VICINITY MAP

N

7 BREW COFFEE

LEE'S SUMMIT, MO

22033 7BLS PERMIT SET APRIL 22, 2022

SHEET INDEX

BUILDING SUPPLIER

CREATIVE MODULAR CONSTRUCTION

DREW RODIGER
PROJECT MANAGER
C: 417-425-4546
E: DREW@CMCMOD.COM

LEE LOVEALL
OWNER/DESIGN
CONSULTANT
C: 417.353.1865
E: LEE@CMCMOD.COM

BUILDING CODE INFORMATION

AUTHORITY HAVING JURISDICTION:	CITY OF LEES SUMMIT	
APPLICABLE BUILDING CODES:	2018 IBC, 2017 NEC, 2010 ADA	
CURRENT ZONING:	CP-2, PLANNED COMMUNITY COMMERCIAL	
USE GROUPS:	B, BUSINESS	
CONSTRUCTION TYPE:	V-B	
BUILDING LIMITATIONS:	ALLOWABLE HEIGHT: 2 STORIES	(BASED ON B USE GROUP, IBC 2018, 504.3)
	ALLOWABLE AREA: 9,000 S.F.	(BASED ON B USE GROUP, IBC 2018, 506.2)
	ACTUAL AREAS: 510 S.F.	
OTHER CODE ITEMS:	SEE EGRESS PLAN FOR ADDITIONAL ITEMS	

PROJECT DESCRIPTION

PREFABRICATED FREESTANDING BUILDING WITH ACCOMPANYING WALK-IN COOLER DELIVERS COFFEE, TEA, AND ENERGY DRINKS TO CUSTOMERS VIA DRIVE-THROUGH LANES. NO INTERIOR OR EXTERIOR DINING COMPONENT IS PROVIDED; THE INTERIOR IS ONLY OCCUPIED BY STAFF. DRINK ITEMS ARE THE ONLY ITEMS OFFERED ON THE MENU.

CONSULTANTS

CIVIL ENGINEER:

KAW VALLEY ENGINEERING
8040 NORTH OAK TRAFICWAY
KANSAS CITY, MO 64118
(816) 468-5858

STRUCTURAL ENGINEER:

J&M ENGINEERING
3045 S. KANSAS EXPY.
SPRINGFIELD, MO 65807
PHONE: 417.708.9315
www.jandmstructural.com

MECHANICAL, ELECTRICAL, PLUMBING ENGINEER:

CJD
Engineering | Energy | Innovation
2225 WEST CHESTERFIELD BOULEVARD, SUITE 200
SPRINGFIELD, MO 65807
(417) 877-1700

TORGERSON DESIGN PARTNERS
ARCHITECTURE / REAL ESTATE / DEVELOPMENT
116 NORTH 2ND AVENUE · OZARK, MO 65721 · P (417) 581-8889 · F (417) 581-9002
ARCHITECTURAL CORPORATION MISSOURI LICENSE NUMBER: A-2010011427

CMC
CREATIVE MODULAR CONSTRUCTION

7 BREW COFFEE
LEE'S SUMMIT, MO
NW CORNER OF NE DOUGLAS ST AND NE VICTORIA DR
LEE SUMMIT, MO 64086

STATE OF MISSOURI
ADAM JOSEPH KREHER
NUMBER 2011002764
ARCHITECT
05/03/2022

ARCHITECT OF RECORD:
NAME: ADAM KREHER
LICENSE NO. 2011002764

PROJECT NUMBER:
22033 7BLS

REVISION:

G0.0
COVER SHEET

DATE: APRIL 22, 2022

EQUIPMENT AND FIXTURE SCHEDULE

ITEM NO.	QTY.	MANUFACTURER	PRODUCT	PRODUCT NO.	SIZE	NOTES
EQ-1	1	NOLAKE	REMOTE WALK-IN COOLER	KODB77104-C	675 CUBIC SF	
EQ-2	1	BUNN WATER HEATER	HOT WATER MACHINE	H5X - ELEMENT		
EQ-3	2	LA MARZOCCO	ESPRESSO MACHINE	LINEA PB (AV) - 3		
EQ-4	1	LA MARZOCCO	ESPRESSO MACHINE	LINEA PB (AV) - 4		
EQ-5	2	MANITOWOC	ICE MAKER HEADS	IYF 1800 C		REMOTE CONDENSOR - IF 1800C
EQ-6	1	MANITOWOC	ICE MAKER BIN	LB 1760	60"	
EQ-7	27	TORRANI	SYRUP RACK			
EQ-8	3	VITAMIX	BLENDER			
EQ-9	4	EAGLE GROUP	STAINLESS STEEL STORAGE SHELVING	(1) SS 1872 - PZB6S (2) SS 1424 - PZB6S (3) SS 1436 - PZB6S (4) SS 1436 - PZB6S		
EQ-10	1	SPACEMAN	CHILLER MACHINE	N236-1VA0B		
EQ-11	3	MAZZER	COFFEE BEAN GRINDER	ROBUR S NERO		
EQ-12	1	MAZZER	DECAF COFFEE BEAN GRINDER	SUPER JOLLY PRO V (E) NERO		
EQ-13	1	RUBBERMAID	TRASH CONTAINER			
EQ-14	1	ATOSA	REACH-IN COOLER	MCF8723GR		
EQ-15	3	LA CROSSR	MOBILE ICE BINS	513034 CL-24ICCCAB-31		
EQ-16	1	CONTINENTAL	UNERCOUNTER COOLER	SW36NGD-U		
EQ-17	3	STRONGWAY	AIR CURTAIN	49947		
EQ-18	3		RAPID RINSER			

EQUIPMENT SCHEDULE NOTES:

a. ALL EQUIPMENT TO BE INSTALLED BY A LICENSED INSTALLER AND THE MANUFACTURERS SPECIFICATIONS.

GENERAL SCHEDULE NOTES:

THE ITEMS IDENTIFIED ON THE FINISH MATERIALS SCHEDULE, EQUIPMENT AND FIXTURE SCHEDULES HAVE BEEN SELECTED AND APPROVED FOR THE USE ON 7 BREW COFFEE PROJECTS AS "STANDARDS". ITEMS SPECIFIED MAY OR MAY NOT ACTUALLY APPEAR ON THE DRAWINGS. THE DESCRIPTIONS ARE TO IDENTIFY THE PRODUCTS AND NOT TO DETERMINE THE INCLUSION OR USE OF ANY PARTICULAR ITEM.

FINISH MATERIALS SCHEDULE

SYMBOL	ITEM	DESCRIPTION	REMARKS
FRP-1	MEG-WALLS	WHITE	MEG PANELS
MP-1	METAL SIDING	CUSTOM COLOR: ZINC GRAY FINISH: SMOOTH	EXTERIOR SIDING
MP-2	BRAKE METAL	COLOR: SLATE BLUE FINISH: SMOOTH	METAL ROOF, COPING AND CANOPY COLUMNS
MP-3	BRAKE METAL	COLOR: MATTE BLACK FINISH: SMOOTH	METAL SOFFIT AND COPING
MP-4	BRAKE METAL	COLOR: ZINC GRAY FINISH: SMOOTH	METAL COPING AT SIDE WALLS
MP-5	BRAKE METAL	COLOR: COLONIAL RED FINISH: SMOOTH	METAL COPING
PL-1	DECORATIVE PANEL	NICHIHA MODERNBRICK COLOR: MIDNIGHT FIBER CEMENT PANEL	EXTERIOR FINISH
PL-2	DECORATIVE PANEL	NICHIHA CANYONBRICK COLOR: SHALE BROWN FIBER CEMENT PANEL	EXTERIOR FINISH
WC-1	DECORATIVE WALL COVERING	CUSTOM VINYL WALL COVERING	COOLER WALLS
VT-1	RESILIENT VINYL FLOORING	PROTECT-ALL FLOORING COLOR: LIGHT GRAY	SERVICE AREA AND TOILET
VB-1	RESILIENT VINYL BASE	PROTECT-ALL BASE COLOR: LIGHT GRAY	SERVICE AREA AND TOILET

FINISH MATERIALS SCHEDULE NOTES:

a. PROVIDED BY 7 BREW AND INSTALLED BY GENERAL CONTRACTOR.

b. ALL MATERIALS AND WORK PROVIDED AND INSTALLED BY GENERAL CONTRACTOR.

c. PROVIDE A MINIUM OF TWO (2) COATS PAINT OVER ONE (1) COAT PRIMER ON ALL EXPOSED GYP BD IN SERVICE AREA AND TOILET

d. CEILING AND WALL TO BE SATIN FINISH. DOORS AND DOOR FRAMES TO BE SEMI-GLOSS.

GENERAL CONSTRUCTION PROCEDURES

1. ALL CONSTRUCTION SHALL BE EXECUTED IN STRICT COMPLIANCE WITH ALL LOCAL CODES AND ORDINANCES. GENERAL CONTRACTOR SHALL COMPLY WITH ALL CONSTRUCTION REGULATIONS AND PROCEDURES ESTABLISHED BY THE LANDLORD.
2. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING APPLICATION FOR AND PROCURING ALL PERMITS AND CERTIFICATES AS MIGHT BE REQUIRED BY GOVERNING AGENCIES AND SHALL BEAR THE COST FOR SUCH PERMITS AND CERTIFICATES. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS OF THE SITE.
3. EVERY EFFORT HAS BEEN MADE TO ASSURE ACCURATE CONSTRUCTION DOCUMENTS, BUT IF A CONFLICT EXISTS THE GENERAL CONTRACTOR SHALL CONTACT THE ARCHITECT IMMEDIATELY FOR CLARIFICATION. THESE DOCUMENTS INDICATE THE DESIGN INTENT AND IF EXISTING CONDITIONS ARE IN CONFLICT THE GENERAL CONTRACTOR SHALL CONTACT THE ARCHITECT IMMEDIATELY FOR CLARIFICATION.
4. THE GENERAL CONTRACTOR SHALL MAINTAIN DIRECT SUPERVISION OVER ALL SUBCONTRACTORS AND SHARE RESPONSIBILITY FOR THEIR PERFORMANCE AND QUALITY OF WORK. A LIST OF ALL SUBCONTRACTORS SHALL BE PROVIDED TO THE OWNER AND THE ARCHITECT. A COPY OF THIS LIST SHALL BE POSTED ON THE JOB SITE.
5. ALL SIGNAGE AND MOUNTING DEVICES SHALL BE PROVIDED, AND ALL SIGNAGE APPOVALS OBTAINED, BY OWNERS SIGN CONTRACTOR. GENERAL CONTRACTOR SHALL PROVIDE ELECTRICAL POWER AS REQUIRED AND INSURE SUFFICIENT SPACE AND CLEARANCE IS PROVIDED FOR PROPER INSTALLATION. SIGNAGE CONTRACTOR SHALL APPLY FOR AND SECURE ALL APPROVALS REQUIRED BY ALL LOCAL GOVERNING AGENCIES AND SUPPLY ANY DRAWINGS OR GRAPHIC REPRESENTATIONS REQUIRED BY LANDLORD.
6. ALL CONCEALED WOOD BLOCKING USED IN CONSTRUCTION SHALL BE FIRE-RETARDENT TREATED (IF APPLICABLE).
7. GENERAL CONTRACTOR SHALL PERFORM AND/OR CAUSE TO BE PERFORMED ALL WORK IN A FIRST-CLASS WORKMANLIKE MANNER AND IN ACCORDANCE WITH EACH TRADE'S ESTABLISHED PROCEDURES AND MANUFACTURER'S RECOMMENDATIONS FOR PRODUCT USE AND INSTALLATION.
8. ALL PRODUCTS USED ON THIS PROJECT SHALL BE FIRST QUALITY, NEW AND FREE OF ASBESTOS OR OTHER ENVIRONMENTALLY UNSAFE SUBSTANCES.
9. MILLWORK, BASE, DESIGNATED TRIM, ETC. SHALL BE PROVIDED BY OWNER AND INSTALLED BY CONTRACTOR WHERE INDICATED ON THE DRAWINGS AND/OR SCHEDULES.
10. GENERAL CONTRACTOR SHALL CONTACT ARCHITECT PRIOR TO CONSTRUCTION START DATE TO CONFIRM THAT HE/SHE HAS LATEST APPROVED CONSTRUCTION DOCUMENTS FOR THIS LOCATION.

SUSTAINABILITY GUIDELINES

THE FOLLOWING GUIDELINES TO BE USED BY GENERAL CONTRACDTOR ARE VOLUNTARY IN NATURE. IT IS HIGHLY RECOMMENDED THAT THE GENERAL CONTRACTOR FOLLOW THESE GUIDELINES TO THE EXTENT IT IS FEASIBLE..

1. IMPROVE INDOOR AIR QUALITY:
   - A. REDUCE CONSTRUCTION DUST AND AIR PARTICULATES WITH DUST CONTAINMENT SYSTEMS AND/OR SHUT OFF CIRCULATING AIR.
   - B. CHANGE HVAC FILTERS AT THE CONCLUSION OF THE JOB.
   - C. USE LOW V.O.C. PAINTS, ADHESIVES, SEALANTS, ETC

PREFABRICATED BUILDING

THIS BUILDING IS BEING FABRICATED IN A CONTROLLED ENVIRONMENT AND TRANSFERRED TO THE JOB SITE. CJD ENGINEERING GROUP HAS BEEN ENGAGED TO CONDUCT 3rd PARTY INSPECTIONS OF ALL FABRICATION WITHIN THE 7 BREW COFFEE WAREHOUSE. THE INSPECTION WILL INCLUDE STRUCTURAL, FRAMING, BUILDING, PLUMBING AND ELECTRICAL.

TYPICAL SYMBOL LEGEND

DETAIL DESIGNATION	DETAIL NUMBER, SHEET NUMBER 12/A3.4	ELEVATION HEIGHT	T.O. WALL 106'-0"
ROOM TAG	SQUARE FOOTAGE, ROOM NAME 101, ROOM NUMBER, 150 SF	ELEVATION TAG	1 A1.1 1 A1.1 1
DOOR TAG	101	CEILING HEIGHT	0'-0"
SECTION CUT TAG	1 101	WINDOW TAG	W1
ROOF SLOPE	12 2	REVISION DELTA	1
WALL TYPE/ PARTITION TYPE	W1	GRID BUBBLE	0
WALL PARTITION		ENLARGED DETAIL	1 101
EXISTING WALL		FINISH TAG	PT-1

MATERIAL INDICATION

CONCRETE		FINISHED WOOD	
DIMENSIONAL LUMBER		GYPSUM BOARD	
RIGID INSULATION		PLYWOOD	
BATT OR BLOWN INSULATION		GLASS	
EARTH/BACKFILL		CMU	

ABBREVIATIONS

ACCOUST.	ACOUSTICAL	FR	FIRE RETARDANT	RCP	REINFORCED CONCRETE PIPE
ADD'	ADDITIONAL	FRM	FRAME	RE	REFER
A.F.F.	ABOVE FINISH FLOOR	FURN	FURNISHED	R.H.B.	RIGHT HAND BEVEL
AF	AS FURNISHED	F.R.T.	FIRE RETARDANT TREATED	R.H.R.B.	RIGHT HAND REVERSE BEVEL
AI	AS INSTALLED	FTG	FOOTING	RL	RAIN LEADER
ALT.	ALTERNATE	FUR	FURRING	RM	ROOM
ALUM.	ALUMINUM	GA.	GAUGE	R.O.	ROUGH OPENING
ANCH.	ANCHOR	GAL	GALLON	RES.	RESILIENT TILE
ARCH.	ARCHITECT	GALV	GALVANIZED	REQ'D	REQUIRED
@	AT	GC	GENERAL CONTRACTOR	REQM'T	REQUIREMENT
B.B	BOTTOM OF BEAM	G.I.	GALVANIZED IRON	R.T.V.	ROTARY-TURBINE VENT
B.F.	BOTTOM OF FOOTING	GLAZ.	GLAZING	REG	REGULAR
BD	BOARD	GOV'T	GOVERNMENT	SAF	SAFETY
BKT.	BRACKET	G.S.	GRAVEL STOP	SAN	SANITARY
BLDG.	BUILDING	GEN	GENERAL	SCHED	SCHEDULE
BLK'G	BLOCKING	GYP	GYPSUM	S.C.	SOLID CORE
BM	BENCH MARK	HDWR	HARDWARE	SECT	SECTION
B.O.	BOTTOM OF	H.C.	HOLLOW CORE	SHT	SHEET
BRG	BEARING	HOL	HOLLOW	SIM	SIMILAR
BSMT	BASEMENT	HORIZ	HORIZONTAL	SPEC	SPECIFICATION
C.S.	COUNTERSUNK	H	HIGH	STND	STANDARD
CAB.	CABINET	HT.	HEIGHT	STD	STUD
C.C	CENTER-TO-CENTER	HTG.	HEATING	STL	STEEL
CEM.	CEMENT	HTR	HEATER	STOR	STORAGE
CF	CONTRACTOR FURNISHED	H.W.	HOT WATER	STRUCT	STRUCTURE / STRUCTURAL
CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED	I.D.	INSIDE DIAMETER	SURF	SURFACE
		INSUL	INSULATION	SUSP	SUSPENDED
CI	CONTRACTOR INSTALLED	INT.	INTERIOR	SYST	SYSTEM
CLG	CEILING	INV	INVERT	S.W.	STORM WATER
C.O.	CLEAN OUT	JNT	JOINT	TYP.	TYPICAL
COL	COLUMN	JSTS	JOISTS	T.O.	TOP OF
CONC	CONCRETE	K.E.S.	KITCHEN EQUIPMENT SUPPLIER	U.N.O	UNLESS NOTED OTHERWISE
CONF	CONFERENCE	LAM	LAMINATE	VCP	VITRIFIED-CLAY-PIPE
CONN	CONNECTION	LAV	LAVATORY	VEST	VESTIBULE
CONST'R	CONSTRUCTION	LG	LONG	VERT	VERTICAL
CONT	CONTINUOUS	L.H.B.	LEFT HAND BEVEL	VOL	VOLUME
CONT'R	CONTRACTOR	L.H.R.B.	LEFT HAND REVERSE BEVEL	V.T.R.	VENT-THRU-ROOF
COORD	COORDINATE	LIN	LINEAR / LINEAL	VCT	VINYL COMPOSITION TILE
CORR	CORRUGATED/ CORRIDOR	LVR	LOUVER	W	WIDE
CTR	CENTER	MAS	MASONRY	W/	WITH
CYL	CYLINDER	MATL	MATERIAL	WD	WOOD
℄	CENTERLINE	MAX	MAXIMUM	W.D.	WINDOW DIMENSION
C.W.	COLD WATER	MEZZ	MEZZANINE	WDW	WINDOW
DP	DEEP	MFRD	MANUFACTURED	WRB	WEATHER RESISTANT BARRIER
DBL	DOUBLE	MFR	MANUFACTURER	WWF	WELDED WIRE FABRIC
DEG	DEGREE	MID	MIDDLE	W.P.	WEATHER PROOF
D.F.	DRINKING FOUNTAIN	MIN	MINIMUM	WT	WEIGHT
DEMO	DEMOLITION	MISC	MISCELLANEOUS		
DIA ∅	DIAMETER	MK	MARK		
DIAG	DIAGONAL	M.O.	MASONRY OPENING		
DIM	DIMENSION	MTD	MOUNTED		
D.O.	DO-OVER	MTL	METAL		
DTL	DETAIL	MULL	MULLION		
DR	DOOR	NOM	NOMINAL		
D.S.	DOWNSPOUT	NTS	NOT TO SCALE		
EA.	EACH	O.A.	OVERALL		
ELEC	ELECTRICAL	O.C.	ON CENTER		
ELEV	ELEVATION (VIEW)	OD	OUTSIDE DIAMETER		
ELEV	ELEVATOR	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED		
E.W.C.	ELECTRIC WATER COOLER	OFOI	OWNER FURNISHED OWNER INSTALLED		
EQUIP.	EQUIPMENT	O/H	OVERHEAD		
EXIST'G	EXISTING	O/	OVER		
EXP	EXPOSED	OPN'G	OPENING		
EXT	EXTERIOR / EXTENSION	OPP	OPPOSITE		
F.B.O.	FURNISHED BY OTHERS	PART	PARTITION		
F.D.	FLOOR DRAIN	P.E.M.B.	PRE-ENGINEERED METAL BUILDING		
F.E.	FIRE EXTINGUISHER	PERIM	PERIMETER		
F.E.C.	FIRE EXTINGUISHER CABINET	P.G.	PRESENT GRADE		
F.E.B.	FIRE EXTINGUISHER BRACKET	PLAM	PLASTIC LAMINATE		
FIN	FINISH	PLAS	PLASTIC		
F.G.	FINISH GRADE	PL	PROPERTY LINE		
F.L.	FLOW LINE	PLUMB'G	PLUMBING		
FLASH'G	FLASHING	PLY	PLYWOOD		
FLR	FLOOR	P.P.	POWERPOLE		
F.O.M	FACE OF MASONRY	PR	PAIR		
FND	FOUNDATION	PVC	POLYVINYL CHLORIDE		
		Q.T.	QUARRY TILE		
		R	RADIUS		

TORGERSON DESIGN PARTNERS
ARCHITECTURE / REAL ESTATE / DEVELOPMENT
116 NORTH 2ND AVENUE · OZARK, MO 65721 · P (417) 581-8889 · F (417) 581-9002
ARCHITECTURAL CORPORATION MISSOURI LICENSE NUMBER: A-2010011427

7 BREW COFFEE
LEE'S SUMMIT, MO

NW CORNER OF NE DOUGLAS ST AND NE VICTORIA DR
LEE SUMMIT, MO 64086

STATE OF MISSOURI · ADAM JOSEPH KREHER · NUMBER A-2011002764 · ARCHITECT · 05/02/2022

ARCHITECT OF RECORD:
NAME: ADAM KREHER
LICENSE NO. 2011002764

PROJECT NUMBER:
22033 7BLS

REVISION:

G0.1
GENERAL NOTES & SCHEDULES
DATE: APRIL 22, 2022

FINAL DEVELOPMENT PLAN FOR

7 BREW

1410 NE DOUGLAS STREET

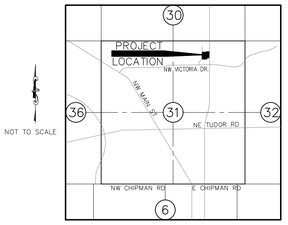
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DEVELOPER:
P2 BREW, LLC.
91 CHAMPIONS BLVD.
ROGERS, AR 72712
CONTACT: JASON PULLMAN
EMAIL: JPCOMPANIES@GMAIL.COM

ARCHITECT:
ARCHITECTURAL DESIGN CONCEPTS
2821 UNIT D W CHESTNUT
SPRINGFIELD, MO 65802

PREPARED BY:
KAW VALLEY ENGINEERING
8040 N. OAK TRAFFICWAY
KANSAS CITY, MO. 64118
CONTACT: MARTIN ARLING
PHONE: 816-468-5858
EMAIL: arling@kveng.com

PROJECT INFORMATION:
PROJECT: 7BREW
LOCATION: 1410 NE DOUGLAS STREET
PARCEL ID: 52-900-02-35-00-0-00-000
AREA: 0.939 AC.
ZONING: CP-2
LEGAL DESCRIPTION: LOT 3, OAKVIEW LOTS 1-5



LOCATION MAP
CITY OF LEES SUMMIT, MISSOURI
SEC. 31, TWP-48-NORTH, RNG-31-WEST

INDEX OF SHEETS

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FLOOD STATEMENT:
THE ACCURACY OF ANY FLOOD HAZARD DATA SHOWN HEREON IS SUBJECT TO MAP SCALE UNCERTAINTY AND TO ANY OTHER UNCERTAINTY IN LOCATION OR ELEVATION ON THE REFERENCED FLOOD INSURANCE RATE MAP. THE SURVEYED PROPERTY LIES WITHIN FLOOD HAZARD ZONE "X, NON-SHADED" AS SAID PROPERTY PLOTS BY SCALE ON THE FLOOD INSURANCE RATE MAP CITY OF LEE'S SUMMIT, COMMUNITY PANEL NO. 29095C0409G, EFFECTIVE ON 01/20/2017.

DATUM BENCHMARK:
DATUM IS U.S. SURVEY FEET AND REFERS TO NAVD88 DATUM DERIVED FROM CONNECTIONS TO NATIONAL CORS NETWORK VIA GPS STATIC SESSIONS ON PROJECT CONTROL PROCESSED WITH THE NATIONAL GEODETIC SURVEY'S OPUS PROJECTS UTILITY. ORTHOMETRIC HEIGHT WAS CALCULATED USING THE GEOID12B MODEL.

BENCHMARKS:
JA-43: 3" ALUM DISK STAMPED JA-43 ON THE WEST SIDE OF DOUGLAS AND 44'± SOUTH OF THE S.E. BOUNDARY CORNER OF THE SURVEY. ELEV= 1034.77

BS#60: FOUND "SQUARE" CUT ON THE BACK OF CURB ON THE SOUTH SIDE OF A PRIVATE DRIVE ON THE NORTH SIDE OF LOT 3 AND LOCATED NEAR THE NORTHEAST BOUNDARY CORNER, MARKED BY OTHERS 1028.00. ELEV= 1028.03

NOTES:
1. THERE ARE NO ACTIVE, INACTIVE OR CAPPED WELLS ON THE SITE BASED ON THE MO 2017 WELLS-STATE OF MISSOURI WELLHEAD INFORMATION.
2. THERE ARE NO WETLANDS ON THE SITE PER THE NATIONAL WETLANDS INVENTORY MAP.

PARKING SUMMARY

DESCRIPTION	REQUIRED
REQUIRED STALLS	9
DESCRIPTION	PROPOSED
ACCESSIBLE PARKING STALLS	1
STANDARD PARKING STALLS	11
TOTAL PARKING STALLS	12

LAND USE SCHEDULE		
DWELLING UNITS	0	
LAND AREA	0.939	UNITS/ACRE
TOTAL FLOOR AREA	681	SQ.FT.
FLOOR AREA RATIO	0.017	
REQUIRED STALLS	0	
PROPOSED ACCESSIBLE PARKING STALLS	1	
PROPOSED STANDARD PARKING STALLS	11	
TOTAL PROPOSED PARKING STALLS	12	

LEGEND

- ○ MONUMENT FOUND, ORIGIN UNDETERMINED UNLESS OTHERWISE NOTED
- ● 1/2" x 24" REBAR W/LS 214F CAP SET
- (P) PLATTED
- (M) MEASURED
- E ELECTRIC METER
- E ELECTRIC TRANSFORMER
- FIRE HYDRANT
- STORM MANHOLE
- S SAN SEWER MANHOLE
- GAS SIGN
- ⊗ WATER VALVE
- E UNDERGROUND ELECTRIC LINE
- G GAS LINE
- T UNDERGROUND TELEPHONE
- W(R) WATER LINE(RECORDED)
- 725 1' CONTOUR INTERVAL

UTILITY CONTACTS

WATER AND SEWER SERVICE
CITY OF LEE'S SUMMIT WATER UTILITIES
1200 SE HAMBLEN ROAD
LEE'S SUMMIT, MO 64081
816-969-1900

GAS SERVICE
SPIRE INC.
7500 E 35TH ST,
KANSAS CITY, MO 64129
816-756-5252

ELECTRICAL SERVICE
EVERGY
1200 MAIN ST,
KANSAS CITY, MO 64105
888-471-5275

TELECOMMUNICATION
AT&T
2121 E. 63RD STREET
KANSAS CITY, MO 64130
800-403-3302

SPECTRUM
550 WESTPORT ROAD
KANSAS CITY, MO 64111
866-874-2389

UTILITY STATEMENT:
THE UNDERGROUND UTILITIES SHOWN HEREON ARE FROM FIELD SURVEY INFORMATION OF ONE-CALL LOCATED UTILITIES, FIELD SURVEY INFORMATION OF ABOVE GROUND OBSERVABLE EVIDENCE, AND/OR THE SCALING AND PLOTTING OF EXISTING UTILITY MAPS AND DRAWINGS AVAILABLE TO THE SURVEYOR AT THE TIME OF SURVEY. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. FURTHERMORE, THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES BY EXCAVATION UNLESS OTHERWISE NOTED ON THIS SURVEY.

SAFETY NOTICE TO CONTRACTOR:
IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

WARRANTY / DISCLAIMER:
THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER KAW VALLEY ENGINEERING, INC NOR ITS PERSONNEL CAN OR DO WARRANTY THESE DESIGNS OR PLANS AS CONSTRUCTED, EXCEPT IN THE SPECIFIC CASES WHERE KAW VALLEY ENGINEERING PERSONNEL INSPECT AND CONTROL THE PHYSICAL CONSTRUCTION ON A CONTEMPORARY BASIS AT THE SITE.

CAUTION – NOTICE TO CONTRACTOR:
THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICTS PRIOR TO ANY CONSTRUCTION.

REV	DATE	DESCRIPTION	DSN	DWN	CHK
2	05/06/22	PER OWNER COMMENTS	MTA	JNG	MTA
1	04/08/22	CHECK SET	MTA	JNG	
0	03/02/22	INITIAL ISSUE	ARM	JNG	

STATE OF MISSOURI
MARTIN T. ARLING
NUMBER PE-2009002955
PROFESSIONAL ENGINEER
03/02/22

MARTIN T. ARLING
ENGINEER
MO # 2009002955

8040 N. OAK TRAFFICWAY
KANSAS CITY, MISSOURI 64118
PH. (816) 468-5858 | FAX (816) 468-6651
kc@kveng.com | www.kveng.com

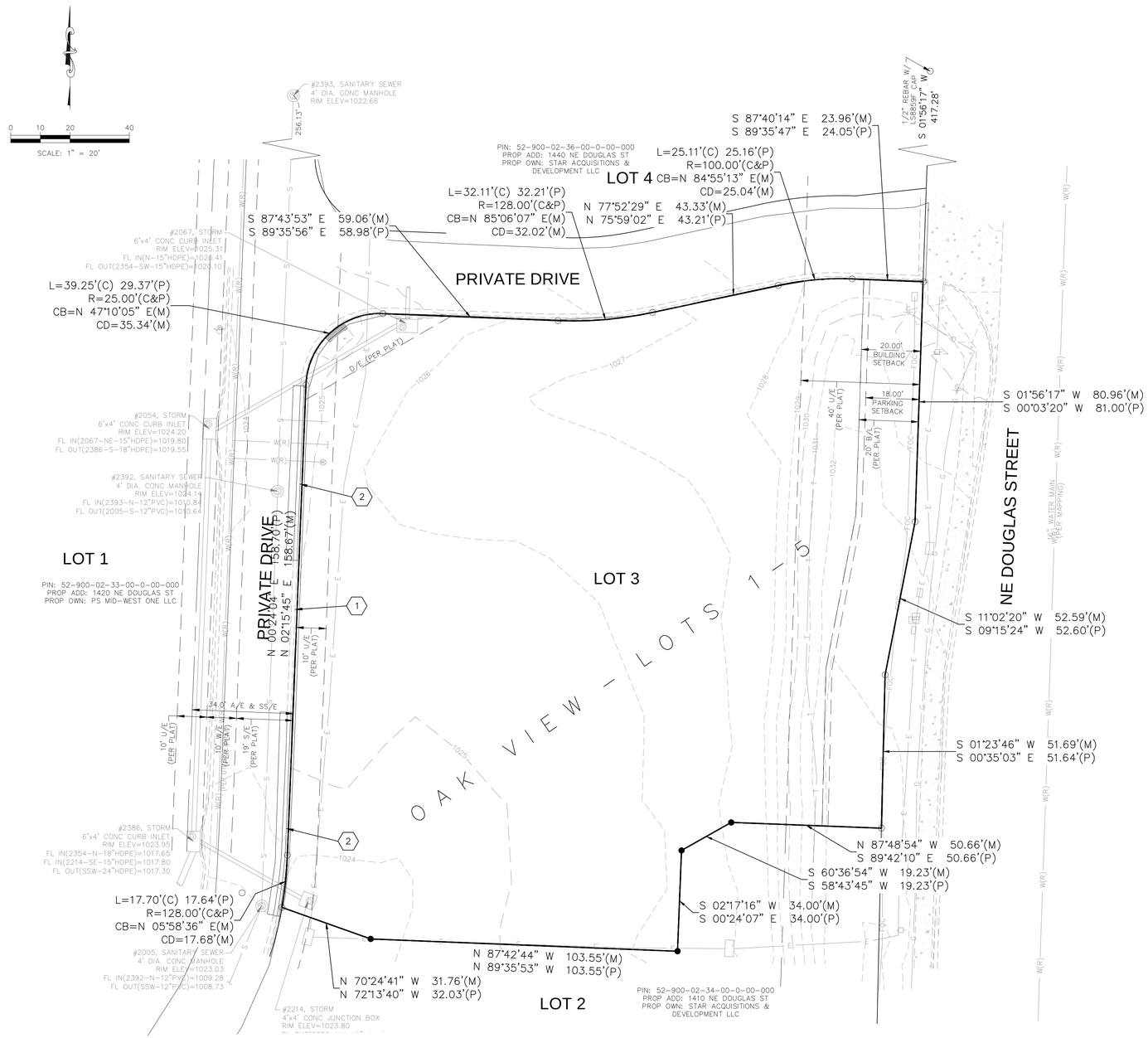
KAW VALLEY ENGINEERING

KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/23

7 BREW
1410 N.E. DOUGLAS STREET
LEE'S SUMMIT, MO. 64086

FINAL DEVELOPMENT PLAN
COVER SHEET

PROJ. NO. B21D4397
DESIGNER MTA | DRAWN BY JNG
CFN 4397DEMO
SHEET FDP | REV 2



LEGEND

- MONUMENT FOUND, ORIGIN UNDETERMINED UNLESS OTHERWISE NOTED
- 1/2" x 24" REBAR W/LS 214F CAP SET
- (P) PLATTED
- (M) MEASURED
- ELECTRIC METER
- ELECTRIC TRANSFORMER
- FIRE HYDRANT
- STORM MANHOLE
- SAN SEWER MANHOLE
- GAS SIGN
- WATER VALVE
- E — UNDERGROUND ELECTRIC LINE
- G — GAS LINE
- T — UNDERGROUND TELEPHONE
- W(R) — WATER LINE(RECORDED)
- 725 — 1' CONTOUR INTERVAL

NOTES:

1 TO REMAIN

2 REMOVE CURB

DEMOLITION NOTES:

1. CONTRACTOR SHALL VERIFY SITE CONDITIONS PRIOR TO BIDDING. CONTRACTOR SHALL REMOVE AS SHOWN, IN ACCORDANCE WITH THE SPECIFICATIONS AND THE CITY AND STATE REGULATIONS.
2. ALL STRUCTURES AND MATERIAL WITHIN DEMOLITION LIMITS TO BE REMOVED AND DISPOSED OF IN CONFORMANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.
3. ALL HAZARDOUS ASBESTOS AND OTHER HAZARDOUS MATERIALS MUST BE IDENTIFIED AND REMOVED PRIOR TO ANY BUILDING DEMOLITION, IN STRICT CONFORMANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.
4. DRIVES, PAVING AND OTHER STRUCTURES ON STREET OR HIGHWAY RIGHT-OF-WAY SHALL BE REMOVED AS NECESSARY TO CONSTRUCT IMPROVEMENTS SHOWN ON THESE PLANS. REMOVAL AND DISPOSAL SHALL BE IN CONFORMANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.
5. ALL PAVING WITHIN PROPERTY TO BE REMOVED AND DISPOSED OF IN CONFORMANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

FLOOD STATEMENT:

THE ACCURACY OF ANY FLOOD HAZARD DATA SHOWN HEREON IS SUBJECT TO MAP SCALE UNCERTAINTY AND TO ANY OTHER UNCERTAINTY IN LOCATION OR ELEVATION ON THE REFERENCED FLOOD INSURANCE RATE MAP. THE SURVEYED PROPERTY LIES WITHIN FLOOD HAZARD ZONE "X, NON-SHADED" AS SAID PROPERTY PLOTS BY SCALE ON THE FLOOD INSURANCE RATE MAP CITY OF LEE'S SUMMIT, COMMUNITY PANEL NO. 29095C0409G, EFFECTIVE ON 01/20/2017.

DATUM BENCHMARK:

DATUM IS U.S. SURVEY FEET AND REFERS TO NAVD88 DATUM DERIVED FROM CONNECTIONS TO NATIONAL CORS NETWORK VIA GPS STATIC SESSIONS ON PROJECT CONTROL PROCESSED WITH THE NATIONAL GEODETIC SURVEY'S OPUS PROJECTS UTILITY. ORTHOMETRIC HEIGHT WAS CALCULATED USING THE GEOID12B MODEL.

BENCHMARKS:

JA-43: 3" ALUM DISK STAMPED JA-43 ON THE WEST SIDE OF DOUGLAS AND 44'± SOUTH OF THE S.E. BOUNDARY CORNER OF THE SURVEY. ELEV= 1034.77

BS#60: FOUND "SQUARE" CUT ON THE BACK OF CURB ON THE SOUTH SIDE OF A PRIVATE DRIVE ON THE NORTH SIDE OF LOT 3 AND LOCATED NEAR THE NORTHEAST BOUNDARY CORNER, MARKED BY OTHERS 1028.00. ELEV= 1028.03

UTILITY STATEMENT:

THE UNDERGROUND UTILITIES SHOWN HEREON ARE FROM FIELD SURVEY INFORMATION OF ONE-CALL LOCATED UTILITIES, FIELD SURVEY INFORMATION OF ABOVE GROUND OBSERVABLE EVIDENCE, AND/OR THE SCALING AND PLOTTING OF EXISTING UTILITY MAPS AND DRAWINGS AVAILABLE TO THE SURVEYOR AT THE TIME OF SURVEY. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. FURTHERMORE, THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES BY EXCAVATION UNLESS OTHERWISE NOTED ON THIS SURVEY.

SAFETY NOTICE TO CONTRACTOR:

IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

WARRANTY / DISCLAIMER:

THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER KAW VALLEY ENGINEERING, INC NOR ITS PERSONNEL CAN OR DO WARRANTY THESE DESIGNS OR PLANS AS CONSTRUCTED, EXCEPT IN THE SPECIFIC CASES WHERE KAW VALLEY ENGINEERING PERSONNEL INSPECT AND CONTROL THE PHYSICAL CONSTRUCTION ON A CONTEMPORARY BASIS AT THE SITE.

CAUTION – NOTICE TO CONTRACTOR:

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICTS PRIOR TO ANY CONSTRUCTION.

REV	DATE	DESCRIPTION	DSN	DWN	CHK
2	05/06/22	PER OWNER COMMENTS	MTA	JNG	MTA
1	04/08/22	CHECK SET	MTA	JNG	
0	03/02/22	INITIAL ISSUE	ARM	JNG	

STATE OF MISSOURI
MARTIN T. ARLING
NUMBER PE-2009002955
PROFESSIONAL ENGINEER

MARTIN T. ARLING
ENGINEER
MO # 2009002955

KAW VALLEY ENGINEERING
8040 N. OAK TRAFFICWAY
KANSAS CITY, MISSOURI 64118
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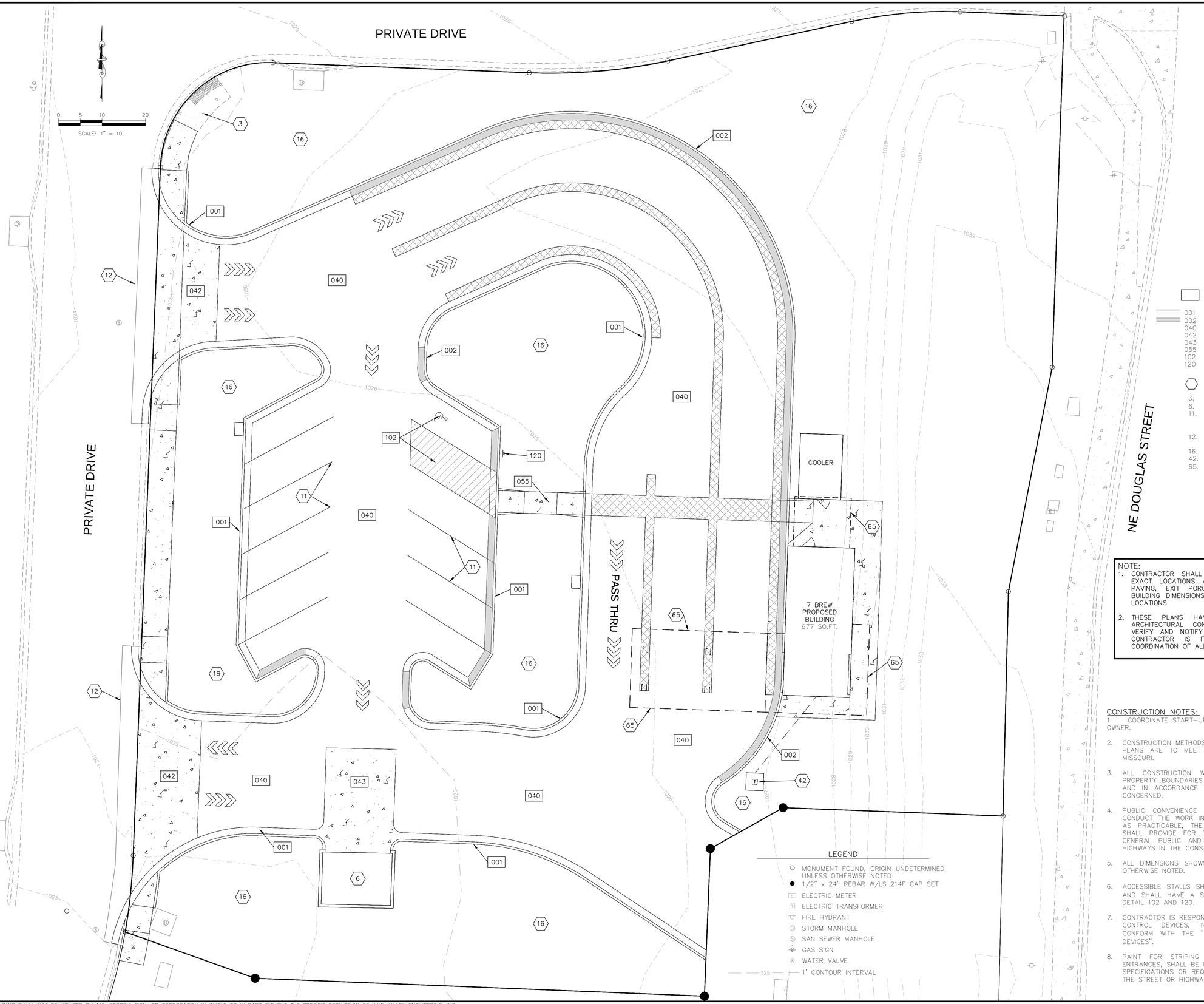
kcb@kveng.com | www.kveng.com

KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 2008042. EXPIRES 12/31/23

7 BREW
1410 N.E. DOUGLAS STREET
LEE'S SUMMIT, MO. 64086

FINAL DEVELOPMENT PLAN
EXISTING SITE CONDITIONS / DEMOLITION PLAN

PROJ. NO.	B21D4397
DESIGNER	MTA
DRAWN BY	JNG
CFN	4397DEMO
SHEET	C100
REV	2



NOTE:
1. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRANCE, SLOPED PAVING, EXIT PORCHES, RAMPS, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
2. THESE PLANS HAVE NOT BEEN VERIFIED WITH FINAL ARCHITECTURAL CONTRACT DRAWINGS. CONTRACTOR SHALL VERIFY AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES. CONTRACTOR IS FULLY RESPONSIBLE FOR REVIEW AND COORDINATION OF ALL DRAWINGS AND CONTRACTOR DOCUMENTS.

CONSTRUCTION NOTES:
1. COORDINATE START-UP AND ALL CONSTRUCTION ACTIVITIES WITH OWNER.
2. CONSTRUCTION METHODS AND MATERIALS NOT SPECIFIED IN THESE PLANS ARE TO MEET OR EXCEED THE CITY OF LEE SUMMIT, MISSOURI.
3. ALL CONSTRUCTION WORK AND UTILITY WORK OUTSIDE OF PROPERTY BOUNDARIES SHALL BE PERFORMED IN COOPERATION, AND IN ACCORDANCE WITH, REGULATIONS OF THE AUTHORITIES CONCERNED.
4. PUBLIC CONVENIENCE AND SAFETY: THE CONTRACTOR SHALL CONDUCT THE WORK IN A MANNER THAT WILL ENSURE, AS FAR AS PRACTICABLE, THE LEAST OBSTRUCTION TO TRAFFIC, AND SHALL PROVIDE FOR THE CONVENIENCE AND SAFETY OF THE GENERAL PUBLIC AND RESIDENTS ALONG, AND ADJACENT TO, HIGHWAYS IN THE CONSTRUCTION AREA.
5. ALL DIMENSIONS SHOWN ARE TO THE BACK OF CURB UNLESS OTHERWISE NOTED.
6. ACCESSIBLE STALLS SHOWN WITH A "V" SHALL BE 16'-0" MIN. AND SHALL HAVE A SIGN DESIGNATING "VAN-ACCESSIBLE". SEE DETAIL 102 AND 120.
7. CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL. ALL TRAFFIC CONTROL DEVICES, INSTALLATION, AND OPERATIONS, SHALL CONFORM WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
8. PAINT FOR STRIPING ON PUBLIC STREETS, HIGHWAYS, AND ENTRANCES, SHALL BE REFLECTORIZED PAINT CONFORMING TO THE SPECIFICATIONS OR REQUIREMENTS OF THE AUTHORITY GOVERNING THE STREET OR HIGHWAY.

REV	DATE	DESCRIPTION	DSN	DWN	CHK
2	05/06/22	PER OWNER COMMENTS	MTA	JNG	
1	04/08/22	CHECK SET	MTA	JNG	
0	03/02/22	INITIAL ISSUE	ARM	JNG	MTA

STATE OF MISSOURI
MARTIN T. ARLING
NUMBER PE-2009002955
PROFESSIONAL ENGINEER
05/10/22

MARTIN T. ARLING
ENGINEER
MO # 2009002955

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8040 N. OAK TRAFFICWAY
KANSAS CITY, MISSOURI 64118
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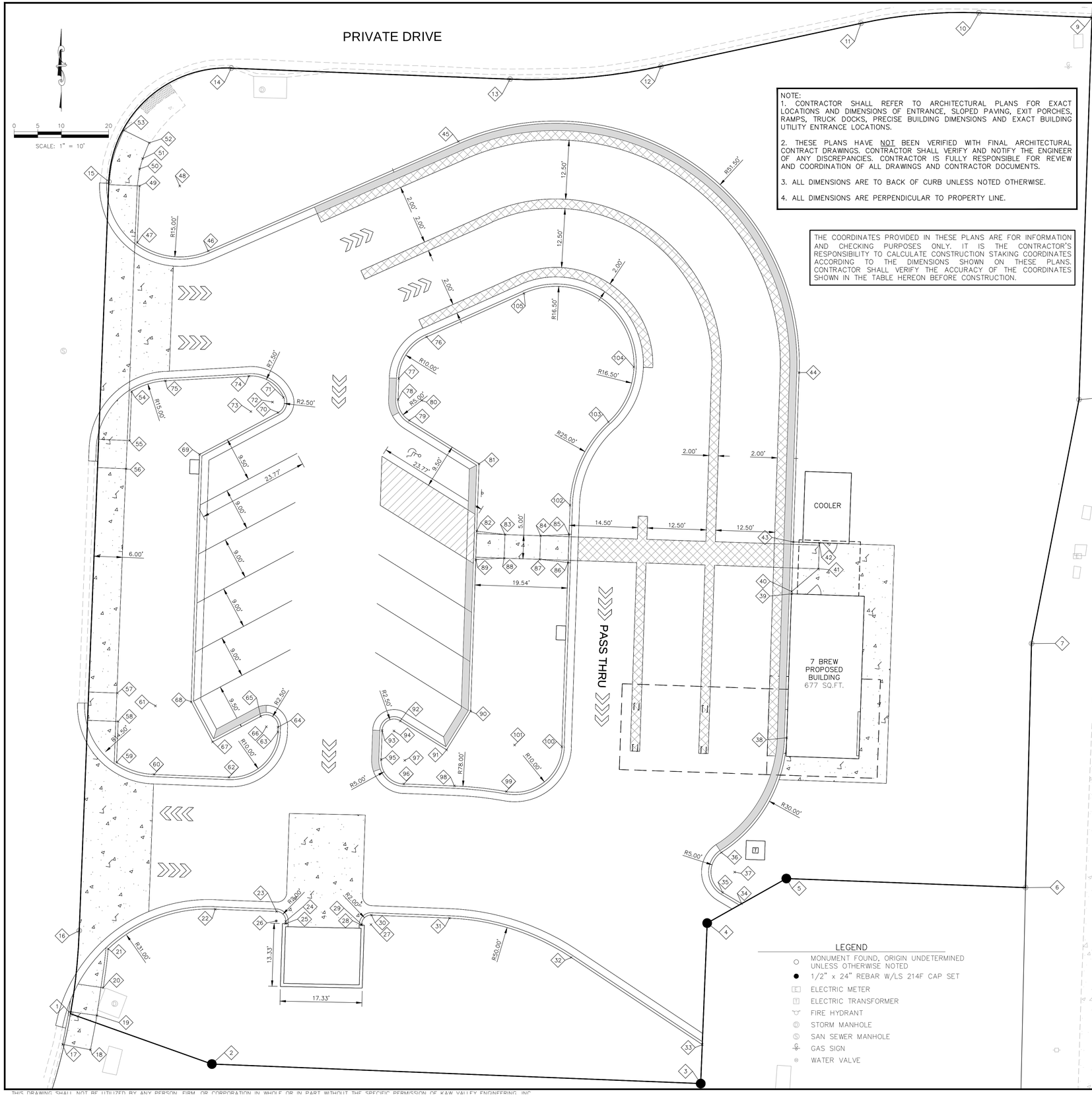
7 BREW
1410 N.E. DOUGLAS STREET
LEE'S SUMMIT, MO. 64086

FINAL DEVELOPMENT PLAN
SITE PLAN

PROJ. NO.	B21D4397
DESIGNER	MTA
DRAWN BY	JNG
CFN	4397SP
SHEET	C200
REV	2



COORDINATE TABLE			
	NORTHING	EASTING	DESCRIPTION
1	1008966.45	2823007.09	PL
2	1008955.80	2823037.01	PL
3	1008951.67	2823140.48	PL
4	1008985.64	2823141.83	PL
5	1008995.08	2823158.59	PL
6	1008993.15	2823209.21	PL
7	1009044.83	2823210.47	PL
8	1009096.44	2823220.54	PL
9	1009177.36	2823223.28	PL
10	1009178.30	2823199.35	PL
11	1009176.11	2823174.40	PL
12	1009167.01	2823132.03	PL
13	1009164.28	2823100.12	PL
14	1009166.62	2823041.11	PL
15	1009142.59	2823015.20	PL
16	1008984.04	2823008.93	PL
17	1008959.98	2823005.41	SW
18	1008958.84	2823011.30	SW
19	1008966.09	2823012.66	SW
20	1008971.96	2823014.03	SW
21	1008980.19	2823015.08	SW
22	1008988.58	2823037.71	BC
23	1008988.09	2823050.70	BC
24	1008986.02	2823052.63	BC
25	1008985.53	2823052.62	BC
26	1008986.09	2823050.63	RP
27	1008985.33	2823070.69	RP
28	1008985.20	2823068.69	BC
29	1008985.37	2823068.69	BC
30	1008987.33	2823070.77	BC
31	1008986.70	2823087.29	BC
32	1008978.37	2823113.06	BC
33	1008959.93	2823140.81	BC
34	1008989.75	2823149.13	BC
35	1008992.15	2823145.10	BC
36	1009000.58	2823144.84	BC
37	1008996.44	2823147.65	
38	1009024.86	2823158.67	BC
39	1009055.33	2823159.70	BC
40	1009055.82	2823159.72	SW
41	1009060.63	2823165.38	SW
42	1009066.14	2823165.57	SW
43	1009066.32	2823160.07	SW
44	1009102.16	2823161.28	BC
45	1009151.08	2823089.17	BC
46	1009127.92	2823036.24	BC
47	1009129.67	2823021.21	BC
48	1009141.66	2823030.22	RP
49	1009141.68	2823021.72	SW
50	1009145.27	2823021.69	SW
51	1009147.47	2823022.34	SW
52	1009150.80	2823023.76	SW
53	1009153.47	2823018.38	SW
54	1009098.15	2823020.03	SW
55	1009087.78	2823019.60	SW
56	1009081.80	2823018.84	SW
57	1009034.34	2823017.01	SW
58	1009028.33	2823017.17	SW
59	1009019.65	2823016.84	SW
60	1009017.10	2823024.75	BC

COORDINATE TABLE			
	NORTHING	EASTING	DESCRIPTION
61	1009031.62	2823025.07	RP
62	1009016.49	2823040.61	BC
63	1009026.11	2823050.98	BC
64	1009027.11	2823051.02	BC
65	1009029.42	2823047.35	BC
66	1009027.21	2823048.53	RP
67	1009023.99	2823037.17	BC
68	1009032.49	2823032.63	BC
69	1009084.84	2823034.40	BC
70	1009093.71	2823051.03	BC
71	1009096.90	2823052.15	BC
72	1009095.91	2823049.85	RP
73	1009093.93	2823045.26	RP
74	1009101.42	2823044.84	BC
75	1009100.42	2823027.16	BC
76	1009109.72	2823082.46	BC
77	1009100.93	2823076.56	BC
78	1009096.47	2823076.41	BC
79	1009092.06	2823078.76	BC
80	1009096.30	2823081.41	RP
81	1009082.84	2823093.55	BC
82	1009068.58	2823093.07	SW
83	1009067.88	2823099.04	SW
84	1009067.63	2823106.58	SW
85	1009067.89	2823112.60	SW
86	1009061.97	2823112.40	SW
87	1009062.63	2823106.42	SW
88	1009062.89	2823098.88	SW
89	1009062.59	2823092.86	SW
90	1009030.49	2823091.78	BC
91	1009022.31	2823086.68	BC
92	1009028.43	2823076.86	BC
93	1009026.40	2823073.04	BC
94	1009026.31	2823075.54	RP
95	1009020.25	2823072.83	BC
96	1009015.09	2823077.64	BC
97	1009020.08	2823077.83	RP
98	1009014.68	2823088.35	BC
99	1009013.48	2823099.30	BC
100	1009022.98	2823111.08	BC
101	1009023.32	2823101.08	RP
102	1009074.10	2823112.81	BC
103	1009091.72	2823120.94	BC
104	1009103.34	2823126.30	BC
105	1009118.96	2823103.06	BC

COORDINATE TABLE LEGEND

BC = BACK OF CURB
SW = EDGE OF SIDEWALK
RP = RADIUS POINT
PL = PROPERTY LINE

REV	DATE	DESCRIPTION	DSN	DWN	CHK
2	05/06/22	PER OWNER COMMENTS	MTA	JNG	MTA
1	04/08/22	CHECK SET	MTA	JNG	
0	03/02/22	INITIAL ISSUE	ARM	JNG	

STATE OF MISSOURI
MARTIN T. ARLING
NUMBER PE-2009002955
PROFESSIONAL ENGINEER
05/06/22

MARTIN T. ARLING
ENGINEER
MO # 2009002955

KAW VALLEY ENGINEERING
8040 N. OAK TRAFFICWAY
KANSAS CITY, MISSOURI 64118
PH. (816) 468-5858 | FAX (816) 468-6651
kcdkv.eng.com | www.kveng.com

KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES IN THE STATE OF MISSOURI. STATE CERTIFICATE OF AUTHORITY # 2006242. EXPIRES 12/31/23

7 BREW
1410 N.E. DOUGLAS STREET
LEE'S SUMMIT, MO. 64086

FINAL DEVELOPMENT PLAN
DIMENSION PLAN

PROJ. NO.	B21D4397
DESIGNER	DRAWN BY
MTA	JNG
CFN	4397DIM
SHEET	REV
C300	2

SCALE: 1" = 10'

IF DISCREPANCIES EXIST BETWEEN THE GRADING NOTES AND THE RECOMMENDATIONS OUTLINED IN THE PROJECT GEOTECHNICAL REPORT, THE RECOMMENDATIONS OUTLINED IN THE GEOTECHNICAL REPORT SHALL GOVERN.

NOTE:
1. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRANCE, SLOPED PAVING, EXIT PORCHES, RAMPS, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
2. THESE PLANS HAVE NOT BEEN VERIFIED WITH FINAL ARCHITECTURAL CONTRACT DRAWINGS. CONTRACTOR SHALL VERIFY AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES. CONTRACTOR IS FULLY RESPONSIBLE FOR REVIEW AND COORDINATION OF ALL DRAWINGS AND CONTRACT DOCUMENTS.

THE COORDINATES PROVIDED ON THIS PLAN ARE FOR INFORMATION AND CHECKING PURPOSES ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CALCULATE CONSTRUCTION STAKING COORDINATES ACCORDING TO THE DIMENSIONS SHOWN ON THESE PLANS. CONTRACTOR SHALL VERIFY THE ACCURACY OF THE COORDINATES SHOWN HEREON BEFORE CONSTRUCTION.

UTILITY STATEMENT:
THE UNDERGROUND UTILITIES SHOWN HEREON ARE FROM FIELD SURVEY INFORMATION OF ONE-CALL LOCATED UTILITIES, FIELD SURVEY INFORMATION OF ABOVE GROUND OBSERVABLE EVIDENCE, AND/OR THE SCALING AND PLOTTING OF EXISTING UTILITY MAPS AND DRAWINGS AVAILABLE TO THE SURVEYOR AT THE TIME OF SURVEY. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. FURTHERMORE, THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES BY EXCAVATION UNLESS OTHERWISE NOTED ON THIS SURVEY.

SAFETY NOTICE TO CONTRACTOR:
IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

WARRANTY / DISCLAIMER:
THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER KAW VALLEY ENGINEERING, INC NOR ITS PERSONNEL CAN OR DO WARRANTY THESE DESIGNS OR PLANS AS CONSTRUCTED, EXCEPT IN THE SPECIFIC CASES WHERE KAW VALLEY ENGINEERING PERSONNEL INSPECT AND CONTROL THE PHYSICAL CONSTRUCTION ON A

CAUTION – NOTICE TO CONTRACTOR:
THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICTS PRIOR TO ANY CONSTRUCTION.

Know what's **below.** **Call** before you dig.

LEGEND

(ME)	MATCH EXISTING
82.92	SPOT ELEVATION (ADD 1000), TOP OF PAVEMENT
83.60 / 83.10	TOP OF CURB (ADD 1000) FLOWLINE OF CURB (ADD 1000)
	FLOW DIRECTION
1000	FINISHED 1' CONTOUR INTERVALS
290	EXISTING 1' CONTOUR INTERVALS

REV	DATE	DESCRIPTION	DSN	DWN	CHK
2	05/06/22	PER OWNER COMMENTS	MTA	JNG	
1	04/08/22	CHECK SET	MTA	JNG	
0	03/02/22	INITIAL ISSUE	ARM	JNG	MTA

STATE OF MISSOURI
MARTIN T. ARLING
NUMBER PE-2009002955
PROFESSIONAL ENGINEER

MARTIN T. ARLING
ENGINEER
MO # 2009002955

KAW VALLEY ENGINEERING
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kcdk.kveng.com | www.kveng.com
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7 BREW
1410 N.E. DOUGLAS STREET
LEE'S SUMMIT, MO. 64086

FINAL DEVELOPMENT PLAN
GRADING PLAN

PROJ. NO.	B21D4397
DESIGNER	MTA
DRAWN BY	JNG
CFN	4397GP
SHEET	C400
REV	2

GRADING NOTES:

1. THE CONSTRUCTION AREA SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL AND ORGANIC MATTER FROM ALL AREAS TO BE OCCUPIED BY BUILDING AND PAVING. TOPSOIL FOR REPLACEMENT ON SLOPES MAY BE STOCKPILED ON SITE. EXCESS TOPSOIL MAY BE WASTED IN FILL SLOPES PROVIDED THAT NO TOPSOIL WILL BE WASTED WITHIN 10 FEET OF THE EDGE OF THE BUILDING OR PARKING AREA. BURNING OF TIMBER WILL NOT BE PERMITTED UNLESS APPROVAL IS OBTAINED FROM GOVERNING OFFICIALS. STRIPPING EXISTING TOPSOIL AND ORGANIC MATTER SHALL BE TO A MINIMUM DEPTH OF 6 INCHES.

2. AREAS TO RECEIVE FILL SHALL BE SCARIFIED AND THE TOP 8-INCH DEPTH COMPACTED TO 95% STANDARD PROCTOR DENSITY. ANY UNSUITABLE AREAS SHALL BE UNDERCUT AND REPLACED WITH SUITABLE MATERIAL BEFORE ANY FILL MATERIAL CAN BE APPLIED.

3. OFF-SITE FILL MATERIAL SHALL HAVE A PLASTICITY INDEX OF 25 OR LESS, A LIQUID LIMIT OF 45 OR LESS AND CONTAIN NO ROCK LARGER THAN FOUR INCHES. OFF-SITE FILL MATERIAL SHALL BE APPROVED BY THE OWNER PRIOR TO BRINGING ON SITE.

4. EARTHWORK UNDER THE BUILDING SHALL COMPLY WITH THE PROJECT ARCHITECTURAL PLANS. OTHER FILL MATERIAL SHALL BE MADE IN LIFTS NOT TO EXCEED EIGHT INCHES DEPTH COMPACTED TO 95% STANDARD PROCTOR DENSITY. FILL MATERIAL MAY INCLUDE ROCK FROM ON-SITE EXCAVATION IF CAREFULLY PLACED SO THAT LARGE STONES ARE WELL DISTRIBUTED AND VOIDS ARE COMPLETELY FILLED WITH SMALLER STONES, EARTH, SAND OR GRAVEL TO FURNISH A SOLID EMBANKMENT. NO ROCK LARGER THAN THREE INCHES IN ANY DIMENSION NOR ANY SHALE SHALL BE PLACED IN THE TOP 12 INCHES OF EMBANKMENT.

5. AREAS THAT ARE TO BE CUT TO SUBGRADE LEVELS SHALL BE PROOF ROLLED WITH A MODERATELY HEAVY LOADED DUMP TRUCK OR SIMILAR APPROVED CONSTRUCTION EQUIPMENT TO DETECT UNSUITABLE SOIL CONDITIONS.

6. IN ALL AREAS OF EXCAVATION, IF UNSUITABLE SOIL CONDITIONS ARE ENCOUNTERED, A QUALIFIED GEOTECHNICAL ENGINEER SHALL RECOMMEND TO THE OWNER THE METHODS OF UNDERCUTTING AND REPLACEMENT OF PROPERLY COMPACTED, APPROVED FILL MATERIAL. ALL PROOFROLLING AND UNDERCUTTING SHOULD BE PERFORMED DURING A PERIOD OF DRY WEATHER.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF DUST AND DIRT RISING AND SCATTERING IN THE AIR DURING CONSTRUCTION AND SHALL PROVIDE WATER SPRINKLING OR OTHER SUITABLE METHODS OF CONTROL. THE CONTRACTOR SHALL COMPLY WITH ALL GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION.

8. ALL SLOPES ARE TO BE 3:1 OR FLATTER UNLESS OTHERWISE INDICATED.

9. ALL SLOPES EXCEEDING 3:1 SHALL BE PROTECTED BY RIP RAP, CONCRETE PAVING, OR OTHER METHODS INDICATED ON THESE PLANS, THAT WILL PREVENT EROSION AND PLACED SUCH THAT THE SURFACE IS FLUSH WITH SURROUNDING GROUND AND SHAPED TO CHANNEL WATER IN DIRECTIONS INDICATED.

10. ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH AND FOUR INCHES OF TOPSOIL APPLIED. IF ADEQUATE TOPSOIL IS NOT AVAILABLE ON-SITE, THE CONTRACTOR SHALL PROVIDE TOPSOIL, APPROVED BY THE OWNER, AS NEEDED. THE AREA SHALL THEN BE SEEDED, FERTILIZED, MULCHED, WATERED AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED IN ALL AREAS. ANY AREAS DISTURBED FOR ANY REASON SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER PRIOR TO FINAL ACCEPTANCE OF THE PROJECT.

11. CONTRACTOR SHALL USE SILT FENCE, BALES OF HAY OR OTHER MEANS OF CONTROLLING EROSION ALONG THE EDGE OF THE PROPERTY OR OTHER BOTTOM OF SLOPE LOCATIONS.

12. CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS.

13. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT.

14. IT IS NOT THE DUTY OF THE ENGINEER OR THE OWNER TO REVIEW THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES, IN, ON OR NEAR THE CONSTRUCTION SITE AT ANY TIME DURING CONSTRUCTION.

15. HANDICAP STALLS SHALL MEET ADA REQUIREMENTS AND SHALL NOT EXCEED 2% SLOPE IN ANY DIRECTION AT THE BUILDING ENTRY AND ACCESSIBLE PARKING STALLS. SLOPES EXCEEDING 2.0% WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

16. PIPE LENGTHS ARE CENTER TO CENTER OF STRUCTURE OR TO END OF END SECTIONS.

UTILITY STATEMENT:

THE UNDERGROUND UTILITIES SHOWN HEREON ARE FROM FIELD SURVEY INFORMATION OF ONE-CALL LOCATED UTILITIES, FIELD SURVEY INFORMATION OF ABOVE GROUND OBSERVABLE EVIDENCE, AND/OR THE SCALING AND PLOTTING OF EXISTING UTILITY MAPS AND DRAWINGS AVAILABLE TO THE SURVEYOR AT THE TIME OF SURVEY. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. FURTHERMORE, THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES BY EXCAVATION UNLESS OTHERWISE NOTED ON THIS SURVEY.

SAFETY NOTICE TO CONTRACTOR:

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WARRANTY / DISCLAIMER:

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THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICTS PRIOR TO ANY CONSTRUCTION.

REV	DATE	DESCRIPTION	DSN	DWN	CHK
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1	04/08/22	CHECK SET	MTA	JNG	
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STATE OF MISSOURI
MARTIN T. ARLING
NUMBER PE-2009002955
PROFESSIONAL ENGINEER
05/17/22

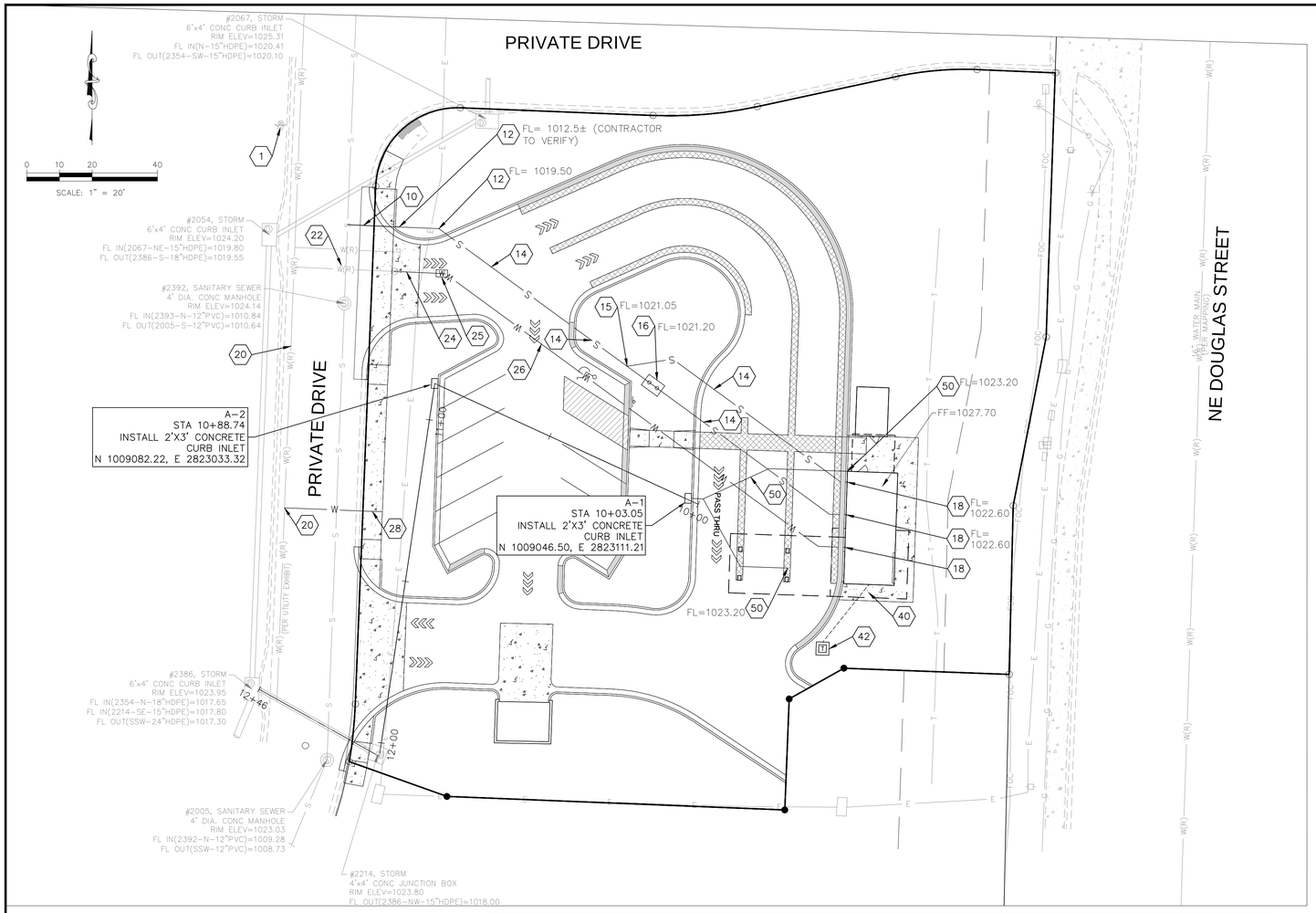
MARTIN T. ARLING
ENGINEER
MO # 2009002955

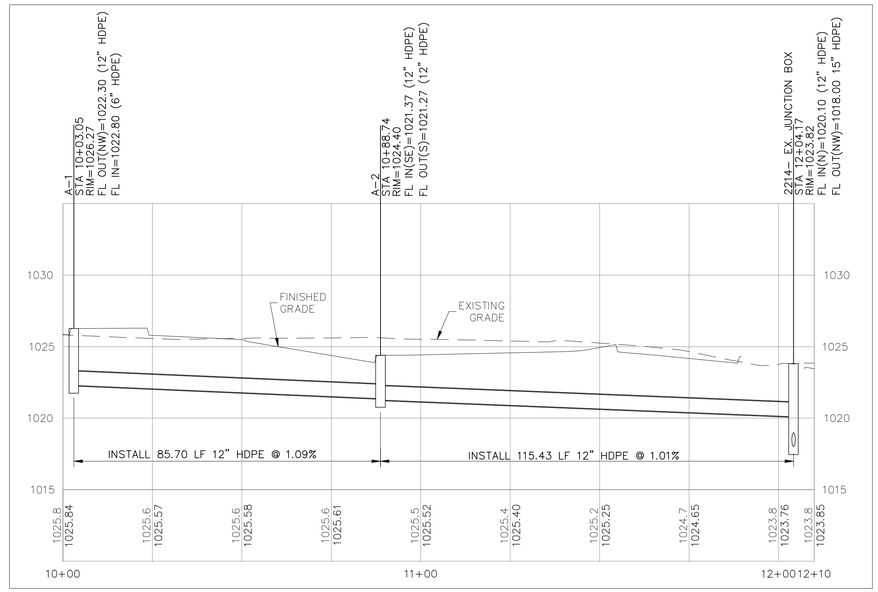
8040 N. OAK TRAFFICWAY
KANSAS CITY, MISSOURI 64118
PH. (816) 468-5858 | FAX (816) 468-6651
kc@kveng.com | www.kveng.com
KAW VALLEY ENGINEERING
KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000822.
EXPIRES 12/31/23

7 BREW
1410 N.E. DOUGLAS STREET
LEE'S SUMMIT, MO. 64086

FINAL DEVELOPMENT PLAN
GRADING PLAN NOTES

PROJ. NO.	
B21D4397	
DESIGNER	DRAWN BY
MTA	JNG
CFN	
4397GP	
SHEET	REV
C401	2





STORM LINE
SCALE:
HOR: 1" = 20'
VER: 1"= 5'

NOTE: HDPE PIPE SHALL BE ADS N-12 OR APPROVED EQUAL

LEGEND

- ○ MONUMENT FOUND, ORIGIN UNDETERMINED UNLESS OTHERWISE NOTED
- ● 1/2" x 24" REBAR W/LS 214F CAP SET
- (P) PLATTED
- (M) MEASURED
- ELECTRIC METER
- ELECTRIC TRANSFORMER
- FIRE HYDRANT
- STORM MANHOLE
- SAN SEWER MANHOLE
- GAS SIGN
- WATER VALVE
- E — UNDERGROUND ELECTRIC LINE
- G — GAS LINE
- T — UNDERGROUND TELEPHONE
- W(R) — WATER LINE(RECORDED)
- 725 — 1' CONTOUR INTERVAL

UTILITY NOTES:

1. THE CITY OF LEE'S SUMMIT SHALL BE GIVEN AT LEAST A 48-HOUR NOTICE PRIOR TO PERFORMING ANY INSPECTION, SITE DISTURBANCE OR UTILITY WORK.
2. CONSTRUCTION SHALL NOT START ON ANY PUBLIC WATER OR SANITARY SEWER SYSTEM UNTIL WRITTEN APPROVAL FROM THE OWNER, AND PERMITS FROM THE CITY HAVE BEEN RECEIVED.
3. ALL UTILITY AND STORM SEWER TRENCHES CONSTRUCTED UNDER AREAS THAT RECEIVE PAVING SHALL BE BACKFILLED TO 18 INCHES ABOVE THE TOP OF THE PIPE WITH CRUSHED STONE BASE MATERIAL PLACED ON EIGHT-INCH LIFTS, AND COMPACTED TO 95% MODIFIED PROCTOR DENSITY.
4. CONTRACTOR SHALL NOT OPEN, TURN OFF, INTERFERE WITH, OR ATTACH ANY PIPE OR HOSE TO OR TAP ANY WATER MAIN BELONGING TO THE CITY UNLESS DULY AUTHORIZED TO DO SO BY THE CITY. ANY ADVERSE CONSEQUENCE OF ANY SCHEDULED OR UNSCHEDULED DISRUPTIONS OF SERVICE TO THE PUBLIC ARE TO BE THE LIABILITY OF THE CONTRACTOR. KAW VALLEY ENGINEERING AND OWNER ARE TO BE HELD HARMLESS.
5. DISINFECTION AND PRESSURE TESTING OF WATER LINES SHALL BE PERFORMED AND PAID FOR BY THE CONTRACTOR UNDER SUPERVISION OF A REPRESENTATIVE OF THE CITY WATER DEPARTMENT. CONTRACTOR SHALL NOTIFY THE CITY OF LEE'S SUMMIT 24 HOURS MINIMUM, PRIOR TO ANY TESTING.
6. ALL CONSTRUCTION, INCLUDING SANITARY SEWER AND WATER INFRASTRUCTURE, SHALL BE IN ACCORDANCE WITH THE CITY IF LEE'S SUMMIT'S DESIGN AND CONSTRUCTION MANUAL.
7. LOCATIONS SHOWN FOR PROPOSED WATER LINES ARE APPROXIMATE. VARIATIONS MAY BE MADE, WITH APPROVAL OF THE ENGINEER, TO AVOID CONFLICTS.
8. CONTRACTOR TO INSTALL TRACING TAPE ALONG ALL NON-METALLIC WATER MAINS AND SERVICE LINES PER SECTION 6900 OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL.
9. CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICT AND POINTS OF CONNECTION PRIOR TO ANY CONSTRUCTION OF NEW UTILITIES.
10. WATER SERVICE LINES SHALL HAVE A MINIMUM COVER OF 48 INCHES AND A MAXIMUM COVER OF 60 INCHES UNLESS OBSTRUCTIONS REQUIRE DEEPER EXCAVATIONS. ALL VALVES ON MAINS AND FIRE HYDRANT LEADS SHALL BE WITH VALVE BOX ASSEMBLIES. THE SIZE OF VALVE BOX ASSEMBLY TO BE INSTALLED IS DETERMINED BY THE TYPE AND SIZE OF VALVE. VALVE BOX CAPS SHALL HAVE THE WORD "WATER".
11. A MINIMUM HORIZONTAL DISTANCE OF 10 FEET SHALL BE MAINTAINED BETWEEN PARALLEL WATER AND SANITARY SEWER LINES. WHEN IT IS NECESSARY FOR ANY WATER LINE TO CROSS A SANITARY SEWER LINE, THE SEWER LINE SHALL BE ENCASED IN CONCRETE OR CONSTRUCTED OF DUCTILE IRON PIPE OR PVC PIPE WITH NO JOINTS WITHIN 10 FEET OF THE CROSSING UNLESS THE WATER LINE IS AT LEAST 2 FEET CLEAR DISTANCE ABOVE THE SANITARY SEWER LINE.
12. ALL WATER SERVICE INSTALLATIONS INCLUDING BACKFLOW DEVICES ARE SUBJECT TO FIELD VERIFICATION AND APPROVAL BY THE WATER DEPARTMENT INSPECTOR.

NOTE:
1. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRANCE, SLOPED PAVING, EXIT PORCHES, RAMPS, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
2. THESE PLANS HAVE NOT BEEN VERIFIED WITH FINAL ARCHITECTURAL CONTRACT DRAWINGS. CONTRACTOR SHALL VERIFY AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES. CONTRACTOR IS FULLY RESPONSIBLE FOR REVIEW AND COORDINATION OF ALL DRAWINGS AND CONTRACTOR DOCUMENTS.

NOTES:

1 EXISTING FIRE HYDRANT
10 EXISTING 6" SANITARY SEWER SERVICE LINE (FROM RECORD INFORMATION)
12 CONNECT TO EXISTING 6" SANITARY SEWER SERVICE LINE WITH 4"X6" SDR 26 REDUCER (CONTRACTOR TO VERIFY FLOW LINE PRIOR TO SERVICE LINE INSTALLATION)
14 INSTALL 4" SDR 26 SANITARY SEWER SERVICE LINE @ 2% MIN. SLOPE
15. INSTALL 4"X4" WYE
16 INSTALL GREASE TRAP (SEE MEP PLANS FOR SIZE)
18 CONNECT TO BUILDING
20 EXISTING 8" WATER MAIN
22 EXISTING 1" WATER SERVICE LINE AND VALVE
24 CONNECT TO EXISTING WATER SERVICE
25 PROPOSED 1" WATER METER
26 INSTALL 1" TYPE K COPPER WATER SERVICE LINE PER SECTION 6900 OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL
28 PROPOSED 3/4 WATER SERVICE TAP FOR IRRIGATION PER SECTION 6900 OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL
29 INSTALL 3/4 TYPE K COPPER (SEE IRRIGATION PLANS FOR MORE INFORMATION)
40 PROPOSED SECONDARY ELECTRICAL CONDUITS. CONTRACTOR SHALL COORDINATE NUMBER AND SIZE OF CONDUITS WITH MEP
42 PROPOSED TRANSFORMER
50 INSTALL 6" HDPE ADS N-12 PIPE @ 1% MIN. SLOPE COORDINATE LOCATION WITH ROOF DRAINS. SEE ARCHITECTURAL PLAN FOR CONNECTION DETAIL

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STATE OF MISSOURI
MARTIN T. ARLING
NUMBER PE-2009002955
PROFESSIONAL ENGINEER

MARTIN T. ARLING
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KAW VALLEY ENGINEERING

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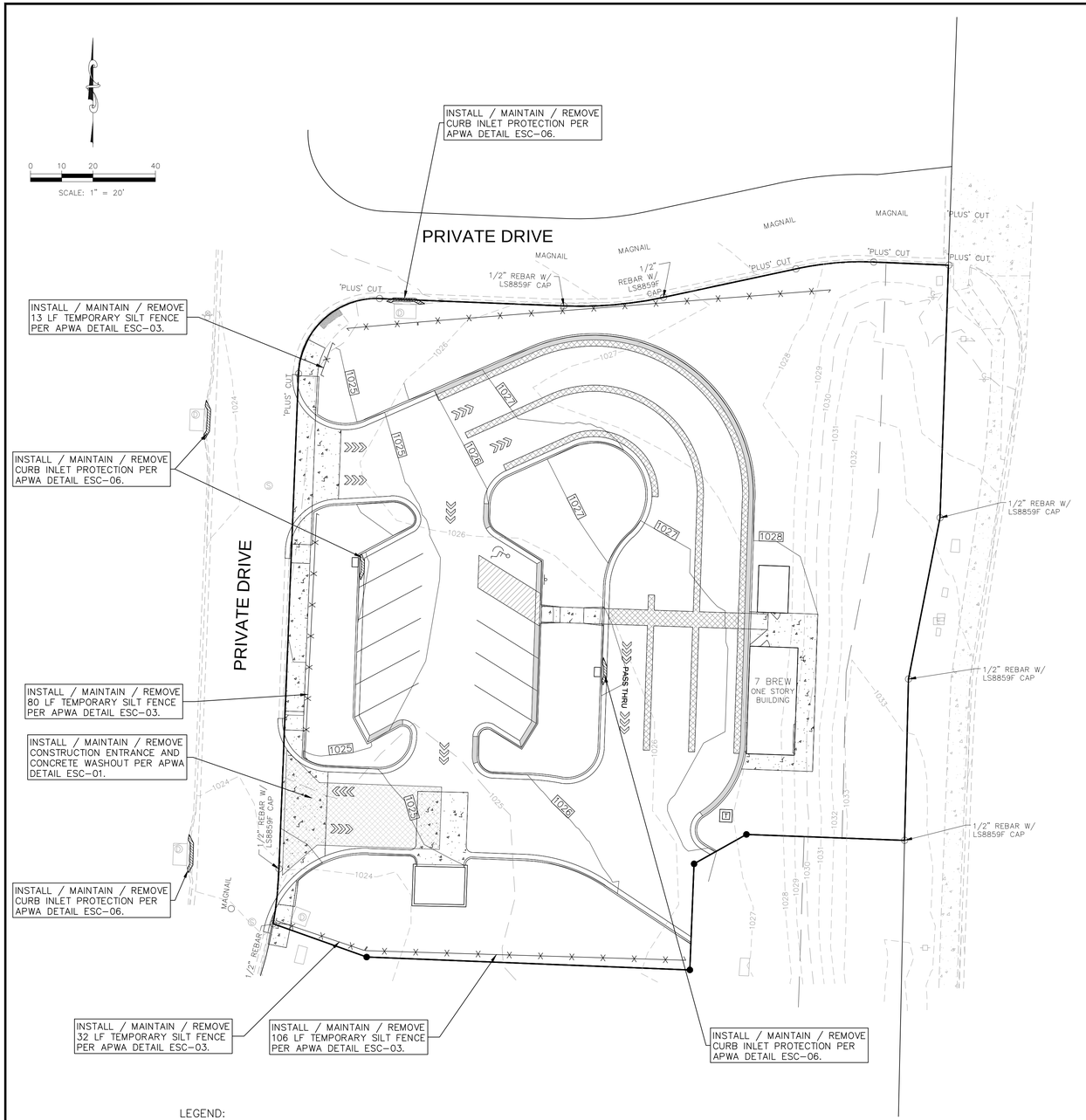
7 BREW
1410 N.E. DOUGLAS STREET
LEE'S SUMMIT, MO. 64086

FINAL DEVELOPMENT PLAN
UTILITY PLAN

PROJ. NO.	B21D4397
DESIGNER	DRAWN BY
MTA	JNG
CFN	4397UP
SHEET	REV
C500	2



EROSION CONTROL NOTES:

1. PROPERTY LINE IS LIMITS OF CONSTRUCTION EXCEPT AS SHOWN.
2. THE CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES AS SHOWN ON THE DRAWINGS PRIOR TO BEGINNING EARTHWORK OPERATIONS AND DURING APPROPRIATE PHASING AS CONSTRUCTION PROGRESSES.
3. THE CONTRACTOR SHALL MAINTAIN ALL SILT CONTROL MEASURES DURING CONSTRUCTION. BUILDERS AND OR DEVELOPER TO MAINTAIN EROSION CONTROL AND SILT CONTROL UPON COMPLETION OF THIS PROJECT.
4. ALL SILT SHALL REMAIN ON SITE AND SURROUNDING STREETS SHALL BE KEPT CLEAR OF ALL MUD AND DEBRIS.
5. SEDIMENTATION BARRIERS ARE TO BE INSTALLED AS SHOWN AND AT ANY ADDITIONAL AREAS OF CONCENTRATED FLOWS NOT SHOWN ON PLANS.
6. ACCUMULATED SEDIMENT SHALL BE REMOVED AND THE SEDIMENTATION BARRIERS MAINTAINED AS NEEDED TO PREVENT SEDIMENTATION BYPASS OF THE BARRIER.
7. SLOPES ARE TO BE LEFT IN A ROUGH CONDITION DURING GRADING.
8. CURB INLET SEDIMENTATION BARRIERS ARE TO BE INSTALLED AROUND INLETS AND WEIRS WHERE SEDIMENTATION IS A CONCERN. INLET BARRIERS SHALL BE FILTERS, OR SILT FENCE, OR STRAW BALES (PRIOR TO PAVING PLACEMENT). AFTER PAVEMENT IS IN PLACE, PROVIDE FILTER PROTECTION THAT CANNOT BE WASHED INTO INLETS OR WASHED AWAY. STRAW/HAY BALES WILL NOT BE ALLOWED ON CONCRETE OR ASPHALT PAVING.
9. SEDIMENT IS TO BE REMOVED FROM STORM WATER DRAINAGE SYSTEMS. ALL SEDIMENT CONTROL MEASURES TO BE INSPECTED AND REPAIRED IMMEDIATELY AND ON A REGULAR BASIS AFTER ALL RAIN STORMS.
10. THE CONTRACTOR SHALL CONTACT THE CITY'S DEVELOPMENT SERVICES ENGINEERING INSPECTION TO SCHEDULE A PRE-CONSTRUCTION MEETING WITH AN INSPECTOR PRIOR TO ANY LAND DISTURBANCE WORK AT (816) 969-1200.
11. CONTRACTOR IS RESPONSIBLE FOR INSTALLING ANY ADDITIONAL EROSION CONTROL AS HE/SHE DEEMS NECESSARY TO PREVENT SEDIMENT FROM ENTERING STORM DRAINS, STREETS, AND WATERWAYS.
12. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, TOOLS, EQUIPMENT AND LABOR AS NECESSARY TO INSTALL AND MAINTAIN ADEQUATE EROSION AND SILTATION CONTROLS REQUIRED TO PREVENT SOIL EROSION FROM LEAVING THE PROJECT SITE. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO ENSURE THAT METHODS UTILIZED ARE ADEQUATE AND COMPLY WITH REQUIREMENTS OF THE SPECIFICATIONS AND GOVERNMENTAL AGENCIES HAVING JURISDICTION OVER THE WORK.
13. TEMPORARY SEDIMENT FENCE EROSION CONTROL MEASURES TO REMAIN UNTIL ADEQUATE VEGETATION IS ESTABLISHED. ON PROJECTS THAT ARE NOT EXPECTING IMMEDIATE DEVELOPMENT (I.E.- INTERCEPTOR SEWERS, OFFSITE IMPROVEMENTS, ETC.) EROSION CONTROL MEASURES ARE TO BE REMOVED BY CONTRACTOR AS SOON AS ADEQUATE VEGETATION IS ESTABLISHED.
14. MUD, SILT, AND DEBRIS SHALL BE CLEANED UP AT THE CONCLUSION OF EACH WORKING DAY, OR AFTER EACH RAINFALL.
15. INSPECTION, MAINTENANCE AND REPAIR OF EROSION CONTROL DEVICES SHALL BE ON GOING THROUGHOUT THE LIFE OF INFRASTRUCTURE AND BUILDING CONSTRUCTION TO KEEP THE DEVICES IN OPERABLE CONDITION AT ALL TIMES. ADDITIONAL MEASURES SHALL BE INSTALLED AS REQUIRED BY ACTUAL FIELD CONDITIONS AND/OR GOVERNING INSPECTION AGENCIES. NOTE: ALTHOUGH EXTENSIVE EFFORT IS PUT INTO THE DESIGN OF THE EROSION CONTROL PLAN BY THE ENGINEER, IT IS THE RESPONSIBILITY OF THE CONTRACTOR/DEVELOPER TO ENSURE THAT ANY ADDITIONAL REQUIRED EROSION CONTROL MEASURES ARE INSTALLED AND MAINTAINED AT NO ADDITIONAL COST TO THE OWNER.
16. INSTALL AND MAINTAIN CONSTRUCTION ENTRANCE(S) AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING THE SITE AND AS SHOWN ON PLANS.
17. AT COMPLETION OF SITE GRADING AND OTHER RELATED CONSTRUCTION ACTIVITIES, ALL DISTURBED AREAS WITHIN THE PROJECT SITE SHALL BE SEEDED, SODDED, OR LANDSCAPED, FLAT LOTS WILL NOT REQUIRE SEEDING BUT ALL SLOPES, DISTURBED AREAS AND STREET RIGHT-OF-WAYS WILL BE SEEDED.
18. TOPSOIL IS TO BE PLACED IN AREAS UNSUITABLE FOR VEGETATIVE GROWTH.
19. STRIP TOPSOIL PRIOR TO EXCAVATION, STOCKPILE AND SPREAD ONTO DISKED SUBGRADE (4" MIN) A THICKNESS OF 4 INCHES.
20. THE CONTRACTOR SHALL HAVE THE RESPONSIBILITY FOR RESOLVING COMPLAINTS IN THE EVENT THAT COMPLAINTS OR DAMAGE CLAIMS ARE FILED DUE TO DAMAGES OCCURRING, ADJACENT TO OR DOWNSTREAM FROM PROPERTY, BY SEDIMENT RESULTING FROM EROSION ON THE PROJECT SITE.
21. GOOD HOUSEKEEPING PRACTICES SHALL BE MAINTAINED ON SITE TO KEEP SOLID WASTE FROM ENTRY INTO WATERS.
22. ALL FUELING FACILITIES PRESENT ON SITE SHALL ADHERE TO APPLICABLE FEDERAL AND STATE REQUIREMENTS CONCERNING UNDERGROUND STORAGE, ABOVE GROUND STORAGE AND DISPENSERS, INCLUDING SPILL PREVENTION, CONTROL AND COUNTER MEASURES.
23. MINIMAL WASHING OF CONCRETE EQUIPMENT ALLOWED (CHUTE, TOOLS, ETC.) AT A CONTRACTOR DEFINED LOCATION. CONCRETE WASHOUT OF THE DRUM IS NOT ALLOWED. ANY PIT/WASHOUT AREA NEEDS TO BE MAINTAINED IN A NON-DISCHARGING MANNER AND ANY WASTE RESIDUE WILL NEED TO BE CLEANED OUT AND REMOVED AT THE END OF PROJECT.
24. DEVELOPER IS RESPONSIBLE FOR HAVING LOT BUILDERS FOLLOW THE GUIDELINES OF "CONTROLLING EROSION WHEN BUILDING YOUR HOME" PROVIDED BY MISSOURI DEPARTMENT OF HEALTH AND ENVIRONMENT.
25. EROSION CONTROL STRAW/FIBER WATTLES TO BE INSTALLED 1'-0" BEHIND CURB & GUTTER UPON COMPLETION OF BACKFILL OF CURB IN ALL AREAS WHERE SLOPES FROM LOT DRAIN TOWARDS CURB. UPON COMPLETION OF FINAL GRADING THE TOES OF ALL EMBANKMENTS IN EXCESS OF TWO FEET IN HEIGHT WILL HAVE EROSION CONTROL SEDIMENT FENCE INSTALLED.
26. THE CITY OF LEE'S SUMMIT SHALL BE GIVEN AT LEAST A 48-HOUR NOTICE PRIOR TO PERFORMING ANY INSPECTION, SITE DISTURBANCE OR UTILITY WORK.

TEMPORARY SEEDING

TO PROVIDE PROMPT EROSION CONTROL ON PROJECT TEMPORARY SEEDING MAY BE REQUIRED WHICH WILL DEPEND ON THE CONTRACTORS WORK SCHEDULE. TEMPORARY SEEDING WILL BE REQUIRED IN THE FOLLOWING AREAS:
1. IN SLOPES AND AREAS OF CONCENTRATED FLOW WITHIN 28 DAYS OF ROUGH GRADING.
2. IN AREAS THAT REQUIRE SEEDING BUT IS NOT WITHIN THE SEASON FOR PERMANENT SEEDING AS PER THE TECHNICAL SPECIFICATIONS.
PLANT SELECTION – ANNUAL RYE GRASS, WHEAT OR OATS FOR TEMPORARY SEEDING
SEEDING – EVENLY APPLY SEED USING A CYCLONE SEEDER (BROADCAST), DRILL, CULTIPACKER SEEDER OR HYDROSEEDER. ANNUAL RYE GRASS SHOULD BE APPLIED AT A RATE OF 120 LBS/ACRE, WHEAT OR OATS SHOULD BE APPLIED AT A RATE OF 100 LBS/ACRE. BROADCAST SEEDING AND HYDROSEEDING ARE APPROPRIATE FOR STEEP SLOPES WHERE EQUIPMENT CANNOT BE DRIVEN. HAND BROADCASTING IS NOT RECOMMENDED BECAUSE OF THE DIFFICULTY IN ACHIEVING A UNIFORM DISTRIBUTION. SMALL GRAINS SHOULD BE PLANTED NO MORE THAN 1 INCH DEEP, AND GRASSES AND LEGUMES NO MORE THAN 1/2 INCH. BROADCAST SEED MUST BE COVERED BY RAKING OR CHAIN DRAGGING, AND THEN LIGHTLY FIRMED WITH A ROLLER OR CULTIPACKER. HYDROSEEDED MIXTURES SHOULD INCLUDE A WOOD FIBER (CELLULOSE) MULCH.
MULCHING – THE USE OF MULCH WILL HELP ENSURE ESTABLISHMENT UNDER NORMAL CONDITIONS AND IS ESSENTIAL TO SEEDING SUCCESS UNDER HARSH CONDITIONS SUCH AS SEEDING IN FALL OR WINTER COVER (WOOD FIBER MULCHES ARE NOT CONSIDERED ADEQUATE FOR THIS USE), SLOPES STEEPER THAN 3:1, EXCESSIVELY HOT OR DRY WEATHER, ADVERSE SOILS (SHALLOW, ROCKY, HIGH IN CLAY OR SAND), AND AREAS RECEIVING CONCENTRATED FLOW. IF AREA TO BE MULCHED IS SUBJECT TO
CONCENTRATED WATERFLOW, AS IN CHANNELS, ANCHOR MULCH WITH NETTING.
MAINTENANCE – RESEED, REFERTILIZE AND MULCH AREAS OF INSUFFICIENT GROWTH. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

PERMANENT SEEDING

SEE LANDSCAPE PLAN FOR PERMANENT SEEDING REQUIREMENTS.

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1	04/08/22	CHECK SET	MTA	JNG	
0	03/02/22	INITIAL ISSUE	ARM	JNG	MTA

STATE OF MISSOURI
MARTIN T. ARLING
NUMBER PE-2009002955
PROFESSIONAL ENGINEER
12/31/23

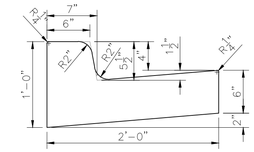
MARTIN T. ARLING
ENGINEER
MO # 2009002955

KAW VALLEY ENGINEERING
8040 N. OAK TRAFFICWAY
KANSAS CITY, MISSOURI 64118
PH. (816) 468-5858 | FAX (816) 468-6651
kcde@kveng.com | www.kveng.com
KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/23

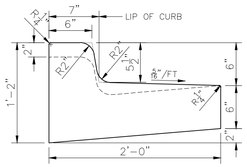
7 BREW
1410 N.E. DOUGLAS STREET
LEE'S SUMMIT, MO. 64086

FINAL DEVELOPMENT PLAN
EROSION CONTROL PLAN

PROJ. NO.	B21D4397
DESIGNER	MTA
DRAWN BY	JNG
CFN	4397ECP
SHEET	C600
REV	2



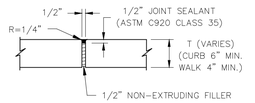
FULL HEIGHT TYPE "B" CURB 001



FULL HEIGHT DRY CURB

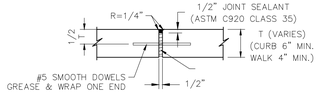
FULL HEIGHT CURB 002

*GUTTER DEPTH MAY VARY TO IMPROVE DRAINAGE



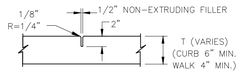
NOTE:
1. TYPE 1 JOINTS SHALL BE PLACED WHERE NEW CONCRETE ABUTS EXISTING CONCRETE AND IN AREAS WHERE CONCRETE ABUTS BUILDINGS. UNLESS NOTED OTHERWISE.

EXPANSION JOINT - TYPE 1



TYPE 2

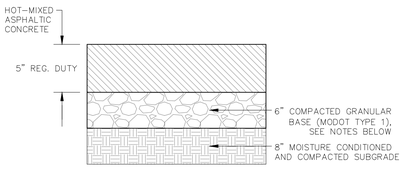
NOTES:
1. TYPE 2 JOINTS SHALL BE PLACED AS NOTED AND AT ALL P.C.'S, P.T.'S AND TRANSITIONS, AND WHERE NEW CURB OR CONCRETE PAVEMENT TIES INTO EXISTING CURB OR CONCRETE PAVEMENT.
2. SMOOTH BARS SHALL BE 24" LONG



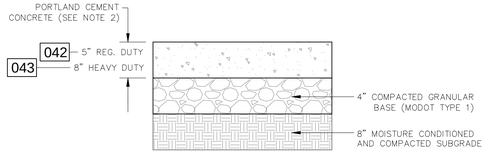
CONTRACTION JOINT - TYPE 3

CURB & GUTTER
N.T.S

CURB & GUTTER NOTES:
1. 1/2" PREMOLDED EXPANSION JOINTS SHALL BE PLACED AT POINTS OF CURVATURE, CURB RETURNS, CURB 2 INLETS AND AT 250' CENTERS. THE EXPANSION JOINTS SHALL BE DOWELED IN ACCORDANCE WITH THE SPECIFICATIONS. CONTRACTION JOINTS SHALL BE 2" DEEP AND PLACED AT 15' INTERVALS EQUALLY SPACED BETWEEN EXPANSION JOINTS.
2. ALL CONCRETE USED IN THIS WORK SHALL MEET THE LATEST EDITION OF THE KANSAS CITY METROPOLITAN CHAPTER OF THE AMERICAN PUBLIC WORKS ASSOCIATION. KCMMB4K CONCRETE SHALL BE USED THROUGHOUT.
3. ALL REINFORCING STEEL SHALL BE SUPPORTED ON FABRICATED STEEL BAR SUPPORTS @ 3'-0" MAXIMUM SPACING.
4. SEE SIDEWALK RAMP DETAILS FOR TYPICAL SIDEWALK RAMP CURB & GUTTER SECTIONS.
5. DETAILS AS SHOWN FOR CONCRETE AND ASPHALT PAVING. WHEN USED WITH CONCRETE PAVING POURED MONOLITHICALLY WITH CURB NO MODIFICATIONS ARE REQUIRED. WHEN CURB AND CONCRETE PAVING ARE TO BE POURED SEPARATELY #4 BARS, 24" LONG ARE TO BE PROVIDED TO TIE CURB TOGETHER WITH CONCRETE PAVING.
6. ALL REINFORCING SHALL BE 60 ksi EPOXY COATED DEFORMED BARS AND COMPLY WITH ASTM A65.
7. CURBS TO BE CONSTRUCTED ON MINIMUM 6 INCHES OF COMPACTED WELL GRADED BASE ROCK.



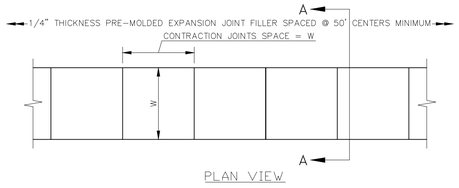
ASPHALT PAVEMENT 040
NOT TO SCALE



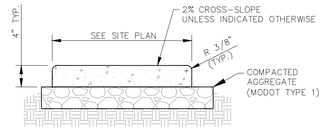
P.C. CONCRETE PAVEMENT 042 043
NOT TO SCALE

NOTES:
1. FLEXIBLE PAVEMENT SHALL BE IN ACCORDANCE WITH THE LATEST (FEBRUARY 2017) EDITION OF THE KANSAS CITY METROPOLITAN CHAPTER OF APWA SECTION 2200 OR M+E 2021 MISSOURI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

   HOT-MIXED ASPHALT - MODOT SP125FEEF OR APWA TYPE 6-01
2. PORTLAND CEMENT CONCRETE SHALL BE A KCMMB4K MIX AND SHALL MEET THE LATEST EDITION OF THE KANSAS CITY METROPOLITAN CHAPTER OF APWA SECTION 2200.
3. HEAVY DUTY CONCRETE IS AN OPTIONAL PAVEMENT FOR DETAIL 041 HEAVY DUTY ASPHALT. WHEN PLANS SPECIFY DETAIL 042 NO ALTERNATES ARE ALLOWED.
4. ASPHALT PAVEMENT MAY BE MODIFIED BY REPLACING GRANULAR BASE WITH AN ADDITIONAL ONE INCH OF HOT-MIXED ASPHALT CONCRETE.
5. IF A MARSHALL DESIGNED MIX IS DESIRED, ANY 50-BLOW MARSHALL MIX MAY BE SELECTED MEETING THE AGGREGATE AND GRADATION REQUIREMENTS OF APWA TYPE 2 OR 3, MODOT BP-1 OR 2, OR OTHER LOCALLY PRODUCED MARSHALL MIX THAT IS EQUIVALENT TO KDOT BM-2. ANY SUBMITTED 50-BLOW MARSHALL MIX DESIGN SHOULD ALSO BE CHECKED FOR RESISTANCE TO STRIPPING DURING DESIGN USING AASHTO T 283 TO DETERMINE IF AN ANTISTRIPPING AGENT IS NEEDED FOR THE SAME ASPHALT CONCRETE CHOSEN FOR THE PROJECT. THE INDEX OF RETAINED STRENGTH SHALL EXCEED 75%.



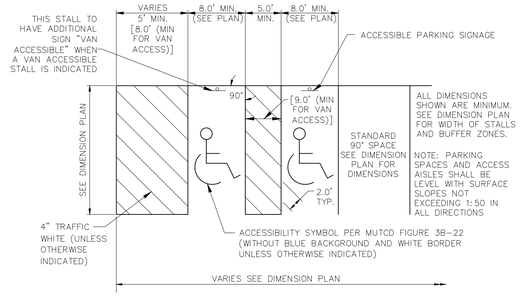
PLAN VIEW



SECTION A-A

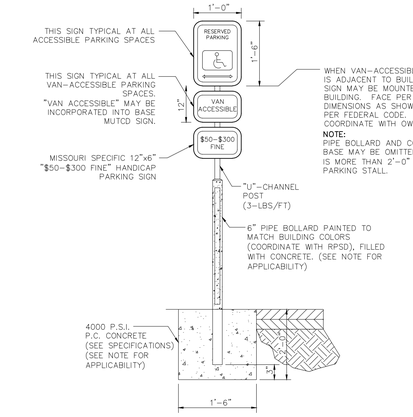
CONCRETE SIDEWALK 055
NOT TO SCALE

NOTES:
1. PORTLAND CEMENT CONCRETE USED IN CONSTRUCTION OF SIDEWALKS SHALL CONFORM TO KCMMB4K AND KCMO-APWA SECTION 2208.
2. CONTRACTOR SHALL BACKFILL SIDEWALKS WITH TOPSOIL AND SEED/SOD IN ACCORDANCE WITH LANDSCAPE PLAN AND PROJECT SPECIFICATIONS.



ACCESSIBLE STRIPING 102
NOT TO SCALE

NOTES:
1. PARKING SPACES AND ACCESS AISLES SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 1:50 IN ALL DIRECTIONS.
2. ALL DIMENSIONS SHOWN ARE MINIMUM. SEE DIMENSION PLAN FOR WIDTH OF STALLS AND BUFFER ZONES.
3. ADA PARKING SPACES AND ACCESS ISLES SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 1:50 IN ALL DIRECTIONS.



ACCESSIBLE PARKING SIGN 120
HEIGHT ABOVE GRADE FOR POLE MOUNTED SIGNS VARIES. TYPICAL INSTALLATION IS 5'-0" ABOVE GRADE, SIGN SHALL BE MOUNTED AT 7'-0" IF IT FALLS WITHIN A WALKING PATH.

REV	DATE	DESCRIPTION	DSN	DWN	CHK
2	05/06/22	PER OWNER COMMENTS	MTA	JNG	MTA
1	04/08/22	CHECK SET	MTA	JNG	
0	03/02/22	INITIAL ISSUE	ARM	JNG	

STATE OF MISSOURI
MARTIN T. ARLING
NUMBER PE-2009002955
PROFESSIONAL ENGINEER
05/10/22

MARTIN T. ARLING
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MO # 2009002955

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7 BREW
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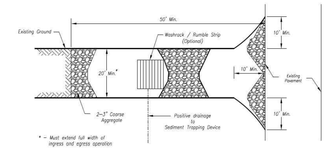
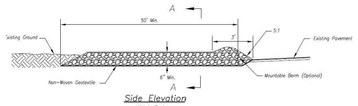
LEE'S SUMMIT, MO. 64086

FINAL DEVELOPMENT PLAN
DETAIL SHEET

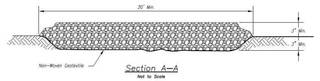
PROJ. NO.	B21D4397
DESIGNER	MTA
DRAWN BY	JNG
CFN	4397DET
SHEET	C700
REV	2



Plan View
Not to Scale



Side Elevation
Not to Scale



Section A-A
Not to Scale

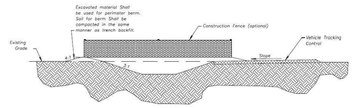
CONSTRUCTION ENTRANCE

NOTES FOR CONCRETE WASHOUT:
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 SEDIMENT CONTROL DEVICE.
7. IF CONDITIONS WARRANT, PLACE GEOTEXTILE FABRIC ON THE GRADED FOUNDATION TO IMPROVE STABILITY.

MAINTENANCE FOR CONCRETE WASHOUT:
1. RESHAPE ENTRANCE AS NEEDED TO MAINTAIN FUNCTION AND INTEGRITY OF INSTALLATION. TOP DRESS WITH CLEAN AGGREGATE AS NEEDED.

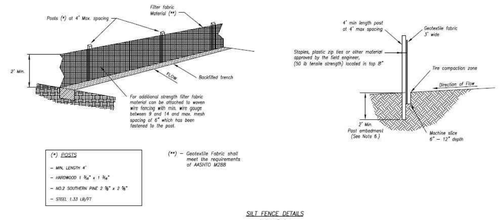
NOTES FOR CONCRETE WASHOUT:
1. CONCRETE WASHOUT AREAS SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON SITE.
2. CONCRETE WASHOUT AREA SHALL INCLUDE A FLAT SUBSURFACE PIT SIZED RELATIVE TO THE AMOUNT OF CONCRETE TO BE PLACED ON SITE. THE SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1. THE 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 ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION(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 WASTED CONCRETE.
3. CONCRETE WASHOUT WATER, WASTED 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 COMPACTED BACKFILL AND TOPSOIL. ANY DISTURBED AREAS ASSOCIATED WITH THE INSTALLATION, MAINTENANCE, AND/OR REMOVAL OF THE CONCRETE WASHOUT AREAS SHALL BE STABILIZED.



CONCRETE WASHOUT

AMERICAN PUBLIC WORKS ASSOCIATION
KANSAS CITY METRO CHAPTER
CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT
STANDARD DRAWING NUMBER: ESC-04
ADOPTED: 10/24/2016



(*) POSTS
– MIN. LENGTH 4'
– HARDWOOD 1 ½" x 1 ½"
– OR 2 SOUTHERN PINE 2 ½" x 2 ½"
– STEEL 1.33 LB/FT

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

SILT FENCE DETAILS
Not to Scale

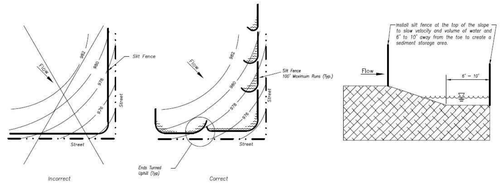
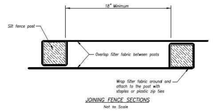


Figure A

SILT FENCE LAYOUT
Not to Scale

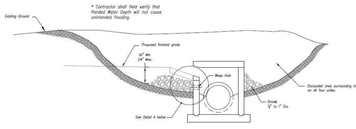
NOTES:
1. IN ORDER TO CONTAIN WATER, THE ENDS OF THE SILT FENCE MUST BE TURNED UPHILL (FIGURE A).
2. LONG PERIMETER RUNS OF SILT FENCE MUST BE LIMITED TO 100'. RUNS SHOULD BE BROKEN UP INTO SEVERAL SMALLER SEGMENTS TO MINIMIZE WATER CONCENTRATIONS (FIGURE A).
3. LONG SLOPES SHOULD BE BROKEN UP WITH INTERMEDIATE 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.

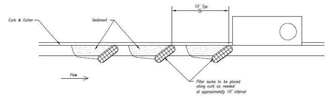
MAINTENANCE:
1. REMOVE AND DISPOSE OF SEDIMENT DEPOSITS WHEN THE DEPOSIT APPROACHES 1/3 THE HEIGHT OF SILT FENCE.
2. REPAIR AS NECESSARY TO MAINTAIN FUNCTION AND STRUCTURE.



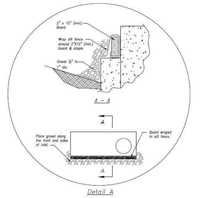
JOINING FENCE SECTIONS
Not to Scale

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





On Grade Curb Inlet Protection

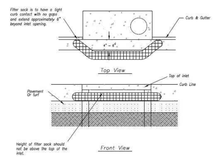


Detail A

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)

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

REV	DATE	DESCRIPTION	DSN	DWN	CHK
2	05/06/22	PER OWNER COMMENTS	MTA	JNG	
1	04/08/22	CHECK SET	MTA	JNG	
0	03/02/22	INITIAL ISSUE	ARM	JNG	MTA

STATE OF MISSOURI
MARTIN T. ARLING
NUMBER PE-2009002955
PROFESSIONAL ENGINEER
03/02/22

MARTIN T. ARLING
ENGINEER
MO # 2009002955

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KANSAS CITY, MISSOURI 64118
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kcdk@kveng.com | www.kveng.com

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EXPIRES 12/31/23

7 BREW
1410 N.E. DOUGLAS STREET
LEE'S SUMMIT, MO. 64086

FINAL DEVELOPMENT PLAN
DETAIL SHEET

PROJ. NO.	B21D4397
DESIGNER	MTA
DRAWN BY	JNG
CFN	4397DET
SHEET	C701
REV	2

LANDSCAPING NOTES:

1. LOCATE ALL UTILITIES BEFORE LANDSCAPE CONSTRUCTION BEGINS.
2. NOTIFY OWNER REPRESENTATIVE OF ANY LAYOUT DISCREPANCIES.
3. ALL EXTERIOR GROUND WITHIN THE LIMITS OF THE CONTRACT, EXCEPT FOR SURFACES OCCUPIED BY BUILDINGS, STRUCTURES,PAVING, AND AS DIRECTED ON THE DRAWINGS AS UNDISTURBED, SHALL BE FILLED WITH SIX INCHES (6") OF TOPSOIL.
4. ALL DISTURBED AREAS NOT DESIGNATED FOR OTHER PLANTING SHALL BE SODDED. SOD SHALL CONSIST OF 90% TURF TYPE TALL FESCUE 10% BLUEGRASS.
5. QUANTITIES INDICATED IN PLANT LIST ARE FOR CONVENIENCE ONLY. CONTRACTOR IS RESPONSIBLE FOR PLANT QUANTITIES AS ILLUSTRATED ON THE PLAN.
6. SHREDDED HARDWOOD MULCH SHALL BE USED AS THREE INCH (3") TOP DRESSING IN ALL PLANT BEDS AND AROUND ALL TREES. SINGLE TREES OR SHRUBS SHALL BE MULCHED TO THE OUTSIDE EDGE OF SAUCER OR LANDSCAPE ISLAND (SEE PLANTING DETAILS).
7. FERTILIZE ALL PLANTS AT THE TIME OF PLANTING WITH TIME-RELEASE FERTILIZER(3-4 SLOW-RELEASE TABLETS/PELLETS).
8. IF LEANING OCCURS WITHIN ONE YEAR, TREES SHALL BE RE-STAKED (SEE PLANTING DETAILS).
9. CONTRACTOR SHALL STAKE ALL PLANT MATERIALS PRIOR TO INSTALLATION FOR THE PURPOSE OF DETERMINING CONFLICTS WITH ROCK, UTILITIES, ETC. NO PLANTS CAN BE PLANTED DIRECTLY ON ROCK OR UTILITIES. NOTIFY ARCHITECT/ENGINEER/OWNER AT ONCE IF ANY CONFLICTS OCCUR. CONTRACTOR WILL BE REQUIRED TO ADJUST PLANT LOCATIONS AT NO ADDITIONAL COST.
10. CONTRACTOR IS RESPONSIBLE FOR WATERING ALL SOD UNTIL ROOTS HAVE KNITTED INTO SOIL AND OWNER HAS OCCUPIED THE BUILDING.
11. PROVIDE "GATOR" BAGS ON ALL TREES. REFILL AS NECESSARY UNTIL OWNER OCCUPIES THE BUILDING.
12. ALL TREES SHALL BE 3" CALIPER, EVERGREEN TREES SHALL BE 8' TALL AND SHRUBS SHALL BE 18" HEIGHT AT TIME OF PLANTING

IRRIGATION PERFORMANCE SPECIFICATION:

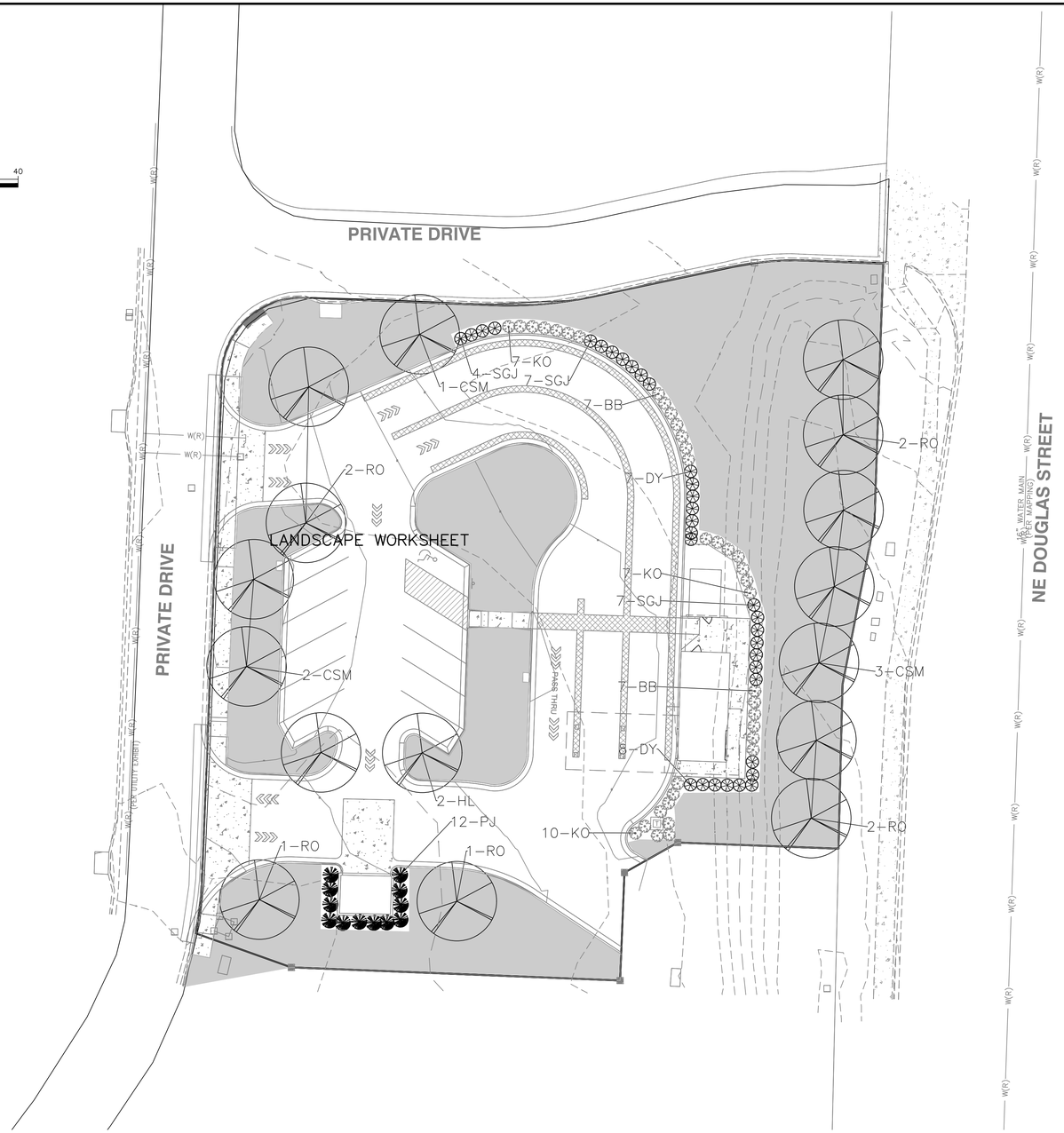
THE FOLLOWING CRITERIA SHALL BE CONSIDERED MINIMUM STANDARDS FOR DESIGN AND INSTALLATION OF LANDSCAPE IRRIGATION SYSTEM:

1. GENERAL – IRRIGATION SYSTEM TO INCLUDE DRIP IRRIGATION OF SHRUB BEDS ADJACENT TO BUILDINGS, SPRAY HEADS IN THE PARKING ISLANDS, AND ROTORS AROUND THE PERIMETER OF THE PARKING LOTS. HEADS SHALL THROW AWAY FROM BUILDING AND AVOID SPRAYING OVER SIDEWALKS.
2. IRRIGATION SYSTEM SHALL CONFORM TO ALL INDUSTRY STANDARDS AND ALL FEDERAL, STATE AND LOCAL LAWS GOVERNING DESIGN AND INSTALLATION.
3. WATER LINE TYPE, SIZE LOCATION, PRESSURE AND FLOW SHALL BE FIELD VERIFIED PRIOR TO SYSTEM DESIGN AND INSTALLATION.
4. ALL MATERIALS SHALL BE FROM NEW STOCK FREE OF DEFECTS AND CARRY A MINIMUM ONE YEAR WARRANTY FROM THE DATE OF SUBSTANTIAL COMPLETION.
5. THE IRRIGATION SYSTEM SHALL BE DESIGNED AND INSTALLED IN SUCH A WAY THAT ALL SYSTEM COMPONENTS OPERATE WITHIN THE GUIDELINES ESTABLISHED BY THE MANUFACTURER.
6. LAWN AREA AND SHRUB BEDS SHALL BE ON SEPARATE CIRCUITS.
7. PROVIDE WATER TAP, METER SET, METER VAULT AND ALL OTHER OPERATIONS NECESSARY TO PROVIDE WATER FOR IRRIGATION SHALL CONFORM TO LOCAL WATER GOVERNING AUTHORITY GUIDELINES AND STANDARDS.
8. BACKFLOW PREVENTION SHALL BE PROVIDED IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.
9. IRRIGATION CONTROLLER TO BE LOCATED IN UTILITY ROOM INSIDE BUILDING, AS IDENTIFIED BY OWNER.
10. IRRIGATION CONTROLLER STATIONS SHALL BE LABELED TO CORRESPOND WITH THE CIRCUIT IT CONTROLS.
11. CONTRACTOR SHALL PROVIDE TO THE OWNER WRITTEN OPERATION INFORMATION FOR ALL SYSTEM COMPONENTS.
12. CONTRACTOR SHALL PROVIDE TO THE OWNER ALL KEYS, ACCESS TOOLS, WRENCHES AND ADJUSTING TOOLS NECESSARY TO GAIN ACCESS, ADJUST AND CONTROL THE SYSTEM.
13. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS TO THE OWNER FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
14. AN AUTOMATIC RAIN SHUT-OFF OR MOISTURE DEVICE SHALL BE INSTALLED.
15. INSTALL SCHEDULE 40 PVC SLEEVES UNDER ALL CURBS, PAVING AND SIDEWALKS. SLEEVES TO BE TWICE THE SIZE OF THE LINE IT HOUSES.
16. INSTALL MANUAL DRAIN VALVES AT LOWEST POSSIBLE ELEVATION ON IRRIGATION MAIN TO ALLOW GRAVITY DRAINING OF MAIN DURING WINTER MONTHS. PROVIDE QUICK COUPLERS AT MULTIPLE LOCATIONS TO ALLOW FOR EASY "BLOWING OUT" OF LATERAL AND MAIN LINES.
17. ZONES OR NOZZLES SHALL BE DESIGNED WITH MATCHED PRECIPITATION RATES.
18. MINIMUM LATERAL DEPTH IS 15" AND MAIN DEPTH IS 18".
19. SUBMIT DESIGN DRAWING WITH BID TO ALLOW OWNER TO EVALUATE SYSTEM. INCLUDE CUT SHEETS OF ALL COMPONENTS AND ZONE TABLE ILLUSTRATING FLOWS AND ANTICIPATED PRESSURE AT FURTHEST HEAD.
20. AN "AS-BUILT" SCALED DRAWING SHALL BE PROVIDED TO THE OWNER BY THE CONTRACTOR AND SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:
    - AS CONSTRUCTED LOCATION OF ALL COMPONENTS
    - COMPONENT NAME, MANUFACTURER, MODEL INFORMATION, SIZE AND QUANTITY
    - PIPE SIZE AND QUANTITY
    - INDICATION OF SPRINKLER HEAD SPRAY PATTERN
    - CIRCUIT IDENTIFICATION SYSTEM
    - DETAILED METHOD OF WINTERIZING SYSTEM

SUBMIT AS-BUILT DRAWING IN FULL SIZE DRAWING FORM AS WELL AS PDF ELECTRONIC FORMAT. (SCANNING FULL SIZE COPY OF PLAN IS ACCEPTABLE IF IT CAN BE PRINTED TO SCALE)

0 10 20 40

SCALE: 1" = 20'



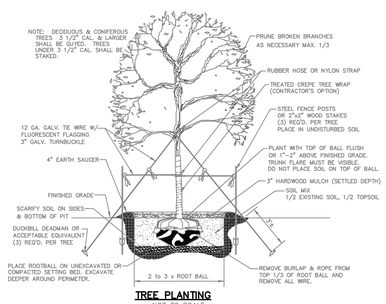
LANDSCAPE WORKSHEET

	ORDINANCE REQUIREMENT	REQUIRED FOR THIS SITE	PROPOSED
8.790.A.1 Street Frontage Trees (NE Douglas)	1 tree per 30 feet of street frontage	186 ft. of street frontage /30 = 37 trees required	7 trees
8.790.A.2 Street Frontage Green Strip (NE Douglas.)	20 feet	20 feet	20 feet
8.790.A.3 Street Frontage Shrubs (NE Douglas)	1 shrub per 20 feet of street frontage	186 ft. of street frontage/20 = 10 shrubs required	*
8.790.B.1 Open Yard Shrubs	2 shrubs per 5000 sq. ft. of total lot area excluding building footprint.	15,394 sq.ft. of landscape area/5,000 x 2 = 6.16 shrubs.	*
8.790.B.3 Open Yard Trees (LOTS 1-13)	1 tree per 5000 sq. ft. of landscaped open space..	18,908 sq.ft. of landscape area/5,000 = 3.76 trees.	4 trees
8.820 Parking Lot Screening, NE Douglas	Screening to a height of 2.5 feet along the edge of the parking lot adjacent to the street.	Continuous shrubs along parking stalls.	SEE PLAN

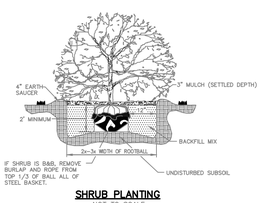
* SHRUBS ARE SATISFIED WITH PARKING LOT SCREENING REQUIREMENTS.

PLANT SCHEDULE

KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE/REMARKS
TREES				
CSM	6	ACER SACHARUM 'AUTUMN SPLENDOR'	CADDO SUGAR MAPLE	3" CAL. B&B
HL	2	GLEDITISA TRIACANTHOS 'SKYLINE'	SKYLINE HONEYLOCUST	3" CAL. B&B
RO	8	QUERCUS RUBRA	RED OAK	3" CAL. B&B
PJ	12	JUNIPEROUS CHINENSIS 'PERFECTA'	PERFECTA JUNIPER	6' HT. B&B
SHRUBS/GRASSES/GROUNDCOVER				
BB	14	EUONYMUS ALATUS	DWARF BURNING BUSH	5 GAL/18" HT. MIN.
KO	24	ROSA KNOCKOUT RADRAZZ	KNOCK OUT ROSE	5 GAL/18" HT. MIN.
SGJ	18	JUNIPEROUS CHINENSIS 'SEA GREEN'	SEA GREEN JUNIPER	5 GAL/18" HT. MIN.
DV	14	TAXUS x MEDIA 'DENSIFORMIS'	DENSIFORMIS YEW	5 GAL/18" HT. MIN.



TREE PLANTING
NOT TO SCALE



SHRUB PLANTING
NOT TO SCALE

REV	DATE	DESCRIPTION	DSN	DWN	CHK
1	05/05/22	OWNER CHANGES	VSR	VSR	MTA
0	05/05/22	INITIAL ISSUE	VSR	VSR	MTA

STATE OF MISSOURI
VANCE S. RZEPKA
NUMBER LA-000144
LANDSCAPE ARCHITECT
5/6/22

VANCE S. RZEPKA
LANDSCAPE ARCHITECT
MO: LA 000141

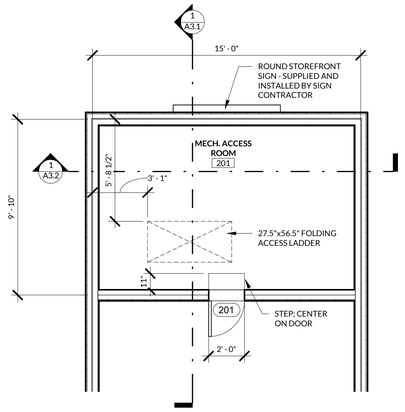
KAW VALLEY ENGINEERING
8040 N. OAK TRAFFICWAY
KANSAS CITY, MISSOURI 64118
PH. (816) 468-5858 | FAX (816) 468-6651
kc@kveng.com | www.kveng.com

KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000512. EXPIRES 12/31/23

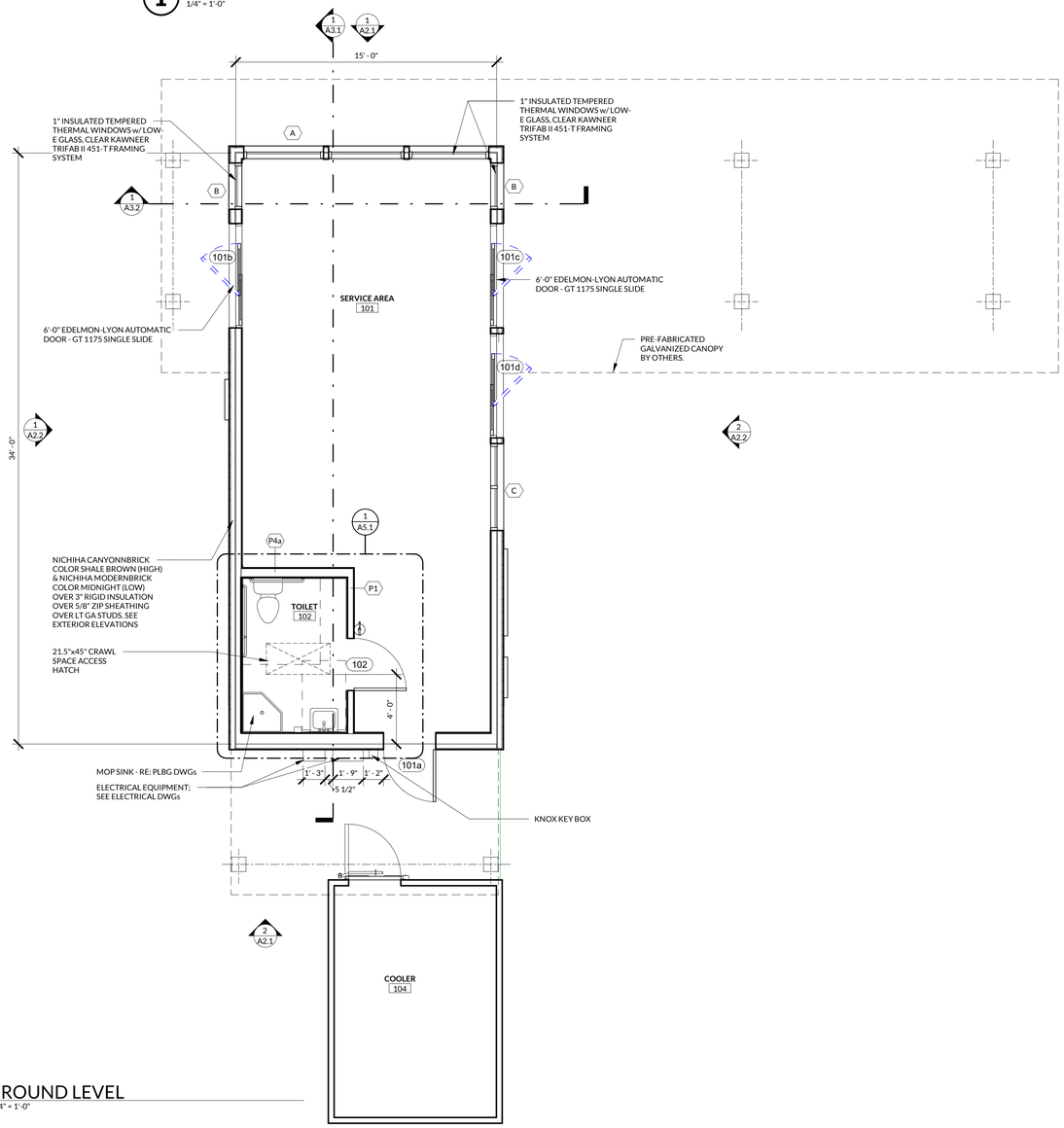
7 BREW
1410 N.E. DOUGLAS STREET
LEE'S SUMMIT, MO. 64086

FINAL DEVELOPMENT PLAN
LANDSCAPE PLAN

PROJ. NO. B21D4397
DESIGNER ARM | DRAWN BY JNG
CFN 4397LS-DP
SHEET L100 | REV 10

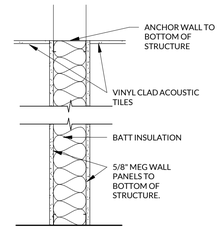


1 ATTIC FLOOR
1/4" = 1'-0"



2 GROUND LEVEL
1/4" = 1'-0"

PARTITION TYPES



P4a USES 6" METAL STUDS

P1 USES 3-5/8" METAL STUDS

ROOM FINISH SCHEDULE

RM NO.	RM NAME	FLR	BASE	WALLS				CLG	CLG HGT	NOTE
				TOP	RT	BOT	LT			
101	SERVICE AREA	F1	B1	W1/2	W1/2	W1	W1/2	C1	VERIFY	-
102	TOILET	F1	B1	W1	W1	W1	W1	C1	VERIFY	-
201	MECH ACCESS RM	F2	B2	W3	W3	W3	W3	C2	VARIES	-

FINISH LEGEND:

FLOORS	BASE	WALLS	CEILINGS
F1 PROTECT-ALL VINYL	B1 PROTECT-ALL VINYL COVE BASE	W1 MEG WALL PANELS	C1 VINYL CLAD ACOUSTICAL TILES
F2 UNFINISHED PLYWOOD	B2 NONE	W2 ALUM STOREFRONT SYSTEM	C2 EXPOSED STRUCTURE
		W3 EXPOSED STRUCTURE	

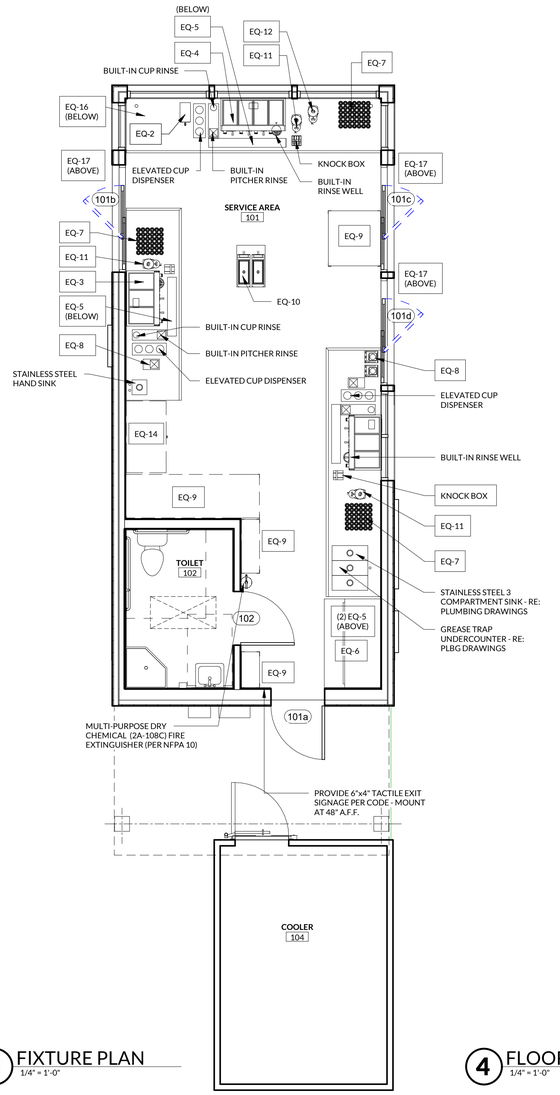
ROOM FINISH SCHEDULE NOTES:

FRP PANELS PROVIDED AND INSTALLED BY CONTRACTOR

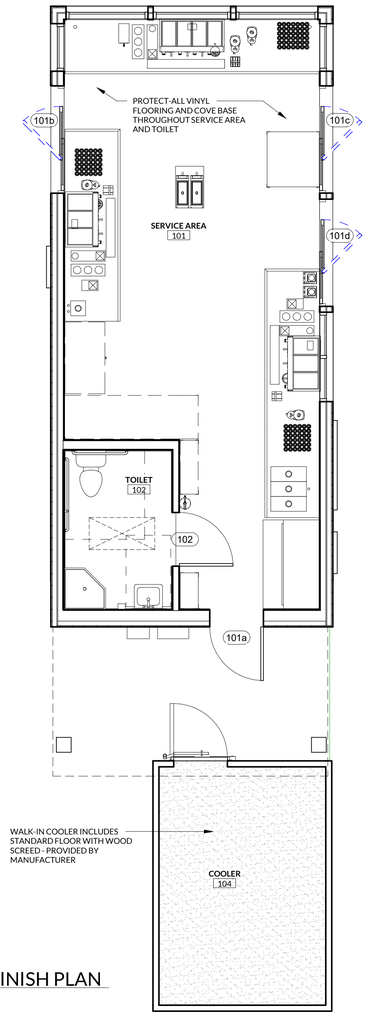
NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR HAVING A THOROUGH KNOWLEDGE OF THE LANDLORDS CRITERIA PRIOR TO CONSTRUCTION. FAILURE TO ACCOUNT HIMSELF WITH THIS KNOWLEDGE DOES NOT RELIEVE HIM FROM ANY RESPONSIBILITY.

2. CONTRACTOR SHALL THOROUGHLY VERIFY ALL EXISTING CONDITIONS PRIOR TO BIDDING AND CONSTRUCTION. ALL DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THESE DOCUMENTS SHALL BE REPORTED IMMEDIATELY TO THE ARCHITECT.



3 FIXTURE PLAN
1/4" = 1'-0"



4 FLOOR FINISH PLAN
1/4" = 1'-0"

TORGERSON DESIGN PARTNERS
ARCHITECTURE / REAL ESTATE / DEVELOPMENT
116 NORTH 2ND AVENUE · OZARK, MO 65721 · P (417) 581-8889 · F (417) 581-9002
ARCHITECTURAL CORPORATION MISSOURI LICENSE NUMBER: A-2010011427

7 BREW COFFEE
LEE'S SUMMIT, MO
NW CORNER OF NE DOUGLAS ST AND NE VICTORIA DR
LEE'S SUMMIT, MO 64086

STATE OF MISSOURI · ADAM JOSEPH KREHER · NUMBER A-2011002764 · ARCHITECT · 05/05/2022

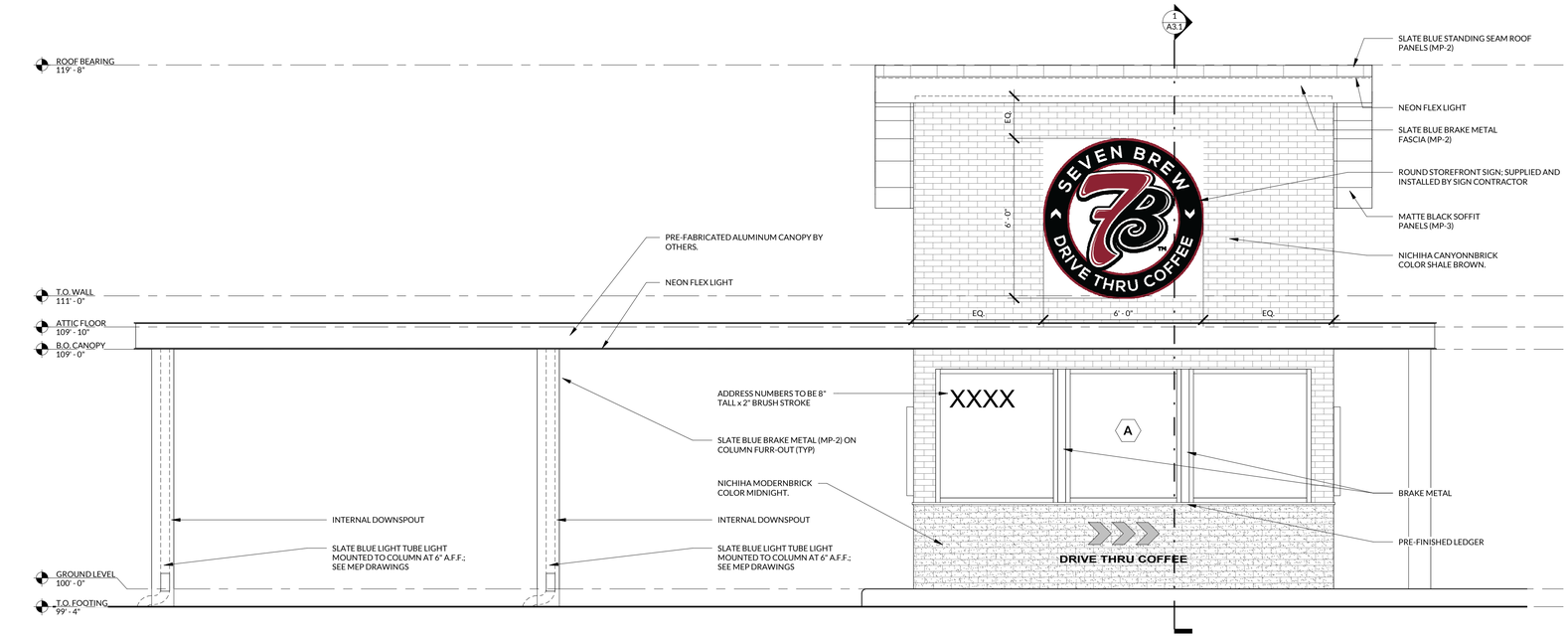
ARCHITECT OF RECORD:
NAME: ADAM KREHER
LICENSE NO. 2011002764

PROJECT NUMBER:
22033 7BLS

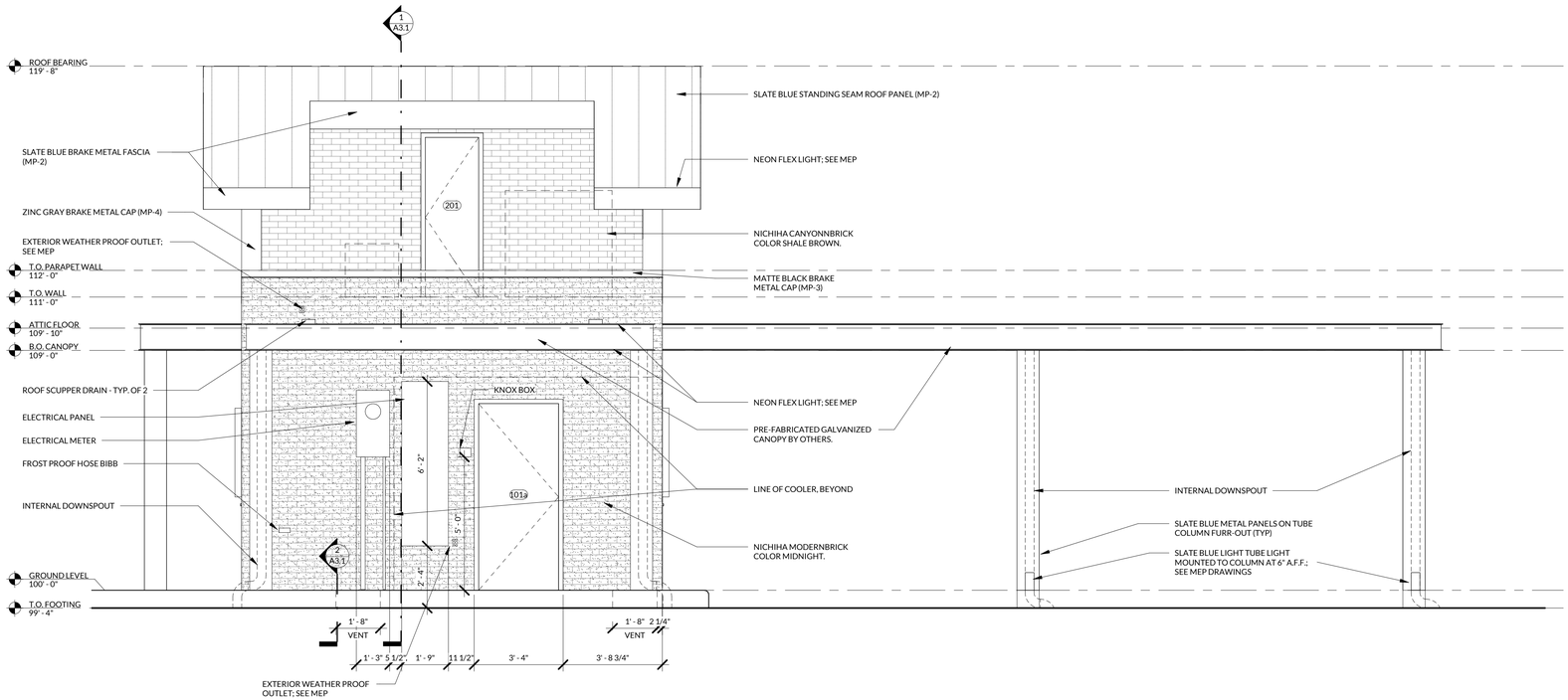
REVISION:

A1.1
FLOOR PLANS

DATE: APRIL 22, 2022



1 EXTERIOR ELEVATION - FRONT
3/8" = 1'-0"



2 EXTERIOR ELEVATION - BACK
3/8" = 1'-0"

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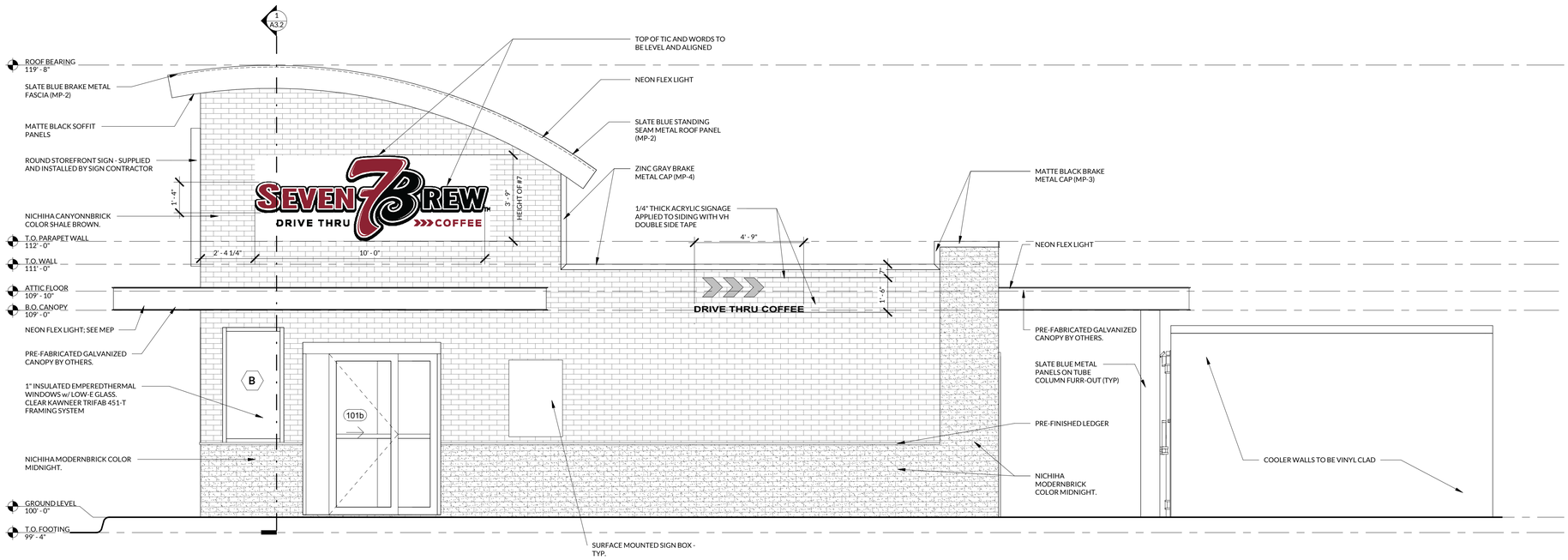
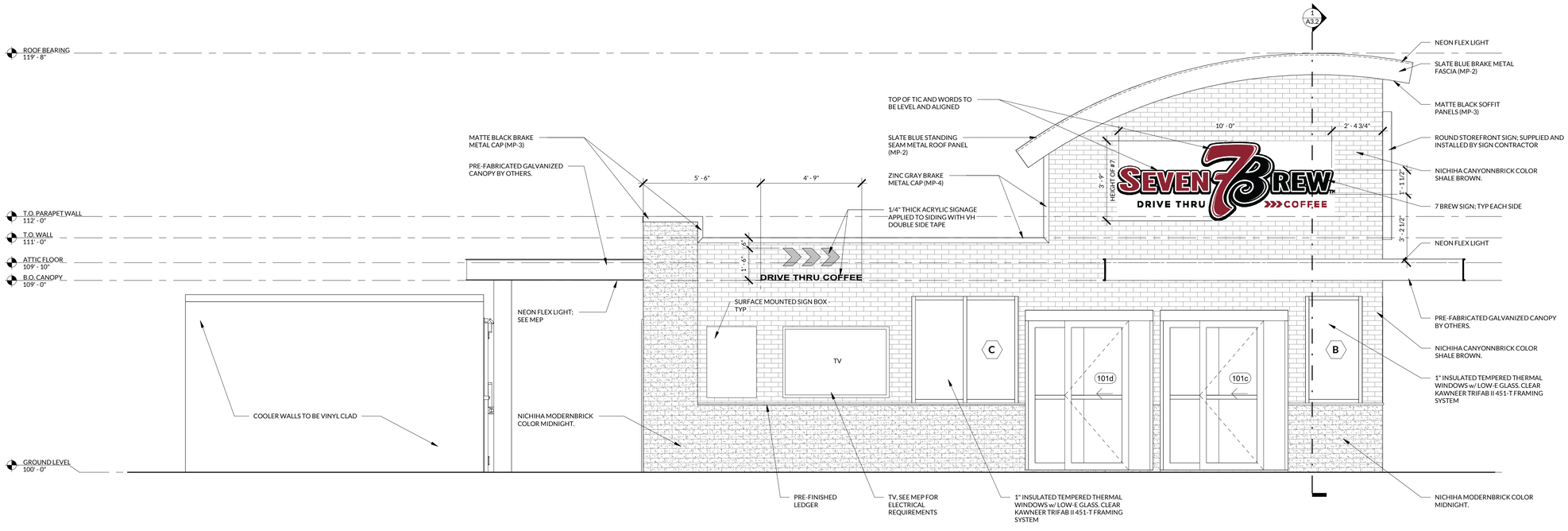
REVISION:

A2.1
EXTERIOR ELEVATIONS
DATE: APRIL 22, 2022



1 EXTERIOR ELEVATION - RIGHT SIDE
3/8" = 1'-0"



2 EXTERIOR ELEVATION - LEFT SIDE
3/8" = 1'-0"

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NUMBER A-2011002764
ARCHITECT
05/03/2022

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NAME: ADAM KREHER
LICENSE NO. 2011002764

PROJECT NUMBER:
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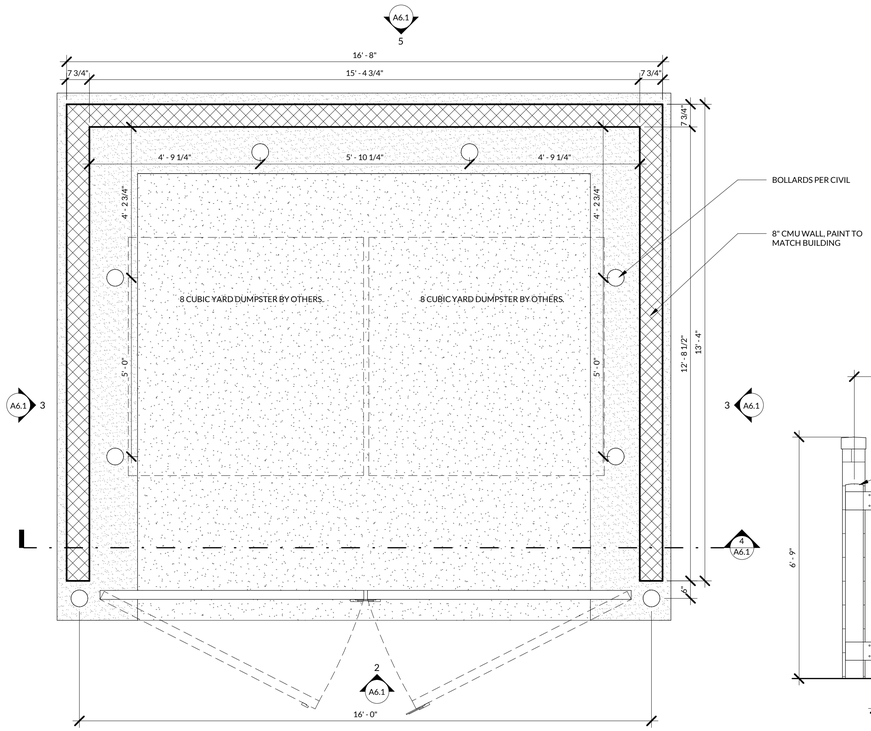
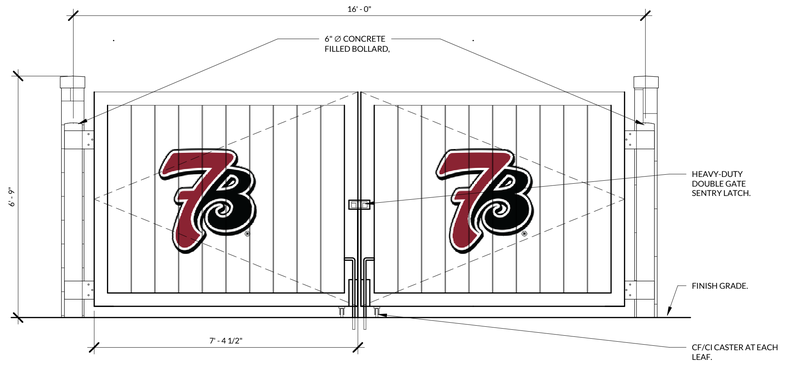
REVISION:

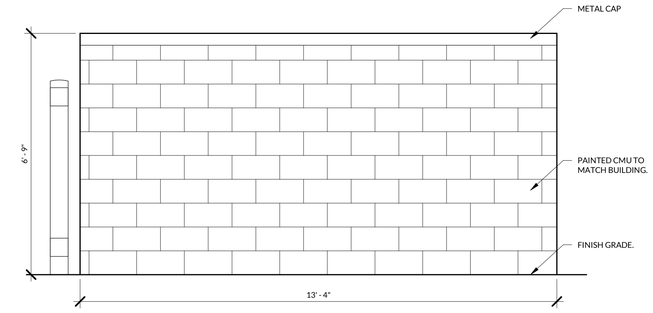
A2.2
EXTERIOR ELEVATIONS
DATE: APRIL 22, 2022



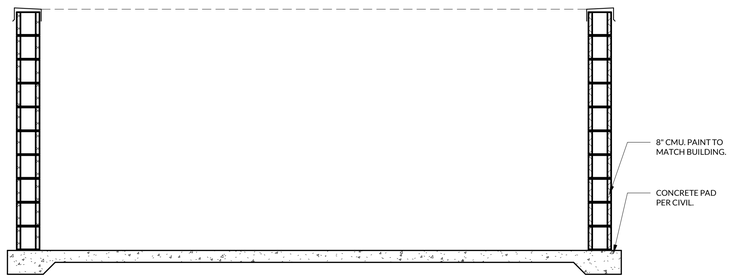
1 TRASH ENCLOSURE
1/2" = 1'-0"



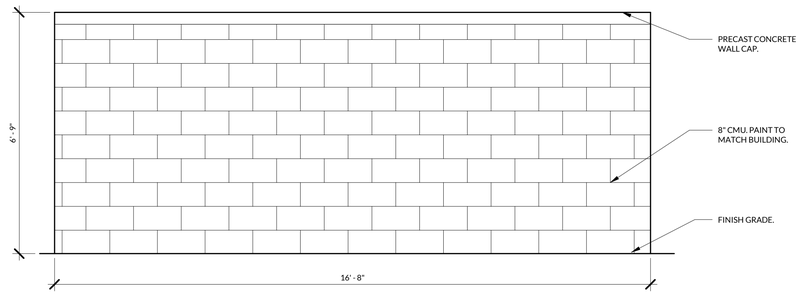
2 TRASH ENCLOSURE - FRONT ELEVATION
1/2" = 1'-0"



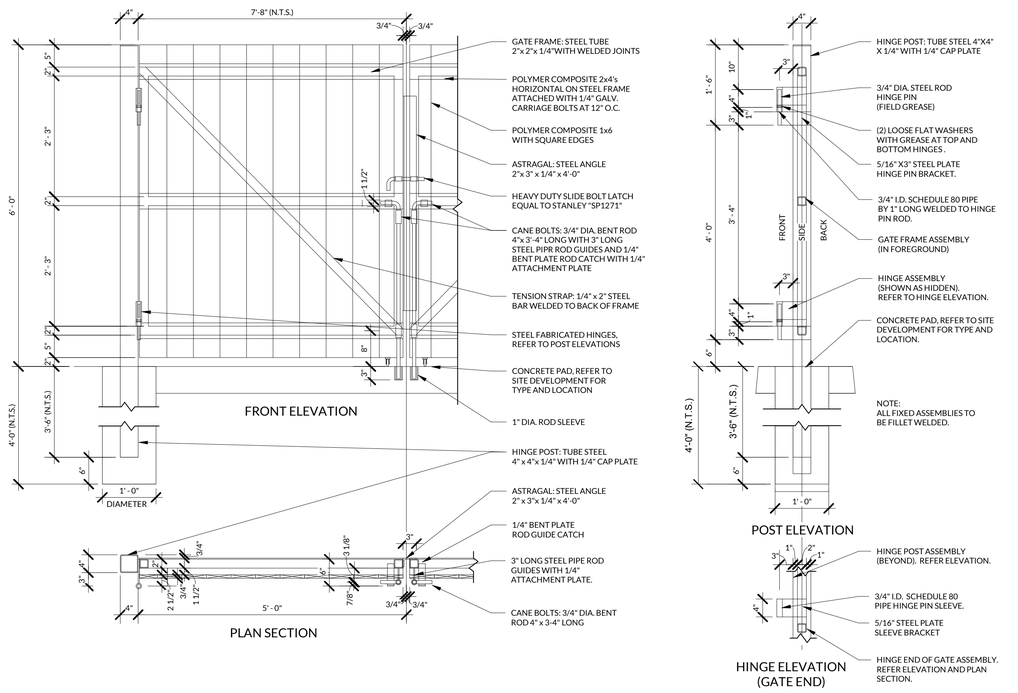
3 TRASH ENCLOSURE - SIDE ELEVATION
1/2" = 1'-0"



4 TRASH ENCLOSURE - SECTION DETAIL
1/2" = 1'-0"



5 TRASH ENCLOSURE - BACK ELEVATION
1/2" = 1'-0"



6 TRASH ENCLOSURE GATE DETAILS
3/4" = 1'-0"

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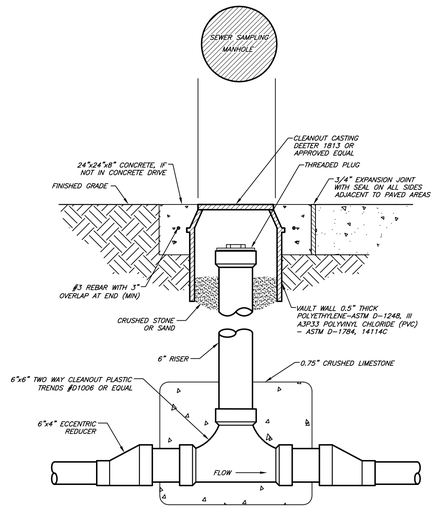
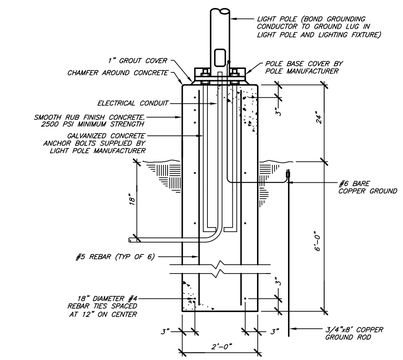
REVISION:

A6.1
TRASH ENCLOSURE DETAILS
DATE: APRIL 22, 2022



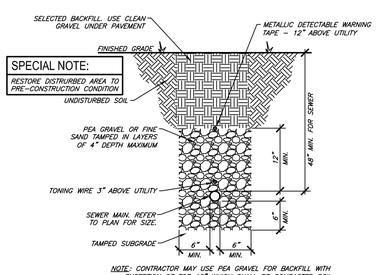
4 FINISH GRADE SAMPLING MANHOLE DETAIL

NO SCALE



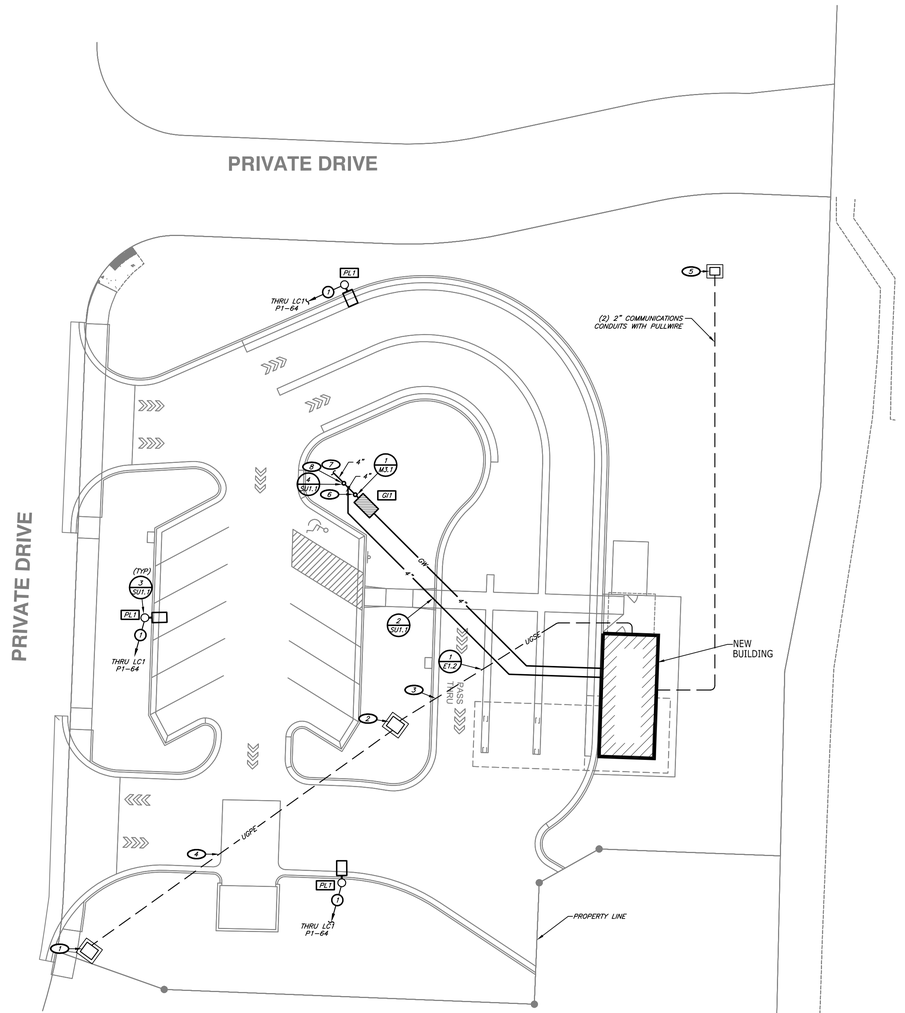
3 LIGHT POLE CONCRETE BASE

NO SCALE



2 SEWER TRENCH DETAIL

NO SCALE



1 SITE PLAN

1" = 20'-0"

NORTH

KEYNOTES:

1. EXISTING PRIMARY JUNCTION BOX IN THIS AREA. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH UTILITY COMPANY.
2. PADMOUNT 120/240-VOLT SINGLE-PHASE TRANSFORMER BY UTILITY COMPANY. CONCRETE PAD BY CONTRACTOR. EXACT LOCATION SHALL BE FIELD DETERMINED/COORDINATED.
3. SECONDARY CONDUIT AND CONDUCTORS BY CONTRACTOR. FIELD COORDINATE EXACT ROUTINGS.
4. PRIMARY CONDUITS AND CONDUCTORS BY UTILITY COMPANY. VERIFY EXACT ROUTING, TERMINATION LOCATION, AND REQUIREMENTS WITH THE UTILITY COMPANY. COORDINATE WITH UTILITY COMPANY FOR CONDUCTOR/CONDUIT SIZES.
5. PROVIDE 18x18 2-BOLT, OPEN BOTTOM, HEAVY DUTY PULL BOX EQUIVALENT TO HUBBELL-QUADITE MODEL DT121212GSN. "COMMUNICATIONS" SHALL BE INSCRIBED ON THE LID. INSTALL TOP OF BOX FLUSH WITH FINISH GRADE. PROVIDE EXTENSION AS REQUIRED TO MATCH CONDUIT BURIAL DEPTH. VERIFY/COORDINATE EXACT SERVICE LOCATION AND ALL REQUIREMENTS WITH SERVICE PROVIDER(S) PRIOR TO CONDUIT AND COMMUNICATION BOX INSTALLATION.
6. 4" WASTE UP TO FINISH GRADE CLEANOUT.
7. REFER TO CIVIL PLAN FOR CONTINUATION.
8. 4" WASTE UP TO SAMPLING MANHOLE.

CONDUIT & CONDUCTOR SCHEDULE:

1. (2) #10 AND (1) #10 GROUND IN 0.75" CONDUIT.

GENERAL NOTES:

1. UTILITY ROUTINGS ARE DIAGRAMMATIC. ADJUST EXACT ROUTING TO ACCOMMODATE FIELD CONDITIONS. REFER TO CIVIL AND PUBLIC IMPROVEMENT PLANS FOR NEW SEWER, WATER AND STORMWATER PIPING.
2. REFER TO CIVIL AND PUBLIC IMPROVEMENT PLANS FOR LOCATION AND COORDINATION OF ALL EASEMENTS.
3. REVIEW ALL CIVIL AND PUBLIC IMPROVEMENT PLANS AND COORDINATE ALL WORK WITH DIFFERENT DISCIPLINES. REVIEW AND OBTAIN APPROVAL FROM CITY UTILITIES AND CITY OF SPRINGFIELD PRIOR TO PERFORMING ANY UTILITY WORK.
4. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO SUBMITTING HIS BID. NO EXTRAS WILL BE PAID DUE TO UNANTICIPATED EXISTING CONDITIONS. PLANS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED. REFER TO ARCHITECTURAL AND CIVIL DRAWINGS FOR DIMENSIONS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING TEMPORARY TELEPHONE, ELECTRICAL AND WATER SERVICES REQUIRED DURING CONSTRUCTION, AND SHALL PAY ALL ASSOCIATED COSTS.
6. THE CONTRACTOR SHALL CONTACT EVERCY AT (888) 471-5275 AND ARRANGE FOR ELECTRICAL SERVICES AS INDICATED ON DRAWINGS. THE CONTRACTOR SHALL INCLUDE ALL FEES, CHARGES, ETC. INCURRED BY THE UTILITY COMPANY INTO BID. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS AS REQUIRED BY THE LOCAL AUTHORITIES FOR SERVICE INSTALLATION. ALL WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF LOCAL AUTHORITIES.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH TELECOMMUNICATIONS AND CABLE TELEVISION SERVICE PROVIDERS TO FACILITATE AND SCHEDULE INSTALLATION OF SERVICES. CONTRACTOR SHALL COORDINATE WITH OWNER FOR SERVICE PROVIDER CONTACT. THE OWNER SHALL BE RESPONSIBLE FOR ALL COSTS, CHARGES, FEES, ETC. INCURRED BY SERVICE PROVIDERS. PROVIDE ALL MATERIALS AS REQUIRED BY LOCAL AUTHORITIES FOR SERVICE INSTALLATION. ALL WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF LOCAL AUTHORITIES.
8. ALL SITE ELECTRICAL INSTALLATIONS AND CONSTRUCTION SHALL BE PER THE MOST RECENT REVISIONS OF THE NATIONAL ELECTRIC SAFETY CODE (NESC) AND THE NATIONAL ELECTRIC CODE (NEC) STANDARDS AND SPECIFICATIONS.
9. COORDINATE ALL TRANSFORMER LOCATIONS WITH OTHER UTILITIES INDICATED ON CIVIL PLANS.
10. REFER TO CIVIL PLANS FOR ALL SITE SANITARY SEWER WORK.

SITE UTILITIES SYMBOLS:

- OHE — OVERHEAD ELECTRIC
- UGPE — UNDERGROUND PRIMARY ELECTRIC
- UGSE — UNDERGROUND SECONDARY ELECTRIC
- UGT — UNDERGROUND TELECOMMUNICATIONS
- UGC — UNDERGROUND CABLE TV

TORGERSON DESIGN PARTNERS
ARCHITECTURE / REAL ESTATE / DEVELOPMENT
116 NORTH 2ND AVENUE - OZARK, MO 65721 - P (417) 581-8889 - F (417) 581-9002
ARCHITECTURAL CORPORATION MISSOURI LICENSE NUMBER: A-2010011427

7 BREW COFFEE

LEE'S SUMMIT, MO

1410 NE DOUGLAS STREET
LEE'S SUMMIT, MO 64086

STATE OF MISSOURI
RYAN S. JONES
NOTARY PUBLIC
PE-2004017193
PROFESSIONAL ENGINEER

04-26-22

ENGINEER OF RECORD:
NAME: RYAN JONES
LICENSE NO.PE-2004017193

PROJECT NUMBER:
21334 7BSM

REVISION:

MISSOURI ONE CALL SYSTEM INC.
DIAL 811 OR 1-800-344-7483
STOP-CALL BEFORE YOU DIG!

CJD LLC
Engineering | Energy | Innovation
2225 West Chesterfield Boulevard, Suite 200, Springfield, MO 65807
P: 417.877.1700 F: 417.324.7735 www.cjd-eng.com
Missouri State Certificate of Authority #2005026903

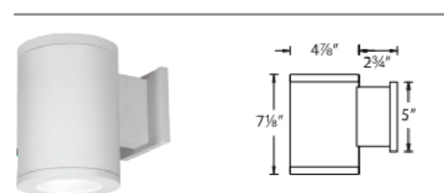
SU1.1

SITE UTILITIES PLAN

DATE: APRIL 26, 2022

TUBE ARCHITECTURAL DS-WS05 — WAC LIGHTING

LED Wall Mounts



Fixture Type:

Catalog Number:

Project:

Location:

PRODUCT DESCRIPTION

The latest energy efficient LED technology in an appealing cylindrical profile delivers accent and wall wash lighting. Comes in various light distribution and beam angle options.

FEATURES

- High performance exterior rated LED wall mount light
- Fixture can install upside down to alter light distribution
- Solid aluminum construction
- 5 year warranty

SPECIFICATIONS

Input: Universal voltage 120V - 277VAC, 50/60Hz
Dimming: Electronic low voltage (ELV) : 100% - 5%; 0-10V: 100% - 1%
Light Source: High output 3 Step Mac Adam Ellipse COB; Rated life of 60,000 hours at L70
Finish: Electrostatically powder coated, white, black, bronze and graphite
Standards: IP65 rated, ETL & cETL wet location listed, Energy Star® 2.2 rated Title 24 JA8-2016 Compliant
Operating Temp: -13°F to 122°F (-25°C to 50°C)

ORDERING NUMBER

Diameter / Watt	Beam	Beam Angle	Color Temp		CRI	Lumen	CBCP	Efficacy (lm/w)	Finish
DS-WS05 5" 25W; DS-WS0517 5" 17W	S Straight up or down	16°	927S	2700K	90	1825	10050	73	BK Black; WT White; BZ Bronze; GH Graphite
			27S	2700K	85	2190	12057	88	
			930S	3000K	90	1895	10427	76	
			30S	3000K	85	2300	12644	92	
			35S	3500K	85	2350	12937	94	
			40S	4000K	85	2375	13062	95	
	N Straight up or down	25°	927S	2700K	90	1810	5280	72	
			27S	2700K	85	2170	6335	87	
			930S	3000K	90	1880	5478	75	
			30S	3000K	85	2275	6643	91	
			35S	3500K	85	2330	6797	93	
			40S	4000K	85	2350	6863	94	
	F Straight up or down	33°	927S	2700K	90	1900	4515	76	
			27S	2700K	85	2280	5417	91	
			930S	3000K	90	1970	4685	79	
			30S	3000K	85	2390	5681	96	
			35S	3500K	85	2445	5812	98	
			40S	4000K	85	2470	5870	99	
	F Away from the wall	N/A	927A	2700K	90	2000	N/A	80	
			27A	2700K	85	2400		96	
			930A	3000K	90	2075		83	
			30A	3000K	85	2520		101	
			35A	3500K	85	2575		103	
			40A	4000K	85	2600		104	
	F Towards the wall	N/A	927B	2700K	90	2000	N/A	80	
			27B	2700K	85	2400		96	
			930B	3000K	90	2075		83	
			30B	3000K	85	2520		101	
			35B	3500K	85	2575		103	
			40B	4000K	85	2600		104	

DS-WS05-______-___ [1]Reference output shows 25W output. Multiply by 0.7 to determine output for 17W combinations.

Example: DS-WS05-F930A-WT

waclighting.com, Phone (800) 526.2588, Fax (800) 526.2585 | Headquarters/Eastern Distribution Center, 44 Harbor Park Drive, Port Washington, NY 11050 | Central Distribution Center, 1600 Distribution Ct, Lithia Springs, GA 30122 | Western Distribution Center, 1750 Archibald Avenue, Ontario, CA 91760

WAC Lighting retains the right to modify the design of our products at any time as part of the company's continuous improvement program. SEPT 2019

4 SITE LIGHTING FIXTURE C2

HALO — SMD6 Series

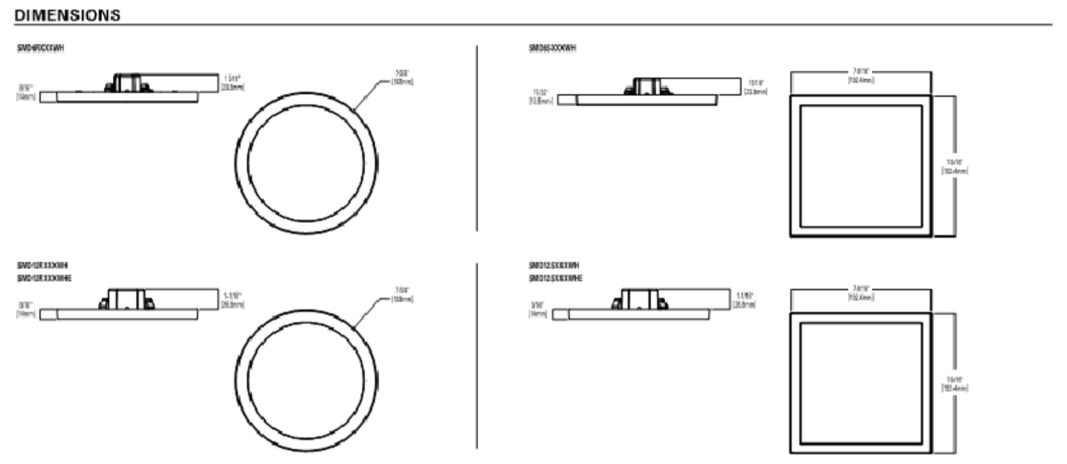
ENERGY DATA

SMD6R6 / SMD6S6	Round	Square
Lumens (3000K models)	788	815
Input Power	9.6 W	9.9 W
Input Current	0.0811 A	0.085 A
Efficiency	82 lm/W	82 lm/W
THD	13.9	14.7
Input Voltage	120V	
Frequency	50/60 Hz	
CRI	90 CRI	
Power Factor	0.99	
T Ambient	-30 - +40°C	
Sound Rating	Class A	

SMD6R12 / SMD6S12	Round	Square
Lumens (3000K models)	1252	1235
Input Power	15.3	15.7
Input Current	0.133 A	0.132 A
Efficiency	82 lm/W	79 lm/W
THD	15.3	15.7
Input Voltage	120V	
Frequency	50/60 Hz	
CRI	92 CRI	
Power Factor	0.98	
T Ambient	-30 - +40°C	
Sound Rating	Class A	

SMD6R12-E / SMD6S12-E	Round	Square
Lumens (3000K models)	1200	1180
Input Power	15.3	16
Input Current	0.133 A - (120V) 0.061 A - (277V)	0.132 A - (120V) 0.061 A - (277V)
Efficiency	78	73
THD	15.3	15.7
Input Voltage	120 - 277V	
Frequency	60 Hz	
CRI	92 CRI	
Power Factor	0.99	
T Ambient	-30 - +40°C	
Sound Rating	Class A	

DIMENSIONS



ORDERING INFORMATION

SAMPLE NUMBER: SMD6R6930WH=6" Round Surface Mount Downlight, 90CRI, 3000K
Junction Box Installation: Order junction box separately, as supplied by others, to complete installation.
Recessed Installation: Order Halo recessed housing separately to complete installation.

Models	Lumens	CRI / CCT	Finish	Voltage
SMD6R= 6" Round Surface Mount Downlight; SMD6S= 6" Square Surface Mount Downlight	6=600 lumen series (120V only); 12=1200 lumen series	927=90CRI, 2700K; 930=90CRI, 3000K; 935=90CRI, 3500K; 940=90CRI, 4000K; 950=90CRI, 5000K	WH= Matte White	Blank= 120V standard; E= UNV Universal 120-277V*

Accessories

Designer Trims
SMD6RTRMSN=6" Round SMD Satin Nickel
SMD6RTRMTBZ=6" Round SMD Tuscan Bronze
SMD6RTRMWH=6" Round SMD White (paintable)
SMD6STRMSN=6" Square SMD Satin Nickel
SMD6STRMTBZ=6" Square SMD Tuscan Bronze
SMD6STRMWH=6" Square SMD White (paintable)
T24HWKIT= Title 24 Cable harness kit used to convert incandescent and low voltage housings to LED
HE26LED= E26 Screw base adaptor for retrofit (included)

* UNV voltage configuration is offered only in the 1200 lumen series

COOPER Lighting Solutions

3 SITE LIGHTING FIXTURE C1

Project		Catalog #		Type	
Prepared by		Notes		Date	

Lumark

Prevail LED

Area / Site Luminaire

Product Features

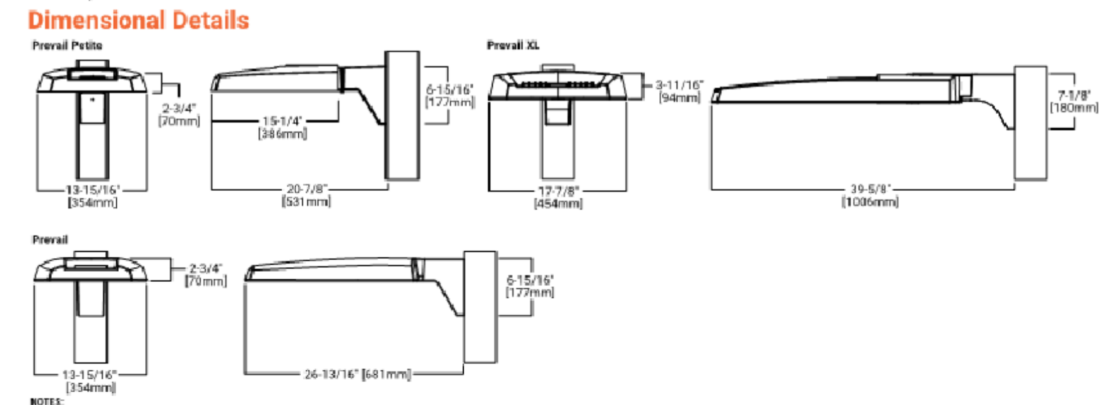
Interactive Menu
- Ordering Information page 2
- Mounting Details page 3
- Optical Configurations page 4
- Product Specifications page 4
- Energy and Performance Data page 5
- Control Options page 6

Product Certifications

Connected Systems
- WaveLinx

Quick Facts
- Lumen packages range from 4,800 - 52,300 lumens (35W - 350W)
- Replaces 70W up to 1,000W HID equivalents
- Efficacies up to 160 lumens per watt
- Energy and maintenance savings up to 85% versus HID solutions
- Standard universal quick mount arm with universal drill pattern

Dimensional Details



NOTES:
1. Visit https://www.designlights.org/search/ to confirm qualification. Not all product variations are DLC qualified.
2. IDA Certified for 3000K CCT and warmer only.

COOPER Lighting Solutions — PS500001EN page 1, February 14, 2022 11:56 AM

Lumark — Prevail LED

Ordering Information

SAMPLE NUMBER: PRV-XL-C75-D-UNV-T4-SA-BZ

Product Family	Light Engine	Driver	Voltage	Distribution	Mounting	Color
PRV-P=Prevail Petite; BAA-PRV-P=Prevail Petite BAA Compliant; TAA-PRV-P=Prevail Petite TAA Compliant	C10=(1 LED) 4,900 Nominal Lumens; C15=(1 LED) 6,900 Nominal Lumens; C20=(1 LED) 9,800 Nominal Lumens; C25=(1 LED) 11,800 Nominal Lumens	D=Dimming (0-10V)	UNV=Universal (120-277V); 347=347V; 480=480V; DV=DuraVolt (277-480V)	T2=Type II; T3=Type III; T4=Type IV; T5=Type V	SA=Standard Versatile Arm; MA=Mast Arm; WM=Wall Mount Arm; ADJA=Adjustable Arm - Pole Mount; ADJS=Adjustable Arm - Slipfitter, 3in vertical tenon; ADJA-WM=Adjustable Arm - Wall Mount	BZ=Bronze; AP=Grey; BK=Black; DP=Dark Platinum; GM=Graphite Metallic; WH=White
PRV=Prevail; BAA-PRV=Prevail BAA Compliant; TAA-PRV=Prevail TAA Compliant	C15=(1 LED) 7,100 Nominal Lumens; C25=(2 LEDs) 13,100 Nominal Lumens; C40=(2 LEDs) 17,100 Nominal Lumens; C60=(2 LEDs) 20,000 Nominal Lumens					
PRV-XL=Prevail XL; BAA-PRV-XL=Prevail XL BAA Compliant; TAA-PRV-XL=Prevail XL TAA Compliant	C75=(4 LED) 26,100 Nominal Lumens; C100=(4 LED) 31,000 Nominal Lumens; C125=(4 LED) 36,000 Nominal Lumens; C150=(6 LED) 41,100 Nominal Lumens; C175=(6 LED) 48,600 Nominal Lumens					

Options (Add as Suffix) / **Accessories (Order Separately)** — 7030=70 CRI / 3000K CCT; 7050=70 CRI / 5000K CCT; HSS=House Side Shield; L90=Optics Rotated 90° Left; R90=Optics Rotated 90° Right; 10K=10kV UL 1449 Fused Surge Protective Device; 20MSP=20kV MOV Surge Protective Device; 20K=Series 20kV UL 1449 Surge Protective Device; HA=50°C High Ambient Temperature; CC=Coastal Construction; PER=NEMA 3-PIN Twistlock Photocontrol Receptacle; PER7=NEMA 7-PIN Twistlock Photocontrol Receptacle; MS/DIM-L08, MS/DIM-L20, MS/DIM-L40=Dimming Motion and Daylight Sensor, IR Remote Programmable; SPB1, SPB2, SPB4=Dimming Motion and Daylight Sensor, Bluetooth Programmable; ZW=Wavelinx-enabled 4-PIN Twistlock Receptacle; ZD=SR Driver-enabled 4-PIN Twistlock Receptacle; ZW-SWPD4XX, ZW-SWPD5XX, ZD-SWPD4XX, ZD-SWPD5XX=WaveLinx Sensor, Dimming Motion and Daylight, WAC Programmable; (See Table Below)=LumenSafe Integrated Network Security Camera. PRVSA-XX=Standard Arm Mounting Kit; PRVMA-XX=Mast Arm Mounting Kit; PRVWM-XX=Wall Mount Kit; PRV-ADJA-XX=Adjustable Arm - Pole Mount Kit; PRV-ADJS-XX=Adjustable Arm - Slipfitter Kit; PRV-ADJA-WM-XX=Adjustable Arm - Wall Mount Kit; PRVXLSA-XX, PRVXLMA-XX, PRVXLWM-XX, PRV-XL-ADJA-XX, PRV-XL-ADJS-XX, PRV-XL-ADJA-WM-XX; MA1010-XX, MA1011-XX, MA1017-XX, MA1018-XX=Tenon Adapters; SRA238=Tenon Adapter from 2-3/8" to 3"; PRV/COB-FDV=Full Drop Visor; PRVXL/COB-FDV=Full Drop Visor; HS/VERD=House Side Shield; VGS-F/B=Vertical Glare Shield, Front/Back; VGS-SIDE=Vertical Glare Shield, Side; OA/RA1013=Photocontrol Shorting Cap; OA/RA1014=NEMA Photocontrol - 120V; OA/RA1016=NEMA Photocontrol - Multi-Tap 105-285V; OA/RA1231=NEMA Photocontrol - 347V; OA/RA1027=NEMA Photocontrol - 480V; FSIR-100=Wireless Configuration Tool for Occupancy Sensor; SWPD4-XX, SWPD5-XX=WaveLinx Sensor, Dimming Motion and Daylight, WAC Programmable; WOLC-7P-10A=WaveLinx Outdoor Control Module (7-PIN).

NOTES: 1–27 (DesignLights Consortium qualification, pole and fixture compatibility, BAA/TAA compliance, surge, DuraVolt, sensor and controls restrictions).

LumenSafe Integrated Network Security Camera Technology Options (Add as Suffix)

Product Family	Camera Type	Data Backhaul
L=LumenSafe Technology	H=Dome Camera, High Res; Z=Dome Camera, Remote PTZ	C=Cellular, Customer Installed SIM Card; A=Cellular, Factory Installed AT&T SIM Card; V=Cellular, Factory Installed Verizon SIM Card; S=Cellular, Factory Installed Sprint SIM Card; E=Ethernet Networking

Stock Ordering Information

Product Family	Light Engine	Voltage	Distribution
PRVS=Prevail	C15=(1 LED) 7,100 Nominal Lumens; C25=(2 LEDs) 13,100 Nominal Lumens; C40=(2 LEDs) 17,100 Nominal Lumens; C60=(2 LEDs) 20,000 Nominal Lumens	UNV=Universal (120-277V); 347=347V	T3=Type III; T4=Type IV
PRVS-XL=Prevail XL	C75=(4 LED) 26,100 Nominal Lumens; C100=(4 LED) 31,000 Nominal Lumens; C125=(4 LED) 36,000 Nominal Lumens; C150=(6 LED) 41,100 Nominal Lumens; C175=(6 LED) 48,600 Nominal Lumens		

NOTES:
1. All stock configurations are standard 4000K/70CRI, bronze finish, and include the standard versatile mounting arm.
2. Only available in PRVS configurations C15, C25, C40 or C60.

COOPER Lighting Solutions — PS500001EN page 2, February 14, 2022 11:56 AM

2 SITE LIGHTING FIXTURE PL1

WPAS LED Architectural Wall Pack – Small — Williams

CATALOG #: TYPE: PROJECT:

FEATURES
- Semi-cutoff wall luminaire places light where it's needed with reduced glare
- Savings of up to 75% energy compared to HID systems
- Provides effective security and accent lighting
- 12' – 18' mounting heights
- Optional energy-saving photocells available
- Includes easy-hang wall mounting plate with built-in level for simplified installation

SPECIFICATIONS
- HOUSING – Die-cast hinged and gasketed aluminum enclosure. Nickel-plated stainless steel hardware.
- OPTICAL – Semi-cutoff front frame. Type IV wide forward throw distribution.
- LENS – Prismatic borosilicate glass lens.
- LED DRIVER – 0-10V integral dimming driver.
- ELECTRICAL – 120-277V or 347-480V input range; 50-60Hz; power factor >0.90; THD<20%. 6kV standard surge protection. L70 = 129,000 hours at 25°C. Operating temperature -40°C to 40°C.
- FINISH – Textured bronze powder coat over a chromate conversion coating.
- MOUNTING – Cast-in template to mount directly over a 4" recessed outlet box or 1/2" surface conduit.
- LISTINGS – CSA listed for wet locations, ANSI/UL 1598, 8750; IP65 sealed LED compartment.
- WARRANTY – 5-year limited warranty, see hew.com/warranty.

ORDERING EXAMPLE: WPAS - L34/850 - BZ - OPTIONS - DIM - UNV

ORDERING INFO

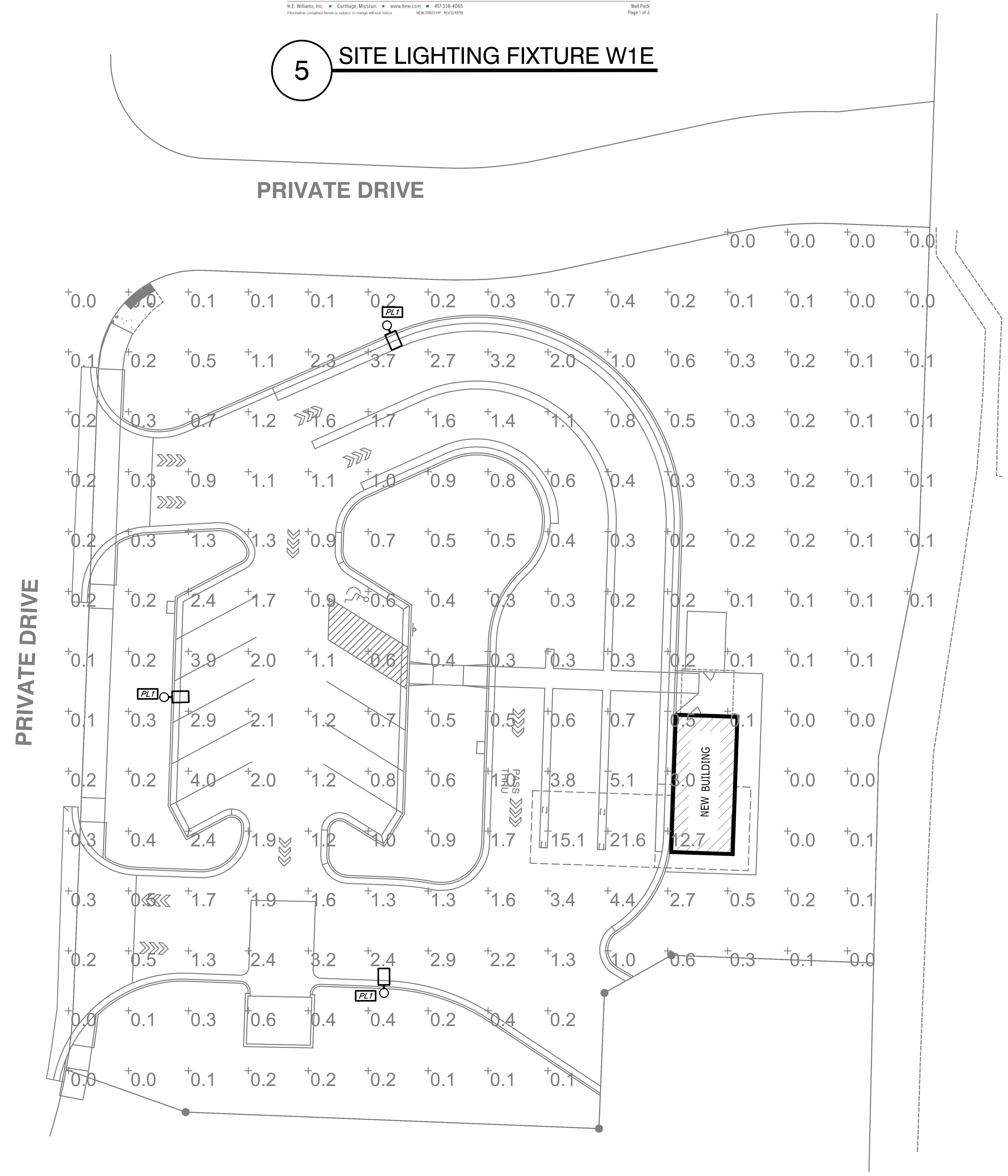
SERIES	LUMENS [1]	CRI	CCT	FINISH	OPTIONS [3]
WPAS	L34 3,400lm	8 80	50 5000K	BZ Bronze	SF Single fuse [4]; DF Double fuse [4]; SP10 10kV surge protection [5]; PC Photocell, 120-277V; P14 Pencil Photocell, 120-277V; P20 Swivel Photocell, 120V; P22 Swivel Photocell, 208-277V; EM/6W 6-watt emergency battery [6]; WG Stainless steel wireguard [7]

DRIVER	VOLTAGE
DIM Dimming driver [8]	UNV 120-277V; HV 347-480V

NOTES
1. Lumen output based on 5000 CCT. Actual lumens may vary +/-5%, see page 2 for FIXTURE PERFORMANCE DATA.
2. Fixtures ordered with factory-installed photocell are internally wired for switching and/or 1-10V dimming within the housing.
3. Not available with HV option.
4. Not available with HV option.
5. In addition to 6kV standard surge protection, total of 16kV.
6. 90 minutes emergency operation; ambient operating temperature range: 10°C to 50°C.
7. Ordered and shipped separately, field installed.
8. Prewired for 0-10V low voltage applications.

H.E. Williams, Inc. ■ Carthage, Missouri ■ www.hew.com ■ 417-358-4065 — Information contained herein is subject to change without notice. HEW70803.HP REV12/19/19 — Wall Pack Page 1 of 2

5 SITE LIGHTING FIXTURE W1E



1 SITE PHOTOMETRIC PLAN

1" = 20'-0"

NORTH

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STATE OF MISSOURI — RYAN S. JONES — NUMBER PE-2004017193 — PROFESSIONAL ENGINEER — 04-26-22

ENGINEER OF RECORD:
NAME: RYAN JONES
LICENSE NO.PE-2004017193

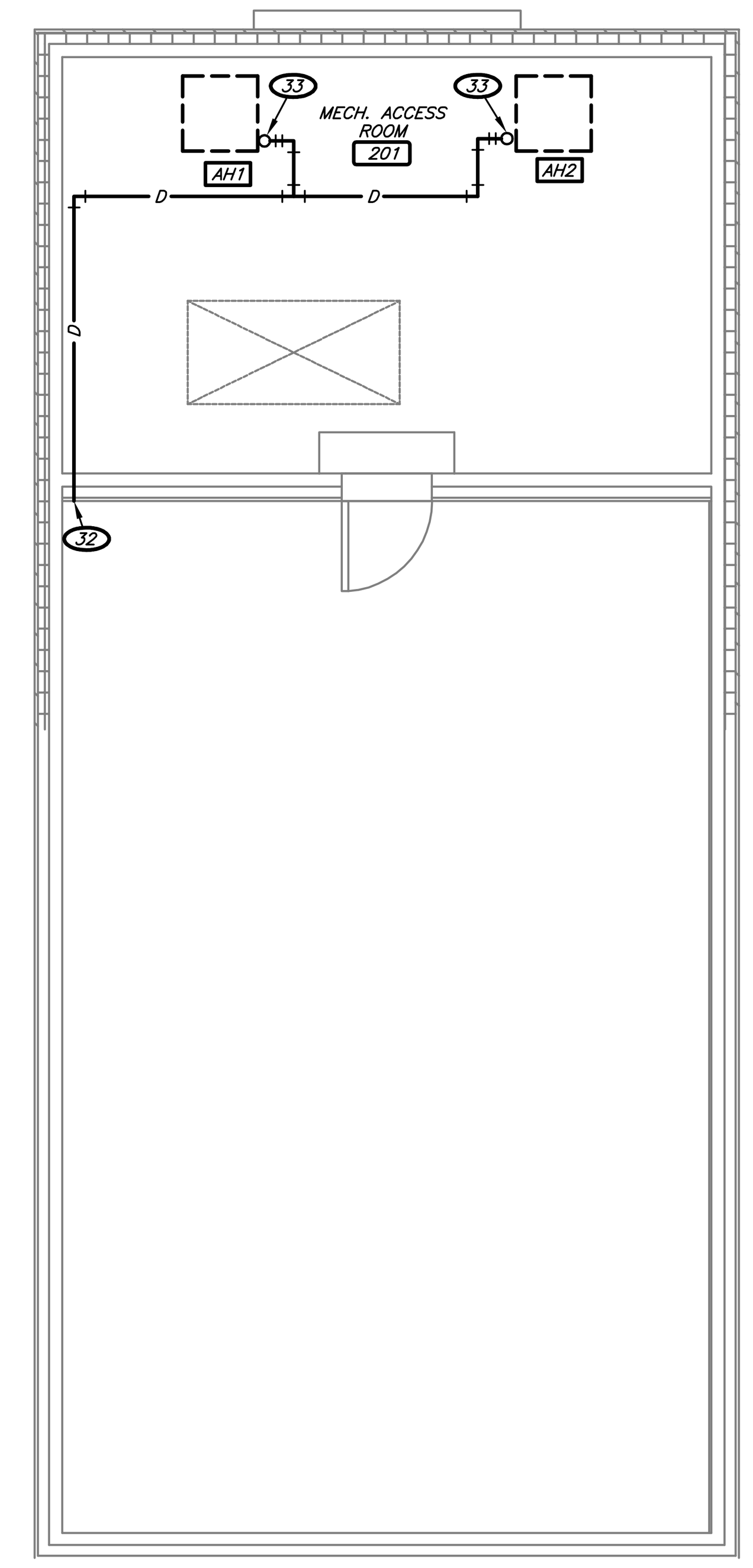
PROJECT NUMBER:
21334 7BSM

REVISION:

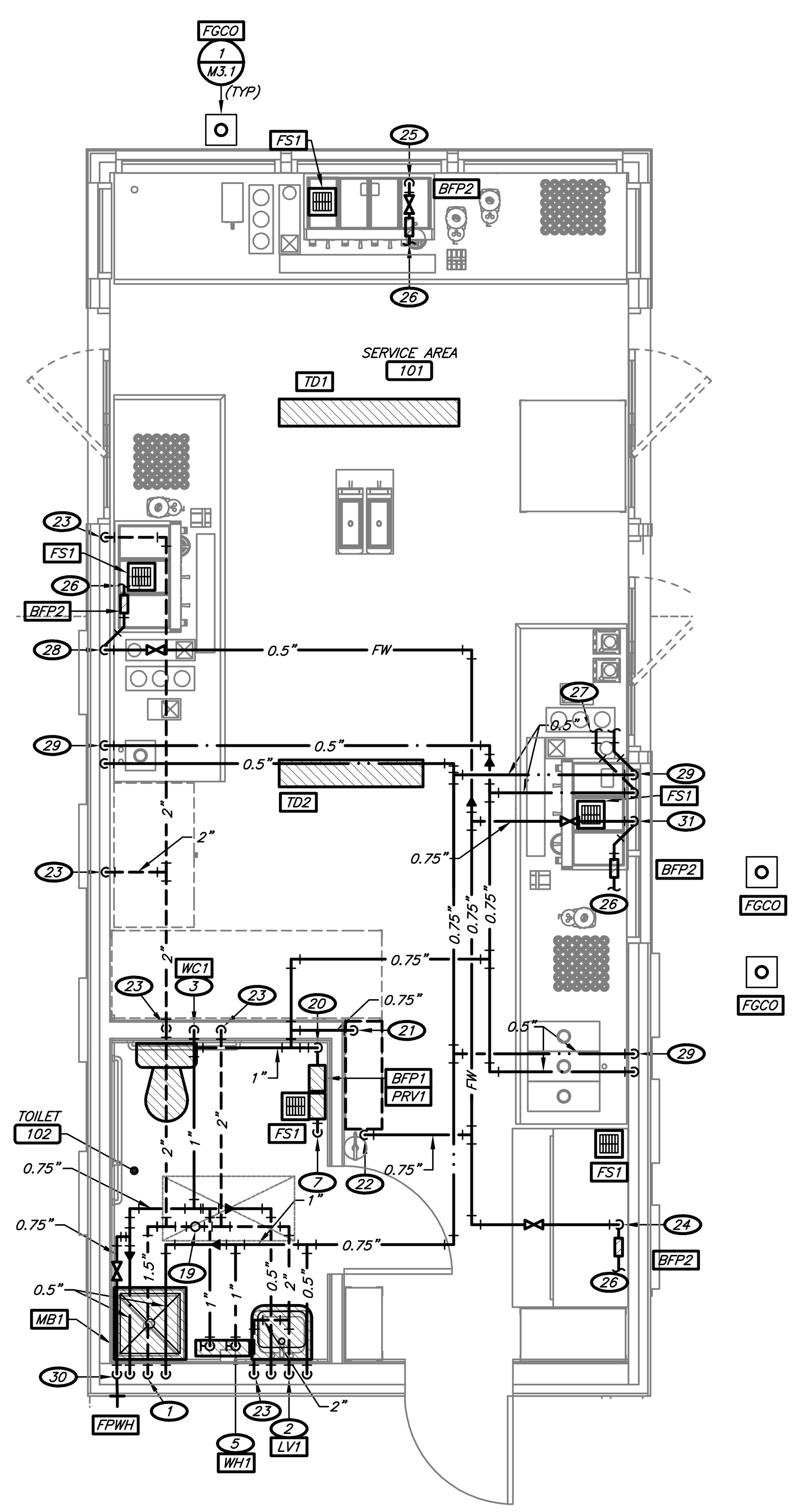
SU1.2

SITE PHOTOMETRIC PLAN

DATE: APRIL 26, 2022



3 ROOF AND ATTIC PLUMBING PLAN
1/4" = 1'-0"
NORTH



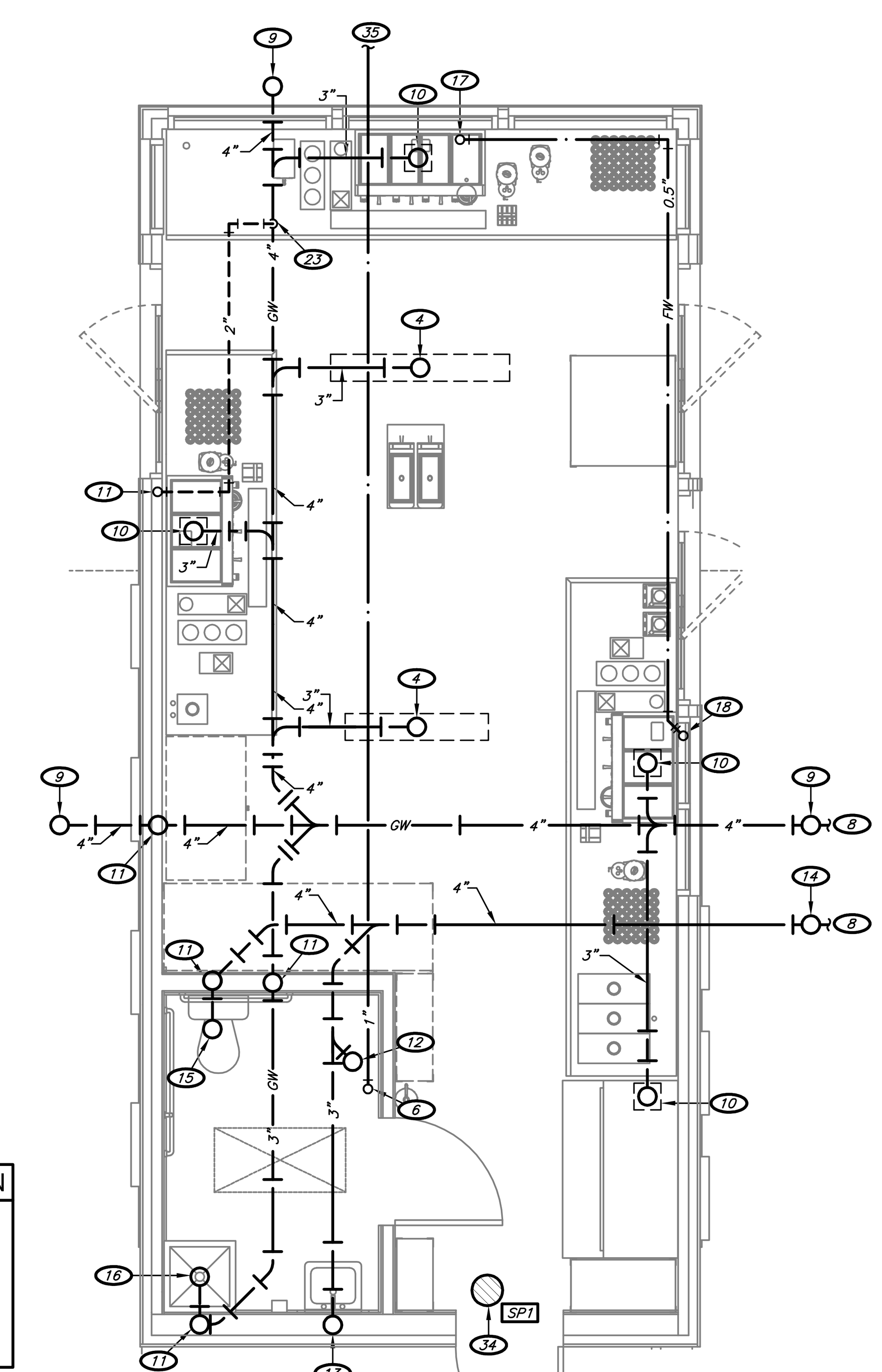
2 GROUND LEVEL PLUMBING PLAN
1/4" = 1'-0"
NORTH

GREASE INTERCEPTOR CALCULATION

VOLUME OF 3-COMPARTMENT SINK: 7800 CUBIC IN.
VOLUME OF MOP BASIN: 5760 CUBIC IN.
VOLUME OF RINSER SINK: 770 CUBIC IN.
VOLUME OF RINSER SINK: 1000 CUBIC IN.
VOLUME OF RINSER SINK: 770 CUBIC IN.
TOTAL: 16100 CUBIC IN.

– CONVERSIONS TO GALLONS: 70 GALLONS

GREASE INTERCEPTOR IS SIZED FOR 75-GPM



1 UNDERSLAB PLUMBING PLAN
1/4" = 1'-0"
NORTH

KEYNOTES:

1. 1.5" VENT, 0.5" HOT AND COLD WATER DOWN TO MOP BASIN.
2. 1.5" VENT, 0.5" HOT AND COLD WATER DOWN TO LAVATORY.
3. 0.5" COLD WATER DOWN TO WATER CLOSET.
4. 3" TRAPPED GREASE WASTE UP TO TRENCH DRAIN.
5. 1" HOT AND COLD WATER DOWN TO TANKLESS WATER HEATER.
6. 1" WATER SERVICE UP. REFER TO 2/M1.1 FOR CONTINUATION.
7. 1" WATER SERVICE DOWN. REFER TO 1/M1.1 FOR CONTINUATION.
8. REFER TO SU1.1 DRAWINGS FOR CONTINUATION.
9. 4" GREASE WASTE UP TO FINISH GRADE CLEANOUT.
10. 3" TRAPPED GREASE WASTE UP TO FLOOR SINK.
11. 2" VENT UP.
12. 3" TRAPPED WASTE UP TO FLOOR SINK.
13. 2" WASTE UP TO LAVATORY.
14. 4" WASTE UP TO FINISH GRADE CLEANOUT.
15. 4" WASTE UP TO WATER CLOSET.
16. 3" TRAPPED GREASE WASTE UP TO MOP BASIN.
17. 0.5" FILTERED WATER UP TO BEVERAGE EQUIPMENT.
18. 0.5" FILTERED WATER UP.
19. 2" VENT UP TO 3" VENT THROUGH ROOF.
20. 1" COLD WATER DOWN TO BACKFLOW PREVENTER AND PRESSURE REDUCING VALVE.
21. 0.75" COLD WATER DOWN TO WATER FILTER. COORDINATE CONNECTION REQUIREMENTS WITH EQUIPMENT PROVIDER.
22. 0.75" FILTERED WATER DOWN TO WATER FILTER. COORDINATE CONNECTION REQUIREMENTS WITH EQUIPMENT PROVIDER.
23. 2" VENT DOWN.
24. PROVIDE 0.5" FILTERED WATER WITH SHUT-OFF VALVE TO ICE MAKER WITH BACKFLOW PREVENTER. PROVIDE 0.75" INDIRECT DRAIN FROM iCE-MAKER TO FLOOR SINK AS REQUIRED.
25. 0.5" FILTERED WATER DOWN.
26. CONNECT FILTERED WATER PIPING TO KITCHEN EQUIPMENT. PROVIDE BACKFLOW PREVENTER AS REQUIRED.
27. 0.5" HOT AND COLD WATER ROUTED IN OWNER PROVIDED COUNTER TO SINK.
28. PROVIDE 0.5" FILTERED WATER WITH SHUT-OFF VALVE TO ESPRESSO MAKER WITH BACKFLOW PREVENTER.
29. 0.5" HOT AND COLD WATER DOWN TO SINK. TERMINATE WASTE PIPING AT ADJACENT FLOOR SINK.
30. 0.75" COLD WATER DOWN TO FREEZE-PROOF WALL HYDRANT.
31. 0.75" COLD WATER DOWN. TEE OFF 0.5" FILTERED WATER WITH SHUT-OFF VALVE TO ESPRESSO MAKER WITH BACKFLOW PREVENTER. CONTINUE 0.5" FILTERED WATER UNDERSLAB. REFER TO 1/M1.1 FOR CONTINUATION. SHOWN OFF-SET FOR CLARITY.
32. CONDENSATE SHALL PENETRATE THROUGH WALL AND DISCHARGE ONTO ROOF SURFACE.
33. CONDENSATE UP TO AIR HANDLER.
34. COORDINATE SUMP PUMP LOCATION WITH OWNER.
35. REFER TO CIVIL DRAWINGS FOR CONTINUATION.

PLUMBING SYMBOLS:

Symbol	Description
GW	GREASE WASTE PIPING BELOW SLAB
GW	GREASE COMBINATION WASTE AND VENT PIPING
GW	GREASE WASTE PIPING ABOVE SLAB
GW	GREASE COMBINATION WASTE AND VENTING PIPING ABOVE SLAB
RD	ROOF DRAIN PIPING ABOVE SLAB
ORD	OVERFLOW ROOF DRAIN PIPING ABOVE SLAB
	SANITARY WASTE PIPING BELOW SLAB
	SANITARY COMBINATION WASTE AND VENT PIPING
	SANITARY WASTE PIPING ABOVE SLAB
	SANITARY COMBINATION WASTE AND VENT PIPING ABOVE SLAB
	DOMESTIC COLD WATER PIPING
FW	DOMESTIC FILTERED COLD WATER PIPING
	DOMESTIC HOT WATER PIPING
	PLUMBING VENT PIPING
D	CONDENSATE DRAIN PIPING
	SHUT-OFF VALVE
	UNION
	TEE / ELBOW DOWN WITH VALVE IN VERTICAL PIPE
FPH1 HB1	FREEZEPROOF WALL HYDRANT / HOSE BIBB
	BACKFLOW PREVENTER
FD1	FLOOR DRAIN / FLOOR SINK
FGCO	FINISH GRADE CLEANOUT
FFCO	FINISH FLOOR CLEANOUT

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Missouri State Certificate of Authority #2005026903

M1.1
PLUMBING PLAN

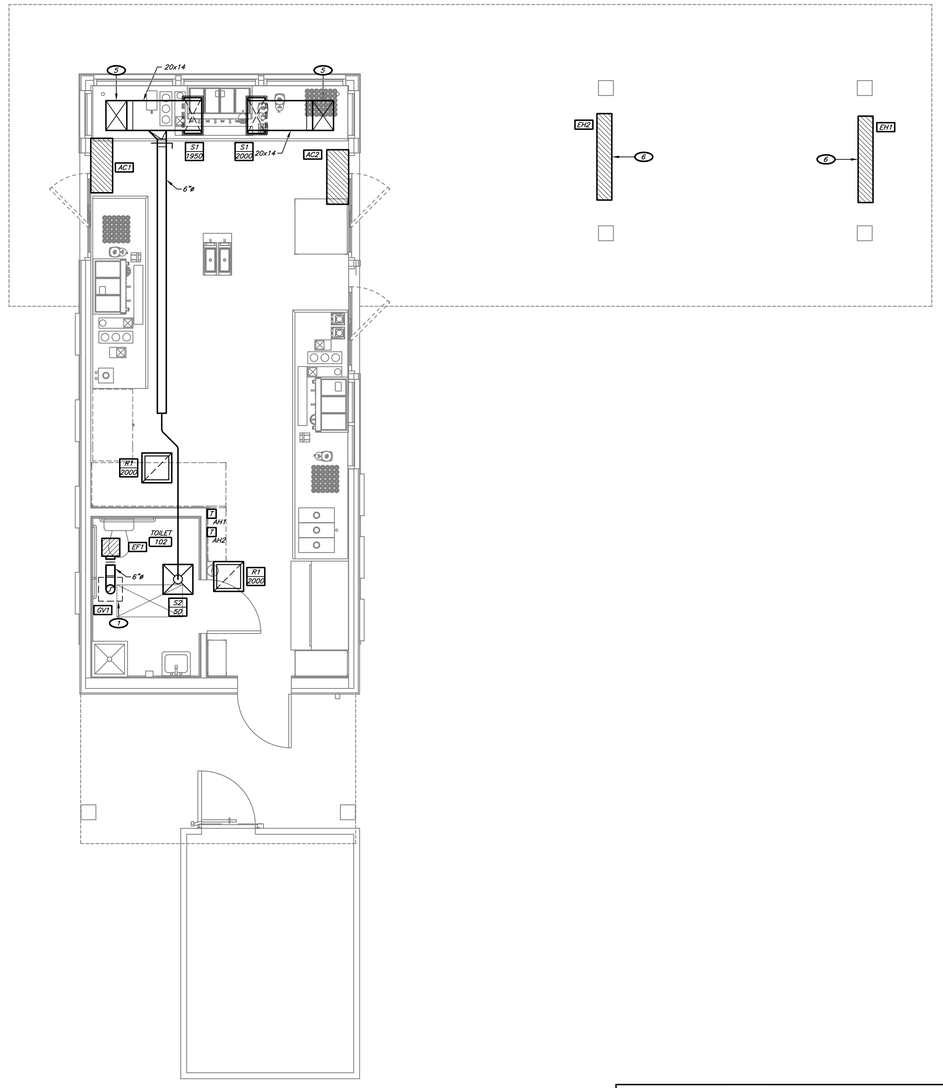
DATE: APRIL 26, 2022

KEYNOTES:

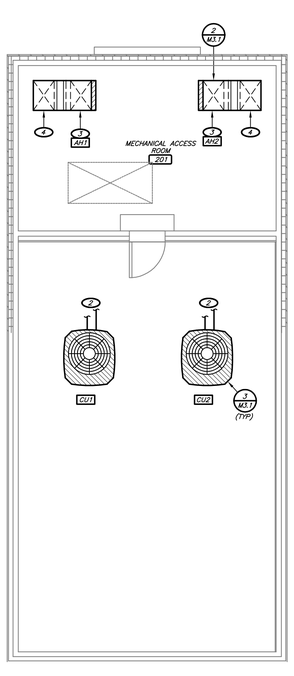
1. 6"ø EXHAUST DUCT UP TO GRAVITY VENTILATOR (WITH 8" CURB).
2. PROVIDE REFRIGERANT LINE ASSOCIATED AIR HANDLER. SIZE AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
3. 20x14 SUPPLY DOWN TO AIR HANDLER TRANSITION AS REQUIRED AND PROVIDE FLEXIBLE CONNECTION. 20x16 RETURN DUCT UP TO BOTTOM OF AIR HANDLER FROM BELOW TRANSITION TO UNIT AS REQUIRED.
4. 20x14 SUPPLY DOWN. REFER TO 1/M2.1 FOR CONTINUATION.
5. 20x14 SUPPLY UP. REFER TO 2/M2.1 FOR CONTINUATION.
6. ELECTRIC HEATER. COORDINATE MOUNTING HEIGHT WITH OWNER.

HVAC SYMBOLS:

- FLEXIBLE DUCTWORK
- CEILING RETURN/EXHAUST GRILLE
- CEILING SUPPLY DIFFUSER
- T — TEMPERATURE SENSOR
- 14x18 — DUCTWORK (WIDTH/HEIGHT) WITH DAMPER
- FLEXIBLE CONNECTION
- ST / 100 — DIFFUSER TYPE AND CFM
- RECTANGULAR TO ROUND TAKE-OFF



1 GROUND LEVEL HVAC PLAN
1/4" = 1'-0"
NORTH



2 PARTIAL ROOF AND ATTIC HVAC PLAN
1/4" = 1'-0"
NORTH

TORGERSON DESIGN PARTNERS
ARCHITECTURE / REAL ESTATE / DEVELOPMENT
116 NORTH 2ND AVENUE – OZARK, MO 65721 – P (417) 581-8889 – F (417) 581-9002
ARCHITECTURAL CORPORATION MISSOURI LICENSE NUMBER: A-2010011427

7 BREW COFFEE
LEE'S SUMMIT, MO
1410 NE DOUGLAS STREET
LEE'S SUMMIT, MO 64086

STATE OF MISSOURI
RYAN S. JONES
NUMBER
PE-2004017193
PROFESSIONAL ENGINEER
04-26-22

ENGINEER OF RECORD:
NAME: RYAN JONES
LICENSE NO.PE-2004017193

PROJECT NUMBER:
21334 7BSM

REVISION:

CJD LLC
Engineering | Energy | Innovation
2225 West Chesterfield Boulevard, Suite 200, Springfield, MO 65807
P: 417.877.1700 F: 417.324.7735 www.cjd-eng.com
Missouri State Certificate of Authority #2005026903

M2.1
HVAC PLAN

DATE: APRIL 26, 2022

PIPING MATERIAL SCHEDULE

SYSTEM	PIPING SIZE	PIPING TYPE	PIPING SCHEDULE	PIPING GRADE	PIPING ASTM	PIPING MATERIAL	FITTINGS MATERIAL	FITTINGS TYPE	MAXIMUM WORKING PRESSURE (PSI)	MAXIMUM WORKING TEMP (DEG. F)	FIELD TEST PRESSURE (PSI)	FIELD TEST TIME (HOURS)	NOTES
DOMESTIC WATER ABOVE AND BELOW GRADE	0.5"-2"	PEX	-	-	A877	PEX	BRONZE	MJ	120	40-180	150	1	-
GREASE WASTE AND VENT ABOVE GRADE	ALL	DWV	40	-	2665	PVC	PVC	DR/SW	10 FT	50-180	10 FT	1	1
GREASE WASTE BELOW GRADE	ALL	DWV	40	-	2665	PVC	PVC	DR/SW	10 FT	50-180	10 FT	1	1
SANITARY WASTE BELOW GRADE	ALL	DWV	40	-	2665	PVC	PVC	DR/SW	10 FT	50-180	10 FT	1	1
SANITARY WASTE & VENT ABOVE GRADE	ALL	DWV	40	-	2665	PVC	PVC	DR/SW	10 FT	50-180	10 FT	1	1
TEMPERATURE & PRESSURE RELIEF DRAIN	ALL	M	-	-	B88	COPPER	COPPER	DR/SJ	10 FT	40-70	10 FT	1	-

NOTES:
1. USE OF CELLULAR CORE DWV PIPING IS STRICTLY PROHIBITED.

ABBREVIATIONS:
CI - CAST IRON
CS - CARBON STEEL
CW - CONTINUOUS WELD
DI - DUCTILE IRON
DR - DRAINAGE FITTING
DWV - DRAINAGE WASTE AND VENT
MI - MALLEABLE IRON
MJ - MECHANICAL JOINT
NH - NO-HUB
SJ - 95-5 TIN-ANTIMONY SOLDER JOINT
SS - STANDARD STRENGTH / SERVICE WEIGHT
SW - SOLVENT WELD

PLUMBING FIXTURE & EQUIPMENT SCHEDULE

MARK	DESCRIPTION	MANUFACTURER	MODEL NUMBER	ACCESSORIES	PIPING CONNECTION SIZES COLD WATER	HOT WATER	WASTE	VENT	NOTES	EQUIVALENT MANUFACTURERS
BFP1	BACK FLOW PREVENTER	WATTS	LF009	LEAD FREE BNRONZE CONSTRUCTION, TWO IN LINE INDEPENDENT CHECK VALVES, REPLACEABLE CHECK SEATS WITH AN INTERMEDIATE RELIEF VALVE, AND BALL VALVE TEST COCKS.	1"	-	-	-	-	FEBCO
BFP2	BACKFLOW PREVENTER	WATTS	SD-3	DUAL CHECK VALVE WITH ATMOSPHERIC PORT AND STRAINER FOR CARBONATED BEVERAGE MACHINES	0.5"	-	-	-	-	FEBCO
TD1	FLOOR DRAIN	-	-	CUSTOM STAINLESS STEEL TRENCH DRAIN BY OWNER	-	-	SEE PLAN	SEE PLAN	2	ZURN
TD2	FLOOR DRAIN	-	-	CUSTOM STAINLESS STEEL TRENCH DRAIN BY OWNER	-	-	SEE PLAN	SEE PLAN	2	ZURN
FGCO	FINISH GRADE CLEANOUT	ZURN	ZN1400-HD	-	-	-	SEE PLAN	-	-	SIOUX CHIEF, SMITH, WADE
FPWH	FREEZE-PROOF WALL HYDRANT	JAY R. SMITH	#5609	NICKEL BRONZE-FACE, KEY OPERATED, INTEGRAL VACUUM BREAKER	0.75"	-	-	-	3	SMITH, WOODFORD
FS1	FLOOR SINK	JAY R. SMITH	#3161	CAST IRON RECEPTOR, A.R.E. INTERIOR 12"x12" NICKEL BRONZE STRAINER, SEDIMENT BUCKET.	-	-	3"	SEE PLAN	1	-
GI1	GREASE INTERCEPTOR	SCHIER	GB-75	75 GPM, 125 GALLON CAPACITY, 616 lbs. GREASE CAPACITY, PEDESTRIAN RATED COVER, PROVIDE 24" COVER RISER.	-	-	4"	-	-	SUBMIT FOR APPROVAL
LV1	WALL HUNG ADA LAVATORY	AMERICAN STANDARD	#355.012	#2385.130 FAUCET, WITH SINGLE METAL LEVER HANDLE #7723.018, 1.25" TAILPIECE AND TRAP, SUPPLIES AND STOP VALVES, INSULATE WITH PROWRAP SEAMLESS MOLDED CLOSED CELL VINYL INSULATION. PROVIDE WATTS LFUSG-B MIXING VALVE.	0.5"	0.5"	2"	1.5"	1,3,	CRANE, KOHLER, TOTO, ZURN
MB1	MOP BASIN	FIAT	MSB-2424	830-AA FAUCET, 838-AA HOSE AND BRACKET, 889-CC MOP HANGER, MSG2424 WALL GUARD	0.5"	0.5"	3"	1.5"	1	STERN WILLIAMS
PRV1	PRESSURE REDUCING VALVE	CASH ACME	EB25	SET TO MAX DELIVERY PRESSURE OF 80-PSI.	SEE PLAN	-	-	-	-	FEBCO, WILKINS
WC1	ADA FLUSH TANK WATER CLOSET	AMERICAN STANDARD	2467.016	1.6 GALLON FLUSH, 16.5" HIGH ELONGATED BOWL, FLOOR MOUNTED, TANK TYPE, VITREOUS CHINA, OPEN FRONT SEAT WITH CHECK HINGE AND LESS COVER. CHROME PLATED ANGLE STOP AND RISER. HANDLE ON WIDE SIDE OF FIXTURE.	0.5"	-	4"	2"	1,4	ELJER, KOHLER, TOTO

NOTES:
1. ACCESSORIES SHALL BE SAME MANUFACTURER AS FIXTURE / EQUIPMENT UNLESS NOTED OTHERWISE.
2. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT.
4. INSTALL ACCESSORIES AS RECOMMENDED BY MANUFACTURER FOR ADA COMPLIANCE.
5. FIELD COORDINATE/VERIFY FRAMING ROUGH-IN DIMENSIONS WITH ASSOCIATED CONTRACTOR BEFORE ORDERING.
6. PROVIDE WALL CARRIER OR BRACKET AS RECOMMENDED BY MANUFACTURER FOR WALL MOUNTED INSTALLATION.

PUMP SCHEDULE

MARK	MANUFACTURER	SERIES	INLET	DISCH.	GPM	HEAD (FT.)	NPSH	TYPE	WORKING CLASS	H.P.	RPM	VOLTAGE/ PHASE	CONST.	FLUID TYPE	FLUID TEMP.	NOTES/ ACCESS.	EQUIVALENT MANUFACTURERS
SP1	ZOELLER	1043-0006	-	1"	35	20	-	SUMP	-	1/3	-	115/1	CI	WATER	40-140	1	LITTLE GIANT, WEIL

NOTES/ACESSORIES:
1. PROVIDE ZOELLER 30-0152 CHECK VALVE INSTALLED ON PUMP DISCHARGE PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.

ABBREVIATIONS:
NPSH - NET POSITIVE SUCTION HEAD
CW - CHILLED WATER
CHW - CHILLED/HOT WATER
CDW - CONDENSER WATER
HW - HEATING HOT WATER
DHW - DOMESTIC HOT WATER
BFCI - BRONZE FITTED CAST IRON
AB - ALL BRONZE
AI - ALL IRON
AS - AQUASTAT KIT
BMES - BASE MOUNTED END SUCTION
IL - IN-LINE

WATER HEATER SCHEDULE

MARK	MANUFACTURER	MODEL #	TYPE	GALLON CAPACITY	RECOVERY GPH @ 85F	KW	VOLTAGE/ PHASE	ACCESSORIES
WH1	RHEEM	RTEX-18	ELEC	-	-	18.0	240/1	1,2,3

ACCESSORIES:
1. THERMAL EXPANSION TANK EQUIVALENT TO AMTROL MODEL ST-5
2. DRAIN VALVE WITH THREADED HOSE CONNECTION
3. PRESSURE & TEMPERATURE RELIEF VALVE

GRAVITY VENTILATOR SCHEDULE

MARK	MANUFACTURER	MODEL #	SERVICE	CFM	DELTA P (STATIC)	THROAT AREA MIN (SQ.FT.)	FACE AREA MIN (SQ.FT.)	FACE VELOCITY (FPM)	NOTES AND ACCESSORIES
GV1	COOK	PR8	EXHAUST	75	0.1"	0.394	1.38	54.3	1,2,3,4

NOTES AND ACCESSORIES:
1. FACTORY FABRICATED INSULATED ROOF CURB WITH CUSTOM HEIGHT OF 14" MINIMUM ABOVE FINISH ROOF SURFACE.
2. PROVIDE COUNTER BALANCE BACKDRAFT DAMPER.
3. PROVIDE ANTI-CONDENSATE COATING.
4. PROVIDE BIRD SCREEN.

AIR HANDLER/COIL/CONDENSING UNIT SCHEDULE

AIR HANDLER

MARK	MANUFACTURER	MODEL #	SA (CFM)	OA (CFM)	EXTERNAL STATIC	ELEC HEAT (KW/STAGES)	VOLTAGE/ PHASE	MCA	MOCP	NOTES
AH1	OMNIGUARD	BCE5E60	1810	-	0.5"	14.4/1	240/1	96	100	1,2,3,4,5
AH2	OMNIGUARD	BCE5E60	1810	-	0.5"	14.4/1	240/1	96	100	1,2,3,4,5

AIR HANDLER NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES WET COIL, EXCLUDES FILTER LOSS.
2. PROVIDE FRONT ACCESSIBLE FILTER RACK AND 2" FILTER EQUAL TO FARR 30/30 WITH MERV 7 MINIMUM RATING.
3. PROVIDE SINGLE POINT POWER CONNECTION WITH CIRCUIT BREAKER DISCONNECTING MEANS.
4. PROVIDE ENERGY STAR RATED 7-DAY PROGRAMMABLE THERMOSTAT.
5. PROVIDE WATER LEVEL MONITORING DEVICE IN DRAIN CONNECTED TO FAN SHUT DOWN RELAY IN AIR HANDLER.

COIL / CONDENSING UNIT

MARK	MANUF	EVAP. COIL MODEL #	COND. UNIT MODEL #	ENTERING AIR DB/WB	SENSIBLE MBH	TOTAL MBH	VOLTAGE/ PHASE	MCA	MOCP	NOTES
CU1	OMNIGUARD	W/ AHU	4AC16L60P-50	80 / 67	45.4	60.5	240/1	29.6	50	1,2,3
CU2	OMNIGUARD	W/ AHU	4AC16L60P-50	80/ 67	45.4	60.5	240/1	29.6	50	1,2,3

COIL / CONDENSING UNIT NOTES:
1. PROVIDE REFRIGERANT LINE SET(S) SIZED PER MANUFACTURER'S RECOMMENDATIONS.
2. PROVIDE ALL REFRIGERATION SYSTEM ACCESSORIES REQUIRED BY MANUFACTURER FOR GIVEN LINE SET ROUTING.
3. PROVIDE LOW AMBIENT CRANK CASE HEATER (10 DEG. F)

AIR CURTAIN SCHEDULE

MARK	MANUFACTURER	MODEL #	MOUNTING	HEATING (KW)	AMCA LAB AIRFLOW (SCFM)	NOZZLE WIDTH	MAX. VELOCITY @ NOZZLE (FPM)	VOLTAGE/ PHASE	MCA	MOCP	NOTES
AC1	STRONGWAY	49947	WALL	-	816	36"	3,937	120/1	2.9	15	1 THRU 8
AC2	STRONGWAY	49947	WALL	-	816	36"	3,937	120/1	2.9	15	1 THRU 8

NOTES:
1. PROVIDE FACTORY INSTALLED DISCONNECT.
2. FACTORY INSTALLED UNIT MOUNTED CONTROLS WITH TWO SPEED CONTROL.
3. MAGNETIC DOOR LIMIT SWITCH.
4. FACTORY MOUNTED MOTOR CONTROL PANEL.
5. CLEANABLE FILTER.
6. FIELD COORDINATE EXACT MOUNTING REQUIREMENTS AND PROVIDE ALL REQUIRED ACCESSORIES
7. UNIT SHALL BE RATED FOR OUTDOOR CONDITIONS
8. COORDINATE FINISH WITH OWNER.

FAN SCHEDULE

MARK	MANUFACTURER	MODEL #	CFM	ESP (IN. W.C.)	MOUNTING	FINISH	DAMPER	VOLTAGE/ PHASE	MOTOR HP/WATTS	NOTES
EF1	COOK	GC-146	75	0.25"	CEILING	STD	-	120/1	31W	1,2,3

NOTES:
1. FACTORY MOUNTED DISCONNECTING MEANS.
2. GRAVITY BACKDRAFT DAMPER.
3. PROVIDE BIRD SCREEN.

ELECTRIC HEATER SCHEDULE

MARK	MANUFACTURER	MODEL #	MOUNTING	FINISH	CFM	HEATING (WATTS)	VOLTAGE/ PHASE	MCA	MOCP	NOTES
EH1	INFRATECH	CL3024SS	SUSPENDED	ARCH	-	3000	240/1	12.5	20	1
EH2	INFRATECH	CL3024SS	SUSPENDED	ARCH	-	3000	240/1	12.5	20	1
EH3	INFRATECH	CL3024SS	SUSPENDED	ARCH	-	3000	240/1	12.5	20	1

NOTES:
1. PROVIDE FACTORY MOUNTED DISCONNECTING MEANS.

AIR DEVICE SCHEDULE

MARK	MANUFACTURER	MODEL #	DUCT CONNECTION SIZE	SERVICE	MODULE SIZE	FRAME	FINISH	DAMPER	MAX. NC	THROW (FT)	DELTA P (STATIC)	NOTES
S1	OWNER PROVIDED		12x24: 0-2000 CFM	SUPPLY	-	SURFACE	WHITE	-	30	20	0.1"	-
S2	OWNER PROVIDED		6": 0-75 CFM	SUPPLY	-	SURFACE	WHITE	-	30	20	0.1"	-
R1	OWNER PROVIDED		22x22: 0-2000 CFM	RETURN	-	SURFACE	WHITE	-	30	-	0.1"	-

NOTES:

GENERAL MECHANICAL NOTES:

GENERAL

1. GENERAL MECHANICAL NOTES APPLY TO ALL MECHANICAL SHEETS.
2. CJD ENGINEERING LLC, BEING THE AUTHOR OF THESE CONSTRUCTION DOCUMENTS RESERVES THE RIGHT OF FINAL INTERPRETATION AS TO THEIR INTENT AND MEANING. ANY ADDITIONAL WORK OR COSTS RESULTING FROM THE CONTRACTOR'S OWN INTERPRETATION AS TO THE INTENT OR MEANING WITHOUT CONSULTATION WITH CJD ENGINEERING LLC SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO COST TO OWNER OR A/E.
3. THE INTENT OF THE WORK INDICATED ON THESE CONSTRUCTION DOCUMENTS IS TO PROVIDE A FULLY FUNCTIONING SYSTEM IN COMPLETE WORKING ORDER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND THE CONTRACTOR'S SUPPLIERS TO INCLUDE ALL ACCESSORIES, COMPONENTS, PARTS, ETC. THAT MAY NOT BE INDICATED ON THESE CONSTRUCTION DOCUMENTS TO PROVIDE BUILDING CODE COMPLIANT SYSTEMS AND EQUIPMENT THAT OPERATE SATISFACTORILY AS DESIGNED AND INTENDED.
4. DRAWINGS ARE NOT SET UP SPECIFICALLY ACCORDING TO TRADE AND EACH CONTRACTOR AND SUB-CONTRACTOR OR TRADE IS REQUIRED TO REVIEW THE CONSTRUCTION DOCUMENTS AS A WHOLE AND PROVIDE ANY MISC. ITEMS, MATERIALS, WORK, ETC. REQUIRED TO COMPLETE THE WORK AS SHOWN ON ALL DOCUMENTS. THIS REQUIREMENT APPLIES TO ALL TRADES. STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING REQUIREMENTS AND RELATED WORK ARE INDICATED THROUGHOUT THE DOCUMENTS AND SHOULD BE REVIEWED WITH EACH FOR OVERALL SCOPE OF WORK.
5. ALL MECHANICAL WORK SHALL BE PERFORMED BY LICENSED PLUMBING AND MECHANICAL CONTRACTORS AND SHALL BE IN ACCORDANCE WITH REQUIREMENTS OF THE 2018 INTERNATIONAL BUILDING, PLUMBING, FUEL GAS AND MECHANICAL CODES, AND ALL APPLICABLE LOCAL CODES AS ADOPTED BY LOCAL AUTHORITIES.
6. THE CONTRACTOR SHALL INCLUDE ALL PERMIT AND INSPECTION FEES IN BID.
7. THE PLANS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED. REFER TO CIVIL, STRUCTURAL, AND ARCHITECTURAL DRAWINGS AND EXISTING CONDITIONS FOR DIMENSIONS. FIELD VERIFY ALL DIMENSIONS.
8. PIPING AND DUCTWORK LAYOUTS ARE DIAGRAMMATIC. FIELD COORDINATE EXACT LOCATIONS AND ROUTINGS WITH STRUCTURE, LIGHT FIXTURES, CONDUITS, ETC. FINAL RESULT SHALL BE EQUIVALENT TO THAT INDICATED ON DRAWINGS.
9. COOPERATE CLOSELY WITH ALL OTHER TRADES TO EXPEDITE CONSTRUCTION AND AVOID INTERFERENCES AND CONFLICTS. BEFORE ANY PIPING, DUCTWORK, CONDUIT, ETC. IS INSTALLED, IT SHALL BE COORDINATED CAREFULLY BETWEEN ALL TRADES.
10. MAINTAIN ALL CLEARANCES REQUIRED BY PLUMBING AND HVAC EQUIPMENT. COORDINATE WITH ELECTRICAL CONTRACTOR TO MAINTAIN ALL CLEARANCES REQUIRED FOR EQUIPMENT. DO NOT ROUTE PIPING, DUCTWORK, ETC. ABOVE ELECTRICAL PANELS.
11. DRAWINGS REPRESENT FINAL RESULT. REMOVE, RELOCATE, MODIFY EXISTING EQUIPMENT, DUCTWORK, PIPING, ETC. AS REQUIRED. FIELD VERIFY EXISTING CONDITIONS AND EXACT REQUIREMENTS. NO EXTRAS WILL BE PAID DUE TO UNANTICIPATED EXISTING CONDITIONS.
12. IF CONTRACTOR WISHES TO INCORPORATE PRODUCTS OTHER THAN THOSE NAMED IN SPECIFICATIONS IN HIS BID OR PRODUCTS BY MANUFACTURERS OTHER THAN THOSE LISTED AS APPROVED MANUFACTURERS, THE CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST FOR REVIEW AND APPROVAL OF PROPOSED SUBSTITUTIONS TO CJD ENGINEERING LLC NOT LESS THAN FIVE WORKING DAYS PRIOR TO BID DATE. APPROVAL OR ACCEPTANCE OF PROPOSED SUBSTITUTION OF MANUFACTURERS OR ITEMS IS FOR THE PURPOSES OF BIDDING ONLY AND DOES NOT RELIEVE THE PROPOSED SUBSTITUTION FROM THE SUBMITTAL/SHOP DRAWING REVIEW AND DOES NOT CONSTITUTE PRIOR APPROVAL OF PROPOSED SUBSTITUTIONS.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COSTS OF LARGER WIRING, CONDUIT, ENCLOSURES, CONTROL AND OVERCURRENT PROTECTIVE DEVICES, ETC. RESULTING FROM SUBSTITUTION OF EQUIPMENT OTHER THAN THAT WHICH WAS THE BASIS OF DESIGN AT NO COST TO OWNER OR A/E.
14. THE CONTRACTOR SHALL PROVIDE ELECTRONIC SHOP DRAWINGS/SUBMITTALS OF ALL FIXTURES AND EQUIPMENT FURNISHED UNDER THIS CONTRACT.
15. THE CONTRACTOR SHALL PERFORM A PRELIMINARY FUNCTIONAL TEST AND BALANCE FOR ALL EQUIPMENT INSTALLED UNDER THIS CONTRACT. THE CONTRACTOR SHALL THEN OBTAIN THE SERVICES OF AN INDEPENDENT FIRM CERTIFIED WITH ASSOCIATED AIR BALANCING COUNCIL OR NATIONAL ENVIRONMENTAL BALANCING BUREAU TO PERFORM THE HVAC SYSTEM TESTING AND BALANCING IN ACCORDANCE WITH AABC OR NEBB NATIONAL STANDARDS.
16. THE CONTRACTOR SHALL GUARANTEE ALL EQUIPMENT, ACCESSORIES, AND MATERIAL FURNISHED BY HIM FOR A PERIOD OF ONE YEAR FROM FINAL ACCEPTANCE AGAINST ALL DEFECTS.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING COSTS TO CUT, PATCH AND REPAIR EXISTING WALL, FLOOR AND CEILING CONSTRUCTION AS REQUIRED TO INSTALL NEW PLUMBING FIXTURES, DUCTWORK, EQUIPMENT, PIPING, ETC. ARE INCLUDED IN THE BID PRICE.

GENERAL MECHANICAL NOTES:

PRODUCTS

1. ALL SHUTOFF VALVES ON DOMESTIC WATER SHALL BE BRONZE FULL-PORT BALL VALVE TYPE.
2. P-TRAPS SHALL INCLUDE INTEGRAL CLEANOUT.
3. DUCT CONSTRUCTION:

ALL DUCTWORK SHALL BE FABRICATED OF G90 GALVANIZED STEEL AND INSTALLED IN ACCORDANCE WITH THE SMACNA HVAC DUCT CONSTRUCTION STANDARDS – METAL AND FLEXIBLE MANUAL. ALL SUPPLY AND RETURN AIR DUCT PRESSURE CLASSES SHALL BE THE SAME AS THE EXTERNAL STATIC PRESSURE OF THE EQUIPMENT SUPPLYING THE DUCT. THE EQUIPMENT ESP SHALL BE THE PRESSURE CLASS FOR THE ENTIRE SUPPLY DUCT SYSTEM.

CONCEALED ROUND SUPPLY AIR DUCT – 3" PRESSURE CLASS OR LESS: GALVANIZED SNAP-LOCK PIPE WITH TRANSVERSE JOINTS AND CONNECTIONS SEALED. WRAP SUPPLY AND OUTSIDE AIR DUCTS WITH SPECIFIED INSULATION.

CONCEALED ROUND RETURN AND EXHAUST DUCT – 3" PRESSURE CLASS OR LESS: GALVANIZED SNAP-LOCK PIPE WITH TRANSVERSE JOINTS AND CONNECTIONS SEALED WITH SPECIFIED INSULATION.

RECTANGULAR SUPPLY AND RETURN AIR DUCT: – 3" PRESSURE CLASS OR LESS: GALVANIZED SHEET METAL. LINE SUPPLY, RETURN, OUTDOOR AIR AND MAKE-UP AIR DUCTWORK WITH SPECIFIED INSULATION.

FLEXIBLE DUCTWORK: FLEXMASTER USA TYPE 8B, UL 181 CLASS 1 RATED PRE-INSULATED ACOUSTICAL FLEX DUCT WITH MECHANICAL LOCK HELIX CONSTRUCTION, 25/50 FLAME SMOKE RATING, AND R-6.0 THERMAL BARRIER. RUNS OF FLEXIBLE DUCT SHALL NOT EXCEED 5 LINEAR FEET. FLEXIBLE DUCT SHALL NOT BE USED ON SYSTEMS WITH PRESSURE CLASS GREATER THAN 1".

EXTERIOR DUCTWORK SHALL HAVE FLANGED AND GASKETED JOINTS BY DUCTMATE OR EQUIVALENT.

ALL METAL DUCTWORK SPECIFIED TO RECEIVE INTERIOR THERMAL AND ACOUSTICAL LINER IS NOT SIZED ON PLANS TO INCLUDE THE PROPER THICKNESS OF INSULATION. PROVIDE ADDITIONAL HEIGHT AND WIDTH OF DUCTWORK TO ACCOMMODATE THICKNESS OF INSULATION.

4. DUCT INSULATION:

RECTANGULAR DUCT (LOCATED WITHIN CONDITIONED SPACE): 1.0" THICK, 2.0 LB. DENSITY DUCT LINER. MINIMUM R-VALUE OF 6.0.

ROUND DUCT: WRAP WITH 2", 1.0 LB DENSITY FIBERGLASS DUCT WRAP WITH FOIL-SCRIM-KRAFT FACING. MINIMUM R-VALUE OF 6.0.

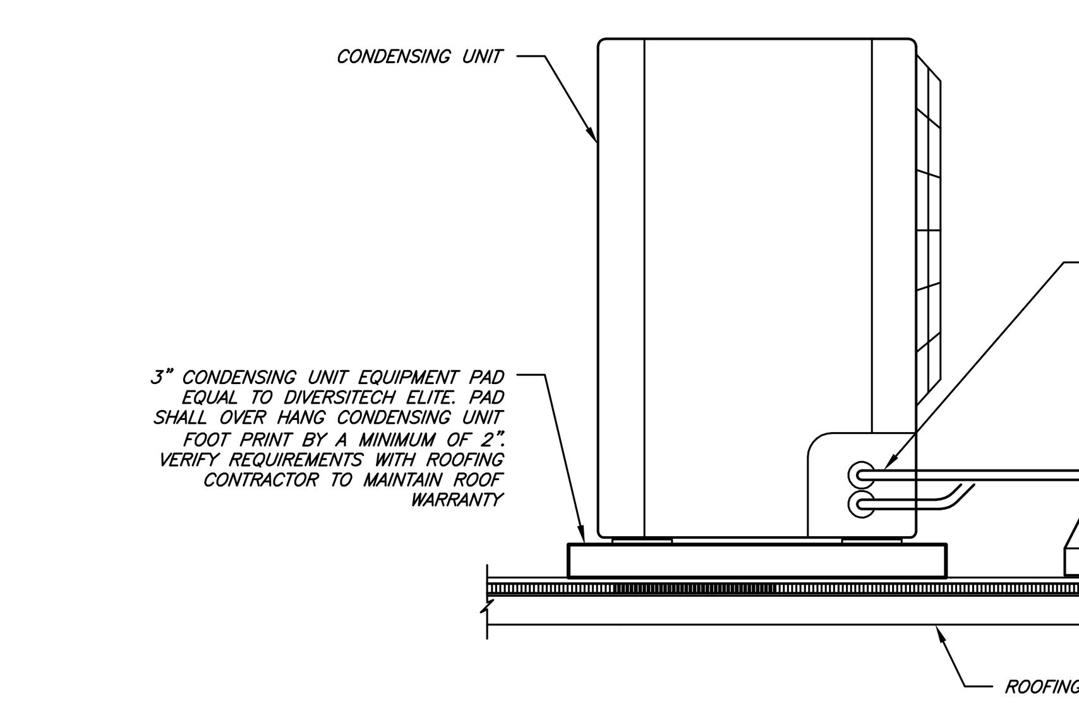
ALL DUCTWORK LOCATED WITHIN AN ATTIC OR UNCONDITIONED SPACE SHALL BE WRAPPED TO PROVIDE A MINIMUM INSULATION VALUE OF R-8.

5. ROUND TAKE-OFF FITTINGS FROM RECTANGULAR DUCTWORK SHALL BE MADE WITH BUCKLEY AIR PRODUCTS MODEL 3300 AND 3300D RECTANGULAR TO ROUND BOOT FITTINGS FITTINGS WITH INTEGRAL VOLUME DAMPERS AND INSULATION STAND-OFFS WHERE INDICATED. EQUIVALENT BY AIR-TITE AND CROWN.
6. PROVIDE AERO-DYNE OR EQUIVALENT DOUBLE WALL TURNING VANES IN ALL RECTANGULAR ELBOWS.
7. BRANCH DUCTS SHALL BE THE SAME SIZE AS DIFFUSER NECK UNLESS NOTED OTHERWISE.
8. EQUIVALENT WATER HEATERS BY A.O. SMITH, BRADFORD WHITE, LOCHINVAR, RHEEM, STATE, OR OTHERS WITH PRIOR APPROVAL.
9. EQUIVALENT GRILLES, DIFFUSERS AND REGISTERS BY CARNES, KRUEGER, NAILOR, PRICE, TITUS, HART & COOLEY, TUTTLE & BAILEY, OR OTHERS WITH PRIOR APPROVAL.
10. EQUIVALENT EXHAUST FANS BY ACME, COOK, GREENHECK, PENN, OR OTHERS WITH PRIOR APPROVAL.
11. EQUIVALENT FURNACES, EVAPORATOR COILS AND CONDENSING UNITS BY CARRIER, TRANE AND YORK, AND SHALL BE THE PRODUCT OF A SINGLE MANUFACTURER.

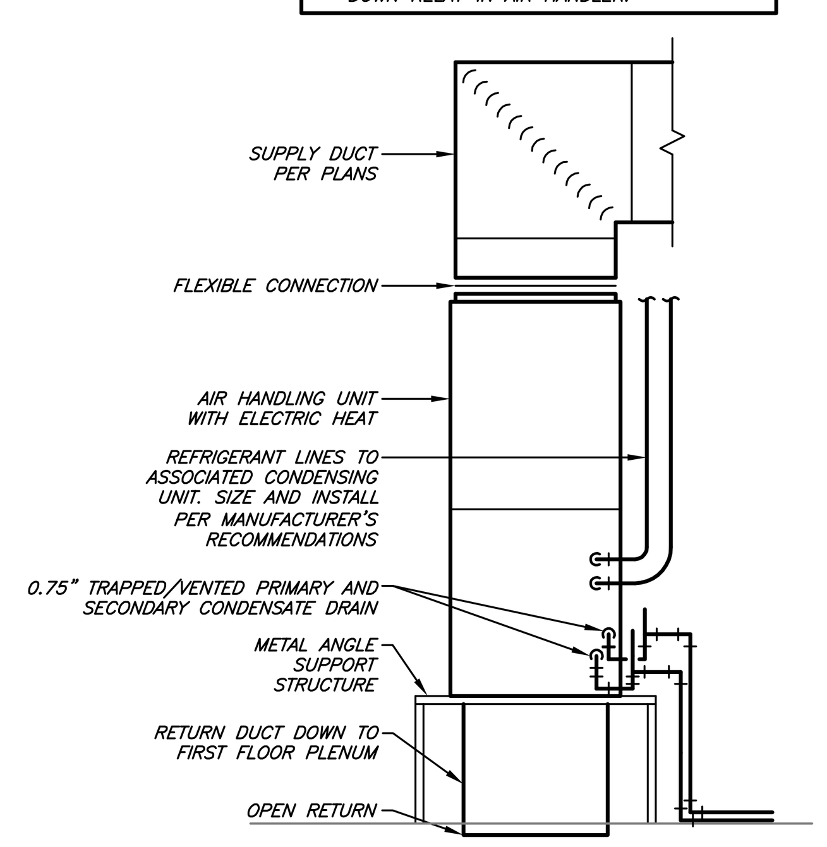
EXECUTION

1. PROVIDE ALL ACCESSORIES, COMPONENTS, ETC. REQUIRED FOR COMPLETE INSTALLATION OF SPECIFIED EQUIPMENT.
2. PROVIDE UNISTRUTS AND ACCESSORIES AS REQUIRED FOR SUPPORT OF PIPING, EQUIPMENT, ETC.
3. CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS TO EQUIPMENT. PROVIDE ADAPTERS, FITTINGS, ETC. FOR ALL EQUIPMENT AS REQUIRED. COORDINATE SPECIFIC REQUIREMENTS WITH EQUIPMENT SUPPLIERS. REFER TO SPECIAL EQUIPMENT DRAWINGS FOR ADDITIONAL INFORMATION.
4. INSULATE ALL DOMESTIC WATER AND REFRIGERANT PIPING WITH 1/2" THICK ARMACELL AP/ARMAFLEX FLEXIBLE ELASTOMERIC THERMAL PIPE INSULATION. EQUIVALENT BY RUBATEX. THE USE OF TUBOLIT OR EQUIVALENT CLOSED CELL POLYETHYLENE FOAM INSULATION IS STRICTLY PROHIBITED.
5. INSTALL TRAPS AT WASTE CONNECTIONS TO ALL FLOOR DRAINS AND OTHER PLUMBING FIXTURES WITHOUT A TRAP INTEGRAL TO THE FIXTURE.
7. INSTALL WATER AND WASTE PIPING BELOW SLAB AND BELOW GRADE ON TOP OF A 6" BED OF PEA GRAVEL, WITH 6" PEA GRAVEL ON SIDES AND TOP OF PIPING.
8. PROVIDE TRAPPED AND VENTED CONDENSATE DRAIN CONNECTION TO ALL HVAC EQUIPMENT WHERE REQUIRED. EXTEND FULL SIZE TO NEAREST ROOF DRAIN, FLOOR DRAIN, OR MOP BASIN.
9. SEAL ALL DUCTWORK IN ACCORDANCE WITH THE LATEST SMACNA METAL AND FLEXIBLE DUCT CONSTRUCTION STANDARDS MANUAL. AT A MINIMUM, LOW STATIC PRESSURE DUCTS SHALL BE SEALED WITH WATER, SOLVENT OR SILICONE BASED SEALANT IN ACCORDANCE WITH SMACNA DUCT SEAL CLASS C. THE USE OF DUCT TAPE IS STRICTLY PROHIBITED.
10. ALL THERMOSTATS, SENSORS, DAMPER CONTROLS, ASSOCIATED ACCESSORIES, AND FINAL WIRING CONNECTIONS SHALL BE PROVIDED BY HVAC CONTRACTOR. ROUGH-IN AND WIRE INSTALLATION SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR.
11. PROVIDE HVAC EQUIPMENT WITH NEW FILTERS DURING CONSTRUCTION AND UPON SUBSTANTIAL COMPLETION.
12. COORDINATE CEILING DIFFUSER/GRILLE LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLANS.
13. PROVIDE FLEXIBLE CONNECTION AND TRANSITION TO UNIT OPENING SIZES FOR ALL HVAC EQUIPMENT.
14. INSTALL ALL ROOF EQUIPMENT, PIPE, CONDUIT AND DUCTWORK SUPPORTS, CURBS AND PENETRATIONS IN ACCORDANCE WITH THE REQUIREMENTS OF THE ROOFING SYSTEM MANUFACTURER.
15. PROVIDE FACTORY FABRICATED PIPE CURB ASSEMBLIES FOR MULTIPLE CONDUIT AND PIPING PENETRATIONS THROUGH THE ROOF. PIPE CURB ASSEMBLIES SHALL BE FACTORY FABRICATED, 8" TALL (MINIMUM) GALVANIZED STEEL ROOF CURBS WITH INTEGRAL BASE PLATE, 3 LB. DENSITY INSULATION, WOOD NAILER, ACRYLIC CLAD THERMOPLASTIC COVER, FASTENING SCREWS, AND GRADUATED STEP BOOTS WITH STAINLESS STEEL CLAMPS AS MANUFACTURED BY PATE, THYBAR OR APPROVED EQUIVALENT. PROVIDE PIPE SEAL ASSEMBLIES FOR INDIVIDUAL CONDUIT OR PIPE PENETRATIONS. ALL WORK SHALL BE IN ACCORDANCE WITH ROOFING MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS.
16. SUPPORT PIPING ON ROOF WITH PREMANUFACTURERED PIPING SUPPORTS EQUIVALENT TO B-LINE C-SERIES. FIELD FABRICATED SUPPORTS CONSISTING OF LUMBER, ETC. ARE NOT ACCEPTABLE.
17. PROVIDE SLEEVES AT PIPE PENETRATIONS OF EXTERIOR OR FOUNDATION WALLS. SEAL PENETRATIONS WEATHERTIGHT.
18. SEAL ALL PENETRATIONS THROUGH FIRE-RATED ASSEMBLIES AS NECESSARY TO RESTORE FIRE-RESISTANCE RATING OF ASSEMBLY. REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR RATED ASSEMBLIES, FIRESTOPPING MATERIALS AND REQUIREMENTS.
19. ALL EXPOSED PIPING, DUCTWORK AND EQUIPMENT SHALL BE PRIMED AND PAINTED. REFER TO ARCHITECTURAL DRAWINGS FOR REQUIREMENTS AND COORDINATE WITH GENERAL CONTRACTOR.
20. THE MECHANICAL/PLUMBING CONTRACTOR SHALL SEAL ALL NECESSARY PENETRATIONS OF RATED WALL AND CEILING CONSTRUCTION WITH FIRE CAULK. PROVIDE FIRE PUTTY PAD AROUND LAUNDRY AND ICE-MAKER ROUGH-IN BOXES INSTALLED IN RATED WALL AND CEILING CONSTRUCTION. FIRE CAULK AND PUTTY PADS SHALL BE MANUFACTURED BY 3M OR HILTI, AND SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
21. PROVIDE SIOUX CHIEF WATER HAMMER ARRESTERS ON ALL PLUMBING FIXTURES SIZED IN ACCORDANCE WITH PLUMBING AND DRAINAGE INSTITUTE STANDARD P.D.I. WH201. EQUIVALENT BY JONESPEC, J.R. SMITH, OR WADE.

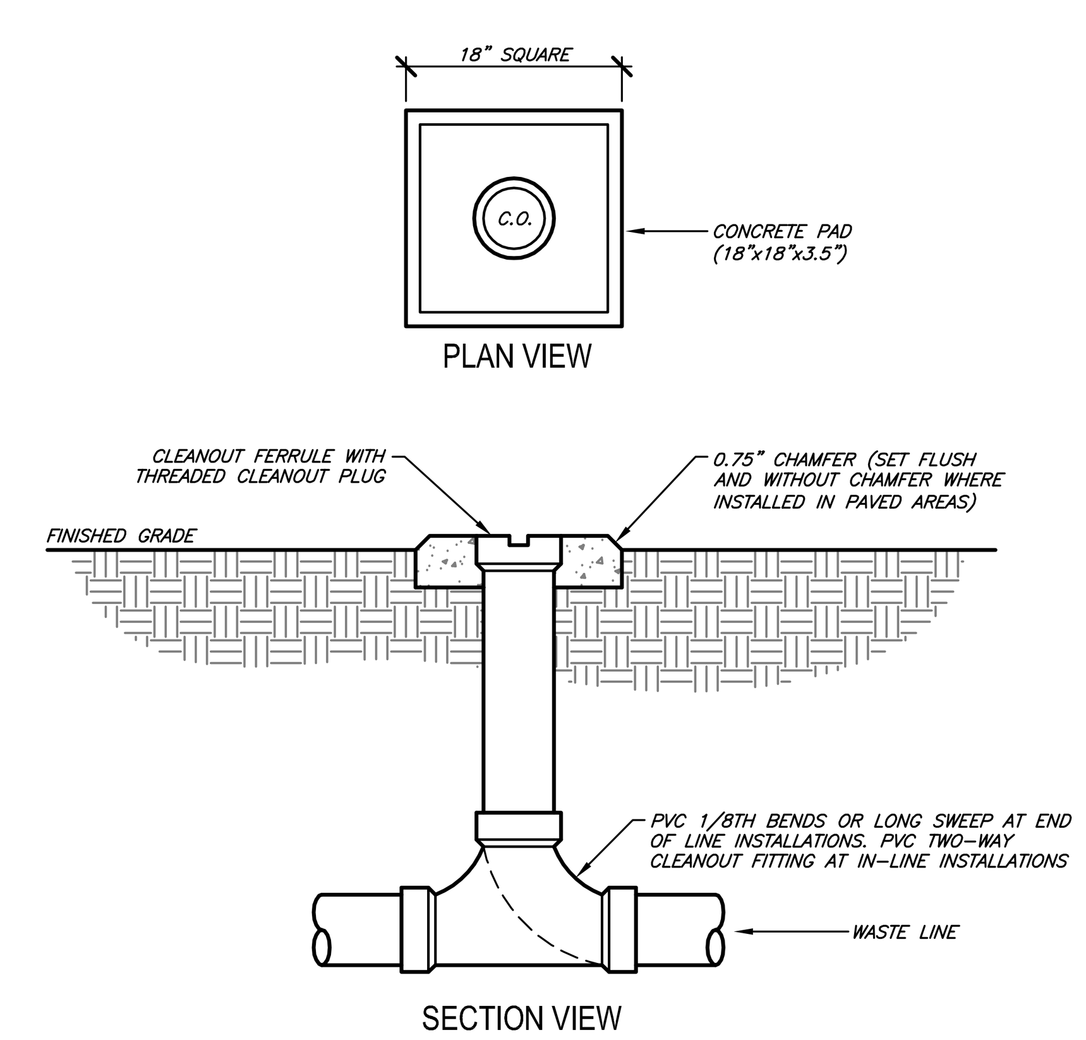
SPECIAL NOTE:
1. CONDENSATE DRAIN PIPING SHALL BE COPPER OR PEX (COMPLYING WITH IMC 602.2.1) WHEN AIR HANDLER IS INSTALLED IN A ROOM/CLOSET THAT'S CONSIDERED A RETURN AIR PLENUM.
2. PROVIDE WATER LEVEL MONITORING DEVICE IN DRAIN PAN. CONNECTED TO FAN SHUT DOWN RELAY IN AIR HANDLER.



3 ROOF MOUNTED CONDENSING UNIT DETAIL
NO SCALE



2 AIR HANDLER DETAIL
NO SCALE



1 FINISH GRADE CLEANOUT DETAIL
NO SCALE

TORGERSON DESIGN PARTNERS
ARCHITECTURE / REAL ESTATE / DEVELOPMENT
116 NORTH 2ND AVENUE – OZARK, MO 65721 – P (417) 581-8889 – F (417) 581-9002
ARCHITECTURAL CORPORATION MISSOURI LICENSE NUMBER: A-2010011427

7 BREW COFFEE
LEE'S SUMMIT, MO

1410 NE DOUGLAS STREET
LEE'S SUMMIT, MO 64086

STATE OF MISSOURI
RYAN S. JONES
NUMBER PE-2004017193
PROFESSIONAL ENGINEER
04-26-22

ENGINEER OF RECORD:
NAME: RYAN JONES
LICENSE NO.PE-2004017193

PROJECT NUMBER:
21334 7BSM

REVISION:

CJD LLC
Engineering | Energy | Innovation
2225 West Chesterfield Boulevard, Suite 200, Springfield, MO 65807
P: 417.877.1700 F: 417.324.7735 www.cjd-eng.com
Missouri State Certificate of Authority #2005026903

M3.1
SCHEDULES AND DETAILS
DATE: APRIL 26, 2022

ELECTRICAL SYMBOLS:

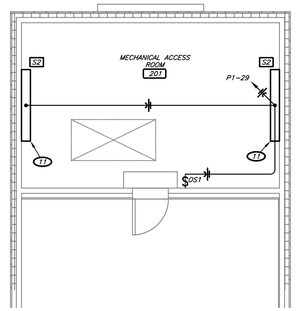
- SIMPLEX RECEPTACLE; 2P, 3W, 20A, 125V
- 14-30 SIMPLEX RECEPTACLE; NEMA CONFIGURATION AS INDICATED
- DUPLEX RECEPTACLE; 2P, 3W, 20A, 125V
- 42" DUPLEX RECEPTACLE; MOUNTED @ 42" ABOVE FINISHED FLOOR
- AC DUPLEX RECEPTACLE; MOUNTED 6" ABOVE COUNTERTOP BACKSPLASH
- GF DUPLEX RECEPTACLE W/ GROUND FAULT INTERRUPTER
- WP DUPLEX RECPTACLE; WEATHERPROOF
- DOUBLE DUPLEX RECEPTACLE WITH COMMON FACEPLATE
- TELECOMMUNICATIONS OUTLET; ROUGH-IN JUNCTION BOX OR PLASTER RING ONLY. MAY BE USED FOR VOICE, DATA, FAX, MODEM, OR ANY COMBINATION THEREOF. CABLE, COVER PLATE & JACKS PROVIDED BY OTHERS.
- TV CABLE TV OUTLET; ROUGH-IN JUNCTION BOX OR PLASTER RING ONLY. CABLE, COVER PLATE & JACKS PROVIDED BY OTHERS.
- EXIT LIGHT; WALL MOUNTED / CEILING MOUNTED
- EMERGENCY LIGHT
- EXIT/EMERGENCY LIGHT
- LED LIGHT FIXTURE
- NL NIGHT LIGHT FIXTURE
- $ LIGHT SWITCH
- $3 3-WAY LIGHT SWITCH
- $OS OCCUPANCY SENSOR LIGHT SWITCH
- OS CEILING MOUNTED OCCUPANCY SENSOR
- J JUNCTION BOX
- PANELBOARD LIGHTING & POWER PANELBOARD
- CONDUIT CONCEALED IN CEILING OR WALL
- CONDUIT BELOW GRADE
- HOME RUN: TICK MARKS INDICATE NUMBER OF WIRES, ARROWS INDICATE NUMBER OF CIRCUITS
- GROUND WIRE
- FEEDER PER SCHEDULE
- DISCONNECT SWITCH

KEYNOTES:

1. INSTALL RECEPTACLE IN CRAWL SPACE FOR SUMP PUMP. VERIFY LOCATION AND MOUNTING HEIGHT WITH OWNER PRIOR TO ROUGH-IN.
2. RECEPTACLE TO BE MOUNTED ABOVE CANOPY. VERIFY LOCATION AND MOUNTING HEIGHT WITH OWNER PRIOR TO ROUGH-IN.
3. PROVIDE JUNCTION BOX AND POWER FOR HORTON SLIDING DOOR.
4. RECEPTACLES FOR SECURITY AND AUDIO.
5. PROVIDE JUNCTION BOX AND POWER FOR COOLER CONTROLS/LIGHTS. FIELD VERIFY EXACT LOCATION AND REQUIREMENTS.
6. PROVIDE JUNCTION BOX AND POWER FOR COOLER EVAPORATOR. FIELD VERIFY EXACT LOCATION AND REQUIREMENTS.
7. PROVIDE JUNCTION BOX FOR OUTDOOR HEATER CONTROLS 6" ABOVE SLIDING GLASS DOOR. COORDINATE ROUGH-IN AND WIRING REQUIREMENTS WITH OWNER.
8. PROVIDE JUNCTION BOX FOR POWER CONNECTION TO BUILDING LED TAPE LIGHT. REFER TO ARCHITECTURAL ELEVATIONS FOR EXACT LOCATION AND LINEAR FOOTAGE OF FIXTURE. CONNECT POWER TO LED STRIPS PER MANUFACTURE'S INSTRUCTION.
9. PROVIDE WEATHER PROOF JUNCTION BOX AND TOGGLE SWITCH LOCATED ON SIGN IN CONCEALED LOCATION FOR EXTERIOR SIGNAGE PER NEC. COORDINATE EXACT LOCATION OF JUNCTION BOX WITH THE SIGNAGE PROVIDER PRIOR TO INSTALLATION. CONTRACTOR SHALL PULL ALL WIRING TO THE JUNCTION BOXES AND MAKE FINAL CONNECTIONS. COORDINATE ALL REQUIREMENTS WITH THE SIGNAGE PROVIDER.
10. INSTALL FIXTURE 12" ABOVE TOP OF DOOR. FIELD VERIFY EXACT LOCATION WITH OWNER.
11. INSTALL FIXTURE 7" ABOVE FINISH FLOOR. FIELD VERIFY MOUNTING HEIGHT WITH OWNER.
12. RECEPTACLE FOR ESPRESSO MACHINE. PROVIDE CORD AND PLUG CONNECTION.
13. POWER CONNECTION FOR AIR CURTAIN. COORDINATE ROUGH-IN, WIRING REQUIREMENTS, AND MOUNTING HEIGHT WITH OWNER.
14. CT CABINET AND METER.
15. COORDINATE INSTALLATION HEIGHT WITH ARCHITECT.
16. POWER CONNECTION FOR ELECTRIC HEATER. COORDINATE INSTALLATION HEIGHT WITH OWNER.
17. RECEPTACLE FOR IPAD. COORDINATE INSTALLATION HEIGHT WITH OWNER.
18. REFER TO 1/SU1.1 FOR CONTINUATION.
19. (2) 2" COMMUNICATION CONDUITS WITH PULL-WIRE. COORDINATE TERMINATION WITH OWNER PRIOR TO INSTALLATION.
20. COORDINATE LOCATION AND RECEPTACLE TYPE WITH EQUIPMENT PROVIDER.

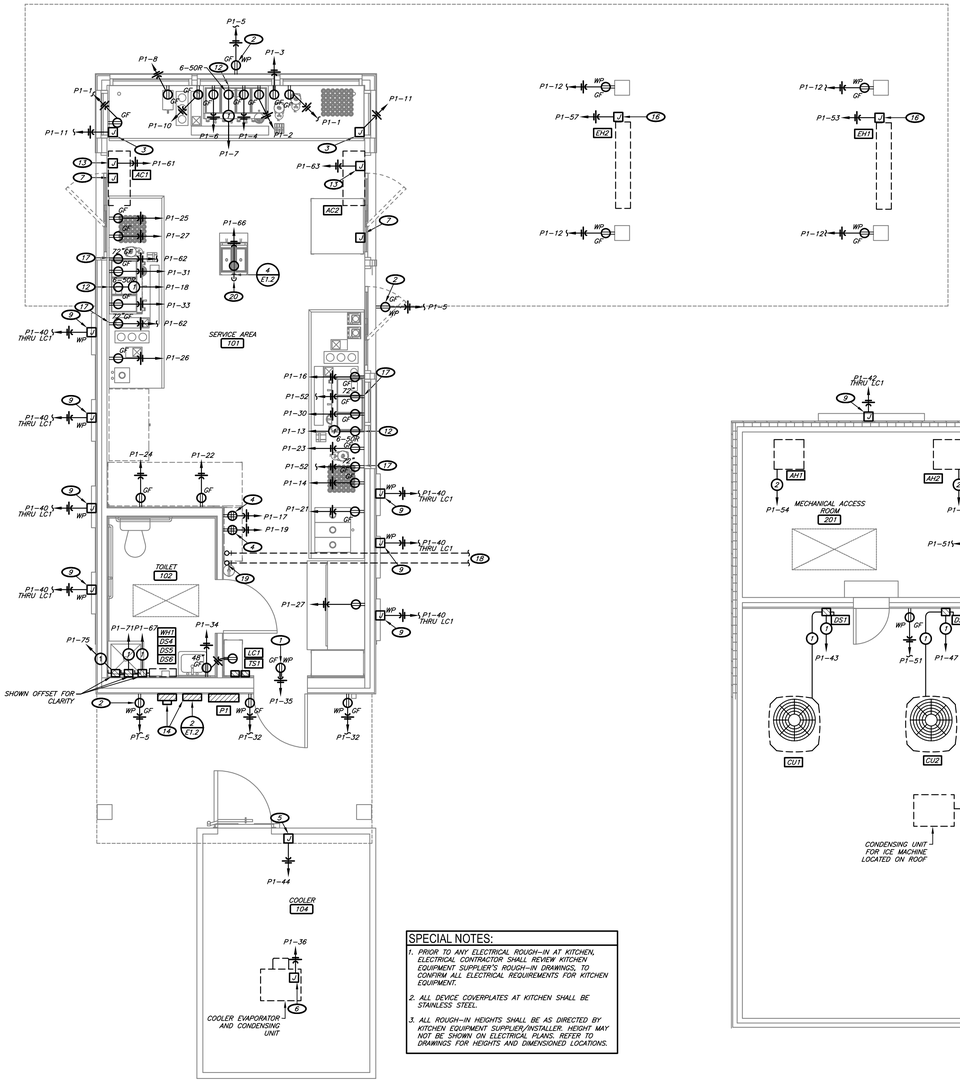
CONDUIT & CONDUCTOR SCHEDULE:

1. (2) #8 AND (1) #10 GROUND, IN 0.75" CONDUIT.
2. (2) #3 AND (1) #8 GROUND IN 1.25" CONDUIT.



4 PARTIAL ROOF AND ATTIC LIGHTING PLAN
1/4" = 1'-0"

NORTH



SPECIAL NOTES:

1. PRIOR TO ANY ELECTRICAL ROUGH-IN AT KITCHEN, ELECTRICAL CONTRACTOR SHALL REVIEW KITCHEN EQUIPMENT SUPPLIER'S ROUGH-IN DRAWINGS, TO CONFIRM ALL ELECTRICAL REQUIREMENTS FOR KITCHEN EQUIPMENT.
2. ALL DEVICE COVERPLATES AT KITCHEN SHALL BE STAINLESS STEEL.
3. ALL ROUGH-IN HEIGHTS SHALL BE AS DIRECTED BY KITCHEN EQUIPMENT SUPPLIER/INSTALLER. HEIGHT MAY NOT BE SHOWN ON ELECTRICAL PLANS. REFER TO DRAWINGS FOR HEIGHTS AND DIMENSIONED LOCATIONS.

3 GROUND LEVEL POWER PLAN
1/4" = 1'-0"

NORTH

2 ROOF AND ATTIC POWER PLAN
1/4" = 1'-0"

NORTH

1 GROUND LEVEL LIGHTING PLAN
1/4" = 1'-0"

NORTH

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LEE'S SUMMIT, MO 64086

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CJD LLC
Engineering | Energy | Innovation
2225 West Chesterfield Boulevard, Suite 200, Springfield, MO 65807
P: 417.877.1700 F: 417.324.7735 www.cjd-eng.com
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E1.1
ELECTRICAL PLAN

DATE: APRIL 26, 2022

LIGHTING FIXTURE SCHEDULE

MARK	MANUFACTURER	MODEL #	FINISH	MOUNTING	LAMPS TYPE	LAMPS CODE	LAMPS QTY.	FIXTURE WATTS	VOLTAGE	APPROVED MANUFACTURERS	NOTES
T1	WILLIAMS	LP-24-L50/835-DIM-UNV	WHITE	RECESSED	LED	WITH FIXTURE	-	50	UNV	SUBMIT	-
T1E	WILLIAMS	LP-24-L50/835-EM/10WRM-DIM-UNV	WHITE	RECESSED	LED	WITH FIXTURE	-	50	UNV	SUBMIT	-
C1	HALO	SMD6R69SWH	WHITE	SURFACE	LED	WITH FIXTURE	-	10	UNV	SUBMIT	1,2,3,4,6
C2	WAC LIGHTING	DS-WS05-F-B-CC-BK	BLACK	SURFACE	LED	WITH FIXTURE	-	35	UNV	SUBMIT	1,2,4,6
S1	LED NEONFLEX	LN-11X29-24-RGB	WHITE	SURFACE	LED	WITH FIXTURE	-	1.88/FT	UNV	SUBMIT	1,2,6
S2	WILLIAMS	78-4-L53/830-DIM-UNV	WHITE	SURFACE	LED	WITH FIXTURE	-	35	UNV	SUBMIT	-
PL1	LUMARK	PRV-C25-D-UNV-T3-SA-BZ-HSS	BRONZE	POLE	LED	WITH FIXTURE		96	UNV	SUBMIT	1,4,6,7,8,9
W1E	WILLIAMS	WPAS-L34/850-BZ-PC-EM/6W-UNV	BRONZE	SURFACE	LED	WITH FIXTURE	-	45	UNV	SUBMIT	1,3,6
X1	WILLIAMS	EXIT/EM/LED-R-WHT	WHITE	SURFACE	LED	WITH FIXTURE	-	10	120	SUBMIT	3

NOTES:

1. FIXTURE SHALL BE LISTED FOR OUTDOOR USE AND SHALL BE LISTED FOR DAMP OR WET LOCATION AS REQUIRED.
2. COORDINATE WITH ARCHITECT FOR EXACT MOUNTING HEIGHT AND LOCATION.
3. PROVIDE FIXTURE WITH EMERGENCY BATTERY BACK-UP FOR MINIMUM 90-MINUTES OPERATION.
4. COORDINATE WITH ARCHITECT/OWNER FOR EXACT FINISH.
5. REFER TO PLANS AND COORDINATE WITH OWNER/ARCHITECT FOR MOUNTING TYPE, FACE ORIENTATION, AND CHEVRON DIRECTION AS APPLICABLE.
6. FIXTURE LAMP AND BALLAST SHALL BE CAPABLE OF OPERATING DOWN TO 0 DEGREES F AND UP TO 110 DEGREES F AS REQUIRED.
7. PROVIDE 20' STRAIGHT STEEL POLE AND ACCESSORIES AS REQUIRED FOR COMPLETE INSTALLATION.
8. PROVIDE ALL ACCESSORIES AS REQUIRED FOR COMPLETE INSTALLATION. POLE AND ACCESSORIES SHALL BE SAME COLOR AS FICTURE HEAD.
9. PROVIDE FIXTURE WITH LUMARK NEMA PHOTOCONTROL OA/RA1014

ABBREVIATIONS:
OSFCI - OWNER FURNISHED, CONTRACTOR INSTALLED
TBD - TO BE DETERMINED

GENERAL NOTES (APPLY TO ALL LIGHT FIXTURES):
1. PROVIDE INSULATION BARRIER, WHERE NON IC-RATED LIGHT FIXTURES ARE INSTALLED WHERE THEY MAY BE IN DIRECT CONTACT WITH INSULATION. INSULATION BARRIER SHALL BE EQUAL TO PRODUCTS BY 'E.Z. BARRIER'

DISCONNECT SWITCH SCHEDULE

MARK	EQUIPMENT SERVED	SWITCH VOLTAGE	SWITCH DUTY	SWITCH AMP	SWITCH POLE	OVERCURRENT PROTECTION AMP	OVERCURRENT PROTECTION TYPE	NEMA ENCLOSURE	NOTES & ACCESSORIES
DS1	CONDENSING UNIT CU1	240	GD	60	2	-	-	3R	1
DS2	CONDENSING UNIT CU2	240	GD	60	2	-	-	3R	1
DS3	REMOTE CONDENSING UNIT	240	GD	30	3	-	-	3R	1
DS4	WATER HEATER WH1	240	GD	100	2	-	-	1	1

ACCESSORIES:
1. GROUND LUG KIT
2. SOLID NEUTRAL
3. SERVICE ENTRANCE RATED

ABBREVIATIONS:
C/B - CIRCUIT BREAKER
GD - GENERAL DUTY
HD - HEAVY DUTY

CONTACTOR SCHEDULE

MARK	LOAD EQUIPMENT SERVED	LOAD VOLTAGE	CONTACTOR TYPE	CONTACTOR AMP	CONTACTOR POLE	CONTACTOR ENCLOSURE	CONTACTOR CONTROLLED BY	NOTES
LC1	EXTERIOR LIGHTING	120/240	NOEH	20A	8	NEMA 1	TIME SWITCH TS1	1

NOTES:
1. PROVIDE WITH 120 VOLT CONTROL COIL.

TIME SWITCH SCHEDULE

MARK	MANUFACTURER	MODEL #	EQUIPMENT SERVED	VOLTAGE	AMP	POLE	ENCLOSURE	NOTES
TS1	TORK	DTS200B	EXTERIOR LIGHTING	120	30	1	NEMA 1	1

NOTES:
1. CONTRACTOR SHALL SUPPLY SS403 OVERRIDE SWITCH SET AT 2 HOUR OVERRIDE.

PANELBOARD SCHEDULE — P1

VOLTAGE:	120/240	POLES:	84	MOUNTING:	SURFACE	ENCLOSURE:	NEMA 3R
PHASE / WIRE:	1 /3	KAIC AMPS (RMS):	22K	LOCATION:	EXTERIOR	MANUFACTURER:	SQUARE D
AMPS:	600	MAIN BREAKER / MLO:	MLO	FED FROM:	UTILITY XFMR	MODEL:	NQ

CIRC. NO.	EQUIPMENT SERVED	C/B AMPS	C/B POLES	C/B ACC.	LOAD (VA)	PHASE LOADS (VA) A	PHASE LOADS (VA) B	LOAD (VA)	C/B ACC.	C/B POLES	C/B AMPS	EQUIPMENT SERVED	CIRC. NO.
1	POINT OF SALE RECEPTACLES	20	1	-	400	1050		650	-	1	20	GRINDER	2
3	FRONT BAR RECEPTACLE	20	1	-	180		830	650	-	1	20	GRINDER	4
5	EXTERIOR RECEPTACLES	20	1	-	540	720		180	-	1	20	FRONT BAR RECEPTACLE	6
7	ESPRESSO MACHINE 4 GROUP	50	2	-	4000		5800	1800	-	1	20	HOT WATER RECEPTACLE	8
9	"			-	4000	5284		1284	-	1	20	ICE MAKER	10
11	HORTON SLIDING DOOR	20	1	-	500		1220	720	-	1	20	EXTERIOR RECEPTACLES	12
13	ESPRESSO MACHINE 3 GROUP	50	2	-	3050	4334		1284	-	1	20	BLENDER	14
15	"			-	3050		4334	1284	-	1	20	ICE MAKER	16
17	SECURITY RECEPTACLES	20	1	-	360	3410		3050	-	2	50	ESPRESSO MACHINE 3 GROUP	18
19	SECURITY RECEPTACLES	20	1	-	360		3410	3050	-			"	20
21	SIDE BAR RECEPTACLE	20	1	-	180	360		180	-	1	20	SERVICE AREA RECEPTACLE	22
23	SIDE BAR RECEPTACLE	20	1	-	180		360	180	-	1	20	SERVICE AREA RECEPTACLE	24
25	SIDE BAR RECEPTACLE	20	1	-	180	1464		1284	-	1	20	BLENDER	26
27	ICE MAKER	20	1	-	1284		1554	270	-	1	20	EXTERIOR LIGHTS	28
29	INTERIOR LIGHTS	20	1	-	700	1984		1284	-	1	20	BLENDER	30
31	SIDE BAR RECEPTACLE	20	1	-	180		540	360	-	1	20	EXTERIOR RECEPTACLES	32
33	BLENDER	20	1	-	1284	1644		360	-	1	20	BATHROOM RECEPTACLE	34
35	CRAWL SPACE RECEPTACLE	20	1	-	180		970	790	HACR	2	20	WALK IN COOLER	36
37	EXTERIOR LED LIGHTS	20	1	-	500	1290		790				"	38
39	SPARE	20	1	-			1200	1200	-	1	20	BUILDING SIGNAGE	40
41	SPARE	20	1	-		1200		1200	-	1	20	BUILDING SIGNAGE	42
43	CONDENSING UNIT CU1	50	2	HACR	3078		3278	200	-	1	20	COOLER LIGHT	44
45	"				3078	3218		140	HACR	1	15	ICE MACHINE	46
47	CONDENSING UNIT CU2	50	2	HACR	3078		6918	3840	HACR	2	40	REMOTE CONDENSING UNIT	48
49	"				3078	6918		3840				"	50
51	MECHANICAL ACCESS RECEPTACLE	20	1	-	360		720	360	-	1	20	IPAD RECEPTACLES	52
53	ELECTRIC HEATER EH1	20	2	-	1500	11484		9984	HACR	2	100	AIR HANDLER AH1	54
55	"				1500		11484	9984				"	56
57	ELECTRIC HEATER EH2	20	2	-	1500	11484		9984	HACR	2	100	AIR HANDLER AH2	58
59	"	20	1	-	1500		11484	9984				"	60
61	AIR CURTAIN AC1	15	1	HACR	768	1128		360	-	1	20	IPAD RECEPTACLES	62
63	AIR CURTAIN AC2	15	1	HACR	768		1068	300	-	1	20	SITE LIGHTING	64
65	SPARE	20	1	-		0			-	1	20	SPARE	66
67	WATER HEATER WH1	40	2	-	4000		4000		-	1	20	SPARE	68
69	"				4000	4000			-	1	20	SPARE	70
71	WATER HEATER WH1	40	2	-	4000		4000		-	1	20	SPARE	72
73	"				4000	4000			-	1	20	SPARE	74
75	WATER HEATER WH1	40	2	-	4000		4000		-	1	20	SPARE	76
77	"				4000	4000			-	1	20	SPARE	78
79	SPARE	20	1	-			0		-	1	20	SPARE	80
81	SPARE	20	1	-		0			-	1	20	SPARE	82
83	SPARE	20	1	-			0		-	1	20	SPARE	84

ENCLOSURE ACCESSORIES: CH, FL — PANELBOARD ACCESSORIES: GB, CBB

CIRCUIT BREAKER ACCESSORIES:		ENCLOSURE ACCESSORIES:		PANELBOARD ACCESSORIES			
AC	- AUXILLIARY CONTACTS	CH	- CONCEALED HINGE	CL	- COMPRESSION LUGS	SFB	- SUB-FEED CIRCUIT BREAKER
EO	- ELECTRICAL OPERATOR	CW	- COLUMN WIDTH PANEL	FTL	- FEED-THRU LUGS	SFL	- SUB-FEED LUGS
GFCI	- GROUND-FAULT INTERRUPTING	DWD	- HINDGED DOOR WITHIN HINGED DOOR	GB	- EQUIPMENT GROUND BAR KIT	CBB	- SILVER PLATED COPPER BUS BARS
HACR	- HACR RATING	EGT	- EXTENDED GUTTER TOP	IGB	- INSULATED GROUND BAR KIT	ABB	- TIN PLATED ALUMINUM BUS BARS
HLF	- HANDLE LOCK-OFF	EGB	- EXTENDED GUTTER BOTTOM	NBK	- NEUTRAL BONDING KIT	TRN	- 200% RATED NEUTRAL BUS BAR
HLN	- HANDLE LOCK-ON	EGSL	- EXTENDED GUTTER LEFT HAND SIDE	PS	- PREPARED CIRCUIT BREAKER SPACE	TVSS	- TRANSIENT VOLTAGE SURGE SUPPRESSION
SR	- SWITCH RATING	EGSR	- EXTENDED GUTTER RIGHT HAND SIDE	SB	- SPLIT BUS		
ST	- SHUNT TRIP	FL	- FLUSH LOCK(S)	SER	- SERVICE ENTRANCE RATING		

OCCUPANCY SENSOR SCHEDULE

MARK	CONTROL TYPE	LOAD EQUIPMENT SERVED	LOAD VOLTAGE	SENSOR MANUF	SENSOR MODEL #	SENSOR VOLTAGE	SENSOR TYPE	SENSOR TIME DELAY	SENSOR MOUNTING	SENSOR INTERLOCK	SENSOR ACCESS.
OS1	WALL MOUNTED OCCUPANCY	RESTROOMS	120	WATTSTOPPER	DW-100	120	IR/US	AUTO	WALL BOX	-	1

NOTES/ACCESSORIES:
1. WALL SWITCH SHALL BE CAPABLE OF MANUAL ON-OFF CONTROL

GENERAL NOTES (APPLIES TO ALL SENSORS):
1. EACH SENSOR TYPE MAY BE SHOWN IN MULTIPLE LOCATIONS ON ELECTRICAL PLANS
2. EQUIPMENT SUBMITTAL: PRIOR TO APPROVAL, WITH OCCUPANCY SENSOR SPECIFICATION INFORMATION, CONTRACTOR SHALL SUBMIT PLAN (PROVIDED BY MANUFACTURER'S REPRESENTATIVE) WITH OCCUPANCY SENSOR LOCATIONS, OCCUPANCY SENSOR TYPE, MOUNTING HEIGHT AND SENSOR COVERAGE FOR EACH SPACE.
3. WHERE SWITCHING IS SHOWN, WIRE OCCUPANCY SENSOR CONTROL IN SERIES WITH LOCAL SWITCHES
4. PROVIDE CONTROL UNIT(S)/POWER PACK(S) AS REQUIRED.
5. FINISH/COLOR SHALL MATCH ALL OTHER DEVICES.

ABBREVIATIONS:
PIR - PASSIVE INFRARED
US - ULTRASONIC
IR/US -DUAL TECHNOLOGY

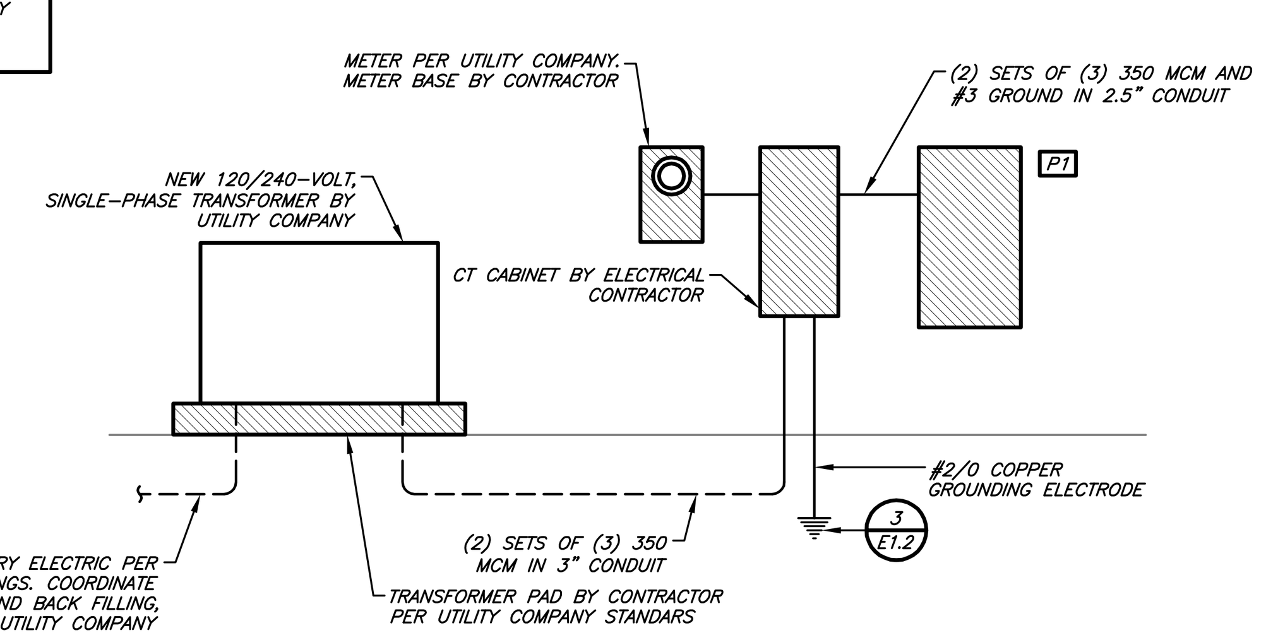
APPROVED MANUFACTURERS:
GREENGATE/NOVITAS
WATTSTOPPER
HUBBELL

SPECIAL NOTES:

1. CONTRACTOR SHALL COORDINATE AND VERIFY ALL ELECTRIC SERVICE RESPONSIBILITIES WITH ELECTRIC UTILITY COMPANY.
2. PROVIDE EXCAVATION, TRENCHING AND BACKFILL ON PRIMARY, AS REQUIRED BY UTILITY COMPANY.
3. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY FOR ALL RESPONSIBILITIES ON PRIMARY, FOR METERING, JUNCTION ENCLOSURES AND TRANSFORMER.

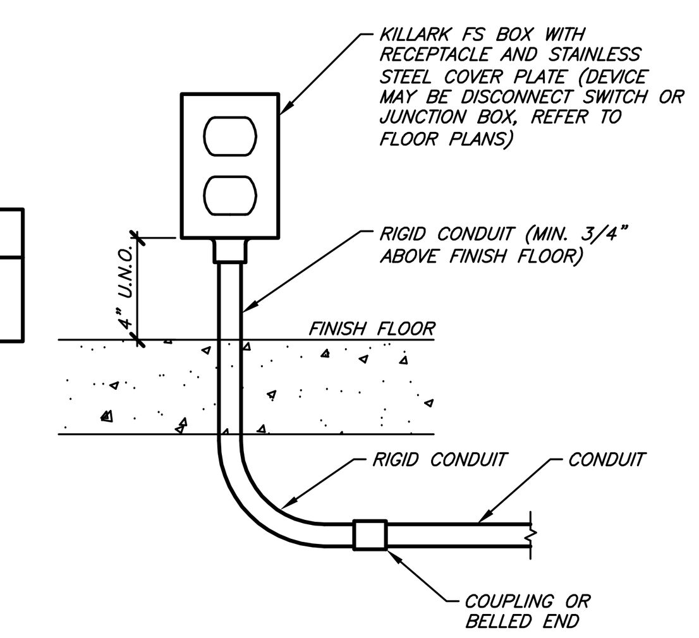
AVAILABLE FAULT CURRENT NOTE:

THE FOLLOWING ASSUMPTIONS WERE MADE TO CALCULATE THE AVAILABLE FAULT CURRENT: 167KVA TRANSFORMER, 3% IMPEDANCE AND 80 FEET OF SECONDARY CONDUCTOR TO WIREWAY. CONTRACTOR SHALL CONTACT ENGINEER IF MODIFICATIONS ARE MADE TO CONSTRUCTION-DOCUMENT SPECIFIED CONDUCTOR TYPE, CONDUCTOR QUANTITY AND/OR TRANSFORMER LOCATION/INFORMATION. IF NO MODIFICATIONS HAVE BEEN MADE AFTER LISTED CALCULATION DATE, CONTRACTOR SHALL PROVIDE A PERMANENT PLACARD AT SERVICE DISCONNECTING MEANS, OR SWITCHBOARD MAIN CIRCUIT BREAKER. PLACARD SHALL MEET REQUIREMENTS OF AUTHORITY HAVING JURISDICTION. PLACARD SHALL READ: "MAXIMUM AVAILABLE FAULT CURRENT: 17,309 AMPS, CALCULATED ON APRIL 26, 2022".

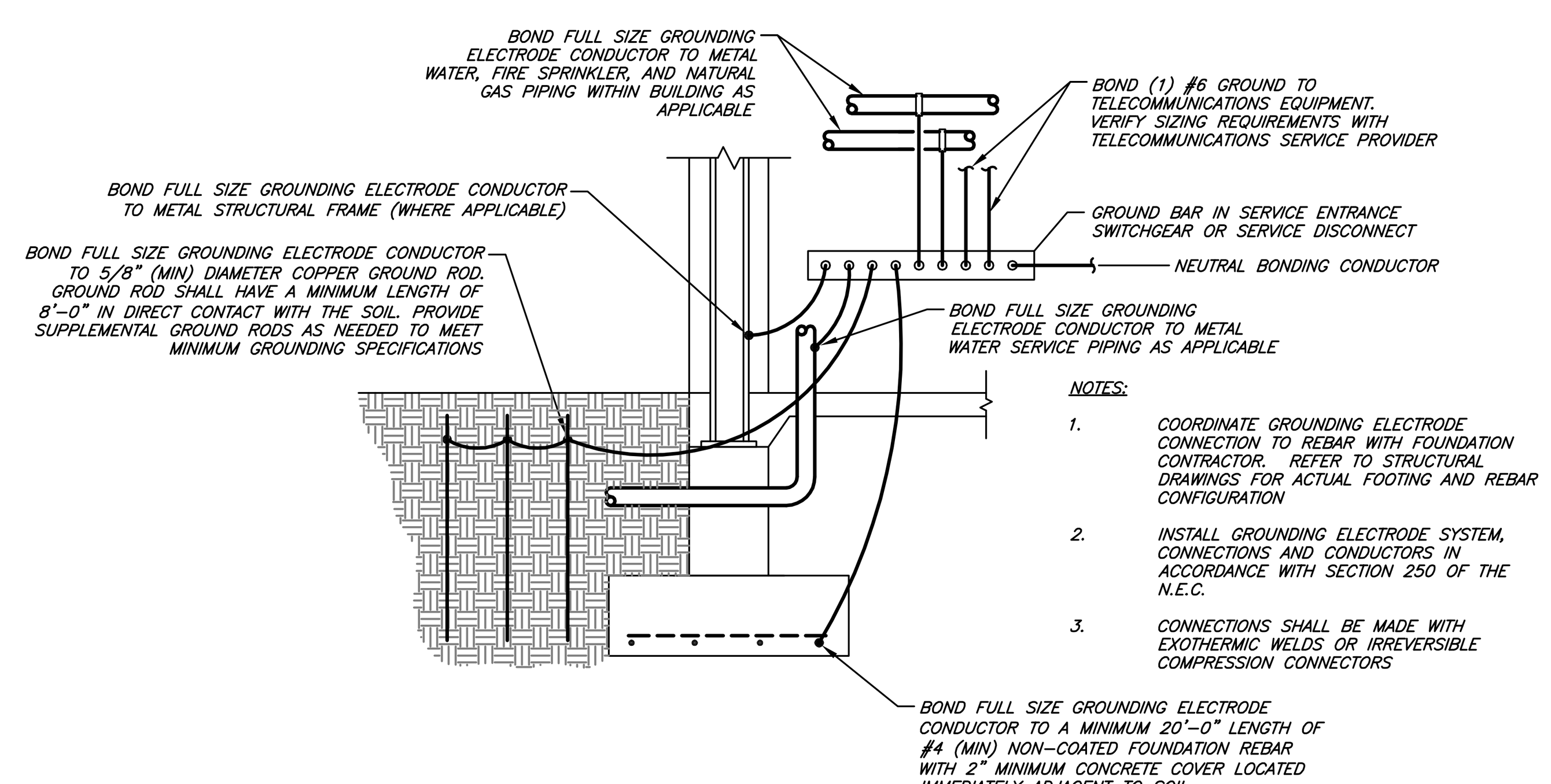


2 ELECTRICAL RISER DIAGRAM
NO SCALE

SPECIAL NOTES:
FIELD VERIFY/COORDINATE DIMENSION WITH KITCHEN EQUIPMENT

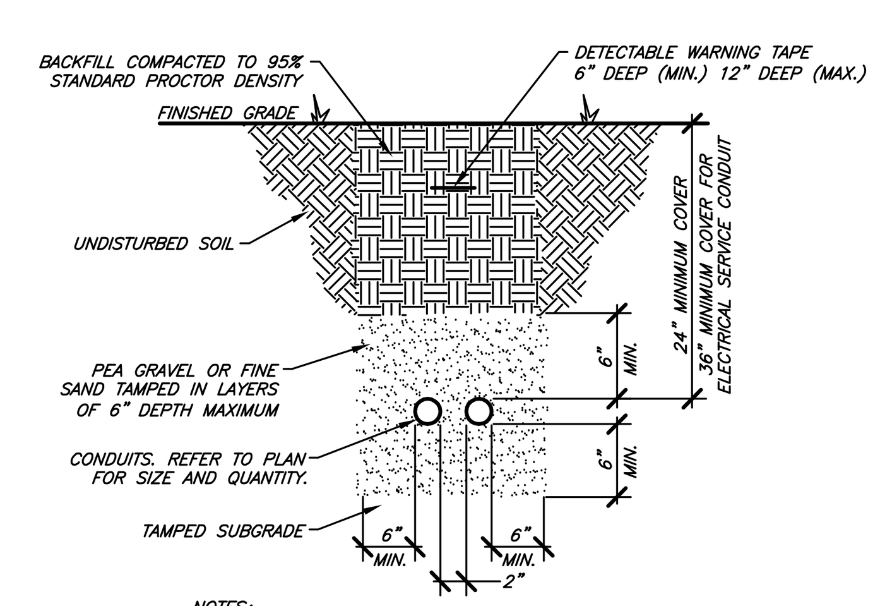


4 KITCHEN FLOOR RECEPTACLE
NO SCALE



NOTES:
1. COORDINATE GROUNDING ELECTRODE CONNECTION TO REBAR WITH FOUNDATION CONTRACTOR. REFER TO STRUCTURAL DRAWINGS FOR ACTUAL FOOTING AND REBAR CONFIGURATION
2. INSTALL GROUNDING ELECTRODE SYSTEM, CONNECTIONS AND CONDUCTORS IN ACCORDANCE WITH SECTION 250 OF THE N.E.C.
3. CONNECTIONS SHALL BE MADE WITH EXOTHERMIC WELDS OR IRREVERSIBLE COMPRESSION CONNECTORS

3 GROUNDING ELECTRODE DETAIL
NO SCALE



NOTES:
1. CONTRACTOR MAY USE PEA GRAVEL FOR BACKFILL WITH EXCEPTION OF TOP 12" WHICH SHALL BE COMPACTED SOIL.
2. MINIMUM DIMENSIONS APPLY UNLESS NOTED OTHERWISE ON PLANS.

1 ELECTRICAL CONDUIT TRENCH DETAIL
NO SCALE

GENERAL ELECTRICAL NOTES:

GENERAL

1. GENERAL ELECTRICAL NOTES APPLY TO ALL ELECTRICAL SHEETS.
2. CJD ENGINEERING LLC, BEING THE AUTHOR OF THESE CONSTRUCTION DOCUMENTS RESERVES THE RIGHT OF FINAL INTERPRETATION AS TO THEIR INTENT AND MEANING. ANY ADDITIONAL WORK OR COSTS RESULTING FROM THE CONTRACTOR'S OWN INTERPRETATION AS TO THE INTENT OR MEANING WITHOUT CONSULTATION WITH CJD ENGINEERING LLC SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO COST TO OWNER OR A/E.
3. THE INTENT OF THE WORK INDICATED ON THESE CONSTRUCTION DOCUMENTS IS TO PROVIDE A FULLY FUNCTIONING SYSTEM IN COMPLETE WORKING ORDER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND THE CONTRACTORS SUPPLIERS TO INCLUDE ALL ACCESSORIES, COMPONENTS, PARTS, ETC. THAT MAY NOT BE INDICATED ON THESE CONSTRUCTION DOCUMENTS TO PROVIDE BUILDING CODE COMPLIANT SYSTEMS AND EQUIPMENT THAT OPERATE SATISFACTORILY AS DESIGNED AND INTENDED.
4. ALL ELECTRICAL WORK SHALL BE PERFORMED BY LICENSED CONTRACTORS IN ACCORDANCE WITH THE 2018 INTERNATIONAL BUILDING CODES, THE 2017 NATIONAL ELECTRICAL CODE, AND ALL LOCAL CODES AS ADOPTED BY THE AUTHORITIES HAVING JURISDICTION.
5. THE CONTRACTOR SHALL INCLUDE ALL PERMIT AND INSPECTION FEES IN BID.
6. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO SUBMITTING HIS BID. NO EXTRAS WILL BE PAID DUE TO UNANTICIPATED EXISTING CONDITIONS.
7. PLANS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED. REFER TO CIVIL, STRUCTURAL AND ARCHITECTURAL DRAWINGS AND EXISTING CONDITIONS FOR DIMENSIONS. FIELD VERIFY ALL DIMENSIONS.
8. EQUIPMENT AND CONDUIT/CONDUCTOR LAYOUTS ARE DIAGRAMMATIC. FIELD COORDINATE EXACT LOCATIONS AND ROUTINGS WITH STRUCTURE, PIPING, DUCTWORK, LIGHT FIXTURES, ETC. FINAL RESULT SHALL BE EQUIVALENT TO THAT INDICATED ON DRAWINGS.
9. COOPERATE CLOSELY WITH ALL OTHER TRADES TO EXPEDITE CONSTRUCTION AND AVOID INTERFERENCES AND CONFLICTS. BEFORE ANY PIPING, DUCTWORK, CONDUIT, ETC. IS INSTALLED, IT SHALL BE COORDINATED CAREFULLY BETWEEN ALL TRADES.
10. MAINTAIN ALL CLEARANCES REQUIRED BY ELECTRICAL EQUIPMENT. COORDINATE WITH PLUMBING, HVAC, AND SPRINKLER CONTRACTORS TO MAINTAIN ALL CLEARANCES REQUIRED FOR EQUIPMENT. DO NOT ROUTE PIPING, DUCTWORK, ETC. ABOVE ELECTRICAL PANELS.
11. DRAWINGS REPRESENT FINAL RESULT. REMOVE, RELOCATE, MODIFY EXISTING EQUIPMENT, DUCTWORK, PIPING, ETC. AS REQUIRED. FIELD VERIFY EXISTING CONDITIONS AND EXACT REQUIREMENTS.
12. COORDINATE INFORMATION OUTLET, RECEPTACLE, AND OTHER DEVICE LOCATIONS WITH OWNER AND WITH MILLWORK AND WITH OTHER TRADES PRIOR TO ROUGH-IN.
13. INFORMATION OUTLET (DATA AND TELEPHONE) DEVICES, WALL PLATES, AND ASSOCIATED WIRING SHALL BE SUPPLIED AND INSTALLED BY OTHERS UNDER A SEPARATE CONTRACT WITH THE OWNER.
14. THE CONTRACTOR SHALL PROVIDE ELECTRONIC SHOP DRAWINGS/SUBMITTALS OF ALL FIXTURES AND EQUIPMENT FURNISHED UNDER THIS CONTRACT.
15. IF CONTRACTOR WISHES TO INCORPORATE PRODUCTS OTHER THAN THOSE NAMED IN SPECIFICATIONS IN HIS BID OR PRODUCTS BY MANUFACTURERS OTHER THAN THOSE LISTED AS APPROVED MANUFACTURERS, THE CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST FOR REVIEW AND APPROVAL OF PROPOSED SUBSTITUTIONS TO CJD ENGINEERING LLC NOT LESS THAN FIVE WORKING DAYS PRIOR TO BID DATE. APPROVAL OR ACCEPTANCE OF PROPOSED SUBSTITUTION OF MANUFACTURERS OR ITEMS IS FOR THE PURPOSES OF BIDDING ONLY AND DOES NOT RELIEVE THE PROPOSED SUBSTITUTION FROM SUBMITTAL/SHOP DRAWING REVIEW AND DOES NOT CONSTITUTE PRIOR APPROVAL OF PROPOSED SUBSTITUTIONS.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COSTS OF LARGER WIRING, CONDUIT, ENCLOSURES, CONTROL AND OVERCURRENT PROTECTIVE DEVICES, ETC. RESULTING FROM SUBSTITUTION OF EQUIPMENT OTHER THAN THAT WHICH WAS THE BASIS OF DESIGN AT NO COST TO OWNER OR A/E.
17. THE CONTRACTOR SHALL GUARANTEE ALL EQUIPMENT, ACCESSORIES, AND MATERIAL FURNISHED BY HIM FOR A PERIOD OF ONE YEAR FROM FINAL ACCEPTANCE AGAINST ALL DEFECTS.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING COSTS TO CUT, PATCH AND REPAIR EXISTING WALL, FLOOR AND CEILING CONSTRUCTION AS REQUIRED TO INSTALL NEW FIXTURES, CONDUIT, WIRING, ETC. ARE INCLUDED IN THE BID PRICE.

PRODUCTS

1. LIGHT SWITCHES SHALL BE EQUIVALENT TO HUBBELL 1220 SERIES, 20-AMP, 120/277-VOLT, IN COLOR SELECTED BY THE ARCHITECT/INTERIOR DESIGNER.
2. DUPLEX RECEPTACLES SHALL BE EQUIVALENT TO HUBBELL 5300 SERIES, 20A, 125V, NEMA CONFIGURATION 5-20R, IN COLOR SELECTED BY THE ARCHITECT/INTERIOR DESIGNER.
3. ALL RECEPTACLES THROUGHOUT SHALL BE TAMPER-RESISTANT TYPE, TO COMPLY WITH N.E.C.
4. ELECTRICAL DEVICE WALL PLATES SHALL BE HIGH IMPACT NYLON PLASTIC IN COLOR AS SELECTED BY THE ARCHITECT/INTERIOR DESIGNER.
5. FEEDER AND BRANCH CIRCUIT WIRING SHALL BE COPPER, 600V WITH THHN/THWN INSULATION. BRANCH CIRCUIT WIRING SHALL BE #12 AWG MINIMUM. HOMERUNS FOR BRANCH CIRCUITS OVER 75 FEET LONG SHALL BE #10 AWG; OVER 100 FEET LONG, #8 AWG UNLESS INDICATED OTHERWISE.
6. EQUIVALENT WIRING DEVICES BY BRYANT, COOPER, HUBBELL, LEVITON, OR AS APPROVED BY OWNER.
7. EQUIVALENT PANELBOARDS, LIGHTING CONTACTORS AND DISCONNECT SWITCHES BY CUTLER HAMMER, GENERAL ELECTRIC, SIEMENS, SQUARE D, OR AS APPROVED BY OWNER.

EXECUTION

1. PROVIDE ALL ACCESSORIES, COMPONENTS, ETC. REQUIRED FOR COMPLETE INSTALLATION OF SPECIFIED EQUIPMENT.
2. PROVIDE UNISTRUTS AND ACCESSORIES AS REQUIRED FOR SUPPORT OF PIPING, EQUIPMENT, ETC.
3. COORDINATE LIGHTING AND CEILING DEVICE LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLANS.
4. ALL WIRING SHALL BE INSTALLED IN EMT CONDUIT AND SHALL BE CONCEALED UNLESS OTHERWISE NOTED. PVC CONDUIT WILL BE ALLOWED BELOW SLAB. ALL TRANSITIONS FROM PVC TO STEEL CONDUIT SHALL BE MADE BELOW GRADE. MINIMUM CONDUIT SIZE FOR LIGHTING AND POWER BRANCH CIRCUITS ABOVE GRADE SHALL BE 1/2". MINIMUM CONDUIT SIZE FOR LIGHTING AND POWER BRANCH CIRCUITS BELOW GRADE SHALL BE 3/4". CONTRACTOR SHALL HAVE THE OPTION TO USE METALLIC CLAD (M/C) CABLE FOR CONCEALED BRANCH CIRCUIT WIRING.
5. MINIMUM CONDUIT SIZE FOR INFORMATION OUTLETS SHALL BE 3/4". CONDUIT STUBS SHALL BE TERMINATED WITH INSULATING BUSHINGS.
6. ALL LIGHTING AND POWER CIRCUITS SHALL HAVE A GROUNDING CONDUCTOR.
7. ALL RECEPTACLES, TELECOMMUNICATIONS OUTLETS, AND TELEVISION OUTLETS SHALL BE INSTALLED AT 18" AFF TO CENTER UNLESS NOTED OTHERWISE. ALL SWITCHES SHALL BE INSTALLED AT 48" AFF TO CENTER UNLESS NOTED OTHERWISE.
8. PROVIDE TYPED CIRCUIT DIRECTORIES FOR ALL PANELBOARDS. DIRECTORY INFORMATION SHALL INCLUDE CIRCUIT NUMBER AND EQUIPMENT SERVED.
9. INSTALL ALL ROOF EQUIPMENT, PIPE, AND CONDUIT SUPPORTS, CURBS AND PENETRATIONS IN ACCORDANCE WITH THE REQUIREMENTS OF THE ROOFING SYSTEM MANUFACTURER.
10. SUPPORT CONDUIT ON ROOF WITH PREMANUFACTURERED PIPING SUPPORT EQUIVALENT TO B-LINE C-SERIES. FIELD FABRICATED SUPPORTS CONSISTING OF LUMBER, ETC. ARE NOT ACCEPTABLE.
11. PROVIDE FACTORY FABRICATED PIPE CURB ASSEMBLIES FOR MULTIPLE CONDUIT AND PIPING PENETRATIONS THROUGH THE ROOF. PIPE CURB ASSEMBLIES SHALL BE FACTORY FABRICATED, 8" TALL (MINIMUM) GALVANIZED STEEL ROOF CURBS WITH INTEGRAL BASE PLATE, 3 LB. DENSITY INSULATION, WOOD NAILER, ACRYLIC CLAD THERMOPLASTIC COVER, FASTENING SCREWS, AND GRADUATED STEP BOOTS WITH STAINLESS STEEL CLAMPS AS MANUFACTURED BY PATE, THYBAR OR APPROVED EQUIVALENT. PROVIDE PIPE SEAL ASSEMBLIES FOR INDIVIDUAL CONDUIT OR PIPE PENETRATIONS. ALL WORK SHALL BE IN ACCORDANCE WITH ROOFING MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS.
12. PROVIDE SLEEVES AT CONDUIT PENETRATIONS OF EXTERIOR OR FOUNDATION WALLS. SEAL PENETRATIONS WEATHERTIGHT.
13. SEAL ALL PENETRATIONS THROUGH FIRE-RATED ASSEMBLIES AS NECESSARY TO RESTORE FIRE-RESISTANCE RATING OF ASSEMBLY. REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR RATED ASSEMBLIES, FIRESTOPPING MATERIALS AND REQUIREMENTS.
14. CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS TO SPECIAL EQUIPMENT. PROVIDE ADAPTERS, FITTINGS, ETC. FOR ALL EQUIPMENT AS REQUIRED. COORDINATE SPECIFIC REQUIREMENTS WITH EQUIPMENT SUPPLIERS. REFER TO SPECIAL EQUIPMENT DRAWINGS FOR ADDITIONAL INFORMATION.
15. ELECTRICAL CONTRACTOR SHALL PROVIDE ROUGH-IN FOR THERMOSTATS AND SENSORS. PROVIDE SINGLE-GANG BOX WITH 0.75" CONDUIT TO ABOVE ACCESSIBLE CEILING OR TO ASSOCIATED EQUIPMENT. THERMOSTATS, SENSORS, AND WIRING SHALL BE PROVIDED BY MECHANICAL CONTRACTOR. REFER TO HVAC PLANS FOR THERMOSTAT AND CONTROL LOCATIONS.
16. BRANCH CIRCUIT WIRING SERVING EQUIPMENT, LIGHTING, AND RECEPTACLES IN PATIENT CARE AREAS SHALL COMPLY WITH NEC SECTION 517.13. METAL RACEWAYS, ARMORED CABLING AND ASSOCIATED FITTINGS SHALL BE LISTED AS A GROUND RETURN PATH AND SHALL CONTAIN A SEPARATE EQUIPMENT GROUNDING CONDUCTOR AS SPECIFIED.

CJD LLC
Engineering | Energy | Innovation
2225 West Chesterfield Boulevard, Suite 200, Springfield, MO 65807
P: 417.877.1700 F: 417.324.7735 www.cjd-eng.com
Missouri State Certificate of Authority #2005026903

TORGERSON DESIGN PARTNERS
ARCHITECTURE / REAL ESTATE / DEVELOPMENT
116 NORTH 2ND AVENUE – OZARK, MO 65721 – P (417) 581-8889 – F (417) 581-9002
ARCHITECTURAL CORPORATION MISSOURI LICENSE NUMBER: A-2010011427

7 BREW COFFEE
LEE'S SUMMIT, MO

1410 NE DOUGLAS STREET
LEE'S SUMMIT, MO 64086

STATE OF MISSOURI — RYAN S. JONES — NUMBER PE-2004017193 — PROFESSIONAL ENGINEER — 04-26-22

ENGINEER OF RECORD:
NAME: RYAN JONES
LICENSE NO.PE-2004017193

PROJECT NUMBER:
21334 7BSM

REVISION:

E1.2
SCHEDULES AND DETAILS
DATE: APRIL 26, 2022