# PROJECT DATA:

**PROJECT DESCRIPTION:** THE PROJECT IS A MULTI-USE BUILDING CONSISTING OF A WAREHOUSE PORTION AND A SMALL OFFICE AREA. THE BUILDING STRUCTURE IS A PRE-ENGINEERED METAL BUILDING WITH WOOD INFILL FOR THE OFFICE AREA LOCATED AT THE FRONT OF THE BUILDING. THE BUILDING WILL CONSIST OF METAL ROOF PANELS, METAL WALL PANELS, STUCCO AND BRICK. THE WAREHOUSE IS 9,918 SQ.FT. AND THE OFFICE IS 2,010 SQ.FT.

**APPLICABLE CODES:** 

-INTERNATIONAL BUILDING CODE (IBC), 2015 ED. -LIFE SAFETY CODE - NFPA 101, 2015 ED. -NATIONAL ELECTRIC CODE - NFPA 70, 2014 ED. -INTERNATIONAL MECHANICAL CODE (IBC), 2015 -LOUISIANA STATE PLUMBING CODE, 2015 -AMERICANS WITH DISABILITIES ACT (ADA) 2010 ED.

-CONSTRUCTION TYPE: IBC - VB (NON-SPRINKLERED)

-OCCUPANCY CLASSIFICATION: IBC = BUSINESS GROUP B - (OFFICE) IBC = STORAGE GROUP S-2 (LOW HAZARD)

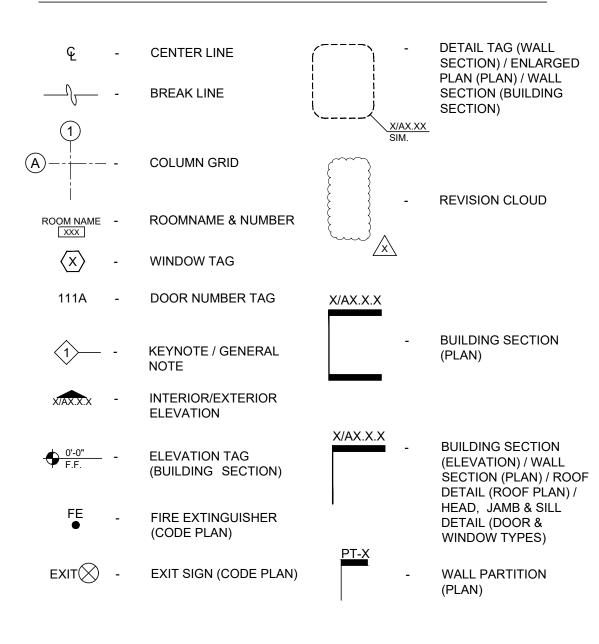
PLUMBING IBC 2015: WATER CLOSETS BUSINESS = 1 PER 25 FOR THE FIRST 50 AND 1 PER 50 FOR THE REMAINDER EXCEEDING 50 STORAGE = 1 PER 100 LAVATORIES BUSINESS = 1 PER 40 FOR THE FIRST 80 AND 1 PER 80 FOR THE REMAINDER EXCEEDING 80 STORAGE = 1 PER 100

PARKING REQUIREMENTS: PER LOCAL CODES

ZONING: -LIGHT INDUSTRY (LI) ULTIMATE DESIGN WIND SPEED

(3-SECOND GUST) **RISK CATEGORY II** 130 MPH

# SYMBOL LEGEND:



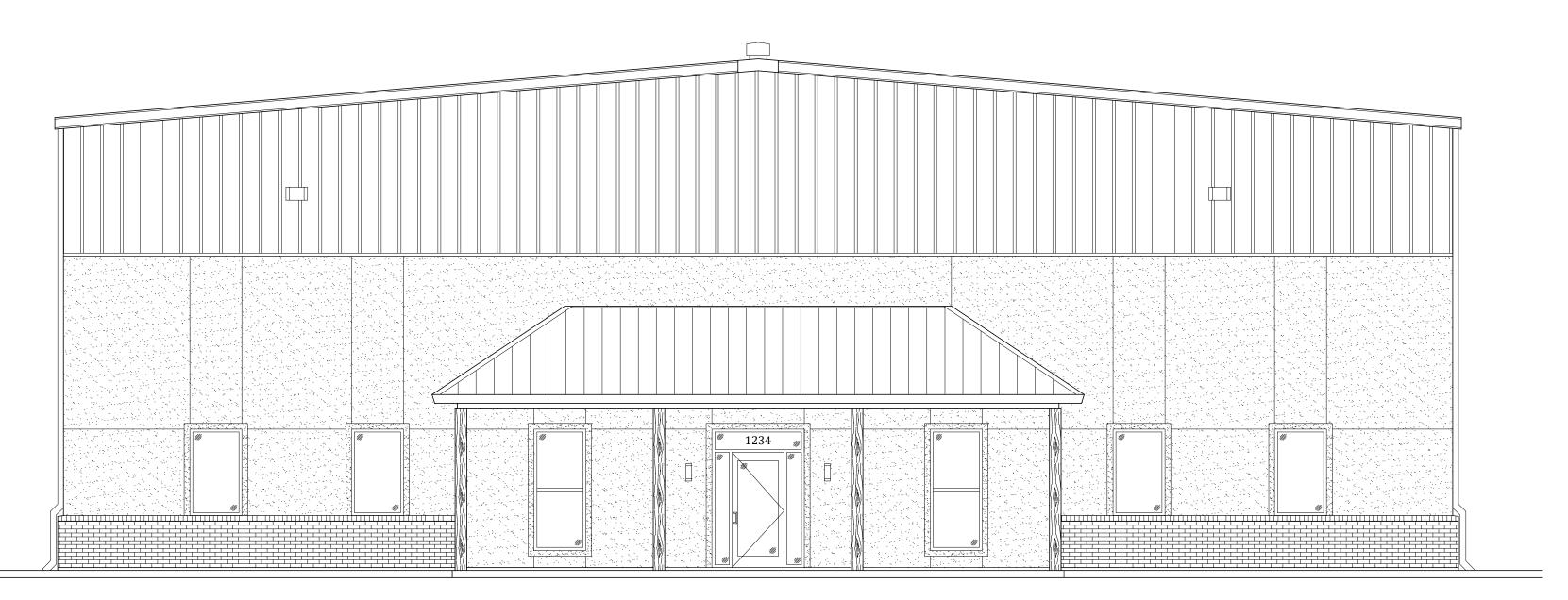
X/X"=1'-0"

DRAWING TITLE

COPPERHEAD

OWNER:

TALON INDUSTRIAL, LLC ARCHITECT: MKE ARCHITECTS, LLC CONTRACTOR: **RW CONSTRUCTION, LLC** 



# **BUILDING ELEVATION:**

LOCATION MAP:



# COPPERHEAD BUILDING NO.2 35030 HWY. 30 GEISMAR, LOUISIANA 70734

# DRAWING INDEX:

T0.01 TITLE SHEET / INDEX (PROJECT)

LIFE SAFETY DRAWINGS: LS1.00 LIFE SAFETY PLANS

## ARCHITECTURAL DRAWINGS: (SERVICE BUILDING)

- A1.00 SUPPLEMENTAL INFORMATION
- A1.01 SITE PLAN
- A1.02 FLOOR PLAN A1.03 RCP PLAN
- A2.01 EXTERIOR ELEVATIONS
- A3.01 BUILDING SECTIONS
- A4.01 INTERIOR ELEVATIONS
- A5.01 SCHEDULES / FINISH PLANS

ELECTRICAL DRAWINGS: (SALES BUILDING) E1.00 POWER PLAN / RISER E2.00 LIGHTING PLAN / SCHEDULE E3.00 GENERAL SPECIFICATIONS

**MECHANICAL DRAWINGS:** 

M1.01 MECHANICAL FLOOR PLAN M2.01 MECHANICAL DETAILS / SCHEDULES

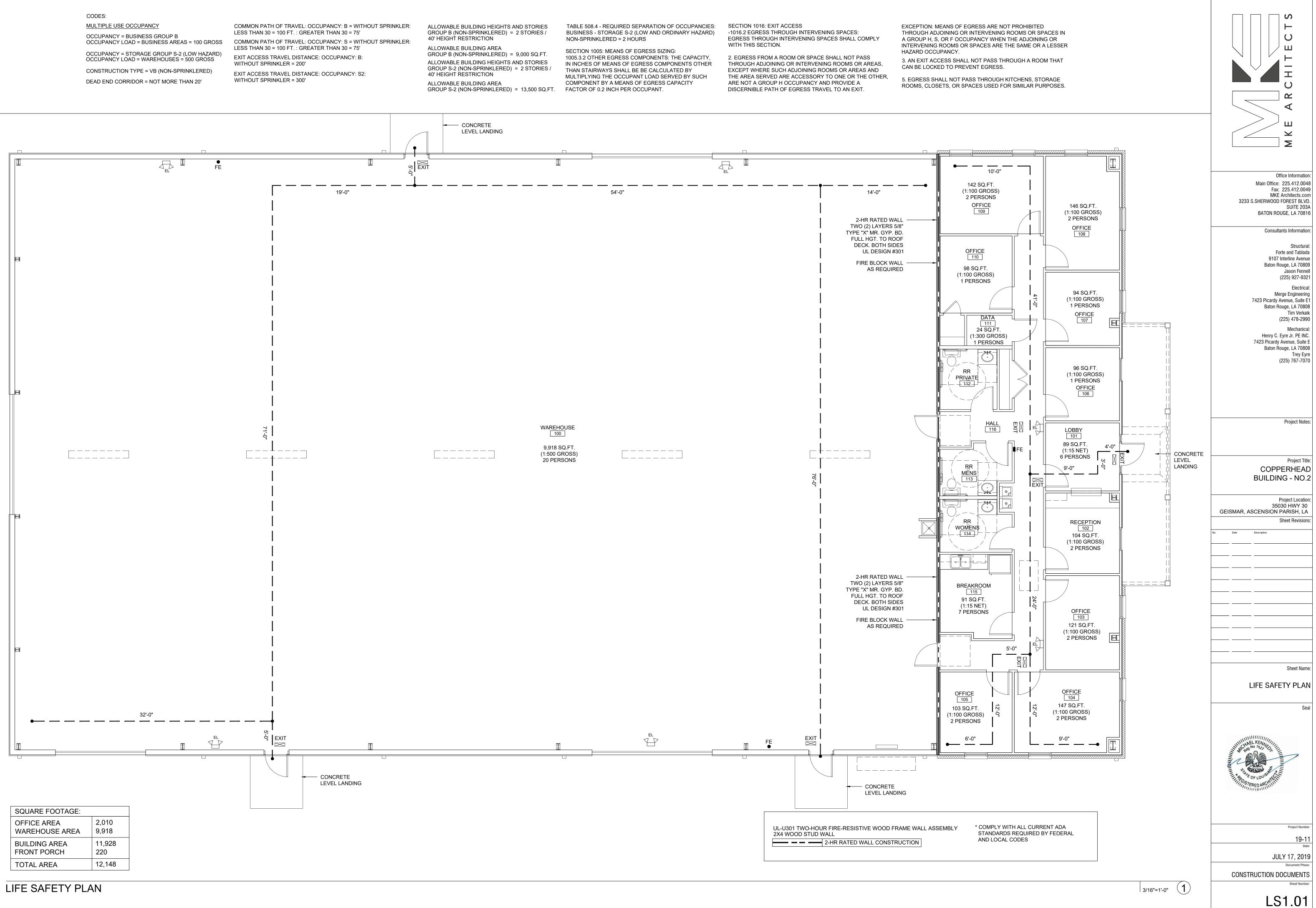
MECHANICAL / PLUMBING SPECS: MPS1.01 MECHANICAL / PLUMBING SPECIFICATIONS

MKE ARCHIECTS
Office Information: Main Office: 225.412.0048 Fax: 225.412.0049 MKE Architects.com 3233 S.SHERWOOD FOREST BLVD. SUITE 203A BATON ROUGE, LA 70816
Consultants Information: Structural: Forte and Tablada 9107 Interline Avenue Baton Rouge, LA 70809 Jason Fennell (225) 927-9321
Electrical: Merge Engineering 7423 Picardy Avenue, Suite E1 Baton Rouge, LA 70808 Tim Verkaik (225) 478-2990 Mechanical: Henry C. Eyre Jr. PE INC. 7423 Picardy Avenue, Suite E Baton Rouge, LA 70808 Trey Eyre
(225) 767-7070 Project Notes:
Project Title: COPPERHEAD BUILDING - NO.2
Project Location: 35030 HWY 30 GEISMAR, ASCENSION PARISH, LA Sheet Revisions: No. Date Description
Sheet Name: TITLE SHEET Seal
A STREED ARCMIT
Project Number: 19-11 Date:
JULY 17, 2019 Document Phase: CONSTRUCTION DOCUMENTS Sheet Number:
T0.01

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PLUMBING DRAWINGS: P1.01 PLUMBING FLOOR PLAN P2.01 PLUMBING DETAILS & RISERS

STRUCTURAL DRAWINGS: S0.01 GENERAL NOTES & INDEX S1.01 FOUNDATION PLAN S2.01 FOUNDATION DETAILS



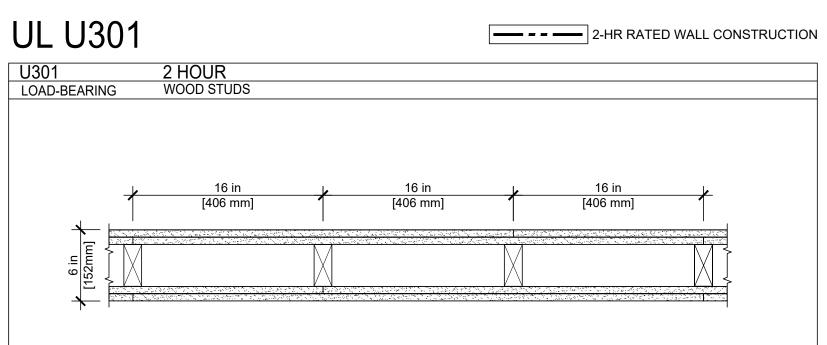
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## PARTITIONS: WOOD STUD (LOAD-BEARING)

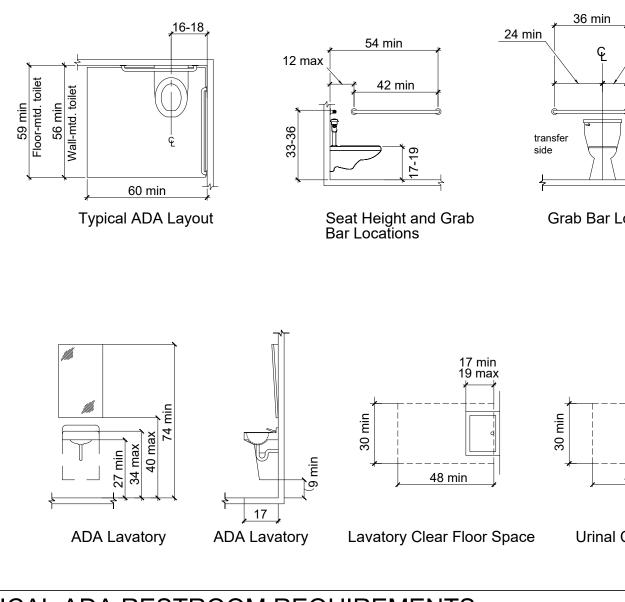
FIRE RATING: 2 HOUR STC: SOUND TEST: 52 N/A SYSTEM THICKNESS: 6"

**ASSEMBLY OPTIONS:** 

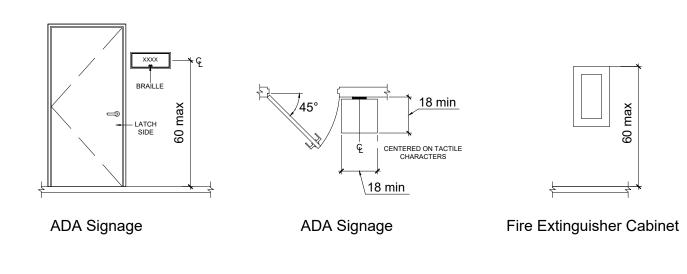
TWO LAYERS OF 5/8 IN. (TYPE "X" ) THICK GYPSUM BOARD APPLIED HORIZONTALLY OR VERTICALLY. GYPSUM BOARD: 2 IN. X 4 IN. WOOD STUDS SPACED MAX. 16 IN. O.C. TWO LAYERS OF 5/8 IN. (TYPE "X") THICK GYPSUM BOARD APPLIED HORIZONTALLY. WOOD STUDS: GYPSUM BOARD:



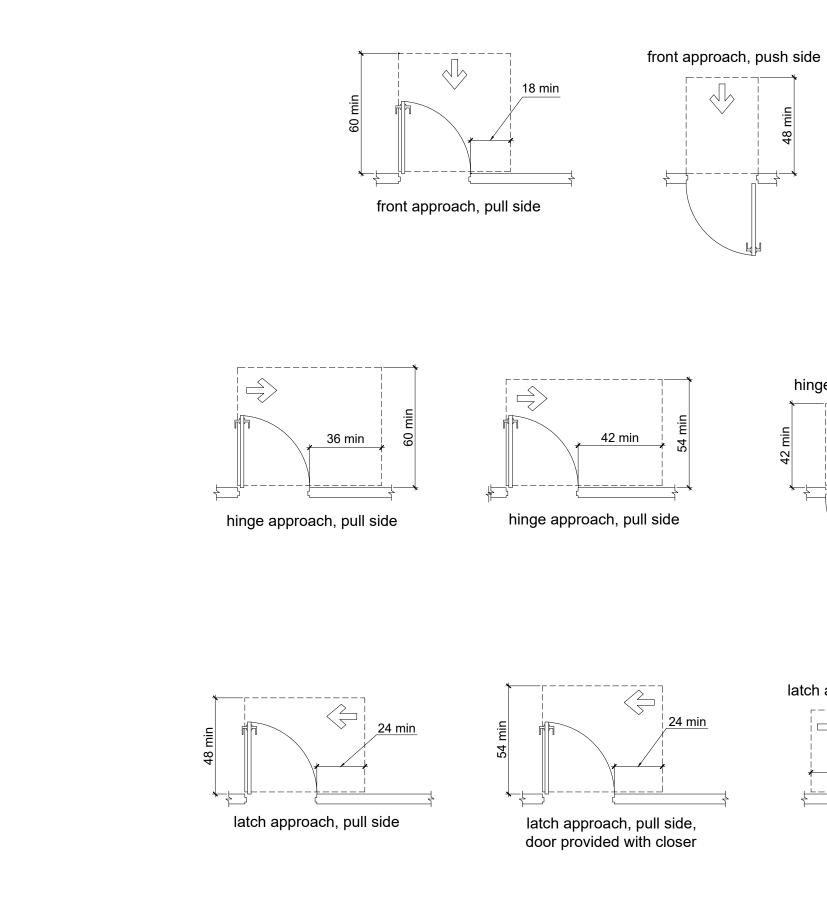
UL FIREWALL CONSTRUCTION - 2HR WALL CONSTRUCTION



# TYPICAL ADA RESTROOM REQUIREMENTS

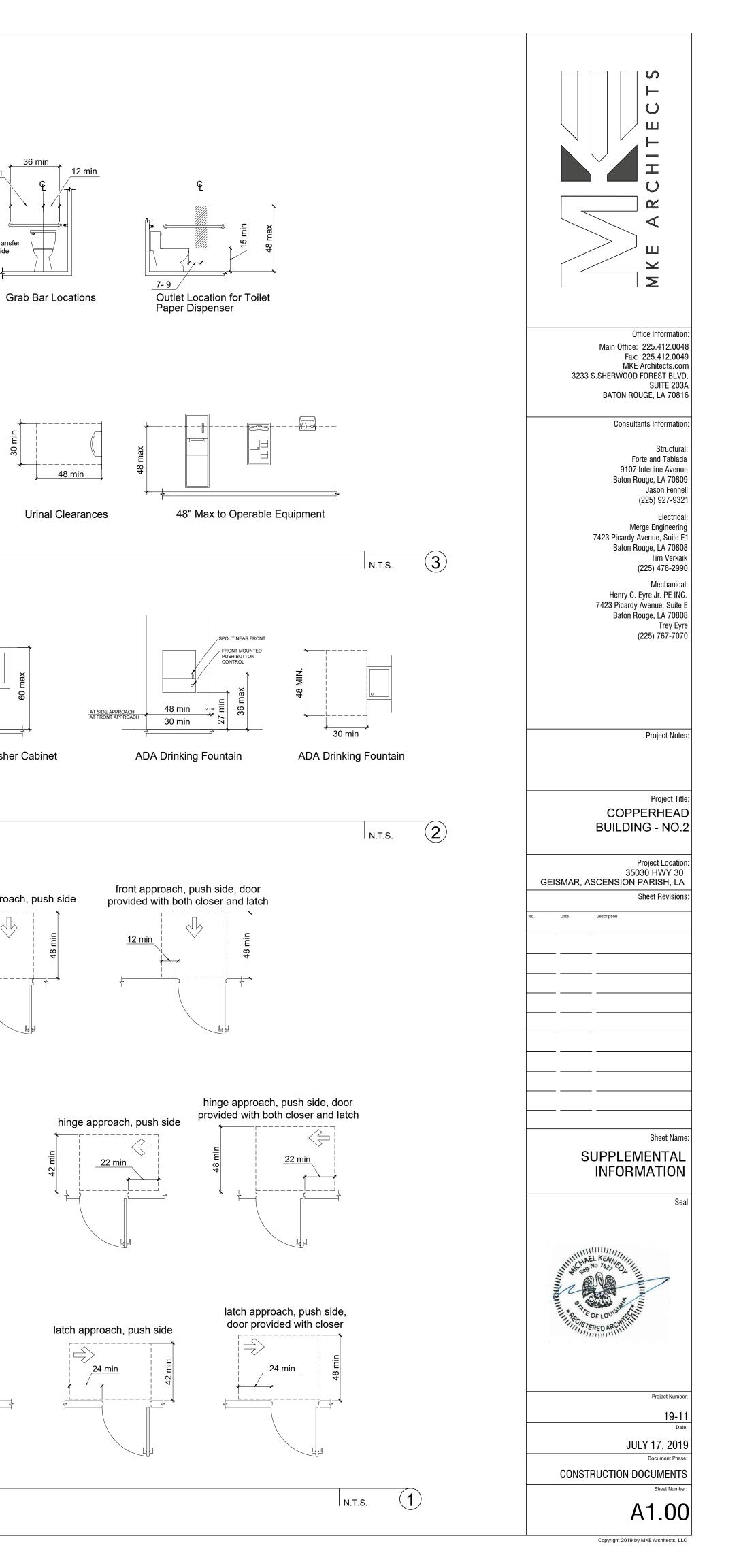


# TYPICAL ADA PROJECT REQUIREMENTS





TYPICAL ADA DOOR REQUIREMENTS



\*ARCHITECTURAL SITE PLAN IS FOR REFERENCE ONLY. OWNER TO ACQUIRE THE SERVICES OF A LICENSED CIVIL ENGINEER TO DEVELOP FINAL SITE DESIGN INCLUDING BUT NOT LIMITED TO ALL DRAINAGE REQUIREMENTS AND DESIGN: PARKING / DRIVE / SIDEWALK STANDARDS INCLUDING CONCRETE SPECIFICATIONS AND MIX DESIGNS, JOINT LAYOUTS AND DESIGN / ETC. CIVIL ENGINEER WILL BE RESPONSIBLE FOR LOCATING AND CONFIRMING ALL PROPERTY LINES, LOT LINES, SETBACKS, EASEMENTS, CENTER LINES FINAL BUILDING CORNERS AND ALL LOCAL AND STATE CODES PERTAINING TO THE CIVIL ENGINEERS SCOPE OF WORK.

\*OWNER TO ACQUIRE THE SERVICES OF A LANDSCAPE ARCHITECT TO DEVELOP LANDSCAPED AREAS

REFER TO DEVELOPMENT PAVING SPECIFICATIONS FOR FINAL DESIGN STANDARDS:

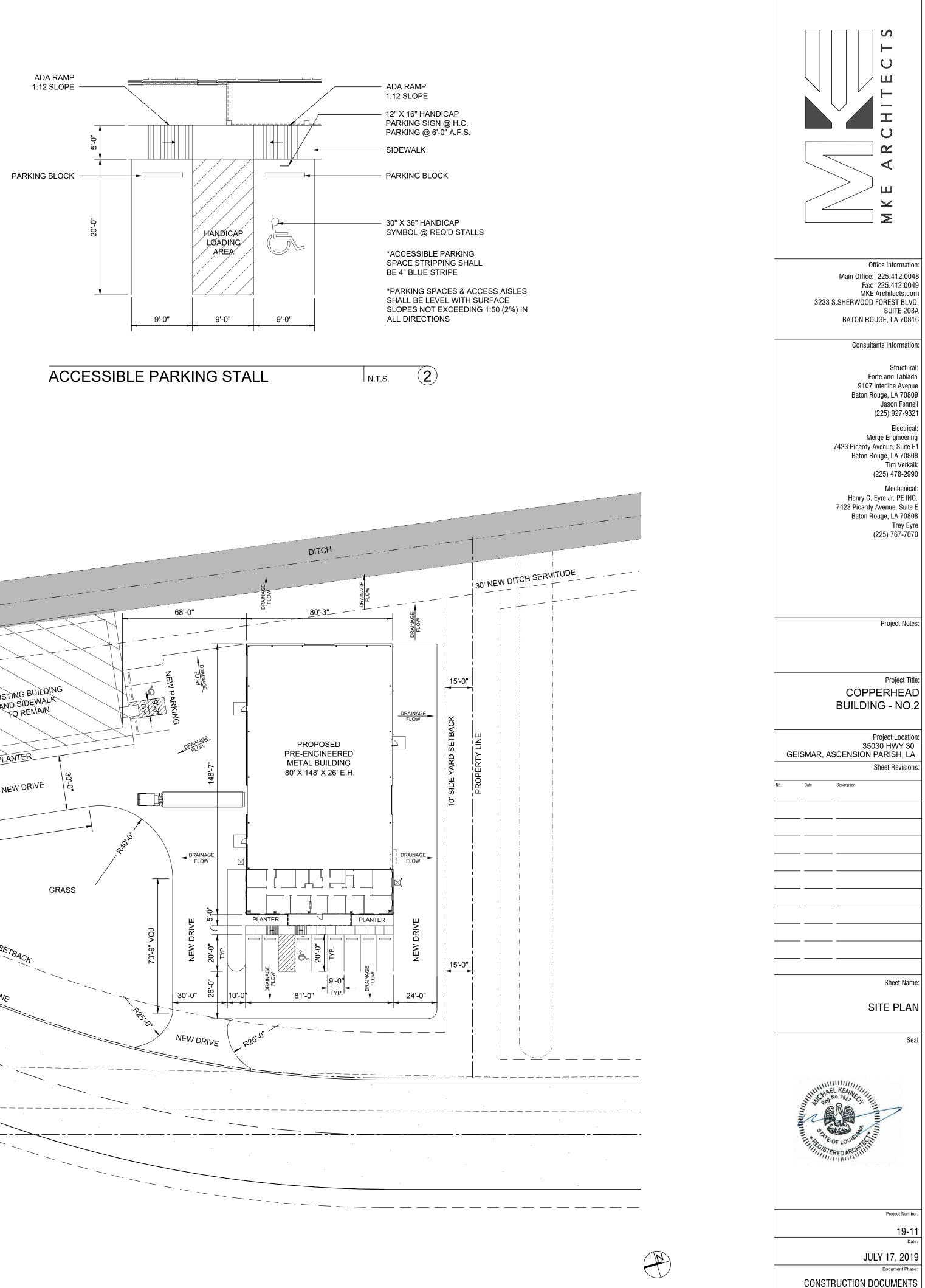
PAVING NOTES: (FOR BIDDING PURPOSES ONLY)

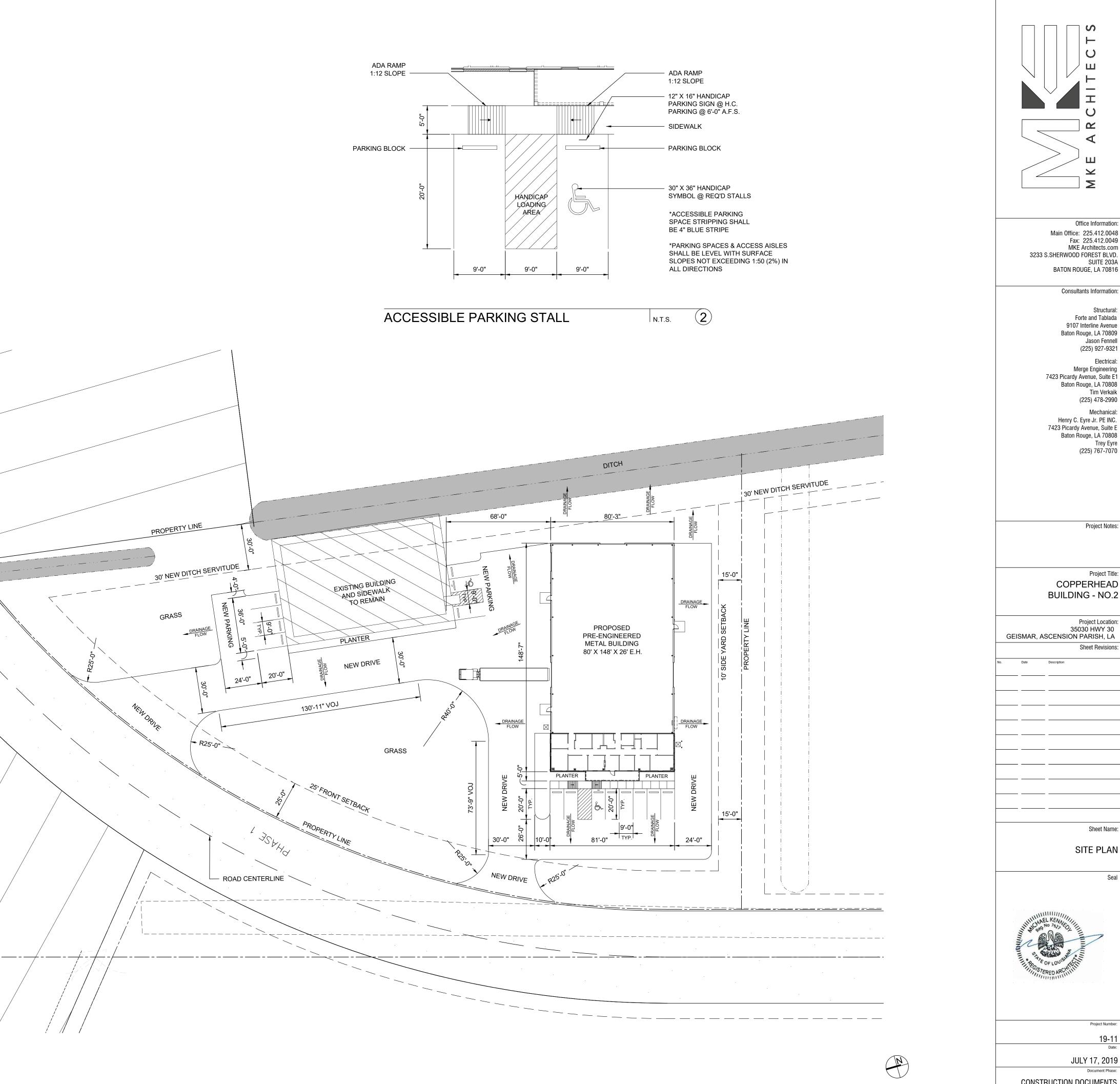
- 1. ALL PARKING AND DRIVES SHALL BE CONCRETE, CAST IN PLACE, 4000 P.S.I.
- @ 28 DAYS COMPRESSIVE STRENGTH. 2. DRIVEWAY PAVING SHALL BE A MIN. THICKNESS OF 5 INCHES REINFORCED WITH 6 X 6 W2.9 X W2.9 WELDED WIRE FABRIC. PARKING STALL PAVING
- SHALL BE MINIMUM THICKNESS OF 4". 3. PLACEMENT AND CURING OF CONCRETE SHALL BE IN ACCORDANCE WITH THE LATEST A.C.I. RECOMMENDATIONS.
- 4. PROVIDE KEYED METAL JOINTS ON A STAGGERED 20'-0" X 20'-0" GRID (MAX.) PROVIDE EXPANSION JOINTS AT BUILDING, WALKS, LANDINGS AND STREET.
- 5. CURBS SHALL BE AS SHOWN ON PLANS AND/OR AS REQUIRED BY LOCAL AUTHORITIES. 6. PARKING STALLS SHALL BE MARKED WITH 4" WIDE WHITE PAINTED

\_\_\_\_\_\_ - \_\_\_\_ - \_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ /

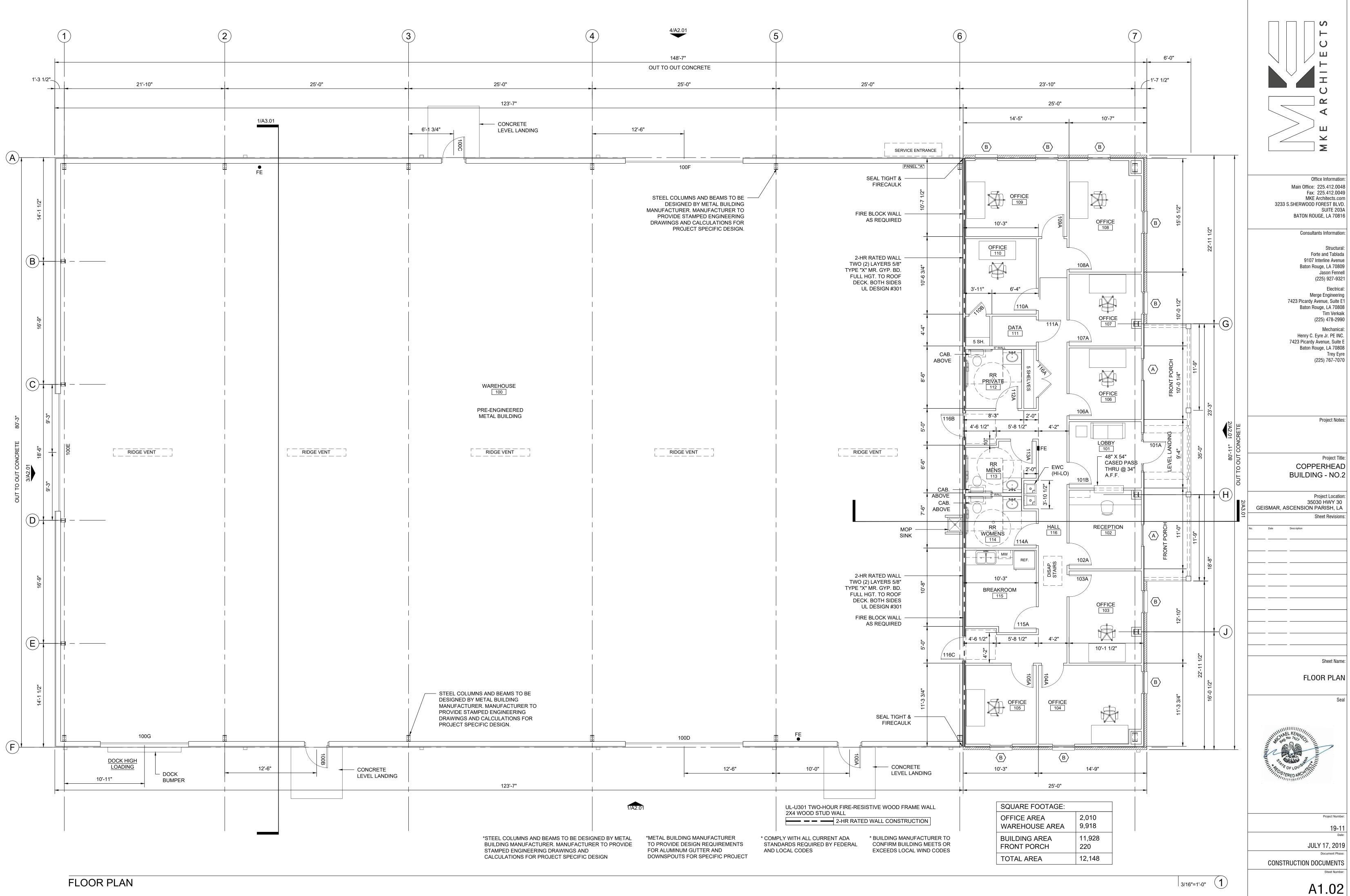
\_\_\_\_\_

- STRIPES. HANDICAPPED PARKING STALLS SHALL BE MARKED TO COMPLY WITH ADA AND ANSI REGULATIONS.
- 7. PROVIDE 8" THICK CONCRETE DRIVEWAY APRON FROM CONNECTION TO THE STREET TO THE RIGHT-OF-WAY LINE AS PER CITY-PARISH STANDARD.

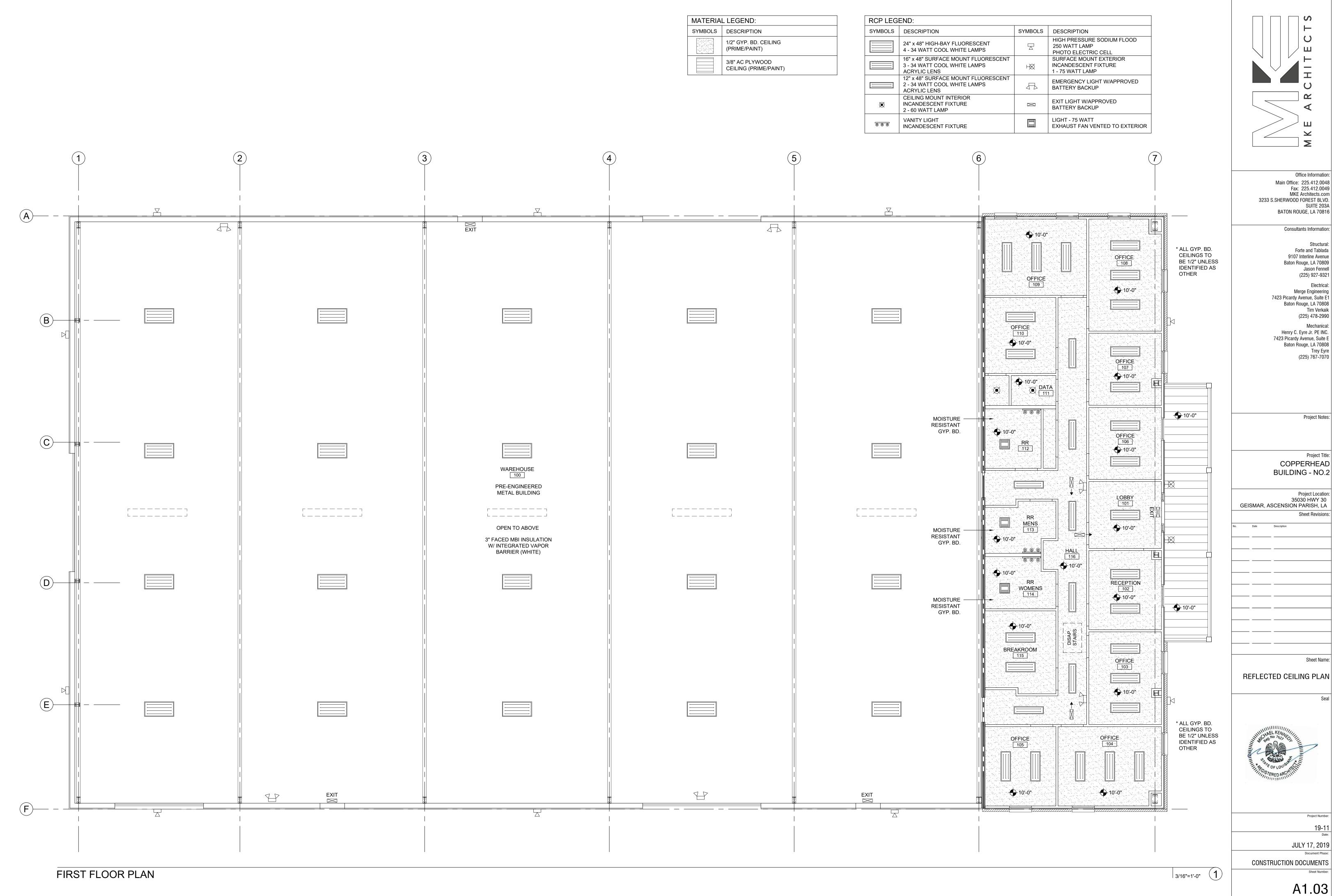




Sheet Numb

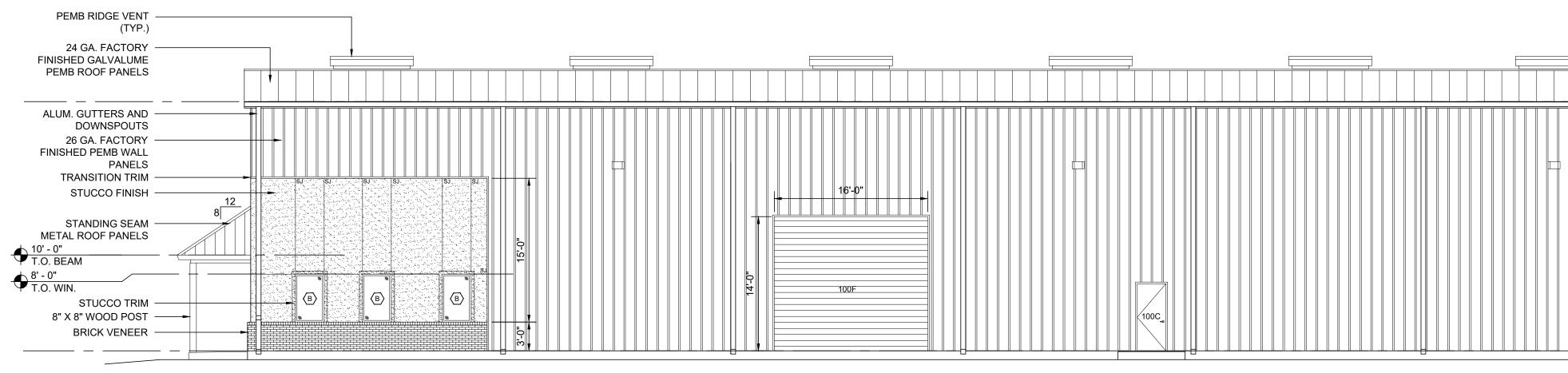


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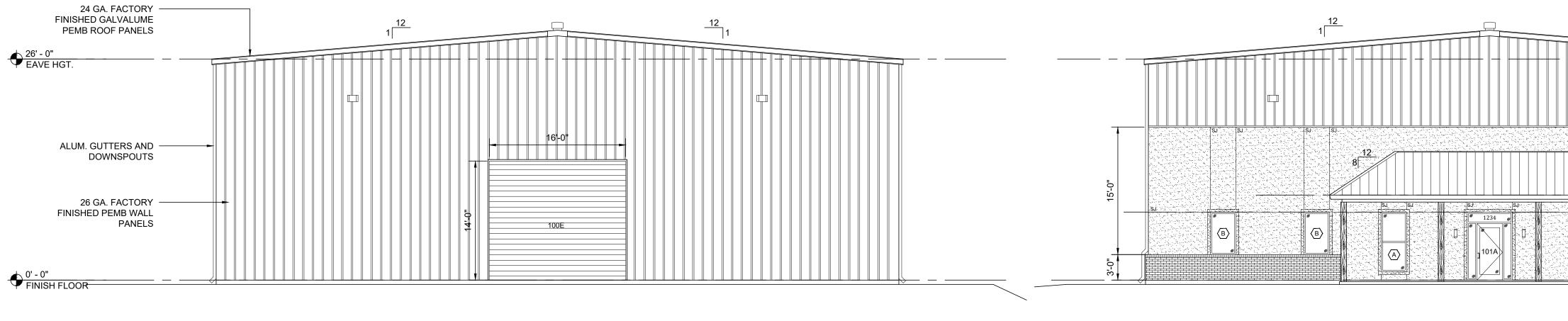


RCP LEGEND:						
SYMBOLS	DESCRIP					
	24" x 48" ł 4 - 34 WA					
	16" x 48" S 3 - 34 WA ACRYLIC					
	12" x 48" S 2 - 34 WA ACRYLIC					
×	CEILING I INCANDE 2 - 60 WA					
000	VANITY L					

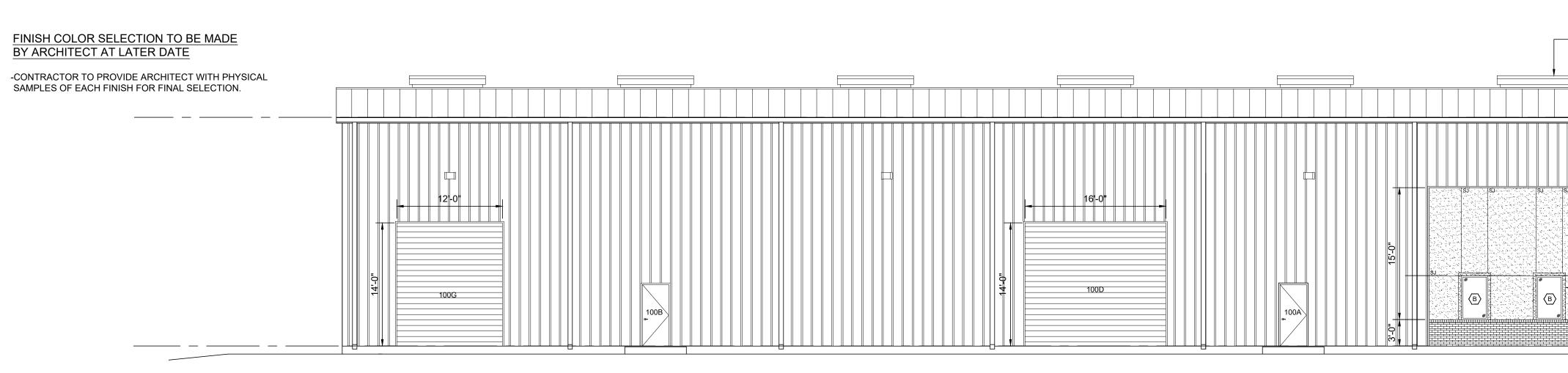
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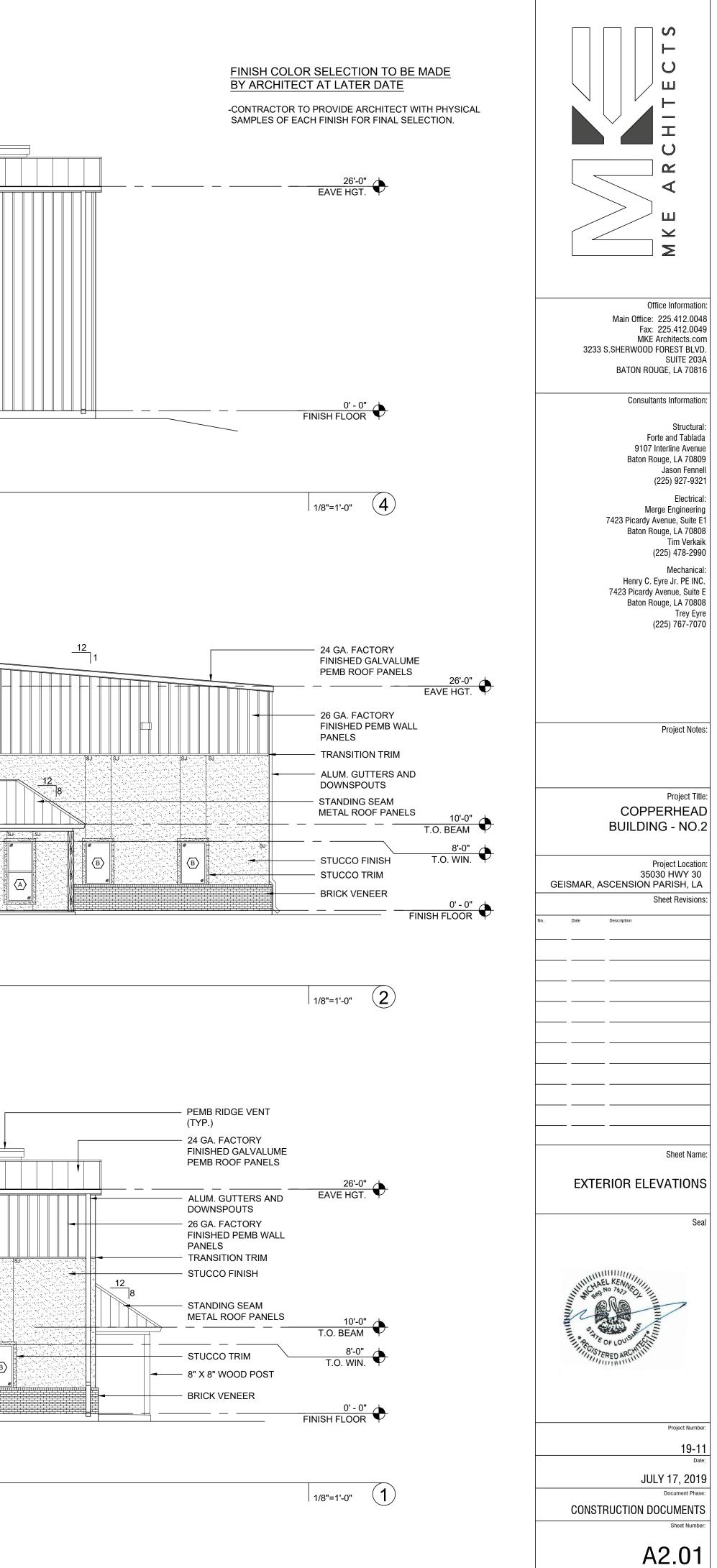
## **REAR ELEVATION**

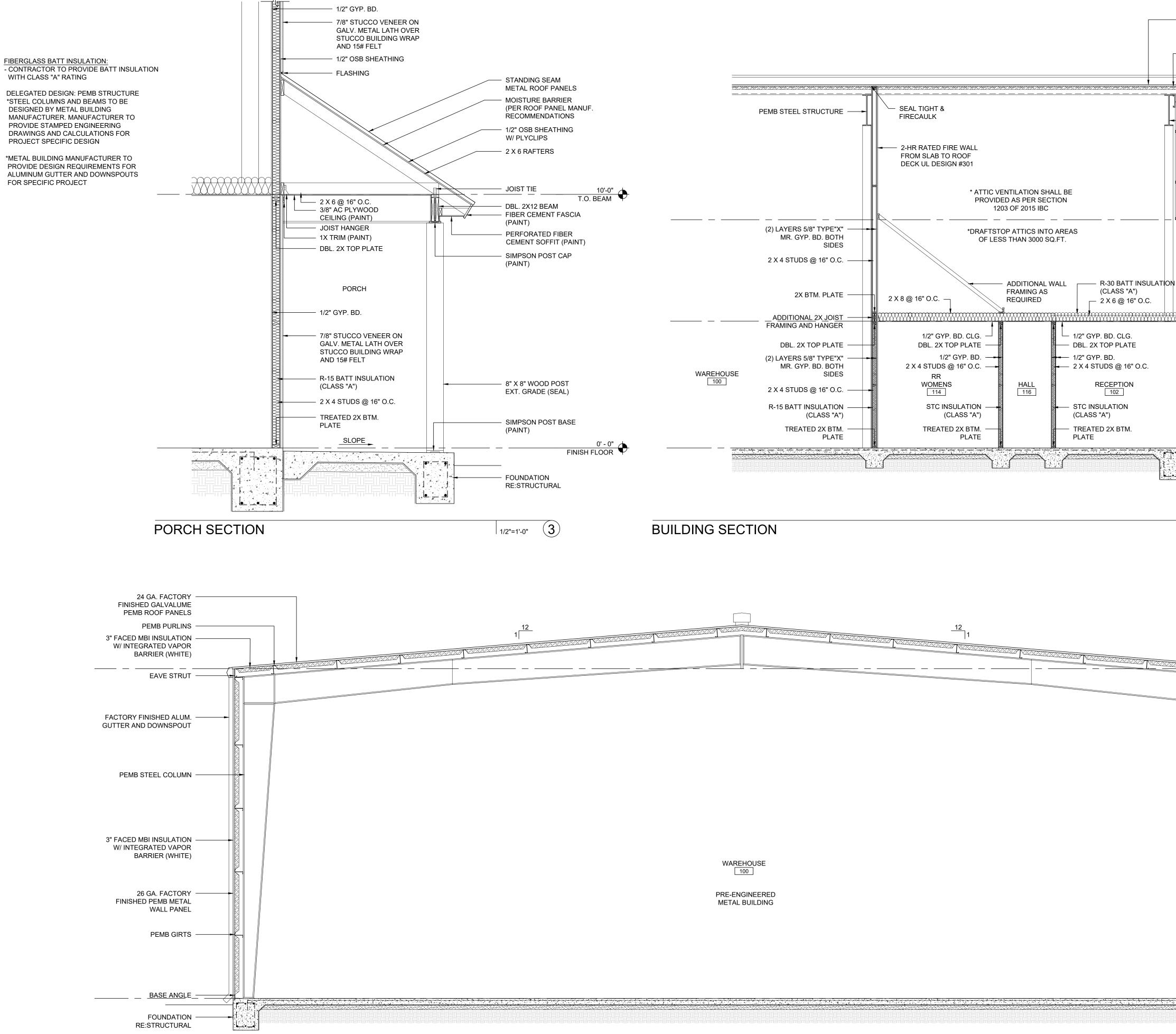


## LEFT SIDE ELEVATION

1/8"=1'-0"

FRONT ELEVATION





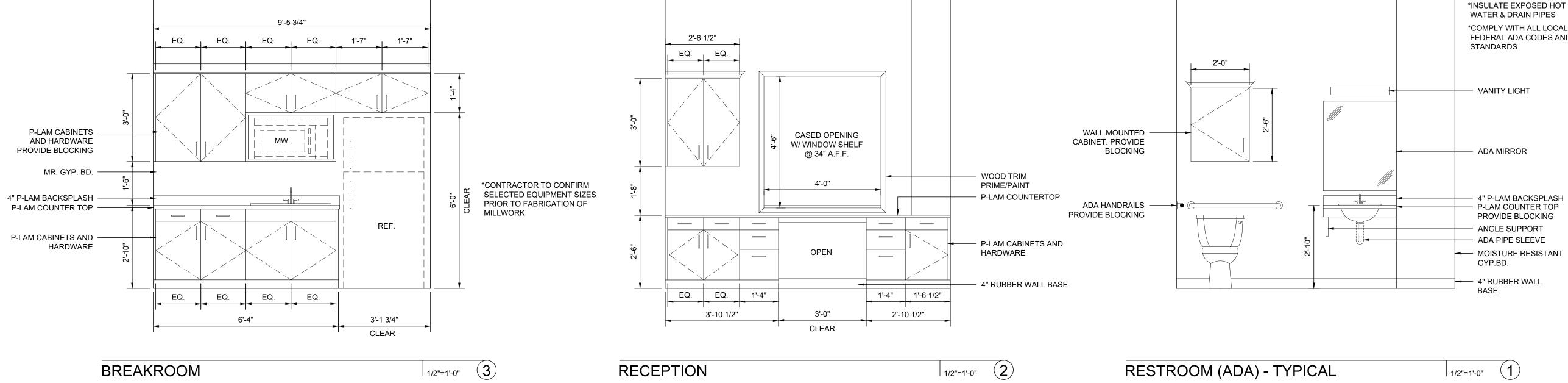
## **BUILDING SECTION**

	FINISHED GALVALUME PEMB ROOF PANELS	
	3" FACED MBI INSULATION W/ INTEGRATED VAPOR	
	BARRIER (WHITE)	
	PEMB PURLIN PEMB END WALL RAFTER	A A A
	PEMB STEEL STRUCTURE	
		×
	26 GA. FACTORY FINISHED PEMB METAL WALL PANEL	Σ
	PEMB GIRTS	
		Office Information: Main Office: 225.412.0048 Fax: 225.412.0049
	BARRIER (WHITE) 	MKE Architects.com 3233 S.SHERWOOD FOREST BLVD.
	STUCCO FINISH	SUITE 203A BATON ROUGE, LA 70816
	STANDING SEAM METAL ROOF PANELS	Consultants Information:
	MOISTURE BARRIER     1/2" OSB SHEATHING     W/ PLYCLIPS	Structural: Forte and Tablada
	2 X 6 RAFTERS	9107 Interline Avenue Baton Rouge, LA 70809
	10'-0" T.O. BEAM	Jason Fennell (225) 927-9321
	DBL. 2X12 BEAM 1/2" GYP. BD.	Electrical: Merge Engineering 7422 Bioardy Avanue, Suite E1
	R-15 BATT INSULATION	7423 Picardy Avenue, Suite E1 Baton Rouge, LA 70808 Tim Verkaik
	(CLASS "A") 2 X 4 STUDS @ 16" O.C.	(225) 478-2990 Mechanical:
•	1/2" OSB SHEATHING MOISTURE BARRIER	Henry C. Eyre Jr. PE INC. 7423 Picardy Avenue, Suite E
PORCH	STUCCO FINISH 8" X 8" WOOD POST	Baton Rouge, LA 70808 Trey Eyre (225) 767-7070
	EXT. GRADE (SEAL)	
	RE:STRUCTURAL	
		Project Notes:
	1/4"=1'-0" (2)	
		Project Title: COPPERHEAD
		BUILDING - NO.2
	– 24 GA. FACTORY FINISHED GALVALUME	Project Location:
	PEMB ROOF PANELS	35030 HWY 30 GEISMAR, ASCENSION PARISH, LA
	- PEMB PURLINS - 3" FACED MBI INSULATION	No. Date Description
N. CANADA CONTRACTOR OF CONTRA	W/ INTEGRATED VAPOR BARRIER (WHITE)	
	EAVE STRUT	
	- FACTORY FINISHED ALUM. GUTTER AND DOWNSPOUT	
	GUTTER AND DOWINSPOUT	
	- PEMB STEEL COLUMN	
		Sheet Name:
	- 3" FACED MBI INSULATION	BUILDING SECTIONS
	W/ INTEGRATED VAPOR BARRIER (WHITE)	Seal
	– 26 GA. FACTORY FINISHED PEMB METAL	WHITTINI HAEL KEAN
	WALL PANEL	1111 CHAR NO 7523 (5)
	- PEMB GIRTS	
		E OF LOUIS
	– BASE ANGLE 0' - 0" + FINISH FLOOR +	
	- FOUNDATION RE:STRUCTURAL	Project Number:
Derest Schultung		<b>19-11</b> Date:
		JULY 17, 2019 Document Phase:
	1/4"=1'-0" (1)	CONSTRUCTION DOCUMENTS

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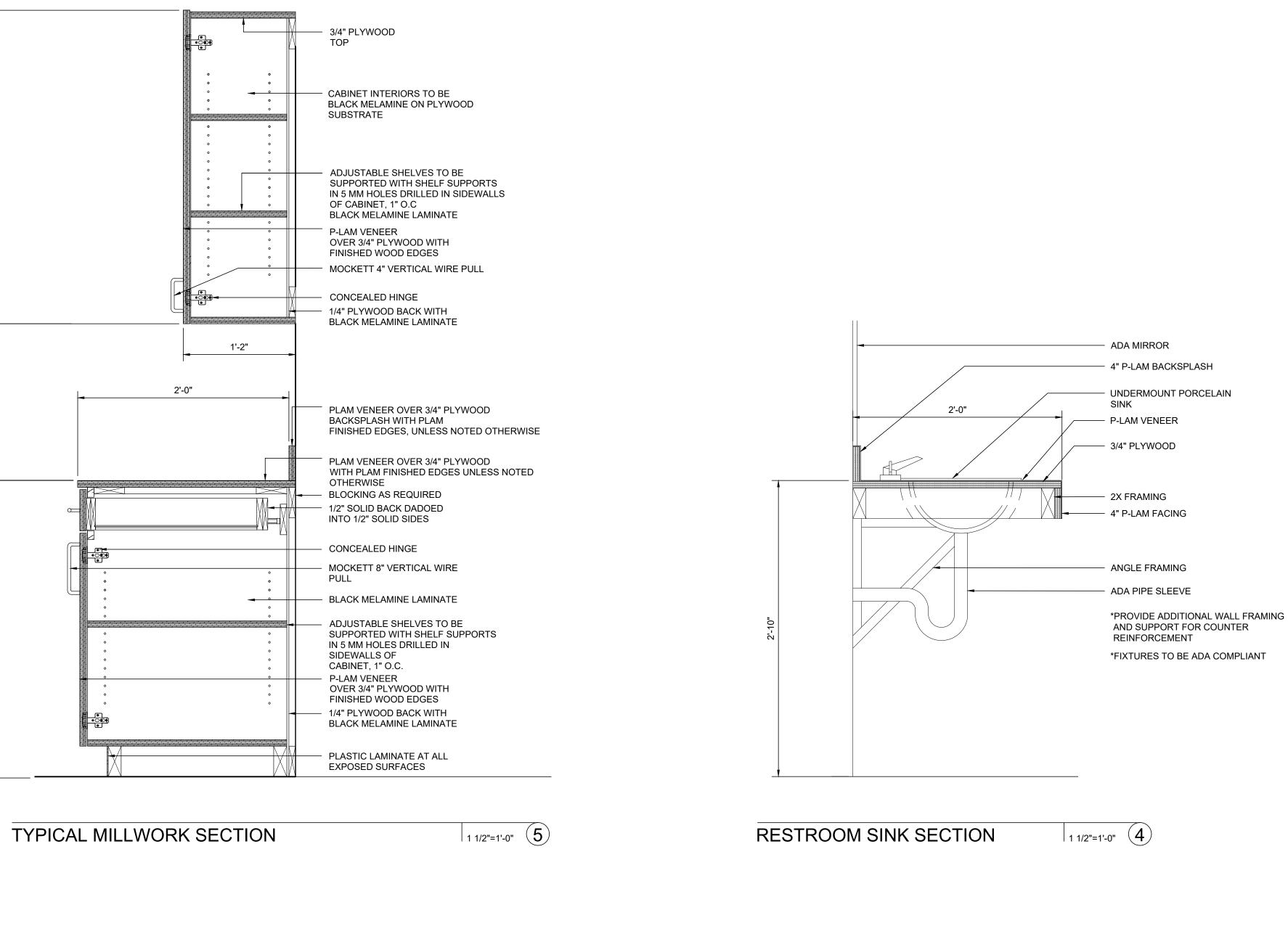


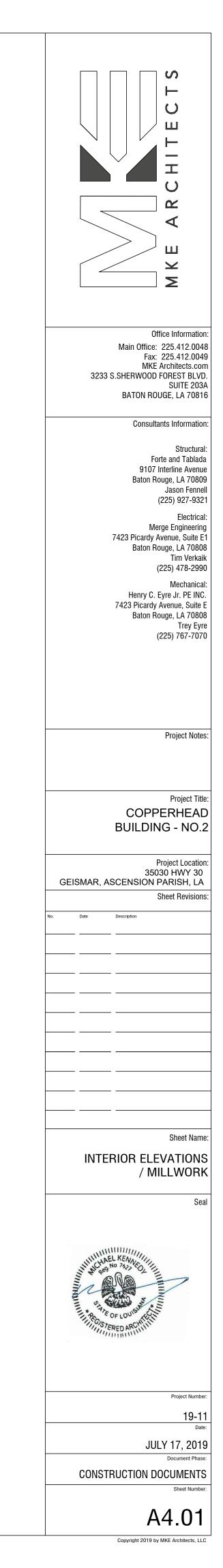


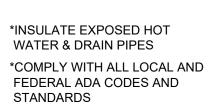












### GENERAL NOTES:

- 1. THE CONTRACTOR IS RESPONSIBLE FOR MEETING ALL CURRENT INTERNATIONAL BUILDING CODES, ZONING ORDINANCES AND STATE FIRE MARSHALL REGULATIONS.
- 2. PROVIDE ACCESSIBILITY FOR THE PHYSICALLY HANDICAPPED CONFORMING TO ALL CURRENT ADA-ABA GUIDELINES AND STANDARDS.
- 3. ADA RESTROOMS SHALL BE CONSTRUCTED AND EQUIPPED TO CONFORM WITH ALL CURRENT ADA-ABA REGULATIONS.
- 4. EXIT DOORS SHALL NOT BE LOCKED DURING PERIODS OF OCCUPANCY FROM EGRESS SIDE.
- 5. PROVIDE SAFETY GLAZING AT HAZARDOUS LOCATIONS TO CONFORM WITH CHAPTER 24 OF THE I.B.C. AND ALL OTHER APPLICABLE CODES.
- 6. INTERIOR FINISHES SHALL COMPLY WITH CHAPTER 8 AND TABLE 803.11 OF THE IBC 2015 EDITION.

CLASS A: = FLAME SPREAD INDEX 0-25; SMOKE DEVELOPED INDEX 0-450 CLASS B: = FLAME SPREAD INDEX 26-75; SMOKE DEVELOPED INDEX 0-450 CLASS C: = FLAME SPREAD INDEX 76-200; SMOKE DEVELOPED INDEX 0-450

-BUSINESS: NONSPRINKLERED -INTERIOR EXIT STAIRWAYS AND RAMPS AND EXIT PASSAGEWAYS:

CLASS A -CORRIDORS AND ENCLOSURE FOR EXIT ACCESS STAIRWAYS AND RAMPS: CLASS B

- -ROOMS AND ENCLOSED SPACES: CLASS C
- 7. ALL INSULATION AND INSULATION ASSEMBLIES SHALL HAVE A SMOKE DEVELOPED FACTOR OF LESS THAN 450. CONCEALED & EXPOSED INSULATION SHALL HAVE A
- FLAME SPREAD RATING OF 0-25. 8. ALL DRAFTSTOPPING TO COMPLY WITH SECTION 717.4 OF THE I.B.C. DRAFTSTOP ALL ATTIC SPACES TO AREAS OF LESS THAN 3000 SQ.FT. DRAFT STOPPING MATERIAL SHALL NOT BE LESS THAN 1/2" GYPSUM BOARD, 1/2" PLYWOOD OR OTHER APPROVED MATERIALS ADEQUATELY SUPPORTED, THE INTEGRITY OF ALL
- DRAFTSTOPS SHALL BE MAINTAINED. 9. FIRESTOPPING SHALL BE PROVIDED IN WALLS AND PARTITIONS TO CUTOFF ALL CONCEALED DRAFT OPENINGS, BOTH VERT. & HORIZ., AND TO FORM A FIRE BARRIER BETWEEN FLOOR AND ROOF SPACES. ALL OPENINGS AROUND PIPES, DUCTS OR CONDUIT SHALL BE FIRESTOPPED WITH APPROVED MATERIALS, SECURELY FASTENED IN PLACE. FIRESTOPPING SHALL COMPLY WITH SECTION 717.2 OF THE I.B.C.
- 10. PROVIDE HAND OPERATED FIRE EXTINGUISHERS AS SHOWN ON PLANS AND IN ACCORDANCE WITH NFPA 10. -TOP OF FIRE EXTINGUISHER, HAVING A GROSS WEIGHT LESS THAN 40 LBS. SHALL BE NOT MORE THAN 5 FEET ABOVE THE FLOOR, 3-1/2" FEET IF GROSS WEIGHT 40
- LBS. OR GREATER. 11. GROUND AND FLOOR SURFACES SHALL BE NON-SLIP UNDER ALL WEATHER CONDITIONS.
- 12. THRESHOLDS SHALL NOT BE MORE THAN 1/2" IN HEIGHT AND SHALL BE BEVELED IF OVER 1/4" IN HEIGHT. (ADA COMPLIANT)
- 13. LAVATORIES SHALL BE MOUNTED WITH A CLEARANCE OF AT LEAST 29" FROM THE FLOOR TO THE BOTTOM OF THE APRON. HOT WATER AND DRAIN PIPES SHALL BE INSULATED OR COVERED.
- 14. MIRRORS SHALL BE MOUNTED WITH THE BOTTOM EDGE NOT MORE THAN 40" FROM THE FLOOR SURFACE. 15. FAUCETS SHALL BE LEVER-OPERATED, PUCH TYPE OR ELECTRONICALLY
- CONTROLLED.
- 16. DOOR HARDWARE SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING OR TWISTING OF THE WRIST TO OPERATE. LEVER-OPERATED, PUSH-TYPE AND U-SHAPED HANDLES ARE ACCEPTABLE DESIGNS. LOCKS ON DOORS IN MEANS OF EGRESS SHALL NOT REQUIRE THE USE OF A KEY, SPECIAL DEVICE OR SPECIAL KNOWLEDGE TO OPEN IN DIRECTION OF EGRESS.

\*CONTRACTOR TO CONFIRM SELECTED EQUIPMENT SIZES PRIOR TO FABRICATION OF MILLWORK

\* USE (2) LAYERS 5/8" TYPE "X" MOISTURE RESISTANT GYP. BD. EACH SIDE AT 2-HOUR RATED WALL

UL-U301 TWO-HOUR FIRE-RESISTIVE WOOD FRAME WALL 2X4 WOOD STUD WALL

\_\_\_\_\_ \_ \_ \_ \_\_\_ 2-HR RATED WALL CONSTRUCTION

#### HARDWARE NOTE:

DOOR HARDWARE SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING OR TWISTING OF THE WRIST TO OPERATE. LEVER-OPERATED, PUSH-TYPE AND U-SHAPED HANDLES ARE ACCEPTABLE DESIGNS. LOCKS ON DOORS IN MEANS OF EGRESS SHALL NOT REQUIRE THE USE OF A KEY, SPECIAL DEVICE OR SPECIAL KNOWLEDGE TO OPEN IN DIRECTION OF EGRESS.

#### \*WINDOW NOTES:

-ALL GLAZING WITHIN A 24 INCH ARC OF A DOOR OPENING IS REQUIRED TO BE SAFETY GLAZING

IF ALL OF THE FOLLOWING CONDITIONS (BELOW) OCCUR, THEN THE GLASS IS REQUIRED TO BE SAFETY GLAZING.

-EXPOSED AREA OF AN INDIVIDUAL PANE GREATER THAN 9 SQUARE FEET (0.836 m2) -BOTTOM EDGE LESS THAN 18 INCHES (457 mm)

ABOVE THE FLOOR OR HORIZONTAL SURFACE BELOW

-TOP EDGE GREATER THAN 36 INCHES (914mm) ABOVE THE FLOOR OR HORIZONTAL SURFACE

BELOW -ONE OR MORE WALKING SURFACES WITHIN 36 INCHES (914 mm) HORIZONTALLY OF THE GLAZING

			<b>T</b> 1 11 /	RECORDETION
MARK	WIDTH	HEIGHT	THK.	DESCRIPTION
100A	3'-0"	7'-0"	1 3/4"	HOLLOW METAL DOOR W/ KEYED LOCKSET
100B	3'-0"	7'-0"	1 3/4"	HOLLOW METAL DOOR W/ KEYED LOCKSET
100C	3'-0"	7'-0"	1 3/4"	HOLLOW METAL DOOR W/ KEYED LOCKSET
100D	16'-0"	14'-0"	STD.	METAL ROLL-UP DOOR / FACTORY FINISH
100E	16'-0"	14'-0"	STD.	METAL ROLL-UP DOOR / FACTORY FINISH
100F	16'-0"	14'-0"	STD.	METAL ROLL-UP DOOR / FACTORY FINISH
100G	12'-0"	14'-0"	STD.	METAL ROLL-UP DOOR / FACTORY FINISH
101A	3'-0"	6'-8"	STD.	STOREFRONT DOOR W/ SIDELITES & TRANSOM. EGRESS HARDWARE
101B	3'-0"	6'-8"	1 3/4"	INTERIOR GRADE 6 PANEL W/ EGRESS HARDWARE
102A	3'-0"	6'-8"	1 3/4"	INTERIOR GRADE 6 PANEL W/ PASSAGE LOCKSET
103A	3'-0"	6'-8"	1 3/4"	INTERIOR GRADE 6 PANEL W/ PASSAGE LOCKSET
103A	3'-0"	6'-8"	1 3/4"	INTERIOR GRADE 6 PANEL W/ PASSAGE LOCKSET
104A	3'-0"	6'-8"	1 3/4"	INTERIOR GRADE 6 PANEL W/ PASSAGE LOCKSET
105A	3'-0"	6'-8"	1 3/4"	INTERIOR GRADE 6 PANEL W/ PASSAGE LOCKSET
106A	3'-0"	6'-8"	1 3/4"	INTERIOR GRADE 6 PANEL W/ PASSAGE LOCKSET
107A	3'-0"	6'-8"	1 3/4"	INTERIOR GRADE 6 PANEL W/ PASSAGE LOCKSET
108A	3'-0"	6'-8"	1 3/4"	INTERIOR GRADE 6 PANEL W/ PASSAGE LOCKSET
109A	3'-0"	6'-8"	1 3/4"	INTERIOR GRADE 6 PANEL W/ PASSAGE LOCKSET
110A	3'-0"	6'-8"	1 3/4"	INTERIOR GRADE 6 PANEL W/ PASSAGE LOCKSET
110B	2'-4"	6'-8"	1 3/4"	INTERIOR GRADE 6 PANEL
111A	3'-0"	6'-8"	1 3/4"	INTERIOR GRADE 6 PANEL W/ PASSAGE LOCKSET
112A	3'-0"	6'-8"	1 3/4"	INTERIOR GRADE 6 PANEL W/ PRIVACY
113A	3'-0"	6'-8"	1 3/4"	LOCKSET INTERIOR GRADE 6 PANEL W/ PRIVACY
114A	3'-0"	6'-8"	1 3/4"	LOCKSET INTERIOR GRADE 6 PANEL W/ PRIVACY
115A	3'-0"	6'-8"	1 3/4"	LOCKSET INTERIOR GRADE 6 PANEL W/ PASSAGE
116A	2'-6"	6'-8"	1 3/4"	LOCKSET (PAIR) INTERIOR GRADE 6 PANEL
116B	3'-0"	6'-8"	1 3/4"	90 MIN. RATED INSULATED STEEL DOOR /
116C	3'-0"	6'-8"	1 3/4"	FRAME W/ AUTO CLOSER 90 MIN. RATED INSULATED STEEL DOOR /

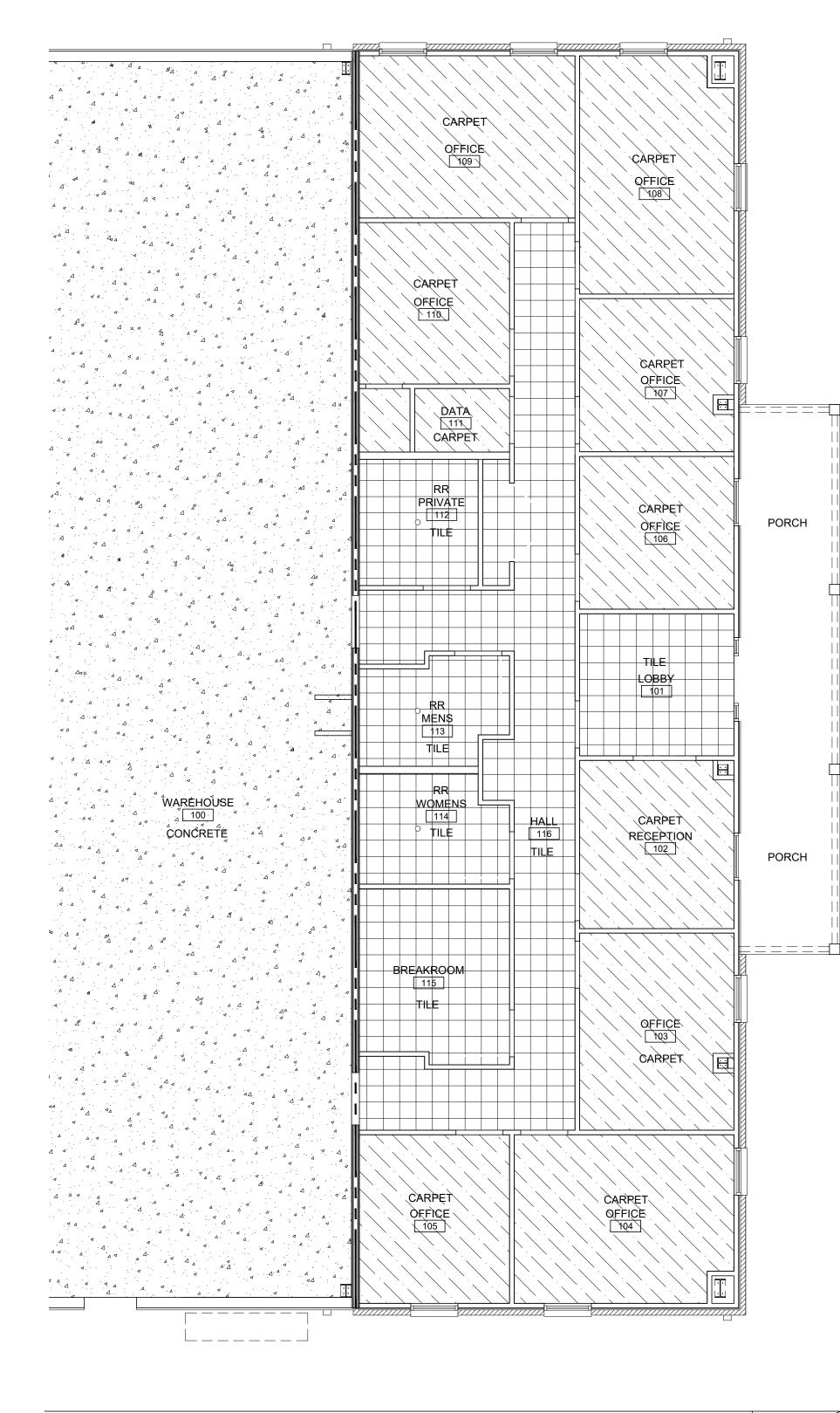
WINDOW SCHEDULE								
MARK	WIDTH	HEIGHT	DESCRIPTION					
A	3'-0"	7'-0"	ALUM. INSULATED / FIXED GLASS / LOW-E					
В	3'-0"	5'-0"	ALUM. INSULATED / FIXED GLASS / LOW-E					

\*WINDOW PERFORMANCE NOTES:

-ALUM. FRAME WITH THERMAL BREAK -MAX-U-FACTOR = 0.32-MAX SHGC = 0.32

INTERIOR FINISH SCHEDULE							
ROOM	FLOOR	WALLS	CEILINGS	WALL BASE			
OFFICES	CARPET	1/2" GYP. BD. / LIGHT TEXTURE / PRIME PAINT	1/2" GYP. BD. / LIGHT TEXTURE / PRIME PAINT	4" RUBBER WALL BASE			
CLOSETS	SAME AS ADJACENT RM.	1/2" GYP. BD. / LIGHT TEXTURE / PRIME PAINT	1/2" GYP. BD. / LIGHT TEXTURE / PRIME PAINT	4" RUBBER WALL BASE			
LOBBY	PORCELAIN TILE	1/2" GYP. BD. / LIGHT TEXTURE / PRIME PAINT	1/2" GYP. BD. / LIGHT TEXTURE / PRIME PAINT	4" RUBBER WALL BASE			
RECEPTION	CARPET	1/2" GYP. BD. / LIGHT TEXTURE / PRIME PAINT	1/2" GYP. BD. / LIGHT TEXTURE / PRIME PAINT	4" RUBBER WALL BASE			
BREAKROOM	PORCELAIN TILE	1/2" GYP. BD. / LIGHT TEXTURE / PRIME PAINT	1/2" GYP. BD. / LIGHT TEXTURE / PRIME PAINT	4" RUBBER WALL BASE			
RESTROOMS	PORCELAIN TILE	MOISTURE RESISTANT 1/2" GYP. BD. / LIGHT TEXTURE / PRIME PAINT	MOISTURE RESISTANT 1/2" GYP. BD. / LIGHT TEXTURE / PRIME PAINT	4" RUBBER WALL BASE			
HALL	PORCELAIN TILE	1/2" GYP. BD. / LIGHT TEXTURE / PRIME PAINT	1/2" GYP. BD. / LIGHT TEXTURE / PRIME PAINT	4" RUBBER WALL BASE			
DATA	CARPET	1/2" GYP. BD. / LIGHT TEXTURE / PRIME PAINT	1/2" GYP. BD. / LIGHT TEXTURE / PRIME PAINT	4" RUBBER WALL BASE			
WAREHOUSE	CONCRETE	EXPOSED STEEL STRUCTURE MBI INSULATION	EXPOSED STEEL STRUCTURE MBI INSULATION	4" RUBBER WALL BASE			

\* USE (2) LAYERS 5/8" TYPE "X" MOISTURE RESISTANT GYP. BD. EACH SIDE AT 2-HOUR RATED WALL



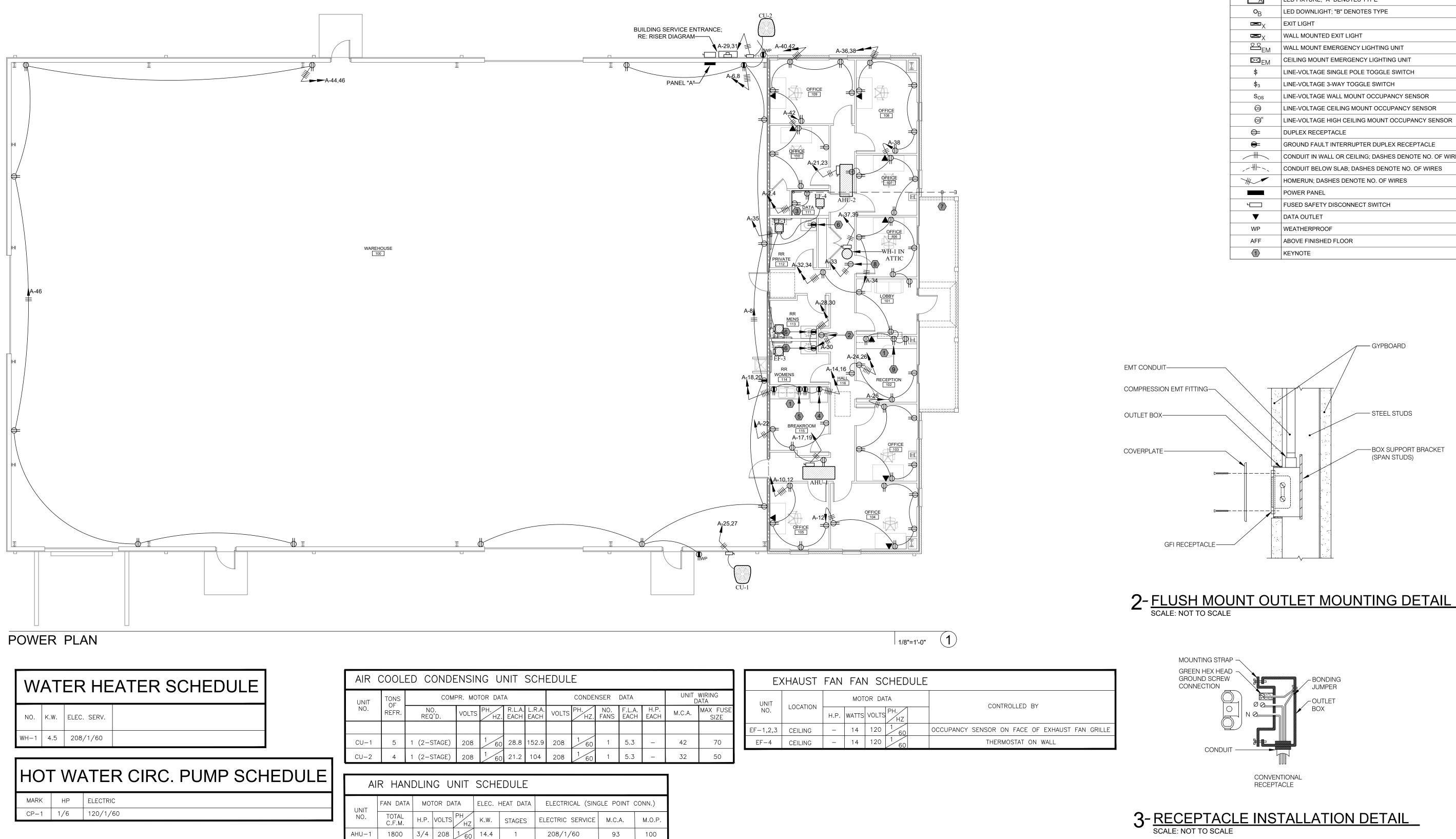
## **FINISH PLAN**

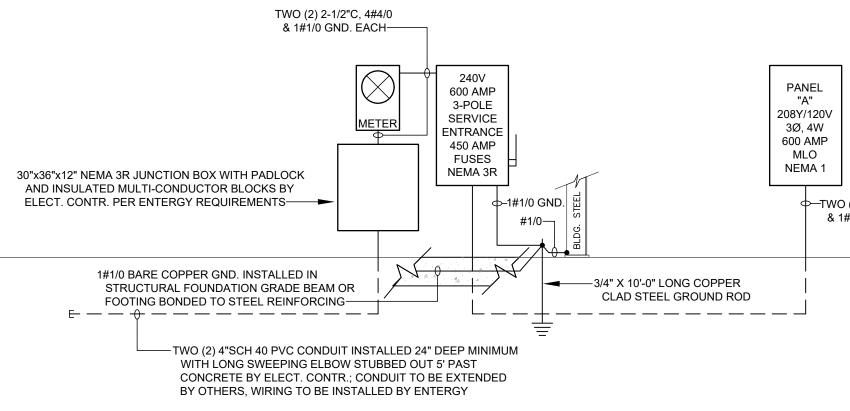
WKE ARCHIECTS
Office Information: Main Office: 225.412.0048 Fax: 225.412.0049 MKE Architects.com 3233 S.SHERWOOD FOREST BLVD. SUITE 203A BATON ROUGE, LA 70816
Consultants Information: Structural: Forte and Tablada 9107 Interline Avenue Baton Rouge, LA 70809 Jason Fennell (225) 927-9321 Electrical: Merge Engineering 7423 Picardy Avenue, Suite E1 Baton Rouge, LA 70808 Tim Verkaik (225) 478-2990
Mechanical: Henry C. Eyre Jr. PE INC. 7423 Picardy Avenue, Suite E Baton Rouge, LA 70808 Trey Eyre (225) 767-7070
Project Notes:
Project Title: COPPERHEAD BUILDING - NO.2
Project Location: 35030 HWY 30 GEISMAR, ASCENSION PARISH, LA Sheet Revisions:
Sheet Name: SCHEDULES / FINISH PLANS
Seal
Project Number: 19-11 Date: JULY 17, 2019 Document Phase:
CONSTRUCTION DOCUMENTS Sheet Number: A5.01

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1			
			[
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1			

1/2"=1'-0"





**RISER DIAGRAM** 

1400 3/4 208 1 60 14.4

AHU-2

1/8"=1'-0"	(1
1/0 - 1 -0	

Г	SCHEDULE								
	CONDENSER DATA UNIT WIRING DATA								
L.A. .CH	L.R.A. EACH	VOLTS	PH. HZ.	NO. FANS	F.L.A. EACH	H.P. EACH	M.C.A.	MAX FUSE SIZE	
3.8	152.9	208	1 60	1	5.3	_	42	70	
1.2	104	208	1 60	1	5.3	-	32	50	

EXH	IAUST	FAN	FAN	SCHEDUL
			MOTOR	

Ε>	KHAUSI	FAN	FAr	1 50	CHEDU	ILE	
UNIT			MOTOR DATA				CONTROLLED BY
NO.	NO. LOCATION H.P. WATTS VOLTS PH.	PH. HZ					
EF-1,2,3	CEILING	_	14	120	1 60		OCCUPANCY SENSOR ON FACE OF EXHAUST FAN GRILLE
EF-4	CEILING	-	14	120	1 60		THERMOSTAT ON WALL

LE			
DATA	ELECTRICAL (SING	GLE POINT (	CONN.)
GES	ELECTRIC SERVICE	M.C.A.	M.O.P.
1	208/1/60	93	100
1	208/1/60	93	100

POWER PLAN KEYNOTES	 	

- LOCATE DEVICE(S) ABOVE THE COUNTER AT THIS MILLWORK, UNLESS NOTED OTHERWISE
- 2 LOCATE DUPLEX RECEPTACLE BEHIND THE EWC; COORDINATE THE EXACT LOCATION WITH THE PLUMBING CONTR. PRIOR TO ROUGH-IN.
- 3/4" X 8' HIGH PLYWOOD COMMUNICATION BACKBOARD ON THE TWO (2) WALLS; ROUTE A #6 AWG BARE COPPER GROUND ALONG BOTTOM OF BACKBOARD TO GROUND BUS IN PANEL "A".
- 4 LOCATE DUPLEX RECEPTACLE 36" AFF FOR REFRIGERATOR.
- 5 LOCATE DUPLEX RECEPTACLE ABOVE THE COUNTER FOR MICROWAVE.
- 6 LOCATE DUPLEX RECEPTACLE 48" AFF.
- T> STUB OUT ONE (1) 2" CONDUIT PAST ALL CONCRETE FOR COMMUNICATION SERVICES INTO THE BUILDING; CONDUIT TO BE EXTENDED BY OTHERS AS DIRECTED BY THE LOCAL TEL. CO.
- (8) LOCATE DUPLEX RECEPTACLE IN THE ATTIC FOR HOT WATER CIRCULATING PUMP.
- IOCATE DUPLEX RECEPTACLE 18" AFF.

#### ≻TWO (2) 2-1/2"C, 4#4/0 & 1#1/0 GND. EACH

- ELECT. CONTR. SHALL COORDINATE THE PLACEMENT OF ALL OWNER FURNISHED 4. EQUIPMENT WITH THE OWNERS REP AS WELL AS RECEPTACLE CONFIGURATIONS PRIOR TO ROUGH-IN; ALL RECEPTACLES SHALL MATCH THE OWNER'S EQUIPMENT PLUGS.

2.

3

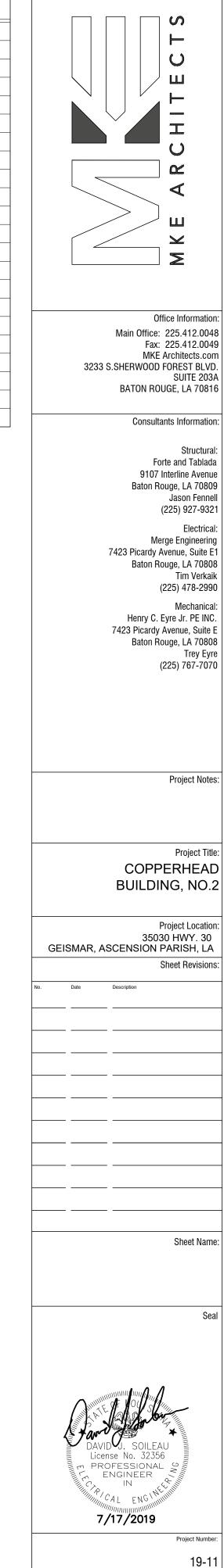
3.

- 5. EACH 120 VOLT CIRCUIT SHALL HAVE ITS OWN SEPARATE NEUTRAL; SHARING OF NEUTRAL CONDUCTORS IS NOT ALLOWED.
- 7

	SYMBOL SCHEDULE
Α	LED FIXTURE; "A" DENOTES TYPE
o <sub>B</sub>	LED DOWNLIGHT; "B" DENOTES TYPE
×χ	EXIT LIGHT
×χ	WALL MOUNTED EXIT LIGHT
∑ Second EM	WALL MOUNT EMERGENCY LIGHTING UNIT
	CEILING MOUNT EMERGENCY LIGHTING UNIT
\$	LINE-VOLTAGE SINGLE POLE TOGGLE SWITCH
\$ <sub>3</sub>	LINE-VOLTAGE 3-WAY TOGGLE SWITCH
S <sub>OS</sub>	LINE-VOLTAGE WALL MOUNT OCCUPANCY SENSOR
69	LINE-VOLTAGE CEILING MOUNT OCCUPANCY SENSOR
©9 <sup>H</sup>	LINE-VOLTAGE HIGH CEILING MOUNT OCCUPANCY SENSOR
ŧ	DUPLEX RECEPTACLE
€=	GROUND FAULT INTERRUPTER DUPLEX RECEPTACLE
	CONDUIT IN WALL OR CEILING; DASHES DENOTE NO. OF WIRES
#\`	CONDUIT BELOW SLAB; DASHES DENOTE NO. OF WIRES
	HOMERUN; DASHES DENOTE NO. OF WIRES
	POWER PANEL
4	FUSED SAFETY DISCONNECT SWITCH
▼	DATA OUTLET
WP	WEATHERPROOF
AFF	ABOVE FINISHED FLOOR
(1)	KEYNOTE

# 3-<u>RECEPTACLE INSTALLATION DETAIL</u> SCALE: NOT TO SCALE

- POWER PLAN NOTES
- 1. VERIFY THE EXACT LOCATION OF ALL DEVICES WITH THE ARCHITECT PRIOR TO ROUGH-IN. VERIFY THE EXACT LOCATION, VOLTAGE, PHASE, AMPERAGE, ETC. OF ALL MECHANICAL AND PLUMBING EQUIPMENT WITH THE MECH. CONTR. AND PLUMBING CONTR. PRIOR TO ROUGH-IN.
- ROUTE A 1" CONDUIT FROM EACH WALL MOUNTED VOICE/DATA OUTLET TO AN ACCESSIBLE LOCATION ABOVE THE CEILING.
- THE COUNTER TOP SHALL BE DRILLED AND GROMMETS INSTALLED BY OTHERS WHERE DEVICES ARE SHOWN TO BE INSTALLED INSIDE OR BELOW THE MILLWORK.
- 6. ALL DEVICES SHALL BE LOCATED 18"AFF UNLESS NOTED OTHERWISE.
- COORDINATE THE EXACT LOCATION OF THE COND. UNITS WITH THE ELECTRICAL SERVICE MAINTAINING PROPER CLEARANCES.





Date JULY 17, 2019

Document Phase CONSTRUCTION DOCUMENTS Sheet Numb

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LIGHTING PLAN							1/8"=1'-0" 1
				FIY		11 F	1/8"=1'-0" 1
LIGHTING PLAN NOTES	L LIGHT FIXTURES WITH THE REFLECTED CEILING PLA	AN.		LAMPING			
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<ul> <li>LIGHTING PLAN NOTES</li> <li>VERIFY THE EXACT LOCATION OF ALL</li> <li>ELECTRICAL CONTRACTOR SHALL VE APPROPRIATE TRIMS AT EACH CEILIN</li> <li>VERIFY THE EXACT LOCATION OF ALL ROUGH-IN.</li> <li>THE ELECTRICAL CONTRACTOR SHAL WITH THE MANUFACTURER PRIOR TO</li> <li>REFER TO THE LIGHTING PLAN FOR G ADD DEVICES AS REQUIRED FOR FUL</li> </ul>	ERIFY THE TYPE OF CEILINGS TO ACCEPT LIGHT FIXTUNG TYPE. REFERENCE THE REFLECTED CEILING PLAN LL LIGHT SWITCHES AND OCCUPANCY SENSORS WITH ALL VERIFY THE EXACT LOCATION OF ALL CEILING MOU O INSTALLATION FOR OPTIMUM PERFORMANCE QUANTITY AND LOCATIONS OF ALL OCCUPANCY SENS LL COVERAGE.	URES; PROVIDE N FOR CEILING TYPES. I THE ARCHITECTS PRIOR TO PUNT OCCUPANCY SENSORS SORS. ADJUST LOCATION OR	A       SELECTED BY THE OWNER         B       SELECTED BY THE OWNER         C       SELECTED BY THE OWNER         D       SELECTED BY THE OWNER	LAMPING TYPE 8400 LUMEN 4100°K 5600 LUMEN 4100°K 1800 LUMEN LED/ 4000°K 1000 LUMEN LED/ 4000°K	QNTY         VOLTAGE           3         120/277           2         120/277           N/A         120/277           N/A         120/277	WATTAGE 95 65 21 12	FINISH       DESCRIPTION         WHITE       4' SURFACE MOUNT WRAPAROUND, ACRYLIC LENS, UNIVERSA VOLTAGE ELECTRONIC BALLAST         WHITE       4' SURFACE MOUNT WRAPAROUND, ACRYLIC LENS, UNIVERSA VOLTAGE ELECTRONIC BALLAST         FINISH       4' SURFACE MOUNT WRAPAROUND, ACRYLIC LENS, UNIVERSA VOLTAGE ELECTRONIC BALLAST         FINISH       WALL MOUNT DECORATIVE VANITY LIGHT         AS       SELECTED         FINISH       EXTERIOR WALL MOUNT DECORATIVE SCONCE         AS       SELECTED
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<ul> <li>LIGHTING PLAN NOTES</li> <li>VERIFY THE EXACT LOCATION OF ALL</li> <li>ELECTRICAL CONTRACTOR SHALL VE APPROPRIATE TRIMS AT EACH CEILIN</li> <li>VERIFY THE EXACT LOCATION OF ALL ROUGH-IN.</li> <li>THE ELECTRICAL CONTRACTOR SHAL WITH THE MANUFACTURER PRIOR TO</li> <li>REFER TO THE LIGHTING PLAN FOR O ADD DEVICES AS REQUIRED FOR FUL</li> <li>ELECT. CONTR. SHALL VERIFY THE FI ORDERING ANY LIGHT FIXTURES.</li> <li>CONNECT ALL EXIT SIGNS AND EMER AHEAD OF ALL CONTROLS.</li> <li>SUSPEND TYPE "E" LIGHT FIXTURES 2</li> <li>DIMENSIONS SHOWN NEXT TO THE EXIT</li> <li>WALL MOUNT TYPE "Z" EXTERIOR EM</li> </ul>	ERIFY THE TYPE OF CEILINGS TO ACCEPT LIGHT FIXTU NG TYPE. REFERENCE THE REFLECTED CEILING PLAN IL LIGHT SWITCHES AND OCCUPANCY SENSORS WITH ALL VERIFY THE EXACT LOCATION OF ALL CEILING MOU O INSTALLATION FOR OPTIMUM PERFORMANCE QUANTITY AND LOCATIONS OF ALL OCCUPANCY SENS LL COVERAGE. FINISH OF ALL INTERIOR AND EXTERIOR LIGHTS WITH T RGENCY LIGHTS TO THE LIGHTING CIRCUIT IN THE ROM 24' AFF.	TURES; PROVIDE N FOR CEILING TYPES. If THE ARCHITECTS PRIOR TO OUNT OCCUPANCY SENSORS SORS. ADJUST LOCATION OR THE ARCHITECT PRIOR TO DOM THEY ARE LOCATED IN OF THE FIXTURES.	ASELECTED BY THE OWNERBSELECTED BY THE OWNERCSELECTED BY THE OWNERDSELECTED BY THE OWNERESELECTED BY THE OWNERFSELECTED BY THE OWNERGSELECTED BY THE OWNERHSELECTED BY THE OWNERXSELECTED BY THE OWNER	LAMPING TYPE 8400 LUMEN 5600 LUMEN 4100°K 1800 LUMEN LED/ 4000°K 1000 LUMEN LED/ 4000°K 11200 LUMEN LED/ 4000°K 12000 LUMEN LED/ 4000°K 12000 LUMEN LED/ 4000°K 1300 LUMEN LED/ 4000°K RED LED	QNTY         VOLTAGE           3         120/277           2         120/277           N/A         120/277	WATTAGE 95 65 21 12 130 110 110 15 6	FINISH       DESCRIPTION         WHITE       4' SURFACE MOUNT WRAPAROUND, ACRYLIC LENS, UNIVERSA VOLTAGE ELECTRONIC BALLAST         WHITE       4' SURFACE MOUNT WRAPAROUND, ACRYLIC LENS, UNIVERSA VOLTAGE ELECTRONIC BALLAST         FINISH       4' SURFACE MOUNT WRAPAROUND, ACRYLIC LENS, UNIVERSA VOLTAGE ELECTRONIC BALLAST         FINISH       WALL MOUNT DECORATIVE VANITY LIGHT         AS       SELECTED         FINISH       EXTERIOR WALL MOUNT DECORATIVE SCONCE         AS       SELECTED         WHITE       2' X 4' SUSPENDED HIGH BAY, UNIVERSAL VOLTAGE ELECTRONE BALLAST         FINISH       WALL MOUNT LED WALL PACK, BUILT-IN PHOTO CELL, UNIVERSAL VOLTAGE ELECTRONIC DRIVER         SELECTED       FINISH         WALL MOUNT LED WALL PACK, UNIVERSAL VOLTAGE         SELECTED       FINISH         WALL MOUNT LED WALL PACK, UNIVERSAL VOLTAGE         SELECTED       FINISH         WALL MOUNT LED WALL PACK, UNIVERSAL VOLTAGE         SELECTED       FINISH         WALL MOUNT LED WALL PACK, UNIVERSAL VOLTAGE         SELECTED       FINISH         WHITE       6" DIAMETER RECESSED LED DOWNLIGHT, UNIVERSAL VOLTAGE         BLECTRONIC DRIVER       ELECTRONIC DRIVER         WHITE       EXIT LIGHT, THERMOPLASTIC HOUSING, BUILT-IN BATTERY
<ul> <li>LIGHTING PLAN NOTES</li> <li>VERIFY THE EXACT LOCATION OF ALL</li> <li>ELECTRICAL CONTRACTOR SHALL VE APPROPRIATE TRIMS AT EACH CEILIN</li> <li>VERIFY THE EXACT LOCATION OF ALL ROUGH-IN.</li> <li>THE ELECTRICAL CONTRACTOR SHALL WITH THE MANUFACTURER PRIOR TO</li> <li>REFER TO THE LIGHTING PLAN FOR O ADD DEVICES AS REQUIRED FOR FUL</li> <li>ELECT. CONTR. SHALL VERIFY THE FI ORDERING ANY LIGHT FIXTURES.</li> <li>CONNECT ALL EXIT SIGNS AND EMER AHEAD OF ALL CONTROLS.</li> <li>SUSPEND TYPE "E" LIGHT FIXTURES 2</li> <li>DIMENSIONS SHOWN NEXT TO THE EX 10. WALL MOUNT TYPE "Z" EXTERIOR EM 11. WHERE SHOWN TO BE WALL MOUNTE FIXTURES.</li> </ul>	ERIFY THE TYPE OF CEILINGS TO ACCEPT LIGHT FIXTU NG TYPE. REFERENCE THE REFLECTED CEILING PLAN IL LIGHT SWITCHES AND OCCUPANCY SENSORS WITH ALL VERIFY THE EXACT LOCATION OF ALL CEILING MOU O INSTALLATION FOR OPTIMUM PERFORMANCE QUANTITY AND LOCATIONS OF ALL OCCUPANCY SENS LL COVERAGE. FINISH OF ALL INTERIOR AND EXTERIOR LIGHTS WITH T RGENCY LIGHTS TO THE LIGHTING CIRCUIT IN THE ROU 24' AFF. EXTERIOR TYPE "F" WALL PACKS IS TO THE BOTTOM O MERGENCY LIGHTS ABOVE THE DOORS.	TURES; PROVIDE N FOR CEILING TYPES. A THE ARCHITECTS PRIOR TO OUNT OCCUPANCY SENSORS SORS. ADJUST LOCATION OR THE ARCHITECT PRIOR TO DOM THEY ARE LOCATED IN OF THE FIXTURES.	ASELECTED BY THE OWNERBSELECTED BY THE OWNERCSELECTED BY THE OWNERDSELECTED BY THE OWNERESELECTED BY THE OWNERFSELECTED BY THE OWNERGSELECTED BY THE OWNERHSELECTED BY THE OWNER	LAMPING TYPE 8400 LUMEN 5600 LUMEN 5600 LUMEN 1800 LUMEN LED/ 4000°K 1000 LUMEN LED/ 4000°K 11200 LUMEN LED/ 4000°K 12000 LUMEN LED/ 4000°K 12000 LUMEN LED/ 4000°K	QNTY         VOLTAGE           3         120/277           2         120/277           N/A         120/277	WATTAGE 95 65 21 12 130 110 110 15 6 3	FINISH       DESCRIPTION         WHITE       4' SURFACE MOUNT WRAPAROUND, ACRYLIC LENS, UNIVERSA VOLTAGE ELECTRONIC BALLAST         WHITE       4' SURFACE MOUNT WRAPAROUND, ACRYLIC LENS, UNIVERSA VOLTAGE ELECTRONIC BALLAST         FINISH       VALL MOUNT DECORATIVE VANITY LIGHT         AS       SELECTED         FINISH       WALL MOUNT DECORATIVE VANITY LIGHT         AS       SELECTED         WHITE       2' X 4' SUSPENDED HIGH BAY, UNIVERSAL VOLTAGE ELECTRONE BALLAST         FINISH       WALL MOUNT LED WALL PACK, BUILT-IN PHOTO CELL, UNIVERSAL VOLTAGE ELECTRONIC DRIVER         SELECTED       WALL MOUNT LED WALL PACK, UNIVERSAL VOLTAGE ELECTRONIC DRIVER         FINISH       WALL MOUNT LED WALL PACK, UNIVERSAL VOLTAGE ELECTRONIC DRIVER         SELECTED       WHITE         WHITE       0' DIAMETER RECESSED LED DOWNLIGHT, UNIVERSAL VOLTAGE         ELECTRONIC DRIVER       SELECTED

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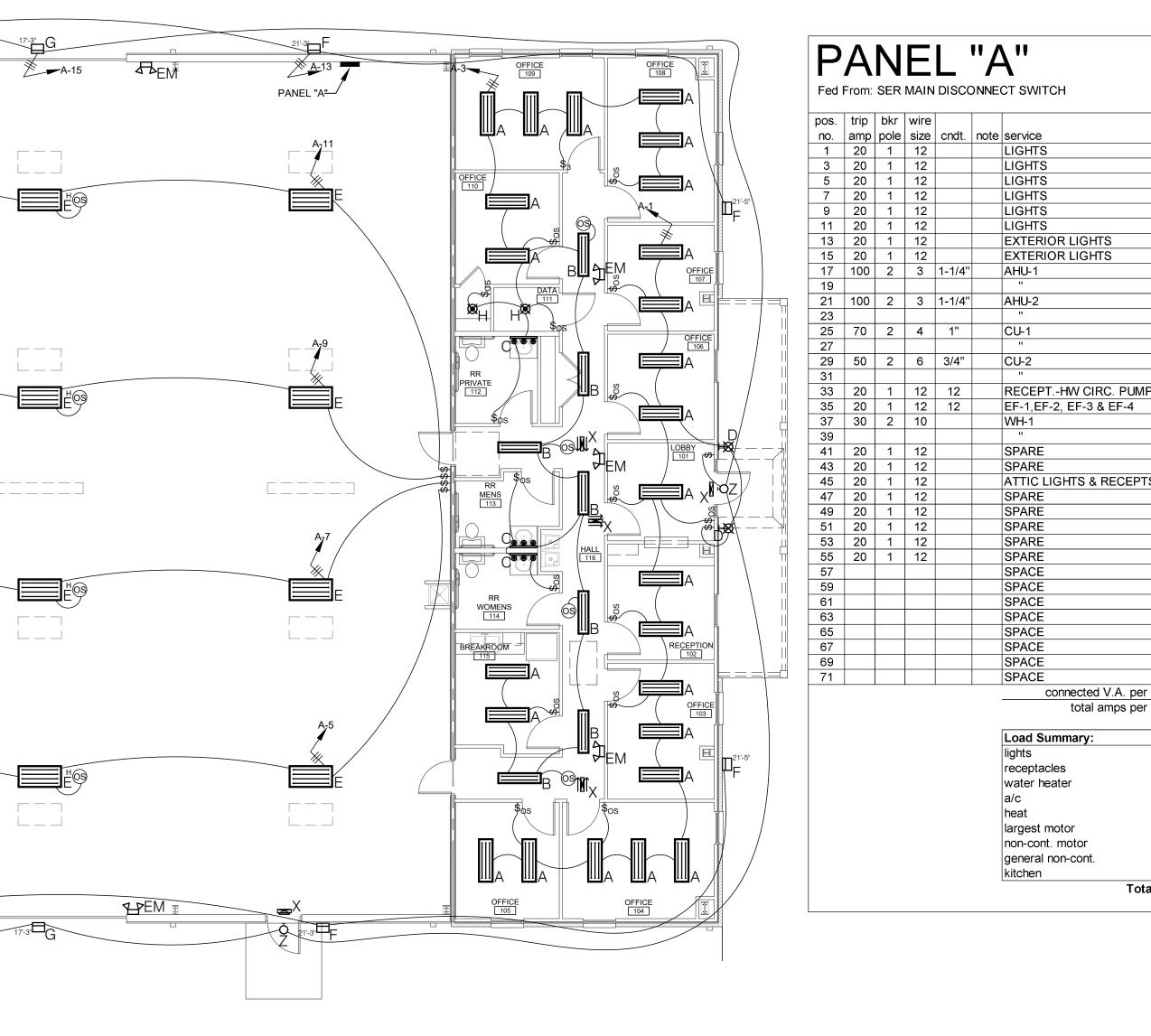
21'-3"**F** 

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TURN THE LIGHTS OFF IF NO MOTION IS DETECTED WITHIN A SET PERIOD OF TIME.

14. LOCATE THREE (3) 4' 2-LAMP STRIPS AND TWO (2) DUPLEX RECEPTACLES IN THE ATTIC, CONNECT ALL TOGETHER ON CIRCUIT #A-45. LOCATE LIGHT SWITCH IN THE ATTIC AT THE ATTIC ACCESS.



СН	SERVICE: 20 MAINS: 600 /	AMPS FULLY	, 3PH, 4W	S	emarks ervice E nclosur	Entrance e: NEM	e Ratec A 1	I: No		
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GHTS & RECEPTS.	540	570 540 570 4 570 540 540 540 540 540 540 540 540 540 54							RECEPTACLES RECEPTACLES SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE	9107 Interline Avenue Baton Rouge, LA 70809 Jason Fennell (225) 927-9321 Electrical: Merge Engineering 7423 Picardy Avenue, Suite E1 Baton Rouge, LA 70808 Tim Verkaik (225) 478-2990 Mechanical: Henry C. Eyre Jr. PE INC.
onnected V.A. per phase total amps per phase <b>mmary:</b> les ater		21,792 182 factor 1.25 NEC 220.44 1.25 0 1	24,414 203 demand 9,516 11,480 6,025 0 30,952		otes: . Provid	e grour	nd-fault	circuit	SPACE SPACE SPACE breaker.	7423 Picardy Avenue, Suite E Baton Rouge, LA 70808 Trey Eyre (225) 767-7070
notor motor non-cont. <b>Total (VA)</b> Amps		1.25 1 1 0.65	0 56 3,850 0 61,879 172							Project Title: COPPERHEAD BUILDING, NO.2 Project Location:
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7423 PICARDY AVENUE, SUITE E1 BATON ROUGE, LA 70808 (225) 478-2990 DAVID J. SOILEAU, PE LA #32356 MERGE ENGINEERING LLC, FIRM #5793

E2.00

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BASIC ELECTRICAL REQUIREMENTS

- 1. It is the intent of the drawings and specifications to obtain a complete, fully functional and satisfact installation. They are not intended to show ever connection detail or each item essential to the functioning of the systems. The contractor shall be responsible for finishes and structural condition and coordinate with other trades to avoid interference between the various systems. Additionally, t contractor shall provide all essential options and accessories for a fully functional system as described.
- 2. Organize and lay out Work so that it will be concealed in furred chases and suspended ceilings, in finished portions of the building, unless specifically noted to be exposed. Install all Work paralle or perpendicular to building lines unless otherwise noted.
- 3. Products shall conform to requirements of the National Electrical Code. Where Underwriters' Laboratories have set standards, listed products and issued labels, products used shall be listed a labeled by UL and meet NEMA standards.
- 4. Equipment selected shall conform to the building features and shall be coordinated with all components. Do not provide equipment that will not meet arrangement and space limitations. Contractor shall submit room layouts with submitted items shown drawn to scale. Submittals will be rejected without floor plan Drawings showing submitted items.
- 5. Equipment specified in Sections Panelboards, and Disconnect Safety Switches shall be provided the same manufacturer.
- 6. All materials, installation and workmanship shall comply with the applicable requirements and standards addressed within the Contract Documents. Applicable codes include the following:

NFPA 70, National Electrical Code (2014) NFPA 101, Life Safety Code (2012) International Building Code (2012) American National Standards Institute (ANSI) National Electrical Manufacturers Association (NEMA) Underwriters' Laboratories (UL)

LOW VOLTAGE ELECTRICAL POWER CONDUCTORS

- 1. Provide factory-fabricated wire of the size, rating, material and type as indicated for each service Where not indicated, provide proper selection as required to comply with installation requirements and with NEC standards. The minimum size wire to be used for power or lighting circuits shall be #12 copper with insulation as noted below.
- 2. All wire #10 and smaller shall be sold, all wire #8 and larger shall be stranded.
- 3. Feeders and Branch Circuits all sizes: 98 percent conductivity copper, stranded conductor, 600insulation, THHN/THWN.
- 4. Conductors No. 10 and smaller shall have a solid colored insulation throughout the entire length the wire.
- 5. Conductors No. 8 AWG and larger shall be identified by colored plastic tape that matches the circu phase color at all visible points when colored insulation is unavailable. Colored tape shall be appli at all accessible locations of the conductor.
- 6. Each multi-wire branch circuit shall have a separate neutral conductor. Sharing neutral conductor not allowed.
- 7. Install conductor sizes as indicated. Provide No. 10 conductor for single phase, 20 ampere circu for which the distance from panelboard to the first outlet is more than 100 feet No. 8 conductor or 200 feet.

8. Insulation color shall be as follows:

	208Y/120 Volts
Phase A	Black
Phase B	Red
Phase C	Blue
Neutral	White
Ground	Green

GROUNDING AND BONDING

#### Grounding Conductors:

- 1. Provide 600-volt insulated conductors having a green-colored insulation for grounding electrode nent grounding conductors. Use stranded
- 2. Grounding conductors shall be insulated copper conductor, green in color to size #6 AWG. Insul conductors larger than #6 AWG shall be same as phase conductors but identified with green tape each accessible opening or location in raceway.
- 3. Provide bare conductors for bonding jumpers.

#### Connections:

- 4. Unless otherwise noted, for below-grade connections provide exothermic welded type.
- 5. For above-grade connections provide mechanical bolted-type connections utilizing high conductiv copper alloy or bronze lugs or clamps.
- 6. Grounding clips shall be O-Z Gedney, Steel City (Thomas & Betts) Type G.
- 7. Grounding electrodes shall not be smaller than 3/4-inch diameter, with minimum length ten (10)
- 8. Grounding electrodes shall be copper-clad steel for corrosion protection.
- 9. Ground cabinets, junction boxes, outlet boxes, motors, controllers, raceways, fittings, switchgear, transformer enclosures, and other equipment and metallic enclosures. Ground equipment and enclosures to the continuous grounded, metallic raceway system is required in addition to any oth specific grounding shown.
- 10. Provide bonding jumpers and ground wire throughout to ensure electrical continuity of the ground svstem
- 11. Provide grounding type insulated bushings for metal conduits terminating in equipment enclosure containing a ground bus and connect the bushing to the ground bus.
- 12. Provide a green insulated equipment grounding conductor for each feeder, receptacle lighting and power branch circuit.
- 13. When grounding and bonding conductors are not sized on drawings, size the grounding conductor in accordance with NEC Table 250-122. Size bonding jumper so that minimum cross-section are greater than or equal to that of the equivalent grounding conductor as determined from NEC Tab 250-122.

RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS

Conduit:

- 1. Rigid metallic conduit shall be steel conduit manufactured in accordance with ANSI C80.1 and lis to UL 6 with label showing evidence of third party listing. Rigid metallic conduit shall be hot-dippe galvanized and shall be supplied with factory tapered threads. Conduit shall be galvanized after cutting of threads. Manufactured elbows and nipples shall meet the same ASNSI and UL standar Field installed fittings shall be threaded galvanized steel fittings and listed to UL514B.
- 2. Electrical Metallic Tubing shall be steel conduit manufactured in accordance with ANSI C80.3 and listed to UL 7976 with label showing evidence of third party listing. Electrical Metallic Tubing shall hot-dipped galvanized. Manufactured elbows and nipples shall meet the same ASNSI and UL standards. Field installed fittings shall be compression type steel fittings and listed to UL514B. Se screw fittings are not acceptable.
- 3. Flexible Metallic Conduit shall be reduced wall steel conduit listed to UL-1 and UL 1479 with label showing evidence of third party listing. Flexible Metallic Conduit shall be hot-dipped galvanized. installed fittings shall be malleable iron screw fittings manufacturer to NEMA FB-1 and listed to UL514B. Press on or crimp type fittings are not acceptable.
- 4. Liquid Tight Flexible Metallic Conduit shall be steel interlocked conduit core with extruded PVC jacket listed to UL-360 with label showing evidence of third party listing. Flexible Metallic Conduit shall be hot-dipped galvanized with a UV sunlight resistant jacket. Field installed fittings shall be malleable iron threaded fittings manufacturer to NEMA FB-1 and listed to UL514B.

	Conduit shall be a minimum trade size of $\frac{1}{2}$ ".	with a diameter of 68' when mounted at 40' aff. b. Provide sensors as follows
6.	Metallic conduits must be continuous between enclosures such as outlet, junction and pull boxes, panels, cabinets, motor control centers, etc. The conduit must enter and be secured to enclosures so that each system is electrically continuous throughout. Where knockouts are used, provide	Type Wattstopper Sensor Switch Leviton
	double locknuts, one on each side. At conduit terminations, provide insulated bushings or insulated throat connectors for conductor protection. Where conduits terminate in equipment having a ground bus, such as in switchgear, motor control centers and panelboards, provide conduit with an insulated grounding bushing and extend a suitable grounding wire to the ground bus.	<ul> <li>Sensor HBL4 CMR6 OSFHD</li> <li>9. Coordinate layout and installation of ceiling-mounted devices with other construction that penetrates ceilings or is supported by them, including light fixtures, HVAC equipment, smoke detectors, fire-suppression systems, and partition assemblies.</li> </ul>
7.	Run concealed conduit as directly and with the largest radius bends as possible. Run exposed conduit parallel or at right angles to building or other construction lines in a neat and orderly manner. All conduit shall be conceal unless specifically noted otherwise.	<ol> <li>Contractor shall verify the locations of all ceiling mounted occupancy sensors with the manufactu chosen prior to installation to achieve optimum performance.</li> </ol>
3.	Install each entire conduit system complete before pulling in any conductors. Clean the interior of every run of conduit before pulling in conductors to guard against obstruction and abrasions.	11. Install and aim sensors in locations to achieve not less than 90 percent coverage of areas indicated. Do not exceed coverage limits specified in manufacturer's written instructions.
9.	Make bends with standard elbows or conduit bent to not less than same radius. Bends must be free from dents or flattening. For power conduits use no more than the equivalent of four 90 bends (for telecommunications conduits use no more than two 90 bends or a total of 180 of bends) in any run	PANELBOARDS
0.01	between terminals and cabinets, or between outlets and junction boxes or pull boxes.	1. Provide deadfront, bolt-on circuit breaker type panelboards as scheduled.
	nduit type according to use and location: Exposed to rain, condensation, moisture or constant high humidity: RMC	2. Enclosure shall be NEMA Type 1 for indoor dry locations and NEMA type 3R for exterior and wet
1.	Exposed in areas not specified in the preceding paragraphs: RMC or EMT	locations unless otherwise indicated on the Contract Documents.
12.	Concealed in exterior or interior walls and ceiling spaces: EMT	<ol> <li>Provide cabinet front with one door over the interior and an additional full-height hinged dead fron cover over interior and wireway (door-in-door). Cabinet front shall be cleaned and finished with</li> </ol>
13.	Electrical equipment in dry locations and subject to vibration and movement, excluding motors: flexible metal conduit, 36 inches maximum length.	manufacturer's standard finish. Provide flush door locks.
14.	Electrical equipment in wet locations and subject to vibration and movement, and all motors: liquidtight flexible metal conduit, 36 inches maximum length.	<ol> <li>Panelboard NEMA type 1 enclosures shall be galvanized steel with all cut edges galvanized. Box shall have standard conduit knockouts on ends of enclosure.</li> </ol>
	Below grade: RMC or rigid nonmetallic conduit a minimum 24 inches below finished grade.	5. Bus shall be tin-plated copper and braced for the maximum available fault current. Minimum bus ampacity shall be 100 amperes.
	General: All outlet boxes shall be listed to UL-514. Sheet metal and drawn boxes shall be	6. Provide a 6 inch x ¼ inch tin-plated copper ground bus in all panelboards. The ground bus shall be drilled to accept lugs for all grounding conductors. Mount ground bus on brackets to allow easy
47	manufactured to NEMA OS-1. Cast boxes shall be manufactured to NEMA FB 1. All outlet boxes shall be flush device boxes unless specifically noted otherwise.	installation of bolts, nuts and lockwashers used to attach ground lugs.
17.	Flush Device Boxes: Provide galvanized steel boxes of sufficient size to accommodate wiring devices to be installed at outlet. Provide an extension ring for the device to be installed. Square or rectangular boxes may be supplied. Unless otherwise noted, provide 1-1/2 inch deep by 4 inch square box. Boxes for use with audio/ visual and telecommunications outlets shall be 4 inch square	<ol> <li>Provide a tin-plated copper neutral bus with the same ampacity rating as the phase bus. Neutral t shall be isolated from the ground bus.</li> </ol>
	x 2-1/8" deep minimum.	8. Panelboard electrical ratings and configurations are indicated in the Contract Documents.
18.	wiring devices to be installed at outlet. Provide a surface cover for the device to be installed. Square	9. Branch circuit panelboards shall be as follows:
	or rectangular boxes may be supplied. Unless otherwise noted, provide 1-1/2 inch deep by 4 inch square box. Boxes for use with audio/ visual and telecommunications outlets shall be 4 inch square x 2-1/8" deep minimum.	TypeSquare DSiemensCutler HammerGE208Y/120 VNQP1 or P2PRL1AAQ
9.	Exterior Locations: For both flush and exposed applications, provide cast, one piece type, listed for use in wet locations. Provide weather proof "while-in-use" cover for the device to be installed. Unless otherwise noted, provide 1-1/2 inch deep by 4 inch square box.	<ol> <li>Provide molded case circuit breakers of manufacturer's standard industrial construction, with integ inverse time delay thermal and instantaneous trip. Provide bolt-on circuit breakers for 208Y/120V panels.</li> </ol>
0.	Luminaire Outlet Boxes: Provide galvanized steel octagonal boxes with fixture stud supports and attachments as required to properly support ceiling and bracket-type lighting fixtures. Unless otherwise noted, provide 1-1/2 inch deep by 4 inch box. Boxes shall be of drawn construction for exposed applications.	<ol> <li>Circuit breakers shall be 240 VAC rated for nominal 208Y/120V panels. Minimum interrupting rat shall be 10,000 amperes for 120/208V circuits, unless higher rating noted on the Contract Documents.</li> </ol>
1.	. Small Sheet Metal Pull and Junction Boxes: Boxes shall be galvanized sheet metal with screw-on cover and welded seams, stainless steel nuts, bolts, screws and washers. Boxes shall be sized in accordance with NEC and shall be manufactured in accordance with NEMA OS 1.	12. Multi-pole breakers shall be two or three pole as specified. Handle ties are not permitted.
2.	<ul> <li>Do not install boxes back-to-back in walls. Provide minimum 6-inch separation in non-fire-rated walls. Provide minimum 24-inch horizontal separation in acoustic-rated walls.</li> </ul>	<ol> <li>Panels shall be fully rated; combination series rated is not allowed All overcurrent devices shall b capable of interrupting the available fault current.</li> </ol>
3.	. Membrane penetration of minimum 1-hour, up to maximum 2-hour fire rating walls and partitions shall be protected by listed putty pads or other listed materials and methods. Refer to the architectural requirements for fire stopping of rated walls.	<ol> <li>Anchor enclosures firmly to walls and structural surfaces, ensuring that they are permanently and mechanically secured.</li> </ol>
1.	Secure boxes rigidly to the substrate upon which they are being mounted, or solidly imbed boxes in concrete or masonry. Boxes shall not be permitted to move laterally. Boxes shall be secured between two studs. Boxes connected to one stud are not permitted.	15. Install panelboards such that the center of the circuit breaker in the highest position will not be mo than 6-1/2 feet above the floor
5.	. Typical outlet box centerline heights shall be as listed below. Coordinate outlet heights with Architectural Drawings, millwork details, casework details and equipment installation. Where discrepancies occur, ask for an interpretation from the Architect/Engineer and Owner.	WIRING DEVICES
	Receptacles18"AFFVoice/Data18"AFFOutlets at millwork8" above counter top unless noted otherwise	Occupancy Sensing Wall Switches: 1. Type: Line voltage dual technology switch utilizing both passive infrared (PIR) and ultrasonic
	Light Switches 48" AFF	technologies as specified herein
	nction and Pull Boxes: .  Install boxes as required to facilitate cable installation in raceway systems.  Generally provide boxes	2. Rating: 800W, 120 VAC; 1200W, 277 VAC
	in conduit whe of more than 100 fact as with more than three 00 degree hands. I costs have	
	in conduit runs of more than 100 feet or with more than three 90 degree bends. Locate boxes strategically and make them of such shape to permit easy pulling of wire or cables.	3. Listing: UL
27.	<ul> <li>strategically and make them of such shape to permit easy pulling of wire or cables.</li> <li>Install boxes so that covers are readily accessible and easily removable after completion of the installation. Include suitable access doors for boxes above inaccessible ceilings. Select a practical</li> </ul>	4. Coverage: 20'x20' major motion; 15'x15' minor motion
	<ul> <li>strategically and make them of such shape to permit easy pulling of wire or cables.</li> <li>Install boxes so that covers are readily accessible and easily removable after completion of the installation. Include suitable access doors for boxes above inaccessible ceilings. Select a practical size for each box and cover</li> </ul>	
28.	<ul> <li>strategically and make them of such shape to permit easy pulling of wire or cables.</li> <li>Install boxes so that covers are readily accessible and easily removable after completion of the installation. Include suitable access doors for boxes above inaccessible ceilings. Select a practical size for each box and cover</li> <li>In inaccessible ceiling areas, position outlets and junction boxes within reach of ceiling access panels.</li> </ul>	4. Coverage: 20'x20' major motion; 15'x15' minor motion
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28. 29. 30. <u>LIG</u>	<ul> <li>strategically and make them of such shape to permit easy pulling of wire or cables.</li> <li>Install boxes so that covers are readily accessible and easily removable after completion of the installation. Include suitable access doors for boxes above inaccessible ceilings. Select a practical size for each box and cover</li> <li>In inaccessible ceiling areas, position outlets and junction boxes within reach of ceiling access panels.</li> <li>Locate pull boxes and junction boxes above accessible ceilings or in unfinished areas.</li> <li>Support pull and junction boxes independent of conduit. Combination box/conduit hangers from drop rod (like Caddy B18 Series) are acceptable.</li> </ul>	<ul> <li>4. Coverage: 20'x20' major motion; 15'x15' minor motion</li> <li>5. Provide Devices as follows:         <ul> <li><u>Type</u> <u>Wattstopper</u> <u>Hubbell</u> <u>Leviton</u></li> <li>Standard DSW-301 LHMTS1 OSSMT</li> <li>Dual Relay DSW-302 LHMTD2 OSSMD</li> </ul> </li> <li>Receptacles:</li> </ul>
28. 29. 30. <u>LIG</u>	<ul> <li>strategically and make them of such shape to permit easy pulling of wire or cables.</li> <li>Install boxes so that covers are readily accessible and easily removable after completion of the installation. Include suitable access doors for boxes above inaccessible ceilings. Select a practical size for each box and cover</li> <li>In inaccessible ceiling areas, position outlets and junction boxes within reach of ceiling access panels.</li> <li>Locate pull boxes and junction boxes above accessible ceilings or in unfinished areas.</li> <li>Support pull and junction boxes independent of conduit. Combination box/conduit hangers from drop rod (like Caddy B18 Series) are acceptable.</li> </ul>	<ul> <li>4. Coverage: 20'x20' major motion; 15'x15' minor motion</li> <li>5. Provide Devices as follows: <ul> <li><u>Type</u> <u>Wattstopper</u> <u>Hubbell</u> <u>Leviton</u></li> <li>Standard DSW-301 LHMTS1 OSSMT</li> <li>Dual Relay DSW-302 LHMTD2 OSSMD</li> </ul> </li> <li>Receptacles: <ul> <li>1. Type: Back and side wired receptacles, as specified herein.</li> </ul> </li> </ul>
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28. 29. 30. <u>LIG</u> Indo 1. 2. 3. 4. 5.	<ul> <li>strategically and make them of such shape to permit easy pulling of wire or cables.</li> <li>Install boxes so that covers are readily accessible and easily removable after completion of the installation. Include suitable access doors for boxes above inaccessible ceilings. Select a practical size for each box and cover</li> <li>In inaccessible ceiling areas, position outlets and junction boxes within reach of ceiling access panels.</li> <li>Locate pull boxes and junction boxes above accessible ceilings or in unfinished areas.</li> <li>Support pull and junction boxes independent of conduit. Combination box/conduit hangers from drop rod (like Caddy B18 Series) are acceptable.</li> <li>SHTING CONTROL DEVICES</li> <li>Noor Occupancy Sensors</li> <li>Operation: Unless otherwise indicated, turn lights on when coverage area is occupied, and turn them off when unoccupied; with a time delay for turning lights off, adjustable over a minimum range of 1 to 15 minutes.</li> <li>Sensor Output: Contacts rated to operate the connected relay, complying with UL 773A. Low voltage sensors shall be listed for 120 volt operation. Sensors shall be rated for 800W at 120volt.</li> <li>Power Pack: Dry contacts rated for 20-A ballast load at 120-V ac, for 13-A tungsten at 120-V ac, and for 1 hp at 120-V ac. Sensor has 24-V dc, 150-mA, Class 2 power source, as defined by NFPA 70.</li> <li>Dual-Technology Type: Ceiling mounted; detect occupants in coverage area using PIR and ultrasonic detection methods. The particular technology or combination of technologies that control on-off functions is selectable in the field by operating controls on unit.</li> </ul>	<ol> <li>Coverage: 20'x20' major motion; 15'x15' minor motion</li> <li>Provide Devices as follows:         <ul> <li><u>Type Wattstopper</u> <u>Hubbell</u> <u>Leviton</u> Standard DSW-301 <u>LHMTS1</u> OSSMT Dual Relay DSW-302 <u>LHMTD2</u> OSSMD</li> </ul> </li> <li>Receptacles:         <ul> <li>Type: Back and side wired receptacles, as specified herein.</li> <li>Rating: Scheduled on Drawings.</li> <li>Listing: UL 498 and Federal Specification W-C-596.</li> <li>Provide devices as specified herein.</li> <li><u>Type Pass &amp; Seymour</u> <u>Arrow Hart Leviton</u> <u>CR20 AH5352 C5362</u> GFC1 2095 VGF20 GFTR2 Weather Resistant 2095TRWR WRVGF20 GFWR2</li> </ul> </li> <li>Supply wiring device in color selected by architect.</li> <li>Dimming Wall Switches:</li> </ol>
<ol> <li>28.</li> <li>29.</li> <li>30.</li> <li>LIG</li> <li>Indo</li> <li>1.</li> <li>2.</li> <li>3.</li> <li>4.</li> <li>5.</li> <li>6.</li> </ol>	<ul> <li>strategically and make them of such shape to permit easy pulling of wire or cables.</li> <li>Install boxes so that covers are readily accessible and easily removable after completion of the installation. Include suitable access doors for boxes above inaccessible ceilings. Select a practical size for each box and cover</li> <li>In inaccessible ceiling areas, position outlets and junction boxes within reach of ceiling access panels.</li> <li>Locate pull boxes and junction boxes above accessible ceilings or in unfinished areas.</li> <li>Support pull and junction boxes independent of conduit. Combination box/conduit hangers from drop rod (like Caddy B18 Series) are acceptable.</li> <li>SHTING CONTROL DEVICES</li> <li>loor Occupancy Sensors</li> <li>Operation: Unless otherwise indicated, turn lights on when coverage area is occupied, and turn them off when unoccupied; with a time delay for turning lights off, adjustable over a minimum range of 1 to 15 minutes.</li> <li>Sensor Output: Contacts rated to operate the connected relay, complying with UL 773A. Low voltage sensors shall be listed for 120 volt operation. Sensors shall be rated for 800W at 120volt.</li> <li>Power Pack: Dry contacts rated for 20-A ballast load at 120-V ac, for 13-A tungsten at 120-V ac, and for 1 h pt 120-V ac. Sensor has 24-V dc, 150-mA, Class 2 power source, as defined by NFPA 70.</li> <li>Dual-Technology Type: Ceiling mounted; detect occupants in coverage area using PIR and ultrasonic detection methods. The particular technology or combination of technologies that control on-off functions is selectable in the field by operating controls on unit.</li> <li>Detection Coverage (Standard Room): Detect occupancy anywhere within a circular area of 1000 sq. ft. when mounted on a 96-inch high ceiling.</li> </ul>	<ol> <li>Coverage: 20'x20' major motion; 15'x15' minor motion</li> <li>Provide Devices as follows:         <ul> <li><u>Type Wattstopper</u> <u>Hubbell</u> <u>Leviton</u></li> <li>Standard DSW-301 <u>LHMTS1</u> OSSMT</li> <li>Dual Relay DSW-302 LHMTD2 OSSMD</li> </ul> </li> <li>Receptacles:         <ul> <li>Type: Back and side wired receptacles, as specified herein.</li> <li>Rating: Scheduled on Drawings.</li> <li>Listing: UL 498 and Federal Specification W-C-596.</li> <li>Provide devices as specified herein.</li> <li><u>Type Pass &amp; Seymour</u> <u>Arrow Hart Leviton</u> <u>C362</u></li> <li>GFC1 2095 VGF20 GFTR2</li> <li>Weather Resistant 2095TRWR WRVGF20 GFWR2</li> </ul> </li> <li>Supply wiring device in color selected by architect.</li> </ol>
<ol> <li>28.</li> <li>29.</li> <li>30.</li> <li>LIG</li> <li>Indo</li> <li>1.</li> <li>2.</li> <li>3.</li> <li>4.</li> <li>5.</li> <li>6.</li> </ol>	<ul> <li>strategically and make them of such shape to permit easy pulling of wire or cables.</li> <li>Install boxes so that covers are readily accessible and easily removable after completion of the installation. Include suitable access doors for boxes above inaccessible ceilings. Select a practical size for each box and cover</li> <li>In inaccessible ceiling areas, position outlets and junction boxes within reach of ceiling access panels.</li> <li>Locate pull boxes and junction boxes above accessible ceilings or in unfinished areas.</li> <li>Support pull and junction boxes independent of conduit. Combination box/conduit hangers from drop rod (like Caddy B18 Series) are acceptable.</li> <li>SHTING CONTROL DEVICES</li> <li>loor Occupancy Sensors</li> <li>Operation: Unless otherwise indicated, turn lights on when coverage area is occupied, and turn them off when unoccupied; with a time delay for turning lights off, adjustable over a minimum range of 1 to 15 minutes.</li> <li>Sensor Output: Contacts rated to operate the connected relay, complying with UL 773A. Low voltage sensors shall be listed for 120 volt operation. Sensors shall be rated for 800W at 120volt.</li> <li>Power Pack: Dry contacts rated for 20-A ballast load at 120-V ac, for 13-A tungsten at 120-V ac, and for 1 hp at 120-V ac. Sensor has 24-V dc, 150-mA, Class 2 power source, as defined by NFPA 70.</li> <li>Dual-Technology Type: Ceiling mounted; detect occupants in coverage area using PIR and ultrasonic detection methods. The particular technology or combination of technologies that control on-off functions is selectable in the field by operating controls on unit.</li> <li>Detection Coverage (Standard Room): Detect occupancy anywhere within a circular area of 1000 sq, ft. when mounted on a 96-inch high ceiling.</li> <li>Provide sensors as follows:</li> </ul>	<ol> <li>Coverage: 20'x20' major motion; 15'x15' minor motion</li> <li>Provide Devices as follows:         <ul> <li><u>Type Wattstopper Hubbell Leviton</u> Standard DSW-301 LHMTS1 OSSMT Dual Relay DSW-302 LHMTD2 OSSMD</li> </ul> </li> <li>Receptacles:         <ul> <li>Type: Back and side wired receptacles, as specified herein.</li> <li>Rating: Scheduled on Drawings.</li> <li>Listing: UL 498 and Federal Specification W-C-596.</li> <li>Provide devices as specified herein.</li> <li><u>Type Pass &amp; Seymour Arrow Hart Leviton</u> Duplex CR20 AH5352 C5362 GFC1 2095 VGF20 GFTR2 Weather Resistant 2095TRWR WRVGF20 GFWR2</li> <li>Supply wiring device in color selected by architect.</li> </ul> </li> <li>Dimming Wall Switches:</li> </ol>
<ol> <li>28.</li> <li>29.</li> <li>30.</li> <li>LIG</li> <li>Indo</li> <li>1.</li> <li>2.</li> <li>3.</li> <li>4.</li> <li>5.</li> <li>6.</li> </ol>	<ul> <li>strategically and make them of such shape to permit easy pulling of wire or cables.</li> <li>Install boxes so that covers are readily accessible and easily removable after completion of the installation. Include suitable access doors for boxes above inaccessible ceilings. Select a practical size for each box and cover</li> <li>In inaccessible ceiling areas, position outlets and junction boxes within reach of ceiling access panels.</li> <li>Locate pull boxes and junction boxes above accessible ceilings or in unfinished areas.</li> <li>Support pull and junction boxes independent of conduit. Combination box/conduit hangers from drop rod (like Caddy B18 Series) are acceptable.</li> <li>SHTING CONTROL DEVICES</li> <li>loor Occupancy Sensors</li> <li>Operation: Unless otherwise indicated, turn lights on when coverage area is occupied, and turn them off when unoccupied; with a time delay for turning lights off, adjustable over a minimum range of 1 to 15 minutes.</li> <li>Sensor Output: Contacts rated to operate the connected relay, complying with UL 773A. Low voltage sensors shall be listed for 120 volt operation. Sensors shall be rated for 800W at 120volt.</li> <li>Power Pack: Dry contacts rated for 20-A ballast load at 120-V ac, for 13-A tungsten at 120-V ac, and for 1 h pt 120-V ac. Sensor has 24-V dc, 150-mA, Class 2 power source, as defined by NFPA 70.</li> <li>Dual-Technology Type: Ceiling mounted; detect occupants in coverage area using PIR and ultrasonic detection methods. The particular technology or combination of technologies that control on-off functions is selectable in the field by operating controls on unit.</li> <li>Detection Coverage (Standard Room): Detect occupancy anywhere within a circular area of 1000 sq. ft. when mounted on a 96-inch high ceiling.</li> </ul>	<ol> <li>Coverage: 20'x20' major motion; 15'x15' minor motion</li> <li>Provide Devices as follows:         <ul> <li><u>Type Wattstopper Hubbell Leviton</u> Standard DSW-301 LHMTS1 OSSMT Dual Relay DSW-302 LHMTD2 OSSMD</li> </ul> </li> <li>Receptacles:         <ul> <li>Type: Back and side wired receptacles, as specified herein.</li> <li>Rating: Scheduled on Drawings.</li> <li>Listing: UL 498 and Federal Specification W-C-596.</li> <li>Provide devices as specified herein.</li> <li><u>Type Pass &amp; Seymour Arrow Hart Leviton</u> Duplex CR20 AH5352 C5362 GFC1 2095 VGF20 GFTR2 Weather Resistant 2095TRWR WRVGF20 GFWR2</li> </ul> </li> <li>Supply wiring device in color selected by architect.</li> <li>Dimming Wall Switches:         <ul> <li>Type: 0-10 volt slide dimmer with integrated on/off switch for use with fluorescent and led fixtures</li> </ul> </li> </ol>

#### 9. CMU Wall Finishes: Use 302 stainless steel.

10. Other Wall Finishes: Nylon in color as selected by Architect. Device plate color shall match the device color.

Installation:

Device Plates:

11. Set wall switches in a suitable steel outlet box centered at the height of 48 inches from the floor, except as otherwise shown. Install switch on the strike side of the door as finally hung.

12. Install wall switches in a uniform position so the same direction of operation will open and close the circuits throughout the job. Switches shall be installed such that up or to the left is the ON position.

13. Mount receptacles vertically in a suitable steel outlet box centered at the height of 18 inches from the floor or as shown on the drawings. The Engineer reserves the right to make any reasonable changes in receptacle locations without change in the contract sum.

14. Receptacles shall be wire such that removal of the receptacle shall not disrupt the continuity of the neutral and equipment ground connections to downstream devices.

15. Wall receptacles shall be installed with the ground pinhole in the down position, unless instructed otherwise by the Architect.

#### FUSES

Class RK1

- 1. Provide low peak dual element time delay fuses rated for 600 amps or less at 250 or 600 volts.
- 2. Fuses shall be Bussmann LP(N or S)-RK; Gould Shawmut A2D or A6D; Littlefuse LL(n or S) RK. Class RK5
- 3. Provide dual element time delay fuses rated for 600 amps or less at 250 or 600 volts.
- 4. Fuses shall be Bussmann FR(N or S)-R; Gould Shawmut TR or TRS; Littlefuse FL(N or S)R ID Application:
- 5. Provide class RK1 fuses for feeders to panels and other electrical equipment.
- 6. Provide class RK5 fuses for all motors, compressor loads and all other loads not listed above.
- SAFETY SWITCHES

#### Fusible Switches:

- Provide heavy duty, type HD, single throw, 240 VAC or 600 VAC switch in accordance with the load voltage with fuse interiors to accommodate fuses as required for the load. Switch shall be provided with a lockable handle that interlocks with the cover in the closed position.
- 2. Heavy Duty Switches shall be Square D H series; Siemens HF series; or Cutler Hammer DH.

#### Accessories:

- 3. Equipment Ground Kit: Internally mounted and labeled for copper and aluminum ground conductors.
- 4. Neutral Kit: Internally mounted; insulated, capable of being grounded and bonded; labeled for
- 5. Indoor, Dry and Clean Locations: NEMA 1 enclosure.
- 6. Outdoor, Wet Locations: NEMA 3R enclosure.

copper and aluminum neutral conductors.

#### LIGHTING

1. Lighting fixtures are specified by type and manufacturer in the lighting fixture schedule on the drawings. Model numbers are based on manufacturer information at time of design. Model numbers are subject to change by the manufacturers. Contractor shall verify the accuracy of the model number for style and application and adjust model numbers as required.

Installation:

- 2. Lighting fixtures: Set level, plumb, and square with ceilings and walls. Install lamps in each fixture
- 3. Recessed light fixtures shall have a minimum of two (2) independent supports points from the structure above. The two suspension point shall be on opposite corners of the fixture.
- 4. Fixtures shall not be supported from suspended ceilings or their components.

Drivers for LED Fixtures

- 5. Electronic Driver for LED Fixtures: Comply with UL 1310 Class 2 requirements for dry and damp locations. Include the following features unless otherwise indicated:
- 6. Rated for 50,000 hours of life, unless otherwise noted.
- 7. Sound Rating: Class A.
- 8. Total Harmonic Distortion Rating: 20 percent or less.
- 9. Current Crest Factor: 1.5 or less.
- 10. 0-10V Dimming Standard (Step Dimming does not qualify)



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#### Project Notes:

Project Title: COPPERHEAD BUILDING, NO.2

Project Location: 35030 HWY. 30 GEISMAR, ASCENSION PARISH, LA

Sheet Revisions Date Description

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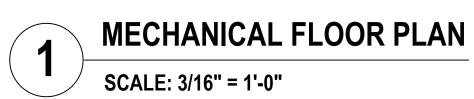
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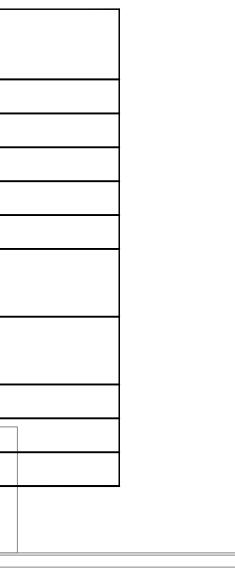




	MECHANICAL AIRS	SIDE LEGEND	)	
	NOTE: ALL SYMBOLS IN THIS LEGEND ARE N	OT NECESSARILY FO	UND ON THE PLAT	NS
SYMBOL	DESCRIPTION	SYMBOL	DESC	RIPTION
	CEILING SUPPLY AIR DEVICE		M.V.D. IN DUCT DE	ROP
	CEILING RETURN AIR OR EXHAUST AIR DEVICE		EQUIPMENT	
	VOLUME DAMPER OR MANUAL DAMPER, RECT. & ROUND DUCT; "M.V.D."	T	THERMOSTAT	
[M]	MOTORIZED DAMPER OR AUTO DAMPER	F	FIRESTAT	
FD	FIRE DAMPER, RE: ARCH. FOR RATING OF WALL/CLG		AIR DEVICE TY	PE (TYPE-A)
BD	BACK DRAFT DAMPER	A-150 -	— AIR QUANTITY	(150 CFM)
EA & E/A	EXHAUST AIR	RF=2/M-2 -	— REFER TO — SHEET M-2	
0/A & 0/A	OUTSIDE AIR	↓ ··· - ↓ ··· - ↓	- DETAIL NUMBER (	2)
ø	45° DUCT LOW LOSS TAP WITH DAMPER	AFF	ABOVE FINISHED	FLOOR
		RE:	REFER TO	







45° LOW LOSS BRANCH DUCT TAP CONNECTION WITH DAMPER (FLEXMASTER MODEL STODBO3), DAMPER CONSTRUCTED OF MINIMUM 26 GAUGE GALVANIZED STEEL. THE DAMPER SHALL HAVE A 2" RAISED HANDLE WITH A HIGH QUALITY LOCKING QUADRANT. A 3/8" CONTINUOUS ROD WITH "U" BOLTS CONNECTS THE DAMPER TO THE ROD. NYLON END BEARINGS ARE REQUIRED WHERE THE ROD

THERMOSTAT, TYPICAL. THERMOSTAT SHOWN FOR DIAGRAMMATICAL PURPOSES ONLY, COORDINATE WITH GENERAL CONTRACTOR AND 3 THERMOSTAT, TYPICAL. THERMOSTAT SHOWIN FOR DIAGNAMIMATICAL FOR USED ONLY, CONTENDED ON ALL ARTWORK, MILLWORK, ETC. FOR CONFLICTS. ALL THERMOSTAT WIRING TO BE IN ½" RIGID CONDUIT, PROVIDE LONG ARCHITECT ON ALL ARTWORK, MILLWORK, ETC. FOR CONFLICTS. ALL THEM DOWNS INTO WALLS

6 CONDENSING UNIT ON CONCRETE HOUSEKEEPING PAD, SIZED AS REQUIRED. SEAL ALL PENETRATIONS INTO BUILDING AIR TIGHT. ROUTE REFRIGERANT LINES DOWN LOW THRU EXTERIOR WALL (WITHIN COMMON WALL SLEEVE), UP EXTERIOR WALL TO RESPECTIVE INDOOR UNIT.

AIR HANDLING UNIT (WITH REFRIGERANT COILS) MOUNTED IN ATTIC SPACE (ON ATTIC FLOOR DECK MOUNTED SUPPORT PLATFORM). FIELD ROUTE INSULATED CONDENSATE DRAIN LINE FROM AIR HANDLING UNIT AND TURN DOWN TO NEAREST HUB DRAIN (REFER TO PLUMBING DRAWINGS FOR EXACT LOCATION OF HUB DRAIN, PROVIDE FUNNEL AT HUB DRAIN, REFER TO SCHEDULES FOR CONDENSATE DRAIN PIPE SIZE). PROVIDE 4" HIGH AUXILIARY DRAIN PAN (16 GA. G90 GALVANIZED STEEL), SIZE AS REQUIRED, UNDER ENTIRE UNIT, EQUIP WITH FLOAT SWITCH (INTERCONNECT FLOAT SWITCH WITH RESPECTIVE CONDENSING UNIT, CONDENSING UNIT TO SHUT OFF WHEN FLOAT SWITCH IS TRIPPED). SUPPORT PLATFORM TO EXTEND ALL AROUND UNIT, WITH MANUFACTURER RECOMMENDED CLEARANCE IN FRONT (CONTROL SIDE) FOR SERVICING. REFER TO TYPICAL AIR HANDLING UNIT DETAIL #5 SHEET M2.01. FIELD ROUTE FRESH AIR DUCT FROM RETURN AIR PLENUM TO EXTERIOR WALL/ROOF AIR DEVICE. BALANCE TO CFM SPECIFIED ON SCHEDULES. PROVIDE MANUAL VOLUME DAMPER IN FRESH AIR DUCT. MAINTAIN 10'-0" MINIMUM DISTANCE FROM ALL FRESH AIR INTAKES AND EXHAUST OUTLETS.

DAMPER AT DISCHARGE OF EXHAUST FAN. MAINTAIN 10'-0" FROM ANY AND ALL FRESH AIR INLETS. INSULATE ENTIRE EXHAUST

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1. HVAC SYSTEM/CONSTRUCTION SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES/STANDARDS:

2. MAINTAIN VENTILATION AND EXHAUST RATES SHALL BE IN ACCORDANCE WITH ASHRAE STANDARD 62.1 (CURRENT EDITION) & 2012

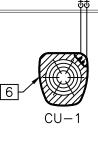
4. MECHANICAL CONTRACTOR TO PROVIDE SHEET METAL PLENUM ON REAR OF ALL SUPPLY AIR DEVICES. TAP INTO SIDE OF SHEET METAL PLENUM WITH BRANCH DUCT, REFER TO DRAWINGS FOR SIZE OF BRANCH DUCT. HEIGHT OF PLENUM AS REQUIRED IN ORDER TO MAKE BRANCH DUCT CONNECTIONS. ALL NON-RATED CEILING SUPPLY AIR DEVICES TO BE BY AIRMATE, STAMPED

5.1. PROVIDE/INSTALL CEILING RADIATION DAMPERS (INCLUDING DAMPER, STEEL ENCLOSURE, INSULATION, MOUNTING ANGLE, STEEL GRILLE) AT ALL CEILING AIR DEVICES WITHIN FIRE RATED CORRIDOR (REFER TO ARCHITECTURAL DRAWINGS FOR RATING AND



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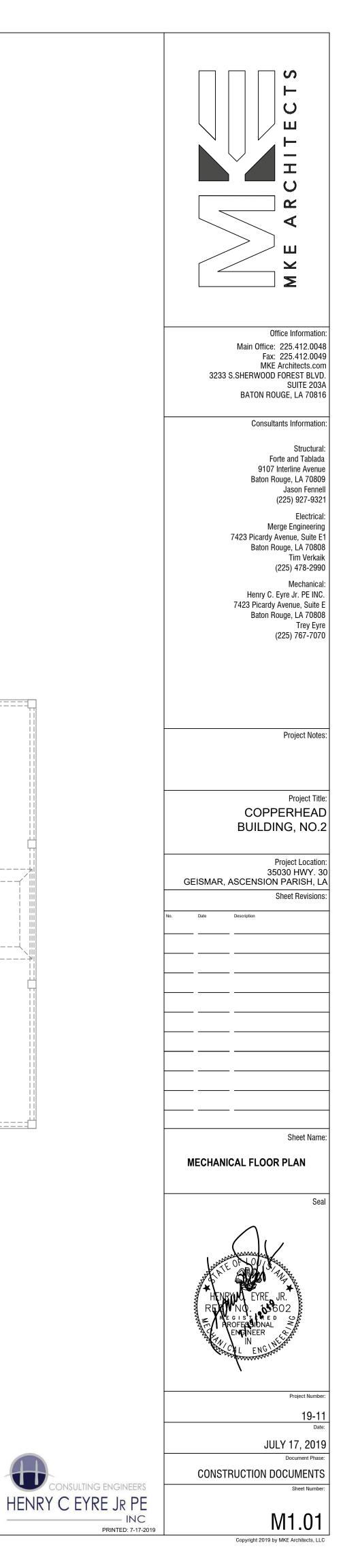


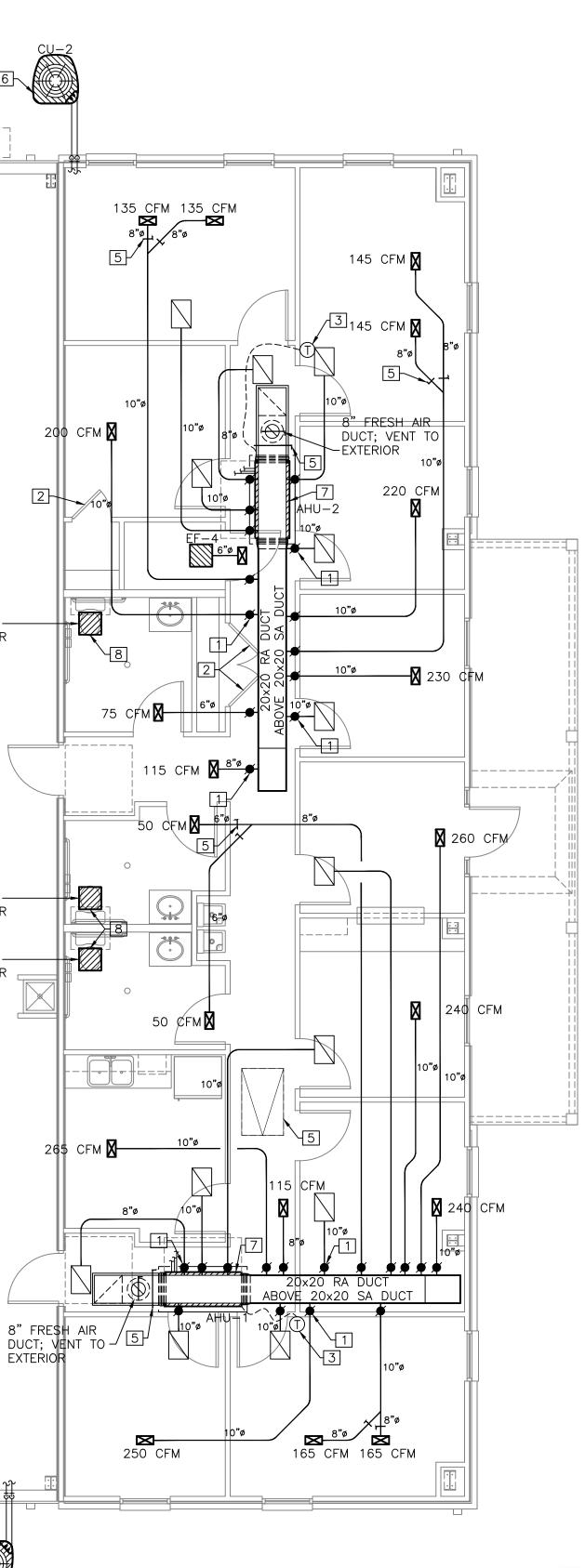
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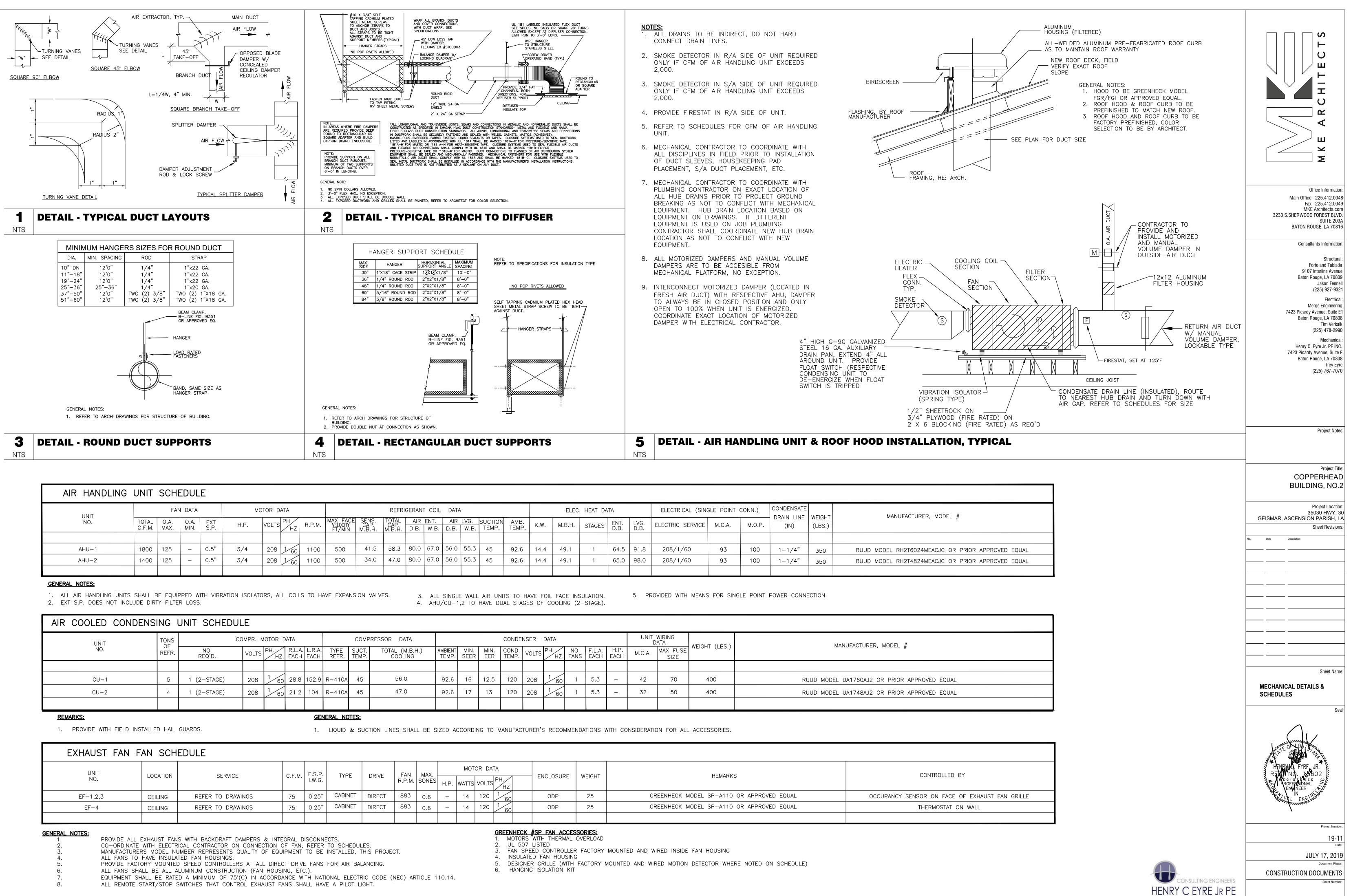
EF-1; VENT-TO EXTERIOR

EF-2; VENT TO EXTERIOR

EF-3; VENT-TO EXTERIOR







EXHAUST FAN FAN SCHEDULE															
UNIT	LOCATION		C.F.M	E.S.P.	E.S.P. TYPE DRIVE FAN MAX. MOTOR DATA FNCLOSURE WEIGHT REMARKS				REMARKS	CONTROLLE					
NO.	LUCATION	SERVICE		1. I.W.G.		DRIVE	R.P.M. S	ONES H	.P.	WATTS VOLTS PH.		ENCLOSURE	WEIGHT	REMARKS	
EF-1,2,3	CEILING	REFER TO DRAWINGS	75	0.25"	CABINET	DIRECT	883 (	0.6	_	14 120 1 60		ODP	25	GREENHECK MODEL SP-A110 OR APPROVED EQUAL	OCCUPANCY SENSOR ON FAC
EF-4	CEILING	REFER TO DRAWINGS	75	0.25"	CABINET	DIRECT	883 (	0.6	_	14 120 1 60		ODP	25	GREENHECK MODEL SP-A110 OR APPROVED EQUAL	THERMOSTAT

ΑΤΑ	N				ELEC	. HEAT DA	TA		ELECTRICAL (SINC	GLE POINT	CONN.)	CONDENSATE DRAIN LINE	WEIGHT	MANUFACTURER, MODE
	LVG. W.B.	SUCTION TEMP.	AMB. TEMP.	K.W.	M.B.H.	STAGES	ENT. D.B.	LVG. D.B.	ELECTRIC SERVICE	M.C.A.	M.O.P.	(IN)	(LBS.)	
5.0	55.3	45	92.6	14.4	49.1	1	64.5	91.8	208/1/60	93	100	1-1/4"	350	RUUD MODEL RH2T6024MEACJC
6.0	55.3	45	92.6	14.4	49.1	1	65.0	98.0	208/1/60	93	100	1-1/4"	350	RUUD MODEL RH2T4824MEACJC

			CONDE	NSER	DATA					WIRING ATA	WEIGHT (LBS.)	MANUFACTURER, MODEL #
INT	MIN. SEER	MIN. EER	COND. TEMP.	VOLTS	PH. HZ.	NO. FANS	F.L.A. EACH	H.P. EACH	M.C.A.	MAX FUSE SIZE	WEIGHT (LBS.)	WANG ACTORER, MODEL $\pi$
6	16	12.5	120	208	1 60	1	5.3	_	42	70	400	RUUD MODEL UA1760AJ2 OR PRIOR APPROVED EQU
6	17	13	120	208	1 60	1	5.3	_	32	50	400	RUUD MODEL UA1748AJ2 OR PRIOR APPROVED EQU

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#### 15010 BASIC MECHANICAL REQUIREMENTS

#### GENERAL REQUIREMENTS

"PROVIDE" MEANS FURNISH AND INSTALL. THIS CONTRACTOR SHALL ALSO INSTALL MATERIALS FURNISHED "BY OTHERS" AND/OR OWNER.

GENERAL REQUIREMENTS AS LISTED IN THE SUBCONTRACT PURCHASE ORDER AGREEMENT SHALL BE INCLUDED AS PART OF THESE SPECIFICATIONS. WHERE THERE IS A CONFLICT THE SUBCONTRACT PURCHASE ORDER AGREEMENT SHALL GOVERN.

CONTRACTOR IS RESPONSIBLE FOR A COMPLETE SYSTEM. ALL EQUIPMENT AND RELATED ITEMS BY CONTRACTOR UNLESS OTHERWISE NOTED IN THESE SPECIFICATIONS.

IT IS THE INTENT OF THESE CONSTRUCTION DOCUMENTS TO DEPICT ENGINEERED DUCT, PIPE AND EQUIPMENT ARRANGEMENTS THAT MINIMIZE CONFLICTS AND/OR INTERFERENCES WITH STRUCTURES AND OTHER TRADES. FINAL CONSTRUCTION COORDINATION WITH OTHER TRADES TO AVOID SUCH CONFLICTS IS THE RESPONSIBILITY OF THIS CONTRACTOR.

DIFFERENCES AND/OR CONFLICTS BETWEEN CONTRACT DRAWING AND SPECIFICATION AND SHOP DRAWINGS, SHALL BE CALLED TO THE ENGINEERS ATTENTION. IF DIFFERENCES AND/ OR CONFLICTS ARE NOT NOTED TO CONTRACTOR PRIOR TO CONTRACT. CONTRACTOR SHALL DETERMINE GOVERNING CONDITION AND SUBCONTRACTOR SHALL PERFORM WORK AT NO ADDITIONAL COST TO THE OWNER.

TRADE NAMES ARE USED TO ESTABLISH QUALITY. SUBSTITUTIONS OF EQUAL QUALITY MAY BE USED IF PRIOR APPROVED BY THE ENGINEER.

#### RECORD DRAWINGS

PROVIDE RECORD DRAWINGS SHOWING LOCATIONS OF ALL CHANGES IN EQUIPMENT, PIPING AND DUCT ARRANGEMENTS. DRAWINGS SHALL BE RED PENCIL ON BLUE LINE PRINTS, DETAILS AND SCHEDULES AND SHALL BE KEPT UP TO DATE ON A DAILY BASIS. THESE DRAWINGS SHALL BE AVAILABLE TO THE BUILDER OR HIS REPRESENTATIVE AT THE JOB SITE.

AT COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT UPDATED PRINTS TO THE BUILDER, BEFORE RECEIPT OF FINAL PAYMENT.

#### MATERIALS FURNISHED BY OWNER

WILL BE RECEIVED, CHECKED IN UNDAMAGED AND WITH PROPER ACCESSORIES AND STORED AT THE SITE IN A CONVENIENT LOCATION FOR THE CONTRACTOR. UNLESS OTHERWISE SPECIFIED, ALL EQUIPMENT INDICATED IN THE SPECIFICATIONS, DETAILS SCHEDULES AND/OR ON THE DRAWINGS AS "FURNISHED BY OWNER" WILL BE FURNISHED BY OWNER AND INSTALLED BY THE CONTRACTOR. ALL OTHER EQUIPMENT AND MATERIALS SHALL BE PROVIDED BY THE CONTRACTOR.

#### CONTRACTOR'S EQUIPMENT STORAGE

EQUIPMENT STORED AT THE SITE SHALL BE ADEQUATELY PROTECTED FROM THE WEATHER.

#### <u>START UP</u>

CONTRACTOR TO LUBRICATE BEARINGS AS REQUIRED, INSTALL BELTS AND CHECK FOR PROPER BELT TENSION AND MOTOR ROTATION, INSTALL ALL SAFETY DEVICES, RELIEF VALVES, AND FILTERS. CONNECT ALL DAMPER LINKAGES AND REMOVE ALL SHIPPING HOLD DOWN CLAMPS AND BLOCKING.

#### SYSTEM BALANCING

OBTAIN THE SERVICES OF AN INDEPENDENT AIR BALANCE AND TESTING AGENCY WHICH SPECIALIZES IN THE TESTING, AND BALANCING OF HEATING, VENTILATING, AIR CONDITIONING SYSTEMS: TO TEST ADJUST, AND BALANCE ALL SUPPLY, RETURN AND EXHAUST SYSTEMS. AFTER AIR SYSTEMS HAVE BEEN BALANCED, TEST, ADJUST AND BALANCE THE HYDRONIC WATER SYSTEM (IF REQUIRED). WORK SHALL BE BY SAME TEST AND BALANCE AGENCY.

ALL WORK TO BE PERFORMED IN COMPLETE ACCORDANCE WITH THE ASSOCIATED AIR BALANCE COUNCIL (AABC) NATIONAL STANDARDS FOR FIELD MEASUREMENTS AND INSTRUMENTATION, LATEST EDITION, THOSE SECTIONS APPLICABLE TO AIR DISTRIBUTION AND HYDRONIC BALANCING.

#### EQUIPMENT SUPPORT

ALL HEATING DEVICES AND EQUIPMENT SHALL BE SECURELY MOUNTED TO THE BUILDING STRUCTURE AND SHALL NOT DEPEND UPON CEILING OR WALL SURFACES FOR THEIR SUPPORT. THEY SHALL BE INCAPABLE OF BEING ROTATED OR DISPLACED. THE SUPPORT ATTACHMENT SHALL ADEQUATELY SUPPORT THE WEIGHT OF THE FIXTURE, DEVICE, OR EQUIPMENT PLUS THE WEIGHT OF THE SUPPORT ATTACHMENT.

#### TOUCH-UP AND COMPLETION

BUILDER WILL PAINT ALL EXTERIOR EXPOSED HVAC EQUIPMENT, INCLUDING DUCTS, PIPES, LOUVERS, ETC.

CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING AND KEEPING CLEAN HVAC EQUIPMENT DURING INSTALLATION, HVAC CONTRACTOR TO TEST EACH SYSTEM OR PIECE OF EQUIPMENT INSTALLED AND REPORT TO BUILDER ANY EQUIPMENT DAMAGE OR MAL- FUNCTION.

#### ELECTRICAL WIRING

ELECTRICAL CONTRACTOR (E.C.) SHALL PROVIDE ALL POWER WIRING, INCLUDING CONDUIT, WIRE AND CONNECTIONS. ALL STARTERS, FUSES AND DISCONNECTS BY OTHERS EXCEPT WHERE SPECIFIED AS PART OF PACKAGE EQUIPMENT. STARTERS THAT COME WITH EQUIPMENT SHALL BE AUTOMATIC AND HAVE T.O.L. APPROPRIATE COVERS AND INTERLOCKS. ALL MOTORS LESS THAN 1/2 HP ARE 115/60/1 WITH INTEGRAL THERMAL OVERLOAD UNLESS OTHERWISE SPECIFIED.

ELECTRICAL CONTRACTOR SHALL LABEL ALL REMOVABLE PANELS FOR DISCONNECTS IN EQUIPMENT CABINETS WITH NAMEPLATE FURNISHED BY BUILDER (LABELED "ELECTRICAL SERVICE DISCONNECT LOCATED BEHIND THIS PANEL").

#### SHOP DRAWINGS

SUBMIT TO THE ENGINEER FOR REVIEW IMMEDIATELY AFTER AWARD OF CONTRACT, SIX (6) COPIES OF COMPLETE DESCRIPTIVE INFORMATION AND DIMENSIONAL DATA ON ALL ITEMS OF EQUIPMENT, MATERIALS AND ACCESSORIES. SUBMIT ALL SHOP DRAWINGS AT ONE TIME. PIECE MEAL SUBMISSION SHALL NOT BE ACCEPTABLE.

"AS BUILT DRAWINGS": CONTRACTOR SHALL BE FURNISHED WITH ONE (1) SET OF BLUE LINE PRINTS, ON WHICH CONTR. SHALL SHOW ANY CHANGES IN THE WORK CAUSED BY UNFORSEEN CIRCUMSTANCES AND THESE DRAWINGS SHALL BE TURNED OVER TO THE ENGINEER IN GOOD ORDER PRIOR TO FINAL ACCEPTANCE OF THE BLDG. ENGINEER IN TURN PREPARE RECORD DRAWINGS FROM INFORMATION FURNISHED BY CONTR.

"PARTS CATALOG": FURNISH TO THE ENGINEER FOR THE OWNER, THREE (3) COMPLETE SETS OF PARTS CATALOGS AND OPERATING INSTRUCTIONS BOUND IN LARGE BINDERS FOR HIS USE. CONTR. SHALL INSTRUCT OWNER'S OPERATOR IN THE PROPER CARE, OPERATION, LUBRICATION, AND MAINTENANCE OF MECHANICAL EQUIPMENT INSTALLED.

#### GUARANTEE AND SERVICE

GUARANTEE ALL EQUIPMENT, MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FOLLOWING DATE OF ACCEPTANCE. GUARANTEE ALL EQUIPMENT CONTAINING HVAC REFRIGERATION COMPRESSORS FULL FIVE (5) YEARS COVERING COMPRESSORS, LABOR, AND REFRIGERANT. GUARANTEE DOES NOT INCLUDE NORMAL MAINTENANCE ITEMS.

#### TSUSU BASIC MATERIALS AND METHODS

## MECHANICAL IDENTIFICATION

EQUIPMENT STENCILS SHALL IDENTIFY THE TYPE AND SERVICE WITH THE SAME NAMES, NUMBERS, AND/OR LETTERS USED TO IDENTIFY THE EQUIPMENT ON THE DRAWINGS. ALL STARTERS SHALL BE SIMILARLY STENCILED. OMIT IDENTIFICATION OF MINOR HEATING EQUIPMENT LOCATED IN THE ROOM IT SERVES, SUCH AS CONVECTORS, FINNED PIPE, UNIT HEATERS, ETC.

VIBRATION ISOLATORS

PIPE INSULATION

REFRIGERANT SUCTION & CONDENSATE DRAIN LINES INSTALL 1" ARMAFLEX PER MANUFACTURER'S INSTRUCTIONS. ALL OUTSIDE LINES TO BE PAINTED WITH ARMSTRONG OUTDOOR FINISH. MUST HAVE A CONTINUOUS SEALED VAPOR BARRIER ON ALL SUCTION LINES.

HOT AND COLD WATER DOMESTIC PIPING INSULATE ALL DOMESTIC COLD/HOT WATER PIPING WITH 1" THK. FIBERGLASS INSULATION WITH FRJ JACKET, ALL JOINTS AND ELBOWS SHALL BE NEATLY MITERED AND SEALED COVERED PVC COVER/JACKET.

REFRIGERANT PIPING CONTRACTOR TO INSTALL PRECLEANED, (DRIED AND SEALED) FACTORY REFRIGERANT LINE SETS. SEE SCHEDULE AND DETAILS FOR SIZES AND ROUTING. LIQUID & SUCTION LINES SHALL BE SIZED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS WITH CONSIDERATION FOR ALL ACCESSORIES.

REFRIGERANT SYSTEMS PIPE WORK 1 INCH IN 40 FEET.

PROPER LUBRICATION.

#### **SLEEVES**

PIPE SLEEVES: WROUGHT IRON OR STEEL OF SUFFICIENT SIZE FOR PIPING INSTALLATION IN FLOORS, WALLS, BELOW GRADE, AND GRADE BEAMS WHERE PIPING PASSES THROUGH. PVC MAY ONLY BE USED WHERE SPECIFICALLY NOTED.

HANGERS AND SUPPORTS HORIZONTAL PIPING ABOVE GRADE: RIGIDLY SUPPORTED ON MALLEABLE IRON SPLIT RING HANGERS; SUPPORTS FOR TWO OR MORE SYSTEMS OF PIPING RUN PARALLEL AND WITH SAME GRADE, TRAPEZE HANGERS MAY BE USED. USE ALL THREADED RODS FOR HANGERS AND SUPPORTS.

MAXIMUM SPACING OF SUPPORTS AND HANGERS FOR HORIZONTAL RUNS OF PIPE: FIVE (5) FEET FOR SOIL, TEN (10) FEET FOR OTHER SOIL PIPE EXCEPT SUPPORT PIPING 1-1/2" AND SMALLER EVERY SIX (6) FEET. PROVIDE GALVANIZED IRON SHIELDS BETWEEN HANGERS AND PIPE COVERING ON INSULATED PIPING. NO STRAP HANGERS OR WIRE WILL BE ACCEPTED.

CONTR. SHALL SUPPORT DUCTWORK IN STRICT ACCORDANCE TO SMACNA STANDARDS, REFER TO DUCTWORK SPECIFICATION, THIS SHEET.

#### ACCESS PANELS

FACTORY MADE ACCESS DOORS AND FRAMES, PRIME COAT FINISH, SCREWDRIVER LATCH(S) OF SUITABLE SIZE AS REQUIRED. ACCESS PANELS IN RATED CEILING TO HAVE SAME RATING AS CEILING. ACCESS PANELS IN LINED DUCTWORK TO BE DOUBLE WALL TYPE WITH INSULATION SANDWICHED IN BETWEEN, SAME INSULATION VALUE AS ADJACENT DUCTWORK. WHERE VALVES, DAMPERS, CONTROLS, FIRE DAMPERS, SMOKE DAMPERS AND DETECTORS, REHEAT COILS, ETC. ARE CONCEALED IN WALLS OR NON- ACCESSIBLE CEILINGS, INSTALL FACTORY MADE ACCESS DOORS AND FRAMES. ACCESS PANELS TO BE 2 HR. RATED.

FLOOR, WALL AND CEILING PLATES (ESCUTCHEONS) WHERE ANY PIPE OR RISERS PASS EXPOSED THROUGH WALLS, PARTITIONS, FLOORS OR CEILING, USED CHROME PLATED FLOOR OR CEILING PLATES. PLATES SHALL BE LARGE ENOUGH TO COMPLETELY CLOSE HOLE AROUND THE PIPES AND BE ROUND WITH THE LEAST DIMENSION NOT LESS THAN 1-1/2" LARGER THAN THE DIAMETER OF THE PIPE. PLATES SHALL BE SECURED IN AN APPROVED MANNER.

CUTTING AND PATCHING CUT ALL OPENINGS AS REQUIRED FOR THE WORK UNDER THIS SECTION. PATCHING SHALL BE DONE BY THE CRAFT WHOSE WORK IS INVOLVED. FURNISH AND INSTALL ALL NECESSARY SLEEVES, THIMBLES, HANGERS, INSERTS, ETC., AT SUCH TIME AND IN SUCH A MANNER SO AS NOT TO DELAY OR INTERFERE WITH WORK OF OTHER TRADES. NO BEAMS OR JOISTS SHALL BE CUT. AFTER RESURFACING HAS BEEN DONE, ANY FURTHER CUTTING, PATCHING AND PAINTING SHALL BE DONE AT THE EXPENSE OF THE CONTRACTOR.

#### 15400 PLUMBING GENERAL

- 2. SLOPE DRAINAGE LINES, 3" AND SMALLER, 1/4" PER FOOT AND LINES 4" AND LARGER 1/8" PER FOOT.
- ASTM D2665. 5. <u>WATER PIPING</u>
- 5.1.
- UNDERGROUND. 5.2.

#### PEX PIPING SHALL COMPLY WITH ASTM F876, ASTM F877.

- OWNER/ARCHITECT.

INSTALL VIBRATION ISOLATORS AS SHOWN ON DETAILS OR AS NOTED ON SCHEDULES.

PITCH HORIZONTAL PIPING DOWN IN THE DIRECTION OF REFRIGERANT FLOW NOT LESS THAN

PROVIDE OIL TRAPS AND DOUBLE RISERS IN REFRIGERANT SUCTION AND HOT GAS LINES WHERE REQUIRED TO PREVENT OIL SLUGGING AT THE COMPRESSOR AND TO INSURE

SET INSERTS IN CONCRETE FOR HANGER RODS AND DUCT HANGERS WHERE APPLICABLE.

1. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE INTERNATIONAL PLUMBING CODE (2015 EDITION WITH LOUISIANA AMENDMENTS) ALONG WITH ALL LOCAL CODES, ORDINANCES AND REGULATIONS.

3. ALL PIPES THRU WALLS TO BE EQUIPPED WITH ESCUTCHEONS, CHROME PLATED. 4. <u>SANITARY SEWER PIPING:</u> ASTM D2665, PVC-DWV, SOLID WALL (CELLULAR CORE NOT ALLOWED) SCHEDULE 40 SEWER PIPE WITH PVC FITTINGS, SOLVENT WELD JOINTS,

> COPPER TUBING, ASTM B88 TYPE "L" SOFT DRAWN (UNDERGROUND) AND TYPE "L" HARD DRAWN (ABOVE SLAB) WITH SOLDERED JOINTS AND WROUGHT COPPER, ANSI/ASME B16.22, ANSI/ASME B16.18, SOCKET COPPER FITTINGS. SILVER SOLDERED (BRAZED) JOINTS (ANSI B31.1, SECTION 6) FOR ALL COPPER JOINTS

> CONTRACTOR HAS OPTION TO USE PEX PIPING IN LIEU OF COPPER PIPE WHERE IN COMPLIANCE WITH APPLICABLE CODES (ALL FITTINGS TO BE FULL COPPER TUBE SIZE, INSERT BARB TYPE FITTINGS THAT REDUCE INSIDE PIPE DIAMETER SHALL NOT BE ACCEPTED).

PEX FITTINGS SHALL COMPLY WITH ASSE 1061, ASTM F877, ASTM F1807.

6. CONTRACTOR SHALL PROVE EITHER AIR CHAMBERS (MIN. 18" HIGH) OR SHOCK ABSORBERS AT ALL FIXTURES TO PREVENT WATER HAMMER, APPLIES ALL RISER DIAG. SUPPORT ALL PIPING WITH CLEVIS TYPE HANGERS, EIGHT (8) FOOT CENTERS. CONTRACTOR SHALL PROVIDE NEW WATER SERVICE. CONTRACTOR SHALL OBTAIN PRICES FROM LOCAL WATER COMPANY FOR THEIR REQUIRED SERVICES. PRICES SHALL INCLUDE ALL NECESSARY EQUIPMENT, LABOR, ETC. FOR TIE-INS TO MAIN INCLUDING COST OF BUT NOT LIMITED TO ALL METERS, FEES, PERMITS, ETC. 9. PLUMBING CONTRACTOR SHALL INSTALL AND CONNECT ALL OWNER FURNISHED EQUIP. REQUIRING SERVICES (WATER OR SANITARY WASTE), COORDINATE WITH

10. CONTRACTOR SHALL PROVIDE NEW SANITARY SEWER SERVICES. CONTRACTOR SHALL CO-ORDINATE WITH CITY-PARISH FOR LOCATION OF TIE-IN ALONG WITH INCLUDING COSTS OF ALL PERMITS FEES, ETC. IN HIS BID. BEFORE COMMENCING WORK CHECK ALL INVERT ELEVATIONS FOR SEWER CONNECTIONS, CONFIRM INVERTS AND ENSURE THAT THESE CAN BE PROPERLY CONNECTED WITH PROPER SLOPE FOR DRAINAGE. 11. CONTRACTOR SHALL PROVIDE CLEANOUTS EVERY 75 FEET AND AT ALL TURNS.

#### 15650 REFRIGERATION

AIR HANDLING UNIT / CONDENSING UNIT CONTRACTOR SHALL PROVIDE SPLIT TYPE DX AIR CONDITIONING SYSTEM COMPRISING OF ELECTRIC HEATERS & REFRIGERANT COOLING COIL(S). UNITS SIZED AND CAPACITY SHALL BE AS SPECIFIED ON THE DRAWINGS. INSTALL HVAC UNIT IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDED INSTALLATION GUIDELINES.

#### 15850 AIR HANDLING

ALL RIGHTS AND LEFTS FOR FAN UNITS SHALL BE DETERMINED BY LOOKING INTO THE AIR OUTLET. CLOCKWISE AND COUNTERCLOCKWISE ROTATION SHALL BE DETERMINED BY VIEWING FROM THE DRIVE SIDE.

EXHAUST FANS CONTRACTOR SHALL PROVIDE & INSTALL EXHAUST FANS OF TYPE, CAPACITY AND SIZED AS SPECIFIED IN THE EXHAUST FAN EQUIPMENT SCHEDULE.

#### 15880 AIR DISTRIBUTION

#### <u>DUCTWORK</u>

VERIFY ALL DIMENSIONS. DIMENSIONS SHOWN ARE METAL TO METAL. ALL DUCTWORK SHALL HAVE MAXIMUM 5% AIR LEAKAGE.

GALVANIZED SHEET METAL DUCTWORK FIRST QUALITY, COLD ROLLED, GALVANIZED. OPEN HEARTH SOFT STEEL SHEETS, CAPABLE OF DOUBLE SEAMING WITHOUT FRACTURE. TRANSVERSE JOINTS ON RECTANGULAR DUCTWORK WITH SLIPS AND DRIVES SHALL HAVE DRIVES BENT OVER AT CORNERS. GAUGES AND JOINT CONNECTORS PER LOCAL CODES, SMACNA OR ASHRAE RECOMMENDATIONS AND THE FOLLOWING UNLESS OTHERWISE NOTED. FLEX DUCT NOT PERMITTED.

ALL DUCTWORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH SMACNA LOW PRESSURE DUCT STANDARD, 2 INCH S.P. WITH THE FOLLOWING METAL THICKNESS.

ROUND DUCTS - SNAP LOCK UP TO 12 INCH DIAMETER #26 GAUGE MINIMUM. 13 INCH TO 18 INCH DIAMETER #24 GAUGE MINIMUM. 19 INCH TO 24 INCH DIAMETER #22 GAUGE MINIMUM.

SPIRAL LOCK SEAM ROUND DUCTS MAY BE ONE GAUGE LIGHTER THAN GAUGES

RECTANGULAR DUCTS AND PLENUMS MAXIMUM SIDE UP TO 12 INCH #26 GAUGE MINIMUM. MAXIMUM SIDE 13 INCH TO 30 INCH #24 GAUGE MINIMUM. MAXIMUM SIDE 31 INCH TO 50 INCH #22 GAUGE MINIMUM. MAXIMUM SIDE 51 INCH TO 84 INCH #20 GAUGE MINIMUM. MAXIMUM SIDE 85 INCH AND UP #18 Gauge minimum.

AS NOTED ON DRAWINGS #16 GAUGE.

FOR GREATER THAN 24 INCHES USE REINFORCEMENT AS LISTED IN LATEST SMACNA LOW PRESSURE SHEET METAL CONSTRUCTION GUIDE, SECURELY HUNG, BRACED AND STIFFENED TO PREVENT BREATHING, RATTLING, VIBRATION OR SAGGING.

DUCT SIZES 19 INCHES WIDE AND LARGER WHICH HAVE MORE THAN 10 SQUARE FEET OF UNBRACED PANEL SHALL BE CROSS BROKEN OR BEADED.

SUPPORT ALL DUCTS IN ACCORDANCE WITH SMACNA, EXCEPT WIRE HANGERS SHALL NOT BE PERMITTED. DUCTS 36 INCHES OR LARGER SHALL HAVE TRAPEZE TYPE HANGERS SUSPENDED WITH THREADED ROD.

SEAL ALL DUCTWORK SERVING SYSTEMS HAVING FANS RATED FOR LESS THAN 2 INCHES STATIC PRESSURE IN ACCORDANCE WITH SMACNA, SEAL CLASS C. ALL TRANSVERSE JOINTS, FITTING CONNECTIONS, AND SQUARE OR RECTANGULAR TO ROUND CONNECTIONS IN DUCTWORK SHALL BE SEALED USING ADHESIVE TYPE SLIPS, DUCT SEALER OR HARD CAST. ROUND TO ROUND CONNECTIONS WITH FIRM FIT AND SEALED, SEAL ALL DUCTWORK SERVING SYSTEMS HAVING FANS RATED FOR 2 INCHES STATIC PRESSURE OR GREATER IN ACCORDANCE WITH SMACNA SEAL CLASS A. ALL TRANSVERSE JOINTS, LONGITUDINAL SEAMS, DUCT WALL PENETRATIONS TO BE SEALED.

BRANCH TAKEOFFS NOT TO EXCEED 45 DEGREES. PROVIDE A VOLUME DAMPER IN EACH AND EVERY BRANCH OF SUPPLY, RETURN AND EXHAUST DUCT. (SEE FLOOR PLANS AND DETAILS).

#### CANVAS CONNECTORS

18 OUNCE FIREPROOF CANVAS OR NEOPRENE AT ALL FANS AND HVAC UNITS (EXCEPT ROOF VENTILATORS AND VANE AXIAL FANS WITH COMPANION FLANGES).

DUCT INSULATION

INSULATION PRODUCTS PER NFPA-90A WITH 25 OF LESS FLAME SPREAD AND 50 OR LESS SMOKE DEVELOPMENT RATINGS. NO PLASTIC LINERS OR COVERS

#### DUCT LINER INSULATION

OWENS-CORNING AEROFLEX OR EQUIVALENT MANVILLE LINACOUSTIC OR KNAUF DUCT LINER M FIRE RESISTANT MATT FACED GLASS FIBER DUCT LINER. 1-1/2 LB. DENSITY. CERTIFIED EROSION RESISTANT DUCT LINER FOR DUCT AIR VELOCITIES UNDER 2000 F/P/M. K APPROX. 0.24 AT 50 DEGREES F. DUCT LINER SHALL BE ADHERED TO THE SHEET METAL WITH A 100% COVERAGE OF ADHESIVE, AND ALL EXPOSED LEADING EDGES AND ALL TRANSVERSE JOINTS COATED WITH ADHESIVE. DUCT LINER SHALL BE CUT TO ASSURE OVERLAPPED AND COMPRESSED LONG-LONGITUDINAL CORNER JOINTS. THE DUCT LINER SHALL BE ADDITIONALLY SECURED WITH MECHANICAL FASTENERS WHICH SHALL COMPRESS THE DUCT LINER SUFFICIENTLY TO HOLD IT FIRMLY IN PLACE.

FASTENERS SHALL START WITHIN 3 INCHES OF THE UPSTREAM TRANSVERSE EDGES OF THE DUCT LINER AND 3 INCHES FROM THE LONGITUDINAL JOINTS AND SHALL BE SPACED AR A MAXIMUM OF 12 INCHES O.C. AROUND THE PERIMETER OF THE DUCT, EXCEPT THAT THEY MAY BE A MAXIMUM OF 12 INCHES FROM A CORNER BREAK. ELSEWHERE THEY SHALL BE A MAXIMUM OF 18 INCHES O.C. EXCEPT THAT THEY SHALL BY PLACED NOT MORE THAN 6 INCHES FROM A CORNER BREAK.

#### DUCT WRAP INSULATION

OWENS-CORNING FIBERGLASS ALL-SERVICE FACED DUCT WRAP INSULATION, OR EQUAL. INSTALL DUCT WRAP INSULATION WITH FACING OUTSIDE SO THAT TAPE FLAP OVERLAPS INSULATION AND FACING OF ADJACENT PIECE OF DUCT WRAP. INSULATION SHALL BE TIGHTLY BUTTED. IF DUCTS ARE RECTANGULAR INSTALL SO INSULATION IS NOT EXCESSIVELY COMPRESSED AT DUCT CORNERS. SEAMS SHALL BE STAPLED APPROXIMATELY 6 INCHES ON CENTER WITH OUTWARD CLINCHING STAPLES. SEAL SEAMS WITH PRESSURE-SENSITIVE TAPE MATCHING THE FACING. WHERE RECTANGULAR DUCTS ARE 24 INCHES IN WIDTH OR GREATER, DUCT WRAP INSULATION SHALL BE ADDITIONALLY SECURED TO THE BOTTOM OF THE DUCT WITH MECHANICAL FASTENERS SUCH AS PINS AND SPEED CLIP WASHERS, SPACED ON 18 INCH CENTERS (MAXIMUM) TO PREVENT SAGGING OF INSULATION. ADJACENT SECTIONS OF WRAP INSULATION SHALL BE TIGHTLY BUTTED WITH THE 2 INCH TAPE FLAP OVERLAPPING. SEAL ALL TEARS, PUNCTURES AND OTHER PENETRATIONS OF THE DUCT WRAP INSULATION FACING WITH TAPE OR MASTIC TO PROVIDE A VAPOR TIGHT SYSTEM.

<u>'URNING VANES</u>

LARGER.

DRAWING.

<u>DUCT ACCESS PANELS</u>

FILTERS

HVAC CONTROLS

### DUCT INSULATION LOCATION

#### EXHAUST DUCTS

WRAP ALL RECTANGULAR/ROUND EXHAUST DUCTS/PLENUMS/BOOTS WITH 2.33" THICK DUCT WRAP INSULATION. WRAP FOR ENTIRE LENGTH. ENTIRE EXHAUST SYSTEM TO BE INSULATED.

SUPPLY AIR DUCTS

LINE ALL RECTANGULAR SUPPLY AIR DUCTS & DIFFUSER BOOTS WITH 1" THICK DUCT LINER. WRAP ALL ROUND SUPPLY AIR DUCTS AND DUCTS 4" OR LESS IN ANY DIMENSION WITH 2.33" DUCT WRAP INSULATION. LINE & WRAP ALL DUCTWORK IN ATTIC SPACES IN ACCORDANCE WITH IECC 2015.

RETURN AIR DUCTS

LINE ALL RETURN AIR PLENUMS AT AIR HANDLING UNITS & RECTANGULAR RETURN AIR DUCTS WITH 1" THICK DUCT LINER. LINE ALL DUCTED RETURN GRILLE BOOTS WITH 1" THICK DUCT LINER. PROVIDE & INSTALL RETURN GRILLE ACOUSTICAL PLENUMS AT ALL RETURN AIR DEVICES. WRAP ALL ROUND DUCTS AND DUCTS 4" OR LESS IN ANY DIMENSION WITH 2.33" THICK DUCT WRAP INSULATION. LINE AND WRAP ALL DUCTWORK IN ATTIC SPACES IN ACCORDANCE WITH IECC 2015.

DUCT ACCESSORIES

TURNING VANES TO BE DOUBLE WALL FABRICATED PER SMACNA STANDARDS

VOLUME DAMPERS MANUAL VOLUME DAMPERS, FABRICATED PER SMACNA STANDARDS, WITH LOCKING QUADRANT. PROVIDE MULTIBLADE DAMPERS FOR ALL DUCTS 12 INCHES DEEP AND

BALANCING DAMPERS WIDTH OF THE BRANCH TAKEOFF. PROVIDE CEILING ACCESS FOR OPERATING DAMPERS. LEAVE ALL DAMPERS OPEN. VOLUME DAMPERS WHERE SHOWN ON

FOR ROUND DUCTS, HART & COOLEY #607 AND #608, OR EQUIVALENT, WITH 2 BEARING POINTS AND HANDLE AND WING NUT ASSEMBLY.

BACKDRAFT DAMPERS

INSTALL PER MANUFACTURER'S INSTRUCTIONS. SEE SCHEDULE. INTERLOCKED, FELT EDGED BLADE, ADJUSTABLE SPRING LOADED. PREFCO PHL, OR EQUIVALENT.

FOR MAINTENANCE, CLEANING, RESETTING OR EXAMINATION. AIR TIGHT HINGED ACCESS DOORS WITH FELT OR TUBULAR NEOPRENE GASKET. WITH CAM LATCHES (NOT SCREWS). KARP OR EQUIVALENT. INSULATED AT INSULATED DUCTS.

GRILLES AND DIFFUSERS

ALL GRILLES AND DIFFUSERS SHALL BE AS INDICATED ON THE PLANS AND SHALL BE EQUIPPED WITH OPPOSED BLADE DAMPERS AND HAVE A WHITE BAKED ON ENAMEL FINISH UNLESS SPECIFIED OTHERWISE ON THE DRAWINGS.

FILTERS FURNISHED WITH ALL RETURN AIR GRILLES. SEE SCHEDULES. SPARE FILTERS PROVIDED WHERE INDICATED IN SCHEDULE. HVAC CONTRACTOR IS REQUIRED DURING AND AT THE COMPLETION OF THE BUILDING CONSTRUCTION TO PROVIDE NEW REPLACEMENT AIR FILTERS OF EQUAL EFFICIENCY AT ALL HVAC UNITS USED DURING CONSTRUCTION.

## SEQUENCE OF OPERATION

AIR CONDITIONING SYSTEM (TYPICAL): PROVIDE ROOM TYPE THERMOSTATS TO CYCLE CONDENSING UNIT ON THE COOLING CYCLE (IN STAGES) AND THE HEATER (IN STAGES). REFER TO SCHEDULE, ON THE HEATING CYCLE AS REQUIRED TO MAINTAIN SPACE CONDITIONS. AIR HANDLING UNIT SHALL BE WIRED FOR AND ELECTRICALLY INTERLOCKED SUCH THAT THE CONDENSING UNIT MAY NOT RUN NOR THE HEATER BE ENERGIZED UNLESS THE EVAPORATOR FAN IS OPERATIONAL. IF RETURN AIR TEMPERATURE RISES ABOVE FIRESTAT SETPOINT THEN FIRESTAT DE-ENERGIZES UNIT EVAPORATOR FAN. IF SUPPLY/RETURN AIR CONTAINS SMOKE, THE SMOKE DETECTOR SHALL DE-ENERGIZE FAN MOTOR AND ACTIVATE FIRE ALARM (IF NO FIRE ALARM THE CONTRACTOR SHALL PROVIDE AUDIO/VISUAL ALARM). IF AUX. DRAIN PAN FILLS WITH WATER, FLOAT SWITCH SHALL DE-ENERGIZE CONDENSING UNIT.



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Project Notes:

Project Title: **COPPERHEAD** BUILDING, NO.2

#### Project Location: 35030 HWY. 30

GEISMAR, ASCENSION PARISH, LA Sheet Revisions

Description Date

Sheet Name

MECHANICAL & PLUMBING SPECIFICATIONS





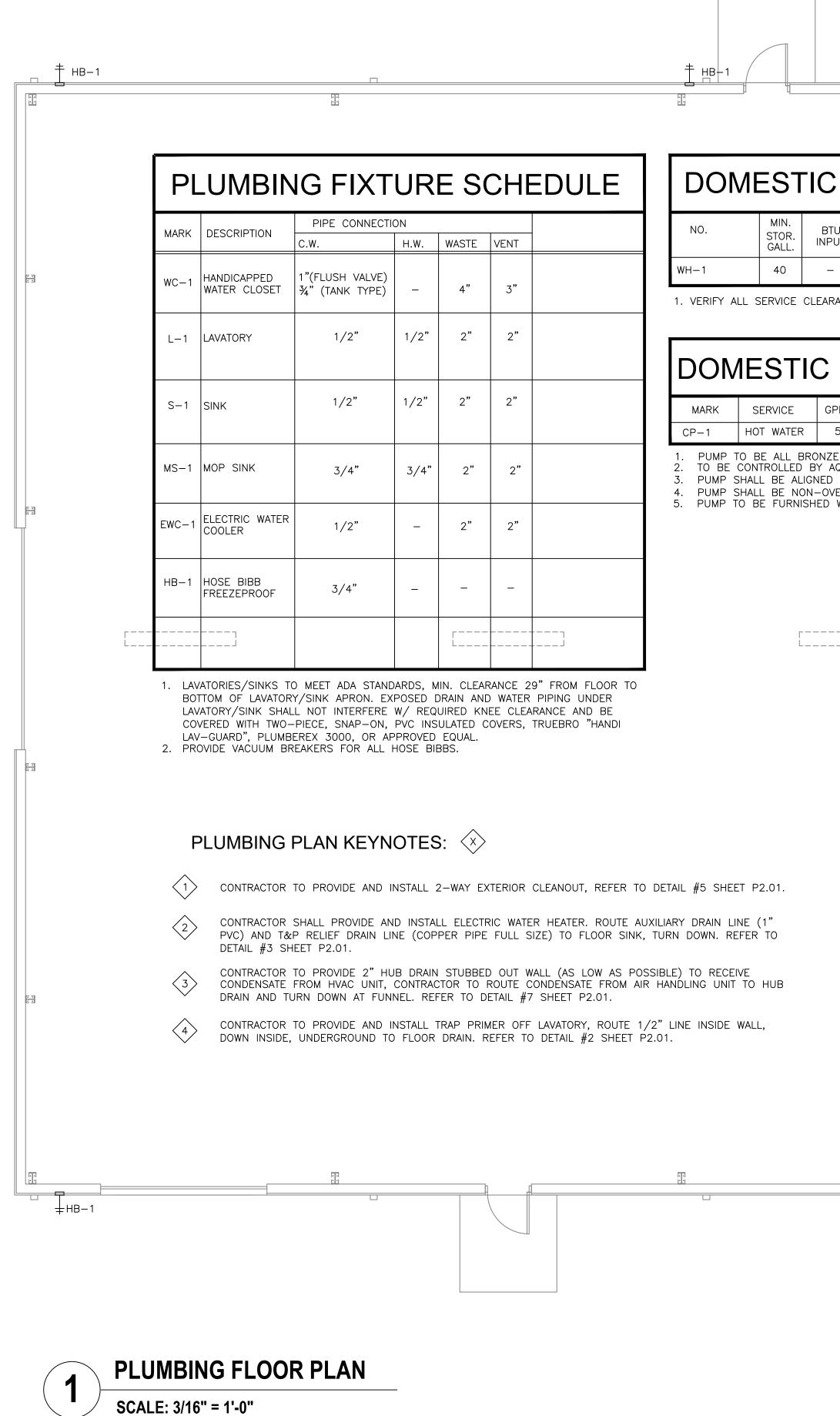
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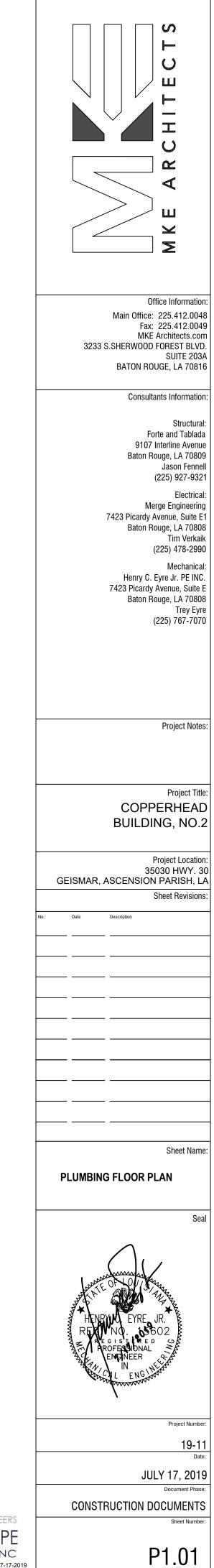
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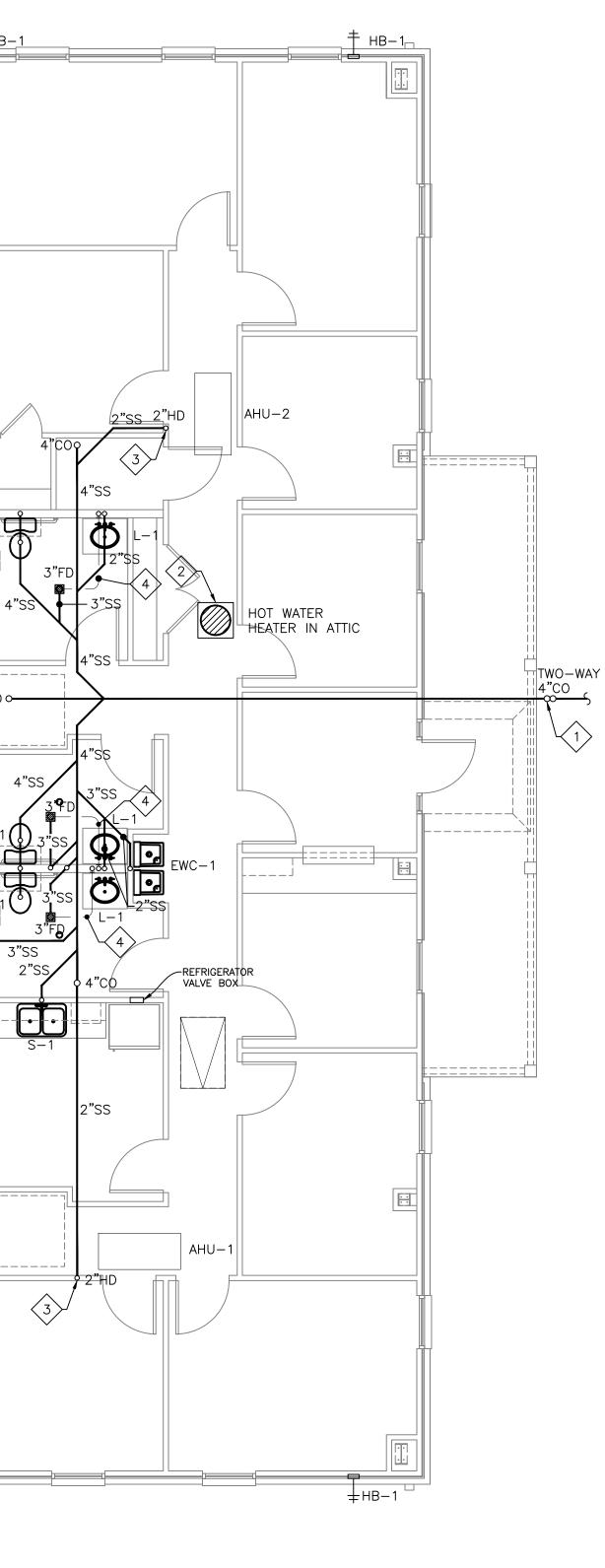
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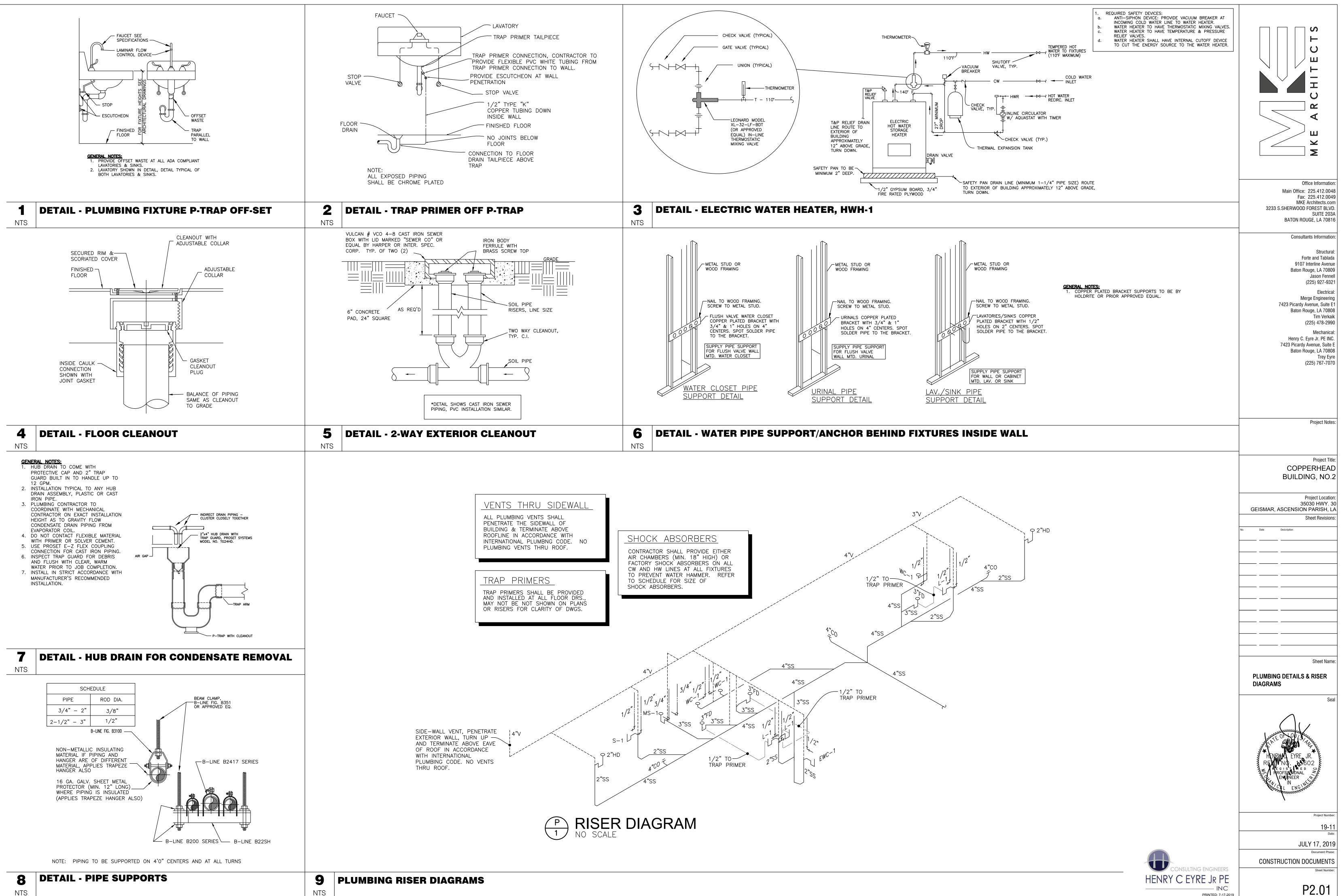
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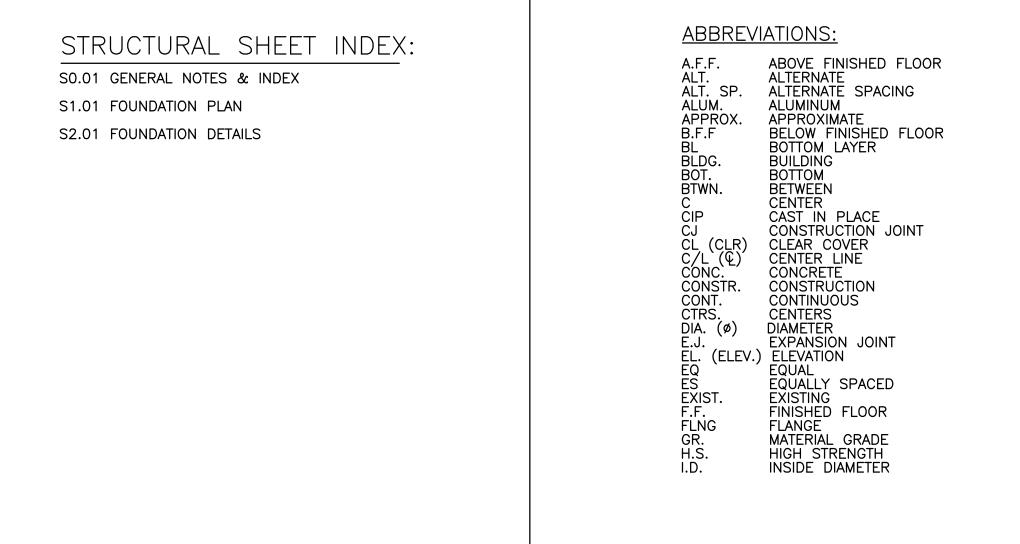
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#### <u>GENERAL</u>

- SEE ARCHITECTURAL DOCUMENTS FOR FINAL DIMENSIONS. ARCHITECTURAL DOCUMENTS GOVERN AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL DIMENSIONS IN THE FIELD BEFORE CONSTRUCTION BEGINS. ALL DIMENSIONS, DISCREPANCIES, OR CONFLICTS BETWEEN CONSTRUCTION DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR STRUCTURAL ENGINEER BEFORE PROCEEDING WITH ANY WORK INVOLVED. THE CONTRACTOR SHALL VERIFY ALL MECHANICAL, PLUMBING, AND MISCELLANEOUS OPENINGS AND ALL SLEEVES, BOLTS, AND OTHER RELATED ITEMS. NOTIFY THE STRUCTURAL ENGINEER WHEN DRAWINGS BY OTHERS SHOW OPENINGS, POCKETS, ETC. NOT SHOWN ON THE STRUCTURAL DRAWINGS, BUT ARE LOCATED IN OR ON THE STRUCTURAL MEMBERS
- THESE PLANS ARE NOT INTENDED TO CONVEY ANY PARTICULAR CONSTRUCTION SEQUENCE OR PROCEDURE AND REPRESENT THE FINISHED STRUCTURE. THE RESPECTIVE BIDDER AND/OR CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING ADEQUATE MEANS AND MEASURES TO ENSURE THE STABILITY OF THE BUILDING AND ITS COMPONENTS DURING CONSTRUCTION. THESE SHALL INCLUDE, BUT ARE NOT LIMITED TO: NECESSARY SHORING, SHEETING, TEMPORARY BRACING, DEWATERING, ETC. CONSTRUCTION MATERIALS SHALL BE SPREAD OUT WHEN PLACED ON FRAMED FLOORS OR ROOFS. THE CONSTRUCTION MATERIAL LOAD SHALL NOT EXCEED THE DESIGN LIVE LOADS. PROVIDE ADEQUATE SHORING AND/OR BRACING WHERE THE STRUCTURE HAS NOT ATTAINED DESIGN STRENGTH.
- OBSERVATIONS, VISITS, OR VERBAL COMMUNICATION DURING CONSTRUCTION BY A REPRESENTATIVE OF THE STRUCTURAL ENGINEER SHALL NEITHER BE CONSTRUED AS AN INSPECTION NOR APPROVAL OF CONSTRUCTION UNLESS STATED SO IN WRITING BY THE ENGINEER. OBSERVATION VISITS DO NOT INCLUDE INSPECTION OF CONSTRUCTION MEANS AND METHODS AND ARE NOT CONTINUOUS AND DETAILED INSPECTION SERVICES WHICH ARE TO BE PERFORMED BY OTHERS. OBSERVATIONS ARE PERFORMED SOLELY FOR THE PURPOSE OF DETERMINING IF THE CONTRACTOR UNDERSTANDS DESIGN INTENT SHOWN IN CONTRACT DRAWINGS. OBSERVATIONS DO NOT GUARANTEE CONTRACTOR'S PERFORMANCE AND ARE NOT TO BE CONSTRUED AS SUPERVISION OR VERIFICATION OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFETY AND PROTECTION IN AND AROUND THE JOB SITE AND/OR ADJACENT PROPERTY.

#### STRUCTURAL DESIGN CRITERIA

- 1. DESIGN CODES
- a. INTERNATIONAL BUILDING CODE (IBC), 2015 EDITION. ALL REFERENCED CODES AND SPECIFICATIONS NOTED SHALL BE THE LATEST APPROVED EDITIONS AND REVISIONS BY THE GOVERNMENTAL AGENCY HAVING JURISDICTION OVER THIS PROJECT 2. LIVE LOADS:
- a. FLOOR LIVE LOAD = 60 PSF (OFFICE), 125 PSF (WAREHOUSE)

#### CONSTRUCTION PROCEDURE

- THE STRUCTURE SHALL BE ADEQUATELY BRACED AND SHORED DURING ERECTION AGAINST WIND AND ERECTION LOADS. STRUCTURAL MEMBERS ARE DESIGNED FOR "IN PLACE" LOADS. COMPLY WITH ALL APPLICABLE CITY, PARISH, STATE, AND FEDERAL LAWS, INCLUDING THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) AND REGULATIONS ADOPTED PURSUANT
- THERETO. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. UNLESS OTHERWISE NOTED, THEY DO NOT INDICATE THE MEANS OR METHOD OF CONSTRUCTION. PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, WORKERS, OR OTHERS PERSONS DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT ARE NOT LIMITED TO, BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR THE BUILDING, SHORING FOR EARTH BANKS, FORMS, SCAFFOLDING, PLANKING, SAFETY NETS, SUPPORT AND BRACING FOR CRANES AND GIB POLES.
- 4. ENGAGE PROPERLY QUALIFIED PERSONS TO DETERMINE WHERE AND HOW TEMPORARY PRECAUTIONARY MEASURES SHALL BE USED AND INSPECT SAME IN THE FIELD. OBSERVATION VISITS TO THE SITE BY ENGINEER'S FIELD REPRESENTATIVE SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS. SUPERVISE AND DIRECT THE WORK SO AS TO MAINTAIN SOLE RESPONSIBILITY FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. AS A PART OF THIS RESPONSIBILITY, RETAIN THE SERVICES OF A LICENSED STRUCTURAL ENGINEER TO DESIGN AND SUPERVISE ANY SCAFFOLDING FOR WORKERS, AND ALL SHORING OF FORMS AND
- ELEMENTS OF THE CONSTRUCTION. THESE DRAWINGS DO NOT INCLUDE EVERY COMPONENT AND PROCEDURE NECESSARY FOR CONSTRUCTION SAFETY WHICH IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFETY AND PROTECTION IN AND AROUND THE JOB SITE AND ADJACENT PROPERTY.

#### CONSTRUCTION COORDINATION

- PLACEMENT OF ANCHOR BOLTS, PIPE SLEEVES, PADS, AND OPENINGS FOR EQUIPMENT SHALL BE COORDINATED BETWEEN THE GENERAL CONTRACTOR AND THE OTHER SUBCONTRACTORS.
- ALL CORE DRILLING SHALL BE DONE UNDER THE SUPERVISION OF THE GENERAL CONTRACTOR. NO REINFORCING STEEL SHALL BE CUT. VERIFY LOCATION OF REINFORCING STEEL BEFORE CORE DRILLING. THERE SHALL NOT BE ANY CORE DRILLING THROUGH BEAMS OR COLUMNS. MAXIMUM CORE HOLE THROUGH SLABS SHALL BE PIPE DIAMETER PLUS 1".
- SEE THE ARCHITECTURAL DRAWINGS FOR GRADES AND REFERENCE ELEVATIONS. COORDINATE THE TIMELY PLACEMENT OF PLUMBING, ELECTRICAL, AND OTHER WORK LOCATED UNDER AND WITHIN THE FOUNDATION AND STRUCTURE. CONTRACTOR SHALL VERIFY ALL OPENINGS IN SLAB. DO NOT SCALE DRAWINGS TO DETERMINE DIMENSIONS. USE ONLY THE NUMERICAL DIMENSIONS SHOWN.

#### ANCHOR BOLTS AND MISCELLANEOUS

- UNLESS OTHERWISE NOTED IN THE PLANS, ALL SOLE PLATE ANCHOR BOLTS SHALL BE GALVANIZED AND AS DETAILED IN THE PLANS. SPECIALTY ANCHORS SHALL BE INSTALLED PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- PROVIDE SETTING TEMPLATES TO POSITION ANCHOR BOLTS PRIOR TO PLACING CONCRETE. ACCURATELY POSITION BOLTS TO ENSURE CORRECT VERTICAL AND HORIZONTAL LOCATION TO
- MATCH STEEL AND BOLT PATTERN. KEYWAY DIMENSIONS: DEPTH 3/4"; WIDTH ONE-THIRD THAT OF MEMBER UNLESS SHOWN OTHERWISE. ALL CONSTRUCTION JOINTS SHALL HAVE KEYWAYS UNLESS SHOWN OTHERWISE

#### FOUNDATION PREPARATION AND EARTHWORK

1. SEE GEOTECHNICAL/SUBSURFACE INVESTIGATIVE REPORT BY GULF SOUTH ENGINEERING AND TESTING, FILE NO: 18-037 DATED MAY 31, 2018, FOR INFORMATION REGARDING SITE PREPARATION, ALLOWABLE BEARING CAPACITY, AND OTHER GEOTECHNICAL CRITERIA. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE WHETHER OR NOT ADDITIONAL GEOTECHNICAL INFORMATION IS REQUIRED AND TO PROVIDE SUCH INFORMATION AS HE DEEMS NECESSARY. 2. THE DESIGN BEARING CAPACITIES ARE AS FOLLOWS:

#### GRADE BEAMS: SPREAD FOOTINGS:

#### 1300 PSF 1500 PSF

- THE CONTRACTOR SHALL PROVIDE FOR PROPER DEWATERING OF EXCAVATIONS FROM SURFACE WATER, GROUND WATER, SEEPAGE, ETC. ALL ABANDONED UTILITIES, FOOTINGS, ETC., THAT INTERFERE WITH THE NEW CONSTRUCTION SHALL BE REMOVED. NOTIFY THE STRUCTURAL ENGINEER SHOULD ANY FOUNDATIONS FOR EXISTING STRUCTURES BE ENCOUNTERED THAT ARE NOT SHOWN ON THE STRUCTURAL DRAWINGS.
- FOOTINGS, GRADE BEAMS, SLABS, AND THICKENED SLAB SECTIONS SHALL BE PLACED TO THE DIMENSIONS SHOWN ON THE DRAWINGS AND OBSERVED FOR QUALITY ASSURANCE PRIOR TO PLACING CONCRETE AND REINFORCING. SHOULD SOIL ENCOUNTERED NOT BE APPROVED, DESIGNS, EXCAVATIONS, AND SITE WORK WILL BE ALTERED BY CHANGE ORDER. THE INSPECTION OF FOUNDATION FOOTINGS AND REINFORCEMENT AND THE PLACEMENT OF CONCRETE SHALL PROCEED IMMEDIATELY FOLLOWING APPROVAL. IF FOOTING EXCAVATIONS ARE TO REMAIN OPEN
- FOR MORE THAN ONE DAY, THE CONTRACTOR SHALL TAKE MEASURES TO REDUCE MOISTURE ENTRY OR EVAPORATION. ALL EXCAVATIONS SHALL BE PROPERLY BACKFILLED. FOOTING BACKFILL AND UTILITY TRENCH BACKFILL WITHIN THE BUILDING PERIMETER SHALL BE MECHANICALLY COMPACTED IN LAYERS, TO THE APPROVAL OF THE SPECIAL INSPECTOR.
- ALL TOPSOIL AND ORGANIC MATERIALS, INCLUDING TREES AND LARGE ROOTS, AND ANY DELETERIOUS MATERIALS SHALL BE STRIPPED FROM THE PROJECT AREA AND REPLACED WITH STRUCTURAL FILL.
- 8. FILL SHALL BE AS DESCRIBED IN THE GEOTECHNICAL REPORT.

#### CONCRETE REQUIREMENTS

- ALL ASPECTS OF WORK PERTAINING TO CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 318 AND ACI 301 LATEST EDITIONS, EXCEPT AS NOTED. CONCRETE MIX DESIGNS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW. CONCRETE COMPRESSIVE STRENGTH SHALL BE AS FOLLOWS AT 28 DAYS AND SHALL HAVE A MAXIMUM SLUMP OF 8" FOR CONCRETE WITH A VERIFIED SLUMP OF 2-4" BEFORE ADDING WATER-REDUCING OR PLASTICIZING ADMIXTURE. MAX AIR ENTRAINMENT =  $5.5\% \pm 1.5\%$  (U.N.O.). SLABS, FOOTINGS: 4000 PSI
- CONCRETE IN THE FOUNDATION SHALL NOT CONTAIN CALCIUM CHLORIDE OR OTHER CORROSIVE ADMIXTURES. PORTLAND CEMENT SHALL CONFORM TO ASTM C150 TYPE II
- WATER SHALL BE CLEAN, POTABLE AND FREE FROM INJURIOUS AMOUNTS OF ACID, ALKALI, OR ORGANIC MATERIAL CONCRETE AGGREGATES SHALL CONFORM TO THE SPECIFICATIONS OF ASTM C-33 AND SHALL CONFORM TO THE FOLLOWING MAXIMUM DIAMETERS: FOUNDATION: 1.5" DIAMETER
- CONCRETE FLOORS SHALL BE FINISHED IN ACCORDANCE WITH ACI 301 FOR FLOOR FLATNESS AND FLOOR LEVELNESS WITHIN 48 HOURS AFTER SLAB INSTALLATION IN ACCORDANCE WITH ASTM E-1155. TOLERANCES SHALL BE AS FOLLOWS:
- EXPOSED TO VIEW & FOOT TRAFFIC: F(F) 20, F(L) 15 MOISTURE CONTROL BENEATH THE FOUNDATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND SHALL CONSIST OF SAND OR WASHED GRAVEL FILL, 10 MIL POLYETHYLENE VAPOR BARRIER, ETC. AS REQUIRED BY GOVERNING CODES AND LOCAL PRACTICES. 10. EXPOSED CONCRETE CORNER CHAMFER: 3/4" UNLESS SHOWN OTHERWISE.
- 11. ALL METAL FABRICATIONS EMBEDDED IN CONCRETE, OTHER THAN REINFORCING, STRUCTURAL FRAMING, AND ANCHOR BOLTS, SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 AND ASTM A386 AS APPLICABLE. NON-SHRINK GROUT UNDER BASE PLATES TO BE SAME COMPRESSIVE STRENGTH AS SUPPORTING CONCRETE.
- 13. CONCRETE PLACEMENT FOR EACH FOUNDATION TYPE SHALL BE POURED MONOLITHICALLY WITH NO COLD JOINTS.

LONGIT. LONGITUDINAL M BENDING MOMENT FOOT KIPS MAX. MAXIMUM MFG. MANUFACTURER MIN. MINIMUM N.T.S. NOT TO SCALE O.C. ON CENTER O.D. OUTSIDE DIAMETER OPT. OPTIONAL PL. (P) PLATE P.P.C. PRECAST PRESTRESSED CONCRETE PSF POUNDS PER SQUARE FOOT PSI POUNDS PER SQUARE INCH REINF. REINFORCEMENT RE: (REF.) REFERENCE REQ'D REQUIRED SPC'S SPACES SQ. SQUARE S.S. STAINLESS STEEL STD. HK. STANDARD HOOK T.O.S. TOP OF STEEL THK. THICKNESS TRANSV. TRANSVERSE TYP TYPICAL
TYP.TYPICALU.N.O.UNLESS OTHERWISE NOTEDVSHEAR IN KIPSW.P.WORK POINTWWFWELDED WIRE FABRIC1V TO 3H 1 VERTICAL TO 3 HORIZONTAL

## SYMBOL LEGEND - DETAIL AREA -DETAIL NUM. Ref# Sh# - DETAIL SHEET DETAIL NUM. - CUT DIRECTION EL. "XX" A.F.F. DETAIL SHEE SECTION - SECTION DESIGNATOR A SCALE: 3/4" = 1' - 0"— DRAWING SCALE NOTES: \_\_\_\_\_\_SHEET SPECIFIC NOTES $\Delta \boxtimes \odot \odot \odot \Delta \odot -$ Note callout

DEFORMED STEEL AND WELDED WIRE FABRIC

SCALE: 3/8"=1'

1. ALL REINFORCING STEEL SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318 LATEST EDITION) AND THE MANUAL FOR STANDARD PRACTICE FOR REINFORCED CONCRETE CONSTRUCTION BY CRSI (UNLESS OTHERWISE NOTED). DEFORMED REINFORCING BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615 GRADE 60. LAP SPLICES SHALL BE 90 BAR DIAMETERS FOR TOP BARS AND 70 BAR DIAMETERS FOR ALL OTHER BARS. WELDING OF REINFORCING IS NOT PERMITTED.

ALL REINFORCING BAR BENDS SHALL BE MADE COLD AND IN ACCORDANCE WITH THE STANDARD HOOK REQUIREMENTS OF ACI 318.

I I - REFERENCE SCALES

- REINFORCING.
- ALL REINFORCING BARS SHALL BE MARKED SO THEIR IDENTIFICATION CAN BE MADE WHEN THE FINAL IN-PLACE INSPECTION OCCURS. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
- MINIMUM LAP OF WELDED WIRE FABRIC SHALL BE 6 INCHES OR ONE FULL MESH AND ONE HALF, WHICH EVER IS GREATER.

REBAR LAP SPLICE REQUIREMENTS (MIN.)		
LOCATION	FOUNDATIONS	
BAR	4000 PSI	
#3	15"	
#4	19"	
#5	24"	
#6	29"	
#7	42"	
#8	48"	

SPLICE NOTES:

LAP SPLICE LENGTHS ABOVE APPLY TO ALL REINFORCING BARS FOR THIS PROJECT, UNLESS SPECIFICALLY NOTED OTHERWISE IN THESE PLANS.

ALL LAP SPLICES PROVIDED ABOVE ARE NORMAL WEIGHT CONCRETE AND GRADE 60 REINFORCING BARS IN TENSION. SPLICES FOR COLUMN AND SLAB BARS ARE BASED ON A MINIMUM OF 1" CLEAR COVER.

LAP SPLICE LENGTHS PROVIDED IN THIS TABLE ARE BASED ON ACI 318–11, 12.2, AND 12.15.

	#8 REINFORCING SIZE	
––– NEW WORK (BOLD)	PHU223	
	SIZE, # OF STUDS, CAMBER REACTION $-$ I REACTION $ \frac{13K(V)^*}{13K(V)^*}$ W12X30 (30)** c=1/2**** 13K(V)*	
	<pre>(+2")**** <h =="" ±20k="">***** — AXIAL TOP OF STEEL DEVIATION * IF NONE, USE CONNECTIONS DETAILED **</h></pre>	
-REVISION NUMBER	** IF NONE, NON-COMPOSITE BEAM *** IF NONE, NO CAMBER **** IF NONE, USE T.O.S. NOTED *****IF NONE, NO AXIAL (-COMPRESSION, + TENSION)	
REVISION AREA	— CONCRETE	
FRAME LINE	— GROUT — GRAVEL	Office Inf
<del>X</del> WWF		
REBAR	— GROUND	

REINFORCING DOWELS BETWEEN FOOTINGS AND WALLS OR COLUMNS SHALL BE THE SAME NUMBER, SIZE, SPACING AND GRADE AS THE SPECIFIED VERTICAL

PROVIDE CONTINUOUS REINFORCING TOP AND BOTTOM OF GRADE BEAMS AND AROUND CORNERS OF GRADE BEAMS IN ACCORDANCE WITH THE DETAILS PROVIDED.

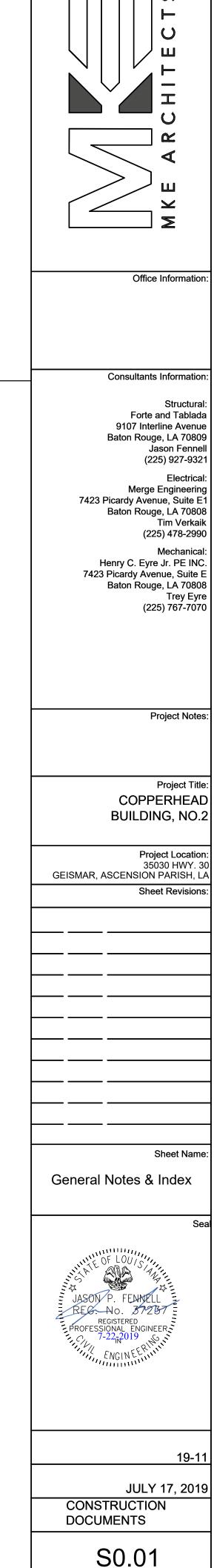
METAL BUILDING ANCHOR ROD SCHEDULE			
ANCHOR Ø	ANCHOR EMBED.	ANCHOR PROJECTION	
½"	6"	PER MTL. BLDG. PROVIDER	
5%"	6"	PER MTL. BLDG. PROVIDER	
34"	8"	PER MTL. BLDG. PROVIDER	

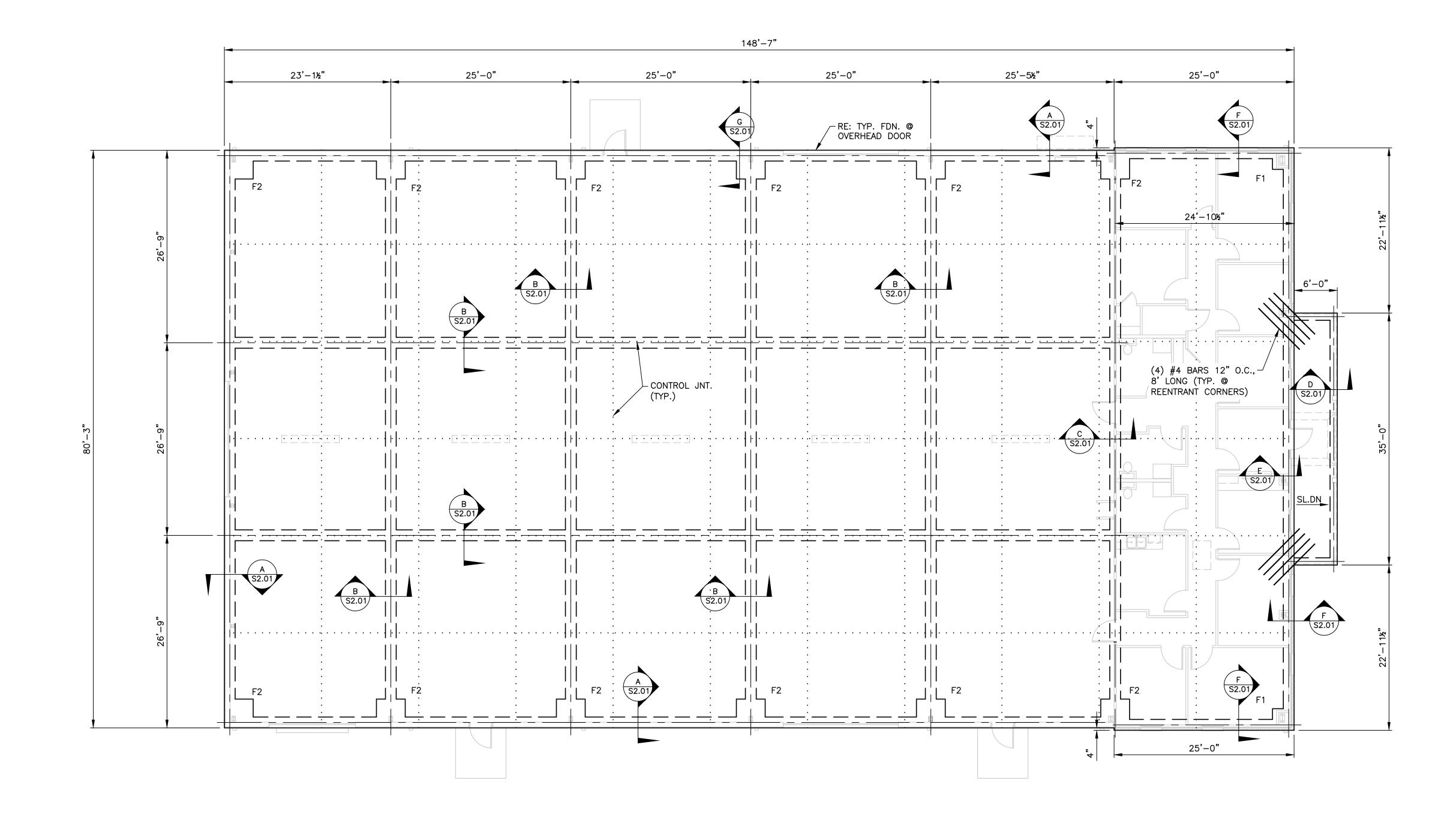
ANCHOR ROD NOTES:

REFER TO METAL BUILDING PROVIDER DRAWINGS FOR ANCHOR ROD MATERIAL, ARRANGEMENT, AND PLACEMENT LOCATIONS. ANCHOR RODS SHALL BE HEADED.



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FOOTING SCHEDULE		
FOOTING	SIZE	REINFORCEMENT
F1	3'-0"x3'-0"x1'-6"	(6)#5 E.W. BOTT.
F2	4'-0"x4'-0"x1'-6"	(7)#5 E.W. BOTT.

FOUNDATION PLAN SCALE: 1/8" = 1'-0"

	Image: Second
	Consultants Information: Structural: Forte and Tablada 9107 Interline Avenue Baton Rouge, LA 70809 Jason Fennell (225) 927-9321 Electrical: Merge Engineering 7423 Picardy Avenue, Suite E1 Baton Rouge, LA 70808 Tim Verkaik (225) 478-2990 Mechanical: Henry C. Eyre Jr. PE INC. 7423 Picardy Avenue, Suite E Baton Rouge, LA 70808 Trey Eyre (225) 767-7070
	Project Notes: Project Title: COPPERHEAD BUILDING, NO.2 Project Location: 35030 HWY. 30 GEISMAR, ASCENSION PARISH, LA Sheet Revisions:
	Sheet Name: Foundation Plan
NS DF 1½"	JASON P. FENNELL PROFESSIONAL ENGINEER <i>7-22-2019</i> <i>FROGINEER</i>
GS <u>-</u>	19-11 JULY 17, 2019 CONSTRUCTION DOCUMENTS S1.01

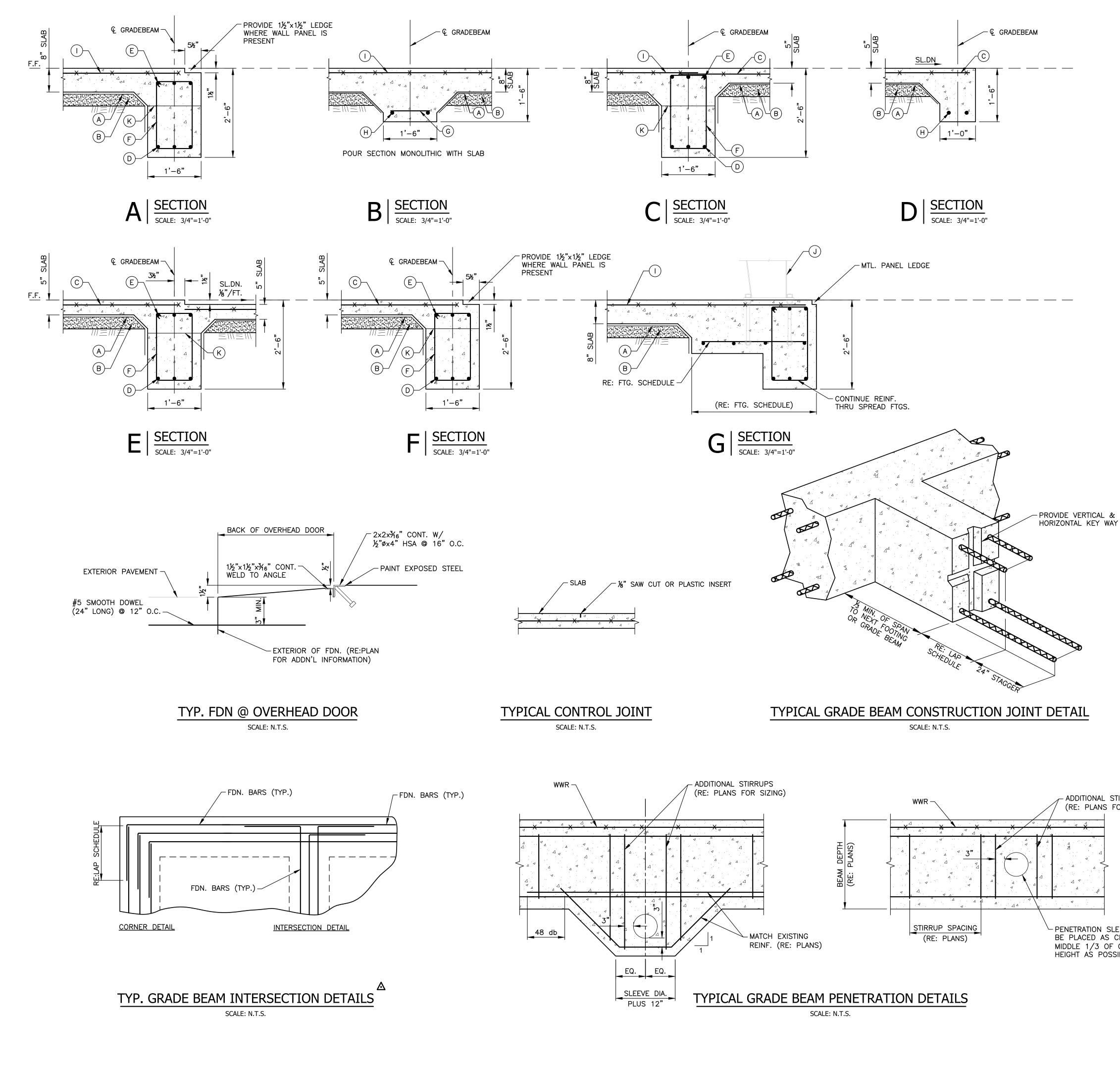
## NOTES:

REFER TO ARCHITECTURAL SHEETS FOR ADDITIONAL DIMENSIONS NOT SHOWN.

CONCRETE COVER SHALL BE 3" ALONG BOTTOM AND SIDES OF GRADE BEAMS AND FOOTINGS, 1" ALONG TOP OF SLAB, AND  $1\frac{1}{2}$ " ELSEWHERE.

SLOPE FLOORS TO DRAIN. REFER TO ARCHITECTURAL DRAWINGS FOR DRAIN LOCATIONS.

ALL EXPOSED EXTERIOR FOUNDATION SHALL HAVE A SURFACE FINISH 2.0 UNLESS NOTED OTHERWISE.



	<ul> <li>KEYNOTES:</li> <li>A 10 MIL VAPOR BARRIER</li> <li>B 4" GRAVEL OR SAND</li> <li>C WWR4X4 - W4XW4 (SEE NOTES BELOW)</li> <li>D #5 BARS</li> <li>E #5 BARS (FIELD BEND AT CHANGES IN GRADE BEAM DEPTH)</li> <li>F #3 @ 24" O.C. (VARY WITH DEPTH OF GRADE BEAM)</li> <li>G #3 @ 36" O.C.</li> <li>H (2) #4 BARS</li> <li>1 WWR6X6 - W8XW8 (SEE NOTES BELOW)</li> <li>J COLUMN (SEE PLANS BY METAL BUILDING MANUFACTURER)</li> <li>K OPTIONAL CONST. JNT. LOCATION</li> </ul>	Image: Signal of the second state o
		Consultants Information: Structural: Forte and Tablada 9107 Interline Avenue Baton Rouge, LA 70809 Jason Fennell (225) 927-9321 Electrical: Merge Engineering 7423 Picardy Avenue, Suite E1 Baton Rouge, LA 70808 Tim Verkaik (225) 478-2990 Mechanical: Henry C. Eyre Jr. PE INC. 7423 Picardy Avenue, Suite E Baton Rouge, LA 70808 Trey Eyre (225) 767-7070
		Project Notes
		Project Title: COPPERHEAD BUILDING, NO.2 Project Location: 35030 HWY. 30 GEISMAR, ASCENSION PARISH, LA Sheet Revisions:
SITE PREPARATION, EART FOR 5" SLAB WWR BAR CENTER—TO—CENTER SP.	DR ADDITIONAL INFORMATION RELATED TO THWORK, AND FILL REQUIREMENTS. DIAMETER TO BE 0.226" AT A 4" ACING EACH WAY. SPLICE LENGTH TO BE IN UPPER 1/3 OF SLAB. WWR SUPPORT D 3'-0".	Sheet Name Foundation Details Sea
FOR 8" SLAB WWR BAR CENTER-TO-CENTER SP OPTION #3 BARS AT 6" O.C. EACH WAY MAY BE CONCRETE COVER TO BI GRADE BEAMS AND FOO ELSEWHERE. REFER TO ARCHITECTURA NOT SHOWN. SLOPE FLOORS TO DRAI FOR DRAIN LOCATIONS.	DIAMETER TO BE 0.319" AT A 6" ACING EACH WAY. AT CONTRACTORS O.C. EACH WAY OR #4 BARS AT 12"	JASON P. FENNELL REG. NO. 37237 REGISTERED PROFESSIONAL ENGINEER ENGINEER
FINISH 2.0 UNLESS NOT		19-11 JULY 17, 2019 CONSTRUCTION DOCUMENTS
		S2.01

– ADDITIONAL STIRRUPS (RE: PLANS FOR SIZING)

– PENETRATION SLEEVE TO BE PLACED AS CLOSE TO MIDDLE 1/3 OF GRADE BEAM HEIGHT AS POSSIBLE