 4. Investigated for Interior General Purpose. Type W9A4. Investigated for Exterior Use with top coat as described in Item 6E

GREENTECH THERMAL INSULATION PRODUCTS MFG CO L L C — Type W8 3. Investigated for Interior General Purpose. Type W9 4. Investigated for Interior General Purpose. Type W9A4. Investigated for Exterior Use with top coat as described in Item 6E

ISOLATEK INTERNATIONAL — Type Spray Film-W8 3 and Type W8 3. Investigated for Interior General Purpose. Type SprayFilm-W9 4 and Type W9 4. Investigated for Interior General Purpose. Type SprayFilm-W9 4 and Type W9A4. Investigated for Exterior Use with top coat as described in Item 6E

NEWKEM PRODUCTS CORP — Type W8 3. Investigated for Interior General Purpose. Type W9 4. Investigated for Interior General Purpose. Type W9A4. Investigated for Exterior Use with top coat as described in Item 6E

6D. **Intumescent Fire-resistive Materials* —** As an alternate to Items 6 through 6C. For use with normal weight concrete. Min. size WBx28 beams shall be primed with a phenolic modified alkyd primer a metal alkyl primer, an acrylic primer or an epoxy primer at a nominal thickness of 3 mil. Coating spray or brush applied in accordance with the manufacturer's instructions at the min dry thickness as shown in the table below. The thickness shown below includes the primer thickness. The top surface of the top flange where fluted units are used must be protected with the coating material at the same min dry thickness at a min distance of 1 in. (25 mm) inward from the flange tip on both sides of the beam. Mineral wool insulation optional above top surface of the beam.

Minimum Dry Thickness mils	Minimum Dry Thickness mm	Steel Floor Units	Unrestrained Beam Rating Hr	Restrained Assembly Rating Hr
103	2.62	Fluted or Cellular	1-1/2	2
179	4.55	Cellular	1-1/2	3
341	8.67	Cellular	2	3

BERLIN CO LTD — Type W9 3. Investigated for Interior General Purpose. Type W8 4. Investigated for Interior General Purpose. Type W9 4. Investigated for Exterior Use with top coat as described in Item 6E

GREENTECH ASIA PACIFIC SDN BDH — Type W8 3. Investigated for Interior General Purpose. Type W9 4. Investigated for Interior General Purpose. Type W9 4. Investigated for Exterior Use with top coat as described in Item 6E

GREENTECH THERMAL INSULATION PRODUCTS MFG CO L L C — Type W8 3. Investigated for Interior General Purpose. Type W9 4. Investigated for Interior General Purpose. Type W9 4. Investigated for Exterior Use with top coat as described in Item 6E

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ISOLATEK INTERNATIONAL — Type SprayFilm-W8 3 and Type W8 3. Investigated for Interior General Purpose. Type SprayFilm-W9 4 and Type W9 4. Investigated for Interior General Purpose. Type SprayFilm-W9 4 and Type W9A 4. Investigated for Exterior Use with top coat as described in Item 6E

NEWKEM PRODUCTS CORP — Type W8 3. Investigated for Interior General Purpose. Type W9 4. Investigated for Interior General Purpose. Type W9A4. Investigated for Exterior Use with top coat as described in Item 6E

6E. **Top Coat —** (Not Shown) — Type TNEMEC 140 required for Exterior Use with Type SprayFilm WB3, applied at a minimum dry thickness of 2 mils over the intumescent material.
See Classification information in the **Mastic and Intumescent Coating** (CCMZ) category, Isolatek International, for mixing requirements.

6F. **Intumescent Fire-resistive Materials* —** As an alternate to Items 6 through 6D. For use with normal weight or light weight concrete and fluted steel floor and form units only. Min size WBx24 beams shall be primed with a phenolic modified alkyd primer at a thickness of 2 mils or a epoxy primer at a nominal thickness of 1 mil. Coating spray or brush applied in accordance with the manufacturer's instructions at the thicknesses shown below. The thickness includes the thickness of primer. The top surface of the top flange where fluted units are used must be protected with the coating material at the same min dry thickness or filled with nominal 4 pcf mineral wool.

Minimum Dry Thickness mils	Minimum Dry Thickness mm	Beam Size	Unrestrained Beam Rating Hr	Restrained Assembly Rating Hr
35	0.88	WBx24	1	2
66	1.68	WBx24	1-1/2	3

GREENTECH ASIA PACIFIC SDN BDH — Type WB-S. Investigated for Interior General Purpose. Investigated for Exterior Use with top coat as described in Item 6G.

GREENTECH THERMAL INSULATION PRODUCTS MFG CO L L C — Type WB-S. Investigated for Interior General Purpose. Investigated for Exterior Use with top coat as described in Item 6G.

ISOLATEK INTERNATIONAL — Type WB-S. Investigated for Interior General Purpose. Investigated for Exterior Use with top coat as described in Item 6G.

NEWKEM PRODUCTS CORP — Type WB S. Investigated for Interior Conditioned Space and Interior General Purpose. Investigated for Exterior Use with top coat as described in Item 6G.

6G. **Top Coat —** (Not Shown) — Type TNEMEC 140 required for Exterior Use with Type SprayFilm WB5, applied at a minimum dry thickness of 7 mils over the intumescent material.
See Classification information in the **Mastic and Intumescent Coating** (CCMZ) category, Isolatek International, for mixing requirements.

6H. **Sprayed Fiber Insulation* —** (Optional, Not Shown) — Spray applied fiber insulation, Classified for Surface Burning Characteristics (BNST), having a maximum applied density of 3.5 pcf, applied over Spray-Applied Fire Resistive Material (Item 6) on both steel floor and form units (Item 4) and supports (Item 1). Sprayed fiber insulation may be over Spray-Applied Fire Resistive Material (Item 6) according to the following tables:

Allowable Spray-Applied Fiber Insulation Thickness Over Beam

Installed SFRM Thickness (in.) on Beam	SFRM Density (pcf)						
	13	15	17.5	22	22 (Type HP)	44	47
3/8	6-3/4	4	4-11/16	5-7/8	8	8	8
7/16	6-1/2	3-3/4	4-3/8	5-1/2	8	8	8
1/2	6-1/4	3-1/2	4-1/16	5-1/8	8	8	8
9/16	6-1/16	3-3/16	3-3/4	4-11/16	8	8	8
5/8	5-13/16	2-15/16	3-7/16	4-5/16	8	8	8
11/16	5-9/16	2-11/16	3-1/8	3-15/16	8	8	8
3/4	5-5/16	2-7/16	2-13/16	3-9/16	8	8	8
13/16	5-1/8	2-1/8	2-1/2	3-1/8	8	8	8
7/8	4-7/16	1-5/16	1-15/16	1-15/16	7-7/16	6-5/16	6-11/16
1-1/16	4-3/16	1-1/16	1-1/4	1-9/16	7-1/16	5-1/2	5-7/8
1-3/16	3-11/16	9/16	5/8	13/16	6-5/16	3-15/16	4-3/16
1-5/16	3-1/4	0	0	0	5-1/2	2-3/8	2-1/2
1-9/16	2-5/16	0	0	0	3-15/16	0	0
1-15/8	2-1/16	0	0	0	3-9/16	0	0

Allowable Spray-Applied Fiber Insulation Thickness Over Joist

Installed SFRM Thickness (in.) on Joist	SFRM Density (pcf)					
	13	15	22	22 (Type HP)	44	47
9/16	5	5	5	5	5	5
13/16	5	5	5	5	5	5
1	5	5	5	5	5	5
1-3/8	5	4-13/16	5	5	5	5
1-1/4	5	4-5/16	5	5	5	5
1-3/8	5	3-3/4	5	5	5	5
1-9/16	5	2-15/16	4-5/16	5	5	5
1-3/4	5	2-1/8	3-1/8	5	5	5
2-1/16	5	13/16	1-3/16	5	5	5
2-1/4	5	0	0	5	5	5
3-1/4	0	0	0	0	0	0

INTERNATIONAL CELLULOSE CORP — Type K13, UR8-K, or Sonospray FC

6I. **Sprayed Fiber Insulation* —** (Optional, Not Shown) — Spray applied fiber insulation, Classified for Noncombustible Building Materials (BICW), having a maximum applied density of 3.5 pcf, applied over Spray-Applied Fire Resistive Material (Item 6) on both steel floor and form units (Item 4) and supports (Item 1). Sprayed Fiber insulation may be over Spray-Applied Fire Resistive Material (Item 6) according to the following tables:

Allowable Spray-Applied Fiber Insulation Thickness Over Beam

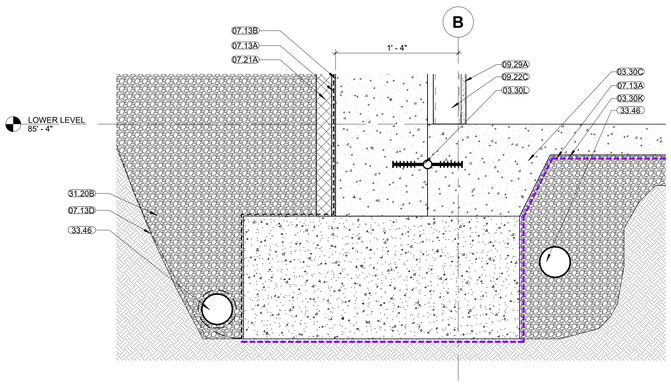
Installed SFRM Thickness (in.) on Beam	SFRM Density (pcf)						
	13	15	17.5	22	22 (Type HP)	44	47
5/16	5	5	5	5	5	5	5
3/8	5	5	5	5	5	5	5

ALTERNATE #1 DOOR SCHEDULE

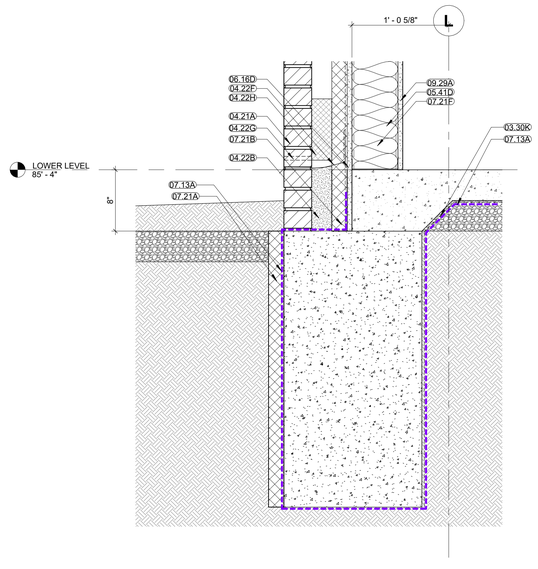
DOOR #	ROOM: NAME	WIDTH	HEIGHT	DOOR MATERIAL	DOOR TYPE	FRAME MATERIAL	FRAME TYPE	FIRE RATING	AAOS Project HW Set	HEAD	JAMB	REMARKS
020	WATER	3' - 0"	7' - 0"	HM	F	HM	F1		20.0	J12 / A-601	J10 / A-601	
021	ELEC.	3' - 0"	7' - 0"	HM	F	HM	F1		24.0	J12 / A-601	J10 / A-601	
022	MEDIA	3' - 0"	7' - 0"	WD	F	HM	F1		17.0	J12 / A-601	J10 / A-601	
023	COMM STOR.	3' - 0"	7' - 0"	WD	F	HM	F1		17.0	J12 / A-601	J10 / A-601	
039B	GENERAL STORAGE	3' - 0"	7' - 0"	HM	F	HM	F1		18.0	J12 / A-601	J10 / A-601	
039C	GENERAL STORAGE	3' - 0"	7' - 0"	HM	F	HM	F1		18.0	J12 / A-601	J10 / A-601	
040	ELEC.	3' - 0"	7' - 0"	HM	F	HM	F1		22.0	J12 / A-601	J10 / A-601	
042A	LOADING DOCK	3' - 0"	8' - 0"	HM	DF	HM	F2		25.0	J9 / A-601	J7 / A-601	
048	988	3' - 0"	7' - 0"	WD	F	HM	F1		27.0	J12 / A-601	J10 / A-601	
106	STORAGE	3' - 0"	7' - 0"	WD	F	HM	F1		17.0	J12 / A-601	J10 / A-601	
110	BC - PREV	3' - 0"	7' - 0"	WD	F	HM	F1		17.0	J12 / A-601	J10 / A-601	
111	AC - PREV	3' - 0"	7' - 0"	WD	F	HM	F1		17.0	J12 / A-601	J10 / A-601	
112	MEDICAL DIR.	3' - 0"	7' - 0"	WD	F	HM	F1		17.0	J12 / A-601	J10 / A-601	
113	AC - EMS	3' - 0"	7' - 0"	WD	F	HM	F1		17.0	J12 / A-601	J10 / A-601	
114	ADMIN DIV. CONF.	3' - 0"	7' - 0"	WD	F	HM	F1		17.0	J12 / A-601	J10 / A-601	
115	DC - ADMIN	3' - 0"	7' - 0"	WD	F	HM	F1		17.0	J12 / A-601	J10 / A-601	
116	OPEN OFFICE	3' - 0"	7' - 0"	WD	F	HM	F1		17.0	J12 / A-601	J10 / A-601	
121	CHIEF	3' - 0"	7' - 0"	WD	F	HM	F1		17.0	J12 / A-601	J10 / A-601	
124	PR-FUTURE	3' - 0"	7' - 0"	WD	F	HM	F1		17.0	J12 / A-601	J10 / A-601	
125	ADMIN MGR	3' - 0"	7' - 0"	WD	F	HM	F1		17.0	J12 / A-601	J10 / A-601	
126	BC - TRAIN-FUTURE	3' - 0"	7' - 0"	WD	F	HM	F1		17.0	J12 / A-601	J10 / A-601	
127	AC - TRAIN	3' - 0"	7' - 0"	WD	F	HM	F1		17.0	J12 / A-601	J10 / A-601	
128	OPP. DIV CONF	3' - 0"	7' - 0"	WD	F	HM	F1		17.0	J12 / A-601	J10 / A-601	
129	DC - OPP	3' - 0"	7' - 0"	WD	F	HM	F1		17.0	J12 / A-601	J10 / A-601	
134	ROOF	3' - 0"	7' - 0"	WD	F	HM	F1		19.0	J12 / A-601	J10 / A-601	
141	STORAGE	3' - 0"	7' - 0"	WD	F	HM	F1		17.0	J12 / A-601	J10 / A-601	
142	CONFERENCE	3' - 0"	7' - 0"	WD	V	HM	F1		17.0	J12 / A-601	J10 / A-601	
143	CONFERENCE	3' - 0"	7' - 0"	WD	V	HM	F1		17.0	J12 / A-601	J10 / A-601	
144	PLANNER	3' - 0"	7' - 0"	WD	V	HM	F1		17.0	J12 / A-601	J10 / A-601	
145	AC - EMERG MGMT	3' - 0"	7' - 0"	WD	V	HM	F1		17.0	J12 / A-601	J10 / A-601	
149	JAN	3' - 0"	7' - 0"	WD	F	HM	F1		22.0	J12 / A-601	J10 / A-601	
153	STORAGE	3' - 0"	7' - 0"	WD	F	HM	F1		20.0	J12 / A-601	J10 / A-601	
156	STOR.	3' - 0"	7' - 0"	WD	DF	HM	F1		26.0	J12 / A-601	J10 / A-601	
157	MECH.	3' - 0"	7' - 0"	HM	F	HM	F1		22.0	J12 / A-601	J10 / A-601	

ALTERNATES LEGEND

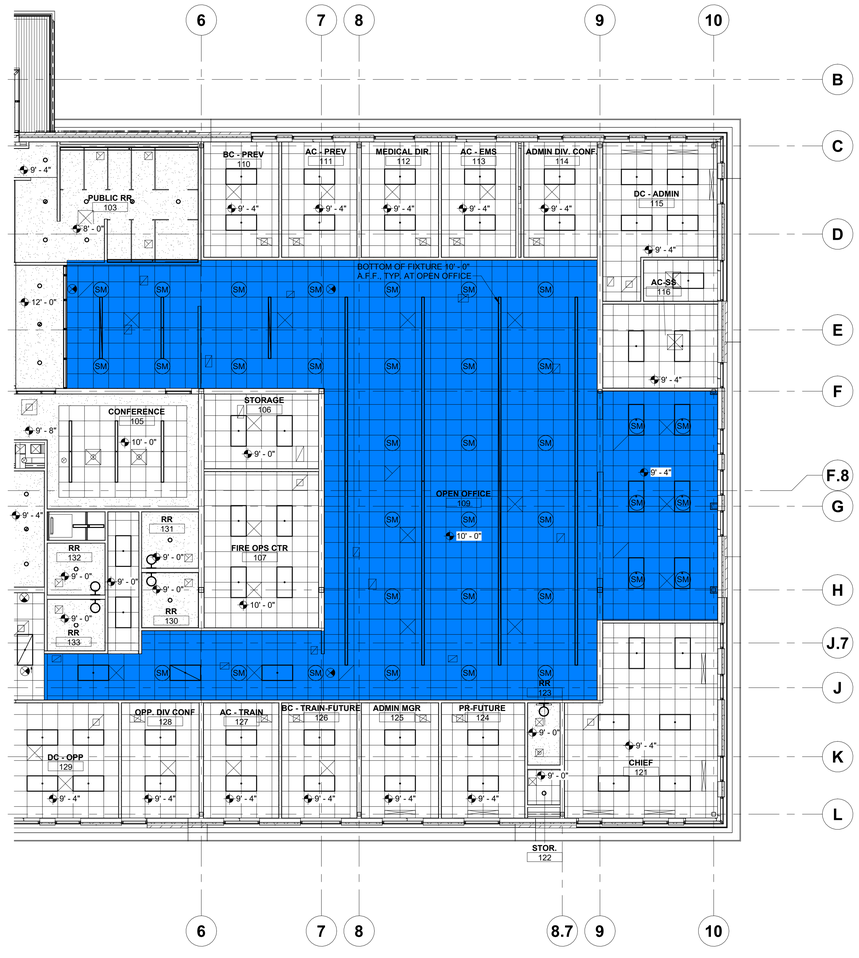
ALT.#	DESCRIPTION
1	REFERENCE NOTES FOR ADDED CARD READER IN HARDWARE SETS 17.0, 18.0, 19.0, 20.0, 22.0, 24.0, 25.0, 26.0, 27.0 FOR DOORS SHOWN IN ALTERNATE #1 DOOR SCHEDULE
2	PROVIDE VEHICLE BUILDING RE-SHEETS A-104 AND A-105
3	PROVIDE SOUND MASKING IN OPEN OFFICE 109. RE A1/G-411 FOR LOCATIONS.
4	ADD PRINT #51777, COLOR V908 ON SURFACE #2 TO ALL GLASS IN WINDOW TYPES A1, A2, B1, B2, C1, C2, C3, C4, C5, C6, C7, AND C8
5	ADD UNDER SLAB WATERPROOFING TO LOWER LEVEL FOUNDATIONS AND SLAB ON GRADE. RE A7/G-411 AND E7/G-411.



E7 FOUNDATION SECTION @CONCRETE WALL - ALTERNATE #5
1 1/2" = 1'-0"



A7 FOUNDATION SECTION @ METAL STUD - ALTERNATE #5
1 1/2" = 1'-0"



NORTH

A1 ALTERNATE #3 RCP
1/8" = 1'-0"

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www.hoeferwelker.com

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

PACKAGE 2: CONSTRUCTION SET

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

REVISION DATES:

STATE OF MISSOURI
CHRISTOPHER KRUMREI
NUMBER A-2016012111
11/1/24
ARCHITECT

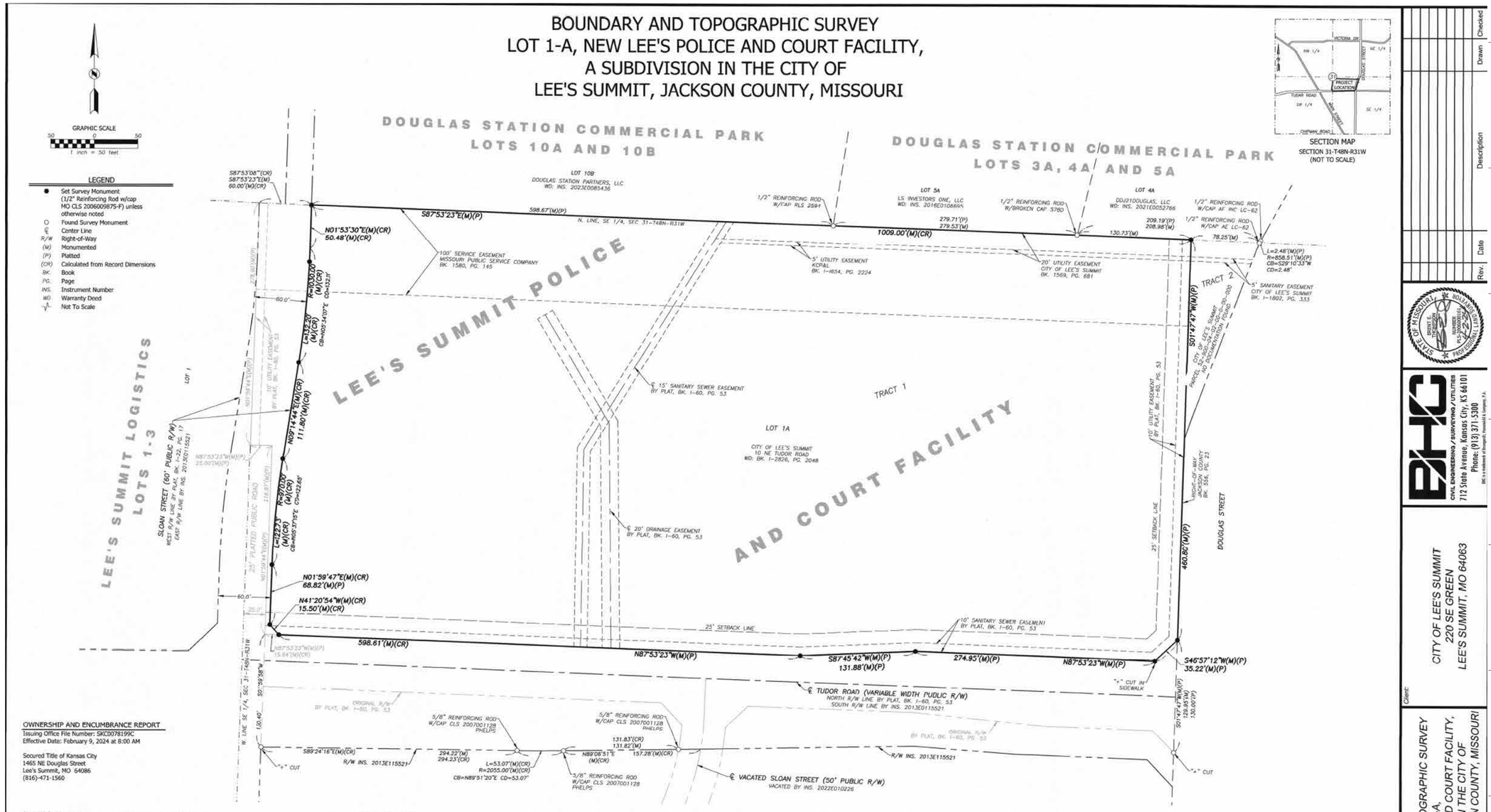
PROFESSIONAL SEAL

G-411

ISSUE DATE: NOVEMBER 1, 2024
HOEFER WELKER #: 138191

ALTERNATES

BOUNDARY AND TOPOGRAPHIC SURVEY
LOT 1-A, NEW LEE'S POLICE AND COURT FACILITY, A SUBDIVISION IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI



SECTION MAP
SECTION 31-T48N-R31W
(NOT TO SCALE)

OWNERSHIP AND ENCUMBRANCE REPORT

Issuing Office File Number: SKC0078199C
Effective Date: February 9, 2024 at 8:00 AM

Secured Title of Kansas City
1465 NE Douglas Street
Lee's Summit, MO 64086
(816)-471-1560

OWNERSHIP AND ENCUMBRANCE REPORT DESCRIPTION

TRACT 1:
Lot 1-A, NEW LEE'S POLICE AND COURT FACILITY, a subdivision in Lee's Summit, Jackson County, Missouri

TRACT 2:
All that part of the Southeast Quarter of Section 31, Township 48, Range 31, described as follows: Beginning at a point 1450 feet west of the northeast corner of the southeast quarter of said Section 31; thence west 75 feet, more or less to the northeast corner of Lot 1, SUMMIT PARK, a subdivision in Lee's Summit, as recorded in Plat Book 6, at Page 38, at the Recorder's Office of said County; thence south along the east line of said Lot 1, 230 feet more or less to the intersection with the westerly right of way line of County Highway 10-E, aka N. Douglas Street; thence northeasterly along said westerly right of way line to the Point of Beginning.

(Legal description for TRACT 2 is shown for convenience only)

GENERAL NOTES

1. Basis of Bearings: South 87° 53' 23" East along the North line of Lot 1A, LEE'S SUMMIT POLICE AND COURT FACILITY as shown on the recorded plat of LEE'S SUMMIT POLICE AND COURT FACILITY.
2. This survey is based on field work completed on or before the date shown in the title block or the following survey or plats:
   -An ALTA/NSPS survey performed by PHELPS ENGINEERING, INC. on April 27, 2022 as project number 220231
   -The plat of "SUMMIT PARK" recorded June 23, 1914 and filed as Instrument Number 19140096399 in Book 6, Page 38.
   -The plat of "LEE'S SUMMIT POLICE AND COURT FACILITY" recorded April 10, 1997 and filed as Instrument Number 1997I20462 in Book I-60, Page 53.
   -The plat of "DOUGLAS STATION COMMERCIAL PARK, LOTS 3A, 4A, AND 5A" recorded January 21, 2003 and filed as Instrument Number 2003I0007666 in Book I74, Page 55.
   -The plat of "DOUGLAS CORNER, 2ND PLAT" recorded July 25, 2006 and filed as Instrument Number E0063342 in Book I96, Page 1.
   -The plat of "DOUGLAS STATION COMMERCIAL PARK, LOTS 10A, AND 10B" recorded August 14, 2008 and filed as Instrument Number 2008E0087576 in Book 122, Page 17.
   -The plat of "LEE'S SUMMIT LOGISTICS LOTS 1-3" recorded March 22, 2022, and filed as Instrument Number 2022E0027423 in Book 199, Page 92.
3. This Tract contains 504,419 square feet or 11.5799 acres.
4. Accuracy standard of this survey: Urban.

SURVEYOR'S NOTES

1. This surveyor has made no search at the county Register of Deeds office or searched court documents for easements, vacations, Right-of-Way acquisitions, condemnations, court decrees or encumbrances that may affect this property. The aforementioned items shown hereon are based entirely upon the ownership and encumbrance report cited above, by documents found in this firms possession, documents obtained from other sources, or other information. If any other easements, vacations, Right-of-Way acquisitions, condemnations, court decrees or encumbrances affect this property their existence is unknown to this surveyor and are therefore not shown.

SURVEYOR'S STATEMENT

This survey was executed in accordance with the Missouri STANDARDS FOR PROPERTY BOUNDARY SURVEYS as set forth in Chapter 16 of the Rules of Department of Insurance, Financial Institutions and Professional Registration, Division 2030 - Missouri Board for Professional Land Surveyors. (See Title Block for date, seal and signature.)

BHC, MO CLS 2006009875-F
Brent E. Thompson, PLS - 2006000161

Checked | Drawn | Description | Date | Rev.

STATE OF MISSOURI
BRENT E. THOMPSON
NUMBER 2006009875
PROFESSIONAL LAND SURVEYOR

BHC
CIVIL ENGINEERING / SURVEYING / UTILITIES
712 State Avenue, Kansas City, KS 66101
Phone: (913) 371-5300
BHC's Missouri Certificate of Authority is L-2007000174

Client:
CITY OF LEE'S SUMMIT
220 SE GREEN
LEE'S SUMMIT, MO 64063

Project:
BOUNDARY AND TOPOGRAPHIC SURVEY
LOT 1-A,
NEW LEE'S POLICE AND COURT FACILITY,
A SUBDIVISION IN THE CITY OF
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

Project No:	041470
Field Crew:	ZL/TH
Field Date:	2024/03/13
Drawn By:	GJW
Issue Date:	2024/04/02
Sheet:	1 OF 7

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KANSAS CITY, MO 64112
P: 913.307.3700
www.hoeferwelker.com

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

PACKAGE 2: CONSTRUCTION SET

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

REVISION DATES:

INTERIM REVIEW ONLY
(Document Incomplete)
Not to be used for regulatory approval, permit, or construction.

Architect Of Record:
Hoefer Welker

PROFESSIONAL SEAL

V1.0

ISSUE DATE: NOVEMBER 1, 2024
HOEFER WELKER #: 138191

BOUNDARY AND TOPGRAPHIC SURVEY

LEGEND

Proposed Line Types and Symbols shown. Existing Line Types and Symbols shall be the same, but screened, unless designated otherwise by the inclusion of a survey by others.

- *Set Survey Monument*
- *Set Survey Monument (in concrete)*
- *Found Survey Monument*
- *Found Survey Monument in Box*
- *Origin Unknown*
- *Found Right-of-Way Marker*
- *Control Point*
- *Benchmark*
- *Set Hub*
- OHC — *Overhead Utility Line(s)*
- *Underground Electric Line Marker*
- UGE — *Underground Electric Line*
- KCP&L — *Underground KCP&L Line (e.g.)*
- *Utility Pole*
- *Utility Pole with Transformer*
- *Guy Anchor*
- *Utility Pole w/Light & arm*
- *Street Light Pole w/ arm*
- *Street Light Pole (14')*
- *Electric Pedestal (above ground)*
- EM *Electric Meter*
- EV *Electric Access Vault (underground)*
- EB *Electric Access Box (mounted)*
- *Electric Manhole*
- *Electric Pull Box (underground)*
- *Transformer (pad mounted)*
- *Yard Light*
- AC *Air Conditioner Unit*
- W — *Water Line*
- WS — *Water Service Line*
- *Underground Water Line Marker*
- *Water Valve*
- *Fire Hydrant*
- *Fire Hydrant Assembly*
- WM *Water Meter*
- WV *Water Manhole*
- WV *Water Vault (underground)*
- *Sprinkler Control Box*
- *Sprinkler Head*
- *Yard Hydrant*
- BFV *Backflow Valve (BFV)*
- BFP *Backflow Preventer (BFP)*
- *Blow-Off Assembly*
- GAS — *Gas Line*
- GS — *Gas Service Line*
- SPIRE — *Underground Spire Line (e.g.)*
- *Underground Gas Line Marker*
- *Gas Manhole or Access Lid*
- *Gas Valve*
- *Regulator Unit*
- GM *Gas Meter*
- *Casing Vent*
- P — *Underground Pipe Line (High Capacity)*
- *Underground Pipe Line Marker*
- UGT — *Underground Telephone Line*
- ATT — *Underground AT&T Line (e.g)*
- *Underground Telephone Line Marker*
- *Telephone Pedestal (above ground)*
- *Telephone Manhole*
- TA *Telephone Access Vault (underground)*
- TB *Telephone Access Box (mounted)*
- FO — *Underground Fiber Optic Line*
- *Underground Fiber Optic Line Marker*
- *Fiber Optic Pedestal*
- *Fiber Optic Manhole*
- FV *Fiber Optic Vault (underground)*
- FM *Fiber Optic Pedestal on top of Vault*
- [36"] *Traffic Signal Post w/ Mast Arm*
- *Pedestrian Signal Pole*
- TC *Traffic Control Manhole*
- TC *Traffic Control Cabinet*
- TCV *Traffic Control Vault (underground)*
- UGTV — *Underground Cable TV Line*
- SPC — *Underground Spectrum Line (e.g.)*
- *Underground Cable TV Marker*
- *Cable TV Pedestal (above ground)*
- *Manhole-Unknown Purpose*
- GT *Grease Trap Access Lid*
- MW *Monitoring Well*
- BH *Bore Hole*
- *Fill Lid (for Underground Tank)*
- SAN — *Sanitary Sewer Line*
- SS — *Sanitary Sewer Service Line*
- S *Sanitary Sewer Manhole*
- *Clean-out*
- VCP *Vitrified Clay Pipe*
- DIP *Ductile Iron Pipe*
- PVC *Polyvinyl Chloride Pipe*
- CIP *Cast Iron Pipe*
- *Underground Utility Line Marker*
- *Metal Guard Rail or Handrail*
- *Flag Pole*
- *Satellite Dish*
- *Mailbox*
- *Concrete or Metal Bollard*
- *Wood Bollard or Wood Post*
- STM — *Storm Sewer Line*
- *Storm Sewer Manhole*
- *Curb Inlet*
- *Field Inlet*
- *Junction Box*
- *Grate Inlet*
- *Grate Inlet (Round/Domed)*
- *End Section*
- *Headwall*
- DS *Down Spout*
- RD *Roof Drain*
- CMP *Corrugated Metal Pipe*
- CMAP *Corrugated Metal Arch Pipe*
- CPP *Corrugated Plastic Pipe*
- HDPE *High Density Polyethylene Pipe*
- RCP *Reinforced Concrete Pipe*
- RCAP *Reinforced Concrete Arch Pipe*
- RCB *Reinforced Concrete Box*
- FES *Flared End Section*
- *Pipe Continues-Outlet or Source Not Found or Not Surveyed*
- *Wood Fence*
- *Chain Link Fence*
- *Wire Fence (with or without barb)*
- *Barbed Wire Fence*
- *Plastic Fence*
- *Iron or Metal Fence*
- *Gate Post*
- *Retaining Wall*
- *Single Pole Sign*
- *Single Pole Sign*
- *Double Pole Sign*
- *Railroad Crossing Gate*
- *Railroad Switch Machine*
- *Railroad Tracks*
- *Wheel Stop*
- *ADA Parking Stall*
- *ADA Detection Warning Pad*
- *Bush*
- *Deciduous Tree and Size (Scaled for Size)*
- *Coniferous Tree and Size (Scaled for Size)*
- *Tree Stump*
- *Foliage Drip Line/Edge of Timber*
- *Hedge*
- *Center Line*
- PL *Property Line*
- R/W *Right-of-Way Line*
- R= *Radius*
- L= *Arc Length*
- CB *Chord Bearing*
- CD *Chord Distance*
- Δ *Interior Angle (Delta)*
- I.T.B. *Initial Tangent Bearing*
- R/W *Right-of-Way*
- (M) *Monumented*
- (m) *Measured*
- (D) *Deeded*
- (P) *Platted*
- (C) *Calculated*
- (CR) *Calculated from Record Dimensions*
- (CM) *Calculated from Found Monuments*
- (PR) *Proportioned*
- BK. *Book*
- PG. *Page*
- DOC. *Document Number*
- INS. *Instrument Number*
- VOL. *Volume*
- ESMT. *Easement*
- B/L *Building Setback Line*
- U/E *Utility Easement*
- D/E *Drainage Easement*
- ST/E *Storm Sewer Easement*
- S/E *Sanitary Sewer Easement*
- I/E/E *Ingress/Egress Easement*
- TC/E *Temporary Construction Easement*
- SQ. FT. *Square Feet*
- AC *Acres*
- CY *Cubic Yard*
- LF *Linear Feet*
- CO. *Company*
- L/S *Landscaping (Bushes, Trees, Flowers, Border, Mulch, any or all of them)*
- ASPH *Asphalt*
- CONC *Concrete*
- COR *Corner*
- R.WALL *Retaining Wall*
- STA. *Station*
- Lt *Left*
- Rt *Right*
- PI *Point of Intersection*
- PC *Point of Curve*
- PT *Point of Tangent*
- NTS *Not To Scale*

LEGAL DESCRIPTION

Lot 1-A, NEW LEE'S POLICE AND COURT FACIMTY, a subdivision in Lee's Summit, Jackson County, Missouri

TRACT 2:
All that part of the Southeast Quarter of Section 31, Township 48, Range 31, described as follows: Beginning at a point 1450 feet west of the northeast corner of the southeast quarter of said Section 31; thence west 75 feet, more or less to the northeast corner of Lot 1, SUMMIT PARK, a subdivision in Lee's Summit, as recorded in Plat Book 6, at Page 38, at the Recorder's Office of said County; thence south along the east line of said Lot 1, 230 feet more or less to the intersection with the westerly right of way line of County Highway 10-E, aka N. Douglas Street; thence northeasterly along said westerly right of way line to the Point of Beginning.

OIL AND GAS WELLS

According to the "Oil and Gas Permits" database published by the Missouri Department of Natural Resources, as of November 13, 2024, no oil or gas wells (of any status) are listed within subject property site.

03

GENERAL NOTES

1. All work in public easement and Right-of-Way shall be installed per the requirements and specifications of the City of Lee's Summit, Missouri.
2. All existing topographic, survey, and utility information shown was provided to BHC in the form of an Topographic Survey prepared by BHC and dated April 2, 2024. BHC makes no guarantees as to the accuracy of the existing information shown hereon. Contractors shall satisfy themselves as to the existing conditions of the site and have all utilities located prior to commencing construction.
3. The Contractor shall be required to obtain all Federal, State, and Local permits required for this project prior to commencing construction.
4. Any work adjacent to or crossing existing streets requires proper traffic control devices. Traffic control devices shall be placed in accordance with the Manual of Uniform Traffic Control Devices (MUTCD).
5. The contractor shall be required to demolish, remove and dispose of all existing structures, pavements, and features necessary to construct the improvements shown hereon. Any waste materials generated during construction shall be removed from the site by the Contractor and disposed of in accordance with all local, State, and Federal regulations governing such disposal.
6. The contractor shall prevent any trash, debris, or liquid wastes from being disposed of in sanitary sewers, storm sewers, or open drainage systems.
7. The Contractor shall be solely responsible to protect adjacent property, structures, and other improvements from damage during construction. In the event of damage to adjacent property, structures, or improvements, the contractor shall repair or replace such damage to the Owners's satisfaction at the Contractor's expense.
8. Contractors at the site shall be solely responsible for jobsite safety for all aspects of work shown hereon.
9. All work and materials used in the construction of the improvements shown hereon shall comply with all referenced standards, specifications, and plan notes.
10. All buildings are shown as a reference only. All buildings shall be located and constructed per the Architectural drawings prepared by others.
11. Contractor shall be responsible for contacting all utility companies for field locations of underground utilities affected by the contract. All existing utilities indicated on these plans are according to the best information available to the engineer; however, all utilities actually existing may not be shown. Utilities damaged through the negligence of the contractor to obtain the location of same shall be repaired or replaced at the expense of the contractor.
12. Coordinate with facility representative as to when construction activities may be performed to work with the operations of the facility.
13. Any and all hazards shall be properly identified and barricaded from access during all non-construction periods.
14. Unless specified otherwise, all construction shall meet the requirements of the Missouri Department of Transportation (MoDOT) Standard Specifications, except as modified by these plans.
15. Third party inspection of the storm sewer is required, after inspection, provide documentation to the City of Lee's Summit, Missouri.
16. Private Erosion & Sediment Control inspections are required in accordance with NPDES schedule and requirements. After inspections, provide the City of Lee's Summit, Missouri with reports and documentation.
17. A Right-of-Way permit is required from the City of Lee's Summit, Missouri Public Works Department for any work within the public right-of-way.



SECTION MAP
SECTION 31-T48N-R31W
(NOT TO SCALE)

PROJECT CONTROL TABLE
(NAD83 MISSOURI STATE PLANE, WEST ZONE, US SURVEY FOOT)

POINT NO.	CONTROL POINT/ BENCHMARK DESCRIPTION	NORTHING COORDINATE	EASTING COORDINATE	ELEV.
1	CP1 /IB4 WITH CP CAP	1006378.56	2822886.48	1029.44'
2	CP2 /CUT PLUS BACK OF WALK	1006378.62	2821916.33	1011.43'
3	CP3 /CHISEL PLUS ON W. EDGE OF WALK	1006849.13	2821878.06	1010.62'
4	CP4 /IB4 WITH CP CAP	1006865.95	2823140.23	1023.26'
5	CP5 /IB4 W CP CAP	1006971.51	2822049.11	1009.85'
10	CP0 /IB4 WITH CP CAP	1006274.88	2823059.46	1031.60'

BENCHMARKS (NAVD88 Datum)

BM1 Chiseled square on the North face of a grate inlet, located on the South side of Tudor Road, approximately 425 feet East of the intersection of Tudor Road and Sloan Street.

Elevation: 1015.01

BM2 Chiseled square on the Northwest corner of a pedestrian crossing signal, located on the Southwest corner of the intersection of Tudor Road and Douglas Street.

Elevation: 1031.01

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BHC
CIVIL ENGINEERING / SURVEYING / UTILITIES
7101 College Blvd., Suite 400
Overland Park, Kansas 66210
p. (913) 663-1900

BHC is a trademark of Brungardt Honomichl & Company, P.A.

LEE'S SUMMIT JOINT OPERATIONS FACILITY

PACKAGE 1: SITE AND STRUCTURE

10 NE TUDOR ROAD
LEES SUMMIT, MO 64086

REVISION DATES:

01	ADDENDUM 01	2024-09-20
02	ADDENDUM 02	2024-10-30
03	ADDENDUM 03	2024-11-18

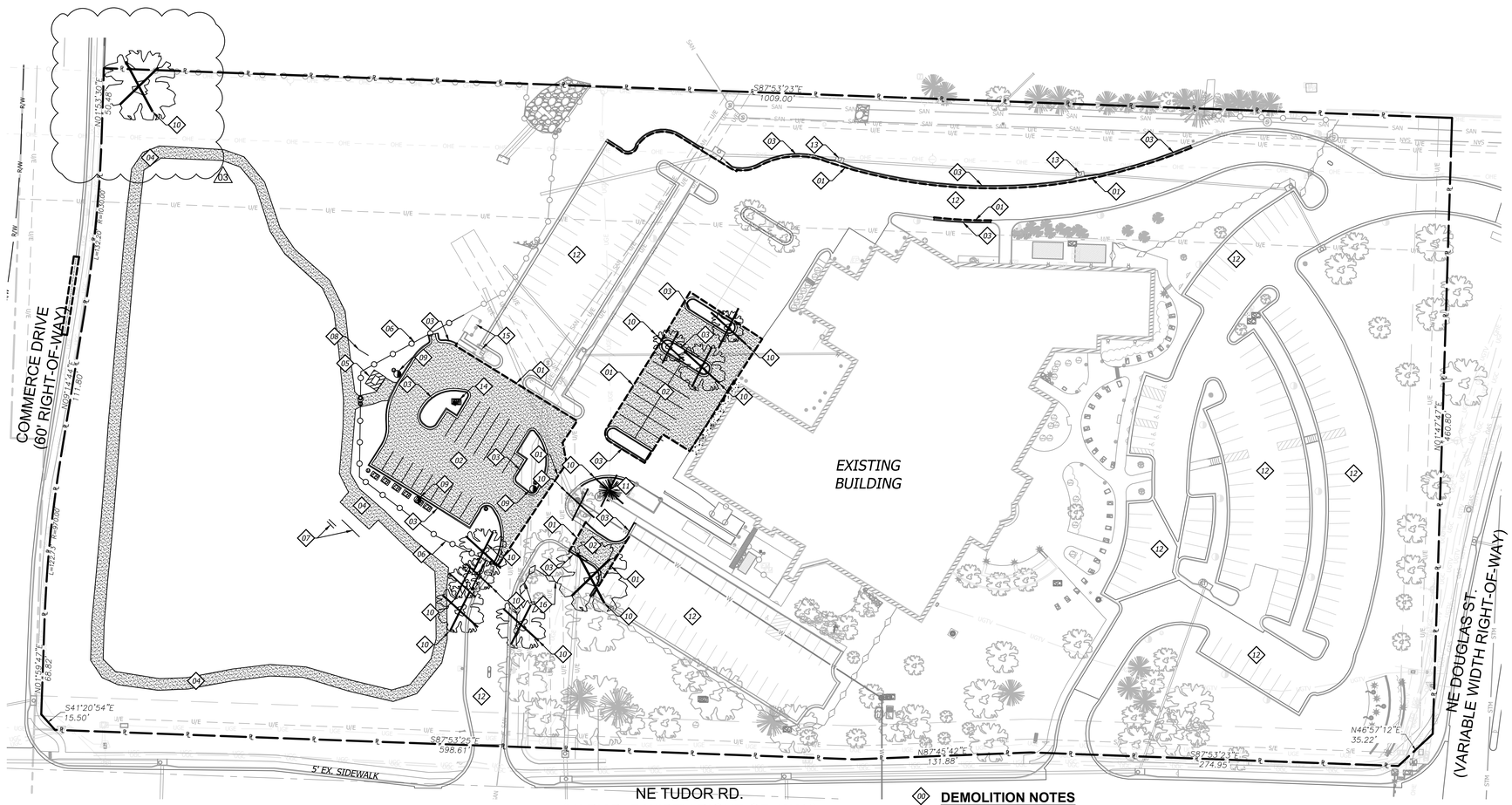
STATE OF MISSOURI
MICHAEL T. MAKRIS
2024.11.18
NUMBER PE-2010035286
PROFESSIONAL ENGINEER

MICHAEL T. MAKRIS, PE
MO PE-2021035286

C0.1

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

GENERAL INFORMATION



DEMOLITION GENERAL NOTES

1. Contractor shall verify the location, size, material and depth of all utilities prior to any excavation or construction activity.
2. All materials shall be removed and disposed of off-site. It is the contractors responsibility to meet all applicable laws and regulations pertaining to the disposal of construction/demolition material.
3. The contractor shall ensure that any structures to remain which are damaged during demolition operations shall be repaired to meet current code, at no additional cost to the owner.
4. The contractor shall remove any and all existing debris which is encountered from the existing site. This shall include, but shall not be limited to, footings, concrete slabs, conduits, granular subgrade, utility services, and/or unsuitable structural fill material as determined by the owner's engineer. The cost for these removals shall be considered incidental to the project. Said debris shall become property of the contractor and it shall be the responsibility of the contractor to dispose of properly off-site.
5. It shall be the contractor's responsibility to meet all applicable laws and regulations pertaining to the disposal of construction/demolition material.
6. The contractor shall be responsible for obtaining and payment of any permits for demolition that pertain to this project.
7. All protection fencing shall be installed prior to demolition/construction activity. The contractor shall provide a 6-foot security fence around the entire job site with locked gated access points, if required by the owner or the City.
8. All existing utilities removed during construction shall have their trenches backfilled with structural fill and be compacted to the requirements for structural fill.
9. All removals required to properly perform the work (whether shown on the plans or not) shall be performed by the contractor at no additional cost to the owner.

07 DEMOLITION NOTES

01 *SAW CUT EXISTING PAVEMENT TO FULL DEPTH AND CLEAN EDGE.*

02 *REMOVE & DISPOSE OF EXISTING ASPHALT.*

03 *REMOVE & DISPOSE OF EXISTING CURB AND GUTTER.*

04 *REMOVE & DISPOSE OF ASPHALT TRAIL.*

05 *REMOVE & DISPOSE OF EXISTING SHED.*

06 *REMOVE & DISPOSE OF EXISTING CHAIN LINK FENCE.*

07 *REMOVE & DISPOSE OF EXISTING PULL UP BARS.*

08 *REMOVE & DISPOSE OF EXISTING WOODEN WINDOW.*

09 *REMOVE & DISPOSE OF EXISTING LIGHT POLES.*

10 *REMOVE & DISPOSE OF EXISTING TREES.*

11 *RELOCATE WATER VAULT TO ALLOW FOR PROPOSED TRASH ENCLOSURE.*

12 *MILL EXISTING PARKING LOT 2", OVERLAY ASPHALT AND RESTRIPE TO MATCH EXISTING. CONTRACTOR TO COORDINATE OVERLAY WORK SEQUENCE WITH OWNER TO MINIMIZE DISRUPTION TO FACILITY OPERATIONS.*

13 *STRUCTURE TO MODIFIED TO FROM CURB INLET TO GRATE TOP INLET.*

14. *REMOVE & RELOCATE EXISTING SHUT-OFF FOR FUEL PUMP*

15. *EXISTING FUEL STATION TO REMAIN. TO BE PROTECTED DURING CONSTRUCTION.*

16. *REMOVE & DISPOSE OF EXISTING CHAIN IRON FENCE.*

LEGEND

- R/W — *RIGHT - OF - WAY LINE*
- ℄ — *PROPERTY LINE*
- OHE — *EXISTING OVERHEAD UTILITY LINES*
- UGE — *EXISTING UNDERGROUND ELECTRICAL LINE*
- GAS — *EXISTING GAS LINE*
- W — *EXISTING WATER LINE*
- *SAW CUT LINE*
- *ASPHALT PAVEMENT TO BE REMOVED*
- *EXISTING TREE LINE*
- *EXISTING TREE TO BE REMOVED*

GRAPHIC SCALE
40 0 40

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

PACKAGE 1: SITE AND STRUCTURE

10 NE TUDOR ROAD
LEES SUMMIT, MO 64086

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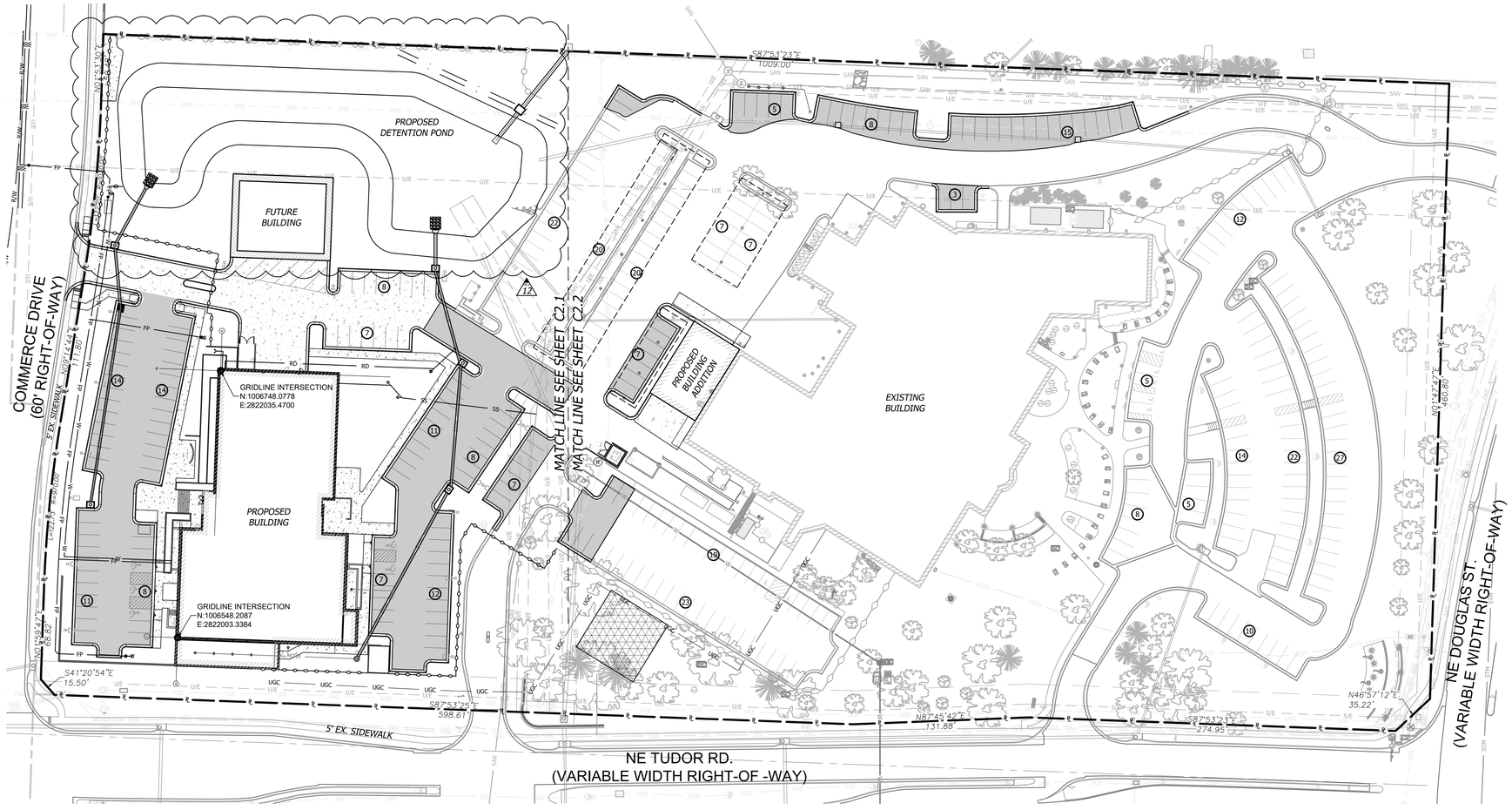
STATE OF MISSOURI
MICHAEL T. MAKRIS
2024-11-18
NUMBER PE-2021035286
PROFESSIONAL ENGINEER

MICHAEL T. MAKRIS, PE
MD PE-2021035286

C1.0

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

DEMOLITION PLAN



SITE DATA

SITE		
SITE AREA:	*11.58*	*AC*
	504,417	*SF*
IMPERVIOUS AREA:		
EXISTING:	*228,818*	*SF (45.4%)*
PROPOSED:	*296,228*	*SF (58.7%)*
BUILDING		
EXISTING BUILDING (INCLUDING ADDITION) AREA:	*93,507*	*SF (18.5)*
PROPOSED BUILDING AREA:	*43,639*	*SF (8.7%)*
PROPOSED FUTURE BUILDING AREA:	*4,724*	*SF (0.9%)*
FLOOR AREA RATIO (FAR):	*0.28:1*	
PARKING		
PARKING PROVIDED:	*366*	*STANDARD*
ADA PARKING SPACES:	*13*	*HANDICAP (6 VAN)*

ZONING

PO (PLANNED OFFICE)

OWNERSHIP:

PARCEL NO. 52-900-04-237-00-0-00-000
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT POLICE AND COURT FACILITY
INSTRUMENT NO. 199710020462, BOOK 60, PAGE 53

DIMENSIONAL STANDARDS:

BUILDING SET-BACKS	*FRONT YARD*	*15 FT*
	REAR YARD	*20 FT*
PARKING SET-BACKS	*RIGHT OF WAY*	*20 FT*
	RESIDENTIAL DISTRICT	*20 FT*
	SIDE AND REAR P/L	*6 FT*
DRIVEWAY AISLE MINIMUM		*24 FT*
PARKING SPACE DIMENSIONS	*LENGTH*	*19 FT*
	WIDTH	*9 FT*

GENERAL NOTES:

1. *MINIMUM CURB RADIUS OF 3 FEET (UNLESS OTHERWISE SPECIFIED).*
2. *ALL NEW ON-SITE WIRING AND CABLES SHALL BE INSTALLED UNDERGROUND.*
3. *ALL ABOVE GROUND ELECTRICAL AND/ OR TELEPHONE CABINETS MUST BE PLACED WITHIN THE INTERIOR SIDE OR REAR BUILDING SETBACK YARDS.*
4. *ALL CONCRETE MATERIALS (ASPHALTIC AND PORTLAND) SHALL BE MEET KANSAS CITY METROPOLITAN MATERIALS BOARD (KCMMB) SPECIFICATIONS.*
5. *ALL EXTERIOR GROUND OR BUILDING MOUNTED EQUIPMENT, INCLUDING BUT NOT LIMITED TO MECHANICAL EQUIPMENT, UTILITY METER BANKS AND COOLERS, SHALL BE SCREENED FROM PUBLIC VIEW WITH LANDSCAPING OR ARCHITECTURAL TREATMENT COMPATIBLE WITH THE BUILDING ARCHITECTURE.*
6. *ALL EXERIOR -MOUNTED AND ROOFTOP BUILDING HVAC AND MECHANICAL EQUIPMENT, VENTS, PIPING, ROOF ACCESS LADDERS AND UTILITY METERS MUST BE LOCATED OUT OF VIEW OR OTHERWISE SCREENED FROM PUBLIC VIW FROM ALL ADJACENT STREETS AND RESIDENTIALLY ZONED OR DEVELOPED PROPERTIES. SCREENING MUST BE ACCOMPLISHED WITH LANDSCAPING, SCREEN WALLS, BUILDING ELEMENTS, OR A COMBINATION OF THESE METHODS.*
7. *BUILDING FOOTPRINT AS SHOWN REPRESENTS THE MOST EXTERIOR LINE WORK FOR BUILDING AS PROVIDED BY HOEFER WELKER. REFERENCE DRAWING DATED 2024-10-08.*

SITE LEGEND

- *PARKING STALL COUNT*
- *PROPOSED BUILDING*
- *EXISTING BUILDING*
- *LIGHT DUTY ASPHALT PAVEMENT*
- *LIGHT DUTY PCC PAVEMENT*
- *CONCRETE SIDEWALK*
- *STRAIGHT BACK CURB & GUTTER (TYPE CG-1)*
- *RETAINING WALL*
- *STRAIGHT BACK DRY CURB & GUTTER (TYPE CG-1 DRY)*
- *ZERO HEIGHT CURB*
- *TRANSITION CURB*

N

GRAPHIC SCALE
40 0 40

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

PACKAGE 1: SITE AND STRUCTURE

10 NE TUDOR ROAD
LEES SUMMIT, MO 64086

REVISION DATES:

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09	CCD 01	2025-01-29
12	ASI 05	2025-02-07

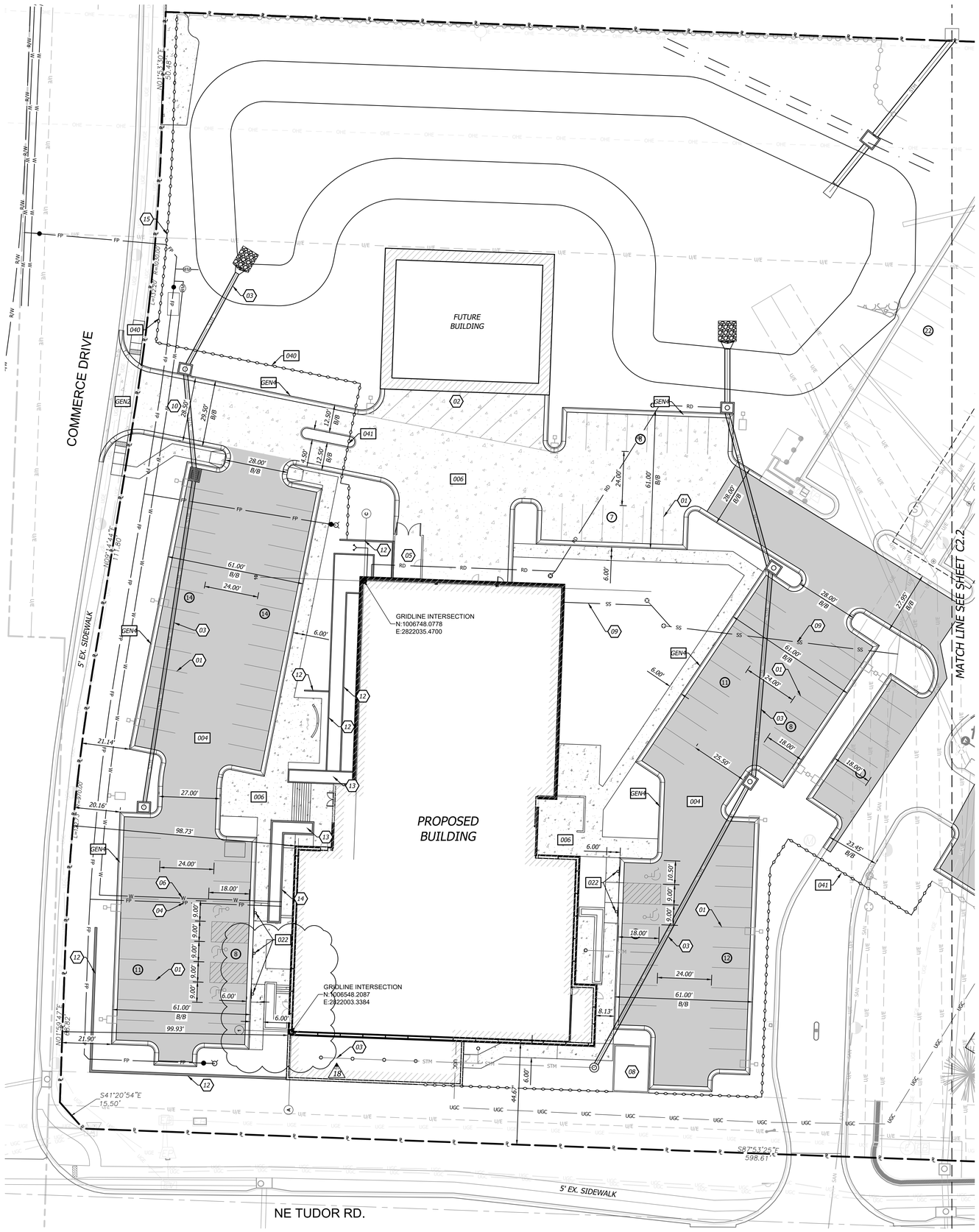
STATE OF MISSOURI
MICHAEL T. MAKRIS
NUMBER PE-2021035286
2025-02-07
PROFESSIONAL ENGINEER

MICHAEL T. MAKRIS, PE
MO PE-2021035286

C2.0

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

OVERALL SITE PLAN



ZONING

PO (PLANNED OFFICE)

GENERAL NOTES:

1. *MINIMUM CURB RADIUS OF 3 FEET (UNLESS OTHERWISE SPECIFIED).*
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6. *BUILDING FOOTPRINT AS SHOWN REPRESENTS THE MOST EXTERIOR LINE WORK FOR BUILDING AS PROVIDED BY HOEFER WELKER.*

00 CONSTRUCTION NOTES

- *01 LEAD FREE, WATER-BORNE EMULSION BASED TRAFFIC PAINT FOR PARKING LOT STRIPING (WHITE ON ASPHALT & YELLOW ON CONCRETE).*
- *02 PROPOSED NO PARKING STRIPING*
- *03 PROPOSED STORM SEWER SYSTEM*
- *04 PROPOSED FIRE PROTECTION SYSTEM*
- *05 PROPOSED TRASH ENCLOSURE. (REF. TO ARCHITECTURAL PLANS)*
- *06 PROPOSED WATER SERVICE SYSTEM*
- *07 PROPOSED GENERATOR*
- *08 PROPOSED TRANSFORMER PAD LOCATION*
- *09 PROPOSED SANITARY SEWER SYSTEM*
- *10 CITY OF LEE'S SUMMIT COMMERCIAL DRIVE ENTRANCE (GEN-1)*
- *11 PROPOSED COMMUNICATIONS TOWER LOCATION. PENDING FURTHER DESIGN.*
- *12 SITE RETAINING WALLS ARE DELEGATED DESIGN. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR ENGINEER/ARCHITECT REVIEW. PRODUCT - VERSA-LOK MOSAIC, COLOR BY ARCHITECT.*
- *13 PLANTER WALLS SPECIFIED BY ARCHITECT.*
- *14 HANDRAILS REQUIRED FOR ADA RAMP SPECIFIED BY ARCHITECT.*
- *15 PROPOSED FENCE TO CONNECT TO EXISTING FENCE ALONG NORTHERN PROPERTY LINE.*

SITE LEGEND

- (#) *PARKING STALL COUNT*
- *PROPOSED BUILDING*
- *EXISTING BUILDING*
- *LIGHT DUTY ASPHALT PAVEMENT*
- *LIGHT DUTY PCC PAVEMENT*
- *CONCRETE SIDEWALK*
- *STANDARD CURB & GUTTER*
- *RETAINING WALL*
- *DRY CURB & GUTTER*
- *ZERO HEIGHT CURB*
- *TRANSITION CURB*

000 DETAILS

SEE CONSTRUCTION DETAILS - SHEETS C7.0 - C7.3

- *GEN-1 CONCRETE DRIVEWAY DETAIL*
- *GEN-4 CONCRETE CURB & GUTTER*
- *004 MEDIUM DUTY ASPHALT PAVEMENT*
- *006 MEDIUM DUTY PCC PAVEMENT*
- *014 CONCRETE SIDEWALK SECTION*
- *022 ADA PARKING SIGNAGE*
- *040 AMERISTAR FENCE DETAIL*
- *041 AMERISTAR GATE DETAIL*

GRAPHIC SCALE
20 0 20

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

PACKAGE 1: SITE AND STRUCTURE

10 NE TUDOR ROAD
LEES SUMMIT, MO 64086

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18	CCD 03	2025-05-05

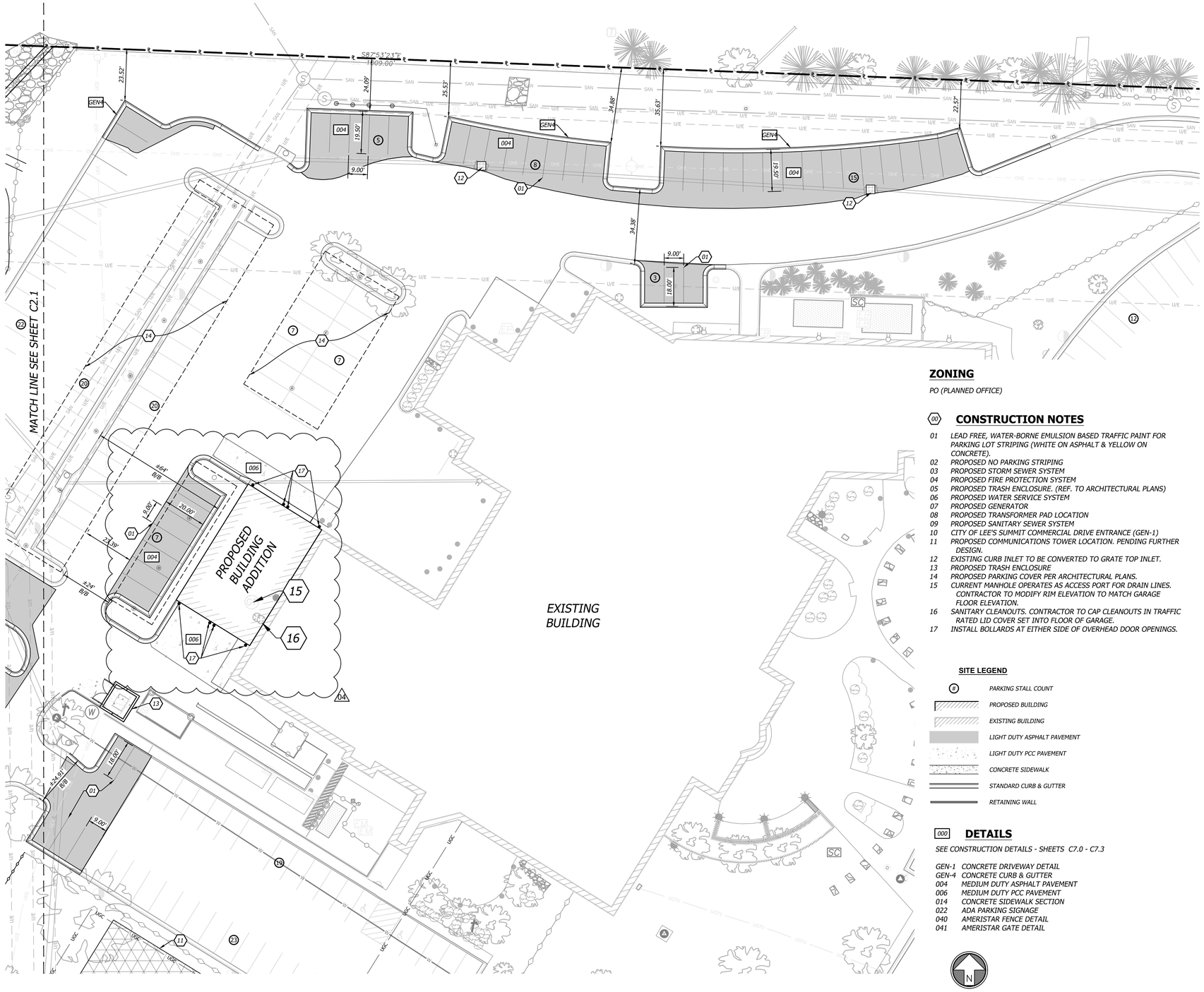
STATE OF MISSOURI
MICHAEL T. MAKRIS
2025-05-05
NUMBER PE-2021035286
PROFESSIONAL ENGINEER

MICHAEL T. MAKRIS, PE
MD PE-2021035286

C2.1

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

SITE PLAN



ZONING

PO (PLANNED OFFICE)

00 CONSTRUCTION NOTES

01 LEAD FREE, WATER-BORNE EMULSION BASED TRAFFIC PAINT FOR PARKING LOT STRIPING (WHITE ON ASPHALT & YELLOW ON CONCRETE).
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06 PROPOSED WATER SERVICE SYSTEM
07 PROPOSED GENERATOR
08 PROPOSED TRANSFORMER PAD LOCATION
09 PROPOSED SANITARY SEWER SYSTEM
10 CITY OF LEE'S SUMMIT COMMERCIAL DRIVE ENTRANCE (GEN-1)
11 PROPOSED COMMUNICATIONS TOWER LOCATION. PENDING FURTHER DESIGN.
12 EXISTING CURB INLET TO BE CONVERTED TO GRATE TOP INLET.
13 PROPOSED TRASH ENCLOSURE
14 PROPOSED PARKING COVER PER ARCHITECTURAL PLANS.
15 CURRENT MANHOLE OPERATES AS ACCESS PORT FOR DRAIN LINES. CONTRACTOR TO MODIFY RIM ELEVATION TO MATCH GARAGE FLOOR ELEVATION.
16 SANITARY CLEANOUTS. CONTRACTOR TO CAP CLEANOUTS IN TRAFFIC RATED LID COVER SET INTO FLOOR OF GARAGE.
17 INSTALL BOLLARDS AT EITHER SIDE OF OVERHEAD DOOR OPENINGS.

SITE LEGEND

(#) PARKING STALL COUNT
PROPOSED BUILDING
EXISTING BUILDING
LIGHT DUTY ASPHALT PAVEMENT
LIGHT DUTY PCC PAVEMENT
CONCRETE SIDEWALK
STANDARD CURB & GUTTER
RETAINING WALL

000 DETAILS

SEE CONSTRUCTION DETAILS - SHEETS C7.0 - C7.3

GEN-1 CONCRETE DRIVEWAY DETAIL
GEN-4 CONCRETE CURB & GUTTER
004 MEDIUM DUTY ASPHALT PAVEMENT
006 MEDIUM DUTY PCC PAVEMENT
014 CONCRETE SIDEWALK SECTION
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040 AMERISTAR FENCE DETAIL
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N

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

PACKAGE 1: SITE AND STRUCTURE

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REVISION DATES:

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04	ADDENDUM 04	2024-11-26

STATE OF MISSOURI
MICHAEL T. MAKRIS
2024-11-26
NUMBER PE-2021035286
PROFESSIONAL ENGINEER

MICHAEL T. MAKRIS, PE
MD PE-2021035286

C2.2

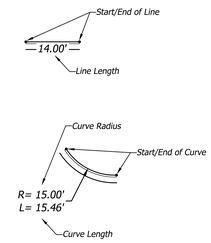
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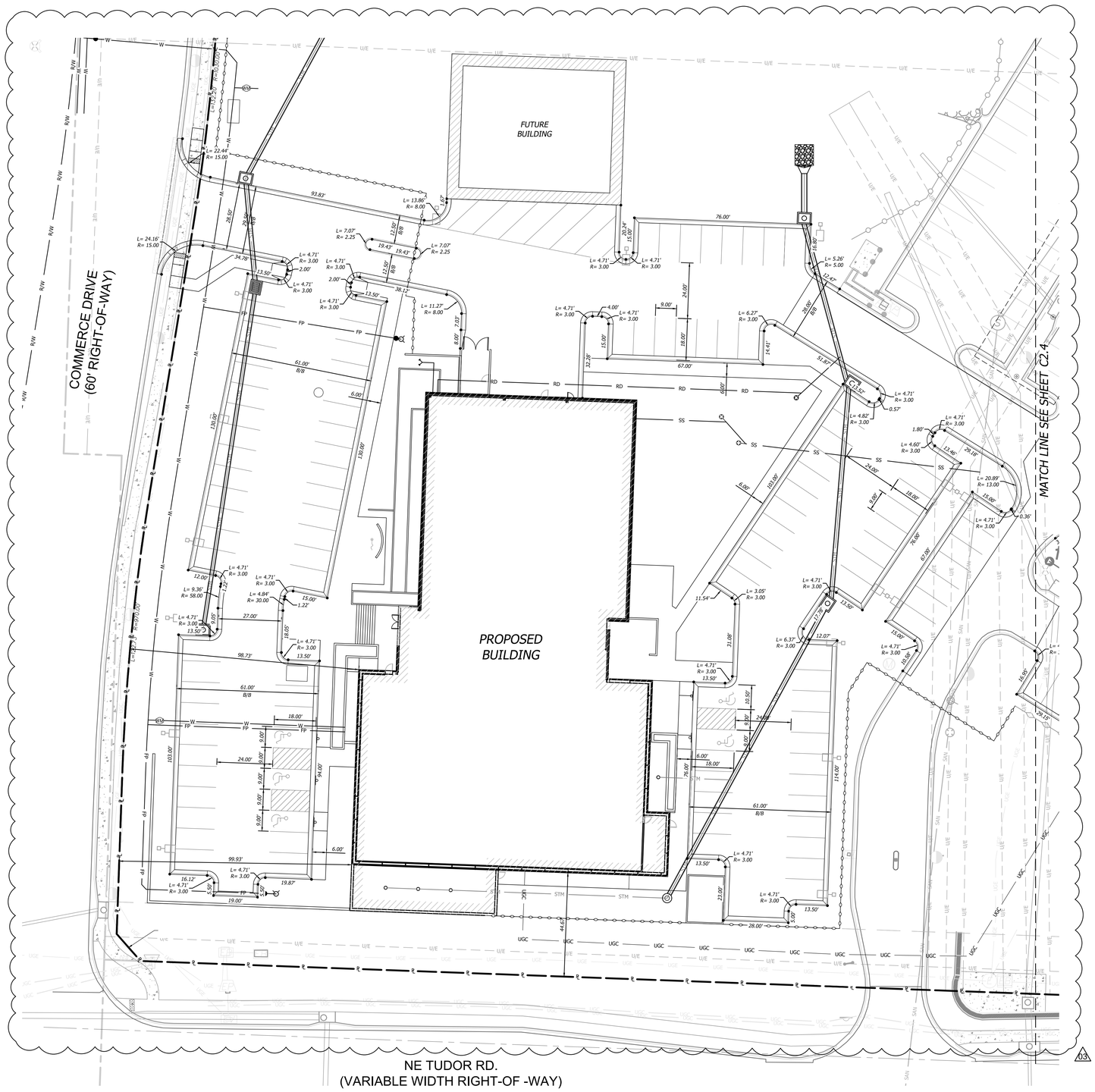
SITE PLAN

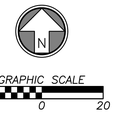
DIMENSION NOTES

1. All dimensions are to/along back of curb unless otherwise noted.
2. All dimensions are to bottom of wall unless otherwise noted.

DIMENSION LEGEND







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NUMBER PE-2021035286
PROFESSIONAL ENGINEER
2024-11-18

MICHAEL T. MAKRIS, PE
MO PE-2021035286

C2.3

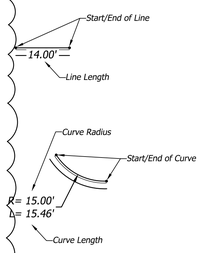
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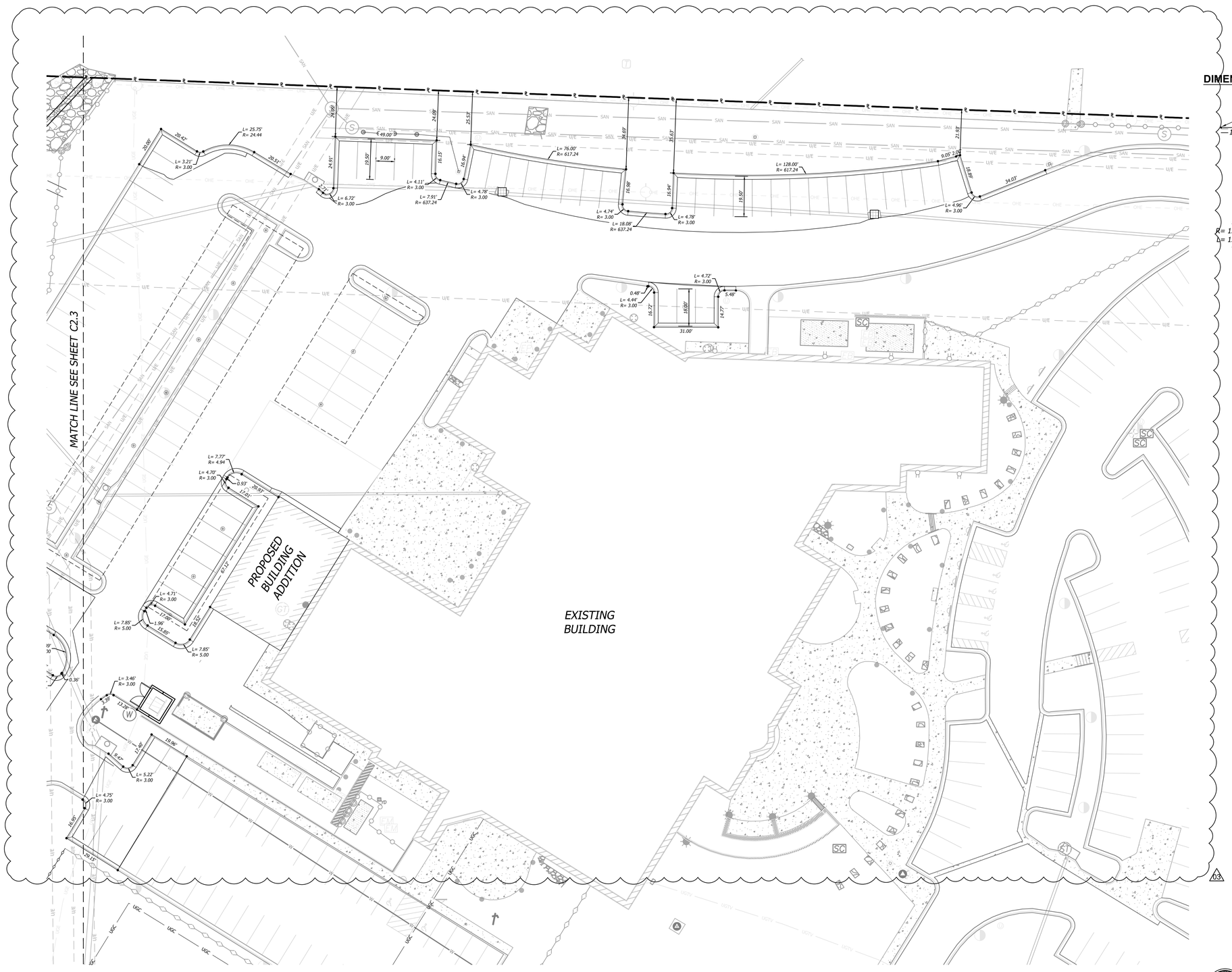
DIMENSION PLAN

DIMENSION NOTES

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2. All dimensions are to bottom of wall unless otherwise noted.

DIMENSION LEGEND





GRAPHIC SCALE
20 0 20

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2024-11-18
NUMBER PE-2021035286
PROFESSIONAL ENGINEER

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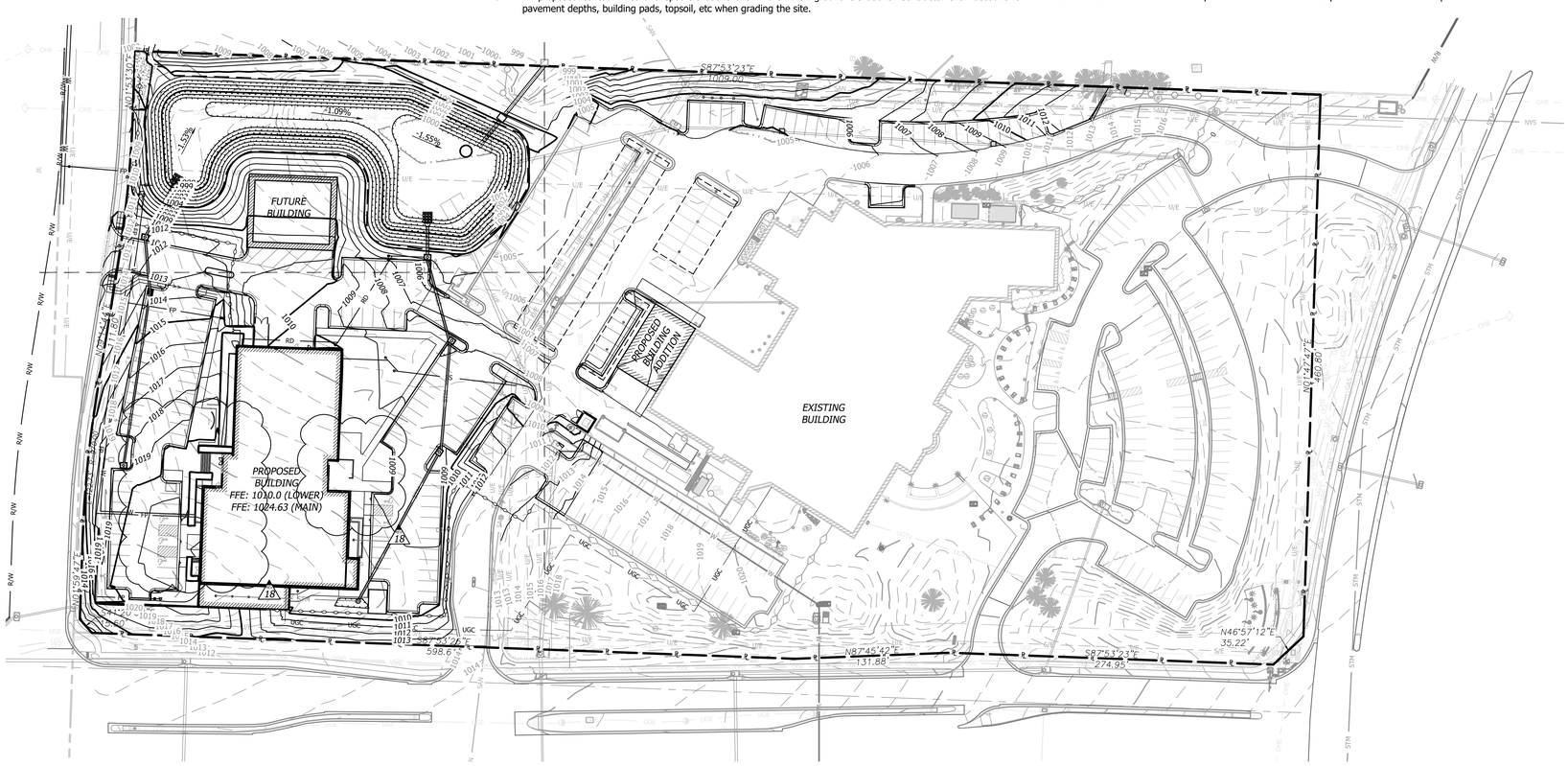
C2.4

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

DIMENSION PLAN

GRADING GENERAL NOTES

1. Contractor shall obtain a copy of the Geotechnical Services Report, prepared for the project and satisfy himself as to the existing conditions and recommendations contained in the report.
2. As discussed in the Geotechnical Report, over excavation of existing unsuitable soils will be required under building and pavement areas. Contractor shall perform over excavation of unsuitable soils as a part of this work.
3. Contractor shall obtain soils suitable as structural fill from off-site sources. All borrow materials must be tested and approved by the Geotechnical Engineer prior to importing the soils to the project site.
4. Contractor shall operate under the terms and permits included in the Stormwater Pollution Prevention Plan (SWPPP) prepared for this project and permitted through the State of Missouri. Contractor shall employ a qualified person to conduct regular inspections of the site erosion control measures and document such inspections in the SWPPP document maintained by the Contractor.
5. All topsoil, vegetation, root structures, and deleterious materials shall be stripped from the ground surface prior to the placement of embankments. Contractor shall obtain the on-site geotechnical representative's acceptance of the existing ground surface materials and the proposed fill material prior to the placement of fill.
6. All proposed contour lines and spot elevations shown are finish ground elevations. Contractor shall account for pavement depths, building pads, topsoil, etc when grading the site.
7. All disturbed areas that are not to be paved (green spaces) shall be finish graded with a minimum of six inches of topsoil.
8. All excavation and embankments shall comply with the recommendations provided by the geotechnical engineer.
9. Prior to placing any concrete or asphalt pavement the contractor shall perform a proof roll of the pavement sub-grade with a fully loaded tandem axle dump truck. The proof roll shall be conducted in the presence of the Engineer and the on-site geotechnical representative. Areas that display rutting or pumping that are unsatisfactory to the engineer shall be re-worked and a follow-up proof roll shall be conducted prior to acceptance of the sub-grade for paving. The contractor may, at its own expense, stabilize the sub-grade using Class C fly ash or quicklime.
10. Finished grades shall not be steeper than 3:1.
11. All grading work shall be considered unclassified. No additional payments shall be made for rock excavation. Contractor shall satisfy himself as to any rock excavation required to accomplish the improvements shown hereon.
12. A 2.0% maximum cross slope shall be maintained on all pedestrian sidewalks and paths.



BENCHMARKS (DATUM: NAVD88)

BENCHMARK NUMBER: 1
ELEVATION= 1015.01

CHISELED SQUARE ON THE NORTH FACE OF A GRATE INLET, LOCATED ON THE SOUTH SIDE OF TUDOR ROAD, APPROXIMATELY 425 FEET EAST OF THE INTERSECTION OF TUDOR ROAD AND SLOAN STREET.

BENCHMARK NUMBER: 2
ELEVATION= 1031.01

CHISELED SQUARE ON THE NORTHWEST CORNER OF A PEDESTRIAN CROSSING SIGNAL, LOCATED ON THE SOUTHWEST CORNER OF THE INTERSECTION OF TUDOR ROAD AND DOUGLAS STREET.

FLOOD STATEMENT

The subject property lies within Flood Zone " X " (unshaded) (Areas determined to be outside the 0.2% annual chance floodplain.), as shown on the Jackson County, Missouri and Incorporated Areas Flood Insurance Rate Map (F.I.R.M.).

Map Number: 29095C0417G
Panel No: 417 of 625
Map Revised Date: January 20, 2017

NOTE: This statement is provided for informational purposes only and shall in no way constitute a basis for a flood certificate. No field work was performed to establish the boundaries of this zone. The information was derived by scaling the subject property on the above referenced map.

GRADING LEGEND

- 980 — FINISH GRADE MAJOR CONTOURS
- 982 — FINISH GRADE MINOR CONTOURS
- 980 — EXISTING GRADE MAJOR CONTOURS
- 982 — EXISTING GRADE MINOR CONTOURS
- PROPERTY LINE
- R/W — RIGHT-OF-WAY LINE
- STANDARD CURB & GUTTER
- DRY CURB & GUTTER
- ZERO HEIGHT CURB
- TRANSITION CURB
- RETAINING WALL

GRAPHIC SCALE
50 0 50

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

PACKAGE 1: SITE AND STRUCTURE

10 NE TUDOR ROAD
LEES SUMMIT, MO 64086

REVISION DATES:

01	ADDENDUM 01	2024-09-20
02	ADDENDUM 02	2024-10-30
03	ADDENDUM 03	2024-11-18
09	CCD 01	2025-01-29
12	ASI 05	2025-02-07
18	CCD 03	2025-05-05

STATE OF MISSOURI
MICHAEL T. MAKRIS
2025-05-05
NUMBER PE-2021035286
PROFESSIONAL ENGINEER

MICHAEL T. MAKRIS, PE
MO PE-2021035286

C3.0

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

OVERALL GRADING PLAN

DETAILED GRADING LEGEND

0000.00 FG	FINISHED GRADE ELEVATION
0000.00 TC	TOP OF CURB ELEVATION
0000.00 TP	TOP OF PAVEMENT ELEVATION
0000.00 TW	FG @ TOP OF RETAINING WALL
0000.00 BW	FG @ BOTTOM OF RETAINING WALL
0000.00 ME	MATCH EXISTING GRADE
0000.00 TE	TOP ELEVATION OF STRUCTURE
0000.00 XX HIGH POINT	HIGH POINT AT SPECIFIC CALLOUT
0000.00 XX LOW POINT	LOW POINT AT SPECIFIC CALLOUT
1.00%	SLOPE INDICATOR

NW SLOAN

NE TUDOR RD.

PROPOSED BUILDING FFE: 1010.0

PROPOSED BUILDING LOWER FFE: 1010.0 UPPER FFE: 1024.67

SEE ADA PARKING DETAIL SHEET C3.3

(MATCH LINE SEE SHEET C3.2)

GRAPHIC SCALE 20 0 20

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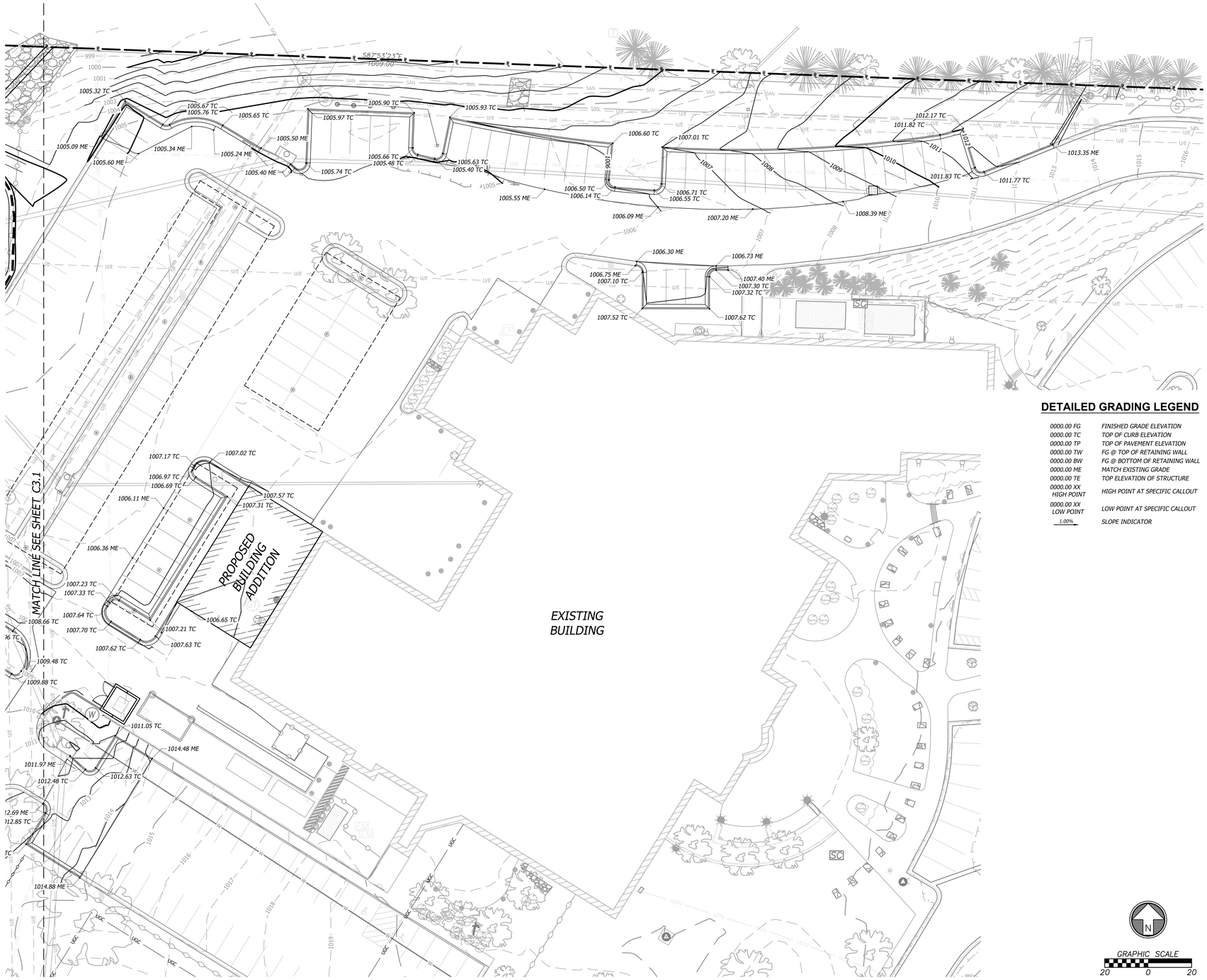
STATE OF MISSOURI
MICHAEL T. MAKRIS
NUMBER PE-2021035266
PROFESSIONAL ENGINEER
2025-05-05

MICHAEL T. MAKRIS, PE
MD PE-2021035266

C3.1

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

DETAILED GRADING PLAN



DETAILED GRADING LEGEND

0000.00 FG	FINISHED GRADE ELEVATION
0000.00 TC	TOP OF CURB ELEVATION
0000.00 TP	TOP OF PAVEMENT ELEVATION
0000.00 TW	FG @ TOP OF RETAINING WALL
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0000.00 TE	TOP ELEVATION OF STRUCTURE
0000.00 XX HIGH POINT	HIGH POINT AT SPECIFIC CALLOUT
0000.00 XX LOW POINT	LOW POINT AT SPECIFIC CALLOUT
1.00%	SLOPE INDICATOR

GRAPHIC SCALE
20 0 20

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MO PE-2021035286

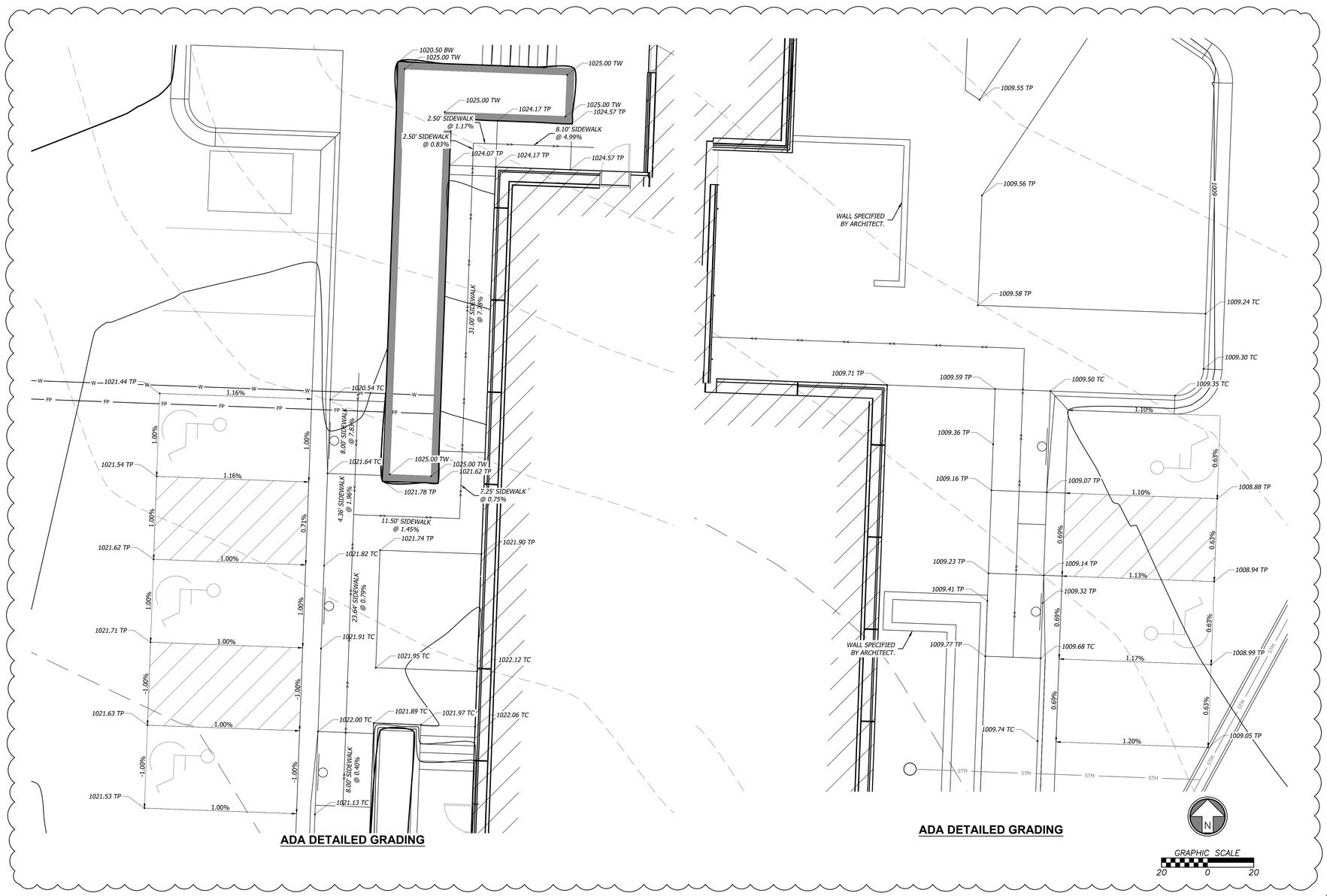
C3.2

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

DETAILED GRADING PLAN

DETAILED GRADING LEGEND

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0000.00 TP	TOP OF PAVEMENT ELEVATION
0000.00 TW	FG @ TOP OF RETAINING WALL
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0000.00 ME	MATCH EXISTING GRADE
0000.00 TE	TOP ELEVATION OF STRUCTURE
0000.00 XX HIGH POINT	HIGH POINT AT SPECIFIC CALLOUT
0000.00 XX LOW POINT	LOW POINT AT SPECIFIC CALLOUT
1.00%	SLOPE INDICATOR



ADA DETAILED GRADING

ADA DETAILED GRADING

18

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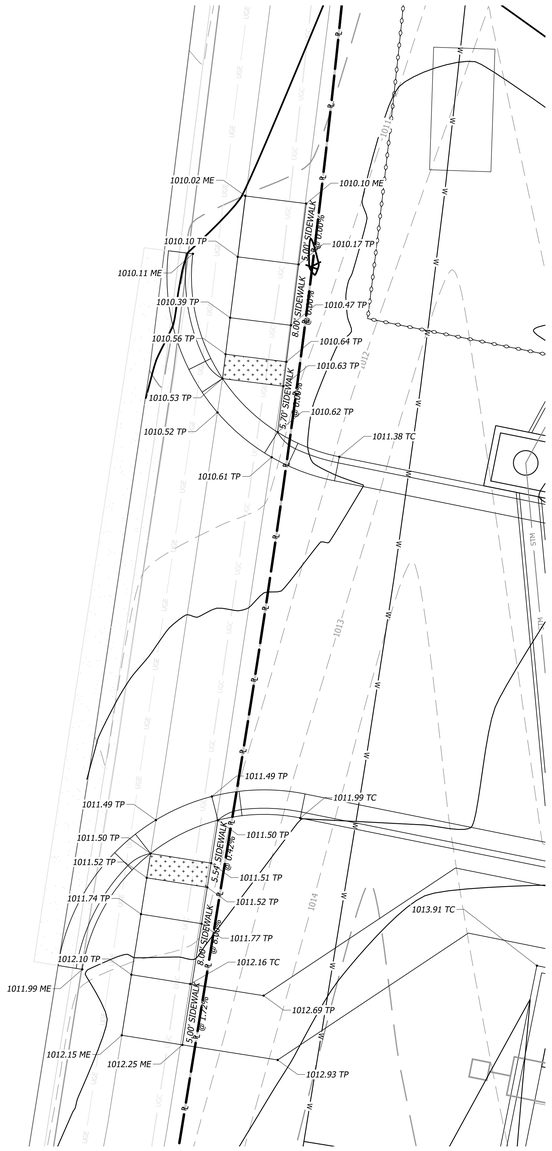
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NUMBER PE-2021035286
2025-05-05
PROFESSIONAL ENGINEER

MICHAEL T. MAKRIS, PE
MO PE-2021035286

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ISSUE DATE: AUGUST 30, 2024
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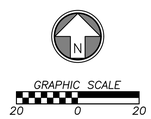
ADA DETAILED GRADING



ADA DETAILED GRADING - CROSSWALK

DETAILED GRADING LEGEND

0000.00 FG	*FINISHED GRADE ELEVATION*
0000.00 TC	*TOP OF CURB ELEVATION*
0000.00 TP	*TOP OF PAVEMENT ELEVATION*
0000.00 TW	*FG @ TOP OF RETAINING WALL*
0000.00 BW	*FG @ BOTTOM OF RETAINING WALL*
0000.00 ME	*MATCH EXISTING GRADE*
0000.00 TE	*TOP ELEVATION OF STRUCTURE*
0000.00 XX HIGH POINT	*HIGH POINT AT SPECIFIC CALLOUT*
0000.00 XX LOW POINT	*LOW POINT AT SPECIFIC CALLOUT*
1.00%	*SLOPE INDICATOR*



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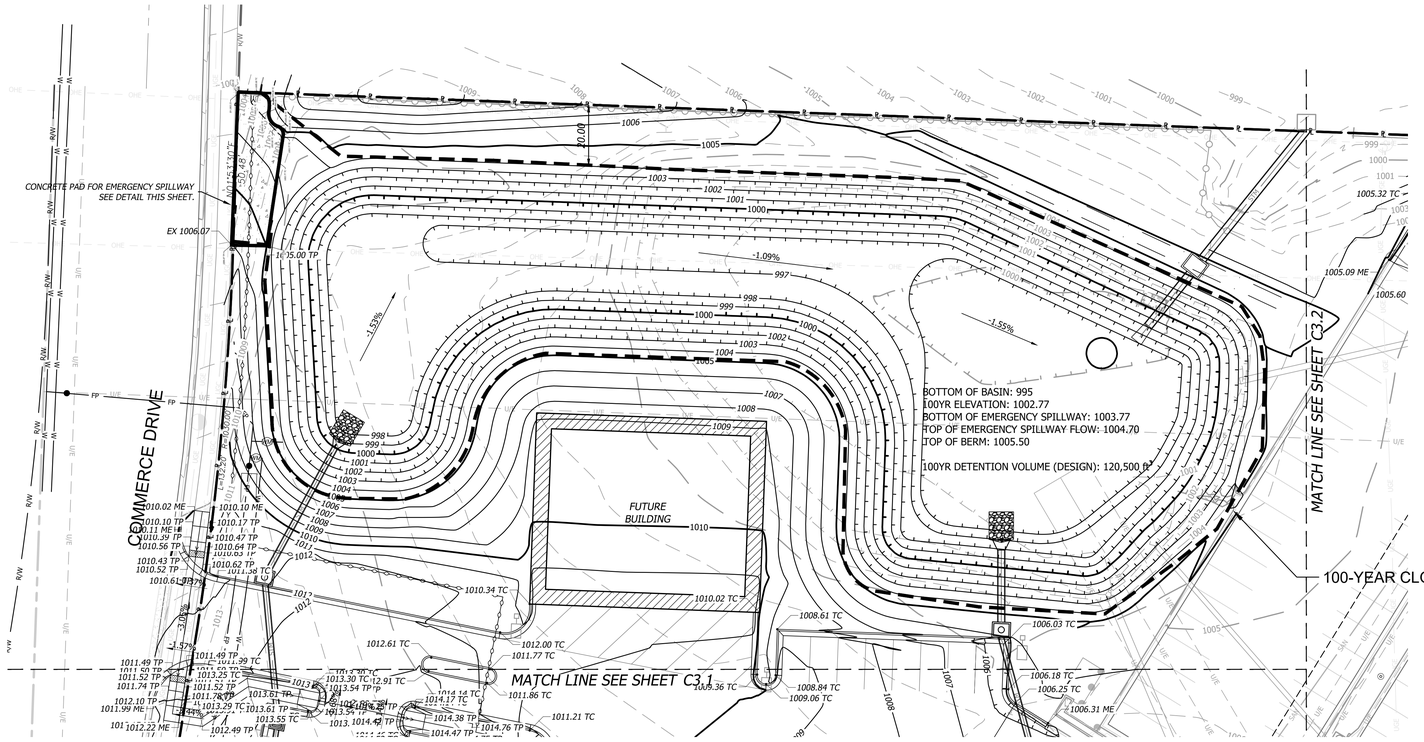
STATE OF MISSOURI
MICHAEL T. MAKRIS
2024-11-18
NUMBER PE-2021035286
PROFESSIONAL ENGINEER

03
MICHAEL T. MAKRIS, PE
MO PE-2021035286

C3.4

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

ADA DETAILED GRADING



DETAILED GRADING LEGEND

0000.00 FG	FINISHED GRADE ELEVATION
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0000.00 XX HIGH POINT	HIGH POINT AT SPECIFIC CALLOUT
0000.00 XX LOW POINT	LOW POINT AT SPECIFIC CALLOUT
1.00%	SLOPE INDICATOR

AS-BUILT CERTIFICATION

CONSTRUCTION SEQUENCE

SEDIMENT BASIN NOTE

GENERAL NOTES

GENERAL

1. *ALL STORM SEWER STRUCTURES SHALL BE PRECAST. CONCRETE PRE-CAST SHOP DRAWINGS SHALL BE PROVIDED TO THE ARCHITECT/ENGINEER FOR REVIEW.*
2. *DO NOT SCALE THESE DRAWINGS FOR DIMENSIONS OR CLEARANCES. ANY QUESTIONS REGARDING DIMENSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION.*
3. *THE FIRST DIMENSION LISTED IN THE CONSTRUCTION NOTES IS THE "L" DIMENSION. THE SECOND DIMENSION IS THE "W" DIMENSION.*
4. *RING & COVER TO BE EAST JORDAN IRON WORKS #00150230 (HEAVY DUTY) OR APPROVED EQUAL.*

CONCRETE

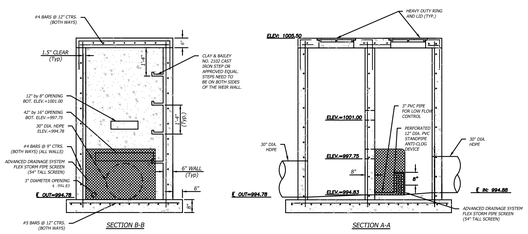
5. *CONCRETE USED IN THIS WORK SHALL BE KCMMBHK FOR ALL PRECAST STRUCTURAL COMPONENTS AS APPROVED BY THE KANSAS CITY METROPOLITAN MATERIALS BOARD, AND SHALL MEET THE REQUIREMENTS OF THE CITY TECHNICAL SPECIFICATIONS.*
6. *CONCRETE CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF STANDARD SPECIFICATIONS FOR STATE ROAD AND BRIDGE CONSTRUCTION, KANSAS DEPARTMENT OF TRANSPORTATION, LATEST EDITION.*
7. *INLET FLOORS SHALL BE SHAPED WITH NON-REINFORCED KCMMBHK CONCRETE INVERT TO PROVIDE SMOOTH FLOW.*
8. *BEVEL ALL EXPOSED EDGES WITH ¾" TRIANGULAR MOLDING.*

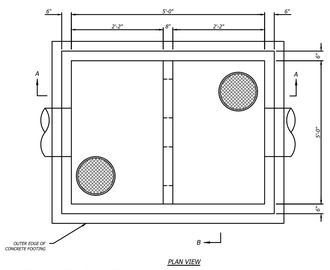
REINFORCING STEEL

9. *REINFORCING STEEL SHALL BE NEW BILLET, MINIMUM GRADE 40 AS PER ASTM A615, AND SHALL BE BENT COLD.*
10. *ALL DIMENSIONS RELATIVE TO REINFORCING STEEL ARE TO CENTERLINE OF BARS. 2" CLEARANCE SHALL BE PROVIDED THROUGHOUT UNLESS NOTED OTHERWISE. TOLERANCE OF ±1/8" SHALL BE PERMITTED.*
11. *ALL LAP SPLICES NOT SHOWN SHALL BE A MINIMUM OF 40 BAR DIAMETERS IN LENGTH.*
12. *ALL REINFORCING STEEL SHALL BE SUPPORTED ON FABRICATED STEEL BAR SUPPORTS @ 3'-0" MAXIMUM SPACING.*
13. *ALL DOWELS SHALL BE ACCURATELY PLACED AND SECURELY TIED IN PLACE PRIOR TO PLACEMENT OF BOTTOM SLAB CONCRETE. STICKING OF DOWELS INTO FRESH OR PARTIALLY HARDENED CONCRETE WILL NOT BE ACCEPTABLE.*

CONSTRUCTION

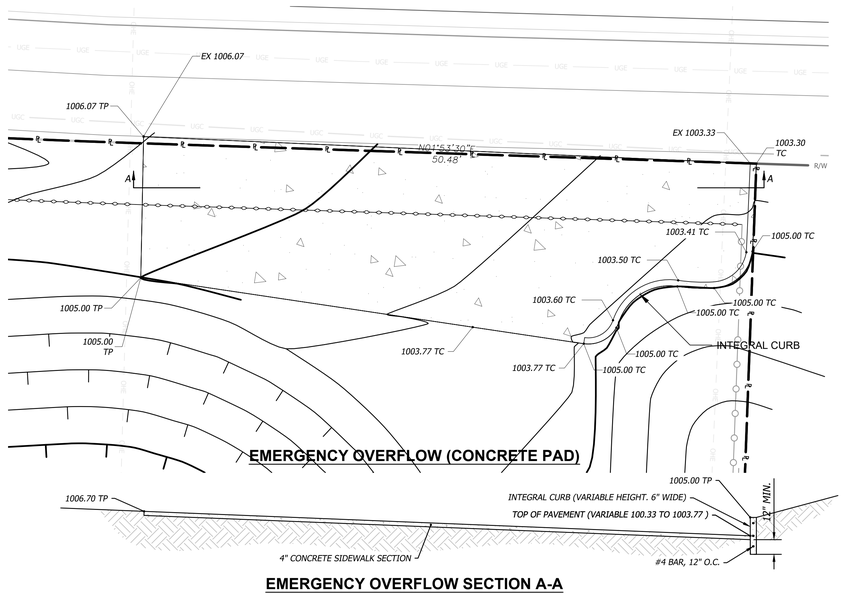
14. *THE BOTTOM SLAB SHALL BE AT LEAST 24 HOURS OLD BEFORE PLACING SIDEWALL CONCRETE. ALL SIDEWALL FORMS SHALL REMAIN IN PLACE A MINIMUM OF 24 HOURS AFTER SIDEWALLS ARE POURED BEFORE REMOVAL, AND AFTER REMOVAL SHALL BE IMMEDIATELY TREATED WITH MEMBRANE CURING COMPOUND.*
15. *PIPE CONNECTIONS TO PRECAST STRUCTURES SHALL HAVE A MINIMUM OF 6" OF CONCRETE AROUND THE ENTIRE PIPE WITHIN 2' OF THE STRUCTURE.*
16. *MATERIAL SELECTION AND COMPACTION REQUIREMENTS FOR BACKFILL AROUND STRUCTURES SHALL BE AS SPECIFIED IN THE CITY TECHNICAL SPECIFICATIONS.*





Detention Outlet Control Structure

Not to Scale



EMERGENCY OVERFLOW (CONCRETE PAD)

EMERGENCY OVERFLOW SECTION A-A

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

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REVISION DATES:

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MICHAEL T. MAKRIS
NUMBER PE-2021035286
2025-02-07
PROFESSIONAL ENGINEER

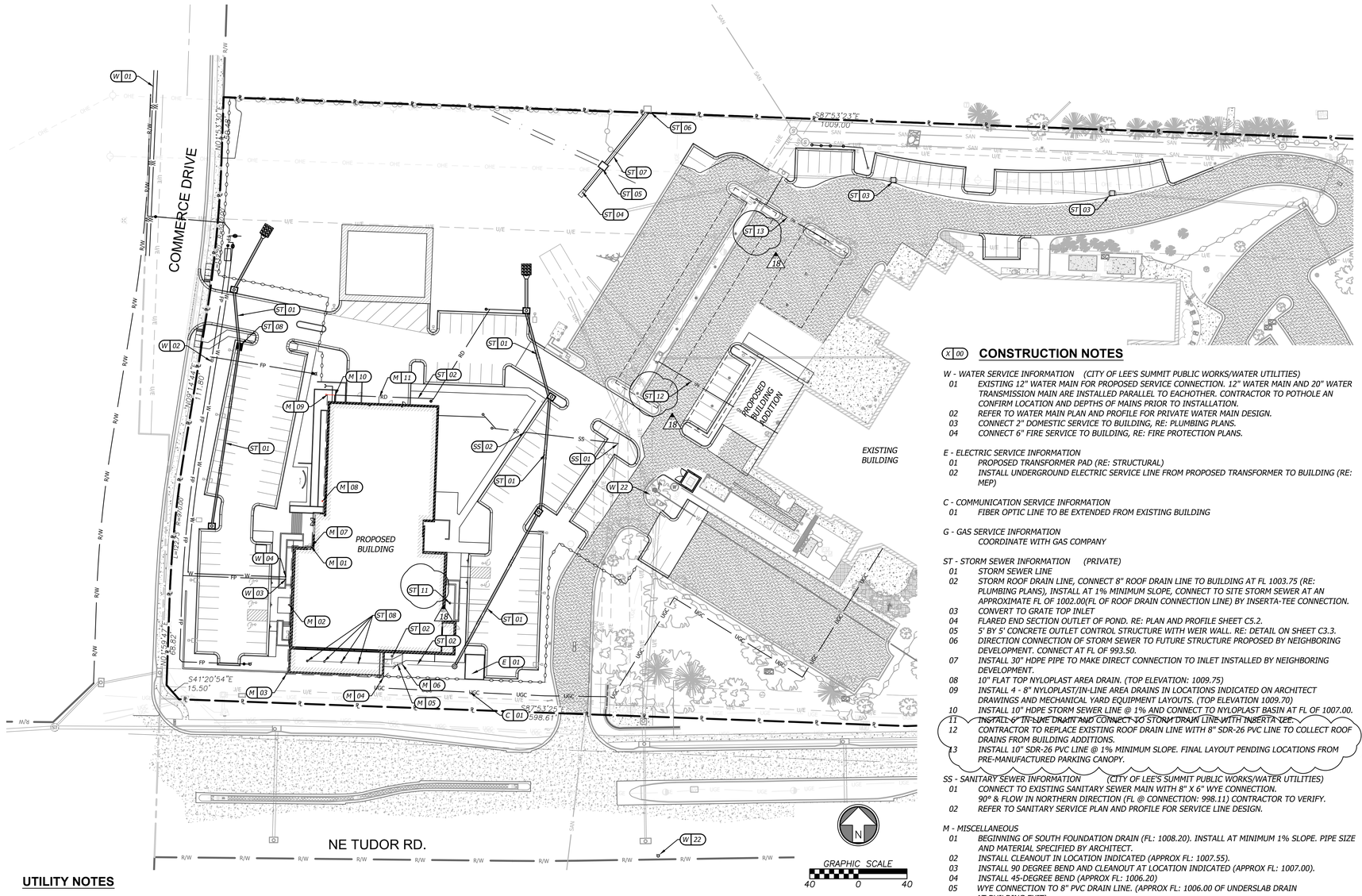
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12

C3.5

ISSUE DATE: AUGUST 30, 2024
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DETENTION POND (DETAIL GRADING)



UTILITY NOTES

1. Contractor shall refer to all specifications, guidelines, and installation drawings from utility contacts for the installation of all service lines.
2. The information shown on these plans concerning the type and location of underground utilities is not guaranteed to be accurate or all inclusive. The contractor is responsible for contacting all utility companies for field location of all underground utility lines prior to any excavation and for making his own verification as to type and location of underground utilities as may be necessary to avoid damage thereto.
3. Contractor to ensure 18" minimum separation between utilities at crossings. Contractor to call engineer if any conflicts between utilities are found.
4. Fire Line Notes:
   - 4.1. All private fire lines shall be installed in accordance with NFPA 24, and other applicable codes and standards.
   - 4.2. Contact the Fire Department to schedule inspections prior to private fire lines being backfilled.
   - 4.3. Contact the Fire Department to witness scheduled hydrostatic tests and flushes of private fire lines.
5. Stub all connections to within 5' of the building to provide connection into the building by mechanical/plumbing contractor.

ROOF DRAIN LEGEND

RD	PROPOSED ROOF LINE DRAIN
SSM	PROPOSED STORM SEWER LINE
R/W	RIGHT-OF-WAY LINE
℄	PROPERTY LINE
W	PROPOSED WATER LINE
SS	PROPOSED SANITARY SEWER LINE
GAS	PROPOSED NATURAL GAS LINE

CONSTRUCTION NOTES

W - WATER SERVICE INFORMATION (CITY OF LEE'S SUMMIT PUBLIC WORKS/WATER UTILITIES)

- *01 EXISTING 12" WATER MAIN FOR PROPOSED SERVICE CONNECTION. 12" WATER MAIN AND 20" WATER TRANSMISSION MAIN ARE INSTALLED PARALLEL TO EACHOTHER. CONTRACTOR TO POTHOLE AN CONFIRM LOCATION AND DEPTHS OF MAINS PRIOR TO INSTALLATION.*
- *02 REFER TO WATER MAIN PLAN AND PROFILE FOR PRIVATE WATER MAIN DESIGN.*
- *03 CONNECT 2" DOMESTIC SERVICE TO BUILDING, RE: PLUMBING PLANS.*
- *04 CONNECT 6" FIRE SERVICE TO BUILDING, RE: FIRE PROTECTION PLANS.*

E - ELECTRIC SERVICE INFORMATION

- *01 PROPOSED TRANSFORMER PAD (RE: STRUCTURAL)*
- *02 INSTALL UNDERGROUND ELECTRIC SERVICE LINE FROM PROPOSED TRANSFORMER TO BUILDING (RE: MEP)*

C - COMMUNICATION SERVICE INFORMATION

- *01 FIBER OPTIC LINE TO BE EXTENDED FROM EXISTING BUILDING*

G - GAS SERVICE INFORMATION

- *COORDINATE WITH GAS COMPANY*

ST - STORM SEWER INFORMATION (PRIVATE)

- *01 STORM SEWER LINE*
- *02 STORM ROOF DRAIN LINE, CONNECT 8" ROOF DRAIN LINE TO BUILDING AT FL 1003.75 (RE: PLUMBING PLANS), INSTALL AT 1% MINIMUM SLOPE, CONNECT TO SITE STORM SEWER AT AN APPROXIMATE FL OF 1002.00(FL OF ROOF DRAIN CONNECTION LINE) BY INSERTA-TEE CONNECTION.*
- *03 CONVERT TO GRATE TOP INLET*
- *04 FLARED END SECTION OUTLET OF POND. RE: PLAN AND PROFILE SHEET C5.2.*
- *05 5' BY 5' CONCRETE OUTLET CONTROL STRUCTURE WITH WEIR WALL. RE: DETAIL ON SHEET C3.3.*
- *06 DIRECTION CONNECTION OF STORM SEWER TO FUTURE STRUCTURE PROPOSED BY NEIGHBORING DEVELOPMENT. CONNECT AT FL OF 993.50.*
- *07 INSTALL 30" HDPE PIPE TO MAKE DIRECT CONNECTION TO INLET INSTALLED BY NEIGHBORING DEVELOPMENT.*
- *08 10" FLAT TOP NYLOPLAST AREA DRAIN. (TOP ELEVATION: 1009.75)*
- *09 INSTALL 4 - 8" NYLOPLAST/IN-LINE AREA DRAINS IN LOCATIONS INDICATED ON ARCHITECT DRAWINGS AND MECHANICAL YARD EQUIPMENT LAYOUTS. (TOP ELEVATION 1009.70)*
- *10 INSTALL 10" HDPE STORM SEWER LINE @ 1% AND CONNECT TO NYLOPLAST BASIN AT FL OF 1007.00.*
- *11 INSTALL 6" IN-LINE DRAIN AND CONNECT TO STORM DRAIN LINE WITH INSERTA TEE.*
- *12 CONTRACTOR TO REPLACE EXISTING ROOF DRAIN LINE WITH 8" SDR-26 PVC LINE TO COLLECT ROOF DRAINS FROM BUILDING ADDITIONS.*
- *13 INSTALL 10" SDR-26 PVC LINE @ 1% MINIMUM SLOPE. FINAL LAYOUT PENDING LOCATIONS FROM PRE-MANUFACTURED PARKING CANOPY.* (18)

SS - SANITARY SEWER INFORMATION (CITY OF LEE'S SUMMIT PUBLIC WORKS/WATER UTILITIES)

- *01 CONNECT TO EXISTING SANITARY SEWER MAIN WITH 8" X 6" WYE CONNECTION. 90° & FLOW IN NORTHERN DIRECTION (FL @ CONNECTION: 998.11) CONTRACTOR TO VERIFY.*
- *02 REFER TO SANITARY SERVICE PLAN AND PROFILE FOR SERVICE LINE DESIGN.*

M - MISCELLANEOUS

- *01 BEGINNING OF SOUTH FOUNDATION DRAIN (FL: 1008.20). INSTALL AT MINIMUM 1% SLOPE. PIPE SIZE AND MATERIAL SPECIFIED BY ARCHITECT.*
- *02 INSTALL CLEANOUT IN LOCATION INDICATED (APPROX FL: 1007.55).*
- *03 INSTALL 90 DEGREE BEND AND CLEANOUT AT LOCATION INDICATED (APPROX FL: 1007.00).*
- *04 INSTALL 45-DEGREE BEND (APPROX FL: 1006.20)*
- *05 WYE CONNECTION TO 8" PVC DRAIN LINE. (APPROX FL: 1006.00 OF UNDERSLAB DRAIN AT BUILDING EXIT)*
- *06 CONNECT UNDERSLAB DRAIN TO 8" PVC ROOF DRAIN LINE. (APPROX FL: 1006.00)*
- *07 BEGINNING OF NORTH FOUNDATION DRAIN (FL: 1009.27). INSTALL AT A MINIMUM 1% SLOPE. PIPE SIZE AND MATERIAL SPECIFIED BY ARCHITECT.*
- *08 INSTALL CLEANOUT IN LOCATION INDICATED (APPROX FL: 1008.32).*
- *09 INSTALL 90 DEGREE BEND AND CLEAN OUT AT LOCATION INDICATED. (APPROX FL: 1007.45).*
- *10 CONNECT TO EXISTING 8" ROOF DRAIN LINE WITH TEE CONNECTION. (FOUNDATION DRAIN APPROX FL: 1007.39)*
- *11 CONNECT UNDERSLAB DRAIN TO 8" PVC ROOF DRAIN LINE. (APPROX FL: 1007.25 OF UNDERSLAB DRAIN AT BUILDING EXIT)*

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15	ASI 08	2025-03-10
18	CCD 03	2025-05-05

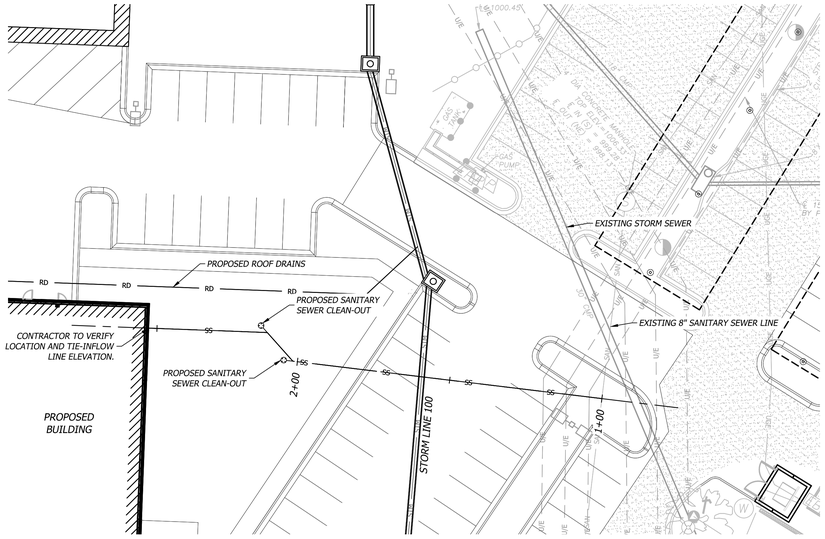
STATE OF MISSOURI
MICHAEL T. MAKRIS
NUMBER PE-2021035286
PROFESSIONAL ENGINEER
2025-05-05

MICHAEL T. MAKRIS, PE
MO PE-2021035286

C4.0

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

UTILITY PLAN



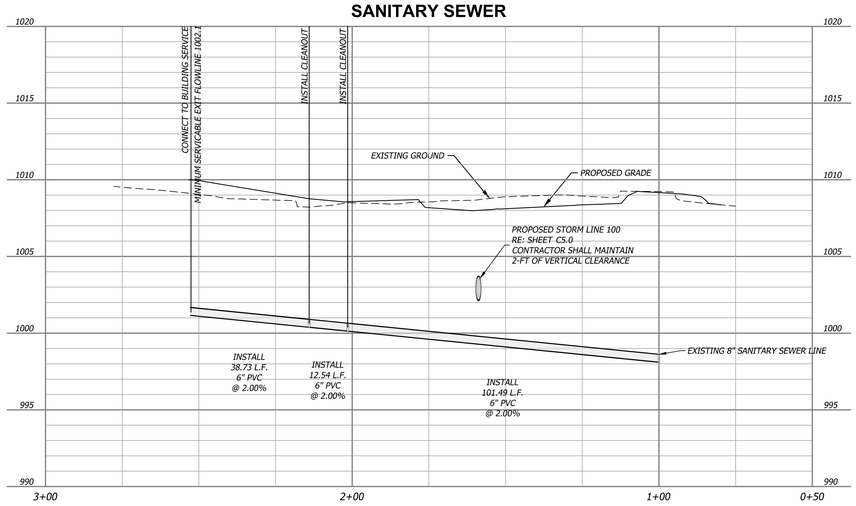
STORM NOTE

All Northings, Eastings, and alignment stationing for storm structures are to center of structure unless stated otherwise.

N

GRAPHIC SCALE
20 0 20

SANITARY SEWER



20 0 20
4
0
PROFILE
GRAPHIC SCALE

SANITARY PROFILE NOTE

SANITARY PROFILE IS BASED ON MINIMUM SERVICEABLE ELEVATION FOR EXIT OF BUILDING SERVICE. CONTRACTOR SHALL MAINTAIN FIELD REDLINES OF CONSTRUCTED ELEVATIONS.

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

PACKAGE 1: SITE AND STRUCTURE

10 NE TUDOR ROAD
LEES SUMMIT, MO 64086

REVISION DATES:

01	ADDENDUM 01	2024-09-20
02	ADDENDUM 02	2024-10-30
03	ADDENDUM 03	2024-11-18

STATE OF MISSOURI
MICHAEL T. MAKRIS
NUMBER PE-2021035286
PROFESSIONAL ENGINEER
2024-11-18

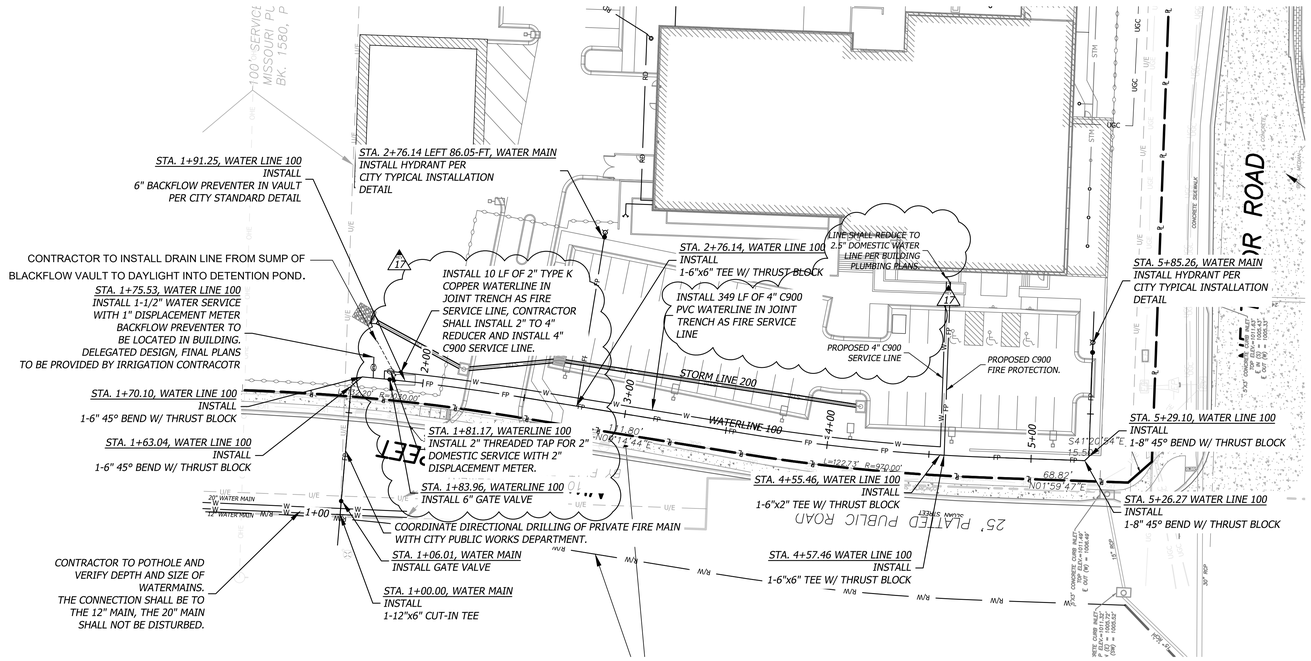
03

MICHAEL T. MAKRIS, PE
MO PE-2021035286

C4.1

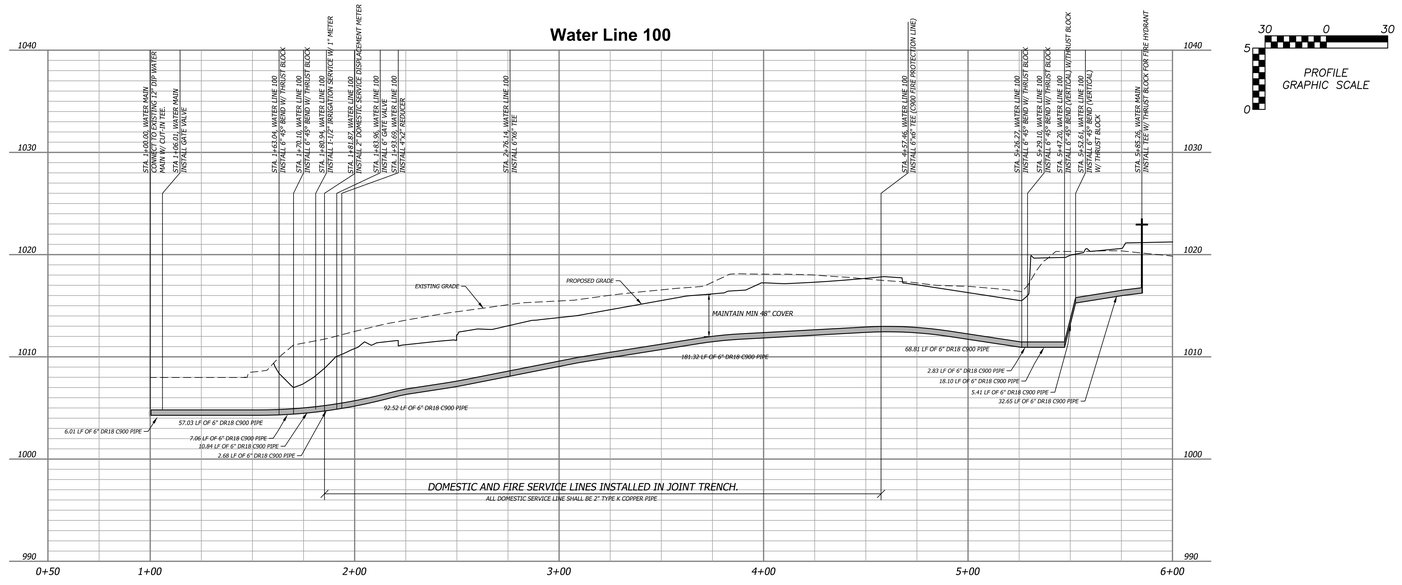
ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

SANITARY SEWER PLAN & PROFILE



GENERAL NOTES:

1. All northings, eastings, and alignment stationing for pressure network are to center of pressure network fitting/appurtences unless stated otherwise.
2. All DIP material shall be conforming to the current AWWA Specification C151, Class 50. Joints shall be mechanical or push on type.
3. Maintain a minimum of 18" vertical separation between waterline and storm sewer line.
4. All PVC pipe material shall be conforming to the current AWWA Specification C900, Class 150, DR 18.



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12	ASI 05	2025-02-07
17	ASI 10	2025-04-28

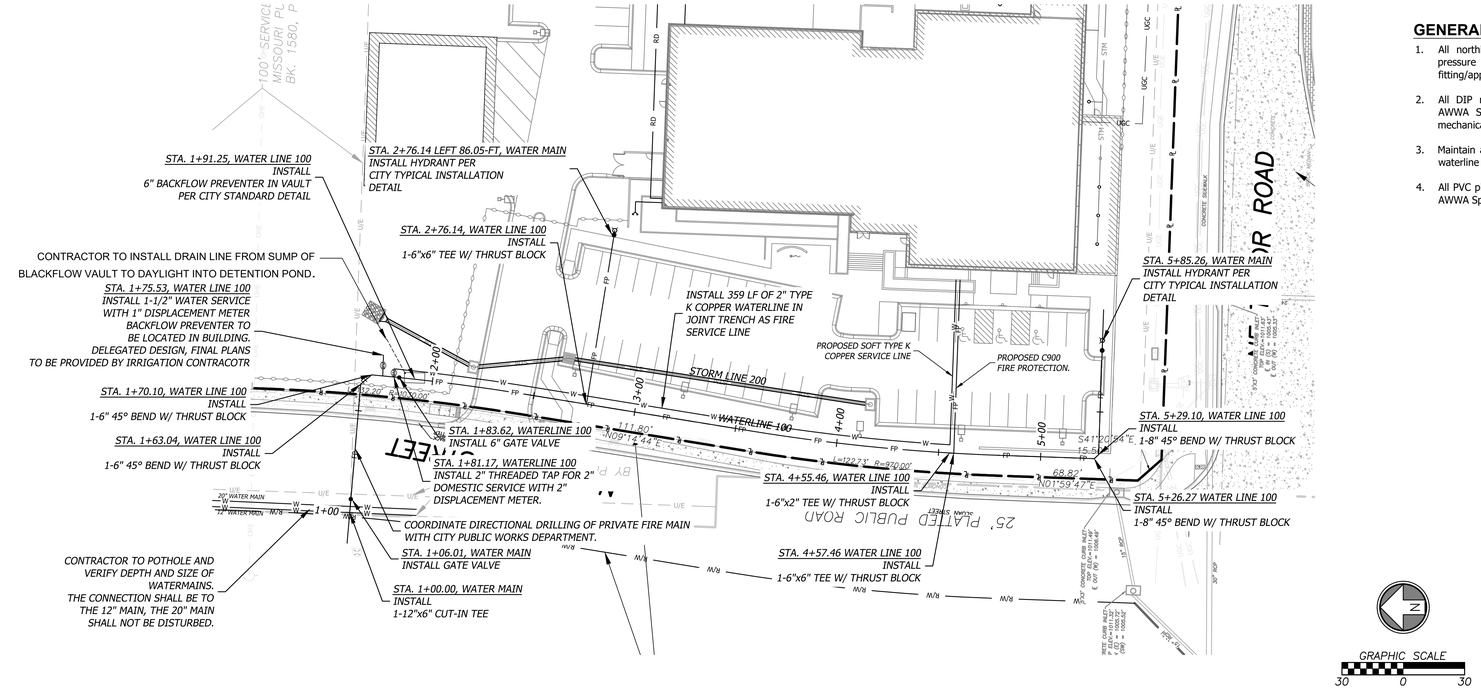
STATE OF MISSOURI
MICHAEL T. MAKRIS
2025-04-28
NUMBER PE-2021035286
PROFESSIONAL ENGINEER

MICHAEL T. MAKRIS, PE
MO PE-2021035286

C4.2

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

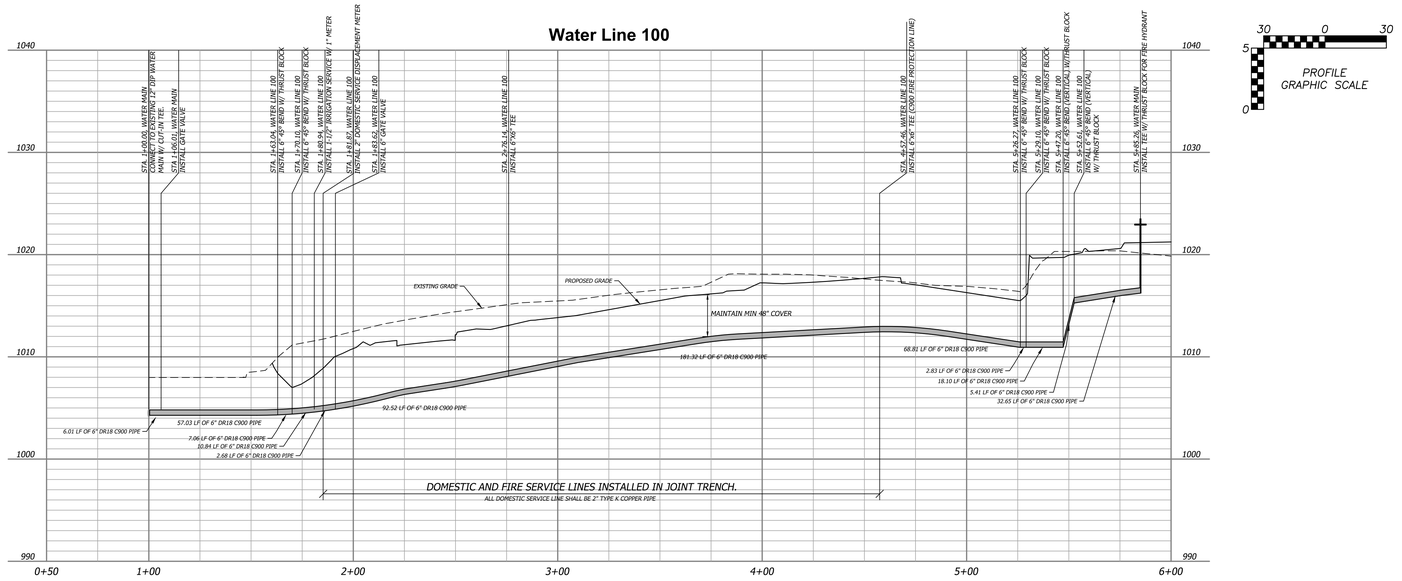
WATER PLAN & PROFILE



GENERAL NOTES:

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2. All DIP material shall be conforming to the current AWWA Specification C151, Class 50. Joints shall be mechanical or push on type.
3. Maintain a minimum of 18" vertical separation between waterline and storm sewer line.
4. All PVC pipe material shall be conforming to the current AWWA Specification C900, Class 150, DR 18.

GRAPHIC SCALE
30 0 30



30 0 30
5
0
PROFILE
GRAPHIC SCALE

12

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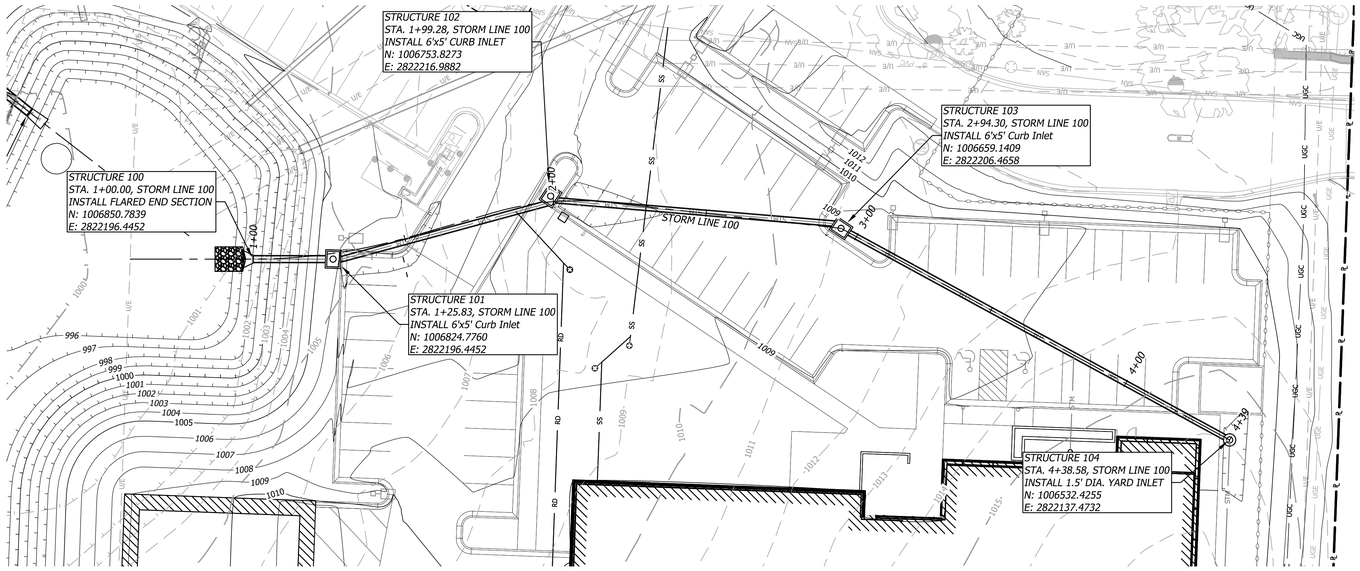
STATE OF MISSOURI
MICHAEL T. MAKRIS
NUMBER PE-2021035286
2025-02-07
PROFESSIONAL ENGINEER

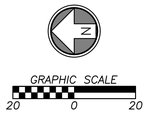
MICHAEL T. MAKRIS, PE
MO PE-2021035286

C4.2

ISSUE DATE: AUGUST 30, 2024
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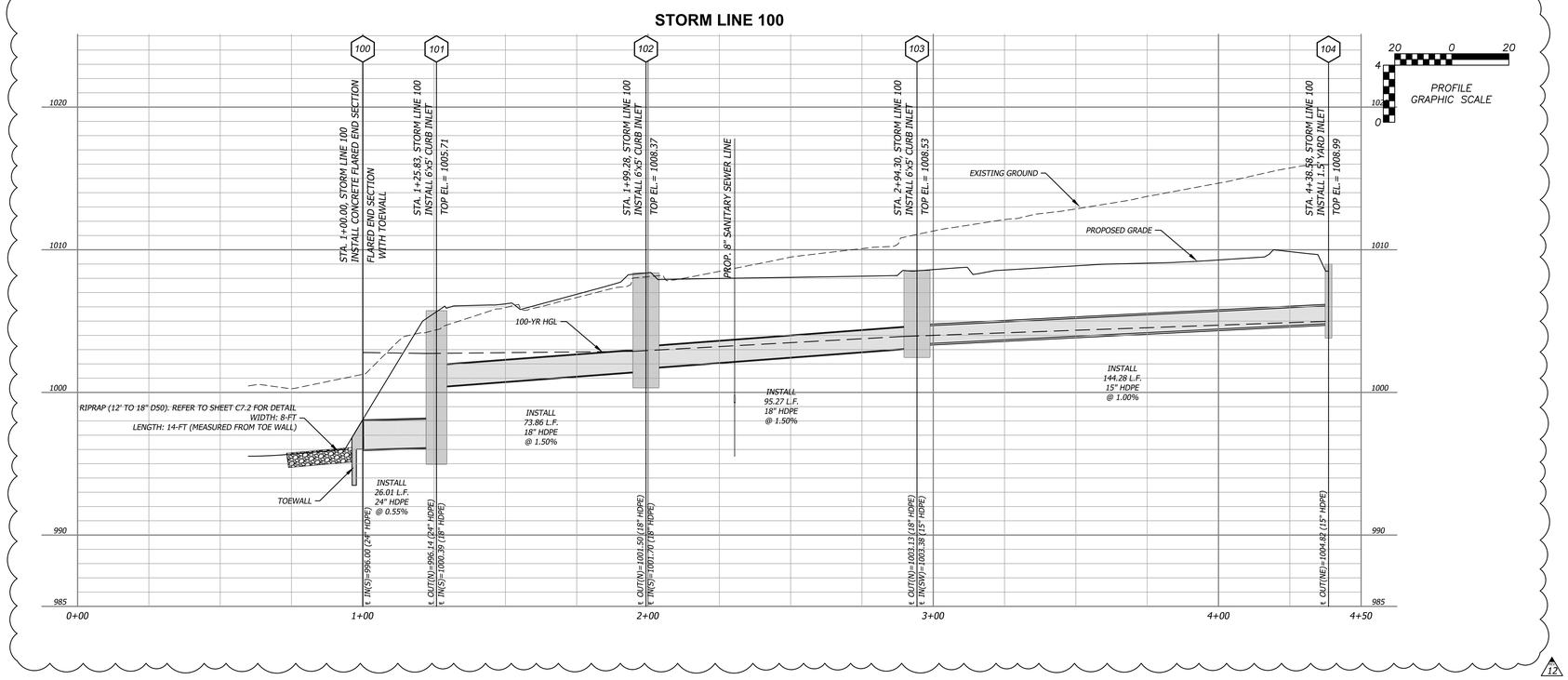
WATER PLAN & PROFILE





STORM NOTE

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MICHAEL T. MAKRIS
NUMBER PE-2021035286
PROFESSIONAL ENGINEER
2025-02-07

MICHAEL T. MAKRIS, PE
MO PE-2021035286

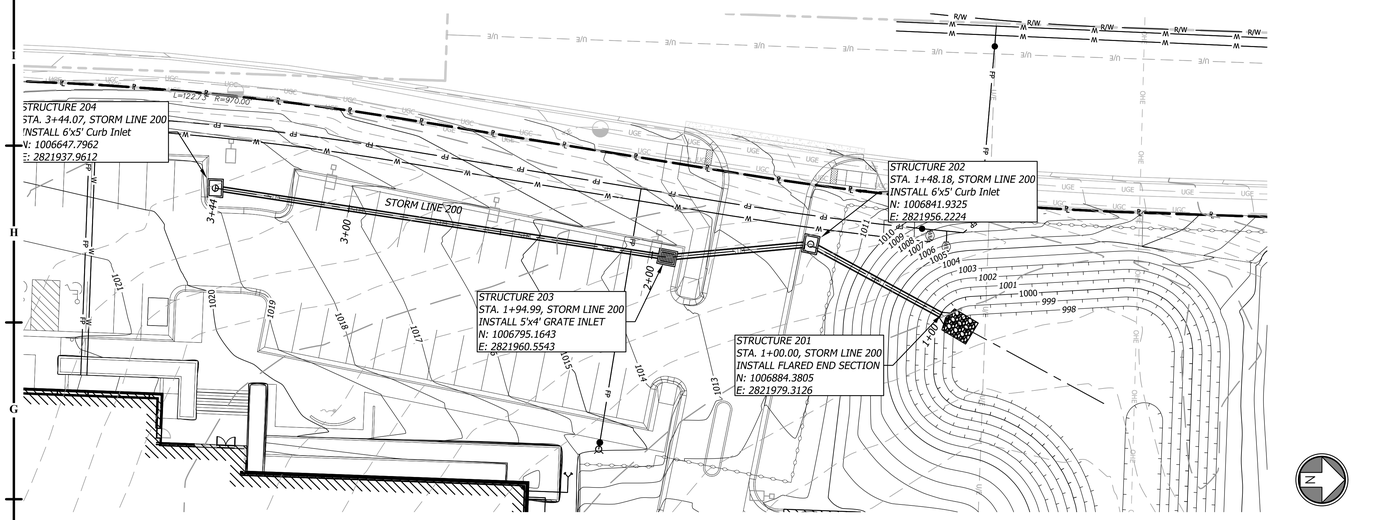
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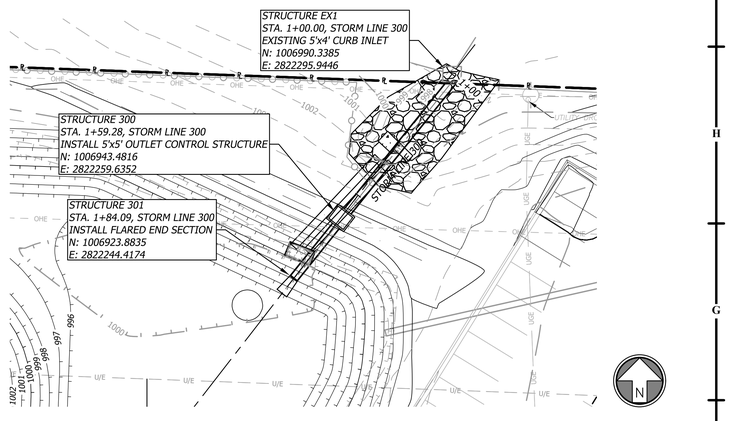
ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

STORM PLAN & PROFILE

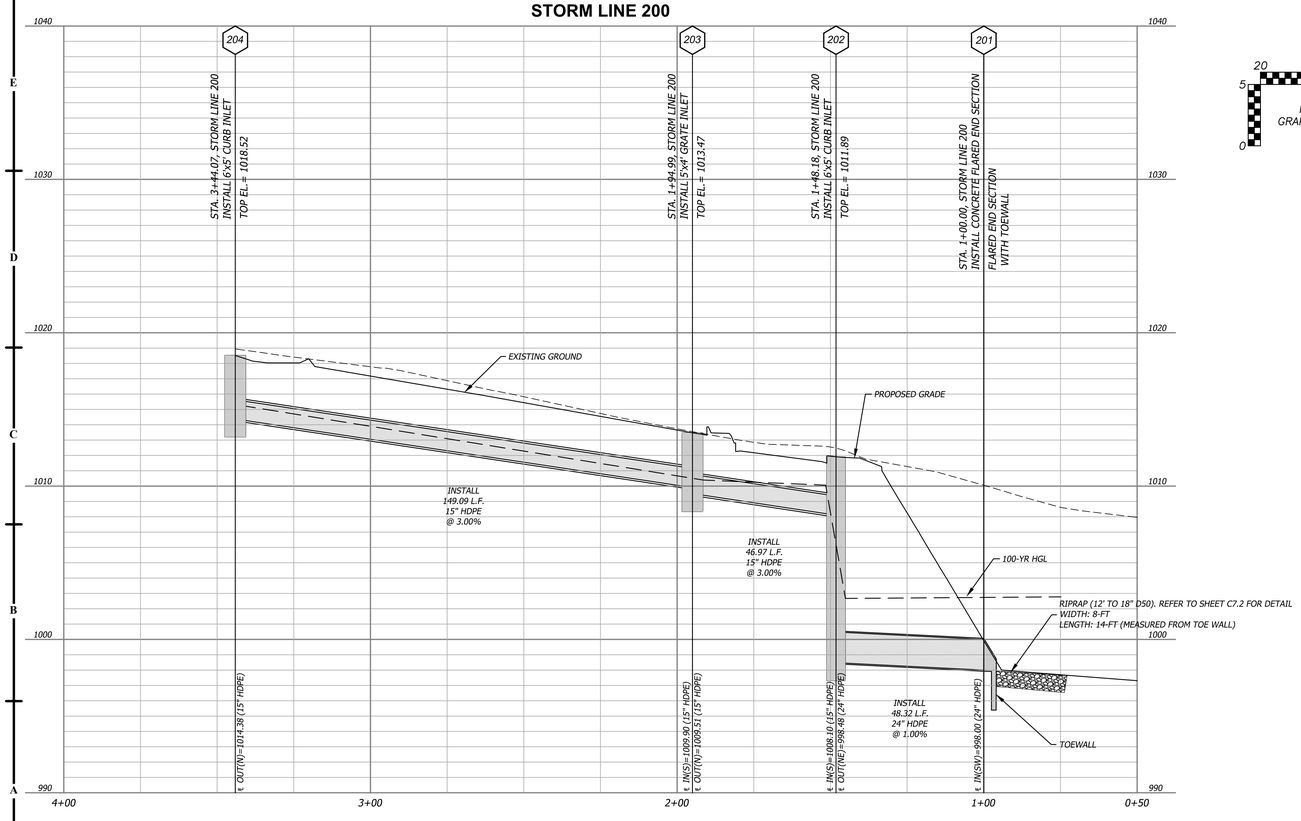
STORM NOTE

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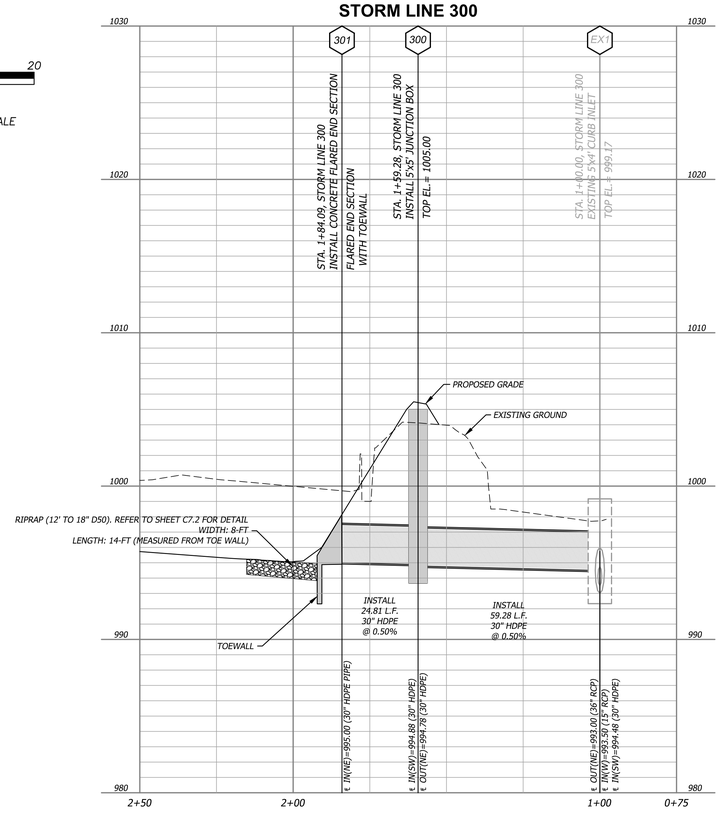




STORM LINE 200



STORM LINE 300



PROFILE GRAPHIC SCALE
20 0 20
5
0

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

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LEES SUMMIT, MO 64086

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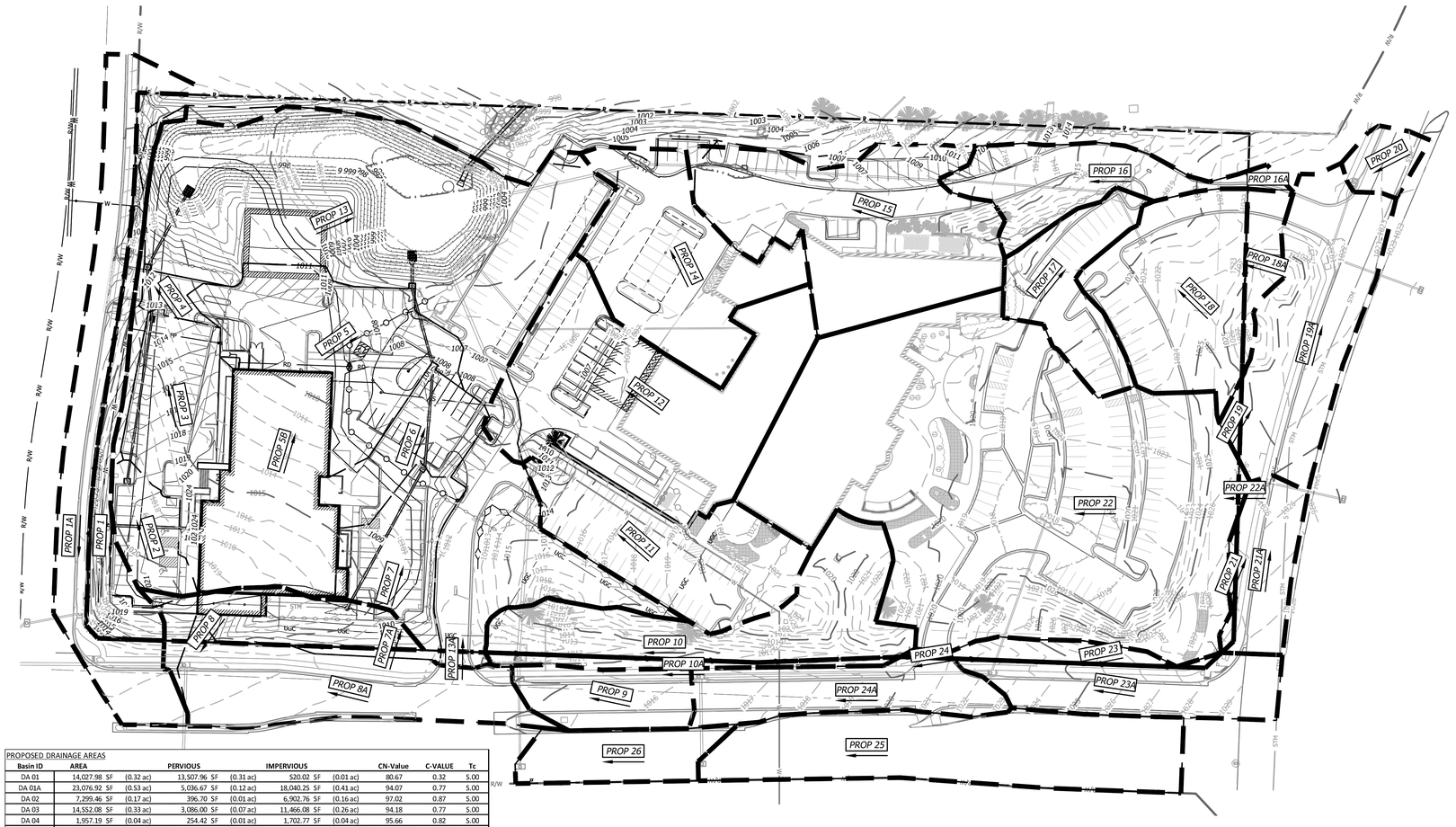
STATE OF MISSOURI
MICHAEL T. MAKRIS
NUMBER PE-2021035266
PROFESSIONAL ENGINEER
2025-02-07

MICHAEL T. MAKRIS, PE
MO PE-2021035266

C5.1

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

STORM PLAN & PROFILE



PROPOSED DRAINAGE AREAS

Basin ID	AREA		PERVIOUS		IMPERVIOUS		CN-Value	C-VALUE	Tc
DA 01	14,027.98 SF	(0.32 ac)	13,507.96 SF	(0.31 ac)	520.02 SF	(0.01 ac)	80.67	0.32	5.00
DA 01A	23,076.92 SF	(0.53 ac)	5,036.67 SF	(0.12 ac)	18,040.25 SF	(0.41 ac)	94.07	0.77	5.00
DA 02	7,299.46 SF	(0.17 ac)	396.70 SF	(0.01 ac)	6,902.76 SF	(0.16 ac)	97.02	0.87	5.00
DA 03	14,552.08 SF	(0.33 ac)	3,086.00 SF	(0.07 ac)	11,466.08 SF	(0.26 ac)	94.18	0.77	5.00
DA 04	1,957.19 SF	(0.04 ac)	254.42 SF	(0.01 ac)	1,702.77 SF	(0.04 ac)	95.66	0.82	5.00
DA 05	22,611.15 SF	(0.52 ac)	6,936.70 SF	(0.16 ac)	15,674.45 SF	(0.36 ac)	92.48	0.72	5.00
DA 05B	22,976.29 SF	(0.53 ac)	000.00 SF	(0.00 ac)	22,976.29 SF	(0.53 ac)	98.00	0.90	5.00
DA 06	9,306.97 SF	(0.21 ac)	925.83 SF	(0.02 ac)	8,381.14 SF	(0.19 ac)	96.21	0.84	5.00
DA 07	16,975.86 SF	(0.39 ac)	8,587.40 SF	(0.20 ac)	8,388.46 SF	(0.19 ac)	88.89	0.60	5.00
DA 07A	970.05 SF	(0.02 ac)	970.05 SF	(0.02 ac)	000.00 SF	(0.00 ac)	80.00	0.30	5.00
DA 08	352.15 SF	(0.01 ac)	352.15 SF	(0.01 ac)	000.00 SF	(0.00 ac)	80.00	0.30	5.00
DA 08A	19,121.21 SF	(0.44 ac)	4,941.76 SF	(0.11 ac)	14,179.45 SF	(0.33 ac)	93.35	0.74	5.00
DA 09	8,360.61 SF	(0.19 ac)	3,141.70 SF	(0.07 ac)	5,218.90 SF	(0.12 ac)	91.24	0.67	5.00
DA 10	21,721.11 SF	(0.50 ac)	21,110.87 SF	(0.48 ac)	610.24 SF	(0.01 ac)	80.51	0.32	5.00
DA 10A	2,957.19 SF	(0.07 ac)	2,957.19 SF	(0.07 ac)	000.00 SF	(0.00 ac)	80.00	0.30	5.00
DA 11	20,767.36 SF	(0.48 ac)	4,447.32 SF	(0.10 ac)	16,320.04 SF	(0.37 ac)	94.15	0.77	5.00
DA 12	36,472.72 SF	(0.84 ac)	2,383.86 SF	(0.05 ac)	34,088.86 SF	(0.78 ac)	96.82	0.86	5.00
DA 13	79,271.39 SF	(1.82 ac)	55,914.99 SF	(1.28 ac)	23,356.41 SF	(0.54 ac)	85.30	0.48	5.00
DA 13A	585.81 SF	(0.01 ac)	194.90 SF	(0.00 ac)	390.91 SF	(0.01 ac)	92.01	0.70	5.00
DA 14	23,415.46 SF	(0.54 ac)	1,575.29 SF	(0.04 ac)	21,840.17 SF	(0.50 ac)	96.79	0.86	5.00
DA 15	32,909.54 SF	(0.76 ac)	5,014.71 SF	(0.12 ac)	27,894.84 SF	(0.64 ac)	95.26	0.81	5.00
DA 16	12,282.50 SF	(0.28 ac)	4,615.27 SF	(0.11 ac)	7,667.23 SF	(0.18 ac)	91.24	0.67	5.00
DA 16A	641.15 SF	(0.01 ac)	452.19 SF	(0.01 ac)	188.96 SF	(0.00 ac)	85.30	0.48	5.00
DA 17	11,909.74 SF	(0.27 ac)	3,189.25 SF	(0.07 ac)	8,720.49 SF	(0.20 ac)	93.18	0.74	5.00
DA 18	21,451.70 SF	(0.49 ac)	12,963.09 SF	(0.30 ac)	8,488.61 SF	(0.19 ac)	87.12	0.54	5.00
DA 18A	3,825.88 SF	(0.09 ac)	2,920.72 SF	(0.07 ac)	905.16 SF	(0.02 ac)	84.26	0.44	5.00
DA 19	729.59 SF	(0.02 ac)	729.59 SF	(0.02 ac)	000.00 SF	(0.00 ac)	80.00	0.30	5.00
DA 19A	23,442.66 SF	(0.54 ac)	10,216.32 SF	(0.23 ac)	13,226.33 SF	(0.30 ac)	90.16	0.64	5.00
DA 20	3,384.09 SF	(0.08 ac)	573.85 SF	(0.01 ac)	2,810.23 SF	(0.06 ac)	94.95	0.80	5.00
DA 21	754.26 SF	(0.02 ac)	650.90 SF	(0.01 ac)	103.36 SF	(0.00 ac)	82.47	0.38	5.00
DA 21A	8,206.78 SF	(0.19 ac)	1,960.56 SF	(0.05 ac)	6,246.22 SF	(0.14 ac)	93.70	0.76	5.00
DA 22	101,945.41 SF	(2.34 ac)	36,942.36 SF	(0.85 ac)	65,003.06 SF	(1.49 ac)	91.48	0.68	5.00
DA 22A	274.53 SF	(0.01 ac)	274.53 SF	(0.01 ac)	000.00 SF	(0.00 ac)	80.00	0.30	5.00
DA 23	3,573.43 SF	(0.08 ac)	3,519.34 SF	(0.08 ac)	054.09 SF	(0.00 ac)	80.27	0.31	5.00
DA 23A	12,813.96 SF	(0.29 ac)	2,626.09 SF	(0.06 ac)	10,187.87 SF	(0.23 ac)	94.31	0.78	5.00
DA 24	247.27 SF	(0.01 ac)	039.97 SF	(0.00 ac)	207.29 SF	(0.00 ac)	95.09	0.80	5.00
DA 24A	12,671.21 SF	(0.29 ac)	2,758.35 SF	(0.06 ac)	9,912.86 SF	(0.23 ac)	94.08	0.77	5.00
DA 25	26,742.33 SF	(0.61 ac)	559.28 SF	(0.01 ac)	26,183.05 SF	(0.60 ac)	97.62	0.89	5.00
DA 26	8,119.49 SF	(0.19 ac)	145.86 SF	(0.00 ac)	7,973.63 SF	(0.18 ac)	97.68	0.89	5.00

DRAINAGE LEGEND

- DRAINAGE AREA BOUNDARY
- Field — AREA/DIRECTION OF DRAINAGE BOUNDARY
- 980 — PROPOSED FINISH GRADE MAJOR CONTOUR
- 982 — PROPOSED FINISH GRADE MINOR CONTOUR
- 980 — EXISTING GRADE MAJOR CONTOUR
- 982 — EXISTING GRADE MINOR CONTOUR
- STM — PROPOSED STORM SEWER LINE
- RD — PROPOSED ROOF LINE DRAIN
- PL — PROPERTY LINE
- R/W — RIGHT-OF-WAY LINE

GRAPHIC SCALE
50 0 50

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STATE OF MISSOURI
MICHAEL T. MAKRIS
2024.11.18
NUMBER PE-2021035286
PROFESSIONAL ENGINEER

03
MICHAEL T. MAKRIS, PE
MO PE-2021035286

C5.2

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

PROPOSED DRAINAGE MAP

10-YEAR STORM CALCULATIONS

Design Storm:	10
"K" Value:	1.00
"F" Factor:	1.00

Runoff Calculations														Pipe Properties													Design Checks		
Inlet #	Area (acres)	"C" Value	Cumul. Area (acres)	Cumul. CxA	Tc	Intensity	Runoff To Inlet	Cumul. Runoff	Pipe Cap.	Pipe Vel.	Up Piped Inlets	Up Piped Inlets	Up Area (acres)	Up CxA	Up Inlet	Down Inlet	Pipe Type	"n" Value	Pipe Size	Length	Slope %	Drop In Inlet	FL Up	FL Down	Inlet Top	HGL Elev.	Pipe Depth Check	Head-Water Check	Station
LINE 100																									DS TAILWATER @ STR #	1002.75			
101	1.05	0.81	1.65	1.26	5.1	7.33	6.23	9.24	21.22	6.76			0.00	0.00	101		PEP	0.012	24	19.22	0.75	0.50	999.89	999.75	1005.71	1002.85	3.57	Ok	19.22
102	0.21	0.84	0.60	0.41	5.1	7.34	1.29	3.01	13.94	7.89			0.00	0.00	102	101	PEP	0.012	18	10.00	1.50	0.50	1000.54	1000.39	1008.37	1002.88	5.58	Ok	29.22
103	0.20	0.60	0.39	0.23	5.0	7.34	0.88	1.72	13.94	7.89			0.00	0.00	103	102	PEP	0.012	18	10.00	1.50	0.50	1001.19	1001.04	1008.53	1002.89	5.34	Ok	39.22
104	0.19	0.60	0.19	0.11	5.0	7.35	0.84	0.84	7.00	5.70			0.00	0.00	104	103	PEP	0.012	15	10.00	1.00	N/A	1001.79	1001.69	1008.99	1002.89	5.70	Ok	49.22
LINE 200																									DS TAILWATER @ STR #	1002.75			
201	0.04	0.82	0.54	0.43	5.6	7.18	0.24	3.12	30.02	9.55			0.00	0.00	201		PEP	0.012	24	73.75	1.50	0.75	999.18	998.07	1011.89	1002.77	10.46	Ok	73.75
202	0.33	0.77	0.50	0.40	5.4	7.22	1.83	2.90	7.00	5.70			0.00	0.00	202	201	PEP	0.012	15	46.97	1.00	0.50	1000.40	999.93	1013.47	1002.90	11.07	Ok	120.72
203	0.17	0.87	0.17	0.15	5.0	7.35	1.09	1.09	7.00	5.70			0.00	0.00	203	202	PEP	0.012	15	149.09	1.00	N/A	1002.39	1000.90	1018.52	1002.94	14.63	Ok	269.81

100-YEAR STORM CALCULATIONS

Design Storm:	100
"K" Value:	1.25
"F" Factor:	1.00

Runoff Calculations														Pipe Properties												
Inlet #	Area (acres)	"C" Value	Cumul. Area (acres)	Cumul. CxA	Tc	Intensity	Runoff To Inlet	Cumul. Runoff	Pipe Cap.	Pipe Vel.	Up Piped Inlets	Up Piped Inlets	Up Area (acres)	Up CxA	Up Inlet	Down Inlet	Pipe Type	"n" Value	Pipe Size	Length	Slope %	Drop In Inlet	FL Up	FL Down	Inlet Top	HGL Elev.
LINE 100																									DS TAILWATER @ STR #	1002.75
101	1.05	0.81	1.65	1.26	5.1	10.29	10.94	16.22	21.22	6.76			0.00	0.00	101		PEP	0.012	24	19.22	0.75	0.50	999.89	999.75	1005.71	1003.05
102	0.21	0.84	0.60	0.41	5.1	10.30	2.27	5.28	13.94	7.89			0.00	0.00	102	101	PEP	0.012	18	10.00	1.50	0.50	1000.54	1000.39	1008.37	1003.14
103	0.20	0.60	0.39	0.23	5.0	10.31	1.55	3.02	13.94	7.89			0.00	0.00	103	102	PEP	0.012	18	10.00	1.50	0.50	1001.19	1001.04	1008.53	1003.17
104	0.19	0.60	0.19	0.11	5.0	10.32	1.47	1.47	7.00	5.70			0.00	0.00	104	103	PEP	0.012	15	10.00	1.00	N/A	1001.79	1001.69	1008.99	1003.18
LINE 200																									DS TAILWATER @ STR #	1002.75
201	0.04	0.82	0.54	0.43	5.6	10.09	0.41	5.48	30.02	9.55			0.00	0.00	201		PEP	0.012	24	73.75	1.50	0.75	999.18	998.07	1011.89	1002.81
202	0.33	0.77	0.50	0.40	5.4	10.14	3.22	5.10	7.00	5.70			0.00	0.00	202	201	PEP	0.012	15	46.97	1.00	0.50	1000.40	999.93	1013.47	1003.20
203	0.17	0.87	0.17	0.15	5.0	10.32	1.91	1.91	7.00	5.70			0.00	0.00	203	202	PEP	0.012	15	149.09	1.00	N/A	1002.39	1000.90	1018.52	1003.32

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

PACKAGE 1: SITE AND STRUCTURE

10 NE TUDOR ROAD
LEES SUMMIT, MO 64086

REVISION DATES:

01	ADDENDUM 01	2024-09-20
02	ADDENDUM 02	2024-10-30
03	ADDENDUM 03	2024-11-18

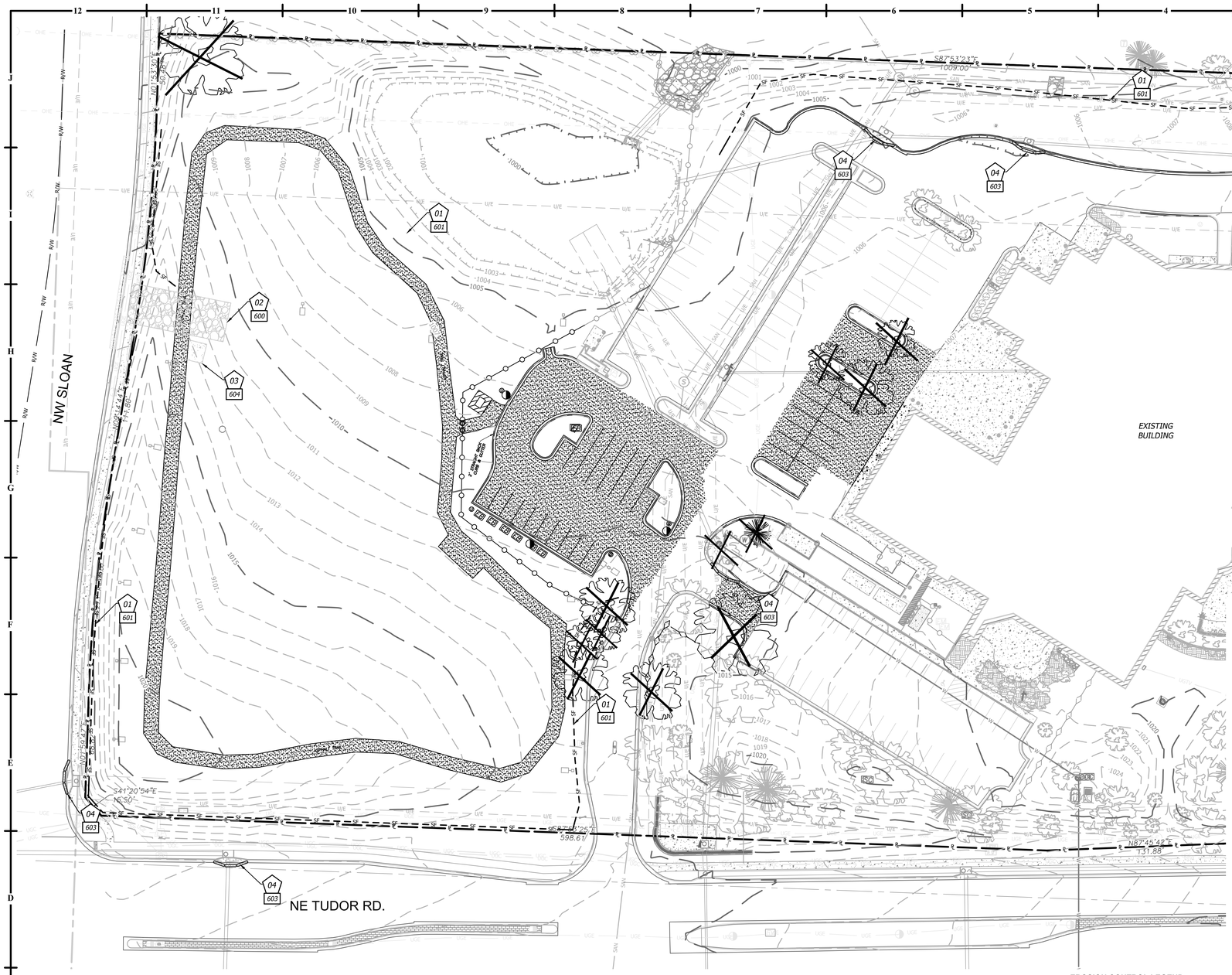
STATE OF MISSOURI
MICHAEL T. MAKRIS
NUMBER PE-2021035286
2024-11-18
PROFESSIONAL ENGINEER

MICHAEL T. MAKRIS, PE
MO PE-2021035286

C5.3

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

STORM CALCULATIONS



EROSION AND SEDIMENT CONTROL GENERAL NOTES

1. Prior to Land Disturbance activities, the contractor shall:
   - Delineate the outer limits of any natural stream corridor designated with construction fencing.
   - Install perimeter controls and request the inspection of the pre-construction erosion and sediment control measures designated on the approved erosion and sediment control plan. Land disturbance work shall not proceed until there is a satisfactory inspection.
   - Identify the limits of construction on the ground with easily recognizable indications such as construction staking, construction fencing, and placement of physical barriers or other means acceptable to the City inspector and in conformance with the erosion and sediment control plan.

2. The contractor shall comply with all requirements of the Storm Water Pollution Prevention Plan, including but not limited to:
   - The contractor shall seed, mulch, or otherwise stabilize any disturbed area where the land disturbance activity has ceased for more than 14 days.
   - The contractor shall perform inspections of erosion and sediment control measures at the following minimum intervals:
     - o During active construction phases - at least once per week
     - o During periods of inactivity - at least once per 14 days
     - o After each rainfall event of ½ inch or more - within 24 hours of the rain event
   - The contractor shall maintain an inspection log including the inspector's name, date of inspection, observations as to the effectiveness of the erosion and sediment control measures, actions necessary to correct deficiencies, when the deficiencies were corrected, and the signature of the person performing the inspection. The inspection log shall be available for review by the regulatory authority.
   - The contractor shall have the erosion and sediment control plan routinely updated to show all changes and amendments to the plan. A copy of the erosion and sediment control plan shall be kept on site and made available for review by the regulatory authority.

3. Unless otherwise noted in the plans, all seeding must conform to Division II-Construction and Materials Specification-Section 2150 published by the Kansas City Metropolitan Chapter of the American Public Works Association dated May 21, 2008. Permanent seeding shall be installed after completion of final grading except when seeding will occur outside of the acceptable seeding season as specified in Section 2150. When temporary seeding is installed, permanent seeding shall be installed at the next seeding season. Temporary seeding shall not be used as a stabilization measure for a period exceeding 12 months. The Permit will not be closed until permanent seeding has been established to a minimum of 70% density over the entire disturbed area.

4. The contractor shall maintain installed erosion and sediment control devices in a manner that preserves their effectiveness for preventing sediment from leaving the site or entering a sensitive area such as a natural stream corridor, areas of the site intended to be left undisturbed, a storm sewer, or an on-site drainage channel.

5. The contractor is responsible for providing erosion and sediment control for the duration of a project. If the City determines that the BMPs in place do not provide adequate erosion and sediment control at any time during the project, the contractor shall install additional or alternate measures that provide effective control.

6. Concrete wash or rinse water from concrete mixing equipment, tools and/or ready-mix trucks, tools, etc. may not be discharged into or be allowed to run directly into any existing water body or storm inlet. One or more locations for concrete wash out will be designated on site, such that discharges during concrete washout will be contained in a small area where waste concrete can solidify in place.

7. Chemicals or materials capable of causing pollution may only be stored onsite in their original container. Materials stored outside must be in closed and sealed water-proof containers and located outside of drainage ways or areas subject to flooding. Locks and other means to prevent or reduce vandalism shall be used. Spills will be reported as required by law and immediate actions taken to contain them.

8. Silt fences and erosion control BMPs which are shown along the back of curb must be installed within two weeks of curb backfill and prior to placement of base asphalt. Exact locations of these erosion control methods may be field adjusted to minimize conflicts with utility construction; however, anticipated disturbance by utility construction shall not delay installation.

9. Interior Silt Fence as necessary during construction. Portions may be limited as vegetation is established and hardscape is installed. Entire length may be installed at the contractor's option to aid in stabilizing slopes.

10. Private Erosion & Sediment Control inspections are required in accordance with NPDES schedule and requirements. After inspections, provide the City of Lee's Summit with reports and documentation.

GRAPHIC SCALE
30 0 30

000 DETAILS

- *SEE EROSION CONTROL DETAIL SHEET FOR THE FOLLOWING*

600 TEMPORARY CONSTRUCTION ENTRANCE
601 FILTER FABRIC SILT FENCE
603 STORM INLET PROTECTION
604 CONCRETE WASH-OUT

EROSION CONTROL LEGEND

- DISTURBED AREA
- SF SILT/SEDIMENT FENCE
- INLET PROTECTION FILTER BAGS
- CONSTRUCTION ENTRANCE
- STAGING AREA
- CONCRETE CLEANOUT
- EXISTING TREE TO BE REMOVED

EROSION & SEDIMENT CONTROL STAGING CHART

Phase	Project Stage	BMP Plan Ref. No.	BMP Description	Remove After Stage:	Notes:
Phase I (PRE-CON)	A - Place BMP's Prior to Land Disturbance	01	Perimeter Silt Fence	E	Place as shown on plan
		02	Concrete Entrance & Staging Area	D	Place as shown on plan
		03	Concrete Wash-Out	D	Place as shown on plan
		04	Existing Inlet Protection	E	Place as shown on plan
Phase II (MID-CON)	B - After Stripping, Grubbing, & Mass Grading	05	Interior Silt Fence	E	Place as shown on plan
	C - After Utility Storm Sewer Construction	06	Storm Inlet Protection	D	Place as shown on plan
Phase III (POST-CON)	D - After Construction of Building and Parking Lot	07	Storm Inlet Protection	E	Place as shown on plan
	E - Final Grading, Paving & Landscaping	08	Final Seeding, Sod, and Landscaping	N/A	Silt fencing & inlet protect may be removed once seed & sodded areas are established on 80% of site. (RE: L1.1 Landscape Plan for the stormwater treatment facility)

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10 NE TUDOR ROAD
LEES SUMMIT, MO 64086

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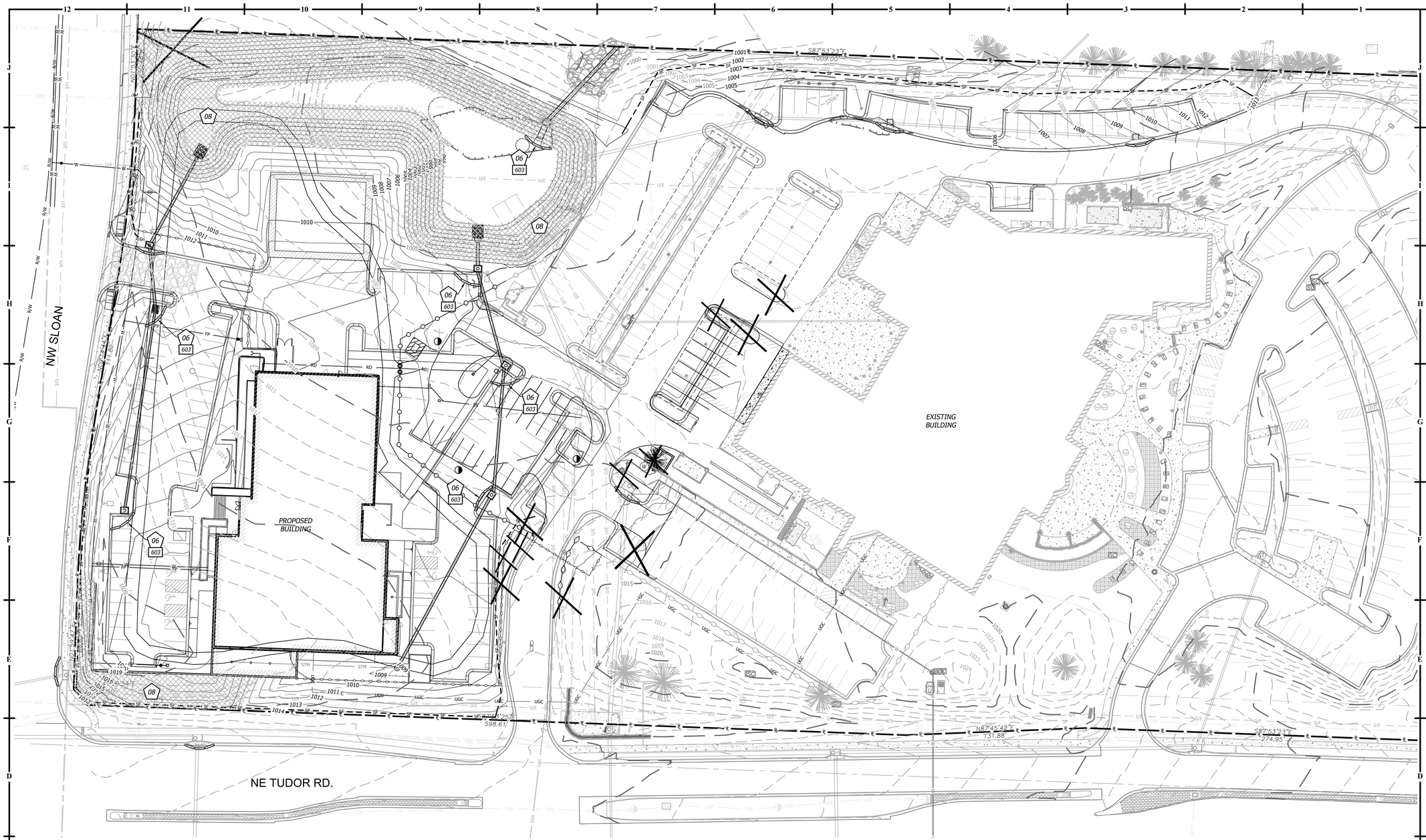
STATE OF MISSOURI
MICHAEL H. MAHER
2024-11-18
NUMBER PE-2011035286
PROFESSIONAL ENGINEER

03

C6.0

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

EROSION CONTROL PLAN



GRAPHIC SCALE
40 0 40

DETAILS

000

- SEE EROSION CONTROL DETAIL SHEET FOR THE FOLLOWING

600 TEMPORARY CONSTRUCTION ENTRANCE
601 FILTER FABRIC SILT FENCE
603 STORM INLET PROTECTION
604 CONCRETE WASH-OUT

EROSION CONTROL LEGEND

- DISTURBED AREA
- SF — SILT/SEDIMENT FENCE
- INLET PROTECTION FILTER BAGS
- CONSTRUCTION ENTRANCE
- STAGING AREA
- CONCRETE CLEANOUT
- STEEP SLOPE PROTECTION

EROSION & SEDIMENT CONTROL STAGING CHART

Phase	Project Stage	BMP Plan Ref. No.	BMP Description	Remove After Stage:	Notes:
Phase I (PRE-CON)	A - Place BMP's Prior to Land Disturbance	01	Perimeter Silt Fence	E	Place as shown on plan
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10 NE TUDOR ROAD
LEES SUMMIT, MO 64086

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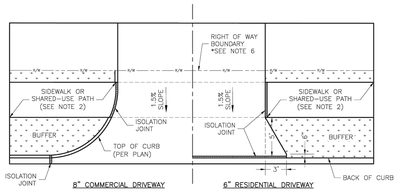
STATE OF MISSOURI
MICHAEL P. MAKRIS
2024-11-18
NUMBER PE-2021035286
PROFESSIONAL ENGINEER

03

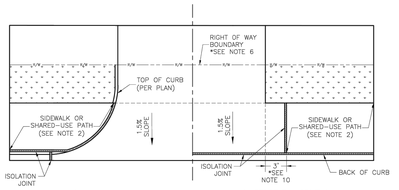
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ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

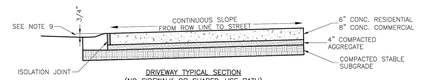
EROSION CONTROL PLAN



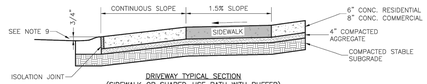
DRIVEWAY WITH BUFFER
NOT TO SCALE



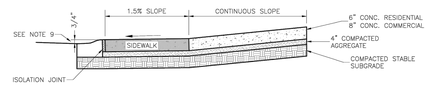
DRIVEWAY WITHOUT BUFFER
NOT TO SCALE



DRIVEWAY TYPICAL SECTION
(NO SIDEWALK OR SHARED-USE PATH)
NOT TO SCALE



DRIVEWAY TYPICAL SECTION
(SIDEWALK OR SHARED-USE PATH WITH BUFFER)
NOT TO SCALE



DRIVEWAY TYPICAL SECTION
(SIDEWAK OR SHARED-USE PATH WITHOUT BUFFER)
NOT TO SCALE

GENERAL NOTES

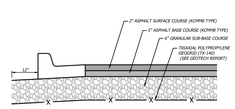
1. SUBGRADE SHALL BE STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. ALL DRIVE APPROACHES SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG) FOR SLOPE REQUIREMENTS WHEN SIDEWALK IS REQUIRED (SEE ADA RAMP RETROFIT DETAIL GEN-3B, SIDEWALK/SHARED USE PATH RAMP AT DRIVEWAY DETAIL).
3. JOINT AT BACK OF CURB LINE SHALL BE AN ISOLATION JOINT FOR RESIDENTIAL DRIVEWAYS.
4. KCMMB 4K CONCRETE MIX IS REQUIRED FOR ALL CURBS.
5. COMMERCIAL DRIVEWAYS, IN THE PUBLIC RIGHT OF WAY, SHALL BE KCMMB 4K CONCRETE MIX.
6. RESIDENTIAL DRIVEWAYS, IN THE PUBLIC RIGHT OF WAY, KCMMB 4K CONCRETE MIX IS RECOMMENDED. OTHER CONCRETE MIXES NEED TO BE APPROVED BY CITY INSPECTOR.
7. A JOINT MUST BE INSTALLED AT THE RIGHT OF WAY BOUNDARY FOR PROPERTY DELINEATION.
8. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
9. ¾" FROM TOP OF CURB TO FLOWLINE AT DRIVEWAY (TYPE CG-1 CURB ONLY). MUST MAINTAIN ORIGINAL FLOWLINE OF CURB.
10. SIDEWALK ADJOINING CURB SHALL BE 6" THICK, EXTENDING 3" FROM THE DRIVEWAY.
11. THE MAXIMUM WIDTH OF A RESIDENTIAL DRIVEWAY IS 36 FEET WITHIN THE RIGHT OF WAY.

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

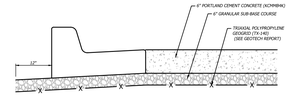
STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
DRIVEWAY DETAIL

Project:
Sheet Name:
Drawn By: MJF
Checked By: DL
Date: 08/2023
Proj. #:

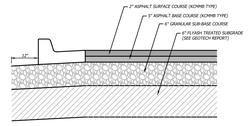
GEN-1



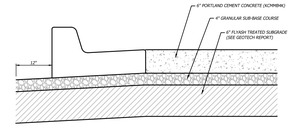
Medium Duty Asphalt Pavement
Option 1
004 Not to Scale



Medium Duty Concrete Pavement
Option 1
005 Not to Scale



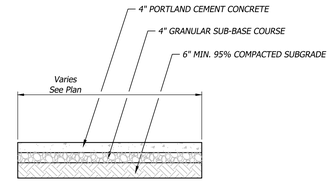
Medium Duty Asphalt Pavement
Option 2
004 Not to Scale



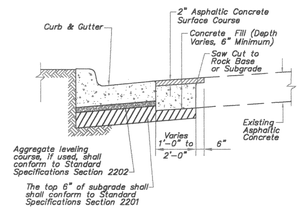
Medium Duty Concrete Pavement
Option 2
005 Not to Scale

NOTES:

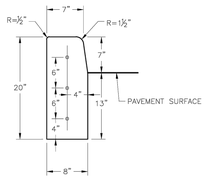
1. *CONTROL JOINT SPACING SHALL MATCH WIDTH OF SIDEWALK.*
2. *ISOLATION JOINTS SHALL BE PLACED @ 250' CENTERS OR WHERE WALKS ABUT CURBS, BUILDINGS, ETC....*
3. *ALL EXTERIOR CONCRETE SHALL HAVE A BROOM FINISH.*



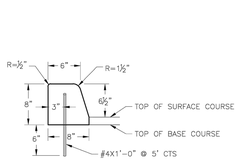
014 Concrete Sidewalk Section
Not to Scale



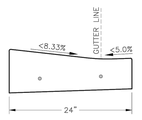
CURB REPLACEMENT DETAIL



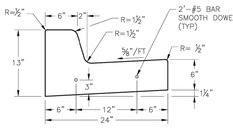
STRAIGHT CURB
(TYPE C-1)



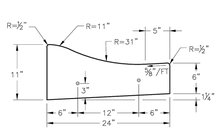
DOWELLED CURB
(TYPE DC)



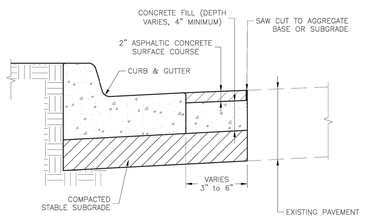
CURB & GUTTER DETAIL AT RAMP
(ADA SLOPE REQUIREMENTS)



STRAIGHT BACK CURB & GUTTER
(TYPE CG-1)



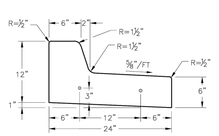
ROLL BACK CURB & GUTTER
(TYPE CG-2)



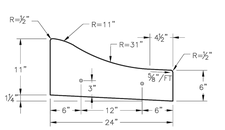
CURB REPLACEMENT DETAIL

GENERAL NOTES

1. ¾" ISOLATION JOINTS WITH 2 (2"-#5 BAR) SMOOTH DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150' INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
2. 3" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APPROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
3. CONCRETE FILL SHALL HAVE UNIFORM AND SMOOTH FINISH
4. KCMMB 4K CONCRETE SHALL BE USED FOR ALL CURB.
5. ASPHALTIC CONCRETE SURFACE COURSE SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2205.2.
6. CURBS FOR NEW STREETS SHALL BE BUILT ON ASPHALT OR AGGREGATE BASE AS SHOWN IN TYPICAL SECTION DETAIL.
7. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
8. ALL DOWELS & TIE BARS SHALL BE EPOXY COATED.



STRAIGHT BACK DRY CURB & GUTTER
(TYPE CG-1 DRY)



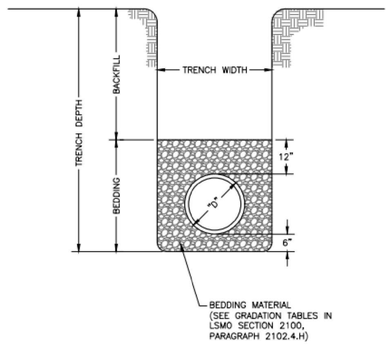
ROLL BACK DRY CURB & GUTTER
(TYPE CG-2 DRY)

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
CURB & GUTTER DETAIL

Project:
Sheet Name:
Drawn By: MJF
Checked By: DL
Date: 08/2023
Proj. #:

GEN-4



NOTES:

1. FOR TRENCHING AND PAVEMENT PATCHING REPAIRS WITHIN EXISTING OR FUTURE STREETS SEE STANDARD DETAIL GEN-5.
2. EXCAVATION DEPTH, SLOPES, SHORING, AND STOCKPILE LOCATIONS SHALL COMPLY WITH OSHA REGULATIONS.

DESIGN ENGINEER'S NOTE: ALL PIPE BEDDING AND TRENCHING SHALL COMPLY WITH CITY OF LEE' SUMMIT SPECIFICATIONS SECTION 2100 - GRADING AND SITE PREPARATION.

LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

PIPE BEDDING DETAIL

Date: 08/2023
Drawn By: MJF
Checked By: GMB

GEN-6

15

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

PACKAGE 1: SITE AND STRUCTURE

10 NE TUDOR ROAD
LEES SUMMIT, MO 64086

REVISION DATES:

01	ADDENDUM 01	2024-09-20
02	ADDENDUM 02	2024-10-30
03	ADDENDUM 03	2024-11-18
09	CCD 01	2025-01-29
15	ASI 08	2025-03-10

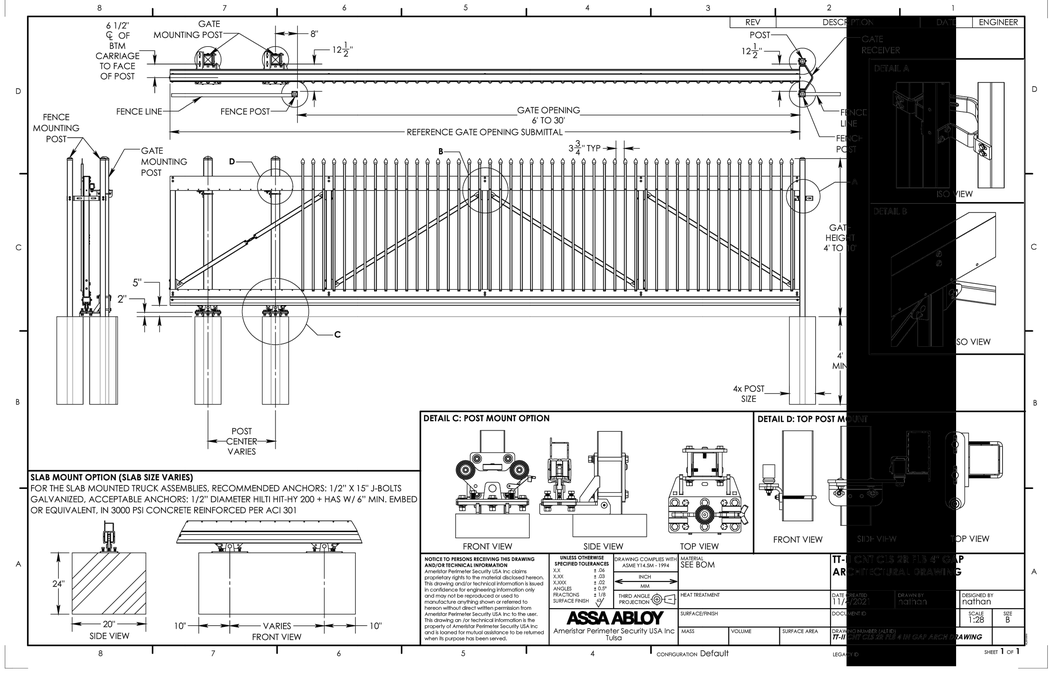
STATE OF MISSOURI
MICHAEL T. MAKRIS
2025-03-10
NUMBER PE-2021035286
PROFESSIONAL ENGINEER

MICHAEL T. MAKRIS, PE
MO PE-2021035286

C7.0

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

CIVIL DETAILS 1



SLAB MOUNT OPTION (SLAB SIZE VARIES)
FOR THE SLAB MOUNTED TRUCK ASSEMBLIES, RECOMMENDED ANCHORS: 1/2" X 15" J-BOLTS GALVANIZED, ACCEPTABLE ANCHORS: 1/2" DIAMETER HILTI HIT-HY 200 + HAS W/ 6" MIN. EMBED OR EQUIVALENT, IN 3000 PSI CONCRETE REINFORCED PER ACI 301

DETAIL C: POST MOUNT OPTION

DETAIL D: TOP POST MOUNT

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UNLESS OTHERWISE SPECIFIED TOLERANCES: X.X ± .04, X.XX ± .03, X.XXX ± .010, ANGLES ± 1/2°, REACTIONS ± 1/2°, SURFACE FINISH 125

DRAWING COMPLIES WITH ASME Y14.5M - 1994 | MATERIAL SEE BOM | INCH MM | THIRD ANGLE PROJECTION | HEAT TREATMENT | SURFACE/FINISH

ASSA ABLOY
Ameristar Perimeter Security USA Inc
Tulsa

MASS	VOLUME	SURFACE AREA

CONFIGURATION Default

DATE CREATED	DRAWN BY	DESIGNED BY
11/2/202	nathan	nathan

DOCUMENT NO

SCALE 1:28 | SIZE B

DRAWING NUMBER (AUTO) TT-0

SHEET 1 OF 1

REV	DESCRIPTION	DATE	ENGINEER
	GATE RECEIVER		

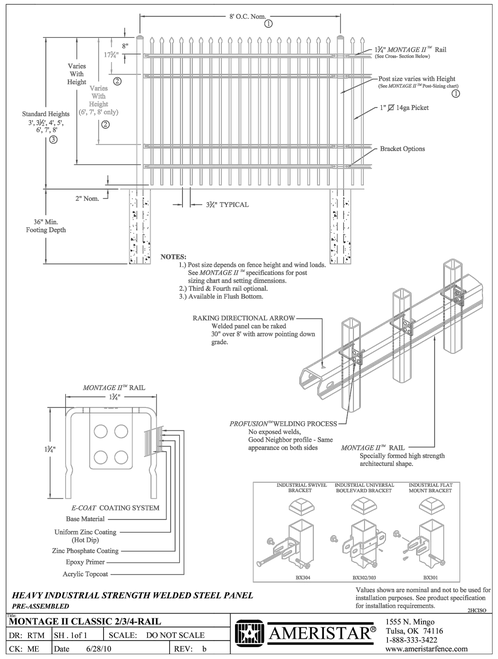
DETAIL A

DETAIL B

GAT HEIGH 4' TO

4' MIN

TT- AR



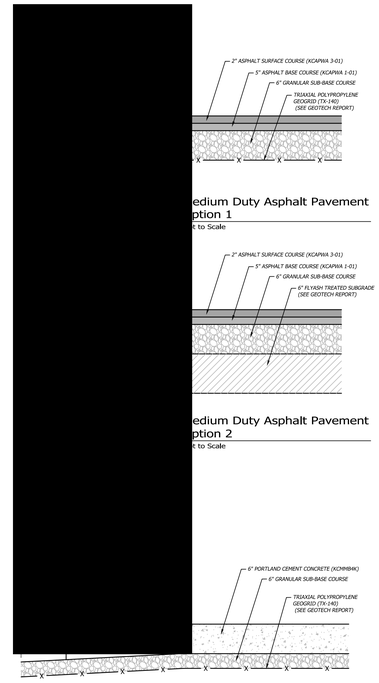
NOTES:
1.) Post size depends on fence height and wind loads. See *MONTAGE II™* specifications for post sizing chart and setting dimensions.
2.) Third & Fourth rail optional.
3.) Available in Flush Bottom.

HEAVY INDUSTRIAL STRENGTH WELDED STEEL PANEL
PRE-ASSEMBLED

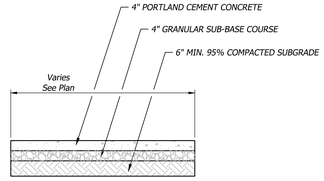
Values shown are nominal and not to be used for installation purposes. See product specification for installation requirements.
2/8/2010

MONTAGE II CLASSIC 2/3/4-RAIL			
DR: RTM	SH . 1of 1	SCALE:	DO NOT SCALE
CK: ME	Date 6/28/10	REV:	b

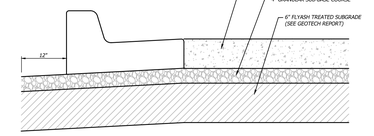
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NOTES:
1. *CONTROL JOINT SPACING SHALL MATCH WIDTH OF SIDEWALK.*
2. *ISOLATION JOINTS SHALL BE PLACED @ 250' CENTERS OR WHERE WALKS ABUT CURBS, BUILDINGS, ETC....*
3. *ALL EXTERIOR CONCRETE SHALL HAVE A BROOM FINISH.*

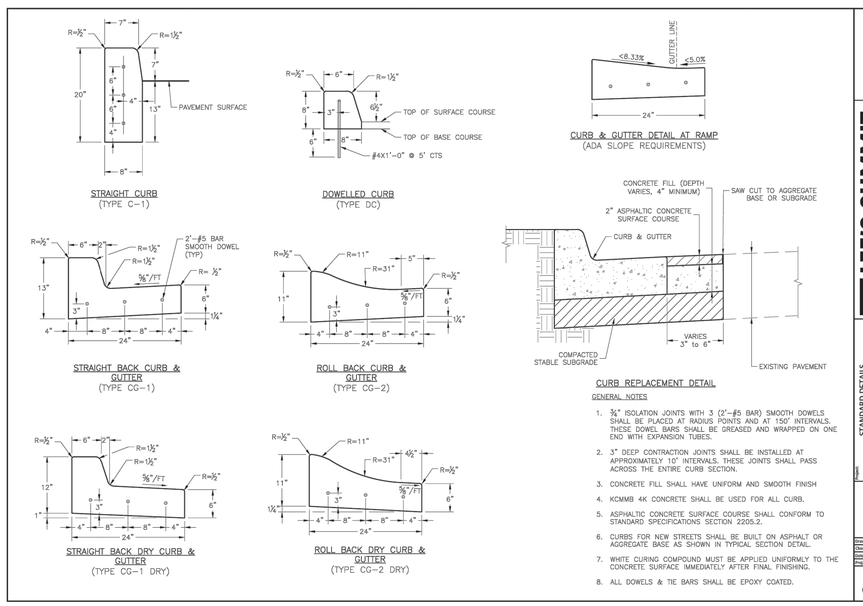


014 Concrete Sidewalk Section
Not to Scale



Medium Duty Concrete Pavement Option 1
005 Not to Scale

Medium Duty Concrete Pavement Option 2
005 Not to Scale



GENERAL NOTES

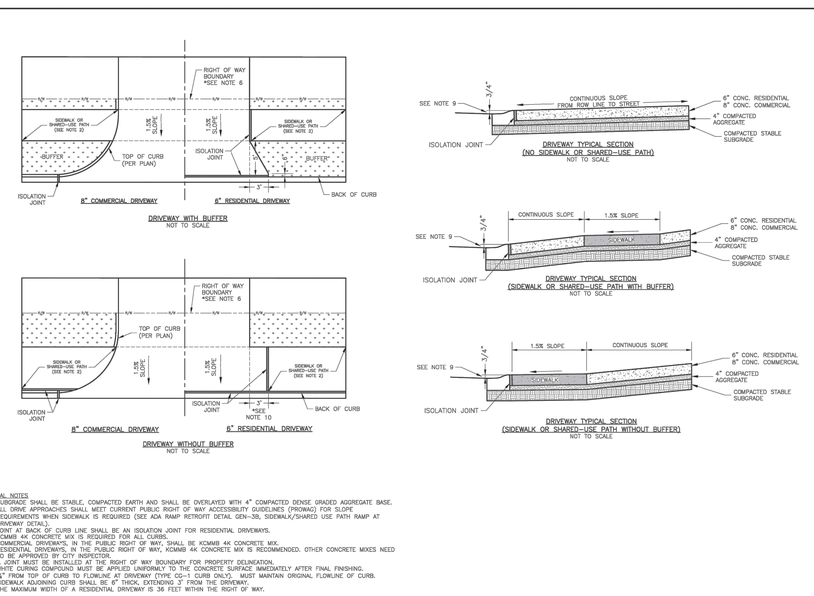
1. ¾" ISOLATION JOINTS WITH 3 (2'-#5 BAR) SMOOTH DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150' INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
2. 3" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APPROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
3. CONCRETE FILL SHALL HAVE UNIFORM AND SMOOTH FINISH
4. KCMMB 4K CONCRETE SHALL BE USED FOR ALL CURB.
5. ASPHALTIC CONCRETE SURFACE COURSE SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2205.2.
6. CURBS FOR NEW STREETS SHALL BE BUILT ON ASPHALT OR AGGREGATE BASE AS SHOWN IN TYPICAL SECTION DETAIL.
7. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
8. ALL DOWELS & TIE BARS SHALL BE EPOXY COATED.

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
CURB & GUTTER DETAIL

Drawn By: MJF
Checked By: DL
Date: 05/2021
Proj. #

GEN-4



GENERAL NOTES
1. SUBGRADE SHALL BE STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. ALL DRIVE APPROACHES SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG) FOR SLOPE REQUIREMENTS WHEN SIDEWALK IS REQUIRED (SEE ADA RAMP RETROFIT DETAIL GEN-3B, SIDEWALK/SHARED USE PATH RAMP AT DRIVEWAY DETAIL).
3. JOINT AT BACK OF CURB LINE SHALL BE AN ISOLATION JOINT FOR RESIDENTIAL DRIVEWAYS.
4. KCMMB 4K CONCRETE MIX IS REQUIRED FOR ALL CURBS.
5. COMMERCIAL DRIVEWAY'S, IN THE PUBLIC RIGHT OF WAY, SHALL BE KCMMB 4K CONCRETE MIX.
6. RESIDENTIAL DRIVEWAY'S, IN THE PUBLIC RIGHT OF WAY, KCMMB 4K CONCRETE MIX IS RECOMMENDED. OTHER CONCRETE MIXES NEED TO BE APPROVED BY THE INSPECTOR.
7. A JOINT MUST BE INSTALLED AT THE RIGHT OF WAY BOUNDARY FOR PROPERTY DELINEATION.
8. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
9. ¾" FROM TOP OF CURB TO FLOWLINE AT DRIVEWAY (TYPE CG-1 CURB ONLY). MUST MAINTAIN ORIGINAL FLOWLINE OF CURB.
10. SIDEWALK ADJOINING CURB SHALL BE 6" THICK, EXTENDING 3' FROM THE DRIVEWAY.
11. THE MAXIMUM WIDTH OF A RESIDENTIAL DRIVEWAY IS 36 FEET WITHIN THE RIGHT OF WAY.

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PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
DRIVEWAY DETAIL

Drawn By: MJF
Checked By: DL
Date: 05/2021
Proj. #

GEN-1

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

PACKAGE 1: SITE AND STRUCTURE

10 NE TUDOR ROAD
LEES SUMMIT, MO 64086

REVISION DATES:

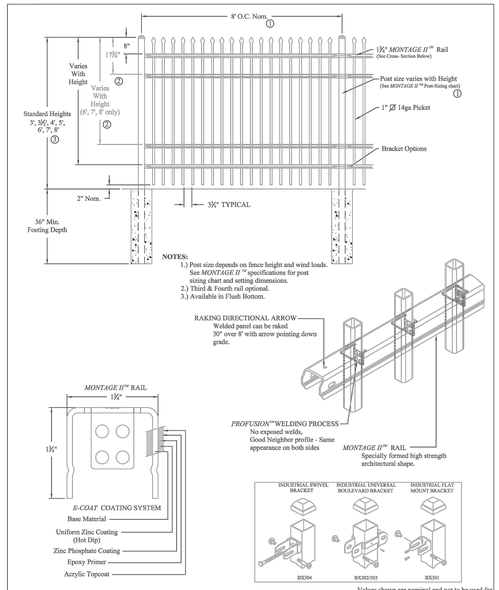
01	ADDENDUM 01	2024-10-30

STATE OF MISSOURI
MICHAEL J. MARRS
NUMBER PE-2021035286
2024-10-30
PROFESSIONAL ENGINEER
PROFESSIONAL SEAL

C7.1

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

CIVIL DETAILS 2



HEAVY INDUSTRIAL STRENGTH WELDED STEEL PANEL
PRE-ASSEMBLED

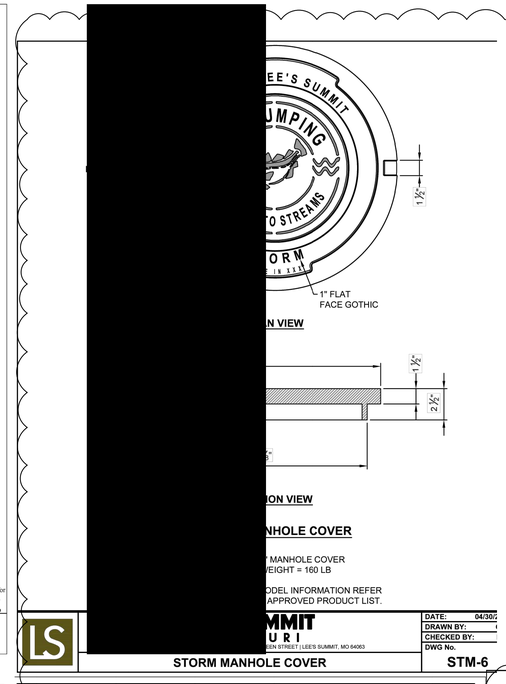
Values shown are nominal and not to be used for installation purposes. See product specification for installation requirements.

28CBO

MONTAGE II CLASSIC 2/3/4-RAIL			
DR: RTM	SH . 1of 1	SCALE: DO NOT SCALE	
CK: ME	Date 6/28/10	REV: b	

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[redacted]



N VIEW

ON VIEW

NHOLE COVER

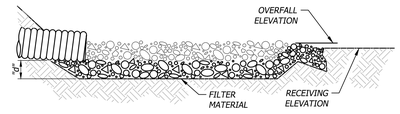
" MANHOLE COVER
/EIGHT = 160 LB

ODEL INFORMATION REFER
APPROVED PRODUCT LIST.

MMIT
U R I
EN STREET | LEE'S SUMMIT, MO 64063

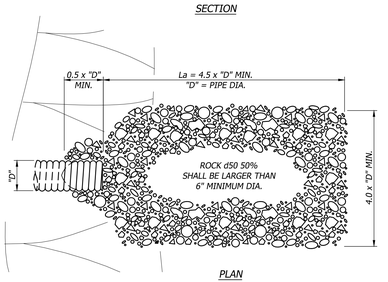
DATE:	04/30/2
DRAWN BY:	
CHECKED BY:	
DWG No.	

STORM MANHOLE COVER — **STM-6**



THICKNESS ("d") = 1.5 x MAXIMUM DIAMETER - 6" MINIMUM

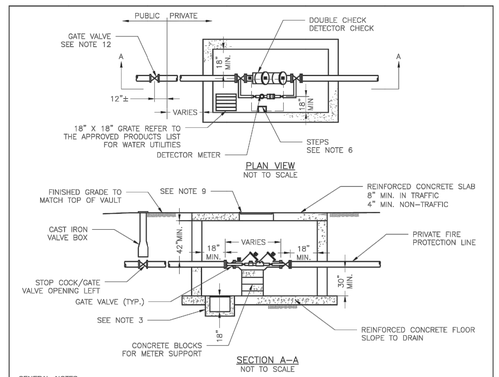
SECTION



PLAN

NOTES:
1. *'La' = LENGTH OF APRON. DISTANCE 'La' SHALL BE OF SUFFICIENT LENGTH TO DISSIPATE ENERGY.*
2. *APRON SHALL BE AT A ZERO GRADE AND ALIGNED STRAIGHT.*
3. *FILTER MATERIAL SHALL BE FILTER FABRIC OR 6" THICK MINIMUM GRADED GRAVEL LAYER.*
4. *SIDE SLOPES SHALL BE 4:1 UNLESS NOTED OTHERWISE.*
5. *ROCK SHALL CONFORM TO KDOT SECTION 1114.2(b) STONE FOR AGGREGATE DITCH LINING.*

605 Energy Dissipater (Rip Rap)
Not to Scale



GENERAL NOTES:

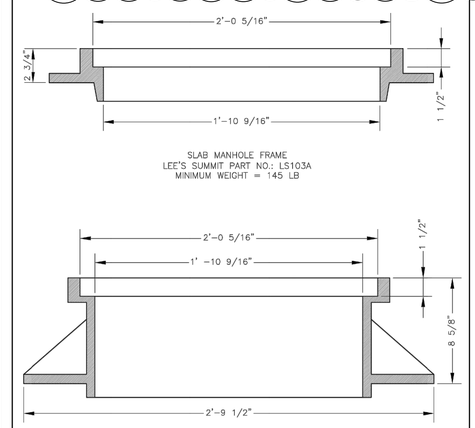
1. METER VAULT WALLS TO BE POURED OR PRECAST CONCRETE.
2. METER VAULT ROOF TO BE REINFORCED CONCRETE OPENING CENTERED OVER DETECTOR METER.
3. METER VAULT TO BE LOCATED, WHEN POSSIBLE, OUTSIDE TRAFFIC AREA WHERE SURFACE WATER WILL NOT DRAIN INTO IT. VAULT MUST BE KEPT FREE OF WATER. PROVIDE CONCRETE SUMP AS A MINIMUM. WHERE PRACTICAL, PROVIDE A 2" PIPE DRAIN WITH AN ABOVE-GROUND DISCHARGE POINT. PROJECT OWNER MAY DESIRE A PERMANENTLY INSTALLED SUMP PUMP.
4. ALL PIPE SHALL BE DUCTILE IRON CLASS 50. ALL PIPE FITTINGS FROM THE CITY WATER MAIN THROUGH THE VAULT SHALL BE PROVIDED WITH RESTRAINED JOINT FITTINGS.
5. ALL FITTINGS TO BE BRASS.
6. STEPS SHALL BE IN ACCORDANCE WITH THE APPROVED PRODUCTS LIST FOR WATER UTILITIES AND SHALL BE ON 16" CENTERS.
7. A DEPARTMENT OF NATURAL RESOURCES APPROVED DOUBLE CHECK DETECTOR CHECK BACKFLOW PREVENTER MUST BE USED. FOR A COPY OF THE MISSOURI DEPARTMENT OF NATURAL RESOURCES APPROVED BACKFLOW PREVENTION ASSEMBLIES, CONTACT THE WATER UTILITIES OPERATIONS DIVISION AT 816-969-1940. AS OF JANUARY 1, 1987, THE DNR REQUIRES FIRE SPRINKLER SYSTEMS USING CHEMICALS TO HAVE A DNR APPROVED PRESSURE BACKFLOW PREVENTER INSTALLED, PRIOR TO THE MIXING POINT.
8. ALL VALVES SHALL HAVE RISING STEMS.
9. FOR MANHOLE COVERS, SELECT A MANHOLE FOUND ON THE APPROVED PRODUCTS LIST FOR WATER UTILITIES SUITABLE FOR EITHER TRAFFIC OR NON-TRAFFIC CONDITIONS.
10. A MINIMUM OF 18" CLEARANCE SHALL BE PROVIDED AROUND ALL PIPING, VALVES, APPURTENANCES, ETC.
11. METER SHALL BE OWNED AND MAINTAINED BY THE WATER UTILITIES DEPARTMENT.
12. IF PUBLIC WATER IS LOCATED ON THE OPPOSITE SIDE OF THE STREET, THEN THE PUBLIC WATER MAIN RESPONSIBILITY OF THE WATER UTILITIES DEPARTMENT ENDS AT THE GATE VALVE NEAREST THE VAULT.

LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

VAULT FOR DOUBLE CHECK DETECTOR CHECK

Date:	02/2016
Drawn By:	JN
Checked By:	DL

WAT-12



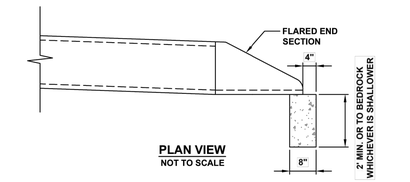
*COVER AND FRAME MODEL INFORMATION REFER TO THE STORMWATER APPROVED PRODUCTS LIST.

LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

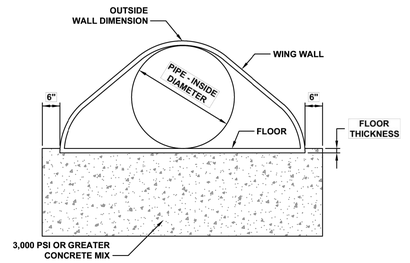
STORM MANHOLE FRAME DETAIL

Date:	04/27
Drawn By:	MJF
Checked By:	DL

STM-7



PLAN VIEW
NOT TO SCALE



END VIEW
NOT TO SCALE

FLARED END SECTION SUPPORT DETAIL

LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

FLARED END SECTION SUPPORT DETAIL

DATE:	04/30/2024
DRAWN BY:	CNS
CHECKED BY:	MJF
DWG No.	

STM-5

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

PACKAGE 1: SITE AND STRUCTURE

10 NE TUDOR ROAD
LEES SUMMIT, MO 64086

REVISION DATES:

01	ADDENDUM 01	2024-09-20
02	ADDENDUM 02	2024-10-30
03	ADDENDUM 03	2024-11-18
09	CCD 01	2025-01-29

STATE OF MISSOURI
MICHAEL T. MAKRIS
NUMBER PE-2021035286
2025-02-07
PROFESSIONAL ENGINEER

MICHAEL T. MAKRIS, PE
MD PE-2021035286

C7.2

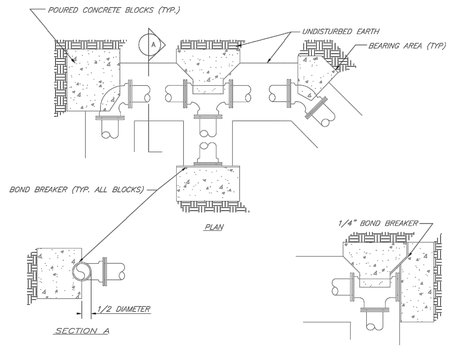
ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

CIVIL DETAILS 3

REQUIRED CONCRETE BEARING AREA (SQUARE FEET – SF)

NOM. DIA. (INCHES)	180 TEE, PLUG	90 BEND	45 BEND	22.5 BEND	11.25 BEND
6	4.7	6.7	4.0	4.0	4.0
8	8.4	11.8	6.4	4.0	4.0
10	13.1	18.5	10.0	5.1	4.0
12	18.8	26.7	14.4	7.4	4.0
14	25.7	36.3	19.6	10.0	5.0
16	33.5	47.4	25.6	13.1	6.6
18	42.4	REST. JT.	32.5	16.5	8.3
20	REST. JT.	REST. JT.	40.1	20.4	10.3
24	REST. JT.	REST. JT.	REST. JT.	29.4	14.8

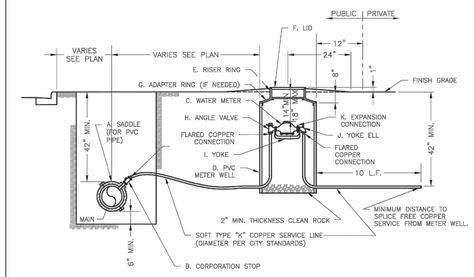
NOTES:
1. ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT.
2. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.
3. BEARING AREA MUST BE AGAINST UNDISTURBED SOIL.
4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.



LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

HORIZONTAL THRUST BLOCKS

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT--1
Rev: 1/14
Rev:



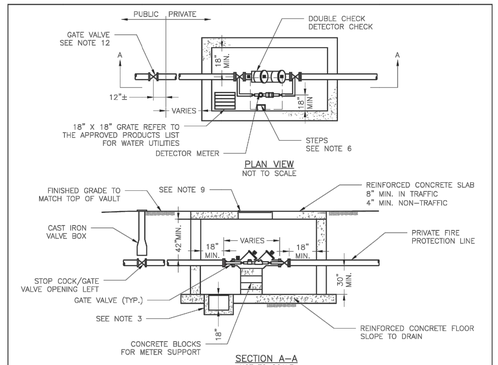
NOTES:
1. METER INSTALLATION SHALL NOT BE LOCATED IN AREAS SUBJECT TO VEHICULAR TRAFFIC OR IN CONCRETE PAVEMENT WITHOUT CITY APPROVAL.
2. IF METER IS TO BE LOCATED OTHER THAN IN FRONT OF PROPERTY LINE, CITY APPROVAL SHALL BE OBTAINED.
3. CITY TO FURNISH ITEMS A–K.
4. NO OTHER EQUIPMENT SHALL BE INSTALLED IN THIS PIT.
5. 42" MINIMUM BURY DEPTH FOR ALL SERVICE LINES.
6. EXCAVATION FOR TAP TO EXPOSE 4 LINEAR FEET OF MAIN.
7. NO SPLICES ALLOWED BETWEEN METER AND MAIN.
8. SERVICE CONNECTION TAP AT APPROXIMATELY 45 DEGREES.
9. LID AND RISER RING SHALL BE SET SO THAT GROUND WATER WILL DRAIN AWAY FROM THE WELL.
10. CONTACT WATER UTILITIES, 816–969–1900, FOR REQUIREMENTS OF A METER LARGER THAN 2"

LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

SERVICE CONNECTION WITH METER WELL

Date: 06/2015
Drawn By: JN
Checked By: DL

WAT-11



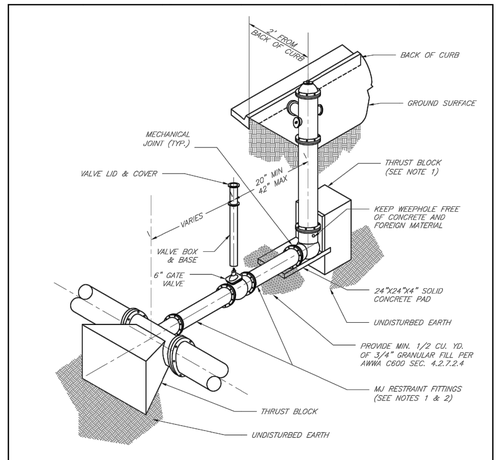
GENERAL NOTES:
1. METER VAULT WALLS TO BE POURED OR PRECAST CONCRETE.
2. METER VAULT ROOF TO BE REINFORCED CONCRETE OPENING CENTERED OVER DETECTOR METER.
3. METER VAULT TO BE LOCATED, WHEN POSSIBLE, OUTSIDE TRAFFIC AREA WHERE SURFACE WATER WILL NOT DRAIN INTO IT. VAULT MUST BE KEPT FREE OF WATER. PROVIDE CONCRETE SUMP AS A MINIMUM. WHERE PRACTICAL, PROVIDE A 2" PIPE DRAIN WITH AN ABOVE–GROUND DISCHARGE POINT. PROJECT OWNER MAY DESIRE A PERMANENTLY INSTALLED SUMP PUMP.
4. ALL PIPE SHALL BE DUCTILE IRON CLASS 50. ALL PIPE FITTINGS FROM THE CITY WATER MAIN THROUGH THE VAULT SHALL BE PROVIDED WITH RESTRAINED JOINT FITTINGS.
5. ALL FITTINGS TO BE BRASS.
6. STEPS SHALL BE IN ACCORDANCE WITH THE APPROVED PRODUCTS LIST FOR WATER UTILITIES AND SHALL BE ON 16" CENTERS.
7. A DEPARTMENT OF NATURAL RESOURCES APPROVED DOUBLE CHECK DETECTOR CHECK BACKFLOW PREVENTER MUST BE USED. FOR A COPY OF THE MISSOURI DEPARTMENT OF NATURAL RESOURCES APPROVED BACKFLOW PREVENTION ASSEMBLIES, CONTACT THE WATER UTILITIES OPERATIONS DIVISION AT 816–969–1940. AS OF JANUARY 1, 1987, THE DNR REQUIRES FIRE SPRINKLER SYSTEMS USING CHEMICALS TO HAVE A DNR APPROVED PRESSURE BACKFLOW PREVENTER INSTALLED, PRIOR TO THE MIXING POINT.
8. ALL VALVES SHALL HAVE RISING STEMS.
9. FOR MANHOLE COVERS, SELECT A MANHOLE FOUND ON THE APPROVED PRODUCTS LIST FOR WATER UTILITIES SUITABLE FOR EITHER TRAFFIC OR NON–TRAFFIC CONDITIONS.
10. A MINIMUM OF 18" CLEARANCE SHALL BE PROVIDED AROUND ALL PIPING, VALVES, APPURTENANCES, ETC.
11. METER SHALL BE OWNED AND MAINTAINED BY THE WATER UTILITIES DEPARTMENT.
12. IF PUBLIC WATER IS LOCATED ON THE OPPOSITE SIDE OF THE STREET, THEN THE PUBLIC WATER MAIN RESPONSIBILITY OF THE WATER UTILITIES DEPARTMENT ENDS AT THE GATE VALVE NEAREST THE VAULT.

LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

VAULT FOR DOUBLE CHECK DETECTOR CHECK

Date: 02/2016
Drawn By: JN
Checked By: DL

WAT-12

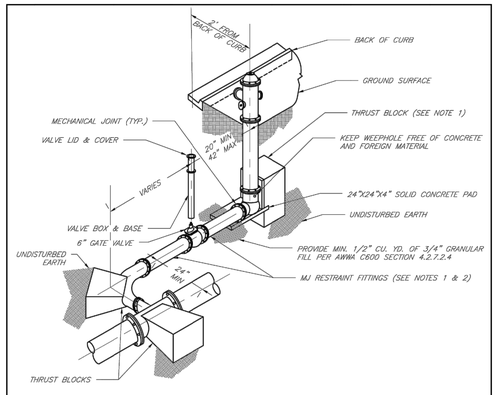


NOTES:
1. WHEN RETAINER GLANDS ARE USED IN LIEU OF MECHANICAL JOINT (MJ) RESTRAINT FITTINGS, HORIZONTAL THRUST BLOCKS ARE REQUIRED.
2. GATE VALVE MAY BE BOLTED DIRECTLY TO MJ RESTRAINT TEE.
3. SEE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR FIRE HYDRANT, VALVES, VALVE BOX LID, AND COVER.
4. BOTTOM HYDRANT FLANGE SHALL BE 2" TO 6" ABOVE FINISHED GRADE.
5. FOR STREETS WITHOUT CURBS FIRE HYDRANTS SHALL BE PLACED WITHIN 1 FOOT OF THE R/W LINE, BUT NOT MORE THAN 10' FROM EDGE OF PAVEMENT. FIRE HYDRANT SHALL NOT BE PLACED IN BOTTOM OF DITCH.
6. HYDRANT SHALL BE ROTATED AS DIRECTED BY INSPECTOR.

LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

HYDRANT INSTALLATION – STRAIGHT SET

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT--7
Rev: 1/14
Rev:

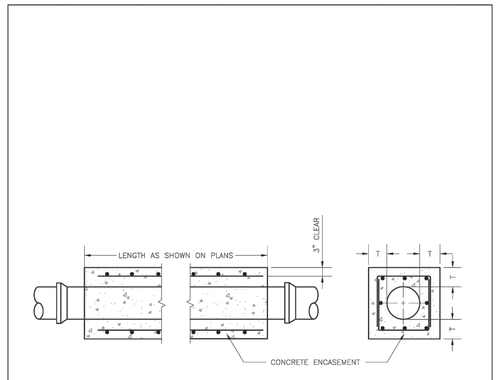


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LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

HYDRANT WITH 90 DEGREE BEND

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT--8
Rev: 1/14
Rev:



NOTES:
1. FOR PIPES LESS THAN 15", T = 6" MIN.
2. FOR PIPES 15" THRU 36", T = 8" MIN.
3. INTERMEDIATE BELLS SHALL BE ENCASED.
4. REINFORCING STEEL SHALL BE #4 @ 12" O.C. EACH WAY WITH A MINIMUM REBAR LAP OF 12".

LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

PIPE ENCASEMENT DETAIL

Date: 01/2016
Drawn By: JN
Checked By: DL

SAN-7

12

HOEFER WELKER
4622 PENNSYLVANIA AVENUE
SUITE 1400
KANSAS CITY, MO 64112
P: 913.307.3700
www.hoeferwelker.com

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CIVIL ENGINEERING / SURVEYING / UTILITIES
7101 College Blvd., Suite 400
Overland Park, Kansas 66210
p. (913) 663-1900

BHC is a trademark of Brungardt Honomichl & Company, P.A.

LEE'S SUMMIT JOINT OPERATIONS FACILITY

PACKAGE 1: SITE AND STRUCTURE

10 NE TUDOR ROAD
LEES SUMMIT, MO 64086

REVISION DATES:

01	ADDENDUM 01	2024-09-20
02	ADDENDUM 02	2024-10-30
03	ADDENDUM 03	2024-11-18
09	CCD 01	2025-01-29

STATE OF MISSOURI
MICHAEL T. MAKRIS
NUMBER PE-2021035286
2025-02-07
PROFESSIONAL ENGINEER

MICHAEL T. MAKRIS, PE
MD PE-2021035286

C7.3

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

CIVIL DETAILS 4

HOEFER WELKER
4622 PENNSYLVANIA AVENUE
SUITE 1400
KANSAS CITY, MO 64112
P: 913.307.3700
www.hoeferwelker.com
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LEE'S SUMMIT JOINT OPERATIONS FACILITY

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10 NE TUDOR ROAD
LEES SUMMIT, MO 64086

REVISION DATES:

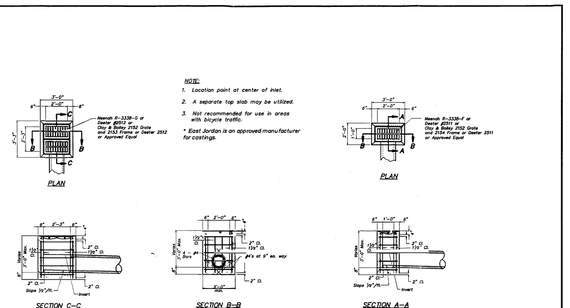
01	ADDENDUM 01	2024-09-20
02	ADDENDUM 02	2024-10-30
03	ADDENDUM 03	2024-11-18
09	CCD 01	2025-01-29

MICHAEL T. MAKRIS, PE
MO PE-2021035286

C7.4

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

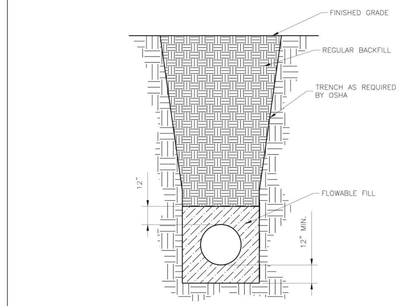
CIVIL DETAILS 5



DOUBLE GRATE INLET DETAILS

SINGLE GRATE INLET DETAILS

AMERICAN PUBLIC WORKS ASSOCIATION	
APWA	KANSAS CITY METROPOLITAN CHAPTER
GRATE INLET DETAILS	STANDARD DRAWING NUMBER 5211-1 ADOPTED APRIL 17, 1996



NOTES:
1. FLOWABLE FILL SHALL MEET THE REQUIREMENTS OF THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL.
2. REGULAR BACKFILL ABOVE THE TRENCH CHECK SHALL BE FREE OF DEBRIS, ORGANIC MATTER, AND STONES > 6" IN ANY DIMENSION.
3. TOP OF FLOWABLE BACKFILL SHALL EXTEND 12" ABOVE THE TOP OF THE PIPE.
4. LENGTH OF TRENCH CHECK SHALL BE A MINIMUM OF 12".

LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

WATER TRENCH CHECK DETAIL

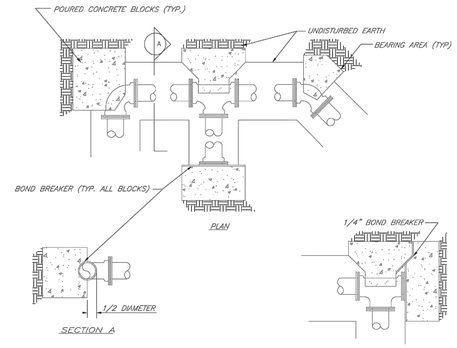
Date: 08/2023
Drawn By: MJF
Checked By: KLY

WAT-6

REQUIRED CONCRETE BEARING AREA (SQUARE FEET – SF)

NOM. DIA. (INCHES)	180 TEE, PLUG	90 BEND	45 BEND	22.5 BEND	11.25 BEND
6	4.7	6.7	4.0	4.0	4.0
8	8.4	11.8	6.4	4.0	4.0
10	13.1	18.5	10.0	5.1	4.0
12	18.8	26.7	14.4	7.4	5.0
14	25.6	36.3	19.6	10.0	5.9
16	33.5	47.4	25.6	13.1	6.6
18	42.4	REST. JT.	32.5	16.5	8.3
20	REST. JT.	REST. JT.	40.1	20.4	10.3
24	REST. JT.	REST. JT.	REST. JT.	29.4	14.8

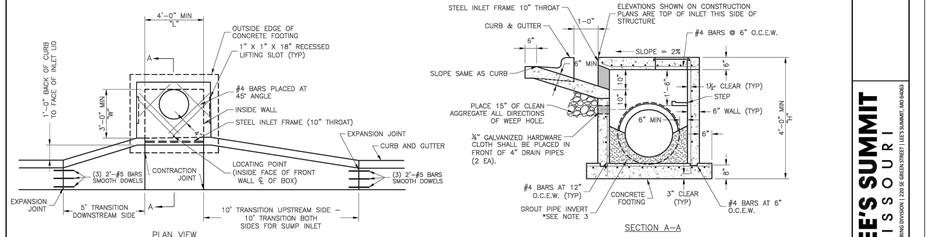
NOTES:
1. ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT.
2. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.
3. BEARING AREA MUST BE AGAINST UNDISTURBED SOIL.
4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.

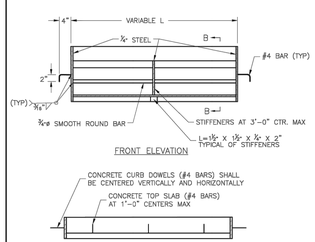


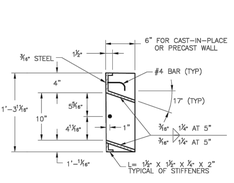
LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

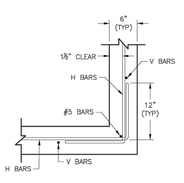
HORIZONTAL THRUST BLOCKS

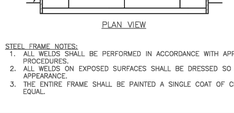
Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT-1
Rev: 1/14
Rev:











STEEL FRAME NOTES:
1. ALL WELDS SHALL BE PERFORMED IN ACCORDANCE WITH APPROPRIATE AWS SPECIFICATIONS AND PROCEDURES.
2. ALL WELDS ON EXPOSED SURFACES SHALL BE DRESSED SO AS TO PROVIDE A PLEASING FINISHED APPEARANCE.
3. THE ENTIRE FRAME SHALL BE PAINTED A SINGLE COAT OF CHEM–PRIME #37H–78 PRIMER (GRAY) OR EQUAL.

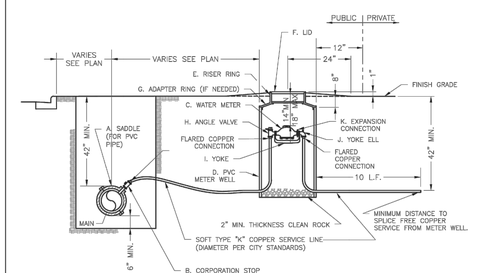
GENERAL NOTES:
1. THE FIRST DIMENSION LISTED IN THE CONSTRUCTION NOTES IS THE "L" DIMENSION. THE SECOND DIMENSION IS THE "W" DIMENSION.
2. FLOW LINES LISTED ON THE PROJECT PLANS ARE LISTED AT THE INSIDE FACE OF THE WALL.
3. FLOOR OF INLET GROUTED AND SHAPED TO MATCH PIPE INVERT TO PROVIDE SMOOTH FLOW.
4. LOCATE MH RING AND COVER ON BLANK WALL IF POSSIBLE.
5. STEPS SHALL BE SPACED AT 1'–4" O.C. VERTICALLY ON BLANK WALL IF POSSIBLE.
6. BEVEL ALL EXPOSED EDGES WITH ¾"CHAMFER OR ¾" TOOLED EDGE.
7. ON–GRADE INLETS SHALL CONFORM TO THE STREET GRADE AND SUMP INLETS SHALL BE LEVEL.
8. PRECAST LIDS SHALL BE PINNED, SEALED WITH NON–SHRINKABLE GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
9. LIFTING RINGS SHALL BE REMOVED AND SEALED WITH NON–SHRINKABLE GROUT
10. FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.

LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
CURB INLET DETAIL

Drawn By: MJF
Checked By: DL
Date: 09/17
Proj. #:

STM-1



NOTES:
1. METER INSTALLATION SHALL NOT BE LOCATED IN AREAS SUBJECT TO VEHICULAR TRAFFIC OR IN CONCRETE PAVEMENT WITHOUT CITY APPROVAL.
2. IF METER IS TO BE LOCATED OTHER THAN IN FRONT OF PROPERTY LINE, CITY APPROVAL SHALL BE OBTAINED.
3. CITY TO FURNISH ITEMS A–K.
4. NO OTHER EQUIPMENT SHALL BE INSTALLED IN THIS PIT.
5. 42" MINIMUM BURY DEPTH FOR ALL SERVICE LINES.
6. EXCAVATION FOR TAP TO EXPOSE 4 LINEAR FEET OF MAIN.
7. NO SPLICES ALLOWED BETWEEN METER AND MAIN.
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9. LID AND RISER RING SHALL BE SET SO THAT GROUND WATER WILL DRAIN AWAY FROM THE WELL.
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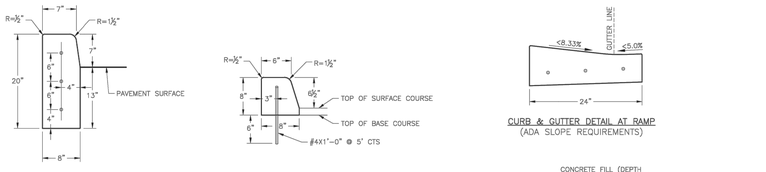
LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

SERVICE CONNECTION WITH METER WELL

Date: 06/2015
Drawn By: JN
Checked By: DL

WAT-11

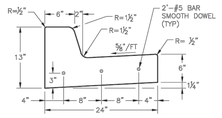
12



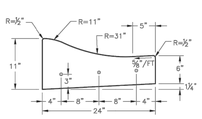
STRAIGHT CURB
(TYPE C-1)

DOWELLED CURB
(TYPE DC)

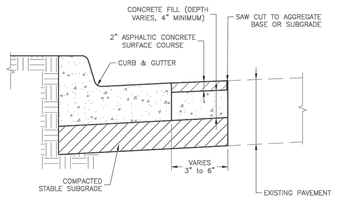
CURB & GUTTER DETAIL AT RAMP
(ADA SLOPE REQUIREMENTS)



STRAIGHT BACK CURB & GUTTER
(TYPE CG-1)



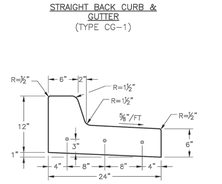
ROLL BACK CURB & GUTTER
(TYPE CG-2)



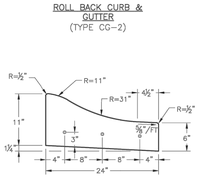
CURB REPLACEMENT DETAIL

GENERAL NOTES

1. ¾" ISOLATION JOINTS WITH 3 (2'-#5 BAR) SMOOTH DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150' INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
2. 3" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APPROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
3. CONCRETE FILL SHALL HAVE UNIFORM AND SMOOTH FINISH
4. KCMMB 4K CONCRETE SHALL BE USED FOR ALL CURB.
5. ASPHALTIC CONCRETE SURFACE COURSE SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2205.2.
6. CURBS FOR NEW STREETS SHALL BE BUILT ON ASPHALT OR AGGREGATE BASE AS SHOWN IN TYPICAL SECTION DETAIL.
7. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
8. ALL DOWELS & TIE BARS SHALL BE EPOXY COATED.



STRAIGHT BACK DRY CURB & GUTTER
(TYPE CG-1 DRY)



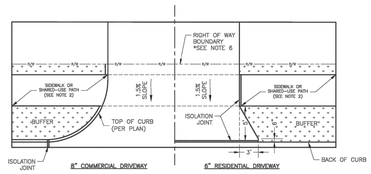
ROLL BACK DRY CURB & GUTTER
(TYPE CG-2 DRY)

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

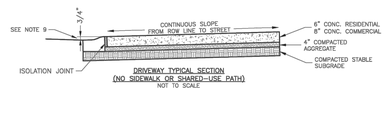
STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
CURB & GUTTER DETAIL

Drawn By: MJP
Checked By: ES
Date: 05/2021
Proj. #:

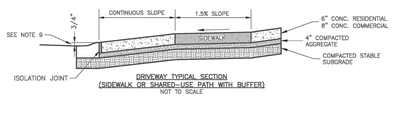
GEN-4



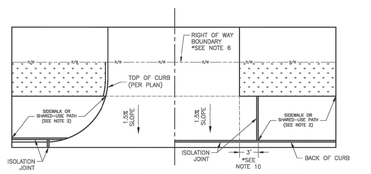
DRIVEWAY WITH BUFFER
NOT TO SCALE



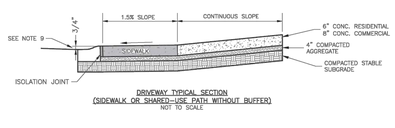
DRIVEWAY TYPICAL SECTION
(NO SIDEWALK OR SHARED-USE PATH)
NOT TO SCALE



DRIVEWAY TYPICAL SECTION
(SIDEWALK OR SHARED-USE PATH WITH BUFFER)
NOT TO SCALE



DRIVEWAY WITHOUT BUFFER
NOT TO SCALE



DRIVEWAY TYPICAL SECTION
(SIDEWALK OR SHARED-USE PATH WITHOUT BUFFER)
NOT TO SCALE

GENERAL NOTES

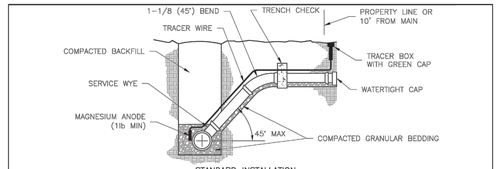
1. SUBGRADE SHALL BE STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. ALL DRIVE APPROACHES SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG) FOR SLOPE REQUIREMENTS WHEN SIDEWALK IS REQUIRED (SEE ADA RAMP RETROFIT DETAIL GEN-39, SIDEWALK/SHARED USE PATH RAMP AT DRIVEWAY DETAIL).
3. JOINT AT BACK OF CURB LINE SHALL BE AN ISOLATION JOINT FOR RESIDENTIAL DRIVEWAYS.
4. KCMMB 4K CONCRETE MIX IS REQUIRED FOR ALL CURBS.
5. COMMERCIAL DRIVEWAYS, IN THE PUBLIC RIGHT OF WAY, SHALL BE KCMMB 4K CONCRETE MIX.
6. RESIDENTIAL DRIVEWAYS, IN THE PUBLIC RIGHT OF WAY, KCMMB 4K CONCRETE MIX IS RECOMMENDED. OTHER CONCRETE MIXES NEED APPROVAL FROM CITY ENGINEER.
7. A JOINT MUST BE INSTALLED AT THE RIGHT OF WAY BOUNDARY FOR PROPERTY DELINEATION.
8. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
9. ¾" FROM TOP OF CURB TO FLOWLINE AT DRIVEWAY (TYPE CG-1 CURB ONLY). MUST MAINTAIN ORIGINAL FLOWLINE OF CURB.
10. SIDEWALK ADJOINING CURB SHALL BE 8" THICK, EXTENDING 3' FROM THE DRIVEWAY.
11. THE MAXIMUM WIDTH OF A RESIDENTIAL DRIVEWAY IS 36 FEET WITHIN THE RIGHT OF WAY.

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

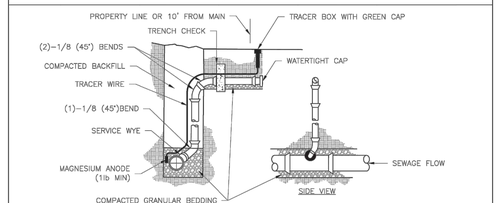
STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
DRIVEWAY DETAIL

Drawn By: MJP
Checked By: ES
Date: 05/2021
Proj. #:

GEN-1



STANDARD INSTALLATION
NOT TO SCALE



VERTICAL RISER
NOT TO SCALE

NOTES:

1. ALL SEWER STUBS SHALL BE CONSTRUCTED TO PROPERTY LINE OR 10' MINIMUM FROM THE MAIN, WHICHEVER IS GREATER. WHERE SIDEWALKS ARE PRESENT, CONTRACTOR SHALL EXTEND SERVICE LINE UNDER EXISTING SIDEWALK TO TWO FEET BEYOND.
2. IMPERVIOUS TRENCH CHECKS SHALL BE PLACED ON BUILDING SEWER STUBS (AT LEAST 5' AWAY FROM THE SANITARY SEWER MAIN).
3. TRENCH CHECKS ON THE BUILDING SEWER STUBS SHALL EXTEND 6" BELOW THE BOTTOM OF THE PIPE. LENGTH SHALL BE A MINIMUM OF 12". THE HEIGHT OF THE TRENCH CHECK SHALL EXTEND 12" ABOVE THE TOP OF THE PIPE. THE WIDTH OF THE TRENCH CHECK SHALL BE THE WIDTH OF THE TRENCH.
4. SEE SPECIFICATION SECTION 2100 FOR SEWER MAIN BEDDING AND BACKFILL.
5. #12 GAUGE GREEN INSULATED COPPER TRACER WIRE SHALL BE INSTALLED. TRACER WIRE TERMINAL BOXES SHALL BE INSTALLED DIRECTLY ABOVE THE SEWER SERVICE OR AS DETERMINED BY THE ENGINEER.
6. FOR SERVICES, TRACER WIRE SHALL RUN FROM THE WYE AND TERMINATE IN A FLUSH MOUNTED TRACER BOX WITH A GREEN CAST IRON LOCKABLE TOP. WIRE SHALL BE TAPED OR TIED TO THE PIPE AT 5' INTERVALS.
7. TRACER WIRE BOX SHALL BE INSTALLED WITHIN 1.0' OF PROPERTY LINE.
8. THE TRACER WIRE SHALL REMAIN CONTINUOUS TO THE GREATEST EXTENT POSSIBLE. SPLICES IN THE TRACER WIRE SHOULD BE MADE WITH SPLIT BOLT CONNECTORS. WIRE NUTS SHALL NOT BE USED. A WATER-PROOF CONNECTION IS NECESSARY TO PREVENT CORROSION.

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

SANITARY SEWER STUB DETAIL

Date: 12/2015
Drawn By: MJP
Checked By: DL

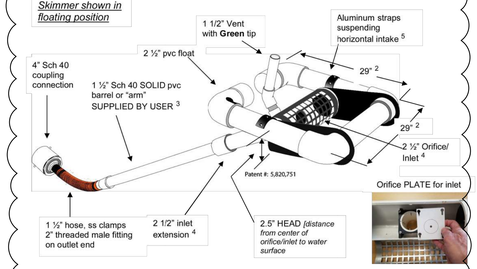
SAN-1

03

2.5" *Faircloth Skimmer®* Surface Drain Cut Sheet

J. W. Faircloth & Son, Inc.
www.FairclothSkimmer.com

Skimmer shown in floating position



1. Skimmer can be attached to a straight 4" sch 40 pipe through the dam but the pipe may need to be anchored to the bottom at the connection so it is secure. Coupling can be removed and hose attached to outlet using the threaded 2" fitting. Typical methods used: a) a metal structure with a steel stub out welded on the side at the bottom with a 2" threaded coupling or reducer(s); b) a concrete structure with a hole or orifice at the bottom - use a steel plate with a hole cut in it and coupling welded to it that will fit over the hole in the concrete and bolted to the structure with sealant; or c) grout a 4" pvc pipe in a hole in the concrete to connect the skimmer.
2. Dimensions are approximate, not intended as plans for construction.
3. Barrel (solid, not foam core pipe) should be 1.4 times the depth of water with a minimum length of 6' so the inlet can be pulled to the side for maintenance. If more than 8' long weight may have to be added to inlet to counter the increased buoyancy.
4. Orifice/inlet tapers down from 2 ½" maximum inlet to a 1½" barrel and hose. Barrel is smaller to reduce buoyancy and tendency to lift inlet but is sufficient for flow through inlet because of slope. The orifice/inlet can be reduced using the plate and cutter provided to control the outflow rate – see #6.
5. Horizontal intake is 5" pipe between the straps with aluminum screen door for access to the 2½" inlet and orifice inside.
6. **Capacity**: 6,234 cubic feet per day maximum with 2½" inlet and 2.5 head. Inlet can be reduced by installing a smaller orifice using the plate and cutter provided to adjust flow rate for the particular drawdown time required. Please use the sizing template at www.fairclothskimmer.com .
7. Ships assembled. User glues inlet extension and barrel, installs vent, cuts orifice in plate and attaches to outlet pipe or structure. Includes float, flexible hose, rope, and orifice plate and cutter. Does NOT include 1 ½" Sch 40 SOLID pvc barrel or "arm" SUPPLIED BY USER.

2-SinchCut 5-1-19

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KANSAS CITY, MO 64112
P: 913.307.3700
www.hoeferwelker.com
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7101 College Blvd., Suite 400
Overland Park, Kansas 66210
p. (913) 663-1900
BHC is a trademark of Brungardt Honomichl & Company, P.A.

LEE'S SUMMIT JOINT OPERATIONS FACILITY

PACKAGE 1: SITE AND STRUCTURE

10 NE TUDOR ROAD
LEES SUMMIT, MO 64086

REVISION DATES:

01	ADDENDUM 01	2024-09-20
02	ADDENDUM 02	2024-10-30
03	ADDENDUM 03	2024-11-18

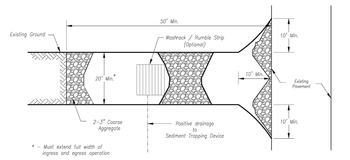
STATE OF MISSOURI
MICHAEL T. MAKRIS
2024-11-18
NUMBER PE-2021035286
PROFESSIONAL ENGINEER

MICHAEL T. MAKRIS, PE
MD PE-2021035286

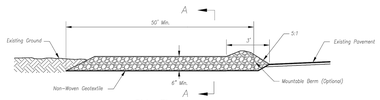
C7.5

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

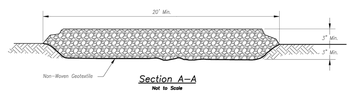
CIVIL DETAILS 6



Plan View
Not to Scale



Side Elevation
Not to Scale



Section A-A
Not to Scale

Notes for Construction Entrance:

1. Avoid locating on steep slopes, at curves on public roads, or downhill of disturbed area.
2. Remove all vegetation and other unsuitable material from the foundation area, grade, and crown for positive drainage.
3. If slope towards the public road exceeds 2%, construct a 6- to 8-inch high ridge with 3H:1V side slopes across the foundation approximately 15 feet from the edge of the public road to divert runoff from it.
4. Install pipe under the entrance if needed to maintain drainage ditches along public roads.
5. Place stone to dimensions and grade as shown on plans. Leave surface sloped for drainage.
6. Divert all surface runoff and drainage from the entrance to a sediment control device.
7. If conditions warrant, place geotextile fabric on the graded foundation to improve stability.

Maintenance for Construction Entrance:

1. Reshape entrance as needed to maintain function and integrity of installation. Top dress with clean aggregate as needed.

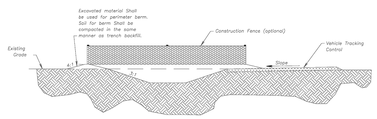
CONSTRUCTION ENTRANCE

Notes for Concrete Washout:

1. Concrete washout areas shall be installed prior to any concrete placement on site.
2. Concrete washout area shall include a flat subsurface pit sized based on the volume of concrete to be placed. The sides and slopes leading out of the subsurface pit shall be 2:1. The vehicle tracking pad shall be sloped towards the concrete washout area.
3. Vehicle tracking control is required at the access point to all concrete washout areas.
4. Signs shall be placed at the construction site entrance, washout area, and at other locations within the site as needed to direct(s) of the concrete washout area(s) to operators of concrete truck and pump rigs.
5. A one-piece impervious liner may be required along the bottom and sides of the subsurface pit in sandy or gravelly soils.

Maintenance for Concrete Washout:

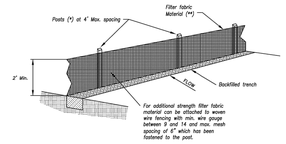
1. Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
2. Concrete washout areas shall be enlarged as necessary to maintain capacity for washout concrete.
3. Concrete washout water, washed pieces of concrete and all other debris in the subsurface pit shall be transported from the job site in a water-tight container and disposed of properly.
4. Concrete washout areas shall remain in place until all concrete for the project is placed.
5. When concrete washout areas are removed, excavations shall be filled with suitable material, compacted, and any disturbed areas associated with the installation, maintenance, and/or removal of the concrete washout areas shall be stabilized.

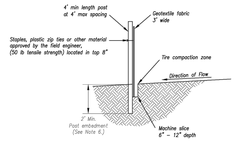


CONCRETE WASHOUT

Construction Entrance modified from 2015 Overland Park Standard Details for Erosion and Sediment Control. Concrete Washout modified from 2009 City of Great Bend Standard Drawings.

AMERICAN PUBLIC WORKS ASSOCIATION
KANSAS CITY METRO CHAPTER
CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT
STANDARD DRAWING NUMBER ESC-01
ADOPTED: 10/24/2016





(*) POSTS
- MIN. LENGTH 4'
- HARDWOOD 1 ⅛" x 1 ⅛"
- NO.2 SOUTHERN PINE 2 ⅛" x 2 ⅛"
- STEEL 1.33 LB/FT

(**) - Geotextile Fabric shall meet the requirements of AASHTO M288

SILT FENCE DETAILS
Not to Scale

Notes:

1. In order to contain water, the ends of the silt fence must be turned uphill (Figure A).
2. Long perimeter runs of silt fence must be limited to 100'. Runs should be broken up into several smaller segments to minimize water concentrations (Figure A).
3. Long slopes should be broken up with intermediate rows of silt fence to slow runoff velocities.
4. Attach fabric to upstream side of post.
5. Install posts a minimum of 2" into the ground.
6. Trenching will only be allowed for small or difficult installation, where slicing machine cannot be reasonably used.

Maintenance:

1. Remove and dispose of sediment deposits when the deposit approaches ½ the height of silt fence.
2. Repair as necessary to maintain function and structure.

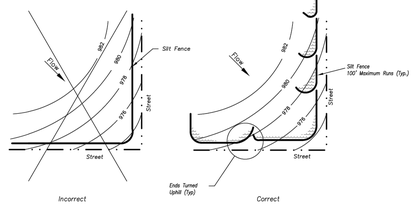
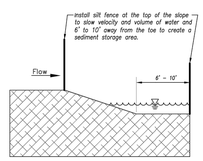
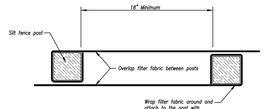


Figure A

SILT FENCE LAYOUT
Not to Scale

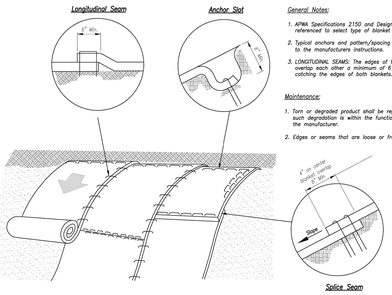


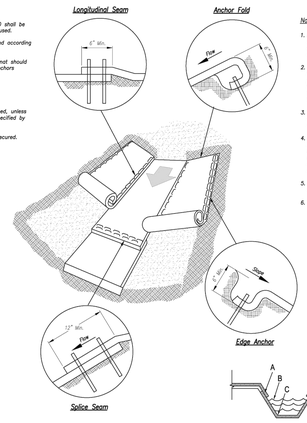


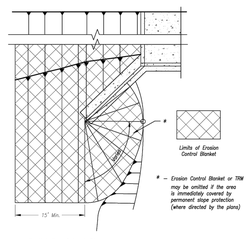
JOINING FENCE SECTIONS
Not to Scale

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION
KANSAS CITY METRO CHAPTER
SILT FENCE
STANDARD DRAWING NUMBER ESC-03
ADOPTED: 10/24/2016





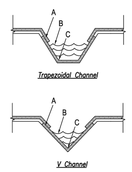


Partial Box Culvert Plan
Not to Scale

Installation Around Culvert Slope

Notes for Installation on Slopes:

1. Erosion Control Blankets and TRMs shall be laid in the direction of the slope. In order for blanket to be in contact with the soil, lay blanket loosely, avoiding stretching.
2. ANCHOR SLOTS: The top of the blanket should be "slotted in" at the top of the slope and anchored in place with anchors 6 inches apart. The slots should be 6 inches wide x 6 inches deep with the blanket anchored in the bottom of the slot, then backfilled, tamped and seeded.
3. SPLICE SEAM: When splices are necessary, overlap end a minimum of 8 inches in direction of water flow. Stagger splice seams.
4. TERMINAL FOLD: The bottom edge of the blanket shall be turned under a minimum of 4 inches, then anchored in place with anchors 9 inches apart.



Installation in Channels

Notes for Installation in Channels:

1. Erosion Control Blankets and TRMs shall be laid in the direction of the flow, with the first course at the centerline of channel, where applicable. In order for the mat to be in contact with the soil, lay the mat loosely, avoiding stretching.
2. ANCHOR FOLD: The top of the mat should be folded under, buried and secured with wood or other approved anchors placed 6 inches apart. The top edge of the mat should be buried in a slot 6 inches wide x 6 inches deep, anchored in the bottom of the slot, backfilled, and the mat folded over the top as shown in detail.
3. SPLICE SEAM: When splices are necessary, overlap end a minimum of 12 inches in direction of water flow. Stagger splice seams.
4. CHECK SLOTS: Establish check slots transverse to slope every 30 feet. The slots should be 6 inches wide x 6 inches deep. The mat shall be cut to a length 12 inches beyond the slot. The top of the downstream mat shall be slotted in, secured and buried similar to the edge anchor fold. The upstream mat shall then cover the slot and be anchored as shown.
5. EDGE ANCHORS: Lay outside edge of mat into trench at top of the slope and anchor.
6. TERMINUS: The bottom edge of the mat shall be anchored.

Critical Points:

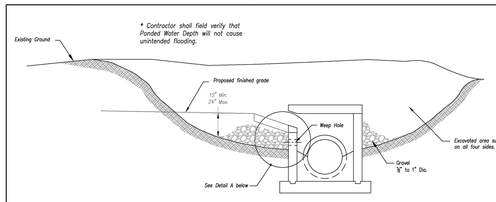
A – Overlaps and seams;

B – Projected water line;

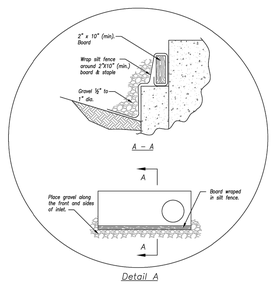
C – Channel bottom / side slope vertices;

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION
KANSAS CITY METRO CHAPTER
EROSION CONTROL BLANKETS AND TURF REINFORMENT MATS
STANDARD DRAWING NUMBER ESC-02
ADOPTED: 10/24/2016



On Grade Curb Inlet Protection



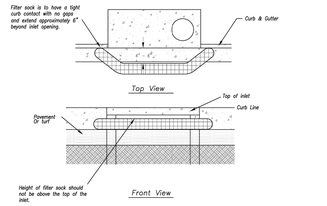
EARLY STAGE CURB INLET
(Open Box and Prior to Pouring Curb and Inlet Throat)

Notes:

1. Immediately following inlet construction and prior to construction of curb and inlet throat, protect inlet opening by installing 2" x 10" (min.) board wrapped in silt fence. Structures shall have excavated storage area on all four sides to allow settling of sediment (Early Stage Curb Inlet).
2. When inlet is completed and curb poured, filter socks or approved equal should be used (Late Stage Curb Inlet). Straw wattles are not approved for curb inlet use.
3. Contractor to field verify ponding water shall not create a traffic hazard.

Maintenance:

1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.



Sump Inlet Sediment Filter

LATE STAGE CURB INLET
(After Pouring Curb and Inlet Throat)

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION
KANSAS CITY METRO CHAPTER
CURB INLET PROTECTION
STANDARD DRAWING NUMBER ESC-06
ADOPTED: 10/24/2016

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

PACKAGE 1: SITE AND STRUCTURE

10 NE TUDOR ROAD
LEES SUMMIT, MO 64086

REVISION DATES:

01	ADDENDUM 01	2024-10-30

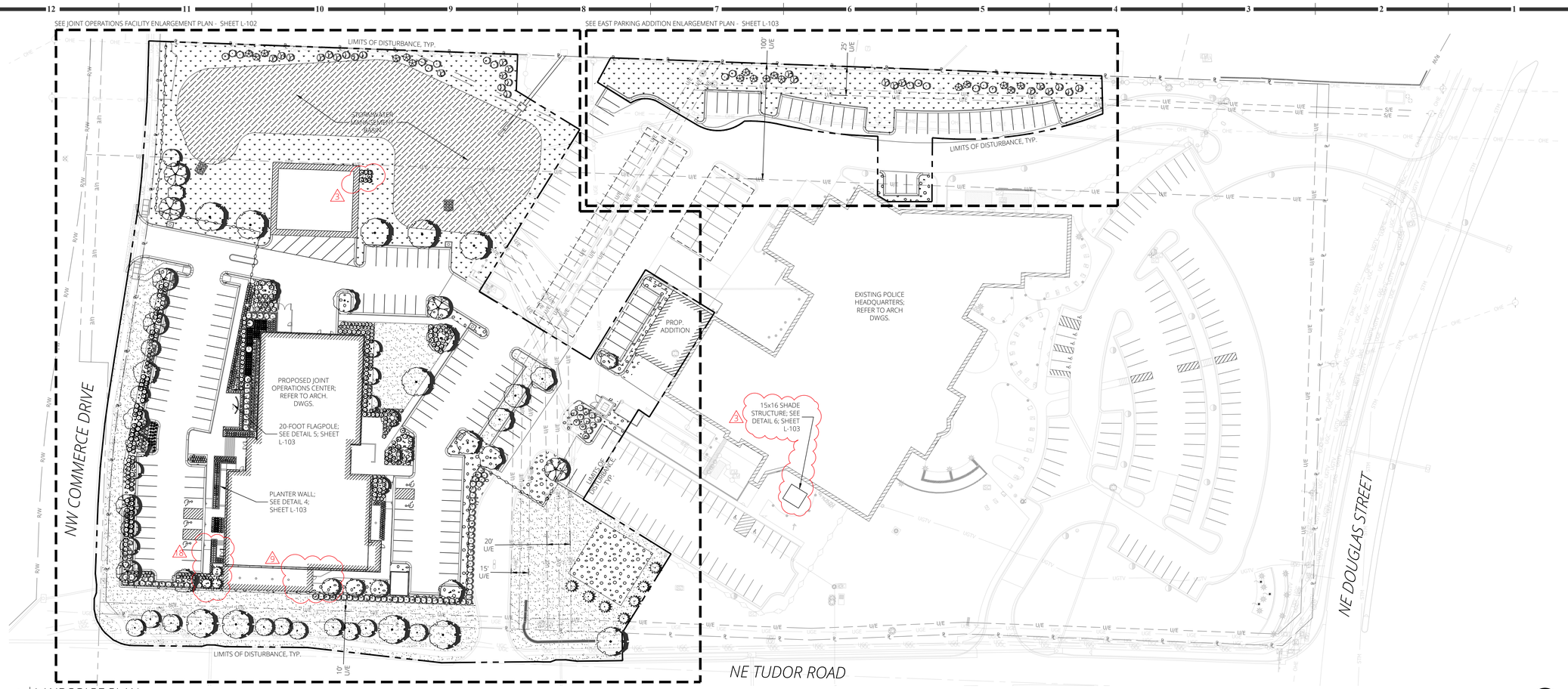
STATE OF MISSOURI
MICHAEL J. MAKRIS
NUMBER PE-2021035286
2024-10-30
PROFESSIONAL ENGINEER

PROFESSIONAL SEAL

C7.5

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

EROSION CONTROL DETAILS



1 LANDSCAPE PLAN
SCALE = 1" = 40'

GRAPHIC SCALE 40'

NORTH

LANDSCAPE NOTES

1. CONTRACTOR SHALL LOCATE ALL UTILITIES BEFORE COMMENCING WORK. CONTACT THE MISSOURI ONE CALL SYSTEM AT 1-800-DIG-RITE OR 811 TO FILE A LOCATE REQUEST PRIOR TO ANY EXCAVATION. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY DAMAGE TO UTILITIES RESULTING FROM LANDSCAPE OPERATIONS. ANY UTILITIES SHOWN ON THIS PLAN ARE FOR REFERENCE ONLY AND MAY OR MAY NOT DEPICT THE ACTUAL LOCATION OF SERVICES.
2. QUANTITIES OF MATERIALS SHOWN ON THE LANDSCAPE PLAN TAKE PRECEDENCE OVER QUANTITIES SHOWN ON THE PLANT SCHEDULE. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL QUANTITIES ON THE LANDSCAPE PLAN PRIOR TO BIDDING.
3. REPORT ANY DISCREPANCIES IN THE LANDSCAPE PLAN TO THE LANDSCAPE ARCHITECT, PRIOR TO PURCHASING MATERIALS OR STARTING CONSTRUCTION.
4. ALL DISTURBED AREAS NOT PAVED OR COVERED BY BUILDINGS SHALL BE BROUGHT TO FINISH GRADE AND PLANTED WITH TURF OR OTHER APPROPRIATE GROUND COVERS.
5. ALL TREE AND SHRUB PITS SHALL BE AMENDED WITH A PLANTING SOIL MIX CONSISTING OF EXISTING SOIL, TOPSOIL, AND COMPOST TO MAKE A NEW SOIL WHICH MEETS THE PROJECT GOALS FOR THE INDICATED PLANTING AREAS. THESE COMPONENTS WILL BE MIXED ON-SITE IN THE FOLLOWING RATION (BY MOIST VOLUME): EXISTING SOIL, 65-70%; TOPSOIL (UNSCREENED), 25-30%; AND COMPOST, 5%. MIX THE TOPSOIL AND COMPOST TOGETHER FIRST AND THEN ADD TO THE EXISTING SOIL. MIX WITH A LOADER BUCKET TO LOOSELY INCORPORATE THE TOPSOIL/COMPOST MIX INTO THE EXISTING SOIL. DO NOT OVER MIX. DO NOT MIX WITH A SOIL BLENDING MACHINE. DO NOT SCREEN THE SOIL. CLUMPS OF TOPSOIL, COMPOST AND EXISTING SOIL WILL BE PERMITTED IN THE OVERALL MIX.
6. ALL TREES AND SHRUBS SHALL BE WELL-FORMED AND DEVELOPED IN GOOD CONDITION, HEALTHY AND DISEASE-FREE, AND BE TYPICAL OF THE SPECIES. PLANTS SHALL COMPLY WITH ACCEPTABLE STANDARDS AS SET FORTH IN THE LATEST EDITION OF THE "AMERICAN STANDARD FOR NURSERY STOCK."
7. APPLY A 3" LAYER OF DECORATIVE GRAVEL OVER NON-WOVEN GEOTEXTILE FABRIC IN ALL PLANTING BEDS. GRAVEL SHOULD NOT COME IN CONTACT WITH PLANT TRUNKS OR STEMS.
8. ALL TURF AREAS SHALL BE SEPARATED FROM BUILDING FOUNDATION WALLS, RETAILNG WALLS, AND FENCES BY AN AGGREGATE MOW STRIP 18 INCHES IN WIDTH, 6 INCHES IN DEPTH, AND CONSISTING OF 1-3" DIAMETER DECORATIVE GRAVEL. REFER TO SHEET L-103, DETAIL #3.
9. ALL PLANTING BEDS AND AGGREGATE MOW STRIPS MUST BE SEPARATED FROM TURF AREAS WITH STEEL LANDSCAPE EDGING. INSTALL "BORDER KING STEEL LANDSCAPE EDGING" MANUFACTURED BY BORDER CONCEPTS, INC., OR APPROVED EQUAL.
10. TURF SOD SHALL BE CERTIFIED TURF GRASS SOD COMPLYING WITH TURFGRASS PRODUCERS INTERNATIONAL'S "GUIDELINE SPECIFICATIONS FOR TURFGRASS SODDING." SOD SHALL BE TURF-TYPE TALL FESCUE HARVESTED FROM A SOD FARM LOCATED WITHIN 100 MILES OF THE PROJECT SITE. SODS SHALL BE WELL ROOTED, 2-YEAR OLD STOCK HARVESTED IN ROLLS AND FERTILIZED 2-3 WEEKS PRIOR TO CUTTING. ALL SOD SHALL BE MACHINE CUT AND VIGOROUSLY GROWING (NOT DORMANT). MAXIMUM TIME FROM STRIPPING TO PLANTING SHALL BE 24 HOURS.
18. TURF SEED SHALL COMPLY WITH U.S. DEPARTMENT OF AGRICULTURE RULES AND REGULATIONS UNDER THE FEDERAL SEED ACT AND BE EQUAL IN QUALITY TO STANDARDS FOR CERTIFIED SEED. SEED SHALL BE A TURF-TYPE FESCUE BLEND CONSISTING OF 85% TURF-TYPE TALL FESCUE, 10% KENTUCKY BLUEGRASS, AND 5% ANNUAL RYEGRASS. ALL SEEDED AREAS SHALL BE MULCHED WITH STRAW OR HYDROMULCH AT TIME OF INSTALLATION UNTIL SEED HAS ESTABLISHED.
19. NATIVE WETLAND SEED MIX SHALL CONSIST OF PRE-MIXED WETLAND TOLERANT PLANT SEED OF A MINIMUM OF TWENTY (20) LOCAL NATIVE SPECIES. PROVIDE "ALL-STAR FACW WETLAND MIX" BY STAR SEED, INC., OR APPROVED EQUAL. CONTACT STAR SEED BY PHONE: (800) 782-7311, FAX: (785) 346-2479, OR THEIR WEBSITE: WWW.GOSTARSEED.COM. BROADCAST SEED MIX BY USING AN AGITATING SPREADER (SUCH AS A VICON SEEDER) MOUNTED TO A TRACTOR OR ATV PER NURSERY DIRECTIONS. SOW EVENLY ACROSS THE SITE IN TWO DIRECTIONS PERPENDICULAR TO ONE ANOTHER AT A RATE NOT LESS THAN 20 POUNDS PURE LIVE SEED (PLS) PER ACRE.SEED MIX INSTALLATION SHALL OCCUR EITHER BETWEEN THE DATES OF NOVEMBER 1 AND FEBRUARY 28 OR APRIL 1 AND JUNE 15. COORDINATE INSTALLATION OF SEED MIX WITH THE EROSION CONTROL CONTRACTOR.
20. CONTRACTOR SHALL USE AN APPROVED TREE GUYING SYSTEM. TREE GUYING TO BE FLAT WOVEN POLYPROPYLENE MATERIAL, 3/4-INCH-WIDE, WITH A TENSILE STRENGTH OF 900 LBS. HOSE AND WIRE WILL NOT BE ACCEPTED. CONTRACTOR SHALL PROVIDE ONE OF THE FOLLOWING PRODUCTS, OR APPROVED EQUAL: "ARBORTIE GREEN" MANUFACTURED BY DEEP ROOT PARTNERS, LP, OR "LEONARD TREE TIE WEBBING GREEN" MANUFACTURED BY A.M. LEONARD, INC.
21. REMOVE ALL RUBBISH, EQUIPMENT, AND MATERIAL AND LEAVE THE AREA IN A NEAT, CLEAN CONDITION EACH DAY. MAINTAIN PAVED AREAS UTILIZED FOR HAULING EQUIPMENT AND MATERIALS BY OTHER TRADES IN A CLEAN AND UNOBSTRUCTED CONDITION AT ALL TIMES. REMOVE SOIL OR DIRT THAT ACCUMULATES DUE TO PLANTING OPERATIONS EACH DAY.
22. AT THE COMPLETION OF PLANTING OPERATIONS ALL PLANTS SHALL BE INSPECTED BY THE OWNER'S REPRESENTATIVE. CONTRACTOR SHALL REPLACE IMMEDIATELY ANY PLANTS NOT IN HEALTHY AND VIGOROUS CONDITION AT THAT TIME AT NO EXPENSE TO THE OWNER. ANY PLANT NOT IN HEALTHY CONDITION AFTER ONE FULL YEAR FROM THE DATE OF FINAL ACCEPTANCE SHALL BE REPLACED AS PER THE ORIGINAL SPECIFICATIONS, FREE OF CHARGE TO THE OWNER.
23. CONTRACTOR SHALL GUARANTEE TREES, SHRUBS, PERENNIALS AND TURF FOR ONE CALENDAR YEAR FOLLOWING PROVISIONAL ACCEPTANCE OF THE OVERALL PROJECT. DURING THE GUARANTEE PERIOD, PLANTS THAT DIE DUE TO NATURAL CAUSES OR THAT ARE UNHEALTHY OR UNSIGHTLY IN CONDITION, SHALL BE REPLACED BY THE CONTRACTOR. PLANTS USED FOR THE REPLACEMENT SHALL BE OF THE SAME VARIETY AND SIZE AS ORIGINALLY SPECIFIED IN THE PLANT SCHEDULE. REPLACEMENTS SHALL BE MADE WITHIN ONE WEEK OF REQUEST PENDING FAVORABLE SEASONAL PLANTING CONDITIONS.

PLANT SCHEDULE

SYMBOL	CODE	QTY	COMMON / BOTANICAL NAME	CONT	CAL	SIZE
DECIDUOUS TREES						
	AC	8	CADDO SUGAR MAPLE / ACER SACCHARUM `CADDO`	B & B	2.5"CAL	
	GB	7	MAIDENHAIR TREE / GINKGO BILOBA	B & B	2.5"CAL	
	PB	5	BLOODGOOD LONDON PLANE TREE / PLATANUS X ACERIFOLIA 'BLOODGOOD'	B & B	2.5"CAL	
	QB	3	SWAMP WHITE OAK / QUERCUS BICOLOR	B & B	2.5"CAL	
	QS	5	SHUMARD OAK / QUERCUS SHUMARDII	B & B	2.5"CAL	
	TA	4	BOULEVARD AMERICAN LINDEN / TILIA AMERICANA 'BOULEVARD'	B & B	2.5"CAL	
EVERGREEN TREES						
	JP	10	PERFECTA JUNIPER / JUNIPERUS CHINENSIS 'PERFECTA'	B & B		5'-6' TALL
	JT	3	TAYLOR EASTERN REDCEDAR / JUNIPERUS VIRGINIANA `TAYLOR`	B & B		5'-6' TALL
ORNAMENTAL TREES						
	AG	15	AUTUMN BRILLIANCE SERVICEBERRY / AMELANCHIER X GRANDIFLORA `AUTUMN BRILLIANCE`	B & B	1.5"CAL	
	CC	10	EASTERN REDBUD / CERCIS CANADENSIS	B & B	1.5"CAL	
	MR2	5	ROYAL RAINDROPS CRABAPPLE / MALUS X 'ROYAL RAINDROPS'	B & B	1.5"CAL	
SHRUBS						
	BT	32	SUNJOY TANGELO BARBERRY / BERBERIS THUNBERGII `SUNJOY TANGELO`	#3		
	BG	103	GREEN GEM BOXWOOD / BUXUS X 'GREEN GEM'	#5		
	CL	16	FIBER OPTICS BUTTONBUSH / CEPHALANTHUS OCCIDENTALIS 'BAILOPTICS'	#5		
	IS	79	SHAMROCK INKBERRY HOLLY / ILEX GLABRA 'SHAMROCK'	#3		
	JS	107	SEA GREEN PFITZER JUNIPER / JUNIPERUS X PFITZERIANA `SEA GREEN`	#5		
	PO	21	AMBER JUBILEE NINEBARK / PHYSOCARPUS OPULIFOLIUS `JEFAM`	#5		
	RG	52	GRO-LOW FRAGRANT SUMAC / RHUS AROMATICA `GRO-LOW`	#3		
	SE	17	BLACK LACE® ELDERBERRY / SAMBUCUS NIGRA 'EVA'	#5		
	SM	126	MAGIC CARPET JAPANESE SPIREA / SPIRAEA JAPONICA 'WALBUMA'	#3		
	TD	40	DENSIFORMIS YEW / TAXUS X MEDIA `DENSIFORMIS`	#5		
	VA	18	ARROWWOOD VIBURNUM / VIBURNUM DENTATUM	#5		
	VB	9	BLACKHAW VIBURNUM / VIBURNUM PRUNIFOLIUM	#5		

SYMBOL	CODE	QTY	COMMON / BOTANICAL NAME	CONT
GRASSES & PERENNIALS				
	CK	93	KARL FOERSTER FEATHER REED GRASS / CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'	#1
	CP2	20	STIFF TICKSEED / COREOPSIS PALMATA	#1
	HR	116	RUBY SPIDER DAYLILY / HEMEROCALLIS X 'RUBY SPIDER'	#1
	PP	94	RUSSIAN SAGE / PEROVSKIA ATRIPLICIFOLIA `PEEK-A-BLUE`	#1
	SP	77	PRAIRIE MUNCHKIN LITTLE BLUESTEM / SCHIZACHYRIUM SCOPARIUM `PRAIRIE MUNCHKIN`	#1
	ST	19	WILD STONECROP / SEDUM TERNATUM	#1
	SH	39	PRAIRIE DROPSEED / SPOROBOLUS HETEROLEPIS	#1
GROUND COVERS				
	DG	21,937 SF	DECORATIVE GRAVEL / 1" - 3" MISSOURI RAINBOW	ROCK
	TE	39,770 SF	TURF SEED / DROUGHT TOLERANT FESCUE BLEND	SEED
	TS	35,080 SF	TURF SOD / DROUGHT TOLERANT FESCUE BLEND	SOD
	WP	26,125 SF	NATIVE WETLAND SEED MIX / STORMWATER BMP PERENNIAL MIX	SEED

LANDSCAPE CODE SUMMARY

STREET FRONTAGE TREES (8.790.A.1)
REQUIRED: 1 TREE PER 30 FEET OF STREET FRONTAGE
NE TUDOR ROAD = 438 FEET / 30 = 15 TREES
NW COMMERCE CIRCLE = 502 FEET / 30 = 17 TREES
PROVIDED: NE TUDOR ROAD = 15 TREES
NW COMMERCE CIRCLE = 17 TREES

STREET FRONTAGE SHRUBS (8.790.A.2)
REQUIRED: 1 SHRUB PER 20 FEET OF STREET FRONTAGE
NE TUDOR ROAD = 314 FEET / 20 = 16 SHRUBS
NW COMMERCE CIRCLE = 502 FEET / 20 = 26 SHRUBS
PROVIDED: NE TUDOR ROAD = 23 SHRUBS
NW COMMERCE CIRCLE = 40 SHRUBS

OPEN YARD SHRUBS (8.790.B.1)
REQUIRED: 2 SHRUBS PER 5,000 SQUARE FEET OF TOTAL LOT AREA
221,540 SF / 5,000 * 2 = 88 SHRUBS
PROVIDED: 379 SHRUBS

OPEN YARD TREES (8.790.B.3)
REQUIRED: 1 TREE PER 5,000 SQUARE FEET OF TOTAL LOT AREA
221,540 SF / 5,000 = 44 TREES
PROVIDED: 43 TREES

PARKING LOT SCREENING (8.820.C.1)
REQUIRED: HEDGE OF 12 SHRUBS / 40 LINEAR FEET
392 LINEAR FEET / 40 * 12 = 118 SHRUBS
PROVIDED: 118 SHRUBS

MINIMUM BUFFER / SCREEN (8.890)
REQUIRED: NORTHWEST = MEDIUM IMPACT SCREEN - TYPE B
1 SHADE TREE PER 1,000 SQUARE FEET = 6 SHADE TREES
1 ORNAMENTAL TREE PER 500 SQUARE FEET = 12 ORNAMENTAL TREES
1 EVERGREEN TREE PER 300 SQUARE FEET = 20 EVERGREEN TREES
1 SHRUB PER 200 SQUARE FEET = 30 SHRUBS
PROVIDED: 30 SHRUBS

REQUIRED: NORTHEAST = LOW IMPACT SCREEN - TYPE B
1 SHADE TREE PER 1,000 SQUARE FEET = 6 SHADE TREES
1 ORNAMENTAL TREE PER 500 SQUARE FEET = 12 ORNAMENTAL TREES
1 EVERGREEN TREE PER 500 SQUARE FEET = 20 EVERGREEN TREES
1 SHRUB PER 500 SQUARE FEET = 30 SHRUBS
PROVIDED: 30 SHRUBS

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

PACKAGE 2: CONSTRUCTION SET

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

REVISION DATES:
2 ADDENDUM #3 11/18/24
9 CCD #001 1/29/25
18 CCD #003 5/5/25



PROFESSIONAL SEAL

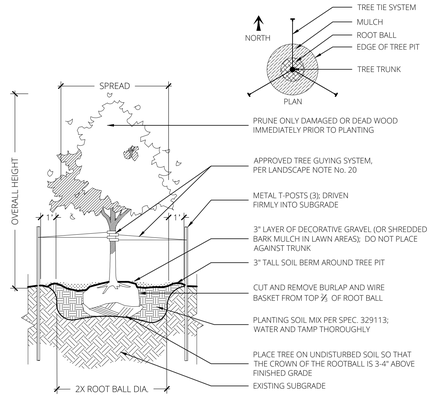
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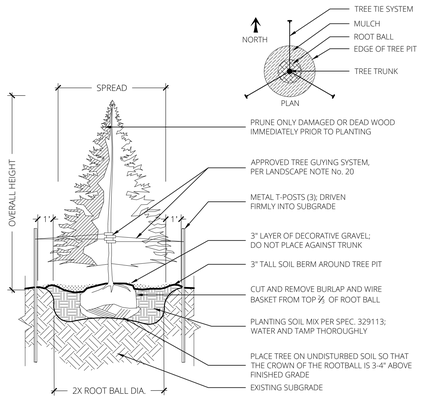
LANDSCAPE PLAN



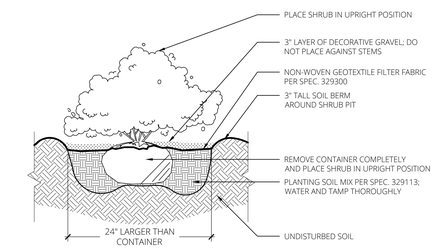
1 JOINT OPERATIONS FACILITY ENLARGEMENT PLAN
SCALE = 1" = 20'-0"



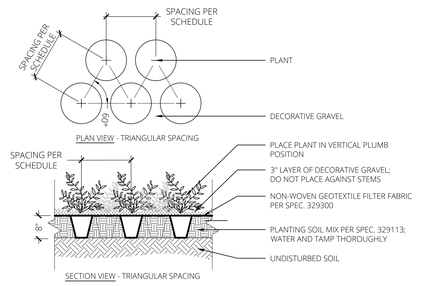
2 DECIDUOUS TREE PLANTING
SCALE = 1/4" = 1'-0"



3 EVERGREEN TREE PLANTING
SCALE = 1/4" = 1'-0"



4 SHRUB PLANTING
SCALE = 1/2" = 1'-0"



5 PERENNIAL PLANTING
SCALE = 1/2" = 1'-0"

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

PACKAGE 2: CONSTRUCTION SET

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

REVISION DATES:

2	ADDENDUM #3	11/18/24
4	CCD #001	1/29/25
18	CCD #003	5/5/25

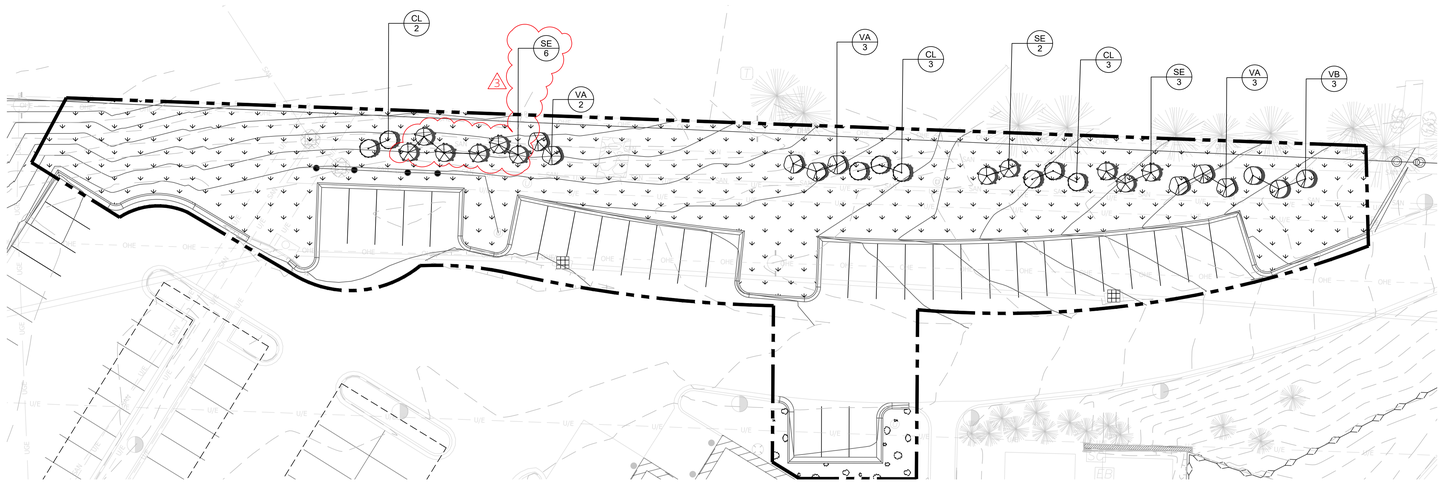
STATE OF MISSOURI
CARRIE VANLEER
NUMBER A-2003024
LANDSCAPE ARCHITECT

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L-102

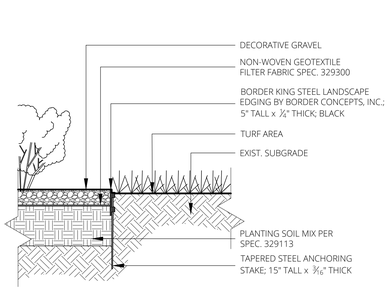
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JOF ENLARGEMENT PLAN



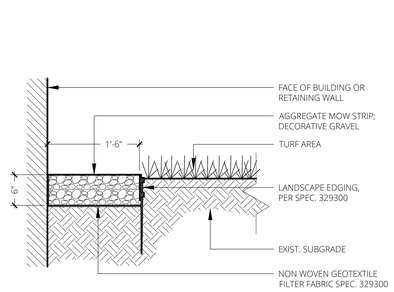
1 EAST PARKING ENLARGEMENT PLAN

SCALE = 1" = 10'-0"



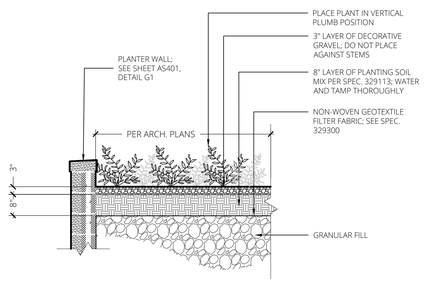
2 LANDSCAPE EDGING

SCALE = 1" = 1'-0"



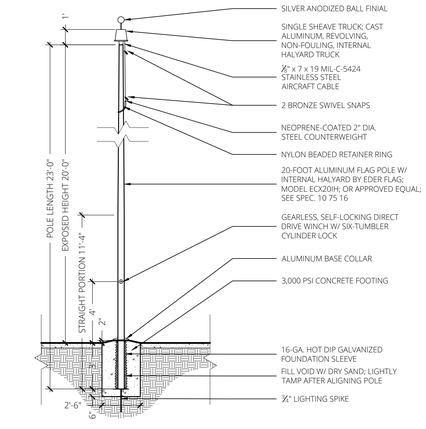
3 AGGREGATE MOW STRIP

SCALE = 1" 1'-0"



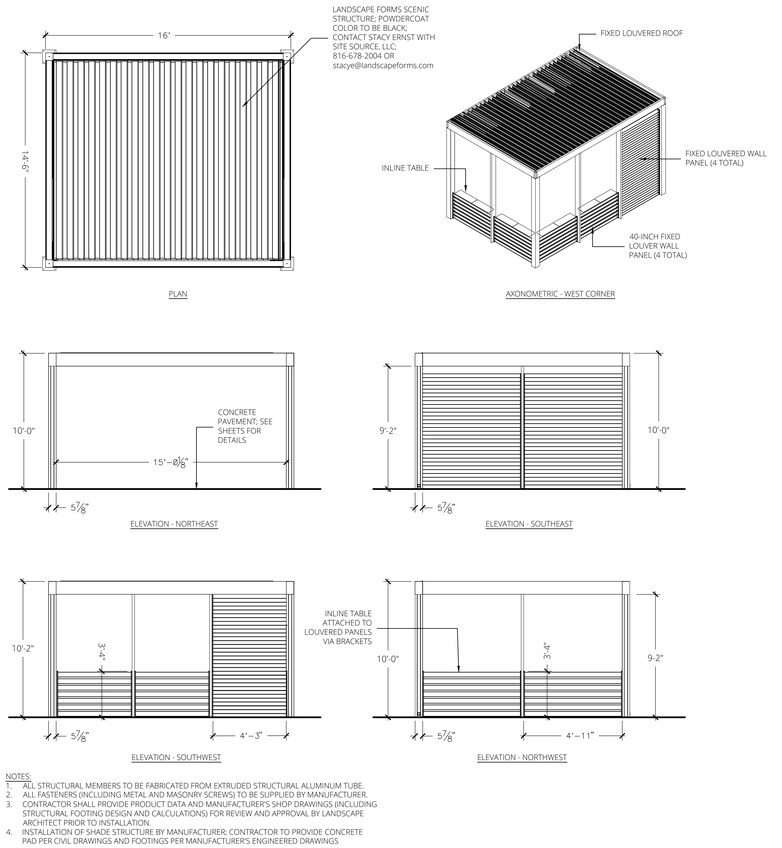
4 PLANTER WALL

SCALE = 1/2" = 1'-0"



5 20-FOOT FLAGPOLE

SCALE = 1/4" = 1'-0"



NOTES:

1. ALL STRUCTURAL MEMBERS TO BE FABRICATED FROM EXTRUDED STRUCTURAL ALUMINUM TUBE.
2. ALL FASTENERS (INCLUDING METAL AND MASONRY SCREWS) TO BE SUPPLIED BY MANUFACTURER.
3. CONTRACTOR SHALL PROVIDE PRODUCT DATA AND MANUFACTURER'S SHOP DRAWINGS (INCLUDING STRUCTURAL, FOOTING DESIGN AND CALCULATIONS) FOR REVIEW AND APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
4. INSTALLATION OF SHADE STRUCTURE BY MANUFACTURER; CONTRACTOR TO PROVIDE CONCRETE PAD PER CIVIL DRAWINGS AND FOOTINGS PER MANUFACTURER'S ENGINEERED DRAWINGS

6 SHADE STRUCTURE

SCALE = 1/4" = 1'-0"

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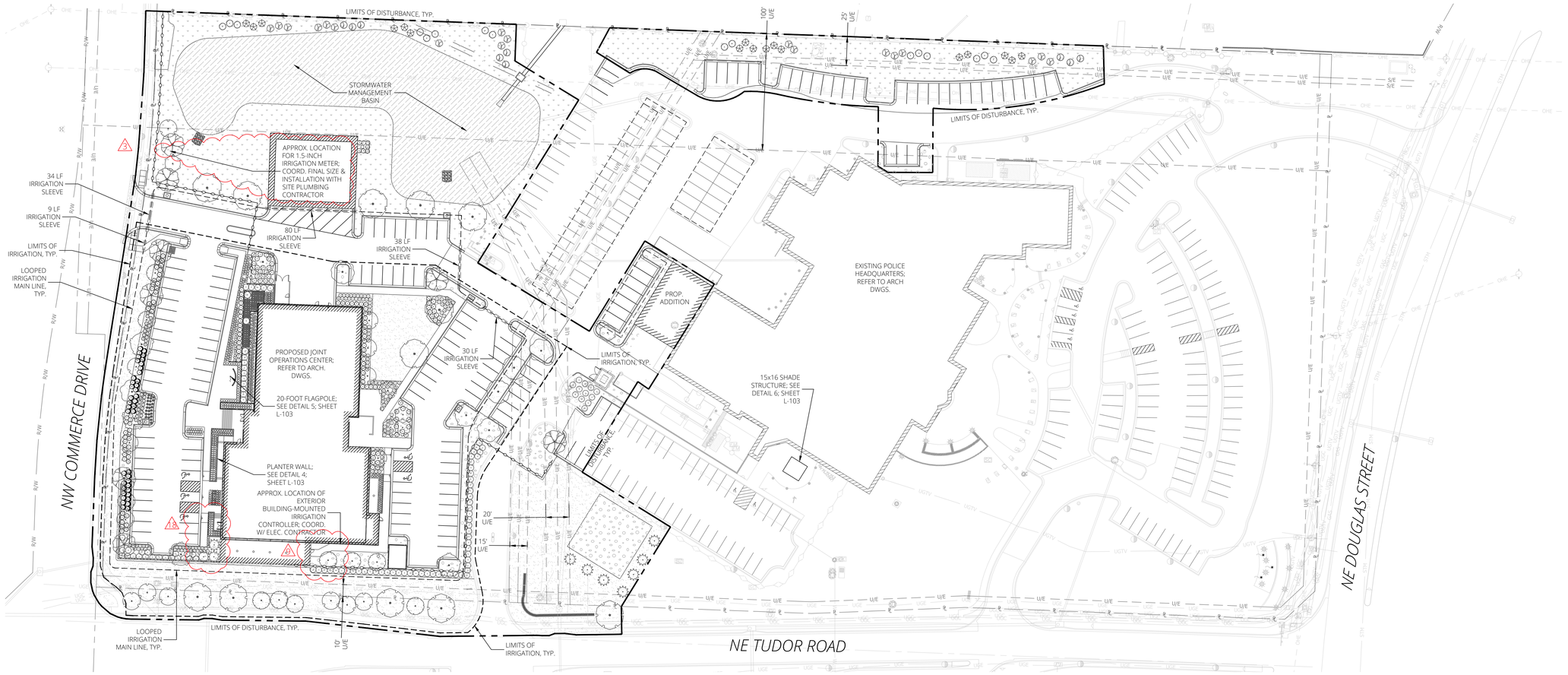
STATE OF MISSOURI
CHRISTOPHER J. MAULLEN
NUMBER LA-1999133724
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L-103

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EAST PARKING ENLARGEMENT PLAN



1 | iRRIGATION PLAN
SCALE = 1" = 40'

GRAPHIC SCALE 40' (0, 40', 80')

NORTH

IRRIGATION NOTES

1. CONTRACTOR SHALL LOCATE ALL UTILITIES BEFORE COMMENCING WORK. CONTACT THE MISSOURI ONE CALL SYSTEM AT 8-1-1 TO FILE A LOCATE REQUEST PRIOR TO ANY EXCAVATION. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY DAMAGE TO UTILITIES RESULTING FROM IRRIGATION OPERATIONS. ANY UTILITIES SHOWN ON PLAN ARE FOR REFERENCE ONLY AND MAY OR MAY NOT DEPICT THE ACTUAL LOCATION OF SERVICES.
2. THE IRRIGATION SCOPE INCLUDES DESIGN AND INSTALLATION OF A COMPLETELY NEW SYSTEM INCLUDING, BUT NOT LIMITED TO, A REDUCED PRESSURE BACKFLOW PREVENTER, MASTER VALVE, CONTROL VALVES, MAIN LINE, LATERAL LINES, NEW DRIP TUBING, NEW SLEEVES, AND ALL OTHER NECESSARY COMPONENTS REQUIRED TO IRRIGATE THE LANDSCAPING AND VEGETATION WITHIN THE LIMITS SHOWN ON THIS PLAN.
3. THE IRRIGATION MAIN LINE AND SLEEVE LOCATIONS SHOWN ON THIS PLAN ARE CONCEPTUAL. THE IRRIGATION SYSTEM SHALL BE BE DESIGNED AND BUILT BY A QUALIFIED IRRIGATION CONTRACTOR AND SHALL CONFORM TO THE PERFORMANCE SPECIFICATIONS INCLUDED IN SECTION 328400.
4. THE IRRIGATION CONTRACTOR SHALL FURNISH ALL MATERIALS, TOOLS, EQUIPMENT, AND LABOR TO DESIGN AND INSTALL A COMPLETE AND OPERABLE AUTOMATICALLY CONTROLLED LANDSCAPE IRRIGATION SYSTEM AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS AND AS NECESSARY TO COMPLETE THE CONTRACT.
5. THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION, SEQUENCING, AND SCHEDULING ALL WORK RELATED TO THE IRRIGATION SYSTEM.
6. THE IRRIGATION CONTRACTOR SHALL PROVIDE A WRITTEN WARRANTY COVERING ALL NEW EQUIPMENT AGAINST DEFECTS IN INSTALLATION, WORKMANSHIP, AND EQUIPMENT FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE.
7. PROVIDE SLEEVES IN NEW SECTIONS OF 4-INCH PVC SCHEDULE 40 PIPE, AS NEEDED, UNDER PAVEMENT AT DEPTHS OF 18-24 INCHES TO FACILITATE INSTALLATION OF IRRIGATION MAIN LINE AND LATERALS. SLEEVES SHALL EXTEND A MINIMUM OF 18 INCHES INTO THE GREEN SPACE BEYOND THE EDGE OF PAVEMENT OR BACK OF CURB. FLAG ALL SLEEVE OPENINGS UPON INSTALLATION. WHERE SLEEVES CROSS VEHICULAR DRIVE AISLES, INSTALL AT A MINIMUM DEPTH OF 30 INCHES BELOW TOP OF PAVEMENT GRADE AND BACKFILL TRENCHES WITH FLOWABLE CONCRETE FILL.

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STATE OF MISSOURI
CARRIE L. VANALLEN
NUMBER LA-2010039214
LANDSCAPE ARCHITECT

PROFESSIONAL SEAL

L-104

ISSUE DATE: NOV. 1, 2024
HOEFER WELKER #: 138191

IRRIGATION PLAN

2/28/2024 11:43:52 AM Autodesk Docs://138161-LeesSummitFS5-PS/138161_A23_LeesSummit-FS5-PS.rvt

STRUCTURAL NOTES

2018 INTERNATIONAL BUILDING CODE

GENERAL NOTES:
1. DESIGN AND CONSTRUCTION SHALL CONFORM TO THE 2018 INTERNATIONAL BUILDING CODE.

2. THE DRAWINGS REPRESENT THE FINISHED STRUCTURE, NOT THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE NEW AND EXISTING STRUCTURE DURING CONSTRUCTION INCLUDING, BUT NOT LIMITED TO BRACING, SHORING FOR CONSTRUCTION LOADS AND EQUIPMENT, ETC. THE ARCHITECT-ENGINEER IS NOT RESPONSIBLE FOR THE CONTRACTOR'S MEANS AND METHODS, SEQUENCES OF CONSTRUCTION, OR THE SAFETY PROGRAM. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT-ENGINEER WILL NOT INVOLVE REVIEW OF THESE ITEMS.

3. CONTRACTOR IS TO ESTABLISH AND VERIFY OPENINGS AND INSERTS FOR ITEMS TO BE INSTALLED BY OTHER TRADES PRIOR TO SUBMITTAL OF SHOP DRAWINGS AND CONSTRUCTION.

4. CONSTRUCTION MATERIAL AND EQUIPMENT PLACED ON FRAMED CONSTRUCTIONS SHALL BE SUCH THAT THE LOAD DOES NOT EXCEED THE DESIGN LIVE LOAD OF THE CONSTRUCTION. PROVIDE SHORING OF CONSTRUCTIONS WHERE NECESSARY FOR LOADS.

5. DETAILS THAT ARE NOTED AS "TYP." ON DETAIL TITLES ARE TO BE APPLIED TO THE PROJECT CONSTRUCTION AS GENERAL CONSTRUCTION METHODS UNLESS NOTED OTHERWISE. THESE DETAILS ARE NOT CUT AT ALL LOCATIONS THEY OCCUR AND MAY NOT BE CUT AT ALL.

6. CONTRACTOR NOTE: PROVIDE 2 TONS OF MISCELLANEOUS STRUCTURAL STEEL SHAPES (LABOR FOR BOTH LABOR FOR DETAILING AND ERECTION INCLUDED FOR FIELD USE AS DIRECTED BY THE ARCHITECT/ENGINEER.

DESIGN:
ALL CONSTRUCTION SHALL COMPLY WITH THE FOLLOWING CODES AND STANDARDS, EXCEPT WHERE NOTED TO THE CONTRARY ON DRAWINGS OR WHERE MORE STRINGENT REQUIREMENTS ARE SHOWN.

ACI 301	SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS.
ACI 318	BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE
AISC 360-16	SPECIFICATIONS FOR STRUCTURAL STEEL FOR BUILDINGS
AISI-S100-16	NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS
AWS D1.1	STRUCTURAL WELDING CODE
ICC500-2014	ICC/NSSA STANDARD FOR THE DESIGN AND CONSTRUCTION OF STORM SHELTER

DEAD LOADS:
ROOF: 87 PSF (MAIN BUILDING)
CANOPY: 15 PSF

LIVE LOADS:
ROOF: 100 PSF
CANOPY: 20 PSF

SNOW LOADS:
SNOW LOADS IN ACCORD WITH THE 2018 INTERNATIONAL BUILDING CODE AND ASCE 7 INCLUDING DRIFTING SNOW LOADS CHAPTER 16.

Ce = 1.0
Ct = 1.0
Pg = 20 PSF
Pf = 16.8 PSF
Pf(min)=16 psf
RAIN ON SNOW LOAD=5 PSF
DESIGN BALANCE SNOW LOAD = 22 PSF

WIND LOAD:
WIND LOADS IN ACCORD WITH THE 2018 INTERNATIONAL BUILDING CODE.
ULTIMATE DESIGN WIND SPEED = 122 MPH
EXPOSURE = B

SEISMIC LOAD:
SEISMIC DESIGN IN ACCORD WITH 2018 INTERNATIONAL BUILDING CODE.
IE=1.5
SEISMIC USE GROUP IV
SITE CLASS = B
MAPPED SPECTRAL RESPONSE COEFFICIENTS: Ss = 0.16 S1 = 0.082
SPECTRAL RESPONSE COEFFICIENTS: SDS = 0.082 SD1 = 0.057
SEISMIC DESIGN CATEGORY A
INTERMEDIATE REINFORCED MASONRY WALLS & BRACED FRAMES.
Cs = 0.01

LATERAL LOAD RESISTANCE SYSTEM:
STEEL DECK ROOF DIAPHRAGMS TRANSFERRING LATERAL LOADS TO INTERMEDIATE REINFORCED MASONRY SHEAR WALLS & BRACED FRAME SUPPORTED BY SHALLOW CONCRETE FOUNDATIONS.

FOUNDATIONS:
1. A GEOTECHNICAL REPORT HAS BEEN COMPLETED BY GEOTECHNOLOGY, LLC DBA UES DATED MAY 21, 2024. UES PROJECT NO.: J045326.01. ALL RECOMMENDATIONS SHOULD BE FOLLOWED.

2. ALLOWABLE BEARING PRESSURE: 12000 PSF

3. FROST DEPTH = 12" ON SHALE & LIMESTONE

4. SEE GEOTECHNICAL REPORT FOR ANY ADDITIONAL OVEREXCAVATION AND SUBGRADE PREPARATION REQUIREMENTS. ALL RECOMMENDATION IN THE GEOTECHNICAL REPORT SHALL BE FOLLOWED UNO.

STRUCTURAL BACKFILL:
1. ALL BELOW-GRADE WALLS TO BE BACKFILLED WITH GRAVEL BACKFILL AS DESCRIBED IN GEOTECH REPORT.

2. PLACE BACKFILL AND COMPACT IN 8" LIFTS PER GEOTECH REPORT.

3. DESIGN EQUIVALENT FLUID PRESSURES (GRAVEL BACKFILL)
ACTIVE: 35 pst/ft
AT-REST: 56 pst/ft

CONCRETE:
1. CONCRETE MIX DESIGNS:
FOOTINGS:
MIN 28 DAY COMPRESSIVE STRENGTH = 4,000 PSI
W/C RATIO = 0.50
MAX AGGREGATE SIZE = 3/4"
SLUMP = 4" ±1"
AIR CONTENT = 6% ±1.5% (ASTM C 260)

WALLS:
MIN 28 DAY COMPRESSIVE STRENGTH = 4,000 PSI
W/C RATIO = 0.50
MAX AGGREGATE SIZE = 3/4"
SLUMP = 4" ±1"
AIR CONTENT = 6% ±1.5% (ASTM C 260)

SLAB ON GRADE:
MIN 28 DAY COMPRESSIVE STRENGTH = 4,000 PSI
W/C RATIO = 0.45
MAX AGGREGATE SIZE = 3/4"
MAX SLUMP = 4"
AIR CONTENT = 1.5% (ASTM C 260)

EXTERIOR CONCRETE:
MIN 28 DAY COMPRESSIVE STRENGTH = 4,500 PSI
W/C RATIO = 0.40
MAX AGGREGATE SIZE = 3/4"
SLUMP = 4"±1"
AIR CONTENT = 6% ± 1.5% (ASTM C 260)

2. IF CONTRACTOR DESIRES TO INCREASE SLUMP ABOVE ALLOWABLE LIMITS TO FACILITATE PLACEMENT OR PUMPING THIS SHALL BE DONE UTILIZING AN APPROPRIATE APPROVED ADMIXTURE - NO WATER SHALL BE ADDED AT THE PROJECT SITE WITHOUT THE ENGINEER'S PERMISSION. ALL ADMIXTURES SHALL BE APPROVED IN WRITING BY THE ENGINEER.

3. THE CONTRACTOR SHALL REJECT ANY CONCRETE THAT EXCEEDS THE SLUMP LIMITS NOTED ABOVE OR EXCEEDS THE TOTAL ALLOWABLE MIXING TIME.

4. FLY ASH MAY BE INCLUDED IN FOUNDATION CONCRETE.

5. NO ALUMINUM SHALL BE PLACED IN CONCRETE.

6. DURING HOT WEATHER (80 DEGREES F AND ABOVE, THE CONTRACTOR SHALL COMPLY WITH THE RECOMMENDATIONS ACI 305"HOT WEATHER CONCRETE." DURING COLD WEATHER (40 DEGREES F AND BELOW), THE CONTRACTOR SHALL COMPLY WITH THE RECOMMENDATIONS OF ACI-306 "COLD WEATHER CONCRETING."

7. THE CONCRETE MIX DESIGNS ARE TO BE SUBMITTED AS A FORMAL SUBMITTAL TO THE ENGINEER OF RECORD FOR REVIEW AND ACCEPTANCE. AFTER ACCEPTANCE OF THE MIX DESIGN BY THE ENGINEER OF RECORD, THE ACCEPTED DESIGNS MUST BE FORWARDED TO THE CITY INSPECTION DEPT. & THE SPECIAL INSPECTOR PRIOR TO CONCRETE BEING DELIVERED TO THE SITE.

CONCRETE REINFORCEMENT:
1. REINFORCING STEEL SHALL BE ASTM A615, GRADE 60.

2. CONCRETE COVER REQUIREMENTS FOR CAST-IN-PLACE, UNLESS OTHERWISE NOTED ON DETAILS:

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"
OTHER: #6 BARS AND LARGER: 2"
#5 BARS AND SMALLER: 1-1/2"

3. REINFORCING BAR SPLICES SHALL BE IN ACCORD WITH THE REQUIREMENTS OF ACI 318-14 AND THE REINFORCING SPLICE LENGTH TABLE SHOWN ON THE DRAWINGS.

COLD-FORMED FRAMING:
1. ALL COLD-FORMED FRAMING SHALL BE ASTM A 1003, GRADE ST 50H WITH G60 COATING.

2. PROVIDE COLD-FORMED METAL FRAMING CAPABLE OF WITHSTANDING DESIGN LOADS WITHIN LIMITS AND UNDER CONDITIONS INDICATE ON CONTRACT DOCUMENTS. 18 GA MINUMUM THICKNESS IS REQ'D. CONSULT LIGHT GAGE ENGINEER TO VERIFY SIZES UTILIZED FOR BID PURPOSES

3. DEFLECTION LIMITS:
L/240 UNLESS ITS AN APPLICATION AT MASONRY THEN L/600

4. PROVIDE SHOP DRAWINGS SHOWING LAYOUT, SPACING, SIZES, THICKNESS AND TYPES OF COLD-FORMED FRAMING INCLUDING FASTENING AND ANCHORAGE DETAILS WITH SUPPORTING CALCULATIONS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF THE PROJECT.

5. SCREWS SHALL BE HILTI INC., KWIK-PRO SELF DRILLING OR AN APPROVED EQUAL. INSTALL IN ACCORD WITH MANUFACTURER'S RECOMMENDATIONS AND ICC REPORT ESR-2196.

6. WHERE GYPSUM SHEATHING IS NOT REQUIRED ON BOTH FACES OF STEEL STUDS, CONTINUOUS BRIDGING SHALL BE INSTALLED AS REQUIRED BY MANUFACTURER.

7. ALL LIGHT GAUGE STEEL FRAMING SHALL BE INSTALLED WITH BRIDGING, BRACING, TRACK, AND STIFFENERS, ETC. AS REQUIRED TO STRICTLY CONFORM TO MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR SHALL OBTAIN A COPY OF THE MANUFACTURER'S SUGGESTED CONSTRUCTION DETAILS TO USE AS A REFERENCE DURING CONSTRUCTION.

PRECAST CONCRETE
1. THE CONTRACTOR/SUPPLIER IS RESPONSIBLE FOR THE DESIGN OF ALL THE PRECAST MEMBERS AND CONNECTION BETWEEN THEM AND OTHER STRUCTURAL MEMBERS. SUBMIT DESIGN CALCULATIONS, SEALED BY AN ENGINEER LICENSED IN THE STATE OF THE PROJECT LOCATION, FOR REVIEW BY THE ARCHITECT/ENGINEER OF RECORD.

2. ALL PRECAST MEMBERS ARE TO BE DESIGNED IN ACCORDANCE WITH ACI 318-14, 2018 IBC AND OTHER APPLICABLE CODES, STANDARDS (SEE SPECS) AND DESIGNED CONNECTIONS.

3. PROVIDE BLOCKOUTS AND OPENINGS FOR MECHANICAL/ELECTRICAL EQUIPMENT. REFER TO MECHANICAL/ELECTRICAL DOCUMENTS.

4. SHOP DRAWINGS SHALL BE COMPLETE AND SHALL INCLUDE A LAYOUT PLAN, FABRICATION DETAILS, ESTIMATED CAMBER, CONNECTIONS AND ANCHORAGE DETAILS AND MEMBER IDENTIFICATION MARKS. IDENTIFICATION MARKS SHALL APPEAR ON MANUFACTURED UNITS TO FACILITATE CORRECT FIELD PLACEMENT.

5. REFER TO MECHNICAL/ELECTRICAL DRAWINGS FOR CONDUIT LOCATIONS EMBEDDED IN PRECAST MEMBERS

STRUCTURAL STEEL:
1. FABRICATOR SHALL BE AISC CERTIFIED IN LIEU OF THE PREVIOUS,FABRICATOR SHALL INCLUDE IN THEIR BID THE SERVICES OF A SPECIAL INSPECTOR TO PROVIDE INSPECTION/TESTING SERVICES FOR IN-SHOP WORK TO MEET THE REQUIREMENTS OF 2018 INTERNATIONAL BUILDING CODE SECTION 1704.

2. STRUCTURAL STEEL SHALL MEET ASTM A36 UNLESS NOTED OTHERWISE. STRUCTURAL STEEL WIDE FLANGE SHAPES SHALL MEET ASTM A992.

3. STEEL TUBES SHALL MEET ASTM A500, GRADE B.

4. STEEL PIPE SHALL MEET ASTM A53, TYPE E OR S, GRADE B.

5. BOLTS SHALL BE 3/4" DIAMETER A325-N UNLESS OTHERWISE NOTED.

6. FIELD BOLTING INSTALLATION SHALL BE INSPECTED IN ACCORD WITH THE 2018 INTERNATIONAL BUILDING CODE AND THE AISC LRFD MANUAL, SECOND EDITION. BOLTS SHALL BE INSTALLED SNUG TIGHT UNLESS NOTES OTHERWISE NOTED. ASTM A-325-SC SHALL BE FULLY TIGHTENED USING LOAD INDICATOR WASHERS.

7. ALL WELDING SHALL CONFORM TO THE PROVISIONS OF THE AMERICAN WELDING SOCIETY CODE AWS D1.1-98. ELECTRODES SHALL MATCH BASE METALS AS SPECIFIED IN 2018 INTERNATIONAL BUILDING CODE.

8. ALL FIELD WELDING SHALL BE VISUALLY INSPECTED BY THE TESTING LABORATORY.

9. HOT DIP GALVANIZE ALL STEEL MEMBERS EXPOSED TO EXTERIOR TO MEET ASTM 525 G60.

10. ALL STEEL BELOW GRADE SHALL BE ENCASED IN CONCRETE WHERE POSSIBLE; IF NOT POSSIBLE, STEEL SHALL BE THOROUGHLY COATED WITH TWO COATS OF ASPHALTIC PAINT.

STEEL JOISTS:
1. FABRICATOR SHALL BE AN "APPROVED FABRICATOR" IN ACCORD WITH THE 2018 INTERNATION BUILDING CODE BUILDING CODE SECTION 1704.2, REGISTERED AND APPROVED BY THE LOCAL BUILDING DEPARTMENT.

2. DESIGNED, FABRICATED AND ERECTED IN ACCORD WITH THE 2018 INTERNATION BUILDING CODE CHAPTER 22 AND THE STANDARD SPECIFICATIONS FOR STEEL JOIST, K-SERIES, LH-SERIES, DLH-SERIES AND JOIST GIRDERS, PUBLISHED BY THE STEEL JOIST INSTITUTE.

3. SIZE, TYPE AND SPACING OF JOIST BRIDGING TO BE IN ACCORD WITH STEEL JOIST INSTITUTE RECOMMENDATIONS. USE 'X'-BRIDGING AT DISCONTINUOUS ENDS OF BRIDGING. LOCATE BRIDGING TO AVOID MECHANICAL OPENINGS.

4. JOIST SEAT DEPTH SHALL BE 2-½" FOR 'K' SERIES AND 5" INCHES FOR 'LH' SERIES UNLESS NOTED OTHERWISE.

5. DESIGN EXTENDED ENDS FOR SAME DEAD LOADS AS JOIST AND A SNOW LOAD OF 40 PSF, AND OTHER LOADS AS INDICATED. LIMIT LIVE LOAD DEFLECTION TO L/240.

6. ADDITIONAL LOADS HAVE BEEN NOTED ON FRAMING PLANS. JOISTS SHALL BE DESIGNED TO SUPPORT THE ADDITIONAL LOADS. IT IS THE JOISTS SUPPLIERS RESPONSIBILITY TO DESIGN JOIST FOR ANY LOAD IN ADDITION TO THE DEAD AND LIVE LOADS LISTED ON THIS SHEET.

METAL DECK:
1. METAL ROOF DECK SHALL BE DEPTH X GAUGE SHOWN ON DRAWINGS(22 GA. MIN.), WITH NESTABLE SIDE LAPS AND PAINTED.

2. COMPOSITE FLOOR DECK SHALL BE DEPTH X GAUGE SHOWN ON DRAWING (22 GA MIN.), WITH NESTABLE SIDE LAPS AND GALVANIZED.

3. FASTEN ROOF DECK IN ACCORD WITH METAL DECK ATTACHMENT TYPES NOTED ON THE PLANS AND FASTENING DETAILS. DECK ATTACHMENT SHALL BE IN ACCORD WITH VULCRAFT AND THE STEEL DECK INSTITUTE'S SECOND EDITION OF THE DIAPHRAGM DESIGN MANUAL OR APPROVED EQUAL.

4. METAL DECK ATTACHMENTS SHALL BE INSPECTED BY TESTING LABORATORY.

MASONRY:
1. THE MINIMUM 28-DAY COMPRESSIVE STRENGTH OF THE CONCRETE MASONRY UNITS SHALL BE 1900 PSI ON THE NET AREA, PROVIDING A STRUCTURAL DESIGN COMPRESSIVE STRENGTH OF 1500 PSI PER THE 2018 INTERNATIONAL BUILDING CODE, TABLE 2105.2.2.1.2.

2. MORTAR SHALL BE TYPE S IN ACCORD WITH THE 2018 INTERNATIONAL BUILDING CODE, TABLE NO. 2103.7(1), MORTAR PROPORTIONS FOR UNIT MASONRY, USING CEMENT LIME OR MORTAR CEMENT MIXES. (MASONRY CEMENT IS NOT ACCEPTABLE).

3. ELEVATOR WALL MASONRY GROUT SHALL BE THE GREATER OF 2500 PSI OR THE COMPRESSIVE STRENGTH OF THE MASONRY UNITS. AIR ENTRAINMENT AND OTHER ADDITIVES ARE NOT ACCEPTABLE IN GROUT MIX. GROUT SHALL HAVE A SLUMP OF 8 TO 11 INCHES.

4. MASONRY REINFORCING STEEL SHALL BE ASTM A615, GRADE 60.

5. HORIZONTAL JOINT REINFORCING SHALL BE STANDARD LADDER TYPE, GALVANIZED, AT 16-INCHES ON CENTER, UNLESS OTHERWISE NOTED ON PLAN.

6. MINIMUM BOND BEAM REINFORCING SHALL BE 2 - #4 IN 6" AND 8" BOND BEAMS AND 2 - #5 IN 12" BOND BEAMS. BOND BEAM REINFORCING SHALL BE CONTINUOUS THROUGH CONTROL JOINTS EXCEPT AS NOTED ON TYPICAL MASONRY WALL OPENING DETAIL.

7. SPLICE LENGTHS FOR MASONRY REINFORCEMENT SHALL BE IN ACCORD WITH THE REINFORCING SPLICE LENGTH TABLE OR AS SHOWN ON THE DRAWINGS.

8. PROVIDE BOND BEAMS AT TOP OF ALL WALLS, AT ROOFS, STRUCTURAL FLOORS, OVER ALL OPENINGS IN WALLS AND WHERE SHOWN ON THE DRAWINGS.

9. REINFORCING SHALL BE HELD IN PLACE PRIOR TO GROUTING WITH WIRE POSITIONERS PLACED AT INTERVALS NOT EXCEEDING 192 BAR DIAMETERS NOR 10 FEET. PROVIDE POSITIONERS AT REINFORCING SPLICES.

10. VERTICAL REINFORCING SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED ON THE PLANS OR DETAILS.

8" CONC BLOCK 1-#5 @ 4'-0" OC

11. PROVIDE 1 #5 VERTICAL REINFORCING AT JAMB OPENINGS, ENDS AND CORNERS OF ALL WALLS AND EACH SIDE OF CONTROL JOINTS. SPECIAL JAMB REINFORCING, WHERE REQUIRED, IS CALLED OUT ON THE PLANS.

12. ELECTRICAL PANELS, CONDUITS, PIPES, FIRE EXTINGUISHER CABINETS, ETC., ARE TO BE LOCATED SO AS NOT TO INTERFERE WITH REINFORCED AND/OR GROUTED CELLS. PIPES AND CONDUITS PASSING HORIZONTALLY THROUGH WALLS SHALL BE SLEEVED. MINIMUM SPACING OF SLEEVES SHALL BE THREE DIAMETERS.

13. GROUT SHALL BE MECHANICALLY CONSOLIDATED IN A MANNER TO FILL THE GROUT SPACE AND RECONSOLIDATED IN ACCORD WITH THE 2018 INTERNATIONAL BUILDING CODE.

14. PROVIDE GROUT AND MASONRY UNIT TESTING PRIOR TO AND DURING CONSTRUCTION IN ACCORD WITH THE 2018 INTERNATIONAL BUILDING CODE.

15. REINFORCEMENT PLACEMENT, GROUT SPACES AND GROUTING OPERATION SHALL BE INSPECTED BY TESTING LABORATORY IN ACCORD WITH THE 2018 INTERNATIONAL BUILDING CODE REQUIREMENTS. MORTAR FIN PROJECTION INTO THE GROUT SPACE SHALL NOT EXCEED 1/2 INCH.

POST-INSTALLED ANCHORS:
1. EXPANSION BOLTS INSTALLED IN CONCRETE OR MASONRY SHALL BE HILTI KWIK BOLT TZ ANCHORS OR APPROVED EQUAL WITH EMBEDMENT NOTED ON THE DRAWINGS OR EMBEDMENT AS RECOMMENDED BY MANUFACTURER WHERE NO EMBEDMENT IS SHOWN. INSTALL IN ACCORD WITH MANUFACTURER'S RECOMMENDATIONS AND ICC-ES REPORTS ESR-4266.

2. SCREW ANCHORS SHALL BE KWIK HUS-EZ-SS316 CONCRETE ANCHORS BY HILTI, INC. OR APPROVED EQUAL. INSTALL IN ACCORD WITH MANUFACTURER'S RECOMMENDATIONS AND ICC-ES REPORT ESR-3027

3. ADHESIVE ANCHORS SHALL BE HILTI:
-HIT-HY 200 SAFE SET SYSTEM WITH THE HILTI HIT-Z ROD OR HAS THREADED ROD, PER ICC ESR 3187
-HIT-HY SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT (TE-CD OR TE-YD) WITH HAS -E THREADED ROD PER ICC-3187
-HIT-RE 500 V3 EPOXY ADHESIVE ANCHORING SYSTEM WITH THREADED ROD PER ESR-3814

4. ANCHORS ARE NOT TO BE INSTALLED UNTIL CONCRETE OR GROUT HAS REACHED ITS DESIGN STRENGTH.

FIRE RATINGS:
1. FOR FIRE-RATING REQUIREMENTS AND METHODS, SEE ARCHITECTURAL DRAWINGS.

SPECIAL STRUCTURAL INSPECTIONS:
1. IN ACCORD WITH THE 2018 INTERNATIONAL BUILDING CODE, SECTION 1704, AS NOTED BELOW. TESTING AND INSPECTION SHALL BE BY AN INDEPENDENT TESTING/INSPECTION FIRM, UNDER THE SUPERVISION OF A LICENSED ENGINEER EMPLOYED BY THAT FIRM. THE BASIS FOR WELDING INSPECTOR QUALIFICATION SHALL BE AWS QC 1.

2. SPECIAL INSPECTION IS TO BE PROVIDED IN ADDITION TO THE INSPECTIONS CONDUCTED BY THE LOCAL DEPARTMENT OF BUILDING SAFETY AND SHALL NOT BE CONSTRUED TO RELIEVE THE OWNER OR HIS AUTHORIZED AGENT FROM REQUESTING THE PERIODIC AND CALLED INSPECTIONS REQUIRED BY THE 2018 INTERNATIONAL BUILDING CODE.

3. THE INSPECTOR SHALL OBSERVE THE WORK ASSIGNED TO BE CERTAIN IT CONFORMS WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS.

4. THE INSPECTOR SHALL FURNISH DAILY INSPECTION REPORTS ON THE WORK TO THE BUILDING OFFICIAL AND TO THE ENGINEER OF RECORD FOR CONFORMANCE TO THE CONTRACT DOCUMENTS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, AND, IF UNCORRECTED, TO THE ENGINEER OF RECORD AND THE BUILDING OFFICIAL.

5. THE TESTING/INSPECTION FIRM'S ENGINEER SHALL COMPLETE, SIGN AND SEAL A FINAL REPORT CERTIFYING THAT TO THE BEST OF HIS KNOWLEDGE, THE WORK IS IN CONFORMANCE WITH THE CONTRACT DOCUMENTS.

STATEMENT OF SPECIAL INSPECTION			
IBC CODE REFERENCE	CONSTRUCTION TYPE	FREQUENCY CONT.	PER
1705.2	STEEL CONSTRUCTION		
1. INSPECTION OF WELDING			X
2. INSPECTION OF HIGH STRENGTH BOLTING			X
1705.3	REINFORCED CONCRETE		
1. INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS AND PLACEMENT.			X
3. INSPECTION OF ANCHORS CAST IN CONCRETE			X
4. INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS.			X
5. VERIFYING USE OF REQUIRED MIX DESIGN			X
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS AND DETERMINE THE TEMPERATURE OF THE CONCRETE.		X	
7. INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.		X	
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.			X
1705.4	MASONRY CONSTRUCTION		
1. VERIFY PROPORTIONS OF SITE-PREPARED MORTAR, CONSTRUCTION OF MORTAR JOINTS, LOCATION OF REINFORCEMENT, CONNECTORS AND ANCHORAGES AS CONSTRUCTION BEGINS.			X
2. VERIFY GROUT SPACING, GRADE AND SIZE OF REINFORCEMENT AND ANCHORS, PLACEMENT OF REINFORCING AND CONNECTIONS, PROPORTIONS OF SITE PREPARED GROUT PRIOR TO GROUTING.			X
3. VERIFY THE PLACEMENT OF GROUT.			X
1705.6	SOILS		
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE ADEQUATE BEARING CAPACITY.			X
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.			X
3. PERFORM CLASSIFICATION AND TESTING OF THE COMPACTED FILL MATERIALS.			X
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.		X	
5. PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.			X

DEFERRED SUBMITTALS:
1. THE FOLLOWING ITEMS ARE DEFERRED SUBMITTAL ITEMS:
- PRECAST CONCRETE DOUBLE TEE SYSTEM AND PRECAST CONCRETE WALLS
- STEEL JOISTS

2. DEFERRED SUBMITTAL ITEMS SHALL BE PREPARED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF THE PROJECT WITH CALCULATIONS, DRAWINGS, DETAILS, AND CUT SHEETS SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW. ONCE REVIEWED, CONTRACTOR SHALL FORWARD TO THE BUILDING DEPARTMENT FOR APPROVAL. FABRICATION AND/OR INSTALLATION OF DEFERRED SUBMITTAL ITEMS SHALL NOT OCCUR UNTIL APPROVAL OF THE BUILDING DEPARTMENT IS RECEIVED.

SHOP DRAWING REVIEW:
1. J&S STRUCTURAL ENGINEERS, PA WILL REVIEW SHOP DRAWINGS AND RELATED SUBMITTALS FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT AND THE INFORMATION GIVEN IN THE CONSTRUCTION DOCUMENTS. REVIEW OF A SPECIFIC ITEM SHALL NOT INCLUDE REVIEW OF AN ASSEMBLY OF WHICH THE ITEM IS A COMPONENT.

2. THE FOLLOWING IS A LIST OF REQUIRED SHOP DRAWINGS AND RELATED SUBMITTALS. THE CONTRACTOR SHALL REFER TO THE SPECIFICATIONS FOR MORE INFORMATION AND A COMPLETE LIST OF REQUIRED SUBMITTALS:
- ANCHOR BOLT LAYOUT DRAWINGS
- COLD-FORMED FRAMING SHOP DRAWINGS INCLUDING STANDARD DETAILS, BRACING AND BRIDGING REQUIREMENTS AND MATERIAL CERTIFICATIONS.
- CONCRETE BLOCK COMPRESSION TESTS AND MATERIAL CERTIFICATIONS
- CONCRETE MIX DESIGNS, TESTS AND MATERIAL CERTIFICATIONS
- CONCRETE REINFORCING SHOP DRAWINGS AND REINFORCING MATERIAL CERTIFICATIONS
- MASONRY GROUT AND AND MORTAR MIX DESIGNS
- MASONRY REINFORCING SHOP DRAWINGS
- STRUCTURAL STEEL SHOP DRAWINGS, MATERIAL CERTIFICATIONS AND WELDER CERTIFICATIONS

ICC-500 COMMUNITY SHELTER NOTES:

DEAD LOADS:
ROOF: 87 PSF (ICC SHELTER)

LIVE LOADS:
ROOF: 100 PSF

RAIN LOAD:
15 MINUTE:9.41 in/hour
60 MINUTE:4.46 in/hour

WIND LOAD
BASIC WIND SPEED = 250 MPH K_{zt} = 1.0
Iw=1.5 K_d = 1.0
EXPOSURE "C"
GCpi = +/- 0.55

SEISMIC LOAD:
SEISMIC DESIGN IN ACCORD WITH 2018 INTERNATIONAL BUILDING CODE.
IE=1.5
SEISMIC USE GROUP IV
SITE CLASS = B
MAPPED SPECTRAL RESPONSE COEFFICIENTS: Ss = 0.16 SI = 0.082
SPECTRAL RESPONSE COEFFICIENTS: SDS = 0.082 SDI = 0.057
SEISMIC DESIGN CATEGORY A
INTERMEDIATE REINFORCED PRECAST WALLS & BRACED FRAMES.
Cs = 0.01

QUALITY ASSURANCE PLAN:
1. ROOF FRAMING CONNECTIONS SHALL BE COMPLETED BY WELDED CONNECTIONS.
2. WALL CONNECTIONS SHALL BE REINFORCING DOWEL BARS CONNECTING CONCRETE FILLED METAL DECK TO PRECAST AND CONCRETE WALLS. (ACI 318)
3. BOUNDARY ELEMENTS ARE PROVIDED BY CONTINUOUS BOND BEAM AT PERIMETER OF EMERGENCY OPERATIONS CENTER.(ACI 318 & TMS 602)
4. MAIN WINDFORCE-RESISTING SYSTEM SHALL BE SUPPORTED BY PRECAST CONCRETE. (TMS 602)
5. PRECAST CONCRETE SHEARWALLS ARE CONNECTED TO FOUNDATIONS BY REINFORCING STEEL EMBEDED IN BOTH PRECAST WALL AND FOUNDATION COMPONENTS. (ACI 318 & TMS 602)
6. ALL WALL AND ROOF ASSEMBLIES MUST MEET IMPACT OR STATIC OR CYCLIC PRESSURE TEST REQUIREMENTS. (CHAPTER 3, ICC 500)
7. WALL CONSTRUCTION HAS BEEN DESIGNED FOR 250 MILES PER HOUR WIND LOADS, CLADDING IS EXEMPT FOR WIND REQUIREMENTS FOR EMERGENCY OPERATIONS SHELTERS (ASCE 7-16)
8. FOUNDATIONS SHALL BE PROVIDED TO RESIST GRAVITY AND WIND LOADS. (ASCE 7-16, ICC 500) AS NOTED ON FOUNDATIONS SECTION S000

GENERAL NOTES:
1. CONTRUCTION OBSERVATION IS REQUIRED AT SHELTER. SEE STATEMENT OF SPECIAL INSPECTION FOR MORE INFORMATION ON SHEET S001.
2. ALL DOORS MUST COMPLY WITH SECTION 306.3.1, ALL WINDOWS MUST COMPLY WITH SECTION 306.3.2 AND OTHER IMPACT-PROTECTIVE SYSTEMS COMPLYING WITH SECTION 306.4 OR BAFFLED TO PREVENT WIND-BORNE DEBRIS FROM ENTERING THE SHELTER PROTECTED OCCUPANT AREA IN ACCORDANCE WITH TEH SECTION 308.5.
3. ALL PENETRATIONS THROUGH SHELTER MUST COMPLY WITH SECTION 309

MASONRY SPLICE LENGTH TABLE

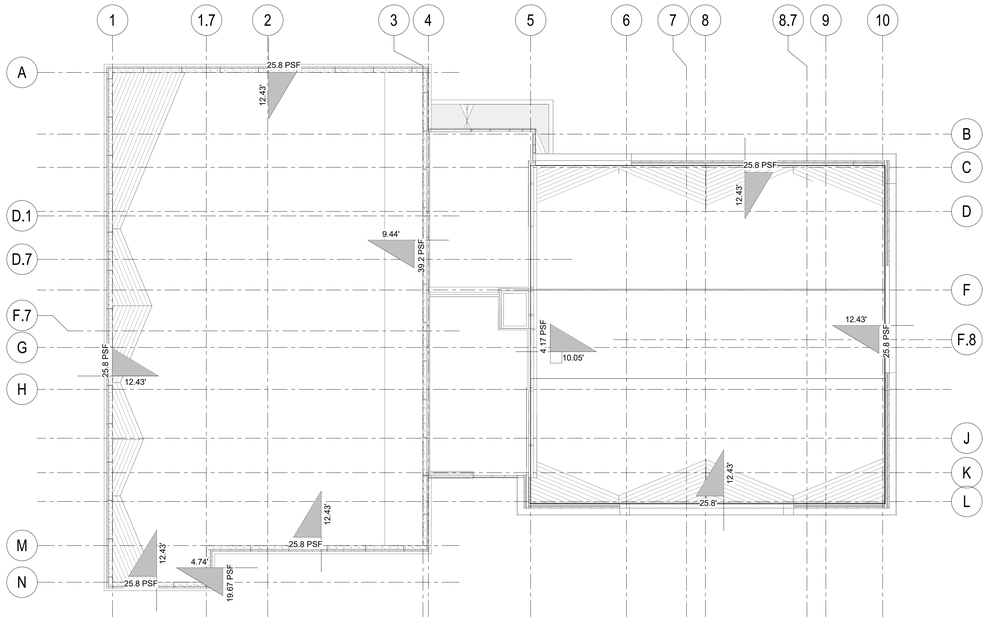
BAR SIZE	6" BLOCK	8" BLOCK		10" BLOCK		12" BLOCK	
	BAR @ CL	BAR @ CL	BAR @ EDGE	BAR @ CL	BAR @ EDGE	BAR @ CL	BAR @ EDGE
#4	1'-9"	1'-9"	3'-0"	1'-9"	2'-0"	1'-9"	1'-9"
#5	2'-8"	2'-2"	3'-9"	2'-2"	3'-3"	2'-2"	2'-3"
#6	-	3'-7"	4'-6"	3'-4"	4'-6"	3'-4"	4'-5"
#7	-	5'-0"	-	3'-10"	5'-3"	4'-2"	5'-3"

NOTE:
WHEN REQUIRED SPLICE LENGTH EXCEEDS 4'-0" USE HIGH LIFT GROUTING OR USE MECHANICAL TENSION SPLICES WITH LOW LIFT GROUTING

CONCRETE SPLICE LENGTH TABLE

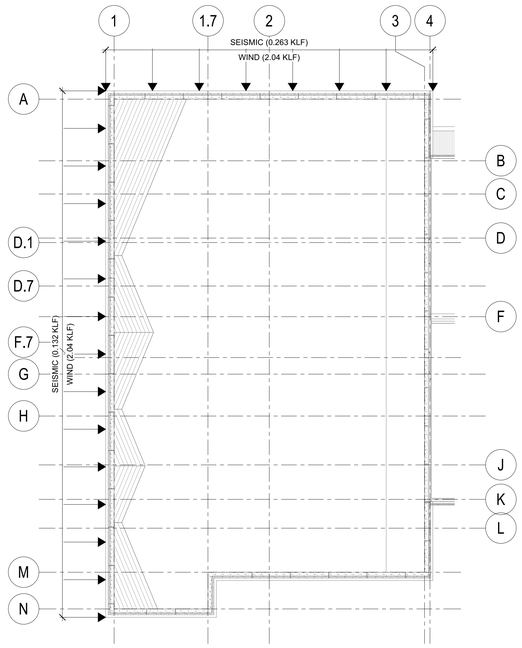
BAR SIZE	FOOTING OR GRADE BEAM	PIER	WALL (VERTICAL)	WALL (HORIZONTAL)	SLAB	COLUMN	BEAM (BOTTOM)	BEAM (TOP)
#3	-	-	1'-8"	1'-8"	1'-8"	-	-	-
#4	2'-3"	-	2'-3"	2'-3"	2'-3"	-	-	-
#5	2'-9"	2'-7"	2'-9"	2'-9"	2'-9"	2'-0"	2'-7"	3'-5"
#6	3'-4"	3'-1"	3'-4"	3'-4"	3'-4"	2'-5"	3'-1"	4'-1"
#7	4'-10"	4'-6"	4'-10"	4'-10"	4'-10"	3'-6"	4'-6"	5'-11"
#8	5'-6"	5'-2"	5'-6"	-	-	4'-0"	5'-2"	6'-9"
#9	-	5'-10"	-	-	-	4'-6"	5'-10"	7'-7"
#10	-	6'-7"	-	-	-	5'-1"	6'-7"	8'-6"
#11	-	7'-3"	-	-	-	5'-7"	7'-3"	9'-6"

NOTES:
1. WHEN BARS OF DIFFERENT SIZE ARE LAP SPLICED, THE LARGER SPLICE LENGTH SHALL BE USED.
2. TOP BAR IS DEFINED AS ANY HORIZONTAL BAR THAT HAS MORE THAN 12" OF FRESH CONCRETE B



SNOW LOADING PLAN

1/16" = 1'-0"



PRECAST DISTRIBUTED LOADS - UPPER LEVEL

1/16" = 1'-0"

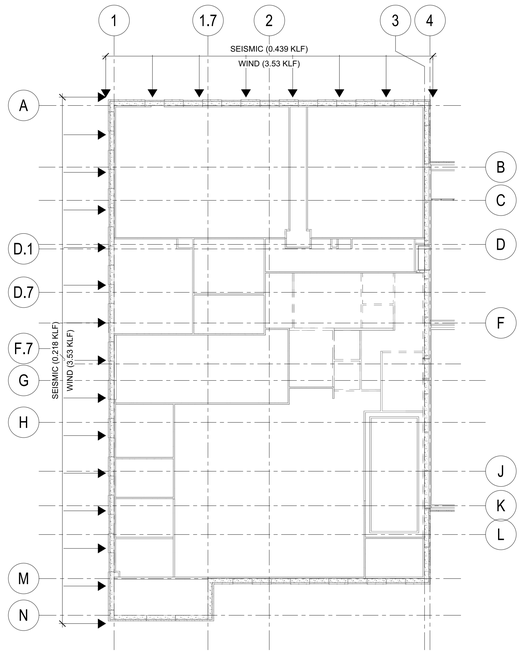
NOTES:
ALL LOADING IS UNFACTORED AS PER ASCE 7-16, 2.3.1

COMPONENTS AND CLADDING PRESSURES: ICC 500

	COMPONENT	ZONE	+ PRESSURE	- PRESSURE		COMPONENT	ZONE	+ PRESSURE	- PRESSURE
ROOF	<=10 SF	1S	134.9	-246.0	WALL	<=10 SF	4S	230.1	-244.4
	100 SF	1S	128.6	-239.7		50 SF	4S	212.5	-226.8
	200 SF	1S	123.8	-234.9		200 SF	4S	197.3	-211.6
	>500 SF	1S	119.0	-230.1		>500 SF	4S	187.3	-201.6
	<=10 SF	2S	230.1	-373.0		<=10 SF	5S	230.1	-287.3
	100 SF	2S	220.1	-328.8		50 SF	5S	212.5	-252.0
	200 SF	2S	212.5	-295.3		200 SF	5S	197.3	-221.6
	>500 SF	2S	204.9	-261.9		>500 SF	5S	187.3	-201.6
	<=10 SF	3S	230.1	-373.0	PARAPET	<=10 SF	4S	187.3	-366.6
	100 SF	3S	220.1	-328.8		50 SF	4S	318.8	-340.2
	200 SF	3S	212.5	-295.3		<=10 SF	5S	345.2	-431.0
	>500 SF	3S	204.9	-261.9		50 SF	5S	318.8	-378.0

COMPONENTS AND CLADDING PRESSURES:

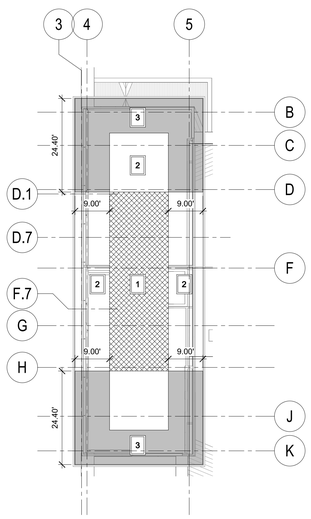
	Component	Zone	+ Pressure	- Pressure		Component	Zone	+ Pressure	- Pressure
ROOF	<=10 SF	1	11.5	-45.0	WALL	<=10 SF	4	25.8	-28.0
	100 SF	1	9.1	-35.1		50 SF	4	23.2	-25.3
	200 SF	1	9.1	-32.1		200 SF	4	20.9	-23.0
	>500 SF	1	9.1	-28.2		>500 SF	4	19.4	-21.5
	<=10 SF	2	25.9	-59.3		<=10 SF	5	25.8	-34.4
	100 SF	2	22.0	-46.6		50 SF	5	23.2	-29.1
	200 SF	2	20.9	-42.8		200 SF	5	20.9	-24.6
	>500 SF	2	19.4	-37.8		>500 SF	5	19.4	-21.5
	<=10 SF	3	25.8	-59.3	PARAPET	<=10 SF	4	38.7	-42.0
	100 SF	3	22.0	-46.6		50 SF	4	34.8	-38.0
	200 SF	3	20.9	-42.8		<=10 SF	5	38.7	-51.6
	>500 SF	3	19.4	-37.8		50 SF	5	34.8	-43.7



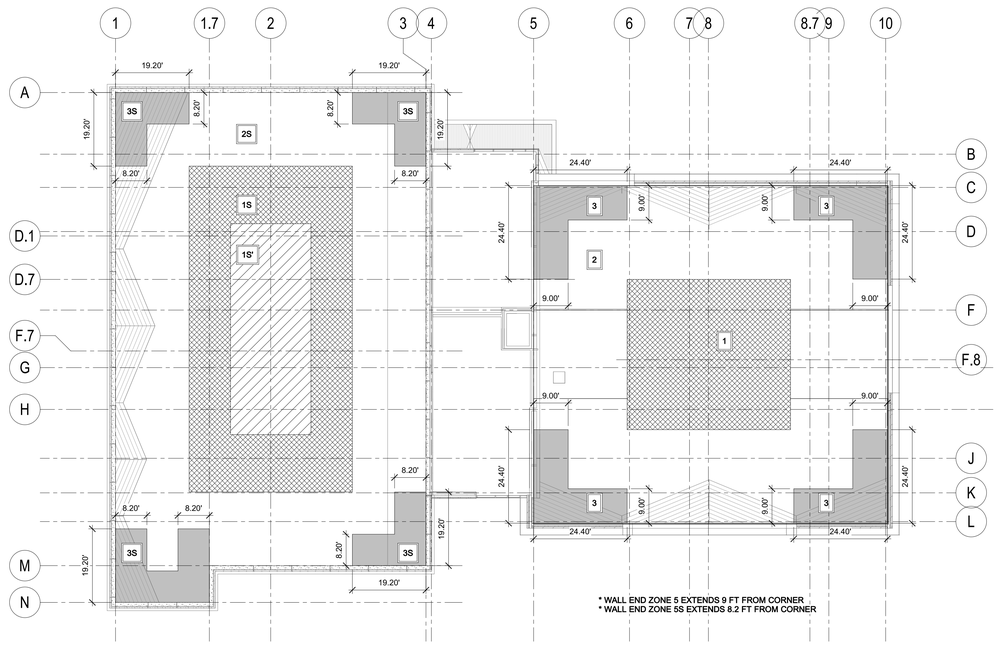
PRECAST DISTRIBUTED LOADS - FLOOR

1/16" = 1'-0"

NOTES:
ALL LOADING IS UNFACTORED AS PER ASCE 7-16, 2.3.1



HIGH ROOF



* WALL END ZONE 5 EXTENDS 9 FT FROM CORNER
* WALL END ZONE 5S EXTENDS 8.2 FT FROM CORNER

WIND COMPONENTS & CLADDING LOADING PLAN

1/16" = 1'-0"

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MO COA: 2009009344

LEE'S SUMMIT JOINT OPERATIONS

PACKAGE 1: SITE AND STRUCTURE

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

REVISION DATES:

7	ASI #4	2/12/2025

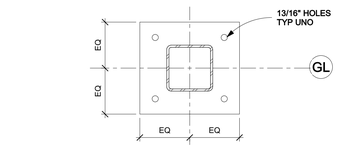
STATE OF MISSOURI
KIMBERLY EBERT JONES
PE-2005029619
PROFESSIONAL ENGINEER
2/19/25

PROFESSIONAL SEAL

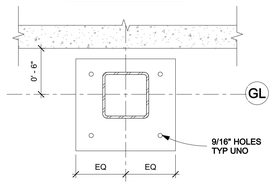
S-001

ISSUE DATE: AUGUST 29, 2024
HOEFER WELKER #: 138161

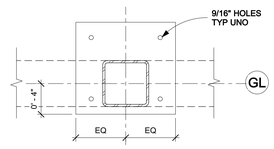
LOADING PLANS



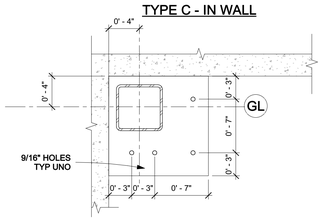
TYPE A - TYPICAL



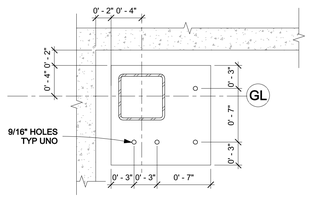
TYPE B - AT CONC WALL



TYPE C - IN WALL



TYPE D - AT CORNER

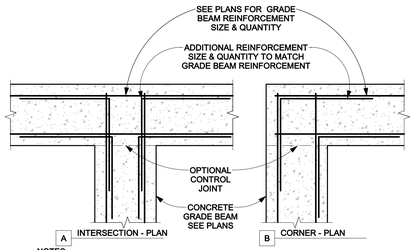


TYPE E - AT CORNER

NOTES:

1. SEE FOUNDATION PLAN FOR BASEPLATE SIZE
2. PROVIDE 9/16"Ø HOLES 2" FROM EDGE
3. TYPE A UNLESS NOTED OTHERWISE ON PLAN

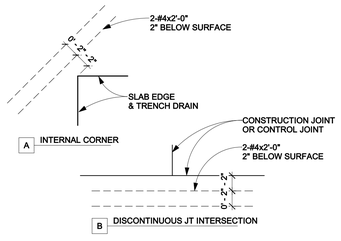
21 S-010 BASEPLATE ORIENTATION
1 1/2" = 1'-0"



NOTES:

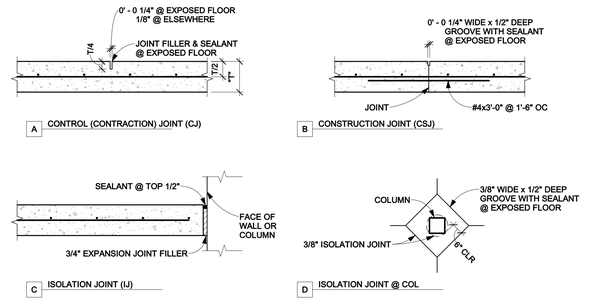
1. SEE CONCRETE SPLICE LENGTH TABLE FOR SPLICE REQUIREMENTS
2. ADDITIONAL REINFORCEMENT IS REQUIRED AT THE TOP AND BOTTOM FOR GRADE BEAM

12 S-010 TYPICAL GRADE BEAM REINFORCING DETAIL
3/4" = 1'-0"

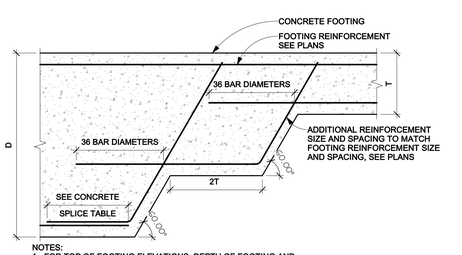


NOTE:
SEE PLANS FOR TYPICAL SLAB-ON-GRADE REINFORCEMENT

13 S-010 ADDITIONAL SLAB-ON-GRADE REINF
1 1/2" = 1'-0"



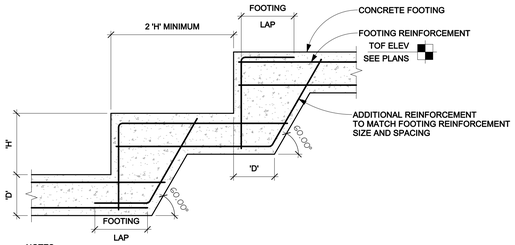
14 S-010 TYPICAL SLAB-ON-GRADE JOINTS
1 1/2" = 1'-0"



NOTES:

1. FOR TOP OF FOOTING ELEVATIONS, DEPTH OF FOOTING AND REINFORCEMENT, SEE PLANS AND TYPICAL FOOTING DETAILS.
2. PROVIDE TWO EQUAL STEPS WHEN 'D' IS GREATER THAN TWO TIMES 'T', OTHERWISE PROVIDE ONE STEP.

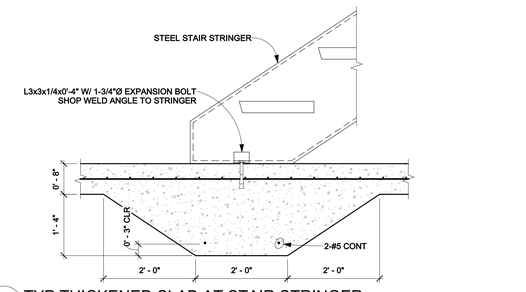
22 S-010 TYPICAL BOTTOM STEP FOOTING DETAIL
3/4" = 1'-0"



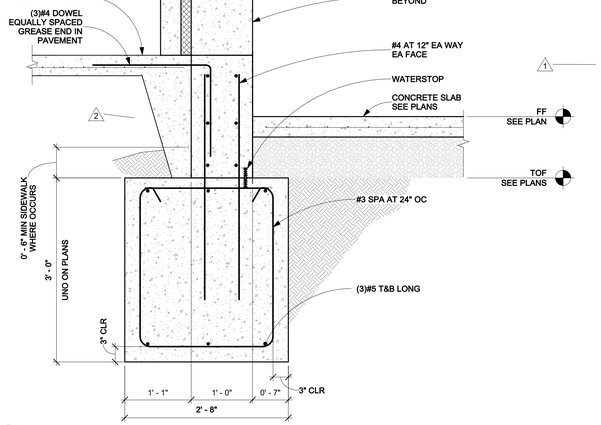
NOTES:

1. FOR FOOTING ELEVATION, DEPTH AND REINFORCEMENT SEE PLANS
2. TOP REINFORCEMENT WHERE OCCURS SEE PLANS
3. SEE CONCRETE SPLICE LAP TABLE FOR SPLICE LAPS

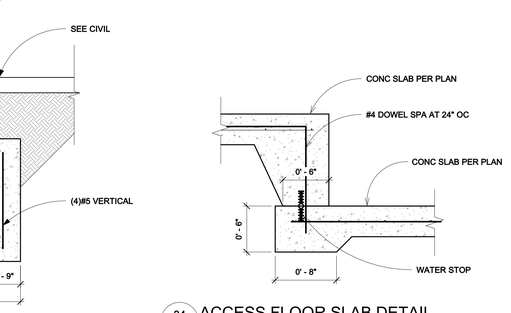
23 S-010 TYPICAL STEP FOOTING DETAIL
1" = 1'-0"



24 S-010 TYP THICKENED SLAB AT STAIR STRINGER
3/4" = 1'-0"

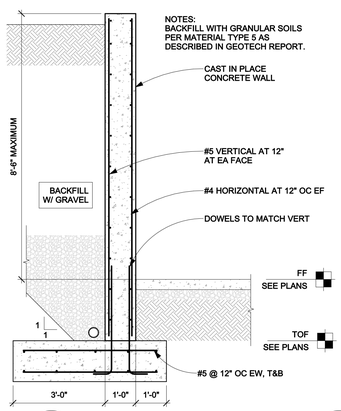


32 S-010 TYPICAL MAN DOOR AT PRECAST
1" = 1'-0"

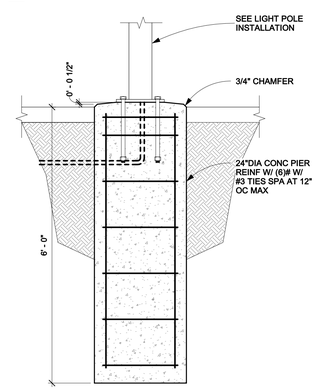


33 S-010 TYP BOLLARD DETAIL
3/4" = 1'-0"

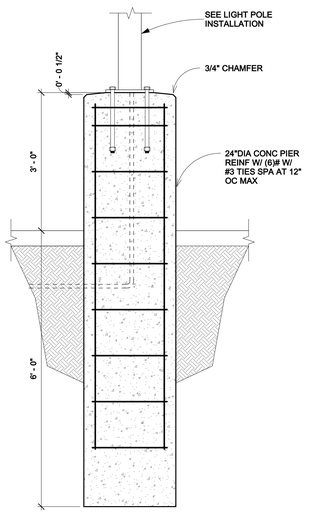
34 S-010 ACCESS FLOOR SLAB DETAIL
1 1/2" = 1'-0"



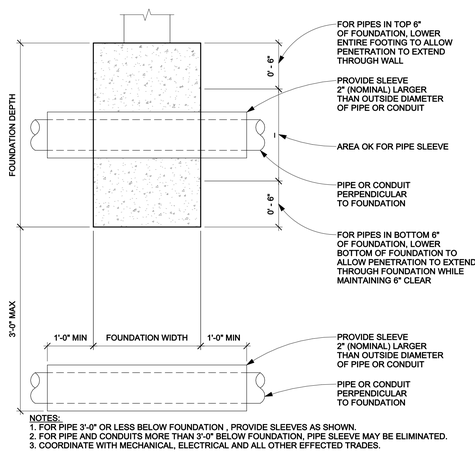
41 S-010 CONC SITE WALL DETAIL
1/2" = 1'-0"



42 S-010 DECORATIVE LIGHTPOLE BASE DETAIL
3/4" = 1'-0"



43 S-010 LIGHTPOLE BASE DETAIL
3/4" = 1'-0"



NOTES:

1. FOR PIPE 3'-0" OR LESS BELOW FOUNDATION , PROVIDE SLEEVES AS SHOWN.
2. FOR PIPE AND CONDUITS MORE THAN 3'-0" BELOW FOUNDATION, PIPE SLEEVE MAY BE ELIMINATED.
3. COORDINATE WITH MECHANICAL, ELECTRICAL AND ALL OTHER EFFECTED TRADES.

44 S-010 TYPICAL INSTALLATION OF PIPE
1 1/2" = 1'-0"

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LEE'S SUMMIT JOINT OPERATIONS

PACKAGE 1: SITE AND STRUCTURE

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

REVISION DATES:

1	ADDENDUM #1	9/19/24
2	ADDENDUM #2	10/30/24
10	CCD #002	1/23/24
18	CCD #003	5/5/25

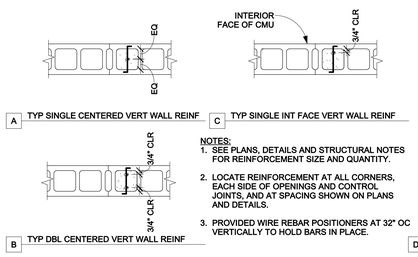
STATE OF MISSOURI
KIMBERLY EBERT JONES
PE-2005029619
PROFESSIONAL ENGINEER
5/1/25

PROFESSIONAL SEAL

S-010

ISSUE DATE: AUGUST 29, 2024
HOEFER WELKER #: 138161

TYPICAL FOUNDATION DETAILS

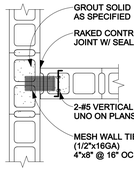


A TYP SINGLE CENTERED VERT WALL REINF

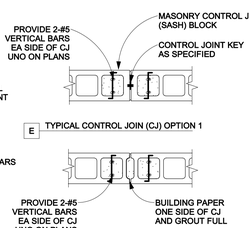
C TYP SINGLE INT FACE VERT WALL REINF

B TYP DBL CENTERED VERT WALL REINF

NOTES:
1. SEE PLANS, DETAILS AND STRUCTURAL NOTES FOR REINFORCEMENT SIZE AND QUANTITY.
2. LOCATE REINFORCEMENT AT ALL CORNERS, EACH SIDE OF OPENINGS AND CONTROL JOINTS, AND AT SPACING SHOWN ON PLANS AND DETAILS.
3. PROVIDED WIRE REBAR POSITIONERS AT 32" OC VERTICALLY TO HOLD BARS IN PLACE.



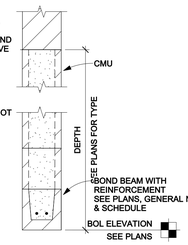
D TYP MASONRY WALL INTERSECTION



E TYPICAL CONTROL JOIN (CJ) OPTION 1

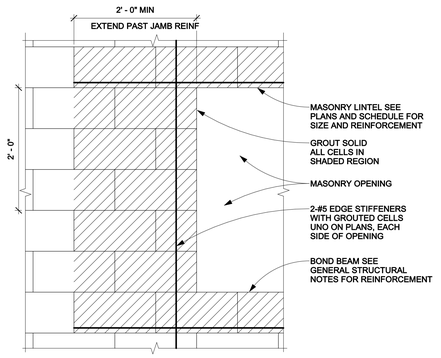
F TYP CONTROL JOIN (CJ) OPTION 2

NOTES:
1. PROVIDE SHORING UNDER BEAM FOR A MINIMUM OF 7 DAYS AFTER GROUTING.
2. MONOLITHICALLY GROUT BOND BEAM AND ALL CELLS SOLID. GROUTING SHALL HAVE NO VERTICAL OR HORIZONTAL COLD JOINTS FULL HEIGHT AND LENGTH OF LINTEL INCLUDING END BEARINGS.
3. MECHANICALLY VIBRATE GROUT.
4. SEE TYPICAL MASONRY BEAM/LINTEL BEARING DETAIL FOR BEARING.
5. HORIZONTAL REINFORCEMENT SHALL NOT BE SPLICED.

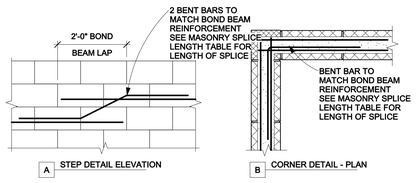


LINTEL SCHEDULE	
MARK	TYPE
ML-1	8x8 BOND BEAM W/ 1-#4
ML-2	8x16 BOND BEAM W/ 2-#4'S (UNO @ 8" CMU)
ML-3	8x24 BOND BEAM W/ 2-#4'S
ML-4	12x8 BOND BEAM W/ 2-#4'S
ML-5	12x16 BOND BEAM W/ 2-#5'S (UNO @ 12" CMU)
ML-6	12x24 BOND BEAM W/ 2-#5'S
ML-7	6x8 BOND BEAM W/ 1-#3
ML-8	6x16 BOND BEAM W/ 2-#4'S (UNO @ 6" CMU)

NOTES:
1. AT 8" CMU USE LINTEL ML-2 ALL OPENINGS ≤ 4'-8" AND ML-3 FOR ALL OPENINGS > 4'-8" AND < 8'-0" WIDE UNLESS OTHERWISE NOTED.
2. AT 12" CMU USE LINTEL ML-5 ALL OPENINGS ≤ 6'-8" AND ML-6 FOR ALL OPENINGS > 6'-8" AND < 10'-0" WIDE UNLESS OTHERWISE NOTED.
3. WHERE LINTEL IS NOTED AT SIMILAR, PROVIDE BOND BEAM AND REINFORCING PER SCHEDULE AT TOP AND BOTTOM OF LINTEL.
4. BOND BEAM REINFORCING SHALL BE CONTINUOUS, WITHOUT SPLICES.



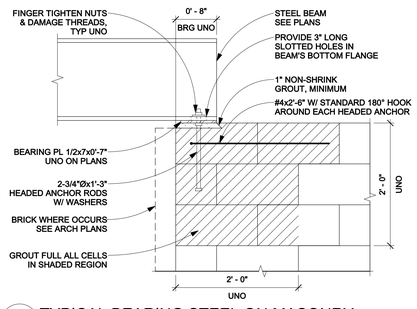
11 TYPICAL MASONRY WALL REINFORCEMENT
S-011 3/4" = 1'-0"

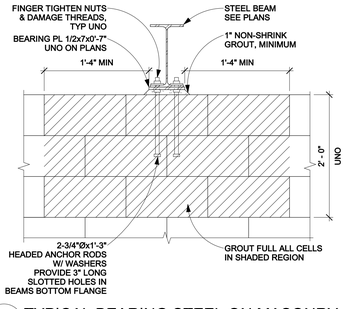


A STEP DETAIL ELEVATION

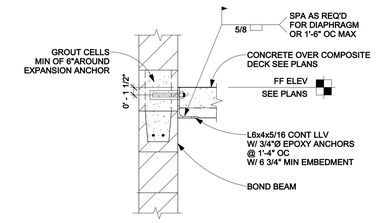
B CORNER DETAIL - PLAN

13 TYPICAL MASONRY LINTEL DETAIL AND SCHEDULE
S-011 1" = 1'-0"





15 TYPICAL MASONRY LINTEL BEARING DETAIL
S-011 1" = 1'-0"



21 TYPICAL BOND BEAM DETAIL
S-011 3/4" = 1'-0"

22 TYPICAL BEARING STEEL ON MASONRY
S-011 1" = 1'-0"

NOTES:
1. SEE ARCHITECTURAL PLANS AND DETAILS FOR LOCATIONS OF WALLS TO STRUCTURE
2. PROVIDE CONTINUOUS 10 GA PLATE, CONTINUOUS ANGLES, AND SCREWS @ 2'-0" OC WHEN TOP OF WALL IS EXPOSED.

23 TYPICAL BEARING STEEL ON MASONRY
S-011 1" = 1'-0"

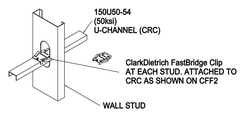
25 TYP COMPOSITE DECK TO MASONRY WALL
S-011 1" = 1'-0"

31 TYP METAL DECK ATTACH
S-011 1" = 1'-0"

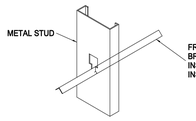
32 TYPICAL WALL BRACING DETAIL
S-011 1" = 1'-0"

34 COMP DECK BEARING AT MAS WALL
S-011 1" = 1'-0"

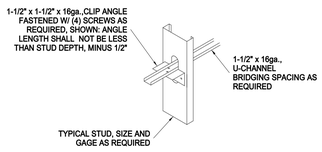
35 STEEL COLUMN BEARING CONCRETE
S-011 3/4" = 1'-0"



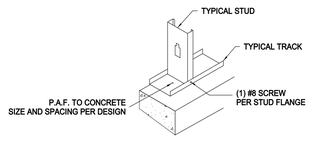
41 FASTBRIDGE BRIDGING OPTION
S-011 1/4" = 1'-0"



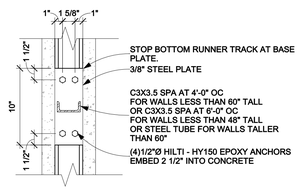
42 SPACER BAR BRIDGING OPTION
S-011 1/2" = 1'-0"

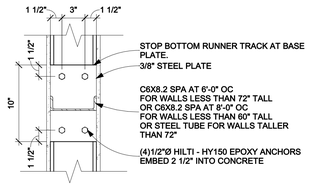


43 U-CHANNEL BRIDGING OPTION
S-011 1" = 20'-0"

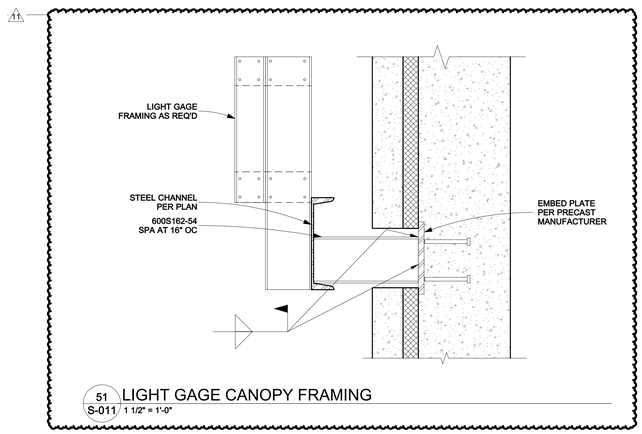


44 TYP STUD BASE CONNECTION
S-011 1/2" = 1'-0"

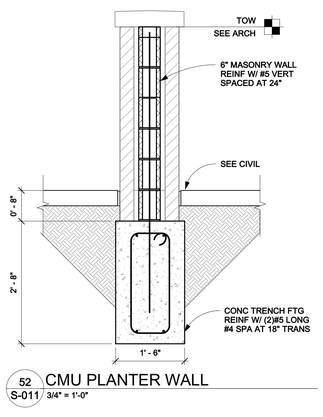




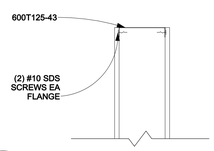
45 PARTIAL WALL HEIGHT SUPPORT
S-011 1 1/2" = 1'-0"



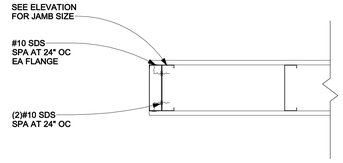
51 LIGHT GAGE CANOPY FRAMING
S-011 1 1/2" = 1'-0"



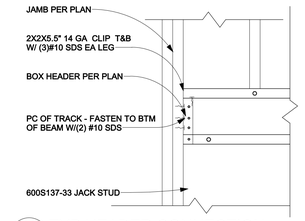
52 CMU PLANTER WALL
S-011 3/4" = 1'-0"



53 TYP SILL PLATE SECTION
S-011 1 1/2" = 1'-0"



54 TYP JAMB DETAIL
S-011 1 1/2" = 1'-0"



55 TYP HEADER CONNECTION
S-011 1 1/2" = 1'-0"

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LEE'S SUMMIT JOINT OPERATIONS

PACKAGE 1: SITE AND STRUCTURE

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

REVISION DATES:

11	ASI #6	2/26/25

STATE OF MISSOURI
KIMBERLY EBERT JONES
PE-2005029619
PROFESSIONAL ENGINEER
3/3/25

PROFESSIONAL SEAL

S-011

ISSUE DATE: AUGUST 29, 2024
HOEFER WELKER #: 138161

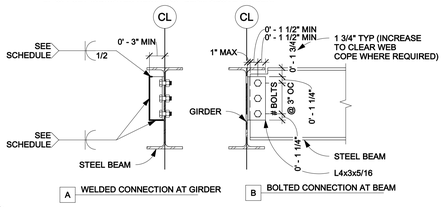
TYPICAL MASONRY & LIGHTGAGE DETAILS

SINGLE ANGLE CONNECTION SCHEDULE (LRFD)

BEAM SIZE	WELD SIZE	OFFSET					
		0"		2 1/2" MAX		5" MAX	
		NUMBER OF BOLTS	SHEAR CAPACIT Y	NUMBER OF BOLTS	SHEAR CAPACIT Y	NUMBER OF BOLTS	SHEAR CAPACIT Y
W8 W10	3/16"	2	22K	2	14K*	-	14K
W12 W14	1/4"	3	43K	3	26K	2	26K**
W16 W18	1/4"	4	64K	4	64K	3	46K
W21	1/4"	5	80K	5	80K	4	64K
W24	1/4"	6	95K	6	95K	5	80K
W27	1/4"	7	111K	7	111K	6	95K
W30 W33	1/4"	8	127K	8	127K	7	111K
W36	1/4"	9	143K	9	143K	9	143K

NOTES:
1. BOLTS ARE 3/4"Ø A325N BOLTS. HOLES ARE 13/16"Ø HOLES IN SUPPORT MEMBER AND 13/16"x1" HORIZONTAL SHORT SLOTS IN ANGLES.
2. OFFSET INDICATES HEIGHT OF BEAM ABOVE GIRDER.

* W10 BEAMS ONLY
** W12 BEAMS ONLY

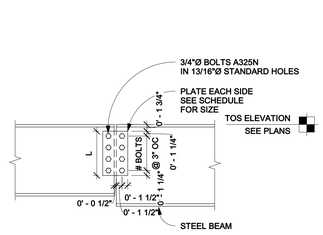


A WELDED CONNECTION AT GIRDER
B BOLTED CONNECTION AT BEAM

22 S-012 TYPICAL SINGLE ANGLE CONNECTION
1" = 1'-0"

CONNECTION SCHEDULE (LRFD)

BEAM SIZE	NUMBER OF BOLTS	L=PLATE LENGTH	PLATE THICKNES S	SHEAR CAPACIT Y
W8 W10	2	5 1/2"	1/4"	18K
W12 W14	3	8 1/2"	1/4"	36K
W16 W18	4	11 1/2"	1/4"	73K
W21	5	14 1/2"	1/4"	135K
W24	6	17 1/2"	1/4"	165K
W27	7	20 1/2"	1/4"	193K
W30 W33	8	23 1/2"	5/16"	239K
W36	9	26 1/2"	5/16"	271K



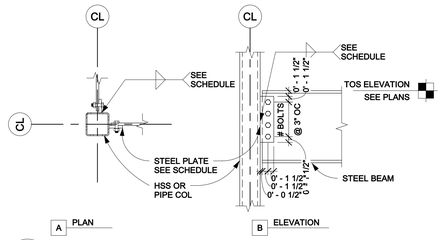
23 S-012 TYPICAL BEAM SPLICE DETAIL
3/4" = 1'-0"

CONNECTION SCHEDULE (LRFD)

BEAM SIZE	NUMBER OF BOLTS	L=PLATE LENGTH	PLATE THICKNES S	WELD SIZE	SHEAR CAPACIT Y
W8 W10	2	6"	1/4"	3/16"	18K
W12 W14	3	9"	1/4"	3/16"	36K
W16 W18	4	12"	1/4"	3/16"	53K
W21	5	15"	5/16"	1/4"	70K
W24	6	18"	5/16"	1/4"	87K
W27	7	21"	3/8"	1/4"	99K
W30 W33	8	24"	3/8"	5/16"	111K
W36	9	27"	7/16"	5/16"	123K

NOTE:

BOLTS ARE 3/4"Ø A325N BOLTS. HOLES ARE 13/16"Ø HOLES IN SUPPORT MEMBER AND 13/16"x1" HORIZONTAL SHORT SLOPS IN PLATES.

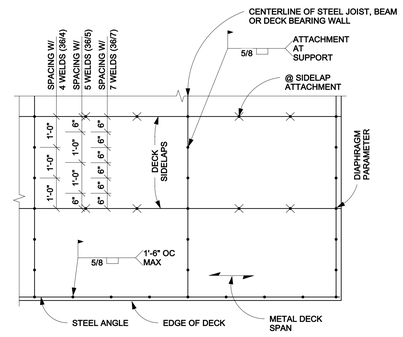


A PLAN
B ELEVATION

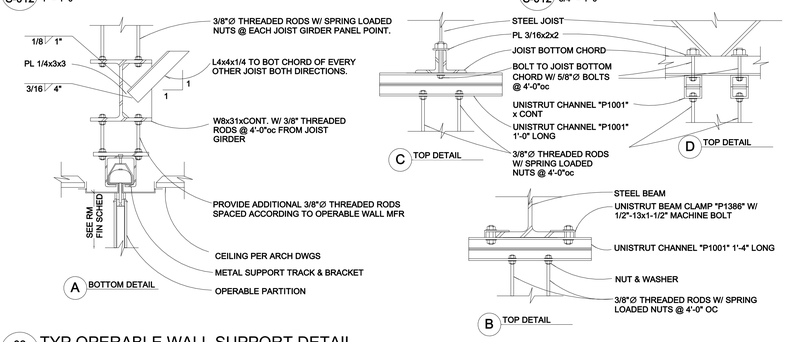
24 S-012 TYPICAL STEEL BEAM/COLUMN CONNECTION
3/4" = 1'-0"

DECK ATTACHMENT SCHEDULE

ATTACHMENT TYPE	ATTACHMENT @ SUPPORTS	ATTACHMENT @ SIDELAPS	REMARKS
A	36/4: 4-5/8" Ø PER 36" WIDE SHEET	2-#10 SCREWS @ 1/3 POINTS	USE UNO ON PLANS
B	36/7: 7-5/8" Ø PER 36" WIDE SHEET	9-#10 SCREWS @ 1/10 POINTS	USE AT LOW ROOF
C	36/7: 7-5/8" Ø PER 36" WIDE SHEET	5-#10 SCREWS @ 1/6 POINTS	USE AT HIGH ROOF
D	36/4: 4-5/8" Ø PER 36" WIDE SHEET	5-#10 SCREWS @ 1/6 POINTS	
E	36/7: 7-5/8" Ø PER 36" WIDE SHEET	3-#10 SCREWS @ 1/4 POINTS	



25 S-012 TYPICAL ROOF OR FLOOR DECK ATTACH
1" = 1'-0"

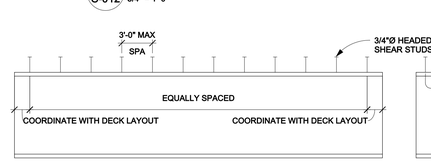


A BOTTOM DETAIL

C TOP DETAIL
D TOP DETAIL

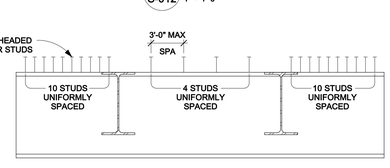
B TOP DETAIL

32 S-012 TYP OPERABLE WALL SUPPORT DETAIL
1" = 1'-0"



NOTES:
1. THE NUMBER IN BRACKETS [#] FOLLOWING THE BEAM SIZE ON THE PLANS INDICATES THE NUMBER OF 3/4" HEADED STUDS TO BE PLACED ON THE BEAM.
2. THE MAXIMUM STUD SPACING SHALL BE 3'-0"
3. DECK VALLEYS WITHOUT STUDS SHALL BE WELDED.
4. STUD PLACEMENT SHALL BE:
   A. WHEN THE NUMBER OF STUDS IS LESS THAN THE NUMBER OF DECK VALLEYS UNIFORMLY SPACE STUDS SYMMETRICALLY WITH THE BEAM CENTERLINE.
   B. WHEN THE NUMBER OF STUDS IS GREATER THAN THE NUMBER OF DECK VALLEYS PLACE ONE STUD IN EACH VALLEY STARTING AT THE END OF THE BEAM. WHEN TWO STUDS ARE REQUIRED PLACE STUDS 1 1/2" EACH SIDE OF THE BEAM WEB.

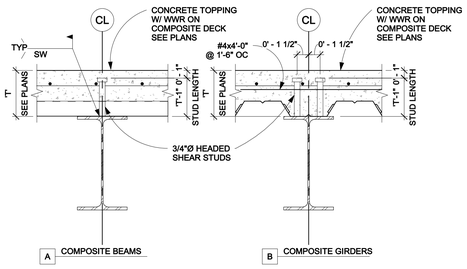
A COMPOSITE BEAMS



NOTES:
1. THE SERIES OF NUMBERS SHOWN IN BRACKETS [#,#,#] FOLLOWING THE GIRDER SIZE, ON THE PLANS, WHEN ADDED TOGETHER REPRESENT THE TOTAL NUMBER OF 3/4" STUDS TO BE PLACED ON THE GIRDER. FOR EXAMPLE [10,4,10] REPRESENTS A TOTAL OF 24 STUDS TO BE LOCATED ON THE GIRDER. THE FIRST (LAST) NUMBER REPRESENTING THE NUMBER OF STUDS TO BE PLACED BETWEEN THE END OF THE GIRDER AND THE FIRST (LAST) INTERSECTING BEAM. THE MIDDLE NUMBER REPRESENTS THE NUMBER OF STUDS TO BE LOCATED BETWEEN THE TWO INTERSECTING BEAMS.
2. PLACE STUDS UNIFORMLY ALONG THE BEAM OR PORTION OF BEAM INDICATED.
3. MAXIMUM STUD SPACING SHALL BE 3'-0".
4. MINIMUM STUD SPACING SHALL BE 4 1/2". IF THE REQUIRED NUMBER OF STUDS EXCEEDS WHAT CAN BE PLACED AT 4 1/2", PLACE A SECOND ROW OF STUDS SPACED AT 4 1/2" OC, STARTING AT THE END OF THE BEAM, UNTIL THE REQUIRED NUMBER OF STUDS IS REACHED. WHEN TWO ROWS ARE REQUIRED, PLACE STUDS 1 1/2" EACH SIDE OF THE BEAM CENTERLINE.

B COMPOSITE GIRDERS

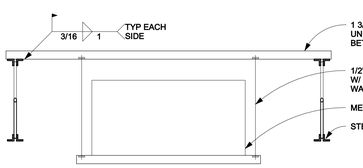
34 S-012 TYPICAL COMPOSITE BEAM STUD PLACEMENT DETAIL
1" = 1'-0"



A COMPOSITE BEAMS
B COMPOSITE GIRDERS

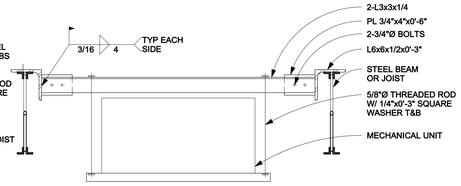
NOTE:
PROVIDE DECK GIRDER FILLER PLATE IF REQUIRED

42 S-012 TYPICAL COMPOSITE BEAM & GIRDER
1 1/2" = 1'-0"



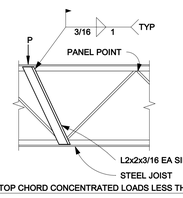
A UNITS WEIGHTING LESS THAN 500 LBS

NOTE:
VERIFY SIZE AND LOCATION WITH MECHANICAL CONTRACTOR



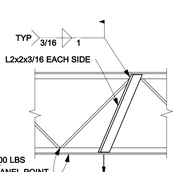
B UNITS WEIGHTING BETWEEN 500 AND 3,000 LBS

43 S-012 TYPICAL HANGING MECHANICAL UNIT DETAILS
1" = 1'-0"



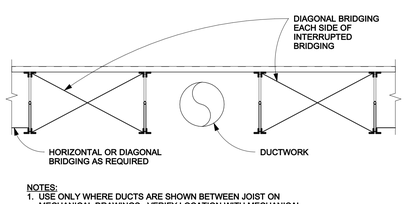
A TOP CHORD CONCENTRATED LOADS LESS THAN 400 LBS

NOTE:
PROVIDED REINFORCEMENT WHEN CONCENTRATED LOAD IS MORE THAN 4" FROM PANEL POINT



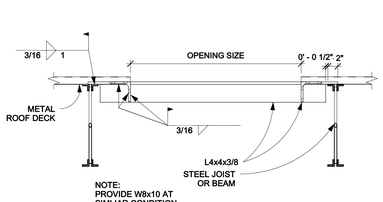
B BOTTOM CHORD CONCENTRATED LOADS LESS THAN 200 LBS

45 S-012 TYPICAL JOIST REINFORCEMENT DETAIL
1" = 1'-0"



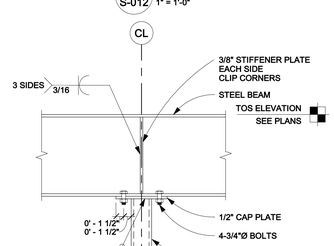
NOTES:
1. USE ONLY WHERE DUCTS ARE SHOWN BETWEEN JOIST ON MECHANICAL DRAWINGS. VERIFY LOCATION WITH MECHANICAL CONTRACTOR.
2. DO NOT INSTALL DUCTS IN TWO ADJACENT JOIST SPACES.

52 S-012 TYPICAL INTERRUPTION OF BRIDGING
3/4" = 1'-0"

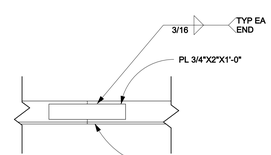


NOTE:
PROVIDE W8x10 AT SIMLIAR CONDITION WITH FLOOR OPENINGS

53 S-012 TYPICAL FLOOR AND ROOF OPENING DETAIL
1" = 1'-0"



54 S-012 TYPICAL BEAM TO COLUMN DETAIL
1" = 1'-0"



55 S-012 TYP PERIMETER ANGLE SPLICE
1 1/2" = 1'-0"

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LEE'S SUMMIT JOINT OPERATIONS

PACKAGE 1: SITE AND STRUCTURE

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

REVISION DATES:

1	ADDENDUM #1	9/19/24

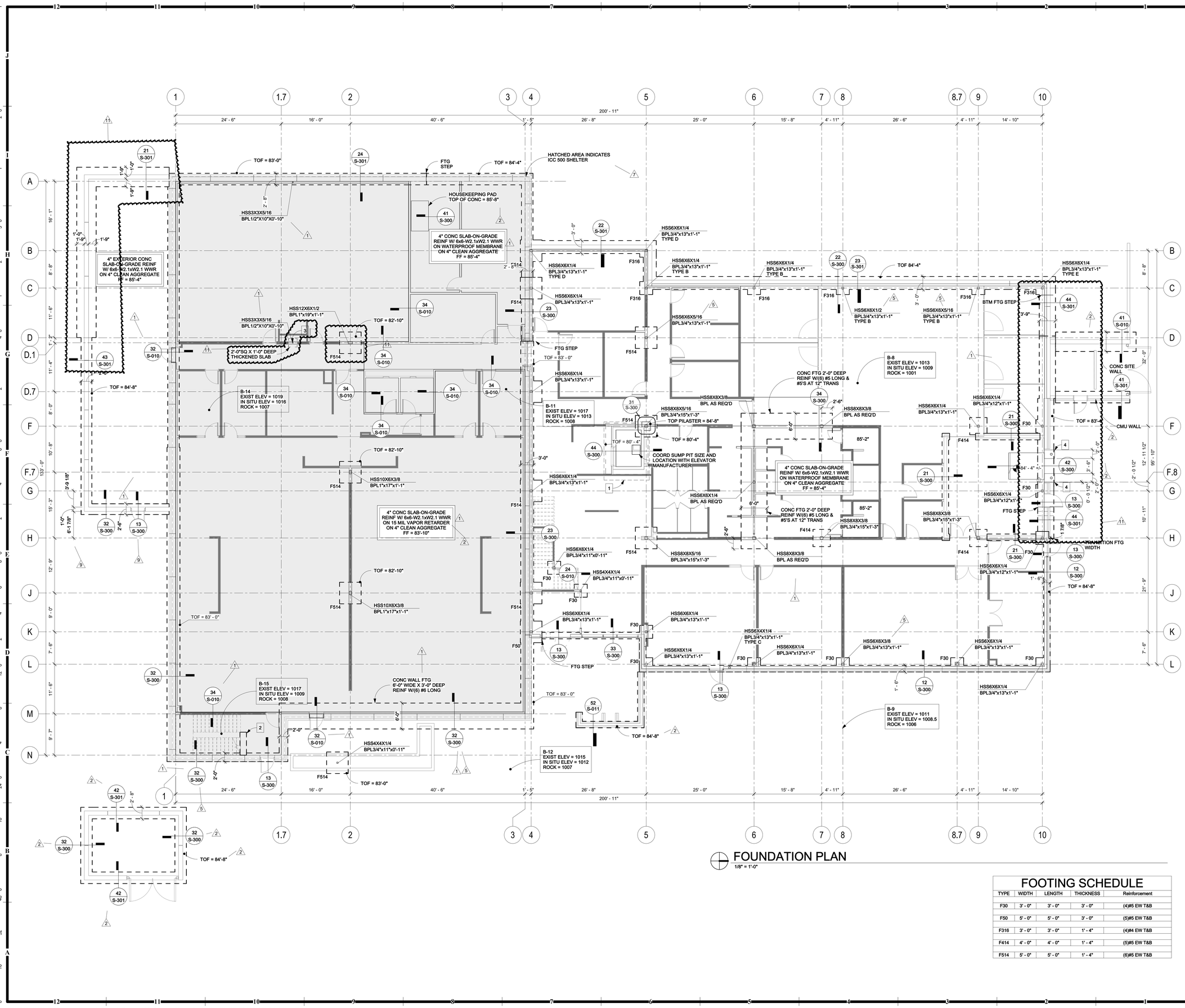
STATE OF MISSOURI
KIMBERLY EBERT JONES
PE-2005029615
PROFESSIONAL ENGINEER
10/30/24

PROFESSIONAL SEAL

S-012

ISSUE DATE: AUGUST 29, 2024
HOEFER WELKER #: 138161

TYPICAL STRUCTURAL STEEL DETAILS



FOUNDATION PLAN

1/8" = 1'-0"

FOOTING SCHEDULE

TYPE	WIDTH	LENGTH	THICKNESS	Reinforcement
F30	3' - 0"	3' - 0"	3' - 0"	(4)#5 EW T&B
F50	5' - 0"	5' - 0"	3' - 0"	(5)#5 EW T&B
F316	3' - 0"	3' - 0"	1' - 4"	(4)#4 EW T&B
F414	4' - 0"	4' - 0"	1' - 4"	(5)#5 EW T&B
F514	5' - 0"	5' - 0"	1' - 4"	(6)#5 EW T&B

FOUNDATION NOTES:

1. ALL ELEVATIONS ARE BASED ON A RELATIVE ELEVATION OF 100'-0" EQUAL TO THE INDICATED DATUM ELEVATION. VERIFY DATUM ELEVATION WITH THE LATEST CIVIL DRWAINGS PRIOR TO CONSTRUCTION.
2. COORDINATE TOP OF FOOTING ELEVATIONS WITH LATEST CIVIL DRAWINGS PRIOR TO CONSTRUCTION TO MAINTAIN 3'-0" MINIMUM FROST DEPTH. TOP OF FOOTING ELEVATION = 99'-4" UNLESS OTHERWISE SHOWN THUS.
3. SEE ARCHITECTURAL DRAWINGS FOR BUILDING DIMENSIONS AND WALL OPENINGS AND LOCATION OF THICKENED, SLOPED, RAISED, OR DEPRESSED SLABS.
4. PROVIDE ISOLATION JOINTS AND SAW CUT CONTROL JOINTS IN SLAB ON GRADE AS SHOWN IN DETAIL 13 ON SHEET S0.10 AND 15'-0" OC MAX.
5. ABBV: BPL - BASE PLATE
6. ALL BASEPLATES ARE TYPE A UNLESS NOTED OTHERWISE. SEE 21/S-010.

KEY NOTES:

1. (2)#6 IN EA CELL AT ELEVATOR SHAFT
2. THICKENED SLAB W/(2) #4
3. 4) 1/2"Ø X 6" CONC SCREWS LOCATED 1-1/2" FROM EDGE
4. BUMPOUT THICKENED SLAB FOR BOLLARD FOUNDATION. REINF W/ (2) #5 EA CORNER

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LEE'S SUMMIT JOINT OPERATIONS

PACKAGE 1: SITE AND STRUCTURE

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

REVISION DATES:

1	ADDENDUM #1	9/19/24
2	ADDENDUM #2	10/30/24
5	ASI #1	12/11/24
7	ASI #4	2/12/2025
9	CCD #001	1/29/24
11	ASI #6	2/26/25

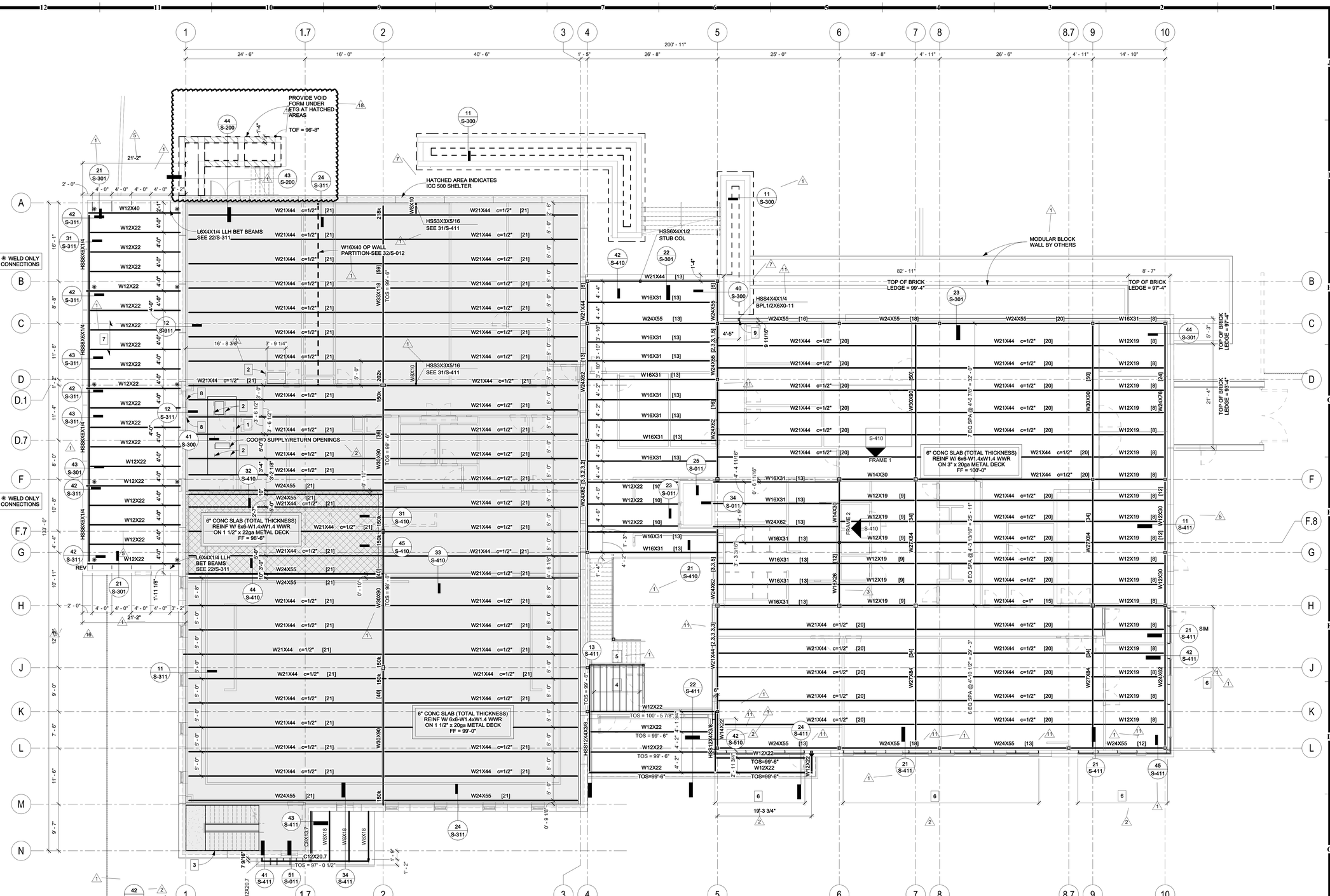
STATE OF MISSOURI
KIMBERLY EBERT JONES
PE-2005029619
PROFESSIONAL ENGINEER
3/3/25

PROFESSIONAL SEAL

S-100

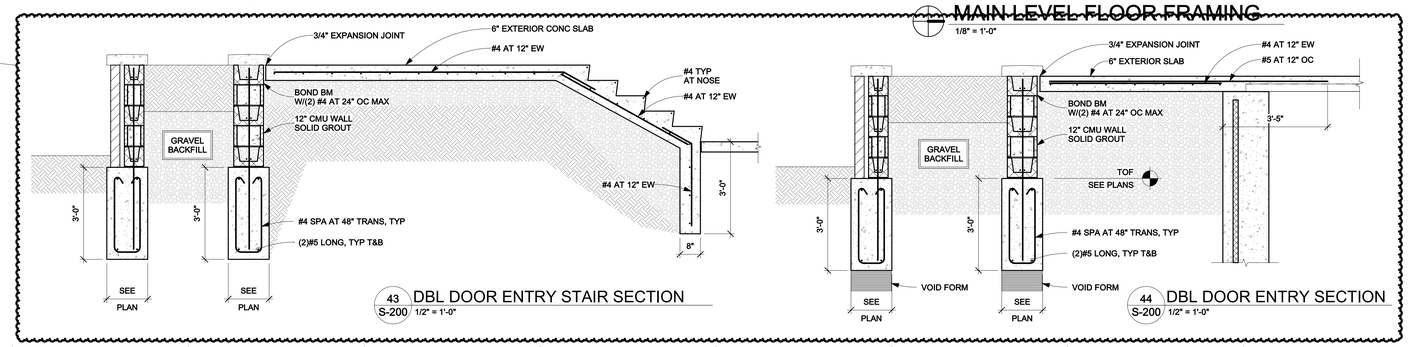
ISSUE DATE: AUGUST 29, 2024
HOEFER WELKER #: 138161

FOUNDATION PLAN



MAIN LEVEL FLOOR FRAMING

1/8" = 1'-0"



43 S-200 DBL DOOR ENTRY STAIR SECTION 1/2" = 1'-0"

44 S-200 DBL DOOR ENTRY SECTION 1/2" = 1'-0"

FRAMING NOTES:

1. ALL ELEVATIONS ARE BASED ON A RELATIVE ELEVATION OF 100'-0" EQUAL TO THE INDICATED DATUM ELEVATION. VERIFY DATUM ELEVATION WITH THE LATEST CIVIL DRWAINGS PRIOR TO CONSTRUCTION.
2. TRUSS GIRDER HEIGHT TO MATCH MONOTRUSS HEIGHT AS REQ'D.

TOS = 98'-6"

TOS = 99'-0"

KEY NOTES:

1. HOUSEKEEPING PAD - TOP OF CONCRETE = 100'-4"
2. FRAME FLOOR OPENING W/ W8X10 EA SIDE AS REQ'D
3. PRECAST STAIR SYSTEM
4. 600S162-43 SPA AT 16" OC
5. BOXED BEAM - (2)600S162-54
6. C6X8.2 VERT & BRICK SUPPORT PLATE SEE 45/S-300
7. METAL GRATING - GW-19-W-2 W/ 1" X 3/16" BARS
8. PROVIDE 16" WIDE EMBED PLATE TO ALLOW FOR BEAM LOCATION ADJUSTMENT
9. 4) 1/2"Ø X 6" CONC SCREWS LOCATED 1-1/2" FROM EDGE

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LEE'S SUMMIT JOINT OPERATIONS

PACKAGE 1: SITE AND STRUCTURE

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

REVISION DATES:

1	ADDENDUM #1	9/19/24
2	ADDENDUM #2	10/30/24
3	ADDENDUM #3	11/18/24
5	ASI #1	12/11/24
7	ASI #4	2/12/2025
9	CCD #001	1/29/24
10	CCD #002	1/23/24
11	ASI #6	2/26/25
16	ASI #9	4/10/25
18	CCD #003	5/5/25

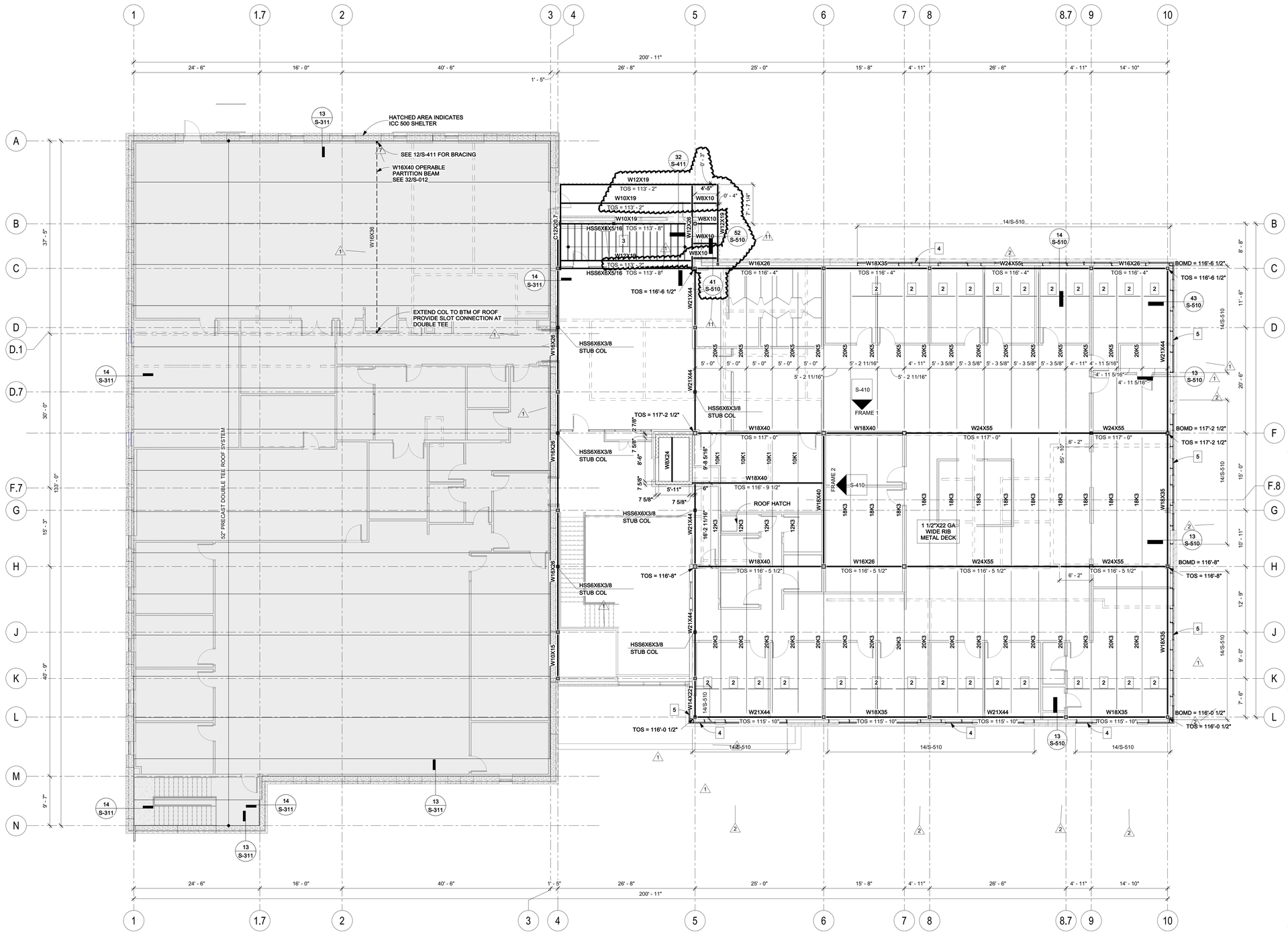
STATE OF MISSOURI
KIMBERLY EBERT
KANSAS
PE-2005029619
PROFESSIONAL ENGINEER
5/1/25

PROFESSIONAL SEAL

S-200

ISSUE DATE: AUGUST 29, 2024
HOEFER WELKER #: 138161

MAIN FLOOR FRAMING PLAN



ROOF FRAMING PLAN

1/8" = 1'-0"

FRAMING NOTES:

1. ALL ELEVATIONS ARE BASED ON A RELATIVE ELEVATION OF 100'-0" EQUAL TO THE INDICATED DATUM ELEVATION. VERIFY DATUM ELEVATION WITH THE LATEST CIVIL DRWAINGS PRIOR TO CONSTRUCTION.
2. TRUSS GIRDER HEIGHT TO MATCH MONOTRUSS HEIGHT AS REQ'D.

KEY NOTES

1. 600S162-43 SPA AT
2. L4X4X3/8" BET JOISTS
3. 600S162-43 SPA AT 16" OC
4. BRICK SUPPORT PLATE & C6X8.2 VERT SPA AT 4'-0" OC - SEE 14/S-510
5. BRICK SUPPORT PLATE & C6X8.2 VERT SPA AT 4'-0" OC - SEE 43/S-510

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LEE'S SUMMIT JOINT OPERATIONS

PACKAGE 1: SITE AND STRUCTURE

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

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11	ASI #6	2/26/25

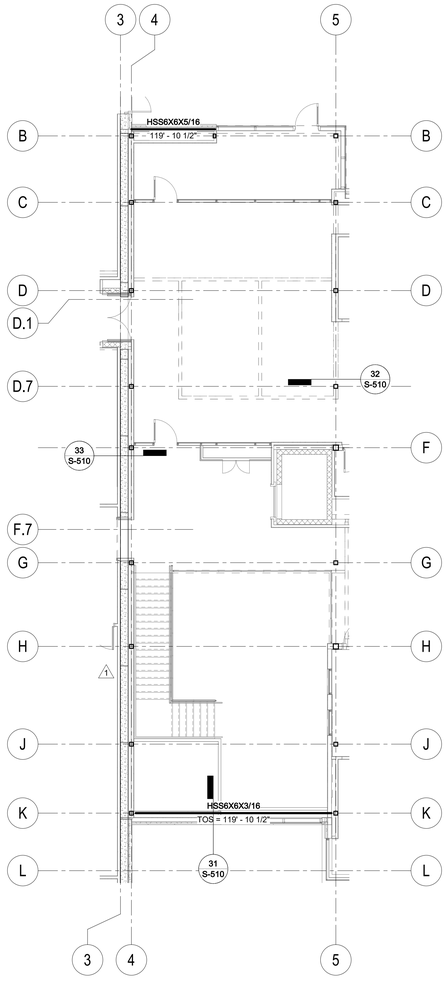
STATE OF MISSOURI
KIMBERLY EBERT JONES
PE-2005029613
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PROFESSIONAL SEAL

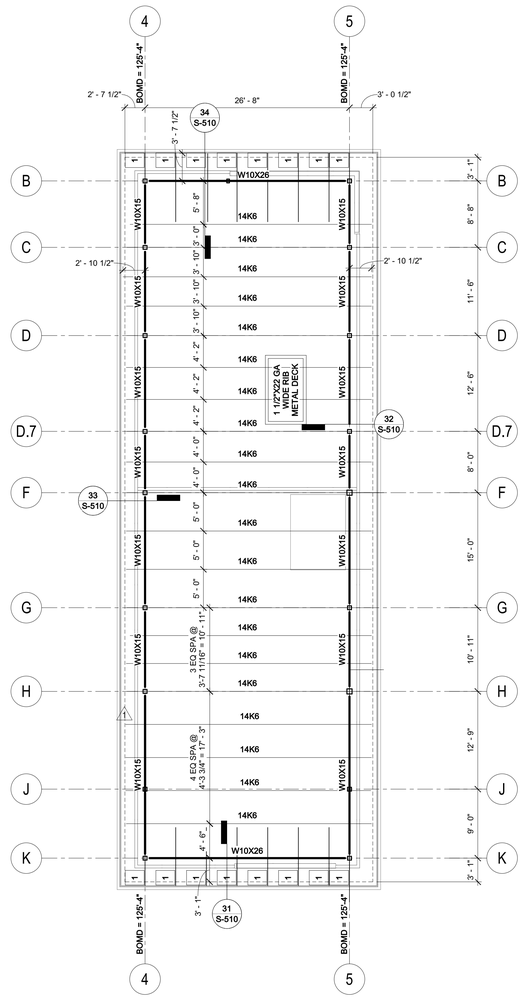
S-201

ISSUE DATE: AUGUST 29, 2024
HOEFER WELKER #: 138161

ROOF FRAMING PLAN



WIND BEAM PLAN
1/8" = 1'-0"



HIGH ROOF FRAMING PLAN
1/8" = 1'-0"

FRAMING NOTES:

1. ALL ELEVATIONS ARE BASED ON A RELATIVE ELEVATION OF 100'-0" EQUAL TO THE INDICATED DATUM ELEVATION. VERIFY DATUM ELEVATION WITH THE LATEST CIVIL DRWAINGS PRIOR TO CONSTRUCTION.
2. TOS = 125'-0" UNLESS NOTED OTHERWISE.

KEY NOTES

1 L4X4X1/4" OUTRIGGER SPA AT 4'-0" OC

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LEE'S SUMMIT JOINT OPERATIONS

PACKAGE 1: SITE AND STRUCTURE

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

REVISION DATES:

1	ADDENDUM #1	9/19/24

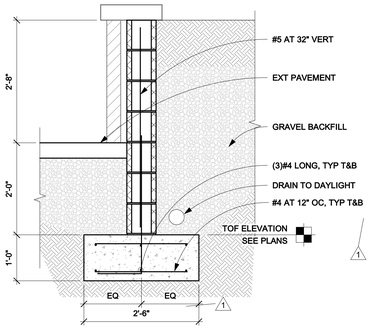
STATE OF MISSOURI
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10/30/24

PROFESSIONAL SEAL

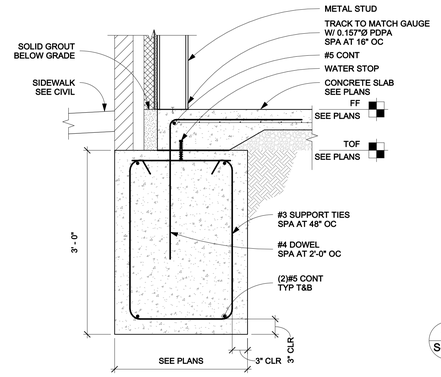
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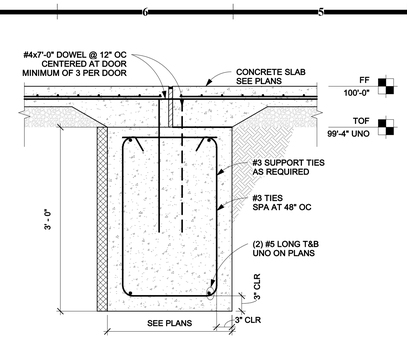
HIGH ROOF FRAMING PLAN



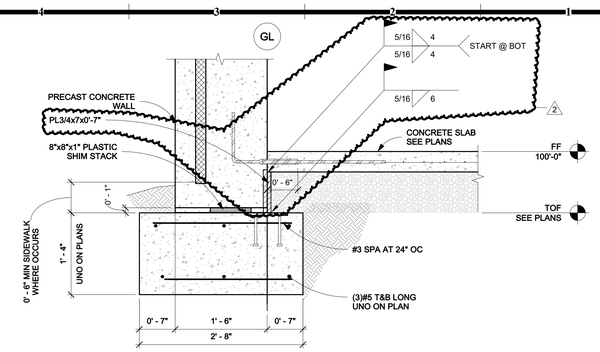
11 S-300 TYP MASONRY PLANTER WALL
3/4" = 1'-0"



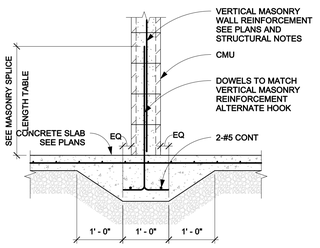
12 S-300 TYP GRADE BEAM AT STUD WALL
1" = 1'-0"



13 S-300 TYPICAL GRADE BEAM AT MAN DOOR
1" = 1'-0"

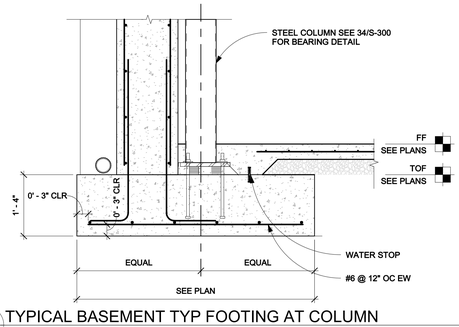


14 S-300 TYPICAL EXTERIOR FOOTING AT PRECAST
1" = 1'-0"

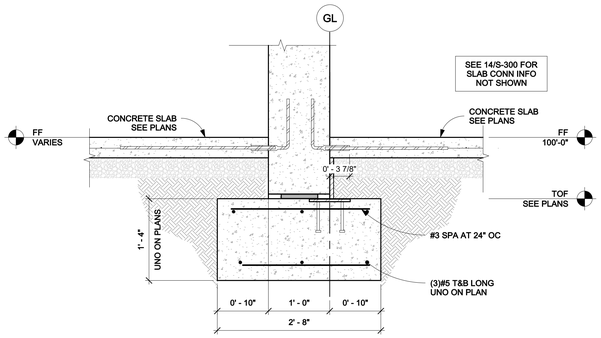


NOTE:
CONTRACTOR HAS THE OPTION TO EPOXY DOWELS INTO THICKENED SLAB AS AN ALTERNATIVE TO HOOKED DOWELS. SEE EPOXY EMBEDMENT TABLE.

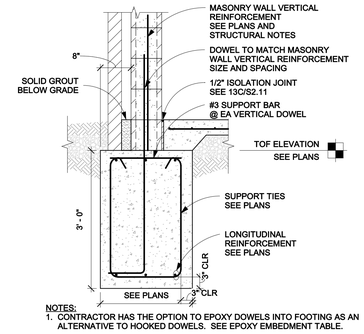
21 S-300 TYPICAL THICKENED SLAB AT CMU
3/4" = 1'-0"



22 S-300 TYPICAL BASEMENT TYP FOOTING AT COLUMN
3/4" = 1'-0"

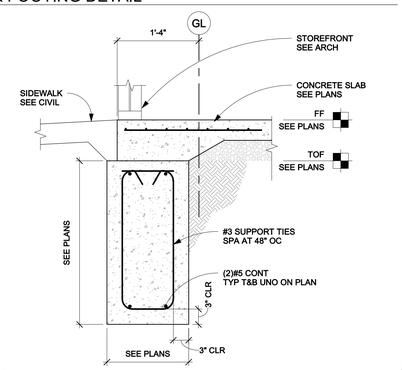


23 S-300 TYPICAL INTERIOR FOOTING DETAIL
1" = 1'-0"

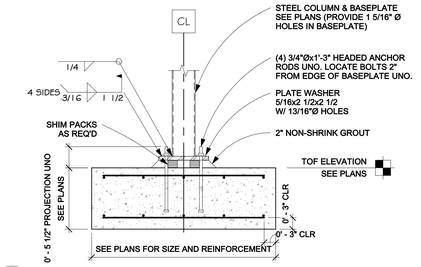


NOTES:
1. CONTRACTOR HAS THE OPTION TO EPOXY DOWELS INTO FOOTING AS AN ALTERNATIVE TO HOOKED DOWELS. SEE EPOXY EMBEDMENT TABLE.

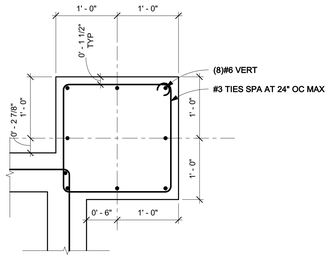
24 S-300 TYPICAL MASONRY WALL FOOTING
3/4" = 1'-0"



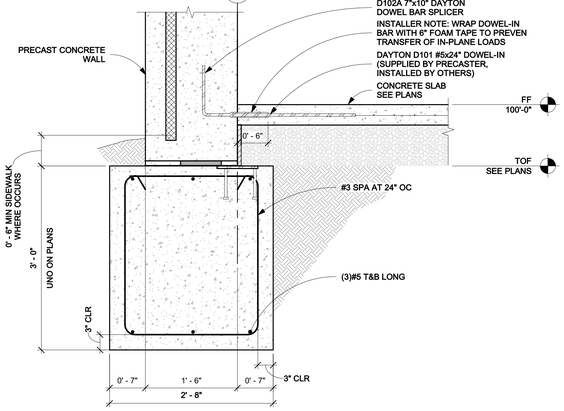
33 S-300 TYP GRADE BEAM AT STOREFRONT / GLAZING
1" = 1'-0"



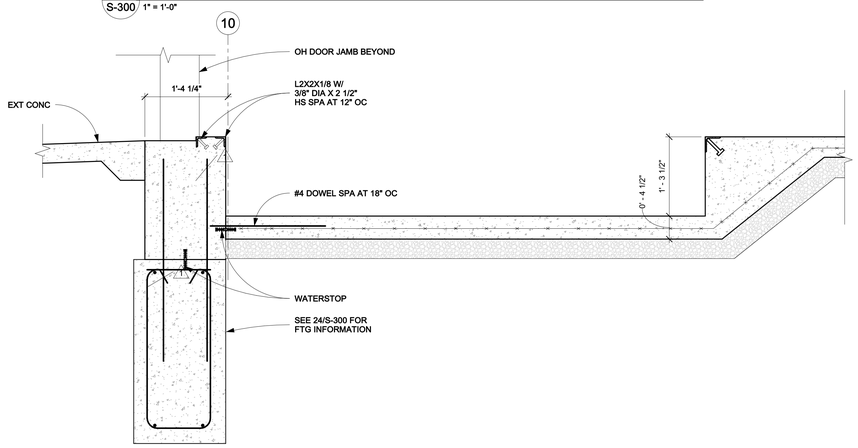
34 S-300 TYPICAL SPREAD FOOTING DETAIL
3/4" = 1'-0"

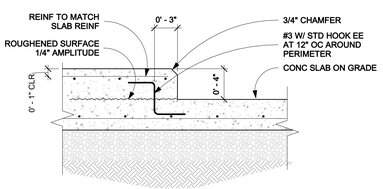


31 S-300 PILASTER DETAIL
1" = 1'-0"



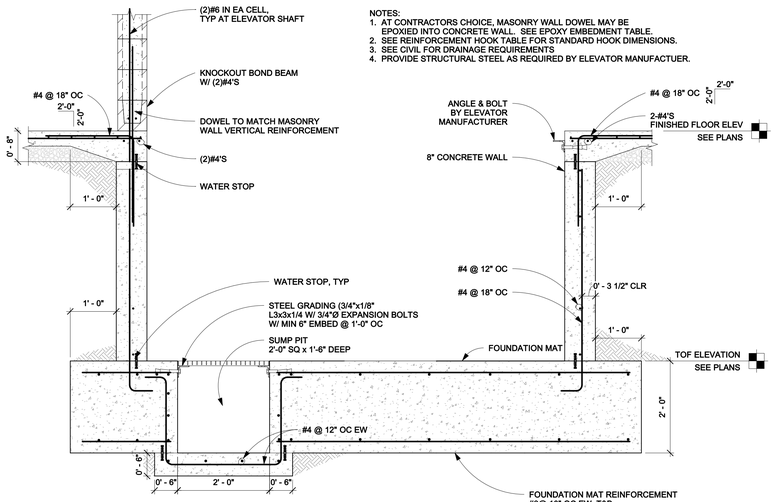
32 S-300 TYPICAL TRENCH FTG AT PRECAST
1" = 1'-0"





41 S-300 HOUSEKEEPING PAD DETAIL
1 1/2" = 1'-0"

42 S-300 LEVELER AT OH DOOR
1" = 1'-0"



NOTES:
1. AT CONTRACTORS CHOICE, MASONRY WALL DOWEL MAY BE EPOXIED INTO CONCRETE WALL. SEE EPOXY EMBEDMENT TABLE.
2. SEE REINFORCEMENT HOOK TABLE FOR STANDARD HOOK DIMENSIONS.
3. SEE CIVIL FOR DRAINAGE REQUIREMENTS
4. PROVIDE STRUCTURAL STEEL AS REQUIRED BY ELEVATOR MANUFACTUER.

44 S-300 TYPICAL ELEVATOR PIT DETAIL
3/4" = 1'-0"

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JOINT OPERATIONS

PACKAGE 1: SITE AND STRUCTURE

LEE'S SUMMIT JOINT OPS CENTER

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

REVISION DATES:

1	ADDENDUM #1	9/19/24
2	ADDENDUM #2	10/30/24

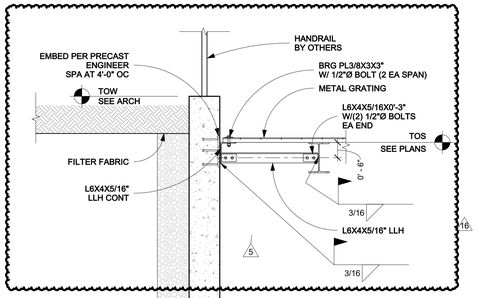
STATE OF MISSOURI
KIMBERLY EBERT JONES
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10/30/24

PROFESSIONAL SEAL

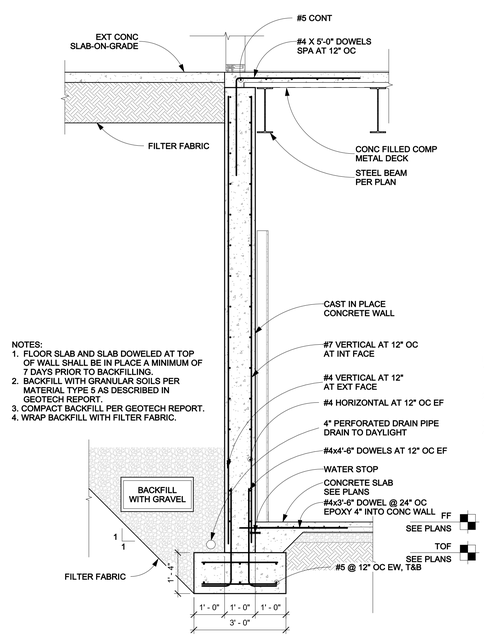
S-300

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HOEFER WELKER #: 138161

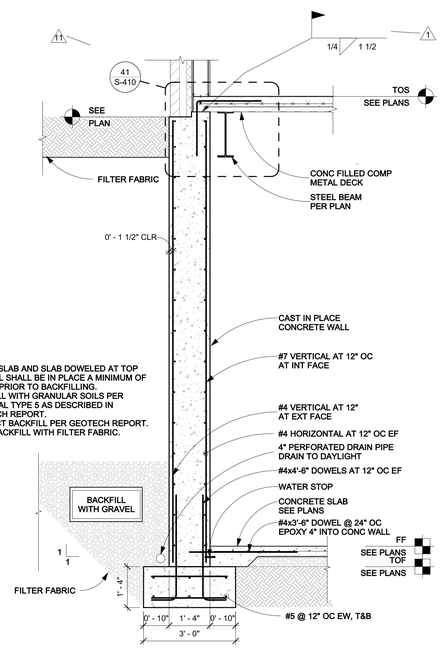
FOUNDATION DETAILS



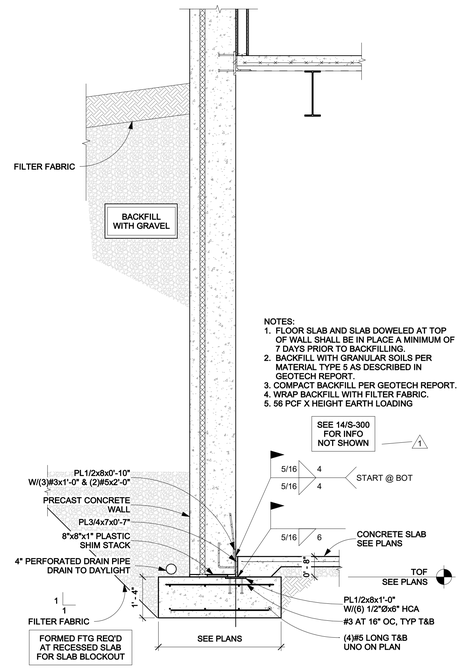
21 S-301 MECH YARD DETAIL
1/2" = 1'-0"



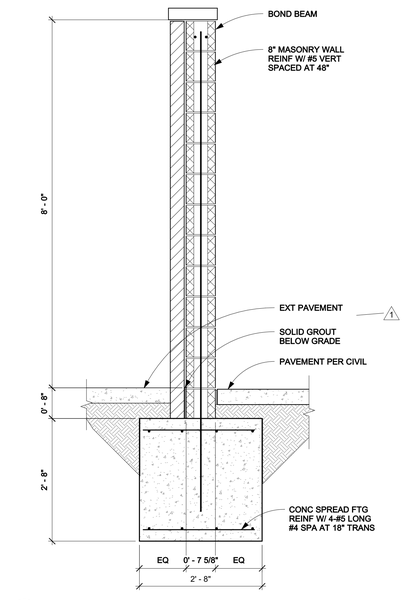
22 S-301 CONC BASEMENT WALL DETAIL
1/2" = 1'-0"



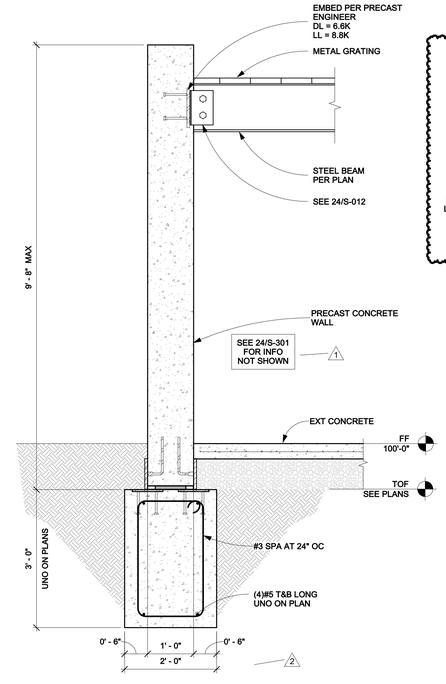
23 S-301 BASEMENT WALL WEST
1/2" = 1'-0"



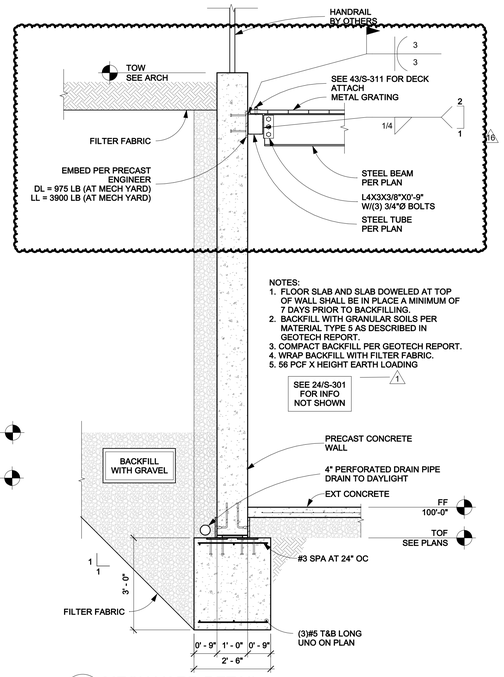
24 S-301 PRECAST BASEMENT WALL DETAIL
1/2" = 1'-0"



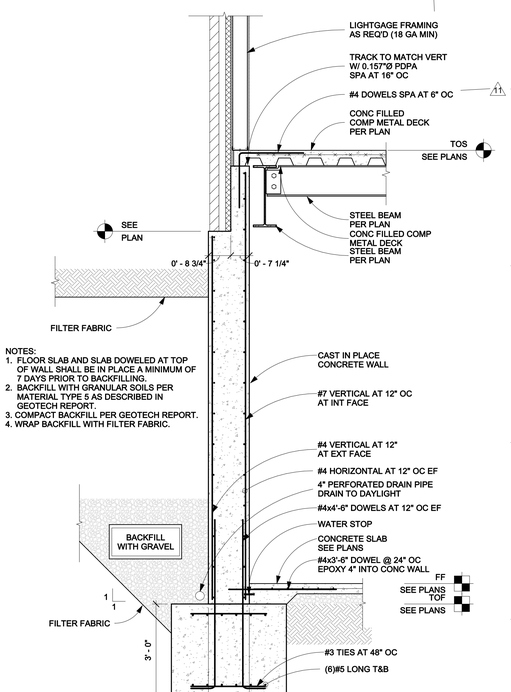
41 S-301 TYPICAL TRASH ENCLOSURE FTG DETAIL
3/4" = 1'-0"



42 S-301 PRECAST WALL DETAIL
3/4" = 1'-0"



43 S-301 MECH YARD DETAIL
1/2" = 1'-0"



44 S-301 CONC WALL FTG DETAIL
1/2" = 1'-0"

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LEE'S SUMMIT JOINT OPERATIONS

PACKAGE 1: SITE AND STRUCTURE

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

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16	ASI #9	4/10/25

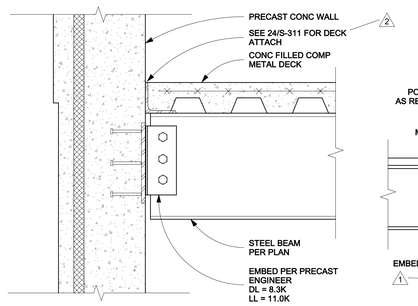
STATE OF MISSOURI
KIMBERLY
EBERT
JONES
PE-2005029619
PROFESSIONAL ENGINEER
4/11/25

PROFESSIONAL SEAL

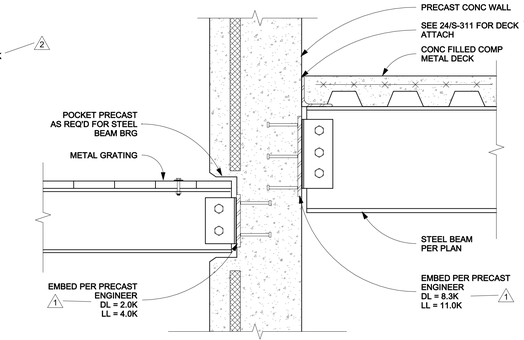
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HOEFER WELKER #: 138161

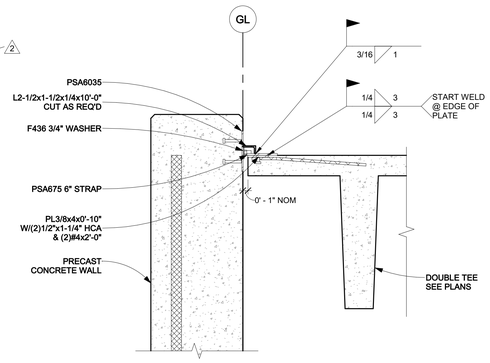
FOUNDATION WALL SECTIONS



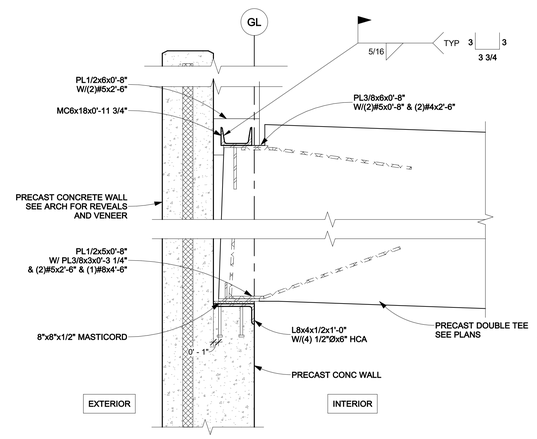
11 S-311 BEAM / PRECAST DETAIL
1" = 1'-0"



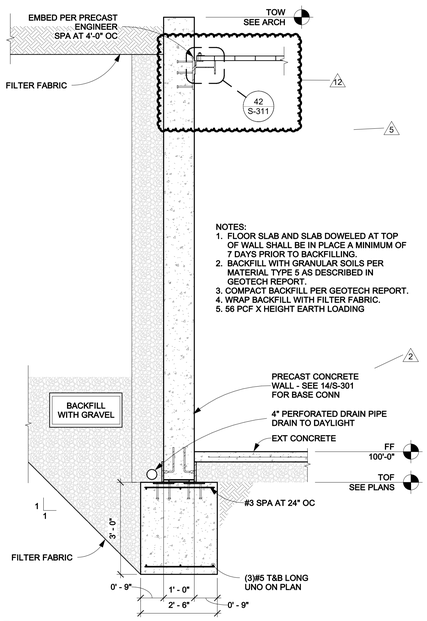
12 S-311 BM BRG AT MECH EXT PRECAST WALL
1" = 1'-0"



13 S-311 DOUBLE TEE AT CAST-IN-PLACE WALL
1" = 1'-0"

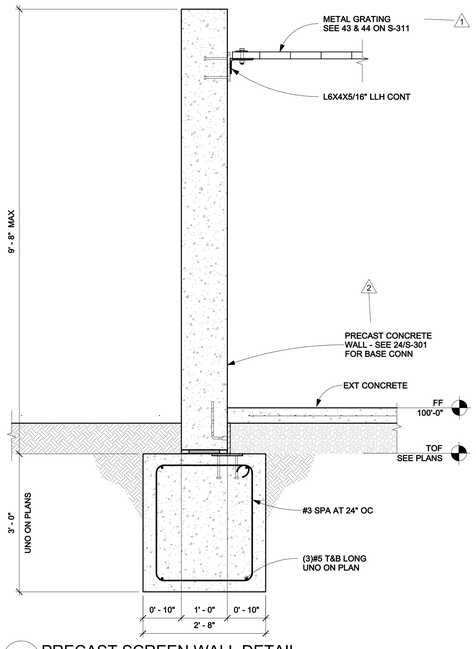


14 S-311 DOUBLE TEE BEARING AT PRECAST WALL
1" = 1'-0"

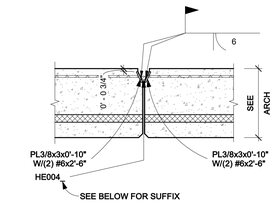


NOTES:
1. FLOOR SLAB AND SLAB DOWELED AT TOP OF WALL SHALL BE IN PLACE A MINIMUM OF 7 DAYS PRIOR TO BACKFILLING.
2. BACKFILL WITH GRANULAR SOILS PER MATERIAL TYPE 5 AS DESCRIBED IN GEOTECH REPORT.
3. COMPACT BACKFILL PER GEOTECH REPORT.
4. WRAP BACKFILL WITH FILTER FABRIC.
5. 56 PCF X HEIGHT EARTH LOADING

31 S-311 MECH YARD DETAIL
1/2" = 1'-0"



32 S-311 PRECAST SCREEN WALL DETAIL
3/4" = 1'-0"

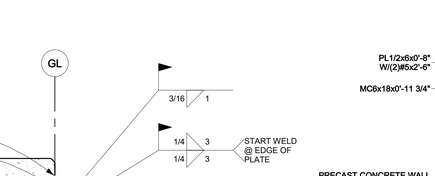


SEE BELOW FOR SUFFIX

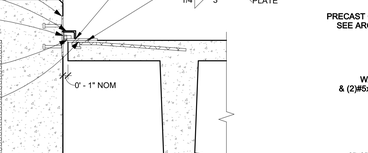
JOINT WIDTH	SUFFIX	LOOSE PIECE
1/8 < JT < 1/4	C	#6 x 0'-6" A706
1/4 < JT < 1/2	B	#7 x 0'-6" A706
1/2 < JT < 5/8	C	#8 x 0'-6" A706

NOTES:
1. JOINT WIDTHS SHOWN IN PLAN ARE NOMINAL. FIELD CONDITIONS MAY VARY DEPENDING ON PRECAST/ERECTION TOLERANCES. REFER TO THE ABOVE TABLE FOR THE APPROPRIATE LOOSE PIECE TO BE USED BASED ON FIELD MEASURED JOINT WIDTH.
2. CENTER WELD AND LOOSE PIECE WITHIN FACEPLATE OF CONNECTOR.
3. DO NOT OVER-WELD.
4. JOINTS SHALL NOT BE WIDER THAN 3/4"

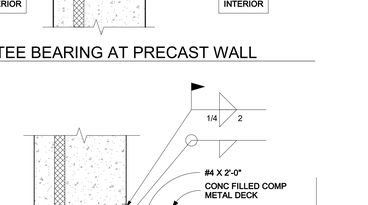
23 S-311 WALL PANEL TO WALL PANEL VERT CONN
3/4" = 1'-0"



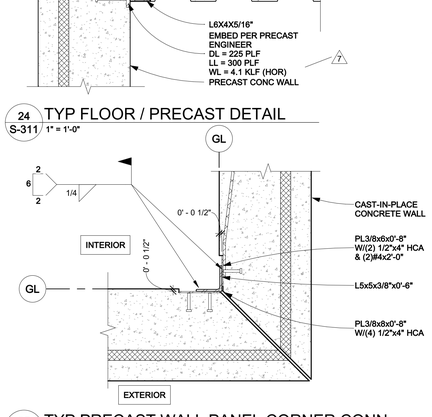
33 S-311 DBL TEE CHORD TIE CONNECTION
1 1/2" = 1'-0"



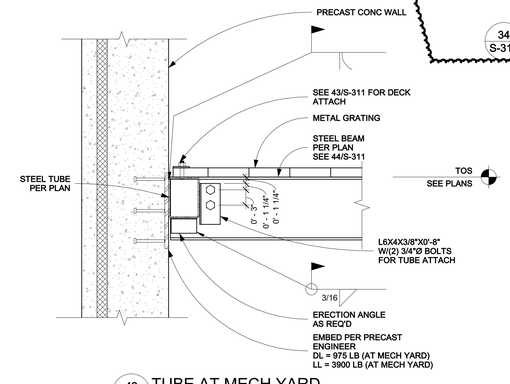
34 S-311 DBL TEE FLANGE TO FLANGE CONN
1 1/2" = 1'-0"



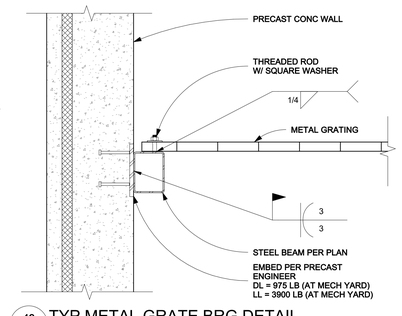
24 S-311 TYP FLOOR / PRECAST DETAIL
1" = 1'-0"



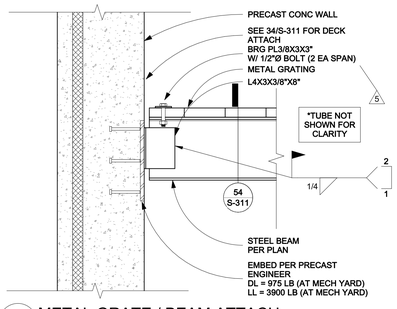
35 S-311 TYP PRECAST WALL PANEL CORNER CONN
1" = 1'-0"



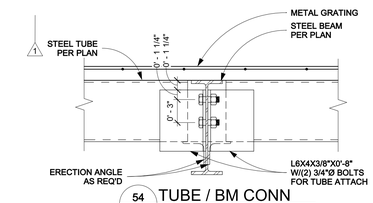
42 S-311 TUBE AT MECH YARD
1" = 1'-0"



43 S-311 TYP METAL GRATE BRG DETAIL
1" = 1'-0"



44 S-311 METAL GRATE / BEAM ATTACH
1" = 1'-0"



54 S-311 TUBE / BM CONN
1 1/2" = 1'-0"

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MO COA: 2009009344

LEE'S SUMMIT JOINT OPERATIONS

PACKAGE 1: SITE AND STRUCTURE

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

REVISION DATES:

1	ADDENDUM #1	9/19/24
2	ADDENDUM #2	10/30/24
5	ASI #1	12/11/24
7	ASI #4	2/12/2025
12	MECH YARD	4/1/25
16	ASI #9	4/10/25

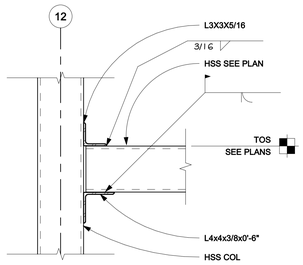
STATE OF MISSOURI
KIMBERLY EBERT JONES
PE-2005029619
PROFESSIONAL ENGINEER
4/11/25

PROFESSIONAL SEAL

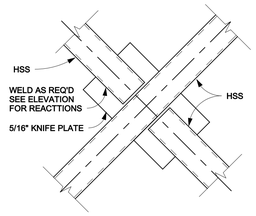
S-311

ISSUE DATE: AUGUST 29, 2024
HOEFER WELKER #: 138161

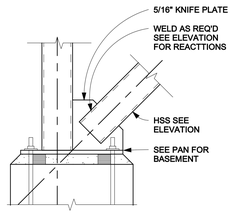
PRECAST CONCRETE DETAILS



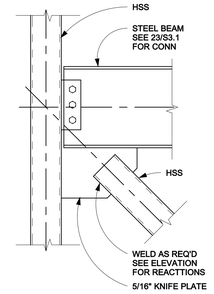
11 TUBE TO TUBE CONNECTION
S-410 1 1/2" = 1'-0"



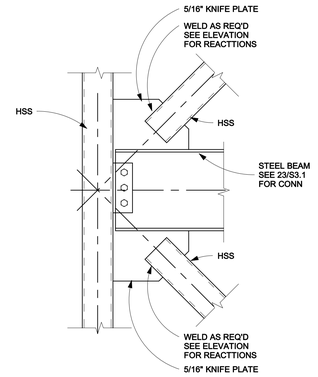
12 TYP BRACE AT INTERSECTION
S-410 1" = 1'-0"



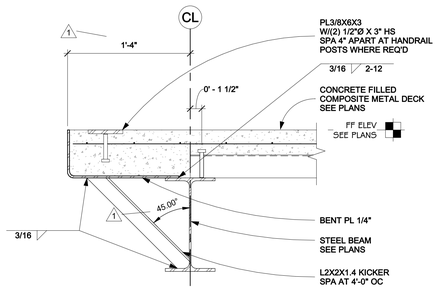
13 TYP BRACE AT FOUNDATION
S-410 1" = 1'-0"



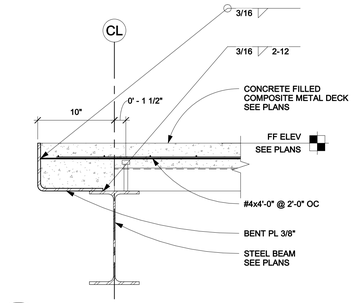
14 TYP BRACE DETAIL AT ROOF
S-410 1" = 1'-0"



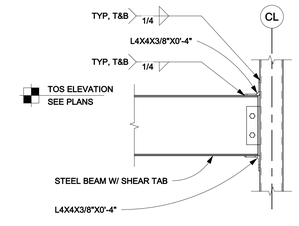
15 TYP BRACE DETAIL AT BEAM
S-410 1" = 1'-0"



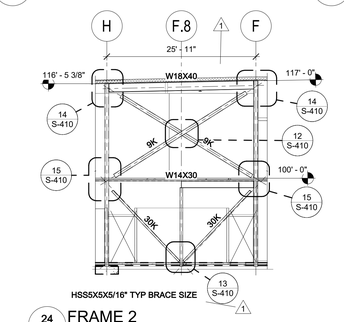
21 TYPICAL COMP SLAB EDGE DETAIL
S-410 1 1/2" = 1'-0"



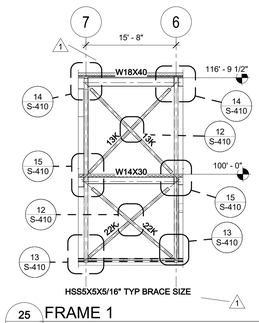
22 COMP SLAB EDGE BEARING
S-410 1 1/2" = 1'-0"



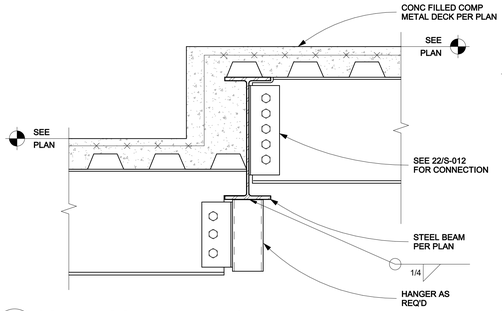
23 MOMENT CONNECTION
S-410 3/4" = 1'-0"



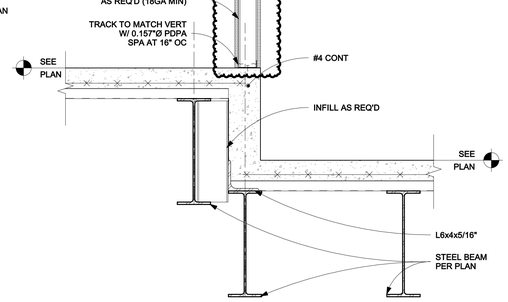
24 FRAME 2
S-410 3/32" = 1'-0"



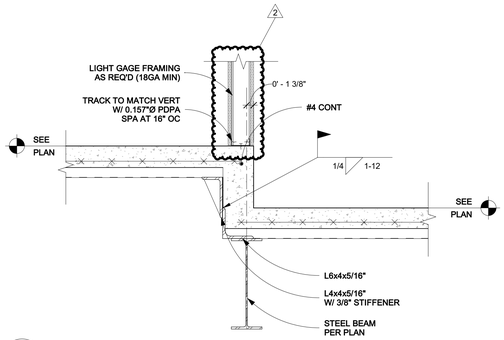
25 FRAME 1
S-410 3/32" = 1'-0"



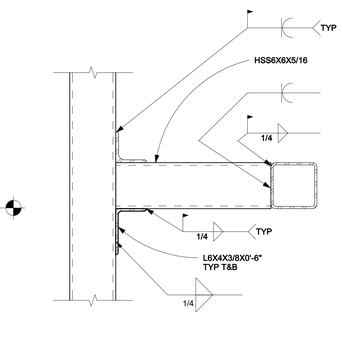
31 COMP FLOOR STEP DETAIL
S-410 1" = 1'-0"



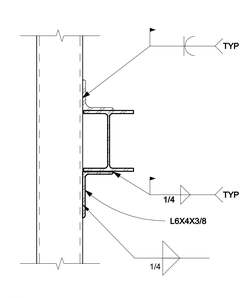
32 COMP FLOOR STEP DETAIL
S-410 1" = 1'-0"



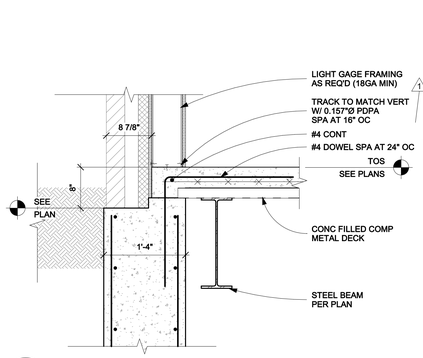
33 COMP FLOOR STEP DETAIL
S-410 1" = 1'-0"



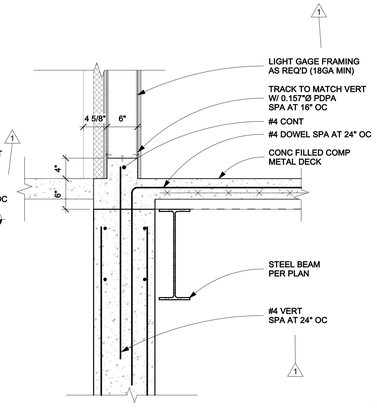
34 WIND BEAM ATTACHMENT
S-410 1 1/2" = 1'-0"



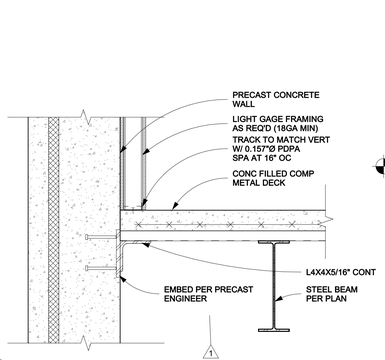
35 TUBE / COL DETAIL
S-410 1 1/2" = 1'-0"



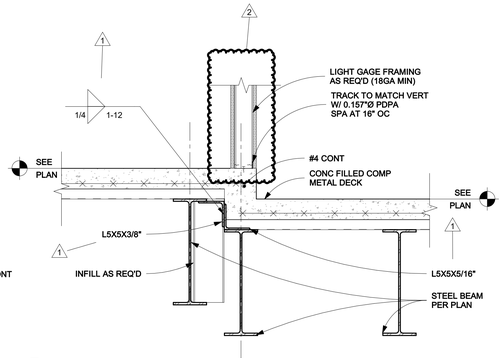
41 FLOOR / DECK BRG DETAIL
S-410 1" = 1'-0"



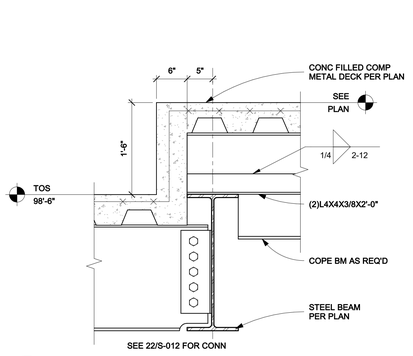
42 SLAB / CONC WALL DETAIL
S-410 1" = 1'-0"



43 DECK / PRECAST CONN
S-410 1" = 1'-0"



44 COMP FLOOR STEP DETAIL
S-410 1" = 1'-0"



45 COMP FLOOR STEP DETAIL
S-410 1" = 1'-0"

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LEE'S SUMMIT JOINT OPERATIONS

PACKAGE 1: SITE AND STRUCTURE

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

REVISION DATES:

1	ADDENDUM #1	9/19/24
2	ADDENDUM #2	10/30/24

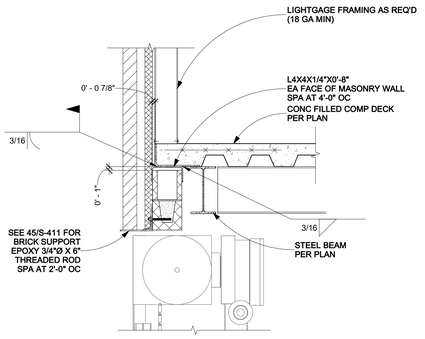
STATE OF MISSOURI
KIMBERLY
EBERT
JONES
PE-2005029615
PROFESSIONAL ENGINEER
10/30/24

PROFESSIONAL SEAL

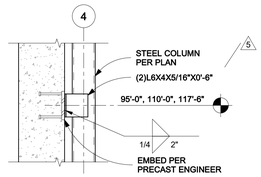
S-410

ISSUE DATE: AUGUST 29, 2024
HOEFER WELKER #: 138161

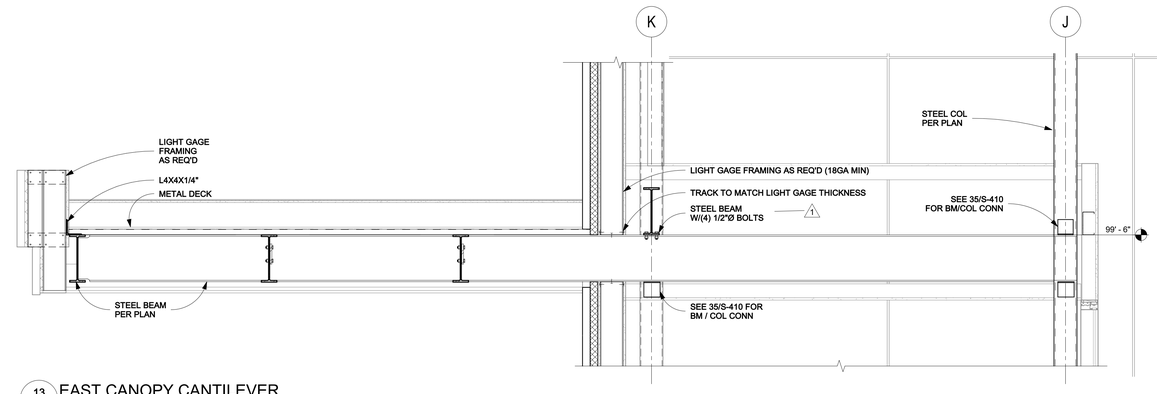
FRAMING DETAILS



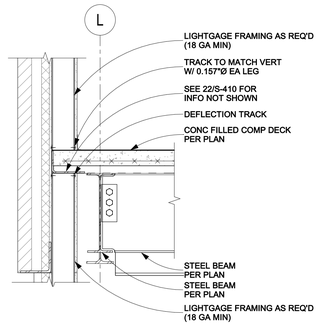
11 OH DOOR AT DECK BRG
S-411 3/4" = 1'-0"



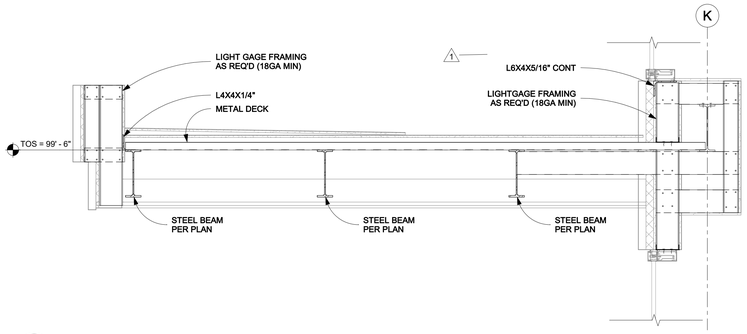
12 COLUMN BRACE AT PRECAST
S-411 3/4" = 1'-0"



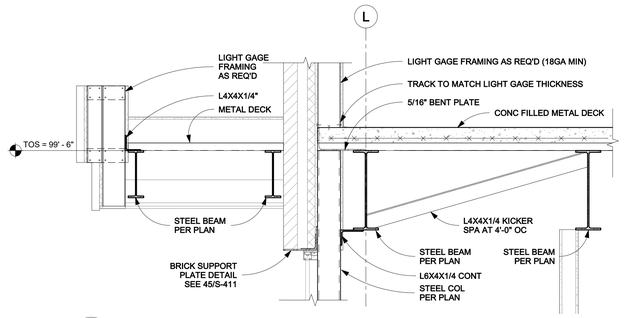
13 EAST CANOPY CANTILEVER
S-411 3/4" = 1'-0"



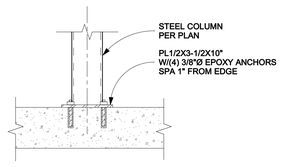
21 DECK EDGE AT LIGHTGAGE
S-411 3/4" = 1'-0"



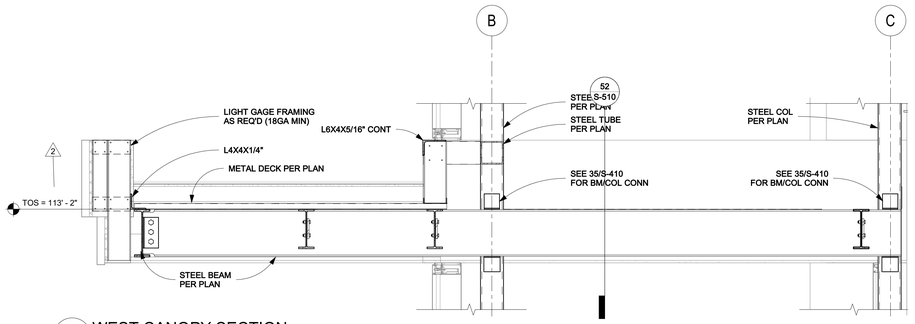
22 EAST CANOPY SECTION
S-411 3/4" = 1'-0"



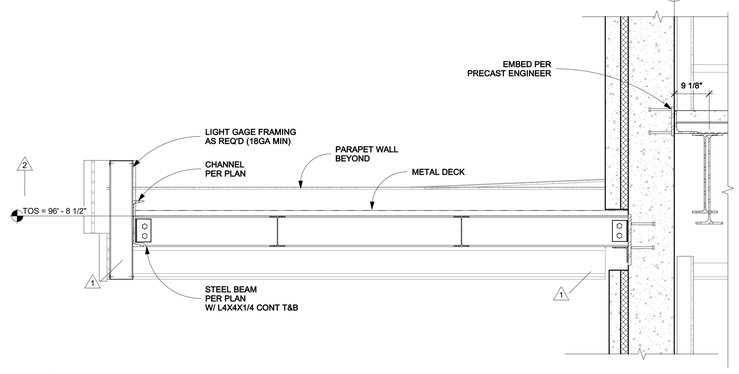
24 EAST CANOPY SECTION
S-411 3/4" = 1'-0"



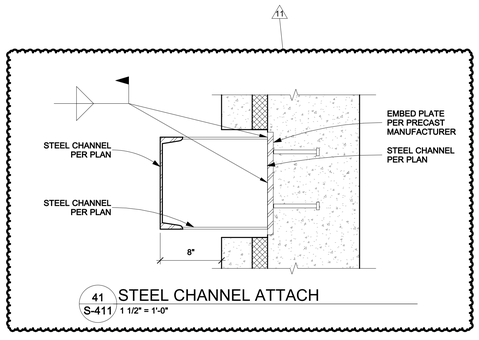
31 OP COL DETAIL
S-411 1" = 1'-0"



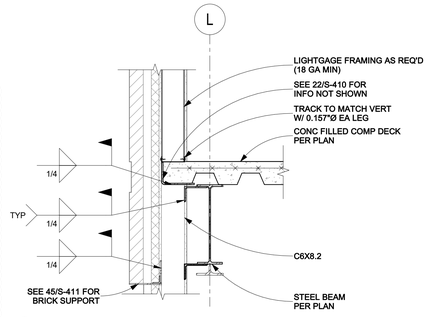
32 WEST CANOPY SECTION
S-411 3/4" = 1'-0"



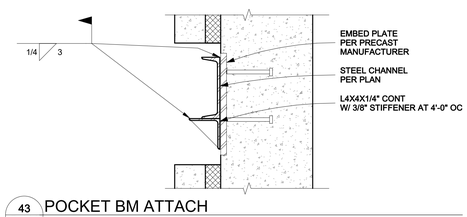
34 PATIO CANOPY SECTION
S-411 3/4" = 1'-0"



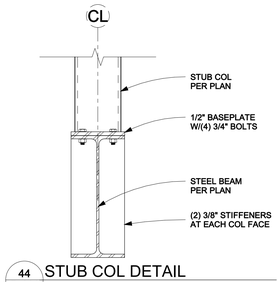
41 STEEL CHANNEL ATTACH
S-411 1 1/2" = 1'-0"



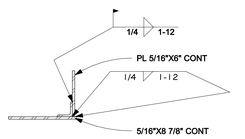
42 DECK BRG / BRICK SUPPORT DETAIL
S-411 3/4" = 1'-0"



43 POCKET BM ATTACH
S-411 1 1/2" = 1'-0"



44 STUB COL DETAIL
S-411 1 1/2" = 1'-0"



45 BRICK SUPPORT PLATE DETAIL
S-411 1 1/2" = 1'-0"

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LEE'S SUMMIT JOINT OPERATIONS

PACKAGE 1: SITE AND STRUCTURE

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

REVISION DATES:

1	ADDENDUM #1	9/19/24
2	ADDENDUM #2	10/30/24
5	ASI #1	12/11/24
11	ASI #6	2/26/25

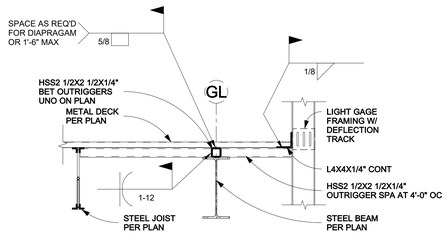
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KIMBERLY EBERT JONES
PE-2005029619
PROFESSIONAL ENGINEER
3/9/25

PROFESSIONAL SEAL

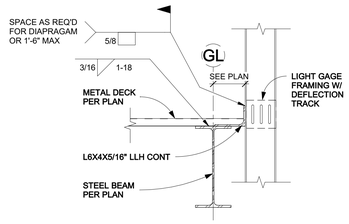
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ISSUE DATE: AUGUST 29, 2024
HOEFER WELKER #: 138161

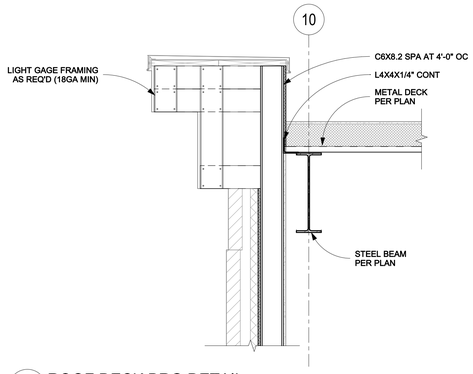
FLOOR FRAMING DETAILS



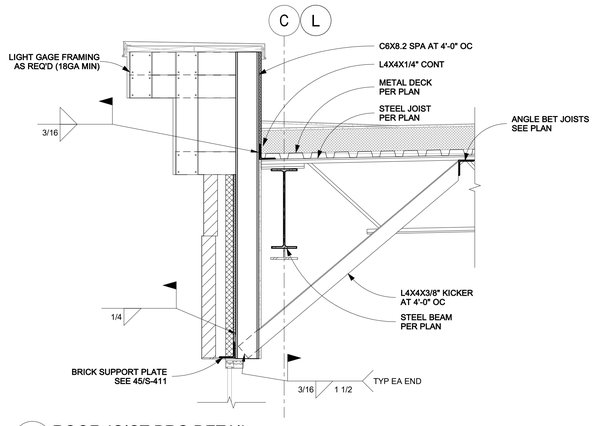
11 TYP OUTRIGGER DETAIL
S-510 3/4" = 1'-0"



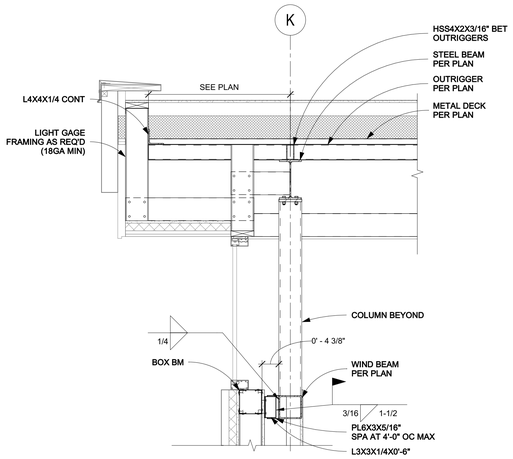
12 TYP DECK SUPPORT SECTION
S-510 1" = 1'-0"



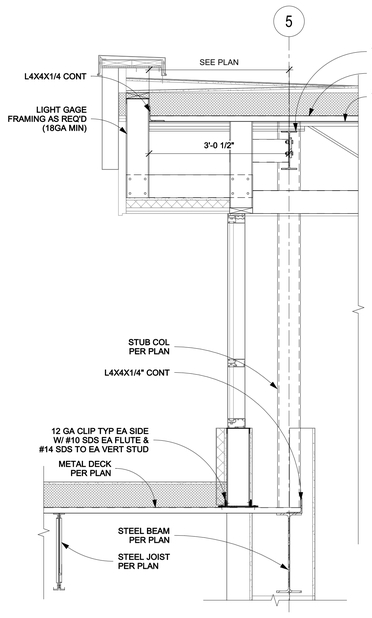
13 ROOF DECK BRG DETAIL
S-510 3/4" = 1'-0"



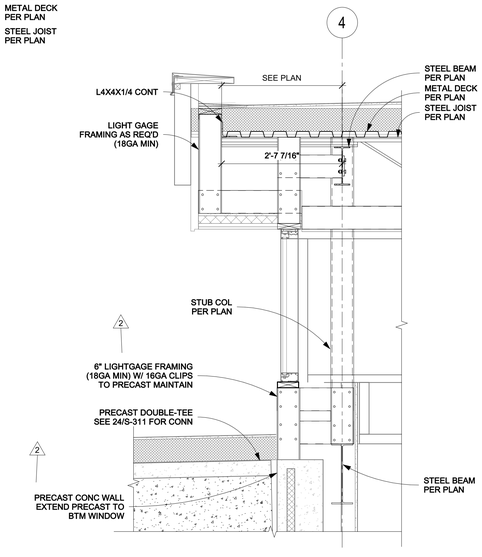
14 ROOF JOIST BRG DETAIL
S-510 3/4" = 1'-0"



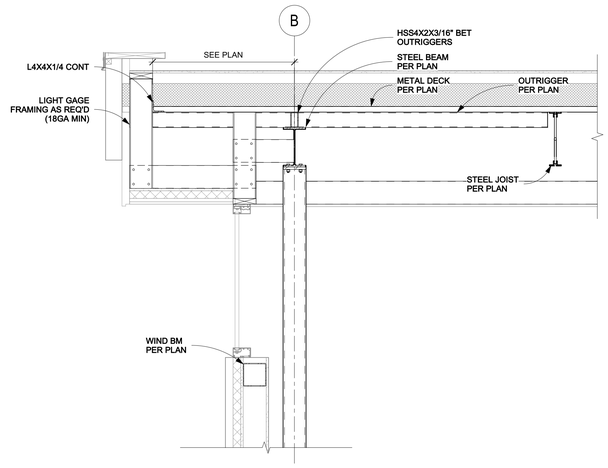
31 CLERESTORY PLAN EAST
S-510 3/4" = 1'-0"



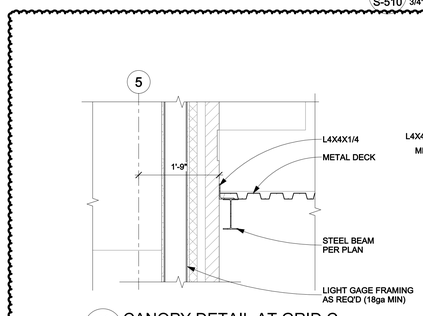
32 CLERESTORY PLAN NORTH
S-510 3/4" = 1'-0"



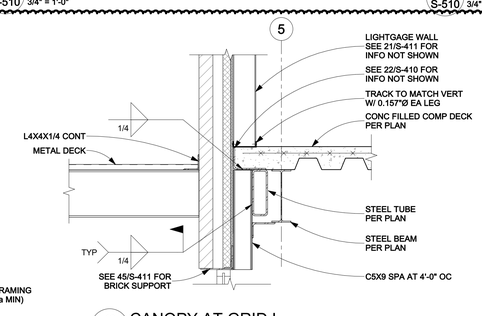
33 CLERESTORY PLAN SOUTH
S-510 3/4" = 1'-0"



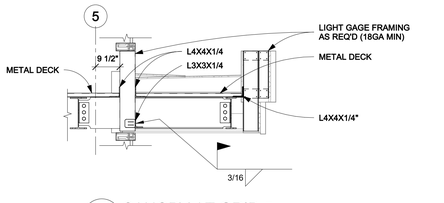
34 CLERESTORY PLAN WEST
S-510 3/4" = 1'-0"



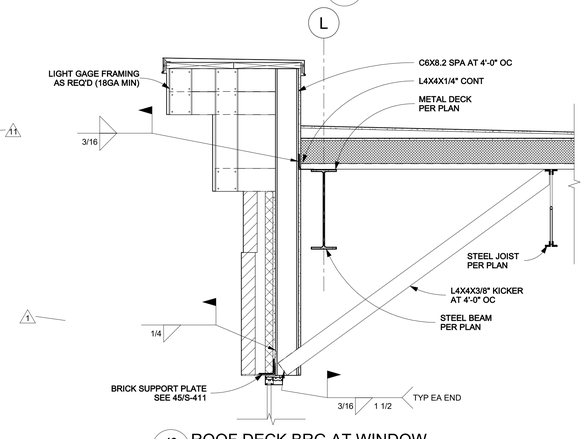
41 CANOPY DETAIL AT GRID C
S-510 3/4" = 1'-0"



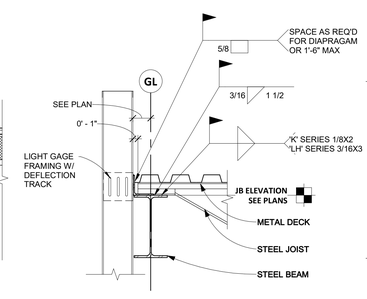
42 CANOPY AT GRID L
S-510 3/4" = 1'-0"



52 CANOPY AT GRID 5
S-510 1/2" = 1'-0"



43 ROOF DECK BRG AT WINDOW
S-510 3/4" = 1'-0"



44 TYP JOIST BRG AT LIGHT GAGE
S-510 1" = 1'-0"

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LEE'S SUMMIT JOINT OPERATIONS

PACKAGE 1: SITE AND STRUCTURE

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

REVISION DATES:

1	ADDENDUM #1	9/19/24
2	ADDENDUM #2	10/30/24
11	ASI #6	2/26/25

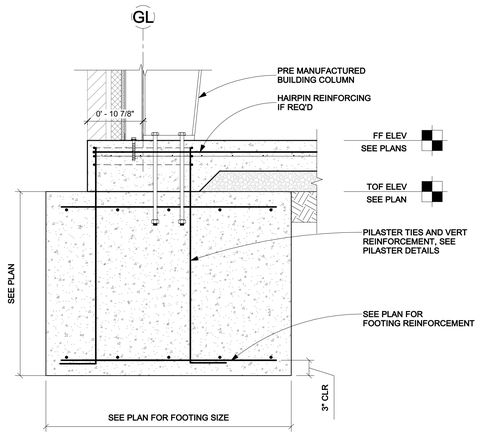
STATE OF MISSOURI
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3/9/25

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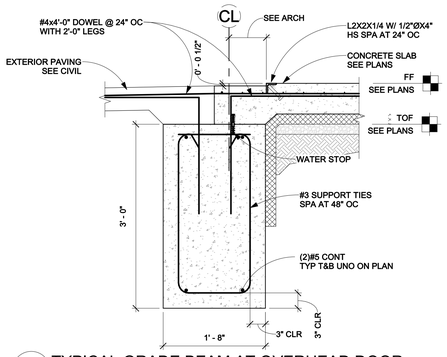
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HOEFER WELKER #: 138161

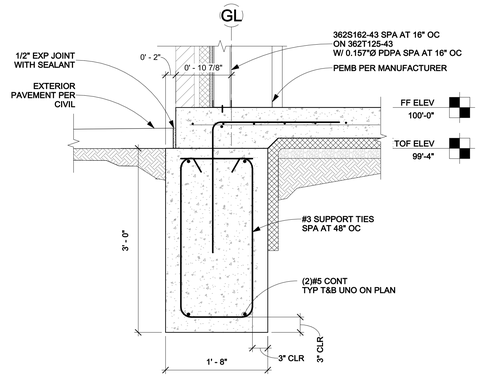
ROOF FRAMING DETAILS



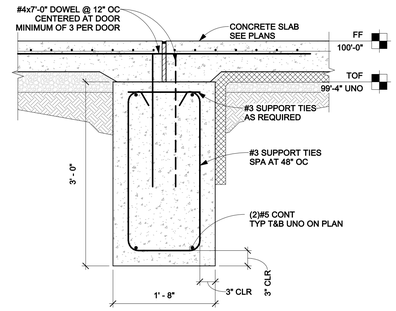
11 S-511 VEHICLE BUILDING PILASTER
1" = 1'-0"



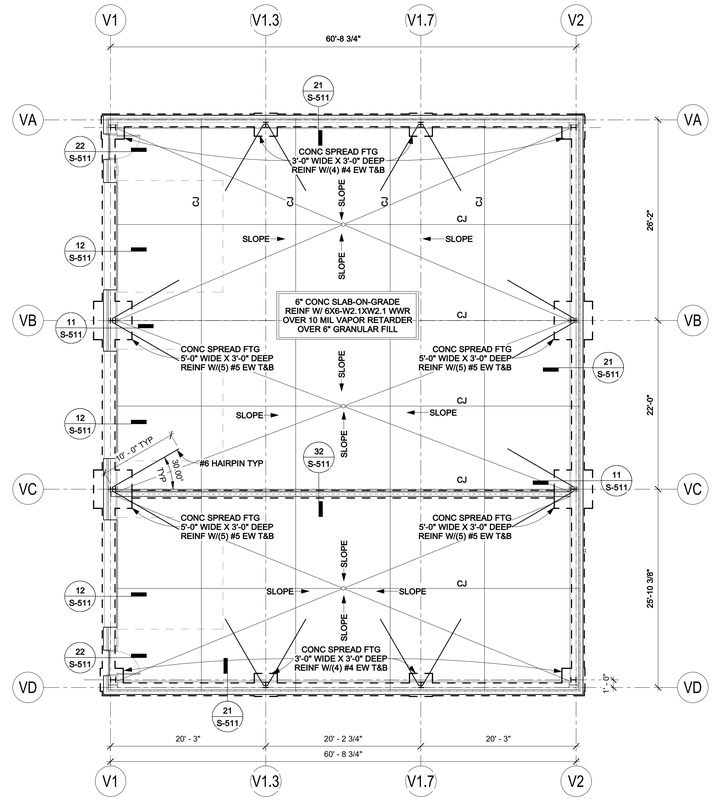
12 S-511 TYPICAL GRADE BEAM AT OVERHEAD DOOR
1" = 1'-0"



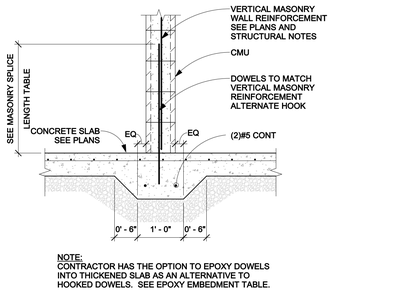
21 S-511 TYPICAL FOOTING DETAIL
1" = 1'-0"



22 S-511 TYP GRADE BEAM AT MAN DOOR
1" = 1'-0"

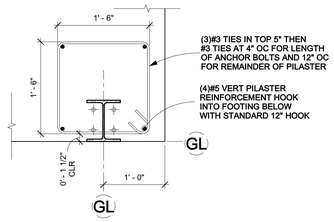


VEHICLE BUILDING FOUNDATION PLAN
1/8" = 1'-0"

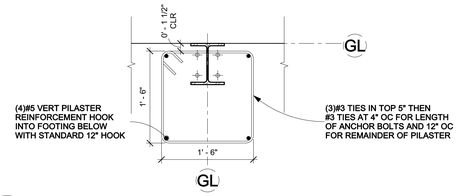


NOTE:
CONTRACTOR HAS THE OPTION TO EPOXY DOWELS INTO THICKENED SLAB AS AN ALTERNATIVE TO HOOKED DOWELS. SEE EPOXY EMBEDMENT TABLE.

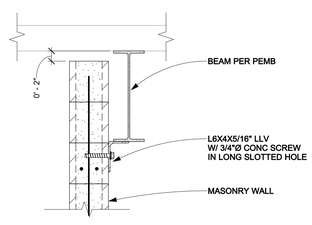
32 S-511 THICKENED SLAB DETAIL
3/4" = 1'-0"



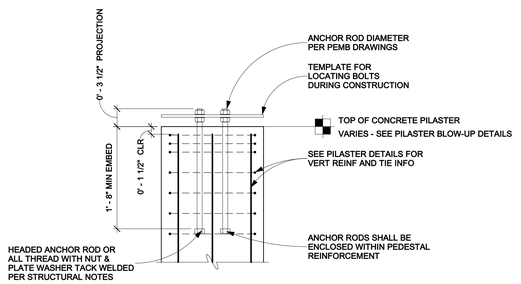
33 S-511 TYPICAL PILASTER AT CORNER DETAIL
1" = 1'-0"



34 S-511 TYPICAL PILASTER DETAIL
1" = 1'-0"



43 S-511 TOP OF MASONRY WALL
1" = 1'-0"



44 S-511 TYPICAL ANCHOR BOLT DETAIL
1" = 1'-0"

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LEE'S SUMMIT JOINT OPERATIONS

PACKAGE 2:
CONSTRUCTION SET

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

REVISION DATES:

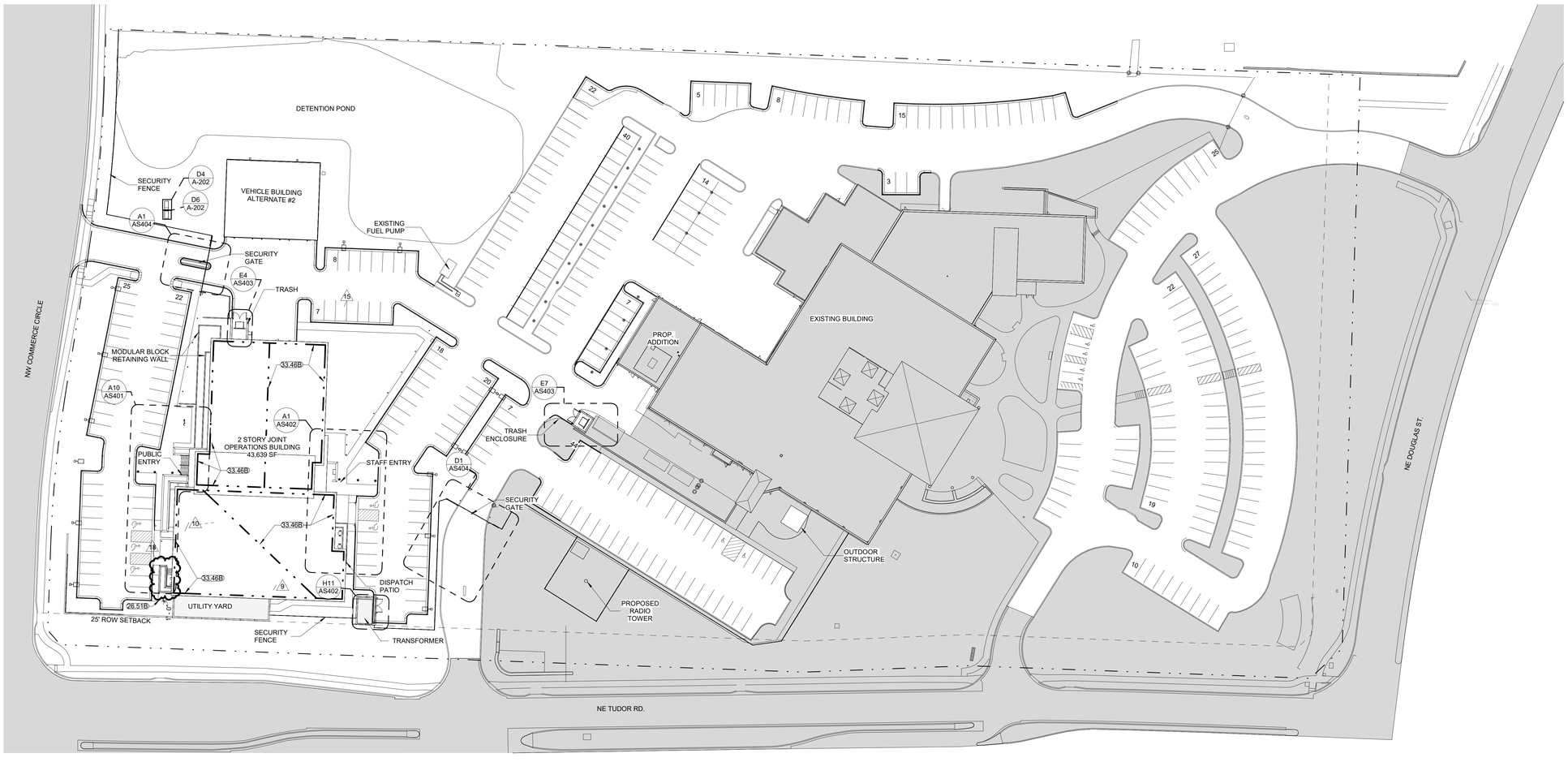
KIMBERLY EBERT IONES
PE-2005029619
PROFESSIONAL ENGINEER
STATE OF MISSOURI
11/1/24

PROFESSIONAL SEAL

S-511

ISSUE DATE: AUGUST 29, 2024
HOEFER WELKER #: 138161

VEHICLE BUILDING PLAN AND DETAILS



NORTH

A1 ARCHITECTURAL SITE PLAN
1" = 40'-0"

GENERAL NOTES - ARCHITECTURAL SITE:

1. RE: SHEET G-011 FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. ARCHITECTURAL ELEVATION 100'-0" = CIVIL ELEVATION 1024.67'.
3. ALL SIDEWALKS SHALL SLOPE 1/4 INCH PER FOOT AWAY FROM THE BUILDING, UNLESS NOTED OTHERWISE.
4. ALL GRADES SHALL SLOPE AWAY FROM THE BUILDING AT 5 PERCENT FOR THE FIRST 10 FT.
5. LOCATIONS AND SIZES OF ALL CONCRETE MECHANICAL AND ELECTRICAL PADS SHALL BE COORDINATED BY THE MECHANICAL AND ELECTRICAL CONTRACTORS, WITH THE SELECTED EQUIPMENT MANUFACTURER / SUPPLIER; AND ARE TO BE APPROVED BY THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.

SITE LEGEND

AREA NOT IN SCOPE

PROPERTY LINE

MATERIAL KEYNOTES

26.51B	EXTERIOR LIGHT FIXTURE RE: ELECTRICAL
33.46B	FOUNDATION DRAINAGE - 4" HDPE PERFERATED PIPE WRAPPED IN FILTER FABRIC

15

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PACKAGE 2: CONSTRUCTION SET

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

REVISION DATES:

9	CCD 001	1/29/2025
10	CCD 002	1/24/2025
15	ASI 008	3/10/2025
18	CCD 003	5/5/2025

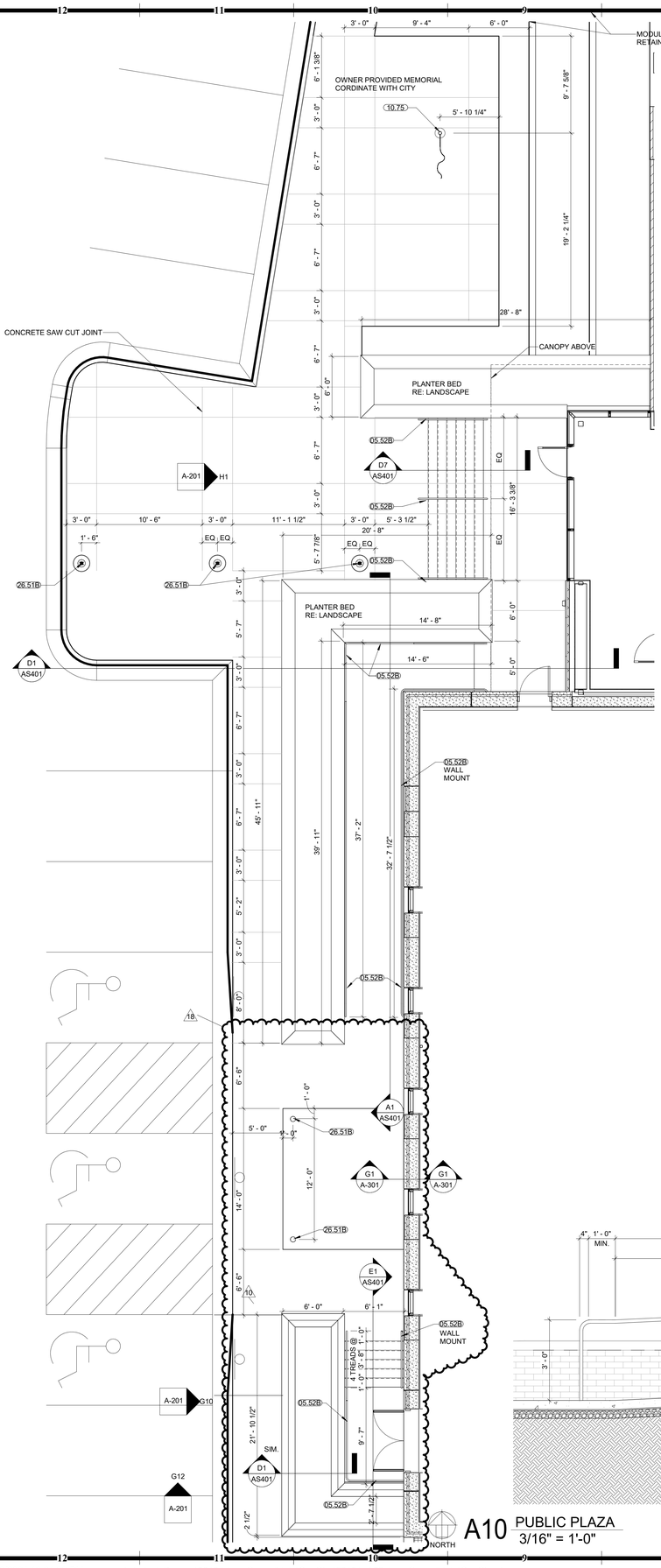
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CHRISTOPHER KRUMREI
NUMBER A-2016011211
ARCHITECT

PROFESSIONAL SEAL

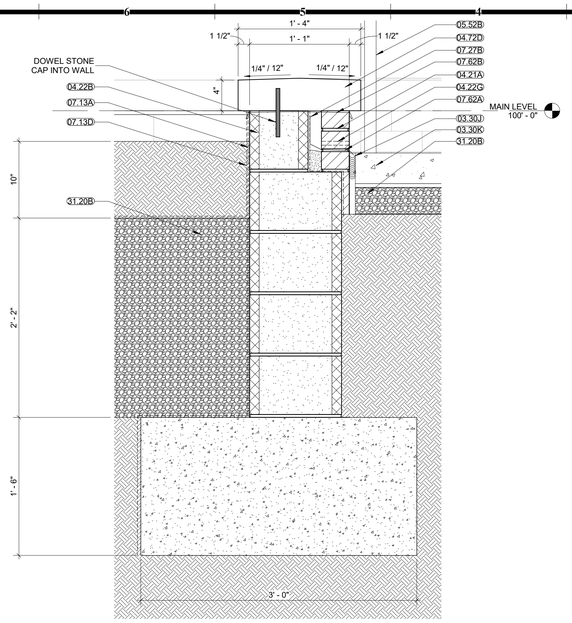
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HOEFER WELKER #: 138191

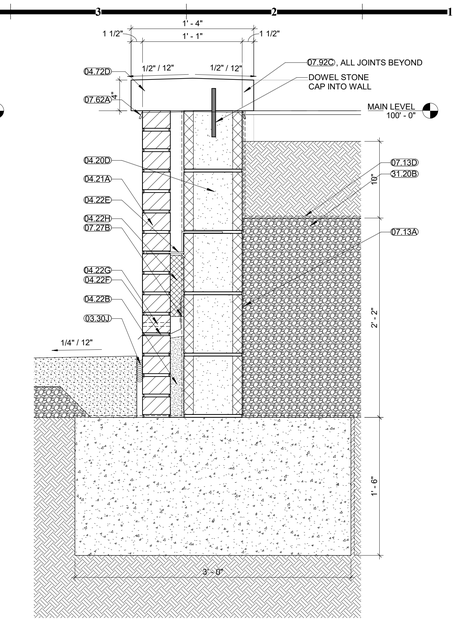
SITE PLAN



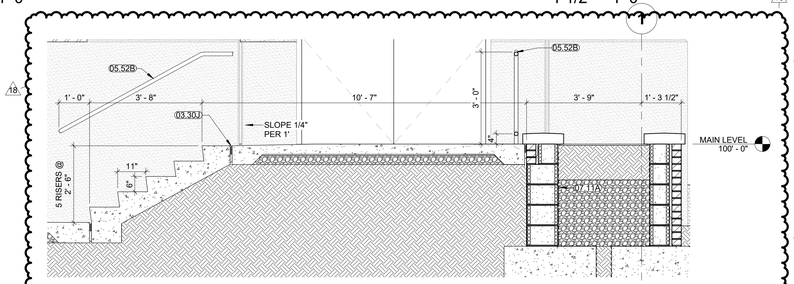
A10 PUBLIC PLAZA
3/16" = 1'-0"



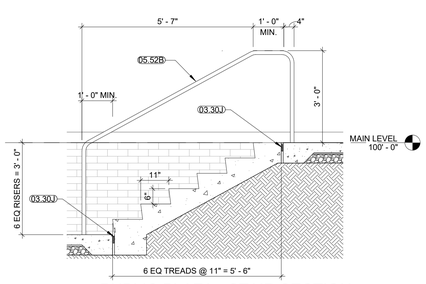
G5 PLANTER SECTION @ RAMP
1 1/2" = 1'-0"



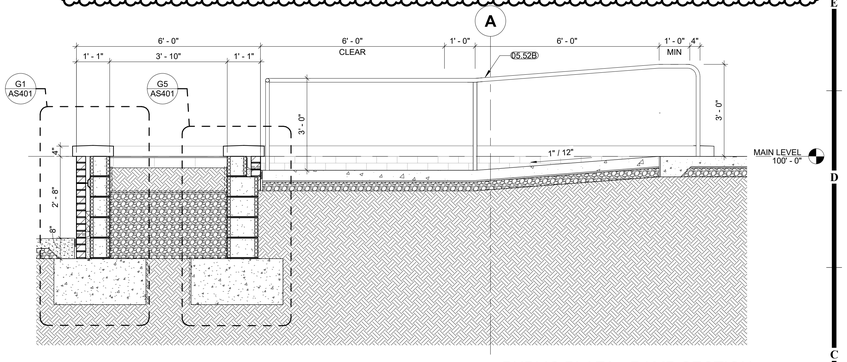
G1 PLANTER SECTION
1 1/2" = 1'-0"



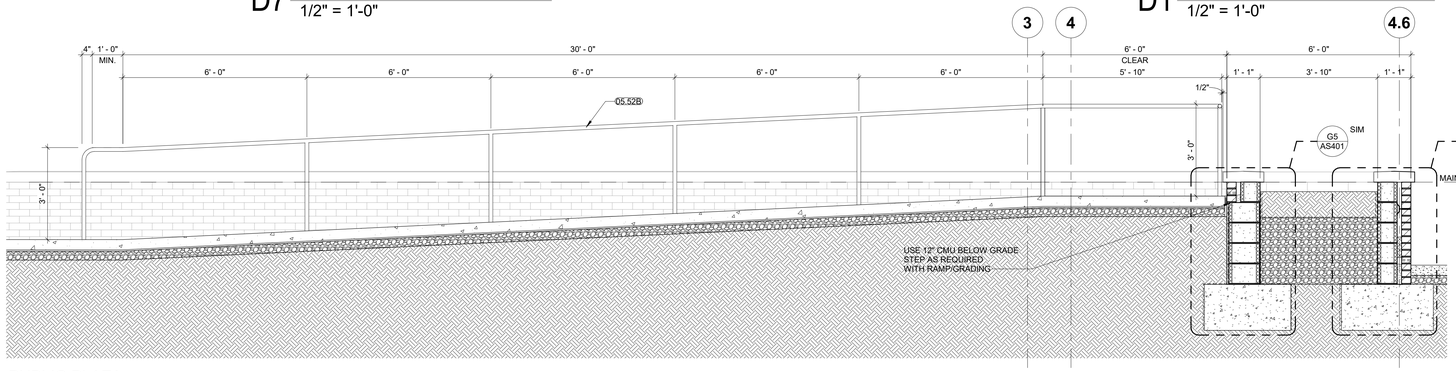
E1 EGRESS DOOR - STAIR SECTION
1/2" = 1'-0"



D7 PUBLIC PLAZA - STAIR SECTION
1/2" = 1'-0"



D1 PUBLIC PLAZA - RAMP SECTION
1/2" = 1'-0"



A1 PUBLIC PLAZA - RAMP SECTION
1/2" = 1'-0"

GENERAL NOTES - ARCHITECTURAL SITE:

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MATERIAL KEYNOTES

03.30J	1/2-INCH COMPRESSIBLE JOINT FILLER (HOLD DOWN TOP 1/2-INCH - FILL W/ SEALANT.)
03.30K	UNDER-SLAB VAPOR RETARDER
04.20D	CONCRETE MASONRY UNIT (CMU) - 7 5/8 INCH
04.21A	FACE BRICK
04.22B	GROUT SOLID - MASONRY CELLS
04.22E	TIES AND ANCHORS
04.22F	THROUGH-WALL MEMBRANE FLASHING WITH METAL DRIP EDGE
04.22G	WEEP VENTS @ 24-INCH O.C.
04.22H	CAVITY DRAINAGE MATERIAL (MORTAR NET)
04.72D	CAST STONE WALL CAP
05.52B	STAINLESS STEEL PIPE/ TUBE RAILING
07.11A	BITUMINOUS DAMPROOFING
07.13A	SELF-ADHEARING SHEET WATERPROOFING MEMBRANE
07.13D	FILTER FABRIC
07.27B	FLUID-APPLIED MEMBRANE AIR BARRIER
07.62A	PREFINISHED SHEET METAL FLASHING
07.62B	PREFINISHED METAL SILL FLASHING
07.92C	BACKER ROD AND SEALANT
10.75	FLAGPOLE
26.51B	EXTERIOR LIGHT FIXTURE RE: ELECTRICAL
31.20B	GRANULAR FILL

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

PACKAGE 2: CONSTRUCTION SET

2 NE TUDOR RD
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REVISION DATES:

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18	CCD 003	5/5/2025

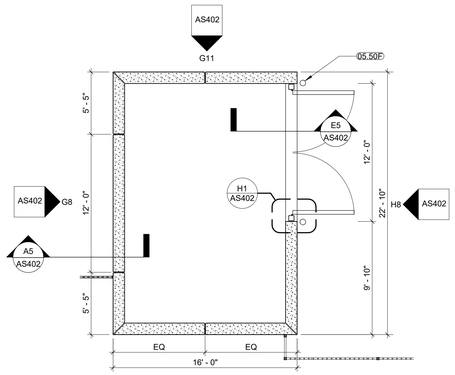
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CHRISTOPHER KRUMREI
NUMBER A-2016013211
ARCHITECT
5/5/25

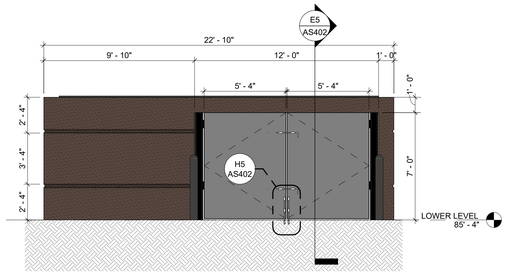
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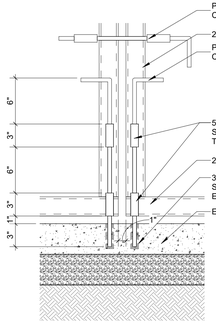
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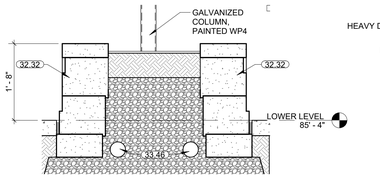
ISSUE DATE: DECEMBER 20, 2024
HOEFER WELKER #: 138191

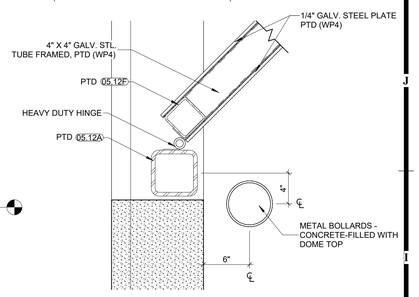
SITE DETAILS



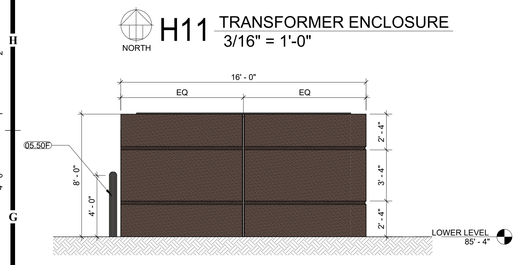








H11 TRANSFORMER ENCLOSURE
3/16" = 1'-0"



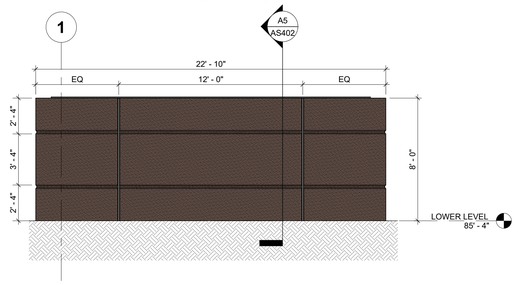
H8 TRANSFORMER ENCLOSURE - EAST
1/4" = 1'-0"

H5 GATE CLOSURE DETAIL @ TRANSFORMER
1 1/2" = 1'-0"

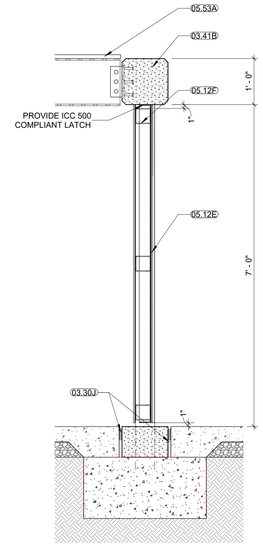
H3 MODULAR BLOCK
3/4" = 1'-0"

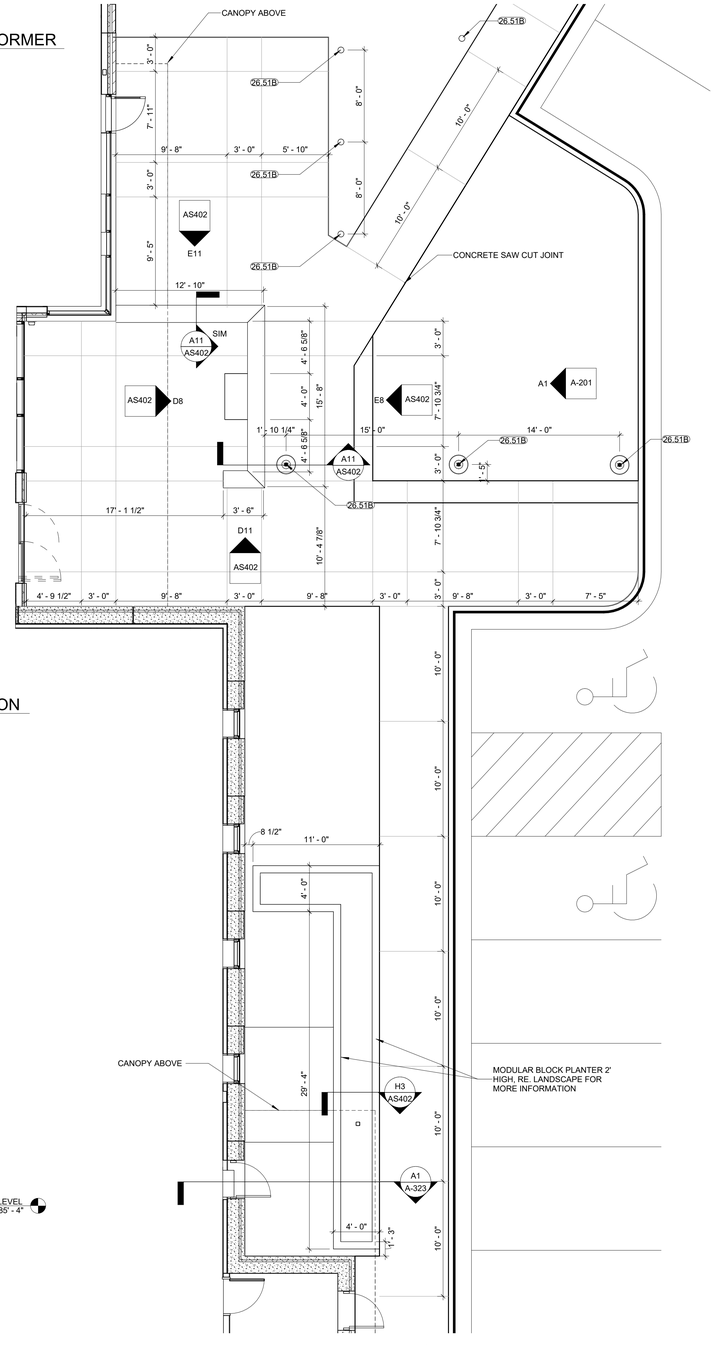
H1 HEAVY DUTY GATE JAMB @ TRANSFORMER
1 1/2" = 1'-0"

G11 TRANSFORMER ENCLOSURE - NORTH
1/4" = 1'-0"

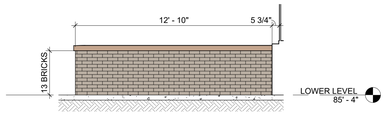


G8 TRANSFORMER ENCLOSURE - WEST
1/4" = 1'-0"

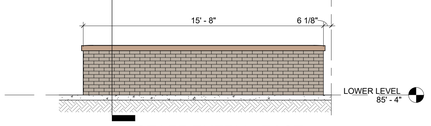




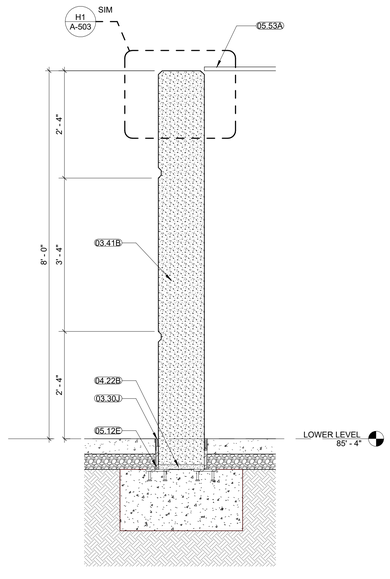
E11 STAFF ENTRY - NORTH
1/4" = 1'-0"



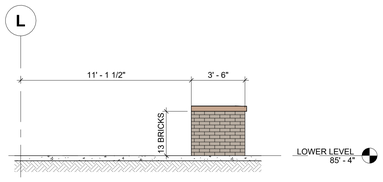
E8 STAFF ENTRY - EAST
1/4" = 1'-0"



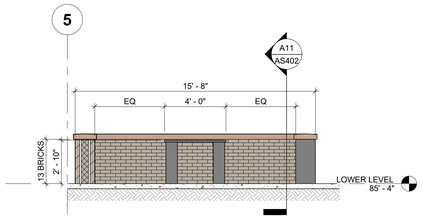
E5 TRANSFORMER ENCLOSURE - GATE SECTION
3/4" = 1'-0"



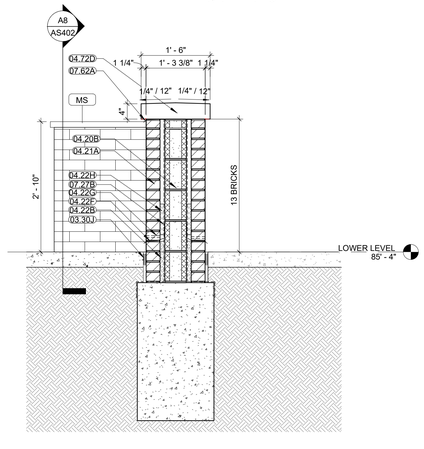
D11 STAFF ENTRY - SOUTH
1/4" = 1'-0"



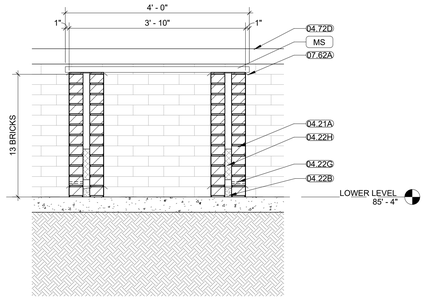
D8 STAFF ENTRY - WEST
1/4" = 1'-0"



A11 STAFF ENTRY - SECTION
3/4" = 1'-0"



A8 STAFF ENTRY - COUNTERTOP SECTION
3/4" = 1'-0"



A5 TRANSFORMER ENCLOSURE - SECTION
3/4" = 1'-0"

A1 STAFF PLAZA
3/16" = 1'-0"

NORTH

GENERAL NOTES - ARCHITECTURAL SITE:

1. RE: SHEET G-011 FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. ARCHITECTURAL ELEVATION 100'-0" = CIVIL ELEVATION 1024.67'.
3. ALL SIDEWALKS SHALL SLOPE 1/4 INCH PER FOOT AWAY FROM THE BUILDING, UNLESS NOTED OTHERWISE.
4. ALL GRADES SHALL SLOPE AWAY FROM THE BUILDING AT 5 PERCENT FOR THE FIRST 10 FT.
5. LOCATIONS AND SIZES OF ALL CONCRETE MECHANICAL AND ELECTRICAL PADS SHALL BE COORDINATED BY THE MECHANICAL AND ELECTRICAL CONTRACTORS, WITH THE SELECTED EQUIPMENT MANUFACTURER / SUPPLIER; AND ARE TO BE APPROVED BY THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.

GENERAL NOTES - EXTERIOR ELEVATIONS:

1. RE: SHEET G-011 FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. DIMENSIONS SHOWN ON THE EXTERIOR ELEVATIONS ARE TO THE FACE OF EXTERIOR WALL, FACE OF MASONRY (FOM), FACE OF CONCRETE WALLS (FOC), AND COLUMN GRID LINES, UNLESS OTHERWISE NOTED OR INDICATED.
3. RE: THE WINDOW TYPES SHEET FOR ALL EXTERIOR WINDOW TYPES AND GLASS TYPES.
4. ALL EXPOSED STEEL INCLUDING COLUMNS AND LINTELS TO BE PAINTED WP4
5. ALL SEALANT JOINTS TO MATCH ADJACENT FINISH, TYP.
6. ALL EXTERIOR DOORS TO BE PAINTED WP4.
7. METAL COPINGS TO MATCH METAL PANEL.

GENERAL NOTES – EXTERIOR WALL SECTIONS/ DETAILS:

1. RE: SHEET G-011 FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. RE: FLOOR PLANS, ROOF PLAN AND ELEVATIONS FOR SECTION CUT LOCATIONS.
3. ALL WINDOW AND DOOR OPENING DIMENSIONS ARE ROUGH OPENING DIMENSIONS, UNLESS NOTED OTHERWISE.
4. DIMENSIONS SHOWN ON THE WALL SECTIONS ARE TO THE FACE OF EXTERIOR WALL, FACE OF MASONRY (FOM), FACE OF CONCRETE WALLS (FOC), AND COLUMN GRID LINES, UNLESS NOTED OR SHOWN OTHERWISE.
5. PAINT ALL EXPOSED STEEL, INCLUDING STEEL LINTELS, ETC. (TYP.)

MATERIAL KEYNOTES

03.30J	1/2-INCH COMPRESSIBLE JOINT FILLER (HOLD DOWN TOP 1/2-INCH - FILL W/ SEALANT.)
03.41B	PRECAST CONCRETE WALL
04.20B	CONCRETE MASONRY UNIT (CMU) - 3 5/8 INCH
04.21A	FACE BRICK
04.22B	GROUT SOLID - MASONRY CELLS
04.22F	THROUGH-WALL MEMBRANE FLASHING WITH METAL DRIP EDGE
04.22G	WEEP VENTS @ 24-INCH O.C.
04.22H	CAVITY DRAINAGE MATERIAL (MORTAR NET)
04.72D	CAST STONE WALL CAP
05.12A	STEEL COLUMN
05.12E	STEEL PLATE
05.12F	STEEL TUBE
05.50F	METAL BOLLARDS - CONCRETE-FILLED WITH DOME TOP
05.53A	METAL GRATING
07.27B	FLUID-APPLIED MEMBRANE AIR BARRIER
07.62A	PREFINISHED SHEET METAL FLASHING
26.51B	EXTERIOR LIGHT FIXTURE RE: ELECTRICAL
32.32	SEGMENTAL RETAINING WALL
33.46	FOUNDATION DRAINAGE

EXTERIOR ELEVATION MATERIALS

- BRICK - RUNNING BOND - ENDICOTT- COLOR MEDIUM IRONSPOT 46 VELOUR
- BRICK - RUNNING BOND - INTERSTATE BRICK - COLOR ASH
- PRECAST PANEL, COLOR TAN, ACID ETCH FINISH (USE WHITE PORTALND CEMENT)
- PRECAST PANEL, COLOR MEDIUM BROWN, HEAVY RETARDANT FINISH
- PRECAST PANEL WITH COLOR TREATMENT, LIGHT SANDBLAST FINISH, COLOR NWW004 CHARCOAL
- IGU - BOD: VIRACON VRE26-38.
- COMPOSITE METAL PANEL, COLOR SUNSHINE GRAY
- MODULAR BLOCK RETAINING WALL

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

PACKAGE 2: CONSTRUCTION SET

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

REVISION DATES:

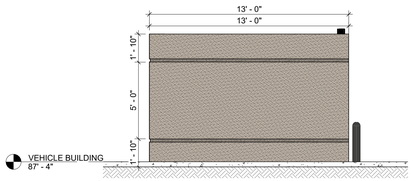
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CHRISTOPHER KRUMREI
NUMBER A-201601211
ARCHITECT

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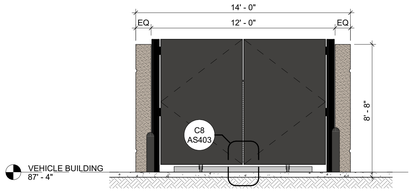
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ISSUE DATE: NOVEMBER 1, 2024
HOEFER WELKER #: 138191

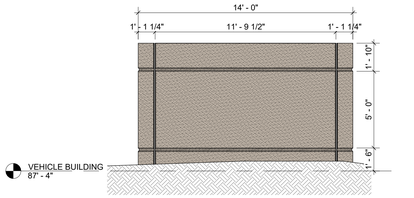
SITE DETAILS



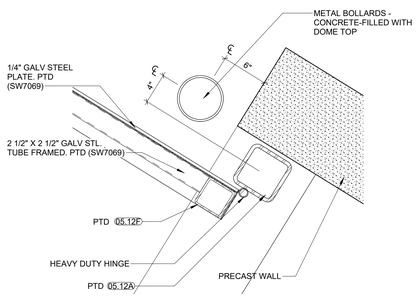
J10 TRASH ENCLOSURE @ POLICE BUILDING - SOUTH
1/4" = 1'-0"



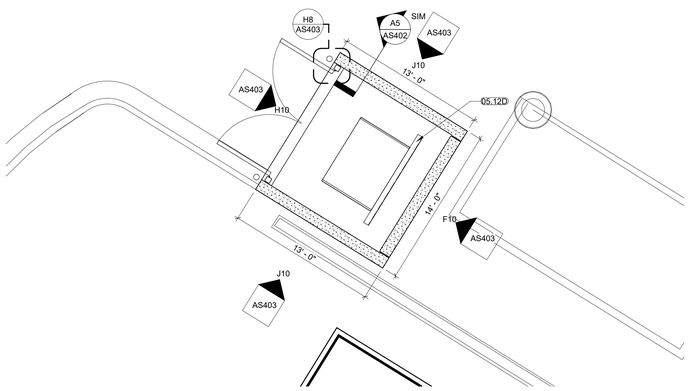
H10 TRASH ENSCLOSURE @ POLICE BUILDING - EAST
1/4" = 1'-0"



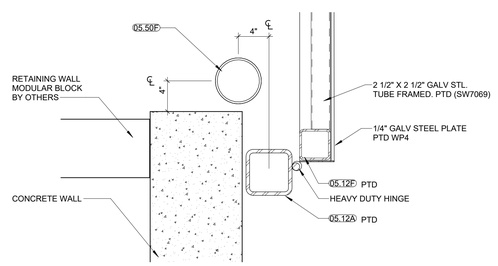
F10 TRASH ENCLOSURE @ POLICE BUILDING - WEST
1/4" = 1'-0"



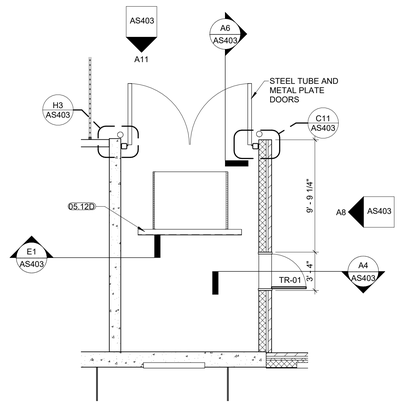
H8 HEAVY DUTY GATE JAMB - PRECAST
1 1/2" = 1'-0"



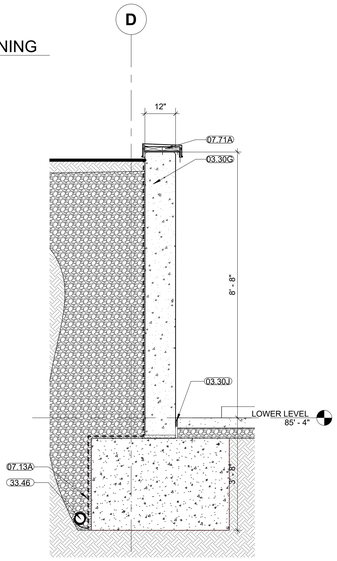
E7 TRASH ENCLOSURE @ POLICE ADDITION
3/16" = 1'-0"
NORTH



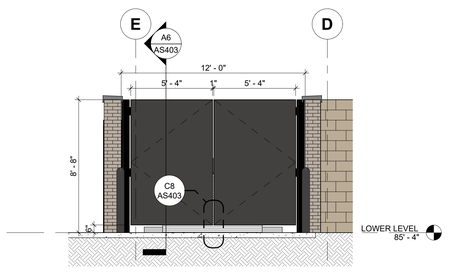
H3 HEAVY DUTY GATE JAMB - RETAINING
1 1/2" = 1'-0"



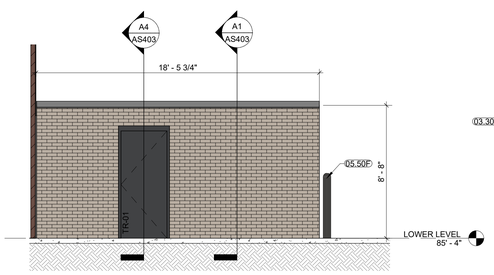
E4 TRASH ENCLOSURE
3/16" = 1'-0"
NORTH



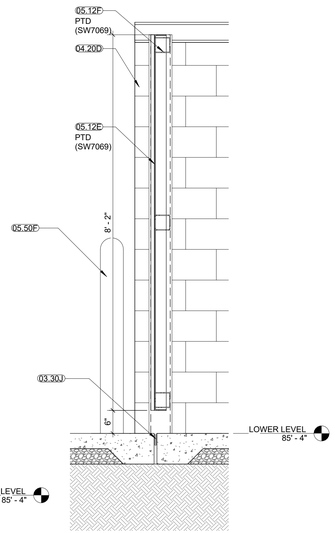
E1 CONCRETE WALL SECTION
1/2" = 1'-0"



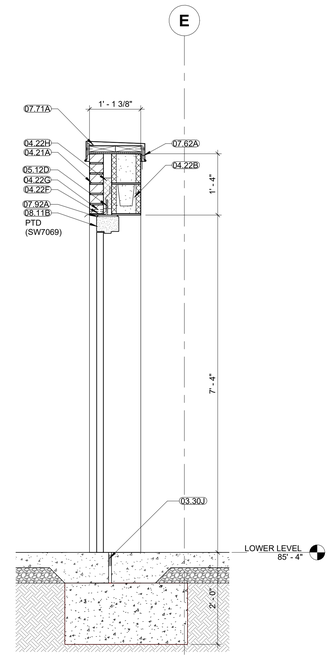
A11 TRASH ENCLOSURE - NORTH
1/4" = 1'-0"



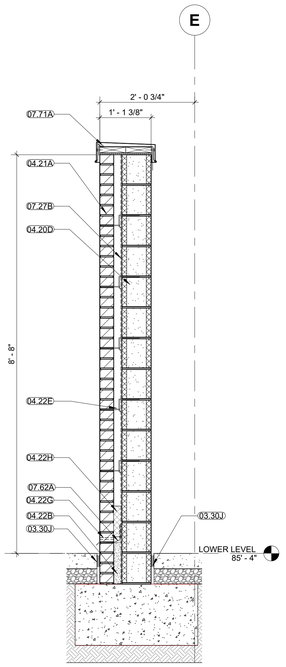
A8 TRASH ENCLOSURE - EAST
1/4" = 1'-0"



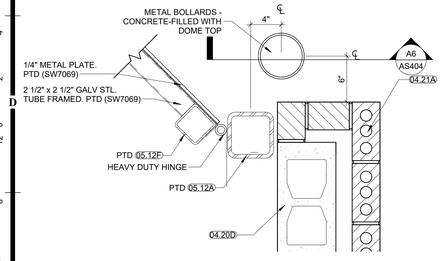
A6 TRASH ENCLOSURE - SECTION
3/4" = 1'-0"



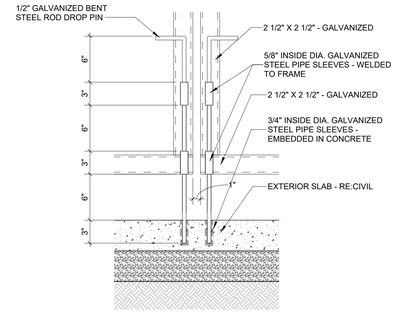
A4 TRASH ENCLOSURE - SECTION
3/4" = 1'-0"



A1 BRICK WALL SECTION
3/4" = 1'-0"



C11 HEAVY DUTY GATE JAMB - CMU
1 1/2" = 1'-0"



C8 GATE CLOSURE DETAIL
1 1/2" = 1'-0"

GENERAL NOTES - ARCHITECTURAL SITE:

1. RE: SHEET G-011 FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. ARCHITECTURAL ELEVATION 100'-0" = CIVIL ELEVATION 1024.67'.
3. ALL SIDEWALKS SHALL SLOPE 1/4 INCH PER FOOT AWAY FROM THE BUILDING, UNLESS NOTED OTHERWISE.
4. ALL GRADES SHALL SLOPE AWAY FROM THE BUILDING AT 5 PERCENT FOR THE FIRST 10 FT.
5. LOCATIONS AND SIZES OF ALL CONCRETE MECHANICAL AND ELECTRICAL PADS SHALL BE COORDINATED BY THE MECHANICAL AND ELECTRICAL CONTRACTORS, WITH THE SELECTED EQUIPMENT MANUFACTURER / SUPPLIER; AND ARE TO BE APPROVED BY THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.

GENERAL NOTES - EXTERIOR ELEVATIONS:

1. RE: SHEET G-011 FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. DIMENSIONS SHOWN ON THE EXTERIOR ELEVATIONS ARE TO THE FACE OF EXTERIOR WALL, FACE OF MASONRY (FOM), FACE OF CONCRETE WALLS (FOC), AND COLUMN GRID LINES, UNLESS OTHERWISE NOTED OR INDICATED.
3. RE: THE WINDOW TYPES SHEET FOR ALL EXTERIOR WINDOW TYPES AND GLASS TYPES.
4. ALL EXPOSED STEEL INCLUDING COLUMNS AND LINTELS TO BE PAINTED WP4
5. ALL SEALANT JOINTS TO MATCH ADJACENT FINISH, TYP.
6. ALL EXTERIOR DOORS TO BE PAINTED WP4.
7. METAL COPINGS TO MATCH METAL PANEL.

GENERAL NOTES – EXTERIOR WALL SECTIONS/ DETAILS:

1. RE: SHEET G-011 FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. RE: FLOOR PLANS, ROOF PLAN AND ELEVATIONS FOR SECTION CUT LOCATIONS.
3. ALL WINDOW AND DOOR OPENING DIMENSIONS ARE ROUGH OPENING DIMENSIONS, UNLESS NOTED OTHERWISE.
4. DIMENSIONS SHOWN ON THE WALL SECTIONS ARE TO THE FACE OF EXTERIOR WALL, FACE OF MASONRY (FOM), FACE OF CONCRETE WALLS (FOC), AND COLUMN GRID LINES, UNLESS NOTED OR SHOWN OTHERWISE.
5. PAINT ALL EXPOSED STEEL, INCLUDING STEEL LINTELS, ETC. (TYP.)

MATERIAL KEYNOTES

03.30G	CONCRETE WALL
03.30J	1/2-INCH COMPRESSIBLE JOINT FILLER (HOLD DOWN TOP 1/2-INCH - FILL W/ SEALANT.)
04.20D	CONCRETE MASONRY UNIT (CMU) - 7 5/8 INCH
04.21A	FACE BRICK
04.22B	GROUT SOLID - MASONRY CELLS
04.22E	TIES AND ANCHORS
04.22F	THROUGH-WALL MEMBRANE FLASHING WITH METAL DRIP EDGE
04.22G	WEEP VENTS @ 24-INCH O.C.
04.22H	CAVITY DRAINAGE MATERIAL (MORTAR NET)
05.12A	STEEL COLUMN
05.12D	STEEL ANGLE
05.12E	STEEL PLATE
05.12F	STEEL TUBE
05.50F	METAL BOLLARDS - CONCRETE-FILLED WITH DOME TOP
07.13A	SELF-ADHEARING SHEET WATERPROOFING MEMBRANE
07.27B	FLUID-APPLIED MEMBRANE AIR BARRIER
07.62A	PREFINISHED SHEET METAL FLASHING
07.71A	PREFINISHED METAL COPING & CONT. CLEAT
07.92A	JOINT SEALANT
08.11B	HOLLOW METAL FRAME
33.46	FOUNDATION DRAINAGE

EXTERIOR ELEVATION MATERIALS

- BRICK - RUNNING BOND - ENDICOTT- COLOR MEDIUM IRONSPOT 46 VELOUR
- BRICK - RUNNING BOND - INTERSTATE BRICK - COLOR ASH
- PRECAST PANEL, COLOR TAN, ACID ETCH FINISH (USE WHITE PORTALND CEMENT)
- PRECAST PANEL, COLOR MEDIUM BROWN, HEAVY RETARDANT FINISH
- PRECAST PANEL WITH COLOR TREATMENT, LIGHT SANDBLAST FINISH, COLOR NWW004 CHARCOAL
- IGU - BOD: VIRACON VRE26-38.
- COMPOSITE METAL PANEL, COLOR SUNSHINE GRAY
- MODULAR BLOCK RETAINING WALL

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

PACKAGE 2: CONSTRUCTION SET

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

REVISION DATES:

STATE OF MISSOURI
CHRISTOPHER KRUMREI
NUMBER A-2016011211
ARCHITECT
11/1/24

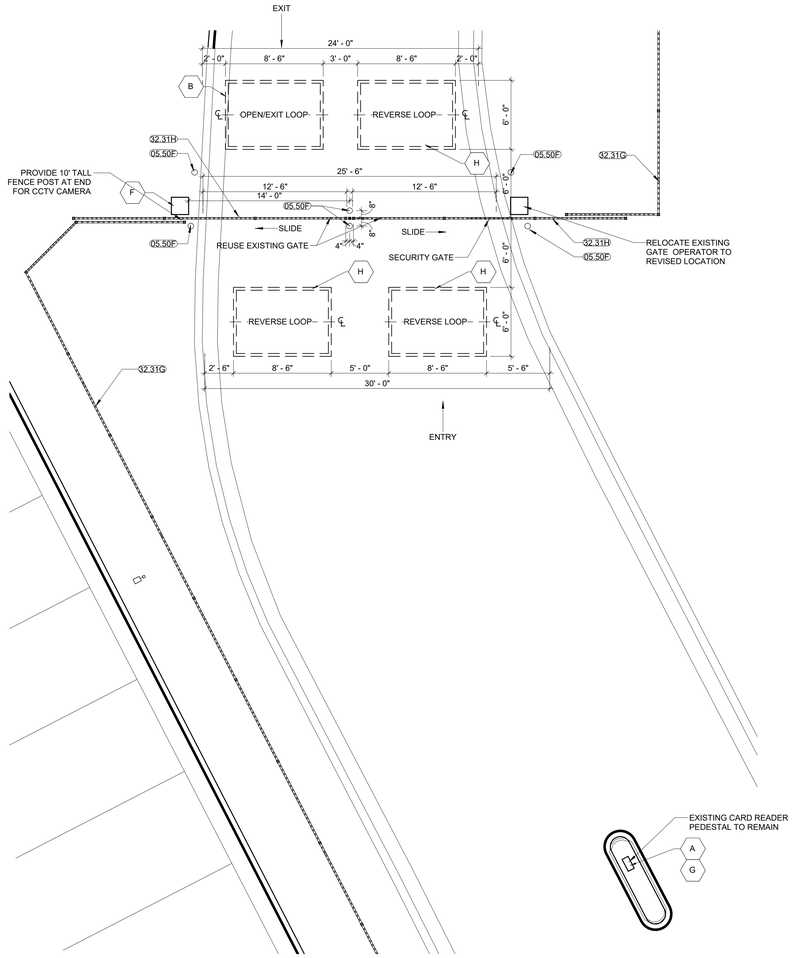
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AS403

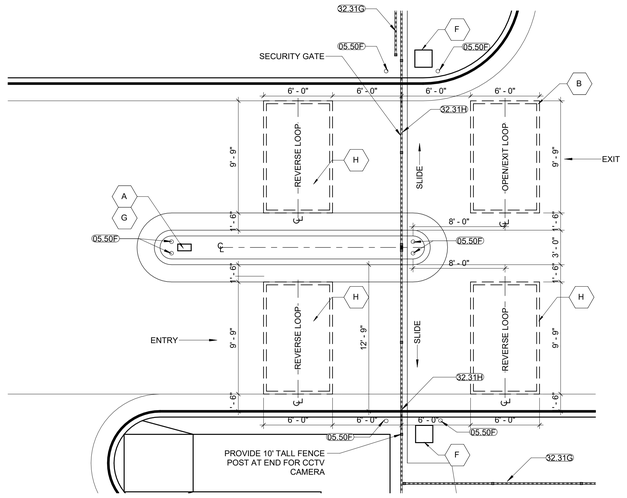
ISSUE DATE: NOVEMBER 1, 2024
HOEFER WELKER #: 138191

SITE DETAILS

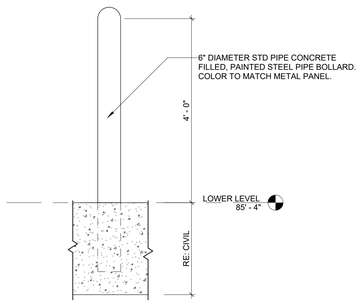
PARKING EQUIPMENT SCHEDULE1					
TYPE	MANUFACTURER	DESCRIPTION	MODEL	FINISH	COMMENT
A	AIPHONE	ENTRY TERMINAL	IS-IPDV	BLACK	REF. MEP
B	HYSECURITY	OPEN/EXIT LOOP	HY5B LOOP DETECTOR	TBD	COORDINATE W/ CONCRETE POUR
F	HYSECURITY	GATE OPERATOR	SLIDESMARTDC HD25	BLACK	COORDINATE W/ OWNER
G	PRO PEDESTAL	PEDESTAL POLE	REF. MEP	BLACK	
H	HYSECURITY	REVERSE LOOP	HY5B LOOP DETECTOR	TBD	COORDINATE W/ CONCRETE POUR



NORTH **D1** SITE GATE @ TUDOR ROAD
3/16" = 1'-0"



NORTH **A1** SITE GATE @ NW COMMERCE CIRCLE
3/16" = 1'-0"



A6 TYP. BOLLARD DETAIL
3/4" = 1'-0"

GENERAL NOTES - ARCHITECTURAL SITE:

1. RE: SHEET G-011 FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. ARCHITECTURAL ELEVATION 100'-0" = CIVIL ELEVATION 1024.67'.
3. ALL SIDEWALKS SHALL SLOPE 1/4 INCH PER FOOT AWAY FROM THE BUILDING, UNLESS NOTED OTHERWISE.
4. ALL GRADES SHALL SLOPE AWAY FROM THE BUILDING AT 5 PERCENT FOR THE FIRST 10 FT.
5. LOCATIONS AND SIZES OF ALL CONCRETE MECHANICAL AND ELECTRICAL PADS SHALL BE COORDINATED BY THE MECHANICAL AND ELECTRICAL CONTRACTORS, WITH THE SELECTED EQUIPMENT MANUFACTURER / SUPPLIER; AND ARE TO BE APPROVED BY THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.

MATERIAL KEYNOTES	
05.50F	METAL BOLLARDS - CONCRETE-FILLED WITH DOME TOP
32.31G	DECORATIVE METAL FENCING
32.31H	DECORATIVE METAL GATE

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

PACKAGE 2: CONSTRUCTION SET

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

REVISION DATES:

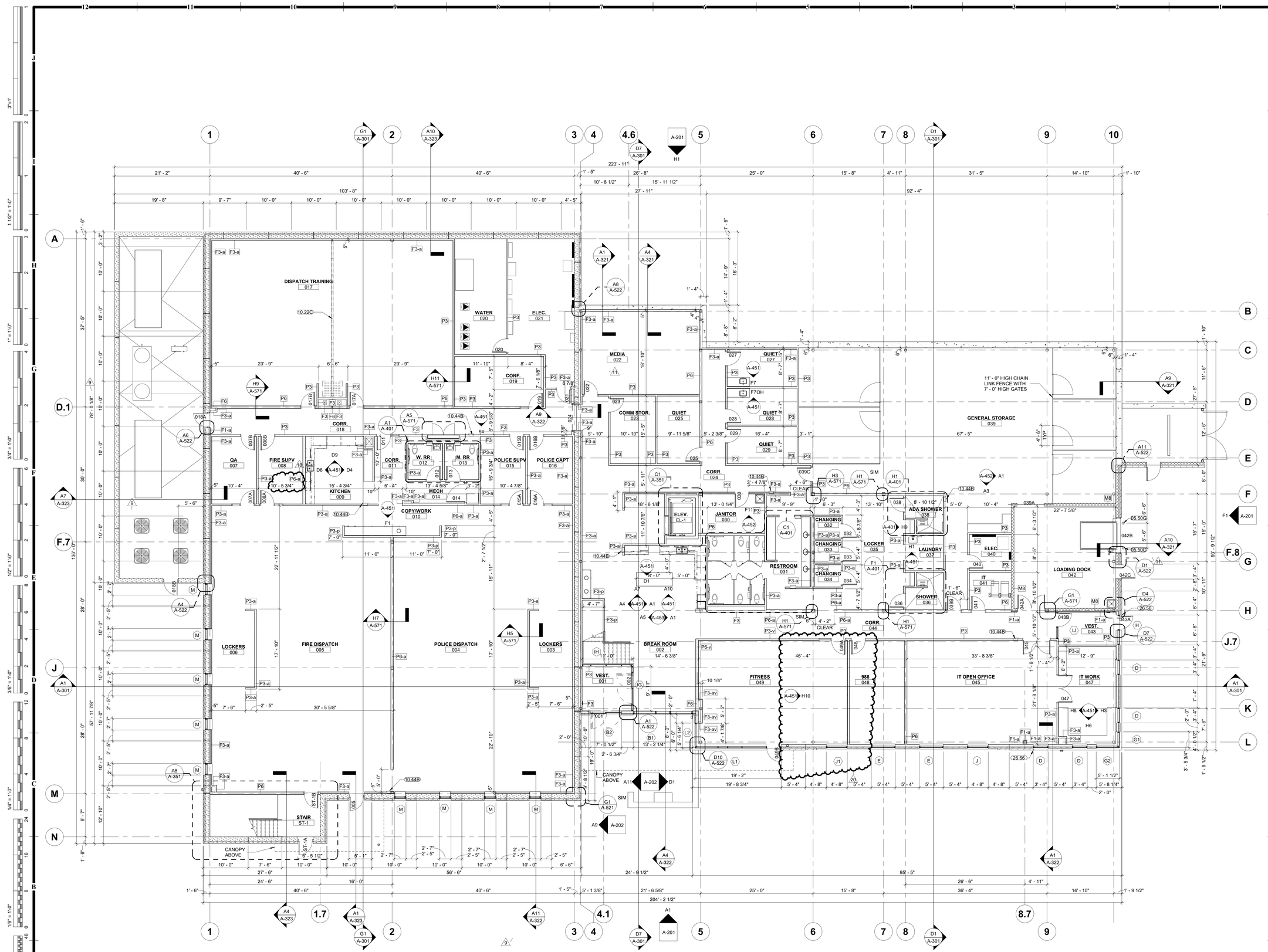
STATE OF MISSOURI
CHRISTOPHER KRUMREI
NUMBER A-2016011211
ARCHITECT

PROFESSIONAL SEAL

AS404

ISSUE DATE: NOVEMBER 1, 2024
HOEFER WELKER #: 138191

SITE DETAILS



A1 LOWER LEVEL FLOOR PLAN
1/8" = 1'-0"

NORTH

GENERAL NOTES - FLOOR PLANS:

1. RE: SHEET G-011 FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. ARCHITECTURAL ELEVATION 100'-0" = CIVIL ELEVATION 1024.67'
3. DIMENSIONS SHOWN ON THE FLOOR PLAN ARE TO THE FACE OF MASONRY (FOM), FACE OF CONCRETE WALLS (FOC), AND COLUMN GRID LINES, UNLESS NOTED OR SHOWN OTHERWISE.
4. FOR METAL STUD CONSTRUCTION DIMENSIONS SHOWN ON THE FLOOR PLAN ARE TO THE FACE OF GYP. BOARD/ WALL (FOG), UNLESS NOTED OR SHOWN OTHERWISE.
5. NOTE: WALL THICKNESSES ARE ACTUAL DIMENSIONS.
6. DOOR OPENINGS NOT LOCATED BY DIMENSION SHALL BE CENTERED IN WALL SHOWN OR LOCATED 4 INCHES FROM FINISH WALL TO OUTSIDE FACE OF DOOR FRAME - HINGE SIDE, ALWAYS ALLOWING A MINIMUM OF 18" FROM THE PULL SIDE (STRIKE SIDE) OF THE DOOR TO THE INTERSECTING WALL, OR OTHER PROTRUDING OBJECTS.
7. ALL CLOSETS AND ALCOVES WITHOUT A SPACE IDENTIFICATION NUMBER SHALL HAVE THE SAME FINISHES AS THE ADJOINING SPACES.
8. ALL PUBLIC SPACES: THE WALLS WILL BE FINISHED WITH 5/8" GYP. BD. TO A LEVEL 4 FINISH AND PAINTED, UNLESS NOTED OR SPECIFIED OTHERWISE.
9. RE: FINISH LEGEND, AND SPECIFICATIONS FOR DOOR AND DOOR FRAME FINISHES.
10. ALL EXPOSED STEEL INCLUDING COLUMNS TO BE PAINTED WP4

MATERIAL KEYNOTES

05.50G	6" TRAFFIC GUARD NON LOCKIGN DROP IN BOLLARD SERIES RP4501, 10K DESIGN LOAD
10.22C	OPERABLE PARTITION
10.44B	SEMI-RECESSED FIRE EXTINGUISHER CABINET
26.56	EXTERIOR LIGHT FIXTURE

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FINAL DEVELOPMENT PLAN

REVISION DATES:

9	CCD 001	1/29/2025
11	ASI 006	3/10/2025
18	CCD 003	5/5/2025
20	ASI 012	6/20/2025

PROFESSIONAL SEAL

A-101

ISSUE DATE: OCTOBER 16, 2024
HOEFER WELKER #: 138191

LOWER LEVEL - FLOOR PLAN