MCREST

Interior Renovation

215 S. Main St. Mount Clemens, MI 48043

PARTNERS

Architect:

PARTNERS in Architecture, PLC

65 Market Street
Mount Clemens, MI 48043
(Phone) 586-469-3600

Owner:

MCREST

20145 Erin
Roseville, MI 48066
(Phone) 248-672-3412

Structural Engineer

EFI Global of Michigan, LLC

Clinton Township, MI 48035
(Phone) 586-782-9287

Mechanical / Electrical Engineer:

MEP Engineers, LLC

30403 West 13 Mile Road
Farmington Hills, MI 48334
(Phone) 248-488-9822

List of Drawings

Sheet Number	Sheet Title		Sheet Number	Sheet Title	
A0-00	Cover Sheet		Structural		
			S5-01	Construction Tolerances	
Architectural			S5-02	Typical Details	
A0-01	General Project Information		S5-11	Sections & Details	
A0-02	Not Used		S5-21	Sections & Details	
A0-03	Code & Life Safety Plan				
A0-04	Room Finish Schedule & Wall Types				
A0-05	Door/Opening & Window Schedules & Storefront		Mechanical		
A0-06	Typical Opening Details		M-000	Mechanical Legend, Symbols, and Sheet Index	
A1-01	Lower Level Demolition Plan		MD-100	Demolition Lower & First Level Plan	
A1-02	First Level Demolition Plan		MD-101	Demolition Second Level Plan	
A1-03	Second Level Demolition Plan		M-100	Sanitary + Vent Plumbing Lower Level Plan	
A3-01	Lower Level Floor Plan		M-101	Sanitary + Vent Plumbing First Level Plan	
A3-02	First Level Floor Plan		M-102	Sanitary + Vent Plumbing Second Level Plan	
A3-03	Second Level Floor Plan		M-103	Domestic Water + Gas Piping Lower Level Plan	
A3-04	Attic Floor Plan		M-104	Domestic Water + Gas Piping First Level Plan	
A3-21	Plan Details		M-105	Domestic Water + Gas Piping Second Level Plan	
A4-01	Lower Level Reflected Ceiling Plan		M-200	HVAC Lower Level Plan	
A4-02	First Level Reflected Ceiling Plan		M-201	HVAC First Level Plan	
A4-03	Second Level Reflected Ceiling Plan		M-202	HVAC Second Level Plan	
A4-11	Ceiling Details		M-203	HVAC Attic Plan	
A5-01	Exterior Elevations		M-400	Mechanical Schedules & Details	
A5-02	Exterior Elevations		M-401	Mechanical Details	
A6-01	Building Sections		M-500	Mechanical Specifications	
A6-02	Wall Sections				
A6-11	Section Details				
A6-12	Section Details		Electrical		
A8-01	Interior Elevations		E-000	Electrical Legends & Abbreviations	
A8-02	Interior Elevations		ED-200	Lower & First Level Electrical Demo Plan	
A8-03	Interior Elevations		ED-201	Second Level Electrical Demo Plan	
A9-01	Lower Level Finish Plan		E-200	Lower Level Power Floor Plan	
A9-02	First Level Finish Plan		E-201	First Level Power Floor Plan	
A9-03	Second Level Finish Plan		E-202	Second Level Power Floor Plan	
			E-203	Attic Level Power Floor Plan	
Structural			E-300	Lower Lighting Plan	
SG-01	General Notes		E-301	First Level Lighting Floor Plan	
SG-02	Special Inspections & Testing		E-302	Second Level Lighting Floor Plan	
SG-03	Special Inspections & Testing		E-303	Lighting Fixture Schedule	
SG-04	Special Inspections & Testing		E-400	Riser Diagram and Panel Schedules	
SG-05	Specifications		E-500	Electrical Specifications	
SP-01	Foundation Plan				
SP-02	First Floor Framing Plan				
SP-03	Second Floor Framing Plan				
SP-04	Attic Framing Plan				

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

Client Review	01/11/2018
Client Review	01/29/2018
Site Walk-Through	02/26/2018
Client Review	11/28/2018
Building Permit	12/14/2018
BP Revisions-01	10/04/2019

DRAWN BY

NPR

CHECKED BY

LAG

APPROVED BY

MAM

SHEET NAME

COVER SHEET

SHEET NO.

A0-00

Abbreviations

A

AFF	ABOVE FINISHED FLOOR
ARF	ABOVE REFERENCE FLOOR
ACCT	ACCENT
AP	ACCESS PANEL
AC	ACOUSTICAL
ACT	ACOUSTICAL TILE (OR ACTIVE)
ADD.	ADDENDUM
ADD'L	ADDITIONAL
ADJ	ADJACENT
AGG	AGGREGATE
A/C	AIR CONDITIONING
ALT	ALTERNATE OR ALTERNATIVE
AL. ALUM	ALUMINUM
ANCH	ANCHOR, ANCHORAGE
AB	ANCHOR BOLT
ANOD	ANODIZED
ARCH	ARCHITECT(URAL)
ASPH	ASPHALT
AUTO	AUTOMATIC

B

B.F.	BARRIER FREE
BP BP_L	BASE PLATE OR BEARING P_L
BRG	BEARING
BM	BENCH MARK OR BEAM
BETW	BETWEEN
BIT	BITUMINOUS
BLKG	BLOCKING
BD	BOARD
BS	BOTH SIDES
BOT	BOTTOM
BC	BOTTOM OF CURB
BRK	BRICK
BLDG	BUILDING
BL	BUILDING LINE

C

CABT	CABINET
CR	CARD READER
CPT	CARPET(ED)
CES	CARPET EDGE STRIP
CI	CAST IRON
CIP	CAST-IN-PLACE
CB	CATCH BASIN
CLG	CEILING
CEM	CEMENT
C TO C	CENTER TO CENTER
CM	CENTIMETER(S)
C°	DEGREES CENTIGRADE
CER	CERAMIC
CT	CERAMIC TILE
CHAN	CHANNEL
CHOK PL	CHECKERED PLATE
CL	CLEAR(ANCE)
CLOS	CLOSET
CO	CLEAN OUT
CHK	COAT HOOK
CW	COLD WATER
COL	COLUMN
COMB	COMBINATION
COMP	COMPRESS(ED),(ION),(IBLE)
CONCE	CONCEALED
CONC	CONCRETE
CMU	CONCRETE MASONRY UNIT (CONCRETE BLOCK)
CONN	CONNECTION
CONST	CONSTRUCTION
CONST JT	CONSTRUCTION JOINT
CONT	CONTINUOUS OR CONTINUE
CONTR	CONTRACT(OR)
CJ	CONTROL JOINT
CORR	CORRUGATED OR CORRIDOR
CTR	CENTER
CTSK	COUNTERSUNK
CF	CUBIC FOOT
CY	CUBIC YARD
CYL	CYLINDER

D

DPR	DAMPER
DP	DAMPROOFING
DL	DEAD LOAD
DET.	DETAIL
DIAG	DIAGONAL
∅	DIAMETER
DIFF	DIFFUSER
DIM	DIMENSION
D/W	DISHWASHER
DO	DOOR OPENING
DN	DOWN
DT	DRAIN TILE
DWG	DRAWING
DF	DRINKING FOUNTAIN

E

EA	EACH
EF	EACH FACE
EW	EACH WAY
E	EAST
ELEC	ELECTRIC(AL)
EWC	ELECTRIC WATER COOLER
EL	ELEVATION
ELEV	ELEVATOR
EMER	EMERGENCY
ENC	ENCLOS(E), (URE)
EP	EPOXY
EQ	EQUAL
EQUIP	EQUIPMENT
ESC	ESCALATOR
EPDM	ETHYLENE PROPYLENE DIENE MONOMERS
EXH	EXHAUST
EB	EXPANSION BOLT
EJ	EXPANSION JOINT
EXP CONST	EXPOSED CONSTRUCTION
EXT	EXTERIOR
ETR	EXISTING TO REMAIN

F

FWP	FABRIC WRAPPED PANEL
FB	FACE BRICK
FOC	FACE OF CONCRETE
FF	FACTORY FINISH
FS	FAR SIDE
F°	DEGREES FAHRENHEIT
FT	FEET/FOOT
FIN	FINISH(ED)
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FVC	FIRE VALVE CABINET
FLD	FIELD
FHS	FIRE HOSE STATION
FPR	FIRE PROOFING
FL	FLOOR(ING)
FD	FLOOR DRAIN
FLUOR	FLUORESCENT
FTG	FOOTING
FDN	FOUNDATION
FA	FRESH AIR
FSRS	FULLY-ADHERED SHEET ROOFING SYSTEM
FURR	FURR(ED), (ING)

G

GA	GAGE, GAUGE
GAL	GALLON
GALV	GALVANIZED
GL	GLASS, GLAZING
GR	GRADE, GRADING
g	GRAM
GRD	GROUND
GYP	GYPSUM
GYP L	GYPSUM LATH
GP	GYPSUM PLASTER
GWB	GYPSUM WALL BOARD

H

HDCP	HANDICAP(PED)
HDBD	HARDBOARD
HDWE	HARDWARE
HWD	HARDWOOD
HTG	HEATING
H&V	HEATING & VENTILATING
HVAC	HEATING/VENTILATION/ AIR CONDITIONING
HT	HEIGHT
H	HIGH
HP	HIGH POINT
HS	HIGH STRENGTH
HC	HOLLOW CORE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HORSE POWER
HB	HOSE BIBB
HW	HOT WATER
HWH	HOT WATER HEATER
HR	HOUR

I

IN(")	INCH(ES)
INCL	INCLUDE(D), (ING)
INFO	INFORMATION
ID	INSIDE DIMENSION
INSUL	INSULATE(D), (ION)
ICA	INTEGRAL COLOR ANODIZED
INT	INTERIOR/INTERNAL
INTERM	INTERMEDIATE
INV	INVERT
IRR	IRRIGATION

J

JC	JANITOR'S CLOSET
JT	JOINT
JST	JOIST
JB	JUNCTION BOX

K

kg	KILOGRAMS
KV	KILOVOLT
KVA	KILOVOLT/AMPERE
KW	KILOWATT(S)
KWH	KILOWATT-HOUR
kg/m	KILOGRAM PER METER
kg/cm^2	KILOGRAM PER SQUARE CENTIMETER
K	KIPS
KSI	KIPS PER SQUARE INCH
KIT	KITCHEN
KO	KNOCKOUT

L

LAB	LABORATORY
LAM	LAMINATE(D)
LAV	LAVATORY
LCC	LEAD COATED COPPER
LH	LEFT HAND
LHR	LEFT HAND REVERSE
L	LENGTH
LT	LIGHT
LTG	LIGHTING
LP	LIGHTING PANEL
LIN	LINEAR, LINEAL
LSWD	LINEAR SUSPENDED WOOD CEILING
LL	LIVE LOAD
LG	LONG
LLBB	LONG LEGS BACK TO BACK
LLH	LONG LEG HORZONTAL
LLO	LONG LEG OUTSTANDING
LLV	LONG LEG VERTICAL
LOC	LOCATE/LOCATION
L.P.	LOW POINT
LV	LOW VOLTAGE

M

MAG	MAGNETIC
MH	MANHOLE
MFR	MANUFACTURE(R)
MAR	MARBLE
MAR T.	MARBLE THRESHOLD
MKR	MARKER BOARD
MAS	MASONRY
MO	MASONRY OPENING
MAT	MATERIAL(S)
MAX.	MAXIMUM
MECH	MECHANICAL
MC	MEDICINE CABINET
MED	MEDIUM
MEM	MEMBER
MEMB	MEMBRANE
MET	METAL
MDS	METAL DIVIDER STRIP
ML	METAL LATH
MET T.	METAL THRESHOLD
MEZZ	MEZZANINE
mm	MILLIMETER(S)
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MISC	MISCELLANEOUS IRON
MON.	MONITOR(ED)
MCC	MOTOR CONTROL CENTER
MTD	MOUNT(ED), (ING)
MULL	MULLION

N

NAT	NATURAL
NCA	NATURAL COLOR ANODIZED
NEG	NEGATIVE
NRC	NOISE REDUCTION COEFFICIENT
NONCOMB	NONCOMBUSTIBLE
NOM	NOMINAL
N	NORTH
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
NO (#)	NUMBER

O

OFF	OFFICE
O/C	ON CENTER(S)
OPG	OPENING
OPP	OPPOSITE
OPP HD	OPPOSITE HAND
ORIG	ORIGINAL
Oz	OUNCE
OS	OUTSIDE
OA	OUTSIDE AIR
OD	OUTSIDE DIAMETER
OH	OVERHEAD

P

PH	PHYSICALLY HANDICAPPED
PT	PAINT(ED) (OR POINT)
PR	PAIR
PNL	PANEL
PTD	PAPER TOWEL DISPENSER
PTD/R	PAPER TOWEL DISPENSER & RECEPTACLE COMBINATION
PKG	PARKING
PBD	PARTICLE BOARD
PARTN	PARTITION
PE	PASSENGER ELEVATOR
PERM	PERMANENT
PLAS	PLASTER
PL	PLASTIC LAMINATE
P_L	PLATE
PLBG	PLUMBING
PLWD	PLYWOOD
POL	POLISHED
PVC	POLYVINYL CHLORIDE
lb/ #	POUND(S)
PCF	POUNDS PER CUBIC FOOT
PPF	POUNDS PER FOOT
PLF	POUNDS PER LINEAL FOOT
PSF	POUNDS PER SQUARE FOOT
PC	PRECAST CONCRETE
PRE-FAB	PREFABRICATE(D)

Q

QT	QUARRY TILE
QB	QUARRY TILE BASE
QTR	QUARTER

R

RAD	RADIUS, RADIATOR, RADIATION
RC	RAINWATER CONDUCTOR
RECVG	RECEIVING
REC	RECESS(ED)
REF	REFERENCE
REFL	REFLECT(ED), (IVE), (OR)
REFR	REFRIGERATOR
REG	REGISTER
REINF	REINFORCE(D), (ING)
REQD	REQUIRED
RESIL	RESILIENT
RT	RESILIENT TILE
RA	RETURN AIR
REV	REVISION(S), REVISED
RH	RIGHT HAND
RHR	RIGHT HAND REVERSE
ROW	RIGHT OF WAY
R	RISER
Rd	ROAD

R (CONT.)

RD	ROOF DRAIN
RS	ROOF SUMP
RFG	ROOFING
RM	ROOM
RO	ROUGH OPENING
RUB	RUBBER
RB	RUBBER BASE (OR RESILIENT BASE)

S

SAN	SANITARY
SND	SANITARY NAPKIN DISPENSER
SNWR	SANITARY NAPKIN WASTE RECEPTACLE
SCH	SCHEDULE
SJ	SCORED JOINT
S.CONC	SEALED CONCRETE
SEAL	SEALER
SECT	SECTION
SS	SERVICE SINK
SHT	SHEET
SLO	SHORT LEG OUTSTANDING
SIM	SIMILAR
SK	SINK
SB	SOIL BORING
STC	SOUND TRANSMISSION CLASS
S	SOUTH
SPC	SPACER, SPACING
SPK	SPEAKER
SPEC(S)	SPECIFICATION(S)
SPEC'D	SPECIFIED
SQ	SQUARE
cm^2	SQUARE CENTIMETER
SF	SQUARE FOOT (OR STOREFRONT) (OR SPORTS FLOORING)
STAG	STAGGERED
SST	STAINLESS STEEL
STD	STANDARD
STA	STATION
STL	STEEL
STN	STONE
STOR	STORAGE
SD	STORM DRAIN
ST	STREET
STRUCT	STRUCTURAL
SA	SUPPLY AIR
SUPP	SUPPORTS
SUSP	SUSPENDED
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
SYM	SYMMETRY(ICAL)

T

TKB	TACKBOARD
TP	TANGENT POINT
TEL	TELEPHONE
TV	TELEVISION
TEMP	TEMPERATURE, TEMPERED
TERR	TERRAZZO
TT	TERRAZZO TILE
THERM	THERMOSTAT
THK	THICK(NESS)
THRES	THRESHOLD
THRU	THROUGH/THOUGHOUT
TOIL	TOILET
TPH	TOILET PAPER HOLDER
TOL	TOLERANCE
T&G	TONGUE AND GROOVE
T&B	TOP & BOTTOM
TE	TOP ELEVATION
TOC	TOP OF CONCRETE
TC	TOP OF CURB
TOS	TOP OF STEEL
TWC	TOWEL & WASTE CABINET
TRAN	TRANSFORMER
T	TREAD
TYP	TYPICAL

U

UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
UR	URINAL

V

VA	VALVE
VB	VAPOR BARRIER
VR	VAPOR RETARDER
VAR	VARNISH
VERT	VERTICAL
VEST	VESTIBULE
VIN	VINYL
VCT	VINYL COMPOSITION TILE
VT	VINYL TILE
VWC	VINYL WALL COVERING
VIT	VITREOUS
VRS	VINYL RESILIENT STRIP

W

WAIN	WAINSCOT
WHYD	WALL HYDRANT
WH	WATER HEATER
WC	WATER CLOSET
WM	WATER MAIN
WP	WATERPROOFING
WR	WATER RESISTANT
WS	WATERSTOP
WT	WEIGHT
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH
W	WIDTH, WIDE, WEST
W/	WITH
W/O	WITHOUT
WD	WOOD

Y

YD	YARD

Graphic Symbols

- 1 / A5-03 / A1-03 — Drawing 3/4" = 1'-0"
  - 1: DETAIL NUMBER
  - Drawing: DETAIL TITLE
  - 3/4" = 1'-0": DRAWING SCALE
  - A5-03: SHEET NUMBER FROM WHICH DRAWING IS REFERENCED
  - A1-03: ADDL SHEET(S) FROM WHICH DRAWING IS REFERENCED
- 1 / A8-03
  - 1: DETAIL NUMBER
  - DARKENED ARROW INDICATES ELEVATED WALL
  - A8-03: SHEET NUMBER WHERE ELEVATION IS LOCATED
  - NOTE: ELEVATION SYMBOL USED FOR INTERIOR & EXTERIOR ELEVATIONS.
- REF. FLR. EL. 00'-0" / 8'-0"
  - NOTE: SYMBOL INDICATES A SPECIFIC HEIGHT IN AN ELEVATION OR SECTION VIEW
  - HEIGHT OF FINISHED CEILING ABOVE FINISHED FLOOR IN AN ELEVATION OR SECTION VIEW
  - HEIGHT OF FINISHED CEILING ABOVE FINISHED FLOOR IN A PLAN VIEW
- 1 / A3-02
  - 1: DETAIL NUMBER
  - A3-02: SHEET NUMBER WHERE SECTION IS LOCATED
  - NOTE: SECTION SYMBOL USED FOR WALL & BUILDING SECTIONS.
- 1: WALL TYPE SYMBOL INDICATES WALL TYPE DESIGNATION - REFER TO WALL TYPE DRAWINGS FOR ADD'L INFO. SHEET A1-2
- LOBBY 100 / 100A
  - 100: ROOM NUMBER
  - THE ENTRY DOOR NUMBER SHALL BE THE SAME AS THE ROOM NUMBER - IF MORE THAN ONE (1) DOOR IS INDICATED ON THE PLAN FOR ONE ROOM, EACH DOOR IN THAT AREA WILL BE IDENTIFIED
- A: GENERAL NOTE
- 1: KEY NOTE SYMBOL INDICATES WORK AS DESCRIBED IN KEYNOTE LIST ON SAME DRAWING SHEET AS KEYNOTE OCCURS

Text Symbols

△	ANGLE	P	PLATE
℄	CENTERLINE	∅	ROUND
⊏	CHANNEL	&	AND
⊥	PERPENDICULAR	@	AT

Line Type Designation

- EXISTING ITEM TO REMAIN
- EXISTING ITEM TO BE REMOVED
- NEW ITEM AS NOTED

Material Poche Indications

CONCRETE (SECTION)	GYPSUM WALL BOARD	WOOD/SOLID SPECIES (FINISH MATERIAL) (NOTE MATERIAL)
CONC., STONE, PLASTER (ELEVATION) (NOTE MATERIAL)	PLASTER GYPSUM/ CEMENTITIOUS ON METAL LATH (NOTE MATERIAL)	WOOD (CONTINUOUS BLOCKING)
STONE (MARBLE, STONE) (GRANITE, ETC.) (SECTION/ELEVATION) (NOTE MATERIAL)	INSULATION ACOUSTIC/THERMAL (NOTE TYPE) RIGID /SEMI-RIGID	SHIM MATERIAL (WOOD, METAL, ETC.) (NOTE MATERIAL)
GRAVEL/STONE (GRANULAR MATERIAL)	JOINT FILLER	PLYWOOD/PARTICLE BOARD (VENEER FINISH) (NOTE MATERIAL)
SAND/GRAVEL (SUB-BASE MATERIAL)	C.M.U. (CONCRETE BLOCK) C.M.U. - SOLID OR GROUT SOLID CELLS	CARPET
STUD WALL (PLAN)	BRICK	INSULATION ACOUSTIC/THERMAL (NOTE TYPE) BATT OR BLANKET
SOLID SURFACE	STEEL/COPPER, METAL, ALUMINUM, ETC. (NOTE MATERIAL)	FIBER CEMENT SIDING / TRIM

Mounting Height Schedule

WALL MOUNTED ACCESSORIES

PLUMBING FIXTURES and TOILET ACCESSORIES

NOTE:
- NOT ALL HEIGHTS SHOWN ARE TYPICAL FOR ALL ITEMS WHERE THEY OCCUR
- UNLESS SPECIFICALLY NOTED OTHERWISE ON DRAWINGS, (B.F. DENOTES BARRIER FREE REQUIREMENTS)
- NOT ALL ITEMS SHOWN ON THIS DRAWING MAY OCCUR ON THIS PROJECT

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

Client Review	01/11/2018
Client Review	01/29/2018
Site Walk-Through	02/26/2018
Client Review	11/28/2018
Building Permit	12/14/2018
BP Revisions-01	10/04/2019

DRAWN BY

NPR

CHECKED BY

LAG

APPROVED BY

MAM

SHEET NAME

General Project Information

SHEET NO.

A0-01

BUILDING CODE INFORMATION

GENERAL PROJECT INFORMATION

PROJECT LOCATION:
215 S MAIN STREET
MOUNT CLEMENS, MI 48043

BUILDING AREAS & VOLUMES:

TOTAL GROSS AREA:	8,430 FT²
GROSS SECOND FLOOR:	2810 FT²
GROSS MAIN FLOOR:	2810 FT²
GROSS BASEMENT:	2810 FT²

GOVERNING CODES:

2015 MICHIGAN BUILDING CODE (MBC)
2015 MICHIGAN MECHANICAL CODE (MMC)
2015 MICHIGAN PLUMBING CODE (MPC)
2015 MICHIGAN ENERGY CODE (MEC)
2014 NATIONAL ELECTRIC CODE (NEC)
2009 ICC / ANSI A117.1

MBC CHAPTER 3: USE AND OCCUPANCY CLASSIFICATION

USE GROUP: RESIDENTIAL GROUP (R-2)
BOARDING HOUSES (NONTRANSIENT) W/ MORE THAN 16 OCCUPANTS

MBC CHAPTER 4: SPECIAL REQUIREMENTS BASED ON USE AND OCCUPANCY

AUTOMATIC SPRINKLER SYSTEMS (420.5)
GROUP R OCCUPANCIES SHALL BE EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION 903.2.8. QUICK RESPONSE OR RESIDENTIAL AUTOMATIC SPRINKLERS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 903.3.2.

MBC CHAPTER 5: GENERAL BUILDING HEIGHTS AND AREAS

ALLOWABLE BUILDING HEIGHT AND AREA (PER MBC TABLE 504.3, 504.4, & 506.2)
USE GROUP: R-2
CONSTRUCTION TYPE: V-B
ALLOWABLE HEIGHT: 40 FEET
ALLOWABLE STORIES: 2 STORY
ALLOWABLE AREA: 7,000 SF

PROPOSED BUILDING HEIGHT AND AREA
AREA: 8,430 < 7,000 SF MAX.
HEIGHT: 32'-0"± TO ROOF MIDPOINT < 40 FEET MAX.
STORIES: 2 STORY = 2 STORIES MAX.

SECTION 202 DEFINITIONS
STORIES ABOVE GRADE PLANE: ANY STORY HAVING ITS FINISH FLOOR SURFACE ENTIRELY ABOVE GRADE PLANE, OR IN WHICH THE FINISHED SURFACE OF THE FLOOR NEXT ABOVE IS:
1. MORE THAN 6FT ABOVE GRADE PLANE OR;
2. MORE THAN 12FT ABOVE THE FINISHED GROUND LEVEL AT ANY POINT.

SINGLE -OCCUPANCY, MULTISTORY BUILDING (506.2.3)
AREA INCREASE = Aa = [At + (NS x If)] x Sa
= [7,000 + (7,000 x .75)] x 2
= 24,500 SF

AMOUNT OF INCREASE (506.3.3)
AREA FACTOR INCREASE DUE TO FRONTAGE = If = [F/P - 0.25] W/30
= [1 - 0.25] 30/30
= 0.75

MBC CHAPTER 6: TYPES OF CONSTRUCTION

TYPE V-B

FIRE RESISTANCE RATING REQUIREMENTS (PER MBC TABLES 601 AND 602)

PRIMARY STRUCTURAL FRAME	0 HR
BEARING WALLS	
INTERIOR	0 HR
EXTERIOR	0 HR
NONBEARING WALLS & PARTITIONS	
INTERIOR	0 HR
EXTERIOR	0 HR
FLOOR CONSTRUCTION	0 HR
ROOF CONSTRUCTION	0 HR

MBC CHAPTER 7: FIRE AND SMOKE PROTECTION FEATURES

FIRE WALLS (SECTION 706): NOT REQUIRED

FIRE BARRIERS (SECTION 707): 1 HOUR BARRIER REQUIRED TO ENCLOSE STAIRWELL
FIRE PARTITIONS (SECTION 708): REQUIRED TO SEPARATE ADJACENT DWELLING UNITS
SMOKE BARRIERS (SECTION 709): NOT REQUIRED
SMOKE PARTITIONS (SECTION 710): REQUIRED TO ATMOSPHERICALLY DISCONNECT STORIES
FLOOR AND ROOF ASSEMBLIES (SECTION 711): NOT REQUIRED

FIRE PARTITIONS GENERAL (SECTION 708.1)
THE FOLLOWING WALL ASSEMBLIES SHALL COMPLY WITH THIS SECTION.

SEPARATION WALLS ARE REQUIRED BY SECTION 420.2 FOR GROUPS I-1, R-1-3
CORRIDOR WALLS AS REQUIRED BY SECTION 1020.1

FIRE-RESISTANCE RATING (SECTION 708.3)
FIRE PARTITIONS SHALL HAVE A FIRE-RESISTANCE RATING OF NOT LESS THAN 1 HOUR
EXCEPTIONS:
CORRIDOR WALLS PERMITTED TO HAVE A 0.5 HR FIRE RESISTANCE RATING BY TABLE 1020.1
2. DWELLING UNIT AND SLEEPING UNIT SEPARATION IN BUILDINGS OF TYPE IIB, IIIB, VB CONSTRUCTION SHALL HAVE A FIRE-RESISTANCE RATING OF NOT LESS THAN ½ HR IN BUILDINGS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION 903.3.1.1

MBC CHAPTER 8: INTERIOR FINISHES

INTERIOR WALL AND CEILING FINISH REQUIREMENTS (PER MBC TABLE 803.11)

USE GROUP R-2, SPRINKLERED
- INTERIOR EXIT STAIRWAYS, INTERIOR EXIT RAMPS AND EXIT PASSAGEWAYS: C
- CORRIDORS AND ENCLOSURE FOR EXIT ACCESS STAIRWAYS AND EXIT RAMPS: C
- ROOMS AND ENCLOSED SPACES: C

MBC CHAPTER 9: FIRE PROTECTION SYSTEMS

AUTOMATIC SPRINKLER SYSTEMS (SECTION 903.2.8 GROUP R)
AN AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 903.3 SHALL BE PROVIDED THROUGHOUT ALL BUILDING WITH A GROUP R FIRE AREA.

QUICK-RESPONSE AND RESIDENTIAL SPRINKLERS (903.3.2)
WHERE AUTOMATIC SPRINKLER SYSTEMS ARE REQUIRED BY THIS CODE, QUICK-RESPONSE OR RESIDENTIAL AUTOMATIC SPRINKLERS SHALL BE INSTALLED IN ALL OF THE FOLLOWING AREA IN ACCORDANCE WITH SECTION 903.3.1 AND THEIR LISTINGS:

3. DWELLING UNITS AND SLEEPING UNITS IN GROUP I-1 AND R OCCUPANCIES

SEPARATION WALLS (SECTION 420.2)
WALLS SEPARATING DWELLING UNITS IN THE SAME BUILDING, WALLS SEPARATING SLEEPING UNITS IN THE SAME BUILDING AND WALLS SEPARATING DWELLING OR SLEEPING UNITS FORM OTHER OCCUPANCIES CONTIGUOUS TO THEM IN THE SAME BUILDING SHALL BE CONSTRUCTION AS FIRE PARTITION SIN ACCORDANCE WITH SECTION 708.

PORTABLE FIRE EXTINGUISHERS (PER MBC SECTION 906)
MAXIMUM TRAVEL DISTANCE TO EXTINGUISHER = 75'-0"
WITHIN 30'-0" OF COOKING EQUIPMENT (RANGE IF APPLICABLE)

FIRE ALARM AND DETECTION SYSTEMS (PER MBC SECTION 907.2.3 GROUP E)
A MANUAL FIRE ALARM SYSTEM IS REQUIRED

MBC CHAPTER 10: MEANS OF EGRESS

OCCUPANT LOAD (PER MBC SECTION 1004)
REFER TO PLAN FOR DESIGN OCCUPANT LOADS IN ACCORDANCE WITH TABLE 1004.1.2

TOTAL OCCUPANT LOAD = 42 OCCUPANTS

MINIMUM NUMBER OF EXISTS OR ACCESS TO EXITS PER STORY (SECTION 1006.3.1)
OCCUPANT LOAD PER STORY 1-500 = 2 REQUIRED

ACCESSIBLE MEANS OF EGRESS (SECTION 1009.1)
ACCESSIBLE MEANS OF EGRESS SHALL COMPLY WITH THIS SECTION. ACCESSIBLE SPACES SHALL BE PROVIDED WITH NOT LESS THAN ONE ACCESSIBLE MEANS OF EGRESS.
EXCEPTION:
1. ACCESSIBLE MEANS OF EGRESS ARE NOT REQUIRED TO BE PROVIDED IN EXISTING BUILDINGS.

STAIRWAYS WIDTHS & CAPACITY (SECTION 1011.2)
THE REQUIRED CAPACITY OF STAIRWAYS SHALL BE DETERMINED AS A SPECIFIED IN SECTION 1005.1, BUT THE MINIMUM WIDTH SHALL BE NOT LESS THAN 44 INCHES. SEE SECTION 1009.3 FOR ACCESSIBLE MEANS OF EGRESS STAIRWAYS.

EXCEPTIONS:
1. STAIRWAYS SERVING AN OCCUPANT LOAD OF LESS THAN 50 SHALL HAVE A WIDTH OF NOT LESS THAN 36 INCHES

EXIT SIGNS (SECTION 1013)
EXITS AND EXIT ACCESS DOORS SHALL BE MARKED BY AN APPROVED EXIT SIGN READILY VISIBLE FROM ANY DIRECTION OF EGRESS TRAVEL.

ACCESS TRAVEL DISTANCE (PER MBC TABLE 1017.2)
R - WITH SPRINKLER SYSTEM = 250 FEET

EXIT ACCESS STAIRWAYS AND RAMPS OCCUPANCIES OTHER THAN GROUPS I-2 & I-3 (SECTION 1019.3)
IN OTHER THAN GROUP I-2 & I-3 OCCUPANCIES, FLOOR OPENINGS CONTAINING EXIT ACCESS STAIRWAYS OR RAMPS THAT DO NOT COMPLY WITH ONE OF THE CONDITIONS LISTED IN THIS SECTION SHALL BE ENCLOSED WITH A SHAFT ENCLOSURE CONSTRUCTIONI IN ACCORDANCE WITH SECTION 713.
1. EXIT ACCESS STAIRWAYS AND RAMPS THAT SERVE OR ATMOSPHERICALLY COMMUNICATE BETWEEN ONLY TWO STORIES. SUCH INTERCONNECTED STORIES SHALL NOT BE OPEN TO OTHER STORIES.

INTERIOR EXIT STAIRWAYS AND RAMPS (SECTION 1023)
STAIRS SHALL BE ENCLOSED WITH A 1 HOUR BARRIER.

DEPARTMENT OF JUSTICE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN

ALTERATIONS: ELEVATOR EXEMPTIONS (SECTION 36.404)
(A) THIS SECTION DOES NOT REQUIRE THE INSTALLTION OF AN ELEVATOR IN AN ALTERED FACILITY THAT IS LESS THAN THREE STORIES OR HAS LESS THAN 3,000 SF PER STORY, EXCEPT WITH RESPECT TO ANY FACILITY THAT HOUSES A SHOPPING CENTER, A SHOPPING MALL, THE PROFESSIONAL OFFICE OF A HEALTH CARE PROVIDER, A TERMINAL, DEPOT OR OTHER STATION USED FOR SPECIFIED PUBIC TRANSPORTATION OR AN AIRPORT PASSENGER TERMINAL.

PLUMBING FIXTURE CALCULATION (PER 2015 MICHIGAN PLUMBING CODE - TABLE 403.1)

PER SECTION (403.1 EXCEPTION 1)
OWNER PROVIDED AFFIDAVIT STATING THE ACTUAL NUMBER OF OCCUPANTS

TOTAL BUILDING OCCUPANT LOAD = 26

PER SECTION 403.1.1: DIVIDE TOTAL OCCUPANT LOAD IN HALF
26 / 2 = 13 MALE
13 FEMALE

REFER TO CALCULATIONS BELOW FOR NUMBER OF REQUIRED PLUMBING FIXTURES

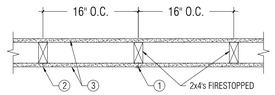
CLASSIFICATION / OCCUPANCY		WATER CLOSETS	LAVATORIES	DRINKING FOUNTAINS	SERVICE SINKS
R-2: BOARDING HOUSE	REQUIRED RATIO	1/10	1/10	1 / 100	1
	# REQUIRED	2	2	1	1
	# PROVIDED	4	3	1	1

GENERAL LIFE SAFETY NOTES

1. THESE CODE ANALYSIS DRAWINGS, NOTES AND WALL IDENTIFICATIONS FOR FIRE RATINGS AND / OR SMOKE BARRIERS ARE INDICATED FOR LIFE SAFETY AND BUILDING CODE COMPLIANCE ONLY. ALL OTHER CONSTRUCTION REQUIREMENTS ARE INDICATED ON THE CONSTRUCTION DOCUMENTS.

UL DESIGN DETAIL - U305

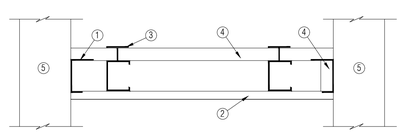
BASED ON UNDERWRITERS LABORATORIES INC. CURRENT FIRE RESISTANCE DIRECTORY DESIGN NO. U305 BEARING WALL RATING - 1HR. OPTIONAL ITEMS 4, 5, & 6 NOT SHOWN OR LISTED HERE.



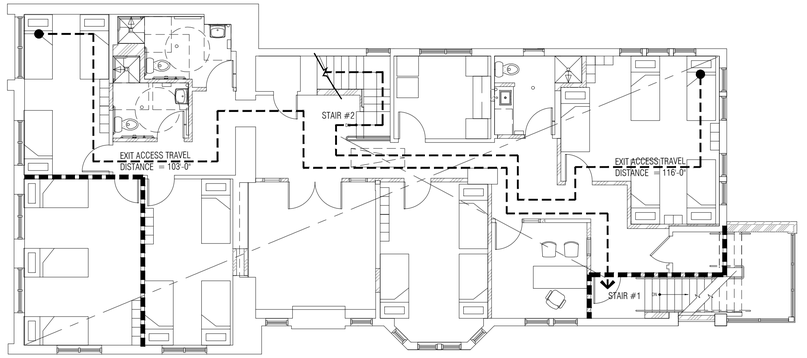
1. NAILHEADS -- EXPOSED OR COVERED WITH JOINT COMPOUND.
2. JOINTS -- EXPOSED OR COVERED WITH FIBER TAPE AND JOINT COMPOUND. EXCEPT WHERE REQUIRED FOR SPECIFIC EDGE CONFIGURATION. FOR TAPERED, ROUNDED-EDGE WALLBOARD, JOINTS COVERED WITH JOINT COMPOUND OR FIBER TAPE AND JOINT COMPOUND. AS AN ALTERNATE, NOM 3/32 IN. THICK GYPSUM VENEER PLASTER MAY BE APPLIED TO THE ENTIRE SURFACE OF CLASSIFIED VENEER BASEBOARD. JOINTS REINFORCED.
3. GYPSUM BOARD* -- 5/8 IN. THICK WALLBOARD PAPER OR VINYL SURFACED, WITH BEVELED, SQUARE, OR TAPERED EDGES, APPLIED EITHER HORIZONTALLY OR VERTICALLY. WALLBOARD NAILED 7 IN. OC WITH 60 CEMENT COATED NAILS 1-7/8 IN. LONG, 0.0915 IN. SHANK DIAM AND 15/64 IN. DIAM HEADS. WHEN USED IN WIDTHS OF OTHER THAN 48 IN., WALLBOARD IS TO BE INSTALLED HORIZONTALLY
AMERICAN GYPSUM CO -- TYPES AGX-1, AGX-2, AGX-3 (FINISH RATING 23 MIN.), TYPE AGX-7, AGX-11 (FINISH RATING 26 MIN) OR TYPE AG-C, TYPEAGX-8 (FINISH RATING 20 MIN), TYPE AGX-9 (FINISH RATING 20 MIN), TYPE AGX-10 (FINISH RATING 20 MIN), TYPE AGX-5 (FINISH RATING 26 MIN), TYPE AGX-4 (FINISH RATING 20 MIN), TYPE AGX-C.
BEIJING NEW BUILDING MATERIALS CO LTD -- TYPE DBX-1 (FINISH RATING 24 MIN).
BPB AMERICA INC --TYPE 1, TYPE SF3 (FINISH RATING 20 MIN) OR FRPC, PROROC TYPE C OR PROROC TYPE X (FINISH RATING 26 MIN), TYPE EGRG (FINISH RATING 23 MIN)
BPB CANADA INC. --PROROC TYPE C, PROROC TYPE X OR PROROC TYPE ABUSE-RESISTANT
CANADIAN GYPSUM COMPANY -- TYPE AR (FINISH RATING 26 MIN), TYPE C (FINISH RATING 26 MIN), TYPE FCV (FINISH RATING 26 MIN), TYPE IP-AR (FINISH RATING 26 MIN), TYPE IPC-AR (FINISH RATING 26 MIN), TYPE IP-X1 (FINISH RATING 26 MIN), TYPE IP-X2 (FINISH RATING 26 MIN), TYPE SCX (FINISH RATING 26 MIN), TYPE SHX (FINISH RATING 26 MIN), TYPE WRC (FINISH RATING 26 MIN), TYPE WRX (FINISH RATING 26 MIN) .
G-P GYPSUM CORP.-SUB OF GEORGIA-PACIFIC CORP. -- TYPE 5 (FINISH RATING 26 MIN), TYPE 6 (FINISH RATING 23 MIN), TYPE 9 (FINISH RATING 26 MIN), TYPE C (FINISH RATING 26 MIN), TYPE DGG (FINISH RATING 20 MIN), TYPE GPF5 1 (FINISH RATING 20 MIN), TYPE GPF52 (FINISH RATING 20 MIN), TYPE GPF56 (FINISH RATING 26 MIN), TYPE DS, TYPE DAP, TYPE DD (FINISH RATING 20 MIN), DA.
LAFARGE NORTH AMERICA INC --TYPE LGFC2 (FINISH RATING 20 MIN), TYPE LGFC3 (FINISH RATING 20 MIN), TYPE LGFC6 (FINISH RATING 26 MIN), TYPE LGFC (FINISH RATING 20 MIN), TYPE LGFC6A (FINISH RATING 34 MIN), TYPE LGFC3A, TYPE LGFC- C/A.
NATIONAL GYPSUM CO -- TYPE FSK (FINISH RATING 20 MIN), TYPE FSK-G (FINISH RATING 20 MIN), TYPE FSW (FINISH RATING 20 MIN), TYPE WRX (FINISH RATING 26 MIN), TYPE FSW-2 (FINISH RATING 24 MIN), TYPE FSW-3 (FINISH RAT- ING 20 MIN), TYPE FSW-G (FINISH RATING 20 MIN), TYPE FSK-C (FINISH RATING 20 MIN), TYPE FSW-C (FINISH RATING 20 MIN).
PABCO GYPSUM, DIV OF PACIFIC COAST BUILDING PRODUCTS INC --TYPES C, PG-2 (FINISH RATING 20 MIN), PG-3 (FINISH RATING 20 MIN), TYPES PG-3W, PG-5W (FINISH RATING 20 MIN), TYPE PG-4 (FINISH RATING 20 MIN), TYPE PG-6 (FINISH RATING 23 MIN), TYPES PG-3WS, PG-5WS (FINISH RATING 20 MIN), TYPES PG-5, PG-9 (FINISH RATING 26 MIN) OR TYPE PG-C.
SIAM GYPSUM INDUSTRY (SARABURI) CO LTD --TYPE EK-1 (FINISH RATING 26 MIN)
STANDARD GYPSUM I, L C --TYPE SGC(FINISH RATING 20 MIN), TYPE SGC-3(FINISH RATING 20 MIN.) TYPE SG-C OR SGC-G(FINISH RATING 20 MIN).
TEMPLE-INLAND FOREST PRODUCTS CORP --TYPES T (FINISH RATING 20 MIN), VPB-TYPE T (FINISH RATING 20 MIN), WR-TYPE T (FINISH RATING 20 MIN), TYPE T SHTG (FINISH RATING 20 MIN), FRX-6, VPBX-6, FRWRX-6, TG-C OR FRX-6 EXTERIOR GYPSUM SOFFIT BOARD.
UNITED STATES GYPSUM CO -- TYPE AR (FINISH RATING 26 MIN), TYPE SCX (FINISH RATING 26 MIN), TYPE C (FINISH RATING 26 MIN), TYPE WRX (FINISH RATING 26 MIN), TYPE WRC (FINISH RATING 26 MIN), TYPE IP-X1 (FINISH RATING 26 MIN), TYPE FCV (FINISH RATING 26 MIN), TYPE IP-X2 (FINISH RATING 26 MIN), TYPE SHX (FINISH RATING 26 MIN), TYPE FRX-G (FINISH RATING 29 MIN), TYPE IP-AR (FINISH RATING 26 MIN), TYPE IPC-AR (FINISH RATING 26 MIN).
USG MEXICO S A DE C V --TYPE AR (FINISH RATING 26 MIN), TYPE C (FINISH RATING 26 MIN), TYPE WRX (FINISH RATING 26 MIN), TYPE WRC (FINISH RATING 26 MIN), TYPE IP-X1 (FINISH RATING 26 MIN), TYPE FCV (FINISH RATING 26 MIN), TYPE IP-X2 (FINISH RATING 26 MIN), TYPE SHX (FINISH RATING 26 MIN), SCX (FINISH RATING 26 MIN), TYPE IP-AR (FINISH RATING 26 MIN), TYPE IPC-AR (FINISH RATING 26 MIN).
3A. GYPSUM BOARD* -- (AS AN ALTERNATE TO ITEM 3) -- NOM 3/4 IN. THICK, INSTALLED AS DESCRIBED IN ITEM 3.
CANADIAN GYPSUM COMPANY --TYPES AR, IP-AR. UNITED STATES GYPSUM CO --TYPES AR, IP-AR. USG MEXICO S A DE C V --TYPES AR, IP-AR.
3B. GYPSUM BOARD* -- (AS AN ALTERNATE TO ITEMS 3 AND 3A) -- 5/8 IN. THICK, 4 FT WIDE, SQUARE EDGE, APPLIED VERTICALLY. WALLBOARD NAILED 8 IN. OC WITH 1-3/4 IN. LONG GALVANIZED ROOFING NAILS. JOINT COVERING (ITEM 2) NOT REQUIRED.
CANADIAN GYPSUM COMPANY --TYPE WSX (FINISHED RATING 22 MIN).
UNITED STATES GYPSUM CO --TYPE WSX (FINISHED RATING 22 MIN).
USG MEXICO S A DE C V --TYPE WSX (FINISHED RATING 22 MIN).
3C. GYPSUM BOARD* -- (AS AN ALTERNATE TO ITEMS 3, 3A AND 3B) -- 5/8 IN. THICK, 2 FT WIDE, TONGUE AND GROOVE EDGE, APPLIED HORIZONTALLY TO ONE SIDE OF THE ASSEMBLY. SECURED AS DESCRIBED IN ITEM 3. JOINT COVERING (ITEM 2) NOT REQUIRED.
CANADIAN GYPSUM COMPANY -- TYPE SHX. UNITED STATES GYPSUM CO --TYPE SHX. USG MEXICO S A DE C V -- TYPE SHX.
*BEARING THE UL CLASSIFICATION MARK.

CEILING APPLICATION - AER-09038

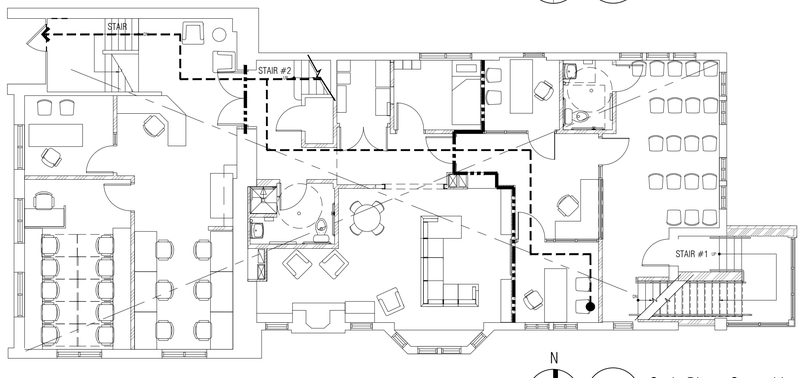
UNITED STATES GYPSUM COMPANY: ONE HOUR CORRIDOR CEILING OR UNDERSIDE STAIR APPLICATIONS



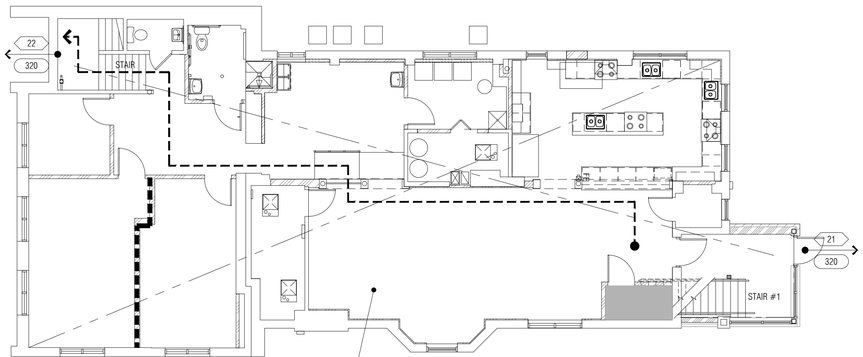
1. A MINIMUM 2-1/2" DEEP 24 GAUGE J-RUNNER ATTACHED HORIZONTALLY TO PERIMETER OR BOUNDARY WALLS WITH A POWER ACTUATED FASTENERS.
2. GYPSUM WALL BOARD: FOR A ONE (1) HOUR ASSEMBLY: ATTACH ONE (1) LAYER OF 5/8" THICK SHEETROCK® BRAND FIRECODE® C CORE GYPSUM (TYPE C), TO THE UNDERSIDE OF THE "CORRIDOR CEILING" OF THE C-H STUD AND THE PERIMETER J-RUNNERS. USE 1" LONG TYPE S SCREWS THAT ARE SPACED 12" O.C. IN THE FIELD AND AT THE EDGES.
3. INSTALL THE C-H STUDS PERPENDICULAR TO THE J-RUNNER SPACED 24" O.C. WITH THE C-SECTION OF THE C-H STUD FACING DOWNWARD TOWARDS THE CORRIDOR SIDE OF THE ASSEMBLY WITH TWO (2) SCREWS A MINIMUM 1/2" LONG TYPE S-12 SCREWS, ONE ON EACH SIDE.
4. 1" THICK SHEETROCK® BRAND GYPSUM LINER PANEL - FRICTION-FITTED IN "H" PORTION OF C-H STUDS.
5. VERTICAL WALL CONSTRUCTION - REFER TO WALL TYPES



N 1 Code Plan - Second Level
1/8" = 1'-0"



N 1 Code Plan - Ground Level
1/8" = 1'-0"



N 1 Code Plan - Lower Level
1/8" = 1'-0"

CODE AND LIFE SAFETY PLAN LEGEND

1-HOUR FIRE BARRIER WALL:
1-HOUR "FIRE BARRIER" WALL PER 2015 MBC SECTION 707 INCLUDING 45 MINUTE DOOR AND FRAME PROTECTIVES. PROVIDE FIRE / SMOKE DAMPERS AS REQUIRED PER 2015 MBC. SEE UL DESIGN DETAIL U305 THIS PAGE FOR WALL CONSTRUCTION REQUIREMENTS.

SMOKE PARTITION:
SMOKE PARTITION TO BE PROVIDED ALONG LINE, INCLUDING SMOKE SEALS AT DOORS AND WALLS RUNNING TO THE UNDERSIDE OF FLOOR SHEATHING.

EXIT ACCESS TRAVEL DISTANCE PATH:
NOT TO EXCEED 200FT TO AN EXIT (MBC 1017.2)

FIRE RATED CEILING/UNDERSIDE OF STAIR:
AREA WITH FIRE RATED CONSTRUCTION AER 09038

SPRINKLER SYSTEM
INDICATES AREA WHERE SPRINKLER SYSTEM IS PROVIDED BY CODE

OCCUPANT LOAD THROUGH EGRESS COMPONENT

OCCUPANT CAPACITY OF EGRESS COMPONENT

AREA OF ROOM OR SPACE

ROOM OCCUPANT LOAD

FEC LOCATION OF FIRE EXTINGUISHER / CABINET

PARTNERS

PARTNERS in Architecture, PLC
65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

OWNER
MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME
MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.
17-179

ISSUES / REVISIONS

Client Review	01/11/2018
Client Review	01/29/2018
Site Walk-Through	02/26/2018
Client Review	11/28/2018
Building Permit	12/14/2018
BP Revisions-01	10/04/2019

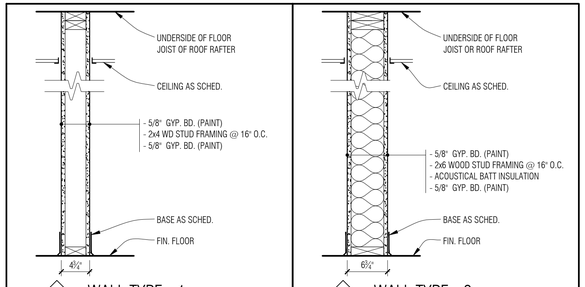
DRAWN BY
NPR

CHECKED BY
LAG

APPROVED BY
MAM

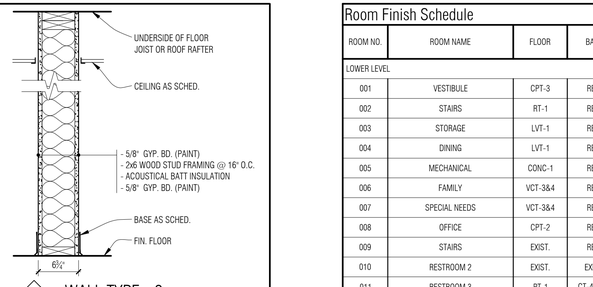
SHEET NAME
Code & Life Safety Plan

SHEET NO.
A0-03

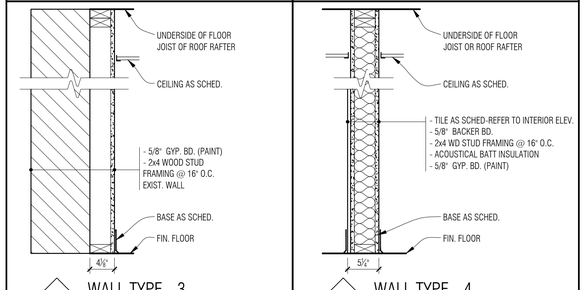


1 WALL TYPE - 1
1" = 1'-0"

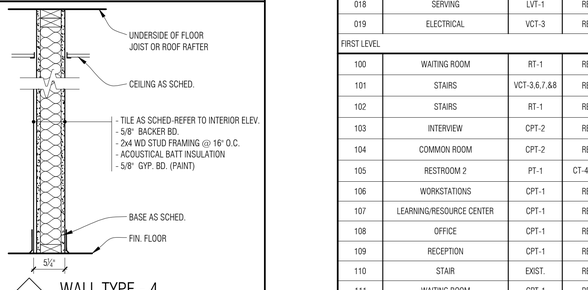
WALL TYPE '1A': SAME AS TYPE '1' WITH ONE SIDE OF 5/8" GYPSUM ON INTERIOR FINISH FACE IN LIEU OF TWO SIDES OF 5/8" GYPSUM
WALL TYPE '1B': SAME AS TYPE '1' WITH ACOUSTICAL INSULATION IN CAVITIES
WALL TYPE '1C': SAME AS TYPE '1B' WITH ONE SIDE OF 5/8" GYPSUM ON INTERIOR FINISH FACE IN LIEU OF TWO SIDES OF 5/8" GYPSUM



2 WALL TYPE - 2
1" = 1'-0"

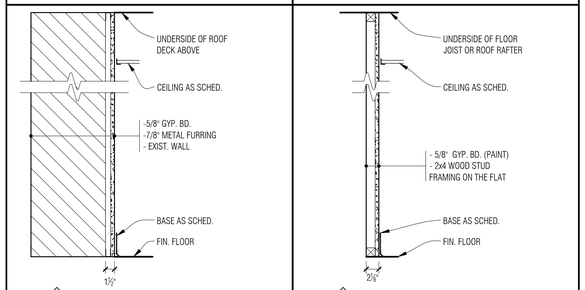


3 WALL TYPE - 3
1" = 1'-0"

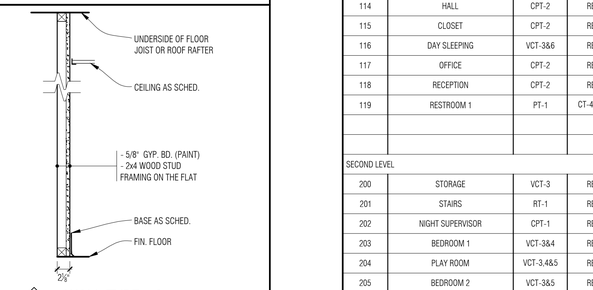


4 WALL TYPE - 4
1" = 1'-0"

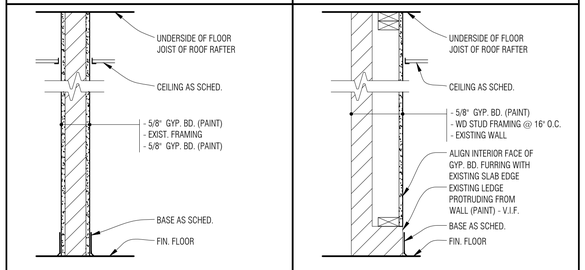
WALL TYPE '4A': SAME AS TYPE '4' WITH TILE ON BOTH SIDES OF WALL - REFER TO INTERIOR ELEV.



5 WALL TYPE - 5
1" = 1'-0"

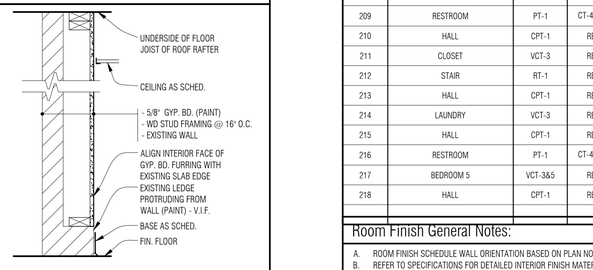


6 WALL TYPE - 6
1" = 1'-0"



7 WALL TYPE - 7
1" = 1'-0"

WALL TYPE '7A': SAME AS TYPE '1' WITH ONE SIDE OF 5/8" GYPSUM ON EXISTING FRAMING IN LIEU OF TWO SIDES OF 5/8" GYPSUM



8 WALL TYPE - 8
1" = 1'-0"

REFER TO CODE PLAN FOR LOCATIONS & SPECIFIC INSTALLATION INSTRUCTIONS FOR FIRE RATED WALLS

Room Finish Schedule

ROOM NO.	ROOM NAME	FLOOR	BASE	WALLS				CEILING FINISH	ROOM FINISH KEY NOTES
				NORTH	EAST	SOUTH	WEST		
LOWER LEVEL									
001	VESTIBULE	CPT-3	RB-1	PNT-2	PNT-2	PNT-2	PNT-2	PNT-1	
002	STAIRS	RT-1	RB-1	PNT-2	PNT-2	PNT-2	PNT-2	PNT-1	
003	STORAGE	LVT-1	RB-1	PNT-2	PNT-2	PNT-2	PNT-2	PNT-1	
004	DINING	LVT-1	RB-1	PNT-5	PNT-3	PNT-3	PNT-3	PNT-1	4
005	MECHANICAL	CONC-1	RB-1	PNT-2	PNT-2	PNT-2	PNT-2	PNT-1	
006	FAMILY	VCT-3&4	RB-1	PNT-2	PNT-2	PNT-2	PNT-2	ACT-1	
007	SPECIAL NEEDS	VCT-3&4	RB-1	PNT-2	PNT-2	PNT-2	PNT-2	ACT-1	
008	OFFICE	CPT-2	RB-1	PNT-2	PNT-2	PNT-2	PNT-2	ACT-1	
009	STAIRS	EXIST.	RB-1	PNT-2	PNT-2	PNT-2	PNT-2	PNT-1	
010	RESTROOM 2	EXIST.	EXIST.	PNT-2	PNT-2	PNT-2	PNT-2	PNT-1	
011	RESTROOM 3	PT-1	CT-4,CT-6	PNT-2,CT-1, CT-3	PNT-2,CT-1, CT-3	PNT-2,CT-1, CT-3	PNT-2,CT-3	ACT-1, PNT-1	2,3
012	HALL	VCT-3	RB-1	PNT-2	PNT-4,PNT-2	PNT-2	PNT-4 PNT-2	ACT-1,PNT-1	
013	HALL	VCT-3	RB-1	PNT-2	PNT-2	PNT-2	PNT-2	ACT-1	
014	LAUNDRY	VCT-3	RB-1	PNT-2	PNT-2	PNT-2	PNT-2	PNT-1	
015	MECH.	CONC-1	RB-1	PNT-2	PNT-2	PNT-2	PNT-2	PNT-1	
017	KITCHEN	VCT-1&2	RB-1	PNT-2	PNT-2	PNT-2	PNT-2	ACT-1, PNT-1	
018	SERVING	LVT-1	RB-1	PNT-5	PNT-3	PNT-3	PNT-3	PNT-1	
019	ELECTRICAL	VCT-3	RB-1	-	-	-	-	PNT-1	
FIRST LEVEL									
100	WAITING ROOM	RT-1	RB-1	PNT-3	PNT-6	PNT-3	PNT-3	ACT-2	4
101	STAIRS	VCT-3,6,7,&8	RB-1	PNT-2	PNT-2	PNT-2	PNT-2	ACT-2	
102	STAIRS	RT-1	RB-1	PNT-2	PNT-2	PNT-2	PNT-2	PNT-1	
103	INTERVIEW	CPT-2	RB-1	PNT-2	PNT-2	PNT-2	PNT-4	ACT-1	
104	COMMON ROOM	CPT-2	RB-1	PNT-3	PNT-5	PNT-3	PNT-6,PNT-3	ACT-2	4
105	RESTROOM 2	PT-1	CT-4,CT-6	PNT-2,CT-3, CT-5	PNT-2,CT-5,	PNT-2, CT-3,CT-5	PNT-2,CT-3, CT-5	ACT-1, PNT-1	2,3
106	WORKSTATIONS	CPT-1	RB-1	PNT-3	PNT-2	PNT-3	PNT-2	ACT-1	
107	LEARNING/RESOURCE CENTER	CPT-1	RB-1	PNT-3	PNT-2	PNT-3	PNT-2	ACT-1	
108	OFFICE	CPT-1	RB-1	PNT-2	PNT-2	PNT-2	PNT-2	ACT-1	
109	RECEPTION	CPT-1	RB-1	PNT-3	PNT-3	PNT-3,PNT-4	PNT-3	ACT-1	
110	STAIR	EXIST.	RB-1	PNT-2	PNT-2	PNT-2	PNT-2	PNT-1	
111	WAITING ROOM	CPT-1	RB-1	PNT-2	PNT-3	PNT-3	PNT-3	ACT-1	
112	STAIR	RT-1	RB-1	PNT-2	PNT-2	PNT-2	PNT-2	PNT-1	
113	IT	VCT-3	RB-1	PNT-2	PNT-2	PNT-2	PNT-2	PNT-1	
114	HALL	CPT-2	RB-1	PNT-2	PNT-2	PNT-2	PNT-2	ACT-2	
115	CLOSET	CPT-2	RB-1	PNT-2	PNT-2	PNT-2	PNT-2	PNT-1	
116	DAY SLEEPING	VCT-3&6	RB-1	PNT-2	PNT-2	PNT-2	PNT-2	ACT-1	
117	OFFICE	CPT-2	RB-1	PNT-2	PNT-4	PNT-2	PNT-2	ACT-1	
118	RECEPTION	CPT-2	RB-1	PNT-2	PNT-2	PNT-2	PNT-2, 4	ACT-2,PNT-1	4
119	RESTROOM 1	PT-1	CT-4,CT-6	PNT-2,CT-5	PNT-2	PNT-2, CT-5	PNT-2,CT-5	ACT-1	2,3
SECOND LEVEL									
200	STORAGE	VCT-3	RB-1	PNT-2	PNT-2	PNT-2	PNT-2	ACT-2	
201	STAIRS	RT-1	RB-1	PNT-2	PNT-2	PNT-2	PNT-2	PNT-1	
202	NIGHT SUPERVISOR	CPT-1	RB-1	PNT-2	PNT-2	PNT-2	PNT-2	ACT-1	
203	BEDROOM 1	VCT-3&4	RB-1	PNT-2	PNT-2	PNT-2	PNT-2	ACT-1	
204	PLAY ROOM	VCT-3,4&5	RB-1	PNT-2, PNT-6	PNT-2, PNT-6	PNT-2, PNT-5	PNT-2, PNT-6	ACT-2	
205	BEDROOM 2	VCT-3&5	RB-1	PNT-2	PNT-2	PNT-2	PNT-2	ACT-1	
206	BEDROOM 3	VCT-3&4	RB-1	PNT-2	PNT-2	PNT-2	PNT-2	ACT-1	
207	BEDROOM 4	VCT-3&5	RB-1	PNT-2	PNT-2	PNT-2	PNT-2	ACT-1	
208	RESTROOM	PT-1	CT-4,CT-6	PNT-2,CT-3, CT-5	PNT-2,CT-3, CT-5	PNT-2	PNT-2,CT-3, CT-5	ACT-1,PNT-1	2,3
209	RESTROOM	PT-1	CT-4,CT-6	PNT-2,CT-3, CT-5	PNT-2, CT-3, CT-5	PNT-2, CT-5	PNT-2, CT-3, CT-5	ACT-1,PNT-1	2,3
210	HALL	CPT-1	RB-1	PNT-2	PNT-2	PNT-4	PNT-2	ACT-2,PNT-1	
211	CLOSET	VCT-3	RB-1	PNT-2	PNT-2	PNT-2	PNT-2	PNT-1	
212	STAIR	RT-1	RB-1	PNT-2	PNT-2	PNT-2	PNT-2	PNT-1	
213	HALL	CPT-1	RB-1	PNT-2	PNT-2	PNT-2	PNT-4	ACT-2	
214	LAUNDRY	VCT-3	RB-1	PNT-3	PNT-3	PNT-3	PNT-3	ACT-2	
215	HALL	CPT-1	RB-1	PNT-2	PNT-4	PNT-2	PNT-2	ACT-2	
216	RESTROOM	PT-1	CT-4,CT-6	PNT-2,CT-3, CT-5	PNT-2,CT-3, CT-5	PNT-2,CT-3, CT-5	PNT-2,CT-5	ACT-2, PNT-1	2
217	BEDROOM 5	VCT-3&5	RB-1	PNT-3	PNT-3	PNT-3	PNT-3	ACT-1	
218	HALL	CPT-1	RB-1	PNT-2	PNT-4	PNT-2	PNT-2	ACT-2	

Room Finish General Notes:

A. ROOM FINISH SCHEDULE WALL ORIENTATION BASED ON PLAN NORTH - NOT TRUE NORTH
B. REFER TO SPECIFICATIONS FOR DETAILED INTERIOR FINISH MATERIAL INFORMATION
C. REFER TO REFLECTED CEILING PLANS, INTERIOR ELEVATIONS AND FINISH FLOOR PLANS FOR LOCATIONS OF MATERIAL/ PAINT TRANSITION.

Room Finish Key Notes:

1. FIRE RATED GYPSUM BOARD CEILING CONSTRUCTION, REFER TO CODE PLAN A0-02
2. REFER TO INTERIOR ELEVATIONS FOR CERAMIC WALL TILE PATTERN
3. PORCELAIN FLOOR TILE AND CERAMIC WALL TILE IN RESTROOMS SHOULD ALIGN APPROPRIATELY
4. REFER TO FINISH FLOOR PLAN FOR PAINT COLOR LOCATION

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

Client Review	01/11/2018
Client Review	01/29/2018
Site Walk-Through	02/26/2018
Client Review	11/28/2018
Building Permit	12/14/2018
BP Revisions-01	10/04/2019

DRAWN BY
NPR

CHECKED BY
LAG

APPROVED BY
MAM

SHEET NAME

ROOM FINISH SCHEDULE & WALL TYPES

SHEET NO.

A0-04

Door / Opening Schedule

DOOR NO.	DOOR / OPENING SIZE (W X H)	DOOR / WINDOW			FRAME			DETAILS			HARDWARE SET #	LABEL (MIN.)	DOOR / OPENING KEY NOTES
		TYPE	MATERIAL	FINISH	TYPE	MATERIAL	FINISH	HEAD	JAMB	THRES. / SILL			
LOWER LEVEL-DOORS													
001A	3'-0" X 6'-8"	B	ALUM./GLASS	ANON.	SF-1	ALUM.	ANON.	D1	D2	T1	1		
001B	3'-0" X 6'-8"	B	HM	PNT-7	F1	HM	PNT-7	D6	D7	T5	7	45	
003	3'-0" X 6'-8"	A	WD	PNT-5	F1	KD	PNT-5	D4	D5	-	4		
005	3'-0" X 6'-8"	A	WD	PNT-5	F1	KD	PNT-5	D4	D5	T6	4		
006	3'-0" X 6'-8"	A	WD	ST-1	F1	KD	PNT-5	D4	D5	-	6		
007	3'-0" X 6'-8"	A	WD	ST-1	F1	KD	PNT-5	D4	D5	-	6		
008	3'-0" X 6'-8"	C	WD	ST-1	F1	KD	PNT-5	D4	D5	T5	8		
010	EXIST.	-	-	PNT-5	-	-	PNT-5				3		
011	3'-0" X 6'-8"	A	WD	PNT-5	F1	KD	PNT-5	D4	D5	T3	3		
014	3'-0" X 6'-8"	C	WD	PNT-5	F1	KD	PNT-5	D4	D5	-	10		
015	3'-0" X 6'-8"	D	WD	PNT-1	F1	KD	PNT-1	D4	D5	T6	--		
019	2'-8" X 6'-8"	A	WD	PNT-5	F1	KD	PNT-5	D4	D5	T9	4		
FIRST LEVEL-DOORS													
101	3'-0" X 7'-0"	E	HM	PNT-5	F1	HM	PNT-5	D6	D7	T2	7		
103	3'-0" X 7'-0"	A	WD	ST-1	F2	KD	PNT-3	D4	D5	-	8		
105	3'-0" X 7'-0"	A	WD	PNT-5	F1	KD	PNT-5	D4	D5	T7	3		
107	3'-0" X 7'-0"	C	WD	ST-1	F1	KD	PNT-3	D4	D5	-	8		
108	3'-0" X 7'-0"	A	WD	ST-1	F3	KD	PNT-3	D4	D5	-	8		
110	EXIS.	--	--	--	--	--	--	--	--	--	1		
111	(2) 6'-0" X 7'-0"	E	WD	ST-1	F1	KD	PNT-3	D9	D9	-	5		
113	2'-8" X 7'-0"	A	WD	PNT-5	F1	KD	PNT-5	D4	D5	T-5	4		
114	3'-0" X 7'-0"	E	WD	ST-1	F1	KD	PNT-5	D4	D5	-	7	SMOKE	
115	(2) 5'-4" X 7'-0"	A	WD	PNT-5	F1	KD	PNT-5	D4	D5	-	2		
116	3'-0" X 7'-0"	A	WD	ST-1	F1	KD	PNT-5	D4	D5	T5	6		
117	3'-0" X 7'-0"	A	WD	ST-1	F4	KD	PNT-3	D4	D5	-	8		
118	3'-0"-7'-0"	A	WD	ST-1	F5	KD	PNT-5	D4	D5	T5	7		
119	3'-0"-7'-0"	A	WD	PNT-5	F1	KD	PNT-5	D4	D5	T3	3		
SECOND LEVEL-DOORS													
200	EXIST.	-	-	PNT-5	-	-	PNT-5				4		
201	3'-0"-7'-0"	E	HM	PNT-5	F1	HM	PNT-5	D4	D5	T10	7	45	
202	3'-0"-7'-0"	A	WD	ST-1	F1	KD	PNT-3	D4	D5	-	8		
203	3'-0"-7'-0"	A	WD	ST-1	F1	KD	PNT-3	D4	D5	T5	6		
204	(2) 6'-0"-7'-0"	A	WD	ST-1	F1	KD	PNT-3	D4	D5	T5	9		
205	3'-0"-7'-0"	A	WD	ST-1	F1	KD	PNT-3	D4	D5	T5	6		
206	2'-8"-7'-0"	A	WD	ST-1	F1	KD	PNT-3	D4	D5	T5	6	45	
207	3'-0"-7'-0"	A	WD	ST-1	F1	KD	PNT-3	D4	D5	T5	6		
208	3'-0"-7'-0"	A	WD	PNT-5	F1	KD	PNT-5	D4	D5	T7	3		
209	3'-0"-7'-0"	A	WD	PNT-5	F1	KD	PNT-5	D4	D5	T7	3		
211	2'-8"-7'-0"	A	WD	PNT-5	F1	KD	PNT-5	D4	D5	T5	4		
214	3'-0"-7'-0"	C	WD	ST-1	F1	KD	PNT-3	D4	D5	T5	10		
216	3'-0"-7'-0"	A	WD	PNT-5	F1	KD	PNT-5	D4	D5	T7	3		
217	3'-0"-7'-0"	A	WD	ST-1	F1	KD	PNT-3	D4	D5	T5	6		

Door/ Openings General Notes:

A. FIELD VERIFY ALL OPENINGS PRIOR TO DOOR/FRAME FABRICATION
B. FIRE RATED LABEL DOORS AND FRAMES ARE LISTED IN MINUTES
C. REFER TO SPECIFICATIONS FOR DOOR HARDWARE NOTES AND INFORMATION
D. ALL WINDOW SIZES BASED ON WEATHERSHIELD WINDOW PRODUCTS
E. ALL DOOR HARDWARE TO BE COORDINATED WITH OWNER

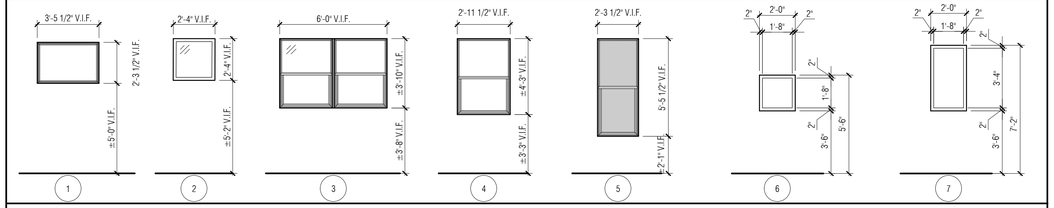
Window Schedule

WINDOW NO.	WINDOW			FRAME			DETAILS			HARDWARE SET #	LABEL (MIN.)	WINDOW / OPENING KEY NOTES
	TYPE	MATERIAL	FINISH	TYPE	MATERIAL	FINISH	HEAD	JAMB	THRES. / SILL			
WINDOWS												
W1	1	MG-11	CLEAR	FIXED	ALUM / WD	--	D10	D11	--	--		1, 3
W2	2	MG-11	CLEAR	FIXED	ALUM / WD	--	D10	D11	--	--		1, 3
W3	3	MG-11	CLEAR	DOUBLE HUNG	ALUM / WD	--	D10	D11	--	--		1, 3
W4	4	MG-11	CLEAR	SINGLE HUNG	ALUM / WD	--	D10	D11	--	--		1, 3
W5	5	IG-10	TINTED	SINGLE HUNG	ALUM / WD	--	D10	D11	--	--		1, 2, 3
W6	6	MG-11	CLEAR	FIXED	ALUM / WD	--	D10	D11	--	--		1, 3
W7	7	MG-11	CLEAR	FIXED	ALUM / WD	--	D10	D11	--	--		1, 3

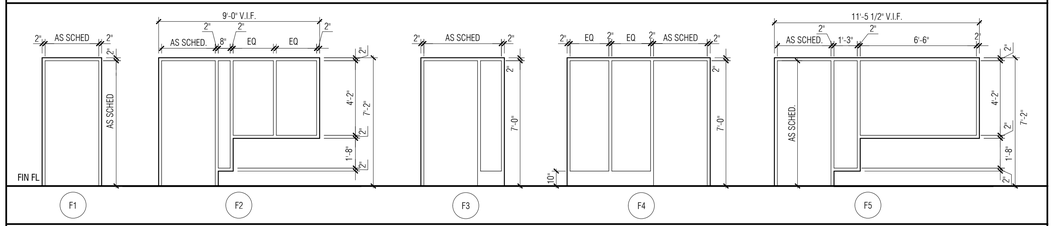
Window Key Notes:

1. VERIFY EXISTING OPENING SIZE IN FILED.
2. WINDOW WITH TINTED CLASS TO MATCH (IG-13).
3. DOOR FRAME FINISH TO BE SELECTED FROM MANUFACTURE STANDARD COLORS

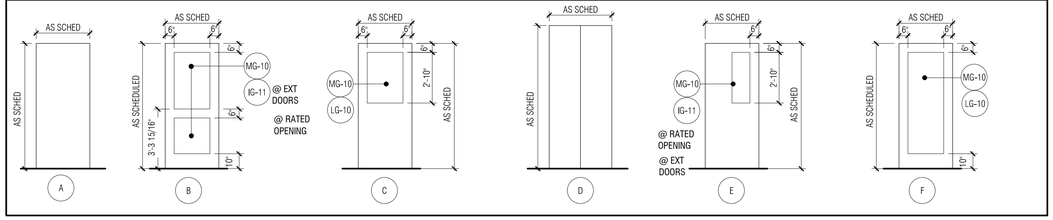
Window Types

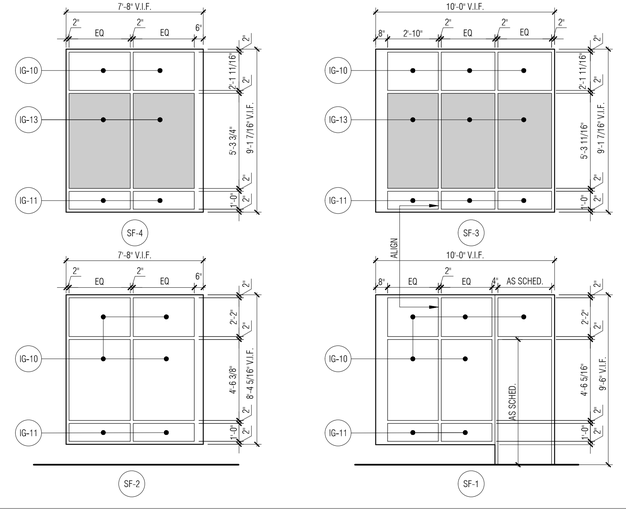


Frame Types



Door Types





PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

Client Review	01/11/2018
Client Review	01/29/2018
Site Walk-Through	02/26/2018
Client Review	11/28/2018
Building Permit	12/14/2018
BP Revisions-01	10/04/2019

DRAWN BY

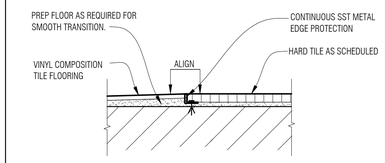
CHECKED BY
LAG

APPROVED BY
MAM

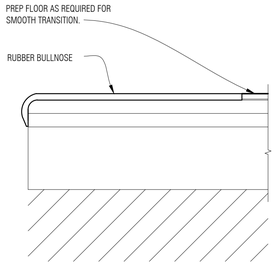
SHEET NAME

DOOR & OPENING, WINDOW SCHEDULES & STOREFRONT ELEVATIONS

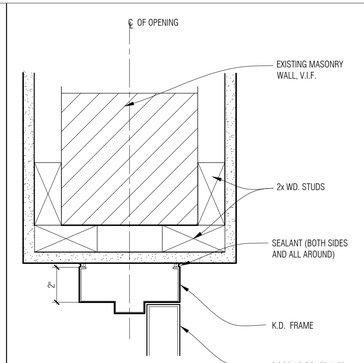
SHEET NO.
A0-05



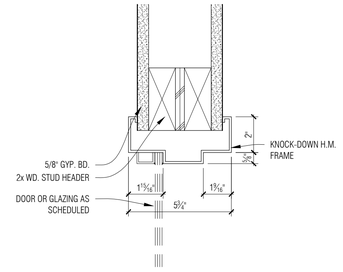
VINYL TO TILE TRANSITION 6" = 1'-0" T8



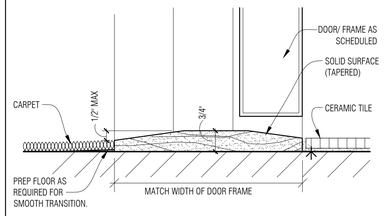
VINYL TO TILE TRANSITION 6" = 1'-0" T4



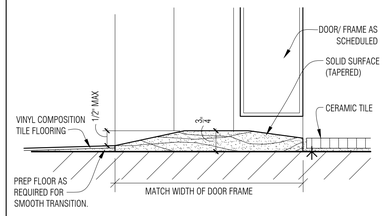
K.D. HEAD AT EXISTING MASONRY WALL W/ GYP. BD ON ALL SIDES 3" = 1'-0" D8



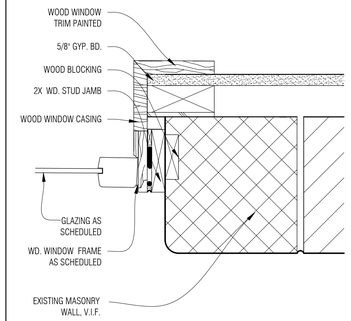
TYP. KNOCK-DOWN / H.M. DOOR / WINDOW HEAD @ STUD WALL 3" = 1'-0" D4



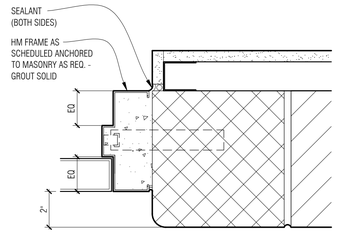
SOLID SURFACE THRESHOLD 6" = 1'-0" T7



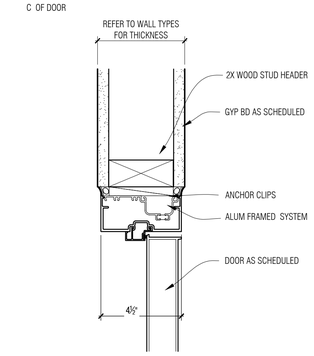
SOLID SURFACE THRESHOLD 6" = 1'-0" T3



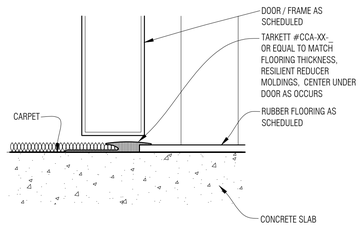
TYP. WOOD WINDOW HEAD AT MASONRY/GYP WALL 3" = 1'-0" D11



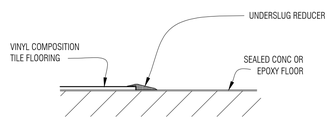
HM JAMB AT MASONRY/GYP WALL 3" = 1'-0" D7



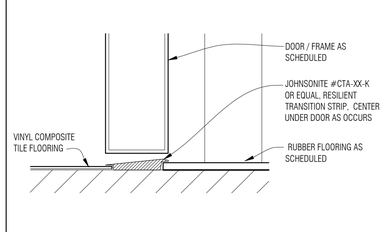
ALUM WINDOW / DOOR HEAD AT STUD WALL 3" = 1'-0" D3



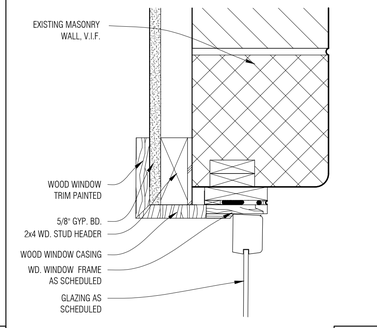
CARPET TO RUBBER FLOORING TRANSITION 6" = 1'-0" T10



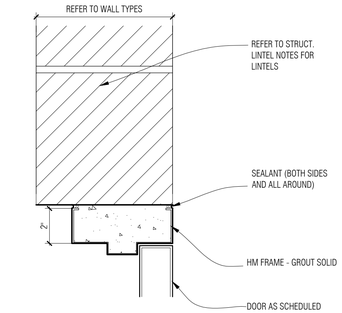
VINYL TO CONC TRANSITION 6" = 1'-0" T6



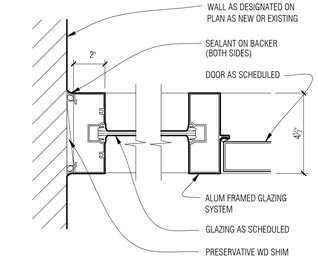
VCT TO RUBBER FLOORING TRANSITION 6" = 1'-0" T2



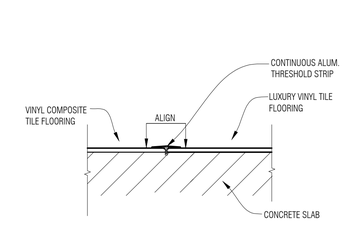
TYP. WOOD WINDOW HEAD AT MASONRY/GYP WALL 3" = 1'-0" D10



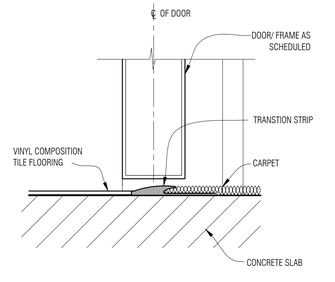
HM HEAD AT MASONRY 3" = 1'-0" D6



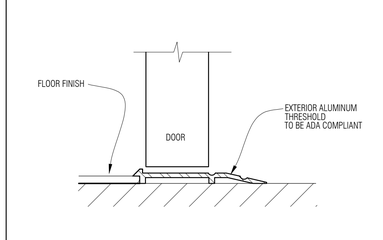
ALUM JAMB AT WALL 3" = 1'-0" D2



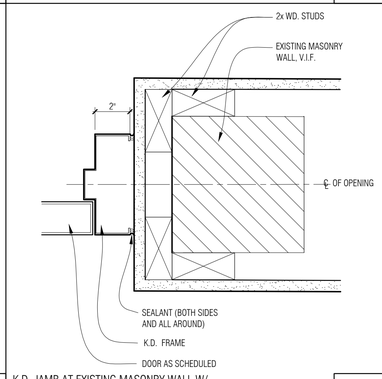
VCT TO LVT TRANSITION 6" = 1'-0" T9



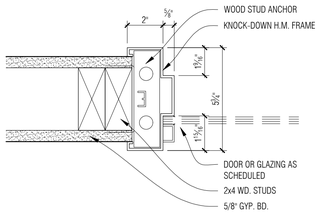
VINYL TO CARPET TRANSITION 6" = 1'-0" T5



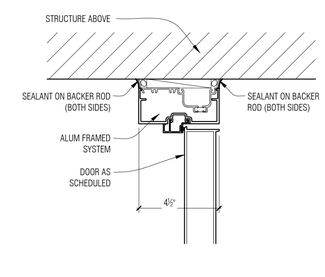
EXTERIOR ALUMINUM THRESHOLD HALF SADDLE 6" = 1'-0" T1



K.D. JAMB AT EXISTING MASONRY WALL W/ GYP. BD ON ALL SIDES 3" = 1'-0" D9



TYP. KNOCK-DOWN / H.M. DOOR / WINDOW JAMB @ STUD WALL 3" = 1'-0" D5



ALUMINUM HEAD 3" = 1'-0" D1

P:\2017\17-179-MCREST\02 CAD\A0-06 Typical Openino Details.dwg, 1/21/2020 4:42:31 PM, amarkle

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

Client Review	01/11/2018
Client Review	01/29/2018
Site Walk-Through	02/26/2018
Client Review	11/28/2018
Building Permit	12/14/2018
BP Revisions-01	10/04/2019

DRAWN BY
NPR

CHECKED BY
LAG

APPROVED BY
MAM

SHEET NAME

Typical Opening Details

SHEET NO.

A0-06

DEMOLITION PLAN - GENERAL NOTES:

A. ALL DEMOLITION DRAWINGS AND DEMOLITION DETAILS ARE PROVIDED TO SHOW THE GENERAL SCOPE OF THE DEMOLITION WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PERFORM ALL DEMOLITION WORK NECESSARY TO ACCOMPLISH NEW WORK. THE DEMOLITION DRAWINGS AND DETAILS MAY NOTE TYPICAL ITEMS IN SOME AREAS, WHICH APPLY IN OTHER AREAS (AND ARE DESIGNATED WITH DASHED, HIDDEN OR STRUCK THRU LINES). COORDINATE ALL DEMOLITION WORK WITH ALL ARCHITECTURAL DRAWINGS. CONTRACTOR RESPONSIBLE TO REFERENCE ALL DRAWINGS/ SPECIFICATIONS TO CONFIRM EXTENT OF DEMOLITION WORK.

B. ALL REMOVED ITEMS, WALLS, FLOORS CEILING, OPENINGS, ETC ARE TO BE PATCHED/REPAIRED AND PREPPED TO RECEIVE NEW WORK AND/OR FINISHES.

C. ALL CONSTRUCTION AND DEMOLITION MEANS, METHODS AND SAFETY PRECAUTIONS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

D. REMOVE ALL ITEMS PROJECTING FROM EXISTING WALLS OR FLOORS TO REMAIN (BLOCKING, SCREWS, FASTENERS, PIPES, CONDUITS, MOUNTING PLATES, FIXED EQUIPMENT, ETC). PATCH AND REPAIR FOR NEW FINISH

E. DISPOSE AND/OR RECYCLE ALL DEMOLITION MATERIALS LEGALLY OFF-SITE.

F. AT DEMOLISHED WALLS AND CEILINGS, REMOVE ELECTRICAL DEVICES, FIXTURES, & WIRING BACK TO ELECTRICAL PANEL.

G. WALL REMOVAL THAT TERMINATES INTO A WALL OR CEILING TO REMAIN SHALL BE COMPLETELY REMOVED FREE OF PROJECTIONS, READY TO RECEIVE NEW WORK.

H. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING AND UNDERSTANDING EXISTING CONDITIONS. PRIOR TO BIDDING

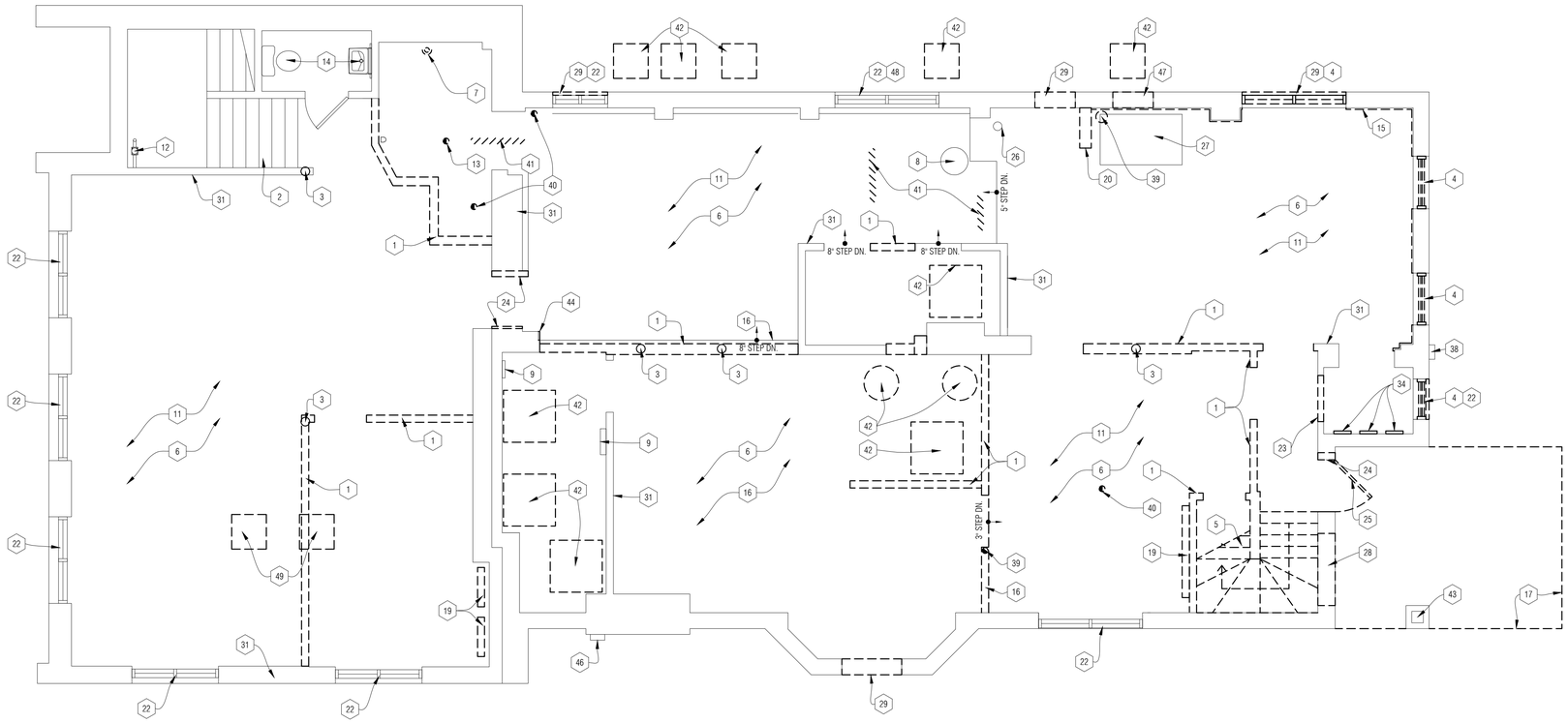
I. MAINTAIN EXISTING FIRE RATING WHERE OCCURS AND WHERE POSSIBLE DURING DEMOLITION. REFER TO CODE AND LIFE SAFETY SHEETS FOR MORE INFORMATION AS WELL AS CONSTRUCTION MANAGER'S INSTRUCTIONS.

J. ASBESTOS AND OTHER HAZARDOUS MATERIALS WILL BE REMOVED PRIOR TO START OF CONSTRUCTION. IF ANY SUSPECTED HAZARDOUS MATERIAL IS ENCOUNTERED, STOP WORK IN THAT AREA AND IMMEDIATELY INFORM THE ARCHITECT, CONSTRUCTION MANAGER, AND OWNER.

K. ALL DIMENSIONS OF EXISTING WALLS TO REMAIN TO BE FIELD VERIFIED BY CONTRACTOR PRIOR TO DEMO. CONTACT ARCHITECT IF ANY MAJOR DISCREPANCIES IN MEASUREMENTS.

DEMOLITION SITE PLAN - KEY NOTES:

1. DEMOLISH INTERIOR STUD WALL CONSTRUCTION COMPLETE.
2. EX. STAIR TO REMAIN, REMOVE EXISTING FINISH & PREP FOR NEW FINISH -REFER TO FINISH SCHEDULE A9-02
3. EX. STRUCTURAL COLUMN TO REMAIN
4. DEMOLISH EXISTING WINDOW. PREP OPENING FOR NEW WINDOW. OPENING TO BE V.I.F. AND COORDINATED WITH NEW WINDOW SIZE.
5. DEMOLISH EX. STAIRS COMPLETE.
6. DEMOLISH ALL INTERIOR FINISHES, CEILINGS, LIGHT FIXTURES AND PREPARE FOR NEW CONSTRUCTION.
7. REMOVE EXISTING PLUMBING FIXTURES COMPLETE WITH PIPES. CUT & CAP PLUMBING. REFER TO MECH.
8. EXISTING SUMP PUMP TO REMAIN
9. EX. ELECTRICAL PANEL TO REMAIN. REFER TO ELEC.
10. REMOVE EXISTING WALL BASE.
11. EX. FLOOR SLAB TO REMAIN. PREPARE TO ACCEPT NEW FINISH
12. WATER METER TO REMAIN.
13. EXISTING FLOOR DRAIN TO REMAIN - V.I.F. IF USABLE
14. EXISTING PLUMBING FIXTURE TO REMAIN.
15. EXISTING FURRING TO BE REUSED WHERE POSSIBLE - REMOVE FURRING AT WINDOW OPENINGS - REFER TO NEW WORK PLANS.
16. EXISTING CONCRETE SLAB TO BE REDUCED TO ALIGN W/ ADJACENT SLAB
17. REMOVE ASPHALT & PREP FOR NEW FOUNDATION & CONCRETE SLAB-REFER TO PLANS.
18. EXISTING GYP. BD. TO REMAIN - PATCH AND REPAIR IF NECESSARY.
19. EXISTING PHONE PATCH PANEL TO BE REMOVED
20. EXISTING CMU WALL TO BE REMOVED AND CUT FLUSH TO EXTERIOR WALL
21. EXISTING STRUCTURAL SUPPORT TO BE REMOVED-REFER TO STRUCTURAL
22. EXISTING WINDOW TO REMAIN
23. DEMO WALL TO ALLOW FOR NEW DOOR-REFER TO PLAN
24. EXISTING OPENING TO BE WIDENED-REFER TO PLAN
25. EXISTING DOOR AND FRAME TO BE DEMOLISHED AND PREP. FOR NEW WORK
26. EXISTING SEWER MAIN TO REMAIN
27. EXISTING REFRIGERATOR TO BE RELOCATED
28. DEMOLISH EX. EXTERIOR WALL AS NECESSARY TO ACCOMMODATE NEW STAIR-REFER TO PLANS, PICTURES, & FIELD MEASUREMENTS FOR LOCATION OF STAIRS
29. DEMO. EX. INFILL PREP FOR NEW WINDOW
30. EXISTING MILLWORK TO REMAIN
31. EXISTING WALL TO REMAIN PREP TO BE REFINISHED
32. DEMOLISH EXISTING EXTERIOR WALL
33. EXISITNG DOOR TO REMAIN-REPAIR AS NECESSARY
34. REMOVE EX. ELECTRICAL PANEL - REFER TO ELEC.
35. EXISTING CHIMNEY TO REMAIN-EXPOSE BRICK & CLEAN
36. EXISTING WINDER TREAD TO BE DEMOLISHED & RECONFIGURED - REFER TO STRUCT.
37. STRUCTURAL STUD COLUMN TO REMAIN-REFER TO STRUCT.
38. EXISTING ELECTRICAL MAIN
39. EXISTING PIPE TO BE DEMOLISHED CUT 7 CAP PLUMBING-REFER TO MECH.
40. EXISTING FLOOR DRAIN TO BE DEMOLISHED CUT & CAP 4" BELOW SLAB. PREP & PATCH FLOOR
41. SAW CUT EXISTING CONCRETE SLAB AS NECESSARY FOR NEW FLOOR DRAIN-REFER TO MECHANICAL
42. EXISTING MECHANICAL UNIT - REFER TO MECH.
43. EXISTING STRUCTURAL BRICK PIER TO REMAIN
44. DEMOLISH WALL AS NEEDED TO ALLOW FOR REQUIRED FLOOR CLEARANCE-REFER TO A3-01
45. EXISTING FIREPLACE TO REMAIN
46. EXISTING GAS METER TO REMAIN
47. DEMO. EX. INFILL PREP FOR NEW BRICK INFILL
48. EXISTING LAUNDRY DUCTS TO REMAIN AND PREPARE TO CONNECT TO NEW UNITS
49. PARTIALLY DEMOLISH EXISTING CEILING AND PREPARE TO INSTALL NEW CEILING ACCESS HATCH PER MANUFACTURERS RECOMMENDATIONS



1 / A1-01 Lower Level Demolition Floor Plan
1/4" = 1'-0"

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

Client Review	01/11/2018
Client Review	01/29/2018
Site Walk-Through	02/26/2018
Client Review	11/28/2018
Building Permit	12/14/2018
BP Revisions-01	10/04/2019

DRAWN BY

CHECKED BY
LAG

APPROVED BY
MAM

SHEET NAME

LOWER LEVEL
DEMOLITION
FLOOR PLAN

SHEET NO.
A1-01

DEMOLITION PLAN - GENERAL NOTES:

A. ALL DEMOLITION DRAWINGS AND DEMOLITION DETAILS ARE PROVIDED TO SHOW THE GENERAL SCOPE OF THE DEMOLITION WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PERFORM ALL DEMOLITION WORK NECESSARY TO ACCOMPLISH NEW WORK. THE DEMOLITION DRAWINGS AND DETAILS MAY NOTE TYPICAL ITEMS IN SOME AREAS, WHICH APPLY IN OTHER AREAS (AND ARE DESIGNATED WITH DASHED, HIDDEN OR STRUCK THRU LINES). COORDINATE ALL DEMOLITION WORK WITH ALL ARCHITECTURAL, DRAWINGS. CONTRACTOR RESPONSIBLE TO REFERENCE ALL DRAWINGS/ SPECIFICATIONS TO CONFIRM EXTENT OF DEMOLITION WORK.

B. ALL REMOVED ITEMS, WALLS, FLOORS CEILING, OPENINGS, ETC ARE TO BE PATCHED/REPAIRED AND PREPPED TO RECEIVE NEW WORK AND/OR FINISHES.

C. ALL CONSTRUCTION AND DEMOLITION MEANS, METHODS AND SAFETY PRECAUTIONS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

D. REMOVE ALL ITEMS PROJECTING FROM EXISTING WALLS OR FLOORS TO REMAIN (BLOCKING, SCREWS, FASTENERS, PIPES, CONDUITS, MOUNTING PLATES, FIXED EQUIPMENT, ETC). PATCH AND REPAIR FOR NEW FINISH

E. DISPOSE AND/OR RECYCLE ALL DEMOLITION MATERIALS LEGALLY OFF-SITE.

F. AT DEMOLISHED WALLS AND CEILINGS, REMOVE ELECTRICAL DEVICES, FIXTURES, & WIRING BACK TO ELECTRICAL PANEL.

G. WALL REMOVAL THAT TERMINATES INTO A WALL OR CEILING TO REMAIN SHALL BE COMPLETELY REMOVED FREE OF PROJECTIONS, READY TO RECEIVE NEW WORK.

H. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING AND UNDERSTANDING EXISTING CONDITIONS. PRIOR TO BIDDING

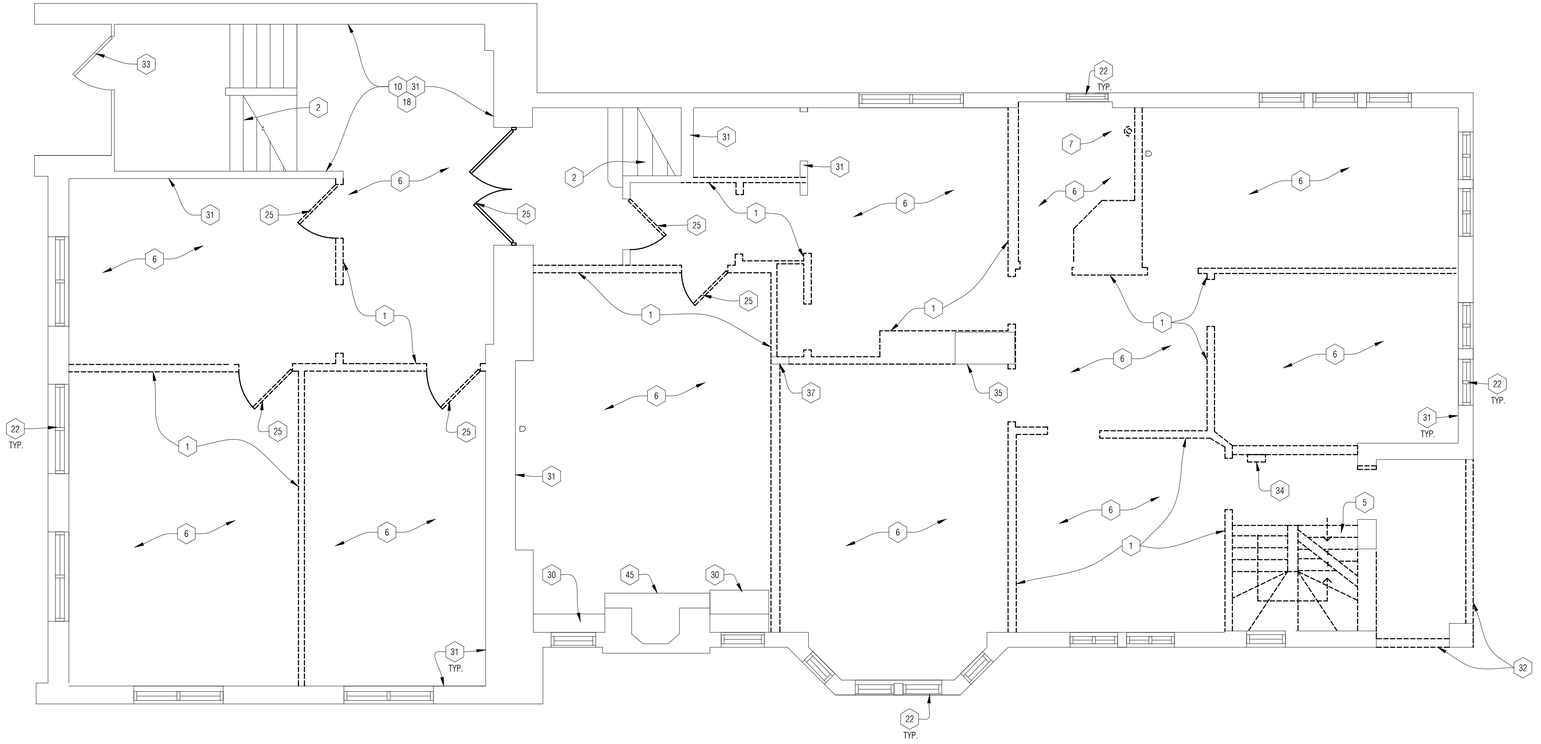
I. MAINTAIN EXISTING FIRE RATING WHERE OCCURS AND WHERE POSSIBLE DURING DEMOLITION. REFER TO CODE AND LIFE SAFETY SHEETS FOR MORE INFORMATION AS WELL AS CONSTRUCTION MANAGER'S INSTRUCTIONS.

J. ASBESTOS AND OTHER HAZARDOUS MATERIALS WILL BE REMOVED PRIOR TO START OF CONSTRUCTION. IF ANY SUSPECTED HAZARDOUS MATERIAL IS ENCOUNTERED, STOP WORK IN THAT AREA AND IMMEDIATELY INFORM THE ARCHITECT, CONSTRUCTION MANAGER, AND OWNER.

K. ALL DIMENSIONS OF EXISTING WALLS TO REMAIN TO BE FIELD VERIFIED BY CONTRACTOR PRIOR TO DEMO. CONTACT ARCHITECT IF ANY MAJOR DISCREPANCIES IN MEASUREMENTS.

DEMOLITION SITE PLAN - KEY NOTES:

1. DEMOLISH INTERIOR STUD WALL CONSTRUCTION COMPLETE.
2. EX. STAIR TO REMAIN, REMOVE EXISTING FINISH & PREP FOR NEW FINISH -REFER TO FINISH SCHEDULE A9-02
3. EX. STRUCTURAL COLUMN TO REMAIN
4. DEMOLISH EXISTING WINDOW. PREP OPENING FOR NEW WINDOW. OPENING TO BE V.I.F. AND COORDINATED WITH NEW WINDOW SIZE.
5. DEMOLISH EX. STAIRS COMPLETE.
6. DEMOLISH ALL INTERIOR FINISHES, CEILINGS, LIGHT FIXTURES AND PREPARE FOR NEW CONSTRUCTION.
7. REMOVE EXISTING PLUMBING FIXTURES COMPLETE WITH PIPES. CUT & CAP PLUMBING. REFER TO MECH.
8. EXISTING SUMP PUMP TO REMAIN
9. EX. ELECTRICAL PANEL TO REMAIN. REFER TO ELEC.
10. REMOVE EXISTING WALL BASE.
11. EX. FLOOR SLAB TO REMAIN. PREPARE TO ACCEPT NEW FINISH
12. WATER METER TO REMAIN.
13. EXISTING FLOOR DRAIN TO REMAIN - V.I.F. IF USABLE
14. EXISTING PLUMBING FIXTURE TO REMAIN.
15. EXISTING FURRING TO BE REUSED WHERE POSSIBLE - REMOVE FURRING AT WINDOW OPENINGS - REFER TO NEW WORK PLANS.
16. EXISTING CONCRETE SLAB TO BE REDUCED TO ALIGN W/ ADJACENT SLAB
17. REMOVE ASPHALT & PREP FOR NEW FOUNDATION & CONCRETE SLAB-REFER TO PLANS.
18. EXISTING GYP. BD. TO REMAIN - PATCH AND REPAIR IF NECESSARY.
19. EXISTING PHONE PATCH PANEL TO BE REMOVED
20. EXISTING CMU WALL TO BE REMOVED AND CUT FLUSH TO EXTERIOR WALL
21. EXISTING STRUCTURAL SUPPORT TO BE REMOVED-REFER TO STRUCTURAL
22. EXISTING WINDOW TO REMAIN
23. DEMO WALL TO ALLOW FOR NEW DOOR-REFER TO PLAN
24. EXISTING OPENING TO BE WIDENED-REFER TO PLAN
25. EXISTING DOOR AND FRAME TO BE DEMOLISHED AND PREP. FOR NEW WORK
26. EXISTING SEWER MAIN TO REMAIN
27. EXISTING REFRIGERATOR TO BE RELOCATED
28. DEMOLISH EX. EXTERIOR WALL AS NECESSARY TO ACCOMMODATE NEW STAIR-REFER TO PLANS, PICTURES, & FIELD MEASUREMENTS FOR LOCATION OF STAIRS
29. DEMO. EX. INFILL PREP FOR NEW WINDOW
30. EXISTING MILLWORK TO REMAIN
31. EXISTING WALL TO REMAIN PREP TO BE REFINISHED
32. DEMOLISH EXISTING EXTERIOR WALL
33. EXISITNG DOOR TO REMAIN-REPAIR AS NECESSARY
34. REMOVE EX. ELECTRICAL PANEL - REFER TO ELEC.
35. EXISTING CHIMNEY TO REMAIN-EXPOSE BRICK & CLEAN
36. EXISTING WINDER TREAD TO BE DEMOLISHED & RECONFIGURED - REFER TO STRUCT.
37. STRUCTURAL STUD COLUMN TO REMAIN-REFER TO STRUCT.
38. EXISTING ELECTRICAL MAIN
39. EXISTING PIPE TO BE DEMOLISHED CUT 7' CAP PLUMBING-REFER TO MECH.
40. EXISTING FLOOR DRAIN TO BE DEMOLISHED CUT & CAP 4" BELOW SLAB. PREP & PATCH FLOOR
41. SAW CUT EXISTING CONCRETE SLAB AS NECESSARY FOR NEW FLOOR DRAIN-REFER TO MECHANICAL
42. EXISTING MECHANICAL UNIT - REFER TO MECH.
43. EXISTING STRUCTURAL BRICK PIER TO REMAIN
44. DEMOLISH WALL AS NEEDED TO ALLOW FOR REQUIRED FLOOR CLEARANCE-REFER TO A3-01
45. EXISTING FIREPLACE TO REMAIN
46. EXISTING GAS METER TO REMAIN
47. DEMO. EX. INFILL PREP FOR NEW BRICK INFILL
48. EXISTING LAUNDRY DUCTS TO REMAIN AND PREPARE TO CONNECT TO NEW UNITS
49. PARTIALLY DEMOLISH EXISTING CEILING AND PREPARE TO INSTALL NEW CEILING ACCESS HATCH PER MANUFACTURERS RECOMMENDATIONS



1 / A1-02 First Level Demolition Floor Plan
1/4" = 1'-0"

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

Client Review	01/11/2018
Client Review	01/29/2018
Site Walk-Through	02/26/2018
Client Review	11/28/2018
Building Permit	12/14/2018
BP Revisions-01	10/04/2019

DRAWN BY

CHECKED BY
LAG

APPROVED BY
MAM

SHEET NAME

FIRST LEVEL
DEMOLITION
FLOOR PLAN

SHEET NO.
A1-02

DEMOLITION PLAN - GENERAL NOTES:

A. ALL DEMOLITION DRAWINGS AND DEMOLITION DETAILS ARE PROVIDED TO SHOW THE GENERAL SCOPE OF THE DEMOLITION WORK. IT IS THE CONTRACTORS RESPONSIBILITY TO PERFORM ALL DEMOLITION WORK NECESSARY TO ACCOMPLISH NEW WORK. THE DEMOLITION DRAWINGS AND DETAILS MAY NOTE TYPICAL ITEMS IN SOME AREAS, WHICH APPLY IN OTHER AREAS (AND ARE DESIGNATED WITH DASHED, HIDDEN OR STRUCK THRU LINES). COORDINATE ALL DEMOLITION WORK WITH ALL ARCHITECTURAL DRAWINGS. CONTRACTOR RESPONSIBLE TO REFERENCE ALL DRAWINGS/ SPECIFICATIONS TO CONFIRM EXTENT OF DEMOLITION WORK.

B. ALL REMOVED ITEMS, WALLS, FLOORS CEILING, OPENINGS, ETC ARE TO BE PATCHED/REPAIRED AND PREPPED TO RECEIVE NEW WORK AND/OR FINISHES.

C. ALL CONSTRUCTION AND DEMOLITION MEANS, METHODS AND SAFETY PRECAUTIONS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

D. REMOVE ALL ITEMS PROJECTING FROM EXISTING WALLS OR FLOORS TO REMAIN (BLOCKING, SCREWS, FASTENERS, PIPES, CONDUITS, MOUNTING PLATES, FIXED EQUIPMENT, ETC). PATCH AND REPAIR FOR NEW FINISH

E. DISPOSE AND/OR RECYCLE ALL DEMOLITION MATERIALS LEGALLY OFF-SITE.

F. AT DEMOLISHED WALLS AND CEILINGS, REMOVE ELECTRICAL DEVICES, FIXTURES, & WIRING BACK TO ELECTRICAL PANEL.

G. WALL REMOVAL THAT TERMINATES INTO A WALL OR CEILING TO REMAIN SHALL BE COMPLETELY REMOVED FREE OF PROJECTIONS, READY TO RECEIVE NEW WORK.

H. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING AND UNDERSTANDING EXISTING CONDITIONS. PRIOR TO BIDDING

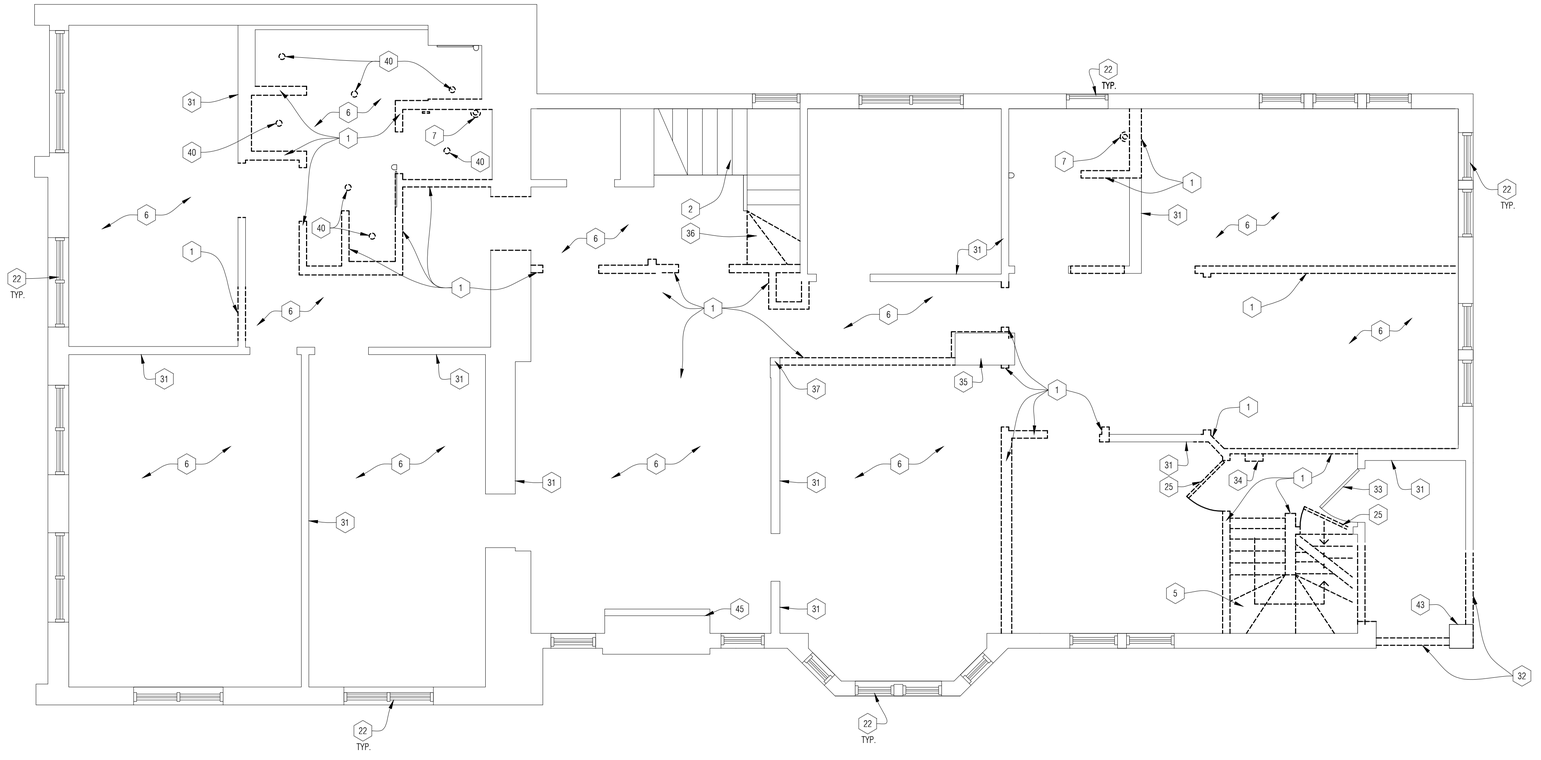
I. MAINTAIN EXISTING FIRE RATING WHERE OCCURS AND WHERE POSSIBLE DURING DEMOLITION. REFER TO CODE AND LIFE SAFETY SHEETS FOR MORE INFORMATION AS WELL AS CONSTRUCTION MANAGER'S INSTRUCTIONS.

J. ASBESTOS AND OTHER HAZARDOUS MATERIALS WILL BE REMOVED PRIOR TO START OF CONSTRUCTION. IF ANY SUSPECTED HAZARDOUS MATERIAL IS ENCOUNTERED, STOP WORK IN THAT AREA AND IMMEDIATELY INFORM THE ARCHITECT, CONSTRUCTION MANAGER, AND OWNER.

K. ALL DIMENSIONS OF EXISTING WALLS TO REMAIN TO BE FIELD VERIFIED BY CONTRACTOR PRIOR TO DEMO. CONTACT ARCHITECT IF ANY MAJOR DISCREPANCIES IN MEASUREMENTS.

DEMOLITION SITE PLAN - KEY NOTES:

1. DEMOLISH INTERIOR STUD WALL CONSTRUCTION COMPLETE.
2. EX. STAIR TO REMAIN, REMOVE EXISTING FINISH & PREP FOR NEW FINISH -REFER TO FINISH SCHEDULE A9-02
3. EX. STRUCTURAL COLUMN TO REMAIN
4. DEMOLISH EXISTING WINDOW. PREP OPENING FOR NEW WINDOW. OPENING TO BE V.I.F. AND COORDINATED WITH NEW WINDOW SIZE.
5. DEMOLISH EX. STAIRS COMPLETE.
6. DEMOLISH ALL INTERIOR FINISHES, CEILINGS, LIGHT FIXTURES AND PREPARE FOR NEW CONSTRUCTION.
7. REMOVE EXISTING PLUMBING FIXTURES COMPLETE WITH PIPES. CUT & CAP PLUMBING. REFER TO MECH.
8. EXISTING SUMP PUMP TO REMAIN
9. EX. ELECTRICAL PANEL TO REMAIN. REFER TO ELEC.
10. REMOVE EXISTING WALL BASE.
11. EX. FLOOR SLAB TO REMAIN. PREPARE TO ACCEPT NEW FINISH
12. WATER METER TO REMAIN.
13. EXISTING FLOOR DRAIN TO REMAIN - V.I.F. IF USABLE
14. EXISTING PLUMBING FIXTURE TO REMAIN.
15. EXISTING FURRING TO BE REUSED WHERE POSSIBLE - REMOVE FURRING AT WINDOW OPENINGS - REFER TO NEW WORK PLANS.
16. EXISTING CONCRETE SLAB TO BE REDUCED TO ALIGN W/ ADJACENT SLAB
17. REMOVE ASPHALT & PREP FOR NEW FOUNDATION & CONCRETE SLAB-REFER TO PLANS.
18. EXISTING GYP. BD. TO REMAIN - PATCH AND REPAIR IF NECESSARY.
19. EXISTING PHONE PATCH PANEL TO BE REMOVED
20. EXISTING CMU WALL TO BE REMOVED AND CUT FLUSH TO EXTERIOR WALL
21. EXISTING STRUCTURAL SUPPORT TO BE REMOVED-REFER TO STRUCTURAL
22. EXISTING WINDOW TO REMAIN
23. DEMO WALL TO ALLOW FOR NEW DOOR-REFER TO PLAN
24. EXISTING OPENING TO BE WIDENED-REFER TO PLAN
25. EXISTING DOOR AND FRAME TO BE DEMOLISHED AND PREP. FOR NEW WORK
26. EXISTING SEWER MAIN TO REMAIN
27. EXISTING REFRIGERATOR TO BE RELOCATED
28. DEMOLISH EX. EXTERIOR WALL AS NECESSARY TO ACCOMMODATE NEW STAIR-REFER TO PLANS, PICTURES, & FIELD MEASUREMENTS FOR LOCATION OF STAIRS
29. DEMO. EX. INFILL PREP FOR NEW WINDOW
30. EXISTING MILLWORK TO REMAIN
31. EXISTING WALL TO REMAIN PREP TO BE REFINISHED
32. DEMOLISH EXISTING EXTERIOR WALL
33. EXISITNG DOOR TO REMAIN-REPAIR AS NECESSARY
34. REMOVE EX. ELECTRICAL PANEL - REFER TO ELEC.
35. EXISTING CHIMNEY TO REMAIN-EXPOSE BRICK & CLEAN
36. EXISTING WINDER TREAD TO BE DEMOLISHED & RECONFIGURED - REFER TO STRUCT.
37. STRUCTURAL STUD COLUMN TO REMAIN-REFER TO STRUCT.
38. EXISTING ELECTRICAL MAIN
39. EXISTING PIPE TO BE DEMOLISHED CUT 7 CAP PLUMBING-REFER TO MECH.
40. EXISTING FLOOR DRAIN TO BE DEMOLISHED CUT & CAP 4" BELOW SLAB. PREP & PATCH FLOOR
41. SAW CUT EXISTING CONCRETE SLAB AS NECESSARY FOR NEW FLOOR DRAIN-REFER TO MECHANICAL
42. EXISTING MECHANICAL UNIT - REFER TO MECH.
43. EXISTING STRUCTURAL BRICK PIER TO REMAIN
44. DEMOLISH WALL AS NEEDED TO ALLOW FOR REQUIRED FLOOR CLEARANCE-REFER TO A3-01
45. EXISTING FIREPLACE TO REMAIN
46. EXISTING GAS METER TO REMAIN
47. DEMO. EX. INFILL PREP FOR NEW BRICK INFILL
48. EXISTING LAUNDRY DUCTS TO REMAIN AND PREPARE TO CONNECT TO NEW UNITS
49. PARTIALLY DEMOLISH EXISTING CEILING AND PREPARE TO INSTALL NEW CEILING ACCESS HATCH PER MANUFACTURERS RECOMMENDATIONS



1 / A1-03 Second Level Demolition Floor Plan
1/4" = 1'-0"

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

Client Review	01/11/2018
Client Review	01/29/2018
Site Walk-Through	02/26/2018
Client Review	11/28/2018
Building Permit	12/14/2018
BP Revisions-01	10/04/2019

DRAWN BY

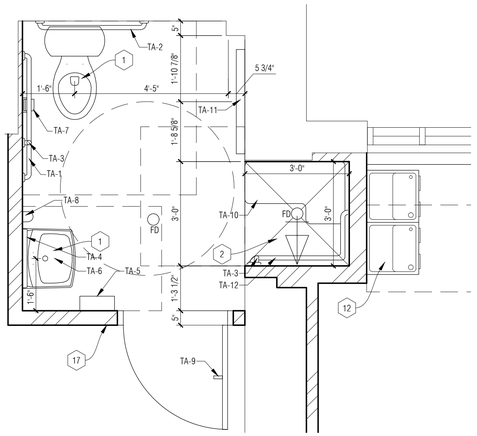
CHECKED BY
LAG

APPROVED BY
MAM

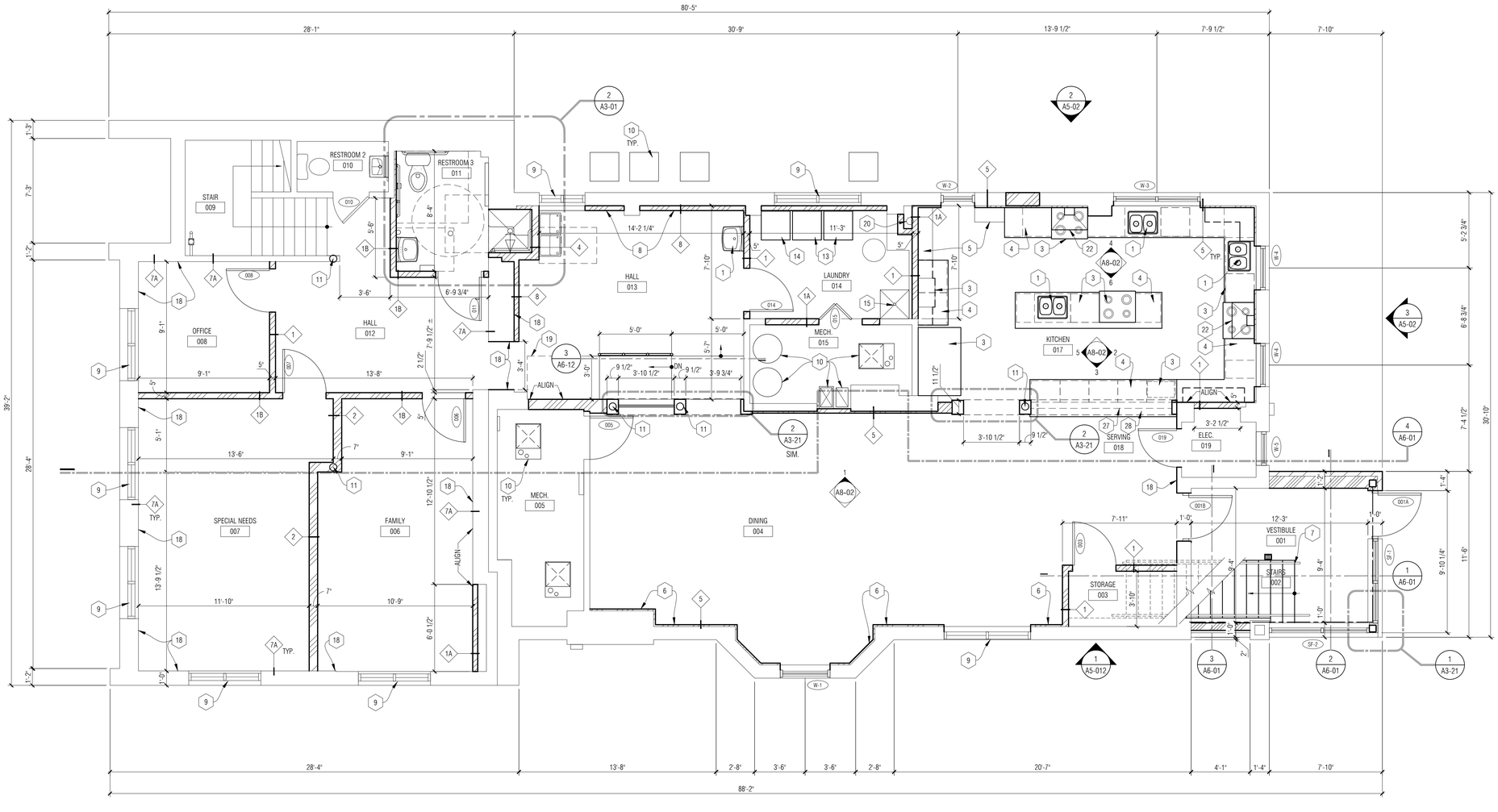
SHEET NAME

SECOND LEVEL
DEMOLITION
FLOOR PLAN

SHEET NO.
A1-03



2 A3-01 Enlarged Plan-Restroom 011
1/2" = 1'-0"



N

1 A3-01 Lower Level Floor Plan
1/4" = 1'-0"

TOILET ROOM ACCESSORIES:

TA-1: 42" HORIZONTAL GRAB BAR

TA-2: 36" HORIZONTAL GRAB BAR

TA-3: 18" VERTICAL GRAB BAR

TA-4: MIRROR ON WALL ABOVE SINK

TA-5: PAPER TOWER DISPENSER

TA-6: UNDER LAVATORY GUARD

TA-7: TOILET TISSUE DISPENSER

TA-8: SOAP DISPENSER

TA-9: COAT HOOK, ON INTERIOR FACE OF DOOR

TA-10: ADA SHOWER SEAT

TA-11: BABY CHANGING STATION

TA-12 TWO WALL GRAB BAR

FLOOR PLAN GENERAL NOTES:

A. ALL PLAN DIMENSIONS ARE NOMINAL TO FACE OF WALL. WALL THICKNESSES ARE SHOWN NOMINAL - SEE WALL TYPES FOR ACTUAL THICKNESS.

B. COORDINATE SIZE AND LOCATION OF ALL DUCT, SHAFT AND LOUVER OPENINGS IN WALLS AND FLOORS WITH MECHANICAL AND ELECTRICAL. PROVIDE ALL REQUIRED LINTELS FOR OPENINGS AS INDICATED.

C. DO NOT SCALE DRAWINGS. USE DIMENSIONS PROVIDED. IF A CONFLICT IS ENCOUNTERED OR A REQUIRED DIMENSION IS NOT PROVIDED, REQUEST A CLARIFICATION FROM THE ARCHITECT.

D. FIRE RATED PARTITIONS ARE INDICATED ON CODE PLANS.

E. REFER TO CODE PLAN FOR LOCATIONS OF FIRE EXTINGUISHERS

F. REFER TO SPECIFICATIONS AND MECHANICAL DRAWINGS FOR ALL PLUMBING FIXTURES

G. FOR TOILET ROOM ACCESSORIES IN EACH OF THE THREE RESTROOMS. REFER TO A0-01 FOR TYPICAL MOUNTING LOCATIONS. REFER TO SPEC'S FOR DETAILED PRODUCT INFORMATION.

H. REFER TO INTERIOR ELEVATIONS FOR ALL MILLWORK DETAILS.

I. REFER TO FINISH FLOOR PLAN FOR ALL FLOOR PATTERNS, FLOOR TRANSITIONS AND WALL ITEM DESIGNATIONS.

J. INSTALL NEW WOOD WINDOW SILLS AS NECESSARY (PNT-1).

K. ALL DIMENSIONS OF EXISTING WALLS TO REMAIN TO BE FIELD VERIFIED BY CONTRACTOR PRIOR TO DEMO. CONTACT ARCHITECT IF ANY MAJOR DISCREPANCIES IN MEASUREMENTS.

FLOOR PLAN KEY NOTES:

1 PLUMBING FIXTURE, REFER TO MECHANICAL.

2 ADA COMPLIANT TRANSFER SHOWER .

3 ALL KITCHEN EQUIPMENT EXCLUDING RANGE HOOD TO BE BY OWNE (RANGE, DISHWASHER, REFRIGERATOR, MICROWAVE, ETC.). REFER T MEP DRAWINGS FOR REQUIRED UTILITY HOOKUPS.

4 MILLWORK-KITCHEN CABINETS.

5 METAL SHELVING-BY OWNER.

6 NEW GYP. BD. FURRING ON EXISTING EXTERIOR WALL.

7 NEW WOOD STAIR AND HANDRAILS. REFER TO SECTION DETAIL 2 / A6-02.

8 MEET WITH ARCHITECT PRIOR TO INSTALLATION TO REVIEW POTENTI INTERFERENCE WITH EXISTING PIPING SYSTEM.

9 EXISTING WINDOW TO REMAIN.

10 NEW MECHANICAL- REFER TO MEP DRAWINGS.

11 EXISTING COLUMN TO REMAIN-REFER TO STRUCTURAL DRAWINGS.

12 ELECTRONIC WATER COOLER.

13 WASHERS & DRYERS. REFER TO MECHANICAL & ELECTRICAL FOR UTILITY HOOKUP REQUIREMENTS.

14 LAUNDRY SINK, REFER TO TO MECHANICAL FOR HOOKUP REQUIREMENTS.

15 UTILITY SINK, REFER TO PLUMBING DRAWINGS.

16 BUILT-IN MILLWORK WINDOW SEAT WITH STORAGE BELOW.

17 TOILET ROOM SIGN WITH TACTILE CHARACTERS.

18 NEW GYPSUM BOARD FINISH ON EXIST. WALL. INFILL STUD CAVITY WITH R-15 BATT. INSULATION ON EXTERIOR WALLS. - FURR OUT IF REQUIRED. V.I.F.

19 3'-0" X 5'-0" REQUIRED FLOOR CLEARANCE AT BOTTOM OF RAMP.

20 EXISTING SEWER MAIN TO BE MAINTAINED. VERIFY EXACT LOCATION FIELD-REFER TO MECH.

21 ATTIC MAKE & MODEL.

22 NEW RANGE HOOD TO BE INSTALLED AND HOOKED UP TO MECH. - REFER TO MECH.

23 EXIST. CHIMNEY.

24 NEW MILLWORK-BUILT-IN SHELVING - REFER TO INTERIOR ELEVATIO

25 NOT USED

26 FINISH PANEL ON BACK OF CABINETS - PAINT (PNT-5)

27 LINE OF WALL BELOW

28 LINE OF HEADER ABOVE

29 NEW FLOOR DRAIN - REFER TO PLUMBING

30 INFILL EXISTING STUD CAVITY WITH ACOUSTICAL BATT. INSULATION

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

Client Review	01/11/2018
Client Review	01/29/2018
Site Walk-Through	02/26/2018
Client Review	11/28/2018
Building Permit	12/14/2018
BP Revisions-01	10/04/2019

DRAWN BY

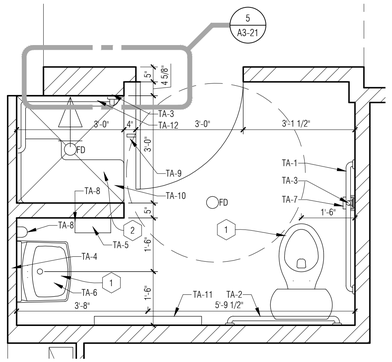
CHECKED BY
LAG

APPROVED BY
MAM

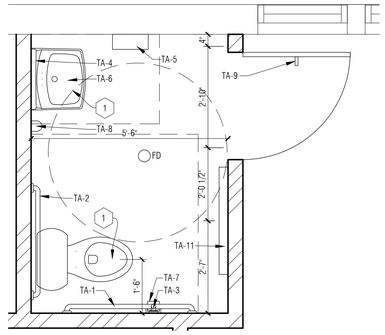
SHEET NAME

LOWER LEVEL
FLOOR PLAN

SHEET NO.
A3-01



3 / A3-02 Enlarged Restroom 105
1/2" = 1'-0"



2 / A3-02 Enlarged Restroom 119
1/2" = 1'-0"

TOILET ROOM ACCESSORIES:

TA-1: 42" HORIZONTAL GRAB BAR

TA-2: 36" HORIZONTAL GRAB BAR

TA-3: 18" VERTICAL GRAB BAR

TA-4: MIRROR ON WALL ABOVE SINK

TA-5: PAPER TOWER DISPENSER

TA-6: UNDER LAVATORY GUARD

TA-7: TOILET TISSUE DISPENSER

TA-8: SOAP DISPENSER

TA-9: COAT HOOK, ON INTERIOR FACE OF DOOR

TA-10: ADA SHOWER SEAT

TA-11: BABY CHANGING STATION

TA-12 TWO WALL GRAB BAR

FLOOR PLAN GENERAL NOTES:

A. ALL PLAN DIMENSIONS ARE NOMINAL TO FACE OF WALL. WALL THICKNESSES ARE SHOWN NOMINAL - SEE WALL TYPES FOR ACTUAL THICKNESS.

B. COORDINATE SIZE AND LOCATION OF ALL DUCT, SHAFT AND LOUVER OPENINGS IN WALLS AND FLOORS WITH MECHANICAL AND ELECTRICAL. PROVIDE ALL REQUIRED LINTELS FOR OPENINGS AS INDICATED.

C. DO NOT SCALE DRAWINGS. USE DIMENSIONS PROVIDED. IF A CONFLICT IS ENCOUNTERED OR A REQUIRED DIMENSION IS NOT PROVIDED, REQUEST A CLARIFICATION FROM THE ARCHITECT.

D. FIRE RATED PARTITIONS ARE INDICATED ON CODE PLANS.

E. REFER TO CODE PLAN FOR LOCATIONS OF FIRE EXTINGUISHERS

F. REFER TO SPECIFICATIONS AND MECHANICAL DRAWINGS FOR ALL PLUMBING FIXTURES

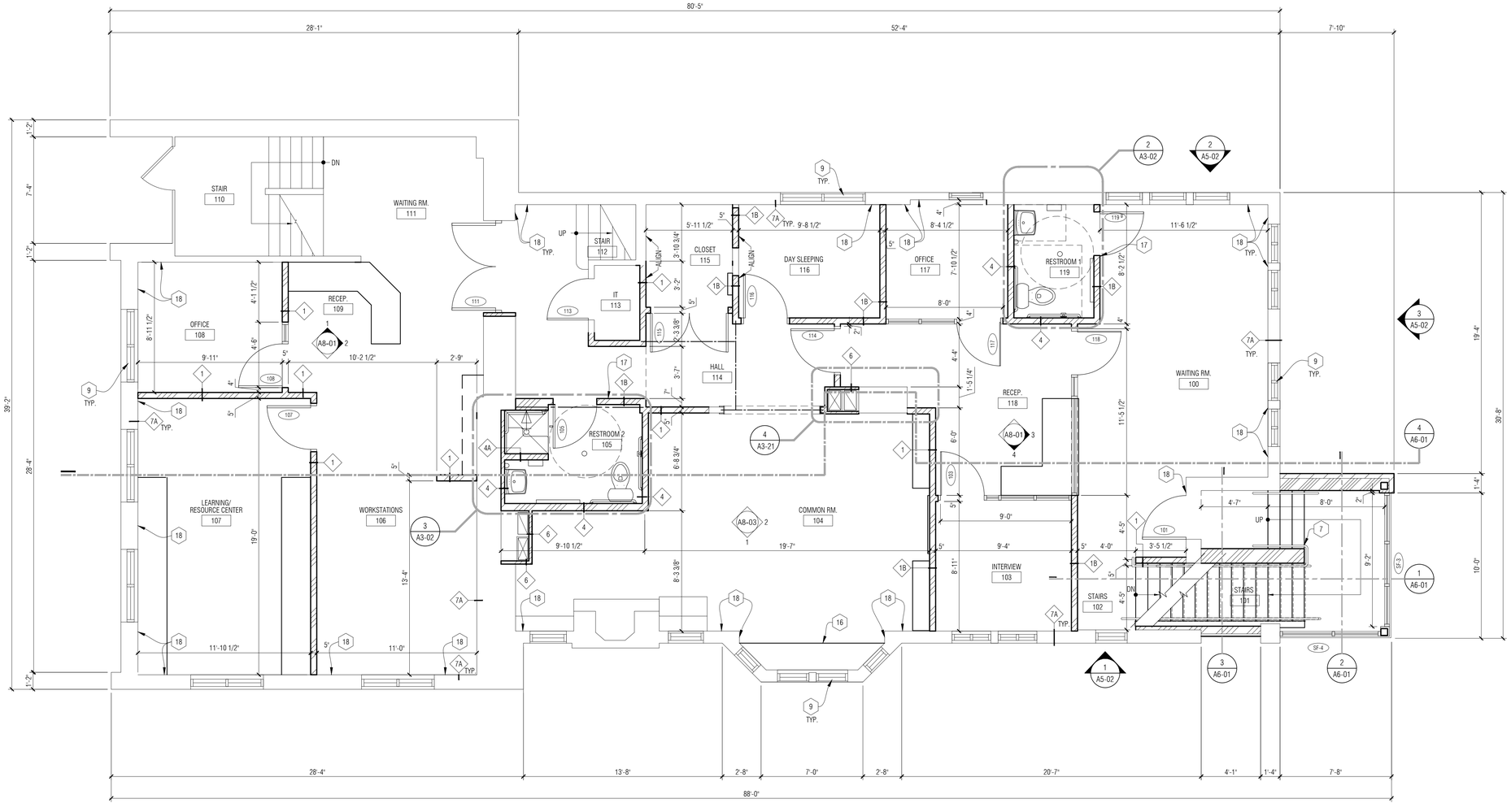
G. FOR TOILET ROOM ACCESSORIES IN EACH OF THE THREE RESTROOMS.. REFER TO A0-01 FOR TYPICAL MOUNTING LOCATIONS. REFER TO SPEC'S FOR DETAILED PRODUCT INFORMATION.

H. REFER TO INTERIOR ELEVATIONS FOR ALL MILLWORK DETAILS.

I. REFER TO FINISH FLOOR PLAN FOR ALL FLOOR PATTERNS, FLOOR TRANSITIONS AND WALL ITEM DESIGNATIONS.

J. INSTALL NEW WOOD WINDOW SILLS AS NECESSARY (PNT-1).

K. ALL DIMENSIONS OF EXISTING WALLS TO REMAIN TO BE FIELD VERIFIED BY CONTRACTOR PRIOR TO DEMO. CONTACT ARCHITECT IF ANY MAJOR DISCREPANCIES IN MEASUREMENTS.



N

1 / A3-02 First Level Floor Plan
1/4" = 1'-0"

FLOOR PLAN KEY NOTES:

1. PLUMBING FIXTURE, REFER TO MECHANICAL.
2. ADA COMPLIANT TRANSFER SHOWER .
3. ALL KITCHEN EQUIPMENT EXCLUDING RANGE HOOD TO BE BY OWNER (RANGE, DISHWASHER, REFRIGERATOR, MICROWAVE, ETC.), REFER TO MEP DRAWINGS FOR REQUIRED UTILITY HOOKUPS.
4. MILLWORK-KITCHEN CABINETS.
5. METAL SHELVING- BY OWNER.
6. NEW GYP. BD. FURRING ON EXISTING EXTERIOR WALL.
7. NEW WOOD STAIR AND HANDRAILS. REFER TO SECTION DETAIL 2 / A6-02.
8. MEET WITH ARCHITECT PRIOR TO INSTALLATION TO REVIEW POTENTIAL INTERFERENCE WITH EXISTING PIPING SYSTEM.
9. EXISTING WINDOW TO REMAIN.
10. NEW MECHANICAL- REFER TO MEP DRAWINGS.
11. EXISTING COLUMN TO REMAIN-REFER TO STRUCTURAL DRAWINGS.
12. ELECTRONIC WATER COOLER.
13. WASHERS & DRYERS. REFER TO MECHANICAL & ELECTRICAL FOR UTILITY HOOKUP REQUIREMENTS.
14. LAUNDRY SINK, REFER TO TO MECHANICAL FOR HOOKUP REQUIREMENTS.
15. UTILITY SINK, REFER TO PLUMBING DRAWINGS.
16. BUILT-IN MILLWORK WINDOW SEAT WITH STORAGE BELOW.
17. TOILET ROOM SIGN WITH TACTILE CHARACTERS.
18. NEW GYPSUM BOARD FINISH ON EXIST. WALL. INFILL STUD CAVITY WITH R-15 BATT. INSULATION ON EXTERIOR WALLS. - FURR OUT IF REQUIRED. V.I.F.
19. 3'-0" X 5'-0" REQUIRED FLOOR CLEARANCE AT BOTTOM OF RAMP.
20. EXISTING SEWER MAIN TO BE MAINTAINED. VERIFY EXACT LOCATION IN FIELD-REFER TO MECH.
21. ATTIC MAKE & MODEL.
22. NEW RANGE HOOD TO BE INSTALLED AND HOOKED UP TO MECH. - REFER TO MECH.
23. EXIST. CHIMNEY.
24. NEW MILLWORK-BUILT-IN SHELVING - REFER TO INTERIOR ELEVATIONS
25. NOT USED
26. FINISH PANEL ON BACK OF CABINETS - PAINT (PNT-5)
27. LINE OF WALL BELOW
28. LINE OF HEADER ABOVE
29. NEW FLOOR DRAIN - REFER TO PLUMBING
30. INFILL EXISTING STUD CAVITY WITH ACOUSTICAL BATT. INSULATION

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

Client Review	01/11/2018
Client Review	01/29/2018
Site Walk-Through	02/26/2018
Client Review	11/28/2018
Building Permit	12/14/2018
BP Revisions-01	10/04/2019

DRAWN BY

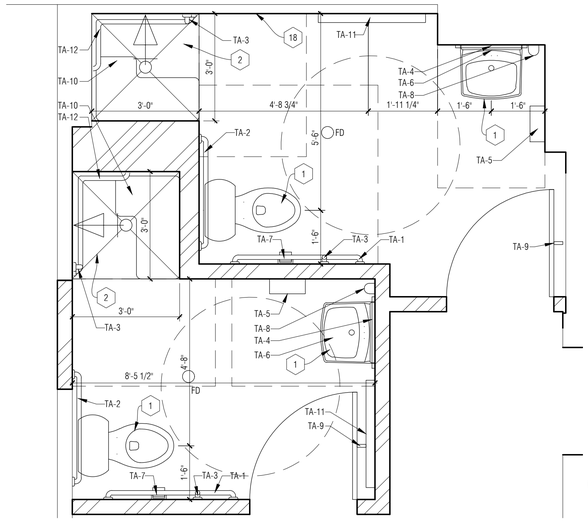
CHECKED BY
LAG

APPROVED BY
MAM

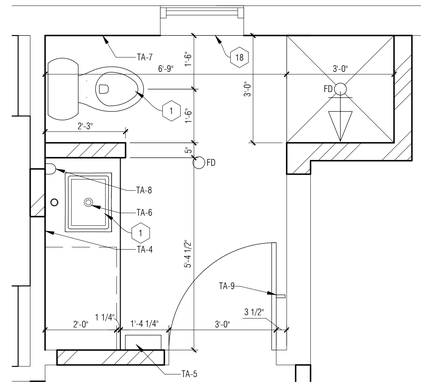
SHEET NAME

FIRST LEVEL
FLOOR PLAN

SHEET NO.
A3-02



3 A3-03 Enlarged Plan-Restroom 208 & 209
1/2" = 1'-0"



2 A3-03 Enlarged Plan-Restroom 216
1/2" = 1'-0"

TOILET ROOM ACCESSORIES:

TA-1: 42" HORIZONTAL GRAB BAR

TA-2: 36" HORIZONTAL GRAB BAR

TA-3: 18" VERTICAL GRAB BAR

TA-4: MIRROR ON WALL ABOVE SINK

TA-5: PAPER TOWER DISPENSER

TA-6: UNDER LAVATORY GUARD

TA-7: TOILET TISSUE DISPENSER

TA-8: SOAP DISPENSER

TA-9: COAT HOOK, ON INTERIOR FACE OF DOOR

TA-10: ADA SHOWER SEAT

TA-11: BABY CHANGING STATION

TA-12 TWO WALL GRAB BAR

FLOOR PLAN GENERAL NOTES:

A. ALL PLAN DIMENSIONS ARE NOMINAL TO FACE OF WALL. WALL THICKNESSES ARE SHOWN NOMINAL - SEE WALL TYPES FOR ACTUAL THICKNESS.

B. COORDINATE SIZE AND LOCATION OF ALL DUCT, SHAFT AND LOUVER OPENINGS IN WALLS AND FLOORS WITH MECHANICAL AND ELECTRICAL. PROVIDE ALL REQUIRED LINTELS FOR OPENINGS AS INDICATED.

C. DO NOT SCALE DRAWINGS. USE DIMENSIONS PROVIDED. IF A CONFLICT IS ENCOUNTERED OR A REQUIRED DIMENSION IS NOT PROVIDED, REQUEST A CLARIFICATION FROM THE ARCHITECT.

D. FIRE RATED PARTITIONS ARE INDICATED ON CODE PLANS.

E. REFER TO CODE PLAN FOR LOCATIONS OF FIRE EXTINGUISHERS

F. REFER TO SPECIFICATIONS AND MECHANICAL DRAWINGS FOR ALL PLUMBING FIXTURES

G. FOR TOILET ROOM ACCESSORIES IN EACH OF THE THREE RESTROOMS,. REFER TO A0-01 FOR TYPICAL MOUNTING LOCATIONS. REFER TO SPEC'S FOR DETAILED PRODUCT INFORMATION.

H. REFER TO INTERIOR ELEVATIONS FOR ALL MILLWORK DETAILS.

I. REFER TO FINISH FLOOR PLAN FOR ALL FLOOR PATTERNS, FLOOR TRANSITIONS AND WALL ITEM DESIGNATIONS.

J. INSTALL NEW WOOD WINDOW SILLS AS NECESSARY (PNT-1).

K. ALL DIMENSIONS OF EXISTING WALLS TO REMAIN TO BE FIELD VERIFIED BY CONTRACTOR PRIOR TO DEMO. CONTACT ARCHITECT IF ANY MAJOR DISCREPANCIES IN MEASUREMENTS.

FLOOR PLAN KEY NOTES:

1 PLUMBING FIXTURE, REFER TO MECHANICAL.

2 ADA COMPLIANT TRANSFER SHOWER .

3 ALL. KITCHEN EQUIPMENT EXCLUDING RANGE HOOD TO BE BY OWNER (RANGE, DISHWASHER, REFRIGERATOR, MICROWAVE, ETC.). REFER TO MEP DRAWINGS FOR REQUIRED UTILITY HOOKUPS.

4 MILLWORK-KITCHEN CABINETS.

5 METAL SHELVING-BY OWNER.

6 NEW GYP. BD. FURRING ON EXISTING EXTERIOR WALL.

7 NEW WOOD STAIR AND HANDRAILS. REFER TO SECTION DETAIL 2 / A6-02.

8 MEET WITH ARCHITECT PRIOR TO INSTALLATION TO REVIEW POTENTIAL INTERFERENCE WITH EXISTING PIPING SYSTEM.

9 EXISTING WINDOW TO REMAIN.

10 NEW MECHANICAL- REFER TO MEP DRAWINGS.

11 EXISTING COLUMN TO REMAIN-REFER TO STRUCTURAL DRAWINGS.

12 ELECTRONIC WATER COOLER.

13 WASHERS & DRYERS. REFER TO MECHANICAL & ELECTRICAL FOR UTILITY HOOKUP REQUIREMENTS.

14 LAUNDRY SINK, REFER TO TO MECHANICAL FOR HOOKUP REQUIREMENTS.

15 UTILITY SINK, REFER TO PLUMBING DRAWINGS.

16 BUILT-IN MILLWORK WINDOW SEAT WITH STORAGE BELOW.

17 TOILET ROOM SIGN WITH TACTILE CHARACTERS.

18 NEW GYPSUM BOARD FINISH ON EXIST. WALL. INFILL STUD CAVITY WITH R-15 BATT. INSULATION ON EXTERIOR WALLS. - FURR OUT IF REQUIRED. V.I.F.

19 3'-0" X 5'-0" REQUIRED FLOOR CLEARANCE AT BOTTOM OF RAMP.

20 EXISTING SEWER MAIN TO BE MAINTAINED. VERIFY EXACT LOCATION IN FIELD-REFER TO MECH.

21 ATTIC MAKE & MODEL.

22 NEW RANGE HOOD TO BE INSTALLED AND HOOKED UP TO MECH. - REFER TO MECH.

23 EXIST. CHIMNEY.

24 NEW MILLWORK-BUILT-IN SHELVING - REFER TO INTERIOR ELEVATIONS

25 NOT USED

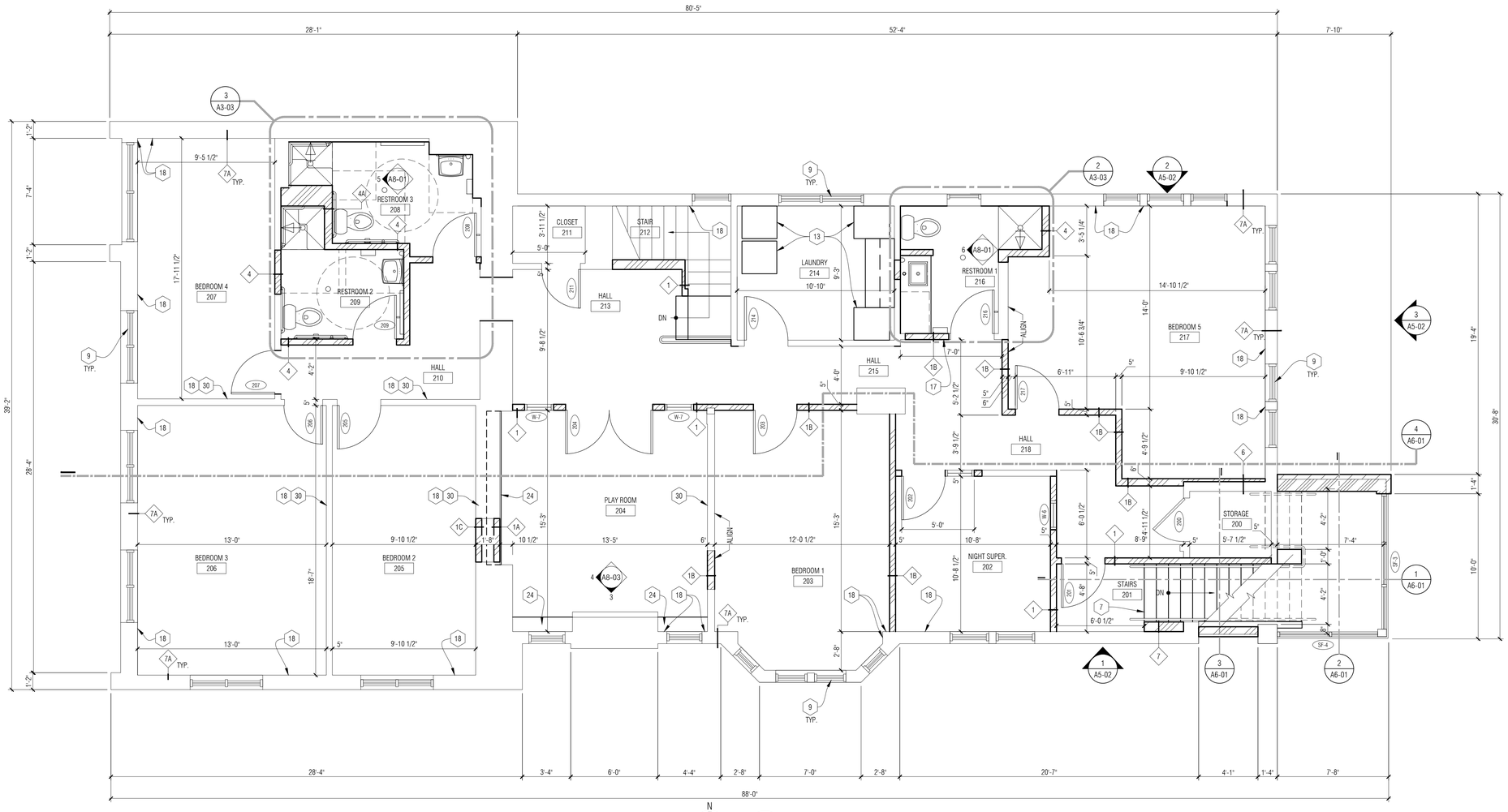
26 FINISH PANEL ON BACK OF CABINETS - PAINT (PNT-5)

27 LINE OF WALL BELOW

28 LINE OF HEADER ABOVE

29 NEW FLOOR DRAIN - REFER TO PLUMBING

30 INFILL EXISTING STUD CAVITY WITH ACOUSTICAL BATT. INSULATION



N

1 A3-03 Second Level Floor Plan
1/4" = 1'-0"

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

Client Review	01/11/2018
Client Review	01/29/2018
Site Walk-Through	02/26/2018
Client Review	11/28/2018
Building Permit	12/14/2018
BP Revisions-01	10/04/2019

DRAWN BY

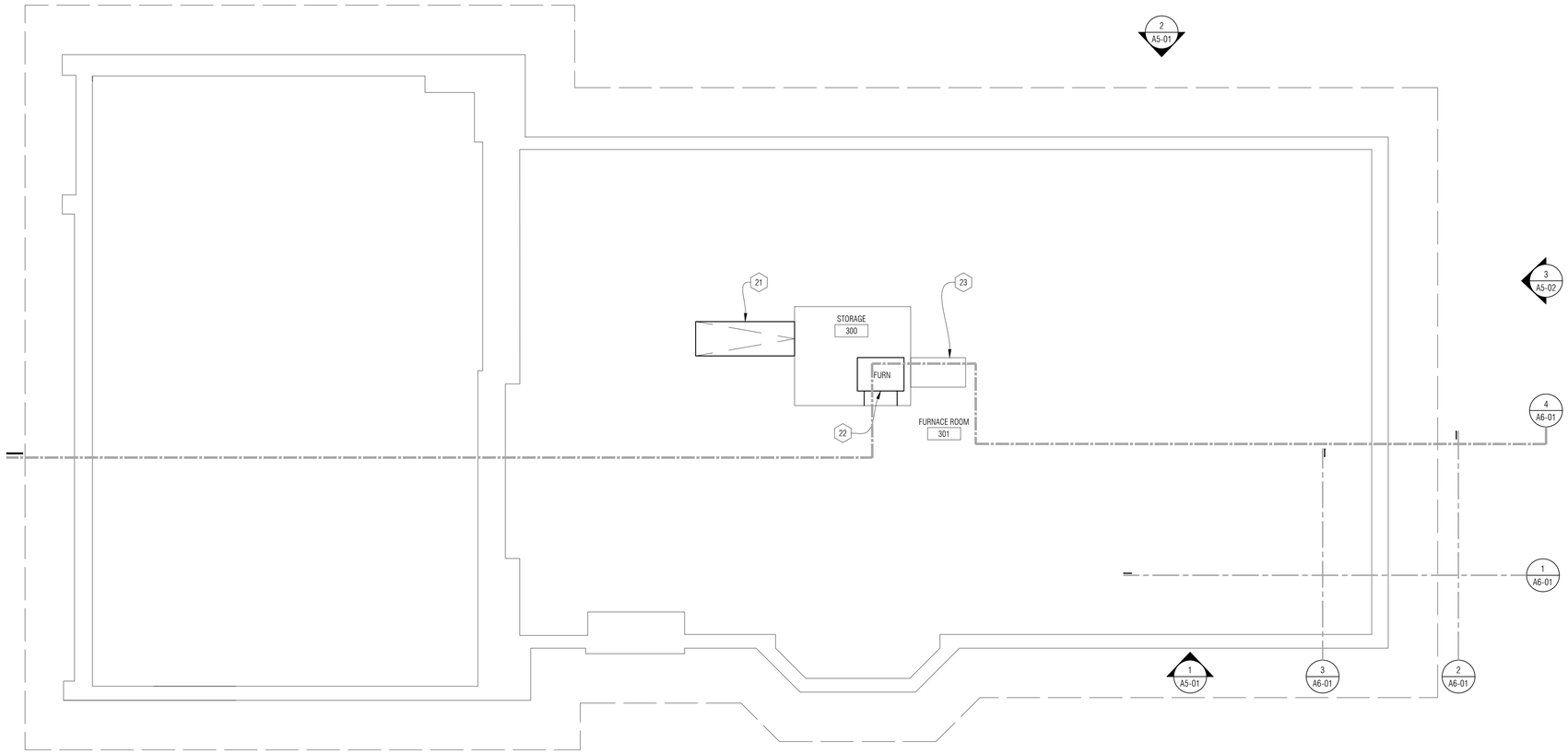
CHECKED BY
LAG

APPROVED BY
MAM

SHEET NAME

SECOND LEVEL
FLOOR PLAN

SHEET NO.
A3-03



N

1 Attic Floor Plan
1/4" = 1'-0"

25 NOT USED

26 FINISH PANEL ON BACK OF CABINETS - PAINT (PNT-5)

27 LINE OF WALL BELOW

28 LINE OF HEADER ABOVE

29 NEW FLOOR DRAIN - REFER TO PLUMBING

30 INFILL EXISTING STUD CAVITY WITH ACOUSTICAL BATT. INSULATION

TOILET ROOM ACCESSORIES:

TA-1: 42" HORIZONTAL GRAB BAR

TA-2: 36" HORIZONTAL GRAB BAR

FLOOR PLAN GENERAL NOTES:

A. ALL PLAN DIMENSIONS ARE NOMINAL TO FACE OF WALL. WALL THICKNESSES ARE SHOWN NOMINAL - SEE WALL TYPES FOR ACTUAL THICKNESS.

B. COORDINATE SIZE AND LOCATION OF ALL DUCT, SHAFT AND LOUVER OPENINGS IN WALLS AND FLOORS WITH MECHANICAL AND ELECTRICAL. PROVIDE ALL REQUIRED LINTELS FOR OPENINGS AS INDICATED.

C. DO NOT SCALE DRAWINGS. USE DIMENSIONS PROVIDED. IF A CONFLICT IS ENCOUNTERED OR A REQUIRED DIMENSION IS NOT PROVIDED, REQUEST A CLARIFICATION FROM THE ARCHITECT.

D. FIRE RATED PARTITIONS ARE INDICATED ON CODE PLANS.

E. REFER TO CODE PLAN FOR LOCATIONS OF FIRE EXTINGUISHERS

F. REFER TO SPECIFICATIONS AND MECHANICAL DRAWINGS FOR ALL PLUMBING FIXTURES

G. FOR TOILET ROOM ACCESSORIES IN EACH OF THE THREE RESTROOMS., REFER TO A0-01 FOR TYPICAL MOUNTING LOCATIONS. REFER TO SPEC'S FOR DETAILED PRODUCT INFORMATION.

H. REFER TO INTERIOR ELEVATIONS FOR ALL MILLWORK DETAILS.

I. REFER TO FINISH FLOOR PLAN FOR ALL FLOOR PATTERNS, FLOOR TRANSITIONS AND WALL ITEM DESIGNATIONS.

J. INSTALL NEW WOOD WINDOW SILLS AS NECESSARY (PNT-1).

K. ALL DIMENSIONS OF EXISTING WALLS TO REMAIN TO BE FIELD VERIFIED BY CONTRACTOR PRIOR TO DEMO. CONTACT ARCHITECT IF ANY MAJOR DISCREPANCIES IN MEASUREMENTS.

FLOOR PLAN KEY NOTES:

1 PLUMBING FIXTURE, REFER TO MECHANICAL.

2 ADA COMPLIANT TRANSFER SHOWER .

3 ALL KITCHEN EQUIPMENT EXCLUDING RANGE HOOD TO BE BY OWNER (RANGE, DISHWASHER, REFRIGERATOR, MICROWAVE, ETC.), REFER TO MEP DRAWINGS FOR REQUIRED UTILITY HOOKUPS.

4 MILLWORK-KITCHEN CABINETS.

5 METAL SHELVING-BY OWNER.

6 NEW GYP. BD. FURRING ON EXISTING EXTERIOR WALL.

7 NEW WOOD STAIR AND HANDRAILS. REFER TO SECTION DETAIL 2 / A6-02.

8 MEET WITH ARCHITECT PRIOR TO INSTALLATION TO REVIEW POTENTIAL INTERFERENCE WITH EXISTING PIPING SYSTEM.

9 EXISTING WINDOW TO REMAIN.

10 NEW MECHANICAL- REFER TO MEP DRAWINGS.

11 EXISTING COLUMN TO REMAIN-REFER TO STRUCTURAL DRAWINGS.

12 ELECTRONIC WATER COOLER.

13 WASHERS & DRYERS. REFER TO MECHANICAL & ELECTRICAL FOR UTILITY HOOKUP REQUIREMENTS.

14 LAUNDRY SINK, REFER TO TO MECHANICAL FOR HOOKUP REQUIREMENTS.

15 UTILITY SINK, REFER TO PLUMBING DRAWINGS.

16 BUILT-IN MILLWORK WINDOW SEAT WITH STORAGE BELOW.

17 TOILET ROOM SIGN WITH TACTILE CHARACTERS.

18 NEW GYPSUM BOARD FINISH ON EXIST. WALL. INFILL STUD CAVITY WITH R-15 BATT. INSULATION ON EXTERIOR WALLS. - FURR OUT IF REQUIRED. V.I.F.

19 3'-0" X 5'-0" REQUIRED FLOOR CLEARANCE AT BOTTOM OF RAMP.

20 EXISTING SEWER MAIN TO BE MAINTAINED. VERIFY EXACT LOCATION IN FIELD-REFER TO MECH.

21 ATTIC MAKE & MODEL.

22 NEW RANGE HOOD TO BE INSTALLED AND HOOKED UP TO MECH. - REFER TO MECH.

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

Client Review	01/11/2018
Client Review	01/29/2018
Site Walk-Through	02/26/2018
Client Review	11/28/2018
Building Permit	12/14/2018
BP Revisions-01	10/04/2019

DRAWN BY

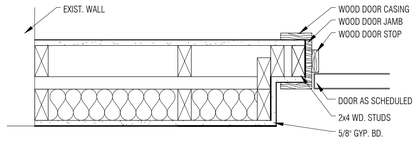
CHECKED BY
LAG

APPROVED BY
MAM

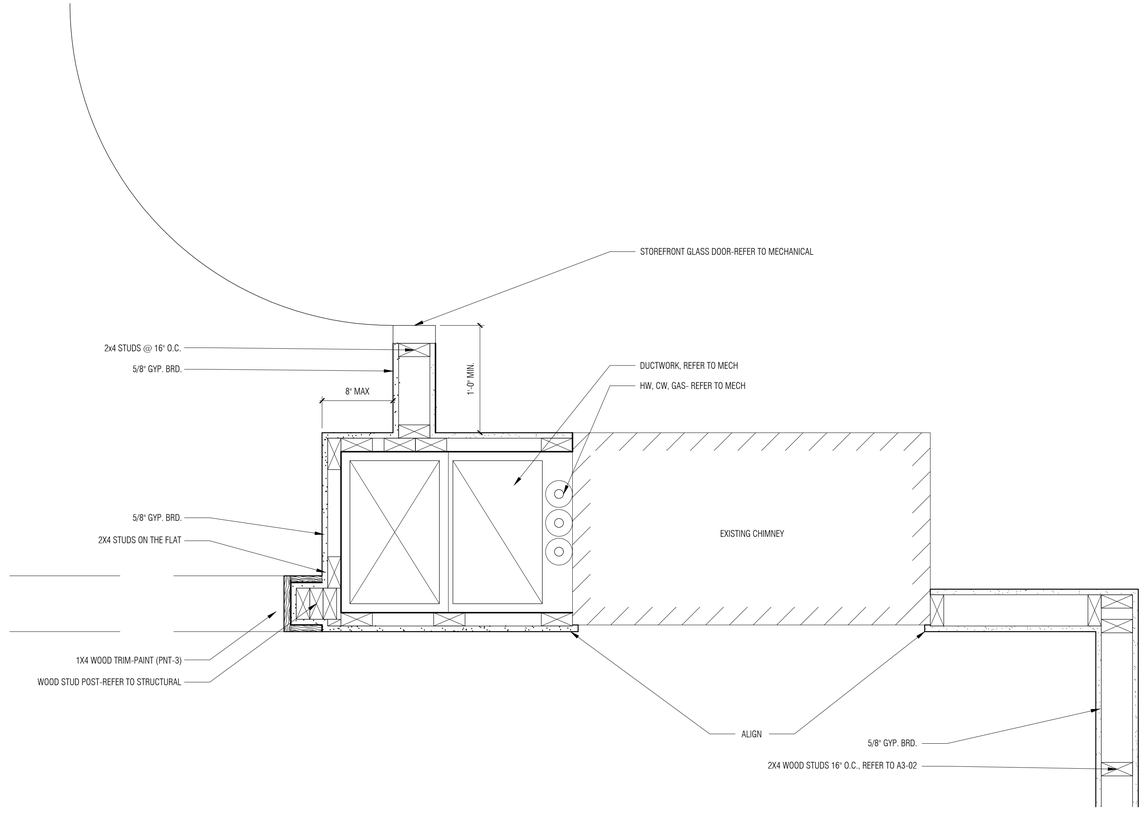
SHEET NAME

ATTIC FLOOR PLAN

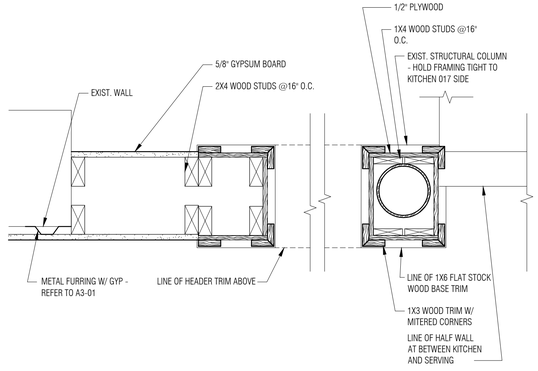
SHEET NO.
A3-04



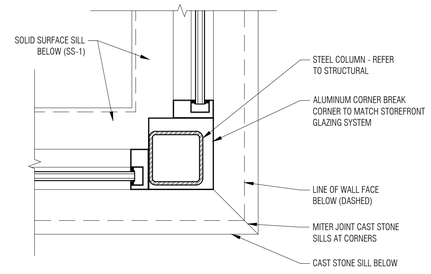
5 A3-02 Restroom 2 Framing Detail
1-1/2" = 1'-0"



4 A3-02 Chase Framing Detail
1-1/2" = 1'-0"



2 A3-01 Detail @ Exist. Pipe Columns
1-1/2" = 1'-0"



1 A3-01 Column Storefront Detail
1-1/2" = 1'-0"

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

Client Review	01/11/2018
Client Review	01/29/2018
Site Walk-Through	02/26/2018
Client Review	11/28/2018
Building Permit	12/14/2018
BP Revisions-01	10/04/2019

DRAWN BY

NPR

CHECKED BY

LAG

APPROVED BY

MAM

SHEET NAME

Plan Details

SHEET NO.

A3-21

REFLECTED CEILING PLAN - GENERAL NOTES:

A. REFER TO FLOOR PLANS FOR ROOM NAMES, NUMBERS AND ROOM DIMENSIONS.

B. REFER TO ELECTRICAL FOR LIGHT FIXTURE TYPES AND SPECIFICATIONS.

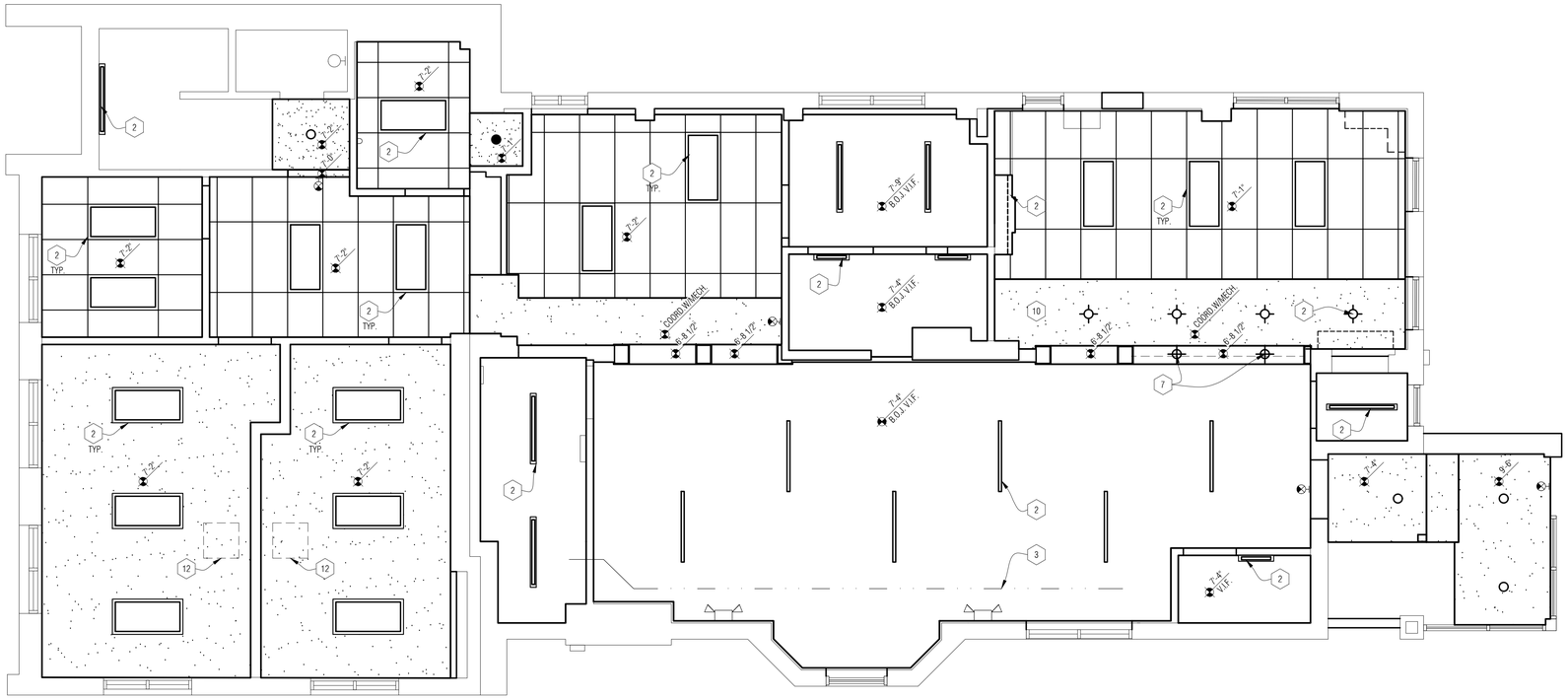
C. REFER TO MECHANICAL FOR DIFFUSERS, REGISTERS, AND RETURNS.

D. ALL LIGHT FIXTURES ARE TO BE CENTERED WITHIN CEILING U.O.N.

E. PAINT ALL EXPOSED STRUCTURE, MECH, AND ELEC - REFER TO SPEC SECTION 000200 MATERIAL / FINISH COLOR SCHEDULE AND DRAWINGS FOR EXACT COLORS.

REFLECTED CEILING PLAN - KEY NOTES:

1. GYPSUM BOARD CEILING / SOFFIT - PNT-1.
2. LIGHT FIXTURE - COORDINATE WITH ELEC.
3. LINE OF DUCT RUN - REFER TO MECH.
4. DECORATIVE WALL MOUNTED LIGHT FIXTURE.
5. ATTIC ACCESS HATCH. V.I.F. CLEARANCES WITH EXISTING WALLS
6. VENTED ALUMINUM SOFFIT PANELS.
7. DECORATIVE PENDANT LIGHT - REFER TO ELEC.
8. 2 x 4 SUSPENDED ACOUSTICAL CEILING TILE SYSTEM (ACT-1)
9. 2 x 2 SUSPENDED ACOUSTICAL CEILING TILE SYSTEM (ACT-2)
10. COORDINATE SOFFIT DIMENSION & HEIGHT W/ MECH. HOLD TIGHT TO THE UNDERSIDE.
11. SOFFIT - REFER TO WALL SECTIONS FOR WIDTH & CEILING HEIGHT.
12. FIRE RATED LOCKABLE ACCESS PANEL
13. CEILING HEIGHT TO BE V.I.F. - CEILING TO FOLLOW BOTTOM OF EXISTING STAIR



N

1 Lower Level Reflected Ceiling Plan
1/4" = 1'-0"

Ceiling Symbols Legend

	5/8" GYP BD ON 7/8" METAL FURRING CONSTRUCTION AT 16" O.C. SECURE TO STRUCTURE ABOVE AT 48" O.C. MAX EACH WAY
	2' X 4' LAY-IN LIGHT FIXTURE IN GRID
	2' X 2' LAY-IN LIGHT FIXTURE IN GRID
	6" RECESSED ROUND LIGHT FIXTURE
	6" RECESSED ROUND LIGHT FIXTURE / WET LOCATION
	EXIT LIGHT - CEILING MOUNTED
	EXIT LIGHT - WALL MOUNTED
	VIDEO SURVEILLANCE CAMERA - COORD WITH TECH AND ELEC
	SUPPLY AIR DIFFUSER (MECHANICAL)
	RETURN AIR GRILLE (MECHANICAL)
	WALL MOUNTED LIGHT FIXTURE
	WALL MOUNTED LINEAR FIXTURES
	UNDER CABINET LED STRIP LIGHT
	PENDANT LIGHT FIXTURE
	SURFACE MOUNT LIGHT FIXTURE
	CHAIN HUNG FIXTURE
	2' X 48" LINEAR FIXTURE
	EMERGENCY LIGHT FIXTURE

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

Client Review	01/11/2018
Client Review	01/29/2018
Site Walk-Through	02/26/2018
Client Review	11/28/2018
Building Permit	12/14/2018
BP Revisions-01	10/04/2019

DRAWN BY
GV

CHECKED BY
LAG

APPROVED BY
MAM

SHEET NAME

LOWER LEVEL
REFLECTED
CEILING PLAN

SHEET NO.
A4-01

REFLECTED CEILING PLAN - GENERAL NOTES:

A. REFER TO FLOOR PLANS FOR ROOM NAMES, NUMBERS AND ROOM DIMENSIONS.

B. REFER TO ELECTRICAL FOR LIGHT FIXTURE TYPES AND SPECIFICATIONS.

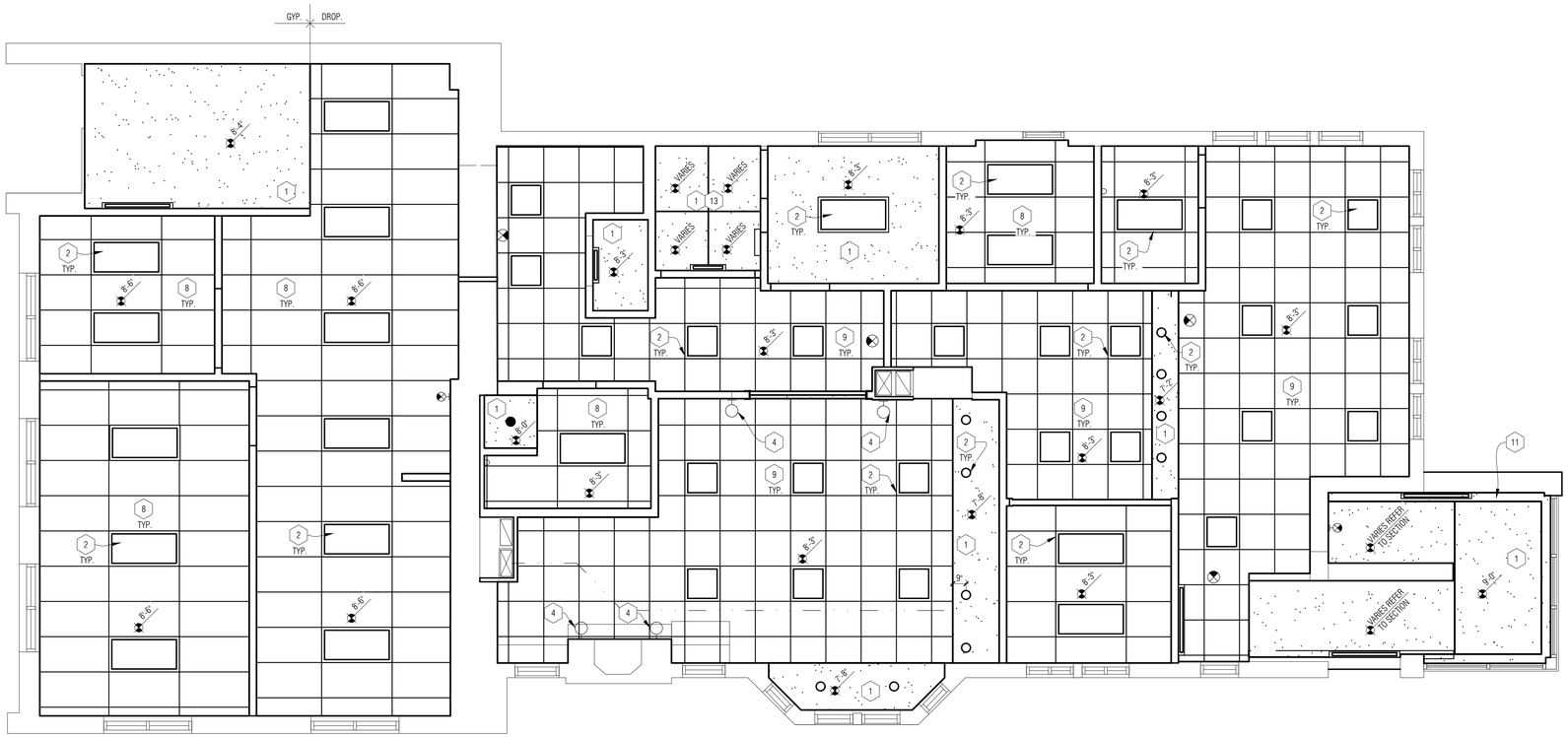
C. REFER TO MECHANICAL FOR DIFFUSERS, REGISTERS, AND RETURNS.

D. ALL LIGHT FIXTURES ARE TO BE CENTERED WITHIN CEILING U.O.N.

E. PAINT ALL EXPOSED STRUCTURE, MECH, AND ELEC - REFER TO SPEC SECTION 000200 MATERIAL / FINISH COLOR SCHEDULE AND DRAWINGS FOR EXACT COLORS.

REFLECTED CEILING PLAN - KEY NOTES:

1. GYPSUM BOARD CEILING / SOFFIT - PNT-1.
2. LIGHT FIXTURE - COORDINATE WITH ELEC.
3. LINE OF DUCT RUN - REFER TO MECH.
4. DECORATIVE WALL MOUNTED LIGHT FIXTURE.
5. ATTIC ACCESS HATCH. V.I.F. CLEARANCES WITH EXISTING WALLS
6. VENTED ALUMINUM SOFFIT PANELS.
7. DECORATIVE PENDANT LIGHT - REFER TO ELEC.
8. 2 x 4 SUSPENDED ACOUSTICAL CEILING TILE SYSTEM (ACT-1)
9. 2 x 2 SUSPENDED ACOUSTICAL CEILING TILE SYSTEM (ACT-2)
10. COORDINATE SOFFIT DIMENSION & HEIGHT W/ MECH. HOLD TIGHT TO THE UNDERSIDE.
11. SOFFIT - REFER TO WALL SECTIONS FOR WIDTH & CEILING HEIGHT.
12. FIRE RATED LOCKABLE ACCESS PANEL
13. CEILING HEIGHT TO BE V.I.F. - CEILING TO FOLLOW BOTTOM OF EXISTING STAIR



N

1 First Level Reflected Ceiling Plan
1/4" = 1'-0"

Ceiling Symbols Legend

	5/8" GYP BD ON 7/8" METAL FURRING CONSTRUCTION AT 16" O.C. SECURE TO STRUCTURE ABOVE AT 48" O.C. MAX EACH WAY
	2' X 4' LAY-IN LIGHT FIXTURE IN GRID
	2' X 2' LAY-IN LIGHT FIXTURE IN GRID
	6" RECESSED ROUND LIGHT FIXTURE
	6" RECESSED ROUND LIGHT FIXTURE / WET LOCATION
	EXIT LIGHT - CEILING MOUNTED
	EXIT LIGHT - WALL MOUNTED
	VIDEO SURVEILLANCE CAMERA - COORD WITH TECH AND ELEC
	SUPPLY AIR DIFFUSER (MECHANICAL)
	RETURN AIR GRILLE (MECHANICAL)
	WALL MOUNTED LIGHT FIXTURE
	WALL MOUNTED LINEAR FIXTURES
	UNDER CABINET LED STRIP LIGHT
	PENDANT LIGHT FIXTURE
	SURFACE MOUNT LIGHT FIXTURE
	CHAIN HUNG FIXTURE
	2' X 48" LINEAR FIXTURE
	EMERGENCY LIGHT FIXTURE

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

Client Review	01/11/2018
Client Review	01/29/2018
Site Walk-Through	02/26/2018
Client Review	11/28/2018
Building Permit	12/14/2018
BP Revisions-01	10/04/2019

DRAWN BY
GV

CHECKED BY
LAG

APPROVED BY
MAM

SHEET NAME

FIRST LEVEL
REFLECTED
CEILING PLAN

SHEET NO.
A4-02

REFLECTED CEILING PLAN - GENERAL NOTES:

A. REFER TO FLOOR PLANS FOR ROOM NAMES, NUMBERS AND ROOM DIMENSIONS.

B. REFER TO ELECTRICAL FOR LIGHT FIXTURE TYPES AND SPECIFICATIONS.

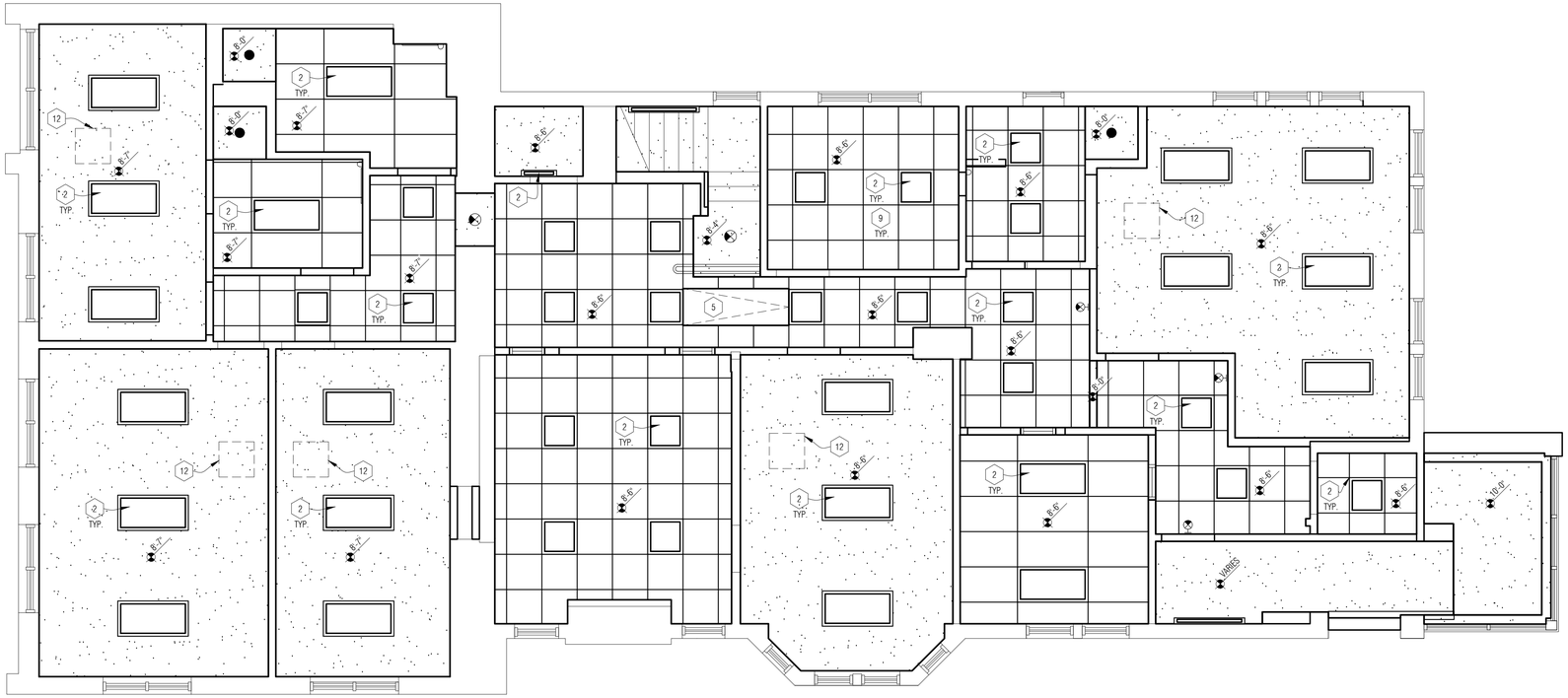
C. REFER TO MECHANICAL FOR DIFFUSERS, REGISTERS, AND RETURNS.

D. ALL LIGHT FIXTURES ARE TO BE CENTERED WITHIN CEILING U.O.N.

E. PAINT ALL EXPOSED STRUCTURE, MECH, AND ELEC - REFER TO SPEC SECTION 000200 MATERIAL / FINISH COLOR SCHEDULE AND DRAWINGS FOR EXACT COLORS.

REFLECTED CEILING PLAN - KEY NOTES:

1. GYPSUM BOARD CEILING / SOFFIT - PNT-1.
2. LIGHT FIXTURE - COORDINATE WITH ELEC.
3. LINE OF DUCT RUN - REFER TO MECH.
4. DECORATIVE WALL MOUNTED LIGHT FIXTURE.
5. ATTIC ACCESS HATCH. V.I.F. CLEARANCES WITH EXISTING WALLS
6. VENTED ALUMINUM SOFFIT PANELS.
7. DECORATIVE PENDANT LIGHT - REFER TO ELEC.
8. 2 x 4 SUSPENDED ACOUSTICAL CEILING TILE SYSTEM (ACT-1)
9. 2 x 2 SUSPENDED ACOUSTICAL CEILING TILE SYSTEM (ACT-2)
10. COORDINATE SOFFIT DIMENSION & HEIGHT W/ MECH. HOLD TIGHT TO THE UNDERSIDE.
11. SOFFIT - REFER TO WALL SECTIONS FOR WIDTH & CEILING HEIGHT.
12. FIRE RATED LOCKABLE ACCESS PANEL
13. CEILING HEIGHT TO BE V.I.F. - CEILING TO FOLLOW BOTTOM OF EXISTING STAIR



N

1 Second Level Reflected Ceiling Plan
1/4" = 1'-0"

Ceiling Symbols Legend

	5/8" GYP BD ON 7/8" METAL FURRING CONSTRUCTION AT 16" O.C. SECURE TO STRUCTURE ABOVE AT 48" O.C. MAX EACH WAY
	2' X 4' LAY-IN LIGHT FIXTURE IN GRID
	2' X 2' LAY-IN LIGHT FIXTURE IN GRID
	6" RECESSED ROUND LIGHT FIXTURE
	6" RECESSED ROUND LIGHT FIXTURE / WET LOCATION
	EXIT LIGHT - CEILING MOUNTED
	EXIT LIGHT - WALL MOUNTED
	VIDEO SURVEILLANCE CAMERA - COORD WITH TECH AND ELEC
	SUPPLY AIR DIFFUSER (MECHANICAL)
	RETURN AIR GRILLE (MECHANICAL)
	WALL MOUNTED LIGHT FIXTURE
	WALL MOUNTED LINEAR FIXTURES
	UNDER CABINET LED STRIP LIGHT
	PENDANT LIGHT FIXTURE
	SURFACE MOUNT LIGHT FIXTURE
	CHAIN HUNG FIXTURE
	2' X 48' LINEAR FIXTURE
	EMERGENCY LIGHT FIXTURE

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

Client Review	01/11/2018
Client Review	01/29/2018
Site Walk-Through	02/26/2018
Client Review	11/28/2018
Building Permit	12/14/2018
BP Revisions-01	10/04/2019

DRAWN BY

GV

CHECKED BY

LAG

APPROVED BY

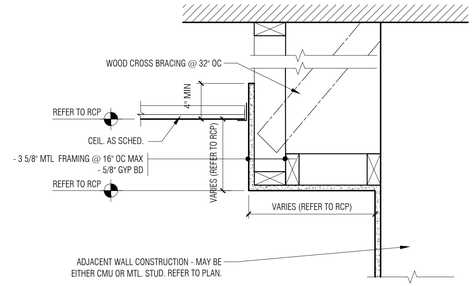
MAM

SHEET NAME

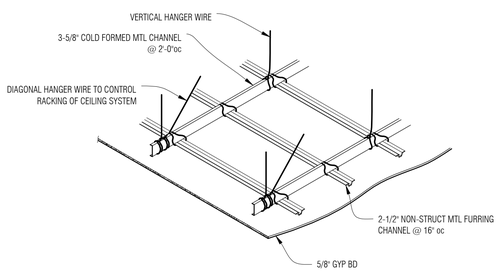
SECOND LEVEL REFLECTED CEILING PLAN

SHEET NO.

A4-03



2 Typ. Perimeter Gyp. Bd. Drop
1-1/2" = 1'-0"



1 Typ. Gyp. Bd. Ceiling Framing
1-1/2" = 1'-0"

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

Client Review	01/11/2018
Client Review	01/29/2018
Site Walk-Through	02/26/2018
Client Review	11/28/2018
Building Permit	12/14/2018
BP Revisions-01	10/04/2019

DRAWN BY
MZ / NPR

CHECKED BY
LAG

APPROVED BY
MAM

SHEET NAME

CEILING DETAILS

SHEET NO.
A4-11

EXTERIOR ELEVATIONS - GENERAL NOTES:

REFER TO MATERIAL FINISH / COLOR SCHEDULE (SPEC SECTION 000200)

EXTERIOR ELEVATIONS - KEY NOTES:

1. CULTURED STONE SILL - (CS-1).
2. ASPHALT ROOF SHINGLES - (ASPH-1).
3. EXTERIOR SIGNAGE.
4. WALL-MOUNTED LIGHT FIXTURE. REFER TO ELEC.
5. 5" ALUMINUM GUTTER SYSTEM.
6. ALUMINUM DOWNSPOUT. TIE INTO UNDERGROUND STORM LINE WITH CAST IRON DOWNSPOUT BOOT. COORDINATE WITH CIVIL.
7. REPAIR EXISTING BROKEN OR DAMAGED GLASS AS NEEDED. V.I.F.
8. VINYL CLAD WOOD WINDOW - REFER TO WINDOW SCHEDULE.
9. PVC TRIM - FACTORY FINISH.
10. VINYL CLAD WOOD WINDOW W/ TRANSLUCENT FILM.
11. LOUVERED GABLE VENT - PAINT TO MATCH BRICK.
12. STANDARD BRICK TO MATCH EXISTING - (FB-1).
13. SOLDIER COURSE CERAMIC GLAZED BRICK - (FB-2).
14. EXTERIOR INSULATION FINISH SYSTEM - (STO-1).
15. STOREFRONT GLAZING SYSTEM -REFER TO SCHEDULE
16. TINTED STOREFRONT GLAZING SYSTEM -REFER TO SCHEDULE
17. DASHED LINE INDICATES TO REMOVE EXISTING BRICK, STONE SILL AND ADD ADDITIONAL COURSING AS NECESSARY TO PREP. FOR NEW WINDOW.
18. STAIN EXISTING BRICK (BRST-1).
19. REMOVE EXISTING AWNING AND REPLACE.
20. STAIN EXISTING BRICK (BRST-2).
21. EXTERIOR INSULATION FINISH SYSTEM (STO-2).

2 / A3-01 North West Elevation
N.T.S.

1 / A3-01 Southwest Elevation
N.T.S

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

Client Review	01/11/2018
Client Review	01/29/2018
Site Walk-Through	02/26/2018
Client Review	11/28/2018
Building Permit	12/14/2018
BP Revisions-01	10/04/2019

DRAWN BY

GV

CHECKED BY

LAG

APPROVED BY

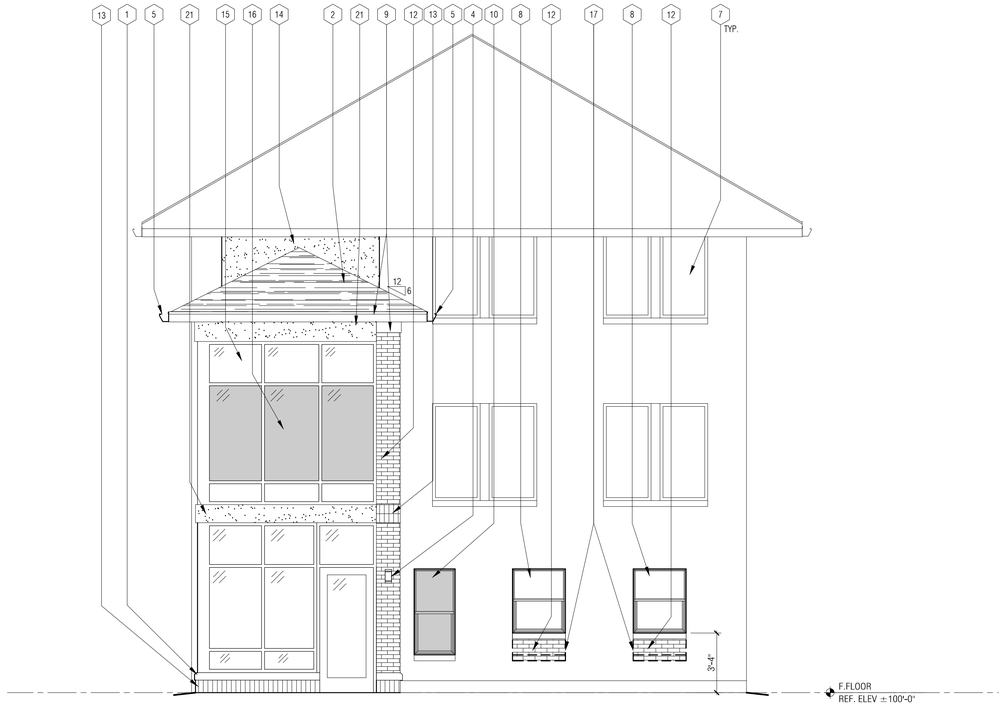
MAM

SHEET NAME

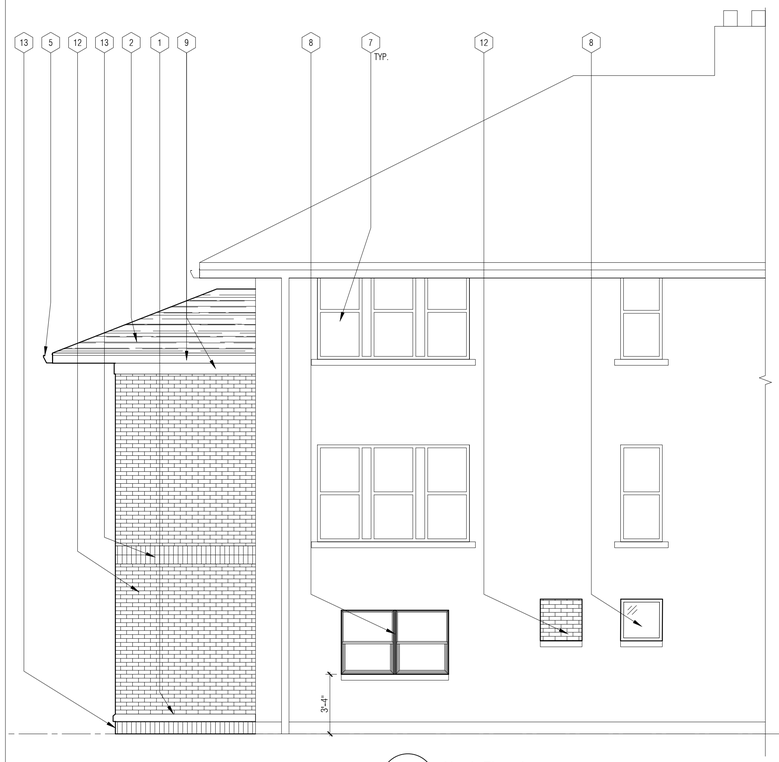
EXTERIOR ELEVATIONS

SHEET NO.

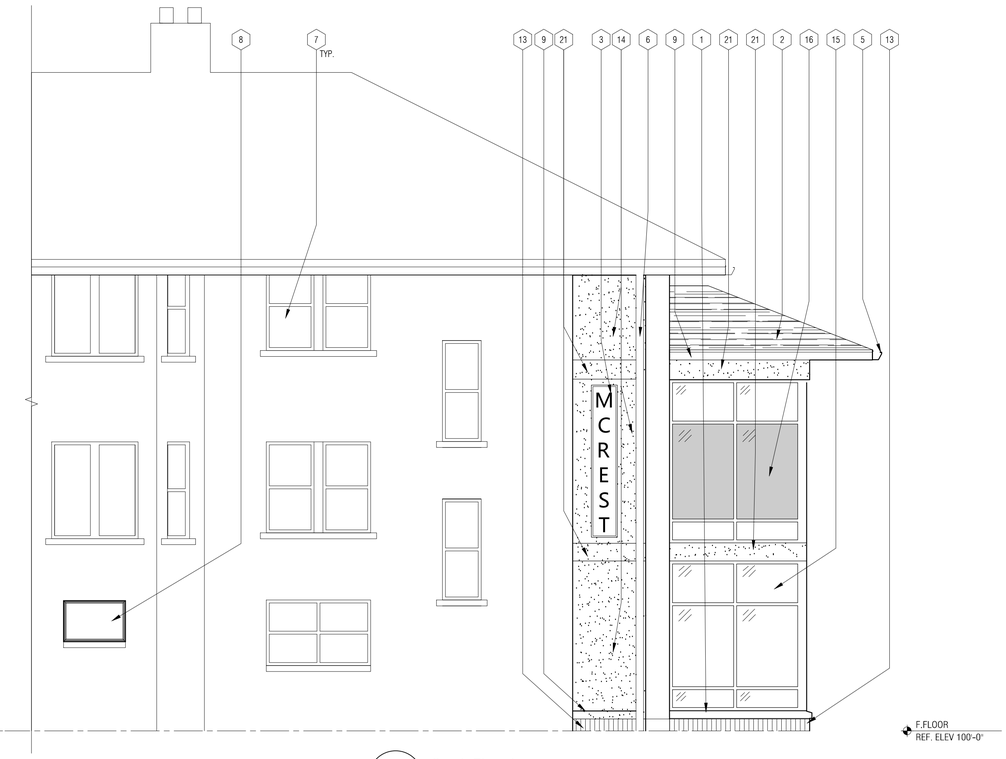
A5-01



3 / A3-01 East Elevation
1/4" = 1'-0"



2 / A3-01 North Elevation
1/4" = 1'-0"



1 / A3-01 South Elevation
1/4" = 1'-0"

EXTERIOR ELEVATIONS - GENERAL NOTES:

REFER TO MATERIAL FINISH / COLOR SCHEDULE (SPEC SECTION 000200)

EXTERIOR ELEVATIONS - KEY NOTES:

1. CULTURED STONE SILL - (CS-1).
2. ASPHALT ROOF SHINGLES - (ASPH-1).
3. EXTERIOR SIGNAGE.
4. WALL-MOUNTED LIGHT FIXTURE. REFER TO ELEC.
5. 5" ALUMINUM GUTTER SYSTEM.
6. ALUMINUM DOWNSPOUT. TIE INTO UNDERGROUND STORM LINE WITH CAST IRON DOWNSPOUT BOOT. COORDINATE WITH CIVIL.
7. REPAIR EXISTING BROKEN OR DAMAGED GLASS AS NEEDED. V.I.F.
8. VINYL CLAD WOOD WINDOW - REFER TO WINDOW SCHEDULE.
9. PVC TRIM - FACTORY FINISH.
10. VINYL CLAD WOOD WINDOW W/ TRANSLUCENT FILM.
11. LOUVERED GABLE VENT - PAINT TO MATCH BRICK.
12. STANDARD BRICK TO MATCH EXISTING - (FB-1).
13. SOLDIER COURSE CERAMIC GLAZED BRICK - (FB-2).
14. EXTERIOR INSULATION FINISH SYSTEM - (STO-1).
15. STOREFRONT GLAZING SYSTEM -REFER TO SCHEDULE
16. TINTED STOREFRONT GLAZING SYSTEM -REFER TO SCHEDULE
17. DASHED LINE INDICATES TO REMOVE EXISTING BRICK, STONE SILL AND ADD ADDITIONAL COURSING AS NECESSARY TO PREP. FOR NEW WINDOW.
18. STAIN EXISTING BRICK (BRST-1).
19. REMOVE EXISTING AWNING AND REPLACE.
20. STAIN EXISTING BRICK (BRST-2).
21. EXTERIOR INSULATION FINISH SYSTEM (STO-2).

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

Client Review	01/11/2018
Client Review	01/29/2018
Site Walk-Through	02/26/2018
Client Review	11/28/2018
Building Permit	12/14/2018
BP Revisions-01	10/04/2019

DRAWN BY
GV

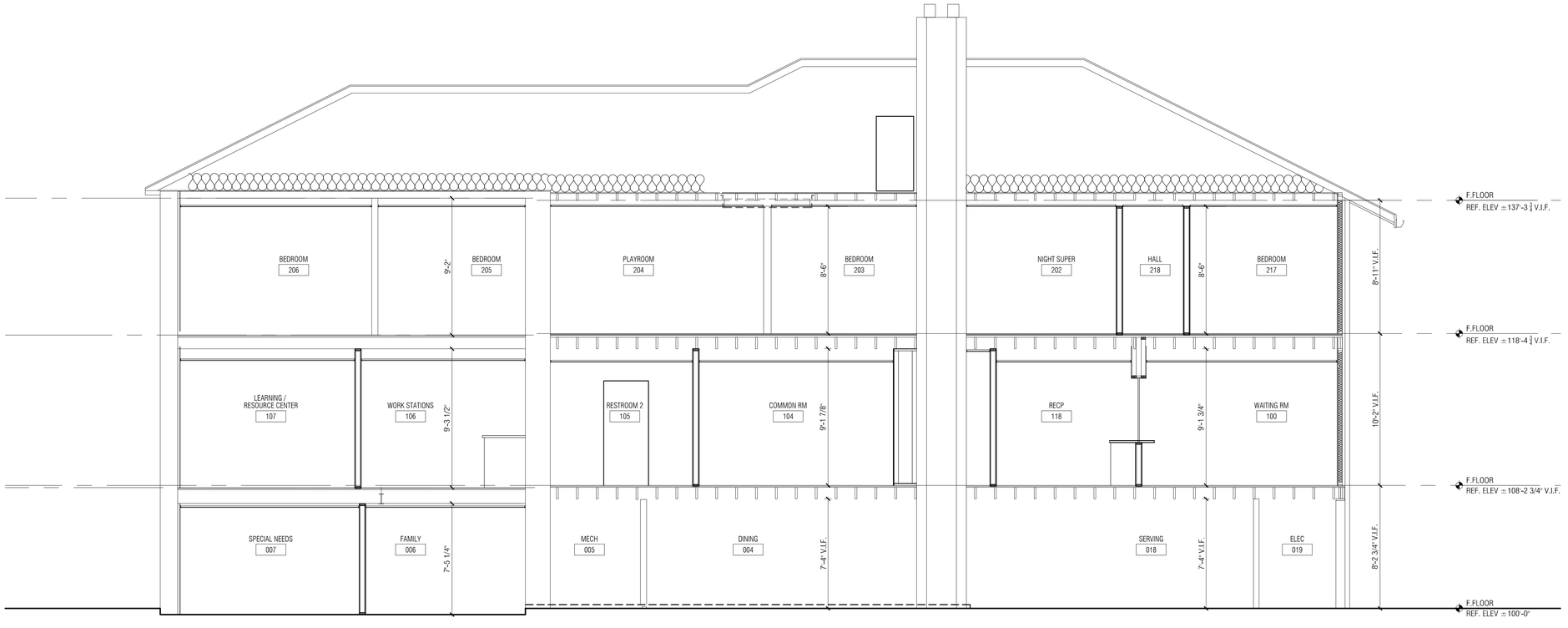
CHECKED BY
LAG

APPROVED BY
MAM

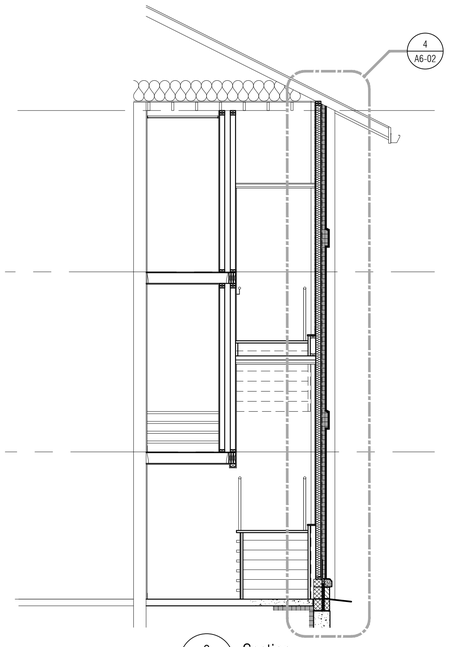
SHEET NAME

EXTERIOR ELEVATIONS

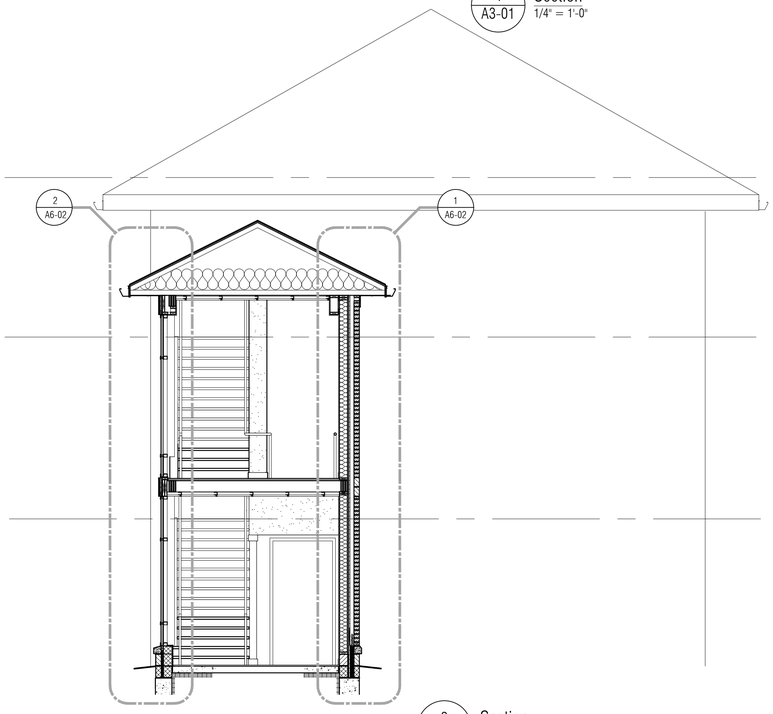
SHEET NO.
A5-02



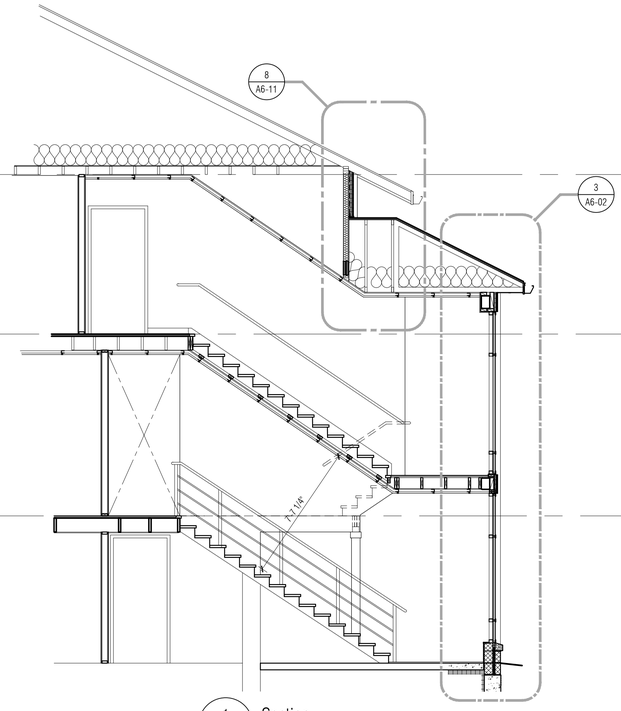
4 / A3-01 Section
1/4" = 1'-0"



3 / A3-01 Section
1/4" = 1'-0"



2 / A3-01 Section
1/4" = 1'-0"



1 / A3-01 Section
1/4" = 1'-0"

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

Client Review	01/11/2018
Client Review	01/29/2018
Site Walk-Through	02/26/2018
Client Review	11/28/2018
Building Permit	12/14/2018
BP Revisions-01	10/04/2019

DRAWN BY

GV

CHECKED BY

LAG

APPROVED BY

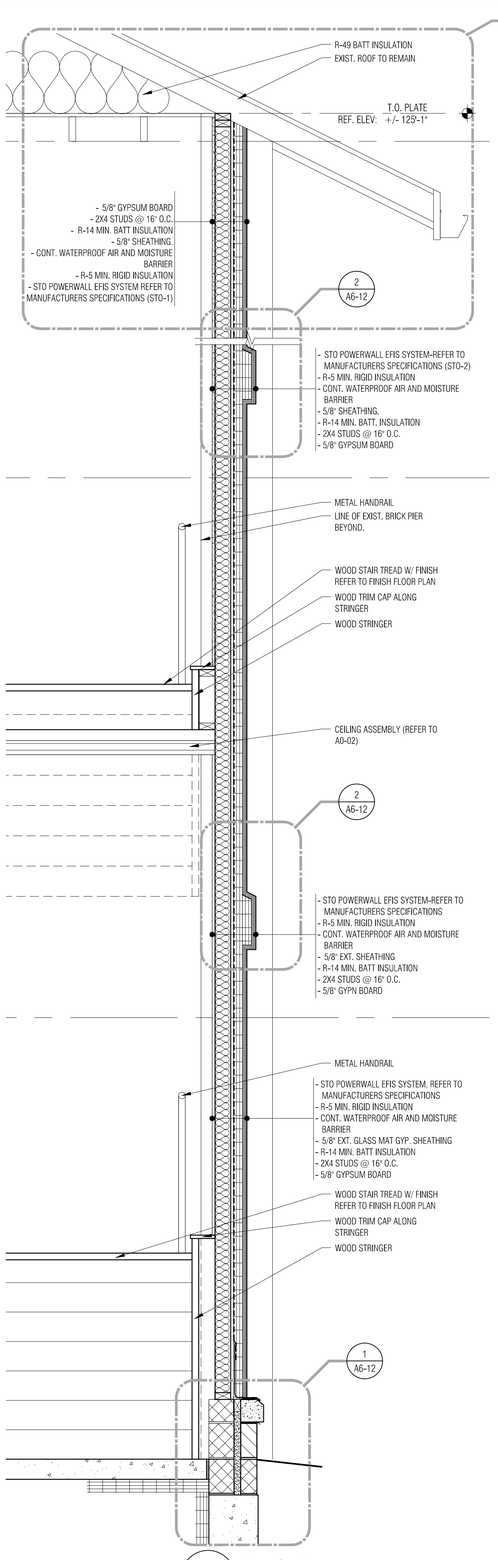
MAM

SHEET NAME

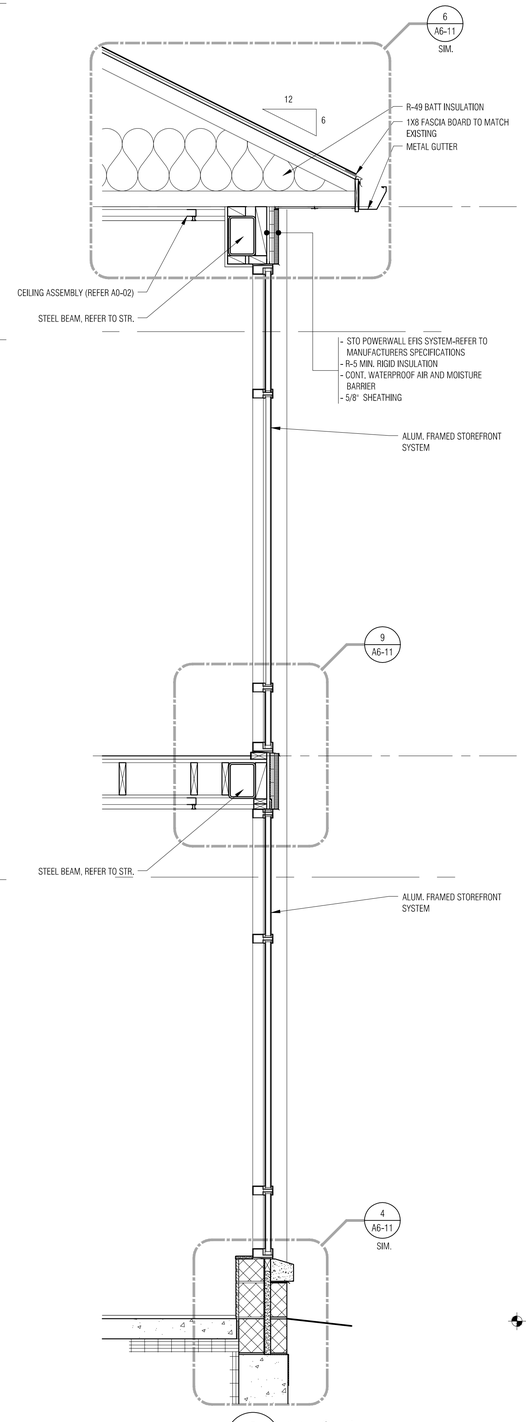
BUILDING SECTIONS

SHEET NO.

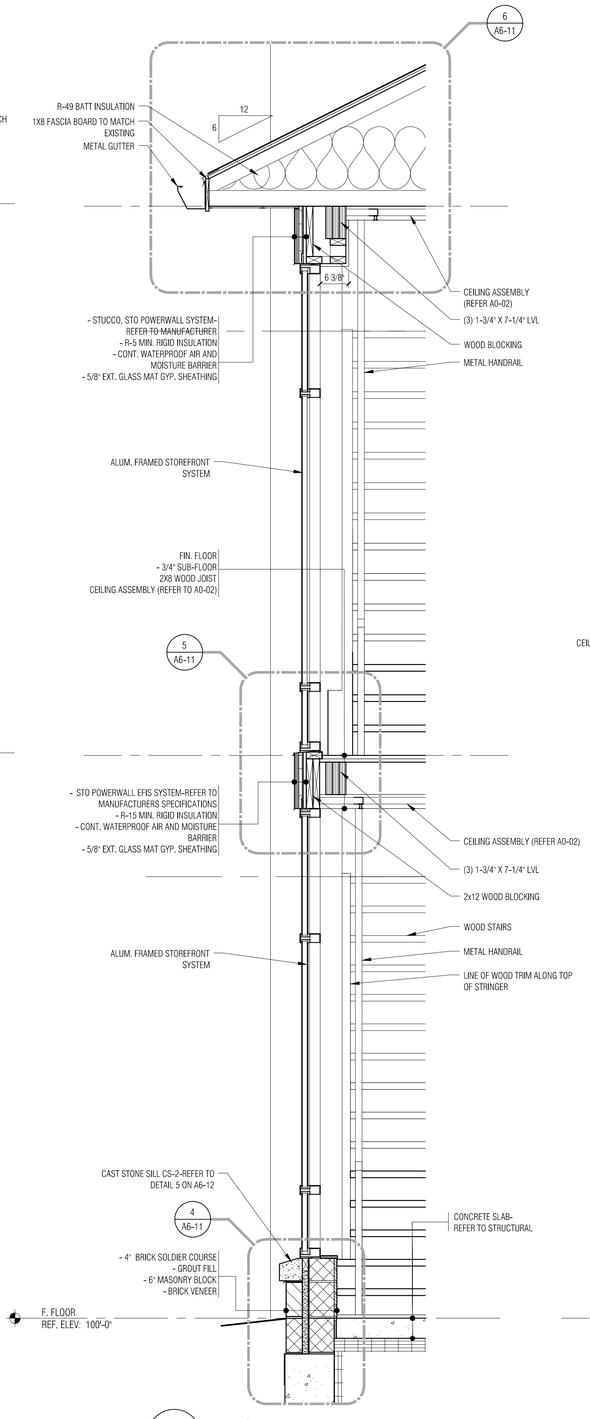
A6-01



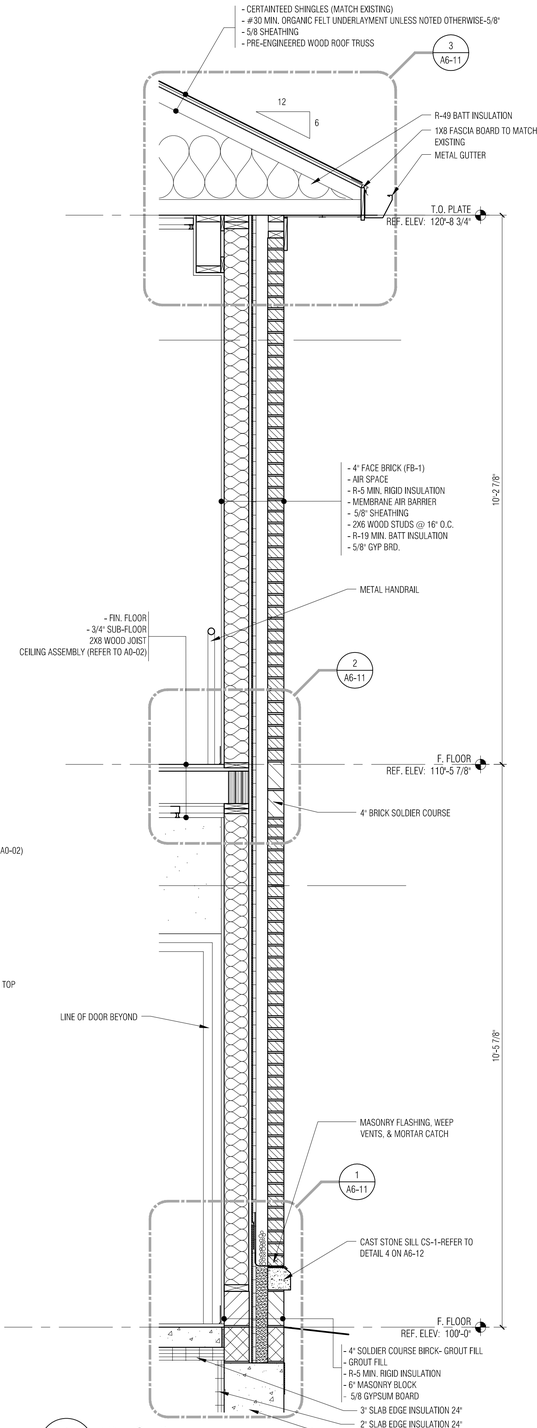
4 A6-01 Wall Section 3/4" = 1'-0"



3 A6-01 Wall Section 3/4" = 1'-0"



2 A6-01 Wall Section 3/4" = 1'-0"



1 A6-01 Wall Section 3/4" = 1'-0"

GENERAL NOTE: REFER TO STRUCTURAL FOR BRICK TIES AND HORIZONTAL BLOCK REINFORCING

P:\2017\17-179-MCREST\02_CAD\A6-02_Wall Sections.dwg, 1/21/2020 4:43:13 PM, amarkle

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

Client Review	01/11/2018
Client Review	01/29/2018
Site Walk-Through	02/26/2018
Client Review	11/28/2018
Building Permit	12/14/2018
BP Revisions-01	10/04/2019

DRAWN BY

CHECKED BY
LAG

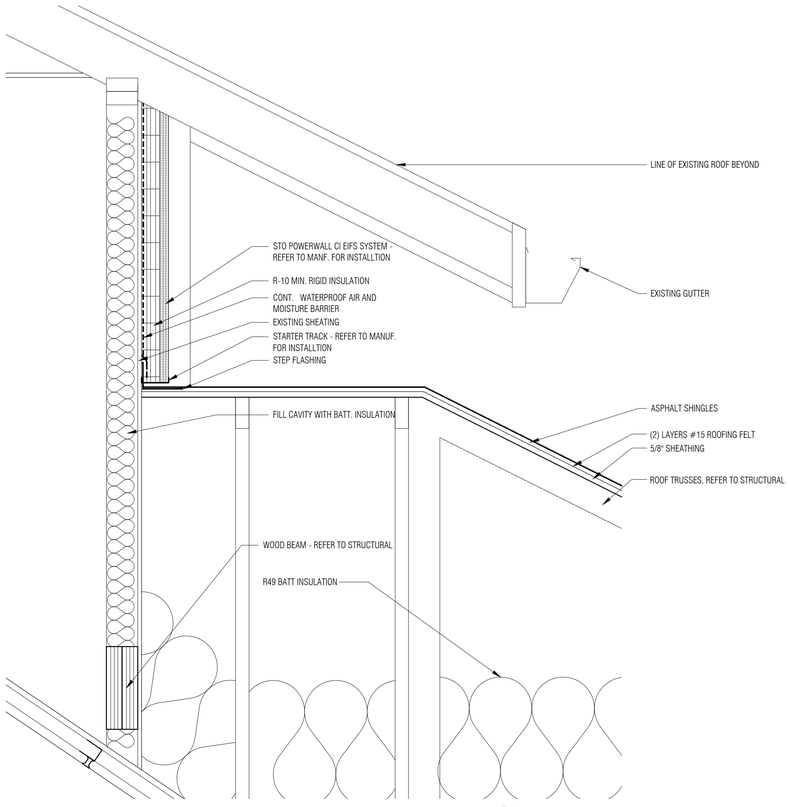
APPROVED BY
MAM

SHEET NAME

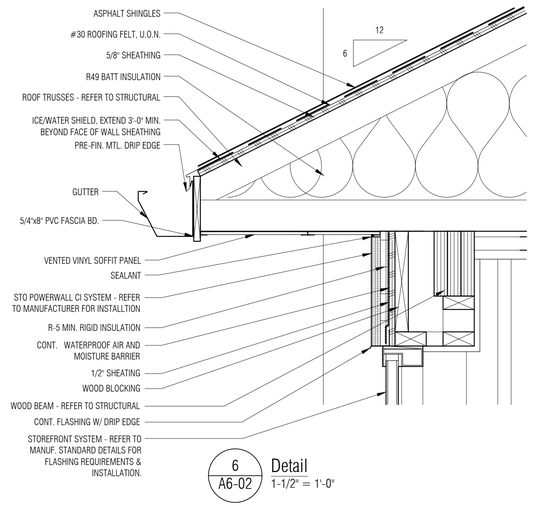
WALL SECTIONS

SHEET NO.

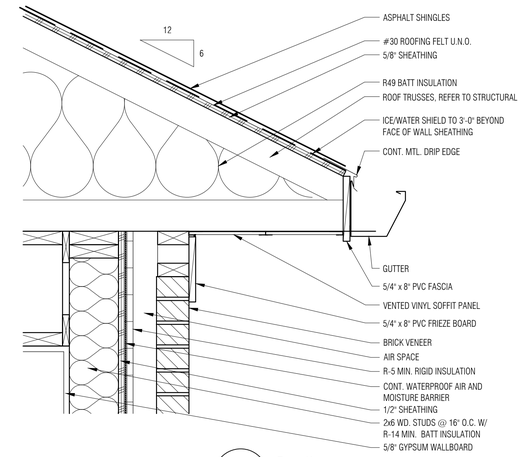
A6-02



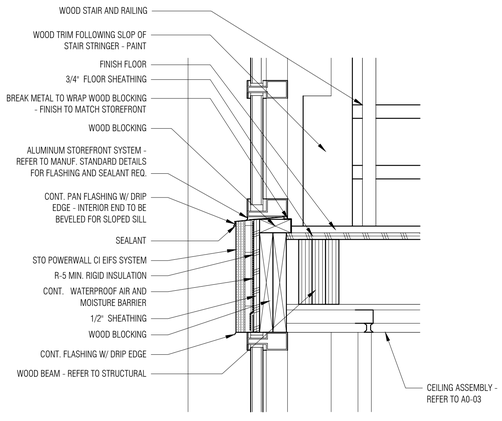
8 A6-02 Detail
1-1/2" = 1'-0"



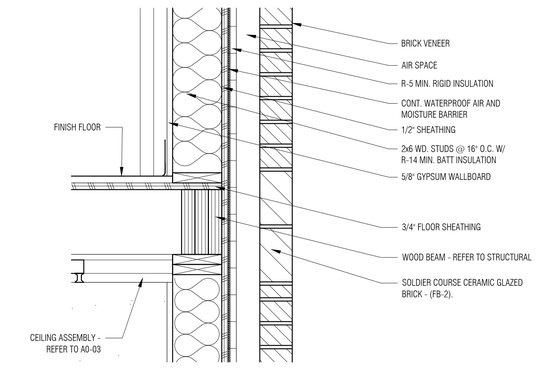
6 A6-02 Detail
1-1/2" = 1'-0"



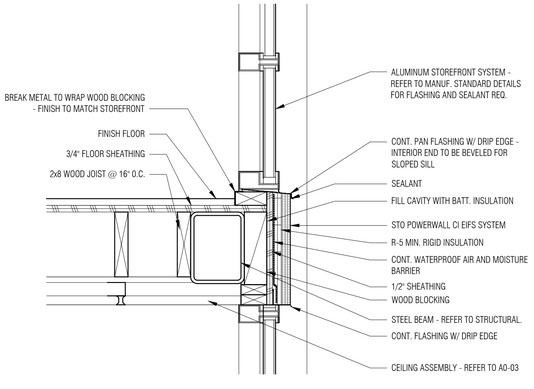
3 A6-02 Detail
1-1/2" = 1'-0"



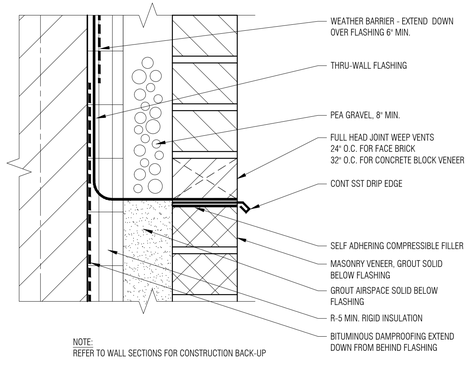
5 A6-02 Detail
1-1/2" = 1'-0"



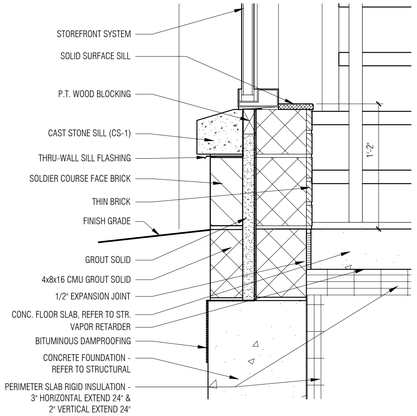
2 A6-02 Detail
1-1/2" = 1'-0"



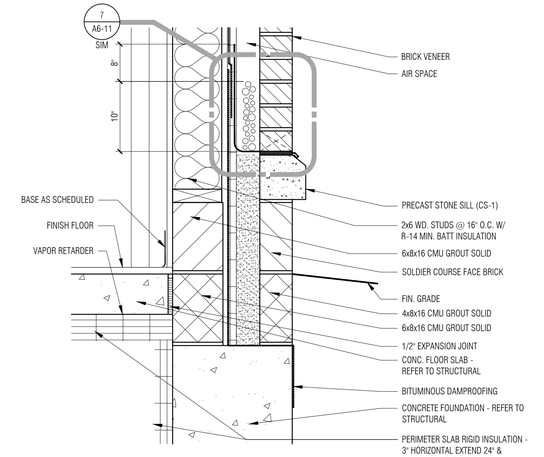
9 A6-02 Detail
1-1/2" = 1'-0"



7 A6-11 Typical Masonry Flashing Detail
3" = 1'-0"



4 A6-02 Detail
1-1/2" = 1'-0"



1 A6-02 Detail
1-1/2" = 1'-0"

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

Client Review	01/11/2018
Client Review	01/29/2018
Site Walk-Through	02/26/2018
Client Review	11/28/2018
Building Permit	12/14/2018
BP Revisions-01	10/04/2019

DRAWN BY

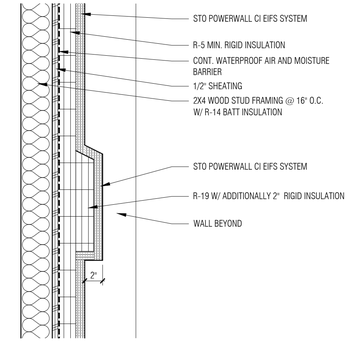
CHECKED BY
LAG

APPROVED BY
MAM

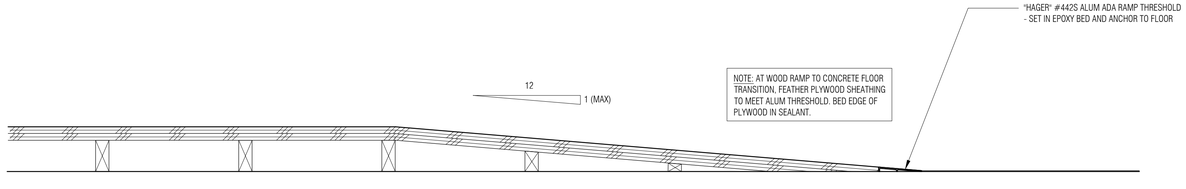
SHEET NAME

SECTION DETAILS

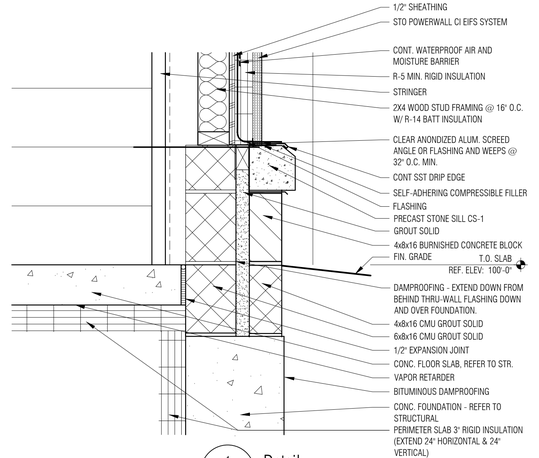
SHEET NO.
A6-11



2 A6-02 Detail
1-1/2" = 1'-0"



3 A3-01 Detail
1-1/2" = 1'-0"



1 A6-02 Detail
1-1/2" = 1'-0"

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

Client Review	01/11/2018
Client Review	01/29/2018
Site Walk-Through	02/26/2018
Client Review	11/28/2018
Building Permit	12/14/2018
BP Revisions-01	10/04/2019

DRAWN BY

CHECKED BY
LAG

APPROVED BY
MAM

SHEET NAME

SECTION DETAILS

SHEET NO.
A6-12

CASEWORK LEGEND

CASEWORK MODEL NUMBERS ARE DERIVED FOR BASIS OF DESIGN FROM CASE SYSTEMS DESIGN CORPORATION

BASE CABINETS

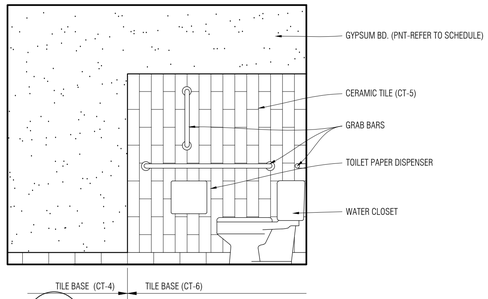
BC-1	SINGLE DOOR / DRAWER STORAGE - B3110 & B3120
BC-2	DOUBLE DOORS/DRAWERS STORAGE - B3100
BC-3	SINK CABINET W/DOORS - B2100
BC-4	OPEN STORAGE - B0000
BC-5	DOOR/DRAWER SIDE-BY-SIDE STORAGE - B5410 & B5420
BC-6	FOUR DRAWER STORAGE - B4040
BC-7	FILE DRAWER STORAGE - B4560
BC-8	STORAGE W/ DOOR - B0110(L) & B0120(R)

WALL CABINETS

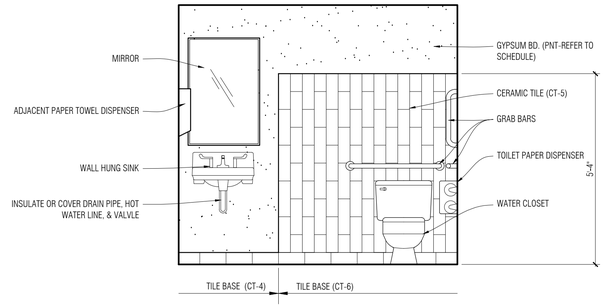
WC-1	STORAGE W/ DOOR - W0110(L) OR W0120(R)
WC-2	MICROWAVE CABINET - Y1100

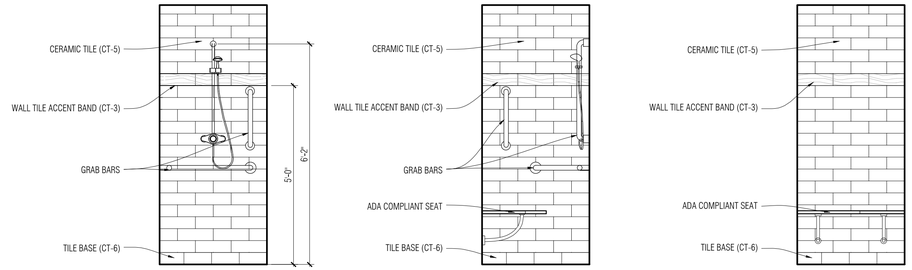
GENERAL NOTES:
1. SOME TAGS ARE NOT USED ON THIS SHEET

GENERAL CASEWORK NOTES:
1. ALL EXPOSED SURFACES ARE TO BE FINISHED
2. PROVIDE FINISHED FILLER PANELS AS REQUIRED AT ALL SPACES BETWEEN CABINETS AND BETWEEN CASEWORK AND WALLS
3. CAULK AROUND ENTIRE PERIMETER OF ALL CABINETS AND COUNTERTOPS AT INTERSECTION OF DISIMILAR SURFACES
4. BASE CABINET DEPTH IS TO BE 24" DEEP NOMINAL (U.O.N.), WALL CABINET DEPTH IS TO BE 14" DEEP NOMINAL (U.N.O.)
5. REFER TO OTHER ELEVATIONS WITHIN THE SAME ROOM FOR SIMILAR APPLICABLE NOTES AND REQUIREMENTS
6. PROVIDE LOCKS AT ALL DRAWER LOCATIONS - KEYED PER ROOM
7. WHERE COUNTER TOP ABUTS WALL, PROVIDE PAINTED WOOD CLEAT
8. REFER TO MATERIAL FINISH/COLOR SCHEDULE (SPEC SECTION 000200) FOR LAMINATE (PL-#) COLORS

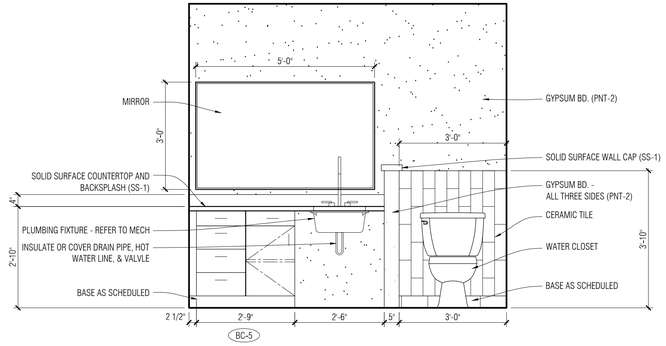


8 — Typical Restroom
1/2" = 1'-0"

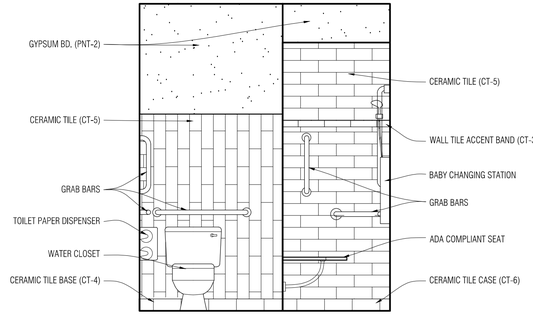




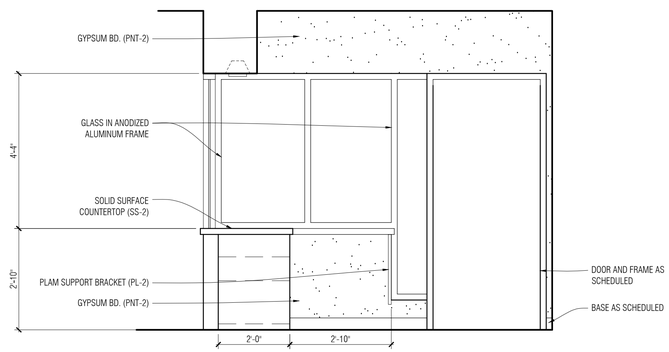
7 — Typical Shower
1/2" = 1'-0"



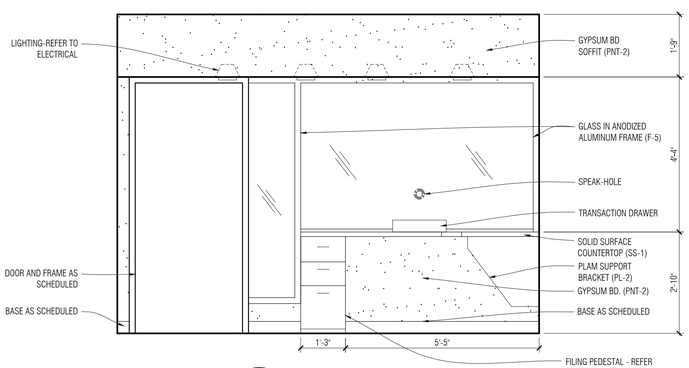
6 / A3-03 — Restroom 216
1/2" = 1'-0"



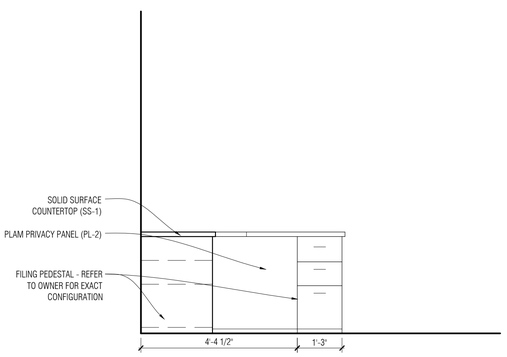
5 / A3-03 — Restroom 208
1/2" = 1'-0"



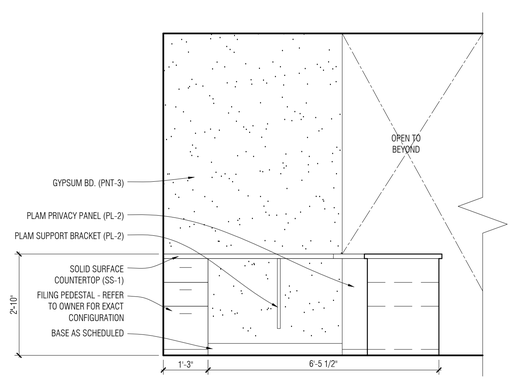
4 / A3-02 — F.F Reception Desk 118
1/2" = 1'-0"



3 / A3-02 — F.F Reception Desk 118
1/2" = 1'-0"



2 / A3-02 — F.F Reception Desk 109
1/2" = 1'-0"



1 / A3-02 — F.F Reception Desk 109
1/2" = 1'-0"

PARTNERS

PARTNERS in Architecture, PLC
65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

KEY PLAN

OWNER
MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME
MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.
17-179

ISSUES / REVISIONS

Client Review	01/11/2018
Client Review	01/29/2018
Site Walk-Through	02/26/2018
Client Review	11/28/2018
Building Permit	12/14/2018
BP Revisions-01	10/04/2019

DRAWN BY
SAZ
CHECKED BY
LAG
APPROVED BY
MAM

SHEET NAME
INTERIOR ELEVATIONS

SHEET NO.
A8-01

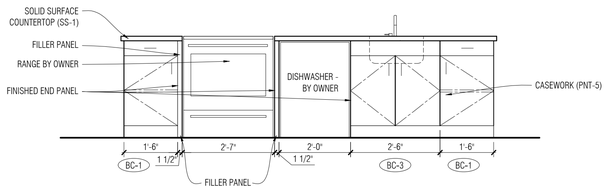
CASEWORK LEGEND

CASEWORK MODEL NUMBERS ARE DERIVED FOR BASIS OF DESIGN FROM CASE SYSTEMS DESIGN CORPORATION

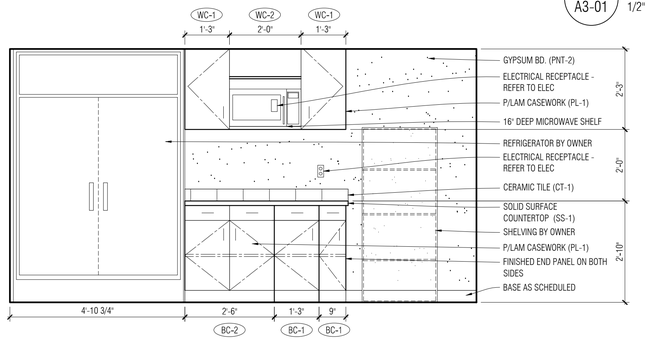
BASE CABINETS	BC-1	SINGLE DOOR / DRAWER STORAGE - B3110 & B3120
	BC-2	DOUBLE DOORS/DRAWERS STORAGE - B3100
	BC-3	SINK CABINET W/DOORS - B2100
	BC-4	OPEN STORAGE - B0000
	BC-5	DOOR/DRAWER SIDE-BY-SIDE STORAGE - B5410 & B5420
	BC-6	FOUR DRAWER STORAGE - B4040
	BC-7	FILE DRAWER STORAGE - B4560
	BC-8	STORAGE W/ DOOR - B0110(L) & B0120(R)
WALL CABINETS	WC-1	STORAGE W/ DOOR - W0110(L) OR W0120(R)
	WC-2	MICROWAVE CABINET - Y1100

GENERAL NOTES:
1. SOME TAGS ARE NOT USED ON THIS SHEET

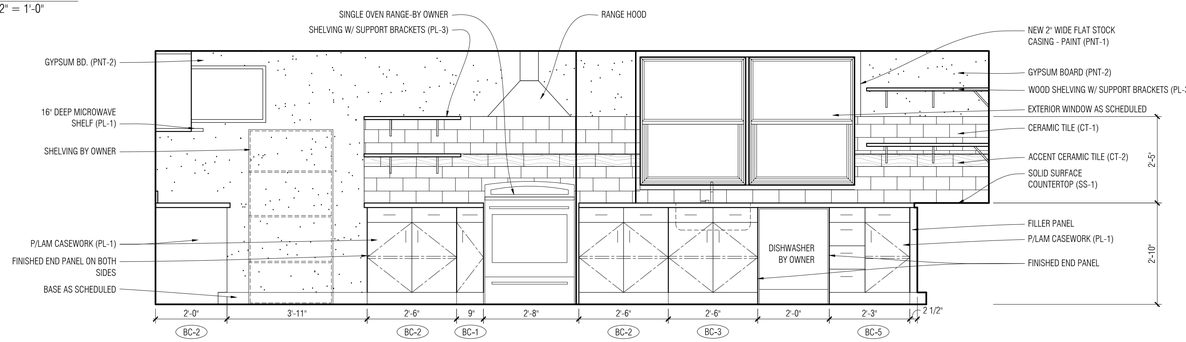
GENERAL CASEWORK NOTES:
1. ALL EXPOSED SURFACES ARE TO BE FINISHED
2. PROVIDE FINISHED FILLER PANELS AS REQUIRED AT ALL SPACES BETWEEN CABINETS AND BETWEEN CASEWORK AND WALLS
3. CAULK AROUND ENTIRE PERIMETER OF ALL CABINETS AND COUNTERTOPS AT INTERSECTION OF DISIMILAR SURFACES
4. BASE CABINET DEPTH IS TO BE 24" DEEP NOMINAL (U.O.N.), WALL CABINET DEPTH IS TO BE 14" DEEP NOMINAL (U.N.O.)
5. REFER TO OTHER ELEVATIONS WITHIN THE SAME ROOM FOR SIMILAR APPLICABLE NOTES AND REQUIREMENTS
6. PROVIDE LOCKS AT ALL DRAWER LOCATIONS - KEYED PER ROOM
7. WHERE COUNTER TOP ABUTS WALL, PROVIDE PAINTED WOOD CLEAT
8. REFER TO MATERIAL FINISH/COLOR SCHEDULE (SPEC SECTION 000200) FOR LAMINATE (PL-#) COLORS



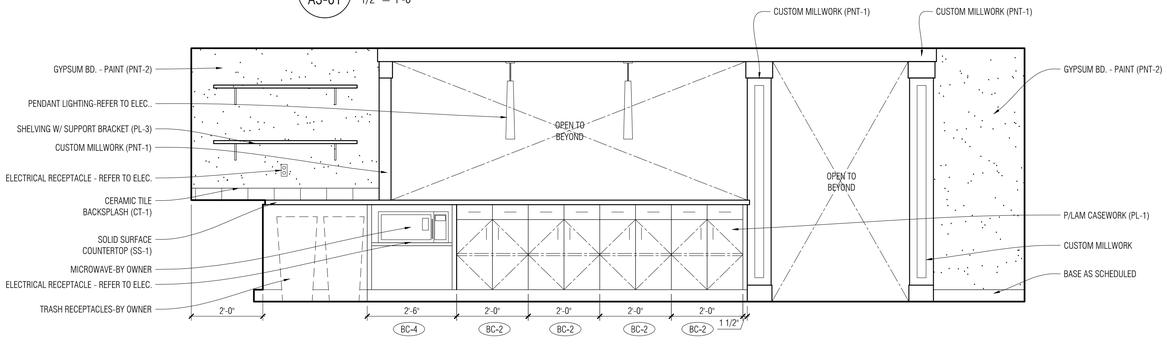
6 A3-01 Kitchen - 017
1/2" = 1'-0"



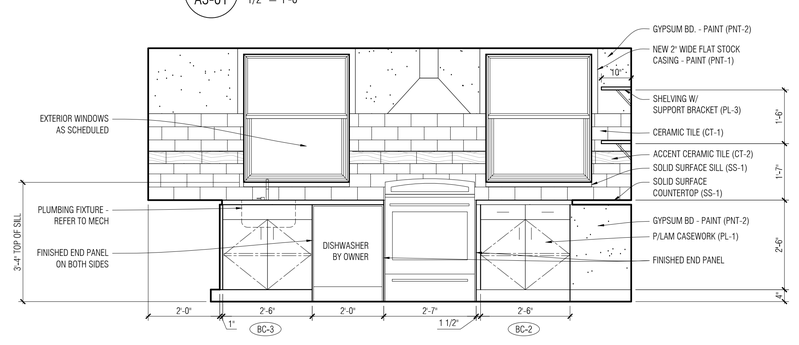
5 A3-01 Kitchen - 017
1/2" = 1'-0"



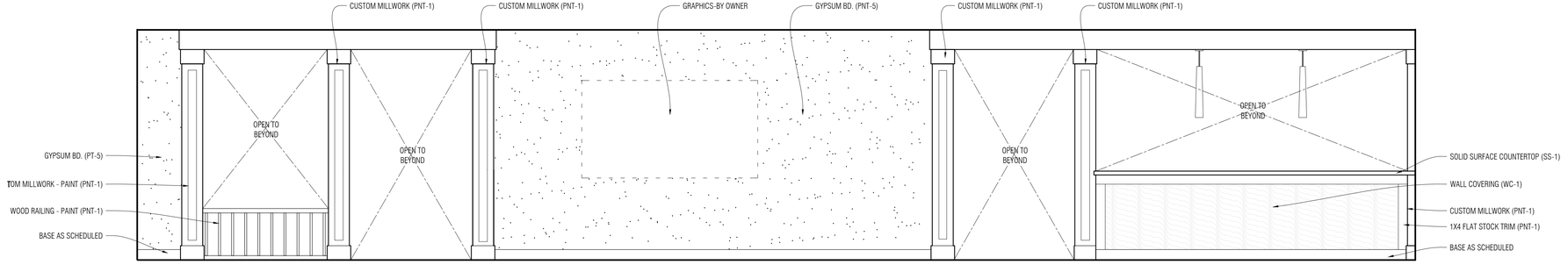
4 A3-01 Kitchen - 017
1/2" = 1'-0"



3 A3-01 Kitchen - 017
1/2" = 1'-0"



2 A3-01 Kitchen - 017
1/2" = 1'-0"



1 A3-01 Dining Room - 004
1/2" = 1'-0"

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

Client Review	01/11/2018
Client Review	01/29/2018
Site Walk-Through	02/26/2018
Client Review	11/28/2018
Building Permit	12/14/2018
BP Revisions-01	10/04/2019

DRAWN BY
SAZ

CHECKED BY
LAG

APPROVED BY
MAM

SHEET NAME

INTERIOR ELEVATIONS

SHEET NO.
A8-02

CASEWORK LEGEND

CASEWORK MODEL NUMBERS ARE DERIVED FOR BASIS OF DESIGN FROM CASE SYSTEMS DESIGN CORPORATION

BASE CABINETS

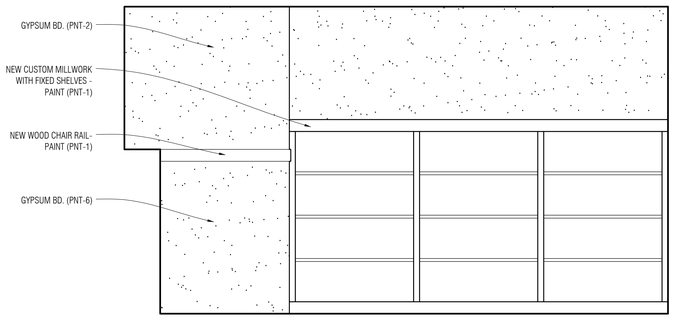
- BC-1 — SINGLE DOOR / DRAWER STORAGE - B3110 & B3120
- BC-2 — DOUBLE DOORS/DRAWERS STORAGE - B3100
- BC-3 — SINK CABINET W/DOORS - B2100
- BC-4 — OPEN STORAGE - B0000
- BC-5 — DOOR/DRAWER SIDE-BY-SIDE STORAGE - B5410 & B5420
- BC-6 — FOUR DRAWER STORAGE - B4040
- BC-7 — FILE DRAWER STORAGE - B4560
- BC-8 — STORAGE W/ DOOR - B0110(L) & B0120(R)

WALL CABINETS

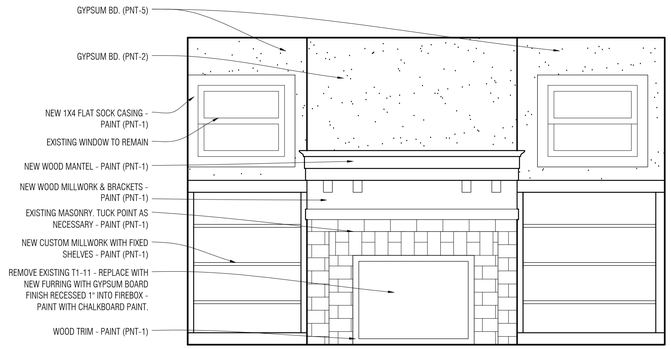
- WC-1 — STORAGE W/ DOOR - W0110(L) OR W0120(R)
- WC-2 — MICROWAVE CABINET - Y1100

GENERAL NOTES:
1. SOME TAGS ARE NOT USED ON THIS SHEET

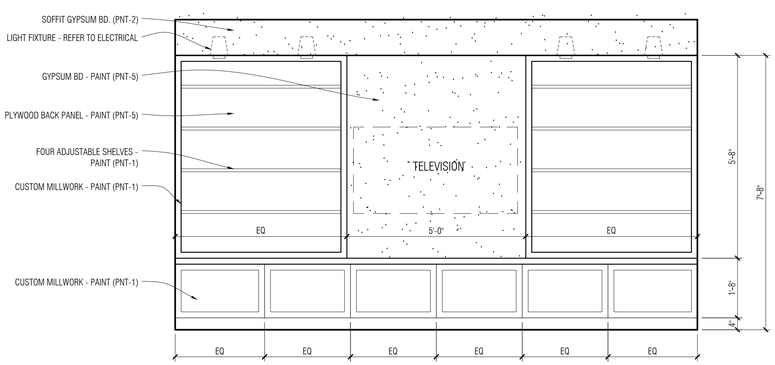
GENERAL CASEWORK NOTES:
1. ALL EXPOSED SURFACES ARE TO BE FINISHED
2. PROVIDE FINISHED FILLER PANELS AS REQUIRED AT ALL SPACES BETWEEN CABINETS AND BETWEEN CASEWORK AND WALLS
3. CAULK AROUND ENTIRE PERIMETER OF ALL CABINETS AND COUNTERTOPS AT INTERSECTION OF DISIMILAR SURFACES
4. BASE CABINET DEPTH IS TO BE 24" DEEP NOMINAL (U.O.N.), WALL CABINET DEPTH IS TO BE 14" DEEP NOMINAL (U.N.O.)
5. REFER TO OTHER ELEVATIONS WITHIN THE SAME ROOM FOR SIMILAR APPLICABLE NOTES AND REQUIREMENTS
6. PROVIDE LOCKS AT ALL DRAWER LOCATIONS - KEYED PER ROOM
7. WHERE COUNTER TOP ABUTS WALL, PROVIDE PAINTED WOOD CLEAT
8. REFER TO MATERIAL FINISH/COLOR SCHEDULE (SPEC SECTION 000200) FOR LAMINATE (PL-#) COLORS



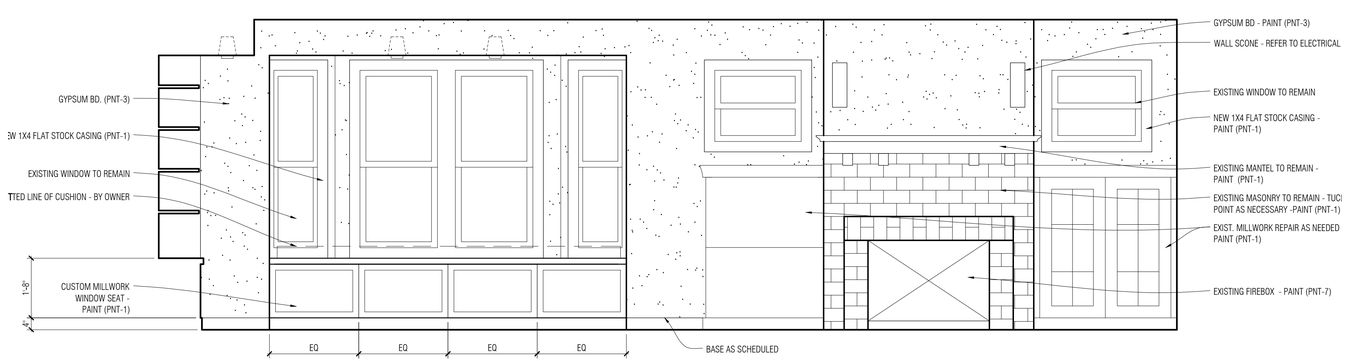
4 / A3-03 — Play Room-204
1/2" = 1'-0"



3 / A3-03 — Play Room-204
1/2" = 1'-0"



2 / A3-02 — Common Room-104
1/2" = 1'-0"



1 / A3-02 — Common Room-104
1/2" = 1'-0"

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

Client Review	01/11/2018
Client Review	01/29/2018
Site Walk-Through	02/26/2018
Client Review	11/28/2018
Building Permit	12/14/2018
BP Revisions-01	10/04/2019

DRAWN BY

SAZ

CHECKED BY

LAG

APPROVED BY

MAM

SHEET NAME

INTERIOR ELEVATIONS

SHEET NO.

A8-03

GENERAL NOTES - FINISH FLOOR PLANS:

A. REFERENCE ROOM FINISH SCHEDULE AND MATERIAL FINISH / COLOR SCHEDULE (SPEC SECTION 000200) FOR ADDITIONAL FINISH INFORMATION.

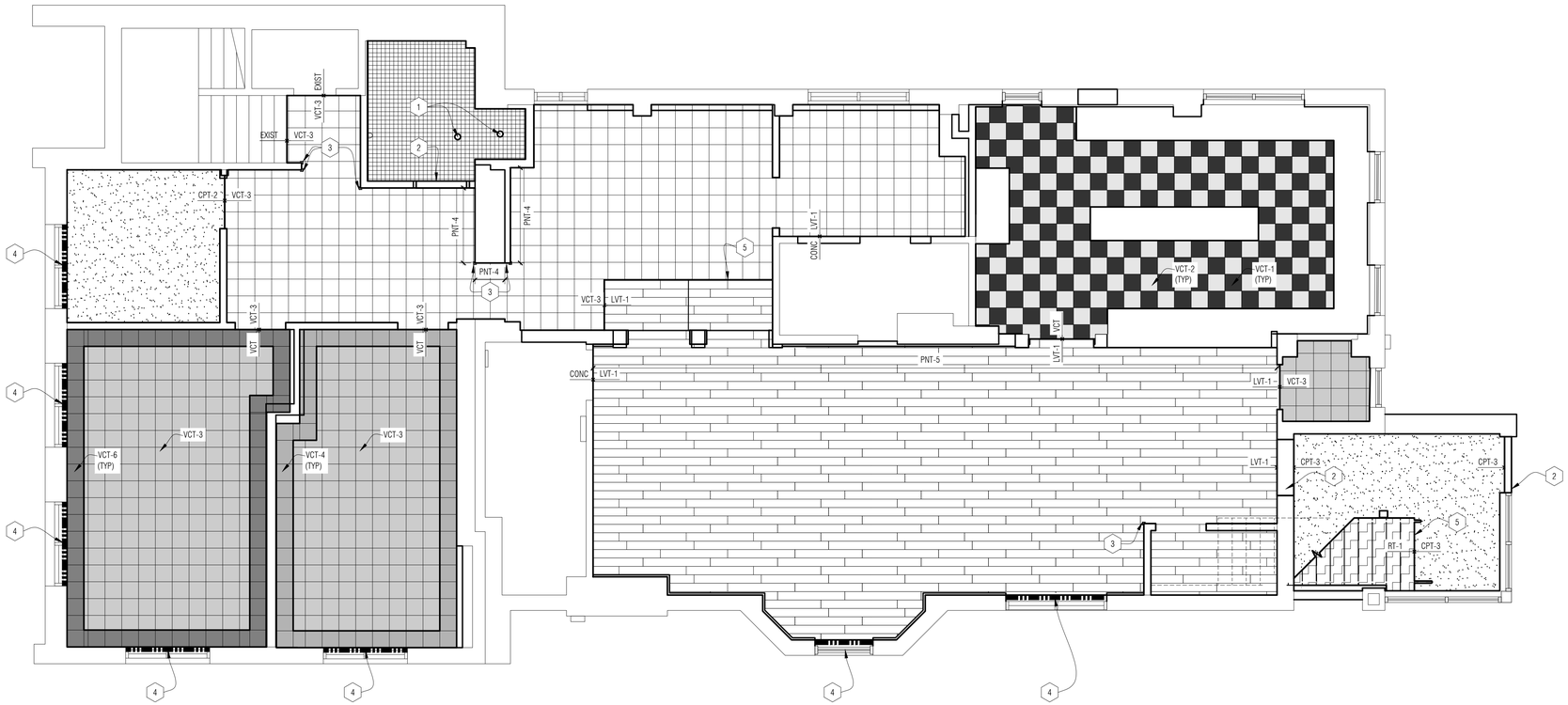
B. VCT COLOR TRANSITION TO BEGIN AT FIRST JOINT INSIDE CORNER OF WALL AT ALL DOORWAYS SHOWN AS HAVING A COLOR TRANSITION.

C. ALL DIMENSIONS ARE SHOWN AS +/- AND NEED TO BE VERIFIED IN FIELD.

D. UNLESS OTHERWISE NOTED, FLOOR FINISHES TRANSITION UNDER THE CENTERLINE OF DOORS (WHEREVER APPLICABLE).

KEY NOTES - FINISH FLOOR PLANS:

1. FLOOR DRAIN- PROVIDE POSITIVE SLOPE TO DRAIN.
2. THRESHOLD - REFER TO DOOR SCHEDULE.
3. CORNER GUARDS - REFER TO SPECIFICATIONS. PROVIDE FULL WALL END CAP AS CONDITION OCCURS.
4. ROMAN SHADE WINDOW TREATMENT.
5. BULLNOSE EDGE.



1 Lower Level Finish Floor Plan
1/4" = 1'-0"

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

Client Review	01/11/2018
Client Review	01/29/2018
Site Walk-Through	02/26/2018
Client Review	11/28/2018
Building Permit	12/14/2018
BP Revisions-01	10/04/2019

DRAWN BY

CHECKED BY
LAG

APPROVED BY
MAM

SHEET NAME

LOWER LEVEL
FINISH FLOOR
PLAN

SHEET NO.
A9-01

GENERAL NOTES - FINISH FLOOR PLANS:

A. REFERENCE ROOM FINISH SCHEDULE AND MATERIAL FINISH / COLOR SCHEDULE (SPEC SECTION 000200) FOR ADDITIONAL FINISH INFORMATION.

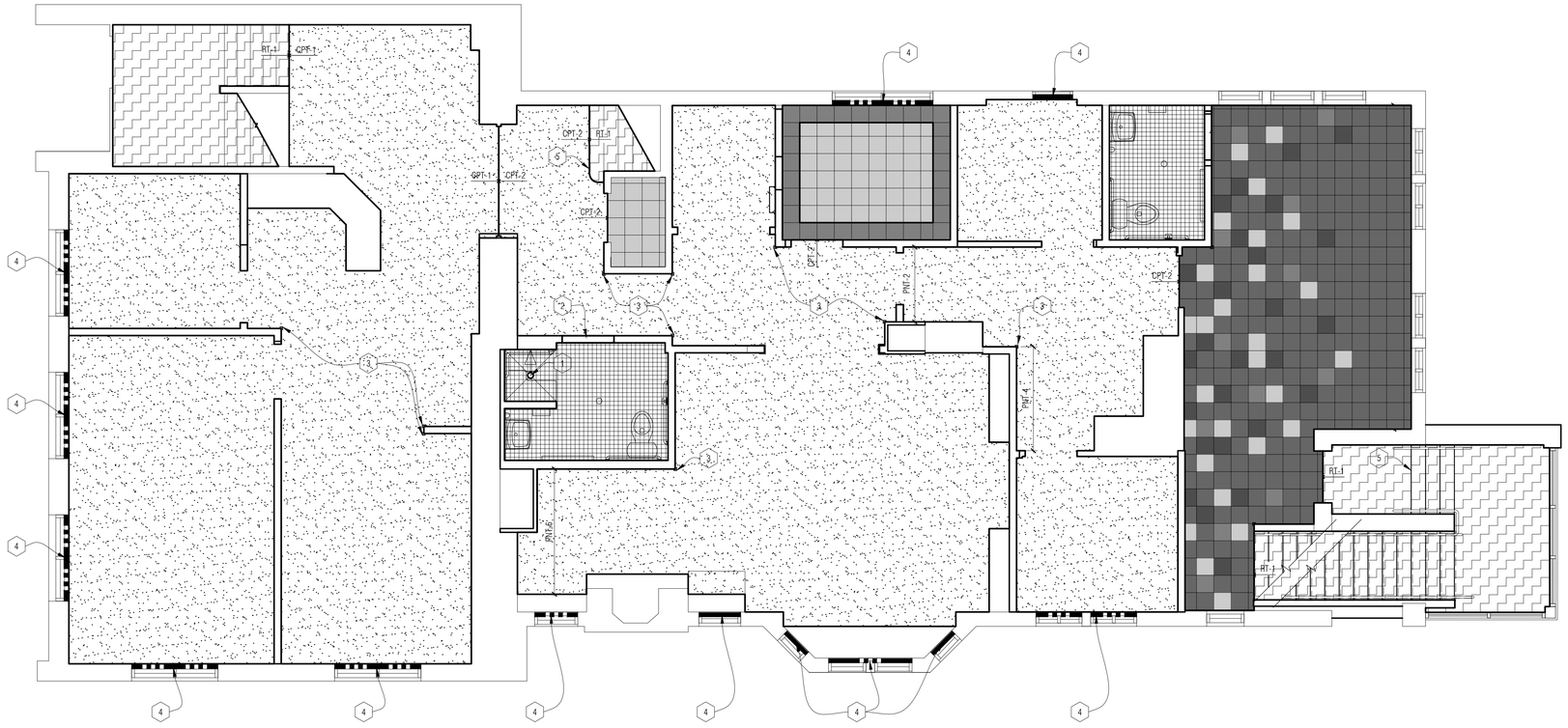
B. VCT COLOR TRANSITION TO BEGIN AT FIRST JOINT INSIDE CORNER OF WALL AT ALL DOORWAYS SHOWN AS HAVING A COLOR TRANSITION.

C. ALL DIMENSIONS ARE SHOWN AS +/- AND NEED TO BE VERIFIED IN FIELD.

D. UNLESS OTHERWISE NOTED, FLOOR FINISHES TRANSITION UNDER THE CENTERLINE OF DOORS (WHEREVER APPLICABLE).

KEY NOTES - FINISH FLOOR PLANS:

1. FLOOR DRAIN- PROVIDE POSITIVE SLOPE TO DRAIN.
2. THRESHOLD - REFER TO DOOR SCHEDULE.
3. CORNER GUARDS - REFER TO SPECIFICATIONS. PROVIDE FULL WALL END CAP AS CONDITION OCCURS.
4. ROMAN SHADE WINDOW TREATMENT.
5. BULLNOSE EDGE.



1 First Level Finish Floor Plan
1/4" = 1'-0"

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

Client Review	01/11/2018
Client Review	01/29/2018
Site Walk-Through	02/26/2018
Client Review	11/28/2018
Building Permit	12/14/2018
BP Revisions-01	10/04/2019

DRAWN BY

CHECKED BY
LAG

APPROVED BY
MAM

SHEET NAME

FIRST LEVEL
FINISH FLOOR
PLAN

SHEET NO.
A9-02

GENERAL NOTES - FINISH FLOOR PLANS:

A. REFERENCE ROOM FINISH SCHEDULE AND MATERIAL FINISH / COLOR SCHEDULE (SPEC SECTION 000200) FOR ADDITIONAL FINISH INFORMATION.

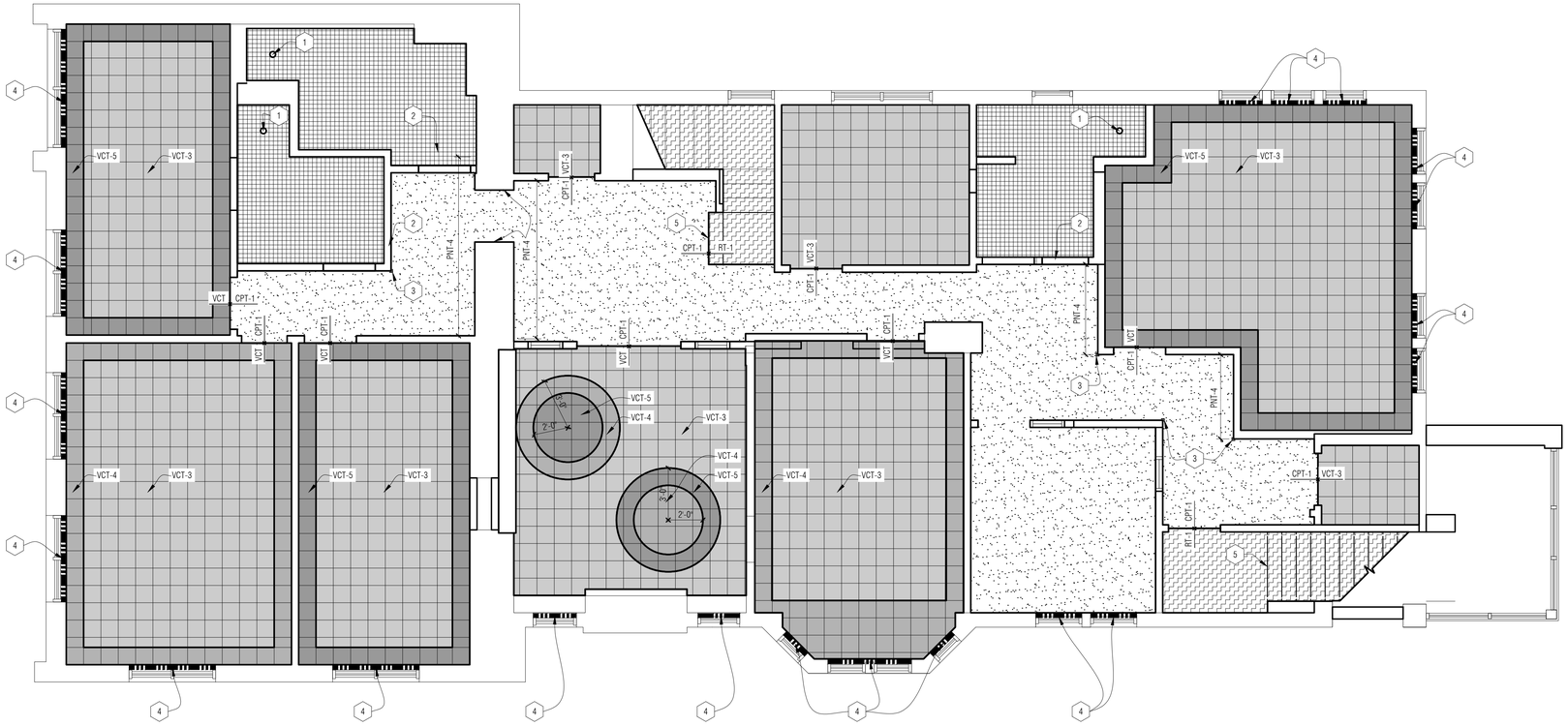
B. VCT COLOR TRANSITION TO BEGIN AT FIRST JOINT INSIDE CORNER OF WALL AT ALL DOORWAYS SHOWN AS HAVING A COLOR TRANSITION.

C. ALL DIMENSIONS ARE SHOWN AS +/- AND NEED TO BE VERIFIED IN FIELD.

D. UNLESS OTHERWISE NOTED, FLOOR FINISHES TRANSITION UNDER THE CENTERLINE OF DOORS (WHEREVER APPLICABLE).

KEY NOTES - FINISH FLOOR PLANS:

1. FLOOR DRAIN- PROVIDE POSITIVE SLOPE TO DRAIN.
2. THRESHOLD - REFER TO DOOR SCHEDULE.
3. CORNER GUARDS - REFER TO SPECIFICATIONS. PROVIDE FULL WALL END CAP AS CONDITION OCCURS.
4. ROMAN SHADE WINDOW TREATMENT.
5. BULLNOSE EDGE.



1 Upper Level Finish Floor Plan
1/4" = 1'-0"

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

Client Review	01/11/2018
Client Review	01/29/2018
Site Walk-Through	02/26/2018
Client Review	11/28/2018
Building Permit	12/14/2018
BP Revisions-01	10/04/2019

DRAWN BY

CHECKED BY
LAG

APPROVED BY
MAM

SHEET NAME

UPPER LEVEL FINISH FLOOR PLAN

SHEET NO.
A9-03

WOOD

1. WOOD FRAMING FABRICATION INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION AND THE "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" PUBLISHED BY THE NATIONAL FOREST PRODUCTS ASSOCIATION.

2. FRAMING LUMBER 2" THICK OR LESS SHALL BE STRESS RATED OR GRADED FOR THE SPECIES AS SCHEDULED WITH A MOISTURE CONTENT OF 19% OR LESS. MINIMUM PROPERTIES SHALL BE AS FOLLOWS:
   a. NO. 1 DOUGLAS FIR, USED FOR 4x BEAMS, HEADERS, & STRINGERS 2" TO 4" THICK, 2" & WIDER; BEAMS HEADERS & STRINGERS LARGER THAN 4x BEAMS & STRINGERS; 4x POSTS 2" TO 4" THICK, 2" & WIDER; & POSTS LARGER THAN 4x POSTS & TIMBERS:
      Fb = 1,000 PSI Fv = 180 PSI E = 1,700,000 PSI
   b. NO. 2 DOUGLAS FIR, USED FOR JOISTS, RAFTERS, WALL STUDS, & WALL PLATES:
      Fb = 900 PSI Fv = 180 PSI E = 1,600,000 PSI
   c. STUD GRADE DOUGLAS FIR, USED FOR BLOCKING & NON-BEARING STUD:
      Fb = 700 PSI Fv = 180 PSI E = 1,000,000 PSI

3. WOOD STUDS:
   a. TOP PLATE OF STUD WALLS SHALL BE 2 PIECES SAME WIDTH AS STUDS EXCEPT AT STAGGERED STUD WALLS, AS INDICATED AS ON DRAWINGS. SPLICE AS INDICATED.
   b. PROVIDE STUD WALL BRACING IN COMPLIANCE WITH CBC 2308.9.3 IN STUD WALLS NOT PLYWOOD SHEATHED.
   c. PROVIDE FIRE BLOCKS IN COMPLIANCE WITH CBC 717.
   d. NOTCH OR BORE HOLES IN WOOD STUDS IN COMPLIANCE WITH CBC 2308.9.10 AND 2308.9.11.
   e. PROVIDE DOUBLE JOISTS UNDER PARTITIONS WHICH ARE PARALLEL TO JOISTS AND PROVIDE SOLID FULL DEPTH BLOCKING UNDER PARTITIONS WHICH ARE PERPENDICULAR TO JOISTS.

4. DO NOT SUSPEND CEILINGS, SOFFITS, SPRINKLERS, PIPING, MECHANICAL DUCTS, NOR ANY OTHER ELEMENT FROM 2x4 ROOF FRAMING UNLESS SPECIFICALLY DETAILED.

5. PROVIDE PLYWOOD COMPLYING WITH DOS PS 1 AND CLASSIFIED AS EXPOSURE 1. EACH SHEET OF PLYWOOD SHALL BE IDENTIFIED WITH APPROPRIATE TRADEMARK OF THE AMERICAN PLYWOOD ASSOCIATION.

6. FLOOR SHEATHING SHALL BE APA RATED STURD-I-FLOOR, EXPOSURE 1, 23/32 INCH THICK, 24 OC SPAN RATING, CONTINUOUS OVER TWO OR MORE SPANS, WITH LONG DIMENSION ACROSS SUPPORTS. FASTEN WITH 8d NAILS 6" O.C. @ EDGES AND 12" O.C. @ INTERMEDIATE SUPPORTS. STAGGER PANELS.

7. ROOF SHEATHING SHALL BE A.P.A. RATED SHEATHING, EXPOSURE 1, 5/8 INCH THICK, 32/16 RATING, CONTINUOUS OVER TWO OR MORE SPANS WITH LONG DIMENSION ACROSS SUPPORTS. FASTEN WITH 8d NAILS 6" O.C. @ EDGES AND 12" O.C. @ INTERMEDIATE SUPPORTS. STAGGER PANELS.

8. WALL GYPSUM BOARD SHALL BE 5/8 INCH THICK. FASTEN WITH 6d COOLER NAILS OR WALLBOARD NAILS 4" O.C. @ EDGES AND INTERMEDIATE SUPPORTS.

9. LAMINATED VENEER LUMBER (LVL) SHALL BE DESIGNED AND FABRICATED IN ACCORDANCE WITH APA H815. ADHESIVES SHALL CONFORM TO ASTM D 2559. MINIMUM PROPERTIES SHALL BE AS FOLLOWS:
   a. F_b = 2800 PSI F_v = 285 PSI E = 2,000,000 PSI

10. WOOD FRAMING CONNECTIONS SHALL BE SEATED CONNECTIONS, U.O.N. DO NOT COPE ANY MEMBER. DO NOT USE TOE NAILING TO SUPPORT VERTICAL LOADS. PROVIDE STANDARD PREFABRICATED, GALVANIZED, MANUFACTURED FRAMING DEVICES PER ASTM D1761, DESIGNED TO SUPPORT THE MEMBER SIZE.

11. DO NOT CUT OR NOTCH STRUCTURAL LUMBER UNLESS SPECIFICALLY DETAILED OR INDICATED.

12. PROVIDE HOLES FOR BOLTS 1/32" TO 1/16" LARGER THAN NOMINAL BOLT DIAMETER. PROVIDE A307 BOLTS, UNLESS NOTED OTHERWISE, WITH STANDARD CUT WASHER UNDER BOLT HEAD AND NUT. PROVIDE STANDARD WASHERS UNDER HEADS OF LAG SCREWS.

13. RETIGHTEN BOLTS PRIOR TO APPLICATION OF SHEATHING, PLASTER, ETC.

14. PROVIDE LATERAL SUPPORT FOR BEAMS, RAFTERS AND JOISTS AS STIPULATED IN CBC 2308.8.5.

15. TEMPORARY AND PERMANENT BRACING FOR TRUSS MEMBER SLENDERNESS AND STABILITY IS DESIGNED, SPECIFIED AND INSPECTED BY THE TRUSS MANUFACTURER.

16. TEMPORARY BRACING FOR TRUSS AND BUILDING STABILITY UNTIL PERMANENT BRACING IS COMPLETED AS DESIGNED, SPECIFIED AND INSPECTED BY THE CONTRACTOR.

17. PERMANENT BRACING FOR OVERALL BUILDING STABILITY IS COMPLETE WHEN ROOF SHEATHING AND BEARING WALL SHEATHING IS COMPLETE WITH FASTENING. PROVIDE TEMPORARY BRACING UNTIL ROOF AND BEARING WALL SHEATHING IS COMPLETE.

18. PRESSURE TREAT WOOD MEMBERS IN CONTACT WITH GROUND OR CONCRETE WITH WATERBORNE PRESERVATIVES IN COMPLIANCE WITH CBC 2303.18. PROVIDE FIRE TREATED LUMBER COMPLYING WITH CBC 2303.2 WHERE INDICATED ON THE ARCHITECTURAL PLANS. PROVIDE HOT-DIPPED GALVANIZED PER ASTM A153 STAINLESS STEEL FASTENERS, AND HARDWARE CONNECTORS PER ASTM A123 AT PRESERVATIVE TREATED AND FIRE TREATED STRUCTURAL LUMBER.

19. PROVIDE LUMBER TREATED WITH WOOD-PRESERVATIVE-TREATING MATERIAL BY ONE THE FOLLOWING ACCEPTABLE MANUFACTURERS:
   a. J. H. BAXTER CO.
   b. CHEMICAL SPECIALITIES, INC.
   c. CONTINENTAL WOOD PRESERVATIVES, INC.
   d. HICKSON CORP.
   e. HOOVER TREATER WOOD PRODUCTS, INC.
   f. OSMOSE WOOD PRESERVING, INC.

20. ALL NAILS, UNLESS INDICATED OTHERWISE, ARE COMMON NAILS WITH DIMENSIONAL PROPERTIES COMPLYING WITH AF & PA NDS TABLE L4 AND ASTM F1667. INSTALL NAILS IN COMPLIANCE WITH CBC CHAPTER 23, INCLUDING TABLE 2304.9.1.

21. PROVIDE WOOD HARDWARE CONNECTORS AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY, INC. COMPLYING WITH ICBO EVALUATION REPORT NOS. 1211 AND NER209.

STRUCTURAL STEEL

1. SHOP DETAILS, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF CURRENT AISC "SPECIFICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES", AND AISC "DETAILING FOR STEEL CONSTRUCTION".

2. STRUCTURAL STEEL SHALL CONFORM TO THE YIELD STRENGTH (F_y) LISTED BELOW:

a.	W, WT SHAPES	50	KSI
b.	HSS SQUARE AND RECTANGULAR	46	KSI
c.	HSS ROUND	42	KSI
d.	ALL OTHER PLATES AND SHAPES, U.O.N.	36	KSI

3. ANCHOR RODS SHALL BE ASTM F-1554 GRADE 36 U.O.N.

4. HIGH STRENGTH BOLTS SHALL CONFORM TO "GROUP A" OR "GROUP B" U.O.N. AS OUTLINED BY AISC AND THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS

5. ANCHOR RODS, BASE PLATES OR BEARING PLATES SHALL BE LOCATED AND BUILT INTO CONNECTING WORK, PRE-SET BY TEMPLATES OR SIMILAR METHOD. PLATES SHALL BE SET IN FULL BEDS OF NON-SHRINK MORTAR OR GROUT.

6. WELDING SHALL BE DONE WITH APPROPRIATE E70 SERIES ELECTRODES COMPATIBLE WITH THE NEW AND EXISTING STEEL AND SHALL CONFORM TO THE REQUIREMENTS OF THE "CODE FOR WELDING IN BUILDING CONSTRUCTION" OF THE AMERICAN WELDING SOCIETY.

7. REFER TO ARCHITECTURAL DRAWINGS FOR STEEL PLATES, ANGLES, ETC., ATTACHED TO BEAMS, FRAMES, ETC., FOR SUPPORT OF FASCIA AND OTHER CONSTRUCTION.

8. THE LENGTH DIMENSION AND THE CONNECTION DETAIL FROM NEW STRUCTURAL MEMBER TO THE EXISTING STRUCTURE SHALL BE FIELD VERIFIED BEFORE FABRICATION.
   NO FIELD MODIFICATION TO THE FABRICATED MEMBER OR CONNECTION IS ALLOWED WITHOUT PRIOR APPROVAL BY THE STRUCTURAL ENGINEER OF THE CONTRACTOR'S SKETCHES OR SHOP DRAWINGS REFLECTING THESE MODIFICATIONS.

9. ANGLES ASSUMED LONG LEG VERTICAL (LLV) UNLESS OTHERWISE NOTED.

10. THE CONTRACTOR IS RESPONSIBLE FOR THE ERECTION SAFETY OF STEEL CONNECTIONS, INCLUDING BUT NOT LIMITED TO: CONFIGURATION, SEQUENCE, USE OF: BLOCKING, EXTENDED CLIP ANGLES, CLAMPS, ETC.

POST-INSTALLED ANCHORS

1. WHERE SPECIFIC ANCHOR MANUFACTURER, TYPE, SIZE, AND EMBED REQUIREMENTS ARE SHOWN ON DETAILS, DRAWINGS, OR SPECIFICATIONS, SUBSTITUTIONS ARE NOT ACCEPTABLE.

2. FOR SUBSTITUTION PURPOSES, AT THE CONTRACTORS OPTIONS, SIGNED AND SEALED CALCULATIONS SHALL BE PROVIDED, INDICATING THE SUBSTITUTED ANCHOR MEETS THE CAPACITY REQUIREMENTS OF THE DETAILED ANCHOR. INCLUDE APPROPRIATE LOAD ADJUSTMENT FACTORS APPLICABLE TO ALL LOADING CONDITIONS INCLUDING BUT NOT LIMITED TO, ANCHOR GEOMETRY, EMBEDMENT DEPTH, ANCHOR SPACING, EDGE DISTANCE, CRACKED CONCRETE, SATURATED CONCRETE, AND OTHER SPECIFIED CONCRETE PROPERTIES. ASSUME DETAILED ANCHOR REQUIRES 100% OF ITS CAPACITY.

3. CONTRACTOR PERFORMING ANCHOR INSTALLATION SHALL ARRANGE FOR ANCHOR MANUFACTURERS REPRESENTATIVE TO PROVIDE ONSITE INSTALLATION TRAINING FOR ALL OF THEIR ANCHORING PRODUCTS SPECIFIED. DOCUMENTED CONFIRMATION THAT ALL OF THE CONTRACTORS PERSONNEL WHO INSTALL ANCHORS HAVE RECEIVED TRAINING SHALL BE PROVIDED TO THE STRUCTURAL ENGINEER OF RECORD PRIOR TO COMMENCEMENT OF INSTALLING ANCHORS.

4. HOLES FOR THROUGH BOLTS SHALL BE FILLED WITH EPOXY TO ENSURE UNIFORM BEARING OF THE BOLT ON THE SUBSTRATE. THE VOLUME OF EPOXY SHALL BE SUFFICIENT TO FILL THE ANNULAR SPACE BETWEEN THE BOLT AND THE HOLE THROUGH THE ENTIRE WIDTH OF THE SUPPORTING ELEMENT.

5. HOLES FOR POST INSTALLED ANCHORS (MECHANICAL OR EPOXY) SHALL BE DRILLED WITH HAMMER OR ROTARY DRILLS ONLY.
   CONTRACTOR SHALL NOT SUBSTITUTE WITH CORE-DRILLED HOLES UNLESS SPECIFICALLY INDICATED ON THE CONTRACT DOCUMENTS.

6. POST-INSTALLED ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH ANCHOR/ADHESIVE MANUFACTURERS PUBLISHED INSTALLATION INSTRUCTIONS. INCLUDING BUT NOT LIMITED TO BASE MATERIAL HOLE DIAMETER AND DEPTH FOR SPECIFIED ANCHOR/ADHESIVE, PROPER INSTALLATION TORQUE FOR EXPANSION ANCHORS.

7. WHERE NOT SPECIFICALLY INDICATED OTHERWISE, CONTRACTOR SHALL USE HILTI HIT-HY 200 SAFE SET ADHESIVE SYSTEM WHERE ADHESIVE ANCHORING W/ DOWELS, THREADED ROD ANCHORS, OR REINFORCING INTO HARDENED CONCRETE IS SPECIFIED.

8. WHERE NOT SPECIFICALLY INDICATED OTHERWISE, CONTRACTOR SHALL USE HILTI HIT-HY 270 ADHESIVE WHERE ADHESIVE ANCHORING TO GROUT FILLED CONCRETE MASONRY IS SPECIFIED. PLASTIC MESH SCREEN TUBES SHALL BE USED WHEN ANCHORING TO HOLLOW CONCRETE MASONRY, CLAY MASONRY W/ HOLES AND/OR VOIDS, OR OTHER MASONRY ASSEMBLIES W/ HOLES AND/OR VOIDS.

9. WHERE NOT SPECIFICALLY INDICATED OTHERWISE, CONTRACTOR SHALL USE HILTI KWIK HUS-EZ SCREW ANCHORS WHERE SCREW ANCHORING INTO HARDENED CONCRETE OR GROUT FILLED CONCRETE MASONRY WITH SCREW ANCHORS IS SPECIFIED.

10. WHERE NOT SPECIFICALLY INDICATED OTHERWISE, CONTRACTOR SHALL USE HILTI KWIK BOLT TZ EXPANSION ANCHORS WHERE EXPANSION ANCHORING INTO HARDENED CONCRETE OR GROUT FILLED CONCRETE MASONRY WITH EXPANSION ANCHORS IS SPECIFIED.

FOUNDATIONS

1. THE FOUNDATION DESIGN IS BASED ON AN ASSUMED SOIL BEARING CAPACITY OF 2500 POUNDS PER SQUARE FOOT.

2. FOOTINGS SHALL BE CARRIED DOWN TO UNDISTURBED SOIL HAVING A MINIMUM NET ALLOWABLE BEARING CAPACITY OF 2500 POUNDS PER SQUARE FOOT.

3. DURING WINTER CONSTRUCTION, PROVIDE FROST PROTECTION FOR FOOTING AND AREA WITHIN 3 FEET OF THE FOOTING PERIMETER. PROTECT FOOTINGS IN ORDER TO PREVENT FREEZING AND HEAVING OF THE BEARING STRATUM.

4. FINISHED EXCAVATIONS AND BEARING GRADES SHALL BE INSPECTED AND APPROVED BY THE GEOTECHNICAL INSPECTION AGENCY BEFORE ANY CONCRETE IS PLACED.

5. THE EXPOSED SUBGRADE SOILS ARE SENSITIVE TO DISTURBANCE AND STRENGTH DEGRADATION WHEN HIGH MOISTURE CONTENTS ARE PRESENT. CONSTRUCTION TRAFFIC OVER EXPOSED SUBGRADES SHALL BE AVOIDED. PROVIDE PROPER DRAINAGE AND GRADING TO AVOID PONDING ON THE SUBGRADES.

6. BACKFILL AGAINST FOUNDATION WALLS AND GRADE BEAMS:
   a. DO NOT PLACE BACKFILL UNTIL CONCRETE STRENGTH HAS ATTAINED 75% OF ITS 28 DAY STRENGTH.

7. CONCRETE FOR FOOTINGS AND GRADE BEAMS MAY ONLY BE PLACED AT CONTRACTOR'S OPTION INTO UNFORMED TRENCHES IF THE BUILDING OFFICIAL CONCURS THAT SOIL CONDITIONS DO NOT REQUIRE FORMWORK.
   a. CUT TRENCH FOOTING SIDES IN VERTICAL MANNER TO NOT ALLOW TRENCH FOOTING TO "MUSHROOM OUT" NEAR THE TOP.
   b. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MINIMIZE SLOUGHING OF SIDEWALLS.
   c. WHERE SLOUGHING OCCURS, REMOVE SLOUGHED SOIL AND/OR OVER EXCAVATE, EITHER ONE OR BOTH AS REQUIRED.

CONCRETE

1. CONCRETE IS NORMAL WEIGHT AND SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS.

2. CONCRETE BAR REINFORCEMENT SHALL BE NEW BILLET STEEL CONFORMING TO ASTM A615 (60,000 PSI YIELD).

3. WELDED WIRE REINFORCEMENT SHALL CONFORM TO ASTM A-185, AND SHALL BE FURNISHED AND PLACED IN FLAT SHEETS.

4. CONCRETE BAR REINFORCEMENT FOR WELDED REINFORCEMENT CONNECTIONS SHALL CONFORM TO ASTM A706. ASTM STANDARDS SHALL BE LATEST EDITION.

5. UNLESS OTHERWISE NOTED, CONCRETE WORK SHALL CONFORM TO THE ACI STANDARD "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318-11) AND THE ACI "DETAILING MANUAL" (SP-66 2004 EDITION).

6. WALLS AND PIERS SHALL BE DOWELED TO FOOTINGS.

7. SIZES OF CONCRETE PLACEMENTS SHALL NOT EXCEED THE FOLLOWING; UNLESS OTHERWISE INDICATED ON THE PLANS:
   a. WALLS - 100 FEET MAXIMUM LENGTH.
   b. SLABS ON GRADE - PLACE IN ALTERNATING STRIP FASHION. APPROXIMATE WIDTH 30 FEET. MAXIMUM LENGTH 200 FEET.
   c. SUPPORTED SLABS - PLACE IN SECTIONS, MAXIMUM AREA 10,000 SQUARE FEET. MAXIMUM LENGTH 100 FEET (ALL CONCRETE SLABS INCLUDING THOSE CAST ON METAL DECK).

8. MINIMUM ELAPSED TIME BETWEEN ADJACENT CONCRETE PLACEMENTS SHALL BE 48 HOURS.

9. DRILLED AND EPOXIED / GROUTED DOWELS ARE NOT AN EQUAL SUBSTITUTE FOR DOWELS SHOWN IN DETAILS UNLESS OTHERWISE INDICATED.

10. PROVIDE A SHEAR KEY 1/3 OF DEPTH OF STRUCTURAL MEMBER AT CONSTRUCTION JOINTS.

11. MINIMUM CONCRETE COVER SHALL BE (UNLESS OTHERWISE NOTED):

a.	UNFORMED SURFACES IN CONTACT WITH GROUND (FOOTING BOTTOMS).	3"
b.	SLABS ON GRADE (TOP COVER)	1"
c.	FORMED SURFACES IN CONTACT WITH GROUND OR EXPOSED TO THE WEATHER (GRADE BEAMS, WALLS, ETC.)	2"
d.	BEAMS AND COLUMN MAIN REINFORCING OR STIRRUPS AND TIES	1 1/2"
e.	INTERIOR & EXTERIOR STRUCTURAL SLABS	1"
f.	INTERIOR WALL SURFACES	1"
g.	IN ALL CASES, CLEARANCE NOT LESS THAN THE DIAMETER OF THE BARS.	

NOTE: MAXIMUM DEVIATION FROM THESE REQUIREMENTS SHALL BE +1/4" FOR SECTIONS TEN (10) INCHES OR LESS AND +1/2" FOR SECTIONS OVER TEN (10) INCHES THICK.

12. WHERE CONTINUOUS BARS ARE CALLED FOR, THEY SHALL BE RUN CONTINUOUSLY AROUND CORNERS AND LAPPED AT NECESSARY SPLICES, AND HOOKED AT DISCONTINUOUS ENDS.

DELEGATED DESIGN

1. THE CONTRACTOR SHALL RETAIN A DELEGATED DESIGN PROFESSIONAL, LICENSED AS A PROFESSIONAL ENGINEER IN THE STATE OF MICHIGAN, TO DESIGN AND DETAIL THE FOLLOWING COMPONENTS:
   a. STRUCTURAL STEEL CONNECTIONS
   b. PRE-ENGINEERED WOOD TRUSSES

2. REFER TO SPECIFICATIONS FOR ADDITIONAL CRITERIA.

3. TYPICAL DETAILS INDICATE GENERAL CRITERIA FOR THE DESIGN AND DETAILING OF CONNECTIONS. TYPICAL DETAILS ARE NOT INTENDED TO CONVEY COMPLETE CONNECTOR SIZE, TYPE, SPACING, NUMBER OF CONNECTORS, OR ANY OTHER SPECIFIC INFORMATION THAT IS OBTAINED THROUGH DESIGNING OF AN INDIVIDUAL CONNECTION FOR A GIVEN SET OF LOADS. DETAILS THAT CONVEY SPECIFIC COMPONENT INFORMATION ESTABLISH MINIMUM REQUIREMENTS AND ARE NOT INTENDED TO CONVEY COMPLETED DESIGN.

4. SUBMITTALS FOR COMPONENTS INDICATED ABOVE SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW AND SHALL BEAR THE SEAL OF THE DELEGATED DESIGN PROFESSIONAL RESPONSIBLE FOR THE DESIGN.

5. STRUCTURAL CALCULATIONS FOR DELEGATED DESIGN COMPONENTS SHALL BE FURNISHED WITH THE SHOP DRAWINGS AND SHALL BEAR THE SEAL OF THE DELEGATED DESIGN PROFESSIONAL RESPONSIBLE FOR THE DESIGN.

STATEMENT OF SPECIAL INSPECTION

1. GENERAL
   a. THIS STATEMENT OF INSPECTIONS IS SUBMITTED AS A CONDITION FOR PERMIT ISSUANCE IN ACCORDANCE WITH THE SPECIAL INSPECTION REQUIREMENTS OF THE 2015 MICHIGAN BUILDING CODE.
   b. REFERENCE DRAWING SHEET SG-02 & SG-03, AND SPECIFICATIONS FOR SPECIAL INSPECTION MATRIX AND ADDITIONAL INFORMATION.

SPECIAL INSPECTIONS & TESTING

1. THE FOLLOWING ITEMS REQUIRE TESTING AND/OR INSPECTION IN ACCORDANCE WITH THE STATEMENT OF SPECIAL INSPECTION, SPECIAL INSPECTION MATRIX LOCATED ON DRAWING SHEET SG-02 & SG-03, AND SPECIFICATIONS.

   a. CAST-IN-PLACE CONCRETE
   b. MASONRY CONSTRUCTION
   c. STRUCTURAL STEEL MATERIALS, WELDS, AND CONNECTIONS
   d. MECHANICAL EXPANSION AND ADHESIVE ANCHORS
   e. SOILS SPECIAL CASES

GENERAL

1. THE STRUCTURAL DRAWINGS SHOW A PORTION OF THE WORK TO BE PERFORMED BY THE CONTRACTOR. SUPPLEMENTARY REQUIREMENTS FOR STRUCTURAL STEEL, CONCRETE, ETC., ARE FOUND WITHIN THE DRAWINGS OF OTHER DISCIPLINES AND REMAIN THE RESPONSIBILITY OF THE CONTRACTOR.

2. THESE NOTES ARE COMPLEMENTARY TO THE SPECIFICATIONS AND SHALL BE USED IN CONJUNCTION WITH THE SPECIFICATIONS.

3. SPECIFICATIONS AND DRAWINGS SHALL BE EQUAL IN AUTHORITY AND PRIORITY. SHOULD THE SPECIFICATIONS AND DRAWINGS DISAGREE IN THEMSELVES, OR WITH EACH OTHER, CONSTRUCTION SHALL BE BASED ON THE MOST STRINGENT. THE WORK REQUIRED TO BE CONSTRUCTED BY THE DOCUMENTS SHALL BE DECIDED BY THE STRUCTURAL ENGINEER IN THE EVENT OF THE ABOVE MENTIONED DISAGREEMENTS.

4. VERIFY THE SIZES, LOCATIONS, ELEVATIONS AND DETAILS OF EXISTING CONDITIONS THAT AFFECT THE WORK. INFORM THE STRUCTURAL ENGINEER OF ANY DISCREPANCIES IN DIMENSIONS, SIZES, LOCATIONS, AND CONDITIONS. PROCEEDING WITH WORK ONLY AFTER DISCREPANCIES ARE RESOLVED.

5. PROVIDE SHORING, BRACING, UNDERPINNING, AND ANY OTHER MEANS REQUIRED TO PROTECT AND MAINTAIN THE SAFETY, INTEGRITY AND STABILITY OF EXISTING AND NEW CONSTRUCTION.

6. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS AT THE SITE, INCLUDING UTILITIES, SERVICES, ETC., AND SHALL BE FULLY RESPONSIBLE FOR ANY DAMAGE HE CAUSES TO THE PROPERTY, EXISTING AND NEW CONSTRUCTION, AND FOR ANY UNAUTHORIZED DISRUPTIONS TO THE OWNER'S NORMAL USE OF UTILITIES, SERVICES AND THE SURROUNDING FACILITIES.

7. CONTRACTOR SHALL OBTAIN APPROVAL OF THE STRUCTURAL ENGINEER PRIOR TO PLACING OPENINGS OR SLEEVES NOT SHOWN ON DRAWINGS THROUGH ANY STRUCTURAL MEMBERS.

8. TYPICAL DETAILS APPLY TO ALL DRAWINGS AND SHALL BE USED EXCEPT WHERE OTHERWISE SHOWN OR NOTED.

9. SEE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS, AND SHOP DRAWINGS FOR SIZE AND LOCATION OF WALL AND FLOOR OPENINGS, WALL OFFSETS, STAIR DETAILS, PIPES, VENTS, DUCTS, CONDUIT, AND OTHER OPENINGS AND DETAILS NOT SHOWN ON THE STRUCTURAL DRAWINGS.

STRUCTURAL STABILITY

1. STRUCTURAL STABILITY IS DEPENDENT ON A FULLY COMPLETED STRUCTURE.

2. THE FULLY COMPLETED STRUCTURE IS DESIGNED TO BE STABLE AND TO RESIST THE CODE PRESCRIBED LATERAL AND GRAVITY FORCES.
   a. "FULLY COMPLETE" INCLUDES, BUT IS NOT LIMITED TO:
      a) BEAMS, JOISTS AND COLUMNS ARE IN PLACE AND ARE CONNECTED AS REQUIRED ON THE CONTRACT DOCUMENTS.
      b) MASONRY SHEAR WALLS ARE INSTALLED AND HAVE ACHIEVED THE DESIGN STRENGTH, F'm.
      d) ELEVATED CONCRETE SLABS AND CONCRETE SLAB-ON-GRADE ARE IN-PLACE AND HAVE ACHIEVED DESIGN STRENGTH F'c.
      e) THE ROOF DIAPHRAGM IS INSTALLED AND PROPERLY FASTENED.

3. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE IN ITS INCOMPLETE STAGE, INCLUDING BUT NOT LIMITED TO:
   a. DETERMINING ERECTION AND PLACING PROCEDURES.
   b. DESIGNING AND PROVIDING TEMPORARY SUPPORTS, SUCH AS TEMPORARY SHORING, BRACING, GUYS AND TIE-DOWNS.
   c. TEMPORARY BRACING SHALL REMAIN IN PLACE AND SHALL CONSIDER THE FULL WIND LOAD EFFECTS AS STATED ON THE DRAWINGS UNTIL THE ABOVE REQUIREMENTS ARE MET.
   d. DESIGNING AND PROVIDING SEI/ASCE 37-02, "DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION" AS A REFERENCE TO DETERMINE LOADS FOR TEMPORARY SUPPORTS.

REINFORCED HOLLOW CONCRETE MASONRY (CMU)

1. MASONRY SHALL BE IN ACCORDANCE WITH BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530-11/ASCE 5-14) AND SPECIFICATIONS FOR MASONRY STRUCTURES (ACI 530.1-11/ASCE 6-14).

2. MORTAR SHALL BE PORTLAND CEMENT LIME MORTAR OR MASONRY CEMENT MORTAR, IN ACCORDANCE WITH ASTM C 270, TYPE S.

3. GROUT SHALL BE "FINE GROUT" IN ACCORDANCE WITH ASTM C 476. GROUT STRENGTH SHALL BE f'_c = 2500 PSI MIN.

4. MINIMUM MASONRY STRENGTH SHALL BE f'_m = 2000 PSI . UNITS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH ON THE NET AREA OF 2800 PSI. EXCEPTION: IF PRISM TESTS ARE PERFORMED IN ACCORDANCE WITH ASTM E 447 METHOD B UNITS OF LESSER STRENGTH MAY BE USED TO ACHIEVE THE REQUIRED f'_m.

5. REINFORCEMENT: ASTM A 615 GRADE 60.

6. HORIZONTAL BOND BEAM AND VERTICAL REINFORCEMENT SHALL BE CONTINUOUS U.O.N.

7. LAP SPLICE HORIZONTAL REINFORCEMENT PER TYPICAL DETAILS OR PROVIDE MECHANICAL BAR COUPLERS. STAGGER SPLICE LOCATIONS.

8. GROUT SOLID ALL CORES AND BOND BEAMS WITH REINFORCEMENT.

9. GROUT SOLID ALL MASONRY BELOW FINISH FLOOR AND/OR FINISH GRADE.

10. PROVIDE BRACES TO THE WALLS TO RESIST WIND AND SEISMIC LOADS UNTIL THE MASONRY HAS REACHED 75% OF THE REQUIRED STRENGTH, f'_m .

DESIGN LOADS

1. DESIGN CODE — MICHIGAN BUILDING CODE 2015
   DESIGN LOAD COMBINATIONS — PER ASCE 7-10 SECTION 2.3 & 2.4 & MBC SECTION 1605

2. ROOF LIVE LOADS (UNFACTORED)
   a. MINIMUM ROOF LIVE LOAD — 20 PSF
   b. FLAT ROOF DESIGN SNOW LOAD — 20 PSF
   c. GROUND SNOW LOAD, "P_g" — 25 PSF
   d. SNOW EXPOSURE FACTOR, "C_e" — 1.0
   e. SNOW THERMAL FACTOR, "C_t" — 1.0
   f. SNOW LOAD IMPORTANCE FACTOR, "I_s" — 1.0

3. FIRST, SECOND, AND THIRD FLOOR (UNFACTORED)
   a. MINIMUM LIVE LOAD — 40 PSF
   b. DEAD LOAD — 20 PSF

4. ULTIMATE DESIGN WIND LOAD FOR STRUCTURAL FRAME (MULTIPLY BY 0.6 FOR NOMINAL LOADS)
   a. RISK CATEGORY — II
   b. EXPOSURE CATEGORY — B
   c. BASIC WIND SPEED — 115 MPH
   d. BASE WIND PRESSURE "q_h" — 28.7 PSF

5. ULTIMATE DESIGN WIND LOAD FOR EXTERIOR COMPONENTS AND CLADDING COMPONENT TRIBUTARY OF AREA OF 20 SQUARE FEET (MULTIPLY BY 0.6 FOR NOMINAL LOADS)
   a. ROOF ZONE 1 (FIELD) — +/- 28.7 PSF
   b. ROOF ZONE 2 (EDGE) — +/-35.6 PSF
   c. ROOF ZONE 3 (CORNER) — +/- 68.5.5 PSF
   d. WALL ZONE 4 (TYPICAL WALL) — +/- 35.2 PSF
   e. WALL ZONE 5 (CORNER) (WITHIN 4 FT EACH SIDE OF CORNER) — +/- 42.2 PSF

6. SEISMIC LOADS
   a. RISK CATEGORY — II
   b. IMPORTANCE FACTOR "I_E" — 1.0
   c. SEISMIC DESIGN CATEGORY "SDC" — B
   d. SHORT PERIOD PEAK SPECTRAL ACCELERATION "S_S" — 9.00% g
   e. 1 - SECOND PERIOD PEAK SPECTRAL ACCELERATION "S_1" — 4.50% g
   f. SEISMIC SITE CLASS — D
   g. SPECTRAL RESPONSE COEFFICIENT "S_{DS}" — 0.096
   h. SPECTRAL RESPONSE COEFFICIENT "S_{D1}" — 0.072
   i. LONG TERM TRANSITION PERIOD "T_L" — 12 SEC
   j. SEISMIC BASE SHEAR, "V" — 0.015W

SHOP DRAWINGS & SUBMITTALS

1. PROVIDE THE FOLLOWING SHOP DRAWINGS AND SUBMITTALS FOR REVIEW TO THE STRUCTURAL ENGINEER:
   a. TESTING AND INSPECTION REPORTS IN ACCORDANCE WITH PROJECT REQUIREMENTS FOR SPECIAL INSPECTIONS AND TESTING
   b. CONCRETE FOUNDATIONS AND REINFORCING SHOP DRAWINGS
   c. COLUMN ANCHOR BOLT SHOP DRAWINGS
   d. STRUCTURAL STEEL SHOP DRAWINGS
   e. METAL STAIR SHOP DRAWINGS

STRUCTURAL DRAWING LIST

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

efi global

EFI Global of Michigan, LLC

33955 Harper Avenue • Clinton Township, MI 48035
P: (586) 868-0220 • www.efiglobal.com

EFIG Project Number: MI011806115

KEY PLAN

STATE OF MICHIGAN — LAWRENCE CARNAGHI — No. 37736 — REGISTERED PROFESSIONAL ENGINEER

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency Shelter
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PIA PROJECT NO.

17-179

ISSUES / REVISIONS

Building Permit	12/19/2018

DRAWN BY
L. Lesniak

CHECKED BY
G. Carnaghi

APPROVED BY
L. Lesniak

SHEET NAME
General Notes

SHEET NO.
SG-01

1705.2 - REQUIRED VERIFICATION AND INSPECTION OF STRUCTURAL STEEL & METAL DECK

	INSPECTION TASK	FREQUENCY OF INSPECTION		REFERENCED STANDARD	RESPONSIBLE AGENT
		CONTINUOUS	PERIODIC		
1.	Material verification of structural steel and cold-formed steel deck:				SI,PE
a.	For structural steel, identification markings to conform to AISC 360.		X	AISC 303, Section 5	
b.	For other steel, identification markings to conform to ASTM standards specified in the approved construction documents.		X	Applicable ASTM material standards	
c.	Manufacturers' certified mill test reports.		X		
2.	Inspection tasks prior to welding:			AISC 360, AWS D1.1	SI, PE
a.	Welding procedure specifications (WPSs) available.	X			
b.	Manufacturer certifications for welding consumables available.	X			
c.	Material identification (type/grade).		X		
d.	Welding procedure specifications (WPSs) available including identification of welder who has welded each joint.		X		
e.	Fit-up groove welds (including joint geometry):				
1)	Joint preparation.		X		
2)	Dimensions (alignment, root opening, root face, bevel).		X		
3)	Cleanliness (condition of steel surface).		X		
4)	Tacking (tack weld quality and location).		X		
5)	Backing type and fit (if applicable).		X		
f.	Configuration and finish of access holes.		X		
g.	Fit-up of fillet welds:				
1)	Dimensions (alignment, gaps at root).		X		
2)	Cleanliness (condition of steel surface).		X		
3)	Tacking (tack weld quality and location).		X		
h.	Check welding equipment.		X		
3.	Inspection tasks during welding:			AISC 360, AWS D1.1	SI, PE
a.	Use of qualified welders.		X		
b.	Control and handling of welding consumables:				
1)	Packaging.		X		
2)	Exposure control.		X		
c.	No welding over cracked tack welds.		X		
d.	Environmental conditions:				
1)	Wind speed within limits.		X		
2)	Precipitation and temperature.		X		
e.	Welding procedure specifications (WPSs) followed:				
1)	Settings on welding equipment.		X		
2)	Travel speed.		X		
3)	Selected welding materials.		X		
4)	Shielding gas type/flow rate.		X		
5)	Preheat applied.		X		
6)	Interpass temperature maintained (min/max).		X		
7)	Proper position (F,V,H, OH).		X		
f.	Welding techniques:				
1)	Interpass and final cleaning.		X		
2)	Each pass within profile limitations.		X		
3)	Each pass meets quality requirements.		X		
4.	Inspection tasks after welding:			AISC 360, AWS D1.1	SI, PE
a.	Welds cleaned.		X		
b.	Size, length and location of welds.	X			
c.	Welds meet visual acceptance criteria:				
1)	Crack prohibition.	X			
2)	Welds/base metal fusion.	X			
3)	Crater cross section.	X			
4)	Weld profile.	X			
5)	Weld Size.	X			
6)	Undercut.	X			
7)	Porosity.	X			
d.	Repair activities.	X			
e.	Document acceptance or rejection of welded joints or members.	X			
5.	Nondestructive testing of welded joints:			AISC 360, AWS D1.1	SI, PE
a.	Ultrasonic testing of all CJP groove welds in Risk Category III & IV structures.	X			
b.	Ultrasonic testing of 10% CJP groove welds in Risk Category II structures. Increase rate of inspection to 100% when required per AISC 360-10 N5.5.5f.	X			
6.	Inspection tasks prior to bolting:			AISC 360, RCSC	SI, PE
a.	Manufacturers certifications available for fastener materials.	X			
b.	Fasteners marked in accordance with ASTM requirements.		X		
c.	Proper fastener selected for joint details.		X		
d.	Proper bolting procedure selected for joint detail.		X		
e.	Connecting elements, including the appropriate faying surface condition and hole preparation, if specified, meet applicable requirements.		X		
f.	Pre-installation verification testing by installation personnel observed and documented for fastener assemblies and methods used.		X		
g.	Proper storage provided for bolts, nuts, washers, and other fastening components.		X		
7.	Inspection tasks during bolting:			AISC 360, RCSC	SI, PE
a.	Fastener assemblies, of suitable condition, placed in all holes and washers (if required) are positioned as required.		X		
b.	Joint brought to snug-tight condition prior to pretensioning operation.		X		
c.	Fastener component not turned by the wrench prevented from rotating.		X		
d.	Fasteners are pretensioned in accordance with the RCSC specification, progressing systematically from the most rigid point toward the free edges.		X		
8.	Inspection tasks after bolting:			AISC 360, RCSC	SI, PE
a.	Document acceptance or rejection of bolted connections.	X			
9.	Inspection Anchor Rods:			AISC 360	SI,PE
a.	Verify anchor rod projection to engage nut.		X		
b.	Inspect base plate for grouting of over sized holes.		X		
c.	Inspect base plate welding of plate washers.		X		

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

efi global

EFI Global of Michigan, LLC

33955 Harper Avenue • Clinton Township, MI 48035
P: (586) 868-0220 • www.efiglobal.com

EFIG Project Number: MI011806115

KEY PLAN

STATE OF MICHIGAN
LAWRENCE J. LESNIAK
NO. 37736
LICENSED PROFESSIONAL ENGINEER

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency Shelter
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PIA PROJECT NO.

17-179

ISSUES / REVISIONS

Building Permit	12/19/2018

DRAWN BY
L. Lesniak

CHECKED BY
G. Carnaghi

APPROVED BY
L. Lesniak

SHEET NAME

Special Inspections & Testing

SHEET NO.

SG-02

1705.5 - REQUIRED VERIFICATION AND INSPECTION OF WOOD CONSTRUCTION

	INSPECTION TASK	FREQUENCY OF INSPECTION		REFERENCED STANDARD	RESPONSIBLE AGENT
		CONTINUOUS	PERIODIC		
1.	Inspect wood structural panel sheathing or gypsum sheathing to ascertain whether it is of the grade and thickness shown on the approved building plans and/or approved submittals. Verify fasteners do not break skin of structural panels.		X		SI,PE
2.	Verify nominal size of framing members at adjoining panel edges, the nail or staple diameter and length, the number of fastener lines and that the spacing between fasteners in each line and at edge margins agrees with the approved building plans and/or shop drawings.		X		SI,PE
3.	Verify height, length, width, and location of shear walls and diaphragms. Size, location, quantity, and fastening of drag struts. Verify appropriate wood or gypsum sheathing panels.		X		SI,PE
4.	Verify bolts and washers, connectors and fastening of connectors, anchor bolt size and spacing, and nailing schedule.		X		SI,PE
5.	Verify connections to roof and sill plates, including hold down connections.		X		SI,PE
6.	Where metal-plate-connected wood trusses clear span 60 feet or greater, verify that the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing are installed in accordance with the approved truss submittal package.	X			SI,PE

1705.4 - REQUIRED VERIFICATION AND INSPECTION OF MASONRY CONSTRUCTION - LEVEL B

	INSPECTION TASK	FREQUENCY OF INSPECTION		Reference for Criteria		RESPONSIBLE AGENT
		CONTINUOUS	PERIODIC	ACI 530/ASCE 5/TMS 402	ACI 530.1/ASCE 6/TMS 602	
1.	Verification of f'm in accordance with Specification Article 1.4 B prior to construction except where specifically exempted by ACI 530/ASCE 5/TMS 402.	X				SI,PE
2.	Verify compliance with the approved submittals.		X		Art. 1.5	SI,PE
3.	As masonry construction begins, the following shall be verified to ensure compliance:					SI,PE
	a. Proportions of site-prepared mortar.		X		Art. 2.1, 2.6A	
	b. Construction of mortar joints.		X		Art. 3.3B	
	c. Grade and size of and anchorages.		X		Art. 2.4B, 2.4H	
	d. Location of reinforcement, connectors, and anchorages.		X		Art. 3.4, 3.6A	
4.	Prior to grouting, verify that the following are in compliance:					SI,PE
	a. Grout space is clean.		X		Art. 3.2D, 3.2F	
	b. Grade, type, and size of reinforcing and anchor bolts.		X	Sec. 6.1	Art. 2.4, 3.4	
	c. Placement of reinforcement and connectors.		X	Sec. 5.1, 6.2.1, 6.2.6, 6.2.7	Art. 3.2E, 3.4, 3.6A	
	d. Proportions of site-prepared grout.		X		Art. 2.6B, 2.4G.1.b	
	e. Construction of mortar joints.		X		Art. 3.3B	
5.	Verify during construction:					SI,PE
	a. Size and location of structural elements.		X		Art. 3.3F	
	b. Type, size and locations of anchors, including other details of anchorage of masonry to structural members, frames or other construction.		X	Sec. 1.2.1(e), 6.1.4.3, 6.2.1		
	c. Preparation, construction and protection of masonry during cold weather (temperature below 40 degrees F) or hot weather (temperatures above 90 degrees F).		X		Art. 1.8C, 1.8D	
6.	Observe preparation of grout specimens, mortar specimens and/or prisms.		X		Art. 1.4B.2.a.3, 1.4B.2.b.3, 1.4B.2.c.3, 1.4B.3, 1.4B.4	SI,PE

SPECIAL INSPECTION LEGEND & NOTES

1.	Special inspections shall be performed in accordance with 2015 Michigan Building Code Chapter 17 and as modified herein.
2.	SI: Special Inspector meeting the minimum qualification requirements to perform the indicated special inspection services. Shall demonstrate competence documented by certifications from recognized agencies and approved by the Building Official Having Jurisdiction.
3.	PE: Registered Professional Engineer licensed in the State of Michigan meeting the minimum qualification requirements to perform the indicated special inspection service and approved by the Building Official Having Jurisdiction.
4.	GEOR: The geotechnical engineer of record who provided the original project geotechnical soils investigation report and meets the minimum qualification requirements to perform the indicated special inspection service and approved by the Building Official Having Jurisdiction.
5.	GEOR shall submit records of the inspection results to the SI. The SI shall compile and submit inspection records to the Architect/Engineer of Record and Building Official. Records shall include statements of tests, whether installed/fabricated item complies with contract documents, remedial work performed, retests.
6.	Special Inspectors performing inspection services shall refer to and familiarize themselves with the Contract Documents, approved submittals, RFI responses, and field directives related to the work being inspected.
7.	SI shall develop and maintain a list of each reported discrepancy and suggested remedial action. It shall list method of how discrepancy was resolved and when the remedial action is performed.
8.	The Special Inspection Agency and/or Special Inspector shall be paid by the Owner or the registered design professional in responsible charge acting as the Owner's agent, in compliance with the Michigan Building Code.
9.	Refer to the Michigan Building Code Chapter 35 for current reference standard editions.
10.	Refer to the International Code Council Special Inspection Manual 2012 Edition for additional information.

1705.6 - REQUIRED VERIFICATION AND INSPECTION OF SOILS

	INSPECTION TASK	FREQUENCY OF INSPECTION		REFERENCED STANDARD	RESPONSIBLE AGENT
		CONTINUOUS	PERIODIC		
1.	Verify materials below footings are adequate to achieve the design bearing capacity.		X	Geotechnical Report	GEOR,SI,PE
2.	Verify excavations are extended to proper depth and have reached proper material.		X		
3.	Perform classification and testing of compacted fill materials.		X		
4.	Verify use of proper materials, analysis of fill materials, densities and lift thicknesses during placement and compaction of compacted fill.	X			
5.	Prior to placement of compacted fill, observe subgrade and verify that site has been prepared properly.		X		
6.	Verify subgrade preparation for concrete slabs on grade in accordance with specification requirements and geotechnical recommendations contained within the geotechnical report, immediately prior to placement of the concrete slab on grade.	X			
7.	Verify site prepared in accordance with the approved geotechnical report.		X		

1705.3 - REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION

	INSPECTION TASK	FREQUENCY OF INSPECTION		REFERENCED STANDARD	RESPONSIBLE AGENT
		CONTINUOUS	PERIODIC		
1.	Inspection of reinforcing steel and placement.		X	ACI 318: Ch. 20, 25.2, 25.3, 26.6.1-26.6.3	SI,PE
2.	Inspect bolts to be installed in concrete prior to and during placement of concrete.	X		ACI 318: 17.8.2	SI,PE
3.	Inspection of anchors installed in hardened concrete. (Refer to 1705.1 P.I. Anchors)		X	ACI 318: 17.8.2	SI,PE
4.	Verifying use of approved concrete mix designs.		X	ACI 318: Ch. 19, 26.4.3-26.4.4	SI,PE
5.	At the time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	X		ASTM C 172 ASTM C 31 ACI 318: 26.4, 26.12	SI,PE
6.	Inspection of concrete for proper application techniques.	X		ACI 318: 26.5	SI,PE
7.	Inspection of vapor retarder surface for complete moisture removal prior to placement of concrete.		X		SI,PE
8.	Inspection for maintenance of specified curing temperature and techniques.		X	ACI 318: 26.5.3-26.5.5	SI,PE
9.	Erection of precast concrete members.		X	ACI 318: 26.8	SI,PE
10.	Inspect formwork for shape, location and dimensions of the concrete member being formed.		X	ACI 318: 26.11.1.2(b)	SI,PE

1705.1 - REQUIRED VERIFICATION AND INSPECTION OF POST-INSTALLED ANCHORS

	INSPECTION TASK	FREQUENCY OF INSPECTION		REFERENCED STANDARD	RESPONSIBLE AGENT
		CONTINUOUS	PERIODIC		
1.	Expansion, wedge, screw, and powder-actuated fasteners/anchors:			ACI 355.2, ICC ES AC193, Manuf. Requirements	SI,PE
	a. Prior to installation, verify anchor type, anchor dimensions, concrete type, concrete compressive strength, and drill bit type.		X		
	b. During installation, verify hole dimensions, hole cleaning procedures, anchor spacing, edge distance, concrete thickness, anchor embedment, and installation torque.		X		
2.	Adhesive anchors installed in horizontal or overhead application:			ACI 355.4, ICC ES AC308, Manuf. Requirements	SI,PE
	a. Prior to installation:				
	1) Review certifications from each installer indicating completion of the ACI/CRSI Adhesive Anchor Installation Certification Program.	X			
	b. During installation verify the following:				
	1) Verify anchor type, adhesive identity and expiration date, anchor dimensions, concrete type, concrete compressive strength, hole drilling method, hole dimensions, hole-cleaning procedures, anchor spacing, edge distances, concrete thickness, anchor embedment, and installation torque.	X			
	2) Verify compliance with proof-loading program (when required)	X			
3.	Adhesive anchors not installed in horizontal or overhead application:			ACI 355.4, ICC ES AC308, Manuf. Requirements	SI,PE
	a. Prior to installation verify the following:				
	1) Review certifications from each installer indicating completion of the adhesive manufacturers training and quality assurance program, or ACI/CRSI Adhesive Anchor Installation Certification Program.	X			
	2) Anchor type, anchor dimensions, concrete type, concrete compressive strength, adhesive identification and expiration date.	X			
	b. During installation verify the following:				
	1) Verify anchor type, adhesive identity and expiration date, anchor dimensions, concrete type, concrete compressive strength, hole drilling method, hole dimensions, hole-cleaning procedures, anchor spacing, edge distances, concrete thickness, anchor embedment, and installation torque.	X			
	2) Verify initial installations of each type and size of adhesive anchor. Subsequent installations of the same anchor type and size by the same construction personnel may be performed in the absence of the special inspector and inspected on a periodic basis.		X		
	3) For ongoing installations, perform periodic inspections in accordance with item 3.b.1		X		

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

efi global

EFI Global of Michigan, LLC

33955 Harper Avenue • Clinton Township, MI 48035
P: (586) 868-0220 • www.efiglobal.com

EFIG Project Number: MI011806115

KEY PLAN

STATE OF MICHIGAN
LAWRENCE J. LESNIAK
NO. 37736
LICENSED PROFESSIONAL ENGINEER

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency Shelter
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PIA PROJECT NO.

17-179

ISSUES / REVISIONS

Building Permit 12/19/2018

DRAWN BY
L. Lesniak

CHECKED BY
G. Carnaghi

APPROVED BY
L. Lesniak

SHEET NAME

Special Inspections & Testing

SHEET NO.

SG-03

REINFORCED UNIT MASONRY ASSEMBLIES SPECIFICATIONS

1. EXTENT OF EACH TYPE OF REINFORCED UNIT MASONRY WORK IS INDICATED ON DRAWINGS AND IN SCHEDULES.

2. SUBMIT SHOP DRAWINGS FOR FABRICATION, BENDING, AND PLACEMENT OF REINFORCING BARS. COMPLY WITH ACI 315 "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES". SHOW BAR SCHEDULES, DIAGRAMS OF BENT BARS, STIRRUP SPACING, LATERAL TIES AND OTHER ARRANGEMENTS AND ASSEMBLIES AS REQUIRED FOR FABRICATION AND PLACEMENT OF REINFORCEMENT FOR UNIT MASONRY WORK.

3. GROUTING PROCEDURE:
   a. SUBMIT PROPOSED GROUTING PROCEDURES WITH AT MINIMUM THE FOLLOWING INFORMATION:
      1) USE OF FINE GROUT.
      2) LIFT HEIGHTS:
         a) PROPOSED LIFT HEIGHT AS IT APPLIES TO THE TYPE OF GROUT AND BLOCK SIZE.
      3) GROUT CONSOLIDATION METHOD:
         a) IF MORE THAN ONE METHOD IS PROPOSED, INDICATED RESPECTIVE AREA OF USE.
      4) LOCATION OF CLEANOUTS AS APPLICABLE.

4. CODES AND STANDARDS:
   a. COMPLY WITH PROVISIONS OF FOLLOWING CODES, SPECIFICATIONS, AND STANDARDS, EXCEPT WHERE
      MORE STRINGENT REQUIREMENTS ARE SHOWN OR SPECIFIED:
      1) ACI 530-11, BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES.
      2) ACI 530.1-11, SPECIFICATIONS FOR MASONRY STRUCTURES.

5. RESPONSIBILITY OF CONTRACTOR:
   a. THE CONTRACTOR ALONE SHALL BE FULLY RESPONSIBLE FOR THE DESIGN, STRENGTH, SAFETY AND ADEQUACY OF ALL FORMWORK, SHORING, BRACING AND ALL METHODS OF CONSTRUCTION, AND FOR THE STRENGTH, CONSISTENCY, FINISH AND GENERAL QUALITY OF MASONRY. THE SPECIFYING HEREIN OF REQUIREMENTS FOR CONSTRUCTION METHODS, PRELIMINARY APPROVALS BY THE STRUCTURAL ENGINEER, INSPECTION TESTING AND QUALITY CONTROL PERFORMED BY THE TESTING AGENCY, OR ANY OTHER REQUIREMENTS OF THE SPECIFICATIONS SHALL BE CONSTRUED AS THE MINIMUM ACCEPTABLE, AND SHALL NOT ELIMINATE, LESSEN OR RESTRICT IN ANY MANNER THE RESPONSIBILITY OF THE CONTRACTOR FOR ALL CONSTRUCTION METHODS AND FOR PROVIDING MASONRY IN THE COMPLETED STRUCTURE THAT FULLY MEETS THE STRENGTH, APPEARANCE AND ALL OTHER REQUIREMENTS OF THE SPECIFICATIONS AND DRAWINGS.

6. MATERIALS
   a. FOR ALIGNMENT OF CELLS TO RECEIVE REINFORCEMENT AND GROUT, BLOCK SHALL BE 2-CELL UNITS, WITH A RECOMMENDED OPEN END AT ONE SIDE.
   b. REINFORCEMENT BARS:
      1) PROVIDE GRADE ASTM A 615 - GRADE 60, DEFORMED, EXCEPT AS OTHERWISE INDICATED.
      2) SHOP-FABRICATE REINFORCEMENT BARS WHICH ARE SHOWN TO BE BENT OR HOOKED.
   c. REINFORCING BAR POSITIONERS:
      1) BARS AT CENTER OF BLOCK:
         a) D/A 811; DUR-O-WAL,
         b) NO. 376 REBAR POSITIONER; HECKMANN BUILDING PRODUCTS,
         c) #RB REBAR POSITIONER, HOHMANN & BARNARD, INC.,
         d) FIGURE 8 REBAR POSITIONER, MASONRY REINFORCING CORP. OF AMERICA,
      2) BARS NEAR FACE OF BLOCK:
         a) POSITIONERS TO PLACE REBARS WITH ½ INCH COVER TO INSIDE FACE OF BLOCK.
   d. FOR HORIZONTAL BARS IN BOND BEAMS:
      1) BOTTOM REINFORCING:
         a) USE STANDARD CHAIRS OR BOLSTERS FOR SPACING, SUPPORTING AND FASTENING BARS IN PLACE. USE WIRE BAR TYPE SUPPORTS COMPLYING WITH CRSI RECOMMENDATIONS.
   e. MECHANICAL TYPE TENSION SPLICES AND ACCESSORIES:
      1) LENTON REBAR SPLICES; ERICO PRODUCTS, INC., .
      2) DS-BAR-LOCK COUPLER SYSTEM; DAYTON SUPERIOR;
   f. GROUT:
      1) COMPLY WITH ASTM C 476.
      2) UNLESS OTHERWISE INDICATED, USE TYPE (FINE OR COARSE)
      3) SLUMP: 8 TO 11 INCHES, IN ACCORDANCE WITH ASTM C 143.

7. EXAMINE CONDITIONS, WITH INSTALLER PRESENT, FOR COMPLIANCE WITH REQUIREMENTS FOR INSTALLATION TOLERANCES AND OTHER CONDITIONS AFFECTING PERFORMANCE.

8. DO NOT PROCEED WITH MASONRY INSTALLATION UNTIL CONSTRUCTION THAT MASONRY IS DEPENDANT-ON IS SATISFACTORY AND THAT UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

9. CLEAN REINFORCEMENT OF LOOSE RUST, MILL SCALE, EARTH, ICE OR OTHER MATERIALS WHICH WILL REDUCE BOND TO MORTAR OR GROUT. DO NOT USE REINFORCING BARS WITH BENDS NOT SHOWN ON DRAWINGS OR FINAL SHOP DRAWINGS, OR BARS WITH REDUCED CROSS-SECTION DUE TO EXCESSIVE RUSTING OR OTHER CAUSES.

10. POSITION REINFORCEMENT ACCURATELY AT THE SPACING INDICATED. SUPPORT AND SECURE VERTICAL BARS AGAINST DISPLACEMENT. HORIZONTAL REINFORCEMENT MAY BE PLACED AS THE MASONRY WORK PROGRESSES. EXCEPT AT SPLICES, WHERE VERTICAL BARS ARE SHOWN IN CLOSE PROXIMITY, PROVIDE A CLEAR DISTANCE BETWEEN BARS OF NOT LESS THAN THE NOMINAL BAR DIAMETER OR 1" (WHICHEVER IS GREATER).

11. PLACE REINFORCEMENT AND TIES IN GROUT SPACES PRIOR TO GROUTING.

12. SPLICE REINFORCEMENT BARS WHERE SHOWN; DO NOT SPLICE AT OTHER POINTS UNLESS ACCEPTABLE IN WRITING TO THE ARCHITECT. FOR BARS WHERE LAP SPLICES ARE PERMITTED, PROVIDE NOT LESS THAN MINIMUM LAP INDICATED.

13. SUPPORT VERTICAL REINFORCING WITH REINFORCING BAR POSITIONERS.
   a. LOCATE REINFORCING BAR POSITIONERS AS SHOWN ON THE DRAWINGS.

14. EMBED PREFABRICATED HORIZONTAL JOINT REINFORCEMENT AS THE WORK PROGRESSES, WITH A MINIMUM COVER OF 5/8" ON EXTERIOR FACE OF WALLS AND 1/2" AT OTHER LOCATIONS. LAP UNITS NOT LESS THAN 6" AT ENDS. USE PREFABRICATED "L" AND "T" UNITS TO PROVIDE CONTINUITY AT CORNERS AND INTERSECTIONS. CUT AND BEND UNITS AS RECOMMENDED BY MANUFACTURER FOR CONTINUITY AT RETURNS, OFFSETS, COLUMN FIREPROOFING, PIPE ENCLOSURES AND OTHER SPECIAL CONDITIONS.

15. ANCHOR REINFORCED MASONRY WORK TO SUPPORTING STRUCTURE AS INDICATED.

16. CONSTRUCT GROUT SPACES FREE OF MORTAR DROPPINGS, DEBRIS, LOOSE AGGREGATES, AND ANY MATERIAL DELETERIOUS TO MASONRY GROUT.

17. DO NOT WET CONCRETE MASONRY UNITS (CMU).

18. LAY CMU UNITS WITH FULL-FACE SHELL MORTAR BEDS. FILL VERTICAL HEAD JOINTS (END JOINTS BETWEEN UNITS) SOLIDLY WITH MORTAR FROM FACE OF UNIT TO A DISTANCE BEHIND FACE EQUAL TO NOT LESS THAN THE THICKNESS OF LONGITUDINAL FACE SHELLS. SOLIDLY BED CROSS-WEBS OF STARTING COURSES IN MORTAR. MAINTAIN HEAD AND BED JOINT WIDTHS SHOWN, OR IF NOT SHOWN, PROVIDE 3/8" JOINTS.

SPECIAL INSPECTION AND TESTING SPECIFICATIONS

9. SPECIAL INSPECTOR IN TRAINING (SIIT):
   a. AN INSPECTOR WHO DOES NOT MEET THE QUALIFICATIONS FOR A SPECIAL INSPECTOR MAY BE ALLOWED TO PERFORM A "SPECIAL INSPECTION" AT THE DISCRETION OF THE SPECIAL INSPECTION AGENCY'S RESPONSIBLE PROFESSIONAL ENGINEER, PROVIDED THE FOLLOWING CONDITION IS MET:
   b. THE INDIVIDUAL IS WORKING UNDER THE DIRECT ON-SITE AND CONTINUOUS SUPERVISION OF A SPECIAL INSPECTOR FULLY QUALIFIED FOR THE TYPE OF WORK INVOLVED.

10. TESTING LABS QUALIFICATION STANDARDS.
   a. EACH DESIGNATED TESTING LAB SHALL BE ACCREDITED BY ONE OF THE FOLLOWING MAJOR ACCEPTABLE ACCREDITATION AUTHORITIES:
      1) IAS ACCREDITATION WITH THE SCOPE OF ACCREDITATION COVERING THE DISCIPLINES FOR WHICH THE TESTING LAB IS DESIGNATED.
      2) AASHTO ACCREDITATION PROGRAM PER EITHER AASHTO R18 OR ISO/IES 17250.
      3) AMERICAN ASSOCIATION OF LABORATORY ACCREDITATION.
      4) ACCREDITED BY A THIRD PARTY AND SHALL MEET THE REQUIREMENTS OF SECTION 1703.1 OF MBC 2015.

11. MINIMUM QUALIFICATIONS FOR SPECIAL INSPECTORS:
   a. MINIMUM QUALIFICATIONS OF RESPONSIBLE INSPECTION AGENT INDICATED IN THE SPECIAL INSPECTION AND TESTING SERVICES MATRIX. ONE OR A COMBINATION OF THE FOLLOWING SHALL BE PROVIDED:
      1) SI - SPECIAL INSPECTOR MEETING THE MINIMUM QUALIFICATION REQUIREMENTS TO PERFORM THE INDICATED SPECIAL INSPECTION SERVICES. SHALL DEMONSTRATE COMPETENCE DOCUMENTED BY CERTIFICATIONS FROM RECOGNIZED AGENCIES AND APPROVED BY THE BUILDING OFFICIAL HAVING JURISDICTION.
      2) PE - REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MICHIGAN MEETING THE MINIMUM QUALIFICATION REQUIREMENTS TO PERFORM THE INDICATED SPECIAL INSPECTION SERVICE AND APPROVED BY THE BUILDING OFFICIAL HAVING JURISDICTION.
      3) GEOR - THE GEOTECHNICAL ENGINEER OF RECORD WHO PROVIDED THE ORIGINAL PROJECT GEOTECHNICAL SOILS INVESTIGATION REPORT AND MEETS THE MINIMUM QUALIFICATION REQUIREMENTS TO PERFORM THE INDICATED SPECIAL INSPECTION SERVICE AND APPROVED BY THE BUILDING OFFICIAL HAVING JURISDICTION.

SPECIAL INSPECTION AND TESTING SPECIFICATIONS

1. THE OWNER SHALL EMPLOY ONE OR MORE APPROVED INDEPENDENT TESTING AGENCIES TO PERFORM INSPECTIONS DURING CONSTRUCTION ON THE TYPES OR WORK LISTED UNDER MBC 2015 SECTION 1705 AND THE CONTRACT DOCUMENTS.

2. MATERIALS, SYSTEMS, COMPONENTS, AND WORK AS PART OF DELEGATED DESIGNS OR DELEGATED SYSTEMS ARE REQUIRED TO HAVE SPECIAL INSPECTIONS IN ACCORDANCE WITH THIS SECTION.
   a. EXAMPLE: ANCHORAGE OF NON-STRUCTURAL COMPONENTS RELATED TO ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND FIRE SUPPRESSION.

3. RELATED DOCUMENTS:
   a. SPECIAL INSPECTION AND TESTING MATRIX SHOWN ON CONTRACT DRAWINGS.
   b. INTERNATIONAL ACCREDITATION SERVICES, INC. ACCREDITATION CRITERIA FOR SPECIAL INSPECTION AGENCIES, AC291 DATED JUNE 2013.
   c. ACI MANUAL OF CONCRETE PRACTICE LATEST ADDITION FOR TESTING AND INSPECTION OF CONCRETE MATERIALS AND PROCEDURES.
   d. TMS 402-14/ACI 530-14/ASCE 5-14 "BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES" FOR TESTING AND INSPECTION OF MASONRY MATERIALS AND PROCEDURES.
   e. TMS 602-14/ACI 530.1-14/ASCE 6 QUALITY ASSURANCE PROGRAM REQUIREMENTS.
   f. AISC 360-10 "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", INCLUDING "COMMENTARY" AND SUPPLEMENTS THERE TO ISSUED FOR TESTING AND INSPECTION OF STEEL MATERIALS AND PROCEDURES.
   g. RCSC DECEMBER 31, 2009 "SPECIFICATIONS FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS" FOR TESTING AND INSPECTION OF BOLTING MATERIALS, CONNECTIONS, AND PROCEDURES.
   h. AWS D1.1 - 2015 "STRUCTURAL WELDING CODE" FOR TESTING AND INSPECTION OF WELD MATERIALS AND PROCEDURES.

4. ACTION SUBMITTALS:
   a. DAILY REPORTS: THE INDEPENDENT TESTING AGENCY SHALL SUBMIT WITHIN 10 CALENDAR DAYS, A CERTIFIED REPORT OF EACH INSPECTION, TEST OR SIMILAR SERVICE.
   b. EXCEPTION: IF THE TESTING/INSPECTION ACTIVITY IS FOUND TO BE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL BE NOTIFIED IMMEDIATELY.
   c. IF THE CONTRACTOR IS UNABLE TO COMPLY WITH REQUIRED CORRECTIONS IN A TIMELY MANNER, OR IF THE STRUCTURAL ENGINEER IS REQUIRED TO PROVIDE DIRECTION, A WRITTEN REPORT SHALL BE IN THE STRUCTURAL ENGINEER'S AND CONTRACTOR'S OFFICES NO LATER THAN 9:00 A.M., LOCAL TIME, THE FOLLOWING MORNING.
   d. PROVIDE PHOTOGRAPHS OF THE DISCREPANCY AND THE SPECIFIC LOCATION THEREOF.
   e. IF DELIVERED BY ELECTRONIC MAIL OR FAX, THE DOCUMENT SHALL BE CLEARLY MARKED OR FLAGGED THAT A DISCREPANCY HAS OCCURRED.
   f. ATTACH A COPY OF PHOTOGRAPH(S) FOR EACH ITEM NOT IN COMPLIANCE.
   g. RETEST REPORTS: REPORTS FOR ITEMS THAT ARE RETESTED SHALL BE CLEARLY MARKED OR FLAGGED.
   h. SUBMIT ONE COPY OF THE REPORTS TO THE OWNER, TO THE ARCHITECT, TO THE STRUCTURAL ENGINEER, TO THE CONTRACTOR, AND TO THE BUILDING OFFICIAL HAVING JURISDICTION.

5. INSPECTION REPORTS ISSUED BY THE INDEPENDENT TESTING AGENCY SHALL ACCURATELY AND CLEARLY OUTLINE THE RESULTS OF THE SPECIAL INSPECTIONS AND TESTING. INSPECTION REPORTS SHALL COMPLY WITH THE REPORTING REQUIREMENTS OF MBC 2015, CHAPTER 17 AND CONTAIN THE FOLLOWING MINIMUM INFORMATION, AS APPLICABLE:
   a. INSPECTION DATE, AND ARRIVAL AND DEPARTURE TIMES (OR TOTAL DURATION ON-SITE) OF THE INSPECTOR.
   b. REPORT NUMBER.
   c. STRUCTURAL ENGINEERS PROJECT TITLE.
   d. STRUCTURAL ENGINEERS PROJECT NUMBER.
   e. NAME, ADDRESS AND TELEPHONE NUMBER OF INDEPENDENT TESTING AGENCY.
   f. DATES AND LOCATIONS OF SAMPLES AND TESTS OR INSPECTIONS.
   g. NAMES OF INDIVIDUALS MAKING THE INSPECTION OR TEST.
   h. DESIGNATION OF THE WORK AND TEST METHOD.
   i. IDENTIFICATION OF PRODUCT AND/OR TEST.
   j. COMPLETE INSPECTION OR TEST DATA.
   k. TEST RESULTS AND AN INTERPRETATION OF TEST RESULTS.
   l. AMBIENT CONDITIONS AT THE TIME OF SAMPLE-TAKING AND TESTING.
   m. PROFESSIONAL EVALUATION AS TO WHETHER INSPECTED OR TESTED WORK COMPLIES WITH CONTRACT DOCUMENT REQUIREMENTS, INCLUDING REFERENCED CODES.
   n. NAME AND SIGNATURE OF LABORATORY INSPECTOR.
   o. RECOMMENDATIONS ON RETESTING.

6. FINAL REPORT AND CERTIFICATION:
   a. A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND/OR TESTING ALONG WITH CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS SHALL BE SUBMITTED BY THE INDEPENDENT TESTING AGENCY UPON SUBSTANTIAL COMPLETION OF THE WORK BEING PERFORMED.
   b. THE FINAL REPORT SHALL INDICATE THE WORK INSPECTED WAS OR WAS NOT COMPLETED IN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS AND SHALL BEAR THE SIGNATURE OF THE RESPONSIBLE PROFESSIONAL ENGINEER OF THE AGENCY.

7. RESPONSABILITIES OF INDEPENDENT TESTING AGENCY AND SPECIAL INSPECTOR:
   a. SUBMIT INSPECTION REPORTS, AND FINAL REPORT AND CERTIFICATION AS OUTLINED UNDER ACTION SUBMITTALS.
   b. PROVIDE SPECIAL INSPECTIONS DURING CONSTRUCTION ON THE TYPES OR WORK LISTED UNDER MBC 2015 SECTION 1705 AND THE CONTRACT DOCUMENTS.
   c. SPECIAL INSPECTOR PERFORMING INSPECTION SERVICES SHALL REVIEW CONTRACT DOCUMENTS RELATED TO WORK BEING INSPECTED AND FAMILIARIZE THEMSELVES WITH THE CONTRACT DOCUMENTS REQUIREMENTS PRIOR COMMENCEMENT OF CONSTRUCTION.
   d. SPECIAL INSPECTOR PERFORMING INSPECTION SERVICES SHALL REVIEW APPROVED SUBMITTALS RELATED TO WORK BEING INSPECTED AND FAMILIARIZE THEMSELVES WITH THE CONTENTS AND REVIEW COMMENTS CONTAINED WITHIN THE SUBMITTAL PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
   e. SPECIAL INSPECTOR PERFORMING INSPECTION SERVICES SHALL REVIEW RFI RESPONSES RELATED TO WORK BEING INSPECTED AND PROVIDE WRITTEN CONFIRMATION THE REQUIREMENTS OF THE RFI RESPONSE ARE FOLLOWED.
   f. INDEPENDENT TESTING AGENCY SHALL DEVELOP AND MAINTAIN A LIST OF EACH REPORTED DISCREPANCY AND SUGGESTED REMEDIAL ACTION. IT SHALL LIST METHOD OF HOW DISCREPANCY WAS RESOLVED AND WHEN THE REMEDIAL ACTION IS PERFORMED.
   g. SUBMIT COPY OF DISCREPANCY LIST ALONG WITH EACH SUBMISSION OF TESTING REPORTS.

8. QUALIFICATION STANDARDS FOR SPECIAL INSPECTIONS:
   a. INDEPENDENT TESTING AGENCY SHALL PROVIDE TESTING PERSONAL WITH MINIMUM QUALIFICATIONS AS OUTLINED HEREIN. THE REQUIREMENTS FOR THE RESPONSIBLE AGENT ARE INDICATED IN THE SPECIAL INSPECTION AND TESTING MATRIX CONTAINED WITHIN THE CONTRACT DOCUMENTS. THE MINIMUM QUALIFICATIONS FOR SPECIAL INSPECTORS LISTED BELOW ARE DERIVED FROM THE INTERNATIONAL ACCREDITATION SERVICE'S "ACCREDITATION CRITERIA FOR THE IBC SPECIAL INSPECTION AGENCIES" AC291, §6.0 MINIMUM QUALIFICATIONS FOR SPECIAL INSPECTORS.
   b. INDEPENDENT TESTING AGENCY QUALIFICATION STANDARDS:
      1) AN AGENCY THAT MAINTAINS IAS CURRENT ACCREDITATION WITH THE SCOPE OF ACCREDITATION COVERING THE DISCIPLINES FOR WHICH THE AGENCY IS DESIGNATED.
      2) AN AGENCY THAT MEETS THE REQUIREMENTS OF SECTION 1703.1 OF MBC 2015. THE RESPONSIBLE PROFESSIONAL ENGINEER OF THE AGENCY SHALL PROVIDE ALL DOCUMENTATION AS NECESSARY FOR THE BUILDING OFFICIAL HAVING JURISDICTION TO DETERMINE IF THE AGENCY MEETS THE APPLICABLE CODE REQUIREMENTS.
      3) AN AGENCY THAT HAS BEEN ACCREDITED BY AN APPROVED INSPECTION AGENCY IN ACCORDANCE WITH ISO/IEC 17020.

SOILS AND EARTHWORK SPECIFICATIONS (CONT.)

18. FIELD QUALITY CONTROL
   a. ALLOW GEOTECHNICAL TESTING AGENCY TO INSPECT AND APPROVE EACH SUBGRADE AND FILL LAYER BEFORE FURTHER FILL OR CONSTRUCTION WORK IS PERFORMED.
   b. PERFORM FIELD DENSITY TESTS IN ACCORDANCE WITH ASTM D 1556 (SAND CONE METHOD) OR ASTM D 2167 (RUBBER BALLOON METHOD), AS APPLICABLE.
   c. FIELD DENSITY TESTS MAY ALSO BE PERFORMED BY THE NUCLEAR METHOD IN ACCORDANCE WITH ASTM D 2922, PROVIDING THAT CALIBRATION CURVES ARE PERIODICALLY CHECKED AND ADJUSTED TO CORRELATE TO TESTS PERFORMED USING ASTM D 1556. IN CONJUNCTION WITH EACH DENSITY CALIBRATION CHECK, CHECK THE CALIBRATION CURVES FURNISHED WITH THE MOISTURE GAGES IN ACCORDANCE WITH ASTM D 3017.
   d. IF FIELD TESTS ARE PERFORMED USING NUCLEAR METHODS, MAKE CALIBRATION CHECKS OF BOTH DENSITY AND MOISTURE GAGES AT BEGINNING OF WORK, ON EACH DIFFERENT TYPE OF MATERIAL ENCOUNTERED, AND AT INTERVALS AS REQUIRED BY EQUIPMENT MANUFACTURER.

19. MAINTENANCE:
   a. PROTECT NEWLY GRADED AREAS FROM TRAFFIC AND EROSION. KEEP FREE OF TRASH AND DEBRIS.
   b. REPAIR AND REESTABLISH GRADES IN SETTLED, ERODED, AND RUTTED AREAS TO SPECIFIED TOLERANCES.

SOILS AND EARTHWORK SPECIFICATIONS

1. THIS SECTION INCLUDES THE FOLLOWING:
   a. EXCAVATION AND BACKFILL FOR FOUNDATIONS AND STRUCTURES SHOWN ON STRUCTURAL DRAWINGS.
   b. THIS SECTION APPLIES TO THE BUILDING FOOTPRINT, PLUS AN AREA OUTSIDE THE BUILDING FOOTPRINT WITHIN 5 FEET THEREOF.

2. QUALITY ASSURANCE
   a. CODES AND STANDARDS: PERFORM EXCAVATION WORK IN COMPLIANCE WITH APPLICABLE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.

3. MATERIALS:
   a. SATISFACTORY SOIL MATERIALS ARE DEFINED AS THOSE COMPLYING WITH ASTM D2487 SOIL CLASSIFICATION GROUPS GW, GP, GM, SM, SW, AND SP.
   b. UNSATISFACTORY SOIL MATERIALS ARE DEFINED AS THOSE COMPLYING WITH ASTM D2487 SOIL CLASSIFICATION GROUPS GC, SC, ML, MH, CH, OL, OH, AND PT.
   c. UNSATISFACTORY SOILS ALSO INCLUDE SATISFACTORY SOILS NOT MAINTAINED WITHIN 2 PERCENT OF OPTIMUM MOISTURE CONTENT AT TIME OF COMPACTION.

4. UNSUITABLE MATERIAL:
   a. ORGANIC MATERIAL, OIL, ALKALI, CHEMICAL COMPOUNDS, ICE, SNOW, FROZEN MATERIALS, RUBBLE, RUBBISH, WOOD, AND OTHER SUBSTANCES SUBJECT TO DECOMPOSITION.
   b. LOOSE NON-COMPACTED FILL, LOOSE SOIL OR OBVIOUSLY COMPRESSIVE MATERIALS.

5. PEA STONE:
   a. NATURAL GRAVEL, STONE OR GRAVEL CRUSHINGS, CONFORMING TO ASTM D 448, TABLE 1, SIZE 67

6. GRANULAR FILL:
   a. MDOT 21AA AGGREGATE OR WELL-GRADED NATURAL SAND AND GRAVEL, CONTAINING NOT MORE THAN SEVEN (7) PERCENT BY WEIGHT PASSING THE NO. 200 SIEVE, SIXTY (60) TO ONE-HUNDRED (100) PERCENT PASSING A ONE (1) INCH SIEVE, WITH A MAXIMUM PARTICLE SIZE OF THREE (3) INCHES.

7. LEAN CONCRETE:
   a. NORMAL WEIGHT, 1500 PSI 28-DAY COMPRESSIVE STRENGTH, CONFORMING TO APPLICABLE REQUIREMENTS OF ASTM C 94.

8. OPEN GRADED AGGREGATE:
   a. AGGREGATE PRODUCED BY CRUSHING, WASHING AND SCREENING LIMESTONE. PARTICLE SIZE VARY FROM 1-1/2" TO DUST.
   b. MDOT 4G. (MDOT SPECIAL PROVISIONS FOR OPEN-GRADED DRAINAGE COURSES, 03 SP 303 (A); FHWA APPROVED 11-01-08).

9. LOW STRENGTH FLOWABLE FILL CONCRETE:
   a. MIXTURE COMPONENTS: PORTLAND CEMENT, FLY ASH, WATER.
   b. COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE 50 PSI. TESTING SHALL BE ACCOMPLISHED IN ACCORDANCE WITH ASTM C 495.

10. WATER CONTROL:
   a. PREVENT SURFACE WATER AND SUBSURFACE OR GROUND WATER FROM FLOWING INTO EXCAVATIONS AND FROM FLOODING OR IMPAIRING PROJECT SITE AND SURROUNDING PROPERTY.
   b. DO NOT USE TRENCH EXCAVATIONS AS TEMPORARY DRAINAGE DITCHES.
   c. DO NOT ALLOW WATER TO ACCUMULATE IN EXCAVATIONS. REMOVE WATER TO PREVENT SOFTENING OF FOUNDATION BOTTOMS, UNDERCUTTING FOOTINGS, AND SOIL CHANGES DETRIMENTAL TO STABILITY OF SUBGRADES AND FOUNDATIONS.
   d. MAINTAIN WATER TO A MINIMUM OF 2 FEET BELOW SUBGRADE LEVELS RECEIVING COMPACTION; AND IN THE CASE WHERE FOOTINGS BEAR ON SOIL, 2 FEET BELOW BOTTOM OF FOOTING.
   e. PROVIDE AND MAINTAIN PUMPS, WELL POINTS, SUMPS, SUCTION AND DISCHARGE LINES, AND OTHER DEWATERING SYSTEM COMPONENTS NECESSARY TO CONVEY WATER AWAY FROM EXCAVATIONS.
   f. ESTABLISH AND MAINTAIN TEMPORARY DRAINAGE DITCHES AND OTHER DIVERSIONS OUTSIDE EXCAVATION LIMITS TO CONVEY RAIN WATER AND WATER REMOVED FROM EXCAVATIONS TO COLLECTING OR RUNOFF AREAS.

11. EXCAVATION FOR STRUCTURES:
   a. REMOVE VEGETATION, DEBRIS, UNSUITABLE MATERIAL, UNSATISFACTORY SOIL MATERIALS, OBSTRUCTIONS, AND DELETERIOUS MATERIALS FROM GROUND SURFACE PRIOR TO PROOF ROLLING AND PLACEMENT OF FILLS.
   b. SOILS CONTAINING 4% OR GREATER ORGANIC CONTENT SHALL BE REMOVED.

12. EXCAVATIONS FOR FOOTINGS AND FOUNDATIONS:
   a. DO NOT DISTURB BOTTOM OF EXCAVATION. TRIM BOTTOMS TO REQUIRED LINES AND GRADES TO LEAVE SOLID BASE TO RECEIVE OTHER WORK.
   b. IF BOTTOM OF EXCAVATION IS DISTURBED, OR IF BEARING PRESSURE CANNOT BE OBTAINED:
      1) EXCAVATE UNTIL BEARING STRATA IS REACHED.
      2) FOR DISTURBANCE ONLY: RECOMPACT OR EXCAVATE.

13. COLD WEATHER PROTECTION:
   a. PROTECT EXCAVATION BOTTOMS AGAINST FREEZING WHEN ATMOSPHERIC TEMPERATURE IS LESS THAN 35 DEGREES F.

14. EXCAVATION STABILITY:
   a. COMPLY WITH LOCAL CODES, ORDINANCES, AND REQUIREMENTS OF AGENCIES HAVING JURISDICTION.
   b. SLOPE SIDES OF EXCAVATIONS TO COMPLY WITH LOCAL CODES, ORDINANCES, AND REQUIREMENTS OF AGENCIES HAVING JURISDICTION. TEMPORARILY SHORE AND BRACE WHERE SLOPING IS NOT POSSIBLE BECAUSE OF SPACE RESTRICTIONS OR STABILITY OF MATERIAL EXCAVATED. MAINTAIN SIDES AND SLOPES OF EXCAVATIONS IN SAFE CONDITION UNTIL COMPLETION OF FILLING.

15. DO NOT PLACE NEW FILL ON FROZEN GROUND, GROUND CONTAINING LENSES OF FROZEN MATERIAL, ICE OR SNOW.

16. PROTECT SUBGRADE AGAINST FREEZING WHEN SUBSEQUENT WORK, SUCH AS FILL, SLAB ON GRADE, FOOTINGS, ETC., WILL BE PLACED ON IT.

17. PROTECT AREAS AT AND ADJACENT TO UNPROTECTED FOOTINGS FROM FREEZING AT THE FOOTING BEARING SURFACE.

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

efi global

EFI Global of Michigan, LLC

33955 Harper Avenue • Clinton Township, MI 48035
P: (586) 868-0220 • www.efiglobal.com

EFIG Project Number: MI011806115

KEY PLAN

STATE OF MICHIGAN — LAWRENCE G. LESNIAK — LICENSE NO. 37736 — REGISTERED PROFESSIONAL ENGINEER

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency Shelter
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PIA PROJECT NO.

17-179

ISSUES / REVISIONS

Building Permit	12/19/2018

DRAWN BY
L. Lesniak

CHECKED BY
G. Carnaghi

APPROVED BY
L. Lesniak

SHEET NAME

Special Inspections & Testing

SHEET NO.

SG-04

STRUCTURAL STEEL SPECIFICATIONS CONTINUED

12. SHOP FABRICATION AND ASSEMBLY:
    a. FABRICATE AND ASSEMBLE STRUCTURAL ASSEMBLIES IN SHOP TO GREATEST EXTENT POSSIBLE. FABRICATE ITEMS OF STRUCTURAL STEEL IN ACCORDANCE WITH AISC SPECIFICATIONS AND AS INDICATED ON APPROVED SHOP DRAWINGS.
    b. BOLTED CONNECTIONS:
        1) INSTALL THREADED FASTENERS IN ACCORDANCE WITH AISC "SPECIFICATIONS.
        2) FOR STRUCTURAL JOINTS USING ASTM A 325 OR A 490 BOLTS".
        3) CUT, DRILL, OR PUNCH HOLES PERPENDICULAR TO METAL SURFACES. DO NOT FLAME-CUT HOLES OR ENLARGE HOLES BY BURNING. DRILL HOLES IN BEARING PLATES. REMOVE BURRS FROM FAYING SURFACES OF BEARING-TYPE CONNECTIONS. THE USE OF BURNT HOLES FOR BOLTED CONNECTIONS IS PROHIBITED. VIOLATION OF THIS CLAUSE WILL BE SUFFICIENT CAUSE FOR THE REJECTION OF THE WHOLE MEMBER INTO WHICH SUCH HOLES WERE BURNT.
    c. WELDED CONNECTIONS:
        1) COMPLY WITH AWS CODE FOR PROCEDURES, APPEARANCE AND QUALITY OF WELDS, AND METHODS USED IN CORRECTING WELDING WORK.
        2) NO WELDS SHALL BE APPLIED TO FLANGES OF TENSION MEMBERS PERPENDICULAR TO THE DIRECTION OF STRESS.
        3) TURN SIDE AND END FILLET WELDS AROUND CORNERS FOR A MINIMUM LENGTH OF TWICE THE NOMINAL SIZE OF THE WELD. TO ASSURE COMPLIANCE, DETAIL SHALL BE INDICATED ON SHOP DRAWINGS. LENGTH OF END RETURNS ARE NOT TO BE INCLUDED IN THE CALCULATED WELDED LENGTH.
        4) PARTS TO BE JOINED SHALL BE BROUGHT INTO CONTACT AS CLOSE AS POSSIBLE. IF THE SEPARATION EXCEEDS 1/16 INCH, THE SIZE OF THE WELD SHALL BE INCREASED BY THE AMOUNT OF SEPARATION.
        5) MATERIAL THICKER THAN 3/4 INCH SHALL BE PREHEATED BEFORE WELDING PER THE REQUIREMENTS OF THE AMERICAN WELDING SOCIETY.

13. SHOP PAINTING
    a. IN GENERAL, STRUCTURAL STEEL IS PAINTED.
    b. DO NOT PAINT THE FOLLOWING SURFACES:
        1) TO BE WELDED.
    c. CLEANING AND PREPARATION:
        1) AFTER INSPECTION AND BEFORE SHIPPING, CLEAN STEEL WORK, PAINTED OR UNPAINTED. REMOVE LOOSE RUST, LOOSE MILL SCALE, AND SPATTER, SLAG, OR FLUX DEPOSITS. CLEAN STEEL IN ACCORDANCE WITH STEEL STRUCTURES PAINTING COUNCIL (SSPC).
    d. PAINTING:
        1) IMMEDIATELY AFTER SURFACE PREPARATION, APPLY STRUCTURAL STEEL PRIMER PAINT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. USE PAINTING METHODS THAT RESULT IN FULL COVERAGE OF JOINTS, CORNERS, EDGES, AND EXPOSED SURFACES.
        2) IF FOR ANY REASON ANY SURFACE TO RECEIVE FIELD WELDS OR SLIP CRITICAL BOLTS IS PAINTED, REMOVE SUCH PAINT COMPLETELY TO WITHIN STATED LIMITS BEFORE FIELD WELDING OR BOLTING.

14. TEMPORARY BRACING:
    a. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE DESIGN, STRENGTH, SAFETY AND ADEQUACY OF ALL TEMPORARY BRACING AND ALL METHODS OF CONSTRUCTION. THE SPECIFYING HEREIN OF REQUIREMENTS FOR BRACING OR CONSTRUCTION METHODS, OR ANY OTHER REQUIREMENTS OF THE SPECIFICATIONS SHALL BE CONSTRUED AS THE MINIMUM ACCEPTABLE, AND SHALL NOT ELIMINATE, LESSEN OR RESTRICT IN ANY MANNER THE RESPONSIBILITY OF THE CONTRACTOR FOR ALL CONSTRUCTION METHODS AND FOR THE SAFETY AND STABILITY OF THE STRUCTURAL STEEL WORK AT ALL STAGES OF ERECTION, UNTIL SUCH TIME AS THE PERMANENT BRACING SYSTEM BECOMES EFFECTIVE.
    b. PROVIDE TEMPORARY SHORING AND BRACING MEMBERS WITH CONNECTIONS OF SUFFICIENT STRENGTH TO BEAR IMPOSED LOADS.
    c. PROVIDE TEMPORARY GUY LINES TO ACHIEVE PROPER ALIGNMENT OF STRUCTURES AS ERECTION PROCEEDS.
    d. REMOVE TEMPORARY MEMBERS AND CONNECTIONS AFTER PERMANENT MEMBERS ARE IN PLACE, FINAL CONNECTIONS ARE MADE, AND BASEPLATES ARE GROUTED.

15. SETTING BASES AND BEARING PLATES:
    a. CLEAN CONCRETE AND MASONRY BEARING SURFACES OF BOND-REDUCING MATERIALS. CLEAN BOTTOM SURFACE OF BASE AND BEARING PLATES.
    b. TIGHTEN ANCHOR RODS AFTER SUPPORTED MEMBERS HAVE BEEN POSITIONED AND PLUMBED.
    c. GROUT SOLID BETWEEN BEARING SURFACES AND BASES OR PLATES TO ENSURE THAT NO VOIDS REMAIN. FINISH EXPOSED SURFACES, PROTECT INSTALLED MATERIALS, AND ALLOW TO CURE.
    d. GROUT COLUMN BASE PLATES BEFORE CONCRETE SLABS ON METAL DECK ARE PLACED.

16. FIELD WELDING: SIMILAR PROCEDURES AS FOR SHOP WELDING.
    a. AT SUBFREEZING TEMPERATURES, PREHEAT ALL METAL LOCATED WITHIN 3 INCHES OF THE WELD TO A MINIMUM TEMPERATURE OF ABOUT 70 DEGREES FAHRENHEIT. NO WELDING SHALL BE DONE AT TEMPERATURES BELOW ZERO DEGREES FAHRENHEIT.

17. GAS CUTTING:
    a. DO NOT USE GAS CUTTING TORCHES IN FIELD FOR CORRECTING FABRICATION ERRORS IN PRIMARY STRUCTURAL FRAMING. CUTTING WILL BE PERMITTED ONLY ON SECONDARY MEMBERS THAT ARE NOT UNDER STRESS, AS ACCEPTABLE TO ARCHITECT. FINISH GAS-CUT SECTIONS EQUAL TO A SHEARED APPEARANCE WHEN PERMITTED.

18. TOUCH-UP PAINTING:
    a. APPLY PAINT USING SAME MATERIAL AS USED FOR SHOP PAINTING.
    b. APPLY BY BRUSH OR SPRAY TO PROVIDE A MINIMUM DRY FILM THICKNESS OF 2.0 MILS

STRUCTURAL STEEL SPECIFICATIONS

1. SUBMIT CHECKED SHOP DRAWINGS FOR FABRICATION AND ASSEMBLY OF STRUCTURAL STEEL MEMBERS. PROVIDE DETAILS, PROCEDURES, DIAGRAMS AND SCHEDULES AS NECESSARY FOR FABRICATION AND ASSEMBLY IN SHOP AND FIELD.
    a. INCLUDE DETAILS OF CUTS, CONNECTIONS, CAMBER, HOLES, SURFACE PREP, SHOP FINISH (PAINT/GALV.) AND OTHER PERTINENT DATA.
    b. INDICATE WELDS BY STANDARD AWS SYMBOLS, AND SHOW SIZE, LENGTH, AND TYPE OF EACH WELD. IDENTIFY SHOP AND FIELD WELDS.
    c. CONTRACTOR SHALL PROVIDE ELECTRONIC VERSION IN PDF FORMAT. ONLY ELECTRONIC COPY WILL BE RETURNED WITH REVIEW COMMENTS.

2. CODES AND STANDARDS: COMPLY WITH PROVISIONS OF FOLLOWING, EXCEPT AS OTHERWISE INDICATED:
    a. AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES".
    b. AISC "SPECIFICATIONS FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", INCLUDING "COMMENTARY" AND SUPPLEMENTS THERETO AS ISSUED.
    c. AISC "SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A 325 OR A 490 BOLTS" APPROVED BY THE RESEARCH COUNCIL ON RIVETED AND BOLTED STRUCTURAL JOINTS OF THE ENGINEERING FOUNDATION.
    d. AWS D1.1 "STRUCTURAL WELDING CODE".
    e. ASTM A 6 "GENERAL REQUIREMENTS FOR DELIVERY OF ROLLED STEEL PLATES, SHAPES, SHEET PILING AND BARS FOR STRUCTURAL USE".
    f. TO THE EXTENT THAT ANY PROVISIONS CONTAINED IN ANY OF THE AFOREMENTIONED CODES AND STANDARDS CONFLICT WITH ANY OTHER TERMS, REQUIREMENTS OR DEFINITIONS CONTAINED IN THE CONTRACT DOCUMENTS, THEN THE TERMS, REQUIREMENTS OR DEFINITIONS CONTAINED ELSEWHERE IN THE CONTRACT DOCUMENTS SHALL CONTROL.

3. QUALIFICATIONS FOR WELDING WORK:
    a. QUALIFY WELDING PROCESSES AND WELDING OPERATORS IN ACCORDANCE WITH AWS "STANDARD QUALIFICATION PROCEDURE".
    b. PROVIDE CERTIFICATION THAT WELDERS TO BE EMPLOYED IN WORK HAVE SATISFACTORILY PASSED AWS QUALIFICATION TESTS.
    c. IF RECERTIFICATION OF WELDERS IS REQUIRED, RETESTING WILL BE CONTRACTOR'S RESPONSIBILITY.

4. SUPPLY ANCHOR BOLTS, BEARING PLATES AND OTHER ANCHORAGE ITEMS TO BE EMBEDDED IN OR ATTACHED TO OTHER CONSTRUCTION. SUPPLY WITHOUT DELAYING THE WORK.
    a. PROVIDE SETTING DIAGRAMS, TEMPLATES, INSTRUCTIONS, AND DIRECTIONS FOR INSTALLATION.
    b. PROVIDE ANCHOR ROD TEMPLATE WITH TARGET ARROWS FOR COLUMN CENTER LINES, STAMPED FOR COLUMN LOCATION, ORIENTATION AND ELEVATION.

5. DELIVERY, STORAGE, AND HANDLING
    a. STORE MATERIALS TO PERMIT EASY ACCESS FOR INSPECTION AND IDENTIFICATION. KEEP STEEL MEMBERS OFF GROUND BY USING PALLETS, PLATFORMS, OR OTHER SUPPORTS.
    b. DO NOT STORE MATERIALS ON STRUCTURE IN A MANNER THAT MIGHT CAUSE DISTORTION OR DAMAGE TO MEMBERS OR SUPPORTING STRUCTURES.
    c. PROTECT STEEL MEMBERS AND PACKAGED MATERIALS FROM EROSION AND DETERIORATION. IF BOLTS AND NUTS BECOME DRY OR RUSTY, CLEAN AND RELUBRICATE BEFORE USE.

6. TUBULAR SECTIONS, (HSS ROUND, HSS RECTANGULAR) SHALL BE MANUFACTURED IN USA OR CANADA.

7. ELECTRODES FOR WELDING: COMPLY WITH AWS CODE.
    a. FOR HIGH-STRENGTH LOW-ALLOY STEEL AND EXISTING STEEL, PROVIDE ELECTRODES, WELDING RODS AND FILLER METALS EQUAL IN STRENGTH AND COMPATIBLE IN APPEARANCE WITH PARENT METAL JOINED.
    b. COMPLY WITH AWS REQUIREMENTS.

8. ANCHOR RODS:
    a. ASTM F1554 HEX-HEADED BOLT AND CARBON-STEEL NUT. GRADE INDICATED ON DRAWINGS.

9. PAINT - SHOP PRIMER:
    a. PAINT FOR SHOP PRIMER SHALL BE VOC COMPLIANT, BE LEAD AND CHROMATE FREE, AND HAVE NOT LESS THAN 50 PERCENT SOLIDS PER VOLUME.
    b. COLOR: WHITE OR LIGHT GRAY.
    c. PRODUCTS/MANUFACTURERS: PROVIDE ONE OF THE FOLLOWING:
        a) #10-99 PRIMER/TNEMEC
        b) KEM KROMIK B50 NZ6/SHERWIN WILLIAMS
        c) 960/RUSTOLEUM

10. NONMETALLIC SHRINKAGE-RESISTANT GROUT: PREMIXED, NONMETALLIC, NONCORROSIVE, NONSTAINING PRODUCT CONTAINING SELECTED SILICA SANDS, PORTLAND CEMENT, SHRINKAGE COMPENSATING AGENTS, PLASTICIZING AND WATER-REDUCING AGENTS, COMPLYING WITH CE-CRD-C621.
    a. PRODUCTS:
        1) EUCO N.S.; EUCLID CHEMICAL CO.
        2) CRYSTEX; L & M CONSTRUCTION CHEMICALS, INC.
        3) MASTERFLOW 928; MASTER BUILDERS.
        4) SEALTIGHT 588 GROUT; W. R. MEADOWS.
        5) FIVE STAR GROUT; U.S. GROUT CORP.
        6) SIKA GROUT 212, SIKA CORP.

11. DETAILS AND CONNECTIONS

    a DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS, UNLESS OTHERWISE INDICATED.
    b. PROMPTLY NOTIFY STRUCTURAL ENGINEER WHENEVER MEMBERS SIZES AND CONNECTIONS REQUIREMENTS FOR ANY PORTION OF STRUCTURE ARE NOT CLEARLY INDICATED.
    c. THE USE OF OVERSIZED AND SLOTTED HOLES IN THE LOAD DIRECTION FOR BEARING BOLTS IS NOT PERMITTED.

CONCRETE SPECIFICATIONS

1. CONCRETE (NORMAL WEIGHT), UNLESS OTHERWISE NOTED ON DRAWING, SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH INDICATED ON SHEET SG-01. WATER TO CEMENT RATIO SHALL NOT EXCEED .44 AND SLUMP SHALL NOT EXCEED FOUR INCHES.

2. CONCRETE BAR REINFORCEMENT SHALL BE NEW BILLET STEEL CONFORMING TO ASTM A615 (60,000 PSI YIELD). WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185, AND SHALL BE FURNISHED AND PLACED IN FLAT SHEETS.

3. UNLESS OTHERWISE NOTED, CONCRETE WORK SHALL CONFORM TO THE ACI STANDARD "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"

4. PROVIDE COLD WEATHER CONCRETE PROTECTION IN ACCORDANCE WITH ACI 306R-10 "COLD WEATHER CONCRETING".

5. CONCRETE SLABS SHALL BE CAST SO THAT THE SLAB THICKNESS IS AT NO POINT LESS THAN THAT INDICATED ON THE DRAWINGS.

6. MINIMUM CONCRETE COVER SHALL BE (UNLESS OTHERWISE NOTED):
    a. UNFORMED SURFACES IN CONTACT WITH GROUND 3"
    b. SLABS ON GRADE (TOP COVER) 3/4"
    c. FORMED SURFACE IN CONTACT WITH GROUND 2"

7. WHERE CONTINUOUS BARS ARE CALLED FOR, THEY SHALL BE RUN CONTINUOUSLY AROUND CORNERS AND LAPPED AT NECESSARY SPLICES, AND HOOKED AT DISCONTINUOUS ENDS.

8. SUBMITTALS:
    a. PRODUCT DATA FOR CONCRETE MATERIALS, ADMIXTURES, AND NON-SHRINK GROUT.
    b. SHOP DRAWINGS FOR FABRICATING, BENDING, AND PLACING CONCRETE REINFORCEMENT.
    c. LABORATORY TEST REPORTS OR EVALUATION REPORTS FOR CONCRETE MATERIALS AND CONCRETE MIX DESIGNS IN ACCORDANCE WITH ACI 318 FIFTEEN DAYS PRIOR TO DESIRED START OF CONCRETE PLACEMENT.

9. MATERIALS:
    a. PORTLAND CEMENT: ASTM C 150, TYPE 1
    b. FLY ASH: ASTM C 618, TYPE F (NOT MORE THAN 25 PERCENT)
    c. LOSS ON IGNITION LESS THAN 1.5 PERCENT
    d. CHLORIDE CONTENT LESS THAN 1.5 PERCENT
    e. AGGREGATES: ASTM C33
    f. WATER: POTABLE
    g. ADMIXTURES, WATER REDUCING: ASTM C 494

10. CONCRETE FINISHING:
    a. FLOAT FINISH: APPLY FLOAT FINISH WHEN SURFACE WATER HAS DISAPPEARED AND WHEN CONCRETE HAS STIFFENED SUFFICIENTLY TO PERMIT OPERATION OF POWER-DRIVEN FLOATS. CONSOLIDATE SURFACE WITH POWER-DRIVEN FLOATS OR BY HAND-FLOATING. CHECK LEVEL SURFACE PLANE TO TOLERANCE OF 1/4" IN TEN FEET. IMMEDIATELY AFTER LEVELING, REFLOAT SURFACE TO A UNIFORM, SMOOTH, GRANULAR TEXTURE.
    b. TROWEL FINISH: AFTER FLOATING, BEGIN FIRST TROWEL-FINISH OPERATION USING A POWER-DRIVEN TROWEL. BEGIN FINAL TROWELING WHEN SURFACE PRODUCES A RINGING SOUND AS TROWEL IS MOVED OVER SURFACE. CONSOLIDATE CONCRETE SURFACE BY FINAL HAND-TROWELING OPERATION, FREE OF TROWEL MARKS, UNIFORM IN TEXTURE AND APPEARANCE, AND WITH SURFACE LEVELED TO TOLERANCES OF 3/16" IN TEN FEET. GRIND SMOOTH SURFACE DEFECTS THAT WOULD TELEGRAPH THROUGH APPLIED FLOOR COVERING SYSTEM.

11. SAMPLING AND TESTING: IN ACCORDANCE WITH THE STATEMENT OF SPECIAL INSPECTION AND TESTING.

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

efi global

EFI Global of Michigan, LLC

33955 Harper Avenue • Clinton Township, MI 48035
P: (586) 868-0220 • www.efiglobal.com

EFIG Project Number: MI011806115

KEY PLAN

STATE OF MICHIGAN
LAWRENCE J. LESNIAK
NO. 37736
REGISTERED PROFESSIONAL ENGINEER

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency Shelter
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PIA PROJECT NO.

17-179

ISSUES / REVISIONS

Building Permit	12/19/2018

DRAWN BY
L. Lesniak

CHECKED BY
G. Carnaghi

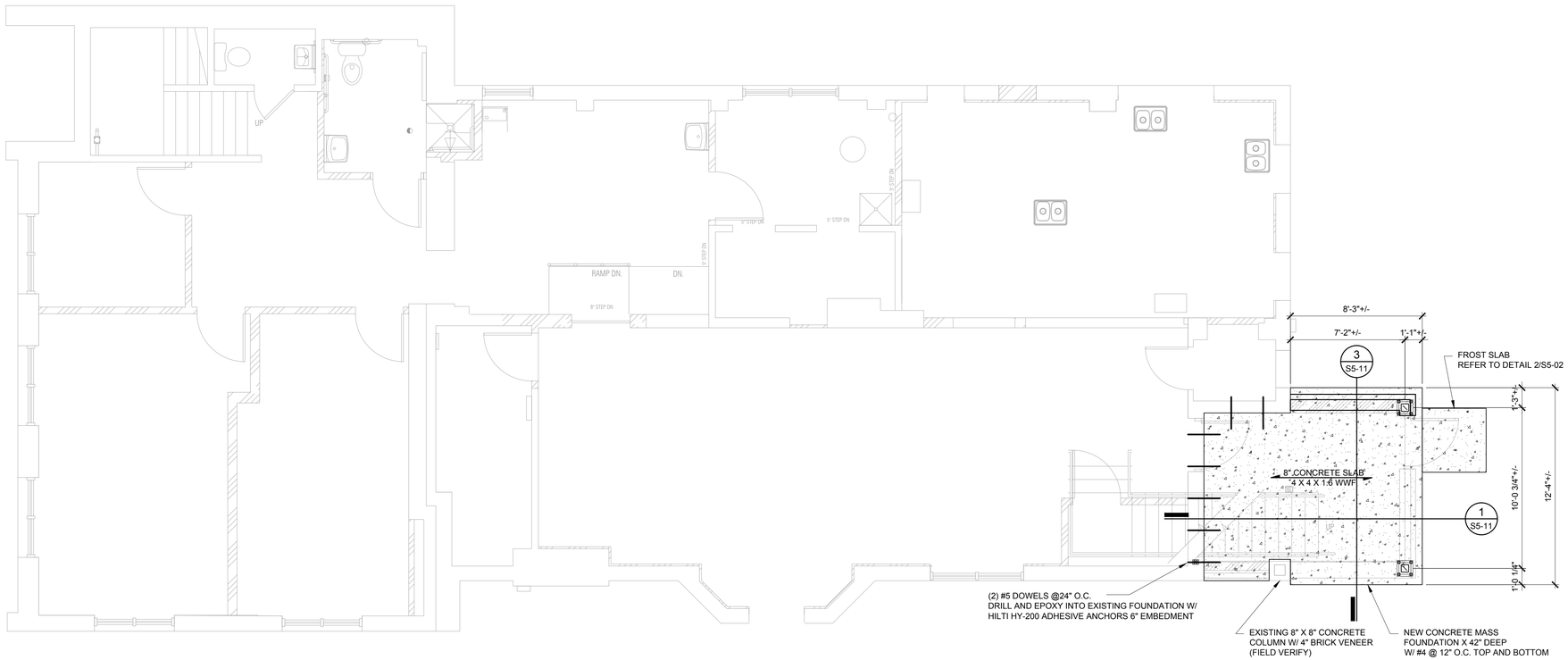
APPROVED BY
L. Lesniak

SHEET NAME

Specifications

SHEET NO.

SG-05



N

FOUNDATION PLAN

SCALE: 1/4" = 1'-0" (24" X 36")

FOUNDATION PLAN NOTES

1. REFER TO DRAWING SG-01 FOR GENERAL NOTES.
2. REFER TO DRAWING SG-02 THROUGH SG-03 FOR SPECIAL INSPECTION & TESTING.
3. REFER TO DRAWINGS SG-04 THROUGH SG-05 FOR SPECIFICATIONS.
3. TYPICAL DETAILS APPLY TO ALL DRAWINGS. USE THROUGHOUT EXCEPT WHERE OTHERWISE SHOWN OR NOTED.
4. TOP OF SLAB REFERENCE ELEVATION = 0' - 0" U.O.N.
5. TOP OF FOOTING ELEVATION = -0'-8" U.O.N.
6. FOOTINGS SHALL BEAR 42" BELOW FINISH GRADE MINIMUM.
7. FOOTINGS SHALL BEAR ON NATIVE UNDISTURBED SOIL OR ENGINEERED FILL HAVING A NET ALLOWABLE BEARING CAPACITY OF 2,500 PSF MINIMUM.
8. WHEN ADEQUATE BEARING CAPACITY IS NOT FOUND AT FOOTING DESIGN BEARING ELEVATION, UNDERCUT SUBGRADE TO ADEQUATE BEARING STRATUM AND FILL WITH COMPACTED ENGINEERED FILL OR LOW-STRENGTH FLOWABLE CONCRETE FILL. REFER TO GEOTECHNICAL REPORT FOR SOIL IMPROVEMENT MEASURES WHERE UNSUITABLE SOILS ARE ENCOUNTERED AT BEARING ELEVATION.
9. REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL FOR FLOOR PENETRATIONS OF CONDUIT AND PIPING. COORDINATE LOCATIONS W/ TRADES.

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

efi global
EFI Global of Michigan, LLC
33955 Harper Avenue • Clinton Township, MI 48035
P: (586) 868-0220 • www.efiglobal.com

EFIG Project Number: MI011806115

KEY PLAN

STATE OF MICHIGAN
LAWRENCE E. LESNIAK
LICENSED
NO. 37736
REGISTERED PROFESSIONAL ENGINEER

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency Shelter
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PIA PROJECT NO.

17-179

ISSUES / REVISIONS

Building Permit	12/19/2018

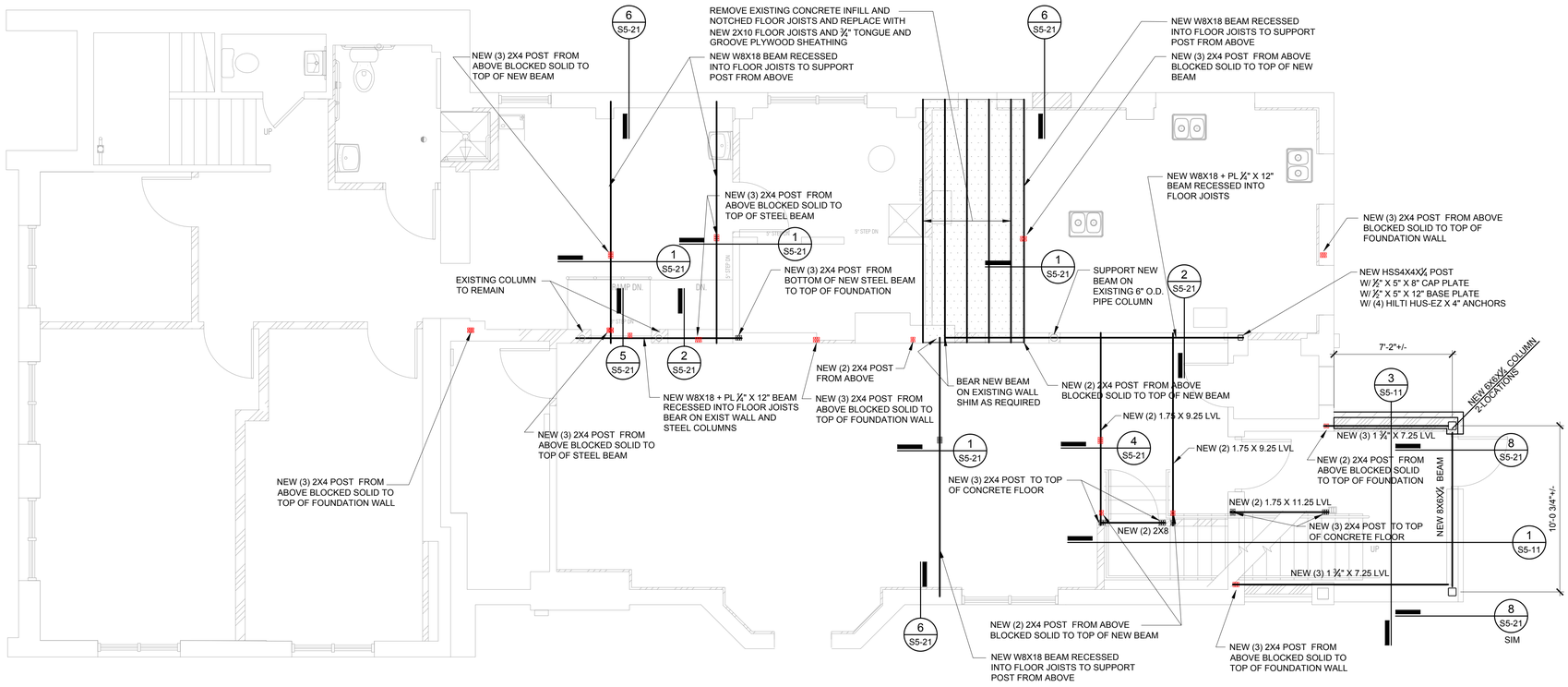
DRAWN BY
L. Lesniak

CHECKED BY
G. Carnaghi

APPROVED BY
L. Lesniak

SHEET NAME
Foundation Plan

SHEET NO.
SP-01



N

FIRST FLOOR FRAMING MODIFAICATION PLAN

SCALE: 1/4" = 1'-0" (24" X 36")

FLOOR FRAMING PLAN NOTES

1. REFER TO DRAWING SG-01 FOR GENERAL NOTES.
2. REFER TO DRAWING SG-02 THROUGH SG-03 FOR SPECIAL INSPECTION & TESTING.
3. REFER TO DRAWINGS SG-04THROUGH SG-05 FOR SPECIFICATIONS
3. TYPICAL DETAILS APPLY TO ALL DRAWINGS. USE THROUGHOUT EXCEPT WHERE OTHERWISE SHOWN OR NOTED.
4. TOP OF FINISHED FLOOR MATCH EXISTING.
5. REFER TO ARCHITECTURAL NON-STRUCTURAL FRAMING AND DIMENSIONS.

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

efi global

EFI Global of Michigan, LLC

33955 Harper Avenue • Clinton Township, MI 48035
P: (586) 868-0220 • www.efiglobal.com

EFIG Project Number: MI011806115

KEY PLAN

STATE OF MICHIGAN
LAWRENCE J. LESNIAK
NO. 37736
REGISTERED PROFESSIONAL ENGINEER

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency Shelter
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PIA PROJECT NO.

17-179

ISSUES / REVISIONS

Building Permit	12/19/2018

DRAWN BY
L. Lesniak

CHECKED BY
G. Carnaghi

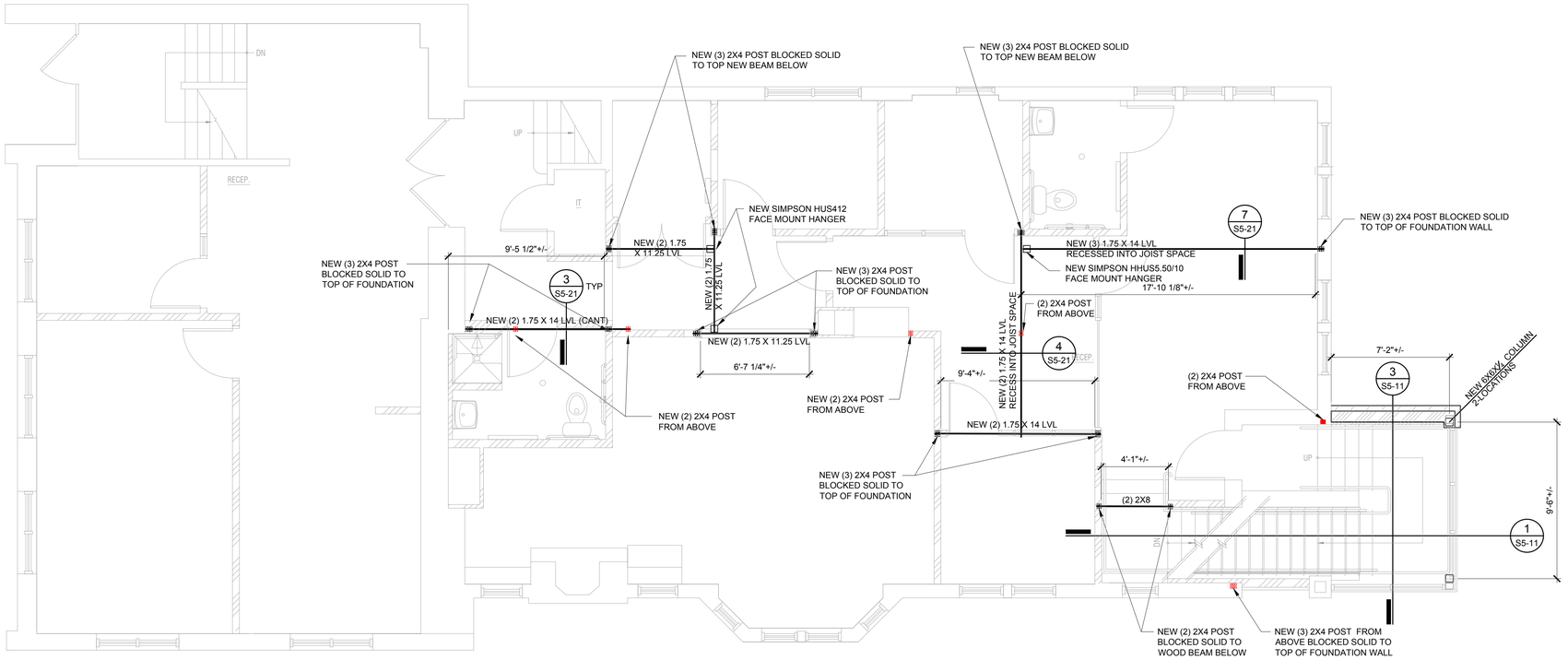
APPROVED BY
L. Lesniak

SHEET NAME

First Floor Framing Plan

SHEET NO.

SP-02



N

SECOND FLOOR FRAMING MODIFAICATION PLAN

SCALE: 1/4 = 1'-0" (24" X 36")

FLOOR FRAMING PLAN NOTES

1. REFER TO DRAWING SG-01 FOR GENERAL NOTES.
2. REFER TO DRAWING SG-02 THROUGH SG-03 FOR SPECIAL INSPECTION & TESTING.
3. REFER TO DRAWINGS SG-04 THROUGH SG-05 FOR SPECIFICATIONS
4. TYPICAL DETAILS APPLY TO ALL DRAWINGS. USE THROUGHOUT EXCEPT WHERE OTHERWISE SHOWN OR NOTED.
5. TOP OF FINISHED FLOOR MATCH EXISTING.
6. REFER TO ARCHITECTURAL NON-STRUCTURAL FRAMING AND DIMENSIONS.

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

efi global

EFI Global of Michigan, LLC

33955 Harper Avenue • Clinton Township, MI 48035
P: (586) 868-0220 • www.efiglobal.com

EFIG Project Number: MI011806115

KEY PLAN

STATE OF MICHIGAN LAWRENCE J. LESNIAK LICENSE NO. 37736 STRUCTURAL PROFESSIONAL ENGINEER

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency Shelter
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PIA PROJECT NO.

17-179

ISSUES / REVISIONS

Building Permit	12/19/2018

DRAWN BY
L. Lesniak

CHECKED BY
G. Carnaghi

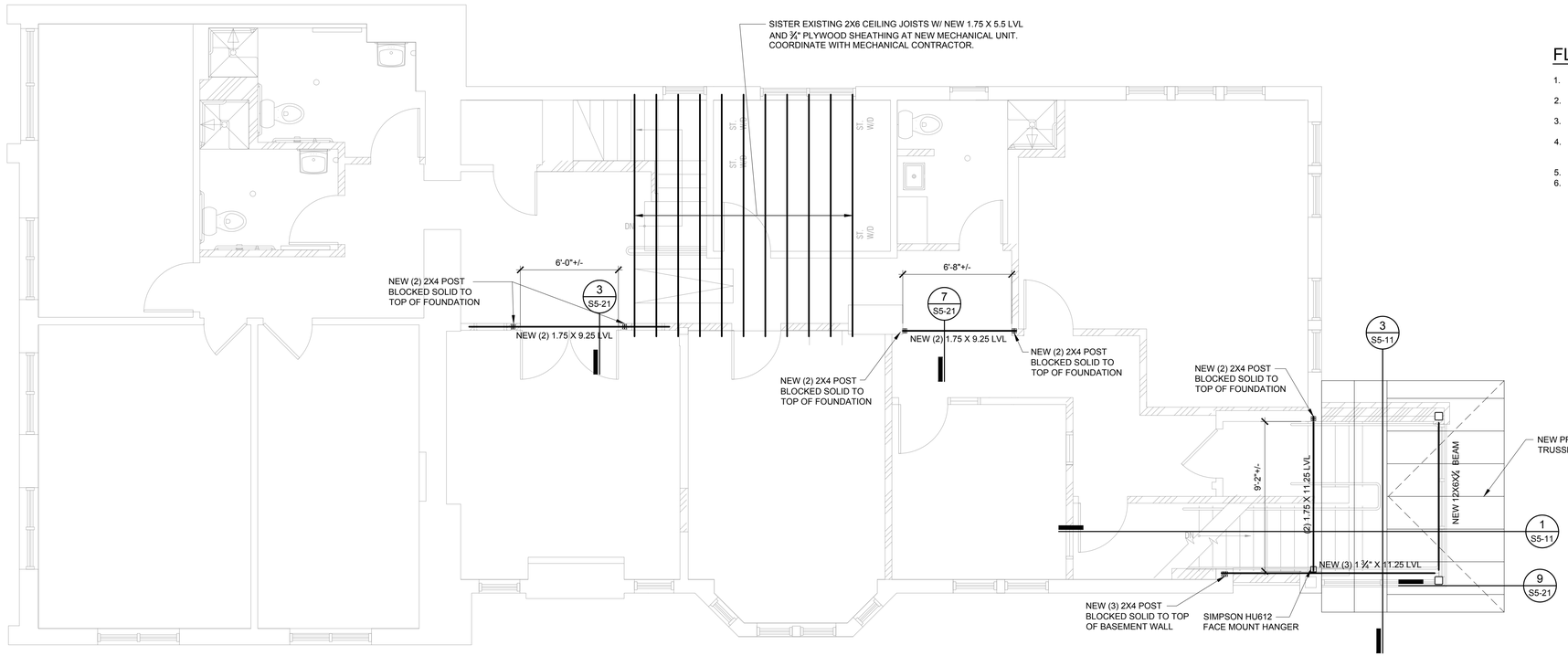
APPROVED BY
L. Lesniak

SHEET NAME

Second Floor Framing Plan

SHEET NO.

SP-03



N

ATTIC & LOW ROOF FRAMING PLAN

SCALE: 1/4 = 1'-0" (24" X 36")

FLOOR FRAMING PLAN NOTES

1. REFER TO DRAWING SG-01 FOR GENERAL NOTES.
2. REFER TO DRAWING SG-02 THROUGH SG-03 FOR SPECIAL INSPECTION & TESTING.
3. REFER TO DRAWINGS SG-04 THROUGH SG-05 FOR SPECIFICATIONS
4. TYPICAL DETAILS APPLY TO ALL DRAWINGS. USE THROUGHOUT EXCEPT WHERE OTHERWISE SHOWN OR NOTED.
5. TOP OF FINISHED FLOOR MATCH EXISTING.
6. REFER TO ARCHITECTURAL NON-STRUCTURAL FRAMING AND DIMENSIONS.

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

efi global

EFI Global of Michigan, LLC

33955 Harper Avenue • Clinton Township, MI 48035
P: (586) 868-0220 • www.efiglobal.com

EFIG Project Number: MI011806115

KEY PLAN

STATE OF MICHIGAN
LAWRENCE J. LESNIAK
NO. 37736
LICENSED PROFESSIONAL ENGINEER

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency Shelter
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PIA PROJECT NO.

17-179

ISSUES / REVISIONS

Building Permit	12/19/2018

DRAWN BY
L. Lesniak

CHECKED BY
G. Carnaghi

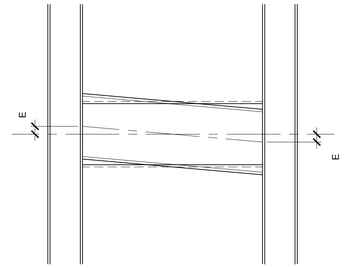
APPROVED BY
L. Lesniak

SHEET NAME

Attic Framing Plan

SHEET NO.

SP-04



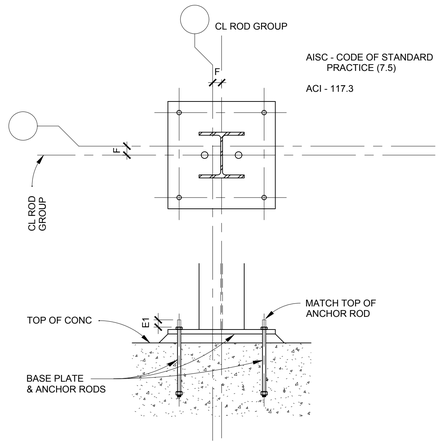
E = ELEVATION TOLERANCE OF BEAM FRAMING INTO COLUMN +3/16", - 5/16"

NOTE:
FOR PLAN TOLERANCES NONE ARE PERMISSIBLE EXCEPT FOR THOSE BASED SOLELY ON COLUMNS

TYP STEEL BEAM ELEVATION TOLERANCE

6 TYP

SCALE: N.T.S.

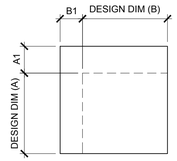


E1 = +/- 1/2" TOP ELEVATION OF ANCHOR RODS
F = +/- 1/4" CENTER OF ANCHOR ROD GROUP TO ESTABLISHED COLUMN LINES SHOWN ON CONTRACT DOCUMENTS

TYP ANCHOR ROD SETTING TOLERANCES

4 TYP

SCALE: N.T.S.



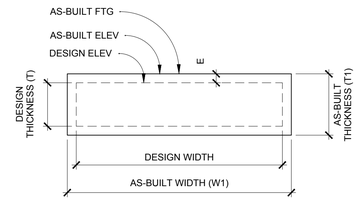
REFERENCE ACI 117.3

A1, B1 = INCREASED THICKNESS OF MEMBERS (i.e. WALLS, COLUMNS, PIERS, BEAMS, AND SLABS)
FOR A/B:
1. 12" OR LESS - A1/B1 = +3/8", -1/4"
2. GREATER THAN 12" BUT LESS THAN OR EQUAL TO 36" - A1/B1 = +1/2", -3/8"
3. GREATER THAN 36" - A1/B1 = +1", -3/4"

TYP TOLERANCE IN CROSS-SECTION DIM FOR CONCRETE MEMBERS

1 TYP

SCALE: N.T.S.

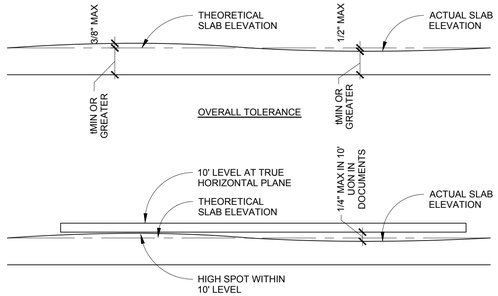


E = ELEVATION TOLERANCE (TOP OF FTG):
SUPPORTING MASONRY (+/- 1/2")
OTHERWISE (+1/2", -2")
T1 = AS-BUILT THICKNESS
NO LIMIT ON LARGER THAN THICKNESS (T) U.O.N.
NOT THINNER THAN (0.95xT)
W1 = AS-BUILT WIDTH
NOT LESS THAN (W-1/2")

TYP FOOTING SECTION TOLERANCES

2 TYP

SCALE: N.T.S.



10 FOOT TOLERANCE

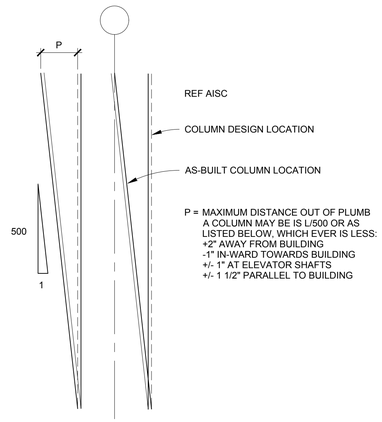
NOTES:

1. CONSULT SPECIFICATION FOR ADDITIONAL FINISHING REQUIREMENTS
2. 1MIN = MINIMUM THICKNESS SHOWN ON PLANS
3. AS CONCRETE IS PLACED, ADJUST SCREEDS, BY LASER OR TRANSIT, TO PRODUCE A FLAT FINISHED CONCRETE SURFACE

TYP SLAB ON GRADE ELEVATION TOLERANCES

9 TYP

SCALE: N.T.S.

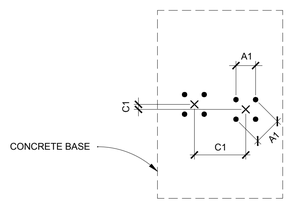


P = MAXIMUM DISTANCE OUT OF PLUMB
A COLUMN MAY BE IS L/500 OR AS LISTED BELOW, WHICH EVER IS LESS:
+2" AWAY FROM BUILDING
-1" IN-WARD TOWARDS BUILDING
+/- 1" AT ELEVATOR SHAFTS
+/- 1 1/2" PARALLEL TO BUILDING

TYP STEEL COLUMN OUT-OF-PLUMB TOLERANCE

7 TYP

SCALE: N.T.S.



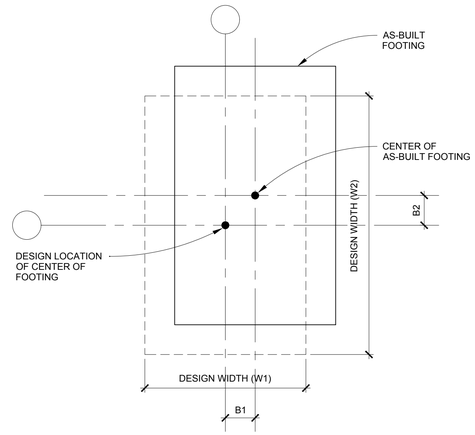
A1 = 1/8" +/- CENTER TO CENTER OF ANY 2 RODS WITHIN AN ANCHOR ROD GROUP, WHERE AN ANCHOR ROD GROUP IS DEFINED AS THE SET OF ANCHOR RODS WHICH RECEIVE A SINGLE FABRICATED STEEL SHIPPING PIECE.

C1 = 1/4" +/- CENTER TO CENTER OF ADJACENT ANCHOR ROD GROUPS FROM THEIR SPECIFIED RELATIVE LOCATION AS SHOWN ON DRAWINGS

TYP ANCHOR ROD LAYOUT TOLERANCES

5 TYP

SCALE: N.T.S.



B1 & B2 = LATERAL ALIGNMENT TOLERANCE
+/- 0.02x(W1 OR W2 RESPECTIVELY);
BUT NOT GREATER THAN 2"

TYP SPREAD FOOTING PLAN TOLERANCE

3 TYP

SCALE: N.T.S.

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

efi global

EFI Global of Michigan, LLC

33955 Harper Avenue • Clinton Township, MI 48035
P: (586) 868-0220 • www.efiglobal.com

EFIG Project Number: MI011806115

KEY PLAN

STATE OF MICHIGAN
LAWRENCE G. LESNIAK
NO. 37736
REGISTERED PROFESSIONAL ENGINEER

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency Shelter
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PIA PROJECT NO.

17-179

ISSUES / REVISIONS

Building Permit	12/19/2018

DRAWN BY
L. Lesniak

CHECKED BY
G. Carnaghi

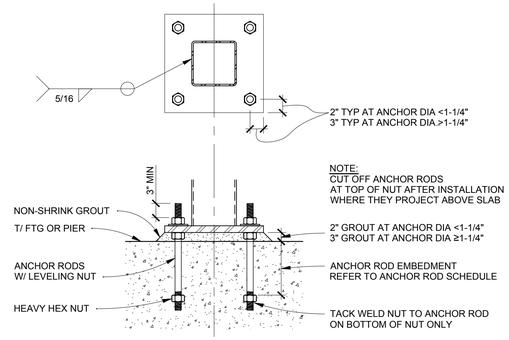
APPROVED BY
L. Lesniak

SHEET NAME

Construction Tolerances

SHEET NO.

S5-01



1 TYP

TYP COLUMN BASE PLATE AND ANCHOR RODS

SCALE: N.T.S.

NOTES:
1. REFER ELSEWHERE FOR BLDG FOUNDATION SIZE AND REINF.
2. REFER ELSEWHERE FOR BLDG SLAB EDGE.
3. SLOPE SLAB 1/8" PER FOOT AWAY FROM BLDG UON.

2 TYP

TYP FROST SLAB DETAIL

SCALE: N.T.S.

PARTNERS

PARTNERS in Architecture, PLC
65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

efi global
EFI Global of Michigan, LLC
33955 Harper Avenue • Clinton Township, MI 48035
P: (586) 868-0220 • www.efiglobal.com

EFIG Project Number: MI011806115

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency Shelter
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PIA PROJECT NO.

17-179

ISSUES / REVISIONS

Building Permit	12/19/2018

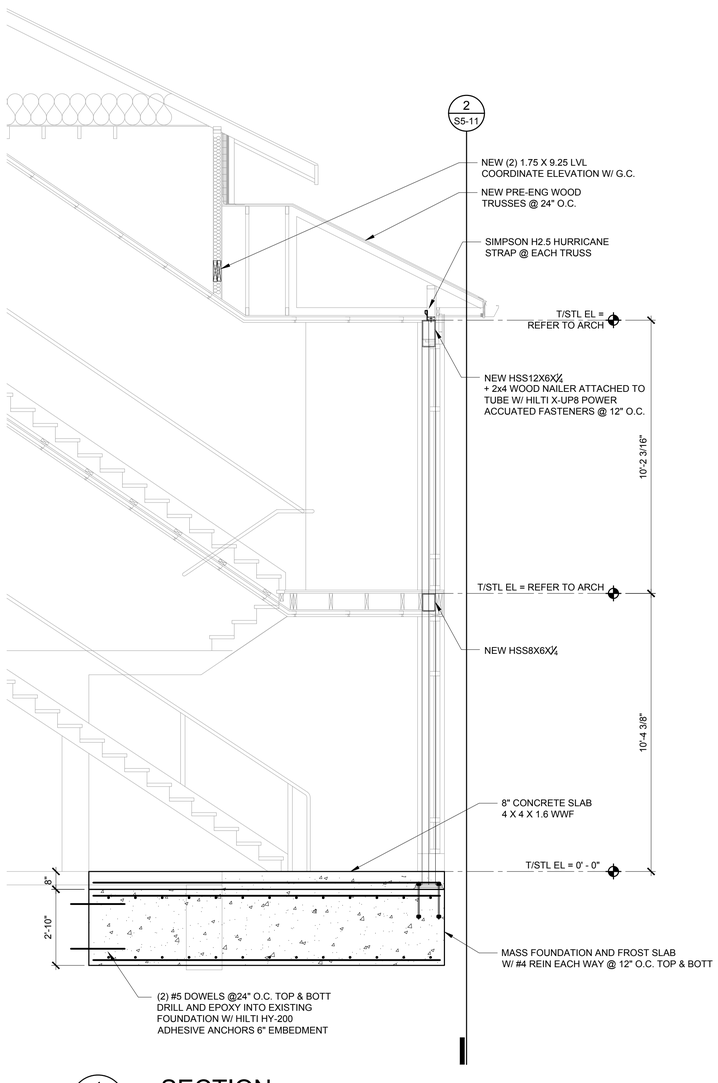
DRAWN BY
L. Lesniak

CHECKED BY
G. Carnaghi

APPROVED BY
L. Lesniak

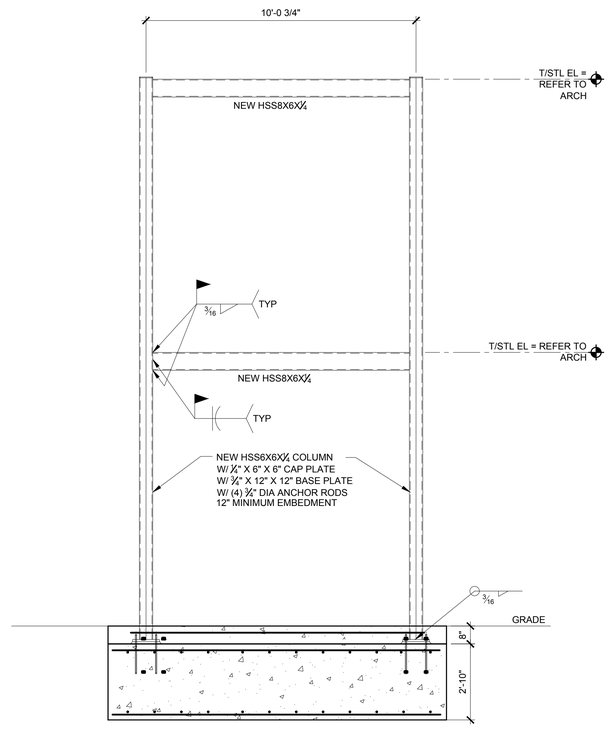
SHEET NAME
Typical Details

SHEET NO.
S5-02



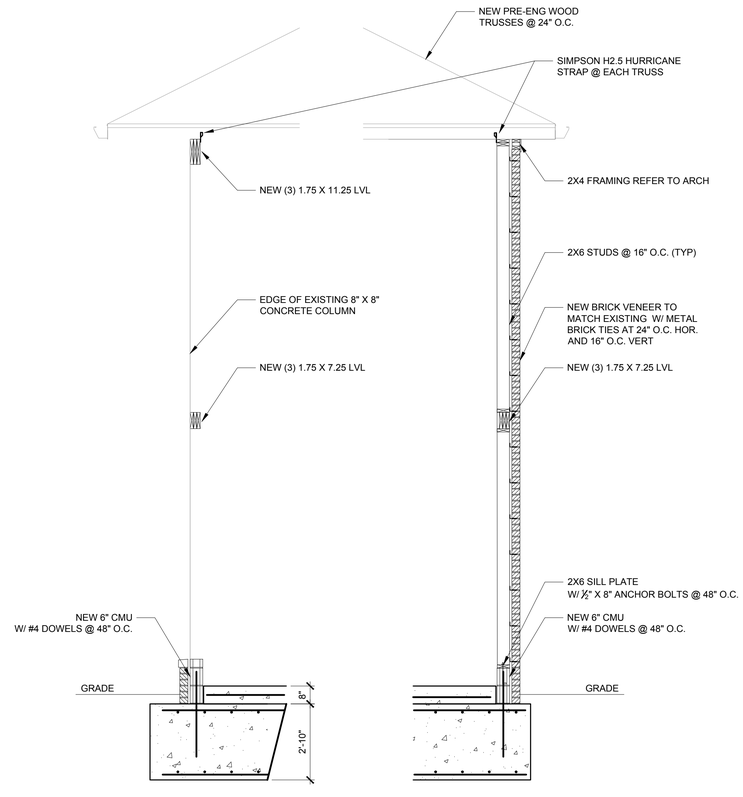
1 SP-01-SP-05 **SECTION**

SCALE: 3/8" = 1'-0" (24" X 36")



2 S5-11 **SECTION**

SCALE: 3/8" = 1'-0" (24" X 36")



3 SP-02,SP-05 **SECTION**

SCALE: 3/8" = 1'-0" (24" X 36")

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

efi global
EFI Global of Michigan, LLC
33955 Harper Avenue • Clinton Township, MI 48035
P: (586) 868-0220 • www.efiglobal.com

EFIG Project Number: MI011806115

KEY PLAN

STATE OF MICHIGAN
LAWRENCE J. LESNIAK
LICENSED
NO.
37736
REGISTERED PROFESSIONAL ENGINEER

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency Shelter
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PIA PROJECT NO.

17-179

ISSUES / REVISIONS

Building Permit	12/19/2018

DRAWN BY
L. Lesniak

CHECKED BY
G. Carnaghi

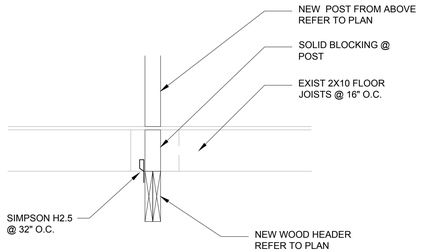
APPROVED BY
L. Lesniak

SHEET NAME

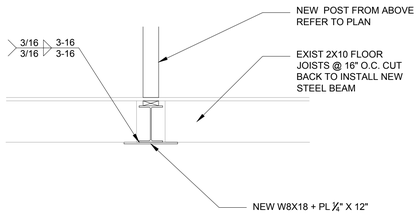
Sections & Details

SHEET NO.

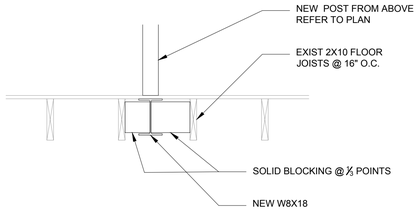
S5-11



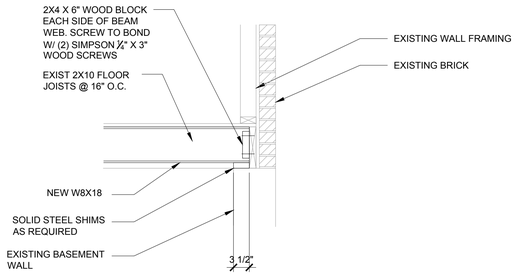
3 SP-03,SP-04 **SECTION**
SCALE: 3/4" = 1'-0" (24" X 36")



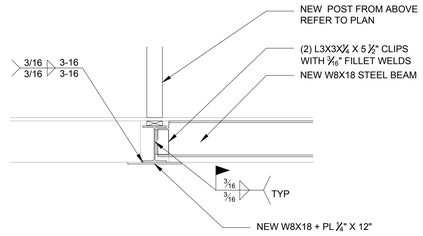
2 SP-02 **SECTION**
SCALE: 3/4" = 1'-0" (24" X 36")



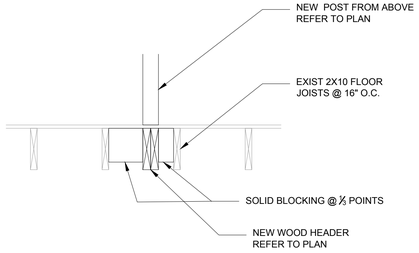
1 SP-02 **SECTION**
SCALE: 3/4" = 1'-0" (24" X 36")



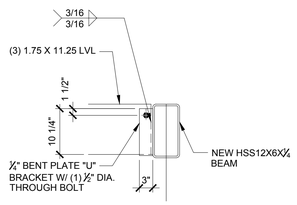
6 SP-02 **SECTION**
SCALE: 3/4" = 1'-0" (24" X 36")



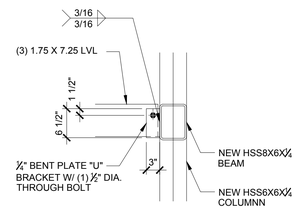
5 SP-02 **SECTION**
SCALE: 3/4" = 1'-0" (24" X 36")



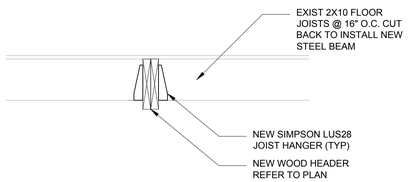
4 SP-02,SP-03 **SECTION**
SCALE: 3/4" = 1'-0" (24" X 36")



9 SP-04 **SECTION**
SCALE: 3/4" = 1'-0" (24" X 36")



8 SP-02 **SECTION**
SCALE: 3/4" = 1'-0" (24" X 36")



7 SP-03,SP-04 **SECTION**
SCALE: 3/4" = 1'-0" (24" X 36")

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

efi global
EFI Global of Michigan, LLC
33955 Harper Avenue • Clinton Township, MI 48035
P: (586) 868-0220 • www.efiglobal.com

EFIG Project Number: MI011806115

KEY PLAN

STATE OF MICHIGAN
LAWRENCE J. LESNIAK
NO. 37736
REGISTERED PROFESSIONAL ENGINEER

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency Shelter
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PIA PROJECT NO.

17-179

ISSUES / REVISIONS

Building Permit	12/19/2018

DRAWN BY
L. Lesniak

CHECKED BY
G. Carnaghi

APPROVED BY
L. Lesniak

SHEET NAME
Sections & Details

SHEET NO.
S5-21

ABBREVIATIONS

A.L.	ACOUSTICAL LINING
B.V.	BALANCING VALVE
C.D.	CEILING DIFFUSER
C.F.M.	CUBIC FEET PER MINUTE
C.I.	CAST IRON
C.O.	CLEAN OUT
DPR.	DAMPER
D.F.	DRINKING FOUNTAIN
D.W.S.	DRINKING WATER SUPPLY
D.W.R.	DRINKING WATER RETURN
E.F.	EXHAUST FAN
ER–#	EXHAUST REGISTER
EWC	ELECTRIC WATER COOLER
F.D.	FLOOR DRAIN
F.DPR.	FIRE DAMPER
H.B.	HOSE BIBB
H.O.	HUB OUTLET
I.E.	INVERT ELEVATION
I.W.	INDIRECT WASTE
LAV.	LAVATORY
LD–#	LINEAR SUPPLY AIR DIFFUSER
LR–#	LINEAR RETURN AIR DIFUSER
O.A.	OUTSIDE AIR
O.B.D.	OPPOSED BLADE DAMPER
O.E.D.	OPEN END DUCT
P.H.	PHYSICAL HANDICAPPED
P.REL.V.	PRESSURE RELIEF VALVE
P–1	PUMP #1
R.A.	RETURN AIR
R.C.	RAIN CONDUCTOR
RG –#	RETURN AIR GRILLE
R.P.B.P.	REDUCED PRESSURE BACKFLOW PREVENTER
RR–#	RETURN AIR REGISTER
R.S.	ROOF SUMP
S.A.	SUPPLY AIR
SD–#	SUPPLY DIFFUSER
SR–#	SUPPLY REGISTER
SAN.	SANITARY
S.S.	SERVICE SINK
ST.	STORM
S.W.S.	SAFE WASTE SINK
T.A.D.	TRANSFER AIR DUCT
T.W.	TEMPERED WATER
U/GRD.	UNDERGROUND
U.H.	UNIT HEATER
UR.	URINAL
V.	VENT
V.T.R.	VENT THRU ROOF
V.V.B.	VARIABLE VOLUME AIR TERMINAL BOX
W.C.	WATER CLOSET
W.H.	WATER HEATER
W.	WASTE

H.V.A.C. SYMBOLS

- SPIN–IN FITTING W/DAMPER
- FLEXIBLE DUCT
- RETURN AIR GRILLE
- SUPPLY AIR DIFFUSER
- HORIZONTAL FIRE DAMPER
- VERTICAL FIRE DAMPER
- VOLUME DAMPER
- RECTANGULAR TO ROUND TRANSITION
- THERMOSTAT
- DAMPER
- DUCT TO BE REMOVED
- EXISTING TO REMAIN
- NEW DUCTWORK

PLUMBING & PIPING SYMBOLS

- DOMESTIC COLD WATER (C.W.)
- DOMESTIC HOT WATER (H.W.)
- DOMESTIC HOT WATER RETURN (H.W.R.)
- NATURAL GAS (GAS OR NG)
- SANITARY SEWER–UNDER GROUND (SAN)
- SANITARY SEWER–ABOVE GROUND (SAN)
- STORM SEWER (ST)
- VENT
- GATE VALVE
- CHECK VALVE
- BALANCING VALVE
- THERMOMETER
- STRAINER
- UNION
- FLEXIBLE CONNECTOR
- BALL VALVE
- NEW CONNECTION
- VALVE
- GLOBE VALVE
- NEEDLE VALVE
- GAS COCK VALVE
- VALVE WITH HANDWHEEL
- MODULATING VALVE
- DAMPER
- STOP CHECK STRAIGHT VALVE
- CHECK VALVE
- PNEUMATIC CONTROL VALVE
- PRESSURE REGULATOR
- BACK PRESSURE REGULATOR
- DIFFERENTIAL REGULATOR
- SOLENOID VALVE (NORM. OPEN)
- SOLENOID VALVE (NORM. CLOSED)
- MOTOR ACTUATOR BALL VALVE
- PRESSURE GAUGE TO MATCH EXISTING
- TURBINE FLOW METER
- FLEX COUPLING (2 FT MIN)
- SPARK PLUG
- PUMP
- STEAM TRAP
- CURRENT / PNEUMATIC POSITIONER
- ELECTRIC MOTOR / ACTUATOR
- INSTRUMENT – NON–ACCESSIBLE

GENERAL MECHANICAL NOTES:

1. PRIOR TO SUBMITTING BID, VISIT THE JOB SITE AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS OF THE PROJECT. REVIEW THE GENERAL NOTES, SPECIFICATIONS, AND OTHER DRAWINGS FOR ADDITIONAL REQUIREMENTS WHICH MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT, ENGINEER, AND/OR OWNER OF CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
2. EXISTING CONDITIONS WERE TAKEN FROM ORIGINAL DRAWINGS AND SITE VISITS AND MAY NOT REFLECT EXACT "AS–BUILT" CONDITIONS. FIELD VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING FINAL BIDS. COORDINATE NEW WORK AND DEMOLITION WITH OTHER DISCIPLINES AND EXISTING CONDITIONS PRIOR TO CONSTRUCTION.
3. COORDINATE THE INSTALLATION OF THE MECHANICAL SYSTEMS WITH OTHER TRADES TO ENSURE A NEAT AND ORDERLY INSULATION. INSTALL PIPING AS TIGHT TO STRUCTURE AS POSSIBLE. COORDINATE WITH OTHER TRADES TO AVOID CONFLICTS. COORDINATE INSTALLATION OF PIPING TO AVOID CONFLICTS WITH ELECTRICAL PANELS, LIGHTING FIXTURES, ETC. ANY MODIFICATIONS REQUIRED DUE TO LACK OF COORDINATION WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO EXTRA COST TO THE OWNER.
4. ALL NEW MECHANICAL EQUIPMENT SHOWN ON THE MECHANICAL PLANS SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR UNLESS OTHERWISE NOTED.
5. WHERE SHUTDOWN OF EXISTING SYSTEM IS REQUIRED DURING NEW WORK, COORDINATE SHUTDOWN TIME AND DURATION WITH THE OWNER TO MINIMIZE DOWNTIME. NOTIFY OWNER (7) DAYS PRIOR TO INTERRUPTION OF SERVICE.
6. PROVIDE TEMPORARY BARRIERS TO CONTAIN DUST AND DEBRIS RESULTING FROM THE PERFORMANCE OF THE WORK TO THE AREA WHERE WORK IS BEING PERFORMED..
7. NEW MECHANICAL PIPING ARE SHOWN AT APPROXIMATE LOCATIONS. FIELD MEASURE FINAL PIPING LOCATIONS PRIOR TO FABRICATION AND MAKE ADJUSTMENTS AS REQUIRED TO FIT THE PIPING WITHIN THE AVAILABLE SPACE. VERIFY THAT FINAL EQUIPMENT LOCATIONS MEET MANUFACTURER'S RECOMMENDATIONS REGARDING SERVICE CLEARANCE AND PROPER AIRFLOW CLEARANCE AROUND EQUIPMENT.
8. ADJUST LOCATION OF CEILING DIFFUSERS, REGISTERS AND GRILLES AS REQUIRED TO ACCOMMODATE FINAL CEILING GRID AND LIGHTING LOCATIONS.
9. REFER TO ARCHITECTURAL DRAWINGS FOR RELATED CONSTRUCTION DETAILS AS APPLICABLE TO THE MECHANICAL SYSTEM. VERIFY CHASES AND PENETRATIONS SHOWN ON ARCHITECTURAL DRAWINGS THAT ARE INTENDED FOR DUCTWORK AND PIPING MEET REQUIREMENTS.
10. INSTALL PIPING PARALLEL TO BUILDING COLUMN LINES UNLESS OTHERWISE SHOWN OR NOTED.
11. OVERHEAD HANGERS AND SUPPORTERS FOR PIPING SHALL BE FASTENED TO BUILDING JOISTS OR BEAMS. DO NOT ATTACH HANGERS AND SUPPORTS TO THE ABOVE FLOOR SLAB OR ROOF EXCEPT WHERE CONCRETE INSERTS IN CONCRETE SLABS ARE ALLOWED BY THE SPECIFICATIONS.
12. COORDINATE LOCATION OF SUPPORTERS WITH LOCATION OF EQUIPMENT ACCESS PANELS/DOORS TO ENABLE SERVICE OF EQUIPMENT AND/OR FILTER REPLACEMENT.
13. SEAL PENETRATIONS THROUGH THE BUILDING COMPONENTS IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS. FIREPROOF PENETRATIONS THROUGH FIRE RATED COMPONENTS IN ACCORDANCE WITH U.L. REQUIREMENTS.
14. CONTRACTOR SHALL CEASE WORK AND IMMEDIATELY NOTIFY THE OWNER SHOULD ANY HAZARDOUS MATERIALS BE ENCOUNTERED DURING THE PERFORMANCE OF THE WORK.
15. LOCATE AND SET THERMOSTATS AND SENSORS AT LOCATIONS SHOWN ON PLANS. VERIFY LOCATIONS WITH OWNER PRIOR TO INSTALLATION. INSTALL DEVICES WITH TOP OF DEVICE AT MAXIMUM 48" AFF TO MEET ADA REQUIREMENTS UNLESS NOTED OTHERWISE ON PLANS. MECHANICAL CONTROLS CONTRACTOR SHALL INSTALL WIRING IN CONDUIT PROVIDED BY DIVISION 16. AT A MINIMUM, PROVIDE CONDUIT IN THE WALL FROM THE JUNCTION BOX TO 6" ABOVE CEILING.
16. PROVIDE MANUAL BALANCING DAMPER IN EACH BRANCH DUCT TAKEOFF FROM MAIN SUPPLY, RETURN AND EXHAUST AIR DUCTS.

MECHANICAL SHEET INDEX

NOTE:

NOT ALL SYMBOLS AND ABBREVIATIONS ARE APPLICABLE TO THIS PROJECT

CODES:

MICHIGAN PLUMBING CODE 2015 (MPC 2015).
MICHIGAN MECHANICAL CODE 2015 (MMC 2015).

ENERGY CODES:

2015 MICHIGAN BUILDING CODE (MBC 2015).
2015 MICHIGAN ENERGY CODE (MEC 2015).
ANSI/ASHRAE/IES STANDARD 90.1–2013.

STATE OF MICHIGAN
JOSEPH A. MACKOUN
ENGINEER
No. 42633
LICENSED PROFESSIONAL ENGINEER

PARTNERS

PARTNERS in Architecture, PLC
65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

MEP Engineers LLC
Mechanical | Electrical | Plumbing | Energy
380 North Main Street
Clawson, MI 48017
Tel: (248) 488–9822 Fax: (248) 488–9811
Web: www.mepmi.com Email: mep@mepmi.com

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

BUILDING PERMIT	12/19/2018

DRAWN BY: JK.
CHECKED BY: JM.
APPROVED BY: JM.

SHEET NAME

MECHANICAL LEGEND, SYMBOLS AND SHEET INDEX

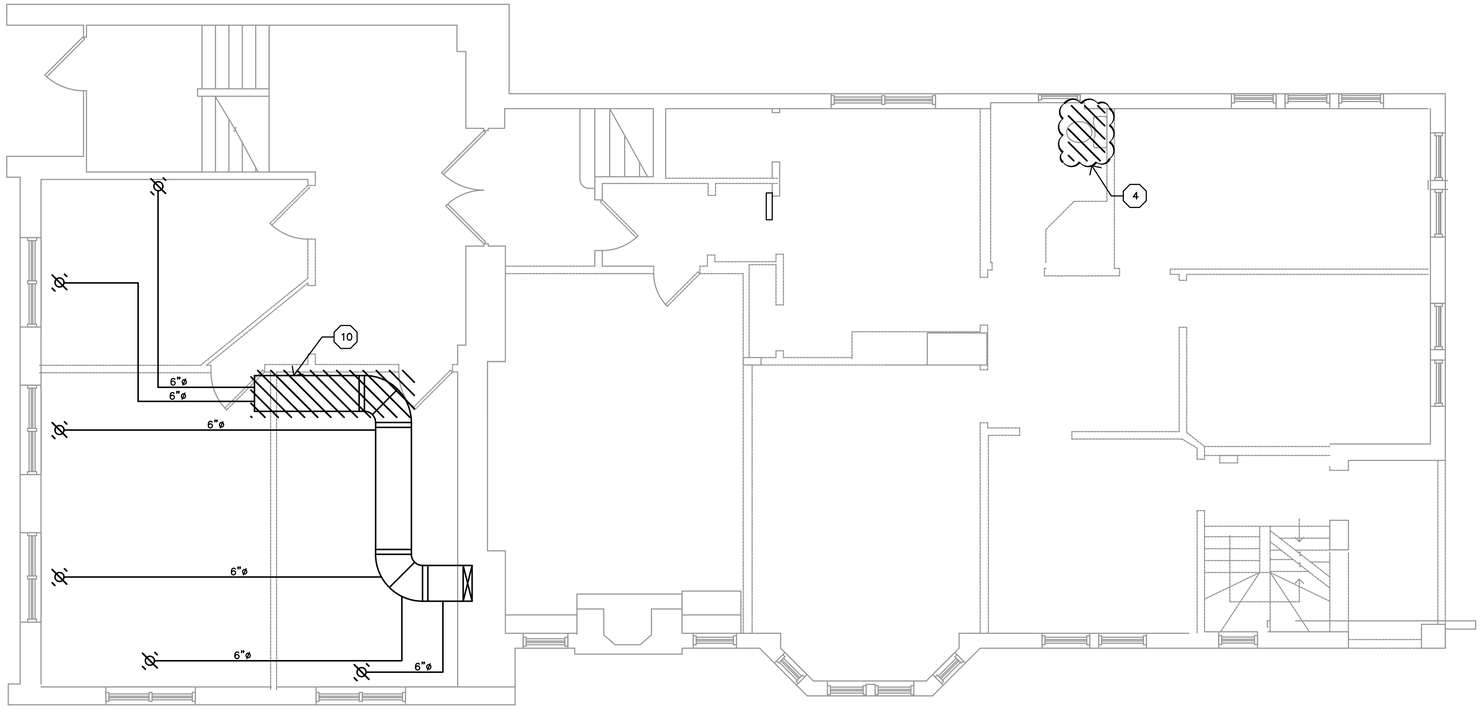
SHEET NO. M.000

GENERAL DEMOLITION NOTES:

1. COORDINATE ALL DEMOLITION WITH WHAT IS SHOWN ON THIS PLAN AND EXISTING FIELD CONDITIONS. NOTIFY ARCHITECT, OWNER AND/OR ENGINEER OF ANY DISCREPANCIES.
2. PRIOR TO SUBMITTING BID, VISIT THE JOB SITE AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS OF THE PROJECT. REVIEW GENERAL NOTES, SPECIFICATIONS, AND OTHER DRAWINGS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF CONSTRUCTION DOCUMENTS. NOTIFY ENGINEERS AND/OR OWNER AS DEFINED IN BID DOCUMENTS, OF CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
3. OWNER RETAINS RIGHTS OF SALVAGE FOR EQUIPMENT AND FIXTURES TO BE REMOVED. COORDINATE WITH OWNER THE EQUIPMENTS AND FIXTURES TO BE SALVAGED AND THE LOCATION FOR STORAGE. AVOID DAMAGE TO SALVAGED EQUIPMENT, FIXTURES, AND DEVICES DURING DEMOLITION WORK AND DURING TRANSPORT TO OWNER'S DESIGNATED STORAGE LOCATION.
4. AVOID DAMAGING EXISTING SURFACES AND EQUIPMENT TO REMAIN FOR NEW INSTALLATION. REPAIR DAMAGE CAUSED DURING WORK AT NO EXTRA COST TO THE OWNER.
5. THE PLUMBING CONTRACTOR SHALL REMOVE ALL PLUMBING FIXTURES, CARRIERS, TRIM, ACCESSORIES, EQUIPMENT, FLOOR DRAINS AND ALL THE PIPING.
6. ALL PIPING SHALL BE REMOVED COMPLETELY, ALL PIPE HANGERS, SLEEVES, RISER CLAMPS, ETC. SHALL BE REMOVED COMPLETELY WITH PIPING. NO EXISTING HANGER SYSTEMS SHALL BE REUSED FOR NEW PIPING.
7. ALL PIPING TO BE REMOVED SHALL BE REMOVED UNDERGROUND, ABOVE CEILING OR IN WALLS BACK TO MAIN OR SHUT OF VALVES AT MAINS AND PROPERLY CAPPED PER CODE WITHOUT LEAVING DEAD ENDED PIPING.
8. ALL EXISTING PIPING AND EQUIPMENT SHOWN HAS BEEN TAKEN FROM THE BEST AVAILABLE EXISTING INFORMATION. THE DRAWINGS ARE DIAGRAMMATIC AND ALL FIXTURES, PIPING AND DEVICES MAY NOT BE SHOWN. THE INTENT OF THESE DRAWINGS IS THAT IN ALL AREA OF RENOVATION THAT THEY ARE REMOVED, WHETHER OR NOT SHOWN.
9. ALL MECHANICAL SYSTEMS TO BE REMOVED SHALL BE REMOVED COMPLETE WITH ALL RELATED ITEMS INCLUDING HANGERS, SUPPORTS, CONTROLS, ETC. CAP ALL OPEN PIPES AND DUCTS. PATCH AND SEAL ALL OPENINGS AS A RESULT OF DEMOLITION IN RATED WALLS TO MAINTAIN EXISTING WALL'S FIRE OR SMOKE RATING AND TO MATCH EXISTING ADJACENT SURFACES.
10. THE PLUMBING CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE EXISTING SYSTEMS AND CONDITIONS IN AREA OF RENOVATION.
11. THE PLUMBING CONTRACTOR SHALL COORDINATE WITH THE OWNER OR GENERAL CONTRACTOR ANY AND ALL PHASING OF THE PLUMBING DEMOLITION WORK IN ORDER TO SATISFY THE CONSTRUCTION SCHEDULE AND OWNERS OCCUPANCY REQUIREMENTS.
12. ALL ITEMS AND EQUIPMENT REMOVED SHALL REMAIN THE PROPERTY OF THE OWNER UNLESS POSSESSION RIGHTS ARE WAIVED. CONTRACTOR SHALL MEET WITH THE OWNER PRIOR TO START OF DEMOLITION TO DETERMINE WHICH ITEMS ARE TO BE SALVAGED. CONTRACTOR SHALL REMOVE REMAINING ITEMS FROM SITE.
13. THE PLUMBING CONTRACTOR SHALL ALSO REVIEW THE ARCHITECTURAL DEMOLITION DRAWINGS AS PART OF THIS CONTRACT FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
14. FIELD VERIFY EXACT SIZE AND LOCATION OF ALL EXISTING SERVICES PRIOR TO START OF DEMOLITION.
15. INSPECT EXISTING EQUIPMENT TO REMAIN AND VERIFY THAT EQUIPMENT IS OPERATING PROPERLY, NOTIFY OWNER DAMAGES AND/OR MALFUNCTION COMPONENTS.
16. REMOVE EXISTING TEMPERATURE SENSOR , CONTROLS AND THERMOSTATS (VERIFY IN FIELD LOCATION).

DEMOLITION KEY NOTES:

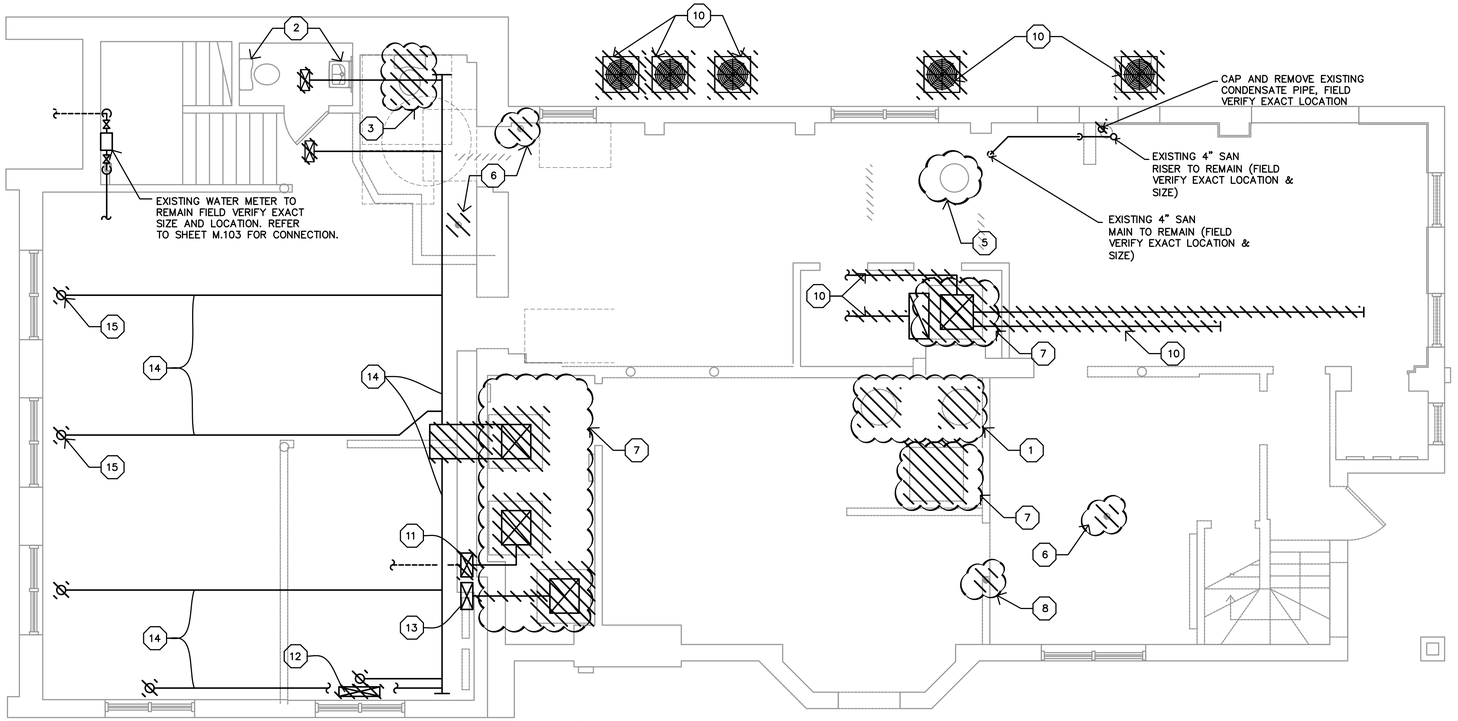
1. REMOVE AND DISPOSE OFF EXISTING WATER HEATERS. REFER TO SHEET M-100 FOR NEW LOCATION.
2. EXISTING PLUMBING FIXTURES TO REMAIN, CONFIRM IN FIELD WORKING CONDITION OF EXISTING PLUMBING FIXTURES TO REMAIN, REMOVE & REPLACE (FAUCETS, DRAINS, HANDLES, ETC..) AS NEEDED.
3. REMOVE , DISPOSE OFF AND REPLACE EXISTING FIXTURES WITH NEW PLUMBING FIXTURES AND CONNECT THEM WITH EXISTING SERVICES PIPES. REFER TO M-100.
4. REMOVE AND DISPOSE OFF EXISTING PLUMBING FIXTURES AND CAP ALL THE PIPES AT THE MAIN LINE (COLD AND HOT WATER , SANITARY AND VENT).
5. EXISTING SUMP PUMP TO REMAIN.
6. REMOVE EXISTING FLOOR DRAIN AND CAP THE SANITARY PIPE AT THE MAIN LINE.
7. REMOVE AND DISPOSE OFF EXISTING FURNACES WITH ALL ACCESSORIES AND ASSOCIATED DUCTWORK INCLUDING ALL CONNECTED WIRING AND CONTROLS. VENT AND COMBUSTION AIR FOR NEW FURNACES TO REMAIN.
8. REMOVE EXISTING SANITARY RISER AND CAP FLUSH IT AT THE LOWER LEVEL FLOOR (FIELD VERIFY SIZE & LOCATION).
9. REMOVE AND DISPOSE OFF EXISTING CONDENSING UNIT WITH ALL ACCESSORIES.
10. REMOVE EXISTING SUPPLY AND RETURN AIR DUCTWORK WITH ALL DUCT INSULATION, FITTINGS, DAMPERS, SUPPORT & REGISTERS.
11. CAP EXISTING DUCT AT BOTTOM OF THE SHAFT AFTER BACKFILLING WITH CONCRETE. REFER TO ARCHITECTURE DWG FOR BACKFILL MATERIALS.
12. BACKFILL ALL THE REGISTER OPENING UNDERGROUND AT THE LOWER LEVER, REFER TO THE ARCHITECTURE DWG. FOR BACKFILL MATERIALS.
13. EXISTING 24"x6" DUCTWORK RISER UP TO MAIN LEVEL TO REMAIN. FIELD VERIFY EXACT SIZE AND LOCATION.
14. EXISTING DUCT TO REMAIN. FIELD VERIFY EXACT SIZE AND LOCATION.
15. REMOVE EXISTING REGISTERS CONNECTIONS AND REUSE THE BRANCH FOR NEW REGISTERS. (REFER TO SHEET M.200 & M.201)



NORTH

DEMOLITION FIRST LEVEL PLAN

SCALE: 1/4" = 1'



NORTH

DEMOLITION LOWER LEVEL PLAN

SCALE: 1/4" = 1'

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

MEP Engineers LLC
Mechanical | Electrical | Plumbing | Energy
380 North Main Street
Clawson, MI 48017
Tel: (248) 488-9822 Fax: (248) 488-9811
Web: www.mepmi.com Email: mep@mepmi.com

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

BUILDING PERMIT	12/19/2018

DRAWN BY

JK

CHECKED BY

JM

APPROVED BY

JM

SHEET NAME

DEMOITION LOWER + FIRST LEVEL PLAN

SHEET NO.

MD.100

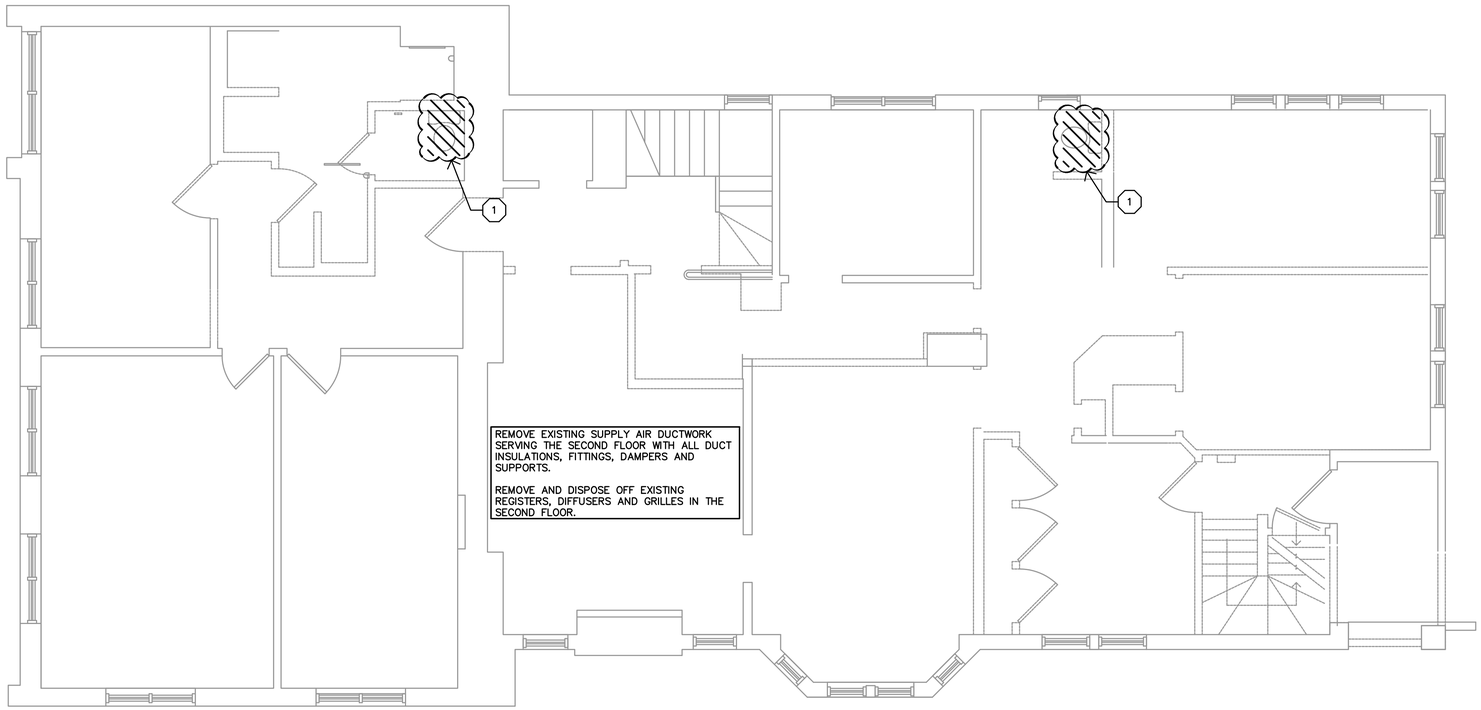
STATE OF MICHIGAN
JOSEPH A. MALKOUN
ENGINEER
No. 42633
LICENSED PROFESSIONAL ENGINEER

GENERAL DEMOLITION NOTES:

1. COORDINATE ALL DEMOLITION WITH WHAT IS SHOWN ON THIS PLAN AND EXISTING FIELD CONDITIONS. NOTIFY ARCHITECT, OWNER AND/OR ENGINEER OF ANY DISCREPANCIES.
2. PRIOR TO SUBMITTING BID, VISIT THE JOB SITE AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS OF THE PROJECT. REVIEW GENERAL NOTES, SPECIFICATIONS, AND OTHER DRAWINGS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF CONSTRUCTION DOCUMENTS. NOTIFY ENGINEERS AND/OR OWNER AS DEFINED IN BID DOCUMENTS, OF CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
3. OWNER RETAINS RIGHTS OF SALVAGE FOR EQUIPMENT AND FIXTURES TO BE REMOVED. COORDINATE WITH OWNER THE EQUIPMENTS AND FIXTURES TO BE SALVAGED AND THE LOCATION FOR STORAGE. AVOID DAMAGE TO SALVAGED EQUIPMENT, FIXTURES, AND DEVICES DURING DEMOLITION WORK AND DURING TRANSPORT TO OWNER'S DESIGNATED STORAGE LOCATION.
4. AVOID DAMAGING EXISTING SURFACES AND EQUIPMENT TO REMAIN FOR NEW INSTALLATION. REPAIR DAMAGE CAUSED DURING WORK AT NO EXTRA COST TO THE OWNER.
5. THE PLUMBING CONTRACTOR SHALL REMOVE ALL PLUMBING FIXTURES, CARRIERS, TRIM, ACCESSORIES, EQUIPMENT, FLOOR DRAINS AND ALL THE PIPING.
6. ALL PIPING SHALL BE REMOVED COMPLETELY, ALL PIPE HANGERS, SLEEVES, RISER CLAMPS, ETC. SHALL BE REMOVED COMPLETELY WITH PIPING. NO EXISTING HANGER SYSTEMS SHALL BE REUSED FOR NEW PIPING.
7. ALL PIPING TO BE REMOVED SHALL BE REMOVED UNDERGROUND, ABOVE CEILING OR IN WALLS BACK TO MAIN OR SHUT OF VALVES AT MAINS AND PROPERLY CAPPED PER CODE WITHOUT LEAVING DEAD ENDED PIPING.
8. ALL EXISTING PIPING AND EQUIPMENT SHOWN HAS BEEN TAKEN FROM THE BEST AVAILABLE EXISTING INFORMATION. THE DRAWINGS ARE DIAGRAMMATIC AND ALL FIXTURES, PIPING AND DEVICES MAY NOT BE SHOWN. THE INTENT OF THESE DRAWINGS IS THAT IN ALL AREA OF RENOVATION THAT THEY ARE REMOVED, WHETHER OR NOT SHOWN.
9. ALL MECHANICAL SYSTEMS TO BE REMOVED SHALL BE REMOVED COMPLETE WITH ALL RELATED ITEMS INCLUDING HANGERS, SUPPORTS, CONTROLS, ETC. CAP ALL OPEN PIPES AND DUCTS. PATCH AND SEAL ALL OPENINGS AS A RESULT OF DEMOLITION IN RATED WALLS TO MAINTAIN EXISTING WALL'S FIRE OR SMOKE RATING AND TO MATCH EXISTING ADJACENT SURFACES.
10. THE PLUMBING CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE EXISTING SYSTEMS AND CONDITIONS IN AREA OF RENOVATION.
11. THE PLUMBING CONTRACTOR SHALL COORDINATE WITH THE OWNER OR GENERAL CONTRACTOR ANY AND ALL PHASING OF THE PLUMBING DEMOLITION WORK IN ORDER TO SATISFY THE CONSTRUCTION SCHEDULE AND OWNERS OCCUPANCY REQUIREMENTS.
12. ALL ITEMS AND EQUIPMENT REMOVED SHALL REMAIN THE PROPERTY OF THE OWNER UNLESS POSSESSION RIGHTS ARE WAIVED. CONTRACTOR SHALL MEET WITH THE OWNER PRIOR TO START OF DEMOLITION TO DETERMINE WHICH ITEMS ARE TO BE SALVAGED. CONTRACTOR SHALL REMOVE REMAINING ITEMS FROM SITE.
13. THE PLUMBING CONTRACTOR SHALL ALSO REVIEW THE ARCHITECTURAL DEMOLITION DRAWINGS AS PART OF THIS CONTRACT FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
14. FIELD VERIFY EXACT SIZE AND LOCATION OF ALL EXISTING SERVICES PRIOR TO START OF DEMOLITION.
15. INSPECT EXISTING EQUIPMENT TO REMAIN AND VERIFY THAT EQUIPMENT IS OPERATING PROPERLY, NOTIFY OWNER DAMAGES AND/OR MALFUNCTION COMPONENTS.

DEMOLITION KEY NOTES:

(1) REMOVE AND DISPOSE OFF EXISTING HATCHED PLUMBING FIXTURES AND CAP ALL THE PIPES AT THE MAIN LINE (COLD AND HOT WATER , SANITARY AND VENT).



NORTH

PLUMBING DEMOLITION SECOND LEVEL PLAN

SCALE: 1/4" = 1'

STATE OF MICHIGAN
JOSEPH A. MAKOUN
ENGINEER
No. 42633
LICENSED PROFESSIONAL ENGINEER

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

MEP Engineers LLC
Mechanical | Electrical | Plumbing | Energy
380 North Main Street
Clawson, MI 48017
Tel: (248) 488-9822 Fax: (248) 488-9811
Web: www.mepmi.com Email: mep@mepmi.com

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

BUILDING PERMIT	12/19/2018

DRAWN BY

JK.

CHECKED BY

JM.

APPROVED BY

JM.

SHEET NAME

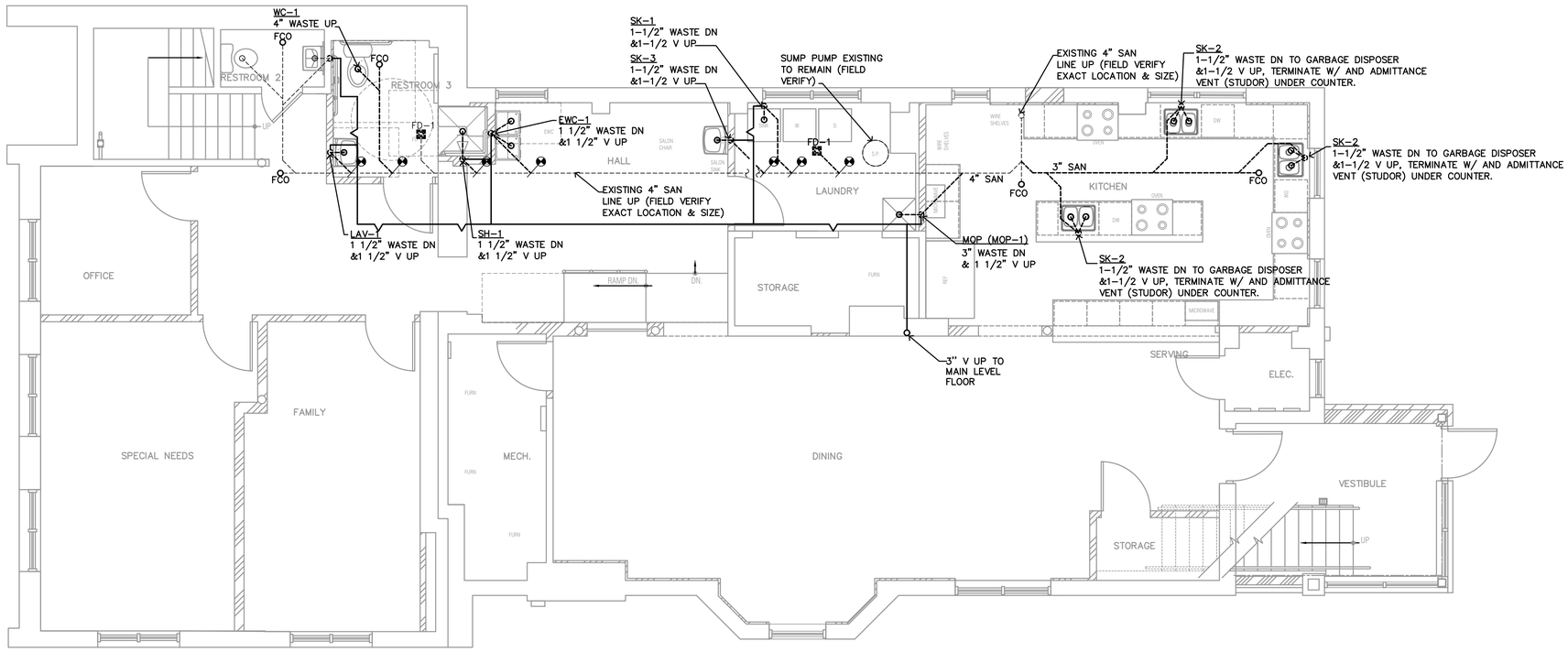
PLUMBING DEMO. SECOND LEVEL PLAN

SHEET NO.

MD.101

PLUMBING GENERAL NOTES:

1. DRAWINGS ARE DIAGRAMMATIC ONLY AND REPRESENT THE GENERAL SCOPE OF THE WORK. PRIOR TO SUBMITTING BID, VISIT THE JOB SITE TO OBSERVE THE EXISTING CONDITIONS OF THE PROJECT. REVIEW THE GENERAL NOTES, SPECIFICATIONS AND PLANS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
2. PROVIDE A CONSTRUCTION RECORD SET OF "AS-BUILT" DOCUMENTS TO THE ARCHITECT REFLECTING ANY VARIANCES OF INSTALLED PIPING LOCATIONS OR EQUIPMENT CONTRARY TO THE CONSTRUCTION DOCUMENTS, REFER TO SPECIFICATIONS.
3. PROVIDE TO THE ARCHITECT A COPY OF INSPECTION REPORTS AND APPROVAL CERTIFICATES FROM LOCAL AND STATE INSPECTIONS, REFER TO SPECIFICATIONS.
4. INSTALLATION SHALL COMPLY WITH LEGALLY CONSTITUTED CODES AND THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.
5. PLANS AND SPECIFICATIONS GOVERN WHERE THEY EXCEED CODE REQUIREMENTS.
6. VERIFY LOCATION AND DEPTH OF UTILITIES AT POINTS OF CONNECTION BEFORE START OF PIPING INSTALLATION.
7. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND MOUNTING HEIGHTS OF PLUMBING FIXTURES.
8. DO NOT SCALE FLOOR PLANS FOR EXACT HORIZONTAL LOCATION OF PIPE ROUTING.
9. INSTALL CONCEALED PIPING TIGHT TO THE STRUCTURE AND AS HIGH AS POSSIBLE. INSTALL EXPOSED PIPING TIGHT TO THE STRUCTURE, WALL OR CEILING AND AS HIGH AS POSSIBLE. COORDINATE WITH OTHER TRADES TO AVOID CONFLICTS.
10. PIPING IN FINISHED AREAS SHALL BE ROUTED CONCEALED; EXPOSED PIPING, WHERE NECESSARY, SHALL BE ROUTED AS HIGH AS POSSIBLE AND TIGHT TO WALLS.
11. INSTALL NO PLASTIC PIPE OF ANY KIND ABOVE SLAB INSIDE THE BUILDING. INSTALL NO PLASTIC PIPE IN THE CEILING RETURN AIR PLENUM.
12. COORDINATE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
13. COORDINATE PIPE ROUTING AWAY FROM ELECTRICAL PANELS. DO NOT INSTALL PIPING OVER ELECTRICAL PANELS.
14. COORDINATE ALL ROOF PENETRATIONS WITH OTHER TRADES. MAINTAIN 25' MINIMUM CLEARANCE FROM ALL AIR INTAKES. MAINTAIN 2' CLEARANCE FROM ALL OTHER EQUIPMENT.
15. PROVIDE "HEAVY-DUTY" NO-HUB COUPLINGS ON SANITARY PIPING 3" AND LARGER, SOIL STACKS 4" AND LARGER AND CONNECTIONS TO SOIL STACKS. SEE DIVISION 22 SPECIFICATION SECTION "SANITARY DRAINAGE AND VENT AND PIPING SPECIALTIES" FOR MORE INFORMATION.
16. PROVIDE TRANSITION ADAPTER COUPLINGS FOR CONNECTION OF PVC DWV TO CAST IRON SANITARY, WASTE AND VENT PIPE AT SLAB ON GRADE. SEE DIVISION 22 SPECIFICATION SECTION "SANITARY DRAINAGE AND VENT PIPING AND SPECIALTIES" FOR MORE INFORMATION.
17. VERIFY EXISTING EQUIPMENT, INCLUDING ACCESSORIES, IS NOT DAMAGED AND IS IN GOOD WORKING ORDER. REPORT ANY DEFICIENCIES TO THE ARCHITECT.
18. INSULATE LAST 25 LINEAL FEET OF NEW AND EXISTING VENT PIPING INSIDE BUILDING PER SPECIFICATIONS AT VENT THRU ROOF PENETRATIONS WITHIN SCOPE.
19. RUN SANITARY LINE WITH 1% SLOPE.
20. VERIFY USE EXISTING CHIMNEY AS PIPING CHASE. NOTIFY ARCHITECT OF ANY OBSTRUCTIONS OR REPAIRS REQUIRED.



NORTH

SANITARY & VENT PIPING LOWER LEVEL PLAN

SCALE: 1/4" = 1'

STATE OF MICHIGAN
JOSEPH A. MACKOUN
ENGINEER
No. 42633
LICENSED PROFESSIONAL ENGINEER

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

MEP Engineers LLC
Mechanical | Electrical | Plumbing | Energy
380 North Main Street
Clawson, MI 48017
Tel: (248) 488-9822 Fax: (248) 488-9811
Web: www.mepmi.com Email: mep@mepmi.com

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

BUILDING PERMIT	12/19/2018

DRAWN BY
JK.

CHECKED BY
JM.

APPROVED BY
JM.

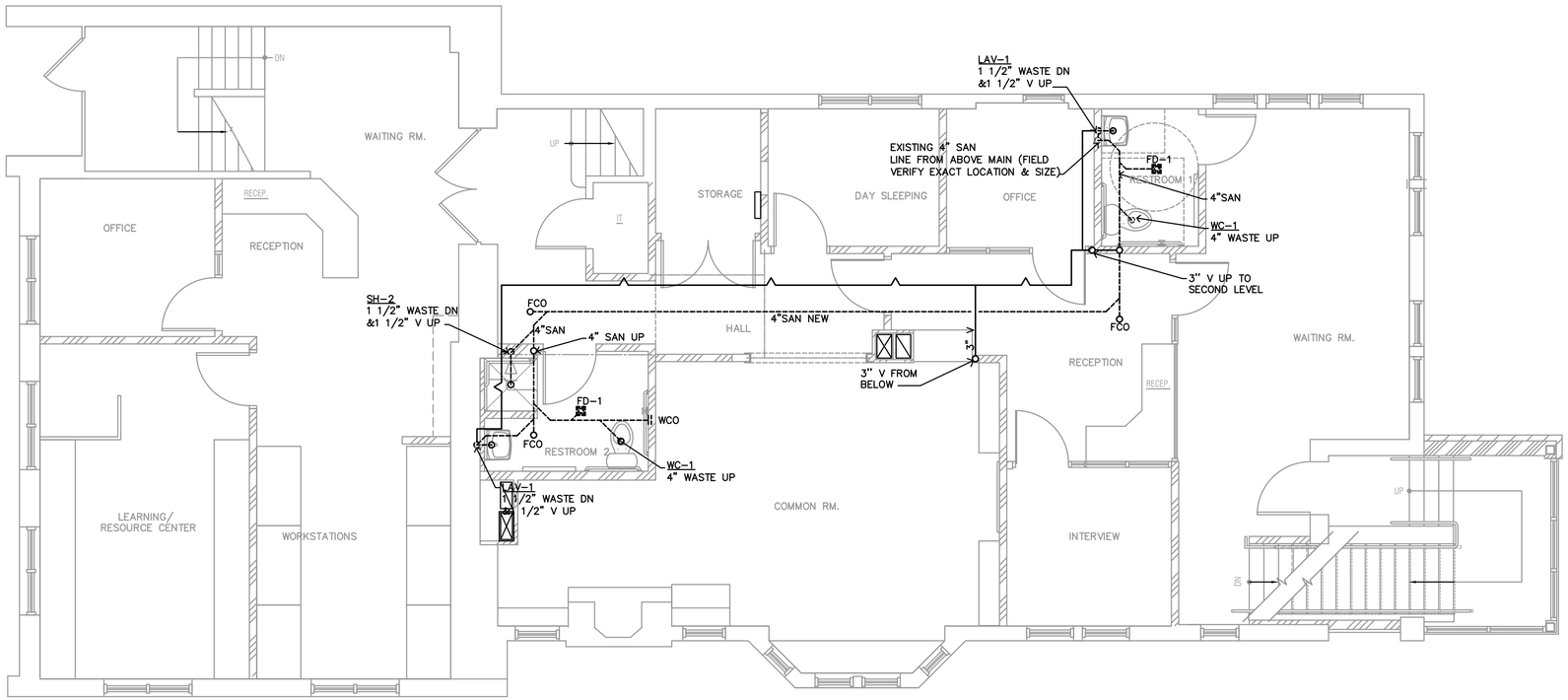
SHEET NAME

SANITARY + VENT PIPING LOWER LEVEL PLAN

SHEET NO.
M.100

PLUMBING GENERAL NOTES:

1. DRAWINGS ARE DIAGRAMMATIC ONLY AND REPRESENT THE GENERAL SCOPE OF THE WORK. PRIOR TO SUBMITTING BID, VISIT THE JOB SITE TO OBSERVE THE EXISTING CONDITIONS OF THE PROJECT. REVIEW THE GENERAL NOTES, SPECIFICATIONS AND PLANS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
2. PROVIDE A CONSTRUCTION RECORD SET OF "AS-BUILT" DOCUMENTS TO THE ARCHITECT REFLECTING ANY VARIANCES OF INSTALLED PIPING LOCATIONS OR EQUIPMENT CONTRARY TO THE CONSTRUCTION DOCUMENTS, REFER TO SPECIFICATIONS.
3. PROVIDE TO THE ARCHITECT A COPY OF INSPECTION REPORTS AND APPROVAL CERTIFICATES FROM LOCAL AND STATE INSPECTIONS, REFER TO SPECIFICATIONS.
4. INSTALLATION SHALL COMPLY WITH LEGALLY CONSTITUTED CODES AND THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.
5. PLANS AND SPECIFICATIONS GOVERN WHERE THEY EXCEED CODE REQUIREMENTS.
6. VERIFY LOCATION AND DEPTH OF UTILITIES AT POINTS OF CONNECTION BEFORE START OF PIPING INSTALLATION.
7. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND MOUNTING HEIGHTS OF PLUMBING FIXTURES.
8. DO NOT SCALE FLOOR PLANS FOR EXACT HORIZONTAL LOCATION OF PIPE ROUTING.
9. INSTALL CONCEALED PIPING TIGHT TO THE STRUCTURE AND AS HIGH AS POSSIBLE. INSTALL EXPOSED PIPING TIGHT TO THE STRUCTURE, WALL OR CEILING AND AS HIGH AS POSSIBLE. COORDINATE WITH OTHER TRADES TO AVOID CONFLICTS.
10. PIPING IN FINISHED AREAS SHALL BE ROUTED CONCEALED; EXPOSED PIPING, WHERE NECESSARY, SHALL BE ROUTED AS HIGH AS POSSIBLE AND TIGHT TO WALLS.
11. INSTALL NO PLASTIC PIPE OF ANY KIND ABOVE SLAB INSIDE THE BUILDING. INSTALL NO PLASTIC PIPE IN THE CEILING RETURN AIR PLENUM.
12. COORDINATE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
13. COORDINATE PIPE ROUTING AWAY FROM ELECTRICAL PANELS. DO NOT INSTALL PIPING OVER ELECTRICAL PANELS.
14. COORDINATE ALL ROOF PENETRATIONS WITH OTHER TRADES. MAINTAIN 25' MINIMUM CLEARANCE FROM ALL AIR INTAKES. MAINTAIN 2' CLEARANCE FROM ALL OTHER EQUIPMENT.
15. PROVIDE "HEAVY-DUTY" NO-HUB COUPLINGS ON SANITARY PIPING 3" AND LARGER, SOIL STACKS 4" AND LARGER AND CONNECTIONS TO SOIL STACKS. SEE DIVISION 22 SPECIFICATION SECTION "SANITARY DRAINAGE AND VENT AND PIPING SPECIALTIES" FOR MORE INFORMATION.
16. PROVIDE TRANSITION ADAPTER COUPLINGS FOR CONNECTION OF PVC DWV TO CAST IRON SANITARY, WASTE AND VENT PIPE AT SLAB ON GRADE. SEE DIVISION 22 SPECIFICATION SECTION "SANITARY DRAINAGE AND VENT PIPING AND SPECIALTIES" FOR MORE INFORMATION.
17. VERIFY EXISTING EQUIPMENT, INCLUDING ACCESSORIES, IS NOT DAMAGED AND IS IN GOOD WORKING ORDER. REPORT ANY DEFICIENCIES TO THE ARCHITECT.
18. INSULATE LAST 25 LINEAL FEET OF NEW AND EXISTING VENT PIPING INSIDE BUILDING PER SPECIFICATIONS AT VENT THRU ROOF PENETRATIONS WITHIN SCOPE.
19. RUN SANITARY LINE WITH 1% SLOPE.



NORTH

SANITARY & VENT PIPING FIRST LEVEL PLAN

SCALE: 1/4" = 1'

STATE OF MICHIGAN
JOSEPH A. MALKOUN
ENGINEER
No. 42633
LICENSED PROFESSIONAL ENGINEER

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

MEP Engineers LLC
Mechanical | Electrical | Plumbing | Energy
380 North Main Street
Clawson, MI 48017
Tel: (248) 488-9822 Fax: (248) 488-9811
Web: www.mepmi.com Email: mep@mepmi.com

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

BUILDING PERMIT	12/19/2018

DRAWN BY
JK.

CHECKED BY
JM.

APPROVED BY
JM.

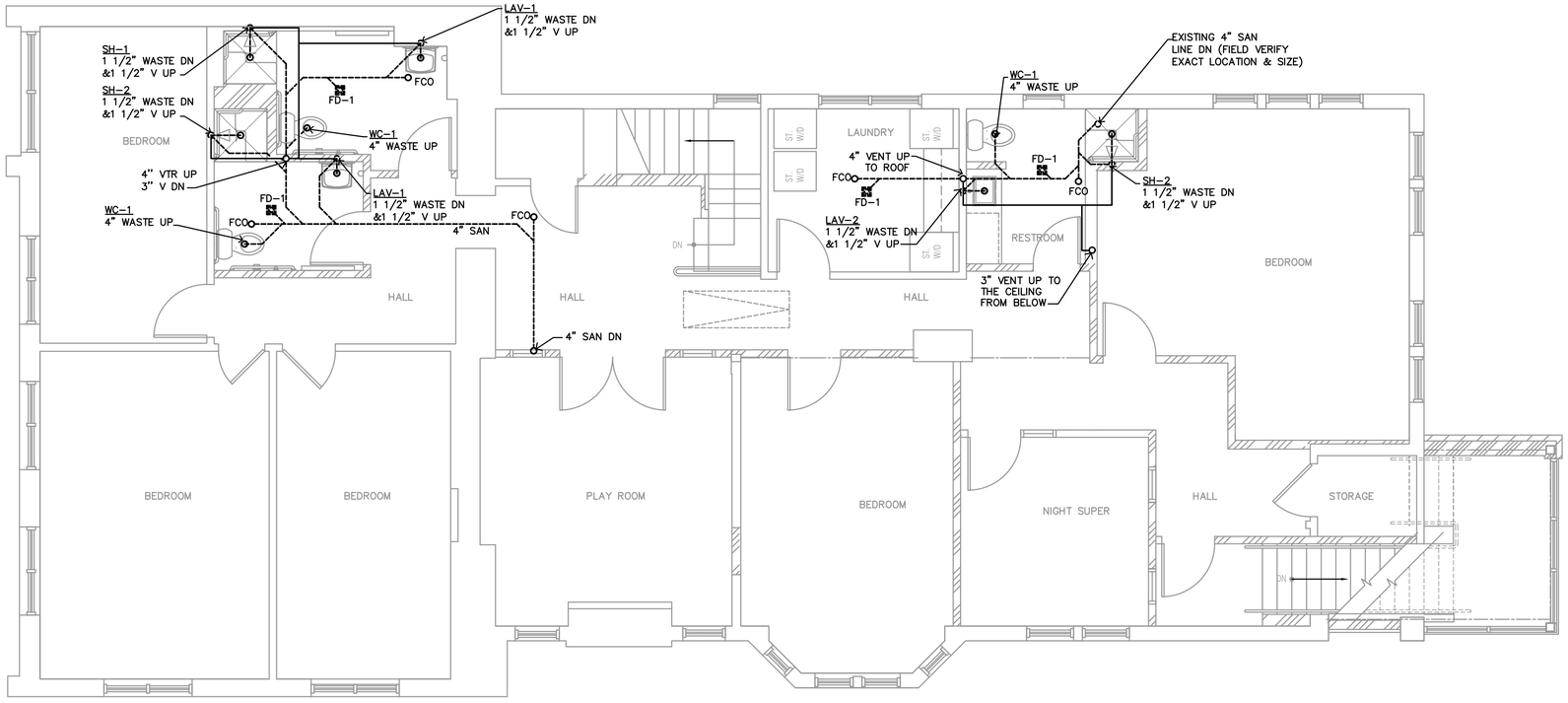
SHEET NAME

SANITARY + VENT PIPING FIRST LEVEL PLAN

SHEET NO.
M.101

PLUMBING GENERAL NOTES:

1. DRAWINGS ARE DIAGRAMMATIC ONLY AND REPRESENT THE GENERAL SCOPE OF THE WORK. PRIOR TO SUBMITTING BID, VISIT THE JOB SITE TO OBSERVE THE EXISTING CONDITIONS OF THE PROJECT. REVIEW THE GENERAL NOTES, SPECIFICATIONS AND PLANS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
2. PROVIDE A CONSTRUCTION RECORD SET OF "AS-BUILT" DOCUMENTS TO THE ARCHITECT REFLECTING ANY VARIANCES OF INSTALLED PIPING LOCATIONS OR EQUIPMENT CONTRARY TO THE CONSTRUCTION DOCUMENTS, REFER TO SPECIFICATIONS.
3. PROVIDE TO THE ARCHITECT A COPY OF INSPECTION REPORTS AND APPROVAL CERTIFICATES FROM LOCAL AND STATE INSPECTIONS, REFER TO SPECIFICATIONS.
4. INSTALLATION SHALL COMPLY WITH LEGALLY CONSTITUTED CODES AND THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.
5. PLANS AND SPECIFICATIONS GOVERN WHERE THEY EXCEED CODE REQUIREMENTS.
6. VERIFY LOCATION AND DEPTH OF UTILITIES AT POINTS OF CONNECTION BEFORE START OF PIPING INSTALLATION.
7. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND MOUNTING HEIGHTS OF PLUMBING FIXTURES.
8. DO NOT SCALE FLOOR PLANS FOR EXACT HORIZONTAL LOCATION OF PIPE ROUTING.
9. INSTALL CONCEALED PIPING TIGHT TO THE STRUCTURE AND AS HIGH AS POSSIBLE. INSTALL EXPOSED PIPING TIGHT TO THE STRUCTURE, WALL OR CEILING AND AS HIGH AS POSSIBLE. COORDINATE WITH OTHER TRADES TO AVOID CONFLICTS.
10. PIPING IN FINISHED AREAS SHALL BE ROUTED CONCEALED; EXPOSED PIPING, WHERE NECESSARY, SHALL BE ROUTED AS HIGH AS POSSIBLE AND TIGHT TO WALLS.
11. INSTALL NO PLASTIC PIPE OF ANY KIND ABOVE SLAB INSIDE THE BUILDING. INSTALL NO PLASTIC PIPE IN THE CEILING RETURN AIR PLENUM.
12. COORDINATE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
13. COORDINATE PIPE ROUTING AWAY FROM ELECTRICAL PANELS. DO NOT INSTALL PIPING OVER ELECTRICAL PANELS.
14. COORDINATE ALL ROOF PENETRATIONS WITH OTHER TRADES. MAINTAIN 25' MINIMUM CLEARANCE FROM ALL AIR INTAKES. MAINTAIN 2' CLEARANCE FROM ALL OTHER EQUIPMENT.
15. PROVIDE "HEAVY-DUTY" NO-HUB COUPLINGS ON SANITARY PIPING 3" AND LARGER, SOIL STACKS 4" AND LARGER AND CONNECTIONS TO SOIL STACKS. SEE DIVISION 22 SPECIFICATION SECTION "SANITARY DRAINAGE AND VENT AND PIPING SPECIALTIES" FOR MORE INFORMATION.
16. PROVIDE TRANSITION ADAPTER COUPLINGS FOR CONNECTION OF PVC DWV TO CAST IRON SANITARY, WASTE AND VENT PIPE AT SLAB ON GRADE. SEE DIVISION 22 SPECIFICATION SECTION "SANITARY DRAINAGE AND VENT PIPING AND SPECIALTIES" FOR MORE INFORMATION.
17. VERIFY EXISTING EQUIPMENT, INCLUDING ACCESSORIES, IS NOT DAMAGED AND IS IN GOOD WORKING ORDER. REPORT ANY DEFICIENCIES TO THE ARCHITECT.
18. INSULATE LAST 25 LINEAL FEET OF NEW AND EXISTING VENT PIPING INSIDE BUILDING PER SPECIFICATIONS AT VENT THRU ROOF PENETRATIONS WITHIN SCOPE.
19. RUN SANITARY LINE WITH 1% SLOPE.



NORTH

SANITARY & VENT PIPING SECOND LEVEL PLAN

SCALE: 1/4" = 1'

STATE OF MICHIGAN
JOSEPH A. MACKOUN
ENGINEER
No. 42633
LICENSED PROFESSIONAL ENGINEER

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

MEP Engineers LLC
Mechanical | Electrical | Plumbing | Energy
380 North Main Street
Clawson, MI 48017
Tel: (248) 488-9822 Fax: (248) 488-9811
Web: www.mepmi.com Email: mep@mepmi.com

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

BUILDING PERMIT	12/19/2018

DRAWN BY
JK.

CHECKED BY
JM.

APPROVED BY
JM.

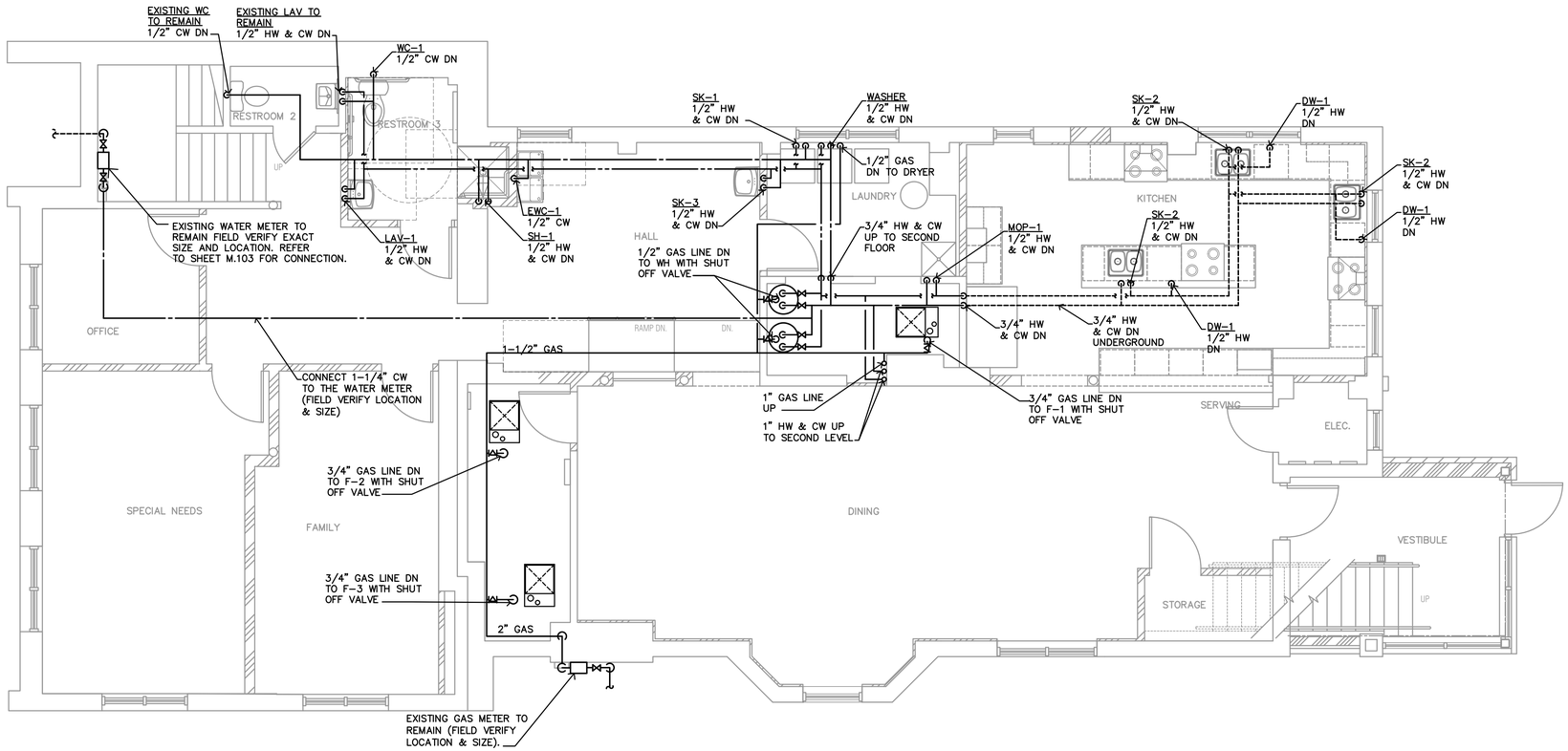
SHEET NAME

SANITARY + VENT PIPING SECOND LEVEL PLAN

SHEET NO. M.102

PLUMBING GENERAL NOTES:

1. DRAWINGS ARE DIAGRAMMATIC ONLY AND REPRESENT THE GENERAL SCOPE OF THE WORK. PRIOR TO SUBMITTING BID, VISIT THE JOB SITE TO OBSERVE THE EXISTING CONDITIONS OF THE PROJECT. REVIEW THE GENERAL NOTES, SPECIFICATIONS AND PLANS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
2. PROVIDE A CONSTRUCTION RECORD SET OF "AS-BUILT" DOCUMENTS TO THE ARCHITECT REFLECTING ANY VARIANCES OF INSTALLED PIPING LOCATIONS OR EQUIPMENT CONTRARY TO THE CONSTRUCTION DOCUMENTS, REFER TO SPECIFICATIONS.
3. PROVIDE TO THE ARCHITECT A COPY OF INSPECTION REPORTS AND APPROVAL CERTIFICATES FROM LOCAL AND STATE INSPECTIONS, REFER TO SPECIFICATIONS.
4. INSTALLATION SHALL COMPLY WITH LEGALLY CONSTITUTED CODES AND THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.
5. PLANS AND SPECIFICATIONS GOVERN WHERE THEY EXCEED CODE REQUIREMENTS.
6. VERIFY LOCATION AND DEPTH OF UTILITIES AT POINTS OF CONNECTION BEFORE START OF PIPING INSTALLATION.
7. DO NOT SCALE FLOOR PLANS FOR EXACT HORIZONTAL LOCATION OF PIPE ROUTING.
8. PROVIDE TRANSITION ADAPTER COUPLINGS FOR CONNECTION OF PVC DWV TO CAST IRON SANITARY, WASTE AND VENT PIPE AT SLAB ON GRADE.
9. INSULATE LAST 25 LINEAL FEET OF NEW AND EXISTING VENT PIPING INSIDE BUILDING PER SPECIFICATIONS AT VENT THRU ROOF PENETRATIONS WITHIN SCOPE.
10. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND MOUNTING HEIGHTS OF PLUMBING FIXTURES.
11. INSTALL CONCEALED PIPING TIGHT TO THE STRUCTURE AND AS HIGH AS POSSIBLE. INSTALL EXPOSED PIPING TIGHT TO THE STRUCTURE, WALL OR CEILING AND AS HIGH AS POSSIBLE. COORDINATE WITH OTHER TRADES TO AVOID CONFLICTS.
12. PROVIDE SHUT OFF VALVE AT EACH FIXTURE AND EQUIPMENT. VALVES SHALL BE LINE SIZE UNLESS OTHERWISE NOTED.
13. PIPING IN FINISHED AREA SHALL BE ROUTED CONCEALED; EXPOSED PIPING, WHERE NECESSARY, SHALL BE ROUTED AS HIGH AS POSSIBLE AND TIGHT TO WALLS.
14. COORDINATE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
15. CLEAN FAUCET AERATORS AND PIPE STRAINERS PRIOR TO TURNING BUILDING OVER TO THE OWNER.
16. COORDINATE PIPE ROUTING AWAY FROM ELECTRICAL PANELS. DO NOT INSTALL PIPING OVER ELECTRICAL PANELS.
17. COORDINATE ALL ROOF PENETRATIONS WITH OTHER TRADES. MAINTAIN 25' MINIMUM CLEARANCE FROM ALL AIR INTAKES. MAINTAIN 2' CLEARANCE FROM ALL OTHER EQUIPMENT.
18. INSULATE PIPING ROUTED IN EXTERIOR BUILDING WALLS WITH MINIMUM 2" BATT INSULATION TO PREVENT FREEZING.
19. WATER HAMMER ARRESTORS SHALL BE SIZE "A" UNLESS NOTED OTHERWISE.
20. CONTRACTOR SHALL VERIFY EXACT LOCATION OF CW MAIN ABOVE THE CEILING. CONNECT TO EXISTING FEED AND PROVIDE NEW BACKFLOW PREVENTOR.



NORTH

DOMESTIC WATER & GAS PIPING LOWER LEVEL PLAN

SCALE: 1/4" = 1'

STATE OF MICHIGAN
JOSEPH A. MALKOUN
ENGINEER
No. 42633
LICENSED PROFESSIONAL ENGINEER

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

MEP Engineers LLC
Mechanical | Electrical | Plumbing | Energy
380 North Main Street
Clawson, MI 48017
Tel: (248) 488-9822 Fax: (248) 488-9811
Web: www.mepmi.com Email: mep@mepmi.com

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

BUILDING PERMIT	12/19/2018

DRAWN BY
JK

CHECKED BY
JM

APPROVED BY
JM

SHEET NAME

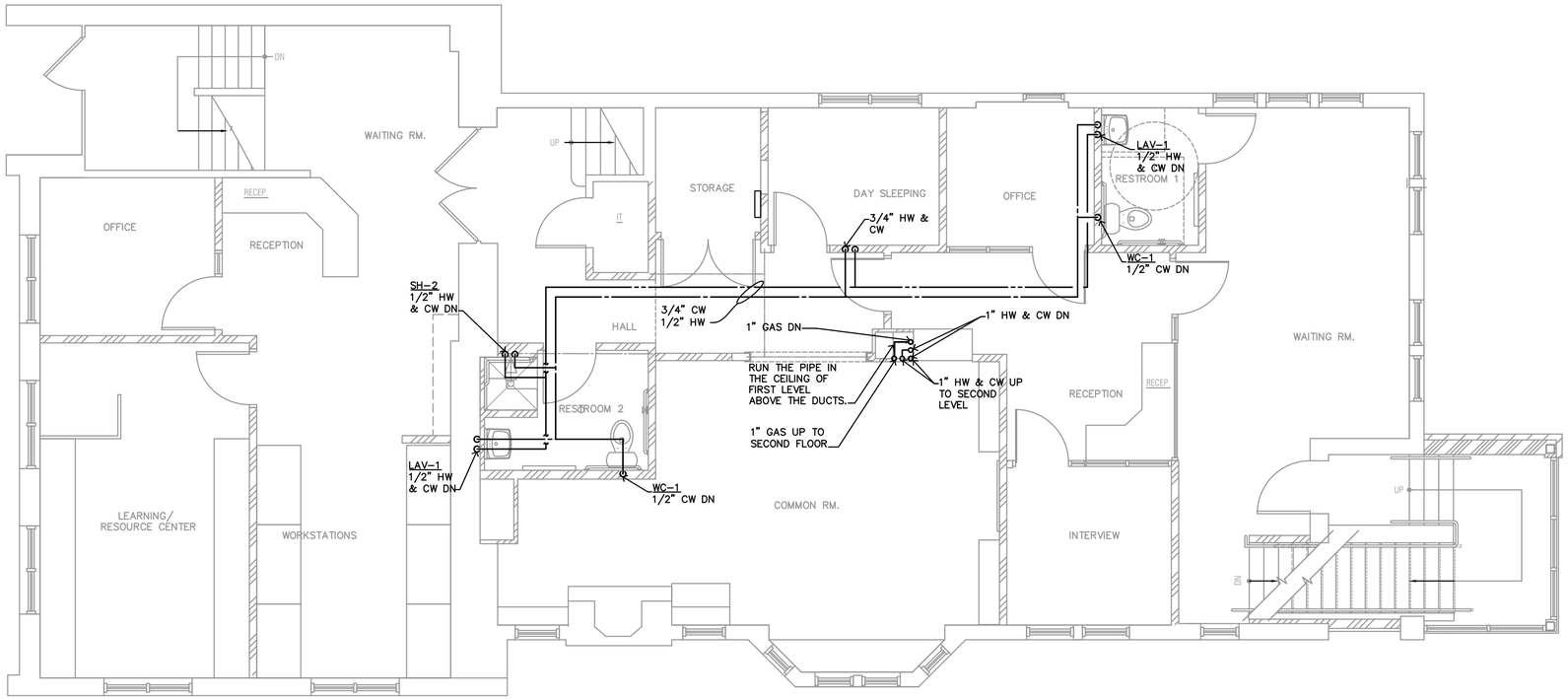
DOMESTIC WATER + GAS PIPIMG LOWER LEVEL PLAN

SHEET NO.

M.103

PLUMBING GENERAL NOTES:

1. DRAWINGS ARE DIAGRAMMATIC ONLY AND REPRESENT THE GENERAL SCOPE OF THE WORK. PRIOR TO SUBMITTING BID, VISIT THE JOB SITE TO OBSERVE THE EXISTING CONDITIONS OF THE PROJECT. REVIEW THE GENERAL NOTES, SPECIFICATIONS AND PLANS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
2. PROVIDE A CONSTRUCTION RECORD SET OF "AS-BUILT" DOCUMENTS TO THE ARCHITECT REFLECTING ANY VARIANCES OF INSTALLED PIPING LOCATIONS OR EQUIPMENT CONTRARY TO THE CONSTRUCTION DOCUMENTS, REFER TO SPECIFICATIONS.
3. PROVIDE TO THE ARCHITECT A COPY OF INSPECTION REPORTS AND APPROVAL CERTIFICATES FROM LOCAL AND STATE INSPECTIONS, REFER TO SPECIFICATIONS.
4. INSTALLATION SHALL COMPLY WITH LEGALLY CONSTITUTED CODES AND THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.
5. PLANS AND SPECIFICATIONS GOVERN WHERE THEY EXCEED CODE REQUIREMENTS.
6. VERIFY LOCATION AND DEPTH OF UTILITIES AT POINTS OF CONNECTION BEFORE START OF PIPING INSTALLATION.
7. DO NOT SCALE FLOOR PLANS FOR EXACT HORIZONTAL LOCATION OF PIPE ROUTING.
8. PROVIDE TRANSITION ADAPTER COUPLINGS FOR CONNECTION OF PVC DWV TO CAST IRON SANITARY, WASTE AND VENT PIPE AT SLAB ON GRADE.
9. INSULATE LAST 25 LINEAL FEET OF NEW AND EXISTING VENT PIPING INSIDE BUILDING PER SPECIFICATIONS AT VENT THRU ROOF PENETRATIONS WITHIN SCOPE.
10. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND MOUNTING HEIGHTS OF PLUMBING FIXTURES.
11. INSTALL CONCEALED PIPING TIGHT TO THE STRUCTURE AND AS HIGH AS POSSIBLE. INSTALL EXPOSED PIPING TIGHT TO THE STRUCTURE, WALL OR CEILING AND AS HIGH AS POSSIBLE. COORDINATE WITH OTHER TRADES TO AVOID CONFLICTS.
12. PROVIDE SHUT OFF VALVE AT EACH FIXTURE AND EQUIPMENT. VALVES SHALL BE LINE SIZE UNLESS OTHERWISE NOTED.
13. PIPING IN FINISHED AREA SHALL BE ROUTED CONCEALED; EXPOSED PIPING, WHERE NECESSARY, SHALL BE ROUTED AS HIGH AS POSSIBLE AND TIGHT TO WALLS.
14. COORDINATE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
15. CLEAN FAUCET AERATORS AND PIPE STRAINERS PRIOR TO TURNING BUILDING OVER TO THE OWNER.
16. COORDINATE PIPE ROUTING AWAY FROM ELECTRICAL PANELS. DO NOT INSTALL PIPING OVER ELECTRICAL PANELS.
17. COORDINATE ALL ROOF PENETRATIONS WITH OTHER TRADES. MAINTAIN 25' MINIMUM CLEARANCE FROM ALL AIR INTAKES. MAINTAIN 2' CLEARANCE FROM ALL OTHER EQUIPMENT.
18. INSULATE PIPING ROUTED IN EXTERIOR BUILDING WALLS WITH MINIMUM 2" BATT INSULATION TO PREVENT FREEZING.
19. WATER HAMMER ARRESTORS SHALL BE SIZE "A" UNLESS NOTED OTHERWISE.
20. CONTRACTOR SHALL VERIFY EXACT LOCATION OF CW MAIN ABOVE THE CEILING. CONNECT TO EXISTING FEED AND PROVIDE NEW BACKFLOW PREVENTOR.



NORTH

DOMESTIC WATER & GAS PIPING FIRST LEVEL PLAN

SCALE: 1/4" = 1'

STATE OF MICHIGAN
JOSEPH A. MALKOUN
ENGINEER
No. 42633
LICENSED PROFESSIONAL ENGINEER

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

MEP Engineers LLC
Mechanical | Electrical | Plumbing | Energy
380 North Main Street
Clawson, MI 48017
Tel: (248) 488-9822 Fax: (248) 488-9811
Web: www.mepmi.com Email: mep@mepmi.com

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

BUILDING PERMIT	12/19/2018

DRAWN BY
JK

CHECKED BY
JM

APPROVED BY
JM

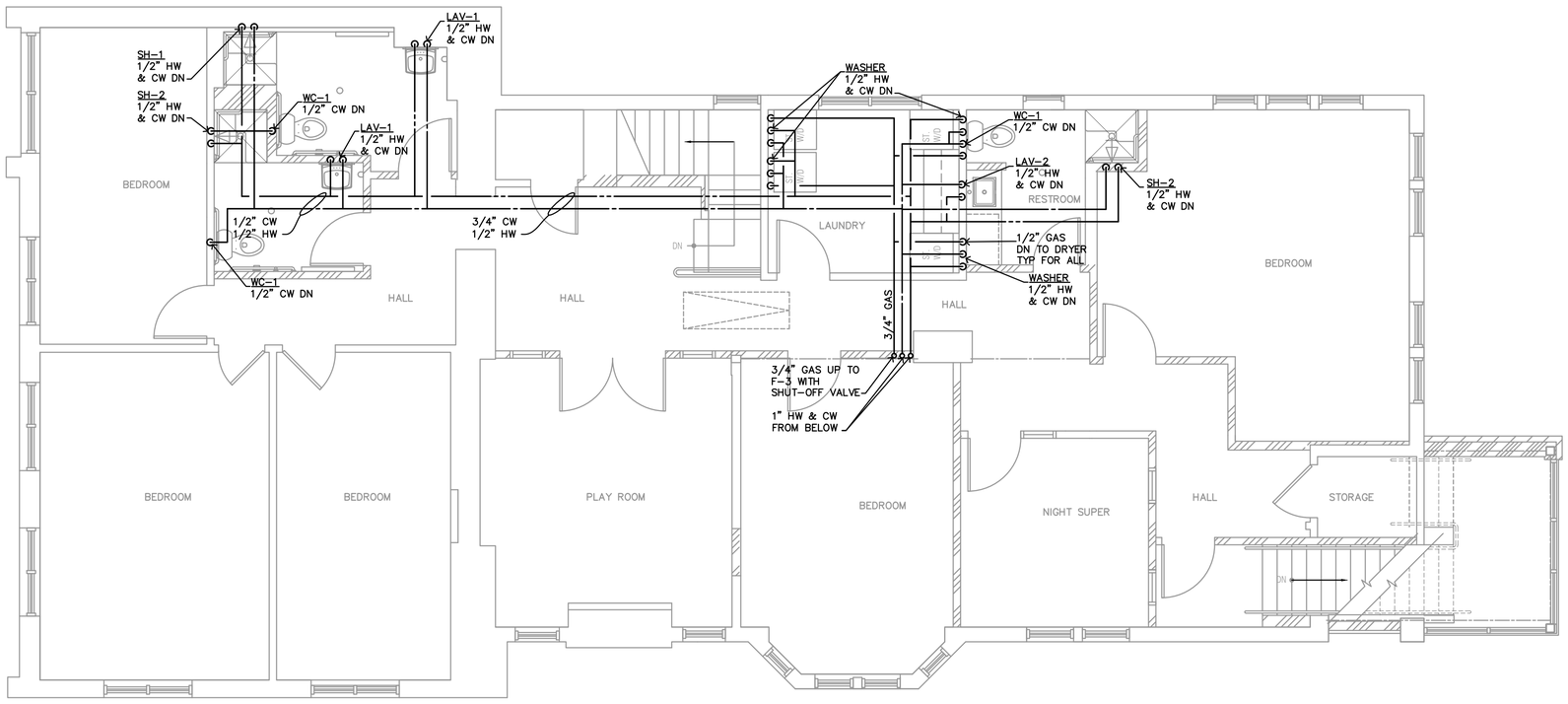
SHEET NAME

DOMESTIC WATER + GAS PIPIMG FIRST LEVEL PLAN

SHEET NO.
M.104

PLUMBING GENERAL NOTES:

1. DRAWINGS ARE DIAGRAMMATIC ONLY AND REPRESENT THE GENERAL SCOPE OF THE WORK. PRIOR TO SUBMITTING BID, VISIT THE JOB SITE TO OBSERVE THE EXISTING CONDITIONS OF THE PROJECT. REVIEW THE GENERAL NOTES, SPECIFICATIONS AND PLANS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
2. PROVIDE A CONSTRUCTION RECORD SET OF "AS-BUILT" DOCUMENTS TO THE ARCHITECT REFLECTING ANY VARIANCES OF INSTALLED PIPING LOCATIONS OR EQUIPMENT CONTRARY TO THE CONSTRUCTION DOCUMENTS, REFER TO SPECIFICATIONS.
3. PROVIDE TO THE ARCHITECT A COPY OF INSPECTION REPORTS AND APPROVAL CERTIFICATES FROM LOCAL AND STATE INSPECTIONS, REFER TO SPECIFICATIONS.
4. INSTALLATION SHALL COMPLY WITH LEGALLY CONSTITUTED CODES AND THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.
5. PLANS AND SPECIFICATIONS GOVERN WHERE THEY EXCEED CODE REQUIREMENTS.
6. VERIFY LOCATION AND DEPTH OF UTILITIES AT POINTS OF CONNECTION BEFORE START OF PIPING INSTALLATION.
7. DO NOT SCALE FLOOR PLANS FOR EXACT HORIZONTAL LOCATION OF PIPE ROUTING.
8. PROVIDE TRANSITION ADAPTER COUPLINGS FOR CONNECTION OF PVC DWV TO CAST IRON SANITARY, WASTE AND VENT PIPE AT SLAB ON GRADE.
9. INSULATE LAST 25 LINEAL FEET OF NEW AND EXISTING VENT PIPING INSIDE BUILDING PER SPECIFICATIONS AT VENT THRU ROOF PENETRATIONS WITHIN SCOPE.
10. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND MOUNTING HEIGHTS OF PLUMBING FIXTURES.
11. INSTALL CONCEALED PIPING TIGHT TO THE STRUCTURE AND AS HIGH AS POSSIBLE. INSTALL EXPOSED PIPING TIGHT TO THE STRUCTURE, WALL OR CEILING AND AS HIGH AS POSSIBLE. COORDINATE WITH OTHER TRADES TO AVOID CONFLICTS.
12. PROVIDE SHUT OFF VALVE AT EACH FIXTURE AND EQUIPMENT. VALVES SHALL BE LINE SIZE UNLESS OTHERWISE NOTED.
13. PIPING IN FINISHED AREA SHALL BE ROUTED CONCEALED; EXPOSED PIPING, WHERE NECESSARY, SHALL BE ROUTED AS HIGH AS POSSIBLE AND TIGHT TO WALLS.
14. COORDINATE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
15. CLEAN FAUCET AERATORS AND PIPE STRAINERS PRIOR TO TURNING BUILDING OVER TO THE OWNER.
16. COORDINATE PIPE ROUTING AWAY FROM ELECTRICAL PANELS. DO NOT INSTALL PIPING OVER ELECTRICAL PANELS.
17. COORDINATE ALL ROOF PENETRATIONS WITH OTHER TRADES. MAINTAIN 25' MINIMUM CLEARANCE FROM ALL AIR INTAKES. MAINTAIN 2' CLEARANCE FROM ALL OTHER EQUIPMENT.
18. INSULATE PIPING ROUTED IN EXTERIOR BUILDING WALLS WITH MINIMUM 2" BATT INSULATION TO PREVENT FREEZING.
19. WATER HAMMER ARRESTORS SHALL BE SIZE "A" UNLESS NOTED OTHERWISE.
20. CONTRACTOR SHALL VERIFY EXACT LOCATION OF CW MAIN ABOVE THE CEILING. CONNECT TO EXISTING FEED AND PROVIDE NEW BACKFLOW PREVENTOR.



NORTH

DOMESTIC WATER & GAS PIPING SECOND LEVEL PLAN

SCALE: 1/4" = 1'

STATE OF MICHIGAN
JOSEPH A. MACKOUN
ENGINEER
No. 42633
LICENSED PROFESSIONAL ENGINEER

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

MEP Engineers LLC
Mechanical | Electrical | Plumbing | Energy
380 North Main Street
Clawson, MI 48017
Tel: (248) 488-9822 Fax: (248) 488-9811
Web: www.mepmi.com Email: mep@mepmi.com

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

BUILDING PERMIT	12/19/2018

DRAWN BY
JK.

CHECKED BY
JM.

APPROVED BY
JM.

SHEET NAME

DOMESTIC WATER + GAS PIPIMG SECOND LEVEL PLAN

SHEET NO.
M.105

MECHANICAL GENERAL NOTES:

1. PRIOR TO SUBMITTING BID, VISIT THE JOB SITE AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS OF THE PROJECT. REVIEW THE GENERAL NOTES, SPECIFICATIONS, AND OTHER DRAWINGS FOR ADDITIONAL REQUIREMENTS WHICH MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ENGINEER AND/OR OWNER OF CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.

2. EXISTING CONDITIONS WERE TAKEN FROM ORIGINAL DRAWINGS AND SITE VISITS AND MAY NOT REFLECTED EXACT "AS-BUILT" CONDITIONS. FIELD VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING FINAL BIDS. COORDINATE NEW WORK AND DEMOLITION WITH OTHER DISCIPLINES AND EXISTING CONDITIONS PRIOR TO CONSTRUCTION.

3. COORDINATE THE INSTALLATION OF THE MECHANICAL SYSTEMS WITH OTHER TRADES TO ENSURE A NEAT AND ORDERLY INSTALLATION. INSTALL DUCTWORK AND PIPING AS TIGHT TO STRUCTURE AS POSSIBLE. COORDINATE WITH OTHER EXISTING ELEMENTS AND UTILITIES TO AVOID CONFLICTS. COORDINATE INSTALLATION OF DUCTWORK AND PIPING TO AVOID CONFLICTS WITH ELECTRICAL PANELS, LIGHTING FIXTURES, ETC. ANY MODIFICATIONS REQUIRED DUE TO LACK OF COORDINATION WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO EXTRA COST TO THE OWNER.

4. WHERE SHUTDOWN OF EXISTING SYSTEMS IS REQUIRED DURING NEW WORK, COORDINATE SHUTDOWN TIME AND DURATION WITH THE OWNER TO MINIMIZE DOWNTIME. NOTIFY OWNER SEVEN (7) DAYS PRIOR TO INTERRUPTION OF SERVICE.

5. DURING INSTALLATION OF NEW WORK, AVOID DAMAGING OF EXISTING SURFACES AND EQUIPMENT TO REMAIN. REPAIR DAMAGES CAUSED DURING CONSTRUCTION AT NO EXTRA COST TO THE OWNER.

6. PROVIDE TEMPORARY BARRIERS TO CONTAIN DUST AND DEBRIS RESULTING FROM THE PERFORMANCE OF THE WORK TO THE AREA WHERE WORK IS BEING PERFORMED.

7. ALL NEW MECHANICAL EQUIPMENT SHOWN ON THE MECHANICAL PLANS SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR UNLESS OTHERWISE NOTED.

8. NEW MECHANICAL EQUIPMENT, DUCTWORK, AND PIPING ARE SHOWN AT APPROXIMATE LOCATIONS. FIELD MEASURE FINAL DUCTWORK AND PIPING LOCATIONS PRIOR TO FABRICATION AND MAKE ADJUSTMENTS AS REQUIRED TO FIT THE DUCTWORK AND PIPING WITHIN THE AVAILABLE SPACE. VERIFY THAT FINAL EQUIPMENT LOCATIONS MEET MANUFACTURER'S RECOMMENDATIONS REGARDING SERVICE CLEARANCE AND PROPER AIRFLOW CLEARANCE AROUND EQUIPMENT.

9. LOCATE AND SET THE THERMOSTATS AND SENSORS AT LOCATIONS SHOWN ON PLANS, VERIFY EXACT LOCATION WITH THE OWNER PRIOR TO INSTALLATION. INSTALL DEVICES WITH TOP OF DEVICE AT MAXIMUM 48" AFF TO MEET ADA REQUIREMENTS UNLESS NOTED OTHERWISE ON PLANS.

10. PROVIDE A MANUAL BALANCING DAMPER IN EACH BRANCH DUCT TAKEOFF FROM MAIN SUPPLY.

11. PROVIDE A PREFABRICATED RECTANGULAR/ROUND BRANCH DUCT TAKEOFF FITTING WITH MANUAL BALANCING DAMPER AND LOCKING QUADRANT FOR BRANCH DUCT CONNECTIONS AND TAKE-OFFS TO INDIVIDUAL DIFFUSERS, REGISTERS AND GRILLES.

12. REFER TO SPECIFICATIONS FOR DUCTWORK AND PIPING INSULATION REQUIREMENTS. DUCT SIZES ON MECHANICAL PLAN INDICATE CLEAR INSIDE AIRFLOW DIMENSIONS.

13. COORDINATE THE EXACT MOUNTING SIZE AND FRAME TYPE OF DIFFUSERS, REGISTERS, AND GRILLES WITH THE SUPPLIER TO MEET THE CEILING, WALL, AND DUCT INSTALLATION REQUIREMENTS.

14. BRANCH DUCTWORK TO AIR OUTLETS SHALL BE SAME SIZE AS OUTLET NECK SIZE UNLESS OTHERWISE NOTED.

15. FLEXIBLE DUCTWORK SHALL NOT EXCEED 5'-0" IN LENGTH AND SHALL BE INSTALLED AND SUPPORTED TO AVOID SHARP BENDS AND SAGGING. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

16. COORDINATE LOCATION OF EQUIPMENT SUPPORTERS WITH LOCATION OF EQUIPMENT ACCESS PANELS/DOORS TO ENABLE SERVICE OF EQUIPMENT AND/OR FILTER REPLACEMENT.

17. CONTRACTOR SHALL FIELD VERIFY THAT THE EXISTING EQUIPMENT INCLUDING ACCESSORIES BEING REUSED FOR THIS PROJECT IS NOT DAMAGED AND IS IN GOOD WORKING ORDER. REPORT ANY DEFICIENCIES TO THE OWNER. CONTRACTOR SHALL SUBMIT TO THE OWNER A WRITTEN REPORT DESCRIBING TESTS PERFORMED TO VERIFY OPERATION AND RESULTS OF THE TESTS.

18. ALL CONCEALED INDOOR HEATING AND/OR COOLING SUPPLY AND RETURN AIR DUCTWORK SHALL BE INSULATED, REFER TO M.500 FOR INSULATION PRODUCTS AND SPECIFICATIONS.

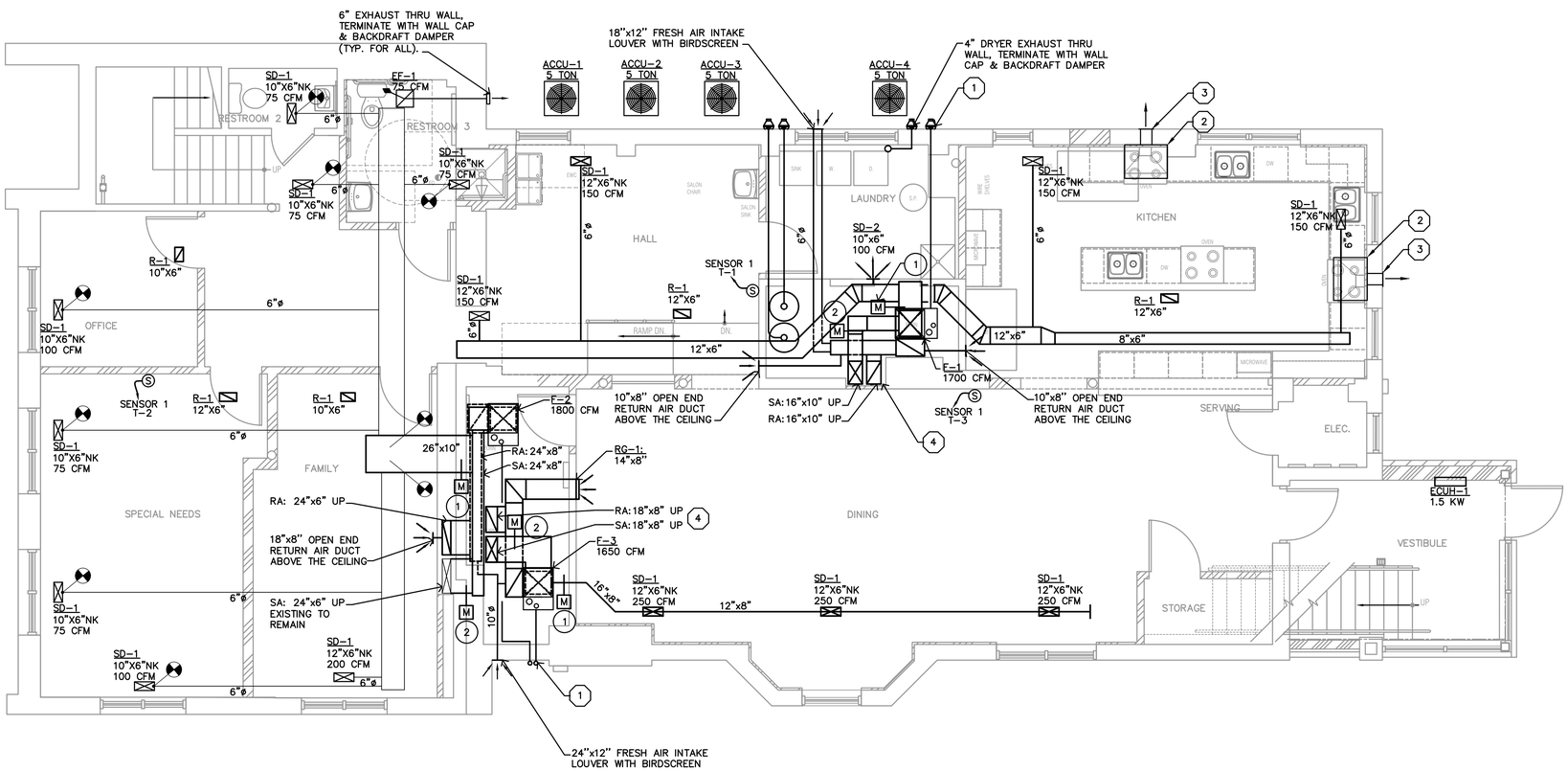
19. ALL SUPPLY AND RETURN GRILLES TO BE COORDINATED WITH CEILING GRID & PLACED CENTERED IN THE TILE(S).

20. EXISTING DUCTWORK REUSED, SHALL BE SANITIZED AND CLEAN AFTER ALL WORK IS DONE.

21. THE CLEARANCE BETWEEN FRESH AIR INTAKE AND COMBUSTION VENT OR FLUE SHOULD BE 10 FEET ACCORDING TO CODES.

KEY NOTES :

1. 3" COMBUSTION AIR & 3" VENT TO BE CONNECTED TO EXISTING CONCENTRIC INTAKE / VENT TERMINATION KITS.
2. REH-1, RANGE EXHAUST HOOD. BRAUN M/N:403004, 29-1/4"X17.5 DUCTED W/3-1/4"X10" TO THE OUTSIDE
3. ROUTE 3-1/2"X8" KITCHEN HOOD EXHAUST DUCT TO BACK WALL COMPLETE INSTALL W/BACKDRAFT DAMPER AND WEATHER CAP.
4. RETURN AIR DUCT WITHOUT INSULATION AND THE SUPPLY AIR DUCT WITH 1" INSULATION (ONLY IN THE SHAFT).



NORTH

HVAC LOWER LEVEL FLOOR PLAN

SCALE: 1/4" = 1'

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

MEP Engineers LLC
Mechanical | Electrical | Plumbing | Energy
380 North Main Street
Clawson, MI 48017
Tel: (248) 488-9822 Fax: (248) 488-9811
Web: www.mepmi.com Email: mep@mepmi.com

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

BUILDING PERMIT	12/19/2018

DRAWN BY: JK.
CHECKED BY: JM.
APPROVED BY: JM.

SHEET NAME

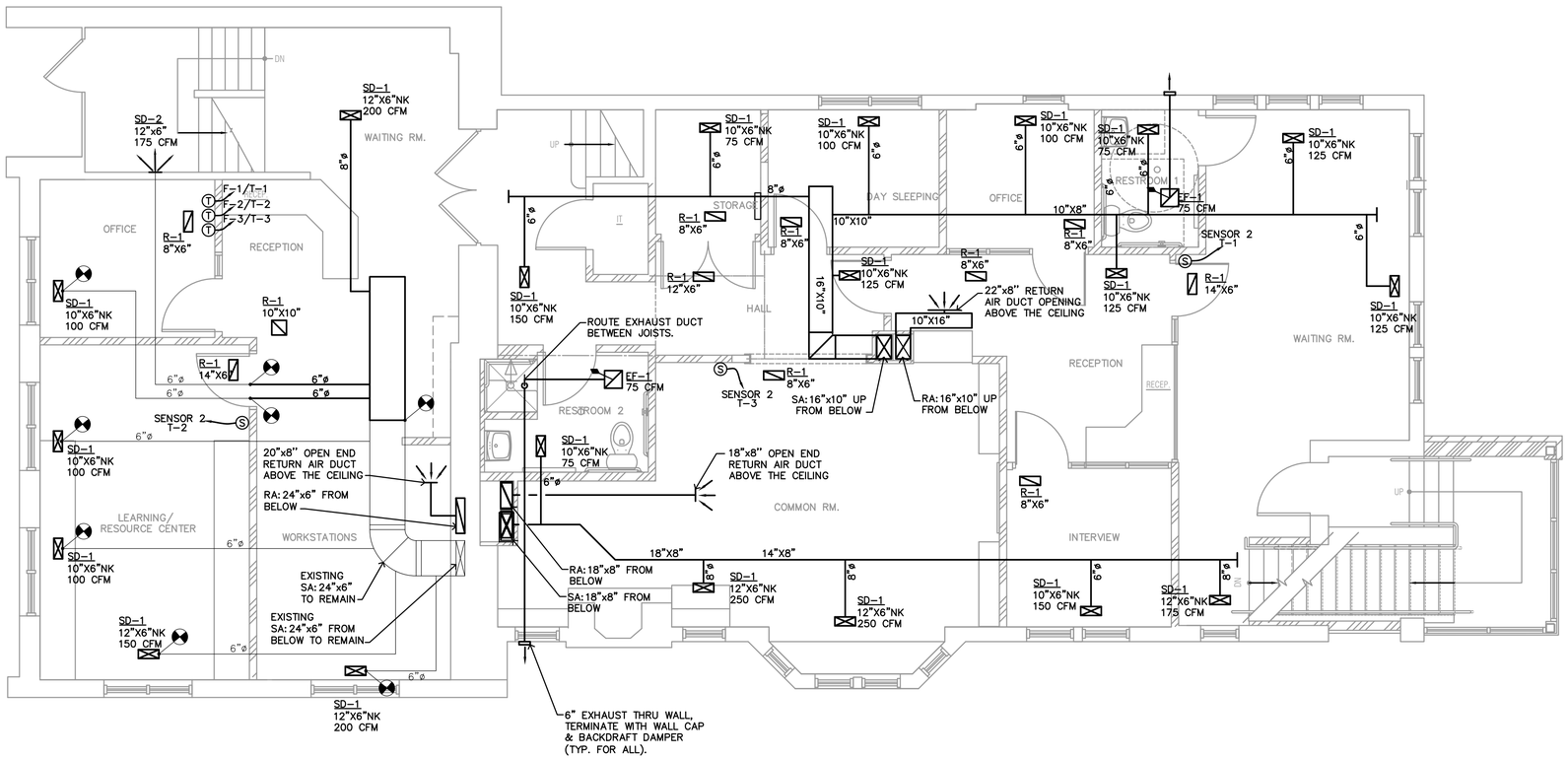
HVAC LOWER LEVEL FLOOR PLAN

SHEET NO. M.200

STATE OF MICHIGAN
JOSEPH A. MALKOUN
ENGINEER
No. 42833
LICENSED PROFESSIONAL ENGINEER

MECHANICAL GENERAL NOTES:

1. PRIOR TO SUBMITTING BID, VISIT THE JOB SITE AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS OF THE PROJECT. REVIEW THE GENERAL NOTES, SPECIFICATIONS, AND OTHER DRAWINGS FOR ADDITIONAL REQUIREMENTS WHICH MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ENGINEER AND/OR OWNER OF CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
2. EXISTING CONDITIONS WERE TAKEN FROM ORIGINAL DRAWINGS AND SITE VISITS AND MAY NOT REFLECTED EXACT "AS-BUILT" CONDITIONS. FIELD VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING FINAL BIDS. COORDINATE NEW WORK AND DEMOLITION WITH OTHER DISCIPLINES AND EXISTING CONDITIONS PRIOR TO CONSTRUCTION.
3. COORDINATE THE INSTALLATION OF THE MECHANICAL SYSTEMS WITH OTHER TRADES TO ENSURE A NEAT AND ORDERLY INSTALLATION. INSTALL DUCTWORK AND PIPING AS TIGHT TO STRUCTURE AS POSSIBLE. COORDINATE WITH OTHER EXISTING ELEMENTS AND UTILITIES TO AVOID CONFLICTS. COORDINATE INSTALLATION OF DUCTWORK AND PIPING TO AVOID CONFLICTS WITH ELECTRICAL PANELS, LIGHTING FIXTURES, ETC. ANY MODIFICATIONS REQUIRED DUE TO LACK OF COORDINATION WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO EXTRA COST TO THE OWNER.
4. WHERE SHUTDOWN OF EXISTING SYSTEMS IS REQUIRED DURING NEW WORK, COORDINATE SHUTDOWN TIME AND DURATION WITH THE OWNER TO MINIMIZE DOWNTIME. NOTIFY OWNER SEVEN (7) DAYS PRIOR TO INTERRUPTION OF SERVICE.
5. DURING INSTALLATION OF NEW WORK, AVOID DAMAGING OF EXISTING SURFACES AND EQUIPMENT TO REMAIN. REPAIR DAMAGES CAUSED DURING CONSTRUCTION AT NO EXTRA COST TO THE OWNER.
6. PROVIDE TEMPORARY BARRIERS TO CONTAIN DUST AND DEBRIS RESULTING FROM THE PERFORMANCE OF THE WORK TO THE AREA WHERE WORK IS BEING PERFORMED.
7. ALL NEW MECHANICAL EQUIPMENT SHOWN ON THE MECHANICAL PLANS SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR UNLESS OTHERWISE NOTED.
8. NEW MECHANICAL EQUIPMENT, DUCTWORK, AND PIPING ARE SHOWN AT APPROXIMATE LOCATIONS. FIELD MEASURE FINAL DUCTWORK AND PIPING LOCATIONS PRIOR TO FABRICATION AND MAKE ADJUSTMENTS AS REQUIRED TO FIT THE DUCTWORK AND PIPING WITHIN THE AVAILABLE SPACE. VERIFY THAT FINAL EQUIPMENT LOCATIONS MEET MANUFACTURER'S RECOMMENDATIONS REGARDING SERVICE CLEARANCE AND PROPER AIRFLOW CLEARANCE AROUND EQUIPMENT.
9. LOCATE AND SET THE THERMOSTATS AND SENSORS AT LOCATIONS SHOWN ON PLANS, VERIFY EXACT LOCATION WITH THE OWNER PRIOR TO INSTALLATION. INSTALL DEVICES WITH TOP OF DEVICE AT MAXIMUM 48" AFF TO MEET ADA REQUIREMENTS UNLESS NOTED OTHERWISE ON PLANS.
10. PROVIDE A MANUAL BALANCING DAMPER IN EACH BRANCH DUCT TAKEOFF FROM MAIN SUPPLY.
11. PROVIDE A PREFABRICATED RECTANGULAR/ROUND BRANCH DUCT TAKEOFF FITTING WITH MANUAL BALANCING DAMPER AND LOCKING QUADRANT FOR BRANCH DUCT CONNECTIONS AND TAKE-OFFS TO INDIVIDUAL DIFFUSERS, REGISTERS AND GRILLES.
12. REFER TO SPECIFICATIONS FOR DUCTWORK AND PIPING INSULATION REQUIREMENTS. DUCT SIZES ON MECHANICAL PLAN INDICATE CLEAR INSIDE AIRFLOW DIMENSIONS.
13. COORDINATE THE EXACT MOUNTING SIZE AND FRAME TYPE OF DIFFUSERS, REGISTERS, AND GRILLES WITH THE SUPPLIER TO MEET THE CEILING, WALL, AND DUCT INSTALLATION REQUIREMENTS.
14. BRANCH DUCTWORK TO AIR OUTLETS SHALL BE SAME SIZE AS OUTLET NECK SIZE UNLESS OTHERWISE NOTED.
15. FLEXIBLE DUCTWORK SHALL NOT EXCEED 5'-0" IN LENGTH AND SHALL BE INSTALLED AND SUPPORTED TO AVOID SHARP BENDS AND SAGGING. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
16. COORDINATE LOCATION OF EQUIPMENT SUPPORTERS WITH LOCATION OF EQUIPMENT ACCESS PANELS/DOORS TO ENABLE SERVICE OF EQUIPMENT AND/OR FILTER REPLACEMENT.
17. CONTRACTOR SHALL FIELD VERIFY THAT THE EXISTING EQUIPMENT INCLUDING ACCESSORIES BEING REUSED FOR THIS PROJECT IS NOT DAMAGED AND IS IN GOOD WORKING ORDER. REPORT ANY DEFICIENCIES TO THE OWNER. CONTRACTOR SHALL SUBMIT TO THE OWNER A WRITTEN REPORT DESCRIBING TESTS PERFORMED TO VERIFY OPERATION AND RESULTS OF THE TESTS.
18. ALL CONCEALED INDOOR HEATING AND/OR COOLING SUPPLY AND RETURN AIR DUCTWORK SHALL BE INSULATED, REFER TO M.500 FOR INSULATION PRODUCTS AND SPECIFICATIONS.
19. ALL SUPPLY AND RETURN GRILLES TO BE COORDINATED WITH CEILING GRID & PLACED CENTERED IN THE TILE(S).
20. **EXISTING DUCTWORK REUSED, SHALL BE SANITIZED AND CLEAN AFTER ALL WORK IS DONE.**



NORTH

HVAC FIRST LEVEL FLOOR PLAN

SCALE: 1/4" = 1'

STATE OF MICHIGAN
JOSEPH A. MALKOUN
ENGINEER
No. 42633
LICENSED PROFESSIONAL ENGINEER

PARTNERS

PARTNERS in Architecture, PLC
65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

MEP Engineers LLC
Mechanical | Electrical | Plumbing | Energy
380 North Main Street
Clawson, MI 48017
Tel: (248) 488-9822 Fax: (248) 488-9811
Web: www.mepmi.com Email: mep@mepmi.com

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

BUILDING PERMIT	12/19/2018

DRAWN BY
JK

CHECKED BY
JM

APPROVED BY
JM

SHEET NAME

HVAC FIRST LEVEL FLOOR PLAN

SHEET NO.
M.201

MECHANICAL GENERAL NOTES:

1. PRIOR TO SUBMITTING BID, VISIT THE JOB SITE AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS OF THE PROJECT. REVIEW THE GENERAL NOTES, SPECIFICATIONS, AND OTHER DRAWINGS FOR ADDITIONAL REQUIREMENTS WHICH MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ENGINEER AND/OR OWNER OF CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.

2. EXISTING CONDITIONS WERE TAKEN FROM ORIGINAL DRAWINGS AND SITE VISITS AND MAY NOT REFLECTED EXACT "AS-BUILT" CONDITIONS. FIELD VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING FINAL BIDS. COORDINATE NEW WORK AND DEMOLITION WITH OTHER DISCIPLINES AND EXISTING CONDITIONS PRIOR TO CONSTRUCTION.

3. COORDINATE THE INSTALLATION OF THE MECHANICAL SYSTEMS WITH OTHER TRADES TO ENSURE A NEAT AND ORDERLY INSTALLATION. INSTALL DUCTWORK AND PIPING AS TIGHT TO STRUCTURE AS POSSIBLE. COORDINATE WITH OTHER EXISTING ELEMENTS AND UTILITIES TO AVOID CONFLICTS. COORDINATE INSTALLATION OF DUCTWORK AND PIPING TO AVOID CONFLICTS WITH ELECTRICAL PANELS, LIGHTING FIXTURES, ETC. ANY MODIFICATIONS REQUIRED DUE TO LACK OF COORDINATION WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO EXTRA COST TO THE OWNER.

4. WHERE SHUTDOWN OF EXISTING SYSTEMS IS REQUIRED DURING NEW WORK, COORDINATE SHUTDOWN TIME AND DURATION WITH THE OWNER TO MINIMIZE DOWNTIME. NOTIFY OWNER SEVEN (7) DAYS PRIOR TO INTERRUPTION OF SERVICE.

5. DURING INSTALLATION OF NEW WORK, AVOID DAMAGING OF EXISTING SURFACES AND EQUIPMENT TO REMAIN. REPAIR DAMAGES CAUSED DURING CONSTRUCTION AT NO EXTRA COST TO THE OWNER.

6. PROVIDE TEMPORARY BARRIERS TO CONTAIN DUST AND DEBRIS RESULTING FROM THE PERFORMANCE OF THE WORK TO THE AREA WHERE WORK IS BEING PERFORMED.

7. ALL NEW MECHANICAL EQUIPMENT SHOWN ON THE MECHANICAL PLANS SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR UNLESS OTHERWISE NOTED.

8. NEW MECHANICAL EQUIPMENT, DUCTWORK, AND PIPING ARE SHOWN AT APPROXIMATE LOCATIONS. FIELD MEASURE FINAL DUCTWORK AND PIPING LOCATIONS PRIOR TO FABRICATION AND MAKE ADJUSTMENTS AS REQUIRED TO FIT THE DUCTWORK AND PIPING WITHIN THE AVAILABLE SPACE. VERIFY THAT FINAL EQUIPMENT LOCATIONS MEET MANUFACTURER'S RECOMMENDATIONS REGARDING SERVICE CLEARANCE AND PROPER AIRFLOW CLEARANCE AROUND EQUIPMENT.

9. LOCATE AND SET THE THERMOSTATS AND SENSORS AT LOCATIONS SHOWN ON PLANS, VERIFY EXACT LOCATION WITH THE OWNER PRIOR TO INSTALLATION. INSTALL DEVICES WITH TOP OF DEVICE AT MAXIMUM 48" AFF TO MEET ADA REQUIREMENTS UNLESS NOTED OTHERWISE ON PLANS.

10. PROVIDE A MANUAL BALANCING DAMPER IN EACH BRANCH DUCT TAKEOFF FROM MAIN SUPPLY.

11. PROVIDE A PREFABRICATED RECTANGULAR/ROUND BRANCH DUCT TAKEOFF FITTING WITH MANUAL BALANCING DAMPER AND LOCKING QUADRANT FOR BRANCH DUCT CONNECTIONS AND TAKE-OFFS TO INDIVIDUAL DIFFUSERS, REGISTERS AND GRILLES.

12. REFER TO SPECIFICATIONS FOR DUCTWORK AND PIPING INSULATION REQUIREMENTS. DUCT SIZES ON MECHANICAL PLAN INDICATE CLEAR INSIDE AIRFLOW DIMENSIONS.

13. COORDINATE THE EXACT MOUNTING SIZE AND FRAME TYPE OF DIFFUSERS, REGISTERS, AND GRILLES WITH THE SUPPLIER TO MEET THE CEILING, WALL, AND DUCT INSTALLATION REQUIREMENTS.

14. BRANCH DUCTWORK TO AIR OUTLETS SHALL BE SAME SIZE AS OUTLET NECK SIZE UNLESS OTHERWISE NOTED.

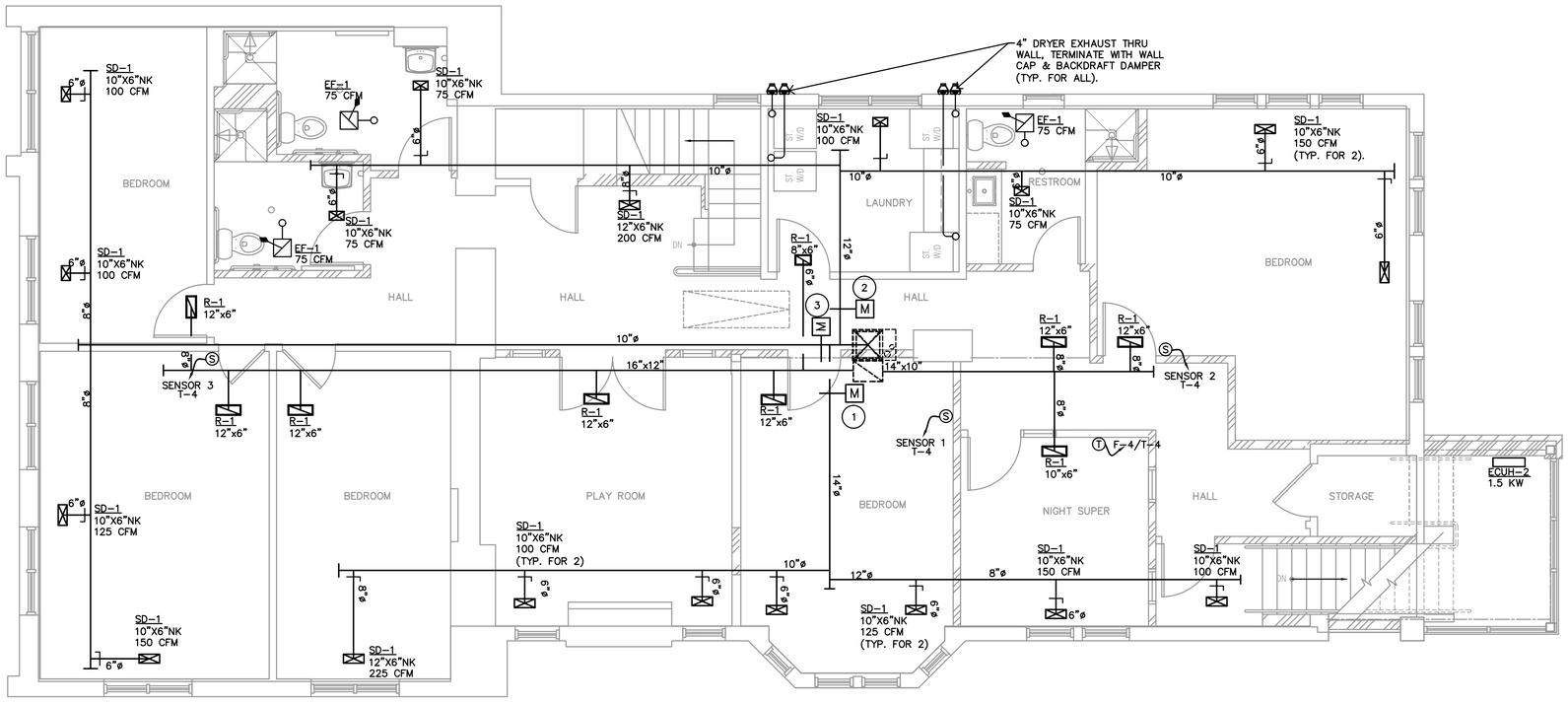
15. FLEXIBLE DUCTWORK SHALL NOT EXCEED 5'-0" IN LENGTH AND SHALL BE INSTALLED AND SUPPORTED TO AVOID SHARP BENDS AND SAGGING. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

16. COORDINATE LOCATION OF EQUIPMENT SUPPORTERS WITH LOCATION OF EQUIPMENT ACCESS PANELS/DOORS TO ENABLE SERVICE OF EQUIPMENT AND/OR FILTER REPLACEMENT.

17. CONTRACTOR SHALL FIELD VERIFY THAT THE EXISTING EQUIPMENT INCLUDING ACCESSORIES BEING REUSED FOR THIS PROJECT IS NOT DAMAGED AND IS IN GOOD WORKING ORDER. REPORT ANY DEFICIENCIES TO THE OWNER. CONTRACTOR SHALL SUBMIT TO THE OWNER A WRITTEN REPORT DESCRIBING TESTS PERFORMED TO VERIFY OPERATION AND RESULTS OF THE TESTS.

18. ALL CONCEALED INDOOR HEATING AND/OR COOLING SUPPLY AND RETURN AIR DUCTWORK SHALL BE INSULATED, REFER TO M.500 FOR INSULATION PRODUCTS AND SPECIFICATIONS.

19. ALL SUPPLY & RETURN GRILLES TO BE COORDINATE WITH CEILING GRID & PLACED CENTERED IN THE TILE(S).



NORTH

HVAC SECOND LEVEL FLOOR PLAN

SCALE: 1/4" = 1'

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

MEP Engineers LLC
Mechanical | Electrical | Plumbing | Energy
380 North Main Street
Clawson, MI 48017
Tel: (248) 488-9822 Fax: (248) 488-9811
Web: www.mepmi.com Email: mep@mepmi.com

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

BUILDING PERMIT	12/19/2018

DRAWN BY

JK.

CHECKED BY

JM.

APPROVED BY

JM.

SHEET NAME

HVAC SECOND LEVEL FLOOR PLAN

SHEET NO.

M.202

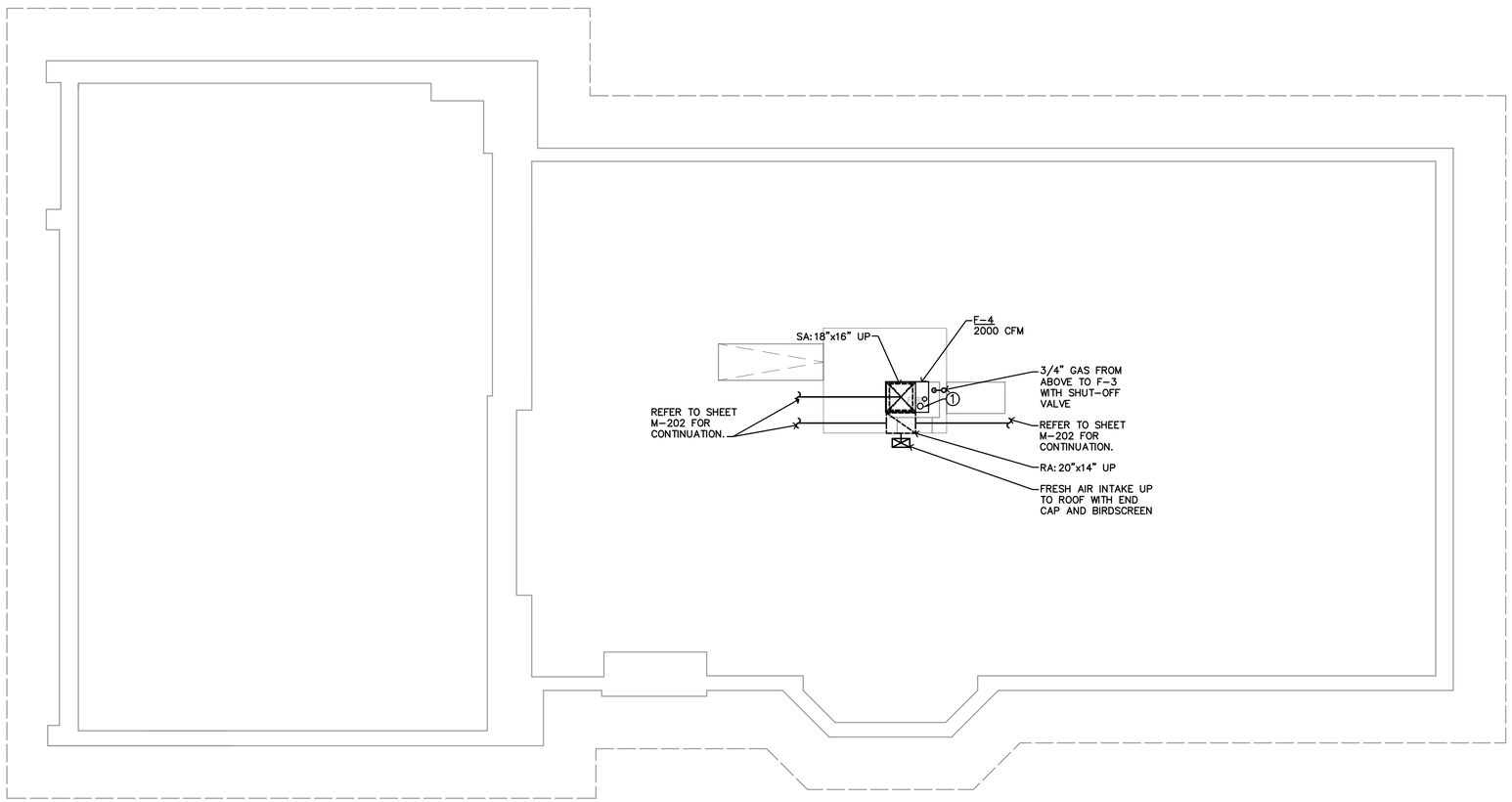
STATE OF MICHIGAN
JOSEPH A. MALKOUN
ENGINEER
No. 42833
LICENSED PROFESSIONAL ENGINEER

GENERAL MECHANICAL NOTES:

1. COORDINATE THE INSTALLATION OF THE MECHANICAL SYSTEMS WITH OTHER TRADES TO ENSURE A NEAT AND ORDERLY INSTALLATION. INSTALL DUCTWORK AND PIPING AS TIGHT TO STRUCTURE AS POSSIBLE. COORDINATE WITH OTHER TRADES TO AVOID CONFLICTS. COORDINATE INSTALLATION OF DUCTWORK AND PIPING TO AVOID CONFLICTS WITH ELECTRICAL PANELS, LIGHTING FIXTURES, ETC. ANY MODIFICATIONS REQUIRED DUE TO LACK OF COORDINATION WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO EXTRA COST TO THE OWNER.
2. ALL NEW MECHANICAL EQUIPMENT SHOWN ON THE MECHANICAL PLANS SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR UNLESS OTHERWISE NOTED.
3. REFER TO ARCHITECTURAL DRAWINGS FOR RELATED CONSTRUCTION DETAILS AS APPLICABLE TO THE HVAC SYSTEM. VERIFY CHASES AND PENETRATIONS SHOWN ON ARCHITECTURAL DRAWINGS THAT ARE INTENDED FOR DUCTWORK AND PIPING MEET REQUIREMENTS.
4. OVERHEAD HANGERS AND SUPPORTERS FOR EQUIPMENT, DUCTWORK, AND PIPING SHALL BE FASTENED TO BUILDING JOISTS OR BEAMS. DO NOT ATTACH HANGERS AND SUPPORTS TO THE ABOVE FLOOR SLAB OR ROOF EXCEPT WHERE CONCRETE INSERTS IN CONCRETE SLABS ARE ALLOWED BY THE SPECIFICATIONS.
5. SEAL PENETRATIONS THROUGH THE BUILDING COMPONENTS IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS. FIREPROOF PENETRATIONS THROUGH FIRE RATED COMPONENTS IN ACCORDANCE WITH U.L. REQUIREMENTS.
6. COORDINATE THE EXACT MOUNTING SIZE AND FRAME TYPE OF DIFFUSERS, REGISTERS, AND GRILLES WITH THE SUPPLIER TO MEET THE CEILING, WALL, AND DUCT INSTALLATION REQUIREMENTS.
7. ADJUST LOCATION OF CEILING DIFFUSERS, REGISTERS, AND GRILLES AS REQUIRED TO ACCOMMODATE FINAL CEILING GRID AND LIGHTING LOCATIONS.
8. LOCATE AND SET THERMOSTATS AND SENSORS AT LOCATIONS SHOWN ON PLANS. VERIFY EXACT LOCATIONS WITH ARCHITECTS PRIOR TO INSTALLATION.
9. PROVIDE A PREFABRICATED RECTANGULAR/ROUND BRANCH DUCT TAKEOFF FITTING WITH MANUAL BALANCING DAMPER AND LOCKING QUADRANT FOR BRANCH DUCT CONNECTIONS AND TAKE-OFFS TO INDIVIDUAL DIFFUSERS, REGISTERS AND GRILLES.
10. BRANCH DUCTWORK TO AIR OUTLETS SHALL BE SAME SIZE AS OUTLET NECK SIZE UNLESS OTHERWISE NOTED.
11. REFER TO SPECIFICATIONS FOR DUCTWORK AND PIPING INSULATION REQUIREMENTS. DUCT SIZES ON MECHANICAL PLANS INDICATE CLEAR INSIDE AIRFLOW DIMENSIONS.
12. FLEXIBLE DUCTWORK SHALL NOT EXCEED 5'-0" IN LENGTH AND SHALL BE INSTALLED AND SUPPORTED TO AVOID SHARP BENDS AND SAGGING. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

KEY NOTES :

(1) 3" COMBUSTION AIR & 3" VENT UP TO ROOF CONCENTRIC INTAKE / VENT TERMINATION KITS. DISCHARGE VENT 14" ABOVE ROOF. SEE CONCENTRIC INTAKE / CENT DETAIL ON SHEET M.400 REFER TO MANUFACTURER INSTALLATION INSTRUCTION MANUAL FOR THE INSTALLATION OF INTAKE PIPE, VENT PIPE AND INTAKE / CENT TERMINATION KITS.



NORTH

HVAC ATTIC LEVEL FLOOR PLAN

SCALE: 1/4" = 1'

STATE OF MICHIGAN
JOSEPH A. MALKOUN
ENGINEER
No. 42833
LICENSED PROFESSIONAL ENGINEER

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

MEP Engineers LLC
Mechanical | Electrical | Plumbing | Energy
380 North Main Street
Clawson, MI 48017
Tel: (248) 488-9822 Fax: (248) 488-9811
Web: www.mepmi.com Email: mep@mepmi.com

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

BUILDING PERMIT	12/19/2018

DRAWN BY

JK.

CHECKED BY

JM.

APPROVED BY

JM.

SHEET NAME

HVAC ATTIC LEVEL FLOOR PLAN

SHEET NO.

M.203

NATURAL GAS FURNACE SCHEDULE - 97% EFFICIENT

TAG	MANUFACTURER & MODEL NO.	AREA SERVED	CFM	BLOW MOTOR		ESP "WC	DX COOLING CAPACITY (MBH)	HEATING CAPACITY		ELECTRICAL			NOTES/ACCESSORIES
				HP	RPM			INPUT	OUTPUT	VOLTS	PHASE	HZ	
F-1	CARRIER 59MN7A120V24-22	SEE DWG.	1700	1	1200	0.5	56.87	120	117	115	1	60	PROVIDE PROGRAMMABLE WALL T-STAT FILTERS, DX COOLING COIL, 410A REFRIGERANTS & LINE SET FOR EACH FURNACE. VARIABLE SPEED BLOWER FOR EACH FURNACE, PROVIDE XFINITY ZONE CONTROLLER WITH ASSOCIATED ZONES SENSORS WIT HEACH FURNACE. PROVIDE HUMIDIFIER FOR EACH FURNACE, MANUFACTURER : CARRIER MODEL NO. HUMXXSTM3034.
F-2	CARRIER 59MN7A120V24-22	SEE DWG.	1800	1	1200	0.5	56.87	120	117	115	1	60	
F-3	CARRIER 59MN7A120V24-22	SEE DWG.	1650	1	1200	0.5	56.87	120	117	115	1	60	
F-4	CARRIER 59MN7A120V24-22	THIRD FLOOR	2000	1	1200	0.5	56.87	120	117	115	1	60	

NOTES :

PROVIDE DUCT SMOKE DETECTOR ON SUPPLY AIR DUCT FOR EACH FURNACE, DUCT SMOKE DETECTOR SHALL COMPLY WITH UL 268A.
DUCT SMOKE DETECTOR SHALL BE WIRED TO SIMPLEX FIRE ALARM PANEL, REFER TO SIMPLEX DWGS.
SIMPLEX TO PROVIDE AN EMERGENCY SHUTDOWN BUTTON LOCATED NEXT TO FIRE ALARM PANEL .

AIR COOLED CONDENSING UNIT SCHEDULE - SEER 19

TAG	MANUFACTURER & MODEL NO.	SERVICE	CAPACITY (MBH)	NUMBER OF FANS	MINIMUM (MCA)	MAX. FUSE	ELECTRICAL			OPERATING WEIGHT (Lbs)	NOTES/ACCESSORIES
							VOLTS	PHASE	HZ		
ACCU-1	CARRIER / 24VNA960A003	F-1	56.87	1	40	60	208	1	60	241	DISCONNECT SWITCH BY ELECTRICAL CONTRACTOR
ACCU-2	CARRIER / 24VNA960A003	F-2	56.87	1	40	60	208	1	60	241	
ACCU-3	CARRIER / 24VNA960A003	F-3	56.87	1	40	60	208	1	60	241	
ACCU-4	CARRIER / 24VNA960A003	F-4	56.87	1	40	60	208	1	60	241	

WATER HEATER SCHEDULE

TAG	BASIS OF DESIGN	MODEL	SERVICE	LOCATION	WATER CAPACITY (GAL)	INPUT BTU/HR	GPH @ 90 DEG. F. RISE	GAS CON.	WATER CON.	COMBUSTION INLET AND VENT SIZE	NOTES & ACC.
WH-1	AO SMITH	GDHE-50	SEE DRAWING	STORAGE	50	100	129	1/2"	3/4"	3"	A, B, C, D, E, F, G
WH-2	AO SMITH	GDHE-75	SEE DRAWING	STORAGE	75	100	129	1/2"	3/4"	3"	A, B, C, D, E, F, G

NOTES:

A	P & T RELIEF TO FD
B	FLOOR MOUNTED
C	POWER VENTED
D	CONCENTRIC VENT KIT THRU WALL
E	NATURAL GAS
F	120V DISCONNECT SWITCH
G	EXPANSION TANK

CABINET UNIT HEATER SCHEDULE

TAG	MANIFACTURER	TYPE	LOCATION	TYPE	CAPACITY (WATTS)	V/PH/HZ	MODELS	NOTES & ACC.
ECUH-1	Q-MARK	RECESSED	STAIRS	WALL	1500	120-1-60	LKF 151F	A, B, C
ECUH-2	Q-MARK	RECESSED	STAIRS	WALL	1500	120-1-60	LKF 151F	A, B, C

NOTE:

A	WALL MOUNTED ACCESSORIES, FOR RECESSED INSTALLATION
B	BUILT IN POWER DISCONNECT SWITCH
C	UNIT INTEGRAL THERMOSTAT

GAS LOADS

S.#	ITEM	GAS LOAD (CFH)
1	F-1	120
2	F-2	120
3	F-3	120
4	F-4	120
7	WH-1	100
8	WH-2	100
9	DRYER 1	20
10	DRYER 2	20
11	DRYER 3	20
12	DRYER 4	20
13	DRYER 5	20
TOTAL		780

GRILLE, REGISTER & DIFFUSER SCHEDULE

TAG	BASIS OF DESIGN	MODEL	SERVICE	MOUNTING	OVERALL SIZE	NECK SIZE	NOTES /ACCESSORIES
SD-1	TITUS	301RS	SUPPLY	LAY IN	L-1 1/4"Xw+1 1/4"	SEE PLAN	A,B,C
SD-2	TITUS	301RS	SUPPLY	SURFACE	L-1 1/4"Xw+1 1/4"	SEE PLAN	A,B,C
R-1	TITUS	350	RETURN	LAY IN	L-1 1/4"Xw+1 1/4"	SEE PLAN	A,C
RG-1	TITUS	350	RETURN	SURFACE	L-1 1/4"Xw+1 1/4"	SEE PLAN	A,C

NOTE:

A	WHITE FINISH
B	SQUARE TO ROUND ADAPTOR
C	OPPOSED BLADE DAMPER

EXHAUST FAN SCHEDULE

SNO.	TAG	BASIS OF DESIGN	MODEL	SERVICE	LOCATION	CAPACITY (CFM)	ESP "WC	DRIVE	ELECTRICAL VOLT	WATTS / HP	NOTES /ACCESSORIES
1	EF-1	LOREN COOK	GEMINI	SEE DWG.	CEILING	75	0.25	DIRECT	120 / 1	30 W	A,B,C,D,E

NOTE:

A	PROVDE FACTORY MOUNTED DISCONNECT SWITCH WITH THERMAL OVERLOAD PROTECTION
B	CONTRACTOR TO FURNISH COMBINATION STARTOR / DISCONNECT SWITCH
C	INTERLOCK FAN OPERATION WITH LIGHT SWITCH
D	GRAVITY BACKDRAFT DAMPER
E	WALL CAP W/ BIRDSCREEN AS SUPPLIED BY MFG

PLUMBING FIXTURE SCHEDULE

ITEM	FIXTURE	ITEM	MANUFACTURER & MODEL NUMBER	ACCESSORIES	PIPE CONNECTIONS SIZES (INCH)			
					WASTE	VENT	COLD WATER	HOT WATER
FD-1	FLOOR DRAIN		ZURN Z415B-NH		3"	-	-	-
WC-1	WATER CLOSET	FLOOR MOUNTED TANK TYPE WATER CLOSET	KOHLER CIMARRON CONFORT HEIGHT TOILET MODEL : #K-3828	ONE PIECE TOILETS INTEGRATE THE TANK AND BOWL INTO A SEAMLESS, ELONGATED BOWL, 1.258 GAL PER FLUSH, 2-1/8" GLASED TRAPWAY, STANDARD LEFT HAND POLISHED CHROME TRIP LEVER INCLUDED.	4"	2"	1/2"	-
LAV-1	LAVATORY	PUBLIC COUNTER LAVATORY	KOHLER GREENWICH WALL MOUNT BATHROOM SINK MODEL : #K-2032	VITREOUS CHINA DIMENSION 20-3/4"L x 18-1/4"W , WALL MOUNT INSTALLATION, K-8998 P-TRAP, ADA COMPLIANCE.	1-1/2"	1-1/2"	1/2"	1/2"
LAV-2	LAVATORY	PUBLIC UNDER-MOUNT LAVATORY	KOHLER VERTICYL RECTANGLE UNDER MOUNT BATHROOM SINK MODEL : #K-2882	VITREOUS CHINA DIMENSION 17-1/4"x13" UNDER MOUNT, RECTANGULAR BASIN WITH CONTEMPORARY DESIGN, NO FAUCET HOLES, K-8998 P-TRAP, ADA COMPLIANCE, TRITON BOWE FAUCET MODEL :#K-100T70-5ANL	1-1/2"	1-1/2"	1/2"	1/2"
SH-1	SHOWER	RESTROOM SHOWER	SHOWER FLOOR TO BE TILED, CORRDINATE WITH OTHERS.	SHOWER DRAIN: K-9132 FAUCET : SYMMONS TEMPTROL C-96-300-B30-V WITH MIXING VALVE AND 30 INCH SLIDE BAR	1-1/2"	1-1/2"	1/2"	1/2"
SH-2	SHOWER	RESTROOM SHOWER	SHOWER FLOOR TO BE TILED, CORRDINATE WITH OTHERS.	SHOWER DRAIN: K-9132 FAUCET : SYMMONS TEMPTROL C-96-1-X WITH MIXING VALVE AND SLIDE BAR	1-1/2"	1-1/2"	1/2"	1/2"
SK-1	SINK	LAUNDRY SINK	ELKAY SSP #B1C18X18X STAINLESS STEEL SINK	REGENCY WALL MOUNTED 12" SWIN SPOUT SWIVEL FAUCET WITH 8" CENTERS #600FW812 2GPM FLOW RATE, 1/2" NPT.	1-1/2"	1-1/2"	1/2"	1/2"
SK-2	SINK	STAINLESS STEEL 2-COMPARTMENT SINK.	DAYTON STAINLESS STEEL MODEL: #D22519	STAINLESS STEEL 25"x19"x6-5/16" EQUAL DOUBLE BOW DROP IN SINK, 3 HOLES DRILLINGS, ADA COMPLIANCE,	2"	2"	1/2"	1/2"
SK-3	SINK	SHAMPOO BOWL CABINET	MINERVA BEAUTY CALLAWAY SHAMPOO BOWL CABINET	FEATURES INCLUDE WATERPROOF MOLDED BOTTLE WELL AND SIDE ACCESS STORAGE CABINET, FOOT PRINT : 24"Wx32.25"Dx37.5"H	1-1/2"	1-1/2"	1/2"	1/2"
EWC-1	ELECTRICAL WATER COOLER	ELECTRICAL WATER COOLER (ADULT/CHILD)	ELKAY EZSTLVR8LC	TWO STATION WALL MOUNT WATER COOLERS BARRIER-FREE ACCESS	1-1/2"	1-1/2"	1/2"	-
MOP-1	MOP SINK	MOP SINK	MOP SINK MUSTEE 63M SERVICE BASIN ON PIECE	OVERSIZED MOP SINK : 24"x24"x10" INCLUDES 1 HEAVY DUTY SERVICE FAUCET : #63.600A THREE SPRING-LOADED HANDLE HOLDERS.	3"	1-1/2"	1/2"	1/2"
MX-1	MIXING VALVE	THERMOSTATIC MIXING VALVE.	WATTS USG-B	ASSE 1070 THERMOSTATIC MIXING VALVE	-	-	1/2"	1/2"

APPROVED PLUMBING FIXTURE MANUFACTURERS : AMERICAN STANDARD, MANSFIELD, CRANE, TOTO, ELKAY, KOHLER, ZURN, FIAT, MUSTEE, FLORESTONE.
APPROVED PLUMBING HARDWARE MANUFACTURERS: AMERICAN STANDARD, DELTA, KOHLER, CHICAGO, SLOAN, ZURN, TOTO.
(FIXTURES TO BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE "BARRIER FREE DESIGN REQUIREMENTS OF THE MICHIGAN CONSTRUCTION CODE".

STATE OF MICHIGAN
JOSEPH A MALKOUN
ENGINEER
No. 42633
LICENSED PROFESSIONAL ENGINEER

PARTNERS

PARTNERS in Architecture, PLC
65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

MEP Engineers LLC
Mechanical | Electrical | Plumbing | Energy
380 North Main Street
Clawson, MI 48017
Tel: (248) 488-9822 Fax: (248) 488-9811
Web: www.mepmi.com Email: mep@mepmi.com

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

BUILDING PERMIT	12/19/2018

DRAWN BY
JK.

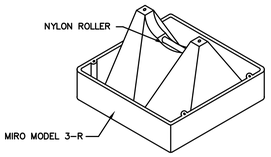
CHECKED BY
JM.

APPROVED BY
JM.

SHEET NAME

MECHANICAL SCHEDULES

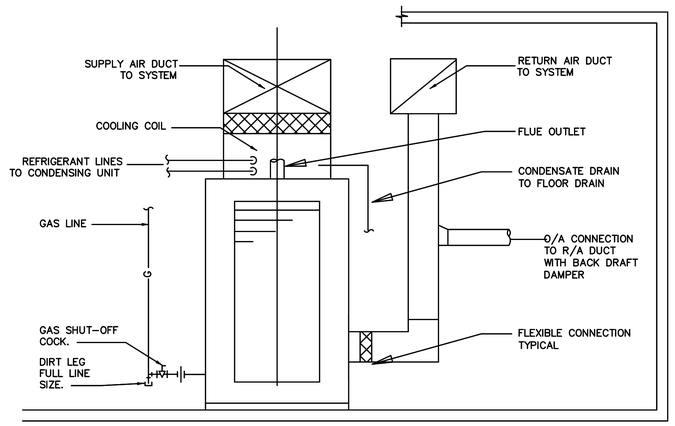
SHEET NO.
M.400



SUPPORT SPACING FOR PIPE SIZE: 5"=16', 4"=14', 3"=12', 2-1/2"=11', 2"=10' 1-1/2"=9', 1-1/4"=8', 1"=7', 3/4"=6'. PLACE BASE SHEETS ON ROOFING BEFORE GRAVEL IF ANY. INSTALL GAS PIPE TO ALLOW FOR EXPANSION AND CONTRACTION. PRIMER COAT AND PAINT EXTERIOR GAS PIPE.

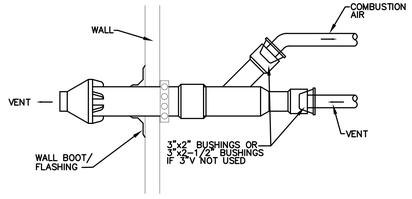
SUPPORT OF PIPE ON ROOF

NO SCALE



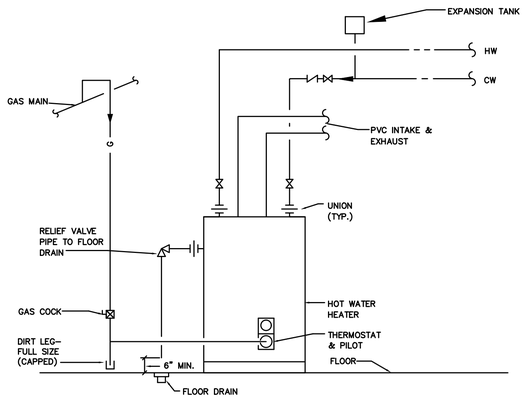
UP-FLOW GAS FURNACE DETAIL

NO SCALE



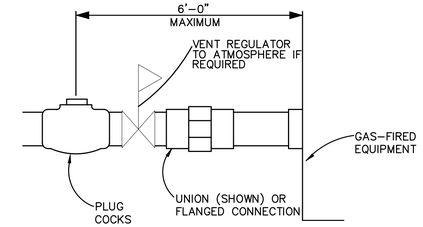
CONCENTRIC VENT KIT WALL INSTALLATION DETAIL

NO SCALE



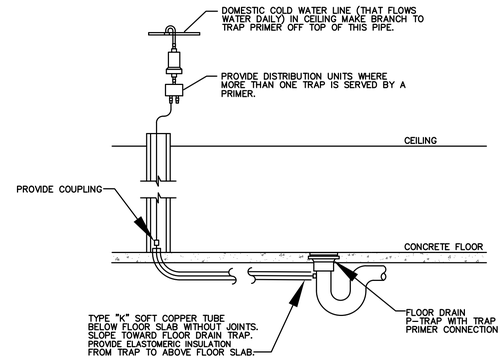
DOMESTIC WATER HEATER PIPING SCHEMATIC (WH-1)

NO SCALE



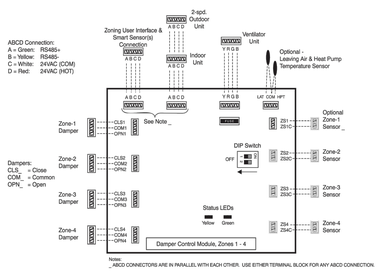
TYPICAL GAS PIPING CONNECTION

NO SCALE



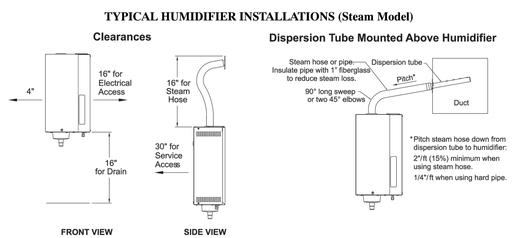
TRAP PRIMER- DETAIL

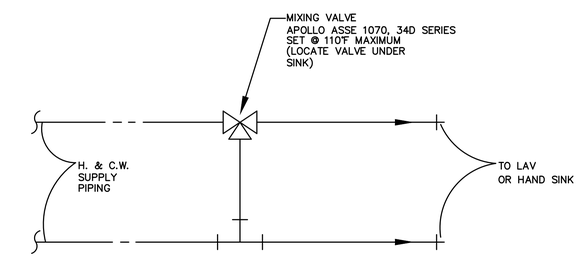
NO SCALE



Notes:
_ ABCD CONNECTORS ARE IN PARALLEL WITH EACH OTHER. USE EITHER TERMINAL BLOCK FOR ANY ABCD CONNECTION.
_ INSTALLING ZONE-1 REMOTE ROOM SENSOR WILL OVERRIDE USER INTERFACE TEMPERATURE SENSOR.

Zoning System Wiring Diagram
Zones 1 - 4
Fig. 9 - System Wiring





MIXING VALVE PIPING DETAIL ALL LAV'S AND HAND SINKS

NO SCALE

PARTNERS

PARTNERS in Architecture, PLC
65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

MEP Engineers LLC
Mechanical | Electrical | Plumbing | Energy
380 North Main Street
Clawson, MI 48017
Tel: (248) 488-9822 Fax: (248) 488-9811
Web: www.mepmi.com Email: mep@mepmi.com

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

BUILDING PERMIT	12/19/2018

DRAWN BY

JK.

CHECKED BY

JM.

APPROVED BY

JM.

SHEET NAME

MECHANICAL DETAILS

SHEET NO.

M.401

GENERAL MECHANICAL SPECIFICATIONS GENERAL REQUIREMENTS:

READ AND BE BOUND BY THE ARCHITECTURAL SPECIFICATIONS.

THESE SPECIFICATIONS, ALL OTHER DOCUMENTS ATTACHED HERETO, ALL ADDENDA ISSUED AND THE ACCOMPANYING PLANS ARE INTENDED TO PROVIDE FOR THE COMPLETE FURNISHING AND INSTALLATION OF THE ENTIRE MECHANICAL SYSTEM.

THE WORK SHALL BE DONE IN ACCORDANCE WITH BEST PRACTICE SO AS TO CONTRIBUTE TO EFFICIENCY OF OPERATION AND MINIMUM MAINTENANCE AND SHALL BE INSTALLED WITH PROPER ACCESSIBILITY. THE MATERIALS AND EQUIPMENT, INCLUDING ALL NECESSARY ACCESSORIES, SHALL BE PUT INTO PROPER ADJUSTMENT SO THAT THE COMPONENT PARTS FUNCTION TOGETHER AS A WORKABLE SYSTEM. THE MECHANICAL CONTRACTOR SHALL PROVIDE ALL EQUIPMENT, MATERIALS AND OPERATIONS AS INDICATED EITHER ON THE DRAWINGS OR CONTAINED HEREIN OR AS MAY BE REASONABLY IMPLIED BY EITHER TO ACCOMPLISH THE COMPLETE INSTALLATION.

PROVIDE ALL MATERIALS, EQUIPMENT, LABOR AND INCIDENTALS NECESSARY FOR COMPLETE AND OPERABLE MECHANICAL SYSTEMS. PROVIDE ALL NECESSARY TESTS AND PAY FOR ALL FEES, PERMITS, INSPECTIONS, ETC. AS REQUIRED BY LOCAL AUTHORITIES. SECURE PERMITS PRIOR TO STARTING WORK. OBTAIN ALL PERMITS, LICENSES, INSPECTIONS AND BONDS. PERFORM ALL TESTS REQUIRED. UPON COMPLETION OF THE WORK, OBTAIN AND SEND CERTIFICATES OF INSPECTION AND APPROVAL TO THE ARCHITECT/OWNER. PAY ALL FEES AND EXPENSES FOR PERMITS, LICENSES, TESTS AND INSPECTIONS.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR THAT HIS WORK IS INSTALLED IN THE MOST DIRECT AND WORKMANLIKE MANNER AND THAT INTERFERENCE IS AVOIDED.

THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND INDICATIVE OF THE EQUIPMENT AND SYSTEMS TO BE INSTALLED AND THE GENERAL LOCATION AND ARRANGEMENT OF MECHANICAL WORK. DUE TO THE SCALE OF THE DRAWINGS IT IS NOT POSSIBLE TO INDICATE THE EXACT LOCATION AND ROUTING OF MECHANICAL WORK, UNLESS REFERENCE DIMENSIONS ARE SPECIFICALLY INDICATED ON DRAWINGS. DEVIATIONS FROM CONTRACT DRAWING LAYOUT IN ORDER TO AVOID INTERFERENCES WITH OTHER TRADES, OR OTHER MECHANICAL WORK SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT, WITH NO INCREASE IN CONTRACT PRICE. ALL COSTS FOR REMOVAL AND RELOCATION OF MECHANICAL WORK RESULTING FROM FAILURE TO COORDINATE WITH OTHER TRADES SHALL BE PAID BY THE MECHANICAL SUBCONTRACTOR.

INSTALLATION SHALL CONFORM TO ALL LOCAL CODES AND ORDINANCES. THE CONTRACTOR SHALL BE HELD TO BE FULLY INFORMED OF ALL LAWS, ORDINANCES AND CODES, AND SHALL, IN THE PERFORMANCE OF THE CONTRACT, COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL AFORESAID REGULATIONS. ANY DEVIATION FROM THE PLANS OR SPECIFICATIONS AND ANY ADDITIONAL WORK NECESSARY TO MEET CODE REQUIREMENTS, SHALL BE MADE BY THE CONTRACTOR WITHOUT EXTRA COST TO THE OWNER.

WORK SHALL BE DONE IN ACCORDANCE WITH THE RULES OF LOCAL UTILITY COMPANIES. BEFORE SUBMITTING HIS BID, THE CONTRACTOR SHALL CHECK WITH EACH UTILITY (WATER, SEWER, GAS, ETC.) AND SHALL DETERMINE FROM THEM ALL EQUIPMENT AND CHARGES WHICH THEY WILL REQUIRE. INCLUDE COST OF SAME IN THE BID.

ALL EQUIPMENT IS TO BE U.L. LISTED AND LABELED.

ALL ROOF MOUNTED EQUIPMENT IS TO BE IDENTIFIED WITH THE UNIT (AND TENANT) NAME AND NUMBER USING 2" HIGH LETTERS.

EACH TRADE SHALL BE RESPONSIBLE FOR IT'S OWN CLEAN-UP. COORDINATE WITH THE ARCHITECTURAL TRADES (A.T.).

UNLESS OTHERWISE NOTED, ALL CUTTING SHALL BE PROVIDED BY THE M.T. AND PATCHING BY THE A.T. ROOF PENETRATIONS ARE TO BE PERFORMED BY THE OWNER'S (LANDLORD'S) ROOFER AND PAID FOR BY THE M.T. COORDINATE ALL OPENINGS WITH THE A.T.

FURNISH ELECTRIC MOTORS AND CONTROL DEVICES IN CONNECTION WITH THE VARIOUS PIECES OF MOTOR-DRIVEN EQUIPMENT SPECIFIED IN MECHANICAL WORK SECTIONS, AS SPECIFIED HEREIN. ALL MOTORS SHALL BE OF THE "PREMIUM" HIGH EFFICIENCY TYPE.

AIR SYSTEMS BALANCING IS REQUIRED. REFER TO THE HVAC SPECIFICATIONS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SEALING AND FIRE-STOPPING OF ALL HOLES ASSOCIATED WITH THE PIPING, CONDUIT, ETC., IN WALLS, FLOORS AND ROOF. IN WALLS, FLOORS AND ROOF, WRAP EACH RISER, PIPE, ETC., WITH NON-COMBUSTIBLE MATERIAL AND FILL ALL FLOOR OPENINGS WITH A MINIMUM OF 5" OF INTUMESCENT FIRE-STOPPING MATERIAL EQUAL TO 3M OR FIBERFRAX "FIRE PUTTY". PIPES REQUIRING INSULATION SHALL BE INSULATED BEFORE PLACING FIRE-STOPPING MATERIAL.

FURNISH THE OWNER WITH TWO COPIES OF OPERATION/MAINTENANCE MANUALS FOR ALL EQUIPMENT AND PROVIDE FULL OPERATION INSTRUCTIONS TO THE OWNERS PERSONNEL.

GUARANTEE: THE M.T. SHALL REPAIR OR REPLACE ANY PART OF THE MECHANICAL SYSTEMS INSTALLATION WHICH MAY FAIL WITHIN A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE.

PLUMBING SPECIFICATIONS

GENERAL

SEWERS ARE TO BE PITCHED DOWN IN DIRECTION OF FLOW AT 1 /8" PER FOOT UNLESS OTHERWISE NOTED. PITCH VENT PIPING UP. WATER PIPING SHALL BE PITCHED TO FACILITATE DRAINAGE.

PROVIDE MINIMUM 10 PIPE DIAMETERS DISTANCE BETWEEN FIXTURE CONNECTIONS TO HORIZONTAL UNDERGROUND WASTE OR SOIL STACKS. MINIMUM 3" SIZE FOR ALL UNDERGROUND SEWERS.

NEW PLUMBING SERVICES ARE TO CONNECT TO EXISTING STUBS OR MAINS. FIELD VERIFY EXACT SIZE AND LOCATIONS.

ALL PIPING SHALL BE CONCEALED UNLESS NOTED OR APPROVED BY THE ARCHITECT. EXPOSED PIPING SERVING PLUMBING FIXTURES SHALL BE CHROME PLATED.

PROVIDE CLEANOUTS AT THE BASE OF ALL WASTE STACKS AND RAIN CONDUCTORS, CHANGES IN DIRECTION GREATER THAN 45 DEGREES AND 50 FEET ON CENTER ON STRAIGHT RUNS.

PROVIDE BRANCH LINE SHUT-OFF VALVES ON DOMESTIC WATER PIPING TO EACH GROUP OF PLUMBING FIXTURES OR EQUIPMENT. PROVIDE CHROME PLATED RIGID SUPPLIES WITH LOOSE KEY STOPS AT EACH FIXTURE.

ALL HOSE END FITTINGS ARE TO BE FURNISHED WITH WATTS 84 VACUUM BREAKERS. OTHER BACKFLOW PREVENTION INCLUDES WATTS 9BD AT VENDING MACHINES, ICE MAKERS, ETC., AS INDICATED ON THE DRAWINGS AND/OR AS REQUIRED BY THE LOCAL AUTHORITIES.

ALL VALVES ARE TO BE TYPES AS RECOMMENDED BY THE MANUFACTURER FOR THE INTENDED SERVICE AND SHALL BE PROPERLY RATED FOR PRESSURE AND TEMPERATURE.

TO PREVENT ELECTROLYTIC CORROSION, PROVIDE INSULATED COUPLINGS WHERE DISSIMILAR METALS ARE JOINED. COUPLINGS SHALL BE EQUAL TO LOCHINVAR "V-LINE" WITH AN INERT, NON-CONDUCTIVE, LINED-IMPREGNATED LAMINATE MATERIAL AND THREADED TO NPS STANDARDS. COUPLINGS SHALL BE SUITABLE FOR HYDROSTATIC PRESSURE UP TO 300 PSI AND 225 DEGREE F. TEMPERATURE.

PROVIDE WATER HAMMER ARRESTERS (SHOCK ABSORBERS) EQUAL TO ZURN Z-1700 OR SIOUX CHIEF 600 SERIES AT ALL QUICK CLOSING VALVES AND AT ENDS OF PIPING MAINS SERVING PLUMBING FIXTURES. ARRESTER CASING AND BELLOWS SHALL BE OF TYPE 304 STAINLESS STEEL CONSTRUCTION OR COPPER TUBE STYLE WITH LUBRICATED POLYPRO PISTON.

PIPE INTERIOR CLEANING:

PROVIDE ALL NECESSARY LABOR, MATERIALS AND EQUIPMENT TO FLUSH THE LISTED PIPING SYSTEM WITH CLEAN WATER AT A MINIMUM VELOCITY OF 6 FEET/SECOND UNTIL DIRTY WATER DOES NOT APPEAR AT THE OUTLETS. USE OPEN END BRANCHES, SETTLING BASINS, PUMPS, OR TEMPORARY FILTERS AS SUITABLE FOR THE JOB CONDITIONS AND AS THE REASONABLE DISPOSAL OF FLUSHING WATER PERMITS. THE CONTRACTOR HAS THE OPTION OF HIGH PRESSURE HYDRAULIC JET CLEANING IN LIEU OF FLUSHING.

PROTECT ALL VALVES AND DEVICES FROM DAMAGE DURING THE CLEANING OPERATION.

DISINFECTION:

A. ALL DOMESTIC WATER SYSTEMS SHALL BE PURGED OF DELETERIOUS MATTER AND DISINFECTED PRIOR TO UTILIZATION. THE METHOD TO BE FOLLOWED SHALL BE AS PRESCRIBED BY THE HEALTH AUTHORITY HAVING JURISDICTION, OR IN THE ABSENCE OF A PRESCRIBED METHOD, THE PROCEDURE IN EITHER AWWA C651 OR AWWA C652 OR AS FOLLOWS:

1. FLUSH OUT SYSTEM FIRST, THEN HOLD A SOLUTION MIXTURE OF 50 PPM OF CHLORINE/ WATER FOR A 24 HOUR PERIOD OR THE SYSTEM SHALL BE FILLED WITH WATER/CHLORINE SOLUTION CONTAINING AT LEAST 200 PPM OF CHLORINE AND ALLOWED T REMAIN TO STAND FOR AT LEAST 3 HOURS. DRAIN SYSTEMS AND FLUSH WITH CLEAN WATER UNTIL THE CHLORINE IS PURGED FROM THE SYSTEM.
2. CHLORINATION PROCEDURES SHALL CONFORM TO AWWA C651 OR AWWA C652. REPEAT CHLORINATION AS NECESSARY UNTIL NO CONTAMINANTS REMAIN IN THE SYSTEM.

PROVIDE PIPE CONTENT AND FLOW DIRECTION IDENTIFICATION LABELS EQUAL TO SETON SETMARK ON ALL PIPE MAINS, ADJACENT TO EACH VALVE, AT EACH FITTING, AT BUILDING ENTRANCE, AT LEAST ONCE IN EACH ROOM AND AT INTERVALS NO LONGER THAN 20 FEET. TEXT TO BE 2" HIGH ON PIPES 4" AND LARGER AND 3/4" HIGH ON PIPES 3" AND SMALLER.

PROVIDE VALVE TAGS FOR EACH VALVE. TAGS ARE TO BE AT LEAST 1" DIAMETER, 1/8" THICK LAMINATED PLASTIC WITH 3/8" HIGH BLACK CHARACTERS ON WHITE FACE OR ENGRAVED BRASS. ATTACH TAGS WITH "S" HOOKS. CONSECUTIVELY NUMBER WITH PREFIX "P".

AT COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE REPRODUCIBLE TRANSPARENCY "AS-BUILT" DRAWINGS OF ALL PLUMBING WORK.

PLUMBING MATERIALS

UNDERGROUND SEWERS AND VENTS SHALL BE STANDARD WEIGHT CAST IRON SOIL PIPE WITH COMPRESSION TYPE FITTINGS OR SCHEDULE 40 PVC.

ABOVEGROUND WASTE AND VENT PIPING SHALL BE CAST IRON WITH NO-HUB JOINTS OR SCHEDULE 40 GALVANIZED STEEL. SCHEDULE 40 PVC MAY BE USED ABOVEGROUND WHERE CODE PERMITS. ALL PIPING IN RETURN AIR PLENUMS SHALL BE PLENUM RATED WITH MAXIMUM FLAME SPREAD RATING OF 25 AND SMOKE DEVELOPED RATING OF 50 OR LESS.

DOMESTIC WATER PIPING 2-1/2" AND SMALLER SHALL BE TYPE "L" HARD DRAWN COPPER WITH LEAD-FREE SOLDER TYPE FITTINGS. 3" AND LARGER SHALL BE THE SAME MATERIAL AS THE WATER SERVICE, DUCTILE IRON MEETING ASTM A377 OR OTHER AS APPROVED BY THE LOCAL WATER DEPARTMENT. REFER TO CIVIL ENGINEERING DRAWINGS AND SPECIFICATIONS. ALL UNDERFLOOR PIPING IS TO BE TYPE "K" COPPER WITH NO JOINTS.

WATER, SEWER AND VENT PIPING SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE ON CLEVIS TYPE HANGERS SPACED IN ACCORDANCE WITH ASHRAE GUIDE RECOMMENDATIONS. PIPE SUPPORT SPACING FOR NATURAL GAS PIPING SHALL BE IN ACCORDANCE WITH THE INTERNATIONAL FUEL GAS CODE.

THE PLUMBING TRADES SHALL BE RESPONSIBLE FOR THE FIRE-STOPPING OF ALL HOLES ASSOCIATED WITH THE PLUMBING IN FIRE RATED WALLS, FLOORS AND ROOF. WRAP EACH RISER, PIPE, ETC., WITH NON-COMBUSTIBLE MATERIAL AND FILL ALL FLOOR OPENINGS WITH A MINIMUM OF 5" OF INTUMESCENT FIRE-STOPPING MATERIAL EQUAL TO 3M OR FIBERFRAX "FIRE PUTTY". PIPES REQUIRING INSULATION SHALL BE INSULATED BEFORE PLACING FIRE-STOPPING MATERIAL.

SLEEVE ALL PIPING PASSING THROUGH STRUCTURAL FOUNDATIONS.

PLUMBING SPECIALTIES

PLUMBING SPECIALTIES SHALL BE JOSAM, J.R. SMITH, WADE, MIFAB, SIOUX CHIEF OR ZURN.

CLEANOUTS: THREADED BRASS PLUGS WITH ZURN Z-1460-9 STAINLESS STEEL COVER IN WALLS AND Z-1400-2 NICKEL BRONZE SCORIATED COVER IN FLOORS.

FLOOR DRAINS: SEE PLUMBING FIXTURE SCHEDULE.

CONTRACTOR HAS THE OPTION OF USING TRAP PRIMERS OR TRAP SEAL DEVICES AS FOLLOWS:

TRAP SEALS SHALL BE PROVIDED FOR ALL FLOOR DRAINS, FLOOR SINKS AND OTHERS TO PREVENT TRAP EVAPORATION. SEALS SHALL BE EQUAL TO SURESEAL, SIZED TO MATCH THE DRAIN TRAP.

TRAP PRIMERS SHALL BE MIFAB, SMITH OR ZURN Z-1022 "SANI-GARD", ALL BRONZE BODY WITH INTERNAL VACUUM BREAKER, ANTI-BACK-SIPHON DESIGN, NON-LIMING OPERATING ASSEMBLY, REPLACEABLE VALVE SEAT, GASKETED BRONZE COVER, CHROME PLATED FINISH. LOCATE TRAP PRIMER VALVES ON THE NEAREST DOMESTIC COLD WATER MAIN SERVING THE SPACE AND PIPE TO FLOOR DRAIN TRAP PRIMER CONNECTION.

PROVIDE HEAT TRAPS IN BOTH HOT AND COLD WATER PIPE RISERS AT WATER HEATERS UNLESS TRAPS ARE INTEGRAL WITH THE HEATERS.

PLUMBING FIXTURES

PLUMBING FIXTURES SHALL BE AS MANUFACTURED BY AMERICAN STANDARD, CRANE, KOHLER, SLOAN OR MANSFIELD COMPLETE WITH ALL STANDARD ACCESSORIES. FIXTURES TO BE WHITE VITREOUS CHINA UNLESS NOTED.

PLUMBING FIXTURES FOR PHYSICALLY HANDICAPPED USE SHALL BE MOUNTED AND PIPED PER STATE OF MICHIGAN "BARRIER FREE CODE" (ADA) REQUIREMENTS AND PROVIDED WITH DELTA, LEONARD, POWERS "HYDROGUARD" SERIES 480 (BRASS SCREWED) OR WATTS MMV SWEAT JOINT OR THREADED UNION TEMPERING VALVES TO SUPPLY MAXIMUM 110 DEGREE HOT WATER. PROVIDE ADJUSTMENT CAP WITH LOCKING FEATURE. VALVES SHALL COMPLY WITH ASSE 1070 STANDARD.

JOINTS BETWEEN PLUMBING FIXTURES AND WALLS OR COUNTERTOPS SHALL BE FILLED WITH WHITE PLASTIC SEAM COMPOUND EQUAL TO DE WITT "TUB AND TILE CAULK".

FAUCETS AND CONTROL VALVES SHALL BE AS MANUFACTURED BY DELTA, SPEAKMAN, SYMMONS, LEONARD, AMERICAN STANDARD, KOHLER, MOEN, GROHE OR CHICAGO FAUCET, CHROME PLATED ALL METAL UNLESS OTHERWISE NOTED. FLUSH VALVES SHALL BE CHROME PLATED AS MANUFACTURED BY SLOAN, SPEAKMAN, DELTA OR ZURN.

HEATING, VENTILATING AND AIR CONDITIONING SPECIFICATIONS

GENERAL

SUPPLY, RETURN AND EXHAUST AIR DUCTWORK SHALL BE GALVANIZED STEEL, CONSTRUCTED OF PROPER PRESSURE CLASSIFICATION GAUGES AND INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS. MINIMUM 2" PRESSURE RATING FOR LOW VELOCITY SYSTEMS.

RECTANGULAR DUCT JOINTS SHALL BE CONNECTED WITH DUCTMATE 25/35/45 JOINT SYSTEMS THAT UTILIZE ROLL-FORMED FLANGES, CORNER PIECES, GASKET AND CLEAT. DUCT JOINTS MAY BE INDIVIDUALLY REMOVED. SEAL ALL JOINTS WITH UL 181 B-M LISTED JOINT SEALANT EQUAL TO DUCTMATE PROSEAL, HARDCAST OR AIRSEAL FOR THE APPROPRIATE PRESSURE CLASSIFICATION, TEMPERATURE AND WEATHER-RESISTANCE.

ROUND DUCT FITTINGS AND ELBOWS SHALL BE JOINED USING SLIP-JOINT FITTINGS. FITTING SHALL HAVE A STOP BEAD TO LOCATE FITTING INSIDE PIPE. ALL PIPE TO PIPE CONNECTIONS REQUIRE A SLIP COUPLING THAT FITS INSIDE BOTH MATING SECTIONS. SEAL ALL JOINTS WITH UL 181B-M LISTED JOINT SEALANT EQUAL TO DUCTMATE PROSEAL, HARDCAST OR AIRSEAL FOR THE APPROPRIATE PRESSURE CLASSIFICATION, TEMPERATURE AND WEATHER-RESISTANCE.

EXPOSED SPIRAL DUCTWORK SHALL BE DOUBLE WALL INSULATED.

DUCTWORK FITTINGS SHALL BE PER SMACNA RECOMMENDATIONS. RADIUS TURNS ON SUPPLY AIR DUCTS SHALL BE 1-1/2 TIMES DUCT WIDTH MINIMUM. WHERE SPACE OR CLEARANCE REQUIRES THE USE OF MITERED TURNS, PROVIDE HIGH PERFORMANCE DOUBLE THICKNESS TURNING VANES EQUAL TO AERO/DYNE "HEP" AND VOLUME DAMPERS. REFER TO DETAILS ON THE DRAWINGS.

PROVIDE FACTORY MANUFACTURED TEST HOLE UNITS IN DUCTWORK WHERE REQUIRED TO FACILITATE AIR BALANCE.

ALL DUCTWORK AND PIPING INSIDE THE BUILDING IS TO BE SUSPENDED FROM THE TOP CORD OF BAR JOIST AT PANEL POINTS ONLY. DO NOT CONNECT TO THE ROOF DECK. DUCTS AND PIPES LOCATED ON THE ROOF ARE TO BE MOUNTED ON PATE PIPE OR EQUIPMENT CURBS. EQUIPMENT CURBS TO BE TYPE ES-1 OR ES-5 FOR INSULATED ROOFS. CONTRACTOR HAS THE OPTION TO USE MIRO INDUSTRIES OR PORTABLE PIPE HANGERS, INC. PILLOW BLOCK PIPE STANDS IN LIEU OF THE PATE PIPE CURBS.

DUCT SIZES INDICATED ON THE DRAWINGS ARE CLEAR INSIDE DIMENSIONS.

PROVIDE DUCT VOLUME DAMPERS AT EACH BRANCH CONNECTION TO DIFFUSERS AND REGISTERS FOR PROPER AIR SYSTEMS BALANCING. REFER TO DETAILS OF THE DRAWING.

PROVIDE GRAVITY BACKDRAFT DAMPERS FOR ALL EXHAUST FANS AND BUILDING PRESSURE RELIEF VENTS (UNLESS OTHERWISE NOTED.) USE COUNTERBALANCE WEIGHTS TO SET OPERATION PRESSURE ON RELIEF DAMPERS.

THE CONTRACTOR HAS THE OPTION OF USING EQUIVALENT SIZE ROUND DUCT (NOT FLEXIBLE DUCT) WHERE SPACE PERMITS.

NO OUTDOOR AIR INTAKES ARE TO BE LOCATED WITHIN 10 FEET OF EXHAUST FAN DISCHARGE OR PLUMBING VENTS. FIELD VERIFY.

PROVIDE FLEXIBLE CONNECTORS ON ALL DUCT CONNECTIONS TO AIR HANDLING UNITS. MAXIMUM FLAME SPREAD/SMOKE DEVELOPED RATING NOT TO EXCEED 25/50. FLEXIBLE CONNECTORS SHALL BE MINIMUM 8" LONG, MADE OF TWO LAYERS OF 8 OZ. OR ONE LAYER OF 16 OZ. NEOPRENE COATED CLOTH WITH AIRTIGHT SEAMS. FASTEN WITH BOLTED GALVANIZED METAL BANDS.

PAINT ALL DUCTWORK, STRUCTURAL MEMBERS, CONDUIT, ETC., VISIBLE BEHIND GRILLES (ESPECIALLY EGG-CRATE) MATTE BLACK. REFER TO ARCHITECTURAL PAINTING SPECIFICATIONS.

AT COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE REPRODUCIBLE TRANSPARENCY "AS-BUILT" DRAWINGS OF ALL HVAC WORK.

FLEXIBLE AIR DUCT

FLEXIBLE AIR DUCT (INSULATED) SHALL BE CLEVAFLEX OR FLEXMASTER TYPE 5, U.L.-181 LISTED, LOW PRESSURE RATED (6") WITH A TRILAMINATE OF ALUMINUM FOIL, FIBERGLASS AND POLYESTER INNER LINER ON GALVANIZED STEEL HELIX WITH R-5.0 (6.0)(8.0) FIBERGLASS INSULATION WITH 25/50 FIRE RETARDANT VAPOR BARRIER JACKET.

FLEXIBLE AIR DUCT (NON-INSULATED) SHALL BE CLEVAFLEX OR FLEXMASTER TYPE NI 45, U.L -181 LISTED, LOW AND HIGH PRESSURE RATED WITH 25/50 FIBERGLASS CLOTH FABRIC ON GALVANIZED (ALUMINUM) (STAINLESS) STEEL HELIX.

ALL CONNECTIONS ARE TO BE MADE WITH ADJUSTABLE CLAMPS AND TAPED AIR TIGHT.

FLEXIBLE DUCT SHALL ONLY BE USED WHERE CONCEALED ABOVE CEILINGS.

FIRE DAMPERS

PROVIDE FIRE DAMPERS EQUAL TO UNITED ENERTECH, PHILLIPS, RUSKIN, AMERICAN WARMING, GREENHECK OR AIR BALANCE 119BL WITH BLADES OUT OF THE AIR STREAM, WHERE SHOWN ON THE DRAWINGS AND/OR WHERE REQUIRED TO MAINTAIN WALL OR FLOOR FIRE RATING. 1-1/2 HOUR, 2 HOUR OR 3 HOUR RATING AS REQUIRED TO MAINTAIN THE FIRE INTEGRITY OF THE WALL OR FLOOR. 165 DEGREE F. LINK. WHERE DAMPERS ARE PROVIDED AT WALL GRILLES OR REGISTERS, GRILLES ARE TO BE THE SAME OVERALL SIZE OF THE DAMPER.

AIR SYSTEMS BALANCING

THE AIR SYSTEMS ARE TO BE BALANCED TO WITHIN 5% OF THE QUANTITIES INDICATED ON THE DRAWINGS.

PREPARE AN AIR BALANCE REPORT COMPLETE WITH AN 8-1/2" X 11" SKETCH OF EACH SYSTEM ON FORMS SIMILAR TO AABC OR NEBB AND SCHEDULE EACH OUTLET, FAN, TERMINAL UNIT, ETC. INCLUDE SUCTION AND DISCHARGE STATIC PRESSURES AND OUTDOOR AIR, RETURN AIR AND MIXED AIR TEMPERATURES AT EACH FAN. SUBMIT (6) COPIES OF THE REPORT TO THE LANDLORD.

BALANCE IS TO BE PERFORMED BY AN INDEPENDENT AND CERTIFIED SYSTEMS BALANCE CONTRACTOR.

SPIN-IN FITTINGS

ROUND BRANCH CONNECTIONS TO DIFFUSERS MAY BE MADE WITH SPIN-IN FITTINGS WITH VOLUME DAMPERS AND SCOOP EQUAL TO FLEXMASTER FL/DB FOR SHEET METAL DUCT.

DIFFUSERS AND REGISTERS

DIFFUSERS AND REGISTERS SHALL BE MANUFACTURED BY PRICE, CARNES, TUTTLE & BAILEY, TITUS OR KRUEGER. PROVIDE DAMPERS AT EACH DIFFUSER AND REGISTER. PROVIDE PLASTER FRAME FOR LAY-IN TYPE DIFFUSERS MOUNTED IN GYPSUM BOARD CEILINGS. BAKED OFF-WHITE ENAMEL FINISH UNLESS NOTED.

SEE DRAWING SCHEDULE.

COMBUSTION AIR AND FLUE GAS VENTING

COMBUSTION AIR INTAKES AND FLUE GAS VENTING FOR SEALED COMBUSTION/ DIRECT VENT UNIT HEATERS SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS FOR MATERIAL AND TERMINATION.

FANS

CEILING EXHAUST FANS SHALL BE PENN, COOK, ACME OR GREENHECK MODELS AND TYPE AS SCHEDULED WITH BACKDRAFT DAMPER, DISCONNECT SWITCH, INTERNAL THERMAL OVERLOADS, BIRDSCREEN.

ELECTRIC UNIT HEATERS

ELECTRIC HEATER (EH) SHALL BE EQUAL TO ERINCRAFT, QMARK OR MARKEL, 5 KW, 208/1/60 VOLTAGE, FAN FORCED, LAY IN CEILING MOUNTED, REMOTE THERMOSTAT, INTEGRAL CONTROL TRANSFORMER AND DISCONNECT SWITCH, MANUAL RESET THERMAL OVERLOAD. SEE DRAWING SCHEDULE.

REFRIGERATION SYSTEMS:

THE REFRIGERATION SYSTEMS SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH ALL REQUIREMENTS OF ANSI B31.5 "REFRIGERATION PIPING", ANSI B9.1 "SAFETY CODE FOR MECHANICAL REFRIGERATION" AND ALL APPLICABLE LOCAL CODES. THE INSTALLED SHALL BE A FIRM WITH AT LEAST FIVE (5) YEARS OF SUCCESSFUL INSTALLATION EXPERIENCE OF PROJECTS WITH REFRIGERANT PIPING SIMILAR TO THAT REQUIRED FOR THIS PROJECT. ALL MATERIALS USED IN THE CONSTRUCTION OF THE REFRIGERATION SYSTEM SHALL BE SUITABLE FOR THE TYPE OF REFRIGERANT USED AND BE ABSOLUTELY CLEAN AND DRY PRIOR TO USE.

THE REFRIGERATION SYSTEMS SHALL BE COMPLETELY TESTED, DEHYDRATED AND CHARGED. DURING FABRICATION, PIPE AND FITTINGS SHALL BE KEPT FULL OF AN INERT GAS SUCH AS NITROGEN OR CARBON DIOXIDE TO PREVENT SCALE FORMATION. PIPE ALL DISCHARGE FROM REFRIGERANT RELIEF DEVICES TO ATMOSPHERE.

PIPING AND FITTINGS:

REFRIGERANT PIPING SHALL BE ASTM B88 TYPE L, HARD TEMPER COPPER TUBE WITH ANSI B16.22 WROUGHT COPPER FITTINGS AND HIGH TEMPERATURE "SILFOS" SOLDERED JOINTS.

VALVES:

STOP VALVES SHALL BE MUELLER BRASS CO., "GLOBEMASTER" PACKED TYPE BACKS EATING GLOBE VALVES WITH WINGED TYPE SEALED CAP, BRONZE BODY AND SOLDERED ENDS. STEM PACKING SHALL BE CAPABLE OF REPLACEMENT UNDER PRESSURE. PROVIDE HEAT STABILIZED NYLON SEAT DISCS FOR LIQUID LINES AND LEAD ALLOY SEAT DISCS FOR HOT GAS LINES. ALL VALVES SHALL BE LINE SIZE.

TESTING:

PRIOR TO INITIAL OPERATION, CLEAN AND TEST REFRIGERANT PIPING IN ACCORDANCE WITH ANSI B31.5 "REFRIGERATION PIPING". TESTS SHALL BE REPEATED AFTER ANY DEFECTS HAVE BEEN MADE GOOD OR THE WORK REPLACED, IF, IN THE JUDGMENT OF THE ARCHITECT, IT IS DEEMED NECESSARY. ALL REPAIRS TO PIPING SYSTEMS SHALL BE MADE WITH NEW MATERIAL. NO CAULKING ON SCREWED JOINTS, CRACKS OR HOLES WILL BE ACCEPTABLE. ARRANGE AND PAY FOR THE COST OF REFRIGERANT, HALIDE AND UTILITIES USED ON ANY TEST. AFTER SUCCESSFULLY COMPLETING TESTS EXHAUST, DEHYDRATE AND CHARGE THE SYSTEMS WITH REFRIGERANT. ALL REFRIGERANT PIPING SHALL BE SUPPORTED ON UNISTRUCT CHANNEL SUPPORTS WITH PIPE CLAMPS AND UNISTRUCT P2600 UNI-CUSHION FLEXIBLE ELASTOMER OR OTHER APPROVED RESILIENT BUSHING TO ISOLATE THE PIPE FROM THE PIPE CLAMPS. UNDER NO CIRCUMSTANCES SHALL ANY REFRIGERANT PIPING TOUCH CEILINGS, WALLS, ETC., WITHOUT A RESILIENT ISOLATOR.

HVAC UNIT (FURNACES):

A. HVAC UNITS SHALL BE FACTORY ASSEMBLED AND TESTED. CONSISTING OF: BLOWER, EVAPORATOR COIL, ECONOMIZER, REFRIGERANT AND TEMPERATURE CONTROL, FILTERS AND DAMPERS. CAPACITY AS INDICATED ON SCHEDULE.

1. HVAC UNITS SHALL BEAR "UL" LABEL. UNIT SHALL COMPLY WITH AGA SAFETY STD, AND ASHRAE 15 "SAFETY CODE FOR MECHANICAL REFRIGERATION".
2. INSTALL UNIT IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS PLUMB AND LEVEL FIRMLY ANCHORED IN INDICATED LOCATION.
3. ACCEPTABLE MANUFACTURERS:

(FURNACE HVAC UNIT): TRANE, CARRIER, DAIKIN.

TESTS, ADJUSTMENTS AND ACCEPTANCE

UPON COMPLETION OF THE ERECTION OF ALL EQUIPMENT AND ALL WORK SPECIFIED HEREIN AND/OR SHOWN ON THE APPROVED SHOP DRAWINGS, OR AT SUCH TIME AS DIRECTED BY THE ARCHITECT, THIS SUBCONTRACTOR SHALL START ALL APPARATUS, MAKE NECESSARY TESTS AS DIRECTED AND AS SPECIFIED HEREIN, AND MAKE COMPLETE ADJUSTMENTS OF ALL ITEMS OF EQUIPMENT BEFORE ACCEPTANCE BY THE ARCHITECT TO WHOSE REPRESENTATIVE THIS SUBCONTRACTOR SHALL DEMONSTRATE (BY PERFORMANCE) ALL OF THE VARIOUS APPARATUS AND EQUIPMENT. START UP AND ADJUSTMENT OF EQUIPMENT SHALL INCLUDE ALL EQUIPMENT FURNISHED AND INSTALLED BY THIS CONTRACTOR.

MANUFACTURER'S AUTHORIZED PERSONNEL MUST BE PRESENT AT THE START-UP AND CALIBRATION OF THE ROOFTOP HVAC UNITS.

WORK UNDER THIS SECTION OF THE SPECIFICATIONS SHALL NOT BE CONSIDERED COMPLETE UNTIL THIS SUBCONTRACTOR HAS OBTAINED REQUIRED INSPECTIONS, CONDUCTED PERFORMANCE TESTS, MADE NECESSARY ADJUSTMENTS AND HAS SUBMITTED SATISFACTORY EVIDENCE OF COMPLIANCE. THE ARCHITECT SHALL MAKE SPOT CHECKS TO DETERMINE THE ACCURACY AND COMPLETENESS OF FINAL ADJUSTMENTS. SHOULD SPOT CHECKS INDICATE MORE THAN A REASONABLE DEVIATION FROM DESIGN DRAWINGS AND REQUIREMENTS, THIS SUBCONTRACTOR SHALL REPEAT TESTS AND ADJUSTMENTS TO THE SATISFACTION OF THE ARCHITECT. DURING THE TESTING PERIOD, THIS SUBCONTRACTOR SHALL MAINTAIN ON THE JOB A COMPETENT INDIVIDUAL, THOROUGHLY FAMILIAR WITH ALL PHASES OF THE HEATING AND VENTILATION SYSTEMS, FOR AS LONG AS MAY BE REQUIRED TO THOROUGHLY ADJUST ALL OF THE SYSTEMS AND TO DEMONSTRATE TO THE ARCHITECT AND/OR ENGINEER THAT THEY ARE FUNCTIONING PROPERLY.

TEMPERATURE CONTROL WIRING AND CONTROL TESTING SHALL BE BY TEMPERATURE CONTROLS CONTRACTOR.

INSULATION SPECIFICATIONS GENERAL

INSULATION SHALL BE INSTALLED ON ALL PIPING AND DUCTWORK SYSTEMS WHERE SPECIFIED BELOW. INSULATION PRODUCTS SHALL BE MANUFACTURED BY OWENS CORNING, CERTAINTEED, JOHNS-MANVILLE OR KNAUF AND INSTALLED PER MANUFACTURERS RECOMMENDATIONS.

INSULATION MATERIALS SHALL MEET CURRENT ASHRAE 90.1 REQUIREMENTS INCLUDING MAXIMUM FLAME SPREAD RATING OF 25 AND SMOKE DEVELOPED RATING OF 50 OR LESS.

DUCTWORK THAT IS ACOUSTICALLY LINED SHALL NOT BE INSULATED.

INSULATION PRODUCTS

ALL DOMESTIC HOT AND COLD WATER PIPING EXCEPT FOR SHORT RUNS TO FIXTURES SHALL BE INSULATED WITH 1" THICK FIBERGLASS INSULATION WITH VAPOR BARRIER. TAPE JOINTS AND COVER ELBOWS WITH PRE-FABRICATED PVC OR ALUMINUM ELBOW WRAPS. NOTE THAT PVC IS NOT TO BE USED IN CEILING SPACES USED AS RETURN AIR PLENUMS.

AT THE CONTRACTOR'S OPTION, CLOSED CELL POLYMER FOAM INSULATION EQUAL TO ARMAFLEX OR NOMACO MAY BE USED ON DOMESTIC WATER PIPING. 3/4" THICKNESS FOR PIPES UP TO 1-1/4" IN SIZE AND 1" THICK FOR PIPES 1-1/2" AND LARGER.

PHYSICALLY HANDICAPPED LAVATORIES SHALL BE PROVIDED WITH "P" TRAP AND WATER INSULATION KITS EQUAL TO TRUEBRO "HANDI-LAV-GUARD". INSULATION SHALL THOROUGHLY COVER THE HOT AND COLD WATER AND WASTE PIPES FROM THE LAVATORY TO THE WALL ESCUTCHEONS AND PROVIDE ACCESS TO WATER ANGLE STOP VALVES. WHITE FINISH.

ALL CONCEALED INDOOR HEATING AND/OR COOLING SUPPLY AND RETURN AIR DUCTWORK SHALL BE INSULATED WITH 1-1/2" THICK FIBERGLASS INSULATION WITH VAPOR BARRIER. TAPE ALL JOINTS WITH VAPOR BARRIER TAPE. MINIMUM INSTALLED "R" VALUE TO BE 4.2, UNLESS OTHERWISE NOTED.

EXPOSED SPIRAL SUPPLY AIR DUCTWORK SHALL BE DOUBLE WALL INSULATED WITH 2" THICK INSULATION 1 LB PER CUBIC FT WITH A THERMAL CONDUCTIVITY OF .26 BTU IN/HR FT DEG F BY USA (UNIVERSAL SPIRAL AIR) MFR. OR EQUAL. EXPOSED SPIRAL RETURN AIR DUCTWORK NEED NOT BE INSULATED.

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

MEP Engineers LLC
Mechanical | Electrical | Plumbing | Energy
380 North Main Street
Clawson, MI 48017
Tel: (248) 488-9822 Fax: (248) 488-9811
Web: www.mepmi.com Email: mep@mepmi.com

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

BUILDING PERMIT 12/19/2018

DRAWN BY

J.K.

CHECKED BY

J.M.

APPROVED BY

J.M.

SHEET NAME

MECHANICAL SPECIFICATIONS

SHEET NO. M.500

ABBREVIATIONS

SYM.	DESCRIPTION
ACT	ABOVE COUNTERTOP
AFF	ABOVE FINISHED FLOOR
CONTR	CONTACTOR
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
D	DRYER
DW	DISHWASHER
E	EXISTING
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
ECUH	ELECTRIC CABINET UNIT HEATER
EM	EMERGENCY
ER	EXISTING RELOCATED
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
FACP	FIRE ALARM CONTROL PANEL
GFI	GROUND FAULT INTERRUPTER
GD	GARBAGE DISPOSAL
HD	HAND DRYER
MC	MECHANICAL CONTRACTOR
MH	METAL HALIDS
NEC	NATIONAL ELECTRICAL CODE
NF	NON-FUSED
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NTS	NOT TO SCALE
PC	PHOTOCELL
PCH	PULL CHAIN
REF	REFRIGERATOR
RN	RANGE
RTU	ROOF TOP UNIT
SW	SWITCH
S.E.	SERVICE ENTRANCE
TTB	TELEPHONE TERMINAL BACKBOARD
W	WASHER
WH	WATER HEATER
WP	WEATHER PROOF
UON	UNLESS OTHERWISE NOTED

COMMUNICATION / TV

SYM.	DESCRIPTION
	TELEPHONE OUTLET
□	WALL MOUNTED TELEPHONE OUTLET
□	PUBLIC TELEPHONE OUTLET
	DATA OUTLET
	COMBINATION DATA/TELEPHONE OUTLET
	FLOOR MOUNTED DATA OUTLET
TV	CABLE TV OUTLET
	QUAD RECEPTACLE AND VOICE/DATA COMBINATION FLOOR OUTLET

ELECTRICAL LEGEND

LIGHTING

SYM.	DESCRIPTION
S	SWITCH
S_3	THREE WAY SWITCH
S_D	DIMMER SWITCH 0-10V SLIDE DIMMER WALL STATION
S_{OS}	WALL-MOUNTED OCCUPANCY SENSOR SWITCH
S_{OSD}	WALL-MOUNTED OCCUPANCY SENSOR WITH DIMMING
S_{WS}	WALL-MOUNTED ROOM CONTROLLER WALL STATION
S_{DS}	WALL-MOUNTED DECORATOR SWITCH
OS	CEILING MOUNTED OCCUPANCY SENSOR WITH INPUT/OUTPUT COUPLER DEVICE
	STRIP LIGHT FIXTURE
	1'x4' LIGHT FIXTURE
	1'x4' NIGHT LIGHT FIXTURE
	2'x4' LIGHT FIXTURE
	2'x4' NIGHT LIGHT FIXTURE
	2'x2' NIGHT LIGHT FIXTURE
	2'x4' NIGHT LIGHT FIXTURE
	CEILING SURFACE/RECESSED MOUNTED LIGHTING FIXTURE
	CEILING SURFACE/RECESSED MOUNTED NIGHT LIGHTING FIXTURE
	WALL MOUNTED LIGHTING FIXTURE
	POLE MOUNTED SITE LIGHTING FIXTURE
	CEILING MOUNTED EXIT SIGN (SHADED AREA INDICATES FACE OF FIXTURE, ARROW INDICATES DIRECTION)
	WALL MOUNTED EXIT SIGN
	CEILING FAN WITH LIGHT
RC	ROOM CONTROLLER
SP	RELAY SWITCH PACK
LRP	LIGHTING CONTROL RELAY PANEL

FIRE ALARM

SYM.	DESCRIPTION
FACP	FIRE ALARM CONTROL AND ANNUNCIATOR PANEL
F	FIRE ALARM PULL STATION
F	HORN WITH STROBE LIGHT
SD	SMOKE DETECTOR-ADDRESSABLE TYPE
SD R	SMOKE DETECTOR-ADDRESSABLE TYPE WITH 120V RELAY CONTACTS
SD CO	COMBINATION OF SMOKE DETECTOR & CARBON MONOXIDE DETECTOR WITH SOUNDER BASE
DSD	DUCT SMOKE DETECTOR-ADDRESSABLE TYPE FURNISHED BY MECHANICAL TRADE INSTALLED BY ELECTRICAL CONTRACTOR
	FIRE ALARM STROBE LIGHT
FS	SPRINKLER SYSTEM FLOW SWITCH
TS	SPRINKLER SYSTEM TAMPER SWITCH
FD	FIRE/SMOKE DAMPER 120V
CO	CARBON MONOXIDE DETECTOR

POWER

SYM.	DESCRIPTION
—E—	ELECTRIC SERVICE
—T—	TELEPHONE SERVICE
	120V, DUPLEX RECEPTACLE
USB	USB DUPLEX RECEPTACLE
	FLOOR MOUNTED DUPLEX RECEPTACLE
C	CEILING MOUNTED DUPLEX RECEPTACLE
	220V, RECEPTACLE
	120V, DUPLEX RECEPTACLE, 44"AFF
	120V, QUADRUPLEX RECEPTACLE
	120V, QUADRUPLEX RECEPTACLE FED FROM EMERGENCY POWER
	120V, DUPLEX RECEPTACLE FED FROM EMERGENCY POWER
	208V, RECEPTACLE
	DIRECT CONNECTION TO EQUIPMENT
J	WALL MOUNTED JUNCTION BOX
J	CEILING MOUNTED JUNCTION BOX
	LIGHTING/RECEPTACLE PANEL
RP-XX	SYMBOL INDICATES TO WHICH PANELBOARD INDICATED CIRCUIT IN THE ROOM ARE TO BE CONNECTED.
200	FEEDER SIZE WITH THE NUMBER INDICATING BREAKER SIZE REFER TO FEEDER SCHEDULE
	DISCONNECT SWITCH (NON-FUSED)
	DISCONNECT SWITCH (F-FUSED)
B	WALL MOUNTED ENCLOSED SERVICE ENTRANCE BREAKER NEMA 3R
	STARTER AND DISCONNECT COMBINATION
	CURRENT TRANSFORMER
	WALL MOUNTED UTILITY METER
M	UTILITY METER
M	OWNER METER
	GROUND
	MOTOR
LC	LIGHTING CONTROL CONTACTOR
LC	LIGHTING CONTROL TIMER CLOCK
T	TRANSFORMER
	MAGNETIC DOOR HOLDER
	EMERGENCY POWER OFF/PANIC BUTTON
A	DOOR MAGNETIC CONTACTS FOR DOOR AJAR SYSTEM
CR	CARD READER
DO	DOOR OPENER
	PLUGMOLD

ELECTRICAL NEW WORK GENERAL NOTES:

1. THESE DRAWINGS REPRESENT THE GENERAL EXTENT AND ARRANGEMENT OF SYSTEMS, BUT ARE NOT TO BE CONSIDERED FABRICATION DRAWINGS. COORDINATE WITH OTHER TRADES, AND PROVIDE EACH SYSTEM COMPLETE, INCLUDING ALL NECESSARY COMPONENTS, FITTINGS, AND OFFSETS.
2. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
3. COORDINATE AND PROVIDE ACCESS DOORS WITHIN INACCESSIBLE CEILING, SHAFT, AND CHASE AREAS FOR ALL COMPONENTS WHICH REQUIRE SERVICE ACCESS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
4. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
5. COORDINATE THE MOUNTING HEIGHTS OF DEVICES WITH ARCHITECTURAL ELEVATIONS AND THE TRADES INSTALLING THE WORK.
6. COORDINATE EXACT LOCATIONS OF ALL FLOOR SERVICE FITTINGS AND POKE-THROUGH ASSEMBLIES WITH FINAL FURNITURE LAYOUT DRAWINGS.

ELECTRICAL SHEET INDEX

NOT ALL SYMBOLS AND ABBREVIATIONS ARE APPLICABLE TO THIS PROJECT

GENERAL NOTES

(NOTES APPLY TO ALL ELECTRICAL DRAWINGS.)

1. COMPLY WITH THE APPLICABLE REQUIREMENTS OF THE CITY, COUNTY, AND STATE LAWS, ORDINANCES AND REGULATIONS INCLUDING MODIFICATIONS AND SUPPLEMENTS TO ANSI C2 AND NFPA 70 (2014 NATIONAL ELECTRIC CODE..
2. COMPLY WITH THE APPLICABLE REQUIREMENTS OF U.S. DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEATH ADMINISTRATION STANDARDS (OSHA).
3. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY ELECTRICAL PERMITS AND CERTIFICATES OF INSPECTION FOR CONSTRUCTION.
4. CONTRACTOR SHALL VISIT THE SITE AND FIELD VERIFY EXISTING CONDITIONS UNDER WHICH THE WORK IS TO BE DONE
5. MATERIAL NECESSARY FOR THIS PROJECT SHALL BE NEW AND SHALL BE U.L. LISTED AND SHALL COMPLY WITH N.E.C. ART. 110.3.
6. PROVIDE BRANCH CIRCUIT WIRING 600V CONDUCTORS COPPER WITH 98% CONDUCTIVITY TYPE THHN/THWN, 90 DEGREES C. MINIMUM WIRE SIZE SHALL BE AWG #12. USE NEXT WIRE SIZE FOR HOMERUN IN EXCESS OF 75'. VOLTAGE DROP SHOULD BE CONSIDERED FOR ALL HOMERUNS TO BE IN COMPLIANCE WITH CODE.
7. ELECTRIC SYSTEM GROUNDING SHALL IN ALL INSTANCES COMPLY WITH THE MINIMUM REQUIREMENTS OF NEC.
8. PROVIDE GFI OUTLETS FOR WET LOCATIONS AREAS AS REQUIRED BY CODE AND AS SHOWN ON DRAWINGS.
9. ALL CUTTING AND PATCHING REQUIRED BY THIS PORTION OF THE CONTRACT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR.
10. THE CONTRACTOR SHALL REMOVE DEBRIS CREATED BY HIS PORTION OF THE CONTRACT AND CLEAN ALL EQUIPMENT INSTALLED UNDER HIS CONTRACT AT THE COMPLETION OF THE PROJECT.
11. ELECTRICAL WORK SHALL BE CONCEALED. EXPOSED RACEWAY SHALL BE RUN PARALLEL TO BUILDING WALLS AND BEAMS.
12. PROVIDE FIRE STOP PER NFPA TO MATCH RATINGS OF WALLS WHERE PENETRATIONS ARE MADE THRU FIRE WALLS. SEE ARCHITECTURAL PLANS FOR FIRE RATINGS OF WALLS.
13. PROVIDE NEW FIRE ALARM DEVICES WHERE REQUIRED IN COMPLIANCE WITH THE FIRE MARSHALL REQUIREMENTS.
14. FOR VOICE/DATA OUTLETS SHOWN ON DRAWINGS PROVIDE SINGLE GANG BOX AND ¾" EMPTY CONDUIT WITH PULL STRING. TERMINATE CONDUIT 6" ABOVE GRID CEILING.

ELECTRICAL DEMOLITION GENERAL NOTES:

1. VISIT THE SITE PRIOR TO SUBMISSION OF BID TO EXAMINE THE EXISTING CONDITIONS AND THE EXTENT OF DEMOLITION WORK.
2. EXAMINE THE DRAWINGS OF OTHER TRADES AND BE FAMILIAR WITH THE DEMOLITION REQUIRED BY OTHER TRADES. PERFORM ALL INCIDENTAL ELECTRICAL DEMOLITION AND/OR RELOCATION REQUIRED TO FACILITATE THE DEMOLITION WORK OF OTHER TRADES, WHETHER OR NOT SPECIFICALLY INDICATED.
3. REMOVE LIGHTING FIXTURES AND ELECTRICAL DEVICES AS INDICATED ON PLAN WITH CROSS HATCHING. DEMOLITION SHALL INCLUDE, BUT NOT BE LIMITED TO, THOSE DEVICES SHOWN.
4. COORDINATE WITH NEW WORK PLANS, ONE LINE DIAGRAMS AND RISER DIAGRAMS FOR EXTENT OF DEMOLITION WORK.
5. PROVIDE PROPER SUPPORT FOR EXISTING TO REMAIN CONDUITS AND BOXES WHERE EXISTING SUPPORT IS TO BE REMOVED. RE-ROUTE BRANCH CIRCUIT CONDUITS AND RELOCATE JUNCTION BOXES AS REQUIRED TO FACILITATE INSTALLATION OF NEW EQUIPMENT AND SYSTEMS IN CEILING SPACES.
6. REMOVE ALL CONDUIT AND WIRE BACK TO THE SOURCE OR NEAREST UPSTREAM DEVICE REMAINING IN SERVICE.
7. MAINTAIN ELECTRICAL SERVICE TO ALL LIGHTING FIXTURES, DEVICES AND EQUIPMENT THAT ARE TO REMAIN. EXTEND CONDUIT AND WIRE AS REQUIRED WHERE DEMOLITION WORK AFFECTS ELECTRICAL SERVICE TO DOWNSTREAM LOADS THAT ARE TO REMAIN.
8. DISPOSE OF ALL MATERIALS OFF SITE AND INCLUDE ALL COSTS FOR DISPOSAL IN BID. ALL MATERIALS SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS, INCLUDING TCLP TESTING, PROPER DISPOSAL AND/OR RECYCLING OF FLUORESCENT LAMPS.
9. PROVIDE BLANK COVER PLATES WHERE SWITCHES AND DEVICES ARE REMOVED BUT EXISTING WALLS REMAIN INTACT.
10. RING OUT AND TAG ALL CIRCUITS AFFECTED BY THIS ALTERATION AT BOTH ENDS. MARK ALL UNUSED CIRCUIT BREAKERS "SPARE".
11. PROVIDE UPDATED TYPED-IN DIRECTORIES FOR ALL PANELS AFFECTED BY THIS ALTERATION.
12. VERIFY ALL UNDERGROUND AND IN SLAB UTILITY LOCATIONS PRIOR TO SAW-CUTTING OR PENETRATING ANY FLOOR SLAB.
13. COORDINATE ANY SHUT DOWN OF EXISTING SERVICES AND EQUIPMENT THAT ARE REMAINING IN USE WITH THE OWNER'S REPRESENTATIVE. WHERE EXISTING BUILDING SERVICE IS REQUIRED TO BE SHUT DOWN, INCLUDE ALL ASSOCIATED OVERTIME COSTS TO PERFORM THIS WORK DURING WEEKENDS AND EVENINGS INCLUDE ALL COSTS FOR PROVIDING TEMPORARY POWER WHERE SHUT DOWNS MUST OCCUR FOR PERIODS LONGER THAN THESE HOURS. COORDINATE ELECTRICAL SHUT DOWNS WITH THE OWNER 72 HOURS PRIOR TO SHUT DOWN.

STATE OF MICHIGAN
STEVE F. METTI
ENGINEER
No. 34833
LICENSED PROFESSIONAL ENGINEER

PARTNERS

PARTNERS in Architecture, PLC
65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

MEP Engineers LLC
Mechanical | Electrical | Plumbing | Energy
380 North Main Street
Clawson, MI 48017
Tel: (248) 488-9822 Fax: (248) 488-9811
Web: www.mepmi.com Email: mep@mepmi.com

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

BUILDING PERMIT	12/19/2018

DRAWN BY

CHECKED BY

APPROVED BY

SHEET NAME

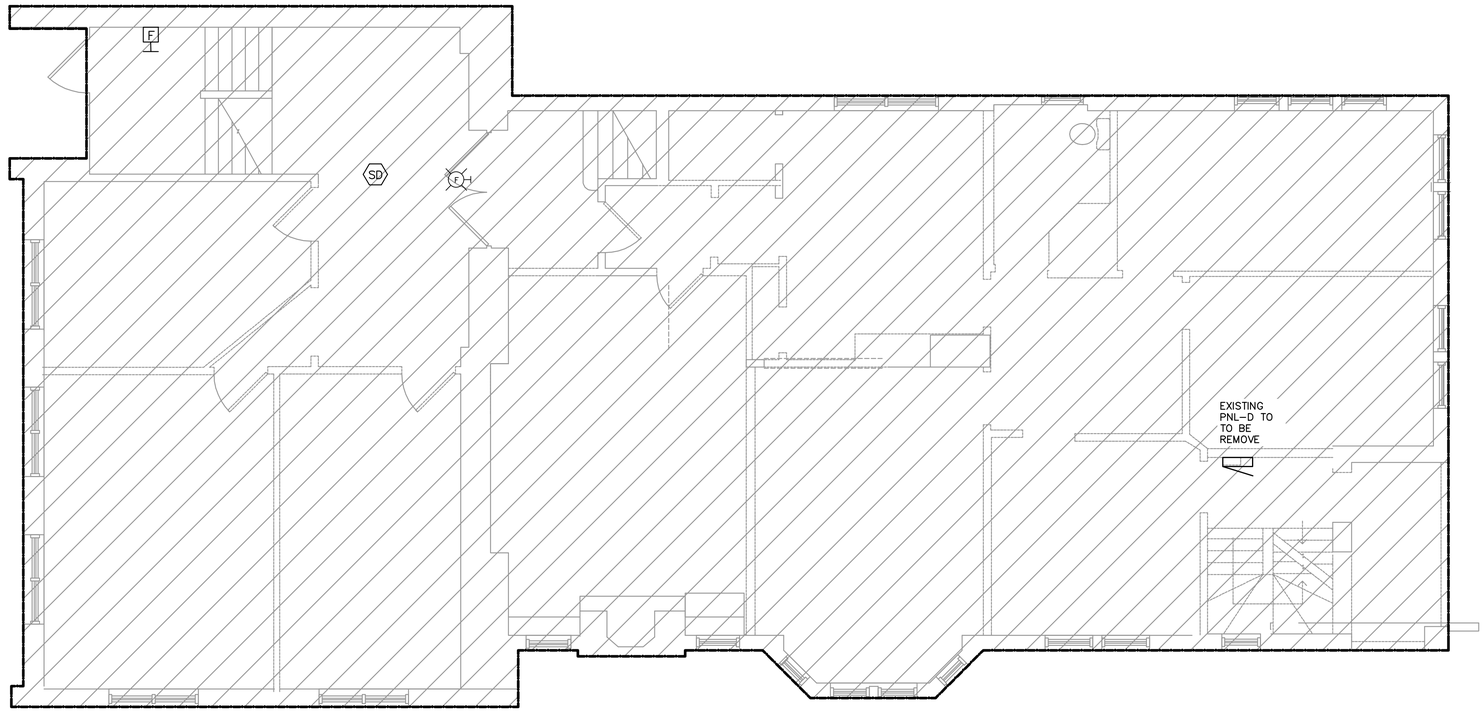
ELECTRICAL LEGENDS + ABBREV.

SHEET NO. E.000

P:\AA (2018) Projects\(1843-2) MCREST\Production\CAD Files\E.000.dwg

SHEET NOTES:

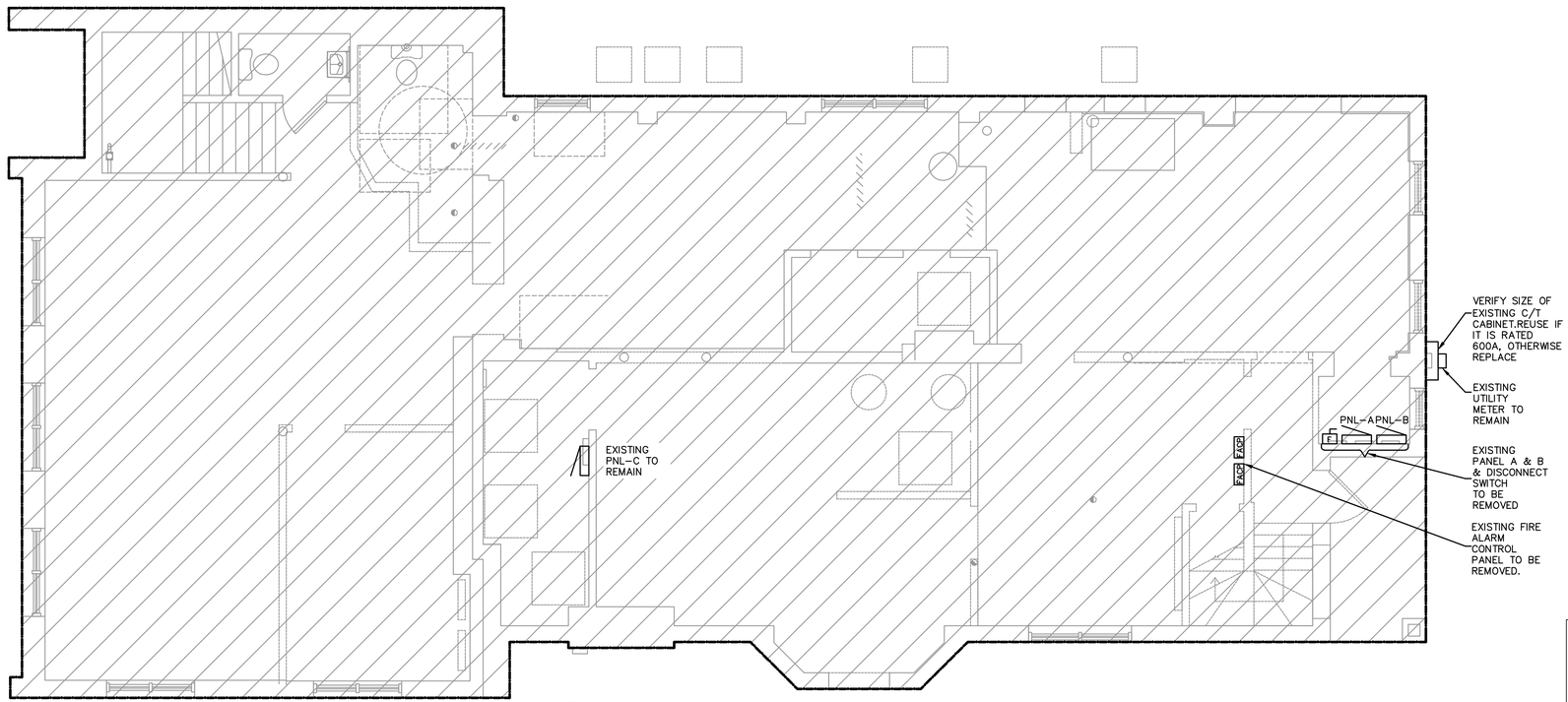
1. CROSS HATCH DENOTES REMOVAL OF EXISTING FIXTURES, RECEPTACLES, CONDUITS, WIRES AND ALL OTHER ELECTRICAL ITEMS UNLESS OTHERWISE NOTED.
2. EXISTING FIRE ALARM SYSTEM & DEVICES ARE TO BE REMOVED.
3. OUTDOOR LIGHTING TO REMAIN. RE-WIRE TO NEW PANEL AS REQUIRED.
4. MAINTAIN SERVICE FOR EXISTING MECHANICAL EQUIPMENT TO REMAIN. RE-USE EXISTING CONDUIT AND WIRING FOR MECHANICAL EQUIPMENT PUT IN PLACE OF REMOVED EQUIPMENT IF IT REQUIRES SAME SIZE OF FEEDERS.



NORTH

FIRST LEVEL ELECTRICAL DEMO PLAN

SCALE: 1/4" = 1'



NORTH

LOWER LEVEL ELECTRICAL DEMO PLAN

SCALE: 1/4" = 1'

STATE OF MICHIGAN
STEVE F. METTI
ENGINEER
NO. 34833
LICENSED PROFESSIONAL ENGINEER

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

MEP Engineers LLC
Mechanical | Electrical | Plumbing | Energy
380 North Main Street
Clawson, MI 48017
Tel: (248) 488-9822 Fax: (248) 488-9811
Web: www.mepmi.com Email: mep@mepmi.com

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

BUILDING PERMIT	12/19/2018

DRAWN BY

CHECKED BY

APPROVED BY

SHEET NAME

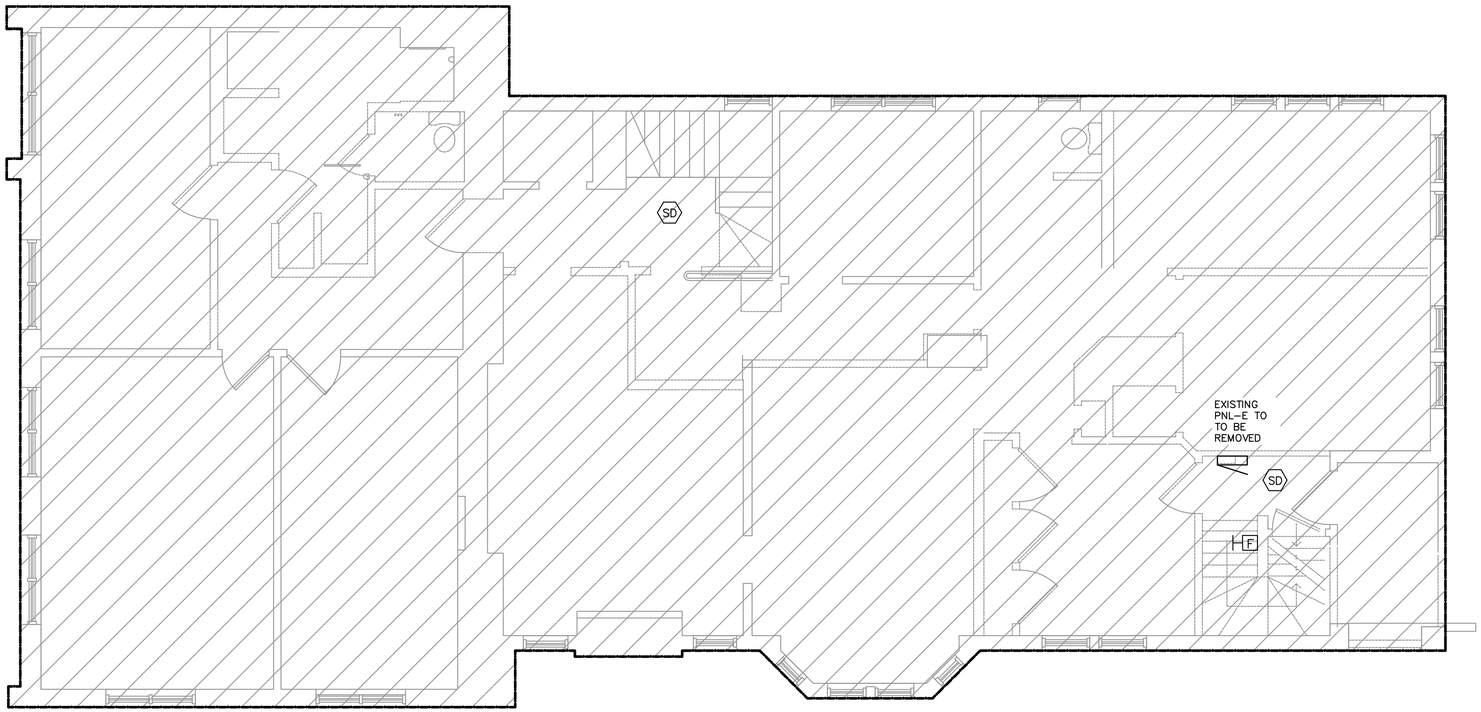
LOWER + FIRST LEVEL ELECTRICAL DEMO PLAN

SHEET NO. ED.200

P:\AA (2018) Projects\(1843-2) MCREST\Production\CAD Files\ED.200.dwg

SHEET NOTES:

1. CROSS HATCH DENOTES REMOVAL OF EXISTING FIXTURES, RECEPTACLES, CONDUITS, WIRES AND ALL OTHER ELECTRICAL ITEMS UNLESS OTHERWISE NOTED.
2. EXISTING FIRE ALARM SYSTEM & DEVICES ARE TO BE REMOVED.



NORTH

SECOND LEVEL ELECTRICAL DEMO PLAN

SCALE: 1/4" = 1'

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

MEP Engineers LLC
Mechanical | Electrical | Plumbing | Energy
380 North Main Street
Clawson, MI 48017
Tel: (248) 488-9822 Fax: (248) 488-9811
Web: www.mepmi.com Email: mep@mepmi.com

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

BUILDING PERMIT	12/19/2018

DRAWN BY

CHECKED BY

APPROVED BY

SHEET NAME

SECOND LEVEL ELECTRICAL DEMO PLAN

SHEET NO.

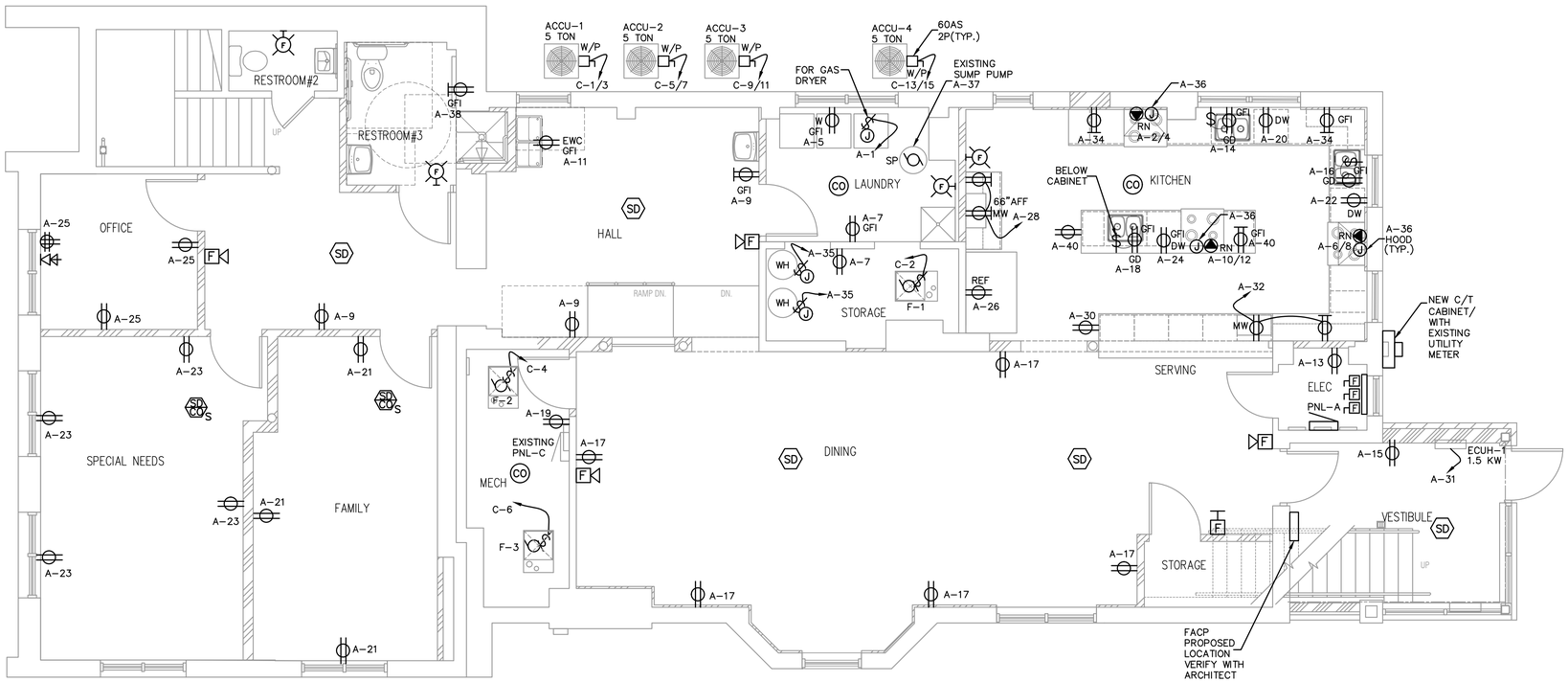
ED.201

STATE OF MICHIGAN
STEVE F. METTI
ENGINEER
NO. 34833
LICENSED PROFESSIONAL ENGINEER

P:\AA (2018) Projects\(1843-2) MCREST\Production\CAD Files\ED.201.dwg

SHEET NOTES:

1. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT LOCATION OF MECHANICAL EQUIPMENT.
2. FOR INTERLOCKING OF FANS, REFER TO MECHANICAL SCHEDULE. PROVIDE REQUIRED CONDUIT AND WIRING.
3. REFER TO PANEL SCHEDULES AND RISER DIAGRAM ON SHEET E.400.
4. FOR BRANCH CIRCUITS AND FEEDER SIZING, REFER TO TABLES ON SHEET E.400.
5. ALL RECEPTACLES SHALL BE GFI IN WET LOCATION OR WITHIN 6' OF SINK.
6. FIRE ALARM DEVICES FINAL LOCATIONS TO BE COORDINATED IN FIELD. INSTALLATION SHALL MEET FIRE MARSHALL REQUIREMENTS.



NORTH

LOWER LEVEL POWER AND SYSTEM PLAN

SCALE: 1/4" = 1'

STATE OF MICHIGAN
STEVE F. METTI
ENGINEER
NO. 34833
LICENSED PROFESSIONAL ENGINEER

P:\AA (2018) Projects\(1843-2) MCREST\Production\CAD Files\E.200.dwg

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

MEP Engineers LLC
Mechanical | Electrical | Plumbing | Energy
380 North Main Street
Clawson, MI 48017
Tel: (248) 488-9822 Fax: (248) 488-9811
Web: www.mepmi.com Email: mep@mepmi.com

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

BUILDING PERMIT	12/19/2018

DRAWN BY

CHECKED BY

APPROVED BY

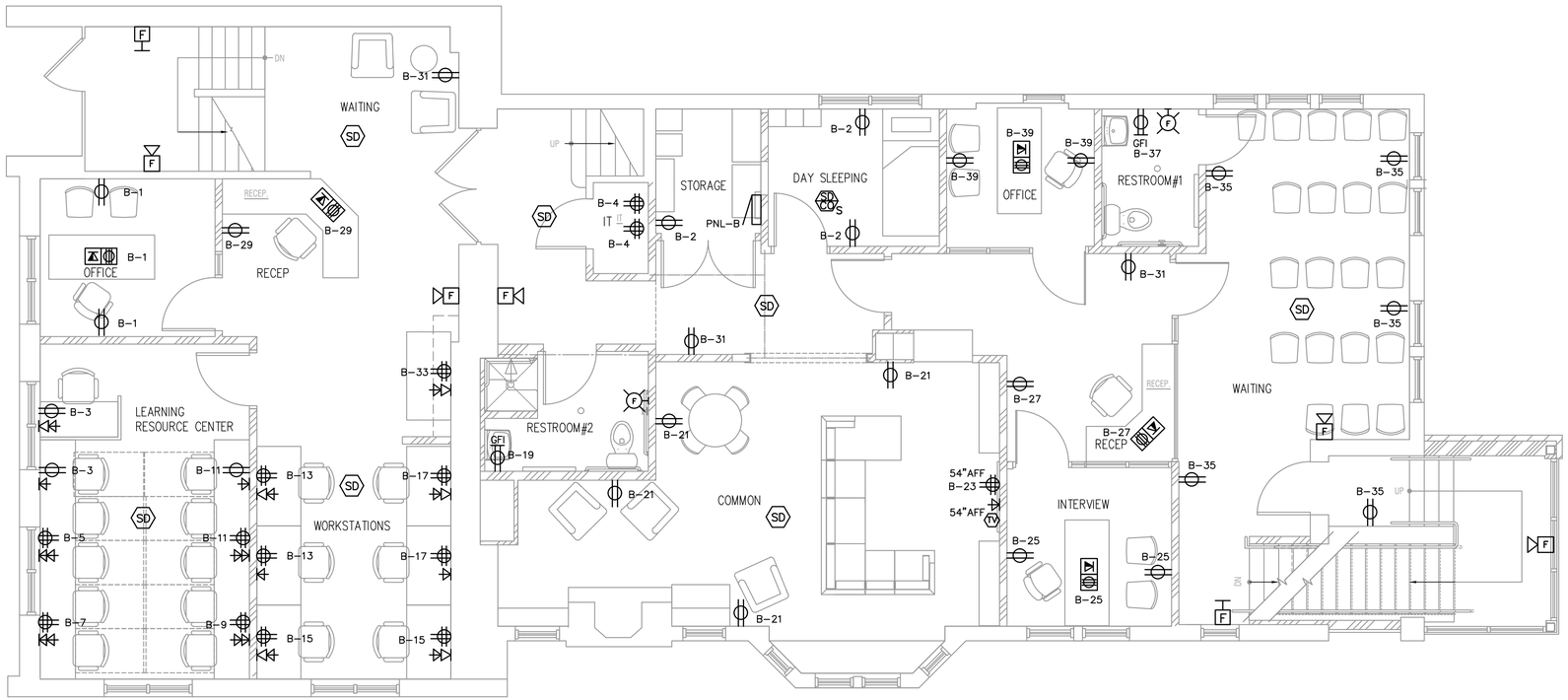
SHEET NAME

LOWER LEVEL POWER FLOOR PLAN

SHEET NO. E.200

SHEET NOTES:

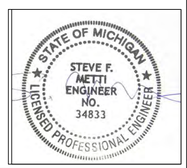
1. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT LOCATION OF MECHANICAL EQUIPMENT.
2. FOR INTERLOCKING OF FANS, REFER TO MECHANICAL SCHEDULE. PROVIDE REQUIRED CONDUIT AND WIRING.
3. REFER TO PANEL SCHEDULES AND RISER DIAGRAM ON SHEET E.400.
4. FOR BRANCH CIRCUITS AND FEEDER SIZING, REFER TO TABLES ON SHEET E.400.
5. ALL RECEPTACLES SHALL BE GFI IN WET LOCATION OR WITHIN 6' OF A SINK.
6. FIRE ALARM DEVICES FINAL LOCATIONS TO BE COORDINATED IN FIELD. INSTALLATION SHALL MEET FIRE MARSHALL REQUIREMENTS.



NORTH

FIRST LEVEL POWER AND SYSTEM PLAN

SCALE: 1/4" = 1'



PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

MEP Engineers LLC
Mechanical | Electrical | Plumbing | Energy
380 North Main Street
Clawson, MI 48017
Tel: (248) 488-9822 Fax: (248) 488-9811
Web: www.mepmi.com Email: mep@mepmi.com

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

BUILDING PERMIT	12/19/2018

DRAWN BY

CHECKED BY

APPROVED BY

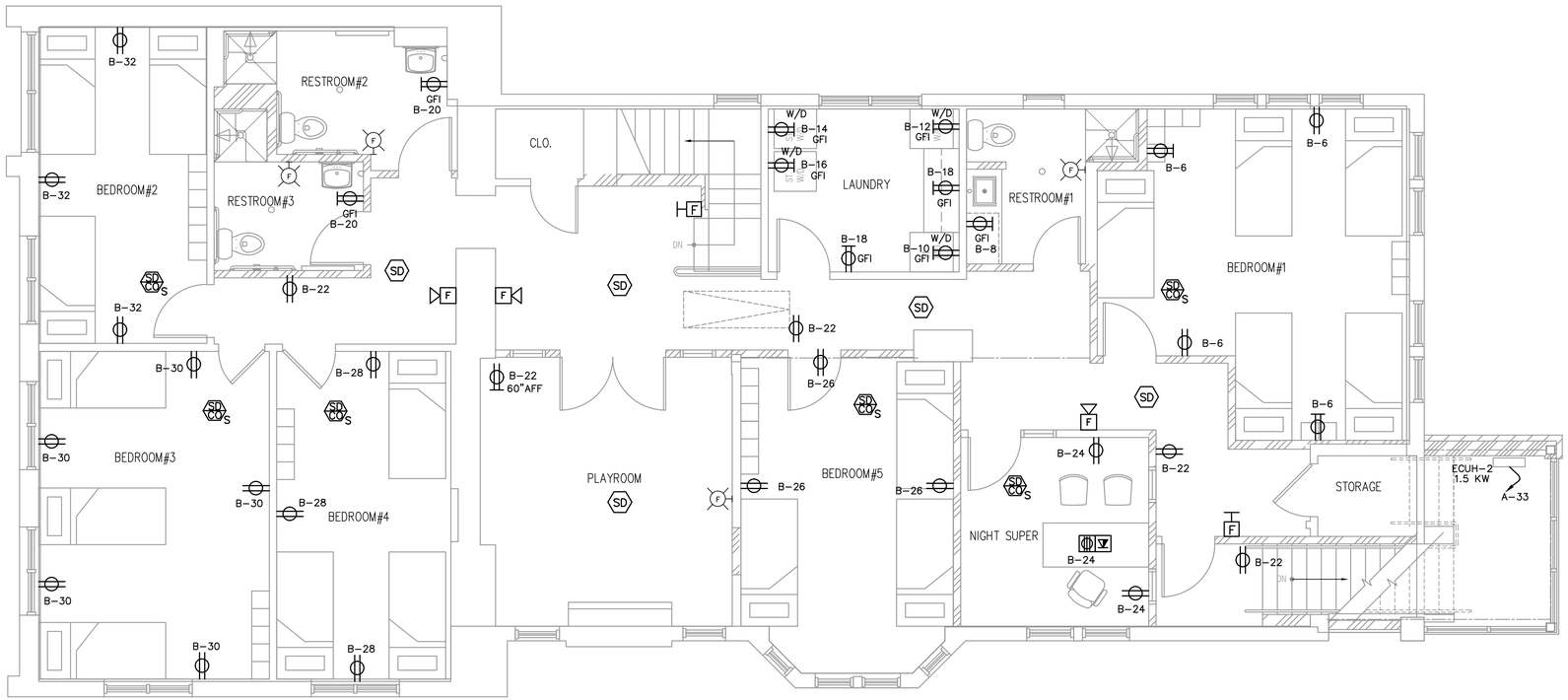
SHEET NAME

FIRST LEVEL POWER FLOOR PLAN

SHEET NO. E.201

SHEET NOTES:

1. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT LOCATION OF MECHANICAL EQUIPMENT.
2. FOR INTERLOCKING OF FANS, REFER TO MECHANICAL SCHEDULE. PROVIDE REQUIRED CONDUIT AND WIRING.
3. REFER TO PANEL SCHEDULES AND RISER DIAGRAM ON SHEET E.400.
4. FOR BRANCH CIRCUITS AND FEEDER SIZING, REFER TO TABLES ON SHEET E.400.
5. ALL RECEPTACLES SHALL BE GFI IN WET LOCATION OR WITHIN 6' OF A SINK
6. FIRE ALARM DEVICES FINAL LOCATIONS TO BE COORDINATED IN FIELD. INSTALLATION SHALL MEET FIRE MARSHALL REQUIREMENTS.



NORTH

SECOND LEVEL POWER AND SYSTEM PLAN

SCALE: 1/4" = 1'

STATE OF MICHIGAN
STEVE F. METTI
ENGINEER
NO. 34833
LICENSED PROFESSIONAL ENGINEER

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

MEP Engineers LLC
Mechanical | Electrical | Plumbing | Energy
380 North Main Street
Clawson, MI 48017
Tel: (248) 488-9822 Fax: (248) 488-9811
Web: www.mepmi.com Email: mep@mepmi.com

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

BUILDING PERMIT	12/19/2018

DRAWN BY

CHECKED BY

APPROVED BY

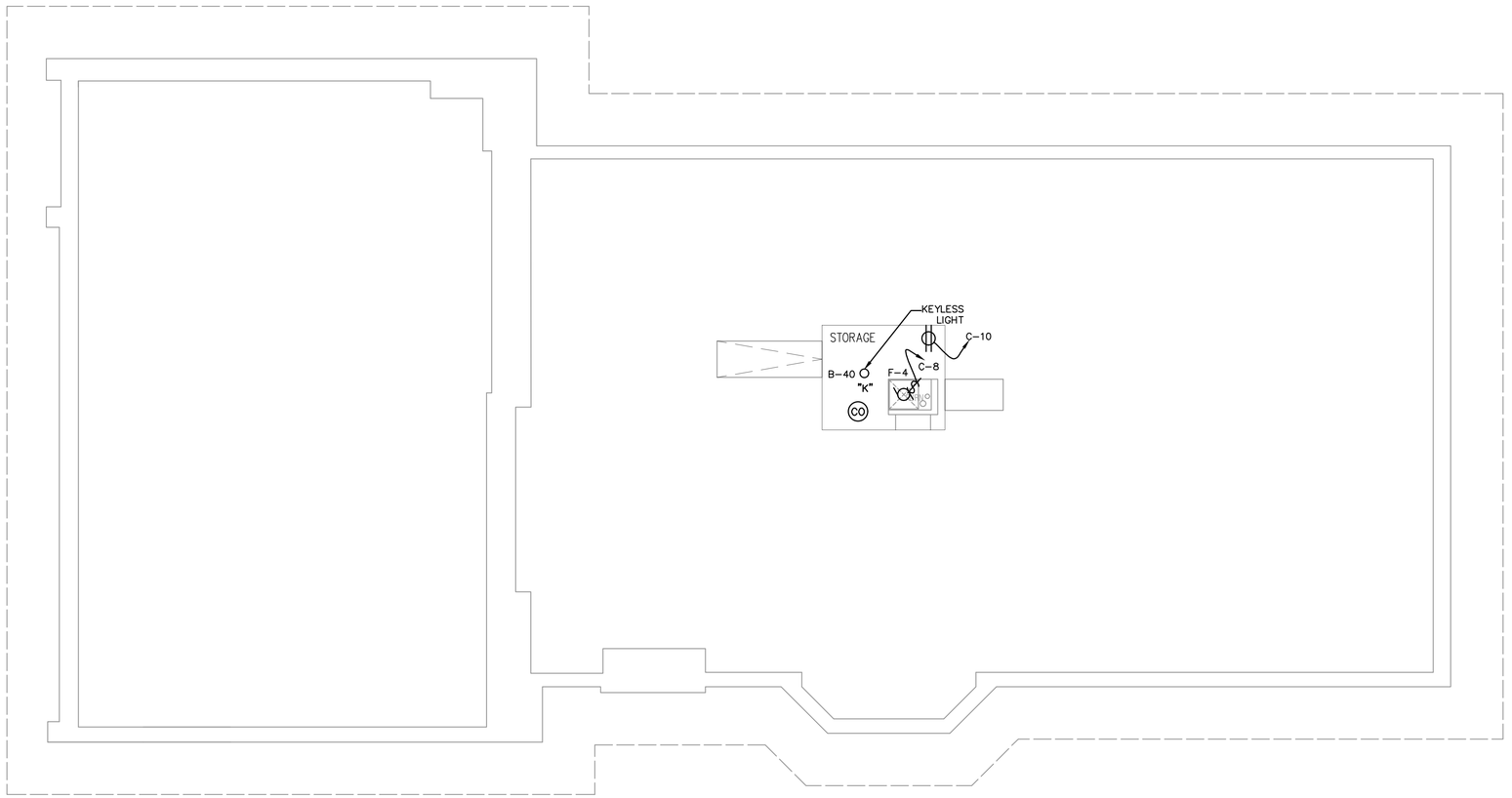
SHEET NAME

SECOND LEVEL POWER FLOOR PLAN

SHEET NO. E.202

SHEET NOTES:

1. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT LOCATION OF MECHANICAL EQUIPMENT.
2. FOR INTERLOCKING OF FANS, REFER TO MECHANICAL SCHEDULE. PROVIDE REQUIRED CONDUIT AND WIRING.
3. REFER TO PANEL SCHEDULES AND RISER DIAGRAM ON SHEET E.400.
4. FOR BRANCH CIRCUITS AND FEEDER SIZING, REFER TO TABLES ON SHEET E.400.
5. ALL RECEPTACLES SHALL BE GFI IN WET LOCATION OR WITHIN 6' OF A SINK.
6. FIRE ALARM DEVICES FINAL LOCATIONS TO BE COORDINATED IN FIELD. INSTALLATION SHALL MEET FIRE MARSHALL REQUIREMENTS.



NORTH

ATTIC LEVEL –ELECTRICAL PLAN

SCALE: 1/4" = 1'

STATE OF MICHIGAN
STEVE F. METTI
ENGINEER
NO. 34833
LICENSED PROFESSIONAL ENGINEER

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

MEP Engineers LLC
Mechanical | Electrical | Plumbing | Energy
380 North Main Street
Clawson, MI 48017
Tel: (248) 488-9822 Fax: (248) 488-9811
Web: www.mepmi.com Email: mep@mepmi.com

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

BUILDING PERMIT	12/19/2018

DRAWN BY

CHECKED BY

APPROVED BY

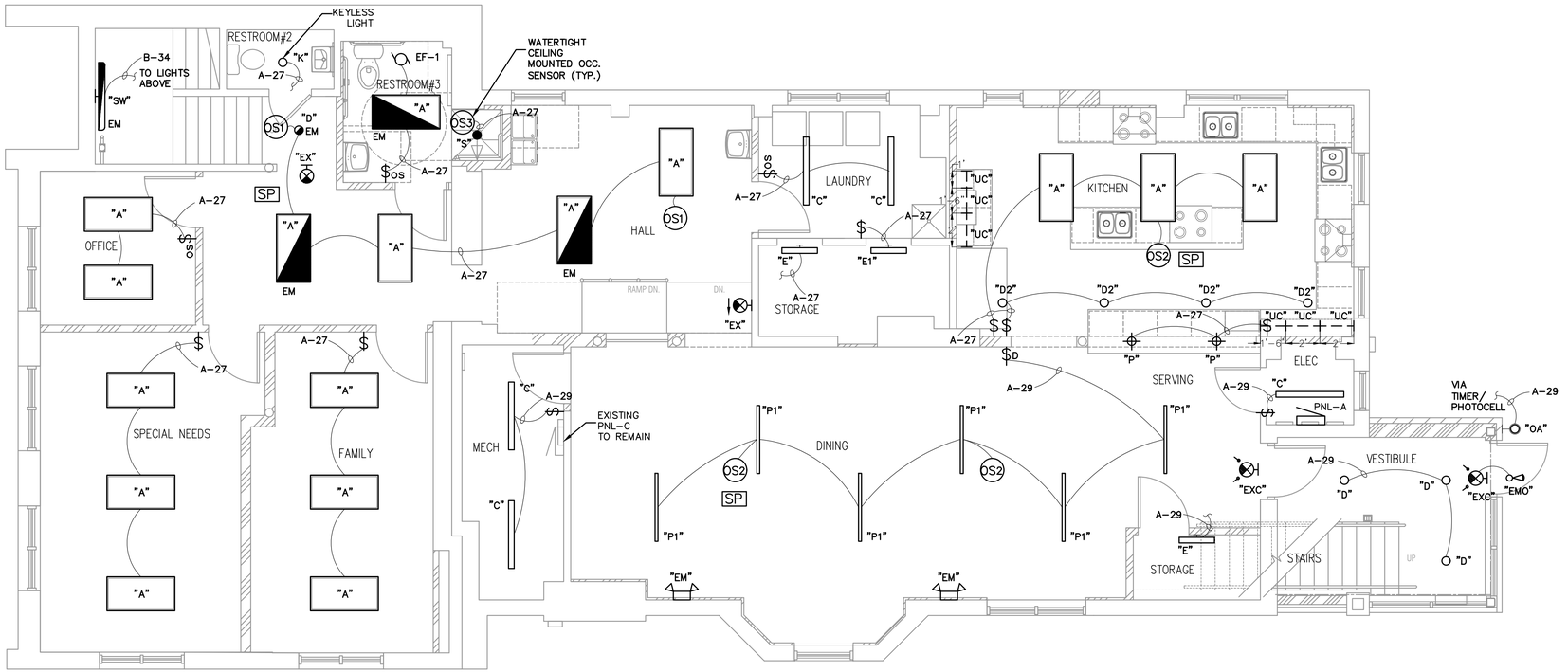
SHEET NAME

ATTIC LEVEL ELECTRICAL PLAN

SHEET NO. E.203

SHEET NOTES:

1. FOR BRANCH CIRCUITS AND FEEDER SIZING, REFER TO TABLES ON SHEET E.400.
2. CONNECT EXIT SIGNS AND EMERGENCY BATTERY UNITS TO NEAREST CIRCUIT SERVING THE AREA AND AHEAD OF ANY SWITCH.
3. OCCUPANCY SENSORS LOCATIONS TO BE DETERMINED IN FIELD FOR BEST OPERATION.



NORTH

LOWER LEVEL LIGHTING FLOOR PLAN

SCALE: 1/4" = 1'

STATE OF MICHIGAN
STEVE F. METTI
ENGINEER
NO. 34833
LICENSED PROFESSIONAL ENGINEER

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

MEP Engineers LLC
Mechanical | Electrical | Plumbing | Energy
380 North Main Street
Clawson, MI 48017
Tel: (248) 488-9822 Fax: (248) 488-9811
Web: www.mepmi.com Email: mep@mepmi.com

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

BUILDING PERMIT	12/19/2018

DRAWN BY

CHECKED BY

APPROVED BY

SHEET NAME

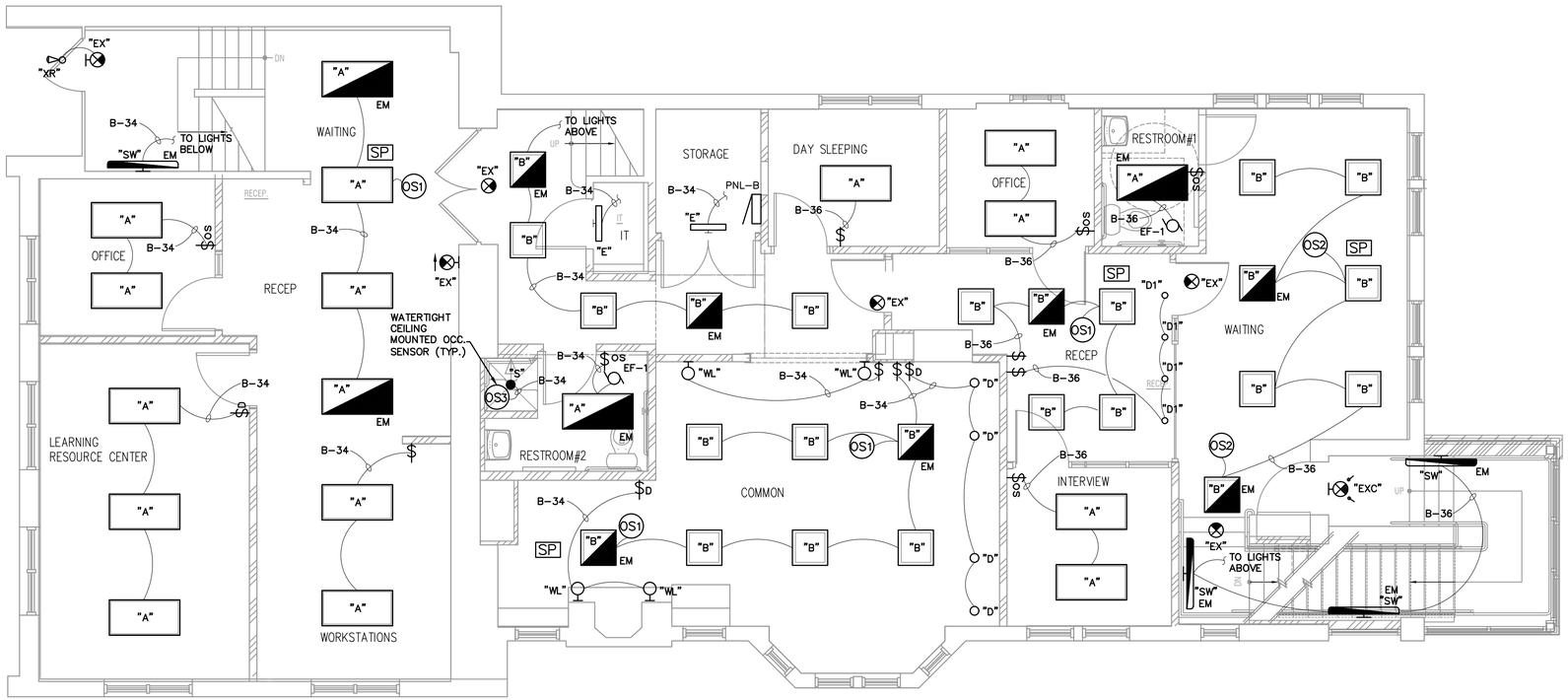
LOWER LEVEL LIGHTING FLOOR PLAN

SHEET NO. E.300

P:\AA (2018) Projects\(1843-2) MCREST\Production\CAD Files\E.300.dwg

SHEET NOTES:

1. FOR BRANCH CIRCUITS AND FEEDER SIZING, REFER TO TABLES ON SHEET E.400.
2. CONNECT EXIT SIGNS AND EMERGENCY BATTERY UNITS TO NEAREST CIRCUIT SERVING THE AREA AND AHEAD OF ANY SWITCH.
3. OCCUPANCY SENSORS LOCATIONS TO BE DETERMINED IN FIELD FOR BEST OPERATION.



NORTH

FIRST LEVEL LIGHTING FLOOR PLAN

SCALE: 1/4" = 1'

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

MEP Engineers LLC
Mechanical | Electrical | Plumbing | Energy
380 North Main Street
Clawson, MI 48017
Tel: (248) 488-9822 Fax: (248) 488-9811
Web: www.mepmi.com Email: mep@mepmi.com

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

BUILDING PERMIT	12/19/2018

DRAWN BY

CHECKED BY

APPROVED BY

SHEET NAME

FIRST LEVEL LIGHTING FLOOR PLAN

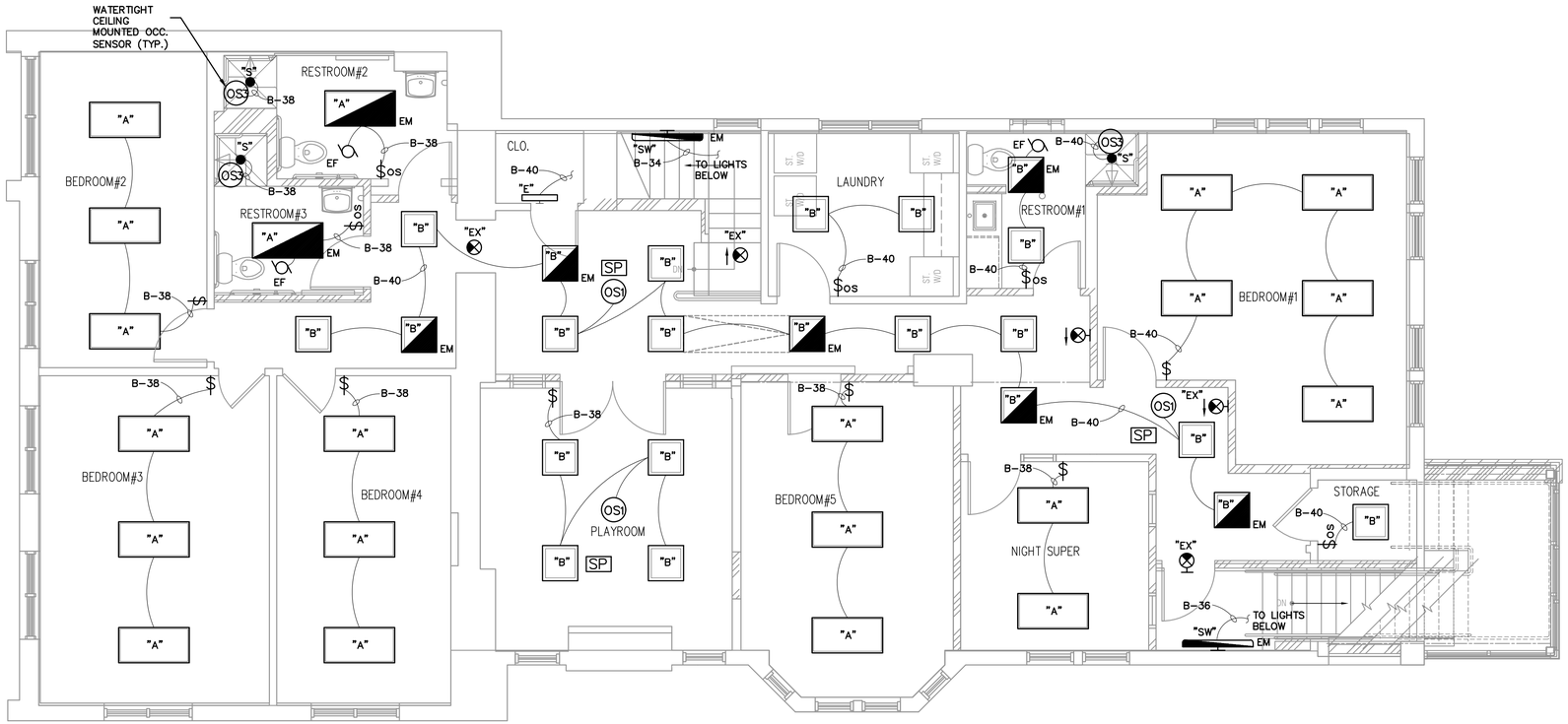
SHEET NO. E.301

STATE OF MICHIGAN
STEVE F. METTI
ENGINEER
NO. 34833
LICENSED PROFESSIONAL ENGINEER

P:\AA (2018) Projects\(1843-2) MCREST\Production\CAD Files\E.301.dwg

SHEET NOTES:

1. FOR BRANCH CIRCUITS AND FEEDER SIZING, REFER TO TABLES ON SHEET E.400.
2. CONNECT EXIT SIGNS AND EMERGENCY BATTERY UNITS TO NEAREST CIRCUIT SERVING THE AREA AND AHEAD OF ANY SWITCH.
3. OCCUPANCY SENSORS LOCATIONS TO BE DETERMINED IN FIELD FOR BEST OPERATION.



NORTH

SECOND LEVEL LIGHTING FLOOR PLAN

SCALE: 1/4" = 1'

STATE OF MICHIGAN
STEVE F. METTI
ENGINEER
NO. 34833
LICENSED PROFESSIONAL ENGINEER

P:\AA (2018) Projects\(1843-2) MCREST\Production\CAD Files\E.302.dwg

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

MEP Engineers LLC
Mechanical | Electrical | Plumbing | Energy
380 North Main Street
Clawson, MI 48017
Tel: (248) 488-9822 Fax: (248) 488-9811
Web: www.mepmi.com Email: mep@mepmi.com

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

BUILDING PERMIT	12/19/2018

DRAWN BY

CHECKED BY

APPROVED BY

SHEET NAME

SECOND LEVEL LIGHTING FLOOR PLAN

SHEET NO. E.302

LIGHTING FIXTURE SCHEDULE

PREFIX	FIXTURE DESCRIPTION	MANUFACTURER	MODEL / CATALOG NO.	LAMP	WATTS	LOCATION	COMMENTS
A	2' X 4' RECESSED LED LAY IN CEILING LIGHT	LITHONIA	2BLT4-30LHE-ADP-MVOLT-EZ1-LP840-E10WLCP	LED,3000 LUMENS,4000K	23.3W	GENERAL AREAS	*EM WITH E10WLCP BATTERY PACK
B	2' X 2' RECESSED LED LAY IN CEILING LIGHT	LITHONIA	2BLT4-20LHE-ADP-MVOLT-EZ1-LP840-E10WLCP	LED,2000 LUMENS,4000K	16.6W	GENERAL AREAS	*EM WITH E10WLCP BATTERY PACK
C	4" X 4' LOW PROFILE LED STRIP LIGHTS-SURFACE CEILING MOUNTED	LITHONIA	ZL1F-L48-ASR-3000LM-MDD-MVOLT-40K-90CRI-E10WLCP	LED,3000 LUMENS,4000K	30W	LAUNDRY,MECH/ELEC RM	*EM WITH E10WLCP BATTERY PACK
D	6" RECESSED DOWNLIGHT	EATON	LD6B-15-D010-EM14-EU6B-1020-90-40	LED,1500 LUMENS,4000K	15.5W	KITCHEN,COMMOM, VESTIBULE	*EM WITH EM14 EMERGENCY MODULE WITH REMOTE TEST SWITCH
D1	4" RECESSED DOWNLIGHT	EATON	LD4B-10-D010-EU4B-1020-90-40	LED,1000 LUMENS,4000K	11W	RECEPTION	
D2	6" ROUND SURFACE MOUNTED DOWNLIGHT	EATON	SMD6R-12-940	LED,1200 LUMENS,4000K	15.3W	KITCHEN	CONSULT ARCHI FOR COLOR & FINISHES
E/E1	4" X 2' LOW PROFILE LED STRIP LIGHTS-SURFACE WALL MOUNTED	LITHONIA	ZL1F-L24-ASR-1500LM-MDD-MVOLT-40K-90CRI-LSXR	LED,1500 LUMENS,4000K	15W	STORAGE/MECH/IT/CLO.	WITH BUILT IN OCC. SENSOR, E1 WITHOUT OCC. SENSOR
K	KEYLESS LIGHT			LED ,4000K	10W	TOILET/STORAGE	
P	DECORATIVE PENDANT LIGHTS	TECH LIGHTING	700-ZEN	LED,3000 LUMENS,3000K	8W	KITCHEN	CONSULT ARCHI FOR SHAPE,COLOR & FINISHES
P1	4' DECORATIVE PENDANT LIGHTS	FINELITE	HP-2-D-4'-H-840-F-120V-FM-SC	LED,3215 LUMENS,4000K	37W	DINING	COORDINATE ARCHI WITH INSTALLATION ACCESSORIES
S	RECESSED 6" LED LENSED SHALLOW DOWNLIGHT	ATLANTIC LIGHTING	LED6-SH-SYL11-35K-U	LED,1100 LUMENS,3500K	10W	SHOWER	SUITABLE FOR DAMP LOCATION
SW	4' SURFACE MOUNTED LED LIGHT	LITHONIA	WL4-20L-MVOLT-LP840-MSD7-DIM10-E10WLCP	LED,2000 LUMENS,4000K	18.7W	STAIRWELLS	*EM WITH E10WLCP BATTERY PACK, WITH INTEGRAL OCCUPANCY SENSOR
UC	UNDER CABINET LIGHTS	LITHONIA	UCLD-12IN,18IN,24IN-30K-90CRI-SWR-WH-UC PIR M12	LED,740 LUMENS,3000K	12.5W	UNDER CABINET	WITH BUILT IN OCC. SENSOR
WL	DECORATIVE WALL MOUNTED LIGHTS			LED,1000 LUMENS,3500K	8W	COMMON	SELECTED BY OWNER
OA	OUTDOOR SURFACE MOUNTED SCONCE	LITHONIA	OLLWU-LED-P1-40K-MVOLT-DDB-	LED,4000K	14W	OUTDOOR	
EMO	REMOTE EM LIGHT	EATON	SELW-29-BK-SD	LED	0.6W	EXIT AREAS	WEATHER PROOF TYPE
EX	EXIT LIGHT	EATON	APXH7R2	LED	1.55W	EXIT AREAS	WITH BATTERY BACK UP
EXC	EXIT COMBO LIGHT	EATON	SURE LITES- APCH7-R	LED	2.8W	EXIT AREAS	WITH BATTERY BACK UP
EM	EMERGENCY LIGHT FIXTURE	EATON	SURE-LITES-SEL60R4SD	LED	2W	GENERAL AREAS	WITH BATTERY BACK UP
XR	TWIN HEAD REMOTE EM FIXTURE	EATON	SURE LITES- APWR-2-BK	LED	2W	OUTDOOOR	

NOTES:

1. COORDINATE WITH ID/ARCHI FOR FINAL SELECTION OF FINISHES AND MOUNTING HEIGHT.
2. ALL LIGHTING PRODUCTS SHALL BE LISTED BY OSHA NATIONALLY RECOGNIZED TESTING LAB (NRTL)
3. ALL LIGHT FIXTURES SHALL HAVE ACCESSORIES NECESSARY FOR INSTALLATION AS REQUIRED BY ID/ARCHI.
4. "EM" DENOTES COMPLETE WITH INTEGRAL 90 MINUTES BATTERY BACK-UP.
5. ALL LED LIGHTS SHALL BE DIMMABLE AND TO BE COORDINATED WITH LIGHTING CONTROL SYSTEM .
6. ALL FIXTURES SHALL BE PROVIDED WITH FIRE RATED BOX IN RATED CEILING WHERE APPLICABLE.
7. BEFORE ORDERING OF FIXTURES, VERIFY ALL CEILING CLEARANCES WITH ARCHITECT.

LIGHT SENSORS AND CONTROLS

LIGHT CONTROL SYSTEM	MANUFACTURER	MODEL / CATALOG NO.	DESCRIPTION	REMARKS
DUALTECH LOW VOLTAGE CEILING SENSOR (OS2)	EATON	OAC-DT-2000-R	CEILING MOUNTED OCCUPANCY SENSOR	WITH BAS RELAY & DAYLIGHT SENSOR
DUALTECH LOW VOLTAGE CEILING SENSOR (OS1)	EATON	OAC-DT-1000-R	CEILING MOUNTED OCCUPANCY SENSOR	WITH BAS RELAY & DAYLIGHT SENSOR
PIR SENSOR (WATERTIGHT)	HUBBELL	WSP-LWO-UNV-D	CEILING MOUNTED OCCUPANCY SENSOR	FOR SHOWERS
SWITCHPACKS	EATON	SP20-MV	RELAYS AND TRANSFORMERS	HEAVY DUTY
DUALTECH WALL SWITCH SENSOR	EATON	ONW-D-1001-MV	WALL MOUNTED SWITCH SENSOR	GROUND REQUIRED
0-10V DIMMER SENSOR	EATON	OSW-P-010	COMBINED OCCUPANCY SENSOR & DIMMER	
0-10V DIMMER SWITCH	LEVITON	IP710-LF	WALL MOUNTED DIMMER SWITCH	

NOTE 1: MOUNT MOTION DETECTORS TO THE BOTTOM OF THE CEILING. COORDINATE LOCATION WITH ANY MECHANICAL WORK TO AVOID INTERFERENCE. MOUNT MOTION DETECTORS IN ROOMS SUCH THAT MOVEMENT IN THE ROOM SHALL ACTIVATE SENSOR AND TURN ON THE RESPECTIVE LIGHTS. ONCE THE LIGHT ARE ON BY THE MOTION DETECTOR, THEY SHALL REMAIN ON FOR 20 MINUTES (ADJUSTABLE BY OWNER). SENSOR ADJUSTMENT MAY BE NECESSARY.

NOTE 2: PRIOR TO INSTALLATION, EC SHALL ASSURE THAT THERE IS NO IMMEADIATE OBSTRUCTION TO SENSOR, SO IT CAN WORK AS REQUIRED.

NOTE 3: PROVIDE ADDITIONAL SENSORS WHEN REQUIRED TO ACHIEVE THE PROPER FUNCTIONALITY OF THE SYSTEM WITHOUT EXTRA COST TO THE OWNER.

NOTE 4: ANY ACCESSORIES/COMPONENTS REQUIRED FOR THE SYSTEM TO FUNCTION PROPERLY SHALL BE PROVIDED WITHOUT EXTRA COST TO THE OWNER.

NOTE 5: LIGHTING RELAY CONTROL PANELS SHALL BE EATON OR APPROVED EQUAL, PANELS MAY INCLUDE DIMMING FUNCTIONALITY AND OTHER FEATURES PROVIDED BY THE MANUFACTURER.

LIGHTING FIXTURE SCHEDULE & DETAILS

TYPE "A"

TYPE "B"

TYPE "C"

TYPE "D"

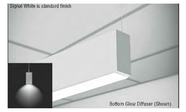
TYPE "D1"

TYPE "D2"

TYPE "E/E1"

TYPE "K"

TYPE "P"



TYPE "P1"

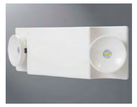
TYPE "S"

TYPE "SW"

TYPE "UC"

TO BE SELECTED BY OWNER

TYPE "WL"



TYPE "EM"

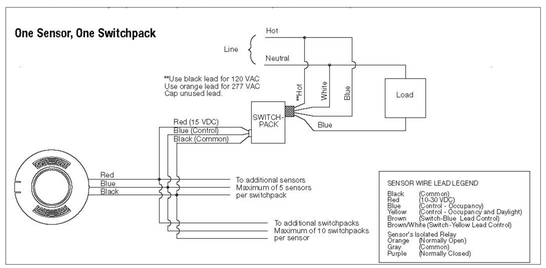
TYPE "OA"

TYPE "EMO"

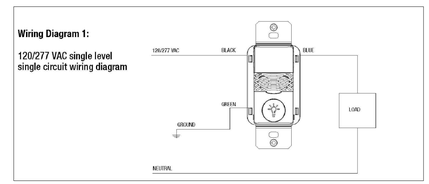
TYPE "EX"

TYPE "EXC"

TYPE "XR"



STAND ALONE CONTROL SCHEMATIC
(CEILING MOUNTED SENSOR)



STAND ALONE CONTROL SCHEMATIC
(WALL MOUNTED SENSOR)

STATE OF MICHIGAN
STEVE F. METTI
ENGINEER
NO. 34833
LICENSED PROFESSIONAL ENGINEER

PARTNERS

PARTNERS in Architecture, PLC
65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

MEP Engineers LLC
Mechanical | Electrical | Plumbing | Energy
380 North Main Street
Clawson, MI 48017
Tel: (248) 488-9822 Fax: (248) 488-9811
Web: www.mepmi.com Email: mep@mepmi.com

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

BUILDING PERMIT	12/19/2018

DRAWN BY

CHECKED BY

APPROVED BY

SHEET NAME

LIGHTING FIXTURE SCHEDULE

SHEET NO. E.303

P:\AA (2018) Projects\(1843-2) MCREST\Production\CAD Files\E.303.dwg

CIRC□IT SI□IN□ SCHED□LES NOTES□

1. BASED ON THHN/THWN, 90°., 600V., INSULATED, COPPER WIRE APPLIED AT 75° FOR TERMINATIONS RATED AT 60°C/75°C AND 75°C. FOR TERMINATIONS RATED AT 60°C PROVIDE WIRE AND CONDUIT SIZES INDICATED IN PARENTHESIS.
2. BASED ON WIRE OUTSIDE DIAMETERS AND RIGID METALLIC CONDUIT INSIDE DIAMETERS AS PROVIDED IN THE NEC. DO NOT REDUCE CONDUIT SIZE FOR NON-RIGID METALLIC APPLICATION. REFER TO NEC FOR CONDUIT TYPES MORE RESTRICTIVE THAN RIGID METALLIC.
3. BASED ON MOTOR FULL LOAD AMPERES AS PROVIDED BY THE NEC.
4. BASED ON MOTOR RUNNING OVERLOAD PROTECTION PROVIDED BY THERMAL OVERLOAD RELAYS.

□EEDER □ BRANCH CIRC□IT SI□IN□ SCHED□LE □□ENERAL P□RPOSE

NOTE:
USE THIS SCHEDULE FOR FEEDERS AND BRANCH CIRCUITS SIZING IF NOT INDICATED ON:
1. ONE LINE AND RISER DIAGRAMS SERIES DRAWING.
2. PANEL SCHEDULES, SPECIFICATION.

OVERCURRENT DEVICE RATING (AMPERES)	WIRE SIZE - AWG OR KCMIL		CONDUIT SIZE			NOTE
	PHASE & NEUTRAL	E.G.	2 WIRE	3 WIRE	4 WIRE (3PH & 1N)	
15–20	12	12	3/4"	3/4"	3/4"	
25–30	10	10	3/4"	3/4"	3/4"	
35–40	8	10	3/4"	3/4"	3/4"	
45–50	8(6)	10	3/4"	3/4"	3/4"(1")	
60	6(4)	10	3/4"(1")	3/4"(1")	1"(1 1/4")	
70	6(4)	8	3/4"(1")	3/4"(1")	1"(1 1/4")	
80–90	4(2)	8	1"	1"(1 1/4")	1 1/4"	
100	3(2)	8	1"(1 1/4")	1 1/4"	1 1/4"	
110	2(1)	6	1 1/4"	1 1/4"(1 1/2")	1 1/4"(1 1/2")	
125	1(1/0)	6	1 1/4"	1 1/2"	1 1/2"(2")	
150	1/0	6	1 1/4"	1 1/2"	2"	
175	2/0	6	1 1/2"	2"	2"	
200	3/0	6	1 1/2"	2"	2"	
225	4/0	4	2"	2"	2 1/2"	
250	250	4	2"	2 1/2"	2 1/2"	
300	350	4	2 1/2"	3"	3"	
350	500	3	3"	3"	3 1/2"	
400	500	3	3"	3"	3 1/2 "	
450	2-4/0	2-2	2-2"	2-2"	2-2 1/2"	
500	2-250	2-2	2-2"	2-2 1/2"	2-2 1/2"	
600	2-350	2-1	2-2 1/2"	2-3"	2-3"	
700	2-500	2-1/0	2-3"	2-3"	2-3 1/2"	
800	2-500	2-1/0	2-3"	2-3"	3-3 1/2"	
1000	3-400	3-2/0	3-2 1/2"	3-3"	3-3"	
1200	4-350	4-3/0	4-2 1/2"	4-3"	4-3"	
1600	5-400	5-4/0	5-2 1/2"	5-3"	5-3"	
2000	6-400	6-250	6-2 1/2"	6-3"	6-3"	
3000	9-400	9-400	9-2 1/2"	9-3"	9-3"	
4000	12-400	12-500	12-2 1/2"	12-3"	12-3 1/2"	

CIRC□IT MA□IM□M DISTANCE TABLES

NOTES:

1. CIRCUIT MAXIMUM DISTANCE IS BASED ON NEC CHAPTER 9, TABLE 8 CONDUCTOR PROPERTIES FOR COATED COPPER CONDUCTORS AT 75 DEGREES CELSIUS.
2. MAXIMUM CIRCUIT LOAD FOR DISTANCE IS BASED ON NEC 220-10(b)

BREAKER AMPACITY (AMPS)	MAX. CIRCUIT LOAD (AMPS)	120V SINGLE PHASE CIRCUIT MAXIMUM DISTANCE IN FEET				
		NO.12	NO.10	NO.8	NO.6	NO.4
20	4	220	349	556	882	–
	8	110	174	278	441	701
	12	73	116	185	294	467
	16	55	87	139	221	350
30	24	–	58	93	147	234
40	32	–	–	70	110	175
50	40	–	–	–	88	140
60	48	–	–	–	–	117

BREAKER AMPACITY (AMPS)	MAX. CIRCUIT LOAD (AMPS)	208V THREE PHASE CIRCUIT MAXIMUM DISTANCE IN FEET				
		NO.12	NO.10	NO.8	NO.6	NO.4
20	4	439	698	1113	–	–
	8	220	349	557	883	–
	12	127	233	371	589	935
	16	95	175	278	442	701
30	24	–	116	186	294	468
40	32	–	–	139	221	351
50	40	–	–	–	177	281
60	48	–	–	–	–	234

BREAKER AMPACITY (AMPS)	MAX. CIRCUIT LOAD (AMPS)	208V SINGLE PHASE CIRCUIT MAXIMUM DISTANCE IN FEET				
		NO.12	NO.10	NO.8	NO.6	NO.4
20	4	380	605	964	–	–
	8	190	302	482	765	–
	12	127	202	321	510	810
	16	95	151	241	382	607
30	24	–	101	161	255	405
40	32	–	–	121	191	304
50	40	–	–	–	153	243
60	48	–	–	–	–	202

SHEET NOTES:

1. RECORD DRAWINGS ARE NOT AVAILABLE AND INFORMATION ARE BASED ON FIELD SURVEY. EC TO FIELD VERIFY.
2. CROSSHATCH DENOTES REMOVAL OF ALL ELECTRICAL ITEMS.

KEY NOTES:

1. FOR FEEDER SIZES, REFER TO TABLE ON THIS SHEET.
2. PROVIDE NEW 200AS/200AF,2P SERVICE RATED DISCONNECT.
3. PROVIDE NEW 200AS/150AF,2P SERVICE RATED DISCONNECT.
4. VERIFY SIZE OF EXISTING C/T CABINET.

PROJECT : MCREST MT CLEMENS, MICHIGAN
PANEL NO. A — 240 /120V — 1 PH ,3W, — 200 AMP. — [X] M.L.O., — 10,000 AIC

DESCRIPTION	POLES & AMPS	VOLT-AMPS A	VOLT-AMPS B	CIRC. NO.	CIRC. NO.	VOLT-AMPS A	VOLT-AMPS B	POLES & AMPS	DESCRIPTION
LAUNDRY-GAS DRYER	1P/20A	1,500		1	2	4000		2P	RANGE
OUTDOOR LIGHTS/PHOTOCELL (EXISTING)	1P/20A		500	3	4		4000	50A	
LAUNDRY-WASHER	1P/20A	1,500		5	6	4000		2P	RANGE
RECEPT.-STOR/LAUNDRY	1P/20A		360	7	8		4000	50A	
RECEPT.-HALL	1P/20A	540		9	10	4000		2P	RANGE
ELECTRIC WATER COOLER	1P/20A		370	11	12		4000	50A	
RECEPT.-ELEC	1P/20A	180		13	14	860		1P/20A	GARBAGE DISPOSAL
RECEPT.-VESTIBULE	1P/20A		180	15	16		860	1P/20A	GARBAGE DISPOSAL
RECEPT.-DINING	1P/20A	900		17	18	860		1P/20A	GARBAGE DISPOSAL
RECEPT.-MECH	1P/20A		180	19	20		1200	1P/20A	DISHWASHER
RECEPT.-FAMILY	1P/20A	540		21	22	1200		1P/20A	DISHWASHER
RECEPT.-SPECIAL NEEDS	1P/20A		720	23	24		1200	1P/20A	DISHWASHER
RECEPT.-OFFICE	1P/20A	720		25	26	1200		1P/20A	REFRIGERATOR
LIGHTING-L.L	1P/20A		633	27	28		1500	1P/20A	RECEPT.-KITCHEN
LIGHTING-L.L	1P/20A	389		29	30	1500		1P/20A	RECEPT.-KITCHEN
ECUH-1	1P/20A		1,500	31	32		1500	1P/20A	RECEPT.-KITCHEN
ECUH-2	1P/20A	1,500		33	34	1500		1P/20A	RECEPT.-KITCHEN
WH CONTROLS	1P/20A		1,000	35	36		500	1P/20A	RANGE HOOD
SUMP PUMP (EXISTING)	1P/20A	1,500		37	38	1000		1P/20A	RECEPT.-RR#3
FACP	1P/20A*		1,000	39	40		1000	1P/20A	RECEPT.-KITCHEN
TOTAL		9,269.0	6,443.0			20,120.0	19,760.0		**TOTAL**

	A	B			TOTAL	
	29,389	26,203			55,592	VA
	LTG.	REC.	MECH.	EQUIP.	TOTAL	
TOTAL CONNECTED LOAD	1,522	14,320	3,000	36,750	55,592	VA
DEMAND LOAD	1,903	12,160	3,750	23,888	41,700	VA
					174	AMP

* PROVIDE LOCK ON DEVICE

PROJECT : MCREST MT CLEMENS, MICHIGAN
PANEL NO. B — 240 /120V — 1 PH ,3W, — 200 AMP. — [X] M.L.O., — 10,000 AIC

DESCRIPTION	POLES & AMPS	VOLT-AMPS A	VOLT-AMPS B	CIRC. NO.	CIRC. NO.	VOLT-AMPS A	VOLT-AMPS B	POLES & AMPS	DESCRIPTION
RECEPT.-OFFICE F.L	1P/20A	720		1	2	540		1P/20A	RECEPT.-DAY SLEEP/STOR. F.L
RECEPT.-LEARNING F.L	1P/20A		1,000	3	4		1000	1P/20A	RECEPT.IT. F.L
RECEPT.-LEARNING F.L	1P/20A	1,000		5	6	720		1P/20A	RECEPT.-B.R#1 S.L
RECEPT.-LEARNING F.L	1P/20A		1,000	7	8		180	1P/20A	RECEPT.-R.R#1 S.L
RECEPT.-LEARNING F.L	1P/20A	1,000		9	10	1500		1P/20A	WASHER/DRYER COMBI S.L
RECEPT.-LEARNING F.L	1P/20A		1,500	11	12		1500	1P/20A	WASHER/DRYER COMBI S.L
RECEPT.-WORKSTATIONS F.L	1P/20A	1,000		13	14	1500		1P/15A	WASHER/DRYER COMBI S.L
RECEPT.-WORKSTATIONS F.L	1P/20A		1,000	15	16		1500	1P/15A	WASHER/DRYER COMBI S.L
RECEPT.-WORKSTATIONS F.L	1P/20A	1,000		17	18	360		1P/20A	RECEPT.-LAUNDRY S.L
RECEPT.-RR#2 F.L	1P/20A		180	19	20		360	1P/20A	RECEPT.-R.R#2&3 S.L
RECEPT.-COMMON F.L	1P/20A	720		21	22	900		1P/20A	RECEPT.-HALL/STAIR + PLAYRM S.L
RECEPT.-COMMON F.L	1P/20A		360	23	24		720	1P/20A	RECEPT.-NIGHT SUPER S.L
RECEPT.-INTERVIEW F.L	1P/20A	720		25	26	540		1P/20A	RECEPT.-B.R#5 S.L
RECEPT.-RECEPTION F.L	1P/20A		540	27	28		540	1P/20A	RECEPT.-B.R#4 S.L
RECEPT.-RECEPTION F.L	1P/20A	540		29	30	720		1P/20A	RECEPT.-B.R#3 S.L
RECEPT.-HALLWAY/WAITING F.L	1P/20A		540	31	32		540	1P/20A	RECEPT.-B.R#2 S.L
PRINTER-F.L	1P/20A	1,500		33	34	676		1P/20A	LIGHTING-F.L
RECEPT.-WAITING/STOR F.L	1P/20A		900	35	36		514	1P/20A	LIGHTING-F.L
RECEPT.-RR#1 F.L	1P/20A	180		37	38	561		1P/20A	LIGHTING-S.L
RECEPT.-OFFICE F.L	1P/20A		720	39	40		500	1P/20A	LIGHTING-S.L
TOTAL		8,380.0	7,740.0			8,017.0	7,354.0		**TOTAL**

	A	B			TOTAL	
	16,397	15,094			31,491	VA
	LTG.	REC.	MECH.	EQUIP.	TOTAL	
TOTAL CONNECTED LOAD	2,251	23,240	-	6,000	31,491	VA
DEMAND LOAD	2,814	16,620	-	3,900	23,334	VA
					97	AMP

PROJECT : MCREST MT CLEMENS, MICHIGAN
PANEL NO. C (EXISTING) — 240 /120V — 1 PH ,3W, — 200 AMP. — [X] M.L.O., — 10,000 AIC

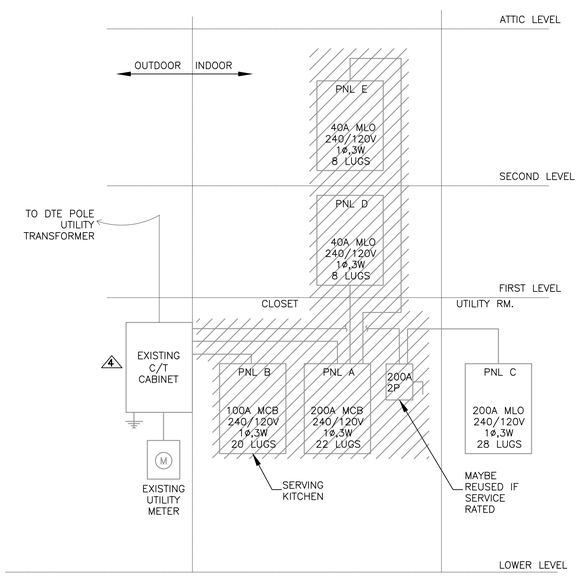
DESCRIPTION	POLES & AMPS	VOLT-AMPS A	VOLT-AMPS B	CIRC. NO.	CIRC. NO.	VOLT-AMPS A	VOLT-AMPS B	POLES & AMPS	DESCRIPTION
ACCU-1	2P	3,840		1	2	1560		1P/20A	F-1
	50A*		3,840	3	4		1560	1P/20A	F-2
ACCU-2	2P	3,840		5	6	1560		1P/20A	F-3
	50A*		3,840	7	8		1560	1P/20A	F-4
ACCU-3	2P	3,840		9	10	180		1P/20A	RECEPT.-STORAGE ATTIC
	50A*		3,840	11	12			1P/20A	SPARE
ACCU-4	2P	3,840		13	14			1P/20A	SPARE
	50A*		3,840	15	16			1P/20A	SPARE
SPARE	1P/20A			17	18			1P/20A	SPARE
SPARE	1P/20A			19	20			1P/15A	SPARE
SPARE	1P/20A			21	22			1P/15A	SPARE
SPARE	1P/20A			23	24			1P/15A	SPARE
SPARE	1P/20A			25	26			1P/15A	SPARE
SPACE				27	28			1P/15A	SPARE
TOTAL		15,360.0	15,360.0			3,300.0	3,120.0		**TOTAL**

	A	B			TOTAL	
	18,660	18,480			37,140	VA
	LTG.	REC.	MECH.	EQUIP.	TOTAL	
TOTAL CONNECTED LOAD	-	180	36,960	-	37,140	VA
DEMAND LOAD	-	180	46,200	-	46,380	VA
					193	AMP

* DENOTES NEW CB

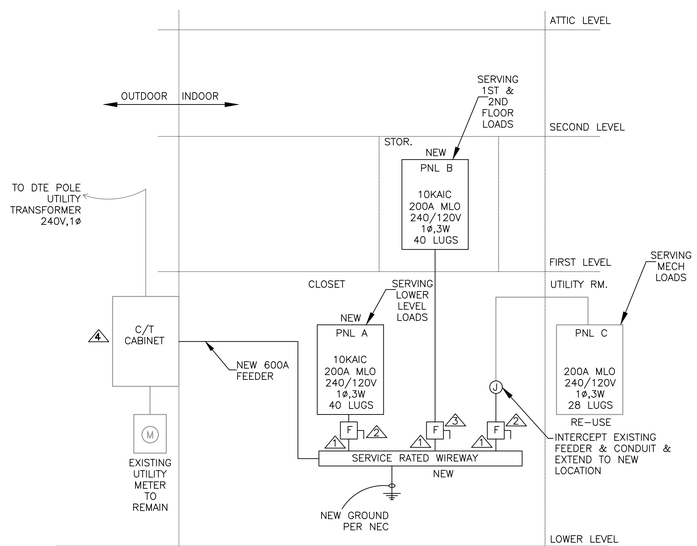
PANEL SCHEDULES

SCALE: NTS



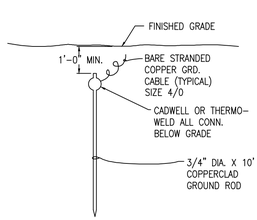
EXISTING POWER DISTRIBUTION (DEMO)

SCALE: NTS



MODIFIED EXISTING POWER DISTRIBUTION

SCALE: NTS



GROUNDING DETAIL

SCALE : NONE

BLDG LOAD CALCULATION

	LIGHTING (VA)	RECEPTACLE (VA)	MECHANICAL (VA)	EQUIPMENT (VA)	TOTAL CONNECTED LOAD (KVA)
PNL A	1,522.00	13,960.00	3,000.00	36,750.00	55.23
PNL B	2,251.00	23,240.00	0.00	6,000.00	31.49
PNL C (Reuse Existing)	0.00	180.00	36,960.00	0.00	37.14
TOTAL CONNECTED LOAD (VA)	3,773.00	37,380.00	39,960.00	42,750.00	123.86
TOTAL DEMAND (VA)	4,716.25	23,690	49,950.00	27,787.50	106.14
Amps @ 240V, 1 ph					442.27
FEEDER SIZE					

STATE OF MICHIGAN
STEVE F. METTI
ENGINEER
No. 34833
LICENSED PROFESSIONAL ENGINEER

PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

MEP Engineers LLC
Mechanical | Electrical | Plumbing | Energy
380 North Main Street
Clawson, MI 48017
Tel: (248) 488-9822 Fax: (248) 488-9811
Web: www.mepmi.com Email: mep@mepmi.com

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team

215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

BUILDING PERMIT	12/19/2018

DRAWN BY

CHECKED BY

APPROVED BY

SHEET NAME

MODIFIED EXISTING POWER DISTRIBUTION

SHEET NO.

E.400

GENERAL

1. PROVIDE ALL ITEMS, ARTICLES, MATERIALS, OPERATIONS OR METHODS LISTED, MENTIONED OR SCHEDULED ON DRAWINGS AND/OR HEREIN SPECIFIED OR REQUIRED, INCLUDING ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY AND REQUIRED FOR THE COMPLETE AND OPERATING SYSTEMS.

2. OBTAIN AND PAY FOR ALL PERMITS, LICENSES, INSPECTIONS, APPROVALS AND FEES REQUIRED AND INSURE THAT THE ENTIRE ELECTRICAL INSTALLATION CONFORMS TO CODES AND REGULATIONS REQUIRED BY AUTHORITY OR AGENCY HAVING JURISDICTION OVER THE INSTALLATION, ALTERATION OR CONSTRUCTION OF WORK INCLUDED.

3. ALL ELECTRICAL WORK SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE (N.E.C.), N.F.P.A., LOCAL AND STATE CODES, ORDINANCES AND REGULATIONS.

4. ELECTRICAL CONTRACTOR SHALL FURNISH ALL EQUIPMENT UNLESS OTHERWISE INDICATED AND PERFORM ALL ELECTRICAL WORK AS REQUIRED TO COMPLETE NEW WORK AND REVISIONS INDICATED ON PLAN OR AS REQUIRED FOR THE SUCCESSFUL OPERATION OF ELECTRICAL SYSTEMS.

5. THE COMPLETED SYSTEMS SHALL BE FULLY OPERATIONAL. ACCEPTANCE BY THE OWNER SHALL BE A CONDITION OF THE CONTRACT.

6. ALL WIRING SHALL BE INSTALLED IN CONDUIT OR METAL RACEWAY. THINWALL CONDUIT SHALL BE USED EXCEPT WHERE RIGID CONDUIT IS REQUIRED BY CODE. ALL CONDUIT IN FINISHED AREAS SHALL BE INSTALLED CONCEALED.

7. CONTRACTOR SHALL INCLUDE ALL MISCELLANEOUS ITEMS REQUIRED TO COMPLETE THE WORK, INCLUDING BUT NOT LIMITED TO THE FOLLOWING: MOVING AND RIGGING OF MATERIALS AND EQUIPMENT, ALL HANGERS, SUPPORTS, ANCHORS, EXPANSION MEANS, CONDUIT, WIRE, FITTINGS, SLEEVES, DEVICES AND BOXES.

8. EXCEPT AS OTHERWISE INDICATED ON PLAN OR HEREIN SPECIFIED, ALL MATERIALS USED SHALL BE NEW AND BEAR THE U.L. LABEL WHERE SUCH SERVICE AND LABEL ARE REGULARLY PROVIDED AND BE OF THE APPROPRIATE NEMA STANDARD.

9. CONTRACTOR SHALL NOT SCALE DRAWINGS FOR DIMENSIONS, BUT SHALL CONTACT THE PROJECT ARCHITECT FOR ALL DIMENSIONAL DATA. FIELD VERIFY EXISTING DIMENSIONS AND CONDITIONS.

10. SUBMIT ELECTRONIC COPY OF ALL EQUIPMENT SHOP DRAWINGS FOR ALL MAJOR PIECES OF ELECTRICAL EQUIPMENT INCLUDING, BUT NOT LIMITED TO THE FOLLOWING:
    A. LIGHTING FIXTURES
    B. FUSED DISCONNECT SWITCHES.
    C. WIRING DEVICES, AND OCCUPANCY SENSORS, AND SURFACE RACEWAY.
    D. STEP-UP TRANSFORMER.

11. ALL WORK REQUIRED FOR THE TELE/SERVER ROOM SHALL BE BY THE OWNERS IT CONTRACTOR-ELECTRICAL CONNECTION SHALL PROVIDE CONDUIT AND OUTLET BOXES COORDINATED WITH THE OWNERS COMMUNICATION CONTRACTOR

12. ON COMPLETION OF WORK, THIS CONTRACTOR SHALL PREPARE "AS-BUILT DRAWINGS". CLEARLY INDICATE ON A SET OF CONTRACT DRAWINGS ALL THE CHANGES MADE DURING CONSTRUCTION, DUE TO FIELD CONDITIONS, ADDENDA, BULLETINS, ETC. DRAWINGS SHALL INDICATE THE INSTALLED LOCATION OF ALL EQUIPMENT, OUTLETS, PANELS, ETC. AND THE INSTALLED CIRCUITING OF ALL DEVICES AND LOADS WITH ACTUAL CIRCUIT NUMBERS USED. CIRCUIT NUMBERS SHOWN ON AS-BUILT DRAWINGS SHALL CORRESPOND WITH REVISED PANEL DIRECTORIES. AS BUILT DRAWINGS SHALL BE DELIVERED TO THE ARCHITECT PRIOR TO FINAL PAYMENT. ALL DRAWINGS MUST BE CLEAR AND ACCEPTABLE TO THE PROJECT ARCHITECT AND ENGINEER. REPRODUCIBLE DRAWINGS WILL BE MADE AVAILABLE FROM THE PROJECT ARCHITECT FOR USE BY THE ELECTRICAL CONTRACTOR IN PREPARING AS-BUILT DRAWINGS.

13. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL TESTS AND INSPECTIONS NECESSARY TO DETERMINE THAT ALL WIRING AND EQUIPMENT INSTALLED UNDER THIS SPECIFICATION IS IN SATISFACTORY CONDITION AND SHALL BE PERFORMED TO THE SATISFACTION OF THE ELECTRICAL INSPECTOR OF THE LOCAL AUTHORITY AND TO ALL OTHERS HAVING JURISDICTION OVER THE ELECTRICAL WORK.

14. PRIOR TO PROJECT CLOSE OUT, THE ELECTRICAL CONTRACTOR SHALL:

A. COMPLETE ALL PUNCH LIST ITEMS.
B. CLEAN PROJECT OF DEBRIS, DUST AND DIRT RESULTING FROM THE INSTALLATION OF ELECTRICAL SYSTEMS.
C. PROVIDE AS-BUILT DRAWINGS AS HEREIN SPECIFIED.
D. PROVIDE ONE SET OF APPROVED SHOP DRAWINGS FOR ALL SHOP DRAWINGS REQUIRED.
E. TURN ALL PANEL BOARD KEYS OVER TO THE OWNER.
F. PROVIDE ALL MANUALS, OPERATING INSTRUCTIONS, ETC. ASSOCIATED WITH ELECTRICAL MATERIALS AND EQUIPMENT. ALL DOCUMENTS TO BE CONTAINED IN A THREE RING BINDER.
G. PERFORM ALL TESTING TO VERIFY SYSTEMS AND EQUIPMENT IS PROPERLY OPERATING AND INSTALLED.
H. PROVIDE A CERTIFICATE OF INSPECTION.
I. PROVIDE GUARANTEE.

DEMOLITION WORK

A. IN GENERAL, DEMOLITION WORK IS INDICATED ON THE DRAWINGS. HOWEVER, THE CONTRACTOR SHALL VISIT THE JOB SITE TO DETERMINE THE FULL EXTENT AND SCOPE OF THIS WORK.
B. UNLESS SPECIFICALLY NOTED TO THE CONTRARY, REMOVED MATERIALS SHALL NOT BE REUSED IN THE WORK. SALVAGED MATERIALS THAT ARE TO BE REUSED SHALL BE STORED SAFE AGAINST DAMAGE AND TURNED OVER TO THE APPROPRIATE TRADE FOR REUSE. SALVAGED MATERIALS OF VALUE THAT ARE NOT TO BE REUSED SHALL REMAIN THE PROPERTY OF THE OWNER UNLESS SUCH OWNERSHIP IS WAIVED. ITEMS ON WHICH THE OWNER WAIVES OWNERSHIP SHALL BECOME THE PROPERTY OF THE CONTRACTOR, WHO SHALL REMOVE AND LEGALLY DISPOSE OF SAME, AWAY FROM THE PREMISES.
C. WHERE EQUIPMENT OR FIXTURES ARE REMOVED AND WALLS REMAIN, OUTLETS SHALL BE PROPERLY BLANKED OFF, CONDUITS CAPPED, AND CONDUCTORS REMOVED BACK TO SOURCE OR NEAREST UPSTREAM DEVICE REMAINING IN SERVICE. AFTER ALTERATIONS ARE DONE, THE ENTIRE INSTALLATION SHALL PRESENT A "FINISHED" LOOK, AS APPROVED BY THE ARCHITECT/ENGINEER. THE ORIGINAL FUNCTION OF THE PRESENT ELECTRICAL WORK TO BE MODIFIED SHALL NOT BE CHANGED UNLESS REQUIRED BY THE SPECIFIC REVISIONS TO THE SYSTEM AS SPECIFIED OR INDICATED.
D. REROUTE SIGNAL WIRES, LIGHTING, AND POWER WIRING AS REQUIRED TO MAINTAIN SERVICE. WHERE WALLS AND CEILINGS ARE TO BE REMOVED AS SHOWN ON THE DRAWINGS, THE CONDUIT IS TO BE CUT OFF BY THE ELECTRICAL TRADES SO THAT THE ABANDONED CONDUIT IN THESE WALLS AND CEILINGS MAY BE REMOVED WITH THE WALLS AND CEILINGS BY THE ARCHITECTURAL TRADES. ALL DEAD-END CONDUIT RUNS SHALL BE PLUGGED AT THE REMAINING LINE OUTLET BOXES OR AT THE PANELS.
E. WHERE NEW WALLS AND/OR FLOORS ARE INSTALLED WHICH INTERFERE WITH EXISTING OUTLETS, DEVICES, ETC., THE ELECTRICAL TRADES SHALL ADJUST, EXTEND AND RECONNECT SUCH ITEMS AS REQUIRED TO MAINTAIN CONTINUITY OF SAME.
F. ALL ELECTRICAL WORK IN ALTERED AND UNALTERED AREAS SHALL BE RUN CONCEALED WHEREVER POSSIBLE. USE OF SURFACE RACEWAY OR EXPOSED CONDUITS WILL BE PERMITTED ONLY WHERE APPROVED BY THE ARCHITECT/ENGINEER.
G. EXISTING LIGHTING SHALL BE REUSED WHERE INDICATED ON PLANS. REUSED FIXTURES SHALL BE DETERGENT CLEANED, RELAMPED AND RECONDITIONED SUITABLE FOR SATISFACTORY OPERATION AND APPEARANCE.
H. REUSING EXISITNG PANELS, EC MAY HAVE TO REWORK EXISITNG CIRCUITRY BY COMBINING LIGHTLY LOADED CIRCUITS TO MAKE ROOM TO ACCEP NEW CIRCUITS. NEW TYPED DIRECTORY TO BE PROVIDED TO REFLECT THE CHANGES.
I. REFERENCE TO EXISTING RISER DIAGRAM AND PANEL SCHEDULES BASED ON RECORD DRAWINGS ARE TO BE VERIFIED IN FIELD BY ELECTRICIAN AND REPORTED TO THE ENGINEER AS REQUIRED.

BASIC MATERIALS AND METHODS

1. EXCEPT AS OTHERWISE SPECIFIED ALL PAINTING TO BE BY ARCHITECTURAL TRADES EXCEPT FOR TOUCH UP OF ELECTRICAL EQUIPMENT. ALL CUTTING AND PATCHING TO BE BY THE ELECTRICAL TRADES. ALL SAW CUTTING OR FLOOR CORING OF THE CONCRETE SLAB AS REQUIRED FOR THE INSTALLATION OF ELECTRICAL WORK SHALL BE BY THE ELECTRICAL TRADES.

2. ALL WALL AND FLOOR PENETRATIONS SHALL BE FIRE RATED TO MAINTAIN RATING OF SURFACE PENETRATED. SEALING SHALL BE WITH 3M # CP25 FIRE PUTTY OR EQUAL.

3. BRANCH CIRCUIT WIRE AND CABLE SHALL BE COPPER WITH 98% CONDUCTIVITY AND SHALL MEET THE TESTS AND STANDARDS SET FORTH BY NEMA, U.L. AND IPCEA. WIRE FOR GENERAL USE SHALL BE COPPER, TYPE THHN/THWN, 90 DEGREES C. ALUMINUM WIRE SHALL NOT BE USED.

4. ALL 120 VOLT CIRCUITS SHALL UTILIZE A SEPARATE NEUTRAL.

5. ALL BRANCH CIRCUITS AND POWER WIRING (NOT INCLUDING LIGHTING) SHALL INCLUDE A SEPARATE INSULATED GREEN GROUND WIRE.

6. ALL WIRING SHALL BE COLORED CODED. PER NEC CODING SCHEME

7. CONDUIT INSTALLED WITHIN WALL CONSTRUCTION OR ABOVE CEILINGS MAY BE MC CABLE ON THINWALL WITH SET SCREW CONNECTIONS. CONDUIT INSTALLED IN CONTACT WITH CONCRETE SHALL BE RIGID STEEL WITH THREADED CONNECTIONS. STEEL CONDUIT ELBOWS AND COUPLINGS SHALL BE HOT DIPPED GALVANIZED AND CONFORM TO THE LATEST ANSI SPECIFICATIONS FOR STEEL CONDUIT, ZINC COATED.

8. LIQUID-TIGHT FLEXIBLE STEEL CONDUIT FOR CONNECTION TO MOTORS AND SPECIAL EQUIPMENT SHALL BE FLEXIBLE STEEL WITH PVC JACKET AND GROUNDING JUMPER.

9. GREENFIELD FLEXIBLE STEEL CONDUIT SHALL BE 1/2" MINIMUM AND INSTALLED IN CEILING SPACE TO CONNECT LIGHTING FIXTURES TO OUTLET BOXES FOR FINAL CONNECTIONS, AS DESCRIBED IN THE N.E.C. AND SHALL HAVE GROUND WIRE IN ANY AND ALL LENGTHS.

10. BOXES SHALL BE GALVANIZED STEEL, CODE THICKNESS, A MINIMUM OF 2 1/2" DEEP AND OF SUFFICIENT SIZE TO ACCOMMODATE THE DEVICES SHOWN, ACCORDING TO N.E.C. REQUIREMENTS. PROVIDE PLASTER RINGS WHERE REQUIRED. PULL BOXES FOR ALL CONDUIT RUNS FOR ALL SYSTEMS SHALL BE INSTALLED AT INTERVALS NOT EXCEEDING 100 FEET OR AFTER 270 DEGREES OF BENDS.

11. ELECTRIC SYSTEM GROUNDING SHALL IN ALL INSTANCES COMPLY WITH THE MINIMUM REQUIREMENTS OF THE N.E.C. METAL ENCLOSURES SHALL BE BONDED TOGETHER AND GROUNDED TO THE BUILDING GROUND SYSTEM.

12. CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND HEIGHT OF ALL OUTLETS WITH ARCHITECTURAL ELEVATIONS PRIOR TO INSTALLATION.

13. GENERAL USE RECEPTACLES SHALL BE DUPLEX, HEAVY DUTY, 2 WIRE, 3 POLE, SELF-GROUNDING TYPE WITH STANDARD PARALLEL SLOTS TO ACCOMMODATE BOTH REGULAR AND GROUND TYPE PLUG CAPS. RECEPTACLES SHALL BE LEVITON HUBBELL 5362 OR AS NOTED ON DRAWINGS.

14. BRANCH CIRCUIT WIRING SHALL BE TERMINATED ON THE RECEPTACLE SCREW TERMINAL, WHERE STRANDED WIRING IS REQUIRED, UTILIZE A TWO PRONG STA-KON TYPE TERMINAL CONNECTOR.

15. GROUP AND NEATLY ARRANGE ALL CONDUCTORS IN PULL BOXES, CABINETS AND PANEL BOARDS BY CIRCUITS. GROUP AND BIND ALL CONDUCTORS OF A FEEDER OR BRANCH CIRCUIT TOGETHER WITH NYLON TIES AND IDENTIFY THERE SERVICE.

16. NEATLY ARRANGE ALL BRANCH CIRCUIT WIRES IN PANELS. CUT OFF ALL SURPLUS WIRE AND TIE ALL CONDUCTORS WITH NON-METALLIC TIES.

17. GENEROUSLY SIZE ALL JUNCTION BOXES TO ALLOW PLENTY OF VOLUME FOR SPLICES AND FUTURE MAINTENANCE AND MODIFICATIONS. JUNCTION BOX VOLUMES REQUIRED BY THE NEC ARE MINIMUM AND IN MANY CASES INADEQUATE FOR THE LIFE CYCLE OF THE FACILITY. PROVIDE LARGER JUNCTION BOXES THAN REQUIRED BY CODE WHERE REQUIRED TO FACILITATE FUTURE MAINTENANCE AND OPERATIONS. DO NOT USE EXTENSION RINGS TO GAIN INCREASED VOLUME.

18. ALL RECEPTACLES SHALL BE LABELED WITH THE PANEL AND CIRCUIT SERVING THE RECEPTACLE. LABEL ALL RECEPTACLE COVERS AS TO THE PANEL BOARD AND CIRCUIT NUMBER IT FEEDS. LABELING SHALL BE ACCOMPLISHED WITH A LABELING MACHINE SIMILAR TO A BRADY ID PRO.

19. DEVICE PLATES IN FINISHED AREAS SHALL BE STAINLESS STEEL OR AS NOTED BY THE ARCHITECT.

20. WHERE NEW CIRCUIT BREAKERS OR FUSIBLE SWITCHES ARE INDICATED TO BE INSTALLED IN EXISTING PANELS, THE NEW CIRCUIT BREAKER OR FUSIBLE SWITCH SHALL BE OF THE SAME MANUFACTURER AS THE EXISTING PANEL AND SHALL MATCH THE EXISTING CIRCUIT BREAKERS OR FUSIBLE SWITCHES. ELECTRICAL CONTRACTOR SHALL UPDATE (RE-TYPE) PANEL DIRECTORY.

21. NAMEPLATES SHALL BE PROVIDED ON ALL PANELBOARDS, MOTOR STARTERS, DISCONNECT SWITCHES, ETC. NAMEPLATES SHALL BE ENGRAVED LAMICOID TYPE WITH BLACK LETTERS ON A WHITE BACKGROUND. THE USE OF DYMO LABELS ARE NOT ACCEPTABLE. LABEL ALL PANEL BOARDS (NEW AND EXISTING SERVING THE AREA OF RENOVATION) AS TO ITS TITLE, FEEDER SOURCE AND VOLTAGE AND PHASING. NAMEPLATES SHALL BE ENGRAVED LAMICOID TYPE WITH BLACK LETTERS ON A WHITE BACKGROUND, PANEL LABELS SHALL BE WITH ¼"HIGH LETTERS.

22. PANLBOARDS SHALL BE PROVIDED WITH TYPED CIRCUIT DIRECTORIES. DIRECTORIES SHALL INDICATE LOAD SERVED FOR ALL CIRCUIT BREAKERS.

LIGHTING REQUIREMENTS AND SPECIFICATIONS

1. ALL NEW LIGHTING FIXTURES SHALL BE UL LISTED, COMPLETE IN EVERY DETAIL, PROPERLY WIRED AND CONNECTED WITH CONDUITS SUPPLYING SAME. ALL FIXTURES SHALL BE COMPLETE WITH LAMPS, BALLASTS AND ALL RELATED ACCESSORIES AS REQUIRED FOR A COMPLETE AND OPERATING SYSTEM.

2. REFER TO THE LIGHTING FIXTURE SCHEDULE SHOWN ON ELECTRICAL DRAWINGS FOR A COMPLETE DESCRIPTION OF ALL LIGHTING FIXTURES.

3. ALL LIGHTING FIXTURES SHALL COMPLY WITH ALL REQUIREMENTS OF STATE AND LOCAL CODES AND THE N.E.C.

4. LAMPS SHALL BE LED.

5. WHERE MULTIPLE SWITCHES ARE INDICATED TO BE INSTALLED AT A SINGLE LOCATION, SWITCHES ARE TO GANGED UNDER A SINGLE COVERPLATE.

6. LIGHTING SWITCHES. TOGGLE SWITCHES SHALL BE UL LISTED, HEAVY DUTY GRADE RATED FOR 20A AND 120V/277 VOLTS
   - DOUBLE POLE SWITCHES SHALL BE AS MANUFACTURED BY LEVITON MODEL NO. 1221-S OR APPROVED EQUAL.
   - 3-WAY SWITCHES SHALL BE AS MANUFACTURED BY LEVITON, MODEL NO. 1223S-S SERIES OR APPROVED EQUAL.

7. LIGHTING SWITCHES SHALL BE AS MANUFACTURED BY LEVITON OR APPROVED EQUAL.

8. ALL DIMMING SWITCHES SHALL BE THE 0-10V DIMMING AS MANUFACTURED BY LEVITON OR APPROVED EQUAL.

OCCUPANCY SENSORS

1. WALL-MOUNTED OCCUPANCY SWITCHES SHALL USE PASSIVE INFRARED (PIR) AND/OR ULTRASONIC (US) MOTION DETECTION.

2. WALL-MOUNTED OCCUPANCY SENSOR SWITCHES SHALL USE PIR TO INITIALLY DETECT MOTION AND TURN ON LIGHTS. EITHER PIR AND/OR US SHALL BE USED TO KEEP LIGHTS ON WHILE OCCUPIED.

3. WALL-MOUNTED OCCUPANCY SENSOR SHALL BE COMPATIBLE WITH INCANDESCENT, MAGNETIC, OR ELECTRONIC LOW VOLTAGE, LED AS WELL AS MOTOR LOADS.

4. SWITCH SHALL BE MICROPROCESSOR CONTROLLED WITH AUTO-ADAPTING LEARNING PROCESS THAT AUTOMATICALLY ADJUSTS SENSITIVITY AND TIME DELAY BASED ON OCCUPANCY PATTERNS.
5. SHALL BE CAPABLE OF DETECTING OCCUPANCY WITH TRUE, 180 DEGREES FIELD OF VIEW.

6. WALL-MOUNTED OCCUPANCY SENSOR SHALL HAVE PUSHBUTTON FOR MANUAL ON AND OFF, WHICH TIES OUT BASED UPON OCCUPANCY DETECTION.

7. A LED SHALL INDICATE OCCUPANCY STATUS.

8. US SENSITIVITY SHALL BE USER ADJUSTABLE.

9. WALL-MOUNTED OCCUPANCY SENSOR SHALL HAVE MANUAL PIR RANGE, PHOTOCELL, AND TIME SETTINGS SHALL BE USER-CONFIGURABLE.

10. THE UNIT SHALL FIT IN A STANDARD BOX AND USE A STANDARD WALLPLATE, WHICH IS GANGABLE.

11. WALL SWITCH SHALL NOT PROTRUDE MORE THAN 0.4 INCHES FROM BOX.

12. WALL SWITCH SHALL BE DECORA STYLE UNIT WITH A MATCHING WALL PLATE AVAILABLE.

PANELBOARDS (240V OR LESS)

1. PANELBOARDS SHALL BE SQUARE D OR APPROVED EQUAL.

2. MANUFACTURER SHALL WARRANT THE PANELBOARD FOR ONE YEAR FROM THE DATE OF INSTALLATION.

3. INTERIOR
   3.A. INTERIOR SHALL BE TYPE NQ OR NQOD PANELBOARD RATED FOR 240VAC MAXIMUM. CONTINUOUS MAIN RATINGS AS INDICATED ON DRAWINGS.
   3.B. MINIMUM SHORT CIRCUIT RATING OF 22000 IN RMS SYMMETRICAL AMPERES AT 240VAC.
   3.C. THE BUSSING SHALL BE FULLY RATED. EACH BUS BAR SHALL HAVE SEQUENTIALLY PHASE BRANCH CIRCUIT CONNECTORS SUITABLE FOR PLUG-ON OR BOLT-ON BRANCH CIRCUIT BREAKERS. BUSSING SHALL BE COPPER.
   3.D. A SOLID AL/CU EQUIPMENT GROUND BAS SHALL BE PROVIDED.
   3.E. INTERIOR SHALL BE FIELD CONVERTIBLE FOR TOP/BOTTOM INCOMING FEED.

4. ENCLOSURE
   4.A. BOXES SHALL BE HOT ZINC DIPPED GALVANIZED STEEL WITH ENCLOSURE PROPERLY NEMA RATED FOR THE INSTALLED ENVIRONMENT.

5. INSTALLATION
   5.A. INSTALL PANELBOARDS IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.

LOW VOLTAGE OUTLETS

1. UNLESS OTHERWISE NOTED, PROVIDE AN EMPTY CONDUIT RACEWAY SYSTEM TO SERVE LOW VOLTAGE OUTLETS INDICATED ON PLAN.

2. WALL OUTLETS SHALL BE DOUBLE GANG WITH PLASTER RING, FLUSH MOUNTED.

3. PROVIDE A 3/4" CONDUIT FROM THE WALL OUTLET TO THE CEILING SPACE. BUSH THE END OF ALL CONDUITS. NO CONDUIT LESS THAN 3/4 " SHALL BE USED. CONDUITS SHALL BE GROUNDED.

4. EXACT LOCATION OF ALL OUTLETS TO BE COORDINATED WITH ARCHITECTURAL TRADES IN THE FIELD. HEIGHT OF OUTLETS SHALL MATCH DUPLEX RECEPTACLES UNLESS OTHERWISE NOTED ON PLAN.

FIRE ALARM SYSTEM

1. PROVIDE COMPLETE, NON-CODED MICROPROCESSOR BASED ADDRESSABLE FIRE ALARM SYSTEM WITH INITIATING DEVICES, NOTIFY APPLIANCES AND MONITORING AND CONTROL DEVICES AS INDICATED ON THE DRAWINGS. SYSTEM SHALL MEET LOCAL/STATE FIRE MARSHALL REQUIREMENTS.

2. SYSTEM BE SUPPLIED AND INSTALLED BY IQ LIFE SAFETY SYSTEM.

STATE OF MICHIGAN
STEVE F. METTI
ENGINEER
NO. 34833
LICENSED PROFESSIONAL ENGINEER

PARTNERS

PARTNERS in Architecture, PLC
65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

CONSULTANT

MEP Engineers LLC
Mechanical | Electrical | Plumbing | Energy
380 North Main Street
Clawson, MI 48017
Tel: (248) 488-9822 Fax: (248) 488-9811
Web: www.mepmi.com Email: mep@mepmi.com

KEY PLAN

OWNER

MCREST
20415 Erin
Roseville, MI 48066

PROJECT NAME

MCREST
Macomb County
Rotating Emergency
Shelter Team
215 S. Main St.
Mt Clemens, MI 48043

PROJECT NO.

17-179

ISSUES / REVISIONS

BUILDING PERMIT 12/19/2018

DRAWN BY

CHECKED BY

APPROVED BY

SHEET NAME

ELECTRICAL SPECIFICATIONS

SHEET NO. E.500

P:\AA (2018) Projects\1843-2) MCREST\Production\CAD Files\E.500.dwg