MO'BETTAHS

HAWAIIAN STYLE FOOD®

MOBETTAHS (TI)
for:
LEE'S SUMMIT

520 NW Chipman Rd
Lee's Summit, MO 64086

ISSUED FOR PERMIT
1-23-2022

OCCUPANCY LOAD CALCULATION PER IBC TABLE 1004.5

NUMBER	NAME	ROOM OCCUPANCY	AREA	S.F. PER PERSON	# OF OCCUPANTS
100	DINING	Assembly - Unconcentrated (tables and chairs)	1107.51 SF	15	73.8
101	ORDER	Assembly - Standing Space	74.50 SF	5	14.9
103	KITCHEN	Kitchens, Commercial	975.58 SF	200	4.9
104	ELEC CLOSET	Business Areas	48.70 SF	150	0.3
Grand total					93.9

KNOWN SEATING
78 SEATS PROVIDED
14.9
4.9
0.3
98.1

OCCUPANT LOAD IS KNOWN; THERFORE, THIS OCCUPANCY TO BE POSTED ON OCCUPANT LOAD SIGN AT MAIN ENTRY DOOR PER SHEET G101.

PLUMBING ANALYSIS (IBC TABLE 2902.1 & IPC TABLE 403.1)

OCCUPANCY		WATER CLOSETS				LAVATORIES				DRINKING FOUNTAINS		SERVICE SINK
USE	LOAD	RATIO	MALE	RATIO	FEMALE	RATIO	MALE	RATIO	FEMALE	RATIO	D.F.	
A-2	99	1 PER 75	50	1 PER 75	50	1 PER 200	50	1 PER 200	50	1 PER 500	100	1 SERVICE SINK
REQUIRED TOTALS			.66		.66		0.23		0.23		0*	1
PROVIDED			1		1		1		1		0*	1

*REQUIRED DRINKING FOUNTAINS;
THIS RESTAURANT WILL PROVIDE DRINKING WATER IN A CONTAINER FREE OF CHARGE; PER IPC SECTION 410.3 - DRINKING FOUNTAINS SHALL NOT BE REQUIRED.

GENERAL NOTES ABOUT ROOF AND ROOF MOUNTED EQUIPMENT

COORDINATE WITH MECHANICAL AND ELECTRICAL DRAWINGS FOR ROOFTOP EQUIPMENT.

PROVIDE CURBS OR PENETRATIONS FLASHING FOR MAKE UP AIR UNIT, EXHAUST HOODS AND OTHER ROOF TOP PENETRATIONS. TIE INTO AND FLASH TO EXISTING ROOF MEMBRANE. COORDINATE WITH ORIGINAL ROOFING CONTRACTOR/MANUFACTURER TO MAINTAIN ROOF WARRANTY

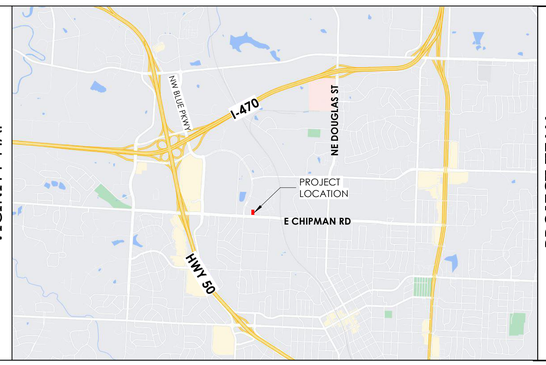
EXHAUST HOODS TO BE LOCATED A MINIMUM OF 10'-0" FROM ANY AIR INTAKE

ALL ROOF PENETRATIONS NEED TO BE DONE BY THE LANDLORD'S APPROVED CONTRACTOR

AT NEW MECHANICAL EQUIPMENT/MAU CURB TO BE SECURED TO ROOF PER MANUFACTURER'S REQUIREMENT; EQUIPMENT MUST SPAN A MINIMUM OF THREE JOISTS; PROVIDE CURB AND CRICKET AS REQUIRED FOR PROPER DRAINAGE; SEE MECHANICAL

NEW MECHANICAL EXHAUST FAN/;EQUIPMENT TO BE SECURED TO ROOF PER MANUFACTURER'S REQUIREMENTS; PROVIDE CURB AND CRICKET AS REQUIRED FOR PROPER DRAINAGE. SEE MECHANICAL

VICINITY MAP



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RESPONSIBILTY SCHEDULE

NOTICE:
Items listed below are NOT all-inclusive and DO NOT represent the entire scope of the project. It is the General Contractor's sole responsibility to coordinate and verify with the Owner all information contained in the drawings. This schedule shall govern over any discrepency in the drawings.

ITEM	FURNISHED: GENERAL CONTRACTOR	FURNISHED: OWNER	INSTALLED: GENERAL CONTRACTOR	INSTALLED: OWNER	REMARKS
EXTERIOR SPECIALTY					
Door Hardware	X		X		If specified
Door Keying		X		X	Electronic key access
Patio Tables & Chairs		X		X	If specified
Building Signage		X		X	
INTERIOR SPECIALTY					
Door Hardware	X		X		
Stainless Steel Trim	X		X		Wall trim/casings/flashings
Wainscoting	X		X		Composite wood paneling & top cap, Location: Dining Area
Maple Wood Cap	X		X		Location: Pony Walls
Flooring	X		X		Ground & polished concrete, epoxy
Epoxy Base	X		X		
Tile	X		X		Location: Dining Area, Restroom walls
Cabinetry	X		X		Toe kicks and casework
Granite Countertops	X		X		
Countertop Substrate	X		X		(2) layers 3/4" CDX plywood
Countertop Hole Cutouts	X		X		
Countertop Grommets	X		X		At all 2" hole cutouts
Dining Tables & Bases		X		X	
Dining Chairs		X		X	
Beverage Counter Accessories		X		X	Lid & cup dispensers, condiment dispensers, utensil holders
Hand Wash Signs		X	X		Location: All hand sinks
Maximum Occupancy Sign		X	X		6"x4" (Max.) black background with white text
Restroom ADA Signs		X	X		Black background with white text
Restroom Grab Bars & Accessories	X		X		
Paper Dispensers		X	X		Paper towels, toilet tissue
Soap Dispensers		X	X		
Window Shades		X		X	General Contractor to supply measurements
Menu Boards		X		X	Contractor to pour footings and run Power/Data
Surf Boards & Racks		X		X	
Artwork		X		X	
Interior Canopies		X		X	General Contractor coordinates with Owner to supply & install RS posts embedded in pony walls
Open/Closed Signs		X		X	
Manager's Safe		X	X		Bolt and silicone to floor
Kitchen Wall-Hung Shelving		X		X	
Kitchen Floor-Standing Shelving		X		X	
Kitchen Floor-Standing Shelving Delivery		X	X		Receive, offload
Chemicals & Pest Control		X		X	
Final Clean	X				Final and touch up clean prior to opening
EQUIPMENT					
Kitchen Equipment		X			
Kitchen Equipment Deliveries		X	X		Receive, offload, uncrate, set in place
Kitchen Equipment Connections/Terminations	X		X		Power, gas, water, drains, venting (Gas connector kits are Owner Furnished / GC Installed)
Kitchen Equipment Startup & Commission		X			
ELECTRICAL					
Low Voltage Boxes & Conduit	X		X		
Low Voltage Cabling		X		X	
Low Voltage Trim		X		X	Jacks, terminations
Audio/Video Equipment Rack		X	X		General Contractor provides plywood backing; Contractor to hang rack
Speaker System		X		X	
Camera System		X		X	
Alarm System		X		X	
Point-of-Sale System		X		X	
TVs & Mounting Brackets		X		X	
MECHANICAL					
Type-I Hoods			X	X	
Type-I Grease Duct			X	X	
Type-I Duct Wrap & Straps			X	X	
Grease Exhaust Fans & Curbs			X	X	
Makeup Air Unit			X	X	
Makeup Air Unit Duct	X		X		
Rooftop Heating/Cooling Units (RTUs)	X		X		
RTU Curbs	X		X		
RTU Accessories		X		X	**As Required:** Fused disconnects, duct smoke detectors, wall-mounted CO2 sensors, thermostats w/ remote sensors
RTU Distribution	X			X	Ductwork, grilles, dampers and related components
Ice Machine			X	X	
Ice Machine Startup & Commission			X		
Walk-in Cooler			X	X	
Walk-in Startup & Commission			X	X	
Walk-in Condensate Drain	X		X		
Walk-in Electronic Temperature Controller			X	X	Secondary unit as specified
Restroom Exhaust Fans & Curbs	X		X		
Air Curtains	X		X		If specified
PLUMBING					
Backflow Preventers	X			X	If specified
Pressure Reducing Valves	X			X	If specified
Mixing Valves	X			X	If specified
Beverage Tubing		X		X	Soda, CO2
Beverage Dispensers		X		X	Coke (includes final connections, drains and startup)
Beverage Dispenser Backflow Prevention	X			X	Where required by local jurisdiction
Co2 Tanks		X		X	General Contractor secures tanks to wall as required by local jurisdiction
Water Heater	X			X	Includes circulation pump, storage tank and all related components
Water Conditioning System	X			X	Includes softener and all related components
Kitchen Hand Sinks and Faucets		X	X		
Kitchen Compartment Sinks and Faucets		X	X		
FIRE SUPPRESSION					
Fire Sprinklers	X			X	Design, permit, install, test and commission as required by local jurisdiction
Fire Alarm Panel	X			X	**If Specified - Landlord Furnished & Installed.** General Contractor is responsible for tying tenant's sprinkler system to landlord's existing alarm panel.
Ansul System		X	X		Permit, pull stations, test, commission (by CaptiveAire)
Fire Extinguishers	X			X	As specified and required by local jurisdiction
TESTING					
Air Test & Balance	X				
FEES					
Municipal		X			City/County development, permitting and licensing fees
Builder's Risk Insurance	X				

DEFINITIONS

O.F. OWNER FURNISHED
O.I. OWNER INSTALLED
C.F. CONTRACTOR FURNSHED
C.I. CONTRACTOR INSTALLED

AT TYPE I-B AND II-B BUILDINGS ALL PLYWOOD AND BLOCKING IS TO BE FIRE RETARDANT TREATED.

AT TYPE V-B BUILDINGS PLYWOOD AND BLOCKING IS NOT REQUIRED TO BE FIRE RETARDANT TREATED.

CITY DEFERRED SUBMITTALS

DEFERRED SUBMITTALS ARE TO BE MADE IN COMPLIANCE WITH SECTION 107.3.4.1 OF THE INTERNATIONAL BUILDING CODE. DEFERRED SUBMITTAL DOCUMENTS SHALL BE SUBMITTED TO THE ARCHITECT OF RECORD FOR THE PROJECT WHO SHALL REVIEW THEM AND FORWARD THEM TO THE BUILDING OFFICIAL HAVING JURISDICTION WITH A NOTATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND THAT THEY HAVE BEEN FOUND TO BE IN GENERAL COMPLIANCE WITH THE DESIGN OF THE PROJECT. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND APPROVED. THE FOLLOWING CONSTRUCTION DOCUMENTS SHALL BE SUBMITTED AS A DEFERRED SUBMITTAL:

1. HEALTH DEPARTMENT REVIEW IS IN PROCESS.
2. KITCHEN HOOD SUPPRESSION SYSTEM
3. FIRE ALARM
4. TRUSS PACKAGE / CALCS

GENERAL CONTRACTOR SUBMITTALS

THE FOLLOWING SHOP DRAWINGS SHALL BE SUBMITTED TO ARCHITECT & OWNER FOR REVIEW PRIOR TO WORK/INSTALLATION (EMAIL OR ELECTRONICALLY):

PLUMBING FIXTURES
DOORS & HARDWARE
WINDOWS
RESTROOM ACCESSORIES
FLOORING
ACOUSTICAL CEILINGS
PAINT & STAIN
FRP
HVAC
TILE
WALL FINISHES

DRAWING INDEX

GENERAL

G001 PROJECT INFORMATION SHEET
G002 GENERAL NOTES, LEGENDS, ABBREVIATIONS, AND SYMBOLS
G101 CODE REVIEW SHEET
G201 GENERAL ACCESSIBILITY REQUIREMENTS
G202 GENERAL ACCESSIBILITY REQUIREMENTS

CIVIL

C0.0 COVER SHEET
C0.1 GENERAL NOTES
1 OF 1 SURVEY
C1.0 EROSION CONTROL PLAN
C1.1 EROSION CONTROL DETAILS
C2.0 SITE AND PAVING PLAN
C3.0 GRADING AND DRAINAGE PLAN
C3.1 STORM DRAIN PROFILES
C4.0 EXISTING DRAINAGE AREA MAP
C4.1 PROPOSED DRAINAGE AREA MAP
C5.0 UTILITY PLAN
C6.0 CONSTRUCTION DETAILS (1 OF 4)
C6.1 CONSTRUCTION DETAILS (2 OF 4)
C6.2 CONSTRUCTION DETAILS (3 OF 4)
C6.3 CONSTRUCTION DETAILS (4 OF 4)

LP-1 LANDSCAPE PLANTING
LP-2 LANDSCAPE DETAILS AND SPECIFICATIONS
LI-1 LANDSCAPE IRRIGATION
LI-2 IRRIGATION DETAILS AND SPECIFICATIONS
LI-3 IRRIGATION DETAILS

ARCHITECTURAL (SHELL)

AS101 SITE PLAN
AS102 SITE DETAILS
AS103 CANOPY PLAN AND DETAILS
AS111 FOUNDATION PLAN
AS112 SHELL PLAN
AS121 ROOF PLAN
AS201 EXTERIOR ELEVATIONS
AS202 EXTERIOR ELEVATIONS
AS301 BUILDING SECTIONS
AS311 WALL SECTIONS
AS312 WALL SECTIONS
AS501 EXTERIOR DETAILS
AS502 EXTERIOR DETAILS
AS561 OPENING DETAILS
AS621 WINDOW SCHEDULE

ARCHITECTURAL

A111 SLAB PLAN
A112 FLOOR PLAN
A113 REFLECTED CEILING PLAN
A114 FINISH PLAN
A115 FURNITURE PLAN
A151 SPECIFICATION - ECO-GRIP FLOOR
A152 SPECS - SPRAYED APPLIED ACOUSTIC INSULATION
A401 ENLARGED FLOOR PLANS (RESTROOMS)
A402 INTERIOR ELEVATIONS (BEVERAGE & OFFICE)
A403 INTERIOR ELEVATIONS (POS)
A501 INTERIOR DETAILS
A502 INTERIOR DETAILS (CEILINGS)
A510a 3-BAY CANOPY DETAILS
A511 CANOPY DETAILS
A512 TYPICAL DINING ELEVATIONS
A513 JALOUSIE WALL
A514 INDOOR PATIO
A551 MILLWORK DETAILS
A611 STANDARD PARTITION TYPES
A612 PARTITION HEAD DETAILS
A613 STANDARD PARTITION AND FRAMING DETAILS
A631 DOOR AND FRAME TYPES
A651 TYPICAL MOUNTING HEIGHTS

KITCHEN

K1 FOOD SERVICE EQUIPMENT PLAN

STRUCTURAL - SHELL

S001 GENERAL STRUCTURAL NOTES
S002 GENERAL STRUCTURAL NOTES
S003 GENERAL STRUCTURAL NOTES
S004 GENERAL STRUCTURAL NOTES
S101 FOOTING AND FOUNDATION PLAN
S102 ROOF FRAMING PLAN
S201 EXTERIOR ELEVATIONS
S301 BUILDING SECTIONS
S501 FOOTING AND FOUNDATION DETAILS
S502 FOOTING AND FOUNDATION DETAILS
S701 ROOF FRAMING DETAILS
S702 ROOF FRAMING DETAILS
S703 ROOF FRAMING DETAILSBBC
S801 CONCRETE SCHEDULES
S802 WOOD SCHEDULES
S803 STEEL SCHEDULES

STRUCTURAL - TI

S-001TI GENERAL STRUCTURAL NOTES
S-102TI THREE BAY PLANS AND ELEVATIONS
S-301TI DETAILS

MECHANICAL / PLUMBING

ME001 MECHANICAL COVER SHEET
ME002 MECHANICAL SPECIFICATIONS
ME003 MECHANICAL SPECIFICATIONS
ME501 MECHANICAL DETAILS
ME502 MECHANICAL DETAILS
ME503 KITCHEN MECHANICAL EQUIPMENT
ME504 KITCHEN MECHANICAL EQUIPMENT
ME505 KITCHEN MECHANICAL EQUIPMENT
ME506 KITCHEN MECHANICAL EQUIPMENT
ME507 KITCHEN MECHANICAL EQUIPMENT
ME508 KITCHEN MECHANICAL EQUIPMENT
ME509 GREASE DUCT DETAILS
ME601 MECHANICAL SCHEDULES
MH101 MECHANICAL PLAN
MH102 ROOF MECHANICAL PLAN

PE001 PLUMBING COVER SHEET
PE501 PLUMBING DETAILS
PE502 PLUMBING DETAILS
PE601 PLUMBING SCHEDULES
PL101 PLUMBING PLAN - WATER
PL102 PLUMBING PLAN - GAS
PL103 PLUMBING PLAN - DWV
PL104 ROOF PLUMBING PLAN

ELECTRICAL

EE001 SHEET INDEX, ABBREVIATIONS, AND GENERAL NOTES
EE501 ELECTRICAL DETAILS
EE701 TYPICAL MOUNTING HEIGHT DETAILS
ES101 ELECTRICAL SITE PLAN
EP101 LEVEL 1 POWER PLAN
EP102 ROOF POWER PLAN
EP401 ENLARGED POWER PLAN
EP601 ONE-LINE DIAGRAM
EP602 EQUIPMENT SCHEDULE
EP603 PANEL SCHEDULES
EL101 LEVEL 1 LIGHTING PLAN
EL501 RELAY PANEL CUTSHEETS
EL601 LIGHTING FIXTURE SCHEDULE & COMCHECK

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sheet information

revisions:

num.	description	date
1	REVISION 01	03-11-22
2	REVISION 02	04-06-22

CURRENT SET THRU REVISION 02

date: 1-23-2022
project number: MO-53LEE
project status: ISSUED FOR PERMIT
original drawing is 24" x 36"
current as of: 4/26/2022 12:03:55 AM

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STATE OF MISSOURI
JOSEPH NOWLAND WINDER
NUMBER 2016038459
ARCHITECT

sheet number:

MOBETTAHS (TI) for: LEE'S SUMMIT
520 NW Chipman Rd
Lee's Summit, MO 64086

sheet title: PROJECT INFORMATION SHEET

sheet number:

G001

ABBREVIATIONS

A/C	AIR CONDITIONING
ACST	ACOUSTICAL
ADDM	ADDENDUM
ADJ	ADJUSTABLE
ALLOW	ALLOWABLE
ALUM	ALUMINUM
APPROX	APPROXIMATE
BLDG	BUILDING
BLK	BLOCK
BRK	BRICK
BU	BUILT-UP
BW	BOTH WAYS
CI	CAST IRON
CJ	CONTROL JOINT
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
COMP	COMPACTED / COMPOSITE
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIM	DIMENSION
DN	DOWN
DTL	DETAIL
DWG	DRAWING
EA	EACH
EXF	EXHAUST FAN
EIFS	EXTERIOR INSULATION FINISH SYSTEM
EJ	EXPANSION JOINT
ELECT	ELECTRIC / ELECTRICAL
ELEV	ELEVATION
EQ	EQUAL
EXIST	EXISTING
EXT	EXTERIOR
FD	FLOOR DRAIN
FDN	FOUNDATION
FIN	FINISH
FLR	FLOOR
FR	FIRE RATED
FTG	FOOTING
G	GAS
GA	GAUGE
GALV	GALVANIZED
GI	GALVANIZED IRON
GRD	GRADE
GLB	GLUE-LAM BEAM
GYP	GYPSUM BOARD
HB	HOSE BIB
HDR	HEADER
HM	HOLLOW METAL
HORZ	HORIZONTAL
ID	INSIDE DIAMETER
INSUL	INSULATION
INT	INTERIOR
IRRG	IRRIGATION
JB	JAMB
JNT	JOINT
MAX	MAXIMUM
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MR	MOISTURE RESISTANT
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
NO	NUMBER
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFD	OVERFLOW DRAIN
OPNG	OPENING
PLYWD	PLYWOOD
PNT	PAINT
PNTD	PAINTED
PR	PAIR
R&S	ROD AND SHELF
RAD	RADIUS
RD	ROOF DRAIN
REG	REGULAR
REINF	REINFORCED / REINFORCING
REQ'D	REQUIRED
REV	REVISED
RM	ROOM
RO	ROUGH OPENING
RS	ROUGH-SAWN
SC	SOLID CORE
SCHED	SCHEDULE
SHT	SHEET
SIM	SIMILAR
SPEC	SPECIFICATION
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL
SYS	SYSTEM
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TO	TOP OF
TOF	TOP OF FOOTING
TOW	TOP OF WALL
TYP	TYPICAL
TS	TUBE STEEL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
W	WATER
w/	WITH
WD	WOOD
WP	WATERPROOF
WR	WATER RESISTANT
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH

ELECTRICAL SYMBOLS

MARK	DESCRIPTION
	CEILING SURFACE MOUNTED
	CEILING PENDANT
	SURFACE MOUNTED
P.C.	SURFACE MOUNTED PULL CHAIN
	RECESSED DOWN LIGHT
	RECESSED WALL WASHER
	RECESSED 6" CAN LIGHT/FAN COMBO FIXTURE
W.P.	RECESSED WATERPROOF 6" CAN LIGHT FIXTURE
	EXHAUST FAN
S	INTER-CONNECTING SMOKE DETECTOR
	CONVENIENCE OUTLET 110V.
	CONVENIENCE OUTLET 220V.
	HALF-SWITCHED DUPLEX OUTLET
GFI	GROUND FAULT INDICATOR DUPLEX OUTLET
W.P.	WEATHER PROOF CONVENIENCE OUTLET
	FOURPLEX OUTLET
F	FLOOR OUTLET
$	SINGLE SWITCH
$3	3-WAY SWITCH
$4	4-WAY SWITCH
	LIGHT TRACK
EA	EXHAUST FAN
J	JUNCTION BOX
TV	TELEVISION OUTLET
J	JUNCTION BOX
	HEAVY DUTY GARAGE DOOR OPENER
T	TELEPHONE OUTLET
TV	TELEVISION OUTLET
	FLUORESCENT TUBE FIXTURE
	CEILING FAN

MATERIALS AND TYPES

ACOUSTICAL TILE

ASPHALT

BRICK

CAST STONE

CERAMIC TILE

CONCRETE

CONCRETE BLOCK

EARTH

EARTH BACKFILL

ENGINEERED FILL

FINISH LUMBER

GLASS

GRAVEL

GYPSUM WALL BOARD

INSULATION - BATT

INSULATION - RIGID

PLASTER

PLYWOOD

STEEL

STUD FRAMING - METAL

STUD FRAMING WOOD

WOOD BLOCKING

CONTOUR EXISTING — 22.0'

CONTOUR FINISH — 22.0'

FENCE — X — X

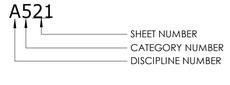
PROPERTY LINE

WALL RATINGS

- NON RATED
- SMOKE PARTITION (NON RATED)
- 1 HR FIRE RATED
- 1 HR FIRE-SMOKE RATED
- 2 HR FIRE RATED
- 2 HR FIRE-SMOKE RATED

SYMBOLS LEGEND

SHEET NUMBER



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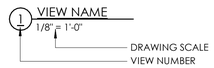
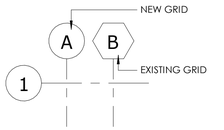
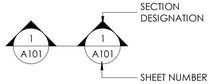


NORTH ARROWS

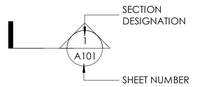
GRIDLINES



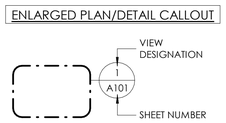
BUILDING SECTION CALLOUT



WALL SECTION CALLOUT



ENLARGED PLAN/DETAIL CALLOUT



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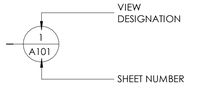
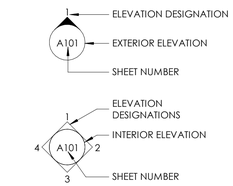
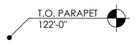


ELEVATION CALLOUT(S)

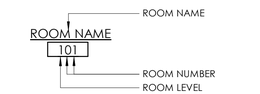


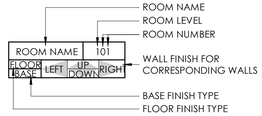
VERTICAL ELEVATION

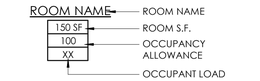
SPOT ELEVATION



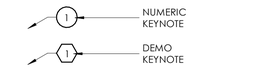
ROOM NAMES AND NUMBERS





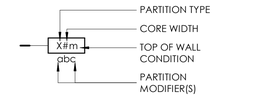


KEYNOTES

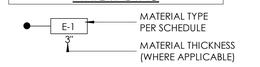


DOOR AND WINDOW TAGS

WALL TAG



MATERIAL TAG

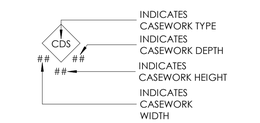


CEILING TAG

REVISION TAG

ACCESSORY TAG

CASEWORK TAG



OCCUPANCY EXITING TAG

FLOOR PATTERN DIRECTION

STEP IN SLAB

GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY AND ALL PERMITS THAT ARE REQUIRED BEFORE AND DURING THE CONSTRUCTION PROCESS PRIOR TO THE COMMENCEMENT OF ANY WORK, AND SHALL BE REQUIRED TO CONTACT THE PROPER AUTHORITIES HAVING JURISDICTION.

2. THE CONTRACTOR SHALL CAREFULLY READ, STUDY, AND UNDERSTAND ALL PLANS AND SPECIFICATIONS FOR TRADES. COORDINATION BETWEEN TRADES WILL BE NECESSARY AND THE RESPONSIBILITY OF THE CONTRACTOR. ANY QUESTIONS THAT ARISE SHALL BE CLARIFIED BY THE ARCHITECT PRIOR TO CONSTRUCTION.

3. CONTRACTOR WILL VERIFY ALL CONDITIONS, DIMENSIONS AND ELEVATIONS, ETC. AT THE SITE AND WILL COORDINATE WORK PERFORMED BY ALL TRADES.

4. DRAWINGS ARE NOT TO BE SCALED. DIMENSIONAL DISCREPANCIES ARE TO BE CLARIFIED WITH THE ARCHITECT BEFORE PROCEEDING WITH CONSTRUCTION.

5. CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES PRIOR TO EXCAVATION. CONTACT BLUE-STAKE OR AUTHORITIES HAVING JURISDICTION.

6. CONTRACTOR WILL NOTIFY ARCHITECT / ENGINEER OF ANY DISCREPANCIES, OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND / OR SPECIFICATIONS BEFORE PROCEEDING WITH ANY WORK INVOLVED. IN ALL CASES, UNLESS OTHERWISE DIRECTED, THE MOST STRINGENT REQUIREMENTS WILL GOVERN.

7. THE ARCHITECTS APPROVAL MUST BE OBTAINED FOR ANY DEVIATIONS FROM THE CONSTRUCTION DOCUMENTS, INCLUDING BUT NOT LIMITED TO CHANGES IN DIMENSIONS, DESIGN, MATERIALS, PRODUCTS, AND FINISHES, IN NO CASE MAY THE CONTRACTOR MAKE THESE CHANGES WITHOUT THE APPROVAL OF THE ARCHITECT.

8. SHOP DRAWINGS AND OTHER SUBMITTALS ARE TO BE PRESENTED TO THE ARCHITECT FOR REVIEW PRIOR TO EXECUTION OF WORK, ALLOW APPROPRIATE TIME FOR REVIEW. COORDINATE WITH ADDITIONAL GENERAL NOTES, ENERGY CONSERVATION NOTES, AND STRUCTURAL NOTES.

9. SHOP DRAWINGS WILL BE PROVIDED TO THE CONTRACTOR BY SUPPLIER OR PRODUCT MANUFACTURER PRIOR TO INSTALLATION, FABRICATION, OR ERECTION OF ANY PREFABRICATED OR MANUFACTURER DESIGNED COMPONENTS. THESE DRAWINGS WILL BE STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THIS STRUCTURE RESIDES. COPIES OF THE SHOP DRAWINGS ARE TO BE PROVIDED TO THE ARCHITECT FOR REVIEW PRIOR TO ORDERING OR INSTALLATION.

10. ALL CONSTRUCTION SHALL CONFORM TO AND STRICTLY COMPLY WITH ALL APPLICABLE CODES INCLUDING THE INTERNATIONAL BUILDING CODE, COVENANTS AND RESTRICTIONS AND LOCAL BUILDING AND HOUSING STANDARDS.

11. IN NO EVENT SHALL THE CONTRACTOR SUBSTITUTE A STANDARD CONSTRUCTION DETAIL FOR A DETAIL SPECIFIED IN THESE DOCUMENTS. THE CONTRACTOR SHALL BRING ALL WORK INTO CONFORMITY WITH THE CONSTRUCTION DOCUMENTS AS THE ARCHITECT ORDERS BEFORE APPROVAL OF THAT CONSTRUCTION WILL BE GRANTED. NOTES AND DETAILS ON THE DRAWINGS WILL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.

12. IN INSTANCES WHERE ITEMS ARE TO BE SELECTED BY OWNER, THE DETAILS PROVIDED BY THE ARCHITECT ARE OF A GENERIC NATURE. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO COORDINATE THE SELECTED MANUFACTURERS SPECIFIC DETAILS WITH THE PROVIDED DETAILS AND ADJUST CONSTRUCTION ACCORDINGLY. IN SUCH INSTANCES CONSULT WITH THE ARCHITECT / ENGINEER PRIOR TO INSTALLATION. THE SELECTED MANUFACTURERS RECOMMENDED INSTALLATION PROCEDURES, INDUSTRY STANDARDS, AND APPLICABLE CODE REQUIREMENTS MUST BE FOLLOWED.

13. IN INSTANCES WHERE ITEMS ARE TO BE SELECTED BY OWNER, ORDERING, DELIVERY, OR INSTALLATION WILL NOT TAKE PLACE UNTIL WRITTEN AUTHORIZATION IS OBTAINED FROM THE OWNER OR OWNER'S AGENT.

14. ALL WATER HEATERS ARE TO HAVE SEISMIC TIE DOWNS. PROVIDE AN UNOBSTRUCTED WORKING SPACE NOT LESS THAN 30" IN DEPTH, AND CLEAR ACCESS OF 36" IN WIDTH IN FRONT OF FIREBOX.

15. PROVIDE A CONTINUOUS 3/4" BEAD OF 100% SILICONE SEALANT AT ALL EXTERIOR JOINTS

16. (WHERE OCCURS) REFER TO STRUCTURAL DRAWINGS FOR ALL FOOTING AND FOUNDATION WALLS, CONCRETE REINFORCING, BEARING WALLS, SHEAR WALLS, COLUMNS, BEAMS, PRIMARY STRUCTURAL FRAMES, FLOOR FRAMING, ROOF FRAMING, SECONDARY FRAMING, AND ASSOCIATED CONNECTION DETAILS. COORDINATE ALL RELATED WORK WITH GENERAL STRUCTURAL NOTES, SCHEDULES, AND DETAILS.

17. REFER TO ELECTRICAL DRAWINGS FOR ALL ELECTRICAL EQUIPMENT, PANEL LOCATIONS, WIRING DIAGRAMS, AND FIXTURE LOCATIONS. COORDINATE ANY RELATED WORK WITH GENERAL ELECTRICAL NOTES AND ELECTRICAL FIXTURE SCHEDULES.

18. REFER TO MECHANICAL DRAWINGS FOR ALL MECHANICAL EQUIPMENT, DUCT WORK, MECHANICAL PIPING, AND EXHAUST. COORDINATE ANY RELATED WORK WITH GENERAL MECHANICAL NOTES, SCHEDULES, AND DETAILS.

19. REFER TO PLUMBING DRAWINGS FOR ALL PLUMBING EQUIPMENT, FIXTURES, AND RELATED PIPING, I.E.; STORM SEWER, SANITARY SEWER, AND DOMESTIC WATER SUPPLY. COORDINATE ANY RELATED WORK WITH GENERAL PLUMBING NOTES, SCHEDULES, AND DETAILS.

20. CONTRACTOR AND ALL SUBCONTRACTORS WILL PERFORM THEIR TRADES AND DUTIES IN A MANNER CONFORMING TO THE PROCEDURES AND REQUIREMENTS AS STATED IN THE 2012 INTERNATIONAL BUILDING CODE, (OR LATEST ACCEPTED CODE ADOPTED BY THE LOCAL BUILDING OFFICIALS). THE CONTRACTOR WILL COORDINATE ALL REQUIRED INSPECTIONS AND WILL NOT PROCEED WITH WORK UNTIL THE REQUIRED INSPECTIONS HAVE BEEN COMPLETED.

21. ANY SPECIAL INSPECTION REQUIRED BY THE BUILDING OFFICIAL OR THE BUILDING CODE ARE NOT THE RESPONSIBILITY OF THE ARCHITECT.

22. CONTRACTOR WILL BE RESPONSIBLE FOR SAFETY AND PROTECTION WITHIN AND ADJACENT TO THE JOB SITE.

23. DURING CONSTRUCTION OPEN EXCAVATIONS AND TRENCHES WILL BE SUPPORTED AND BARRICADED BY CONTRACTOR TO CONFORM WITH OSHA SAFETY STANDARDS.

24. TEMPORARY BRACING WILL BE PROVIDED WHEREVER NECESSARY TO TAKE CARE OF ALL LOADS TO WHICH THE STRUCTURE MAY BE SUBJECTED, INCLUDING WIND. SUCH BRACING WILL BE LEFT IN PLACE AS LONG AS MAY BE REQUIRED FOR SAFETY, OR UNTIL ALL THE STRUCTURAL ELEMENTS ARE COMPLETE.

25. PROVIDE AN OBVIOUS TURN OFF FOR WATER SUPPLY IN MECHANICAL AREA LABELED BELOW GRID IN BACK OF HOUSE.

26. FINISH GRADE TO SLOPE AWAY FROM STRUCTURE 6" MIN. IN FIRST 10' AND 2% THERE AFTER. COORDINATE WITH CIVIL.

28. ALL WOOD IN CONTACT WITH CONCRETE SHALL BE TREATED.

29. COORDINATE WITH FRAMING PLANS FOR LOCATIONS OF COLUMNS, BEAMS, MOMENT FRAMES, ETC.

30. VISITS TO THE JOB SITE BY THE ARCHITECT OR HIS CONSULTANTS DO NOT CONSTITUTE APPROVAL OF THE WORK PERFORMED BY THE GENERAL CONTRACTOR OR HIS SUBCONTRACTORS. ANY SUCH VISITS ARE SOLELY FOR THE PURPOSE OF OBSERVING THE WORK BEING PERFORMED.

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sheet information

revisions: 1

num.	description	date

CURRENT SET THRU REVISION 02

date:	1-23-2022
project number:	MO-53LEE
project status:	ISSUED FOR PERMIT

original drawing is 24" x 36"
current as of: 1/25/2022 11:31:35 PM

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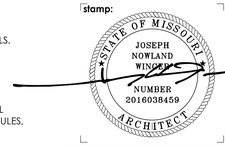


sheet number:

MOBETTAHS (TI) for: LEE'S SUMMIT

520 NW Chipman Rd
Lee's Summit, MO 64086

sheet title:

GENERAL NOTES, LEGENDS, ABBREVIATIONS, AND SYMBOLS

sheet number:

G002

COMcheck Software Version 4.1.5.1

Envelope Compliance Certificate

Project Information

Energy Code:	2018 IECC
Project Title:	MO-53LEE
Location:	Lees Summit, Missouri
Climate Zone:	4a
Project Type:	New Construction
Vertical Glazing / Wall Area:	18%

Construction Site:
NORTHWEST CHIPMAN ROAD &
NORTHWEST HAWD ROAD
LEES SUMMIT, MO 64012

Owner/Agent:

Designer/Contractor:

Additional Efficiency Package(s)
High efficiency HVAC. Systems that do not meet the performance requirement will be identified in the mechanical requirements checklist report.

Building Area	Floor Area
1-Retail : Nonresidential	2706

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
Floor 1: Slab-On-Grade:Unheated, [Bldg. Use 1 - Retail] (c)	240	---	---	0.730	0.540
Roof 1: Insulation Entirely Above Deck, [Bldg. Use 1 - Retail]	2583	---	30.0	0.032	0.032
NORTH					
NORTH EIFS: Wood-Framed, 16" o.c., [Bldg. Use 1 - Retail]	490	19.0	7.5	0.043	0.064
Window 1: Metal Frame with Thermal Break Fixed, Perf. Specs.: Product ID Pending, SHGC 0.38, VT 0.60, [Bldg. Use 1 - Retail] (b)	37	---	---	0.280	0.380
NORTH BRICK: Wood-Framed, 16" o.c., [Bldg. Use 1 - Retail]	443	19.0	0.0	0.067	0.064
NORTH HARDI BOARD: Wood-Framed, 16" o.c., [Bldg. Use 1 - Retail]	635	19.0	0.0	0.067	0.064
Window 7: Metal Frame with Thermal Break Fixed, Perf. Specs.: Product ID Pending, SHGC 0.38, VT 0.60, [Bldg. Use 1 - Retail] (b)	180	---	---	0.280	0.380
EAST					
EAST EIFS: Wood-Framed, 16" o.c., [Bldg. Use 1 - Retail]	637	19.0	7.5	0.043	0.064
Door 1: Insulated Metal, Swinging, [Bldg. Use 1 - Retail]	27	---	---	0.035	0.610
EAST BRICK: Wood-Framed, 16" o.c., [Bldg. Use 1 - Retail]	82	19.0	0.0	0.067	0.064
SOUTH					
SOUTH EIFS: Wood-Framed, 16" o.c., [Bldg. Use 1 - Retail]	342	19.0	7.5	0.043	0.064
Window 9: Metal Frame with Thermal Break Fixed, Perf. Specs.: Product ID Pending, SHGC 0.38, VT 0.60, [Bldg. Use 1 - Retail] (b)	117	---	---	0.280	0.380
SOUTH HARDI BOARD: Wood-Framed, 16" o.c., [Bldg. Use 1 - Retail]	687	19.0	0.0	0.067	0.064
Window 10: Metal Frame with Thermal Break, Perf. Specs.: Product ID Pending, SHGC 0.38, VT 0.60, [Bldg. Use 1 - Retail] (b)	216	---	---	0.280	0.380
SOUTH BRICK: Wood-Framed, 16" o.c., [Bldg. Use 1 - Retail]	477	19.0	0.0	0.067	0.064
WEST					

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
WEST BRICK: Wood-Framed, 16" o.c., [Bldg. Use 1 - Retail]	363	19.0	0.0	0.067	0.064
Window 10: Metal Frame with Thermal Break, Perf. Specs.: Product ID Pending, SHGC 0.38, VT 0.60, [Bldg. Use 1 - Retail] (b)	128	---	---	0.280	0.380
WEST HARDI BOARD: Wood-Framed, 16" o.c., [Bldg. Use 1 - Retail]	341	19.0	0.0	0.067	0.064
Window 10: Metal Frame with Thermal Break Fixed, Perf. Specs.: Product ID Pending, SHGC 0.38, VT 0.60, [Bldg. Use 1 - Retail] (b)	120	---	---	0.280	0.380

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.
(b) Fenestration product performance must be certified in accordance with NFRC and requires supporting documentation.
(c) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.

Project Notes

Envelope PASSES: Design 9% better than code

Envelope Compliance Statement

Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.1 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

ShaeLee - BIM Tech — Signature — Date
Name - Title

.28 U-Factor
.39 SHGC
ppg Solarban 60x1

CODE REVIEW - GENERAL NOTES

1. DO NOT SCALE DRAWINGS, IF DIMENSIONAL INFORMATION IS REQUIRED & NOT FOUND, NOTIFY ARCHITECT IMMEDIATELY FOR CLARIFICATION.
2. SEE SHEET G001 FOR GENERAL CODE AND PROJECT SPECIFIC CODE INFORMATION.
3. SEE SHEET G002 FOR GENERAL NOTES
4. HIGHER RATED FIRE WALLS TAKE PRECEDENCE OVER LOWER RATED WALLS AND ARE TO CONTINUE THROUGH ALL SUCH INTERSECTIONS.
5. SEE A100 SHEETS FOR WALL TYPE DESIGNATIONS.
6. SEE A500 SHEETS FOR FIRE PROOFING DETAILS.
7. SEE A600 SHEETS FOR WALL ASSEMBLIES, TOP OF WALL DETAILS, UL LISTINGS, ETC.
8. ALL DOORS ON THE ACCESSIBLE ROUTE OR CIRCULATION PATH BE TESTED FOR A MAX OPENING FORCE OF 5LBS.

FIRE RATING LEGEND

NON RATED

1 HR FIRE BARRIER

KEYNOTES

1. ACCESSIBLE CUSTOMER TRANSACTION COUNTER
2. MAXIMUM AREA OCCUPANT LOAD SIGN, SEE 4/A651
3. PROVIDE "EMERGENCY ACCESS" KEY IN THE KNOX BOX; KNOX BOX TO BE LOCATED IN APPROVED AREA BY FIRE DEPARTMENT KEY BOX

FURNITURE COUNT

TYPE	TABLE SIZE	COUNT	TOTAL NUMBER OF SEATS
INTERIOR			
1 - SEAT	30X30 TABLE	X 4	= 8 SEATS
2 - SEAT		X 3	= 6 SEATS
2 - SEAT	30X48 TABLE	X 2	= 4 SEATS
4 - SEAT		X 4	= 16 SEATS
6 - SEAT	30X48 TABLE	X 4	= 24 SEATS
LINEAR FEET OF BENCH		24 LF	= 12 SEATS
LINEAR FEET OF BOOTH		4LF X 4 = 16 LF	= 8 SEATS
INTERIOR SEAT COUNT			= 78 SEATS
EXTERIOR			
2 - SEAT	30X30 TABLE	X 0	= 0 SEATS
4 - SEAT	30X48 TABLE	X 3	= 12 SEATS
EXTERIOR SEAT COUNT			= 12 SEATS
TOTAL SEAT COUNT			**= 90 SEATS**

MINIMUM REQUIREMENT ACCESSIBLE SEATING (51 TO 100) = 4 SEATS REQUIRED
ACCESSIBLE SEATING (INTERIOR) = 4 SEATS

EGRESS PLAN LEGEND

ROOM NAME — ROOM NAME
150 SF — ROOM S.F.
100 — OCCUPANCY ALLOWANCE
XX — OCCUPANT LOAD

EXIT
200 OCC
0.2 CF
25" R
34" P
— MAXIMUM OCCUPANT LOAD THRU EXIT
— CAPACITY FACTOR (STAIRS PER 1005.3.1; OTHER PER 1005.3.2 EXCEPTION 1)
— MINIMUM REQUIRED EXIT WIDTH
— EXIT WIDTH PROVIDED; DOORS MEASURED BETWEEN DOOR FACE AND STOP

7 — NUMBER OF OCCUPANTS THRU DOOR/OPENING

FE — FIRE EXTINGUISHER LOCATION 75' MAXIMUM TRAVEL DISTANCE TO FIRE EXTINGUISHER

— EGRESS PATH

AGG.
7
— AGGREGATE NUMBER OF OCCUPANTS THRU SPACE

INSTALL OCCUPANCY SIGNAGE AS DESCRIBED IN DETAIL 4/A651
CONTACT ARCHITECT OF ANY DISCREPANCIES PRIOR TO WORK

EXIT ACCESS DOORWAY CONFIGURATION (SECTION 1007.1.1)
(EXCEPTION 2) REQUIRED DISTANCE BETWEEN INTERIOR EXITS
MAXIMUM OVERALL DIAGONAL DIMENSION / 3
REQUIRED DISTANCE = 23'-9.5" = (71'-4" / 3)
PROVIDED DISTANCE = 28' - 5"

MAXIMUM DIAGONAL DIMENSION IN DINING AREA/ 3
REQUIRED DISTANCE = 18'-7" = (55' - 8.5" / 3)
PROVIDED DISTANCE = 28' - 5"

PROJECT INFORMATION

CODE SUMMARY AND PROJECT INFORMATION:

APPLICABLE CODES AND STANDARDS

2018	INTERNATIONAL BUILDING CODE (IBC)
2018	INTERNATIONAL PLUMBING CODE (IPC)
2018	INTERNATIONAL MECHANICAL CODE (IMC)
2017	NATIONAL ELECTRICAL CODE (NEC)
2006	INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
2018	INTERNATIONAL FIRE CODE (IFC)
2009	ANSI A117.1

PROJECT DESCRIPTION
THIS PROJECT IS A SHELL BUILDING AND INTERIOR BUILD OUT FOR A RESTAURANT INCLUDING DINING SPACE, COMMERCIAL, KITCHEN, RESTROOMS AND AN OFFICE.
THIS BUILDING DOES NOT INCLUDE A FIRE SPRINKLER SYSTEM.

PROJECT AREA:

FUTURE MOBETTAH'S	2,800 SF

USE AND OCCUPANCY CLASSIFICATION (IBC CHAPTER 3)
GROUP(S): A-2

GENERAL BUILDING HEIGHTS AND AREAS (IBC CHAPTER 5)
CONSTRUCTION TYPE: V-B

	ALLOWABLE	ACTUAL
BUILDING HEIGHT IN FEET (Table 504.3):	40	XX
BUILDING HEIGHT IN STORIES (Table 504.4):	1	1
AREA PER FLOOR (Table 506.2):	x	x

MIXED OCCUPANCIES: NOT APPLICABLE

FIRE RESISTIVE RATING REQUIREMENTS FOR BUILDING ELEMENTS (IBC CHAPTER 6)
CONSTRUCTION TYPE: V-B

STRUCTURAL FRAME:	0	HR
BEARING WALLS EXTERIOR:	0	HR
BEARING WALLS INTERIOR:	0	HR
NONBEARING WALLS INTERIOR:	0	HR
FLOOR CONSTRUCTION:	0	HR
ROOF CONSTRUCTION:	0	HR

FIRE AND SMOKE PROTECTION FEATURES (IBC CHAPTER 7)
ALLOWABLE AREA OF OPENINGS:

FIRE SEPARATION DISTANCE: x FEET
OPENING PROTECTION: UNPROTECTED, NONSPRINKLERED

ALLOWABLE AREA: 70%

FIRE PROTECTION SYSTEMS (IBC CHAPTER 9)
AUTOMATIC SPRINKLER SYSTEM: NOT PROVIDED

ADDITIONAL REQUIREMENTS OR DESCRIPTIVE INFORMATION

MEANS OF EGRESS (IBC CHAPTER 10)
OCCUPANT LOAD (1004): XX TOTAL OCCUPANTS (SEE OCCUPANT LOAD CALCULATIONS ON SHEET G001)

EGRESS SIZING (1005):
STAIRWAYS = OCCUP. LOAD x 0.3 "/OCC.
= XX INCHES REQUIRED
= N/A INCHES PROVIDED

OTHER EGRESS COMPONENTS = OCCUP. LOAD x 0.2 "/OCC.
= XX INCHES REQUIRED
= XX INCHES PROVIDED

COMMON PATH OF EGRESS TRAVEL: XXX FEET
EXIT ACCESS TRAVEL DISTANCE: XXX FEET

PLUMBING FIXTURE REQUIREMENTS (IBC CHAPTER 29)
SEE PLUMBING FIXTURE CALCULATIONS ON SHEET: G001

THERMAL ENVELOPE (IECC)

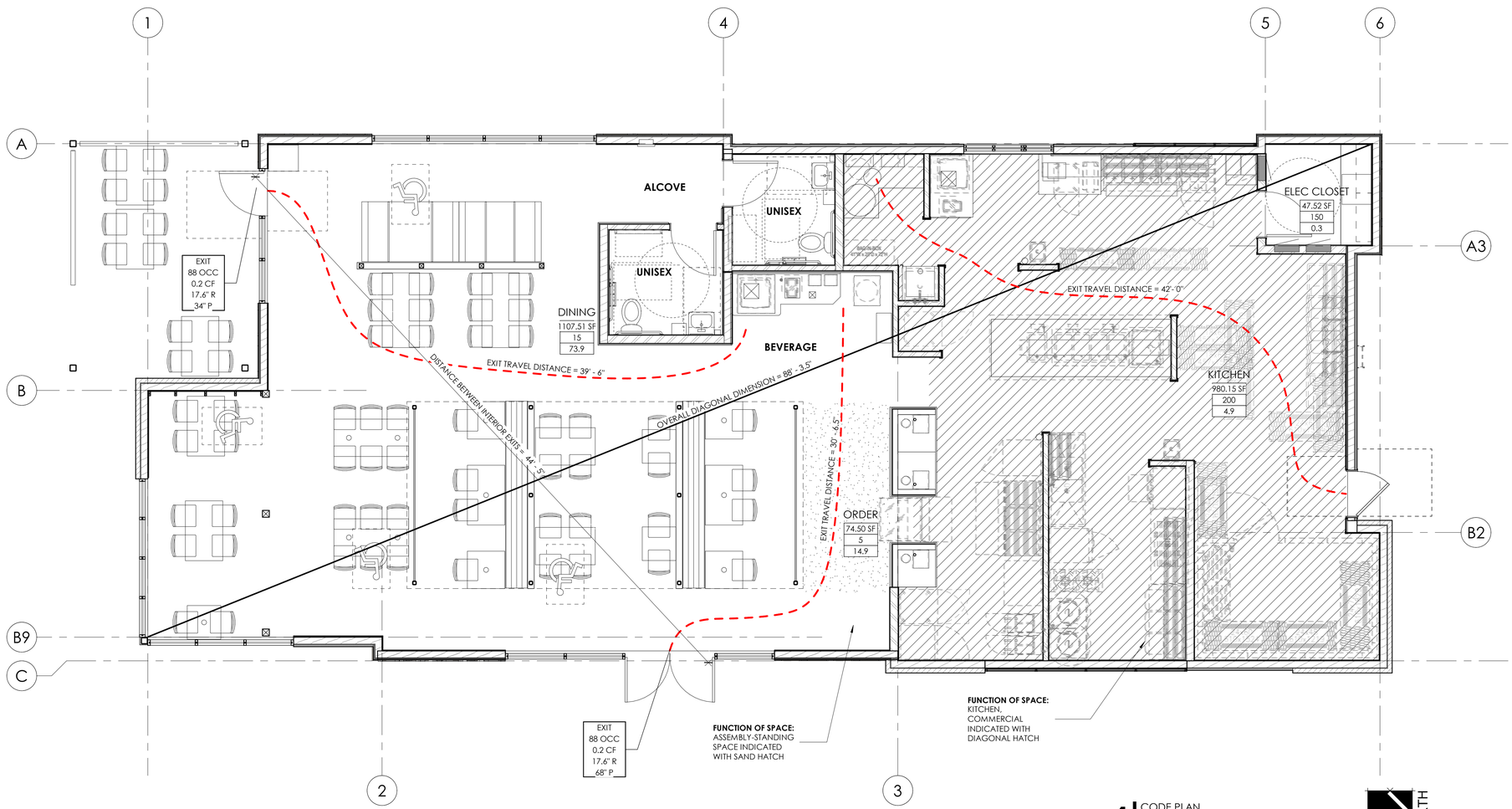
STUD CAVITY INSULATION R-VALUE:	R-19	
ROOF INSULATION R-VALUE:	R-38	
CONTINUOUS INSULATION R-VALUE:	R-7.5	WHERE IT OCCURS

EXTERIOR GLAZING INFORMATION:

BASIS OF DESIGN PRODUCT:	PPG SOLARBAN 60	
VLT	60%	MINIMUM
SUMMER U-FACTOR:	0.29	Btu/(hr x sqft) MAXIMUM
WINTER U-FACTOR:	0.27	Btu/(hr x sqft) MAXIMUM
SHGC	0.39	MAXIMUM

NOTES:
ALL DEFERRED SUBMITTALS TO BE PROVIDED TO THE AUTHORITY HAVING JURISDICTION FOR REVIEW A MINIMUM OF TWO WEEKS PRIOR TO COMMENCEMENT OF WORK.

ALL DEFERRED SUBMITTALS TO BE REVIEWED BY THE ARCHITECT PRIOR TO SUBMITTAL TO THE AUTHORITY HAVING JURISDICTION.



1 CODE PLAN
1/4" = 1'-0"

NORTH

FIRE MARSHAL NOTES:
1. FOR CLASS I COOKING HOODS, THE FIRE MARSHAL'S OFFICE SHALL CONDUCT SEPARATE INSPECTIONS OF DUCT WORK, DUCT WRAP AND HOOD OPERATION FROM THE BUILDING DEPARTMENT INSPECTION. PLEASE HAVE THE INSTALLATION CONTRACTOR CONTACT THIS OFFICE FOR THE DUCT WORK "LIGHT TEST", HEAT DETECTOR TEST, AND INSPECTION OF THE DUCT WRAP, MAKE-UP AIR OPERATION, AND GENERAL INSPECTION OF HOOD AND DUCT. ALL INSPECTIONS ARE REQUIRED BEFORE THE SYSTEM CAN BE APPROVED FOR OPERATION ALL INSPECTIONS ARE REQUIRED BEFORE THE SYSTEM CAN BE APPROVED FOR OPERATION (NFPA96, IFC SEC. 901.5.
2. THE EMERGENCY GAS SHUT-OFF VALVE FOR THE HOOD SYSTEM SHALL BE MOUNTED BELOW THE CEILING GRID AND IN AN EASY ACCESSIBLE LOCATION FOR MAINTENANCE. NFPA 96.
3. A MINIMUM 2A10BC EXTINGUISHER(S) SHALL BE MOUNTED AND LABELED FOR EVERY 75 FEET OF TRAVEL DISTANCE. IFC SEC. 906.2.
4. THE HOOD SUPPRESSION SYSTEM TO BE A DEFERRED SUBMITTAL. CONTRACTOR CAN CONTACT FIRE MARSHAL'S OFFICE DIRECTLY IFC SEC 901.2.

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sheet information

revisions:

num.	description	date

CURRENT SET THRU REVISION 02

date: 1-23-2022
project number: MO-53LEE
project status: ISSUED FOR PERMIT
original drawing is 24" x 36"
current as of: 1/25/2022 11:31:52 PM

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LEE'S SUMMIT
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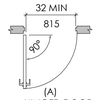
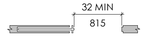
sheet title:
CODE REVIEW SHEET

sheet number:
G101



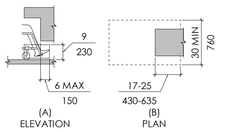
(A)
HINGED DOOR



(B)
SLIDING DOOR

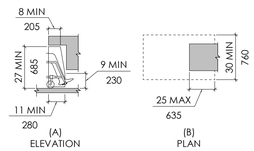
(C)
FOLDING DOOR

CLEAR WIDTH OF DOORWAYS
ICC/ANSI FIG 404.2.2



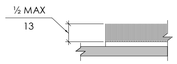
(A) ELEVATION (B) PLAN

ICC/ANSI FIG 306.2
TOE CLEARANCE

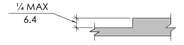


(A) ELEVATION (B) PLAN

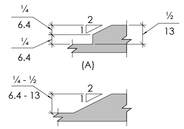
ICC/ANSI FIG 306.3
KNEE CLEARANCE



ICC/ ANSI FIG 303.2
CARPET ON FLOOR SURFACES



ICC/ANSI FIG 303.2
CHANGES IN LEVEL



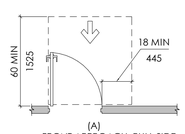
ICC/ANSI FIG 303.3
BEVELED CHANGES IN LEVEL

THIS DRAWING PRODUCED BY THE U.S. ACCESS BOARD

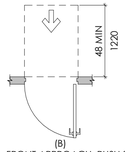
CONVENTION	DESCRIPTION
36 / 915	DIMENSION SHOWING ENGLISH UNITS (IN INCHES UNLESS OTHERWISE SPECIFIED) ABOVE THE LINE AND SI UNITS (IN MILLIMETERS UNLESS OTHERWISE SPECIFIED) BELOW THE LINE
6 / 150	DIMENSION FOR SMALL MEASUREMENTS
33-36 / 840-915	DIMENSION SHOWING A RANGE WITH MINIMUM - MAXIMUM
MIN	MINIMUM
Max	MAXIMUM
>	GREATER THAN
≥ MIN	GREATER THAN OR EQUAL TO
<	LESS THAN
≤ MAX	LESS THAN OR EQUAL TO
	BOUNDARY OF CLEAR FLOOR SPACE OR MANEUVERING CLEARANCE
	CENTERLINE
	A PERMITTED ELEMENT OR ITS EXTENSION
	DIRECTION OF TRAVEL OR APPROACH
	A WALL, FLOOR, CEILING OR OTHER ELEMENT CUT IN SECTION OR PLAN
	A HIGHLIGHTED ELEMENT IN ELEVATION OR PLAN
	LOCATION ZONE OF ELEMENT, CONTROL OR FEATURE

FIGURE 104
GRAPHIC CONVENTION FOR FIGURES

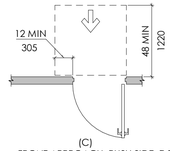
THE PROJECT IS TO MEET THE IBC AND THE ACCESSIBILITY CODES FOR ACCESSIBILITY AS DEFINED BY SHEET G001. THE MOST STRINGENT REQUIREMENTS SHALL BE UTILIZED IN THE CONSTRUCTION OF THIS PROJECT. THE FOLLOWING DIAGRAMS AND NOTES ARE PROVIDED ONLY AS A GUIDE TO THIS PROJECT. THE CONTRACTOR SHALL BE FAMILIAR WITH ALL CODES AND NOTIFY THE ARCHITECT IF THESE NOTES AND DIAGRAMS ARE CONTRADICTORY TO THE ACTUAL CONSTRUCTION. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE CODES. IF THERE IS A DISCREPANCY, THE ADOPTED CODES AND ENFORCED LAWS TAKE PRECEDENCE.



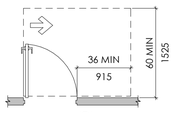
(A)
FRONT APPROACH, PULL SIDE



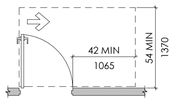
(B)
FRONT APPROACH, PUSH SIDE



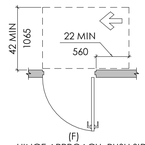
(C)
FRONT APPROACH, PUSH SIDE, DOOR PROVIDED WITH BOTH CLOSER AND LATCH



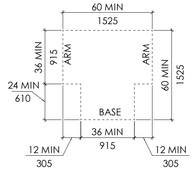
(D)
HINGE APPROACH, PULL SIDE



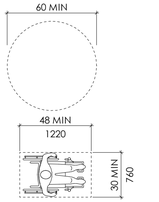
(E)
HINGE APPROACH, PULL SIDE



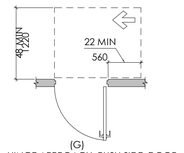
(F)
HINGE APPROACH, PUSH SIDE



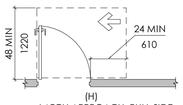
ICC/ANSI FIG 304.3
SIZE OF TURNING SPACE



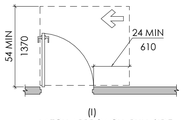
ICC/ANSI FIG 305.3
SIZE OF CLEAR FLOOR SPACE



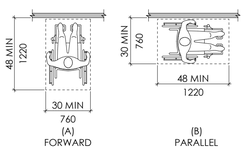
(G)
HINGE APPROACH, PUSH SIDE, DOOR PROVIDED WITH BOTH CLOSER AND LATCH



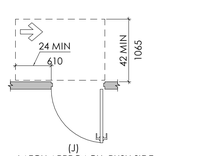
(H)
LATCH APPROACH, PULL SIDE



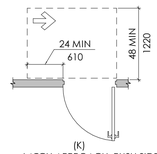
(I)
LATCH APPROACH, PULL SIDE, DOOR PROVIDED WITH CLOSER



ICC/ANSI FIG 305.5
POSITION OF CLEAR FLOOR SPACE

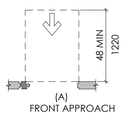


(J)
LATCH APPROACH, PUSH SIDE

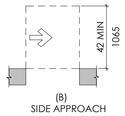


(K)
LATCH APPROACH, PUSH SIDE, DOOR PROVIDED WITH CLOSER

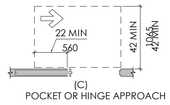
MANEUVERING CLEARANCES AT MANUAL
SWINGING DOORS
ICC/ANSI FIG 404.2.3.1



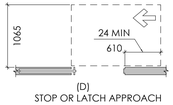
(A)
FRONT APPROACH



(B)
SIDE APPROACH

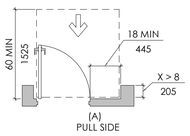


(C)
POCKET OR HINGE APPROACH

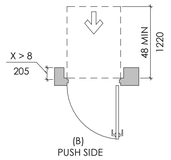


(D)
STOP OR LATCH APPROACH

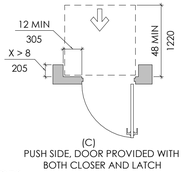
MANEUVERING CLEARANCES AT SLIDING AND FOLDING DOORS
ICC/ANSI FIG 404.2.3.2



(A)
PULL SIDE

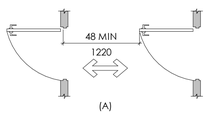


(B)
PUSH SIDE

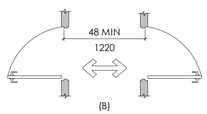


(C)
PUSH SIDE, DOOR PROVIDED WITH BOTH CLOSER AND LATCH

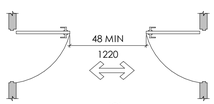
MANEUVERING CLEARANCES AT RECESSED DOORS
ICC/ANSI FIG 404.2.3.4



(A)

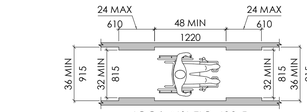


(B)

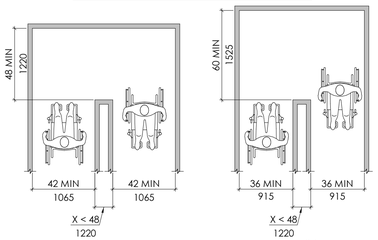


(C)

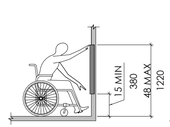
TWO DOORS IN SERIES
ICC/ANSI FIG 404.2.5

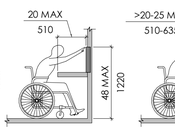


ICC/ANSI FIG 403.5
CLEAR WIDTH OF AN ACCESSIBLE ROUTE

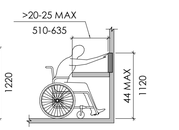


(a) 180 DEGREE TURN ICC/ANSI FIG 403.5.1 CLEAR WIDTH AT TURN (b) 180 DEGREE TURN (EXCEPTION)





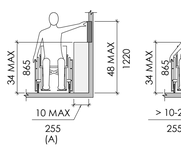
(A)



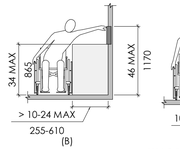
(B)

UNOBSTRUCTED FORWARD REACH
ICC/ANSI FIG 308.2.1

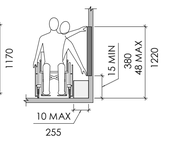
OBSTRUCTED HIGH FORWARD REACH
ACC/ANSI FIG 308.2.2.



(A)

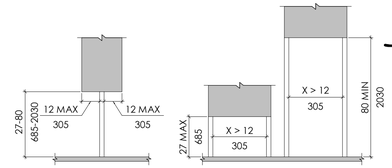


(B)



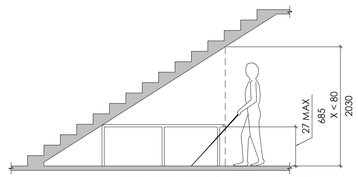
OBSTRUCTED HIGH SIDE REACH
ICC/ANSI FIG 308.3.2

UNOBSTRUCTED SIDE REACH
FIG 308.3.1

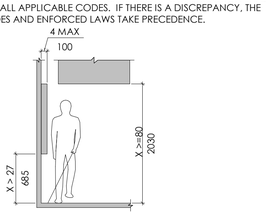


(A) (B)

POST-MOUNTED PROTRUDING OBJECTS
ICC/ANSI FIG 307.3



REDUCED VERTICAL CLEARANCE
ICC/ANSI FIG 307.4



LIMITS OF PROTRUDING OBJECTS
ICC/ANSI FIG 307.2

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52 Exchange Place
Salt Lake City, UT 84111
801.531.1144

Boise
800 W MAIN STREET
SUITE 940
BOISE, ID 83702
208.424.7675

babcock**design**.com

sheet information

revisions: 2

num.	description	date

CURRENT SET THRU REVISION 02

date:	1-23-2022
project number:	MO-53LEE
project status:	ISSUED FOR PERMIT

original drawing is 24" x 36"
current as of: 1/25/2022 11:31:56 PM

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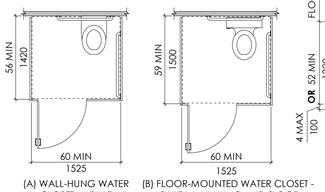
STATE OF MISSOURI
JOSEPH NOWLAND WINDER
NUMBER 2016038459
ARCHITECT

sheet number:

for:
MOBETTAHS (TI)
LEE'S SUMMIT
520 NW Chipman Rd
Lee's Summit, MO 64086

sheet title:
GENERAL ACCESSIBILITY REQUIREMENTS

sheet number:
G201



(A) WALL-HUNG WATER CLOSET - ADULT

(B) FLOOR-MOUNTED WATER CLOSET - ADULT WALL-HUNG AND FLOOR-MOUNTED WATER CLOSET - CHILDREN

FIGURE 604.9.2
SIZE OF WHEELCHAIR ACCESSIBLE TOILET COMPARTMENT

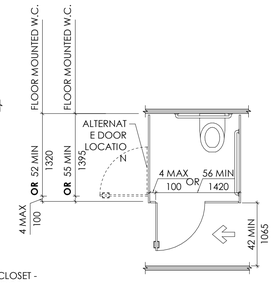
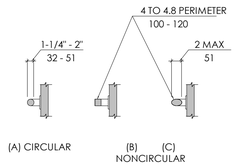


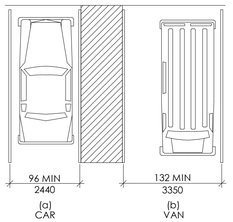
FIGURE 604.9.3.1
WHEELCHAIR ACCESSIBLE TOILET COMPARTMENT DOORS



(A) CIRCULAR

(B) (C) NONCIRCULAR

FIGURE 609.2
SIZE OF GRAB BARS



(a) CAR

(b) VAN

FIGURE 502.2
VEHICLE PARKING SPACES

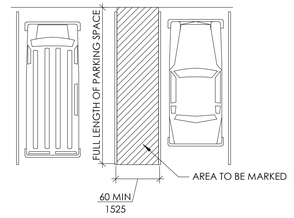
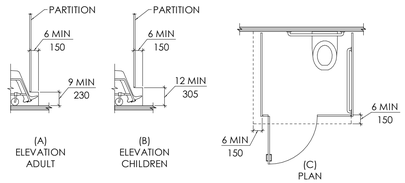


FIGURE 502.4
PARKING SPACE ACCESS AISLE



(A) ELEVATION ADULT

(B) ELEVATION CHILDREN

(C) PLAN

FIGURE 604.9.5
WHEELCHAIR ACCESSIBLE TOILET COMPARTMENT TO CLEARANCE

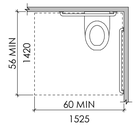


FIGURE 604.3
SIZE OF CLEARANCE AT WATER CLOSETS

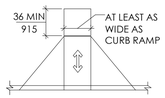


FIGURE 406.4
LANDINGS AT THE TOP OF CURB RAMPS

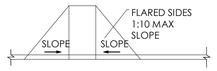


FIGURE 406.3
SIDES OF CURB RAMPS

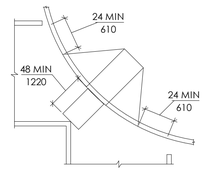
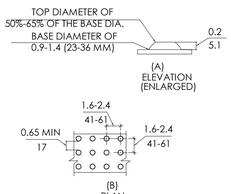


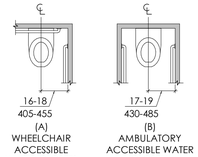
FIGURE 406.6
DIAGONAL OR CORNER TYPE CURB RAMPS



(A) ELEVATION (ENLARGED)

(B) PLAN

FIGURE 705.1
SIZE AND SPACING OF TRUNCATED DOMES



(A) WHEELCHAIR ACCESSIBLE WATER CLOSETS

(B) AMBULATORY ACCESSIBLE WATER CLOSETS

FIGURE 604.2
WATER CLOSET LOCATION

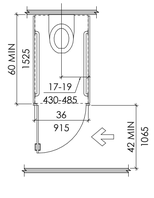
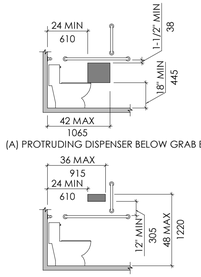


FIGURE 604.10
AMBULATORY ACCESSIBLE TOILET COMPARTMENT



(A) PROTRUDING DISPENSER BELOW GRAB BAR

(B) PROTRUDING DISPENSER ABOVE GRAB BAR

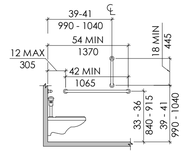


FIGURE 604.5.1
SIDE WALL GRAB BAR AT WATER CLOSETS

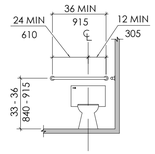
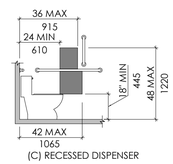


FIGURE 604.5.2
REAR WALL GRAB BAR AT WATER CLOSETS



(C) RECESSED DISPENSER

FIGURE 604.7
DISPENSER OUTLET LOCATION

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52 Exchange Place
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801.531.1144

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800 W MAIN STREET
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revisions: ⚠

num.	description	date

CURRENT SET THRU REVISION 02

date:	1-23-2022
project number:	MO-53LEE
project status:	ISSUED FOR PERMIT

original drawing is 24" x 36"
current as of: 1/25/2022 11:31:59 PM

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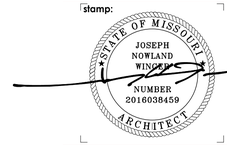


sheet number:

MOBETTAHS (TI) for
LEE'S SUMMIT

520 NW Chipman Rd
Lee's Summit, MO 64086

sheet title:
GENERAL ACCESSIBILITY REQUIREMENTS

sheet number:

G202

FINAL DEVELOPMENT PLANS FOR:

MO' BETTAHS

520 NW CHIPMAN RD

LEE'S SUMMIT, MO 64086

PROJECT INFORMATION

PROJECT	MO'BETTAH'S RESTAURANT
PROJECT ADDRESS/LOCATION	520 NW CHIPMAN RD., LEE'S SUMMIT MO 64086
PARCEL ID NUMBERS	52-900-03-64-00-0-00-000
LOT ACREAGE	0.88 ACRES
LIMIT OF DISTURBANCE (LOD)	0.88 ACRES
PARCEL ZONING	PMIX - PLANNED MIXED USE
EXISTING BUILDING CONDITIONS	VACANT UNDEVELOPED LAND
LEGAL DESCRIPTION	LOT 4C-2, SUMMIT ORCHARD, LOT 4C-1, 4C-2 AND 4C-3, CORRECTED SUMMIT ORCHARD, LOTS 4A- 4E, A SUBDIVISION IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, ACCORDING TO THE RECORDED PLAT THEREOF.

PROJECT SUMMARY

THE APPLICANT PROPOSES A RESTAURANT WITH A DRIVE-THROUGH BUILDING. THE PROPOSED IMPROVEMENTS INCLUDE PARKING SPACES, A TRASH ENCLOSURE, LANDSCAPE SCREENING, STORMWATER INFRASTRUCTURE, AND APPLICABLE UTILITIES.

AGENCY CONTACTS

DEVELOPMENT SERVICES	CITY OF LEE'S SUMMIT RYAN ELAM - DIRECTOR 220 SE GREEN STREET LEE'S SUMMIT, MO 64063 (816) 969-1202
ENGINEERING	CITY OF LEE'S SUMMIT KENT MONTER - ENGINEERING MANAGER 220 SE GREEN STREET LEE'S SUMMIT, MO 64063 (816) 969-1229
UTILITY DEPARTMENT	CITY OF LEE'S SUMMIT 1200 SE HAMBLEN ROAD LEE'S SUMMIT, MO 64081 (816) 969-1900
FIRE DEPARTMENT	LEE'S SUMMIT FIRE DEPARTMENT JIM EDEN - ASSISTANT CHIEF 207 SOUTHEAST DOUGLAS ST. LEE'S SUMMIT, MO 64063 (816) 969-1240
ELECTRIC	KANSAS CITY POWER AND LIGHT COMPANY (888) 471-5275
NATURAL GAS	SPIRE ENERGY (816) 756-5252

PARKING SCHEDULE

REQUIRED	14 SPACE PER 1000 SF OF FLOOR AREA = 40 SPACES
PROPOSED	40 TYPICAL SPACES 2 ADA SPACES 42 TOTAL SPACES

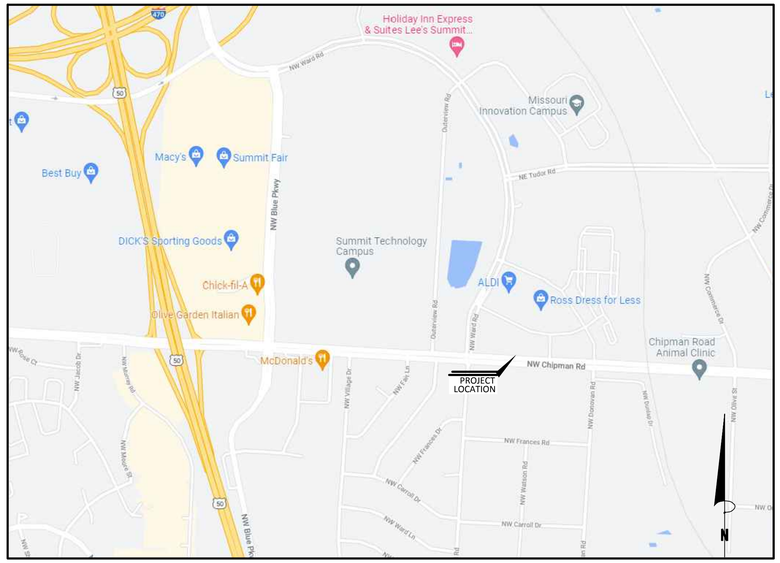
SITE COVERAGE CALCULATION

PROPOSED IMPERVIOUS AREA	= 0.670 AC (76.14%)
PROPOSED OPEN SPACE AREA	= 0.210 AC (23.86%)

NOTES

- NO ACTIVE, INACTIVE OR CAPPED OIL AND GAS WELLS WITHIN THE AREA OF THE PROJECT SITE.
- FINAL BUILDING UTILITY CONNECTIONS TO BE DETERMINED PER ARCHITECT DRAWINGS.
- NO WETLANDS ON SITE.
- SITE IS LOCATED IN ZONE X (OUTSIDE OF THE 100-YEAR FLOOD PLAIN) PER FEMA FIRM NUMBER 29095C0417G, EFFECTIVE JANUARY 20, 2017.
- ELEVATIONS ARE BASED ON:

BENCHMARKS		
No. 103	CONTROL/ TBM (1005943.8164, 2822115.1076)	ELEV: 1010.19'
No. 104	CONTROL/ TBM (1005613.4472, 2821932.7384)	ELEV: 1000.36'



VICINITY MAP

NTS

SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
C0.0	COVER SHEET
C0.1	GENERAL NOTES
1 OF 1	SURVEY
C1.0	EROSION CONTROL PLAN
C1.1	EROSION CONTROL DETAILS
C2.0	SITE AND PAVING PLAN
C3.0	GRADING AND DRAINAGE PLAN
C3.1	STORM DRAIN PROFILES
C4.0	EXISTING DRAINAGE AREA MAP
C4.1	PROPOSED DRAINAGE AREA MAP
C5.0	UTILITY PLAN
C6.0	CONSTRUCTION DETAILS (1 OF 4)
C6.1	CONSTRUCTION DETAILS (2 OF 4)
C6.2	CONSTRUCTION DETAILS (3 OF 4)
C6.3	CONSTRUCTION DETAILS (4 OF 4)
LP-1	LANDSCAPE PLANTING
LP-2	LANDSCAPE DETAILS AND SPECIFICATIONS
LI-1	LANDSCAPE IRRIGATION
LI-2	IRRIGATION DETAILS AND SPECIFICATIONS
LI-3	IRRIGATION DETAILS

ENGINEER

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5601 Democracy Drive, Suite 205
Plano, Texas 75025
[Phone] 972.497.2990
Contact: Kofi Addo, P.E.

DEVELOPER

SAVORY DEVELOPMENT FUND, LLC
1557 W Innovation Way
Lehi, Utah 84043
[Phone] 208.860.4661
Contact: Cass Tenney

LANDSCAPE ARCHITECT

EVERGREEN DESIGN GROUP, INC
4625 Lindell, Suite 200
St. Louis, MO 63101
[Phone] 800.680.6630
Contact: James Gibson

Bowman

FIRM NO. 2018010514

Bowman
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MDPR Firm Registration No. 2018010514
5601 DEMOCRACY DRIVE, SUITE 205, PLANO, TX 75024
Phone: (972) 497-2990
www.bowman.com

REVISIONS

REVISION	DESCRIPTION	DATE
	CURRENT SET THRU REVISION 02	

COVER SHEET

MO' BETTAHS
520 NW CHIPMAN RD
LEE'S SUMMIT, MO 64086

STATE OF MISSOURI
KOFI ADDO-NYARKO
NUMBER PE-2021015534
PROFESSIONAL ENGINEER
8/15/22

DESIGN	DRAWN	CHKD
BB	BB	KAN

JOB No. 070460-01-001

SHEET
C0.0

GENERAL NOTES:

1. ALL ELEVATIONS SHOWN ARE BASED ON A TOPOGRAPHIC SURVEY PERFORMED BY ANDERSON ENGINEERING DATED JULY 07TH, 2021.
2. CONTRACTOR SHALL VERIFY ACCURACY OF ANY TEMPORARY BENCHMARKS SHOWN PRIOR TO UTILIZING THEM FOR CONSTRUCTION.
3. THE EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE BASED UPON AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES PRIOR TO BEGINNING DIGGING OPERATIONS. IF UTILITIES OTHER THAN THOSE SHOWN ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY AND TAKE STEPS TO PROTECT THE LINE(S) AND ENSURE CONTINUED SERVICE. DAMAGE CAUSED TO EXISTING UTILITIES BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR. ADDITIONALLY, THE CONTRACTOR SHALL CONFIRM THE CONNECTION POINTS OF NEW UTILITIES TO EXISTING UTILITIES PRIOR TO BEGINNING NEW CONSTRUCTION.
4. THE CONTRACTOR SHALL INSTALL ALL EROSION CONTROL AND PREVENTION STRUCTURES SHOWN ON THE PLANS. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE CONSTRUCTED SIMULTANEOUSLY WITH THE DISTURBANCE OF THE LAND AND SHALL REMAIN FUNCTIONAL UNTIL THE CONTRIBUTING DISTURBED AREAS ARE STABILIZED. SILT BARRIERS WILL BE INSTALLED AS NECESSARY TO PREVENT EXCESSIVE SEDIMENTATION OF DOWNSTREAM AREAS. DEVICES SHALL BE IN ACCORDANCE WITH JACKSON COUNTY FOR CONSTRUCTION ACTIVITIES. 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.
5. IF WORK IS SUSPENDED OR DELAYED FOR FOURTEEN (14) DAYS, THE CONTRACTOR SHALL TEMPORARILY STABILIZE THE DISTURBED AREA AT CONTRACTORS EXPENSE.
6. THE TREE PROTECTION IN THE AREAS OF WORK SHALL BE INSTALLED BY THE CONTRACTOR PRIOR TO THE START OF LAND DISTURBANCE ACTIVITIES. UNLESS SPECIFICALLY SHOWN ON THESE PLANS, THE DESTRUCTION OF ANY REGULATED TREES IS PROHIBITED. PROTECTIVE BARRICADES SHALL BE PLACED AROUND ALL TREES DURING ALL PHASES OF CONSTRUCTION.
7. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF UNSUITABLE MATERIAL IS DISCOVERED PRIOR TO BEGINNING ANY REMOVAL OPERATION.
8. CONTRACTOR WILL BE REQUIRED TO ADJUST MANHOLE FRAMES TO MATCH FINAL GRADE AT NO ADDITIONAL COST.
9. ANY DAMAGE TO EXISTING PAVEMENT MUST BE REPAIRED AT CONTRACTOR'S EXPENSE.
10. ALL RIGHT-OF-WAY AND DRAINAGE EASEMENT CONSTRUCTION SHALL MEET APPLICABLE CITY OF LEE'S SUMMIT STANDARD SPECIFICATIONS UNLESS SPECIFIED ELSEWHERE AND APPROVED IN WRITING BY THE ENGINEER.
11. WHERE FIELD INSPECTIONS ARE REQUIRED BY THE CITY, THE CONTRACTOR SHALL NOTIFY THE ENGINEERING DIVISION A MINIMUM OF 48 HOURS IN ADVANCE TO SCHEDULE SUCH INSPECTIONS.
12. A COMPLETE SET OF APPROVED DRAWINGS AND SPECIFICATIONS MUST BE MAINTAINED ON SITE AT ALL TIMES THAT THE CONTRACTOR IS PERFORMING WORK. THESE DRAWINGS SHALL BE MADE AVAILABLE TO THE COUNTY PERSONNEL AT THEIR REQUEST.
13. ANY REVISIONS DURING CONSTRUCTION WHICH ALTER THE ROAD LAYOUT, CONSTRUCTION METHODS, RIGHT-OF-WAY LOCATIONS OR STORM DRAINAGE AS INDICATED AND APPROVED BY THE CITY MUST BE SUBMITTED AND APPROVED IN WRITING BY THE CITY ENGINEER.
14. THE CONTRACTOR AND ALL SUB-CONTRACTORS HIRED BY THE CONTRACTOR SHALL BE LICENSED TO WORK IN THE STATE OF MISSOURI.
15. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL CONSTRUCTION PERMITS NECESSARY FROM OTHER RESPONSIBLE AGENCIES.
16. ALL TRAFFIC CONTROL SIGNS AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" CURRENT EDITION. ALL DRAINAGE WILL BE MADE FUNCTIONAL DAILY AS WORK PROGRESSES.
17. EACH EXISTING ROAD WILL BE CLEANED OF DEBRIS AND RESTORED DAILY, OR MORE OFTEN IF NECESSARY.
18. NEW PAVEMENT TO BE FLUSH WITH EDGE OF EXISTING PAVEMENT.
19. ALL CONSTRUCTION, INCLUDING SANITARY SEWER AND WATER INFRASTRUCTURE SHALL BE IN ACCORDANCE WITH CITY OF LEE'S SUMMIT'S DESIGN AND CONSTRUCTION MANUAL.
20. THE SEDIMENT AND EROSION CONTROL PLAN MUST BE KEPT ON SITE AT ALL TIMES, AND IN A DESIGNATED AREA THAT IS ACCESSIBLE TO THE INSPECTORS.
21. SEDIMENT AND EROSION CONTROL INSPECTIONS MUST BE COMPLETED BY A CERTIFIED INSPECTOR.
22. SEDIMENT AND EROSION CONTROL SHOULD INCLUDE A CONCRETE WASHOUT/STAGING AREA FOR SITE AND BUILDING CONSTRUCTION AND ALL OTHER PURPOSES OF THE DEVELOPMENT.
23. CONSTRUCTION DEBRIS MUST BE PLACED INSIDE CONTAINERS AND NOT LEFT EXPOSED TO THE ELEMENTS.
24. SITE MUST BE BUILT ACCORDING TO APPROVED CITY PLANS UNLESS SEDIMENT AND EROSION CONTROL PLAN DOCUMENTS ARE UPDATED BY THE ORIGINAL PREPARER, REVIEWED AND APPROVED. OTHERWISE PERMITS WILL BE INVALIDATED.
25. NO OBSTRUCTIONS, TO INCLUDE BUT NOT LIMITED TO FENCES, STRUCTURES, OR LANDSCAPING MAY BE PERMITTED OR BUILT WITHIN ANY SWALES OR DRAINAGE EASEMENT.
26. CONTRACTOR IS RESPONSIBLE FOR COORDINATING INSTALLATION OF UNDERGROUND UTILITIES WITH THE APPROPRIATE UTILITY COMPANY.
27. PIPE LENGTHS THAT ARE SHOWN ON THE PLANS ARE 2D LENGTH FROM CENTER TO CENTER. FIELD ADJUSTMENT OF THE ACTUAL PIPE LENGTHS MAY BE NECESSARY.
28. THE CONTRACTOR SHALL STAGE CLEARING AND GRUBBING WORK TO MINIMIZE THE AMOUNT OF EROSION AND SEDIMENTATION.
29. THE CONTRACTOR SHALL PROVIDE APPROPRIATE BARRICADES, WARNING LIGHTS, AND WARNING SIGNS TO ENSURE THE SAFETY OF THE PUBLIC AT ALL TIMES.
30. THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION SIGNAGE AND MAINTENANCE OF EXISTING PERMANENT SIGNS DURING CONSTRUCTION.
31. THE CONTRACTOR SHALL VERIFY PROPERTY LINES, BUILDING DIMENSIONS, AND ALL OTHER SITE CONDITIONS PRIOR TO CONSTRUCTION. ANY SIGNIFICANT VARIATIONS SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
32. WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS ON THE JOB. BOWMAN CONSULTING GROUP SHALL BE NOTIFIED IN WRITING OF ANY VARIATION FROM THE DIMENSIONS, CONDITIONS, AND SPECIFICATIONS SHOWN BY THESE DRAWINGS.
33. ALL CURVE RADII ARE SHOWN TO THE FACE OF CURB UNLESS NOTED OTHERWISE.
34. ALL DRAINAGE WILL BE MADE FUNCTIONAL DAILY AS WORK PROGRESSES.
35. AT THE CONCLUSION OF THE CONSTRUCTION PROJECT, ALL COMPONENTS OF THIS DESIGN PACKAGE SHALL BE IN OPERABLE CONDITION, MEETING ITS REQUIREMENTS.
36. THE CONTRACTOR SHALL CONTACT MISSOURI 811, UTILITY COMPANY REPRESENTATIVES, PERFORM TEST PITS, REVIEW CURRENT TEST PIT DATA, AND WHATEVER OTHER OPERATIONS AVAILABLE TO ENSURE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES IN THE AREA OF CONSTRUCT TO INSURE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES IN THE AREA OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY BOWMAN CONSULTING GROUP, LTD. OF ANY POTENTIAL CONFLICTS PRIOR TO COMMENCING CONSTRUCTION.
37. THE CONTRACTOR SHALL CAREFULLY EXAMINE THE SITE AND MAKE ALL INSPECTIONS NECESSARY IN ORDER TO DETERMINE THE FULL EXTENT OF THE WORK REQUIRED TO MAKE THE PROPOSED WORK CONFORM TO THE DRAWINGS AND SPECIFICATIONS.
38. UTILITY COMPANIES SHALL BE NOTIFIED 72 HOURS IN ADVANCE OF ANY EXCAVATION.
39. ALL UNDERGROUND UTILITIES WITHIN THE STREET RIGHT-OF-WAY SHALL BE INSTALLED TO THE REQUIRED DISTANCE BEYOND THE RIGHT-OF-WAY LINE PRIOR TO THE INSTALLATION OF ANY SUBBASE MATERIAL, CURB AND GUTTER OR SIDEWALK.
40. ADDITIONAL SILTATION AND EROSION CONTROL MEASURES SHALL BE INSTALLED AS DIRECTED BY THE INSPECTOR DURING FIELD REVIEW.
41. ALL SURFACED STREETS SHALL BE MAINTAINED IN A CLEAR CONDITION; FREE OF DUST, MUD OR SNOW AT ALL TIMES. THE DEVELOPER SHALL PROVIDE ADEQUATE MEANS TO CLEAN TRUCKS AND OTHER EQUIPMENT USING SURFACED STREETS.
42. CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTMENTS AND/OR RECONSTRUCTIONS OF ALL UTILITY COVER (MANHOLE FRAMES AND COVERS, VALVE BOX COVERS, ETC.) TO MATCH THE FINISHED GRADES OF THE AREAS EFFECTED BY THE CONSTRUCTION.
43. THE CONTRACTOR MUST HAVE THE APPROVED SET OF CONSTRUCTION PLANS AND ALL APPLICABLE PERMITS IN POSSESSION PRIOR TO THE START OF CONSTRUCTION. AT LEAST ONE (1) COPY OF THE APPROVED PLANS, WITH REVISIONS, MUST BE KEPT ON-SITE AT ALL TIMES.
44. THESE PLANS MAKE NO REPRESENTATION AS TO THE SUBSURFACE CONDITIONS AND THE PRESENCE OF SUBSURFACE WATER OR THE NEED FOR SUBSURFACE DRAINAGE FACILITIES.
45. STORM SEWER AND CULVERT PIPE SHALL BE REINFORCED CONCRETE PIPE TO CONFORM TO THE CURRENT A.A.S.H.T.O. DESIGNATION M170, UNLESS OTHERWISE DESIGNATED ON THESE PLANS.
46. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING A SAFE CONSTRUCTION SITE AND COMPLYING WITH ALL OSHA REGULATIONS.
47. EMERGENCY VEHICLE ACCESS SHALL BE PROVIDED DURING ALL PHASES OF CONSTRUCTION.
48. WHERE IMPROVEMENTS ARE PROPOSED WITHIN EXISTING EASEMENTS OF RECORD, THE DEVELOPER SHALL OBTAIN WRITTEN PERMISSION FROM THE AUTHORITIES THAT ARE DOMINANT TENEMENTS OF THESE EASEMENTS FOR PERMIT FOR ANY DISTURBANCES WITHIN THESE AREAS PRIOR TO CONSTRUCTIONS.
49. ALL FINISHED GRADING, SEEDING, SODDING OR PAVING SHALL BE DONE IN SUCH MANNER TO PRECLUDE THE PONDING OF WATER.
50. ALL SIDEWALKS TO BE 4" THICK CONCRETE UNLESS OTHERWISE SHOWN ON THE PLAN.
51. THE ENGINEER SHALL NOT HAVE CONTROL OVER OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK SHOWN ON THESE PLANS. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S SCHEDULES OF FAILURE TO CARRY OUR THE WORK. THE ENGINEER IS NOT RESPONSIBLE FOR ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, OR THEIR AGENTS OR EMPLOYEES, OR OF ANY OTHER PERSONS PERFORMING PORTIONS OF THE WORK.
52. ALL GAS LINES REQUIRE A MINIMUM OF 1 FOOT VERTICAL AND 5 FEET HORIZONTAL SEPARATION. CONSTRUCTION WITHIN 10 FEET OF THE GAS LINE REQUIRES A GAS LINE REPRESENTATIVE TO BE PRESENT DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE GAS COMPANY PRIOR TO CONSTRUCTION.
53. NO TREES SHALL BE PLANTED IN THE WATER AND SEWER EASEMENTS.
54. UNLESS OTHERWISE NOTED HEREIN, CONSTRUCTION OF PAVEMENT AND DRAINAGE STRUCTURES SHALL BE IN ACCORDANCE WITH THE CITY OF LEE'S SUMMIT STANDARDS.
55. UPON AWARD OF CONTRACT, THE CONTRACTOR SHALL OBTAIN THE NECESSARY LOCAL TRADE PERMITS (INCLUDING APPLICATIONS AND FEES) ASSOCIATED WITH THE WORK INDICATED ON THE DRAWINGS, IN THE SPECIFICATIONS AND IN THE CONTRACT DOCUMENTS.
56. ALL ROAD IMPROVEMENTS AT THE DRIVE CONNECTIONS ARE TO BE COORDINATED WITH THE CITY OF LEE'S SUMMIT ENGINEERING DEPARTMENT PRIOR TO CONSTRUCTION.
57. APPROVAL OF THIS PLAN IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNERS.
58. IN ORDER TO ENSURE PROPER DRAINAGE, KEEP A MINIMUM OF 0.5% SLOPE ON THE CURB.
59. CURB AND GUTTER SHOWN ON PLANS MAY REQUIRE ADJUSTMENT BASED UPON FIELD CONDITIONS. ASSOCIATED STORM DRAINAGE MAY ALSO REQUIRE MODIFICATION BASED UPON FIELD CONDITIONS.
60. NO ACTIVE, INACTIVE OR CAPPED OIL AND GAS WELLS WITHIN THE AREA OF THE PROJECT SITE.
61. THE CONTRACTOR SHALL CONTACT THE CITY OF LEE'S SUMMIT DEVELOPMENT SERVICES ENGINEERING INSPECTION TO SCHEDULE A PRE-CONSTRUCTION MEETING WITH AN INSPECTOR PRIOR TO ANY LAND DISTURBANCE WORK AT (816) 969-1200.

Bowman
© Bowman Consulting Group, Ltd.
MDPR Firm Registration No. 2018010514
5601 DEMOCRACY DRIVE, SUITE 265,
PLANO, TX 75024
Phone: (972) 497-2990
www.bowman.com

REVISIONS

REVISION	DESCRIPTION	DATE

CURRENT SET THRU REVISION 02

GENERAL NOTES

MO' BETTAHS
520 NW CHIPMAN RD
LEE'S SUMMIT, MO 64086

STATE OF MISSOURI
KOFI ADDO-NYARKO
NUMBER PE-2021015534
PROFESSIONAL ENGINEER
3/15/22

DESIGN	DRAWN	CHKD
BB	BB	KAN

JOB No. 070460-01-001

SHEET
C0.1

ALTA/NSPS LAND TITLE SURVEY

LOT 4C-2
SUMMIT ORCHARD , LOT 4C-1, 4C-2 AND 4C-3
CORRECTED SUMMIT ORCHARDS, LOTS 4A-4E
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

LEGAL DESCRIPTION

LOT 4C-2, SUMMIT ORCHARD, LOT 4C-1, 4C-2 AND 4C-3, CORRECTED SUMMIT ORCHARD, LOTS 4A- 4E, A SUBDIVISION IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, ACCORDING TO THE RECORDED PLAT THEREOF.

SURVEYOR'S GENERAL NOTES & TABLE A NOTES

1). THIS SURVEY IS BASED UPON THE FOLLOWING INFORMATION PROVIDED BY THE CLIENT OR RESEARCHED BY THIS SURVEYOR.
(A). LOT 4C-2, MINOR PLAT LOT 4C, CORRECTED SUMMIT ORCHARDS, LOT 4A-4E, IN DOCUMENT 2021E0082033.

2). THE TITLE REPORT WAS FURNISHED BY (FIRST AMERICAN TITLE INSURANCE COMPANY - FILE NO. NCS-1070411-SLC1, DATED: JULY 27, 2021 @ 8:00 A.M.

3). BEARINGS AND DISTANCE SHOWN HEREON ARE BASED UPON THE MISSOURI STATE PLANE COORDINATE SYSTEM, 1983, MISSOURI WEST ZONE (NSRS 2011)

4). WITH THIS SURVEY, ANDERSON ENGINEERING, INC., AND THIS LAND SURVEYOR DOES NOT GUARANTEE THAT OWNERSHIP IS TO THE SURVEY LINES DEPICTED HEREON. THIS SURVEY IS A GRAPHIC REPRESENTATION OF THE OPINION OF SAID SURVEYOR AND THE OPINION OF SAID ANDERSON ENGINEERING, INC., AS TO THE LOCATION OF THE RECORD DESCRIPTION(S). NO OPINION AS TO THE VALIDITY OF THE TITLE IS GIVEN OR IMPLIED.

5). PROPERTY ADDRESS IS: 520 NW CHIPMAN ROAD, LEE'S SUMMIT, MO 64086

6). SUBJECT PROPERTY IS LOCATED IN ZONE "X", AREA OF MINIMAL FLOOD HAZARD. AS SHOWN ON FEMA FLOOD INSURANCE RATE MAP NUMBER 29095C0417G. EFFECTIVE DATE: JANUARY 20, 2017

7). SUBJECT PROPERTY CONTAINS: 38,265 SQ. FT., 0.88 ACRES ±. SUBJECT PROPERTY IS ZONED: (PLANNED MIX USED) PER LEES SUMMIT ZONING MAP. NO ZONING DOCUMENTS WERE PROVIDED. NO BUILDINGS EXIST ON SITE.

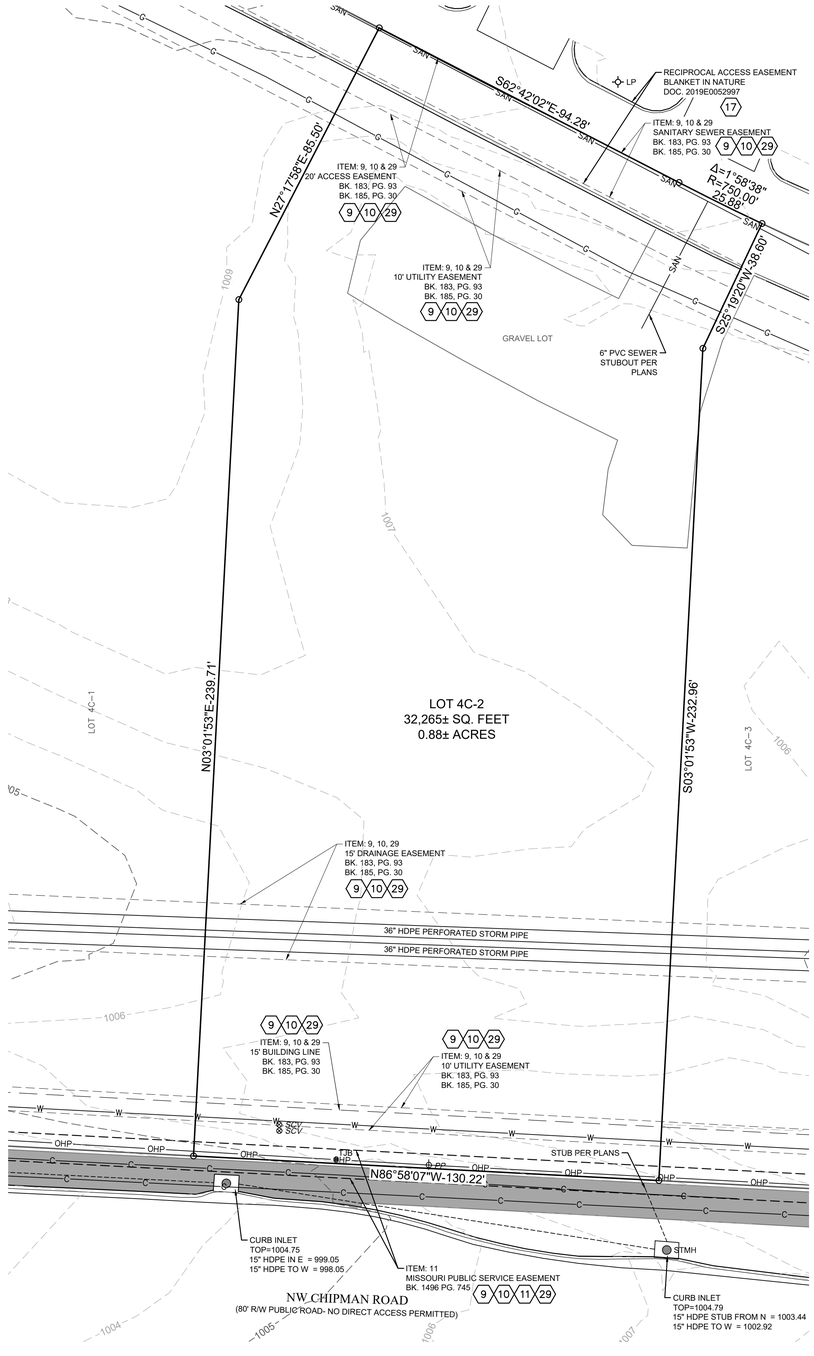
8). THIS COMPANY ASSUMES NO RESPONSIBILITY IN THE LOCATION OF EXISTING UTILITIES WITHIN THE SUBJECT PREMISES. THIS IS AN ABOVE-GROUND SURVEY THE UNDERGROUND UTILITIES, IF SHOWN, ARE BASED ON INFORMATION PROVIDED BY THE VARIOUS UTILITY COMPANIES AND THESE LOCATIONS SHOULD BE CONSIDERED APPROXIMATE. THERE MAY BE ADDITIONAL UNDERGROUND UTILITIES NOT SHOWN ON THIS DRAWING.

9). SUBSURFACE AND ENVIRONMENTAL CONDITIONS WERE NOT SURVEYED OR EXAMINED OR CONSIDERED AS A PART OF THIS SURVEY. NO EVIDENCE OR STATEMENT IS MADE CONCERNING THE EXISTENCE OR UNDERGROUND OR OVERHEAD CONDITIONS, CONTAINERS OR FACILITIES THAT MAY AFFECT THE USE OR DEVELOPMENT OF THIS PROPERTY.

10). NOTE TO THE CLIENT, INSURER, AND LENDER - WITH REGARD TO TABLE A, ITEM 11, SOURCE INFORMATION FROM PLANS AND MARKINGS WILL BE COMBINED WITH OBSERVED EVIDENCE OF UTILITIES PURSUANT TO SECTION 5.E.IV. TO DEVELOP A VIEW OF THE UNDERGROUND UTILITIES. HOWEVER, LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY, AND RELIABLY DEPICTED. IN ADDITION, IN SOME JURISDICTIONS, 811 OR OTHER SIMILAR UTILITY LOCATE REQUESTS FROM SURVEYORS MAY BE IGNORED OR RESULT IN AN INCOMPLETE RESPONSE, IN WHICH CASE THE SURVEYOR SHALL NOTE ON THE PLAT OR MAP HOW THIS AFFECTED THE SURVEYOR'S ASSESSMENT OF THE LOCATION OF THE UTILITIES. WHERE ADDITIONAL OR MORE DETAILED INFORMATION IS REQUIRED, THE CLIENT IS ADVISED THAT EXCAVATION AND/OR A PRIVATE UTILITY LOCATE REQUEST MAY BE NECESSARY.

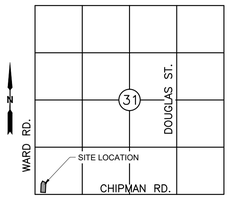
11). NO PROPOSED CHANGES IN THE STREET(S) AS SHOWN HEREON, WERE PROVIDED TO THIS SURVEYOR OR HAS KNOWLEDGE OF AS OF THE DATE OF THIS SURVEY.

12). ITEM 17- "RECIPROCAL EASEMENT AND OPERATING AGREEMENT" GUARANTEES ACCESS TO AND FOR EXISTING AND FUTURE DEVELOPMENTS. THIS IS BLANKET EASEMENT.

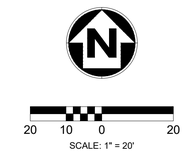


LEGEND

DRAIN	= STORM DROP INLET	G	= UNDERGROUND GAS LINES
STMH	= STORM MANHOLE	SAN	= SANITARY SEWER PIPES
LP	= LIGHT POLE	OHP	= OVERHEAD POWER LINE
CMH	= COMMUNICATION MANHOLE	C	= UNDERGROUND COMMUNICATION LINES
FVT	= GOOGLE FIBER VAULT		
FH	= FIRE HYDRANT		
WV	= WATER VALVE		
SSMH	= SANITARY SEWER MANHOLE		= SIDEWALK
SCV	= SPRINKLER CONTROL VALVE		
TJB	= TRAFFIC CONTROL VAULT		
T	= COMMUNICATION MARKER		
PP	= POWER POLE		
	= FOUND 1/2 REBAR WITH CAP AE INC. LC-62		



LOCATION MAP
SECTION 31, TOWNSHIP 48, RANGE 31
JACKSON COUNTY, MISSOURI
SCALE: 1" = 2000'



SCALE: 1" = 20'

NOTES CORRESPONDING TO SCHEDULE B, PART II (EXCEPTIONS)

1. ANY DEFECT, LIEN, ENCUMBRANCE, ADVERSE CLAIM, OR OTHER MATTER THAT APPEARS FOR THE FIRST TIME IN THE PUBLIC RECORDS OR IS CREATED, ATTACHES, OR IS DISCLOSED BETWEEN THE COMMITMENT DATE AND THE DATE ON WHICH ALL OF THE SCHEDULE B, PART I-REQUIREMENTS ARE MET. NOT A SURVEY MATTER.
2. RIGHTS OR CLAIMS OF PARTIES IN POSSESSION NOT SHOWN BY THE PUBLIC RECORDS. NOT A SURVEY MATTER.
3. EASEMENTS, OR CLAIMS OF EASEMENTS, NOT SHOWN BY THE PUBLIC RECORDS. NOT A SURVEY MATTER.
4. ANY ENCROACHMENT, ENCUMBRANCE, VIOLATION, VARIATION OR ADVERSE CIRCUMSTANCES AFFECTING TITLE THAT WOULD BE DISCLOSED BY AN ACCURATE AND COMPLETE SURVEY OF THE LAND OR THAT COULD BE ASCERTAINED BY AN INSPECTION OF THE LAND.
5. ANY LIEN OR RIGHT TO A LIEN FOR SERVICES, LABOR, MATERIAL OR EQUIPMENT, UNLESS SUCH LIEN IS SHOWN BY THE PUBLIC RECORDS AT DATE OF POLICY AND NOT OTHERWISE EXCEPTED FROM COVERAGE HEREIN. NOT A SURVEY MATTER.
6. TAXES, OR SPECIAL ASSESSMENTS, IF ANY, NOT SHOWN AS EXISTING LIENS BY THE PUBLIC RECORDS. NOT A SURVEY MATTER.
7. THE LIEN OF THE GENERAL TAXES FOR THE YEAR 2021, AND THEREAFTER. NOT A SURVEY MATTER. GENERAL, STATE, COUNTY AND CITY TAXES AND ASSESSMENTS FOR THE YEAR 2020 IN THE AMOUNT OF $504.98 ARE PAID. PARCEL NO. 52-900-03-64-00-0-00-000. NOT A SURVEY MATTER.
8. THE LIEN OF THE CITY OF LEE'S SUMMIT, MISSOURI SPECIAL ASSESSMENT TAXES, IF ANY; NONE DUE OR PAYABLE. NOT A SURVEY MATTER.
9. 9. EASEMENTS, RESTRICTIONS AND SETBACK LINES AS PER PLAT,SUMMIT ORCHARD, LOTS 4A-4E, RECORDED IN PLAT BOOK 183, PAGE 93; SUMMIT ORCHARD - FIRST PLAT, LOTS 1-4 & TRACT A, RECORDED IN PLAT BOOK 163, PAGE 87; SUMMIT INNOVATION CENTER - 2ND PLAT, LOTS 7A AND 8, RECORDED IN PLAT BOOK 160, PAGE 1; SUMMIT INNOVATION CENTER - FIRST PLAT, RECORDED IN PLAT BOOK 156, PAGE 64; SUMMIT FAIR, LOTS 11A & 11B, RECORDED IN PLAT BOOK 138, PAGE 1 AND SUMMIT FAIR, SECOND PLAT LOTS 8, 10-14, AND TRACT C, RECORDED IN PLAT BOOK 122, PAGE 1. THIS EXCEPTION AFFECTS SUBJECT PROPERTY AND IS SHOWN HEREON.
10. 10. EASEMENTS, RESTRICTIONS AND SETBACK LINES PER PLAT. RECORDED AS CORRECTED SUMMIT ORCHARD, LOTS 4A-E, RECORDED AUGUST 29, 2019 AS DOCUMENT NO. 2019E0086481, IN PLAT BOOK 185, PAGE 30. THIS EXCEPTION AFFECTS SUBJECT PROPERTY AND IS SHOWN HEREON.
11. 11. EASEMENT GRANTED TO MISSOURI PUBLIC SERVICE COMPANY, RECORDED FEBRUARY 7, 1961, AS DOCUMENT NO. 762400, IN BOOK 1496, PAGE 745. DOES AFFECT SUBJECT PROPERTY.
12. EASEMENT GRANTED TO THE GAS SERVICE COMPANY, RECORDED JUNE 16, 1961, AS DOCUMENT NO. 770224, IN BOOK 1517, PAGE 96. DOES NOT AFFECT SUBJECT PROPERTY.
13. RIGHT OF WAY AGREEMENT GRANTED TO THE GAS SERVICE COMPANY, RECORDED JUNE 23, 1970, AS DOCUMENT NO. I-62891, IN BOOK 188, PAGE 1869. PARTIAL RELEASE OF RIGHT OF WAY AGREEMENT RECORDED OCTOBER 21, 2008, AS DOCUMENT NO. 2008E0111404. ASSIGNMENT OF EASEMENTS AND RIGHTS-OF-WAY TO LACLEDE GAS COMPANY, RECORDED SEPTEMBER 3, 2013, AS DOCUMENT NO. 2013E0093218. DOES NOT AFFECT SUBJECT PROPERTY.
14. TERMS AND PROVISIONS OF THE DECLARATION OF RESTRICTIVE COVENANT AND GRANT OF ACCESS, EXCEPT THAT PART PERTAINING TO THE USE RESTRICTIONS UNDER THE RESTRICTIVE COVENANT, DATED APRIL 24, 2007, BY AND BETWEEN TOWNSEND SUMMIT, LLC, A DELAWARE LIMITED LIABILITY COMPANY AND MISSOURI DEPARTMENT OF NATURAL RESOURCES, RECORDED APRIL 24, 2007, AS DOCUMENT NO. 2007E0054314. NOT A SURVEY MATTER.
15. TERMS, PROVISIONS AND RESTRICTIONS AS CONTAINED IN THE CERTIFICATE OF COMPLETION DATED JULY 11, 2007, FROM THE DEPARTMENT OF NATURAL RESOURCES, STATE OF MISSOURI, RECORDED AUGUST 8, 2007, AS DOCUMENT NO. 2007E0104283. NOT A SURVEY MATTER.
16. TERMS AND PROVISIONS OF THE DEVELOPMENT AGREEMENT DATED SEPTEMBER 6, 2016, AND APPROVED BY CITY ORDINANCE NUMBER 7885, AS EVIDENCED BY THE MEMORANDUM OF DEVELOPMENT AGREEMENT BETWEEN TOWNSEND SUMMIT, LLC AND THE CITY OF LEE'S SUMMIT, MISSOURI FOR THE SUMMIT ORCHARD DEVELOPMENT FILED SEPTEMBER 8, 2016, AS DOCUMENT NO. 2016E0083148. CERTIFICATE OF COMPLETION AND COMPLIANCE FOR THE SUMMIT ORCHARD DEVELOPMENT AGREEMENT, RECORDED SEPTEMBER 24, 2020, AS DOCUMENT NO. 2020E0087174. NOT A SURVEY MATTER. DOES NOT AFFECT SUBJECT PROPERTY.
17. 17. ACCESS EASEMENT AGREEMENT BETWEEN TOWNSEND SUMMIT, LLC AND SUMMIT ORCHARDS COMMUNITY IMPROVEMENT DISTRICT, RECORDED JULY 11, 2019, AS DOCUMENT NO. 2019E0052997. DOES AFFECT SUBJECT PROPERTY. INGRESS/EGRESS ACCESS, INDIRECT ACCESS IS PROVIDED TO NW WARD ROAD AND NW DONOVAN ROAD.
18. MEMORANDUM OF SUMMIT ORCHARDS CID COOPERATIVE AGREEMENT, BETWEEN THE CITY OF LEE'S SUMMIT, MISSOURI, SUMMIT ORCHARDS COMMUNITY IMPROVEMENT DISTRICT AND TOWNSEND SUMMIT, LLC, RECORDED JULY 8, 2019, AS DOCUMENT NO. 2019E0051682. AFFECTS SUBJECT PROPERTY. NOT PLOTTABLE.
19. RECIPROCAL EASEMENT AND OPERATING AGREEMENT, BY TOWNSEND SUMMIT, LLC, RECORDED SEPTEMBER 17, 2019 AS DOCUMENT NO. 2019E0074368. AFFECT SUBJECT PROPERTY, NOT A SURVEY MATTER.
20. TERMS AND PROVISIONS OF AN UNRECORDED LEASE, BY AND BETWEEN TOWNSEND SUMMIT, LLC, A DELAWARE LIMITED LIABILITY COMPANY AS LESSOR AND ALDI INC., A KANSAS CORPORATION AS LESSEE, AS DISCLOSED BY A MEMORANDUM OF LEASE RECORDED OCTOBER 29, 2019 AS DOCUMENT NO. 2019E0088260 OF OFFICIAL RECORDS. MEMORANDUM OF LEASE RECORDED OCTOBER 29, 2019 AS DOCUMENT NO. 2019E0088260 OF OFFICIAL RECORDS. DOES NOT AFFECT SUBJECT PROPERTY.
21. TERMS AND PROVISIONS OF AN UNRECORDED LEASE, BY AND BETWEEN TOWNSEND SUMMIT, LLC, A DELAWARE LIMITED LIABILITY COMPANY AS LESSOR AND ROSS DRESS FOR LESS, INC., A VIRGINIA CORPORATION AS LESSEE, AS DISCLOSED BY A MEMORANDUM OF LEASE RECORDED NOVEMBER 12, 2019 AS DOCUMENT NO. 2019E0092622 OF OFFICIAL RECORDS. DOES NOT AFFECT SUBJECT PROPERTY.
22. TERMS AND PROVISIONS OF AN UNRECORDED LEASE, BY AND BETWEEN TOWNSEND SUMMIT, LLC AS LESSOR AND FIVE BELOW, INC. AS LESSEE, AS DISCLOSED BY A SUBORDINATION, NON-DISTURBANCE AND ATTORNMENT AGREEMENT RECORDED JANUARY 31, 2020 AS DOCUMENT NO. 2020E0009310 OF OFFICIAL RECORDS. DOES NOT AFFECT SUBJECT PROPERTY.
23. TERMS AND PROVISIONS OF AN UNRECORDED LEASE DATED FEBRUARY 28, 2020, BY AND BETWEEN TOWNSEND SUMMIT, LLC, A DELAWARE LIMITED LIABILITY COMPANY AS LESSOR AND LC RESTAURANT, LLC, A DELAWARE LIMITED LIABILITY COMPANY AS LESSEE, AS DISCLOSED BY A MEMORANDUM OF GROUND LEASE RECORDED MARCH 9, 2020 AS DOCUMENT NO. 2020E0020258 OF OFFICIAL RECORDS. DOES NOT AFFECT SUBJECT PROPERTY.
24. UTILITY EASEMENT GRANTED TO CITY OF LEE'S SUMMIT, MISSOURI, RECORDED APRIL 10, 2020, AS DOCUMENT NO. 2020E0029624. DOES NOT AFFECT SUBJECT PROPERTY.
25. TERMS AND PROVISIONS OF AN UNRECORDED LEASE DATED DECEMBER 7, 2019, BY AND BETWEEN TOWNSEND SUMMIT, LLC, A DELAWARE LIMITED LIABILITY COMPANY AS LESSOR AND BLACKSTONE FB, LLC AS LESSEE, AS DISCLOSED BY A LEASEHOLD SUBORDINATION, NONDISTURBANCE AND ATTORNMENT AGREEMENT AND ESTOPPEL CERTIFICATE RECORDED AUGUST 3, 2020 AS DOCUMENT NO. 2020E0067234 OF OFFICIAL RECORDS. DOES NOT AFFECT SUBJECT PROPERTY.
26. TERMS AND PROVISIONS OF AN UNRECORDED LEASE DATED APRIL 7, 2020, BY AND BETWEEN TOWNSEND SUMMIT, LLC, A DELAWARE LIMITED LIABILITY COMPANY AS LESSOR AND NGUYEN-NGUYEN SITUATIONS LLC, A MISSOURI LIMITED LIABILITY COMPANY AS LESSEE, AS DISCLOSED BY A LEASEHOLD SUBORDINATION, NONDISTURBANCE AND ATTORNMENT AGREEMENT AND ESTOPPEL CERTIFICATE RECORDED OCTOBER 2, 2020 AS DOCUMENT NO. 2020E0091093 OF OFFICIAL RECORDS. DOES NOT AFFECT SUBJECT PROPERTY.
27. ANY CLAIM THAT THE TITLE IS SUBJECT TO A TRUST OR LIEN CREATED UNDER THE PERISHABLE AGRICULTURAL COMMODITIES ACT (7 U.S.C. §§499A, ET SEQ.) AND/OR THE PACKERS AND STOCKYARDS ACT (7 U.S.C. §§181 ET SEQ.) OR UNDER SIMILAR STATE LAWS. NOT A SURVEY MATTER.
28. TENANCY RIGHTS, EITHER AS MONTH TO MONTH, OR BY VIRTUE OF WRITTEN LEASES OF PERSONS IN POSSESSION OF ANY PART OF THE SUBJECT PROPERTY. DOES NOT AFFECT SUBJECT PROPERTY.
29. 29. EASEMENTS, RESTRICTIONS AND SETBACK LINES AS PER PLAT, RECORDED AS/IN PLAT BOOK I-194, PAGE 60, DOCUMENT NO. 2021E0082033. THIS EXCEPTION AFFECTS SUBJECT PROPERTY AND IS SHOWN HEREON.

TO: TOWNSEND SUMMIT, LLC., SAVOY DEVELOPEMENT I, LLC, A DELAWARE LIMITED LIABILITY COMPANY & FIRST AMERICAN TITLE INSURANCE TITLE COMPANY

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE "2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS" JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 5, 6(a), 6(b), 7(a) 7(b)(1), 7(b)(2), 7(c), 8, 9, 10, 11(a), 11(b), 13, 16, 17, AND 18 OF TABLE "A" THEREOF. PURSUANT TO THE ACCURACY STANDARDS AS ADOPTED BY ALTA AND NSPS AND IN EFFECT ON THE DATE OF THIS CERTIFICATION, UNDERSIGNED FURTHER CERTIFIES THAT IN MY PROFESSIONAL OPINION, AS A LAND SURVEYOR REGISTERED IN THE STATE OF MISSOURI, THE RELATIVE POSITIONAL ACCURACY OF THIS SURVEY DOES NOT EXCEED THAT WHICH IS SPECIFIED THEREIN, AND THAT SAID SURVEY MEETS OR EXCEEDS THE CURRENT MISSOURI STANDARDS FOR PROPERTY BOUNDARY SURVEYS AS ESTABLISHED BY THE MISSOURI BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, PROFESSIONAL LAND SURVEYORS AND LANDSCAPE ARCHITECTS, AND THE MISSOURI DEPARTMENT OF AGRICULTURE LAND SURVEY PROGRAM.

THE FIELD WORK WAS COMPLETED ON 2021-04-23.

DATE: 8/31/2021

SAMUEL J. DEPRIEST MISSOURI PLS 2013000041
ANDERSON ENGINEERING INC. LC-62

ANDERSON ENGINEERING
EMPLOYEE OWNED
ENGINEERS • SURVEYORS • LABORATORIES • DRILLING
941 W 141TH TERRACE • KANSAS CITY, MO 64145 • PHONE (913) 777-0400
A LICENSED MISSOURI SURVEYING CORPORATION -LC 62

DRAWING INFO.
DRAWN BY: MJE
CHK'D BY: LC-62
FIELD BOOK: PLS 2013000041 LIC. NO.
JOB NUMBER: 21KC20060 DWG. NO.
CURRENT SET THRU REVISION 02

NO.	DESCRIPTION	BY	DATE
1	PER SAVOY LLC.	TSA	8-26-21
2	UPDATED TITLE REPORT		
3			
4			
5			

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SAVOY MANAGEMENT
1557 W INNOVATION WAY
LEHI, UT 84043

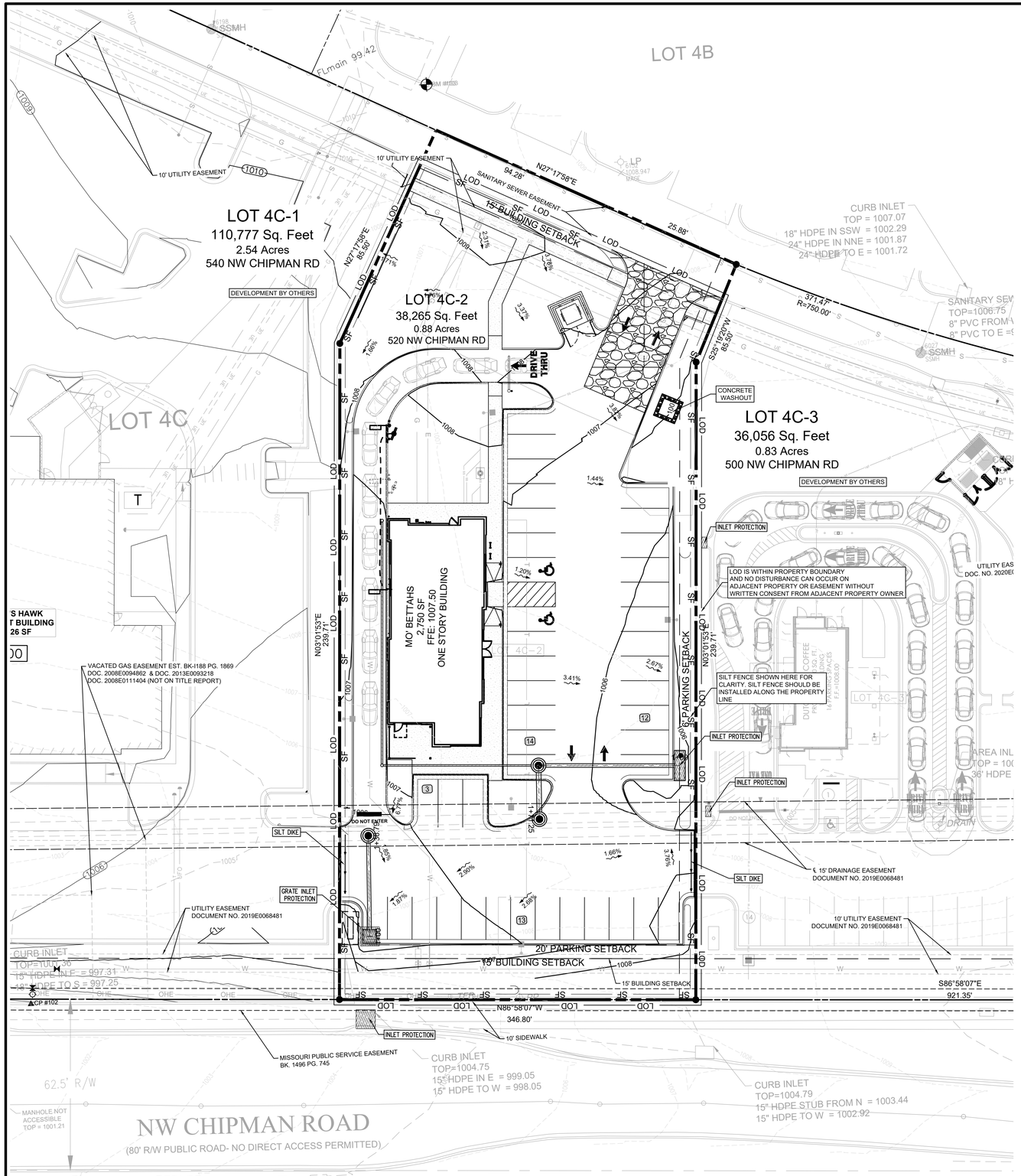
ALTA/NSPS LAND TITLE SURVEY

520 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64086

STATE OF MISSOURI
SAMUEL J DEPRIEST
NUMBER PLS-2013000041
08/31/2021
PROFESSIONAL LAND SURVEYOR

SHEET NUMBER
1
OF 1

August 31, 2021 10:41 AM Plotted By: KC Surv 2 G:\Shared drives\KC2 SURVEY\2021 SURVEY PROJECTS\21KC20060 COOPER HAWK LOT 4C-2 ALTA\DRAWINGS\21KC20060_ALTA.dwg Layout: ---



BENCHMARKS

No. 103	CONTROL/ TBM (1005943.8164, 2822115.1076)	ELEV: 1010.19'
No. 104	CONTROL/ TBM (1005613.4472, 2821932.7384)	ELEV: 1000.36'

PROPOSED LEGEND

- BUILDING
- CONCRETE SIDEWALK
- PROPERTY LINE
- STD. 6" CONCRETE CURB
- PARKING SPACE COUNT (13)
- PROPOSED CONTOUR (430)
- EXISTING CONTOUR (430)
- FLOW ARROW (2.30%)
- LIMITS OF DISTURBANCE (LOD)
- SILT FENCE (SF)
- SILT DIKE
- CONSTRUCTION ENTRANCE
- INLET PROTECTION
- CONCRETE WASHOUT
- GRATE INLET
- CURB INLET

EXISTING LEGEND

- PROPERTY LINE
- STORM DROP INLET (DRAIN)
- STORM MANHOLE (STMH)
- LIGHT POLE (LP)
- COMMUNICATION MANHOLE (UMH)
- POWER POLE (PP)
- LIGHT POLE (LP)
- COMMUNICATION MANHOLE (UMH)
- GOOGLE FIBER VAULT (FVT)
- FIRE HYDRANT (FH)
- WATER VALVE (WV)
- SANITARY SEWER MANHOLE (SSMH)
- SPRINKLER CONTROL VALVE (SCV)
- TRAFFIC CONTROL VAULT (TJB)
- COMMUNICATION MARKER (T)
- POWER POLE (PP)
- UNDERGROUND GAS LINE (G)
- SANITARY SEWER LINE (S)
- STORM SEWER LINE
- OVERHEAD POWER LINE (OHP)

SCALE: 1 INCH = 20 FT

EROSION CONTROL NOTES

1. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP AND THAT CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DIRECTED BY PERMITTING AGENCY AND OWNER OR AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST TO OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
2. PERMIT FOR ANY CONSTRUCTION ACTIVITY MUST BE MAINTAINED ON SITE AT ALL TIMES.
3. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.
4. GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.
5. ALL WASH WATER SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
6. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.
7. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
8. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORM WATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
9. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE INITIATED AS SOON AS PRACTICABLE.
10. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 7 DAYS, SHALL BE TEMPORARILY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS.
11. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE SODDED/LANDSCAPED PER PLANS. THESE AREAS SHALL BE SEEDED NO LATER THAN 7 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN.
12. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.
13. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
14. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.
15. ON-SITE AND OFFSITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.
16. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
17. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION AND SEDIMENT CONTROL MEASURES TO PREVENT EROSION AND SEDIMENTATION.
18. CONTRACTOR SHALL DESIGNATE/IDENTIFY AREAS INSIDE THE LIMITS OF DISTURBANCE, FOR WASTE DISPOSAL AND DELIVERY AND MATERIAL STORAGE.
19. CONTRACTOR TO LIMIT DISTURBANCE OF SITE IN STRICT ACCORDANCE WITH THE EROSION CONTROL SEQUENCING SHOWN ON THIS PLAN, NO UNNECESSARY OR IMPROPERLY SEQUENCED CLEARING AND/OR GRADING SHALL BE PERMITTED.

CONSTRUCTION SEQUENCE

1. CONDUCT PRE-CONSTRUCTION MEETING WITH THE CITY TO DISCUSS EROSION AND SEDIMENT CONTROLS AND CONSTRUCTION PHASING.
2. INSTALL STABILIZED CONSTRUCTION ENTRANCE.
3. INSTALL CONSTRUCTION FENCES.
4. PREPARE TEMPORARY PARKING AND STORAGE AREAS.
5. INSTALL INLET PROTECTION, SILT DIKES, AND SILT FENCE ON THE SITE AS SHOWN ON PLANS WITHIN THE CONSTRUCTION LIMITS.
6. DEMO EXISTING STRUCTURES, PAVEMENT, AND SPECIFIED UTILITIES.
7. BEGIN GRADING THE SITE.
8. BEGIN CONSTRUCTION OF UTILITIES.
9. BEGIN SUBGRADE PREPARATION AND CONSTRUCTION OF STRUCTURES.
10. BEGIN INSTALLATION OF CURB, GUTTER, AND PAVING.
11. COMPLETE PERMANENT STABILIZATION ON AREAS WHERE CONSTRUCTION HAS COMPLETED.
12. COMPLETE FINAL GRADING AND INSTALLATION OF PERMANENT STABILIZATION OVER ALL AREAS.
13. OBTAIN CONCURRENCE FROM THE OWNER AND THE CITY THAT THE SITE HAS BEEN FULLY STABILIZED.
14. REMOVE ALL REMAINING TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES.
15. STABILIZE ALL AREAS DISTURBED BY BMP REMOVAL.

CONTRACTOR MAY COMPLETE CONSTRUCTION RELATED ACTIVITIES CONCURRENTLY ONLY IF ALL PRECEDING BMPS HAVE BEEN COMPLETELYINSTALLED.

THE ACTUAL SCHEDULE FOR IMPLEMENTING POLLUTANT CONTROL MEASURES WILL BE DETERMINED BY THE PROJECT CONSTRUCTION PROGRESS AND RECORDED BY THE GENERAL CONTRACTOR ON THESE PLANS.

SOIL EROSION/SEDIMENTATION CONTROL OPERATION TIME SCHEDULE

NOTE: GENERAL CONTRACTOR TO COMPLETE TABLE WITH THEIR SPECIFIC PROJECT SCHEDULE

CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
ROUGH GRADE/SEDIMENT CONTROL																		
TEMPORARY CONTROL MEASURES																		
STRIP & STOCKPILE TOPSOIL																		
STORM FACILITIES																		
SITE CONSTRUCTION																		
FINISH GRADING																		
FOUNDATION/BUILDING CONSTRUCTION																		
PERMANENT CONTROL STRUCTURES																		
LANDSCAPING/SEED/FINAL STABILIZATION																		

Know what's below. Call before you dig.

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTORS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

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Phone: (972) 497-2990
www.bowman.com

REVISION	DESCRIPTION	DATE
	CURRENT SET THRU REVISION 02	

EROSION CONTROL PLAN

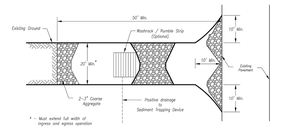
MO' BETTAHS
520 NW CHIPMAN RD
LEE'S SUMMIT, MO 64086

STATE OF MISSOURI
KOFI ADDO-NYARKO NUMBER PE-2021015534
PROFESSIONAL ENGINEER
3/15/22

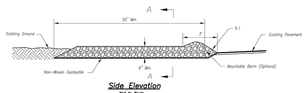
DESIGN	DRAWN	CHKD
BB	BB	KAN

JOB No. 070460-01-001

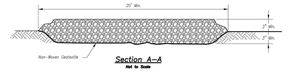
SHEET C1.0



Plan View
Not to Scale



Side Elevation
Not to Scale



Section A–A
Not to Scale

Notes for Construction Entrance:

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

Maintenance for Construction Entrance:

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

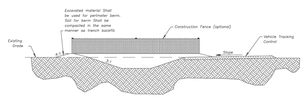
CONSTRUCTION ENTRANCE

Notes for Concrete Washout:

1. Concrete washout areas shall be installed prior to any concrete placement on site.
2. Concrete washout area shall include a flat subsurface pit sized appropriately for the amount of concrete to be placed. The slopes leading out of the subsurface pit shall be 2:1. The vehicle tracking pad shall be sloped towards the concrete washout area.
3. Vehicle tracking control is required at the access point to all concrete washout areas.
4. Signs shall be placed at the construction site entrance, washout area, and along the haul roadway 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:

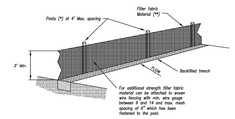
1. Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
2. Concrete washout areas shall be enlarged as necessary to maintain capacity for washed concrete.
3. Concrete washout water, washed pieces of concrete and all other waste shall be disposed of properly off-site. Dumping on the job site in a water-tight container is not disposal 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 shall be graded to natural conditions and seeded. Only/or removal of the concrete washout areas shall be stabilized.

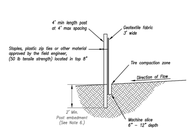


CONCRETE WASHOUT

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

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





(*) POSTS
- MIN. LENGTH 4'
- HARDWOOD 1 ¼" x 1 ¼"
- NO.2 SOUTHERN PINE 2 ¼" x 2 ¼"
- STEEL 1.33 LB/FT

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

SILT FENCE DETAILS
Not to Scale

Notes:

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

Maintenance:

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

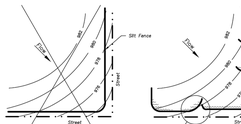
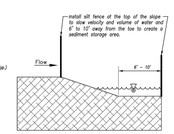
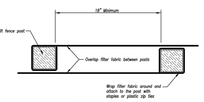


Figure A



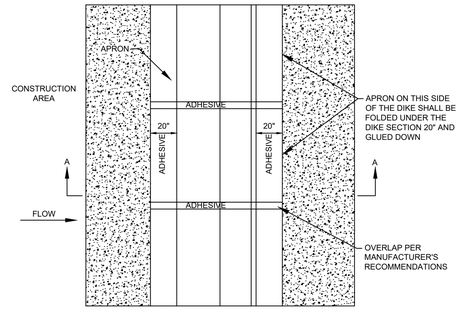
SILT FENCE LAYOUT
Not to Scale



JOINING FENCE SECTIONS
Not to Scale

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

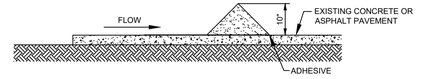
AMERICAN PUBLIC WORKS ASSOCIATION	KANSAS CITY METRO CHAPTER
SILT FENCE	STANDARD DRAWING NUMBER ESC-03 ADOPTED: 10/24/2016



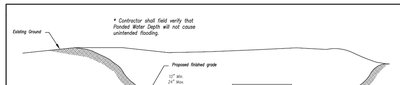
DIKE PLAN VIEW

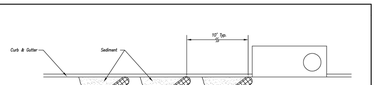
NOTES:

1. INSTALLED SILT DIKE UNIT SHALL HAVE CONTINUOUS AND FIRM CONTACT WITH PAVEMENT.
2. ADHESIVES SHALL BE LIQUID NAIL OR APPROVED EQUAL FOR CONCRETE PAVEMENT APPLICATIONS AND EMULSIFIED ASPHALT FOR ASPHALT APPLICATIONS. ADHESIVE SHALL BE PLACED WHERE THE UNITS OVERLAP AND A 20" STRIP ALONG BOTH EDGES.

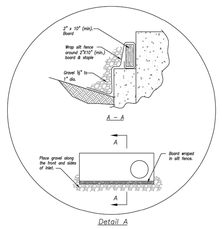


SECTION A-A



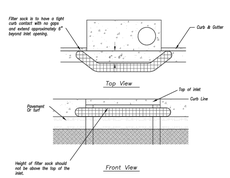


On Grade Curb Inlet Protection



Detail A

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



Sump Inlet Sediment Filter

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

Notes:

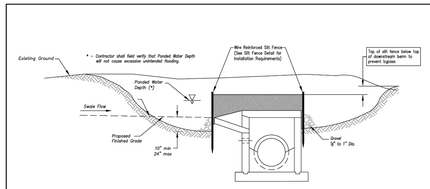
1. Immediately following inlet construction and prior to construction of curb and inlet throat, protect inlet opening by installing 2" X 10" (min.) board wrapped in silt fence. Structures shall have excavated storage area on all four sides to allow settling of sediment (Early Stage Curb Inlet).
2. When 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:

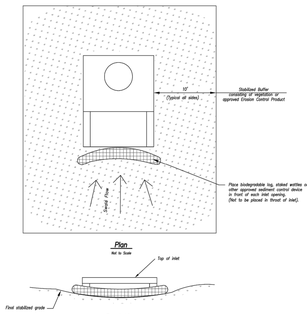
1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.

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

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



EARLY STAGE AREA INLET
(All open boxes and inlets not at final grade)



LATE STAGE AREA INLET
(Area inlets at final grade and existing inlets)

Notes:

1. Early Stage Area Inlet Sediment Barrier to be installed immediately after inlet or junction box is constructed.
2. Silt fence shall remain in place until excavated area is removed and Late Stage Area Inlet is being installed.
3. Backfill excavated area ONLY after final grading of the site. Stabilization of the site is to immediately follow.
4. Wire reinforced silt fence may be used in place of silt fence attached to wood frame.

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.

AMERICAN PUBLIC WORKS ASSOCIATION	KANSAS CITY METRO CHAPTER
AREA INLET AND JUNCTION BOX PROTECTION	STANDARD DRAWING NUMBER ESC-07 ADOPTED: 10/24/2016

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

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PLANO, TX 75024
Phone: (972) 497-2990
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REVISION	DESCRIPTION	DATE

CURRENT SET THRU REVISION 02

EROSION CONTROL DETAILS

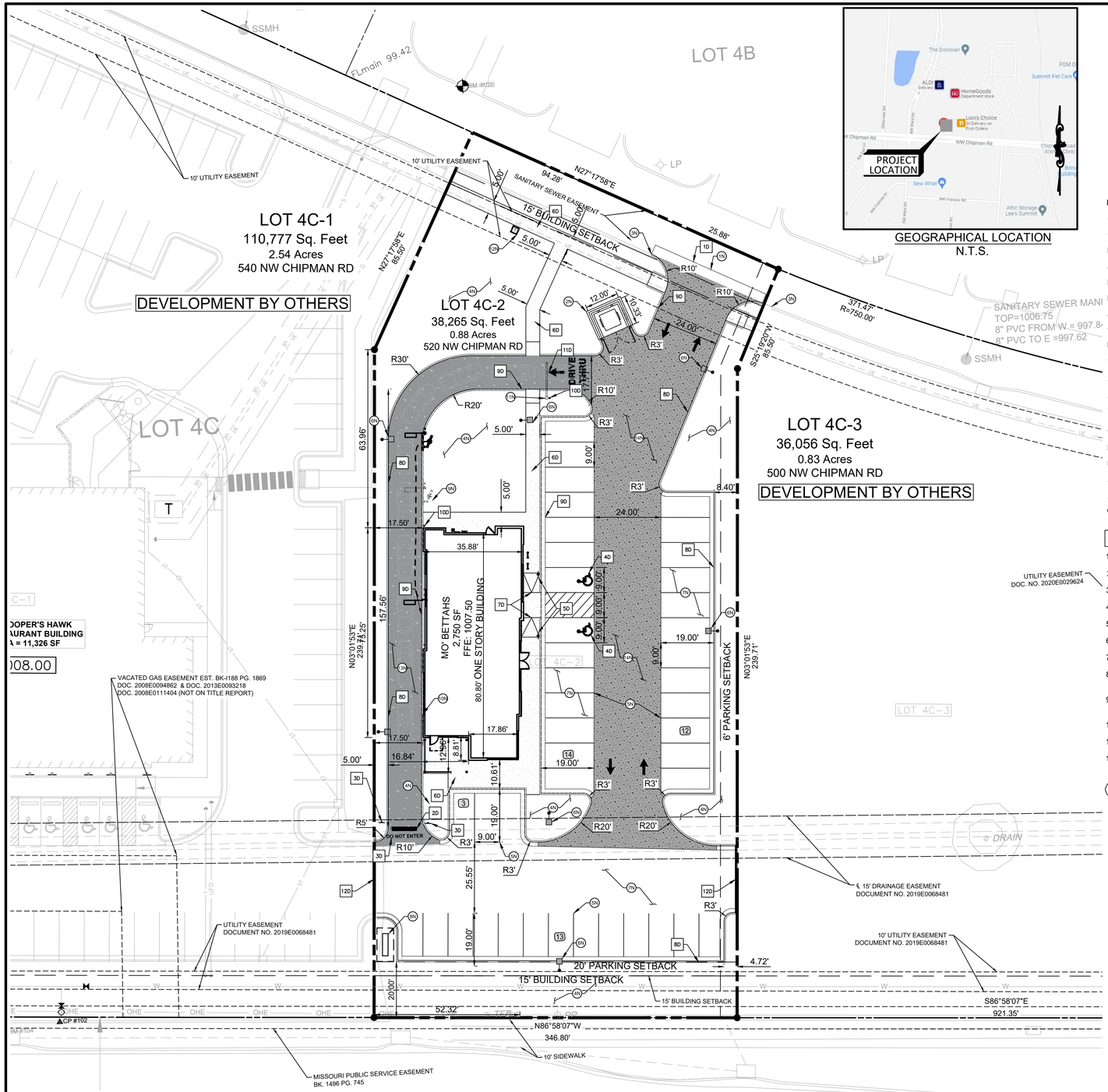
MO' BETTAHS
520 NW CHIPMAN RD
LEE'S SUMMIT, MO 64086

STATE OF MISSOURI
KOFI ADDO-NYARKO
NUMBER PE-2021015534
PROFESSIONAL ENGINEER
3/6/23

DESIGN	DRAWN	CHKD
BB	BB	KAN

JOB No. 070460-01-001

SHEET
C1.1



GEOGRAPHICAL LOCATION
N.T.S.

PROPOSED LEGEND

- BUILDING
- CONCRETE SIDEWALK
- PROPERTY LINE
- STRAIGHT BACK CONCRETE CURB & GUTTER
- DRY CONCRETE CURB & GUTTER
- PARKING SPACE COUNT (1)
- LIGHT DUTY CONCRETE
- HEAVY DUTY CONCRETE

EXISTING LEGEND

PROPERTY LINE	
STORM DROP INLET	DRAIN
STORM MANHOLE	STMH
LIGHT POLE	LP
COMMUNICATION MANHOLE	UMH
POWER POLE	PP
LIGHT POLE	LP
COMMUNICATION MANHOLE	UMH
GOOGLE FIBER VAULT	FVT
FIRE HYDRANT	FH
WATER VALVE	WV
SANITARY SEWER MANHOLE	SSMH
SPRINKLER CONTROL VALVE	SCV
TRAFFIC CONTROL VAULT	TJB
COMMUNICATION MARKER	T
POWER PEE	PP
UNDERGROUND GAS LINE	G
SANITARY SEWER LINE	S
STORM SEWER LINE	
OVERHEAD POWER LINE	OHP

DETAILS

- 1D DRIVEWAY ENTRANCE
- 2D STOP BAR
- 3D DO NOT ENTER SIGN (MUTCD R5-1)
- 4D ADA PARKING
- 5D ADA SIGN
- 6D CONCRETE SIDEWALK
- 7D CURB RAMP
- 8D STRAIGHT BACK CONCRETE CURB & GUTTER (REFER TO SHEET C6.1 CITY DETAIL GEN-4, CG-1)
- 9D DRY CONCRETE CURB & GUTTER (REFER TO SHEET C6.1 CITY DETAIL GEN-4, CG-1 DRY)
- 10D BOLLARD
- 11D DRIVE THROUGH PAVEMENT MARKING
- 12D TEMPORARY ASPHALT CURB TO BE REMOVED ONCE ADJACENT LOTS ARE DEVELOPED

NOTES

- 1N SAWCUT 2' AND MATCH EXISTING
- 2N DUMPSTER ENCLOSURE (REFER TO BUILDING PLANS)
- 3N END CURB MATCH EXISTING
- 4N LANDSCAPE AREA
- 5N 6" WIDE WHITE PARKING LOT STRIPE
- 6N SITE LIGHTING
- 7N LIGHT DUTY ASPHALT PAVING
- 8N MONUMENT SIGN (REFER TO SIGNAGE PLANS)
- 9N MENU ORDER BOARD AND SPEAKER
- 10N ORDER PICKUP WINDOW
- 11N CLEARANCE BAR (REFER TO ARCH. PLANS)
- 12N ELECTRIC TRANSFORMER
- 13N LIGHT DUTY CONCRETE PAVING
- 14N HEAVY DUTY CONCRETE PAVING

GENERAL SITE NOTES

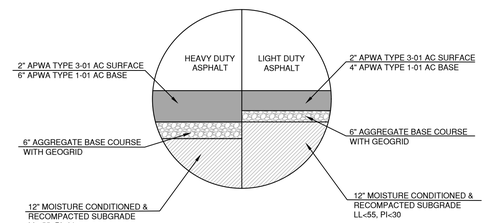
1. ALL DIMENSIONS SHOWN ARE TO THE FACE OF CURB, PROPERTY LINE OR CENTERLINE OF STRIPING UNLESS OTHERWISE NOTED.
2. ALL EXISTING EASEMENTS, RIGHTS-OF-WAY, AND LOT LINES MAY NOT BE SHOWN. REFER TO SURVEY PREPARED BY ANDERSON ENGINEERING, DATED AUGUST 31, 2021, FOR COMPLETE BOUNDARY INFORMATION AND ASSOCIATED ENCUMBRANCES.
3. A PRE-CONSTRUCTION MEETING WITH FIELD INSPECTOR SHALL BE HELD PRIOR TO CONSTRUCTION COMMENCEMENT.
4. THE CITY OF LEE'S SUMMIT SHALL BE GIVEN AT LEAST 48 HOURS NOTICE PRIOR TO PERFORMING ANY INSPECTIONS, SITE DISTURBANCE OR UTILITY WORK.
5. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE PROJECT PLANS, THE CURRENT EDITION OF THE MODOT DESIGN STANDARDS AND THE LATEST MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
6. ALL MECHANICAL EQUIPMENT TO BE ROOF MOUNTED AND SCREENED FROM HE STREET.
7. CONTRACTOR TO PROVIDE AS-BUILTS OF ALL IMPROVEMENTS TO THE SITE. AS-BUILTS TO INCLUDE HORIZONTAL AND VERTICAL LOCATIONS OF ALL UNDERGROUND UTILITIES INCLUDING, BUT NOT LIMITED TO, PIPES, FITTINGS, STRUCTURES, AND OTHER APPURTENANCES. ELEVATIONS OF PIPES AT CROSSING POINTS MUST BE SUFFICIENT TO IDENTIFY MINIMUM SEPARATION OF UTILITIES. IN ADDITION TO THE AFOREMENTIONED CRITERIA AS-BUILTS MUST MEET ALL LOCAL AND JURISDICTIONAL REQUIREMENTS FOR CERTIFICATION OF CONSTRUCTION.
8. ALL AFFECTED SIDEWALKS, RAMPS AND CROSSWALKS, WILL BE BUILT AND INSPECTED TO MEET CURRENT ADA REQUIREMENTS.
9. BUILDING SETBACK DIMENSIONS MEASURED TO OUTERMOST ARCHITECTURAL FEATURE. CONTRACTOR TO REFER TO ARCHITECTURAL PLANS FOR BUILDIN
10. ALL CURB RADII ARE 3' UNLESS SHOWN OTHERWISE.
11. PRIOR TO INSTALLATION, CONTRACTOR MUST VERIFY LOCATIONS OF LIGHT POLES, LANDSCAPING AND UTILITIES.
12. NO ACTIVE, INACTIVE OR CAPPED OIL AND GAS WELLS WITHIN THE AREA OF THE PROJECT SITE.
13. REFER TO GEOTECHNICAL ENGINEERING REPORT FOR PAVEMENT RECOMMENDATIONS.

SITE DATA & AREA CALCULATIONS

CURRENT LAND USE CLASSIFICATION:	COMMERCIAL
FUTURE LAND USE CLASSIFICATION:	COMMERCIAL
CURRENT ZONING CLASSIFICATION:	PMIX - PLANNED MIXED USE
CURRENT LOCAL JURISDICTION:	CITY OF LEE'S SUMMIT
FLOOD ZONE CLASSIFICATION;	ZONE 'X'
FEMA PANEL:	29095C0417G
DATE:	01/20/2017
SITE AREA TOTAL:	38,265 SF (0.88 AC)
IMPERVIOUS AREA BUILDING:	2,800 SF (0.064 AC) (7.31%)
PAVEMENT:	22,821 SF (0.524 AC)(59.63%)
PERVIOUS AREA OPEN SPACE:	12,644 SF (0.290 AC)(33.06%)
FLOOR AREA RATIO BLDG/SITE:	7.58%

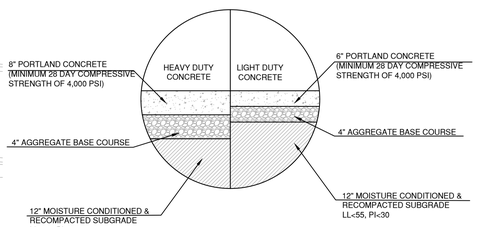
PARKING DATA

SPACES REQUIRED:	14/1000 SF OF GFA 40 SPACE	
SPACES PROVIDED:	40	REGULAR
	2	ADA
	42	TOTAL
TYPICAL DIMENSIONS:	9'	WIDTH
	19'	DEPTH



ASPHALT PAVEMENT SECTION

SCALE: NONE
REFER TO CFS ENGINEER'S GEOTECH REPORT
DATED MAY 21,2021
PROJECT NO: 21-5355



CONCRETE PAVEMENT SECTION

SCALE: NONE
REFER TO CFS ENGINEER'S GEOTECH REPORT
DATED MAY 21,2021
PROJECT NO: 21-5355

PAVING NOTE
AGGREGATE BASE AND MOISTURE CONDITIONED SUBGRADE OF BOTH ASPHALT AND CONCRETE PAVEMENTS SHALL EXTEND 1' BEYOND BACK OF CURB.

CONTRACTOR MUST REFER TO ARCHITECTURAL PLANS FOR EXACT BUILDING DIMENSIONS AND LOCATIONS OF ALL OUTSIDE DOORS AND BUILDING UTILITIES.

CONTRACTOR MUST COORDINATE ALL UTILITY CONNECTIONS SUCH AS ELECTRIC, GAS CABLE, TELEPHONE, WATER, SANITARY SEWER, STORM DRAINAGE WITH UTILITY PROVIDERS.

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BENCHMARKS

No. 103	CONTROL/ TBM (1005943.8164, 2822115.1076)	ELEV: 1010.19'
No. 104	CONTROL/ TBM (1005613.4472, 2821932.7384)	ELEV: 1000.36'

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PLANO, TX 75024
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REVISION	DESCRIPTION	DATE
	CURRENT SET THRU REVISION 02	

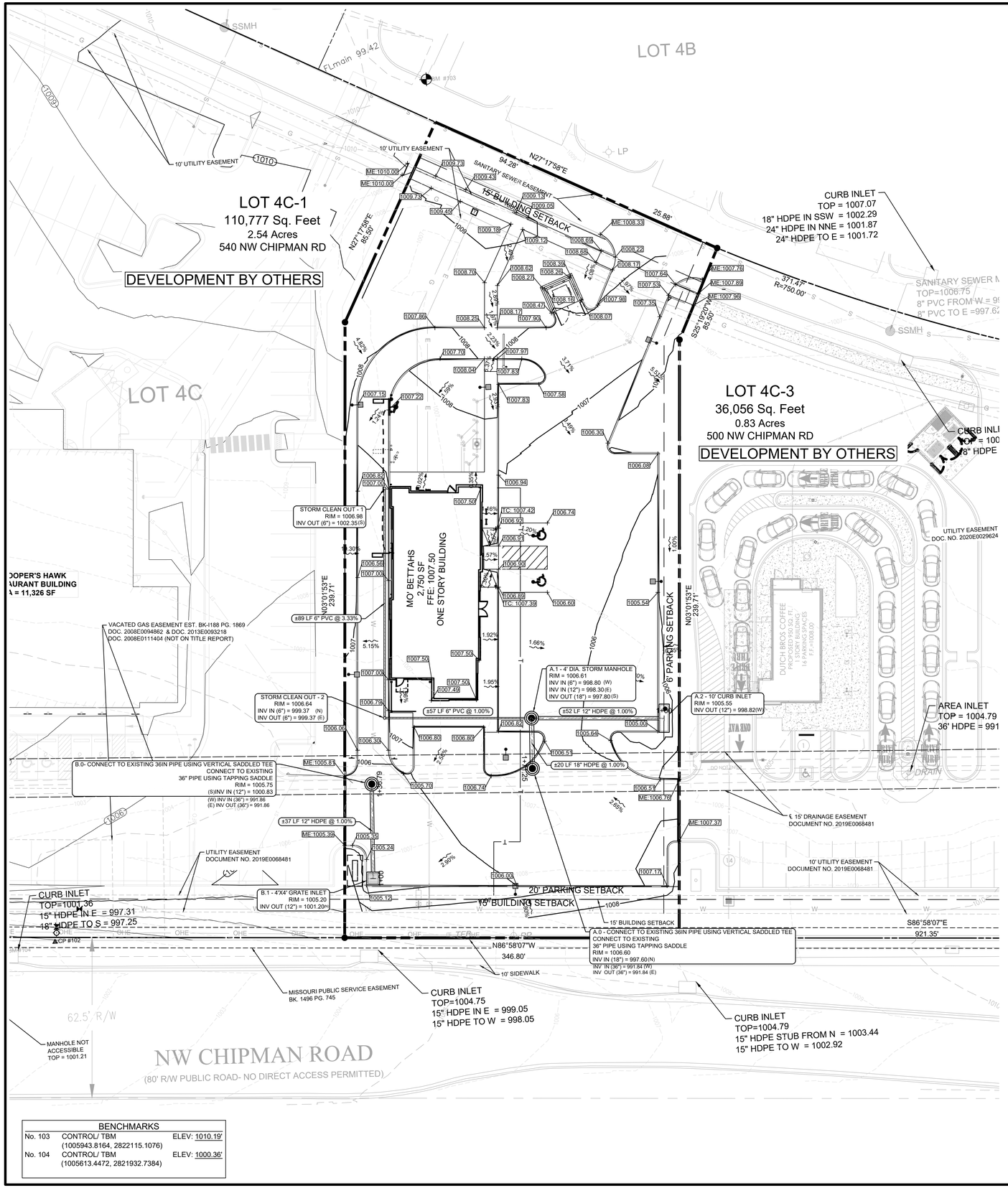
SITE AND PAVING PLAN

MO' BETTAHS
520 NW CHIPMAN RD
LEE'S SUMMIT, MO 64086

DESIGN	DRAWN	CHKD
BB	BB	KAN

JOB No. 070460-01-001

SHEET
C2.0



BENCHMARKS

No. 103	CONTROL/ TBM (1005943.8164, 2822115.1076)	ELEV: 1010.19'
No. 104	CONTROL/ TBM (1005613.4472, 2821932.7384)	ELEV: 1000.36'

PROPOSED LEGEND

PROPOSED BUILDING
PROPERTY LINE
STD. 6" CONCRETE CURB
WATER LINE — w —
SANITARY LINE — ss —
SANITARY MANHOLE (S)
ELECTRIC LINE — E —
TRANSFORMER (T)
PROPOSED CONTOUR 430
EXISTING CONTOUR 430
DIRECTION OF FLOW 2.30%
SPOT ELEVATION 843.56
MATCH EXISTING ME
STORM GRATE INLET
STORM CURB INLET
STORM PIPE

EXISTING LEGEND

PROPERTY LINE
STORM DROP INLET — DRAIN
STORM MANHOLE — STMH
LIGHT POLE — LP
COMMUNICATION MANHOLE — UMH
POWER POLE — PP
LIGHT POLE — LP
COMMUNICATION MANHOLE — UMH
GOOGLE FIBER VAULT — FVT
FIRE HYDRANT — FH
WATER VALVE — WV
SANITARY SEWER MANHOLE — SSMH
SPRINKLER CONTROL VALVE — SCV
TRAFFIC CONTROL VAULT — TJB
COMMUNICATION MARKER — T
POWER POLE — PP
UNDERGROUND GAS LINE — G — G —
SANITARY SEWER LINE — S — S —
STORM SEWER LINE
OVERHEAD POWER LINE — OHP — OHP —

CONTRACTOR MUST REFER TO ARCHITECTURAL PLANS FOR EXACT BUILDING DIMENSIONS AND LOCATIONS OF ALL OUTSIDE DOORS AND BUILDING UTILITIES.

CONTRACTOR MUST COORDINATE ALL UTILITY CONNECTIONS SUCH AS ELECTRIC, GAS CABLE, TELEPHONE, WATER, SANITARY SEWER, STORM DRAINAGE WITH UTILITY PROVIDERS.

20 0 20 40
SCALE: 1 INCH = 20 FT

GRADING NOTES

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF ALL EXISTING UTILITIES (ABOVE AND BELOW GROUND) AS SHOWN ON THESE PLANS ARE APPROXIMATE AND WERE LOCATED BASED ON EITHER VISUAL OBSERVATIONS AT THE SITE, EXISTING SURVEYS, AND/OR FROM UTILITY OWNERS. THE OWNER DOES NOT GUARANTEE THAT EXISTING UTILITY LOCATIONS ARE EXACT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXACT LOCATIONS OF EXISTING UTILITIES(ABOVE AND BELOW GROUND) BEFORE BEGINNING ANY CONSTRUCTION. THE CONTRACTOR SHALL CALL APPROPRIATE UTILITY COMPANIES AND THE UTILITIES PROTECTION CENTER AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY OWNER AND/OR ENGINEER OF ANY UTILITY CONFLICTS WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
2. ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT, AND SHALL HAVE TRAFFIC BEARING RING AND COVERS. MANHOLES IN UNPAVED AREAS SHALL BE 6" ABOVE FINISH GRADE. LIDS SHALL BE LABELED "STORM SEWER".
3. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDING AND FOR ALL NATURAL AND PAVED AREAS.
4. ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATION SHALL RECEIVE 4 INCHES OF TOPSOIL. CONTRACTOR SHALL GRASS DISTURBED AREAS IN ACCORDANCE WITH CITY SPECIFICATIONS UNTIL HEALTHY STAND OF GRASS IS OBTAINED.
5. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME.
6. CONTRACTOR TO REVIEW GEOTECHNICAL REPORT PROVIDED BY THE OWNER.
7. ALL PROPOSED SPOT ELEVATIONS ARE PAVEMENT GRADES, UNLESS OTHERWISE NOTED, TOP OF CURB ELEVATIONS ARE 6 INCH ABOVE ELEVATIONS SHOWN ON THIS PLAN.
8. ALL ELEVATIONS PRESENTED IN THESE PLANS ARE RELATIVE TO THE NORTH AMERICAN VERTICAL DATUM OF NAVD 88.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MANAGING CONSTRUCTION ACTIVITIES TO ENSURE THAT PUBLIC STREETS AND RIGHT-OF-WAYS ARE KEPT CLEAN OF MUD, DUST OR DEBRIS. DUST ABATEMENT SHALL BE MAINTAINED BY ADEQUATE WATERING OF THE SITE BY THE CONTRACTOR.
10. CLEAR AND GRUB WITHIN WORK LIMITS FOR ALL SURFACE VEGETATION, TREES, STUMPS, BRUSH, ROOTS, ETC. DO NOT DAMAGE OR REMOVE TRESS EXCEPT AS APPROVED BY THE ENGINEER OR AS SHOWN ON THE DRAWINGS. PROTECT ALL ROOTS TWO INCHES IN DIAMETER OR LARGER.
11. STRIP WORK LIMITS, REMOVING ALL ORGANIC MATTER WHICH CANNOT BE COMPACTED INTO A STABLE MASS. ALL TRESS, BRUSH, AND DEBRIS ASSOCIATED WITH CLEARING, STRIPPING OR GRADING SHALL BE REMOVED AND DISPOSED OFF SITE BY THE CONTRACTOR.
12. UNLESS OTHERWISE SHOWN ON THE DRAWINGS, STRAIGHT GRADES SHALL BE RUN BETWEEN ALL FINISH GRADE ELEVATIONS AND/OR FINISH CONTOUR LINES SHOWN. FINISH PAVEMENT GRADES AT TRANSITION TO EXISTING PAVEMENT SHALL MATCH EXISTING PAVEMENT GRADES OR SHALL BE FEATHERED PAST JOINTS WITH EXISTING PAVEMENT AS REQUIRED TO PROVIDE A SMOOTH, FREE DRAINAGE SURFACE.
13. ALL EXISTING AND CONSTRUCTED MANHOLES, CLEANOUTS, MONUMENTS, GAS VALVES, WATER VALVES, AND SIMILAR STRUCTURES SHALL BE ADJUSTED TO MATCH FINISH GRADE OF THE PAVEMENT, SIDEWALK, LANDSCAPED AREA, OR MEDIAN STRIP WHEREIN THEY LIE.
14. CONTRACTOR SHALL HYDROSEED ALL EXPOSED SLOPES AND DISTURBED AREAS WHICH ARE NOT SCHEDULED TO BE LANDSCAPED.

ADA NOTES

1. THE DESIGN PROFESSIONAL SIGNING THIS DOCUMENT REPRESENTS THAT TO THE BEST OF HIS/HER PROFESSIONAL JUDGEMENT, KNOWLEDGE, AND BELIEF THE DESIGN SPECIFICATIONS HEREIN COMPLY WITH THE AMERICANS WITH DISABILITIES ACT (ADA).
2. ALL GRADES/SLOPES SHOWN ON THIS PLAN WERE DESIGNED AT OR BELOW MAXIMUMS ALLOWED BY THE AMERICANS WITH DISABILITIES ACT (ADA). IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE AMERICANS WITH DISABILITIES ACT (ADA) ACCESSIBILITY GUIDELINES, AND THE ADA DESIGN MANUAL. IN THE EVENT THAT A DESIGN QUESTION SHOULD ARISE, OR A FIELD CONDITION PRESENT ITSELF THAT IS DIFFERENT FROM THOSE SHOWN ON THESE PLANS, WORK SHOULD CEASE AND THE ENGINEER SHOULD BE NOTIFIED SO THAT AN ACCEPTABLE SOLUTION CAN BE DETERMINED.
3. THE CONTRACTOR IS ADVISED TO CAREFULLY CHECK ALL THE PHASES OF WORK RELATING TO ADA ACCESSIBILITY FOR THIS PROJECT. SINCE THE CODE DOES NOT ALLOW FOR CONSTRUCTION TOLERANCE, ANY CONSTRUCTION THAT EXCEEDS MAXIMUM OR MINIMUM DIMENSIONS AND SLOPES AS REQUIRED BY ADA ARE SUBJECT TO REJECTION AND MAY BE REQUIRED TO BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
4. SINCE THE CIVIL ENGINEER OR SURVEYOR CANNOT CONTROL THE EXACT METHODS OR MEANS USED BY THE GENERAL CONTRACTOR OR THEIR SUBCONTRACTORS DURING GRADING AND CONSTRUCTION OF THE PROJECT, THE CIVIL ENGINEER OR SURVEYOR ASSUMES NO RESPONSIBILITY FOR THE FINAL ACCEPTANCE OF AMERICANS WITH DISABILITIES ACT ACCESSIBILITY RELATED ITEMS BY THE CITY, ANY OTHER AUTHORITY, OR AFFECTED PARTIES.

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REVISION	DESCRIPTION	DATE

CURRENT SET THRU REVISION 02

GRADING AND DRAINAGE PLAN

MO' BETTAHS
520 NW CHIPMAN RD
LEE'S SUMMIT, MO 64086

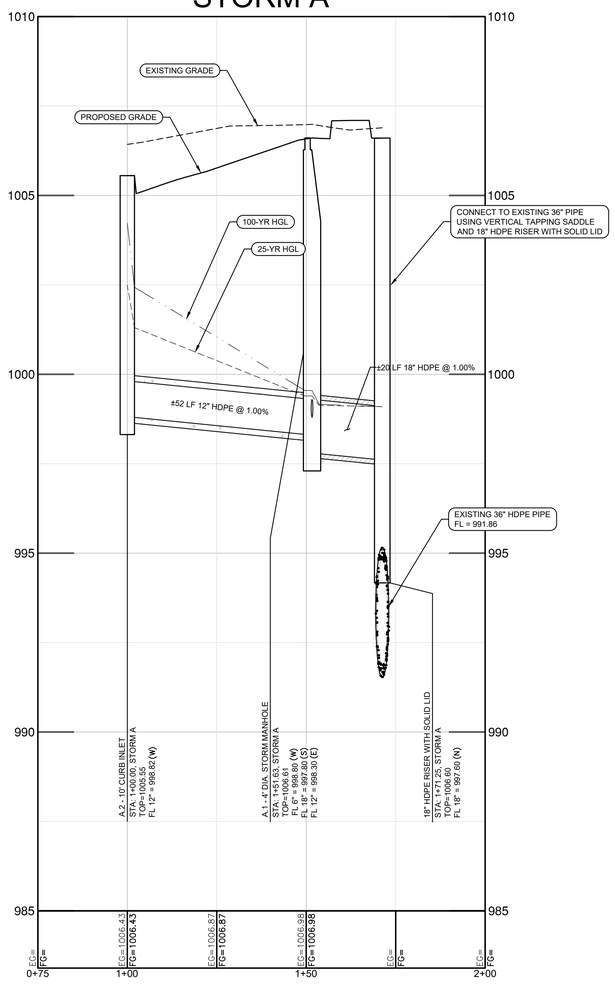
STATE OF MISSOURI
KOFI ADDO-NYARKO
NUMBER PE-2021015534
PROFESSIONAL ENGINEER
3/4/22

DESIGN	DRAWN	CHKD
BB	BB	KAN

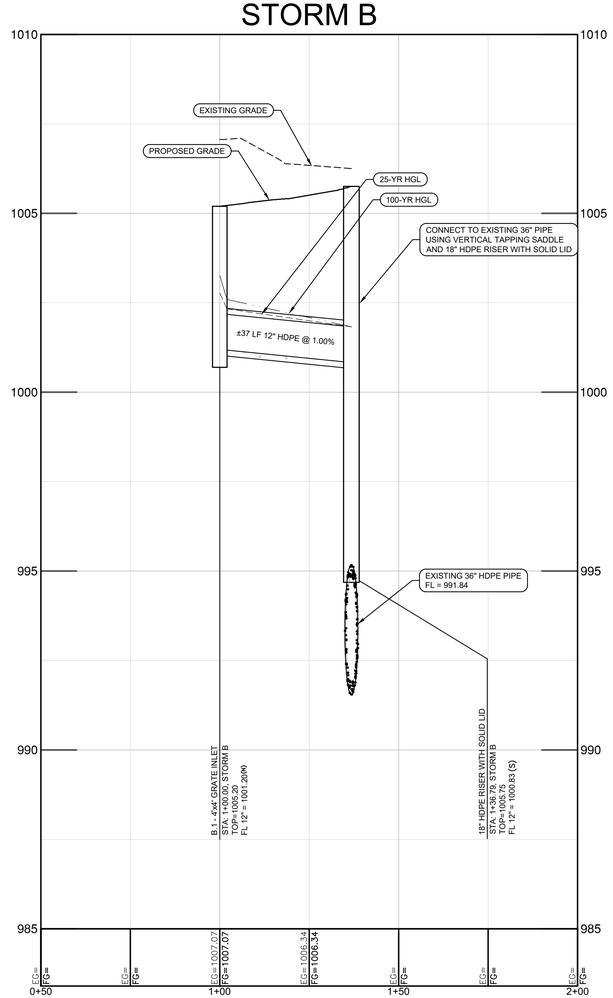
JOB No. 070460-01-001

SHEET
C3.0

STORM A



STORM B



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REVISIONS		
REVISION	DESCRIPTION	DATE

CURRENT SET THRU REVISION 02

STORM DRAIN PROFILES

MO' BETTAHS
520 NW CHIPMAN RD
LEE'S SUMMIT, MO 64086

DESIGN	DRAWN	CHKD
BB	BB	KAN

JOB No. 070460-01-001

SHEET
C3.1

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

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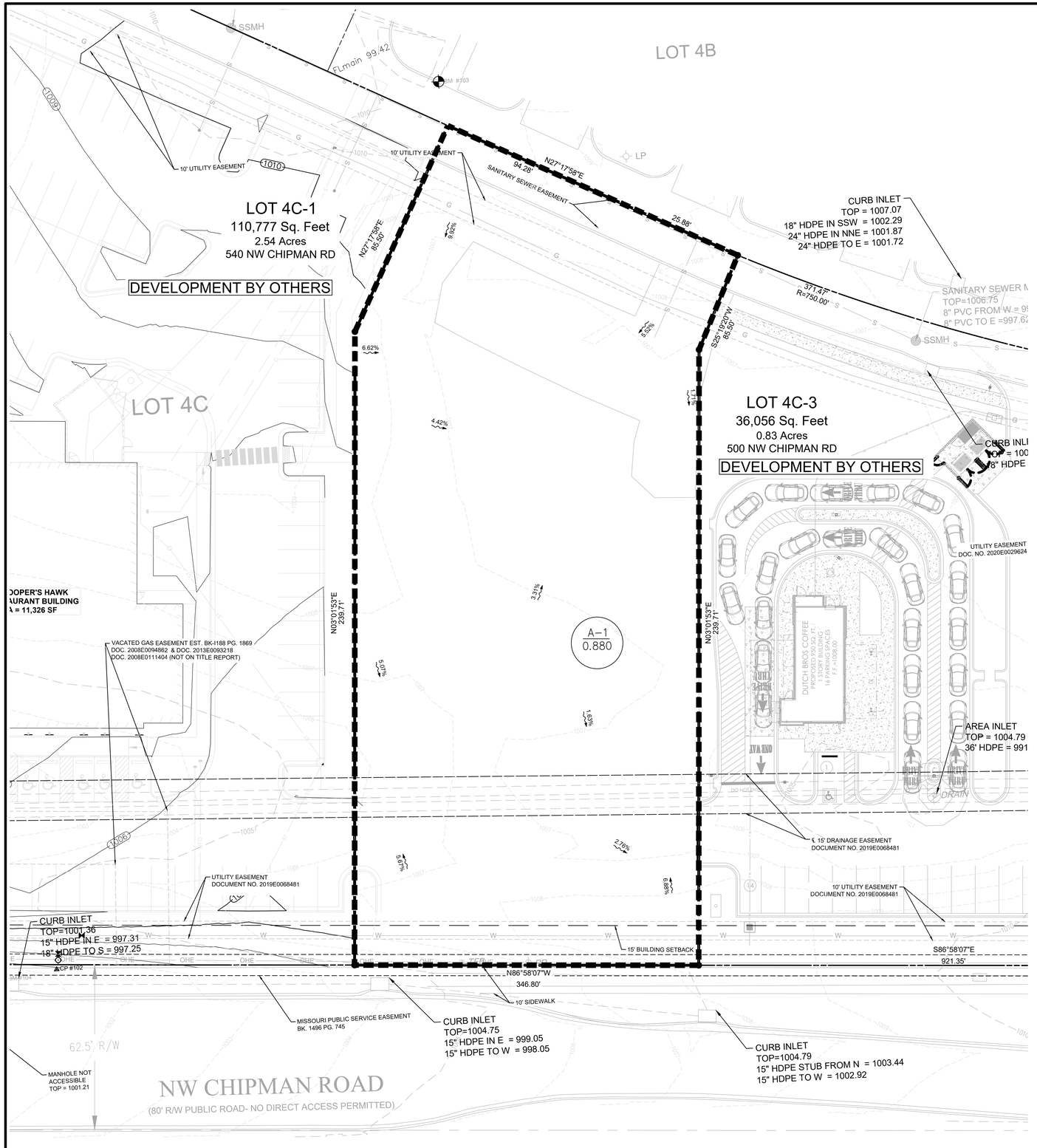

BENCHMARKS

No. 103	CONTROL/ TBM (1005943.8164, 2822115.1076)	ELEV: 1010.19'
No. 104	CONTROL/ TBM (1005613.4472, 2821932.7384)	ELEV: 1000.36'

DRAINAGE LEGEND

- DIRECTION OF FLOW — 5.06%
- DRAIANGE AREA BOUNDARY
- DRAINAGE AREA IDENTIFIER — A–1 / 2.246 — I.D. / area (acres)
- EXISTING CONTOURS — 882

EXISTING LEGEND

- PROPERTY LINE
- STORM DROP INLET — DRAIN
- STORM MANHOLE — STMH
- LIGHT POLE — LP
- COMMUNICATION MANHOLE — UMH
- POWER POLE — PP
- LIGHT POLE — LP
- COMMUNICATION MANHOLE — UMH
- GOOGLE FIBER VAULT — FVT
- FIRE HYDRANT — FH
- WATER VALVE — WV
- SANITARY SEWER MANHOLE — SSMH
- SPRINKLER CONTROL VALVE — SCV
- TRAFFIC CONTROL VAULT — TJB
- COMMUNICATION MARKER — T
- POWER POLE — PP
- UNDERGROUND GAS LINE — G
- SANITARY SEWER LINE — S
- STORM SEWER LINE
- OVERHEAD POWER LINE — OHP

20 0 20 40
SCALE: 1 INCH = 20 FT

EXISTING IMPERVIOUS AREA CALCULATIONS

EXISTING IMPERVIOUS AREA = 0.113 AC (12.84%)

EXISTING OPEN SPACE AREA = 0.767 AC (87.16%)

Pre-Development Conditions

Drainage Area	Acres	Time of Concentration (Min)	Runoff Coefficient C	5 Year Intensity (In/Hr)	5 Year Runoff (cfs)	10 Year Intensity (In/Hr)	10 Year Runoff (cfs)	25 Year Intensity (In/Hr)	25 Year Runoff (cfs)	50 Year Intensity (In/Hr)	50 Year Runoff (cfs)	100 Year Intensity (In/Hr)	100 Year Runoff (cfs)
A-1	0.880	5.00	0.38	7.18	2.40	8.34	2.79	9.98	3.34	11.30	3.78	12.60	4.21

Runoff coefficient per Section 5602.3.C of Design and construction manual

C=0.3 + 0.6 x I

C=0.3 + 0.6 x 0.1284

C=0.38

CALCULATIONS PER CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL

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REVISIONS

REVISION	DATE	DESCRIPTION

CURRENT SET THRU REVISION 02

EXISTING DRAINAGE AREA MAP

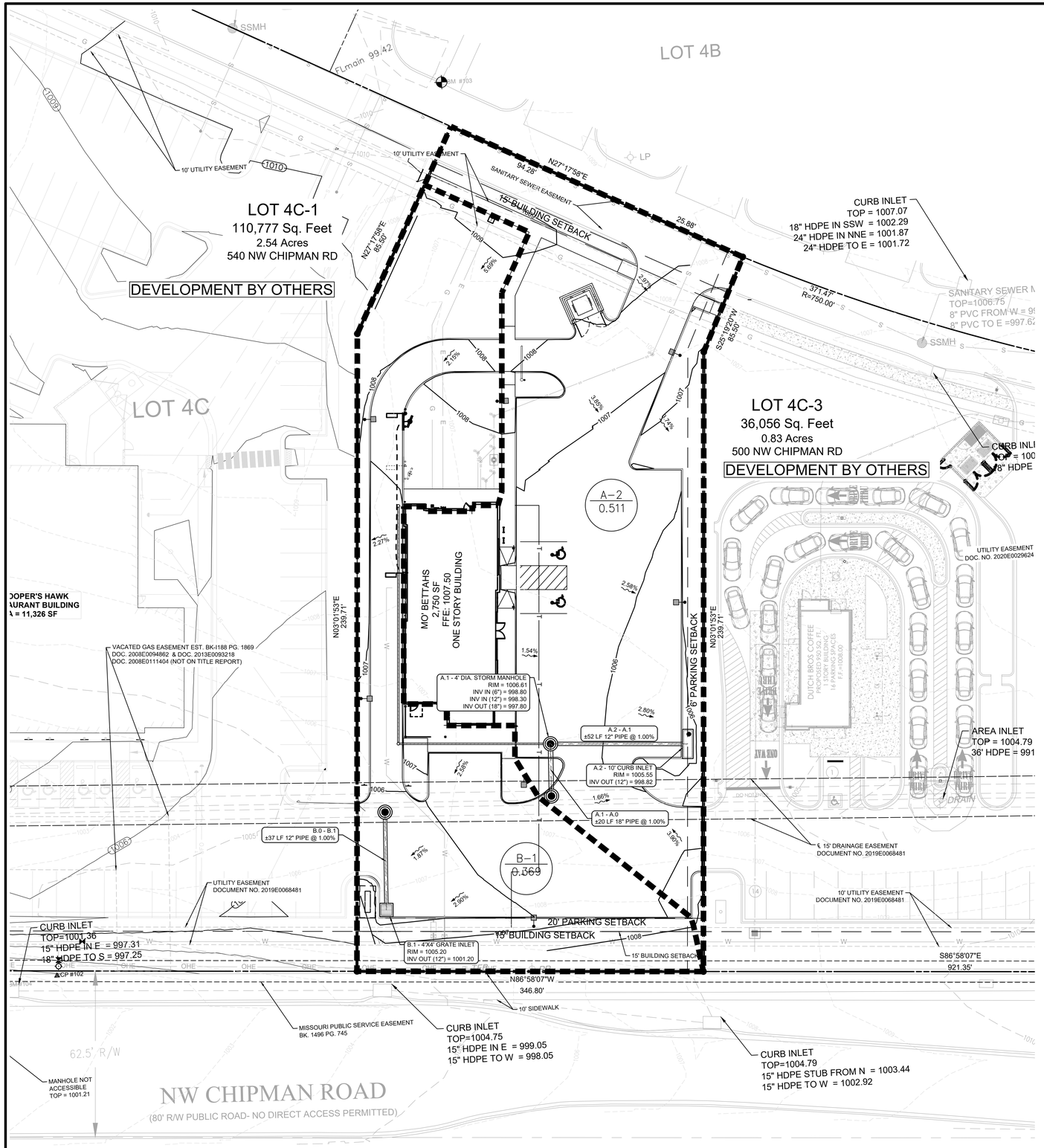
MO' BETTAHS
520 NW CHIPMAN RD
LEE'S SUMMIT, MO 64086

STATE OF MISSOURI
KOFI ADDO-NYARKO
NUMBER PE-2021015534
PROFESSIONAL ENGINEER
3/15/22

DESIGN	DRAWN	CHKD
BB	BB	KAN

JOB No. 070460-01-001

SHEET C4.0



DRAINAGE LEGEND

DIRECTION OF FLOW	5.06%
DRAIANGE AREA BOUNDARY	
DRAINAGE AREA IDENTIFIER	A–1 / 2.246 I.D. area (acres)
EXISTING CONTOURS	882

EXISTING LEGEND

PROPERTY LINE	
STORM DROP INLET	DRAIN
STORM MANHOLE	STMH
LIGHT POLE	LP
COMMUNICATION MANHOLE	UMH
POWER POLE	PP
LIGHT POLE	LP
COMMUNICATION MANHOLE	UMH
GOOGLE FIBER VAULT	FVT
FIRE HYDRANT	FH
WATER VALVE	WV
SANITARY SEWER MANHOLE	SSMH
SPRINKLER CONTROL VALVE	SCV
TRAFFIC CONTROL VAULT	TJB
COMMUNICATION MARKER	T
POWER POLE	PP
UNDERGROUND GAS LINE	G G
SANITARY SEWER LINE	S S
STORM SEWER LINE	
OVERHEAD POWER LINE	OHP OHP

INLET CAPACITY CALCULATIONS

A.2 CURB INLET

$Qi = Co \times h \times L (2 g \times do)^{0.5}$
$Qi = 0.67 \times 0.83 \times 10 (2 \times 32.2 \times 0.75)^{0.5}$
$Qi = 38.65$ CFS

B.1 GRATE INLET

$Qi = Co \times h \times L (2 g \times do)^{0.5}$
$Qi = 0.67 \times 0.83 \times 16 (2 \times 32.2 \times 0.75)^{0.5}$
$Qi = 61.84$ CFS

PIPE SIZING CALCULATIONS

A.2 - A.1

$D = [(Qn) / (K_Q \times So^{0.5})]^{0.375}$
$D = [(4.51x0.01) / (0.46(0.05)^{0.5})]^{0.375}$
$D = 0.73$ FT = 8.8 IN
USE 12IN PIPE

B.0 - B.1

$D = [(Qn) / (K_Q \times So^{0.5})]^{0.375}$
$D = [(3.25x0.01) / (0.46(0.05)^{0.5})]^{0.375}$
$D = 0.32$ FT = 3.8 IN
USE 12IN PIPE

PROPOSED IMPERVIOUS AREA CALCULATIONS

PROPOSED IMPERVIOUS AREA	= 0.588 AC (66.94%)
PROPOSED OPEN SPACE AREA	= 0.290 AC (33.06%)
NET OPEN SPACE DECREASE	=0.109 AC

Post-Development Conditions

Drainage Area	Acres	Time of Concentration (Min)	Runoff Coefficient C	5 Year Intensity (In/Hr)	5 Year Runoff (cfs)	10 Year Intensity (In/Hr)	10 Year Runoff (cfs)	25 Year Intensity (In/Hr)	25 Year Runoff (cfs)	50 Year Intensity (In/Hr)	50 Year Runoff (cfs)	100 Year Intensity (In/Hr)	100 Year Runoff (cfs)
A-2	0.511	5.00	0.70	7.18	2.57	8.34	2.98	9.98	3.57	11.30	4.04	12.60	4.51
B-1	0.369	5.00	0.70	7.18	1.85	8.34	2.15	9.98	2.58	11.30	2.92	12.60	3.25
				5 Year Runoff Total	**4.42**	**10 Year Runoff Total**	**5.14**	**25 Year Runoff Total**	**6.15**	**50 Year Runoff Total**	**6.96**	**100 Year Runoff Total**	**7.76**

Runoff coefficient per Section 5602.3.C of Design and construction manual
C=0.3 + 0.6 x I
C=0.3 + 0.6 x 0.6694
C=0.70

CALCULATIONS PER CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL

DIFFERENCE IN RUNOFF (EXISTING VS PROPOSED)					
5 Year Runoff (cfs)	10 Year Runoff (cfs)	25 Year Runoff (cfs)	50 Year Runoff (cfs)	100 Year Runoff	Net Change
2.02	2.35	2.81	3.18	3.55	Increase

BENCHMARKS		
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20 0 20 40
SCALE: 1 INCH = 20 FT

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REVISION	DATE	DESCRIPTION
		CURRENT SET THRU REVISION 02

PROPOSED DRAINAGE AREA MAP

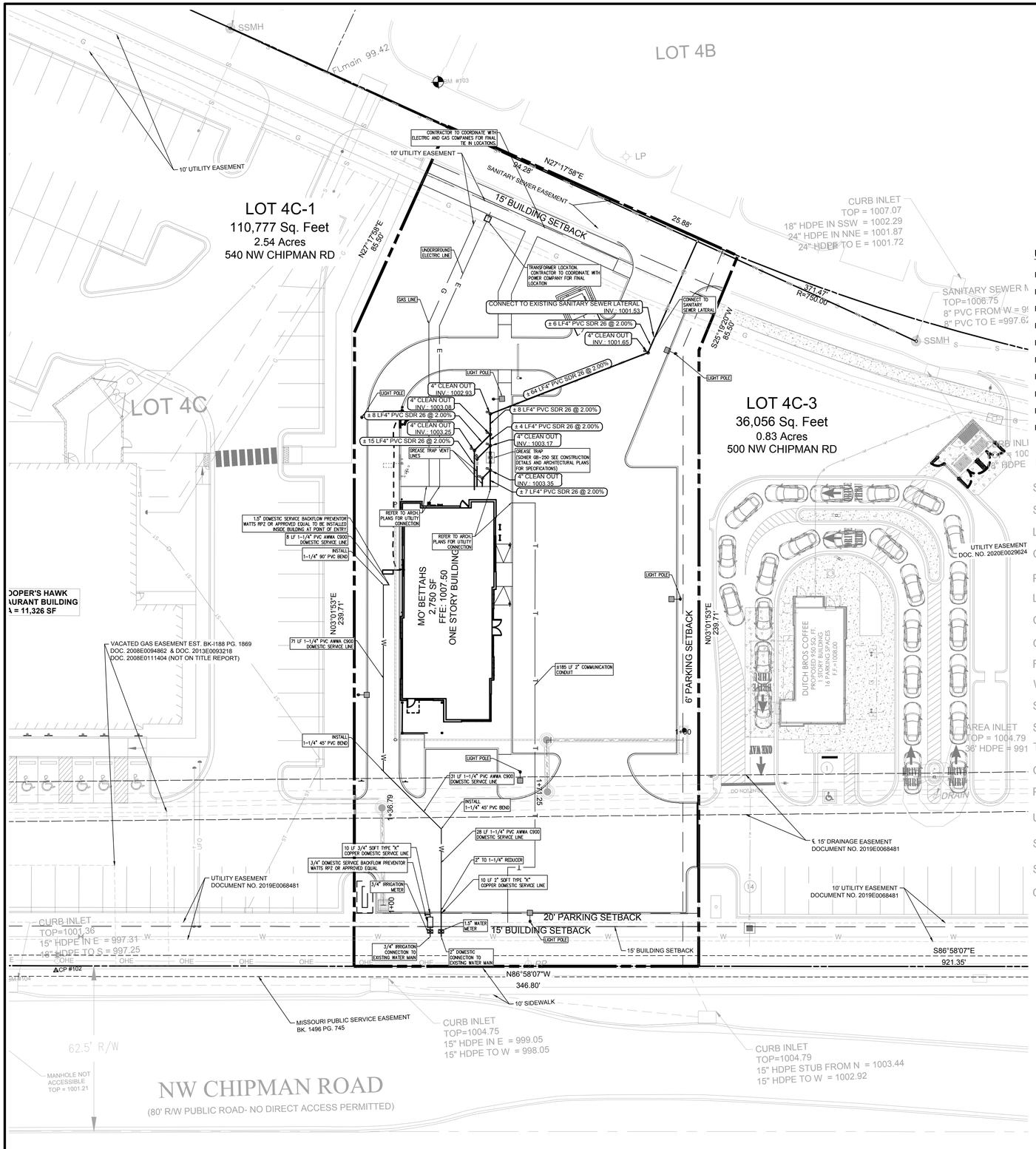
MO' BETTAHS
520 NW CHIPMAN RD
LEE'S SUMMIT, MO 64086

STATE OF MISSOURI
KOFI ADDO-NYARKO NUMBER PE-2021015534
PROFESSIONAL ENGINEER
3/6/23

DESIGN	DRAWN	CHKD
BB	BB	KAN

JOB No. 070460-01-001

SHEET C4.1



UTILITY LEGEND

PROPERTY LINE	
PROPOSED WATER LINE	W
PROPOSED SANITARY LINE	SS
PROPOSED ELECTRIC LINE	E E
PROPOSED GAS LINE	G
PROPOSED FIRE HYDRANT	
PROPOSED WATER METER	
PROPOSED GATE VALVE	
PROPOSED CLEANOUT	CO
PROPOSED LIGHT POLE	

EXISTING LEGEND

STORM DROP INLET	DRAIN
STORM MANHOLE	STMH
LIGHT POLE	LP
COMMUNICATION MANHOLE	UMH
POWER POLE	PP
LIGHT POLE	LP
COMMUNICATION MANHOLE	UMH
GOOGLE FIBER VAULT	FVT
FIRE HYDRANT	FH
WATER VALVE	WV
SANITARY SEWER MANHOLE	SSMH
SPRINKLER CONTROL VALVE	SCV
TRAFFIC CONTROL VAULT	TJB
COMMUNICATION MARKER	T
POWER POLE	PP
UNDERGROUND GAS LINE	G G
SANITARY SEWER LINE	S S
STORM SEWER LINE	
OVERHEAD POWER LINE	OHP OHP

UTILITY NOTES

1. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES AND IS RESPONSIBLE TO REPAIR ANY DAMAGE TO EXISTING UTILITIES DURING CONSTRUCTION AT NO COST TO THE OWNER.
2. ALL UTILITIES ARE SHOWN FROM INFORMATION GATHERED AND SHOULD NOT BE USED AS EXACT. CONTRACTOR SHALL VERIFY EXACT DEPTHS AND LOCATIONS PRIOR TO UTILITY INSTALLATION AND NOTIFY THE ENGINEER OF RECORD IF THERE ARE ANY DEVIATIONS ROM WHAT IS SHOWN ON PLANS.
3. CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITY COMPANY FOR INSTALLATION AND SPECIFICATION REQUIREMENTS.
4. ALL PIPE MATERIALS SHALL COMPLY WITH LOCAL REGULATIONS.
5. ALL TRENCHING AND BEDDING SHALL BE PER THE UTILITY TRENCH AND BEDDING DETAIL.
6. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR ALL BUILDING UTILITY TIE INS.
7. THE CONTRACTOR IS TO FIELD VERIFY THE EXACT LOCATIONS AND DEPTHS OF UTILITY LINES.
8. ALL CERTIFICATES AND SHOP DRAWINGS MUST BE SUBMITTED, REVIEWED, AND APPROVED PRIOR TO STARTING CONSTRUCTION.
9. CONTRACTOR TO PROVIDE AS-BUILTS OF ALL IMPROVEMENTS TO THE SITE. AS-BUILTS TO INCLUDE HORIZONTAL AND VERTICAL LOCATIONS OF ALL UNDERGROUND UTILITIES INCLUDING, BUT NOT LIMITED TO, PIPES, FITTINGS, STRUCTURES, AND OTHER APPURTENANCES. ELEVATIONS OF PIPES AT CROSSING POINTS MUST BE SUFFICIENT TO IDENTIFY MINIMUM SEPARATION OF UTILITIES AS DEFINED BY ENGINEER. IN ADDITION TO THE AFOREMENTIONED CRITERIA, AS-BUILTS MUST MEET ALL LOCAL AND JURISDICTIONAL REQUIREMENTS FOR CERTIFICATION OF CONSTRUCT.
10. UNDERGROUND UTILITIES TO BE FIELD VERIFIED IN RIGHT-OF-WAY WORK WITH EXISTING UTILITIES.
11. UTILITY CONNECTIONS ARE SHOWN TO WITHIN 5 FEET OF THE BUILDING. CONTRACTOR TO REFER TO BUILDING PLANS FOR EXACT CONNECTION POINTS ON BUILDING AND VERIFY THAT THERE ARE NO CONFLICTS PRIOR TO START OF CONSTRUCTION.

BENCHMARKS		
No. 103	CONTROL/ TBM (1005943.8164, 2822115.1076)	ELEV: 1010.19'
No. 104	CONTROL/ TBM (1005613.4472, 2821932.7384)	ELEV: 1000.36'

CONTRACTOR MUST REFER TO ARCHITECTURAL PLANS FOR EXACT BUILDING DIMENSIONS AND LOCATIONS OF ALL OUTSIDE DOORS AND BUILDING UTILITIES.

CONTRACTOR MUST COORDINATE ALL UTILITY CONNECTIONS SUCH AS ELECTRIC, GAS CABLE, TELEPHONE, WATER, SANITARY SEWER, STORM DRAINAGE WITH UTILITY PROVIDERS.

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

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTORS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

SCALE: 1 INCH = 20 FT

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PLANO, TX 75024
Phone: (972) 497-2590
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REVISIONS		
REVISION	DESCRIPTION	DATE

CURRENT SET THRU REVISION 02

UTILITY PLAN

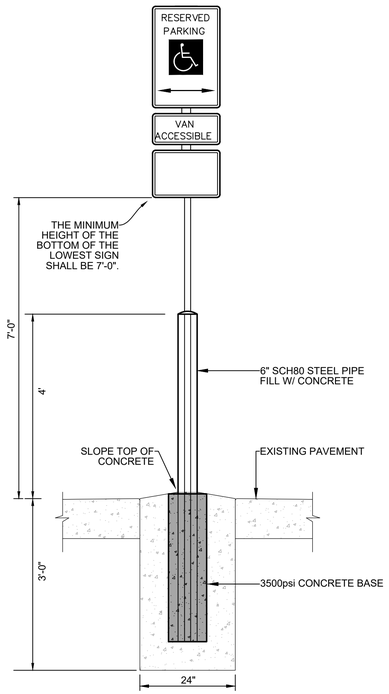
MO' BETTAHS
520 NW CHIPMAN RD
LEE'S SUMMIT, MO 64086

STATE OF MISSOURI
KOFI ADDO-NYARKO
NUMBER PE-2021015534
PROFESSIONAL ENGINEER
3/15/22

DESIGN	DRAWN	CHKD
BB	BB	KAN

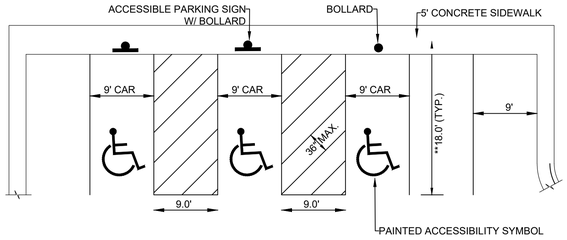
JOB No. 070460-01-001

SHEET C5.0



SIGN MOUNTING WITH BOLLARD

NTS



NOTES

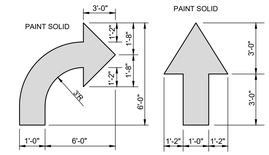
1. ACCESSIBLE PARKING AND ACCESSIBLE AISLES SHALL NOT EXCEED 2% IN SLOPE IN ANY DIRECTION.
2. IF ONLY ONE ACCESS AISLE IS INSTALLED, IT IS TO BE A VAN SIZE.
2. PARKING STALL DIMENSIONING SHALL BE IN ACCORDANCE WITH APPLICABLE GOVERNING AUTHORITY'S AND ADA STANDARDS AND IF DIFFERENT THAN THIS DETAIL SHALL BE THE DIMENSIONING SHOWN ON THE SITE LAYOUT PLAN.
3. CONTRACTOR SHALL USE 4" WIDE WHITE REFLECTIVE PAINT FOR STRIPING ON ASPHALT PARKING LOTS.
5. CONTRACTOR SHALL USE 4" WIDE YELLOW REFLECTIVE PAINT FOR STRIPING ON CONCRETE PARKING LOTS.
6. ADA SIGNS IN BOLLARDS AND BOLLARDS SHALL BE INSTALLED WHEN PARKING IS ADJACENT TO FLUSH CURB OR A RAMP.

PARKING LOT STRIPING SPECIFICATIONS

1. ALWAYS FOLLOW ALL APPLICABLE GOVERNING AUTHORITY'S STANDARDS.
2. SURFACES SHOULD BE CLEAN, DRY, AND FREE FROM LOOSE OR PEELING PAINT.
3. REMOVE ALL OIL, DUST, GREASE, DIRT, AND OTHER FOREIGN MATERIAL TO ENSURE ADEQUATE ADHESION.
4. DO NOT APPLY WHEN AIR OR SURFACE TEMPERATURES ARE BELOW 40°F.

STANDARD PARKING STALL

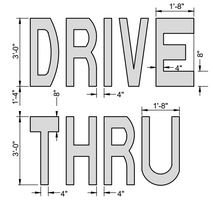
NTS



DIRECTIONAL ARROW

NOT TO SCALE

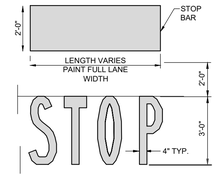
NOTES:
1. CONTRACTOR SHALL USE WHITE REFLECTIVE PAINT ON ASPHALT & YELLOW REFLECTIVE PAINT ON CONCRETE.



DRIVE-THRU GRAPHICS

NOT TO SCALE

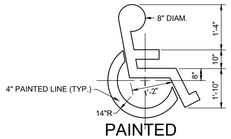
NOTES:
1. CONTRACTOR SHALL USE WHITE REFLECTIVE PAINT ON ASPHALT & YELLOW REFLECTIVE PAINT ON CONCRETE.



STOP LINE GRAPHIC

NOT TO SCALE

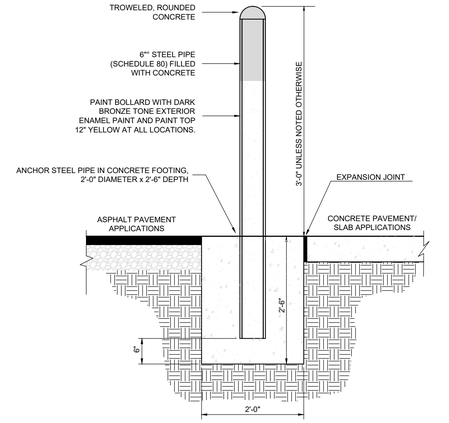
NOTES:
1. CONTRACTOR SHALL USE WHITE REFLECTIVE PAINT ON ASPHALT & YELLOW REFLECTIVE PAINT ON CONCRETE.
2. IF STOP SIGN IS PROPOSED, STOP LINE GRAPHIC IS NOT REQUIRED.



PAINTED ACCESSIBILITY SYMBOL

NOT TO SCALE

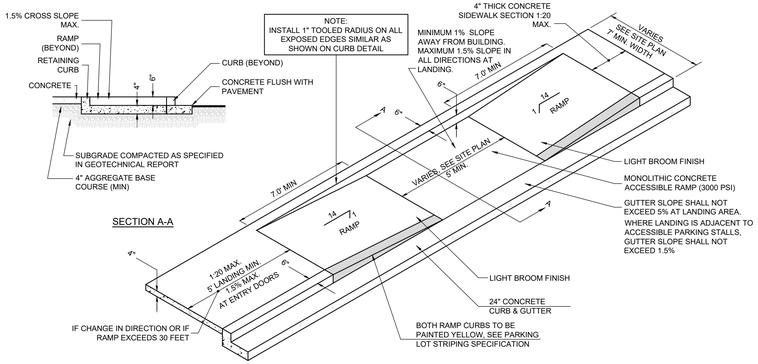
NOTES:
1. CONTRACTOR SHALL USE WHITE REFLECTIVE PAINT ON ASPHALT & YELLOW REFLECTIVE PAINT ON CONCRETE; UNLESS UPON VERIFICATION BY THE GENERAL CONTRACTOR IT IS DETERMINED THAT LOCAL, STATE, OR ADA CODES DIFFER, IN WHICH CASE THESE CODES SHALL GOVERN.



CONCRETE BOLLARD

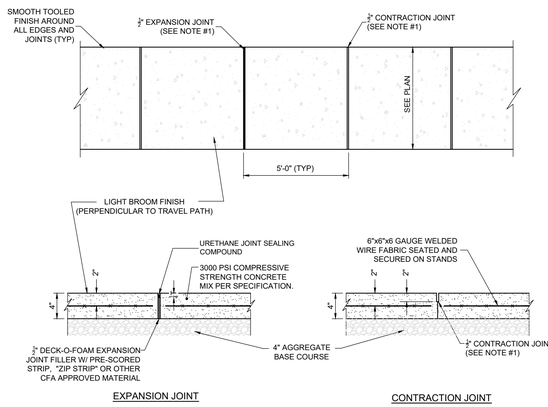
NOT TO SCALE

NOTE: BOLLARD HEIGHT SHALL BE 5'-0" AT DRIVE-THRU WINDOW AND INSIDE DUMPSTER ENCLOSURE



SIDEWALK ACCESSIBLE RAMP

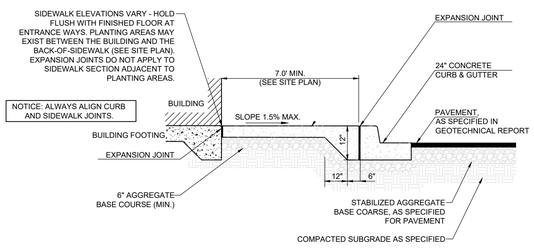
NOT TO SCALE



TYPICAL CONCRETE SIDEWALK

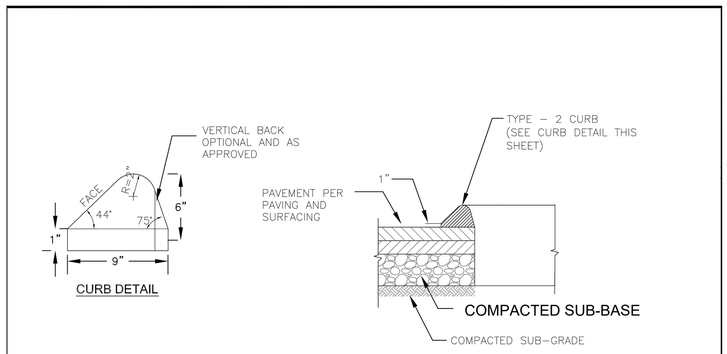
NOT TO SCALE

NOTES:
1. JOINTS AT 5'-0" O.C. TOOLED ½" WIDE, 1" DEEP OR MAX. ¼ DEEP WHICHEVER IS GREATER. EXPANSION JOINTS AT 20' MAX. & ALL P.C.s, UNLESS APPROVED OR INDICATED OTHERWISE ON PLAN VIEW JOINT PATTERN.



SIDEWALK WITH CURB & GUTTER SECTION

NOT TO SCALE



TEMPORARY ASPHALT CURB

NOT TO SCALE

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REVISION	DATE	DESCRIPTION

CURRENT SET THRU REVISION 02

CONSTRUCTION DETAILS (1 OF 3)

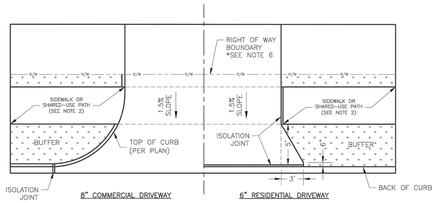
MO' BETTAHS
520 NW CHIPMAN RD
LEE'S SUMMIT, MO 64086

STATE OF MISSOURI
KOFI ADDO-NYARKO
NUMBER PE-2021015534
PROFESSIONAL ENGINEER
3/15/23

DESIGN	DRAWN	CHKD
BB	BB	KAN

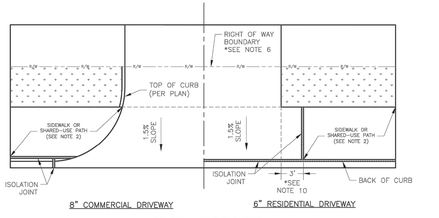
JOB No. 070460-01-001

SHEET
C6.0



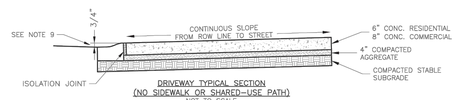
8" COMMERCIAL DRIVEWAY | 6" RESIDENTIAL DRIVEWAY

DRIVEWAY WITH BUFFER
NOT TO SCALE

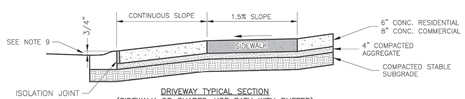


8" COMMERCIAL DRIVEWAY | 6" RESIDENTIAL DRIVEWAY

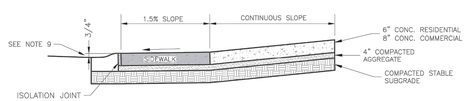
DRIVEWAY WITHOUT BUFFER
NOT TO SCALE



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



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



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

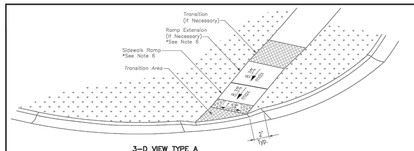
GENERAL NOTES
1. SUBGRADE SHALL BE STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. ALL DRIVE APPROACHES SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG) FOR SLOPE REQUIREMENTS WHEN SIDEWALK IS REQUIRED (SEE ADA RAMP RETROFIT DETAIL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

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

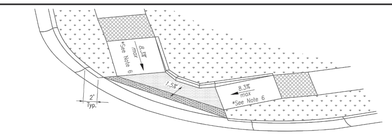
Project: STANDARD DETAILS CITY OF LEE'S SUMMIT, MO LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: DRIVEWAY DETAIL

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

GEN-1

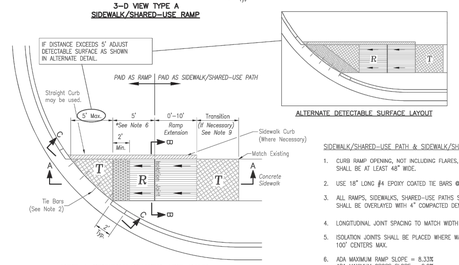


3-D VIEW TYPE A
SIDEWALK/SHARED-USE RAMP



3-D VIEW TYPE B
SIDEWALK/SHARED-USE RAMP

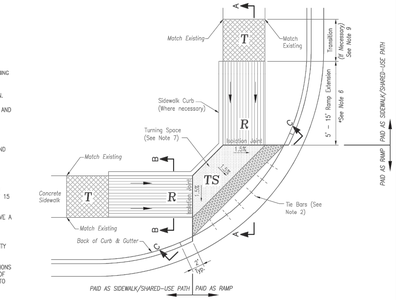
LEGEND
- R — SIDEWALK RAMP
- TS — TURNING SPACE
- DETECTABLE WARNING SURFACE
- T — TRANSITION



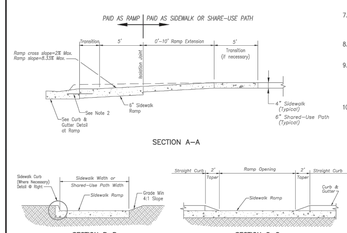
TYPE A SIDEWALK/SHARED-USE RAMP
Not to Scale

ALTERNATE DETECTABLE SURFACE LAYOUT

SIDEWALK/SHARED-USE PATH & SIDEWALK/SHARED-USE RAMP NOTES:
1. CURB RAMP OPENING, NOT INCLUDING FLARES, SHALL MATCH EXISTING SIDEWALK WIDTH AND OPENING SHALL BE AT LEAST 48" WIDE.
2. USE 18" LONG #4 EPOXY COATED TIE BARS @ 24" O.C. EMBED TIE BARS 9" IN EACH DIRECTION.
3. ALL RAMPS, SIDEWALKS, SHARED-USE PATHS SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
4. LONGITUDINAL JOINT SPACING TO MATCH WIDTH OF SIDEWALK.
5. ISOLATION JOINTS SHALL BE PLACED WHERE WALK ABUTS DRIVEWAYS AND SIMILAR STRUCTURES, AND 100' CENTERS MAX.
6. ADA MAXIMUM RAMP SLOPE = 8.33%
ADA MAXIMUM CROSS SLOPE = 2.0%
*ROADWAY EXCEPTION: WHERE EXISTING ROAD PROFILE GRADE DOES NOT ALLOW RAMP TO MEET RAMP SLOPE REQUIREMENT OF 8.33% OR LESS, THE RAMP SHALL BE EXTENDED TO A LENGTH OF 15 FEET TO MATCH EXISTING SIDEWALK. CROSS SLOPE OF RAMP SHALL BE 1.5%, ±0.5%.
7. TURNING SPACES SHALL BE 1.5%, ±0.5% SLOPE IN ANY DIRECTION. TURNING SPACES SHALL HAVE A MINIMUM 4'x4' TURNING AREA. TURNING SPACES, WITH A SIDEWALK CURB, SHALL HAVE A 5' TURNING AREA PERPENDICULAR TO THE SIDEWALK CURB.
8. FOR RETROFIT WORK, SLOPES TO BE DETERMINED IN FIELD BY CONTRACTOR AND APPROVED BY CITY INSPECTOR
9. RAMP EXTENSION AREA SHALL NOT BE USED AS TRANSITION TO EXISTING SIDEWALK. ANY TRANSITIONS REQUIRED TO MATCH RAMPS TO EXISTING SIDEWALK SHALL REQUIRE REMOVAL AND REPLACEMENT OF ADDITIONAL SIDEWALK BEYOND THE RAMP AREA. SIDEWALK TRANSITION LENGTH SHALL BE EQUAL TO OR GREATER THAN THE WIDTH OF THE EXISTING SIDEWALK. RAMP EXTENSIONS SHALL BE A CONTINUOUS SLOPE.
10. ALL SIDEWALK AND RAMP CONSTRUCTION SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).



TYPE B SIDEWALK/SHARED-USE RAMP
Not to Scale

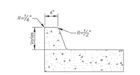


SECTION A–A

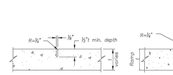
SECTION B–B

SECTION C–C

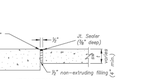
TYPE A & B SIDEWALK RAMP
Not to Scale



SIDEWALK CURB DETAIL
Not to Scale

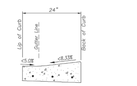


CONTRACTION JOINT



ISOLATION JOINT

JOINT DETAILS
Not to Scale



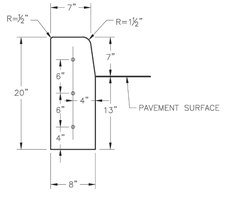
CURB & GUTTER DETAIL AT RAMP
Not to Scale

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

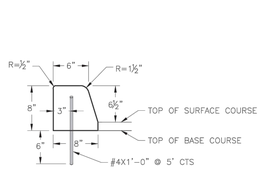
Project: STANDARD DETAILS CITY OF LEE'S SUMMIT, MO LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: ADA RAMP RETROFIT DETAIL

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

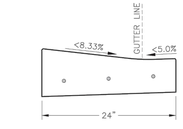
GEN-3A



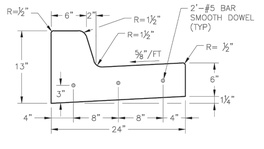
STRAIGHT CURB
(TYPE C-1)



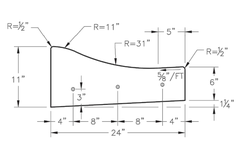
DOWELLED CURB
(TYPE DC)



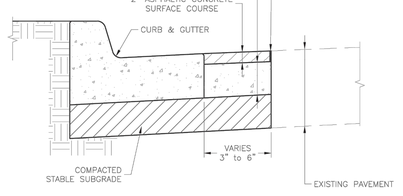
CURB & GUTTER DETAIL AT RAMP
(ADA SLOPE REQUIREMENTS)



STRAIGHT BACK CURB & GUTTER
(TYPE CG-1)

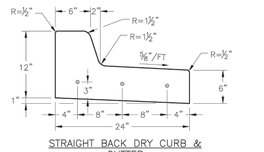


ROLL BACK CURB & GUTTER
(TYPE CG-2)

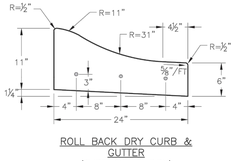


CURB REPLACEMENT DETAIL

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



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



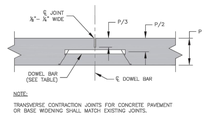
ROLL BACK DRY CURB & GUTTER
(TYPE CG-2 DRY)

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

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

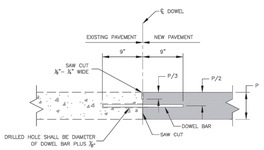
Drawn By: MJF
Checked By: DL
Date: 05/2021
Proj. #:

GEN-4



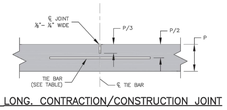
NOTE:
TRANSVERSE CONTRACTION JOINTS FOR CONCRETE PAVEMENT OR BASE WIDENING SHALL MATCH EXISTING JOINTS.

1 TRANSVERSE CONTRACTION JOINT

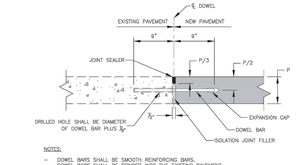


NOTES:
- DOWEL BARS SHALL BE SMOOTH REINFORCING BARS.
- DOWEL BARS SHALL BE BONDED INTO THE EXISTING PAVEMENT.
- BONDING FOR DOWEL BARS SHALL BE EPOXY OR POLYESTER BONDING AGENTS.
- THE PORTION OF THE DOWEL OUTSIDE THE HOLE SHALL BE COATED WITH AN APPROVED LUBRICANT.

3 TRANSVERSE CONSTRUCTION JOINT

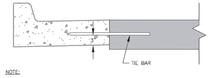


2 LONG. CONTRACTION/CONSTRUCTION JOINT



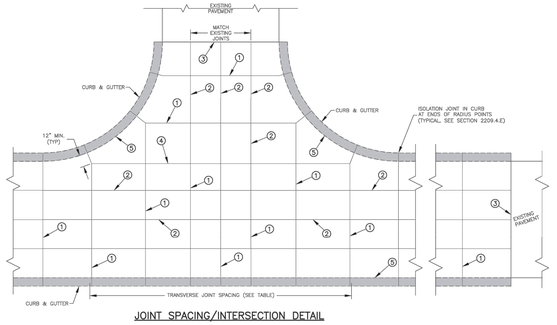
NOTES:
- DOWEL BARS SHALL BE SMOOTH REINFORCING BARS.
- DOWEL BARS SHALL BE BONDED INTO THE EXISTING PAVEMENT.
- BONDING FOR DOWEL BARS SHALL BE EPOXY OR POLYESTER BONDING AGENTS.
- THE PORTION OF THE DOWEL OUTSIDE THE HOLE SHALL BE COATED WITH AN APPROVED LUBRICANT.

4 TRANSVERSE ISOLATION JOINT



NOTE:
- JOINT NOT NEEDED IF CURB & GUTTER IS MONOLITHICALLY POURED.

5 LONG. CONSTRUCTION JOINT (CURB & GUTTER)



JOINT SPACING/INTERSECTION DETAIL

TABLE

PCCP THICKNESS (P)	DOWEL SIZE	TIE BAR SIZE	DOWEL SPACING	TIE BAR SPACING	MAX. TRANS. SPACING	MAX. LONG. SPACING
6"	N/A	#5 x 30"	N/A	30" CTRS.	12'	12'
7"	1" x 18"	#5 x 30"	12" CTRS.	30" CTRS.	14'	14'
8"	1 ¼" x 18"	#5 x 30"	12" CTRS.	30" CTRS.	15'	14'
≥9"	1 ½" x 18"	#5 x 30"	12" CTRS.	30" CTRS.	15'	15'

GENERAL NOTES:
- THE FINAL POSITION OF ALL DOWELS AND TIE BARS SHALL BE PARALLEL WITHIN 10% OF THE LANE WIDTH AND PARALLEL TO THE SURFACE OF THE PAVEMENT AND INSTALLED TO EACH OTHER.
- ALL DOWELS & TIE BARS SHALL BE EPOXY COATED.
- DOWEL BARS SHALL BE PLACED AT 9 INCHES FROM LONGITUDINAL JOINTS.
- TIE BARS SHALL BE PLACED AT 12 INCHES FROM TRANSVERSE JOINTS.
- DOWEL BARS SHALL BE PLACED WITHIN A TOLERANCE OF 1.5 TO 1.
- DOWEL BASKET SHIPPING WIRE SHALL NOT BE CUT.
- CONTRACTOR SHALL SUBMIT PROJECT SPECIFIC JOINTING PLAN AT LEAST TWO WEEKS BEFORE PAVING OPERATIONS.
- IN ACCORDANCE WITH 2208.4.D, ALL JOINTS SHALL BE SEALED, INCLUDING CURB & GUTTER.

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

Project: STANDARD DETAILS CITY OF LEE'S SUMMIT, MO LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: TYPICAL PAVEMENT JOINT DETAILS

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

GEN-9

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MDPR Firm Registration No. 2018010514
5601 DEMOCRACY DRIVE, SUITE 205, PLANO, TX 75024
Phone: (972) 497-2990
www.bowman.com

REVISION	DATE

CURRENT SET THRU REVISION 02

CONSTRUCTION DETAILS (2 OF 3)

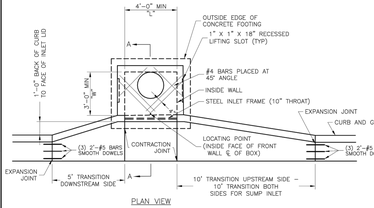
MO' BETTAHS
520 NW CHIPMAN RD
LEE'S SUMMIT, MO 64086

STATE OF MISSOURI
KOFI ADDO-NYARKO
NUMBER PE-2021015534
PROFESSIONAL ENGINEER
3/15/22

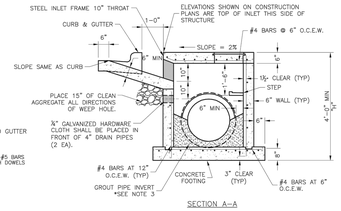
DESIGN	DRAWN	CHKD
BB	BB	KAN

JOB No. 070460-01-001

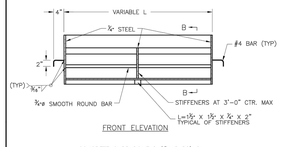
SHEET
C6.1



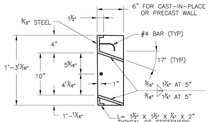
PLAN VIEW



SECTION A–A



FRONT ELEVATION



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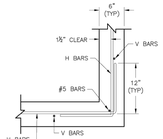


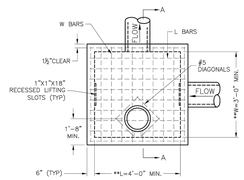
WALL CORNER DETAIL

PLAN VIEW

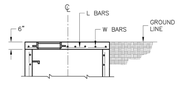
STEEL FRAME NOTES:
1. ALL WELDS SHALL BE PERFORMED IN ACCORDANCE WITH APPROPRIATE AWS SPECIFICATIONS AND PROCEDURES.
2. ALL WELDS ON EXPOSED SURFACES SHALL BE DRESSED SO AS TO PROVIDE A PLEASING FINISHED APPEARANCE.
3. THE ENTIRE FRAME SHALL BE PAINTED A SINGLE COAT OF CHEM–PRIME #37H–78 PRIMER (GRAY)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

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

STANDARDS DETAILS CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
CURB INLET DETAIL
Drawn By: MJF
Checked By: DL
Date: 04/17
STM-1



PLAN

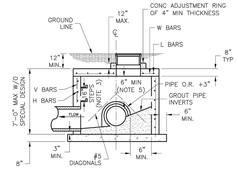


SLAB TOP ALTERNATE FOR JUNCTION BOX (SHALLOW)

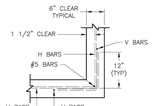
** INCREASE IN MULTIPLES OF 6" (7'–0" MAX WITHOUT SPECIAL DESIGN. (SEE PROJECT PLANS FOR DETAILS)

REINFORCING

BARS	BAR SIZE	SPACING (IN.)
H	4	12
V	4	12
L	5	6
W	5	6



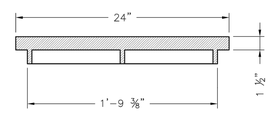
SECTION A–A



WALL CORNER DETAIL

GENERAL NOTES:
1. LOCATE RING AND COVER ON BLANK WALL.
2. USE ¾" CHAMFER STRIP OR ¾" R EDGER TOOL ON ALL EXPOSED CONCRETE CORNERS.
3. STEPS REQUIRED AT 16" O.C. WHEN DEPTH FROM TOP OF CASTING TO INVERT EXCEEDS 4' ON BLANK WALL IF POSSIBLE.
4. BOXOUTS WILL NOT BE ALLOWED TO PROJECT THROUGH THE CORNERS OF THE STRUCTURE AND THE MINIMUM DISTANCE BETWEEN BOXOUTS IS 6".
5. THE MINIMUM REINFORCING SHALL BE 1 H–BAR OVER A CAST–IN–PLACE PIPE AND 2 H–BARS OVER A PRECAST BOXOUT.
8. PRECAST LIDS SHALL BE PINNED, SEALED WITH NON–SHRINKABLE GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
9. REINFORCING OF COVERS IN STREETS REQUIRE SPECIAL DESIGN.
10. FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.

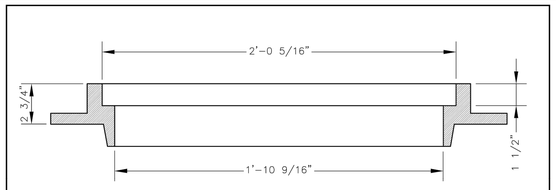
STANDARDS DETAILS CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
JUNCTION BOX DETAIL
Drawn By: MJF
Checked By: DL
Date: 04/17
STM-3



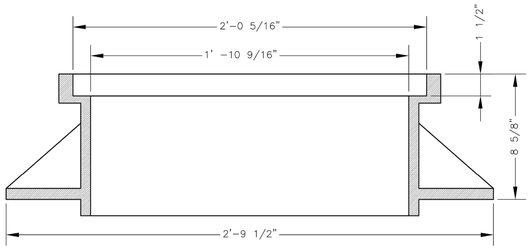
STANDARD 24" MANHOLE COVER
MINIMUM WEIGHT = 160 LB
NOTE: PICK HOLES NOT SHOWN

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

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
STORM MANHOLE COVER DETAIL
Date: 04/17
Drawn By: MJF
Checked By: DL
STM-6



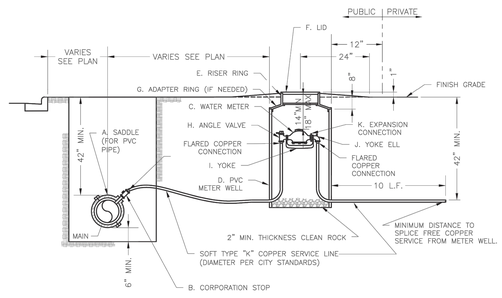
SLAB MANHOLE FRAME
LEE'S SUMMIT PART NO.: LS103A
MINIMUM WEIGHT = 145 LB



STANDARD 24" MANHOLE FRAME
LEE'S SUMMIT PART NO.: LS101A
MINIMUM WEIGHT = 250 LB

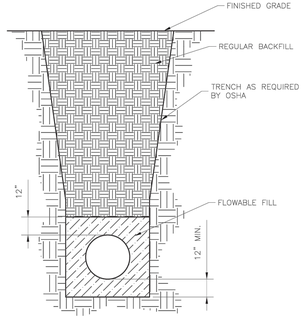
*COVER AND FRAME MODEL INFORMATION REFER TO THE STORMWATER APPROVED PRODUCTS LIST.

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
STORM MANHOLE FRAME DETAIL
Date: 04/17
Drawn By: MJF
Checked By: DL
STM-7



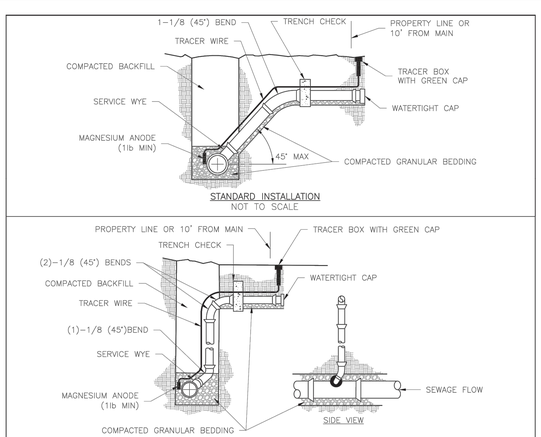
NOTES:
1. METER INSTALLATION SHALL NOT BE LOCATED IN AREAS SUBJECT TO VEHICULAR TRAFFIC OR IN CONCRETE PAVEMENT WITHOUT CITY APPROVAL.
2. IF METER IS TO BE LOCATED OTHER THAN IN FRONT OF PROPERTY LINE, CITY APPROVAL SHALL BE OBTAINED.
3. CITY TO FURNISH ITEMS A–K.
4. NO OTHER EQUIPMENT SHALL BE INSTALLED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

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
SERVICE CONNECTION WITH METER WELL
Date: 06/2015
Drawn By: JN
Checked By: DL
WAT-11



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

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
WATER TRENCH CHECK DETAIL
Date: 01/2016
Drawn By: JN
Checked By: DL
WAT-6



STANDARD INSTALLATION
NOT TO SCALE

VERTICAL RISER
NOT TO SCALE

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

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
SANITARY SEWER STUB DETAIL
Date: 12/2015
Drawn By: MJF
Checked By: DL
SAN-1

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MDPR Firm Registration No. 2018010514
5601 DEMOCRACY DRIVE, SUITE 205, PLANO, TX 75024
Phone: (972) 497-2990
www.bowman.com

REVISIONS
DESCRIPTION
DATE
CURRENT SET THRU REVISION 02

CONSTRUCTION DETAILS (3 OF 3)

MO' BETTAHS
520 NW CHIPMAN RD
LEE'S SUMMIT, MO 64086

KOFI ADDO-NYARKO NUMBER PE-2021015534 PROFESSIONAL ENGINEER STATE OF MISSOURI
8/15/22

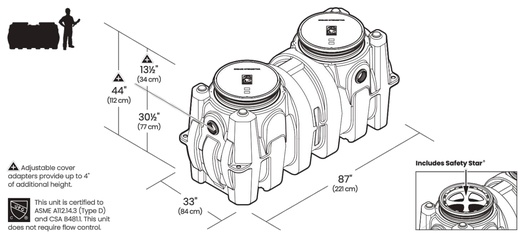
DESIGN	DRAWN	CHKD
BB	BB	KAN

JOB No. 070460-01-001

SHEET
C6.2

SPECIFICATION AND SUBMITTAL

GB-250 100/200 GPM Great Basin™ Indoor/Outdoor Grease Interceptor



⚠ Adjustable cover adapters provide up to 4" of additional height.

This unit is certified to ASME A112.14.3 (type D) and CSA B481.1. This unit does not require flow control.

Includes Safety Star™

SUBMITTAL

Standard

Location: Indoor/outdoor
Installation: Above/below grade
Flow Rates / Grease Capacities:
100 GPM (6.3 L/s) / 1,895 lbs. (860 kg), 260 gal. (984 L)
200 GPM (12.6 L/s) / 1,196 lbs. (543 kg), 164 gal. (621 L)*
Removal Efficiency at the Rated Capacity: 95.7%
Solids Capacity: 69 gal. (261 L)
Liquid Capacity: 277 gal. (1,049 L)
Weight: 376 lbs. (171 kg)
Connections: 4" FPT with 4" plain end adapters, single inlet and triple outlet
Covers: Cast iron covers, pickable 24" gas/water tight, H-20 rated, proof-load tested to 40,000 lbs.
Access Restrictor: Safety Star® (450 lb. rating) built into each cover adapter

* At 200 GPM, this unit is certified to ASME A112.14.3 (Type C) and CSA B481.1 and includes an internal flow control. External flow control with vent not required.

Options

- ☐ 6" plain end inlet/outlet (straight-through) with dual pumpout port connections
- ☐ 6" MPT inlet/outlet (stainless steel, straight-through)
- ☐ **-FO** (fixed outlet)
- ☐ **C24H2** Composite covers, bolted 24" gas/water tight, traffic load rated for 16,000 lbs.

Accessories

- ☐ **FCR2 (x2)** >4" – 34" field cut riser
- ☐ **FCR2 (x4)** >34" – 64" field cut risers
- ☐ **FCR2 (x6)** >64" – 94" field cut risers
- ☐ **CA2** Adapter for 24" corrugated pipe riser
- ☐ **PP3** Pumpout port
- ☐ **AK1** High water anchor kit
- ☐ **ATD1** Cover adapter tie-down kit
- ☐ **AGS1** Above grade support kit
- ☐ **PLAIN-EA-24** 2" plain end fitting
- ☐ **PLAIN-EA-34** 3" plain end fitting
- ☐ **FPT-EA-34** 4" x 3" FPT fitting
- ☐ **FPT-EA-23** 3" x 2" FPT fitting
- ☐ **CC2** Integral membrane clamping collar kit

Approval

Signature:	Date:	Company:
Specifying Engineer:		Engineering Firm:

SCHIER | MODEL NUMBER: GB-250 | DESCRIPTION: 100/200 GPM Polyethylene Grease Interceptor
PART #: 4055-001-02 | DWG BY: B. Karrer | DATE: 8/28/2020 | REV: | ECO:

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SPECIAL PRECAUTIONS

For Schier Grease Interceptor installations - Failure to follow this guidance voids your warranty

⚠ WARNING! DO NOT AIR TEST UNIT OR RISER SYSTEM! Doing so may result in property damage, personal injury or death.

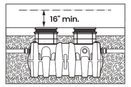
⚠ CAUTION! Do not install this unit in any manner except as described in these instructions.

Installation Instructions

Installation instructions and additional components are included with the interceptor. Read all instructions prior to installation. This interceptor is intended to be installed by a licensed plumber in conformance with all local codes.

Install interceptor as close as possible to fixtures being served

Provide at least 16" clearance above unit for routine maintenance.

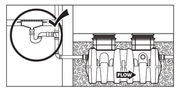


High Temperature Kitchen Water

If water is entering the interceptor at excessive temperature (over 150º F), a drain water tempering valve (DTV) and approved backflow prevention assembly must be installed. Most state and local plumbing codes prohibit water above 150º F being discharged into the sanitary sewer. Water above 150º F will weaken or deform PVC Schedule 40 pipe, poly drainage fixtures like interceptors and erode the coating of cast iron (leading to eventual failure).

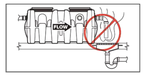
ODOR ALERT!

Interceptor is not a sewer gas trap.
All upstream fixtures must be trapped



ODOR ALERT!

Do not install air gap on outlet side of interceptor.

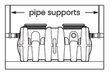


Fully Support Base of Unit

Install unit on solid, level surface in contact with the entire footprint of unit base

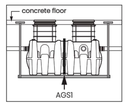
Support Inlet and Outlet Piping

For above grade installations ensure heavy inlet and outlet piping (such as cast iron or long runs) is properly supported or suspended during the entire installation process to prevent connection failure or damage to bulkhead fittings.



Suspended Installations

Design trapeze to support the wet weight of the unit. Do not partially support unit or suspend unit using metal U-channel to create a trapeze. The wet weight of the interceptor combined with high temperature kitchen water creates the potential for tank deformation in suspended installations. In these situations Above Grade Support Kit model AGS1 is required to be installed to maintain GB-250 structural integrity.



DO NOT USE CAST IRON COVERS IN ABOVE GRADE OR INDOOR INSTALLATIONS
Use composite cover C24H2 for above grade installations

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SPECIAL PRECAUTIONS

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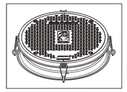
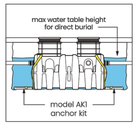
Secure Cover Adapters

Cover adapters must be secured to base units in above grade installations with increased head pressure conditions. Use cover adapter tie-down kit model ATD1.



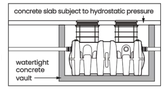
High Water Table Installations

Interceptors and risers are not designed to withstand water table height in excess of the top of the unit when buried (see figure). If it is possible for this to occur, install the interceptor and risers in a water-tight concrete vault or backfill with concrete or flowable fill (wet concrete and flowable backfill should be poured in stages to avoid crushing the interceptor). At risk areas include but are not limited to tidal surge areas, floodplains and areas that receive storm water. Great Basin™ models that are direct buried in high water table scenarios must be installed with an anchor kit. Model GB-250 uses model AK1 anchor kit.



Hydrostatic/ Pressure Slabs

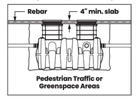
When installed under a hydrostatic slab (slab designed to withstand upward lift, usually caused by hydrostatic pressure) interceptor must be enclosed in a watertight concrete vault.

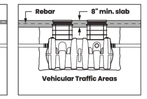


DO NOT COMPACT BACKFILL MECHANICALLY
Compact by hand only

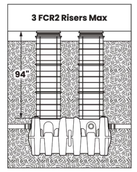
Below Grade Installation Slab Requirements

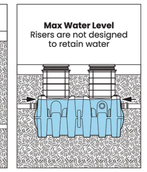
A concrete slab to finished grade with rebar is required when installing interceptor below grade.





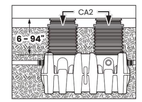
Installations with Risers





Corrugated Riser Pipe Requirements

Riser adapter model CA2 must be used when installing interceptors using 24" diameter corrugated pipe as a riser. This will adequately embed the cover adapter in the concrete slab, preventing cover/cover adapter failure under traffic rated loads.



SCHIER | MODEL NUMBER: GB-250 | DESCRIPTION: 100/200 GPM Polyethylene Grease Interceptor
PART #: 4055-001-02 | DWG BY: B. Karrer | DATE: 8/28/2020 | REV: | ECO:

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SPECIFICATIONS

NOTES

1. 4" FPT with 4" plain end adapters, single inlet and triple outlet
2. Unit weight - w/cast iron covers: 376 lbs.; w/composite covers: 266 lbs. (For wet weight add 2,310 lbs.)
3. Maximum operating temperature: 150º F continuous
4. Capacities - Liquid: 277 gal.; @100 GPM - Grease: 1,895 lbs. @200 GPM - Grease: 1,196 lbs. Solids: 69 gal.
5. This unit does not require flow control for 100 GPM applications. Built-in Flow control is provided for 200 GPM applications. For series installations, only install flow control on the first unit in the series if necessary.
6. For gravity drainage applications only.
7. Do not use for pressure applications.
8. Cover placement allows full access to tank for proper maintenance.
9. Vent not required unless per local code.
10. Engineered inlet and outlet diffusers are removable to inspect / clean piping.
11. Integral air relief / Anti-siphon / Sampling access.
12. Adjustable cover adapters provide up to 4" of additional height.
13. Fixed outlet models (-FO) have inlet and outlet permanently welded at the factory in the straight-through (B) positions.
14. Flow rates are based on 2-minute drain time.
15. Safety Star® access restrictor built into each cover adapter, prevents accidental entry to tanks (450 lb rating)

DIFFUSION FLOW TECHNOLOGY

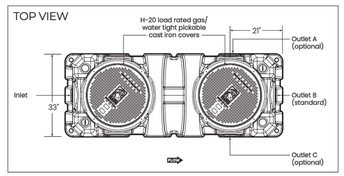
The inlet diffuser reduces turbulence, creates laminar flow and allows the entire tank volume to be utilized for efficient grease separation and minimal disturbance to existing grease and sediment layers. The inlet diffuser can be attached to any of the three inlets provided to ease job site piping layouts. The integral air relief / anti-siphon at the outlet diffuser top allows pressure stabilization within the unit during operation. The outlet diffuser can easily be attached to any of the three outlets provided to ease job site piping layouts.

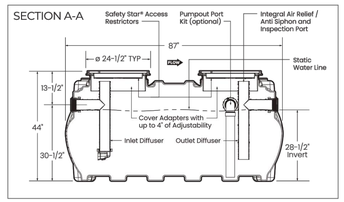
ENGINEER SPECIFICATION GUIDE

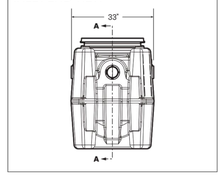
Schier Great Basin™ grease interceptor model # GB-250 shall be lifetime guaranteed and made in USA of seamless, rotationally-molyethylene. Interceptor shall be furnished for above or below grade installation. Interceptor shall be certified to ASME A112.14.3 (Type D for 100 GPM, type C for 200 GPM) and CSA B481.1, with adjustable cover adapters, Safety Star® access restrictor built into each cover adapter, built-in flow control (for 200 GPM only) and three outlet options. Interceptor flow rate shall be 100 or 200 GPM. Interceptor grease capacity shall be 1,895 lbs. @ 100 GPM or 1,196 GPM @ 200 GPM. Cover shall provide water/ gas-tight seal and have minimum 16,000 lbs. load capacity.

CERTIFIED PERFORMANCE

Great Basin™ hydromechanical grease interceptors are third party performance-tested and listed by IAPMO to ASME #A112.14.3 and CSA B481.1 grease interceptor standards and greatly exceed requirements for grease separation and storage. They are compliant to the Uniform Plumbing Code and the International Plumbing Code.







Rated Grease Capacities for Units Piped in Series

No. of Units in Series	Removal Efficiency 100 GPM	Removal Efficiency 200GPM
	96.7%	93.5%
2	3,790 lbs.	2,392 lbs.
3	5,685 lbs.	3,588 lbs.
4	7,580 lbs.	4,790 lbs.

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MDPR Firm Registration No. 2018010514
5601 DEMOCRACY DRIVE, SUITE 215
PLANO, TX 75024
Phone: (972) 497-2590
www.bowman.com

REVISION | DESCRIPTION | DATE
CURRENT SET THRU REVISION 02

CONSTRUCTION DETAILS (4 OF 4)

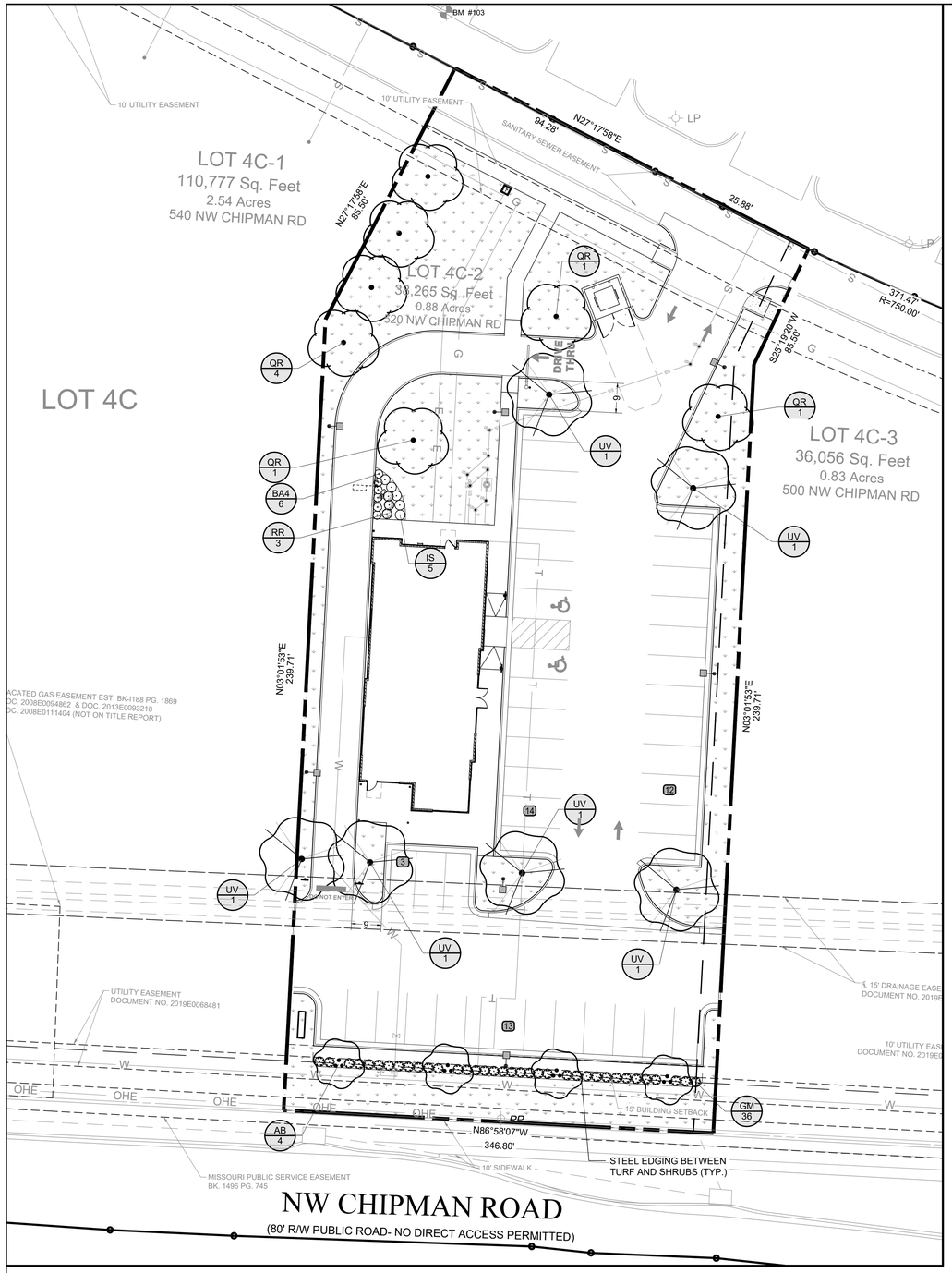
MO' BETTAHS
520 NW CHIPMAN RD
LEE'S SUMMIT, MO 64086

STATE OF MISSOURI
KOFI ADDO-NYARKO NUMBER PE-2021015534
PROFESSIONAL ENGINEER
3/6/23

DESIGN	DRAWN	CHKD
BB	BB	KAN

JOB No. 070460-01-001

SHEET C6.3



PLANT SCHEDULE

TREES	CODE	BOTANICAL / COMMON NAME	ROOT	CONT	HEIGHT	QTY
	AB	Acer buergerianum / Trident Maple	3" Cal.	B&B	8` minimum	4
	QR	Quercus rubra / Red Oak	3" Cal.	B&B	8` minimum	7
	UV	Ulmus americana `Valley Forge` / American Elm	3" Cal.	B&B	8` minimum	6

SHRUBS	CODE	BOTANICAL / COMMON NAME	SIZE	CONTAINER	SPACING	QTY
	BA4	Berberis thunbergii `Aurea Nana` / Japanese Barberry	3 gal	Cont.	30" o.c.	6
	GM	Buxus x `Green Mountain` / Boxwood 30" at the time of planting	---	Cont.	36" o.c.	36
	IS	Ilex vomitoria `Schillings` / Schillings Holly	5 gal	Cont.	36" o.c.	5
	RR	Rosa x `Knockout` TM / Rose	3 gal	Cont.	36" o.c.	3

GROUND COVERS	CODE	BOTANICAL / COMMON NAME	QTY
	FK	Festuca arundinacea `Kentucky 31` / Kentucky Tall Fescue	10,767 sf

LANDSCAPE CALCULATIONS

TOTAL SITE AREA: .88 ac (38,287 SF)

STRET FRONTAGE
20' STRIP REQUIRED AT STREET FRONTAGE — 20' LANDSCAPE STRIP PROVIDED
1 TREE PER 30' OF STREET FRONTAGE
NW CHIPMAN RD = 130 LF/30 = 4 TREES — 4 TREES PROVIDED*
1 SHRUBS PER 20' OF STREET FRONTAGE
NW CHIPMAN RD = 130 LF/20 x 1 = 7 SHRUBS — 7 SHRUBS PROVIDED

OPEN YARD REQUIREMENTS
1 TREE PER 5,000
35,587 / 5,000 = 7 TREES REQUIRED — 7 TREES PROVIDED
2 SHRUB PER 5,000
35,587 / 5,000 = 14 SHRUBS REQUIRED — 14 SHRUBS PROVIDED

PARKING AREA
5% PARKING SHALL BE LANDSCAPE
TOTAL PARKING AREA = 15,544 x .05 =
777 SF REQUIRED — 1,130 SF PROVIDED
1 TREE PER REQUIRED ISLAND (5) — 5 TREES PROVIDED

PARKING LOT SCREENING
12 18" EVERGREEN SHRUBS PER 40 LF
119 LF / 40 = 1.2 x 12 = 36 SHRUBS — 36 SHRUBS PROVIDED

BUFFERING
REAR: N/A
SIDE: N/A

*BECAUSE OF OVERHEAD UTILITY LINES SMALLER SIZED TREES ARE BEING USED.

GENERAL GRADING AND PLANTING NOTES

1. BY SUBMITTING A PROPOSAL FOR THE LANDSCAPE PLANTING SCOPE OF WORK, THE CONTRACTOR CONFIRMS THAT HE HAS READ, AND WILL COMPLY WITH, THE ASSOCIATED NOTES, SPECIFICATIONS, AND DETAILS WITH THIS PROJECT.
2. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL EXISTING VEGETATION (EXCEPT WHERE NOTED TO REMAIN).
3. IN THE CONTEXT OF THESE PLANS, NOTES, AND SPECIFICATIONS, "FINISH GRADE" REFERS TO THE FINAL ELEVATION OF THE SOIL SURFACE (NOT TOP OF MULCH) AS INDICATED ON THE GRADING PLANS.
   a. BEFORE STARTING WORK, THE LANDSCAPE CONTRACTOR SHALL VERIFY THAT THE ROUGH GRADES OF ALL LANDSCAPE AREAS ARE WITHIN +/-0.1' OF FINISH GRADE. SEE SPECIFICATIONS FOR MORE DETAILED INSTRUCTION ON TURF AREA AND PLANTING BED PREPARATION.
   b. CONSTRUCT AND MAINTAIN FINISH GRADES AS SHOWN ON GRADING PLANS, AND CONSTRUCT AND MAINTAIN SLOPES AS RECOMMENDED BY THE GEOTECHNICAL REPORT. ALL LANDSCAPE AREAS SHALL HAVE POSITIVE DRAINAGE AWAY FROM STRUCTURES AT THE MINIMUM SLOPE SPECIFIED IN THE REPORT AND ON THE GRADING PLANS, AND AREAS OF POTENTIAL PONDING SHALL BE REGRADED TO BLEND IN WITH THE SURROUNDING GRADES AND ELIMINATE PONDING POTENTIAL.
   c. THE LANDSCAPE CONTRACTOR SHALL DETERMINE WHETHER OR NOT THE EXPORT OF ANY SOIL WILL BE NEEDED, TAKING INTO ACCOUNT THE ROUGH GRADE PROVIDED, THE AMOUNT OF SOIL AMENDMENTS TO BE ADDED (**BASED ON A SOIL TEST**, PER SPECIFICATIONS), AND THE FINISH GRADES TO BE ESTABLISHED.
   d. ENSURE THAT THE FINISH GRADE IN SHRUB AREAS IMMEDIATELY ADJACENT TO WALKS AND OTHER WALKING SURFACES, AFTER INSTALLING SOIL AMENDMENTS, IS 3" BELOW THE ADJACENT FINISH SURFACE, IN ORDER TO ALLOW FOR PROPER MULCH DEPTH. TAPER THE SOIL SURFACE TO MEET FINISH GRADE, AS SPECIFIED ON THE GRADING PLANS, AT APPROXIMATELY 18" AWAY FROM THE WALKS.
   e. ENSURE THAT THE FINISH GRADE IN TURF AREAS IMMEDIATELY ADJACENT TO WALKS AND OTHER WALKING SURFACES, AFTER INSTALLING SOIL AMENDMENTS, IS 1" BELOW THE FINISH SURFACE OF THE WALKS. TAPER THE SOIL SURFACE TO MEET FINISH GRADE, AS SPECIFIED ON THE GRADING PLANS, AT APPROXIMATELY 18" AWAY FROM THE WALKS.
   f. SHOULD ANY CONFLICTS AND/OR DISCREPANCIES ARISE BETWEEN THE GRADING PLANS, GEOTECHNICAL REPORT, THESE NOTES AND PLANS, AND ACTUAL CONDITIONS, THE CONTRACTOR SHALL IMMEDIATELY BRING SUCH ITEMS TO THE ATTENTION OF THE LANDSCAPE ARCHITECT, GENERAL CONTRACTOR, AND OWNER.
4. ALL PLANT LOCATIONS ARE DIAGRAMMATIC. ACTUAL LOCATIONS SHALL BE VERIFIED WITH THE LANDSCAPE ARCHITECT OR DESIGNER PRIOR TO PLANTING. THE LANDSCAPE CONTRACTOR SHALL ENSURE THAT ALL REQUIREMENTS OF THE PERMITTING AUTHORITY ARE MET (I.E., MINIMUM PLANT QUANTITIES, PLANTING METHODS, TREE PROTECTION METHODS, ETC.).
   a. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR DETERMINING PLANT QUANTITIES; PLANT QUANTITIES SHOWN ON LEGENDS AND CALLOUTS ARE FOR GENERAL INFORMATION ONLY. IN THE EVENT OF A DISCREPANCY BETWEEN THE PLAN AND THE PLANT LEGEND, THE PLANT QUANTITY AS SHOWN ON THE PLAN (FOR INDIVIDUAL SYMBOLS) OR CALLOUT (FOR GROUNDCOVER PATTERNS) SHALL TAKE PRECEDENCE.
   b. **NO SUBSTITUTIONS OF PLANT MATERIALS SHALL BE ALLOWED WITHOUT THE WRITTEN PERMISSION OF THE LANDSCAPE ARCHITECT.** IF SOME OF THE PLANTS ARE NOT AVAILABLE, THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IN WRITING (VIA PROPER CHANNELS).
   c. THE CONTRACTOR SHALL, AT A MINIMUM, PROVIDE REPRESENTATIVE PHOTOS OF ALL PLANTS PROPOSED FOR THE PROJECT. THE CONTRACTOR SHALL ALLOW THE LANDSCAPE ARCHITECT AND THE OWNER/OWNER'S REPRESENTATIVE TO INSPECT, AND APPROVE OR REJECT, ALL PLANTS DELIVERED TO THE JOBSITE. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS FOR SUBMITTALS.
5. THE CONTRACTOR SHALL MAINTAIN THE LANDSCAPE IN A HEALTHY CONDITION FOR 90 DAYS AFTER ACCEPTANCE BY THE OWNER. REFER TO SPECIFICATIONS FOR CONDITIONS OF ACCEPTANCE FOR THE START OF THE MAINTENANCE PERIOD, AND FOR FINAL ACCEPTANCE AT THE END OF THE MAINTENANCE PERIOD.
6. SEE SPECIFICATIONS AND DETAILS FOR FURTHER REQUIREMENTS.

MULCHES

AFTER ALL PLANTING IS COMPLETE, CONTRACTOR SHALL INSTALL 3" THICK LAYER OF 1-1/2" SHREDDED WOOD MULCH, NATURAL (UNDYED), OVER LANDSCAPE FABRIC IN ALL PLANTING AREAS (EXCEPT FOR TURF AND SEEDED AREAS). CONTRACTOR SHALL SUBMIT SAMPLES OF ALL MULCHES TO LANDSCAPE ARCHITECT AND OWNER FOR APPROVAL PRIOR TO CONSTRUCTION. ABSOLUTELY NO EXPOSED GROUND SHALL BE LEFT SHOWING ANYWHERE ON THE PROJECT AFTER MULCH HAS BEEN INSTALLED (SUBJECT TO THE CONDITIONS AND REQUIREMENTS OF THE "GENERAL GRADING AND PLANTING NOTES" AND SPECIFICATIONS).

ROOT BARRIERS

THE CONTRACTOR SHALL INSTALL ROOT BARRIERS NEAR ALL NEWLY-PLANTED TREES THAT ARE LOCATED WITHIN FIVE (5) FEET OF PAVING OR CURBS. ROOT BARRIERS SHALL BE "CENTURY" OR "DEEP-ROOT" 24" DEEP PANELS (OR EQUAL). BARRIERS SHALL BE LOCATED IMMEDIATELY ADJACENT TO HARDSCAPE. INSTALL PANELS PER MANUFACTURER'S RECOMMENDATIONS. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR USE ROOT BARRIERS OF A TYPE THAT COMPLETELY ENCIRCLE THE ROOTBALL.

0' 10' 20' 40'
Scale 1" = 20'

EVERGREEN DESIGN GROUP
(800) 680-6630
4625 Lindell Blvd., Ste 200
St Louis, MO 63101
www.EvergreenDesignGroup.com

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

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTORS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

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REVISION	DESCRIPTION	DATE

CURRENT SET THRU REVISION 02

LANDSCAPE PLANTING

MO' BETTAHS
520 NW CHIPMAN RD
LEE'S SUMMIT, MO 64086

STATE OF MISSOURI
JAMES W. GIBSON
NUMBER
LA-1999138133
LANDSCAPE ARCHITECT

DATE: 12/23/21

DESIGN	DRAWN	CHKD
JWG	JWG	RM

JOB No. 070460-01-001

SHEET
LP-1

PLANTING SPECIFICATIONS

GENERAL

A. QUALIFICATIONS OF LANDSCAPE CONTRACTOR
   1. ALL LANDSCAPE WORK SHOWN ON THESE PLANS SHALL BE PERFORMED BY A SINGLE FIRM SPECIALIZING IN LANDSCAPE PLANTING.
   2. A LIST OF SUCCESSFULLY COMPLETED PROJECTS OF THIS TYPE, SIZE AND NATURE MAY BE REQUESTED BY THE OWNER FOR FURTHER QUALIFICATION MEASURES.
   3. THE LANDSCAPE CONTRACTOR SHALL HOLD A VALID CONTRACTOR'S LICENSE ISSUED BY THE APPROPRIATE LOCAL JURISDICTION.

B. SCOPE OF WORK
   1. WORK COVERED BY THESE SECTIONS INCLUDES THE FURNISHING AND PAYMENT OF ALL MATERIALS, LABOR, SERVICES, EQUIPMENT, LICENSES, TAXES AND ANY OTHER ITEMS THAT ARE NECESSARY FOR THE EXECUTION, INSTALLATION AND COMPLETION OF ALL WORK, SPECIFIED HEREIN AND / OR SHOWN ON THE LANDSCAPE PLANS, NOTES, AND DETAILS.
   2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LAWS, CODES AND REGULATIONS REQUIRED BY AUTHORITIES HAVING JURISDICTION OVER SUCH WORK, INCLUDING ALL INSPECTIONS AND PERMITS REQUIRED BY FEDERAL, STATE AND LOCAL AUTHORITIES IN SUPPLY, TRANSPORTATION AND INSTALLATION OF MATERIALS.
   3. THE LANDSCAPE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITY LINES (WATER, SEWER, ELECTRICAL, TELEPHONE, GAS, CABLE, TELEVISION, ETC.) PRIOR TO THE START OF ANY WORK.

PRODUCTS

A. ALL MANUFACTURED PRODUCTS SHALL BE NEW.
B. CONTAINER AND BALLED-AND-BURLAPPED PLANTS:
   1. FURNISH NURSERY-GROWN PLANTS COMPLYING WITH ANSI Z60.1-2014. PROVIDE WELL-SHAPED, FULLY BRANCHED, HEALTHY, VIGOROUS STOCK FREE OF DISEASE, INSECTS, EGGS, LARVAE, AND DEFECTS SUCH AS KNOTS, SUN SCALD, INJURIES, ABRASIONS, AND DISFIGUREMENT. ALL PLANTS WITHIN A SPECIES SHALL HAVE SIMILAR SIZE, AND SHALL BE OF A FORM TYPICAL FOR THE SPECIES. ALL TREES SHALL BE OBTAINED FROM SOURCES WITHIN 200 MILES OF THE PROJECT SITE, AND WITH SIMILAR CLIMACTIC CONDITIONS.
   2. ROOT SYSTEMS SHALL BE HEALTHY, DENSELY BRANCHED ROOT SYSTEMS, NON-POT-BOUND, FREE FROM ENCIRCLING AND/OR GIRDLING ROOTS, AND FREE FROM ANY OTHER ROOT DEFECTS (SUCH AS J-SHAPED ROOTS).
   3. TREES MAY BE PLANTED FROM CONTAINERS OR BALLED-AND-BURLAPPED (B&B), UNLESS SPECIFIED ON THE PLANTING LEGEND. BARE-ROOT TREES ARE NOT ACCEPTABLE.
   4. ANY PLANT DEEMED UNACCEPTABLE BY THE LANDSCAPE ARCHITECT OR OWNER SHALL BE IMMEDIATELY REMOVED FROM THE SITE AND SHALL BE REPLACED WITH AN ACCEPTABLE PLANT OF LIKE TYPE AND SIZE AT THE CONTRACTOR'S OWN EXPENSE. ANY PLANTS APPEARING TO BE UNHEALTHY, EVEN IF DETERMINED TO STILL BE ALIVE, SHALL NOT BE ACCEPTED. THE LANDSCAPE ARCHITECT AND OWNER SHALL BE THE SOLE JUDGES AS TO THE ACCEPTABILITY OF PLANT MATERIAL.
   5. ALL TREES SHALL BE STANDARD IN FORM, UNLESS OTHERWISE SPECIFIED. TREES WITH CENTRAL LEADERS WILL NOT BE ACCEPTED IF LEADER IS DAMAGED OR REMOVED. PRUNE ALL DAMAGED TWIGS AFTER PLANTING.
   6. CALIPER MEASUREMENTS FOR STANDARD (SINGLE TRUNK) TREES SHALL BE AS FOLLOWS: SIX INCHES ABOVE THE ROOT FLARE FOR TREES UP TO AND INCLUDING FOUR INCHES IN CALIPER, AND TWELVE INCHES ABOVE THE ROOT FLARE FOR TREES EXCEEDING FOUR INCHES IN CALIPER.
   7. MULTI-TRUNK TREES SHALL BE MEASURED BY THEIR OVERALL HEIGHT, MEASURED FROM THE TOP OF THE ROOT BALL. WHERE CALIPER MEASUREMENTS ARE USED, THE CALIPER SHALL BE CALCULATED AS ONE-HALF OF THE SUM OF THE CALIPER OF THE THREE LARGEST TRUNKS.
   8. ANY TREE OR SHRUB SHOWN TO HAVE EXCESS SOIL PLACED ON TOP OF THE ROOT BALL, SO THAT THE ROOT FLARE HAS BEEN COMPLETELY COVERED, SHALL BE REJECTED.
C. SOD: PROVIDE WELL-ROOTED SOD OF THE VARIETY NOTED ON THE PLANS. SOD SHALL BE CUT FROM HEALTHY, MATURE TURF WITH SOIL THICKNESS OF 3/4" TO 1". EACH PALLET OF SOD SHALL BE ACCOMPANIED BY A CERTIFICATE FROM SUPPLIER STATING THE COMPOSITION OF THE SOD.
D. SEED: PROVIDE BLEND OF SPECIES AND VARIETIES AS NOTED ON THE PLANS, WITH MAXIMUM PERCENTAGES OF PURITY, GERMINATION, AND MINIMUM PERCENTAGE OF WEED SEED AS INDICATED ON PLANS. EACH BAG OF SEED SHALL BE ACCOMPANIED BY A TAG FROM THE SUPPLIER INDICATING THE COMPOSITION OF THE SEED.
E. TOPSOIL: SANDY TO CLAY LOAM TOPSOIL, FREE OF STONES LARGER THAN ½ INCH, FOREIGN MATTER, PLANTS, ROOTS, AND SEEDS.
F. COMPOST: WELL-COMPOSTED, STABLE, AND WEED-FREE ORGANIC MATTER, pH RANGE OF 5.5 TO 8; MOISTURE CONTENT 35 TO 55 PERCENT BY WEIGHT; 100 PERCENT PASSING THROUGH 3/4-INCH SIEVE; SOLUBLE SALT CONTENT OF 5 TO 10 DECISIEMENS/M; NOT EXCEEDING 0.5 PERCENT INERT CONTAMINANTS AND FREE OF SUBSTANCES TOXIC TO PLANTINGS. NO MANURE OR ANIMAL-BASED PRODUCTS SHALL BE USED.
G. FERTILIZER: GRANULAR FERTILIZER CONSISTING OF NITROGEN, PHOSPHORUS, POTASSIUM, AND OTHER NUTRIENTS IN PROPORTIONS, AMOUNTS, AND RELEASE RATES RECOMMENDED IN A SOIL REPORT FROM A QUALIFIED SOIL-TESTING AGENCY (SEE BELOW).
H. MULCH: SIZE AND TYPE AS INDICATED ON PLANS, FREE FROM DELETERIOUS MATERIALS AND SUITABLE AS A TOP DRESSING OF TREES AND SHRUBS.
I. TREE STAKING AND GUYING
   1. STAKES: 6' LONG GREEN METAL T-POSTS.
   2. GUY AND TIE WIRE: ASTM A 641, CLASS 1, GALVANIZED-STEEL WIRE, 2-STRAND, TWISTED, 0.106 INCH DIAMETER.
   3. STRAP CHAFING GUARD: REINFORCED NYLON OR CANVAS AT LEAST 1-1/2 INCH WIDE, WITH GROMMETS TO PROTECT TREE TRUNKS FROM DAMAGE.
L. STEEL EDGING: PROFESSIONAL STEEL EDGING, 14 GAUGE THICK X 4 INCHES WIDE, FACTORY PAINTED DARK GREEN. ACCEPTABLE MANUFACTURERS INCLUDE COLAMET OR APPROVED EQUAL.
M. PRE-EMERGENT HERBICIDES: ANY GRANULAR, NON-STAINING PRE-EMERGENT HERBICIDE THAT IS LABELED FOR THE SPECIFIC ORNAMENTALS OR TURF ON WHICH IT WILL BE UTILIZED. PRE-EMERGENT HERBICIDES SHALL BE APPLIED PER THE MANUFACTURER'S LABELED RATES.

METHODS

A. SOIL PREPARATION
   1. BEFORE STARTING WORK, THE LANDSCAPE CONTRACTOR SHALL VERIFY THAT THE GRADE OF ALL LANDSCAPE AREAS ARE WITHIN +/-0.1' OF FINISH GRADE. THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY SHOULD ANY DISCREPANCIES EXIST.
   2. SOIL TESTING:
      a. AFTER FINISH GRADES HAVE BEEN ESTABLISHED, CONTRACTOR SHALL HAVE SOIL SAMPLES FROM THE PROJECT'S LANDSCAPE AREAS TESTED BY AN ESTABLISHED SOIL TESTING LABORATORY. EACH SAMPLE SUBMITTED TO THE LAB SHALL CONTAIN NO LESS THAN ONE QUART OF SOIL, TAKEN FROM BETWEEN THE SOIL SURFACE AND 6" DEPTH. IF NO SAMPLE LOCATIONS ARE INDICATED ON THE PLANS, THE CONTRACTOR SHALL TAKE A MINIMUM OF THREE SAMPLES FROM VARIOUS REPRESENTATIVE LOCATIONS FOR TESTING.
      b. THE CONTRACTOR SHALL HAVE THE SOIL TESTING LABORATORY PROVIDE RESULTS FOR THE FOLLOWING: SOIL TEXTURAL CLASS, GENERAL SOIL FERTILITY, pH, ORGANIC MATTER CONTENT, SALT (CEC), LIME, SODIUM ADSORPTION RATIO (SAR) AND BORON CONTENT.
      c. THE CONTRACTOR SHALL ALSO SUBMIT THE PROJECT'S PLANT LIST TO THE LABORATORY ALONG WITH THE SOIL SAMPLES.
      d. THE SOIL REPORT PRODUCED BY THE LABORATORY SHALL CONTAIN RECOMMENDATIONS FOR THE FOLLOWING (AS APPROPRIATE): SEPARATE SOIL PREPARATION AND BACKFILL MIX RECOMMENDATIONS FOR GENERAL ORNAMENTAL PLANTS, XERIC PLANTS, TURF, AND NATIVE SEED, AS WELL AS PRE-PLANT FERTILIZER APPLICATIONS AND RECOMMENDATIONS FOR ANY OTHER SOIL RELATED ISSUES. THE REPORT SHALL ALSO PROVIDE A FERTILIZER PROGRAM FOR THE ESTABLISHMENT PERIOD AND FOR LONG-TERM MAINTENANCE.
   3. THE CONTRACTOR SHALL INSTALL SOIL AMENDMENTS AND FERTILIZERS PER THE SOILS REPORT RECOMMENDATIONS. ANY CHANGE IN COST DUE TO THE SOIL REPORT RECOMMENDATIONS, EITHER INCREASE OR DECREASE, SHALL BE SUBMITTED TO THE OWNER WITH THE REPORT.
   4. FOR BIDDING PURPOSES ONLY, THE SOIL PREPARATION SHALL CONSIST OF THE FOLLOWING:
      a. TURF: INCORPORATE THE FOLLOWING AMENDMENTS INTO THE TOP 8" OF SOIL BY MEANS OF ROTOTILLING AFTER CROSS-RIPPING:
         i. NITROGEN STABILIZED ORGANIC AMENDMENT - 4 CU. YDS. PER 1,000 S.F.
         ii. PREPLANT TURF FERTILIZER (10-20-10 OR SIMILAR, SLOW RELEASE, ORGANIC) - 15 LBS PER 1,000 S.F.
         iii. "CLAY BUSTER" OR EQUAL - USE MANUFACTURER'S RECOMMENDED RATE
      b. TREES, SHRUBS, AND PERENNIALS: INCORPORATE THE FOLLOWING AMENDMENTS INTO THE TOP 8" OF SOIL BY MEANS OF ROTOTILLING AFTER CROSS-RIPPING:
         i. NITROGEN STABILIZED ORGANIC AMENDMENT - 4 CU. YDS. PER 1,000 S.F.
         ii. 12-12-12 FERTILIZER (OR SIMILAR, ORGANIC, SLOW RELEASE) - 10 LBS. PER CU. YD.
         iii. "CLAY BUSTER" OR EQUAL - USE MANUFACTURER'S RECOMMENDED RATE
         iv. IRON SULPHATE - 2 LBS. PER CU. YD.
   5. IN THE CONTEXT OF THESE PLANS, NOTES, AND SPECIFICATIONS, "FINISH GRADE" REFERS TO THE FINAL ELEVATION OF THE SOIL SURFACE (NOT TOP OF MULCH) AS INDICATED ON THE GRADING PLANS.
      a. BEFORE STARTING WORK, THE LANDSCAPE CONTRACTOR SHALL VERIFY THAT THE ROUGH GRADES OF ALL LANDSCAPE AREAS ARE WITHIN +/-0.1' OF FINISH GRADE. SEE SPECIFICATIONS FOR MORE DETAILED INSTRUCTION ON TURF AREA AND PLANTING BED PREPARATION.
      b. CONSTRUCT AND MAINTAIN FINISH GRADES AS SHOWN ON GRADING PLANS, AND CONSTRUCT AND MAINTAIN SLOPES AS RECOMMENDED BY THE GEOTECHNICAL REPORT. ALL LANDSCAPE AREAS SHALL HAVE POSITIVE DRAINAGE AWAY FROM STRUCTURES AT THE MINIMUM SLOPE SPECIFIED IN THE REPORT AND ON THE GRADING PLANS, AND AREAS OF POTENTIAL PONDING SHALL BE REGRADED TO BLEND IN WITH THE SURROUNDING GRADES AND ELIMINATE PONDING POTENTIAL.
      c. THE LANDSCAPE CONTRACTOR SHALL DETERMINE WHETHER OR NOT THE EXPORT OF ANY SOIL WILL BE NEEDED, TAKING INTO ACCOUNT THE ROUGH GRADE PROVIDED, THE AMOUNT OF SOIL AMENDMENTS TO BE ADDED (**BASED ON A SOIL TEST**, PER SPECIFICATIONS), AND THE FINISH GRADES TO BE ESTABLISHED.
      d. ENSURE THAT THE FINISH GRADE IN SHRUB AREAS IMMEDIATELY ADJACENT TO WALKS AND OTHER WALKING SURFACES, AFTER INSTALLING SOIL AMENDMENTS, IS 3" BELOW THE ADJACENT FINISH SURFACE, IN ORDER TO ALLOW FOR PROPER MULCH DEPTH. TAPER THE SOIL SURFACE TO MEET FINISH GRADE, AS SPECIFIED ON THE GRADING PLANS, AT APPROXIMATELY 18" AWAY FROM THE WALKS.
      e. ENSURE THAT THE FINISH GRADE IN TURF AREAS IMMEDIATELY ADJACENT TO WALKS AND OTHER WALKING SURFACES, AFTER INSTALLING SOIL AMENDMENTS, IS 1" BELOW THE FINISH SURFACE OF THE WALKS. TAPER THE SOIL SURFACE TO MEET FINISH GRADE, AS SPECIFIED ON THE GRADING PLANS, AT APPROXIMATELY 18" AWAY FROM THE WALKS.
      f. SHOULD ANY CONFLICTS AND/OR DISCREPANCIES ARISE BETWEEN THE GRADING PLANS, GEOTECHNICAL REPORT, THESE NOTES AND PLANS, AND ACTUAL CONDITIONS, THE CONTRACTOR SHALL IMMEDIATELY BRING SUCH ITEMS TO THE ATTENTION OF THE LANDSCAPE ARCHITECT, GENERAL CONTRACTOR, AND OWNER.
   6. ONCE SOIL PREPARATION IS COMPLETE, THE LANDSCAPE CONTRACTOR SHALL ENSURE THAT THERE ARE NO DEBRIS, TRASH, OR STONES LARGER THAN 1" REMAINING IN THE TOP 6" OF SOIL.

B. SUBMITTALS
   1. THE CONTRACTOR SHALL PROVIDE SUBMITTALS AND SAMPLES, IF REQUIRED, TO THE LANDSCAPE ARCHITECT, AND RECEIVE APPROVAL IN WRITING FOR SUCH SUBMITTALS BEFORE WORK COMMENCES.
   2. SUBMITTALS SHALL INCLUDE PHOTOS OF PLANTS WITH A RULER OR MEASURING STICK FOR SCALE, PHOTOS OR SAMPLES OF ANY REQUIRED MULCHES, AND SOIL TEST RESULTS AND PREPARATION RECOMMENDATIONS FROM THE TESTING LAB (INCLUDING COMPOST AND FERTILIZER RATES AND TYPES, AND OTHER AMENDMENTS FOR TREE/SHRUB, TURF, AND SEED AREAS AS MAY BE APPROPRIATE).
   3. SUBMITTALS SHALL ALSO INCLUDE MANUFACTURER CUT SHEETS FOR PLANTING ACCESSORIES SUCH AS TREE STAKES AND TIES, EDGING, AND LANDSCAPE FABRICS (IF ANY).
   4. WHERE MULTIPLE ITEMS ARE SHOWN ON A PAGE, THE CONTRACTOR SHALL CLEARLY INDICATE THE ITEM BEING CONSIDERED.

C. GENERAL PLANTING
   1. REMOVE ALL NURSERY TAGS AND STAKES FROM PLANTS.
   2. EXCEPT IN AREAS TO BE PLANTED WITH ORNAMENTAL GRASSES, APPLY PRE-EMERGENT HERBICIDES AT THE MANUFACTURER'S RECOMMENDED RATE.
   3. TRENCHING NEAR EXISTING TREES:
      a. CONTRACTOR SHALL NOT DISTURB ROOTS 1-1/2" AND LARGER IN DIAMETER WITHIN THE CRITICAL ROOT ZONE (CRZ) OF EXISTING TREES, AND SHALL EXERCISE ALL POSSIBLE CARE AND PRECAUTIONS TO AVOID INJURY TO TREE ROOTS, TRUNKS, AND BRANCHES. THE CRZ IS DEFINED AS A CIRCULAR AREA EXTENDING OUTWARD FROM THE TREE TRUNK, WITH A RADIUS EQUAL TO 1' FOR EVERY 1" OF TRUNK DIAMETER-AT-BREAST-HEIGHT (4.5' ABOVE THE AVERAGE GRADE AT THE TRUNK).
      b. ALL EXCAVATION WITHIN THE CRZ SHALL BE PERFORMED USING HAND TOOLS. NO MACHINE EXCAVATION OR TRENCHING OF ANY KIND SHALL BE ALLOWED WITHIN THE CRZ.
      c. ALTER ALIGNMENT OF PIPE TO AVOID TREE ROOTS 1-1/2" AND LARGER IN DIAMETER. WHERE TREE ROOTS 1-1/2" AND LARGER IN DIAMETER ARE ENCOUNTERED IN THE FIELD, TUNNEL UNDER SUCH ROOTS. WRAP EXPOSED ROOTS WITH SEVERAL LAYERS OF BURLAP AND KEEP MOIST. CLOSE ALL TRENCHES WITHIN THE CANOPY DRIP LINES WITHIN 24 HOURS.
      d. ALL SEVERED ROOTS SHALL BE HAND PRUNED WITH SHARP TOOLS AND ALLOWED TO AIR-DRY. DO NOT USE ANY SORT OF SEALERS OR WOUND PAINTS.

C. TREE PLANTING
   1. TREE PLANTING HOLES SHALL BE EXCAVATED TO MINIMUM WIDTH OF TWO TIMES THE WIDTH OF THE ROOTBALL AND TO A DEPTH EQUAL TO THE DEPTH OF THE ROOTBALL LESS TWO TO FOUR INCHES.
   2. SCARIFY THE SIDES AND BOTTOM OF THE PLANTING HOLE PRIOR TO THE PLACEMENT OF THE TREE. REMOVE ANY GLAZING THAT MAY HAVE BEEN CAUSED DURING THE EXCAVATION OF THE HOLE.
   3. FOR CONTAINER AND BOX TREES, TO REMOVE ANY POTENTIALLY GIRDLING ROOTS AND OTHER ROOT DEFECTS, THE CONTRACTOR SHALL SHAVE A 1" LAYER OFF OF THE SIDES AND BOTTOM OF THE ROOTBALL OF ALL TREES JUST BEFORE PLACING INTO THE PLANTING PIT. DO NOT "TEASE" ROOTS OUT FROM THE ROOTBALL.
   4. INSTALL THE TREE ON UNDISTURBED SUBGRADE SO THAT THE TOP OF THE ROOTBALL IS TWO TO FOUR INCHES ABOVE THE SURROUNDING GRADE.
   5. BACKFILL THE TREE HOLE UTILIZING THE EXISTING TOPSOIL FROM ON-SITE. ROCKS LARGER THAN 1" DIA. AND ALL OTHER DEBRIS SHALL BE REMOVED FROM THE SOIL PRIOR TO THE BACKFILL. SHOULD ADDITIONAL SOIL BE REQUIRED TO ACCOMPLISH THIS TASK, USE STORED TOPSOIL FROM ON-SITE OR IMPORT ADDITIONAL TOPSOIL FROM OFF-SITE AT NO ADDITIONAL COST TO THE OWNER. IMPORTED TOPSOIL SHALL BE OF SIMILAR TEXTURAL CLASS AND COMPOSITION IN THE ON-SITE SOIL.
   6. TREES SHALL NOT BE STAKED UNLESS LOCAL CONDITIONS (SUCH AS HEAVY WINDS OR SLOPES) REQUIRE STAKES TO KEEP TREES UPRIGHT. SHOULD STAKING BE REQUIRED, THE TOTAL NUMBER OF TREE STAKES (BEYOND THE MINIMUMS LISTED BELOW) WILL BE LEFT TO THE LANDSCAPE CONTRACTOR'S DISCRETION. SHOULD ANY TREES FALL OR LEAN, THE LANDSCAPE CONTRACTOR SHALL STRAIGHTEN THE TREE, OR REPLACE IT SHOULD IT BECOME DAMAGED. TREE STAKING SHALL ADHERE TO THE FOLLOWING GUIDELINES:
      a. 1"-2" TREES — TWO STAKES PER TREE
      b. 2-1/2"-4" TREES — THREE STAKES PER TREE
      c. TREES OVER 4" CALIPER — GUY AS NEEDED
      d. MULTI-TRUNK TREES — THREE STAKES PER TREE MINIMUM, QUANTITY AND POSITIONS AS NEEDED TO STABILIZE THE TREE
   7. UPON COMPLETION OF PLANTING, CONSTRUCT AN EARTH WATERING BASIN AROUND THE TREE. COVER THE INTERIOR OF THE TREE RING WITH THE WEED BARRIER CLOTH AND TOPDRESS WITH MULCH (TYPE AND DEPTH PER PLANS).

D. SHRUB, PERENNIAL, AND GROUNDCOVER PLANTING
   1. DIG THE PLANTING HOLES TWICE AS WIDE AND 2" LESS DEEP THAN EACH PLANT'S ROOTBALL. INSTALL THE PLANT IN THE HOLE. BACKFILL AROUND THE PLANT WITH SOIL AMENDED PER SOIL TEST RECOMMENDATIONS.
   2. INSTALL THE WEED BARRIER CLOTH, OVERLAPPING IT AT THE ENDS. UTILIZE STEEL STAPLES TO KEEP THE WEED BARRIER CLOTH IN PLACE.
   3. WHEN PLANTING IS COMPLETE, INSTALL MULCH (TYPE AND DEPTH PER PLANS) OVER ALL PLANTING BEDS, COVERING THE ENTIRE PLANTING AREA.

E. SODDING
   1. SOD VARIETY TO BE AS SPECIFIED ON THE LANDSCAPE PLAN.
   2. LAY SOD WITHIN 24 HOURS FROM THE TIME OF STRIPPING. DO NOT LAY IF THE GROUND IS FROZEN.
   3. LAY THE SOD TO FORM A SOLID MASS WITH TIGHTLY FITTED JOINTS. BUTT ENDS AND SIDES OF SOD STRIPS - DO NOT OVERLAP. STAGGER STRIPS TO OFFSET JOINTS IN ADJACENT COURSES.
   4. ROLL THE SOD TO ENSURE GOOD CONTACT OF THE SOD'S ROOT SYSTEM WITH THE SOIL UNDERNEATH.
   5. WATER THE SOD THOROUGHLY WITH A FINE SPRAY IMMEDIATELY AFTER PLANTING TO OBTAIN AT LEAST SIX INCHES OF PENETRATION INTO THE SOIL BELOW THE SOD.

F. HYDROMULCHING
   1. TURF HYDROMULCH MIX (PER 1,000 SF) SHALL BE AS FOLLOWS:
      a. WINTER MIX (OCTOBER 1 - MARCH 31)
         50# CELLULOSE FIBER MULCH
         2# UNHULLED FESCUE SEED
         2# ANNUAL RYE SEED
         15# 15-15-15 WATER SOLUBLE FERTILIZER
      b. SUMMER MIX (APRIL 1 - SEPTEMBER 30)
         50# CELLULOSE FIBER MULCH
         2# HULLED FESCUE SEED
         15# 15-15-15 WATER SOLUBLE FERTILIZER
   2. SEED HYDROMULCH MIX (PER 1,000 SF) SHALL BE AS FOLLOWS:
      a. GENERAL
         50# CELLULOSE FIBER MULCH
         15# 15-15-15 WATER SOLUBLE FERTILIZER
         SEED RATE PER LEGEND

G. MULCH
   1. INSTALL MULCH TOPDRESSING, TYPE AND DEPTH PER MULCH NOTE, IN ALL PLANTING AREAS AND TREE RINGS.
   2. DO NOT INSTALL MULCH WITHIN 6" OF TREE ROOT FLARE AND WITHIN 24" OF HABITABLE STRUCTURES, EXCEPT AS MAY BE NOTED ON THESE PLANS. MULCH COVER WITHIN 6" OF CONCRETE WALKS AND CURBS SHALL NOT PROTRUDE ABOVE THE FINISH SURFACE OF THE WALKS AND CURBS. MULCH COVER WITHIN 12" OF WALLS SHALL BE AT LEAST 3" LOWER THAN THE TOP OF WALL.

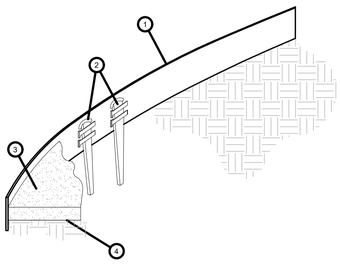
I. CLEAN UP
   1. DURING LANDSCAPE PREPARATION AND PLANTING, KEEP ALL PAVEMENT CLEAN AND ALL WORK AREAS IN A NEAT, ORDERLY CONDITION.
   2. LEGALLY DISPOSE ALL EXCAVATED MATERIALS OFF THE PROJECT SITE.

J. INSPECTION AND ACCEPTANCE
   1. UPON COMPLETION OF THE WORK, THE LANDSCAPE CONTRACTOR SHALL PROVIDE THE SITE CLEAN, FREE OF DEBRIS AND TRASH, AND SUITABLE FOR USE AS INTENDED. THE LANDSCAPE CONTRACTOR SHALL THEN REQUEST AN INSPECTION BY THE OWNER TO DETERMINE FINAL ACCEPTABILITY.
   2. WHEN THE INSPECTED PLANTING WORK DOES NOT COMPLY WITH THE CONTRACT DOCUMENTS, THE LANDSCAPE CONTRACTOR SHALL REPLACE AND/OR REPAIR THE REJECTED WORK TO THE OWNER'S SATISFACTION WITHIN 24 HOURS.
   3. THE LANDSCAPE MAINTENANCE PERIOD WILL NOT COMMENCE UNTIL THE LANDSCAPE WORK HAS BEEN RE-INSPECTED BY THE OWNER AND FOUND TO BE ACCEPTABLE. AT THAT TIME, A WRITTEN NOTICE OF FINAL ACCEPTANCE WILL BE ISSUED BY THE OWNER, AND THE MAINTENANCE AND GUARANTEE PERIODS WILL COMMENCE.

K. LANDSCAPE MAINTENANCE
   1. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL WORK SHOWN ON THESE PLANS FOR 90 DAYS BEYOND FINAL ACCEPTANCE OF ALL LANDSCAPE WORK BY THE OWNER. LANDSCAPE MAINTENANCE SHALL INCLUDE WEEKLY SITE VISITS FOR THE FOLLOWING ACTIONS (AS APPROPRIATE): PROPER PRUNING, RESTAKING OF TREES, RESETTING OF PLANTS THAT HAVE SETTLED, MOWING AND AERATION OF LAWNS, WEEDING, RESEEDING AREAS WHICH HAVE NOT GERMINATED WELL, TREATING FOR INSECTS AND DISEASES,REPLACEMENT OF MULCH, REMOVAL OF LITTER, REPAIRS TO THE IRRIGATION SYSTEM DUE TO FAULTY PARTS AND/OR WORKMANSHIP, AND THE APPROPRIATE WATERING OF ALL PLANTINGS. THE LANDSCAPE CONTRACTOR SHALL MAINTAIN THE IRRIGATION SYSTEM IN PROPER WORKING ORDER, WITH SCHEDULING ADJUSTMENTS BY SEASON TO MAXIMIZE WATER CONSERVATION.
   2. SHOULD SEEDED AND/OR SODDED AREAS NOT BE COVERED BY AN AUTOMATIC IRRIGATION SYSTEM, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING THESE AREAS AND OBTAINING A FULL, HEALTHY STAND OF PLANTS AT NO ADDITIONAL COST TO THE OWNER.
   3. TO ACHIEVE FINAL ACCEPTANCE AT THE END OF THE MAINTENANCE PERIOD, ALL OF THE FOLLOWING CONDITIONS MUST OCCUR:
      a. THE LANDSCAPE SHALL SHOW ACTIVE, HEALTHY GROWTH (WITH EXCEPTIONS MADE FOR SEASONAL DORMANCY). ALL PLANTS NOT MEETING THIS CONDITION SHALL BE REJECTED AND REPLACED BY HEALTHY PLANT MATERIAL PRIOR TO FINAL ACCEPTANCE.
      b. ALL HARDSCAPE SHALL BE CLEANED PRIOR TO FINAL ACCEPTANCE.
      c. SODDED AREAS MUST BE ACTIVELY GROWING AND MUST REACH A MINIMUM HEIGHT OF 1 1/2 INCHES BEFORE FIRST MOWING. HYDROMULCHED AREAS SHALL SHOW ACTIVE, HEALTHY GROWTH. BARE AREAS LARGER THAN TWELVE SQUARE INCHES MUST BE RESODDED OR RESEEDED (AS APPROPRIATE) PRIOR TO FINAL ACCEPTANCE. ALL SODDED TURF SHALL BE NEATLY MOWED.

L. WARRANTY PERIOD, PLANT GUARANTEE AND REPLACEMENTS
   1. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL TREES, SHRUBS, PERENNIALS, SOD, SEEDED/HYDROMULCHED AREAS, AND IRRIGATION SYSTEMS FOR A PERIOD OF ONE YEAR FROM THE DATE OF THE OWNER'S FINAL ACCEPTANCE (90 DAYS FOR ANNUAL PLANTS). THE CONTRACTOR SHALL REPLACE, AT HIS OWN EXPENSE AND TO THE SATISFACTION OF THE OWNER, ANY PLANTS WHICH DIE IN THAT TIME, OR REPAIR ANY PORTIONS OF THE IRRIGATION SYSTEM WHICH OPERATE IMPROPERLY.
   2. AFTER THE INITIAL MAINTENANCE PERIOD AND DURING THE GUARANTEE PERIOD, THE LANDSCAPE CONTRACTOR SHALL ONLY BE RESPONSIBLE FOR REPLACEMENT OF PLANTS WHEN PLANT DEATH CANNOT BE ATTRIBUTED DIRECTLY TO OVERWATERING OR OTHER DAMAGE BY HUMAN ACTIONS.

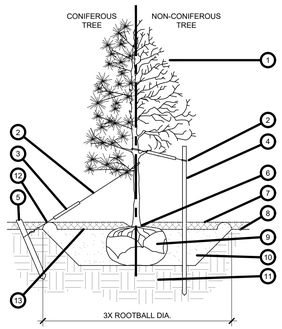
M. PROVIDE A MINIMUM OF (2) COPIES OF RECORD DRAWINGS TO THE OWNER UPON COMPLETION OF WORK. A RECORD DRAWING IS A RECORD OF ALL CHANGES THAT OCCURRED IN THE FIELD AND THAT ARE DOCUMENTED THROUGH CHANGE ORDERS, ADDENDA, OR CONTRACTOR/CONSULTANT DRAWING MARKUPS.



1. ROLLED-TOP STEEL EDGING PER PLANS.
2. TAPERED STEEL STAKES.
3. MULCH, TYPE AND DEPTH PER PLANS.
4. FINISH GRADE.

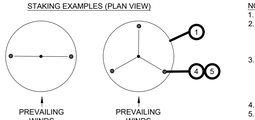
NOTES:
1) INSTALL EDGING SO THAT STAKES WILL BE ON INSIDE OF PLANTING BED.
2) BOTTOM OF EDGING SHALL BE BURIED A MINIMUM OF 1" BELOW FINISH GRADE.
3) TOP OF MULCH SHALL BE 1" LOWER THAN TOP OF EDGING.

D STEEL EDGING
SCALE: NOT TO SCALE



1. TREE CANOPY.
2. CINCH-TIES (24" BOX/2" CAL. TREES AND SMALLER) OR 12 GAUGE GALVANIZED WIRE WITH NYLON TREE STRAPS AT TREE AND STAKE (36" BOX/2.5" CAL. TREES AND LARGER). SECURE TIES OR STRAPS TO TRUNK JUST ABOVE LOWEST MAJOR BRANCHES.
3. 24" X 3/4" P.V.C. MARKERS OVER WIRES.
4. GREEN STEEL T-POSTS. EXTEND POSTS 12" MIN. INTO UNDISTURBED SOIL.
5. PRESSURE-TREATED WOOD DEADMAN, TWO PER TREE (MIN.). BURY OUTSIDE OF PLANTING PIT AND 18" MIN. INTO UNDISTURBED SOIL.
6. TRUNK FLARE.
7. MULCH, TYPE AND DEPTH PER PLANS. DO NOT PLACE MULCH WITHIN 6" OF TRUNK.
8. FINISH GRADE.
9. ROOT BALL.
10. BACKFILL. AMEND AND FERTILIZE ONLY AS RECOMMENDED IN SOIL FERTILITY ANALYSIS.
11. UNDISTURBED NATIVE SOIL.
12. 4" HIGH EARTHEN WATERING BASIN.
13. FINISH GRADE.

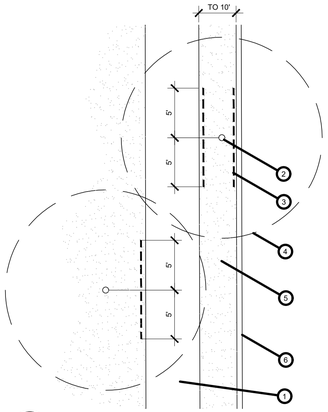
STAKING EXAMPLES (PLAN VIEW)



NOTES:
1. SCARIFY SIDES OF PLANTING PIT PRIOR TO SETTING TREE.
2. REMOVE EXCESS SOIL APPLIED ON TOP OF THE ROOTBALL THAT COVERS THE ROOT FLARE. THE PLANTING HOLE DEPTH SHALL BE SUCH THAT THE ROOTBALL RESTS ON UNDISTURBED SOIL, AND THE ROOT FLARE IS 2"-4" ABOVE FINISH GRADE.
3. FOR B&B TREES, CUT OFF BOTTOM 1/3 OF WIRE BASKET BEFORE PLACING TREE IN HOLE, CUT OFF AND REMOVE REMAINDER OF BASKET AFTER TREE IS SET IN HOLE. REMOVE ALL NYLON TIES, TWINE, ROPE, AND OTHER PACKING MATERIAL. REMOVE AS MUCH BURLAP FROM AROUND ROOTBALL AS IS PRACTICAL.
4. REMOVE ALL NURSERY STAKES AFTER PLANTING.
5. FOR TREES 36" BOX/2.5" CAL. AND LARGER, USE THREE STAKES OR DEADMEN (AS APPROPRIATE), SPACED EVENLY AROUND TREE.
6. STAKING SHALL BE TIGHT ENOUGH TO PREVENT TRUNK FROM BENDING, BUT LOOSE ENOUGH TO ALLOW SOME TRUNK MOVEMENT IN WIND.

A TREE PLANTING
SCALE: NOT TO SCALE

OPEN LANDSCAPE PARKWAY



1. TYPICAL WALKWAY OR PAVING
2. TREE TRUNK
3. TYPICAL SYMBOL FOR LINEAR ROOT BARRIER MATERIAL. SEE PLANTING NOTES FOR TYPE AND MANUFACTURER. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
4. TREE CANOPY
5. TYPICAL PLANTING AREA
6. TYPICAL CURB AND GUTTER

F ROOT BARRIER - PLAN VIEW
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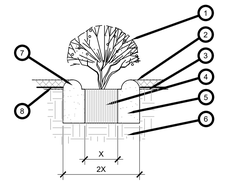
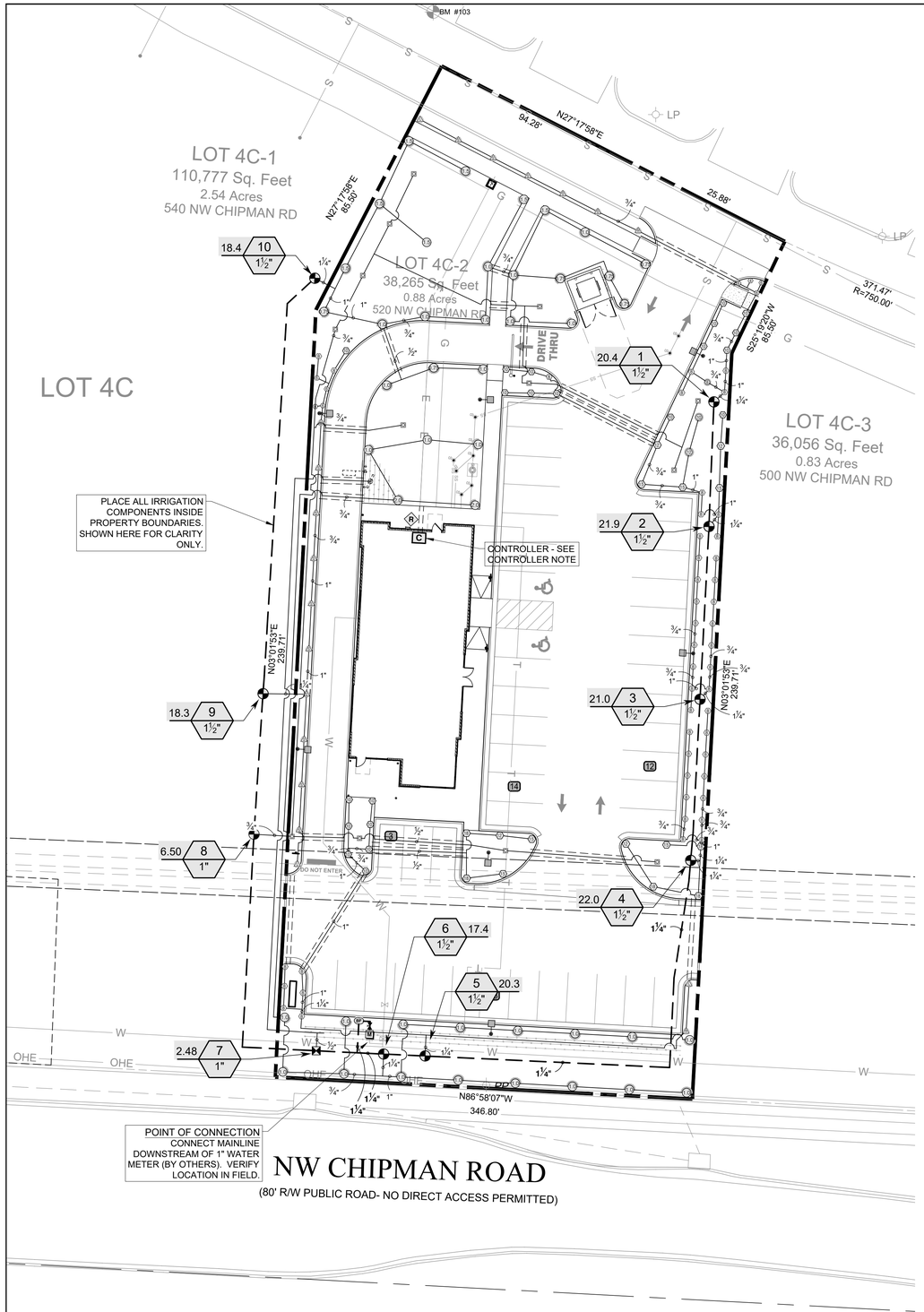


1. SHRUB, PERENNIAL, OR ORNAMENTAL GRASS.
2. MULCH, TYPE AND DEPTH PER PLANS. PLACE NO MORE THAN 1" OF MULCH WITHIN 6" OF PLANT CENTER.
3. FINISH GRADE.
4. ROOT BALL.
5. BACKFILL. AMEND AND FERTILIZE ONLY AS RECOMMENDED IN SOIL FERTILITY ANALYSIS.
6. UNDISTURBED NATIVE SOIL.
7. 3" HIGH EARTHEN WATERING BASIN.
8. WEED FABRIC UNDER M



CRITICAL ANALYSIS

Generated:	2022-01-25 12:20
P.O.C. NUMBER: 01	
Water Source Information:	
FLOW AVAILABLE	
Water Meter Size:	3/4"
Flow Available	22.5 GPM
PRESSURE AVAILABLE	
Static Pressure at POC:	60.00 PSI
Elevation Change:	0.00 ft
Service Line Size:	1 1/2"
Length of Service Line:	5 ft
Pressure Available:	59.00 psi
DESIGN ANALYSIS	
Maximum Station Flow:	21.98 GPM
Flow Available at POC:	22.5 GPM
Residual Flow Available:	0.52 GPM
Critical Station:	2
Design Pressure:	25 PSI
Friction Loss:	3.38 PSI
Fittings Loss:	0.34 PSI
Elevation Loss:	0 PSI
Loss through Valve:	3.84 PSI
Pressure Req. at Critical Station:	32.56 PSI
Loss for Fittings:	0.81 PSI
Loss for Main Line:	8.14 PSI
Loss for POC to Valve Elevation:	0 PSI
Loss for Backflow:	8.67 PSI
Loss for Water Meter:	7.96 PSI
Critical Station Pressure at POC:	58.14 PSI
Pressure Available:	59 PSI
Residual Pressure Available:	0.86 PSI

VALVE SCHEDULE

NUMBER	MODEL	SIZE	TYPE	GPM	PSI	PSI @ POC	PRECIP
1	Rain Bird PEB	1-1/2"	Turf Spray	20.40	32.4	56.83	2.54 in/h
2	Rain Bird PEB	1-1/2"	Turf Spray	21.93	32.56	58.14	2.15 in/h
3	Rain Bird PEB	1-1/2"	Turf Spray	20.97	30.51	53.13	4.25 in/h
4	Rain Bird PEB	1-1/2"	Turf Spray	21.98	30.12	52.48	2.87 in/h
5	Rain Bird PEB	1-1/2"	Turf Spray	20.27	33.26	49.75	2.43 in/h
6	Rain Bird PEB	1-1/2"	Turf Rotor	17.43	33.25	47.56	0.46 in/h
7	Rain Bird LFV-100	1"	Area for Dripline	2.48	23.59	34.21	0.43 in/h
8	Rain Bird PEB	1"	Bubbler	6.50	24.99	36.2	1.7 in/h
9	Rain Bird PEB	1-1/2"	Turf Spray	18.33	32.24	50.23	2.09 in/h
10	Rain Bird PEB	1-1/2"	Turf Rotor	18.36	32.06	53.1	0.73 in/h

SLEEVING / WIRING NOTES:

IN ADDITION TO PROVIDING SLEEVES FOR ALL PIPING UNDER ROADWAYS AND WALKWAYS, THE IRRIGATION CONTRACTOR SHALL PROVIDE AND INSTALL SCH. 40 PVC SLEEVES FOR ALL CONTROLLER WIRES OCCURRING UNDER ALL ROADWAYS AND WALKWAYS. SLEEVES FOR CONTROLLER WIRES SHALL BE 2" DIA. AND CONTAIN NO MORE THAN 25 WIRES.

IRRIGATION DISCLAIMER

THIS DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES, AND OTHER EQUIPMENT SHOWN WITHIN PAVED AREAS OR OUT OF PROPERTY BOUNDARIES ARE FOR DESIGN CLARIFICATION ONLY, AND SHALL BE INSTALLED IN PLANTING AREAS WITHIN THE PROPERTY LINES OR LIMITS INDICATED ON PLAN. THE IRRIGATION CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL ABOVE-GRADE IRRIGATION EQUIPMENT WITH THE OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO INSTALLATION, OR IRRIGATION CONTRACTOR MAY BE REQURED TO MOVE SUCH ITEMS AT HIS OWN COST.

IRRIGATION CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL FINAL QUANTITIES PER DRAWINGS AND SPECIFICATIONS. ANY QUANTITIES PROVIDED ARE PROVIDED AS A CONVENIENCE TO THE CONTRACTOR ONLY AND SHALL NOT BE CONSIDERED ABSOLUTE.

AUTOMATIC DRAIN VALVES AND AIR RELIEF VALVES

INSTALL AUTOMATIC DRAIN VALVES AT THE LOW POINTS OF EACH LATERAL LINE (MIN. 2 PER VALVE) AS PER DETAIL L, SHEET LI4. INSTALL AIR RELIEF VALVES ON DRIP SYSTEMS AT THE LCOATIONS SHOWN ON THE PLANS, AS AS PER DETAILS.

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI
EST LCS RCS CST SST	Rain Bird 1806 15 Strip Series Turf Spray 6.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. Side and Bottom Inlet. 1/2" NPT Female Threaded Inlet.	20	25
Q T H F	Rain Bird 1806 8 Series MPR Turf Spray 6.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. Side and Bottom Inlet. 1/2" NPT Female Threaded Inlet.	1	25
Q T H F	Rain Bird 1806 10 Series MPR Turf Spray 6.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. Side and Bottom Inlet. 1/2" NPT Female Threaded Inlet.	1	25
Q T H TQ F	Rain Bird 1806 12 Series MPR Turf Spray 6.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. Side and Bottom Inlet. 1/2" NPT Female Threaded Inlet.	1	25
4 6 8 10 12 15 18 1401 1402 1404 1408	Rain Bird 1806 ADJ Turf Spray 6.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. Side and Bottom Inlet. 1/2" NPT Female Threaded Inlet. Rain Bird 1806-1400 Flood 1401 Flood Bubbler 6.0" popup	90 13	25 20

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI	GPM	RADIUS
0.75	Rain Bird 3504-PC Turf Rotor, 4" Pop-Up. Adjustable and Full Circle.	6	25	0.54	15'
1.0	Rain Bird 3504-PC Turf Rotor, 4" Pop-Up. Adjustable and Full Circle.	29	25	0.77	20'
1.5	Rain Bird 3504-PC Turf Rotor, 4" Pop-Up. Adjustable and Full Circle.	7	25	1.06	23'
2.0	Rain Bird 3504-PC Turf Rotor, 4" Pop-Up. Adjustable and Full Circle.	2	25	1.40	27'

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Rain Bird LFV-100 1" Low Flow DV Valve	1
	Area to Receive Dripline Rain Bird XFD-06-18 XFD On-Surface Pressure Compensating Landscape Dripline. 0.6 GPH emitters at 18" O.C. Dripline laterals spaced at 18" apart, with emitters offset for triangular pattern. UV Resistant. Specify XF insert fittings.	371.6 l.f.

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Rain Bird PEB 1-1/2"Plastic Industrial Valves. Low Flow Operating Capability, Globe Configuration.	9
	Nibco Ball Valve Brass, Two-Piece, Full Port, NPT x NPT, T-FP-600A	1
BF	Febco 825Y 1-1/4" Reduced Pressure Backflow Preventer	1
C	Rain Bird ESP4MEi with (1) ESP-SM6 10 Station, Hybrid Modular Indoor Controller. For Residential or Light Commercial Applications.	1
R	Rain Bird WR2-RC Wireless Rain Sensor Combo, includes 1 receiver and 1 rain sensor transmitter.	1
M	Water Meter 3/4"	1
	Irrigation Lateral Line: PVC Class 200 SDR 21	2,915 l.f.
	Irrigation Mainline: PVC Schedule 40	603.2 l.f.
	Pipe Sleeve: PVC Schedule 40	315.9 l.f.

Valve Callout
Valve Number
Valve Flow
Valve Size

0' 10' 20' 40'
Scale 1" = 20'

Bowman
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M D P R Firm Reg # 14141100 No. 20180105 14
5601 DEMOCRACY DRIVE, SUITE 205, PLANO, TX 75024
Phone: (972) 497-2990
www.bowman.com

REVISIONS
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LANDSCAPE IRRIGATION

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LEE'S SUMMIT, MO 64086

EVERGREEN DESIGN GROUP
(800) 680-6630
4625 Lindell Blvd., Ste 200
St Louis, MO 63101
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STATE OF MISSOURI
JAMES W. GIBSON
NUMBER
LA-1999138133
LANDSCAPE ARCHITECT

DATE: 1/25/22

Know what's below. Call before you dig.

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTORS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

DESIGN	DRAWN	CHKD
JWG	JWG	RM

JOB No. 070460-01-001

SHEET
LI-1

IRRIGATION SPECIFICATIONS

GENERAL

A. QUALIFICATIONS OF IRRIGATION CONTRACTOR
   1. ALL WORK SHOWN ON THESE PLANS SHALL BE PERFORMED BY A SINGLE IRRIGATION CONTRACTING FIRM SPECIALIZING IN IRRIGATION SYSTEMS. SEE THE IRRIGATION PLAN FOR SPECIFIC EQUIPMENT AND SYSTEM LAYOUT.
   2. THE IRRIGATION CONTRACTOR MUST HAVE ON ITS STAFF A LICENSED IRRIGATION INSTALLER, AS REGULATED BY THE APPROPRIATE LOCAL JURISDICTION. A LICENSED IRRIGATION INSTALLER SHALL BE PRESENT AT THE PROJECT SITE AT ALL TIMES AS WORK IS IN PROGRESS. THE OWNER MAY DEMAND THAT WORK STOP UNTIL THE CONTRACTOR PROVIDES FOR A LICENSED IRRIGATION INSTALLER TO BE PRESENT AT THE PROJECT SITE AND SUPERVISING ALL IRRIGATION WORK.
   3. A LIST OF SUCCESSFULLY COMPLETED PROJECTS OF THIS TYPE, SIZE AND NATURE MAY BE REQUESTED BY THE OWNER FOR FURTHER QUALIFICATION MEASURES.

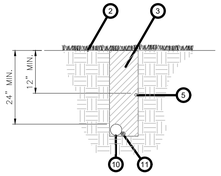
B. SCOPE OF WORK
   1. WORK COVERED BY THESE SECTIONS INCLUDES THE FURNISHING AND PAYMENT OF ALL MATERIALS, LABOR, SERVICES, EQUIPMENT, LICENSES, TAXES, FEES, AND ANY OTHER ITEMS THAT ARE NECESSARY FOR THE EXECUTION, INSTALLATION AND COMPLETION OF ALL WORK, SPECIFIED HEREIN AND/OR SHOWN ON THE IRRIGATION PLANS, NOTES, AND DETAILS.
   2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LAWS, CODES AND REGULATIONS REQUIRED BY AUTHORITIES HAVING JURISDICTION OVER SUCH WORK, INCLUDING ALL INSPECTIONS AND PERMITS REQUIRED BY FEDERAL, STATE AND LOCAL AUTHORITIES IN SUPPLY, TRANSPORTATION AND INSTALLATION OF MATERIALS. IN CASE OF CONFLICT BETWEEN THESE PLANS AND LOCAL AND/OR STATE CODES, CODES SHALL PREVAIL.
   3. THE INTENT OF THE IRRIGATION SYSTEM IS TO PROVIDE 100% COVERAGE OF ALL LANDSCAPE AREAS. THE IRRIGATION PLAN IS GENERALLY DIAGRAMMATIC; COORDINATE IRRIGATION INSTALLATION WITH UTILITY INSTALLATIONS. ACTUAL LOCATION OF CONTROLLER, BACKFLOW DEVICE, PIPING, VALVES, SPRAY HEADS, DRIP IRRIGATION, AND RELATED EQUIPMENT MAY NEED TO BE ADJUSTED BASED ON ACTUAL SITE CONDITIONS.
   4. FOR CLARITY PURPOSES, SOME IRRIGATION LINES AND EQUIPMENT ARE SHOWN IN HARDSCAPE AREAS WITHOUT ACCESS SLEEVES; THESE LINES SHALL BE INSTALLED IN A COMMON TRENCH OR AT THE BACK OF CURB IN LANDSCAPE AREAS. MINOR FIELD ADJUSTMENTS SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER.

PRODUCTS

A. ALL MATERIALS SHALL BE NEW AND WITHOUT FLAWS OR DEFECTS OF ANY TYPE AND SHALL BE THE BEST OF THEIR CLASS AND KIND. ALL MATERIALS SHALL HAVE A MINIMUM GUARANTEE OF ONE YEAR AGAINST MATERIAL DEFECTS OR DEFECTIVE WORKMANSHIP. ALL MATERIALS SHALL BE OF THE BRANDS AND TYPES NOTED ON THE DRAWINGS OR AS SPECIFIED HEREIN, OR APPROVED EQUAL. THE CONTRACTOR MUST FIRST OBTAIN APPROVAL FROM THE IRRIGATION DESIGNER FOR AN APPROVED EQUAL BEFORE INSTALLING SUCH MATERIALS IN THE FIELD, OR THE CONTRACTOR MAY BE REQUIRED TO REPLACE SUCH MATERIALS AT HIS OWN COST.
B. BACKFLOW PREVENTION DEVICES SHALL BE OF THE SIZE AND TYPE INDICATED ON THE DRAWINGS. INSTALL BACKFLOW PREVENTION UNITS IN ACCORDANCE WITH IRRIGATION CONSTRUCTION DETAILS AND ALL APPLICABLE STATE AND LOCAL CODES AND ORDINANCES.
C. PIPING
   1. PRESSURE SUPPLY LINES, DOWNSTREAM OF THE POINT-OF-CONNECTION:
      a. SCHEDULE 40 PVC FOR ALL PIPE 1-1/2" OR LESS
      b. CLASS 315 PVC FOR ALL PIPE 2" TO 2-1/2"
      c. CLASS 200 PVC, GASKETED, FOR ALL PIPE 3" AND LARGER
   2. SLEEVING AND NON-PRESSURE LATERAL LINES (DOWNSTREAM FROM VALVES): CLASS 200 PVC
   3. FITTINGS: SCH. 40 PVC, EXCEPT AS NOTED OTHERWISE.
D. VALVES AND DRIP VALVE ASSEMBLIES: TYPE AND SIZE AS NOTED ON PLANS. EACH VALVE SHALL BEAR A PRE-MANUFACTURED, NUMBERED WATERPROOF TAG BEARING A NUMBER CORRESPONDING TO ITS VALVE SEQUENCE OF OPERATION ON THE CONTROLLER. THE OPERATION SEQUENCE SHALL MATCH THAT AS SHOWN ON THE PLANS.
E. QUICK COUPLERS, BALL VALVES, AND GATE VALVES: TYPE AND SIZE PER PLANS.
F. VALVE BOXES: TYPE AND SIZE AS NOTED ON DETAILS. ALL VALVES BOXES SHALL BE LOCKING BOLT-DOWN TYPE, FURNISHED WITH LIDS AND BOLTS. BOXES SHALL BE OF A SIZE TO CONTAIN THE ENTIRE VALVE AND/OR VALVE ASSEMBLY. THE VALVE BOX LID SHALL HAVE THE VALVE STATION NUMBER HEAT-BRANDED INTO THE LID WITH 2" HIGH LETTERS.
G. FIXED SPRAY HEADS AND ROTORS: PLASTIC BODY POP-UP, WITH A REMOVABLE PLASTIC SPRAY NOZZLE. EXACT TYPE, MODEL, AND NOZZLE SHALL BE AS INDICATED ON PLANS.
H. INTEGRAL EMITTER DRIP TUBING: TUBING MODEL AND FLOW RATE AS NOTED ON PLANS, WITH INTEGRAL EMITTERS WELDED TO THE INSIDE WALL OF THE TUBING AS AN INTEGRAL PART OF THE TUBING ASSEMBLY.
I. AUTOMATIC CONTROLLER: TYPE AND MODEL PER PLANS. PROVIDE VANDAL-PROOF ENCLOSURE FOR ALL EXTERIOR INSTALLATIONS. PROVIDE LINE-VOLTAGE DISCONNECT SWITCH WITH GROUND FAULT PROTECTION.
J. 24 VOLT VALVE WIRE SHALL BE A MINIMUM OF #14 GAUGE, U.F. APPROVED FOR DIRECT BURIAL, SINGLE CONDUCTOR IRRIGATION WIRE. EACH CONTROLLER SHALL HAVE A DIFFERENT COLOR STATION AND COMMON WIRE.
   1. STATION WIRE - ANY COLOR EXCEPT WHITE OR BLUE
   2. COMMON WIRE - WHITE
   3. EXTRA COMMON WIRES - BLUE
K. WIRE SPLICES SHALL BE ENCASED IN A WATERPROOF COMPOUND OR GEL. ALL FIELD SPLICES SHALL BE LOCATED IN A 6 INCH ROUND VALVE BOX.
L. RAIN SENSOR: TYPE AND MODEL PER PLANS.

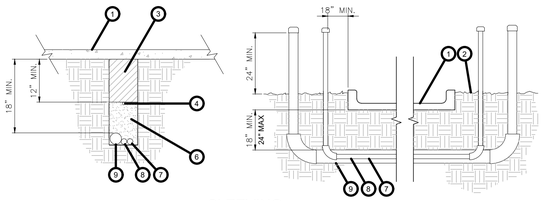
METHODS

A. THIS DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES, AND OTHER EQUIPMENT SHOWN WITHIN PAVED AREAS OR OUT OF PROPERTY BOUNDARIES ARE FOR DESIGN CLARIFICATION ONLY, AND SHALL BE INSTALLED IN PLANTING AREAS WITHIN THE PROPERTY LINES OR LIMITS INDICATED ON PLAN. THE IRRIGATION CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL ABOVE-GRADE IRRIGATION EQUIPMENT WITH THE OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO INSTALLATION, OR IRRIGATION CONTRACTOR MAY BE REQUIRED TO MOVE SUCH ITEMS AT HIS OWN COST. ENSURE FIELD COORDINATION IS MADE EARLY ON IN THE CONSTRUCTION PHASE SO PLACEMENT LOCATION IS CORRECT.
B. THE IRRIGATION CONTRACTOR SHALL MEET WITH THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT OF WORK, AND SHALL OBTAIN ALL ENGINEERING, LANDSCAPE, AND OTHER APPLICABLE PLANS & DOCUMENTS. THE CONTRACTOR SHALL THOROUGHLY REVIEW THE PLANS AND REPORT ANY CONFLICTS OR DISCREPANCIES TO THE LANDSCAPE ARCHITECT AND OWNER'S REPRESENTATIVE IMMEDIATELY.
C. THE IRRIGATION CONTRACTOR SHALL NOT WILFULLY INSTALL THE IRRIGATION SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN OBSTRUCTIONS, GRADES OR DIMENSIONS EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE ENGINEERING. SUCH OBSTRUCTIONS OR DIFFERENCES SHALL BE BROUGHT TO THE ATTENTION OF THE IRRIGATION DESIGNER. IN THE EVENT THAT THIS NOTIFICATION IS NOT PERFORMED, THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS AND NECESSARY COSTS.
D. CHOOSE ONE: SEE UTILITY PLANS FOR IRRIGATION POINTS OF CONNECTION (TAP) AND DOMESTIC WATER SUPPLY. - OR - THE IRRIGATION CONTRACTOR SHALL COORDINATE AND PAY FOR THE INSTALLATION OF THE IRRIGATION TAP AND METER.
E. THE IRRIGATION CONTRACTOR SHALL PAY ANY AND ALL FEES AND PERMITS ASSOCIATED WITH THE INSTALLATION OF THE IRRIGATION SYSTEM.
F. AT LEAST SEVEN DAYS BEFORE BEGINNING WORK, CONFIRM THE STATIC WATER PRESSURE IS AT LEAST 55 PSI AND LESS THAN 70 PSI. IF STATIC WATER PRESSURE IS OUTSIDE OF THE STATED RANGE, DO NOT PROCEED WITHOUT FIRST NOTIFYING THE IRRIGATION DESIGNER AND OWNER IN WRITING, AND OBTAINING SUBSEQUENT DIRECTION FOR CORRECTIONAL MEASURES. SHOULD THE IRRIGATION CONTRACTOR CHOOSE TO BEGIN THE INSTALLATION WITHOUT SUCH NOTIFICATION, THE IRRIGATION CONTRACTOR WILL ASSUME THE RESPONSIBILITY FOR ALL COSTS INCURRED TO ENSURE THE SYSTEM IS WORKING PROPERLY. NO CHANGE ORDERS WILL BE AUTHORIZED IN SUCH CIRCUMSTANCES.
G. THE IRRIGATION CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITY LINES (WATER, SEWER, ELECTRICAL, TELEPHONE, GAS, CABLE, TELEVISION, ETC.) PRIOR TO THE START OF ANY WORK. THE CONTRACTOR SHALL BE FAMILIAR WITH ALL GRADE DIFFERENCES, LOCATIONS OF WALLS, STRUCTURES AND UTILITIES.
H. COORDINATE WITH THE OWNER THE PROPOSED LOCATIONS OF THE AUTOMATIC CONTROLLER AND ANY REQUIRED SLEEVES THROUGH THE BUILDING FOR CONTROL WIRES.
I. TRENCHING NEAR EXISTING TREES:
   1. CONTRACTOR SHALL NOT DISTURB ROOTS 1-1/2" AND LARGER IN DIAMETER WITHIN THE CRITICAL ROOT ZONE (CRZ) OF EXISTING TREES, AND SHALL EXERCISE ALL POSSIBLE CARE AND PRECAUTIONS TO AVOID INJURY TO TREE ROOTS, TRUNKS, AND BRANCHES. THE CRZ IS DEFINED AS A CIRCULAR AREA EXTENDING OUTWARD FROM THE TREE TRUNK, WITH A RADIUS EQUAL TO 1' FOR EVERY 1" OF TRUNK DIAMETER-AT-BREAST-HEIGHT (4.5' ABOVE THE AVERAGE GRADE AT THE TRUNK).
   2. ALL EXCAVATION WITHIN THE CRZ SHALL BE PERFORMED USING HAND TOOLS. NO MACHINE EXCAVATION OR TRENCHING OF ANY KIND SHALL BE ALLOWED WITHIN THE CRZ.
   3. ALTER ALIGNMENT OF PIPE TO AVOID TREE ROOTS 1-1/2" AND LARGER IN DIAMETER. WHERE TREE ROOTS 1-1/2" AND LARGER IN DIAMETER ARE ENCOUNTERED IN THE FIELD, TUNNEL UNDER SUCH ROOTS. WRAP EXPOSED ROOTS WITH SEVERAL LAYERS OF BURLAP AND KEEP MOIST. CLOSE ALL TRENCHES WITHIN THE CANOPY DRIP LINES WITHIN 24 HOURS.
   4. ALL SEVERED ROOTS SHALL BE HAND PRUNED WITH SHARP TOOLS AND ALLOWED TO AIR-DRY. DO NOT USE ANY SORT OF SEALERS OR WOUND PAINTS.
J. ALL BACKFILL MATERIAL SHALL BE SUBJECT TO APPROVAL BY THE OWNER. BACKFILL MATERIAL SHALL BE FREE FROM RUBBISH, ROCK, LARGE STONES, BRUSH, SOD, FROZEN MATERIAL OR OTHER UNSUITABLE SUBSTANCES THAT MAY DAMAGE PIPE DURING THE BACKFILLING OPERATIONS. IN THE EVENT THAT THE MATERIAL FROM THE EXCAVATION OR TRENCHING IS FOUND TO BE UNSUITABLE FOR USE IN BACKFILL, IT SHALL BE REMOVED FROM THE SITE AND PROPERLY AND LEGALLY DISPOSED OF BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL THEN PURCHASE AND AND FURNISH SUITABLE BACKFILL MATERIAL CONSISTING OF EARTH, LOAM, SANDY CLAY, SAND OR OTHER APPROVED MATERIALS FREE OF DEBRIS.
K. BACKFLOW INSTALLATION: CONTRACTOR SHALL MAKE CONNECTIONS TO EXISTING WATER SOURCES AT LOCATION SHOWN ON PLANS AND AS APPROVED BY THE OWNER, AND SHALL MAKE ANY MINOR CHANGES IN LOCATION AS MAY BE NECESSARY DUE TO ACTUAL SITE CONDITIONS. BACKFLOW HEIGHT SHALL BE AS PER LOCAL CODES AND IRRIGATION DETAIL. INSTALL A BRASS BALL VALVE IMMEDIATELY UPSTREAM OF THE BACKFLOW DEVICE TO SERVE AS AN ISOLATION VALVE.
L. PIPING:
   1. PIPE SIZE SHALL CONFORM TO THOSE SHOWN ON THE DRAWINGS. NO SUBSTITUTIONS OF SMALLER PIPE SIZES SHALL BE PERMITTED, BUT SUBSTITUTIONS FOR LARGER SIZES MAY BE APPROVED.
   2. MAINLINE PIPE AND WIRES SHALL BE INSTALLED WITH A MINIMUM COVER OF 18 INCHES. LATERAL PIPE SHALL BE INSTALLED WITH A MINIMUM COVER OF 12 INCHES.
   3. ASSEMBLE ALL THREADED FITTINGS WITH TEFLON TAPE, WHICH SHALL BE APPLIED TO MALE THREADS ONLY.
   4. ALL SOLVENT-WELD CONNECTIONS SHALL BE MADE WITH APPROVED SOLVENT-WELD PRIMER AND GLUE.
   5. PIPE SHALL BE INSTALLED WITH A MINIMUM OF 4" HORIZONTAL CLEARANCE FROM ANY OTHER PIPE AND 2" VERTICAL CLEARANCE FROM ANY PIPES THAT CROSS OVER OR UNDER.
M. VALVES SHALL BE INSTALLED PER MANUFACTURER'S DIRECTIONS AND THE IRRIGATION DETAILS. EACH VALVE SHALL BEAR A PRE-PRINTED WATERPROOF TAG BEARING THE APPROPRIATE CONTROLLER STATION NUMBER.
N. VALVE BOXES SHALL BE INSTALLED FLUSH WITH THE GRADE, WITH CLEAN PEA GRAVEL LOCATED BELOW THE VALVE AS NOTED ON THE DETAILS. EACH VALVE BOX COVER SHALL BE HEAT-BRANDED WITH THE CONTROLLER STATION NUMBER.
O. DRIP IRRIGATION EQUIPMENT SHALL BE INSTALLED PER MANUFACTURER'S DIRECTIONS AND THE IRRIGATION DETAILS.
   1. SUBSURFACE DRIP LINES SHALL BE BURIED NO MORE THAN 2" BELOW FINISH GRADE.
   2. DRIP LINES MOUNTED ON GRADE SHALL BE LOCATED BENEATH LANDSCAPE FABRIC, AND SECURED IN PLACE WITH WIRE STAPLES AT A MAXIMUM OF 48" ON CENTER.
P. SPRAY, ROTOR, AND BUBBLER HEADS:
   1. ALL SPRAY AND ROTOR HEAD LOCATIONS SHALL BE STAKED, FLAGGED AND/OR OTHERWISE CLEARLY MARKED ON THE GROUND PRIOR TO INSTALLATION. SPRINKLER HEAD STAKING SHALL BE INSPECTED AND APPROVED BY THE OWNER'S REPRESENTATIVE BEFORE INSTALLATION.
   2. ALL SPRAY HEADS SHALL BE CONNECTED WITH A 12 INCH MINIMUM LENGTH OF ½ INCH FLEX PVC. THE FLEX PVC SHALL BE SOLVENT WELDED TO SCHEDULE 40 PVC FITTINGS WITH WELD-ON #795 SOLVENT AND #P-70 PRIMER. ALL ROTORS SHALL BE CONNECTED TO LATERAL LINES WITH PRE-MANUFACTURED SWING JOINTS.
   3. ALL ROTOR, SPRAY AND BUBBLER HEADS SHALL BE SET PERPENDICULAR AND FLUSH TO FINISH GRADE AND WITH A CLEARANCE OF FOUR INCHES (MINIMUM) FROM THE EDGE OF ANY BUILDINGS, WALLS, BOULDERS, AND HARDSCAPE, UNLESS OTHERWISE SPECIFIED.
   4. ALL ROTOR, SPRRAY AND BUBBLER HEADS AND VALVES SHALL BE FLUSHED AND ADJUSTED FOR OPTIMUM COVERAGE WITH MINIMUM OVERSPRAY ON WALKS, STREETS, WALLS, ETC.
Q. AUTOMATIC CONTROLLER:
   1. INSTALL THE CONTROLLER AT THE LOCATION INDICATED BY THE OWNER. INSTALL CONTROLLER WITH A BACKUP BATTERY AS RECOMMENDED BY THE MANUFACTURER.
   2. THE IRRIGATION CONTRACTOR SHALL COORDINATE 120 V.A.C. ELECTRICAL POWER TO CONTROLLERS AND DEDICATE ONE (1) 20-AMP BREAKER FOR EACH CONTROLLER. IT SHALL BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO MAKE THE FINAL HOOK-UP FROM THE ELECTRICAL SOURCE TO THE CONTROLLER UNIT ONLY.
   3. ALL VALVE CONTROL WIRE SHALL BE AWG 14 TYPE UF, 600 VOLT TEST, DIRECT BURIAL. NO SPLICES SHALL BE ALLOWED EXCEPT AT VALVES AND CONTROLLER. WHERE SPLICES ARE NECESSARY DUE TO EXCESSIVELY LONG WIRE RUNS, THE CONTRACTOR SHALL MAKE ALL SPLICES IN 6" ROUND VALVE BOXES WITH 3M'S "DBY-DIRECT BURIAL SPLICE KIT". THE CONTRACTOR SHALL LABEL ALL WIRES WITH WATERPROOF TAGS AND MARKERS AT ALL SPLICES AND VALVE MANIFOLDS, AND SHALL LEAVE A 24" COIL OF EXCESS WIRE AT EACH CONNECTION.
   4. PROVIDE #10 COMMON WIRE, DIRECT BURIAL, TO ALL REMOTE CONTROL VALVES.
   5. CONNECT ALL DIRECT BURIAL WIRES TO VALVES USING 3M'S "DBY-DIRECT BURIAL SPLICE KIT" (UNLESS OTHERWISE SPECIFIED).
   6. PROVIDE THREE ADDITIONAL IRRIGATION CONTROL WIRES ALONG EACH BRANCH OF MAINLINE FOR FUTURE EXPANSION. STUB ADDITIONAL CONTROL WIRES INTO BACK OF IRRIGATION CONTROLLERS.
   7. THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL CONTROL WIRE SLEEVES AND PIPE SLEEVES UNDER PAVED AREAS PRIOR TO PAVING - SEE SLEEVING NOTES.
R. INSTALL THE RAIN SENSOR IN THE VICINITY OF THE CONTROLLER, AND COORDINATE LOCATION WITH THE OWNER. IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO ENSURE THE RAIN SENSOR IS PLACED IN A LOCATION WHERE IT CAN RECEIVE ADEQUATE RAINFALL WITHOUT OBSTRUCTIONS. IF IT IS PLACED IN AN INADEQUATE LOCATION, THE IRRIGATION CONTRACTOR MAY BE REQUIRED TO RELOCATE IT AT NO ADDITIONAL COST TO THE OWNER.
S. ALL IRRIGATION EQUIPMENT NOT OTHERWISE DETAILED OR SPECIFIED SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.
T. QUALITY CONTROL
   1. PERFORM COVERAGE TESTS AFTER SPRINKLER SYSTEM IS COMPLETED, BUT PRIOR TO ANY PLANTING AND PERFORM TESTING IN THE PRESENCE OF THE IRRIGATION DESIGNER AND THE CONSTRUCTION MANAGER.
   2. TEST SYSTEM TO ASSURE THAT ALL LAWN AND PLANTING AREAS ARE WATERED COMPLETELY AND UNIFORMLY.
   3. MAKE ALL NECESSARY ADJUSTMENTS TO PROVIDE COMPLETE COVERAGE, INCLUDING REALIGNMENT OF HEADS AND REPLACEMENT OF NOZZLES.
U. CLEAN UP
   1. DURING IRRIGATION EXCAVATION AND INSTALLATION, KEEP ALL PAVEMENT CLEAN AND ALL WORK AREAS IN A NEAT, ORDERLY CONDITION.
   2. DISPOSED LEGALLY OF ALL EXCAVATED MATERIALS OFF THE PROJECT SITE.
V. INSPECTION AND ACCEPTANCE
   1. UPON COMPLETION OF THE WORK, THE IRRIGATION CONTRACTOR SHALL PROVIDE THE SITE CLEAN, FREE OF DEBRIS AND TRASH, AND SUITABLE FOR USE AS INTENDED. THE IRRIGATION CONTRACTOR SHALL THEN REQUEST AN INSPECTION BY THE OWNER TO DETERMINE FINAL ACCEPTABILITY.
   3. WHEN THE INSPECTED WORK DOES NOT COMPLY WITH THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL REPLACE AND/OR REPAIR THE REJECTED WORK TO THE OWNER'S SATISFACTION WITHIN 24 HOURS.
   4. THE MAINTENANCE PERIOD WILL NOT COMMENCE UNTIL THE WORK HAS BEEN RE-INSPECTED BY THE OWNER AND FOUND TO BE ACCEPTABLE. AT THAT TIME, A WRITTEN NOTICE OF FINAL ACCEPTANCE WILL BE ISSUED BY THE OWNER, AND THE MAINTENANCE AND GUARANTEE PERIODS WILL COMMENCE.
   5. CONTROLLER CHART: THE IRRIGATION CONTRACTOR SHALL PROVIDE A 8 ½" X 11" COLOR-CODED, LAMINATED COPY OF THE IRRIGATION LAYOUT AND PLACE IT IN THE CONTROLLER'S COVER. THE CONTROLLER CHART SHALL CLEARLY DELINEATE THE AREAS COVERED BY EACH VALVE, USING A SEPARATE COLOR FOR EACH ZONE.
   6. TURN THE FOLLOWING ITEMS IN TO THE OWNER UPON COMPLETION OF THE INSTALLATION:
      a. QUICK COUPLER KEYS (2)
      b. CONTROLLER MANUAL (1)
      c. CONTROLLER KEYS (2)
      d. A MINIMUM OF (2) COPIES OF RECORD DRAWINGS. A RECORD DRAWING IS A RECORD OF ALL CHANGES THAT OCCURRED IN THE FIELD AND THAT ARE DOCUMENTED THROUGH CHANGE ORDERS, ADDENDA, OR CONTRACTOR/CONSULTANT DRAWING MARKUPS.
W. REFER TO THE PLANTING SPECIFICATIONS FOR ADDITIONAL CONDITIONS OF FINAL ACCEPTANCE AND START OF THE MAINTENANCE PERIOD.
X. WARRANTY
   1. THE IRRIGATION SYSTEM SUPPLIED AND INSTALLED SHALL BE WARRANTED (LABOR AND MATERIALS) TO REMAIN OPERATIONAL FOR A PERIOD OF 12 MONTHS AFTER THE DATE OF FINAL ACCEPTANCE. DURING THIS PERIOD, THE CONTRACTOR SHALL ALSO REPAIR ANY SETTLEMENT OF THE IRRIGATION TRENCHES.
   2. BY THE END OF THE WARRANTY PERIOD, ANY IRRIGATION PART THAT IS EITHER NON-OPERATIONAL OR THAT IS OPERATING BELOW STANDARDS AS DETERMINED BY THE OWNER, SHALL BE REMOVED FROM THE SITE AND SHALL BE REPLACED. REPLACEMENTS SHALL BE OF THE SAME KIND AS SPECIFIED IN THE IRRIGATION LEGEND, AND SHALL BE INSTALLED AS ORIGINALLY SPECIFIED.
   3. IRRIGATION PARTS DAMAGED OR IMPAIRED DUE TO ACTS OF GOD, VANDALISM, AND/OR THE OWNER'S IMPROPER MAINTENANCE SHALL NOT BE COVERED BY THIS WARRANTY.



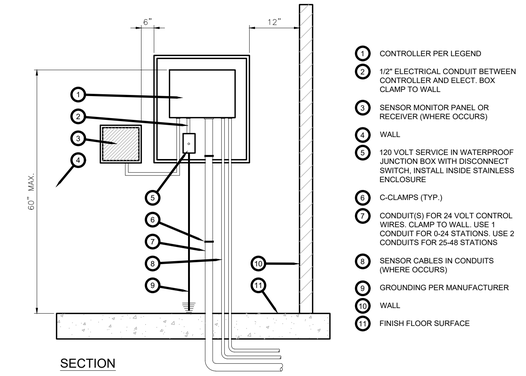
1 PAVEMENT SURFACE
2 FINISH GRADE
3 TRENCH BACKFILL
4 LOCATOR WIRE W/BURIED CAUTION TAPE
5 PVC IRRIGATION LATERAL - BURIED MIN. 12" BELOW GRADE
6 SAND BACKFILL
7 SCH. 40 PVC LATERAL SLEEVE - SEE PLANS FOR SIZE
8 SCH. 40 PVC WIRE SLEEVE FOR CONTROL WIRES, MIN. 2" DIA.
9 SCH. 40 PVC MAINLINE SLEEVE - SEE PLANS FOR SIZE
10 PVC IRRIGATION MAINLINE
11 CONTROL WIRES - TAPE TO MAINLINE AT 10' INTERVALS
12 PVC CAP, SOLVENT WELDED

TRENCHING



SLEEVING

D PIPE AND SLEEVE INSTALLATION
SCALE: NTS

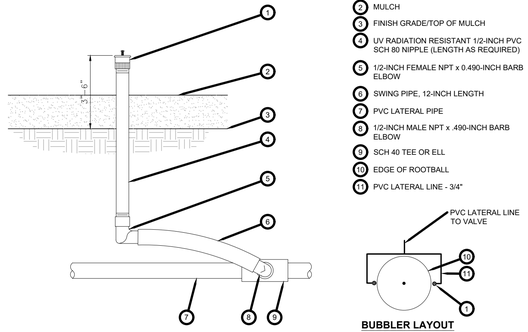


1 CONTROLLER PER LEGEND
2 1/2" ELECTRICAL CONDUIT BETWEEN CONTROLLER AND ELECT. BOX CLAMP TO WALL
3 SENSOR MONITOR PANEL OR RECEIVER (WHERE OCCURS)
4 WALL
5 120 VOLT SERVICE IN WATERPROOF JUNCTION BOX WITH DISCONNECT SWITCH, INSTALL INSIDE STAINLESS ENCLOSURE
6 C-CLAMPS (TYP.)
7 CONDUIT(S) FOR 24 VOLT CONTROL WIRES. CLAMP TO WALL. USE 1 CONDUIT FOR 0-24 STATIONS. USE 2 CONDUITS FOR 25-48 STATIONS
8 SENSOR CABLES IN CONDUITS (WHERE OCCURS)
9 GROUNDING PER MANUFACTURER
10 WALL
11 FINISH FLOOR SURFACE

SECTION

NOTES:
1) MOUNT CONTROLLER AND CABINET PER MANUFACTURER'S DIRECTIONS.
2) 120 V.A.C. POWER PROVIDED BY OTHERS. LANDSCAPE CONTRACTOR SHALL MAKE FINAL CONNECTION AT CONTROLLER. CONNECT TO ELECTRICAL SUPPLY PER NATIONAL ELECTRIC CODE AND LOCAL CODE.
3) LOCATE GROUND ROD 8' MIN. FROM CONTROLLER. VERIFY LOCATION OF GROUND ROD, CONTROLLER AND SOURCE OF ELECTRICITY WITH MANUFACTURER'S REPRESENTATIVE AND OWNER AS PART OF PRE CONSTRUCTION MEETING.

A CONTROLLER - WALL MOUNT, INDOOR
SCALE: NTS

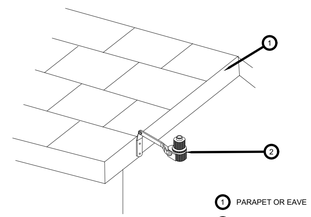


1 BUBBLER PER LEGEND - 2 PER TREE
2 MULCH
3 FINISH GRADE/TOP OF MULCH
4 UV RADIATION RESISTANT 1/2-INCH PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
5 1/2-INCH FEMALE NPT x 0.490-INCH BARB ELBOW
6 SWING PIPE, 12-INCH LENGTH
7 PVC LATERAL PIPE
8 1/2-INCH MALE NPT x .490-INCH BARB ELBOW
9 SCH 40 TEE OR ELL
10 EDGE OF ROOTBALL
11 PVC LATERAL LINE - 3/4"

PVC LATERAL LINE TO VALVE

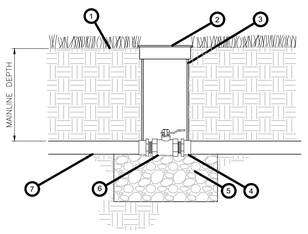
BUBBLER LAYOUT PLAN VIEW

E BUBBLER - TREE
SCALE: NTS



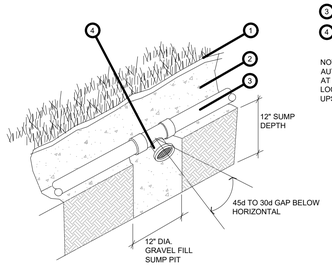
1 PARAPET OR EAVE
2 AUTOMATIC RAIN SENSOR - INSTALL PER MANUFACTURER'S INSTRUCTIONS

B RAIN SENSOR, ROOF MOUNT
SCALE: NTS



1 FINISH GRADE AT 1" BELOW TOP OF BOX IN TURF AREAS: 2" BELOW TOP OF BOX IN SHRUB/GROUNDCOVER AREAS
2 9" ROUND VALVE BOX WITH LOCKABLE LID
3 EXTENSION SECTION AS NECESSARY TO MEET GRADE
4 PVC MALE ADAPTER
5 3-INCH MINIMUM DEPTH OF ¾-INCH WASHED GRAVEL
6 BRASS BALL VALVE (SIZED PER MAINLINE)
7 IRRIGATION MAINLINE

C BRASS BALL VALVE
SCALE: NTS



1 FINISH GRADE
2 PIPE TRENCH
3 LATERAL LINE PIPE
4 AUTOMATIC DRAIN VALVE

NOTE:
AUTOMATIC VALVES ARE TO BE LOCATED AT LOW POINTS OF LATERAL LINES. LOCATE END DRAIN VALVE 12" UPSTREAM FROM LAST HEAD.

F AUTOMATIC DRAIN VALVE
SCALE: NOT TO SCALE

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NO.	DESCRIPTION	DATE
	CURRENT SET THRU REVISION 02	

IRRIGATION DETAILS AND SPECIFICATION

MO' BETTAHS
520 NW CHIPMAN RD
LEE'S SUMMIT, MO 64086

STATE OF MISSOURI
JAMES W. GIPSON
LA-1999138133
LANDSCAPE ARCHITECT

DATE: 12/13/21

DESIGN	DRAWN	CHKD
JWG	JWG	RM

JOB No. 070460-01-001

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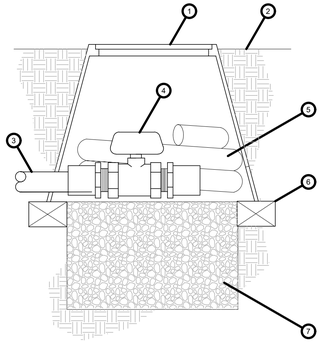
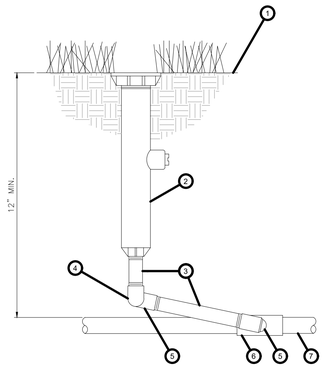


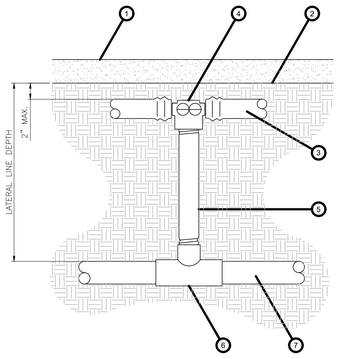
1. 10" ROUND PLASTIC VALVE BOX WITH LOCKABLE LID, "CARSON" OR APPROVED EQUAL
2.
3. [illegible] VALVE BOX TO BE 2" ABOVE FINISH GRADE IN [illegible] AREAS
4. [illegible] SIZE
5. 3' COILED LENGTH OF LINE SIZE FLEX HOSE. SOLVENT WELD TO VALVE
6. RED BRICK TYPICAL, 3 REQUIRED
7. 6" DEEP LAYER OF PEA GRAVEL

M FLUSH VALVE
SCALE: NTS



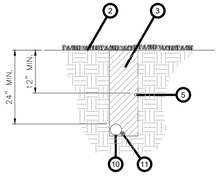
1. FINISH GRADE
2. POP-UP SPRAY HEAD
3. SCH. 80 PVC NIPPLE (LENGTH AS REQUIRED)
4. SCH. 40 PVC ELL
5. SCH. 40 PVC STREET ELL
6. SCH. 40 PVC TEE OR ELL
7. PVC LATERAL PIPE

N POP-UP SPRAY HEAD
SCALE: NTS

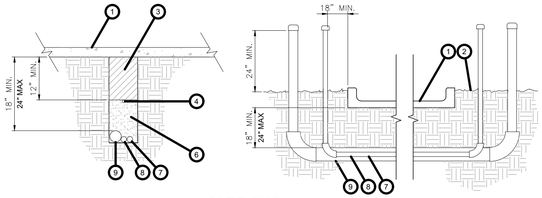


1. TOP OF MULCH
2. FINISH GRADE
3. DRIP LINE PER PLAN
4. INSERT TEE OR ELBOW
5. SCH. 80 PVC NIPPLE (LINE SIZE)
6. SCH. 40 PVC TEE (SST)
7. SCH. 40 PVC SUPPLY HEADER (SIZE PER PLAN)

O SUBSURFACE DRIPLINE CONNECTION



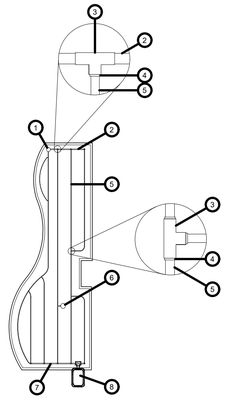
TRENCHING



SLEEVING

1. PAVEMENT SURFACE
2. FINISH GRADE
3. TRENCH BACKFILL
4. LOCATOR WIRE W/BURIED CAUTION TAPE
5. PVC IRRIGATION LATERAL - BURIED MIN. 12" BELOW GRADE
6. SAND BACKFILL
7. SCH. 40 PVC LATERAL SLEEVE - SEE PLANS FOR SIZE
8. SCH. 40 PVC WIRE SLEEVE FOR CONTROL WIRES, MIN. 2" DIA.
9. SCH. 40 PVC MAINLINE SLEEVE - SEE PLANS FOR SIZE
10. PVC IRRIGATION MAINLINE
11. CONTROL WIRES - TAPE TO MAINLINE AT 10' INTERVALS
12. PVC CAP, SOLVENT WELDED

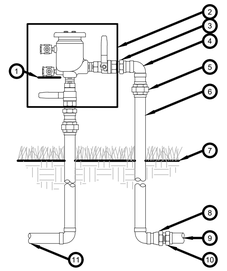
J PIPE AND SLEEVE INSTALLATION
SCALE: NTS



1. FLUSH VALVE
2. SCH. 40 PVC EXHAUST HEADER
3. SCH. 40 PVC TEE OR ELL
4. COMPRESSION ADAPTER
5. DRIP LINE
6. AIR RELIEF VALVE AT HIGH POINT OF SYSTEM (WHERE INDICATED ON PLANS)
7. SCH. 40 PVC SUPPLY HEADER
8. CONTROL VALVE

NOTE: SET DRIP LINES 3"-6" AWAY FROM HARDSCAPE

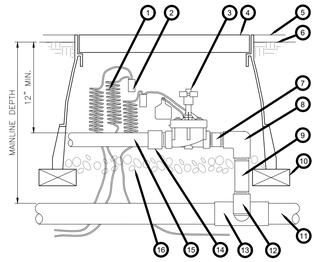
K SUBSURFACE DRIP LINE LAYOUT
SCALE: NOT TO SCALE



1. MIN. OF 12 INCHES ABOVE HIGHEST POINT OF DISCHARGE
2. PRESSURE VACUUM BREAKER
3. COPPER MALE ADAPTER (1 OF 2)
4. COPPER 90° ELL (1 OF 3)
5. COPPER UNION (1 OF 2)
6. COPPER PIPE (TYPICAL)
7. FINISH GRADE
8. COPPER FEMALE ADAPTER
9. IRRIGATION MAINLINE PIPE
10. PVC MALE ADAPTER
11. COPPER PIPE FROM POINT-OF-CONNECTION

NOTE:
INSTALL BACKFLOW PREVENTER AS REQUIRED BY LOCAL CODES AND HEALTH DEPARTMENT. VERIFY LOCAL REQUIREMENTS PRIOR TO INSTALLATION.

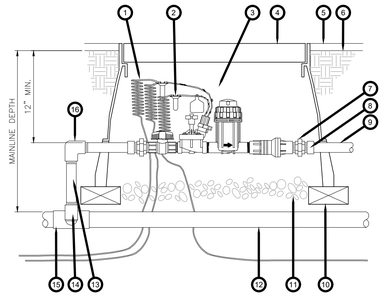
L BACKFLOW PREVENTER, PVB
SCALE: NTS



30-INCH LINEAR LENGTH OF WIRE, COILED

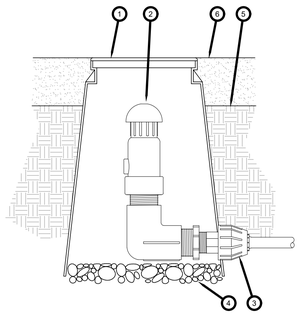
2. WATERPROOF CONNECTION (ANY APPROVED)
3. REMOTE CONTROL VALVE
4. JUMBO PLASTIC VALVE BOX BY CARSON (OR EQUAL)
5. TOP OF MULCH
6. FINISHED GRADE-1" BELOW TOP OF BOX IN TURF AREAS, 2" IN SHRUB AREAS
7. PVC SCH 80 NIPPLE (CLOSE)
8. PVC SCH 40 ELL
9. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
10. BRICK (1 OF 4)
11. PVC MAINLINE PIPE
12. SCH. 40 PVC ELL
13. PVC SCH 40 TEE OR ELL
14. PVC SCH 40 MALE ADAPTER
15. PVC LATERAL PIPE
16. 3-INCH MINIMUM DEPTH OF ¾-INCH WASHED GRAVEL

G REMOTE CONTROL VALVE
SCALE: NTS



1. 30-INCH LINEAR LENGTH OF WIRE, COILED
2. WATERPROOF CONNECTION (ANY APPROVED)
3. REMOTE CONTROL VALVE ASSEMBLY
4. JUMBO PLASTIC VALVE BOX BY CARSON (OR EQUAL)
5. TOP OF MULCH
6. FINISHED GRADE-1" BELOW TOP OF BOX IN TURF AREAS, 2" IN SHRUB AREAS
7. PVC UNION (2)
8. PVC SCH 40 MALE ADAPTER (2)
9. PVC LATERAL PIPE
10. BRICK (1 OF 4)
11. 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
12. PVC MAINLINE PIPE
13. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
14. SCH. 40 PVC ELL
15. SCH. 40 PVC TEE OR ELL
16. SCH. 40 PVC THREADED ELL

H DRIP CONTROL ZONE KIT
SCALE: NTS



1. VALVE BOX PER PLAN
2. AIR RELIEF VALVE PER PLAN
3. ADAPTERS PER MANUFACTURER
4. PEA GRAVEL, 3" DEPTH
5. FINISH GRADE
6. TOP OF MULCH

NOTE: INSTALL AT HIGHEST POINT(S) IN SYSTEM.

I AIR RELIEF VALVE
SCALE: NTS

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REVISION	DESCRIPTION	DATE

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IRRIGATION DETAILS

MO' BETTAHS
520 NW CHIPMAN RD
LEE'S SUMMIT, MO 64086

STATE OF MISSOURI
JAMES W. GIBSON
NUMBER
2009138133
LANDSCAPE ARCHITECT

DATE: 12/13/21

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LI-3

Loop Installation Instructions

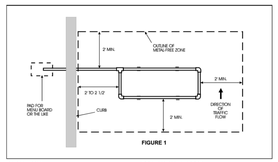

FIGURE 1

PRECAUTIONS
(Refer to Figure 1)

1. The loop should not be closer than five feet (5') from any magnetic interference above ground such as a storage tank, a dumpster, or other large metal object.
2. No part of the loop should be within two feet (2') of reinforcement rods in the surrounding pavement.
3. The loop should not be situated directly over any large metal object in the ground within five feet (5') of the surface.

CONCRETE PAD PREPARATION
(Refer to Figure 2)
Excavate deep enough to install a stone or gravel base. The finished pad must cover the loop with a maximum of two inches (2") of concrete.

ASPHALT PAD PREPARATION
(Refer to Figure 3)

1. Excavate to a minimum of four inches (4") below the pproad finished pavement.
2. Install a sand base that will allow a maximum of two inches (2") of asphalt pavement above the loop.
3. Dig a trench for the loop lead conduit at the same depth as the loop.
4. Cut a slot through the curb to accept the lead wire conduit if necessary.

POSITIONING THE LOOP

1. Place the loop on the ground as shown in Figure 1.
2. Refer to Figure 1 and measure from the "TEE" to the pad for the menu board.
3. Mark and cut the 4' piece of loop lead conduit to this dimension.
4. Thread the loop wires through the cut loop lead conduit and cement the loop lead conduit to the loop "TEE".
5. Thread the loop lead wires through the 90 degree elbow and cement the elbow to the loop lead conduit.
6. Thread the loop lead wire through the 11" piece of PVC pipe and cement this piece to the elbow.
7. On the pavement, mark off and outline that extends at least two feet (2') beyond any portion of the loop and its cable leads.
8. Remove metal reinforcing rods or other metal objects less than five feet (5') below the loop and within the perimeter of this metal-free area.

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LOOP INSTALLATION INSTRUCTIONS (CONTINUED...)

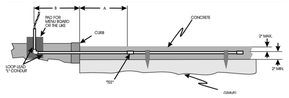

FIGURE 2

EMBEDDING THE LOOP IN CONCRETE

1. Set the loop in place using four notched stakes in the gravel base to suspend it while concrete is being poured.
2. Pour concrete below and above the loop to the finished grade.

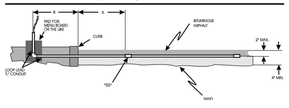

FIGURE 3

EMBEDDING THE LOOP IN ASPHALT

1. Press the loop onto the sand base so that sand supports all parts of the loop.
2. Lay a maximum of two inches (2") of asphalt above the loop.
3. Carefully roll the surface with a small roller or tamp. Do not use a street roller; the weight may damage the PVC conduit.
4. Patch the slot in the curb with paving material.
5. Back-fill over the trench for the cable lead conduit.
6. The loop is ready for connection to the extension cable. See LOOP EXTENSION CABLE INSTALLATION for instruction.

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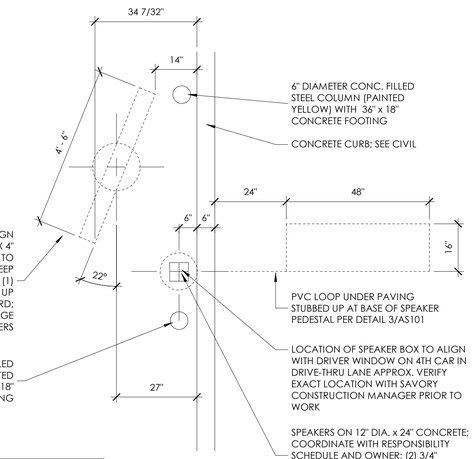
3 MAGNETIC LOOP UNDERNEARTH PAVING DETAIL

6" = 1'-0"



NOTE: COORDINATE WITH SITE PLAN FOR ORIENTATION

2 DRIVE-THRU MENU PLAN

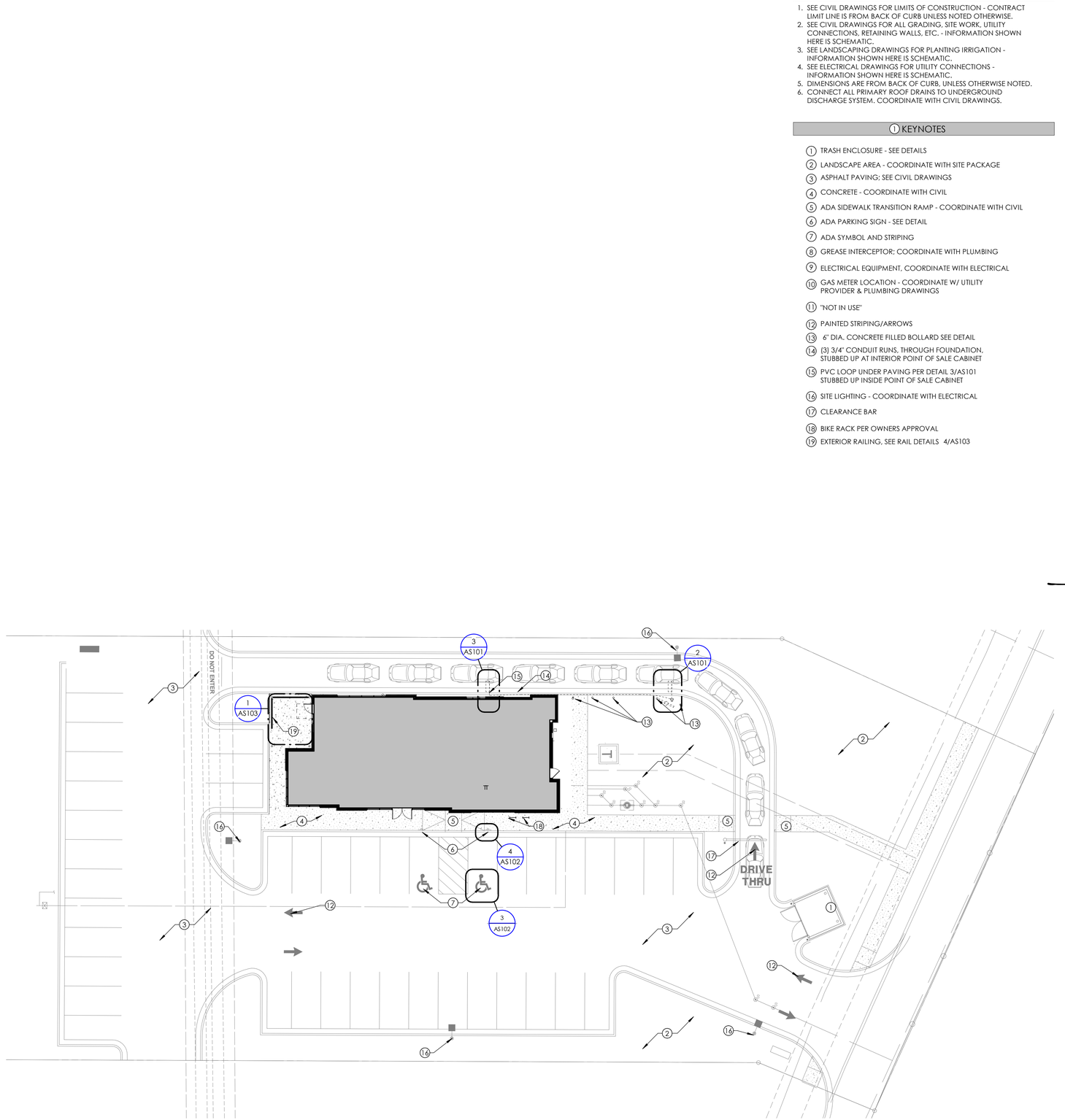
1/2" = 1'-0"

SITE PLAN GENERAL NOTES

1. SEE CIVIL DRAWINGS FOR LIMITS OF CONSTRUCTION - CONTRACT LIMIT LINE IS FROM BACK OF CURB UNLESS NOTED OTHERWISE.
2. SEE CIVIL DRAWINGS FOR ALL GRADING, SITE WORK, UTILITY CONNECTIONS, RETAINING WALLS, ETC. - INFORMATION SHOWN HERE IS SCHEMATIC.
3. SEE LANDSCAPING DRAWINGS FOR PLANTING IRRIGATION - INFORMATION SHOWN HERE IS SCHEMATIC.
4. SEE ELECTRICAL DRAWINGS FOR UTILITY CONNECTIONS - INFORMATION SHOWN HERE IS SCHEMATIC.
5. DIMENSIONS ARE FROM BACK OF CURB, UNLESS OTHERWISE NOTED.
6. CONNECT ALL PRIMARY ROOF DRAINS TO UNDERGROUND DISCHARGE SYSTEM. COORDINATE WITH CIVIL DRAWINGS.

1 KEYNOTES

1. TRASH ENCLOSURE - SEE DETAILS
2. LANDSCAPE AREA - COORDINATE WITH SITE PACKAGE
3. ASPHALT PAVING; SEE CIVIL DRAWINGS
4. CONCRETE - COORDINATE WITH CIVIL
5. ADA SIDEWALK TRANSITION RAMP - COORDINATE WITH CIVIL
6. ADA PARKING SIGN - SEE DETAIL
7. ADA SYMBOL AND STRIPING
8. GREASE INTERCEPTOR; COORDINATE WITH PLUMBING
9. ELECTRICAL EQUIPMENT, COORDINATE WITH ELECTRICAL
10. GAS METER LOCATION - COORDINATE W/ UTILITY PROVIDER & PLUMBING DRAWINGS
11. "NOT IN USE"
12. PAINTED STRIPING/ARROWS
13. 6" DIA. CONCRETE FILLED BOLLARD SEE DETAIL
14. (3) 3/4" CONDUIT RUNS, THROUGH FOUNDATION, STUBBED UP AT INTERIOR POINT OF SALE CABINET
15. PVC LOOP UNDER PAVING PER DETAIL 3/AS101 STUBBED UP INSIDE POINT OF SALE CABINET
16. SITE LIGHTING - COORDINATE WITH ELECTRICAL
17. CLEARANCE BAR
18. BIKE RACK PER OWNERS APPROVAL
19. EXTERIOR RAILING, SEE RAIL DETAILS 4/AS103



1 SITE PLAN

1/16" = 1'-0"

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CURRENT SET THRU REVISION 02

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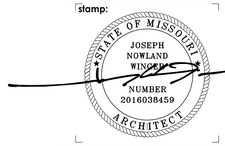


sheet number:

MO-53 LEE - LEE'S SUMMIT

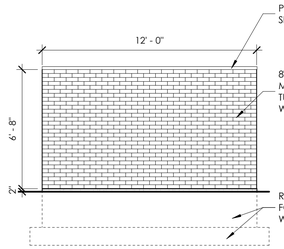
for: MOBETTAH'S (SHELL)

NORTHWEST CHIPMAN ROAD & NORTHWEST WARD ROAD
LEE'S SUMMIT, MO, USA

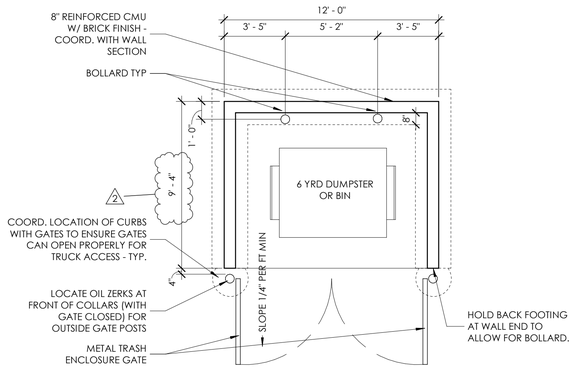
sheet title: SITE PLAN

sheet number:

AS101



12 TRASH ENCLOSURE - BACK ELEVATION
1/4" = 1'-0"



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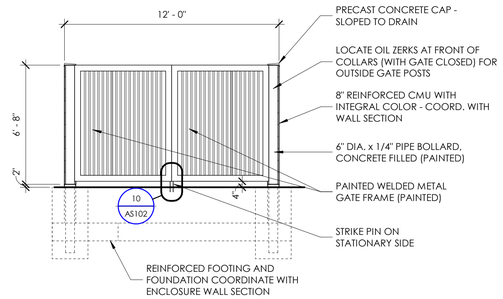
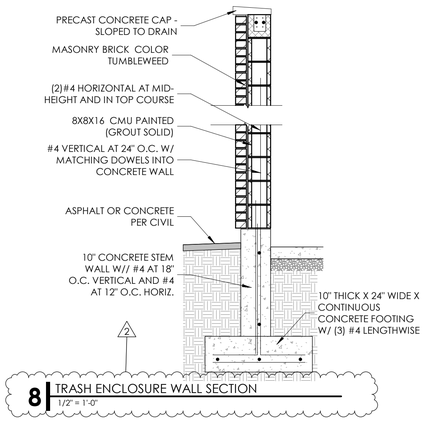
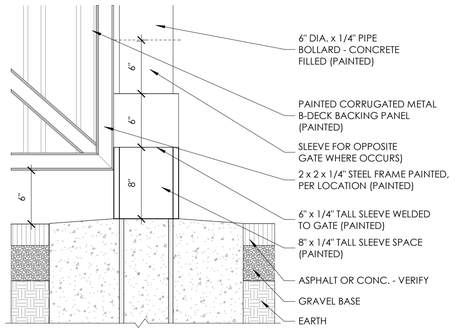
1/4" = 1'-0"



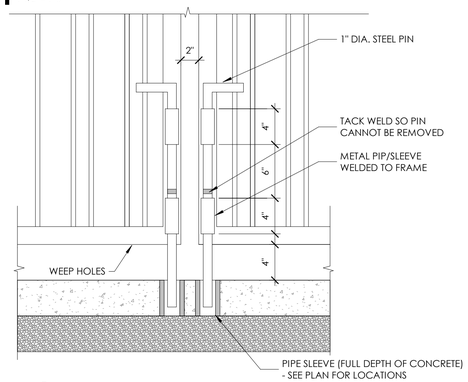
14 TRASH ENCLOSURE - FRONT ELEVATION
1/4" = 1'-0"



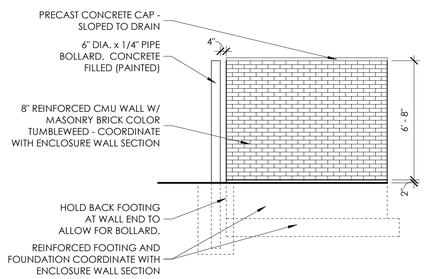
8 TRASH ENCLOSURE WALL SECTION
1/2" = 1'-0"



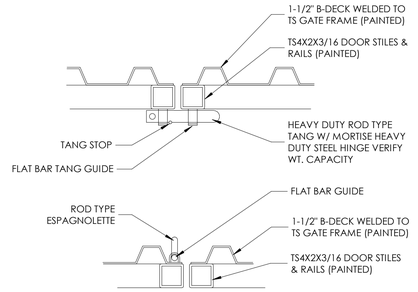
9 DUMPSTER GATE SLEEVE DETAIL
1 1/2" = 1'-0"



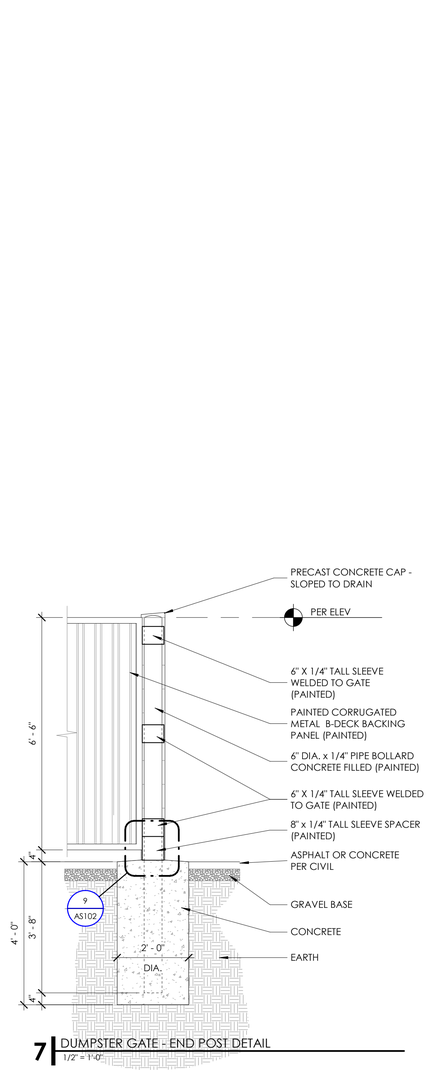
10 DUMPSTER GATE PIN
1 1/2" = 1'-0"



2 **11** TRASH ENCLOSURE - SIDE ELEVATION
1/4" = 1'-0"



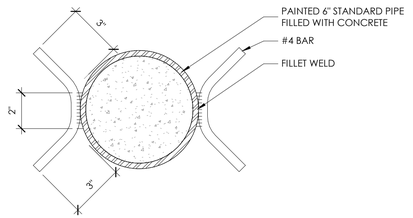
5 GATE ESPAGOLETTE
1" = 1'-0"



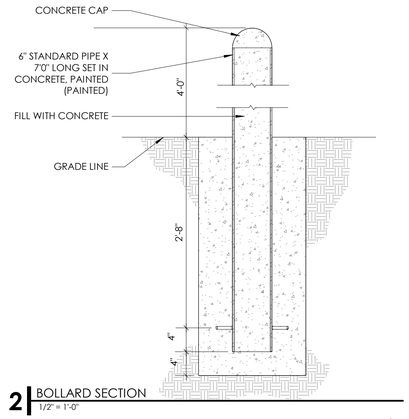
7 DUMPSTER GATE - END POST DETAIL
1/2" = 1'-0"

GENERAL TRASH ENCLOSURE FINISHES:

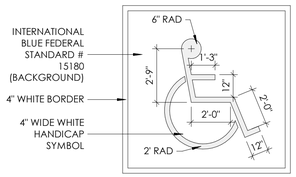
CMU - PAINTED (SW 7024 - FUNCTIONAL GRAY) - HONED FACED PREFINISHED METAL CAP - SHERWIN WILLIAMS 7069 IRON ORE PAINTED DUMPSTER STEEL (POSTS, GATES, BOLLARDS, ETC.) - SHERWIN WILLIAMS 7069 IRON ORE



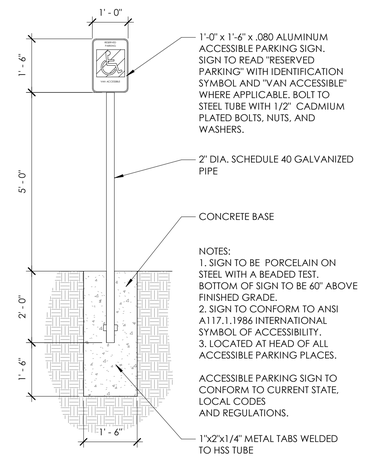
1 BOLLARD CROSS SECTION
3" = 1'-0"



2 BOLLARD SECTION
1/2" = 1'-0"



3 ADA STRIPING SYMBOL
1 1/2" = 1'-0"



4 ACCESSIBLE PARKING SIGN1
1/2" = 1'-0"

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2	REVISION 02	04-06-22

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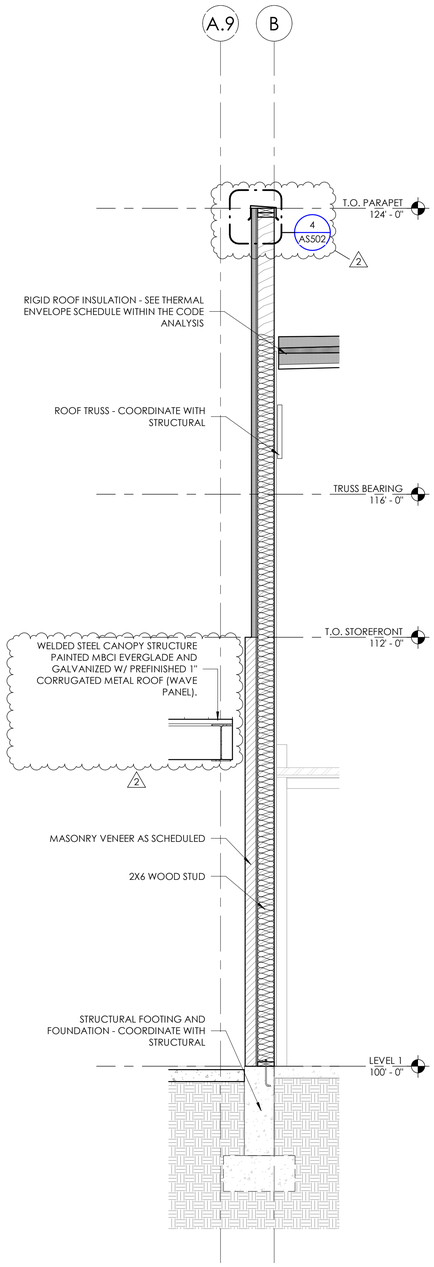
MO-53 LEE - LEE'S SUMMIT for: MOBETTAH'S (SHELL)

NORTHWEST CHIPMAN ROAD & NORTHWEST WARD ROAD
LEE'S SUMMIT, MO, USA

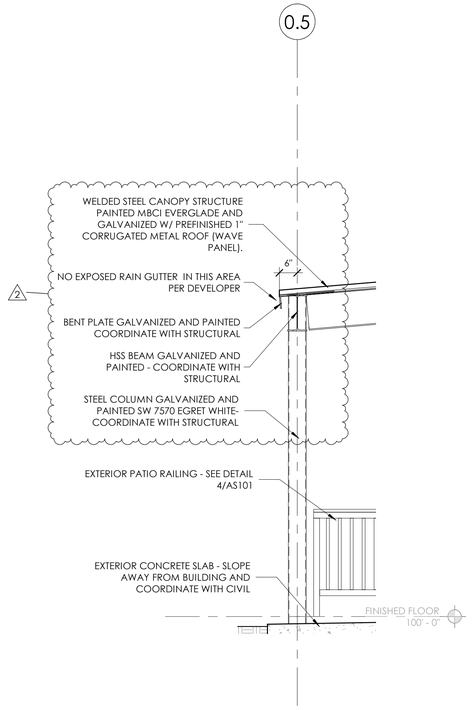
sheet title: SITE DETAILS

sheet number:

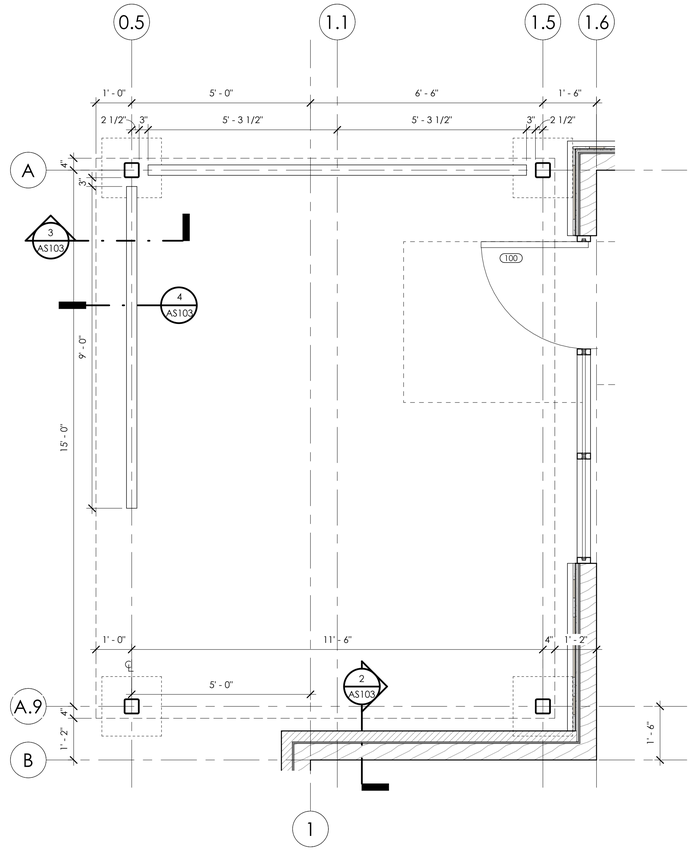
AS102



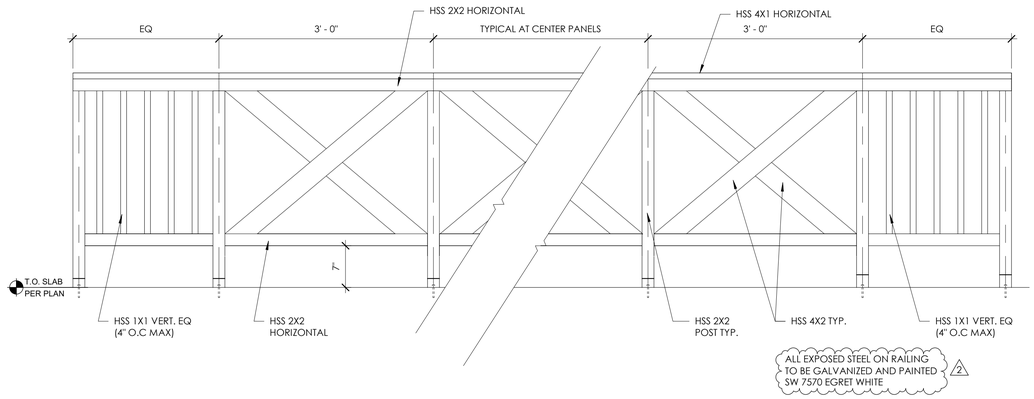
2 EXTERIOR CANOPY SECTION
1/2" = 1'-0"



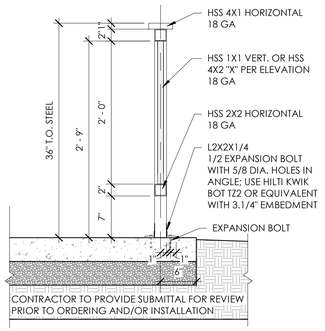
3 EXTERIOR CANOPY SECTION
1/2" = 1'-0"



1 ENLARGED PATIO CANOPY PLAN
1/2" = 1'-0"



4 RAIL DETAIL
1" = 1'-0"



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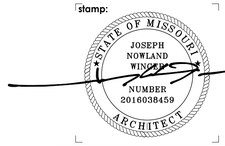

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MO-53 LEE - LEE'S SUMMIT for: MOBETTAH'S (SHELL)

NORTHWEST CHIPMAN ROAD & NORTHWEST WARD ROAD
LEE'S SUMMIT, MO, USA

sheet title:
CANOPY PLAN AND DETAILS

sheet number:
AS103

SLAB PLAN GENERAL NOTES

1. ARCHITECTURAL SLAB PLANS SHALL DETERMINE SLAB EDGES; NOTIFY ARCHITECT OF ANY DETAILS INCONSISTENT WITH THE STRUCTURAL DRAWINGS PRIOR TO WORK.
2. CONTRACTOR TO COORDINATE THE LOCATION OF ALL FLOOR DRAINS AND FLOOR SINKS WITH PLUMBING DRAWINGS AND KITCHEN DRAWINGS.
3. CONTRACTOR TO COORDINATE THE LOCATION OF ALL ROOF DRAINS WITH PLUMBING DRAWINGS.
4. CONTRACTOR TO COORDINATE THE LOCATION OF ALL FLOOR OUTLETS WITH OWNER, ARCHITECT AND ELECTRICAL DRAWINGS.
5. REFER TO STRUCTURE FOR CONTROL JOINTS LOCATIONS ON SLABS ON GRADE UNLESS NOTED OTHERWISE.
6. INSTALL VAPOR BARRIER UNDER SLAB ON GRADE PER SPEC.
7. CONCRETE FOUNDATION WALLS RETAINING EARTH TO RECEIVE TWO COATS OF BITUMINOUS DAMP PROOFING MATERIAL.

① KEYNOTES

① HOLD FOUNDATION DOWN FOR TURN DOWN SLAB - COORDINATE WITH STRUCTURAL

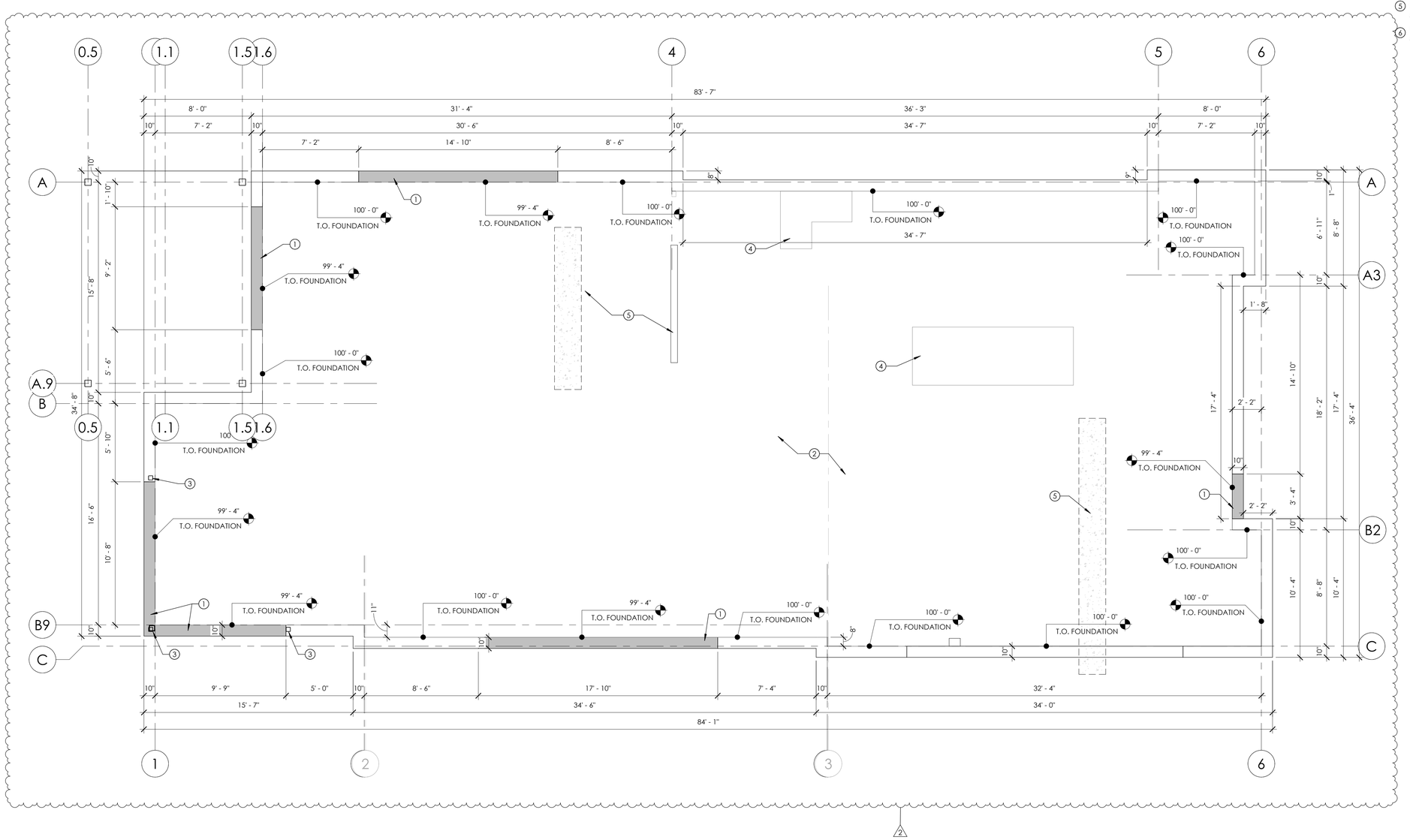
② INTERIOR 4" REINFORCED CONCRETE SLAB PER STRUCTURAL (COORDINATE WITH SHEET A111); PROVIDE 4" GRANULAR DRAINAGE FILL OVER 10 MIL. VAPOR BARRIER AND CONTROL JOINTS AT APPROX. 10'- 0" EACH WAY PROVIDE ESPECIALLY AT CORNERS, COLUMN LOCATIONS AND TRANSITIONS IN SLAB THICKNESS

③ STEEL COLUMN - COORDINATE WITH STRUCTURAL

④ RAISED CONCRETE SLAB PER TI DRAWINGS

⑤ WALL TO BE USED FOR SHEAR; COORDINATE WITH STRUCTURAL AND A112

⑥ COLUMNS AT CANOPY OVER PATIO; COORDINATE WITH STRUCTURAL AND AS112



1 LEVEL 1 - SLAB PLAN
1/4" = 1'-0"

NORTH

THIS SHEET DESCRIBES THE CORE AND SHELL FOR THIS PROJECT; COORDINATE WITH SHEET A111 AS FOR INTERIOR IMPROVMENTS

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for: MOBETTAH'S (SHELL)

NORTHWEST CHIPMAN ROAD & NORTHWEST WARD ROAD
LEE'S SUMMIT, MO, USA

sheet title:
LEVEL 1 FOUNDATION PLAN

sheet number:

AS111

① KEYNOTES

1. HOSE BIB - COORDINATE WITH MECHANICAL
2. PROPOSED LOCATION OF GAS METER - COORDINATE WITH MECHANICAL
3. ELECTRICAL GEAR - COORDINATE WITH ELECTRICAL
4. CONCRETE SLAB OVER GRAVEL BASE AND OVER VAPOR BARRIER (REFER TO SHEET A112 FOR INTERIOR IMPROVEMENTS) - COORDINATE WITH SLAB PLAN AND STRUCTURALLY
5. **NOT IN USE** - INTERIOR ROOF ACCESS LADDER - SEE DETAILS
6. 2 X 2- 1/4" DEEP VENEER GLAZING FRAME
7. CO2 INFILL BOX; COORDINATE WITH OWNER
8. ROOF DRAINS - COORDINATE WITH MECHANICAL
9. CANOPY ABOVE - SEE ROOF PLAN AND DETAILS ON SHEET AS503
10. STEEL COLUMN - COORDINATE WITH STRUCTURAL
11. INTERIOR WALL TO BE USED FOR SHEAR; SEE STRUCTURAL AND A112

FLOOR PLAN GENERAL NOTES:

1. DRAWINGS & SPECIFICATIONS ARE COMPLIMENTARY COMPONENTS OF THE CONTRACT DOCUMENTS. REVIEW ALL DRAWINGS AND SPECIFICATIONS FOR THE COMPLETE SCOPE OF WORK. NOTIFY ARCHITECT IMMEDIATELY FOR CLARIFICATION IF INCONSISTENCIES, CONTRADICTIONS OR OMISSIONS ARE DISCOVERED.
2. DO NOT SCALE DRAWINGS. IF DIMENSIONAL INFORMATION IS REQUIRED & NOT FOUND, NOTIFY ARCHITECT IMMEDIATELY FOR CLARIFICATION BEFORE PROCEEDING WITH CONSTRUCTION.
3. ALL DIMENSIONS ARE TO COLUMN CENTERLINES, TO GRIDLINES OR TO FACE OF FRAMING UNLESS NOTED OTHERWISE.
4. UNLESS NOTED OTHERWISE CLEAR DIMENSIONS INDICATE DIMENSION BETWEEN FINISHES.
5. CONTRACTOR SHALL NOTIFY THE ARCHITECT OF DISCREPANCIES IN THE DOCUMENTS, AND OF ANY FIELD CONDITIONS THAT DEVIATE FROM THE DOCUMENTS.
6. THE ARCHITECT'S APPROVAL MUST BE OBTAINED FOR ANY DEVIATIONS FROM THE CONSTRUCTION DOCUMENTS, INCLUDING BUT NOT LIMITED TO CHANGES IN DIMENSIONS, DESIGN, MATERIALS, PRODUCTS, AND FINISHES. IN NO CASE MAY THE CONTRACTOR MAKE THESE CHANGES WITHOUT THE APPROVAL OF THE ARCHITECT.
7. SHOP DRAWINGS AND OTHER SUBMITTALS ARE TO BE PRESENTED TO THE ARCHITECT FOR REVIEW PRIOR TO EXECUTION OF WORK. ALLOW APPROPRIATE TIME FOR REVIEW.
8. SEE DOOR AND WINDOW SCHEDULES FOR SIZES, TYPES, AND FINISHES, HARDWARE, ETC.
9. FOR BUILDING CODE REQUIREMENTS OR FIRE/SMOKE REQUIREMENTS, SEE 'G' SHEETS.
10. ALL FIRE RATED WALLS TO BE LABELED AS FIRE RATED. LABEL TO BE PLACED ABOVE CEILING LINE.
11. ANY COLUMN FURRING TO BE TIGHT TO COLUMN UNO.
12. ALL CONSTRUCTION SHALL CONFORM TO AND STRICTLY COMPLY WITH ALL APPLICABLE CODES, COVENANTS, RESTRICTIONS, AND OTHER REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION OVER THE PROJECT.
13. IN NO EVENT SHALL THE CONTRACTOR SUBMIT A STANDARD CONSTRUCTION DETAIL FOR A DETAIL SPECIFIED IN THESE DOCUMENTS WITHOUT THE APPROVAL IN WRITING FROM THE ARCHITECT. THE CONTRACTOR SHALL BRING ALL WORK INTO CONFORMITY WITH THE CONSTRUCTION DOCUMENTS, AS THE ARCHITECT ORDERS, BEFORE APPROVAL OF THAT PORTION OF THE PROJECT WILL BE GRANTED.
14. CONTRACTOR TO COORDINATE ALL FLOOR PENETRATIONS WITH ALL TRADES.
15. COORDINATE WITH ELECTRICAL DRAWINGS FOR POWER, DATA, AND OTHER SYSTEM LOCATIONS AND REQUIREMENTS.
16. THE FURNITURE AND OTHER F.F.E. SHOWN ON DRAWINGS IS SCHEMATIC AND IS ONLY TO BE USED FOR REFERENCE ONLY. THE CONTRACTOR SHALL COORDINATE THE FINAL LOCATION OF ELECTRICAL OUTLETS AND OTHER NEEDS WITH THE OWNER AND ARCHITECT, PRIOR TO INSTALLATION.

1 LEVEL 1 -SHELL PLAN
1/4" = 1'-0"

NORTH

THIS SHEET DESCRIBES THE CORE AND SHELL FOR THIS PROJECT; COORDINATE WITH SHEET A112 AS FOR INTERIOR IMPROVMENTS

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MO-53 LEE - LEE'S SUMMIT
for:
MOBETTAH'S (SHELL)
NORTHWEST CHIPMAN ROAD & NORTHWEST WARD ROAD
LEE'S SUMMIT, MO, USA

sheet title:
LEVEL 1 SHELL PLAN

sheet number:
AS112

① KEYNOTES

1. PRE-FINISHED METAL PARAPET CAP
2. ROOF DRAIN - COORDINATE WITH MECHNICAL
3. TAPERED CRICKET INSULATION
4. SINGLE-PLY ROOF MEMBRANE - RUN CONTINUOUS OVER TOP OF PARAPET UNDERNEATH COPING
5. ROOF TOP EQUIPMENT; COORDINATE WITH MECHANICAL
6. LOCKABLE EXTERIOR ROOF ACCESS LADDER - SEE DETAILS
7. WELDED STEEL CANOPY STRUCTURE (PAINTED) W/ PREFINISHED 1" CORRUGATED METAL ROOF (WAVE PANEL) - COORDINATE WITH STRUCTURAL
8. TRAFFIC MEMBRANE - LAYOUT SHOWN IS CONCEPTUAL ONLY - PROVIDE PATHWAY AS REQUIRED TO ACCESS AND SERVICE ALL ROOF TOP EQUIPMENT
9. ANGLE SUPPORT WITH SHAPED PLATES PER STRUCTURAL
10. 36" x 30" ROOF ACCESS HATCH

ROOF PLAN GENERAL NOTES

1. DRAWINGS & SPECIFICATIONS ARE COMPLIMENTARY COMPONENTS OF THE CONTRACT DOCUMENTS, REVIEW ALL DRAWINGS AND SPECIFICATIONS FOR THE COMPLETE SCOPE OF WORK. NOTIFY ARCHITECT IMMEDIATELY FOR CLARIFICATION IF INCONSISTENCIES, CONTRADICTIONS OR OMISSIONS ARE DISCOVERED.
2. DO NOT SCALE DRAWINGS, IF DIMENSIONAL INFORMATION IS REQUIRED & NOT FOUND, NOTIFY ARCHITECT IMMEDIATELY FOR CLARIFICATION BEFORE PROCEEDING WITH CONSTRUCTION.
3. ALL DIMENSIONS ARE TO COLUMN CENTERLINES, TO GRIDLINES OR TO FACE OF FRAMING UNLESS NOTED OTHERWISE.
4. UNLESS NOTED OTHERWISE CLEAR DIMENSIONS INDICATE DIMENSION BETWEEN FINISHES.
5. CONTRACTOR SHALL NOTIFY THE ARCHITECT OF DISCREPANCIES IN THE DOCUMENTS, AND OF ANY FIELD CONDITIONS THAT DEVIATE FROM THE DOCUMENTS.
6. THE ARCHITECTS APPROVAL MUST BE OBTAINED FOR ANY DEVIATIONS FROM THE CONSTRUCTION DOCUMENTS, INCLUDING BUT NOT LIMITED TO CHANGES IN DIMENSIONS, DESIGN, MATERIALS, PRODUCTS, AND FINISHES. IN NO CASE MAY THE CONTRACTOR MAKE THESE CHANGES WITHOUT THE APPROVAL OF THE ARCHITECT.
7. SHOP DRAWINGS AND OTHER SUBMITTALS ARE TO BE PRESENTED TO THE ARCHITECT FOR REVIEW PRIOR TO EXECUTION OF WORK. ALLOW APPROPRIATE TIME FOR REVIEW.
8. ALL CONSTRUCTION SHALL CONFORM TO AND STRICTLY COMPLY WITH ALL APPLICABLE CODES, COVENANTS, RESTRICTIONS, AND OTHER REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION OVER THE PROJECT.
9. IN NO EVENT SHALL THE CONTRACTOR SUBMIT A STANDARD CONSTRUCTION DETAIL FOR A DETAIL SPECIFIED IN THESE DOCUMENTS WITHOUT THE APPROVAL IN WRITING FROM THE ARCHITECT. THE CONTRACTOR SHALL BRING ALL WORK INTO CONFORMITY WITH THE CONSTRUCTION DOCUMENTS, AS THE ARCHITECT ORDERS, BEFORE APPROVAL OF THAT PORTION OF THE PROJECT WILL BE GRANTED.
10. COORDINATE PENETRATION LOCATIONS FOR EQUIPMENT INSIDE BUILDING W/ MECHANICAL, ELECTRICAL, & PLUMBING.
11. PROVIDE CRICKETING AS REQUIRED TO REDIRECT WATER FLOW AROUND ALL ROOFTOP EQUIPMENT AND PREVENT ANY POOLING OF WATER, NOT OPTIONAL.

1 ROOF PLAN
1/4" = 1'-0"

NORTH

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JOSEPH NOWLAND WINDLEY
NUMBER 2016038459
ARCHITECT

sheet number:

MO-53 LEE - LEE'S SUMMIT
for: MOBETTAH'S (SHELL)
NORTHWEST CHIPMAN ROAD & NORTHWEST WARD ROAD
LEE'S SUMMIT, MO, USA

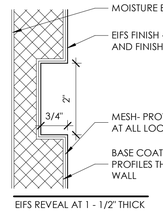
sheet title: ROOF PLAN

sheet number:

AS121

1 NORTH ELEVATION
1/4" = 1'-0"

MATERIAL SCHEDULE							
MARK	DESCRIPTION	MANUFACTURER	PATTERN	COLOR	SIZE	FINISH	COMMENTS
AL-1	ALUMINUM STOREFRONT SYSTEM			EXTRA DARK BRONZE	2X4 1/2"		
E-1	EIFS	SHERWIN WILLIAMS		SW 7045 INTELLECTUAL GRAY			
EC-1	EXPOSED CONCRETE FOUNDATION WALL			NATURAL CONCRETE			PROVIDE PLASTER FINISH AT ALL EXPOSED CONCRETE FOUNDATION WALLS
FB-1	FIBER CEMENT BOARD	SHERWIN WILLIAMS		SW 9041 PARISIAN PATINA			
FB-2	FIBER CEMENT BOARD	SHERWIN WILLIAMS		SW 7570 EGRET WHITE			
GL-1	1" INSULATED - LOW E - CLEAR GLASS	PPG SOLARBAN 60		CLEAR			
GL-1T	1" INSULATED - LOW E - TEMPERED CLEAR GLASS	PPG SOLARBAN 60		CLEAR			
GL-3	1" INSULATED - TINTED SPANDREL GLASS	PPG SOLARBAN 60		WARM GRAY			
GL-3T	1" INSULATED - TINTED TEMPERED SPANDREL GLASS	PPG SOLARBAN 60		WARM GRAY			
M-1	BRICK VENEER	AMCOR	1/2 STACKING BOND	TUMBLEWEED	4" X 16"		MASONRY
MC-1	PREFINISHED METAL CAP			COLOR TO BE MBCI MIDNIGHT BRONZE			
P-2	PAINT	SHERWIN WILLIAMS		SW 7046 ANONYMOUS			
P-3	PAINT	SHERWIN WILLIAMS		MATCH 7069 IRO ORE			GALVANIZED AND PAINTED
P-4	PAINT	SHERWIN WILLIAMS		SW 9041 PARISIAN PATINA			
P-5	PAINT	SHERWIN WILLIAMS		SW 7570 EGRET WHITE			GALVANIZED AND PAINTED



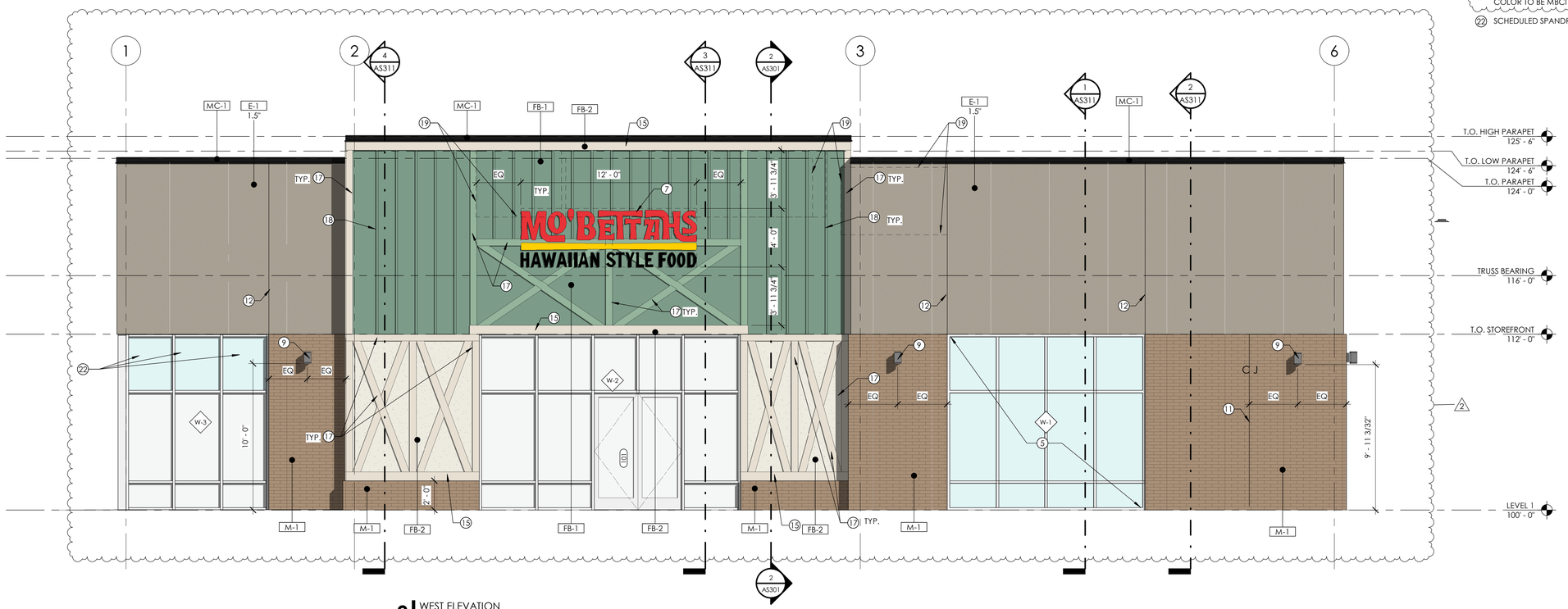
EIFS REVEAL AT 1 - 1/2" THICK

EXTERIOR ELEVATION GENERAL NOTES

1. REFER TO THE MATERIAL AND FINISH SCHEDULES ON SHEET A201 FOR FURTHER INFORMATION.
2. CONTRACTOR TO LEAVE A 1/2" GAP BETWEEN ALL DISSIMILAR MATERIAL TYP. TO BE FILLED WITH BACKER ROD AND SEALANT, COLOR AS SELECTED.
3. ALL EXPOSED EXTERIOR STEEL TO BE GALVANIZED AND PAINTED (I.E. LINTELS, ETC.).
4. CONTRACTOR TO PAINT ALL VENT PIPES, EXHAUST FANS AND OTHER ROOF EQUIPMENT AND PENETRATIONS THAT ARE VISIBLE FROM THE SURROUNDING BUILDING'S STREET FRONTAGE.
5. SEE ELECTRICAL DRAWINGS FOR EXTERIOR POWER LOCATIONS, LIGHTING, HORN STROBES, CARD READERS, ETC.
6. SEE PLUMBING DRAWINGS FOR DOWNSPOUT NOZZLE, HOSE BIB, AND FDC CONNECTION LOCATIONS, ETC.
7. ROOFTOP EQUIPMENT IS SHOWN DASHED.

1 KEYNOTES

1. HOSE BIB - COORDINATE WITH MECHANICAL
2. PROPOSED LOCATION OF GAS METER - COORDINATE WITH MECHANICAL
3. ELECTRICAL GEAR - COORDINATE WITH ELECTRICAL
4. **NOT IN USE**
5. 2 X 2- 1/4" DEEP VENEER GLAZING FRAME
6. ROOF DRAINS - COORDINATE WITH MECHANICAL
7. NEW BUILDING SIGNAGE
8. STEEL CANOPY STRUCTURE GALVANIZED AND PAINTED
9. WALL MOUNTED LIGHTING - COORDINATE WITH ELECTRICAL
10. LIGHTING MOUNTED WITHIN CANOPY FRAMING - COORDINATE WITH ELECTRICAL
11. BRICK CONTROL JOINT - COORDINATE WITH STRUCTURAL
12. EIFS REVEAL - SEE DETAIL
13. DASHED LINE INDICATES EQUIPMENT ON ROOF BEYOND - COORDINATE WITH MECHANICAL
14. ALL FIBER BOARD TRIM TO BE 1X6 UNLESS NOTED OTHERWISE
15. 1X8 FIBER BOARD TRIM
16. **NOT USED**
17. 1X6 FIBER BOARD TRIM TYPICAL
18. VERTICAL 1.75" X 3/4" FIBER BOARD TRIM @ 16" O.C.
19. DASHED LINE INDICATES EQUIPMENT ON ROOF BEYOND - COORDINATE WITH MECHANICAL
20. RAILING PER AS103; PAINTED
21. PREFINISHED 1" CORRUGATED METAL ROOF (WAVE PANEL); COLOR TO BE MBCI EVERGLADE
22. SCHEDULED SPANDREL GLAZING PANEL



2 WEST ELEVATION
1/4" = 1'-0"

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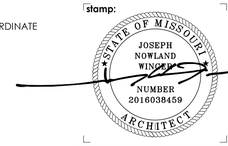

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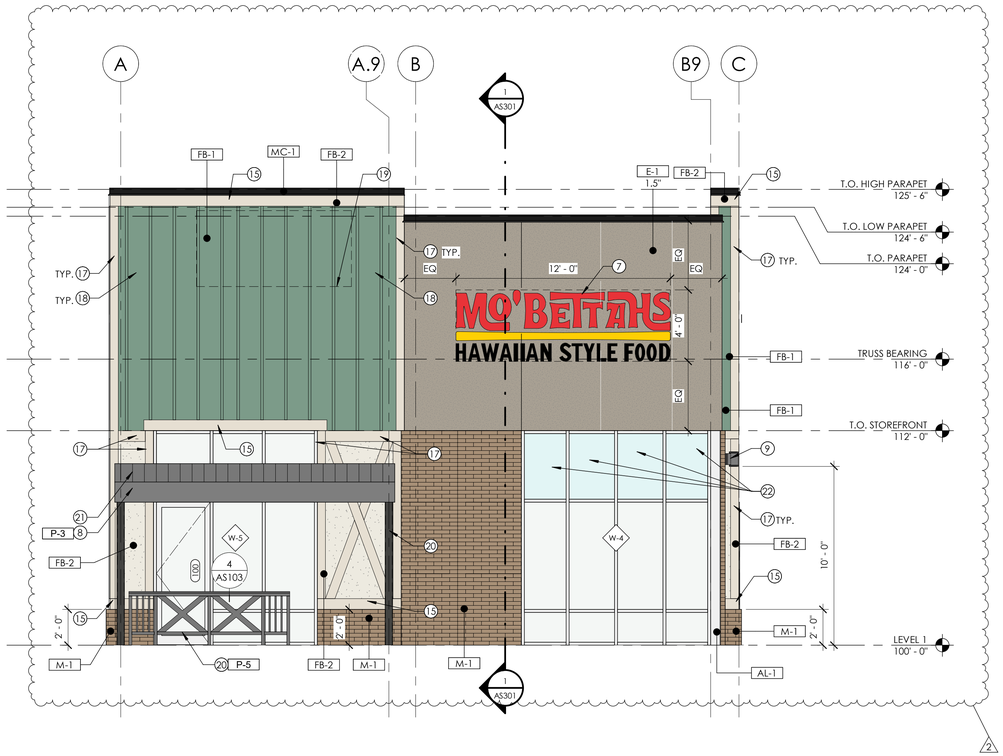
MO-53 LEE - LEE'S SUMMIT for: MOBETTAH'S (SHELL)

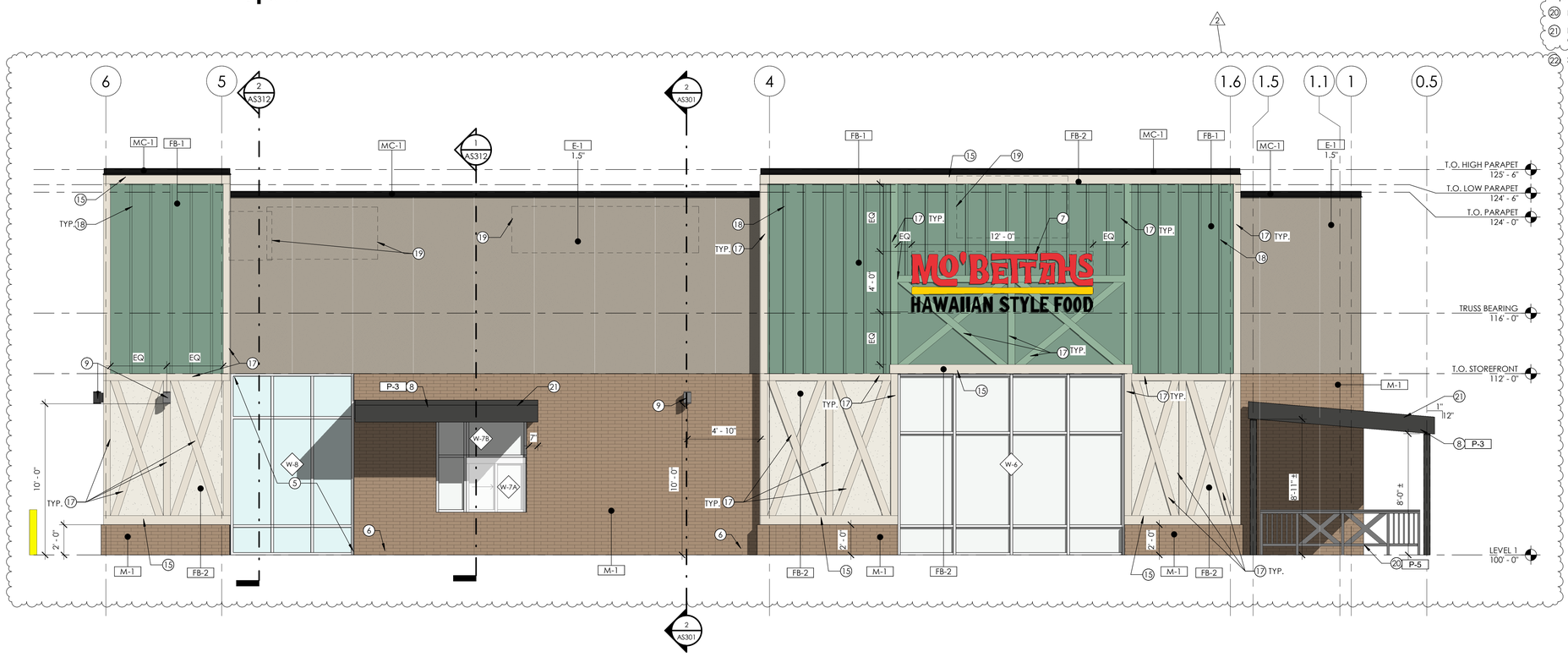
NORTHWEST CHIPMAN ROAD & NORTHWEST WARD ROAD
LEE'S SUMMIT, MO, USA

sheet title:
EXTERIOR ELEVATIONS

sheet number:
AS201



1 SOUTH ELEVATION
1/4" = 1'-0"



2 EAST ELEVATION
1/4" = 1'-0"

MATERIAL SCHEDULE

MARK	DESCRIPTION	MANUFACTURER	PATTERN	COLOR	SIZE	FINISH	COMMENTS
AL-1	ALUMINUM STOREFRONT SYSTEM			EXTRA DARK BRONZE	2X4 1/2"		
E-1	EIFS	SHERWIN WILLIAMS		SW 7045 INTELLECTUAL GRAY			
EC-1	EXPOSED CONCRETE FOUNDATION WALL			NATURAL CONCRETE			PROVIDE PLASTER FINISH AT ALL EXPOSED CONCRETE FOUNDATION WALLS
FB-1	FIBER CEMENT BOARD	SHERWIN WILLIAMS		SW 9041 PARISIAN PATINA			
FB-2	FIBER CEMENT BOARD	SHERWIN WILLIAMS		SW 7570 EGRET WHITE			
GL-1	1" INSULATED - LOW E - CLEAR GLASS	PPG SOLARBAN 60		CLEAR			
GL-1T	1" INSULATED - LOW E - TEMPERED CLEAR GLASS	PPG SOLARBAN 60		CLEAR			
GL-3	1" INSULATED - TINTED SPANDREL GLASS	PPG SOLARBAN 60		WARM GRAY			
GL-3T	1" INSULATED - TINTED TEMPERED SPANDREL GLASS	PPG SOLARBAN 60		WARM GRAY			
M-1	BRICK VENEER	AMCOR	1/2 STACKING BOND	TUMBLEWEED	4" X 16"		MASONRY
MC-1	PREFINISHED METAL CAP			COLOR TO BE MBCI MIDNIGHT BRONZE			
P-2	PAINT	SHERWIN WILLIAMS		SW 7046 ANONYMOUS			
P-3	PAINT	SHERWIN WILLIAMS		MATCH 7069 IRO ORE			GALVANIZED AND PAINTED
P-4	PAINT	SHERWIN WILLIAMS		SW 9041 PARISIAN PATINA			
P-5	PAINT	SHERWIN WILLIAMS		SW 7570 EGRET WHITE			GALVANIZED AND PAINTED

EXTERIOR ELEVATION GENERAL NOTES

1. REFER TO THE MATERIAL AND FINISH SCHEDULES ON SHEET A201 FOR FURTHER INFORMATION.
2. CONTRACTOR TO LEAVE A 1/2" GAP BETWEEN ALL DISSIMILAR MATERIAL TYP. TO BE FILLED WITH BACKER ROD AND SEALANT, COLOR AS SELECTED.
3. ALL EXPOSED EXTERIOR STEEL TO BE GALVANIZED AND PAINTED (I.E. LINTELS, ETC.).
4. CONTRACTOR TO PAINT ALL VENT PIPES, EXHAUST FANS AND OTHER ROOF EQUIPMENT AND PENETRATIONS THAT ARE VISIBLE FROM THE SURROUNDING BUILDING'S STREET FRONTAGE.
5. SEE ELECTRICAL DRAWINGS FOR EXTERIOR POWER LOCATIONS, LIGHTING, HORN STROBES, CARD READERS, ETC.
6. SEE PLUMBING DRAWINGS FOR DOWNSPOUT NOZZLE, HOSE BIB, AND FDC CONNECTION LOCATIONS, ETC.
7. ROOFTOP EQUIPMENT IS SHOWN DASHED.

1 KEYNOTES

1. HOSE BIB - COORDINATE WITH MECHANICAL
2. PROPOSED LOCATION OF GAS METER - COORDINATE WITH MECHANICAL
3. ELECTRICAL GEAR - COORDINATE WITH ELECTRICAL
4. **NOT IN USE**
5. 2 X 2- 1/4" DEEP VENEER GLAZING FRAME
6. ROOF DRAINS - COORDINATE WITH MECHANICAL
7. NEW BUILDING SIGNAGE
8. STEEL CANOPY STRUCTURE GALVANIZED AND PAINTED
9. WALL MOUNTED LIGHTING - COORDINATE WITH ELECTRICAL
10. LIGHTING MOUNTED WITHIN CANOPY FRAMING - COORDINATE WITH ELECTRICAL
11. BRICK CONTROL JOINT - COORDINATE WITH STRUCTURAL
12. EIFS REVEAL - SEE DETAIL
13. DASHED LINE INDICATES EQUIPMENT ON ROOF BEYOND - COORDINATE WITH MECHANICAL
14. ALL FIBER BOARD TRIM TO BE 1X6 UNLESS NOTED OTHERWISE
15. 1X8 FIBER BOARD TRIM
16. **NOT USED**
17. 1X6 FIBER BOARD TRIM TYPICAL
18. VERTICAL 1.75" X 3/4" FIBER BOARD TRIM @ 16" O.C.
19. DASHED LINE INDICATES EQUIPMENT ON ROOF BEYOND - COORDINATE WITH MECHANICAL
20. RAILING PER AS103; PAINTED
21. PREFINISHED 1" CORRUGATED METAL ROOF (WAVE PANEL); COLOR TO BE MBCI EVERGLADE
22. SCHEDULED SPANDREL GLAZING PANEL

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JOSEPH NOWLAND WINDER
NUMBER 2016038459
ARCHITECT

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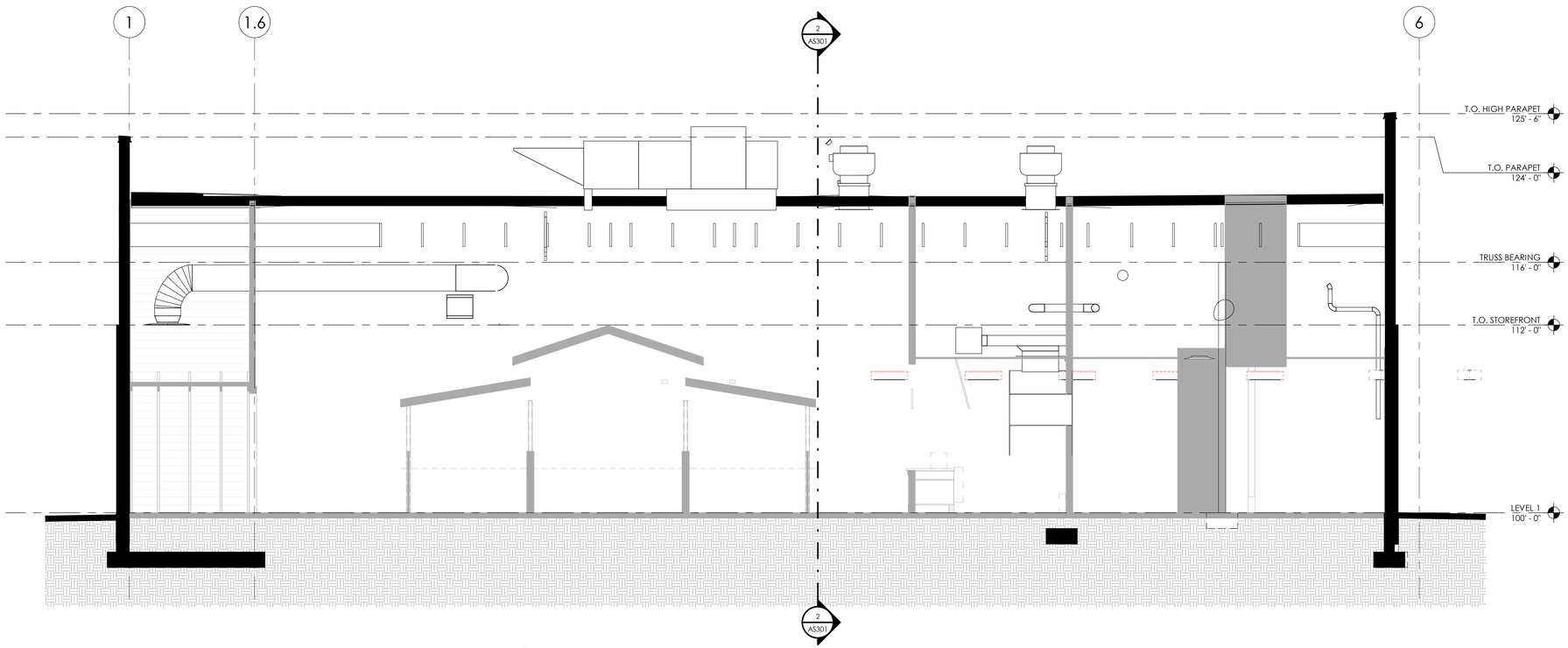
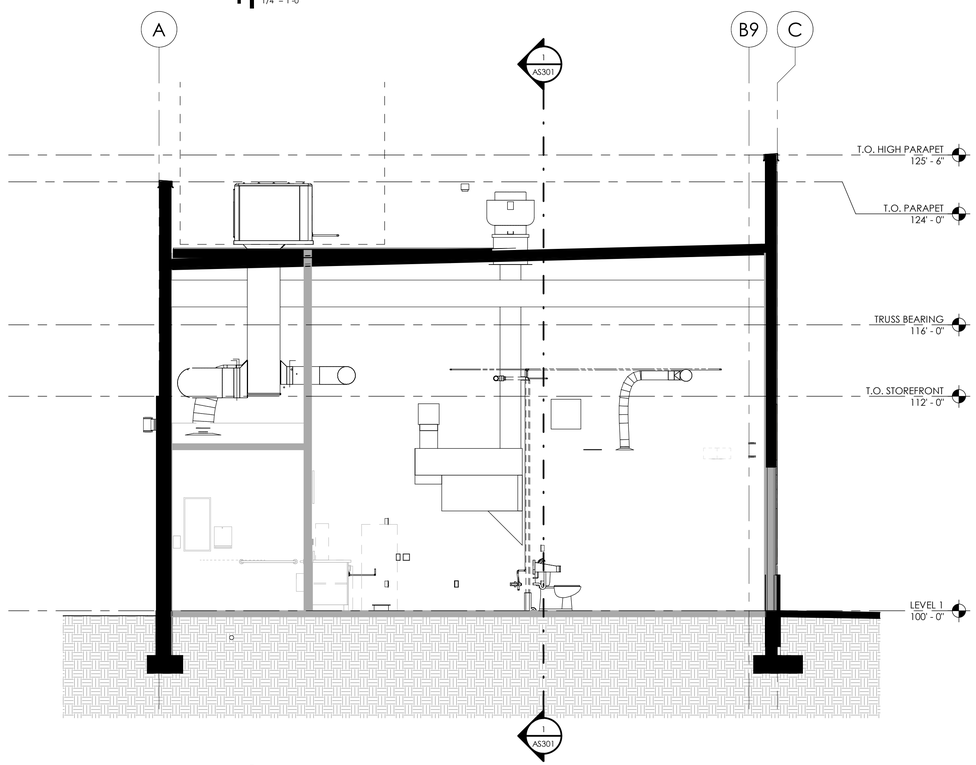
NORTHWEST CHIPMAN ROAD & NORTHWEST WARD ROAD
LEE'S SUMMIT, MO, USA

sheet title:
EXTERIOR ELEVATIONS

sheet number:
AS202



1 BUILDING SECTION
1/4" = 1'-0"



2 BUILDING SECTION
1/4" = 1'-0"

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1. DRAWINGS & SPECIFICATIONS ARE COMPLIMENTARY COMPONENTS OF THE CONTRACT DOCUMENTS. REVIEW ALL DRAWINGS AND SPECIFICATIONS FOR THE COMPLETE SCOPE OF WORK. NOTIFY ARCHITECT IMMEDIATELY FOR CLARIFICATION IF INCONSISTENCIES, CONTRADICTIONS OR OMISSIONS ARE DISCOVERED.
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6. CONTRACTOR TO COORDINATE ALL FLOOR PENETRATIONS WITH ALL TRADES. ALL PENETRATIONS ARE TO BE 2-HOUR FIRE STOPPED. DRAFTSTOPPING MATERIALS SHALL BE NOT LESS THAN 1/2-INCH (12.7MM) GYPSUM BOARD, 3/8-INCH (9.5 MM) WOOD STRUCTURAL PANEL, 3/8-INCH (9.5 MM) PARTICLEBOARD, BATTS OR BLANKETS OF MINERAL WOOL OR GLASS FIBER, OR OTHER APPROVED MATERIALS ADEQUATELY SUPPORTED. THE INTEGRITY OF DRAFTSTOPS SHALL BE MAINTAINED.
7. FINISH GRADE TO BE 8" MIN. BELOW FOUNDATION WALLS. TYPICAL AT ALL LOCATIONS.

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sheet information

revisions: ⚠

num.	description	date

CURRENT SET THRU REVISION 02

date: 01-24-2022

project number: MO-53LEE

project status: ISSUED FOR PERMIT

original drawing is 24" x 36"
current as of: 4/25/2022 10:46:49 PM

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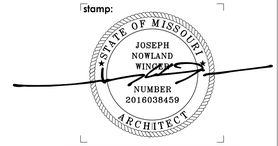


sheet number:

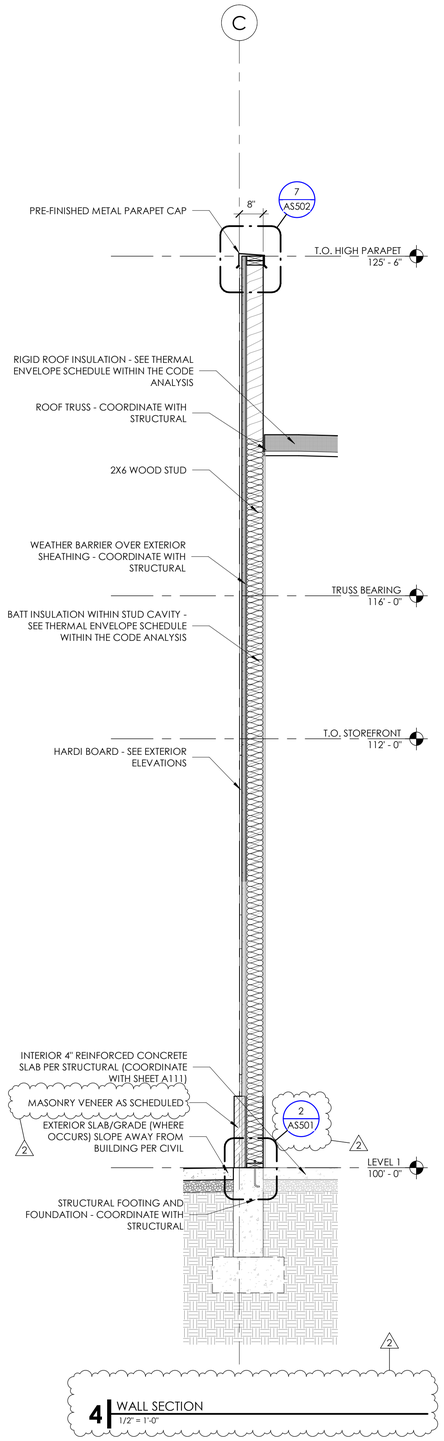
MO-53 LEE - LEE'S SUMMIT

for:
MOBETTAH'S (SHELL)

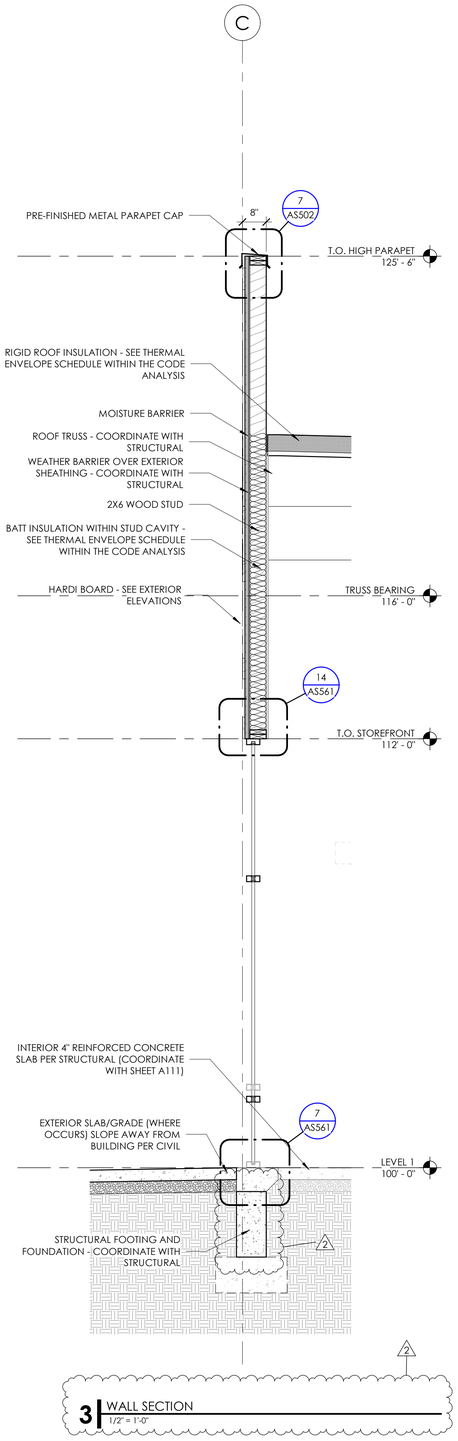
NORTHWEST CHIPMAN ROAD & NORTHWEST WARD ROAD
LEE'S SUMMIT, MO, USA

sheet title:
BUILDING SECTIONS

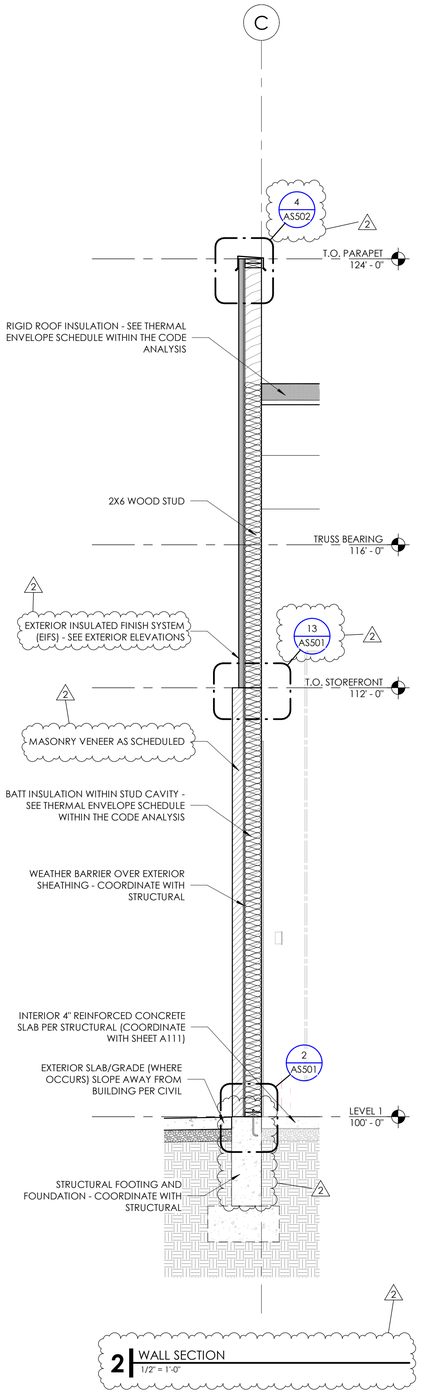
sheet number:
AS301



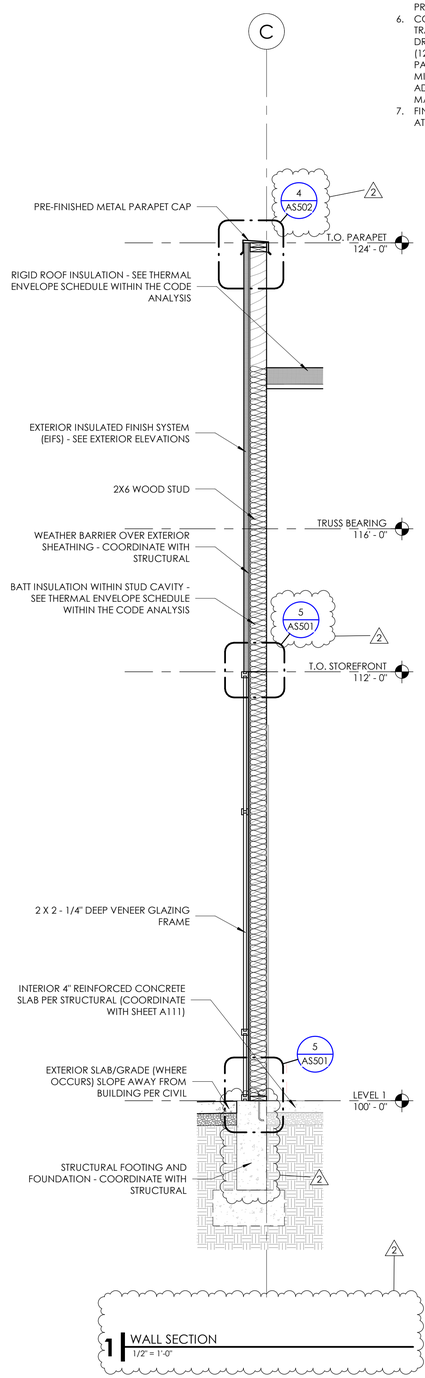
4 WALL SECTION
1/2" = 1'-0"



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



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



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

SECTION GENERAL NOTES

1. DRAWINGS & SPECIFICATIONS ARE COMPLIMENTARY COMPONENTS OF THE CONTRACT DOCUMENTS. REVIEW ALL DRAWINGS AND SPECIFICATIONS FOR THE COMPLETE SCOPE OF WORK. NOTIFY ARCHITECT IMMEDIATELY FOR CLARIFICATION IF INCONSISTENCIES, CONTRADICTIONS OR OMISSIONS ARE DISCOVERED.
2. DO NOT SCALE DRAWINGS, IF DIMENSIONAL INFORMATION IS REQUIRED & NOT FOUND, NOTIFY ARCHITECT IMMEDIATELY FOR CLARIFICATION BEFORE PROCEEDING WITH CONSTRUCTION.
3. ALL DIMENSIONS ARE TO COLUMN CENTERLINES, TO GRIDLINES OR TO FACE OF FRAMING UNLESS NOTED OTHERWISE.
4. ALL CONSTRUCTION SHALL CONFORM TO AND STRICTLY COMPLY WITH ALL APPLICABLE CODES, COVENANTS, RESTRICTIONS, AND OTHER REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION OVER THE PROJECT.
5. IN NO EVENT SHALL THE CONTRACTOR SUBMIT A STANDARD CONSTRUCTION DETAIL FOR A DETAIL SPECIFIED IN THESE DOCUMENTS WITHOUT THE APPROVAL IN WRITING FROM THE ARCHITECT. THE CONTRACTOR SHALL BRING ALL WORK INTO CONFORMITY WITH THE CONSTRUCTION SHALL BRING ALL WORK INTO CONFORMITY WITH THE CONSTRUCTION DOCUMENTS, AS THE ARCHITECT ORDERS. BEFORE APPROVAL OF THE PORTION OF THE PROJECT WILL BE GRANTED.
6. CONTRACTOR TO COORDINATE ALL FLOOR PENETRATIONS WITH ALL TRADES. ALL PENETRATIONS ARE TO BE 2-HOUR FIRE STOPPED. DRAFTSTOPPING MATERIALS SHALL BE NOT LESS THAN 1/2-INCH (12.7MM) GYPSUM BOARD, 3/8-INCH (9.5 MM) WOOD STRUCTURAL PANEL, 3/8-INCH (9.5 MM) PARTICLEBOARD, BATTS OR BLANKETS OF MINERAL WOOL OR GLASS FIBER, OR OTHER APPROVED MATERIALS ADEQUATELY SUPPORTED. THE INTEGRITY OF DRAFTSTOPS SHALL BE MAINTAINED.
7. FINISH GRADE TO BE 8" MIN. BELOW FOUNDATION WALLS. TYPICAL AT ALL LOCATIONS.

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sheet information

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CURRENT SET THRU REVISION 02

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project number: MO-53LEE
project status: ISSUED FOR PERMIT
original drawing is 24" x 36"
current as of: 4/25/2022 10:46:50 PM

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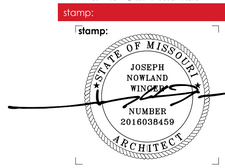

sheet number:

MO-53 LEE - LEE'S SUMMIT
for: MOBETTAH'S (SHELL)
NORTHWEST CHIPMAN ROAD & NORTHWEST WARD ROAD
LEE'S SUMMIT, MO, USA

sheet title: WALL SECTIONS

sheet number:

AS311

SECTION GENERAL NOTES

1. DRAWINGS & SPECIFICATIONS ARE COMPLIMENTARY COMPONENTS OF THE CONTRACT DOCUMENTS. REVIEW ALL DRAWINGS AND SPECIFICATIONS FOR THE COMPLETE SCOPE OF WORK. NOTIFY ARCHITECT IMMEDIATELY FOR CLARIFICATION IF INCONSISTENCIES, CONTRADICTIONS OR OMISSIONS ARE DISCOVERED.
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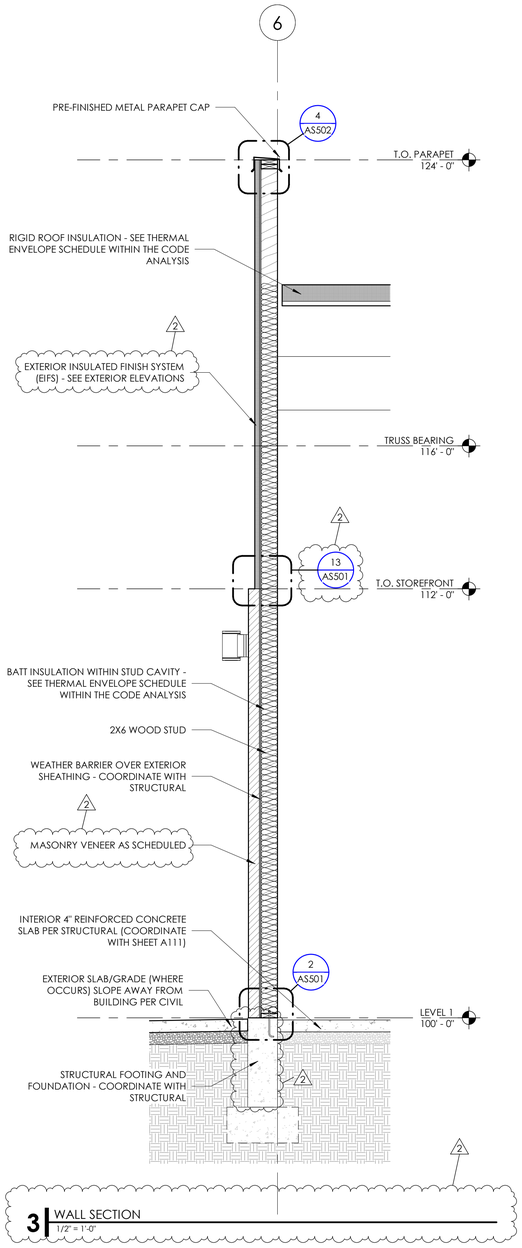
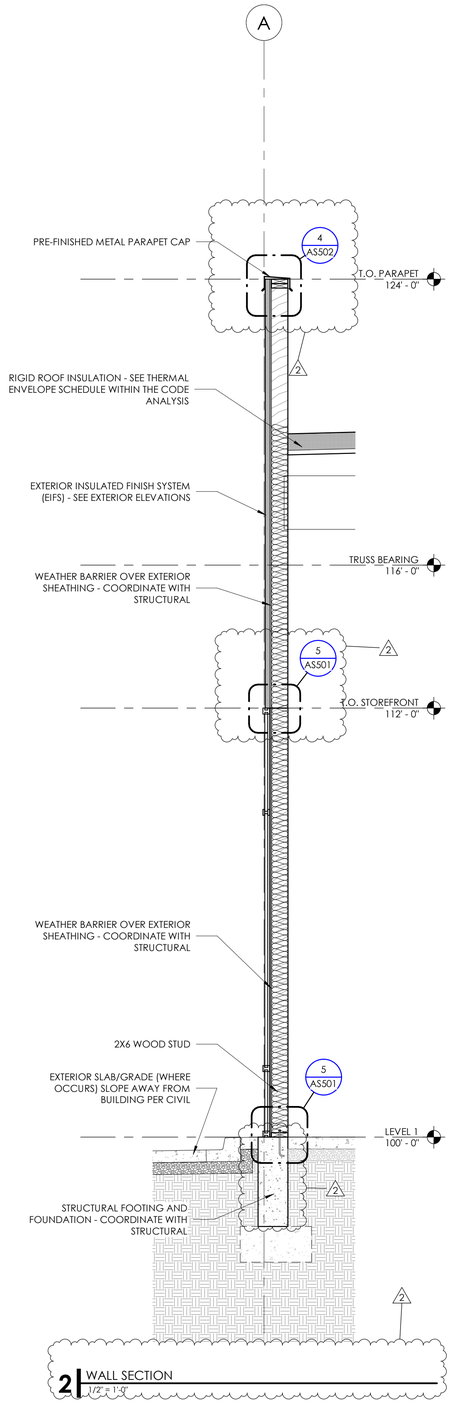
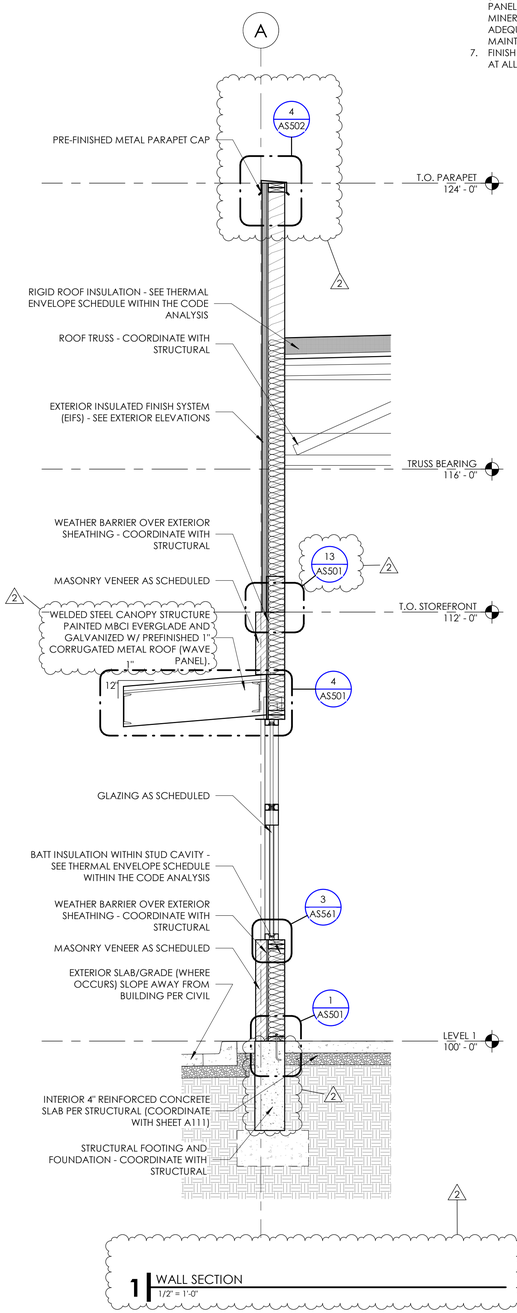
7. FINISH GRADE TO BE 8" MIN. BELOW FOUNDATION WALLS, TYPICAL AT ALL LOCATIONS.







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sheet information

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CURRENT SET THRU REVISION 02

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sheet number:

MO-53 LEE - LEE'S SUMMIT

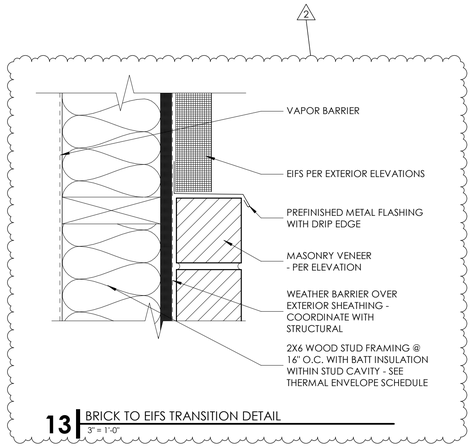
for: MOBETTAH'S (SHELL)

NORTHWEST CHIPMAN ROAD & NORTHWEST WARD ROAD
LEE'S SUMMIT, MO, USA

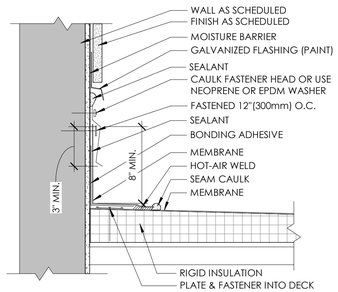
sheet title: WALL SECTIONS

sheet number:

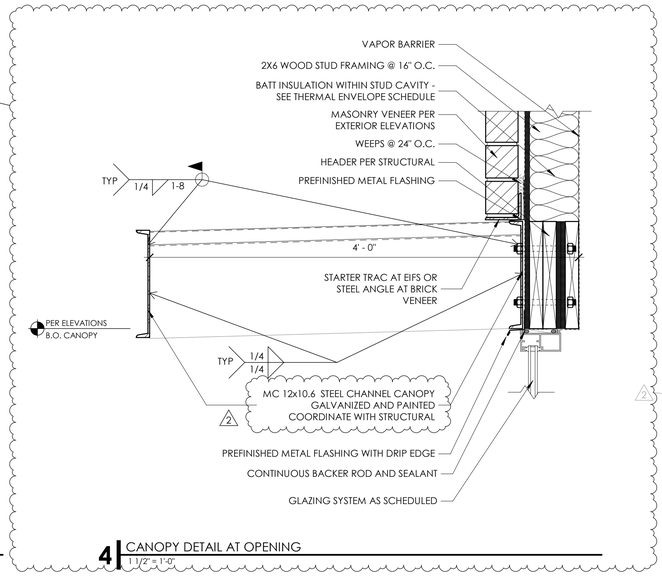
AS312



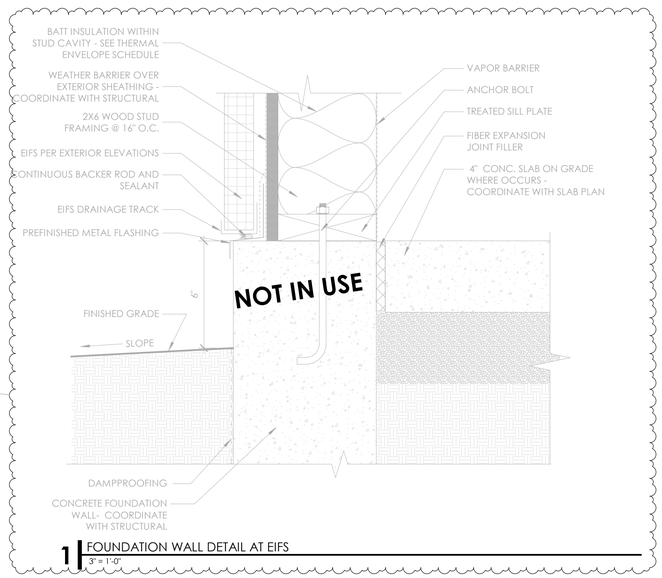
13 BRICK TO EIFS TRANSITION DETAIL
3" = 1'-0"



7 REGLET DETAIL
1 1/2" = 1'-0"



4 CANOPY DETAIL AT OPENING
1 1/2" = 1'-0"



1 FOUNDATION WALL DETAIL AT EIFS
3" = 1'-0"

12 BRICK CORNER PLAN DETAIL
1 1/2" = 1'-0"

8 ROOF DRAIN
3/4" = 1'-0"

5 VENEER GLAZING HEAD AND SILL
1" = 1'-0"

2 FOUNDATION WALL DETAIL AT MASONRY
3" = 1'-0"

14 CORNER AT FIBER BOARD
1 1/2" = 1'-0"

11 BRICK TO EIFS TRANSITION PLAN VIEW
1 1/2" = 1'-0"

6 COPING END DETAIL
1/2" = 1'-0"

3 BRICK TRANSITION TO B&B BOARD
3" = 1'-0"

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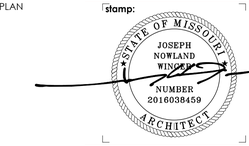


sheet number:

MO-53 LEE - LEE'S SUMMIT

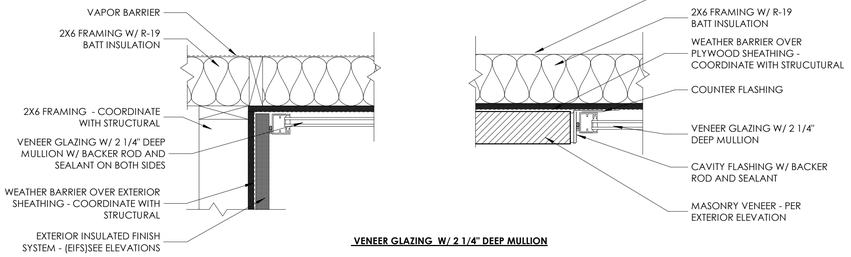
for: MOBETTAH'S (SHELL)

NORTHWEST CHIPMAN ROAD & NORTHWEST WARD ROAD
LEE'S SUMMIT, MO, USA

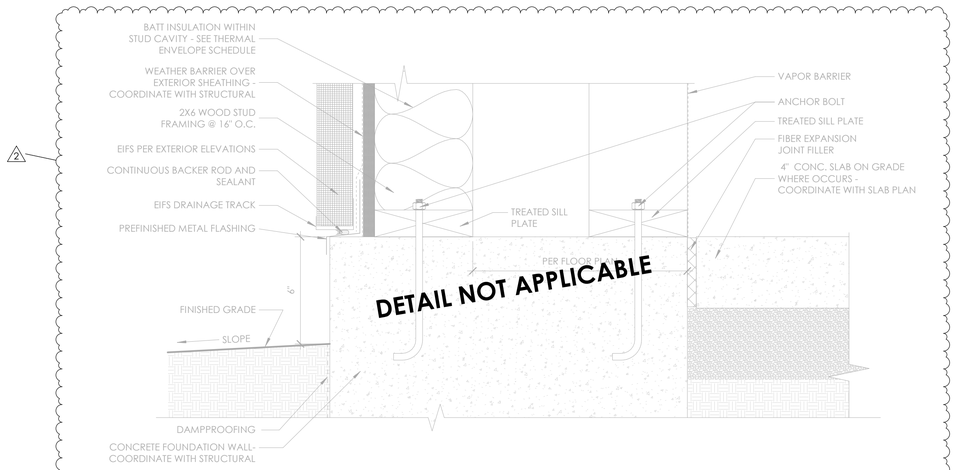
sheet title:
EXTERIOR DETAILS

sheet number:

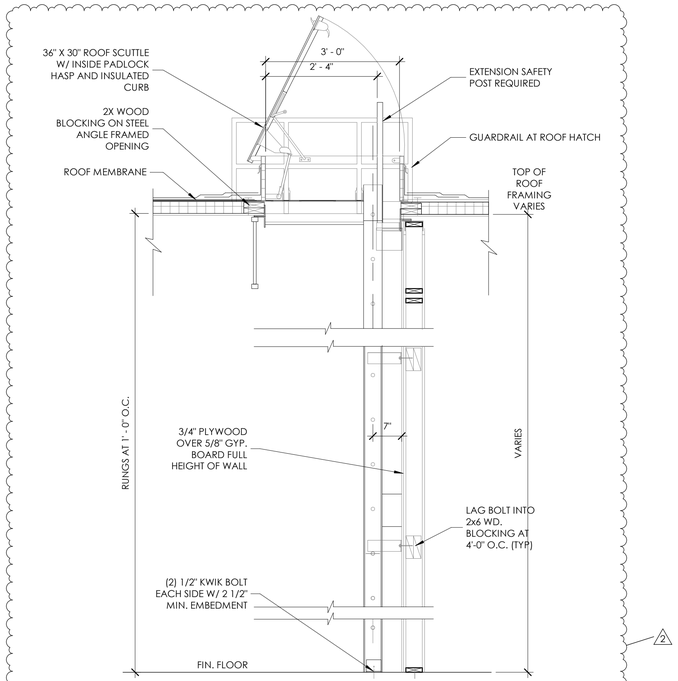
AS501



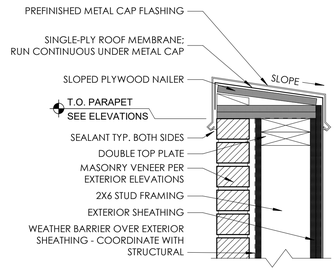
8 VENEER GLAZING W/ 2 1/4" DEEP MULLION JAMB DETAILS
1 1/2" = 1'-0"



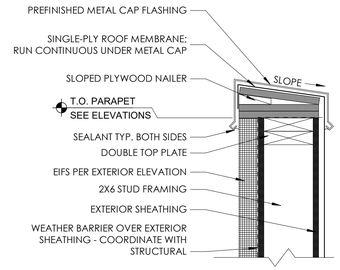
5 FOUNDATION AT BUMP OUT WALL
3" = 1'-0"



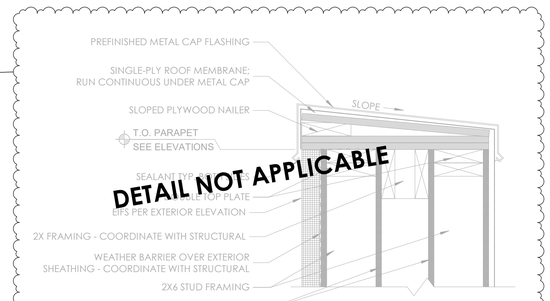
9 ROOF LADDER HATCH DETAIL
1/2" = 1'-0"



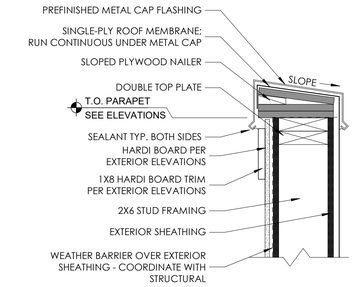
3 PARAPET CAP DETAIL AT MASONRY
1 1/2" = 1'-0"



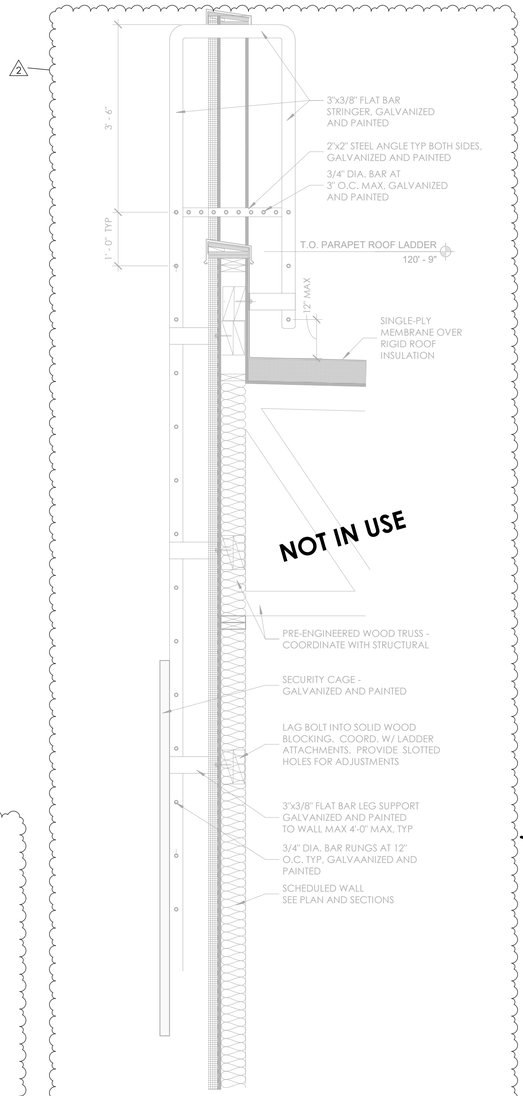
4 PARAPET CAP DETAIL AT EIFS
1 1/2" = 1'-0"



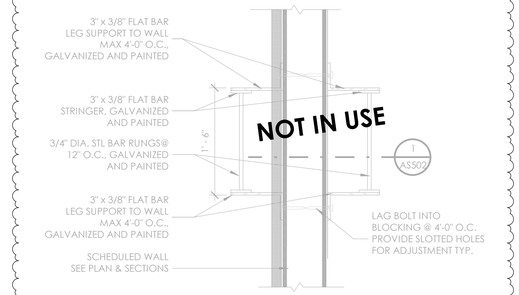
6 PARAPET CAP AT BUMP OUT
1 1/2" = 1'-0"



7 PARAPET CAP AT B&B BOARD
1 1/2" = 1'-0"



1 ROOF LADDER
3/4" = 1'-0"



2 ROOF LADDER OVER PARAPET PLAN
1" = 1'-0"

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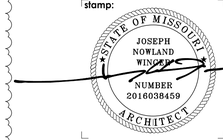


sheet number:

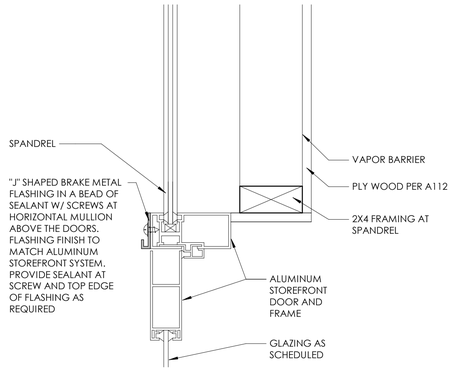
MO-53 LEE - LEE'S SUMMIT for: MOBETTAH'S (SHELL)

NORTHWEST CHIPMAN ROAD & NORTHWEST WARD ROAD
LEE'S SUMMIT, MO, USA

sheet title: EXTERIOR DETAILS

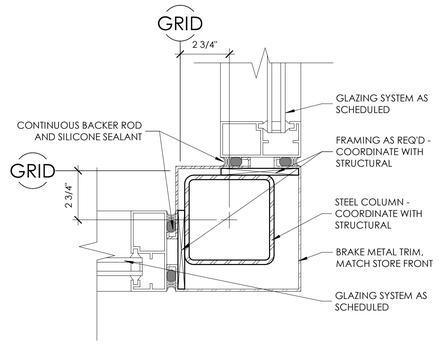
sheet number:

AS502

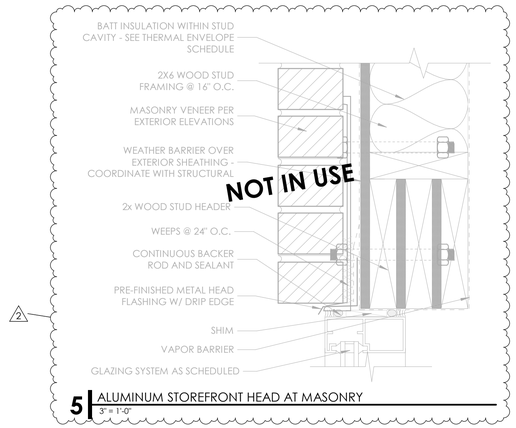


TYP. DOOR HEAD @ TRANSOM

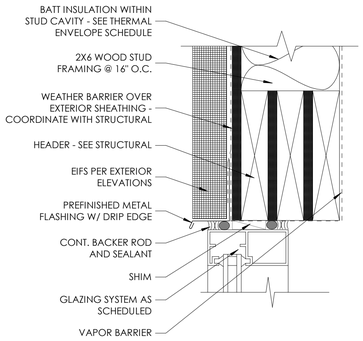
12 STOREFRONT DOOR HEADER DETAIL
3" = 1'-0"



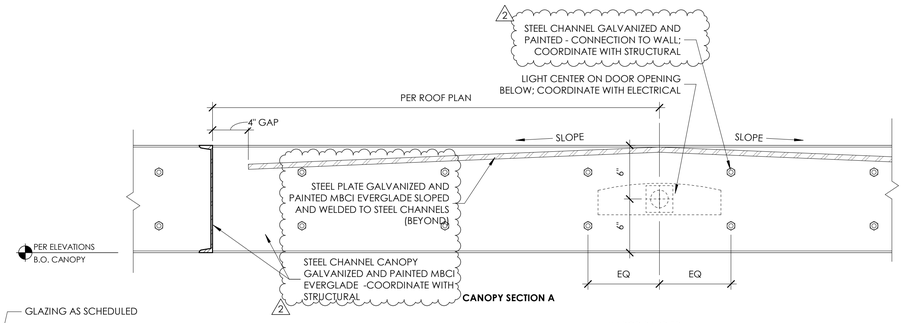
9 STOREFRONT AND STEEL COLUMN DETAIL
3" = 1'-0"



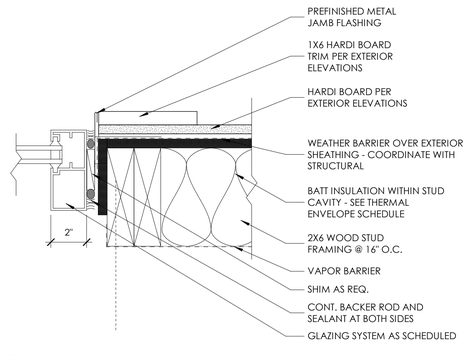
5 ALUMINUM STOREFRONT HEAD AT MASONRY
3" = 1'-0"



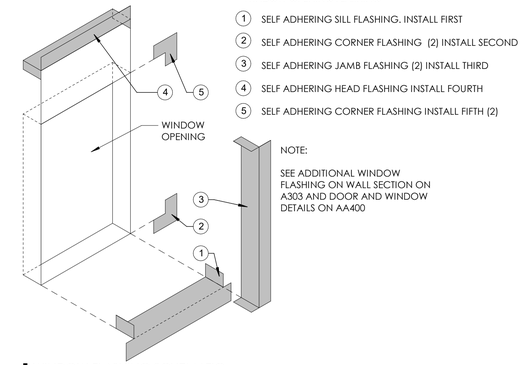
1 ALUMINUM STOREFRONT HEAD AT EIFS
3" = 1'-0"



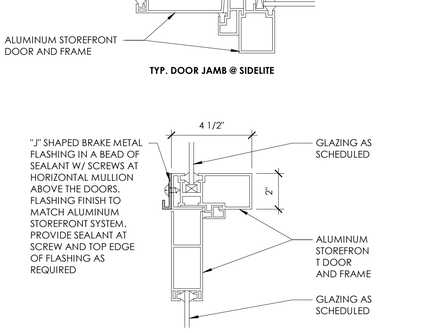
CANOPY SECTION A



6 EXTR. ALUM. STOREFRONT JAMB AT HARDI BOARD
3" = 1'-0"



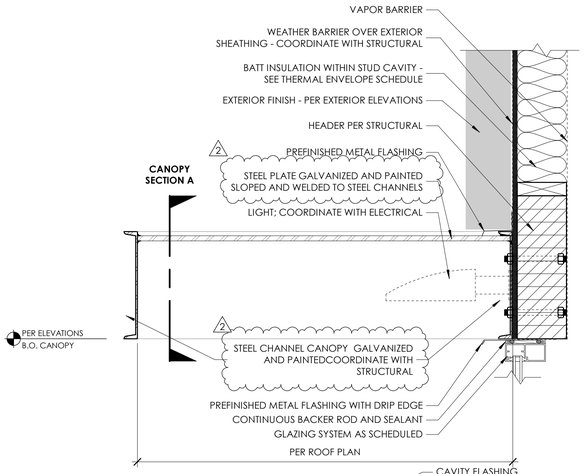
2 WINDOW FLASHING SCHEMATIC
1 1/2" = 1'-0"



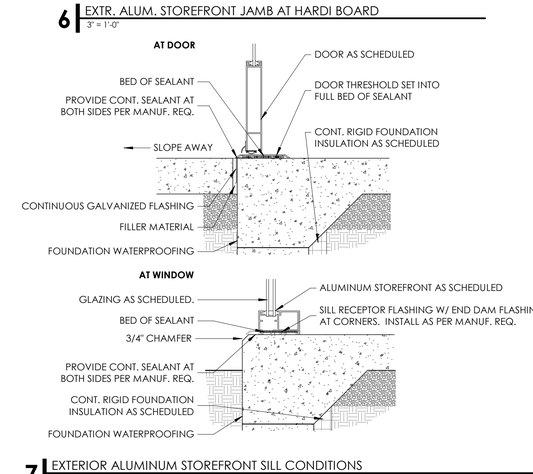
TYP. DOOR JAMB @ SIDELITE

TYP. DOOR HEAD @ TRANSOM

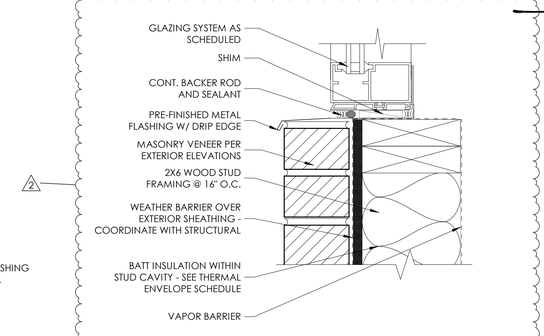
13 STOREFRONT DOOR HEAD DETAIL
3" = 1'-0"



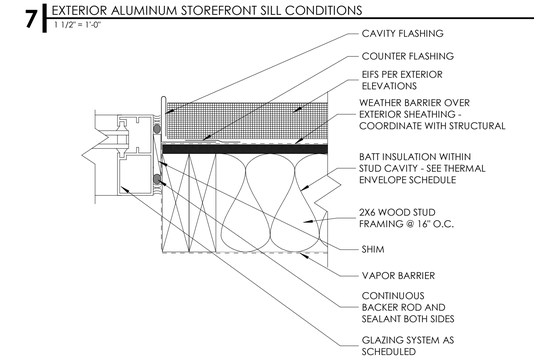
10 CANOPY DETAIL AT GLAZING SYSTEM
1 1/2" = 1'-0"



7 EXTERIOR ALUMINUM STOREFRONT SILL CONDITIONS
1 1/2" = 1'-0"

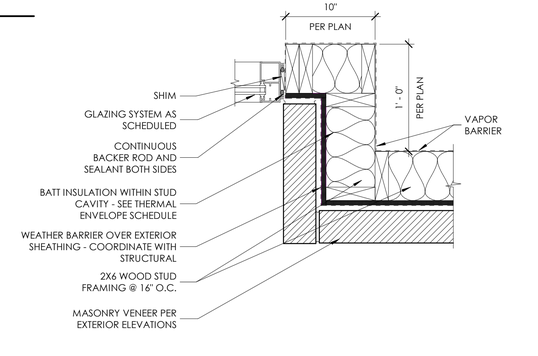


3 ALUMINUM STOREFRONT SILL AT EIFS
3" = 1'-0"



11 ALUMINUM STOFREFRONT JAMB AT MASONRY
3" = 1'-0"

8 ALUMINUM STOREFRONT SPANDREL JAMB AT EIFS
3" = 1'-0"



4 EXTR. ALUMINUM STOREFRONT JAMB AT MASONRY
1 1/2" = 1'-0"

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sheet information

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STATE OF MISSOURI
JOSEPH NOWLAND WINDLE
NUMBER 2016038459
ARCHITECT

sheet number:

MO-53 LEE - LEE'S SUMMIT

for: MOBETTAH'S (SHELL)

NORTHWEST CHIPMAN ROAD & NORTHWEST WARD ROAD
LEE'S SUMMIT, MO, USA

sheet title: OPENING DETAILS

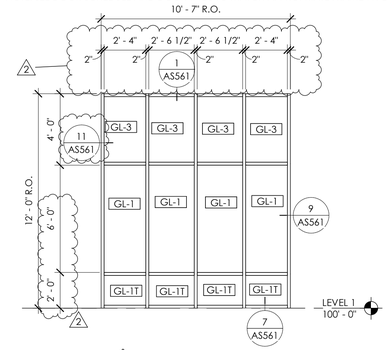
sheet number:

AS561

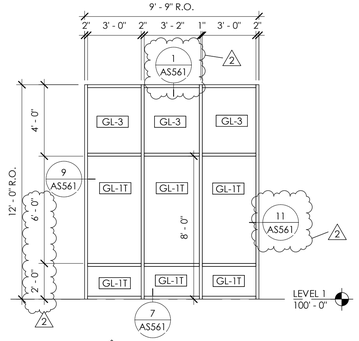
WINDOW & FRAME TYPE - GRAPHICAL SCHEDULE

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

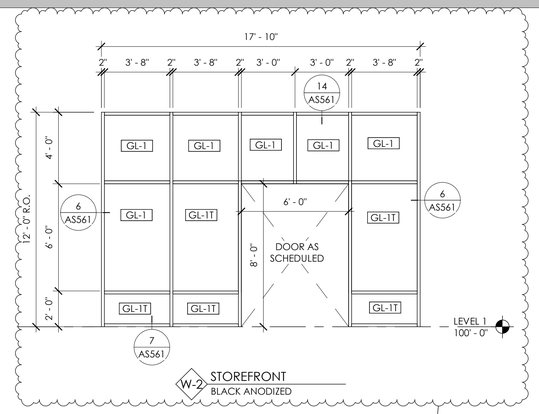
NOTE: SEE DOOR SCHEDULE AND DOOR TAGS TO MATCH APPROPRIATE FRAME TYPE WITH DOOR TYPES.



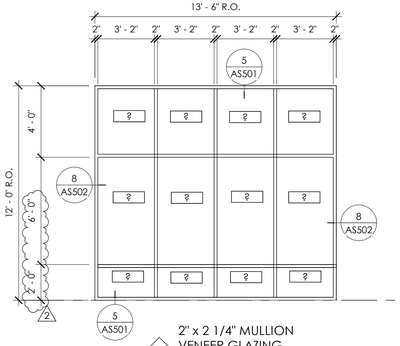
W-4 STOREFRONT
BLACK ANODIZED



W-3 STOREFRONT
BLACK ANODIZED



W-2 STOREFRONT
BLACK ANODIZED

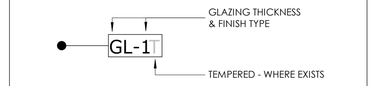


W-1 2" x 2 1/4" MULLION
VENEER GLAZING
BLACK ANODIZED ALUMINUM

DOOR AND GLAZING GENERAL NOTES

1. PROVIDE SOLID BACK FRAMES FOR ALL STOREFRONT SYSTEMS.
2. PROVIDE END DAMS AT BOTTOM OUTSIDE CORNERS OF ALUMINUM STOREFRONT SYSTEMS. INSTALL PER MANUFACTURERS STANDARDS AND REQUIREMENTS.
3. FRAME DIMENSIONS SHOWN ARE NOMINAL. ACTUAL DIMENSIONS MAY VARY DEPENDING ON WINDOW MANUFACTURER AND SYSTEM.
4. SEE SPECIFICATIONS FOR HARDWARE SCHEDULE.
5. SEE DOOR SCHEDULE FOR DOOR WIDTH AND HEIGHT.

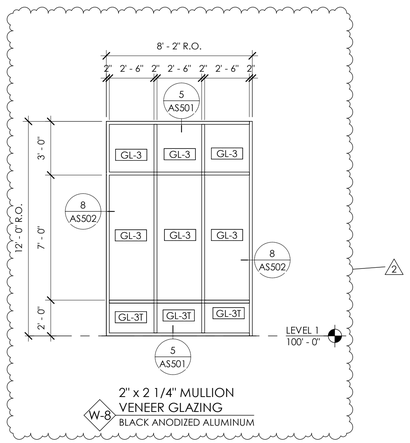
GLAZING LEGEND



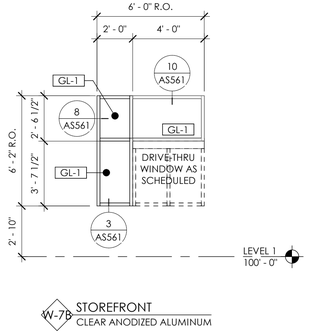
SEE MATERIAL AND FINISH SCHEDULE SHEET FOR GLAZING INFORMATION

DOOR AND WINDOW FINISH LEGEND

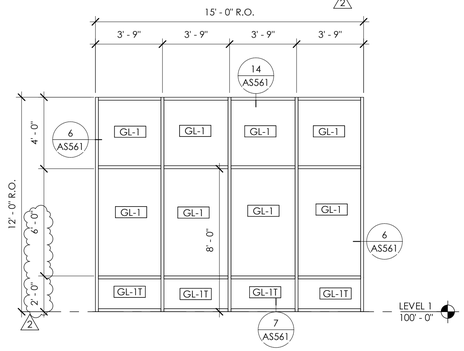
DB	EXTRA DARK BRONZE ANODIZED ALUMINUM
PT	PAINTED - SW 6258 TRICORN BLACK



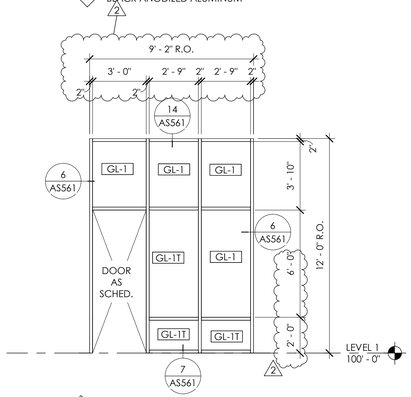
W-8 2" x 2 1/4" MULLION
VENEER GLAZING
BLACK ANODIZED ALUMINUM



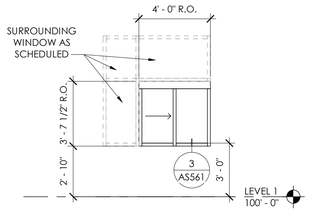
W-7B STOREFRONT
CLEAR ANODIZED ALUMINUM



W-6 STOREFRONT
BLACK ANODIZED



W-5 STOREFRONT
BLACK ANODIZED



BASIS OF DESIGN "READY ACCESS WINDOW WALK-UP" WITH OPERABLE SLIDER. NOTE SLIDE DIRESTION SHOWN AS VIEWED FROM EXTERIOR

W-7B STOREFRONT
BLACK ANODIZED ALUMINUM

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sheet information

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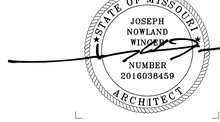


sheet number:

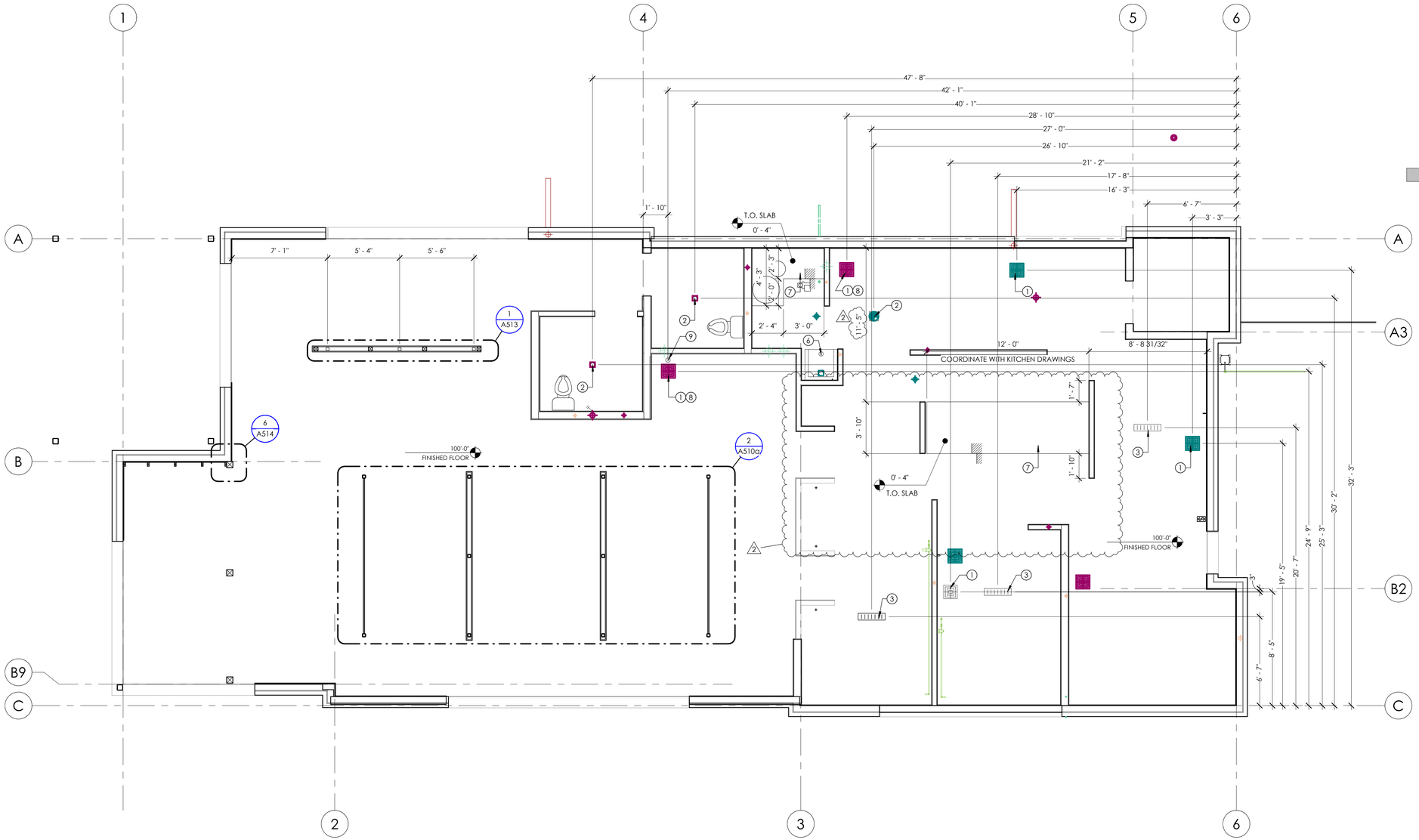
MO-53 LEE - LEE'S SUMMIT

for:
MOBETTAH'S (SHELL)

NORTHWEST CHIPMAN ROAD & NORTHWEST WARD ROAD
LEE'S SUMMIT, MO, USA

sheet title:
WINDOW SCHEDULE

sheet number:
AS621



1 SLAB PLAN
1/4" = 1'-0"

NORTH

DIMENSION NOTES

1. ALL PLAN DIMENSIONS, UNLESS OTHERWISE NOTED, ARE TO:
   A. COLUMN GRID ON CENTERLINES.
   B. FACE OF GYP. BD. OR SHEATHING
   C. FACE OF CONCRETE.
2. DOOR LOCATIONS NOT DIMENSIONED ARE:
   A. JAMB FACE 4" FROM FACE OF STUD.
   B. CENTERLINE OF DOOR ON CENTERLINE OF ROOM OR CORRIDOR.
3. NOTED DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE DIMENSIONS; DETAILS OVER SMALLER SCALE DRAWINGS.
4. "FINISH FLOOR" REFERS TO TOP OF CONCRETE SLABS, FOR DEPRESSED FLOORS AND CURBS, SEE STRUCTURAL DRAWINGS.
5. VERIFY ALL ROUGH-IN, CONCRETE PAD, OR PLATFORM DIMENSIONS FOR EQUIPMENT PROVIDED IN THIS PROJECT, OR BY OTHERS.
6. FINISHED FLOOR ELEVATIONS ARE TO TOP OF CONCRETE OR GYPCRETE, UNLESS NOTED OTHERWISE.
7. CEILING HEIGHT DIMENSIONS ARE TO FINISHED SURFACES, UNLESS NOTED OTHERWISE.

SLAB PLAN GENERAL NOTES

A. ARCHITECTURAL SLAB PLANS SHALL DETERMINE SLAB EDGES; NOTIFY ARCHITECT OF ANY DETAILS INCONSISTENT WITH BUILT CONDITIONS PRIOR TO WORK.
B. CONTRACTOR TO COORDINATE THE LOCATION OF ALL FLOOR DRAINS AND FLOOR SINKS WITH PLUMBING DRAWINGS AND KITCHEN DRAWINGS.
C. CONTRACTOR TO COORDINATE THE LOCATION OF ALL ROOF DRAINS IN THE FIELD PRIOR TO WORK; NOTIFY ARCHITECT OF ANY DETAILS INCONSISTENT WITH BUILT CONDITIONS PRIOR TO WORK.
D. CONTRACTOR TO COORDINATE THE LOCATION OF ALL FLOOR OUTLETS WITH OWNER, ARCHITECT AND ELECTRICAL DRAWINGS.
E. INSTALL VAPOR BARRIER UNDER SLAB ON GRADE TO MATCH EXISTING.
F. CONCRETE FOUNDATION WALLS RETAINING EARTH TO RECEIVE TWO COATS OF BITUMINOUS DAMP PROOFING MATERIAL

STEP IN SLAB

1 KEYNOTES

1. APPROXIMATE LOCATION OF FLOOR SINK; COORDINATE WITH PLUMBING - DO NOT SLOPE TO THE SINK OWNER TOLERANCE: SET FLUSH OR UP TO MAXIMUM 1/8" ABOVE FINISH FLOOR.
2. APPROXIMATE LOCATION OF FLOOR DRAIN; COORDINATE WITH PLUMBING - DO NOT SLOPE TO THE DRAIN OWNER TOLERANCE: SET FLUSH OR UP TO MAXIMUM 1/8" ABOVE FINISH FLOOR.
3. APPROXIMATE LOCATION OF FLOOR TROUGH; COORDINATE WITH PLUMBING DRAWINGS
4. EXISTING INTERIOR CONCRETE SLAB ON GRADE TO REMAIN
5. INTERIOR FACE OF STUD
6. APPROXIMATE LOCATION OF MOP SINK; COORDINATE WITH PLUMBING
7. RAISED PLATFORM - SEE DETAIL 4/A501
8. FLOOR SINK INSTALLED WITHIN BASE CABINET; PER DETAIL 1/A551
9. 4" VERTICAL CONDUIT FROM UNDERSLAB STUBBED OUT IN FRONT OF WALL (WITHIN BASE CABINET) COORDINATE WITH PLUMBING; CONDUITS SHALL NOT RUN THRU CONCRETE FOUNDATION WALLS. COORDINATE WITH SAVORY CONSTRUCTION MANAGER PRIOR TO WORK.
10. HSS 3"X3"X3/16" WITH STEEL BASE PLATE ANCHORED INTO CONCRETE FOR PARTIAL HEIGHT WALL SUPPORT; COORDINATE WITH DETAIL 4/A613

THIS SHEET DESCRIBES INTERIOR IMPROVEMENTS FOR THIS PROJECT; COORDINATE WITH SHEET AS111 AS OR THE CORE AND SHELL

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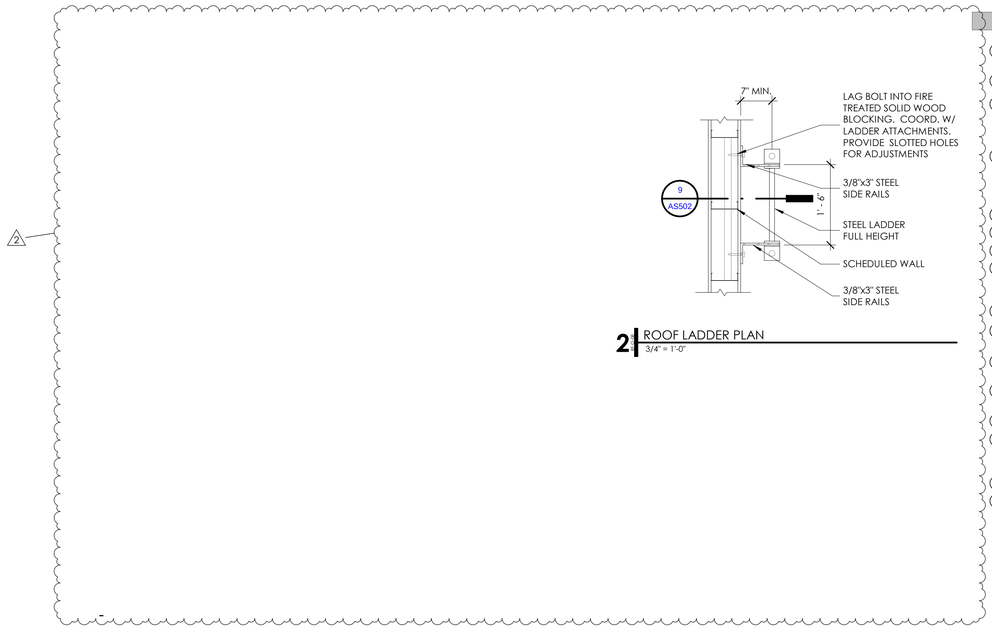
MOBETTAHS (TI) for:
LEE'S SUMMIT
520 NW Chipman Rd
Lee's Summit, MO 64086

sheet title: SLAB PLAN

sheet number:

A111



2 ROOF LADDER PLAN
3/4" = 1'-0"

1 KEYNOTES

1. WALL MOUNTED CLASS "K" FIRE EXTINGUISHER; COORDINATE WITH EQUIPMENT SHEETS,CONFIRM LOCATION WITH FIRE MARSHALL.
2. MOP SINK; COORDINATE WITH PLUMBING DRAWINGS AND EQUIPMENT SHEETS
3. 2A10BC FIRE EXTINGUISHER IN SEMI-RECESSED CABINET; COORDINATE WITH EQUIPMENT SHEETS; SEE DETAIL. CONFIRM LOCATION WITH FIRE MARSHALL, CONTINUE RATING BEHIND CABINET PER DETAIL 5/A501
4. 4" VERTICAL CONDUIT FROM UNDERSLAB STUBBED OUT IN FRONT OF WALL (WITHIN BASE CABINET) COORDINATE WITH PLUMBING; CONDUITS SHALL NOT RUN THRU CONCRETE FOUNDATION WALLS. COORDINATE WITH SAVORY CONSTRUCTION MANAGER PRIOR TO WORK.
5. LIGHTING CONTROL PANEL; COORDINATE WITH ELECTRICAL
6. ELECTRICAL CONTROL PANELS; COORDINATE WITH ELECTRICAL
7. CLEAR -HOLD TO -DIMENSION TO INTERIOR FACE OF PONY WALL
8. WATER SOFTENER; RAISED PLATFORM, SEE DETAIL ON SHEET A111 COORDINATE WITH EQUIPMENT SHEETS AND PLUMBING COORDINATE WITH PLUMBING & ELECTRICAL
9. WATER HEATER; COORDINATE WITH EQUIPMENT SHEETS; SEE PLUMBING
10. BULK CO2 TANK; COORDINATE WITH EQUIPMENT SHEETS AND PLUMBING
11. SYRUP RACK (BIB "BAG IN BOX"); COORDINATE WITH EQUIPMENT, PLUMBING AND ELECTRICAL
12. WATER FILTER; COORDINATE WITH EQUIPMENT, PLUMBING AND ELECTRICAL
13. A/V RACK ABOVE LOCKERS; COORDINATE WITH ELECTRICAL
14. WALL MOUNTED TV; COORDINATE WITH ELECTRICAL; PROVIDE MIN 3'-0" W X 3'-0" BLOCKING, CENTERED ON TV; BOTTOM OF TV MOUNTED AT 84" A.F.F.
15. CO2 FILL BOX; COORDINATE WITH OWNER
16. PROVIDE BLOCKING IN WALL AS REQUIRED FOR RESTROOM GRAB BARS (INDICATED WITH DASHED LINE)
17. PROPOSED GAS METER LOCATION - COORDINATE WITH UTILITY PROVIDER & PLUMBING DRAWINGS
18. ELECTRICAL EQUIPMENT - COORDINATE WITH ELECTRICAL DRAWINGS
19. AREA OF ROOF DRAINS; HOLD FURRING STUDS AS TIGHT AS POSSIBLE
20. EXTERIOR METAL CANOPY; COORDINATE WITH STRUCTURAL AND AS112
21. INTERIOR WALL TO BE USED FOR SHEAR; SEE STRUCTURAL

DIMENSION NOTES

1. ALL PLAN DIMENSIONS, UNLESS OTHERWISE NOTED, ARE TO:
   A. COLUMN GRID ON CENTERLINES.
   B. FACE OF GYP. BD. OR SHEATHING
   C. FACE OF CONCRETE.
2. DOOR LOCATIONS NOT DIMENSIONED ARE:
   A. JAMB FACE 4" FROM FACE OF STUD.
   B. CENTERLINE OF DOOR ON CENTERLINE OF ROOM OR CORRIDOR.
3. NOTED DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE DIMENSIONS; DETAILS OVER SMALLER SCALE DRAWINGS.
4. "FINISH FLOOR" REFERS TO TOP OF CONCRETE SLABS, FOR DEPRESSED FLOORS AND CURBS, SEE STRUCTURAL DRAWINGS.
5. VERIFY ALL ROUGH-IN, CONCRETE PAD, OR PLATFORM DIMENSIONS FOR EQUIPMENT PROVIDED IN THIS PROJECT, OR BY OTHERS.
6. FINISHED FLOOR ELEVATIONS ARE TO TOP OF CONCRETE OR GYPCRETE, UNLESS NOTED OTHERWISE.
7. CEILING HEIGHT DIMENSIONS ARE TO FINISHED SURFACES, UNLESS NOTED OTHERWISE.

FIRE RATING LEGEND

NON RATED

1 HR FIRE BARRIER

FLOOR PLAN GENERAL NOTES:

A. GENERAL CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION. REPORT ANY SIGNIFICANT DISCREPANCIES TO THE ARCHITECT.
B. PROVIDE 18" MINIMUM CLEAR FLOOR SPACE AT PULL SIDE OF ALL DOORS. PROVIDE 12" MINIMUM CLEAR FLOOR SPACE AT PUSH SIDE OF ALL DOORS
C. CONCRETE FOUNDATION WALLS RETAINING EARTH TO RECEIVE TWO COATS OF BITUMINOUS DAMP PROOFING MATERIAL.
D. SEE MECHANICAL AND ELECTRICAL SHEETS FOR ADDITIONAL INFORMATION.
E. ALL COLORS SELECTIONS AND FINISH MATERIALS AND STYLES SHALL BE COORDINATED WITH OWNER.
F. SEE INTERIOR ELEVATIONS ON A400 SERIES SHEETS AND MILLWORK DETAILS ON A550 SERIES SHEETS FOR FINISHES OF MILLWORK BASES, AND COUNTERTOPS.
G. FOR REFLECTED CEILING PLAN SEE A113
H. FOR FINISH INFORMATION SEE SHEET A621 FOR DOOR AND WINDOW INFORMATION.
I. SEE CUT SHEETS IN SUBMITTAL BOOK FOR ADDITIONAL INFORMATION.
J. COORDINATE WITH G000 SERIES SHEETS FOR LEGENDS, SYMBOLS, ABBREVIATIONS AND OTHER ARCHITECTURAL GENERAL INFORMATION.
K. SEE SHEET A611 FOR WALL TYPES.
L. DO NOT SCALE DRAWINGS.
M. SEE SHEET A115 FOR FURNITURE PLAN.
N. SEE KITCHEN SHEETS FOR EQUIPMENT PLAN
O. PROVIDE BLOCKING IN WALLS FOR WALL MOUNTED EQUIPMENT/ACCESSORIES (SHOWN WITH DASHED LINE)
P. IN ACCORDANCE WITH IFC 607.4, PROVIDE CABLE TO RESTRAIN GAS-FIRED COOKING APPLIANCES FROM DAMAGING THE GAS CONNECTOR; COORDINATE WITH MECHANICAL DRAWINGS AND THE CONNECTOR/APPLIANCE MANUFACTURER'S INSTRUCTIONS.
Q. DATA AND POWER UNDER ALL CABINETS TO STUB OUT IN TOE KICKS AND BE SURFACE MOUNTED TO BACK OF CABINET; COORDINATE WITH ELECTRICAL.
R. GAS UNDER HOODS TO STUB OUT AT 18" A.F.F.
S. ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES SHALL BE SEALED WITH FIRE STOPPING, IE. 3M BRAND CAULK, PUTTY, STRIP AND SHEET FORMS, DOW CORNING 3-6548 SILICONE RTV FOAM.

WALL TAG

X#m
ABC

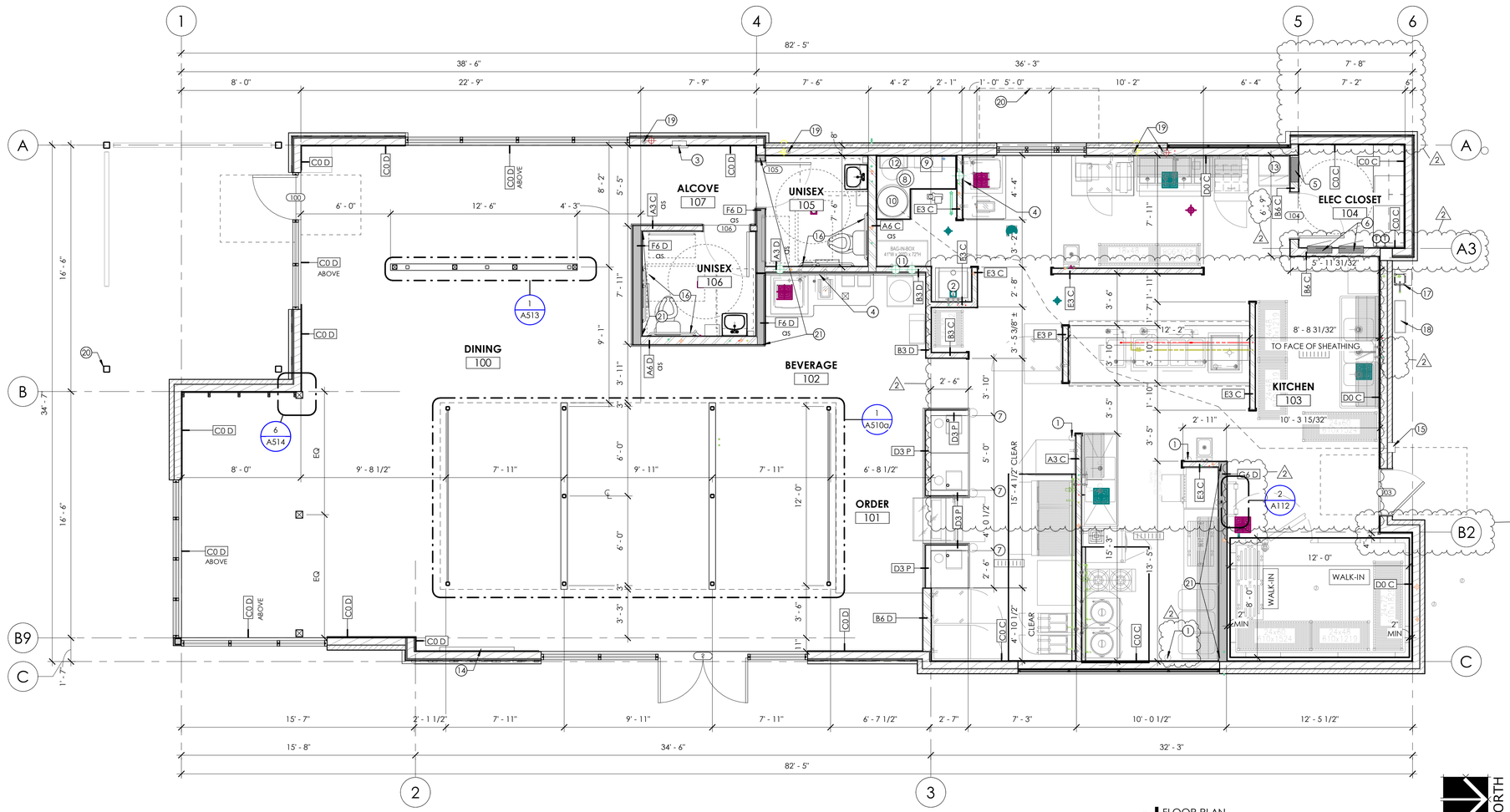
- PARTITION TYPE
- CORE WIDTH
- TOP OF WALL CONDITION
- PARTITION MODIFIER(S)

DOOR AND WINDOW TAGS

- 101 — DOOR NUMBER
- 1 — WINDOW TYPE

AT WALKING SURFACE OR CIRCULATION ROUTE NO SUSPENDED LIGHT FIXTURE, DECORATIVE ITEM OR SIMILAR DECORATIVE ITEMS SHALL BE INSTALLED LOWER THAN 80" A.F.F.

NO DEVICE OR DECORATIVE OBJECT LESS THAN 80" A.F.F. SHALL PROJECT MORE THAN 4" FROM ANY WALL IN ANY CIRCULATION PATH OR ACCESSIBLE ROUTE



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

THIS SHEET DESCRIBES INTERIOR IMPROVEMENTS FOR THIS PROJECT; COORDINATE WITH SHEET AS112 AS FOR THE CORE AND SHELL

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1	REVISION 01	03-11-22
2	REVISION 02	04-06-22

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date: 1-23-2022
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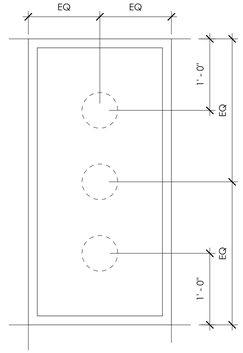
MOBETTAHS (TI) for LEE'S SUMMIT
520 NW Chipman Rd
Lee's Summit, MO 64086

sheet title: FLOOR PLAN

sheet number:

A112



1 TYPICAL CAN LIGHT PLACEMENT
1" = 1'-0"

① KEYNOTES

1. FULL SOUND BATT ATTENUATION ABOVE CEILING
2. TYPE I HOOD; SEE MECHANICAL DRAWINGS; NO COMBUSTIBLE MATERIALS INCLUDING COUNTERS, EQUIPMENT OR APPLIANCES SHALL BE PLACED ADJACENT ANY COOKING APPLIANCE UNDER THE TYPE 1 HOODS OR AGAINST ANY GREASE HOOD OR GREASE DUCT; ACOUSTICAL CEILING TILES, GYP. BD. CEILINGS, LIGHT FIXTURES AND DUCTWORK WITH COMBUSTIBLE INSULATION SHALL NOT BE PLACED WITHIN 18" OF TYPE 1 HOOD. STOP GRID CEILING AT HOOD PERIMETER.
3. LIGHTING AT WALK-IN; SUPPLIED BY MANUFACTURER
4. SHED CANOPY-PROVIDE CIRCUIT & SWITCHES RECEPTACLES FOR LED ROPE LIGHTING UNDER DINING CANOPY; PROVIDE CIRCUIT AND CONTROLS FOR LED ROPE LIGHTING UNDER DINING CANOPY; COORDINATE LOCATION OF OWNER PROVIDED SURFBOARD ABOVE CANOPY.
5. STAINLESS STEEL SHROUD AT WALK-IN BOX PERIMETER TO CLOSE GAP BETWEEN TOP OF BOX AND GRID CEILING; STOP GRID CEILING AT WALK-IN BOX PERIMETER
6. CAN LIGHT IN GRID ABOVE CANOPY; TO BE COORDINATED WITH ELEC.
7. SIGNAGE/MENU BOARDS, OFOI
8. ALIGN THE FACE OF GYP. BD. ON THIS SIDE OF WALL
9. FESTOON LIGHTING MOUNTED TO WALL ABOVE STOREFRONT AT 12'-6"
10. FESTOON LIGHTING MOUNTED TO POST AT 10'-6" PROVIDE 12" SAG
11. LIGHT FIXTURE MOUNTED TO UDNERSIDE OF CANOPY - ALL COUNDUIT UNDER CANOPY SHALL BE PAINTED TO MATCH CANOPY COLOR.
12. GENERAL LIGHTING 11' - 0" A.F.F.

ELECTRICAL/MECHANICAL LEGEND

NOTE:
1. COORDINATE WITH ELECTRICAL AND MECHANICAL DRAWINGS

- LIGHT IN CEILING GRID
- RECESSED LIGHT, PLEASE SEE DETAIL 1/A113 FOR TYPICAL CAN LIGHT PLACEMENT WITHIN CEILING TILE
- SUPPLY DIFFUSER
- RETURN AIR DIFFUSER
- EXHAUST FAN
- SECURITY CAMERA; CEILING MOUNTED; NOT SHOWN; COORDINATE WITH ELECTRICAL
- SECURITY CAMERA; WALL MOUNTED; NOT SHOWN; COORDINATE WITH ELECTRICAL
- CEILING MOUNTED SPEAKER; NOT SHOWN; COORDINATE WITH ELECTRICAL
- DIRECTIONAL FIXTURES; COORD. WITH ELECTRICAL; DINING TRIMS TO BE BLACK

REFLECTED CEILING PLAN GENERAL NOTES

A. GENERAL CONTRACTOR SHALL VERIFY ALL CONDITIONS, DIMENSIONS, AND ASSEMBLIES PRIOR TO CONSTRUCTION. REPORT ANY SIGNIFICANT DISCREPANCIES TO THE OWNER AND ARCHITECT.
B. MECHANICAL, PLUMBING, ELECTRICAL, FIRE SPRINKLER, AND CEILING SUBCONTRACTORS SHALL COORDINATE THEIR WORK. IN CASE OF CONFLICT, THE REFLECTED CEILING PLAN SHALL TAKE PRECEDENCE.
C. COORDINATE WITH MECHANICAL AND ELECTRICAL FOR ADDITIONAL REQUIREMENTS.
D. FOR TYPICAL SEISMIC BRACING SEE DETAILS 3/A502 4/A502
E. FOR TYPICAL SEISMIC LIGHT BRACING SEE DETAIL 2/A502
F. FOR TYPICAL WALL BRACING SEE DETAIL 8/A612
G. CEILING HEIGHTS SHOWN ARE ABOVE FINISH FLOOR
H. DO NOT SCALE DRAWINGS.
I. ALL ELECTRICAL EQUIPMENT SHALL BE NEW. SUB-CONTRACTOR TO PROVIDE COPY OF DATED SALES RECEIPT IF REQUIRED BY THE OWNER.
J. IF FIRE SPRINKLER SYSTEM IS REQUIRED; GENERAL CONTRACTOR SHALL PROVIDE THREADED RECESSED FIRE SPRINKLER ESCUTCHEONS AT ALL LOCATIONS;COORDINATE WITH PLUMBING.
K. COORDINATE FINAL SECURITY AND SPEAKER LOCATIONS WITH OWNER
L. THE USE OF NON-METALLIC SHEATHED CABLE (ROMEX) IS NOT PERMITTED TO BE INSTALLED WITHIN DROPPED OR SUSPENDED CEILING ASSEMBLIES. NEC 334.12.
M. INSTALLATION OF CEILING GRID SYSTEM MUST COMPLY WITH ASTM E580, C636; INCLUDING THE SECURING OF THE LIGHTING FIXTURES AND HVAC TERMINALS. (HEAVY DUTY GRID ONLY); COORDINATE WITH NOTES D AND E ABOVE.

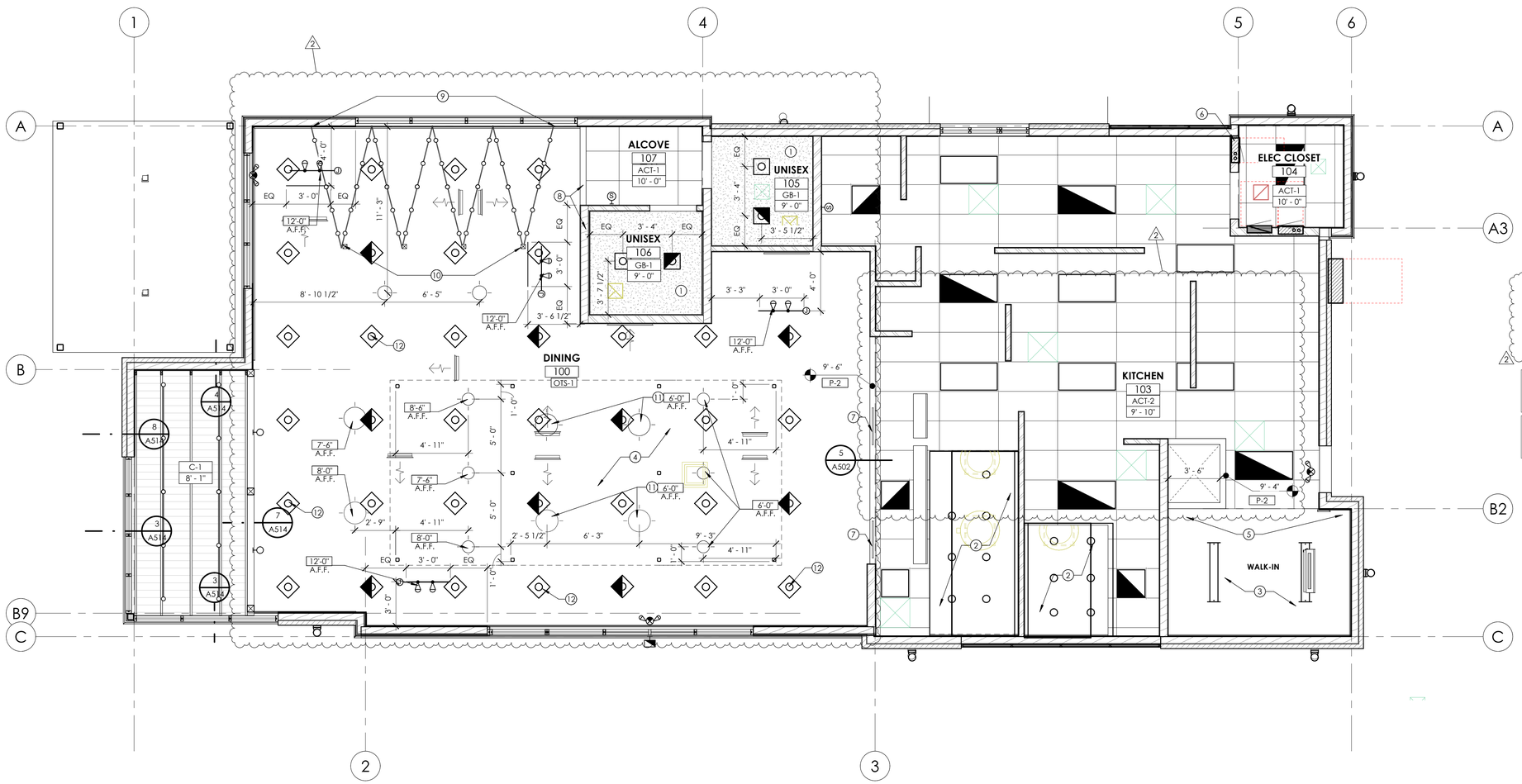
CEILING TAG

C-1 / 1'-0" — CEILING MATERIAL; CEILING HEIGHT

1'-0" — CEILING HEIGHT

MATERIAL TAG

E-1 — MATERIAL TYPE PER SCHEDULE



3 REFLECTED CEILING PLAN
1/4" = 1'-0"

NORTH

REFLECTED CEILING PLAN GENERAL NOTES

NOTE:
1. PAINT ALL GRILLES / DIFFUSERS IN CEILING TO MATCH ADJACENT CEILING COLOR
2. SEE SHEET A114 FOR FINISH SCHEDULE AND PAINT COLORS

- ACT-1 — 2'x4' ARMSTRONG SIMULATED CORTEGA SUSPENDED CEILING TILE IN 2'x4' GRID SYSTEM; COLOR TBD; SEE DETAILS 6/A502 4/A502
- ACT-2 — 2'x4' VINYLROCK GYP LAY-IN PANELS NON-PERFORATED STIPPLE WHITE FACE - NONABSORBENT SURFACE SUSPENDED CEILING TILE IN 2'x4' GRID SYSTEM; COLOR WHITE; SEE DETAILS 6/A502 4/A502
- GB-1 — 5/8" TYPE "X" GYPSUM BOARD WITH SMOOTH FINISH; PAINTED P-5 (PURE WHITE)
- W-1 — CEILING PANELS PROVIDED BY WALK-IN COOLER/FREEZER MANUFACTURER
- C-1 — FAUX STUD WALL; PAINT P-2; SEE DETAILS 9/A514
- OST-1 — OPEN TO STRUCTURE. PAINT EXPOSED STRUCTURE, PIPING, WIRING, JUNCTION BOXES, DUCT WORK AND WALLS ABOVE 12'-0" P-2
  BASE BID: APPLY SPRAYED ACOUSTIC INSULATION TO DECKING PER SPECIFICATION ON SHEET A152 IN LEIU OF PAINTING DECK
  ALTERNATE: PAINT EXPOSED DECKING P-2 IN LEIU OF SPRAYED ACOUSTIC INSULATION

AT WALKING SURFACE OR CIRCULATION ROUTE NO SUSPENDED LIGHT FIXTURE, DECORATIVE ITEM OR SIMILAR DECORATIVE ITEMS SHALL BE INSTALLED LOWER THAN 80" A.F.F.

NO DEVICE OR DECORATIVE OBJECT LESS THAN 80" A.F.F. SHALL PROJECT MORE THAN 4" FROM ANY WALL IN ANY CIRCULATION PATH OR ACCESSIBLE ROUTE

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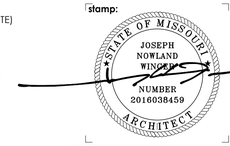


sheet number:

MOBETTAHS (TI) for:
LEE'S SUMMIT
520 NW Chipman Rd
Lee's Summit, MO 64086

sheet title:
REFLECTED CEILING PLAN

sheet number:
A113

REFLECTED FINISH FLOOR PLAN GENERAL NOTES

A. FLOOR FINISHES ARE CONTINUOUS. ALL FLOORING IS TO CONTINUE BENEATH ALL ELEMENTS IN CONTACT WITH THE FLOOR. CONTRACTOR TO COORDINATE OPENINGS AND PROVIDE FLOORING WITHIN OPENINGS NOT SPECIFICALLY IDENTIFIED.
B. ALL PRODUCTS ARE TO BE PROVIDED AND INSTALLED PER MANUFACTURERS PUBLISHED REQUIREMENTS AND FASTENED AND ADHERED ACCORDING TO APPROVED METHODS.
C. ALL EXPOSED SURFACES ARE TO BE PREPARED TO RECEIVE NEW FINISHES.
D. ALL WIRE FRAMES, CONDUIT, ACCESS PANELS, GILLES, FIRE EXTINGUISHER CABINETS, ELECTRICAL PANELS AND MECHANICAL DEVICES SHALL BE FINISHED TO MATCH THE ADJACENT SURFACE UNLESS NOTED OTHERWISE.
E. ALL PAINT IS TO CONTINUE FROM BASE OF WALL TO TOP OF WALL AND EDGE OF WALL TO EDGE OF WALL UNLESS NOTED OTHERWISE.
F. CONTRACTOR TO REPORT ANY DISCREPANCIES IN PRODUCT QUALITY TO ARCHITECT FOR REVIEW AND APPROVAL.
G. COMMENCEMENT OF WORK ON ANY SURFACE BY THE CONTRACTOR MEANS ACCEPTANCE OF THOSE SURFACES.
H. REFER TO SHEET A500 SERIES SHEETS FOR INTERIOR DETAILS.
I. REFER TO SHEET A400 SERIES SHEETS FOR INTERIOR ELEVATIONS.
J. REFER TO SHEET A113 FOR REFLECTED CEILING PLANS.
K. FLOOR TRANSITION HEIGHTS NOT TO EXCEED 1/4" MAXIMUM. PROVIDE APPROPRIATE TRANSITION AT EACH LOCATION WHERE FLOOR MATERIAL CHANGES.
L. EQUIPMENT NOT SHOWN FOR CLARITY
M. RUN FLOORING UP TO MILLWORK AND UNDER OPEN COUNTERTOPS.
N. SEE SHEET A111 FOR FLOOR DRAINS, FLOOR SINKS, AND TROUGH DRAIN LOCATIONS

WALL & PAINT FINISH SCHEDULE

MARK	MATERIAL	DESCRIPTION
GB-1	GYP. BD.	MUD/TAPE/SANDED -NO PAINT
FRP-1	FRP (SMOOTH WHITE)	SMOOTH WHITE; PEBBLED; FULL HEIGHT OR AS SHOWN SEE DETAIL 1/A501
MG-##	METAL GUARD	SEE INTERIOR METAL; SCHEDULE ON SHEET A114
MP-##	METAL PANEL	SEE INTERIOR METAL; SCHEDULE ON SHEET A114
MS-##	METAL SURFACE	SEE INTERIOR METAL; SCHEDULE ON SHEET A114
P-1	PAINT (LIGHT GREEN)	SW #6178 "CLARY SAGE" ; 2 COATS ACRYLIC ENAMEL OVER 1 COAT BLOCKING PRIMER; EGGSHELL
P-2	PAINT (OFF WHITE)	SW #7571 "CASA BLANCA" ; 2 COATS ACRYLIC ENAMEL OVER 1 COAT BLOCKING PRIMER; EGGSHELL
P-3	PAINT (OFF WHITE)	SW #7571 "CASA BLANCA" ; SEMI-GLOSS AT DOOR AND FRAME
P-4	PAINT (SIMULATED RUST DINING CANOPY)	SIMULATED RUST FINISH ON DINING CANOPY CORRUGATED PANELS; SIMULATE RUST WITH VINEGAR-PEROXIDE-SALT SOLUTION (TOP ONLY); ALLOW TIME FOR CORROSION TO BE REVIEWED BY ARCHITECT AND OWNER BEFORE INSTALLATION;
P-5	PAINT (PURE WHITE)	SW #7005 "PURE WHITE"; 2 COATS ACRYLIC ENAMEL OVER 1 COAT BLOCKING PRIMER; EGGSHELL
P-6	PAINT (BLACK)	SW #6258 "TRICORN BLACK"; SEMI-GLOSS AT DOOR AND FRAME
P-7	PAINT (CANOPY STEEL)	SW #7047 "PORPOISE"; 2 COATS ACRYLIC ENAMEL OVER 1 COAT BLOCKING PRIMER; EGGSHELL
W-1	DINING WAINSCOT (STANDARD)	DINING WAINSCOT; "X" FRAME; PAINT P-1; SEE DETAILS 1/A512 3/A512
W-2	DINING WAINSCOT PARTIAL HEIGHT	DINING WAINSCOT; PAINT P-2; HARDWOOD CAP STAIN TO MATCH WILSONART ACORN VELVET ELM15602-31; SEE DETAILS 1/A511
W-3	DINING BOARD AND BATTEN	DINING BOARD AND BATTEN; PAINT P-1; PROVIDE 1/2" PLYWOOD BACKING IN WALL FOR BATTENS SEE DETAILS; 4/A512 3/A512
W-4	DINING FAUX STUD WALL	FAUX STUD WALL; PAINT P-2; SEE DETAILS 2/A514
W-5	POS WAINSCOT	POS WAINSCOT; STAIN TO MATCH WILSONART ACORN VELVET ELM 15602-31; SEE DETAILS 3/A551
WC-1	WALLCOVERING	WALL COVERING ABOVE WAINSCOT; WOLF GORDON; SAMOA PALM; GOH 32260677
WP-1	WALK-IN PANEL	WALL PANELS PROVIDED BY WALK-IN COOLER/MANUF.
WT-1	WALL TILE* (FIELD)	WALL TILE; DALTILE; MYTHOLOGY; COLOR SANTORINI MY90; 4" X 12" UNDULATED; GROUT-MAPEI #27 SILVER
SE-1	SCHLUTER EDGE	JOLLY A 80 AT; SATIN NICKEL ANODIZED ALUMINUM
*TYPICAL		SEAL ALL GROUT WITH COMMERCIAL SEALER

INTERIOR METAL SCHEDULE

MARK	LOCATION	TYPE	NO. OF SURFACES	SHEET SIZE	NO. OF SHEETS	GAUGE	FINISH	REMARKS
MP-01	KITCHEN	WALL FLASHING	1	4x10	3	18	#4 SATIN	INSTALL TRIM AT PERIMETER EDGES AND FIELD JOINTS
MP-02	SERVICE	WALL FLASHING	3	4x10	AS REQ	18	#4 SATIN	INSTALL TRIM AT PERIMETER EDGES AND FIELD JOINTS
MP-03	BEVERAGE	BASE FINISH	3		AS REQ	18	#4 SATIN	
MP-04	KITCHEN (MOP SINK)	WALL FLASHING	3	36" x REQ	AS REQ	18	#4 SATIN	INSTALL TRIM AT PERIMETER EDGES AND FIELD JOINTS

MARK	LOCATION	TYPE	HEIGHT	WING SIZE	NO. OF UNITS	GAUGE	FINISH	REMARKS
MG-01	KITCHEN / SERVICE	U-CHANNEL	10'-0"	2"	PER PLAN	18	#4 SATIN	90° ANGLES
MG-02	KITCHEN / SERVICE	CORNER GUARD	10'-0"	2"	PER PLAN	18	#4 SATIN	90° ANGLE
MG-03	KITCHEN / SERVICE	U-CHANNEL	-	2"	PER PLAN	18	#4 SATIN	FULL WRAP EDGES OF OPENING; STAINLESS STEEL
MG-04	SERVICE (HOOD CLOSURE)	VERTICAL TRIM	40"±	2"	2	18	#4 SATIN	90° ANGLE TO CLOSE GAP AT HOOD AND WING WALL
MG-05	SERVING LINE	U-CHANNEL	2'-8 1/2"	2"	PER PLAN	18	#4 SATIN	90° ANGLES

MARK	LOCATION	TYPE	LENGTH	DEPTH	EDGE	GAUGE	FINISH	REMARKS
MS-01	BEVERAGE	COUNTER	PER PLAN	VARIES	1 1/2"	16	#4 SATIN	6" BACKSPLASH; 3 SIDES; BUILT IN TRASH HOLE; COORINATE WITH SHEET A403
MS-02	BEVERAGE (FLOOR SINK)	COLLAR	-	-	2"	16	#4 SATIN	COORDINATE WITH MILLWORK SUPPLIER
MS-03	STAINLESS STEEL CAP	CAP	PER PLAN	8"	1"	16	#4 SATIN	

INTERIOR METAL SCHEDULE GENERAL NOTES:

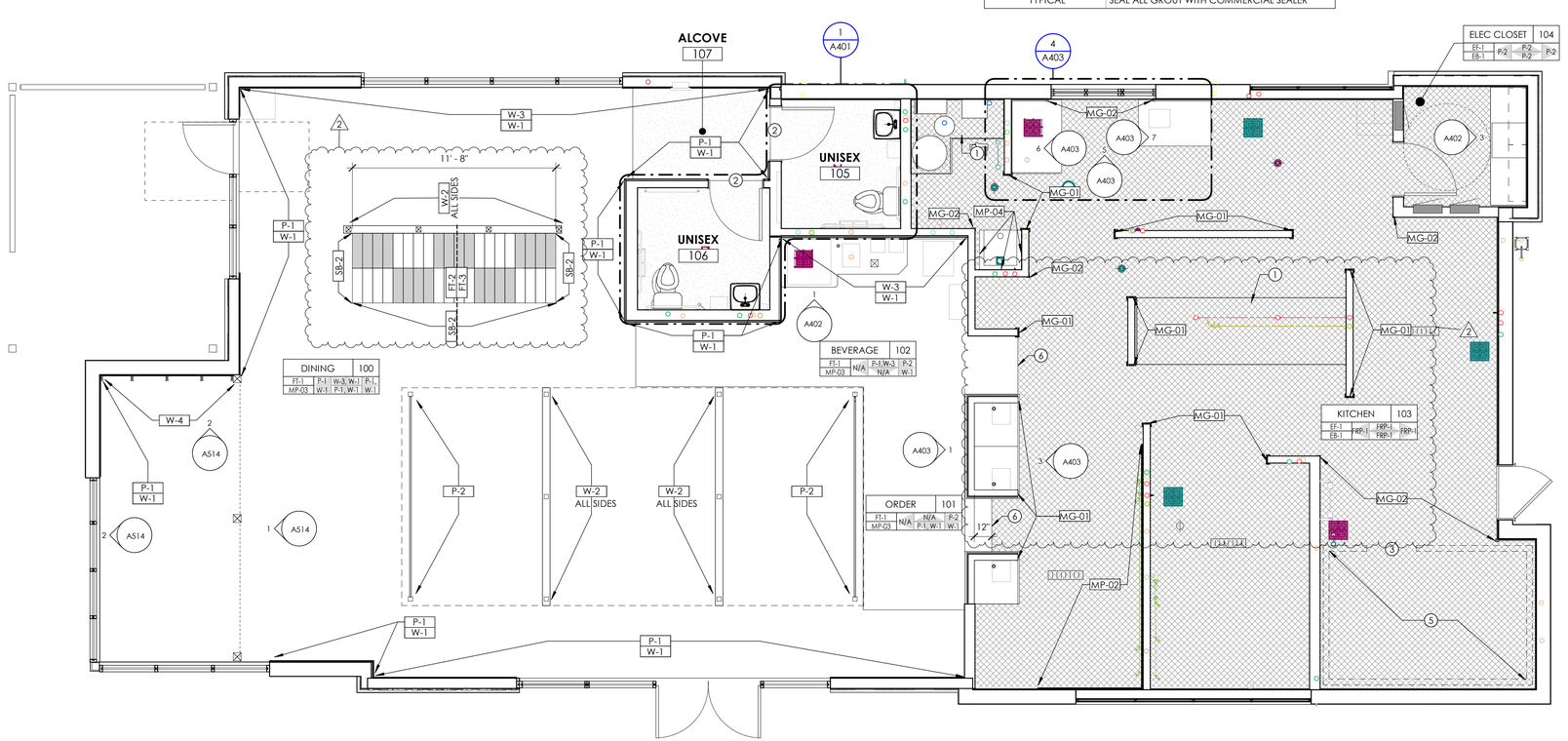
1. METAL SHALL BE SURFACE-LAMINATED TO WALLS; MECHANICAL FASTENING IS NOT PERMITTED UNLESS NOTED OTHERWISE.
2. SHEET SIZES LISTED ARE APPROXIMATE; FIELD VERIFY ALL CONDITIONS PRIOR TO ORDERING MATERIALS.
3. CAULK ALL EXPOSED EDGES AND SEAMS AS REQUIRED; COLOR-CLEAR

BASE FINISH SCHEDULE

MARK	MATERIAL	DESCRIPTION
EB-1	EPOXY BASE	6" HIGH BASE; MATCH FLOOR; SEE SPEC. SEE DETAIL 1/A501
MP-03	BLACK METAL	SEE INTERIOR METAL SCHEDULE ON SHEET A114
SB-1	SCHLUTER COVE	DILEX @AHKA80AT, 3/8" RADIUS; SATIN NICKEL ANODIZED ALUMINUM
SB-2	SCHLUTER	DECO; AE 80D; 5/16"; SATIN ANODIZED ALUMINUM
MB-1	WALK-IN BASE	WALK-IN MANUF. SUPPLIED BASE

① KEYNOTES

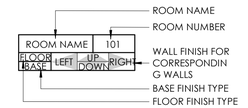
① RAISED PLATFORM AND CURB SEE DETAIL 4/A501
② NO THRESHOLD IN THIS LOCATION; COORDINATE WITH FINISH SCHEDULE
③ NO THRESHOLD AT THIS LOCATION,FOLLOW MANUFACTURE'S INSTRUCTION FOR ADJUSTABLE DOOR SWEEP
④ TERMINATE FRP EDGE AT EMPLOYEE SIDE OF SERVING LINE SOFFIT ABOVE
⑤ SCHEDULED ECO-GRIP BASE ON INTERIOR AND EXTERIOR OF WALK-IN COOLER.
⑥ FLOOR FINISH TRANSITION; COORDINATE WITH DETAIL 2/A501



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

NORTH

INTERIOR FINISH LEGEND



COUNTERTOP / MILLWORK SCHEDULE

MARK	MATERIAL	DESCRIPTION
CB-01	P-LAM	BASE CABINET; WILSONART; ACORN VELVET ELM
CT-01	P. LAM.	COUNTERTOP; WILSONART BRONZE LEGAXY
CT-02	STAINLESS STEEL COUNTER	COORDINATE WITH INTERIOR METAL SCHEDULE ON SHEET A114 & DETAILS ON A400 SERIES SHEETS
CT-03	QUARTZ	COUNTERTOP; CORIAN; CARBON CEMENT; 3CM

FLOOR FINISH SCHEDULE

MARK	MATERIAL	LEGEND	DESCRIPTION
EF-1	EPOXY		EPOXY FLOOR; SEE SPEC.
FT-1	PORCELAIN		FLOOR TILE: AMERICAN OLEAN; THEORETICAL; COLOR CREATIVE GRAY TH96; 11-5/8" X 23-3/8"; GROUT-MAPEI # 27 SILVER; ASHLAR INSTALLATION
FT-2	PORCELAIN		FLOOR TILE: DALTILE; GAINESWOOD; PINE GW04; 6" X 24"; GROUT-MAPEI #04 BAHAMA BEIGE
FT-3	PORCELAIN		FLOOR TILE; DALTILE; GAINESWOOD; HICKORY GW05; 6" X 24"; GROUT-MAPEI #04 BAHAMA BEIGE
PC-1	POLISHED CONC.		POLISHED CONCRETE FLOOR & PROVIDE CODE MINIMUM SLIP RESISTANCE CLEAR COLOR; NATURAL FINISH COORDINATE WITH SHEET A153
SC-1	SEALED CONC.		EXISTING SEALED CONC. TO REMAIN

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sheet number:

MOBETTAHS (TI) for LEE'S SUMMIT
520 NW Chipman Rd
Lee's Summit, MO 64086

sheet title: FINISH PLAN

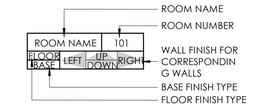
sheet number:

A114

FURNITURE PLAN GENERAL NOTES

A. GENERAL CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION. REPORT ANY SIGNIFICANT DISCREPANCIES TO THE ARCHITECT.
B. ALL COLORS SELECTIONS AND FINISH MATERIALS AND STYLES SHALL BE COORDINATED WITH OWNER.
C. MILLWORK SHOWN DASHED CLARITY.
D. EQUIPMENT NOT SHOWN FOR CLARITY
E. RUN FLOORING UP TO MILLWORK AND UNDER OPEN COUNTERTOPS.
F. COORDINATE COUNTERTOP FINISHES WITH
G. COORDINATE WITH INTERIOR ELEVATIONS ON A250 SERIES SHEETS AND MILLWORK DETAILS ON A550 SERIES SHEETS
H. PAINTED DOOR TRIM COLOR SEE DOOR SCHEDULE.

INTERIOR FINISH LEGEND



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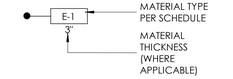
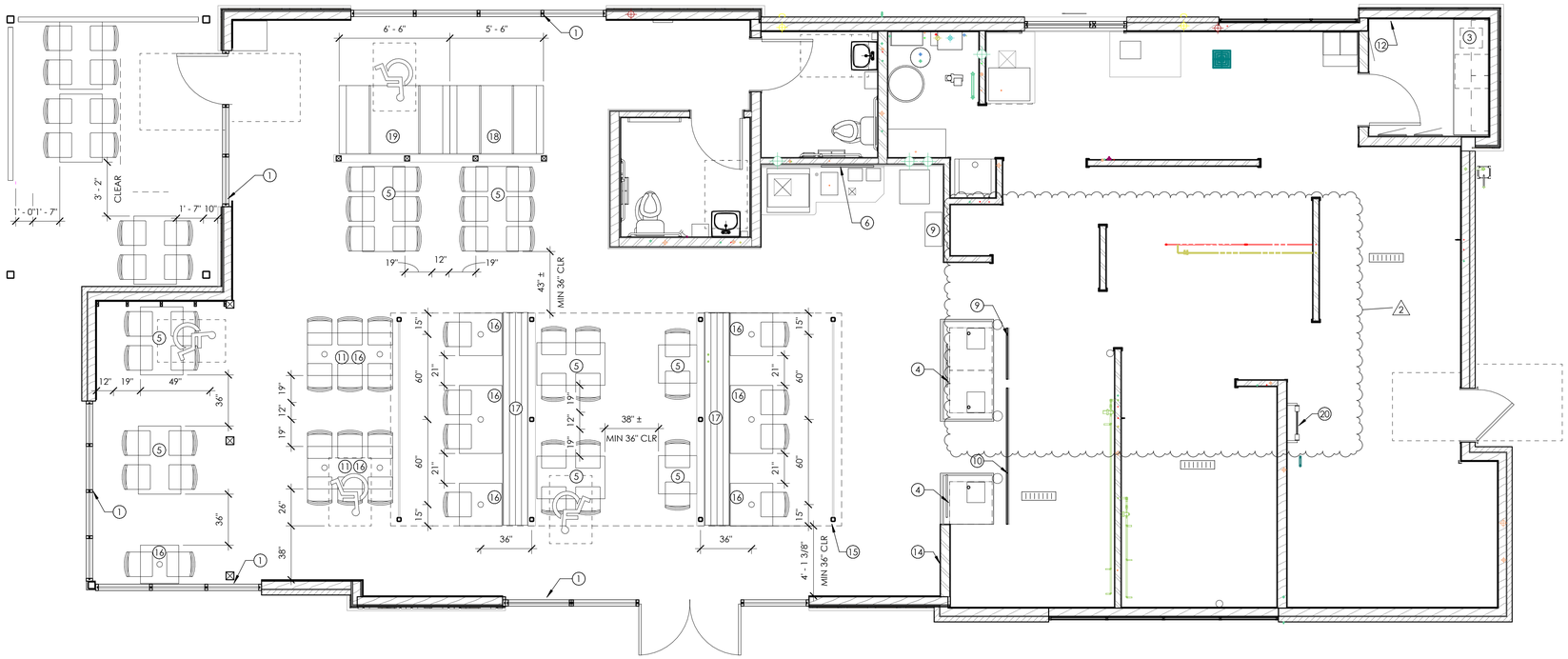


COUNTERTOP / MILLWORK SCHEDULE

MARK	MATERIAL	DESCRIPTION
CB-01	P-LAM	BASE CABINET; WILSONART; ACORN VELVET ELM
CT-01	P. LAM.	COUNTERTOP; WILSONART BRONZE LEGAXY
CT-02	STAINLESS STEEL COUNTER	COORDINATE WITH INTERIOR METAL SCHEDULE ON SHEET A114 & DETAILS ON A400 SERIES SHEETS
CT-03	QUARTZ	COUNTERTOP; CORIAN; CARBON CEMENT; 3CM



KEYNOTES

1. INTERIOR BLINDS
2. WALL MOUNTED SURFBOARD RACK. SEE DETAIL 2/A551
3. MANAGER'S SAFE (BELOW COUNTER); BOLT & SILICONE TO FLOOR, COORDINATE WITH EQUIPMENT PLAN AND SCHEDULE.
4. SUSPENDED SIGN ORDER/PICK UP (30"x15")
5. FREE-STANDING TABLE
6. HAWAIIAN FLAG
7. WALL MOUNTED PADDLE (VERTICAL)
8. WALL MOUNTED PADDLE (HORIZONTAL)
9. CEILING MOUNTED CATERING MENU SIGN
10. CEILING MOUNTED MENU SIGN
11. BAR HEIGHT TABLE SET 2" OFF OF ADJACENT WALL (U.N.O.)
12. STAINLESS STEEL COAT HOOK (ON INTERIOR OF DOOR)
13. WALL-HUNG CANVAS
14. FOUNDER'S STORY
15. WALL MOUNTED MENU HOLDER
16. FIXED/BOLTED DOWN TABLE BASE
17. 18" DEEP x 12'x6" LONG BENCH
18. 4 SEAT BOOTH
19. ADA 4 SEAT BOOTH
20. ROOF ACCESS LADDER (2)

1 FURNITURE PLAN
1/4" = 1'-0"

NORTH

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sheet information

revisions: 2

num.	description	date
2	REVISION 02	04-06-22

CURRENT SET THRU REVISION 02

date: 1-23-2022
project number: MO-53LEE
project status: ISSUED FOR PERMIT

original drawing is 24" x 36"
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ARCHITECT

sheet number:

MOBETTAHS (TI)
for:
LEE'S SUMMIT
520 NW Chipman Rd
Lee's Summit, MO 64086

sheet title: FURNITURE PLAN

sheet number:

A115

ECO-GRIP MUST BE USED (NO SUBSTITUTIONS)

PROVIDE SLATE FINISH

Allied Industries® International, Inc

SECTION 01 15 20
RECYCLED POLYVINYL SAFETY FLOORING INSTALLATIONS

1. GENERAL

1.1 SUMMARY
A. This section includes furnishing all materials, labor, equipment, and related services necessary to supply and install recycled Polyvinyl safety flooring (Eco-Grip®) as indicated in the contract documents, and in compliance with applicable codes.

1.2 RELATED SECTIONS
A. Division 03 Section "Cast in Place Concrete" for general building applications of concrete.
B. Division 22 Section "Plumbing" for drain, floor sink floor troughs, cleanouts, and plumbing penetration conditions.

1.3 INFORMATIONAL SUBMITTALS
A. Product Data: Submit manufacturer's product data and installation instructions for commercial kitchen applications.
B. Samples: Submit 3 Eco-Grip® samples in the color SELECTED on the finish drawings.
C. Certification: Submit evidence of contractor qualifications as outlined under 1.5
D. Quality Assurance. Provide letter from the manufacturer attesting to Approved Installer status.

1.4 CLOSEOUT SUBMITTALS
A. Maintenance Data: Provide detailed Eco-Grip® maintenance instructions.
B. Warranties: Provide manufacturer and installation warranties as noted under Section 1.5 Quality Assurance.

1.5 QUALITY ASSURANCE
A. Contractor will assure compliance with 1.6 Project Conditions to allow or proper installation.
B. Comply with local governing codes and regulations.
C. Use Eco-Grip® factory-trained installers Approved Installers.
D. Manufacturer must provide a limited 10-year product warranty against manufacturing defects, with end-user's continual use of Eco-Grip® Commercial Floor Cleaner.
E. Eco-Grip® Approved Installer must provide a 1-year installation defect warranty.

1.6 PROJECT CONDITIONS
A. Assure that substrate material is suitable for installation of flooring as indicated by manufacturer. Approved substrates include: Portland-based concrete, gypsum-based concrete (installation will require a unique adhesive), marine-grade or underlayment grade plywood, cement board as reviewed and approved by manufacturer, provided all substrates are properly cleaned and prepared per manufacturer guidelines.
    1. Eco-Grip® can be installed over existing finishes such as quarry tile or epoxy, provided all finishes are properly prepared for installation. Glue down products and mastic must be removed.
    2. Eco-Grip® can be installed in "operating environments", defined as a facility that operates a relatively normal daily schedule, but closes for at least 8 hours during a 24-hour period to allow for installation, for the duration of installation.
B. Comply with manufacturer's written instructions for substrate temperature and humidity, ambient temperature, ventilation, and other conditions affecting the installation of Eco-Grip®.
C. Environmental Limitations: Do not install Eco-Grip® flooring until building is enclosed and weatherproof, concrete work is complete and cured, and the HVAC system or temporary heating maintains a minimum temperature of 55-defgrees F and humidity is at normal occupancy levels.
D. Acclimate Eco-Grip® flooring materials to the ambient temperature and humidity levels of the installation spaces for a minimum of 24 hours.
E. Verify that concrete substrate conditions provide for slope to drains allowing water flow to drainage points without assistance. ¼" per 1-foot average slope for a 4' radius from drain center is required.
F. Verify that floor drains, clean-outs, trench drains, grease traps, and floor sinks are set level, and ¼" above substrate, to facilitate drainage to those penetrations once the ¼" (6.5mm) thick Eco-Grip® floor is installed. Floor sinks may be set higher than ¼", per local code.
G. Slab substrates must be dry and free of curing compounds, hardeners, sealers and other foreign materials that would interfere with bonding of adhesive.
H. Verify the substrate is clean, dry, and structurally sound to accept adhesive, and is free of cracks, ridges, depressions, scales, and foreign deposits of any kind.
I. Verify that substrate is ready for resilient flooring installation by testing moisture emission rate and alkalinity, in accordance with ASTM F710; obtain instructions if test results are not within limits recommended by resilient flooring manufacturer and adhesive manufacturer.
    1. Reference ASTM F710 – Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.
    2. Moisture reading must register no more than 98% RH on the Wagner Relative Humidity Scale.
    3. Refer to Eco-Grip® New Construction Checklist for additional Guidance.
J. Do not begin installation of Eco-Grip® flooring until all Project Conditions have been met.

2. PRODUCTS

2.1 NO SUBSTITUTIONS PERMITTED

2.2 APPROVED PRODUCTS
A. Eco-Grip® slip resistant safety flooring as manufactured by Allied Industries International, Inc.
    1. Eco-Grip® Commercial Flooring. Sheets are 8'x5' in ¼" (6.5mm) thickness with color chosen by architect as noted on plans.
    2. Eco-Grip® 2-Part Epoxy Flooring Adhesive
    3. Eco-Grip® SpeedFlex Liquid Weld System (or V-Rod, welding rod)
    4. Eco-Grip® Polyvinyl Cove Base Cap (high-impact polyvinyl), stainless steel base cap, aluminum base cap.
    5. 16-gauge stainless steel drain flanges and transition strips, and #10 stainless screws and lead anchors, as required.
    6. Eco-Grip® sealants.
    7. Other installation materials as required and supplied by Allied Industries International, Inc.
    8. No substitutions permitted.
B. Eco-Grip® slip-resistant safety flooring must meet the following test standards:
    1. ASTM G21: Excellent Bacteria & Mildew Resistance
    2. ASTM D412 Tensile Strength: 1694 psi Elongation 130.98%
    3. ASTM D624 Tear Strength: 268 lbs./force/inch Elongation 7.33%
    4. ASTM F970 2000 psi .023 Avg 1500 psi = .014
    5. ANSI B101.3 SCOF = .62 DCOF = .43
    6. ANSI B101.3 DCOF TRL rubber = .72
    7. ASHB 198:2014 SSR Wet = 65
    8. ASTM E662 Smoke Density: DMC 141
    9. Fire Test: NFPA Type I Rated
    10. ASTM D2240 Hardness: 85
    11. Thickness: 6.5mm / 4mm
    12. Weight (oz. sq. ft.): 25.16 / 16
    13. Oxygen Index: 29.0

3. EXECUTION

3.1 INSTALLATION
A. Refer to manufacturer's Installation Manual, Detail Drawings, and Installation Training Video for all installation techniques. Installation should always be conducted by factory-trained Approved Installers.
B. Follow manufacturer recommendations for laying out sheets. All flooring sheets and welded joints must be offset by 1/3 of sheet length in a staggered design.
C. The majority of all base must be installed integral to the flooring sheet, with minimal usage of flat base.
D. Flooring must be cut tight to all penetrations.
E. Adhere the flooring sheets to substrate with Eco-Grip® 2-part Epoxy using the manufacturer's recommended trowel notch size (3/32). A unique 1-part adhesive is available for gypsum-based substrate applications.
F. Use 100lb. roller to press floor into 2-part epoxy immediately following application of 2-part epoxy.
G. Eco-Grip® E-6100 adhesive/sealant should be used to seal top edge of base under base cap, per Base Cap Detail Drawings, and under all stainless details per Detail Drawings.
H. Route out v-grooves between sheets with a 6mm groover blade for SpeedFlex application, and weld all seams using Eco-Grip® SpeedFlex Liquid Weld System or Eco-Grip® 7mm v-Rod.
I. Stainless steel drain flanges are to be routed into floor surface and mounted flush with the top of flooring. Secure flanges using stainless steel fasteners, lead anchors, and sealant, anchoring the flange to the substrate.
J. Install 16-gauge stainless steel transitions at all doorways and floor transition areas, using stainless steel fasteners, lead anchors, and sealant.
K. Seal all exposed edges of flooring and penetrations with SpeedFlex Liquid Weld System to ensure a watertight seal.
L. Refer to Detail Drawings dated 1/02/20 for additional information.
M. GC to protect finished floor.

3.2 CLEANING
A. Sweep the floor after installation and clear area of scrap materials.
B. Refer to manufacturer's cleaning manual and demonstration video for proper cleaning technique.
C. Installer must provide two copies of manufacturer's cleaning recommendations for contractor and owner use.
D. Installer must provide cleaning kit (1-gallon Eco-Grip® Commercial Floor Cleaner, 1 foam gun, 1 deck brush, 1 squeegee, 1 cleaning instruction poster) with installation.

End of Section 01 15 20

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864-674-0019 fax

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customerservice@eco-gripfloor.com
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Made in USA

SPECS

PRODUCT NAME
ECO-GRIP® SLIP RESISTANT SAFETY FLOORING

MANUFACTURING
Allied Industries International, Inc.
1088 Gaffney Hwy, Jonesville, SC 29353
Phone: (864) 674-0018 Fax: (864) 674-0019

PRODUCT DESCRIPTION
Eco-Grip® flooring is manufactured from 98% recycled polyvinyl with short staple fiber reinforcement to increase overall product flexibility and physical strength. Eco-Grip® provides superior shock absorbency and is impact resistant. The unique surface design produces excellent traction even when wet and/or greasy, and the "walk-in" feature provides increased slip resistance over prolonged use. Specifically designed not to shrink or harden when exposed to animal fats or caustic chemicals, Eco-Grip® is manufactured using polymeric plasticizers and is designed to remain stable through extreme temperature changes.

APPLICATIONS
Ideal for areas requiring a durable, waterproof, easy-to-clean floor system, including: commercial kitchens, walk-in coolers, freezer, food prep areas, dish areas, commissary food service, mobile kitchens, and bulk food production facilities. Eco-Grip® can also be installed as a highly durable sanitary wall treatment, protecting walls from carts, bins, and water overspray.

SPECIFICATIONS
Size Sheets: 60" x 96"
Thickness: 6.5mm
Weight (oz. sq. ft): 25.16
Wear layer: 6mm
Surface Finish: Aggressive slip resistant finish
Solid Colors: Slate, Pewter, Charcoal, Forest, Mocha, Mesa

CLEANING INSTRUCTIONS
Each installation includes a cleaning kit (hot water hose, foam gun, degreaser, deck brush & squeegee). Step 1. Remove all loose debris. Step. 2. Pre-Rinse the floor with HOT water using your hot water hose. Step 3. Fill the foam gun reservoir with Eco-Grip® degreaser and apply a liberal amount on the floor. Step 4. Use the deck brush to scrub the floor as needed. Step 5. Allow the degreaser to dwell on the floor for 8 minutes. Step 6. Use HOT water to rinse the floor and the squeegee can be used to direct water toward the floor drains. Refer to the Eco-Grip® Floor Cleaning Manual for additional details.

INSTALLATION
Eco-Grip® flooring may be installed on most clean, dry, level and hard substrates. Eco-Grip® may be used for both interior and exterior applications.

Surface Preparation: Surface should be clean and free of debris and registering no more than 98% relative humidity. Eco-Grip® should lay flat and uneven joints and cracks in the substrate should be repaired using an approved underlayment or leveling compound. Eco-Grip® is to be installed following standard Allied installation procedures. Cutting and trimming can be achieved using a hook blade razor tool. Please refer to the Allied Industries Installation Manual for additional details.

ALLIED INDUSTRIES TEST DATA
ASTM G21: Excellent Bacteria & Mildew Resistance
ASTM D412 Tensile Strength: 1694 psi Elongation 130.98%
ASTM D624 Tear Strength: 268 lbs/force/inch Elongation 27.33%
ASTM F970 2000 psi .023 Avg 1500 psi = .014
ANSI B101.3 SCOF = .62 DCOF = .43
ANSI B101.3 DCOF TRL rubber = .72
ASHB 198:2014 SSR Wet = 65
ASTM E662 Smoke Density: DMC 141
Fire Test: NFPA Type I Rated
ASTM D2240 Hardness: 85
Thickness: 6.5mm
Weight (oz. sq. ft.): 25.16
Oxygen Index: 29.0

Eco-Grip® flooring is resistant to the chemicals listed below and Allied Industries will evaluate any chemical not listed which may be present in a particular application. Data based on ASTM D-543; Acetate, Ammonium Chloride, Ammonium Hydroxide, Ammonium Nitrate, Ammonium Sulfate, Amyl Aniline, Benzoic Acid, Boric Acid, Butyl Acetate, Butyric Acid, Calcium Chloride, Calcium Hydroxide, Calcium Hypochlorite, Chromic Acid, Citric Acid, Cutting Oil, Ethyl Alcohol, Formaldehyde, Glyoxal, Hydrogen Peroxide, Methyl Alcohol, Mineral Spirits, Diethyl Phthalate, Malic Acid, Phosphoric Acid, Sodium Hydroxide, Triacetin, Varasol

floor score
CERTIFIED BY SCS Global Services

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sheet information

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num.	description	date

CURRENT SET THRU REVISION 02

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NUMBER 2016038459
ARCHITECT

sheet number:

for:
MOBETTAHS (TI)
LEE'S SUMMIT
520 NW Chipman Rd
Lee's Summit, MO 64086

sheet title:
SPECIFICATION - ECO-GRIP FLOOR

sheet number:
A151

SECTION 072129 – SPRAYED ACOUSTIC INSULATION

PART 1 – GENERAL

1.01 Section Includes

A. Sprayed cellulose thermal insulation.
B. Sprayed cellulose acoustical insulation.

1.02 Related Items

A. Clips, hangers, supports, sleeves and other attachments to spray bases are to be placed by other trades prior to the application of sprayed insulation.
B. Ducts, piping, conduit or other suspended equipment shall not be positioned until after the application of sprayed insulation.
C. Roof penetrations to be installed prior to application.

1.03 Quality Assurance

A. Manufacturer must have a current Underwriters Laboratories (UL) Code Evaluation Report.
B. Manufacturer must be in compliance with the 2009 and 2012 International Building Code.
C. Manufacturer must be ISO 9001:2008 Certified.
D. Applicator: Licensed by manufacturer.
E. Manufacturer must subscribe to independent laboratory follow-up inspection services of Underwriters Laboratories and Factory Mutual. Each bag shall be labeled accordingly.
F. Mock-up: Apply a 100 square foot representative sample to be reviewed by the Architect and/or Owner prior to proceeding.

1.04 Submittals

A. Submit product data that the product meets or exceeds the following specified requirements.
   1. Bond strength shall be greater than 100 psf per ASTM E 736.
   2. Product shall be Class 1 Class A per ASTM E 84/ UL 723.
   3. Non-corrosive per ASTM C 739.
   4. Bond Deflection per ASTM E 759: 6" Deflection in 10' Span – No Spalling or Delamination.
   5. R-Value to be 3.75 per inch per ASTM C518.
   6. Comply with IBC 803.3/2009 IBC 803.10 stability requirements for interior finishes.
   7. Meet ASTM C 1149

B. Manufacturer's written certification that product contains no asbestos, fiberglass or other man-made mineral fibers.
C. Copy of manufacturer's ISO 9001:2008 Certification.
D. Minimum Fiber Recycled Content to be 75%.
E. Cannot contain any added Urea-Formaldehyde Resins.

1.06 Delivery, Storage and Handling

A. Deliver in original, unopened containers bearing name of manufacturer, product identification and reference to U.L. testing.
B. Store materials dry, off ground, and under cover.

C. Protect liquid adhesive from freezing.
D. Water to be potable.

PART 2 – PRODUCTS

2.01 Acceptable Manufacturers

A. International Cellulose Corporation
   12315 Robin Boulevard
   Houston, Texas 77045
   (713) 433-6701 or (800) 444-1252
   FAX: (713) 433-2029
   www.spray-on.com icc@spray-on.com
B. For approved applicators contact ICC at 800-444-1252.

2.02 Materials

A. K-13 Spray-On-Systems.
   1. Color shall be from Manufacturer's standard color chart.
   2. Comply with local Building Code requirements.
   3. Material to have been tested in accordance with ASTM E 1042. Testing laboratory must be NVLAP accredited.

PART 3 – EXECUTION

3.01 Examination

A. Examine surfaces and report unsatisfactory conditions in writing. Do not proceed until unsatisfactory conditions are corrected.
B. Verify surfaces to receive spray insulation to determine if priming/sealing is required to insure bonding and/or to prevent discoloration caused by migratory stains.

3.02 Preparation

A. Provide masking, drop cloths or other satisfactory coverings for materials/surfaces that are not to receive insulation to protect from over-spray.
B. Coordinate installation of the sprayed cellulose fiber with work of other trades.
C. Prime surfaces as required by manufacturer's instructions or as determined by examination.

3.03 Installation

A. Install spray applied insulation according to manufacturer's recommendations.
B. Install spray applied insulation to achieve an average NRC of 1.00.

K-13 Sprayed Thermal and Acoustical Insulation ASTM C-423 on Solid Backing*							
Inches	125 HZ	250 HZ	500 HZ	1000 HZ	2000 HZ	4000 HZ	NRC
1.00	0.08	0.29	0.75	0.98	0.93	0.96	0.75
1.00**	0.47	0.90	1.10	1.03	1.05	1.03	1.00
2.00	0.26	0.68	1.05	1.10	1.03	0.98	0.95
3.00	0.57	0.99	1.04	1.03	1.00	1.00	1.00

K-13 Sprayed Thermal and Acoustical Insulation Applied at 1.5" Ribbed Metal Deck*							
Inches	125 HZ	250 HZ	500 HZ	1000 HZ	2000 HZ	4000 HZ	NRC
1.50	0.36	0.89	1.26	1.07	1.01	1.00	1.05
3.00	0.97	1.04	1.13	0.99	0.95	0.98	1.05

*Some values interpolated **On lath

C. Cure insulation with continuous natural or mechanical ventilation.
D. Remove and dispose of over-spray.

3.04 Protection

A. Protect finished installation under provision of Division 1.

END OF SECTION 072129

1 SPECS- SPRAYED APPLIED ACOUSTIC INSULATION
12" = 1'-0"

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sheet information

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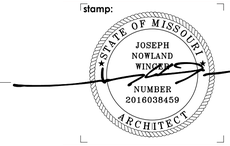

sheet number:

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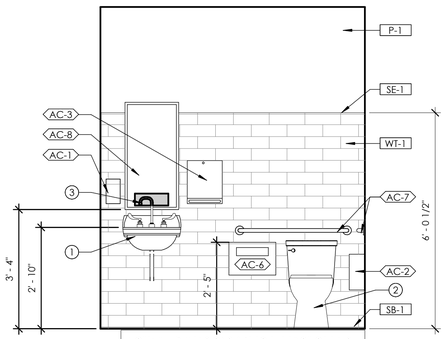
LEE'S SUMMIT
520 NW Chipman Rd
Lee's Summit, MO 64086

sheet title:
SPECS - SPRAYED APPLIED ACOUSTIC INSULATION

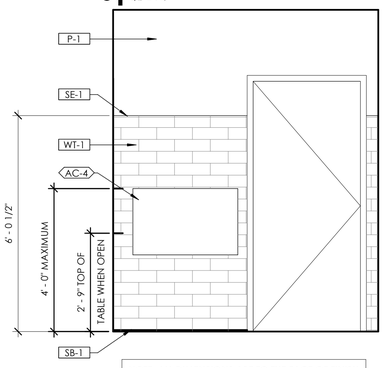
sheet number:

A152



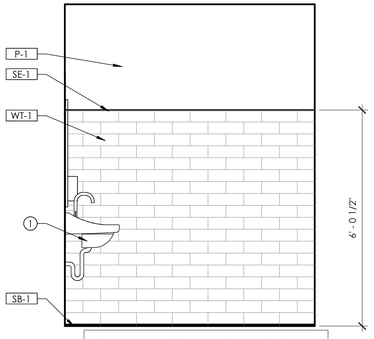
NOTE: ALL DIMENSIONS ARE TO THE FACE OF FINISH COORDINATE WITH FLOOR PLAN FOR ORIENTATION

6 RESTROOM ELEVATION - TOILET WALL - 1
1/2" = 1'-0"



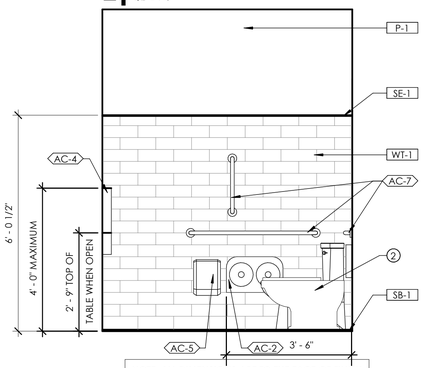
NOTE: ALL DIMENSIONS ARE TO THE FACE OF FINISH COORDINATE WITH FLOOR PLAN FOR ORIENTATION

7 RESTROOM ELEVATION - DOOR WALL - 1
1/2" = 1'-0"



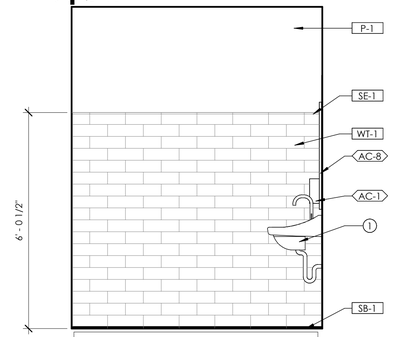
NOTE: ALL DIMENSIONS ARE TO THE FACE OF FINISH COORDINATE WITH FLOOR PLAN FOR ORIENTATION

2 RESTROOM ELEVATION - SIDE WALL - 1
1/2" = 1'-0"



NOTE: ALL DIMENSIONS ARE TO THE FACE OF FINISH COORDINATE WITH FLOOR PLAN FOR ORIENTATION

3 RESTROOM ELEVATION - ACCESSORIES WALL - 1
1/2" = 1'-0"



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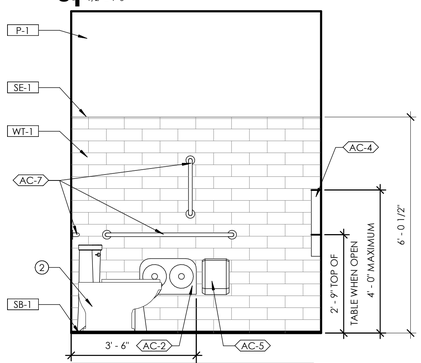
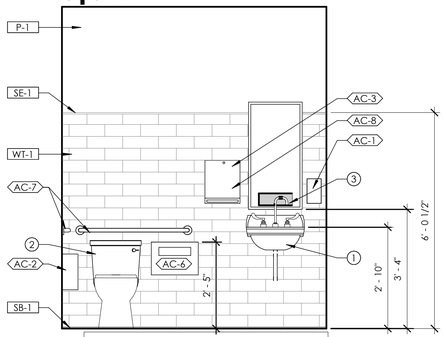
8 RESTROOM ELEVATION - SIDE WALL - 2
1/2" = 1'-0"



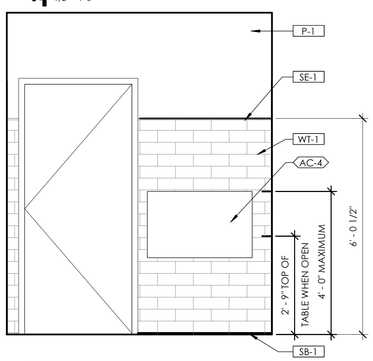
NOTE: ALL DIMENSIONS ARE TO THE FACE OF FINISH COORDINATE WITH FLOOR PLAN FOR ORIENTATION

9 RESTROOM ELEVATION - ACCESSORIES WALL - 2
1/2" = 1'-0"



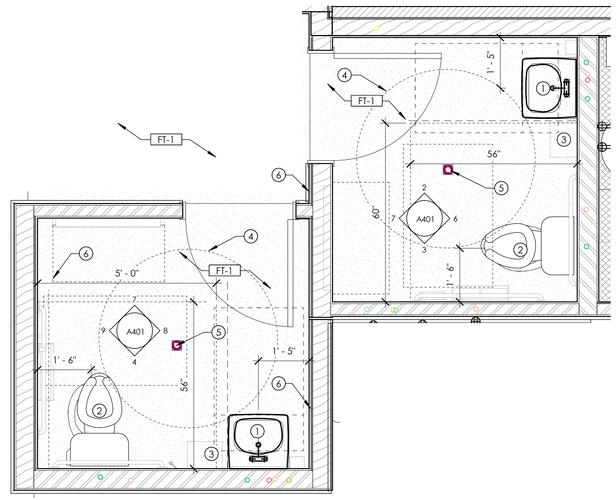
NOTE: ALL DIMENSIONS ARE TO THE FACE OF FINISH COORDINATE WITH FLOOR PLAN FOR ORIENTATION

4 RESTROOM ELEVATION - TOILET WALL - 2
1/2" = 1'-0"



NOTE: ALL DIMENSIONS ARE TO THE FACE OF FINISH COORDINATE WITH FLOOR PLAN FOR ORIENTATION

5 RESTROOM ELEVATION - DOOR WALL - 2
1/2" = 1'-0"



1 RESTROOM FLOOR PLAN
1/2" = 1'-0"

KEYNOTES

1. ADA COMPLIANT SINK & FAUCET; SEE PLUMBING DRAWINGS
2. ADA COMPLIANT TOILET; SEE PLUMBING DRAWINGS
3. WALL MOUNTED 'HAND WASH' SIGNAGE
4. ACCESSIBLE CLEAR FLOOR SPACE PER ICC/ANSI
5. FLOOR DRAIN/FLOOR TROUGH/FLOOR SINK; COORDINATE WITH PLUMBING DRAWINGS
6. INSTALL PLYWOOD ON THIS SIDE OF WALL; COORDINATE WITH A112 AND A611

ACCESSORY LEGEND

AC-# ← ACCESSORY TAG (REFERENCES FIRST COLUMN IN ACCESSORY LEGEND)

MARK	DESCRIPTION
AC-1	ADA COMPLIANT SOAP DISPENSER; SURFACE MOUNTED
AC-2	ADA COMPLIANT TOILET PAPER DISPENSER; SURFACE MOUNTED
AC-3	ADA COMPLIANT PAPER TOWEL DISPENSER/SURFACE MOUNTED
AC-4	BABY CHANGING STATION; COORDINATE WITH EQUIPMENT PLAN
AC-5	ADA COMPLIANT NAPKIN DISPOSAL; SURFACE MOUNTED BOBRICK-MODEL B-270; STAINLESS STEEL
AC-6	ADA COMPLIANT SEAT COVER DISPENSER; SURFACE MOUNTED BOBRICK-MODEL B-221; STAINLESS STEEL
AC-7	ADA COMPLIANT GRAB BARS AT TOILET; COORDINATE WITH DETAIL 3/G202
AC-8	ADA COMPLIANT MIRROR; STAINLESS STEEL FRAME 18"x36", WALL MOUNTED

GENERAL NOTES

A. GENERAL CONTRACTOR SHALL VERIFY ALL CONDITIONS, DIMENSIONS, AND ASSEMBLIES PRIOR TO CONSTRUCTION. REPORT ANY SIGNIFICANT DISCREPANCIES TO THE ARCHITECT.
B. COORDINATE INSTALLATIONS OF ALL AFTER CONTRACT' ASSEMBLIES WITH OWNER PRIOR TO CONSTRUCTION OF ADJOINING OR RELATED STRUCTURES.
C. SEE C4/G002, D1/G002, AND D4/G002 FOR EQUIPMENT BLOCKING AND WALL-MOUNTED ACCESSORIES
D. 5' DIAMETER ACCESSIBLE CLEAR FLOOR SPACE PER ICC/ANSI SHOWN ON PLAN FOR REFERENCE

MATERIAL TAG

E-1 / 3" ← MATERIAL TYPE PER SCHEDULE; MATERIAL THICKNESS (WHERE APPLICABLE)

ACCESSORY TAG

A ← ACCESSORY MARK PER SCHEDULE

← EQUIPMENT PER SCHEDULE ON SHEET Q102

WALL & PAINT FINISH SCHEDULE

MARK	MATERIAL	DESCRIPTION
GB-1	GYP. BD.	MUD/TAPE/SANDED -NO PAINT
FRP-1	FRP (SMOOTH WHITE)	SMOOTH WHITE; PEBBLED; FULL HEIGHT OR AS SHOWN SEE DETAIL 1/A501
MG-##	METAL GUARD	SEE INTERIOR METAL; SCHEDULE ON SHEET A114
MP-##	METAL PANEL	SEE INTERIOR METAL; SCHEDULE ON SHEET A114
MS-##	METAL SURFACE	SEE INTERIOR METAL; SCHEDULE ON SHEET A114
P-1	PAINT (LIGHT GREEN)	SW #6178 "CLARY SAGE" ; 2 COATS ACRYLIC ENAMEL OVER 1 COAT BLOCKING PRIMER; EGGSHELL
P-2	PAINT (OFF WHITE)	SW #7571 "CASA BLANCA" ; 2 COATS ACRYLIC ENAMEL OVER 1 COAT BLOCKING PRIMER; EGGSHELL
P-3	PAINT (OFF WHITE)	SW #7571 "CASA BLANCA" ; SEMI-GLOSS AT DOOR AND FRAME
P-4	PAINT (SIMULATED RUST DINING CANOPY)	SIMULATED RUST FINISH ON DINING CANOPY CORRUGATED PANELS; SIMULATE RUST WITH VINEGAR-PEROXIDE-SALT SOLUTION (TOP ONLY); ALLOW TIME FOR CORROSION TO BE REVIEWED BY ARCHITECT AND OWNER BEFORE INSTALLATION;
P-5	PAINT (PURE WHITE)	SW #7005 "PURE WHITE"; 2 COATS ACRYLIC ENAMEL OVER 1 COAT BLOCKING PRIMER; EGGSHELL
P-6	PAINT (BLACK)	SW #6258 "TRICORN BLACK"; SEMI-GLOSS AT DOOR AND FRAME
P-7	PAINT (CANOPY STEEL)	SW #7047 "PORPOISE"; 2 COATS ACRYLIC ENAMEL OVER 1 COAT BLOCKING PRIMER; EGGSHELL
W-1	DINING WAINSCOT (STANDARD)	DINING WAINSCOT; "X" FRAME; PAINT P-1; SEE DETAILS 1/A512 3/A512
W-2	DINING WAINSCOT PARTIAL HEIGHT	DINING WAINSCOT; PAINT P-2; HARDWOOD CAP STAIN TO MATCH WILSONART ACORN VELVET ELM15602-31; SEE DETAILS 1/A511
W-3	DINING BOARD AND BATTEN	DINING BOARD AND BATTEN; PAINT P-1; PROVIDE 1/2" PLYWOOD BACKING IN WALL FOR BATTENS SEE DETAILS; 4/A512 3/A512
W-4	DINING FAUX STUD WALL	FAUX STUD WALL; PAINT P-2; SEE DETAILS 2/A514
W-5	POS WAINSCOT	POS WAINSCOT; STAIN TO MATCH WILSONART ACORN VELVET ELM 15602-31; SEE DETAILS 3/A551
WC-1	WALLCOVERING	WALL COVERING ABOVE WAINSCOT; WOLF GORDON; SAMOA PALM; GOH 32260677
WP-1	WALK-IN PANEL	WALL PANELS PROVIDED BY WALK-IN COOLER/MANUF.
WT-1	WALL TILE* (FIELD)	WALL TILE; DALTILE; MYTHOLOGY; COLOR SANTORINI MY90; 4" X 12" UNDULATED; GROUT-MAPEI #27 SILVER
SE-1	SCHLUTER EDGE	JOLLY A 80 AT; SATIN NICKEL ANODIZED ALUMINUM
*TYPICAL		SEAL ALL GROUT WITH COMMERCIAL SEALER

FLOOR FINISH SCHEDULE

MARK	MATERIAL	LEGEND	DESCRIPTION
EF-1	EPOXY		EPOXY FLOOR; SEE SPEC.
FT-1	PORCELAIN		FLOOR TILE; AMERICAN OLEAN; THEORETICAL; COLOR CREATIVE GRAY TH96; 11-5/8" X 23-3/8"; GROUT-MAPEI # 27 SILVER; ASHLAR INSTALLATION
FT-2	PORCELAIN		FLOOR TILE; DALTILE; GAINESWOOD; PINE GW04; 6" X 24"; GROUT-MAPEI #04 BAHAMA BEIGE
FT-3	PORCELAIN		FLOOR TILE; DALTILE; GAINESWOOD; HICKORY GW05; 6" X 24"; GROUT-MAPEI #04 BAHAMA BEIGE
PC-1	POLISHED CONC.		POLISHED CONCRETE FLOOR & PROVIDE CODE MINIMUM SLIP RESISTANCE CLEAR COLOR; NATURAL FINISH COORDINATE WITH SHEET A153
SC-1	SEALED CONC.		EXISTING SEALED CONC. TO REMAIN

BASE FINISH SCHEDULE

MARK	MATERIAL	DESCRIPTION
EB-1	EPOXY BASE	6" HIGH BASE; MATCH FLOOR; SEE SPEC. SEE DETAIL 1/A501
MP-03	BLACK METAL	SEE INTERIOR METAL SCHEDULE ON SHEET A114
SB-1	SCHLUTER COVE	DILEX @AHKA80AT, 3/8" RADIUS; SATIN NICKEL ANODIZED ALUMINUM
SB-2	SCHLUTER	DECO; AE 80D; 5/16"; SATIN ANODIZED ALUMINUM
MB-1	WALK-IN BASE	WALK-IN MANUF. SUPPLIED BASE

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sheet information

revisions: 2

num.	description	date

CURRENT SET THRU REVISION 02

date:	1-23-2022
project number:	MO-53LEE
project status:	ISSUED FOR PERMIT

original drawing is 24" x 36"
current as of: 4/26/2022 12:03:25 AM

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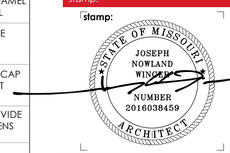


sheet number:

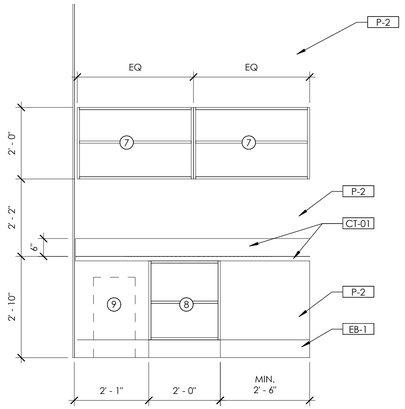
MOBETTAHS (TI) for: LEE'S SUMMIT

520 NW Chipman Rd
Lee's Summit, MO 64086

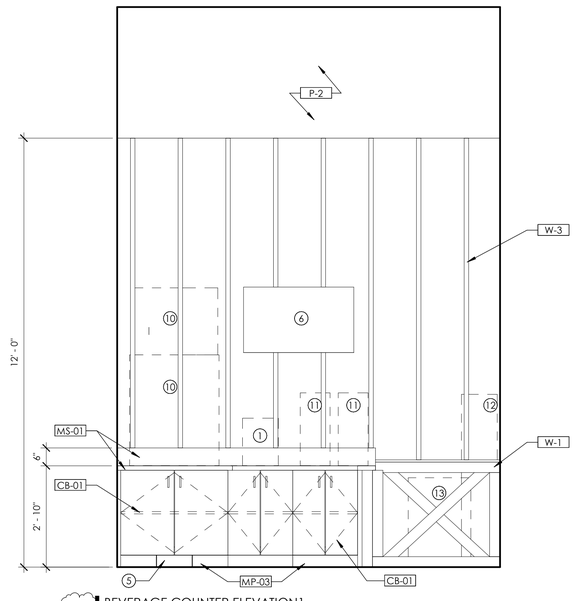
sheet title: ENLARGED FLOOR PLANS (RESTROOMS)

sheet number:

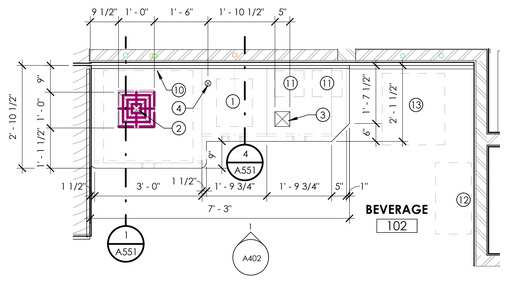
A401



3 OFFICE ELEVATION - FRONT
1/2" = 1'-0"



1 BEVERAGE COUNTER ELEVATION1
1/2" = 1'-0"



2 BEVERAGE PLAN
1/2" = 1'-0"

BASE FINISH SCHEDULE

MARK	MATERIAL	DESCRIPTION
EB-1	EPOXY BASE	6" HIGH BASE; MATCH FLOOR; SEE SPEC. SEE DETAIL 1/A501
MP-03	BLACK METAL	SEE INTERIOR METAL SCHEDULE ON SHEET A114
SB-1	SCHLUTER COVE	DILEX @AHKA80AT, 3/8" RADIUS; SATIN NICKEL ANODIZED ALUMINUM
SB-2	SCHLUTER	DECO; AE 80D; 5/16"; SATIN ANODIZED ALUMINUM
MB-1	WALK-IN BASE	WALK-IN MANUF. SUPPLIED BASE

COUNTERTOP / MILLWORK SCHEDULE

MARK	MATERIAL	DESCRIPTION
CB-01	P-LAM	BASE CABINET; WILSONART; ACORN VELVET ELM
CT-01	P. LAM.	COUNTERTOP; WILSONART BRONZE LEGAXY
CT-02	STAINLESS STEEL COUNTER	COORDINATE WITH INTERIOR METAL SCHEDULE ON SHEET A114 & DETAILS ON A400 SERIES SHEETS
CT-03	QUARTZ	COUNTERTOP; CORIAN; CARBON CEMENT; 3CM

GENERAL NOTES

A. GENERAL CONTRACTOR SHALL VERIFY ALL CONDITIONS, DIMENSIONS, AND ASSEMBLIES PRIOR TO CONSTRUCTION. REPORT ANY SIGNIFICANT DISCREPANCIES TO THE ARCHITECT.
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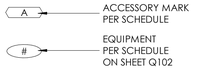
C. SEE C4/G002, D1/G002, AND D4/G002 FOR EQUIPMENT BLOCKING AND WALL-MOUNTED ACCESSORIES
D. 5' DIAMETER ACCESSIBLE CLEAR FLOOR SPACE PER ICC/ANSI SHOWN ON PLAN FOR REFERENCE

MATERIAL TAG

ACCESSORY TAG



WALL & PAINT FINISH SCHEDULE

MARK	MATERIAL	DESCRIPTION
GB-1	GYP. BD.	MUD/TAPE/SANDED -NO PAINT
FRP-1	FRP (SMOOTH WHITE)	SMOOTH WHITE; PEBBLED; FULL HEIGHT OR AS SHOWN SEE DETAIL 1/A501
MG-##	METAL GUARD	SEE INTERIOR METAL; SCHEDULE ON SHEET A114
MP-##	METAL PANEL	SEE INTERIOR METAL; SCHEDULE ON SHEET A114
MS-##	METAL SURFACE	SEE INTERIOR METAL; SCHEDULE ON SHEET A114
P-1	PAINT (LIGHT GREEN)	SW #6178 "CLARY SAGE" ; 2 COATS ACRYLIC ENAMEL OVER 1 COAT BLOCKING PRIMER; EGGSHELL
P-2	PAINT (OFF WHITE)	SW #7571 "CASA BLANCA" ; 2 COATS ACRYLIC ENAMEL OVER 1 COAT BLOCKING PRIMER; EGGSHELL
P-3	PAINT (OFF WHITE)	SW #7571 "CASA BLANCA" ; SEMI-GLOSS AT DOOR AND FRAME
P-4	PAINT (SIMULATED RUST DINING CANOPY)	SIMULATED RUST FINISH ON DINING CANOPY CORRUGATED PANELS; SIMULATE RUST WITH VINEGAR-PEROXIDE-SALT SOLUTION (TOP ONLY); ALLOW TIME FOR CORROSION TO BE REVIEWED BY ARCHITECT AND OWNER BEFORE INSTALLATION;
P-5	PAINT (PURE WHITE)	SW #7005 "PURE WHITE"; 2 COATS ACRYLIC ENAMEL OVER 1 COAT BLOCKING PRIMER; EGGSHELL
P-6	PAINT (BLACK)	SW #6258 "TRICORN BLACK"; SEMI-GLOSS AT DOOR AND FRAME
P-7	PAINT (CANOPY STEEL)	SW #7047 "PORPOISE"; 2 COATS ACRYLIC ENAMEL OVER 1 COAT BLOCKING PRIMER; EGGSHELL
W-1	DINING WAINSCOT (STANDARD)	DINING WAINSCOT; "X" FRAME; PAINT P-1; SEE DETAILS 1/A512 3/A512
W-2	DINING WAINSCOT PARTIAL HEIGHT	DINING WAINSCOT; PAINT P-2; HARDWOOD CAP STAIN TO MATCH WILSONART ACORN VELVET ELM15602-31; SEE DETAILS 1/A511
W-3	DINING BOARD AND BATTEN	DINING BOARD AND BATTEN; PAINT P-1; PROVIDE 1/2" PLYWOOD BACKING IN WALL FOR BATTENS SEE DETAILS: 4/A512 3/A512
W-4	DINING FAUX STUD WALL	FAUX STUD WALL; PAINT P-2; SEE DETAILS 2/A514
W-5	POS WAINSCOT	POS WAINSCOT; STAIN TO MATCH WILSONART ACORN VELVET ELM 15602-31; SEE DETAILS 3/A551
WC-1	WALLCOVERING	WALL COVERING ABOVE WAINSCOT; WOLF GORDON; SAMOA PALM; GOH 32260677
WP-1	WALK-IN PANEL	WALL PANELS PROVIDED BY WALK-IN COOLER/MANUF.
WT-1	WALL TILE* (FIELD)	WALL TILE; DALTILE; MYTHOLOGY; COLOR SANTORINI MY90; 4" X 12" UNDULATED; GROUT-MAPEI #27 SILVER
SE-1	SCHLUTER EDGE	JOLLY A 80 AT; SATIN NICKEL ANODIZED ALUMINUM
*TYPICAL		SEAL ALL GROUT WITH COMMERCIAL SEALER

① KEYNOTES

① DISPENSER, BEVERAGE/NON-CARBONATED
② ACCESS HOLE IN COUNTER FOR DISPENSER; COORDINATE WITH EQUIPMENT DRAWINGS
③ CUT-OUT HOLE IN COUNTER FOR TRASH
④ 2" HOLE
⑤ CUTOUT IN BASE OF CABINET FOR FLOOR SINK; COORD. WITH EQUIPMENT AND PLUMBING
⑥ HAWAIIAN FLAG
⑦ 12" DEEP WHITE MELAMINE UPPER CABINET WITH OPEN ADJUSTABLE MELAMINE SHELVES; SEE 6/A551
⑧ WHITE MELAMINE BASE CABINET WITH ADJUSTABLE MELAMINE SHELVES; REFER TO 5/A551
⑨ SCHEDULED SAFE; BOLT & SILICONE TO THE FLOOR - SEE EQUIPMENT PLAN
⑩ DRINK DISPENSER AND ICE MACHINE - COORDINATE WITH EQUIPMENT PLANS.
⑪ UTENSIL HOLDER - SEE EQUIPMENT PLAN.
⑫ (24"W X 12"D X 58"H) CARRY-OUT SHELVING
⑬ HIGH CHAIRS

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sheet information

revisions: 2

num.	description	date
2	REVISION 02	04-06-22

CURRENT SET THRU REVISION 02

date: 1-23-2022
project number: MO-53LEE
project status: ISSUED FOR PERMIT
original drawing is 24" x 36"
current as of: 4/26/2022 12:03:27 AM

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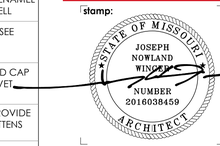


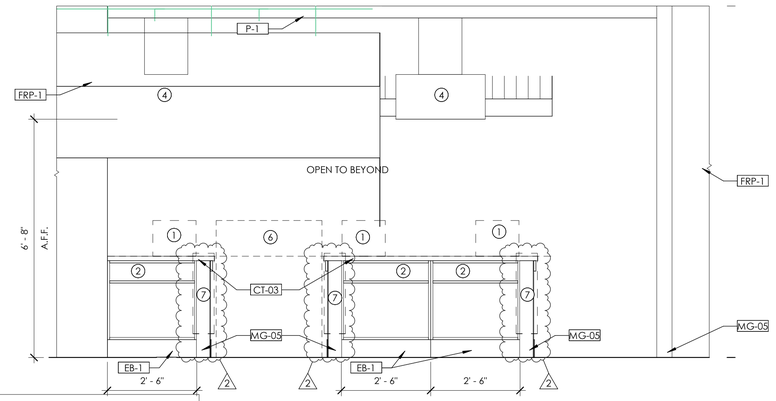
sheet number:

MOBETTAHS (TI) for: LEE'S SUMMIT
520 NW Chipman Rd
Lee's Summit, MO 64086

sheet title: INTERIOR ELEVATIONS (BEVERAGE & OFFICE)

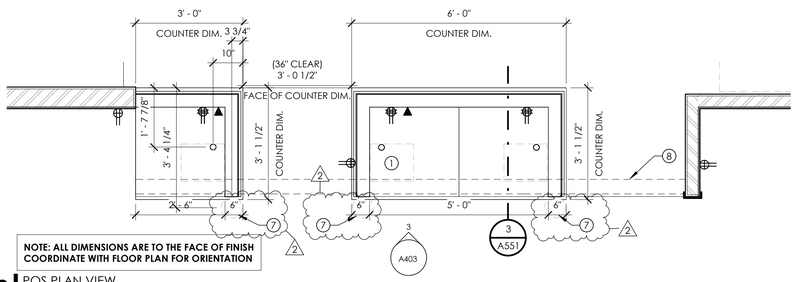
sheet number:

A402



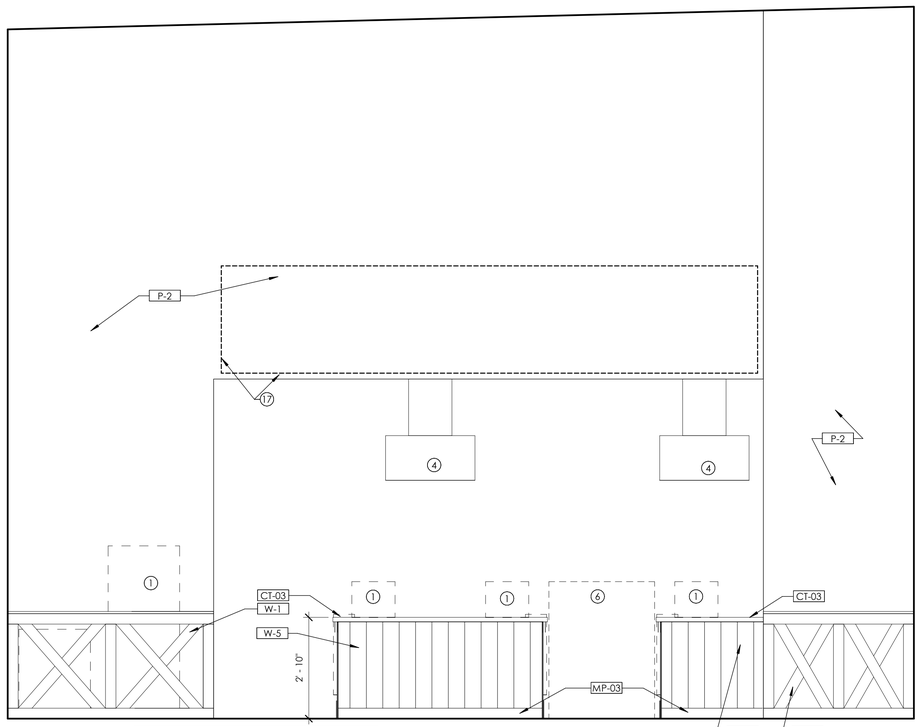
NOTE: ALL DIMENSIONS ARE TO THE FACE OF FINISH
COORDINATE WITH FLOOR PLAN FOR ORIENTATION

3 POS BACK ELEVATION
1/2" = 1'-0"



NOTE: ALL DIMENSIONS ARE TO THE FACE OF FINISH
COORDINATE WITH FLOOR PLAN FOR ORIENTATION

2 POS PLAN VIEW
1/2" = 1'-0"



NOTE: ALL DIMENSIONS ARE TO THE FACE OF FINISH
COORDINATE WITH FLOOR PLAN FOR ORIENTATION

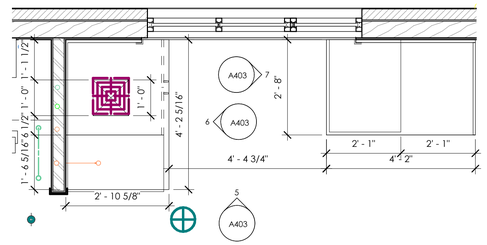
1 POS FRONT ELEVATION
1/2" = 1'-0"

BASE FINISH SCHEDULE

MARK	MATERIAL	DESCRIPTION
EB-1	EPOXY BASE	6" HIGH BASE; MATCH FLOOR; SEE SPEC. SEE DETAIL 1/A501
MP-03	BLACK METAL	SEE INTERIOR METAL SCHEDULE ON SHEET A114
SB-1	SCHLUTER COVE	DILEX @AHKA80AT, 3/8" RADIUS; SATIN NICKEL ANODIZED ALUMINUM
SB-2	SCHLUTER	DECO; AE 80D; 5/16"; SATIN ANODIZED ALUMINUM
MB-1	WALK-IN BASE	WALK-IN MANUF. SUPPLIED BASE

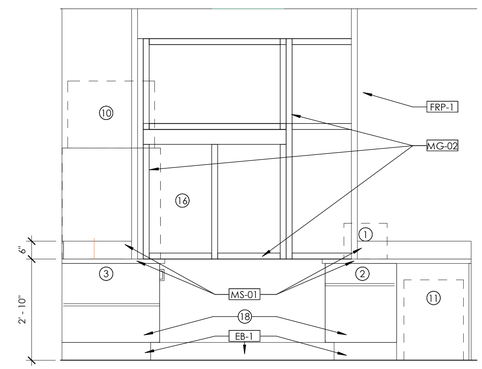
COUNTERTOP / MILLWORK SCHEDULE

MARK	MATERIAL	DESCRIPTION
CB-01	P-LAM	BASE CABINET; WILSONART; ACORN VELVET ELM
CT-01	P. LAM.	COUNTERTOP; WILSONART BRONZE LEGAXY
CT-02	STAINLESS STEEL COUNTER	COORDINATE WITH INTERIOR METAL SCHEDULE ON SHEET A114 & DETAILS ON A400 SERIES SHEETS
CT-03	QUARTZ	COUNTERTOP; CORIAN; CARBON CEMENT; 3CM



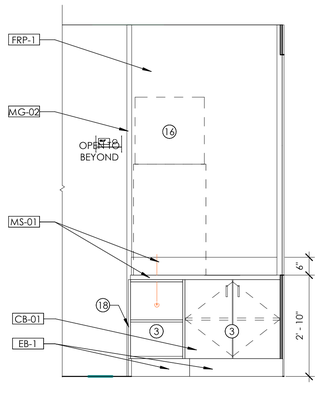
NOTE: ALL DIMENSIONS ARE TO THE FACE OF FINISH
COORDINATE WITH FLOOR PLAN FOR ORIENTATION

4 DRIVE THRU PLAN VIEW
1/2" = 1'-0"



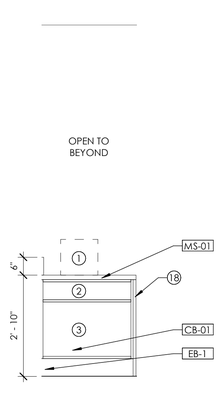
NOTE: ALL DIMENSIONS ARE TO THE FACE OF FINISH
COORDINATE WITH FLOOR PLAN FOR ORIENTATION

5 DRIVE THRU ELEVATION - A
1/2" = 1'-0"



NOTE: ALL DIMENSIONS ARE TO THE FACE OF FINISH
COORDINATE WITH FLOOR PLAN FOR ORIENTATION

6 DRIVE THRU ELEVATION - B
1/2" = 1'-0"



NOTE: ALL DIMENSIONS ARE TO THE FACE OF FINISH
COORDINATE WITH FLOOR PLAN FOR ORIENTATION

7 DRIVE THRU ELEVATION - C
1/2" = 1'-0"

GENERAL NOTES

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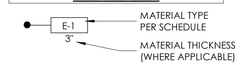
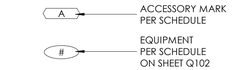
B. COORDINATE INSTALLATIONS OF ALL AFTER CONTRACT' ASSEMBLIES WITH OWNER PRIOR TO CONSTRUCTION OF ADJOINING OR RELATED STRUCTURES.
C. SEE C4/G002, D1/G002, AND D4/G002 FOR EQUIPMENT BLOCKING AND WALL-MOUNTED ACCESSORIES
D. 5' DIAMETER ACCESSIBLE CLEAR FLOOR SPACE PER ICC/ANSI SHOWN ON PLAN FOR REFERENCE

MATERIAL TAG



ACCESSORY TAG



WALL & PAINT FINISH SCHEDULE

MARK	MATERIAL	DESCRIPTION
GB-1	GYP. BD.	MUD/TAPE/SANDED -NO PAINT
FRP-1	FRP (SMOOTH WHITE)	SMOOTH WHITE; PEBBLED; FULL HEIGHT OR AS SHOWN SEE DETAIL 1/A501
MG-##	METAL GUARD	SEE INTERIOR METAL; SCHEDULE ON SHEET A114
MP-##	METAL PANEL	SEE INTERIOR METAL; SCHEDULE ON SHEET A114
MS-##	METAL SURFACE	SEE INTERIOR METAL; SCHEDULE ON SHEET A114
P-1	PAINT (LIGHT GREEN)	SW #6178 "CLARY SAGE" ; 2 COATS ACRYLIC ENAMEL OVER 1 COAT BLOCKING PRIMER; EGGSHELL
P-2	PAINT (OFF WHITE)	SW #7571 "CASA BLANCA" ; 2 COATS ACRYLIC ENAMEL OVER 1 COAT BLOCKING PRIMER; EGGSHELL
P-3	PAINT (OFF WHITE)	SW #7571 "CASA BLANCA" ; SEMI-GLOSS AT DOOR AND FRAME
P-4	PAINT (SIMULATED RUST DINING CANOPY)	SIMULATED RUST FINISH ON DINING CANOPY CORRUGATED PANELS; SIMULATE RUST WITH VINEGAR-PEROXIDE-SALT SOLUTION (TOP ONLY); ALLOW TIME FOR CORROSION TO BE REVIEWED BY ARCHITECT AND OWNER BEFORE INSTALLATION;
P-5	PAINT (PURE WHITE)	SW #7005 "PURE WHITE"; 2 COATS ACRYLIC ENAMEL OVER 1 COAT BLOCKING PRIMER; EGGSHELL
P-6	PAINT (BLACK)	SW #6258 "TRICORN BLACK"; SEMI-GLOSS AT DOOR AND FRAME
P-7	PAINT (CANOPY STEEL)	SW #7047 "PORPOISE"; 2 COATS ACRYLIC ENAMEL OVER 1 COAT BLOCKING PRIMER; EGGSHELL
W-1	DINING WAINSCOT (STANDARD)	DINING WAINSCOT; "X" FRAME; PAINT P-1; SEE DETAILS 1/A512 3/A512
W-2	DINING WAINSCOT PARTIAL HEIGHT	DINING WAINSCOT; PAINT P-2; HARDWOOD CAP STAIN TO MATCH WILSONART ACORN VELVET ELM15602-31; SEE DETAILS 1/A511
W-3	DINING BOARD AND BATTEN	DINING BOARD AND BATTEN; PAINT P-1; PROVIDE 1/2" PLYWOOD BACKING IN WALL FOR BATTENS SEE DETAILS; 4/A512 3/A512
W-4	DINING FAUX STUD WALL	FAUX STUD WALL; PAINT P-2; SEE DETAILS 2/A514
W-5	POS WAINSCOT	POS WAINSCOT; STAIN TO MATCH WILSONART ACORN VELVET ELM 15602-31; SEE DETAILS 3/A551
WC-1	WALLCOVERING	WALL COVERING ABOVE WAINSCOT; WOLF GORDON; SAMOA PALM; GOH 32260677
WP-1	WALK-IN PANEL	WALL PANELS PROVIDED BY WALK-IN COOLER/MANUF.
WT-1	WALL TILE* (FIELD)	WALL TILE; DALTILE; MYTHOLOGY; COLOR SANTORINI MY90; 4" X 12" UNDULATED; GROUT-MAPEI #27 SILVER
SE-1	SCHLUTER EDGE	JOLLY A 80 AT; SATIN NICKEL ANODIZED ALUMINUM
*TYPICAL		SEAL ALL GROUT WITH COMMERCIAL SEALER

① KEYNOTES

① CASH REGISTER - SEE EQUIPMENT PLAN.
② 6" CLEAR HEIGHT FOR CASH DRAWER
③ WHITE MELAMINE BASE CABINETS W/ ADJ. MELAMINE SHELVES
④ SIGNAGE/MENU BOARDS, OFOI
⑤ 2 1/2" HOLE
⑥ DISPLAY CABINET - SEE EQUIPMENT PLAN.
⑦ SURFACE MOUNTED CUP DISPENSERS.
⑧ DASHED LINE REPRESENTS BULKHEAD ABOVE, SEE RCP.
⑨ TERMINATE FRP AT EMPLOYEE SIDE OF SERVING LINE.
⑩ CUSTOMER QUEUE SNEEZE GUARD, SEE -/---
⑪ UNDERCOUNTER FRIDGE - SEE EQUIPMENT PLAN
⑫ FRP AT EQUIPMENT ALCOVE UNDERNEATH COUNTER
⑬ KITCHEN EQUIPMENT - SEE EQUIPMENT PLAN. USE ONLY CLEAR SILICONE AT CUSTOM TABLE
⑭ POS KITCHEN EQUIPMENT - SEE EQUIPMENT FLOOR PLAN
⑮ DRIVE-UP WINDOW. SEE SHELL DRAWINGS
⑯ DRINK DISPENSER AND ICE MACHINE - COORDINATE WITH EQUIPMENT PLANS
⑰ CORRUGATED METAL MURAL; TBD
⑱ PROVIDE MELAMINE END PANEL; RUN BASE UP PANEL TO MATCH ADJACENT HEIGHT

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sheet information

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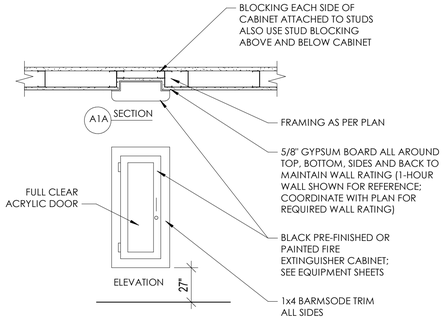
ARCHITECT

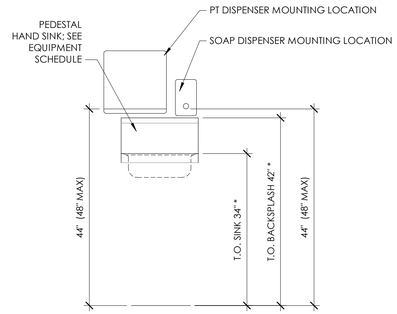
MOBETTAHS (TI) for:
LEE'S SUMMIT
520 NW Chipman Rd
Lee's Summit, MO 64086

sheet title:
INTERIOR ELEVATIONS (POS)

sheet number:
A403

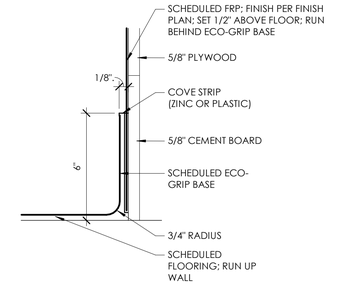


5 SEMI RECESSED FIRE EXTINGUISHER
3/4" = 1'-0"

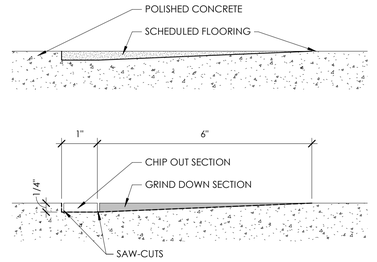


*VERIFY EQUIPMENT DIMENSIONS PROVIDED BY OWNER; NOTIFY ARCHITECT OF ANY DISCREPANCIES

6 HAND SINK ELEVATION
3/4" = 1'-0"

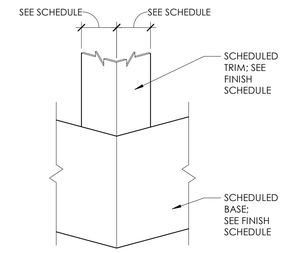


1 FLOOR - ECO-GRIP BASE DETAIL
3" = 1'-0"

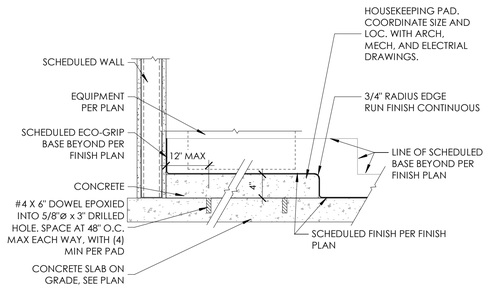


NOTE: AT ALL FLOOR DRAINS AND FINISH TRANSITIONS

2 FLOOR - ECO-GRIP FLOORING TO CONCRETE TRANSITION
6" = 1'-0"



3 CORNER GAURD DETAIL
3" = 1'-0"



4 FLOOR - RAISED PLATFORM DETAIL
1" = 1'-0"

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MOBETTAHS (TI) for:
LEE'S SUMMIT
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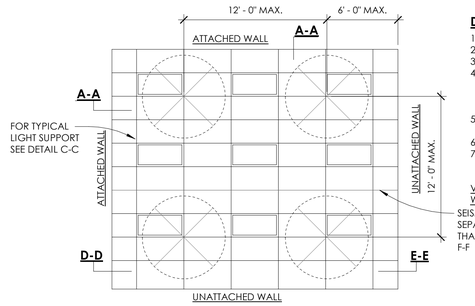
Lee's Summit, MO 64086

sheet title:
INTERIOR DETAILS

sheet number:
A501

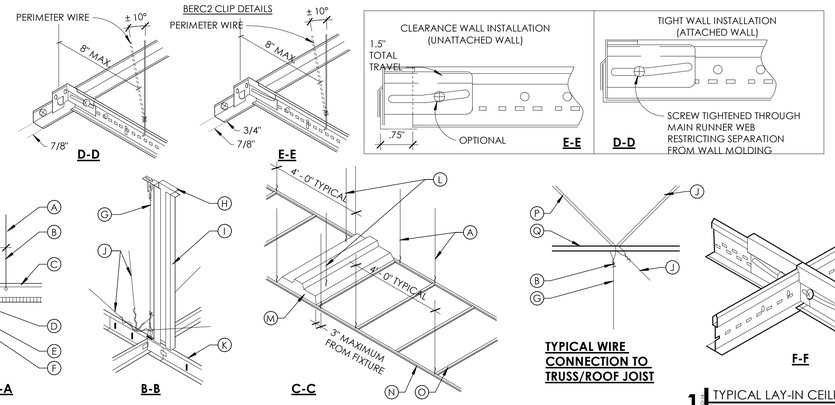


DETAIL GENERAL NOTES

1. USE HEAVY DUTY SUSPENSION SYSTEM.
2. CEILING MUST BE ATTACHED ON TWO ADJACENT WALLS.
3. CEILINGS SUBJECT TO SPECIAL INSPECTION.
4. WITH APPROVAL OF AUTHORITIES HAVING JURISDICTION, INSTALL SUSPENSION SYSTEM AND PANELS IN ACCORDANCE WITH THE IBC SECTION 1621.5 WITH THE FOLLOWING EXCEPTIONS:
5. USE OF BERC2 CLIPS WHICH ELIMINATES THE NEED FOR STABILIZER BARS.
6. 7/8" WALL MOLDING INSTEAD OF THE 2" WALL MOLDING.
7. CEILING AREAS LESS THAN 144 SQ. FT. ARE EXEMPT FROM SEISMIC REQUIREMENTS.

VERIFY INSTALLATION OF CEILING TO BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

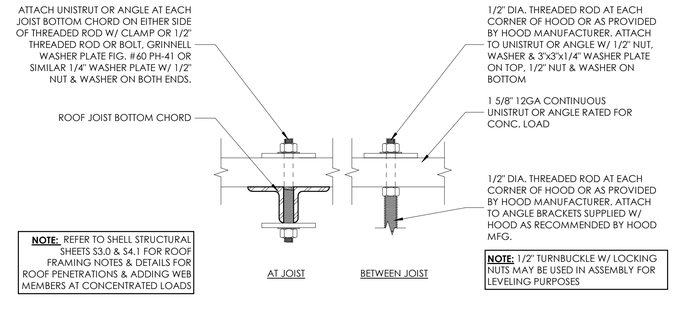
LATERAL FORCE BRACING:
SUSPENDED CEILINGS BRACING SHALL BE AS PER IBC 2506.2.1 AND SECTION 13.5.6 OF ASCE 7 WHERE HORIZONTAL RESTRAINT IS REQUIRED (CEILING SF EXCEEDING 1,000 SF) HORIZONTAL RESTRAINT SHALL BE AFFECTED BY FOUR NO. 12 GAUGE WIRES SECURED TO THE MAIN RUNNER WITHIN 2" OF THE CROSS RUNNER INTERSECTION AND SPLAYED 90° FROM EACH OTHER AT AN ANGLE NOT EXCEEDING 45° FROM THE PLANE OF THE CEILING. THESE HORIZONTAL RESTRAINT POINTS SHALL BE PLACED 12'-0" O.C. MAX. IN BOTH DIRECTIONS W/ THE FIRST POINT WITHIN 8'-0" FROM EACH WALL AT ONE CORNER OF THE ROOM AND NOT TO EXCEED 6'-0" MAX. FROM ANY WALL AT THE PERIMETER OF APPLICATION, ATTACHMENT OF ALL RESTRAINT WIRES SHALL BE AS PER CISCA STANDARDS AND SHALL BE ADEQUATE FOR THE LOAD IMPOSED, 400LBS. MINIMUM. (SEE ABOVE GENERAL NOTE)



DETAIL KEY NOTES

- (A) 12 GA. HANGER WIRE (EVERY 16 SQ. FT. MIN.)
- (B) 3 TURNS MIN. (1-1/2" RUN)
- (C) MAIN RUNNER OR CROSS TEE AS SCHEDULED
- (D) CEILING AS SCHEDULED
- (E) WALL ANGLE
- (F) WALL CONNECTION, ANCHOR TO STRUCTURAL ELEMENT
- (G) ACOUSTICAL CEILING SUSPENSION WIRE (TEST FOR 400 LBS.)
- (H) FASTEN TO DECK
- (I) 2" x18 GA. STEEL STUD (OR ACCEPTED ALTERNATE) SCREW ATTACHED TO MAIN TEE AND TO STRUCTURE ABOVE AT EACH SEISMIC RESTRAINT LOCATION
- (J) 12 GA. SPLAYED SEISMIC BRACING WIRES (45° OFF OF HORIZ., EVERY 144 SQ. FT. MIN.) SECURED TO STRUCTURE PER CISCA STANDARDS, DO NOT INSTALL PERPENDICULAR TO JOISTS
- (K) MAIN TEE
- (L) SLACK WIRES
- (M) LIGHT FIXTURE AS SELECTED
- (N) HEAVY DUTY MAIN 3" MAX. RUNNER
- (O) CROSS TEE
- (P) JOIST WEB MEMBERS
- (Q) BOTTOM JOIST CHORD

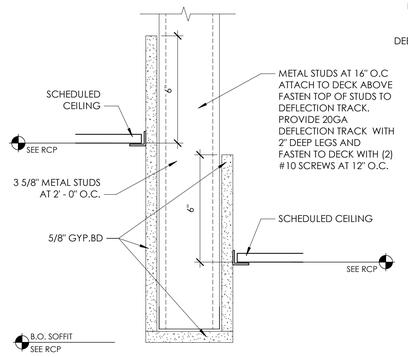
1 TYPICAL LAY-IN CEILING DETAILS
1/2" = 1'-0"



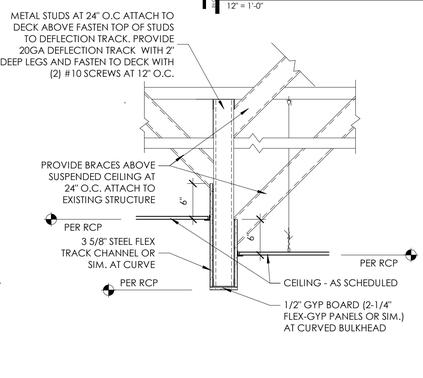
NOTE: REFER TO SHELL STRUCTURAL SHEETS S3.0 & S4.1 FOR ROOF FRAMING NOTES & DETAILS FOR ROOF PENETRATIONS & ADDING WEB MEMBERS AT CONCENTRATED LOADS

NOTE: 1/2" TURNBUCKLE W/ LOCKING NUTS MAY BE USED IN ASSEMBLY FOR LEVELING PURPOSES

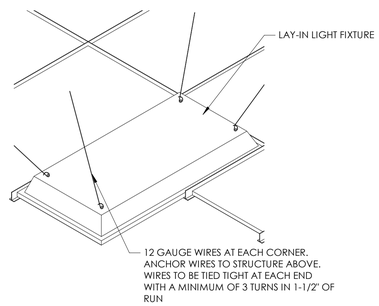
9 HOOD SUPPORT
3" = 1'-0"



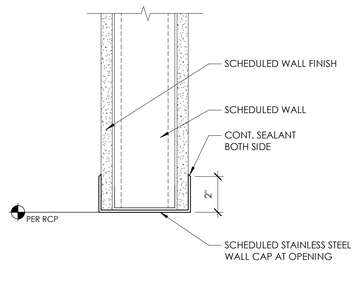
7 SOFFIT DETAIL
3" = 1'-0"



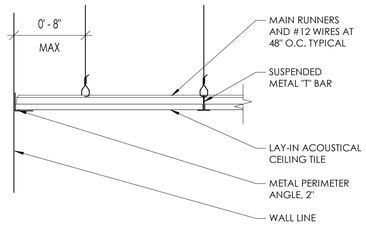
5 CURVED BULKHEAD @ CUSTOMER QUEUE
1" = 1'-0"



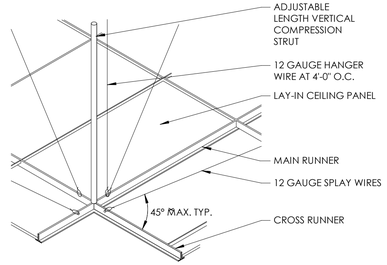
2 CEILING - SEISMIC LIGHT DETAIL
1 1/2" = 1'-0"



8 HEADER / JAMB AT KITCHEN PASS THRU
3" = 1'-0"



6 CEILING- ACT DETAIL
1 1/2" = 1'-0"



3 CEILING - SEISMIC DETAIL
1 1/2" = 1'-0"

SUSPENDED CEILING SYSTEM NOTES:

1- SUSPENDED CEILING SYSTEMS SHALL BE INSTALLED IN COMPLIANCE WITH IBC, ASCE 7-05 , 13.5.6 AND ASTM E580

2- ALL CEILINGS ARE TO HAVE VERTICAL COMPRESSION STRUTS, SEISMIC BRACING, HANGERS, ETC., AS REQUIRED BY IBC, ASCE 7-05 , 13.5.6 AND ASTM E580

3- HEAVY DUTY T-BAR GRID SYSTEM REQUIRED, WITH OF PERIMETER SUPPORTING CLOSURE ANGLE TO BE 7/8" PERIMETER CLOSURE ANGLE WITH CODE APPROVED SEISMIC CLIPS. ATTACH ONE END OF THE CEILING GRID TO THE CLOSURE ANGLE IN EACH DIRECTION, THE OTHER END IN EACH HORIZONTAL DIRECTION SHALL HAVE 3/4" CLEARANCE FROM THE WALL AND SHALL REST UPON AND BE FREE TO SLIDE ON THE CLOSURE ANGLE, WITH HORIZONTAL STRUT STABILIZERS TO PREVENT THE SPREADING OF THE RUNNERS.

4- SPLAY WIRES AS REQUIRED BY IBC, ASCE 7, AND CISCA 3-4, ALL SPLAY WIRES ARE TO BE IN LINE WITH ATTACHED COMPONENT AND ARE TO BE TIED TIGHT AT EACH END WITH A MINIMUM OF 3 TURNS IN 1-1/2" OF RUN.

5- ANCHOR WIRES ONLY TO STRUCTURAL MEMBERS, NOT TO ROOF DECK OR BRIDGING. WIRES SHALL NOT ATTACH TO OR BEND AROUND INTERFERING MATERIAL OR EQUIPMENT. NOT SHALL THEY BE LESS THAN 6" TO ANY UNBRACED HORIZONTAL PIPING OR DUCTWORK. A TRAPEZE OR SIMILAR DEVICE SHALL BE USED WHERE OBSTRUCTIONS OCCUR.

6- SUPPORT ALL RUNNERS AT 8" MAXIMUM FROM WALL OR CEILING DISCONTINUITY.

7- FOUR-WAY DIAGONAL BRACING AND COMPRESSION STRUTS 12'-0" O.C. EACH WAY.

8- PROVIDE CEILING HORIZONTAL RESTRAINT TO THE STRUCTURE ABOVE FOR CEILING AREAS GREATER THAN 1,000 SQUARE FEET TO MINIMIZE DIAPHRAGM LOADS.

9- PROVIDE SEISMIC SEPARATION JOINTS OR FULL HEIGHT PARTITIONS FOR CEILING AREAS GREATER THAN 2,500 SQUARE FEET.

10- CHANGES IN CEILING PLANE ELEVATION SHALL BE PROVIDED WITH POSITIVE BRACING.

11- CABLE TRAYS AND ELECTRICAL CONDUITS SHALL BE SUPPORTED AND BRACED INDEPENDENT FROM THE SUSPENDED CEILING SYSTEM.

12- PROVIDE 2" OVERSIZE RINGS, SLEEVES OR ADAPTERS THROUGH THE CEILING TILE TO ALLOW FOR FREE MOVEMENT FOR AT LEAST 1" MOVEMENT IN ALL DIRECTIONS FOR FIRE SPRINKLER HEADS AND OTHER SIMILAR PENETRATIONS.

4 CEILING - SUSPENDED CEILING NOTES
1 1/2" = 1'-0"

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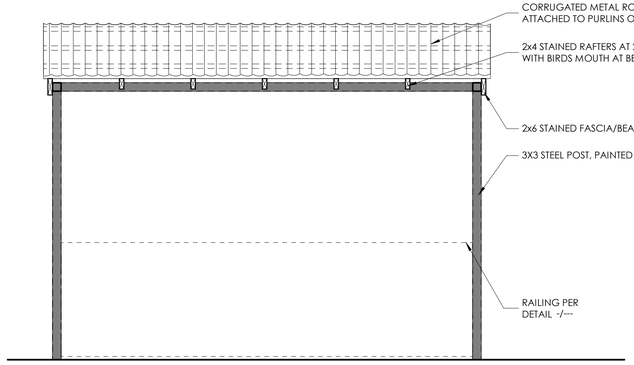
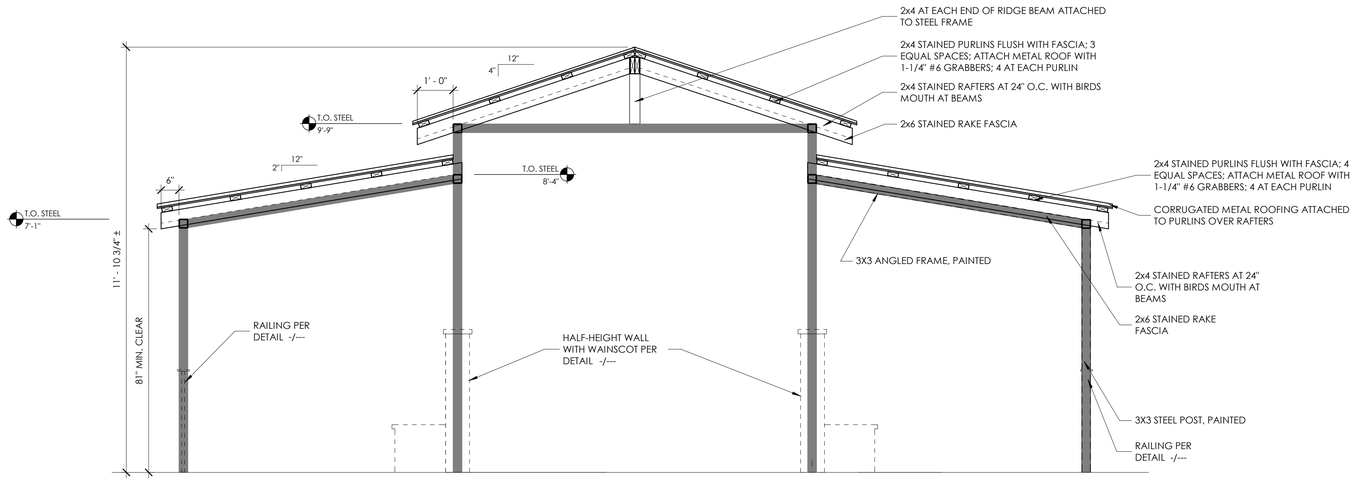
sheet title: INTERIOR DETAILS (CEILINGS)

sheet number:

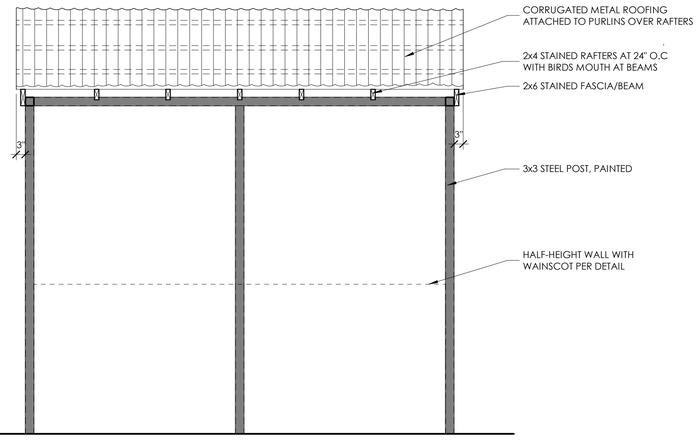
A502



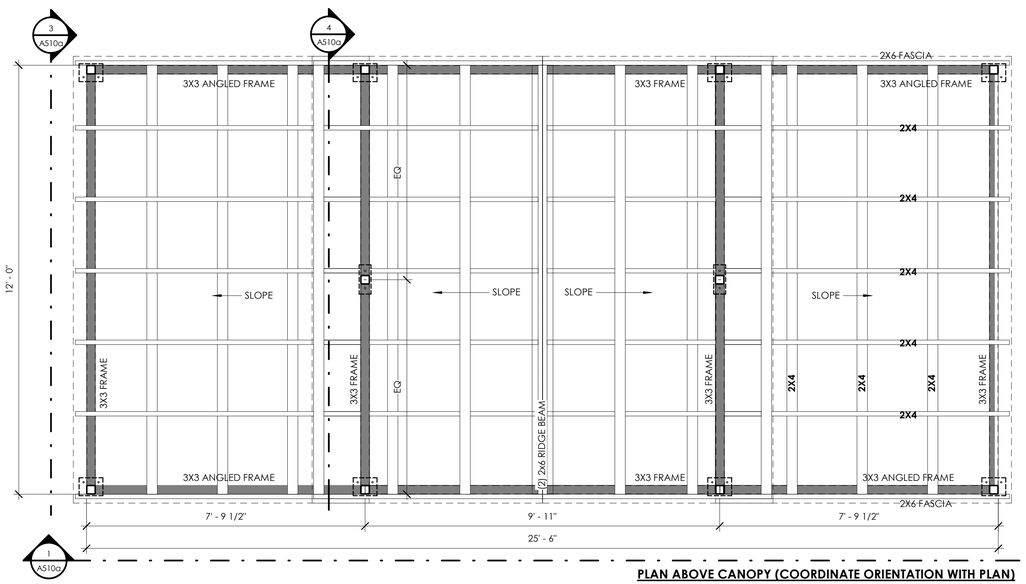
3 3-BAY CANOPY - LOW FRAME ELEVATION
1/2" = 1'-0"



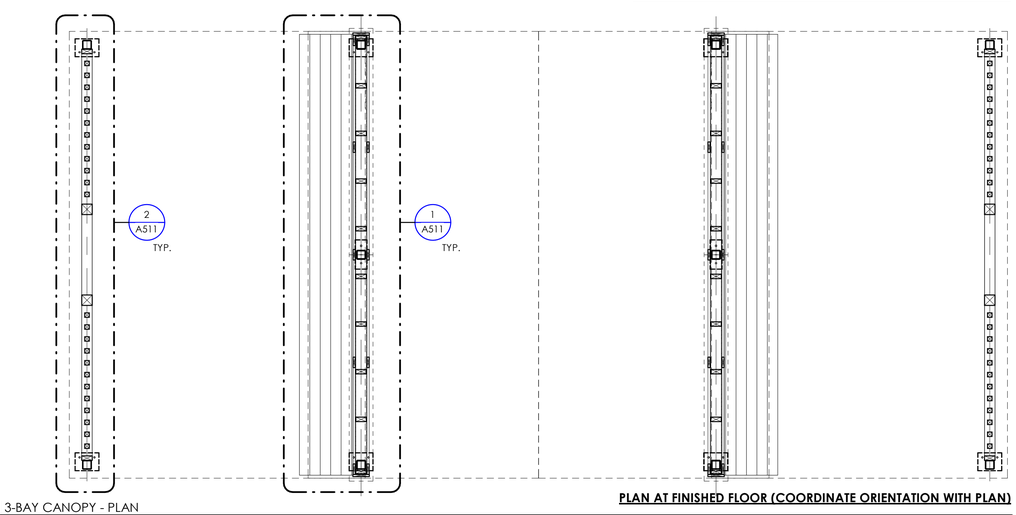
1 3-BAY CANOPY - ELEVATION
1/2" = 1'-0"



4 3-BAY CANOPY - HIGH FRAME ELEVATION
1/2" = 1'-0"



PLAN ABOVE CANOPY (COORDINATE ORIENTATION WITH PLAN)



PLAN AT FINISHED FLOOR (COORDINATE ORIENTATION WITH PLAN)

2 3-BAY CANOPY - PLAN
1/2" = 1'-0"

GENERAL NOTES:
COORDINATE FINISHES WITH SHEET A114

P-2	PAINT (OFF WHITE)
P-4	PAINT (SIMULATED RUST) DINING CANOPY
P-7	PAINT (CANOPY STEEL)
W-2	DINING WAINSCOT PARTIAL HEIGHT

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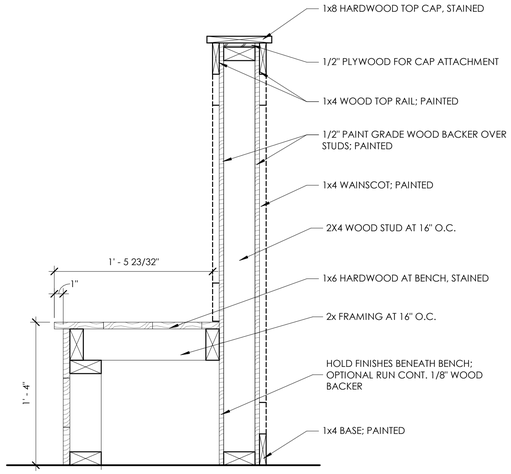
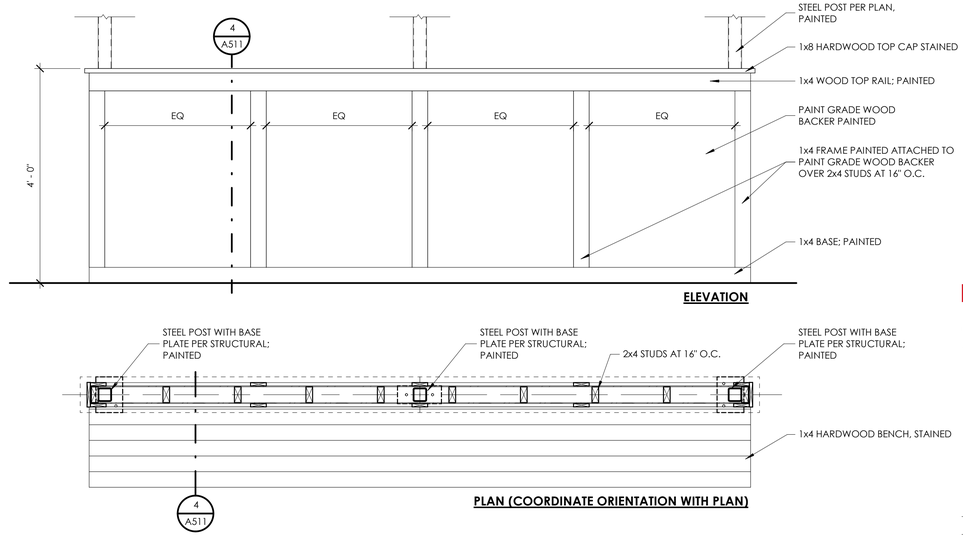
Lee's Summit, MO 64086

sheet title:
3-BAY CANOPY DETAILS

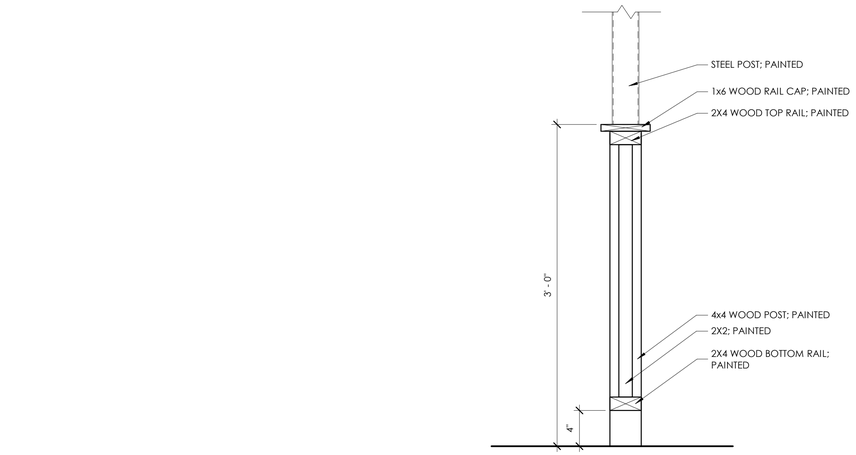
sheet number:
A510a



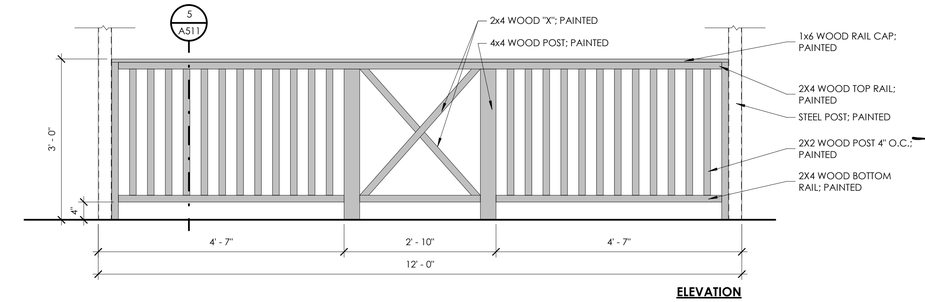
4 LOW WALL AND BENCH SECTION DETAIL1
1 1/2" = 1'-0"



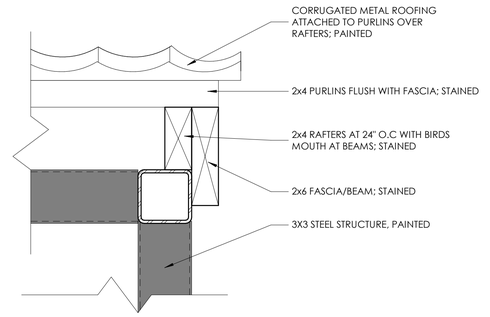
1 WALL FINISH TYPE "W-2" (DINING WAINSCOT AT CANOPY)1
3/4" = 1'-0"



5 CANOPY RAILING DETAIL1
1 1/2" = 1'-0"



2 CANOPY RAILING ELEVATION1
3/4" = 1'-0"



3 CANOPY EDGE DETAIL1
3" = 1'-0"

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sheet information

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CURRENT SET THRU REVISION 02

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project number: MO-53LEE
project status: ISSUED FOR PERMIT
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current as of: 4/26/2022 12:03:35 AM

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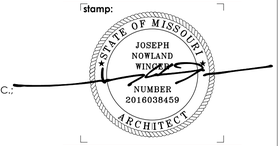


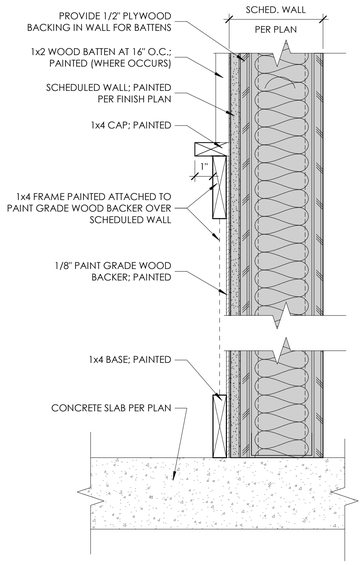
sheet number:

MOBETTAHS (TI) for: LEE'S SUMMIT
520 NW Chipman Rd
Lee's Summit, MO 64086

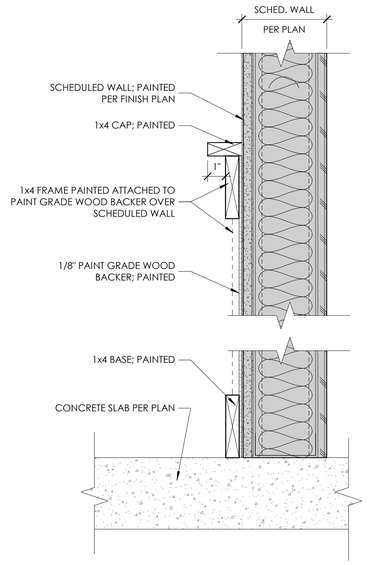
sheet title: CANOPY DETAILS

sheet number:

A511

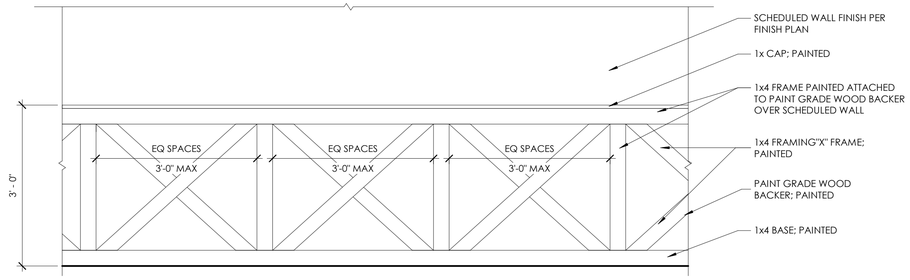


"X" WAINSCOT @ BOARD AND BATTEN WALL DETAIL

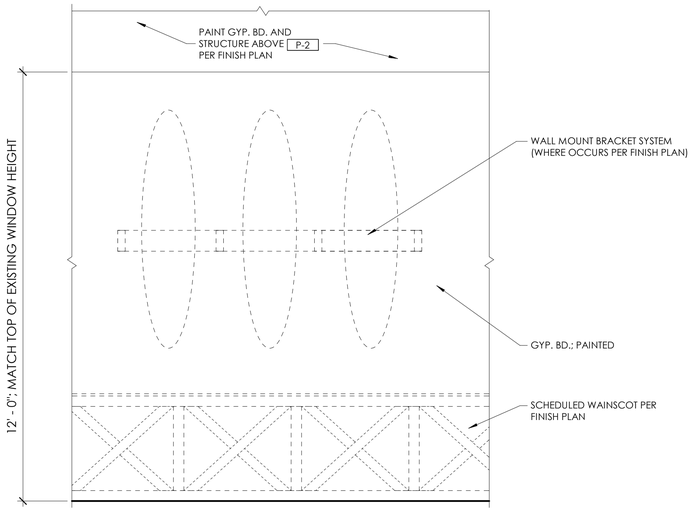


"X" WAINSCOT @ TYPICAL WALL DETAIL

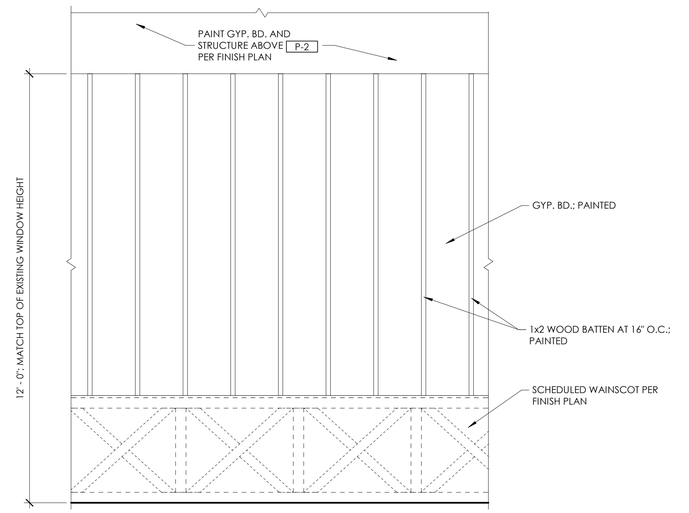
3 "X" WAINSCOT @ WALL DETAIL
3" = 1'-0"



1 WALL FINISH TYPE "W-1" (DINING WAINSCOT "X" FRAME)
3/4" = 1'-0"



2 WALL FINISH TYPE "W-2"
1/2" = 1'-0"



4 WALL FINISH TYPE "W-3" (DINING BOARD AND BATTEN)
1/2" = 1'-0"

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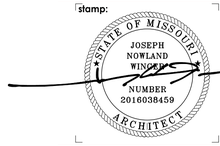


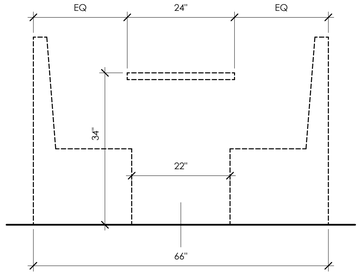
sheet number:

MOBETTAHS (TI)
for:
LEE'S SUMMIT
520 NW Chipman Rd
Lee's Summit, MO 64086

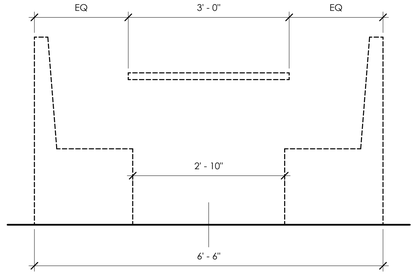
sheet title:
TYPICAL DINING ELEVATIONS

sheet number:

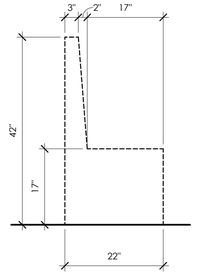
A512



PROPOSED STANDARD BOOTH (SEAT AND TABLE) CONFIGURATION



PROPOSED ADA BOOTH (SEAT AND TABLE) CONFIGURATION

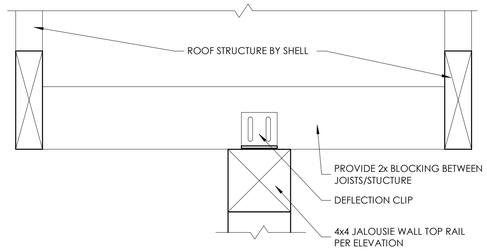


PROPOSED BOOTH SEAT PROFILE

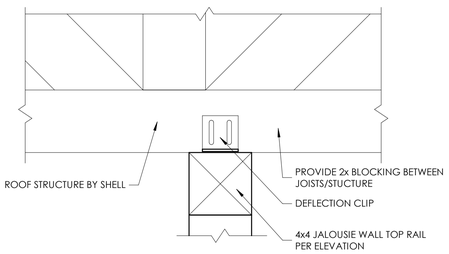
GENERAL NOTES:
JALOUSIE WINDOW
(BASIS OF DESIGN - OR APPROVED EQUAL)
- CRL -10 BLADE WITH LOUVER STRIP HARDWARE IN BLACK FINISH
- LOUVER WINDOW SECURITY CLIP
- CLEAR 3/16" x 4" WIDE LOUVER GLASS
- PROVIDE SET SCREW(S) TO MAKE BLADES FIXED

2 BOOTH DIMENSIONS
3/4" = 1'-0"

NOT USED

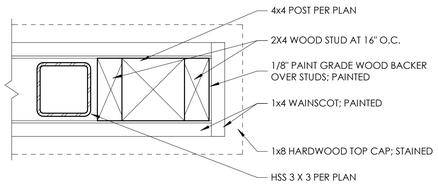


TOP OF JALOUSIE WALL AT ROOF STRUCTURE PARALELL (NO CEILING)

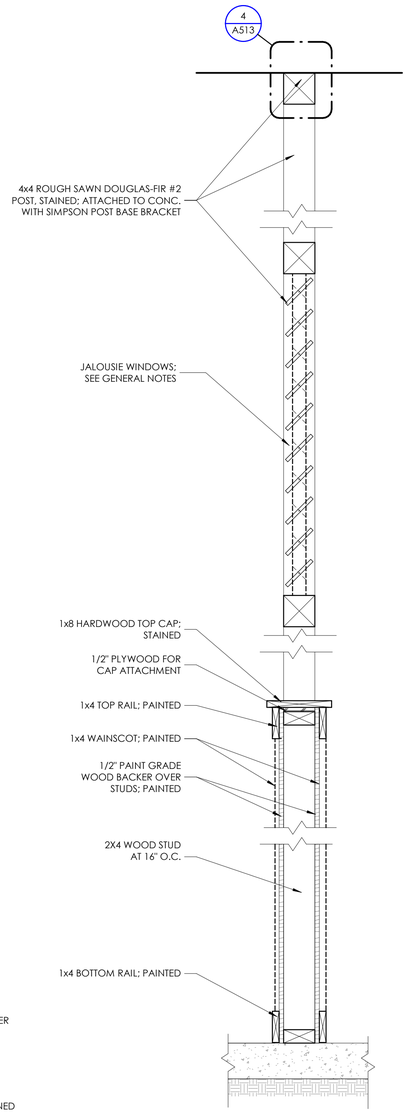


TOP OF JALOUSIE WALL AT ROOF STRUCTURE PERPEDICULAR (NO CEILING)

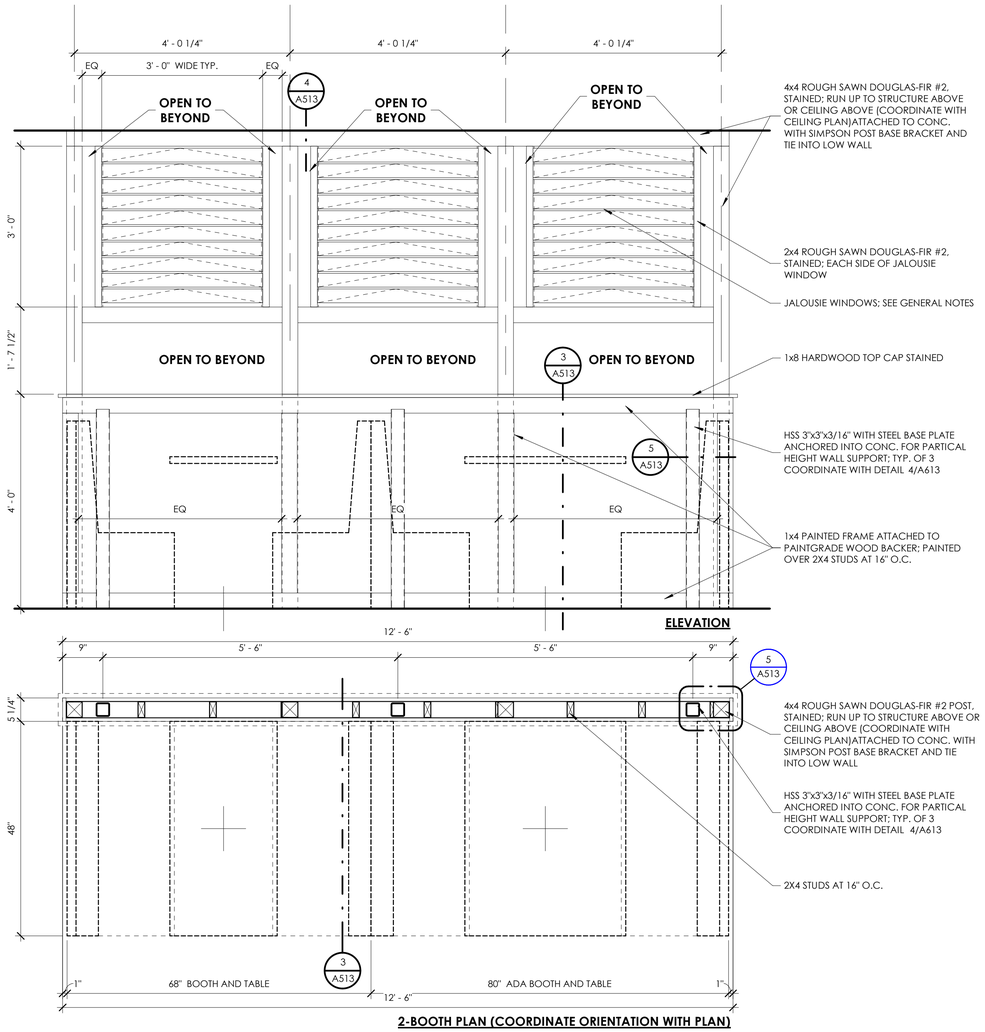
4 TOP OF WALL DETAILS
3" = 1'-0"



5 ENLARGED PLAN AT JALOUSIE
3" = 1'-0"



3 INTERIOR JALOUSIE WALL SECTION
1 1/2" = 1'-0"



2-BOOTH PLAN (COORDINATE ORIENTATION WITH PLAN)

1 WALL FINISH TYPE "W-2" (DINING WAINSCOT AT JALOUSIE)
3/4" = 1'-0"

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NUMBER 2016038459
ARCHITECT

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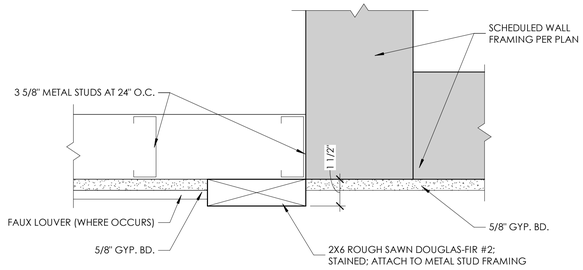
MOBETTAHS (TI) for: LEE'S SUMMIT
520 NW Chipman Rd
Lee's Summit, MO 64086

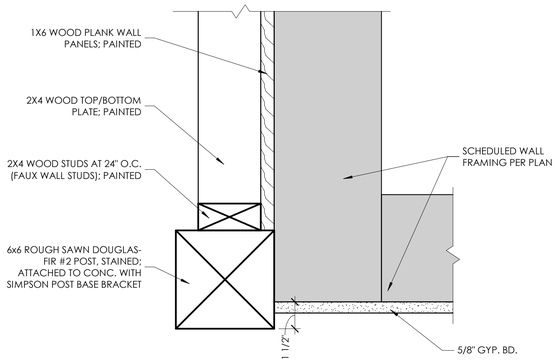
sheet title: JALOUSIE WALL

sheet number:

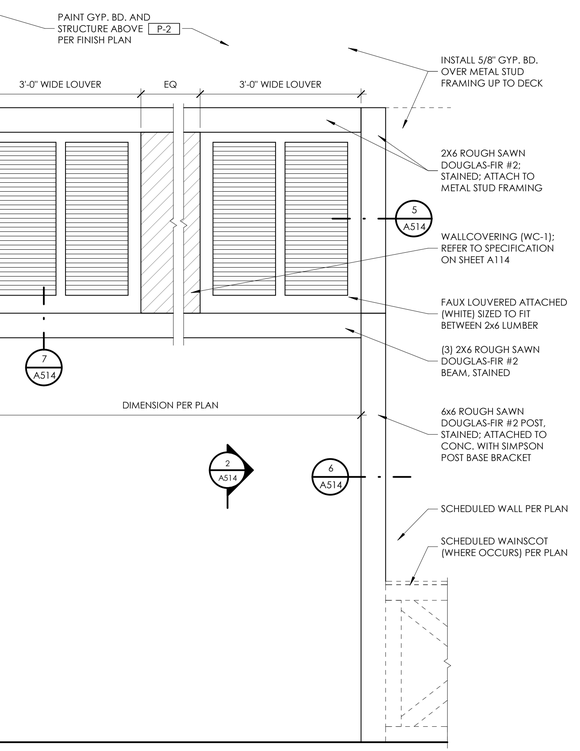
A513



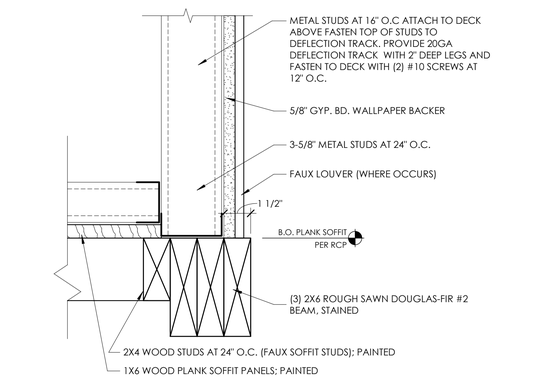
5 SLAT WALL CEILING SECTION @ SOFFIT WALL
3" = 1'-0"



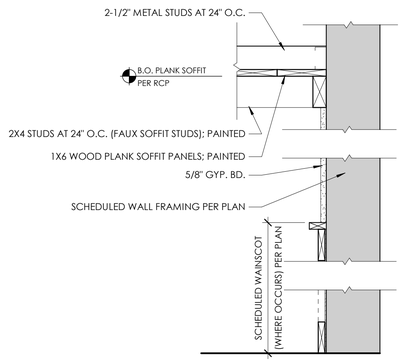
6 SLAT WALL CORNER PLAN DETAIL
3" = 1'-0"



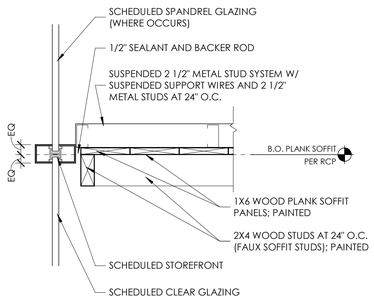
1 TYPICAL ELEVATION @ INTERIOR "PATIO WALL AREA"
3/4" = 1'-0"



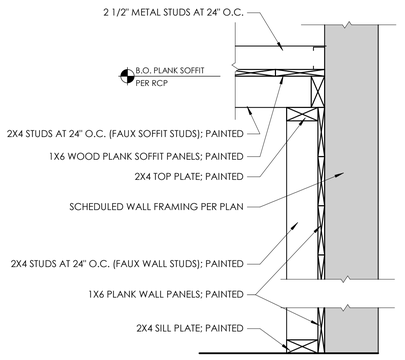
7 FAUX BEAM SECTION
3" = 1'-0"



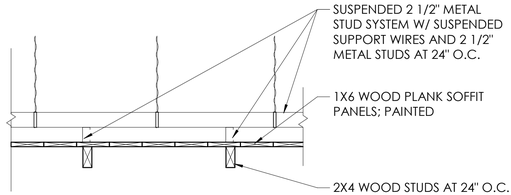
8 FAUX STUD SOFFIT AT WAINSCOT
1 1/2" = 1'-0"



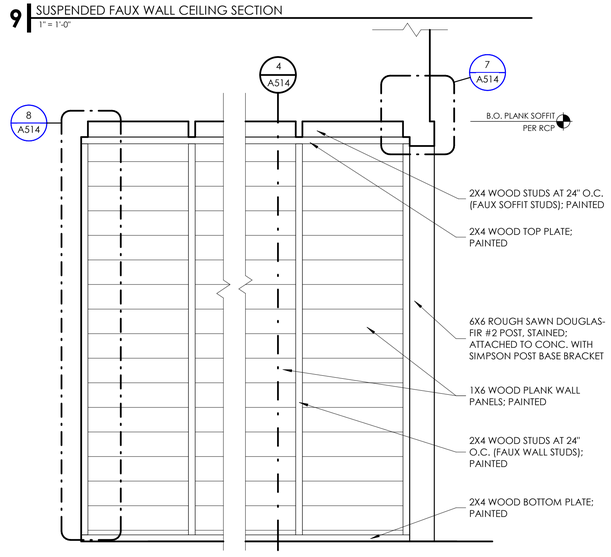
3 FAUX STUD SOFFIT AT STOREFRONT
1 1/2" = 1'-0"



4 FAUX STUD SOFFIT AT FAUX STUD WALL
1 1/2" = 1'-0"



9 SUSPENDED FAUX WALL CEILING SECTION
1" = 1'-0"



2 WALL FINISH TYPE "W-4" (FAUX STUD WALL)
3/4" = 1'-0"

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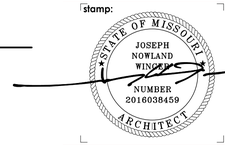

sheet number:

MOBETTAHS (TI) for:
LEE'S SUMMIT
520 NW Chipman Rd
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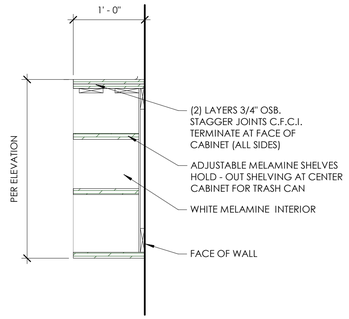
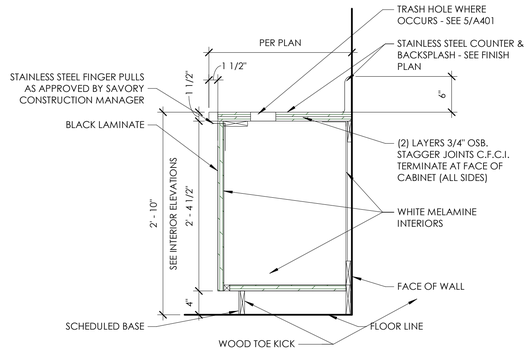
sheet title:
INDOOR PATIO

sheet number:

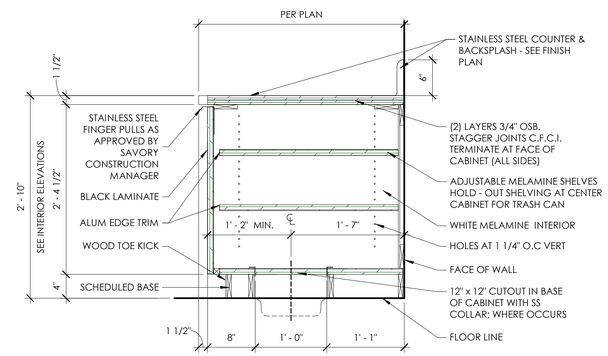
A514



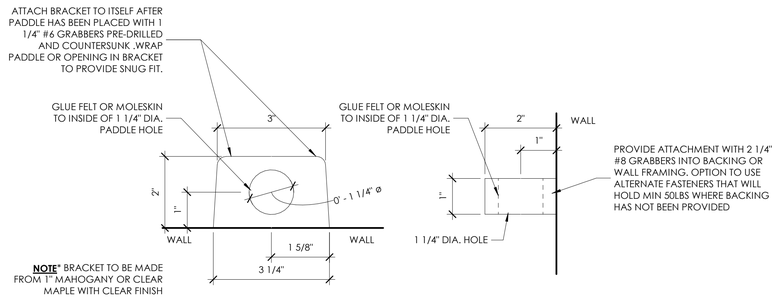
6 UPPER CABINET DETAIL
1" = 1'-0"



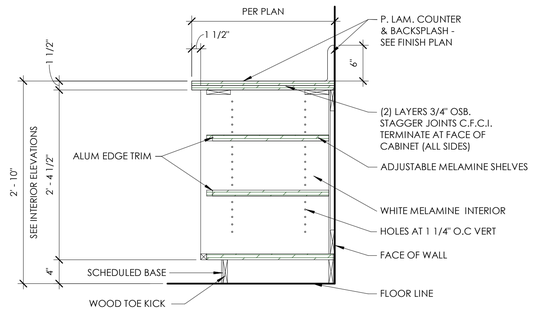
4 MILLWORK - BEVERAGE COUNTER
1" = 1'-0"



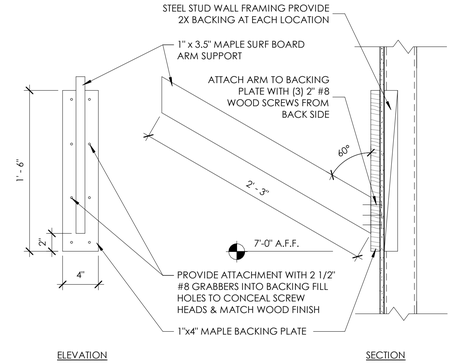
1 MILLWORK - BEVERAGE COUNTER (WIDE)
1" = 1'-0"



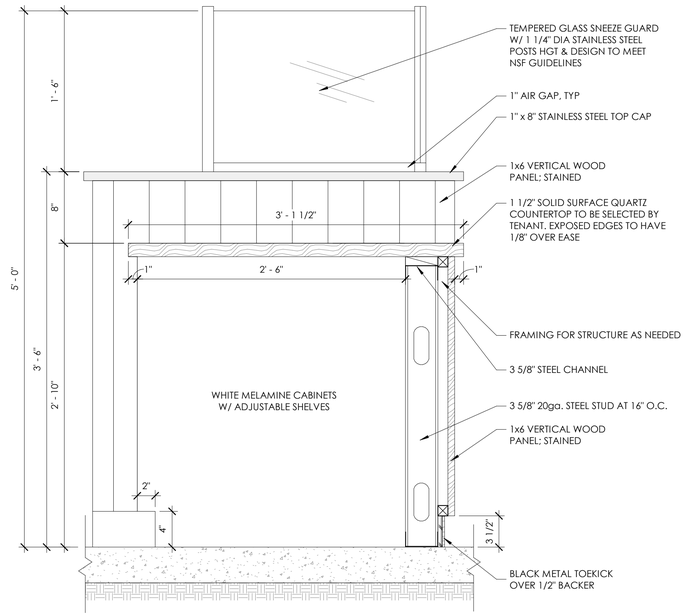
7 PADDLE BRACKET DETAIL
6" = 1'-0"



5 MILLWORK - OFFICE COUNTER
1" = 1'-0"



2 SURF BOARD BRACKET DETAIL
1 1/2" = 1'-0"



3 DETAIL @ FRONT COUNTER
1 1/2" = 1'-0"

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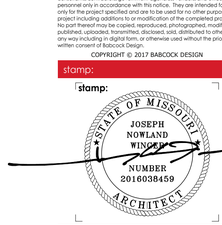
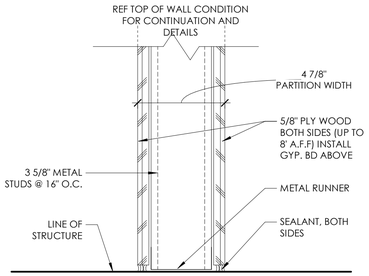


sheet number:

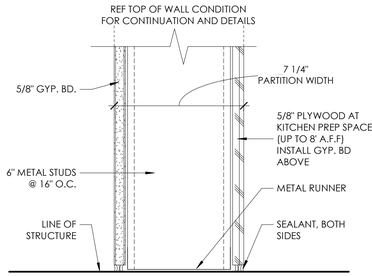
for:
MOBETTAHS (TI)
LEE'S SUMMIT
520 NW Chipman Rd
Lee's Summit, MO 64086

sheet title:
MILLWORK DETAILS

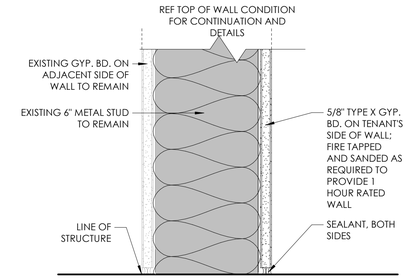
sheet number:
A551



E3 5/8" PLY. (BOTH SIDES) @ 3 5/8" METAL STUD
NOT TO SCALE

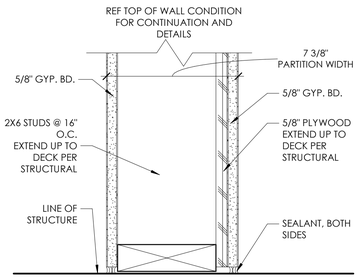


B6 5/8" GYP. BD. & 5/8" PLY. @ 6" METAL STUD
NOT TO SCALE

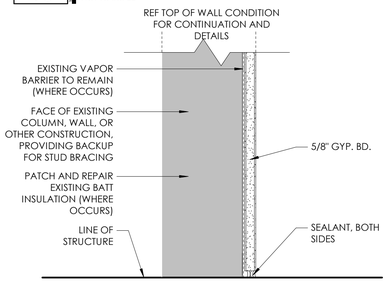


***NOTE:** FOR ONE-HOUR RATED WALLS USE UL DESIGN NO. U305; SEE UL RATING SHEET A601

A0 5/8" GYP. BD. AT EXISTING DEMISING
NOT TO SCALE



F6 INTERIOR SHEAR WALL AT FRONT-OF-HOUSE
NOT TO SCALE



C0 5/8" GYP. BD. @ EXISTING
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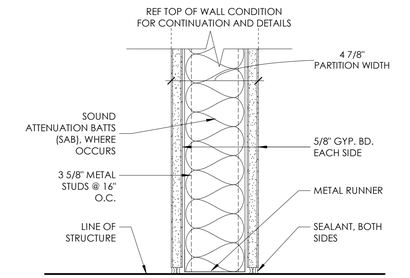

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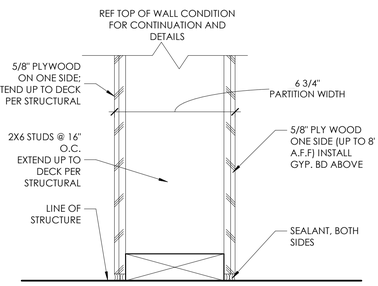
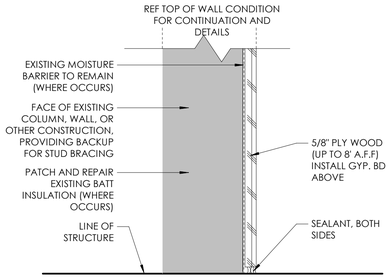
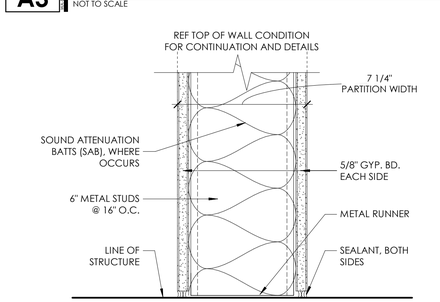
NOT TO SCALE



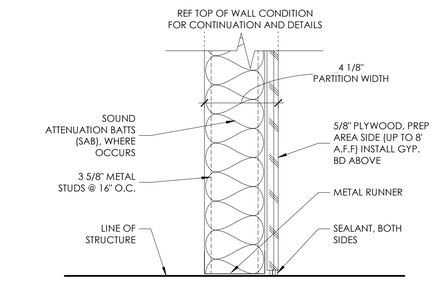
G6 INTERIOR SHEAR WALL AT BACK-OF-HOUSE
NOT TO SCALE



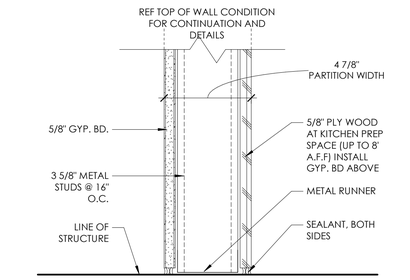
D0 5/8" PLY. @ EXISTING
NOT TO SCALE



A6 5/8" GYP. BD. (BOTH SIDES) @ 6" METAL STUD
NOT TO SCALE



D3 PARTITION TYPE D3
NOT TO SCALE

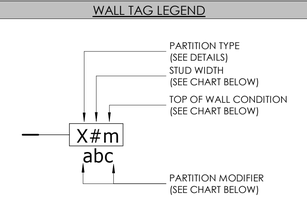


B3 5/8" GYP. BD. & 5/8" PLY. @ 3 5/8" METAL STUD
NOT TO SCALE

PARTITION GENERAL NOTES

1. PARTITIONS ARE DISTINGUISHED ON FLOOR PLANS BY SYMBOL DESIGNATION, GRAPHIC DESIGNATION OR A COMBINATION OF BOTH DESIGNATIONS. SOME PARTITION TYPES SHOWN ON THIS SHEET MAY NOT BE USED ON THIS PROJECT.
2. ALL WALLS NOT DESIGNATED WITH A GRAPHIC OR TAG TO BE **TYPE 'A'**. IF UNCLEAR CONTACT ARCHITECT.
3. SOUND TRANSMISSION CLASS (STC) IS A RATING SYSTEM THAT DESCRIBES THE ABILITY OF AN ASSEMBLY TO REDUCE THE TRANSMISSION OF SOUND. STC RATINGS LISTED ARE BASED ON LABORATORY TESTING AND ARE NOT INDICATIVE OF RESULTS IN FIELD.
4. SEE SPECIFICATIONS FOR SOUND ATTENUATION BATTS (SAB) REQUIREMENTS. WHERE SAB ARE INDICATED, THEY SHALL EXTEND CONTINUOUSLY FROM FLOOR TO STRUCTURE ABOVE.
5. PARTITIONS ARE INDICATED WITH CONVENTIONAL GYPSUM WALLBOARD U.N.O.; UPGRADE TO PREMIUM TYPES OF WALLBOARD (I.E., MOISTURE-RESISTANT, TILE-BACKER BOARD, ACOUSTICALLY ENHANCED, ETC.) BASED ON THEIR LOCATION AND ACCORDING TO REQUIREMENTS LISTED IN THE SPECIFICATIONS.
6. SEALANTS INDICATED MAY BE FOR FIRE RATING, SMOKE RATING, AIR PRESSURE CONTAINMENT, ACOUSTIC RATING, VERMIN CONTROL, MOVEMENT (CRACK) CONTROL AND/OR BIOLOGICAL CONTAINMENT. SEALANT JOINTS ARE TO BE SIZED FOR EXPECTED MOVEMENT OF JOINT WITH EXPANSION/CONTRACTION CAPACITY OF SEALANT MATERIAL TO MAINTAIN THE INTEGRITY OF THE SEAL FOR THESE APPLICABLE PARAMETERS - SEE SPECIFICATIONS.
7. "LINE OF STRUCTURE" INDICATED FOR EACH PARTITION IS DIAGRAMMATIC ONLY AND DOES NOT INDICATE EXACT CONSTRUCTION CONDITIONS OR GEOMETRY.
8. ALL DIMENSIONS ARE TO COLUMN CENTERLINES OR TO FACE OF FRAMING, U.N.O. CLEAR DIMENSIONS INDICATE DIMENSION BETWEEN FINISHES.
9. FIRE RESISTANT AND FIRE RESISTANT SMOKE BARRIER RATINGS ARE TO CONTINUE THROUGH ALL OPENINGS IN RATED PARTITIONS.
10. SMOKE RESISTANT, FIRE RESISTANT, AND FIRE RESISTANT SMOKE BARRIER PARTITIONS SHALL EXTEND AND SEAL TO INSIDE FACE OF EXTERIOR SHEATHING, INCLUDING EXTENSIONS THROUGH SOFFITS.
11. REFER TO THE TOILET ACCESSORIES SHEET AND CASEWORK SHEET FOR MOUNTING DETAIL INFORMATION.
12. REFER TO SHEET **A612** AND **A613** FOR ADDITIONAL PARTITION DETAILS AND FRAMING INFORMATION.
13. SEE DETAILS ON THIS SHEET FOR METAL STUD SIZE, SPACING, HEIGHT LIMITATIONS, AND ADDITIONAL INFORMATION.
14. PARTITIONS REQUIRED TO BE SMOKE RESISTANT, FIRE RESISTANT, OR BOTH FIRE AND SMOKE RESISTANT ARE SHOWN GRAPHICALLY ON PLANS WITH HATCH PATTERNS.
15. THE TYPICAL PARTITION TAG SYMBOL DESIGNATION HAS THREE CHARACTERS. THE FIRST CHARACTER IS A LETTER INDICATING THE PARTITION TYPE, THE SECOND CHARACTER IS A NUMERIC INDICATION OF THE STUD WIDTH. IN SOME INSTANCES, ADDITIONAL CHARACTERS OR "MODIFIER" MAY BE ADDED TO THE END TO INDICATE ADDITIONAL CHARACTERISTICS WITHIN THE WALL. REFER TO CHART BELOW FOR MODIFIER DEFINITIONS. IF NO PARTITION TAG OR NUMERIC SECOND CHARACTER EXISTS, THE STUD SIZE WILL BE 3 5/8" FOR METAL STUD CONSTRUCTION AND 2X4 FOR WOOD CONSTRUCTION TYPICAL, U.N.O.
16. ALL PARTITIONS EXTEND TO DECK UNLESS NOTED OTHERWISE.
17. ALL DRYWALL LEVEL - 5 FINISH.

WALL TAG LEGEND



STUD WIDTH

#	METAL STUD WIDTH	WOOD STUD WIDTH
1	1 5/8"	
2	2 1/2"	
-	3 5/8"	3 1/2"
6	6"	5 1/2"
8	8"	7 1/4"
10	10"	
12	12"	

TOP OF WALL CONDITION

ALL WALL ASSEMBLIES EXTEND TO DECK UNLESS NOTED OTHERWISE
SEE DETAILS ON SHEET A612

- **B** PARTITION EXTENDS TO BOTTOM OF CEILING
- **C** PARTITION EXTENDS TO A MINIMUM OF 6" ABOVE CEILING
- **P** PARTIAL HEIGHT WALL
- **D** PARTITION EXTENSION BOTTOM OF DECK

PARTITION MODIFIER

- **a** PROVIDE SOUND ATTENUATION BATTS TO FILL STUD CAVITY TO TOP OF ADJACENT CEILING
- **s** PROVIDE 5/8" CEMENT BOARD IN PLACE OF GYP. BD. AT LOCATIONS OF TILE (COORDINATE WITH INTERIOR ELEVATIONS)
- **t** PROVIDE R-19 THERMAL BATTS TO FILL STUD CAVITY

FIRE RATING LEGEND

- NON RATED
- 1 HR FIRE BARRIER

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sheet information

revisions: 1

num.	description	date

CURRENT SET THRU REVISION 02

date:	1-23-2022
project number:	MO-53LEE
project status:	ISSUED FOR PERMIT

original drawing is 24" x 36"
current as of: 4/26/2022 12:03:40 AM

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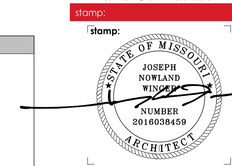
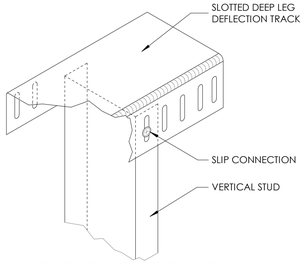


sheet number:

MOBETTAHS (TI) for:
LEE'S SUMMIT
520 NW Chipman Rd
Lee's Summit, MO 64086

sheet title:
STANDARD PARTITION TYPES

sheet number:
A611

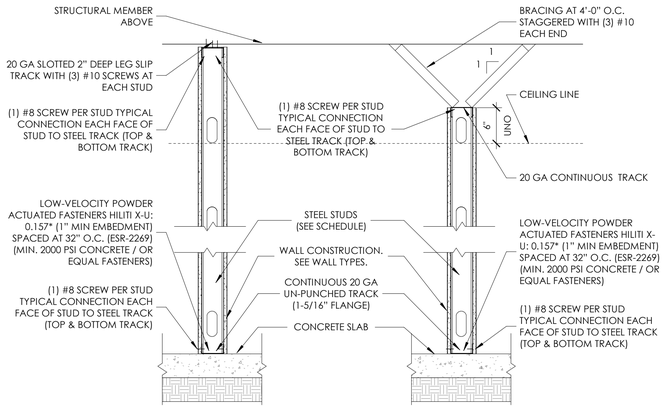


ISOMETRIC VIEW OF SLOTTED TOP TRACK

GENERAL NOTES

1. CONDITIONS INDICATED SHOW DESIGN INTENT, ESPECIALLY IN REGARD TO ACCOMMODATION OF STRUCTURAL DEFLECTION AND CONTINUITY OF INTEGRITY OF SOUND, SMOKE AND FIRE WALLS.
2. DESIGN INTENT DETAILS ARE NOT INTENDED TO BE PROPRIETARY. CONTRACTOR MAY EMPLOY SIMILAR HEAD-OF-WALL DESIGNS AND COMPONENTS AS APPROPRIATE FOR CONDITIONS.
3. DESIGN INTENT DETAILS MAY NOT SHOW ALL CONDITIONS TO BE ENCOUNTERED ON A PROJECT. COMPLY WITH MANUFACTURER AND UL APPROVED METHODS FOR A TYPICAL CONDITIONS.
4. SECURE TOP OF INTERIOR PARTITIONS TO SUPERSTRUCTURE IN A WAY THAT PROVIDES LATERAL STABILITY (PERPENDICULAR-TO AND IN-PLANE WITH WALL) YET ALLOWING FOR A MINIMUM OF 3/4" OF VERTICAL DEFLECTION OF THE SUPERSTRUCTURE.
5. RIGIDLY SECURE SLOTTED TOP TRACK TO BUILDING SUPERSTRUCTURE IN AN APPROVED MANNER. EMPLOY Z-BARS, COLD-ROLLED CHANNELS OR SIMILAR SPACER TO ACCOMMODATE THICKNESS OF SPRAY-APPLIED FIRE-RESISTIVE MATERIALS (SFRM).
6. SLOTTED TOP TRACK, INDICATED ON THESE DETAILS, IS THE BASIS FOR DESIGN AND REFERS TO DEEP-LEG TRACKS WITH VERTICALLY SLOTTED HOLES. OPTIONAL MANUFACTURERS MAY PROVIDE SIMILAR, PROPRIETARY METHODS IN ACCORDANCE WITH THE PROVISIONS OF SPECIFICATION.
7. SECURE VERTICAL STUDS TO SLOTTED TOP TRACK AT MID-HEIGHT OF VERTICAL SLOTS IN TRACK. COMPONENTS INTENDED TO SLIDE VERTICALLY AS SUPERSTRUCTURE DEFLECTS.
8. DO NOT SCREW GYPSUM WALLBOARD TO TOP TRACK OR SUPERSTRUCTURE. GWB SCREWS INTO THE STUDS MUST BE AT LEAST 1" BELOW THE BOTTOM OF THE TOP TRACK.
9. REFER TO PARTITION STANDARDS FOR SPECIFIC WALL TYPES.
10. AT FIRE -RATED WALLS REFER TO JOINT FIRESTOPPING SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS REGARDING HEAD-OF-WALL CONDITIONS.
11. MAINTAIN ACOUSTIC RATING WHERE SOUND-CONTROL WALLS ARE INDICATED.
12. FIRESTOPPING AND ACOUSTICAL SEALANTS SHALL AUTOBOND. PROVIDE EXPOSED CLEAN SEALANT (TO CONCEAL FIRESTOPPING) AT FOOD SERVICE, FDA INSPECTED PRODUCTION FACILITIES, VIVARIA, BIOLOGICAL CONTAINMENT AND CLEAN ROOM APPLICATIONS.
13. WHERE A WALL IS DESIGNATED AS BOTH A SOUND-CONTROL WALL AND A FIRE-RATED WALL, REFER TO FIRE-RATED HEAD-OF-WALL CONDITIONS.
14. WHERE A WALL IS DESIGNATED AS A SOUND-CONTROL WALL, FILL ALL VOIDS WITH SOUND ATTENUATION BATTS (SAB).
15. SMOKE PARTITIONS REQUIRE THAT AT LEAST ONE LAYER OF GWB, AND SOUND-CONTROL WALLS REQUIRE GWB ON BOTH SIDES, BE CUT TO FOLLOW UNDULATING SURFACES OF THE SUPERSTRUCTURE INCLUDING, BUT NOT LIMITED TO, FLUTES IN METAL DECKING. PROVIDE A CONTINUOUS BEAD OF SEALANT (AS SPECIFIED) TO SUPERSTRUCTURE.

7 HEAD-OF-WALL DETAILS - GENERAL REQUIREMENTS FOR STUD WALLS
NOT TO SCALE



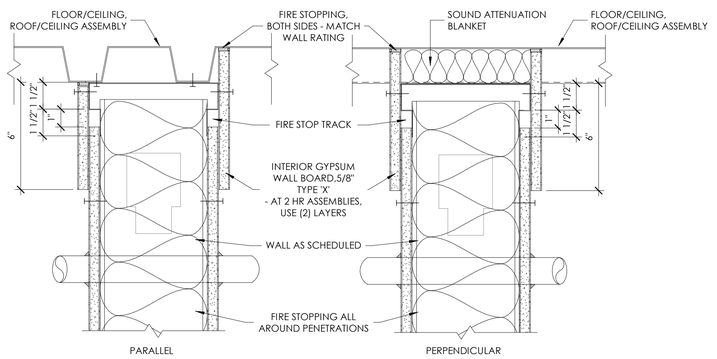
DETAIL GENERAL NOTES

1. STUDS BRACED BY GYPSUM WALLBOARD EACH SIDE. MAXIMUM SCREW SPACING SHALL NOT EXCEED 12" O.C.
2. 5LBS / SQ. FT. MAX LATERAL LOAD
3. FY (MIN) = 33KSL
4. DEFLECTION LIMIT 1/120
5. FOR H > 16'-0" AND BRACING > 8'-0" SEPARATE ENGINEERED DRAWINGS WILL BE REQUIRED
6. NOT APPLICABLE TO SHEAR WALLS
7. FOR SLIP TRACK IN ONE HOUR RATED WALL ASSEMBLIES USE UL SYSTEM NO. HW-S-028.

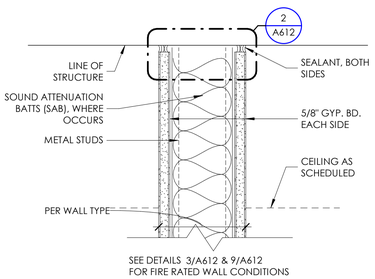
HEIGHT	METAL STUD SIZE & SPACING
UP TO 16'-0"	362S125-33 AT 16" O.C.
UP TO 12'-0"	362S125-18 AT 16" O.C.
BRACE LENGTH	BRACE SIZE
8'-0" TO 6'-1"	400S125-33
6'-0" OR LESS	362S125-18

NOTE: 33 MILS = 20 GA. AND 18 MILLS = 25 GA.

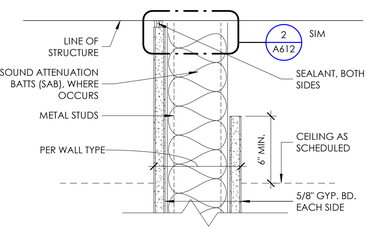
8 TYPICAL NON-BEARING STEEL STUD WALL PARTITION DETAIL
1" = 1'-0"



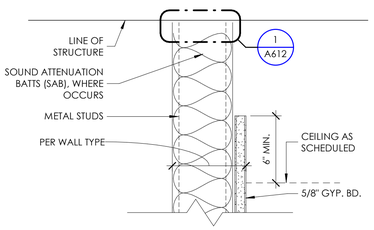
9 HEAD-OF-WALL DETAILS - STUD WALLS - FIRE RATED WALLS (ALTERNATE)
3" = 1'-0"



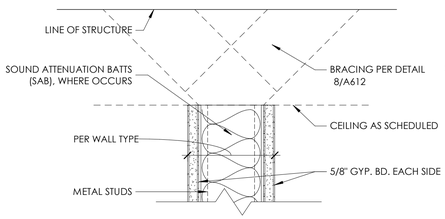
11 TOP OF WALL CONDITION - TYPE 'D' (NON-RATED)
3" = 1'-0"



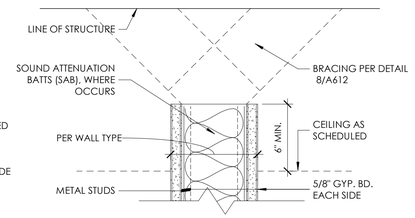
10 TOP OF WALL CONDITION - TYPE 'M' (NON-RATED)
3" = 1'-0"



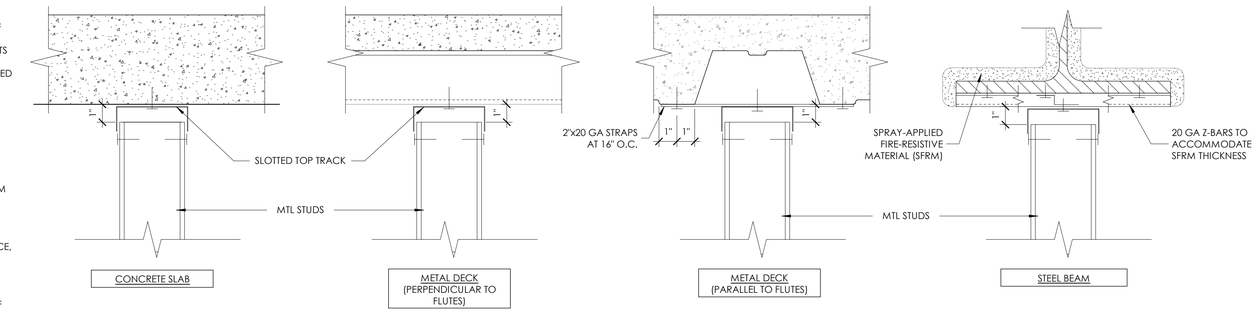
6 TOP OF WALL CONDITION - TYPE 'C2' (NON-RATED)
3" = 1'-0"



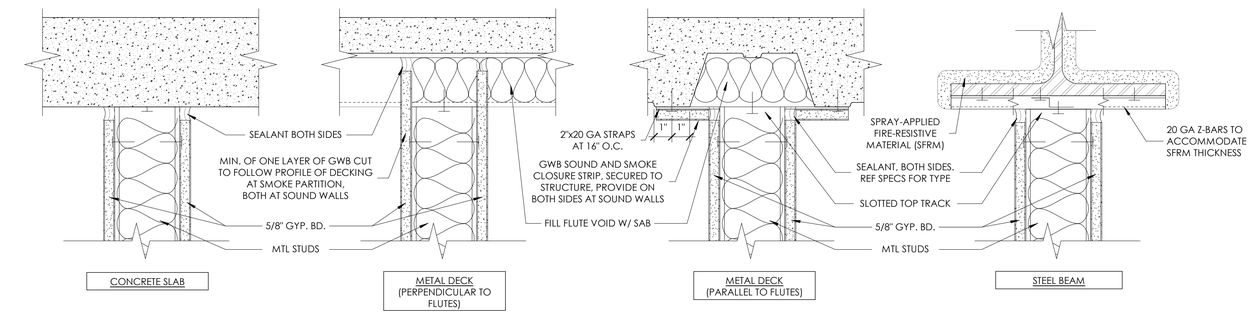
5 TOP OF WALL CONDITION - TYPE 'B' (NON-RATED)
3" = 1'-0"



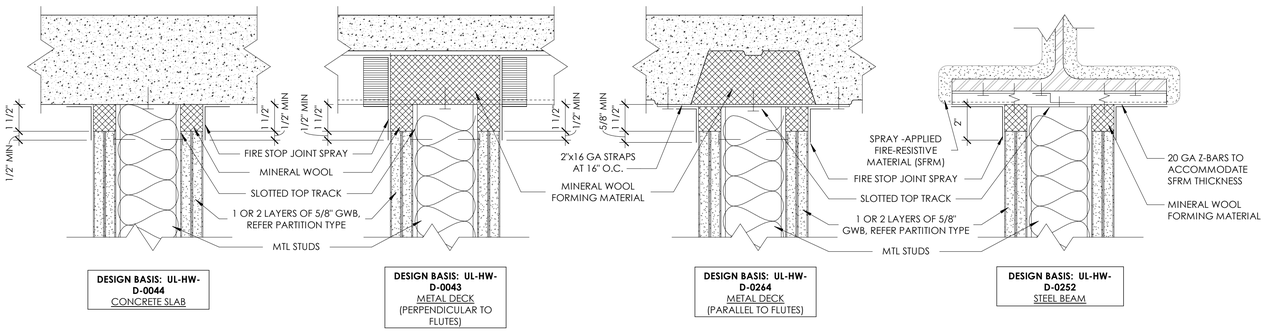
4 TOP OF WALL CONDITION - TYPE 'C1' (NON-RATED)
3" = 1'-0"



1 HEAD-OF-WALL DETAILS - STUD WALLS - NON-FIRE, NON-SMOKE, NON-SOUND CONTROL WALLS
3" = 1'-0"



2 HEAD-OF-WALL DETAILS - STUD WALLS - SMOKE PARTITIONS AND SOUND CONTROL WALLS
3" = 1'-0"



3 HEAD-OF-WALL DETAILS - STUD WALLS - FIRE RATED WALLS
3" = 1'-0"

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sheet information

revisions: ⚠

num.	description	date

CURRENT SET THRU REVISION 02

date:	1-23-2022
project number:	MO-53LEE
project status:	ISSUED FOR PERMIT

original drawing is 24" x 36"
current as of: 4/26/2022 12:03:42 AM

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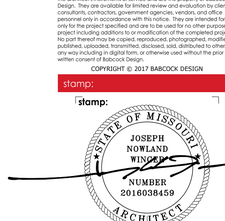
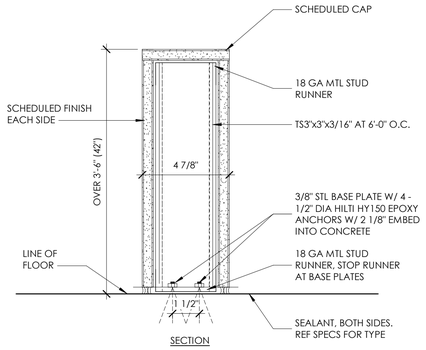


sheet number:

for:
MOBETTAHS (TI)
LEE'S SUMMIT
520 NW Chipman Rd
Lee's Summit, MO 64086

sheet title:
PARTITION HEAD DETAILS

sheet number:
A612



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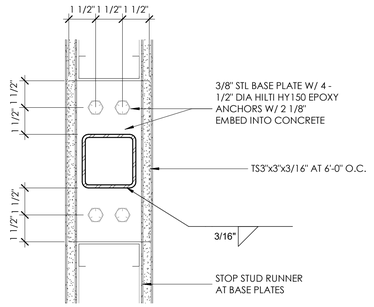
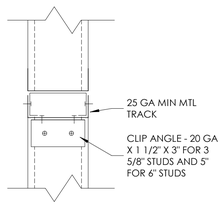
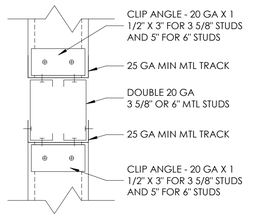


PLAN

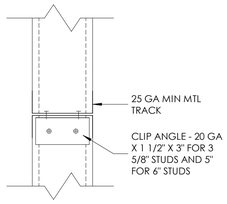
4 PARTIAL HEIGHT OR KNEE WALL - OVER 42" HEIGHT
3" = 1'-0"



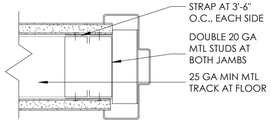
7 DOOR OPENING HEADER
3" = 1'-0"

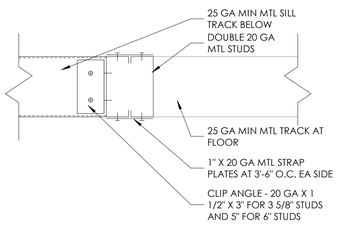


6 DOUBLE DOOR OR LARGE OPENING HEADER
3" = 1'-0"



5 OPENING HEADER
3" = 1'-0"



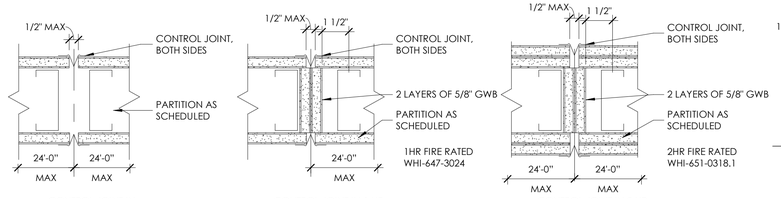


9 DOOR OPENING JAMB STUDS
3" = 1'-0"

ADDITIONAL NOTES:

1. BUILDING CODE REQUIRES THAT "SMOKE PARTITIONS" BE SEALED TO STRUCTURE AS INDICATED TO SUCCESSFULLY "LIMIT THE PASSAGE OF SMOKE".
2. CONDITIONS INDICATED TO SHOW DESIGN INTENT, AND NOT INTENDED TO BE PROPRIETARY. CONTRACTOR MAY EMPLOY SIMILAR UL-APPROVED CONTROL JOINTS DESIGNS THAT ARE APPROPRIATE FOR THE SPECIFIC CONDITION. JOINTS TO BE SIZED TO ACCOMMODATE MOVEMENT CAPABILITIES OF FIRESTOP ASSEMBLY.

8 LARGE OPENING JAMB STUDS
3" = 1'-0"

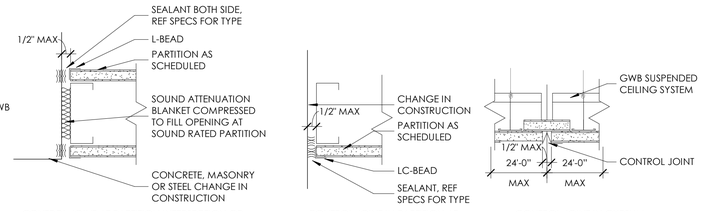


CONTROL JOINT IN GWB PARTITION

CONTROL JOINT IN 1 HR FIRE RATED PARTITION

CONTROL JOINT IN 2 HR FIRE RATED PARTITION

3 GWB DETAIL - TYPICAL GYPSUM WALLBOARD PRIORITY DETAILS
3" = 1'-0"

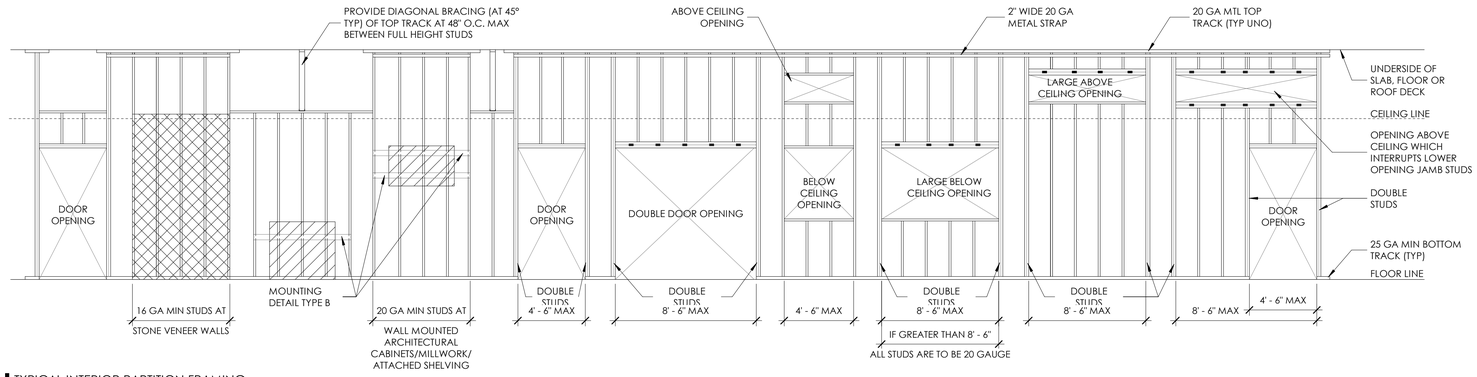


CONTROL JOINT AT PARTITION INTERSECTION OR CHANGE IN CONSTRUCTION

CONTROL JOINT IN PARTITION AT NON-EXPOSED EDGE

CONTROL JOINT IN GYPSUM BOARD CEILING

10 GWB DETAIL - TYPICAL GYPSUM WALLBOARD CONTROL JOINT DETAILS
3" = 1'-0"



NOTES:

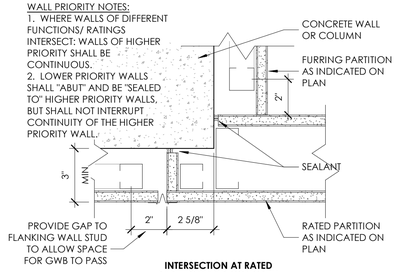
1. ALL STUDS ARE SPACED 16" O.C. MAXIMUM.
2. ALL STUDS SHALL BE "C" STUDS WITH 1/4" RETURN FLANGE MINIMUM.
3. INDICATES SHELVING OR CABINETRY
4. INDICATES STONE
5. DOUBLE STUDS AT SIDES OF OPENING **SHALL NOT** BE CUT FOR DUCTWORK OR ANY OTHER MECHANICAL SYSTEMS.
6. REFER TO A-621/06 FOR MOUNTING TYPE DETAILS.
7. PROVIDE PARTITION BRACING AT ALL ASSEMBLIES OVER 15'-0" IN HEIGHT, U.N.O.
8. ALL DETAIL REFERENCES ON THIS DRAWING REFER TO DETAILS ON THIS SHEET.

NOTE TO USER: STONE SHOULD NOT BE ATTACHED DIRECTLY TO SHAFT WALLS. PROVIDE ADDITIONAL FURRING FOR STONE BACK-UP.

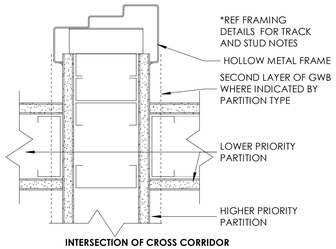
WHERE STONE EXCEEDS 10'-0" IN HEIGHT, OR IF STONE IS GRAVITY SUPPORTED BY THE STUDS, THEY SHOULD BE ENGINEERED.

11 TYPICAL INTERIOR PARTITION FRAMING
1/4" = 1'-0"

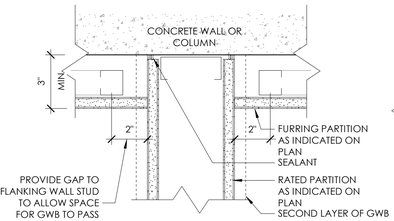
WALL PRIORITY NOTES:
1. WHERE WALLS OF DIFFERENT FUNCTIONS/ RATINGS INTERSECT: WALLS OF HIGHER PRIORITY SHALL BE CONTINUOUS.
2. LOWER PRIORITY WALLS SHALL "ABUT" AND BE "SEALED TO" HIGHER PRIORITY WALLS, BUT SHALL NOT INTERRUPT CONTINUITY OF THE HIGHER PRIORITY WALL.



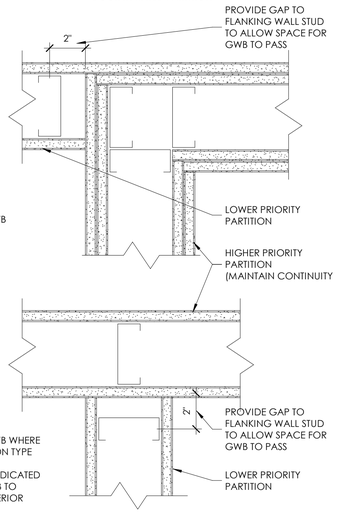
INTERSECTION AT RATED PARTITION AND CONCRETE

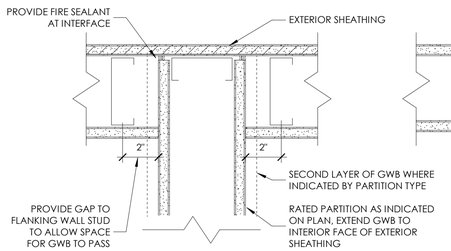


INTERSECTION OF CROSS CORRIDOR DOOR IN RATED PARTITION



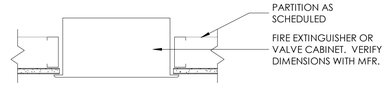
INTERSECTION OF RATED PARTITION AND CONCRETE



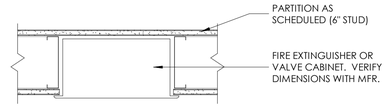


INTERSECTION AT RATED PARTITION AND EXTERIOR WALL

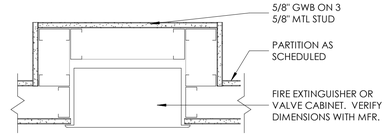
INTERSECTION AT VARIOUS WALL PRIORITY CONFIGURATIONS



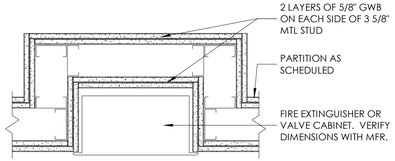
FRAMING AT PENETRATION IN NON-RATED CHASE



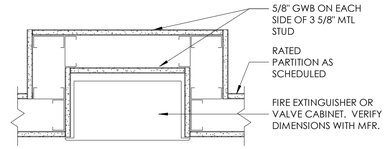
FRAMING AT PENETRATION IN NON-RATED WALL



FRAMING AT PENETRATION IN NON-RATED WALL

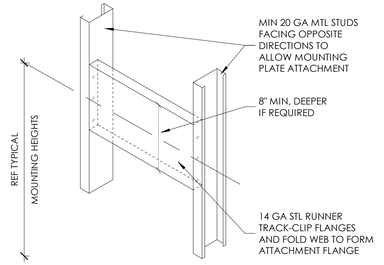


FRAMING AT PENETRATION IN 2-HR FIRE RATED WALL

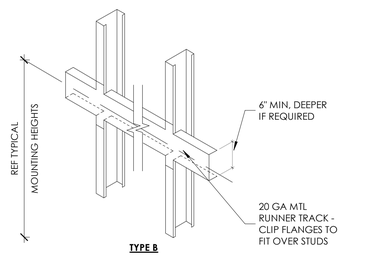


FRAMING AT PENETRATION IN 1-HR FIRE RATED WALL

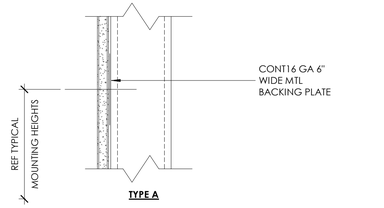
1 NON-RATED PENETRATION AND CABINET DETAILS
1 1/2" = 1'-0"



TYPE C



TYPE B



TYPE A

2 METAL BACKING DETAILS FOR ACCESSORIES AND EQUIPMENT
3" = 1'-0"

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sheet information

revisions: 1

num.	description	date

CURRENT SET THRU REVISION 02

date:	1-23-2022
project number:	MO-53LEE
project status:	ISSUED FOR PERMIT

original drawing is 24" x 36"
current as of: 4/26/2022 12:03:44 AM

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STATE OF MISSOURI
JOSEPH NOWLAND WINDLER
NUMBER 2016038459
ARCHITECT

sheet number:

MOBETTAHS (TI) for: LEE'S SUMMIT
520 NW Chipman Rd
Lee's Summit, MO 64086

sheet title:

STANDARD PARTITION AND FRAMING DETAILS

sheet number:

A613

DOOR AND FRAME SCHEDULE

DOOR #	Z ROOM NAME	PANEL DIMENSIONS W	H	T	NO. OF PANELS	TYPE	MATERIAL	FINISH	GLAZING	FRAME TYPE	MATERIAL	FINISH	FRAME DETAIL HEAD	JAMB	SILL	FIRE RATING	HARDWARE HARDWARE SET	NOTES
FINISHED FLOOR																		
105	UNISEX	3' - 0"	7' - 0"	0' - 1 3/4"	1	F	HM	P-3		1		P-3	3/A631	2/A631			GROUP 05	
106	UNISEX	3' - 0"	7' - 0"	0' - 1 3/4"	1	F	HM	P-3		1		P-3	3/A631	2/A631			GROUP 05	
104	ELEC CLOSET	3' - 0"	7' - 0"	0' - 1 3/4"	1	F	HM	P-6		1		P-6	3/A631	1/A631			GROUP 04	
100	DINING	3' - 0"	8' - 0"	0' - 2"		AM	AL	DB					14/AS561	6/AS561	7/AS561			
103	KITCHEN	3' - 0"	8' - 0"	0' - 1 3/4"	1	F	HM			1			14/AS561	6/AS561	7/AS561			
101	DINING	6' - 0"	8' - 0"	0' - 1 3/4"	2	AM / AM	AL	DB					14/AS561	8/AS561	7/AS561			

DOOR & FRAME SCHEDULE NOTES:

1. CONTRACTOR TO DETERMINE EXISTING HARDWARE AND NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO WORK.
2. ELIASON SCP-8 BLACK W/ STAINLESS STEEL EDGE TRIM & KICK PLATES TRAFFIC DOUBLE ACTING DOOR; PROVIDE CASED FRAME (DETAILS REFERENCED ARE SIMILAR).
3. PROVIDE SEMI-GLOSS PAINT; COORD WITH SHEET A114 FOR PAINT COLORS.

DOOR STOP GENERAL NOTES:

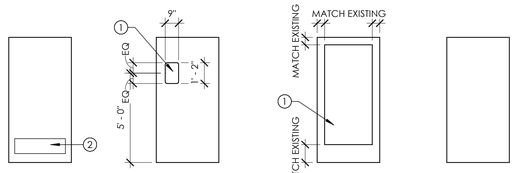
A. **FLOOR MOUNTED STOPS AT EXTERIOR DOORS**
   a. CENTER STOP ON THE DOOR LEAF WHEN OPENED
   b. ALLOW FOR 90 DEGREE OPEN WHEN ADJACENT TO AN OBSTRUCTION
   c. ALLOW FOR 100 DEGREE OPEN WHERE NOT ADJACENT TO OBSTRUCTION
B. **FLOOR MOUNTED STOPS AT INTERIOR DOORS**
   a. CENTER STOP ON THE DOOR LEAF WHEN OPENED
   b. ONLY ALLOW FOR 90 DEGREE OPEN.

GLAZING TYPES:

GL-1 CLEAR ACRYLIC SAFETY WINDOW SET IN BLACK RUBBER MOLDING
GL-2 1" INSULATED GLAZING TO MATCH EXISTING BUILDING STANDARD
GL-2T 1" TEMPERED INSULATED GLAZING TO MATCH EXISTING BUILDING STANDARD

DOOR TYPE - GRAPHICAL SCHEDULE SCALE: 1/4" = 1'-0"

NOTE: SEE DOOR SCHEDULE TO MATCH APPROPRIATE FRAME TYPE WITH DOOR TYPES.



F FLUSH

G1 PARTIAL GLASS STAINLESS STEEL

AW FULL GLASS ALUMINUM **MATCH EXISTING STANDARD**

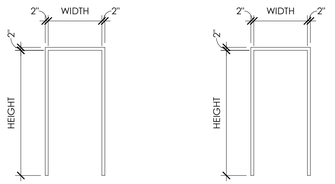
EX EXISTING TO REMAIN

DOOR FRAME TYPE - GRAPHICAL SCHEDULE SCALE: 1/4" = 1'-0"

NOTE: SEE DOOR SCHEDULE TO MATCH APPROPRIATE FRAME TYPE WITH DOOR TYPES.

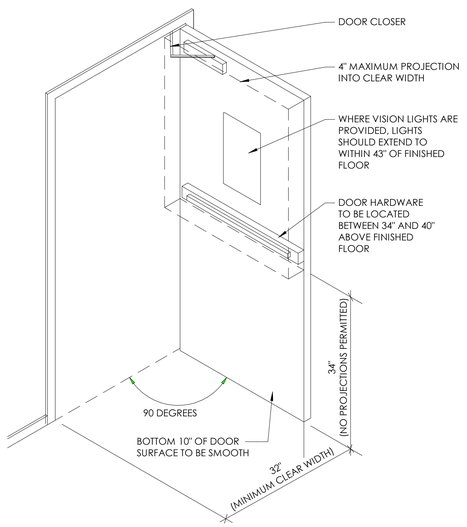
KEYNOTES

1. SCHEDULED GLAZING
2. SCHEDULED KICK PLATE BOTH SIDES



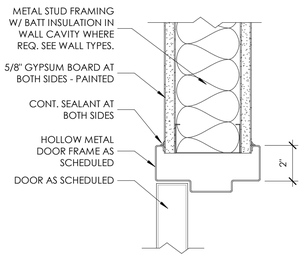
ALUMINUM FRAME

HOLLOW METAL FRAME

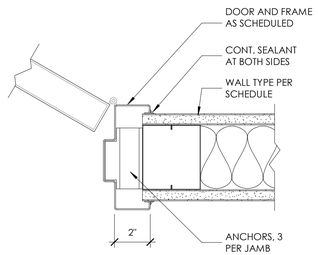


NOTE: HARDWARE TO BE OPERATED WITH ONE HAND, WITHOUT TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. THRESHOLDS ARE LIMITED TO 1/2" MAXIMUM HEIGHT. INTERIOR DOORS, OTHER THAN FIRE DOORS, SHOULD BE ABLE TO BE OPERATED WITH 5 POUNDS OF FORCE. EXTERIOR DOOR AND FIRE DOORS ARE REGULATED BY THE AUTHORITY HAVING JURISDICTION. REFER TO ICC A117.1 FOR APPROACH REQUIREMENTS.

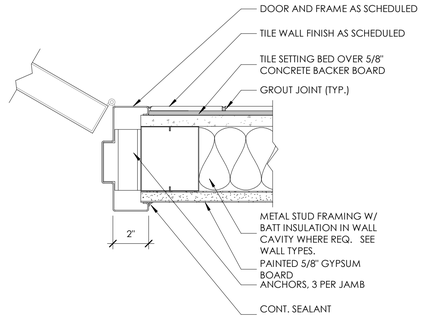
4 TYPICAL ACCESSIBLE DOOR DETAIL
1/4" = 1'-0"



3 INTR. HOLLOW METAL HEAD @ GYP. BD.
3" = 1'-0"



1 INTERIOR HM JAMB @ GYP.BD
3" = 1'-0"



2 INTR. HOLLOW METAL JAMB @ GYP. BD. & TILE
3" = 1'-0"

DOOR AND WINDOW FINISH LEGEND

P-6	BLACK SEMI GLOSS
DB	DARK BRONZE TO MATCH EXISTING
EX	EXISTING FINISH TO REMAIN / MATCH EXISTING BUILDING STANDARD
ST	SATIN

DOOR AND WINDOW GENERAL NOTES:

A. THE CONTRACTOR IS TO VERIFY THE DIMENSIONS OF ALL OPENINGS PRIOR TO THE FABRICATION OF ALL DOORS AND FRAMES.
B. DUE TO MULTIPLE USE, SOME OF THE DETAILS REFERRED TO ON THE DOOR SCHEDULE ARE REVERSED OR TURNED FROM THE DIRECTION SHOWN ON THE FLOOR PLANS. THE INTENT OF THE DETAILS IS TO BE FOLLOWED. CONSULT THE ARCHITECT WHEN QUESTIONS ARISE.
C. ALL EXIT ACCESS DOORS AND EXIT DOORS SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY, SPECIAL KNOWLEDGE, OR EFFORT. USE OF MANUAL FLUSH BOLTS, EDGE BOLTS, TOP OR BOTTOM BOLTS, ETC., IS PROHIBITED.
D. DOOR CLOSERS SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE TIME REQUIRED TO MOVE THE DOOR TO AN OPEN POSITION OF 12 DEGREES WILL BE 5 SECONDS MINIMUM.
E. FIRE DOORS SHALL HAVE THE MINIMUM OPENING FORCE ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY. THE REQUIRED FORCE FOR PUSHING OPEN OR PULLING OPEN DOORS OTHER THAN FIRE DOORS SHALL BE 5 POUNDS. THESE FORCES DO NOT APPLY TO THE FORCE REQUIRED TO RETRACT LATCH BOLTS OR DISENGAGE OTHER DEVICES THAT HOLD THE DOOR IN A CLOSED POSITION.
F. THE BOTTOM 10" OF ALL DOORS EXCEPT AUTOMATIC DOORS, POWER ASSISTED DOORS, AND SLIDING DOORS SHALL HAVE A SMOOTH UNINTERRUPTED SURFACE TO ALLOW THE DOOR TO BE OPENED BY A WHEELCHAIR FOOTREST WITHOUT CREATING A TRAP OR HAZARDOUS CONDITION. WHEN NARROW STILE AND RAIL DOORS ARE USED, A 10" MINIMUM, SMOOTH PANEL, EXTENDING THE FULL WIDTH OF THE DOOR, SHALL BE INSTALLED ON THE PUSH SIDE(S) OF THE DOOR WHICH ALLOW THE DOOR TO BE OPENED BY A WHEELCHAIR FOOTREST WITHOUT CREATING A TRAP OR HAZARDOUS CONDITION. CAVITIES CREATED BY KICK PLATES SHALL BE CAPPED.
G. ALL DOOR LOCKSETS AND PANIC DEVICES SHALL BE ADA COMPLIANT.
H. CAULK HEAD, JAMBS, AND SILLS OF ALL DOORS AND WINDOWS WITH SEALANT CONTINUOUSLY APPLIED TO BOTH SIDES OF THE FRAMES.
I. ALL DOOR CLOSURES TO BE SET IN ACCORDANCE WITH THE ADA REDUCED OPENING FORCE REQUIREMENTS.
J. DOOR HARDWARE SUBSTITUTIONS SHALL BE PERMITTED (MANUFACTURER ONLY) WITH OWNER'S WRITTEN APPROVAL.
K. KEYING FOR ALL SCHEDULED LOCKSETS SHALL BE PROVIDED BY OWNER; COORDINATE WITH RESPONSIBILITY SCHEDULE ON SHEET G000.
L. PROVIDE SOLID BACK FRAMES FOR ALL STOREFRONT SYSTEMS.
M. PROVIDE END DAMS AT BOTTOM OUTSIDE CORNERS OF ALUMINUM STOREFRONT SYSTEMS. INSTALL PER MANUFACTURERS STANDARDS AND REQUIREMENTS.
N. FRAME DIMENSIONS SHOWN ARE NOMINAL. ACTUAL DIMENSIONS MAY VARY DEPENDING ON WINDOW MANUFACTURER AND SYSTEM.
O. COORDINATE THRESHOLDS WITH FINISH PLAN
P. ALL DOORS ON THE ACCESSIBLE ROUTE OR CIRCULATION PATH BE TESTED FOR A MAX OPENING FORCE OF 5LBS.

DOOR PANEL TYPES

FRAME TYPE NOMENCLATURE

XY
- Y — DENOTES FRAME SUB-TYPE
- X — DENOTES FRAME TYPE *(SEE ADJACENT FRAME TYPE ELEVATIONS)*

FRAME SUB-TYPES

M MASONRY HEAD *(SEE ADJACENT FRAME SUB-TYPES ELEVATIONS)*
MT MASONRY HEAD AND TERMINATED STOPS *(SEE ADJACENT FRAME SUB-TYPES ELEVATIONS)*
R RADIATION RESISTANT *(SEE SPECIFICATIONS)*
T TERMINATED STOP *(SEE ADJACENT FRAME SUB-TYPES ELEVATIONS)*

NOTES

1. SEE DOOR SCHEDULE FOR DOOR WIDTH AND HEIGHT
2. INSET FRAME DEPTH/THROAT IS 6" UNLESS OTHERWISE NOTED
3. INSET FRAME'S HEAD WIDTH IS 2" UNLESS DENOTED AS MASONRY HEAD
4. WRAPPED FRAME'S HEAD WIDTH IS 2"

DOOR HARDWARE

		HARDWARE GROUP - 01 MAIN ENTRY	FINISH	MANF
2	SET	PIVOT HINGES AND INTERMEDIATE - EXISTING TO REMAIN		
1	EA	LOCKSET, 3 POINT LOCKING DEVICE - REMOVE/MODIFY AS REQUIRED TO PROVIDE LOCK BELOW		
2	EA	CLOSER - EXISTING TO REMAIN		
2	EA	PUSH/PULL HANDLES - EXISTING TO REMAIN		
1	EA	THRESHOLD - EXISTING TO REMAIN		
1	SET	WEATHERSTRIP - EXISTING TO REMAIN		
2	EA	HEADER/THRESH BOLT - 4015 X 4085	628	ADA
1	EA	DEADLOCK - MS1851S 1-18 BS	628	ADA
1	EA	MORTISE CYLINDER - 20-001 118	626	SCH
1	EA	EXIT INDICATOR - 4089	628	ADA
2	EA	DEADBOLT LEVER - 4550	628	ADA
2	EA	MOUNTING PLATE - 4110-18	689	LCN
2	EA	CUSH SHOE SUPPORT - 4110-30	689	LCN
2	EA	BLADE STOP SPACER - 4110-61	689	LCN
1	EA	SIGN "THIS DOOR TO REMAIN UNLOCKED DURING..")		ADA
2	EA	FLOOR STOP 1462	BLACK	DO

NO PANIC HARDWARE IS PROVIDED AT THIS DOOR IN ACCORDANCE WITH IBC SECTION 1010.1.10 EXCEPTION #1 AND SECTION 1010.1.9.4 ITEM #2

		HARDWARE GROUP - 02 SIDE ENTRY	FINISH	MANF
1	SET	PIVOT HINGES AND INTERMEDIATE - EXISTING TO REMAIN		
1	EA	PANIC HARDWARE -99A-NL-OP-388	626	VON
1	EA	RIM BULINDER - 20-057	626	SCH
1	EA	ENTRANCE LOCK - LEVER VON996L	626	VON
1	EA	INTERCHANGEABLE CORE - 23-030 "C" KEYWAY	626	SCH
1	EA	CLOSER - EXISTING TO REMAIN		
1	EA	MOUNTING PLATE - 4110-18	689	LCN
1	EA	CUSH SHOE SUPPORT - 4110-30	689	LCN
1	EA	BLACE STOP SPACER - 4110-61	689	LCN
1	SET	WEATHERSTRIP - EXISTING TO REMAIN		
1	EA	THRESHOLD - EXISTING TO REMAIN		
1	EA	FLOOR STOP 1462	BLACK	DO

		HARDWARE GROUP - 03 KITCHEN	FINISH	MANF
		MANUFACTURER SUPPLIED HARDWARE		

		HARDWARE GROUP - 04 OFFICE	FINISH	MANF
3	EA	HW HINGES - 5BB1HW 4.5 X 4.5 NRP	652	IVE
1	EA	ENTRANCE LOCK - ND53PD RHO	626	SCH
1	EA	INTERCHANGEABLE CORE - 23-030 "C" KEYWAY	626	SCH
2	EA	KICK PLATE (18 GAUGE) - 90 10"x34"	US10B	DON
1	EA	WALL STOP 1401	BLACK	DO
3	EA	SILENCER - SR64	GRAY	IVE

		HARDWARE GROUP - 05 RESTROOM	FINISH	MANF
3	EA	HW HINGES - 5BB1HW 4.5 X 4.5 NRP	652	IVE
1	EA	CLOSER - REGULAR ARM - 4011 (MOUNT CLOSER AT INTERIOR - RESTROOM SIDE)	627	LCN
1	EA	PUSH PLATE - 70 3 1/2" x 15"	628	DON
1	EA	PULL HANDLE - 7014 3 1/2" x 15"	628	DON
2	EA	KICK PLATE (18 GUAGE) - 90 10" x 34"	628	DON
1	EA	DEAD BOLT - B571	626	SCH
1	EA	INTERCHANGEABLE CORE - 23 - 030 'C' KEYWAY (IF AVAILABLE	626	SCH
1	EA	FLOOR STOP - 1462	BLACK	DO
3	EA	SILENCER - SR64	GRAY	IVE

		HARDWARE GROUP - 06 EXTERIOR KITCHEN	FINISH	MANF
1	SET	HINGES - EXISTING TO REMAIN		
1	EA	CYLINDER PULL 1874	626	DON
1	EA	DOOR PANIC - VON DUPRIN 99A-NL-OP-388 SOFT TOUCH EXPOSED VERTICAL ROD TOUCH BAR PANIC WITH HEX DOGGING	626	VON
1	EA	CYLINDER 20-062-ICX	US26D	SCH
1	EA	INTERCHANGEABLE CORE - 23-030 "C" KEYWAY	US26D	SCH
1	EA	CLOSER - EXISTING TO REMAIN		
1	SET	WEATHERSTRIP - EXISTING TO REMAIN		
1	EA	THRESHOLD - EXISTING TO REMAIN		
1	EA	FLOOR STOP 1462	BLACK	DO
1	EA	DOOR VIEWER ULDV180 (IF APPLICABLE)	626	DO
1	EA	EXTERIOR LEVER - VON996L	626	VON

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sheet information

revisions: 1

num.	description	date

CURRENT SET THRU REVISION 02

date: 1-23-2022
project number: MO-53LEE
project status: ISSUED FOR PERMIT

original drawing is 24" x 36"
current as of: 4/26/2022 12:03:46 AM

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stamp:

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sheet number:

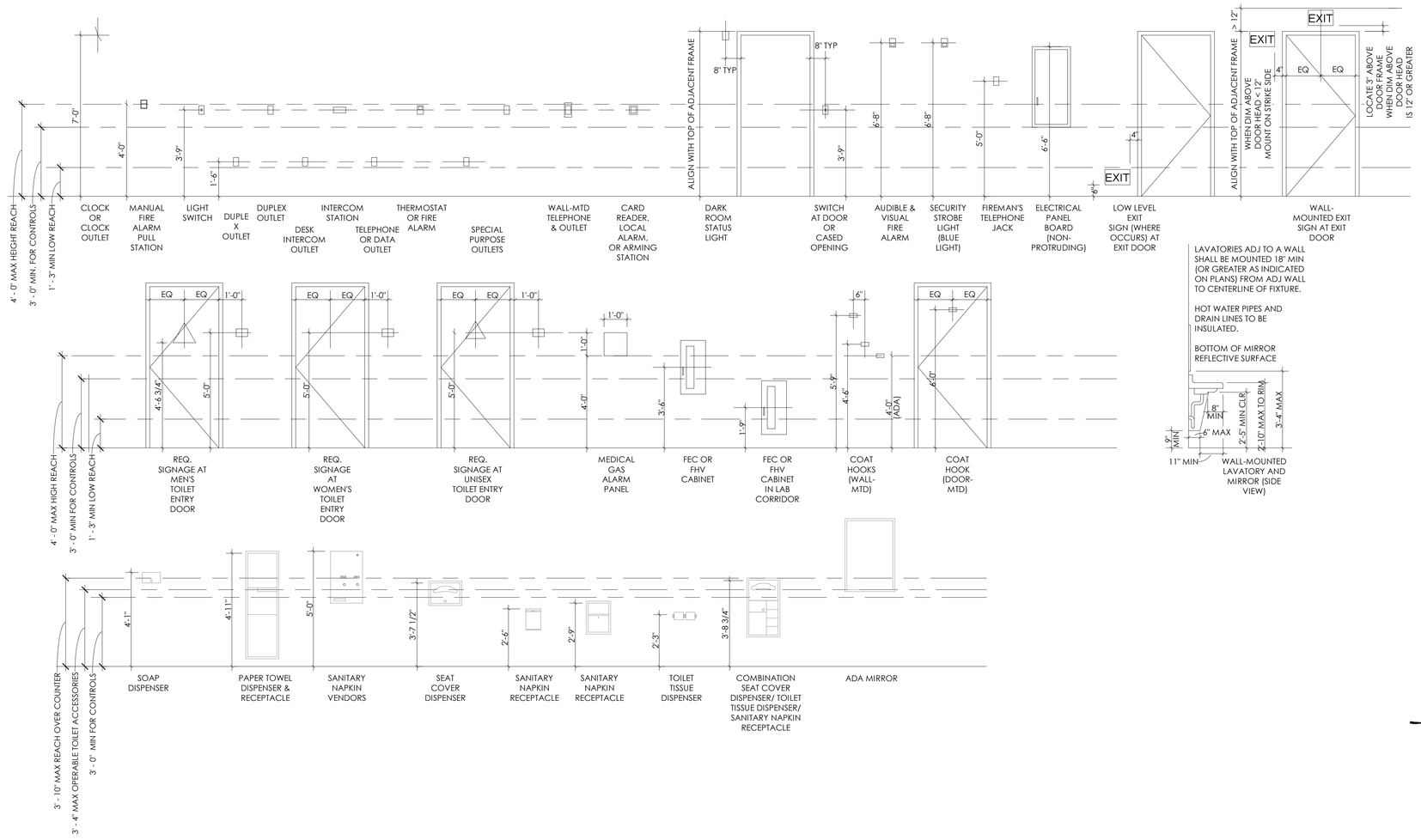
MOBETTAHS (TI) for LEE'S SUMMIT

520 NW Chipman Rd
Lee's Summit, MO 64086

sheet title: DOOR AND FRAME TYPES

sheet number:

A631



LAVATORIES ADJ TO A WALL SHALL BE MOUNTED 18" MIN (OR GREATER AS INDICATED ON PLANS) FROM ADJ WALL TO CENTERLINE OF FIXTURE.

HOT WATER PIPES AND DRAIN LINES TO BE INSULATED.

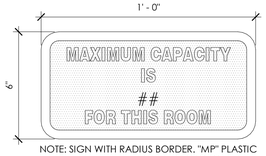
BOTTOM OF MIRROR REFLECTIVE SURFACE

WALL-MOUNTED LAVATORY AND MIRROR (SIDE VIEW)

1 FIXTURE & SIGNAGE HEIGHTS
3/8" = 1'-0"

NOTE: COLOR OF NUMBERS TO CONTRAST SIGNIFICANTLY WITH BACKGROUND COLOR SELECTED BY ARCHITECT.

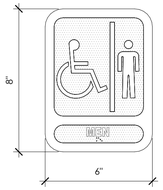
6 BUILDING NUMBER
3" = 1'-0"



NOTE: SIGN WITH RADIUS BORDER, "MP" PLASTIC WITH WHITE TEXT, BROWN BACKGROUND

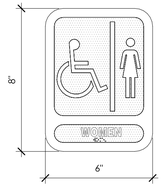
PROVIDE MAXIMUM OCCUPANCY SIGNAGE ACCORDING TO OCCUPANCY CALCULATION ON SHEET G001; SIGNAGE TO BE PLACED IN CONSPICUOUS PLATE ADJACENT TO MAIN ENTRY/EXIT; 60" MAX A.F.F. AND MAY NOT BE OBSCURED BY ANY OTHER ELEMENTS. SIGN SHOULD BE PERMANENT TYPE WITH 1" MINIMUM LETTERING, STANDARD FRONT, ON CONTRASTING BACKGROUND

4 SIGNAGE - MAXIMUM CAPACITY
3" = 1'-0"



NOTE: ADA COMPLIANT SIGN WITH RADIUS CORNER AND RADIUS BORDER, RAISED COPY AND BRAILLE, "MP" WITH WHITE TEXT, BROWN BACKGROUND

2 ADA MEN SIGN
3" = 1'-0"



NOTE: ADA COMPLIANT SIGN WITH RADIUS CORNER AND RADIUS BORDER, RAISED COPY AND BRAILLE, "MP" WITH WHITE TEXT, BROWN BACKGROUND

3 ADA WOMEN SIGN
3" = 1'-0"

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sheet information

revisions: 1

num.	description	date

CURRENT SET THRU REVISION 02

date:	1-23-2022
project number:	MO-53LEE
project status:	ISSUED FOR PERMIT

original drawing is 24" x 36"
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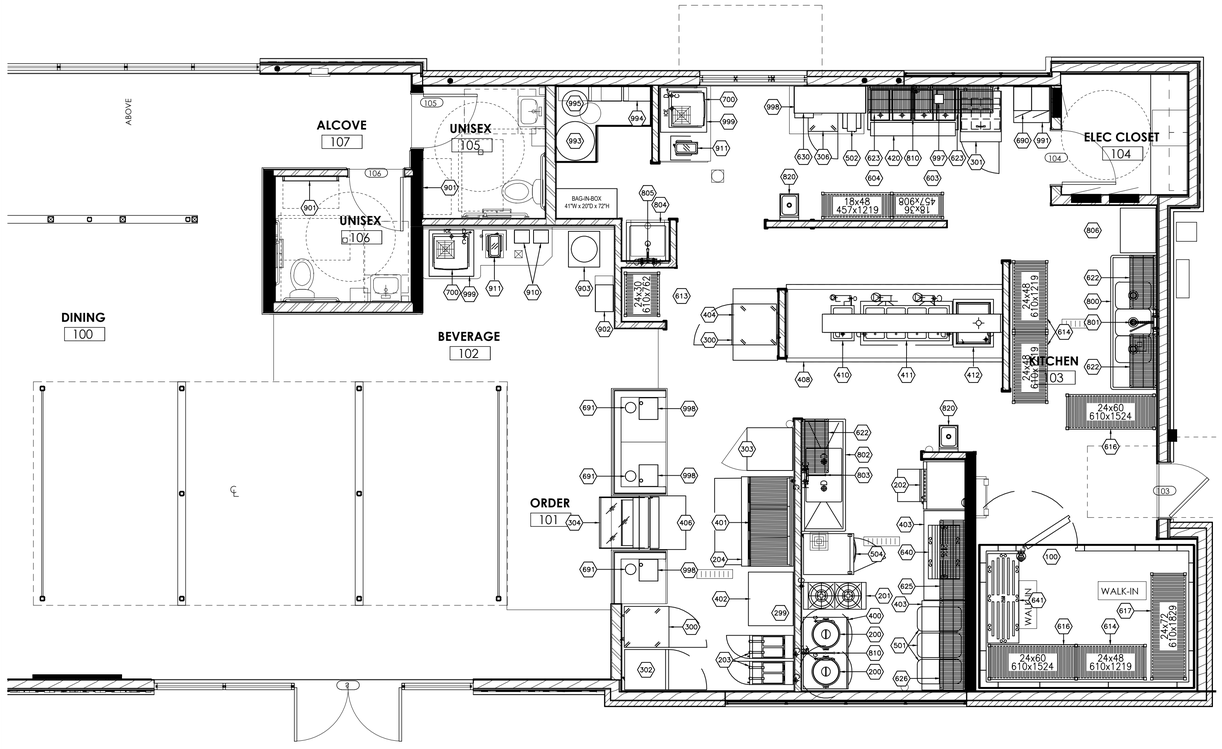
STATE OF MISSOURI
JOSEPH NOWLAND WINDER
NUMBER 2016038459
ARCHITECT

sheet number:

MOBETTAHS (TI) for:
LEE'S SUMMIT
520 NW Chipman Rd
Lee's Summit, MO 64086

sheet title:
TYPICAL MOUNTING HEIGHTS

sheet number:
A651



ENLARGED KITCHEN FLOOR PLAN

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

EQUIPMENT SCHEDULE

Item No	Qty	Equipment Category	Equipment Remarks	Model Number
100	1	REFRIGERATOR, WALK-IN UNIT	FLOORLESS, DOOR HINGED LEFT	12'-0" X 8'-0"
200	2	COOKER, RICE		RM-55N-R
201	1	HOT PLATE, GAS	(2)BURNER, CAST IRON GRATES, ADJUSTABLE LEGS	ISPA-18-2
202	1	OVEN, CONVECTION, ELECTRIC	STACKED UNITS W/ DOUBLE OVEN STAND	E28M4-2
203	2	FRYER, DEEP FAT, GAS		SR142G
204	1	BROILER, UNDER-FIRED, GAS, COUNTER	(3) STEEL GRIDS, 4" LEGS	APM-RMB-660
299	6	FLEXIBLE GAS LINE, 48"		1675KIT48
300	2	REFRIGERATOR, UNDERCOUNTER, LOW PROFILE	(1) RIGHT HINGED, (1) LEFT HINGED, 3" CASTERS	MUR-28L-N6
301	1	REFRIGERATOR, SANDWICH/SALAD PREP	(2) HINGED RIGHT, 5" CASTERS	MST-28-12-N
302	1	REFRIGERATOR/FREEZER, DUAL-TEMP	HINGED LEFT, 5" CASTERS	M3RF19-2-N
303	1	REFRIGERATOR, REACH-IN	HINGED RIGHT, 5" CASTERS	M3R24-1-N
304	1	DISPLAY CASE, SELF-SERVE, REFRIGERATED		ELPRSS3
306	1	REFRIGERATOR, UNDERCOUNTER, LOW PROFILE		MUR-20S-N6
400	1	STAND, EQUIPMENT	16 GA. STAINLESS, 1" UPTURN REAR AND SIDES, UNDERSHELF	EG-LG-304
401	1	STAND, EQUIPMENT	16 GA. STAINLESS, 1" UPTURN REAR AND SIDES, UNDERSHELF	EG-LG-305
402	1	TABLE, WORK, 16 GAUGE, 1.5" UPTURN, W/ UNDERSHELF	16 GA. STAINLESS STEEL, 1-1/2" REAR UPUTURN, UNDERSHELF	FAG-303
404	1	TABLE, WORK, 16 GAUGE, 1.5" UPTURN, W/O UNDERSHELF		TFLAG-304
406	1	TABLE, WORK, 16 GAUGE, FLAT TOP W/ UNDERSHELF		AG-243
408	1	BACK ISLAND SERVING TABLE	CUSTOM TABLE, FIELD MEASUREMENTS REQUIRED	CUSTOM
410	1	DROP-IN, HOT WELLS, INSULATED		HWBI-1DA
411	1	DROP-IN, HOT WELLS, INSULATED	40A DEDICATED LINE REQUIRED FOR POWER	HWBI-5MA
412	1	DROP-IN, COLD WELL		CWB-2
420	1	BUFFET/CAFETERIA, HOT FOOD-SOUP STATION		38118
501	3	BIN, INGREDIENT	CASTERS	IBS27148
502	1	WARMER, FOOD OVERHEAD		GRFFB
504	1	CABINET, HEATED, REACH-IN	HINGED LEFT, 6" CASTERS	STG1H-1S
600	1	SHELVING UNIT, STARTER, PLASTIC, LOUVERED		ESU182484V5580
603	1	SHELVING UNIT, STARTER, PLASTIC, LOUVERED		EA183684V5580
604	1	SHELVING UNIT, STARTER, PLASTIC, LOUVERED		ESU184884V5580
606	1	SHELVING UNIT, STARTER, PLASTIC, LOUVERED		ESU186084V5580
613	1	SHELVING UNIT, STARTER, PLASTIC, LOUVERED		ESU243084V5580
614	3	SHELVING UNIT, STARTER, PLASTIC, LOUVERED		ESU244884V5580
616	2	SHELVING UNIT, STARTER, PLASTIC, LOUVERED		ESU246084V5580
617	1	SHELVING UNIT, STARTER, PLASTIC, LOUVERED		ESU247284V5580
622	3	SHELVING, WIRE		J1836K
623	2	SHELVING, WIRE		J1842K
625	1	SHELVING, WIRE		J1854K
626	1	SHELVING, WIRE		J1860K
630	1	SHELF, WALL MOUNT		WS-18-48
640	1	RACK, DUNNAGE		DRS36480
641	1	RACK, DUNNAGE		DRS600480
690	2	LOCKERS		ELS-6DR
691	3	CUP DISPENSER	STAINLESS STEEL	SLR-2
700	2	ICE MACHINE, COMPRESSED STYLE	SELF CONTAINED, 710LB./24 HR ICE PRODUCTION	HMC710AHT
800	1	SINK, NSF, 3 COMP, 18 GAUGE	18" DRAIN BOARDS L R, BACKSPLASH	FE-3-1824-18RL
801	1	PRE-RINSE FAUCET, WALL MOUNT	12" NOZZLE, 3" NIPPLE, SPRING ACTION, SPLASH MOUNT	B-0133-01
802	1	SINK, SCULLERY, 2 COMPARTMENTS	18" DRAIN BOARDS L R, BACKSPLASH	SH18242D
803	1	FAUCET, WALL MOUNT	12" SWING NOZZLE, DECK MOUNT	B-0231-CC
804	1	SINK, MOP	16 GA. STAINLESS STEEL	PBMS2424-12
805	1	FAUCET, WALL MOUNT	VACUUM BREAKER, 3/4" HOSE THREAD	B-0665-BSTP
806	1	WORKTABLE, 16 GAUGE, BACK SPLASH w/ UNDERSHELF		FAG-240
810	2	FAUCET, WALL MOUNT	SINGLE HOLE WALL MOUNT	B-0592
820	2	SINK, HAND, WALL MOUNT	SIDE SPLASHES, ADA FAUCET, WALL MOUNT BRACKET	HS-1217S
901	2	BABY CHANGING STATION		KB200-05
902	2	HIGH CHAIRS		KB105-02
903	2	TRASH CAN	BLACK	FG256B00BRN
910	2	UTENSIL HOLDER	56 GAL., COLOR-BROWN, HOODED LID	SSFHWDSP08, BY OTHERS
911	2	DISPENSER, BEVERAGE/NON-CARBONATED		D15-3, BY OTHERS
990	1	WOOD SHELVING, TO GO		BY OTHERS
991	1	A/V RACK		BY OTHERS
992	1	SECURITY SAFE		BY OTHERS
993	1	CO2		BY OTHERS
994	1	WATER HEATER		BY OTHERS
995	1	WATER SOFTNER		BY OTHERS
996	1	BAG-IN-BOX SHELVING		BY OTHERS
997	1	RECEIPT PRINTER		BY OTHERS
998	4	CASH REGISTER (P.O.S.)		BY OTHERS
999	2	8-VALVE BEVERAGE DISPENSER		BY OTHERS

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CURRENT SET THRU REVISION 02

SAVORY FOODS
MO'BETTAHS- LEES SUMMIT
PRELIMINARY PLAN
NOT FOR CONSTRUCTION USE

SHEET TITLE:
FOOD SERVICE EQUIPMENT PLAN
EQUIPMENT FLOOR PLAN

DRAWN BY:	LOGAN LYBBERT	SCALE:	1/4"=1'-0"	
PROJECT NO.		FILE:		
REVISION 1:	11/12/2021	REVISION 3:	12/2/2021	
REVISION 2:	11/15/2021	REVISION 4:	04/12/2022	

SHEET NUMBER
K1
K1 OF K3

GENERAL

1. The structural notes are intended to complement the project specifications. Specific notes and details in the drawings shall govern over the structural notes and typical details.
2. Typical details and sections shall apply where specific details are not shown.
3. The contractor shall verify all site conditions and dimensions. If actual conditions differ from those shown in the contract drawings, the contractor shall immediately notify the architect/engineer before proceeding with the fabrication or construction of any affected elements. Discrepancies should be brought the attention of the architect prior to fabrication or construction.
4. Drawings shall not be scaled for the purpose of preparing shop drawings or for construction. Where dimensions on the design drawings are not provided or inferred, the contractor may scale drawings only to estimate member lengths for the purpose of bidding.
5. Changes to these contract drawings may be made only by an authorized representative of Dunn Associates, Inc. Dunn Associates, Inc. shall not be held responsible or liable for any claims arising directly or indirectly from changes made without written authorization by an authorized representative of Dunn Associates, Inc.
6. Omissions or conflicts between the contract drawings and/or specifications shall be brought to the attention of the architect/engineer before proceeding with any work involved. In case of conflict, follow the most stringent requirement as directed by the architect/engineer at no additional cost to the owner.
7. The contractor shall submit a written request to the architect/engineer before proceeding with any changes, substitutions, or modifications. Any work done by the contractor before receiving written approval will be at the contractor's risk. These contract documents note and describe potential bid alternate details that may be requested from and approved by the Engineer of Record during the bidding and negotiation phase. The contractor may also submit to the architect/engineer for approval other substitutions or modifications to the design drawings as bid alternates during the bidding and negotiation phase. Field modifications to structural elements are not permitted without notification and approval by the Engineer of Record.
8. The contractor shall coordinate with all trades any items that are to be integrated into the structural system such as openings, penetrations, mechanical and electrical equipment, etc. Structural drawings do not show all openings. Refer to other discipline drawings. Sizes and locations of mechanical and other equipment that differs from those shown on the contract drawings shall be reported to the architect/engineer. Contractor shall take measures as required to insure that construction loads shall not exceed design loads for the structure.
9. Any structural items shown on other discipline's drawings that are not shown on the structural drawings, but that are noted as "refer to structural drawings" for additional information, shall be brought to the attention of the structural engineer by the contractor.
10. Items such as fireproofing, waterproofing, insulation, vapor barrier, etc, may be shown or noted on structural drawings for reference only. Refer to the architectural drawings or specifications for more information.
11. The contractor shall be responsible for means, methods, techniques, sequences, and procedures in order to comply with the contract drawings and specifications. The contractor shall provide adequate shoring and bracing as required for the chosen method of erection. Shoring and bracing shall remain in place until final connections for the permanent members are completed. The building shall not be considered stable until all connections are completed. Walls shall not be considered self-supporting and shall be braced until the floor/roof system is completed.
12. Site observations by a field representative of Dunn Associates, Inc. shall not be construed as approval of construction, the procedures, nor special inspection.
13. All work shall be done in accordance with OSHA requirements. Potential conflicts between these documents and OSHA requirements shall be brought to the attention of the structural engineer before proceeding with the work.
14. Shop Drawings and submittals:
    A. Shop drawings include plans, details, calculations and/or other relevant design information. Review of shop drawings and submittals by Dunn Associates, Inc. is for general compliance only and is not intended for approval. The shop drawing review shall not relieve the contractor from the responsibility of completing the project according to the contract documents.
    B. Submittals for the following items shall be submitted to the Project Architect/Engineer for review prior to fabrication and/or installation:
        1. Concrete Mix Design
        2. Concrete Reinforcing
        3. Anchorage and Embeds
        4. Structural Steel
        5. Engineered Wood Joists, Beams, etc.
        6. Deferred Design Items
    C. Quality control submittals shall be submitted to special inspector for review prior to fabrication/installation. Courtesy copies shall be provided to the project architect and engineer for their records.
    D. Detailing and shop drawing production for structural elements will require information (including dimensions) contained in the architectural, structural and/or other consultants' drawings. The structural drawings shall be used in conjunction with the architectural and other consultant's drawings. See the Architectural Drawings for dimensions, doors, windows, non-bearing interior and exterior walls, elevations, slopes, curbs, drains, recesses, depressions, railings, waterproofing, finishes, chamfers, kerfs, etc.
    E. Shop drawings made from reproductions of the structural drawings will be rejected unless the contractor signs a release agreement prior to the shop drawings being reviewed. The contractor may also obtain electronic files of the plan sheets after signing a release agreement. Electronic files of the detail sheets and schedule sheets will not be made available.
    F. The Contractor may choose to submit shop drawings and submittals for review electronically. The Contractor may do this provided a minimum of one hard copy set is submitted for review. The submittal will be stamped as received by Dunn Associates, Inc. when the hard copy is received by our office. Hard copies of small submittals need not be submitted if the Contractor receives the approval for this exception by the Engineer of Record.

BASIS OF DESIGN

1. Governing Building Code---------- International Building Code 2018
2. Risk Category---------- II
3. Roof Live Load (Not concurrent with Roof Snow Load)---------- 20 psf or 300 lbs
4. Rain intensity---------- 1.25 in/hr
5. Roof Snow Load (Drift loads are shown on plan)
    A. Ground Snow Load---------- Pg = 20 psf
    B. Flat Roof Snow Load---------- Pf = 14 psf
    C. Snow Exposure Factor---------- Ce = 1.0
    D. Thermal Factor---------- Ct = 1.0
    E. Slope Factor---------- Cs = 1.0
6. Snow Load Importance Factor---------- Is = 1.0
7. Wind Load
    A. Basic Wind Design Speed ---------- V = 103 mph (Vasd = 0.78V)
    B. Wind Exposure---------- C
    C. Internal Pressure Coefficient---------- ± 0.18
    D. Components and Cladding shall be designed to the following wind pressures (psf, service level). Factored wind pressures may be obtained by dividing the table values by 0.6.

Locations	Area (sf) <10	50	100	>500
2. Zone 5 (Walls within X' of building corner)	10/-11	12/-15	12/-14	10/-11
3. Zone 4 (All other wall areas)	10/-11	12/-13	12/-13	10/-11
4. Zone 3 (Roofs within X' of building corner)	10/-18	10/-30	10/-27	10/-18
5. Zone 2 (Roofs within X' of building edge)	10/-18	10/-24	10/-22	10/-18
6. Zone 1 (All other roof areas)	10/-14	10/-18	10/-17	10/-14

8. Seismic Design Criteria
    A. Mapped Spectral Response Accelerations
        1. 0.2-Second (Short) Period Acceleration---------- SS = 0.099
        2. 1-Second Acceleration---------- S1 = 0.068
    B. Design Spectral Response Accelerations
        1. 0.2-Second (Short) Period Acceleration---------- SDS = 0.079
        2. 1-Second Acceleration---------- SD1 = 0.109
    C. Site Class (Soil Profile)---------- D
    D. Seismic Importance Factor---------- Ie = 1.0
    E. Seismic Design Category---------- B
    F. Lateral Force Resisting System(s)---------- Light framed walls with wood panel sheathing, Ordinary cantilever column for freestanding trellis
        1. Response Modification Coefficient---------- R = 6.5,1.25
        2. System Overstrength Factor---------- Ωo = 3 ,1.25
        3. Deflection Amplification Factor---------- CD = 4 ,1.25
        4. Design Base Shear---------- V = Cs*W = 0.010W, .0632W where W is structural weight
    G. Analysis Procedure---------- Equivalent Lateral Force
10. Serviceability Criteria
    A. Interstory Seismic/Wind Drift---------- Δa < 0.02h ('h' is story height)
    B. Deflection Limits---------- Total---------- Live/Snow/Wind
        Floor---------- L/240---------- L/360
        Roof---------- L/240---------- L/360
        Perimeter---------- ____---------- L/600(3/8" max)
        Wall---------- ____---------- L/240

BUILDING MAXIMUM STORY DRIFT

Level	Floor to floor height (feet)	Elastic Story Drift		Inelastic Story Drift	
		Story Drift (inch)	Drift Ratio	Story Drift (inch)	Drift Ratio
Roof	15' - 0"	0.96"	.0005	3.84"	.002

EXTERIOR FAÇADE FRAMING AND CLADDING

1. All systems (including façade, cladding, components, elements and/or their attachments to the structure) intended for use to enclose the building shall comply with the following criteria for interstory drift as required by ASCE 7 as interpreted or defined herein and as modified or supplemented herein. See Basis of Design section of the General Structural notes for vertical and horizontal (story) drift limits.
    A. Systems shall be detailed to accommodate vertical building movement (live load deflection) in conjunction with interstory drift. Interstory drifts should be considered equal in both orthogonal building directions unless noted otherwise.
    B. Systems shall be designed and detailed for elastic (probable) interstory drift such that all systems shall remain intact, undamaged and all sealant joints integral to or placed between systems shall remain intact, uncompromised, without failures or breaches. Joints, jointing and/or jointery shall be designed such that sealant materials flex, compress and/or shear within limits recommended by the sealant manufacturers so as to remain an effective barrier for water and air infiltration.
    C. Systems shall be designed and detailed for inelastic (credible) interstory drift such that no failure or distress occurs to systems except joint sealant is allowed to fail. Under no circumstances shall elements and/or components come in contract with adjacent systems, elements and/or components.
    D. Systems with glazing are intended to keep all members and glazing intact and connected to the building. Glazing shall not break or become dislodged from its restraints. Gaskets may fail and may dislodge but shall not let glass escape its restraint.
    E. Systems shall not apply moments to the slab edges and shall not induce lateral loads into beams unless kicker bracing is supplied. Attachments shall not induce torsional loads into beams and columns, nor loads into braces that are part of the Main Seismic Force Resisting System.
    F. Allowance shall be made for sealant to occupy some finite space when compressed beyond its working limit (suggest ±15% of its static joint width).
2. All system connections shall comply with requirements of ASCE 7 , Chapter 13.
3. All systems shall be coordinated to interface with all adjoining systems such that consistency is maintained throughout the exterior closure regarding the mode (sliding or racking) in which the system performs to meet interstory drift and other design criteria.
4. Systems and details shall be consistent with the architectural intent for joint sizes and system details to the largest extent possible, or where required, modified only after prior approval.

FOUNDATION

1. Soils Report by:---------- Cook, Flatt & Strobel Engineers, P.A.
2. Report Number & Date:---------- 21-5906
3. Soil Bearing Pressure:---------- 2500psf
4. Frost Protection:---------- 36 inches minimum
5. Lateral Soil Pressure Fluid Equivalent Density:
    A. Active---------- 62 pcf (retaining walls)
    B. At Rest---------- 255 pcf (rigid foundation walls)
    C. Passive---------- 83 pcf
6. Coefficient of Friction---------- 0.24

EARTHWORK

1. Consult the project specifications and soils report for further earthwork requirements. In absence of information, refer to the following notes.
2. Clearing: The entire building area shall be scraped to remove the top 4" of soil including all vegetation and debris.
3. Contractor shall provide temporary shoring for excavations as required.
4. Contractor shall provide measures necessary to prevent damage to or settlement of new or existing construction and utilities on or adjacent to project site.
5. Contractor shall provide dewatering as required to protect the site from flooding.
6. Proof rolling: The natural undisturbed soil below all footings shall be proof rolled prior to placing concrete. Remove all soft spots and replace with compacted structural fill.
7. Compacted structural fill: All fill material shall be a well-graded granular material with a maximum size less than 4" and with not more than 10% passing a #200 sieve. Fill beneath footings shall be compacted to 95% of the maximum laboratory density as determined by ASTM D 1557. All fill shall be tested. Compacted structural fill shall be placed in lifts not exceeding 8" in uncompacted thickness.
8. Floor slabs shall be underlain by a granular layer at least 4" thick. The granular layer shall have a maximum size less than 1" with not more than 5% passing a #200 sieve and shall be compacted to at least 90% of the maximum laboratory density as determined by ASTM D 1557.
9. The soils engineer shall review all excavations and fill placement prior to placing concrete.

CONCRETE

Concrete shall be supplied in accordance with ACI 318 and the following requirements:

Concrete Use	Comp. Strength f'c (psi)	Exposure Classes per ACI 318 19.3.1 (a,b,c)	Nominal Max. Aggregate Size
Footings	3500	F1, S0, W0, C1	1 1/2"
Foundation Walls	3500	F1, S0, W0, C1	3/4"
Interior Slabs on Grade (d,e)	3500	F0, S0, W0, C0	3/4"
Exterior Concrete, Reinforced (h)	5000	F3, S0, W0, C2	3/4"
Exterior Concrete, Unreinforced (h)	4500	F3, S0, W0, C0	3/4"

Table Footnotes:

a. Cement type (ASTM C150), max. water/cement ratio and fly ash to comply with ACI 318 Table 19.3.2.1.
b. Air content ± 1.5%, to comply with ACI 318 Tables 19.3.2.1 and 19.3.3.1, measured at point of final placement. Measurements may occur at point of discharge provided air content is adjusted to account for placement losses. Air content shall be adjusted for the use of admixtures, fly ash and aggregate size. Air-entraining admixtures shall comply with ASTM C260 (when used).
c. Calcium chloride shall not be added to the concrete mix. Unreinforced concrete slabs on grade may use calcium chloride as permitted by ACI 318 Table 19.3.2.1.
d. For any exposed slab on grade, the contractor is to notify the engineer of record at least 7 days prior to any pours to discuss the concrete mix design being used as well as present their means and methods of addressing concrete phenomena such as cracking, curling, spalling, etc.
e. Interior slabs on grade shall have a drying shrinkage maximum of 0.040% by ASTM C157 (7-day soak time permitted). Test results shall be submitted with mix designs.
f. For slab on grade 6" or thicker, a maximum aggregate size of 1 1/2" is permitted.
g. Contractor shall provide verification that mix design for lightweight concrete over metal deck has a maximum dry weight density of 110 ± 3 pcf per ASTM - C567.
h. These values shall be used for parking slabs on grade or other slabs within the building footprint with exterior exposure to weather. See civil drawings for site concrete requirements.

1. Materials unless noted otherwise:
    A. Normal Weight aggregates---------- ASTM C33
    B. Light Weight aggregates---------- ASTM C330
    C. Fly Ash, Class C or F Pozzolan---------- ASTM C618
    D. Reinforcing Steel
        1. General---------- ASTM A615 Grade 60
        2. Columns, Beams, Shearwalls---------- ASTM A706-60ksi
        ASTM A615 is permitted if mill certifications are submitted showing that actual yield strength does not exceed the specified strength by more than 18000 psi, the ratio of tensile to yield strength is greater than 1.25, and required minimum elongations of A706 are met.
        3. Subject to the above requirements, ASTM A615 Grade 75 steel may be used at the contractor's option, except in special moment frames, special concrete shear walls, shear stirrups or torsional reinforcement.
    E. Deformed Bar Anchors (DBA) ---------- ASTM A496
    F. Headed Stud Anchors (HSA) ---------- ASTM A108
    G. Anchor Bolts: See steel and/or wood section(s) of general notes.
2. Welded wire reinforcement may be substituted with macro synthetic fibers "coarse fibers" (per ASTM C-1116), made from virgin polyolefin, with equivalent diameter between 0.016" and 0.05", having minimum aspect ratio (length/equivalent diameter) of 50, at a minimum rate of 4 lb / cubic yard. Fibers above finished slab shall not be burned off. Do not use fibers in architecturally finished or colored concrete.
3. The contractor shall be responsible for the design, detailing, care, placement and removal of all formwork and shores.
    A. Supporting forms and shoring shall not be removed until structural members have acquired sufficient strength to safely support their own weight and any construction load to which they may be subjected. In no case, however, shall forms and shoring be removed in less than 24 hours after concrete placement.
4. Reinforcement shall have the following concrete clear cover:
    A. Cast-in-place Concrete
        1. Cast against and permanently exposed to earth---------- 3"
        2. Formed concrete exposed to earth or weather:
            #6 thru #18 bars---------- 2"
            #5 and smaller bars---------- 1 1/2"
        3. Concrete not exposed to weather or in contact with ground:
            Slabs, Walls, Joists; #11 bars and smaller ---------- 3/4"
            Beams, Columns: Primary Reinforcement, Ties,---------- 1 1/2"
            Stirrups, Spirals
        4. Concrete not exposed to weather or in contact with ground:
            Slabs, Walls, Joists; #11 bars and smaller---------- 5/8"
            Beams, Columns: Primary Reinforcement---------- 1 1/2"
            Ties, Stirrups, Spirals---------- 3/8"
5. Construction Joints and Control Joints:
    A. Provide a beveled 2" x 4" x continuous or intermittent keyway in all horizontal and vertical construction joints including between top of footing and foundation walls. In addition, all joints shall be intentionally roughened to a full amplitude of approximately 1/4".
    B. Control joints shall be installed in slabs on grade so the length to width ratio of the slab is no more than 1.25:1. Control joints shall be completed within 12 hours of concrete placement. Control joints may be installed by either:
        1. Saw cut with depth of 1/4 the thickness of the slab
        2. Tooled joints with depth of 1/4 the thickness of the slab
    C. Install control joints in slabs on grade at a spacing not to exceed 30 times the slab thickness in any direction, unless noted otherwise. Construction joints in slabs on grade shall not exceed a distance of 125'-0" on center in any direction.
    D. Install construction joints in walls at a spacing not to exceed 30 times the wall thickness, except in concrete shear walls. For masonry walls above, align joints in concrete walls with masonry control joints.
6. Construction
    A. Use chairs or other support devices recommended by the CRSI to support bar and tie reinforcement bars and WWR prior to placing concrete. WWR shall be continuously supported at 36" on center maximum. Reinforcing steel for slabs on grade shall be adequately supported on precast concrete units. Lifting the reinforcing off the grade during placement of concrete is not permitted.
    B. Contractor shall coordinate placement of all openings, curbs, dowels, sleeves, conduits, bolts, inserts and other embedded items prior to concrete placement.
    C. All embeds and dowels shall be securely tied to formwork or to adjacent rebar prior to concrete placement.
    D. No pipes, ducts, sleeves, etc. shall be placed in structural concrete unless specifically detailed or approved by the structural engineer. Penetrations through walls when approved shall be built into the wall prior to concrete placement. Penetrations will not be allowed in footings or grade beams unless detailed. Piping shall be routed around these elements and footings stepped to avoid piping.
    E. Reinforcing bars shall not be welded unless specifically shown on drawings. In such cases, use only AWS standards. Do not substitute reinforcing bars for DBAs or HSAs.
    F. Reinforcing bars shall not be field bent, except as shown in the contract drawings or permitted by the EOR.
    G. Top of concrete columns shall be flush (±1/4") with bottom of supported cast-in-place members.
7. Detailing:
    A. Lap splice lengths shall be detailed to comply with the "Reinforcing Bar Lap Splice Schedule" contained within the contract drawings.
        1. Do not splice stirrups and ties. Do not splice vertical bars in retaining walls unless specifically shown.
        2. At shear wall boundary elements lap lengths shall be increased by 25%.
        3. Splices may be made with mechanical splices capable of 125% of yield strength of the bar being spliced (Type 1). Splices located within lateral resisting elements shall also develop the tensile strength of the bar (Type 2). Mechanical splices shall be the positive connecting type coupler and shall meet all ACI requirements. Use "Cadweld", "Lenton" Standard Couplers, "Bar-Lock" or equal with internal protector. If mechanical splices are used, splices or couplers on adjacent bars shall be staggered a minimum of 24" apart along the longitudinal axis of the reinforcing bars.
    B. All 90, 135 and 180° hooks shown graphically in the drawings shall be detailed as ACI standard hooks, unless noted otherwise.
    C. At joints provide reinforcing dowels to match the member reinforcing, unless noted otherwise.
    D. At all discontinuous control or construction slab on grade joints, provide (2) #4 x 48".
    E. Provide corner bars at intersecting wall corners using the same bar size and spacing as the horizontal wall reinforcing.
    F. All vertical reinforcing shall be doweled to footings, or to the structure below with the same size and spacing as the vertical reinforcing for the element above. Dowels extending into footings shall terminate with a 90° standard hook and shall extend to within 4" of the bottom of the footing. Footing dowels (#8 bars and smaller) with hooks need not extend more than 20" into footings.
    G. See details for reinforcing around miscellaneous openings. All recesses that interrupt reinforcing shall be reinforced the same as an opening.
    H. Reference ACI 315 for additional detailing requirements.
9. Contractor required to submit concrete mix design for review by the engineer prior to any placement of concrete.
10. All concrete shall be mixed and placed per ACI 304. Contractor shall refer to and follow the recommendations in ACI 305R for hot weather concreting and ACI 306R for cold weather concreting.
11. Contractor is not to backfill against retaining walls unless walls have achieved design strength or have been shored. Contractor is not to backfill against basement walls without placement of the main floor diaphragm unless the walls have been shored or approval of the EOR has been granted, or it has been noted otherwise on the design drawings.
12. Construction activity or storage of materials shall not take place on newly placed concrete until the concrete achieves sufficient strength to provide adequate support.

POST-INSTALLED ANCHORS

1. Post-installed anchors shall only be used where specifically detailed or called for on the design drawings. If circumstances arise during construction where the Contractor desires to substitute a post-installed anchor in place of a cast-in-place anchor, the Contractor shall submit a formal written request for each circumstance to the Architect and Engineer for review.
2. Follow all ICC Evaluation Report and manufacturers' requirements and recommendations for post-installed anchor installation. Where conflicts may exist, the most stringent requirement applies.
3. Post-installed anchors that are exposed to exterior conditions, or interior spaces where moisture can accumulate, shall be either galvanized or stainless steel anchors.
4. All holes in hollow, brick, or stone masonry shall be drilled in the "rotary-only" mode with the hammer function off.
5. For installation of adhesive anchors horizontally or vertically inclined, installers must have AMI/CRSI Adhesive Anchor Installer Certification.
6. Adhesive anchors shall be as specified in the Contract Documents. If no specific adhesive is specified, or if a particular product is preferred, the Contractor may submit a request for an adhesive from the following list prior to design of the anchor. Follow manufacturer and ICC evaluation report requirements for installation temperature of adhesive anchors. Adhesive anchors shall not be installed or cured outside of approved temperature ranges. Adhesive anchors may not be installed in concrete less than 21 days old without prior approval.
    A. Eligible adhesive anchors in concrete (normal weight only)
        1. HIT-RE 500v3 by Hilti (ESR-3814)
        2. HIT-HY 200 by Hilti (ESR-3187)
        3. SET-3G by Simpson (ESR-4057)
        4. SET-XP by Simpson (ESR-2508)
        5. AT-XP by Simpson (IAPMO ES ER-0263)
        6. Pure 110+ by Dewalt (ESR-3298)
        7. AC200+ Gold by Dewalt (ESR-4027)
7. Mechanical anchors shall be as specified in the Contract Documents. If no specific mechanical anchor is specified, or if a particular product is preferred, the Contractor may submit a request for an anchor from the following list prior to design of the anchor.
    A. Eligible mechanical anchors in concrete
        1. Kwik Bolt TZ2 by Hilti (ESR-4266)
        2. Kwik HUS-EZ by Hilti (ESR-3027)
        3. HDI-P TZ by Hilti (ESR-4236)
        4. Strong-Bolt 2 by Simpson (ESR-3037)
        5. Titen HD by Simpson (ESR-2713)
        6. Torq-cut by Simpson (ESR-2705)
        7. Trubolt+ by ITW (ESR-2427)
        8. Tapcon/Sammy Anchors by ITW (ESR-2202)
        9. Power-Stud+ SD2 by Dewalt (ESR-2502)
        10. Power-Stud+ SD4 and SD6 Stainless by Dewalt (ESR-2502)
        11. Snake+ by Dewalt (ESR-2272)
        12. Screw-Bolt+ by Dewalt (ESR-3889)
        13. Mini Undercut+ by Dewalt (ESR-3912)
8. The Contractor may also submit for review and approval, the manufacturer's ICC evaluation report of alternate anchor systems not listed above. The alternate system shall provide minimum capacities equal to or greater than the specified anchor system. The alternate system shall be approved by the engineer of record prior to the substitution.

MASONRY

1. Materials shall be as follows, unless noted otherwise:
    A. Design strength of all masonry shall be f 'm=2000 psi at 28 days, unless noted otherwise.
    B. Concrete Masonry Units (CMU) shall be ASTM C-90, Grade N, Type 1, medium weight (115 pcf) with a minimum unit strength of 2000 psi at 28 days for net area.
    C. rhMortar shall be ASTM C270 Portland cement - lime, type "S", with a minimum compression strength of 1800 psi at 28 days. See specifications for additives allowed. Masonry mortars and masonry cements are not allowed. Use type "M" mortar for masonry below grade (2500 psi).
    D. Grout shall be ASTM C476, with a minimum compression strength at least equal to the design strength F'm at 28 days. Limit fly ash to 25% of the total cementitious material. Slump shall be between 8" and 11".
    E. Reinforcing bars shall be ASTM A615, grade 60, (Fy = 60 ksi) except only ASTM A706, grade 60, "low alloy" steel shall be used for reinforcing shown to be welded.
    F. Joint Reinforcing shall be ASTM A951, galvanized, standard class, ladder type with #9 wire per ASTM A82.
    G. Deformed Bar Anchors (DBA) shall be ASTM A496.
    H. Headed Stud Anchors (HSA) shall be ASTM A108.
    I. Anchor Bolts shall be ASTM A307. Heavy hex nuts and hardened washers shall be ASTM A563 and ASTM F436 respectively.
    J. Mechanical splice couplers shall be ASTM A1034 and shall be capable of developing 125% of the specified yield strength of the bar.
2. Construction Requirements
    A. All masonry construction, workmanship, and materials shall comply with TMS 602/ACI 530.1/ASCE 6, "Specifications for Masonry Structures".
    B. All masonry units shall be stored under cover at the job site. Do not use any frozen materials.
    C. Prior to placing masonry, check with all trades to insure proper placement of openings, block outs, sleeves, curbs, conduits, bolts, inserts, embeds, dowels, etc.
    D. During construction, cover and protect the top of all constructed masonry at the end of each day.
    E. All masonry walls, lintels, and columns shall be built with running bond, typical unless noted otherwise.
    F. Mortar joints for all hollow units, both vertical head joints and horizontal bed joints, shall be bedded for a distance at least equal to the thickness of the face shells. The webs each side of cells to be grouted shall be bedded as well. Mortar joints for all solid masonry units, both vertical head joints and horizontal bed joints, shall be fully bedded.
    G. Do not use mortar for grout.
    H. Grout pours shall be limited to 4'-0" in height and shall be placed in accordance with low lift procedures, typical, unless noted otherwise.
    I. Grout pours shall terminate flush with the top of the uppermost unit except at cells with vertical reinforcing where the grout shall be 1-1/2" below the top of the unit to provide a construction key.
    J. Grout shall be consolidated by mechanical vibration during placement and reconsolidated after excess moisture has been absorbed but before workability is lost. Puddling or rodding of grout is not allowed.
    K. Grout solid all cells which contain reinforcing, bolts, anchors, etc., and as otherwise specified. Grout solid all cells below grade. Grout solid all lintels and columns. Do not grout walls solid unless specifically noted as such. Grout solid around all joist and beam bearing pockets after installation of beams and joists, typical, unless noted otherwise.
    L. Vertical cells to be filled with grout shall have vertical alignment sufficient to maintain a clear, unobstructed, vertical cell measuring not less than 2" x 3".
    A. Masonry control joint spacing shall not exceed 26'-0". Control joints in reinforced masonry shall not occur at the face of masonry lintel supports. See architectural drawings for locations of control joints.
    B. Penetrations shall not be allowed through any masonry lintel, column, pilaster, or jamb without the EOR's prior written approval. Penetrations shall be re-routed as required at these locations. Penetrations through masonry walls shall be built into the wall as the wall is being constructed and shall be reviewed by the EOR prior to installation. Conduits or pipes shall not run in reinforced cells and units without notification and approval by the Engineer of Record.
    C. Masonry walls and columns shall be securely braced until floor and/or roof systems have been installed and are capable of stabilizing the masonry.
    D. Where horizontal reinforcing bars join concrete walls, columns, or pilasters, reinforcing shall be continuous. Also, a key shall be provided between the masonry and the concrete. Fill the key with grout.
    E. Bolt holes in face or end shells shall have a diameter two inches larger than the bolt diameter and the hole shall be filled with grout.
    F. Post-installed anchor bolts shall only be installed with prior written approval of the EOR. When used, they shall be installed in solid material. Grout solid at cavity locations. All bolt holes to be filled with epoxy shall be wire brushed and cleaned with compressed air per manufacturer's recommendations.
3. Detailing Requirements
    A. Reinforcing steel shall be free of loose flakey rust, scale, grease, oil, dirt, or other deleterious materials which might affect or impair bond.
    B. Minimum grout coverage for reinforcing bars shall be one bar diameter, but not less than ¾". Minimum mortar coverage for joint reinforcing shall be 5/8" from exposed face.
    C. Reinforcing steel shall be placed prior to grouting and shall be placed, positioned, and located according to the structural drawings. It shall be secured against displacement by wire positioners or other suitable devices at intervals not to exceed 200 bar diameters or ten feet, and at all bar splice locations.
    D. Lap all masonry reinforcing per the "Masonry Reinforcing Bar Lap Splice Schedule" in the contract documents. In the absence of this schedule, lap all masonry reinforcing per bar size as follows:
        1. One bar/cell, typical: #3=12", #4=13", #5=20", #6=38", #7=52", #8=72", #9=81".
        2. Two bars/cell, typical: #3=13", #4=22", #5=35", #6=54", #7=63", #8=72" and #9=81".
    E. Vertical reinforcing shall be doweled into the foundation wall, footing, or structure below with the same size bar, spacing, and in same core as the vertical reinforcing in the wall above.
    F. Horizontal reinforcing shall be continuous through masonry walls, columns, and pilasters.
    G. Horizontal reinforcing at masonry control joints shall be continuous through the joint, typical, unless noted otherwise.
    H. Reinforcing bars shall not be field bent, except as shown in the contract drawings or permitted by the EOR.
    I. Walls:
        1. Masonry walls shall be built as an integral unit at corners and intersections. Reinforcing shall be continuous and back to back end shells shall be removed at each course.
        2. Vertical reinforcing shall be placed in the center of the wall, typical, unless each face is specified or unless noted otherwise.
        3. Vertical reinforcing shall be provided at each corner and intersection.
        4. Horizontal corner bars shall be provided at all wall intersections and corners. Use same size and spacing as horizontal reinforcing. Provide proper lap lengths.
        5. Horizontal reinforcing shall terminate with a standard hook at the edge of openings and at ends of walls.
        6. Horizontal reinforcing shall occur at the top and bottom course of all masonry walls except the bottom course horizontal reinforcing may be omitted when the wall is doweled to a concrete foundation wall below.
    J. Columns/Jambs
        1. All masonry column ties shall terminate with a 135 degree hook plus a 6 bar diameter extension (4" minimum). Horizontal wall reinforcing shall be placed inside the column vertical reinforcing.
        2. Grout jambs solid for full height of wall (floor to floor and/or roof) at sides of openings; one cell for each 4'-0" of span or portion thereof. Reinforce with (2) #5 vertical bars in each grouted cell with one bar placed at each face of wall, typical unless noted otherwise. See contract documents for other reinforcing requirements.
    K. Reinforcing shall not be welded unless specifically noted otherwise. In such cases, use AWS D1.4 standards. Do not substitute bars for DBA's or HSA's.
    L. Epoxy Coated reinforcing shall only be used when specifically noted. Increase lap lengths as required by the IBC and ACI.

MASONRY VENEER

1. Masonry veneer shall be attached to steel stud and wood stud walls with "Hohmann & Barnard HB 213 seismic veneer anchors" (or equal) spaced at 16" on center. Veneer anchors shall be attached to studs with (2) #10 corrosion resistant self-drilling screws and neoprene washers.
2. Masonry veneer shall be attached to concrete walls with 22 gauge "Hohmann & Barnard HB 300" galvanized dovetail slots installed vertically in concrete at 16" on center. Attach the veneer to dovetail slots with 16 gauge "Hohmann & Barnard HB 303 dovetail anchor ties" (or equal) spaced at 16" on center in both vertical and horizontal directions. Dovetail slots and anchor ties shall be galvanized.
3. Masonry veneer shall be attached to reinforced masonry walls with "tri-rod ladur type reinforcement" spaced at a maximum of 16" on center vertically consisting of (3) #9 gauge, galvanized, corrugated, wires. Veneer may also be attached with "Hohmann & Barnard 270 Eye wire" spaced at 16" on center maximum in both vertical and horizontal directions. Anchors shall extend to the galvanized "ladur type" ((2) #9 wires) joint reinforcing in the masonry wall spaced at 16" on center maximum.
4. Other methods of attachment may be used after written acceptance by the architect and structural engineer.
5. Steel Lintels: Provide steel angle lintels at all openings through the masonry veneer. Provide 1" of bearing for each foot of width of opening, with a minimum bearing of 6". See the Steel Angle Lintel Schedule for size.

2

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sheet information:

revisions: 2

num.	description	date
2	Revision 2	04-06-22

CURRENT SET THRU REVISION 02

date:	1-21-22
project number:	21174
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1-21-22
PERMIT SET

NOTE:
THESE STRUCTURAL DRAWINGS ARE BASED ON ARCHITECTURAL DRAWINGS DATED 12.09.2021

DIMENSIONS AND ELEVATIONS, AS THEY RELATE TO THE BUILDING IN GENERAL, i.e. GRID TO GRID DIMENSIONS OR DECK BEARING ELEVATIONS, ARE SUPPLIED BY THE ARCHITECT. THEY ARE PROVIDED ON THE STRUCTURAL PLANS AND DETAILS FOR THE CONVENIENCE OF THE CONTRACTOR. VERIFY DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS.

sheet title: GENERAL STRUCTURAL NOTES

sheet number: S-001

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STRUCTURAL STEEL

1. Codes and Standards: Fabrication, Erection and Quality Control of structural steel shall comply with the latest edition of the following:
   A. American Institute of Steel Construction (AISC) 360, "Specification for Structural Steel Buildings," with "Commentary".
   B. AISC 341 "Seismic Provisions for Structural Steel Buildings."
   C. AISC 303 "Code of Standard Practice" excluding sections 3.4, 4.4 and 4.4.1.
   D. AISC "Specification for Structural Joints Using ASTM A325 or A490 Bolts"
   E. American Welding Society (AWS), Structural Welding Codes D1.1, D1.3, D1.4, and D1.8, except as modified by the "Steel Construction Manual".
2. Material:
   A. Wide Flange Sections---------- ASTM A992 (50 ksi)
      Notch-toughness requirements apply for Group 3, 4, and 5 shapes with flange thickness greater than 1 1/2" and plate 2" and thicker which are a part of the Seismic Load Resisting System (SLRS). Minimum Charpy V-Notch requirements are 20 ft-lbs at 70°F.
   B. Plate
      1. Typical---------- ASTM A36
      2. Braced/Moment Frames---------- ASTM A572 Grade 50
   C. Pipe---------- ASTM A53 Grade B Type E/S
   D. Hollow Structural Shapes
      1. Rectangular---------- ASTM A500 Grade C (50 ksi)
      2. Round---------- ASTM A500 Grade C (46 ksi)
   E. Other Structural Shapes (M, C, etc)---------- ASTM A36
   F. Bolted Connections---------- ASTM A325
   G. Anchor Bolts
      1. All Columns unless noted otherwise: ASTM F1554 Grade 105 with ASTM A563 heavy hex nuts with Grade A hardened washers. Nuts to be snug tight.
      2. Braced Frame/Moment Frame Columns unless noted otherwise: ASTM F1554 Grade 105 (equiv to A193 Grade B7) with ASTM A563 heavy hex nuts with ASTM F436 minimum 5/16" thick washers. Bottom assembly to include double heavy hex nuts with 5/16" min thick plate washer. Nuts to be snug tight.
   H. Weld Filler Metal
      1. Shielded Metal Arc Welding---------- AWS A5.1, low-hydrogen only
         Low-hydrogen restrictions do not apply when welding sheet steels in accordance with AWS D1.3, including attaching these steels to structural members.
      2. Gas-Metal & Metal-Cored Arc Welding---------- AWS A5.18
      3. Flux-Cored Arc Welding---------- AWS A5.20
         E7XT-4 or E7XT-11 electrodes are not permitted.
      4. Intermixing of welds made from self-shielded welding electrodes with welds made by other processes is not allowed in seismic critical welds, unless tested in accordance with AWS D1.8, annex B. The Field Erection Contractor is responsible for verifying that intermixing of self-shielded weld metal with weld metal of other processes will not occur, or alternatively, the welding procedure is qualified by testing.
      5. Where demand critical welds are required, provide filler metals meeting the following minimum mechanical properties: 58ksi yield strength, 70ksi tensile strength, 22% elongation, Charpy V-Notch toughnesses of 20ft-lbs at 0°F and 40 ft-lbs at 70°F.
   I. Deformed Bar Anchors (DBA)---------- ASTM A496
   J. Headed Stud Anchors (HSA)---------- ASTM A108
   K. Non-Shrink Grout---------- ASTM C1107 Grade B
      Non-shrink grout shall be prepackaged, non-metallic and non-gaseous.
      Furnish certified independent test data to Structural Engineer.
      Compressive Strength in 28 days = 7,500 psi
   L. Refer to architectural drawings for structural steel fireproofing or architecturally exposed steel requirements.
   M. All steel, connectors and embeds exposed to weather shall be galvanized, unless noted otherwise.
3. Structural Detailing
   A. Welds may be performed in the shop or the field. Designations of field welds on the Contract Documents are shown where it is anticipated field welds may be required, and are shown only for the purpose of assisting the Contractor in the bidding process. The Contractor shall coordinate the welding sequence between sub-contractors, and any costs associated with variations in the welding sequence are outside the scope of the Design Engineer, and are the responsibility of the Contractor. Field welding is to be minimized where possible. Contractor is to verify that the sequencing of welds meets all safety regulations, and the requirements of the Construction Documents and their referenced codes. Welding in the 'k' region of wide flange members is prohibited unless noted otherwise.
   B. Provide full depth web stiffener plates at one side of all beams at all bearing points, unless noted otherwise. Stiffener plates shall be the thickness called out below unless noted otherwise. Stiffeners shall be welded on both sides of the plate-to-flange and plate-to-web interfaces.
      FLANGE WIDTH---------- STIFFENER THICKNESS & WELD SIZE
      Less than 8 1/4"---------- 1/4" & 3/16"
      8 1/4" to 12 1/4"---------- 3/8" & 1/4"
      12 1/4" to 16 1/2"---------- 1/2" & 5/16"
      16 1/2" to 20 3/4"---------- 5/8" & 3/8"
   C. Bolting and Fasteners
      1. Ordinary steel-to-steel connections, simple span framing, and beam/girder-to-bearing plates are the standard connection used throughout the design drawings, unless noted otherwise:
         a. Use A325N bolts or tension-controlled bolts.
         b. Tighten these fasteners to a "snug tight" condition.
         c. Where a steel-to-steel connection is not shown, provide a framed connection per AISC for one half the total uniform load capacity of the beam for the span and steel specified.
      2. Fasteners and washers shall not be reused. Scrap dirty, rusted, or water-contaminated bolt assemblies.
   D. Weld Access Holes and Temporary Attachments
      1. Fabricate beam copes and weld access holes using the geometry described in AISC 360 Section J1.6.
      2. Runoff tabs are to be removed unless noted otherwise.
   E. Backup Bars: Remove backup bars from connections in demand critical welds, unless noted otherwise. Backgouge the root and weld to sound metal. Reweld the gouged area and add a 5/16" reinforcing fillet weld. Backup bars may remain for top flange beam welds provided the backup bar is welded to column flanges with 5/16" fillet weld.
   F. All welds not noted on drawings shall be minimum 1/4" fillet welds.
   G. All structural steel members shall be considered as an unrestrained fire-resistance-rated assembly.
4. Welding of Reinforcing Steel or Bolts
   A. Reinforcing Bars: Do not weld rebar except as specifically detailed in the drawings. In such cases, use only AWS standards. Do not substitute reinforcing bars for deformed bar anchors, structural bolts, or headed stud anchors.
   B. Do not weld anchor bolts, including "tack" welds.
   C. Headed Stud Anchor welding and Deformed Bar Anchor welding shall conform to the manufacturer's specifications.

METAL DECKING

1. Steel deck shall comply with the latest requirements of the Steel Deck Institute.
2. Steel deck material shall comply with the manufacturer's ICC Report and have a minimum yield strength of 33ksi.
3. All deck shall be 3-span continuous minimum. In areas where 3-span conditions are not possible, the contractor shall provide heavier gauge deck as required to provide the equivalent loading of the specified deck under a 3-span condition.
4. Loads from plumbing, fire sprinklers, HVAC ducts, light fixtures, architectural elements, or equipment of any kind, may only be attached to the roof deck provided the attachment and loading meets the 'Suspended Loads from Metal Deck' detail supplied in the drawings.
5. Conduits are permitted in deck slabs subject to local code requirements and fire rating considerations. When conduit is installed in the slab, it shall be limited to conduits the lesser of 2" in diameter or less than 1/3 the concrete thickness over the deck flutes, and that no crossovers occur, and that conduit is spaced at least 18" apart with a 3/4" minimum cover and placed a minimum of 1" above top of deck flutes. Conduits shall not be run in bottom deck ribs. For conduits not able to meet spacing requirements, see typical detail for conduits in reinforced concrete over metal deck. Aluminum conduits in concrete slabs shall be coated or covered to prevent aluminum - concrete reaction and electrolytic action between aluminum and steel.
6. All members supporting deck shall be dry before welding.
7. Crimp seams before button punching or welding interlocking seams.
8. Where deck is to receive sprayed-on fire proofing, painted deck shall be coated with special paint that will allow the sprayed-on fire proofing to adhere to the painted deck.
1. All welds performed on roof deck or galvanized deck are to be painted.
2. Steel deck shall be galvanized (G60) when used above or below mechanical equipment rooms.
3. Steel roof deck shall be painted with interlocking side seams with the following minimum properties:
   Type/Ga----------S(in3/ft)----------I (in4/ft)----------Allowable shear value----------Notes
   1 1/2" B/20----------0.233----------0.223----------1988 plf for 6'-0" span----------Typ. Roof
   A. Weld steel roof deck to supporting framing members with 3/4" diameter puddle welds at the following spacings (Closer spacings may be used to develop minimum shear requirements):
      1. 6" on center to all supports perpendicular to deck corrugations (7 welds per 36" sheet).
      2. 6" on center to all supports parallel to deck corrugations.
   B. Interlocking side seams between adjacent pieces of decking may be attached with "PunchLok II" by Verco Manufacturing (VSC2) or "ASC DeltaGrip side seam connection" by ASC Steel Deck at 12" on center.
   C. The Contractor may submit, for review and approval, the manufacturer's ICC report of an alternate method of deck attachment, including Hilti X-ENP 19 (steel beam attachment). The alternate method shall provide minimum deck diaphragm shear values equal to or greater than those noted above. The alternate method shall be approved by the engineer of record prior to the substitution.
   D. Provide a minimum deck bearing of 2". Lap splices shall be centered over the support. To ensure proper lap placement, 4" of lap is recommended, however, it may be reduced to 2" minimum. Deck laps less than the minimum will need to be replaced with deck that meets the minimum lap.

WOOD

1. Materials (Dry service conditions assumed for each type)
   A. Dimension Lumber and Timbers (Sawn Lumber)
      1. All dimensioned lumber shall comply with USDOC PS20.
      2. Visually graded dimension lumber shall be Douglas Fir-Larch #2 or better.
      3. Visually graded timbers (5" x 5" and larger) shall be Douglas Fir-Larch #1 or better.
      4. Machine stress rated (MSR) lumber shall be 1600f-1.6E or better.
      5. Approved end jointed lumber may be used interchangeably with solid sawn members of the same species and grade.
   B. Laminated Strand Lumber (LSL), Laminated Veneer Lumber (LVL) and rim board
      1. All LSL material shall be a minimum of 1 1/2" thick with the following design values in psi: Fb= 1700, E = 1.3X10^6, Fcperp = 710, Fv = 425, Fcpar=1835, Ft = 1300. (Weyerhaeuser Timberstrand)
      2. All LVL shall be a minimum of 1 3/4" thick with the following design values in psi: Fb = 2600, E = 2.0x10^6, Fcperp=750, Fv = 285, Fcpar =2510, Ft = 1895. (Weyerhaeuser Microllam)
      3. All rim boards shall be a minimum of 1 1/2" thick . See bearing wall schedule for vertical capacity requirements.
      4. Handle, store and install all engineered lumber per the manufacturer's guidelines.
      5. See manufacturer guidelines for hole locations and sizing.
      6. LSL, LVL and rim board of equal design properties as determined by ASTM D5456 may be substituted with written approval from Dunn Associates, Inc.
      7. Handle, store and install all wood I-joists per the manufacturer's guidelines.
      8. Holes cut in the webs of the I-joists shall be per the manufacturer's guidelines. DO NOT cut or notch flanges.
   C. Structural Glued Laminated Timber (GLB)
      1. Structural glued laminated timber shall be manufactured and identified as required in ANSI A190.1 and ASTM D3737.
      2. Glulam beams shall be Douglas-fir combination number 24F-V4 1.8E for simple span beams and 24F-V8 1.8E for continuous spans and cantilevers. Hybrid combination glulams with equivalent design properties may also be used with written approval from Dunn Associates Inc.
      3. Appearance of members shall be Framing or Industrial appearance, UNO.
      4. Camber: Unless otherwise noted on the drawings, all stock glulam beams shall be cambered to industry standard 3500'-0" radius. Stock beams with zero camber are acceptable where available.
   D. Wood Structural Panel Sheathing
      1. Wood structural panels shall conform to the requirements for its type in USDOC PS1 or USDOC PS2. The panels must be identified by the trademarks of the approving testing and inspection agency.
      2. Wood sheathing shall be APA rated sheathing Exposure 1 unless noted otherwise. See plans and schedules for thickness and span rating.
   E. Nails
      1. All Nails shall conform to the requirements specified in ASTM F1667, "Standard Specification of Driven Fasteners: Nails, Spikes and Staples."
      2. All nails shall be common nails with the following properties:
         Nail----------Shank Diameter----------Min. Penetration into Support
         6d----------0.113"----------1.25"
         8d----------0.131"----------1.50"
         10d----------0.148"----------1.63"
         12d----------0.148"----------1.63"
         16d----------0.162"----------1.75"
         Nails with properties less then those listed above shall not be used without prior written approval from Dunn Associates, Inc. Hy-Tek nails may be substituted for common nails per ESR-2648.
      3. Nails with "T", brad, finish or casing heads are not permitted. Nails with Round (full), Offset, Oval, Clipped or Notched heads are acceptable.
      4. Deformed shank nails shall have either a helical (screw) or an annular (ring) shank.
   F. Bolts
      1. Anchor Bolts: ASTM F1554 Grade 36 (or A307 Grade A/C or A36)
      2. All anchor bolts connecting shearwall sill plates to the concrete foundation shall have a PL1/4"x3"x3" washer between the sill plate and the nut, UNO. See the shear wall schedule.
      3. Connection Bolts: ASTM A307 Grade A/C or ANSI Standard B18.2.1.
      4. Bolt holes shall be a minimum of 1/32" to a maximum of 1/16" larger than the bolt diameter. Holes shall be accurately aligned in main members and side plates or side members. Bolts shall not be forcibly driven.
      5. At all bolted connections, provide a standard cut or larger washer or metal plate between the wood and the bolt head and between the wood and the nut.
   G. Connection Hardware
      1. All connection hardware shown shall be supplied by Simpson Strong-Tie Incorporated, unless noted otherwise. Install all hardware per the manufacturer's guidelines, filling all available holes with nails.
      2. Connection hardware of equal design properties, including USP Structural Connectors or other manufacturers may be substituted with written approval from Dunn Associates, Inc.
   H. Continuous Rod Hold Down systems
      1. Maximum rod elongation shall be limited to 1/8", or as required by building official.
      2. Maximum total system elongation (rod, take-up device, couplers, bearing plate, and plate crushing) shall be limited to 0.2", as shown by calculation, or as required by building official.
      3. Systems shall anchor at each floor level and/or point of lateral reaction. Skipping of floors is not permitted.
      4. An ICC or IAPMO approved take-up device shall be provided at every level and accommodate shrinkage per note 2 below.
2. Per IBC 2304.3.3, all mechanical, electrical, plumbing and drainage systems shall accommodate for the effects of wood shrinkage, approximately 1/4" shrinkage per level, cumulative from base to roof. Potential solutions may include vertically elongated holes through studs for horizontal pipe (following permitted holes and notches detail), vertical expansion joints on vertical pipes, or other industry standards. 1/4" per floor accounts for 5 plates (7.5") shrinking 7.5% times the difference between initial and final moisture contents of 19% and 8% respectively, divided by 30%. 7.5/100*11/30*7.5" = 1/4". 5 plates is one sill plate, two top plates and two truss chords.
3. All fasteners in contact with preservative-treated or fire-treated wood shall be hot-dipped zinc-coated galvanized or stainless steel.
4. All wood in contact with concrete, masonry or soil shall be preservative-treated or redwood.
5. Design values adjusted for fire-treated lumber using Pyroguard (ESR-1791). Substitutions eligible by approval.
6. General framing and carpentry shall be connected as per "THE MINIMUM NAILING SCHEDULE" unless noted otherwise.
7. Provide solid shaped blocking at least 2" (nominal) thick and full depth of joist at ends and at each support of joist. Provide approved bridging at an 8'-0" on center maximum between joist end supports.
8. All bearing and shear walls shall have a minimum of 2 top plates. See details for splices in top plates.
9. Provide an additional joist within 2' of centerline of parallel partitions.
10. Solid blocking at eaves may be omitted where required for ventilation (1 block in 5), unless noted otherwise.
11. Holes or penetrations through bearing walls shall be limited to the clear space between studs. Holes in shear wall sheathing shall be limited to 6" diameter (max), spaced at a minimum of 3 diameters on center. The accumulated length of openings in a shear wall shall not exceed 20% of the wall length, unless noted otherwise.

PREFABRICATED WOOD TRUSSES

1. The prefabricated metal plate wood trusses shall be designed per the locally adopted building code and signed and sealed by a Professional Engineer registered in the same state as the project location. They shall be designed to support the concentrated and distributed loads shown on the framing plans in addition to the following uniform loads:
   Member----------Dead----------Live*----------Snow**
   Top Chord----------10 psf----------0 psf----------21 psf
   Bottom Chord----------10 psf----------10 psf----------0 psf
   * The bottom chord live load is not concurrent with top chord live load.
   **Loads caused by drifting, unbalanced or sliding snow should be accounted for and are not included in uniform loads given. See plans and details for these loads.

   Designs shall include additional Dead Load of 9 psf at all overbuild framing locations. Design all wood trusses and bearing attachments for wind uplift, assuming 60% of total dead load listed above to resist uplift per the IBC. The structural, mechanical, and architectural plans may show additional loading information (examples: snow drifts, point loads, drag strut loads, hanging partition walls, mechanical equipment weights, roof top anchors, parapets, etc.). Loads shown on these other sheets shall be incorporated in the design of the trusses. Provide additional trusses as required.

2. The location of vertical and lateral supports for all trusses shall be compatible with the overall design of the building. In general, roof and/or floor decks shall provide the lateral restraint for trusses. The exception to this rule occurs at drag trusses in line with and directly over parallel shear walls labeled "PFT OVER SW" on plan and truss blocking over shear walls where indicated. At these locations, horizontal diaphragm forces shall be applied to the truss top chord, conveyed to the truss bottom chord and transferred to the shear wall below.
3. All trusses perpendicular to and vertically supported by exterior walls (including truss blocking) shall be designed to brace the exterior wall for wind and/or seismic forces normal to the wall. The horizontal wind and/or seismic forces on the upper half of the wall shall be applied to the truss at the vertical bearing support.
4. The deflection of all prefabricated wood trusses shall be limited to L/240 for total load (1" max) and L/360 for live load at the roof and L/360 for total load (1/2" max) and L/480 for live load at the floors, unless noted otherwise.
5. Use a load duration factor of 1.0 for live loads and for snow loads above 5000' elevation.
6. All truss uplift connections, including truss-to-wall connections, shall be designed and specified by the truss manufacturer in the shop drawings. See wood schedules for a selection of uplift connector options, which will be verified by Dunn at shop drawing review.
7. For bidding purposes, the general contractor shall assume the following uplift connections:
   A. Typical trusses - Simpson H1 connectors or SDWC screws at roof bearing.
   B. Girder or Hip trusses - Simpson CMSTC16 straps at roof bearing and at every floor below to foundation, including a Simpson HDU-4 at the foundation.
8. Design, handling, erection, and permanent bracing of metal plate connected wood trusses shall be in accordance with ANSI/TPI-1, National Design Standard for Metal Plated Connected Wood Truss Construction.
9. All steel gusset plates shall be galvanized and shall be approved by the "Research Committee for the International Conference of Building Officials." Submit a copy of the ICC Report for the gusset used. Values established by this committee must be indicated on the shop drawings.
10. All gussets shall be located on the joint as the stresses require.
11. Gussets shall be pressed or rolled into member to obtain full penetration without crushing the outer surfaces of wood.
12. No wane, knots, skips, or other defects shall occur in the plated contact area or scarfed area of web members. Plates shall be centered with one required each side of wood truss.
13. The trusses shall be handled and stored in a manner to prevent moisture from being absorbed by the wood.
14. Requirements for truss stability and erection shall comply with the Truss Plate Institute publications entitled "Commentary and Recommendations for Bracing Wood Trusses" and "Commentary and Recommendations for Handling and Erecting Wood Trusses." The contractor shall have copies of these publications on site and shall be familiar with their contents.
15. Provide continuous lateral restraint and diagonal bracing where required in accordance with BCSI-B3 ("Permanent Restraint/Bracing of Chords & Web Members"). Web members requiring bracing shall be noted as such in the shop drawings. For truss webs less than 14'-0", continuous lateral restraint and diagonal bracing may be replaced with T- or L- reinforcement. Where used, T- and L- reinforcing members are to be members matching the web member dimension and are to be of the same grade and species or greater. Install reinforcing perpendicular to and against the narrow face of the braced member with 16d nails at 6"oc. Where two rows of continuous lateral bracing are required, place reinforcing members on each side of the web. The reinforcing member must be at least 90% of the braced web member and must extend within 6" of each end of the web member. Scab reinforcement may also be used in accordance with BCSI-3.
16. Shop Drawings: All loads included in the design of the trusses shall be shown on the truss layout plan. Complete calculations and shop drawings indicating all member forces, stresses, duration factors, lumber grades, truss to truss connections, web members requiring bracing, steel gusset plate sizes and locations shall be submitted and reviewed by the engineer before fabrication. Each gusset shall be dimensioned on the shop drawings as to its exact location at the joint. Dimensions, roof slopes, overhangs, and ceiling elevations shall be shown in the shop drawings per the architectural drawings.
17. At piggy back truss conditions provide continuous lateral restraint and diagonal bracing per details.

DEFERRED SUBMITTALS

1. Deferred submittals are items that are not part of our scope which require architectural and/or engineering review. Deferred submittals include plans, details, calculations and/or other relevant design information stamped by a Professional Engineer licensed in the state in which construction will occur.
2. Deferred submittals shall first be submitted to the project architect and/or engineer for review and coordination. Upon completion of the architect/engineer review, the architect/engineer will submit the deferred submittals to the Building Official for review and approval. The submittal to the Building Official shall include a letter stating that the architect/engineer review has been performed and that the plans and calculations for the deferred submittal items are found to be in general conformance with the design drawings with no exceptions.
3. Construction related to deferred submittals shall not commence until the Building Official has approved the submittal. Approved deferred submittals shall be available at the jobsite throughout construction.
4. Items requiring deferred submittals are listed below. These items shall be designed and fabricated by the manufacturer according to specifications given in the construction documents.
   A. Exterior Façade Framing and Connections (by supplier) showing compliance with drift requirements
   B. Prefabricated Wood Trusses (by truss manufacturer)
   C. Seismic Bracing for mechanical, electrical and plumbing components per ASCE 7, Chapter 13 (by MEP consultant)
   D. Suspended ceilings

ABBREVIATIONS

AB	Anchor Bolt	JST	Joist
ABV	Above		
ALT	Alternate	K Kip(s) =	1000 Pounds
ARCH	Architect	KLF	Kips Per Lineal Foot
ADD'L	Additional	KSF	Kips Per Square Foot
BB	Bottom Bar	LB	Pounds (#)
BLDG	Building	LOC	Location
BLKG	Blocking	LSL	Laminated Strand Lumber
BLW	Below	LVL	Laminated Veneer Lumber
BM	Beam		
BN	Boundary Nail	MAS	Masonry
BOTT	Bottom	MAX	Maximum
BRDG	Bridging	MECH	Mechanical
BRG	Bearing	MFR	Manufacturer
BTWN	Between	MIN	Minimum
BYND	Beyond	MISC	Miscellaneous
		MTL	Metal
CANT	Cantilevered		
CGS	Center of Gravity of Strand	NTS	Not To Scale
CJ	Control Joint	NS	Non-shrink
CJP	Complete Joint Penetration		
CL	Center Line	oc	On Center
COL	Column	OPNG	Opening
CONC	Concrete	OPP	Opposite
CONN	Connection	OSB	Oriented Strand Board
CONT	Continuous		
COORD	Coordinate	PAF	Power Actuated Fastener
CS	Coil Strap	PCF	Pounds per Cubic Foot
CTR	Center	PEN	Penetrate or Penetration
		PERP	Perpendicular
DB	Deck Bearing	PFT	Pre-Fabricated Truss
DBA	Deformed Bar Anchor	PJP	Partial Joint Penetration
DBL	Double	PL	Plate
DCW	Demand Critical Weld	PLF	Pounds per Lineal Foot
DET	Detail	PREFAB	Prefabricated
DIA	Diameter	PSF	Pounds per Square Foot
DIM	Dimension	PSI	Pounds per Square Inch
DWG	Drawing	PT	Post Tension
		PT/DF	Pressure Treated Douglas Fir
(E)	Existing		(or appropriate species for region)
EA	Each		
EF	Each Face	REINF	Reinforce
EL	Elevation	REQD	Required
ELEC	Electrical	RTU	Roof Top Unit
EN	Edge Nail		
ENGR	Engineer	SCHED	Schedule
EQ	Equal	SFRS	Seismic Force Resisting System
EQUIP	Equipment	SHTG	Sheathing
EQ SP	Equally Spaced	SIM	Similar
EW	Each Way	SN	Sill Nail
EJ	Expansion Joint	SOG	Slab on Grade
EXT	Exterior	STD	Standard
		STIFF	Stiffener
FLR	Floor	STL	Steel
FND	Foundation	STRUCT	Structural
FTG	Footing	SW	Shear Wall
ga	Gage	T&B	Top and Bottom
GALV	Galvanized	TB	Top Bar
GLB	Glued Laminated Beam	TEMP	Temperature
GSN	General Structural Notes	TH	Top Hook
GT	Girder Truss	THRU	Through
		T/	Top of
HD	Hold-down	TYP	Typical
HORIZ	Horizontal		
HSA	Headed Stud Anchor	UNO	Unless Noted Otherwise
HSS	Hollow Structural Section		
		VERT	Vertical
IBC	International Building Code		
ICC	International Code Council	W/	With
INT	Interior	WWR	Welded Wire Reinforcement
		WP	Working Point

SPECIAL INSPECTION, TESTING AND STRUCTURAL OBSERVATION REQUIREMENTS

1. Special Inspections and Testing
   A. Special inspections and testing as required per the approved construction documents and per IBC Chapter 17 shall be provided for this project unless waived by the Building Official.
   B. An independent agency, or agencies, employed by the Owner, shall perform the special inspection and testing services required.
   C. The special inspection and testing requirements of this section of the General Structural Notes and the special inspection tables serve as the Engineer of Record's statement of special inspections and structural observations required by IBC Chapter 17.
2. Contractor Responsibilities (1704.4)
   A. Each Contractor responsible for the construction of a main wind or seismic force-resisting system, a designated seismic system, or a wind or seismic force-resisting component listed in the statement of special inspections shall submit a written statement of responsibility to the Building Official and Owner prior to commencing with the work involved. It shall contain acknowledgement of awareness of the special requirements contained in the statement of special inspection.
   B. The Contractor shall coordinate and cooperate with all the required inspections, testing, and/or structural observations required for the project.
   C. The Contractor shall maintain access to and exposure of the work which requires special inspection or testing.
   D. The Contractor shall not proceed with subsequent work until required inspections, testing, and/or structural observations have been provided.
   E. The Contractor shall correct all work found to be deficient, and re-test at no additional cost to the Owner.
   F. The Contractor shall notify the Engineer of Record at least (7) days prior to any required structural observations.
   G. Submit all required documentation to the Special Inspector for review.
3. Special Inspector Responsibilities (1704.2)
   A. Prior to the start of the construction, each approved agency shall provide written documentation to the Building Official, demonstrating the competence and relevant experience or training of the special inspectors who will perform the special inspections and tests during construction.
   B. Special Inspectors shall keep records of their inspections and testing.
   C. Inspection reports shall indicate whether the work inspected was or was not completed in conformance to the approved construction documents.
   D. Non-conforming work and/or discrepancies shall be brought to the Contractor's immediate attention for correction.
   E. The Special Inspector shall notify the Architect/Engineer of any non-conforming work or discrepancies that the Contractor cannot readily correct.
   F. Any uncorrected non-conforming work or discrepancies shall be brought to the attention of the Architect/Engineer and the Building Official prior to completion of that phase of the work.
   G. Submit the following to the Building Official:
      1. Special Inspections and Testing Reports.
      2. Certificates of Compliance for:
         a. Fabrication of structural elements from approved fabricators.
         b. The seismic qualifications of nonstructural components, supports, and attachments.
      3. Reports of:
         a. Material properties verifying compliance with the requirements of AWS D1.4 for weldability for reinforcing bars other than ASTM A706.
4. Special Inspections (1705)
   A. Special Cases (1705.1.1); Special Inspection and tests shall be required for proposed work that is, in the opinion of the Building Official, unusual in its nature, such as, but not limited to, the following:
      1. Construction materials and systems that are alternatives to materials and systems prescribed by the IBC.
      2. Unusual design applications of materials described in the IBC.
      3. Materials and systems required to be installed in accordance with additional manufacturer's instructions that prescribe requirements not contained in the IBC or in standards referenced by the IBC.
   B. Steel Construction (1705.2): The special inspections and nondestructive testing of steel construction in buildings shall be in accordance with the following:
      1. Structural Steel. Special inspections and non-destructive testing of structural steel elements in buildings, structures, and portions thereof shall be in accordance with the Quality Assurance inspection requirements of AISC 360 and tables in the construction documents. Exception: Railing systems composed of structural steel elements shall be limited to welding inspection of welds at the base of cantilevered rail posts.
   C. Cold-Formed Steel Deck. Special inspections and qualification of welding special inspectors for cold-formed steel floor and roof deck shall be in accordance with the Quality Assurance inspection requirements of SDI QA/QC.
      Quality Control Submittals for Structural Steel
      1. Provide Level III non-destructive testing (NDT) personnel certifications.
      2. Provide welder qualification records to verify project welders are tested and qualified in accordance with AWS D1.1 before welding structural or miscellaneous steels, D1.3 before welding sheet steels (10 gauge and thinner), and D1.4 before welding reinforcing steel. Submit documentation to the approved inspection agency for review before welding.
         a. Special, restricted welder qualification testing is required for welders joining the bottom-flange through the weld access hole connection in demand critical welds. Qualify welders for the minimum groove angle and maximum deposition rate used in production. Follow the instructions for supplemental qualification testing in AWS D1.8, Section 5.1. Qualification testing must take place within two years from the start of this project.
      3. Provide welder identification methodology. The fabricator/erector shall maintain a system by which the welder who has welded a joint or member can be identified. Stamps, if used, shall be the low stress type.
      4. Provide welding procedures that comply with AWS D1.1, D1.3, D1.4, D1.8, as required by the project. Welding procedures shall be made available to welders and inspectors.
         a. Provide weld filler metal product data sheets identifying optimum welding parameters and storage conditions with each welding procedure submittal.
         b. Identify the maximum welding heat input per inch of weld (KJ/in) permitted by the welding procedures.
         c. Identify the maximum deposition rate that will be used while welding on any demand critical weld.
         d. Provide typical welding filler metal Certificates of Conformance that identify the WPS Heat Input Envelope.
      5. Provide bolt storage and installation procedures to the approved inspection agency for review.
      6. Provide mill/material test reports (MTR) or certificates of conformance (CC) that verify compliance of furnished materials to the requirements of the approved contract documents. MTRs or CCs are required for structural shapes, plate, metal deck, fasteners, headed studs, DBAs, weld filler metal, and bolt assemblies used as primary, load-bearing members. Maintain the heat number traceability of structural shapes and plate used as primary, load bearing members.
   D. Structural Steel Non-Destructive Testing (NDT) Personnel Qualifications
      1. NDT personnel will:
         a. Qualify in accordance with the recommended practices of the American Society of Nondestructive Testing, SNT-TC-1A, latest edition.
         b. Pass eye examinations meeting: (1) ASTM requirements at least once a year, and (2) AWS D1.1 every three years.
         c. Be certified in accordance with the AWS QC-1, latest edition.
         d. Level III must be qualified by ASNT testing in the applicable method under review.
      2. Only Level II and Level III technicians, qualified by testing in the applicable method, are permitted to interpret nondestructive testing results.
      3. Only Senior Certified or Certified Welding Inspectors (SCWI, CWI) are permitted to evaluate welds. Certified Associate Welding Inspectors may evaluate welds when under the direct supervision of a SCWI and/or CWI.
      4. Approved Inspection Agency will certify the following:
         a. Level III inspector has reviewed the NDT procedures.
         b. Project ultrasonic testing technicians, testing demand critical welds, are trained and qualified in accordance with AWS D1.8, Annex E.
         c. That the Inspection Agencies' ultrasonic testing procedures are qualified by weld mockups similar to AWS D1.1, Annex S.

STATE OF MISSOURI — RONALD DIX — PE-2003018787 — 01/21/2022 — PROFESSIONAL ENGINEER

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CURRENT SET THRU REVISION 02

date:	1-21-22
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MOBETTAHS for: LEE'S SUMMIT
520 NW Chipman Rd
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sheet title: GENERAL STRUCTURAL NOTES

sheet number: S-002

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E. Structural Steel: Special inspection and non-destructive testing (NDT) are required during the fabrication and erection of any load-bearing members and assemblies. Special inspection, except NDT, may be waived when the work is performed in a fabricating shop, or by an erector approved by the Building Official to perform work without Special Inspection. NDT of welds completed in an approved fabricator's shop may be performed by the fabricator when approved by the Building Official. When the fabricator performs the NDT, the fabricator shall submit the NDT reports for review by the Special Inspector. Special inspection and NDT shall be provided per the special inspection tables for structural steel in the construction documents.
   1. Perform all welding and welding special inspection activities in accordance with AWS D1.1, D1.3, D1.4, and D1.8, AISC 360 Chapter N, and AISC 341 Chapter J, as appropriate for the material form and welding methods employed. Approved methods and acceptance criteria are established in these codes.
   2. Perform all bolting and bolting inspection activities in accordance with AISC 360 Specification for Structural Steel Buildings Using A325 and A490 Bolts, AISC 360 Chapter N, and AISC 341 Chapter J, as applicable.
   3. Non-Destructive Testing (NDT) of welds is required as follows:
      a. Ultrasonic testing (UT), magnetic particle testing (MT), penetrant testing (PT), and radiographic testing (RT), where required, shall be performed in accordance with AWS D1.1/D1.1M. Acceptance criteria shall be in accordance with AWS D1.1/D1.1M for statically loaded structures, unless otherwise designated on the design drawings or project specifications.
      b. All NDT shall be documented. NDT reports shall be distributed to the fabricator/erector, the Building Official, the Contractor, and the Architect.
      c. Amount of NDT is permitted to be reduced according to AISC 360 Chapter N and AISC 341 Chapter J if appropriate criteria are met, and if approved by the Building Official and the Engineer of Record.
      d. Requirements for structures in Seismic Design Categories A & B:
         • Ultrasonic test all complete joint penetration groove welds for structures in Risk Categories III and IV for materials 5/16" thick or greater. Ultrasonic test 10% of all complete joint penetration groove welds for structures in Risk Category II for materials 5/16" thick or greater. Complete joint penetration groove welds need not be tested for structures in Risk Category I.
         • Magnetic particle test or penetrant test all thermally cut surfaces of access holes for flange or web thicknesses exceeding 2". Any crack shall be deemed unacceptable.
      e. Requirements for structures in Seismic Design Categories C thru F:
         • Ultrasonic test all complete joint penetration groove
         • Magnetic particle test or penetrant test all thermally cut surfaces of access holes for flange or web thicknesses exceeding 2". Magnetic particle test or penetrant test all thermally cut surfaces of beam copes access holes for flange or web thicknesses exceeding 1 ½" for members of the seismic force resisting system in Seismic Design Categories C thru F. Any crack shall be deemed unacceptable.
   4. Special inspections and Testing for Non-Shrink Grout are required as follows:
      a. Periodic special inspection verifying the use of required mix design.
      b. Samples of non-shrink grout shall be tested for compressive strength at least daily, with additional tests required for each additional 10 bags mixed per day.

F. Concrete (1705.3): Special inspections and tests of concrete construction shall be performed in accordance with Table 1705.3 in the construction documents.
   1. Special inspections of welding of and qualifications of special inspectors for reinforcing bars shall be in accordance with the requirements of AWS D1.4 for special inspections and for special inspector qualifications.
   2. In the absence of sufficient data or documentation providing evidence of conformance to quality standards for concrete materials, the building official shall require testing in accordance with the appropriate standards and criteria for the materials.

G. Wood (1705.5): Special inspections of prefabricated wood structural elements and assemblies shall be performed in accordance with the Fabricated Items section 4.N below. Special inspections of site-built assemblies shall be in accordance with the following:
   1. High-load Diaphragms (Table 2306.2). High load diaphragms designed in accordance with IBC Section 2306.2 shall be installed with special inspections. The Special Inspector shall verify the grade and thickness of the structural panel sheathing, nominal size of framing members at panel edges, the nail or staple diameter and length, the number of fastener lines, and that the spacing between fasteners in each line and at edge margins is per the approved construction documents.
   2. Wood Trusses. Special Inspections of wood trusses with overall heights of 60" or greater shall be performed to verify that the installation of the permanent individual truss member restraint/bracing has been installed in accordance with the approved truss submittal package. For wood trusses with a clear span of 60 feet or greater, the special inspector shall verify during construction that the temporary installation restraint/bracing is installed in accordance with the approved truss submittal package.

H. Soils (1705.6): Special inspections and tests of existing site soil conditions, fill materials and placement, and load-bearing requirements shall be performed in accordance with the approved soils report and Table 1705.6 in the construction documents. The Special Inspector shall verify that during fill placement, proper materials and procedures are used. The approved geotechnical report and the construction documents shall be used to determine compliance.

I. Aggregate Piers: Special inspections and tests shall be performed during installation of aggregate piers. The approved geotechnical report, the ICC Evaluation Report, and the construction documents shall be used to determine compliance.

J. Fabricated Items (1705.10): Where fabrication of structural, load bearing or lateral load-resisting members or assemblies is being conducted on the premises of a fabricator's shop, special inspections of the fabricated items shall be performed during fabrication. Special inspections during fabrication are not required where the work is done on the premises of a fabricator registered and approved by the building official to perform such work without special inspection. At the completion of fabrication, the approved fabricators shall submit a certificate of compliance to the Owner for submittal to the Building Official stating that the work was performed in accordance with the approved construction documents.

K. See architectural drawings for additional required inspections pertaining to sprayed fire-resistant materials (1705.14), mastic and intumescent fire-resistant coatings (1705.15), EIFS (1705.16), fire resistant penetrations and joints (1705.17), or smoke control systems (1705.18).

L. Post-Installed Anchors: Special inspections and tests shall be performed during installation of post-installed anchors according to the requirements of the ICC Evaluation Report and table 1705.3 in the construction documents.

5. Special Inspections for Seismic Resistance (1705.12): Special inspections for seismic resistance are not required for this project per IBC section 1705.12.
   A. Structural Wood (1705.12.2): For the seismic force-resisting systems of structures assigned to Seismic Design Category C, D, E, or F:
      1. Continuous special inspection shall be required during field gluing operations of elements of the seismic force-resisting system.
      2. Periodic Special Inspection shall be required for nailing, bolting, anchoring and other fastening of elements of the seismic force-resisting system, including wood shear walls, wood diaphragms, drag struts, braces, shear panels, and hold downs.
         Exception: Special inspections are not required for wood shear walls, shear panels, and diaphragms, including nailing, bolting, anchoring, and other fastening to other elements of the seismic force-resisting system, where the fastener spacing of the sheathing is more than 4" on center.
   B. Designated Seismic Systems (1705.12.4): For structures assigned to Seismic Design Category C, D, E, or F, the Special Inspector shall examine designated seismic systems requiring seismic qualifications in accordance with ASCE7 Section 13.2.2, and verify that label, anchorage and mounting conforms to the certificate of compliance.
   C. Architectural Components (1705.12.5): Periodic special inspection is required for the erection and fastening of exterior cladding, interior and exterior nonbearing walls and interior and exterior veneer in structures assigned to Seismic Design Category D, E, or F.
   D. Plumbing, Mechanical, and Electrical Components (1705.12.6): Periodic special inspection of plumbing, mechanical, and electrical components shall be required for the following:
      1. Anchorage of electrical equipment for emergency and standby power systems in structures assigned to Seismic Design Category C, D, E, or F.
      2. Anchorage of other electrical equipment is structures assigned to Seismic Design Category E or F.
      3. Installation and anchorage of piping systems designed to carry hazardous materials and their associated mechanical units in structures assigned to Seismic Design Category C, D, E, or F.
      4. Installation and anchorage of ductwork designed to carry hazardous materials in structures assigned to Seismic Design Category C, D, E, or F.
      5. Installation and anchorage of vibration isolated systems in structures assigned to Seismic Design Category C, D, E, or F where the approved construction documents require a nominal clearance of 1/4" or less between the equipment support frame and restraint.
      6. Installation of mechanical and electrical equipment, including duct work, piping systems, and their structural supports, where automatic fire sprinkler systems are installed in structures assigned to Seismic Design Category C, D, E, or F to verify proper clearances have been maintained. Where flexible sprinkler hose fittings are used, special inspection of minimum clearances is not required.
6. Testing for Seismic Resistance (1705.13): Testing for seismic resistance is/is not required for this project per IBC section 1705.13.
   A. Non-Structural Components (1705.13.2): For structures assigned to Seismic Design Category B, C, D, E, or F where the requirements of ASCE 7 Section 13.2.1 for nonstructural components, supports or attachments are met by seismic qualification as specified in Item #2 therein, the registered design professional of the applicable discipline shall specify on the approved construction documents the requirements for seismic qualification by analysis, testing, or experience data. Certificates of Compliance for the seismic qualification shall be submitted to the Building Official.
7. Special Inspections for Wind Resistance (1705.11): Special inspections for wind resistance are/are not required for this project per IBC Section 1705.11.
   A. Structural Wood (1705.11.1): Continuous special inspection is required during field gluing operations of elements of the main wind force-resisting system. Periodic special inspection is required for nailing, bolting, anchoring and other fastening of elements of the main wind-force resisting system, including wood shear walls, wood diaphragms, drag struts, braces and hold-downs.
      Exception: Special Inspection is not required for wood shear walls, shear panels, and diaphragms, including nailing, bolting, anchoring and other fastening to other elements of the main wind-force resisting system, where the specified fastener spacing of the sheathing is more than 4" on center.
   B. Wind Resisting Components (1705.11.3): Periodic special inspection is required for roof covering, roof deck and roof framing connections and for exterior wall coverings and wall connections to roof and floor diaphragms and framing.
8. Structural Observations/Site Observations (1704.6): Structural observations are not required for this project per IBC section 1704.6.
   A. The Engineer of Record or his representative shall perform the structural observations as required.
   B. A registered design professional employed by the Owner shall perform the structural observations as required.
   C. Structural Observations of the following stages of construction shall be provided. The Contractor shall notify (in writing) the [EOR/design professional] performing the structural observations at least 7 days prior to the following stages of construction so that they may have the opportunity to review the work. At the conclusion of the work, a site observation report will be provided stating that the site visits have been made and report any unresolved deficiencies.
      1. Initial placing of any concrete, including but not limited to: footings, shear walls, slabs on grade or concrete over steel deck
      2. Initial grout pours for masonry walls
      3. Initial erection of structural steel
      4. Completion of structural roof deck
      5. Initial wood framing
      6. Initial finish work
   D. Site Observations are part of the Dunn Associates, Inc. contract with the Architect/Owner. The stages of construction listed below will serve as suggested stages of construction to be observed. The Contractor shall notify (in writing) the Engineer of Record at least 7 days prior to the following stages of construction so that the Engineer may have the opportunity to review the work.
      1. Initial grout pours for masonry walls
      2. Initial erection of structural steel
      3. Completion of structural roof deck
      4. Initial wood framing
      5. Initial finish work
   E. Structural observation/Site observation reports will be provided to the Architect. Distribution to the Contractor, Owner, and/or Building Official will be through the Architect.
9. Seismic/Wind Main Force Resisting Systems That Require Special Inspections
   A. Wood Shear Walls
   B. Metal Roof Deck Diaphragms
   C. Wood Diaphragms

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project information:

MOBETTAHS
for:
LEE'S SUMMIT

520 NW Chipman Rd
Lee's Summit, MO 64086

sheet title:
GENERAL STRUCTURAL NOTES

sheet number:
S-003

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TABLE 1705.6: REQUIRED SPECIAL INSPECTIONS AND TESTS OF SOILS

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION
1. Verify materials below shallow foundations are adequate to achieve the design bearing capacity.	-	X
2. Verify excavations are extended to proper depth and have reached proper material.	-	X
3. Perform classification and testing of compacted fill materials.	-	X
4. Verify use of proper materials, densities and lift thickness during placement and compaction of compacted fill.	X	-
5. Prior to placement of compacted fill, inspect subgrade and verify that site has been prepared properly.	-	X

TABLE 1705.3: REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	REFERENCED STANDARD[a]	IBC REFERENCE
1. Inspect reinforcement , including prestressing tendons, and verify placement	-	X	ACI 318 Ch. 20, 25.2, 25.3, 26.6.1-26.6.3	1908.4
2. Reinforcing bar welding a. Verify weldability of reinforcing bars other than ASTM A 706; b. Inspect single-pass fillet welds, maximum 5/16"; and c. inspect all other welds	- - X	X X -	AWS D1.4 ACI 318: 26.6.4	-
3. Inspect anchors cast in concrete.	-	X	ACI 318; 17.8.2	-
4. Inspect anchors post-installed in hardened concrete members[b]. a. Adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads b. Mechanical anchors and adhesive anchors not defined in 4.a.	X -	- X	ACI 318: 17.8.2.4 ACI 318: 17.8.2	-
5. Verify use of required design mix.	-	X	ACI 318: Ch 19, 26.4.3, 26.4.4	1904.1, 1904.2 1908.2, 1908.3
6. Prior to concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	X	-	ASTM C 172 ASTM C 31 ACI 318: 26.5, 26.12	1908.10
7. Inspect concrete and shotcrete placement for proper application techniques.	X	-	ACI 318: 26.5	1908.6, 1908.7, 1908.8
8. Verify maintenance of specified curing temperature and techniques.	-	X	ACI 318: 26.5.3-26.5.5	1908.9
9. Inspect prestressed concrete for: a. Application of prestressing forces; and b. Grouting of bonded prestressing tendons.	X X	- -	ACI 318: 26.10	-
10. Inspect erection of precast concrete members.	-	X	ACI 318: Ch. 26.9	-
11. Inspect formwork for shape, location and dimensions of the concrete member being formed.	-	X	ACI 318: 26.11.1.2(b)	-

For SI: 1 inch = 25.4 mm.

a. Where applicable, see Section 1705.12. Special inspection for seismic resistance.

b. Specific requirements for special inspection shall be included in the research report for the anchor issued by an approved source in accordance with 17.8.2 in ACI 318, or other qualification procedures. Where specific requirements are not provided, special inspection requirements shall be specified by the registered design professional and shall be approved by the building official prior to the commencement of the work.

DEFINITION OF INSPECTION TASK ABBREVIATIONS

O	Observe: The inspector shall observe these functions on a random, daily basis. Operations need not be delayed pending observations.
P	Perform: These inspections shall be performed prior to the final acceptance of the item.
D	Document: The inspector shall prepare reports indicating that the work has been performed in accordance with the contract documents. The report need not provide detailed measurements for joint fit-up, WPS settings, completed welds, or other individual items listed in the tables. For shop fabrication, the report shall indicate the piece mark of the piece inspected. For field work, the report shall indicate the reference grid lines and floor or elevation inspected. Work not in compliance with the contract documents and whether the noncompliance has been satisfactorily repaired shall be noted in the inspection report.

TABLE N5.4-1 COMBINED WITH TABLE J6-1 INSPECTION TASKS PRIOR TO WELDING

AISC 360	AISC 341	VISUAL INSPECTION TASKS PRIOR TO WELDING	QC TASK	QC DOC.	QA TASK	QA DOC.
•		Welder qualification records and continuity records	P	-	O	-
•		Welding procedure specification (WPSs) available	P	-	P	-
•		Manufacturer certification for welding consumables available	P	-	P	-
•	•	Material identification (type/grade)	O	-	O	-
•	•	Welder identification system [a]	O	-	O	-
•	•	Fit-up of groove welds (including joint geometry) • Joint preparation • Dimensions (alignment, root opening, root face, bevel) • Cleanliness (condition of steel surfaces) • Tacking (tack weld quality and location) • Backing type and fit (if applicable)	P/O**	-	O	-
	•	Fit-up of CJP groove welds of HSS T-, Y-, and K-joints without backing (including joint geometry) • Joint preparation • Dimensions (alignment, root opening, root face, bevel) • Cleanliness (condition of steel surfaces) • Tacking (tack weld quality and location)	P	-	O	-
•	•	Configuration and finish of access holes	O	-	O	-
•	•	Fit-up of fillet welds • Dimensions (alignment, gaps at root) • Cleanliness (condition of steel surfaces) • Tacking (tack weld quality and location)	P/O**	-	O	-
•		Check welding equipment	O	-	O	-

[a] The fabricator or erector, as applicable, shall maintain a system by which a welder who has welded a joint or member can be identified, Stamps, if used, shall be low stress type.

** Follow performance of this inspection task for ten welds to be made by a given welder, with the welder demonstrating understanding of requirements and possession of skills and tools to verify these items, the Perform designation of this task shall be reduced to Observe, and the welder shall perform this task. Should the inspector determine that the welder has discontinued performance of this task, the task shall be returned to Perform until such time as the inspector has re-established adequate assurance that the welder will perform the inspection tasks listed.

TABLE N5.4-2 COMBINED WITH TABLE J6-2 VISUAL INSPECTION TASKS DURING WELDING

AISC 360	AISC 341	VISUAL INSPECTION TASKS DURING WELDING	QC TASK	QC DOC.	QA TASK	QA DOC.
•	•	WPS followed • Settings on welding equipment • Travel speed • Selected welding materials • Shielding gas type/flow rate • Preheat applied • Interpass temperature maintained (min/max) • Proper position (F, V, H, OH) • Intermix of filler metals avoided unless approved	O	-	O	-
	•	Use of qualified welders	O	-	O	-
•	•	Control and handling of welding consumables • Packaging • Exposure control	O	-	O	-
•	•	No welding over cracked tack welds	O	-	O	-
•	•	Environmental conditions • Wind speed within limits • Precipitation and temperature	O	-	O	-
•	•	Welding techniques • Interpass and final cleaning • Each pass within profile limitations • Each pass meets quality requirements	O	-	O	-
•		Placement and installation of steel headed stud anchors	P	-	P	-

TABLE N5.4-3 COMBINED WITH TABLE J6-3 VISUAL INSPECTION TASKS AFTER WELDING

AISC 360	AISC 341	VISUAL INSPECTION TASKS AFTER WELDING	QC TASK	QC DOC.	QA TASK	QA DOC.
•	•	Welds cleaned	O	-	O	-
•	•	Size, length and location of welds	P	-	P	-
•	•	Welds meet visual acceptance criteria • Crack prohibition • Weld/ base-metal fusion • Crater cross section • Weld profiles and size • Undercut • Porosity	P	D	P	D
•		Arc strikes	P	-	P	-
•		*k*-area[1]	P	D	P	D
•		Weld acceptance or rejection of welded joint or member	P	-	P	-
	•	Placement of reinforcing or contouring fillet welds (if required)	P	D	P	D
•	•	Backing removed, weld tabs removed and finished, and fillet welds added (if required)	P	D	P	D
•	•	Repair activities	P	-	P	D
•		Document acceptance or rejection of welded joint or member	P	D	P	D
•		No prohibited welds have been added without the approval of the EOR.	O	-	O	-

[1] When welding of doubler plates, continuity plates or stiffeners has been performed in the *k*-area, visually inspect the web *k*-area for cracks within 3 in. (75mm) of the weld.

TABLE N5.6-1 COMBINED WITH TABLE J7-1 INSPECTION TASKS PRIOR TO BOLTING

	AISC 360	AISC 341	VISUAL INSPECTION TASKS PRIOR TO BOLTING	QC TASK	QC DOC.	QA TASK	QA DOC.
1.	•		Manufacturer's certifications available for fastener materials	O	-	P	-
2.	•		Fasteners marked in accordance with ASTM requirements	O	-	O	-
3.	•	•	Proper fasteners selected for the joint detail (grade, type, bolt length if threads are to be excluded from shear plane)	O	-	O	-
4.	•	•	Proper bolting procedure selected for joint detail	O	-	O	-
5.	•	•	Connecting elements, including the appropriate faying surface condition and hole preparation, if specified, meet applicable requirements	O	-	O	-
6.	•	•	Pre-installation verification testing by installation personnel observed and documented for fastener assemblies and methods used	P	D	O	D
7.	•	•	Proper storage provided for bolts, nuts, washers and other fastener components	O	-	O	-

TABLE N5.6-2 COMBINED WITH TABLE J7-2 INSPECTION TASKS DURING BOLTING

	AISC 360	AISC 341	VISUAL INSPECTION TASKS DURING BOLTING	QC TASK	QC DOC.	QA TASK	QA DOC.
1.	•	•	Fastener assemblies of suitable condition placed in all holes and washers (if required) and nuts are positioned as required	O	-	O	-
2.	•	•	Joint brought to the snug-tight condition prior to the pretensioning operation	O	-	O	-
3.	•	•	Fastener component not turned by the wrench prevented from rotating	O	-	O	-
4.	•	•	Fasteners are pretensioned in accordance with the RCSC *Specification* progressing systematically from the most rigid point toward the free edges	O	-	O	-

TABLE N5.6-3 COMBINED WITH TABLE J7-3 INSPECTION TASKS AFTER BOLTING

	AISC 360	AISC 341	VISUAL INSPECTION TASKS AFTER BOLTING	QC TASK	QC DOC.	QA TASK	QA DOC.
1.	•	•	Document acceptance or rejection of bolted connections	P	D	P	D

TABLE J9-1 INSPECTION OF COMPOSITE STRUCTURES PRIOR TO CONCRETE PLACEMENT

INSPECTION OF COMPOSITE STRUCTURES PRIOR TO CONCRETE PLACEMENT	QC TASK	QC DOC.	QA TASK	QA DOC.
Material identification of reinforcing steel (Type/Grade)	O	-	O	-
Determination of carbon equivalent for reinforcing steel other than ASTM A706	O	-	O	-
Proper reinforcing steel size, spacing and orientation	O	-	O	-
Reinforcing steel has not been rebent in the field	O	-	O	-
Reinforcing steel has been tied and supported as required	O	-	O	-
Required reinforcing steel clearances have been provided	O	-	O	-
Composite member has required size	O	-	O	-

TABLE J9-2 INSPECTION OF COMPOSITE STRUCTURES DURING CONCRETE PLACEMENT

INSPECTION OF COMPOSITE STRUCTURES DURING CONCRETE PLACEMENT	QC TASK	QC DOC.	QA TASK	QA DOC.
Concrete: Material identification (mix design, compressive strength, maximum large aggreg size, maximum slump)	O	D	O	D
Limits on water added at the truck or pump	O	D	O	D
Proper placement techniques to limit segregation	O	-	O	-

TABLE J9-3 INSPECTION OF COMPOSITE STRUCTURES AFTER CONCRETE PLACEMENT

INSPECTION OF COMPOSITE STRUCTURES AFTER CONCRETE PLACEMENT	QC TASK	QC DOC.	QA TASK	QA DOC.
Achievement of minimum specified concrete compressive strength at specified age	-	D	-	D

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project information:

MOBETTAHS for: LEE'S SUMMIT

520 NW Chipman Rd
Lee's Summit, MO 64086

sheet title: GENERAL STRUCTURAL NOTES

sheet number:

S-004

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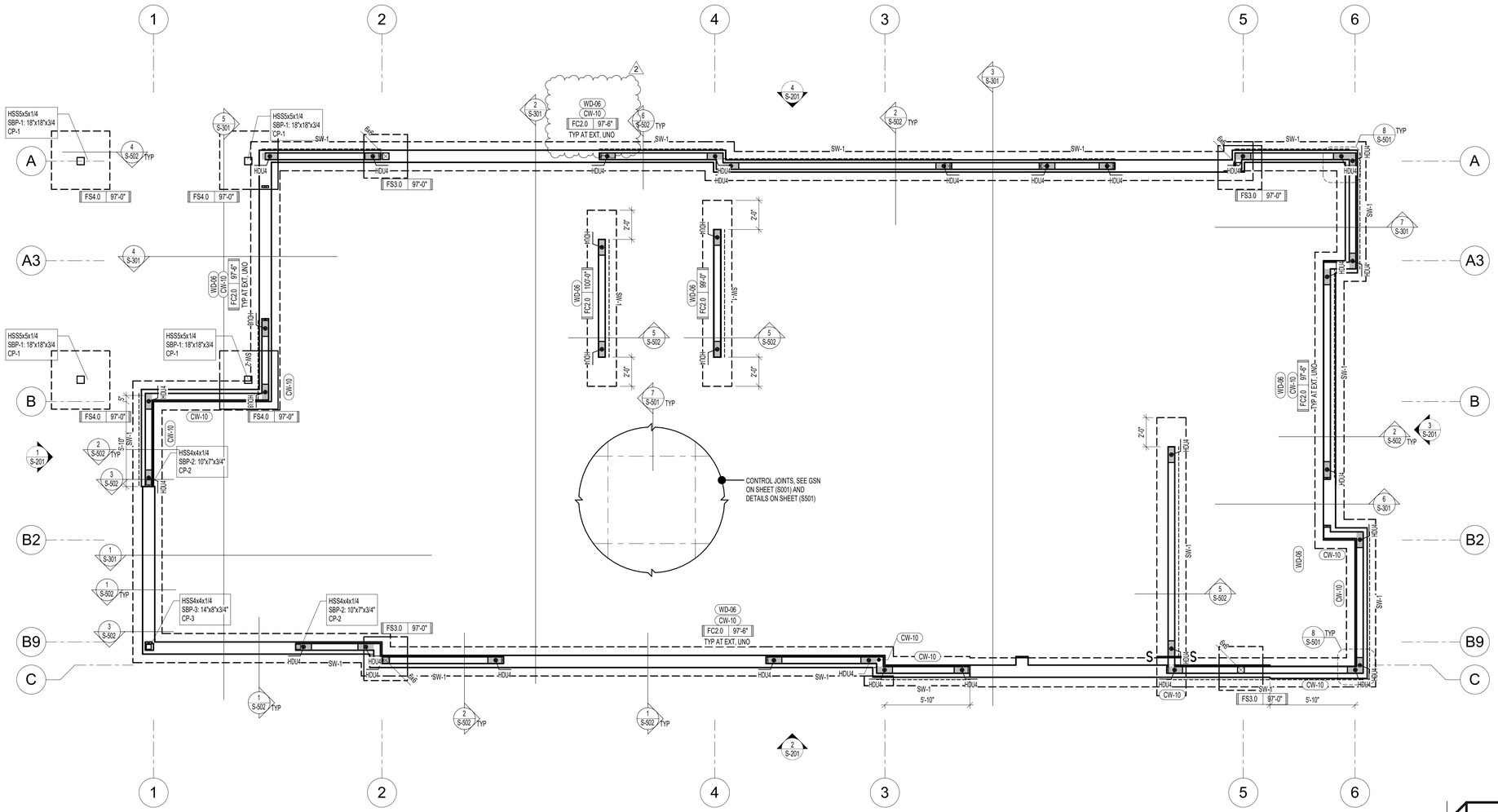
FOOTING AND FOUNDATION PLAN NOTES:

1. FLOOR SLAB SHALL BE 4" UNREINFORCED CONCRETE SLAB ON GRADE OVER 4" FREE-DRAINING GRAVEL.
2. SEE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS AND NON-BEARING WALL LOCATIONS. SEE ARCHITECTURAL DRAWINGS AND MECHANICAL DRAWINGS FOR SLAB ELEVATIONS, SLOPED SLABS, DEPRESSED SLABS, FLOOR DRAINS, ETC. SEE ARCHITECTURAL DRAWINGS AND CIVIL DRAWINGS FOR EXTERIOR CONCRETE WORK AT DOORS, SIDEWALKS, ETC.
3. SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL INFORMATION.
4. SEE SCHEDULES ON (S-800) SHEETS FOR:
   - FOOTINGS
   - BASE PLATES
   - CONCRETE WALLS
   - CONCRETE PIERS
   - REINFORCING SPLICE LENGTHS
   - SHEAR WALLS AND HOLD-DOWNS
   - MASONRY FREE STANDING WALL
   - WOOD BEARING WALLS
5. SEE TYPICAL FOOTING AND FOUNDATION DETAILS ON (S-500) SHEETS FOR:
   - SLAB CONSTRUCTION AND CONTROL JOINTS
   - FOOTING STEPS
   - CORNER BARS
   - PIPES PERPENDICULAR AND PARALLEL TO FOOTINGS
   - DEPRESSED SLABS
   - REINFORCING AT MISCELLANEOUS OPENINGS
   - REINFORCING AT SLAB DISCONTINUITIES
   - FROST COVER AND STRUCTURAL FILL
   - SOLE PLATE ANCHOR BOLTS
   - FLOOR OFFSETS
   - NON-BEARING WALLS

MARKS AND SYMBOLS LEGEND

4 / S-502	SECTION MARK SHEET NUMBER
FTG | EL	FOOTING DESIGNATION TOP ELEVATION
24" ★ 8"	DEPRESSED FOUNDATION WALL, POUR SLAB OVER
S —— S	FOOTING STEP, SEE DETAILS
	FLOOR OFFSET. SEE DETAILS
	DEPRESSED SLAB, SEE ARCHITECTURAL PLANS FOR EXACT LOCATION AND ELEVATION
	CONCRETE WALL
	SHEAR WALL ABOVE, DASHED LINE INDICATES SIDE OF SHEATHING, CIRCLE INDICATES HOLD-DOWN, RECTANGULAR SHADED REGION INDICATES ESTIMATED COMPRESSION POST ASSEMBLY WIDTH (NO MECH PEN), SEE SCHEDULE
	WOOD WALL
⊠	WOOD POST ABOVE, 6x6 BEARING POST, UNO
□	STEEL COLUMN
CJ	CONTROL JOINT
FC-x	CONTINUOUS FOOTING, SEE SCHEDULE
FS-x	SPOT FOOTING, SEE SCHEDULE
HDU-x	HOLD-DOWN TYPE, SEE SCHED
SW-x	WOOD SHEAR WALL, SEE SCHEDULE
CW-X	CONCRETE WALL, SEE SCHEDULE
WD-X	WOOD WALL, SEE SCHEDULE



NORTH

1 / S-101 FOOTING AND FOUNDATION PLAN
SCALE: 1/4" = 1'-0"

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sheet information:

revisions:

num.	description	date
2	Revision 2	04-06-22

CURRENT SET THRU REVISION 02

date:	1-21-22
project number:	21174
project status:	PERMIT SET

original drawing is 24" x 36"
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STATE OF MISSOURI · RONALD W. DUNN · NUMBER 2005031887 · PROFESSIONAL ENGINEER · 04/05/2022

1-21-22
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sheet title: FOOTING AND FOUNDATION PLAN

sheet number: S-101

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ROOF FRAMING PLAN NOTES:

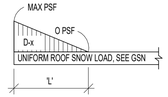
1. TYPICAL ROOF FRAMING IS WOOD TRUSSES AT 32"oc (MAX) UNO. SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL INFORMATION.
2. ALL EXTERIOR WALLS SHALL BE SHEATHED WITH 7/16" SHEATHING AND NAILED WITH 8d NAILS AT 6"oc AT PANEL EDGES AND AT 12"oc IN THE FIELD, TYPICAL, UNLESS NOTED OTHERWISE. SEE SHEAR WALL SCHEDULE FOR ADDITIONAL REQUIREMENTS.
3. TRUSSES, INCLUDING ALL TRUSS CONNECTIONS, SHALL BE PER THE PRE-FABRICATED WOOD TRUSS NOTES SECTION OF THE GENERAL STRUCTURAL NOTES.
4. WEIGHTS AND LOCATIONS OF MECHANICAL EQUIPMENT SHALL BE SUBMITTED TO ARCHITECT IN WRITING FOR REVIEW PRIOR TO FABRICATION OF OR PLACEMENT OF TRUSSES OR OTHER FRAMING MEMBERS.
5. ALL GIRDER TRUSS BEARING LOCATIONS SHALL HAVE MULTIPLE STUDS OR POSTS, AND SHALL BE OF CONTINUOUS FRAMING TO THE FOUNDATION LEVEL BELOW, INCLUDING FULL HEIGHT, FULL DEPTH SQUASH BLOCKING WITHIN THE FLOOR FRAMING.
6. WALL STUDS SHALL BE CONTINUOUS BETWEEN POINTS OF LATERAL SUPPORT SUCH AS ROOFS AND FLOORS. PROVIDE TOP PLATES FOR WALLS AT TRUSS BEARING AND/OR AT LATERAL BRACING LOCATIONS ONLY. DO NOT PLACE TOP PLATES AT UNBRACED LOCATIONS.
7. BEAMS SHOWN ON THIS SHEET OCCUR WITHIN THE ROOF FRAMING SHOWN (FLUSH-FRAMED), UNO.
8. SEE ARCHITECTURAL DRAWINGS FOR ROOF SLOPES, DRAINS, PARAPETS, DECK BEARING ELEVATIONS, CEILING ELEVATIONS, AND SOFFIT ELEVATIONS.
9. SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL INFORMATION.
10. SEE SCHEDULES ON (S-800) SHEETS FOR:
    - HEADERS
    - SHEAR WALLS
    - HOLD-DOWNS AND TIE-DOWNS
    - MINIMUM NAILING
    - ROOF SHEATHING
    - BEARING WALLS AND RIM BOARD
    - FREESTANDING MASONRY WALLS
11. SEE TYPICAL FRAMING DETAILS ON (S-700) SHEETS FOR:
    - BUILT-UP BEAMS AND COLUMNS
    - TOP PLATE SPLICES / STRAPS
    - HOLES AND NOTCHES
    - SHEATHING JOINTS
12. SEE TYPICAL FRAMING DETAILS ON (S-700) SHEETS FOR:
    - FRAMING AT ROOF OPENINGS
    - NON-BEARING WALL CONNECTIONS

MARKS & SYMBOLS LEGEND

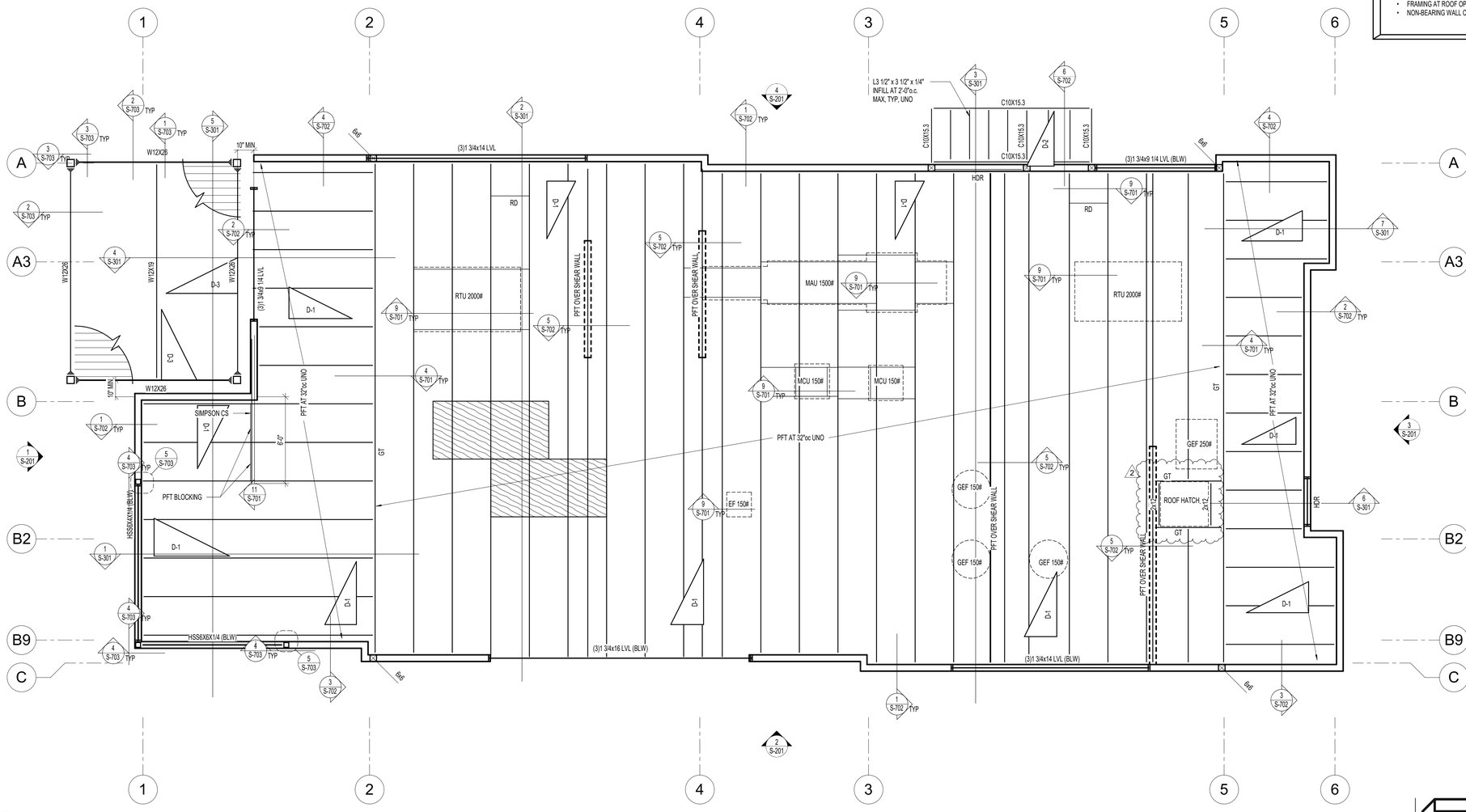
	SECTION MARK SHEET NUMBER
	ROOF OR FLOOR SHEATHING ORIENTATION, SEE SCHEDULE AND GENERAL STRUCTURAL NOTES
	WOOD WALL BELOW
	SHEAR WALL ABOVE, DASHED LINE INDICATES SIDE OF SHEATHING, CIRCLE INDICATES HOLD-DOWN, RECTANGULAR SHADED REGION INDICATES ESTIMATED COMPRESSION POST ASSEMBLY WIDTH (NO MECH PEN), SEE SCHEDULE
⊠	WOOD POST ABOVE, 6x6 BEARING POST, UNO
□	STEEL COLUMN
CS# CMSTC# CMST#	SIMPSON COIL STRAP TIE-DOWN, SEE SCHEDULE
DROP	BEAM OCCURS BELOW FRAMING AT THIS LEVEL
HDR	WOOD HEADER BELOW FRAMING AT THIS LEVEL, SEE SCHEDULE
PFT OVER SW	PREFAB TRUSS OVER SHEAR W ALL BELOW, TRUSS SHALL BE DESIGNED TO TRANSFER 450 PLF IN-PLANE
PFT	PREFAB TRUSSES, SEE GENERAL STRUCTURAL NOTES
RD	ROOF DRAIN, SEE ARCHITECTURAL AND MECHANICAL FOR EXACT LOCATION

SNOW DRIFT LOADING DIAGRAM

D-1	MAX = 36 PSF L = 8' - 7"	D-2	MAX = 29.7 PSF L = 7' - 2"
D-3	MAX = 59 PSF L = 10' - 10"		



WHERE 'L' EXCEEDS LENGTH OF LOWER ROOF, DRIFT TAPERS TO 0 PSF AT THE FAR END OF LOWER ROOF



NORTH

1 S-102 ROOF PLAN
SCALE: 1/4" = 1'-0"

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revisions: ⚠

num.	description	date
2	Revision 2	04-06-22

CURRENT SET THRU REVISION 02

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project number:	21174
project status:	PERMIT SET

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current as of: 4/5/2022 8:42:22 AM

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MOBETTAHS for LEE'S SUMMIT

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Lee's Summit, MO 64086

STATE OF MISSOURI
RONALD D. DUNN
PE 2003013487
PROFESSIONAL ENGINEER
04/05/2022

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sheet title:
ROOF FRAMING PLAN

sheet number:
S-102

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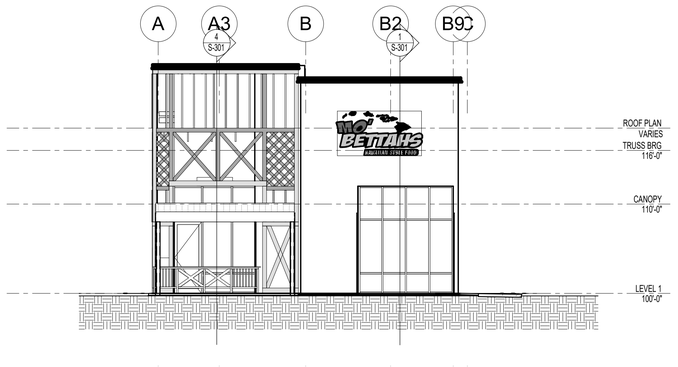
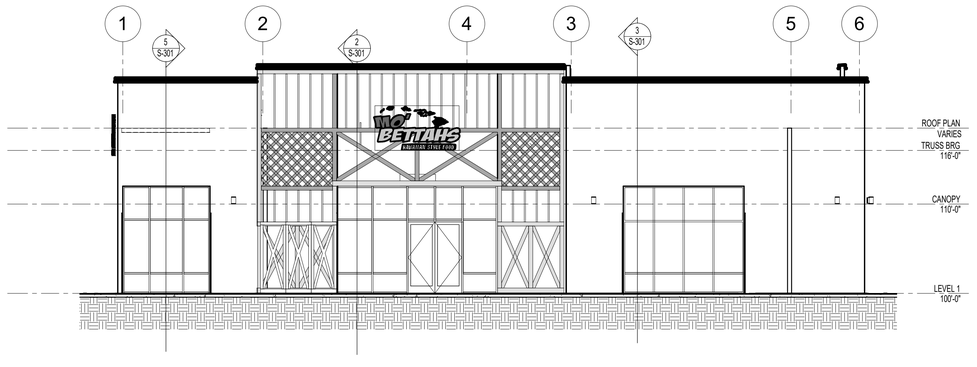
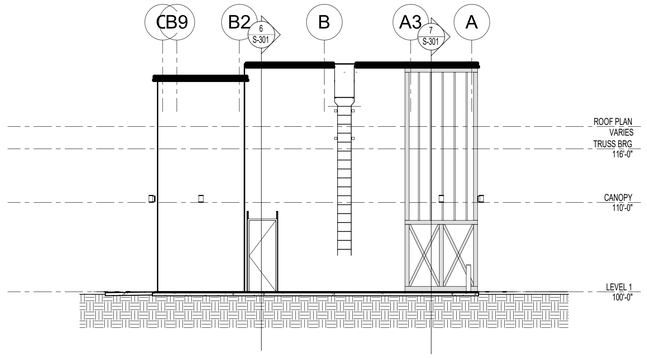


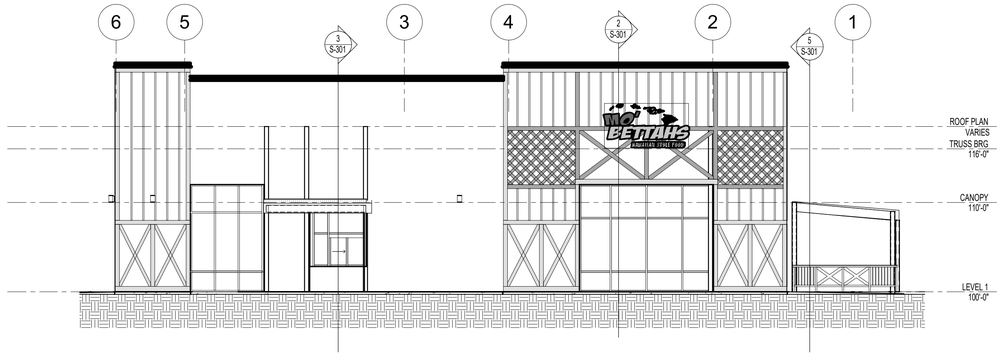
1 S-201 SOUTH ELEVATION
SCALE: 1/8" = 1'-0"



2 S-201 EAST ELEVATION
SCALE: 1/8" = 1'-0"



3 S-201 NORTH ELEVATION
SCALE: 1/8" = 1'-0"



4 S-201 WEST ELEVATION
SCALE: 1/8" = 1'-0"

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RONALD BY DUNN
PE - 2009018187
PROFESSIONAL ENGINEER
01/21/2022

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sheet title: EXTERIOR ELEVATIONS

sheet number:

S-201

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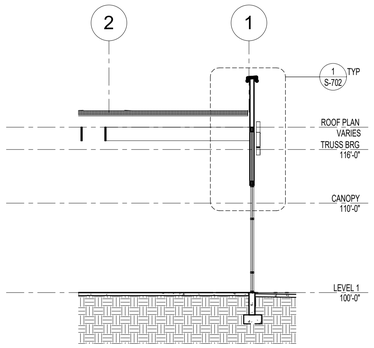
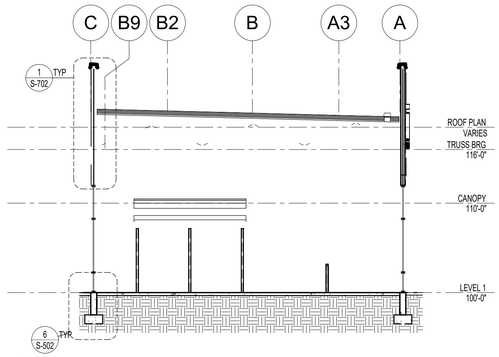
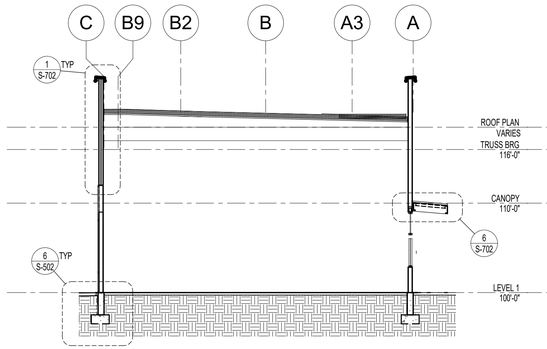


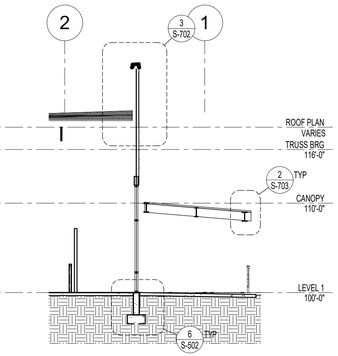
1 BUILDING SECTION
S-301 SCALE: 1/8" = 1'-0"



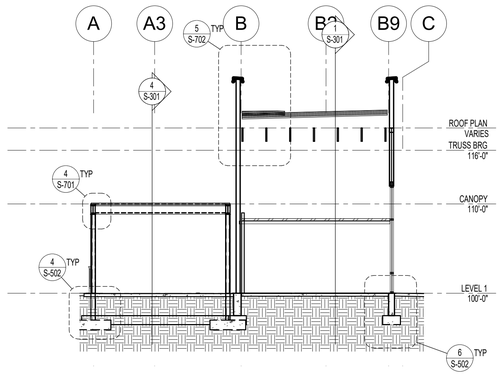
2 BUILDING SECTION
S-301 SCALE: 1/8" = 1'-0"



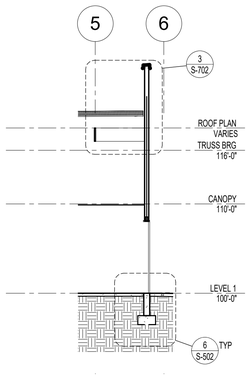
3 BUILDING SECTION
S-301 SCALE: 1/8" = 1'-0"



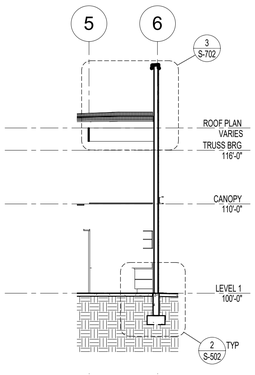
4 BUILDING SECTION
S-301 SCALE: 1/8" = 1'-0"



5 BUILDING SECTION
S-301 SCALE: 1/8" = 1'-0"



6 BUILDING SECTION
S-301 SCALE: 1/8" = 1'-0"



7 BUILDING SECTION
S-301 SCALE: 1/8" = 1'-0"

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STATE OF MISSOURI
RONALD LEE DUNN
PE 2003021457
PROFESSIONAL ENGINEER
01/21/2022

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sheet title:
BUILDING SECTIONS

sheet number:
S-301

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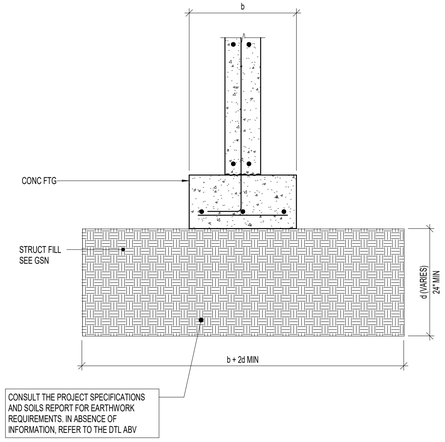
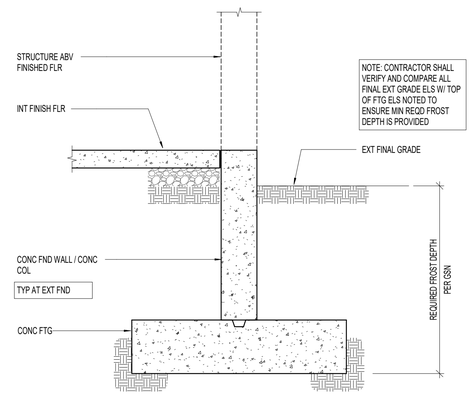


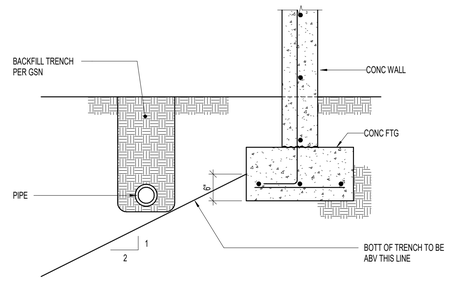
1 S-501 NO SCALE: T-0101

TYPICAL COMPACTED STRUCTURAL FILL



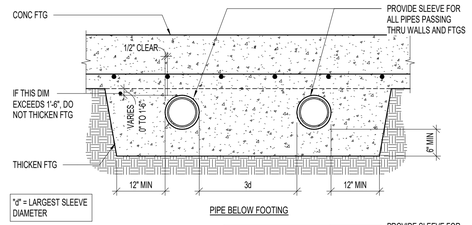
2 S-501 NO SCALE: T-0102

TYPICAL FOOTING DEPTH DETAIL FOR FROST PROTECTION



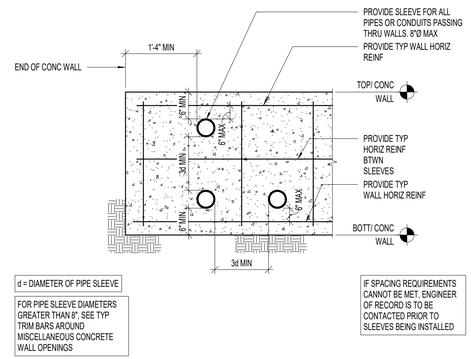
3 S-501 NO SCALE: T-0103

TYPICAL PIPE PARALLEL TO FOOTING



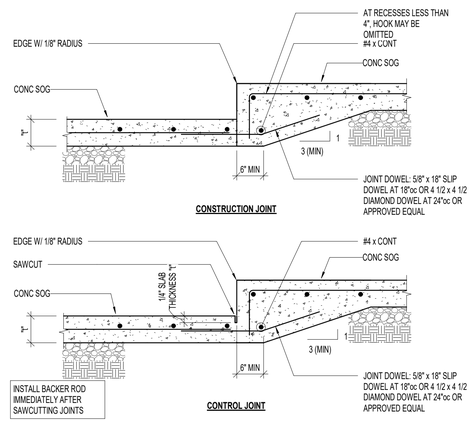
4 S-501 NO SCALE: T-0104

TYPICAL PIPE PERPENDICULAR TO FOOTING



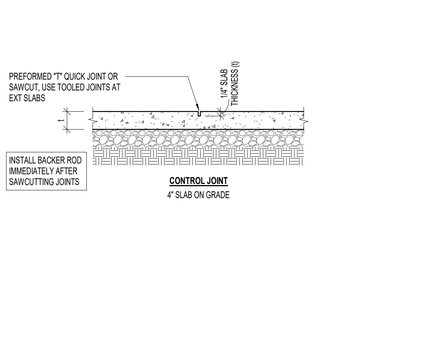
5 S-501 NO SCALE: T-0105

TYPICAL SMALL PIPE OR CONDUIT THROUGH CONCRETE WALL



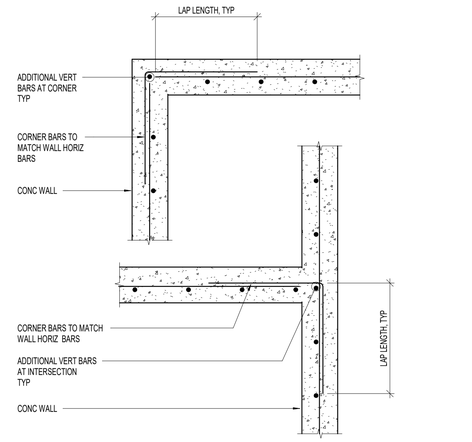
6 S-501 NO SCALE: T-0106

TYPICAL SLAB ON GRADE DEPRESSION DETAILS



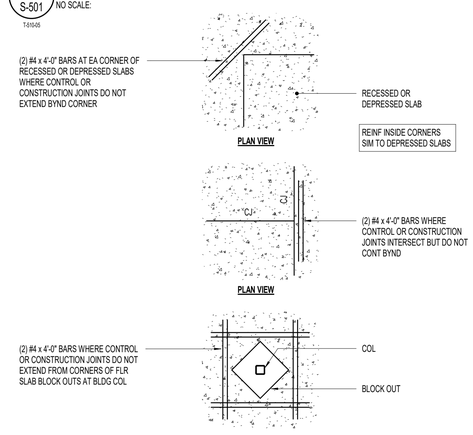
7 S-501 NO SCALE: T-0107

TYPICAL SLAB ON GRADE JOINTS



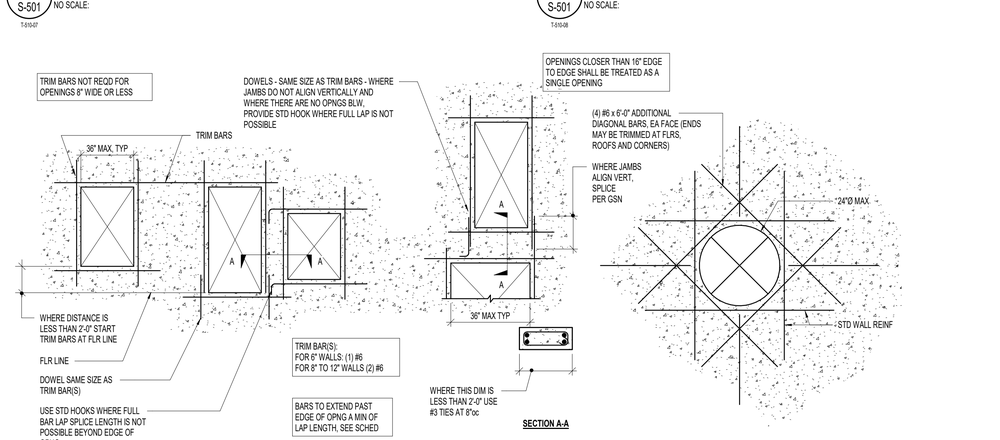
8 S-501 NO SCALE: T-0108

TYPICAL CORNER BARS FOR SINGLE REINFORCED CONCRETE WALLS (PLAN VIEW)



9 S-501 NO SCALE: T-0109

TYPICAL SLAB ON GRADE DISCONTINUITIES REQUIRING ADDITIONAL REINFORCING



10 S-501 NO SCALE: T-0110

TYPICAL TRIM BARS AROUND MISCELLANEOUS CONCRETE WALL OPENINGS UNLESS NOTED OTHERWISE

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CURRENT SET THRU REVISION 02

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sheet title: FOOTING AND FOUNDATION DETAILS

sheet number: S-501

STATE OF MISSOURI
RONALD DEE DUNN
PE - 2003021307
01/21/2022
PROFESSIONAL ENGINEER

1-21-22
PERMIT SET

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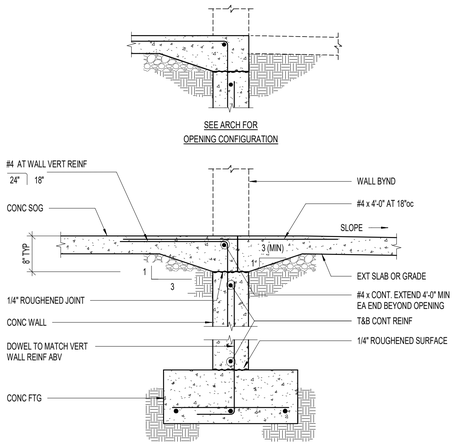
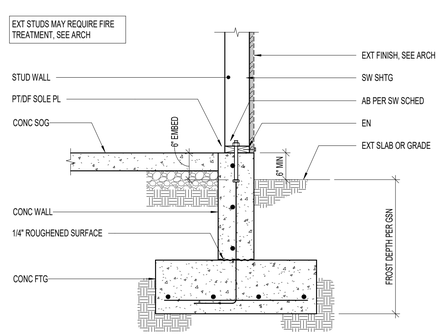
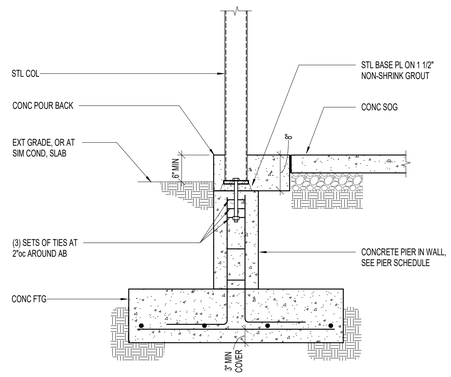


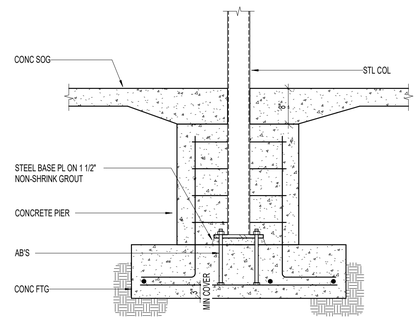
1 S-502 — FOUNDATION WALL AT OPENING DETAIL
NO SCALE:
T-550-10



2 S-502 — TYPICAL PERIMETER WALL
NO SCALE:
T-550-07



3 S-502 — STEEL COLUMN TO FOOTING AT STEEL TRELLIS
NO SCALE:
T-521-02



4 S-502 — STEEL COLUMN TO FOOTING AT STEEL TRELLIS
NO SCALE:
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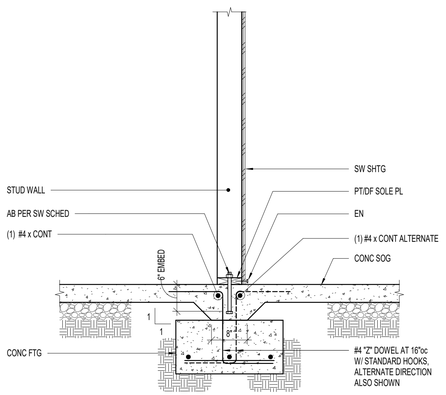
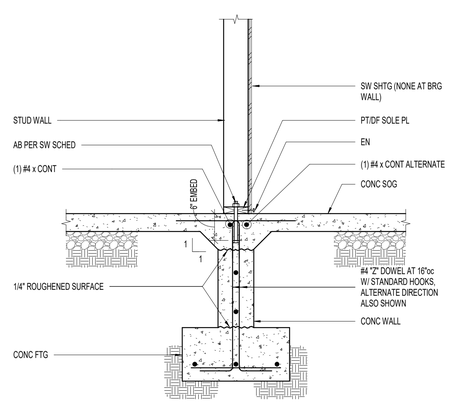
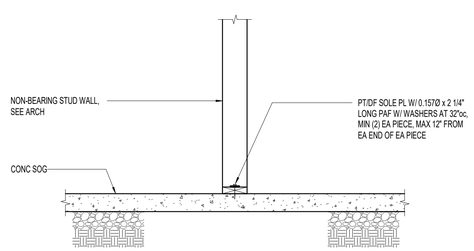


5 S-502 — TYPICAL INTERIOR SHEAR WALL
NO SCALE:
T-550-03



6 S-502 — FOUNDATION WALL AT OPENING DETAIL
NO SCALE:
T-550-10



7 S-502 — TYPICAL NON-BEARING WALL AT SLAB ON GRADE
NO SCALE:
T-550-05

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RONALD W. DUNN
PE - ENGINEER
01/21/2022
PROFESSIONAL ENGINEER

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sheet number:

S-502

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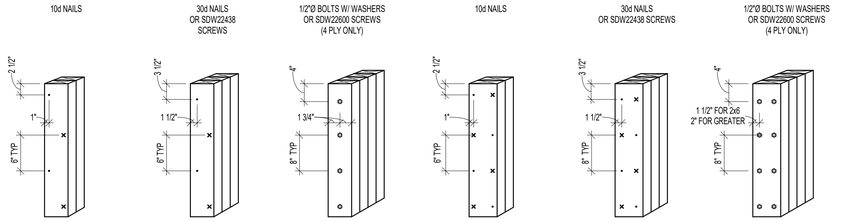
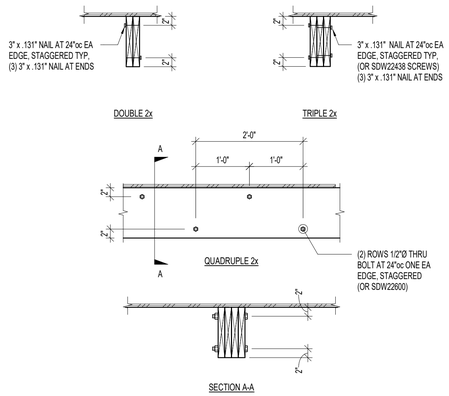
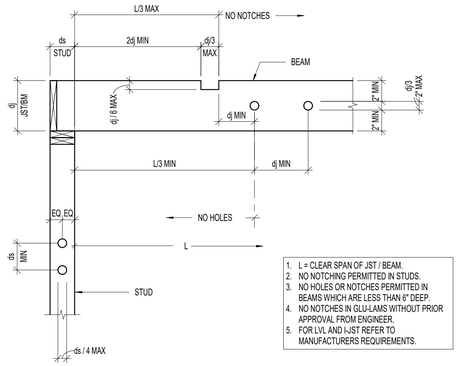
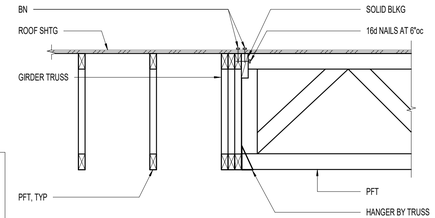


WOOD BEAM NOTES:
1. BUILT-UP LVL BEAMS SHALL BE CONNECTED PER MANUFACTURER'S GUIDELINES.

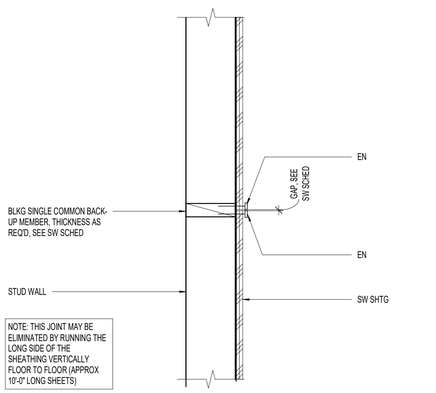




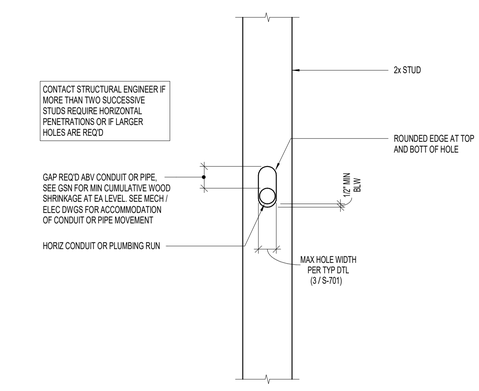
1. L = CLEAR SPAN OF JST. / BEAM.
2. NO NOTCHING PERMITTED IN STUDS.
3. NO HOLES OR NOTCHES PERMITTED IN BEAMS WHICH ARE LESS THAN 6" DEEP.
4. NO NOTCHES IN GLU-LAMS WITHOUT PRIOR APPROVAL FROM ENGINEER.
5. FOR LVL AND I-JST REFER TO MANUFACTURERS REQUIREMENTS.



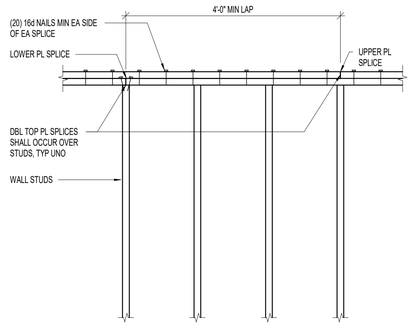
1 TYPICAL BUILT-UP 2x WOOD COLUMN CONNECTIONS
S-701 · NO SCALE: · T-690-01



CONTACT STRUCTURAL ENGINEER IF MORE THAN TWO SUCCESSIVE STUDS REQUIRE HORIZONTAL PENETRATIONS OR IF LARGER HOLES ARE REQ'D

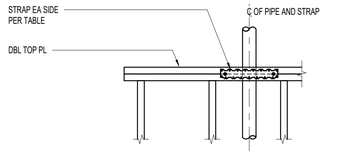


2 TYPICAL BUILT-UP WOOD BEAM CONNECTIONS
S-701 · NO SCALE: · T-690-02



3 TYPICAL PERMITTED NOTCHES AND HOLES
S-701 · NO SCALE: · T-690-03

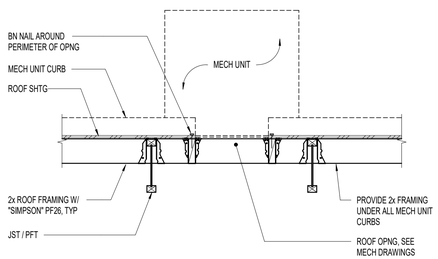
TYP TOP PL STRAP AT PIPE TABLE	
HOLE SIZE	STRAPS
LESS THAN 1/3 STUD WIDTH	NONE REQUIRED
LESS THAN 2/3 STUD WIDTH	ST2122 WITH (8) 16d EA END
OVER 2/3 STUD WIDTH	ST2215 WITH (10) 16d EA END



WHERE MULTIPLE PIPES OCCUR IN A WALL, SPACE PENETRATIONS FAR ENOUGH APART TO PREVENT OVERLAPPING OF STRAPS.

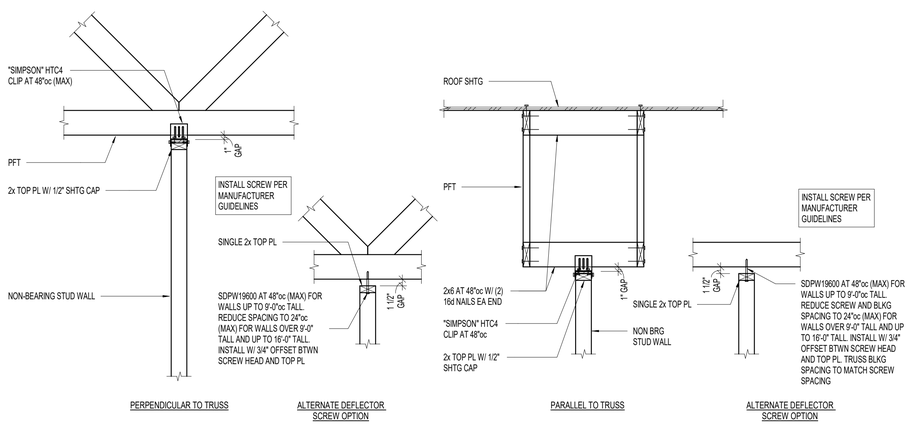
TYPICAL TOP PLATE STRAP AT PIPE

4 TYPICAL GIRDER TRUSS
S-701 · NO SCALE: · T-690-07



5 TYPICAL SHEATHING JOINT NOT AT FLOORS
S-701 · NO SCALE: · T-690-11

6 TYPICAL HORIZONTAL STUD PENETRATION
S-701 · NO SCALE: · T-690-12

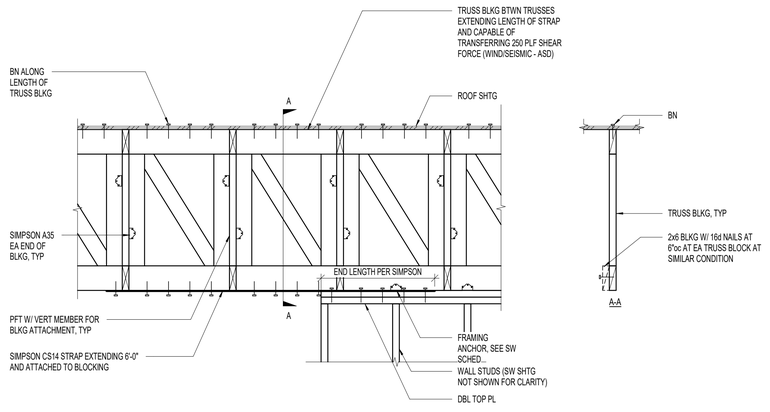


7 TYPICAL TOP PLATE SPLICE
S-701 · NO SCALE: · T-690-04

8 TYPICAL TOP PLATE STRAP AT PIPE
S-701 · NO SCALE: · T-690-05

9 TYPICAL FRAMING AT ROOF OPENING (24"x24" MAX)
S-701 · NO SCALE: · T-750-01

10 TYPICAL NON-BEARING WALL TO TRUSS CONNECTION
S-701 · NO SCALE: · T-750-03



11 TYPICAL ROOF DRAG STRAP
S-701 · NO SCALE: · T-750-05

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ROOF FRAMING DETAILS

sheet number:
S-701

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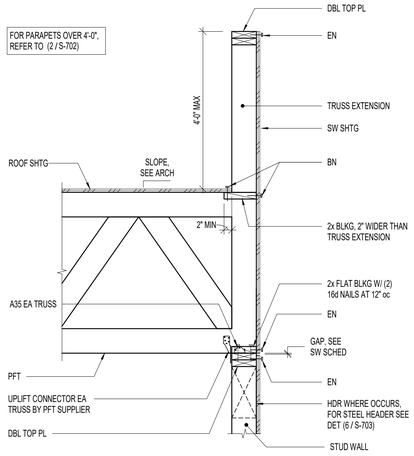
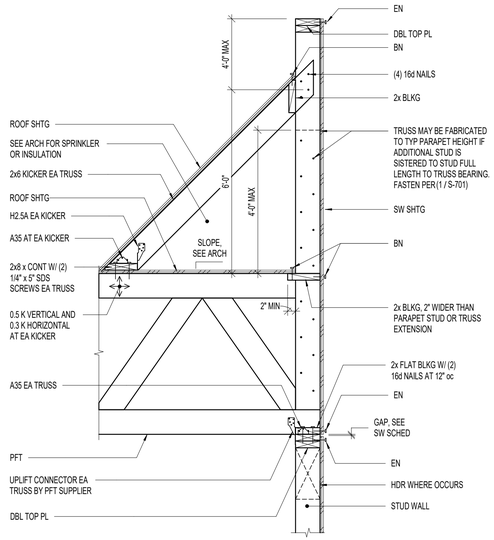


1 S-702 — PFT AT PERIMETER BEARING

NO SCALE:

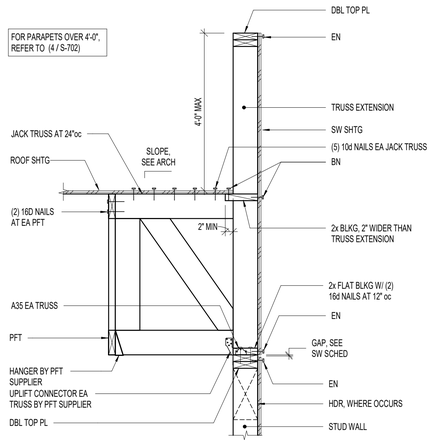
T-702-03



2 S-702 — PFT AT PERIMETER BEARING

NO SCALE:

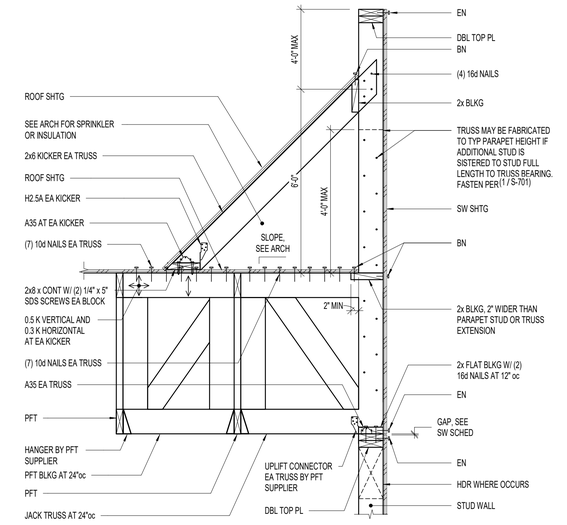
T-702-03



3 S-702 — PFT AT PERIMETER NON-BEARING

NO SCALE:

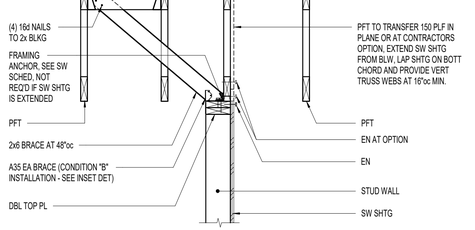
T-702-04



4 S-702 — PFT AT PERIMETER NON-BEARING

NO SCALE:

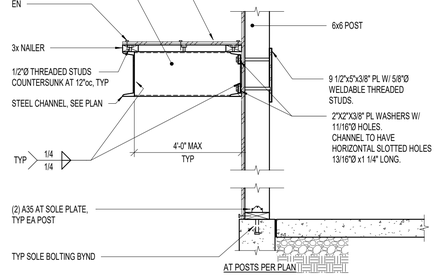
T-702-04



5 S-702 — PFT OVER SHEAR WALL

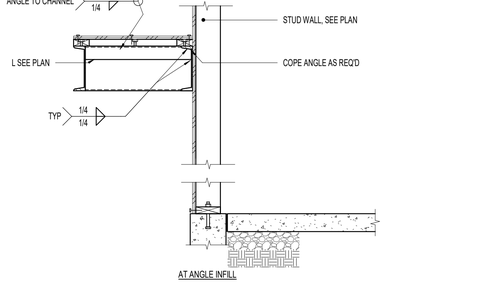
NO SCALE:

T-702-11



6 S-702 — CANOPY CONNECTION DETAIL

NO SCALE:



7 S-702 — CANOPY CONNECTION DETAIL

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MOBETTAHS for LEE'S SUMMIT

520 NW Chipman Rd
Lee's Summit, MO 64086

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STATE OF MISSOURI
RONALD DUNN
PE - 2010021801
01/21/2022
PROFESSIONAL ENGINEER

1-21-22
PERMIT SET

NOTE:
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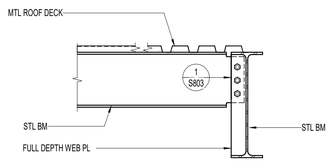
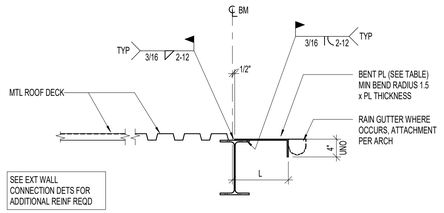
sheet title:
ROOF FRAMING DETAILS

sheet number:
S-702

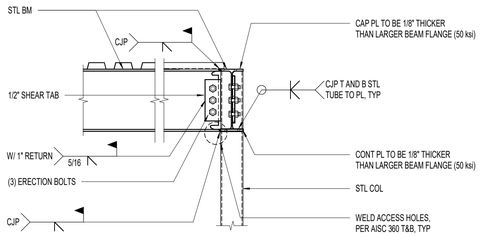


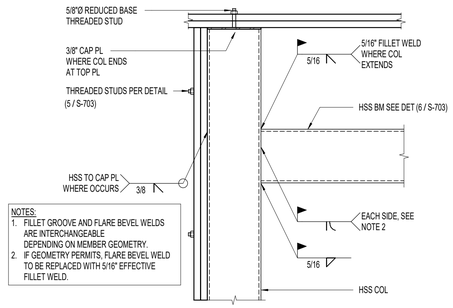


SEE EXT WALL CONNECTION DETS FOR ADDITIONAL REINF REQD

L	CLOSURE PL
< 6"	3/16"
6" ≤ 10"	1/4"
10" ≤ 12"	5/16"

3/8" BENT PL MAY BE USED FOR OVERHANG < 16"





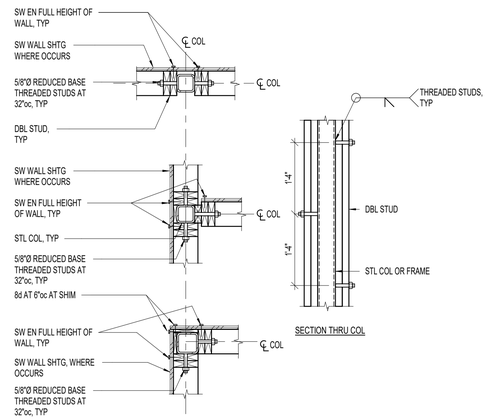
NOTES:
1. FILLET GROOVE AND FLARE BEVEL WELDS ARE INTERCHANGEABLE DEPENDING ON MEMBER GEOMETRY.
2. IF GEOMETRY PERMITS, FLARE BEVEL WELD TO BE REPLACED WITH 5/16" EFFECTIVE FILLET WELD.

1 TYPICAL STEEL BEAM TO STEEL BEAM CONNECTION DETAILS
S-703 NO SCALE:
T-725-16

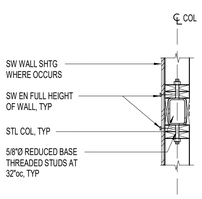
2 TYPICAL CLOSURE PLATE (OVERHANG "L" ≤ 12")
S-703 NO SCALE:
T-723-01

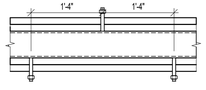
3 TYPICAL TRELLIS FRAMING CORNER/EDGE
S-703 NO SCALE:
T-690-05

4 TYPICAL HSS TO HSS CONNECTION
S-703 NO SCALE:
T-620-02



SECTION THRU COL





5 TYPICAL STEEL COLUMN IN WOOD STUD WALLS
S-703 NO SCALE:
T-650-07

6 TYPICAL STEEL HEADER IN WOOD STUD WALLS
S-703 NO SCALE:
T-650-07

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sheet information:

revisions: ⚠

num.	description	date

CURRENT SET THRU REVISION 02

date:	1-21-22
project number:	21174
project status:	PERMIT SET

original drawing is 24" x 36"
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project information:

MOBETTAHS for LEE'S SUMMIT

520 NW Chipman Rd
Lee's Summit, MO 64086

sheet title:

ROOF FRAMING DETAILS

sheet number:

S-703

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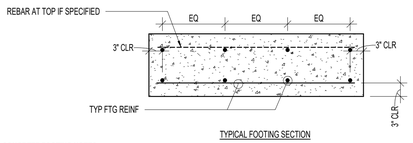
CONCRETE FOOTING SCHEDULE

MARK	WIDTH	LENGTH	DEPTH	REINFORCING CROSSWISE				REINFORCING LENGTHWISE				COMMENTS
				NO	SIZE	LENGTH	SPACING	NO	SIZE	LENGTH	SPACING	
FC2.0	2'-0"		12"					3	#4	CONT	EQ	
FS3.0	3'-0"	3' - 0"	12"	3	#5	2' - 6"	EQ	3	#5	2' - 6"	EQ	
FS4.0	4'-0"	4' - 0"	13"	4	#5	3' - 6"	EQ	4	#5	3' - 6"	EQ	TOP AND BOTTOM



TYPICAL FOOTING SECTION

CONCRETE FOOTING NOTES:

1. PLACE ALL FOOTING REINFORCING IN BOTTOM OF FOOTING WITH 3" CLEAR CONCRETE COVER, UNLESS NOTED OTHERWISE.
2. TOP REINFORCING, WHERE SPECIFIED, SHALL BE PLACED IN THE TOP OF THE FOOTING WITH 2" MINIMUM CONCRETE COVER.
3. IF FOOTINGS ARE EARTH FORMED, FOOTING WIDTH AND LENGTH SHALL BE 6" WIDER AND LONGER THAN SCHEDULED.
4. SEE GENERAL STRUCTURAL NOTES FOR ALL OTHER REQUIREMENTS.
5. NOT ALL FOOTINGS MAY BE USED, SEE FOUNDATION PLAN FOR FOOTING MARKS.
6. RUN CONTINUOUS BARS IN "FC" FOOTING THROUGH INTERSECTED "FS" FOOTINGS.
7. EXTEND CONTINUOUS FOOTINGS 1'-0" BEYOND END OF WALL, EXCEPT AT INTERSECTING CORNERS OR UNO ON PLAN.
8. FOOTINGS MAY BE THICKER THAN THE SCHEDULED DEPTH IN AREAS SURROUNDING ANCHOR BOLTS OR HOLD DOWNS, SEE ANCHORAGE AND HOLD DOWN DETAILS.
9. IN FC FOOTINGS CROSSWISE BAR SHALL BE BELOW THE LENGTHWISE BAR

1 S-801 CONCRETE FOOTING SCHEDULE

NO SCALE:

CONCRETE WALL SCHEDULE

MARK	THICKNESS	REINFORCING			WALL TYPE	COMMENTS
		VERTICAL	HORIZONTAL	TOP AND BOTTOM		
CW-08	8"	(1) #4 AT 18"oc	(1) #4 AT 12"oc	(1) #4	A	__

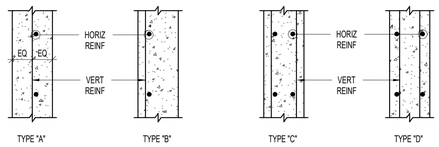
CONCRETE WALL NOTES:

1. SEE GENERAL STRUCTURAL NOTES FOR COVER AND OTHER REQUIREMENTS NOT NOTED IN SCHEDULE.
2. CONCRETE WALLS NOT DESIGNATED ON THE PLANS SHALL BE REINFORCED AS FOLLOWS:

THICKNESS	VERTICAL REINFORCING	HORIZONTAL REINFORCING
6"	#4 BARS AT 18"oc	#4 BARS AT 16"oc
8"	#4 BARS AT 18"oc	#4 BARS AT 12"oc
10"	#4 BARS AT 16"oc	#5 BARS AT 15"oc
12"	#4 BARS AT 18"oc EA FACE	#4 BARS AT 16"oc EA FACE

3. PLACE STEEL IN THE CENTER OF THE WALL (EXCEPT TYPE 'B' AND RETAINING WALLS). WALLS THICKER THAN 10" SHALL HAVE TWO CURTAINS OF REINFORCEMENT (PLACED NEAR EA FACE OF THE WALL), UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS.

WALL REINFORCEMENT PLACEMENT TYPES:



2 S-801 CONCRETE WALL SCHEDULE

NO SCALE:

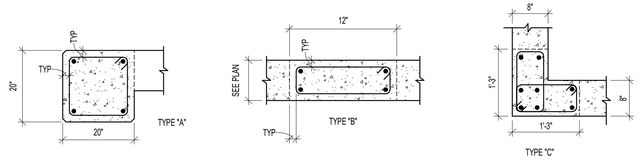
T-81241

CONCRETE PIER SCHEDULE

MARK	PIER SIZE	REINFORCING		TYPE
		VERTICAL	TIES	
CP -1	20" x20"	(4) #6	(1) #3 AT 6"oc	A
CP -2	8" x12"	(4) #4	(1) #3 AT 6"oc	B
CP -3	8" x14"	(8) #4	(2) #3 AT 6"oc	C

CONCRETE PIER NOTES:

1. INSTALL (3) SETS OF TIES WITHIN THE TOP 5" AT THE TOP OF ALL PIERS (UNO).
2. ALTERNATE POSITION OF HOOKS IN PLACING SUCCESSIVE SETS OF TIES.



3 S-801 CONCRETE PIER SCHEDULE

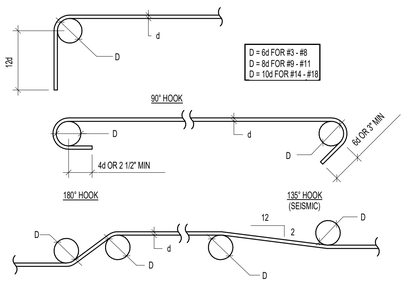
NO SCALE:

T-81143

CONCRETE REINFORCING BAR LAP SPLICE SCHEDULE

BAR SIZE	fc = 3500 PSI				fc = 4000 PSI				fc = 4500 PSI				fc = 5000 PSI			
	REGULAR		TOP		REGULAR		TOP		REGULAR		TOP		REGULAR		TOP	
	CLASS		CLASS		CLASS		CLASS		CLASS		CLASS		CLASS		CLASS	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
#3	16"	21"	21"	26"	15"	19"	19"	25"	14"	18"	18"	23"	13"	17"	17"	22"
#4	21"	27"	27"	36"	19"	25"	25"	33"	18"	24"	24"	31"	17"	23"	23"	29"
#5	26"	34"	34"	44"	24"	31"	31"	41"	23"	30"	30"	38"	22"	28"	28"	36"
#6	31"	40"	40"	52"	29"	37"	37"	49"	27"	35"	35"	46"	26"	34"	34"	44"
#7	45"	59"	59"	75"	42"	54"	54"	71"	40"	51"	51"	67"	38"	49"	49"	63"
#8	51"	67"	67"	82"	48"	62"	62"	81"	45"	59"	59"	76"	43"	56"	56"	72"
#9	58"	75"	75"	98"	54"	70"	70"	91"	51"	66"	66"	86"	48"	63"	63"	81"
#10	65"	85"	85"	110"	61"	79"	79"	102"	57"	74"	74"	96"	54"	71"	71"	92"
#11	73"	94"	94"	122"	67"	87"	87"	114"	64"	82"	82"	107"	60"	78"	78"	102"

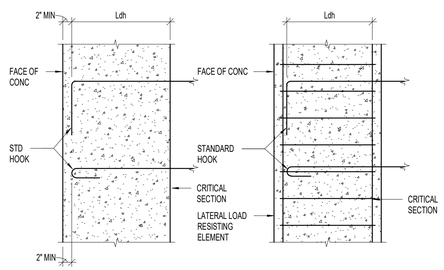
NOTES:
1. THIS SCHEDULE SHALL BE USED FOR ALL SPLICES, UNLESS NOTED OTHERWISE.
2. HORIZONTAL BARS ARE CLASSIFIED AS TOP BARS WHERE 12", OR MORE, OF FRESH CONCRETE IS CAST BELOW THE REINFORCING BARS.
3. CLASS 'B' SPLICES SHALL BE USED FOR ALL SPLICES UNLESS NOTED OTHERWISE.
4. TIES AND STIRRUPS SHALL NOT BE SPLICED.
5. FOR ALL LIGHTWEIGHT CONCRETE, LAP LENGTHS SHALL BE MULTIPLIED BY 1.3.
6. FOR ALL EPOXY COATED BARS, LAP LENGTHS SHALL BE MULTIPLIED BY 1.5 FOR BARS WITH CLEAR COVER LESS THAN 3 BAR DIAMETERS OR CLEAR SPACING LESS THAN 6 BAR DIAMETERS, OTHERWISE MULTIPLY BY 1.2.
7. LAP LENGTHS SHALL BE MULTIPLIED BY 1.25 AT SHEARWALL BOUNDARY ELEMENTS.
8. DEVELOPMENT LENGTH 'Ld' IS EQUAL TO CLASS 'A' SPLICE.
9. IF REINFORCING HAS CLEAR COVER LESS THAN ONE BAR DIAMETER, LAP LENGTHS SHALL BE MULTIPLIED BY 1.5.
10. IF REINFORCING IS NOT ENCLOSED IN TIES OR STIRRUPS AND IS SPACED TIGHTER THAN 2 BAR DIAMETERS ON CENTER, LAP LENGTHS SHALL BE MULTIPLIED BY 1.5.
11. LAP LENGTHS SHALL BE MULTIPLIED BY 1.25 FOR GRADE 75 REBAR.
12. WHERE BARS OF DIFFERENT SIZES ARE LAPPED, THE SPLICE LENGTH SHALL BE THE LARGER OF 'Ld' OF THE LARGER BARS AND THE SPLICE LENGTH OF THE SMALLER BAR.



HOOKED BAR DEVELOPMENT LENGTHS, Ldh

BAR SIZE	fc = 3000 PSI	fc = 4000 PSI	fc = 4500 PSI	fc = 5000 PSI	fc = 6000 PSI
#3	9"	8"	7"	7"	6"
#4	11"	10"	9"	9"	8"
#5	14"	12"	12"	11"	10"
#6	17"	15"	14"	13"	12"
#7	20"	17"	16"	15"	14"
#8	22"	19"	18"	17"	16"
#9	25"	22"	21"	20"	18"
#10	28"	25"	23"	22"	20"
#11	31"	27"	26"	24"	22"

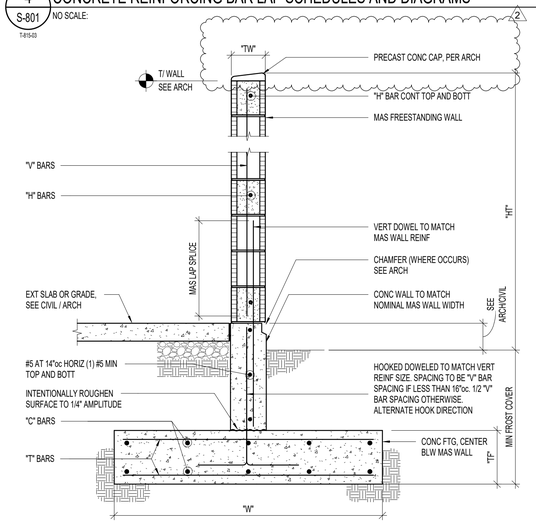
NOTES:
1. FOR GRADE 75 REBAR, MULTIPLY LENGTHS BY 1.25.
2. FOR LIGHTWEIGHT CONCRETE, MULTIPLY LENGTHS BY 1.3.
3. FOR EPOXY COATED REINFORCEMENT, MULTIPLY LENGTHS BY 1.2.
4. FOR HOOKS WITH 2.5" MINIMUM SIDE COVER PERPENDICULAR TO PLANE OF HOOK, MULTIPLY LENGTHS BY 0.7.
5. FOR LATERAL LOAD RESISTING ELEMENTS, CRITICAL SECTIONS SHALL BE TAKEN AS THE FACE OF TIE / HOOP AT CONFINED CORES OF COLUMN JOINTS OR SHEAR WALL BOUNDARY ZONE.



4 S-801 CONCRETE REINFORCING BAR LAP SCHEDULES AND DIAGRAMS

NO SCALE:

T-815-03



SINGLE REINFORCED MASONRY WALL

MASONRY FREESTANDING WALL SCHEDULE

WALL GEOMETRY		FTG GEOMETRY		"V" BARS		"H" BARS		"T" BARS		"C" BARS	
"TW"	"HT"	"W"	"TF"	SIZE	SPACE	SIZE	SPACE	SIZE	SPACE	SIZE	SPACE
8"	4'-0"	2'-6"	12"	(1) #5	32"oc	(1) #5	48"oc	#4	18"oc	#4	18"oc
8"	6'-0"	3'-6"	12"	(1) #5	32"oc	(1) #5	48"oc	#4	18"oc	#4	18"oc
8"	8'-0"	4'-0"	12"	(1) #5	32"oc	(1) #5	48"oc	#4	18"oc	#4	18"oc
8"	10'-0"	5'-0"	12"	(1) #6	16"oc	(1) #5	48"oc	#4	18"oc	#4	18"oc

2000 PSF

MASONRY FREESTANDING WALL NOTES:

1. f'm = 2000 psi (MIN), f'c = 3000 psi (MIN). SEE GSN FOR MORE STRINGENT REQUIREMENTS IF APPLICABLE..
2. WALLS DESIGNED FOR WIND SPEED OF 115 MPH.
3. WALLS ARE DESIGNED FOR MAX SDS OF 1.2. NO CLADDING
4. "HT" IS A MAXIMUM DIMENSION.
5. WALLS ARE FOR MINIMUM 30" FROST DEPTH.

5 S-801 MASONRY FREE STANDING WALL SCHEDULE

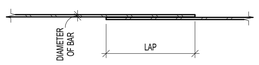
NO SCALE:

T-802-04

LAP LENGTH

SINGLE BAR CENTERED IN CELL

REBAR SIZE	THICKNESS		
	8"	10"	12"
	f'm = 2000psi		
#3	12"		
#4	13"	12"	
#5	20"	16"	13"
#6	38"	29"	24"
#7	52"	40"	33"
#8 *	72"	61"	50"
#9 *	81"	78"	64"



MASONRY REINFORCING BAR LAP SPLICE NOTES:

1. MECHANICAL SPLICES ARE REQUIRED FOR BARS IN MASONRY GREATER THAN #9 BARS.
2. MECHANICAL SPLICES MAY BE USED IN LIEU OF LAP SPLICES SHOWN.
3. MECHANICAL SPLICES SHALL DEVELOP 125% OF SPECIFIED YIELD STRENGTH OF BAR.
4. MASONRY DEVELOPMENT LENGTHS SHOWN SHALL BE INCREASED BY 50% WHERE REBAR IS COATED WITH EPOXY.

* BARS MAY DIFFICULT TO LAP SPLICE DUE TO CONGESTION. COUPLERS RECOMMENDED.

6 S-801 MASONRY REINFORCING BAR LAP SPLICE SCHEDULE

NO SCALE:

T-805-03

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sheet information:

revisions:

num.	description	date
2	Revision 2	04-06-22

CURRENT SET THRU REVISION 02

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MOBETTAHS for LEE'S SUMMIT

520 NW Chipman Rd
Lee's Summit, MO 64086

sheet title:

CONCRETE SCHEDULES

sheet number:

S-801

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MINIMUM NAILING SCHEDULE

CONNECTION	NAILING
BRDG TO JST, TOE NAIL EA END	(2) 8d
BOTTOM PL TO JST OR BLK, FACE NAIL	16d AT 1'-4"oc OR 3" x 0.131 AT 1'-0"oc
STUD TO TOP OR BOTTOM PLATE, END NAIL	(2) 16d OR (3) 3" x 0.131
STUD TO STUD, FACE NAIL	16d AT 2'-0"oc OR 3" x 0.131 AT 1'-4"oc
TOP PL TO TOP PL, FACE NAIL	16d AT 1'-4"oc OR 3" x 0.131 AT 1'-0"oc
BLK BTWN JST OR RAFTERS TO TOP PL, TOE NAIL	(3) 8d
RIM JST TO TOP PL, TOE NAIL	8d AT 0'-6"oc
TOP PL, LAPS AT WALL INTERSECTION, FACE NAIL	(2) 16d OR (3) 3" x 0.131
CONT HEADER, TWO PIECES	16d AT 1'-4"oc ALONG EA EDGE OR 16d BOX AT 1'-0" ALONG EA EDGE
CEILING JST TO PL, TOE NAIL	(3) 8d
CONT HEADER TO STUD, TOE NAIL	(4) 8d
CEILING JST, LAPS OVER PARTITIONS, FACE NAIL	(3) 16d OR (4) 3" x 0.131
RAFTER TO PL, TOE NAIL	(3) 8d
1" BRACE TO EA STUD AND PL, FACE NAIL	(2) 8d
STUD TO STUD AT WALL CORNERS	16d AT 1'-4"oc OR 3" x 0.131 AT 1'-0"oc
BUILT-UP GIRDER AND BM	3" x 0.131 AT 24"oc AT TOP AND BOTT AND STAGGERED, (3) 3" x 0.131 AT ENDS AND AT EA SPLICE
COLLAR TIE TO RAFTER, FACE NAIL	(3) 10d
ROOF RAFTER TO 2x RIDGE BM OR HIP TOE NAIL END NAIL	(3) 10d
JST TO BAND JST, END NAIL	(2) 16d OR (3) 3" x 0.131
LEDGER STRIP, FACE NAIL AT EA JOIST	(3) 16d OR (4) 3" x 0.131
*PLYWOOD AND PARTICLEBOARD:	(3) 16d OR (4) 3" x 0.131
SUBFLOOR, ROOF AND WALL SHEATHING (TO FRAMING)	
1/2" AND LESS	8d
19/32" - 3/4"	8d OR 10d
1 1/8" - 1 1/4	10d
COMBINATION SUB FLOOR - UNDERLAYMENT (TO FRAMING)	
3/4" AND LESS	8d
7/8" - 1"	8d OR 10d
7/8" - 1 1/4"	10d

*NAILS SPACED AT 6 INCHES ON CENTER AT EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS, EXCEPT 6" INCHES AT ALL SUPPORTS WHERE SPANS ARE 48 INCHES OR MORE. FOR NAILING OF DIAPHRAGMS AND SHEAR WALLS, REFER TO THE APPROPRIATE SCHEDULE.

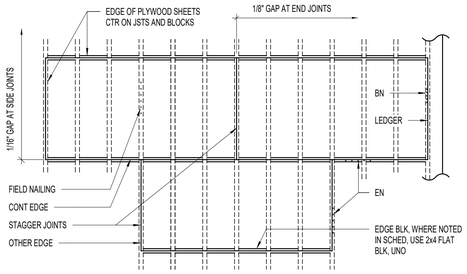
NOTES:
1. ALL NAILS ARE COMMON NAILS, UNO.
2. EXCERPT FROM IBC TABLE 2304.10.1. ADDL NAILING OPTIONS NOT SHOWN MAY BE USED, EXCLUDING STAPLES.
3. NAILING REQUIREMENTS SHOWN HERE DO NOT REPLACE HARDWARE ON THE PLANS OR DETAILS.

SHEATHING SCHEDULE AT ROOF AND FLOOR

LOCATION	WOOD SHEATHING THICKNESS	NAIL SIZE	EDGE NAIL SPACING		FIELD NAIL SPACING	BOUNDARY NAIL SPACING	FULLY BLOCKED
			CONT EDGE *	OTHER EDGE			
ROOF	7/8"	10d	6"	6"	12"oc	6"	NO

* NOT APPLICABLE FOR UNBLOCKED DIAPHRAGMS

NOTES:
1. ALL FLOOR SHEATHING SHALL BE APA RATED SHEATHING WITH A MINIMUM SPAN RATING OF 48/24. ALL ROOF SHEATHING SHALL BE APA RATED SHEATHING WITH A MINIMUM SPAN RATING OF 40/20. USE OSB INSTEAD OF PLYWOOD UNLESS OTHERWISE APPROVED BY THE EOR.
2. NAIL ROOF SHEATHING TO SUPPORTS. GLUE AND NAIL FLOOR SHEATHING TO SUPPORTS.
3. USE COMMON NAILS (8d DIAMETER = 0.131", 10d DIAMETER = 0.148"). RING SHANK NAILS WITH EQUAL OR GREATER DIAMETER MAY BE USED ATFLOOR SHEATHING AT CONTRACTOR'S OPTION. MINIMUM NAIL PENETRATION INTO FRAMING MEMBERS, 8d = 1 3/8", 10d = 1 1/2".
4. DRIVE NAILS WITH NAIL HEADS FLUSH WITH THE SURFACE OF THE SHEATHING. DO NOT OVER DRIVE OR UNDER DRIVE NAILS. EDGE NAILS SHALL BE PLACED 3/8" FROM EDGE OF PANEL.
5. PANEL EDGES PERPENDICULAR TO SUPPORTS SHALL BE UNBLOCKED UNLESS FULLY BLOCKED IS SPECIFICALLY NOTED. PROVIDE PANEL EDGENAILING AS SPECIFIED ALONG ALL SUPPORTED EDGES (ALL EDGES IF FULLY BLOCKED), BOUNDARIES, TOP PLATES OF SHEAR WALLS, STRAPS, COLLECTORS, AND AT ALL OTHER LOCATIONS AS INDICATED AND/OR REQUIRED FOR A COMPLETE INSTALLATION.
6. ALL SHEATHING PANELS SHALL HAVE A MINIMUM WIDTH OF 2'-0", UNLESS PANEL IS FULLY BLOCKED AND NAILED TO ADJACENT PANELS.
7. PLACE ALL SHEATHING PANELS JOINTS ALONG THE CENTER OF A SINGLE COMMON BACK-UP MEMBER, TYPICAL.
8. ALL FLOOR SHEATHING TO BE TONGUE AND GROOVE. GLUE TONGUE AND GROOVE JOINT.
9. EXTERIOR FLOOR SHEATHING SHALL BE PLYWOOD (NOT OSB) WHEN REQUIRED BY THE ARCHITECT.



BEARING WALL FRAMING SCHEDULE

LEVEL	EXTERIOR	INTERIOR	CORRIDOR	NOTES
1ST FLOOR	2x6 AT 16"oc	2x6 AT 16"oc	2x6 AT 16"oc	-

NOTES:
1. FOR TYPICAL TOP PLATE SPLICE, SEE DETAIL (7 / S-701)
2. PROVIDE RIM BOARD AT ALL LEVELS AS FOLLOWS, UNO. AT DOUBLED STUDS, PROVIDE THE RIM FOR THE AVERAGE SINGLE STUD SPACING ((2) 2x6 AT 16"oc = (1) 2x6 AT 8"oc)

2x6 WALL STUD SPACING BELOW RIM	RIM	REQUIRED VERTICAL CAPACITY (ASD)
16"oc OR GREATER	1 1/2" LSL / OSB	3900 plf
12"oc	1 3/4" LSL	5200 plf
8"oc	3 1/2" LSL	7800 plf

2x4 WALL STUD SPACING BELOW RIM	RIM	REQUIRED VERTICAL CAPACITY (ASD)
16"oc OR GREATER	1 1/2" LSL / OSB	2500 plf
12"oc	1 1/2" LSL / OSB	3300 plf
8"oc	1 3/4" LSL	5000 plf

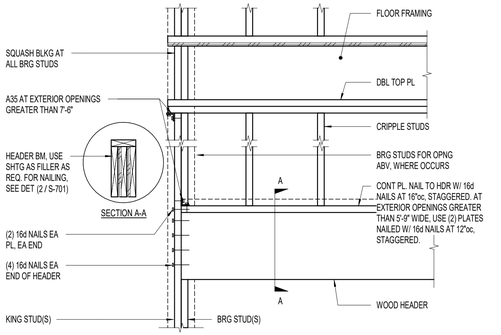
3. RIM BOARD THICKNESS MAY NEED TO BE INCREASED TO ACCOMMODATE SHEAR WALL SILL NAILING WHERE REQUIRED. SEE SHEAR WALL SCHEDULE NOTE 15. THE WIDER RIM SHALL GOVERN.

1 S-802 — MINIMUM NAILING SCHEDULE
NO SCALE:

HEADER SCHEDULE

EXTERIOR WALL				INTERIOR WALL			
SPAN (ft)	SIZE	NUMBER OF TRIM STUDS*	NUMBER OF KING STUDS	SPAN	SIZE	NUMBER OF TRIM STUDS*	NUMBER OF KING STUDS
0'-0" > < 3'-0"	(3) 2x8	1	2	0'-0" > < 3'-0"	(3) 2x8	2	1
3'-0" > < 6'-0"	(3) 2x12	2	2	3'-0" > < 6'-0"	(3) 2x10	3	1
6'-0" > < 8'-0"	6x10	3	2	6'-0" > < 8'-0"	(3) 2x12	3	1
> 8'-0"	SEE PLAN			> 8'-0"	SEE PLAN		

*WHERE HEADERS DO NOT STACK AT ALL LEVELS, THE TRIMMERS AT THE LOWEST HEADER ARE TO CARRY DOWN TO THE TRANSFER SLAB

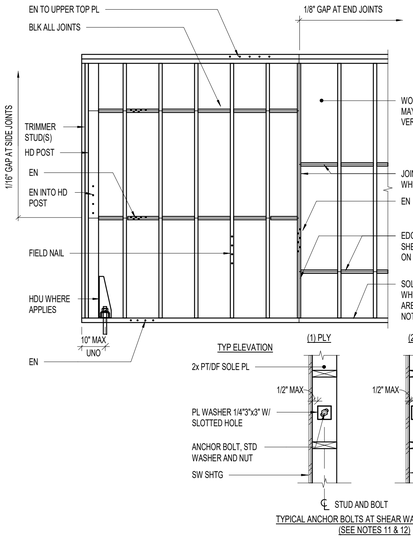


2 S-802 — SHEATHING SCHEDULE AT ROOF AND FLOOR
NO SCALE:

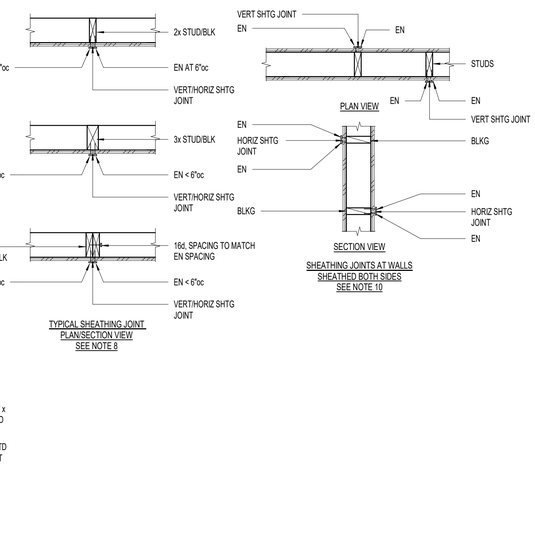
SHEAR WALL SCHEDULE

MARK	SHTG THICKNESS	BOTH SIDES SHEATHED	NAIL SIZE	EDGE NAIL SPACING (EN)	STUD/ BLKG AT JOINT	SILL NAILING (ROWS) AT BOTT OF WALL (SEE NOTE 15)	FRAMING ANCHOR AT TOP OF WALL (SEE NOTE 15)	SOLE BOLTING TO CONCRETE (SEE NOTE 12)	HD POST
SW-1	7/16"	NO	8d	6"	2x	(1) 16d AT 8"oc	(1) A35 AT 16"oc	5/8"Ø AT 24"oc	(2) 2X6s
SW-2	7/16"	NO	8d	2"	3x	(2) 16d AT 10"oc	(1) A35 AT 16"oc	5/8"Ø AT 24"oc	(2) 2X6s

NOTES:
1. ALL WALL SHEATHING SHALL BE APA RATED SHEATHING WITH A MINIMUM SPAN INDEX OF 24/16. USE OSB INSTEAD OF PLYWOOD UNLESS OTHERWISE APPROVED BY THE EOR.
2. ALL EXTERIOR WALLS SHALL BE SHEATHED WITH 7/16" SHEATHING AND NAILED WITH 8d NAILS AT 6"oc AT PANEL EDGES AND AT 12"oc IN THE FIELD, TYPICAL, UNO. FASTEN SOLE PLATE TO FOUNDATION WITH 5/8"Ø ANCHOR BOLTS AT 48"oc, TYPICAL UNO. SEE SHEAR WALL SCHEDULE FOR ADDITIONAL REQUIREMENTS.
3. SHEATHING AT EXTERIOR WALLS MAY NEED TO BE FIRE-TREATED. SEE ARCHITECTURAL DRAWINGS.
4. USE COMMON NAILS (8d DIAMETER = 0.131", 10d DIAMETER = 0.148"). MINIMUM NAIL PENETRATION INTO FRAMING MEMBERS, 8d = 1 1/2", 10d = 1 5/8".
5. DRIVE NAILS WITH NAIL HEADS FLUSH WITH THE SURFACE OF THE SHEATHING. DO NOT OVER DRIVE OR UNDER DRIVE THE NAILS. EDGE NAILS SHALL BE PLACED 3/8" FROM EDGE OF PANEL.
6. ALL PANEL EDGES SHALL BE FULLY BLOCKED, UNO. PROVIDE PANEL EDGE NAILING AS SPECIFIED ALONG ALL PANEL EDGES, UPPER TOP PLATES, SILL PLATES, HOLD-DOWN ELEMENTS, STRAPS, COLLECTORS, AND AT ALL OTHER LOCATIONS AS INDICATED AND/OR AS REQUIRED FOR A COMPLETE INSTALLATION.
7. PROVIDE FIELD NAILING AT 12"oc TYPICAL FOR ALL SHEATHED WALLS.
8. PLACE ALL SHEATHING PANELS WITH A 1/8" GAP AT END JOINTS, 1/16" GAP AT SIDE JOINTS. PLACE ALL SHEATHING PANEL JOINTS ALONG THE CENTER OF A SINGLE COMMON BACK-UP MEMBER, TYPICAL (EXCEPT AS NOTED BELOW). SEE SCHEDULE FOR THICKNESS REQUIREMENTS FOR BACK-UP MEMBER (STUDS, BLOCKING). AS AN ALTERNATE, (2) 2x MEMBERS MAY BE USED INSTEAD OF A 3x MEMBER FOR STUDS, PLATES, OR BLOCKING AT SHEATHING PANEL JOINTS PROVIDED THE (2) 2x MEMBERS ARE STITCH NAILED WITH 16d NAILS AT SPACING TO MATCH THE PANEL EDGE NAIL SPACING SHOWN IN THE SCHEDULE. SEE SKETCH.
9. DO NOT SPLICE SHEATHING ALONG TOP PLATES OR SILL PLATES UNLESS THE PLATE MEETS THE MINIMUM THICKNESS INDICATED IN THE SCHEDULE.
10. AT WALLS WITH SHEATHING ON EACH FACE OF THE WALL, STAGGER ALL PANEL JOINTS ON ONE FACE OF THE WALL FROM THE PANEL JOINTS ON THE OTHER FACE OF THE WALL, BOTH HORIZONTAL AND VERTICAL JOINTS. SEE SKETCH.
11. SOLE PLATES AT THE FOUNDATION LEVEL SHALL BE 2x MATERIAL, EXCEPT WHEN BOTH FACES OF THE WALL ARE SHEATHED THEY SHALL BE 3x MATERIAL, TYPICAL, UNO. SEE SKETCH.
12. ALL ANCHOR BOLTS IN SOLE PLATES SHALL BE POSITIONED AND TIED INTO PLACE PRIOR TO CASTING CONCRETE. PLACE ANCHOR BOLTS ALONG CENTERLINE OF STUD WALL. SHIFT LAYOUT OF STUDS AS REQUIRED TO MISS ANCHOR BOLTS. PROVIDE A PLATE WASHER BELOW EACH ANCHOR BOLT NUT. THE PLATE WASHER SHALL EXTEND TO WITHIN 1/2" OF THE FACE OF THE SHEATHING. MINIMUM SIZE OF PLATE WASHER SHALL BE 3"x3"x1/4". HOWEVER, AT WALLS WITH SHEATHING ON EACH FACE OF THE WALL, THE PLATE WASHER WILL NEED TO EXTEND TO WITHIN 1/2" OF EACH FACE OF SHEATHING. PLATE WASHERS MAY HAVE A DIAGONALLY SLOTTED HOLE WITH A WIDTH OF UP TO THE DIAMETER OF THE BOLT PLUS 3/16" AND A LENGTH OF 1 3/4" PROVIDED A STANDARD CUT WASHER IS PLACED BETWEEN THE PLATE WASHER AND THE NUT. ANCHOR BOLTS SHALL HAVE 6" MINIMUM EMBED TO THE TOP OF THE J-BOLT OR NUT. SEE SKETCH.
13. PROVIDE A HOLD-DOWN AT EACH END OF EACH SHEAR WALL. SEE THE TYPICAL SHEAR WALL AND HOLD-DOWN DETAILS. PLACEMENT OF HOLD-DOWNS SHALL ALLOW FOR THE CORRECT NUMBER OF TRIMMER AND KING POSTS AT OPENINGS. HOLD-DOWN POSTS MAY SERVE AS KING POSTS OF EQUIVALENT SIZE. PLACE CONTINUOUS ROD HOLD DOWN ROD NO MORE THAN 10" FROM END OF SHEAR WALL, WITH REMAINING COMPRESSION POSTS PLACED TO THE INSIDE. PLACE 'HDU' TYPE HOLD DOWNS WITHIN 10" OF END OF WALL.
14. WHERE PERPENDICULAR SHEAR WALLS MEET AT A COMMON CORNER, USE THE LARGER HOLD-DOWN SPECIFIED FOR EACH WALL AND NAIL THE SHEATHING FROM EACH WALL TO THE HOLD DOWN POST. IF SHEATHING FROM BOTH WALLS CANNOT ATTACH TO THE SAME HOLD-DOWN POST, INSTALL BOTH HOLD-DOWNS. AT CONTINUOUS ANCHOR ROD TYPE HOLD DOWNS, INSTALL BOTH HOLD DOWNS. SEE HOLD DOWN DETAILS.
15. THE SILL NAILING AND FRAMING ANCHOR PORTIONS OF THE SCHEDULE ONLY APPLY WHERE VERTICAL WALL SHEATHING IS INTERRUPTED BY FLOOR FRAMING ELEMENTS. IN CASES WHERE SILL NAILING IS NOT REQUIRED, SILL PLATES SHALL BE FASTENED TO WOOD BELOW WITH 16d NAILS AT 8"oc. USE RIM TYPE A FOR 1 OR 2 ROWS OF SILL NAILING. USE RIM TYPE B OR C FOR 3 OR 4 ROWS OF SILL NAILING. USE RIM TYPE C FOR 5 OR 6 ROWS OF SILL NAILING. SEE SKETCH.



3 S-802 — BEARING WALL FRAMING SCHEDULE
NO SCALE:

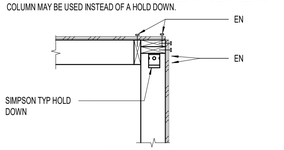


4 S-802 — HEADER SCHEDULE
NO SCALE:

'HDU' TYPE HOLD-DOWN SCHEDULE

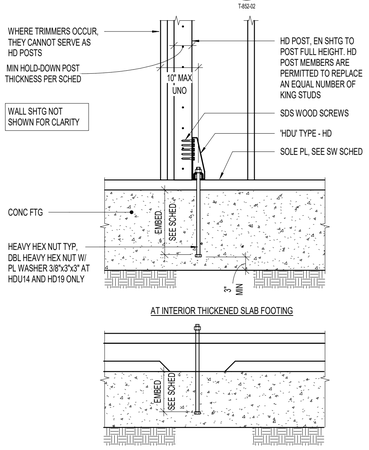
MARK	MIN HOLD-DOWN POST	F1554-GR36 ANCHOR BOLT Ø	EMBED DEPTH SEE NOTE 3
HDU2	(2) 2x6 OR (3) 2x4	5/8"	0'-6"
HDU8	(3) 2x6 OR (4) 2x4	7/8"	0'-7"

NOTES:
1. INCREASE FOOTING DEPTH WHERE EMBEDMENT LENGTH PLUS 3" IS GREATER THAN FOOTING DEPTH SPECIFIED.
2. USE ALL SDS WOOD SCREWS PROVIDED WITH HOLD-DOWN.
3. EMBED DEPTHS ASSUME A 12" MINIMUM DISTANCE TO EDGE OF FOOTING. (15" FOR HDU14)
4. AT LOCATIONS WHERE A STEEL COLUMN IS AT THE END OF A SHEAR WALL THE COLUMN MAY BE USED INSTEAD OF A HOLD DOWN.



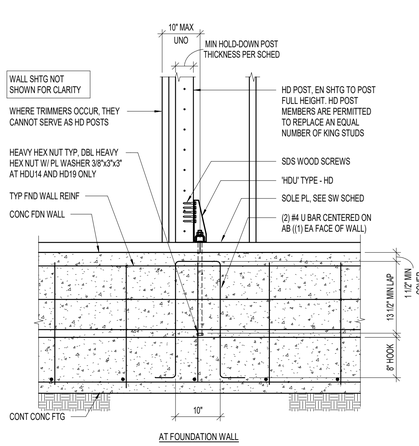
PLAN VIEW
CORNER AT HDU TYP HOLD DOWN

5 S-802 — SHEAR WALL SCHEDULE AND TYPICAL DETAILS)
NO SCALE:



AT INTERIOR THICKENED SLAB FOOTING

AT INTERIOR DROP FOOTING (SIMILAR TO ABOVE)

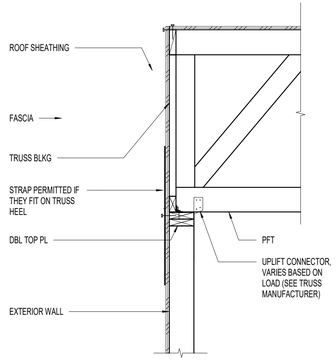


AT FOUNDATION WALL

6 S-802 — 'HDU' TYPE HOLD-DOWN SCHEDULE
NO SCALE:

CONNECTOR OPTIONS

SIMPSON CONNECTOR	UPLIFT CAPACITY (lbs)
H1*	480
H2A	525
H2.5A*	700
SDWC15600*	805
CS20	1030
H10A*	1040
(2) SDWC15600*	1200 (COND A/B)
H14*	1275
CS16	1705
LGT2	2040
(2)CS20	2060
CS14	2490
(3)CS20	3090
(2)CS16	3410
CMSTC16**	4690
(2)CS14	4980
(3)CS16	5115
CMST14**	6475
(3)CS14	7470
CMST12**	9215



EXTERIOR CONDITION

UPLIFT CONNECTOR OPTIONS AT ROOF TRUSSES (BY PFT SUPPLIER)

7 S-802 — NO SCALE:

* FOR UPLIFT CONNECTORS THAT CONNECT PFT TO DOUBLE TOP PLATE ONLY, CONNECT DOUBLE TOP PLATE TO POST BELOW WITH THE SAME CONNECTOR OR ANOTHER CONNECTION OF EQUAL OR GREATER CAPACITY

** VERIFY STRAP LENGTH OF CONNECTION VS TRUSS HEIGHT AT POINT OF ATTACHMENT

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1-21-22
PERMIT SET

NOTE:
THESE STRUCTURAL DRAWINGS ARE BASED ON ARCHITECTURAL DRAWINGS DATED 12.09.2021

DIMENSIONS AND ELEVATIONS, AS THEY RELATE TO THE BUILDING IN GENERAL, i.e. GRID TO GRID DIMENSIONS OR DECK BEARING ELEVATIONS, ARE SUPPLIED BY THE ARCHITECT. THEY ARE PROVIDED ON THE STRUCTURAL PLANS AND DETAILS FOR THE CONVENIENCE OF THE CONTRACTOR. VERIFY DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS.

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num.	description	date

CURRENT SET THRU REVISION 02

date: 1-21-22
project number: 21174
project status: PERMIT SET
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current as of: 1/21/2022 11:42:22 AM

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sheet title: WOOD SCHEDULES

sheet number: S-802

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STEEL COLUMN NOTES:

1. ALL ANCHOR BOLTS SHALL BE ASTM F1554 GRADE 55 (AT CONTRATOR'S OPTION, GRADE 55 ANCHORS MAY BE SUBSTITUTED WITH GRADE 105 ANCHORS). UNLESS NOTED OTHERWISE, ALL COLUMNS SHALL BE INSTALLED WITH HEADED (OR DOUBLE NUT) ANCHOR BOLTS. PROJECT ANCHOR BOLTS 4" MINIMUM ABOVE THE TOP OF THE BASE PLATE.
2. ANCHOR BOLTS SHALL NOT BE WELDED (INCLUDING TACK WELDS).
3. IF DESIRED SPLICE LOCATIONS DIFFER FROM THOSE LEVELS SHOWN ON PLAN, NOTIFY STRUCTURAL ENGINEER PRIOR TO FABRICATION. WRITTEN APPROVAL REQUIRED.
4. ALL CAP PLATE BOLTS SHALL BE 3/4"Ø A325N BOLTS, TYPICAL UNLESS NOTED OTHERWISE.
5. ALL CAP PLATES TO BE 3/4" THICK, UNO.
8. SEE GENERAL STRUCTURAL NOTES FOR OTHER REQUIREMENTS.
9. ERECTION AIDS TO BE REMOVED AFTER COLUMN SPLICING.
10. FOR HSS 12x12 COLUMNS OR SMALLER, ANCHOR BOLTS SHOULD BE 3/4"Ø WITH 8" EMBEDS WITH 1/4"x2" PLATE WASHERS. FOR HSS10x10 COLUMNS OR SMALLER HSS COLUMNS, ASTM F1554 GRADE 36 RODS MAY BE SUBSTITUTED.
11. OVERSIZED HOLES MAY BE USED IN BASE PLATES PROVIDED THEY DO NOT EXCEED THE FOLLOWING SIZES:
    3/4"Ø BOLT ≤ 1 1/16"Ø
12. HOLES IN PLATE WASHERS SHOULD BE 1/16" GREATER THAN BOLT DIMENSION.
13. NON-SHRINK GROUT UNDER BASE PLATES SHALL BE 1 1/2" THICK UNO.
14. COLUMN LOCATIONS SHOWN ON SCHEDULE ARE APPROXIMATE. PLEASE SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS.
15. DO NOT WELD IN WIDE FLANGE "K" ZONES. WELDS ARE NOT REQUIRED AT "K" ZONES.
16. WELDING OF PLATE WASHERS TO BASE PLATES MAY BE OMITTED AT SINGLE STORY COLUMNS AND HSS 8x8 COLUMNS OR SMALLER.

(A) = PLATE WASHER THICKNESS - 1/16" (MAX WELD SIZE 5/16")

(B) = 2" FOR HSS16x16 OTHERWISE 1".

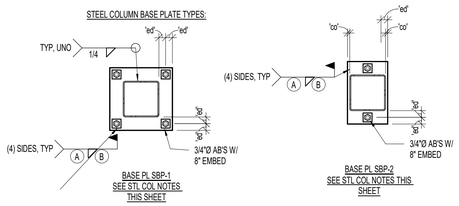
BASE PL LEGEND:

'co' = 1/2" MINIMUM
'ed' = 2" MINIMUM
'bc' = 3" MINIMUM

CAP PL LEGEND:

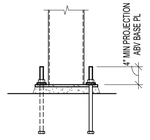
'co' = 1/2" MINIMUM
'ed' = 1 1/2" MINIMUM
'bc' = BEAM OR GIRDER GAGE
'w' = BEAM OR GIRDER GAGE + 3"
OR
BEAM OR GIRDER FLANGE WIDTH + 1"
OR
COLUMN DEPTH + 1"
WHICHEVER IS GREATER
'H' = BEAM OR GIRDER GAGE + 3"
OR
BEAM OR GIRDER FLANGE WIDTH + 1"
OR
COLUMN WIDTH + 1"
WHICHEVER IS GREATER

STEEL COLUMN BASE PLATE TYPES:

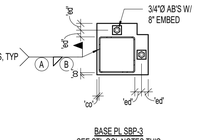


BASE PL SBP-1
SEE STL COL NOTES THIS SHEET

BASE PL SBP-2
SEE STL COL NOTES THIS SHEET



BASE PL ELEVATION



BASE PL SBP-3
SEE STL COL NOTES THIS SHEET

A-325 BOLT SCHEDULE

MAXIMUM BEAM SIZE IN EACH BEAM DEPTH GROUP	A-325N BOLTS	
	No. PER BEAM	SIZE
W12	3	7/8"Ø

(1) CLIP ANGLES: LSx3 1/2. THICKNESS SHALL BE EQUAL TO ONE HALF THE BEAM WEB THICKNESS PLUS 1/16" (1/4" MIN). FOR TWO ROWS OF BOLTS OR SKEWED CONNECTIONS, USE BENT PLATES. WHERE COLUMN WIDTH IS SMALLER THAN THE CONNECTING CLIP ANGLES, ANGLE LEGS SHALL BE REDUCED TO MATCH WIDTH OF COLUMN.

(2) BEAM WEB CONNECTION PLATE THICKNESS EQUALS
3/8" MINIMUM THICK FOR W18 BEAMS OR SMALLER
1/2" MINIMUM THICK FOR W21 BEAMS OR LARGER
3/4" MINIMUM THICK FOR BEAMS WITH WEB GREATER THAT 1" THICK

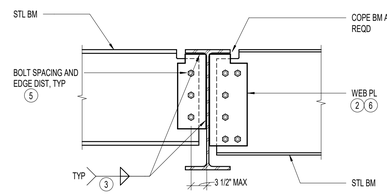
(3) FILLET WELDS SHALL BE AS FOLLOWS:
1/4" FOR 3/8" PLATES
5/16" FOR 1/2" PLATES
7/16" FOR 3/4" PLATES

(4) THICKNESS EQUALS BEAM FLANGE THICKNESS OF BEAM FRAMING INTO COLUMN WEB (3/8" MINIMUM).

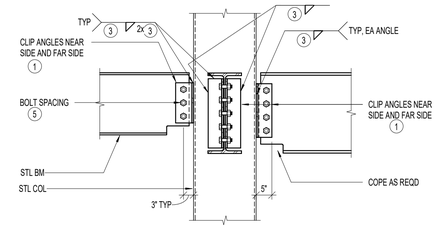
(5) BOLT EDGE DISTANCE SHALL BE 1 1/2" MINIMUM AT ALL EDGES. BOLT SPACING SHALL BE AT 3". BOLT SPACING MAY BE REDUCED TO 3x THE BOLT DIAMETER IF IT IS REQUIRED FOR A SINGLE ROW OF BOLTS. A SINGLE ROW OF BOLTS IS PREFERRED.

(6) WHEN MORE THAN ONE COLUMN OF BOLTS IS NEEDED, THE FIRST COLUMN SHALL BE COMPLETE WITH THE REMAINDER OF THE BOLTS PLACED IN THE SECOND COLUMN.

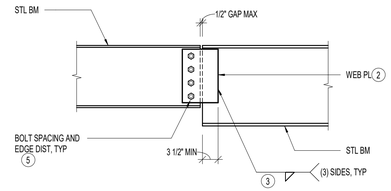
(7) 1/2" PLATE THICKNESS + 5/16"



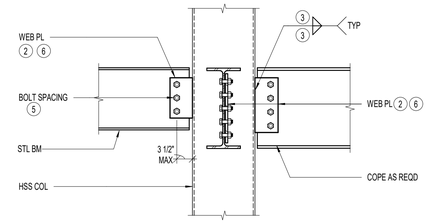
BEAM TO BEAM WEB PLATE CONNECTION



BEAM TO HSS COLUMN CONNECTION



BEAM TO PARALLEL BEAM WEB PLATE CONNECTION



ALTERNATE BEAM TO HSS COLUMN CONNECTION

(THIS DETAIL MAY BE USED AS AN ALTERNATE AT LOCATIONS WHERE THE WEB PLATE THICKNESS DOES NOT EXCEED 1.6 TIMES THE COLUMN WALL THICKNESS.)
(THIS DETAIL MAY NOT BE USED) AT THE FOLLOWING COLUMN SIZES.
HSS16x16x3/8, HSS16x16x5/16
HSS14x14x5/16, HSS12x12x5/16
HSS12x12x1/4, HSS10x10x1/4

1 BASE PLATE SCHEDULE

S-803 NO SCALE:

T-S01-02

2 TYPICAL BOLTED WEB PLATE CONNECTIONS WITH BOLT SCHEDULE (SINGLE SHEAR)

S-803 NO SCALE:

T-S03-01

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sheet information:

revisions:

num.	description	date

CURRENT SET THRU REVISION 02

date:	1-21-22
project number:	21174
project status:	PERMIT SET

original drawing is 24" x 36"
current as of : 1/21/2022 11:42:24 AM

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DUNN ASSOCIATES, INC
Consulting Structural Engineers
WWW.DUNN-SE.COM
PH: 801-575-8877

1-21-22
PERMIT SET

NOTE:
THESE STRUCTURAL DRAWINGS ARE BASED ON ARCHITECTURAL DRAWINGS DATED 12.09.2021

DIMENSIONS AND ELEVATIONS, AS THEY RELATE TO THE BUILDING IN GENERAL, i.e. GRID TO GRID DIMENSIONS OR DECK BEARING ELEVATIONS, ARE SUPPLIED BY THE ARCHITECT. THEY ARE PROVIDED ON THE STRUCTURAL PLANS AND DETAILS FOR THE CONVENIENCE OF THE CONTRACTOR. VERIFY DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS.

project information:

MOBETTAHS for LEE'S SUMMIT

520 NW Chipman Rd
Lee's Summit, MO 64086

sheet title:
STEEL SCHEDULES

sheet number:
S-803

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GENERAL

1. The structural notes are intended to complement the project specifications. Specific notes and details in the drawings shall govern over the structural notes and typical details.
2. Typical details and sections shall apply where specific details are not shown.
3. The contractor shall verify all site conditions and dimensions. If actual conditions differ from those shown in the contract drawings, the contractor shall immediately notify the architect/engineer before proceeding with the fabrication or construction of any affected elements. Discrepancies should be brought the attention of the architect prior to fabrication or construction.
4. Drawings shall not be scaled for the purpose of preparing shop drawings or for construction. Where dimensions on the design drawings are not provided or inferred, the contractor may scale drawings only to estimate member lengths for the purpose of bidding.
5. Changes to these contract drawings may be made only by an authorized representative of Dunn Associates, Inc. Dunn Associates, Inc. shall not be held responsible or liable for any claims arising directly or indirectly from changes made without written authorization by an authorized representative of Dunn Associates, Inc.
6. Omissions or conflicts between the contract drawings and/or specifications shall be brought to the attention of the architect/engineer before proceeding with any work involved. In case of conflict, follow the most stringent requirement as directed by the architect/engineer at no additional cost to the owner.
7. The contractor shall submit a written request to the architect/engineer before proceeding with any changes, substitutions, or modifications. Any work done by the contractor before receiving written approval will be at the contractor's risk. These contract documents note and describe potential bid alternate details that may be requested from and approved by the Engineer of Record during the bidding and negotiation phase. The contractor may also submit to the architect/engineer for approval other substitutions or modifications to the design drawings as bid alternates during the bidding and negotiation phase. Field modifications to structural elements are not permitted without notification and approval by the Engineer of Record.
8. The contractor shall coordinate with all trades any items that are to be integrated into the structural system such as openings, penetrations, mechanical and electrical equipment, etc. Structural drawings do not show all openings. Refer to other discipline drawings. Sizes and locations of mechanical and other equipment that differs from those shown on the contract drawings shall be reported to the architect/engineer. Contractor shall take measures as required to insure that construction loads shall not exceed design loads for the structure.
9. Any structural items shown on other discipline's drawings that are not shown on the structural drawings, but that are noted as "refer to structural drawings" for additional information, shall be brought to the attention of the structural engineer by the contractor.
10. Items such as fireproofing, waterproofing, insulation, vapor barrier, etc, may be shown or noted on structural drawings for reference only. Refer to the architectural drawings or specifications for more information.
11. The contractor shall be responsible for means, methods, techniques, sequences, and procedures in order to comply with the contract drawings and specifications. The contractor shall provide adequate shoring and bracing as required for the chosen method of erection. Shoring and bracing shall remain in place until final connections for the permanent members are completed. The building shall not be considered stable until all connections are completed. Walls shall not be considered self-supporting and shall be braced until the floor/roof system is completed.
12. Site observations by a field representative of Dunn Associates, Inc. shall not be construed as approval of construction, the procedures, nor special inspection.
13. All work shall be done in accordance with OSHA requirements. Potential conflicts between these documents and OSHA requirements shall be brought to the attention of the structural engineer before proceeding with the work.
14. Shop Drawings and submittals:
    A. Shop drawings include plans, details, calculations and/or other relevant design information. Review of shop drawings and submittals by Dunn Associates, Inc. is for general compliance only and is not intended for approval. The shop drawing review shall not relieve the contractor from the responsibility of completing the project according to the contract documents.
    B. Submittals for the following items shall be submitted to the Project Architect/Engineer for review prior to fabrication and/or installation:
        1. Anchorage and Embeds
        2. Structural Steel
    C. Quality control submittals shall be submitted to special inspector for review prior to fabrication/installation. Courtesy copies shall be provided to the project architect and engineer for their records.
    D. Detailing and shop drawing production for structural elements will require information (including dimensions) contained in the architectural, structural and/or other consultants' drawings. The structural drawings shall be used in conjunction with the architectural and other consultant's drawings. See the Architectural Drawings for dimensions, doors, windows, non-bearing interior and exterior walls, elevations, slopes, stairs, curbs, drains, recesses, depressions, railings, waterproofing, finishes, chamfers, kerfs, etc.
    E. Shop drawings made from reproductions of the structural drawings will be rejected unless the contractor signs a release agreement prior to the shop drawings being reviewed. The contractor may also obtain electronic files of the plan sheets after signing a release agreement. Electronic files of the detail sheets and schedule sheets will not be made available.
    F. The Contractor may choose to submit shop drawings and submittals for review electronically. The Contractor may do this provided a minimum of one hard copy set is submitted for review. The submittal will be stamped as received by Dunn Associates, Inc. when the hard copy is received by our office. Hard copies of small submittals need not be submitted if the Contractor receives the approval for this exception by the Engineer of Record.

BASIS OF DESIGN

1. Governing Building Code ---------- International Building Code 2018
2. Risk Category ---------- II
3. Seismic Design Criteria
    A. Design Spectral Response Accelerations
        1. 0.2-Second (Short) Period Acceleration ---------- SDS = 1.5 (Assumption for application at many sites)
    B. Site Class (Soil Profile) ---------- D
    C. Seismic Importance Factor ---------- Ie = 1.0
    D. Seismic Design Category ---------- D
    E. Lateral Force Resisting System(s) ---------- Ordinary Steel Moment Frames
        1. Response Modification Coefficient ---------- R = 3.5
        2. System Overstrength Factor ---------- Ωo = 3
        3. Deflection Amplification Factor ---------- CD = 3
        4. Design Base Shear ---------- V = Cs*W = 0.429W, where W is structural weight
    F. Analysis Procedure ---------- Equivalent Lateral Force
4. Serviceability Criteria
    A. Interstory Seismic/Wind Drift ---------- No Limit for 1-Story Structure
    B. Deflection Limits ---------- Total ---------- Live
        Roof ---------- L/120 ---------- ____

STRUCTURAL STEEL

1. Codes and Standards: Fabrication, Erection and Quality Control of structural steel shall comply with the latest edition of the following:
    A. American Institute of Steel Construction (AISC) 360, "Specification for Structural Steel Buildings," with "Commentary".
    B. AISC 341 "Seismic Provisions for Structural Steel Buildings."
    C. AISC 303 "Code of Standard Practice" excluding sections 3.4, 4.4 and 4.4.1.
    D. AISC "Specification for Structural Joints Using ASTM A325 or A490 Bolts"
    E. American Welding Society (AWS), Structural Welding Codes D1.1, D1.3, D1.4, and D1.8, except as modified by the "Steel Construction Manual".
2. Material:
    A. Plate
        1. Typical ---------- ASTM A36
        2. Braced/Moment Frames ---------- ASTM A572 Grade 50
    B. Hollow Structural Shapes
        1. Rectangular ---------- ASTM A500 Grade C (50 ksi)
        2. Round ---------- ASTM A500 Grade C (46 ksi)
    C. Bolted Connections ---------- ASTM A325
    D. Anchor Bolts
        1. All Columns unless noted otherwise: ASTM F1554 Grade 105 with ASTM A563 heavy hex nuts with Grade A hardened washers. Nuts to be snug tight.
        2. Braced Frame/Moment Frame Columns unless noted otherwise: ASTM F1554 Grade 105 (equiv to A193 Grade B7) with ASTM A563 heavy hex nuts with ASTM F436 minimum 5/16" thick washers. Bottom assembly to include double heavy hex nuts with 5/16" min thick plate washer. Nuts to be snug tight.
    E. Weld Filler Metal
        1. Shielded Metal Arc Welding ---------- AWS A5.1, low-hydrogen only
           Low-hydrogen restrictions do not apply when welding sheet steels in accordance with AWS D1.3, including attaching these steels to structural members.
        2. Gas-Metal & Metal-Cored Arc Welding ---------- AWS A5.18
        3. Flux-Cored Arc Welding ---------- AWS A5.20
           E7XT-4 or E7XT-11 electrodes are not permitted.
        4. Intermixing of welds made from self-shielded welding electrodes with welds made by other processes is not allowed in seismic critical welds, unless tested in accordance with AWS D1.8, annex B. The Field Erection Contractor is responsible for verifying that intermixing of self-shielded weld metal with weld metal of other processes will not occur, or alternatively, the welding procedure is qualified by testing.
        5. Where demand critical welds are required, provide filler metals meeting the following minimum mechanical properties: 58ksi yield strength, 70ksi tensile strength, 22% elongation, Charpy V-Notch toughnesses of 20ft-lbs at 0°F and 40 ft-lbs at 70°F.
    F. Refer to architectural drawings for structural steel fireproofing or architecturally exposed steel requirements.
    G. All steel, connectors and embeds exposed to weather shall be galvanized, unless noted otherwise.
3. Structural Detailing
    A. Welds may be performed in the shop or the field. Designations of field welds on the Contract Documents are shown where it is anticipated field welds may be required, and are shown only for the purpose of assisting the Contractor in the bidding process. The Contractor shall coordinate the welding sequence between sub-contractors, and any costs associated with variations in the welding sequence are outside the scope of the Design Engineer, and are the responsibility of the Contractor. Field welding is to be minimized where possible. Contractor is to verify that the sequencing of welds meets all safety regulations, and the requirements of the Construction Documents and their referenced codes. Welding in the 'k' region of wide flange members is prohibited unless noted otherwise.
    B. Provide full depth web stiffener plates at one side of all beams at all bearing points, unless noted otherwise. Stiffener plates shall be the thickness called out below unless noted otherwise. Stiffeners shall be welded on both sides of the plate-to-flange and plate-to-web interfaces.
       FLANGE WIDTH ---------- STIFFENER THICKNESS & WELD SIZE
       Less than 8 1/4" ---------- 1/4" & 3/16"
       8 1/4" to 12 1/4" ---------- 3/8" & 1/4"
       12 1/4" to 16 1/2" ---------- 1/2" & 5/16"
       16 1/2" to 20 3/4" ---------- 5/8" & 3/8"
    C. Bolting and Fasteners
        1. Ordinary steel-to-steel connections, simple span framing, and beam/girder-to-bearing plates are the standard connection used throughout the design drawings, unless noted otherwise:
            a. Use A325N bolts or tension-controlled bolts.
            b. Tighten these fasteners to a "snug tight" condition.
            c. Where a steel-to-steel connection is not shown, provide a framed connection per AISC for one half the total uniform load capacity of the beam for the span and steel specified.
        2. Pretensioned connections are shown on the structural design drawings. They join steel-to-steel connections, unless noted otherwise:
            a. Use A325N or A325X bolts or tension-controlled bolts.
            b. Pretension these fasteners as required by AISC "Specification for Structural Joints Using ASTM A325 or a A490 bolts."
        3. Fasteners and washers shall not be reused. Scrap dirty, rusted, or water-contaminated bolt assemblies.
    D. Weld Access Holes and Temporary Attachments
        1. Fabricate beam copes and weld access holes using the geometry described in AISC 360 Section J1.6.
        2. Runoff tabs are to be removed unless noted otherwise.
    E. Backup Bars: Remove backup bars from connections in demand critical welds, unless noted otherwise. Backgouge the root and weld to sound metal. Reweld the gouged area and add a 5/16" reinforcing fillet weld. Backup bars may remain for top flange beam welds provided the backup bar is welded to column flanges with 5/16" fillet weld.
    F. Protected Zones: No connections, other than those on the design drawings, shall be made within the protected zone of the SLRS as identified in AISC 341.
        1. Locate headed studs, welds, miscellaneous metal, etc outside of the protected zone.
        2. Paint the protected zones with bright paint before and after fire coating operations to identify them.
    G. All welds not noted on drawings shall be minimum 1/4" fillet welds.
    H. All structural steel members shall be considered as an unrestrained fire-resistance-rated assembly.
4. Welding of Reinforcing Steel or Bolts
    A. Reinforcing Bars: Do not weld rebar except as specifically detailed in the drawings. In such cases, use only AWS standards. Do not substitute reinforcing bars for deformed bar anchors, structural bolts, or headed stud anchors.
    B. Do not weld anchor bolts, including "tack" welds.
    C. Headed Stud Anchor welding and Deformed Bar Anchor welding shall conform to the manufacturer's specifications.

POST-INSTALLED ANCHORS

1. Post-installed anchors shall only be used where specifically detailed or called for on the design drawings. If circumstances arise during construction where the Contractor desires to substitute a post-installed anchor in place of a cast-in-place anchor, the Contractor shall submit a formal written request for each circumstance to the Architect and Engineer for review.
2. Follow all ICC Evaluation Report and manufacturers' requirements and recommendations for post-installed anchor installation. Where conflicts may exist, the most stringent requirement applies.
3. Post-installed anchors that are exposed to exterior conditions, or interior spaces where moisture can accumulate, shall be either galvanized or stainless steel anchors.
4. All holes in hollow, brick, or stone masonry shall be drilled in the "rotary-only" mode with the hammer function off.
5. For installation of adhesive anchors horizontally or vertically inclined, installers must have AMI/CRSI Adhesive Anchor Installer Certification.
6. Mechanical anchors shall be as specified in the Contract Documents. If no specific mechanical anchor is specified, or if a particular product is preferred, the Contractor may submit a request for an anchor from the following list prior to design of the anchor.
    A. Eligible mechanical anchors in concrete
        1. Kwik HUS-EZ by Hilti (ESR-3027)
        2. Titen HD by Simpson (ESR-2713)
7. The Contractor may also submit for review and approval, the manufacturer's ICC evaluation report of alternate anchor systems not listed above. The alternate system shall provide minimum capacities equal to or greater than the specified anchor system. The alternate system shall be approved by the engineer of record prior to the substitution.

SPECIAL INSPECTION, TESTING AND STRUCTURAL OBSERVATION REQUIREMENTS

1. Special Inspections and Testing
    A. Special inspections and testing as required per the approved construction documents and per IBC Chapter 17 shall be provided for this project unless waived by the Building Official.
    B. An independent agency, or agencies, employed by the Owner, shall perform the special inspection and testing services required.
    C. The special inspection and testing requirements of this section of the General Structural Notes and the special inspection tables serve as the Engineer of Record's statement of special inspections and structural observations required by IBC Chapter 17.
2. Contractor Responsibilities (1704.4)
    A. Each Contractor responsible for the construction of a main wind or seismic force-resisting system, a designated seismic system, or a wind or seismic force-resisting component listed in the statement of special inspections shall submit a written statement of responsibility to the Building Official and Owner prior to commencing with the work involved. It shall contain acknowledgement of awareness of the special requirements contained in the statement of special inspection.
    B. The Contractor shall coordinate and cooperate with all the required inspections, testing, and/or structural observations required for the project.
    C. The Contractor shall maintain access to and exposure of the work which requires special inspection or testing.
    D. The Contractor shall not proceed with subsequent work until required inspections, testing, and/or structural observations have been provided.
    E. The Contractor shall correct all work found to be deficient, and re-test at no additional cost to the Owner.
    F. The Contractor shall notify the Engineer of Record at least (7) days prior to any required structural observations.
    G. Submit all required documentation to the Special Inspector for review.
3. Special Inspector Responsibilities (1704.2)
    A. Prior to the start of the construction, each approved agency shall provide written documentation to the Building Official, demonstrating the competence and relevant experience or training of the special inspectors who will perform the special inspections and tests during construction.
    B. Special Inspectors shall keep records of their inspections and testing.
    C. Inspection reports shall indicate whether the work inspected was or was not completed in conformance to the approved construction documents.
    D. Non-conforming work and/or discrepancies shall be brought to the Contractor's immediate attention for correction.
    E. The Special Inspector shall notify the Architect/Engineer of any non-conforming work or discrepancies that the Contractor cannot readily correct.
    F. Any uncorrected non-conforming work or discrepancies shall be brought to the attention of the Architect/Engineer and the Building Official prior to completion of that phase of the work.
    G. Submit the following to the Building Official:
        1. Special Inspections and Testing Reports.
        2. Certificates of Compliance for:
            a. Fabrication of structural elements from approved fabricators.
        3. Reports of:
            a. Material properties verifying compliance with the requirements of AWS D1.4 for weldability for reinforcing bars other than ASTM A706.
            b. Mill tests for ASTM A615 reinforcing bars used to resist earthquake induced forces in special moment frames, special structural walls or coupling beams in structures assigned to Seismic Design Category B, C, D, E, or F.
4. Special Inspections (1705)
    A. Special Cases (1705.1.1): Special Inspection and tests shall be required for proposed work that is, in the opinion of the Building Official, unusual in its nature, such as, but not limited to, the following:
        1. Construction materials and systems that are alternatives to materials and systems prescribed by the IBC.
        2. Unusual design applications of materials described in the IBC.
        3. Materials and systems required to be installed in accordance with additional manufacturer's instructions that prescribe requirements not contained in the IBC or in standards referenced by the IBC.
    B. Steel Construction (1705.2): The special inspections and nondestructive testing of steel construction in buildings shall be in accordance with the following:
        1. Structural Steel. Special inspections and non-destructive testing of structural steel elements in buildings, structures, and portions thereof shall be in accordance with the Quality Assurance inspection requirements of AISC 360 and tables in the construction documents. Exception: Railing systems composed of structural steel elements shall be limited to welding inspection of welds at the base of cantilevered rail posts.
        2. Cold-Formed Steel Deck. Special inspections and qualification of welding special inspectors for cold-formed steel floor and roof deck shall be in accordance with the Quality Assurance inspection requirements of SDI QA/QC.
    C. Quality Control Submittals for Structural Steel
        1. Provide Level III non-destructive testing (NDT) personnel certifications.
        2. Provide welder qualification records to verify project welders are tested and qualified in accordance with AWS D1.1 before welding structural or miscellaneous steels, D1.3 before welding sheet steels (10 gauge and thinner), and D1.4 before welding reinforcing steel. Submit documentation to the approved inspection agency for review before welding.
            a. Special, restricted welder qualification testing is required for welders joining the bottom-flange through the weld access hole connection in demand critical welds. Qualify welders for the minimum groove angle and maximum deposition rate used in production. Follow the instructions for supplemental qualification testing in AWS D1.8, Section 5.1. Qualification testing must take place within two years from the start of this project.
        3. Provide welder identification methodology. The fabricator/erector shall maintain a system by which the welder who has welded a joint or member can be identified. Stamps, if used, shall be the low stress type.
        4. Provide welding procedures that comply with AWS D1.1, D1.3, D1.4, D1.8, as required by the project. Welding procedures shall be made available to welders and inspectors.
            a. Provide weld filler metal product data sheets identifying optimum welding parameters and storage conditions with each welding procedure submittal.
            b. Identify the maximum welding heat input per inch of weld (KJ/in) permitted by the welding procedures.
            c. Identify the maximum deposition rate that will be used while welding on any demand critical weld.
            d. Provide typical welding filler metal Certificates of Conformance that identify the WPS Heat Input Envelope.
        5. Provide a preliminary welding repair procedure to follow should welding repairs be required within the Seismic Protected Zone.
        6. Provide bolt storage and installation procedures to the approved inspection agency for review.
        7. Provide mill/material test reports (MTR) or certificates of conformance (CC) that verify compliance of furnished materials to the requirements of the approved contract documents. MTRs or CCs are required for structural shapes, plate, metal deck, fasteners, headed studs, DBAs, weld filler metal, and bolt assemblies used as primary, load-bearing members. Maintain the heat number traceability of structural shapes and plate used as primary, load bearing members.
    D. Structural Steel Non-Destructive Testing (NDT) Personnel Qualifications
        1. NDT personnel will:
            a. Qualify in accordance with the recommended practices of the American Society of Nondestructive Testing, SNT-TC-1A, latest edition.
            b. Pass eye examinations meeting (1) ASTM requirements at least once a year, and (2) AWS D1.1 every three years.
            c. Be certified in accordance with the AWS QC-1, latest edition.
            d. Level III must be qualified by ASNT testing in the applicable method under review.
        2. Only Level II and Level III technicians, qualified by testing in the applicable method, are permitted to interpret nondestructive testing results.
        3. Only Senior Certified or Certified Welding Inspectors (SCWI, CWI) are permitted to evaluate welds. Certified Associate Welding Inspectors may evaluate welds when under the direct supervision of a SCWI and/or CWI.
        4. Approved Inspection Agency will certify the following:
            a. Level III inspector has reviewed the NDT procedures.
            b. Project ultrasonic testing technicians, testing demand critical welds, are trained and qualified in accordance with AWS D1.8, Annex E.
            c. That the Inspection Agencies' ultrasonic testing procedures are qualified by weld mockups similar to AWS D1.1, Annex S.
    E. Structural Steel: Special inspection and non-destructive testing (NDT) are required during the fabrication and erection of any load-bearing members and assemblies. Special inspection, except NDT, may be waived when the work is performed in a fabricating shop, or by an erector approved by the Building Official to perform work without Special Inspection. NDT of welds completed in an approved fabricator's shop may be performed by the fabricator when approved by the Building Official. When the fabricator performs the NDT, the fabricator shall submit the NDT reports for review by the Special Inspector. Special inspection and NDT shall be provided per the special inspection tables for structural steel in the construction documents.
        1. Perform all welding and welding special inspection activities in accordance with AWS D1.1, D1.3, D1.4, and D1.8, AISC 360 Chapter N, and AISC 341 Chapter J, as appropriate for the material form and welding methods employed. Approved methods and acceptance criteria are established in these codes.
        2. Perform all bolting and bolting inspection activities in accordance with AISC 360 Specification for Structural Steel Buildings Using A325 and A490 Bolts, AISC 360 Chapter N, and AISC 341 Chapter J, as applicable.
        3. Non-Destructive Testing (NDT) of welds is required as follows:
            a. Ultrasonic testing (UT), magnetic particle testing (MT), penetrant testing (PT), and radiographic testing (RT), where required, shall be performed in accordance with AWS D1.1/D1.1M. Acceptance criteria shall be in accordance with AWS D1.1/D1.1M for statically loaded structures, unless otherwise designated on the design drawings or project specifications.
            b. All NDT shall be documented. NDT reports shall be distributed to the fabricator/erector, the Building Official, the Contractor, and the Architect.
            c. Amount of NDT is permitted to be reduced according to AISC 360 Chapter N and AISC 341 Chapter J if appropriate criteria are met, and if approved by the Building Official and the Engineer of Record.
            d. Requirements for structures in Seismic Design Categories A & B:
                - Ultrasonic test all complete joint penetration groove welds for structures in Risk Categories III and IV for materials 5/16" thick or greater. Ultrasonic test 10% of all complete joint penetration groove welds for structures in Risk Category II for materials 5/16" thick or greater. Complete joint penetration groove welds need not be tested for structures in Risk Category I.
                - Magnetic particle test or penetrant test all thermally cut surfaces of access holes for flange or web thicknesses exceeding 2". Any crack shall be deemed unacceptable.
            e. Requirements for structures in Seismic Design Categories C thru F:
                - Ultrasonic test all complete joint penetration groove
                - Magnetic particle test or penetrant test all thermally cut surfaces of access holes for flange or web thicknesses exceeding 2". Magnetic particle test or penetrant test all thermally cut surfaces of beam copes access holes for flange or web thicknesses exceeding 1 ½" for members of the seismic force resisting system in Seismic Design Categories C thru F. Any crack shall be deemed unacceptable.
    F. Fabricated Items (1705.10): Where fabrication of structural, load bearing or lateral load-resisting members or assemblies is being conducted on the premises of a fabricator's shop, special inspections of the fabricated items shall be performed during fabrication. Special inspections during fabrication are not required where the work is done on the premises of a fabricator registered and approved by the building official to perform such work without special inspection. At the completion of fabrication, the approved fabricators shall submit a certificate of compliance to the Owner for submittal to the Building Official stating that the work was performed in accordance with the approved construction documents.
    G. See architectural drawings for additional required inspections pertaining to sprayed fire-resistant materials (1705.14), mastic and intumescent fire-resistant coatings (1705.15), EIFS (1705.16), fire resistant penetrations and joints (1705.17), or smoke control systems (1705.18).
    H. Post-Installed Anchors: Special inspections and tests shall be performed during installation of post-installed anchors according to the requirements of the ICC Evaluation Report and table 1705.3 in the construction documents.
5. Special Inspections for Seismic Resistance (1705.12): Special inspections for seismic resistance are/are not required for this project per IBC section 1705.12.
    A. Structural Steel (1705.12.1): Special Inspections for seismic resistance shall be in accordance with the following as applicable:
        1. Seismic Force-Resisting Systems; Special Inspections of structural steel in the seismic force-resisting systems of buildings and structures assigned to Seismic Design Category B, C, D, E, or F shall be performed in accordance with the Quality Assurance requirements of AISC 341 and the construction documents.
        2. Structural Steel Elements; Special Inspections of structural steel elements in the seismic force-resisting systems of buildings and structures assigned to Seismic Design Category B, C, D, E, or F other than those covered in section5.A.1 above, including struts, collectors, chords, and foundation elements, shall be performed in accordance with the Quality Assurance requirements of AISC 341 and the construction documents.
6. Testing for Seismic Resistance (1705.13): Testing for seismic resistance is/is not required for this project per IBC section 1705.13.
    A. Structural Steel (1705.13.1):
        1. Seismic Force-resisting Systems. Non-destructive testing of structural steel in the seismic force-resisting systems of structures assigned to Seismic Design Category B, C, D, E, or F shall be performed in accordance with the Quality Assurance requirements of AISC 341.
        2. Structural Steel Elements. Non-destructive testing of structural steel elements in the seismic force-resisting systems of structures assigned to Seismic Design Category B, C, D, E, or F shall be performed in accordance with the Quality Assurance requirements of AISC 341.
7. Structural Observations/Site Observations (1704.6): Structural observations are not required for this project per IBC section 1704.6.
8. Seismic/Wind Main Force Resisting Systems That Require Special Inspections
    A. Steel Moment Frames

CURRENT SET THRU REVISION 02

Mo' Bettahs Dining Canopy
-

Project Number
21189

GENERAL STRUCTURAL NOTES

DUNN ASSOCIATES, INC
Consulting Structural Engineers
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Sheet Number
S-001TI

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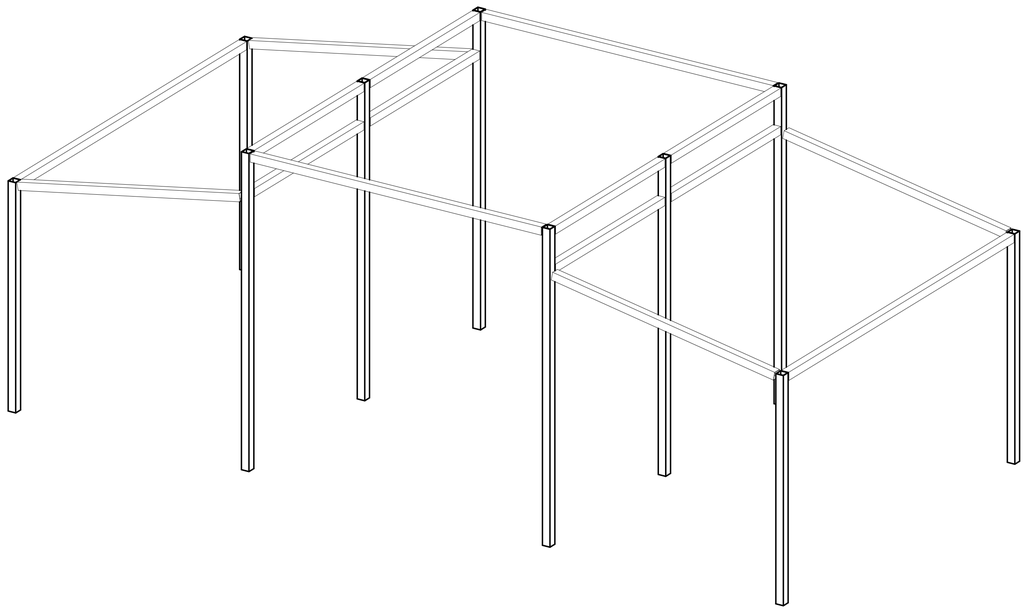
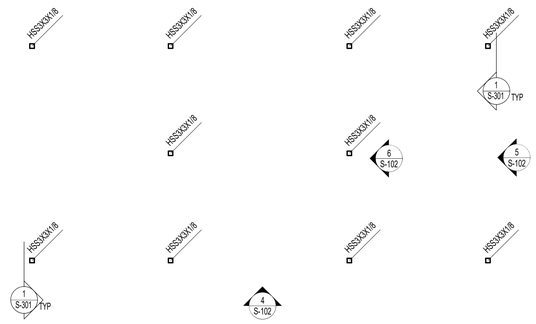
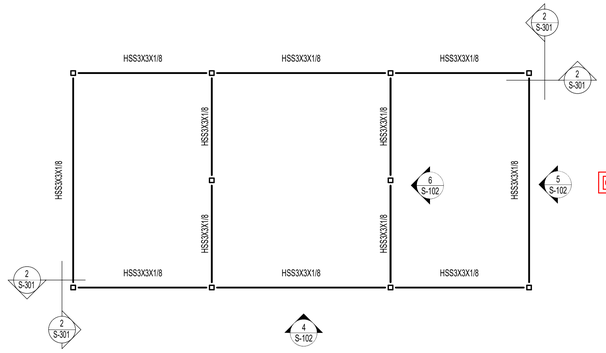


1 S-102 THREE BAY DINING CANOPY - ISOMETRIC VIEW
NO SCALE:



2 S-102 THREE BAY DINING CANOPY - FOUNDATION PLANS
NO SCALE:



3 S-102 THREE BAY DINING CANOPY - FRAMING PLANS
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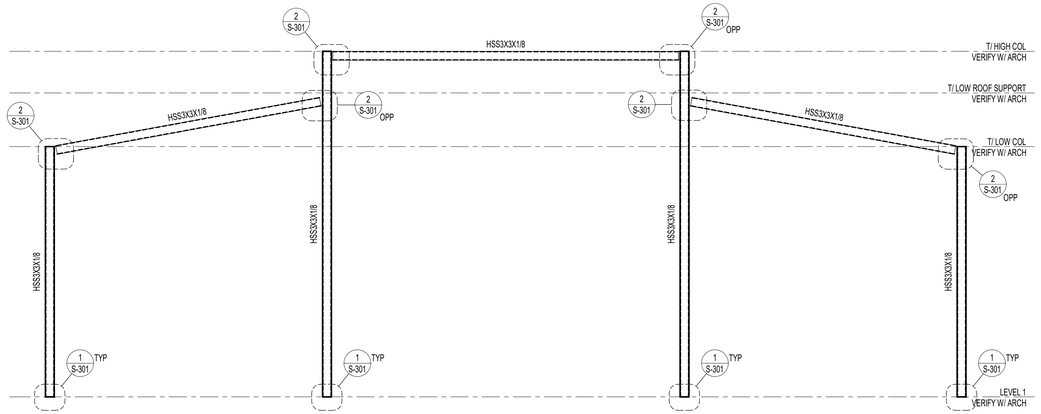
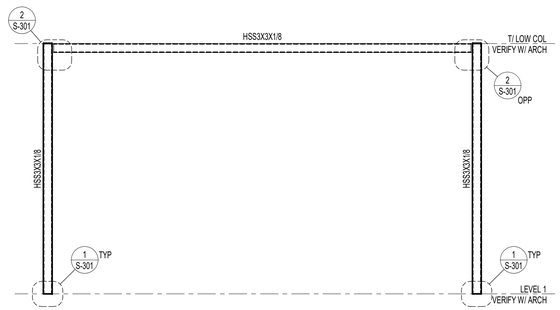
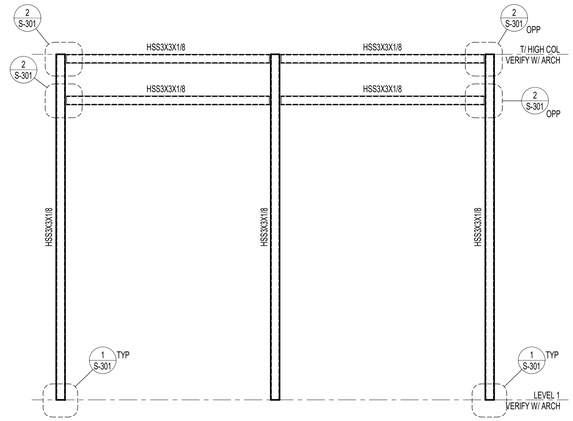


4 S-102 THREE BAY DINING CANOPY - FRONT ELEVATION
NO SCALE:



5 S-102 THREE BAY DINING CANOPY - SIDE ELEVATION
NO SCALE:



6 S-102 THREE BAY DINING CANOPY - CENTER ELEVATION
NO SCALE:

CURRENT SET THRU REVISION 02

Mo' Bettahs Dining Canopy
-

THREE BAY PLANS AND ELEVATIONS

Project Number
21189

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S-102TI

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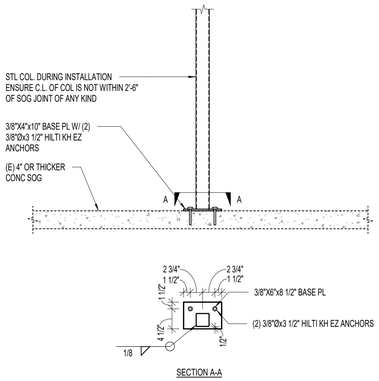
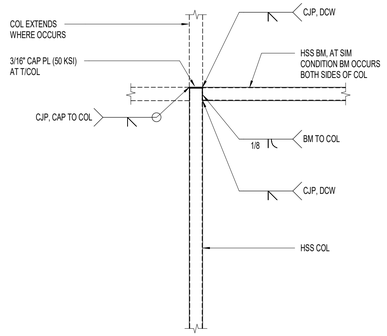


1 S-301 TYPICAL STEEL COLUMN TO CONCRETE PIER

NO SCALE:



2 S-301 HSS TO HSS CONNECTION

NO SCALE:

1-422-02

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Mo' Bettahs Dining Canopy
-

Project Number
21189

DETAILS

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Sheet Number
S-301TI

SYMBOL LEGEND

SYMBOL	DESCRIPTION
VALVES, METERS, AND GAUGES	
	SHUT OFF VALVE
	GATE VALVE
	CHECK VALVE
	AUTO 2-WAY VALVE
	AUTO 3-WAY VALVE
	GLOBE VALVE
	BALL VALVE
	RELIEF VALVE
	CHAIN OPERATED GATE VALVE
	PRESSURE REDUCING VALVE
	BUTTERFLY VALVE
	SOLENOID VALVE
	ANGLE VALVE
	VENTURI
	BALANCING OR PLUG COCK
	FLOW SETTER
	EXPANSION VALVE (REFRIG.)
	GAS COCK
MAV	MANUAL AIR VENT
	STRAINER
	GAUGE COCK
	FLEXIBLE CONNECTION
	PRESSURE GAUGE
	THERMOMETER
	VICTUALIC COUPLING
	REDUCER CONCENTRIC
	REDUCER ECCENTRIC
	REFRIGERANT SITE GLASS
	REFRIGERANT STRAINER
	REFRIGERANT FILTER DRIER
	90 DEG ELBOW UP
	90 DEG ELBOW DOWN
	90 DEG TEE UP
	90 DEG TEE DOWN
	UNION
	CAPPED PIPE
	ANCHOR
	FLOAT AND THERMOSTATIC TRAP
HVAC SYMBOLS	
T	THERMOSTAT
S	TEMPERATURE SENSOR
H	HUMIDISTAT

SYMBOL LEGEND

SYMBOL	DESCRIPTION

DUCT WORK

SINGLE LINE	DOUBLE LINE	DESCRIPTION
		RECTANGULAR SUPPLY DUCT UP
		RECTANGULAR SUPPLY DUCT DOWN
		RECTANGULAR RETURN DUCT UP
		RECTANGULAR RETURN DUCT DOWN
		RECTANGULAR EXHAUST DUCT UP
		RECTANGULAR EXHAUST DUCT DOWN
		ROUND DUCT UP
		ROUND DUCT DOWN
		ACCOUSTICALLY LINED RECTANGULAR DUCT
		90° RECTANGULAR ELBOW WITH TURNING VANES
		90° RADIUS ELBOW R=1.5
		DUCT SIZE OR SHAPE TRANSITION
		OPPOSED BLADE BALANCING DAMPER (O.B.D.) IN RECT DUCT
		BUTTERFLY BALANCING DAMPER IN ROUND DUCTS
		COMBINATION TEE
		SPLITTER DAMPER
		SQUARE OR RECTANGULAR CEILING DIFFUSER
		ROUND CEILING DIFFUSER
		SIDEWALL REGISTER SUPPLY OR RETURN
		ROUND FLEXIBLE DUCT
		RETURN GRILLE
		EXHAUST GRILLE
		FIRE SMOKE DAMPER
		FIRE DAMPER
SD	SD	SMOKE DAMPER
FC	FC	FLEXIBLE CONNECTION
		FLEXIBLE CONNECTION
		DUCT TO BE REMOVED

PIPING LEGEND

NOTE: ALL ABBREVIATIONS MAY NOT BE USED.

HPS	HIGH PRESSURE STEAM
MPS	MEDIUM PRESSURE STEAM
LPS	LOW PRESSURE STEAM
HPC	HIGH PRESSURE CONDENSATE RETURN
MPC	MEDIUM PRESSURE CONDENSATE RETURN
LPC	LOW PRESSURE CONDENSATE RETURN
PC	PUMP DISCHARGE
TWS	TEMPERED WATER SUPPLY
CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
HHWS	HEATING HOT WATER SUPPLY
HHWR	HEATING HOT WATER RETURN
RL	REFRIGERANT LIQUID
RS	REFRIGERANT SUPPLY
CWS	CONDENSER WATER SUPPLY
CWR	CONDENSER WATER RETURN
D	DRAIN LINE
HG	HOT GAS BYPASS
GS	GLYCOL SUPPLY
GR	GLYCOL RETURN
FOS	FUEL OIL SUPPLY
FOV	FUEL OIL VENT

DEFINITIONS

NOTE: ALL DEFINITIONS MAY NOT BE USED.

INDICATED: THE TERM "INDICATED" REFERS TO GRAPHIC REPRESENTATIONS, NOTES, OR SCHEDULES ON THE DRAWINGS, OTHER PARAGRAPHS OR SCHEDULES IN THE SPECIFICATIONS, AND SIMILAR REQUIREMENTS IN THE CONTRACT DOCUMENTS. WHERE TERMS SUCH AS "SHOWN", "NOTED", "SCHEDULED", AND "SPECIFIED" ARE USED, IT IS TO HELP THE READER LOCATE THE REFERENCE, NO LIMITATION ON LOCATION IS INTENDED.

DIRECTED: TERMS SUCH AS "DIRECTED", "REQUESTED", AUTHORIZED", "SELECTED", "APPROVED", "REQUIRED", AND "PERMITTED" MEAN "DIRECTED BY THE ENGINEER", "REQUESTED BY THE ENGINEER", AND SIMILAR PHRASES.

APPROVED: THE TERM "APPROVED", WHERE USED IN CONJUNCTION WITH THE ENGINEER'S ACTION ON THE CONTRACTOR'S SUBMITTALS, APPLICATIONS, AND REQUESTS, IS LIMITED TO THE ENGINEER'S DUTIES AND RESPONSIBILITIES AS STATED IN GENERAL AND SUPPLEMENTARY CONDITIONS.

FURNISH: THE TERM "FURNISH" IS USED TO MEAN "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS."

INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."

PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE."

INSTALLER: AN "INSTALLER" IS THE CONTRACTOR OR AN ENTITY ENGAGED BY THE CONTRACTOR, EITHER AS AN EMPLOYEE, SUBCONTRACTOR, OR SUB-SUBCONTRACTOR, FOR PERFORMANCE OF A PARTICULAR CONSTRUCTION ACTIVITY, INCLUDING INSTALLATION, ERECTION, APPLICATION, AND SIMILAR OPERATIONS. INSTALLERS ARE REQUIRED TO BE EXPERIENCED IN THE OPERATIONS THEY ARE ENGAGED TO PERFORM.

SYMBOL LEGEND

SYMBOL	DESCRIPTION
REFERENCE LINES AND SYMBOLS	
# / SHEET	DETAIL INDICATOR: # INDICATES DETAIL NUMBER, SHEET INDICATES DRAWING SHEET WHERE DETAIL IS SHOWN.
# / SHEET	ELEVATION OR SECTION INDICATOR, EXTERIOR: # INDICATES ELEVATION OR SECTION NUMBER, SHEET INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
# / SHEET	ELEVATION OR SECTION INDICATOR, INTERIOR: # INDICATES ELEVATION OR SECTION NUMBER, SHEET INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
100	SPACE NUMBER
1	KEYNOTE INDICATOR
	REVISION INDICATOR
	EQUIPMENT INDICATOR
	PLUMBING FIXTURE INDICATOR
TYPE / CFM / SIZE	DIFFUSER/GRILLE INDICATOR
TYPE / SIZE	DIFFUSER/GRILLE INDICATOR
	BREAK, STRAIGHT
	BREAK, ROUND
MATCH LINE / SEE XX/X-XXX	MATCHLINE INDICATOR
	HIDDEN FEATURES LINE: HIDDEN, THIN LINE
	CONTRACT LIMIT LINE: DASHDOT, WIDE LINE
	NEW CONNECTION TO EXISTING
	POINT OF DEMOLITION

ABBREVIATIONS

NOTE: ALL ABBREVIATIONS MAY NOT BE USED.

(E)	EXISTING
(F)	FUTURE
AD	ACCESS DOOR
AIR COND	AIR CONDITION(-ING,-ED)
APD	AIR PRESSURE DROP
BD	BALANCING DAMPER
BHP	BRAKE HORSE POWER
BTU	BRITISH THERMAL UNIT
BTUH	BTU/HOUR
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CLG	COOLING
COMP	COMPONENT
COND	CONDENS(-ER, -ING, -ATION)
CV	CONTROL VALVE
DB	DRY BULB TEMPERATURE
DCW	DOMESTIC COLD WATER
DHW	DOMESTIC HOT WATER
DHWR	DOMESTIC HOT WATER RECIRC
DIA	DIAMETER
EA	EXHAUST AIR
EER	ENERGY EFFICIENCY RATIO
EFF	EFFICIENCY
ELEC	ELECTRIC
ELEV	ELEVATION
ENT	ENTERING
EVAP	EVAPORAT(-E, -ING, -ED, -OR)
EWT	ENTERING WATER TEMPERATURE
EXT	EXTERNAL
FC	FLEXIBLE CONNECT(-OR, -ION)
FD	FIRE DAMPER
FLA	FULL LOAD AMPS
FPI	FINS PER INCH
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FSD	FIRE SMOKE DAMPER
GAL	GALLON(S)
GE	GREASE EXHAUST
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HD	HEAD
HG	MERCURY
HP	HORSEPOWER
HR	HOUR
HT	HEIGHT
HTG	HEATING
HZ	HERTZ (FREQUENCY)
ID	INSIDE DIAMETER
IN	INCH
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LG	LENGTH
LH	LATENT HEAT
LRA	LOCKED ROTOR AMPS
LVG	LEAVING
LWT	LEAVING WATER TEMPERATURE
MBH	THOUSAND BTU PER HOUR
MCA	MINIMUM CIRCUIT AMPS
MFR	MANUFACTUR(-ER, -ED)
NC	NORMALLY CLOSED
NC	NOISE CRITERIA
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NPSH	NET POSITIVE SUCTION HEAD
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OD	OUTSIDE DIAMETER
OZ	OUNCE
PD	PRESSURE DROP OR DIFFERENCE
PG	PROPOLENE GLYCOL
PH	PHASE
PPM	PARTS PER MILLION
PRESS	PRESSURE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIA	PSI ABSOLUTE
PSIG	PSI GAUGE
R	THERMAL RESISTANCE
RA	RETURN AIR
RECIRC	RECIRCULATE
REFR	REFRIGERATION
REQD	REQUIRED
RLA	RATED LOAD AMPS
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SC	SHADING COEFFICIENT
SCFM	STANDARD CUBIC FEET PER MINUTE
SCW	SOFT COLD WATER
SF	SAFETY FACTOR
SH	SENSIBLE HEAT
SL	SEA LEVEL
SP	STATIC PRESSURE
SPEC(S)	SPECIFICATION(S)
SQ	SQUARE
STD	STANDARD
SW	SOIL, WASTE
TA(R)	TRANSFER AIR (RETURN)
TA(S)	TRANSFER AIR (SUPPLY)
TD	TEMP. DROP OR DIFF.
TEMP	TEMPERATURE
THERM	THERMAL
TOT	TOTAL
TSTAT	THERMOSTAT
V	VOLT
V	VENT
VAC	VACUUM
VAV	VARIABLE AIR VOLUME
VEL	VELOCITY TEMPERATURE
VEL	VELOCITY
VENT	VENT, VENTILATION
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VOL	VOLUME
WB	WET BULB TEMP
WC	WATER COLUMN
WG	WATER GAUGE
WPD	WATER PRESSURE DROP
WT	WEIGHT
WTR	WATER

MECHANICAL GENERAL NOTES

1 THE MECHANICAL DRAWINGS SHOW THE GENERAL DESIGN, ARRANGEMENT & EXTENT OF THE MECHANICAL SYSTEM. BECAUSE OF THE SMALL SCALE OF THE DRAWINGS, THESE DRAWINGS DO NOT SHOW ALL OFFSETS, BENDS OR ELBOWS NECESSARY FOR THE COMPLETE INSTALLATION IN THE SPACE PROVIDED. CONTRACTOR SHALL MAKE SUCH SLIGHT ALTERATIONS AS MAY BE NECESSARY TO MAKE THE SYSTEM COMPLETE & OPERATIONAL IN ACCORDANCE WITH THE DESIGN INTENT.

2 MAJOR DEVIATIONS SUCH AS CHANGES IN COMPONENT SIZES, WEIGHTS, QUANTITIES OR MATERIAL REQUIRE PRIOR APPROVAL BY THE DESIGN ENGINEER.

3 THE DRAWINGS & SPECIFICATIONS HAVE BEEN PREPARED TO SUPPLEMENT EACH OTHER & SHALL BE INTERPRETED AS AN INTEGRAL UNIT WITH THE ITEMS SHOWN ON ONE & NOT THE OTHER BEING FURNISHED & INSTALLED AS THOUGH SHOWN & CALLED OUT IN BOTH.

4 THE ENTIRE MECHANICAL INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE MOST RECENTLY ADOPTED BUILDING CODES, MECHANICAL CODE, PLUMBING CODE, ELECTRICAL CODE, & ALL OTHER APPLICABLE CITY, COUNTY, STATE, & FEDERAL CODES & REGULATIONS IN EFFECT.

5 THE ENTIRE MECHANICAL INSTALLATION SHALL CONFORM TO ANY CODES, RULES, REGULATIONS & REQUIREMENTS OF THE BUILDING OWNER.

6 PRIOR TO FABRICATION & INSTALLATION OF ANY MECHANICAL COMPONENT THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ALL MECHANICAL WORK WITH ALL OTHER BUILDING TRADES, INCLUDING BUILDING TRADES HIRED DIRECTLY BY THE OWNER. WHERE CONFLICTS MAY OCCUR, THEY SHALL BE RESOLVED PRIOR TO INSTALLATION.

7 THE SPACE ABOVE ALL CEILINGS IS LIMITED. CAREFUL COORDINATION IS REQUIRED WITH ALL TRADES BEFORE ANY PIPE, DUCT, OR EQUIPMENT IS ORDERED & OR INSTALLED. ANY CONFLICTS &/OR CHANGES FOUND DURING INSTALLATION THAT RESULTS FROM THE LACK OF COORDINATION BY THE CONTRACTORS DURING THE SHOP DRAWING PROCESS ARE THE RESPONSIBILITY OF THE CONTRACTOR.

8 ALL MECHANICAL INFORMATION IS NOT SHOWN ON THE MECHANICAL DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL INFORMATION ON ALL OTHER CONSTRUCTION DOCUMENT.

9 THE CONTRACTOR SHALL BE RESPONSIBLE TO REVIEW & USE, WHERE APPROPRIATE, ALL THE MECHANICAL DETAILS SHOWN ON THE DRAWINGS. DETAILS MAY OR MAY NOT BE CALLED OUT ON THE DRAWINGS WITH SYMBOLS OR KEYED NOTES. ANY CHANGES RESULTING FROM FAILURE TO INSTALL THE MECHANICAL SYSTEM WITHOUT USING THE INCLUDED DETAILS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

10 THE STRUCTURE SHOWN ON ALL DETAILS MAY OR MAY NOT PERTAIN TO A PORTION OR ANY PORTION OF THE BUILDING. COORDINATE ALL MOUNTING REQUIREMENTS WITH ARCHITECTURAL & STRUCTURAL DRAWINGS.

11 ANY PART OF THE MECHANICAL INSTALLATION THAT FAILS, IS UNFIT, OR BECOMES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

12 SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF ALL CEILING DIFFUSERS & GRILLES.

13 CONTRACTOR SHALL OPERATE THE SYSTEM & DEMONSTRATE ALL ASPECTS OF THE SYSTEM TO THE ENGINEER &/OR OWNER TO PROVE ALL SYSTEMS ARE OPERATIONAL.

14 DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN A SET OF AS-BUILT REDLINED RECORD DRAINING AT THE PROJECT SITE. ALL CHANGES IN LAYOUT, ROUTING, EQUIPMENT, COMPONENTS, & ACCESSORIES SHALL BE RECORDED. THESE REDLINED DRAWINGS SHALL BE GIVEN TO THE ARCHITECT/ENGINEER AFTER THE FINAL INSPECTION IN ACCORDANCE WITH SPECIFICATIONS.

GENERAL EQUIPMENT NOTES

1 ALL CAPACITIES ARE AT JOB SITE CONDITIONS & ARE MINIMUM CAPACITY.

2 ALL MECHANICAL EQUIPMENT SHALL BE INSTALLED TO CONFORM WITH LOCAL SEISMIC REQUIREMENTS & THE REQUIREMENTS OF THESE CONSTRUCTION DOCUMENTS.

3 VERIFY ALL REQUIRED SERVICE CONNECTIONS, INCLUDING ELECTRICAL CHARACTERISTICS FOR ALL EQUIPMENT PRIOR TO ORDERING EQUIPMENT.

4 ALL EQUIPMENT SHALL BE INDEPENDENTLY SUPPORTED FROM STRUCTURAL MEMBERS.

5 ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.

6 ALL SIMILAR EQUIPMENT SHALL BE OF THE SAME MANUFACTURER.

7 AIR INLETS & OUTLETS SHALL BE OF THE SAME MANUFACTURER.

8 THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE HVAC EQUIPMENT CHECK-IN, SAFEKEEPING, & DAMAGE.

MECHANICAL SHEET INDEX

ME001	MECHANICAL COVER SHEET
ME002	MECHANICAL SPECIFICATIONS
ME003	MECHANICAL SPECIFICATIONS
ME501	MECHANICAL DETAILS
ME502	MECHANICAL DETAILS
ME503	KITCHEN MECHANICAL EQUIPMENT
ME504	KITCHEN MECHANICAL EQUIPMENT
ME505	KITCHEN MECHANICAL EQUIPMENT
ME506	KITCHEN MECHANICAL EQUIPMENT
ME507	KITCHEN MECHANICAL EQUIPMENT
ME508	KITCHEN MECHANICAL EQUIPMENT
ME509	GREASE DUCT DETAILS
ME601	MECHANICAL SCHEDULES
MH101	MECHANICAL PLAN
MH102	ROOF MECHANICAL PLAN

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sheet information

revisions:

num.	description	date

CURRENT SET THRU REVISION 02

date:	01/17/2022
project number:	MO-53LEE
project status:	IFC

original drawing is 24" x 36"
current as of: 3/31/2022 6:28:42 PM

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stamp:

stamp:

STATE OF MISSOURI
RYAN BOGGARD
NUMBER PE-2016019272
PROFESSIONAL ENGINEER

04-15-2022

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www.spectrum-engineers.com

sheet title: MECHANICAL COVER SHEET

sheet number:

ME001

MECHANICAL SPECIFICATIONS

GENERAL REQUIREMENTS

RELATED DOCUMENTS:
THE GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL CONDITIONS AND GENERAL REQUIREMENTS APPLY TO THE WORK SPECIFIED IN THIS SECTION. THE CONTRACTOR SHALL PREPARE A COMPLETE SET OF CONSTRUCTION SHOP DRAWINGS FOR SUBMITTALS TO THE OWNER PRIOR TO START OF CONSTRUCTION. THESE DRAWINGS SHALL INCLUDE: SINGLE LINE DUCT DRAWINGS, SINGLE LINE PIPING DRAWINGS, ALL PIPE AND DUCT SIZES, EQUIPMENT CAPACITY AND EXISTING CONDITIONS. NO WORK SHALL BEGIN UNTIL THESE DRAWINGS HAVE BEEN REVIEWED.

CODES, RULES AND REGULATIONS:
ALL WORK AND MATERIALS SHALL CONFORM TO ALL APPLICABLE LOCAL AND STATE CODES, LAWS AND REGULATIONS AND ALL UTILITY COMPANY REGULATIONS. WHENEVER INDICATED MATERIAL, WORKMANSHIP, ARRANGEMENT OR CONSTRUCTION IS OF HIGHER QUALITY OR CAPACITY THAN THAT REQUIRED BY THE ABOVE CODES, THE DRAWINGS AND/OR SPECIFICATION SHALL GOVERN. SHOULD THERE BE ANY DIRECT CONFLICT BETWEEN THE STATE OF LOCAL CODES, LAWS OR REGULATIONS AND THE DRAWINGS AND/OR SPECIFICATIONS, THE CODES, LAWS OR REGULATIONS SHALL GOVERN. CONTRACTOR SHALL VERIFY ALL LOCAL SEISMIC REQUIREMENT AND PROVIDE (IF REQUIRED) SEISMIC ENGINEERING FOR EQUIPMENT, PIPING, DUCTWORK, HANGERS, SUPPORTS, ETC. REQUIRED BY LOCAL CODES AND AUTHORITIES HAVE JURISDICTION.

STANDARDS:
HEREINAFTER ARE LISTED STANDARDS WITH WHICH THE CONTRACTOR OR HIS SUBCONTRACTOR SHOULD BE FAMILIAR WITH, IN ORDER TO PERFORM THE NECESSARY WORK.
1. 2018 INTERNATIONAL BUILDING CODE
2. 2018 INTERNATIONAL MECHANICAL CODE
3. 2018 INTERNATIONAL PLUMBING CODE
4. SMACNA DUCT CONSTRUCTION STANDARD, METAL AND FLEXIBLE.
5. SMACNA FIRE DAMPER GUIDE FOR AIR HANDLING SYSTEMS.
6. SMACNA MANUAL FOR BALANCING AND ADJUSTING OF AIR DISTRIBUTION SYSTEMS.
7. LIFE SAFETY CODES.
8. NFPA 90A INSTALLATION OF AIR CONDITIONING AND VENTILATION SYSTEMS.
9. NFPA 90B INSTALLATION OF WARM AIR HEATING SYSTEMS.
10. NFPA #91 INSTALLATION OF BLOWER AND EXHAUST SYSTEMS.

EXAMINATION OF SITE:
ALL BIDDERS SHALL EXAMINE THE SITE AND COMPARE IT WITH THE DRAWINGS AND SPECIFICATIONS AND FAMILIARIZE THEMSELVES WITH ALL EXISTING CONDITIONS BEFORE SUBMITTING ANY PROPOSAL. NO EXTRA CHARGES WILL BE ALLOWED FOR WORK PERFORMED BY THE CONTRACTOR DUE TO HIS FAILURE TO BECOME FAMILIAR WITH ALL OF THE EXISTING CONDITIONS PERTAINING TO THIS PROJECT.

WORKING DRAWINGS AND MEASUREMENTS:
THE WORKING DRAWINGS ARE GENERALLY DIAGRAMMATIC. THEY DO NOT SHOW EVERY OFFSET, BEND, OR ELBOW REQUIRED FOR INSTALLATION IN THE SPACE PROVIDED. ALL LOCATIONS FOR MECHANICAL WORK SHALL BE CHECKED AND COORDINATED WITH EXISTING BUILDING CONDITIONS AND THE OTHER TRADES DRAWINGS. THE DRAWINGS SHALL NOT BE SCALED FOR ROUGHING-IN MEASUREMENTS NOR BE USED AS SHOP DRAWINGS. WORKING DRAWINGS ARE REQUIRED FOR THESE PURPOSES OR HAVE TO BE MADE FROM FIELD MEASUREMENTS, THE CONTRACTOR SHALL TAKE THE NECESSARY MEASUREMENTS AND PREPARE THE DRAWINGS. SHOP DRAWINGS OF VARIOUS SUBCONTRACTORS SHALL BE COORDINATED TO ELIMINATE ALL INTERFERENCE'S AND TO PROVIDE SUFFICIENT SPACE FOR THE INSTALLATION OF ALL EQUIPMENT, PIPING, DUCTWORK, ETC. THE DRAWINGS AND SPECIFICATIONS HAVE BEEN PREPARED TO SUPPLEMENT EACH OTHER AND THEY SHALL BE INTERPRETED AS AN INTEGRAL UNIT WITH ITEMS SHOWN ON ONE AND NOT THE OTHER BEING FURNISHED AND INSTALLED AS THOUGH SHOWN AND CALLED OUT IN BOTH.

APPROVALS FOR SUBSTITUTION OF EQUIPMENT & MATERIALS:
ACCEPTABLE EQUIPMENT AND MATERIAL MANUFACTURERS ARE SHOWN ON THE DRAWINGS BY NAME IN THESE SPECIFICATIONS. IF NOT SHOWN OR LISTED, WRITTEN ACCEPTANCE FOR THE MANUFACTURER IS REQUIRED BY THE ARCHITECT AND/OR THE ENGINEER BEFORE USING SUCH MANUFACTURERS EQUIPMENT AND/OR MATERIALS FOR BIDDING. ACCEPTANCE WILL NORMALLY BE GIVEN IN DULY ISSUED ADDENDA TO THIS PROJECT.

EQUIPMENT SUBMITTALS, PRODUCT DATA AND SAMPLES:
UNLESS OTHERWISE APPROVED, ALL MECHANICAL SUBMITTALS SHALL BE PROVIDED AT ONE TIME. PARTIAL SUBMITTALS WILL NOT BE ACCEPTED. SUBMIT SIX (6) COPIES TO THE ENGINEER AND OWNER IN 3-RING BINDERS OR ELECTRONIC SUBMITTAL PACKAGE. EACH ITEM SUBMITTED SHALL BE CLEARLY REFERENCED BY SECTION, PAGE AND PARAGRAPH TO THE APPLICABLE PORTION OF THIS SPECIFICATION. WHERE EQUIPMENT IS DESIGNATED BY NUMBER OR SYMBOL ON THE DRAWINGS, THE SUBMITTALS SHALL ALSO SHOW THIS NUMBER OR SYMBOL. MARKINGS USING YELLOW HIGHLIGHTING ARE NOT ACCEPTABLE. ALL SPECIFIED FEATURES AND PERFORMANCE DATA MUST BE SPECIFICALLY NOTED ON THE SUBMITTAL. THE CONTRACTOR SHALL CHECK SHOP DRAWINGS FOR SPACE REQUIREMENTS AND CONFORMANCE WITH THE SPECIFICATIONS AND SHALL MARK HIS CORRECTIONS AND APPROVAL ON ALL SHOP DRAWINGS PRIOR TO SUBMITTAL TO THE ENGINEERS. IN THE SUBMITTAL OR SHOP DRAWING REVIEW, WHEN SOME ERRORS ARE DETECTED BUT OTHERS OVERLOOKED, THIS DOES NOT GRANT THE CONTRACTOR PERMISSION TO PROCEED IN ERROR. REGARDLESS OF ANY INFORMATION OUTLINED IN THE SUBMITTALS OR SHOP DRAWINGS, THE REQUIREMENTS OF THE SPECIFICATIONS MUST BE FOLLOWED AND ARE NOT WAVED OR SUPERSEDED IN ANY WAY BY THE SUBMITTALS OR SHOP DRAWING REVIEW.

ACCESS AND CAPACITY:
THE ACCESS TO EQUIPMENT SHOWN ON THE DRAWINGS IS THE MINIMUM ACCEPTABLE SPACE REQUIREMENTS. NO EQUIPMENT WILL BE CONSIDERED WHICH REDUCES OR RESTRICTS ACCESSIBILITY. ACCESS FOR REMOVAL OF AIR FILTERS SHALL BE PROVIDED. ANY PIPES OR AIR DUCTS WHICH IMPAIR ACCESS TO AND REMOVAL OF THE AIR FILTERS SHALL BE REMOVED AND REINSTALLED IN A SATISFACTORY LOCATION WITHOUT ANY CHARGE TO THE OWNER. ALL EQUIPMENT SHALL GIVE THE SPECIFIED CAPACITY AND PERFORMANCE AT THE JOB SITE ELEVATION. MANUFACTURER'S STANDARD RATINGS SHALL BE ADJUSTED ACCORDINGLY. ALL CAPACITIES AND PERFORMANCES ARE FOR JOB SITE CONDITIONS. CAPACITIES SHOWN FOR EQUIPMENT IN THE SPECIFICATIONS AND ON THE DRAWING ARE THE MINIMAL ACCEPTABLE. NO EQUIPMENT WILL BE CONSIDERED AS AN ALTERNATIVE WHICH HAS CAPACITIES OR PERFORMANCE LESS THAN THAT OF DESIGN EQUIPMENT.

PERMITS AND FEES:
ARRANGE AND PAY FOR PERMITS, FEES, SERVICE CHARGES AND INSPECTIONS BY GOVERNING AUTHORITIES AND BY UTILITIES.

DUCT OPENINGS AND EQUIPMENT RECESSES:
DUCT CHASES, OPENINGS AND EQUIPMENT RECESSES SHALL BE PROVIDED BY OTHERS ONLY IF SHOWN ON ARCHITECTURAL OR STRUCTURAL DRAWINGS. ALL OPENINGS FOR THE MECHANICAL WORK, EXCEPT WHERE DRAWINGS AND SPECIFICATIONS INDICATE OTHERWISE, SHALL BE PROVIDED AS WORK OF THIS SECTION. WHETHER CHASES, RECESSES, AND OPENINGS ARE PROVIDED AS WORK OF THIS SECTION OR BY OTHERS, THIS SUBCONTRACTOR SHALL SUPERVISE THEIR CONSTRUCTION AND BE RESPONSIBLE FOR THE CORRECT SIZE AND LOCATION, EVEN THOUGH DETAILED AND DIMENSIONED ON THE DRAWINGS. THIS SUBCONTRACTOR SHALL PAY FOR ALL NECESSARY CUTTING, REPAIRING AND FINISHING, IF ANY ARE LEFT OUT OR INCORRECTLY MADE.

SEALING:
SPACES BETWEEN CONDUIT, OR DUCT AND SLEEVE THROUGH WALL OR FLOOR SHALL BE COMPLETELY STUFFED WITH 1 LB. PER CUBIC FOOT FIBERGLASS INSULATION TO CLOSE ALL INTERSTICES. SPACES TOO SMALL TO BE STUFFED SHALL BE CAULKED WITH OIL BASED CAULKING COMPOUND. AFTER STUFFING, ALL OPENINGS TO BE THOROUGHLY TAPED WITH HEAVY PLASTIC OR BUTYL DUCT TAPE TO PREVENT SOUND PASSAGE. ALL SPACES BETWEEN PIPES AND/OR DUCTS AND SLEEVES THROUGH FIRE WALLS, FIRE PARTITIONS, FLOORS, AND CEILINGS SHALL BE CAULKED WITH ONE INCH FILL OF 3M "FIRE BARRIER". CAULKING MUST BE ON BOTH SIDES OF FIRE RATED UNIT.

MECHANICAL SPECIFICATIONS

CLAIMS FOR EXTRA COST:
IF CONTRACTOR CLAIMS ANY INSTRUCTIONS GIVEN HIM INVOLVE EXTRA COST, HE SHALL SO NOTIFY ARCHITECT WITHIN A REASONABLE TIME OF RECEIPT OF SUCH INSTRUCTIONS AND BEFORE PROCEEDING WITH THE WORK CALLED FOR THEREIN. NO SUCH WORK SHALL BE DONE AND NO PAYMENT MADE THEREFOR WITHOUT A WRITTEN CHANGE ORDER COVERING SUCH WORK FROM ARCHITECT AND OWNER. THE CONTRACTOR'S PROPOSAL FOR CHANGES IN THE WORK SHALL INCLUDE A COMPLETE ITEMIZATION OF THE PROPOSED WORK, INDICATING SEPARATELY: (A) QUANTITIES OF MATERIALS, (B) UNIT COSTS, (C) LABOR CHARGES, AND (D) CONTRACTOR'S PROFIT AND OVERHEAD, (E) EXTENSION OF TIME IF REQUIRED. A COMPLETE BREAKDOWN OF COSTS IS MANDATORY. CONTRACTOR'S PROFIT AND OVERHEAD SHALL NOT EXCEED 10% OF THE TOTAL DIRECT COSTS.

DUCT OPENINGS AND EQUIPMENT RECESSES:
DUCT CHASES, OPENINGS AND EQUIPMENT RECESSES SHALL BE PROVIDED BY OTHERS ONLY IF SHOWN ON ARCHITECTURAL OR STRUCTURAL DRAWINGS. ALL OPENINGS FOR THE MECHANICAL WORK, EXCEPT WHERE DRAWINGS AND SPECIFICATIONS INDICATE OTHERWISE, SHALL BE PROVIDED AS WORK OF THIS SECTION. WHETHER CHASES, RECESSES, AND OPENINGS ARE PROVIDED AS WORK OF THIS SECTION OR BY OTHERS, THIS SUBCONTRACTOR SHALL SUPERVISE THEIR CONSTRUCTION AND BE RESPONSIBLE FOR THE CORRECT SIZE AND LOCATION, EVEN THOUGH DETAILED AND DIMENSIONED ON THE DRAWINGS. THIS SUBCONTRACTOR SHALL PAY FOR ALL NECESSARY CUTTING, REPAIRING AND FINISHING, IF ANY ARE LEFT OUT OR INCORRECTLY MADE.

COOPERATION WITH OTHER TRADES:
REFER TO OTHER DRAWINGS AND PARTS OF THIS SPECIFICATION COVERING WORK OF OTHER TRADES WHICH IS CARRIED ON IN CONJUNCTION WITH THE MECHANICAL WORK SUCH THAT ALL WORK CAN PROCEED WITHOUT INTERFERENCE RESULTING FROM LACK OF COORDINATION. PROPERLY SIZE AND LOCATE ALL CHASES, SLEEVES, EQUIPMENT BASES, AND ACCESSES. PROVIDE ACCURATE WIRING DIAGRAMS TO THE ELECTRICAL CONTRACTOR FOR ALL EQUIPMENT FURNISHED UNDER THIS DIVISION.

MANUFACTURER'S INSTRUCTIONS:
THE CONTRACTOR SHALL FOLLOW THE MANUFACTURER'S INSTALLATION INSTRUCTIONS EXPLICITLY IN THE INSTALLATION OF ALL ITEMS OF MECHANICAL EQUIPMENT. IN THE EVENT THE MANUFACTURER'S INSTRUCTIONS CONFLICT WITH THE DRAWINGS AND SPECIFICATIONS, THE ENGINEER SHALL BE SO NOTIFIED IN WRITING AND A RESOLUTION WILL BE MADE.

MATERIALS AND EQUIPMENT:
ALL MATERIALS AND PRODUCTS USED FOR CONSTRUCTION SHALL BE NEW, AND OF THE BEST GRADE AND THE LATEST PRODUCTS AS LISTED IN PRINTED CATALOG DATA. ALL ARTICLES OF A KIND SHALL BE THE STANDARD PRODUCT OF SINGLE MANUFACTURER. PRODUCTS OR EQUIPMENT OF ANY OF THE MANUFACTURERS CITED HEREIN MAY BE USED ON ANY OF THE PRODUCTS APPROVED BY ADDENDA. HOWEVER, WHERE LISTED PRODUCTS ARE CITED HEREIN, THE ONE FIRST LISTED IS THE DESIGN EQUIPMENT USED IN DRAWINGS AND SCHEDULES TO ESTABLISH SIZE, QUALITY, FUNCTION AND CAPACITY STANDARDS. IF OTHER THAN FIRST NAMED EQUIPMENT IS USED, IT SHALL BE CAREFULLY CHECKED FOR ACCESS, ELECTRICAL REQUIREMENTS, VALUING, PIPING AND CONTROL REQUIREMENTS OF THE ALTERNATE EQUIPMENT. SHOULD CHANGES OR ADDITIONS OCCUR IN PIPING, VALUING, ELECTRICAL WORK, ETC., OR THE WORK OF OTHER CONTRACTORS BE REVISED BY THE ALTERNATE EQUIPMENT, THE COST OF ALL CHANGES SHALL BE BORNE AS WORK OF THIS DIVISION.

OBSERVATION:
ALL WORK AND MATERIALS SUBJECT TO REVIEW AT ANY AND ALL TIMES BY ARCHITECT AND/OR OWNERS REPRESENTATIVE. CONTRACTOR SHALL NOTIFY THE ARCHITECT A MINIMUM OF TWO DAYS PRIOR TO TESTING ANY PIPING SYSTEM WHICH MUST BE WITNESSED AND APPROVED BEFORE IT IS COVERED UP OR ENCLOSED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE SURE THAT THE WORK WILL STAND THE TEST PRESCRIBED BEFORE GIVING THE NOTIFICATION. IF AN AUTHORIZED OBSERVER FINDS ANY MATERIAL OR WORK NOT CONFORMING TO THESE SPECIFICATIONS, WITHIN THREE DAYS AFTER BEING NOTIFIED, REMOVE FROM PREMISES. IF MATERIAL HAS BEEN INSTALLED, ENTIRE EXPENSE OF REMOVING AND REPLACING SHALL BE BORNE BY CONTRACTOR.

SUPERVISION AND WORKMANSHIP:
FURNISH THE SERVICES OF AN EXPERIENCED FOREMAN WHO SHALL BE IN CHARGE OF THE ERECTION OF THE MECHANICAL AND/OR PLUMBING SYSTEMS, TOGETHER WITH ALL NECESSARY MECHANICS AND LABORERS REQUIRED TO PROPERLY UNLOAD, TRANSFER, ERECT, CONNECT UP, ADJUST, START, OPERATE AND TEST THE SYSTEM. HE SHALL GIVE FULL INSTRUCTIONS TO THE OWNER'S REPRESENTATIVES AS TO THE OPERATION AND MAINTENANCE OF ALL FIXTURES, APPARATUS AND WORK INSTALLED UNDER HIS SUPERVISION. HE SHALL VERIFY ALL CONDITIONS ON THE JOB SITE AND LAYOUT ALL WORK ACCORDINGLY. ALL WORKMANSHIP SHALL BE OF FIRST QUALITY. NONE BUT COMPETENT MECHANICS SHALL BE EMPLOYED IN THE WORK. SHODDY WORKMANSHIP WILL BE CAUSE FOR REJECTION AND REPLACEMENT OF INSTALLED WORK WITHOUT ADDITIONAL COST TO THE OWNER.

MECHANICAL SPECIFICATIONS

EXCAVATION AND BACK FILL:
THE MECHANICAL CONTRACTOR SHALL PROVIDE ALL EXCAVATION, TRENCHING, AND BACK FILLING FOR HIS UNDERGROUND PIPING. BOTTOMS OF TRENCHES SHALL BE TAMPER HARD AND FOR SOIL AND WASTE PIPING SHALL BE GRADED TO SECURE UNIFORM FALL OF 1/4" PER FOOT, UNLESS OTHERWISE NOTED. STONES OF ONE (1) INCH OR GREATER IN ANY DIMENSIONS SHALL BE REMOVED TO AVOID POINT OF BEARING. BELL HOLES FOR SEWER PIPE SHALL BE EXCAVATED SO THAT PIPE WILL REST ON SOLID GROUND FOR ITS ENTIRE LENGTH. GRADING SHALL BE DONE ON SOLID GROUND FOR ITS ENTIRE LENGTH. GRADING SHALL BE DONE AS MAY BE NECESSARY TO PREVENT SURFACE WATER FROM FLOWING INTO THE TRENCH, AND ANY WATER ACCUMULATING THEREIN SHALL BE REMOVED SO THAT THE STABILITY OF THE BOTTOM AND SIDES OF THE TRENCH SHALL NOT BE IMPAIRED. AFTER PIPELINES HAVE BEEN TESTED, INSPECTED AND APPROVED BY THE OWNER'S REPRESENTATIVE, AND PRIOR TO BACK FILLING, THE EXCAVATION SHALL BE CLEANED OF ALL KINDS OF RUBBISH AND BACK FILL MATERIALS CLEANED FREE OF TRASH. BACK FILL SHALL BE PLACED IN 6" LAYERS (LOOSE THICKNESS) FOR COMPACTION BY HAND OPERATED MACHINE COMPACTORS, AND 8" LAYERS FOR OTHER THAN HAND OPERATED MACHINES. EACH LAYER SHALL BE COMPACTED, BY SUITABLE EQUIPMENT TO A DENSITY OF NOT LESS THAN 95% AS DETERMINED BY THE MODIFIED AASHO TEST T-180. BACK FILL MATERIAL TO 12" ABOVE THE PIPE SHALL NOT HAVE STONES LARGER THAN 3/4" IN ANY DIRECTION AND OF A MOISTURE CONTENT THAT WILL FACILITATE COMPACTION. BEDDING OF ALL UNDERGROUND PIPE SHALL BE FOUR INCHES OF CLEAN SAND. SEWER AND CULINARY WATER PIPES SHALL BE LAID IN SEPARATE TRENCHES, EXCEPT WHERE OTHERWISE NOTED. THE MECHANICAL CONTRACTOR SHALL PROVIDE ADEQUATE SHORING TO SAFEGUARD WORKERS FROM CAVE-INS, FOR ALL EXCAVATIONS IN ACCORDANCE WITH OSHA REQUIREMENTS.

PROTECTION AGAINST WEATHER AND STORING OF MATERIALS:
WORK WILL NOT BE PERMITTED UNDER ANY CONDITIONS UNSUITED TO PROPER EXECUTION, SAFETY,AND PERFORMANCE.ALL EQUIPMENT AND MATERIALS SHALL BE PROPERLY STORED AND PROTECTED AGAINST MOISTURE, DUST, OR WIND. USE COVERINGS OR OTHER PROTECTION ON ALL ITEMS WHICH MAY BE DAMAGED, RUSTED OR HAVE THEIR PERFORMANCE IMPAIRED BY ADVERSE WEATHER OR MOISTURE AND DUST CONDITIONS.

CUTTING AND PATCHING:
NO CUTTING OR DRILLING IN STRUCTURAL MEMBERS SHALL BE DONE WITHOUT WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER. THE WORK SHALL BE CAREFULLY LAID OUT IN ADVANCE, AND WHEN CUTTING, CHANNELING, CHASING OR DRILLING OF FLOORS, WALLS, PARTITIONS, DEALINGS, OR OTHER SURFACES IS NECESSARY FOR THE PROPER INSTALLATION, SUPPORT OR ANCHORAGE OF THE PIPING, DUCT OR OTHER MECHANICAL WORK, THIS WORK SHALL BE CAREFULLY DONE, AND ANY DAMAGE TO BUILDING, PIPING, OR EQUIPMENT SHALL BE REPAIRED BY PROFESSIONAL GYPSUM BOARD FINISHERS, MASONS, CONCRETE WORKERS, ETC., AND ALL SUCH WORK BEING PAID FOR AS WORK OF THIS DIVISION. ALL CUTTING OF MASONRY AND OR CONCRETE SHALL BE DONE BY CORE DRILLING AND MASONRY SAWING. ALL REQUIRED CUTTING AND PATCHING OF STREETS, SIDEWALKS, AND CURBS AND GUTTERS FOR THE INSTALLATION OF THE UTILITY SERVICE PIPES SHONW UNDER THE SCOPE OF THIS CONTRACTOR SHALL BE DONE BY THIS CONTRACTOR. ALL STREETS, SIDEWALKS, AND CURBS AND GUTTERS SHALL BE REPAIRED BY THIS CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL AUTHORITIES.

ELECTRICAL WIRING:
MOTOR STARTERS AND DISCONNECT SWITCHES, UNLESS SPECIFIED TO BE PART OF THIS MECHANICAL PACKAGED EQUIPMENT, SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. ALL POWER WIRING TO MOTORS AND PACKAGED MECHANICAL EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. ALL AUTOMATIC TEMPERATURE CONTROL WIRING (LINE VOLTAGE OR LOW VOLTAGE) REQUIRED TO COMPLETE THE TEMPERATURE CONTROL SYSTEM (BY INTERCONNECTION OF TIME CLOCKS, LOW TEMPERATURE PROTECTION THERMOSTATS, E.P. SWITCHES, P.E. SWITCHES, STARTING SWITCHES, PACKAGED MECHANICAL EQUIPMENT AND LIKE DEVICES AND EQUIPMENT) SHALL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR. INSTALLATION SHALL CONFORM TO ALL LOCAL CODES AND NATIONAL ELECTRICAL CODE. ALL WIRING LOCATED IN RETURN AIR DUCTS OR IN RETURN AIR PLENUMS SHALL BE RUN IN CONDUIT. BEFORE ORDERING ANY EQUIPMENT, THE MECHANICAL CONTRACTOR SHALL VERIFY WITH ELECTRICAL CONTRACTORS ALL MOTOR CHARACTERISTICS, PHASE AND VOLTAGE. ANY ELECTRICAL CHANGES OR ADDITIONS REQUIRED BY SUBSTITUTION OF MECHANICAL EQUIPMENT SHALL BE THE COMPLETE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR.

COMPLETION REQUIREMENTS:
UPON COMPLETION OF THE WORK AND ADJUSTMENT OF ALL EQUIPMENT, ALL SYSTEMS SHALL BE TESTED BY THE CONTRACTOR TO DEMONSTRATE TO THE ENGINEER'S AND OWNER'S REPRESENTATIVES THAT ALL EQUIPMENT FURNISHED AND INSTALLED, OR CONNECTED UNDER THE PROVISIONS OF THESE SPECIFICATIONS, FUNCTION MECHANICALLY IN THE MANNER REQUIRED.

ADJUSTMENTS, OPERATION, ETC.:
ADJUST ALL CONTROLS FOR PROPER OPERATION. ADJUST ALL REGULATORS, FAUCETS, ETC. OPEN AND CLOSE ALL SHUTOFF AND CONTROL VALVES SEVERAL TIMES TO INSURE TIGHT GLANDS. FURNISH THE SERVICES OF A QUALIFIED MAN FOR A PERIOD OF NOT LESS THAN THREE DAYS AT A TIME, APPROVED BY THE OWNER, TO INSTRUCT THE MAINTENANCE PERSONNEL, CORRECT ANY DEFECTS OR DEFICIENCIES, AND DEMONSTRATE TO THE SATISFACTION OF THE ENGINEER AND OWNER, THAT THE ENTIRE SYSTEM IS OPERATING IN A SATISFACTORY MANNER AND COMPLIES WITH ALL REQUIREMENTS OF ANY OTHER TRADES OR CONTRACTORS THAT MAY BE REQUIRED TO COMPLETE THE WORK. COMPLETE THIS OPERATION TEST PRIOR TO REQUEST FOR FINAL INSPECTION. SUBMIT WRITTEN VERIFICATION OF COMPLIANCE FROM THE OWNER'S REPRESENTATIVE.

CLEANING:
AFTER ALL TESTS AND ADJUSTMENTS HAVE BEEN MADE AND ALL SYSTEMS PRONOUNCED SATISFACTORY FOR PERMANENT OPERATION, THIS CONTRACTOR SHALL CLEAN ALL EXPOSED DUCTWORK, INSULATED MEMBERS, FIXTURES AND EQUIPMENT INSTALLED UNDER THIS SECTION AND LEAVE READY FOR PAINTING. HE SHALL REFINISH ANY DAMAGED FINISH, AND LEAVE EVERYTHING IN PROPER WORKING ORDER.

RECORD DRAWINGS:
RECORD DRAWINGS FOR ALL SYSTEMS AND SECTIONS OF THIS DIVISION SHALL BE FURNISHED AS WORK OF THIS SECTION. RECORD DRAWING REDLINES SHALL BE ACCURATELY AND NEATLY MARKED, SHOWING ALL CHANGES FROM SCHEMATICS. RECORD DRAWINGS SHALL BE REVIEWED WITH THE DESIGN TEAM AT LEAST ONCE A MONTH AND SHALL BE SUBMITTED AT TIME OF FINAL INSPECTION AND BE CHECKED FOR ACCURACY.

GUARANTEE:
BY THE ACCEPTANCE OF ANY CONTRACT AWARD FOR THE WORK HEREIN DESCRIBED OR SHOWN ON THE DRAWINGS, THE CONTRACTOR ASSUMES THE FULL RESPONSIBILITY IMPOSED BY THE GUARANTEE AS SET FORTH HEREIN, AND SHALL PROTECT HIMSELF THROUGH PROPER GUARANTEES FROM EQUIPMENT VENDORS AND FROM SUBCONTRACTORS AS THEIR INTERESTS MAY APPEAR. THE GUARANTEE SO ASSUMED BY THE CONTRACTOR AND AS WORK OF THIS SECTION IS AS FOLLOWS:
1. THAT THE ENTIRE MECHANICAL SYSTEM, INCLUDING PLUMBING, AIR CONDITIONING, HEATING AND VENTILATION SYSTEMS SHALL BE QUIET IN OPERATION.
2. THAT THE CIRCULATION OF WATER AND AIR SHALL BE COMPLETE AND EVEN.
3. THAT HE SHALL MAKE, PROMPTLY UPON NOTICE FROM THE OWNER AND FREE OF CHARGE, ANY REPAIRS NECESSARY DUE TO DEFECTIVE MATERIALS OR WORKMANSHIP THAT MAY OCCUR DURING A PERIOD OF ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION. AIR CONDITIONING COMPRESSORS SHALL BE GUARANTEED FOR FIVE YEARS.
4. THAT ALL SPECIALTIES, MECHANICAL AND PATENT DEVICES INCORPORATED IN THESE SYSTEMS, SHALL BE ADJUSTED IN A MANNER THAT EACH SHALL DEVELOP ITS MAXIMUM EFFICIENCY IN THE OPERATION OF THE SYSTEMS.

MECHANICAL SPECIFICATIONS

BASIC MATERIALS AND METHODS

RELATED DOCUMENTS:
THE GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND GENERAL REQUIREMENTS, APPLY TO THE WORK SPECIFIED IN THIS SECTION.

DESCRIPTION OF WORK:
THE WORK UNDER THIS SECTION INCLUDES THE FURNISHING OF ALL LABOR, MATERIALS, EQUIPMENT, TRANSPORTATION, AND SERVICES INCLUDED IN THE FOLLOWING BASIC MATERIALS AND METHODS CLASSIFICATION:
PIPING MATERIALS
PIPING FITTINGS
VALVES
STRAINERS
UNIONS
PIPE SLEEVES
CONCRETE INSERTS
FLOOR, WALL AND CEILING PLATES
PIPE HANGERS AND SUPPORTS
V-BELT DRIVES
MOTORS
JOINTS AND CONNECTIONS
PIPE INSTALLATION
GRADING OF PIPE

PIPING MATERIALS:
FOREIGN MADE MATERIALS: ALL PIPE, PIPE FITTINGS AND ACCESSORIES USED ON THIS PROJECT SHALL BE MANUFACTURED IN THE UNITED STATES. THE USE OF FOREIGN MADE MATERIALS WILL NOT BE ALLOWED. NATURAL GAS PIPING - STEEL PIPE: SIZE 4" AND SMALLER, SCHEDULE 40 OR SCHEDULE 80, BLACK OR GALVANIZED, CONFORMING TO A53 GRADE A. DWV PIPING – DWV ABS PIPE ROOF DRAIN PIPING – PVC PIPE ASTM D2265 OR ASTM D3034 DOMESTIC WATER PIPING - PEX PIPING METHOD PEX PIPING INSTALLATION REQUIREMENTS AND MEETING LOCAL CODES. PIPING TO BE COLOR CODED AND LABELED ACCORDING TO PLAN GENERAL NOTES. COPPER REFRIGERANT TUBE: TYPE "L" HARD DRAWN, DEGREASED, SCALED-AT-THE-MILL, CLEANED AND SEALED AT THE MILL.

PIPE FITTINGS:
IN STEEL PIPE: 2" AND SMALLER, SCREWED MALLEABLE IRON, CLASS 150 LB., CONFORMING TO ANSI-B26.3, EITHER BLACK OR GALVANIZED. 2-1/2" AND LARGER, SCHEDULE 40 WROUGHT STEEL WELDING FITTINGS CONFORMING TO ANSI-B16.28. 2-1/2" AND SMALLER, SCREWED, COATED CAST IRON DRAINAGE TYPE CONFORMING TO ANSI-B16.12. IN CAST IRON PIPE: SERVICE WEIGHT, COATED CAST IRON, HUB LESS TYPE CONFORMING TO ANSI-112.5.1. IN COPPER TUBE: WROUGHT COPPER SWEAT TYPE CONFORMING TO ANSI-26.22. ALL EBOWS SHALL BE LONG RADIUS.

VALVES:
GENERAL: VALVES MANUFACTURED BY APOLLO, JENKINS, KENNEDY, POWELL, WALWORTH, CRANE, NBC, STOCKHOLM, HAMMOND, OR UNREMEMBERED ARE APPROVED. ALL VALVES SHALL BE BY THE SAME MANUFACTURER. BALL VALVES: IN COPPER LINE: BRONZE BODY, SOLDERED ENDS, 150 PSI W.P., LEVER HANDLE WITH STOPS, BRONZE STEM AND BALL, TEFLON SEAT. VALVE SEAT REPLACEABLE WITHOUT DISTURBING PIPING, NIBCO S-590. IN STEEL PIPES: BRONZE BODY, SCREWED ENDS, 150 PSI. W.P., LEVER HANDLE WITH STOPS, BRONZE STEM AND BALL, TEFLON SEAT. VALVE SEAT REPLACEABLE WITHOUT DISTURBING PIPING, NIBCO T- 590. GAS COCKS: ONE INCH SMALLER WALWORTH #597, 1-1/4" SIZE AND LARGER WALWORTH 655. PROVIDE WRENCHES. CHECK VALVES: IN COPPER TUBE: SWEAT TYPE BRONZE BODY, WITH RENEWABLE DISCS, 125 PSI W.P. NIBCO S-413-B. IN STEEL PIPE: SCREWED BRONZE BODY, WITH RENEWABLE DISCS, 125 PSI W.P. NIBCO T-413-B. BALANCING VALVES: 3" AND SMALLER, SCREWED CAST BRONZE BODY WITH BRONZE DISC, METER CONNECTIONS WITH BUILT-IN CHECK VALVES AND INTERNAL SEALS. BELL AND GOSSETT MODEL "CB", OR ARMSTRONG. BALANCING VALVES SHALL BE PROVIDED WITH HANSON QUICK CONNECTS AND SHUTOFF VALVES. WATER SELF-FILL (P.R.) VALVE: HEATING WATER SELF-FILL, 3/4" BRASS BODY, ALL WORKING PARTS BRASS, DIAPHRAGM OPERATED, WITH ANTI-SYPHON CHECK VALVE AND INLET STRAINER, SET AT 12 PSI. MODEL B-7 BELL AND GOSSETT, OR EQUIVALENT BY TACO OR THRUSH. TEMPERATURE AND PRESSURE RELIEF VALVE FOR WATER HEATER: A.S.M.E. RATED AND AUTOMATIC RESEATING, 3/4" BRONZE BODY, WITH TEST LEVER, SET AT 200 DEGREES F. AND 100 PSI, IN CONFORMANCE WITH USA STANDARD Z21.22. WATTS MODEL 40L OR EQUIVALENT BY MC DONNELL-MILLER OR CASH. GAUGE COCKS: CRANE #712 BRONZE COCK. MANUAL AIR VENTS: CRANE #88 NEEDLE VALVE, 3/8" SIZE, ON ALL HIGH POINTS OF PIPING SYSTEMS. ANTI-SYPHON OR BACK PRESSURE VALVE: VALVE SHALL BE REDUCED PRESSURE BACK-FLOW PREVENTOR TYPE WITH MAXIMUM WORKING PRESSURE OF 125 PSI. BRONZE BODY, BRONZE FITTINGS, STAINLESS STEEL SPRINGS, DOUBLE NEOPRENE COATED COTTON DUCT DIAPHRAGM AND NEOPRENE VALVE DISCS. VALVE CONSISTS OF TWO CHECK VALVES BETWEEN WHICH IS MOUNTED A DOUBLE PORTED BALANCED RELIEF VALVE OPERATING INDEPENDENTLY OF LINE PRESSURE, GATE VALVES UP AND DOWNSTREAM OF BASIC UNIT, PIPE UNIONS, AND TEST COCKS. BEECO MODEL "FRP", FEBCO OR WATTS. WATER PRESSURE REDUCING VALVES: SCREWED ALL BRONZE BODY, RENEWABLE STAINLESS STEEL SEAT, SINGLE SEAT, RUBBER DISC, HIGH TEMPERATURE RESISTING DIAPHRAGM, GOOD FOR 300 PSI INLET PRESSURE, WITH SCREWED STRAINER. WATTS 2" MODEL 223S. SET REGULATOR FOR 50 PSI REDUCED PRESSURE UNLESS OTHERWISE NOTED ON THE PLANS.

STRAINERS:
Y-PATTERN: 125 PSI WORKING PRESSURE. BODY MATERIAL TO MATCH PIPE

MECHANICAL SPECIFICATIONS

COPPER TUBING 1-1/2" AND LARGER 10 FEET HORIZONTAL 10 FEET VERTICAL

FLOOR, WALL AND CEILING PLATES:
BRASS MATERIAL, CHROME PLATED FINISH. SIZE SUFFICIENT TO COVER ALL PIPE OPENINGS THROUGH WALL, FLOOR OR CEILING. SET SCREW SPRING TO SECURE PIPE.

PIPE AND PIPE FITTINGS:
GENERAL: RUN ALL PIPING PARALLEL OR PERPENDICULAR TO THE BUILDING STRUCTURE AND SUPPORT IT SUFFICIENTLY TO PREVENT SAGGING. INSTALL ALL PIPING WHERE POSSIBLE SO AS TO VENT AND DRAIN. SUPPORT ALL PIPING INDEPENDENTLY SO THAT ITS WEIGHT IS NOT CARRIED BY THE EQUIPMENT. INSTALL UNIONS IN ALL NON-FLANGED PIPE CONNECTIONS TO APPARATUS AND APPURTENANCES REQUIRING REMOVAL FOR SERVICING, SO LOCATED THAT PIPING MAY BE DISCONNECTED WITHOUT DISTURBING THE GENERAL SYSTEM. PROVIDE DIELECTRIC COUPLINGS, UNIONS OR FLANGES BETWEEN STEEL AND COPPER PIPE OR TUBING. SCREWED JOINTS: SHALL BEVE THE PIPE ENDS REAMED, DOPE OR TAPE APPLIED TO MALE THREADS ONLY, WITH THE EXCEPTION OF BRASS TO BRASS JOINTS WHICH SHALL BE MADE WITH TEFLON TAPE ONLY. AFTER JOINTING, NO MORE THAN 2 THREADS SHALL REMAIN EXPOSED. WELDED JOINTS: BY THE "AARC-WELDING" PROCESS. PORT OPENINGS OF FITTINGS MUST MATCH THE INSIDE DIAMETER OF THE PIPE TO WHICH THEY ARE WELDED. MAKE ALL TURNS WITH FULL RADIUS WELDING ELBOWS AND TEES WITH WELDING TEES. REDUCING FITTINGS MUST BE USED FOR SIZE REDUCTION. SOLDER TYPE JOINTS: WITH 95/5 TIN/ANTIMONY OR "STAY SAFE" LEAD-FREE SOLDER ON WROUGHT COPPER FITTINGS, APPLIED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. JOINTS IN COPPER TUBE 2-1/2" AND LARGER SHALL BE MADE WITH HEAT APPLIED UNIFORMLY AROUND THE ENTIRE CIRCUMFERENCE OF THE TUBE AND FITTINGS BY A MULTIFLAME TORCH. UNDERGROUND JOINTS SHALL BE BRAZED. NO-HUB CAST IRON PIPE: CONFORM WITH UNIFORM STATE PLUMBING CODE AND CAST IRON SOIL PIPE INSTITUTE RECOMMENDATIONS.

VALVES:
INSTALL VALVES ON EACH SIDE OF ALL EQUIPMENT AND WHERE SHOWN ON DRAWINGS. FULL SIZE OF PIPE UNLESS OTHERWISE INDICATED. PROVIDE NEAT APPEARANCE AND EASY GROUPING WITH ALL PARTS EASILY ACCESSIBLE. VALVE STEMS SHALL BE INSTALLED IN HORIZONTAL OR UPRIGHT POSITION.

FLOOR, WALL AND CEILING PLATES:
INSTALL ON ALL EXPOSED PIPES PASSING THROUGH FLOORS, WALLS OR CEILINGS.

PIPE SLEEVES:
LAYOUT WORK IN ADVANCE OF POURING CONCRETE AND FURNISH AND SET SLEEVES NECESSARY TO COMPLETE THE WORK. FLOOR SLEEVES: PROVIDE SLEEVE ON PIPES PASSING THROUGH CONCRETE FLOORS. EXTEND SLEEVE ONE INCH ABOVE FINISHED FLOOR. CAULK ALL PIPES PASSING THROUGH FLOOR WITH OAKUM AND MORTAR.

INSULATED PIPE:
SUPPORTED BY RING HANGERS, THE RINGS SHALL PASS FREELY AROUND THE INSULATION. PROTECT THE INSULATION AT POINT OF CONTACT WITH THE RING HANGER OR TRAPEZE BAR BY MEANS OF PIPE SADDLES.

PIPE HANGERS AND SUPPORTS:
PIPE HANGER SIZE 2" AND SMALLER: ADJUSTABLE MALLEABLE IRON, SPLIT RING HANGER, MALLEABLE, U.L. LISTED. FEE AND MASON NO. 199 OR FIGURE 239. PIPE HANGER LARGER THAN SIZE 2-1/2": ADJUSTABLE STEEL CLEVIS TYPE HANGER, BLACK, U.L. LISTED. FEE AND MASON NO. 239 OR 103. PIPE HANGERS IN CONTACT WITH COPPER TUBE SHALL BE COPPER PLATED. INSULATION PROTECTION SHIELD: GALVANIZED STEEL, 18 GAUGE MINIMUM LENGTH 12". FEE AND MASON #81 OR SIMILAR PRODUCT FABRICATED BY CONTRACTOR.

GENERAL: PROVIDE ADJUSTABLE HANGERS ON ALL PIPES, COMPLETE WITH ADJUSTERS, SWIVELS, RODS, ETC. SIZE HANGERS TO CLEAR INSULATION AND GUIDES. ON HOT LINES WHERE EXPANSION AND CONTRACTION OCCURS, PROVIDE SWIVEL JOINT AT TOP OR BOTTOM OF HANGER ROD. PROVIDE HANGER WITHIN THREE FEET OF ALL CHANGES IN DIRECTION. BRANCHES FIVE (5) FEET OR LONGER SHALL HAVE SEPARATE HANGERS.

PLUMBERS' TAPE: NOT PERMITTED AS PIPE HANGERS.

HANGER SPACING:

PIPE SPACING:

COPPER TUBING 1-1/4" AND SMALLER VERTICAL	5 FEET HORIZONTAL	10 FEET
COPPER TUBING 1-1/2" AND LARGER VERTICAL	10 FEET HORIZONTAL	10 FEET
STEEL PIPE 1" AND SMALLER VERTICAL	7 FEET HORIZONTAL	10 FEET
STEEL PIPE 1-1/4" AND LARGER VERTICAL	10 FEET HORIZONTAL	15 FEET
PEX - ALL SIZES VERTICAL	32 INCHES	10 FEET

CAST IRON SOIL PIPE - AT EACH JOINT AND AT INTERVALS NOT TO EXCEED FIVE (5) FEET.

HANGER RODS:

PIPE SIZES	ROD SIZES
1/2" TO 2"	3/8"
2-1/2" TO 3"	1/2"
4" AND LARGER	5/8"

ALL HANGER RODS SHALL BE PROVIDED WITH DOUBLE NUTS AND THE NUTS SHALL BE LOCKED.

GRADING OF PIPE:
DOMESTIC HOT AND COLD WATER PIPING SHALL BE GRADED TO DRAIN COMPLETELY. INSTALL DRAIN AT ALL LOW POINTS. WASTE AND SOIL PIPING SHALL GRADE DOWNWARD IN THE DIRECTION OF FLOW AT THE RATE OF 1/4" PER FOOT.

PIPE AND EQUIPMENT IDENTIFICATION:
PIPE IDENTIFICATION: IN ALL ACCESSIBLE AREAS, INCLUDING ABOVE REMOVABLE CEILINGS IN EQUIPMENT ROOMS. IN EQUIPMENT ROOMS A DIRECTIONAL FLOW ARROW AND A STENCILED NAME IDENTIFYING THE PIPE CONTENTS SHALL BE PAINTED ON THE PIPE ADJACENT TO EACH VALVE. EACH BRANCH OR TAKEOFF, EACH POINT AT WHICH PIPES LEAVE OR ENTER A WALL, EVERY MAJOR CHANGE OF DIRECTION OF A PIPE, AND AT 20 FT. 2 LB GAS PIPING SHALL BE LABELED EVERY FOOT, ALL OTHER GAS PIPING SHALL BE LABELED EVERY 6'. INTERVALS ON LONG CONTINUOUS RUNS. STENCIL LETTERS AND FLOW ARROWS SHALL BE 1/2, 7/8 OR 1-3/4 INCH IN HEIGHT, DEPENDING ON THE SIZE OF THE PIPE OR EQUIPMENT. IN ALL CASES, THE LARGEST SIZE PRACTICAL SHALL BE USED. STAPLE LABELS TO INSULATION WHERE APPLICABLE. COVER ALL LABELS WITH CLEAR LACQUER OR CLEAR TAPE TO PREVENT PEELING.

ABBREVIATIONS FOR IDENTIFICATION SHALL COMPLY WITH, BUT NOT BE LIMITED TO, THE FOLLOWING:
DOMESTIC COLD WATER - DCW
DOMESTIC HOT WATER - DHW
DOMESTIC HOT WATER CIRCULATING - DHWR
REFRIGERANT LIQUID - RL
REFRIGERANT SUCTION - RS
COMPRESSED AIR - CA
DRAIN - D
NATURAL GAS - G

MECHANICAL SPECIFICATIONS

SEE PLANS FOR ADDITIONAL DOMESTIC WATER LABELS
VALVE IDENTIFICATION:
ALL VALVES, REGARDLESS OF SIZE, SHALL BE IDENTIFIED WITH BRASS TAGS OF 0.51" THICKNESS, 1" BY 3" OR LARGER WITH 1/8" HIGH STAMPED LETTERS. THE TAG SHALL BE ATTACHED TO VALVES WITH RUSTPROOF KEY CHAINS. INFORMATION ON TAG SHALL INCLUDE FUNCTION OF VALVE AND ANY OTHER PERTINENT DATA. ABBREVIATIONS AS SHOWN SHALL BE USED, AS APPLICABLE. EQUIPMENT IDENTIFICATION: ALL EQUIPMENT INCLUDING, BUT NOT LIMITED TO, FAN-COIL UNITS, AIR HANDLING UNITS, EXHAUST FANS, PUMPS, HEAT EXCHANGER, EXPANSION TANK AND AIR SEPARATION TANK SHALL BE IDENTIFIED WITH SIGNS MADE OF LAMINATED PLASTIC WITH 1/8" OR LARGER ENGRAVED LETTERS. SIGNS SHALL BE SECURELY ATTACHED BY RUSTPROOF SCREWS OR SOME OTHER PERMANENT MEANS. INFORMATION ON SIGN SHALL INCLUDE NAME OF EQUIPMENT, RATING, MAINTENANCE INSTRUCTIONS, AND OTHER IMPORTANT DATA. THE MECHANICAL AND ELECTRICAL SCHEDULE SYMBOLS SHALL ALSO APPEAR ON IDENTIFICATION TAGS.

SECTION 15250 - INSULATION

RELATED DOCUMENTS:
THE GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND GENERAL REQUIREMENTS (IF ANY) APPLY TO THE WORK SPECIFIED IN THIS SECTION.

DESCRIPTION OF WORK:
THE WORK UNDER THIS SECTION INCLUDES THE FURNISHING OF ALL LABOR, MATERIALS, EQUIPMENT, TRANSPORTATION AND SERVICES INCLUDED IN THE

FOLLOWING INSULATION CLASSIFICATIONS:
**PIPES OF ALL TYPES TO BE INSULATED ACCORDING TO IECC2015.
DOMESTIC HOT WATER PIPING
DOMESTIC COLD WATER PIPING
ABOVE GRADE RAIN WATER PIPING
THERMAL DUCT WRAPPING

QUALIFICATION OF WORKMEN:
USE SUFFICIENT JOURNEYMEN INSULATORS AND SUPERVISORS IN THE EXECUTION OF THIS PORTION OF THE WORK TO INSURE PROPER AND ADEQUATE INSTALLATION OF INSULATION THROUGHOUT.

COMPLIANCE WITH SPECIFICATION:
WHENEVER REQUIRED DURING PROGRESS OF THE WORK, FURNISH PROOF ACCEPTABLE TO THE OWNER THAT ITEMS INSTALLED EQUAL OR EXCEED ALL REQUIREMENTS SPECIFIED FOR THIS WORK.

PRODUCT HANDLING:
PROTECTION: USE ALL MEANS NECESSARY TO PROTECT INSULATION MATERIALS BEFORE, DURING AND AFTER INSTALLATION.
REPLACEMENT: IN THE EVENT OF DAMAGE, IMMEDIATELY MAKE ALL REPAIRS AND REPLACEMENTS NECESSARY.

FIRE HAZARD CLASSIFICATION FOR ALL INSULATION:
ALL INSULATION SHALL HAVE SURFACE BURNING CHARACTERISTICS RATINGS AS TESTED BY ASTM E84, UL723 OR NFPA 255 NOT EXCEEDING: FLAME SPREAD 25 AND SMOKE DEVELOPED 50. COMPOSITE SHALL INCLUDE INSULATION, JACKETING AND ADHESIVES USED TO SECURE JACKETING OR FACING. ALL ACCESSORY ITEMS, SUCH AS PVC JACKETING AND FITTINGS, ADHESIVES, MASTIC, CEMENT, TAPE AND CLOTH, SHALL HAVE THE SAME COMPONENT RATINGS AS SPECIFIED ABOVE. PIPING INSULATION SHALL BE TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF U.L. "PIPE AND EQUIPMENT COVERING R5583 400 8.15". ACCEPTABLE

MANUFACTURERS:
OWENS-CORNING, JOHNS MANVILLE, PPG, KNAUF, OR CERTAIN-TEED.

PIPE INSULATION:
FIBERGLASS SECTIONAL PIPE INSULATION: SEE PIPE INSULATION SCHEDULE THIS SHEET. MINIMUM DENSITY OF 2 LBS. PER CUBIC FOOT. JACKETED WITH WHITE VAPOR BARRIER LAMINATED OF ALUMINUM FOIL AND WHITE KRAFT REINFORCED WITH GLASS FIBER STRANDS. JACKET SHALL HAVE FACTORY APPLIED SELF-SEALING LAP.

THERMAL AIR DUCT WRAP:
FIBERGLASS BLANKET INSULATION: THERMAL CONDUCTIVITY OF 0.27 BTU - IN. PER SQ. FT. PER HOUR AT 75°F MEAN TEMPERATURE. MINIMUM DENSITY OF ONE POUND PER CUBIC FOOT. JACKETED WITH ALUMINUM FOIL REINFORCED WITH FIBERGLASS SKRIM LAMINATED KRAFT FACING. OWENS-CORNING "FRK-25". PIPE INSULATION: ACCORDING TO GENERAL NOTES ON DRAWINGS

FLUSHING AND CLEANING UPON COMPLETION OF TESTING, FLUSH ALL DOMESTIC WATER PIPING UNTIL WATER SHOWS NO DISCOLOTATION. CLEAN ALL VALVES, STAINERS, ETC. AFTER FLUSHING AND CLEANING, DISINFECT PIPE BY THE USE OF CHLORINE OR CHLORINE COMPOUNDS IN AMOUNTS TO PRODICE A COCENTRATION OF 50 PARTS PER MILLION, AT THE END OF 24 HOURS, FLUSH ALL PIPING UNTIL CHLORINE RESIDUAL IS LESS THAN 2 PARTS PER MILLION. IN ADDITION TO THE ABOVE REQIREMENTS PROVIDE ANY ADDITIONAL SYSTEM CLEANING AND DISINFECTING AS REQUIRED BY STATE OR LOCAL CODES.

THERMAL DUCT WRAPPING: 1-1/2" (OR R-6) THICK FIBERGLASS BLANKET. INSTALLATION OF PIPE INSULATION. INSTALLATION SHALL BE CONTINUOUS THROUGH WALLS, FLOORS, PARTITIONS, SLEEVES, AND PIPE HANGERS, EXCEPTWHERE NOTED OTHERWISE.

FIBERGLASS SECTION PIPE INSULATION: APPLY INSULATION TO PIPE AND SEAL WITH SELF-SEALING LAP. USE SELF-SEALING BUTT STRIPS TO SEAL BUTT JOINTS. EXCEPTION: INSULATION NOT REQUIRED OVER UNIONS, AND VALVEBODIES ON DOMESTIC HOT WATER.FITTINGS FOR PIPE SIZES SMALLER THAN 2-1/2" SHALL BE INSULATED AND FINISHED WITH HYDRAULIC SETTING INSULATING CEMENT TO A THICKNESS EQUAL TO THE ADJOINING PIPE INSULATION. FITTINGS FOR PIPE SIZES 2-1/2" AND LARGER SHALL BE INSULATED WITH SEGMENTS OF THE MOLDED INSULATION SECURELY WIRED IN PLACE AND FINISHED WITH A COST OF HYDRAULIC SETTING INSULATING CEMENT. ALL FITTINGS, REGARDLESS OF PIPE SIZE, SHALL BE FINISHED WITH 4 OUNCE CANVAS AND COATED WITH CHILDREN'S WHITE CP-50A "CHIL-SEAL". THIS SEALANT SHALL CONFORM TO NFPA STANDARD 90A, NFPA FIRE CODE 220 (B) AND SHALL MEET FIRE HAZARD REQUIREMENTS OF GSA AND MIL-A-3316B, CLASS 1, GRADE A/B. INSTALLATION OF

THERMAL AIR DUCT WRAP:
WRAP ALL SUPPLY AIR DUCTS AND ALL RETURN AIR DUCTS. DUCTS THAT ARE INTERNALLY INSULATED NEED NOT BE WRAPPED.

APPLICATION, RECTANGULAR DUCT: APPLY OVER CLEAN, DRY SHEET METAL DUCT. INSTALL TO ALLOW MAXIMUM FULLNESS AT CORNERS, 1" MINIMUM THICKNESS AT CORNERS. BUTT INSULATION TIGHTLY AT JOINTS AND OVERLAP VAPOR BARRIER FACING 2" MINIMUM. REMOVE INSULATION FROM LAPS PRIOR TO STAPLING. STAPLE ALL SEAMS 6" ON CENTERS OUTWARD CLINCHING STAPLES, THEN SEAL WITH FOIL VAPOR BARRIER TAPE. WHERE DUCTS ARE OVER 24" IN WIDTH, SECURE DUCT WRAP TO THE BOTTOM OF DUCT WITH MECHANICAL FASTENERS ON 16" CENTERS TO PREVENT SAGGING. SEAL PENETRATIONS TO PROVIDE A VAPOR-TIGHT SYSTEM. ALL VERTICAL SECTIONS OF DUCTS SHALL BE MECHANICALLY PINNED ON 16" CENTERS, AT LEAST ONE PIN PER SIDE.
SEAL PENETRATIONS OF VAPOR BARRIER TO PROVIDE A VAPOR-TIGHT SYSTEM.
APPLICATION, ROUND DUCT: APPLY OVER CLEAN, DRY SHEET METAL DUCT. INSTALL INSULATION TO ALLOW FULL THICKNESS. BUTT INSULATION TIGHTLY AT JOINTS, AND OVERLAP VAPOR BARRIER FACING 2" MINIMUM. REMOVE INSULATION FROM LAPS PRIOR TO STAPLING. STAPLE ALL SEAMS 6" ON CENTERS WITH OUTWARD CLINCHING STAPLES, THEN SEAL WITH FOIL VAPOR BARRIER TAPE. ALL VERTICAL SECTIONS OF DUCTS 8" DIAMETER AND LARGER SHALL BE MECHANICALLY PINNED ON 16" CENTERS, A MINIMUM OF FOUR PINS AROUND THE CIRCUMFERENCE. SEAL PENETRATION OF VAPOR BARRIER TO PROVIDE A VAPOR-TIGHT SYSTEM.

AIR TESTING AND BALANCING

GC TO HIRE NEBB CERTIFIED THIRD PARTY TEST AND BALANCE (TAB) CONTRACTOR. TAB CONTRACTOR SHALL ADJUST SHEAVES, BELTS, DAMPERS, ETC AS NECESSARY TO BALANCE SYSTEM TO AIRFLOWS REQUIRED AT LOWEST POSSIBLE SPEEDS. TAB CONTRACTOR SHALL VERIFY THE OUTSIDE AIR AT EACH RTU IS AS SCHEDULED. FOLLOW PROCEDURES AS LAID FORTH IN THE CURRENT VERSION OF "PROCEDURAL STANDARDS FOR TESTING ADJUSTING AND BALANCING OF ENVIRONMENTAL SYSTEMS" BY NEBB. PROVIDE REPORT ON NEBB FORMS.

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sheet information

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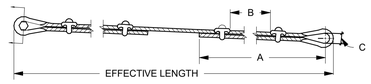
sheet title:
MECHANICAL SPECIFICATIONS

sheet number:
ME003



NOTES:

1. CABLES, THIMBLES, CABLE CLIPS, GROMMETS, FLAT WASHERS AND NEOPRENE WASHERS ARE TO BE FURNISHED BY RESTRAINT MANUFACTURER. ALL OTHER HARDWARE TO BE PROVIDED BY CONTRACTOR.
2. CABLE CLIPS MUST BE ORIENTED AS SHOWN WITH SHORT END OF CABLE ON THE CURVED PART OF THE CLIP.
3. CABLE CLIPS (SAME SIZE AS CABLE) MUST BE ORIENTED AS SHOWN WITH SHORT END OF CABLE ON THE CURVED PART OF THE CLIP.
4. ENTIRE RESTRAINT SYSTEM SHALL BE AMBER BOOTH OR EQUAL.

CABLE SCHEDULE							
CABLE DIA.	CABLE DESIGN	A	B	C	BOLT SIZE	ALLOWABLE LOAD (lbf)	BREAKING STRENGTH (lbf)
1/8"	7X19 GALV.	5-1/4"	1-5/8"	5/8"	3/8"	660	2000
3/16"	7X19 GALV.	5-3/4"	1-7/8"	5/8"	3/8"	1400	4200
1/4"	7X19 GALV.	6-3/4"	2-3/8"	11/16"	3/8"	2330	7000
5/16"	7X19 GALV.	7-3/8"	2-5/8"	13/16"	5/8"	3260	9800
3/8"	7X19 GALV.	8-7/8"	3-1/4"	1"	5/8"	4800	14400
7/16"	6X19 IWRC	17"	3-5/8"	1"	5/8"	5920	17800
1/2"	6X19 IWRC	18"	3-7/8"	1-1/8"	3/4"	7660	23000

9 CABLE CONSTRUCTION

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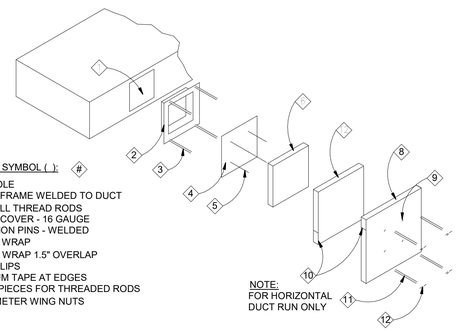
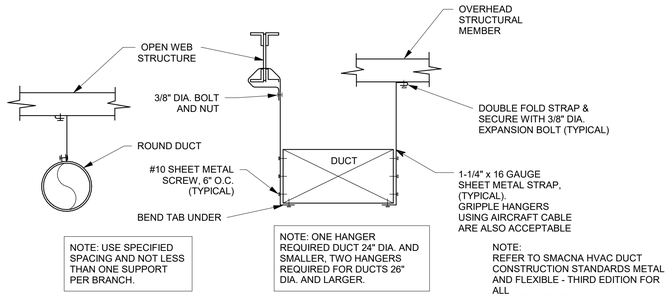


8 GREASE DUCT ACCESS DOOR DETAIL

SCALE: NTS

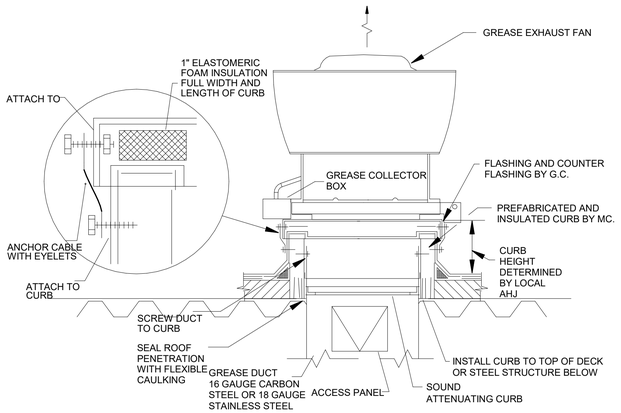


6 DUCT HANGER

SCALE: NTS

5 DIFFUSER MOUNTING DETAIL (SQUARE)

SCALE: NTS



7 GREASE EXHAUST FAN AND CURB DETAIL

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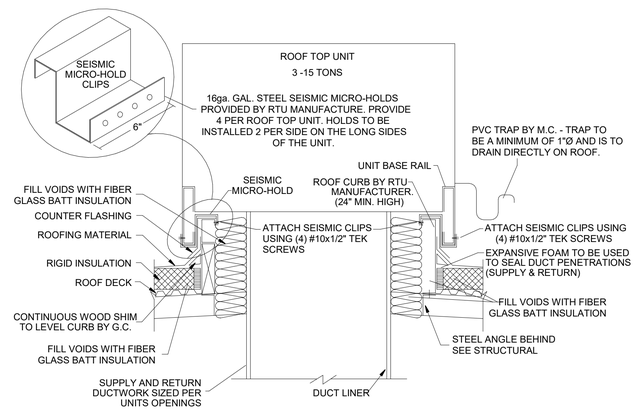

4 ROOFTOP UNIT CURB DETAIL (RTUs & MAUs)

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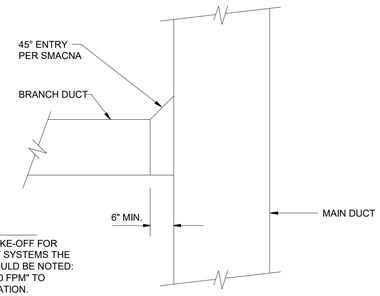
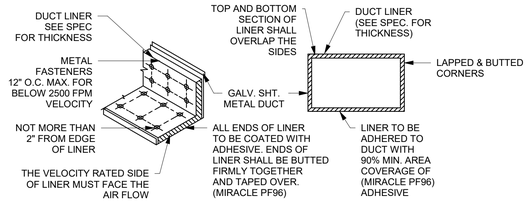


3 TYPICAL DUCT TAKEOFF DETAIL

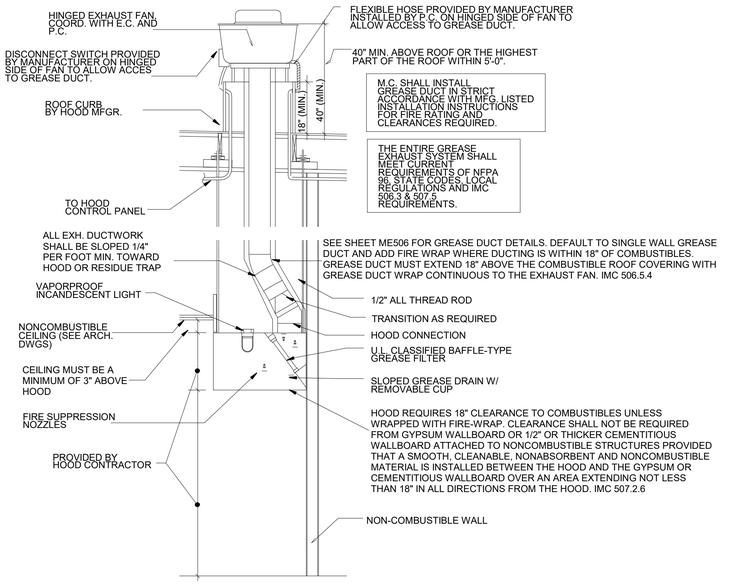
SCALE: NTS

METAL FASTENERS:
OMARK INSUL-PINS, DURA DYNE FASTENERS OR GRIP NAILS.
GRIP NAILS SHALL BE INSTALLED BY "GRIP NAIL AIR HAMMER" OR BY AUTOMATIC FASTENER EQUIP.



2 DUCT LINER

SCALE: NTS



(TYPE I)

NOTE:
1) REQUIREMENTS SHOWN ARE FOR A TYPE "1" HOOD IN A SINGLE STORY BUILDING WITH NON-RATED ROOF ASSEMBLY.
2) HOOD SHALL BE LISTED BY NATIONAL AGENCY.
3) CLEAN-OUTS SHALL BE PROVIDED IN GREASE EXHAUST DUCT AT ALL CHANGES IN DIRECTION. THE CLEAN-OUT PANEL SHALL BE MADE OF THE SAME MATERIAL AND THICKNESS AS THE DUCT. THE C.O. PANEL SHALL HAVE A GASKET OR SEALANT THAT IS RATED FOR 1500°F MIN. AND SHALL BE GREASE TIGHT. FASTENERS USED TO SECURE THE C.O. PANELS, SUCH AS WELDED STUDS, LATCHES, OR WING NUTS SHALL BE CARBON STEEL AND SHALL NOT PENETRATE DUCT WALLS.
4) G.C. SHALL PROVIDE FIRE RATED ACCESS PANEL AT THE DUCT ENCLOSURE TO ACCESS DUCT CLEANOUTS. A SIGN SHALL BE PLACED ON ALL FIRE SHIELDING ACCESS PANELS STATING-"ACCESS PANEL-DO NOT OBSTRUCT".

1 TYP. TYPE 1 GREASE HOOD AND DUCT DETAIL

SCALE: NTS

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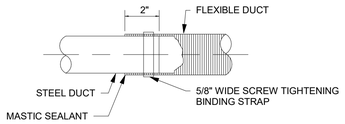
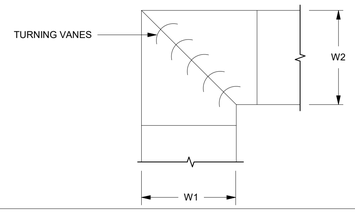
sheet title:
MECHANICAL DETAILS

sheet number:
ME501



8 FLEXIBLE DUCT CONNECTION
SCALE: NTS



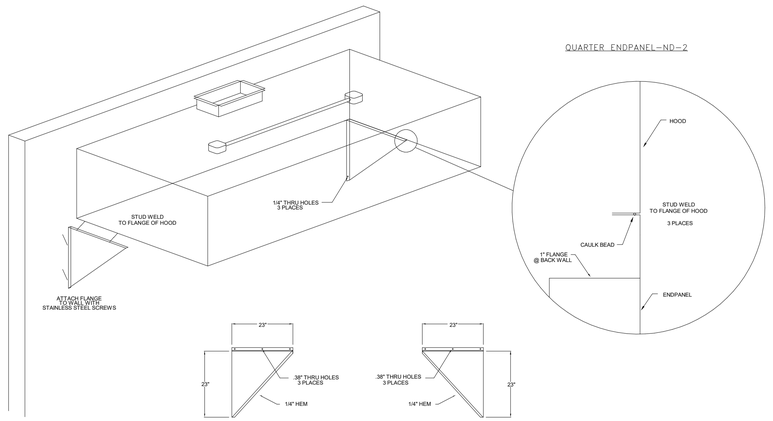
NOTES:
1. ALL TURNING VANES SHALL BE SINGLE VANE TYPE REGARDLESS OF DIMENSION.
2. ALL SINGLE VANES SHALL HAVE A 2 INCH RADIUS, 1 INCH MAXIMUM SPACE BETWEEN VANES AND A 3/4 INCH TRAILING EDGE.

7 DUCT ELBOW - SQUARE
SCALE: NTS

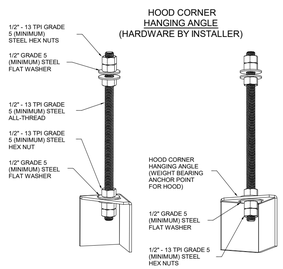
MINIMUM PIPE INSULATION THICKNESS FOR WATER AND REFRIGERANT SYSTEMS

FIELD OPERATING TEMP RANGE (F)	INSULATION CONDUCTIVITY		INSULATION THICKNESS (INCHES) BASED ON NOMINAL PIPE SIZE				
	CONDUCTIVITY BTU*IN/(H*T^2*F)	MEAN RAITING TEMPERATURE, F	LESS THAN 1" DIA.	1"-1 1/2" DIA.	1 1/2"-4" DIA	4"-8" DIA.	8" DIA. AND ABOVE
>350	0.32-0.34	250	4.5	5.0	5.0	5.0	5.0
251-350	0.29-0.32	200	3.0	4.0	4.5	4.5	4.5
201-250	0.27-0.30	150	2.5	2.5	2.5	3.0	3.0
141-200	0.25-0.29	125	1.5	1.5	2.0	2.0	2.0
105-140	0.22-0.28	100	1.0	1.0	1.5	1.5	1.5
40-60	0.27-0.30	75	0.5	0.5	1.0	1.0	1.0
<40	0.20-0.26	50	0.5	1.0	1.0	1.0	1.5

4 MINIMUM PIPING INSULATION TABLE
SCALE: NTS

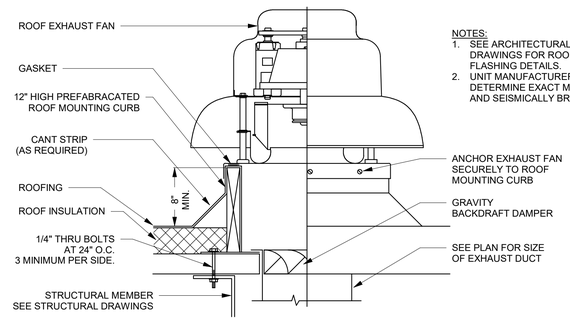


6 HOOD SUPPORT DETAIL
SCALE: NTS



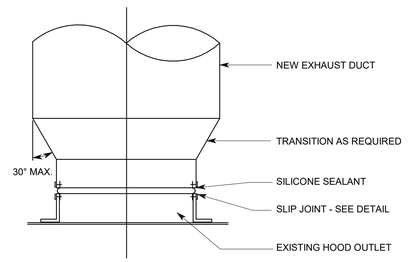
ASSEMBLY INSTRUCTIONS

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD. SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION BENEATH HOOD HANGING ANGLES AND ABOVE CEILING ANCHORS. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.

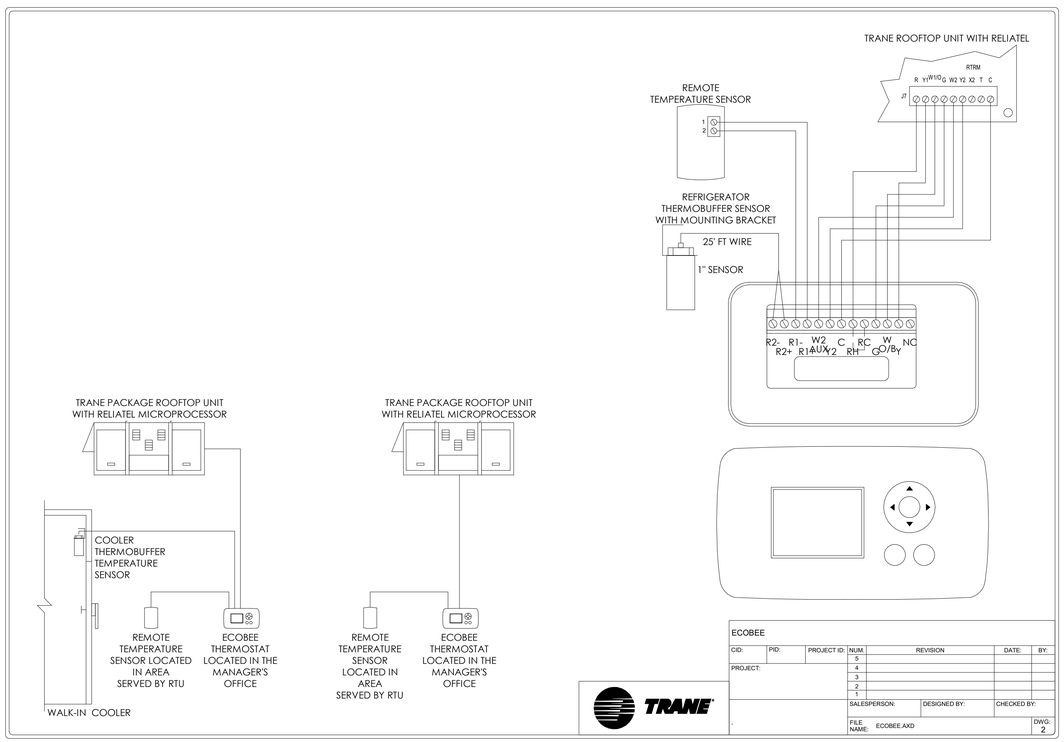


NOTES:
1. SEE ARCHITECTURAL DRAWINGS FOR ROOFING AND FLASHING DETAILS.
2. UNIT MANUFACTURER SHALL DETERMINE EXACT METHOD AND SEISMICALLY BRACING EQUIPMENT.

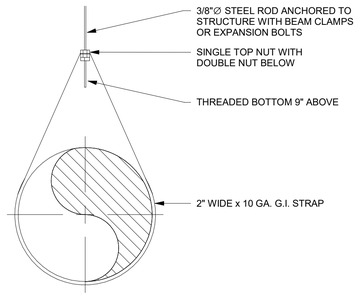
3 ROOF EXHAUST FAN
SCALE: NTS



2 HOOD CONNECTION DETAIL
SCALE: NTS



5 T-STAT WIRING DETAIL
SCALE: NTS



1 EXHAUST DUCT HANGER DETAIL
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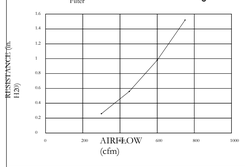
sheet number:

ME502

Grease-Stop Solo Filter



Filter Detail

CAPTRATE

EXHAUST CFM=LENGTH OF HOOD X CFM/LIN.FT. (LOAD)

SUPPLY CFM=EXHAUST CFM X PERCENTAGE REQUIRED

TOTAL DUCT AREA=144 X CFM / FPM(*)

DUCT LENGTH= TOTAL DUCT AREA / DUCT DEPTH

* CAPTIVE-AIRE VENTILATOR DUCT SIZES ARE CALCULATED USING AN EXHAUST VELOCITY OF 1600-1800 FPM AND A SUPPLY VELOCITY OF 1000 FPM PLEASE CONSULT FACTORY FOR MAXIMUM ALLOWABLE DUCT SIZES

CALCULATIONS UTILIZED

CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH:

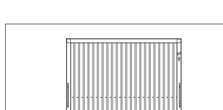
- NFPA 96
- ETL SANITATION
- E.T.L. LISTED 3054804-001
- ETL IS LISTED TO ULC STANDARDS
- NSF

NFPA

Intertek

ETL LISTED

BUILDING CODES



Grease Cup will be supported by 2 studs on the inside wall of the hood
The grease will drain through a concealed grease trough and into this removable cup.

1/2 Pint Grease Cup Detail

NO. 2 HANGING ANGLE DETAIL

HANGING ANGLES WILL BE LOCATED IN THE FOLLOWING FOR WALL CANOPIES

HOOD STYLE		DIM FROM REAR	DIM FROM FRONT (24" High Hood)	DIM FROM FRONT (30" High Hood)
Wall	Exhaust Only	4.166"	2.25"	2.25"
	With MUA		2.25"	2.25"
Back Shelf	Exhaust Only	4.166"	2.25"	2.25"
	With MUA		2.25"	2.25"
Condensate		2.25"	2.25"	

HANGING ANGLE LOCATIONS

FOR QUESTIONS, CALL THE
Utah Office
REGION 87
PHONE: (801) 878-3677
EMAIL: reg87@captiveaire.com

PATENT NUMBERS

AC-PSP (UNITED STATES) - US PATENT 7963830 B2.
AC-PSP WALL (CANADA) - CA PATENT 2820509.
AC-PSP ISLAND (CANADA) - CA PATENT 2520330.

HOOD INFORMATION – JOB#5194064

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S) WIDTH	LENG	HEIGHT	DIA	CFM	VEL	SP	TOTAL SUPPLY CFM	HOOD CONSTRUCTION	HOOD CONFIG END TO END	ROW
1	H-1	5430 ND-2-PSP-F	CAPTIVEAIRE	12' 5"	600 DEG	I	HEAVY	300	3725			4"	14"	1862	1742	-0.914"	2980	430 SS WHERE EXPOSED	ALONE	ALONE
2	H-2	5424 ND-2-PSP-F	CAPTIVEAIRE	6' 5"	600 DEG	I	HEAVY	225	1444			4"	14"	1862	1742	-0.914"	2980	430 SS WHERE EXPOSED	ALONE	ALONE
												4"	12"	1444	1839	-0.731"	1155			

HOOD INFORMATION

HOOD NO	TAG	FILTER(S) TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	LIGHT(S) QTY	TYPE	WIRE GUARD	LOCATION	SIZE	UTILITY CABINET(S) FIRE SYSTEM TYPE	SIZE	ELECTRICAL MODEL #	SWITCHES QUANTITY	FIRE SYSTEM PIPING	HOOD HANGING WEIGHT
1	H-1	CAPTRATE SOLO FILTER	9	20"	16"	85% SEE FILTER SPEC	4	L55 SERIES E26	NO							NO	820 LBS
2	H-2	CAPTRATE SOLO FILTER	4	20"	16"	85% SEE FILTER SPEC	2	L55 SERIES E26	NO	RIGHT	12"x54"x24"			DCV-3111	1 LIGHT 1 FAN	NO	524 LBS

HOOD OPTIONS

HOOD NO	TAG	OPTION
1	H-1	FIELD WRAPPER 12.00" HIGH FRONT, LEFT.
		RIGHT END STANDOFF (FINISHED) 1" WIDE 54" LONG INSULATED.
		STRUCTURAL FRONT PANEL.
		RISER SENSOR INSTALL 3IN DBL.
		LEFT VERTICAL END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 80" HIGH INSULATED 430 SS.
2	H-2	FIELD WRAPPER 18.00" HIGH FRONT, RIGHT.
		LEFT END STANDOFF (FINISHED) 1" WIDE 54" LONG INSULATED.
		RIGHT QUARTER END PANEL 23" TOP WIDTH, 0" BOTTOM WIDTH, 23" HIGH 430 SS.
		RISER SENSOR INSTALL 3IN DBL.

PERFORATED SUPPLY PLENUM(S)

HOOD NO	TAG	POS	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S) WIDTH	LENG	DIA	CFM	SP
1	H-1	Front	150"	18"	6"	MUA	12"	28"		745	0.208"
						MUA	12"	28"		745	0.208"
						MUA	12"	28"		745	0.208"
						MUA	12"	28"		745	0.208"
2	H-2	Front	90"	14"	6"	MUA	10"	28"		577	0.155"
						MUA	10"	28"		577	0.155"

GREASE DUCT & CHIMNEY SPECIFICATIONS:
PROVIDE GREASE DUCT EQUAL TO CAPTIVEAIRE SYSTEMS MODEL "DW" ROUND 20 GAUGE 430 STAINLESS STEEL DUCTWORK. MODEL "DW" IS LISTED TO UL-1978 AND IS INSTALLED USING "V" CLAMP LOCKING CONNECTIONS SEALED WITH 3M FIRE BARRIER 2000 PLUS. MODEL "DW" DOES NOT REQUIRE WELDING PROVIDING IT HAS BEEN INSTALLED PER THE MANUFACTURES INSTALLATION GUIDE.
PROVIDE RATED ACCESS DOORS AT EVERY CHANGE IN DIRECTION AND EVERY 12' ON CENTER. PER MANUFACTURES LISTING MODEL "DW" HORIZONTAL RUNS LESS THAN 75 FT. CAN BE SLOPED 1/16" PER 12", HORIZONTAL RUNS MORE THAN 75 FT. CAN BE SLOPED 3/16" PER 12".
DUCT SHOULD BE SLOPED AS MUCH AS POSSIBLE TO REDUCE THE CHANCE OF GREASE ACCUMULATION IN HORIZONTAL RUNS.

IF THE DUCT OR CHIMNEY IS WITHIN 18 INCHES OF COMBUSTIBLE MATERIAL, PROVIDE UL-2221 OR UL-103 HT LISTED DOUBLE WALL GREASE DUCT OR DOUBLE WALL CHIMNEY EQUAL TO CAPTIVEAIRE SYSTEMS MODEL "DW- 2R, 2R TYPE HT, 3R, OR 3Z" ROUND 20 GAUGE 430 STAINLESS INNER DUCT INSULATED WITH A 24 GAUGE 430 STAINLESS OUTER SHELL.

CAPTIVEAIRE SYSTEMS RECOMMENDS THE USE OF LISTED, PRE-FABRICATED ROUND GREASE EXHAUST DUCT TO REDUCE STATIC PRESSURE IN THE SYSTEM, MINIMIZE INSTALLATION AND INSPECTION TIMES, AND ENSURE DUCT IS LIQUID TIGHT

HVAC DISTRIBUTION NOTE

HIGH VELOCITY DIFFUSERS OR HVAC RETURNS SHOULD NOT BE PLACED WITHIN TEN (10) FEET OF THE EXHAUST HOOD. PERFORATED DIFFUSERS ARE RECOMMENDED.

VERIFY CEILING HEIGHT

___' - ___"

HEIGHT REQUIRED TO VERIFY THAT HOOD FITS SPACE AND TO SIZE THE ENCLOSURE PANELS

CUSTOMER APPROVAL TO MANUFACTURE:

APPROVED AS NOTED ☐
APPROVED WITH NO EXCEPTION TAKEN ☐
REVISE AND RESUBMIT ☐

SIGNATURE _____
YOUR TITLE _____
DATE _____ _____

TYPE 1 HOOD NOTES

1. HOOD(S), ANSUL SYSTEM, MAKE UP AIR UNIT(S), EXHAUST FAN(S) AND GREASE DUCT ARE PROVIDED BY OWNER AND INSTALLED BY MECHANICAL CONTRACTOR
2. GREASE EXHAUST FANS SHALL BE INSTALLED SUCH THAT THE DISCHARGE IS A MINIMUM OF 40" ABOVE ROOF.
3. MECHANICAL CONTRACTOR IS TO PROVIDE/INSTALL A HEAT SENSOR IN EACH HOOD AND OVEN THAT WILL BE INTERLOCKED WITH THE HOOD EXHAUST FAN AND CORRESPONDING MAKE UP AIR UNIT. WHENEVER THE HEAT SENSOR IS ACTIVATED THE HOOD AND MAKE UP AIR UNIT SHALL TURN ON. PROVIDE/INSTALL MAKE UP AIR UNIT AND EXHAUST FAN SWITCHES SO THAT THEY CAN BE CONTROLLED IN THE EVENT THAT A SENSOR FAILS.
4. ALL EXHAUST DUCTWORK SERVING TYPE 1 HOODS IS TO BE PRE-MANUFACTURED DUCT RATED AND LISTED FOR GREASE HOOD APPLICATION WITH 18" TO COMBUSTIBLE RATING.
5. ALL HORIZONTAL SECTIONS OF GREASE DUCT SHALL BE SLOPED BACK TO THE HOOD AT A MINIMUM SLOPE OF 1/4" PER FOOT.
6. PROVIDE GREASE DUCT ACCESS DOORS AT EACH ELBOW AND EVERY 20'.
7. GREASE FANS SHALL BE PROVIDED WITH UL 762 LISTING FOR GREASE, PROVIDED WITH A HINGED, VENTED CURB AND FLEXIBLE ELECTRICAL CONNECTION FOR CLEANING ACCESS.
8. PLUMBING CONTRACTOR IS TO INSTALL AND MAKE ALL FINAL CONNECTIONS TO EMERGENCY NATURAL GAS SHUT OFF VALVE. VALVE WILL BE PROVIDED WITH ANSUL SYSTEM.

CAPTIVE-AIRE
Utah Office
2698 S. Redwood Rd., Suite S, West Valley, UT, 84119 PHONE: (801) 878-3677 FAX: (919) 227-5953 EMAIL: reg87@captiveaire.com

Mo' Bettahs Lee's Summit MO
520 NW Chipman Rd,
Lee's Summit, MO, 64086

11/18/2021

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SLS

3/4" = 1'-0"

MASTER DRAWING

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RYAN BOOGARD
NUMBER PE-2016019272
PROFESSIONAL ENGINEER
04-15-2022

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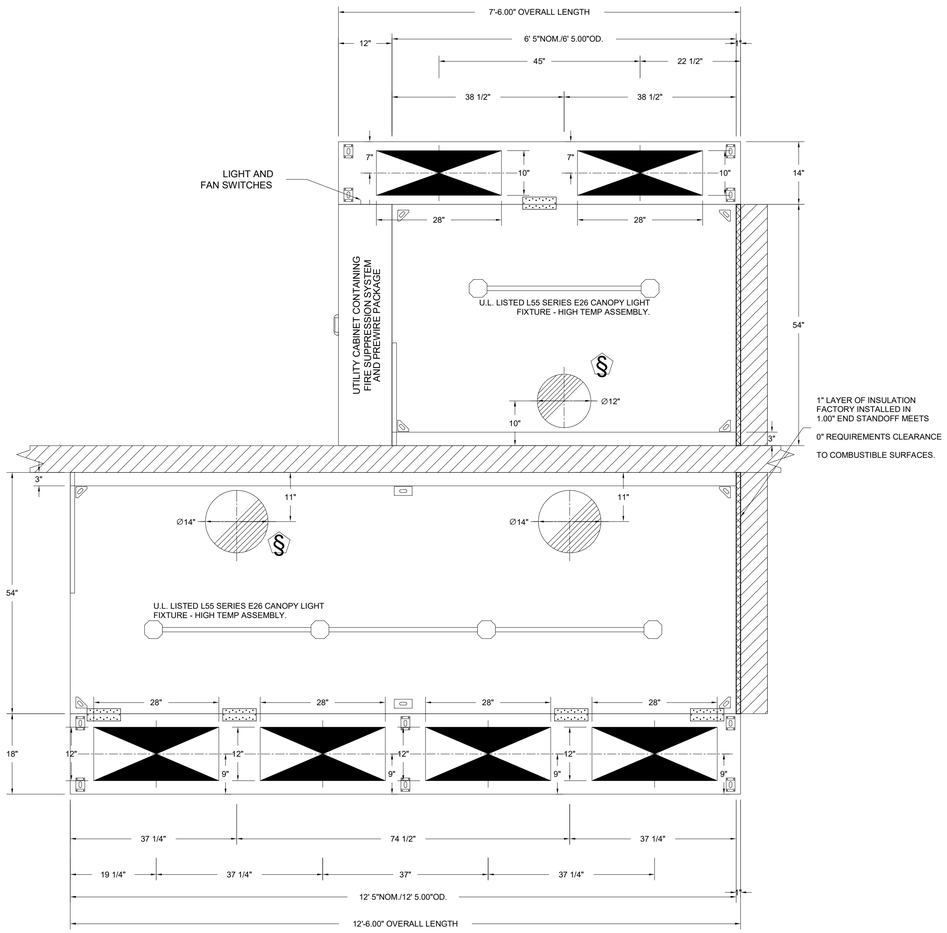
sheet title: KITCHEN MECHANICAL EQUIPMENT

sheet number:

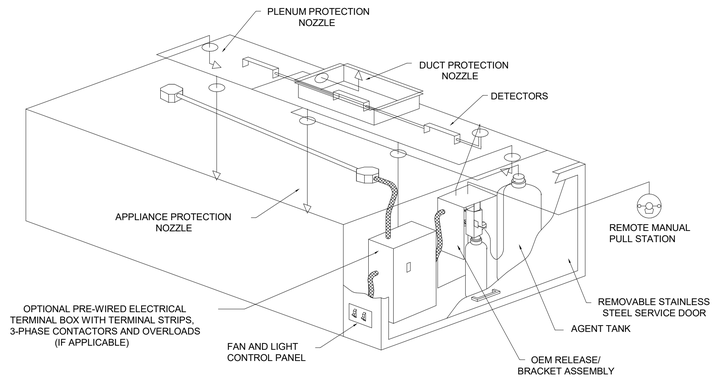
ME503

PLAN VIEW – HOOD #2 (H-2)
6' 5.00" LONG 5424ND-2-PSP-F



PLAN VIEW – HOOD #1 (H-1)
12' 5.00" LONG 5430ND-2-PSP-F

NOTE: ADDITIONAL HANGING ANGLES PROVIDED FOR HOODS 12' AND LONGER.



TYPICAL ANSUL R-102 SYSTEM LAYOUT

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PE-2016019272
PROFESSIONAL ENGINEER

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KITCHEN MECHANICAL EQUIPMENT

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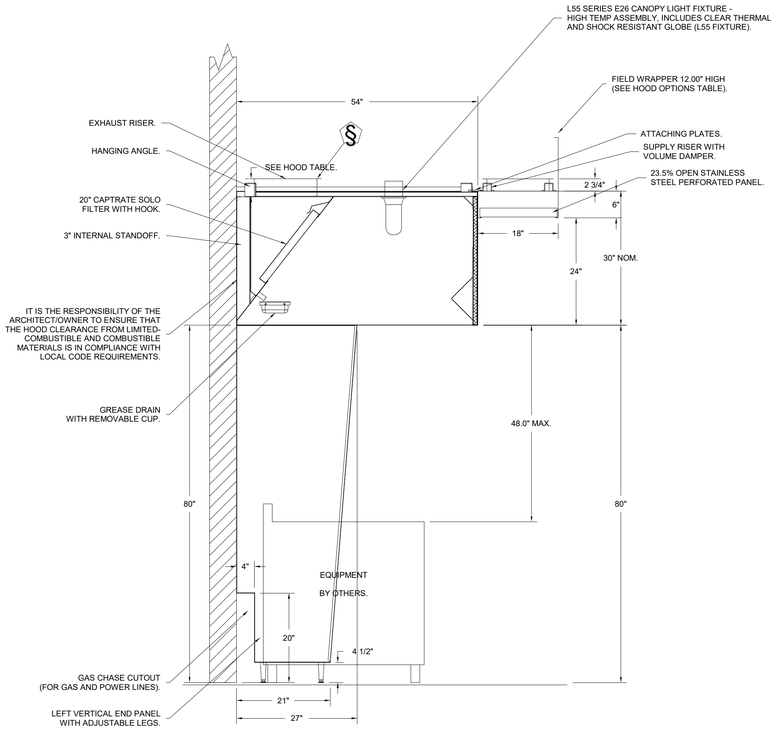
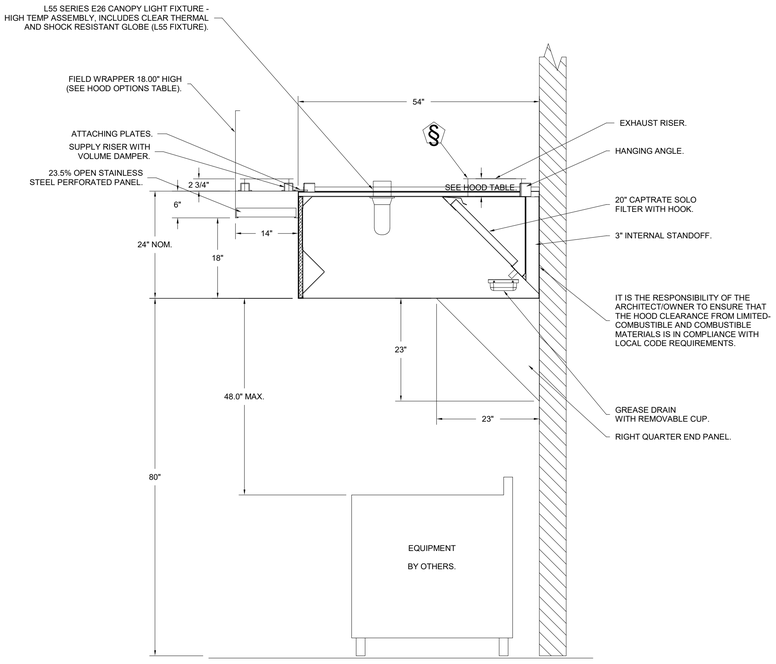


SECTION VIEW – MODEL 5430ND-2-PSP-F
HOOD – #1 (H-1)



SECTION VIEW – MODEL 5424ND-2-PSP-F
HOOD – #2 (H-2)

SECTION 23 38 13 13
SPECIFICATIONS
TAG: Commercial Kitchen Ventilation Hoods, Listed Commercial Kitchen Hoods
PART 1 - GENERAL
1.1 SUMMARY
A. The ND2 series is a Type I, wall canopy hood for use over 600°F cooking surface temperatures. The aerodynamic design includes a mechanical baffle and performance enhancing lip for exceptional capture and containment.
B. The hood shall have the size, shape, and performance specified on drawings.

1.2 SUBMITTALS
A. The manufacturer assumes no liability for the use or results of use from this document. Specifications are to be reviewed by the engineer to confirm the project's requirements and meet Federal, State, and Local codes and regulations.
B. As the manufacturer continues product development, it reserves the right to change design and specifications without notice.
C. The manufacturer shall supply complete computer generated submittal drawings, including hood section view(s) and hood plan view(s). These drawings must be available to the engineer, architect, and owner for their use in construction, operation, and maintenance.

1.3 QUALITY ASSURANCE
A. This hood is ETL-listed to standard UL710, ULC710, and ULC-S646 when installed in accordance with these installation instructions and National Fire Protection Association Standard NFPA 96, Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations.
B. Built-in compliance with NSF/ANSI Standard 2.
C. The hood shall be ETL Listed as:
1. "Exhaust Hood Without Exhaust Damper. "
2. ETL Sanitation Listed and built in accordance with NFPA 96.
3. The ETL label shall list temperature rating(s) and minimum CFM/ft rating(s).

1.4 WARRANTY
A. All units shall be provided with the following standard warranty:
1. This equipment is warranted to be free from defects in materials and workmanship, under normal use and service, for a period of 2-years from date of shipment.
B. The manufacturer shall not be liable for incidental and consequential losses and damages potentially attributable to malfunctioning equipment. Should any part of the equipment prove to be defective in material or workmanship within the 2-year warranty period, upon examination by the manufacturer, such part will be repaired or replaced by manufacturer at no charge. The buyer shall pay all labor costs incurred in connection with such repair or replacement. Equipment shall not be returned without manufacturer's prior authorization, and all returned equipment shall be shipped by the buyer, freight prepaid to a destination determined by the manufacturer.
C. Refer to Manufacturer 's Operation, Installation, and Maintenance (OIM) Manual for detailed descriptions of what is/is not covered and contact information for warranty claims.

PART 2 - PRODUCTS
2.1 GENERAL
A. Construction shall be dependent on the structural application to minimize distortion and other defects. All seams, joints, and penetrations of the hood enclosure to the lower outermost perimeter, which directs and captures grease-laden vapor and exhaust gases, shall have a liquid-tight continuous external weld in accordance with NFPA 96.
B. Duct sizes, CFM, and static pressure requirements shall be as shown on drawings. Static pressure requirements shall be precise and accurate; air velocity and volume information shall be accurate within 1-ft increments along the length of the ventilator.

2.2 CONSTRUCTION
A. Construction shall be type 430 stainless steel.
B. Double wall insulated front to eliminate condensation and increase rigidity on wide sizes. The insulation shall have a flexural modulus of 475 EI, meet UL 181 requirements and be in accordance with NFPA 90A and 90B.
C. Hood shall be equipped with a minimum of four connections for hanger rods. Hood lengths greater than 12 ' will have added hangers.
D. Exhaust duct collar to be 4 " high with flange.
E. The grease drain system shall be an enclosed integral part of the hood back and have slopes with an exposed, removable 1/2 grease cup to facilitate cleaning.
F. An integral baffle to direct grease laden vapors toward the exhaust filter bank.
G. Hood shall be furnished with UL classified filters, supplied in size and quantity as required by ventilator.
H. All seams shall be welded and have stainless steel on exposed surfaces.

2.3 LIGHTING
A. L55 Series canopy light fixture, includes clear thermal and shock resistant globe.
2.4 FILTERS
A. Stainless Steel Captrate Solo filter with hook, ETL Listed. Particulate capture efficiency: 85% efficient at 9 microns, 76% efficient at 5 microns.

2.5 OPTIONS
A. Optional perforated supply plenum shall provide make-up air discharged below the cooking equipment.
1. Perforated diffuser plates shall be included in the design to provide even air distribution.
2. Unexposed surfaces shall be constructed of aluminized steel. Plenum shall be insulated to prevent condensation.
3. Perforated Supply Plenum (PSP)
B. Hood Mounted Utility Cabinet - Cabinet can store listed fire suppression system, listed components, pre-wired electrical controls.
2.6 ACCESSORIES
A. End Panel(s) maximize hood performance and eliminate the effects of cross drafts in the kitchen. Units constructed of stainless steel and sized according to hood width and cooking equipment. Exposed edges hemmed for safety and rigidity. Selected panels:
1. Quarter End Panel
2. Vertical End Panel
B. Standoff(s) selected:
1. Left End Standoff
2. Right End Standoff
C. Wrapper(s) may be installed from the factory or field installed. Wrapper(s) selected:
1. Wrapper
D. Miscellaneous option(s) selected:
1. Riser Sensor Install – Sensor set-up for 3 " thick double wall duct.
2. Structural Front Panel – Front panel made with 18 gauge material.

PART 3 - EXECUTION
3.1 EXAMINATION
A. Examine areas and conditions under which the system is installed. Do not proceed with work until unsatisfactory conditions have been corrected in a manner acceptable to Installer.

3.2 INSTALLATION
A. Install in accordance with manufacturer's instructions, drawings, written specifications, manufacturer 's installation manual, and all applicable building codes.

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5194064
SLS
3/4" = 1'-0"
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CURRENT SET THRU REVISION 02
date: 01/17/2022
project number: MO-53LEE
project status: IFC
original drawing is 24" x 36"
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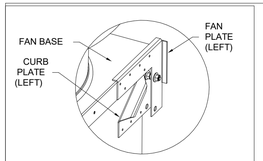
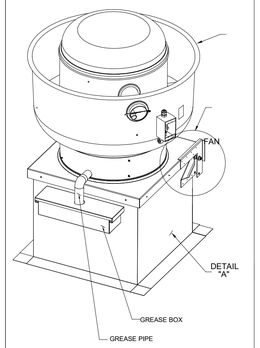
sheet title:
KITCHEN MECHANICAL EQUIPMENT

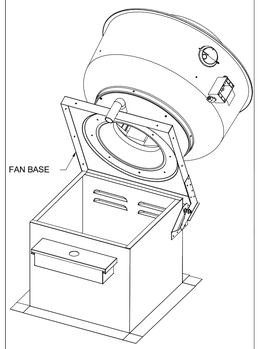
sheet number:
ME505



HINGE KIT DETAIL

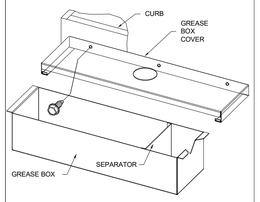


FAN IN CLOSED POSITION

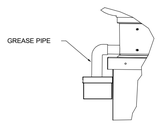


ATTENTION: INSTALLER SHOULD SUPPLY ENOUGH ELECTRICAL CORD TO LET FAN MAKE COMPLETE SWING.

FAN IN OPEN POSITION



ATTACH GREASE BOX COVER TO THE CURB 3" BELOW TOP EDGE OF CURB.
USING (3) LONG (3/4" LG.) SCREWS AS SHOWN.
INSTALL GREASE PIPE AS SHOWN.



GREASE BOX INSTALLATION

A PRE-WIRED ELECTRICAL CONTROL PACKAGE SHALL BE PROVIDED TO OPERATE THE HOOD LIGHTS AND FANS.
1. EACH PACKAGE SHALL CONSIST OF SWITCH PANEL WITH SWITCH(ES) AND RED-LIGHTED FAN SWITCH(ES), OVERLOAD ASSEMBLY FOR EACH FAN(OPTIONAL), NUMBERED INPUT TERMINAL STRIPS, AND A TERMINAL FOR DOUBLE-DUAL FIRE SYSTEM MICROSWITCH CONNECTION.
2. ALL CONTROLS WIRED TO MICROSWITCH (IN FIRE SUPPRESSION EQUIPMENT) FOR SHUTDOWN AND OTHER RELAY ADDITIONAL FIRE SYSTEM ACTIVATED DRY CONTACTS.
3. ELECTRICAL CONDUIT DROPS FROM THE FAN(S) SHALL BE CONNECTED TO THE NUMBERED TERMINAL STRIP.
4. ALL WIRING IN THE PRE-WIRE PACKAGE AND FAN(S) SHALL BE SUPPLIED BY THE ELECTRICAL CONTRACTOR.

ELECTRICAL PACKAGE NOTES

EXHAUST FAN INFORMATION – JOB#5194064

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SONES
1	EF-1	1	DU85HFA	CAPTIVEAIRE	1863	1.414	1509	TEAO-ECM	1.000	0.6620	1	208	6.9	590 FPM	97	15.4
2	EF-2	1	DU85HFA	CAPTIVEAIRE	1863	1.414	1509	TEAO-ECM	1.000	0.6620	1	208	6.9	590 FPM	97	15.4
3	EF-3	1	DU85HFA	CAPTIVEAIRE	1444	1.231	1327	TEAO-ECM	1.000	0.4470	1	208	6.9	457 FPM	97	12

CONDENSER DETAILS

FAN UNIT NO	TAG	FAN UNIT MODEL #	CONDENSER NO	TONNAGE	VOLTAGE	PHASE	FREQUENCY	MCA	RLA	MAX FUSE SIZE	MIN WIRE SIZE	SEER
4	MAU-1	A2-D.500-20D-MPU	1	3	208-230	3 PHASE	60 HZ	14.5 AMPS	11.9 AMPS	20 AMPS	14 AWG	14
			2	5	208-230	3 PHASE	60 HZ	21.4 AMPS	17.4 AMPS	30 AMPS	10 AWG	14

MUA FAN INFORMATION – JOB#5194064

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	BLOWER	HOUSING	MIN CFM	DESIGN CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	MCA	MOCP	WEIGHT (LBS)	5 TON COND. WEIGHT (LBS)	3 TON COND. WEIGHT (LBS)	SONES
4	MAU-1	1	A2-D.500-20D-MPU	20MF-2-MOD	A2-D.500	2900	4135	0.500	1709	ODP,PREMIUM	5.000	2.7320	3	208	15.0	18.8A	30A	1234	198	141	18.1

COILS – JOB#5194064

FAN UNIT NO	TAG	COIL TYPE	DESIGN CFM	COOLING										HEATING								
				ENTERING DB TEMP	ENTERING WB TEMP	LEAVING DB TEMP	LEAVING WB TEMP	ENTERING FLUID TEMP	LEAVING FLUID TEMP	FLUID FLOW RATE	PERCENT GLYCOL	TOTAL CAPACITY	SENSIBLE CAPACITY	LATENT CAPACITY	ENTERING DB TEMP	LEAVING DB TEMP	ENTERING FLUID TEMP	LEAVING FLUID TEMP	FLUID FLOW RATE	PERCENT GLYCOL	STEAM PRESSURE	TOTAL CAPACITY	SENSIBLE CAPACITY
4	MAU-1	DX	4135	94.0°F	76.0°F	76.8°F	70.0°F	---	---	---	---	93.8 MBH	72.7 MBH	21.1 MBH	---	---	---	---	---	---	---	---	---

GAS FIRED MAKE-UP AIR UNIT(S)

FAN UNIT NO	TAG	INPUT BTUs	OUTPUT BTUs	TEMP RISE	REQUIRED INPUT GAS PRESSURE	GAS TYPE	BURNER EFFICIENCY(%)
4	MAU-1	348615	320726	76°F	7 IN. W.C. - 14 IN. W.C.	NATURAL	92

FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
1	EF-1	1	GREASE BOX.
		1	FAN BASE CERAMIC SEAL - SHIP LOOSE - FOR GREASE DUCTS.
		1	ECM WIRING PACKAGE - PWM SIGNAL FROM ECPMO3 PREWIRE (TELCO MOTOR), CCW ROTATION.
		1	2 YEAR PARTS WARRANTY.
2	EF-2	1	GREASE BOX.
		1	FAN BASE CERAMIC SEAL - SHIP LOOSE - FOR GREASE DUCTS.
		1	ECM WIRING PACKAGE - PWM SIGNAL FROM ECPMO3 PREWIRE (TELCO MOTOR), CCW ROTATION.
		1	2 YEAR PARTS WARRANTY.
3	EF-3	1	GREASE BOX.
		1	FAN BASE CERAMIC SEAL - SHIP LOOSE - FOR GREASE DUCTS.
		1	ECM WIRING PACKAGE - PWM SIGNAL FROM ECPMO3 PREWIRE (TELCO MOTOR), CCW ROTATION.
		1	2 YEAR PARTS WARRANTY.
4	MAU-1	1	INLET PRESSURE GAUGE, 0-35".
		1	MANIFOLD PRESSURE GAUGE, -5 TO 15" WC.
		1	MOTORIZED BACKDRAFT DAMPER FOR A2-D HOUSING - MEETS AMCA CLASS 1A RATING.
		1	8 TON 2 CIRCUIT (3/5) MODULAR PACKAGED COOLING OPTION FOR SIZE 2 DF/EH MUA (2,900 TO 4,800 CFM), 208V/230V, 3 PHASE. COOLING THERMOSTAT OR PROGRAMMABLE STAT REQUIRED FOR PROPER OPERATION.
		1	DOWNTURN PLENUM FOR SIZE 2 DX COIL MODULE.
		1	LOW FIRE START.
		1	SHIP CONDENSERS LOOSE - TWO CONDENSERS, THREE PHASE - CONDENSER DISCONNECTS SHIPPED LOOSE.
		1	SEPARATE 120V WIRING PACKAGE (REQUIRED AND USED ONLY FOR DCV OR PREWIRE WITH VFD) - THREE PHASE ONLY.
		1	COOLING THERMOSTAT AND RELAY (NOT REQUIRED FOR EVAP).
		1	2 YEAR PARTS WARRANTY.

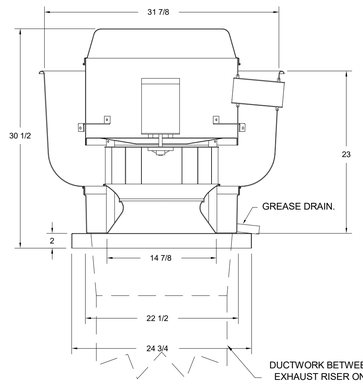
FAN ACCESSORIES

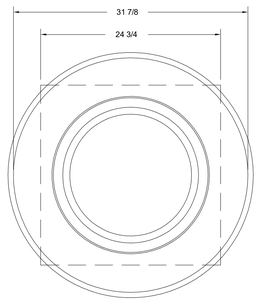
FAN UNIT NO	TAG	EXHAUST			SUPPLY			
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT
1	EF-1	YES						
2	EF-2	YES						
3	EF-3	YES						
4	MAU-1						YES	

CURB ASSEMBLIES

NO	ON FAN	TAG	WEIGHT	ITEM	SIZE
1	# 1	EF-1	41 LBS	CURB	23.000"W X 23.000"L X 22.000"H ALONG LENGTH, RIGHT VENTED HINGED.
2	# 2	EF-2	41 LBS	CURB	23.000"W X 23.000"L X 22.000"H ALONG LENGTH, RIGHT VENTED HINGED.
3	# 3	EF-3	41 LBS	CURB	23.000"W X 23.000"L X 22.000"H ALONG LENGTH, RIGHT VENTED HINGED.
4	# 4		107 LBS	RAIL	6.000"W X 31.000"L X 20.000"H RIGHT.
4	# 4	MAU-1	107 LBS	CURB	31.000"W X 79.000"L X 20.000"H ALONG WIDTH, RIGHT INSULATED.

FANS #1 (EF-1), #2 (EF-2), #3 (EF-3) - DU85HFA EXHAUST FAN





TOP VIEW

FEATURES:

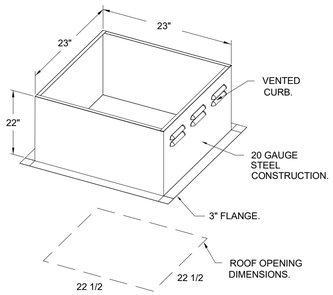
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705 AND UL762 AND ULC-S645
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.
- NEMA 3R SAFETY DISCONNECT SWITCH.

NORMAL TEMPERATURE TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

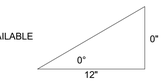
ABNORMAL FLARE-UP TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

OPTIONS

GREASE BOX.
FAN BASE CERAMIC SEAL - SHIP LOOSE - FOR GREASE DUCTS.
ECM WIRING PACKAGE - PWM SIGNAL FROM ECPMO3 PREWIRE (TELCO MOTOR), CCW ROTATION.
2 YEAR PARTS WARRANTY.



PITCHED CURBS ARE AVAILABLE FOR PITCHED ROOFS.



SPECIFY PITCH:
EXAMPLE: 7/12 PITCH = 30° SLOPE.

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sheet information

revisions: 1

num.	description	date

CURRENT SET THRU REVISION 02

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sheet title:
KITCHEN MECHANICAL EQUIPMENT

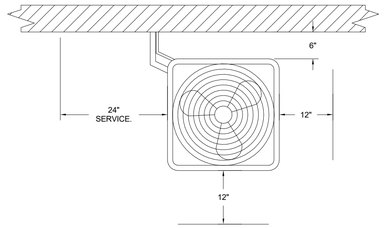
sheet number:
ME506

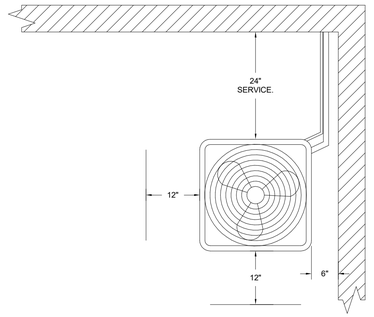
FAN #4 A2-D.500-20D-MPU - HEATER
1. DIRECT GAS FIRED HEATED MAKE UP AIR UNIT WITH 20" MIXED FLOW DIRECT DRIVE FAN.
2. INTAKE HOOD WITH EZ FILTERS.
3. DOWN DISCHARGE - AIR FLOW RIGHT -> LEFT.
4. GAS PRESSURE GAUGE, 0-35", 2.5" DIAMETER, 1/4" THREAD SIZE.
5. GAS PRESSURE GAUGE, -5 TO +15 INCHES WC., 2.5" DIAMETER, 1/4" THREAD SIZE.
6. MOTORIZED BACK DRAFT DAMPER 22.75" X 24" FOR SIZE 2 STANDARD & MODULAR HEATER UNITS W/EXTENDED SHAFT, STANDARD GALVANIZED CONSTRUCTION, 3/4" REAR FLANGE, LOW LEAKAGE, LF120S ACTUATOR INCLUDED.
7. 8 TON, DUAL CIRCUIT (3/5) MODULAR PACKAGED COOLING OPTION FOR SIZE 2 DF/EH MODULAR PACKAGED UNIT. INCLUDES CONDENSER, DX COIL, FILTER/DRYER KIT, THERMAL EXPANSION VALVE, R410A REFRIGERANT, AND REFRIGERANT PIPING. (2,900 TO 4,800 CFM) WHEN ORDERED WITH OPPOSITE AIRFLOW CONDENSERS ACCESS AND COIL PIPING WILL REMAIN IN STANDARD POSITION. DRAIN AND SLEDS WILL MOVE TO THE OPPOSITE SIDE. ANY OTHER CHANGE WILL REQUIRE CLI. CONDENSERS REQUIRE SEPARATE 208V, 3 PHASE POWER SUPPLY UNLESS ORDERED WITH SINGLE POINT CONNECTION. COIL = 3EZ1101C.
8. DOWNTURN PLENUM FOR SIZE 2 COOLING COIL MODULE - REQUIRED FOR DOWN DISCHARGE COOLING COIL APPLICATIONS.
9. LOW FIRE START. ALLOWS THE BURNER CIRCUIT YO ENERGIZE WHEN THE MODULATION CONTROL IS IN A LOW FIRE POSITION.
10. SHIP CONDENSERS LOOSE. THE REFRIGERATION LINES WILL NEED TO BE STUBBED OUT 12 INCHES. THE SUCTION LINES NEEDS TO BE INSULATED INSIDE THE COIL MODULE. ROTARY DISCONNECT SHOULD NOT BE INSTALLED ON THE POST, BLANK POST SHOULD BE USED IN PLACE.
11. SEPARATE 120VAC WIRING PACKAGE FOR MAKE-UP AIR UNITS. OPTION MUST BE SELECTED WHEN MOUNTING VFD IN PREWIRE PANEL OR WITH DCV PACKAGE. PROVIDES SEPARATE 120VAC INPUT TO SUPPLY FAN. THIS 120V SIGNAL MUST BE RUN BY ELECTRICIAN FROM DCV TO MUA SWITCH.
12. DX COOLING INTAKE AIR THERMOSTAT AND RELAYS MOUNTED IN UNIT - SET POINT FOR THERMOSTAT SHOULD BE 85°F.
13. HINGED DOUBLE WALL INSULATED DOOR ASSEMBLY (BURNER/BLOWER/MPU SECTION).
14. 2 YEAR PARTS WARRANTY.

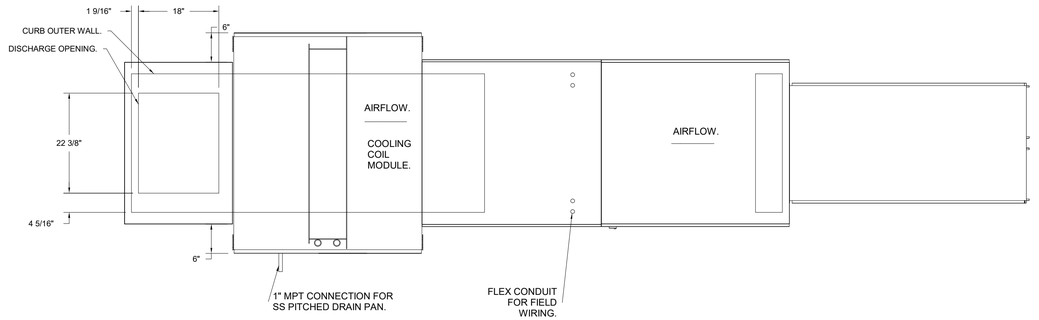
*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE THROAT/SQUARE BACK ELBOWS SHOULD NOT BE USED. ANY TRANSITION AND/OR TURNS IN THE DUCTWORK WILL CAUSE SYSTEM EFFECT. SYSTEM EFFECT WILL DRASTICALLY INCREASE STATIC PRESSURE AND REDUCE AIRFLOW. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT. SUGGESTED STRAIGHT DUCT SIZE IS 20" x 20".

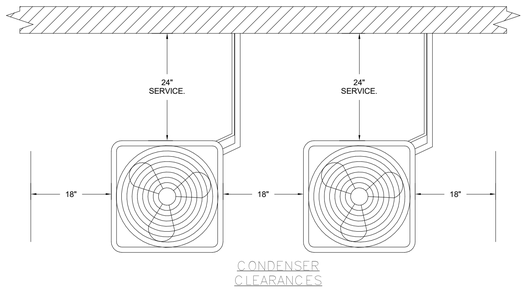
SUPPLY SIDE HEATER INFORMATION:

WINTER TEMPERATURE = 9°F. TEMP. RISE = 76°F.
BTUs CALCULATED OFF ACTUAL AIR DENSITY.
OUTPUT BTUs AT ALTITUDE OF 0.0 FT. = 329573.
INPUT BTUs AT ALTITUDE OF 0.0 FT. = 358231.
OUTPUT BTUs AT ALTITUDE OF 751 FT. = 320726.
INPUT BTUs AT ALTITUDE OF 751 FT. = 348615.



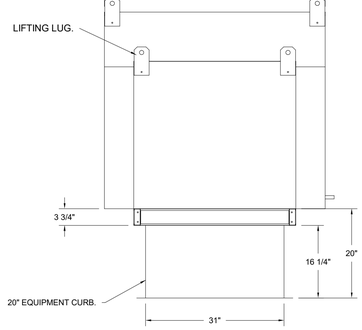


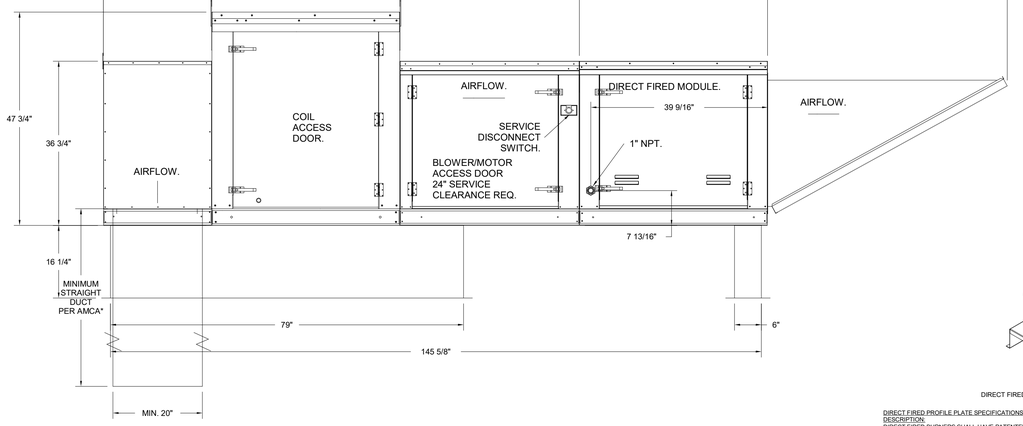


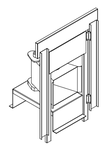


CONDENSER CLEARANCES

48" CLEARANCE REQUIRED ABOVE CONDENSERS.
(NOTE: **CONDENSERS SHOWN HERE ARE NOT DRAWN AT SCALE).







DIRECT FIRED (DF) PROFILE PLATE ASSEMBLY

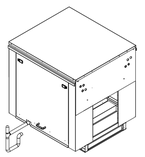
DIRECT FIRED PROFILE PLATE SPECIFICATIONS:
DESCRIPTION:
DIRECT FIRED BURNERS SHALL HAVE PATENTED (US PATENT NO.: US6029523B2), SELF-ADJUSTING PROFILE PLATES DESIGNED TO ENSURE PROPER AIR VELOCITY AND PRESSURE DROP ACROSS THE BURNER. PROFILE PLATES SHALL ALLOW BURNERS TO ACHIEVE CLEAN COMBUSTION BY LIMITING BY-PRODUCT LEVELS TO A MAXIMUM OF 9PPM OF CARBON MONOXIDE (CO), AND 0.5PPM OF NITROGEN DIOXIDE (NO2). DIRECT FIRED UNITS SHALL BE CONFIGURED WITH THE BLOWER MOUNTED DOWNSTREAM OF THE BURNER. THIS ARRANGEMENT WILL ENSURE A CONSISTENT AIRFLOW, REGARDLESS OF INLET AIR TEMPERATURE.

APPLICATION:
SPRING-LOADED BURNER PROFILE PLATES ARE ENGINEERED TO AUTOMATICALLY REACT TO THE MOMENTUM OF A FRESH AIR STREAM, WITHOUT THE NEED FOR ANY MOTORS OR ACTUATORS TO MECHANICALLY ADJUST THEM. WITH THIS FEATURE, ALL DF UNITS ARE DESIGNED FOR DEMAND CONTROL VENTILATION (DCV) REQUIREMENTS.

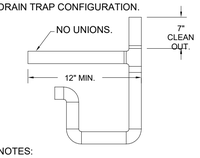
CERTIFICATIONS:
ALL PROFILE PLATE ASSEMBLIES SHALL BE INCLUDED IN THE DF UNIT'S ETL LISTING AND COMPLY WITH COMBINED SAFETY STANDARDS ANSI Z83.4 AND CSA 3.7 (NON-RECIRCULATING DF HEATERS) AND ANSI Z83.18 (RECIRCULATING DF HEATERS).

GENERAL CONSTRUCTION:
-PROFILE PLATES SHALL BE FORMED FROM G90 GALVANIZED STEEL.
-PROFILE PLATES SHALL VARY IN SIZE PER UNIT.
-PROFILE PLATES SHALL BE MOUNTED ALONG THE SAME PLANE AS THE DISCHARGE OF THE BURNER.
-DESIGN SHALL INCORPORATE PROPERLY TORQUED, PERMANENTLY MOUNTED SPRING HINGES.
-SPRING HINGES SHALL BE MADE FROM PLATED STEEL.

TYPICAL DRAIN TRAP INSTALL



RECOMMENDED COOLING COIL
DRAIN TRAP CONFIGURATION.



NOTES:
1) 1" DIAMETER PVC PIPE ONLY.
2) USE ONLY LOW PROFILE COUPLINGS.
3) ADD CLEAN OUT AS SHOWN.

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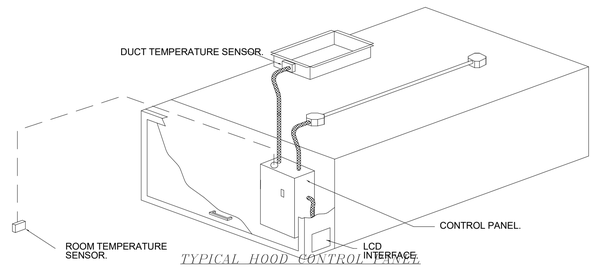
sheet title:
KITCHEN MECHANICAL EQUIPMENT

sheet number:
ME507

DEMAND CONTROL VENTILATION HOOD CONTROL PANEL SPECIFICATIONS:

- CONTROLS SHALL BE LISTED BY ETL (UL 508A) AND SHALL COMPLY WITH DEMAND VENTILATION SYSTEM TURNDOWN REQUIREMENTS OUTLINED IN IECC 403.2.8 (2015).
- THE CONTROL ENCLOSURE SHALL BE NEMA 1 RATED AND LISTED FOR INSTALLATION INSIDE OF THE EXHAUST HOOD UTILITY CABINET. THE CONTROL ENCLOSURE MAY BE CONSTRUCTED OF STAINLESS STEEL OR PAINTED STEEL.
- TEMPERATURE PROBE(S) LOCATED IN THE EXHAUST DUCT RISER(S) SHALL BE CONSTRUCTED OF STAINLESS STEEL.
- A DIGITAL CONTROLLER SHALL BE PROVIDED TO ACTIVATE THE HOOD EXHAUST FANS DYNAMICALLY BASED ON A FIXED DIFFERENTIAL BETWEEN THE AMBIENT AND DUCT TEMPERATURES SENSORS. THIS FUNCTION SHALL MEET THE REQUIREMENTS OF IMC 507.1.1.
- A DIGITAL CONTROLLER SHALL PROVIDE ADJUSTABLE HYSTERESIS SETTINGS TO PREVENT CYCLING OF THE FANS AFTER THE COOKING APPLIANCES HAVE BEEN TURNED OFF AND/OR THE HEAT IN THE EXHAUST SYSTEM IS REDUCED.
- A DIGITAL CONTROLLER SHALL PROVIDE AN ADJUSTABLE MINIMUM FAN RUN-TIME SETTING TO PREVENT FAN CYCLING.
- VARIABLE FREQUENCY DRIVES (VFDS) SHALL BE PROVIDED FOR FANS AS REQUIRED. THE DIGITAL CONTROLLER SHALL MODULATE THE VFDS BETWEEN A MINIMUM SETPOINT AND A MAXIMUM SETPOINT ON DEMAND. THE DUCT TEMPERATURE SENSOR INPUT(S) TO THE DIGITAL CONTROLLER SHALL BE USED TO CALCULATE THE SPEED REFERENCE SIGNAL.
- THE VFD SPEED RANGE OF OPERATION SHALL BE FROM 0% TO 100% FOR THE SYSTEM, WITH THE ACTUAL MINIMUM SPEED SET AS REQUIRED TO MEET MINIMUM VENTILATION REQUIREMENTS.
- AN INTERNAL ALGORITHM TO THE DIGITAL CONTROLLER SHALL MODULATE SUPPLY FAN VFD SPEED PROPORTIONAL TO ALL EXHAUST FANS THAT ARE LOCATED IN THE SAME FAN GROUP AS THE SUPPLY FAN.
- THE SYSTEM SHALL OPERATE IN PREP MODE DURING LIGHT COOKING LOAD OR COOL DOWN MODE WHEN SUFFICIENT HEAT REMAINS UNDERNEATH THE HOOD SYSTEM AFTER COOKING OPERATIONS HAVE COMPLETED. OPERATION DURING EITHER OF THESE PERIODS WILL DISABLE THE SUPPLY FANS AND PROVIDE AN EXHAUST FAN SPEED THAT IS EQUAL TO THE MINIMUM VENTILATION REQUIREMENT.
- A DIGITAL CONTROLLER SHALL DISABLE THE SUPPLY FAN(S), ACTIVATE THE EXHAUST FAN(S), ACTIVATE THE APPLIANCE SHUNT TRIP, AND DISABLE AN ELECTRIC GAS VALVE AUTOMATICALLY WHEN FIRE CONDITION IS DETECTED ON A COVERED HOOD.
- A DIGITAL CONTROLLER SHALL ALLOW FOR EXTERNAL BMS FAN CONTROL VIA DRY CONTACT (EXTERNAL CONTROL SHALL NOT OVERRIDE FAN OPERATION LOGIC AS REQUIRED BY CODE).
- AN LCD INTERFACE SHALL BE PROVIDED WITH THE FOLLOWING FEATURES:
  A. ON/OFF PUSH BUTTON FAN & LIGHT SWITCH ACTIVATION.
  B. INTEGRATED GAS VALVE RESET FOR ELECTRONIC GAS VALVES (NO RESET RELAY REQUIRED).
  C. VFD FAULT DISPLAY WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
  D. DUCT TEMPERATURE SENSOR FAILURE DETECTION WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
  E. MIS-WIRED DUCT TEMPERATURE SENSOR DETECTION WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
  F. A SINGLE LOW VOLTAGE CAT-5 RJ45 WIRING CONNECTION.
  G. AN ENERGY SAVINGS INDICATOR THAT UTILIZES MEASURED KWH FROM THE VFDS.



TYPICAL HOOD CONTROL PANEL INSTALLATION

SEQUENCE OF OPERATIONS:

THE HOOD CONTROL PANEL IS CAPABLE OF OPERATING IN ONE OR MORE OF THE FOLLOWING STATES AT ANY GIVEN TIME:

- AUTOMATIC: THE SYSTEM OPERATES BASED ON THE DIFFERENTIAL BETWEEN ROOM TEMPERATURE AND THE TEMPERATURE AT THE HOOD CAVITY OR EXHAUST DUCT COLLAR. FANS ACTIVATE AT A CONFIGURABLE TEMPERATURE DIFFERENTIAL THRESHOLD. DEPENDING ON THE JOB CONFIGURATION EACH FAN ZONE CAN BE CONFIGURED AS STATIC OR DYNAMIC. THESE TERMS REFER TO WHETHER A VARIABLE MOTOR (SUCH AS EC MOTORS OR VFD DRIVEN MOTORS) MODULATE WITH TEMPERATURE. IF THE PANEL IS EQUIPPED WITH VARIABLE SPEED FANS AND THE ZONE IS DEFINED AS "DYNAMIC", THESE WILL MODULATE WITHIN A USER-DEFINED RANGE BASED ON THE TEMPERATURE DIFFERENTIAL. PANELS EQUIPPED WITH VARIABLE SPEED FANS AND A FAN ZONE DEFINED AS "STATIC", FANS WILL RUN AT A SET SPEED CALCULATED FOR THE DRIVE. DEMAND CONTROL VENTILATION SYSTEMS ARE CAPABLE OF MODULATING EXHAUST AND MAKE UP AIR FAN SPEEDS PER THE REQUIREMENTS OUTLINED IN IECC 403.2.8.
- MANUAL: THE SYSTEM OPERATES BASED ON HUMAN INPUT FROM AN HMI.
- SCHEDULE: A WEEKLY SCHEDULE CAN BE SET TO RUN FANS FOR A SPECIFIED PERIOD THROUGHOUT THE DAY. THERE ARE THREE OCCUPIED TIMES PER DAY TO ALLOW FOR THE USER TO SET UP A TIME THAT IS SUITABLE TO THEIR NEEDS. ANY TIME THAT IS WITHIN THE DEFINED OCCUPIED TIME, THE SYSTEM WILL RUN AT MODULATION MODE AND FOLLOW THE FAN PROCEDURE ALGORITHM BASED ON TEMPERATURE DURING THIS TIME. DURING UNOCCUPIED TIME, THE SYSTEM WILL HAVE AN EXTRA OFFSET TO PREVENT UNINTENDED ACTIVATION OF THE SYSTEM DURING A TIME WHERE THE SYSTEM IS NOT BEING OCCUPIED.
- OTHER: THE SYSTEM OPERATES BASED ON THE INPUT FROM AN EXTERNAL SOURCE (DDC, BMS OR HARD-WIRED INTERLOCK).
- FIRE: UPON ACTIVATION OF THE HOOD FIRE SUPPRESSION SYSTEM, THE EXHAUST FAN WILL COME ON OR CONTINUE TO TO RUN, THE HOOD MAKEUP AIR WILL SHUTDOWN, AND A SIGNAL WILL BE SENT FOR ACTIVATING THE SHUNT TRIP BREAKER PROVIDED BY THE ELECTRICIAN. FUEL GAS WILL SHUT OFF VIA A MECHANICAL/ELECTRICAL GAS VALVE ACTUATED BY THE HOOD FIRE SUPPRESSION SYSTEM.

ELECTRICAL PACKAGE – JOB#5194064

NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED					
				LOCATION	QUANTITY		FAN TAG	TYPE	Φ	HP	VOLT	FLA
1		DCV-3111	UTILITY CABINET RIGHT	04 - UTILITY CABINET RIGHT	1 LIGHT	SMART CONTROLS DCV	EF-1	EXHAUST	1	1.000	208	6.9
							EF-2	EXHAUST	1	1.000	208	6.9
				HOOD # 2	1 FAN		EF-3	EXHAUST	1	1.000	208	6.9
							MAU-1	SUPPLY	3	5.000	208	15.0

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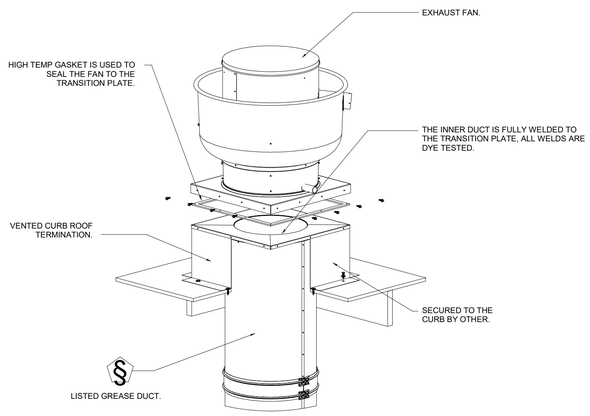
KITCHEN MECHANICAL EQUIPMENT

sheet number:
ME508

SINGLE WALL FACTORY BUILT DUCTWORK (TYPICAL)

- ALL DUCTWORK IS REQUIRED TO BE INSTALLED WITH THE MAXIMUM SUPPORT SPACING LISTED BELOW.
- FOR A COMPLETE LIST OF APPROVED SUPPORT METHODS, SEE THE INSTALLATION AND OPERATION MANUAL.
- DUCTWORK SHALL SLOPE NOT LESS THAN 1/16" PER LINEAR FOOT TOWARDS THE HOOD OR AN APPROVED GREASE COLLECTION RESERVOIR.
- WHERE HORIZONTAL DUCTS EXCEED 75 FEET IN LENGTH, THE SLOPE SHALL NOT BE LESS THAN 3/16" PER LINEAR FOOT.

DUCT DIAMETER	HORIZONTAL WALL SUPPORT (ft)	VERTICAL WALL SUPPORT (ft)	VERTICAL CURB SUPPORT (ft)
8"	10'	10'	24'
10"	10'	10'	24'
12"	10'	10'	24'
14"	10'	10'	24'
16"	10'	10'	24'
18"	10'	10'	24'
20"	10'	10'	24'
22"	10'	10'	24'
24"	10'	10'	24'



GREASE DUCT SPECIFICATIONS:
PROVIDE GREASE DUCT EQUAL TO CAPTIVEAIRE SYSTEMS MODEL "DW"
ROUND 20 GAUGE 430 STAINLESS STEEL DUCTWORK. MODEL "DW"
IS LISTED TO UL-1978 AND IS INSTALLED USING "V" CLAMP LOCKING
CONNECTIONS SEALED WITH 3M FIRE BARRIER 2000 PLUS. MODEL "DW"
DOES NOT REQUIRE WELDING PROVIDING IT HAS BEEN INSTALLED PER
THE MANUFACTURES INSTALLATION GUIDE.
PROVIDE RATED ACCESS DOORS AT EVERY CHANGE IN DIRECTION AND EVERY 12' ON CENTER. PER
MANUFACTURES LISTING MODEL "DW" HORIZONTAL RUNS LESS THAN 75 FT. CAN BE SLOPED 1/16" PER 12",
HORIZONTAL RUNS MORE THAN 75 FT. CAN BE SLOPED 3/16" PER 12".
DUCT SHOULD BE SLOPED AS MUCH AS POSSIBLE TO REDUCE THE CHANCE OF GREASE ACCUMULATION IN
HORIZONTAL RUNS.

IF THE DUCT IS WITHIN 18 INCHES OF COMBUSTIBLE MATERIAL, PROVIDE UL-2221 LISTED DOUBLE WALL
GREASE DUCT EQUAL TO CAPTIVEAIRE SYSTEMS MODEL "DW- 2R, 3R, OR 3Z" ROUND 20 GAUGE 430 STAINLESS INNER DUCT INSULATED WITH A 24 GAUGE 430 STAINLESS OUTER SHELL.

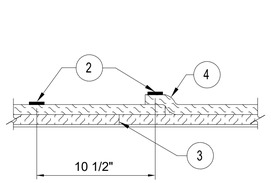
GREASE DUCT SPECIFICATION

Furnish single-wall, factory built, grease duct for use with Type I kitchen hoods, which conforms to the requirements of NFPA-96. Products shall be ETL listed to UL-1978 for venting air and grease vapors from commercial cooking operations as described in NFPA-96. The duct wall shall be constructed of .036 thick type 430 stainless steel and be available in diameters 8" through 24". All supports, fan adapters, hood connections, fittings and expansion joints required to install grease duct shall be included. Roof penetrations shall comply with listed clearance to combustibles, see *"Clearance to Combustibles"* guide for details. The grease duct will terminate at the fan adapter plate, will be fully welded to the fan adapter plate and the fan adapter plate will be fastened to the curb using a suitably sized fastener provided by others; see page 12 of the *"Installation, Operation and Maintenance Manual"* for details. Grease duct joints shall be held together by means of formed vee clamps and sealed with *3M Fire Barrier 2000+* . Screws used to secure the vee clamps shall be of the hex-head type with flanged stops and tapered "lead in" threads for easy starting. Nuts shall be retained by means of a free-floating cage to allow easy alignment. Single-Wall Grease Duct shall be installed in accordance with the manufacturer's *"Installation, Operation and Maintenance Manual"* , ETL listing and state and local codes. Grease duct installed outside of the building shall be protected against accidental damage or vandalism. Support vertically installed grease duct from the building structure using rigid structural supports. Anchor supports to the structure by welding or bolting steel expansion anchors or concrete inserts. Support horizontally installed grease duct from the building structure using above method or use *Duct Mate, Wire Rope & Clutchers*, part numbers WR20 & CL20. 1/2" Threaded rod and saddles may also be used for the support of horizontal grease duct. Fans shall be supported independently from the grease duct sections. Protect grease duct from twisting or movement caused by fan torque or vibration.

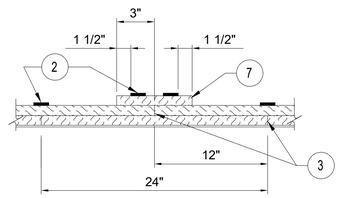
CLEARANCE TO COMBUSTIBLES			
DIAMETER	COMBUSTIBLES	LIMITED COMBUSTIBLES	NON COMBUSTIBLES
8"	18"	3"	0"
10"	18"	3"	0"
12"	18"	3"	0"
14"	18"	3"	0"
16"	18"	3"	0"
18"	18"	3"	0"
20"	18"	3"	0"
24"	18"	3"	0"

ADJUSTABLE DUCT OVERLAP - MINIMUM	
DIAMETER	OVERLAP
8"	4"
10"	5"
12"	6"
14"	6"
16"	6"
18"	6"
20"	6"
24"	6"

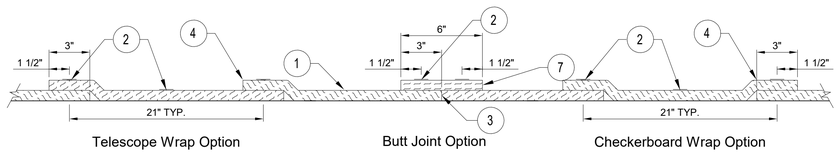
To Provide Zero Clearance to Combustibles for Grease Duct (where within 18" of combustibles)



BUTT-JOINT/3"OVERLAP



BUTT-JOINT/COLLAR



Telescope Wrap Option | Butt Joint Option | Checkerboard Wrap Option

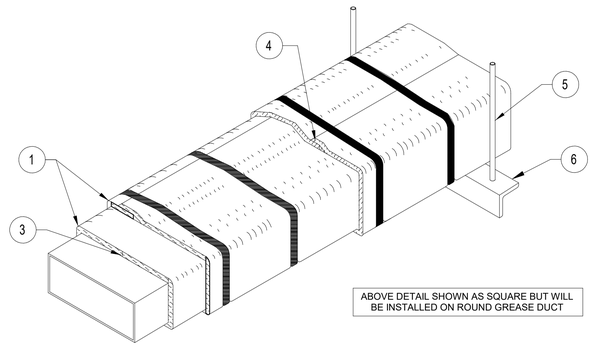
SINGLE LAYER OR OUTSIDE LAYER INSTALLATION OPTIONS

LEGEND	
1	Two Layers of Pyroscat Duct Wrap XL Blanket for Grease Duct Enclosures One Layer of Pyroscat Duct Wrap XL Blanket for Air Ventilation Duct Enclosures
2	Steel banding minimum 1/2" wide by 0.015" thick.
3	Tight butt joints on inner layer
4	Min. 3" overlap on perimeter and between adjacent blanket on outside layer
5	Min. 3/8" diameter hanger rod
6	Min. 2" x 2" x 1/8" angle for Grease Duct Enclosures Min. 1-1/2" x 1-1/2" x 1/8" angle or SMACNA Equivalent for Air Ventilation Duct Enclosures
7	Optional 6" FireMaster Pyroscat Duct Wrap XL collar

The integrity of Pyroscat duct systems is limited to the quality of the installation.

Thermal Ceramics

Pyroscat® Duct Wrap XL
Commercial Kitchen Grease Duct Enclosure System
Air Ventilation Duct Enclosure System
1 or 2 Hour Shaft Alternative / Zero Clearance to Combustibles



ABOVE DETAIL SHOWN AS SQUARE BUT WILL BE INSTALLED ON ROUND GREASE DUCT

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sheet title:
GREASE DUCT DETAILS

sheet number:
ME509

ROOFTOP UNIT SCHEDULE

LABEL	SERVES	TONS	TOTAL CFM	EXT. S.P. (IN. WG.)	MINIMUM O.A. CFM	EER	NOMINAL COOLING CAPACITY (MBH)	HOT GAS REHEAT			MAX HEATING CAPACITY (MBH)		WEIGHT (LBS)	SUPPLY FAN HP	VOLTAGE	PHASE	Hz	# STAGES	MCA	MOCP	MANUFACTURER	MODEL	REMARKS
								DEHUMIDIFICATION/HOT GAS REHEAT CAPACITY	REHEAT TEMPERATURE RISE	MOISTURE REMOVAL RATE	INPUT	OUTPUT											
RTU-1	DINING AREA	10	4000	0.6	950	12.4	116.0	94 MBH	22° F	2.27 GPH	200.0	160.0	1950	2.75	208	3	60	2	53.4	70	Trane	YHC120F	1-14
RTU-2	KITCHEN & SERVING AREAS	10	3600	0.6	500	12.4	116.0	94 MBH	22°F	2.27 GPH	200.0	160.0	1950	2.75	208	3	60	2	53.4	70	Trane	YHC120F	1-13

1. PROVIDE ECOBEE3 THERMOSTAT WITH REMOTE TEMPERATURE SENSOR
2. 100% ECONOMIZER WITH DRY BULB CONTROL WITH LOW LEAK DAMPERS AND FAULT DETECTION DIAGNOSTICS.
3. 100% MODULATING POWERED EXHAUST
   A. CONTRACTOR TO PROVIDE A DEDUCTIVE BID ALTERNATE FOR A STANDARD POWERED EXHAUST.
4. PROVIDE MODULATING SUPPLY FAN MOTOR AND TWO STAGE HEATING AND COOLING.
5. SMOKE DETECTORS IN THE RETURN DUCT OF ALL UNITS OVER 2000 CFM. UNIT TO SHUTDOWN UPON SENSING SMOKE. (COORDINATE WITH AHJ PRIOR TO INSTALLATION TO CONFIRM IF NEEDED IN SUPPLY OR RETURN) - MANUFACTURER DEFAULTS TO RETURN)
6. PROVIDE WITH 14" ROOF CURB WITH HOLD DOWN CLIPS.
7. PROVIDE WITH FACTORY MOUNTED CIRCUIT BREAKER SIZED IN ACCORDANCE WITH CURRENT NEC.
8. CONTRACTOR TO PROVIDE CONDENSATE DRAIN TRAP PER MANUFACTURER'S RECOMMENDATIONS.
9. PROVIDE CONDENSER COIL HAIL GUARD GRILLE.
10. ACCEPTABLE MANUFACTURERS: TRANE, YORK, LENNOX, CARRIER OR PRIOR APPROVED EQUAL.
11. PROVIDE WITH MERV 8 FILTERS.
12. PROVIDE FACTORY AUTHORIZED STARTUP OF EQUIPMENT INCLUDING STARTUP OF ANY FACTORY CONTROLS TO ENSURE PROPER SEQUENCING.
13. PROVIDE UNIT WITH MODULATING HOT GAS REHEAT FOR DEHUMIDIFICATION.
14. PROVIDE CO2 SENSOR TO ALLOW OUTSIDE AIR DAMPER TO SHUT WHEN READINGS INDICATE ROOM IS UNOCCUPPIED.

EXHAUST FAN SCHEDULE

LABEL	CFM	STATIC PRESSURE	FAN RPM	SOUND RATING	WEIGHT	HP	WATTS	MCA	FLA	VOLTAGE	PHASE	Hz	MOCP	DISCONNECT		MANUFACTURER	MODEL	REMARKS
														FURN BY ELEC	FURN BY MECH			
EF-1	1863	1.400 in-wg	1509	15.4 SONES	150	1	-	-	6.9 A	208	1	60	-	NO	FACTORY INSTALLED	Captiveaire	DU85HFA	1-3,7
EF-2	1863	1.400 in-wg	1509	15.4 SONES	150	1	-	-	6.9 A	208	1	60	-	NO	FACTORY INSTALLED	Captiveaire	DU85HFA	1-3,7
EF-3	1444	1.250 in-wg	1327	12 SONES	150	1	-	-	6.9 A	208	1	60	-	NO	FACTORY INSTALLED	Captiveaire	DU85HFA	1-3,7
EF-4	170	0.250 in-wg	1550	4.6 SONES	35	.05	79 W	1	0.0 A	115	1	60	15	YES	NO	Loren Cook Company	70C15DH	4-7

1. SEE EXHAUST FAN REQUIREMENTS, OPTIONS, AND ACCESSORIES ON SHEETS ME506 AND ME507.
2. TYPE I HOOD EXHAUST FANS SHALL CONTINUE TO OPERATE AFTER THE EXTINGUISHING SYSTEM HAS BEEN ACTIVATED.
3. NO MANUFACTURER SUBSTITUTIONS.
4. PROVIDE TIME CLOCK AND RUN CONTINUOUSLY DURING BUSINESS HOURS.
5. ACCEPTABLE MANUFACTURERS: COOK, GREENHECK, PENN BARRY OR PRIOR APPROVED EQUAL.
6. PROVIDE VARIABLE SPEED CONTROLLER FOR ALL DIRECT DRIVE FANS. TEST AND BALANCE CONTRACTOR SHALL MARK BALANCED POSITION ON CONTROLLER.
7. PROVIDE FACTORY AUTHORIZED STARTUP OF EQUIPMENT INCLUDING STARTUP OF ANY FACTORY CONTROLS.

EQUIPMENT FURNISHED/INSTALLED

REFERENCE "RESPONSIBILITY SCHEDULE" ON ARCHITECTURAL COVER SHEET (G001) FOR SCOPE OF WORK CLARIFICATIONS.

MAKEUP AIR UNIT SCHEDULE

LABEL	UNIT TYPE	BLOWER	HOUSING	MIN CFM	DESIGN CFM	INPUT BTU	OUTPUT BTU	TEMP RISE	EXTERNAL S.P.	WEIGHT W/O CU'S (LBS)	CONDENSING UNIT WEIGHTS	CURB ASSEMBLY	SOUND RATING (SONES)	ENTERING DB TEMP	ENTERING WB TEMP	LEAVING DB TEMP	LEAVING WB TEMP	BURNER EFFICIENCY (%)	GAS TYPE	HP	BHP	FLA	MCA	VOLTAGE	PHASE	Hz	MOCP	DISCONNECT		STARTER		MANUFACTURER	MODEL	REMARKS
																												FURN BY ELEC	FURN BY MECH	FURN BY ELEC	FURN BY MECH			
MAU-1	GAS FIRED	20MF-2-MOD	A2-D.500	2900	4135	349000	321000	76 °F	0.50 in-wg	1450	141 & 198 LBS	31"W X 79"L X 20"H INSULATED	18.1	94° F	76° F	76.8° F	70° F	92	NATURAL	5	2.73	15 A	18.8 A	208	3	60	30	NO	FACTORY INSTALLED	NO	FACTORY INSTALLED	Captiveaire	A2-D.500-20D-MPU	1,2

1. SEE MAU REQUIREMENTS, OPTIONS, AND ACCESSORIES ON SHEETS ME506 AND ME507.
2. ***THIS MAU HAS (2) REMOTE CONDENSERS ASSOCIATED WITH IT THAT HAVE SEPARATE ELECTRICAL CONNECTIONS. SEE SHEET ME506 FOR CONDENSER SCHEDULE.

WALK-IN COOLER CONDENSER

LABEL	MANUFACTURER	MODEL	REMARKS
CU-1	BY OWNER	BY OWNER	COORDINATE EXACT SPECS AND ELECTRICAL REQUIREMENTS WITH OWNER

1. COORDINATE WALK-IN COOLER WITH OWNER AND ARCHITECT.

WALK-IN COOLER FAN COIL

LABEL	MANUFACTURER	MODEL
FC-1	BY OWNER	BY OWNER

1. PROVIDE FAN COIL WITH CONDENSATE PUMP.

REGISTER - GRILLE- DIFFUSER SCHEDULE

LABEL	TYPE	BLOW PATTERN	AIR FLOW (CFM)	FACE SIZE	NECK SIZE	NC	PRESSURE DROP (in-wg)	THROW	MANUFACTURER	MODEL	REMARKS
EG-1	EXHAUST GRILLE - CEILING MOUNTED	N/A	300	10" X 10"	N/A	30	0.050	N/A	PRICE	80	1,2,3,4,5
R-1	RETURN GRILLE - LAY IN	N/A	< 400	12" X 12"	N/A	30	0.050	N/A	PRICE	535	1,2,3,4,5
R-2	RETURN GRILLE - LAY IN	N/A	< 2000	24" X 24"	N/A	30	0.100	N/A	PRICE	535	1,2,3,4,5
R-3	WALL MOUNTED RETURN GRILLE	N/A	2000	36" X 20"	N/A	30	0.100	N/A	PRICE	535	1.3.5
R-4	DUCT MOUNTED RETURN GRILLE	N/A	2000	36" X 12"	N/A	30	0.250	N/A	PRICE	SDGR	1.3.5
S-1	SUPPLY DIFFUSER - CEILING MOUNTED	4-WAY	< 195	12" X 12"	8"Ø	30	0.150	7-10-16	PRICE	SMD	1,2,3,4,5
S-2	SUPPLY DIFFUSER - LAY IN	4-WAY	490-675	24" X 24"	12"Ø	30	0.100	13-18-24	PRICE	SMD	1,2,3,4,5
S-3	SUPPLY DIFFUSER - LAY IN	STRAIGHT DOWN - NO DIRECTIONAL VANES	750	24" X 24"	12"Ø	30	0.100	STRAIGHT DOWN	PRICE	PDDR	1,2,3,4,5
S-4	DUCT MOUNTED SUPPLY DIFFUSER	ADJUSTABLE VANES	500	20" X 10"	N/A	30	0.050	12-18-33	PRICE	SDG	1,3,5,6

1. PROVIDE TRANSITION AS NECESSARY
2. PROVIDE LAY-IN MODULE AS NECESSARY
3. COLOR BY ARCHITECT
4. PROVIDE WITH WITH LAY-IN TO HARD LID ADAPTER AS NECESSARY.
5. ACCEPTABLE MANUFACTURERS: PRICE, KRUEGER, TITUS OR PRIOR APPROVED EQUAL.
6. PROVIDE WITH AIR-SCOOP FOR BALANCING.

MINIMUM OUTSIDE AIR CALCS PER IMC

ROOM	SQ FT	TOTAL PEOPLE	OA CFM/PERSON	TOTAL OA CFM FOR PEOPLE	OA / SQ FT	OA FOR SQ FT	SUM OF PEOPLE AND SQ FT OA	EZ FACTOR	TOTAL	O.A. PROVIDED
RESTAURANT DINING	1400	66	7.5	495	0.18	252	747	0.80	934	950
KITCHEN	1050	9	7.5	68	0.12	126	194		243	500
						TOTAL OA REQUIRED			1177	1450

MINIMUM EXHAUST AIR CALCS PER IMC

ROOM	SQ FT	EXHAUST CFM / SQ FT	EXHAUST / UNIT	UNITS	TOTAL REQUIRED EXHAUST CFM	EXHAUST PROVIDED
RESTROOMS	120	-	50	2	100	170
KITCHEN	1050	0.7	-	-	735	1035
			TOTAL EXHAUST REQUIRED		835	1205

NEGATIVE BALANCE (EXHAUST - MAKEUP AIR)

AIR BALANCE CALCS - BOH KITCHEN

EQUIPMENT	SUPPLY CFM	OA CFM	EXHAUST AIR CFM	
RTU-2	3600	500		*Has 100% economizer and powered exhaust.
MAU-1	4135	4135		
EF-1			1863	
EF-2			1863	
EF-3			1444	
TOTALS	**7735**	**4635**	**5170**	**NEGATIVE 535 CFM**

AIR BALANCE CALCS - DINING

EQUIPMENT	SUPPLY CFM	OA CFM	EXHAUST AIR CFM	
RTU-1	4000	950		*Has 100% economizer and powered exhaust.
EF-4			170	
TOTALS	**4000**	**950**	**170**	**POSITIVE 780 CFM**

BUILDING TOTAL: POSITIVE 245 CFM

COMcheck Software Version 4.1.4.1

Mechanical Compliance Certificate

Project Information

Energy Code: 2018 IECC
Project Title: MoBettah's Lees Summit, MO
Location: Lees Summit, Missouri
Climate Zone: 4a
Project Type: New Construction

Construction Site:
520 NW Chipman Rd.
Lee's Summit, MO 64086

Owner/Agent:

Designer/Contractor:

Additional Efficiency Package(s)

Reduced interior lighting power. Requirements are implicitly enforced within interior lighting allowance calculations.

Mechanical Systems List

Quantity — System Type & Description

1 RTU-1 (Single Zone):
Heating: 1 each - Central Furnace, Gas, Capacity = 200 kBtu/h
Proposed Efficiency = 80.00% Et, Required Efficiency: 80.00 % Et or 80% AFUE
Cooling: 1 each - Single Package DX Unit, Capacity = 116 kBtu/h, Air-Cooled Condenser, Air Economizer
Proposed Efficiency = 12.40 EER, Required Efficiency: 11.00 EER + 12.6 IEER
Fan System: 4000 -- Compliance (Motor nameplate HP method) : Passes

Fans:
4000 Supply, Constant Volume, 4000 CFM, 2.8 motor nameplate hp, 0.0 fan efficiency grade

1 RTU-2 (Single Zone):
Heating: 1 each - Central Furnace, Gas, Capacity = 200 kBtu/h
Proposed Efficiency = 80.00% Et, Required Efficiency: 80.00 % Et or 80% AFUE
Cooling: 1 each - Single Package DX Unit, Capacity = 116 kBtu/h, Air-Cooled Condenser, Air Economizer
Proposed Efficiency = 12.40 EER, Required Efficiency: 11.00 EER + 12.6 IEER
Fan System: 3600 -- Compliance (Motor nameplate HP method) : Passes

Fans:
3600 Supply, Constant Volume, 3600 CFM, 2.8 motor nameplate hp, 0.0 fan efficiency grade

1 Water Heater:
Gas Instantaneous Water Heater, Capacity: 0 gallons, Input Rating: 199 kBtu/h w/ Circulation Pump
No minimum efficiency requirement applies

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2018 IECC requirements in COM*check* Version 4.1.4.1 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Sean Johnson - P.E. — Name - Title
Signature
11.18.2021 — Date

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sheet information

revisions:

num.	description	date

CURRENT SET THRU REVISION 02

date: 01/17/2022
project number: MO-53LEE
project status: IFC

original drawing is 24" x 36"
current as of: 3/31/2022 6:29:11 PM

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STATE OF MISSOURI — RYAN BOOGAARD NUMBER PE-2016019272 — PROFESSIONAL ENGINEER

04-15-2022

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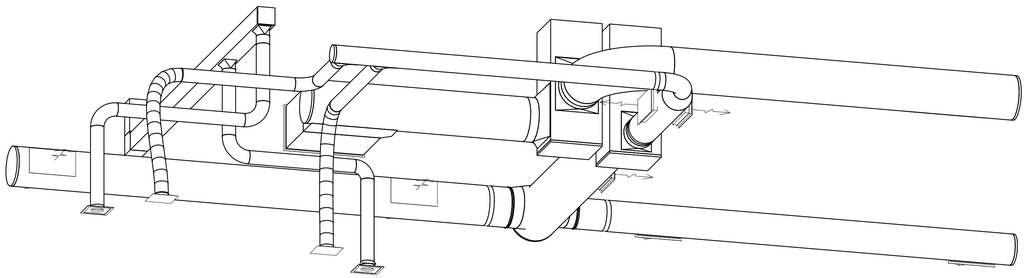
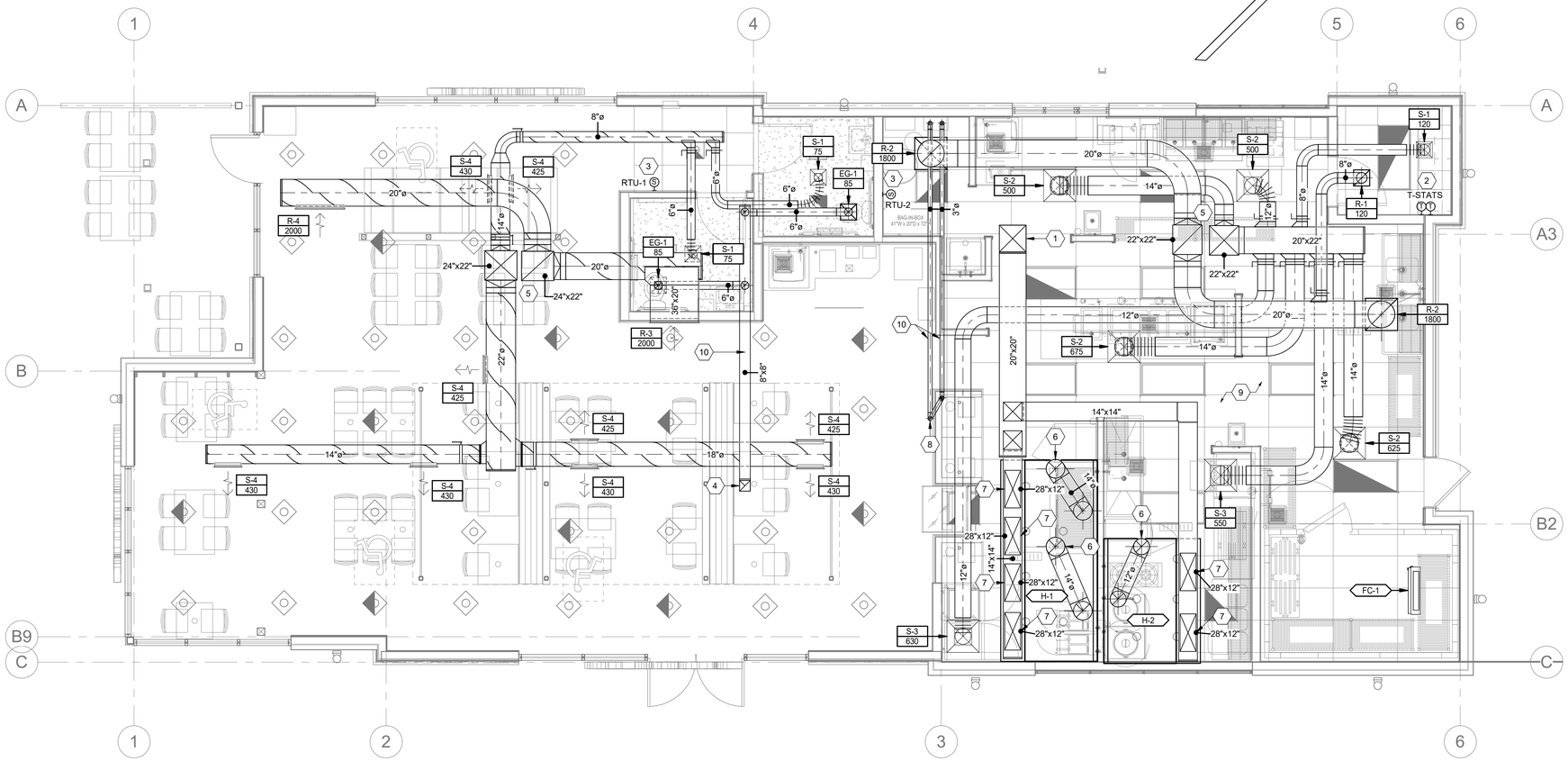
sheet title: MECHANICAL SCHEDULES

sheet number:

ME601



3 DINING AREA DUCTING - 3D VIEW



1 MECHANICAL PLAN
1/4" = 1'-0"

NORTH

GENERAL SHEET NOTES

1. ALL RETURN DUCTWORK TO BE ACCOUSTICALLY LINED.
2. LOUVERED FACE RETURNS ONLY.
3. PROVIDE BALANCING DAMPERS WITH LOCKING QUADRANT IN EACH BRANCH DUCT FOR BALANCING. INCLUDING SUPPLY, RETURN, AND EXHAUST.
4. GC TO HIRE NEBB CERTIFIED THIRD PARTY TEST AND BALANCE (TAB) CONTRACTOR. TAB CONTRACTOR SHALL ADJUST SHEAVES, BELTS, DAMPERS, ETC AS NECESSARY TO BALANCE SYSTEM TO AIRFLOWS REQUIRED AT LOWEST POSSIBLE SPEEDS. TAB CONTRACTOR SHALL VERIFY THE OUTSIDE AIR AT EACH RTU IS AS SCHEDULED. FOLLOW PROCEDURES AS LAID FORTH IN THE CURRENT VERSION OF "PROCEDURAL STANDARDS FOR TESTING ADJUSTING AND BALANCING OF ENVIRONMENTAL SYSTEMS" BY NEBB. PROVIDE REPORT ON NEBB FORMS.
5. PRIOR TO CONCEALMENT OF ANY PORTION OF THE GREASE DUCT PERFORM A LEAKAGE TEST AND A LIGHT TEST PER 2018 IMC 506.3.2.5. PRIOR TO CONCEALMENT AN INSPECTION OF THE GREASE DUCT WRAP IS REQUIRED WITH A BUILDING DEPARTMENT WITNESS PRESENT. PROVIDE GREASE DUCTS WITH CLEANOUTS NO MORE THAN 20 FT. APART AND NO MORE THAN 10 FT. FROM A CHANGE IN DIRECTION GREATER THAN 45°COORDINATE ALL AIR DEVICE LOCATIONS WITH REFLECTED CEILING PLANS AND ELECTRICAL DRAWINGS.
6. PROVIDE CAPTURE & CONTAINMENT TESTS PRIOR TO FINAL INSPECTION AND GIVE RESULTS TO BUILDING DEPARTMENT.
7. COORDINATE ALL AIR DEVICE LOCATIONS WITH REFLECTED CEILING PLANS AND ELECTRICAL DRAWINGS.
8. DUCT DIMENSIONS SHOWN ARE INSIDE CLEAR DIMENSIONS.
9. ALL RTU'S, MAU'S, HOODS, EF'S AND DIFFUSERS MUST BE BALANCED TO THE VALUES INDICATED ON THE FLOOR PLANS. PROVIDE BALANCE REPORT TO ENGINEER PRIOR TO PROJECT CLOSEOUT.
10. CONTRACTOR SHALL PROVIDE SUBMITTALS ON ITEMS LISTED IN MECHANICAL EQUIPMENT LIST TO THE ENGINEER FOR REVIEW PRIOR TO THE ORDER, PURCHASE OR INSTALLATION.
11. CONTRACTOR SHALL USE SMACNA DUCT CONSTRUCTION STANDARDS FOR SHEET METAL DUCTS. ALL DUCTWORK (UNLESS OTHERWISE NOTED ON FLOOR PLANS) SHALL BE CONSTRUCTED OF 1.5" W.C. SEAL CLASS "A".
12. CONTRACTOR SHALL FIELD VERIFY ALL MECHANICAL ITEMS PRIOR TO STARTING NEW WORK. ADDITIONAL COST WILL NOT BE ALLOWED FOR CONTRACTOR'S FAILURE TO BECOME FAMILIAR WITH EXISTING SITE CONDITIONS.
13. ALL TAKE-OFF'S THROUGHOUT THE ENTIRE BUILDING SHALL BE HIGH EFFICIENCY TAKE-OFF'S (HET's). NO EXCEPTIONS TAKEN.
14. ALL DUCTWORK IS TO BE INSTALLED INSIDE TRUSS BAYS. ALL DUCTWORK MUST BE INSTALLED NO LOWER THAN 12" FROM WHERE IT IS BEING SUPPORTED OR SEISMIC BRACING WILL BE REQUIRED. IF DUCTWORK IS INSTALLED BELOW 12" FROM WHERE IT IS SUPPORTED, IT IS THE MECHANICAL CONTRACTOR'S RESPONSIBILITY TO HAVE SEISMIC SUPPORTS ENGINEERED FOR THE JOB BY A LICENSED ENGINEER.
15. ALL THERMOSTAT LOCATIONS ON THE PLANS SHALL BE COORDINATED WITH FURNITURE PLANS AND VERIFIED WITH OWNER PRIOR TO ROUGH IN. IF THERMOSTAT NEEDS TO BE INSTALLED IN A LOCATION OTHER THAN SHOWN ON THE PLANS, THIS CONTRACTOR SHALL MAKE ADJUSTMENTS AT NO ADDITIONAL COST.
16. THIS CONTRACTOR SHALL CLOSELY COORDINATE MECHANICAL AND PLUMBING WITH KITCHEN EQUIPMENT, ELECTRICAL, ARCHITECTURAL AND BUILDING STRUCTURE.
17. DUCTWORK AND PIPE ROUTING AS SHOWN ON DRAWINGS IS DIAGRAMMATIC AND IS NOT TO BE SCALED. WHERE ALTERNATE ROUTING, OFFSETS AND TRANSITIONS ARE REQUIRED FOR COORDINATION OF WORK, THIS CONTRACTOR SHALL MAKE CHANGES WITHOUT ADDITIONAL COSTS.
18. M.C. MUST PROVIDE AND INSTALL ALL ACCESS DOORS FOR VALVES, FLOW METERS, ETC. COORDINATE LOCATION WITH GENERAL CONTRACTOR. ACCESS PANELS SHALL NOT BE VISIBLE TO CUSTOMERS AND SHALL BE PAINTED TO MATCH THE WALL IN WHICH THEY ARE INSTALLED.
19. WHERE THE JURISDICTION REQUIRES, CONTRACTOR IS RESPONSIBLE FOR PROVIDING SEISMIC RESTRAINT AND SUPPORT ENGINEERED BY A LICENSED STRUCTURAL ENGINEER. PROVIDE DESIGN DRAWINGS TO AUTHORITY HAVING JURISDICTION AND MECHANICAL ENGINEER FOR REVIEW.
20. ALL EXPOSED DUCTWORK TO BE SPIRAL ROUND OR FLAT OVAL WITH CLEAR SILICON DUCT SEALANT. DUCT TO BE FREE OF ANY COATINGS OR FILMS TO ALLOW FOR PAINTING.
21. FLEXIBLE DUCT MAY BE USED AT FINAL TERMINATION OF DUCT TO DIFFUSER OR GRILLE WHERE CONCEALED ABOVE DROPPED CEILING. MAXIMUM FLEXIBLE DUCT LENGTH IS 5'-0". PROVIDE DUCT SUPPORTS EVERY 3 FEET.
22. GRILLES AND DUCTWORK ARE SIZED INDEPENDENTLY. THE NECK SIZE OF GRILLES MAY NOT MATCH THE ASSOCIATED DUCT SIZE. PROVIDE TRANSITION TO GRILLES AS NECESSARY.
23. PROVIDE REMOTE CABLE OPERATED DAMPERS FOR ALL DUCTWORK ABOVE HARD LID CEILINGS OR WHERE DAMPER IS INACCESSIBLE OR PROVIDE OPPOSED BLADE DAMPER WITH NYLON BUSHINGS AT GRILLE.
24. DUCTWORK SHALL BE INSULATED AS FOLLOWS:

	LINED OR WRAPPED	R-VALUE
CONCEALED ROUND DUCTWORK:	WRAPPED	R-6
LOW PRESSURE RECTANGULAR DUCTWORK:	LINED	R-6
ROUND FLEXIBLE DUCT (MAX 5' LONG)	N/A	R-6
DUCTWORK INSTALLED OUTSIDE THE BUILDING	DOUBLE WALL	R-12

*ALL INSULATION TO MEET NFPA 90 PER UL 181-CLASS 1. NO DUCTBOARD ALLOWED.

SHEET KEYNOTES

1 DUCT UP THROUGH ROOF TO MAU. COORDINATE WITH TRUSSES AND ROOF PLAN.

2 INSTALL THERMOSTATS IN MANAGER'S OFFICE. TEMPERATURE SENSOR TO BE INSTALLED IN AREA SERVED BY ASSOCIATED EQUIPMENT. LABEL EACH THERMOSTAT WITH AREA SERVED AND RTU NUMBER.

3 PROVIDE TEMPERATURE SENSOR FOR RTU AT 7'-0" AFF. COORDINATE PLACEMENT WITH OWNER. ALL SENSORS IN CUSTOMER VIEW TO MATCH COLOR OF MOUNTING SURFACE - COORDINATE WITH ARCHITECT AND OWNER. CONTROLLING THERMOSTAT TO BE PLACED IN OFFICE.

4 DUCT UP TO ROOFTOP EXHAUST FAN.

5 SUPPLY AND RETURN DROPS FROM RTU ABOVE.

6 GREASE EXHAUST DUCT UP THROUGH ROOF TO EXHAUST FAN. COORDINATE DUCT ROUTING WITH TRUSSES. WHEREVER DUCTING IS WITHIN 18" OF COMBUSTIBLE MATERIALS, WRAP PER DETAILS ON SHEET ME509 FOR ZERO INCH CLEARANCE TO COMBUSTIBLES.

7 CONNECT MAKE UP AIR DUCT TO VOLUME DAMPER PROVIDED WITH HOOD. PROVIDE ALL FINAL CONNECTIONS. SEE HOOD DETAILS. ADJUST AND BALANCE EACH VOLUME DAMPER SO THAT MAKEUP AIR FOR EACH HOOD IS EVENLY DISTRIBUTED ACROSS SUPPLY PLENUM.

8 3" COMBUSTION AIR AND 3" VENT UP FROM WATER HEATER. COMBINE INTO CONCENTRIC VENT UP THROUGH ROOF. COORDINATE EXACT ROOFTOP PENETRATION LOCATION WITH ROOF PLAN.

9 DIFFUSERS/GRILLES IN BACK OF HOUSE TO MATCH CEILING COLOR - COORDINATE WITH ARCHITECT AND OWNER.

10 ROUTE DUCT UP HIGH IN BETWEEN TRUSSES.

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sheet information

revisions:

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CURRENT SET THRU REVISION 02

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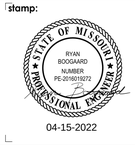

04-15-2022

project information:

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sheet title:
MECHANICAL PLAN

sheet number:
MH101

GENERAL SHEET NOTES

1. MAINTAIN ALL EXHAUSTS AND VENTS A MINIMUM OF 10' FROM ANY FRESH AIR INTAKE.
2. ROOF TOP EQUIPMENT CONDENSATE PIPING SHALL BE ROUTED TO ROOF DRAINS AND TERMINATED WITH AN AIR GAP. SUPPORT PIPING PER SPECS.
3. ALL DUCTS PENETRATING THE ROOF SHALL BE ROUTED STRAIGHT UP FROM APPLIANCE SERVED (WHERE POSSIBLE).

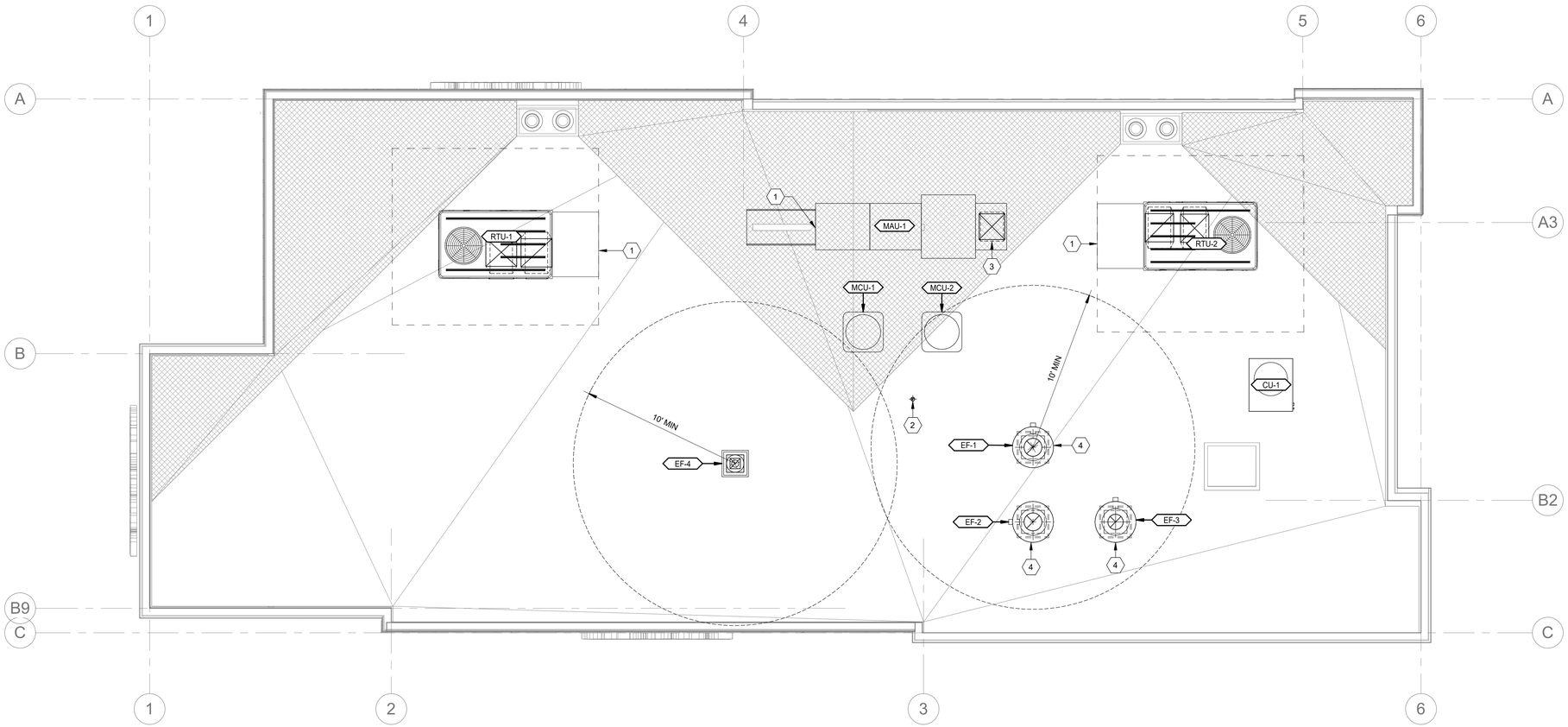
SHEET KEYNOTES

1 FRESH AIR INTAKE. MAINTAIN 10' CLEARANCE TO ALL EXHAUST OUTLETS.

2 WATER HEATER CONCENTRIC VENT THROUGH ROOF. TERMINATE AT LEAST 18" ABOVE ROOF PER MANUFACTURER REQUIREMENTS. MUST BE A MINIMUM OF 10' AWAY FROM ALL FRESH AIR INTAKES.

3 DUCT UP THROUGH ROOF TO MAU. COORDINATE WITH TRUSSES AND ROOF PLAN.

4 LOCATE GREASE EXHAUST FAN SO THAT DUCT DROP IS LOCATED BETWEEN TRUSSES. EXHAUST FAN DISCHARGE MUST BE SLIGHTLY HIGHER THAN TOP OF ANY ADJACENT STRUCTURE WITHIN 10 FEET, AND NOT LESS THAN 40" ABOVE THE ROOF SURFACE (IMC 506.5.6 AND IMC 506.3.13.1).



1 ROOF MECHANICAL PLAN
1/4" = 1'-0"

NORTH

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date:	01/17/2022
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original drawing is 24" x 36"
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RYAN BOOGAARD
NUMBER PE-2016017272
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04-15-2022

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sheet title:
ROOF MECHANICAL PLAN

sheet number:
MH102

MISC. SYMBOL LEGEND

SYMBOL	DESCRIPTION
# SHEET	DETAIL INDICATOR: # INDICATES DETAIL NUMBER, SHEET INDICATES DRAWING SHEET WHERE DETAIL IS SHOWN.
# SHEET	ELEVATION OR SECTION INDICATOR, EXTERIOR: # INDICATES ELEVATION OR SECTION NUMBER, SHEET INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
100	ROOM OR SPACE NUMBER.
1	KEYNOTE INDICATOR.
	REVISION INDICATOR.
CU-1	EQUIPMENT INDICATOR.
P-	PLUMBING FIXTURE INDICATOR.
TYPE CFM SIZE	DIFFUSER/GRILLE INDICATOR.
TYPE SIZE	DIFFUSER/GRILLE INDICATOR.
	BREAK, STRAIGHT
	BREAK, ROUND.
	MATCH LINE INDICATOR
	HIDDEN FEATURES LINE: HIDDEN, THIN LINE.
	CONTRACT LIMIT LINE: DASHDOT, WIDE LINE.
	NEW CONNECTION POINT TO EXISTING

PLUMBING SYMBOL LEGEND

SYMBOL	DESCRIPTION
C.B.	CATCH BASIN
M.H.	MANHOLE
W.H.	WALL HYDRANT
H.B.	HOSE BIBB
	CLEANOUT TO GRADE
	FLOOR CLEANOUT
	WALL CLEANOUT
1/2	1/2 GRATE
3/4	3/4 GRATE
F	FULL GRATE

DEFINITIONS

NOTE: ALL DEFINITIONS MAY NOT BE USED.

INDICATED: THE TERM "INDICATED" REFERS TO GRAPHIC REPRESENTATIONS, NOTES, OR SCHEDULES ON THE DRAWINGS, OTHER PARAGRAPHS OR SCHEDULES IN THE SPECIFICATIONS, AND SIMILAR REQUIREMENTS IN THE CONTRACT DOCUMENTS. WHERE TERMS SUCH AS "SHOWN", "NOTED", "SCHEDULED", AND "SPECIFIED" ARE USED, IT IS TO HELP THE READER LOCATE THE REFERENCE, NO LIMITATION ON LOCATION IS INTENDED.

DIRECTED: TERMS SUCH AS "DIRECTED", "REQUESTED", AUTHORIZED", "SELECTED", "APPROVED", "REQUIRED", AND "PERMITTED" MEAN "DIRECTED BY THE ENGINEER", "REQUESTED BY THE ENGINEER", AND SIMILAR PHRASES.

APPROVED: THE TERM "APPROVED", WHERE USED IN CONJUNCTION WITH THE ENGINEER'S ACTION ON THE CONTRACTOR'S SUBMITTALS, APPLICATIONS, AND REQUESTS, IS LIMITED TO THE ENGINEER'S DUTIES AND RESPONSIBILITIES AS STATED IN GENERAL AND SUPPLEMENTARY CONDITIONS.

FURNISH: THE TERM "FURNISH" IS USED TO MEAN "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS."

INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."

PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE."

INSTALLER: AN "INSTALLER" IS THE CONTRACTOR OR AN ENTITY ENGAGED BY THE CONTRACTOR, EITHER AS AN EMPLOYEE, SUBCONTRACTOR, OR SUB-SUBCONTRACTOR, FOR PERFORMANCE OF A PARTICULAR CONSTRUCTION ACTIVITY, INCLUDING INSTALLATION, ERECTION, APPLICATION, AND SIMILAR OPERATIONS. INSTALLERS ARE REQUIRED TO BE EXPERIENCED IN THE OPERATIONS THEY ARE ENGAGED TO PERFORM.

PLUMBING PIPING LEGEND

SYMBOL	DESCRIPTION
SS	SANITARY SEWER (SS)
GW	GREASE WASTE (GW)
V	VENT (V)
AV	ACID VENT
AW	ACID WASTE
	DOMESTIC COLD WATER (DCW)
	DOMESTIC HOT WATER (DHW)
	DOMESTIC HOT WATER RECIRC (DHWR)
180	180°F HOT WATER
180R	180° HOT WATER RETURN
160	160° HOT WATER
160R	160° HOT WATER RETURN
RW	RAINWATER
SRW	SECONDARY RAINWATER
SD	STORM DRAIN
VTR	VENT THRU ROOF
	NON POTABLE WATER
(E)	EXISTING PIPE
(E)	EXISTING PIPE TO BE REMOVED
IW	IRRIGATION WATER
SS	SANITARY SEWER
LPS	LOW PRESSURE STEAM
CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
HHWS	HEATING HOT WATER SUPPLY
HHWR	HEATING HOT WATER RETURN
CWS	CONDENSER WATER SUPPLY
CWR	CONDENSER WATER RETURN
GS	GLYCOL SUPPLY
GR	GLYCOL RETURN
G	GAS
FP	FIRE PROTECTION
LPG	PROPANE
VAC	VACUUM
CA	COMPRESSED AIR
MA	MEDICAL AIR
O	OXYGEN
NO	NITROUS OXIDE
N	NITROGEN
CO2	CARBON DIOXIDE
EVAC	EVACUATION

SYMBOL LEGEND

SYMBOL	DESCRIPTION
	VALVES, METERS, AND GAUGES
	SHUT OFF VALVE
	GATE VALVE
	CHECK VALVE
	AUTO 2-WAY VALVE
	AUTO 3-WAY VALVE
	GLOBE VALVE
	BALL VALVE
	RELIEF VALVE
	CHAIN OPERATED GATE VALVE
	PRESSURE REDUCING VALVE
	BUTTERFLY VALVE
S	SOLENOID VALVE
	ANGLE VALVE
	VENTURI
	BALANCING OR PLUG COCK
	FLOW SETTER
	EXPANSION VALVE (REFRIG.)
	GAS COCK
MAV	MANUAL AIR VENT
	STRAINER
	GAUGE COCK
	FLEXIBLE CONNECTION
	PRESSURE GAUGE
	THERMOMETER
	VICTUALIC COUPLING
	REDUCER CONCENTRIC
	REDUCER ECCENTRIC
	REFRIGERANT SITE GLASS
	REFRIGERANT STRAINER
	REFRIGERANT FILTER DRIER
	90 DEG ELBOW UP
	90 DEG ELBOW DOWN
	90 DEG TEE UP
	90 DEG TEE DOWN
	UNION
	CAPPED PIPE
	ANCHOR
	FLOAT AND THERMOSTATIC TRAP

ABBREVIATIONS

NOTE: ALL ABBREVIATIONS MAY NOT BE USED.

(E)	EXISTING
(F)	FUTURE
AD	ACCESS DOOR
AIR COND	AIR CONDITION(-ING,-ED)
APD	AIR PRESSURE DROP
BD	BALANCING DAMPER
BHP	BRAKE HORSE POWER
BTU	BRITISH THERMAL UNIT
BTUH	BTU/HOUR
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CLG	COOLING
COMP	COMPONENT
COND	CONDENS(-ER, -ING, -ATION)
CV	CONTROL VALVE
DB	DRY BULB TEMPERATURE
DCW	DOMESTIC COLD WATER
DHW	DOMESTIC HOT WATER
DHWR	DOMESTIC HOT WATER RECIRC
DIA	DIAMETER
EA	EXHAUST AIR
EER	ENERGY EFFICIENCY RATIO
EFF	EFFICIENCY
ELEC	ELECTRIC
ELEV	ELEVATION
ENT	ENTERING
EVAP	EVAPORAT(-E, -ING, -ED, -OR)
EWT	ENTERING WATER TEMPERATURE
EXT	EXTERNAL
FC	FLEXIBLE CONNECT(-OR, -ION)
FD	FIRE DAMPER
FLA	FULL LOAD AMPS
FPI	FINS PER INCH
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FSD	FIRE SMOKE DAMPER
GAL	GALLON(S)
GE	GREASE EXHAUST
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HD	HEAD
HG	MERCURY
HP	HORSEPOWER
HR	HOUR
HT	HEIGHT
HTG	HEATING
HZ	HERTZ (FREQUENCY)
ID	INSIDE DIAMETER
IN	INCH
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LG	LENGTH
LH	LATENT HEAT
LRA	LOCKED ROTOR AMPS
LVG	LEAVING
LWT	LEAVING WATER TEMPERATURE
MBH	THOUSAND BTU PER HOUR
MCA	MINIMUM CIRCUIT AMPS
MFR	MANUFACTUR(-ER, -ED)
NC	NORMALLY CLOSED
NC	NOISE CRITERIA
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NPSH	NET POSITIVE SUCTION HEAD
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OD	OUTSIDE DIAMETER
OZ	OUNCE
PD	PRESSURE DROP OR DIFFERENCE
PG	PROPOLENE GLYCOL
PH	PHASE
PPM	PARTS PER MILLION
PRESS	PRESSURE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIA	PSI ABSOLUTE
PSIG	PSI GAUGE
R	THERMAL RESISTANCE
RA	RETURN AIR
RECIRC	RECIRCULATE
REFR	REFRIGERATION
REQD	REQUIRED
RLA	RATED LOAD AMPS
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SC	SHADING COEFFICIENT
SCFM	STANDARD CUBIC FEET PER MINUTE
SCW	SOFT COLD WATER
SF	SAFETY FACTOR
SH	SENSIBLE HEAT
SL	SEA LEVEL
SP	STATIC PRESSURE
SPEC(S)	SPECIFICATION(S)
SQ	SQUARE
STD	STANDARD
SW	SOIL, WASTE
TA(R)	TRANSFER AIR (RETURN)
TA(S)	TRANSFER AIR (SUPPLY)
TD	TEMP. DROP OR DIFF.
TEMP	TEMPERATURE
THERM	THERMAL
TOT	TOTAL
TSTAT	THERMOSTAT
V	VOLT
V	VENT
VAC	VACUUM
VAV	VARIABLE AIR VOLUME
VEL	VELOCITY TEMPERATURE
VEL	VELOCITY
VENT	VENT, VENTILATION
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VOL	VOLUME
WB	WET BULB TEMP
WC	WATER COLUMN
WG	WATER GAUGE
WPD	WATER PRESSURE DROP
WT	WEIGHT
WTR	WATER

PLUMBING GENERAL NOTES

1 THE PLUMBING DRAWINGS SHOW THE GENERAL DESIGN, ARRANGEMENT AND EXTENT OF THE PLUMBING SYSTEM. BECAUSE OF THE SMALL SCALE OF THE DRAWINGS, THESE DRAWINGS DO NOT SHOW ALL OFFSETS, BENDS OR ELBOWS NECESSARY FOR THE COMPLETE INSTALLATION IN THE SPACE PROVIDED. CONTRACTOR SHALL MAKE SUCH SLIGHT ALTERATIONS AS MAY BE NECESSARY TO MAKE THE SYSTEM COMPLETE AND OPERATIONAL IN ACCORDANCE WITH THE DESIGN INTENT. MAJOR DEVIATIONS SUCH AS CHANGES IN COMPONENT SIZES, WEIGHTS, QUANTITIES OR MATERIAL REQUIRE PRIOR APPROVAL BY THE DESIGN ENGINEER.

2 THE DRAWINGS AND SPECIFICATIONS HAVE BEEN PREPARED TO SUPPLEMENT EACH OTHER AND SHALL BE INTERPRETED AS AN INTEGRAL UNIT WITH THE ITEMS SHOWN ON ONE AND NOT THE OTHER BEING FURNISHED AND INSTALLED AS THOUGH SHOWN AND CALLED OUT IN BOTH.

3 THE ENTIRE PLUMBING INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE MOST RECENTLY ADOPTED BUILDING CODES, MECHANICAL CODE, PLUMBING CODE, ELECTRICAL CODE, AND ALL OTHER APPLICABLE CITY, COUNTY, STATE, AND FEDERAL CODES AND REGULATIONS IN EFFECT.

4 THE ENTIRE PLUMBING INSTALLATION SHALL CONFORM TO ANY CODES, RULES, REGULATIONS AND REQUIREMENTS OF THE BUILDING OWNER.

5 PRIOR TO FABRICATION AND INSTALLATION OF ANY PLUMBING COMPONENT THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ALL PLUMBING WORK WITH ALL OTHER BUILDING TRADES, INCLUDING BUILDING TRADES HIRED DIRECTLY BY THE OWNER. WHERE CONFLICTS MAY OCCUR, THEY SHALL BE RESOLVED PRIOR TO INSTALLATION.

6 ALL PLUMBING INFORMATION IS NOT SHOWN ON THE PLUMBING DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL INFORMATION ON ALL OTHER CONSTRUCTION DOCUMENTS.

7 THE CONTRACTOR SHALL BE RESPONSIBLE TO REVIEW AND USE, WHERE APPROPRIATE, ALL THE PLUMBING SHOWN ON THE DRAWINGS. DETAILS MAY OR MAY NOT BE CALLED OUT ON THE DRAWINGS WITH SYMBOLS OR KEYED NOTES. ANY CHANGES RESULTING FROM FAILURE TO INSTALL THE PLUMBING SYSTEM WITHOUT USING THE INCLUDED DETAILS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

8 ANY PART OF THE PLUMBING INSTALLATION THAT FAILS, IS UNFIT, OR BECOMES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

9 PROVIDE PROPER PROVISIONS FOR EXPANSION, CONTRACTION, OR MOVEMENT OF ALL PIPING.

10 PROVIDE LARGE ENOUGH PIPE SLEEVES THROUGH WALL OR FLOOR TO ALLOW FOR ANTICIPATED DIFFERENTIAL MOVEMENT.

11 ALL PIPING SHALL BE SUPPORT WITH CLEVIS HANGERS (MSS TYPE 1). PERFORATED METAL STRAPS OR PLASTIC STRAPPING (PLUMBER TAPE) SHALL NOT BE USED TO SUPPORT OR BRACE ANY PIPE.

12 PROVIDE PIPE HANGERS WITHIN 18-INCHES OF ALL CHANGES OF DIRECTION.

13 PROVIDE SWAY BRACING FOR ALL PIPING 4" AND LARGER AT ALL CHANGES IN DIRECTION GREATER THAN 45-DEGREES.

14 ALL STEEL CLEVIS HANGERS USED TO SUPPORT COPPER PIPING SHALL BE COPPER OR PLASTIC COATED.

15 COPPER PIPING SHALL NOT COME IN CONTACT WITH FIRE TREATED LUMBER. PROVIDE ½" THICK SLIP-ON CLOSED CELL INSULATION WHERE COPPER PIPING IS ADJACENT TO FIRE TREATED LUMBER. CLOSED CELL INSULATION SHALL EXTEND A MINIMUM OF 1-1/2" PAST LUMBER.

16 ALL EXPOSED PIPING SHALL BE INSTALLED IN A NEATLY ARRANGED MANNER PARALLEL TO THE BUILDING STRUCTURE.

17 ALL EXPOSED DOMESTIC WATER PIPE IN OCCUPIED SPACES SHALL BE POLISHED CHROME PLATED.

18 ALL EXPOSED DRAINAGE PIPING IN OCCUPIED SPACES INCLUDING TRAPS UNDER SINKS SHALL BE POLISHED CHROME PLATED.

19 DRAWINGS SHOW GENERAL ARRANGEMENT OF THE DRAIN WASTE AND VENT SYSTEM WITH THE REQUIRED CLEANOUTS. CONTRACTOR SHALL PROVIDE ALL ADDITIONAL CLEANOUTS AS REQUIRED BY THE PLUMBING CODE.

20 ALL SANITARY DRAINAGE SYSTEM PIPING 3" AND LARGER SHALL BE SLOPED IN DIRECTION OF FLOW AT A MINIMUM OF 1/8" PER FOOT.

21 ALL SANITARY DRAINAGE SYSTEM PIPING SMALLER THAN 3" SHALL BE SLOPED IN DIRECTION OF FLOW AT A MINIMUM OF 1/4" PER FOOT.

22 SLOPE VENT SYSTEM TOWARDS DRAINAGE SYSTEM.

23 SIMILAR EQUIPMENT SHALL BE OF THE SAME MANUFACTURER.

24 ALL EQUIPMENT SHALL PROVIDE THE SCHEDULED PERFORMANCE AT THE JOB SITE ELEVATION.

25 FIXTURE AND EQUIPMENT MODEL NUMBERS SHOWN IN PLUMBING FIXTURE SCHEDULE AND PLUMBING EQUIPMENT SCHEDULE ARE SHOWN TO ESTABLISH THE TYPE OF PRODUCT THAT SHALL BE USED. THE SELECTED PRODUCT SHALL MEET THE SCHEDULED PERFORMANCE DATA SHOWN ON THE SCHEDULE EVEN IF A DIFFERENT MODEL IS SUPPLIED THAT IS DIFFERENT THAN THAT SCHEDULED.

26 ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S INSTALLATION INSTRUCTIONS. PROVIDE ALL NECESSARY FITTINGS, TRANSITIONS, VALVES AND OTHER DEVICES AND ACCESSORIES REQUIRED FOR A COMPLETE, WORKABLE INSTALLATION.

27 SEE "PLUMBING FIXTURE SCHEDULE" FOR INDIVIDUAL TRAPS, WASTE, VENT, AND DOMESTIC WATER PIPING FOR INDIVIDUAL FIXTURES.

28 ALL PLUMBING EQUIPMENT SHALL BE LISTED AND LABELED BY AN APPROVED TESTING AGENCY.

29 FIXTURES, EQUIPMENT AND PIPING INSTALLATION SHALL MEET NSF STANDARDS.

PLUMBING SHEET INDEX

PE001	PLUMBING COVER SHEET
PE501	PLUMBING DETAILS
PE502	PLUMBING DETAILS
PE601	PLUMBING SCHEDULES
PL101	PLUMBING PLAN - WATER
PL102	PLUMBING PLAN - GAS
PL103	PLUMBING PLAN - DWV
PL104	ROOF PLUMBING PLAN

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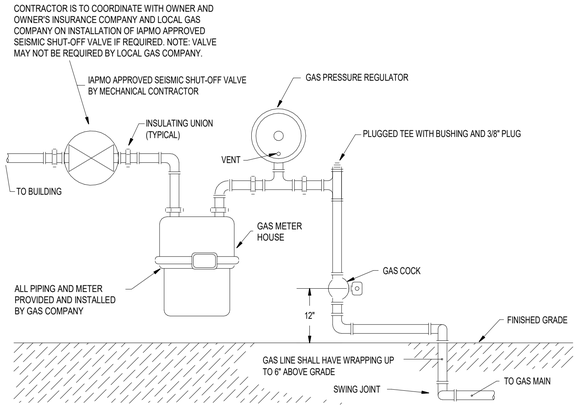
sheet title: PLUMBING COVER SHEET

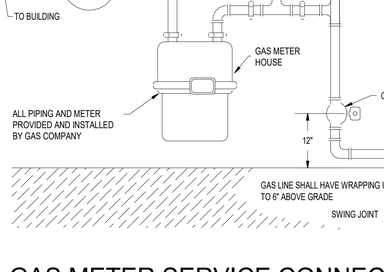
sheet number:

PE001

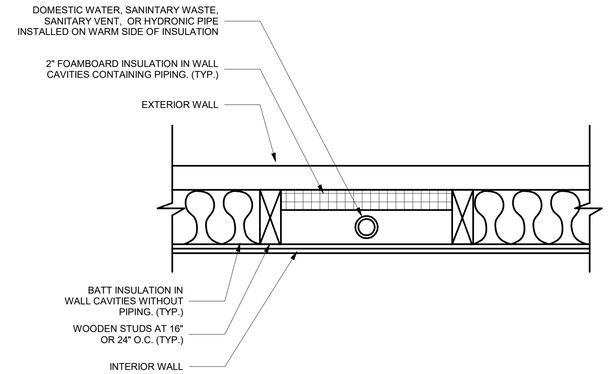


10 GAS METER SERVICE CONNECTION DETAIL
SCALE: NTS

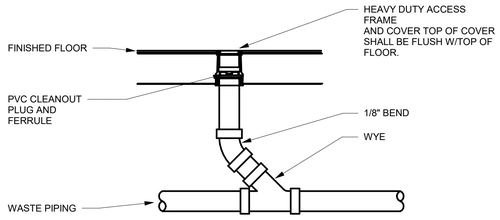
9 FLOOR DRAIN
SCALE: NTS



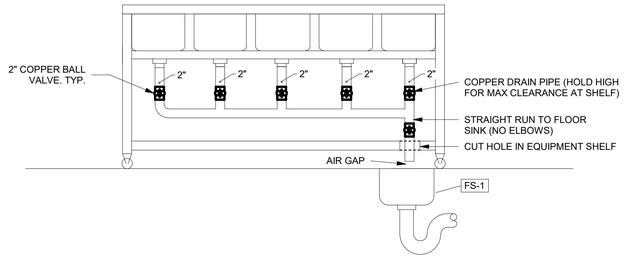
8 WALL CLEANOUT
SCALE: NTS



7 PIPING IN EXTERIOR WALL DETAIL
SCALE: NTS



6 FLOOR CLEANOUT
SCALE: NTS



3 HOT FOOD WELL WASTE PIPING DETAIL
SCALE: NTS

ROOF PIPE SUPPORT SCHEDULE	
PIPE SIZE	MAXIMUM SPACING
1"	6'-0"
1 1/4"	6'-0"
1 1/2"	6'-0"
2"	6'-0"
2 1/2"	8'-0"
3"	8'-0"
4"	8'-0"

NOTES:
1. SUPPORTED PIPE AT ALL ELBOWS AND AT SPACING SPECIFIED.
2. PIPE SUPPORT BLOCK SHALL BE A MINIMUM OF ONE PIPE SIZE LARGER TAHN PIPE
3. DO NOT ATTACH PIPESTANDS TO ROOF

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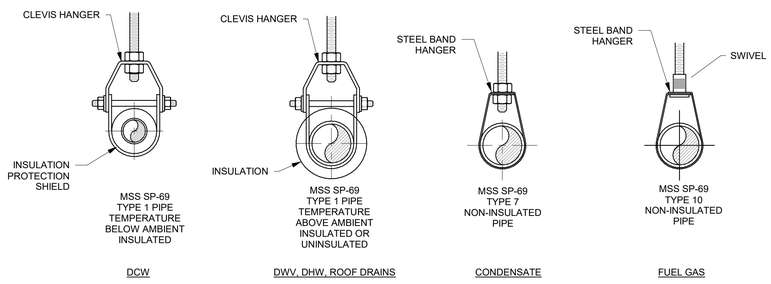
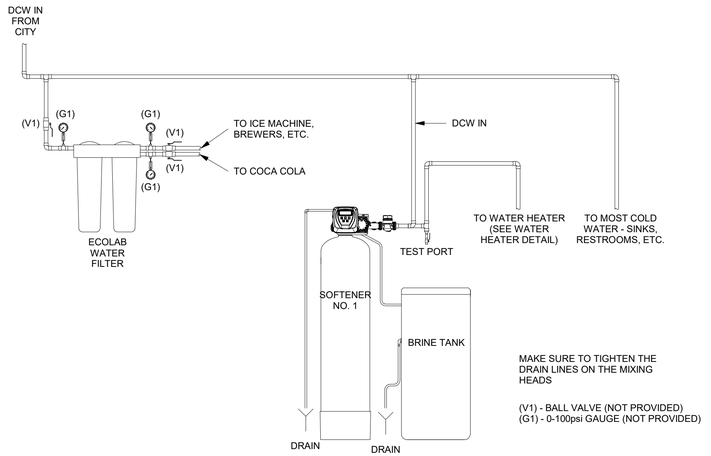
5 ROOF PIPING SUPPORT
SCALE: NTS



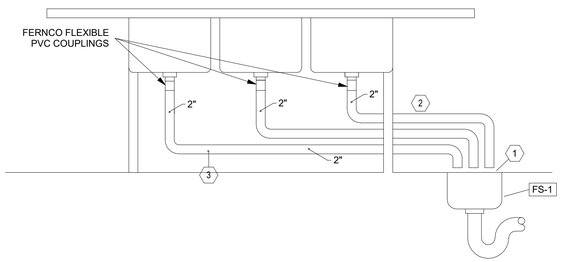
4 PIPE HANGERS
SCALE: NTS



2 WATER PIPING DETAIL
SCALE: NTS

KEYED NOTES:

1. PROVIDE AIR GAP AS REQUIRED BY CODE TO FLOOR SINK.
2. SECURE FULL LENGTH OF PIPES TO WALL WITH UNISTRUT
3. MATERIAL: PVC (TYPICAL)



1 THREE COMPARTMENT SINK WASTE PIPING DETAIL
SCALE: NTS

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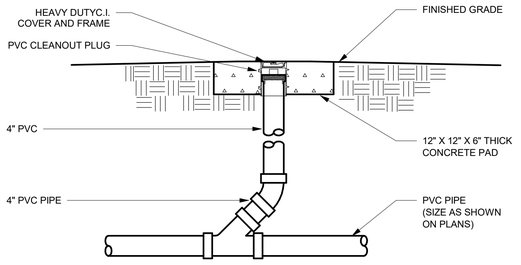
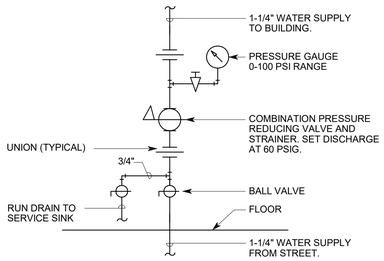
sheet title:
PLUMBING DETAILS

sheet number:
PE501



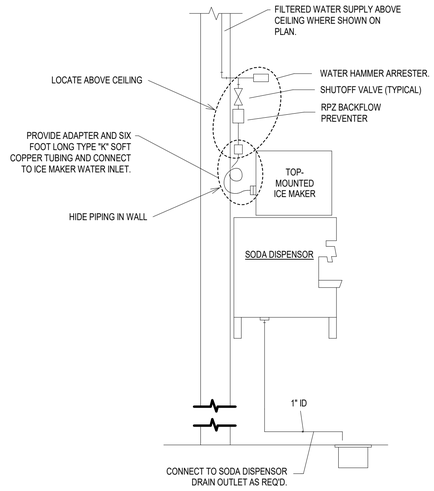
10 CLEANOUT TO GRADE (PVC)

SCALE: NTS



9 PRV STATION DETAIL

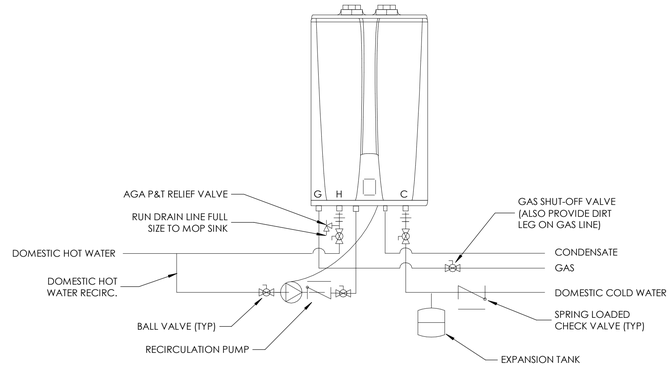
SCALE: NTS



PIPING ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST TO SUIT FIELD CONDITIONS PROVIDE CONNECTIONS AS RECOMMENDED BY EQUIPMENT MANUFACTURER.

6 SODA DISPENSER/ICE MACHINE DETAIL

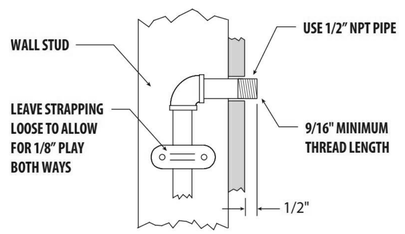
SCALE: NTS



NOTE: PROVIDE MIXING VALVES AT PLUMBING FIXTURES AS REQUIRED.

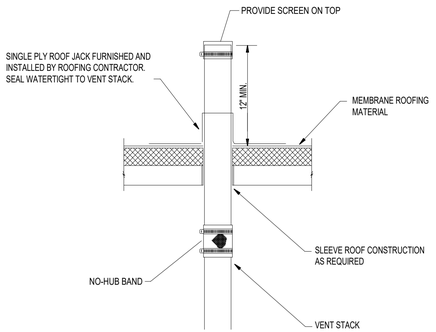
3 TANKLESS WATER HEATER DETAIL

SCALE: NTS



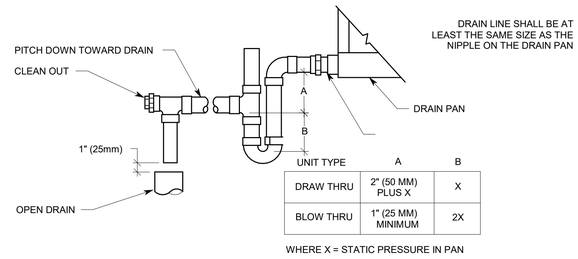
8 BACKING DETAIL FOR POT FILLER

SCALE: NTS



5 VENT THROUGH ROOF DETAIL

SCALE: NTS



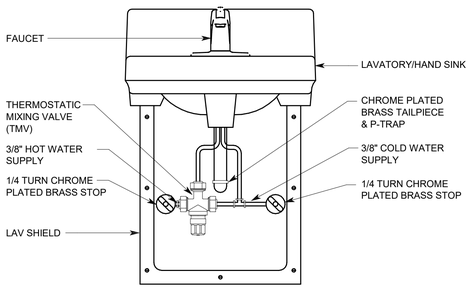
UNIT TYPE	A	B
DRAW THRU	2" (50 MM) PLUS X	X
BLOW THRU	1" (25 MM) MINIMUM	2X

WHERE X = STATIC PRESSURE IN PAN

2 RTU CONDENSATE TRAP DETAIL

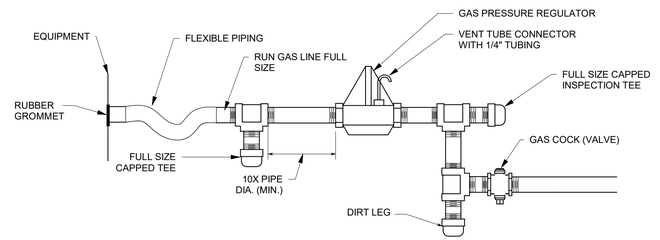
SCALE: NTS

VENT LINE SIZING	
FUEL LINE SIZE (NOMINAL INCHES)	VENT LINE SIZE (NOMINAL INCHES)
UP TO 1 1/2"	3/4"
2"	1"
2 1/2"	1 1/4"
3"	1 1/4"



4 HAND SINK W/MIXING VALVE

SCALE: NTS



1 EQUIPMENT GAS PIPING WITH REGULATOR

SCALE: NTS

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num.	description	date

CURRENT SET THRU REVISION 02

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project status:	IFC

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sheet number:

PE502

WATER HAMMER ARRESTER SCHEDULE

SYMBOL	INLET SIZE (INCHES)	PDI SYMBOL	CAPACITY (DFU)	BASIS OF DESIGN MANUFACTURER & MODEL
WHA-A	3/4	A	1-11	J.R. SMITH 5005
WHA-B	1	B	12-32	J.R. SMITH 5010
WHA-C	1	C	33-60	J.R. SMITH 5020
WHA-D	1	D	61-113	J.R. SMITH 5030
WHA-E	1	E	114-154	J.R. SMITH 5040
WHA-F	1	F	155-330	J.R. SMITH 5050

ACCEPTABLE MANUFACTURERS	NOTES / REMARKS
SIOUX CHIEF "HYDRA-ARRESTER" MIFAB "MWH" J.R. SMITH "50XX" WATTS LF02	(1) ANSI / ASSE 1010 LISTED (2) LEAD FREE CONSTRUCTION (3) COPPER TUBE BODY; POLY PISTON, EPDM O-RING (4) MIP THREADED INLET

NOTES:

1. WATER HAMMER ARRESTOR SHALL BE SIZED AND INSTALLED PER PLUMBING AND DRAINAGE INSTITUTE (STANDARD PDI-WH 201) REQUIREMENTS IN ACCESSIBLE LOCATIONS ON THE COLD WATER AND HOT WATER PIPING AND WHERE FLUSH VALVES AND ANY OTHER QUICK CLOSING VALVES ARE USED.

VALVE SCHEDULE

SERVICE	VALVE TYPE	PIPE SIZE	DESCRIPTION
DOMESTIC WATER SERVICE	BALL VALVE	2" & SMALLER	COPPER ALLOY, 2-PIECE, STANDARD PORT, CHROME PLATED BALL, TFE SEAT, LEVER HANDLE, 400 PSIG WOG, MSS SP-110, SOLDERED OR THREADED END
	CHECK VALVE	2" & SMALLER	BRONZE BODY, SPRING TYPE, TFE SEAT, BRONZE DISC, SOLDERED OR THREADED ENDS, MSS SP-80
	UNION	2" & SMALLER	ASTM B16.39, CLASS 150, MALLEABLE IRON, HEXANGONAL STOCK BODY, BRONZE-TO-BRONZE SEAT
NATURAL GAS	BALL VALVE	2" & SMALLER	COPPER ALLOY, 2-PIECE, STANDARD PORT, CHROME PLATED BALL, TFE SEAT, LEVER HANDLE, 400 PSIG WOG, MSS SP-110, AGA APPROVED, ASME B26.33, THREADED END
	UNION	2" & SMALLER	ASTM B16.39, CLASS 150, MALLEABLE IRON, HEXANGONAL STOCK BODY, BRONZE-TO-BRONZE SEAT

GAS PRESSURE REGULATOR SCHEDULE

SYMBOL	LOCATION	MANUFACTURER	MODEL NO.	REGULATOR SIZE (INCHES)	CAPACITY (CFH)	NOTES
GPR	INDOOR/OUTDOOR	PF REGULATOR	F30051	1/2	928	(1)(2)(3)(4)(5)
			F30052	3/4	1115	
			F30053	1	1501	
			F3013	1-1/4	7894	

ACCEPTABLE MANUFACTURERS	NOTES:
PIETRO FIORENTINI MAXITROL	(1) 2.0 PSIG INLET PRESSURE , 850 BTU PER CF (2) 4 0Z (7" W.C.) OUTLET PRESSURE (3) DIE CAST ALUMINNUM BODY, NITRILE DIAPHRAGM (4) NPT THREADED INLET & OUTLET (5) BALL CHECK AUTOMATIC VENT LIMITING DEVICE

TANKLESS WATER HEATER (GAS)

LABEL	LOCATION	TYPE	FLOW RATE AT 45° F (GPM)	FLOW RATE AT 67° F (GPM)	FLOW RATE AT 90° F (GPM)	HIGH GAS INPUT(BTUH)	LOW GAS INPUT(BTUH)	DESIGN PRESSURE	VOLTS	PHASE	AMPS	FULL WEIGHT (LBS)	MANUFACTURER	MODEL	REMARKS
WH-1	KITCHEN	TANKLESS, GAS-FIRED	8.7	5.6	4.4	199000.0	19900	100.00 psi	120	1	4	125	NAVIEN	NPE-240S	1,2,3,4

1. PROVIDE WITH CONCENTRIC VENT KIT.
2. ELECTRICAL OUTLET TO BE PROVIDED ON ELECTRICAL PLANS.
3. PROVIDE WITH EXPANSION TANK THERM-X-TROL ST-12.
4. ACCEPTABLE MANUFACTURERS: HTP, RINNAI OR APPROVED EQUAL.

WATER SOFTENER SCHEDULE

LABEL	MANUFACTURER & MODEL NUMBER	NOMINAL SYSTEM FLOW	MAXIMUM SYSTEM FLOW	BACKWASH/ RINSE FLOW	OPERATING TEMPERATURE RANGE	OPERATING PRESSURE RANGE	INLET / OUTLET PIPE CONNECTION	BRINE TANK SIZE	MEDIA TANK SIZE	MEDIA TANK CAPACITY	MEDIA VOLUME	MEDIA QUANTITY	SALT CAPACITY	OPERATING WEIGHT	REMARKS
WS-1	SENTRY II SERIES A952SM-60-2441	23 GPM	31 GPM	2.7 GPM	40°F-100°F	30-120 PSI	1" / 1"	24"X41"	12"X52"	60,000 GRAINS	2.0 CU. FT.	1	670 LBS	1110 LBS	PROVIDED AND INSTALLED BY CONTRACTOR

1. REQUIRES 120V OUTLET WITHIN 12'.

WATER FILTER SCHEDULE

LABEL	EQUIPMENT TYPE	INCOMING WATER LINE SIZE	INCOMING WATER TEMPERATURE	APPROXIMATE MAXIMUM GPM	MODEL	REMARKS
WF-1	WATER FILTER	3/4"	40°F - 70°F	ECOLAB	SPLIT TWIN HEAD - FILTERS SELECTED BY OWNER	PROVIDED BY OWNER, INSTALLED BY CONTRACTOR

RECIRCULATION PUMP SCHEDULE

LABEL	MANUFACTURER & MODEL NUMBER	PUMP TYPE	SYSTEM SERVED	LIQUID TYPE	GPM	FT. HD.	TEMP RANGE (F)	V/PH/HZ	WATTS	AMPS	ACCESSORIES & REMARKS
RCP-1	BELL & GOSSETT ECOCIRC 19-16	CIRCULATOR, INLINE	SOFTENED DHW	WATER	1	3	36-203	115/1/60	60	.5	6 FT. LINE CORD WITH PLUG. OUTLET PROVIDED ON ELECTRICAL PLANS.

1. RUN IN CONSTANT PRESSURE MODE IN CONJUNCTION WITH CALEFFI MODEL 116 THERMAL BALANCING VALVES TO ALLOW PUMP TO RUN AT LOWER SPEED WHEN HOT WATER IS RUNNING.

PLUMBING FIXTURE SCHEDULE

LABEL	DESCRIPTION	WASTE	VENT	CW	HW	MANUFACTURER	MODEL	REMARKS
DS-1	PRIMARY RAINWATER DOWNSPOUT	4"	0"	0"	0"	ZURN	Z199	SIZE TO MATCH RAINWATER PIPE SIZE.
DS-2	SECONDARY RAINWATER DOWNSPOUT	4"	0"	0"	0"	ZURN	Z199	SIZE TO MATCH RAINWATER PIPE SIZE.
FD-1	FLOOR DRAIN	2"	1 1/4"	0"	0"	ZURN	FD-2322	PROVIDE TRAP GUARD, PRO-SET OR APPROVED EQUAL. FLOOR DRAIN SIZE TO MATCH PIPE SIZE SHOWN ON PLANS.
FD-2	FLOOR DRAIN	3"	1 1/2"	0"	0"	WATTS	FD-100A (8")	PROVIDE TRAP GUARD, PRO-SET OR APPROVED EQUAL
FS-1	FLOOR SINK	3"	1 1/2"	0"	0"	JAY R. SMITH	3150Y	PROVIDE DOME STRAINER AND HALF GRATE COVER ON ALL FLOOR SINKS. PROVIDE TRAP GUARD, PRO-SET OR APPROVED EQUAL.
HB-1	HOSE BIB - INTERIOR	0"	0"	0"	1/2"	JAY R. SMITH	5670-H	PROVIDE WITH VACUUM BREAKER
HB-2	HOSE BIB - EXTERIOR	0"	0"	3/4"	0"	JAY R. SMITH	5509QT	RECESSED BOX TYPE, NON-FREEZE, INTEGRAL VACUUM BREAKER, "T" HANDLE KEY
LAV-1	LAVATORY - WALL MOUNTED - ADA	2"	1 1/4"	1/2"	1/2"	KOHLER & CHICAGO FAUCETS	K-2032 & 420-E2805ABCP	MOUNT AT ADA HEIGHT. PROVIDE ADA FAUCET. OWNER PROVIDED.
PRD-1	PRIMARY ROOF DRAIN	4"	0"	0"	0"	ZURN	Z100	
SRD-1	SECONDARY ROOF DRAIN	4"	0"	0"	0"	ZURN	Z100	PROVIDE WITH 2" DAM.
TD-1	TRENCH DRAIN - SLOPED	3"	1 1/2"	0"	0"	WATTS	DEAD LEVEL	PROVIDE STAINLESS STEEL GRATES. PROVIDE TRAP GUARD, PRO-SET OR APPROVED EQUAL.
WC-1	WATER CLOSET - TANK TYPE - ADA	4"	2"	3/4"	0"	KOHLER	K-3999-U HIGHLINE	PROVIDE WITH ELONGATED "NO SLAM" TOILET SEAT

MINIMUM PIPE INSULATION THICKNESS FOR WATER AND REFRIGERANT SYSTEMS

FIELD OPERATING TEMP RANGE (F)	INSULATION CONDUCTIVITY		INSULATION THICKNESS (INCHES) BASED ON NOMINAL PIPE SIZE				
	CONDUCTIVITY BTU*IN/(H*T^2*F)	MEAN RAITING TEMPERATURE, F	LESS THAN 1" DIA.	1"-1 1/2" DIA.	1 1/2"-4" DIA	4"-8" DIA.	8" DIA. AND ABOVE
>350	0.32-0.34	250	4.5	5.0	5.0	5.0	5.0
251-350	0.29-0.32	200	3.0	4.0	4.5	4.5	4.5
201-250	0.27-0.30	150	2.5	2.5	2.5	3.0	3.0
141-200	0.25-0.29	125	1.5	1.5	2.0	2.0	2.0
105-140	0.22-0.28	100	1.0	1.0	1.5	1.5	1.5
40-60	0.27-0.30	75	0.5	0.5	1.0	1.0	1.0
<40	0.20-0.26	50	0.5	1.0	1.0	1.0	1.5

DOMESTIC WATER DEMAND

EQUIPMENT	TYPE OF SUPPLY CONTROL	QUANTITY	**COLD** WATER SUPPLY FIXTURE UNITS PER FIXTURE (WSFU)	**HOT** WATER SUPPLY FIXTURE UNITS PER FIXTURE (WSFU)	**TOTAL** WATER SUPPLY FIXTURE UNITS PER FIXTURE (WSFU)	TOTAL WATER SUPPLY FIXTURE UNITS (WSFU)
LAVATORY	FAUCET	2	1.50	1.50	2.00	4.00
WATER CLOSET (1.28 GPF)	FLUSH TANK	2	2.20	0	2.20	4.40
KITCHEN SINK	FAUCET	2	3.00	3.00	4.00	8.00
SERVICE SINK	FAUCET	1	2.25	2.25	3.00	3.00
HAND WASHING SINK	FAUCET	2	1.50	1.50	2.00	4.00
BEVERAGE DISPENSER	3/8" VALVE	2	0.25	0	0.25	0.50
HOSE BIBB - HOT WATER	VALVE	3	0	2.50	2.50	7.50
HOSE BIBB - COLD WATER	VALVE	2	2.50	0	2.50	5.00
OTHER KITCHEN FAUCETS	FAUCET	2	0.00	1.50	2.00	4.00
			TOTAL COLD (WSFU)	TOTAL HOT (WSFU)		
			24.15	24.75		
					TOTAL (WSFU):	40.4
					2018 INTERNATIONAL PLUMBING CODE - TABLE E103.3(3) ESTIMATED PEAK DEMAND (GPM):	26.5
					PIPE SIZE (COLD WATER SUPPLY TO BUILDING):	1-1/4"
					2018 INTERNATIONAL PLUMBING CODE - FIGURE E103.3(4) PIPE FRICTION (PSI / 100 FT):	6.0
					PIPE VELOCITY (FEET / SECOND):	7.0

NATURAL GAS REQUIREMENTS

EQUIPMENT	QUANTITY	SEA LEVEL FUEL GAS INPUT CAPACITY (BTUH)	JOB SITE FUEL GAS REQUIREMENTS (CFH)	TOTAL FUEL GAS CAPACITY (CFH)	BRANCH PIPE SIZES - EACH PIECE OF EQUIP. (INCHES)	
					2 PSIG @ 150 FT.	4 OZ @ 10 FT.
WATER HEATER (WH-1)	1	199,000	209	209	1/2"	3/4"
MAKEUP AIR UNIT (MAU-1)	1	349,000	367	367	1/2"	1"
RICE COOKER	2	35,000	36	72	1/2"	1/2"
RADIANT CHARBROILER	1	195,000	205	205	1/2"	3/4"
GAS RANGE	1	180,000	189	189	1/2"	3/4"
FRYER	2	105,000	111	222	1/2"	1/2"
RTU-1	1	200,000	211	211	1/2"	3/4"
RTU-2	1	200,000	211	211	1/2"	3/4"
TOTAL		1,602,000	----	1,687	1 1/4"	----

BASIS OF DESIGN	NOTES:
2018 INTERNATIONAL FUEL GAS CODE	(1) PROVIDE GAS SHUT-OFF VALVE AND PRESSURE REGULATOR AT EACH PIECE OF EQUIPMENT. INSTALL IN AN ACCESSIBLE LOCATION ROUGHLY 10 FT FROM EQUIPMENT.
HEAT CONTENT OF GAS (BTUH/CU. FT): 950.0	
GAS PRESSSURE AT METER (LB): 2.0	
DISTANCE FROM GAS METER TO MOST REMOTE GAS REG. (FEET): 150.0	
DISTANCE FROM GAS PRES. REG. TO APPLIANCE (FEET): 10.0	

SANITARY SEWER DEMAND

EQUIPMENT	MINIMUM TRAP AND TRAP ARM	QUANTITY	INDIVIDUAL DRAINAGE FIXTURE UNIT	TOTAL DRAINAGE FIXTURE UNITS
WATER CLOSET, FLUSH TANK (PUBLIC 1.6 GPF)	4"	2	4.0	8.00
LAVATORY	1-1/4"	2	1.0	2.00
FLOOR DRAIN	2"	2	2.0	4.00
FLOOR SINK	3"	4	2.0	8.00
HAND WASHING SINK	1-1/2"	2	2.0	4.00
GREASE WASTE	4"	1	26.0	26.00
			TOTAL (DFU):	52.00
BASIS FOR DESIGN:				
2018 INTERNATIONAL PLUMBING CODE CHAPTER 7, TABLE 710.1(2) - PIPE SIZE:				4"

GREASE WASTE DEMAND

EQUIPMENT	MINIMUM TRAP AND TRAP ARM	QUANTITY	INDIVIDUAL DRAINAGE FIXTURE UNIT	TOTAL DRAINAGE FIXTURE UNITS
FLOOR DRAIN	2"	4	2.0	8.00
FLOOR SINK	3"	4	4.0	16.00
SERVICE SINK	1-1/2"	1	2.0	2.00
			TOTAL (DFU):	26.00

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PROFESSIONAL ENGINEER

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PE601

SHEET KEYNOTES

1 DROP 1/2" DCW / SHW DOWN WALL. STUB OUT AT 24" AFF. PROVIDE THERMOSTATIC MIXING VALVE AND HW / CW CONNECTIONS TO SINK. FOR FINAL CONNECTIONS, USE DROP EAR AND COPPER SWEEP STUB OUT AT WALL WITH BRAIDED HOSES TO LAVATORY. DO NOT USE PEX STUB OUTS.

2 DROP 3/4" DCW DOWN WALL TO WATER CLOSET. FOR FINAL CONNECTIONS, USE DROP EAR AND COPPER SWEEP STUB OUT AT WALL WITH BRAIDED HOSE TO WATER CLOSET. DO NOT USE PEX STUB OUTS.

3 DROP 1/2" FILTERED WATER LINE TO ICE MACHINE. PROVIDE ISOLATION VALVE, DOUBLE CHECK VALVE (OR RPZ BACKFLOW PREVENTER IF REQUIRED BY JURISDICTION), AND PRV (20-80 PSI) INSIDE CABINET BELOW COUNTER. SEE DETAIL ON SHEET PE502 FOR ICE MACHINE CONNECTION DETAIL.

4 DROP 1/2" DCW / SHW DOWN WALL. STUB OUT AT 24" AFF. PROVIDE HW / CW CONNECTIONS TO SINK FAUCET.

5 3/4" FILTERED COLD WATER TO CARBONATOR(S). INSTALL RPZ BACKFLOW PREVENTER. TERMINATE PIPING WITH (2) 3/8" COMPRESSION FITTINGS. CONNECTION TO BE MADE AT 8'-0" AFF BY COKE VENDOR. COKE VENDOR TO RUN LINE FROM CARBONATOR TO COKE MACHINES (BOTH CARBONATED AND NONCARBONATED).

6 1/2" SHW STUBOUT FOR CONNECTION TO AUTO FILL ACCESSORY FOR POT WELL. INSTALL PER CODE AND PER MANUFACTURER INSTALLATION INSTRUCTIONS. INSTALL DOUBLE CHECK VALVE ON WATER LINE PRIOR TO CONNECTION TO EQUIPMENT.

7 PROVIDE CALEFFI 116 THERMOSETTER WHERE HOT WATER RECIRCULATION PIPING CONNECTS TO HOT WATER PIPING. ESTIMATED FLOW OF 0.35 GPM.

8 PROVIDE 4" CHASE WITH LONG SWEEPING ELBOWS UNDERGROUND FOR SYRUP LINES.

9 FILTERED COLD WATER STUB OUT UNDER COUNTER FOR BEVERAGE MACHINE. INSTALL DOUBLE CHECK VALVE ON WATER LINE PRIOR TO FINAL EQUIPMENT CONNECTIONS.

10 HOSE BIB TO ECOLAB CHEMICAL STATION AT 18" AFF (CONNECT TO SHW). PROVIDE WITH MIFAB MI-CAG CAST IRON FIXED AIR GAP TO COMPLY WITH ASME A112.1.2. A VERTICAL AIR GAP TWICE THE OUTLET CONNECTION SIZE IS REQUIRED.

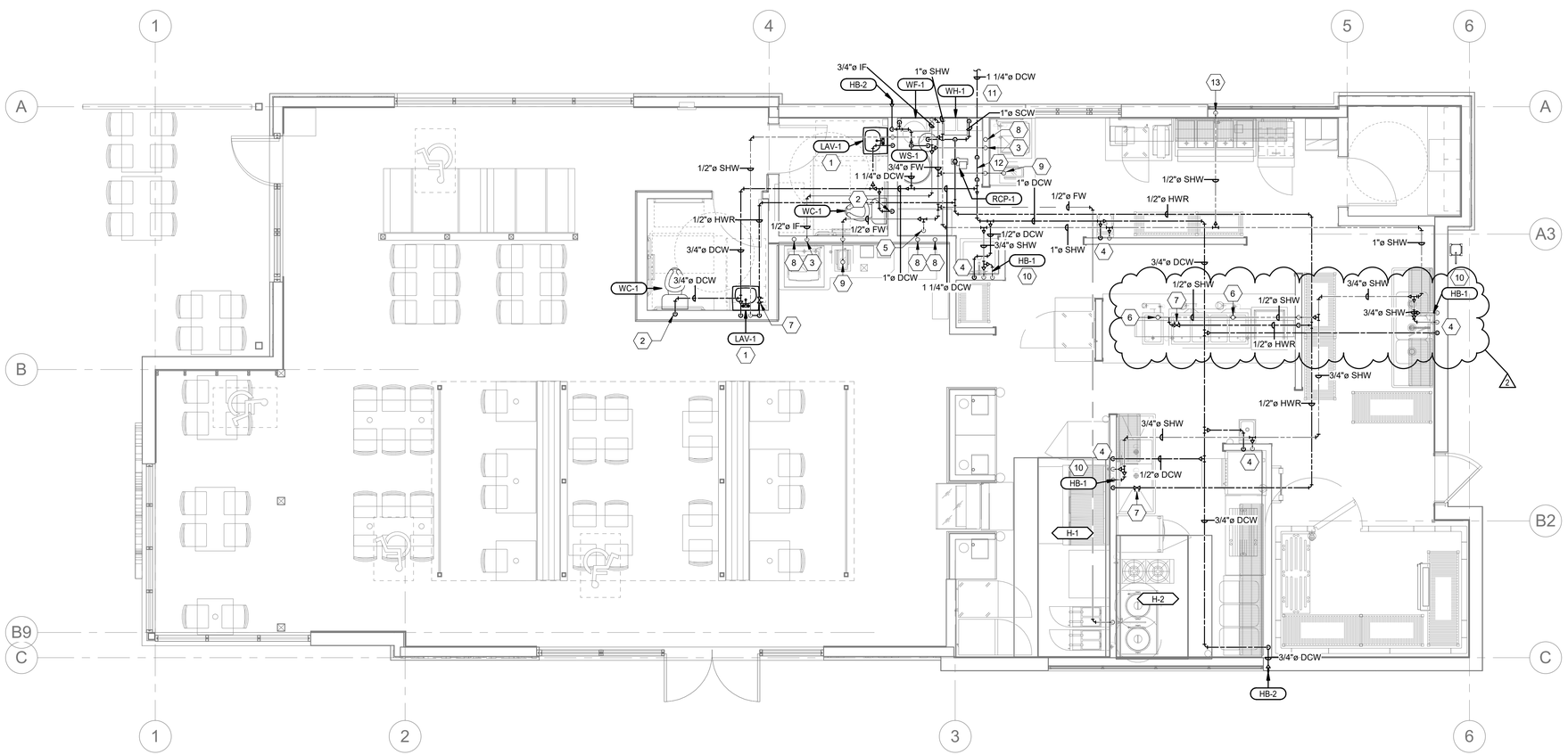
11 MAIN WATER LINE TO BUILDING CONTINUED UNDERGROUND FROM CIVIL PLANS.

12 PROVIDE PRV STATION PER DETAIL.

13 1/2" SHW TO WALL MOUNTED PANTRY FAUCET.

GENERAL SHEET NOTES

1. PC SHALL COORDINATE FIXTURE CONNECTION ELEVATIONS WITH KITCHEN EQUIPMENT CONTRACTOR'S PLANS.
2. WATER LINES FOR DRINK DISPENSING SHALL HAVE BACKFLOW PROTECTION THAT MEETS THE ASSE 1022 STANDARD.
3. ALL TUBING / PIPING FOR DRINK DISPENSING EQUIPMENT SHALL BE NSF STAMPED.
4. PROVIDE HOT / COLD WATER CHECK VALVES FOR ALL MOP SINKS, 3-COMPARTMENT SINKS, PREP SINKS, AND ANY SINK WITH AN OVERHEAD SPRAYER.
5. ANY PIPING WHICH PENETRATES A COUNTER TOP SHALL BE ROUTED THROUGH A STAINLESS STEEL GROMMET WHICH IS TO BE ADHERED TO THE COUNTER TOP WITH A CLEAR, NON-SHRINKING, MILDEW RESISTANT SILICONE.
6. MAIN PIPE ROUTING SHALL BE ABOVE CEILING. WHERE DROPS OCCUR, PIPES SHALL BE CONCEALED INSIDE WALLS.
7. ALL DOMESTIC HOT / COLD PIPING SHALL BE UPONOR AQUAPEX OR EQUAL AND COLOR CODED ACCORDING TO THE FOLLOWING:
   - *RED - SOFT HOT WATER (SHW)
   - *BLUE - SOFT COLD WATER (SCW)
   - *WHITE - FILTERED COLD WATER (FW)
   - *WHITE - INHIBITOR FILTERED WATER (IF)
8. PROVIDE WATER HAMMER ARRESTORS AT ALL FIXTURES WITH QUICK ACTING WATER SHUT OFF INCLUDING, ICE MAKERS, DISHWASHERS, METER FAUCETS, ETC.
9. RUN ALL WATER AND FIRE PROTECTION PIPING ABOVE CEILING INSIDE TRUSS WEBBING.
10. WHERE MULITPLE FIXTURE IN CLOSE PROXIMITY ARE SERVED BY THE SAME WATER LINE, PROVIDE MANIFOLD SECURELY FASTENED TO WALL WITH ISOLATION VALVES.
11. ALL WATER SUPPLY STUBOUTS OCCURRING INSIDE CABINETRY TO BE 24" AFF.
12. INSPECTION AND PERMIT BY STATE OR COUNTY HEALTH DEPARTMENT IS REQUIRED FOR CHEMICAL DISPENSER STATIONS AT MOP SINK AND 3-COMP SINK.
13. ALL ACCESS COVERS IN RESTROOMS TO BE LOCATED BENEATH SINKS OR ADJACENT TO TOILETS, HIDDEN FROM VIEW WHERE POSSIBLE, PAINTED BLACK. ANY ACCESS COVERS OUTSIDE OF THESE REQUIREMENTS SHALL BE STAINLESS STEEL.
14. DISSIMILAR METAL PIPING CONNECTIONS SHALL HAVE DIELECTRIC ISOLATORS.
15. BALL VALVES SHALL BE FULL PORT AND LEAD FREE. PROVIDE WITH HANDLE/STEM EXTENSIONS FOR PROPER FUNCTION WHEN FULLY INSULATED. EXTENSIONS TO BE SEALED AND VAPOR PROOF.
16. ALL DOMESTIC WATER PIPING TO BE LOCATED ON WARM SIDE OF BUILDING ENVELOPE.
17. PROVIDE BALANCE REPORT OF DOMESTIC WATER RECIRCULATING SYSTEM TO ENGINEER. PROVIDE P&T PORTS AND PRESSURE GAUGES ON EACH SIDE OF RECIRCULATING PUMP. PROVIDE THERMOMETER ON DISCHARGE SIDE OF PUMP.
18. COORDINATE NECESSARY SAW CUTTING, BACKFILL, AND NEW CONCRETE WITH GENERAL.
19. PROVIDE A SAND BED WITH SIX (6") INCHES MINIMUM COVERAGE AROUND ALL BELOW GRADE PIPES. PROVIDE BACKFILL FREE OF BOULDERS LARGER THAN TWO (2") INCHES. COMPACT AND TEST ALL BACKFILL ACCORDING TO ASTM COMPACTION STANDARDS OR PROVIDE PEA GRAVEL BACKFILL. PROVIDE MINIMUM TRENCH WIDTH OF NOT LESS THAN 1.5 TIMES THE PIPE OUTSIDE DIAMETER PLUS 12 INCHES.
20. ALL PIPING THROUGH A FOUNDATION WALL OR UNDER A FOOTING TO BE PROVIDED WITH PIPE SLEEVE 2 PIPE SIZES LARGER THAN PIPE PASSING THROUGH WALL OR UNDER FOOTING. SEAL WITH CAULK OR FOAM. PIPE SLEEVE UNDER FOOTING TO BE A MINIMUM OF 2" BELOW FOOTING. PIPE TO BE IRON AND EXTEND BEYOND THE WIDTH OF THE FOOTING AT A 45 DEGREE ON BOTH SIDES OF FOOTING.
21. PIPING SHALL NOT BE SUPPORTED FROM THE ROOF DECK, JOIST BRIDGING OR OTHER PIPES. HANG PIPES FROM BEAMS, JOIST OR SUPPLEMENTARY STRUCTURAL MEMBERS. WHERE POSSIBLE INSTALL ALL PIPING WITHIN 12" FROM SUPPORTING STRUCTURE.
22. CONTRACTOR SHALL FIELD VERIFY ALL PLUMBING ITEMS PRIOR TO STARTING NEW WORK. ADDITIONAL COST WILL NOT BE ALLOWED FOR CONTRACTOR'S FAILURE TO BECOME FAMILIAR WITH EXISTING SITE CONDITIONS.
23. DUCTWORK AND PIPE ROUTING AS SHOWN ON DRAWINGS IS DIAGRAMMATIC AND IS NOT TO BE SCALED. WHERE ALTERNATE ROUTING, OFFSETS AND TRANSITIONS ARE REQUIRED FOR COORDINATION OF WORK, THIS CONTRACTOR SHALL MAKE CHANGES WITHOUT ADDITIONAL COSTS.
24. THIS CONTRACTOR SHALL CLOSELY COORDINATE MECHANICAL AND PLUMBING WITH KITCHEN EQUIPMENT, ELECTRICAL, ARCHITECTURAL AND BUILDING STRUCTURE.
25. INSULATE PIPING WITH FIBERGLASS PIPE COVERING WITH ALL SERVICE JACKET AND SELF-CAP SEAL. FITTINGS SHALL BE MITERED PIPING COVERING OF GLASS FIBER MOLDED FITTINGS FOR USE IN A RETURN AIR PLENUM. THERMAL CONDUCTVITY SHALL BE A MAXIMUM OF .25INCH THICKNESS AT 75°F.
26. P.C. MUST PROVIDE AND INSTALL ALL ACCESS DOORS FOR VALVES, FLOW METERS, ETC. COORDINATE LOCATION WITH GENERAL CONTRACTOR. ACCESS PANELS SHALL NOT BE VISIBLE TO CUSTOMERS AND SHALL BE PAINTED TO MATCH THE WALL IN WHICH THEY ARE INSTALLED.
27. ALL PIPING EXPOSED TO THE OUTDOORS IS TO BE INSULATED AND WEATHERPROOFED.
28. WHERE THE JURISDICTION REQUIRES, CONTRACTOR IS RESPONSIBLE FOR PROVIDING SEISMIC RESTRAINT AND SUPPORT ENGINEERED BY A LICENSED STRUCTURAL ENGINEER. PROVIDE DESIGN DRAWINGS TO AUTHORITY HAVING JURISDICTION AND MECHANICAL ENGINEER FOR REVIEW.
29. ALL DOMESTIC WATER PIPING TO BE PRESSURE TESTED, CLEANED, AND DISINFECTED. PRESSURE TEST: CAP AND SUBJECT PIPING TO STATIC WATER PRESSURE OF 120 PSIG FOR FOUR HOURS. LEAKS AND LOSS IN TEST PRESSURE CONSTITUTE DEFECTS THAT MUST BE REPAIRED. PROVIDE RESULTS IN WRITTEN REPORT TO ENGINEER UPON COMPLETION. CLEAN AND DISINFECT: FLUSH PIPING SYSTEM, FILL SYSTEM WITH WATER/CHLORINE SOLUTION WITH AT LEAST 50 PPM OF CHLORINE FOR 24 HOURS. THOROUGHLY FLUSH SYSTEM. SUBMIT WATER SAMPLES IN STERILE BOTTLES TO AUTHORITIES HAVING JURISDICTION. PROVIDE REPORT TO ENGINEER STATING PROCEDURE FOLLOWED AND SIGNATURES OF GC AND THAT OF PERSONS PERFORMING PROCEDURE.
30. PIPING SHALL BE INSULATED AS FOLLOWS:
   A. DOMESTIC HOT WATER PIPING: 1" THICK FOR ALL PIPE SIZES.
   B. DOMESTIC COLD WATER PIPING: 1/2" THICK FOR ALL PIPE SIZES (PROVIDE CONTINUOUS VAPOR BARRIER.)



1 PLUMBING PLAN - WATER
1/4" = 1'-0"

NORTH

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sheet information

revisions:

num.	description	date
2	REVISION 02	04.06.22

CURRENT SET THRU REVISION 02

date:	01/17/2022
project number:	MO-53LEE
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original drawing is 24" x 36"
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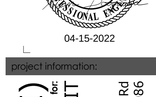

04-15-2022

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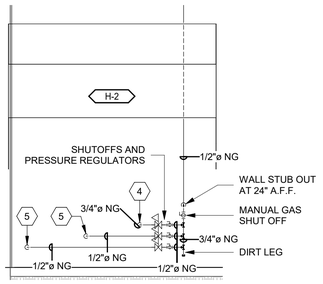
sheet title:

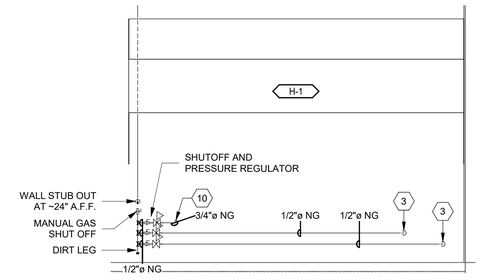
PLUMBING PLAN - WATER

sheet number:

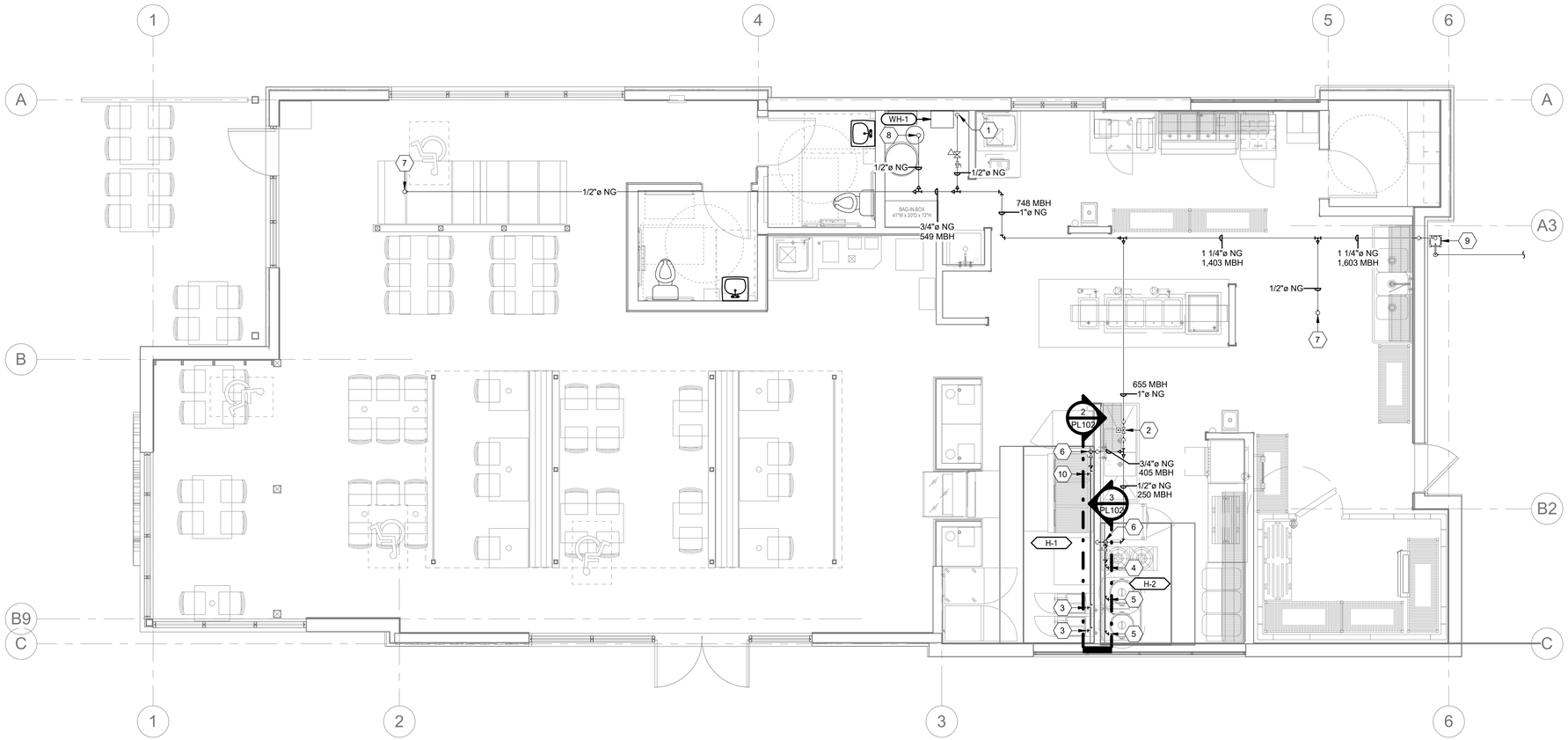
PL101



3 HOOD "H-2" GAS PIPING TO EQUIPMENT
3/8" = 1'-0"



2 HOOD "H-1" GAS PIPING TO EQUIPMENT
3/8" = 1'-0"



1 PLUMBING PLAN - GAS
1/4" = 1'-0"

NORTH

GENERAL SHEET NOTES

1. ALL GAS REGULATORS TO BE 2LB TO 4 OZ TYPE WITH ADJUSTMENT FROM 5" - 12" WATER COLUMN. INSTALL APPROXIMATELY 10' UPSTREAM OF EQUIPMENT CONNECTION.
2. RUN ALL GAS PIPING ABOVE CEILING INSIDE TRUSS WEBBING.
3. ALL NATURAL GAS PIPING 2-1/2" AND OVER OR 5 PSI OR GREATER TO BE WELDED.
4. GAS PIPING SCHEDULE
   A. NATURAL GAS PIPING 2" AND SMALLER = SCHEDULE 4- STEEL PIPE - THREADED
   B. NATURAL GAS PIPING 2-1/2" AND LARGER = SCHEDULE 40 STEEL PIPE - WELDED
   C. NATURAL GAS PIPING BELOW GRADE = POLYETHYLENE PIPE - FUSION WELDED
5. PIPING SHALL NOT BE SUPPORTED FROM THE ROOF DECK, JOIST BRIDGING OR OTHER PIPES. HANG PIPES FROM BEAMS, JOIST OR SUPPLEMENTARY STRUCTURAL MEMBERS. WHERE POSSIBLE INSTALL ALL PIPING WITHIN 12" FROM SUPPORTING STRUCTURE.
6. CONTRACTOR SHALL FIELD VERIFY ALL PLUMBING ITEMS PRIOR TO STARTING NEW WORK. ADDITIONAL COST WILL NOT BE ALLOWED FOR CONTRACTOR'S FAILURE TO BECOME FAMILIAR WITH EXISTING SITE CONDITIONS.
7. DUCTWORK AND PIPE ROUTING AS SHOWN ON DRAWINGS IS DIAGRAMMATIC AND IS NOT TO BE SCALED. WHERE ALTERNATE ROUTING, OFFSETS AND TRANSITIONS ARE REQUIRED FOR COORDINATION OF WORK, THIS CONTRACTOR SHALL MAKE CHANGES WITHOUT ADDITIONAL COSTS.
8. THIS CONTRACTOR SHALL CLOSELY COORDINATE MECHANICAL AND PLUMBING WITH KITCHEN EQUIPMENT, ELECTRICAL, ARCHITECTURAL AND BUILDING STRUCTURE.
9. INSULATE PIPING WITH FIBERGLASS PIPE COVERING WITH ALL SERVICE JACKET AND SELF-CAP SEAL. FITTINGS SHALL BE MITERED PIPING COVERING OF GLASS FIBER MOLDED FITTINGS FOR USE IN A RETURN AIR PLENUM. THERMAL CONDUCTIVITY SHALL BE A MAXIMUM OF .25/INCH THICKNESS AT 75°F.
10. P.C. MUST PROVIDE AND INSTALL ALL ACCESS DOORS FOR VALVES, FLOW METERS, ETC. COORDINATE LOCATION WITH GENERAL CONTRACTOR. ACCESS PANELS SHALL NOT BE VISIBLE TO CUSTOMERS AND SHALL BE PAINTED TO MATCH THE WALL IN WHICH THEY ARE INSTALLED.
11. ALL GAS PRESSURE REGULATORS ARE TO BE VENTED TO THE OUTSIDE OF THE BUILDING BY THE MECHANICAL CONTRACTOR OR PROVIDE/INSTALL VENTLESS REGULATORS IF ALLOWED BY THE LOCAL JURISDICTION. NONE OF THE VENT PIPING OFF THE REGULATORS ARE SHOWN ON THE PLANS. IF VENTED REGULATORS ARE REQUIRED, SIZE VENTS PER MANUFACTURER'S RECOMMENDATION FOR THE GIVEN DISTANCE.
12. WHERE THE JURISDICTION REQUIRES, CONTRACTOR IS RESPONSIBLE FOR PROVIDING SEISMIC RESTRAINT AND SUPPORT ENGINEERED BY A LICENSED STRUCTURAL ENGINEER. PROVIDE DESIGN DRAWINGS TO AUTHORITY HAVING JURISDICTION AND MECHANICAL ENGINEER FOR REVIEW.

SHEET KEYNOTES

1	NATURAL GAS PIPING DOWN BY WALL TO WATER HEATER. PROVIDE ISOLATION VALVE, GAS PRESSURE REGULATOR (2 LB TO 4 OZ), AND ALL FINAL CONNECTIONS.
2	INSTALL AUTOMATIC ANSUL GAS SHUTOFF BELOW CEILING PER CAPTIVEAIRE KITCHEN PLANS.
3	PROVIDE ISOLATION VALVE, MOVEABLE GAS CONNECTOR KIT, QUICK DISCONNECT, AND ALL FINAL CONNECTIONS TO FRYER. INSTALL ANSUL GAS (PROVIDED W/HOOD) VALVE PRIOR TO ANY FIXTURE CONNECTIONS.
4	PROVIDE ISOLATION VALVE, MOVEABLE GAS CONNECTOR KIT, QUICK DISCONNECT, AND ALL FINAL CONNECTIONS TO RANGE. INSTALL ANSUL GAS (PROVIDED W/HOOD) VALVE PRIOR TO ANY FIXTURE CONNECTIONS.
5	PROVIDE ISOLATION VALVE, MOVEABLE GAS CONNECTOR KIT, QUICK DISCONNECT, AND ALL FINAL CONNECTIONS TO RICE COOKER. INSTALL ANSUL GAS (PROVIDED W/HOOD) VALVE PRIOR TO ANY FIXTURE CONNECTIONS.
6	DROP GAS PIPING DOWN IN WALL AND STUB OUT AT APPROXIMATELY 24" AFF. PROVIDE MANIFOLD AT THIS LOCATION - ROUTE PIPE FULL-SIZED ALONG FACE OF WALL DOWN TO DIRT LEG JUST ABOVE FLOOR. BRANCH A PIPE TO EACH PIECE OF EQUIPMENT FROM THIS MANIFOLD, SIZED PER PLANS (ROUTE THESE PIPES BEHIND EQUIPMENT, EACH BRANCH TIGHT TO WALL). INSTALL PRESSURE REGULATOR (2 LB TO 4 OZ) ON EACH BRANCH RIGHT AFTER MANIFOLD PIPE.
7	GAS PIPING UP THROUGH ROOF TO RTU ABOVE.
8	GAS PIPING UP THROUGH ROOF TO MAU ABOVE.
9	COORDINATE NEW GAS METER WITH GAS COMPANY, TENANT, AND LANDLORD. TOTAL LOAD FOR SPACE IS 1,603 MBH AT 2 LB PRESSURE. LONGEST RUN IS 150 FT.
10	PROVIDE ISOLATION VALVE, MOVEABLE GAS CONNECTOR KIT, AND ALL FINAL CONNECTIONS TO RADIANT CHARBROILER. INSTALL ANSUL GAS (PROVIDED W/HOOD) VALVE PRIOR TO ANY FIXTURE CONNECTIONS.

ALL GAS STUB OUTS TO EQUIPMENT UNDER HOODS TO BE AT 18" AFF.

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sheet information

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num.	description	date

CURRENT SET THRU REVISION 02

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project status:	IFC

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sheet title:
PLUMBING PLAN - GAS

sheet number:
PL102

GREASE INTERCEPTOR CALCULATIONS

Reviewed by: Andy

Reference No. 36333 — Project Name: MoBettahs Lee's Summit MO

Step 1: Flow rate to grease interceptor

Fixture flow rate: (cu in / 231) = gal x 0.75 / 2 min = 2 min flow rate

NAME	TYPE	DIMENSIONS	QTY	CU IN	FLOW RATE
3 comp sink	3 Compartment Sink	21" x 21" x 14" (3)	1	18,522	30 GPM
Floor Drain	Floor Drain	N/A	4	N/A	N/A
Hot Food Wells - (4 wells)	Warming Table (with drain)	N/A	2	N/A	1 GPM
Mop Sink	Mop Basin	24" x 24" x 10"	1	5,760	9.35 GPM
Two comp sink	2 Compartment Sink	21" x 21" x 14" (2)	1	12,348	20 GPM
Total					**60.35 GPM**

Step 2: Grease Production

Number of Seats x 4 turns per seat x Grease Production Value x Days between pump-out = Grease output

Number of seats in facility: 70
Grease production value: 0.035 lbs per serving (BBQ: High / No flatware)
Days between pump-outs: 90 days

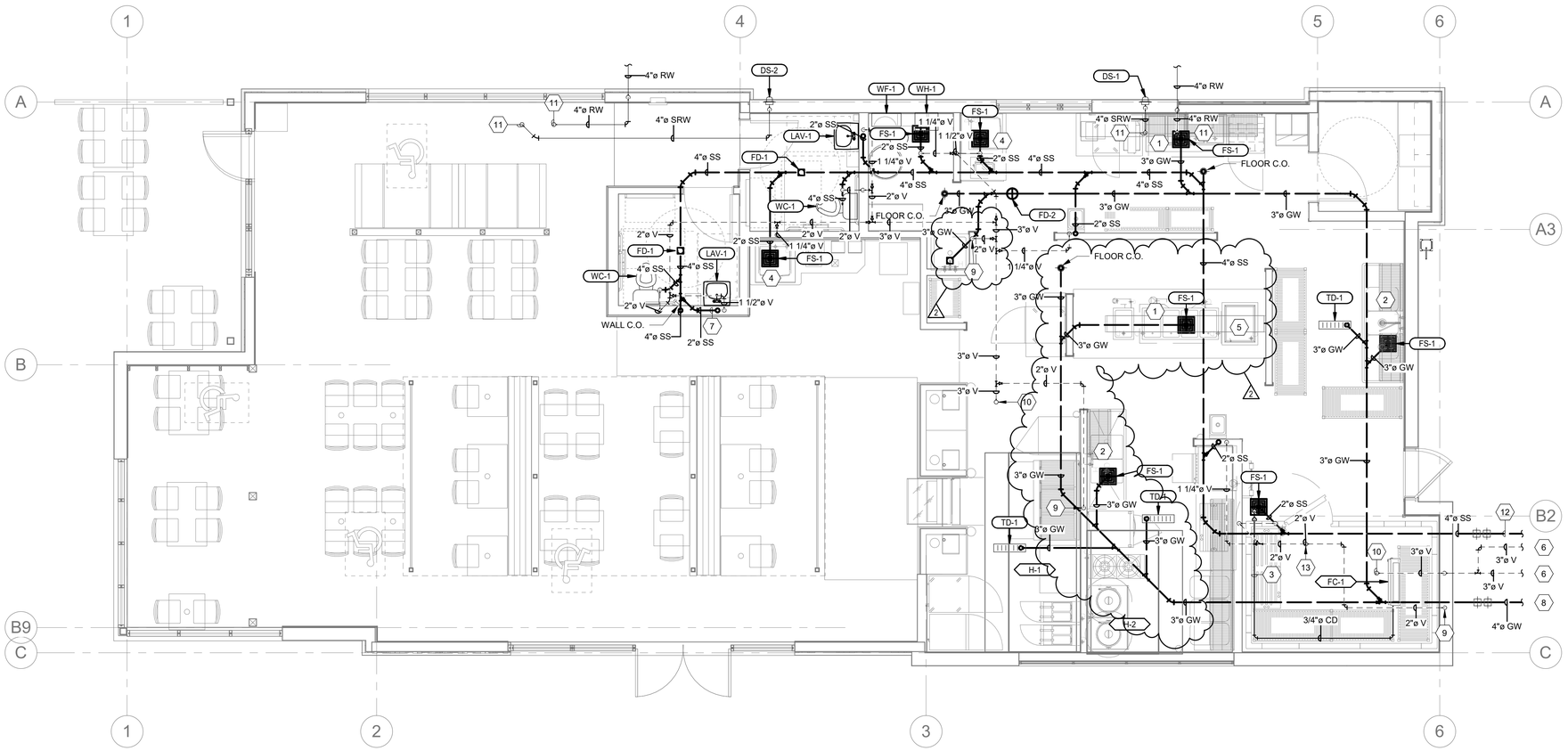
70 x 4 x 0.035 x 90 = 882 lbs of FOG

SCHIER MODEL	
GB-250	**Description:** Polyethylene Grease Interceptor **Dimensions:** Length: 87", Width: 33", Height: 44" **Flow Rates/Grease Capacities:** 100 GPM / 1895.0 lbs **Liquid Capacity:** 277 gal

**GREASE INTERCEPTOR SHOWN ON CIVIL UTILITIES PLAN. CALACULATIONS SHOWN HERE FOR SIZING REQUIREMENTS ONLY.

SUB-ROUGH PLUMBING
REFERENCE ARCHITECTURAL PLANS FOR PLUMBING ROUGH-IN DIMENSIONS

PLUMBING BLOCKOUTS
ALL FLOOR DRAINS AND FLOOR SINKS SHALL RECEIVE BLOCKOUTS IN THE FINISHED SLAB, AND SHALL BE POURED BACK SEPARATELY.



1 PLUMBING PLAN - DWV
1/4" = 1'-0"

GENERAL SHEET NOTES

1. FLOOR SINKS SHALL BE INSTALLED IN AN ACCESSIBLE LOCATION. WHERE POSSIBLE INSTALL FLOOR SINKS TIGHT TO WALLS.
2. ALL EMERGENCY FLOOR SINKS / FLOOR DRAINS ARE TO HAVE PROVENT - TRAP GUARDS (WHERE APPROVED BY AHJ). ANY DRAIN THAT IS USED TO COLLECT CONDENSATESHALL NOT REQUIRE TRAP PROTECTION.
3. PLUMBING CONTRACTOR SHALL PROVIDE / INSTALL DRANE COOLERS FOR ALL DISH, PAN, AND UTENSIL WAHSERS. TEMPERED WATER TO BE LESS THAN 140°F.
4. PLUMBING CONTRACTOR SHALL ROUTE INDIRECT DRAINS FROM KITCHEN EQUIPMENT TO NEAREST FLOOR SINK. TERMINATE WITH AN AIR GAP.
5. ALL INDIRECT WASTE PIPING THAT EXCEED 30" IN DEVELOPED LENGTH MEASURED HORIZONTALLY OR 54" IN TOTAL DEVELOPED LENGTH SHALL BE TRAPPED.
6. PROVIDE A SAND BED WITH SIX (6") INCHES MINIMUM COVERAGE AROUND ALL BELOW GRADE PIPES. PROVIDE BACKFILL FREE OF BOULDERS LARGER THAN TWO (2") INCHES. COMPACT AND TEST ALL BACKFILL ACCORDING TO ASTM COMPACTION STANDARDS OR PROVIDE PEA GRAVEL BACKFILL. PROVIDE MINIMUM TRENCH WIDTH OF NOT LESS THAN 1.5 TIMES THE PIPE OUTSIDE DIAMETER PLUS 12 INCHES.
7. ALL PIPING THROUGH A FOUNDATION WALL OR UNDER A FOOTING TO BE PROVIDED WITH PIPE SLEEVE 2 PIPE SIZES LARGER THAN PIPE PASSING THROUGH WALL OR UNDER FOOTING. SEAL WITH CAULK OR FOAM. PIPE SLEEVE UNDER FOOTING TO BE A MINIMUM OF 2" BELOW FOOTING. PIPE TO BE IRON AND EXTEND BEYOND THE WIDTH OF THE FOOTING AT A 45 DEGREE ON BOTH SIDES OF FOOTING.
8. TEST WASTE AND VENT PIPING FOR LEAKAGE. AFTER PLUMBING FIXTURES HAVE BEEN SET AND TRAPS FILLED WITH WATER, TEST CONNECTIONS AND PROVE THEY ARE GASTIGHT AND WATERTIGHT. PLUG VENT-STACK OPENINGS ON ROOF AND BUILDING DRAINS WHERE THEY LEAVE BUILDING. INTRODUCE AIR INTO PIPING SYSTEM EQUAL TO PRESSURE OF 1-INCH WG. USE U-TUBE OR MANOMETER INSERTED IN TRAP OF WATER CLOSET TO MEASURE THIS PRESSURE. AIR PRESSURE MUST REMAIN CONSTANT WITHOUT INTRODUCING ADDITIONAL AIR THROUGHOUT PERIOD OF INSPECTION. INSPECT PLUMBING FIXTURE CONNECTIONS FOR GAS AND WATER LEAKS. REPAIR LEAKS AND DEFECTS WITH NEW MATERIALS AND RETEST PIPING, OR PORTION THEREOF, UNTIL SATISFACTORY RESULTS ARE OBTAINED. PREPARE REPORTS FOR TESTS AND REQUIRED CORRECTIVE ACTION.
9. COORDINATE NECESSARY SAW CUTTING, BACKFILL, AND NEW CONCRETE WITH GENERAL.
10. PIPING SHALL NOT BE SUPPORTED FROM THE ROOF DECK, JOIST BRIDGING OR OTHER PIPES. HANG PIPES FROM BEAMS, JOIST OR SUPPLEMENTARY STRUCTURAL MEMBERS. WHERE POSSIBLE INSTALL ALL PIPING WITHIN 12" FROM SUPPORTING STRUCTURE.
11. CONTRACTOR SHALL FIELD VERIFY ALL PLUMBING ITEMS PRIOR TO STARTING NEW WORK. ADDITIONAL COST WILL NOT BE ALLOWED FOR CONTRACTOR'S FAILURE TO BECOME FAMILIAR WITH EXISTING SITE CONDITIONS.
12. DUCTWORK AND PIPE ROUTING AS SHOWN ON DRAWINGS IS DIAGRAMMATIC AND IS NOT TO BE SCALED. WHERE ALTERNATE ROUTING, OFFSETS AND TRANSITIONS ARE REQUIRED FOR COORDINATION OF WORK, THIS CONTRACTOR SHALL MAKE CHANGES WITHOUT ADDITIONAL COSTS.
13. THIS CONTRACTOR SHALL CLOSELY COORDINATE MECHANICAL AND PLUMBING WITH KITCHEN EQUIPMENT, ELECTRICAL, ARCHITECTURAL AND BUILDING STRUCTURE.
14. INSULATE PIPING WITH FIBERGLASS PIPE COVERING WITH ALL SERVICE JACKET AND SELF-CAP SEAL. FITTINGS SHALL BE MITERED PIPING COVERING OF GLASS FIBER MOLDED FITTINGS FOR USE IN A RETURN AIR PLENUM. THERMAL CONDUCTIVITY SHALL BE A MAXIMUM OF .25/INCH THICKNESS AT 75°F.
15. P.C. MUST PROVIDE AND INSTALL ALL ACCESS DOORS FOR VALVES, FLOW METERS, ETC. COORDINATE LOCATION WITH GENERAL CONTRACTOR. ACCESS PANELS SHALL NOT BE VISIBLE TO CUSTOMERS AND SHALL BE PAINTED TO MATCH THE WALL IN WHICH THEY ARE INSTALLED.
16. ALL PIPING EXPOSED TO THE OUTDOORS IS TO BE INSULATED AND WEATHERPROOFED.
17. ALL INVERT ELEVATIONS SHOWN ON PLANS ARE BASED OFF OF FINISHED FLOOR ELEVATION AT 100.0'. CONTRACTOR TO COORDINATE WITH ARCHITECTURAL AND CIVIL DRAWINGS FOR EXACT INVERT ELEVATIONS OF ALL LEVELS.
18. ALL GAS REGULATORS ARE TO BE VENTED TO THE OUTSIDE OF THE BUILDING BY THE MECHANICAL CONTRACTOR OR PROVIDE / INSTALL VENTLESS REGULATORS IF ALLOWED BY THE LOCAL JURISDICTION. NONE OF THE VENT PIPING OFF THE REGULATORS ARE SHOWN ON THE PLANS. SIZE VENTS PER MANUFACTURER'S RECOMMENDATION FOR THE GIVEN DISTANCE.
19. WHERE THE JURISDICTION REQUIRES, CONTRACTOR IS RESPONSIBLE FOR PROVIDING SEISMIC RESTRAINT AND SUPPORT ENGINEERED BY A LICENSED STRUCTURAL ENGINEER. PROVIDE DESIGN DRAWINGS TO AUTHORITY HAVING JURISDICTION AND MECHANICAL ENGINEER FOR REVIEW.
20. ALL WASTE AND VENT PIPING SHALL BE SCHEDULE 40 PVC OR SDR26.

SHEET KEYNOTES

1 ROUTE WASTE LINE FOR HOT FOOD WELLS PER DETAIL 3 ON SHEET PE501.

2 ROUTE WASTE LINE FOR COMPARTMENT SINK PER DETAIL 1 ON SHEET PE501.

3 ROUTE 3/4" COPPER CONDENSATE LINE FROM WALK-IN COOLER FAN COIL TO FLOOR SINK. DRAIN PIPING INDIRECTLY AT FLOOR SINK WITH AIR GAP.

4 ICE MACHINE MOUNTED ON BEVERAGE DISPENSER. ROUTE 3/4" COPPER DRAIN LINE FROM ICE MACHINE TO FLOOR SINK. TERMINATE DRAIN WITH AIR GAP ABOVE FLOOR SINK.

5 USE PVC TO HARD PIPE THE PREP SINK DRAIN TO FLOOR SINK (DO NOT USE SOFT TUBING INCLUDED WITH SINK).

6 VENT LINE CONTINUED UNDERGROUND TO GREASE INTERCEPTOR ON CIVIL PLANS.

7 WET VENT FOR RESTROOM FLOOR DRAINS.

8 GREASE WASTE LINE CONTINUED UNDERGROUND ON CIVIL PLANS TO GREASE INTERCEPTOR.

9 DRY VENT (COMBINATION WASTE & VENT METHOD) FOR FLOOR DRAINS AND FLOOR SINKS. FIXTURE DRAINS CONNECTING TO THIS COMBINATION WASTE & VENT PIPE MUST NOT EXCEED THE LENGTHS LISTED IN IPC TABLE 909.1 (12 FT FOR 3" DRAINS, 8 FT FOR 2" DRAINS). MINIMUM SLOPE FOR 2-1/2" PIPES AND SMALLER IS 1/4" PER FT. MINIMUM SLOPE FOR 3"-6" PIPES IS 1/8" PER FT. MAXIMUM SLOPE FOR HORIZONTAL COMBINATION WASTE & VENT PIPE IS 1/2" PER FT.

10 3" VENT UP THROUGH ROOF. COORDINATE EXACT ROOFTOP PENETRATION LOCATION WITH ROOFTOP EQUIPMENT. MAINTAIN 10' MINIMUM CLEARANCE TO ALL FRESH AIR INTAKES.

11 RAINWATER PIPE RISER DOWN THROUGH ROOF FROM ROOF DRAIN ABOVE. SLOPE AT A MINIMUM OF 1/8" PER FOOT. IF SLOPED AT A MINIMUM OF 1/4" PER FOOT (OR GREATER), THIS ROOF DRAIN BRANCH MAY BE DOWNSIZED TO 3"Ø. SLOPE MUST CONTINUE ALL THE WAY TO TERMINATION AT DOWNSPOUT OR CONNECTION TO STORM SEWER MAIN.

12 SANITARY SEWER LINE CONTINUED UNDERGROUND ON CIVIL PLANS.

13 2" VENT UP THROUGH ROOF. COORDINATE EXACT ROOFTOP PENETRATION LOCATION WITH ROOFTOP EQUIPMENT. MAINTAIN 10' MINIMUM CLEARANCE TO ALL FRESH AIR INTAKES.

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sheet title: PLUMBING PLAN - DWV

sheet number:

PL103

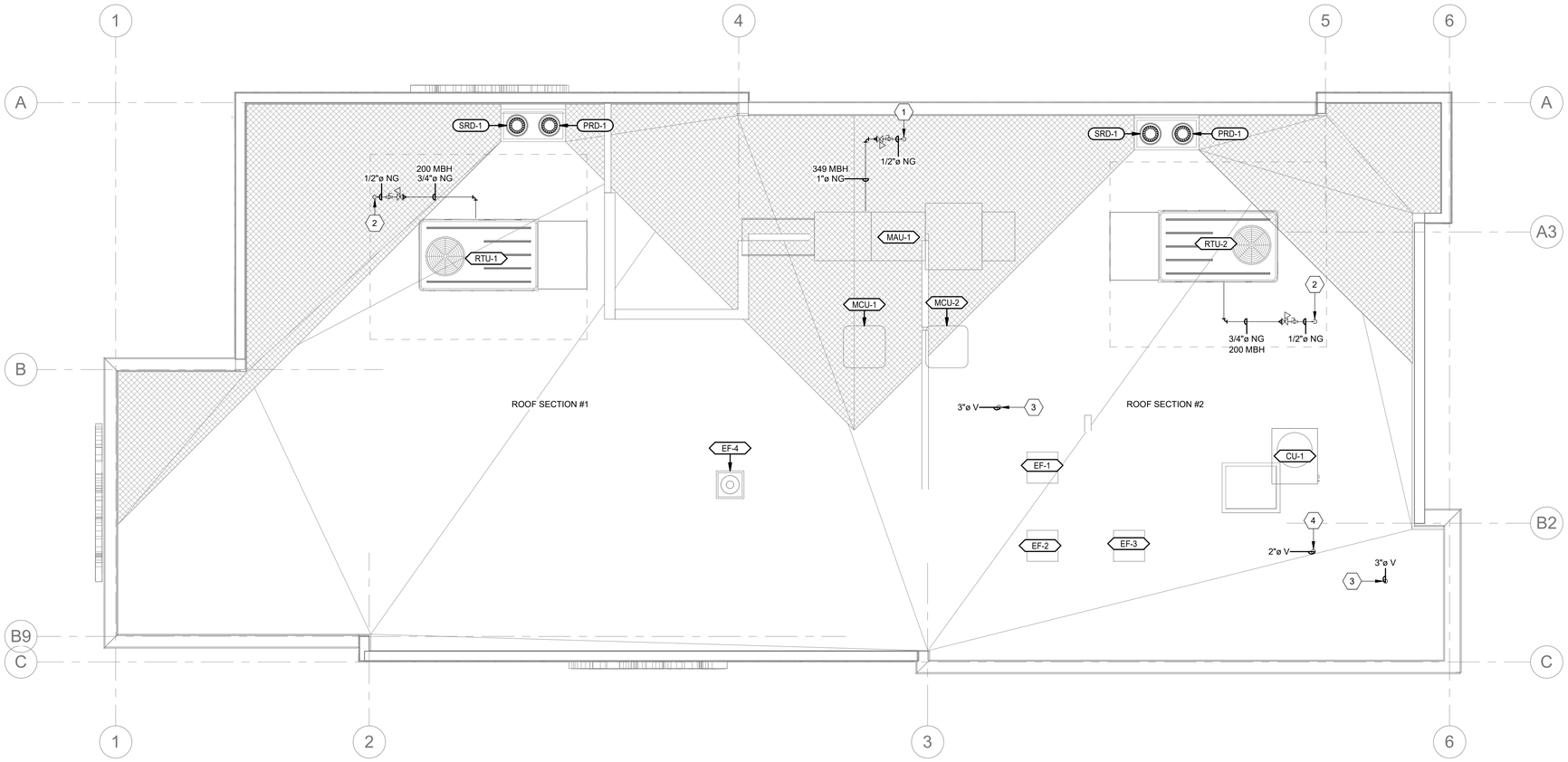
ROOF DRAIN CALCULATIONS

ROOF SECTION #1
1,650 FT^2 * 3.6 IN. / 60 MIN * 1 FT / 12 IN. * 7.48 GAL / 1 FT^3 = 62 GPM

ROOF SECTION #2
1,500 FT^2 * 3.6 IN. / 60 MIN * 1 FT / 12 IN. * 7.48 GAL / 1 FT^3 = 56 GPM

PER 2018 IPC TABLE 1106.2(1) AND TABLE 1106.3, A 3" HORIZONTAL ROOF DRAIN IS SUFFICIENT FOR EACH ROOF SECTION IF SLOPED AT 1/4" PER FOOT OR 1/2" PER FOOT. IF SLOPED AT 1/8" PER FOOT, A 4" ROOF DRAIN IS REQUIRED. THIS DESIGN ASSUMES A 1/8" PER FOOT HORIZONTAL ROOF DRAIN SLOPE.

FOR VERTICAL PIPE SECTIONS, A 3" ROOF LEADER IS ALLOWED.



1 ROOF PLUMBING PLAN - WATER & GAS
1/4" = 1'-0"

NORTH

GENERAL SHEET NOTES

1. ALL GAS REGULATORS TO BE 2LB TO 4 OZ TYPE WITH ADJUSTMENT FROM 5" - 12" WATER COLUMN. INSTALL APPROXIMATELY 10' UPSTREAM OF EQUIPMENT CONNECTION.
2. RUN ALL GAS PIPING ABOVE CEILING INSIDE TRUSS WEBBING. STUB GAS PIPING UP AT EACH ROOFTOP MOUNTED GAS-FIRED UNIT.
3. PAINT ALL EXPOSED CAST IRON PIPING.
4. CONTRACTOR SHALL FIELD VERIFY ALL PLUMBING ITEMS PRIOR TO STARTING NEW WORK. ADDITIONAL COST WILL NOT BE ALLOWED FOR CONTRACTOR'S FAILURE TO BECOME FAMILIAR WITH EXISTING SITE CONDITIONS.
5. DUCTWORK AND PIPE ROUTING AS SHOWN ON DRAWINGS IS DIAGRAMMATIC AND IS NOT TO BE SCALED. WHERE ALTERNATE ROUTING, OFFSETS AND TRANSITIONS ARE REQUIRED FOR COORDINATION OF WORK, THIS CONTRACTOR SHALL MAKE CHANGES WITHOUT ADDITIONAL COSTS.
6. THIS CONTRACTOR SHALL CLOSELY COORDINATE MECHANICAL AND PLUMBING WITH KITCHEN EQUIPMENT, ELECTRICAL, ARCHITECTURAL AND BUILDING STRUCTURE.
7. INSULATE PIPING WITH FIBERGLASS PIPE COVERING WITH ALL SERVICE JACKET AND SELF-CAP SEAL. FITTINGS SHALL BE MITERED PIPING COVERING OF GLASS FIBER MOLDED FITTINGS FOR USE IN A RETURN AIR PLENUM. THERMAL CONDUCTIVITY SHALL BE A MAXIMUM OF .25/INCH THICKNESS AT 75°F.
8. ALL PIPING EXPOSED TO THE OUTDOORS IS TO BE INSULATED AND WEATHERPROOFED.
9. ALL GAS PRESSURE REGULATORS ARE TO BE VENTED TO THE OUTSIDE OF THE BUILDING BY THE MECHANICAL CONTRACTOR OR PROVIDE/INSTALL VENTLESS REGULATORS IF ALLOWED BY THE LOCAL JURISDICTION. NONE OF THE VENT PIPING OFF THE REGULATORS ARE SHOWN ON THE PLANS. IF VENTED REGULATORS ARE REQUIRED, SIZE VENTS PER MANUFACTURER'S RECOMMENDATION FOR THE GIVEN DISTANCE.
10. WHERE THE JURISDICTION REQUIRES, CONTRACTOR IS RESPONSIBLE FOR PROVIDING SEISMIC RESTRAINT AND SUPPORT ENGINEERED BY A LICENSED STRUCTURAL ENGINEER. PROVIDE DESIGN DRAWINGS TO AUTHORITY HAVING JURISDICTION AND MECHANICAL ENGINEER FOR REVIEW.
11. ALL HORIZONTAL PIPING SHOWN IS RUN IN CEILING SPACE BELOW.
12. ALL VENT PIPING TO BE A MINIMUM OF 10' FROM ANY INTAKE.
13. PROVIDE CONDENSATE TRAP ON ALL ROOFTOP UNITS AND TERMINATE TOWARD ADJACENT ROOF DRAIN.
14. ALL INDIRECT WASTE PIPING THAT EXCEEDS 30" IN DEVELOPED LENGTH MEASURED HORIZONTALLY OR 54" IN TOTAL DEVELOPED LENGTH SHALL BE TRAPPED.
15. ALL WASTE AND VENT PIPING SHALL BE ABS. ALL ROOF AND OVERFLOW DRAINAGE PIPING TO BE PVC
16. ROOF AND OVERFLOW DRAIN INSULATION TO BE 1" THICK FOR ALL PIPE SIZES. INSULATION ONLY REQUIRED ON HORIZONTALPRIMARY DRAINS AND ALL DRAIN BOWLS.

SHEET KEYNOTES

1 PROVIDE ISOLATION VALVE, PRESSURE REGULATOR (2 LB TO 4 OZ) AND ALL FINAL CONNECTIONS TO MAU.

2 PROVIDE ISOLATION VALVE, PRESSURE REGULATOR (2 LB TO 4 OZ) AND ALL FINAL CONNECTIONS TO RTU.

3 3" VENT UP THROUGH ROOF. COORDINATE EXACT ROOFTOP PENETRATION LOCATION WITH ROOFTOP EQUIPMENT. MAINTAIN 10' MINIMUM CLEARANCE TO ALL FRESH AIR INTAKES.

4 2" VENT UP THROUGH ROOF. COORDINATE EXACT ROOFTOP PENETRATION LOCATION WITH ROOFTOP EQUIPMENT. MAINTAIN 10' MINIMUM CLEARANCE TO ALL FRESH AIR INTAKES.

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sheet title:
ROOF PLUMBING PLAN

sheet number:
PL104

SYMBOLS LEGEND

SYMBOL	DESCRIPTION
REFERENCE AND LINE SYMBOLS	
A5 / E-501	DETAIL INDICATOR: A5 INDICATES DETAIL NUMBER, E-501 INDICATES DRAWING SHEET WHERE DETAIL IS SHOWN.
A5 / E-201	ELEVATION OR SECTION INDICATOR, EXTERIOR: A5 INDICATES ELEVATION OR SECTION NUMBER, E-201 INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
A5 / E-201	ELEVATION OR SECTION INDICATOR, INTERIOR: A5 INDICATES ELEVATION OR SECTION NUMBER, E-201 INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
ROOM NAME / 100	ROOM IDENTIFIER WITH ROOM NAME AND NUMBER.
1	KEYNOTE INDICATOR.
1	REVISION INDICATOR.
CU-1	EQUIPMENT INDICATOR.
X-X / XMDP	MECHANICAL EQUIPMENT INDICATOR. "X-X" INDICATES EQUIPMENT MARK SHOWN ON EQUIPMENT SCHEDULE. "XMDP" IDENTIFIES PANEL EQUIPMENT IS CIRCUITED TO. REFER TO EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.
	BREAK, STRAIGHT: TO BREAK PARTS OF DRAWING
	BREAK, ROUND
MATCH LINE / SEE XXX-XXX	MATCH LINE INDICATOR: CENTER, EXTRA WIDE LINE.
	NEW LINE: MEDIUM LINE.
	HIDDEN FEATURES LINE: HIDDEN, THIN LINE
	EXISTING TO REMAIN LINE: THIN LINE.
	DEMOLITION LINE: DASHED, MEDIUM LINE
	PROPERTY LINE: DASHED, WIDE LINE.
	CONTRACT LIMIT LINE: DASHDOT, WIDE LINE.
XXX / EF-X	ELECTRICAL EQUIPMENT INDICATOR. "XXX" INDICATES TYPE OF EQUIPMENT OR EQUIPMENT ID. "EF-X" IDENTIFIES MECHANICAL EQUIPMENT BEING SERVED. REFER TO EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.
X-X / 1LA-3	EQUIPMENT INDICATOR. "X-X" INDICATES EQUIPMENT MARK SHOWN ON EQUIPMENT SCHEDULE. "1LA-3" IDENTIFIES PANEL EQUIPMENT IS CIRCUITED TO. REFER TO EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.
WIRING METHODS	
	WIRING.
A-1,3,5	BRANCH CIRCUIT HOME RUN TO PANELBOARD: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS. LETTER AND NUMBER NOTATIONS IDENTIFY PANEL AND CIRCUIT NUMBERS. USE #12 CONDUCTORS, EXCEPT #10 CONDUCTORS SHALL BE INSTALLED IF DISTANCES EXCEED THOSE SPECIFIED IN THE ELECTRICAL SPECIFICATIONS.
	FLEXIBLE WIRING.
	LOW VOLTAGE WIRING: DIVIDE, MEDIUM LINE.
1	CONDUCTOR & CONDUIT ("CC") SCHEDULE INDICATOR. REFER TO ONE-LINE DIAGRAM.
	JUNCTION BOX.
	EARTH GROUND (ONE-LINE DIAGRAM).
C	JUNCTION BOX, CEILING.
	MECHANICAL EQUIPMENT CONNECTION. REFER TO EQUIPMENT SCHEDULE FOR REQUIREMENTS.
LIGHTING CONTROL	
	OCCUPANCY SENSOR, DUAL TECHNOLOGY, OMNI-DIRECTIONAL, CEILING.
	OCCUPANCY SENSOR, DUAL TECHNOLOGY, WALL.
HR / 1	HOUSE RELAY SCHEDULE INDICATOR.
$	SWITCH/OCCUPANCY SENSOR COMBO, DUAL TECHNOLOGY, WALL.
a,b / $	LOW VOLTAGE DIGITAL LIGHTING CONTROL SWITCH: LETTER "a,b" INDICATES ZONING WHERE SHOWN (REFER TO PLANS, SCHEDULES, AND DETAILS FOR EXACT BUTTON CONFIGURATION AND PROGRAMMING REQUIREMENTS)

SYMBOLS LEGEND

SYMBOL	DESCRIPTION
ELECTRICAL POWER AND DISTRIBUTION	
	CIRCUIT BREAKER, MOLDED CASE (ONE-LINE DIAGRAM).
	TRANSFORMER (ONE-LINE DIAGRAM).
"1H"	PANELBOARD (ONE-LINE DIAGRAM).
225/3 "1H"	PANELBOARD WITH MAIN LUGS ONLY. BUS SIZE AND PHASE AS SHOWN (ONE-LINE DIAGRAM).
225/3 "1H"	PANELBOARD WITH MAIN CIRCUIT BREAKER. SIZE AND PHASE AS SHOWN (ONE-LINE DIAGRAM).
225/3 "1H" 60/3	PANELBOARD WITH MAIN AND SUB FEED CIRCUIT BREAKER (ONE-LINE DIAGRAM).
225/3 "1H" 25/3	PANELBOARD WITH MAIN LUGS ONLY AND SURGE PROTECTION WITH CIRCUIT BREAKER (ONE-LINE DIAGRAM).
M	METER.
	DISCONNECT SWITCH, FUSED.
	DISCONNECT SWITCH, UNFUSED.
	PANELBOARD CABINET, FLUSH MOUNTED.
	PANELBOARD CABINET, SURFACE MOUNTED, 1 SECTION.
LP	LIGHTING RELAY, CONTACTOR PANEL, OR DIMMING ENCLOSURE.
LIGHTING	
(W-3)	FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED.
(W-3)	FIXTURE IDENTIFICATION, EMERGENCY WITH BATTERY PACK, CONNECTED TO GENERATOR AS INDICATED: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED.
EM	EMERGENCY.
	EGRESS DIRECTION ARROW (EXIT SIGNS).
	EXIT SIGN: SINGLE FACE; CEILING MOUNTED
	EXIT SIGN: DOUBLE FACE; CEILING MOUNTED
TECHNOLOGY SYSTEMS	
V	VOLUME CONTROL.
WIRING DEVICES	
	RECEPTACLE, DUPLEX: NEMA 5-20R.
A	RECEPTACLE, DUPLEX, ABOVE COUNTER: NEMA 5-20R.
C	RECEPTACLE, DUPLEX, CEILING: NEMA 5-20R.
W	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, WET LABEL, "WEATHERPROOF IN USE": NEMA 5-20R.
WP	RECEPTACLE, DUPLEX, WEATHERPROOF: NEMA 5-20R.
	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER: NEMA 5-20R.
WP	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, WEATHERPROOF: NEMA 5-20R.
	RECEPTACLE, QUADRAPLEX: NEMA 5-20R.
	RECEPTACLE, QUADRAPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER: NEMA 5-20R.
	RECEPTACLE, SPECIAL PURPOSE. PROVIDE RECEPTACLE TO MATCH EQUIPMENT PLUG.
	SWITCH, DIMMER.
X / $	SWITCH, SINGLE POLE ("x" INDICATES FIXTURES CONTROLLED).
X / $2	SWITCH, DOUBLE POLE ("x" INDICATES FIXTURES CONTROLLED).
X / $3	SWITCH, THREE-WAY ("x" INDICATES FIXTURES CONTROLLED).
X / $4	SWITCH, FOUR-WAY ("x" INDICATES FIXTURES CONTROLLED).
$DS	SWITCH, DOOR.
$OS	SWITCH, OCCUPANCY SENSOR.
	RECEPTACLE, SINGLE PLEX, WITH USB OUTLET

ABBREVIATIONS

NOTE: ALL ABBREVIATIONS MAY NOT BE USED.

1P	SINGLE POLE
1PH	SINGLE-PHASE
1WAY	ONE-WAY
2/C	TWO-CONDUCTOR
2WAY	TWO-WAY
3/C	THREE-CONDUCTOR
3WAY	THREE-WAY
4OUT	QUADRUPLE RECEPTACLE OUTLET
4PDT	FOUR-POLE DOUBLE THROW
4PST	FOUR-POLE SINGLE THROW
4W	FOUR-WIRE
4WAY	FOUR-WAY
A	ABOVE COUNTER
AC	ARMORED CABLE
ADA	AMERICANS WITH DISABILITIES ACT
ADJ	ADJACENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPERE INTERRUPTING CAPACITY
ALUM	ALUMINUM
AMP	AMPERE
ANN	ANNUNCIATOR
AP	ACCESS POINT (WIRELESS DATA)
AR	AS REQUIRED
ASC	AMPS SHORT CIRCUIT
ATS	AUTOMATIC TRANSFER SWITCH
AV	AUDIO VISUAL
AWG	AMERICAN WIRE GAGE
BB XFMR	BUCK-BOOST TRANSFORMER
C	CEILING MOUNTED
CATV	COMMUNITY ANTENNA TELEVISION
CB	CIRCUIT BREAKER
CCBA	CUSTOM COLOR AS SELECTED BY ARCHITECT
CCTV	CLOSED CIRCUIT TELEVISION
CF/CI	CONTRACTOR FURNISHED/ CONTRACTOR INSTALLED
CF/OI	CONTRACTOR FURNISHED/ OWNER INSTALLED
CFBA	CUSTOM FINISH AS SELECTED BY ARCHITECT
CKT	CIRCUIT
CM	CONSTRUCTION MANAGER
CND	CONDUIT
CO	CONVENIENCE OUTLET
COR	CONTRACTING OFFICER'S REPRESENTATIVE
CP	CONTROL PANEL
CT	CURRENT TRANSFORMER
CTV	CABLE TELEVISION
CU	COPPER
dBA	UNIT OF SOUND LEVEL
DPDT	DOUBLE POLE, DOUBLE THROW
DS	DISCONNECT SWITCH
EA	EACH
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENT	ELECTRIC NONMETALLIC TUBING
EPO	EMERGENCY POWER OFF
EQUIP	EQUIPMENT
EX	EXISTING
F	FURNITURE MOUNTED
FA	FIRE ALARM
FCP	FIRE ALARM CONTROL PANEL
FLA	FULL LOAD AMPS
FMC	FLEXIBLE METAL CONDUIT
FOB	FREIGHT ON BOARD
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING
GEN	GENERATOR
GFCI	GROUND FAULT INTERRUPTER
GFP	GROUND FAULT PROTECTION
GND	GROUND
HD	HEAVY DUTY
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTOMATIC
HP	HORSE POWER
HPF	HIGH POWER FACTOR
HPS	HIGH PRESSURE SODIUM
HV	HIGH VOLTAGE
HZ	HERTZ
I/O	INPUT/ OUTPUT
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
IN/IS	INSULATED/ ISOLATED
IR	INFRARED
J-BOX	JUNCTION BOX
kV	KILOVOLT
kVA	KILOVOLT AMPERE
kVAR	KILOVOLT AMPERE REACTIVE
kW	KILOWATT
kWh	KILOWATT HOUR
LED	LIGHT EMITTING DIODE
LFMC	LIQUID TIGHT FLEXIBLE METAL CONDUIT
LFNC	LIQUID TIGHT FLEXIBLE NONMETALLIC CONDUIT
LPS	LOW PRESSURE SODIUM
LRA	LOCKED ROTOR AMPS
LTG	LIGHTING
LV	LOW VOLTAGE
MATV	MASTER ANTENNA TELEVISION SYSTEM
MAX	MAXIMUM
MC	METAL CLAD
MCA	MINIMUM CIRCUIT AMPS
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTION
MDP	MAIN DISTRIBUTION PANEL
MG	MOTOR GENERATOR
MH	MANHOLE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MOCP	MAXIMUM OVERCURRENT PROTECTION
MTS	MANUAL TRANSFER SWITCH
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NFC	NATIONAL FIRE CODE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
OCP	OVER CURRENT PROTECTION
OF/CI	OWNER FURNISHED/ CONTRACTOR INSTALLED
OF/OI	OWNER FURNISHED/ OWNER INSTALLED
OFP	OBTAIN FROM PLANS
OH DR	OVERHEAD (COILING) DOOR
OL	OVERLOAD
PB	PUSHBUTTON
PF	POWER FACTOR
PH	PHASE
PNL	PANEL
PT	POTENTIAL TRANSFORMER
PTZ	PAN/TILT/ZOOM
QTY	QUANTITY
R	REMOVE
RCP	REFLECTED CEILING PLAN
RMC	RIGID METAL CONDUIT
RNC	RIGID NONMETAL CONDUIT
RPM	REVOLUTIONS PER MINUTE
RR	REMOVE AND RELOCATE
S/S	START/STOP
SCA	SHORT CIRCUIT AMPS
SCBA	STANDARD COLOR AS SELECTED BY ARCHITECT
SF	SQUARE FOOT (FEET)
SFBA	STANDARD FINISH AS SELECTED BY ARCHITECT
SPD	SURGE PROTECTIVE DEVICE
SPDT	SINGLE POLE, DOUBLE THROW
SPEC	SPECIFICATION
SPST	SINGLE POLE, SINGLE THROW
ST	SINGLE THROW
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TL	TWIST LOCK
TP	TELEPHONE POLE
TP	TWISTED PAIR
TTB	TELEPHONE TERMINAL BOARD
TV	TELEVISION
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER
TYP	TYPICAL
UF	UNDERFLOOR
UGND	UNDERGROUND
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTS
VA	VOLT AMPERE
VFC/VF D	VARIABLE FREQUENCY MOTOR CONTROLLER
W/	WITH
W/O	WITHOUT
WP	WEATHERPROOF
XFMR	TRANSFORMER

GENERAL ELECTRICAL NOTES

1. CLARIFICATION METHODS: AT THE TIME OF BIDDING, BIDDERS SHALL FAMILIARIZE THEMSELVES WITH THE DRAWINGS AND SPECIFICATIONS. ANY QUESTIONS, MISUNDERSTANDINGS, CONFLICTS, DELETIONS, DISCONTINUED PRODUCTS, CATALOG NUMBER DISCREPANCIES, DISCREPANCIES BETWEEN THE EQUIPMENT SUPPLIED AND THE INTENT OR FUNCTION OF THE EQUIPMENT, ETC. SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER IN WRITING FOR CLARIFICATION PRIOR TO ISSUANCE OF THE FINAL ADDENDUM AND BIDDING OF THE PROJECT. WHERE DISCREPANCIES OR MULTIPLE INTERPRETATIONS OCCUR, THE MOST STRINGENT (WHICH IS GENERALLY RECOGNIZED AS THE MOST COSTLY) THAT MEETS THE INTENT OF THE DOCUMENTS SHALL BE ENFORCED.

2. OWNER FURNISHED ITEMS: THE OWNER WILL FURNISH MATERIAL AND EQUIPMENT AS INDICATED IN THE CONTRACT DOCUMENTS TO BE INCORPORATED INTO THE WORK. THESE ITEMS ARE ASSIGNED TO THE INSTALLER AND COSTS FOR RECEIVING, HANDLING, STORAGE, IF REQUIRED, AND INSTALLATION ARE INCLUDED IN THE CONTRACT SUM.
   A. THE INSTALLER'S RESPONSIBILITIES ARE THE SAME AS IF THE INSTALLER FURNISHED THE MATERIALS OR EQUIPMENT.
   B. THE OWNER WILL ARRANGE AND PAY FOR DELIVERY OF OWNER FURNISHED ITEMS FREIGHT ON BOARD JOB SITE AND THE INSTALLER WILL INSPECT DELIVERIES FOR DAMAGE. IF OWNER FURNISHED ITEMS ARE DAMAGED, DEFECTIVE OR MISSING, DOCUMENT DAMAGED ITEMS WITH THE TRANSPORT COMPANY AND THE OWNER WILL ARRANGE FOR REPLACEMENT. THE OWNER WILL ALSO ARRANGE FOR MANUFACTURER'S FIELD SERVICES, AND THE DELIVERY OF MANUFACTURER'S WARRANTIES AND BONDS TO THE INSTALLER.
   C. THE INSTALLER IS RESPONSIBLE FOR DESIGNATING THE DELIVERY DATES OF OWNER FURNISHED ITEMS AND FOR RECEIVING, UNLOADING AND HANDLING OWNER FURNISHED ITEMS AT THE SITE.THE INSTALLER IS RESPONSIBLE FOR PROTECTING OWNER FURNISHED ITEMS FROM DAMAGE, INCLUDING DAMAGE FROM EXPOSURE TO THE ELEMENTS, AND TO REPAIR OR REPLACE ITEMS DAMAGED AS A RESULT OF HIS OPERATIONS.

3. EXPOSED STRUCTURE AREAS (EXCLUDING MECHANICAL, ELECTRICAL, AND COMMUNICATION SPACES): INSTALL RACEWAYS BETWEEN DECK AND STRUCTURE WHEREVER POSSIBLE IN EXPOSED STRUCTURE CEILING AREAS. ROUTE RACEWAYS IN CONCEALED AREAS WHEREVER POSSIBLE. REFER ALL CONDITIONS WHERE RACEWAYS MUST BE INSTALLED WHICH CANNOT COMPLY WITH THESE REQUIREMENTS TO THE ARCHITECT.

4. SUBMITTALS: PROVIDE ORIGINAL ELECTRONIC PDF FORMAT, BOUND, BOOKMARKED (EACH SECTION AND PRODUCT), AND HIGHLIGHTED. JOB NAME AND SUBCONTRACTOR SHALL BE ON THE FRONT COVER. PREPARE INDEX OF EQUIPMENT SUBMITTED IN EACH TAB.

5. REFLECTED CEILING PLANS: COORDINATE THE LOCATION OF LIGHT FIXTURES WITH THE ARCHITECTURAL REFLECTED CEILING PLANS. REFER ALL DISCREPANCIES TO THE ARCHITECT AND ENGINEER.

6. ALL WORK SHALL BE DONE ACCORDING TO THE CURRENT NATIONAL ELECTRIC CODE (NEC), IBC, NFPA, AND IFC. COMPLIANCE AND FINAL APPROVAL IS SUBJECT TO THE ON SITE FIELD INSPECTION OF THE AHJ.

ELECTRICAL SHEET INDEX

EE001	SHEET INDEX, ABBREV., AND GENERAL NOTES
EE501	ELECTRICAL DETAILS
EE701	TYPICAL MOUNTING HEIGHT DETAILS
ES101	ELECTRICAL SITE PLAN
EP101	LEVEL 1 POWER PLAN
EP102	ROOF POWER PLAN
EP401	ENLARGED POWER PLANS
EP601	ONE-LINE DIAGRAM
EP602	EQUIPMENT SCHEDULE
EP603	PANEL SCHEDULES
EL101	LEVEL 1 LIGHTING PLAN
EL501	RELAY PANEL CUTSHEETS
EL601	LIGHTING FIXTURE SCHEDULE

DEFINITIONS

NOTE: ALL DEFINITIONS MAY NOT BE USED.

INDICATED: THE TERM "INDICATED" REFERS TO GRAPHIC REPRESENTATIONS, NOTES, OR SCHEDULES ON THE DRAWINGS, OTHER PARAGRAPHS OR SCHEDULES IN THE SPECIFICATIONS, AND SIMILAR REQUIREMENTS IN THE CONTRACT DOCUMENTS. WHERE TERMS SUCH AS "SHOWN", "NOTED", "SCHEDULED", AND "SPECIFIED" ARE USED, IT IS TO HELP THE READER LOCATE THE REFERENCE, NO LIMITATION ON LOCATION IS INTENDED.

DIRECTED: TERMS SUCH AS "DIRECTED", "REQUESTED", AUTHORIZED", "SELECTED", "APPROVED", "REQUIRED", AND "PERMITTED" MEAN "DIRECTED BY THE ENGINEER", "REQUESTED BY THE ENGINEER", AND SIMILAR PHRASES.

APPROVED: THE TERM "APPROVED", WHERE USED IN CONJUNCTION WITH THE ENGINEER'S ACTION ON THE CONTRACTOR'S SUBMITTALS, APPLICATIONS, AND REQUESTS, IS LIMITED TO THE ENGINEER'S DUTIES AND RESPONSIBILITIES AS STATED IN GENERAL AND SUPPLEMENTARY CONDITIONS.

FURNISH: THE TERM "FURNISH" IS USED TO MEAN "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS."

INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."

PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE."

INSTALLER: AN "INSTALLER" IS THE CONTRACTOR OR AN ENTITY ENGAGED BY THE CONTRACTOR, EITHER AS AN EMPLOYEE, SUBCONTRACTOR, OR SUB-SUBCONTRACTOR, FOR PERFORMANCE OF A PARTICULAR CONSTRUCTION ACTIVITY, INCLUDING INSTALLATION, ERECTION, APPLICATION, AND SIMILAR OPERATIONS. INSTALLERS ARE REQUIRED TO BE EXPERIENCED IN THE OPERATIONS THEY ARE ENGAGED TO PERFORM.

TECHNOLOGY SYSTEMS: THE TERM "TECHNOLOGY SYSTEMS" IS USED TO DESCRIBE ALL LOW VOLTAGE SYSTEMS GENERALLY REFERRED TO AS "SPECIAL SYSTEMS". THESE SYSTEMS INCLUDE BUT ARE NOT NECESSARILY LIMITED TO ALL SYSTEMS WHICH UTILIZE VOLTAGES OF LESS THAN 71 VOLTS SUCH AS SOUND SYSTEMS, VIDEO SYSTEMS, TV SYSTEMS, SECURITY SYSTEMS, VOICE AND DATA CABLING SYSTEMS, ETC...

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WILLIAM N. FEIT
NUMBER A-2015000097
PROFESSIONAL ENGINEER
04/06/22

sheet number:

MOBETTAHS (TI) for: LEE'S SUMMIT
520 NW Chipman Rd
Lee's Summit, MO 64086

SAVORY MANAGEMENT

sheet title:
SHEET INDEX, ABBREV., AND GENERAL NOTES

sheet number:
EE001

GENERAL SHEET NOTES

1. DETERMINE MOUNTING HEIGHTS OF ELECTRICAL AND ELECTRONIC EQUIPMENT IN THE FOLLOWING ORDER OF PRIORITY:

   1 - ELEVATIONS (ARCHITECTURAL, ELECTRICAL, MECHANICAL, ETC).

   2 - EQUIPMENT SHOP DRAWINGS.

   3 - FIELD INSTRUCTIONS.

2. LOCATE RECEPTACLES SERVING THE SAME TYPE OF USE AT A UNIFORM HEIGHT UNLESS DIRECTED OTHERWISE.

3. MECHANICAL, ELECTRICAL, AND COMMUNICATION ROOMS: COORDINATE LOCATION OF LIGHTING AND POWER RECEPTACLES WITH EQUIPMENT, PIPING, AND DUCTWORK. DO NOT INSTALL RECEPTACLES BEHIND EQUIPMENT OR WHERE OTHERWISE INACCESSIBLE. POSITION LIGHTING REGARDLESS OF WHERE SHOWN ON DRAWING TO PROVIDE PROPER ILLUMINATION.

4. MOUNT RECEPTACLE BOXES FOR SWITCHES AND RECEPTACLES WITH LONG AXIS OF THE DEVICE VERTICAL UNLESS OTHERWISE INDICATED.

5. SET BOXES WITH PLASTER RINGS FLUSH WITH FINISHED SURFACE.

6. LOCATE BOX COVERS OR DEVICE PLATES SO THEY WILL NOT SPAN DIFFERENT TYPES OF BUILDING FINISHES EITHER VERTICALLY OR HORIZONTALLY.

7. VERIFY ALL DOOR CONDITIONS ON ARCHITECTURAL DRAWINGS PRIOR TO INSTALLING SWITCHES.

8. LOCATE WIRING DEVICES WHICH ARE ADJACENT AND ARE COMPATIBLE VOLTAGES IN ONE PLATE.

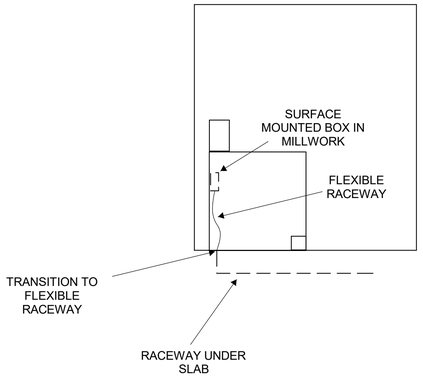
9. WHERE DEVICES ARE LOCATED IN CLOSE PROXIMITY OF THE SAME VERTICAL PLANE, ALIGN DEVICES VERTICALLY PER THE TYPICAL WALL MOUNTED DEVICES ALIGNMENT DETAIL, UNLESS OTHERWISE INDICATED.

SHEET KEYNOTES

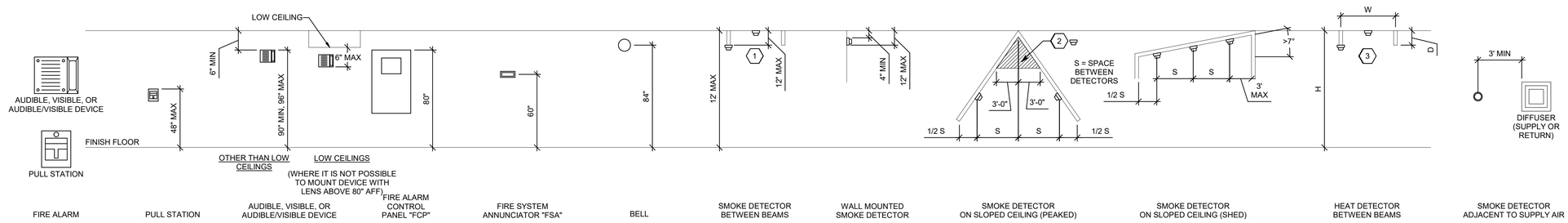
1 LOCATE AT BOTTOM OF BEAMS (OR JOISTS) OR AT CEILING. (REDUCE SPACING BY .5 PERPENDICULAR TO BEAM OR JOIST DIRECTION.) FOR OTHER CONDITIONS, REFER TO NFPA 72.

2 LOCATE DETECTOR ANYWHERE IN SHADED AREA BUT NOT IN TOP OF 4" OF PEAK.

3 LOCATE AT BOTTOM OF BEAMS IF D/H <.1 OR W/H < .4; OTHERWISE, LOCATE IN BEAM POCKET. FOR D > 4 REDUCE SPACING .33 PERPENDICULAR TO BEAMS.



2 MILLWORK CONDUIT ROUGH-IN DETAIL (TYPICAL)
NOT TO SCALE



1 FIRE ALARM MOUNTING DETAILS
NOT TO SCALE

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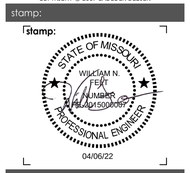

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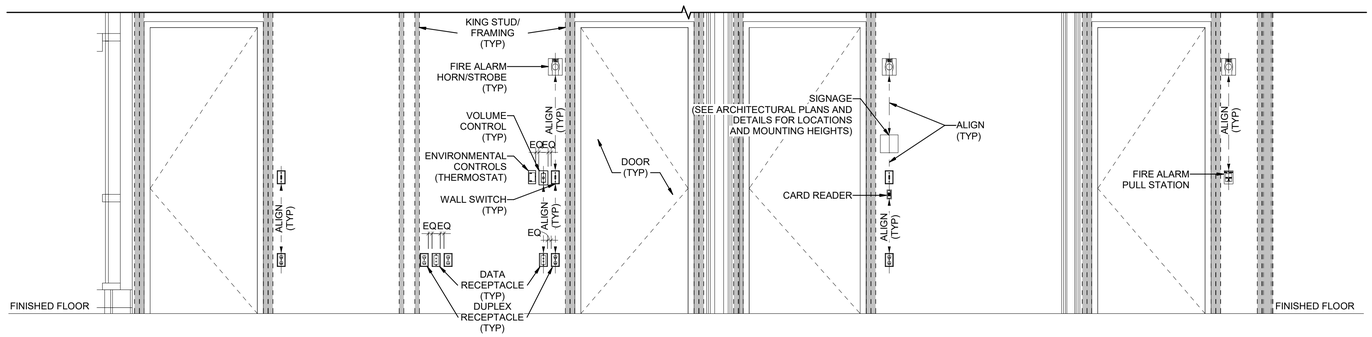
SAVORY MANAGEMENT

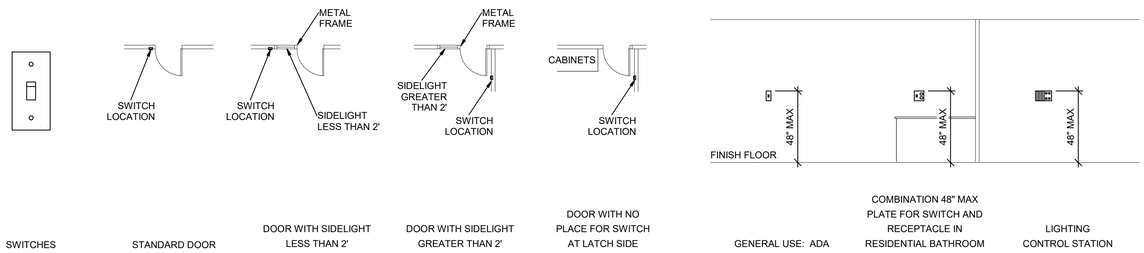
sheet title:
ELECTRICAL DETAILS

sheet number:
EE501



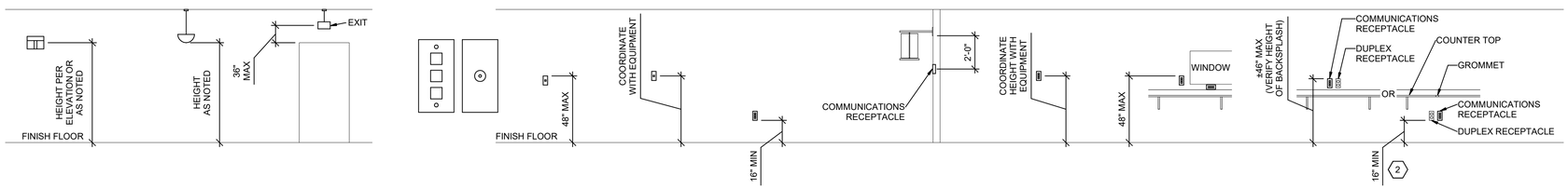
A2 TYPICAL WALL MOUNTED DEVICES ALIGNMENT DETAIL

NOT TO SCALE



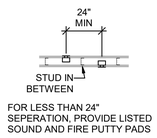
D3 SWITCH MOUNTING DETAILS

NOT TO SCALE



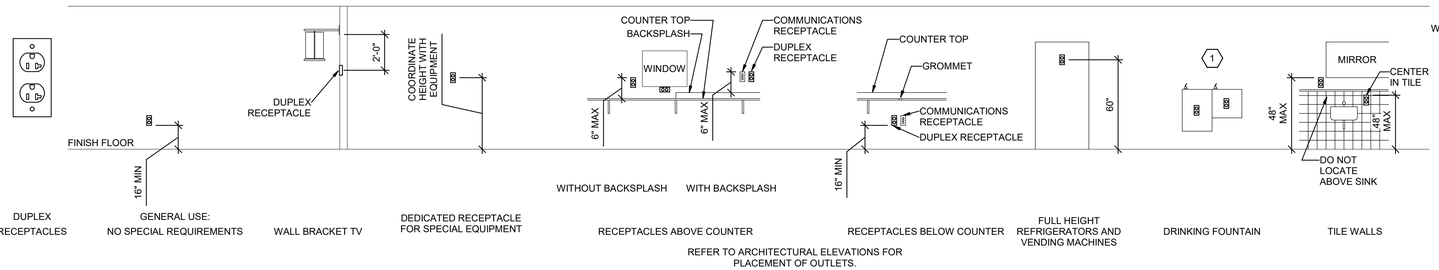
C2 LIGHTING MOUNTING DETAILS

NOT TO SCALE



C3 COMMUNICATIONS MOUNTING DETAILS

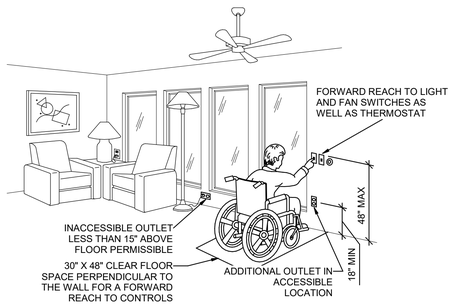
NOT TO SCALE



REFER TO ARCHITECTURAL ELEVATIONS FOR PLACEMENT OF OUTLETS.

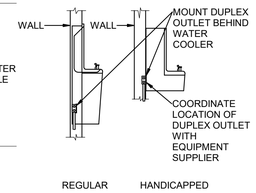
D2 ADA DETAIL

NOT TO SCALE



E2 RECEPTACLE MOUNTING DETAILS

NOT TO SCALE



A1 BOX MOUNTING DETAILS

NOT TO SCALE

GENERAL SHEET NOTES

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   2 - EQUIPMENT SHOP DRAWINGS.

   3 - FIELD INSTRUCTIONS.

2. LOCATE RECEPTACLES SERVING THE SAME TYPE OF USE AT A UNIFORM HEIGHT UNLESS DIRECTED OTHERWISE.

3. MECHANICAL, ELECTRICAL, AND COMMUNICATION ROOMS: COORDINATE LOCATION OF LIGHTING AND POWER RECEPTACLES WITH EQUIPMENT, PIPING, AND DUCTWORK. DO NOT INSTALL RECEPTACLES BEHIND EQUIPMENT OR WHERE OTHERWISE INACCESSIBLE. POSITION LIGHTING REGARDLESS OF WHERE SHOWN ON DRAWING TO PROVIDE PROPER ILLUMINATION.

4. MOUNT RECEPTACLE BOXES FOR SWITCHES AND RECEPTACLES WITH LONG AXIS OF THE DEVICE VERTICAL UNLESS OTHERWISE INDICATED.

5. SET BOXES WITH PLASTER RINGS FLUSH WITH FINISHED SURFACE.

6. LOCATE BOX COVERS OR DEVICE PLATES SO THEY WILL NOT SPAN DIFFERENT TYPES OF BUILDING FINISHES EITHER VERTICALLY OR HORIZONTALLY.

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8. LOCATE WIRING DEVICES WHICH ARE ADJACENT AND ARE COMPATIBLE VOLTAGES IN ONE PLATE.

9. WHERE DEVICES ARE LOCATED IN CLOSE PROXIMITY OF THE SAME VERTICAL PLANE, ALIGN DEVICES VERTICALLY PER THE TYPICAL WALL MOUNTED DEVICES ALIGNMENT DETAIL, UNLESS OTHERWISE INDICATED.

SHEET KEYNOTES

1 LOCATE RECEPTACLES BEHIND DRINKING FOUNTAINS.

2 REFER TO ARCHITECTURAL ELEVATIONS FOR PLACEMENT OF OUTLETS.

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SAVORY MANAGEMENT

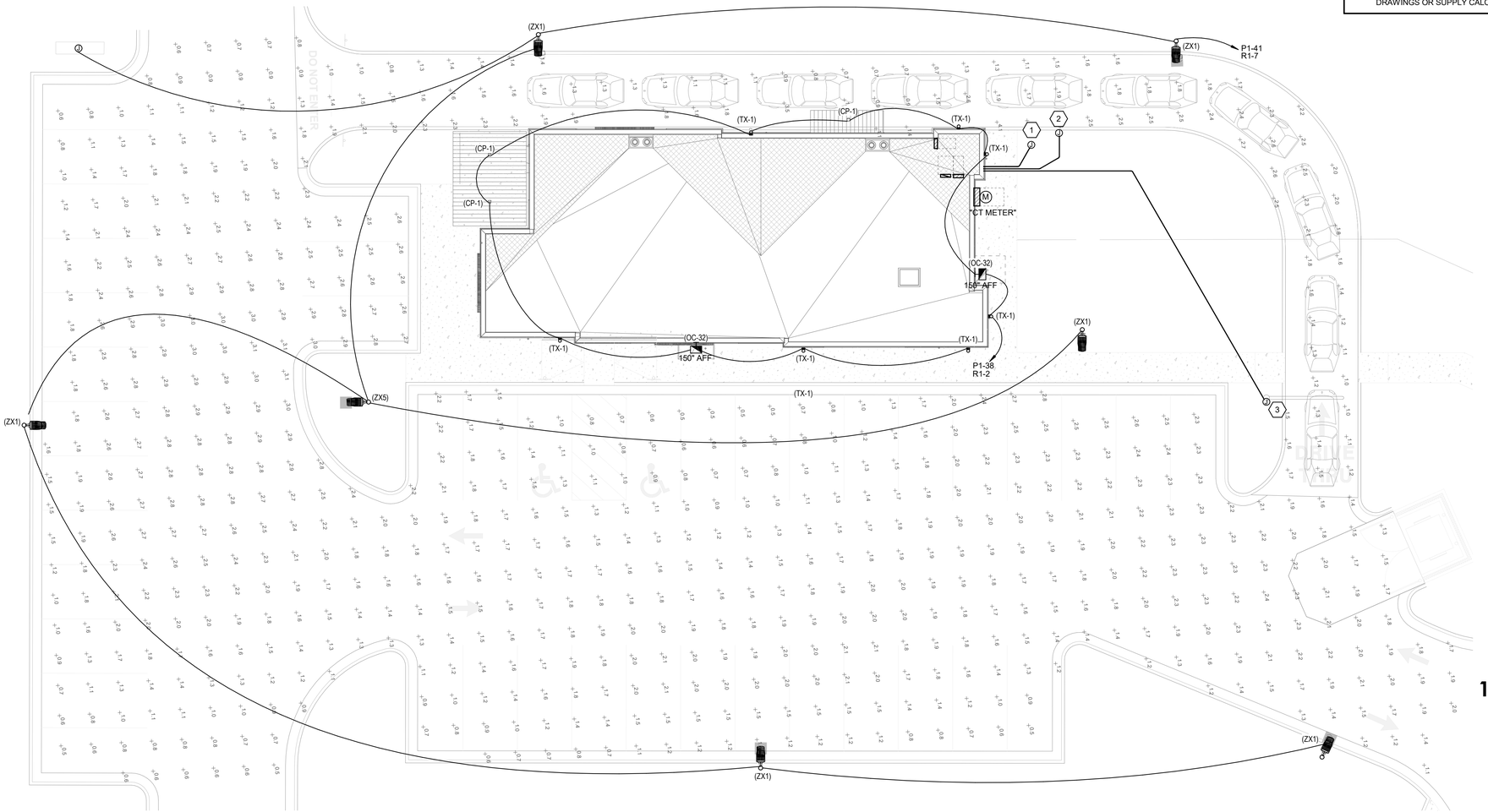
sheet title:
TYPICAL MOUNTING HEIGHT DETAILS

sheet number:
EE701

Schedule											
Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
	B	11	Liton Lighting Inc	WD2340B-L15-BD45-BU45UE-DUN	4" ROUND 2-DIRECTION WALL MOUNT (IP64) - 2 X 1500LM		1	WD2340B-L15-BD45-BU45UE-DUN.ies	3827	0.8	37.42
	A	6	Lithonia Lighting	DSX0 LED P4 40K BLC MVOLT	DSX0 LED P4 40K BLC MVOLT	LED	1	DSX0_LED_P4_40K_BLC_MVOLT.ies	8656	0.9	92
	C	1	Lithonia Lighting	DSX0 LED P4 40K T5S MVOLT	DSX0 LED P4 40K T5S MVOLT	LED	1	DSX0_LED_P4_40K_T5S_MVOLT.ies	10989	0.9	92

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
DRIVE AISLE	+	1.8 fc	4.1 fc	0.5 fc	8.2:1	3.6:1



2 SITE ELECTRICAL PLAN
1" = 10'-0"

SHEET KEYNOTES

1 MENU BOARD. 1" CONDUIT. COORDINATE WITH OWNER AND INSTALLER FOR EXACT REQUIREMENTS.

2 SPEAKER POST. 3/4" CONDUIT. COORDINATE WITH OWNER AND INSTALLER FOR EXACT REQUIREMENTS.

3 PROVIDE 1" CONDUIT TO SIGN. COORDINATE WITH OWNER AND INSTALLER FOR EXACT REQUIREMENTS.

GENERAL SHEET NOTES

1 THE ELECTRICAL CONTRACTOR SHALL MEET WITH AND COORDINATE WITH ALL SERVICE PROVIDERS (POWER, COMMUNICATION, CABLE/SATELLITE, ETC.) TO THE FACILITY ON SITE PRIOR TO ANY WORK BEING PERFORMED. CONFIRM WITH EACH SERVICE PROVIDER EXACT LOCATIONS EQUIPMENT AND ROUTING. COMPLY WITH ALL SERVICE PROVIDER'S CURRENT STANDARDS AND REQUIREMENTS. PROVIDE THE REQUIRED EQUIPMENT, RACEWAYS, BOXES, CABLE, ETC. AS REQUIRED BY THE SERVICE PROVIDER WETHER SHOWN ON THE DRAWINGS OR NOT.

2 FOR ALL LIGHT FIXTURES, POLE LIGHTS, AND ALL OTHER ELECTRICAL DEVICES THE CONTRACTOR SHALL COORDINATE EXACT LOCATION AND MOUNTING HEIGHTS WITH ARCHITECT, OWNER, ENGINEER, AND ALL OF THE CONTRACT DOCUMENTS PRIOR TO ROUGH IN AND TRENCHING.

3 CONTRACTOR IS RESPONSIBLE FOR ALL TRENCHING, BACKFILL, AND COMPACTION ASSOCIATED TO ALL ELECTRICAL UNDERGROUND RACEWAYS AND CABLES COORDINATE WITH ARCHITECTURAL AND CIVIL DRAWINGS. SEE UNDERGROUND RACEWAY DETAILS FOR REQUIREMENTS FOR EACH TRENCH..

4 CONTRACTOR SHALL INSTALL POLE MOUNTED LIGHTS IN STRAIGHT LINES, SQUARE, AND PLUMB. COORDINATE WITH ARCHITECT AND CIVIL DRAWINGS.

5 THE ELECTRICAL CONTRACTOR SHALL HAVE ANY AND ALL CONCRETE POLE BASES AND SLABS REVIEWED BY A STRUCTURAL ENGINEER AND SHALL MODIFY DESIGN PER STRUCTURAL ENGINEER'S AND/OR AHJ'S RECOMMENDATIONS.

6 PROVIDE WITH UL 942 LISTED EMERGENCY BATTERY BACKUP ALL EXTERIOR FIXTURES ADJACENT TO EGRESS DOORS.

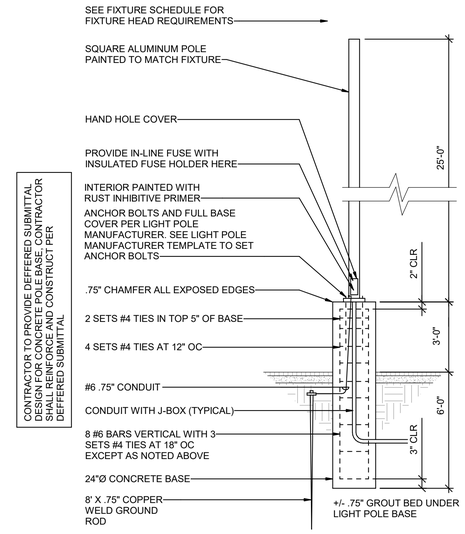
7 ALL EXTERIOR RECEPTACLES SHOWN SHALL BE NEMA 5-20R GFCI "WEATHER RESISTANT" RECEPTACLE WITH "WEATHER PROOF IN-USE COVER."

8 THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL CONCRETE/ASPHALT CUTTING AND REPLACEMENT OF CONCRETE/ASPHALT TO MATCH EXISTING ASSOCIATED WITH UNDERGROUND RACEWAYS PROVIDED AS PART OF THIS PROJECT.

9 REFER TO PLANS FOR CONSTRAINTS ON PHYSICAL DIMENSIONS AND CLEARANCE REQUIREMENTS OF EQUIPMENT. PROVIDE EQUIPMENT DIMENSIONS THAT FALL WITHIN THE CONSTRAINTS OF EACH SPECIFIC LOCATION.

10 PROVIDE SERVICE RATED EQUIPMENT AT EACH SERVICE ENTRANCE.

11 SERVICE EQUIPMENT SHALL BE LEGIBLY MARKED IN THE FIELD WITH THE MAXIMUM AVAILABLE FAULT CURRENT. VERIFY OR RE-CALCULATE THE AVAILABLE FAULT CURRENT AT THE SERVICE WHERE MODIFICATIONS TO THE ELECTRICAL INSTALLATION OCCUR. PLEASE INCLUDE NOTES IN THE ELECTRICAL DRAWINGS OR SUPPLY CALCULATIONS WHERE APPLICABLE SEE NEC 110.24.(B)



1 PARKING LOT LIGHT POLE BASE DETAIL
NOT TO SCALE

NORTH

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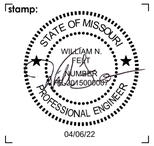

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Lee's Summit, MO 64086

SAVORY MANAGEMENT

sheet title:
ELECTRICAL SITE PLAN

sheet number:
ES101

SHEET KEYNOTES

1 OPEN/CLOSE SIGN AND TIE TO LIGHTING CONTROL PANEL IN UTILITY ROOM. OPEN/CLOSE OUTLET ARE TO BE MOUNTED ABOVE CEILING. COORDINATE WITH OWNER AND ARCHITECT FOR EXACT LOCATION.

2 PROVIDE POWER AND DATA (COAX CABLE AND CAT-6 IN SINGLE-GANG BOX) FOR ALL TV MONITORS. COORDINATE EXACT LOCATION AND POWER/DATA REQUIREMENTS BEFORE ROUGH-IN.

3 CONTRACTOR SHALL LOCATE ANY EXISTING EXTERIOR LIGHTING CIRCUITS AND TRACE BACK CONDUIT TO NON EXPOSED LOCATION. EXTEND CONDUIT AND CONDUCTORS TO NEW ELECTRICAL PANEL P1 CIRCUITING THROUGH LIGHTING CONTROL PANEL.

4 WORKING SPACE IS REQUIRED TO BE MAINTAINED IN FRONT OF PANELS AND SWITCHBOARDS IN ACCORDANCE WITH NEC 110.26.

5 PROVIDE (2) 1" FLEX CONDUITS (1 POWER, 1 DATA); STUB UP CONDUITS FROM FLOOR INTO WALL.

6 PROVIDE POWER AND DATA MOUNTED TO KITCHEN EQUIPMENT SHELF. COORDINATE WITH KITCHEN EQUIPMENT PROVIDER FOR RACEWAYS AND MOUNTING LOCATIONS.

GENERAL SHEET NOTES

1 PROVIDE TYPEWRITTEN PANEL SCHEDULES AT THE COMPLETION OF THE PROJECT.

2 ALL KITCHEN AND FOOD PREP AREA OUTLETS SHALL BE GFCI PROTECTED.

3 PROVIDE DEDICATED NEUTRAL FOR ALL BRANCH CIRCUITS.

4 VERIFY ALL EQUIPMENT LOCATION AND REQUIREMENTS PRIOR TO ROUGH-IN. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE FINAL CONNECTIONS FOR OWNER SUPPLIED EQUIPMENT. VERIFY OUTLETS ARE NOT PLACED BEHIND LEG OF TABLE OR EQUIPMENT.

5 ALL OUTLETS UNMARKED ARE +18"AFF.

6 SEE KITCHEN DRAWINGS FOR EXACT LOCATION AND HEIGHT OF ALL KITCHEN EQUIPMENT.

7 CONTRACTOR IS RESPONSIBLE TO PROVIDE AND INSTALL CORD AND PLUG FOR EQUIPMENT THAT DOES NOT COME WITH CORD AND PLUG.

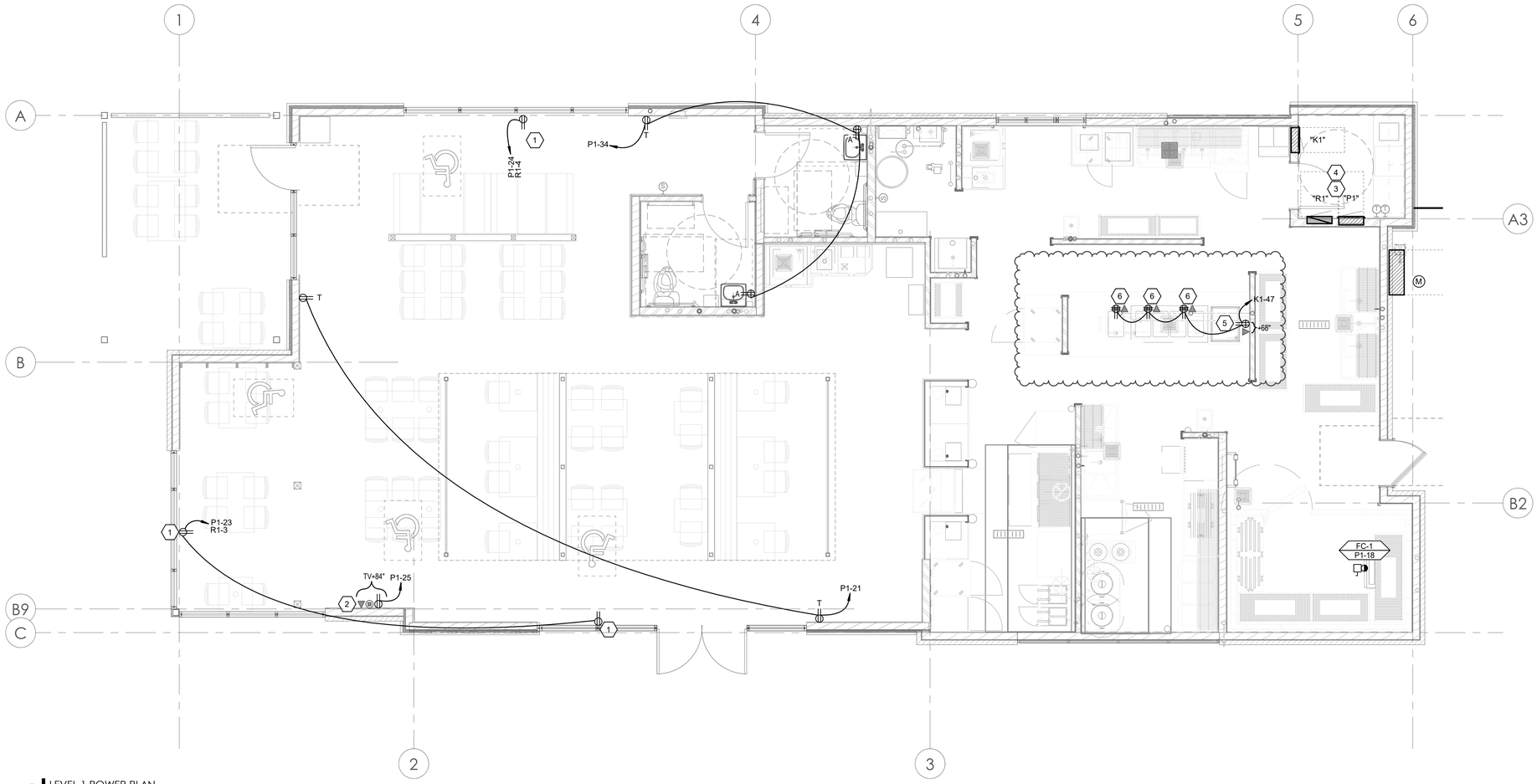
8 RECEPTACLES TO BE COORDINATED WITH FINAL FURNITURE AND EQUIPMENT PLAN. DINING CONVENIENCE OUTLETS ARE TO BE ACCESSIBLE AND CENTERED BETWEEN FURNITURE WHERE POSSIBLE.

9 ALL EQUIPMENT UNDER HOOD ARE TO BE SUPPLIED WITH SHUNT-TRIP CIRCUIT BREAKERS CONNECTED TO ANSUL SYSTEM.

10 COORDINATE WITH ARCHITECT AND OWNER TO DESIGNATE OUTLET AND PLATE COVER COLORS. (WHITE IN KITCHEN AND BLACK EVERYWHERE ELSE.)

11 PROVIDE BLACK OUTLETS IN ALL SERVICE AND DINING AREAS.

12 ALL RECEPTACLES IN THE DINING AREA, 5'-6" AND BELOW SHALL BE TAMPER-RESISTANT.



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

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sheet number:

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SAVORY MANAGEMENT

sheet title:
LEVEL 1 POWER PLAN

sheet number:
EP101

SHEET KEYNOTES

1 EXHAUST FAN TIED TO HOOD CONTROLS CONNECTED BY ELECTRICAL CONTRACTOR.

2 EXHAUST FAN RUN THROUGH RELAY PANEL "RP1". EXHAUST FAN TO RUN CONTINUOUSLY DURING BUSINESS HOURS.

3 120V POWER MOUNTED ABOVE FINISHED CEILING THROUGH CONTROL PANEL (SEE EL601).

4 PROVIDE 1" CONDUIT(S) TO ROOF WITH WEATHERHEAD(S) FOR TELECOM CONNECTIONS. COORDINATE WITH OWNER FOR EXACT LOCATION(S).

5 COORDINATE WITH OWNER/SIGN INSTALLER/ARCHITECT FOR EXACT LOCATION.

6 COORDINATE WALK-IN COOLER WITH OWNER AND ARCHITECT.

GENERAL SHEET NOTES

1 PROVIDE TYPEWRITTEN PANEL SCHEDULES AT THE COMPLETION OF THE PROJECT.

2 ALL KITCHEN AND FOOD PREP AREA OUTLETS SHALL BE GFCI PROTECTED.

3 PROVIDE DEDICATED NEUTRAL FOR ALL BRANCH CIRCUITS.

4 VERIFY ALL EQUIPMENT LOCATION AND REQUIREMENTS PRIOR TO ROUGH-IN. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE FINAL CONNECTIONS FOR OWNER SUPPLIED EQUIPMENT. VERIFY OUTLETS ARE NOT PLACED BEHIND LEG OF TABLE OR EQUIPMENT.

5 ALL OUTLETS UNMARKED ARE +18"AFF.

6 SEE KITCHEN DRAWINGS FOR EXACT LOCATION AND HEIGHT OF ALL KITCHEN EQUIPMENT.

7 CONTRACTOR IS RESPONSIBLE TO PROVIDE AND INSTALL CORD AND PLUG FOR EQUIPMENT THAT DOES NOT COME WITH CORD AND PLUG.

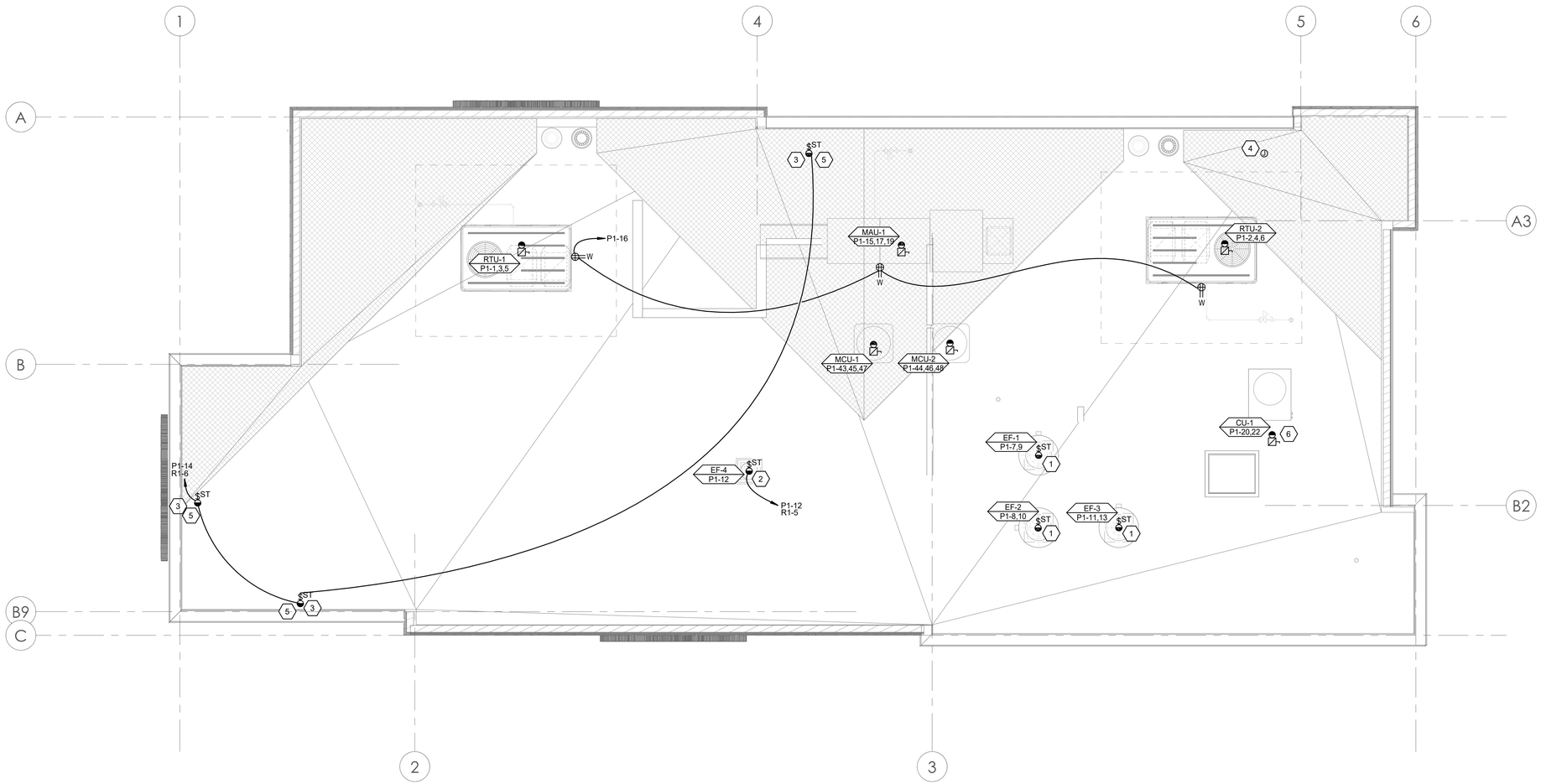
8 RECEPTACLES TO BE COORDINATED WITH FINAL FURNITURE AND EQUIPMENT PLAN. DINING CONVENIENCE OUTLETS ARE TO BE ACCESSIBLE AND CENTERED BETWEEN FURNITURE WHERE POSSIBLE.

9 ALL EQUIPMENT UNDER HOOD ARE TO BE SUPPLIED WITH SHUNT-TRIP CIRCUIT BREAKERS CONNECTED TO ANSUL SYSTEM.

10 COORDINATE WITH ARCHITECT AND OWNER TO DESIGNATE OUTLET AND PLATE COVER COLORS. (WHITE IN KITCHEN AND BLACK EVERYWHERE ELSE.)

11 PROVIDE BLACK OUTLETS IN ALL SERVICE AND DINING AREAS.

12 ALL RECEPTACLES IN THE DINING AREA, 5'-6" AND BELOW SHALL BE TAMPER-RESISTANT.



1 ROOF POWER PLAN
1/4" = 1'-0"

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sheet information

revisions: 1

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1	IFP_ADD-01	03-11-22

CURRENT SET THRU REVISION 02

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project number:	MO-53LEE
project status:	ISSUED FOR PERMIT

original drawing is 24" x 36"
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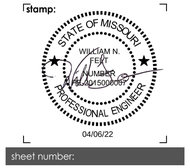

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SAVORY MANAGEMENT

sheet title:
ROOF POWER PLAN

sheet number:
EP102

SHEET KEYNOTES

1 PROVIDE (2) 1" FLEX CONDUITS (1 POWER, 1 DATA); STUB UP CONDUITS FROM FLOOR INTO WALL.

2 PROVIDE 120 VOLT POWER ABOVE FINISHED CEILING AND TERMINATE FOR CONTROL POWER TO HOOD. CONTRACTOR RESPONSIBLE TO PROVIDE FIRE SHUT OFF, SHUNT TRIP, CONNECTED CONTROLS, AND COORDINATION WITH BUILDING OWNER TO CONNECT CONTROLS TO FIRE ALARM SYSTEM PER CODE REQUIREMENTS.

3 COORDINATE WITH MILLWORK AND COUNTER INSTALLER FOR EXACT PLACEMENT AND REQUIREMENTS

4 WALK-IN COOLER LIGHTING. COORDINATE WITH INSTALLERS.

5 RUN WIRING IN BUILT-IN CHASE UNDERNEATH CUSTOM TABLE.

6 PROVIDE RACEWAY BETWEEN AV CABINET AND J-BOXES.

7 PROVIDE CONDUIT AND CONDUCTORS STUBBED TO A/V CABINET LOCATION. AFTER A/V CABINET HAS BEEN INSTALLED PROVIDE SURFACE MOUNTED OUTLETS INSIDE A/V CABINET. COORDINATE WITH OWNER AND A/V INSTALLERS FOR EXACT OUTLET PLACEMENT. A/V RACK MOUNTED AT 9'-0" AFF.

8 PROVIDE ELECTRICAL CONNECTION AND SYSTEM FOR CO2 MONITORING. BASIS OF DESIGN: LOGICO2 ALERT SYSTEM BY NUC02.

GENERAL SHEET NOTES

1 PROVIDE TYPEWRITTEN PANEL SCHEDULES AT THE COMPLETION OF THE PROJECT.

2 ALL KITCHEN AND FOOD PREP AREA OUTLETS SHALL BE GFCI PROTECTED.

3 PROVIDE DEDICATED NEUTRAL FOR ALL BRANCH CIRCUITS.

4 VERIFY ALL EQUIPMENT LOCATION AND REQUIREMENTS PRIOR TO ROUGH-IN. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE FINAL CONNECTIONS FOR OWNER SUPPLIED EQUIPMENT. VERIFY OUTLETS ARE NOT PLACED BEHIND LEG OF TABLE OR EQUIPMENT.

5 ALL OUTLETS UNMARKED ARE +18"AFF.

6 SEE KITCHEN DRAWINGS FOR EXACT LOCATION AND HEIGHT OF ALL KITCHEN EQUIPMENT.

7 CONTRACTOR IS RESPONSIBLE TO PROVIDE AND INSTALL CORD AND PLUG FOR EQUIPMENT THAT DOES NOT COME WITH CORD AND PLUG.

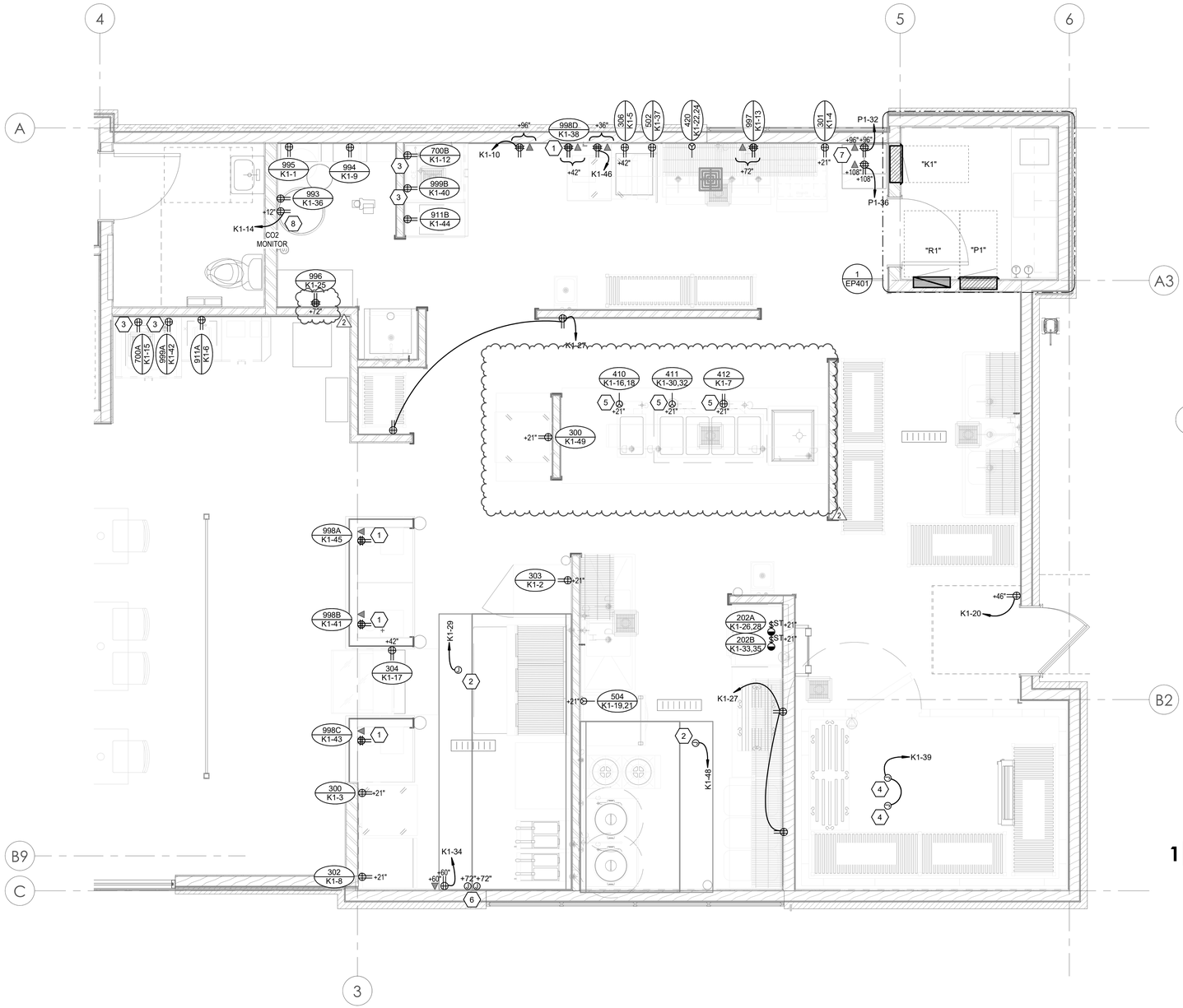
8 RECEPTACLES TO BE COORDINATED WITH FINAL FURNITURE AND EQUIPMENT PLAN. DINING CONVENIENCE OUTLETS ARE TO BE ACCESSIBLE AND CENTERED BETWEEN FURNITURE WHERE POSSIBLE.

9 ALL EQUIPMENT UNDER HOOD ARE TO BE SUPPLIED WITH SHUNT-TRIP CIRCUIT BREAKERS CONNECTED TO ANSUL SYSTEM.

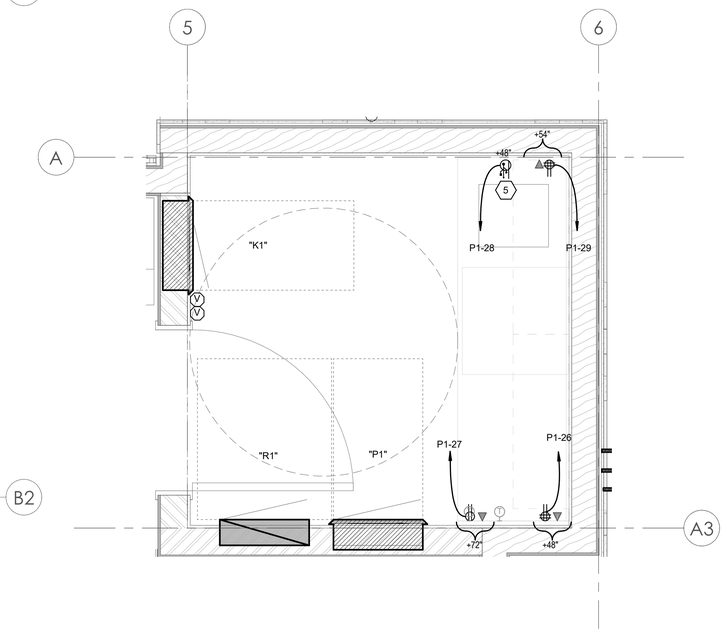
10 COORDINATE WITH ARCHITECT AND OWNER TO DESIGNATE OUTLET AND PLATE COVER COLORS. (WHITE IN KITCHEN AND BLACK EVERYWHERE ELSE.)

11 PROVIDE BLACK OUTLETS IN ALL SERVICE AND DINING AREAS.

12 ALL RECEPTACLES IN THE DINING AREA, 5'-6" AND BELOW SHALL BE TAMPER-RESISTANT.



2 ENLARGED KITCHEN POWER PLAN
3/8" = 1'-0"



1 ENLARGED ELEC CLOSET POWER PLAN
3/4" = 1'-0"

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1	IFP_ADD-01	03-11-22
2	REVISION 02	04.06.22

CURRENT SET THRU REVISION 02

date:	1-23-2022
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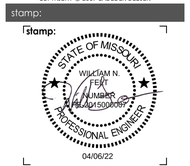

sheet number:

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SAVORY MANAGEMENT

sheet title:
ENLARGED POWER PLANS

sheet number:
EP401

ALUMINUM CONDUCTOR AND CONDUIT SCHEDULE

SCHEDULE NUMBER
SUBSCRIPT (NOTE 5)
(E.G.) 5 IG

SYM	AMP	CONDUIT SIZE	CONDUCTOR (NOTE 1) QTY	SIZE	G	IG	SE	NOTES
1A								
2A								
3A								
4A								
5A								
6A								
7A								
8A								
9A								
10A								
11A								
12A								
13A								
14A								
15A								
16A								
17A								
18A								
19A								
20A								
21A	130	2	3	2/0	4	1/0	4	2,7
22A	130	2	4	2/0	4	1/0	4	2,7
23A	150	2	3	3/0	4	1/0	4	2,7
24A	150	2	4	3/0	4	1/0	4	2,7
25A	175	2	3	4/0	4	1/0	2	2,7
26A	175	2.50	4	4/0	4	1/0	2	2,7
27A	200	2.50	3	250	4	1/0	2	2,7
28A	200	3	4	250	4	1/0	2	2,7
29A	230	2.50	3	300	2	1/0	1/0	2,7
30A	230	3	4	300	2	1/0	1/0	2,7
31A	250	3	3	350	2	2/0	1/0	2,7
32A	250	3	4	350	2	2/0	1/0	2,7
33A	310	3	3	500	1	3/0	1/0	2,7
34A	310	4	4	500	1	3/0	1/0	2,7
35A	380	2 EA 2.50	3	250	1	4/0	3/0	2,7
36A	380	2 EA 3	4	250	1	4/0	3/0	2,7
37A	400	2 EA 2.50	3	250	1/0	4/0	3/0	2,7
38A	400	2 EA 2.50	4	250	1/0	4/0	3/0	2,7
39A	500	2 EA 3	3	350	1/0	300	3/0	2,4,7
40A	500	2 EA 3	4	350	1/0	300	3/0	2,4,7
41A	620	2 EA 3	3	500	3/0	300	3/0	2,4,7
42A	620	2 EA 4	4	500	3/0	300	3/0	2,4,7
43A	750	3 EA 3	3	350	3/0	300	4/0	2,4,7
44A	750	3 EA 3	4	350	3/0	300	4/0	2,4,7
45A	810	3 EA 3	3	400	4/0	300	250	2,4,7
46A	810	3 EA 4	4	400	4/0	300	250	2,4,7
47A	1000	4 EA 3	3	350	4/0	300	250	4,7
48A	1000	4 EA 3	4	350	4/0	300	250	4,7
49A	1140	4 EA 4	3	500	250	300	250	4,7
50A	1140	4 EA 4	4	500	250	300	250	4,7
51A	1240	4 EA 4	3	500	350	300	250	4,7
52A	1240	4 EA 4	4	500	350	300	250	4,7
53A	1620	6 EA 4	4	400	400	350	250	4,7
54A	2170	7 EA 4	4	500	400	500	250	4,7
55A	2695	7 EA 4	4	750	600	750	750	4,7
56A	3080	8 EA 4	4	750	600	750	750	4,7
57A	4235	11 EA 4	4	750	800	750	750	4,7
58A	-	5 EA 4	-	-	-	-	-	6
59A	-	5	-	-	-	-	-	6
60A	-	10 EA 4	-	-	-	-	-	6

CONDUIT AND CONDUCTOR SCHEDULE NOTES

1 CONDUCTORS SHOWN ARE SHOWN FOR EACH CONDUIT WITH MODIFICATIONS AS NOTED IN NOTE 5. ALL CONDUCTORS SHOWN ARE THWN UNLESS OTHERWISE NOTED.
2 PROVIDE EQUIPMENT GROUND CONDUCTORS PER TABLE 250-122 WHEN CIRCUIT BREAKERS ARE SIZED GREATER THAN AMPERE RATING SHOWN IN TABLE.
3 PROVIDE #10 NEUTRALS FOR MULTIWIRE BRANCH CIRCUITS SERVING COMPUTERS.
4 GROUND (G) CONDUCTOR MAY BE DELETED ON SERVICE ENTRANCE CONDUCTORS.
5 SYMBOL SUBSCRIPTS:
"2N": INCLUDE TWO NEUTRAL CONDUCTORS, SIZED AS SCHEDULED FOR PHASED AND NEUTRAL CONDUCTORS.
"FG" FULL SIZE GROUND, SIZE EQUIPMENT GROUNDING CONDUCTOR TO BE SAME SIZE AS THE PHASE CONDUCTORS.
"HH": NEUTRAL CURRENTS EXIST DUE TO HIGH HARMONIC "NONLINEAR" LOADS. CURRENT CARRYING CONDUCTORS DERATED ACCORDINGLY.
"IG": INCLUDE IG (INSULATED/ISOLATED GROUND CONDUCTOR) SCHEDULED ALONG WITH THE GROUND OF EQUIPMENT GROUND CONDUCTOR.
"SE": SUBSTITUTE "SE" CONDUCTOR FOR "G" CONDUCTOR SHOWN, WHICH IS SIZED FOR THE GROUNDING OF THE SECONDARY OF THE SEPARATELY DERIVED SYSTEM.
6 RACEWAY ONLY. CONDUCTORS PROVIDED BY UTILITY.
7 ALUMINUM CONDUCTORS NOT TO BE USED FOR CONNECTION TO MOTORS OR MOTOR DRIVEN EQUIPMENT.

COPPER CONDUCTOR AND CONDUIT SCHEDULE

SCHEDULE NUMBER
SUBSCRIPT (NOTE 5)
(E.G.) 5 IG

SYM	AMP	HH AMPS	CONDUIT SIZE	CONDUCTOR (NOTE 1) QTY	SIZE	G	IG/HH	SE	NOTES
1	20	-	.75	2	12	12	12	8	2
2	20	-	.75	3	12	12	12	8	2,3
3	20	24	.75	4	12	12	12	8	2,3
4	30	-	.75	2	10	10	10	8	2
5	30	-	.75	3	10	10	10	8	2
6	30	32	.75	4	10	10	10	8	2
7	40	-	1	2	8	10	8	6	2
8	40	-	1	3	8	10	8	6	2
9	40	44	1	4	8	10	8	6	2
10	55	-	1	2	6	10	8	4	2
11	55	-	1	3	6	10	8	4	2
12	55	60	1.25	4	6	10	8	4	2
13	70	-	1	2	4	8	4	2	2
14	70	-	1.25	3	4	8	4	2	2
15	70	76	1.25	4	4	8	4	2	2
16	85	-	1.25	2	3	8	3	2	2
17	85	-	1.25	3	3	8	3	2	2
18	85	92	1.25	4	3	8	3	2	2
19	95	-	1.25	3	2	8	2	2	2
20	95	104	1.50	4	2	8	2	2	2
21	130	-	1.50	3	1	6	2	2	2
22	130	116	1.50	4	1	6	2	2	2
23	150	-	2	3	1/0	6	2	1/0	2
24	150	136	2	4	1/0	6	2	1/0	2
25	175	-	2	3	2/0	6	2	2/0	2
26	175	156	2	4	2/0	6	2	2/0	2
27	200	-	2	3	3/0	6	2	2/0	2
28	200	180	2.50	4	3/0	6	2	2/0	2
29	230	-	2.50	3	4/0	4	2	2/0	2
30	230	208	2.50	4	4/0	4	2	2/0	2
31	255	-	2.50	3	250	4	1	2/0	2
32	255	232	2.50	4	250	4	1	2/0	2
33	310	-	3	3	350	3	1/0	3/0	2
34	310	280	3	4	350	3	1/0	3/0	2
35	380	-	3.50	3	500	3	3/0	3/0	2
36	380	344	4	4	500	3	3/0	3/0	2
37	400	-	2 EA 2	3	3/0	3	3/0	3/0	2
38	400	360	2 EA 2.50	4	3/0	3	3/0	3/0	2
39	510	-	2 EA 2.50	3	250	1	4/0	3/0	2
40	510	464	2 EA 3	4	250	1	4/0	3/0	2
41	620	-	2 EA 3	3	350	1/0	4/0	3/0	2,4
42	620	560	2 EA 3	4	350	1/0	4/0	3/0	2,4
43	760	-	2 EA 3.50	3	500	1/0	4/0	3/0	2,4
44	760	688	2 EA 4	4	500	1/0	4/0	3/0	2,4
45	855	-	3 EA 3	3	300	2/0	4/0	3/0	2,4
46	855	768	3 EA 3	4	300	2/0	4/0	3/0	2,4
47	1000	-	3 EA 3.50	3	400	2/0	4/0	3/0	4
48	1000	912	3 EA 3.50	4	400	2/0	4/0	3/0	4
49	1140	-	3 EA 4	3	500	3/0	4/0	3/0	4
50	1140	1032	3 EA 4	4	500	3/0	4/0	3/0	4
51	1240	-	4 EA 3	3	350	3/0	4/0	3/0	4
52	1240	1120	4 EA 3	4	350	3/0	4/0	3/0	4
53	1675	1520	5 EA 4	4	400	4/0	4/0	4/0	4
54	2010	1824	6 EA 4	4	400	250	250	250	4
55	2660	2408	7 EA 4	4	500	350	350	350	4
56	3040	2752	8 EA 4	4	500	500	500	500	4
57	4180	3784	11 EA 4	4	500	500	500	500	4
58	-	-	5 EA 4	-	-	-	-	-	6
59	-	-	5	-	-	-	-	-	6
60	-	-	10 EA 4	-	-	-	-	-	6

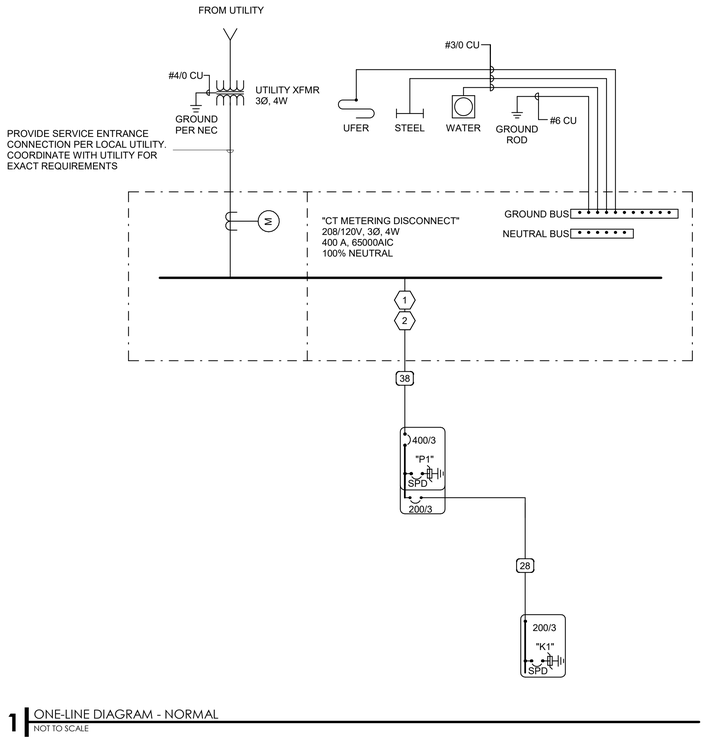
CONDUIT AND CONDUCTOR SCHEDULE NOTES

1. CONDUCTORS SHOWN ARE SHOWN FOR EACH CONDUIT WITH MODIFICATIONS AS NOTED IN NOTE 5. ALL CONDUCTORS SHOWN ARE THWN UNLESS OTHERWISE NOTED.
2. PROVIDE EQUIPMENT GROUND CONDUCTORS PER TABLE 250-122 WHEN CIRCUIT BREAKERS ARE SIZED GREATER THAN AMPERE RATING SHOWN IN TABLE.
3. PROVIDE #10 NEUTRALS FOR MULTIWIRE BRANCH CIRCUITS SERVING COMPUTERS.
4. GROUND (G) CONDUCTOR MAY BE DELETED ON SERVICE ENTRANCE CONDUCTORS.
5. SYMBOL SUBSCRIPTS:
"2N": INCLUDE TWO NEUTRAL CONDUCTORS SIZED AS SCHEDULED FOR PHASE AND NEUTRAL CONDUCTORS WHERE THE CONDUCTOR IS #1/0 OR LARGER. INCLUDE A SINGLE 200% RATED CONDUCTOR THAT IS TWICE THE AMPACITY OF THE SCHEDULED PHASE AND NEUTRAL CONDUCTOR WHERE THE CONDCUTOR IS BELOW #1/0 IN SIZE.
"FG" FULL SIZE GROUND, SIZE EQUIPMENT GROUNDING CONDUCTOR TO BE SAME SIZE AS THE PHASE CONDUCTORS.
"HH": NEUTRAL CURRENTS EXIST DUE TO HIGH HARMONIC "NONLINEAR" LOADS. CURRENT CARRYING CONDUCTORS DERATED ACCORDINGLY. PROVIDE THE IG/HH SIZE FOR THE EQUIPMENT GROUNDING CONDUCTOR.
"IG": INCLUDE IG (INSULATED/ISOLATED GROUND CONDUCTOR) SCHEDULED ALONG WITH THE GROUND OF EQUIPMENT GROUND CONDUCTOR.
"SE": SUBSTITUTE "SE" CONDUCTOR FOR "G" CONDUCTOR SHOWN, WHICH IS SIZED FOR THE GROUNDING OF THE SECONDARY OF THE SEPARATELY DERIVED SYSTEM.
6. RACEWAY ONLY. CONDUCTORS PROVIDED BY UTILITY.

FAULT CURRENT TABLE

PROVIDE FULLY RATED CIRCUIT BREAKERS IN PANELBOARDS FOR THE FAULT CURRENT SHOWN. SERIES RATINGS WITH NEXT LEVEL UPSTREAM OVERCURRENT PROTECTIVE DEVICES ARE PERMITTED SUBJECT TO FACTORY UL DOCUMENTATION OF SERIES RATING SUBMITTED TO ENGINEER. IF DEVICE OR EQUIPMENT FAULT CURRENT RATING IS NOT SHOWN, ASSUME 100,000 AIC.

BUS	FAULT CURRENT	BUS	FAULT CURRENT
CT METER			
K1	29355		
P1	32564		



1 ONE-LINE DIAGRAM - NORMAL
NOT TO SCALE

GENERAL SHEET NOTES

1 PROVIDE NEMA 3R ENCLOSURES FOR EQUIPMENT LOCATED OUTDOORS. REFER TO PLANS FOR EQUIPMENT LOCATIONS.

2 REFER TO PLANS FOR CONSTRAINTS ON PHYSICAL DIMENSIONS AND CLEARANCE REQUIREMENTS OF EQUIPMENT. PROVIDE EQUIPMENT DIMENSIONS THAT FALL WITHIN THE CONSTRAINTS OF EACH SPECIFIC LOCATION.

3 ALL EQUIPMENT SHALL BE CONSTRUCTED AND BRACED FOR THE SEISMIC CONDITIONS OF THE PROJECT. REFER TO ELECTRICAL SPECIFICATIONS FOR REQUIREMENTS.

4 PROVIDE PERFORMANCE TESTING FOR GROUND-FAULT PROTECTION SYSTEMS ON SITE WITH A WRITTEN RECORD OF THIS TEST SUBMITTED TO THE AUTHORITY HAVING JURISDICTION PER NEC 230.95(C).

5 SERVICE EQUIPMENT SHALL BE LEGIBLY MARKED IN THE FIELD WITH THE MAXIMUM AVAILABLE FAULT CURRENT. VERIFY OR RE-CALCULATE THE AVAILABLE FAULT CURRENT AT THE SERVICE WHERE MODIFICATIONS TO THE ELECTRICAL EQUIPMENT OCCUR. THE MARKING SHALL BE DURABLE AND MUST INCLUDE THE DATE THE FAULT CURRENT CALCULATION WAS PERFORMED NEC 110.24(A). PLEASE INCLUDE NOTES IN ELECTRICAL DRAWINGS OR SUPPLY CALCULATIONS WHERE APPICABLE. SEE NEC 110.24(A), (B)

6 THE OVERCURRENT PROTECTION DEVICES SHALL BE RATED THE SAME FAULT CURRENT RATING AS THE RATING OF THE PANEL OR SWITCHGEAR THEY ARE LOCATED WITHIN.

7 PROVIDE GROUNDING AND BONDING PER NEC 250.

8 EXISTING ONE-LINE ELECTRICAL DATA WAS DETERMINED USING PHOTOS WITH NO ELECTRICAL DATA IDENTIFICATION. CONTRACTOR TO FIELD VERIFY EXISITNG CONDITIONS AND NOTIFY ENGINEER OF ANY DISCREPENCIES IN ONE-LINE INFOMRMATION.

9 CONTRACTOR MAY UTILIZE EXISTING ELECTRICAL GEAR AS APROVED BY SAVORY.

SHEET KEYNOTES

1 UNLESS NOTED ON DRAWINGS, DISCONNECT EXISTING PANEL FROM CT DISCONNECT AND DEMO EXISTING CONDUIT, CONDUCTORS AND PANEL(S).

2 PROVIDE NEW FUSED DISCONNECT, CT METER PANEL (PER LOCAL UTILITY REQUIREMENTS), CONDUCTORS AND CONDUIT BETWEEN EXISTING BUSWAY AND PANEL LOCATION SHOWN ON DRAWINGS. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND NOTIFY ENGINEER OF ANY DIFFERENCES FROM ONE-LINE DIAGRAM.

EQUIPMENT NAMEPLATE SCHEDULE

EQUIPMENT ID SCHEME	FIRST DIGIT - BUILDING LEVEL (0, 1, 2, ETC) SECOND DIGIT - PANEL TYPE M - MECHANICAL H - (277/480) L - (120/208) E - EMERGENCY S - STANDBY Q - EQUIPMENT U - UPS K - KITCHEN (120/208) THIRD DIGIT - BUILDING AREA (A, B, C, ETC) FOURTH DIGIT - SEQUENCE # (1,2,3,...)
LABEL FORMAT	[NAME] [SYSTEM] [VOLTAGE] [FED FROM] [SOURSE(S)]
LABEL EXAMPLE	PANEL "4LA1" STANDBY POWER 120/208V FED FROM BUS-A / XFMR 4TA
BUSWAY	LABEL BUSWAY EVERY 6' WHERE EXPOSED TO VIEW AND EVERY 15' WHERE NOT EXPOSED TO VIEW
OTHER	

COLOR SCHEME

SYSTEM	EQUIPMENT	NAMEPLATE COLOR TEXT	BACKGROUND
NORMAL POWER	ALL GEAR NOT INCLUDED BELOW	WHITE	BLACK
STANDBY POWER	MDPS1 AND ALL DOWNSTREAM GEAR, EXCEPT UPS GEAR AS NOTED	WHITE	ORANGE
EMERGENCY POWER	GDP1, GDP2, ATS-E AND ALL DOWNSTREAM GEAR	WHITE	RED
LEGALLY-REQUIRED STANDBY POWER	ATS-S AND ALL DOWNSTREAM GEAR	RED	WHITE
UPS "A" POWER	UPSA AND ALL DOWNSTREAM GEAR	WHITE	BLUE
UPS "B" POWER	UPSB AND ALL DOWNSTREAM GEAR	BLACK	YELLOW

BRANCH CIRCUIT CONDUCTOR AND CONDUIT SIZING TABLE

CIRCUIT AMPACITY/VOLTAGE	CIRCUIT LENGTH	CONDUCTOR SIZE (PHASE, NEUTRAL AND GR)	CONDUIT SIZE
20A/120V	0' - 60'	#12 AWG	0.75" Ø
20A/120V	60' - 95'	#10 AWG	0.75" Ø
20A/120V	95' - 150'	#8 AWG	1" Ø
20A/120V	150' - 240'	#6 AWG	1.25" Ø
20A/277V	0' - 140'	#12 AWG	0.75" Ø
20A/277V	140' - 220'	#10 AWG	0.75" Ø
20A/277V	220' - 350'	#8 AWG	1" Ø
20A/277V	350' - 550'	#6 AWG	1.25" Ø

NOTES:

1. WIRE SIZING IS BASED ON COPPER CONDUCTORS SUPPLYING A 20A, 120V CIRCUIT AT THE INDICATED VOLTAGE, ASSUMED TO BE 80% LOADED (16A), WITH MAXIMUM VOLTAGE DROP OF 3% AT THE LOAD.
2. DOWN-SIZED WIRE AT DEVICE/LOAD AS REQUIRED AND TERMINATE CONDUCTORS IN A SAFE AND CODE COMPLIANT MANNER.
3. CONDUIT SIZE IS BASED ON A MAXIMUM OF 3 CIRCUITS PER CONDUIT, EACH WITH A SEPARATE NEUTRAL CONDUCTOR.

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sheet information

revisions:

num.	description	date
1	IFP_ADD-01	03-11-22

CURRENT SET THRU REVISION 02

date:	1-23-2022
project number:	MO-53LEE
project status:	ISSUED FOR PERMIT

original drawing is 24" x 36"
current as of: 4/18/2022 3:35:19 PM

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NUMBER
PROFESSIONAL ENGINEER
04/06/22

sheet number:

MOBETTAHS (TI) for:
LEE'S SUMMIT
520 NW Chipman Rd
Lee's Summit, MO 64086

SAVORY MANAGEMENT

sheet title: ONE-LINE DIAGRAM

sheet number:

EP601

EQUIPMENT SCHEDULE

EQUIPMENT SCHEDULE KEY
E - DIVISION 26
Q - FURNISHED WITH EQUIPMENT
* - COORDINATE WITH THE DIVISION 23 TEMPERATURE CONTROL INSTALLER
** - AUTOMATIC CONTROL WIRING BY DIVISION 23

NOTES:
1. NEMA 3R
2. TOGGLE SWITCH W/ THERMAL OVERLOAD.
3. PROVIDE FUSED DISCONNECT ELEVATOR POWER MODULE WITH SHUNT TRIP.
4. CONTRACTOR TO PERFORM FINAL CONNECTION TO LINE VOLTAGE THERMOSTATS.
5. TOGGLE SWITCH W/BACNET INTERFACE.
6. INDOOR UNITS FED FROM OUTDOOR UNIT. PROVIDE DISCONNECTS FOR BOTH.
7. PROVIDE SWITCH WITH BACNET MS/TP CAPABILITY.
8. PROVIDE LABEL ON DISCONNECT "DISCONNECT OUTDOOR UNIT PRIOR TO INDOOR."
9. LINE VOLTAGE THERMOSTAT ON WALL.
10. PROVIDE EXPLOSION PROOF DEVICES AND WIRING METHODS.
11. PROVIDE DUAL-REDUNDANT 100% RATED VFD'S FOR AIR HANDLER.
12. PROVIDE MANUAL STARTER WITH THERMAL OVERLOAD AND RELAY FOR ATC/BAS CONTROL.

GENERAL NOTES:
1. WHERE DISCONNECTS, STARTERS, OR VFCs ARE BEING PROVIDED BY ELECTRICAL CONTRACTOR, LOCATE EQUIPMENT IN ACCESSIBLE LOCATION, SUCH THAT IT IS WITHIN SITE OF THE MECHANICAL EQUIPMENT IT IS SERVING, AND COMPLIES WITH N.E.C. REQUIRED CLEARANCES.

			LOAD DATA								OVERCURRENT PROTECTION			DISCONNECT			STARTER									
MARK	QTY	ITEM DESCRIPTION	HP	kW	MCA	FLA	VOLT	PH	Hz	WIRE AND CONDUIT SIZE	FURN BY	DEVICE	LOCATION	FURN BY	DEVICE	LOCATION	FURN BY	DEVICE	SIZES	SELECTOR SWITCH	PILOT LAMP	NORMALLY OPEN CONTACT	NORMALLY CLOSED CONTACT	PHASE FAILURE RELAY	NOTES	MARK
CU-1	1	CONDESNING UNIT	1	-	-	13.6	208	1	60	3 #10, 10 GR 0.75" CND	E	30/2 CB	P1	E	30A/2P FRS-20	ADJ TO EQUIP	Q	-	-	-	-	-	-	-		CU-1
EF-1	1	EXHAUST FAN	1	-	-	6.9	208	1	60	3 #12, 12 GR 0.75" CND	E	15/2 CB	P1	Q	TOGGLE SWITCH	ADJ TO EQUIP	E	-	-	-	-	-	-	-		EF-1
EF-2	1	EXHAUST FAN	1	-	-	6.9	208	1	60	3 #12, 12 GR 0.75" CND	E	15/2 CB	P1	Q	TOGGLE SWITCH	ADJ TO EQUIP	E	-	-	-	-	-	-	-		EF-2
EF-3	1	EXHAUST FAN	1	-	-	6.9	208	1	60	3 #12, 12 GR 0.75" CND	E	15/2 CB	P1	Q	TOGGLE SWITCH	ADJ TO EQUIP	E	-	-	-	-	-	-	-		EF-3
EF-4	1	EXHAUST FAN	.05	-	1	0.8	120	1	60	2 #12, 12 GR 0.75" CND	E	15/1 CB	P1	E	TOGGLE SWITCH	ADJ TO EQUIP	Q	-	-	-	-	-	-	-		EF-4
FC-1	1	FAN COIL UNIT	-	-	-	0.8	120	1	60	2 #12, 12 GR 0.75" CND	E	15/1 CB	P1	E	30A/2P NF	ADJ TO EQUIP	Q	-	-	-	-	-	-	-		FC-1
MAU-1	1	MAKE UP AIR UNIT	5	-	18.8	15	208	3	60	4 #10, 10 GR 0.75" CND	E	30/3 CB	P1	Q	30A/3P FRN-25	ADJ TO EQUIP	Q	-	-	-	-	-	-	-		MAU-1
MCU-1	1	CONDENSING UNIT	3	-	14.5	11.9	208	3	60	4 #10, 10 GR 0.75" CND	E	30/3 CB	P1	E	30A/3P FRS-20	ADJ TO EQUIP	Q	-	-	-	-	-	-	-		MCU-1
MCU-2	1	CONDESNING UNIT	5	-	21.4	17.4	208	3	60	4 #8, 10 GR 1" CND	E	40/3 CB	P1	E	60A/3P FRS-30	ADJ TO EQUIP	Q	-	-	-	-	-	-	-		MCU-2
RTU-1	1	ROOF TOP UNIT	2.75		53.4	42.7	208	3	60	4 #4, #8 GR 1.25" CND	E	70/3 CB	P1	Q	100A/3P FRN-80	ADJ TO EQUIP	Q	-	-	-	-	-	-	-		RTU-1
RTU-2	1	ROOF TOP UNIT	2.75		53.4	42.7	208	3	60	4 #4, #8 GR 1.25" CND	E	70/3 CB	P1	Q	100A/3P FRN-80	ADJ TO EQUIP	Q	-	-	-	-	-	-	-		RTU-2

FOOD SERVICE EQUIPMENT SCHEDULE

ITEM NO.	QTY	DECSRIPTION	ELEC. CONN.	PANEL	CKT #	VOLT	POLE	AFF	HP	AMPS	kW	WIRE AND CONDUIT SIZE	ELECTRICAL REMARKS
202A	1	CONVECTION OVEN	SWITCH CONTROLS	K1	26,28	208 V	2	21"	-	25.8	5.4	3 #10 #10 GR 0.75" CND	DIRECT WIRE, THERMAL SWITCH, 35A/2P CB, SHUNT TRIP
202B	1	CONVECTION OVEN	SWITCH CONTROLS	K1	33,35	208 V	2	21"	-	25.8	5.4	3 #10 #10 GR 0.75" CND	DIRECT WIRE, THERMAL SWITCH, 35A/2P CB, SHUNT TRIP
300	2	UNDERCOUNTER REFRIGERATOR	DUPLEX RECEPTACLE	K1		120 V	1	21"		2.5	0.3	2 #12, #12 GR 0.75" CND	NEMA 5-20R
301	1	REFRIGERATED PREP TABLE (27x34)	DUPLEX RECEPTACLE	K1	4	120 V	1	21"	1/5	3.3	0.4	2 #12, #12 GR 0.75" CND	NEMA 5-20R
302	1	REACH-IN DUAL TEMP CABINET	DUPLEX RECEPTACLE	K1	8	120 V	1	21"	3/8	4.8	0.6	2 #12, #12 GR 0.75" CND	NEMA 5-20R
303	1	REACH-IN REFRIGERATOR	DUPLEX RECEPTACLE	K1	2	120 V	1	21"	1/4	2.5	0.3	2 #12, #12 GR 0.75" CND	NEMA 5-20R
304	1	REFRIGERATED DISPLAY CASE	DUPLEX RECEPTACLE	K1	17	120 V	1	42"	1/3	16.0	1.9	2 #10, #10 GR 0.75" CND	NEMA 5-20R
306	1	UNDERCOUNTER REFRIGERATOR	DUPLEX RECEPTACLE	K1	5	120 V	1	42"	1/5	2.3	0.3	2 #12, #12 GR 0.75" CND	NEMA 5-20R
410	1	SINGLE PAN DROP-IN HOT WELL	SPECIAL PURPOSE RECEPTACLE	K1	16,18	208 V	2	21"	-	5.9	1.2	3 #12, #12 GR 0.75" CND	NEMA 6-20R
411	1	DROP-IN HOT WELL	SPECIAL PURPOSE RECEPTACLE	K1	30,32	208 V	2	21"	-	27.3	5.7	3 #10 #10 GR .75" CND	NEMA 6-50R
412	1	DROP-IN COLD WELL	DUPLEX RECEPTACLE	K1	7	120 V	1	21"	1/5	3.8	0.5	2 #12, #12 GR 0.75" CND	NEMA 5-20R
420	1	HOT FOOD-SOUP STATION	SPECIAL PURPOSE RECEPTACLE	K1	22,24	208 V	2	18"	-	16.6	3.5	3 #12 #12 GR 0.75" CND	NEMA 6-20R
502	1	WARMER, FOOD OVERHEAD	DUPLEX RECEPTACLE	K1	37	120 V	1	60"		6.3	0.8	2 #12, #12 GR 0.75" CND	NEMA 5-20R
504	1	CABINET, HEATED, REACH-IN	SPECIAL PURPOSE RECEPTACLE	K1	19,21	208 V	2	21"	-	7.2	1.5	3 #12, #12 GR 0.75" CND	NEMA 6-20R, SHUNT TRIP
700A	1	ICE MACHINE	DUPLEX RECEPTACLE	K1	15	120 V	1	60"	-	6.5	0.8	2 #12, #12 GR 0.75" CND	NEMA 6-20R
700B	1	ICE MACHINE	DUPLEX RECEPTACLE	K1	12	120 V	1	60"	-	6.5	0.8	2 #12, #12 GR 0.75" CND	NEMA 6-20R
911A	1	8 - VALVE BEVERAGE DISPENSER	DUPLEX RECEPTACLE	K1	6	120 V	1	18"	-	6.5	0.8	2 #12, #12 GR 0.75" CND	NEMA 5-20R
911B	1	8 - VALVE BEVERAGE DISPENSER	DUPLEX RECEPTACLE	K1	44	120 V	1	18"	-	6.5	0.8	2 #12, #12 GR 0.75" CND	NEMA 5-20R
993	1	BULK Co2 TANK	DUPLEX RECEPTACLE	K1	36	120 V	1	18"	-	3.0	0.4	2 #12, #12 GR 0.75" CND	NEMA 5-20R
994	1	WATER HEATER	DUPLEX RECEPTACLE	K1	9	120 V	1	18"	-	4.0	0.5	2 #12, #12 GR 0.75" CND	NEMA 5-20R
995	1	WATER SOFTENER	DUPLEX RECEPTACLE	K1	1	120 V	1	18"	-	1.0	0.1	2 #12, #12 GR 0.75" CND	NEMA 5-20R
996	1	BAG-IN-BOX SHELVING	DUPLEX RECEPTACLE	K1	25	120 V	1	72"		7.9	0.9	2 #12, #12 GR 0.75" CND	NEMA 5-20R
997	1	RECEIPT PRINTER	DUPLEX RECEPTACLE	K1	13	120 V	1	72"		4.2	0.5	2 #12, #12 GR 0.75" CND	NEMA 5-20R
998A	1	CASH REGISTER	DUPLEX RECEPTACLE	K1	45	120 V	1	18"	-	3.0	0.4	2 #12, #12 GR 0.75" CND	NEMA 5-20R
998B	1	CASH REGISTER	DUPLEX RECEPTACLE	K1	41	120 V	1	18"	-	3.0	0.4	2 #12, #12 GR 0.75" CND	NEMA 5-20R
998C	1	CASH REGISTER	DUPLEX RECEPTACLE	K1	43	120 V	1	18"	-	3.0	0.4	2 #12, #12 GR 0.75" CND	NEMA 5-20R
998D	1	CASH REGISTER	DUPLEX RECEPTACLE	K1	38	120 V	1	42"	-	3.0	0.4	2 #12, #12 GR 0.75" CND	NEMA 5-20R
999A	1	BEVERAGE DISPENSER	DUPLEX RECEPTACLE	K1	42	120 V	1	18"	-	3.0	0.4	2 #12, #12 GR 0.75" CND	NEMA 5-20R
999B	1	8 - VALVE BEVERAGE DISPENSER	DUPLEX RECEPTACLE	K1	40	120 V	1	18"	-	3.0	0.4	2 #12, #12 GR 0.75" CND	NEMA 5-20R

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1	IFP_ADD-01	03-11-22
2	REVISION 02	04.06.22

CURRENT SET THRU REVISION 02

date: 1-23-2022
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MOBETTAHS (TI) for:
LEE'S SUMMIT
520 NW Chipman Rd
Lee's Summit, MO 64086

SAVORY MANAGEMENT

sheet title: EQUIPMENT SCHEDULE

sheet number:

EP602

PANEL: "P1"

VOLTS/PHASE/WIRE:	PANEL SIZE & TYPE:	MAIN SIZE AND TYPE:	FED FROM:	CABINET:	LOCATION:	NOTES:
120/208V, 3 PH 4 WIRE	22" W x 6" D, BOLT-ON	400 AMPERE MAIN CB		RECESSED	UTILITY ROOM	

ACCESSORIES: PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR **AIC RATING:** 35,000

CKT	OCP			LOAD (kVA)				PHASE LOAD							LOAD (kVA)			OCP			CKT
NO	AMP	POLE	BKR	LTG	PWR	CO	DESCRIPTION	A		B		C		DESCRIPTION	CO	PWR	LTG	BKR	POLE	AMP	NO
1	70	3		0.0	13.8	0.0	RTU-1	4.6	4.0					RTU-2	0.0	12.1	0.0		3	70	2
3	--	--	--	--	--	--	--			4.6	4.0			--	--	--	--	--	--	--	4
5	--	--	--	--	--	--	--					4.6	4.0	--	--	--	--	--	--	--	6
7	15	2		0.0	1.3	0.0	EF-1	0.6	0.6					EF-2	0.0	1.3	0.0		2	15	8
9	--	--	--	--	--	--	--			0.6	0.6			--	--	--	--	--	--	--	10
11	15	2		0.0	1.3	0.0	EF-3					0.6	0.1	EF-4	0.0	0.1	0.0		1	15	12
13	--	--	--	--	--	--	--	0.6	0.8					SIGNAGE	0.0	0.8	0.0		1	20	14
15	30	3		0.0	5.4	0.0	MAU-1			1.8	0.5			ROOF CO	0.5	0.0	0.0		1	20	16
17	--	--	--	--	--	--	--					1.8	0.1	FC-1	0.0	0.1	0.0		1	15	18
19	--	--	--	--	--	--	--	1.8	1.4					CU-1	0.0	2.8	0.0		2	30	20
21	20	1		0.0	0.0	0.4	ENTRANCE IPADS			0.4	1.4			--	--	--	--	--	--	--	22
23	20	1		0.0	0.0	1.4	OPEN/CLOSE SIGNAGE					1.4	0.7	SIGNAGE	0.7	0.0	0.0		1	20	24
25	20	1		0.0	0.0	0.2	TV	0.2	0.4					CO	0.4	0.0	0.0		1	20	26
27	20	1		0.0	0.0	0.2	CO			0.2	0.1			CO	0.1	0.0	0.0		1	20	28
29	20	1		0.0	0.0	0.4	CO					0.4	0.8	KITCHEN LIGHTING	0.0	0.0	0.8		1	20	30
31	20	1		0.9	0.0	0.0	DINING LIGHTING	1.1	0.4					A/V RACK	0.4	0.0	0.0		1	20	32
33	200	3		0.0	12.6	3.2	K1			12.1	0.5			RESTROOM CO	0.5	0.0	0.0		1	20	34
35	--	--	--	--	--	--	--					13.1	0.4	A/V RACK	0.4	0.0	0.0		1	20	36
37	--	--	--	--	--	--	--	14.3	0.3					EXT. BUILDING LTG	0.0	0.0	0.1		1	20	38
39	20	1		0.1	0.0	0.0	RESTROOM & ELEC CLOSET LTG			0.1	0.8			WALK-IN COOLER LTG	0.0	0.0	0.8		1	20	40
41	20	1		1.4	0.2	0.0	SITE LIGHTING					1.6	0.4	ANSUL POWER	0.0	0.4	0.0		1	20	42
43	30	3		0.0	4.3	0.0	MCU-1	1.4	2.1					MCU-2	0.0	6.3	0.0		3	40	44
45	--	--	--	--	--	--	--			1.4	2.1			--	--	--	--	--	--	--	46
47	--	--	--	--	--	--	--					1.4	2.1	--	--	--	--	--	--	--	48
49	20	1	--	--	--	--	SPARE	0.0	0.0					SPARE	--	--	--	--	1	20	50
51	20	1	--	--	--	--	SPARE			0.0	0.0			SPARE	--	--	--	--	1	20	52
53	20	1	--	--	--	--	SPARE					0.0	0.0	SPARE	--	--	--	--	1	20	54
55	20	1	--	--	--	--	SPARE	0.0	0.0					SPARE	--	--	--	--	1	20	56
57	20	1	--	--	--	--	SPARE			0.0	0.0			SPARE	--	--	--	--	1	20	58
59	20	1	--	--	--	--	SPARE					0.0	0.0	SPARE	--	--	--	--	1	20	60
TOTALS:							CONNECTED kVA PER PHASE	**35**		**31**		**33**		CONNECTED TOTAL kVA =					**99**		
							CONNECTED AMPS PER PHASE	**291**		**261**		**282**		AVERAGE CONNECTED AMPS PER PHASE =					**276**		

NEC DIVERSIFIED LOAD CALCULATIONS

LIGHTING & CONTINUOUS LOADS: **4.1 kVA @ 125% = 5.1 kVA**
RECEPTACLES: **8.7 kVA @ 100% = 8.7 kVA**
ALL OTHER LOADS @ 100% : **66.0 kVA**
KITCHEN EQUIP. LOADS @ 65% : **15.4 kVA**

- 100% CONNECTED LOAD PLUS 25%
- FIRST 10kVA @ 100%, REMAINDER @ 50%
- MOTOR TOTALS INCLUDED IN ALL OTHER LOADS WITH LARGEST MOTOR CALCULATED @ 125% PER NEC

DIVERSIFIED TOTAL kVA = **95**
AVERAGE AMPS PER PHASE = **265**

BKR: GF=GFCI, GF3=30mA GFCI CAPABLE OF BEING LOCKED OUT IN OPEN POSITION, IG=ISOLATED GROUND, AF=AFCI, ST=SHUNT TRIP, RED=PROVIDE RED COLORED BREAKER, AF=ARC FAULT CURRENT INTERRUPTER, GA=COMBINATION OF GROUND FAULT AND ARC FAULT CIRCUIT INTERRUPTER, GS=COMBINATION OF SHUNT TRIP WITH GFCI

NOTES:

PANEL: "K1"

VOLTS/PHASE/WIRE:	PANEL SIZE & TYPE:	MAIN SIZE AND TYPE:	FED FROM:	CABINET:	LOCATION:	NOTES:
120/208V, 3 PH 4 WIRE	22" W x 6" D, BOLT-ON	200 AMPERE MAIN LUGS	P1	RECESSED	UTILITY ROOM	

ACCESSORIES: PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR **AIC RATING:** 35,000

CKT	OCP			LOAD (kVA)				PHASE LOAD							LOAD (kVA)			OCP			CKT
NO	AMP	POLE	BKR	LTG	PWR	CO	DESCRIPTION	A		B		C		DESCRIPTION	CO	PWR	LTG	BKR	POLE	AMP	NO
1	20	1	GF	0.0	0.0	0.0	995 - WATER SOFTNER	0.1	0.3					303 - REACH-IN REF	0.0	0.0	0.0	GF	1	20	2
3	20	1	GF	0.0	0.0	0.0	300 - UNDERCOUNTER REF			0.3	0.4			301 - SALAD PREP REF	0.0	0.0	0.0	GF	1	20	4
5	20	1	GF	0.0	0.0	0.0	306 - UNDERCOUNTER REF					0.3	0.8	911 - BEVERAGE DISPENSER	0.0	0.0	0.0	GF	1	20	6
7	20	1	GF	0.0	0.0	0.0	412 - DROP-IN COLD WELLS	0.5	0.6					302 - DUAL TEMP REF	0.0	0.0	0.0	GF	1	20	8
9	20	1	GF	0.0	0.0	0.0	994 - WATER HEATER			0.5	0.4			DRIVE THRU CO	0.4	0.0	0.0	GF	1	20	10
11	20	1	--	--	--	--	SPARE					0.0	0.8	700B - ICE MACHINE	0.0	0.0	0.0	GF	1	20	12
13	20	1	GF	0.0	0.0	0.0	997 - RECEIPT PRINTER	0.5	0.2					CO2 MONITOR	0.2	0.0	0.0	GF	1	20	14
15	20	1	GF	0.0	0.0	0.0	700A - ICE MACHINE			0.8	0.6			410 - DROP-IN HOT WELLS	0.0	1.2	0.0	GF	2	20	16
17	30	1	GF	0.0	0.0	0.0	304 - REFRIGERATED DISPLAY...					1.9	0.6		--	--	--	--	--	--	18
19	20	2	GS	0.0	1.5	0.0	504 - HEATED CABINET	0.7	0.2					KITCHEN CO	0.2	0.0	0.0	GF	1	20	20
21	--	--	--	--	--	--	--			0.7	1.7			420 - HOT SOUP STATION	0.0	3.5	0.0	GF	2	30	22
23	--	1	--	--	--	--	SPACE (SHUNT TRIP COIL)					--	1.7	--	--	--	--	--	--	--	24
25	20	1	GF	0.0	0.0	0.0	996 - BAG-IN-BOX	0.9	2.7					202A - CONVECTION OVEN	0.0	0.0	0.0	GF	2	40	26
27	20	1	GF	0.0	0.0	0.7	KITCHEN CO			0.7	2.7			--	--	--	--	--	--	--	28
29	20	1	GS	0.0	0.2	0.0	HOOD (1)					0.2	2.8	411 - DROP-IN HOT WELLS	0.0	5.7	0.0	GF	2	40	30
31	--	1	--	--	--	--	SPACE (SHUNT TRIP COIL)	--	2.8					--	--	--	--	--	--	--	32
33	40	2	GF	0.0	0.0	0.0	202B - CONVECTION OVEN			2.7	0.2			VC POWER	0.2	0.0	0.0	GF	1	20	34
35	--	--	--	--	--	--	--					2.7	0.4	993 - CO2	0.0	0.0	0.0	GF	1	20	36
37	20	1	GF	0.0	0.0	0.0	502 - FOOD WARMER, OVERHEAD	0.8	0.4					998 - POS	0.0	0.0	0.0	GF	1	20	38
39	20	1	GF	0.0	0.4	0.0	WALK-IN POWER			0.4	0.4			999 - 8 VALVE BEVERAGE DISPENSER	0.0	0.0	0.0	GF	1	20	40
41	20	1	GF	0.0	0.0	0.0	998 - POS					0.4	0.4	999 - 8 VALVE BEVERAGE DISPENSER	0.0	0.0	0.0	GF	1	20	42
43	20	1	GF	0.0	0.0	0.0	998 - POS	0.4	0.8					911 - BEVERAGE DISPENSER	0.0	0.0	0.0	GF	1	20	44
45	20	1	GF	0.0	0.0	0.0	998 - POS			0.4	0.4			DRIVE THRU CABINET CO	0.4	0.0	0.0		1	20	46
47	20	1	GF	0.0	0.0	1.3	RACK ISLAND SERVING TABLE					1.3	0.2	HOOD (2)	0.0	0.2	0.0	GS	1	20	48
49	20	1	GF	0.0	0.0	0.0	300 - UNDERCOUNTER REF	0.3	--					SPACE (SHUNT TRIP COIL)	--	--	--	--	1	--	50
51	20	1	--	--	--	--	SPARE			0.0	0.0			SPARE	--	--	--	--	1	20	52
53	20	1	--	--	--	--	SPARE					0.0	0.0	SPARE	--	--	--	--	1	20	54
55	20	1	--	--	--	--	SPARE	0.0	0.0					SPARE	--	--	--	--	1	20	56
57	20	1	--	--	--	--	SPARE			0.0	0.0			SPARE (SHUNT TRIP)	--	--	--	--	1	20	58
59	20	1	--	--	--	--	SPARE					0.0	0.0	SPARE (GFI)	--	--	--	--	1	20	60
TOTALS:							CONNECTED kVA PER PHASE	**12**		**13**		**14**		CONNECTED TOTAL kVA =					**40**		
							CONNECTED AMPS PER PHASE	**101**		**111**		**121**		AVERAGE CONNECTED AMPS PER PHASE =					**110**		

NEC DIVERSIFIED LOAD CALCULATIONS

LIGHTING & CONTINUOUS LOADS:
RECEPTACLES: **3.2 kVA @ 100% = 3.2 kVA**
ALL OTHER LOADS @ 100% : **12.6 kVA**
KITCHEN EQUIP. LOADS @ 65% : **15.4 kVA**

- 100% CONNECTED LOAD PLUS 25%
- FIRST 10kVA @ 100%, REMAINDER @ 50%
- MOTOR TOTALS INCLUDED IN ALL OTHER LOADS WITH LARGEST MOTOR CALCULATED @ 125% PER NEC

DIVERSIFIED TOTAL kVA = **31**
AVERAGE AMPS PER PHASE = **87**

BKR: GF=GFCI, GF3=30mA GFCI CAPABLE OF BEING LOCKED OUT IN OPEN POSITION, IG=ISOLATED GROUND, AF=AFCI, ST=SHUNT TRIP, RED=PROVIDE RED COLORED BREAKER, AF=ARC FAULT CURRENT INTERRUPTER, GA=COMBINATION OF GROUND FAULT AND ARC FAULT CIRCUIT INTERRUPTER, GS=COMBINATION OF SHUNT TRIP WITH GFCI

NOTES:

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sheet information

revisions: 2

num.	description	date
1	IFP_ADD-01	03-11-22
2	REVISION 02	04.06.22

CURRENT SET THRU REVISION 02

date:	1-23-2022
project number:	MO-53LEE
project status:	ISSUED FOR PERMIT

original drawing is 24" x 36"
current as of: 4/18/2022 3:35:23 PM

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04/06/22

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SAVORY MANAGEMENT

sheet title: PANEL SCHEDULES

sheet number:

EP603

SHEET KEYNOTES

1 ELECTRICIAN TO PROVIDE AND INSTALL 15 WATT, 3000K, 1500 LUMEN LED LAMPS FOR USE IN MECHANICAL HOODS. PAINT ON CONDUIT UNDER CANOPY BLACK

2 FOUR BUTTON SWITCH "CS-1" TIED TO RELAY PANEL. LABEL SWITCH 1 AS "SERVICE AREA", SWITCH 2 AS "DINING", SWITCH 3 AS "DINING EXHIBITS", AND SWITCH 4 AS "DINING ROOM CANOPY".

3 PROVIDE POWER TO ANSUL SYSTEM IF PRESENT.

4 PROVIDE 2 AMP CURRENT LIMITING DEVICE FOR ALL TRACK LIGHTING.

5 VERIFY WITH INSTALLER THE PLACEMENT OF TRACK LIGHTING OVER ART.

6 CONNECT HEAT DETECTOR TO BUILDING FIRE ALARM SYSTEM (IF PRESENT). PROVIDE WITH KEYED REMOTE TEST SWITCH WITH LED INDICATOR LIGHT. COORDINATE EXACT LOCATION WITH OWNER/ARCHITECT PRIOR TO ROUGH-IN. COORDINATE WITH HOOD ANSUL SYSTEM IF PRESENT.

7 CONNECT DUCT SMOKE DETECTOR TO BUILDING FIRE ALARM SYSTEM (IF PRESENT). PROVIDE WITH KEYED REMOTE TEST SWITCH WITH LED INDICATOR LIGHT. COORDINATE EXACT LOCATION WITH OWNER/ARCHITECT PRIOR TO ROUGH-IN

8 LIGHT FIXTURE MOUNTED TO UNDER SIDE OF CANOPY. COORDINATE MOUNTING HEIGHT OF FIXTURES WITH ARCHITECT/OWNER. ALL CONDUIT UNDER CANOPY SHALL BE PAINTED TO MATCH CANOPY COLOR.

9 WALK-IN COOLER LIGHTING. COORDINATE WITH INSTALLERS.

GENERAL SHEET NOTES

1 RUN UNSWITCHED LEG OF LIGHTING CIRCUIT TO ALL EXIT SIGNS, BATTERY PACKS AND EMERGENCY EGRESS LIGHTING.

2 VERIFY ALL EQUIPMENT LOCATION AND REQUIREMENTS PRIOR TO ROUGH-IN. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE FINAL CONNECTIONS FOR OWNER SUPPLIED EQUIPMENT.

3 SEE ARCHITECTURAL DRAWINGS FOR ALL LIGHTING FIXTURE HEIGHTS AND SPECAILTY PENDANT HEIGHTS.

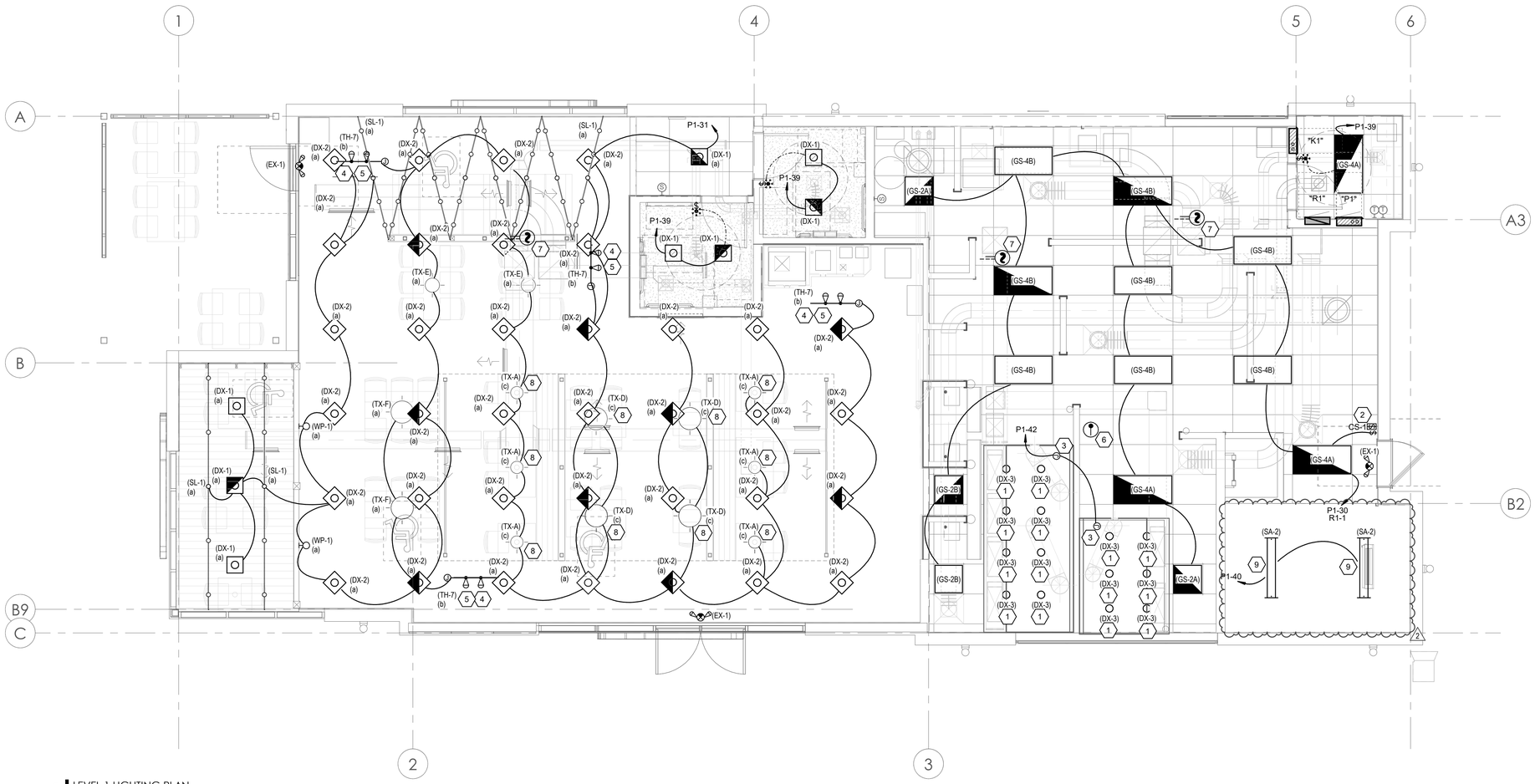
4 ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL SEVEN (12) 12 WATT, 3000K, 1575 LUMEN LED LAMPS FOR USE IN MECHANICAL HOODS.

5 REPAIR OR REPLACE EXISTING POLE MOUNTED FIXTURES. CONTRACTOR SHALL DISCONNECT EXISTING CIRCUITING FROM EXISTING PANEL(S) AND REROUTE TO NEW PANELS AND CIRCUIT THROUGH NEW LIGHTING CONTROL PANEL. PROVIDE CONDUIT AND CONDUCTORS TO EXTEND CIRCUITING AS NEEDED.

6 DEMO ALL EXISTING EXTERIOR BUILDING MOUNTED LIGHT FIXTURES. PROVIDE NEW LIGHT FIXTURES IN LOCATIONS AS SHOWN ON DRAWINGS.

7 LIGHTING CONTROL PANEL SHALL BE PROGRAMMED SUCH THAT THE LIGHTING SHALL REMAIN ON WHILE THE SPACE IS OCCUPIED (DURING BUSINESS HOURS) IN ACCORDANCE WITH IFC 1008 (2015).

8 EMERGENCY LIGHTING SHALL BE ARRANGED TO PROVIDE INITIAL ILLUMINATION THAT IS AT LEAST AN AVERAGE OF 1 FOOT-CANDLE, AND A MINIMUM AT ANY POINT OF 0.1 FOOT-CANDLE MEASURED ALONG THE PATH OF EGRESS AT THE FLOOR LEVEL. IBC 1008.3.5.



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

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SAVORY MANAGEMENT

sheet title: LEVEL 1 LIGHTING PLAN

sheet number:

EL101

SPECIFICATIONS

ENCLOSURE DIMENSIONS
Note: Enclosure is NEMA 1 rated

8-Relay Enclosure
- BACKBOX ONLY: 14.25"H x 14.25"W x 4.00"D
- SURFACE MOUNT SCREW COVER (standard offering): 14.41"H x 14.41"W x 4.05"D
- FLUSH MOUNT SCREW COVER: 15.65"H x 15.65"W x 4.05"D (IN-WALL DEPTH: 4.0")

16 Relay Enclosure
- BACKBOX ONLY: 22.25"H x 14.25"W x 4.00"D
- SURFACE MOUNT SCREW COVER (standard offering): 22.45"H x 14.45"W x 4.06"D
- FLUSH MOUNT SCREW COVER: 23.65"H x 15.65"W x 4.06"D (IN-WALL DEPTH: 4.0")

32 Relay Enclosure
- BACKBOX ONLY: 32.10"H x 20.13"W x 6.00"D
- SURFACE MOUNT HINGED DOOR w/ KEYLOCK: 32.10"H x 20.13"W x 6.68"D

48 Relay Enclosure
- BACKBOX ONLY: 40.10"H x 20.13"W x 6.00"D
- SURFACE MOUNT HINGED DOOR w/ KEYLOCK: 40.10"H x 20.13"W x 6.68"D

Patent
- 10,129,950
- 9,691,578
- 9,368,306

RELAYS
"FCR" Type Relays - Field Configurable for 2-Pole and 3-Pole Relays
- Magnetic/Standard Ballast:
  - 40A @ 120-347VAC (Single-pole)
  - 40A @ 480VAC (Multi-pole)
- Electronic Ballast:
  - 16A @ 120-347VAC
- Tungsten:
  - 20A @ 120-277VAC
- Horsepower Ratings::
  - 2HP @ 120VAC
  - 3HP @ 240-277VAC
- DC:
  - 20A @ 48VDC
- SCCR:
  - 65kA @ 277/480VAC with: Screw Cover (SC) option for 8 & 16 relay enclosure Hinge Locking (HLK) option for 32 & 48 relay enclosure
  - 146kA @ 277/480VAC with: Hinge Locking (HLK) option for 8 & 16 relay enclosure

"SPR" Type Relays
- Magnetic/Standard Ballast:
  - 20A @ 120-277VAC
- Electronic Ballast:
  - 16A @ 120-277VAC
- Tungsten:
  - 5000W @ 250VAC
- Horsepower Ratings::
  - 2HP @ 120VAC
- DC:
  - 20A @ 48VDC
- SCCR:
  - 5kA @ 277VAC

NLIGHT ADDRESSES PER PANEL
- (9) ARP04/08
  - (8) Relays/Dimming Outputs
  - (1) Programmable Input
- (18) ARP12/16
  - (16) Relays/Dimming Outputs
  - (2) Programmable Inputs
- (36) ARP24/32
  - (32) Relays/Dimming Outputs
  - (4) Programmable Inputs
- (54) ARP48
  - (48) Relays/Dimming Outputs
  - (6) Programmable Inputs

INPUTS (1 PER 8 RELAYS)
- (1) Programmable Input for contact closure or photosensor signal (see photosensor accessories above)
- (1) Override input (requires maintained signal)
- 24VDC/200mA auxiliary power available (per 8 relays)
- Connectors accept 16 to 24 AWG wire

OUTPUTS
- 0-10V Capable of Class 1 or Class 2 Wiring
- 100mA Sink Per Dimming Output
- Note:
  - Low trim default 1V, adjustable down to 0.7V
  - High trim default 10V, 10V max
  - Off mode: < 0.7V
- Connectors accept 16 to 24 AWG wire

POWER SUPPLY INPUTS
- 120-277VAC
- 347VAC Option
- 50/60 Hz
- Max 0.5 Amps for 8/16 relay enclosure
- Max 1.0 Amp for 32/48 relay enclosure

PROGRAMMING
- Via SensorView Software

ENVIRONMENT
- Ambient, 8 & 16 relay enclosure: 32-122F (0-50C)
- Ambient, 32 & 48 relay enclosure: 32-113F (0-45C)
- Relative Humidity: 90% non-condensing

STANDARDS
- UL and cUL 916 listed
- UL 924 listed (for emergency circuit use)
- UL 2043 (Plenum) Rated for Surface Mount Screw cover "SC SM" option (8 & 16 relay enclosure only)

BUS CONNECTOR
- (2) RJ45 connectors
- 40mA Bus Power per RJ45 (80mA total)

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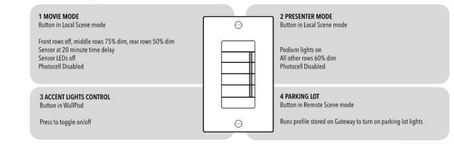
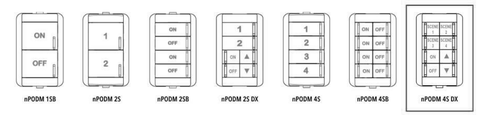
OVERVIEW

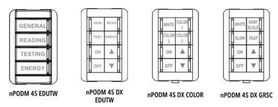
Below is an outline of example scene configurations for the nPODM 4S. When no local scene is selected, the user configurable device default settings are active.

DEFAULT SETTINGS (example)
All lights on, dimming photocell enabled
Sensors at 10 minute time delay & in AUTO ON/AUTO OFF mode





Dynamic wallpods below are paired with Acuity Brands nTUNE fixtures for out-of-box operation.
Reference fixture cut sheets for additional details.

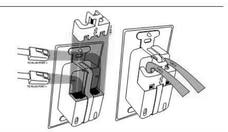


Custom engraved lettering for WH, IV, AL, and GY units can be specified and ordered at:
http://www.acuitybrands.com/-/media/Files/Acuity/Products/Controls/nLight/NGRAVE%20110%20pdf.pdf?la=en

INSTALLATION

- Mount WallPod using holes that align with standard single-gang switch box or low voltage ring
- Access RJ-45 ports by sliding plastic guard up
- Insert CAT-5e cable(s), T568B wiring convention recommended
- Slide guard back onto metal strap
- Interconnect unit with other nLight devices in lighting zone using CAT-5e cables
- Once power is received via CAT-5e connection, all devices in zone will automatically begin functioning together according to respective device's defaults

Attention! Only use non-booted CAT5e cables.



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Catalog Number: Date: Project:

OVERVIEW

The nLight Relay Panel family delivers cost-effective 0-10V dimming and switching for your building design needs. The panel communicates with an nLight network and supports up to 128 digital devices per nLight control zone. Offering a full range of panel sizes, the nLight Relay Panel is ideal for spaces that require full circuit control, with the optional flexibility of configuring single pole relays into a two or three-pole relays in the field.

Also included on each panel is a programmable input that can be connected to a photocell, for example, and a separate dry contact "alarm" input that overrides all relays until the contact is released.

nLIGHT OPERATION

The nLight Relay Panel is nLight-enabled, meaning it has the ability to communicate over an nLight network. When daisy-chain wired with other nLight enabled sensors, power packs, or WallPods™ using CAT-5e cabling, an nLight control zone is created. Connecting the panel to an nLight network backbone and nLight® ECLYPSE™ system controller enables time-based control, remote programming and monitoring from SensorView™ software, and BMS integration capabilities.

The digital time clock (DTC) option allows for on-screen configuration and control of connected devices, while introducing scheduling to standalone panel. When connected to nLight backbone and nLight ECLYPSE system controllers the panels relinquish all time clock functionality.

FEATURES

- Communicates with an nLight network
- Up to 128 digital devices per nLight control zone - each nLight Relay Panel utilizes 9 device addresses per 8 relays/dimming outputs:
  - 1 address per relay/dimming output
  - 1 address for the programmable input
- All relays include local manual override lever
- All relays are individually programmable
- One 0-10V dimming output per relay
- Create and control up to 32 schedules – Normal & Holiday (DTC version)
- Programmable "dry contact/pull high" input (with provided 24VDC source)
  - Input is programmable to preset/profile scene, photosensor signal, wallpod toggle (maintain or momentary)
- Contact input for "alarm" override (requires maintain contact signal)
- All relays communicate with switch/occupancy/photocell channel 1 out of the box (programmable through SensorView)
- FCR type relays capable of being field configured to 2 and 3-pole relay configurations with included hardware:
  - 4/8 Relay Panel: 2x2-Pole and 1x3-Pole Hardware Included
  - 12/16 Relay Panel: 4x2-Pole and 2x3-Pole Hardware Included
  - 24/32/48 Relay Panel: 6x2-Pole and 3x3-Pole Hardware Included
- Supplies auxiliary 24VDC power and nLight network bus power (40mA per RJ45 port)
- Removable back plate for ease of installation
- UL 924 panel listing for Switching Emergency Circuits
- Optional field installed voltage barrier(s) for normal/emergency use, or mixed voltage use
- Remotely Configurable/Upgradeable

Warranty
Five-year limited warranty. Complete warranty terms located at:
www.acuitybrands.com/support/customer-support/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.
Specifications subject to change without notice.

nLIGHT

Relay Panel

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Catalog Number: Date: Project:

OVERVIEW

The nPODM xS Series WallPods are single gang nLight-enabled devices that provide one, two, and four scene control. These units provide a convenient method of selecting a custom lighting control scene for the room in which it is installed, or requesting a global profile scene be run across several remote zones. By default, however, the buttons of an nPODM xS are configured as on/off toggle switches. Scenes are programmed to these units utilizing available SensorView software.

The nPODM xS has soft-click push-buttons with a green LED indicator for each button. These button are field replaceable and can be custom engraved. Two RJ-45 connectors allow the nPODM xS to be daisy-chain wired with CAT-5e cabling to other nLight network devices.

The nPODM xSB offers individual on/off buttons for each scene. Pressing the "on" button will reset the expiration time of a scene back to the original programmed time.*

*In order to utilize a blink warning, system gateway and additional programming is required.
nPODM xSB WallPods are not recommended for use with "preset" style scenes.

nLIGHT

nPODM 1SB
nPODM 2S(B)
nPODM 4S(B)

FEATURES

- Communicates w/ nLight network
- Remotely configurable/upgradable
- Runs locally stored scenes or global scenes (stored on gateway)
- Capable of Programming 4 Different Scene Types
  - Local "Profile" Scene – Modifies the operational configuration of up to 80 devices in the local zone. Stopping scene will revert devices to default settings.
  - Local "Preset" Scene – Modifies on/off/dim levels for up to 16 local switch groups. Exit scene through additional "preset" scene or WallPod control.
  - Global "Profile" Scene – Modifies the operational configuration of any devices on the system. Stopping scene will revert devices to default settings. Scene is stored on the system Gateway, model nGWY2 KIT.
  - Global "Preset" Scene – Modifies on/off/dim levels for up to 128 global switch groups. Exit scene through additional "preset" scene or WallPod control.
- Expiration timer programmable to each scene
- Programmable to initiate occ. sensor time delay sweep
- "Dynamic" options for custom button names when pairing with Acuity Brands nTUNE fixtures

Warranty
Five-year limited warranty. Complete warranty terms located at:
www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application.
Specifications subject to change without notice.

ORDERING INFORMATION

nPODM — Example: nPODM 1SB WH

Series	# of Scenes	Dimming Control	Dynamic	Color	Temp/Humidity
nPODM	1SB 1 Scene control (2 buttons)	[blank] Standard	[blank] Standard	WH White	[blank] Standard
	2S 2 Scene control (2 buttons)	DX[3] On/off + raise/lower control	EDUTW[1] Tunable White	IV Ivory	LT Low temp
	2SB 2 Scene control (4 buttons)		GRSC[1] Greyscale	GY Gray	
	4S 4 Scene control (4 buttons)		COLOR[1] Color control	AL Almond	
	4SB 4 Scene control (8 buttons)			BK Black	
				RD Red	

Notes
1. Available with 2S and 4S versions
2. Available with 4S and 4S DX versions
3. Available with 4S DX version only

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sheet information

revisions:

num.	description	date

CURRENT SET THRU REVISION 02

date:	1-23-2022
project number:	MO-53LEE
project status:	ISSUED FOR PERMIT

original drawing is 24" x 36"
current as of: 4/18/2022 3:34:56 PM

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STATE OF MISSOURI
WILLIAM N. FEIT
NUMBER PE-2010020867
PROFESSIONAL ENGINEER

04/06/22

sheet number:

MOBETTAHS (TI) for: LEE'S SUMMIT
520 NW Chipman Rd
Lee's Summit, MO 64086

SAVORY MANAGEMENT

sheet title: RELAY PANEL CUTSHEETS

SPECTRUM ENGINEERS
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sheet number:

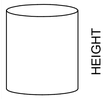
EL501

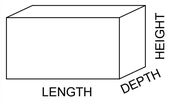
LIGHTING FIXTURE SCHEDULE

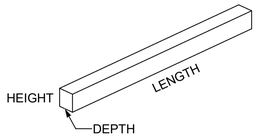
ABBREVIATIONS

MOUNTING

B	-	BASE
C	-	CEILING
F	-	FLANGE
G	-	GRID
P	-	PENDANT
PL		POLE
R	-	RECESSED
S	-	SURFACE
W	-	WALL







LUMINAIRE OPTIONS

ARHR	-	AIR RETURN AND HEAT REJECTION
DL	-	DAMP LOCATION
EQC	-	EARTHQUAKE CLIPS
F	-	FUSING
HLD	-	HINGED AND LATCHED DOOR
HS	-	HOUSE SIDE SHIELD
PS	-	PHOTOCELL SWITCH
QRS	-	QUARTZ RESTRIKE
ST	-	STATIC
WG	-	WIRE GUARD
WL	-	WET LOCATION

FINISH

MW	-	MATTE WHITE
BL	-	BLACK
SL	-	SILVER
GL	-	GOLD
CL	-	CLEAR
PW	-	PAINTED WHITE
EA	-	EXTRUDED ALUMINUM
S	-	STEEL
GS	-	GALVANIZED STEEL
C	-	CAST
CBA	-	COLOR BY ARCHITECT
SCBA	-	STANDARD COLOR BY ARCHITECT
CCA	-	CUSTOM COLOR BY ARCHITECT
FS 209D	-	MEETS FEDERAL STANDARD 209D
TP	-	THERMALLY PROTECTED
FL	-	FLUSH
R	-	REGRESS
M	-	MITERED

1

DIFFUSER/LENS

#A	-	ACRYLIC #THICK
#OA	-	ACRYLIC #THICK (OPAL)
GC	-	GLASS (CLEAR)
GO	-	GLASS (OPAL)
GF	-	GLASS (FROSTED)
SGL	-	SOFT GLOW LENS
HPL	-	HIGH PERFORMANCE LENS
DO	-	DROP OPAL
CGL	-	CONVEX GLASS LENS
S	-	SATIN LENS

REFLECTOR

OP	-	NONE/OPEN
SP	-	SPECULAR
SS	-	SEMI-SPECULAR
D	-	DIFFUSE (WHITE ENAMEL)
SC	-	SPECULAR (COLORED)
PR	-	PRISMATIC
FDR	-	FULL DEPTH REFLECTOR
DS	-	DIFFUSE (SEMI SPECULAR) SILVER
LI	-	LOW IRIDESCENT
IR	-	IRIDESCENT
SL	-	SILVER
GL	-	GOLD
CA	-	CLEAR ALZAK

NOTES

GENERAL NOTES

1. PROVIDE UNIT PRICES AND FIXTURE BRAND SELECTED FOR ADD/DELETE CHANGES FOR EACH FIXTURE TYPES SHOWN WITHIN 48 BUSINESS HOURS OF THE BID DATE. FAILURE TO COMPLY WITH THIS REQUIREMENT MAY DISQUALIFY THE PRODUCTS AND EMPOWER THE ENGINEER TO DETERMINE FAIR VALUE FOR FIXTURE AND INSTALLATION CHANGES, WITHOUT FURTHER INPUT FROM THE CONTRACTOR OR INSTALLER.
2. CONTRACTOR ALLOWANCE PRICES ARE ACCURATE WHEN THIS JOB WAS SPECIFIED, CONTRACTOR AND ELECTRICAL DISTRIBUTOR SHALL VERIFY THIS ALLOWANCE AND REPORT ANY PROBLEMS TO THE ENGINEER BEFORE THE BID. ALLOWANCE PRICE MAY OR MAY NOT INCLUDE LAMP(S) OR FREIGHT AS NOTED, AND DO NOT INCLUDE ANY TAXES.
3. SUBSTITUTIONS AND/OR EQUAL FIXTURES MUST RECEIVE APPROVAL PRIOR TO BIDDING, THEY MUST BE SUBMITTED TO THE ENGINEER NO LESS THAN 2 WEEKS PRIOR TO BID OPENING.
4. SAMPLES MUST BE PROVIDED FOR ANY AND ALL FIXTURES UPON A/E REQUEST PRIOR TO RELEASING FIXTURES.
5. ALL FIXTURES SHALL BE LISTED AND APPROVED FOR THEIR INTENDED USE AND LOCATION.
6. VERIFY THE PROPER MOUNTING KITS OR ACCESSORIES TO FACILITATE INSTALLATION AS SHOWN AT EACH LOCATION ON THE DRAWINGS.
7. COMPLY WITH THE "INTERIOR LIGHTING" SECTION OF THE SPECIFICATIONS.
8. REFER TO SPECIFICATIONS FOR IMPORTANT TECHNICAL REQUIREMENTS FOR LIGHTING FIXTURES, DRIVERS, AND LAMPS.
9. ALL LIGHT FIXTURES TO BE EITHER "DLC" OR "LIGHTING FACTS" LISTED OR TO BE APPROVED BY ARCHITECT/ENGINEER AND OWNER.

ID	DESCRIPTION	COLOR TEMP	VOLTAGE	WATTS	FINISH	FIXTURE LUMENS	MANUFACTURER (CATALOG SERIES) OPTION 1	OPTION 2	OPTION 3
(CP-1)	CANOPY LUMINAIR	4000K	120/277	27	MATCH CEILING	3500	LITHONIA (CNY LED P0-40K)	OR APPROVED EQUAL	
(DX-1)	LED DOWNLIGHT, 0-10V DIMMABLE, SELF FLANG; PROVIDE WITH UL 924 LISTED EMERGENCY BATTERY BACKUP AS INDICATED ON DRAWINGS. MAXIMUM RECESS DEPTH 7"	3000K	120/277	10	WHITE	1500	LITHONIA (LDN6 30/10 LO6WR MVOLT GZ10)		
(DX-2)	ILLUMINATION CYLINDER PENDANT; PROVIDE WITH UL 924 LISTED EMERGENCY BATTERY BACKUP AS INDICATED ON DRAWINGS.	3000K	120/277	18	WHITE	1500	LITHONIA (LDN4CYL 30/15 LO4WR MVOLT GZ10)		
(DX-3)	LED LAMP, TYPE A19, 3000K, 1575 LUMENS	3000K	120/277	0		1575			
(EX-1)	COMBO EMERGENCY DIE-CAST ALUMINUM LED EXIT SIGN, WITH 2 LED LAMPS, SINGLE FACE, RED LETTERS, BLACK BACKGROUND BRUSHED ALUMINUM FINISH, NICKEL-CDMIUM BATTERY, CEILING/BACK MOUNTING		120/277	26	BLACK	0	LITHONIA (LHQM-LED-B-R-M6)		
(GS-2A)	2x2 LED RECESSED LENSED TROFFER, 0.125" THICK PATTERN #12 ACRYLIC LENS, FLUSH STEEL DOOR WITH MITERED CORNERS; MAXIMUM 3-1/4" FIXTURE DEPTH; PROVIDE WITH UL 924 LISTED EMERGENCY BATTERY BACKUP AS INDICATED ON DRAWINGS.	3000K	120/277	28	MATCH CEILING	620	LITHONIA (CPANL 2X2 24/33/44 LM 35K M2)		
(GS-2B)	2x2 LED RECESSED INDIRECT FIXTURE, BI-DIRECTIONAL DISTRIBUTION, MAXIMUM 3-1/4" FIXTURE DEPTH; PROVIDE WITH UL 924 LISTED EMERGENCY BATTERY BACKUP AS INDICATED ON DRAWINGS.	3500K	120/277	39	MATCH CEILING	620	FOCAL POINT FEQL-22-B-LL3-L35-120-G-WH		
(GS-4A)	2x4 LED RECESSED LENSED TROFFER, 0.125" THICK PATTERN #12 ACRYLIC LENS, FLUSH STEEL DOOR WITH MITERED CORNERS; PROVIDE WITH UL 924 LISTED EMERGENCY BATTERY BACKUP AS INDICATED ON DRAWINGS; MAXIMUM 3-1/4" FIXTURE DEPTH	3500K	120/277	45	MATCH CEILING	620	LITHONIA (CPANL 2X4 40/50/60 LM 35K M2)		
(GS-4B)	2x4 LED RECESSED INDIRECT FIXTURE, BI-DIRECTIONAL DISTRIBUTION, MAXIMUM 3-1/4" FIXTURE DEPTH; PROVIDE WITH UL 924 LISTED EMERGENCY BATTERY BACKUP AS INDICATED ON DRAWINGS.	3500K	120/277	52	MATCH CEILING	620	FOCAL POINT FEQL-24-B-LL3-L35-120-G-WH		
(OC-32)	TRAPEZOID EXTERIOR WALL PACK; TYPE III OPTICS; B1-U0-G1; PROVIDE WITH UL 924 LISTED EMERGENCY BATTERY BACKUP	4000K	120/277	20	TBD	2115	LITHONIA (DSXW1 SERIES)		
(SA-2)	LED STRIP, VAPOR TIGHT; COORDINATE WITH WALK-IN INSTALLER. SCBA	3500K	120/277	41		5000	LITHONIA (CSVT L48 5000LM MVOLT 35K 80CRI SCBA)	OR APPROVED EQUAL	
(SL-1)	LED FESTOON LIGHTING, 12" LAMP SPACING, CLEAR GLOBE, BLACK CABLE; PROVIDE WITH G25 BULBS	2700K		216	BLACK	300	TARGETTI DURACLED CABLE LIGHT (DLD-CL-40-12-BK-G25)		
(TH-7)	LED TRACK HEAD, ELV DIMMING; WIDE FLOOD OPTICS, 0-10V DIMMING	3000K	120/277	15	WHITE	0	JUNO (T381L-30K-80CRI-PDIM-FL-WH)	HALO L65X-MB-LC901CB120	CONTECH LT-X-B / LA-23-RN-B / REG1-B
(TX-1)	ROUND 2-DIRECTIONAL WALL MOUNT LED FIXTURE; IP64 RATED;	3500K	120/277	45	BLACK	1500	LITON (WD2340-B-L15-BD45-BUWW-UE-DUN-T35		
(TX-A)	10" DIAMETER METAL PENDANT, PROVIDE WITH 12 WATT CLEAR BULB		120	12	YELLOW	0	CDS LIGHTING (DODSON-B-YW-BLANK-USV)		
(TX-D)	18" DIAMETER PEDANT LAMP, PROVIDE WITH 60 WATT CLEAR BULB		120	60	NATURAL	0	KOUBOO (WICKER BALL PENDANT LAMP)		
(TX-E)	11.5" DIAMETER PENDANT LAMP, PROVIDE WITH 60 WATT CLEAR BULB		120	60	NATURAL	0	KOUBOO (WICKER POD PENDANT LAMP)		
(TX-F)	18" DIAMETER PENDANT LAMP, PROVIDE WITH 60 WATT CLEAR BULB		120	60	NATURAL	0	KOUBOO (WICKER PEAR-SHAPED PENDANT LAMP)		
(WP-1)	12" DIAMETER ALUMINUM DECORATIVE BARN LIGHT, PROVIDE WITH 75 WATT BULB		120	75	BLACK	0	GENERATION LIGHTING (8637401-12: MEDIUM ONE LIGHT OUTDOOR WALL LANTERN)		
(ZX1)	MODERN STYLE, LED POLE LIGHT, CUTOFF SINGLE HEAD	4000K	120/277	125	SCBA	14182	LITHONIA (DSXO-P4-40K-BLC)	BEACON (VP-L)	COOPER LIGHTING (GALLEON LED)
(ZX5)	MODERN STYLE, LED POLE LIGHT, CUTOFF SINGLE HEAD	4000K	120/277	125	SCBA	14182	LITHONIA (DSX1-P4-40K-T4M)	BEACON (VP-L)	COOPER LIGHTING (GALLEON LED)

2

COMcheck Software Version 4.1.5.2

Interior Lighting Compliance Certificate

Project Information

Energy Code: 2018 IECC
Project Title: Mobettahs Lee's Summit, MO
Project Type: New Construction

Construction Site:
520 NW Chipman Rd
Lee's Summit, MO 64086

Owner/Agent:
BABCOCK DESIGN
52 EXCHANGE PLACE
SALT LAKE CITY, UT 84111
801.531.1144
babcockdesign.com

Designer/Contractor:
Michael Fackrell
Spectrum Engineers
324 S State Street
Salt Lake City, UT 84111
801.328.5151

Additional Efficiency Package(s)

Credits: 1.0 Required 1.0 Proposed
Reduced Lighting Power, 1.0 credit

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B X C)
1-Dining: Family	2750	0.70	1930
		Total Allowed Watts =	1931

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
1-Dining: Family				
LED 1: (DX-1): DOWNLIGHT: LED A Lamp 2.5W:	1	8	10	83
LED 2: (DX-2): PENDANT DOWNLIGHT: LED A Lamp 2.5W:	1	36	18	630
LED 3: (DX-3): HOOD DOWNLIGHT: LED A Lamp 9W:	1	14	10	140
LED 4: (GS-4A): 2X4 TROFFER: LED Panel 19W:	1	3	45	135
LED 5: (GS-2B): 2X2 TROFFER: LED Panel 19W:	1	2	39	78
LED 6: (GS-4B): 2X4 TROFFER: LED Panel 19W:	1	8	52	416
LED 7: (GS-2A): 2x2 TROFFER: LED Panel 19W:	1	2	45	90
Track lighting 1: (TH-7): TRACK LIGHTING: Wattage based on low-voltage transformer capacity	0	0	30	30
LED 8: (TX-A): METAL PENDANT: LED A Lamp 12W:	1	6	12	72
LED 9: (TX-D): PENDANT LAMP: LED A Lamp 12W:	1	4	10	40
LED 10: (TX-E): PENDANT LAMP: LED A Lamp 12W:	1	2	10	20
LED 11: (TX-F): PENDANT LAMP: LED A Lamp 12W:	1	2	10	20
LED 12: (WS-1): PENDANT LAMP: LED A Lamp 12W:	1	2	12	25
LED 13: (SL-1): FESTOONR LIGHTING: Other:	1	3	36	108
		Total Proposed Watts =		1667

Interior Lighting PASSES: Design 2% better than code

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.2 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

MICHAEL FACKRELL - PROJECT MANAGER — Name - Title
Signature
01/24/2022 — Date

COMcheck Software Version 4.1.5.2

Exterior Lighting Compliance Certificate

Project Information

Energy Code: 2018 IECC
Project Title: Mobettahs Lee's Summit, MO
Project Type: New Construction
Exterior Lighting Zone 2 (Residential mixed use area (LZ2))

Construction Site:
520 NW Chipman Rd
Lee's Summit, MO 64086

Owner/Agent:
BABCOCK DESIGN
52 EXCHANGE PLACE
SALT LAKE CITY, UT 84111
801.531.1144
babcockdesign.com

Designer/Contractor:
Michael Fackrell
Spectrum Engineers
324 S State Street
Salt Lake City, UT 84111
801.328.5151

Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts / Unit	D Tradable Wattage	E Allowed Watts (B X C)
Parking area	23000 ft2	0.04	Yes	920
			Total Tradable Watts (a) =	920
			Total Allowed Watts =	920
			Total Allowed Supplemental Watts (b) =	400

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.
(b) A supplemental allowance equal to 400 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Proposed Exterior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Parking area (23000 ft2): Tradable Wattage				
LED 1: (TX-1): ROUND 2-DIRECTIONAL WALL MOUNT: Other:	1	8	45	360
LED 2: (CP-1): CANOPY LUMINAIRE: Other:	1	3	27	81
LED 3: (ZX1): DSXO LED P1 40K BLC MVOLT: Other:	1	6	125	750
LED 4: (ZX5): DSXO LED P1 40K T4M MVOLT: Other:	1	1	125	125
			Total Tradable Proposed Watts =	1316

Exterior Lighting PASSES: Design 0.3% better than code

Exterior Lighting Compliance Statement

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.2 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

MICHAEL FACKRELL - PROJECT MANAGER — Name - Title
Signature
01/24/2022 — Date

RELAY PANEL: R1

(RELAY PANEL TO HAVE INTERNET BASE REMOTE CAPABILITY WITH A SUPPORTED WEB BASE CONTROL INTERFACE WITH ASSOCIATED ANDROID & APPLE APPLICATIONS)

LOCATION: UTILITY ROOM

CONTROL SCHEDULE

UL 1008 RELAY PANEL

RELAY#	DESCRIPTION	LOCATION	BRANCH CIRCUIT	LOAD (WATTS)	CNTL SWITCH	OCC SENSOR	TIME CLOCK GROUP	PHOTOCELL
1	SERVICE AREA	KITCHEN	P1-30	700	CS1		2B	
2	MOUNTED BUILDING LIGHTING	EXTERIOR BUILDING	P1-38	750			1	
3	OPEN / CLOSE SIGN	DINING ROOM	P1-23	1400			1	
4	OPEN / CLOSE SIGN	DINING ROOM	P1-24	1400			1	
5	EF-4	ROOF (SERVES RESTROOMS)	P1-12	100			1	
6	BUILDING SIGNAGE	EXTERIOR	P1-14	500			3	
7	SITE LIGHTING	EXTERIOR	P1-41	1400			3	
8	DINING LIGHTING ZONES	DINING ROOOM AREA	P1-31	450	CS1		2B	
(a)	DINING	DINING ROOOM AREA	P1-31	400	CS1		2B	
(b)	DINING EXHIBITS	DINING ROOOM AREA	P1-31	20	CS1		2B	
(c)	DINING ROOM CANOPY	DINING ROOOM AREA	P1-31	30	CS1		2B	

NOTES: 1. TIME CLOCK GROUPS -
1 - TIME CLOCK OR MANUAL ON, TIME CLOCK OFF (Mon-Sat): ON 10:30am/OFF 9:00pm, (Sunday): OFF
2 - MANUAL ON, TIME CLOCK OFF (Everyday): MANUAL ON (AUTO ON Disabled)/OFF 10:00pm; PHOTOCELL DIMMABLE
2B - MANUAL ON, TIME CLOCK OFF (Everyday): MANUAL ON (AUTO ON Disabled)/OFF 10:00pm
3 - TIE TO BUILDING SHELL CONTROL PANEL, IF ONE DOESN'T EXIST: EVERY DAY ON AT 15 MIN PRIOR TO SUNSET, OFF AT 15 MIN PRIOR TO SUNRISE.
4 - PHOTOCELL ON/PHOTOCELL OFF

2. TIME CLOCK SETTINGS SHALL BE VERIFIED BY OWNER PRIOR TO COMMISSIONING, PROGRAMMING MUST BE COMPLETED BY A TECHNICIAN APPROVED BY THE MANUFACTURER, ELECTRICIAN IS RESPONSIBLE FOR SCHEDULING ON-SITE MEETING.
3. REFER TO DRAWINGS FOR LOCATIONS AND QUANTITIES OF MASTER SWITCHES.
4. PROVIDE DIMMING CARDS FOR DIMMABLE CIRCUITS

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sheet information

revisions:

num.	description	date
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2	REVISION 02	04.06.22

CURRENT SET THRU REVISION 02

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NUMBER PE-2010020907
PROFESSIONAL ENGINEER
04/06/22

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SAVORY MANAGEMENT

sheet title:
LIGHTING FIXTURE SCHEDULE

sheet number:
EL601