Crestwood School District
Cherry Hill Baptist Church

Administration Relocation and Addition

Crestwood School District
1045 North Gulley Rd. Dearborn, MI, 48127
Contact Name: Penny Morgan, CFO
Contact Phone: (313) 278-2349

ARCHITECT:

EHRESMAN ARCHITECTS
803 W. Big Beaver Road, Suite 350, Troy, MI 48084 | 248.244.9710
ehresmanarchitects.com

LANDSCAPE ARCHITECT:

deak PLANNING + DESIGN
143 CADYCENTRE #79
NORTHVILLE, MI 48168
248.444.7892

CIVIL ENGINEER:

SPALDING DeDECKER
Engineering and Surveying
Excellence Since 1954
905 South Blvd. East
Rochester Hills, MI 48307
Phone: (248) 844-5400
Fax: (248) 844-5404
www.sdengr.com
(800) 598-1600

STRUCTURAL ENGINEER:

IMEG
33533 W 12 MILE
SUITE 200
FARMINGTON HILLS, MI
48331
PH: 248.344.2800
FAX: 248.344.1650
www.imegcorp.com

MECH. / ELECT. ENGINEER:

Peter Basso Associates Inc
CONSULTING ENGINEERS
5145 Livernois, Suite 100
Troy, Michigan 48098-3276
Tel: 248-879-5666
Fax: 248-879-0007
www.pbanet.com

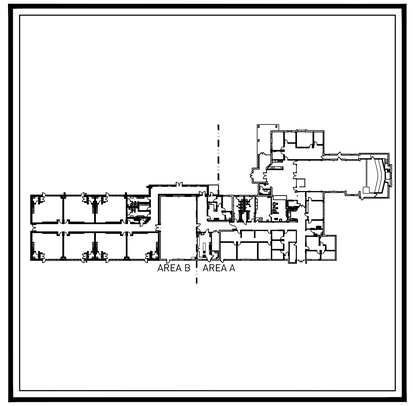
TECHNOLOGY CONSULTANT:

W&H WRIGHT HUNTER

Cherry Hill Baptist Church
1045 North Gulley Road
Dearborn, MI, 48127

LOCATION PLAN

NOT TO SCALE



BUILDING KEY PLAN

NOT TO SCALE

APPLICABLE CODES:

MICHIGAN REHABILITATION CODE FOR EXISTING BUILDINGS:	2015 EDITION
MICHIGAN BUILDING CODE:	2015 EDITION
MICHIGAN PLUMBING CODE:	2018 EDITION
MICHIGAN MECHANICAL CODE:	2015 EDITION
NATIONAL ELECTRIC CODE (WITH MICHIGAN PART 8 RULES):	2017 EDITION
MICHIGAN UNIFORM ENERGY CODE:	2015 EDITION
ASHRAE 90.1-2013:	
LIFE SAFETY CODE 101:	2012 EDITION
FEDERAL ADA LAW:	CURRENT ED.
ACCESSIBLE AND USABLE BUILDINGS & FACILITIES (ANSI A117.1):	2009 EDITION
LICENSING RULES FOR CHILD CARE CENTERS	2019 EDITION
REHABILITATION CODE	

USE GROUP:

EXISTING USE: A-3 RELIGIOUS & I-4 CHILDCARE

NEW USE: B BUSINESS & I-4 CHILDCARE

ZONING DISTRICT:

R-1 SINGLE FAMILY RESIDENTIAL

CONSTRUCTION TYPE:

III-B, NOT SPRINKLED

TOTAL FLOOR AREA:

EXISTING FLOOR AREA: 17,711 SF
ADDITION FLOOR AREA: 8,905 SF
TOTAL FLOOR AREA: 26,616 SF (GROSS FLOOR AREA)

BUILDING HEIGHT:

EXISTING: ± 19'-3" TO MIDPOINT OF HIGHEST SLOPE

ADDITION: ± 15'-0" TO TOP OF PARAPET

DEFERRED SUBMITTALS:

PER SECTION 107.3.4.1, ANY REQUIRED SUBMITTALS WILL BE SUBMITTED TO THE AUTHORITY HAVING JURISDICTION BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE ASSUMING THE DUTIES OF CONSTRUCTION SUPERVISION AT THE APPROPRIATE TIME.

DEFERRED SUBMITTALS:
1. FIRE ALARM SYSTEMS

LIST OF ALTERNATES:

ALTERNATE #1: BOARD ROOM IMPROVEMENTS
THE PORTION OF WORK TO BE ADDED TO THE BASE PROPOSAL INCLUDES THE FOLLOWING. ALL FINISHES, MECHANICAL, ELECTRICAL, AND TECHNOLOGY WORK AS INDICATED ON THE DRAWINGS TO IMPROVE THE BOARD ROOM. CONTRACTOR TO REFER TO DRAWINGS AND / OR SPECIFICATIONS FOR FURTHER INFORMATION.

LIST OF DRAWINGS

LIST OF DRAWINGS

Bidding and Permits: 31 July 2023

Title Sheet

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

TTL

803 W. Big Beaver Road, Suite 350, Troy, MI 48084 | 248.244.9710

ABBREVIATIONS

A

ABV.	ABOVE
A.F.F.	ABOVE FINISH FLOOR
ACC.	ACCESS
ACC, PNL.	ACCESS PANEL
ACT	ACOUSTICAL CEILING TILE
ADD.	ADDENDUM
ADDN.	ADDITION
ADJ.	ADJACENT
A/C	AIR CONDITIONING
A.C.C.	AIR CONDITIONING COMPRESSOR
A.C.C.U.	AIR COOLED CONDENSING UNIT
A.H.U.	AIR HANDLING UNIT
AL.	ALIGN
ALT.	ALTERNATE
ALUM./AL.	ALUMINUM
ANCH.	ANCHOR
A.B.	ANCHOR BOLT
&	AND
ANG./L OR ∠	ANGLE
ANOD.	ANODIZED
APT.	APARTMENT
APPR.	APPROVED
APPROX.	APPROXIMATE
ARCH.	ARCHITECT/ARCHITECTURAL
A.T.M.	AUTOMATIC TELLER MACHINE
ASPH.	ASPHALT
ASSY.	ASSEMBLY
@	AT
AUTO.	AUTOMATIC
AUX.	AUXILIARY
AVG.	AVERAGE

B

B/B.	BACK TO BACK
B.F.P.	BACK FLOW PREVENTER
B.D.D.	BACK DRAFT DAMPER
B.F.	BARRIER FREE
B.B.R	BASE BOARD RADIATION
B. PL	BASE PLATE
BSMT.	BASEMENT
BM	BEAM
B/C	BACK OF CURB
BRG	BEARING
B.M.	BENCHMARK
BT	BENT
BETW.	BETWEEN
BEV.	BEVEL
BIT.	BITUMINOUS
B.I.	BLACK IRON
BLK	BLOCK
BLKG	BLOCKING
BD	BOARD
BLR	BOILER
BK. SH.	BOOK SHELVES
BOT.	BOTTOM
BOT. EL.	BOTTOM ELEVATION
BLVD.	BOULEVARD
BDRY	BOUNDARY
BRKT	BRACKET
BTU	BRITISH TERMINAL UNIT
BLDG.	BUILDING
B.U.R.	BUILT UP ROOFING
BUZZ.	BUZZER

C

CAB.	CABINET
CAP.	CAPACITY
CAR.	CARPET

C (CONTINUED):

C.T.	CAST IRON
C.B.	CATCH BASIN
CLG.	CEILING
CLG. HT.	CEILING HEIGHT
CEM.	CEMENT
CEM. PLAS.	CEMENT PLASTER
CTR	CENTER
℄	CENTER LINE
CER.	CERAMIC
C.T.	CERAMIC TILE
C.BD.	CHALKBOARD
CHAN. OR	CHANNEL
CHWE	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CIRCUM. ℄	CIRCUMFERENCE
CR. BRK.	CIRCUIT BREAKER
CL	CLASSROOM
C.O.	CLEANOUT
CLR.	CLEAR
CL.	CLOSER
CW	COLD WATER
COL.	COLUMN
CO.	COMPANY
CA	COMPRESSED AIR
CONC.	CONCRETE
C.M.U.	CONCRETE MASONRY UNITS
CWR	COLD WATER RETURN
CWS	COLD WATER SUPPLY
COND.	CONDUIT
CONF.	CONFERENCE
CONST.	CONSTRUCTION
C.J.	CONTROL JOINT
CONT.	CONTINUE/CONTINUOUS
CONTR.	CONTRACTOR
C.P.	CONTROL PANEL
CONV.	CONVECTOR
CRS.	COURSE
COV.	COVER
COV. PL	COVER PLATE
CU. FT	CUBIT FEET/CUBIC FOOT
CFV	CONTRACTOR FIELD VERIFY
CULV	CULVERT
CYL.	CYLINDER
CYC.	CYCLE(S)
CIRCUM.	CIRCUMFERENCE

D

DMPR	DAMPER
DMPG	DAMPPROOFING
D.L.	DEAD LOAD
DB	DECIBEL
D.	DEEP
DMT, PARTN.	DEMOUNTABLE PARTITION
DEPT.	DEPARTMENT
DEPR.	DEPRESSED
DES.	DESIGN
DET.	DETAIL
D.E.C.	DETROIT EDISON COMPANY
DIAG.	DIAGONAL
DIA. OR Ø	DIAMETER
DIFF.	DIFFUSER
DIM.	DIMENSION
DIR.	DIRECTION
DISC.	DISCONNECT
DW	DISHWASHER
DISP.	DISPENSER
DIST.	DISTANCE
D.P.	DISTRIBUTION PANEL
DIV.	DIVIDER/DIVISION

D (CONTINUED):

DR.	DOOR
D.O.	DOOR OPENING
DR. OP	DOOR OPERATOR
DBL.	DOUBLE
D.H.	DOUBLE HUNG
DWL.	DOWEL
DN.	DOWN
D.S.	DOWNSPOUT
DRN.	DRAIN
D.T.	DRAIN TILE
D.T.C.	DRAIN TILE CONNECTOR
DWR	DRAWER
DWG	DRAWING
D.F.	DRINKING FOUNTAIN
DUP	DUPLICATE

E

EA	EACH
E.F.	EACH FACE
E.W.	EACH WAY
E	EAST
E.I.F.S.	EXTERIOR INSULATION FINISH SYSTEM
ELAST.	ELASTOMETIC
ELEC.	ELECTRIC/ELECTRICAL
ELEC. CAB.	ELECTRICAL CABINET
E.C.	ELECTRICAL CONTRACTOR
E.P.	ELECTRICAL PANEL
E.W.C.	ELECTRIC WATER PANEL
ELEC. OPER.	ELECTRICALLY OPERATED
EL.	ELEVATION
ELEV.	ELEVATOR
EMERG.	EMERGENCY
ENCL.	ENCLOSURE
ENGR.	ENGINEER
ENTR.	ENTRANCE
EP.	EPOXY
EPDM.	ETHYLENE PROPYLENE DIENE MONOMER
EQ.	EQUAL
EQUIP.	EQUIPMENT
EQUIV.	EQUIVALENT
ESC.	ESCALATOR
EST.	ESTIMATE
EXC.	EXCAVATED
EXH.	EXHAUST
E.F.	EXHAUST FAN
(E)	EXISTING
E.C.U.	EXISTING CONDITIONS UNKNOWN
ETR	EXISTING TO REMAIN
EXP.	EXPANSION
E.J.	EXPANSION JOINT
EXP'D	EXPOSED
EXT'N	EXTENSION
EXT	EXTERIOR
E.H.	EXTRA HEAVY
EXTR.	EXTRUDED

F

FAB	FABRICATED
F.FIN.	FACTORY FINISH
FAS.	FASTENER
FT OR'	FOOT OR FEET
FPM	FEET PER MINUTE
FN	FENCE
F.V.	FIELD VERIFY
FIG	FIGURE
FIN.	FINISH/FINISHED
FIN. FLR/ F.F.	FINISHED FLOOR
F.A.	FIRE ALARM

F (CONTINUED):

F.D.	FIRE DAMPER
F.E.	FIRE EXTINGUISHER
F.E.C.	FIRE EXTINGUISHER CABINET
FLASH	FLASHING
F.C.	FLEXIBLE CONNECTION
FLR	FLOOR
F.C.O.	FLOOR CLEANOUT
F.D.	FLOOR DRAIN
FLR. FIN	FLOOR FINISH
FLUOR.	FLUORESCENT
FTG	FOOTING
FDN	FOUNDATION
FR	FRAME
FRMG	FRAMING
FRZR.	FREEZER
FURN.	FURNISH
FURR.	FURRING
FUT.	FUTURE

G

GA.	GAUGE
GALV.	GALVANIZED
G.	GAS
GSKT	GASKET
G.V. & B.	GATE VALVE AND BOX
G.R.	GUARD RAIL
GEN'L	GENERAL
GL.	GLASS/GLAZING
G.H.T.	GLAZED HARD TILE
G.B.	GRAB BAR
GRN	GRANITE
G.T.	GREASE TRAP
GND	GROUND
G.F.I.	GROUND FAULT INTERRUPTER
GT	GROUT
GYP.	GYPSUM
GYP. BD.	GYPSUM BOARD

H

H.C.	HANDICAPPED
H.R.	HANDRAIL
HDW	HARDWARE
HDWD.	HARDWOOD
HD	HEAD
HDR.	HEADER
HTR	HEATER
H/V	HEATING AND VENTILATING
H.V.A.C	HEATING, VENTILATING & AIR CONDITIONING
HHWR	HEATING HOT WATER RETURN
HHWS	HEATING HOT WATER SUPPLY
HT	HEIGHT
HEX.	HEXAGON
H.	HIGH
H.I.D.	HIGH INTENSITY DISCHARGE
H.P.	HIGH POINT
H.PR.	HIGH PRESSURE
H.S.	HIGH STRENGTH
H.V.	HIGH VOLTAGE
HWY	HIGHWAY
H.C.	HOLLOW CORE
H.M.	HOLLOW METAL
HK	HOOK
HORIZ.	HORIZONAL
HO	HORSEPOWER
H.B.	HOSE BIB
H.W.	HOT WATER
H.W.H.	HOT WATER HEATER
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY

H (CONTINUED):

HR	HOUR
HYD.	HYDRANT

I

I.D.	INSIDE DIMENSION
INCAND.	INCANDESCENT
IN. OR "	INCHIES)
INCL.	INCLUDE/INCLUDING
I/W	INDIRECT WASTER
INFO	INFORMATION
INST'L	INSTALL/INSTALLATION
INSUL.	INSULATE/INSULATION
INT.	INTERIOR
INTER.	INTERMEDIATE
INV.	INVERT
I.E.	INVERT ELEVATION

J

J.C.	JANITOR CLOSET
JT	JOINT
JST	JOIST
J.B.	JUNCTION BOX

K

K.P.	KICKPLATE
KV	KILOVOLT
KVA	KILOVOLT AMPERE
KW	KILOWATT
K	KIP (1000#)
KIT.	KITCHEN
K.D.	KNOCKDOWN
K.O.P.	KNOCK OUT PANEL

L

LBL.	LABEL
LAB.	LABORATORY
LAD.	LADDER
L.B.	LAG BOLT
LAM.	LAMINATE/LAMINATED
LDG	LANDING
LGE	LARGE
LDRY	LAUNDRY
LAV.	LAVATORY
L.H.	LEFT HAND
LGTH OR L	LENGTH
LEV	LEVEL
LT.	LIGT
LTG	LIGHTING
L.P.	LIGHTING PANEL
LMS	LIMESTONE
LTL	LINTEL
L.F.	LINEAR FOOT/FEET
LIQ.	LIQUID
L.L.	LIVE LOAD
LOC.	LOCATION
LG	LONG
L.L.H.	LONG LEG HORIZONTAL
L.L.V.	LONG LEG VERTICAL
LVR	LOUVER
L.O.	LOUVER OPENING
L.P.	LOW POINT
L.PR.	LOW PRESSURE
LBS. OR #	POUNDS

M

MACH.	MACHINE
M.A.U.	MAKE-UP AIR UNIT
M.D.P.	MAIN DISTRIBUTION PANEL
M.S.B	MAIN SWITCH BOARD
MAINT.	MAINTENANCE
M.H.	MANHOLE
MFR.	MANUFACTURER
MAR.	MARBLE
M.O.	MASONRY OPENING
MAX.	MAXIMUM
MECH.	MECHANICAL
NED.	MEDIUM
MEMB.	MEMBRANE
MET.	METAL
M.D.S.	METAL DIVIDER STRIP
M.E.	METAL EDGE
M.L.	METAL LATH
M.L.&PLAS.	METAL LATH & PLASTER
M.T.	MARBLE THRESHOLD
MEZZ.	MEZZANINE
MDOT	MICHIGAN DEPARTMENT OF TRANSPORTATION
MIN.	MINIMUM
MISC.	MISCELLANEOUS
MTD	MOUNTED
MTG	MEETING

N

NRC	NOISE REDUCTION COEFFICIENT
NOM.	NOMINAL
N.	NORTH
N.I.C	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
NO. OR #	NUMBER

O

OBS	OBSCURE
O.C.	ON CENTER
OPQ.	OPAQUE
OPG.	OPENING
OPER.	OPERATOR
OPP.	OPPOSITE
ORN.	ORNAMENTAL
OZ.	OUNCE
O.A.	OUTSIDE AIR
O.D.	OUTSIDE DIAMETER
O.A.	OVERALL
OHD	OVERHEAD
O.F.	OVERFLOW

P

PTD	PAINTED
PR	PATCH AND REPAIR
PNL.	PANEL
P.T.D.	PAPER TOWEL DISPENSER
PKG	PARKING
P.BD.	PARTICLE BOARD
PASS.	PASSAGE
PVMT	PAVEMENT
PED	PEDESTAL
PERF.	PERFORATED
PLAS.	PLASTER
P.LAM.	PLASTIC LAMINATE
PL.	PLATE
PLBG	PLUMBING
PLWD	PLYWOOD
PT	POINT
POL.	POLISH(ED)
PVC	POLYVINYLCHLORIDE

P (CONTINUED):

PORC.	PORCELAIN
PORC.ENAM.	PORCELAIN ENAMEL
POR.	POROUS
PLF	POUNDS PER LINEAR FOOT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PCF	POUNDS PER CUBIC FOOT
P.P.	POWER PANEL
P/C	PRECAST
PREFAB	PREFABRICATE
PFN	PREFINISHED
P.T.	PRESSURE TREATED
P.G.	PRESSURE GAUGE
P.R.V.	PRESSURE REDUCING VALVE
PRIM.	PRIMARY
PROJ.	PROJECT/PROJECTION
PROP.	PROPERTY/PROPOSED
P.L.	PROPERTY LINE
P.A.	PUBLIC ADDRESS
P.S.	PURSE SHELF
P.B.	PUSH BUTTON

Q

QTY	QUANTITY
Q.T.	QUARRY TILE
QTR	QUARTER
QTR.RD.	QUARTER ROUND

R

R.	RISER
RAD. OR R.	RADIUS
R.C.	ROOF CONDUCTOR
R.R.	RAILROAD
REF.	REFER/REFERENCE
REFL.	REFLECTIED)
REFR.	REFRIGERATOR
REINF.	REINFORCE(MENT)
REQ'D	REQUIRED
R.A.	RETURN AIR
REV.	REVISED/REVISION
RPM	REVOLUTIONS PER MINUTE
R.H.	RIGHT HAND
R.O.W.	RIGHT OF WAY
RD	ROAD
RF	ROOF
R.D.	ROOF DRAIN
R.S.	ROOF SUMP
R.T.U.	ROOFTOP UNIT
RM	ROOM
R.O.	ROUGH OPENING
R.B.	RUBBER BASE

S

SAN.	SANITARY
S.N.D.	SANITARY NAPKIN DISPENSER
S.N.R.	SANITARY NAPKIN RECEPTACLE
SCHED.	SCHEDULE
STG.	SEATING
SEC	SECTION
SERV.	SERVICE
SHT	SHEET
SHWR	SHOWER
SIM	SIMILAR
S.D.	SOAP DISPENSER
S.C.	SOLID CORE
STC	SOUND TRANSMISSION CLASS
S	SOUTH

S (CONTINUED):

S	SOUTH
SP	SPACE
SPKR	SPEAKER
SPEC.	SPECIFICATIONS
SQ.	SQUARE
S.F.	SQUARE FEET
S.S.	STAINLESS STEEL
STD	STANDARD
STM	STEAM
STL	STEEL
STOR	STORAGE
ST.	STREET
STRUCT.	STRUCTURAL
SUSP.	SUSPEND(ED)
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
SYM.	SYMBOL
SYS.	SYSTEM

T

T.BD	TACKBOARD
TECH	TECHNICAL
TEL.	TELEPHONE
TV	TELEVISION
TEMP	TEMPORARY
TERR.	TERRAZZO
T.	THERMOSTAT
THRU	THROUGH
T&G	TONGUE AND GROOVE
T&B	TOP AND BOTTOM
T/C	TOP OF CURB
T/F	TOP OF FOOTING
T/G	TOP OF GUTTER
TRFR	TRANSFORMER
T	TREAD
T.D.	TRENCH DRAIN
TYP.	TYPICAL

U

U.C.	UNDERCUT
U.G.	UNDERGROUND
UL	UNDERWRITER'S LABORATORY
UNFIN.	UNFINISHED
U.H.	UNIT HEATER
U.V.	UNIT VENTILATOR
U.N.O.	UNLESS NOTED OTHERWISE
UR	URINAL

V

VAR	VARIABLE
VARN.	VARNISH
VNR.	VENEER
V.	VENT
VTR	VENT THRU ROOF
V.I.F.	VERIFY IN FIELD
V.M.	VERIFY WITH MANUFACTURER
VS	VERSUS
VERT.	VERTICAL/VERTICALLY
VEST.	VESTIBULE
VCT	VINYL COMPOSITION TILE
V.R.S.	VINYL REDUCER STRIP
VIT.	VITREOUS
VOL.	VOLUME
V	VOLTS

W

WAINS.	WAINSCOT
W.C.O	WALL CLEANOUT
W.H.	WALL HYDRANT
W.V.	WALL VENT
W.F.	WASH FOUNTAIN
W.	WASTE
W.C.	WATER CLOSET
W.H.	WATER HEATER
WP	WATERPROOF
WT.	WEIGHT
W.W.F.	WELDED WIRE FABRIC
W	WEST
W.	WIDE/WIDTH
W.B.	WALL BASE
W.O.	WINDOW OPENING
W.M.	WIRE MESH
W/	WITH
W/O	WITHOUT
WD	WOOD
W.P.	WORKING POINT

Y

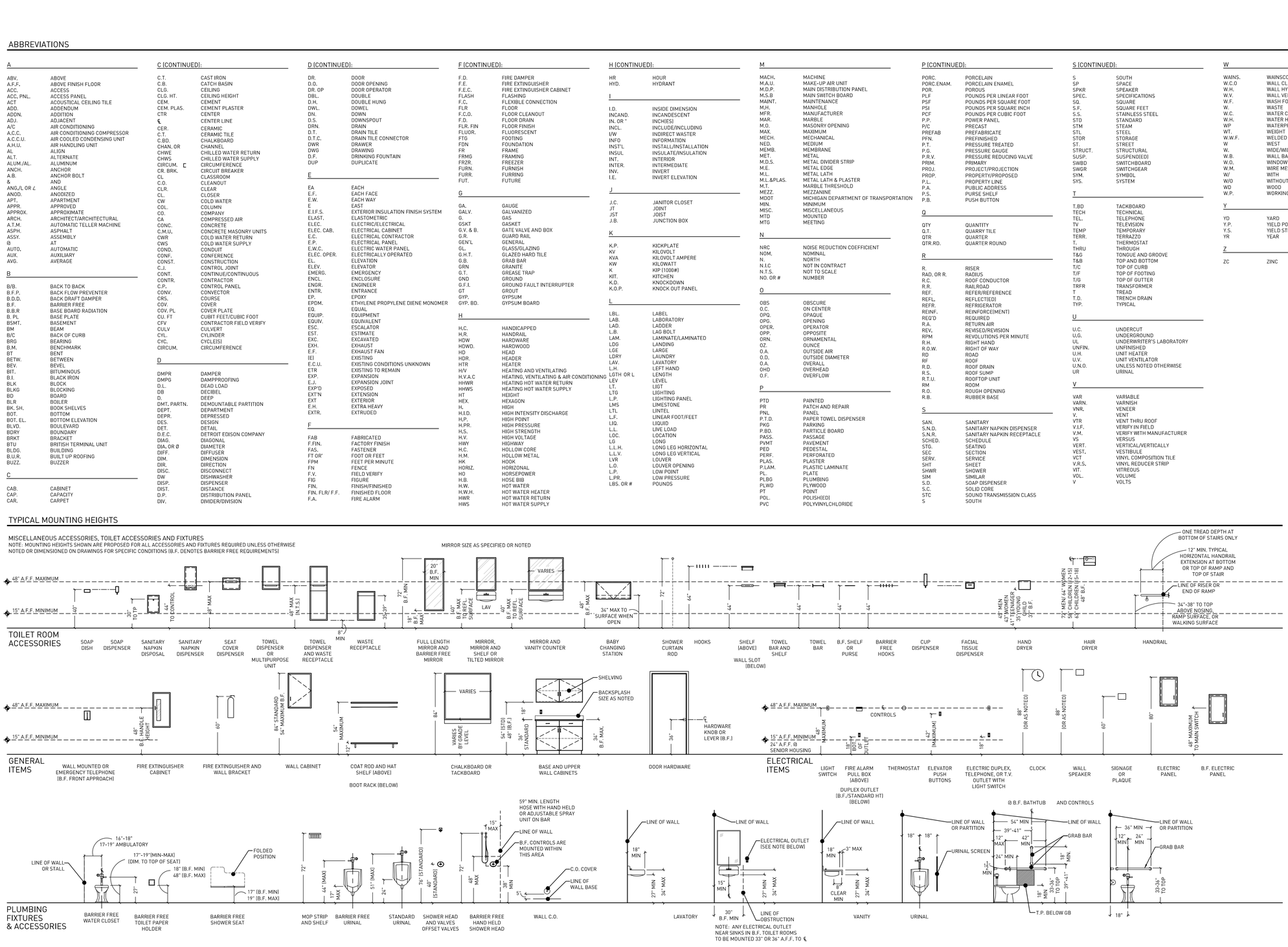
YD	YARD
Y.P.	YIELD POINT
Y.S.	YIELD STRENGTH
YR	YEAR

Z

ZC	ZINC

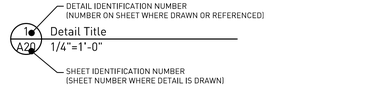
TYPICAL MOUNTING HEIGHTS

MISCELLANEOUS ACCESSORIES, TOILET ACCESSORIES AND FIXTURES
NOTE: MOUNTING HEIGHTS SHOWN ARE PROPOSED FOR ALL ACCESSORIES AND FIXTURES REQUIRED UNLESS OTHERWISE NOTED OR DIMENSIONED ON DRAWINGS FOR SPECIFIC CONDITIONS (B.F. DENOTES BARRIER FREE REQUIREMENTS)

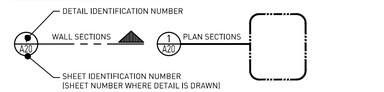


REFERENCE SYMBOLS

DETAIL IDENTIFICATION



DETAIL LOCATION INDICATION



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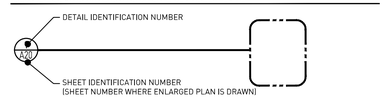

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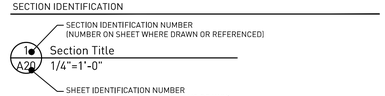

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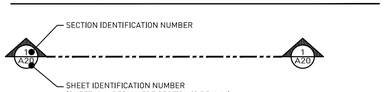
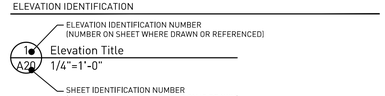


ELEVATION IDENTIFICATION



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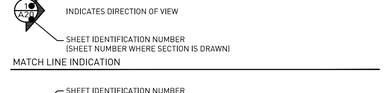
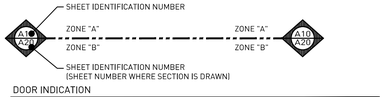
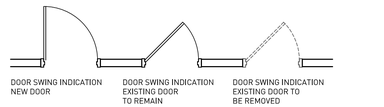


MATCH LINE INDICATION



DOOR INDICATION



ROOM NAME AND NUMBER

ROOM NAME
100

DOOR IDENTIFICATION

A

COLUMN INDICATION

A — COLUMN IDENTIFICATION LETTER OR NUMBER FOR NEW CONSTRUCTION

1 — COLUMN IDENTIFICATION LETTER OR NUMBER FOR EXISTING CONSTRUCTION

NORTH INDICATION

Bidding and Permits: 31 July 2023

General Information

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

A0.00

803 W. Big Beaver Road, Suite 350, Troy, MI 48084 | 248.244.9710

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. PHASING PLAN ISSUED FOR REFERENCE ONLY.

LEGEND:

PHASE 1	ESTIMATED OCTOBER 2023 - MARCH 2024
PHASE 2	ESTIMATED APRIL 2024 - AUGUST 2024
PHASE 3	ESTIMATED JUNE 2024 - AUGUST 2024

1 A0.05 Composite Phasing Plan
Scale: 3/32"=1'-0"

STATE OF MICHIGAN
ELIZABETH SUE BYE
ARCHITECT
No. 1301054283
LICENSED ARCHITECT

Bidding and Permits: 31 July 2023

Composite Phasing Plan

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

A0.05

803 W. Big Beaver Road, Suite 350, Troy, MI 48084 | 248.244.9710

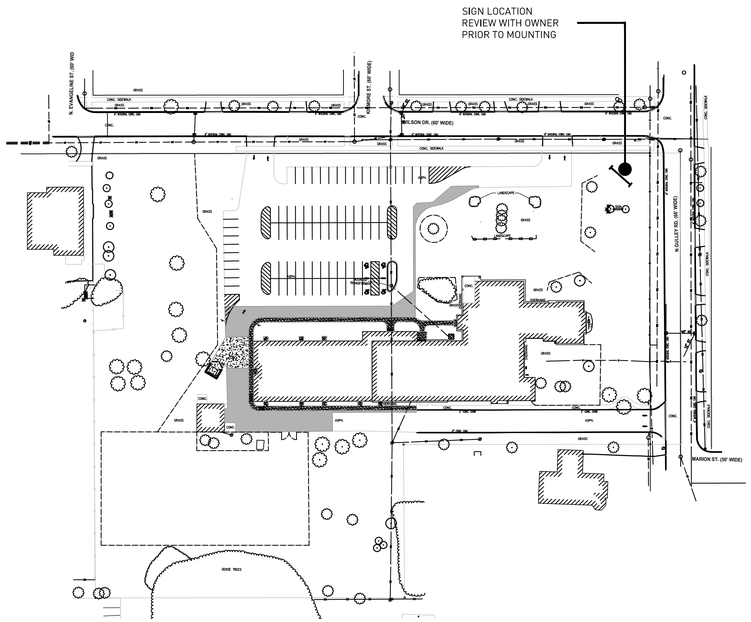
GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

DRAWING NOTES:

1. "COMING SOON" SIGNAGE MOUNTED ON TWO 4x4 WOOD POST.

2 A0.08 Sign Layout
Scale: NOT TO SCALE



1 A0.08 Sign Install Location
Scale: NOT TO SCALE

STATE OF MICHIGAN
ELIZABETH SUE BYE
ARCHITECT
No. 1301054283
LICENSED ARCHITECT

Bidding and Permits: 31 July 2023

Project Identification Sign

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

A0.08

803 W. Big Beaver Road, Suite 350, Troy, MI 48084 | 248.244.9710

TOPOGRAPHICAL SURVEY

CRESTWOOD SCHOOL DISTRICT
CHERRY HILL BAPTIST CHURCH

1045 N. GULLEY RD., DEARBORN HEIGHTS, MICHIGAN 48127

LEGEND

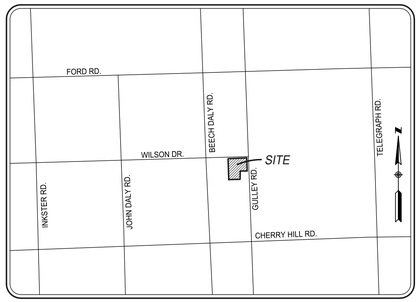
- MANHOLE
- CATCH BASIN
- SEWER CLEAN OUT
- GAS METER
- GAS SHUT OFF VALVE
- VALVE BOX
- GATE VALVE & WELL
- WATER SHUT OFF VALVE
- FIRE HYDRANT
- SPRINKLER VALVE BOX
- LAWN SPRINKLER HEAD
- HAND HOLE
- ELECTRIC RISER OR METER
- TELEPHONE RISER
- CABLE TV RISER
- AIR CONDITION UNIT
- UTILITY POLE
- UTILITY POLE W/ TRANSFORMER
- UTILITY POLE W/ LAMP EXTENSION (ARROW INDICATES DIRECTION OF ARM)
- LIGHT POLE
- LIGHT POLE WITH LAMP EXTENSION
- TRAFFIC SIGNAL
- POLE W/ TRAFFIC SIGNAL (OVER ROAD)
- GUY WIRE
- GUY POLE
- GROUND LEVEL / DECORATIVE LIGHTING
- FLAG POLE
- PHONE OR PHONE BOOTH
- METAL OR CONC. POST
- MAILBOX
- SIGN
- WATER FOUNTAIN
- PARKING METER
- BILLBOARD OR LARGE SIGN
- BASKETBALL HOOP
- BOULDER
- STATUE OR SCULPTURE
- BENCH
- STUMP
- DOWNSPOUT INTO STORM DRAIN
- DOWNSPOUT TO GROUND
- CONIFEROUS TREE
- DECIDUOUS TREE
- DECIDUOUS SHRUB
- CONIFEROUS SHRUB
- SECTION CORNER
- TRAVERSE POINT
- STRUCTURE NUMBER
- SDA POINT No.
- SPOT ELEVATION

TC	TOP OF CURB ELEVATION
GU	GUTTER ELEVATION
TP	TOP OF PAVEMENT ELEVATION
EM	EDGE OF METAL ELEVATION
TW	TOP OF WALK ELEVATION
T/WALL	TOP OF WALL ELEVATION
B/WALL	BOTTOM OF WALL ELEVATION
GR	GROUND ELEVATION
UG	UNDERGROUND
FO	FIBER OPTIC
CONC	CONCRETE
ASPH	ASPHALT
FF	FINISH FLOOR ELEVATION
DL	DOOR LEDGE ELEVATION

- F.I. FOUND IRON
- F.M. FOUND MONUMENT
- F.P.K. FOUND P.K. NAIL
- S.I. SET IRON W/SDA CAP
- S.P.K. SET P.K. NAIL
- S.P.K./TAG SET P.K. NAIL W/SDA TAG
- MAG SET MAGNETIC NAIL
- MAG/TAG SET MAGNETIC NAIL W/SDA TAG

M	MEASURED
R	RECORD
C	CALCULATED
INV.	INVERT ELEVATION
CMP	CORRUGATED METAL PIPE

- G — GAS
- SN — SANITARY SEWER (SAN)
- ST — STORM SEWER (STM)
- WM — WATERMAIN (WM)
- OH — OVERHEAD WIRE
- COMBINED SEWER
- STE — STEAM LINE
- O — OIL LINE
- E — UG ELECTRIC (ELEC.)
- T — UG PHONE (PH)
- C — UG CABLE (CBL)
- CHAIN LINK FENCE (CL)
- WOOD FENCE
- WOVEN WIRE FENCE (WW)
- GUARD RAIL
- EDGE OF BRUSH/WOODS
- CENTERLINE OF DITCH
- CULVERT
- BANK/TOP OF SLOPE
- 650 — MAJOR CONTOUR
- 651 — MINOR CONTOUR
- BOUNDARY LINES
- ROW LINES
- SECTION LINES
- PROPERTY LINES
- ASPHALT
- CONCRETE
- GRAVEL
- BRICK / PAVERS
- WATER



LOCATION MAP

NOT TO SCALE

BENCHMARK DESCRIPTIONS

DATUM: GPS-DERIVED NAVD'88

SITE BM#100 — SET PK NAIL ON SOUTH FACE OF UTILITY POLE, LOCATED ON SOUTH SIDE OF WILSON DR. AND ±15 FEET EAST OF KINMORE ST.
ELEV.=625.03'

SITE BM#101 — SET PK NAIL ON WEST FACE OF UTILITY POLE, LOCATED ON EAST SIDE OF N. GULLEY RD. AND ±15 FEET SOUTH OF THE CENTERLINE OF WILSON DR.
ELEV.=626.25'

SITE BM#102 — SET PK NAIL ON WEST FACE OF UTILITY POLE, LOCATED NORTHEAST CORNER OF N. GULLEY RD. AND MARION ST.
ELEV.=625.46'

SURVEYOR'S COMMENTS

1. THIS TOPOGRAPHICAL MAP IS BASED UPON A FIELD SURVEY PERFORMED BY SPALDING DEDECKER INC. DURING OCTOBER OF 2021.
2. THE PROPERTY LINES/RIGHT-OF-WAY LINES SHOWN ON THIS TOPOGRAPHICAL SURVEY ARE INTENDED TO BE AN APPROXIMATE GRAPHICAL REPRESENTATION BASED UPON A COMBINATION OF A PROVIDED LEGAL DESCRIPTION, FOUND FIELD MONUMENTATION AND OCCUPATION. A COMPLETE PROPERTY LINE ANALYSIS HAS NOT BEEN PERFORMED AND PROPERTY CORNERS HAVE NOT BEEN SET IN THE FIELD PER THE AGREED TO SCOPE OF SERVICES.
3. THIS SURVEY HAS BEEN PREPARED WITH THE BENEFIT OF A CURRENT TITLE SEARCH, A 40 YEAR INFORMATIONAL TITLE SEARCH BY ASK SERVICES HAVING AN ORDER NUMBER OF 10782915 AND AN EFFECTIVE DATE OF 10-07-2021 HAS BEEN PROVIDED TO SPALDING DEDECKER. ALL PLOTTABLE ENCUMBRANCES LISTED ON SCHEDULE B-II EXCEPTIONS OF THIS TITLE SEARCH HAVE BEEN SHOWN ON THIS SURVEY IF THEY FALL WITHIN THE LIMITS OF DETAILED MAPPING. FURTHERMORE, EACH PLOTTABLE EXCEPTION IS DETAILED ON THE 'INFORMATIONAL TITLE EXCEPTION COMMENTS' TABLE ON THIS SURVEY.
4. THE BASIS OF BEARINGS FOR THIS SURVEY IS THE STATE PLANE GRID AND THE UNITS ARE INTERNATIONAL FEET AS ESTABLISHED WITH RTK GPS MEASUREMENTS USING A DATA LINK TO THE MDOT CONTINUOUSLY OPERATING REFERENCE STATIONS (CORS). THE COORDINATE SYSTEM FOR THIS SURVEY IS THE STATE PLANE COORDINATE SYSTEM, MICHIGAN SOUTH ZONE (2113) BASED ON NAD83 (2011).
5. PROPERTY LINES HAVE BEEN ROTATED TO STATE PLANE GRID BEARINGS; THEREFORE, THE BEARINGS OF THE PROPERTY LINES ON THE DRAWING WILL NOT MATCH THOSE SHOWN IN THE LEGAL DESCRIPTION.
6. THE VERTICAL DATUM OF THIS SURVEY IS BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AS ESTABLISHED WITH RTK GPS MEASUREMENTS USING A DATA LINK TO THE MDOT CONTINUOUSLY OPERATING REFERENCE STATIONS (CORS).
7. THE PARKING LOT STRIPING SHOWN ON THIS SURVEY IS APPROXIMATE. DIMENSIONAL AND/OR ORIENTATION VARIATIONS MAY EXIST. THIS DRAWING SHOULD NOT BE USED FOR A PARKING SPACE COUNT.
8. THE UTILITY INFORMATION SHOWN ON THIS SURVEY IS BASED UPON A COMBINATION OF RECORD INFORMATION AND FIELD MEASUREMENTS. A MISS DIG DESIGN TICKET NUMBER OF B012712247 HAS BEEN REFERENCED TO THIS PROJECT AND A UTILITY PROVIDER CHART IS SHOWN ON THIS DRAWING. THERE ARE NO ASSURANCES THAT ALL PROVIDERS HAVE RESPONDED AND THE SURVEYOR DOES NOT GUARANTEE THAT ALL UNDERGROUND UTILITIES ARE SHOWN AND/OR POSITIONED PROPERLY ON THIS DRAWING DUE TO AMBIGUOUS PLANS AND RECORDS PROVIDED TO US. THE INFORMATION SHOWN ON THIS DRAWING IS INTENDED TO BE USED AS A GUIDE FOR POSSIBLE UNDERGROUND UTILITY CONFLICTS, IT IS THE RESPONSIBILITY OF OTHERS TO RESOLVE THE ACTUAL LOCATION OF ANY UNDERGROUND UTILITY THROUGH THE MISS DIG FIELD VERIFICATION SYSTEM PRIOR TO ANY SITE EXCAVATION. CALL 811 OR 800-482-7171.

LEGAL DESCRIPTION

SOURCE: ASK SERVICES
OWNER: CHERRY HILL BAPTIST CHURCH
TAX PARCEL ID: 33-030-99-0001-700
ADDRESS: 1045 N GULLEY RD, DEARBORN HEIGHTS, MI 48127

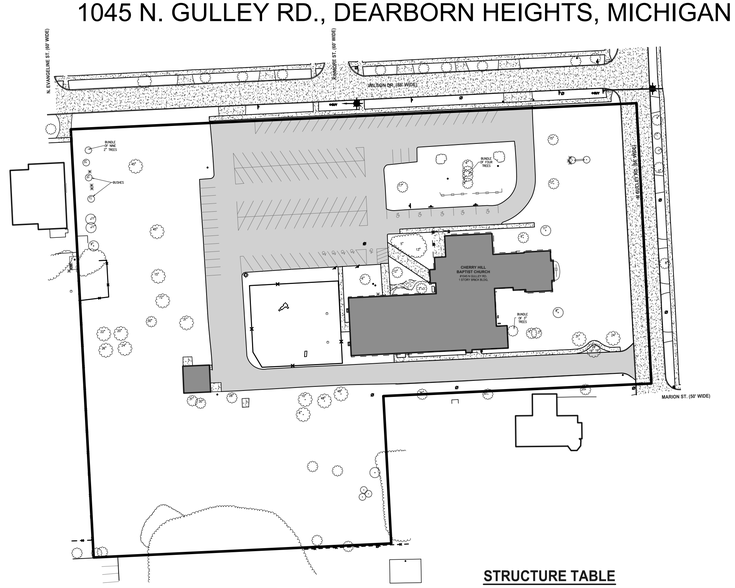
17A1A1 B1 B2A C3A N 3/4 OF E 633 FT OF THE N 1/2 OF THE NW 1/4 OF SW 1/4 SEC 17 T2S R10E EXC N 17 FT THEREOF ALSO EXC E 300 FT OF S 165 FT THEREOF 5.83AC.

INFORMATIONAL TITLE EXCEPTION COMMENTS

COMMITMENT ISSUED BY: ASK SERVICES
COMMITMENT NUMBER: 10782915
EFFECTIVE DATE: 10/07/2021

QUIT CLAIM DEED
RECORDED DATE: 07-03-1979
LIBER/PAGE: 20625 / 234
SDA COMMENTS:

WARRANTY DEED
RECORDED DATE: 07-03-1961
LIBER/PAGE: 14499 / 476
REMARKS: PART, B2a, C3a
SDA COMMENTS:



STRUCTURE TABLE

#	TYPE	RIM	SIZE	MTRL	INVERT	DIRECTION	CONNECT
1	**STORM MANHOLE**	623.69	18"	RCP	613.03	WEST	4
			18"	RCP	613.24	NORTH	24
			12"	RCP	617.39	EAST	2
	TOP / WATER	613.34					
	TOP / DEBRIS	611.49					
	BOTTOM	610.84					
	FLOW DIRECTION:	WEST					
2	**SQUARE CATCH BASIN**	623.20	12"	RCP	617.75	WEST	1
			10"	RCP	617.85	NORTH	3
			6"	CLAY	617.90	ESE	EDGE DRAIN
	TOP / WATER	617.75					
	TOP / DEBRIS	616.85					
	BOTTOM	616.30					
	FLOW DIRECTION:	SOUTHWEST					
3	**SQUARE CATCH BASIN**	623.14	12"	RCP	618.14	SOUTH	2
			6"	PVC	618.44	NE	EDGE DRAIN
	TOP / WATER	618.14					
	BOTTOM	617.99					
	FLOW DIRECTION:	SOUTH					
4	**STORM MANHOLE**	623.27	18"	RCP	612.87	WEST	25
			18"	RCP	612.97	EAST	1
			12"	RCP	616.37	NORTH	5
	TOP / WATER	612.87					
	BOTTOM	610.87					
	FLOW DIRECTION:	WEST					
5	**SQUARE CATCH BASIN**	622.45	12"	RCP	616.45	SOUTH	4
			12"	RCP	617.30	NORTH	6
			6"	CLAY	616.90	WEST	EDGE DRAIN
			6"	CLAY	616.90	EAST	EDGE DRAIN
	TOP / WATER	616.45					
	BOTTOM	615.20					
	FLOW DIRECTION:	SOUTH					
6	**SQUARE CATCH BASIN**	622.60	12"	RCP	617.60	SOUTH	5
	2FT INLET		6"	CLAY	617.80	NE	EDGE DRAIN
			6"	CLAY	617.90	WEST	EDGE DRAIN
	TOP / WATER	617.60					
	TOP / DEBRIS	617.60					
	BOTTOM	617.30					
	FLOW DIRECTION:	SOUTH					
7	**GATE VALVE & WELL**	623.94					
	8IN MAIN. PIPES RUN N/S						
	TOP / PIPE	618.44					
	TOP / WATER	619.74					
	BOTTOM	617.24					

#	TYPE	RIM	SIZE	MTRL	INVERT	DIRECTION	CONNECT
8	**GATE VALVE & WELL**	623.62					
	PIPES RUN N/S						
	TOP / PIPE	616.02					
	TOP / WATER	619.82					
	TOP / DEBRIS	615.62					
9	**GAS MANHOLE**	624.86					
	GAS MH, LOCKED SHUT						
10	**GAS MANHOLE**	624.68					
	GAS VALVE, PIPES RUN E/W						
	TOP / PIPE	619.28					
	BOTTOM	616.58					
11	**GATE VALVE & WELL**	624.54					
	PIPES RUN E/W						
	TOP / PIPE	619.14					
	TOP / WATER	620.24					
	BOTTOM	616.84					
12	**GAS MANHOLE**	624.66					
	GAS MH, LOCKED SHUT						
13	**GATE VALVE & WELL**	624.94					
	12IN MAIN. PIPES RUN N/S						
	TOP / PIPE	619.94					
	TOP / WATER	620.34					
	BOTTOM	618.44					
14	**STORM MANHOLE**						
	REMOVED FROM DRAWING						
	TOP / PIPE						
	TOP / DEBRIS						
	FLOW DIRECTION:						
15	**SEWER MANHOLE**	624.53	15"	CLAY	617.83	SOUTH	19
	HI END MH? COMBO SEWER?						
	TOP / DEBRIS	617.78					
	FLOW DIRECTION:	SOUTH					
16	**GATE VALVE & WELL**	624.78					
	PIPES RUN N/S						
	TOP / PIPE	620.78					
	TOP / DEBRIS	621.28					
17	**SQUARE CATCH BASIN**	623.71	10"	RCP	621.90	EAST	18
			6"	CPP	621.81	NORTH	EDGE DRAIN
			6"	CPP	621.81	SOUTH	EDGE DRAIN
	TOP / WATER	621.81					
	TOP / DEBRIS	620.71					
	BOTTOM	617.31					
	FLOW DIRECTION:	EAST					

#	TYPE	RIM	SIZE	MTRL	INVERT	DIRECTION	CONNECT
18	**SQUARE CATCH BASIN**	623.61	12"	METAL	618.00	SW	
	12INTRAP TO SW		10"	RCP	620.21	WEST	17
	TOP / WATER	618.26					
	BOTTOM	616.36					
	FLOW DIRECTION:	SOUTHWEST					
19	**SEWER MANHOLE**	624.73	18"	CLAY	615.98	SOUTH	
			15"	CLAY	616.08	NORTH	15
			12"	RCP	617.33	SE	
	BOTTOM	616.03					
	FLOW DIRECTION:	SOUTH					
20	**ROUND CATCH BASIN**	624.90	12"	RCP	622.30	SOUTH	
	2FT INLET						
	TOP / WATER	622.30					
	TOP / DEBRIS	622.20					
	BOTTOM	621.90					
	FLOW DIRECTION:	SOUTH					
21	**SQUARE CATCH BASIN**						
	REMOVED FROM DRAWING						
	TOP / WATER						
	TOP / DEBRIS						
	FLOW DIRECTION:						
22	**SQUARE CATCH BASIN**						
	REMOVED FROM DRAWING						
	TOP / DEBRIS						
	FLOW DIRECTION:						
23	**GATE VALVE & WELL**	625.41					
	8IN MAIN RUNS E/W						
	TOP / PIPE	619.81					
	TOP / WATER	619.31					
	BOTTOM	618.71					
24	**STORM MANHOLE**	622.85	18"	RCP	614.20	SOUTH	1
	OUTSIDE OF DETAILED AREA		18"	RCP	614.55	NORTH	
			8"	METAL	614.95	NE	
			12"	RCP	616.65	EAST	
	TOP / WATER	614.20					
	TOP / DEBRIS	611.60					
	BOTTOM	611.25					
	FLOW DIRECTION:	SOUTH					
25	**STORM MANHOLE**	623.51	24"	RCP	611.71	WEST	
			18"	RCP	612.26	NORTH	
			18"	RCP	612.26	EAST	4
	TOP / WATER	611.71					
	TOP / DEBRIS	610.31					
	BOTTOM	610.01					
	FLOW DIRECTION:	WEST					

THE STRUCTURE TABLE ON THIS DRAWING IDENTIFIES THE AS-SURVEYED UNDERGROUND UTILITY MANHOLES THAT WERE FIELD MEASURED USING REASONABLE AND TRADITIONAL SURVEYING PRACTICES. PIPE SIZES, DIRECTIONS AND ELEVATIONS ARE INDICATED BY A COMBINATION OF FIELD EVIDENCE AND AVAILABLE RECORD INFORMATION. UNDERGROUND UTILITY PIPE SIZES AND CONNECTIONS ARE MANY TIMES AMBIGUOUS, SOME STRUCTURES MAY HAVE PIPES WITH UNKNOWN CONNECTIONS, SUMPS AND / OR PIPES THAT ARE FILLED WITH DEBRIS. IT WILL BE UP TO THE DESIGN ENGINEER TO LOOK AT THE PRESENTED SURVEY RESULTS AND DECIDE IF FURTHER INVESTIGATION BY OTHER METHODS SUCH AS VACUUM CLEAN OUT, UNDERGROUND RADAR, SMOKE TESTING AND PHYSICAL EXCAVATION IS REQUIRED AS AN ADDITIONAL SERVICE.

UTILITY CHART

UTILITY PROVIDER	MISS-DIG RESULTS	DATE	CONTACT	CONTACT #	CONTACT EMAIL
ATT	RECEIVED	10/2/2021	LINDA DENNISUK	248-456-8256	LD2154@ATT.COM
COMCAST	RECEIVED	10/14/2021	CRAIG PUDAS	248-809-2715	CRAIG_PUDAS@CABLE.COMCAST.COM
DETROIT EDISON	RECEIVED	10/12/2021		313-235-5632	DESIGN_MISSDIG@DTEENERGY.COM
DEARBORN CITY	RECEIVED	9/28/2021	JOHN SCHEUHER	313-943-2455	JSCHEUHE@CI.DEARBORN.MI.US
DEARBORN HEIGHTS CITY	RECEIVED	9/30/2021	JOHN SELMI	313-791-6000	JSELMI@CI.DEARBORN-HEIGHTS.MI.US
DTE GAS DISTRIBUTION	RECEIVED	10/7/2021	BARBARA SAUNDERS	313-235-5111	SAUNDERSB@DTEENERGY.COM
WIDE OPEN WEST	RECEIVED	9/29/2021	JOHN HAJEC	734-237-4319	JOHN.HAJEC@WOWINC.COM
URBINT, INC.	NOT RECEIVED	NA	MIKE JONE	714-600-2456	

SPALDING DEDECKER
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Fax (248) 844-5404

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Phone (313) 305-9120
Fax (313) 305-9121

27333 Meadowbrook Rd., Suite 210
Novi, MI 48377
Phone (248) 844-6274

400 Ann St. NW, Suite 204
Grand Rapids, MI 49504
Phone (616) 885-5802

www.sda-eng.com
(800) 598-1600

0' 80' 160'
SCALE: 1" = 80'

CLIENT:

CRESTWOOD SCHOOL DISTRICT
27235 JOY RD.
DEARBORN HEIGHTS, MI 48127

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

PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING UTILITIES (IN CONFLICT WITH PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIELD. CALL MISS DIG 3 WORKING DAYS PRIOR TO CONSTRUCTION.

UTILITY NOTE

UTILITY INFORMATION ON THIS DRAWING MAY BE FROM INFORMATION DISCLOSED TO THIS FIRM BY THE VARIOUS UTILITY COMPANIES, CITY/COUNTY AGENCIES AND OTHER VARIOUS SOURCES. UNDERGROUND UTILITIES WHICH ARE ON PRIVATE PROPERTY ARE USUALLY NOT DELINEATED UPON A UTILITY COMPANY'S PUBLISHED PLANS. THEIR LOCATION, IF SHOWN UPON THIS SURVEY, ARE APPROXIMATED FROM FOUND PAINT MARKS/STAKES, ETC. AS LOCATED BY THIS FIRM FROM SOURCES WHICH ARE UNKNOWN, NO GUARANTEE IS GIVEN AS TO THE COMPLETENESS OR ACCURACY THEREOF.

CHERRY HILL
BAPTIST CHURCH
1045 N. GULLEY RD.

DEARBORN HEIGHTS, MI

TOPOGRAPHICAL SURVEY

SECTION 17
TOWN 02 SOUTH RANGE 10 EAST
CITY OF DEARBORN HEIGHTS
WAYNE COUNTY, MICHIGAN

NO.	DATE	REVISION
1	6-8-23	ADDED OH WIRE

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DRAFTER: M.VAPHIADIS	DATE: 11-30-2021
CHECKED: D.JACKSON	DATE: 11-30-2021
FIELD LEADER: D.HARRIS	PROJECT SURVEYOR: D.JACKSON
PROJECT MANAGER: D.JACKSON	DEPARTMENT MANAGER: G.PLATZ
JOB NO.: NP21120	DRAWING NO.: NP21120TPG
SCALE: 1" = 80'	SHEET NO.: 1 OF 2

Plotted: Jul 25, 2023, 12:54 PM by user: 1101 – Saved: 7/25/2023 by user: 1101
N:\NP\NLD Projects\NP21120 – Crestwood Schools – Cherry Hill Baptist Church\Survey\DWG\NP21120TPG.dwg

LEGEND

- MANHOLE
- CATCH BASIN
- CO SEWER CLEAN OUT
- GM GAS METER
- GAS SHUT OFF VALVE
- VALVE BOX
- GATE VALVE & WELL
- WATER SHUT OFF VALVE
- FIRE HYDRANT
- SB SPRINKLER VALVE BOX
- LAWN SPRINKLER HEAD
- HAND HOLE
- E ELECTRIC RISER OR METER
- T TELEPHONE RISER
- C CABLE TV RISER
- AC AIR CONDITION UNIT
- UTILITY POLE
- UTILITY POLE W/ TRANSFORMER
- UTILITY POLE W/ LAMP EXTENSION (ARROW INDICATES DIRECTION OF ARM)
- LIGHT POLE
- LIGHT POLE WITH LAMP EXTENSION
- TRAFFIC SIGNAL
- POLE W/ TRAFFIC SIGNAL (OVER ROAD)
- GUY GUY WIRE
- GP GUY POLE
- GROUND LEVEL / DECORATIVE LIGHTING
- FLAG POLE
- PB PHONE OR PHONE BOOTH
- METAL OR CONC. POST
- MB MAILBOX
- SIGN
- WATER FOUNTAIN
- PARKING METER
- BILLBOARD OR LARGE SIGN
- BASKETBALL HOOP
- BOULDER
- STATUE OR SCULPTURE
- BENCH BENCH
- STUMP
- DS-S DOWNSPOUT INTO STORM DRAIN
- DS-G DOWNSPOUT TO GROUND
- CONIFEROUS TREE
- DECIDUOUS TREE
- DECIDUOUS SHRUB
- CONIFEROUS SHRUB
- SECTION CORNER
- SDA#10 TRAVERSE POINT
- (1) STRUCTURE NUMBER
- (10) SDA POINT No.
- 685.00 SPOT ELEVATION

TC	TOP OF CURB ELEVATION
GU	GUTTER ELEVATION
TP	TOP OF PAVEMENT ELEVATION
EM	EDGE OF METAL ELEVATION
TW	TOP OF WALK ELEVATION
T/WALL	TOP OF WALL ELEVATION
B/WALL	BOTTOM OF WALL ELEVATION
GR	GROUND ELEVATION
UG	UNDERGROUND
FO	FIBER OPTIC
CONC	CONCRETE
ASPH	ASPHALT
FF	FINISH FLOOR ELEVATION
DL	DOOR LEDGE ELEVATION
● F.I.	FOUND IRON
● F.M.	FOUND MONUMENT
● F.P.K.	FOUND P.K. NAIL
○ S.I.	SET IRON W/SDA CAP
○ S.P.K.	SET P.K. NAIL
○ S.P.K./TAG	SET P.K. NAIL W/SDA TAG
✦ MAG	SET MAGNETIC NAIL
✦ MAG/TAG	SET MAGNETIC NAIL W/SDA TAG
M	MEASURED
R	RECORD
C	CALCULATED
INV.	INVERT ELEVATION
CMP	CORRUGATED METAL PIPE

- G GAS
- SN SANITARY SEWER (SAN)
- ST STORM SEWER (STM)
- WM WATERMAIN (WM)
- OH OVERHEAD WIRE
- COMBINED SEWER
- STE STEAM LINE
- O OIL LINE
- E UG ELECTRIC (ELEC.)
- T UG PHONE (PH)
- C UG CABLE (CBL)
- CHAIN LINK FENCE (CL)
- WOOD FENCE
- WOVEN WIRE FENCE (WW)
- GUARD RAIL
- EDGE OF BRUSH/WOODS
- CENTERLINE OF DITCH
- CULVERT
- BANK/TOP OF SLOPE
- 650 MAJOR CONTOUR
- 651 MINOR CONTOUR
- BOUNDARY LINES
- ROW LINES
- SECTION LINES
- PROPERTY LINES

- ASPHALT
- CONCRETE
- GRAVEL
- BRICK / PAVERS
- WATER

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Fax (313) 305-9121

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Novi, MI 48377
Phone (248) 844-6274

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0' 30' 60'
SCALE: 1" = 30'

CLIENT:

CRESTWOOD SCHOOL DISTRICT
27235 JOY RD.
DEARBORN HEIGHTS, MI 48127

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

PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING UTILITIES (IN CONFLICT WITH PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIELD. CALL MISS DIG 3 WORKING DAYS PRIOR TO CONSTRUCTION.

UTILITY NOTE

UTILITY INFORMATION ON THIS DRAWING MAY BE FROM INFORMATION DISCLOSED TO THIS FIRM BY THE VARIOUS UTILITY COMPANIES, CITY/COUNTY AGENCIES AND OTHER VARIOUS SOURCES. UNDERGROUND UTILITIES WHICH ARE ON PRIVATE PROPERTY ARE USUALLY NOT DELINEATED UPON A UTILITY COMPANY'S PUBLISHED PLANS. THEIR LOCATION, IF SHOWN UPON THIS SURVEY, ARE APPROXIMATED FROM FOUND PAINT MARKS/STAKES, ETC. AS LOCATED BY THIS FIRM FROM SOURCES WHICH ARE UNKNOWN, NO GUARANTEE IS GIVEN AS TO THE COMPLETENESS OR ACCURACY THEREOF.

CHERRY HILL BAPTIST CHURCH
1045 N. GULLEY RD.

DEARBORN HEIGHTS, MI

TOPOGRAPHICAL SURVEY

SECTION 17
TOWN 02 SOUTH RANGE 10 EAST
CITY OF DEARBORN HEIGHTS
WAYNE COUNTY, MICHIGAN

NO.	DATE	REVISION
1	6-8-23	ADDED OH WIRE

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DRAFTER: M.VAPHIADIS	DATE: 11-30-2021
CHECKED: D.JACKSON	DATE: 11-30-2021
FIELD LEADER: D.HARRIS	PROJECT SURVEYOR: D.JACKSON
PROJECT MANAGER: D.JACKSON	DEPARTMENT MANAGER: G.PLATZ
JOB NO.: NP21120	DRAWING NO.: NP21120TPG
SCALE: 1" = 30'	SHEET NO.: 2 OF 2

Plotted: Jul 25, 2023, 12:54 PM by user: 1101 – Saved: 7/25/2023 by user: 1101
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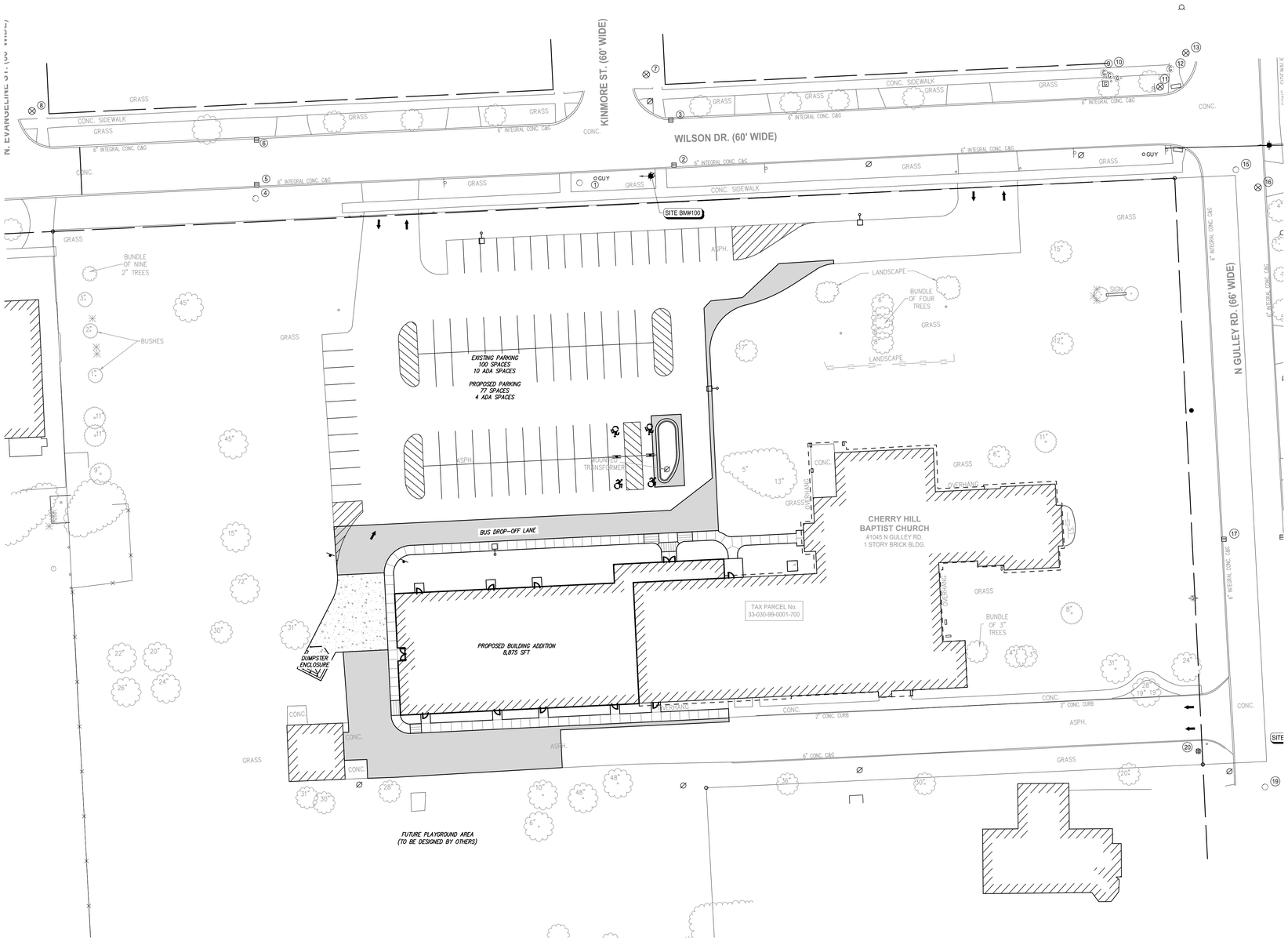

GRAPHIC SCALE

0 15 30 60

(IN FEET)
1 inch = 30 ft.

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. COMPOSITE PLAN ISSUED FOR REFERENCE ONLY.

G3. REFER TO SHEETS A2.11 AND A2.12 FOR FURTHER INFORMATION.

LEGEND

- PROPOSED WATERMAIN
- PROPOSED SANITARY
- PROPOSED STORM SEWER
- PROPOSED GAS MAIN
- PROPOSED ELECTRIC
- PROPOSED HYDRANT
- PROPOSED GATE VALVE & WELL (GVW)
- PROPOSED TAPPING SLEEVE, VALVE & WELL (TSVW)
- PROPOSED SAN MANHOLE (SAN)
- PROPOSED STORM MANHOLE (MH)
- PROPOSED CATCH BASIN (CB)
- PROPOSED INLET (INL)
- PROPOSED END SECTION (ES)
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- HEAVY-DUTY BITUMINOUS PAVEMENT
- DEEP-STRENGTH BITUMINOUS PAVEMENT
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- CONCRETE SIDEWALK
- MILL PAVEMENT
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SHEET INDEX

REFERENCE DRAWINGS

1 OF 2 - TOPOGRAPHICAL SURVEY
2 OF 2 - TOPOGRAPHICAL SURVEY

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Bidding and Permits: 31 July 2023

GENERAL PLAN

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

C1.0

803 W. Big Beaver Road, Suite 350, Troy, MI 48084 | 248.244.9710

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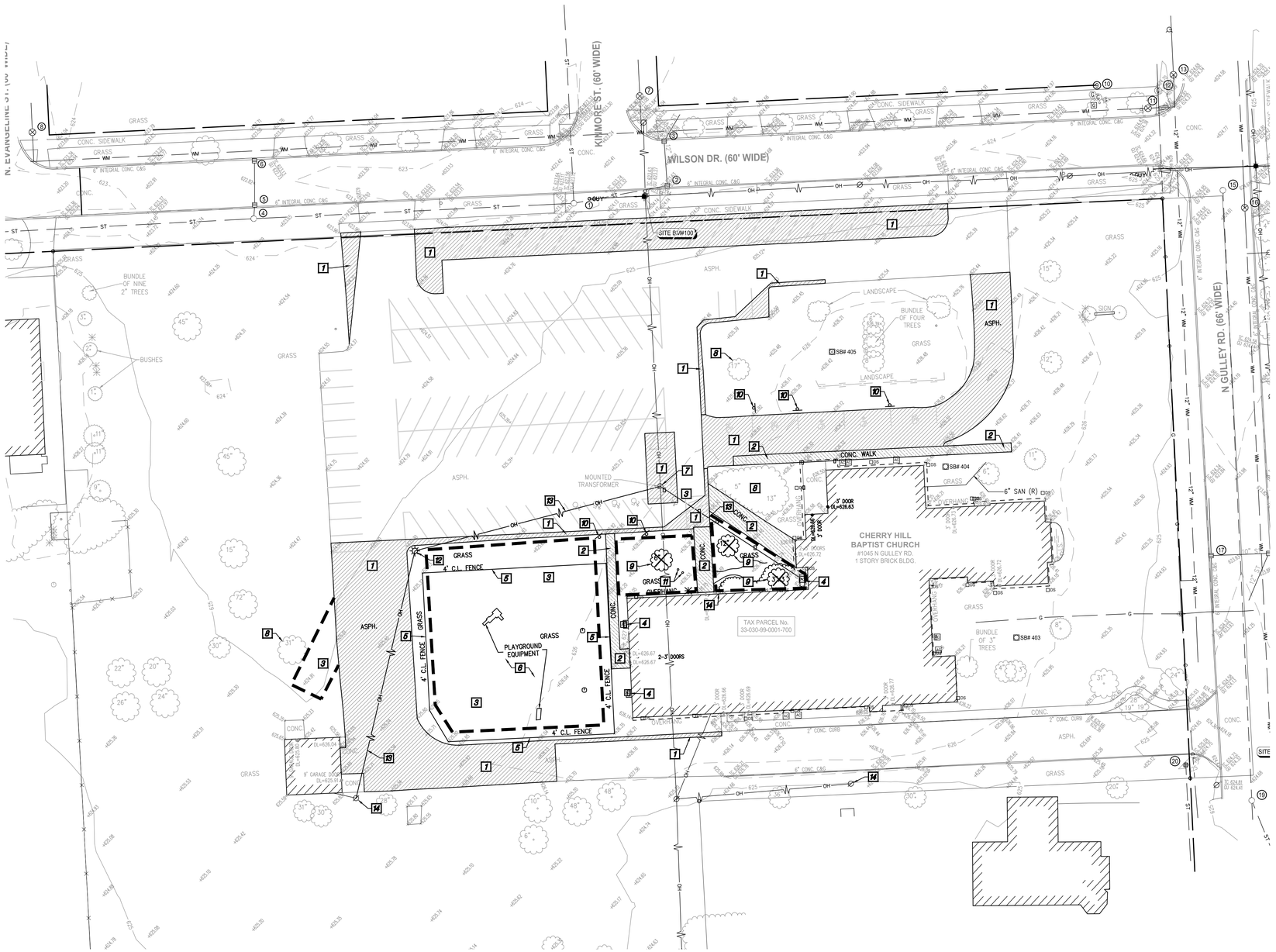

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DEMOLITION NOTES

1. REMOVE ASPHALT PAVEMENT TO FULL DEPTH. SAWCUT FULL DEPTH WHERE NEW PAVEMENT WILL BE PLACED ADJACENT TO EXISTING PAVEMENT. EXCAVATE EXISTING AGGREGATE BASE AND SUBGRADE AS NECESSARY TO INSTALL NEW PAVEMENT SECTION AS SHOWN ON THE PAVING PLANS, INCLUDING NEW AGGREGATE BASE.
2. REMOVE CONCRETE PAVEMENT TO FULL DEPTH. SAWCUT FULL DEPTH TO NEAREST JOINT WHERE NEW PAVEMENT WILL BE PLACED ADJACENT TO EXISTING PAVEMENT.
3. CLEAR AND GRUB TO THE LIMITS SHOWN. INCLUDE REMOVAL OF ALL SIGNS, POSTS, FOOTINGS, GRAVEL, BRUSH, SHRUBS, GRASS, AND TREES NOT INDICATED FOR PROTECTION, INCLUDING ROOTS. STRIP TOPSOIL AND STOCKPILE ON SITE IN DESIGNATED LOCATION.
4. REMOVE EXISTING AC UNIT. REFER TO MECHANICAL PLANS.
6. REMOVE EXISTING CHAIN LINK FENCE, INCLUDING ALL GATES, POSTS, AND FOOTINGS.
8. REMOVE AND SALVAGE RECREATIONAL AND athletic EQUIPMENT, BENCHES, BLEACHERS, ETC. THAT FALL WITHIN THE CONSTRUCTION AREA. STAGE IN ON SITE LOCATION AS SPECIFIED BY OWNER (UNLESS NOTED ON THE PLANS).
7. PROTECT EXISTING UTILITIES AND UTILITY STRUCTURES TO REMAIN.
8. PROTECT EXISTING TREES AND LANDSCAPING TO REMAIN DURING CONSTRUCTION. SEE TREE PROTECTION DETAIL THIS SHEET.
9. REMOVE EXISTING TREE (INCLUDING STUMPS AND ROOTS).
10. REMOVE EXISTING SIGN.
11. REMOVE EXISTING POST.
12. REMOVE EXISTING UTILITY POLE.
13. REMOVE EXISTING OVERHEAD WIRE.
14. REMOVE EXISTING LIGHTS FROM POLE. UTILITY POLE TO REMAIN.

EXISTING SIGNAGE AND MAILBOXES WITHIN THE CLEARING LIMITS ARE TO BE REMOVED AND SALVAGED. STAGE IN ON SITE LOCATION AS SPECIFIED BY OWNER.

ALL DEPRESSIONS CREATED BY DEMOLITION PROCEDURES SHALL BE BACKFILLED WITH CLASS II FILL MATERIAL, IN 8" LIFTS COMPACTED TO 95% OF MAXIMUM UNIT WEIGHT, UP TO PROPOSED SUBGRADE.

CONTRACTOR IS RESPONSIBLE FOR DOING AN EARTHWORK CALCULATION FOR CUT AND FILL REQUIREMENTS, AND IS RESPONSIBLE FOR INCLUDING IMPORT AND EXPORT OF MATERIALS IN THEIR BID. ALL EXCESS MATERIAL (INCLUDING TOPSOIL, CLEAN FILL, AND WASTE MATERIAL) SHALL BE REMOVED FROM THE SITE.

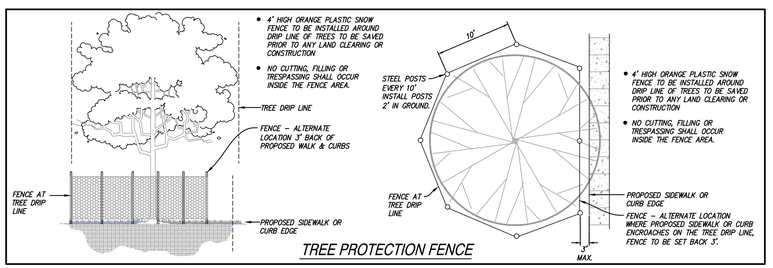
EXISTING SUPPORTED SLABS AT BUILDING ENTRY/DOORS TO REMAIN, UNLESS OTHERWISE DIRECTED. CONTRACTOR TO VERIFY LIMITS OF EXISTING SUPPORTED SLAB AND REMOVE ADJACENT WALKS AS SHOWN ON PLANS.

CONTRACTOR TO PROTECT EXISTING WALKS, PAVEMENT, CURBS, GUTTERS, WALLS, FENCES, GATES, LANDSCAPING AND TREES TO REMAIN DURING CONSTRUCTION.

SURVEY NOTES

1. TOPOGRAPHIC AND/OR BOUNDARY SURVEY, INCLUDING PROPERTY LINES, LEGAL DESCRIPTION, EXISTING UTILITIES, SITE TOPOGRAPHY WITH SPOT ELEVATIONS, OUTSTANDING PHYSICAL FEATURES AND EXISTING STRUCTURE LOCATIONS MAY BE BASED ON RECORD DATA NOT MEASURED IN THE FIELD.
2. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING ALL INFORMATION SHOWN ON THIS SURVEY AND NOTIFYING THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
3. CONTRACTOR SHALL UTILIZE A PRIVATE UTILITY LOCATOR TO STAKE PUBLIC AND PRIVATE UTILITY LOCATIONS PRIOR TO START OF CONSTRUCTION. IT IS THE CONTRACTORS RESPONSIBILITY, AT NO COST TO THE PROJECT, TO REPAIR OR REPLACE ANY DAMAGE CAUSED TO EXISTING UTILITIES.
4. CONTRACTOR SHALL CONTACT MISS DIG (811) THREE WORKING DAYS PRIOR TO THE START OF CONSTRUCTION FOR STAKING OF UTILITIES.

NOTE :
CONTRACTOR SHALL UTILIZE A PRIVATE UTILITY LOCATOR TO STAKE PUBLIC AND PRIVATE UTILITY LOCATIONS PRIOR TO START OF CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REPAIR OR REPLACE ANY DAMAGE TO EXISTING UTILITY LINES.



TREE PROTECTION FENCE

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DEMOLITION PLAN

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Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

C2.1

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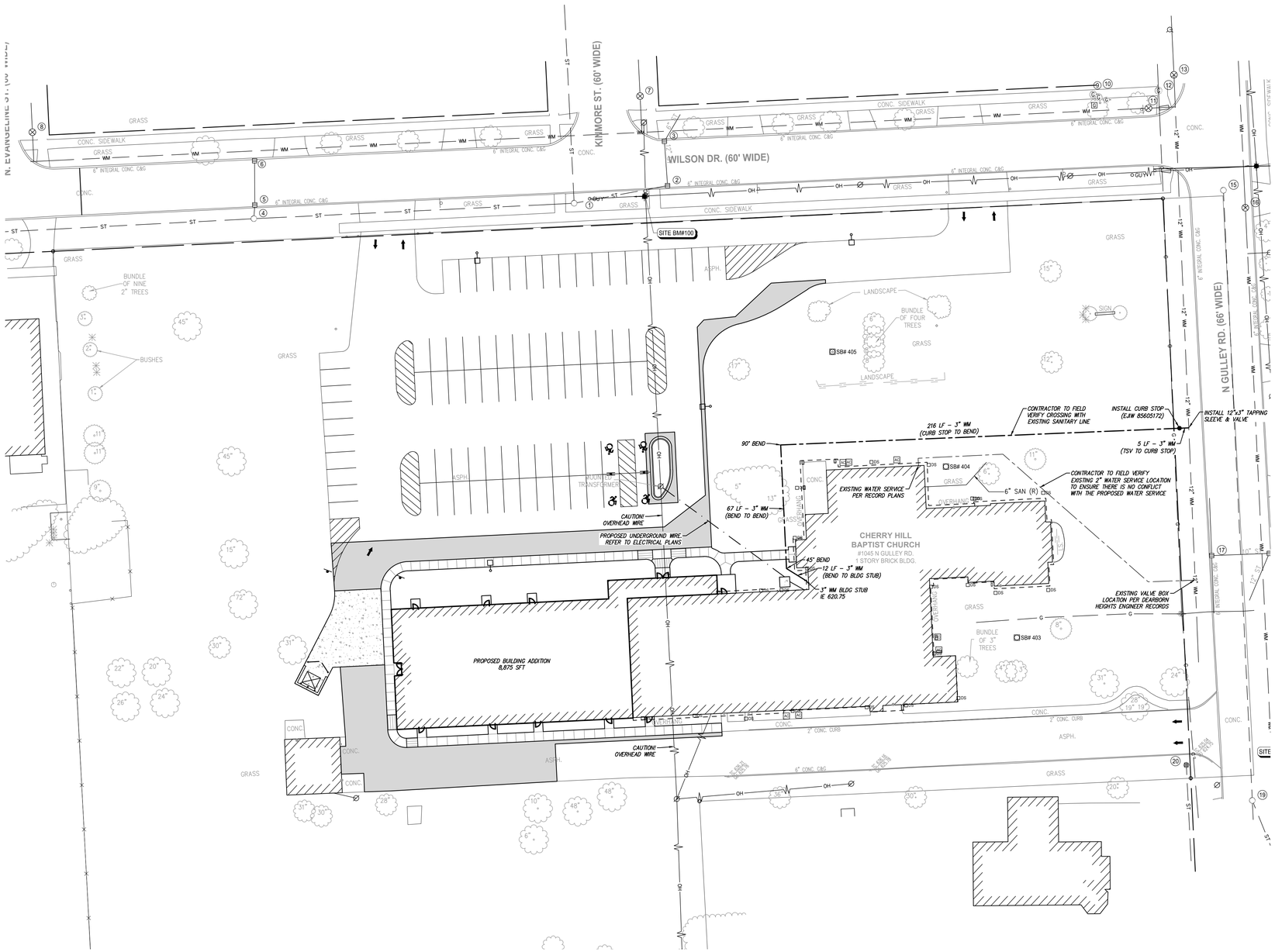

GRAPHIC SCALE

0 15 30 60

(IN FEET)
1 inch = 30 ft.

LEGEND

- PROPOSED WATERMAIN
- PROPOSED SANITARY
- PROPOSED STORM SEWER
- PROPOSED GAS MAIN
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- SANITARY SEWER STRUCTURE: 20
- WATERMAIN STRUCTURE: 10 / XXX – STRUCT. NO. / STRUCT. TYPE

UTILITY NOTES

1. WATER MAIN SHALL BE CLASS 54 DUCTILE IRON. WATER MAINS SHALL BE LEAKAGE AND PRESSURE TESTED IN ACCORDANCE WITH AWWA STANDARD C600. WATER MAINS SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA STANDARD C651 PRIOR TO BEING PUT INTO SERVICE.
2. ALL UTILITY TRENCHES THAT FALL WITHIN A 1-ON-1 INFLUENCE OF PAVEMENT AREAS SHALL BE BACKFILLED WITH CLASS 2 SAND AND COMPACTED TO 95% OF MAXIMUM DENSITY.
3. ALL WATER MAIN SHALL BE BURIED WITH 6' OF COVER FROM PROPOSED GRADES. USE 22.5° BENDS TO LOWER WATER MAIN WHERE NOTED AT UTILITY CROSSING.
4. WHERE HYDRANTS ARE INDICATED ON THE PLAN, COMPLETE HYDRANT ASSEMBLIES ARE REQUIRED, INCLUDING SHUT-OFF VALVE AND BOX (REFER TO THE STANDARD DETAIL SHEET FOR DETAILED REQUIREMENTS) THE ELEVATION OF THE VALVE BOX SHALL BE EQUAL TO THE FINISH GRADE (FG) ELEVATION OF THE HYDRANT UNLESS OTHERWISE NOTED.
5. ALL UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE CITY OF DEARBORN HEIGHTS.
6. ALL UTILITIES SHALL BE INSTALLED ON CLASS "B" BEDDING OR BETTER.
7. ALL UTILITIES SHALL BE PLACED AT LEAST 10' FROM OTHER UTILITIES, SIGNIFICANT TREES, AND FIXED STRUCTURES.
8. LOCATIONS OF LIGHT POLES, IF SHOWN ON THESE DRAWINGS, MAY BE APPROXIMATE. CONFIRM EXACT LOCATION (I.E. CURB OFFSETS, SIDEWALK OFFSETS, ETC.) PRIOR TO STAKING AND CONSTRUCTION. REFER TO SITE ELECTRICAL PLAN FOR DETAILS, AND COORDINATE WITH ELECTRICAL ENGINEER, ARCHITECT, AND CIVIL ENGINEER TO DETERMINE PROPER PLACEMENT.

SITE IMPACT / STORMWATER MANAGEMENT NOTES

TOTAL HARD SURFACE IMPACT AREA OR EXPANSION = 0.49 ACRES (21,615 SQ. FT.)

TOTAL EARTH DISTURBANCE = 0.99 ACRES (43,315 SQ. FT.)

SINCE THE HARD SURFACE IMPACT AREA IS LESS THAN 0.50 ACRES AND THE TOTAL EARTH DISTURBANCE IS LESS THAN 1.00 ACRE, STORMWATER MANAGEMENT MEASURES ARE NOT REQUIRED PER THE COUNTY ORDINANCE AND THE DISTRICT'S MS4 REQUIREMENTS (IF APPLICABLE).

WAYNE COUNTY DPS GENERAL NOTES

1. ALL WORK WITHIN THE WAYNE COUNTY ROAD RIGHT-OF-WAY (ROW) AND DRAIN EASEMENT SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND GENERAL SPECIFICATIONS, INCLUDING SOIL EROSION AND SEDIMENTATION CONTROL, OF THE WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES, AND MDOT 2012 SPECIFICATIONS FOR CONSTRUCTION.
2. THESE PLANS ARE NOT VALID WITHOUT ATTACHMENT OF THE WAYNE COUNTY PERMIT SPECIFICATIONS FOR CONSTRUCTION WITHIN THE ROAD ROW, PARKS, DRAIN EASEMENT OR SANITARY SEWER UNDER JURISDICTION OF THE WAYNCE COUNTY (07/01/93) REVISED 12/15/2004.
3. CONTRACTOR SHALL CONTACT MISS DIG AT 811 TO IDENTIFY AND FLAG / MARK THE LOCATIONS OF ALL UNDERGROUND UTILITIES AT THE PROPOSED CONSTRUCTION AREAS PRIOR TO START OF CONSTRUCTION, AND SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATIONS AND ELEVATIONS OF ALL UNDERGROUND UTILITIES, AND RESOLVE ANY CONFLICT BETWEEN THE PROPOSED WORK AND THE EXISTING UNDERGROUND OR ABOVEGROUND UTILITIES.
4. CONTRACTOR SHALL MAINTAIN 18" MINIMUM VERTICAL CLEARANCE AND 3 FEET MINIMUM HORIZONTAL CLEARANCE BETWEEN THE PROPOSED AND EXISTING UTILITIES. ANY PROPOSED UTILITY PERMITTED TO CROSS UNDER THE ROAD OR DRAIN, MUST BE PLACED A MINIMUM OF 7 FEET BELOW THE LOWEST POINT OF THE ROAD, OR 6 FEET BELOW THE DRAIN BOTTOM, OVERHEAD WIRES/CABLES MUST BE INSTALLED 18 FEET MINIMUM ABOVE THE ROAD CENTERLINE. TO RELOCATE ANY UTILITY WITHIN THE ROAD ROW, THE CONTRACTOR SHALL COORDINATE THE RELOCATION WITH THE UTILITY COMPANY AND AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
5. ALL SURVEY MONUMENTS / CORNERS AND BENCH MARKS LOCATED WITHIN THE CONSTRUCTION AREA MUST BE PRESERVED IN ACCORDANCE WITH PUBLIC ACT 74 AS AMENDED (INCLUDING ACT 34, P.A. 2000) AND AS PER WAYNE COUNTY PERMIT RULE 1.5. THE PERMIT HOLDER AND CONTRACTOR SHALL COORDINATE THE WORK WITH A PROFESSIONAL SURVEYOR LICENSED IN THE STATE OF MICHIGAN DURING CONSTRUCTION ACTIVITIES FOR THE PURPOSE OF WITNESSING, PRESERVING OR REPLACING SURVEY MONUMENTS AND MONUMENT BOXES.
6. EXPOSURE OF ANY UTILITIES UNDER THE PAVEMENT WILL NOT BE PERMITTED, UNLESS APPROVED BY THE WAYNE COUNTY ENGINEER. PAVEMENT REMOVAL AND REPLACEMENT SHALL BE PERFORMED PER APPLICABLE WAYNE COUNTY STANDARD DETAILS AN AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
7. CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS WITHIN THE WAYNE COUNTY ROAD ROW AND DRAIN EASEMENT WITH 3" TOPSOIL, THM SEED MIX AND MULCH. SLOPES STEEPER THAN 1 ON 3 SHALL BE RESTORED BY PLACING SOD ON 2" TOPSOIL.
8. ALL BACKFILLS UNDER OR WITHIN 3 FEET OF THE PROPOSED OR EXISTING PAVEMENT, CURB OR SIDEWALK SHALL CONFORM TO THE WAYNE COUNTY TRENCH "B" BACKFILL REQUIREMENTS. TRENCH "A" BACKFILL MAY BE USED WITHIN THE ROAD ROW AREAS UNDER CONDITIONS OTHER THAN THOSE SPECIFIED FOR TRENCH "B".
9. CONTRACTOR IS RESPONSIBLE FOR RESTORING OR REPLACING ALL DISTURBED LANDSCAPED AREAS, SPRINKLER SYSTEMS, FENCES, SIGNS, MAIL BOXES, ETC. WITHIN THE WAYNE COUNTY ROAD ROW AND / OR AS DIRECTED BY THE COUNTY ENGINEER.
10. CONTRACTOR SHALL MAINTAIN TWO-WAY TRAFFIC AT ALL TIMES. OTHERWISE, DETOURING TRAFFIC MUST BE PER APPROVED PLANS. ALL SIGNING AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST EDITON OF M.M.U.T.C.D.
11. MAINTAIN A SAFE AND ADEQUATE TRAVEL ROUTE FOR PEDESTRIANS AT ALL TIMES THROUGHOUT THE PROJECT DURATION.
12. TUNNELING, BORING AND JACKING OPERATIONS SHALL BE IN ACCORDANCE WITH THE WAYNE COUNTY SPECIFICATIONS AND DETAILS. BORE PITS SHALL BE PLACED AT MINIMUM 10 FEET FROM BACK OF CURB OR EDGE OF PAVEMENT.
13. REMOVE ALL ABANDONED CONDUITS FROM THE COUNTY ROADS ROW OR AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
14. CONTRACTOR SHALL PROVIDE COLD WEATHER PROTECTION FOR ALL PROPOSED CONCRETE WORK (PAVEMENTS, SIDEWALKS, DRIVE APPROACHES, ETC.) AS DIRECTED BY THE WAYNE COUNTY ENGINEER.
15. OVERNIGHT VEHICLE PARKING AND STORAGE OF CONSTRUCTION MATERIALS AND EQUIPMENTS ARE NOT PERMITTED WITHIN THE WAYNE COUNTY ROADS RIGHTS-OF-WAY.
16. CONTRACTOR SHOULD OBTAIN SOIL EROSION AND SEDIMENTATION CONTROL PERMIT FROM THE WAYNE COUNTY DOE. CONTACT SOIL EROSION OFFICE AT (734) 326-3936, OR THE COMMUNITY HAVING JURISDICTION OVER THE SOIL EROSION PERMIT.
17. CONTRACTOR SHALL NOTIFY THE WAYNE COUNTY TRAFFIC SIGNAL SHOP AT (734) 955-2154 AT LEAST 72 HOURS PRIOR TO START OF WORK AT OR NEAR ANY SIGNALIZED INTERSECTINS.
18. CONTRACTOR SHALL NOTIFY WAYNE COUNTY 72 HOURS PRIOR TO START OF CONSTRUCTION. CONTACT THE PERMIT OFFICE AT (734) 858-2764.

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UTILITY PLAN

EHRESMAN ARCHITECTS ehresmanarchitects.com

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C3.1

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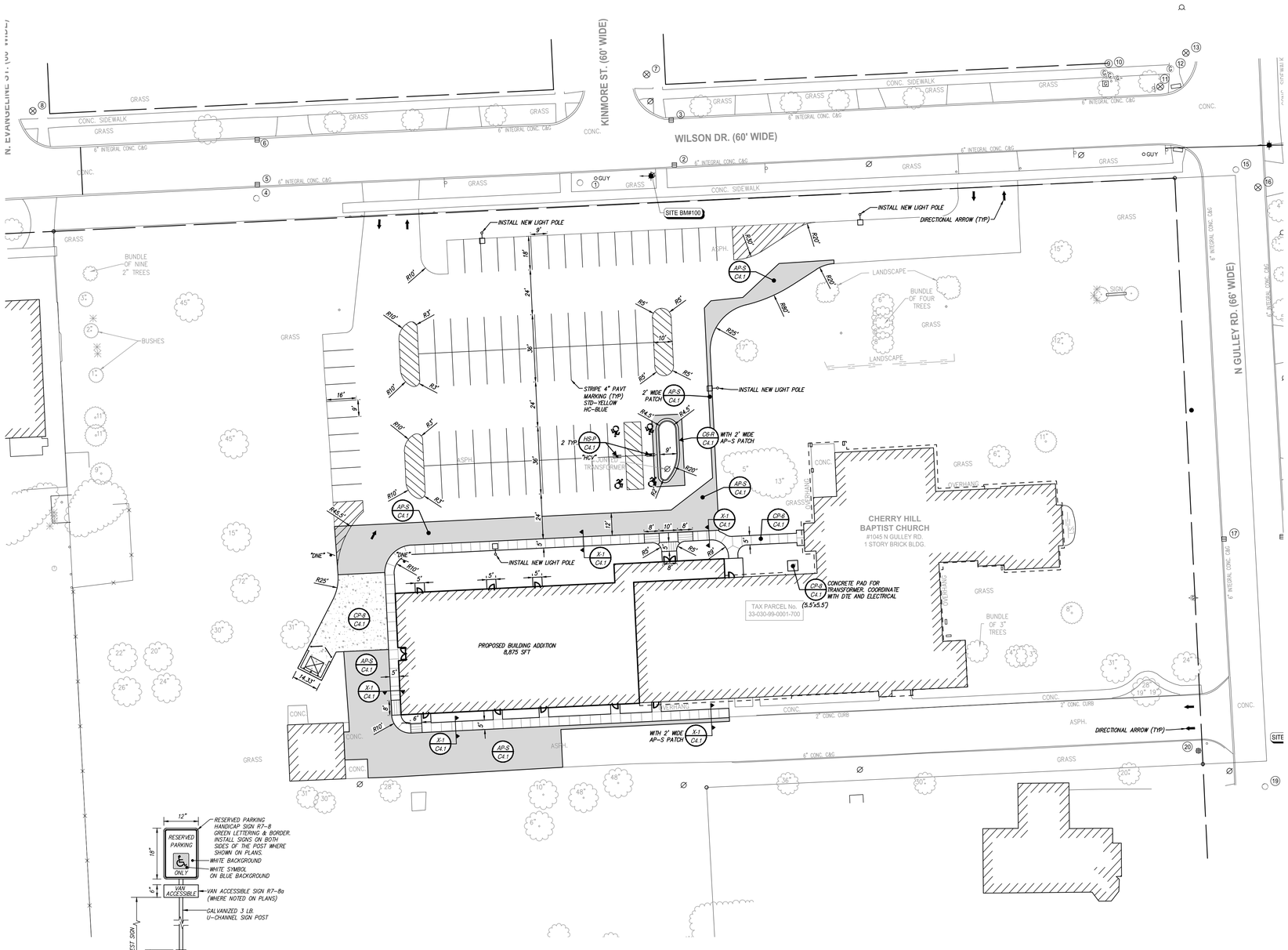

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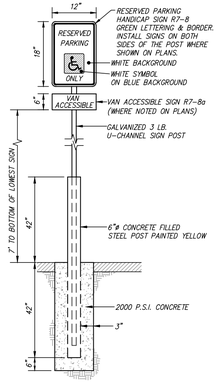
PAVING CONSTRUCTION NOTES

1. EARTHWORK AND PAVEMENT CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION UNLESS OTHERWISE NOTED IN THE FOLLOWING ITEMS.
2. REMOVE ANY EXISTING TOPSOIL, VEGETATION, TREES AND OTHER DELETERIOUS MATERIALS TO EXPOSE THE SUBGRADE SOIL. TREE ROOTS SHALL BE COMPLETELY REMOVED.
3. EXCAVATE TO THE DEPTH OF THE FINAL SUBGRADE ELEVATION TO ALLOW FOR GRADE CHANGES AND THE PLACEMENT OF THE RECOMMENDED PAVEMENT SYSTEM.
4. THE TOP 12 INCHES OF THE EXPOSED SUBGRADE SHALL BE COMPACTED TO A DENSITY NO LESS THAN 95 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED PROCTOR (ASTM D 1557-91).
5. THE FINAL SUBGRADE SHALL BE THOROUGHLY PROOFROLLED UNDER THE OBSERVATION OF A GEOTECHNICAL/PAVEMENT ENGINEER. LOOSE OR YIELDING AREAS WHICH CANNOT BE MECHANICALLY STABILIZED SHALL BE REMOVED AND REPLACED WITH ENGINEERED FILL OR AS DICTATED BY FIELD CONDITIONS.
6. THE AGGREGATE BASE SHALL BE COMPACTED TO A DENSITY NO LESS THAN 95 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED PROCTOR (ASTM D 1557-91). THE BASE SHALL EXTEND A MINIMUM OF 1 FOOT BEYOND THE PAVED EDGE.
7. ALL BITUMINOUS MATERIAL SHALL BE COMPACTED TO A DENSITY NO LESS THAN 97 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY THE MARSHALL METHOD.
8. A BOND COAT OF SS-1H EMULSION IS REQUIRED BETWEEN THE LEVELING COURSE AND THE WEARING COURSE WHEN EITHER 24 HOURS HAVE ELAPSED BETWEEN PLACEMENT OF THE BITUMINOUS COURSES OR THE SURFACE OF THE PAVEMENT HAS BEEN CONTAMINATED WITH DIRT, DUST, OR FOREIGN MATERIAL. THE BOND COAT SHALL BE APPLIED IN A UNIFORM MANNER OVER THE SURFACE AT A RATE OF 0.1 GALLONS/S.Y. IN THE EVENT A BOND COAT IS NOT REQUIRED, THE LEVELING COURSE MAY REQUIRE LOCALIZED BROOM CLEANING.
9. PERFORMANCE GRADE PG64-22 ASPHALT CEMENT SHALL BE USED IN THE PRODUCTION OF ALL BITUMINOUS MIXTURES. RECLAIMED ASPHALT PAVEMENT (RAP) SHALL BE ALLOWED ONLY AS SPECIFIED BY THE CURRENT MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION, UNLESS NOTED ON THE PROJECT DETAILS.
10. CONSTRUCTION TRAFFIC SHALL BE MINIMIZED ON THE NEW PAVEMENT. IF CONSTRUCTION TRAFFIC IS ANTICIPATED ON THE PAVEMENT STRUCTURE, THE PLACEMENT OF THE FINAL LIFT SHALL BE DELAYED UNTIL THE MAJORITY OF THE CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED. THIS ACTION WILL ALLOW REPAIR OF LOCALIZED FAILURE, IF ANY DOES OCCUR, AS WELL AS REDUCE LOAD DAMAGE ON THE PAVEMENT SYSTEM. THE CONTRACTOR IS RESPONSIBLE FOR REPAIR TO ANY DAMAGED SECTION RESULTING FROM CONSTRUCTION ACTIVITY.
11. TAPER CURB HEIGHT DOWN TO ZERO HEIGHT IN FIVE FEET AT ALL CURB ENDINGS UNLESS OTHERWISE NOTED ON THE PLAN.
12. WHERE CURB AND GUTTER SECTION IS ADJACENT TO A HANDICAP RAMP, DROP CURB HEIGHT TO MAXIMUM 1/4" ACROSS THE RAMP OPENING.
13. PAVEMENT REHAB SHALL BE PERFORMED PER THE CURRENT MDOT STANDARD SPECS FOR CONSTRUCTION. BLOW OUT EX. CRACKS WITH COMPRESSED AIR TO REMOVE ALL DIRT, VEGETATION, AND FOREIGN MATERIAL. USE "OVERBAND CRACK FILL" PER SECTION 505 OF MDOT SPECS FOR ALL CRACKS IN EXCESS OF 1/4" WIDTH. CLEAN SURFACE OF ALL DEBRIS AND THOROUGHLY WASH THE SURFACE AS INDICATED IN SECTION 506.03.C. PROVIDE AND APPLY SLURRY SEAL PER SECTION 506 OF THE MDOT SPECS.
14. RESTRIPE PARKING LOTS AS SHOWN, USING 4" PAVEMENT MARKING – BLUE FOR HANDICAP SPACES, YELLOW FOR STANDARD SPACES. IF NEW PARKING LAYOUT IS NOT INDICATED, MATCH ORIGINAL STRIPING PATTERN.
15. DIRECTIONAL ARROW PAVEMENT MARKINGS AND PAVEMENT MARKING LETTERING WHERE INDICATED SHALL BE WHITE PREFORMED THERMOPLASTIC UNLESS OTHERWISE NOTED. INSTALLATION OF THESE PERMANENT PAVEMENT MARKINGS SHALL BE PERFORMED PER THE MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION SECTIONS 811 AND 920.
16. CONTRACTOR SHALL PROTECT EXISTING CURB, GUTTER, SIDEWALK, WALLS, FENCES AND ALL OTHER EXISTING SITE FEATURES NOT INDICATED FOR REMOVAL OR REHABILITATION.
17. PLACE EXPANSION JOINTS WHERE NEW CONCRETE PAVEMENT OR WALKS ABUT BUILDING WALLS (PROPOSED OR EXISTING), CURB, OR EXISTING CONCRETE PAVEMENT. PLACE JOINT SEALANT ON ALL EXPANSION JOINTS.
18. CONTRACTOR TO CONSTRUCT CONTRACTION AND EXPANSION JOINTS IN ALL NEW CONCRETE PAVEMENT. CONTRACTION JOINTS SHALL BE TOOLED WHERE SIDEWALK WIDTH IS 8' OR LESS, AND SHALL BE SPACED EQUAL TO THE WIDTH OF THE PAVEMENT (I.E. 8' SPACING FOR 8' WIDE WALK), BUT NOT MORE THAN 10' APART. PLACE EXPANSION JOINTS WITH JOINT SEALANT AT MAXIMUM 50' SPACING. CONTRACTOR SHALL GENERALLY MATCH THE JOINT PATTERNS FOR CONCRETE PAVEMENT WHEN SHOWN ON THE PLANS.
19. CONCRETE PAVEMENT SHALL MEET THE REQUIREMENTS FOR MDOT GRADE 4000 CONCRETE PER THE CURRENT MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION.

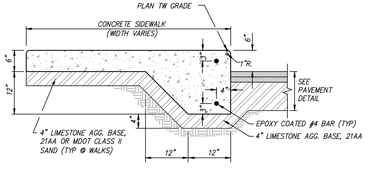
PROPOSED SIGN LEGEND

"HCV" – RESERVED PARKING HANDICAP ONLY VAN ACCESS
"DNE" – ONE WAY – DO NOT ENTER

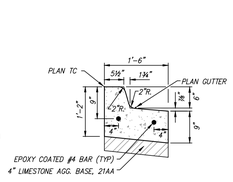
ALL SIGNAGE SHALL BE IN ACCORDANCE WITH THE CURRENT M.M.U.T.C.D. AND THE MDOT TRAFFIC AND SAFETY SIGN SUPPORT STANDARD PLANS.



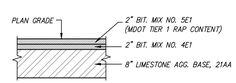
DETAIL
HANDICAP SIGN IN PAVEMENT DETAIL — HS-P C4.1



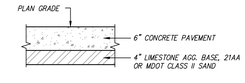
SECTION
INTEGRAL WALK/CURB — X-1 C4.1



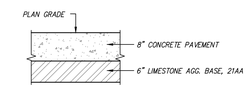
DETAIL
6" CURB & GUTTER REVERSE PAN (MDOT TYPE F1) — C6-R C4.1



DETAIL
STANDARD BITUMINOUS PAVEMENT — AP-S C4.1



DETAIL
6" CONCRETE WALK — CP-6 C4.1



DETAIL
8" CONCRETE PAVEMENT — CP-8 C4.1

SPALDING DEDECKER
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PAVING AND LAYOUT PLAN

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

C4.1

803 W. Big Beaver Road, Suite 350, Troy, MI 48084 | 248.244.9710

Plotted: Jul 28, 2023, 2:40 PM by user: 1069 – Saved: 7/28/2023 by user: 1069
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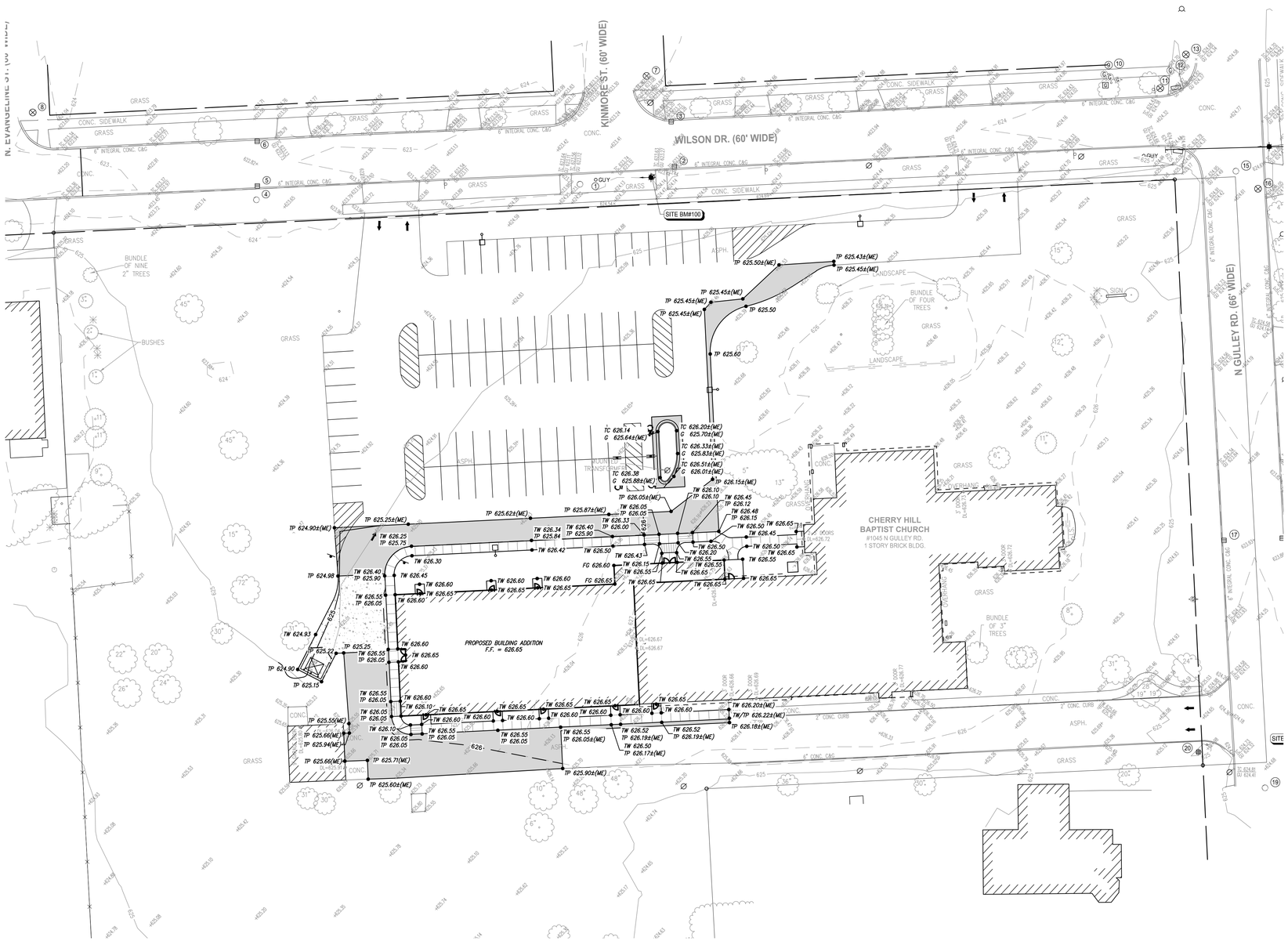

GRAPHIC SCALE

0 15 30 60

(IN FEET)
1 inch = 30 ft.

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. COMPOSITE PLAN ISSUED FOR REFERENCE ONLY.

G3. REFER TO SHEETS A2.11 AND A2.12 FOR FURTHER INFORMATION.

LEGEND

- PROPOSED WATERMAIN
- PROPOSED SANITARY
- PROPOSED STORM SEWER
- PROPOSED GAS MAIN
- PROPOSED ELECTRIC
- PROPOSED HYDRANT
- PROPOSED GATE VALVE & WELL (GVW)
- PROPOSED TAPPING SLEEVE, VALVE & WELL (TSVW)
- PROPOSED SAN MANHOLE (SAN)
- PROPOSED STORM MANHOLE (MH)
- PROPOSED CATCH BASIN (CB)
- PROPOSED INLET (INL)
- PROPOSED END SECTION (ES)
- PROPOSED FIELD CATCH BASIN (FCB) W/BEEHIVE COVER OR STANDPIPE (SP) W/ BAR GRATE COVER
- STANDARD BITUMINOUS PAVEMENT
- HEAVY-DUTY BITUMINOUS PAVEMENT
- DEEP-STRENGTH BITUMINOUS PAVEMENT
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- MILL PAVEMENT
- (2) UTILITY CROSSING (SEE DATA TABLE)
- STORM SEWER STRUCTURE: CB / 2 — STRUCT. TYPE / STRUCT. NO.
- SANITARY SEWER STRUCTURE: 20
- WATERMAIN STRUCTURE: 10 / XXX — STRUCT. NO. / STRUCT. TYPE

GRADING LEGEND

- 000.00 — EXISTING ELEVATION
- TC 000.00 / G 000.00 — PROPOSED TOP OF CURB ELEVATION / PROPOSED GUTTER ELEVATION
- OG 000.00 — OUTSIDE GRADE ELEVATION
- 1130 — EXISTING CONTOURS
- 1130 — PROPOSED CONTOURS
- TP 000.00 — TOP OF PAVEMENT ELEVATION
- TW 000.00 — TOP OF WALK ELEVATION
- FG 000.00 — FINISH GRADE ELEVATION
- T/WALL 000.00 — TOP OF WALL ELEVATION
- ME 000.00 — MATCH EXISTING ELEVATION
- FLOW ARROW

GRADING NOTES

1. CONTRACTOR TO PLACE ALL NEW PAVEMENT TO THE GRADES INDICATED, OR MATCH ORIGINAL GRADES IF NEW GRADES ARE NOT SHOWN. CONTRACTOR SHALL CONFIRM MINIMUM 1% PAVEMENT SLOPES ARE ATTAINED IN ALL AREAS.
2. PROPOSED GRADES MAY BE BASED ON AN INTERPOLATION OF DATA SHOWN ON THE TOPOGRAPHIC SURVEY. THIS INTERPOLATED DATA IS APPROXIMATE AND COULD DIFFER SLIGHTLY BASED ON THE ACCURACY OF THE SURVEY. CONTRACTOR SHALL CONFIRM THAT THE PROPOSED GRADES SHOWN ON THIS PLAN WILL NOT CREATE A STANDING WATER CONDITION (I.E. A LOW SPOT OR PAVEMENT SLOPES LESS THAN 1%) OR AN UNSAFE CONDITION WITH SLOPES IN EXCESS OF 5%. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF THEY BELIEVE THAT ONE OF THESE SITUATIONS WILL OCCUR BASED ON THE PROPOSED GRADES.
3. ALL PAVEMENT PLACED WITHIN HANDICAP PARKING AREAS (STALLS AND ACCESS AISLES) SHALL HAVE A MAXIMUM SLOPE OF 2% IN ANY DIRECTION, INCLUDING MEASURED DIAGONALLY ACROSS THE AREAS. CONTRACTOR SHALL ADJUST SLOPES AS NECESSARY TO PROVIDE ADA COMPLIANT SLOPES AS WELL AS PROVIDING RE-GRADED TRANSITION SLOPES OUTSIDE OF THE HANDICAP PARKING AREAS. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF TRANSITION ZONES WILL EXCEED MAXIMUM 5% SLOPES. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE PATTERNS WITH ALL NECESSARY PAVEMENT RE-GRADING.
4. ALL HANDICAP RAMPS AND ADA ACCESSIBLE ROUTES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT VERSION OF MDOT DETAIL R-28 "SIDEWALK RAMP AND DETECTABLE WARNING DETAILS".
5. CONTRACTOR IS RESPONSIBLE FOR CONTROLLING STORM WATER RUNOFF DURING CONSTRUCTION OPERATIONS. OF PARTICULAR CONCERN WILL BE THE TIME PERIOD AFTER THE SITE HAS BEEN STRIPPED AND NOT YET RESTORED, BUILT UPON, OR PAVED. CONTRACTOR MUST INSTALL OR CONSTRUCT APPROPRIATE TEMPORARY MEASURES TO PROTECT ADJACENT PROPERTIES.

RESTORATION NOTE

RESTORE ALL NON-PAVED AREAS WITH 3" OF CLEAN TOPSOIL AND SOD PER SPEC SECTION 2920. PEG SOD IN PLACE ON SLOPES IN EXCESS OF 10 HORIZONTAL TO 1 VERTICAL USING WOODEN PEGS A MINIMUM OF 12" LONG. WATER SOD ON A REGULAR BASIS AS INDICATED IN THE SPECIFICATIONS.

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Bidding and Permits: 31 July 2023

GRADING PLAN

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

C5.1

803 W. Big Beaver Road, Suite 350, Troy, MI 48084 | 248.244.9710

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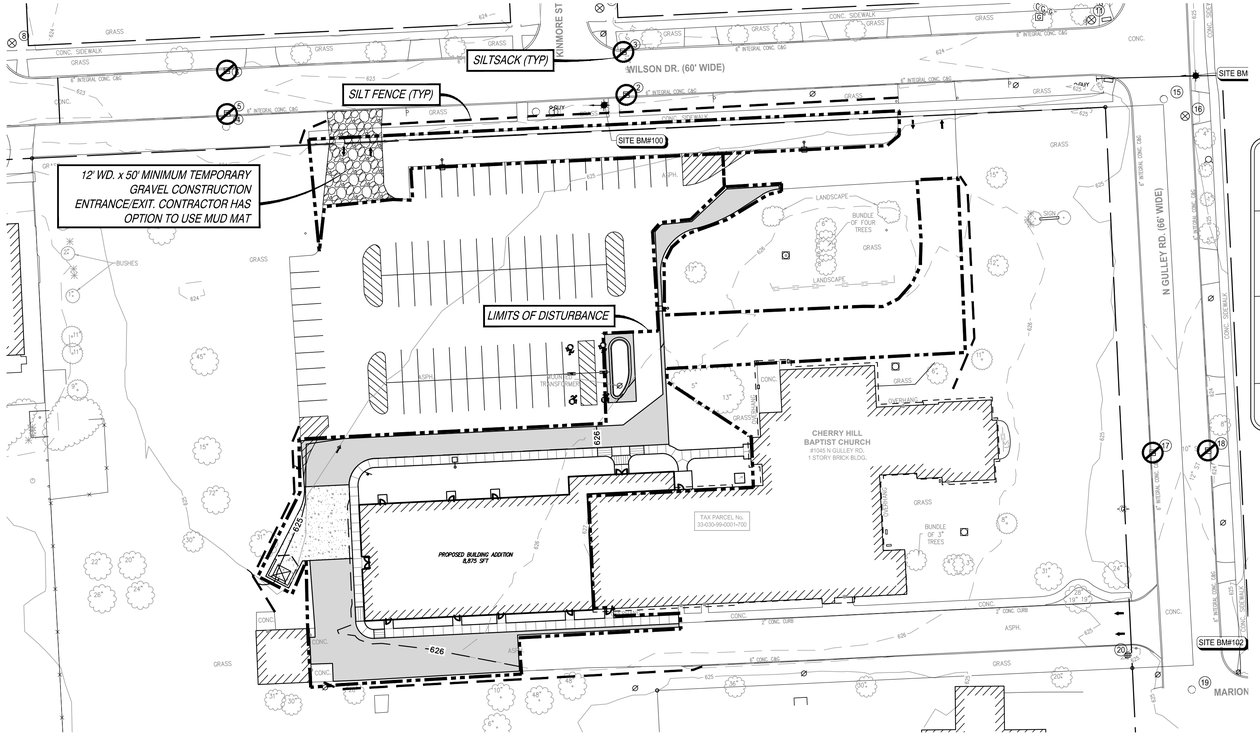

SITE NOTES:

APPROX. GROSS ACREAGE DISTURBED = 0.99± ACRES
DISTANCE TO NEAREST BODY OF WATER = 2.5± MILES (ROUGE RIVER)

SOIL TYPES:
AvohbB - AVOCA-BLOUNT SANDY LOAMS, 0-4% SLOPES
AvoubB - AVOCA-URBAN LAND-BLOUNT COMPLEX, 0-4% SLOPES
BrmhaB - BREMS LOAMY SAND, 0-4% SLOPES
BrmuaB - BREMS-URBAN LAND COMPLEX, 0-4% SLOPES

THIS PROJECT SHALL BE CONSTRUCTED IN COMPLIANCE WITH PART 91 OF ACT 451 OF 1994, AS AMENDED. THE SOIL EROSION AND SEDIMENT CONTROL ACT.

LEGAL DESCRIPTION

SOURCE: ASK SERVICES
OWNER: CHERRY HILL BAPTIST CHURCH
TAX PARCEL ID: 33-030-99-0001-700
ADDRESS: 1045 N GULLEY RD, DEARBORN HEIGHTS, MI 48127

17A1A1 B1 B2A C3A N 3/4 OF E 633 FT OF THE N 1/2 OF THE NW 1/4 OF SW 1/4 SEC 17 T2S R10E EXC N 17 FT THEREOF ALSO EXC E 300 FT OF S 165 FT THEREOF 5.83AC.

OWNER

Crestwood School District
27235 Joy Road
Dearborn Heights, MI 48301
PHONE: (313) 278-0905

LOCATION MAP
NOT TO SCALE

SOIL EROSION/SEDIMENTATION CONTROL CONSTRUCTION SEQUENCE

1. INSTALL SILT FENCE AROUND DEFINED PERIMETER AS SHOWN, INSTALL TREE PROTECTION AND CONSTRUCT TEMPORARY CONSTRUCTION ACCESS.
2. CLEAR, GRUB AND STRIP TOPSOIL IN AREAS OF EARTH DISRUPTION.
3. COMPLETE LAND BALANCING OPERATIONS.
4. INSTALL UNDERGROUND UTILITIES AND PLACE INLET FILTERS WHERE INDICATED.
5. PERFORM PAVING OPERATIONS, FINE GRADING, LANDSCAPING.
6. EROSION CONTROL MEASURES ARE NOT TO BE REMOVED UNTIL THE CITY AND/OR COUNTY GRANTS ITS APPROVAL. INLET FILTERS SHALL BE PERIODICALLY INSPECTED AND CLEANED/REPLACED AS NECESSARY.

ALL EROSION CONTROL MEASURES SHALL BE INSTALLED APPROXIMATELY ACCORDING TO THE FOLLOWING SEQUENCE OF CONSTRUCTION.

PROJECT COMMENCEMENT ON OR ABOUT OCTOBER 2023.

SCHEDULE

A.	INSTALL SILT FENCE AS SHOWN ON PLANS.	2~3 DAYS
B.	STRIP AND STOCKPILE TOPSOIL AND ROUGH GRADE SITE.	4 WEEKS
C.	INSTALL UNDERGROUND UTILITIES.	5 WEEKS
D.	FINE GRADE SITE, PAVE, INSTALL LANDSCAPING AND ESTABLISH VEGETATION.	5 WEEKS
E.	CLEAN PAVEMENTS, WALKS, CULVERTS, AND WATERCOURSES OF ALL ACCUMULATED SEDIMENT IN CONJUNCTION WITH REMOVING ALL TEMPORARY DEVICES.	2 WEEKS

PROJECT COMPLETION ON OR ABOUT OCTOBER 2024.

RESTORATION NOTE

RESTORE ALL NON-PAVED AREAS WITH 3" OF CLEAN TOPSOIL AND SOD PER SPEC SECTION 2930. PEG SOD IN PLACE ON SLOPES IN EXCESS OF 10 HORIZONTAL TO 1 VERTICAL USING WOODEN PEGS A MINIMUM OF 12" LONG. WATER SOD ON A REGULAR BASIS AS INDICATED IN THE SPECIFICATIONS.

GRAPHIC SCALE
0 20 40 80
(IN FEET)
1 inch = 40 ft.

LEGEND

- PROPOSED WATERMAIN
- PROPOSED SANITARY
- PROPOSED STORM SEWER
- PROPOSED GAS MAIN
- PROPOSED ELECTRIC
- PROPOSED HYDRANT
- PROPOSED GATE VALVE & WELL (GVW)
- PROPOSED TAPPING SLEEVE, VALVE & WELL (TSVW)
- PROPOSED SAN MANHOLE (SAN)
- PROPOSED STORM MANHOLE (MH)
- PROPOSED CATCH BASIN (CB)
- PROPOSED INLET (INL)
- PROPOSED END SECTION (ES)
- PROPOSED FIELD CATCH BASIN (FCB) W/BEEHIVE COVER OR STANDPIPE (SP) W/ BAR GRATE COVER
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- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- MILL PAVEMENT
- (2) UTILITY CROSSING (SEE DATA TABLE)
- STORM SEWER STRUCTURE: CB / 2 — STRUCT. TYPE / STRUCT. NO.
- SANITARY SEWER STRUCTURE: 20
- WATERMAIN STRUCTURE: 10 / XXX — STRUCT. NO. / STRUCT. TYPE

SOIL EROSION CONTROL DEVICES

- SILTSACK
- REAR YARD INLET FILTER
- SILT FENCE
- LIMITS OF DISTURBANCE
- CONSTRUCTION ENTRANCE/EXIT

GRADING LEGEND

1000.00	EXISTING ELEVATION	• TP 000.00	TOP OF PAVEMENT ELEVATION
• TC 000.00 / G 000.00	PROPOSED TOP OF CURB ELEVATION / PROPOSED GUTTER ELEVATION	• TW 000.00	TOP OF WALK ELEVATION
• OG 000.00	OUTSIDE GRADE ELEVATION	• FG 000.00	FINISH GRADE ELEVATION
1130	EXISTING CONTOURS	• T/WALL 000.00	TOP OF WALL ELEVATION
1131		• ME 000.00	MATCH EXISTING ELEVATION
1130	PROPOSED CONTOURS		FLOW ARROW

SOIL EROSION/SEDIMENTATION CONTROL NOTES

1. ALL EROSION AND SEDIMENT CONTROL WORK SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE CITY OF DEARBORN HEIGHTS AND/OR COUNTY OF WAYNE.
2. DAILY INSPECTIONS SHALL BE MADE BY THE CONTRACTOR TO DETERMINE EFFECTIVENESS OF EROSION AND SEDIMENTATION CONTROL DEVICES, AND ANY NECESSARY REPAIRS SHALL BE PERFORMED WITHOUT DELAY.
3. EROSION AND ANY SEDIMENT FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT ON ANY OFF-SITE AREAS OR IN WATER WAYS. WATERWAYS INCLUDE BOTH NATURAL AND MANMADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES AND PONDS.
4. EROSION AND SEDIMENT CONTROL DEVICES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CONSTRUCTION. SEDIMENT CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTING OF SILT OFF THE SITE.
5. CONTRACTOR SHALL APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL DEVICES AS REQUIRED AND AS DIRECTED ON THESE PLANS. HE SHALL REMOVE TEMPORARY DEVICES AS SOON AS PERMANENT STABILIZATION OF SLOPES, DITCHES, AND OTHER EARTH CHANGES HAVE BEEN ACCOMPLISHED AND APPROVED BY THE CITY AND/OR COUNTY.
6. DEBRIS FROM PROJECT WILL BE LEFT ON THE SITE BY DELIVERY OR CONSTRUCTION VEHICLES THROUGH THE USE OF CLEAN STONE EXITS. SHOULD THE STONE BECOME LESS EFFECTIVE IT WILL BE REPLACED. ALL CONSTRUCTION TRAFFIC WILL USE THE CLEAN STONE EXIT.
7. DUST CONTROL WILL BE EXERCISED AT ALL TIMES WITHIN THE PROJECT BY THE CONTRACTORS. SPRINKLING TANK TRUCKS WILL BE AVAILABLE AT ALL TIMES TO BE USED ON HAUL ROUTES OR OTHER PLACES WHERE DUST BECOMES A PROBLEM.
8. IMMEDIATELY AFTER SEEDING, MULCH ALL SEEDED AREAS WITH UNWEATHERED SMALL GRAIN STRAW OR HAY. SPREAD UNIFORMLY AT A RATE OF 1 1/2 TO 2 TONS PER ACRE OR 0.10 POUNDS PER SQUARE FEET. ANCHOR MULCH WITH DISC TYPE MULCH ANCHORING TOOL.
9. ALL MUD, DIRT, AND DEBRIS TRACKED ONTO EXISTING ROADS FROM THIS SITE SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR OR BUILDER. ALL MUD, DIRT, AND DEBRIS TRACKED OR SPILLED ONTO PAVED SURFACES WITHIN THIS SITE SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
10. PERMANENT SOIL EROSION CONTROL DEVICES FOR ALL SLOPES, CHANNELS, DITCHES OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN 15 CALENDAR DAYS AFTER FINAL GRADING OR FINAL EARTH CHANGES HAVE BEEN COMPLETED. WHEN IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE A DISTURBED AREA AFTER AN EARTH CHANGE HAS BEEN COMPLETED OR WHERE SIGNIFICANT EARTH CHANGE ACTIVITY CEASES, TEMPORARY SOIL EROSION CONTROL DEVICES SHALL BE IMPLEMENTED WITHIN 30 CALENDAR DAYS. ALL TEMPORARY SOIL EROSION CONTROL DEVICES SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION DEVICES ARE IMPLEMENTED AND/OR ESTABLISHED. ALL PERMANENT SOIL EROSION CONTROL DEVICES WILL BE IMPLEMENTED AND ESTABLISHED BEFORE A CERTIFICATE OF COMPLIANCE IS ISSUED.
11. ALL CONTRACTORS ARE TO KEEP EXCAVATED MATERIAL ON SITE. PARTICULAR CARE SHOULD BE TAKEN WHEN WORKING ALONG THE PERIMETER OF THE SITE. IN NO EVENT SHALL THE WORK AREA EXTEND BEYOND THE LIMITS INDICATED ON THE PLANS.
12. THE SOIL EROSION CONTROLS WILL BE MAINTAINED WEEKLY AND AFTER EVERY STORM EVENT BY THE CONTRACTOR.

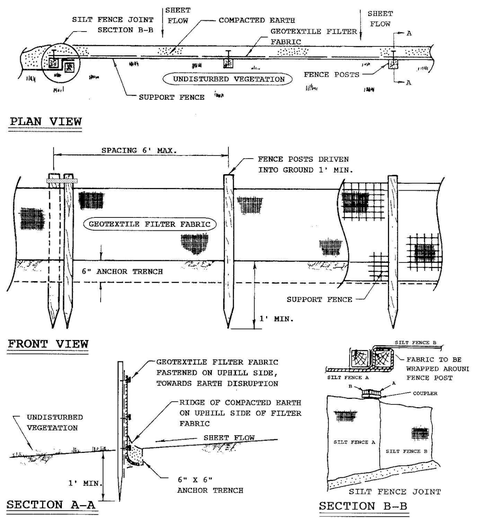
STORMWATER MANAGEMENT PROGRAM NOTES:

1. EXECUTION: NEW DEVELOPMENT AND/OR REDEVELOPMENT PROJECTS THAT DISTURB GREATER THAN OR EQUAL TO ONE ACRE, INCLUDING PROJECTS THAT ARE PART OF A LARGER COMMON PLAN OF DEVELOPMENT THAT WOULD DISTURB ONE ACRE, AND PROJECTS (OF ANY SIZE) WITHIN 500 FEET OF "WATERS OF THE STATE" WILL OBTAIN A PART 91 PERMIT. ALL APPLICABLE CONSTRUCTION PROJECTS WILL BE EVALUATED, IMPLEMENTED AND COMPLETED IN COMPLIANCE WITH CONSTRUCTION AND POST-CONSTRUCTION GUIDELINES OUTLINED IN THE GOVERNING STORMWATER MANAGEMENT PLAN.
2. SESC INSPECTIONS: THE PROJECT'S CERTIFIED STORMWATER OPERATOR (PROVIDED BY CONTRACTOR) WILL PERFORM INSPECTION AT ALL APPLICABLE SITES FOR NPDES COMPLIANCE ONCE PER WEEK, AND WITHIN 24 HOURS AFTER EVERY PRECIPITATION EVENT THAT RESULTS IN A DISCHARGE FROM THE SITE AND ENSURE THAT ANY NEEDED CORRECTIVE ACTIONS ARE CARRIED OUT. INSPECTION REPORTS PER GOVERNING STORMWATER MANAGEMENT PLAN SHALL BE COMPLETED UPON EACH INSPECTION. REPORTS SHALL BE FORWARDED TO THE OWNER.
3. TRAINING: ALL CONTRACTORS HIRED BY THE OWNER SHALL OBTAIN STORMWATER MANAGEMENT TRAINING TO ASSIST IN THE COMPLIANCE WITH THE STORMWATER MANAGEMENT PROGRAM.

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.
G2. COMPOSITE PLAN ISSUED FOR REFERENCE ONLY.
G3. REFER TO SHEETS A2.11 AND A2.12 FOR FURTHER INFORMATION.

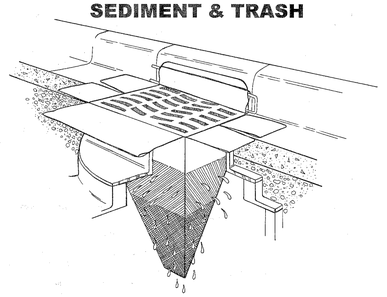
SILT FENCE



SILTSACK®

Price and Company, Inc.
Trademark owned by ACF Environmental

PROTECT CATCH BASINS FROM SEDIMENT & TRASH



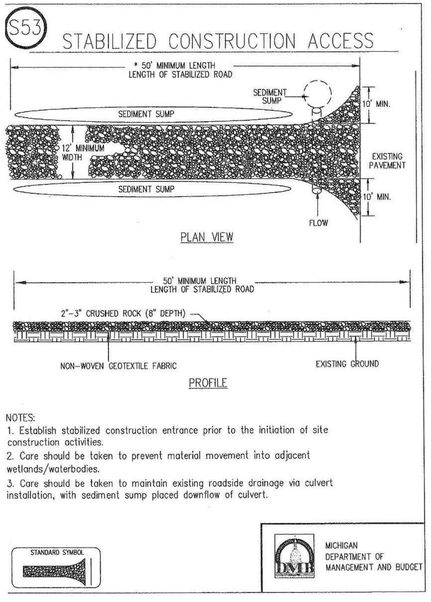
SILTSACK traps sand, debris and most silt particles before they reach the sump or pipes. Costly basin and pipe system cleaning are reduced. With **SILTSACK**, maintenance is easy and site flooding is just a memory. Best of all, **SILTSACK** can be reused!

SILTSACK WORKS!

- → EASY TO INSTALL - EASY TO MAINTAIN
- → ECONOMICAL
- → FABRICATED TO FIT ANY SIZE OR SHAPE
- → PERMEABILITY OF 200 GPM/SF [Hi-Flow style]
- → REPLACES ALL ROCK OR GEOTEXTILES
- → REUSABLE

Trademark of Price and Company, Inc.

S53 STABILIZED CONSTRUCTION ACCESS



NOTES:
1. Establish stabilized construction entrance prior to the initiation of site construction activities.
2. Care should be taken to prevent material movement into adjacent wetlands/waterbodies.
3. Care should be taken to maintain existing roadside drainage via culvert installation, with sediment sump placed downflow of culvert.

STANDARD SYMBOL

MICHIGAN DEPARTMENT OF MANAGEMENT AND BUDGET

SPALDING DEDECKER
Engineering and Surveying
Excellence Since 1954

Bidding and Permits: 31 July 2023

SOIL EROSION AND SEDIMENTATION CONTROL PLAN

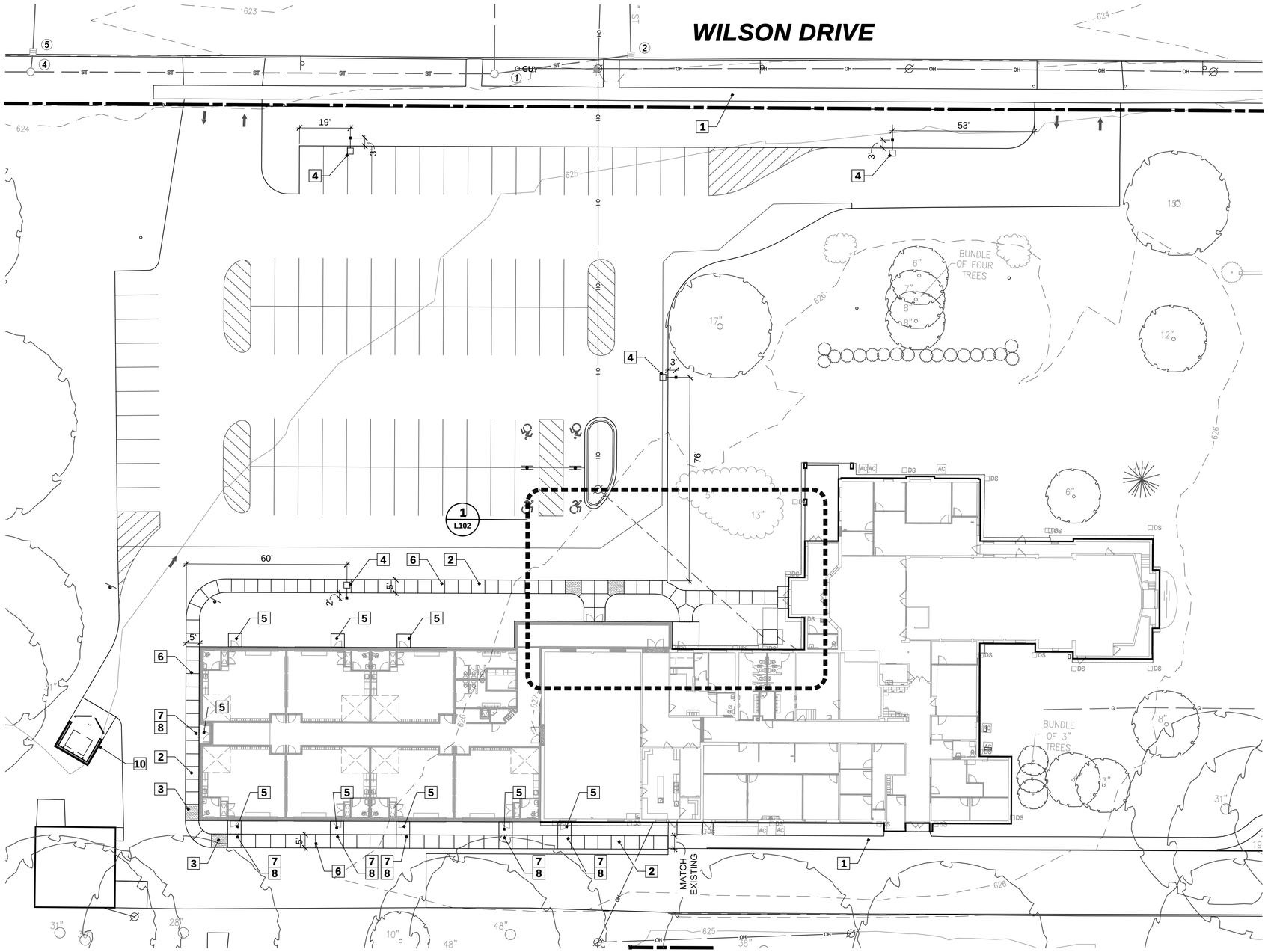
EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

C6.1

803 W. Big Beaver Road, Suite 350, Troy, MI 48084 | 248.244.9710



LANDSCAPE LAYOUT PLAN

SCALE 1" = 20'

1 inch = 20 feet

NORTH

CONTRACTOR TO FOLLOW CONCRETE WALK SCORING AS SHOWN ON LANDSCAPE LAYOUT SHEETS

NOTE KEY:

1	EXISTING SIDEWALK TO REMAIN
2	NEW CONCRETE WALK - SEE CIVIL DRAWINGS
3	BF RAMP - SEE CIVIL DWGS.
4	SITE LIGHT - SEE SITE ELECTRICAL PLANS
5	FROST SLAB - SEE ARCHITECT DRAWINGS
6	CONTROL JOINT
7	EXPANSION JOINT WITH SEALANT
8	12" LENGTH GREASED DOWELS - ¾" DIA. - 18" O.C.
9	PROPOSED TRANSFORMER PAD - SEE CIVIL DRAWINGS
10	DUMPSTER ENCLOSURE - SEE ARCH. DRAWINGS

GENERAL GRADING NOTES:

A. PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS, TYP.

B. PROVIDE POSITIVE DRAINAGE ON ALL WALKS.

C. DO NOT SCALE PRINTS.

D. CONTRACTOR TO CONTACT CIVIL ENGINEER AND LANDSCAPE ARCHITECT WITH ANY DISCREPANCIES BETWEEN GRADES SHOWN AND ACTUAL GRADES ON SITE. DO NOT MAKE ADJUSTMENTS WITHOUT APPROVAL OF THE CIVIL ENGINEER AND/ OR THE LANDSCAPE ARCHITECT.

E. SEE CIVIL ENGINEERING DRAWINGS FOR UTILITY STRUCTURE LOCATIONS.

F. SEE CIVIL ENGINEERING DRAWINGS FOR GRADING AND PAVEMENT ELEVATIONS FOR ALL ROADS, CURBS, BUILDINGS, UTILITIES, ETC.

GENERAL LAYOUT NOTES:

1.) Install 1/2" expansion joint where concrete walks meet building porches, typical.

2.) Install 1/2" expansion joint where concrete walks meet curbs, typ.

3.) Expansion joints in concrete sidewalks:
- 7' wd. sidewalk - 21' o.c. typ.
- 5' wd. sidewalk - 20' o.c. typ.
- 4' wd. sidewalk - 20' o.c. typ.
- 3' wd. sidewalk - 18' o.c. typ.

4.) Control joints in concrete sidewalks:
- 7' wd. sidewalk - 7' x 7' panel
- 5' wd. sidewalk - 5' x 5' panel
- 4' wd. sidewalk - 4' x 4' panel
- 3' wd. sidewalk - 3' x 3' panel

5.) Do not scale prints.

6.) All angles assumed to be 90 degrees unless otherwise noted.

7.) Concrete and Asphalt Walks to meet Porches/ Frost Slabs flush (no step) unless otherwise noted.

8.) See Civil Engineering drawings for Layout of all Roads, Curbs, Buildings, Utilities, etc.

9.) All dimensions to Back of Curb unless otherwise noted.

LIGHT KEY:

SITE LIGHT POLE - 3' OFF BACK OF CURB, 2' OFF BACK OF SIDEWALK. SEE SITE ELEC. PLANS

NOTE: LANDSCAPE ARCHITECT TO APPROVE ALL STAKED LOCATIONS FOR PATH LIGHTS, UPLIGHTS AND DUPLEX OUTLETS PRIOR TO WIRING AND INSTALLATION

Know what's below Call before you dig.

STATE OF MICHIGAN
STEPHEN L. DEAK
LANDSCAPE ARCHITECT
No. 1245
REGISTERED LANDSCAPE ARCHITECT

deak
PLANNING + DESIGN
143 cadycentre #79
northville, mi 48167
deakplanningdesign.com

date
2023-7-31 Bid & Permits

SITE LANDSCAPE PLAN

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

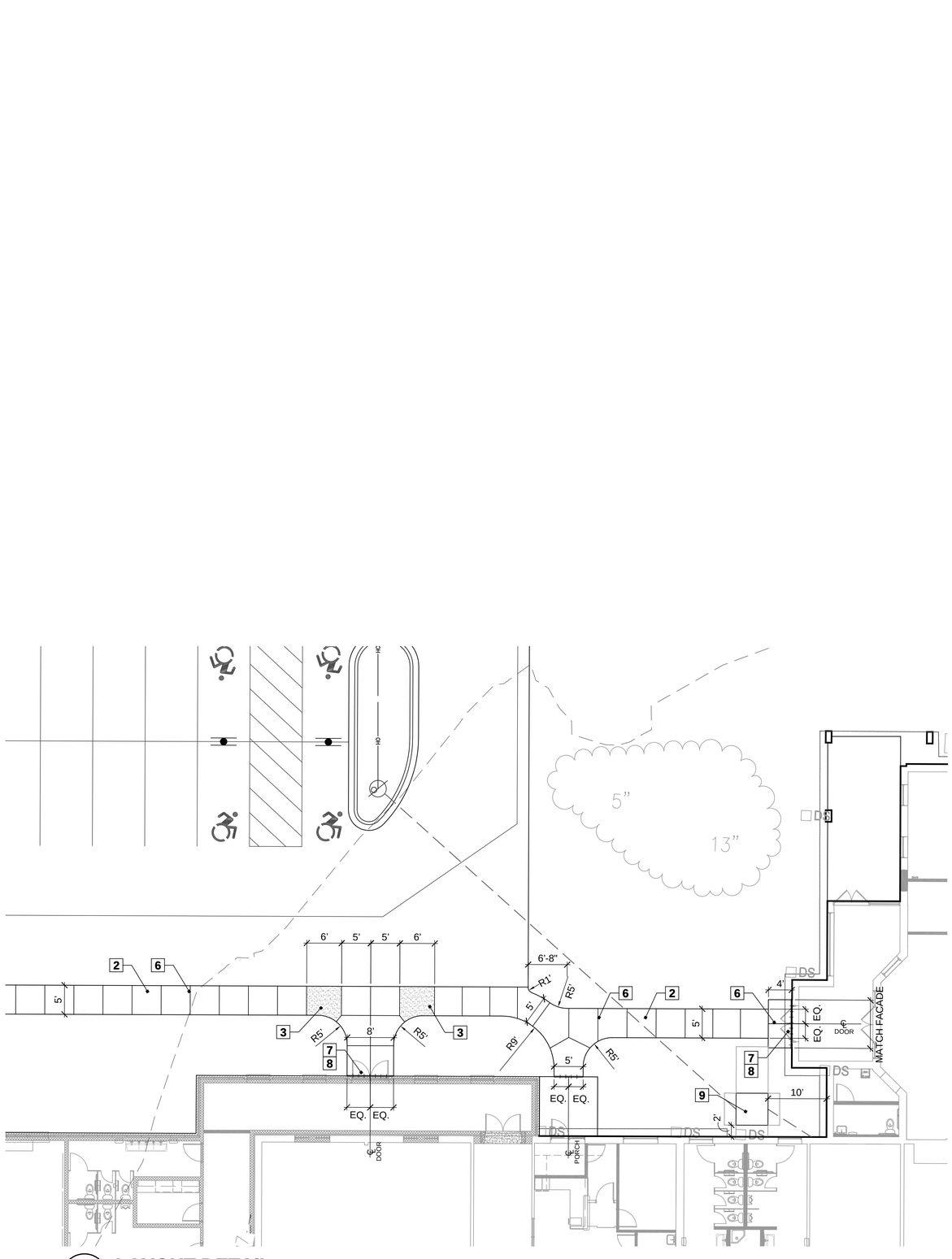
Project No. 3221

340 W. Big Beaver Road, Suite 880, Troy, MI 48084 | 248.744.9119

sheet no.
L.101

NOTE KEY:

1. EXISTING SIDEWALK TO REMAIN
2. NEW CONCRETE WALK - SEE CIVIL DRAWINGS
3. BF RAMP - SEE CIVIL DWGS.
4. SITE LIGHT - SEE SITE ELECTRICAL PLANS
5. FROST SLAB - SEE ARCHITECT DRAWINGS
6. CONTROL JOINT
7. EXPANSION JOINT WITH SEALANT
8. 12" LENGTH GREASED DOWELS - ¾" DIA. - 18" O.C.
9. PROPOSED TRANSFORMER PAD - SEE CIVIL DRAWINGS
10. DUMPSTER ENCLOSURE - SEE ARCH. DRAWINGS



1 L101 LAYOUT DETAIL

SCALE 1" = 10'

CONTRACTOR TO FOLLOW CONCRETE WALK SCORING AS SHOWN ON LANDSCAPE LAYOUT SHEETS

GENERAL GRADING NOTES:

A. PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS, TYP.

B. PROVIDE POSITIVE DRAINAGE ON ALL WALKS.

C. DO NOT SCALE PRINTS.

D. CONTRACTOR TO CONTACT CIVIL ENGINEER AND LANDSCAPE ARCHITECT WITH ANY DISCREPANCIES BETWEEN GRADES SHOWN AND ACTUAL GRADES ON SITE. DO NOT MAKE ADJUSTMENTS WITHOUT APPROVAL OF THE CIVIL ENGINEER AND/ OR THE LANDSCAPE ARCHITECT.

E. SEE CIVIL ENGINEERING DRAWINGS FOR UTILITY STRUCTURE LOCATIONS.

F. SEE CIVIL ENGINEERING DRAWINGS FOR GRADING AND PAVEMENT ELEVATIONS FOR ALL ROADS, CURBS, BUILDINGS, UTILITIES, ETC.

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3.) Expansion joints in concrete sidewalks:
- 7' wd. sidewalk - 21' o.c. typ.
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- 4' wd. sidewalk - 20' o.c. typ.
- 3' wd. sidewalk - 18' o.c. typ.

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- 7' wd. sidewalk - 7' x 7' panel
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- 4' wd. sidewalk - 4' x 4' panel
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5.) Do not scale prints.

6.) All angles assumed to be 90 degrees unless otherwise noted.

7.) Concrete and Asphalt Walks to meet Porches/ Frost Slabs flush (no step) unless otherwise noted.

8.) See Civil Engineering drawings for Layout of all Roads, Curbs, Buildings, Utilities, etc.

9.) All dimensions to Back of Curb unless otherwise noted.

LIGHT KEY:

SITE LIGHT POLE - 3' OFF BACK OF CURB, 2' OFF BACK OF SIDEWALK. SEE SITE ELEC. PLANS

NOTE: LANDSCAPE ARCHITECT TO APPROVE ALL STAKED LOCATIONS FOR PATH LIGHTS, UPLIGHTS AND DUPLEX OUTLETS PRIOR TO WIRING AND INSTALLATION

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STEPHEN L. DEAK
LICENSED LANDSCAPE ARCHITECT
No. 1245

deak
PLANNING + DESIGN
143 cadycentre #79
northville, mi 48167
deakplanningdesign.com

date

2023-7-31 Bid & Permits

SITE LANDSCAPE PLAN

EHRESMAN ARCHITECTS ehresmanarchitects.com

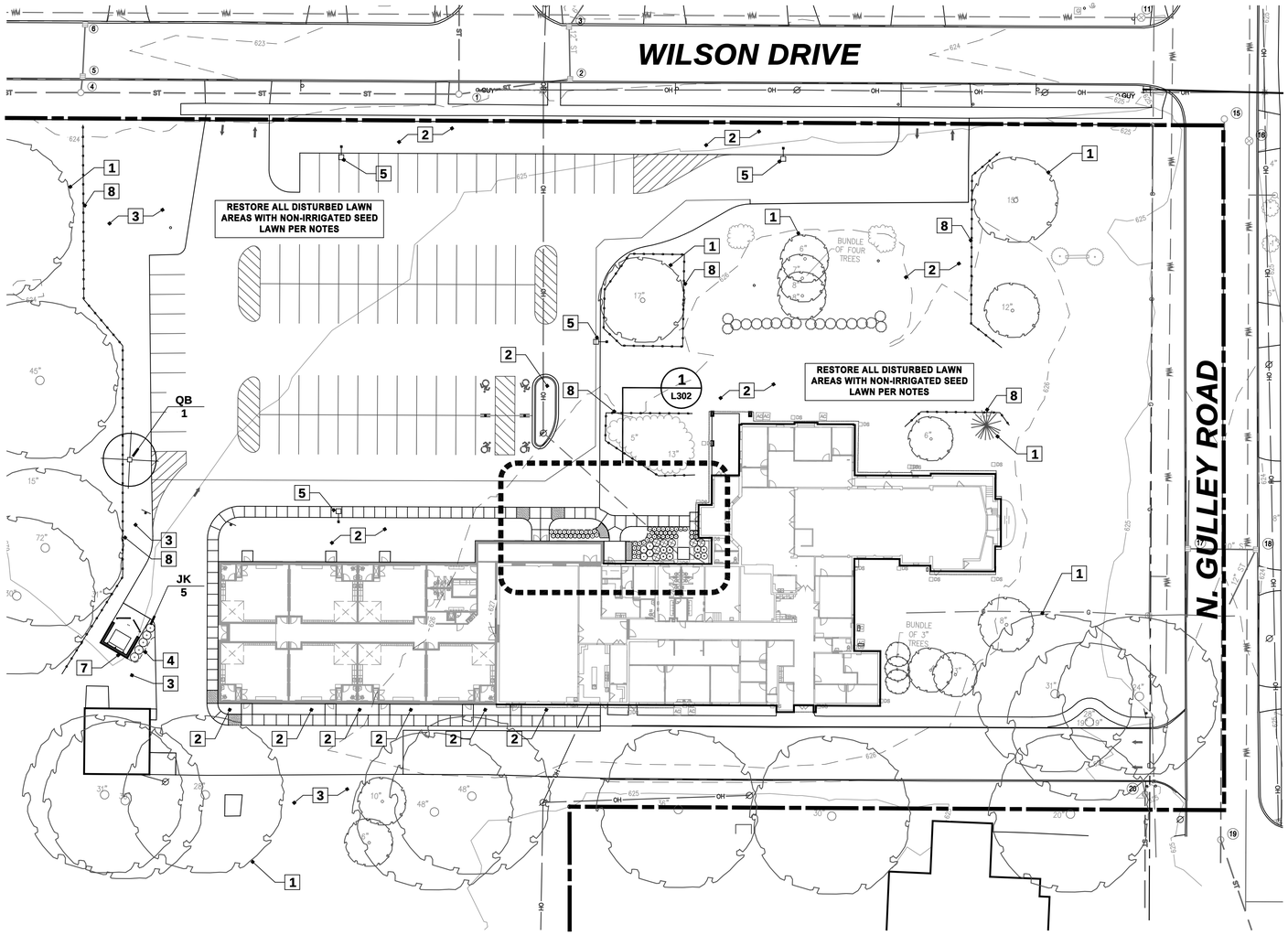
Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

163 W. Big Beaver Road, Suite 350, Troy, MI 48084 | 248.744.9710

sheet no.

L.102



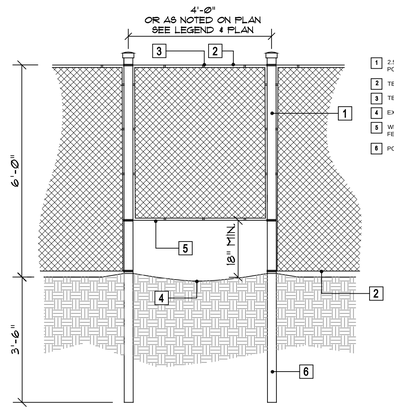
SITE LANDSCAPE PLAN

SCALE 1" = 30'

0 15 30 60

1 inch = 30 feet

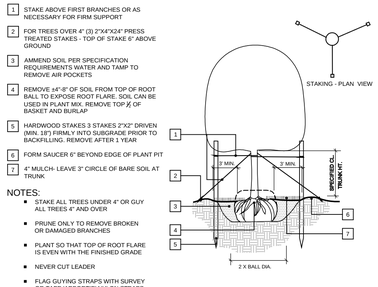
NORTH



1 2.5" CORNER POST 1 7/8" LINE POSTS, WIRE FABRIC- 11 1/2 GAUGE
2 TENSION WIRE, TYP.
3 TENSION CLIPS, 15" O.C. TYP.
4 EXISTING GRADE
5 WILDLIFE OPENING (ONE PER FENCE OR 100' O.C. IF ENCLOSED)
6 POSTS DIRECTLY INTO SOIL

TREE PROTECTION CHAIN LINK FENCING WITH WILDLIFE OPENING DETAIL

1 L.301 NOT TO SCALE

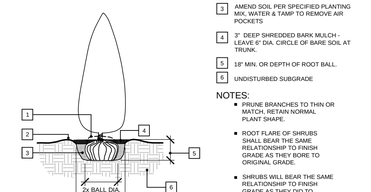


1 STAKE ABOVE FIRST BRANCHES OR AS NECESSARY FOR FIRM SUPPORT
2 FOR TREES OVER 4" (3) 2"X4"X24" PRESS TREATED STAKES - TOP OF STAKE 6" ABOVE GROUND
3 AMMEND SOIL PER SPECIFICATION REQUIREMENTS WATER AND TAMP TO REMOVE AIR POCKETS
4 REMOVE ±4"-8" OF SOIL FROM TOP OF ROOT BALL TO EXPOSE ROOT FLARE. SOIL CAN BE USED IN PLANT MIX. REMOVE TOP ½ OF BASKET AND BURLAP
5 HARDWOOD STAKES 3 STAKES 2"X2" DRIVEN (MIN. 18") FIRMLY INTO SUBGRADE PRIOR TO BACKFILLING. REMOVE AFTER 1 YEAR
6 FORM SAUCER 6" BEYOND EDGE OF PLANT PIT
7 4" MULCH- LEAVE 3" CIRCLE OF BARE SOIL AT TRUNK

NOTES:
- STAKE ALL TREES UNDER 4" OR GUY ALL TREES 4" AND OVER
- PRUNE ONLY TO REMOVE BROKEN OR DAMAGED BRANCHES
- PLANT SO THAT TOP OF ROOT FLARE IS EVEN WITH THE FINISHED GRADE
- NEVER CUT LEADER
- FLAG GUYING STRAPS WITH SURVEY OR TAPE 'ARBORTIE' NYLON STRAPS

DECIDUOUS TREE PLANTING

2 L.301 NOT TO SCALE



1 REMOVE ±4"-8" OF SOIL FROM ROOT BALL MATERIALS TOP OF ROOT BALL TO EXPOSE ROOT FLARE. SOIL CAN BE USED IN PLANT MIX. REMOVE ALL OF BASKET AND BURLAP.
2 FORM SAUCER WITH 3" CONTINUOUS RIM AT EDGE OF PLANT PIT.
3 AMEND SOIL PER SPECIFIED PLANTING MIX. WATER & TAMP TO REMOVE AIR POCKETS
4 3" DEEP SHREDDED BARK MULCH - LEAVE 6" DIA. CIRCLE OF BARE SOIL AT TRUNK.
5 18" MIN. OR DEPTH OF ROOT BALL.
6 UNDISTURBED SUBGRADE

NOTES:
- PRUNE BRANCHES TO THIN OR MATCH, RETAIN NORMAL PLANT SHAPE.
- ROOT FLARE OF SHRUBS SHALL BEAR THE SAME RELATIONSHIP TO FINISH GRADE AS THEY BORE TO ORIGINAL GRADE.
- SHRUBS WILL BEAR THE SAME RELATIONSHIP TO FINISH GRADE AS THEY DID TO ORIGINAL GRADE
- REMOVE ALL FIBER, PLASTIC OR METAL CONTAINERS.

TALL SHRUB PLANTING

3 L.301 NOT TO SCALE

NOTE KEY:

1 EXISTING TREE TO REMAIN
2 NEW NON-IRRIGATED SEEDED LAWN OVER MINIMUM 4" DEPTH TOPSOIL. SEE NOTES BELOW
3 RESTORE DISTURBED EXISTING LAWN AREAS WITH NON-IRRIGATED SEED LAWN OVER 1" DEPTH TOPSOIL
4 SHOVEL CUT BED EDGE - TYP.
5 LIGHT POLE - SEE ELEC. PLANS
6 ARCH./TRANSFORMER PAD - SEE ARCH. DWGS.
7 DUMPSTER ENCLOSURE - SEE ARCH. DWGS.
8 TEMPORARY TREE PROTECTION FENCE - SEE DETAIL 1, SHEET L.301
9 CONTINUOUS MULCH BED - SEE MULCH NOTE THIS SHEET.

GENERAL PLANTING REQ.:

A THE WORK SHALL CONSIST OF PROVIDING ALL NECESSARY MATERIAL, LABOR, EQUIPMENT, TOOLS, AND SUPERVISION REQUIRED FOR THE COMPLETION AS SHOWN ON THE DRAWING.

B ALL PLANT MATERIALS SHALL CONFORM TO THE TYPE STATED ON THE PLANT LIST. SIZES SHALL BE THE MINIMUM STATED ON THE PLANT LIST OR LARGER. ALL MEASUREMENTS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "A.A.N. STANDARDS FOR NURSERY STOCK".

C ALL TREE LOCATIONS SHALL BE STAKED BY LANDSCAPE CONTRACTOR AND ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF THE PLANT MATERIAL.

D ALL SINGLE TRUNK SHADE TREES TO HAVE A CENTRAL LEADER, TREES WITH FORKED OR IRREGULAR TRUNKS WILL NOT BE ACCEPTED. ALL SINGLE STEM SHADE TREES TO HAVE STRAIGHT TRUNKS AND SYMMETRICAL CROWNS.

E ALL MULTI-STEM TREES SHALL BE HEAVILY BRANCHED AND HAVE SYMMETRICAL CROWNS. ONE SIDED TREES OR THOSE WITH THIN OR OPEN CROWNS SHALL NOT BE ACCEPTED.

F ALL EVERGREEN TREES SHALL BE HEAVILY BRANCHED AND FULL TO THE GROUND, SYMMETRICAL IN SHAPE AND NOT SHEARED FOR THE LAST FIVE GROWING SEASONS.

G THE CONTRACTOR IS RESPONSIBLE FOR PLANTING THE MATERIALS AT THE CORRECT GRADES AND SPACING. THE PLANTS SHALL BE ORIENTED AS TO GIVE THE BEST APPEARANCE.

H WHEN THE PLANT HAS BEEN PROPERLY SET, THE PIT SHALL BE BACKFILLED WITH A TOPSOIL AND NATIVE SOIL MIXTURE, GRADUALLY FILLING, PATTING AND SETTLING WITH WATER.

I ALL PLANT MATERIALS SHALL BE PRUNED AND INJURIES REPAIRED. THE AMOUNT OF PRUNING SHALL BE LIMITED TO THE REMOVAL OF DEAD OR INJURED TWIGS AND TO COMPENSATE FOR THE LOSS OF ROOTS FROM TRANSPLANTING. CUTS SHOULD BE FLUSH, LEAVING NO STUBS.

J THE CONTRACTOR AGREES TO GUARANTEE ALL PLANT MATERIALS FOR THE PERIOD OF ONE YEAR, AT THAT TIME THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT FOR A FINAL INSPECTION. PLANT MATERIAL WITH 25% DIE BACK, AS DETERMINED BY THE OWNER'S REPRESENTATIVE SHALL BE REPLACED. THIS GUARANTEE INCLUDES THE FURNISHING OF NEW PLANTS, LABOR AND MATERIALS. THESE NEW PLANTS SHALL ALSO BE GUARANTEED FOR THE PERIOD OF ONE YEAR.

K TOPSOIL SHALL BE FRIABLE, FERTILE TOPSOIL OF CLAY LOAM CHARACTER CONTAINING AT LEAST 5% BUT NOT MORE THAN 20% BY WEIGHT OF ORGANIC MATTER WITH A PH RANGE FROM 6.0 TO 7.0. SOIL SHALL BE FREE FROM CLAY LUMPS, COARSE SAND, PLANT ROOTS, STICKS AND OTHER FOREIGN MATERIALS. FOREIGN MATERIALS.

L NO MACHINERY IS TO BE USED WITHIN THE DRIP LINE OF EXISTING TREES. HAND GRADE ALL LAWN AREAS WITHIN DRIP LINE OF EXISTING TREES.

M IT IS MANDATORY THAT POSITIVE DRAINAGE IS PROVIDED AWAY FROM ALL BUILDINGS, WALKS AND PAVED AREAS.

N ALL PLANTING BEDS SHALL RECEIVE 4" SHREDDED BARK MULCH. SEE SPECIFICATIONS.

O SOD/ SEED LAWN AREAS - ALL LAWN AREAS BETWEEN CURBS AND BUILDINGS OR BETWEEN BUILDINGS, DISK SOIL TO 4" DEEP BEFORE TOPSOIL PLACEMENT

P SOD SHALL BE TWO YEAR OLD "BARON/CHERIADELPHI" KENTUCKY BLUE GRASS GROWN IN A SOD NURSERY ON LOAM SOIL.

PLANT MIX

ALL PLANTING/ PERENNIAL BEDS TO RECEIVE:

1 6 CU FT. BALE CANADIAN PEAT

1 40LB BAG DRIMANURE

1 1-LB BAG SHEMINS 13-13-13 MULTI PURPOSE FERTILIZER

PER 100 SQ FT BED AREA.

HAND TILL INTO SOIL TO A DEPTH OF 12" MINIMUM

MULCH

MULCH TO BE DOUBLE SHREDDED HARDWOOD BARK MULCH

NO GROUND WOOD PALETTE MULCH PERMITTED

TOPSOIL

CONTRACTOR TO TILL OR DISK SUBGRADE TO 4" DEPTH AND INSTALL 4" COMPACTED DEPTH TOPSOIL IN ALL LAWN AREAS - TOPSOIL SHALL BE PROVIDED BY CONTRACTOR

LAWNS

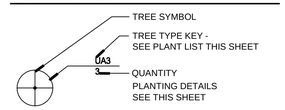
NON-IRRIGATED SEED LAWN - ALL DISTURBED AREAS

LAWN SEED MIX – "NON IRRIGATED"

SEED TYPE	PROPORTION	PURITY	GERMINATION
PENNFINE PERENNIAL RYE	20%	90%	90%
EUKENTUCKY 2M COMMON BLUEGRASS	20%	90%	90%
PENN LAWN FESCUE	60%	90%	80%

NO NOXIOUS WEED SEEDS PERMITTED.
FERTILIZER FOR "NON-IRRIGATED" LAWN 10-10-10

PLANT KEY



WATERING

CONTRACTOR RESPONSIBLE FOR MONITORING THE WATERING OF ALL PLANTINGS AND NEWLY PLANTED LAWN AREAS FOR ONE YEAR FROM THE START OF THE WARRANTY PERIOD.

ANY PLANTING THAT PERISHES DUE TO LACK OF WATER, OR OVERWATERING, DOES NOT QUALIFY AS THE REQUIRED REPLACEMENT PLANTING AS STATED IN THE SPECIFICATION, AND SHALL BE REPLACED AT NO COST TO THE OWNER.

NEWLY PLANTED LAWN AREAS THAT PERISH DUE TO LACK OF WATER, OR OVERWATERING, DO NOT QUALIFY AS THE REQUIRED REPLACEMENT TO ESTABLISH A HEALTHY FULL DENSE LAWN AS STATED IN THE SPECIFICATION, AND SHALL BE REPLACED AT NO COST TO THE OWNER.

811 Know what's below Call before you dig.

STATE OF MICHIGAN STEPHEN L. DEAK ARCHITECT No. 1245 REGISTERED LANDSCAPE ARCHITECT

deak
PLANNING + DESIGN
143 cadycentre #79
northville, mi 48167
deakplanningdesign.com

date
2023-7-31 Bid & Permits

SITE LANDSCAPE PLAN

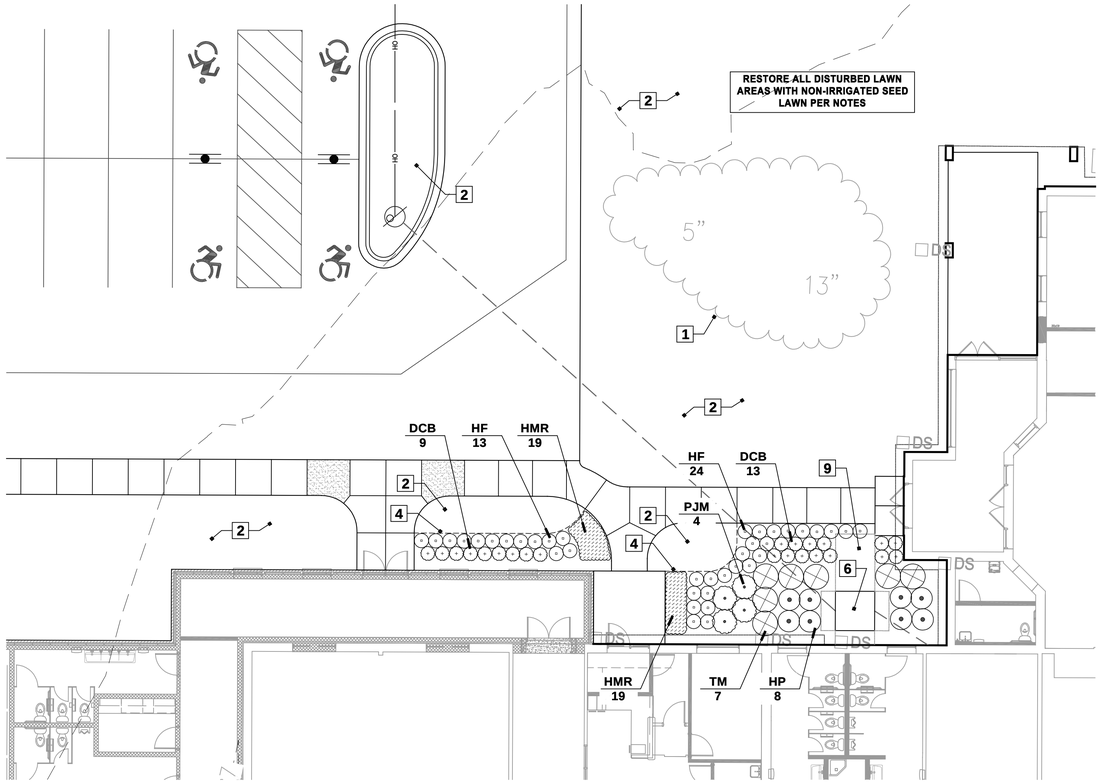
EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

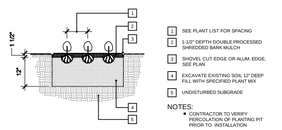
160 W. Big Beaver Road, Suite 300, Troy, MI 48084 | 248.764.9710

sheet no.
L.301



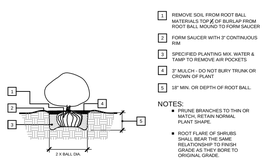
1 L301 PLANTING DETAIL

SCALE 1" = 10'



2 L302 PERENNIAL/ GROUNDCOVER PLANTING DETAIL

NOT TO SCALE



1 L302 SHRUB PLANTING

NOT TO SCALE

PLANT LIST

QUAN.	KEY	COMMON/ BOTANICAL NAME	SIZE	SPEC.	SPACE
1	QB	**Swamp White Oak**	3" cal.	B&B	AS SHOWN
		Quercus bicolor			
5	JK	**Ketler Juniper**	5' Ht.	B&B	AS SHOWN
		J. 'Ketlerii'			
7	TM	**Moon Yew**	30"Ht.	B&B	AS SHOWN
		Taxus x.m. 'Moon'			
8	HP	**Limelight Prime Hydrangea**	3 Gal.	Cont.	AS SHOWN
		Hydrangea p. 'Limelight Prime'			
4	PJM	**PJM Rhododendron**	5 Gal.	Cont.	AS SHOWN
		Rhododendron 'PJM'			
22	DCB	**Yuki Cherry Blossom**	1 Gal.	Cont.	14" O.C.
		Deutzia x 'Yuki Cheery Blossom'			
37	HF	**Francee Hosta**	1 gal.	Cont.	24" O.C.
		Hosta 'Francee'			
38	HMR	**Midnight Rose Coral Bells**	1 Gal.	Cont.	14" O.C.
		Heuchera 'Midnight Rose'			

NOTE: CONTRACTOR TO VERIFY ALL PLANT QUANTITIES ON SITE LANDSCAPE PLAN SHEETS.

GENERAL PLANTING REQ.:

A. THE WORK SHALL CONSIST OF PROVIDING ALL NECESSARY MATERIAL, LABOR, EQUIPMENT, TOOLS, AND SUPERVISION REQUIRED FOR THE COMPLETION AS SHOWN ON THE DRAWING.

B. ALL PLANT MATERIALS SHALL CONFORM TO THE TYPE STATED ON THE PLANT LIST. SIZES SHALL BE THE MINIMUM STATED ON THE PLANT LIST OR LARGER. ALL MEASUREMENTS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "A.A.N. STANDARDS FOR NURSERY STOCK".

C. ALL TREE LOCATIONS SHALL BE STAKED BY LANDSCAPE CONTRACTOR AND ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF THE PLANT MATERIAL.

D. ALL SINGLE TRUNK SHADE TREES TO HAVE A CENTRAL LEADER, TREES WITH FORKED OR IRREGULAR TRUNKS WILL NOT BE ACCEPTED. ALL SINGLE STEM SHADE TREES TO HAVE STRAIGHT TRUNKS AND SYMMETRICAL CROWNS.

E. ALL MULTI-STEM TREES SHALL BE HEAVILY BRANCHED AND HAVE SYMMETRICAL CROWNS. ONE SIDED TREES OR THOSE WITH THIN OR OPEN CROWNS SHALL NOT BE ACCEPTED.

F. ALL EVERGREEN TREES SHALL BE HEAVILY BRANCHED AND FULL TO THE GROUND, SYMMETRICAL IN SHAPE AND NOT SHEARED FOR THE LAST FIVE GROWING SEASONS.

G. THE CONTRACTOR IS RESPONSIBLE FOR PLANTING THE MATERIALS AT THE CORRECT GRADES AND SPACING. THE PLANTS SHALL BE ORIENTED AS TO GIVE THE BEST APPEARANCE.

H. WHEN THE PLANT HAS BEEN PROPERLY SET, THE PIT SHALL BE BACKFILLED WITH A TOPSOIL AND NATIVE SOIL MIXTURE, GRADUALLY FILLING, PATTING AND SETTLING WITH WATER.

I. ALL PLANT MATERIALS SHALL BE PRUNED AND INJURIES REPAIRED. THE AMOUNT OF PRUNING SHALL BE LIMITED TO THE REMOVAL OF DEAD OR INJURED TWIGS AND TO COMPENSATE FOR THE LOSS OF ROOTS FROM TRANSPLANTING. CUTS SHOULD BE FLUSH, LEAVING NO STUBS.

J. THE CONTRACTOR AGREES TO GUARANTEE ALL PLANT MATERIALS FOR THE PERIOD OF ONE YEAR, AT THAT TIME THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT FOR A FINAL INSPECTION. PLANT MATERIAL WITH 25% DIE BACK, AS DETERMINED BY THE OWNER'S REPRESENTATIVE SHALL BE REPLACED. THIS GUARANTEE INCLUDES THE FURNISHING OF NEW PLANTS, LABOR AND MATERIALS. THESE NEW PLANTS SHALL ALSO BE GUARANTEED FOR THE PERIOD OF ONE YEAR.

K. TOPSOIL SHALL BE FRIABLE, FERTILE TOPSOIL OF CLAY LOAM CHARACTER CONTAINING AT LEAST 5% BUT NOT MORE THAN 20% BY WEIGHT OF ORGANIC MATTER WITH A PH RANGE FROM 6.0 TO 7.0. SOIL SHALL BE FREE FROM CLAY LUMPS, COARSE SAND, PLANT ROOTS, STICKS AND OTHER FOREIGN MATERIALS. FOREIGN MATERIALS.

L. NO MACHINERY IS TO BE USED WITHIN THE DRIP LINE OF EXISTING TREES. HAND GRADE ALL LAWN AREAS WITHIN DRIP LINE OF EXISTING TREES.

M. IT IS MANDATORY THAT POSITIVE DRAINAGE IS PROVIDED AWAY FROM ALL BUILDINGS, WALKS AND PAVED AREAS.

N. ALL PLANTING BEDS SHALL RECEIVE 4" SHREDDED BARK MULCH. SEE SPECIFICATIONS.

O. SOD/ SEED LAWN AREAS - ALL LAWN AREAS BETWEEN CURBS AND BUILDINGS OR BETWEEN BUILDINGS, DISK SOIL TO 4" DEEP BEFORE TOPSOIL PLACEMENT

P. SOD SHALL BE TWO YEAR OLD "BARON/CHERIADELPHI" KENTUCKY BLUE GRASS GROWN IN A SOD NURSERY ON LOAM SOIL.

PLANT MIX

ALL PLANTING/ PERENNIAL BEDS TO RECEIVE:

1 6 CU FT. BALE CANADIAN PEAT

1 40LB BAG DRIMANURE

1 1-LB BAG SHEMINS 13-13-13 MULTI PURPOSE FERTILIZER

PER 100 SQ FT BED AREA.

HAND TILL INTO SOIL TO A DEPTH OF 12" MINIMUM

MULCH

MULCH TO BE DOUBLE SHREDDED HARDWOOD BARK MULCH

NO GROUND WOOD PALETTE MULCH PERMITTED

TOPSOIL

CONTRACTOR TO TILL OR DISK SUBGRADE TO 4" DEPTH AND INSTALL 4" COMPACTED DEPTH TOPSOIL IN ALL LAWN AREAS - TOPSOIL SHALL BE PROVIDED BY CONTRACTOR

LAWNS

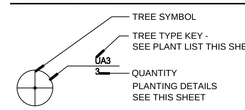
NON-IRRIGATED SEED LAWN - ALL DISTURBED AREAS

LAWN SEED MIX – "NON IRRIGATED"

SEED TYPE	PROPORTION	PURITY	GERMINATION
PENNFINE PERENNIAL RYE	20%	95%	90%
EXENTUCKY 289 COMMON BLUEGRASS	20%	90%	90%
PENN LAWN FESCUE	60%	90%	85%

NO NOXIOUS WEED SEEDS PERMITTED.
FERTILIZER FOR "NON-IRRIGATED" LAWN 10-10-10

PLANT KEY



WATERING

CONTRACTOR RESPONSIBLE FOR MONITORING THE WATERING OF ALL PLANTINGS AND NEWLY PLANTED LAWN AREAS FOR ONE YEAR FROM THE START OF THE WARRANTY PERIOD.

ANY PLANTING THAT PERISHES DUE TO LACK OF WATER, OR OVERWATERING, DOES NOT QUALIFY AS THE REQUIRED REPLACEMENT PLANTING AS STATED IN THE SPECIFICATION, AND SHALL BE REPLACED AT NO COST TO THE OWNER.

NEWLY PLANTED LAWN AREAS THAT PERISH DUE TO LACK OF WATER, OR OVERWATERING, DO NOT QUALIFY AS THE REQUIRED REPLACEMENT TO ESTABLISH A HEALTHY FULL DENSE LAWN AS STATED IN THE SPECIFICATION, AND SHALL BE REPLACED AT NO COST TO THE OWNER.

NOTE KEY:

1. EXISTING TREE TO REMAIN
2. NEW NON-IRRIGATED SEEDED LAWN OVER MINIMUM 4" DEPTH TOPSOIL. SEE NOTES BELOW
3. RESTORE DISTURBED EXISTING LAWN AREAS WITH NON-IRRIGATED SEED LAWN OVER 1" DEPTH TOPSOIL
4. SHOVEL CUT BED EDGE - TYP.
5. LIGHT POLE - SEE ELEC. PLANS
6. ARCH.TRANSFORMER PAD - SEE ARCH. DWGS.
7. DUMPSTER ENCLOSURE - SEE ARCH. DWGS.
8. TEMPORARY TREE PROTECTION FENCE - SEE DETAIL 1, SHEET L.301
9. CONTINUOUS MULCH BED - SEE MULCH NOTE THIS SHEET.

STATE OF MICHIGAN — STEPHEN L. DEAK — LANDSCAPE ARCHITECT — No. 1245 — REGISTERED LANDSCAPE ARCHITECT

deak
PLANNING + DESIGN

143 cadycentre #79
northville, mi 48167

deakplanningdesign.com

date

2023-7-31 Bid & Permits

SITE LANDSCAPE PLAN

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

583 W. Big Beaver Road, Suite 850, Troy, MI 48084 | 248.744.9111

sheet no.

L.302

Know what's below Call before you dig.

SECTION 32 90 00 - PLANTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the furnishing and installation of landscaping.

1.3 REFERENCES

A. Except as herein specified or as indicated on the Drawings, the work of this Section shall comply with the following:
1. American Joint Committee on Horticultural Nomenclature (AJCHN) - Standardized Plant Names.
2. ANSI Z60.1 - American Standard for Nursery Stock.

1.4 DEFINITIONS

A. Terms:
1. Nursery Stock:
a. Trees and shrubs in a recognized nursery in accordance with good horticultural practices.
b. Healthy, vigorous stock grown under climatic conditions similar to conditions in the locality of the Project and free of disease, insects, eggs, larvae, and defects such as knots, sun-scald, injuries, abrasions, or disfigurement.
2. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. ONLY organic permitted - submit manufacturer documentation.
3. Root Flare: Also called "trunk flare." The area at the base of the plant's stem or trunk where the stem or trunk broadens to form roots; the area of transition between the root system or trunk.

1.5 QUALITY ASSURANCE

A. Landscape Subcontractor: The work of this Section shall be performed by a single firm specializing in landscape work, unless otherwise approved by Landscape Architect or Owner.

B. Source Quality Control:
1. Comply with governing regulations applicable to landscape materials.
2. Supply Landscape Architect with certificates of inspection as required by governmental agencies.
3. Landscape Architect reserves the right to inspect trees and shrubs either at place of growth or at the project site before planting, for compliance with requirements for name, variety, size, and quality. Failure of Landscape Architect to inspect trees and shrubs prior to planting does not remove Contractor's responsibility to fully comply with applicable requirements.
4. Comply with the sizing and grading standards of the latest edition of "American Standard for Nursery Stock". A plant shall be dimensioned as it stands in its natural position.
5. All Plants shall be grown under climatic conditions similar to those in the locality of the project for a minimum of 2 years
6. Stock furnished shall be at least the minimum size indicated. Larger stock is acceptable, at no charge. Larger plants shall not be cut back to size indicated.

C. Plant Material Observation: Landscape Architect may observe plant material either at place of growth or at site before installation for compliance with requirements for genus, species, variety, cultivar, size, and quality. Landscape Architect may also observe trees and shrubs further for size, condition of root ball, root systems, pests, disease symptoms, injuries, and latent defects and may reject unsatisfactory or defective material at any time during progress of work. Remove rejected material immediately from Project Site.
1. Notify Landscape Architect of sources of planting materials seven (7) days in advance of delivery to site.

1.6 COORDINATION

D. Coordination with Turf Areas (Lawns): Plant trees, shrubs, and other plants after finish grades are established and before planting turf areas unless otherwise indicated.
1. When Planting trees, shrubs, and other plants after planting turf areas protect turf areas and promptly repair damaged caused by planting operations at contractor's expense.

1.7 PREINSTALLATION MEETING

E. Conduct Preinstallation Meeting at Project Site with sufficient time before any landscape activity.

1.8 SUBMITTALS

F. Product Data (For each type of Product):
1. Plant Materials: Include quantities, sizes, quality, and sources for plant materials.
2. Plant photographs, Plant Photographs, if selection at the source is considered not possible by the Landscape Architect: Include color photographs in digital 3 x 5 inch format of each required species and size of plant material as it will be furnished to Project. Take photographs from an angle depicting true size and condition of the typical plant to be furnished. Include a scale rod or other measuring device in each photograph. For species where more than 20 plants are required, include a minimum of three photographs showing the average plant, the best quality plant, and the worst quality plant to be furnished. Identify each photograph with the full scientific name of the plant, plant size, and name of the growing nursery.

B. Samples for Verification (For each of the following):
1. Trees and Shrubs: Provide "specimen" plants with a special height, shape, or character of growth. Landscape Subcontractor to tag specimen trees or shrubs at the source of supply. The Landscape Subcontractor shall inspect and select all plant material at source prior to Landscape Architect's approval. Landscape Subcontractor shall accompany Landscape Architect on final selection trip. The Landscape Architect will inspect specimen selections for suitability and adaptability to selected location. When specimen plants cannot be purchased locally, provide sufficient photographs of the proposed specimen plants for approval.
2. Organic/ Compost: sealed plastic bags labeled with composition of materials by percentage of weight and source of mulch. Each Sample shall be typical of the lot of material to be furnished; provide an accurate representation of color, texture, and organic makeup.
3. Slow-Release, Tree Watering Device: Photo and manufacture description of each size required.

C. Product Certificates (For each type of manufactured product, from manufacturer and complying with the following):
1. Manufacturer's certified analysis of standard products.
2. Analysis of other materials by recognized laboratory made according to methods established by the Association of Official Chemists, where applicable.

D. Pesticides and Herbicides: Product Label and manufacturer's application instructions specific to Project - ONLY organic pesticides permitted.

1.9 FIELD CONDITIONS

A. Field Measurements: Verify actual grade elevations, service and utility locations, irrigation system components, and dimensions of plantings and construction contiguous with new plantings by field measurements before proceeding with planting work.

B. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with warranty periods to provide required contractor responsibilities from date of Substantial Completion. Evergreen material: Plant evergreen materials between September 1 and October 15 or in spring before new growth begins. If project requirements require planting at other times, plants shall be sprayed with anti-desiccant prior to planting operations. Deciduous material: Plant deciduous materials in a dormant condition. If deciduous trees are planted in leaf, they shall be sprayed with anti-desiccant prior to planting operation.

C. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions and warranty requirements.

1.10 DELIVERY, STORAGE, AND HANDLING

A. Delivery:
1. Deliver packaged materials in containers showing weight, analysis, and name of manufacturer. Store in manner to prevent wetting and deterioration.
2. Deliver trees and shrubs only after preparations for planting have been completed.
3. Trees and Shrubs:
a. Do not prune prior to delivery.
b. Do not use trees or shrubs which have been in cold storage or heeled-in.
c. Provide freshly dug trees and shrubs.
d. Immediately before digging, spray material in full leaf with antidesiccant, applying adequate film over trunks, branches, twigs and foliage.
e. Dig up and prepare for shipment in a manner that will not cause damage to branches, shape and future development after planting.
f. Ball plants with firm natural balls of earth of diameter and depth no less than that recommended by American Standard for Nursery Stock. Firmly wrap root balls with burlap.
g. Drum lace plants which are 2 inches in caliper or over.
h. Plants will be rejected if ball is cracked or broken either before or during process of planting.
i. Provide protective covering during delivery.
j. Water on site heeled in plantings daily.
k. No plants shall be bound with rope or wire in such a manner that could damage or break the branches.

B. Storage and Handling:
1. Protect plants and materials from damage and deterioration while stored.
2. Protect root balls from sun and drying winds.
3. Set balled and burlapped plant which cannot be planted upon delivery on ground in shade, protected with soil and roots kept moist.
4. Do not remove container-grown stock from containers until planting time.
5. In the event of damage, make all replacements necessary to the approval of Engineer and at no additional cost to Owner.
6. Do not drop plants.
7. Do not pick up container or balled plants by stems or trunks.
C. Rejected Material and Replacements:
1. Reject damaged, deteriorated, or contaminated materials and immediately remove from the Site.
2. Replace rejected materials with new materials at no additional cost to Owner.
3. Make replacement during the growing season following the rejection.
4. Match replacement material to adjacent specimens of same species in both size and character, including increase in growth since planting.
5. Only 1 replacement will be required at end of warranty period, except for replacements due to failure to comply with specified requirements.
6. Repair damage to other plants or lawns during replacement at no additional cost to Owner.

1.11 WARRANTY

A. Warranty: Warranty trees and shrubs for a period of 1 year after date of acceptance against defects, including death and unsatisfactory growth, except for defects resulting from neglect by Owner, abuse, or damage by others or unusual phenomena or incidents which are beyond Contractor's control.

B. Replacements:
1. Remove and replace trees, shrubs, or other plants found to be dead or in unhealthy condition during guarantee period.
2. Make replacements during the growing season following the end of the guarantee period.
3. Furnish and plant replacements which comply with this Section.
4. Replace trees and shrubs which are in doubtful condition at end of guarantee period unless, in the opinion of Landscape Architect, it is satisfactory to extend guarantee period for a full growing season.
5. Landscape Architect will make inspection at end of extended guarantee period, if any, to determine acceptance or rejection.
6. Only 1 replacement will be required at end of guarantee period, except for losses or replacements due to failure to comply with specified requirements.
7. Repair damage to other plants or lawns during plant replacements at no additional cost to Owner.

C. Acceptance of Installation
1. At the completion of all landscape installation, or pre-approved portions thereof, the Landscape Subcontractor shall request in writing an inspection for Acceptance of Installation in which the Landscape Subcontractor, Landscape Architect, and General Contractor's Representative shall be present. After this inspection a punch list will be issued by the Landscape Architect. Upon completion of all punch list items, the Landscape Architect and/or General Contractor's Representative shall re-inspect the project and issue a written statement of Acceptance of Installation and establish the beginning of the Project Warranty Period. At the time of acceptance all plant material shall be vigorous health.
2. It is the responsibility of the Landscape Subcontractor to make the above written request for inspection of installation in a timely fashion. If there is plant material loss prior to the Landscape Subcontractor's written request for inspection of installation, the Landscape Contractor shall make all replacements of this dead material at no additional cost. These replacements are not considered to be the required one (1) replacement of dead plant material by the Landscape Subcontractor during the one (1) year project warranty period, as outlined.
3. Landscape work may be inspected for acceptance in parts agreeable to General Contractor's Representative and Landscape Architect provided work offered for inspection is complete, including contractor responsibilities as required.
4. For work to be inspected for partial acceptance, the Landscape Subcontractor shall provide a drawing outlining work completed and supply a written statement requesting acceptance of this work completed to date.

1.12 MAINTENANCE

A. Maintenance Period:
1. Begin maintenance immediately after planting.
2. Maintain trees, shrubs, and other plants until final acceptance, but in no case less than 60 days after planting.

B. Procedures:
1. Maintain trees, shrubs, and other plants by pruning, cultivating, and weeding as required for healthy growth.
2. Restore planting saucers.
3. Inspect for adequate watering during the warranty period. Take any corrective measures needed to provide adequate watering. Inspect and repair or replace any damaged or missing slow release watering devices.
4. Tighten and repair stake and guy supports and reset trees and shrubs to proper grades or vertical position as required.
5. Restore or replace damaged wrappings.
6. Spray as required to keep trees and shrubs free of insects and disease.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Topsoil: In accordance with Division 31 Section "Grading."

B. Fertilizer:
1. Type A: "Chick Magic 5-3-2" applied per manufacturer recommendations
2. Type B: "Shemins 13-13-13". Apply per manufacturer recommendations.
3. Or Approved Equal.

C. Planting Mixture:
1. Type A - Trees and Shrubs:
a. Blend 1/3 existing onsite surface soil, 1/3 topsoil and 1/3 "Plant Mix", modified as need to produce viable planting soil. See "Plant Mix" on plans for quantities to produce planting soil.
b. Add organic compost, fertilizer Types "A" and "B" to planting mixture in accordance with Manufacturer's requirements, follow planting details and planting notes on Drawings.
2. Type B - Perennial Flowers, Groundcover Beds and Ericaceous Plants:
a. Planting backfill shall be a mixture of six cubic foot organic compost, (1) 40 pound bag composted poultry manure and five pounds of fertilizer Type "B" per 100 square foot of planting bed area.
b. All existing soil shall be excavated and removed.
c. Hand till into soil to minimum depth of 12 inches or depth of plant roots whichever is greater.

D. Mulch:
1. Shredded Bark:
a. Double processed dark shredded hardwood bark that is clean, free of debris and sticks
b. Materials shall be uniform in size, shape and texture.
c. Submit samples to General Contractor for approval prior to installation.
d. Install mulch to finish grade, level smooth, without ridges, humps or depressions.

E. Water:
1. Free of substances harmful to plant growth.
2. Hoses or other methods of transportation furnished by Subcontractor.

F. Tree Watering Devices
1. Slow-Release Watering Device - non irrigated areas: Standard product manufactured for drip irrigation of plants and emptying its water contents over an extended time period two hours, two weeks manufactured from UV-light-stabilized nylon-reinforced polyethylene sheet, PVC, or HDPE plastic.
2. Products: Subject to compliance with requirements, provide the following:
b. Gator Bags
1) Color: green

G. Trees and Shrubs:
1. Supply trees and shrubs for nursery stock or collected stock.
2. Provide plant materials true to name and variety established by the AJCHN - Standardized Plant Names.
3. Provide trees, shrubs, and other plants complying with the recommendations and requirements of ANSI Z60.1 and as further specified.
4. Provide deciduous trees of height and caliper listed or indicated and with branching configuration recommended by ANSI Z60.1 for type and species required. Provide single-stem trees except where special forms are shown or listed.
5. Provide deciduous shrubs of the height shown or listed and with not less than the minimum number of canes required by ANSI Z60.1 for the type and height of shrub required.
6. Bare-root plants as specified on the Drawings: Dug with adequate fibrous roots to be covered with a uniformly thick coating of mud by being puddle immediately after they are dug or packed in moist straw or peat moss.
7. Container Grown Stock: Grown in a container for sufficient length of time for the root system to have developed to hold its soil together, firm and whole.
a. No plants shall be loose in container.
b. Container stock shall not be root bound
c. The measurements for height shall be taken from the ground level to the average height of the top of the plant and not the longest branch.
d. Single stemmed or thin plants will not be accepted.
e. Side branches shall be generous, well twigged and the plant as a whole well bushed to the ground.
f. Plants shall be in a moist, vigorous condition, free from dead wood, bruises or other root branch injuries.
8. Evergreens:
a. Provide evergreens of size shown or listed.
b. Dimensions indicate minimum spread for spreading and semi-spreading type evergreens and height for other types such as globe, dwarf, cone, pyramidal, broad upright, and columnar.
c. Provide normal quality evergreens with well balanced form complying with requirements for other size relationships to the primary dimension shown.
9. Balled and Burlapped Stock:
a. Provide plants typical of their species or variety; with normal, densely developed branches and vigorous, fibrous root systems. Provide only sound, healthy, vigorous plants free from defects, disfiguring knots, sunscald injuries, frost cracks, abrasions of the bark, plant diseases, insect eggs, borers, and any forms of infestation. The plants shall have a fully developed form without voids and open spaces. Dig balled and burlapped plants with firm, natural balls of earth of sufficient diameter and depth to encompass the fibrous and feeding root system necessary for full recovery of the plant. Provide ball sizes complying with the latest edition of the "American Standard for Nursery Stock" or larger as required on Drawings. Cracked or mushroomed balls are not acceptable.
b. Provide tree species that mature at heights over 25 feet with a single, main trunk. Trees that have the main trunk forming a "Y" shape are not acceptable.
10. All plants shall have normal habit of growth and shall be sound, healthy, vigorous plants with well developed root systems.
11. All plants shall be free of disease, insects, eggs and larvae.
12. Trees with bark abrasions, sun-scalds, disfiguring knots, or fresh cuts of limbs over 1-1/4 inches which have not completely callused will be rejected.
13. Measure plants when branches are in normal position. Height and spread dimensions specified refer to main body of plant and not from tip to branch tip.
14. Take caliper measurements at point on trunk 6 inches above natural ground line for trees up to, and including 4 inches in caliper and 12 inches above natural ground line for trees over 4 inches in caliper.
15. If range of sizes is given, no plant shall be less than minimum size and not less than 50% of plants shall be as large as upper half of range specified.
16. Measurements specified are measurements after pruning where pruning is required.
17. Plants that meet measurements specified, but do not possess normal balance between height and spread, will be rejected.
18. Substitutions of plant materials will not be permitted unless authorized in writing by Landscape Architect or owner.

H. Staking Materials:
1. Stakes:
a. Sound new hardwood or treated softwood free of knot holes and other defects which would impair strength.
b. 2-inch x 2-inch x 8'-0" long square.
2. Guying/Staking: 3/4-inch Arbortie nylon strap (NO WIRE AND HOSE PERMITTED).

I. Tree Wrap:
1. Standard waterproofed tree wrapping paper 2-1/2-inch wide, made of 2 layers crepe kraft paper weighing not less than 30 lbs. per ream, with bituminous inner coating.
2. Self-adhering Tree Wrap by 3M Corporation.
3. Or approved equal.

J. Antidesiccant:
1. Wilt Pruf by Nursery Specialty Products, Inc.; or approved equal.
2. Protective film emulsion providing a protective film overplant surfaces; permeable to permit transpiration. Mixed and applied in accordance with Manufacturer's instructions,
3.

PART 3 - EXECUTION

3.1 INSPECTION

A. Examine proposed planting areas and conditions of installation. Do not start planting work until unsatisfactory conditions are corrected.

3.2 PREPARATION

A. Location:
1. Notify Landscape Architect at least 7 working days prior to installation of plant material.
2. Protect existing utilities, paving and other facilities from damage caused by landscaping operations.
3. Stake location of trees and plants and outlines for planting beds on ground prior to digging.
4. Notify Landscape Architect 48 hours in advance when staking is complete for onsite review.
5. If staking approval is not requested and plants are installed without approval, Landscape Architect reserves the right to have trees and plant material moved at no additional cost to Owner.
6. If underground obstructions are encountered during excavation of tree pits, alternate locations may be selected by Engineer or a change to the Contract may be provided.

B. Time of Planting:
1. Evergreen Material: Plant evergreen materials between September 1 and October 15 or in spring before new growth begins. If project requirements require planting at other times, plants shall be sprayed with anti-desiccant prior to planting operations.
2. Deciduous Material: Plant deciduous materials in a dormant condition. If deciduous trees are planted in leaf, they shall be sprayed with anti-desiccant prior to planting operation.
3. Planting times other than those indicated must be acceptable to the Landscape Architect.
4. Planting shall be performed only by experienced workmen familiar with planting procedures under the supervision of a qualified supervisor.
5. Planting pits shall be round, with vertical sides and flat bottoms, and sized in accordance with outlines and dimensions indicated on the planting details.
6. Individual plant locations shall be staked on the Project Site by the Landscape Contractor and approved by the Landscape Architect before any planting pits are dug. The Landscape Architect reserves the right to adjust plant material locations to meet field conditions, without additional cost to the Construction Manager or Owner.
7. Planting pits shall be round, with vertical sides and flat bottoms, and sized in accordance with outlines and dimensions indicated on the planting details.
8. If obstructions are encountered that are not indicated, do not proceed with planting operations until alternative plant locations have been selected and approved in writing by the Landscape Architect. Where location or spacing dimensions are not clearly shown, request clarification by the Landscape Architect.
9. See Drawings for planting details.

C. Preparation of Planting Soil:
1. Before mixing, clean topsoil of roots, plants, sods, clay lumps, and other extraneous materials harmful or toxic to plant growth.
2. Plant soil shall consist of a uniform mixture of topsoil, peat moss and fertilizer.
3. One cubic yard of plant soil shall contain 3/4 cubic yard of topsoil, 1/4 cubic yard of peat moss and sufficient chemical fertilizer if planting will not follow placing of planting soil within a few days.
4. Delay mixing of fertilizer if planting will not follow placing of planting soil within a few days.
5. For pit and trench type backfill, mix planting soil prior to backfilling and stockpile at the Site.
6. For planting beds, mix planting soil prior to planting or apply on surface of topsoil and mix thoroughly before planting.

D. Pruning and Shaping:
1. Prune only for the preservation for each plant's natural character.
2. Prune after delivery but prior to planting.
3. Prune, thin out, and shape trees and shrubs in accordance with standard horticultural practice.
4. Limit pruning to 32% of total plant structure as necessary to remove dead or injured twigs and branches and to compensate for root loss resulting from transplanting.
5. Do not cut leaders.
6. Seal cuts over 1/2-inch in size with standard pruning paint.
7. Evergreens shall be pruned only to the extent of removing broken or damaged branches.
8. Remove and replace excessively pruned or misformed stock resulting from improper pruning.

3.3 VEGETATION REMOVAL

A. General: See Landscape Preparation:
1. Strip existing grass and weeds, including roots from all bed areas leaving the soil surface 1-inch below finish grade.
2. Herbicide: Use "Round Up" (Monsanto Company) as required to prepare area for new planting, applied to all ground cover, evergreen and shrubbery beds and all mulch areas before application of pre-emergence herbicide, in accordance with Manufacturer's recommendations. Clean area of all dead material after 5 days.
3. Pre-Emergence Herbicide: DACHTHAL W-75 (Diamond Shamrock Agricultural Chemicals) applied to 1 ounce per 100 square feet to same area where "Herbicide" has been applied and after area is cleared of dead vegetation and to planting bed areas.
4. Herbicides to be applied by licensed applicator as required by the State.
5. Excavate circular plant pits with vertical sides, except for plants specifically indicated to be planted in beds. Provide plant pits in accordance with planting details. Depth of pit shall accommodate the root system. Scarify the bottom of the pit to a depth of 6 inches.
6. Provide premixed planting mixture Type "A" for use around the balls and roots of all deciduous and evergreen tree plantings.

B. Mass Shrub Beds/Hedge Beds: Excavate existing soil to 18-inch depth over entire bed area and remove soil from Site. Scarify bottom of the bed to a 4-inch depth. Set plants according to Drawings and Specifications. Backfill entire bed with (premixed) specified planting mixture Type "A".

3.4 INSTALLATION

A. General:
1. Set material in the planting pit to proper grade and alignment.
2. Set plants upright, plumb and faced to give the best appearance or relationship to each other or adjacent structure. Set plant material 2 inches to 3 inches above the finish grade.
3. Remove top of ball and excess soil to expose the root flare at base of trunk. Raise or lower tree for root flare to be at correct level to grade outside of planting pit. Do not use planting stock if root ball is cracked or broken before or during planting operation.
4. No filling will be permitted around trunks or stems. Backfill the pit with planting mixture and soil removed from top of ball. Do not use frozen or muddy mixtures for backfilling.
5. Form a ring of soil around the edge of each planting pit to retain water.
6. After balled and burlapped plants are set, tamp planting soil mixture around bases of balls and fill all voids.
7. Remove all burlap, ropes and wires from the top 1/2 of root ball.
8. Space ground cover plants in accordance with indicated dimensions. Adjust spacing as necessary to evenly fill planting bed with indicated quantity of plants. Plant to within 12 inches of trunks of trees and shrubs within planting bed and to within 6 inches of edge of bed.
9. Spread and arrange roots of bare rooted plants in their natural position. Work in planting mixture. Do not mat roots together. Cut all broken and frayed roots before installing planting mixture.
10. Water immediately after planting.
11. Apply pre-emergent herbicide to bed areas in accordance with Manufacturer's recommendations before mulching.

B. Antidesiccants:
1. If deciduous trees or shrubs are moved in full leaf, spray with antidesiccant 2 weeks after planting.
2. Apply antidesiccant using power spray to provide adequate film over trunks, branches, stems, twigs and foliage.
C. Balled and Burlapped Stock:
1. Plants: Provide plants typical of their species or variety; with normal, densely developed branches and vigorous, fibrous root systems. Provide only sound, healthy, vigorous plants free from defects, disfiguring knots, sunscald injuries, frost cracks, abrasions of the bark, plant diseases, insect eggs, borers, and all forms of infestation. All plants shall have a fully developed form without voids and open spaces. Dig balled and burlapped plants with firm, natural balls of earth of sufficient diameter and depth to encompass the fibrous and feeding root system necessary for full recovery of the plant. Provide ball sizes complying with the latest edition of the "American Standard for Nursery Stock" or larger as required on Drawings. Cracked or mushroomed balls are not acceptable.
2. Provide tree species that mature at heights over 25'-0" with a single,main trunk. Trees that have the main trunk forming a "Y" shape are not acceptable.
3. Plants planted in rows shall be matched in form Plants larger than those specified in the plant list may be used when acceptable to the Landscape Architect.If the use of larger plants is acceptable, increase the spread of roots or root ball in proportion to the size of the plant.The height of the trees, specified by height, measured from the crown of the roots to the top of the top branch, shall not be less than the minimum size designated on the drawings.No pruning wounds shall be present with a diameter of more than 1" and such wounds must show vigorous bark on all edges. Evergreen trees shall be unsheared and branched to the ground.Shrubs and small plants shall meet the requirements for spread and height indicated on the Drawings.

D. Container Grown Stock:
1. Grown in a container for sufficient length of time for the root system to have developed to hold its soil together, firm and whole. No plants shall be loose in the container.
2. Container stock shall not be root bound.
3. The measurements for height shall be taken from the ground level to the average height of the top of the plant and not the longest branch.
4. Single stemmed or thin plants will not be accepted.
5. Side branches shall be generous, well twigged and the plant as a whole well bushed to the ground.
6. Plants shall be in a moist, vigorous condition, free from dead wood, bruises or other root or branch injuries.

E. Wrapping:
1. Inspect tree trunks for injury, improper pruning, and insect infestation and take appropriate corrective measures before wrapping.
2. Wrap deciduous tree trunks of 1-1/2-inch caliper and larger within 1 week after planting.
3. Start at ground and cover trunk to height of first branches and securely attach.
4. Overlap 1/2 the width of the wrapping tape.
5. Securely attach wrappings so it will not loosen over a 12-month period.

F. Staking and Guying:
1. Staking:
a. Stake/guy all trees immediately after installation. When high winds or other conditions which may affect tree survival or appearance occur during the warranty period, the Subcontractor shall immediately repair the staking/guying.
b. Accurately stake plant material according to the Drawings. Stakes shall be above grade and painted a bright color to be clearly visible for inspection.
c. Stake deciduous trees under 4-inch caliper with 2 x 2 cedar stakes 2 per tree.
d. Stake evergreen trees under 6'-0" tall with 2 x 2 cedar stakes 2 per tree.
e. Stake evergreen trees 6'-0" tall and over with metal fence post, 3 per tree. Drive stakes to avoid the ball and not closer than 1-foot from the trunk.
f. Extend stakes a minimum of 18 inches below bottom of tree ball or root base of item being staked.
g. Extend stakes upwards parallel to the trunk.
h. Trim stakes after installation so that height above grade is no more than 6 feet or 2/3 the plant height.
i. Remove all staking/guying after a period of one year.

j. Work shall be acceptable to the Landscape Architect and Owners representative.
2. Guying:
a. Inspect trees for injury to trunks, evidence of insect infestation and improper pruning before wrapping.
b. Wrap trunks of all trees spirally from bottom to top with specified tree wrap and secure in place. Guy with "Arbortie" nylon straps in accordance with planting details.
c. Stake/guy all trees immediately after installation. When high winds or other conditions which may affect tree survival or appearance occur during the warranty period, the Subcontractor shall immediately repair the staking/guying.
d. Guy deciduous trees 4-inch caliper and over. Stake evergreen trees 6'-0" tall and over with metal fence post, 3 per tree.
e. Firmly attach top of each stake to tree trunk with Arbortie nylon strap (NO WIRE AND HOSE PERMITTED) forming a figure 8 around stake and trunk.
f. Arbortie nylon strap shall be firmly attached to stake.
g. If, during the life of the Contract, trees blow down or are otherwise damaged because of improper bracing or guying, they shall be replaced at no additional cost to Owner.

G. INSPECTION
1. All work shall be acceptable to the Landscape Architect and Owners representative.

H. MULCHING:
1. Mulch trees and shrub planting pits and shrub beds with double shredded bark mulch 3 inches deep immediately after planting.
2. Water thoroughly, immediately after mulching.
3. After watering, rake mulch to provide a uniform finished surface.
4. Mulch ground cover beds with shredded bark mulch 1-inch to 2-inches deep prior to planting. Plant ground cover through mulch.

I. PRUNING
1. Prune branches of deciduous stock, after planting, to balance the loss of roots and preserve the natural character appropriate to the the particular plant requirements. In general remove ¼ to 1/3 of the leaf bearing buds, proportion shall in all cases be acceptable to the Landscape architect.
2. Remove or cut back broken, damaged and unsymmetrical growth of new wood.
3. Mulitple Leader Plants: Preserve the leader which will best promote the symmetry of the plant. Cut branches flush with the trunk of the main branch, at a point beyond a lateral shoot or bud, a distance of not less than1/2 the diameter of the supporting branch. Make cut on an angle.
4. Prune evergreens only to remove broken or damaged branches.

J. CLEANING
1. Perform cleaning during installation of the work daily and upon completion of the work. Remove from site all excess materials, soil, debris, and equipment. Repair damage resulting from planting operations.

K. INSTALL SLOW-RELEASE WATERING DEVICE - NON-IRRIGATED AREAS
1. Provide one (1) device for each tree.
2. Place device on top of the mulch at base of tree stem and fill with water according to manufacturer's written instructions.

3.5 CONTRACTOR RESPONSIBLIITES OF PLANTS

A. Maintain plantings by pruning, cultivating, watering, weeding, fertilizing, mulching, restoring planting saucers, adjusting and repairing tree-stabilization devices, resetting to proper grades or vertical position, and performing other operations as required to establish healthy, viable plantings.

B. Fill in, as necessary, soil subsidence that may occur because of settling or other processes. Replace mulch materials damaged or lost in areas of subsidence.

C. Apply treatments as required to keep plant materials, planted areas, and soils free of pests and pathogens or disease. Use integrated pest management practices when possible to minimize use of pesticides and reduce hazards. Treatments include physical controls such as hosing off foliage, mechanical controls such as traps, and biological control agents.

3.6 REPAIR AND REPLACEMENT

D. General: Repair or replace existing or new trees and other plants that are damaged by construction operations, in a manner approved by Architect.
1. Submit details of proposed pruning and repairs.
2. Perform repairs of damaged trunks, branches, and roots within 24 hours, if approved.
3. Replace trees and other plants that cannot be repaired and restored to full-growth status, as determined by Landscape Architect or Owner Representative.

B. Remove and replace trees that are more than 25 percent dead or in an unhealthy condition before the end of the corrections period or are damaged during construction operations that Architect determines are incapable of restoring to normal growth pattern.
1. Provide new trees of same size as those being replaced for each tree.

3.7 ESTABLISHMENT OF SERVICE

A. See Warranty section above.
1. Warranty Period: Twelve (12) months from date of Acceptance of Installation.

END OF SECTION 32 90 00

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date
2023-7-31 Bid & Permits

SITE LANDSCAPE PLAN

EHRESMAN ARCHITECTS
ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

sheet no.
L.601

SECTION 32 92 00 - TURF AND GRASSES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the furnishing and installation of the major items listed below:
1. Seed.
2. Fertilizer.
3. Mulch.
4. Sod.

B. Related Requirements:
1. Section 32 90 00 PLANTING for trees, shrubs, ground covers, and other plants as well as border edgings and mow strips.

1.3 DEFINITIONS

A. Follow-up Maintenance: Maintenance required when seeding, sodding, or other vegetative practices do not achieve the desired degree of stabilization.

B. Periodic Maintenance: Maintenance performed after the vegetation has been established.

C. Finish Grade: Elevation of finished surface of planting soil.

D. Planting soil: Existing, on-site; imported soil; or manufactured soil that has been modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth.

E. Subgrade: The surface elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.

1.4 LOCATION

A. Sodded Areas: As indicated on the Drawings.

B. Seeded Areas: As indicated on the drawings and all disturbed areas within the project limits not covered by other surface improvements or features.

C. Mulch Blankets: All seeded slopes of 3:1 or greater.

1.5 PRE-INSTALLATION MEETING

D. Conduct Preinstallation Meeting at Project Site with sufficient time before any landscape activity.

1.6 SUBMITTALS

A. Product Data: For mulch blanket on slopes equal or greater than 4:1.

B. Samples: For netting and mulch blanket.

C. Certification of Grass Seed: From seed vendor for each grass-seed monostand or mixture, stating the botanical and common name, percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.
1. Certification of each seed mixture for turfgrass/ sod. Include identification of source and name and telephone number of supplier.

D. Quality Assurance/Control Submittals: For certificates. Supplier's certified analysis for each seed and fertilizer mixture required.

1.7 QUALITY ASSURANCE

A. Sod
1. Comply with American Sod Producers Association (ASPA) classes of sod materials

B. Fabrication and Installation Personnel Qualifications:
1. Trained and experienced in the fabrication and installation of the materials and equipment.
2. Knowledgeable of the design and the reviewed Submittals.

1.8 DELIVERY, STORAGE AND HANDLING

A. Deliver materials in original, unbroken, brand marked containers or wrapping as applicable.

B. Handle and store materials in a manner which will prevent deterioration, damage, contamination with foreign matter, and damage by weather or elements, and according to Manufacturer's directions.

C. Reject damaged, deteriorated, or contaminated material and immediately remove from the Site. Replace rejected materials with new materials at no additional cost to Owner.

D. Cut, deliver and install sod within 24 hour period.

E. Do not harvest or transport sod when moisture content may adversely affect sod survival.

F. Protect sod from sun, wind and dehydration prior to installation. Do not tear, stretch or drop sod during handling and installation.

1.9 PROJECT CONDITIONS

A. Work Notification: Notify Owner's Representative at least 7 workings days prior to start of seeding operations

B. Protect existing utilities, paving, and other facilities from damage caused by seeding or sodding operations.

C. Performing seeding and sodding work only after planting and other work affecting the ground surface has been completed.

D. Planting Restrictions: Seed Lawn - Plant during on of the following periods. Coordinate planting periods with initial warranty period to provide required contractor responsibilities from date of panting completion.
1. Spring Planting: April 1 - June 1
2. Fall planting: August 15 - October 15

E. Weather Limitations B. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions.

F. Restrict traffic from lawn areas until grass is established. Erect signs and barriers as required.

G. Provide hose and lawn watering equipment as needed or required.

H. Either a permanent or temporary irrigation system will be installed prior to seeding. Locate, protect and maintain the irrigation system during seeding operations. Repair irrigation system components damaged during seeding operations at the Subcontractor's expense.

1.10 WARRANTY

A. The requirements of this Section include a one (1) year warranty period from date of acceptance of installation performed by the General Contractor's Representative and Landscape Architect.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Topsoil: In accordance with Division 31 Section "Grading."

B. Fertilizer:
1. Comply with MDOT 917.10, Class A except as herein specified.
2. Liquid Fertilizer for Hydroseed: 16-32-4 containing no chlorine.

c. Seed:
1. Non-Irrigated Lawn Seed: Fresh, clean, and new crop seed mixture.
a. Mixed by an approved method.
b. Composed of the following varieties, mixed to the specified proportions by weight and tested to the minimum percentages of purity and germination. Poa Annua, bent grass, and noxious weed free.
c. Composed of the following varieties, mixed to the specified proportions by weight and tested to minimum percentages of purity and germination.

Seed Type	Proportion	Purity	Germination
Pennfine Perennial Rye	20%	90%	90%
Kentucky 28# Commom Bluegrass	20%	90%	90%
Penn Lawn Fescue	60%	90%	85%

Spread at a rate of 6 lbs. per 1000 s.f. if drilled and 10 lbs. if hydroseeded.
No noxious weed seeds permitted.
2. Furnish seed in durable bags, each marked by the supplier of the blended mix with a tag giving name, lot number, net weight of contents, purity, and germination.

E. Fertilizers
6. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:
a. Composition: 1 lb/1000 sq. ft. of actual nitrogen, 4 percent phosphorous, and 2 percent potassium, by weight.
b. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing laboratory.
2. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
a. Composition: 20 percent nitrogen, 10 percent phosphorous, and 10 percent potassium, by weight.
b. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing laboratory.

F. Mulch:
1. Small Grain: Straw mulch used in crimping process only. Clean oat or wheat straw well seasoned before bailing free from mature seed-bearing status, or roots of prohibited or noxious weeds.
2. Anchoring Material for Small Grain Mulch:
a. Netting:
1) Biodegradable.
2) Openings not to exceed 1-1/2 inches x 2 inches.
3) Minimum Roll Width: 35 inches.
4) Anchoring Staples or Pins:Wood pegs
3. Hydromulch:
a. Slurry: Minimum 60% wood fiber mulch with remaining being recycled cellulose fibers.
b. Tackifier:
1) Manufacturers: Finn Fiber Plus; Finn Fiber Gum; or equal.
2) Synthetic fiber or gum.
4. Mulch Blankets:
a. Biodegradable:
1) Straw: North American Green S-150 or equal.
2) Coconut: North American Green C-125; or equal.
3) Straw and Coconut: North American Green SCC-225 or equal.
b. Anchoring Staples or Pins:
1) Hardwood stakes at least 6 inches long.
2) North American Green Bio-Stake blanket pins at least 6 inches long

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas to be planted for compliance with requirements and other conditions affecting installation and performance of the Work.
1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
2. Suspend planting operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
3. Uniformly moisten excessively dry soil that is not workable, or which is dusty.
B. Proceed with installation only after unsatisfactory conditions have been corrected.
C. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Architect and replace with new planting soil.

3.2 TOPSOIL

A. In accordance with Division 31 Section "Grading."

3.3 LAWN BED PREPARATION

A. General:
1. Landscape Architect or Construction Manager's representative must approve finish surfaces, grades, topsoil quality and depth. Do not start seeding work until unsatisfactory conditions are corrected.
2. Limit preparation to areas which will be immediately seeded or sodded.
3. Loosen topsoil of lawn areas to minimum depth of 4 inches. Remove stones over 1-inch in any dimension, and sticks, roots, rubbish, and extraneous matter.
4. Grade lawn areas to a smooth, free draining even surface with a loose, moderately coarse texture. Roll and rake, remove ridges and fill depressions as required to drain.
5. Place and mix planting soil in place over exposed subgrade. Reduce elevation of planting soil to allow for soil thickness of sod.
6. Apply limestone to supplied topsoil if required by soil test report at rate determined by the soil test, to adjust pH of topsoil to not less than 6.0 no more than 6.8. Distribute evenly by machine and incorporate thoroughly into topsoil.
7. Apply fertilizer to indicate turf areas at a rate equal to 1 lb. of actual nitrogen per 1,000 sq. ft. (43 lbs. per area).
8. Apply fertilizers by mechanical rotary or drop type distributor, thoroughly and evenly incorporated with soil to a depth of 1-inch by discing or other approved method. Fertilize areas inaccessible to power equipment with hand tools and incorporate into soil.
9. Moisten prepared are before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy conditions.
10. Restore prepared areas to specified condition if eroded, settled, or otherwise disturbed after fine grading and prior to seeding.
B. Raking: Rake prepared seedbed before seeding.

3.4 FERTILIZING

A. Dry Fertilizer:
1. Broadcast on surface as first step in seeding process.
2. Apply with seeding if drilled.
3. Work fertilizer into the soil to a depth of 1-inch to 2 inches.
4. Apply uniformly.
5. Application Rate: Equivalent to 240 pounds per acre of 12-12-12, non-irrigated lawns: 10-10-10.
B. Hydroseeding:
1. Apply fertilizer with seed.
2. Application Rate: Equivalent to 6.25 pounds per 1,000 square feet of 16-32-4.

3.5 SEEDING

A. Scheduling:
1. Seed lawns only between April 1 and June 1, fall seeding between August 5 and October 15, or at such other times acceptable to Landscape Architect.
B. Sowing:
1. Seed immediately after preparation of bed. Seed indicated areas within contract limits and areas adjoining contract limits disturbed as a result of construction operations.
2. Perform seeding operations when the soil is dry and when the winds do not exceed 5 miles per hour velocity.
3. Apply seed with a rotary or drop type distributor. Install seed evenly by sowing equal quantities in 2 directions, at right angles to each other.
4. Provide soil erosion planting mat where grade conditions required to stabilize the planting area.
5. Application Rate:
a. Lawn Areas: Sow seed at a minimum rate of 6.9 pounds per 1,000 square feet, 300 pounds per acre.
6. Rake seed lightly into top 1/8 inch of soil. Roll lightly and water with fine spray.
7. Protect seeded areas with slopes exceeding 1:4 with erosion control fiber mesh blanket installed and stapled according to manufactures instructions,
8. Establish dense lawn of permanent grasses, free from lumps and depressions. Any area failing to show uniform germination to be reseeded; continue until dense lawn established. No weeds permitted. Damage to seeded area resulting from erosion to be repaired by Sub Contractor. Scattered bare spots over 5% not allowed.
9. Protect seeded areas with slopes not exceeding 1:10 by spreading straw mulch. Spread uniformly at a minimum rate of 2 tons/acre to form a continuous blanket 1-1/2 inches in loose thickness over seeded areas. Spread by hand, blower, or other suitable equipment.
a. Anchor straw mulch by crimping into soil with suitable mechanical equipment.
10. Protect seeded areas from hot, dry weather or drying winds by applying straw within 1 hour after completing seeding operations. Soak areas, scatter mulch uniformly to a thickness of 1/4 inch.
11. In event Subcontractor does not establish dense lawn during first germination period, return to project to re-fertilize, and reseed to establish dense lawn.
12. Should the seeded lawn become largely weeds after germination, Subcontractor responsible to kill the weeds and reseed the proposed lawn areas to produce a dense turf, as specified, to the approval of the Landscape Architect.
C. Finishing: Float and lightly compact areas sown by hydro-seeder or the broadcast method to incorporate the seed into the uppermost 1/2-inch of the soil.
D. Method:
1. Broadcast: Do not seed when wind velocity exceeds 5 miles per hour.
2. Mechanical drills.
3. Hydroseeder:
a. Use only equipment specifically designed for hydraulic seeding application.
b. Mix seed, fertilizer and pulverized mulch in water until uniformly blended into homogeneous slurry.
c. Continue mixing during application.
E. Inspection: Areas which are sown by hydro-seeder or the broadcast method shall be visually inspected for uniformity of application; areas in which visual inspection fails to reveal an average of 2 seeds per square inch shall be resown at no additional cost to Owner.
F. Method:
1. Broadcast: Do not seed when wind velocity exceeds 5 miles per hour.
2. Mechanical drills.
3. Hydroseeder:
a. Use only equipment specifically designed for hydraulic seeding application.
b. Mix seed, fertilizer and pulverized mulch in water until uniformly blended into homogeneous slurry.
c. Continue mixing during application.

E. Inspection: Areas which are sown by hydro-seeder or the broadcast method shall be visually inspected for uniformity of application; areas in which visual inspection fails to reveal an average of 2 seeds per square inch shall be resown at no additional cost to Owner.

3.6 SEED ON SLOPES: Protect seeded slopes against erosion with mulch blanket.

A. Small Grain Mulch:
1. Application:
a. Place straw mulch on seeded areas with 24 hours after seeding. Uniform distribution.
b. Allow sunlight to penetrate mulch.
2. Application Rate: Place straw mulch uniformly in a continuous blanket at a rate of 2-1/2 tons per acre, or two 50 lb. bales per 1,000 sq. ft. of area. A mechanical blower may be used for straw mulch application when acceptable to the Architect.
3. Crimp straw into soil by use of a "crimper". Two passes in alternate direction required. Alternative methods in areas too small for crimper must be approved by the Landscape Architect or Owner's Representative.
4. Application Rate: Two tons per acre (2-1/2 bales per 1000 square feet).
5. Anchoring:
a. Mulch anchoring tool.
b. Netting.
B. Mulch Blankets:
1. Netting on top.
2. Fibers in direct contact with soil.
3. Staple in accordance with Manufacturer's guidelines for slope conditions.
4. Direction of Installation:
a. Direction of flow of water in intermittent and ephemeral drains.
b. Perpendicular to side slopes above normal water level in perennial drains.

3.7 SOD BED PREPARATION

A. Make Area to be Sodded:
1. Smooth and uniform.
2. Parallel to the finished grade and cross sections indicated on the Drawings.

3.8 LAYING SOD

A. Installation
1. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod strips. Do not overlay edges. Stagger strips to offset joints in adjacent course. Remove excess sod to avoid smothering of adjacent grass. Provide sod pad top flush with adjacent curbs, sidewalks, drains and seeded areas.
2. Do not lay dormant sod or install sod on saturated or frozen soil.
3. Install initial row of sod in a straight line, beginning at bottom of slopes, perpendicular to direction of the sloped area. Place subsequent rows parallel to and lightly against previously installed row
4. Peg sod on slopes greater than 1:10 or in centerline of swales to prevent slippage at a rate of 2 stakes per yard of sod.
5. Water sod thoroughly with a fine spray immediately after laying.
6. Roll with light lawn roller to ensure contact with sub grade.
7. Sod indicated areas on plans.
B. Frozen Materials:
1. Do not place frozen sod.
2. Do not place sod on frozen soil.
C. Watering: After placing sod, water with an initial application of 15 gallons per 100 square feet.

3.9 MAINTENANCE

A. General:
1. Contractor: Responsible for follow-up maintenance.
2. The Subcontractor is responsible for periodic maintenance until Acceptance of Installation by the Owner or Owner's Representative.
3. Establish turf by watering, fertilizing, weeding, mowing, trimming, replanting, and performing other operations as required to establish healthy, viable turf. Roll, regrade, and replant bare or eroded areas and remulch to produce a uniformly smooth turf. Provide materials and installation the same as those used in the original installation.
a. Fill in as necessary soil subsidence that may occur because of settling or other processes. Replace materials and turf damaged or lost in areas of subsidence.
b. In areas where mulch has been disturbed by wind or warranty operations, add new mulch and anchor as required to prevent displacement.
c. Apply treatments as required to keep turf and soil free of pests and pathogens or disease. Use integrated pest management practices whenever possible to minimize the use of pesticides and reduce hazards.
B. Watering
1. Install and maintain temporary piping, hoses, and turf-watering equipment to convey water from sources and to keep turf uniformly moist to a depth of four (4) inches as needed.
a. An irrigation system will be installed prior to sodding. Locate, protect and maintain the irrigation system during sodding operations. Repair irrigation system components damaged during sodding operations at this Sub-contractor's expense.
b. When lawn reaches 3" in height it shall be cut to 2" in height. Natural areas shall not be cut.
c. The Owner assumes cutting responsibilities following the Acceptance of Installation of the seeded lawn.
C. Follow-up Maintenance:
1. Inspect materials planted in the spring during the summer or early fall and take corrective action during the fall planting season.
2. Inspect materials planted in the fall during the spring and take corrective action during this spring planting season.
3. In event Subcontractor does not establish dense lawn during first germination period, return to project to refertilize and reseed to establish dense lawn.
4. Should the seeded lawn become largely weeds after germination, Subcontractor responsible to kill the weeds and reseed the proposed lawn areas to produce a dense turf, as specified, to the approval of the Landscape Architect.
5. Provide hose and lawn watering equipment as required.
6. Water sodded and seeded areas as required to maintain the viability of the Product
D. Maintenance of Seeded Lawn Areas:
1. The Landscape Subcontractor shall maintain seeded lawn areas including watering, fertilizing, weeding, and chemical applications until establish a dense lawn of permanent grasses, free from lumps and depressions or any bare spots, none of which is larger than 1-foot of area up to a maximum of 3% of the total seeded lawn area. Any part of the seeded lawn that fails to show a uniform growth and/or germination shall be reseeded until a dense cover is established regardless of what season the seed was installed.
2. Where indicated on Drawings, the Landscape Subcontractor shall cut of the lawn until Acceptance of Installation is granted. When lawn reaches 3 inches in height, it shall be cut to 2 inches in height. Natural areas shall not be cut.
3. The Owner assumes cutting responsibilities following the Acceptance of Installation of the seeded lawn.
4. At conclusion of Project Warranty Period and after receiving Written Final Acceptance by Construction Manager's representative and Landscape Architect, the Owner shall assume all seeded lawn maintenance responsibilities.
E. Maintenance of sodded lawn areas
1. Maintain sodded lawn areas, including watering, fertilizing, spot weeding, application of herbicides, fungicides, insecticides and resodding until a full, uniform, smooth stand of sod is knitted to topsoil, and accepted by the Landscape Architect or his representative.
2. Water sod thoroughly, as required to establish proper rooting.
3. Repair, rework, and resod all areas that have washed out or are eroded. Replace undesirable or dead areas with new sod. Remove stakes on slopes sod areas.
4. Mow lawn areas as soon as sod has rooted sufficiently and knitted to the topsoil. Cut back to 2" height. Not more than 40% of grass leaf shall be removed at any single mowing. Excess clipping to be removed by the Landscape Subcontractor. Subcontractor is responsible for all mowing until Acceptance of Installation is granted.
5. The Owner assumes mowing responsibilities following the Acceptance of Installation of the sodded lawn.
6. At conclusion of Project Warranty Period and after receiving Written Final Acceptance by General Contractor's representative and Landscape Architect, the Owner shall assume all sodded lawn maintenance responsibilities.

3.10 SATISFACTION OF TURF

A. Turf installations will meet the following criteria as determined by Landscape Architect or Owner's representative.
1. Satisfactory Seeded Turf: Establish dense lawn of permanent grasses, free from lumps and depressions. Any area failing to show uniform germination to be reseeded; continue until dense lawn established. Damage to seeded area resulting from erosion to be repaired by Sub Contractor. Scattered bare spots over 5% not allowed. In event Sub Contractor does not establish dense lawn during first germination period, return to project to re-fertilize and reseed to establish dense lawn. Should the seeded lawn become largely weeds after germination, Sub Contractor responsible to kill the weeds and reseed the proposed lawn areas to produce a dense turf, as specified.
2. Satisfactory Sodded Turf: Establish dense lawn, free from lumps and depressions - a healthy, well-rooted, even-colored, viable turf has been established, free of weeds, open joints and bare areas.
B. Use specified materials to reestablish turf that complies with the requirements above and continue contractor warranty responsibilities until turf is satisfactory.
C. At the conclusion of the Project Warranty Period the Landscape Subcontractor shall request a project inspection for final acceptance in which the Landscape Contractor, Landscape Architect and Owner's Representative shall be present. After this inspection, a punch list will be issued by the Landscape Architect. Upon completion of all punch list items, the Landscape Architect and the Owner's Representative shall re-inspect the project and issue a Written Statement of Final Acceptance.

3.11 PESTICIDE APPLICATION

A. Apply pesticides (organic only) and other products and biological control agents according to requirements of authorities having jurisdiction and manufacturer's written recommendations. Coordinate applications with Owner's operations and others in proximity to the Work. Notify Owner before each application is performed.

B. Post-Emergent Herbicides (ORGANIC Selective and Nonselective): Apply organic solution only as necessary to treat already-germinated weeds and according to manufacturer's written recommendations.

3.12 CLEANUP AND PROTECTION

A. Promptly remove soil and debris created by turf work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.
B. Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash, and debris, and legally dispose of them off Owner's property.
C. Erect temporary fencing or barricades and warning signs as required to protect newly planted areas from traffic. Maintain fencing and barricades throughout initial warranty period and remove after plantings are established.
D. Remove non-degradable erosion-control measures after grass establishment period.

3.13 WARRANTY

A. Turf: The Owner assumes cutting responsibilities following the Final Acceptance of Installation of the sodded and seeded lawn.

END OF SECTION 32 92 00

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2023-7-31 Bid & Permits

SITE LANDSCAPE PLAN

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

565 W. Big Beaver Road, Suite 555, Troy, MI 48084 | 248.744.8700

sheet no.
L.602

SECTION 32 91 13 - SOIL PREPARATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY
A. Section includes planting soils specified by composition of the mixes.
B. Related Requirements:
1. Section 311000 "Site Clearing" for topsoil stripping and stockpiling.
2. Section 329200 "Turf and Grasses" for placing planting soil for turf and grasses.
3. Section 329300 "Plants" for placing planting soil for plantings.

1.3 ALLOWANCES
A. Preconstruction and field quality-control testing are part of testing and inspecting allowance.

1.4 DEFINITIONS
A. AAPFCO: Association of American Plant Food Control Officials.
B. Backfill: The earth used to replace or the act of replacing earth in an excavation. This can be amended, or unamended soil as indicated.
C. CEC: Cation exchange capacity.
D. Compost: The product resulting from the controlled biological decomposition of organic material that has been sanitized through the generation of heat and stabilized to the point that it is beneficial to plant growth.
E. Duff Layer: A surface layer of soil, typical of forested areas, that is composed of mostly decayed leaves, twigs, and detritus.
F. Imported Soil: Soil that is transported to Project site for use.
G. Layered Soil Assembly: A designed series of planting soils, layered on each other, that together produce an environment for plant growth.
H. Manufactured Soil: Soil produced by blending soils, sand, stabilized organic soil amendments, and other materials to produce planting soil.
I. NAPT: North American Proficiency Testing Program. An SSSA program to assist soil-, plant-, and water-testing laboratories through interlaboratory sample exchanges and statistical evaluation of analytical data.
J. Organic Matter: The total of organic materials in soil exclusive of undecayed plant and animal tissues, their partial decomposition products, and the soil biomass; also called "humus" or "soil organic matter."
K. Planting Soil: Existing, on-site soil; imported soil; or manufactured soil that has been modified as specified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth.
L. RCRA Metals: Hazardous metals identified by the EPA under the Resource Conservation and Recovery Act.
M. SSSA: Soil Science Society of America.
N. Subgrade: Surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.
O. Subsoil: Soil beneath the level of subgrade; soil beneath the topsoil layers of a naturally occurring soil profile, typified by less than 1 percent organic matter and few soil organisms.
P. Surface Soil: Soil that is present at the top layer of the existing soil profile. In undisturbed areas, surface soil is typically called "topsoil"; but in disturbed areas such as urban environments, the surface soil can be subsoil.
Q. USCC: U.S. Composting Council.

1.5 PREINSTALLATION MEETINGS
A. Preinstallation Conference: Conduct conference at Project site.

1.6 ACTION SUBMITTALS
A. Product Data: For each type of product.
Include recommendations for application and use.
1. Include test data substantiating that products comply with requirements.
2. Material Certificates: For each type of imported soil and soil amendment and fertilizer before delivery to the site, according to the following:
a. Manufacturer's qualified testing agency's certified analysis of standard products.
b. Analysis of fertilizers, by a qualified testing agency, made according to AAPFCO methods for testing and labeling and according to AAPFCO's SUIP #25.
c. Analysis of nonstandard materials, by a qualified testing agency, made according to SSSA methods, where applicable.
B. Samples: For each bulk-supplied material, 1-quart volume of each in sealed containers labeled with content, source, and date obtained. Each Sample shall be typical of the lot of material to be furnished; provide an accurate representation of composition, color, and texture.

1.7 INFORMATIONAL SUBMITTALS
A. Qualification Data: For each testing agency.
B. Preconstruction Test Reports: For preconstruction soil analyses specified in "Preconstruction Testing" Article.
C. Field quality-control reports.

1.8 QUALITY ASSURANCE
A. Testing Agency Qualifications: An independent, state-operated, or university-operated laboratory; experienced in soil science, soil testing, and plant nutrition; with the experience and capability to conduct the testing indicated; and that specializes in types of tests to be performed.

1.9 PRECONSTRUCTION TESTING
A. Preconstruction Soil Analyses: For each unamended soil type, perform testing on soil samples and furnish soil analysis and a written report containing soil-amendment and fertilizer recommendations by a qualified testing agency performing the testing according to "Soil-Sampling Requirements" and "Testing Requirements" articles.

1.10 SOIL-SAMPLING REQUIREMENTS
A. General: Extract soil samples according to requirements in this article.
B. Sample Collection and Labeling: Have samples taken and labeled by Contractor.
1. Number and Location of Samples: Minimum of three representative soil samples from top soil stock pile for each soil to be used or amended for landscaping purposes.
2. Division of Samples: Split each sample into two, equal parts. Send half to the testing agency and half to Owner for its records.
3. Labeling: Label each sample with the date, location keyed to a site plan or other location system, visible soil condition, and sampling depth.

1.11 TESTING REQUIREMENTS
A. General: Perform tests on soil samples according to requirements in this article.
B. Physical Testing:
1. Soil Texture: Soil-particle, size-distribution analysis by one of the following methods according to SSSA's "Methods of Soil Analysis - Part 1-Physical and Mineralogical Methods":
a. Sieving Method: Report sand-gradation percentages for very coarse, coarse, medium, fine, and very fine sand; and fragment-gradation (gravel) percentages for fine, medium, and coarse fragments; according to USDA sand and fragment sizes.
b. Hydrometer Method: Report percentages of sand, silt, and clay.
2. Total Porosity: Calculate using particle density and bulk density according to SSSA's "Methods of Soil Analysis - Part 1-Physical and Mineralogical Methods."
3. Water Retention: According to SSSA's "Methods of Soil Analysis - Part 1-Physical and Mineralogical Methods."
4. Saturated Hydraulic Conductivity: According to SSSA's "Methods of Soil Analysis - Part 1-Physical and Mineralogical Methods"; at 85% compaction according to ASTM D698 (Standard Proctor).
C. Chemical Testing:
1. CEC: Analysis by sodium saturation at pH 7 according to SSSA's "Methods of Soil Analysis - Part 3- Chemical Methods."
2. Clay Mineralogy: Analysis and estimated percentage of expandable clay minerals using CEC by ammonium saturation at pH 7 according to SSSA's "Methods of Soil Analysis - Part 1- Physical and Mineralogical Methods."
3. Phytotoxicity: Test for plant-available concentrations of phytotoxic minerals including aluminum, arsenic, barium, cadmium, chlorides, chromium, cobalt, copper, lead, lithium, mercury, nickel, selenium, silver, sodium, strontium, tin, titanium, vanadium, and zinc.
D. Fertility Testing: Soil-fertility analysis according to standard laboratory protocol, including the following:
1. Percentage of organic matter.
2. CEC, calcium percent of CEC, and magnesium percent of CEC.
3. Soil reaction (acidity/alkalinity pH value).
4. Buffered acidity or alkalinity.
5. Nitrogen ppm.
6. Phosphorous ppm.
7. Potassium ppm.
8. Manganese ppm.
9. Manganese-availability ppm.
10. Zinc ppm.
11. Zinc availability ppm.
12. Copper ppm.
13. Sodium ppm.
14. Soluble-salts ppm.
15. Presence and quantities of problem materials including salts and metals cited in the Standard protocol. If such problem materials are present, provide additional recommendations for corrective action.
16. Other deleterious materials, including their characteristics and content of each.
E. Organic-Matter Content: Analysis using loss-by-ignition method according to SSSA's "Methods of Soil Analysis - Part 3- Chemical Methods."
F. Recommendations: Based on the test results, state recommendations for soil treatments and soil amendments to be incorporated to produce satisfactory planting soil suitable for healthy, viable plants indicated. Include, at a minimum, recommendations for nitrogen, phosphorous, and potassium fertilization, and for micronutrients.
1. Fertilizers and Soil Amendment Rates: State recommendations in weight per 1000 sq. ft. for 6-inch depth of soil in lawn areas and 12-inch depth for plant beds.
2. Soil Reaction: State the recommended liming rates for raising pH or sulfur for lowering pH according to the buffered acidity or buffered alkalinity in weight per 1000 sq. ft. for 6-inch depth of soil in lawn areas and 12-inch depth for plant beds.

1.12 DELIVERY, STORAGE, AND HANDLING
A. Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and compliance with State and Federal laws if applicable.
B. Bulk Materials:
1. Do not dump or store bulk materials near structures, utilities, walkways, and pavements, or on existing turf areas or plants.
2. Provide erosion-control measures to prevent erosion or displacement of bulk materials, discharge of soil-bearing water runoff, and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
3. Do not move or handle materials when they are wet or frozen.
4. Accompany each delivery of bulk fertilizers and soil amendments with appropriate certificates.

PART 2 - PRODUCTS

2.1 MATERIALS
A. Regional Materials: Imported soil, manufactured planting soil and soil amendments and fertilizers shall be manufactured within 500 miles of Project site from materials that have been extracted, harvested, or recovered, as well as manufactured, within 500 miles of Project site.

2.2 PLANTING SOILS SPECIFIED BY COMPOSITION
A. General: Soil amendments, fertilizers, and rates of application specified in this article are guidelines that may need revision based on testing laboratory's recommendations after preconstruction soil analyses are performed.
B. Planting-Soil Type: for trees and shrubs - Existing, on-site surface soil, with the duff layer, if any, retained and stockpiled on-site; modified to produce viable planting soil. Blend existing, on-site surface soil with the following soil amendments and fertilizers, see "Plant Mix" on plans for quantities, to produce planting soil as stated on drawings.
1. Chick Magic 5-3-2 composted poultry manure.
2. Shemins 13-13-13 per manufacturer's recommendations.
C. Planting-Soil Type for tree and shrub - Onsite or imported, naturally formed soil from off-site sources and consisting of loam soil according to USDA textures; and modified to produce viable planting soil.
1. Sources: Take imported, unamended soil from sources that are naturally well-drained sites where topsoil occurs at least 4 inches deep, not from marshes; and that do not contain undesirable organisms; disease-causing plant pathogens; or obnoxious weeds and invasive plants including, but not limited to, quack grass, Johnsongrass, poison ivy, nutsedge, nimble will, Canada thistle, bindweed, bent grass, wild garlic, ground ivy, perennial sorrel, and bromegrass.
2. Additional Properties of Imported Soil before Amending: Soil reaction of pH 6 to 7.5 and minimum of six (6) percent organic-matter content, friable, and with sufficient structure to give good tilth and aeration.
3. Unacceptable Properties: Clean soil of the following:
a. Unacceptable Materials: Concrete slurry, concrete layers or chunks, cement, plaster, building debris, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, acid, and other extraneous materials that are harmful to plant growth.
b. Unsuitable Materials: Stones, roots, plants, sod, clay lumps, and pockets of coarse sand that exceed a combined maximum of two (2) percent by dry weight of the imported soil.
c. Large Materials: Stones, clods, roots, clay lumps, and pockets of coarse sand exceeding 2 inches any dimension.
4. Amended Soil Composition: Blend imported, unamended soil with the soil amendments and fertilizers as stated on the drawings.
D. Planting-Soil Type for perennials - Manufactured soil consisting of manufacturer's basic sandy loam according to USDA textures, blended in a manufacturing facility with sand, stabilized organic soil amendments, and other materials to produce viable planting soil.
1. Additional Properties of Manufacturer's Basic Soil before Amending: Soil reaction of pH 6 to 7.5 and minimum of six (6) percent organic-matter content, friable, and with sufficient structure to give good tilth and aeration.
2. Unacceptable Properties: Manufactured soil shall not contain the following:
a. Unacceptable Materials: Concrete slurry, concrete layers or chunks, cement, plaster, building debris, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, acid, and other extraneous materials that are harmful to plant growth.
b. Unsuitable Materials: Stones, roots, plants, sod, clay lumps, and pockets of coarse sand that exceed a combined maximum of two (2) percent by dry weight of the imported soil.
c. Large Materials: Stones, clods, roots, clay lumps, and pockets of coarse sand exceeding 2 inches any dimension.
3. Amended Soil Composition: Blend imported, unamended soil with the soil amendments and fertilizers as stated on the drawings.

2.3 INORGANIC SOIL AMENDMENTS
A. Lime: ASTM C602, agricultural liming material containing a minimum of 80 percent calcium carbonate equivalent and as follows:
B. Sulfur: Granular, biodegradable, and containing a minimum of 90 percent elemental sulfur, with a minimum of 99 percent passing through a No. 6 sieve and a maximum of 10 percent passing through a No. 40 sieve.
C. Sand: Clean, washed, natural or manufactured, free of toxic materials, and according to ASTM C33/C33M.

2.4 ORGANIC SOIL AMENDMENTS
A. Compost: Well-composted, stable, and weed-free organic matter produced by composting plant based materials and bearing USCC's "Seal of Testing Assurance."

2.5 FERTILIZERS
A. Commercial Fertilizers:
1. Chick Magic 5-3-2 composted poultry manure.
2. Shemins 13-13-13 per manufacturer's recommendations.

PART 3 - EXECUTION

3.1 GENERAL
A. Place planting soil and fertilizers according to requirements in other Specification Sections.
B. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in planting soil.
C. Proceed with placement only after unsatisfactory conditions have been corrected.

3.2 PREPARATION OF UNAMENDED, ON-SITE SOIL BEFORE AMENDING
A. Excavation: Excavate soil from planting beds to a depth of 12 inches and stockpile until amended.
B. Unacceptable Materials: Clean soil of concrete slurry, concrete layers or chunks, cement, plaster, building debris, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, acid, and other extraneous materials that are harmful to plant growth.
C. Unsuitable Materials: Clean soil to contain a maximum of two (2) percent by dry weight of stones, roots, plants, sod, clay lumps, and pockets of coarse sand.
D. Screening: Pass unamended soil through a two (2) inch sieve to remove large materials.

3.3 PLACING AND MIXING PLANTING SOIL OVER EXPOSED SUBGRADE
A. General: Apply and mix unamended soil with amendments on-site to produce required planting soil. Do not apply materials or till if existing soil or subgrade is frozen, muddy, or excessively wet.
B. Subgrade Preparation: Planting Beds - till sub grade to minimum depth of four (4) inches. Remove stones larger than ½ inch in any dimension and all sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
1. Apply, add soil amendments, and mix approximately half the thickness of unamended soil over prepared, loosened subgrade according to "Mixing" Paragraph below. Mix thoroughly into top towo (2) inches of subgrade. Spread remainder of planting soil.
C. Mixing: Spread unamended soil to total depth of 12 inches or depth of root balls, but not less than required to meet finish grades after mixing with amendments and natural settlement. Lawn Areas - spread amended soil to total depth of four)4) inches, but not less than required to meet finish grades after mixing with amendments and natural settlement. Do not spread if soil or subgrade is frozen, muddy, or excessively wet.
1. Amendments: Apply soil amendments as stated on Drawings except compost and fertilizer, if required, evenly on surface, and thoroughly blend them with unamended soil to produce planting soil.
a. Mix lime or sulfur with dry soil before mixing fertilizer.
b. Mix fertilizer with planting soil no more than seven days before planting.
2. Lifts: Apply and mix unamended soil and amendments in lifts not exceeding six (6) inches in loose depth for material compacted by hand-operated tampers.
D. Compaction: Compact each blended lift of planting soil to 75 to 82 percent of maximum Standard Proctor density according to ASTM D698 and tested in.
E. Finish Grading: Grade planting soil to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.

3.4 PROTECTION
A. Protect areas of in-place soil from additional compaction, disturbance, and contamination. Prohibit the following practices within these areas except as required to perform planting operations:
1. Storage of construction materials, debris, or excavated material.
2. Parking vehicles or equipment.
3. Vehicle traffic.
4. Foot traffic.
5. Erection of sheds or structures.
6. Impoundment of water.
7. Excavation or other digging unless otherwise indicated.
B. If planting soil or subgrade is over compacted, disturbed, or contaminated by foreign or deleterious materials or liquids, remove the planting soil and contamination; restore the subgrade as directed by Architect and replace contaminated planting soil with new planting soil.
C. Protect paved areas and areas to be landscaped from soil erosion and washout. Use conventional methods such as, but not limited to, straw bales, silt fence, coconut rolls etc., to prevent soil from washing over walks, paved areas, or walls. keep all paved / hard surfaces clean. return any eroded soils to installed/ stored locations when completing soil/ plant mix installation.

3.5 CLEANING
A. Protect areas adjacent to planting-soil preparation and placement areas from contamination. Keep adjacent paving and construction clean and work area in an orderly condition.
B. Remove surplus soil and waste material including excess subsoil, unsuitable materials, trash, and debris and legally dispose of them off Owner's property unless otherwise indicated.
1. Dispose of excess subsoil and unsuitable materials on-site where directed by Owner.

END OF SECTION 32 91 13

deak
PLANNING + DESIGN
143 cadycentre #79
northville, mi 48167
deakplanningdesign.com

date
2023-7-31 Bid & Permits

SITE LANDSCAPE PLAN

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

303 W. Big Beaver Road, Suite 850, Troy, MI 48084 | 248.744.9700

sheet no.
L.603

DESIGN CRITERIA

1. STRUCTURE HAS BEEN DESIGNED TO COMPLY WITH:

   IBC 2015
   IEBC 2015
   ASCE 7-10
   ASCE 41-13
   ACI 318-14
   ACI 530-13
   AISC 360-10
   AISC 341-10
   AISI S100
   AWS D1.1, D1.3
   NDS-15 AND SDPWS-15

2. RISK CATEGORY III

TYPICAL ROOF	20 PSF (REDUCIBLE)
TYPICAL FLOOR	100 PSF (REDUCIBLE)
MECHANICAL	125 PSF (UNREDUCIBLE)
HANDRAILS	MAXIMUM OF SIMULTANEOUS VERTICAL AND HORIZONTAL THRUST OF 50 PLF APPLIED AT THE TOP OF THE RAILING OR 200 LBS IN ANY DIRECTION

3. SNOW:

GROUND SNOW	20 PSF
SNOW EXPOSURE FACTOR	1.0
THERMAL FACTOR	1.0
IMPORTANCE FACTOR	1.1
FLAT-ROOF SNOW	22 PSF
DESIGN SNOW	25 PSF
RAIN-ON-SNOW SURCHARGE	5 PSF

4. SEISMIC:

SEISMIC DESIGN CATEGORY	B
IMPORTANCE FACTOR	1.25
SOIL CLASS	D
Ss	0.096 g
S1	0.047 g
Sds	0.102 g
Sd1	0.075 g
SEISMIC FORCE RESISTING SYSTEM	MASONRY SHEAR WALLS
R	2
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE

5. WIND:

BASIC WIND SPEED	V ULT = 120 MPH		
IMPORTANCE FACTOR	1.0		
EXPOSURE CLASS	C		
INTERNAL PRESSURE COEFFICIENT, GCpi	± 0.18		
ROOF COMPONENTS:	ZONE 1	ZONE 2	ZONE 3
SUPPORT BEAMS (A > 100 SF)	31 PSF	37 PSF	37 PSF
ROOF SHEATHING (A = 50 SF)	34 PSF	45 PSF	54 PSF
DECK FASTENERS (A ≤ 10 SF)	34 PSF	56 PSF	85 PSF
WALL COMPONENTS:	ZONE 4	ZONE 5	
A = 200 SF	31 PSF	32 PSF	
A = 50 SF	31 PSF	35 PSF	
A ≤ 20 SF	34 PSF	41 PSF	

   C & C NOTES:
   a. THE PRESSURES LISTED ARE IN ACCORDANCE IBC AND ASCE 7, AND THE DESIGN FORCES USED BY THE SUBCONTRACTOR FOR A SPECIFIC APPLICATION ARE THE RESPONSIBILITY OF THE SUBCONTRACTOR.
   b. WIND PRESSURES ARE ULTIMATE DESIGN LEVEL.
   c. SEE ASCE 7 FOR ZONE DEFINITIONS AND EXTENT OF ZONES.
   d. SUBMIT DESIGN CALCULATIONS PREPARED BY A QUALIFIED PROFESSIONAL STRUCTURAL ENGINEER, REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED, FOR ANY DESIRED MODIFICATION TO THE STATED PRESSURES.

GENERAL

1. DURING THE CONSTRUCTION PERIOD, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF PERSONNEL AND PROPERTY ON AND AROUND THE JOBSITE. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING, BRACING, GUYS, ETC. IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL SAFETY ORDINANCES.
2. ALL DRAWINGS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE START OF CONSTRUCTION SO A CLARIFICATION CAN BE ISSUED. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT THEIR OWN EXPENSE AND AT NO EXPENSE TO THE OWNER OR ARCHITECT.
3. STRUCTURAL SUBSTITUTIONS MAY BE ALLOWED WITH THE APPROVAL OF THE STRUCTURAL ENGINEER. SUPPLIER SHALL PROVIDE SEALED DESIGN CALCULATIONS OR SUITABLE PRODUCT LITERATURE FOR THE COMPONENTS.
4. ALL DIMENSIONS AND SITE CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE JOBSITE PRIOR TO CONSTRUCTION, START OF SHOP DRAWINGS, START OF CONSTRUCTION, AND/OR FABRICATION OF MATERIALS. IF DISCREPANCIES ARE ENCOUNTERED, OR CONDITIONS DEVELOP THAT ARE NOT COVERED BY THE CONTRACT DOCUMENTS, THE ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION.
5. CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR THE PROTECTION AND REPAIR OF ADJACENT EXISTING SURFACES AND AREAS WHICH MAY BE DAMAGED AS A RESULT OF NEW WORK.
6. STRUCTURAL DRAWINGS INCLUDE DESIGN REQUIREMENTS AND DIMENSIONS FOR STRUCTURAL INTEGRITY BUT DO NOT SHOW ALL DETAIL DIMENSIONS TO FIT INTRICATE ARCHITECTURAL AND MECHANICAL DETAILS. CONTRACTOR SHALL SO CONSTRUCT THE WORK SO IT WILL CONFORM TO THE CLEARANCES REQUIRED BY ARCHITECTURAL, MECHANICAL AND ELECTRICAL DESIGN.
7. ALL SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED TO BE CONSTRUCTION STANDARDS. IF CLARIFICATION IS REQUIRED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.
8. DO NOT SCALE DRAWINGS. PRINTED DIMENSIONS HAVE PRECEDENCE OVER SCALED DRAWINGS AND LARGE-SCALE OVER SMALL-SCALE DRAWINGS. CONTRACTOR TO DETERMINE FINAL DIMENSION WITH ARCHITECT.
9. TYPICAL DETAILS SHALL APPLY TO SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY REFERENCED. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK.
10. THE CONTRACT DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE AND SAFETY OF WORKMEN DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING AND SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT OR STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OR APPROVAL OF THE ABOVE ITEMS AND DO NOT IN ANY WAY RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITIES FOR THE ABOVE.
11. SEE ARCHITECTURAL, ELECTRICAL AND MECHANICAL DRAWINGS FOR DETAILS, CONDITIONS, PITS, TRENCHES, PADS, DEPRESSIONS, ROOF/FLOOR OPENINGS, STAIRS, SLEEVES, ITEMS TO BE EMBEDDED OR ATTACHED TO STRUCTURAL ELEMENTS, ETC., NOT SHOWN ON THE STRUCTURAL DRAWINGS.
12. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR MECHANICAL, ELECTRICAL AND PLUMBING WITH APPROPRIATE TRADE CONTRACTORS. OPENING SIZES AND LOCATIONS SHOWN FOR DUCTS, PIPE, INSERTS AND OTHER PENETRATIONS WHEN SHOWN ARE FOR GENERAL INFORMATION ONLY AND SHALL BE VERIFIED PRIOR TO FORMING.
13. NO HOLES, NOTCHES, BLOCK-OUTS, ETC. ARE ALLOWED IN STRUCTURAL ELEMENTS UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER.
14. PENETRATIONS SHALL BE CAST-IN-PLACE AND SHALL NOT BE PERMITTED EXCEPT AS SHOWN IN THE STRUCTURAL DRAWINGS.
15. BEFORE SUBMITTING A PROPOSAL FOR THIS WORK, EACH PARTY SHALL VISIT THE PREMISES AND BECOME FULLY ACQUAINTED WITH CONDITIONS IN FIELD, TEMPORARY CONSTRUCTION REQUIRED, QUANTITIES AND TYPE OF EQUIPMENT, ETC. THE PROPOSAL SHALL INCLUDE ALL SUMS REQUIRED TO DO THE WORK.

SUBMITTALS

1. SUBMITTALS ARE:
   a. CONCRETE MIX DESIGNS
   b. MATERIAL PRODUCT DATA FOR STRUCTURAL MATERIALS
   c. CONCRETE AND MASONRY REINFORCING
   d. STEEL FABRICATION AND MISCELLANEOUS METALS
   e. JOISTS AND JOIST GIRDERS
   f. STEEL DECK
2. SUBMITTALS SHALL BE REVIEWED AND COORDINATED PRIOR TO SUBMITTING TO THE ARCHITECT. EACH SHOP DRAWING SUBMITTED SHALL BE STAMPED INDICATING REVIEW BY THE CONSTRUCTION MANAGER/GENERAL CONTRACTOR AND REVIEW BY THE ARCHITECT SHALL NOT BEGIN UNTIL THIS IS COMPLETE. WORK SHALL NOT BEGIN WITHOUT REVIEW BY THE ARCHITECT/STRUCTURAL ENGINEER.
3. SUBMITTALS SHALL BE REVIEWED BY THE ARCHITECT/STRUCTURAL ENGINEER FOR GENERAL CONFORMANCE WITH DESIGN CONCEPT ONLY. NOTATIONS MADE BY THE ARCHITECT/STRUCTURAL ENGINEER ON THE SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR FROM COMPLYING WITH THE REQUIREMENTS OF THE DRAWINGS.
4. FOR ADDITIONAL INFORMATION ON REQUIRED SUBMITTALS, SEE INDIVIDUAL MATERIAL SECTIONS.

DELEGATED DESIGN

1. DELEGATED DESIGNS PER SECTION 107.3.4.1 SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AND THE DESIGN PROFESSIONALS AND REVIEWED PRIOR TO INSTALLATION.
2. DELEGATED DESIGNS ARE:
   a. EXCAVATION, SHORING, AND UNDERPINNING
   b. PREFABRICATED TRUSSES
   c. PRECAST CONCRETE ELEMENTS AND CONNECTIONS
   d. STEEL JOISTS AND JOIST GIRDERS
   e. STRUCTURAL STEEL CONNECTIONS
   f. CURTAIN WALL AND STOREFRONT SYSTEMS
   g. COLD FORMED STEEL FRAMING
   h. ROOFTOP EQUIPMENT ANCHORAGE AND CURBS
   i. SKYLIGHTS
   j. STAIRS, ACCESS LADDERS, HANDRAILS, GUARDRAILS, AND GRATING
   k. BUILDING MAINTENANCE DAVIT PEDESTALS, TIE-BACKS, AND FALL ARREST SYSTEMS
3. ALL DELEGATED DESIGNS SHALL BEAR THE STAMP AND SIGNATURE OF THE QUALIFIED PROFESSIONAL STRUCTURAL ENGINEER, REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED, RESPONSIBLE FOR THE PREPARATION OF THESE DOCUMENTS. PROVIDE SIGNED AND SEALED CALCULATION TO EOR TO REVIEW.

EARTHWORK

1. FOUNDATION DESIGN IS BASED ON THE GEOTECHNICAL REPORT DATED OCT 22, 2021 BY SME (PROJECT NO. 087805.00). REPORT IS ON FILE WITH THE ARCHITECT.
2. SOIL PROPERTIES PER THE GEOTECHNICAL REPORT:

ALLOWABLE NET SOIL BEARING PRESSURE:	
FOOTINGS	3000 PSF
ANTICIPATE DEPTH TO ALLOWABLE SOIL BEARING	3.5 FT BELOW EXISTING GRADE
FROST DEPTH	3.5 FT

3. ALL EXCAVATIONS SHALL BE PROPERLY AND SAFELY BACKFILLED. DO NOT PLACE BACKFILL BEHIND RETAINING/BASEMENT WALLS BEFORE CONCRETE HAS ATTAINED SPECIFIED COMPRESSIVE STRENGTH. CONTRACTOR SHALL BRACE OR PROTECT ALL WALLS BELOW GRADE FROM LATERAL LOADS UNTIL SUPPORTING FLOORS ARE COMPLETELY IN PLACE AND HAVE ATTAINED 7-DAY STRENGTH MINIMUM. BACKFILLING IS NOT PERMITTED FOR FOUNDATION WALLS UNTIL SUPPORTED SLAB TOP AND BOTTOM IS IN PLACE OR THE WALL IS ADEQUATELY BRACED TO RESIST LATERAL LOADS. CONTRACTOR SHALL PROVIDE FOR DESIGN, PERMITS, AND INSTALLATION OR SHORING AND/OR SHEETING.
4. CONTRACTOR SHALL PROVIDE FOR DE-WATERING OF EXCAVATIONS FROM SURFACE WATER, GROUND WATER OR SEEPAGE. FREE GROUND WATER WAS NOT ENCOUNTERED IN THE BORINGS. DETAILS OF GROUND WATER INFORMATION CAN BE OBTAINED FROM THE ABOVE-MENTIONED GEOTECHNICAL REPORT. IF GROUND WATER SHOULD OCCUR DURING EXCAVATION, SPECIAL PROCEDURES SHALL BE IMPLEMENTED AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
5. WHERE THERE IS NOT SUFFICIENT SPACE FOR SLOPED EMBANKMENTS, SHORING WILL BE REQUIRED. SEE THE GEOTECHNICAL REPORT FOR INFORMATION REGARDING THE DESIGN AND INSTALLATION OF THE SHORING. SHORING THAT IS NOT PART OF THE PERMANENT BUILDING SUPPORT IS THE CONTRACTOR'S RESPONSIBILITY AND OUTSIDE THIS PERMIT.
6. CARE SHALL BE EXERCISED WHEN EXCAVATING OR GRADING ADJACENT TO EXISTING STRUCTURES OR IMPROVEMENTS TO NOT DAMAGE OR UNDERMINE FOUNDATIONS, WALLS, SLABS, UTILITIES, ETC.
7. CONTRACTOR SHALL INVESTIGATE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILL MATERIAL OR BURIED STRUCTURES SUCH AS CESSPOOLS, CISTERNS AND FOUNDATIONS. IF ANY SUCH MATERIAL OR STRUCTURES ARE FOUND, ARCHITECT/ENGINEER SHALL BE NOTIFIED IMMEDIATELY. ALL ABANDONED FOUNDATIONS, UTILITIES AND OTHER STRUCTURES THAT INTERFERE WITH NEW CONSTRUCTION SHALL BE REMOVED.
8. ALL FOOTINGS AND SLABS ON GRADE SHALL BE PLACED ONTO FIRM UNDISTURBED SOIL OR CONTROLLED COMPACTED FILL, REMOVING ANY EXISTING FILL, ORGANIC MATERIAL, OR UNSUITABLE SOILS, AS RECOMMENDED BY THE GEOTECHNICAL REPORT. EXPOSED NATURAL SOIL SHALL BE PROOF ROLLED BELOW SLABS ON GRADE.
9. THE SLAB ON GRADE SELECTED BY THE OWNER AT THE GROUND FLOOR LEVEL OF THIS BUILDING HAS SOME RISK OF MOVEMENT. THE SLAB OPTION CHOSEN AS PROVIDING SUITABLE PERFORMANCE AT A REASONABLE COST REQUIRES OVER-EXCAVATED FILL TO BE PLACED. SEE THE PROJECT GEOTECHNICAL REPORT FOR THE DEPTH AND SPECIFIC REQUIREMENTS.
10. THE PREPARATION OF THE SUBGRADE FOR THE SLAB ON GRADE SHALL BE IN STRICT ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT REFERENCED ABOVE. THE CONTRACTOR SHALL DIRECT QUESTIONS REGARDING THE SUBGRADE PREPARATION REQUIREMENTS TO THE GEOTECHNICAL ENGINEER.
11. FOUNDATION ELEVATIONS SHOWN DESIGNATE A MINIMUM DEPTH WHERE AN ADEQUATE SOIL BEARING PRESSURE IS EXPECTED. FOOTINGS, PIERS AND/OR WALLS SHALL BE LOWERED OR EXTENDED AS REQUIRED TO REACH SOIL MEETING THE DESIGN BEARING PRESSURE.
12. ALL REQUIRED BACKFILL AND UTILITY TRENCH BACKFILL WITHIN THE BUILDING AREA SHALL BE MECHANICALLY COMPACTED IN 12" LAYERS TO 95% MAXIMUM DRY DENSITY PER ASTM D1557 AND TO THE APPROVAL OF THE INSPECTION AGENCY.
13. THE MOISTURE CONTENT OF ONSITE CLAYEY SOILS AT THE TIME OF COMPACTION SHALL BE BETWEEN 2-3% ABOVE OPTIMUM MOISTURE CONTENT.
14. ANY REQUIRED IMPORT FILL SOIL SHALL HAVE A LOW POTENTIAL FOR EXPANSION AND SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO IMPORTING.

REINFORCING STEEL

1. ALL REINFORCING STEEL SHALL BE DETAILED AND PLACED IN CONFORMANCE WITH THE AMERICAN CONCRETE INSTITUTE "ACI DETAILING MANUAL" (SP-066) EXCEPT AS OTHERWISE SHOWN, NOTED OR SPECIFIED.
2. CONCRETE REINFORCING STEEL SHALL BE HIGH STRENGTH NEW BILLET STEEL CONFORMING TO THE FOLLOWING STANDARDS:

DEFORMED BARS	ASTM A615, GR 60	Fy = 60 KSI
DEFORMED BARS IN SFRS	ASTM A706, GR 60	Fy = 60 KSI
WELDED WIRE REINFORCING	ASTM A1064	Fy = 65 KSI
DEFORMED EPOXY-COATED BARS	ASTM A775	Fy = 60 KSI
DEFORMED GALVANIZED-COATED BARS	ASTM A767	Fy = 60 KSI
STEEL WIRE	ASTM A1064	Fy = 60 KSI
DEFORMED BAR ANCHORS	ASTM A1064	Fy = 70 KSI
WELDABLE BARS, DEFORMED	ASTM A706, GR 60	Fy = 60 KSI

3. MINIMUM CONCRETE COVER SHALL BE PROVIDED AS FOLLOWS TO THE OUTERMOST REINFORCING BARS:

CAST AGAINST AND PERMANENTLY IN CONTACT WITH GROUND	3"
EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	
#6 BARS OR LARGER	2"
#5 BARS OR SMALLER	1 1/2"
NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	
SLABS, JOIST AND WALLS WITH #14 AND #18 BARS	1 1/2"
SLABS, JOISTS AND WALLS WITH #11 BARS OR SMALLER	3/4"
BEAMS, COLUMNS, PEDESTALS AND TENSION TIES	1 1/2"
COLUMN VERTICAL BARS	2"
BOUNDARY ELEMENTS	1 1/2"

4. ALL REINFORCING IN CONCRETE USED FOR THE CONTAINMENT OF WATER SHALL BE HOT-DIP GALVANIZED OR EPOXY-COATED.
5. WELDING OF REINFORCING BARS TO BE IN ACCORDANCE WITH AWS D1.4.
6. DEFORMED BAR ANCHORS (DBA) SHALL BE AUTOMATICALLY END WELDED WITH SUITABLE WELDING EQUIPMENT IN THE SHOP OR IN THE FIELD. WELDING SHALL BE IN ACCORDANCE WITH THE MANUFACTURER.
7. SUPPORTS FOR REINFORCEMENT SHALL HAVE CLASS 2 PROTECTION AS DEFINED IN THE CRSI MANUAL OF STANDARD PRACTICE, UNLESS OTHERWISE NOTED.
8. SUPPORTS FOR COATED REINFORCEMENT SHALL HAVE CLASS 1 PROTECTION AS DEFINED IN THE CRSI MANUAL OF STANDARD PRACTICE, UNLESS OTHERWISE NOTED.
9. ALL WELDED WIRE REINFORCING (WWR) SHALL BE LAPPED 2 PANELS AT EDGES AND ENDS.
10. CONTINUOUS HORIZONTAL REINFORCING SHALL BE LAPPED AT MIDSPAN FOR TOP BARS AND DIRECTLY OVER SUPPORTS FOR BOTTOM BARS. AT DISCONTINUOUS ENDS, THE TOP STEEL SHALL BE BENT DOWN 12 BAR DIAMETERS OR 12" MINIMUM, WHICHEVER IS GREATER.
11. FOR MAT FOUNDATIONS, REINFORCING FOR TOP BARS SHALL BE LAPPED UNDER STRUCTURAL COLUMNS AND WALLS ABOVE AND AT MIDSPAN FOR BOTTOM BARS. AT DISCONTINUOUS ENDS, THE TOP STEEL SHALL BE BENT DOWN 12 BAR DIAMETERS OR 12" MINIMUM, WHICHEVER IS GREATER.
12. WHERE REINFORCEMENT LENGTH IS SPECIFIED, NO SPLICES ARE PERMITTED WITHIN THE SPECIFIED LENGTH WITHOUT APPROVAL BY THE STRUCTURAL ENGINEER.
13. DOWELS BETWEEN FOOTINGS AND WALLS OR COLUMNS SHALL BE THE SAME GRADE, SIZE AND SPACING OR NUMBER AS THE VERTICAL REINFORCING, RESPECTIVELY, UNLESS OTHERWISE NOTED. PROVIDE FOUNDATION DOWELS TO MATCH SIZE AND SPACING OF WALL OR COLUMN REINFORCEMENT. EXTEND DOWELS A LAP SPLICE LENGTH INTO WALL OR COLUMN AND TERMINATE WITH STANDARD HOOK AT BOTTOM OF FOOTING, UNLESS OTHERWISE NOTED.
14. REINFORCING IN WALL FOOTINGS AND GRADE BEAMS BETWEEN COLUMNS SHALL BE DEVELOPED (Ld) INTO COLUMN FOOTINGS.
15. CUTTING OF REINFORCING WHICH CONFLICTS WITH EMBEDDED OBJECTS OR SLEEVES IS NOT ACCEPTABLE.
16. REINFORCING BARS SHALL BE BENT COLD, AND NO METHOD OF FABRICATION SHALL BE USED WHICH WOULD BE INJURIOUS TO THE MATERIAL. HEATING OF BARS FOR BENDING IS NOT PERMITTED.
17. FIELD WELDING OR BENDING OF REINFORCING IS NOT PERMITTED EXCEPT AS INDICATED ON THE DRAWINGS OR AS APPROVED BY THE STRUCTURAL ENGINEER.
18. USE TEMPLATES TO SET ALL EMBEDDED ANCHOR BOLTS, LEVELING PLATES, AND DOWEL BARS AS REQUIRED OR INDICATED ON THE DRAWINGS.
19. SUBMIT SHOP DRAWINGS FOR FABRICATION AND PLACEMENT OF REINFORCING STEEL. INCLUDE SCHEDULES AND DIAGRAMS OF BENT BARS AND SHOW ARRANGEMENT OF REINFORCEMENT, INCLUDING CONCRETE COVER. STRUCTURAL ENGINEER'S REVIEW WILL BE FOR COMPLIANCE WITH DESIGN REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING DIMENSIONS AND QUANTITIES.
20. ALL CONCRETE NOT OTHERWISE SPECIFIED SHALL BE REINFORCED TO THE MINIMUM REQUIREMENT OF ACI 318.
21. REINFORCE ALL ARCHITECTURAL CONCRETE TOPPING SLABS WITH 6x6-W1.4xW1.4 WWR UNLESS OTHERWISE NOTED.

CAST-IN-PLACE CONCRETE

1. ALL CONCRETE WORK SHALL CONFORM TO THE CORRESPONDING EDITION OF THE AMERICAN CONCRETE INSTITUTE PUBLICATIONS: ACI 117, ACI 301, ACI 305.1, ACI 306.1, ACI 308.1, ACI 318 AND SP-066, UNLESS OTHERWISE NOTED.
2. CONCRETE MATERIALS SHALL CONFORM TO:

CEMENT	ASTM C150, TYPE I OR II
FLY ASH	ASTM C618, TYPE C OR F
FINE AND COARSE AGGREGATE	ASTM C33
LIGHTWEIGHT AGGREGATE	ASTM C330
WATER	POTABLE
AIR-ENTRAINING ADMIXTURE	ASTM C260
WATER REDUCING ADMIXTURE	ASTM C494

   CONCRETE STRENGTHS SHALL CONFORM TO:

INTENDEDUSE	STRENGTH (PSI)	EXPOSURE CLASS
FOOTINGS	4000	F2
FOUNDATIONS	4000	F2
SLAB ON GRADE	4000	N/A
UNLESS OTHERWISE NOTED	4000	N/A

   NORMAL-WEIGHT 28-DAY STRENGTH UNLESS OTHERWISE NOTED.

   3.THE MODULUS OF ELASTICITY OF ALL CONCRETE SHALL EXCEED 57,000 SQRT(f'c) FOR NORMAL-WEIGHT CONCRETE OR wc1.5 33 SQRT(f'c).
4. DRYPACK OR GROUT SHALL HAVE A MINIMUM 28-DAY STRENGTH OF 7000 PSI.
5. SLAB-ON-GRADE CONSTRUCTION: LOCATE SAW-CUT CONTROL JOINTS ALONG COLUMN LINES WITH INTERMEDIATE JOINTS SPACED PER THE TABLE BELOW, UNLESS OTHERWISE NOTED. SLAB PANELS SHALL HAVE A MAXIMUM LENGTH TO WIDTH RATIO OF 1.5:1. PROVIDE ADDITIONAL CONTROL JOINTS AT ALL RE-ENTRANT CORNERS. SEE PLAN FOR SPECIAL CASES.

THICKNESS (IN)	MAXIMUM JOINT SPACING EACH WAY (FT)
4	12
5	13
6	15
8	18
10	20
12	22

6. CROSS REFERENCE ARCHITECTURAL AND STRUCTURAL DRAWINGS TO ENSURE PROPER DIMENSIONS AND PLACEMENT OF ALL ANCHOR BOLTS, INSERTS, NOTCHES, AND EDGES OF WALLS/FOUNDATIONS PRIOR TO PLACING CONCRETE.
7. UNLESS OTHERWISE NOTED, ALL FOOTINGS SHALL BE CENTERED UNDER WALLS, PIERS OR COLUMNS.
8. CONSTRUCTION JOINTS SHALL BE CLEAN BEFORE POUR. LOCATION TO BE APPROVED BY THE STRUCTURAL ENGINEER. SUBMIT LOCATION PLAN OF ALL PROPOSED JOINTS NOT INDICATED ON DRAWINGS FOR APPROVAL PRIOR TO BEGINNING WORK.
9. PRIOR TO PLACING CONCRETE, THE CONTRACTOR SHALL ENSURE ALL REINFORCING AND EMBEDMENTS, INCLUDING COLUMN ANCHOR BOLTS, ARE PROPERLY LOCATED AND SECURELY TIED IN PLACE.
10. PROVIDE SLEEVES FOR PLUMBING AND ELECTRICAL PENETRATIONS THROUGH CONCRETE BEFORE PLACING. SECURE SLEEVES TO PREVENT MOVEMENT DURING PLACING OPERATIONS. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS.
11. CONFIRM WITH ARCHITECT THAT MATERIALS TO BE EMBEDDED ARE SUITABLE FOR EMBEDMENT IN CONCRETE.
12. CONDUIT, PIPES, AND SLEEVES EMBEDDED IN CONCRETE SHALL CONFORM TO REQUIREMENTS OF ACI 318, SECTIONS 20.7 AND 26.8.
13. DO NOT PLACE VERTICAL CONDUIT IN CONCRETE COLUMNS WITHOUT APPROVAL OF THE STRUCTURAL ENGINEER.
14. NO ALUMINUM SHALL BE ALLOWED IN THE CONCRETE WORK UNLESS COATED TO PREVENT ALUMINUM-CONCRETE REACTION.
15. WATERSTOPS SHALL BE A FLEXIBLE BENTONITE PVC PRODUCT. ACCEPTABLE PRODUCTS INCLUDE: CETCO WATERSTOP-RX AND GREENSTREAK SWELLSTOP WESTIC BARRIER TECHNOLOGIES TPE-R WATERSTOP AND GREENSTREAK PVC WATERSTOP.
16. PROJECTING CORNERS OF BEAMS, WALLS, COLUMNS, ETC., SHALL BE FORMED WITH A 3/4 INCH CHAMFER, UNLESS OTHERWISE NOTED ON ARCHITECTURAL DRAWINGS.
17. SLOPE SLABS TO DRAINS OR FOR POSITIVE DRAINAGE IF NO DRAINS ARE PRESENT AND PROVIDE DEPRESSIONS WHERE SHOWN ON THE STRUCTURAL AND/OR ARCHITECTURAL DRAWINGS WITHOUT REDUCING THE THICKNESS OF SLAB INDICATED. FOR SLAB-ON-GRADE DEPRESSIONS GREATER THAN 1 INCH, SEE DETAILS FOR ADDITIONAL REINFORCING.
18. INTERNALLY VIBRATE ALL CAST-IN-PLACE CONCRETE EXCEPT SLABS-ON-GRADE WHICH NEED ONLY BE VIBRATED AROUND UNDER FLOOR DUCTS AND OTHER EMBEDDED ITEMS. VIBRATE TOPS OF COLUMNS.
19. PROVIDE VERTICAL CONTROL JOINTS IN EXPOSED CONCRETE WALLS AT A MINIMUM UNIFORM SPACING NOT TO EXCEED 25 FEET PER ACI 224.3. COORDINATE JOINT LOCATIONS WITH ARCHITECTURAL DRAWINGS.
20. CONCRETE SHALL NOT BE PERMITTED TO DROP MORE THAN 5 FEET.
21. IF CONCRETE IS PLACED BY PUMPING, SUPPORT SHALL BE PROVIDED FOR THE HOSE. THE HOSE SHALL NOT BE ALLOWED TO RIDE ON THE REINFORCING AND OTHER EMBEDDED ITEMS.
22. CONCRETE SLABS SHALL BE CURED BY KEEPING CONTINUOUSLY WET FOR 7 DAYS. FORMS FOR CONCRETE WALLS SHALL BE LEFT IN PLACE FOR 7 DAYS OR MAY BE STRIPPED AFTER 3 DAYS AND COATED WITH AN APPROVED CURING COMPOUND.
23. NO LOADS SHALL BE PLACED ON STRUCTURAL CONCRETE SLABS WITHIN 7 DAYS AFTER CONCRETE IS PLACED. AFTER CONCRETE IS PLACED, IN NO CASE SHALL THE SUPERIMPOSED CONSTRUCTION LOADS BE GREATER THAN SPECIFIED DESIGN LIVE LOADS, UNLESS THE WORK IS SHORED.
24. NOTIFY THE ARCHITECT/STRUCTURAL ENGINEER 48 HOURS MINIMUM PRIOR TO ALL POURS.
25. CONTRACTOR SHALL SURVEY ALL CONCRETE WORK WITHIN 48 HOURS OF PLACING CONCRETE TO ENSURE PLACEMENT IS IN ACCORDANCE WITH PROJECT REQUIREMENTS.
26. THE DESIGN AND ENGINEERING OF FORMWORK, SHORING AND RESHORING, AS WELL AS THEIR CONSTRUCTION, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. FORMS SHALL BE DESIGNED TO HAVE SUFFICIENT STRENGTH TO SAFELY WITHSTAND THE LOADS RESULTING FROM PLACEMENT AND VIBRATION OF THE CONCRETE AND SHALL ALSO BE DESIGNED FOR SUFFICIENT RIGIDITY TO MAINTAIN SPECIFIED TOLERANCES. CONTRACTOR SHALL SUBMIT DETAILED FORMWORK SHOP DRAWINGS TO THE ARCHITECT TO BE REVIEWED FOR GENERAL COMPLIANCE WITH THE DESIGN CONCEPT ONLY.
27. CONCRETE FILL THICKNESS SHOWN ON FRAMING PLANS AND DETAIL SHEETS IS MINIMUM THICKNESS. NO ALLOWANCES HAVE BEEN SHOWN FOR ADDITIONAL CONCRETE FILL REQUIRED TO COMPENSATE FOR BEAM OR DECK DEFLECTIONS AND TO MAINTAIN SURFACE TOLERANCES SPECIFIED.
28. PROVIDE LIGHTWEIGHT SELF-LEVELING MATERIAL AT ELEVATED CONCRETE SLABS AND SLABS ON STEEL DECK AS REQUIRED TO MEET FLOOR FLATNESS AND LEVELNESS REQUIREMENTS. SUBMIT PROPOSED LOCATIONS AND LEVELING MATERIAL DATA FOR APPROVAL BY THE STRUCTURAL ENGINEER PRIOR TO PLACEMENT.
29. CORING OF CONCRETE IS NOT PERMITTED UNLESS APPROVED BY THE STRUCTURAL ENGINEER.
30. NO CONCRETE SHALL BE PLACED ONTO OR AGAINST SUBGRADES CONTAINING FREE WATER, FROST, ICE OR SNOW.
31. DURING WINTER CONSTRUCTION, ALL FOOTINGS SHALL BE PROTECTED FROM FROST PENETRATION UNTIL THE BUILDING IS ENCLOSED AND TEMPORARY HEAT IS PROVIDED.
32. GENERAL CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR SIZE, LOCATION AND HEIGHT OF MECHANICAL EQUIPMENT PADS ON CONCRETE SLAB ON STEEL DECK AND SLAB-ON-GRADE.
33. THE PROPOSED MATERIALS AND MIX DESIGN SHALL BE FULLY DOCUMENTED AND REVIEWED BY THE TESTING AGENCY. RESPONSIBILITY FOR OBTAINING THE REQUIRED DESIGN STRENGTH IS THE CONTRACTOR'S. SUBMIT TEST DATA ON EACH PROPOSED MIX FOR REVIEW IN ACCORDANCE WITH THE APPLICABLE CODE. MIX DESIGNS SUBMITTED WITHOUT THE REQUIRED TEST DATA WILL BE RETURNED WITHOUT REVIEW.
34. PROVIDE SLAB COORDINATION DRAWING SUBMITTAL INDICATING COORDINATED LOCATIONS OF: MEP PENETRATIONS, SLEEVES, OPENINGS, IN-SLAB CONDUIT/DUCT (IF ALLOWED), EMBEDS, CAST-IN ANCHORS, AND OTHER ITEMS EMBEDDED OR PENETRATING STRUCTURAL ELEVATED SLABS.

EPOXY ANCHORS

1. INTENDED FOR USE WITH REINFORCING BARS AND THREADED RODS.
2. ALL EPOXY ON THE JOB, UNLESS OTHERWISE NOTED, SHALL BE 'SET-3G' AS MANUFACTURED BY SIMPSON STRONG-TIE (ICC ESR-4057) OR APPROVED EQUIVALENT.
3. WORKERS SHALL BE CERTIFIED FOR ANCHOR INSTALLATION EQUIPMENT AND PROCEDURES USING THEIR EPOXY.
4. CONTINUOUS INSPECTION IS REQUIRED FOR INSTALLATION OF REBAR OR THREADED RODS.
5. FOR REQUIRED HOLES, THE DIAMETERS SHALL BE PER MANUFACTURER'S REQUIREMENTS. MINIMUM HOLE LENGTH SHALL BE PER STRUCTURAL DRAWINGS, OR PER THE ICC MINIMUM (FOR MAXIMUM TENSION) IF NOT SHOWN.
6. FOR HORIZONTAL HOLES COMPLETELY THROUGH WALLS OR BEAMS AND FOR TIES AROUND COLUMNS, PROVIDE A DAM AT ONE END, FLOOD WITH EPOXY AND DAM THE OTHER SIDE. VIBRATE TIES TO ENSURE FULL COVERAGE. REMOVE DAMS ONCE FLUID EPOXY HAS SET. FILL ANY VOIDS WITH ADDITIONAL EPOXY.
7. ALL EPOXY ANCHORS WILL BE TESTED AS FOLLOWS:
   a. 25% OF FIRST 40 ANCHORS INSTALLED AND 10% OF ALL ANCHORS THEREAFTER.
   b. IF ANY FAILURES OCCUR, THE PREVIOUS 10 ANCHORS INSTALLED SHALL BE TESTED AS WELL AS THE NEXT 5 ANCHORS INSTALLED. NEW INSTALLED ANCHORS WILL CONTINUE TO BE TESTED UNTIL 5 SUCCESSIVE ANCHORS PASS, AT WHICH TIME NORMAL TESTING OF THE REMAINING ANCHORS SHALL RESUME.
   c. TEST VALUES:

ANCHOR TYPE	TEST TYPE	TEST LOAD (LBS)	BASE MATERIAL
5/8"ø THREADED ROD*	TENSION	6,000	CONCRETE
3/4"ø THREADED ROD*	TENSION	8,500	CONCRETE
7/8"ø THREADED ROD*	TENSION	11,500	CONCRETE
1"ø THREADED ROD*	TENSION	15,000	CONCRETE
#4 REBAR**	TENSION	4,800	CONCRETE
#5 REBAR**	TENSION	7,500	CONCRETE
#6 REBAR**	TENSION	10,500	CONCRETE

   * A307 ** GRADE 60
   d. ANCHORS SHALL BE ALLOWED TO CURE 48 HOURS PRIOR TO TESTING.
   e. TENSION TEST SHALL BE IN ACCORDANCE WITH ASTM E488.
   f. A MINIMUM OF TWO DOWELS PER WALL PER FLOOR SHALL BE TESTED.
   g. IF ANCHOR EDGE DISTANCE IS LESS THAN 6 ANCHOR DIAMETERS, USE 1/2 THE TEST VALUE SHOWN, UNLESS OTHERWISE NOTED.

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REF. SCALE IN INCHES
PROJECT #22009942.00

Bidding and Permits	31 July 2023
Owner Review	17 July 2023
Design Development	08 May 2023

GENERAL STRUCTURAL NOTES

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project. No. 4321

S0.01

803 W. Big Beaver Road, Suite 350, Troy, MI 48084 | 248.244.9710

MASONRY

1. CMU CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH ACI 530/530.1 TMS 402/602 "BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES".
2. MINIMUM 28-DAY COMPRESSIVE STRENGTHS FOR CMU CONSTRUCTION SHALL BE:

DESIGN ASSEMBLY STRENGTH, f'm	2000 PSI
INDIVIDUAL CONCRETE MASONRY UNITS	2800 PSI
GROUT	2000 PSI

3. CMU MATERIALS SHALL CONFORM TO THE FOLLOWING STANDARDS:

CONCRETE MASONRY UNITS	ASTM C90, NORMAL WEIGHT
MORTAR	ASTM C270, TYPE S
GROUT	ASTM C476
JOINT REINFORCING	ASTM A82

4. WIRE REINFORCING PER ASTM A82 FOR SINGLE-WYTHE CMU WALLS, CMU CAVITY WALLS, AND MULTI-WYTHE COMPOSITE CMU WALLS SHALL BE HOT-DIP GALVANIZED PER ASTM A153, CORROSION RESISTANT HORIZONTAL JOINT REINFORCING WITH THE FOLLOWING GAUGE AND VERTICAL SPACING:

RUNNING BOND	9 GA @ 16" OC (ALL WIDTHS)
BELOW GRADE WALLS	9 GA @ 8" OC

5. ALL LOAD BEARING CMU WALLS TO HAVE FULL MORTAR BED, HEAD, AND COLLAR JOINTS.
6. GROUT SOLID ALL JAMBS FULL HEIGHT IN LOAD BEARING CMU WALLS TO UNDERSIDE OF LINTEL PLUS ONE CELL BEYOND BEARING LENGTH.
7. PROVIDE MINIMUM 1 INCH GROUT BETWEEN MAIN REINFORCING AND/OR BOLTS AND CMU UNIT FACE. VERTICAL REINFORCEMENT SHALL BE CENTERED IN WALL, UNLESS OTHERWISE NOTED. VERTICAL REINFORCING BARS SHALL SECURELY BE HELD IN POSITION BY WIRE TIES OR OTHER APPROVED MEANS TO ENSURE DESIGN LOCATION AND LAP. PLACE BARS AND LAP PRIOR TO GROUTING.
8. HORIZONTAL BOND BEAM AND VERTICAL REINFORCING SHALL BE CONTINUOUS UNLESS OTHERWISE NOTED.
9. CELLS SHALL BE IN VERTICAL ALIGNMENT. DOWELS IN FOOTINGS SHALL BE SET TO ALIGN WITH VERTICAL REINFORCING STEEL.
10. ALL CELLS CONTAINING REINFORCING SHALL BE FILLED SOLID WITH GROUT.
11. LIFTS OF GROUT SHALL BE KEYED 1 1/2 INCHES INTO THE PREVIOUS COURSE BELOW.
12. HORIZONTAL BAR REINFORCEMENT SHALL BE FULLY EMBEDDED IN GROUT IN AN UNINTERRUPTED POUR.
13. EXCEPT FOR WALL PILASTERS, VERTICAL REINFORCEMENT SHALL BE FIELD CUT FOR 4'-0" LIFTS AND LAP SPLICED PER LAP LENGTH SCHEDULE.
14. COORDINATE ANY UNIDENTIFIED PIPE OR DUCT PASSING THROUGH STRUCTURAL CMU WALLS WITH TYPICAL DETAILS, UNLESS OTHERWISE NOTED.
15. SEE ARCHITECTURAL DRAWINGS FOR SURFACE AND HEIGHT OF UNITS, LAYING PATTERN, AND JOINT TYPE. ALL BLOCK SHALL BE LAID IN RUNNING BOND, UNLESS OTHERWISE NOTED.
16. ALL MULTIPLE WYTHE CMU WALLS SHALL BE GROUTED SOLID BETWEEN EACH WYTHE.
17. PROVIDE HORIZONTAL TIES WHERE CMU ABUTS CONCRETE.

LINTELS

1. PROVIDE LINTELS OVER ALL OPENINGS AND RECESSES IN MASONRY CONSTRUCTION. LINTELS ARE NOT REQUIRED OVER OPENINGS 12" WIDE OR LESS THAT IS AT LEAST 1 COURSE BELOW THE BOND BEAM AT THE TOP OF WALL.
2. PENETRATIONS NOT IDENTIFIED ON THE DOCUMENTS ARE TO BE TREATED IN A MANNER SIMILAR TO THE IDENTIFIED LOCATIONS.
3. LINTELS IN NON-BEARING WALLS SHALL BE SIZED PER THE FOLLOWING:

SPAN, L	STEEL OPTION (FOR EA 4" OF MASONRY) *
0' < L ≤ 4'-0"	L3 1/2x3 1/2x1/4
4'-0" < L ≤ 6'-0"	L4x3 1/2x5/16 (LLV)
6'-0" < L ≤ 8'-0"	L5x3 1/2x5/16 (LLV)
8'-0" < L ≤ 10'-0"	L6x3 1/2x3/8 (LLV)

SPAN, L	CMU OPTIONS			
	6" BLOCK	8" BLOCK	10" BLOCK	12" BLOCK
0' < L ≤ 4'-0"	8" DEEP W/ (2) # 4 BOTT	8" DEEP W/ (2) # 4 BOTT	8" DEEP W/ (2) #5 BOTT	8" DEEP W/ (2) # 5 BOTT
4'-0" < L ≤ 6'-0"	8" DEEP W/ (2) # 5 BOTT	8" DEEP W/ (2) # 5 BOTT	8" DEEP W/ (2) #6 BOTT	8" DEEP W/ (2) # 5 BOTT
6'-0" < L ≤ 8'-0"	16" DEEP W/ (2) #5 BOTT	16" DEEP W/ (1) #5 BOTT	16" DEEP W/ (1) #5 BOTT	16" DEEP W/ (1) #5 BOTT
8'-0" < L ≤ 10'-0"	16" DEEP W/ (1) #5 BOTT	16" DEEP W/ (2) #5 BOTT	16" DEEP W/ (2) #5 BOTT	16" DEEP W/ (2) #5 BOTT

*ALL ANGLES THAT ARE BACK-TO-BACK SHALL BE WELDED TOP AND BOTTOM 3" @ 12" OC MINIMUM.

4. ALL LINTELS SHALL HAVE A MINIMUM OF 8" END BEARING AND DO NOT REQUIRE BEARING PLATES, UNLESS OTHERWISE NOTED.
5. TEMPORARY SHORING OF MASONRY LINTELS MUST BE PROVIDED UNTIL MASONRY HAS REACHED 75% OF DESIGN STRENGTH.
6. ALL STEEL LINTELS IN EXTERIOR WALL CONSTRUCTION SHALL BE HOT-DIP GALVANIZED, UNLESS OTHERWISE NOTED.

STEEL

1. STRUCTURAL STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "DETAILING FOR STEEL CONSTRUCTION" AND FABRICATED AND ERECTED IN ACCORDANCE WITH THE "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS".
2. STRUCTURAL STEEL SHALL CONFORM TO ASTM STANDARDS AS NOTED BELOW:

WIDE FLANGE SHAPES	ASTM A992	Fy = 50 KSI
OTHER ROLLED SHAPES	ASTM A36	Fy = 36 KSI
PIPE SECTIONS	ASTM A53, GR B	Fy = 35 KSI
HSS SECTIONS, ROUND	ASTM A500, GR C	Fy = 46 KSI
HSS SECTION, SQ/RECT	ASTM A500, GR C	Fy = 50 KSI
HP SHAPES	ASTM A572	Fy = 50 KSI
BASE AND CONNECTION PLATES	ASTM A36	Fy = 36 KSI
ANCHOR RODS	ASTM F1554, GR 36	Fy = 36 KSI
HIGH STRENGTH BOLTS	ASTM F3125, GR A325	Fv = 120 KSI
HIGH STRENGTH BOLTS	ASTM F3125, GR A490	Fv = 150 KSI
HIGH STRENGTH TWIST-OFF BOLTS	ASTM F3125, GR F1852	Fv = 120 KSI
HIGH STRENGTH TWIST-OFF BOLTS	ASTM F3125, GR F2280	Fv = 150 KSI
HEAVY HEX NUTS	ASTM A563	
WASHERS	ASTM F436	
HEADED STUD ANCHORS	ASTM A108, TYPE B	
ELECTRODES FOR ARC WELDING	AWS 5.1, E70XX	

3. HIGH STRENGTH BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH AISC "SPECIFICATIONS FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS". SEE DETAILS FOR BOLT SIZE AND MATERIAL ASTM DESIGNATION.
4. ALL BOLTED CONNECTIONS SHALL BE GRADE A325N BEARING TYPE BOLTS, UNLESS OTHERWISE NOTED. ALL BOLTS SHALL BE INSTALLED TO A MINIMUM "SNUG TIGHT" CONDITION, UNLESS OTHERWISE NOTED.
5. FULLY TENSIONED HIGH STRENGTH BOLTS AND SLIP CRITICAL HIGH STRENGTH BOLTS SHALL USE TENSION-CONTROL "TWIST-OFF" BOLTS OR BE INSTALLED USING THE TURN OF THE NUT METHOD.
6. EXCEPT WHERE DETAILED OTHERWISE, FABRICATOR SHALL SELECT LRFD BOLTED (OR WELDED EQUIVALENT) SIMPLE SHEAR CONNECTIONS PER AISC 360 PART 10 TO SUPPORT LOADS INDICATED ON THE STRUCTURAL DRAWINGS. WHEN LOADS ARE NOT SHOWN, CONNECTION SHALL SUPPORT 60% OF THE TOTAL UNIFORM LOAD CAPACITY FOR EACH GIVEN BEAM SIZE AND SPAN AS LISTED IN AISC 360 TABLE 3-6.
7. BEAM REACTIONS GIVEN ON THE CONTRACT DOCUMENTS SHALL SUPERSEDE THE PREVIOUS NOTE. IN NO CASE SHALL THE CONNECTIONS BE DESIGNED FOR AN UNFACTORED END REACTION LESS THAN 12 KIPS.
8. WELD LENGTHS INDICATED ON THE DRAWINGS ARE THE NET EFFECTIVE LENGTH REQUIRED. WHERE WELD LENGTH IS NOT SPECIFIED, PROVIDE WELD ALONG ENTIRE INTERSECTION OF THE JOINED PARTS. WHERE FILLET WELD SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE, USE MINIMUM WELD SIZE AS SPECIFIED IN AISC 360, TABLE J2.4.
9. ALL WELDING OF STRUCTURAL STEEL SHALL BE PERFORMED BY CERTIFIED WELDERS WITH EXPERIENCE AND CERTIFICATION IN THE TYPES OF WELDING CALLED FOR. WELDERS SHALL HAVE BEEN RECENTLY QUALIFIED AS PRESCRIBED IN "QUALIFICATION PROCEDURES" OF THE AMERICAN WELDING SOCIETY (AWS).
10. HEADED STUD ANCHORS (HSA): SHALL BE INSTALLED IN ACCORDANCE WITH AWS D1.1 AND SHALL BE AUTOMATICALLY END WELDED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS IN SUCH A MANNER AS TO PRODUCE COMPLETE FUSION BETWEEN THE END OF THE HSA AND THE STEEL SHAPE. THERE SHOULD BE NO POROSITY OR EVIDENCE OF LACK OF FUSION BETWEEN THE WELDED END OF THE HSA AND THE STEEL SHAPE. THE HSA SHALL DECREASE IN LENGTH DURING WELDING APPROXIMATELY 1/8" FOR 5/8"ø AND SMALLER AND 3/16" FOR LARGER THAN 5/8"ø.
11. BEAMS SHALL BE CAMBERED UPWARD WHERE SHOWN ON THE DRAWINGS. WHERE NO UPWARD CAMBER IS INDICATED, ANY MILL CAMBER SHALL BE DETAILED UPWARD IN THE BEAMS.
12. SPLICING OF STEEL MEMBERS WHERE NOT DETAILED ON THE DRAWINGS IS PROHIBITED WITHOUT THE PRIOR APPROVAL OF THE STRUCTURAL ENGINEER AS TO LOCATION, TYPE OF SPLICE AND CONNECTION TO BE MADE.
13. ALL STEEL EXPOSED TO WEATHER OR AS NOTED ON PLAN SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 G90. ABRADED AREAS TO BE TOUCHED UP WITH COLD GALVANIZING COMPOUND IN ACCORDANCE WITH ASTM A780.
14. ALL GALVANIZED HOLLOW SECTIONS SHALL HAVE WELDED CAP PLATES TO SEAL EXPOSED ENDS.
15. CUTS, HOLES, OPENINGS, ETC., REQUIRED IN STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES SHALL BE SHOWN ON THE SHOP DRAWINGS. BURNING OF HOLES AND CUTS IN THE FIELD SHALL NOT BE ALLOWED, EXCEPT BY WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER.
16. FURNISH AND INSTALL MISCELLANEOUS STEEL (CURBS, HANGERS, EXPANSION JOINT ANGLES, STRUTS, ETC.) AS CALLED FOR OR AS NECESSARY PER ARCHITECTURAL AND MECHANICAL/ELECTRICAL DRAWINGS.
17. GROUT FOR BASE AND BEARING PLATES SHALL BE A NON-SHRINK, NON-METALLIC PRODUCT. MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE 7000 PSI. INSTALL GROUT PRIOR TO APPLYING SIGNIFICANT LOADING TO MEMBER.
18. THE STRUCTURAL STEEL FABRICATOR SHALL FURNISH SHOP DRAWINGS OF ALL STRUCTURAL STEEL FOR ARCHITECT/STRUCTURAL ENGINEER'S REVIEW BEFORE FABRICATION.

STEEL JOISTS

1. DESIGN, FABRICATION, AND ERECTION SHALL BE IN ACCORDANCE WITH THE STEEL JOIST INSTITUTE (SJI) SPECIFICATION BY A MEMBER OF THE SJI, APPROVED FOR THE TYPE OF JOIST BEING USED.
2. ATTACH STEEL JOIST TO SUPPORT AS FOLLOWS:

	DETAILS WITH WELD INFORMATION		DETAILS WITH BOLT INFORMATION		MINIMUM END BEARING (IN)	
JOIST TYPE/SERIES	FILLET WELD SIZE	WELD LENGTH (IN)	BOLT DIAMETER (IN)	BOLT MATERIAL	STEEL	MASONRY
K	1/8	2	1/2	A307	2 1/2	4
LH/DLH 02-06	3/16	2	3/4	A307	2 1/2	6
LH/DLH 07-17	1/4	2	3/4	A307	4	6
LH/DLH 18-25	1/4	4	3/4	A325	6	6
JOIST GIRDER	1/4	2	3/4	A307	4	6

WHERE WELDS OR BOLTS ARE INDICATED, WELD/BOLT TO BE INSTALLED ON BOTH SIDES OF JOIST SEAT UNLESS OTHERWISE NOTED.

3. DESIGN JOIST SEAT FOR MINIMUM 1500 LBS (1.0 WL) ROLLOVER LOAD FOR K-SERIES JOIST ONLY. EXACT LOAD TO BE CONFIRMED BY JOIST MANUFACTURER.
4. LIVE LOAD DEFLECTION SHALL NOT EXCEED SPAN OVER 360 FOR SPECIAL JOISTS AND JOIST GIRDERS.
5. PROVIDE BRIDGING PER SJI SPECIFICATIONS. DESIGN AND PROVIDE UPLIFT BRIDGING TO WITHSTAND A NET UPLIFT PRESSURE AS INDICATED WITHIN THE DESIGN CRITERIA AND LOADS SECTION. WHERE BRIDGING INTERFERES WITH MECHANICAL OR OTHER TRADE INSTALLATIONS, THE JOIST MANUFACTURER SHALL PROVIDE DIRECTION FOR REMOVAL AND REPLACEMENT OF ANY BRIDGING.
6. PROVIDE ANCHORS AT EACH END OF EACH ROW OF BRIDGING TOP AND BOTTOM CHORDS, EXCEPT AT EXPANSION JOINTS.
7. ALL JOIST HEADERS AND ACCESSORIES SHALL BE DESIGNED AND FURNISHED BY THE JOIST FABRICATOR.
8. STEEL JOISTS SHALL BE TOP CHORD BEARING UNLESS OTHERWISE NOTED ON PLANS.
9. PROVIDE BOTTOM CHORD CEILING SUPPORT EXTENSIONS WHERE SHOWN ON THE STRUCTURAL AND/OR ARCHITECTURAL DRAWINGS.
10. THE JOIST FABRICATOR SHALL FURNISH SHOP DRAWINGS OF ALL BAR JOIST MATERIAL AND ACCESSORIES FOR ARCHITECT/STRUCTURAL ENGINEER'S REVIEW BEFORE FABRICATION. JOIST DESIGNATIONS ON THE SHOP DRAWINGS SHALL BE THE SAME NUMBERS AS SHOWN IN THE SJI MANUAL.

STEEL DECK

1. MATERIAL, DETAILING, DESIGN, MANUFACTURE, AND ERECTION OF STEEL DECKS SHALL BE IN ACCORDANCE WITH THE STEEL DECK INSTITUTE (SDI) SPECIFICATION.
2. DECK SIZE AND GAUGE INDICATED ON THE DRAWINGS ARE BASED ON THE FOLLOWING:
   A. CURRENT VERSION OF VULCRAFT CATALOG FOR GRAVITY DESIGN LOADS AND UNSHORED CONSTRUCTION SPANS
   B. STEEL DECK INSTITUTE (SDI) DIAPHRAGM DESIGN MANUAL 4TH EDITION FOR DIAPHRAGM LOADS
3. STEEL DECK GALVANIZING SHALL CONFORM TO ASTM A653 A924 WITH A MINIMUM COATING OF G90.
4. PAINTED STEEL ROOF DECK SHALL CONFORM TO ASTM A1008, GRADE C.
5. PROVIDE MINIMUM DECK BEARING AND LAP LENGTHS PER MANUFACTURER'S RECOMMENDATIONS.
6. USE SUMP PANS AT ALL ROOF DRAINS. MINIMUM THICKNESS FOR SUMP PANS SHALL BE 14 GAUGE.
7. DECK MANUFACTURER SHALL FURNISH ALL RIDGE AND VALLEY PLATES, SUMP PANS, DRAIN PLATES, AND OTHER ACCESSORIES REQUIRED FOR A COMPLETE INSTALLATION. DECK MANUFACTURER SHALL PROVIDE ALL CLOSURE PLATES AND POUR STOPS NOT PROVIDED BY THE STEEL FABRICATOR.
8. CUTTING AND FRAMING OF OPENINGS FOR OTHER TRADES SHALL BE THE RESPONSIBILITY OF THE TRADES INVOLVED. HOLES THAT ARE LOCATED AND DIMENSIONED ON THE DRAWINGS SHALL BE THE RESPONSIBILITY OF THE DECK ERECTOR.
9. CONDUITS SHOULD NOT BE PLACED IN CONCRETE SLAB ON STEEL DECK WITHOUT COORDINATION WITH THE STRUCTURAL ENGINEER, UNLESS OTHERWISE NOTED.
10. COORDINATE ALL PENETRATIONS, EMBEDS, AND RECESSES IN COMPOSITE FLOOR SYSTEMS WITH THE STRUCTURAL ENGINEER, UNLESS OTHERWISE NOTED.
11. DO NOT EXCEED 25 LBS PER HANGER AND A MINIMUM SPACING OF 2'-0" ON CENTER WHEN ATTACHING TO STEEL ROOF DECK. THIS 25 LBS LOAD AND 2'-0" SPACING INCLUDES ADJACENT MECHANICAL, ELECTRICAL, AND ARCHITECTURAL ITEMS HANGING FROM THE DECK. IF THE HANGER RESTRICTIONS CANNOT BE ACHIEVED, SUPPLEMENTAL FRAMING SUPPORTED OFF STEEL FRAMING WILL NEED TO BE ADDED. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING LOCATION AND WEIGHT OF ALL THE ELEMENTS BEING HUNG WITH STRUCTURAL ENGINEER, UNLESS OTHERWISE NOTED.
12. CORRUGATED FORM DECK GAUGES SHOWN ON THE DRAWINGS ARE INTENDED TO SUPPORT THE WEIGHT OF THE WET CONCRETE PLUS A CONSTRUCTION LIVE LOAD OF 20 PSF WITHOUT INTERMEDIATE SHORING BASED ON A THREE-SPAN CONTINUOUS CONDITION. DECK MANUFACTURER SHALL EVALUATE OTHER SPAN CONDITIONS FOR DEFLECTION WHICH SHALL NOT EXCEED SPAN OVER 180 NOR 1/8 INCH UNDER UNIFORMLY DISTRIBUTED CONCRETE DEAD LOAD. PROVIDE SHORING OR ALTERNATE MEANS OF CONTROLLING DEFLECTION AND MEETING ALLOWABLE STRESSES.
13. SUBMIT SHOP DRAWINGS SHOWING ERECTION PROCEDURES, WELDING PROCEDURES, VERTICAL LOAD AND DIAPHRAGM SHEAR CAPACITY FURNISHED, DECK SHORING REQUIREMENTS, UNDERWRITER'S LABORATORIES (UL) FIRE RATING NUMBER AND COMPOSITE BEAM AND GIRDER STUD PROFILES TO THE ARCHITECT/STRUCTURAL ENGINEER FOR REVIEW. FABRICATION SHALL NOT BEGIN WITHOUT APPROVED SHOP DRAWINGS.

POST-INSTALLED ANCHORS

1. ANCHORS SERVING AS THE BASIS OF DESIGN ARE SHOWN ON THE DRAWINGS. ACCEPTABLE ALTERNATIVE ANCHORS MAY BE SUPPLIED PROVIDED THE QUANTITY AND CONFIGURATION MATCH THE CAPACITY OF THE DESIGN ANCHOR QUANTITY AND CONFIGURATION. ANY ALTERNATES ARE TO BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW. INSTALL IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. BELOW SUMMARIZES EACH ANCHOR TYPE USED ON THE PROJECT.
2. MECHANICAL ANCHORS:
   a. EXPANSION ANCHORS

ANCHORED INTO	BASIS OF DESIGN	ACCEPTABLE ALTERNATES
GROUTED MASONRY	HILTI KB3 (ESR-1385)	DEWALT POWER STUD+ SD1 (ESR-2966) SIMPSON WEDGE-ALL (ESR-1396)
UNCRACKED CONCRETE	HILTI KB3 (ESR-2302)	DEWALT POWER STUD+ SD2 (ESR-2502) RED HEAD TRUBOLT+ (ESR-2427) SIMPSON STRONG BOLT 2 (ESR-3037)
CRACKED CONCRETE	HILTI KBTZ (ESR-1917)	DEWALT POWER STUD+ SD2 (ESR-2502) RED HEAD TRUBOLT+ (ESR-2427) SIMPSON STRONG BOLT 2 (ESR-3037)

   b. THREADED SCREW ANCHORS

ANCHORED INTO	BASIS OF DESIGN	ACCEPTABLE ALTERNATES
GROUTED MASONRY	HILTI KWIK HUS-EZ (ESR-3056)	DEWALT WEDGE-BOLT+ (ESR-1678) SIMPSON TITEN HD (ESR-1056)
UNCRACKED CONCRETE	HILTI KWIK HUS-EZ (ESR-3027)	DEWALT POWER SCREW-BOLT+ (ESR-3889) SIMPSON TITEN HD (ESR-2713)
CRACKED CONCRETE	HILTI KWIK HUS-EZ (ESR-3027)	DEWALT POWER SCREW-BOLT+ (ESR-3889) SIMPSON TITEN HD (ESR-2713)

3. ADHESIVE ANCHORS: SHALL CONSIST OF DEFORMED REINFORCING BARS OR ASTM A193 GRADE B7 RODS, HEAVY DUTY NUTS AND WASHERS AND A TWO COMPONENT STRUCTURAL ADHESIVE. WHERE ANCHORING INTO HOLLOW MASONRY, A SCREEN TUBE SHALL BE PROVIDED.

ANCHORED INTO	BASIS OF DESIGN	ACCEPTABLE ALTERNATES
HOLLOW MASONRY	HILTI HIT-HY 270 (ESR-4143)	DEWALT AC 100+ GOLD (ESR-3200) SIMPSON SET-XP (ESR-0265)
GROUTED MASONRY	HILTI HIT-HY 270 (ESR-4143)	DEWALT AC 100+ GOLD (ESR-3200) RED HEAD A7 ACRYLIC (ESR-3951) SIMPSON SET-XP (ESR-0265)
CONCRETE	HILTI HIT-HY 200 (ESR-3187)	DEWALT AC 200+ (ESR-4027) SIMPSON SET-3G (ESR-4057)

4. CRACKED CONCRETE REPRESENTS ALL CONCRETE FOR PROJECTS LOCATED IN SEISMIC DESIGN CATEGORY C OR HIGHER, TENSILE ZONES SUCH AS BOTTOMS OF BEAMS AND SLABS, OR WHERE NOTED ON THE DRAWINGS.

STRUCTURAL ABBREVIATION KEY

ABBR:	DESCRIPTION:
#	NUMBER OR POUNDS
@	AT
°	DEGREE
ø	DIAMETER
(E)	EXISTING
A.B.	ANCHOR BOLT
AHU	AIR-HANDLING UNIT
ARCH	ARCHITECT, -URE, -URAL
B.O.	BOTTOM OF
bf	BEAM FLANGE WIDTH
BF	BRACE FRAME
BM	BEAM
B.N.	BOUNDARY NAILING
BOTT	BOTTOM
BTWN	BETWEEN
CFSF	COLD FORM STEEL FRAMING
CGS	CENTER OF GRAVITY OF THE TENDON
CJP	COMPLETE JOINT PENETRATION WELD
CLR	CLEAR
CL	CENTERLINE
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUOUS
COORD	COORDINATION
DIA	DIAMETER
DL	DEAD LOAD
DET	DETAIL
DWG	DRAWING
DWL	DOWEL
EA	EACH
EF	EACH FACE
EFF	EFFECTIVE
EL	ELEVATION
ELEC	ELECTRICAL
EMBED	EMBED
E.N.	EDGE NAILING
EOD	EDGE OF DECK
EOS	EDGE OF SLAB
EQ	EQUAL
EQUIP	EQUIPMENT
ETC	ETCETERA
EW	EACH WAY
EXP	EXPANSION
EXT	EXTERIOR
f 'c	CONCRETE COMPRESSIVE STRENGTH
FDN	FOUNDATION
FLR	FLOOR
F.N.	FIELD NAILING
FT	FOOT
FTG	FOOTING
Fy	YIELD STRESS
GA	GAGE OR GAUGE
GALV	GALVANIZED
GB	GRADE BEAM
GLB	GLULAM BEAM
GT	GIRDER TRUSS
HORIZ	HORIZONTAL
HSA	HEADED STUD ANCHOR
HSB	HIGH STRENGTH BOLT
JT	JOINT
K, KIP	KILOPOUND (1,000 POUNDS)
KSF	KIPS PER SQUARE FOOT
KSI	KIPS PER SQUARE INCH
L	POUND
LBS	LENGTH
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LONG.	LONGITUDINAL
LSH	LONG SIDE HORIZONTAL
LSV	LONG SIDE VERTICAL
LT WT	LIGHTWEIGHT
MAX	MAXIMUM
MECH	MECHANICAL
MANUF	MANUFACTURER
MIN	MINIMUM
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
OH	OPPOSITE HAND
OPNG	OPENING
OSB	OREINTED STRAND BOARD
PCF	POUNDS PER CUBIC FOOT
P.H.	PENTHOUSE
PJP	PARTIAL JOINT PENETRATION WELD
PL	PLATE
PLF	POUNDS PER LINEAR FOOT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PRESSURE TREATED DOUGLAS FIR
R	RADIUS
REINF	REINFORCING, -MENT, -ED
REQD	REQUIRED
RTU	ROOF TOP UNIT
SC	SLIP CRITICAL
SCHED	SCHEDULE
SFRS	SEISMIC FORCE-RESISTING SYSTEM
SIM	SIMILAR
SL	SNOW LOAD
S.M.S.	SHEET METAL SCREWS
SP	SPACE(S)
SPEC	SPECIFICATION(S)
SQ	SQUARE
STIFF	STIFFENER
STL	STEEL
SIM	SIMILAR
T&B	TOP AND BOTTOM
T.O.	TOP OF
TC	PRE-TENSIONED BOLT
TEMP	TEMPERATURE
tf	BEAM FLANGE THICKNESS
THK	THICK
TRANS	TRANSVERSE
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
VERT	VERTICAL
VIF	VERIFY IN FIELD
W/	WITH
WP	WORK POINT
WT	WEIGHT
WWR	WELDED WIRE REINFORCING

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PROJECT #22009942.00

Bidding and Permits	31 July 2023
Owner Review	17 July 2023
Design Development	08 May 2023

GENERAL STRUCTURAL NOTES

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project. No. 4321

S0.02

803 W. Big Beaver Road, Suite 350, Troy, MI 48084 | 248.244.9710

TESTING, INSPECTIONS, AND OBSERVATIONS

1. THE STRUCTURAL ENGINEER DOES NOT PROVIDE INSPECTIONS OF CONSTRUCTION. STRUCTURAL ENGINEER MAY MAKE PERIODIC OBSERVATIONS OF THE CONSTRUCTION. SUCH OBSERVATIONS SHALL NOT REPLACE REQUIRED INSPECTIONS BY THE GOVERNING AUTHORITIES OR SERVE AS "SPECIAL INSPECTIONS" AS MAY BE REQUIRED BY CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE.
2. SEE ARCHITECTURAL, CIVIL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS OR SPECIFICATIONS FOR TESTING AND INSPECTION REQUIREMENTS OF NON-STRUCTURAL COMPONENTS.
3. DUTIES OF THE INSPECTION AGENCY PER IBC CHAPTER 17:
   a. SUBMIT A PROPOSED TESTING AND INSPECTION PROGRAM TO THE OWNER, THE ARCHITECT AND THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL AT LEAST TWO WEEKS PRIOR TO COMMENCEMENT OF WORK.
   b. PERFORM ALL TESTING AND INSPECTION REQUIRED PER APPROVED TESTING AND INSPECTION PROGRAM.
   c. FURNISH INSPECTION REPORT TO THE BUILDING OFFICIAL, THE OWNER, THE ARCHITECT, STRUCTURAL ENGINEER AND THE GENERAL CONTRACTOR. THE REPORTS SHALL BE COMPLETED AND FURNISHED WITHIN 48 HOURS OF INSPECTED WORK.
   d. SUBMIT A FINAL SIGNED REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE SPECIAL INSPECTION AGENCY'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.
4. SPECIAL INSPECTIONS AND TESTS ARE REQUIRED FOR MATERIALS AND SYSTEMS REQUIRED TO BE INSTALLED IN ACCORDANCE WITH ADDITIONAL MANUFACTURER'S INSTRUCTIONS THAT PRESCRIBE REQUIREMENTS NOT CONTAINED IN CHAPTER 17 OF THE IBC OR IN STANDARDS REFERENCED BY THE IBC. THESE ITEMS INCLUDE:
   a. POST-INSTALLED ANCHORS - INSPECTION
5. THE FOLLOWING WORK SHALL BE INSPECTED BY THE SPECIAL INSPECTOR UNLESS SPECIFICALLY WAIVED BY THE BUILDING OFFICIAL.

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC	MATERIAL STD REFERENCE	IBC REFERENCE
CONCRETE CONSTRUCTION				
1. INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT		X	ACI 318: CH 20, 25.2, 25.3, 26.2.1-26.6.3	1908.4
2. MATERIAL IDENTIFICATION OF REINFORCING (TYPE/GRADE)		X	AISC 341: TABLE J9.1	
3. REINFORCING STEEL HAS NOT BEEN REBENT IN THE FIELD		X	AISC 341: TABLE J9.1	
4. REINFORCING STEEL HAS BEEN TIED AND SUPPORTED AS REQUIRED		X	AISC 341: TABLE J9.1	
5. REINFORCING STEEL CLEARANCES HAVE BEEN PROVIDED		X	AISC 341: TABLE J9.1	
6. COMPOSITE STEEL MEMBERS HAVE REQUIRED SIZE		X	AISC 341: TABLE J9.1	
7. REINFORCING BAR WELDING:				
a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706		X	AWS D1.4	
b. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"; AND		X	ACI 318: 26.6.4	
c. INSPECTS ALL OTHER WELDS	X			
8. INSPECT ANCHORS CAST IN CONCRETE		X	ACI 318: 17.8.2	
9. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS:				
a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS	X		ACI 318: 17.8.2.4	
b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.a		X	ACI 318: 17.8.2	
10. VERIFY USE OF REQUIRED DESIGN MIX		X	ACI 318: CH 19, 26.4.2, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
11. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	X		ASTM C172, ASTM C31, ACI 318: 26.5, 26.12	1907.10
12. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X		ACI 318: 26.5	1908.6, 1908.7, 1908.8
13. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES		X	ACI 318: 26.5.3-26.5.5	1908.9
14. INSPECT PRESTRESSED CONCRETE FOR:				
a. APPLICATION OF PRESTRESSING FORCES; AND	X		ACI 318: 26.11.2	
b. GROUTING OF BONDED PRESTRESSING TENDONS	X			
15. INSPECT ERECTION OF PRECAST CONCRETE MEMBERS	X		ACI 318: 26.9	
16. VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS		X	ACI 318: 26.11.2	
17. INSPECT FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED		X	ACI 318: 26.11.2(b)	

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC	TMS 402	TMS 602
MASONRY CONSTRUCTION - LEVEL 2				
1. PRIOR TO CONSTRUCTION:				
a. VERIFICATION OF COMPLIANCE OF SUBMITTALS		X		ART. 1.5
b. VERIFICATION OF f'm		X		ART. 1.4 B
2. AS CONSTRUCTION BEGINS, VERIFY THE FOLLOWING ARE IN COMPLIANCE:				
a. PROPORTIONS OF SITE-PREPARED MORTAR		X		ART. 2.1, 2.6 A & 2.6 C
b. GRADE AND SIZE OF ANCHORAGES		X		ART. 2.4 B & 2.4 H
c. GRADE, TYPE AND SIZE OF REINFORCEMENT, CONNECTORS, ANCHOR BOLTS, AND ANCHORAGES		X		ART. 3.4 & 3.6 A
d. SAMPLE PANEL CONSTRUCTION		X		ART. 1.6 D
3. PRIOR TO GROUTING, VERIFY THE FOLLOWING ARE IN COMPLIANCE:				
a. GROUT SPACE		X		ART. 3.2 D & 3.2 F
b. PLACEMENT OF ANCHORAGES		X	SEC. 10.8 & 10.9	ART. 2.4 & 3.6
c. PLACEMENT OF REINFORCEMENT, CONNECTORS, AND ANCHOR BOLTS		X	SEC. 6.1, 6.3.1, 6.3.6 & 6.3.7	ART. 3.2 E & 3.4
d. PROPORTIONS OF SITE-PREPARED GROUT		X		ART. 2.6 B & 2.4 G.1.b
4. DURING CONSTRUCTION:				
a. VERIFICATION OF SLUMP FLOW AND VISUAL STABILITY INDEX (VSI) WHEN SELF-CONSOLIDATING GROUT IS DELIVERED TO THE PROJECT SITE		X		ART. 1.5 & 1.6.3
b. MATERIALS AND PROCEDURES WITH THE APPROVED SUBMITTALS		X		ART. 1.5
c. PLACEMENT OF MASONRY UNITS AND MORTAR JOINT CONSTRUCTION		X		ART. 3.3 B
d. SIZE AND LOCATION OF STRUCTURAL MEMBERS		X		ART. 3.3 F
e. TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION		X	SEC. 1.2.1(e), 6.2.1 & 6.3.1	
f. WELDING OF REINFORCEMENT	X		SEC. 6.1.6.1.2	
g. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F) OR HOT WEATHER (TEMPERATURE ABOVE 90° F)		X		ART. 1.8 C & 1.8 D
5. OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS		X		ART. 1.4 B.2.a.3, 1.4 B.2.b.3, 1.4 B.2.c.3, 1.4 B.3 & 1.4 B.4

VERIFICATION AND INSPECTION TASK	QC	QA	MATERIAL STD REFERENCE
STRUCTURAL STEEL - FABRICATION			
1. FABRICATION FACILITY			X
2. CONNECTION ERECTION AND ASSEMBLY	X	X	
3. PRETENSIONED AND SLIP-CRITICAL BOLTS/JOINTS USING TURN-OF-NUT METHOD WITHOUT MATCHMAKING OF CALIBRATED WRENCH METHODS OF INSTALLATION	X	X	
4. SINGLE PASS FILLET WELDS 5/16" OR LESS	X	X	X
5. ALL OTHER WELDS INCLUDING COMPLETE AND PARTIAL PENETRATION WELDS	X	X	X
6. SHEAR STUD PLACEMENT	X	X	

VERIFICATION AND INSPECTION TASK	QC	QA	MATERIAL STD REFERENCE
STRUCTURAL STEEL - ERECTION			
1. STRUCTURAL STEEL ERECTION	X	X	
2. CONNECTION ERECTION AND ASSEMBLY	X	X	
3. PRETENSIONED AND SLIP-CRITICAL BOLTS/JOINTS USING TURN-OF-NUT METHOD WITHOUT MATCHMAKING OF CALIBRATED WRENCH METHODS OF INSTALLATION	X	X	
4. SINGLE PASS FILLET WELDS 5/16" OR LESS	X	X	X
5. ALL OTHER WELDS INCLUDING COMPLETE AND PARTIAL PENETRATION WELDS	X	X	X
6. SHEAR STUD PLACEMENT	X	X	
7. BEAM CAMBER (IN-PLACE)	X		

VERIFICATION AND INSPECTION TASK	QC	QA	MATERIAL STD REFERENCE	AWS D1.1 CLAUSES
STRUCTURAL STEEL PRIOR TO BOLTING - MINIMUM INSPECTION				
1. MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	O	P	TABLE C-N5.6-1	2.1, 9.1
2. FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	O	O	TABLE C-N5.6-1	6.5.1
3. CORRECT FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM THE SHEAR PLANE)	O	O	TABLE C-N5.6-1	2.3.2, 2.7.2, 9.1
4. CORRECT BOLTING PROCEDURE SELECTED FOR JOINT DETAIL	O	O	TABLE C-N5.6-1	4, 8
5. CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	O	O	TABLE C-N5.6-1	TABLE 6.1(2)
6. PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	P[1]	O[1]	TABLE C-N5.6-1	3, 9.1, 9.3
7. PROTECTION STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS, AND OTHER FASTENER COMPONENTS	O	O	TABLE C-N5.6-1	2.2, 8, 9.1

1 DOCUMENT - THE INSPECTOR SHALL PREPARE REPORTS INDICATING THE WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE REPORTS NEED NOT PROVIDE DETAILED MEASUREMENTS FOR JOINT FIT-UPS, WPS SETTINGS, COMPLETED WELDS, OR OTHER INDIVIDUAL ITEMS LISTED IN THE TABLES. FOR SHOP FABRICATION, THE REPORT SHALL INDICATE THE PIECE MARK OF THE PIECE INSPECTED. FOR FIELD WORK, THE REPORT SHALL INDICATE THE REFERENCE GRID LINES AND FLOOR OR ELEVATION INSPECTED. WORK NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS AND WHETHER THE NONCOMPLIANCE HAS BEEN SATISFACTORILY REPAIRED SHALL BE NOTED IN THE INSPECTION.

VERIFICATION AND INSPECTION TASK	QC	QA	MATERIAL STD REFERENCE	AWS D1.1 CLAUSES
STRUCTURAL STEEL AFTER BOLTING - MINIMUM INSPECTION				
1. DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	P	P	TABLE C-N5.6-3	N/A

VERIFICATION AND INSPECTION TASK	QC	QA	MATERIAL STD REFERENCE	AWS D1.1 CLAUSES
STRUCTURAL STEEL PRIOR TO WELDING - MINIMUM INSPECTION				
1. WELDING PROCEDURE SPECIFICATIONS (WPS) AVAILABLE	P	P	TABLE C-N5.4-1	6.3
2. MANUFACTURER CERTIFICATES FOR WELDING CONSUMABLES AVAILABLE	P	P	TABLE C-N5.4-1	6.2
3. MATERIAL IDENTIFICATION	O	O	TABLE C-N5.4-1	6.2
4. WELDER IDENTIFICATION	O	O	TABLE C-N5.4-1	6.4 (WELDER QUALIFICATIO N)
5. FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY)	O	O	TABLE C-N5.4-1	
a. JOINT PREPARATION	O	O	TABLE C-N5.4-1	6.5.2
b. DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL)	O	O	TABLE C-N5.4-1	5.22
c. CLEANLINESS (CONDITION OF STEEL SURFACE)	O	O	TABLE C-N5.4-1	5.14
d. TACKING (TACK WELD QUALITY AND LOCATION)	O	O	TABLE C-N5.4-1	5.17
e. BACKING TYPE AND FIT (IF APPLICABLE)	O	O	TABLE C-N5.4-1	5.9, 5.21.1.1
6. FIT-UP OF CJP GROOVE WELDS OF HSS T-, Y- & K--JOINTS WITHOUT BACKING (INCLUDING JOINT GEOMETRY)	P/O[1]	O	TABLE C-N5.4-1	9.11.2
a. JOINT PREPARATION	P/O[1]	O	TABLE C-N5.4-1	9.11.2
b. DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL)	P/O[1]	O	TABLE C-N5.4-1	9.11.2
c. CLEANLINESS (CONDITION OF STEEL SURFACE)	P/O[1]	O	TABLE C-N5.4-1	9.11.2
d. TACKING (TACK WELD QUALITY AND LOCATION)	P/O[1]	O	TABLE C-N5.4-1	9.11.2
7. CONFIGURATION AND FINISH OF ACCESS HOLES	O		TABLE C-N5.4-1	6.5.2, 5.16 (& SEE AISC 360 SECT. J1.6)
8. FIT-UP OF FILLET WELDS	P/O[1]	O	TABLE C-N5.4-1	
a. DIMENSIONS (ALIGNMENT, GAPS AT ROOT)	P/O[1]	O	TABLE C-N5.4-1	5.21.1
b. CLEANLINESS (CONDITION OF STEEL SURFACES)	P/O[1]	O	TABLE C-N5.4-1	5.14
c. TACKING (TACK WELD QUALITY AND LOCATION)	P/O[1]	O	TABLE C-N5.4-1	5.17
9. CHECK WELDING EQUIPMENT	O	O	TABLE C-N5.4-1	6.2, 5.10

VERIFICATION AND INSPECTION TASK	QC	QA	MATERIAL STD REFERENCE	AWS D1.1 CLAUSES
STRUCTURAL STEEL DURING WELDING - MINIMUM INSPECTION				
1. USE OF QUALIFIED WELDERS	O	O	TABLE C-N5.4-2	6.4
2. CONTROL AND HANDLING OF WELDING CONSUMABLES	O	O	TABLE C-N5.4-2	6.2
a. PACKAGING	O	O	TABLE C-N5.4-2	5.3.1
b. EXPOSURE CONTROL	O	O	TABLE C-N5.4-2	5.3.2 (FOR SMAW), 5.3.3 (FOR SAW)
3. ENVIRONMENT CONDITIONS	O	O	TABLE C-N5.4-2	
a. WIND SPEED WITHIN LIMITS	O	O	TABLE C-N5.4-2	5.11.1
b. PRECIPITATION AND TEMPERATURE	O	O	TABLE C-N5.4-2	5.11.2
4. WPS FOLLOWED	O	O	TABLE C-N5.4-2	6.3.3, 6.5.2, 5.5, 5.20
a. SETTINGS ON WELDING EQUIPMENT	O	O	TABLE C-N5.4-2	
b. TRAVEL SPEED	O	O	TABLE C-N5.4-2	
c. SELECTED WELDING MATERIALS	O	O	TABLE C-N5.4-2	
d. SHIELDING GAS TYPE/FLOW RATE	O	O	TABLE C-N5.4-2	
e. PREHEAT APPLIED	O	O	TABLE C-N5.4-2	5.6, 5.7
f. INTERPASS TEMPERATURE MAINTAINED (MIN/MAX)	O	O	TABLE C-N5.4-2	
g. PROPER POSITION (F, V, H, OH)	O	O	TABLE C-N5.4-2	
h. INTERMIX OF FILLER METALS AVOIDED UNLESS APPROVED	O	O	TABLE C-N5.4-2	
5. WELDING TECHNIQUES	O	O	TABLE C-N5.4-2	6.5.2, 6.5.3, 5.23
a. INTERPASS AND FINAL CLEANING	O	O	TABLE C-N5.4-2	5.29.1
b. EACH PASS WITHIN PROFILE LIMITATIONS	O	O	TABLE C-N5.4-2	
c. EACH PASS MEETS QUALITY REQUIREMENTS	O	O	TABLE C-N5.4-2	

VERIFICATION AND INSPECTION TASK	QC	QA	MATERIAL STD REFERENCE	AWS D1.1 CLAUSES
STRUCTURAL STEEL AFTER WELDING - MINIMUM INSPECTION				
1. WELDS CLEANED	O	O	TABLE C-N5.4-3	5.29.1
2. SIZE, LENGTH AND LOCATION OF WELDS	P	P	TABLE C-N5.4-3	6.5.1
3. WELDS MEET VISUAL ACCEPTANCE CRITERIA	P[2]	P[2]	TABLE C-N5.4-3	6.5.3
a. CRACK PROHIBITION	P[2]	P[2]	TABLE C-N5.4-3	TABLE 6.1(1)
b. WELD/BASE-METAL FUSION	P[2]	P[2]	TABLE C-N5.4-3	TABLE 6.1(2)
c. CRATER CROSS-SECTION	P[2]	P[2]	TABLE C-N5.4-3	TABLE 6.1(3)
d. WELD PROFILES	P[2]	P[2]	TABLE C-N5.4-3	TABLE 6.1(4), 5.24
e. WELD SIZE	P[2]	P[2]	TABLE C-N5.4-3	TABLE 6.1(6)
f. UNDERCUT	P[2]	P[2]	TABLE C-N5.4-3	TABLE 6.1(7)
g. POROSITY	P[2]	P[2]		TABLE 6.1(8)
4. ARC STRIKES	P	P	TABLE C-N5.4-3	5.28
5. K-AREA[3]	P[2]	P[2]	TABLE C-N5.4-3	N/A
6. WELD ACCESS HOLES IN ROLLED HEAVY SHAPES AND BUILT-UP HEAVY SHAPES	P	P	TABLE C-N5.4-3	5.16, 6.5.2 (& SEE AISC 360 SECT. J1.6)
7. BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	P[2]	P[2]	TABLE C-N5.4-3	5.9, 5.30
8. REPAIR ACTIVITIES	P	P[2]	TABLE C-N5.4-3	6.5.3, 5.25
9. DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	P	P	TABLE C-N5.4-3	6.5.4, 6.5.5
10. PLACEMENT OF REINFORCING OR CONTOURING FILLET WELDS (IF REQUIRED)	P[2]	P[2]	TABLE C-N5.4-3	6.5.4, 6.5.5

1 FOLLOWING PERFORMANCE OF THIS INSPECTION TASK FOR TEN WELDS TO BE MADE BY A GIVEN WELDER, WITH THE WELDER DEMONSTRATING UNDERSTANDING OF REQUIREMENTS AND POSSESSION OF THE SKILLS TO VERIFY THESE ITEMS, THE PERFORM DESIGNATION OF THIS TASK SHALL BE REDUCED TO OBSERVE, AND THE WELDER SHALL PERFORM THIS TASK. SHOULD THE INSPECTOR DETERMINE THE WELDER HAS DISCONTINUED PERFORMANCE OF THIS TASK, THE TASK SHALL BE RETURNED TO PERFORM UNTIL SUCH TIME AS THE INSPECTOR HAS RE-ESTABLISHED ADEQUATE ASSURANCE THE WELDER WILL PERFORM THE INSPECTION TASKS LISTED.

2 DOCUMENT - THE INSPECTOR SHALL PREPARE REPORTS INDICATING THE WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE REPORT NEED NOT PROVIDE DETAILED MEASUREMENTS FOR JOINT FIT-UPS, WPS SETTINGS, COMPLETED WELDS, OR OTHER INDIVIDUAL ITEMS LISTED IN THE TABLES. FOR SHOP FABRICATION, THE REPORT SHALL INDICATE THE PIECE MARK OF THE PIECE INSPECTED. FOR FIELD WORK, THE REPORT SHALL INDICATE THE REFERENCE GRID LINES AND FLOOR OR ELEVATION INSPECTED. WORK NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS AND WHETHER THE NONCOMPLIANCE HAS BEEN SATISFACTORILY REPAIRED SHALL BE NOTED IN THE INSPECTION.

3 WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES OR STIFFENERS HAS BEEN PERFORMED IN THE K-AREA, VISUALLY INSPECT THE WEB K-AREA FOR CRACKS WITHIN 3" OF THE WELD. THE VISUAL INSPECTION SHALL BE PERFORMED NO SOONER THAN 48 HOURS FOLLOWING COMPLETION OF THE WELDING.

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC	MATERIAL STD REFERENCE	IBC REFERENCE
OPEN-WEB JOISTS AND GIRDERS				
1. INSTALLATION OF OPEN-WEB JOISTS AND GIRDERS:				
a. END CONNECTIONS - WELDING AND BOLTED		X	SJI SPEC. LISTED IN SECTION 2207.1	
b. BRIDGING - HORIZONTAL AND DIAGONAL				
c. STANDARD BRIDGING		X	SJI SPEC. LISTED IN SECTION 2207.1	
d. BRIDGING THAT DIFFERS FROM THE SJI SPECIFICATIONS LISTED IN SECTION 2207.1		X		

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC	MATERIAL STD REFERENCE	IBC REFERENCE
STRUCTURAL DECKING				
1. DECK PLACEMENT AND ATTACHMENT	X	X		

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC	MATERIAL STD REFERENCE	IBC REFERENCE
SOILS				
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY		X		
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL		X		
3. PERFORM CLASSIFICATIONS AND TESTING OF COMPACTED FILL MATERIAL		X		
4. VERIFY USE OF PROPER MATERIALS, DENSITIES, AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	X			
5. PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY		X		

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PROJECT #22009942.00

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SPECIAL INSPECTION SCHEDULES

EHRESMAN ARCHITECTS
ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project. No. 4321

S0.03

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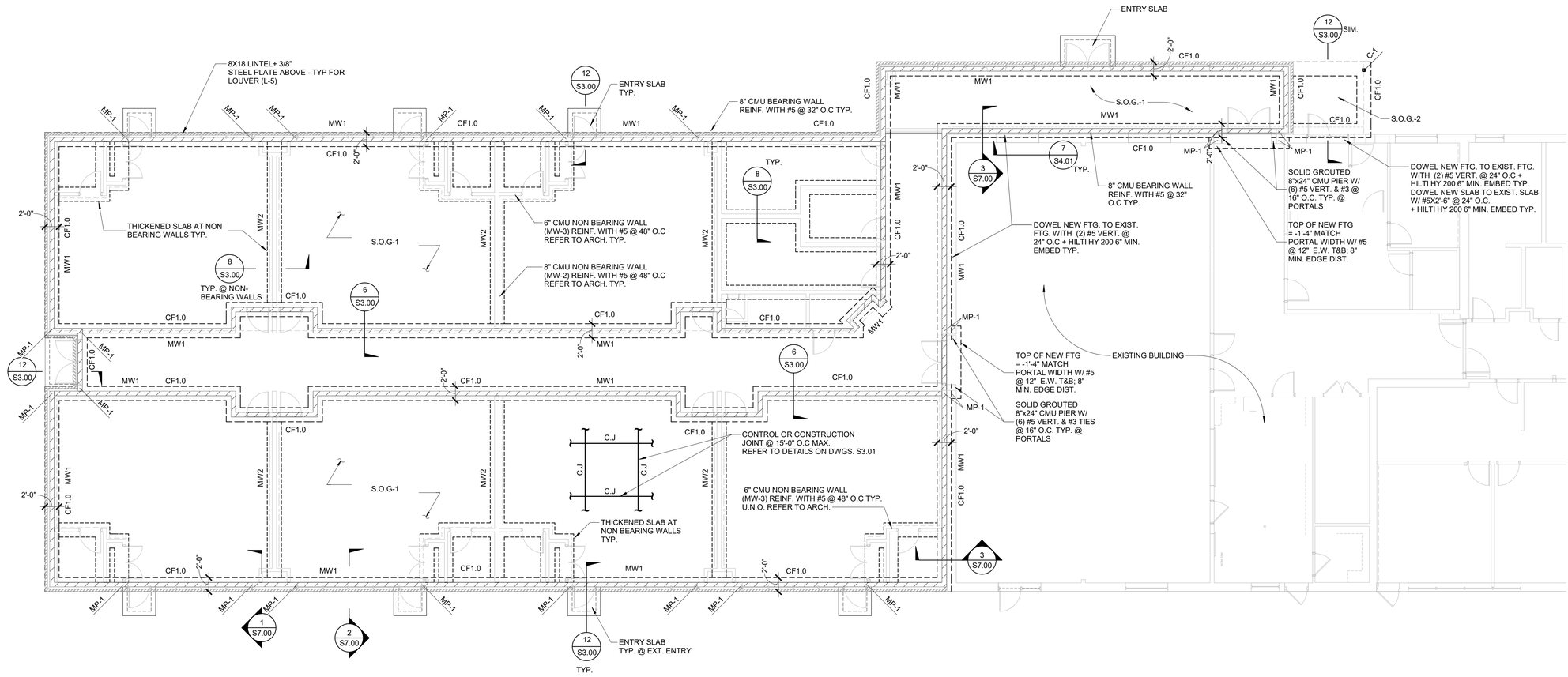

1 FOUNDATION PLAN

1/8" = 1'-0"

NORTH

FOUNDATION NOTES:

1. REFERENCE FINISHED FLOOR ELEVATION = 100'-0"
2. TOP OF FOOTING ELEVATION = -1'- 4" UNLESS NOTED THUS [XX'-XX"]
3. FOOTINGS ARE DESIGNED TO BEAR ON FIRM UNDISTURBED SOIL OR CONTROLLED COMPACTED FILL WITH A PRESUMPTIVE MINIMUM NET ALLOWABLE BEARING CAPACITY OF 3,000 PSF. REFER TO GEOTECH. REPORT FOR SITE PREPARATION, OVEREXCAVATION OF EXIST. FILL REQ., AND REPLACMENT WITH ENGINEERED FILL.
4. CONTRACTOR SHALL COORDINATE ALL MASONRY DOWEL SIZES AND SPACING TO BE CAST INTO CONCRETE WITH MASONRY REINFORCING SHOP DRAWINGS.
5. REFER TO CIVIL/SITE DRAWINGS FOR PROPOSED GRADE ELEVATIONS AROUND THE PERIMETER OF THE BUILDING.
6. REFER TO MEP DRAWINGS FOR ALL PIPE AND CONDUIT SIZES AND LOCATIONS PASSING THROUGH AND/OR UNDER FOUNDATIONS.
7. VERIFY DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
8. DESIGNATIONS:

   CF1.0: 2'-0" WIDE x 3'-6" (MIN.) DEPTH WALL FOOTING REINF. W/ (3) #5 CONT. TOP & BOTT.

   C-1: HSS4X4X1/4 W/ 12"X12"X3/4 BASE PLATE AND (4) 3/4" ANCHORS 8" EMBED.; 5" MIN. PROJECTION

   MW-1: 8" CMU WALL WITH #5 @ 32" O.C. PROVIDE BOND BEAMS WITH (2)#5 HORIZONTAL BARS AT TOP OF WALL, BEAM/JOIST BEARING ELEV., AND BOTT. OF WINDOW OPENING, PROVIDE (3) #5 VERTICAL BARS, ONE PER CELL, AT CORNERS AND (2) #5 VERTICAL BARS, ONE PER CELL, AT OPENINGS IN WALLS, ENDS OF WALLS AND BELOW BEAM/JOIST POCKETS.

   MW-2: 8" CMU WALL WITH #5 @ 48" O.C. PROVIDE BOND BEAMS WITH (2)#5 HORIZONTAL BARS AT TOP OF WALL AND BOTT. OF WINDOW OPENING, PROVIDE (3) #5 VERTICAL BARS, ONE PER CELL, AT CORNERS AND (2) #5 VERTICAL BARS, ONE PER CELL, AT OPENINGS IN WALLS, AND ENDS OF WALLS (TYP. FOR 8" NON-BEARING CMU WALLS; REFER TO ARCH.)

   MW-3: 6" CMU WALL WITH #5 @ 48" O.C. PROVIDE BOND BEAMS WITH (2)#5 HORIZONTAL BARS AT TOP OF WALL, PROVIDE (3) #5 VERTICAL BARS, ONE PER CELL, AT CORNERS AND (2) #5 VERTICAL BARS, ONE PER CELL, AT OPENINGS IN WALLS, AND ENDS OF WALLS (TYP. FOR 6" NON-BEARING CMU WALLS; REFER TO ARCH.)

   MP-1: 8"x16" MASONRY PIER REINF. W/ (4) #5 FULL HEIGHT VERTICAL & #3 TIES @ 16" O.C.

   S.O.G-1: 5" SLAB ON GRADE WITH 6x6-W2.9xW2.9 W.W.F. PLACED @ 2" FROM TOP OF SLAB ON VAPOR RETARDER ON MIN. 4" COMPACTED GRANULAR FILL ON PREPARED SUB-GRADE (TYP. UNO)

   S.O.G-2: 6" SLAB ON GRADE WITH #5 @ 12" O.C. EACH WAY TOP AND BOTTOM. PLACED @ 2" FROM TOP AND BOTTOM OF SLAB ON VAPOR RETARDER ON MIN. 4" COMPACTED GRANULAR FILL ON PREPARED SUB-GRADE (TYP. UNO)

9. REFERENCE DRAWINGS:

   S0.01 & S0.02 GENERAL STRUCTURAL NOTES
   S0.03 SPECIAL INSPECTION SCHEDULES
   S3.00 TYPICAL CONCRETE DETAILS
   S4.00 TYPICAL MASONRY DETAILS
   S4.01 TYPICAL MASONRY DETAILS
   S6.00 TYPICAL STEEL DETAILS
   S7.00 SECTIONS & DETAILS
   S7.01 SECTIONS & DETAILS

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FOUNDATION PLAN

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Cherry Hill Baptist Church
Administration Relocation and Addition

Project. No. 4321

S2.10

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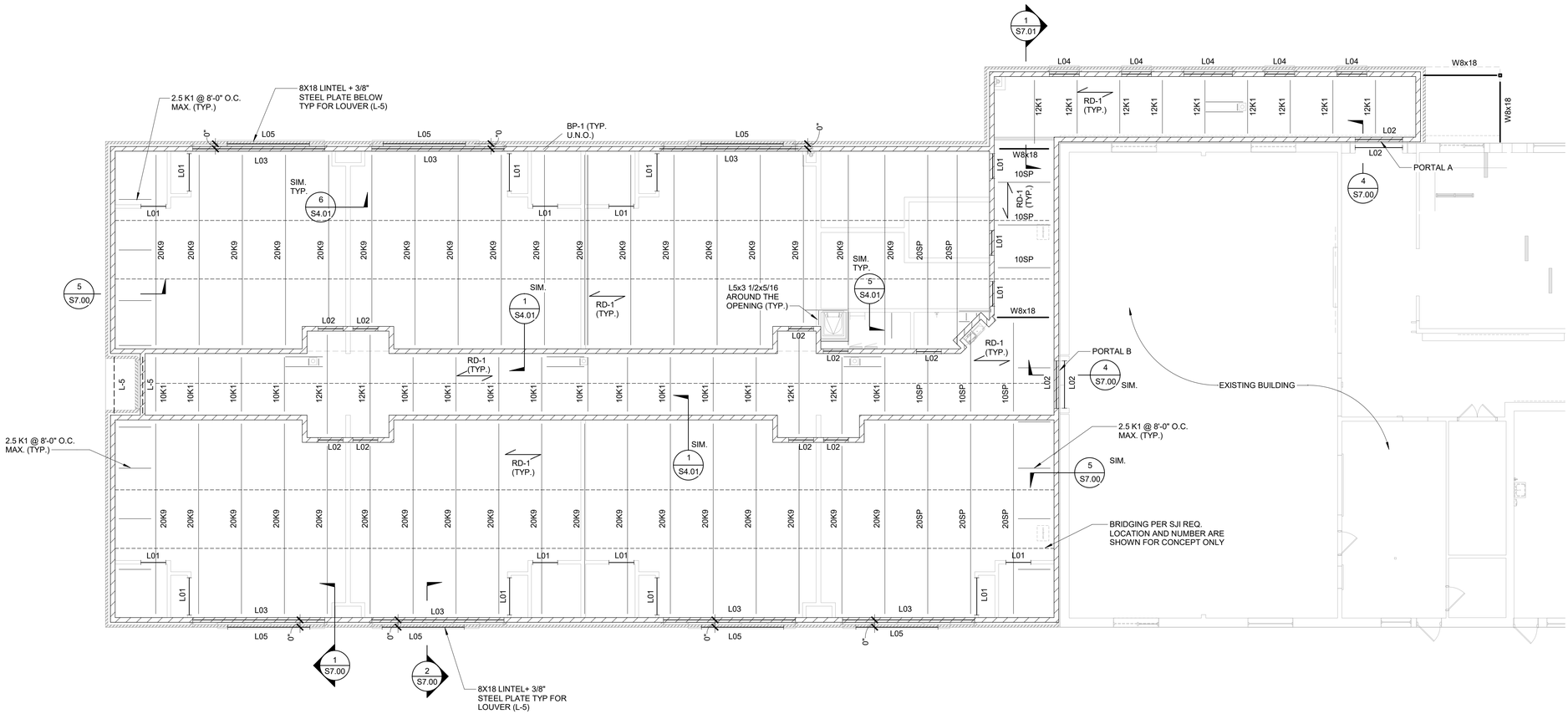


1 ROOF FRAMING PLAN

1/8" = 1'-0"

ROOF FRAMING NOTES:

1. TOP OF STEEL REFERENCE ELEVATION (DECK BEARING ELEVATION) = X'-X" UNLESS NOTED THUS [±X'-XX"] OR REFER TO PLAN.
2. DESIGNATIONS:

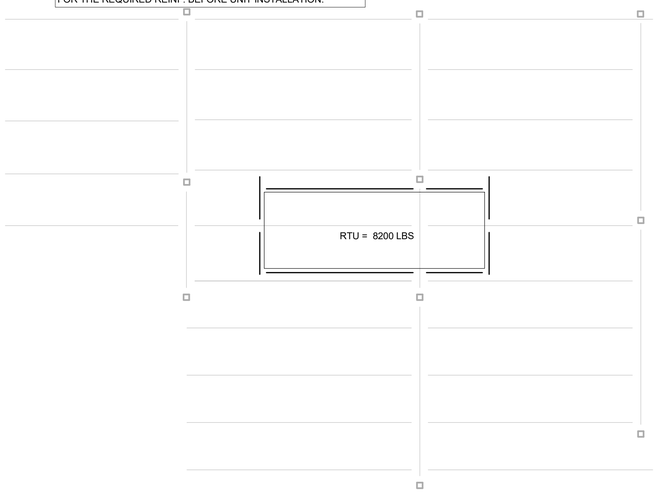
   RD-1: 1 1/2"-20 GAGE MIN. TYPE "B" WIDE RIB GALVANIZED STEEL ROOF DECK (MIN. 3 SPAN CONT.)
   REFER TO DRAWING S6.00 FOR ATTACHMENT DETAILS.
   MINIMUM DECK SECTION PROPERTIES FOR DECK BASED ON Fy = 50 KSI (VULCRAFT):
   DESIGN THICKNESS = 0.0358" (UNCOATED)
   I (POSITIVE) = 0.201 IN^4/FT.
   I (NEGATIVE) = 0.222 IN^4/FT.
   S (POSITIVE) = 0.234 IN^3/FT.
   S (NEGATIVE) = 0.247 IN^3/FT.

   L-x: LINTEL, REFER TO SCHEDULE

   BP-1: BEARING PLATE, 7x7x3/8" WITH (2) 1/2" DIA. x 6" LONG HEADED STUDS (TYP. FOR ALL JOISTS/BEAMS U.N.O.)
3. ALL JOIST SEATS FOR K-SERIES JOISTS SHALL BE 2 1/2" DEEP, UNLESS NOTED OTHERWISE.
4. ALL JOISTS SHALL BE DESIGNED FOR A NET UPLIFT OF 12 PSF (ASD), IN ADDITION TO OTHER LOAD CASES AND ANY OTHER NON-UNIFORM LOADS INDICATED ON THE DRAWINGS. ALL BRIDGING AND UPLIFT BRIDGING SHALL BE PER SJI REQUIREMENTS.
5. COORDINATE SIZES AND LOCATION OF ALL ROOF OPENINGS WITH ARCHITECTURAL AND MEP DRAWINGS.
6. FRAMING FOR ALL ROOF DRAINS AND OVERFLOW DRAINS SHALL BE L5x3 1/2x5/16 LLV TYPICAL, ALL SIDES OF SUPPORTED EDGE, UNLESS NOTED OTHERWISE.
7. VERIFY DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS.
8. REFERENCE DRAWINGS:

   S0.01 & S0.02 GENERAL STRUCTURAL NOTES
   S0.03 SPECIAL INSPECTION SCHEDULES
   S3.00 TYPICAL CONCRETE DETAILS
   S4.00 TYPICAL MASONRY DETAILS
   S4.01 TYPICAL MASONRY DETAILS
   S6.00 TYPICAL STEEL DETAILS
   S7.00 SECTIONS & DETAILS
   S7.01 SECTIONS & DETAILS

NOTE:
EXISTING JOISTS/FRAMINGS SIZE TO BE DETERMINED IN FIELD. JOISTS/BEAMS REINFORCEMENT ARE REQUIRED. CONTACT EOR FOR THE REQUIRED REINF. BEFORE UNIT INSTALLATION.



3 PARTIAL ROOF PLAN

3/16" = 1'-0"

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ROOF FRAMING PLAN

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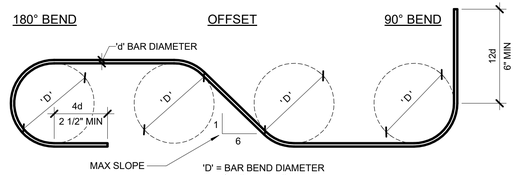
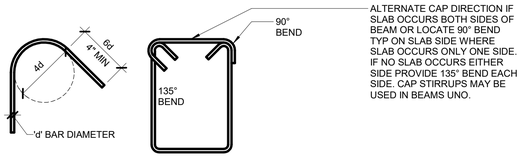
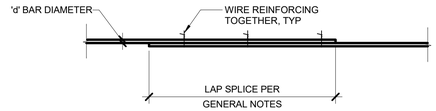




135° BEND CAP STIRRUP



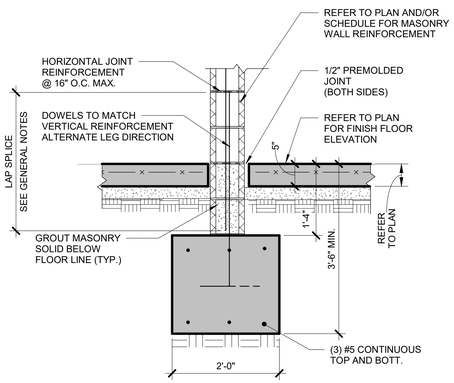
LAP SPLICE

NOTE:

1. ALL HOOKS, BENDS AND LAPS SHALL BE AS INDICATED UNLESS SPECIFICALLY NOTED ON DETAIL. FOR LIGHTWEIGHT CONCRETE, MULTIPLY VALUE FROM THE GENERAL NOTES TABLE BY 1.18.

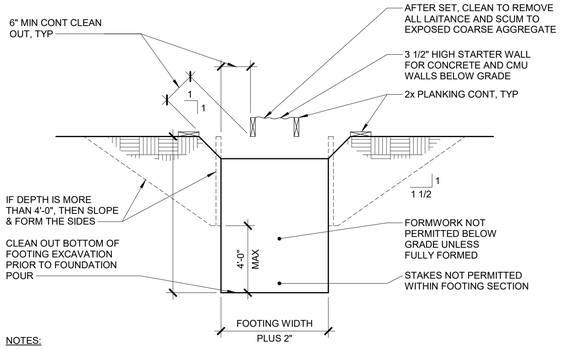
1 TYPICAL REINFORCING DETAILS

3/4" = 1'-0"



6 TYPICAL BEARING INTERIOR MW FOUNDATION

3/4" = 1'-0"



NOTES:

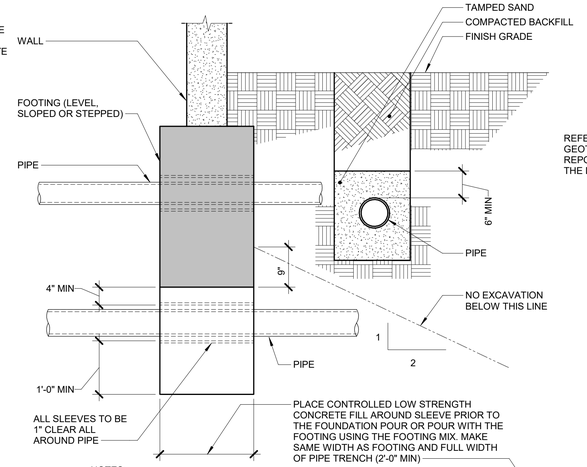
1. FOUNDATION CONCRETE MAY BE PLACED DIRECTLY INTO EXCAVATION (AS SHOWN) PROVIDED THE TRENCH WALLS ARE STABLE AS DETERMINED BY THE GEOTECHNICAL ENGINEER.
2. FOUNDATIONS SHALL BEAR ON ACCEPTABLE SOIL PER THE GEOTECHNICAL REPORT AS DETERMINED BY THE GEOTECHNICAL ENGINEER.
3. ALTERNATE PROCEDURE IN LIEU OF STARTER WALL:
   A. LEAVE AGGREGATE ROUGH AT WALL AREAS. DO NOT WOOD FLOAT.
   B. STAMP KEYWAY AT WALL AREAS SIM TO .
   C. DRY SANDBLAST TO EXPOSE AGGREGATE AND SANDBLAST.
   D. CLEAN WITH AIR COMPRESSOR AND BLOWPIPE.
   E. RE-CLEAN PRIOR TO CLOSING WALL FORMS.
   F. DAMPEN WALL BEFORE POURING WITH A LIMITED AMOUNT OF WATER AND KEEPING DIRT OFF OF THE BOND SURFACE.

2 FORMING OF FOUNDATION

3/4" = 1'-0"

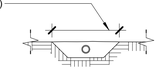
7 FOOTING CORNER BARS

3/4" = 1'-0"



NOTES:

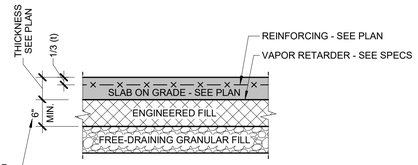
1. PIPE DIAMETER SHALL NOT EXCEED 8".
2. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ALL LOCATIONS, ELEVATIONS, ETC. OF SITE UTILITIES.
3. DETAIL REQUIRED AT ALL UTILITIES HAVING A PLAN WIDTH UP TO 1'-0". FOR WIDTHS GREATER THAN 1'-0", SEE PLAN FOR REQUIRED DETAIL.
4. PIPE IS NOT ALLOWED UNDER SPREAD FOOTINGS.



SECTION A

3 TYPICAL PIPE TRENCH DETAIL

3/4" = 1'-0"

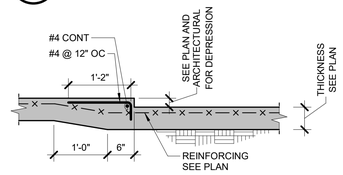


NOTES:

1. COMPACT ALL FILL MATERIAL TO 95% OF THE MAXIMUM DRY DENSITY PER ASTM D1557.
2. VAPOR RETARDER TO MEET ASTM E1745, CLASS A AND BE NOT LESS THAN 15 MILS THICK.
3. REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL REQUIREMENTS OF REMOVING EXISTING FILL AND REPLACING WITH ENGINEERED FILL, DENSE-GRADED CRUSHED CONCRETE, OR CRUSHED CONCRETE TO IMPROVE SLAB PERFORMANCE.
4. EXCAVATION ON SITE TO BE MONITORED BY GEOTECHNICAL ENGINEER TO DETERMINE THE ADEQUACY OF OVER-EXCAVATION DEPTH.

4 TYPICAL SLAB SECTION

3/4" = 1'-0"



NOTE:

1. CONTRACTOR OPTION TO PROVIDE CONSTRUCTION JOINT AT STEP.

5 TYPICAL SLAB DEPRESSION

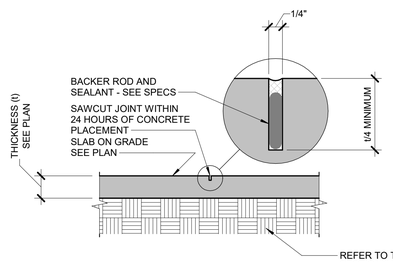
3/4" = 1'-0"

8 TYPICAL THICKENED SLAB DETAIL AT INTERIOR WALL

3/4" = 1'-0"

9 TYPICAL STEPPED GRADE BEAM DETAIL

1/2" = 1'-0"

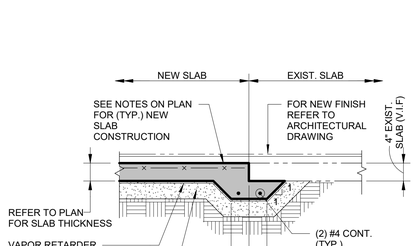


NOTES:

1. SEE CAST-IN-PLACE CONCRETE GENERAL NOTES CONCERNING LOCATION OF JOINTS.
2. CONTRACTOR MUST OBTAIN WRITTEN APPROVAL PRIOR TO POURING CONCRETE FOR ALL CONSTRUCTION AND/OR CONTROL JOINTS.
3. SLAB-ON-GRADE IS A STRUCTURAL DIAPHRAGM AND PART OF LATERAL FORCE RESISTING SYSTEM.

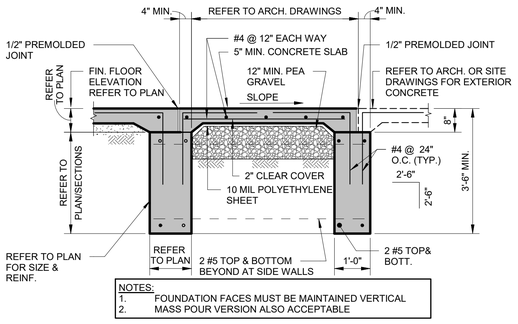
10 TYPICAL CONTROL JOINT

3/4" = 1'-0"



TYPICAL TRANSITION @ NEW/EXIST. SLAB

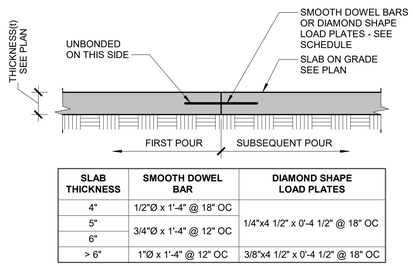
3/4" = 1'-0"



NOTES:
1. FOUNDATION FACES MUST BE MAINTAINED VERTICAL
2. MASS POUR VERSION ALSO ACCEPTABLE

12 TYPICAL ENTRY SLAB

1/2" = 1'-0"



SLAB THICKNESS	SMOOTH DOWEL BAR	DIAMOND SHAPE LOAD PLATES
4"	1/2"Ø x 1'-4" @ 18" OC	1/4"x4 1/2" x 0'-4 1/2" @ 18" OC
5"	3/4"Ø x 1'-4" @ 12" OC	
6"	1"Ø x 1'-4" @ 12" OC	3/8"x4 1/2" x 0'-4 1/2" @ 18" OC

13 TYPICAL CONSTRUCTION JOINT

3/4" = 1'-0"

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REF. SCALE IN INCHES PROJECT #22009942.00

Bidding and Permits	31 July 2023
Owner Review	17 July 2023
Design Development	08 May 2023

TYPICAL CONCRETE SECTIONS

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project. No. 4321

S3.00

803 W. Big Beaver Road, Suite 350, Troy, MI 48084 | 248.244.9710

CMU REINFORCING BAR DEVELOPMENT LENGTH (L_d) SCHEDULE

f'm=2000 PSI

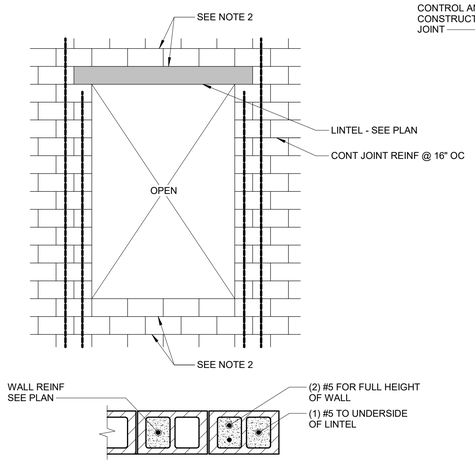
CMU THICKNESS	REINFORCING LOCATION	BAR SIZE	L_d	REMARKS
6"	SINGLE LAYER, REINF CENTERED IN WALL	#3	12"	
		#4	18"	
		#5	28"	NOTE 5
8"	SINGLE LAYER, REINF CENTERED IN WALL	#4	13"	
		#5	20"	
		#6	38"	
		#7	52"	NOTE 5
10" OR 12"	SINGLE LAYER, REINF CENTERED IN WALL	#4	12"	
		#5	16"	
		#6	29"	
		#7	40"	
10" OR 12"	DOUBLE LAYER, REINF W/ 2 1/2" MIN CLR COVER	#4	18"	
		#5	28"	
		#6	52"	
		#7	70"	

NOTES:

1. CONTRACTOR TO PROVIDE LAP SPLICE LENGTHS TO MATCH Ld VALUES PROVIDED IN SCHEDULE OR USE MECHANICAL SPLICES ADEQUATE FOR 125% OF SPECIFIED YIELD STRENGTH OF THE BAR.
2. WHERE TWO DIFFERENT SIZES OF REINFORCING BARS ARE LAPPED, PROVIDE Ld FOR SMALLER REINFORCING BAR.
3. DOWEL EMBEDMENT INTO CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF THE CAST-IN-PLACE CONCRETE GENERAL NOTES.
4. WHEN EPOXY-COATED REINFORCING BARS ARE USED, INCREASE TABULATED VALUES BY A FACTOR OF 1.5.
5. MORTAR FINS TO BE REMOVED.

1 REINFORCING BAR DEVELOPMENT LENGTH (Ld) SCHEDULE_f'm2000

3/4" = 1'-0"



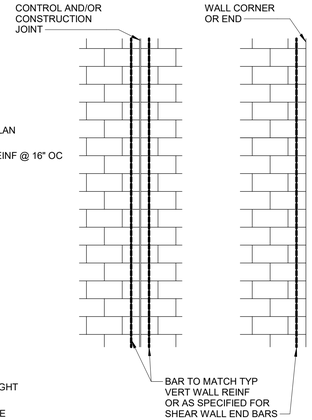
SECTION A

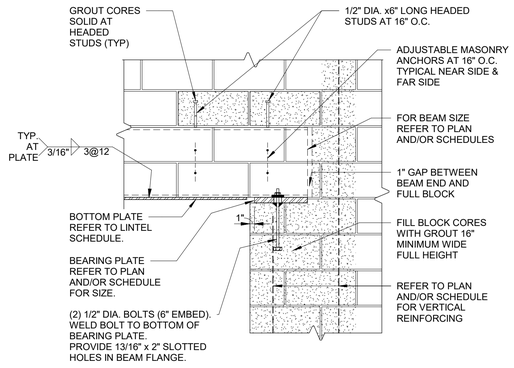
NOTES:

1. SEE ARCH ELEVATIONS FOR CONTROL JOINT LOCATIONS.
2. TWO COURSES OF JOINT REINF ARE REQUIRED ABOVE THE LINTEL AND BELOW THE SILL AND SHALL EXTEND A MIN OF 24 INCHES PAST THE OPENING.

2 TYPICAL CMU WALL OPENING DETAIL

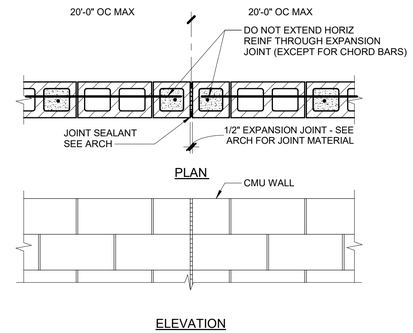
3/4" = 1'-0"





3 BEARING DETAIL

3/4" = 1'-0"

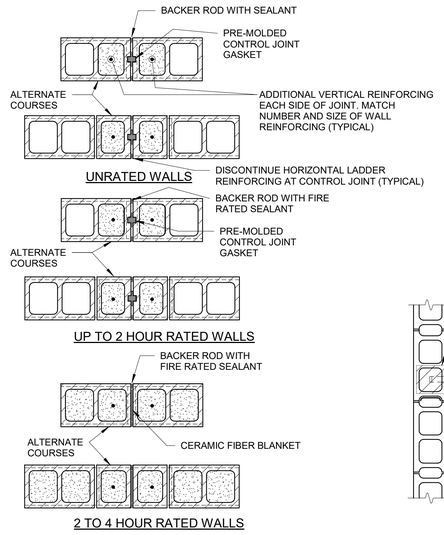


PLAN

ELEVATION

4 CMU EXPANSION JOINT DETAIL

3/4" = 1'-0"



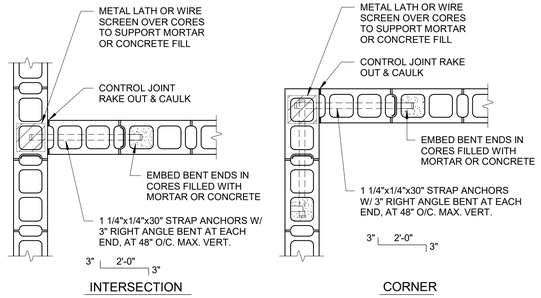
UNRATED WALLS

UP TO 2 HOUR RATED WALLS

2 TO 4 HOUR RATED WALLS

5 TYP - MASONRY WALL CONTROL JOINT DETAIL

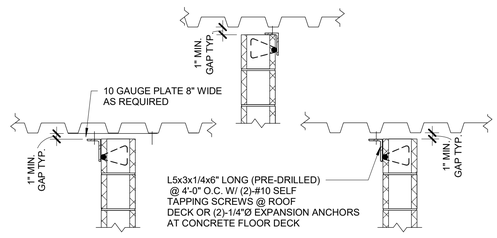
3/4" = 1'-0"



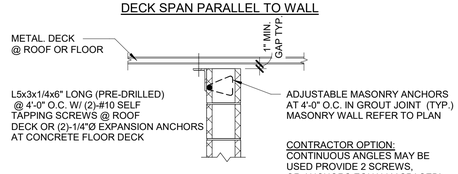
INTERSECTION CORNER

6 TYPICAL PLANS @ MASONRY WALL INTERSECTION & CORNER

3/4" = 1'-0"



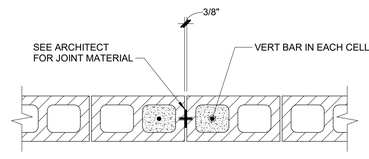
DECK SPAN PARALLEL TO WALL



DECK SPAN PERPENDICULAR TO WALL

7 MASONRY WALL ANCHORAGE DETAILS

3/4" = 1'-0"



NOTES:

1. HORIZONTAL REINFORCING AND BOND BEAMS SHALL BE DISCONTINUOUS AT WALL JOINT. EXCEPT FOR CHORD REINFORCING.
2. DO NOT LOCATE JOINT OVER OPENING OR WITHIN JAMB.
3. REFERENCE STRUCTURAL NOTES FOR ADDITIONAL INFORMATION.
4. COORDINATE LOCATION OF JOINTS WITH ARCHITECTURAL DRAWINGS.

8 WALL CONSTRUCTION JOINT

1" = 1'-0"

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PROJECT #2200994Z.00

Bidding and Permits	31 July 2023
Owner Review	17 July 2023
Design Development	08 May 2023

TYPICAL MASONRY SECTIONS

EHRESMAN ARCHITECTS
ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project. No. 4321

S4.00

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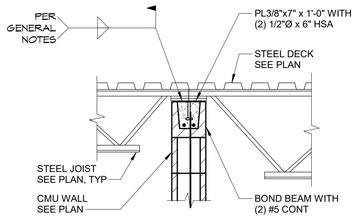
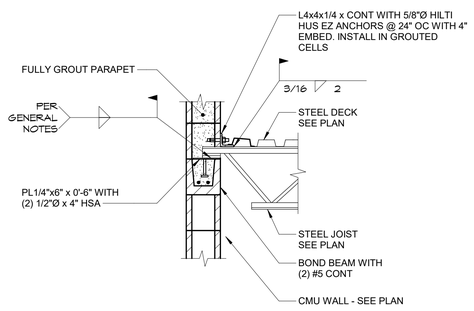


NOTE:

1. STAGGER JOISTS AS REQUIRED TO PROVIDE MIN BEARING PER GENERAL NOTES.

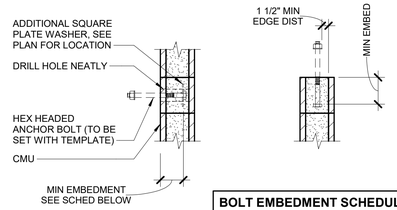
1 TYPICAL ROOF JOIST BEARING ON INTERIOR CMU WALL

3/4" = 1'-0"



2 TYPICAL ROOF JOIST BEARING ON EXTERIOR CMU WALL

3/4" = 1'-0"



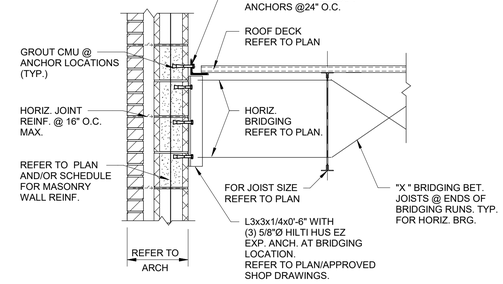
BOLT EMBEDMENT SCHEDULE			
BOLT SIZE	BOLT EMBEDMENT		
	HORIZ		VERT
	12" CMU	8" CMU	
1/2"	9"	5 1/4"	8"
5/8"	9"	5 1/4"	9"
3/4"	9"	-	10"
7/8"	9"	-	11"
1"	9"	-	12"

NOTE:

1. BOLT SPACING SHALL BE 8 BOLT DIAMETERS.

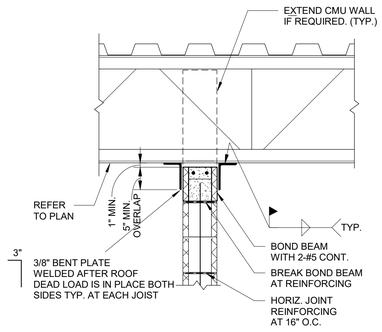
3 ANCHOR BOLT CAST INTO CMU DETAIL

3/4" = 1'-0"



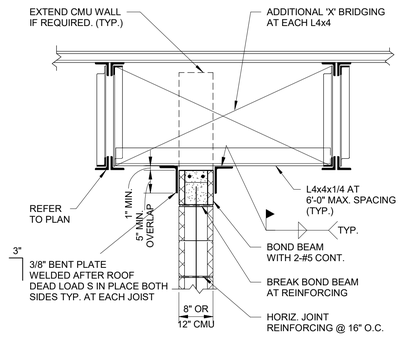
4 JOIST BRIDGING CONN. TO MASONRY WALL

3/4" = 1'-0"



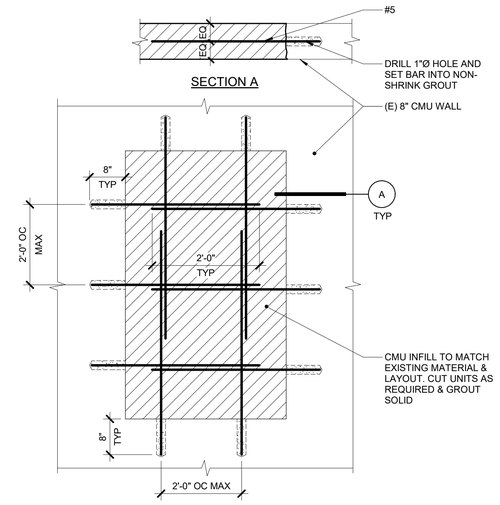
5 MASONRY WALL BRACE PERPENDICULAR TO JOIST

3/4" = 1'-0"



6 MASONRY WALL BRACE PARRALEL JOIST

3/4" = 1'-0"



7 CMU INFILL ELEVATION

3/4" = 1'-0"

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Bidding and Permits	31 July 2023
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TYPICAL MASONRY SECTIONS

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Crestwood School District
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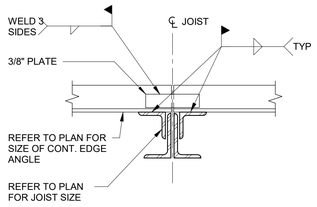
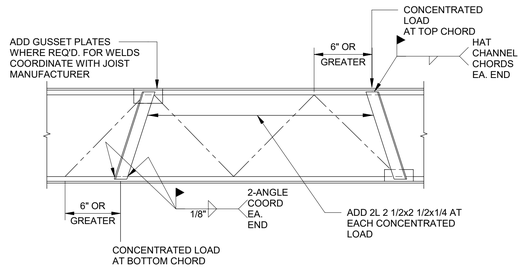


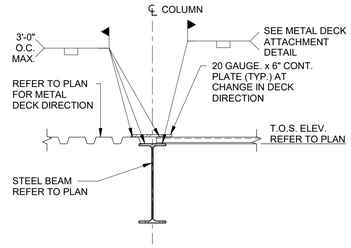
1 TYP. CONT. ANGLE SPLICE AT ROOF PERIMETER

1 1/2" = 1'-0"



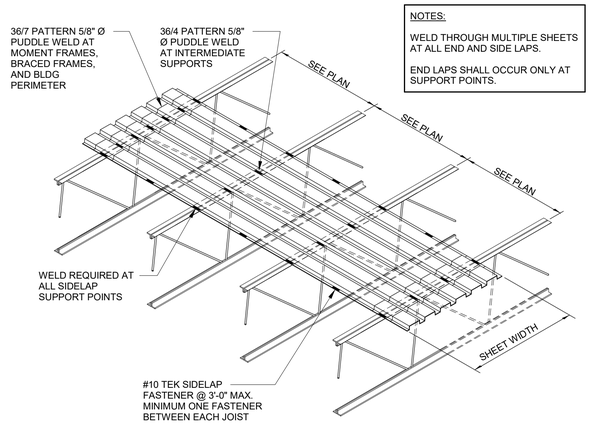
2 TYP. JOIST REINF. AT CONCENTRATED LOAD

3/4" = 1'-0"



3 TYP. CHANGE IN DECK DIRECTION AT ROOF

3/4" = 1'-0"



NOTES:

WELD THROUGH MULTIPLE SHEETS AT ALL END AND SIDE LAPS.

END LAPS SHALL OCCUR ONLY AT SUPPORT POINTS.

4 TYPICAL ROOF DECK FASTENER PATTERNS

1/2" = 1'-0"

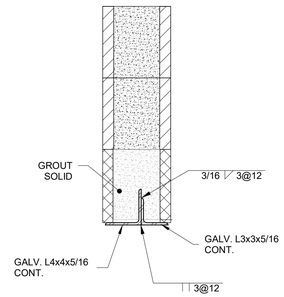
STEEL LINTEL SCHEDULE				
MARK	OPENING	SIZE	BEARING (MIN.)	REMARKS (L" x W" x T")
L01	TYPICAL INTERIOR OPENING (UP TO 5'-0" U.O.N.)	SEE DETAIL 6/S6.00	8"	
L02	TYPICAL INTERIOR OPENING	SEE DETAIL 7/S6.00	8"	7"x7"X3/8" BEARING PL. W. (2) 1/2" DIA. x 6" HD. STUDS
L03	EXTERIOR OPENING	SEE DETAIL 8/S6.00	8"	7"x7"X1/2" BEARING PL. W. (2) 1/2" DIA. x 6" HD. STUDS
L04	EXTERIOR OPENING UP TO 7'-0"	SEE DETAIL 9/S6.00	8"	7"x7"X3/8" BEARING PL. W. (2) 1/2" DIA. x 6" HD. STUDS
L05	EXTERIOR OPENING UP TO 7'-0"	SEE DETAIL 10/S6.00	8"	7"x7"X3/8" BEARING PL. W. (2) 1/2" DIA. x 6" HD. STUDS

NOTES

1. PLACE LINTEL BEAMS CENTERED IN WALLS (U.O.N.)
2. ALL EXTERIOR LINTELS SHALL BE GALVANIZED.
3. REFER TO ARCH. DRAWINGS FOR MISC. INTERIOR LINTELS NOT SHOWN ON STRUCT. PLAN

5 LINTEL SCHEDULE

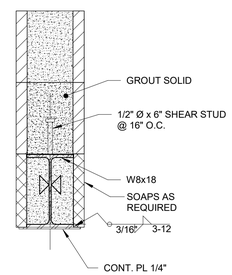
1 : 1



NOTE. USE GALV. L3x2 1/2x3/8 CONT. + GALV. 3X3X3/8 CONT. FOR 6" NON-BEARING CMU WALL

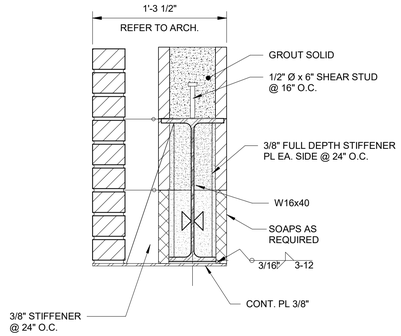
6 INTERIOR LINTEL L-1 @ NON-BEARING WALLS

1 1/2" = 1'-0"



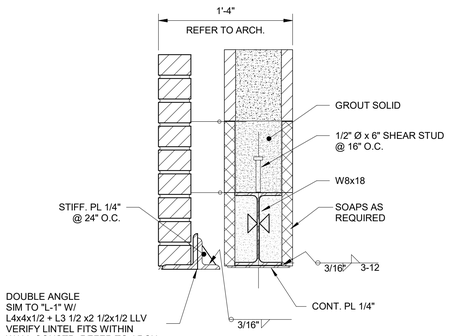
7 INTERIOR LINTEL L-2

1 1/2" = 1'-0"



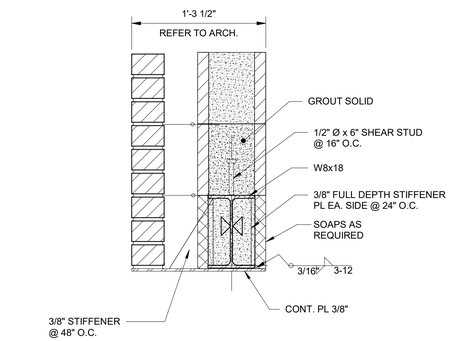
8 EXTERIOR BRICK LINTEL L-3

1 1/2" = 1'-0"



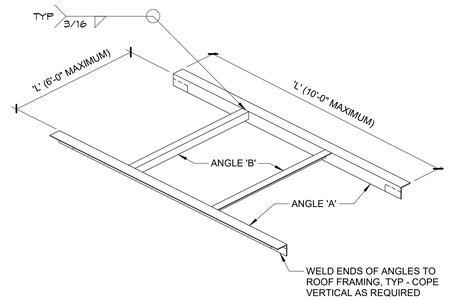
9 EXTERIOR BRICK LINTEL L-4

1 1/2" = 1'-0"



10 EXTERIOR BRICK LINTEL L-5

1 1/2" = 1'-0"



'L'	ANGLE 'A'	ANGLE 'B'
UP TO 1'-0"	NONE	NONE
1'-1" TO 4'-6"	L4x4x1/4	L4x4x1/4
4'-7" TO 6'-0"	L4x4x5/16	L4x4x1/4
6'-1" TO 8'-0"	L4x4x3/8	-
8'-1" TO 10'-0"	L6x4x3/8 (LLV)	-

NOTES:

1. SEE ARCHI AND MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF ALL OPENINGS.
2. ROOF OPENING FRAMING NOT REQUIRED AT SIDE DISCHARGE ROOF DRAINS. COORDINATE WITH MECHANICAL CONTRACTOR.

11 ROOF OPENING DETAIL

3/4" = 1'-0"

IMEG
33533 W. TWELVE MILE
SUITE 200
FARMINGTON HILLS, MI 48331
P: 248.344.2800 F: 248.344.1650
www.imegcorp.com

0 1 2 3

REF. SCALE IN INCHES

PROJECT #22009942.00

Bidding and Permits	31 July 2023
Owner Review	17 July 2023
Design Development	08 May 2023

TYPICAL STEEL DETAILS

EHRESMAN ARCHITECTS
ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project. No. 4321

S6.00

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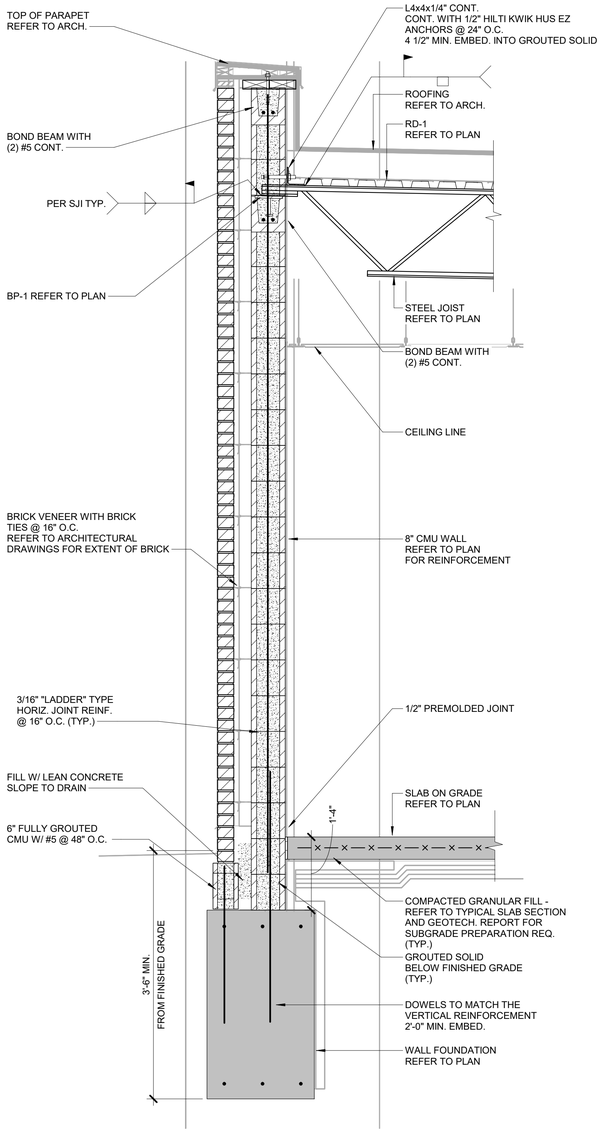
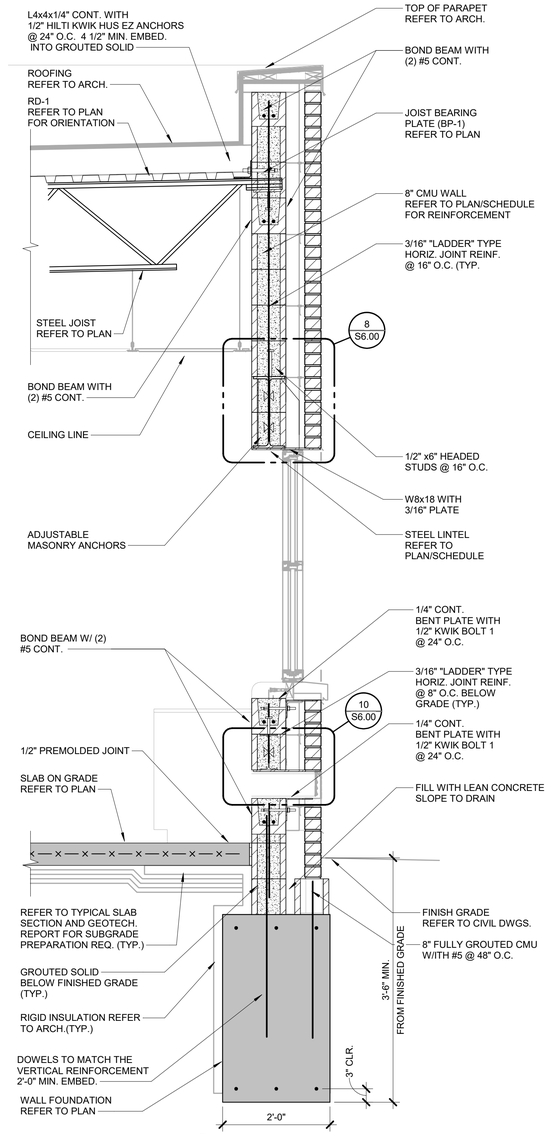
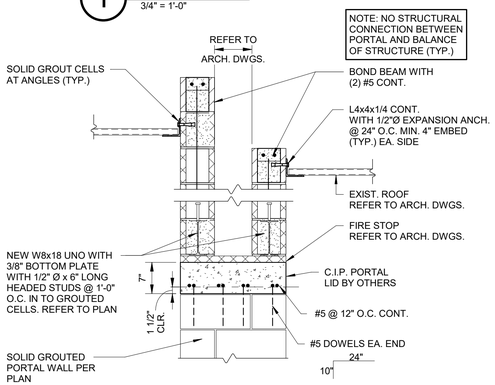


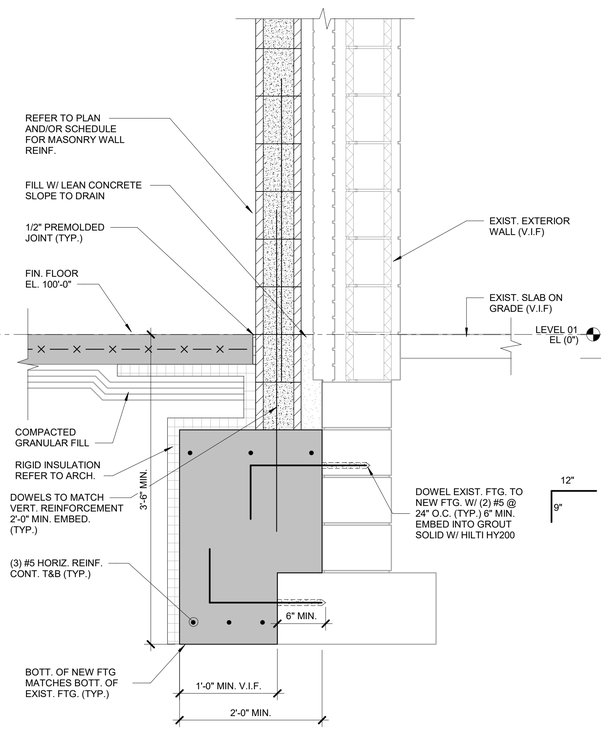
1 SECTION
3/4" = 1'-0"



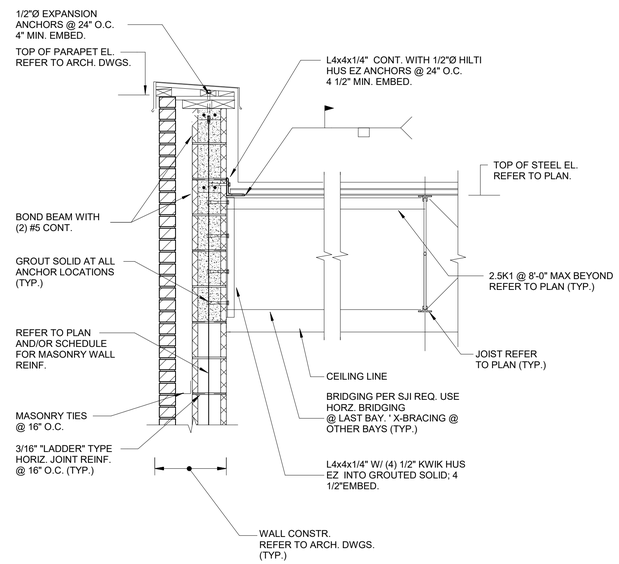
2 SECTION
3/4" = 1'-0"



4 PORTAL SECTION
3/4" = 1'-0"



3 SECTION
1" = 1'-0"



5 SECTION
3/4" = 1'-0"

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REF. SCALE IN INCHES
PROJECT #2200942.00

Bidding and Permits	31 July 2023
Owner Review	17 July 2023
Design Development	08 May 2023

SECTIONS AND DETAILS

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Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project. No. 4321

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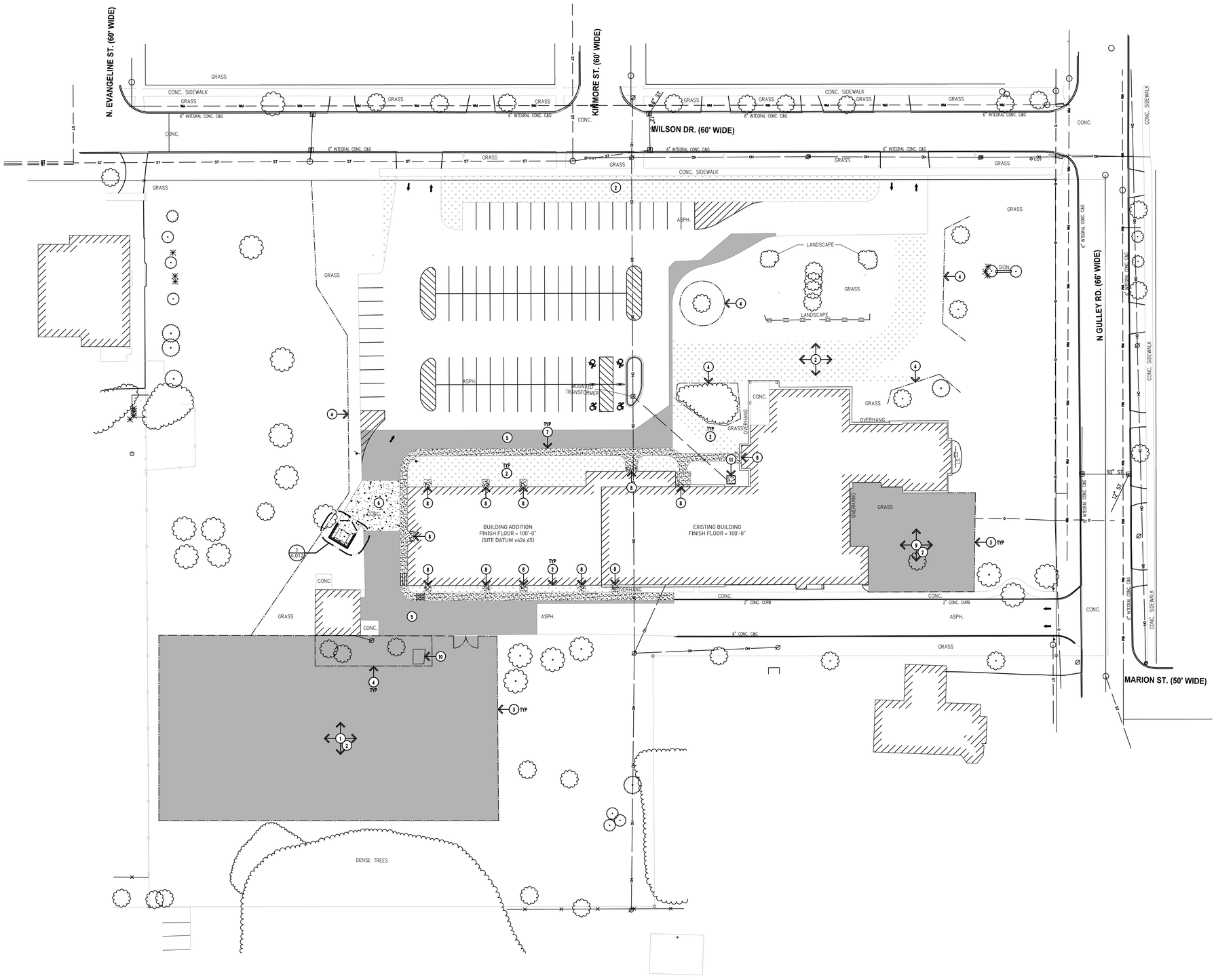

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. UNLESS NOTED OTHERWISE, ALL LANDSCAPING AND TREES ARE EXISTING TO REMAIN.

G3. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO COMMENCING THE WORK. REPORT ANY DISCREPANCIES TO THE ARCHITECT FOR DIRECTION.

G4. CONTRACTOR TO REPLACE ALL ITEMS BACK TO ORIGINAL CONDITION IF DAMAGED DURING CONSTRUCTION OPERATIONS, YET NOT INDICATED TO BE REPLACED (I.E. CONCRETE SIDEWALKS, LAWN AREA, ASPHALT PAVING, ETC.)

G5. DISPOSE OF ALL ITEMS REMOVED OFF SITE PER LOCAL BUILDING AND SAFETY ORDINANCES.

G6. ALL AREAS DISTURBED OR DAMAGED BY CONSTRUCTION OPERATIONS SHALL BE PATCHED, REPAIRED AND FINISHED BACK TO EXISTING CONDITION.

G7. REFER TO STRUCTURAL DRAWINGS AND ARCHITECTURAL BUILDING SECTIONS FOR EXCAVATION.

G8. REFER TO GEOTECHNICAL INVESTIGATION REPORT FOR FURTHER INFORMATION.

G9. CONFORM TO ALL MICHIGAN BARRIER FREE REQUIREMENTS.

G10. CONFORM TO ALL CITY OF DEARBORN HEIGHTS AND / OR WAYNE COUNTY REQUIREMENTS FOR SOIL EROSION AND SEDIMENTATION CONTROL MEASURES.

G11. CONTRACTOR TO MATCH GRADES EXACTLY, ESPECIALLY AT EXISTING CONCRETE SLABS, ETC.

G12. DRAWING IS DIAGRAMMATIC AND FOR REFERENCE ONLY. REFER TO CIVIL LANDSCAPING DRAWINGS FOR ADDITIONAL INFORMATION.

G13. ALL REPLACED OVERHEAD WIRES TO BE COORDINATED BY CONTRACTOR WITH THE LOCAL UTILITY COMPANY PRIOR TO THE START OF CONSTRUCTION.

G14. GRADE NEW LAWN AREA AWAY FROM BUILDING MINIMUM 1/4" PER FOOT.

G15. GRADE TO BE 6" BELOW FINISH FLOOR AT ALL AREAS EXCEPT AT ENTRANCES.

CAUTION!

"JUNE SPENCER MEMORIAL GARDEN" SIGN TO BE REMOVED, PROTECTED, AND STORED FOR REINSTALLATION AT THE COMPLETION OF THE PROJECT.

DRAWING NOTES:

1. CONTRACTOR STAGING AREA. SIZE TO BE DETERMINED BY CONTRACTOR AND OWNER DURING A PRE-CONSTRUCTION MEETING.
2. PROVIDE 4" TOPSOIL AND SEED TO RESTORE LAWN TO PRE-CONSTRUCTION CONDITION, AREA AT LOCATION OF CONSTRUCTION OPERATIONS (WHETHER INDICATED OR OTHER AREAS DISTURBED BY CONSTRUCTION).
3. CONSTRUCTION FENCE FOR STUDENT PROTECTION.
4. CONSTRUCTION FENCE FOR LANDSCAPING AND SITE PROTECTION. REFER TO SITE LANDSCAPING PLAN FOR MORE INFORMATION.
5. ASPHALT PAVING - REFER TO CIVIL FOR MORE INFORMATION.
6. CONCRETE DRIVE - REFER TO CIVIL FOR MORE INFORMATION.
7. CONCRETE WALK - REFER TO CIVIL AND LANDSCAPE FOR MORE INFORMATION.
8. CONCRETE FROST SLAB - REFER TO SECTIONS FOR MORE INFORMATION.
9. TEMPORARY PLAY AREA FOR STUDENTS.
10. PLAY STRUCTURE EXISTING TO REMAIN - CONTRACTOR TO PROVIDE SITE PROTECTION.
11. CONCRETE PAD FOR TRANSFORMER. SIZE AS DETERMINED BY TRANSFORMER MANUFACTURE. REFER TO ELECTRICAL, CIVIL, AND LANDSCAPING FOR MORE INFORMATION.

1 A0.10 Architectural Removals Site Plan
Scale: 1/32"=1'-0"

N

STATE OF MICHIGAN
ELIZABETH SUE BYE
ARCHITECT No. 1301054283
LICENSED ARCHITECT

Bidding and Permits: 31 July 2023

Architectural Site Plan

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

A0.11

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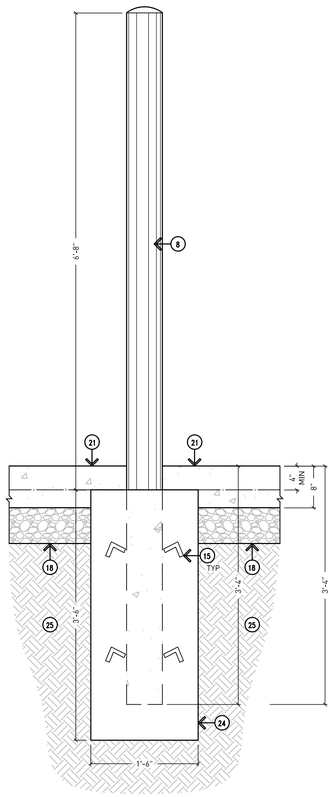
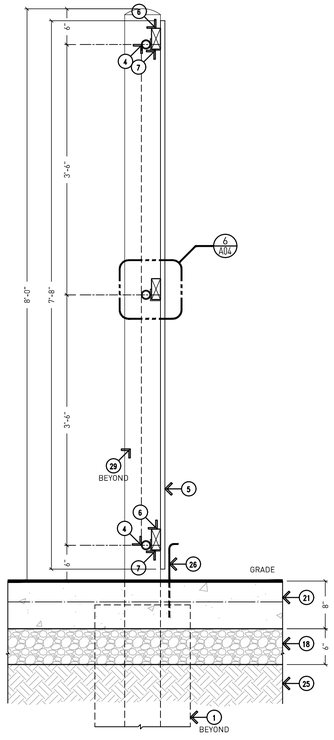
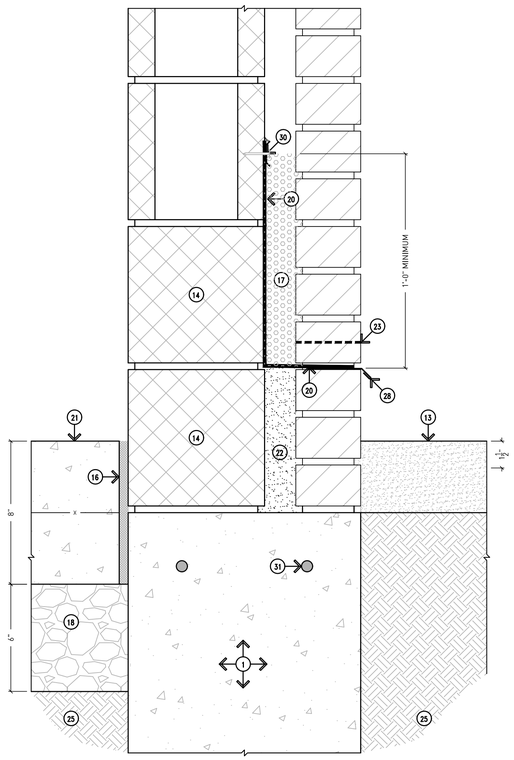


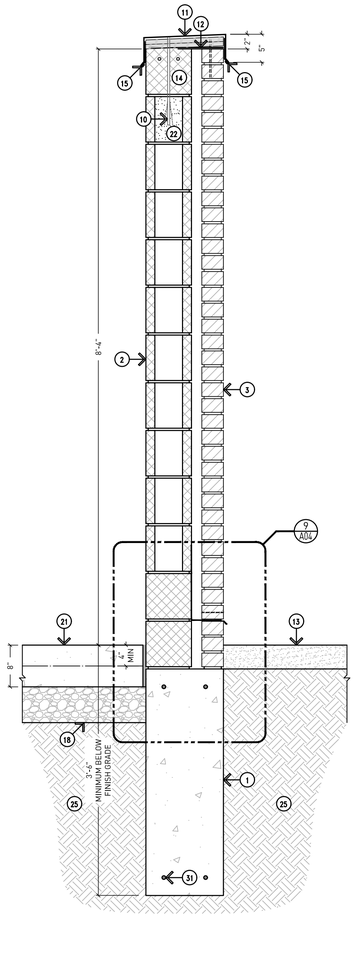
11 A0.12 Pipe Bollard Detail
1" = 1'-0"



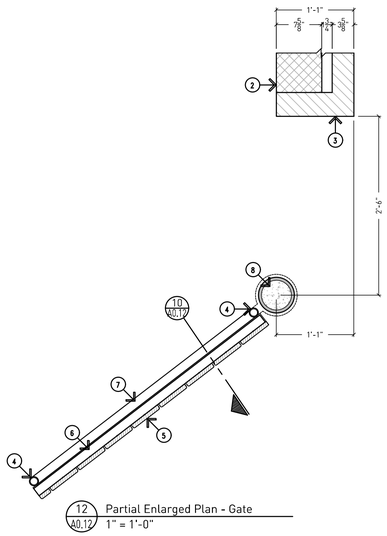
10 A0.12 Section @ Gate
1" = 1'-0"



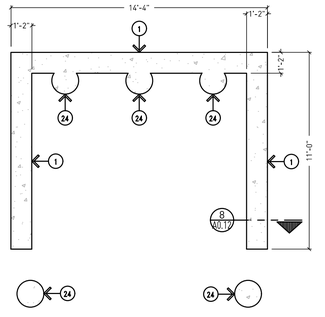
9 A0.12 Enlarged Wall Base Detail
3" = 1'-0"



8 A0.12 Wall Section @ Dumpster
1" = 1'-0"



12 A0.12 Partial Enlarged Plan - Gate
1" = 1'-0"



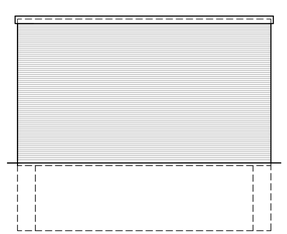
1a A0.12 Dumpster Enclosure Foundation Plan
1/4" = 1'-0"

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

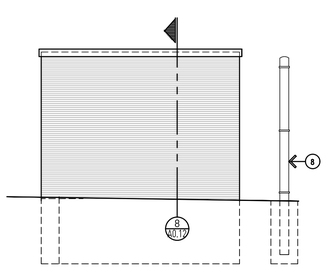
DRAWING NOTES:

1. CONCRETE FOUNDATION - MINIMUM 3'-6" BELOW FINISH GRADE WITH (2) #5 TOP AND BOTTOM (MINIMUM 3" COVER).
2. 8"x8"x16" CMU. SEAL & PAINT EXPOSED SURFACE . PROVIDE HORIZONTAL LADDER REINFORCING @ 16" O.C.
3. 4" BRICK VENEER WITH GALV. METAL TIES TO CMU BACK-UP WALL. MATCH EXISTING BUILDING BRICK. REFER TO SHEET A30 FOR FURTHER INFORMATION. PROVIDE WEEPHOLES AT 2'-8" O.C.
4. 1 1/2" O.D. GALVANIZED STEEL FRAME.
5. 3/4"x6" THICK DOG-EARRED CEDAR PLANK (ROUGH SAWN).
6. 2X4 NOM. TREATED WOOD.
7. 1 3/4" x 1 1/2" x 3/16 GALVANIZED STEEL ANGLE WELDED TO GATE FRAME.
8. 6" ROUND STEEL BOLLARD POST, FILLED SOLID WITH CONCRETE.
9. ASPHALT PAVING. REFER TO CIVIL FOR FURTHER INFORMATION.
10. #4 ANCHOR ROD - 16" MIN. INTO CMU SOLID GROUT CORES.
11. PREFINISHED METAL CAP WITH SLOPED TOP OVER TWO LAYERS 3/4" PRESERVATIVE TREATED PLYWOOD BLOCKING.
12. EPDM WATERPROOF FLASHING ACROSS ENTIRE TOP.
13. PROVIDE 4" TOPSOIL AND SEED.
14. 8"x8"x16" SOLID CMU BLOCK COURSE, SEAL & PAINT EXPOSED SURFACE.
15. METAL ANCHORS.
16. 1/2" PREMOLDED EXPANSION JOINT.
17. WASHED PEA STONE (FOR DRAINAGE).
18. 6" MIN. COMPACTED AGGREGATE BASE.
19. MASONRY WATERPROOFING.
20. FLEXIBLE FLASHING MEMBRANE.
21. 8" REINFORCED CONCRETE DUMPSTER PAD OVER 6" COMPACTED AGGREGATE BASE.
22. GROUT AREA SOLID BELOW FLASHING.
23. 3/8"x1-1/2" PLASTIC WEEP HOLES @ 2'-8" O.C.
24. 18" DIAMETER CONCRETE POST FOUNDATION, 42" DEEP MINIMUM.
25. EXISTING SUBGRADE - COMPACTED.
26. VERTICAL DROP ROD TO SECURE GATE CLOSED (2 REQUIRED).
27. GALVANIZED GATE STOP PIPE FOR VERTICAL DROP BARS (MINIMUM 18" LONG). COORDINATE SIZE REQUIRED WITH DROP ROD.
28. STAINLESS STEEL METAL DRIP EDGE FLASHING WITH HEMMED EDGE (28 GA.).
29. 6" ROUND STEEL GATE POST.
30. TERMINATION BAR.
31. #4 CONTINUOUS REINFORCING BARS.



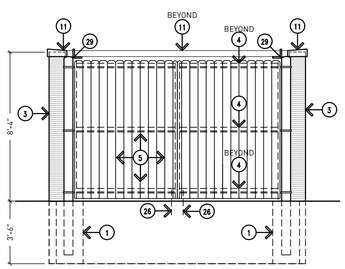
5 A0.12 Rear Elevation
1/4" = 1'-0"

REFER TO 3/A04 FOR TYPICAL NOTES

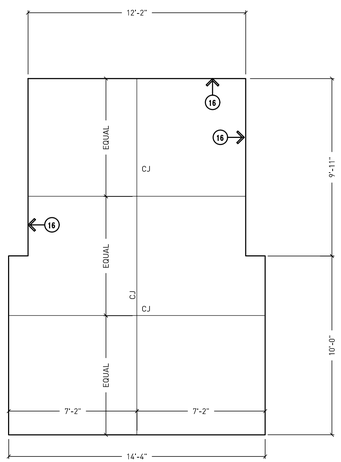


4 A0.12 Side Elevation
1/4" = 1'-0"

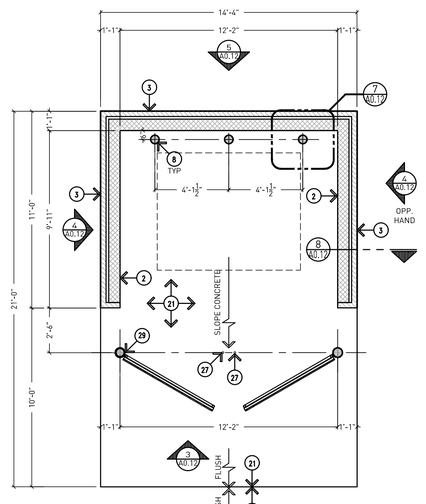
REFER TO 3/A04 FOR TYPICAL NOTES



3 A0.12 Front Elevation
1/4" = 1'-0"



2 A0.12 Slab Plan
1/4" = 1'-0"



1 A0.12 Dumpster Enclosure Plan
1/4" = 1'-0"

STATE OF MICHIGAN
ELIZABETH SUE BYE
ARCHITECT
No. 1301054283
LICENSED ARCHITECT

Bidding and Permits: 31 July 2023

Dumpster Enclosure Plan & Details

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Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

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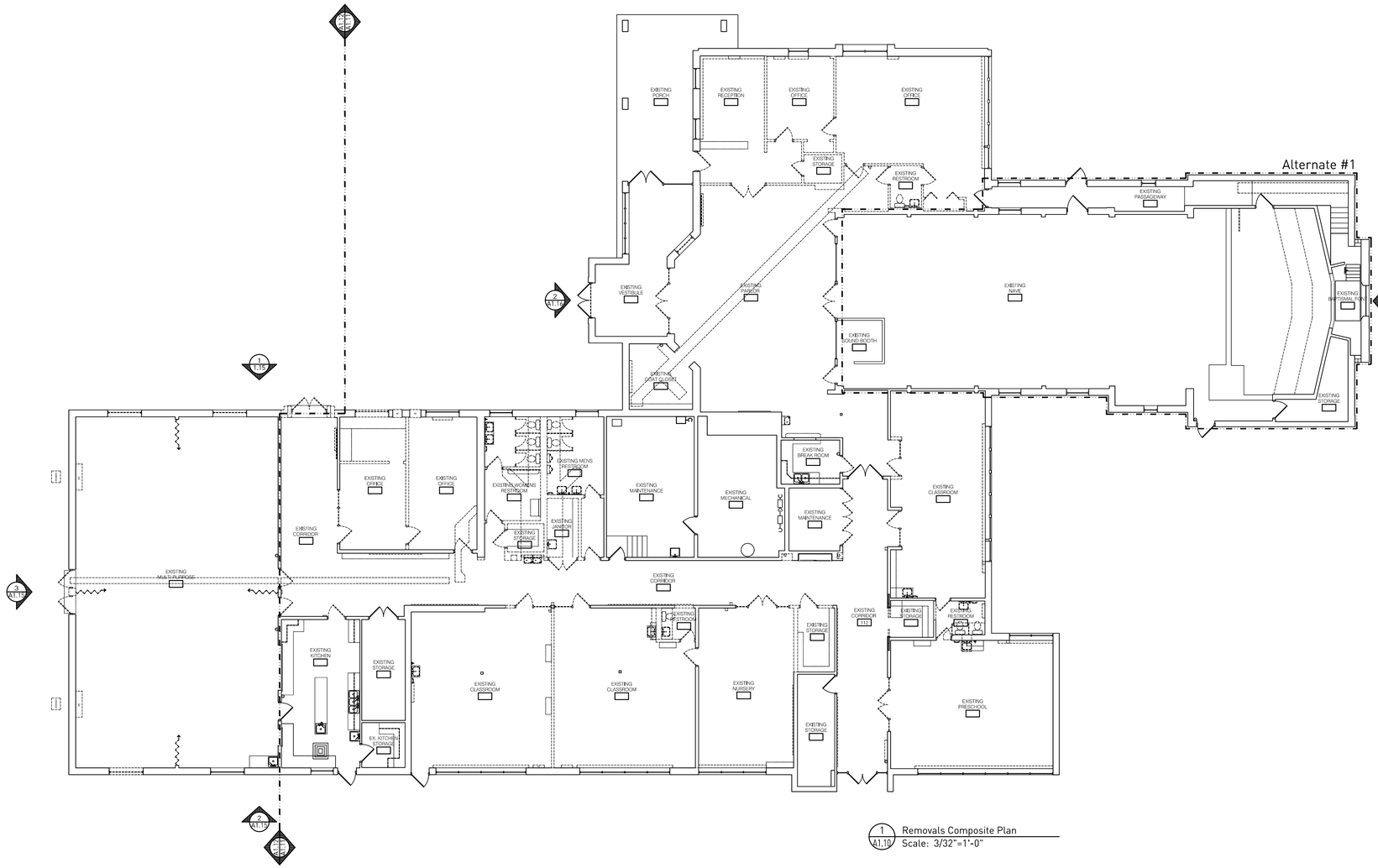
GENERAL REMOVAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. COMPOSITE PLAN ISSUED FOR REFERENCE ONLY.

G3. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCING ON THE WORK.



1 A1.10 Removals Composite Plan
Scale: 3/32"=1'-0"

STATE OF MICHIGAN
ELIZABETH SUE BYE
ARCHITECT
No. 1301054283
LICENSED ARCHITECT

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Removals Composite Plan

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Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

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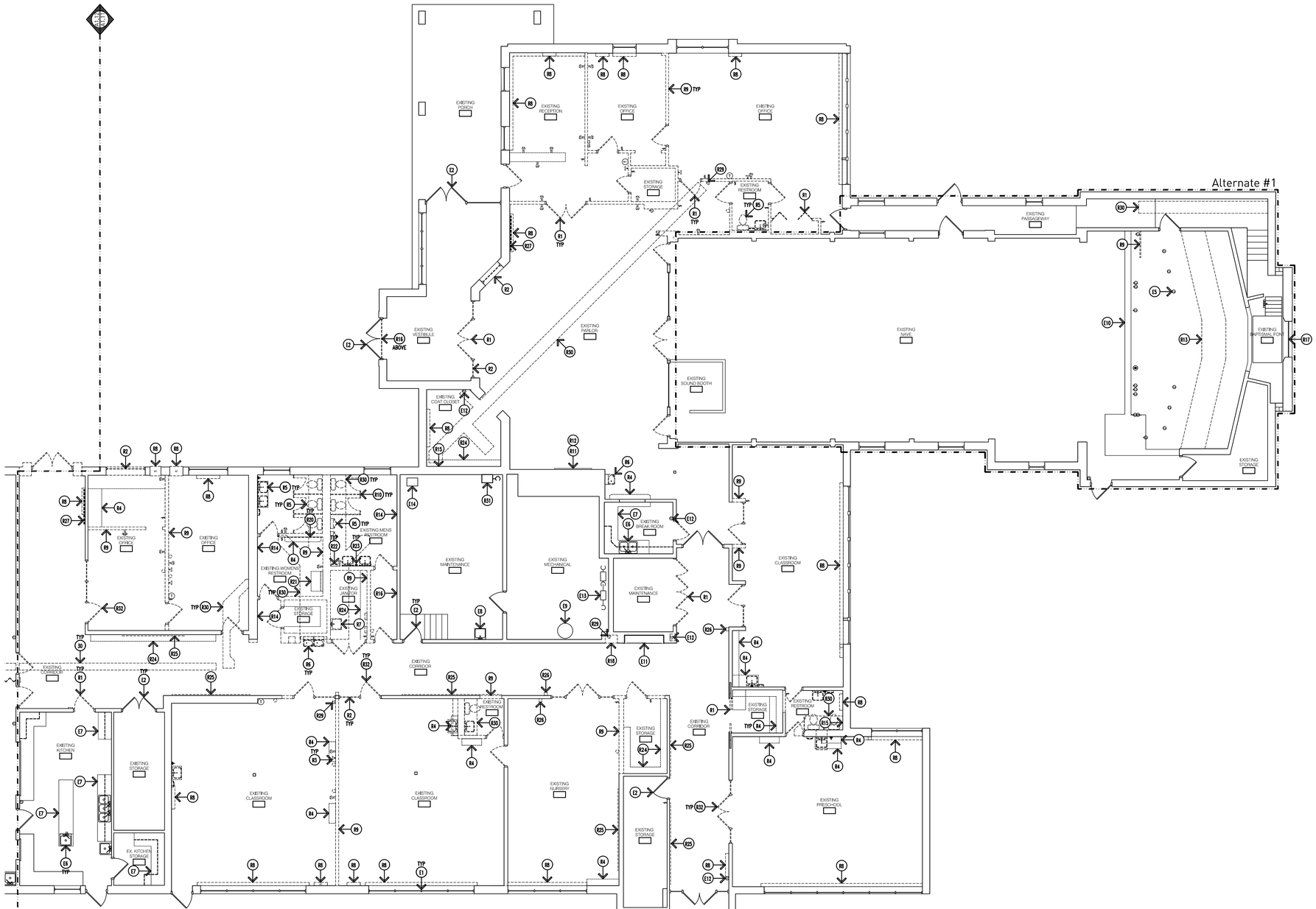

1 A1.11 Removals Floor Plan (Area A)
Scale: 1/8"=1'-0"

REMOVAL NOTES CONTINUED:

R20. EXISTING MIRROR.

R21. EXISTING CHANGING TABLE.

R22. EXISTING PAPER TOWEL DISPENSER.

R23. EXISTING SOAP DISPENSER.

R24. EXISTING SHELVING.

R25. EXISTING HOOKS.

R26. EXISTING HAND SANITIZER DISPENSER.

R27. EXISTING CORK BOARD.

R28. EXISTING ROOM SIGNS.

R29. EXISTING FIRE EXTINGUISHER.

R30. SAW CUT EXISTING CONCRETE FLOOR AS REQUIRED FOR NEW PLUMPING RUNS.

R31. EXISTING WATER METER - REFER TO MECHANICAL.

R32. EXISTING DOOR, FRAME AND SIDELITES, HARDWARE, ETC. COMPLETE.

R33. MOVEABLE PARTITION WALL, TRACK, ETC. COMPLETE.

GENERAL REMOVAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCING ON THE WORK.

G3. PROTECT ALL EXISTING ITEMS TO REMAIN FROM CONSTRUCTION OPERATIONS SO AS TO NOT CAUSE DAMAGE.

G4. ALL AREAS DISTURBED OR DAMAGED BY CONSTRUCTION OPERATIONS SHALL BE PATCHED, REPAIRED AND FINISHED BACK TO EXISTING CONDITION.

G5. CONTRACTOR TO COORDINATED BUILDING ACCESS, CONSTRUCTION ACCESS, ETC. WITH THE OWNERS REPRESENTATIVE PRIOR TO COMMENCING ON THE WORK.

G6. CONFORM TO ALL MICHIGAN BARRIER FREE REQUIREMENTS.

G7. CONTRACTOR TO RECONNECT ANY WIRING THAT IS NEEDED TO MAINTAIN OPERATION OF OUTLETS, LIGHTS, ETC. THAT ARE CONNECTED TO FIXTURES OR DEVICES TO BE REMOVED.

G8. ELECTRICAL (OUTLETS, ETC.) TO REMAIN, UNLESS OTHERWISE NOTED. TERMINATE WIRE(S) AS REQUIRED IN A CONCEALED LOCATION OR REMOVE BACK TO NEAREST JUNCTION BOX.

G9. ALL WALLS, DOORS, WINDOWS, PLUMBING FIXTURES, PIPING, ETC. ARE EXISTING TO REMAIN UNLESS OTHERWISE NOTED.

G10. DISPOSE OF ALL ITEMS REMOVED OFF SITE PER LOCAL BUILDING AND SAFETY ORDINANCES. ANY ITEM REQUESTED BY CRESTWOOD TO BE SALVAGED SHALL BE RETURNED TO OWNER.

G11. DO NOT DISTURB EXISTING UTILITIES TO REMAIN. USE EVERY PRECAUTION TO ENSURE SAFE REMOVAL WORK. INSPECT EXISTING WORK FOR POSSIBLE UNUSUAL CONDITIONS.

G12. COORDINATE ALL REMOVAL WORK (ARCHITECTURAL REMOVAL WORK, ELECTRICAL REMOVAL WORK, MECHANICAL REMOVAL WORK, ETC.)

G13. RELOCATE, REMOVE AND REPLACE OR RE-SUPPORT ANY MECHANICAL OR ELECTRICAL ITEMS IN THE WAY OF NEW CONSTRUCTION OPERATIONS.

G14. REMOVE ALL ELECTRICAL DEVICES ON WALLS TO BE DEMOLISHED (LIGHTING, POWER, FIRE ALARM, P/A ETC.) INCLUDING CEILING MOUNTED LIGHTING. REMOVE LIGHT CONTROLS AND MAINTAIN BRANCH CIRCUIT SERVING LIGHTING FOR RECONNECTION TO NEW LIGHTING . ANY DEVICE LOCATED ON WALL NOT TO BE DEMOLISHED IS TO REMAIN (WALLS TO BE DEMOLISHED ARE SHOWN DASHED). REFER TO FLOOR PLANS FOR EXTENT OF WORK.

G15. REMOVE LIGHT FIXTURES AND CONTROLS. MAINTAIN BRANCH CIRCUIT FOR REUSE.

G16. REMOVE EXISTING FIRE ALARM SYSTEM COMPLETE (DEVICES AND WIRING). ALL FIRE ALARM DEVICES AND WIRING INDICATED OR NOT INDICATED TO BE REMOVED.

G17. NOT ALL NOTES MAY APPLY TO THIS SHEET.

EXISTING TO REMAIN:

E1. WINDOW SYSTEM.

E2. DOOR.

E3. FIRE ALARM.

E4. SPEAKER.

E5. ELECTRICAL DEVICES, CONDUIT, AND WIRING.

E6. KITCHEN SINK.

E7. CASEWORK.

E8. JANITORS SINK.

E9. HOT WATER TANK

E10. PLATFORM.

E11. EXISTING DISPLAY CASE.

E12. EXISTING FIRE EXTINGUISHER.

E13. EXISTING GAS METER.

E14. EXISTING WATER METER.

REMOVAL NOTES:

R1. EXISTING DOOR, FRAME, HARDWARE, ETC. COMPLETE.

R2. EXISTING WINDOW SYSTEM, GLAZING, ETC. COMPLETE.

R3. EXISTING ELECTRICAL EQUIPMENT -- REFER TO ELECTRICAL DRAWINGS FOR MORE INFORMATION.

R4. EXISTING MILLWORK - COUNTER OR STORAGE CABINET.

R5. EXISTING PLUMBING FIXTURES (TOILET, SINK, ETC.).

R6. EXISTING DRINKING FOUNTAIN. LOCATION SHOWN FOR REFERENCE ONLY C.F.V.

R7. EXISTING JANITORS SINK.

R8. EXISTING HVAC -- REFER TO MECHANICAL DRAWINGS FOR MORE INFORMATION.

R9. EXISTING WALL.

R10. EXISTING TOILET PARTITION.

R11. EXISTING MARBLE HEARTH AND SURROUND, MANTEL TO REMAIN.

R12. EXISTING BRASS INSERT.

R13. EXISTING RISERS.

R14. REMOVE GYPSUM BOARD/PLASTER BELOW 6'8" AFF ON EXISTING WALLS TO REMAIN FOR INSTALLATION OF CEMENT BOARD.

R15. REMOVE GYPSUM BOARD/PLASTER BELOW 6'2" AFF ON EXISTING WALLS TO REMAIN FOR INSTALLATION OF CEMENT BOARD.

R16. REMOVE STAINED GLASS AND FRAME.

R17. REMOVE STAINED GLASS AND REPLACE WITH CLEAR GLASS.

R18. EXISTING PHONE SHELF.

R19. EXISTING CONCRETE SLAB.

STATE OF MICHIGAN
ELIZABETH SUE BYE
ARCHITECT
No. 1301054283
LICENSED ARCHITECT

Bidding and Permits: 31 July 2023

Removals Floor Plan (Area A)

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

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A1.11

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REMOVAL NOTES CONTINUED:

R20. EXISTING MIRROR.

R21. EXISTING CHANGING TABLE.

R22. EXISTING PAPER TOWEL DISPENSER.

R23. EXISTING SOAP DISPENSER.

R24. EXISTING SHELVING.

R25. EXISTING HOOKS.

R26. EXISTING HAND SANITIZER DISPENSER.

R27. EXISTING CORK BOARD.

R28. EXISTING ROOM SIGNS.

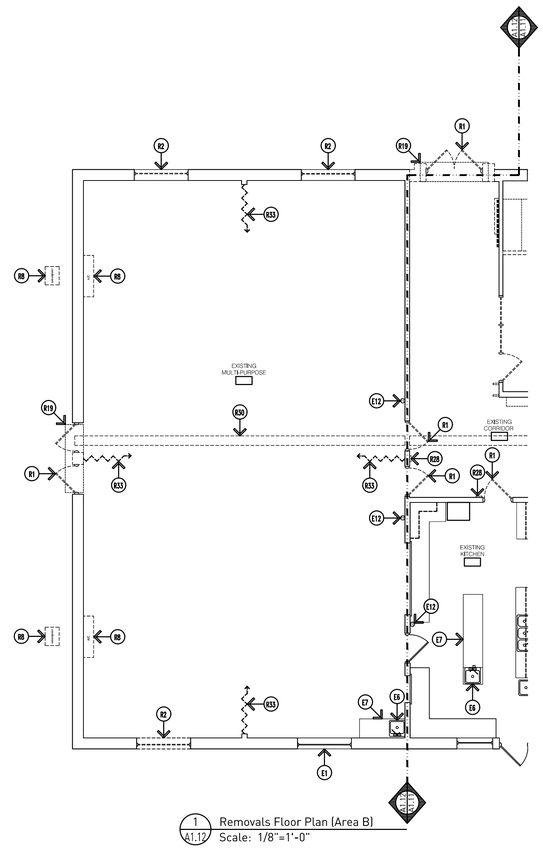
R29. EXISTING FIRE EXTINGUISHER.

R30. SAW CUT EXISTING CONCRETE FLOOR AS REQUIRED FOR NEW PLUMPING RUNS.

R31. EXISTING WATER METER - REFER TO MECHANICAL.

R32. EXISTING DOOR, FRAME AND SIDELITES, HARDWARE, ETC, COMPLETE.

R33. MOVEABLE PARTITION WALL, TRACK, ETC. COMPLETE.



1 / A1.12 Removals Floor Plan (Area B)
Scale: 1/8"=1'-0"

GENERAL REMOVAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCING ON THE WORK.

G3. PROTECT ALL EXISTING ITEMS TO REMAIN FROM CONSTRUCTION OPERATIONS SO AS TO NOT CAUSE DAMAGE.

G4. ALL AREAS DISTURBED OR DAMAGED BY CONSTRUCTION OPERATIONS SHALL BE PATCHED, REPAIRED AND FINISHED BACK TO EXISTING CONDITION.

G5. CONTRACTOR TO COORDINATED BUILDING ACCESS, CONSTRUCTION ACCESS, ETC. WITH THE OWNERS REPRESENTATIVE PRIOR TO COMMENCING ON THE WORK.

G6. CONFORM TO ALL MICHIGAN BARRIER FREE REQUIREMENTS.

G7. CONTRACTOR TO RECONNECT ANY WIRING THAT IS NEEDED TO MAINTAIN OPERATION OF OUTLETS, LIGHTS, ETC. THAT ARE CONNECTED TO FIXTURES OR DEVICES TO BE REMOVED.

G8. ELECTRICAL (OUTLETS, ETC.) TO REMAIN, UNLESS OTHERWISE NOTED, TERMINATE WIRE(S) AS REQUIRED IN A CONCEALED LOCATION OR REMOVE BACK TO NEAREST JUNCTION BOX.

G9. ALL WALLS, DOORS, WINDOWS, PLUMBING FIXTURES, PIPING, ETC. ARE EXISTING TO REMAIN UNLESS OTHERWISE NOTED.

G10. DISPOSE OF ALL ITEMS REMOVED OFF SITE PER LOCAL BUILDING AND SAFETY ORDINANCES. ANY ITEM REQUESTED BY CRESTWOOD TO BE SALVAGED SHALL BE RETURNED TO OWNER.

G11. DO NOT DISTURB EXISTING UTILITIES TO REMAIN. USE EVERY PRECAUTION TO ENSURE SAFE REMOVAL WORK. INSPECT EXISTING WORK FOR POSSIBLE UNUSUAL CONDITIONS.

G12. COORDINATE ALL REMOVAL WORK (ARCHITECTURAL REMOVAL WORK, ELECTRICAL REMOVAL WORK, MECHANICAL REMOVAL WORK, ETC.)

G13. RELOCATE, REMOVE AND REPLACE OR RE-SUPPORT ANY MECHANICAL OR ELECTRICAL ITEMS IN THE WAY OF NEW CONSTRUCTION OPERATIONS.

G14. REMOVE ALL ELECTRICAL DEVICES ON WALLS TO BE DEMOLISHED (LIGHTING, POWER, FIRE ALARM, P/A ETC.) INCLUDING CEILING MOUNTED LIGHTING. REMOVE LIGHT CONTROLS AND MAINTAIN BRANCH CIRCUIT SERVING LIGHTING FOR RECONNECTION TO NEW LIGHTING . ANY DEVICE LOCATED ON WALL NOT TO BE DEMOLISHED IS TO REMAIN (WALLS TO BE DEMOLISHED ARE SHOWN DASHED). REFER TO FLOOR PLANS FOR EXTENT OF WORK.

G15. REMOVE LIGHT FIXTURES AND CONTROLS. MAINTAIN BRANCH CIRCUIT FOR REUSE.

G16. REMOVE EXISTING FIRE ALARM SYSTEM COMPLETE (DEVICES AND WIRING). ALL FIRE ALARM DEVICES AND WIRING INDICATED OR NOT INDICATED TO BE REMOVED.

G17. NOT ALL NOTES MAY APPLY TO THIS SHEET.

EXISTING TO REMAIN:

E1. WINDOW SYSTEM.

E2. DOOR.

E3. FIRE ALARM.

E4. SPEAKER.

E5. ELECTRICAL DEVICES, CONDUIT, AND WIRING.

E6. KITCHEN SINK.

E7. CASEWORK.

E8. JANITORS SINK.

E9. HOT WATER TANK

E10. PLATFORM.

E11. EXISTING DISPLAY CASE.

E12. EXISTING FIRE EXTINGUISHER.

E13. EXISTING GAS METER.

E14. EXISTING WATER METER.

REMOVAL NOTES:

R1. EXISTING DOOR, FRAME, HARDWARE, ETC. COMPLETE.

R2. EXISTING WINDOW SYSTEM, GLAZING, ETC. COMPLETE.

R3. EXISTING ELECTRICAL EQUIPMENT -- REFER TO ELECTRICAL DRAWINGS FOR MORE INFORMATION.

R4. EXISTING MILLWORK - COUNTER OR STORAGE CABINET.

R5. EXISTING PLUMBING FIXTURES (TOILET, SINK, ETC.).

R6. EXISTING DRINKING FOUNTAIN. LOCATION SHOWN FOR REFERENCE ONLY C.F.V.

R7. EXISTING JANITORS SINK.

R8. EXISTING HVAC -- REFER TO MECHANICAL DRAWINGS FOR MORE INFORMATION.

R9. EXISTING WALL.

R10. EXISTING TOILET PARTITION.

R11. EXISTING MARBLE HEARTH AND SURROUND, MANTEL TO REMAIN.

R12. EXISTING BRASS INSERT.

R13. EXISTING RISERS.

R14. REMOVE GYPSUM BOARD/PLASTER BELOW 6'8" AFF ON EXISTING WALLS TO REMAIN FOR INSTALLATION OF CEMENT BOARD.

R15. REMOVE GYPSUM BOARD/PLASTER BELOW 6'2" AFF ON EXISTING WALLS TO REMAIN FOR INSTALLATION OF CEMENT BOARD.

R16. REMOVE STAINED GLASS AND FRAME.

R17. REMOVE STAINED GLASS AND REPLACE WITH CLEAR GLASS.

R18. EXISTING PHONE SHELF.

R19. EXISTING CONCRETE SLAB.

STATE OF MICHIGAN
ELIZABETH SUE BYE
ARCHITECT
No. 1301054283
LICENSED ARCHITECT

Bidding and Permits: 31 July 2023

Removals Floor Plan (Area B)

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

A1.12

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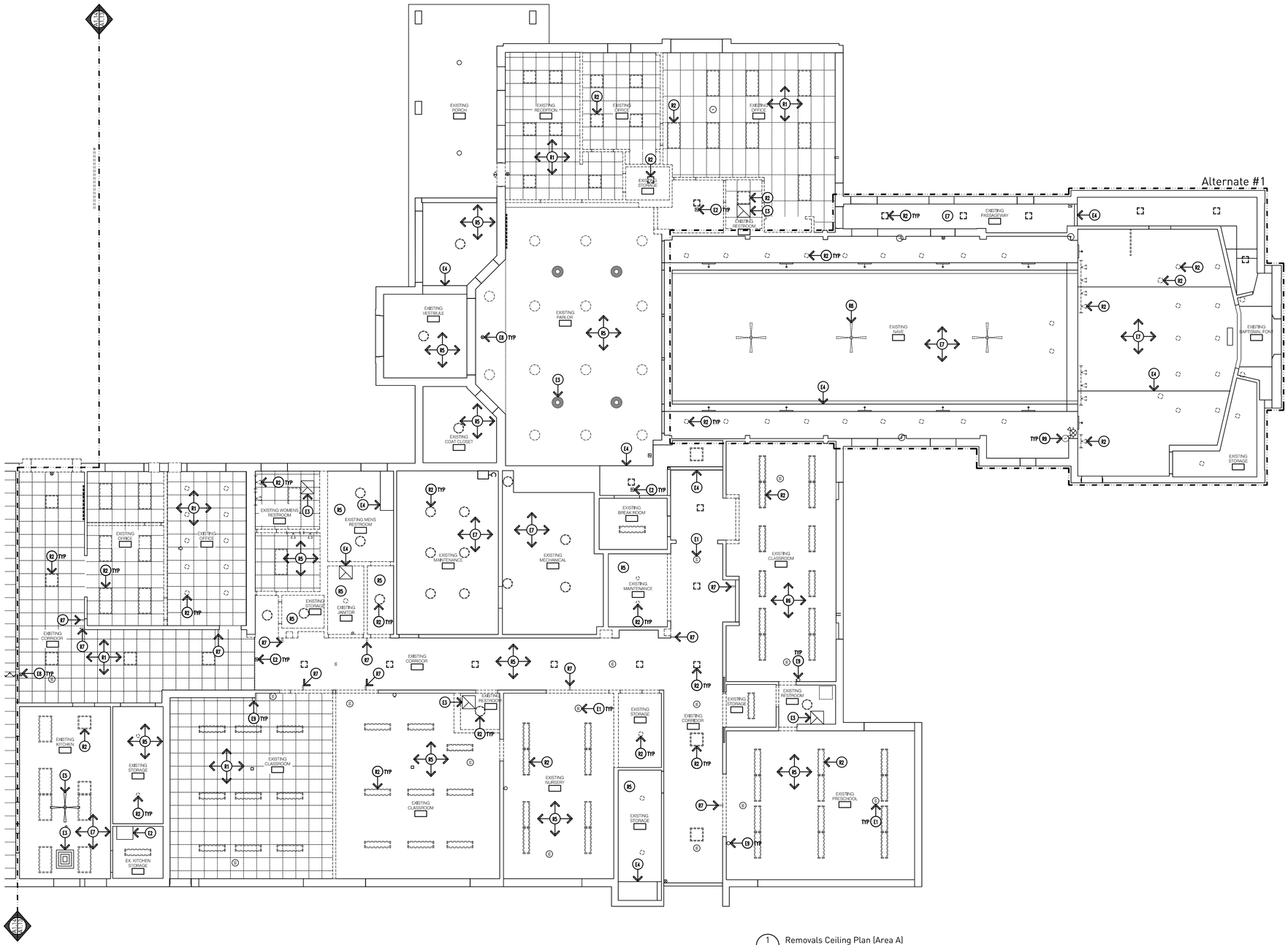

1 A1.13 Removals Ceiling Plan (Area A)
Scale: 1/8"=1'-0"

GENERAL REMOVAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCING ON THE WORK.

G3. PROTECT ALL EXISTING ITEMS TO REMAIN FROM CONSTRUCTION OPERATIONS SO AS TO NOT CAUSE DAMAGE.

G4. ALL AREAS DISTURBED OR DAMAGED BY CONSTRUCTION OPERATIONS SHALL BE PATCHED, REPAIRED AND FINISHED BACK TO EXISTING CONDITION.

G5. CONTRACTOR TO COORDINATED BUILDING ACCESS, CONSTRUCTION ACCESS, ETC. WITH THE OWNERS REPRESENTATIVE PRIOR TO COMMENCING ON THE WORK.

G6. CONTRACTOR TO RECONNECT ANY WIRING THAT IS NEEDED TO MAINTAIN OPERATION OF OUTLETS, LIGHTS, ETC. THAT ARE CONNECTED TO FIXTURES OR DEVICES TO BE REMOVED.

G7. ELECTRICAL (OUTLETS, ETC.) TO REMAIN, UNLESS OTHERWISE NOTED. TERMINATE WIRE(S) AS REQUIRED IN A CONCEALED LOCATION OR REMOVE BACK TO NEAREST JUNCTION BOX.

G8. ALL WALLS, DOORS, WINDOWS, PLUMBING FIXTURES, PIPING, ETC. ARE EXISTING TO REMAIN UNLESS OTHERWISE NOTED.

G10. DISPOSE OF ALL ITEMS REMOVED OFF SITE PER LOCAL BUILDING AND SAFETY ORDINANCES. ANY ITEM REQUESTED BY CRESTWOOD TO BE SALVAGED SHALL BE RETURNED TO OWNER.

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G13. RELOCATE, REMOVE AND REPLACE OR RE-SUPPORT ANY MECHANICAL OR ELECTRICAL ITEMS IN THE WAY OF NEW CONSTRUCTION OPERATIONS.

G14. CEILING REMOVALS SHOWN FOR REFERENCE ONLY. EXACT LOCATIONS TO BE DETERMINED BY CONTRACTOR'S MEANS AND METHODS FOR ALL WORK (ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, ETC.)

G15. NOT ALL NOTES MAY APPLY TO THIS SHEET.

EXISTING TO REMAIN:

E1. SPEAKER.

E2. ELECTRICAL EQUIPMENT.

E3. HVAC EQUIPMENT.

E4. SOFFIT.

E5. CEILING FAN.

E6. LIGHT FIXTURE.

E7. EXISTING CEILING SYSTEM TO REMAIN.

E8. EXIST SIGN.

E9. WIFI.

REMOVAL NOTES:

R1. EXISTING SUSPENDED ACOUSTIC CEILING TILE AND METAL GRID SUSPENSION SYSTEM.

R2. EXISTING LIGHT FIXTURE -- REFER TO ELECTRICAL DRAWINGS FOR MORE INFORMATION.

R3. EXISTING ELECTRICAL EQUIPMENT -- REFER TO ELECTRICAL DRAWINGS FOR MORE INFORMATION.

R4. EXISTING HVAC -- REFER TO MECHANICAL DRAWINGS FOR MORE INFORMATION.

R5. EXISTING GYPSUM CEILING.

R6. EXISTING ELECTRICAL EQUIPMENT -- REFER TO ELECTRICAL DRAWINGS FOR MORE INFORMATION.

R7. EXISTING ROOM SIGNS.

R8. EXISTING CEILING FAN.

R9. EXISTING SPEAKER.

R10. MOVEABLE PARTITION WALL TRACK AND STRUCTURAL SUPPORTS.

STATE OF MICHIGAN
ELIZABETH SUE BYE
ARCHITECT
No. 1301054283
LICENSED ARCHITECT

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Removals Ceiling Plan (Area A)

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

A1.13

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GENERAL REMOVAL NOTES:

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G15. NOT ALL NOTES MAY APPLY TO THIS SHEET.

EXISTING TO REMAIN:

E1. SPEAKER.

E2. ELECTRICAL EQUIPMENT.

E3. HVAC EQUIPMENT.

E4. SOFFIT.

E5. CEILING FAN.

E6. LIGHT FIXTURE.

E7. EXISTING CEILING SYSTEM TO REMAIN.

E8. EXIST SIGN.

E9. WIFI.

REMOVAL NOTES:

R1. EXISTING SUSPENDED ACOUSTIC CEILING TILE AND METAL GRID SUSPENSION SYSTEM.

R2. EXISTING LIGHT FIXTURE -- REFER TO ELECTRICAL DRAWINGS FOR MORE INFORMATION.

R3. EXISTING ELECTRICAL EQUIPMENT -- REFER TO ELECTRICAL DRAWINGS FOR MORE INFORMATION.

R4. EXISTING HVAC -- REFER TO MECHANICAL DRAWINGS FOR MORE INFORMATION.

R5. EXISTING GYPSUM CEILING.

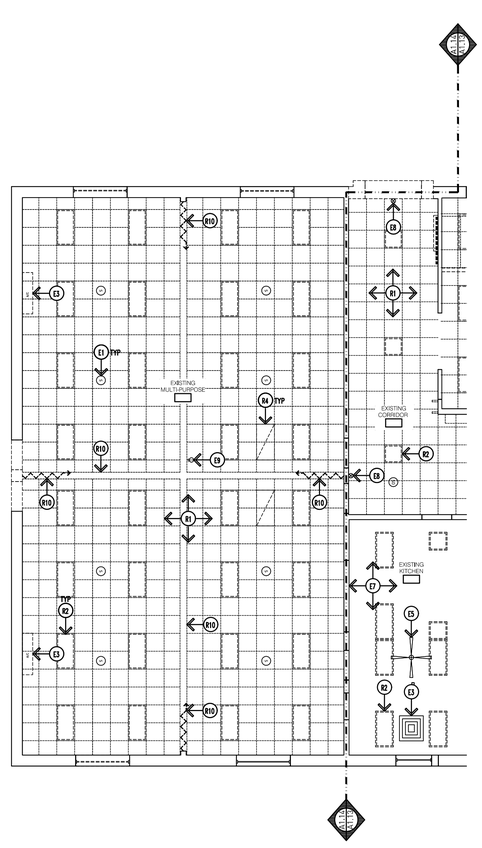
R6. EXISTING ELECTRICAL EQUIPMENT -- REFER TO ELECTRICAL DRAWINGS FOR MORE INFORMATION.

R7. EXISTING ROOM SIGNS.

R8. EXISTING CEILING FAN.

R9. EXISTING SPEAKER.

R10. MOVEABLE PARTITION WALL TRACK AND STRUCTURAL SUPPORTS.



1 A1.14 Removals Ceiling Plan (Area B)
Scale: 1/8"=1'-0"

Bidding and Permits: 31 July 2023

Removals Ceiling Plan (Area B)

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Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

A1.14

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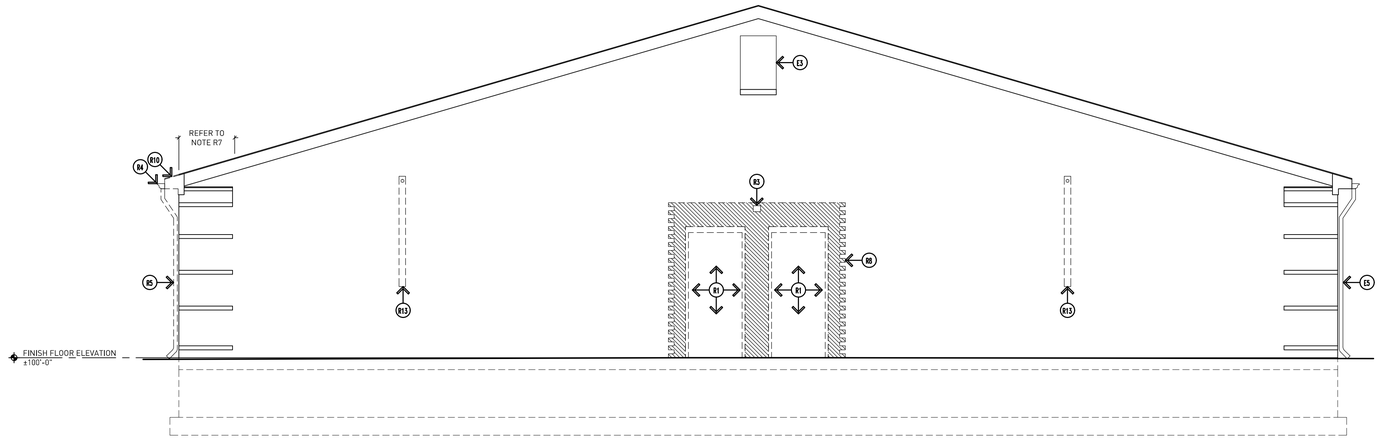
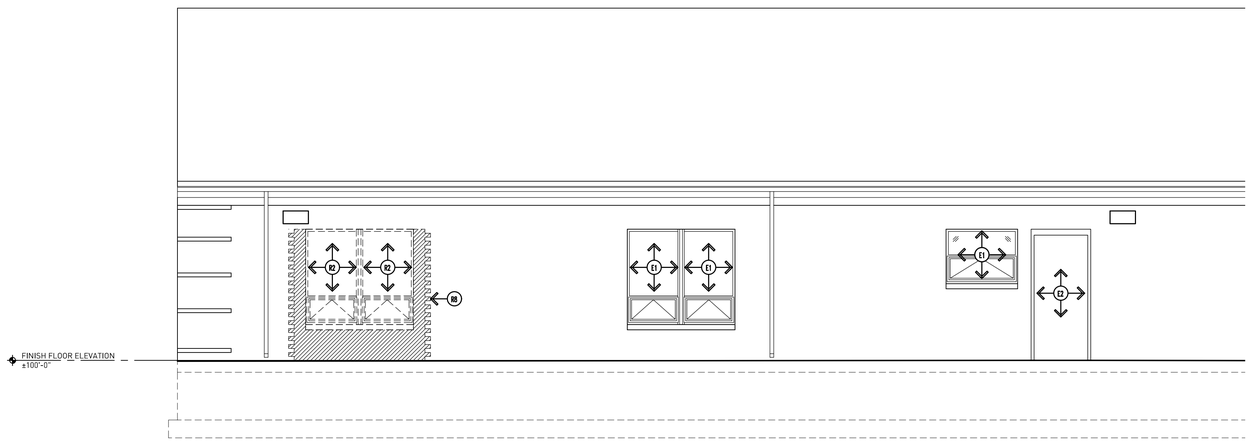
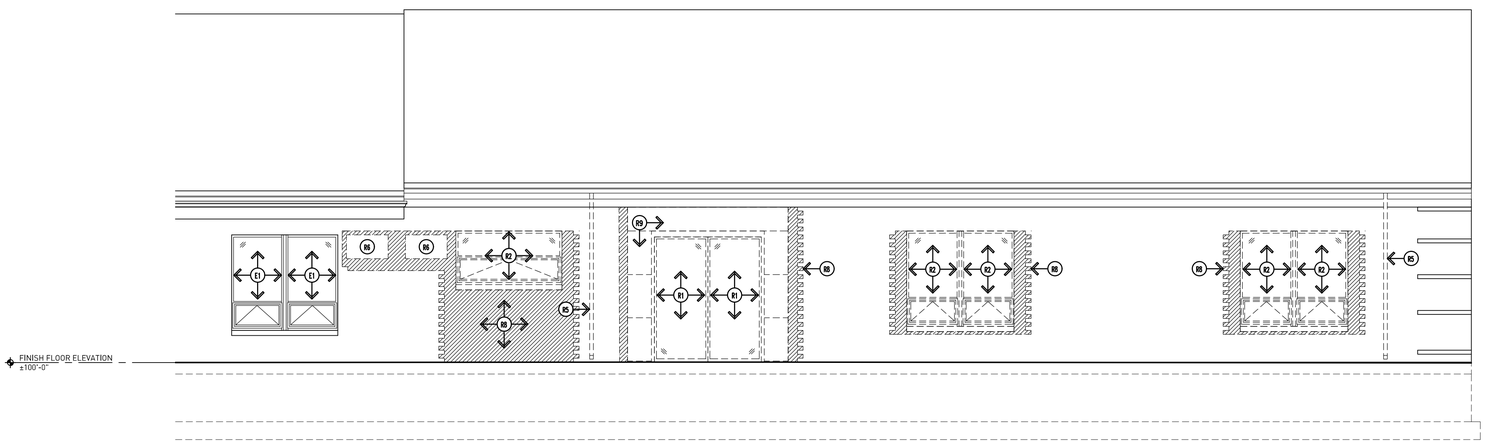


3 A1.15 Removal Elevation - West
Scale: 1/4"=1'-0"



2 A1.15 Removal Elevation - South
Scale: 1/4"=1'-0"



1 A1.15 Removal Elevation - North
Scale: 1/4"=1'-0"

GENERAL REMOVAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCING ON THE WORK.

G3. PROTECT ALL EXISTING ITEMS TO REMAIN FROM CONSTRUCTION OPERATIONS SO AS TO NOT CAUSE DAMAGE.

G4. ALL AREAS DISTURBED OR DAMAGED BY CONSTRUCTION OPERATIONS SHALL BE PATCHED, REPAIRED AND FINISHED BACK TO EXISTING CONDITION.

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G7. ALL WALLS, DOORS, WINDOWS, PLUMBING FIXTURES, PIPING, ETC. ARE EXISTING TO REMAIN UNLESS OTHERWISE NOTED.

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G11. RELOCATE, REMOVE AND REPLACE OR RE-SUPPORT ANY MECHANICAL OR ELECTRICAL ITEMS IN THE WAY OF NEW CONSTRUCTION OPERATIONS.

G12. NOT ALL NOTES MAY APPLY TO THIS SHEET.

EXISTING TO REMAIN:

E1. WINDOW SYSTEM.

E2. DOOR .

E3. HVAC EQUIPMENT.

E4. LIGHT FIXTURE.

E5. EXISTING DOWNSPOUT AND GUTTER.

REMOVAL NOTES:

R1. EXISTING DOOR, FRAME, HARDWARE, ETC. COMPLETE.

R2. EXISTING WINDOW SYSTEM, GLAZING, ETC. COMPLETE.

R3. EXISTING LIGHT FIXTURE -- REFER TO ELECTRICAL DRAWINGS FOR MORE INFORMATION.

R4. EXISTING ROOF GUTTER.

R5. EXISTING DOWNSPOUT.

R6. EXISTING HVAC -- REFER TO MECHANICAL DRAWINGS FOR MORE INFORMATION.

R7. REMOVE EXISTING SHINGLES 3 COURSES MINIMUM OR AS REQUIRED.

R8. REMOVE EXISTING MASONRY.

R9. REMOVE EXISTING LIMESTONE.

R10. REMOVAL OF EXISTING ALUM. FASCIA, ALUM. SOFFIT, ASPHALT SHINGLES, ETC.

R11. REMOVE STAINED GLASS, EXISTING FRAME TO REMAIN.

R12. REMOVE STAINED GLASS AND FRAME.

R13. CONDENSING UNIT LINE SETS - REFER TO MECHANICAL AND ELECTRICAL DRAWINGS.

STATE OF MICHIGAN
ELIZABETH SUE BYE
ARCHITECT
No. 1301054283
LICENSED ARCHITECT

Bidding and Permits: 31 July 2023

Removals Elevations

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Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

A1.15

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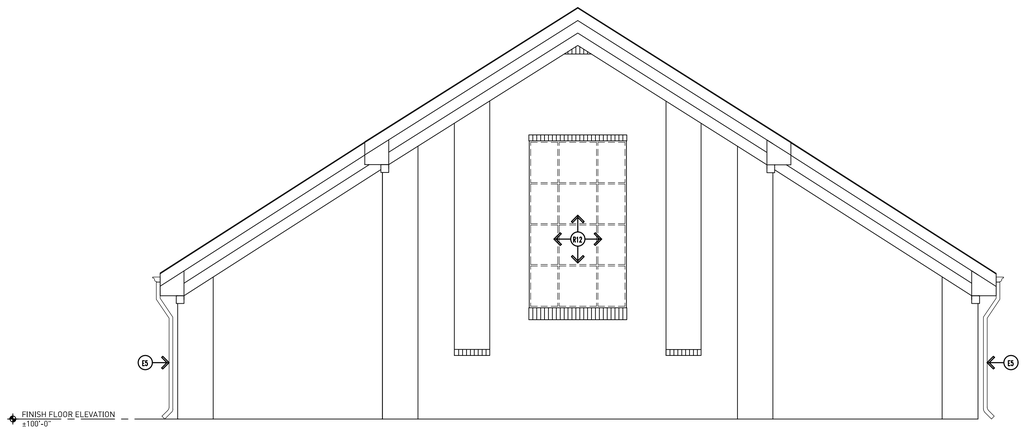
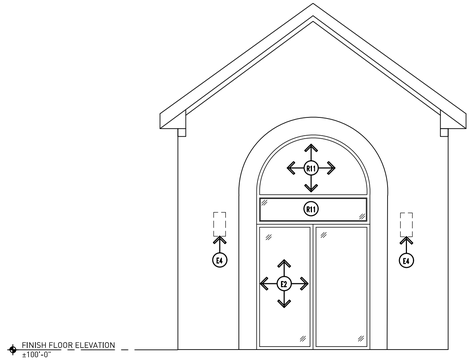


1 / A1.16 Removal Elevation - East
Scale: 1/4"=1'-0"



2 / A1.16 Removal Elevation - West
Scale: 1/4"=1'-0"

GENERAL REMOVAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

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G3. PROTECT ALL EXISTING ITEMS TO REMAIN FROM CONSTRUCTION OPERATIONS SO AS TO NOT CAUSE DAMAGE.

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G7. ALL WALLS, DOORS, WINDOWS, PLUMBING FIXTURES, PIPING, ETC. ARE EXISTING TO REMAIN UNLESS OTHERWISE NOTED.

G8. DISPOSE OF ALL ITEMS REMOVED OFF SITE PER LOCAL BUILDING AND SAFETY ORDINANCES. ANY ITEM REQUESTED BY CRESTWOOD TO BE SALVAGED SHALL BE RETURNED TO OWNER.

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G11. RELOCATE, REMOVE AND REPLACE OR RE-SUPPORT ANY MECHANICAL OR ELECTRICAL ITEMS IN THE WAY OF NEW CONSTRUCTION OPERATIONS.

G12. NOT ALL NOTES MAY APPLY TO THIS SHEET.

EXISTING TO REMAIN:

E1. WINDOW SYSTEM.

E2. DOOR .

E3. HVAC EQUIPMENT.

E4. LIGHT FIXTURE.

E5. EXISTING DOWNSPOUT AND GUTTER.

REMOVAL NOTES:

R1. EXISTING DOOR, FRAME, HARDWARE, ETC. COMPLETE.

R2. EXISTING WINDOW SYSTEM, GLAZING, ETC. COMPLETE.

R3. EXISTING LIGHT FIXTURE -- REFER TO ELECTRICAL DRAWINGS FOR MORE INFORMATION.

R4. EXISTING ROOF GUTTER.

R5. EXISTING DOWNSPOUT.

R6. EXISTING HVAC -- REFER TO MECHANICAL DRAWINGS FOR MORE INFORMATION.

R7. REMOVE EXISTING SHINGLES 3 COURSES MINIMUM OR AS REQUIRED.

R8. REMOVE EXISTING MASONRY.

R9. REMOVE EXISTING LIMESTONE.

R10. REMOVAL OF EXISTING ALUM. FASCIA, ALUM. SOFFIT, ASPHALT SHINGLES, ETC.

R11. REMOVE STAINED GLASS, EXISTING FRAME TO REMAIN.

R12. REMOVE STAINED GLASS AND FRAME.

R13. CONDENSING UNIT LINE SETS - REFER TO MECHANICAL AND ELECTRICAL DRAWINGS.

STATE OF MICHIGAN
ELIZABETH SUE BYE
ARCHITECT
No. 1301054283
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Removals Elevations

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Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

A1.16

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GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. COMPOSITE PLAN ISSUED FOR REFERENCE ONLY.

G3. REFER TO SHEETS A2.11 AND A2.12 FOR FURTHER INFORMATION.

G3. PER SECTION 703.7 MARKING AND IDENTIFICATION OF THE 2015 MICHIGAN BUILDING CODE, WHERE THERE IS AN ACCESSIBLE CONCEALED FLOOR, FLOOR-CEILING OR *ATTIC* SPACE, *FIRE WALLS*, *FIRE BARRIERS*, *FIRE PARTITIONS*, *SMOKE BARRIERS* AND SMOKE PARTITIONS OR ANY OTHER WALL REQUIRED TO HAVE PROTECTED OPENINGS OR PENETRATIONS SHALL BE EFFECTIVELY AND PERMANENTLY IDENTIFIED WITH SIGNS OR STENCILING IN THE CONCEALED SPACE. SUCH IDENTIFICATION SHALL:
   1. BE LOCATED WITHIN 15 FEET (4572 MM) OF THE END OF EACH WALL AND AT INTERVALS NOT EXCEEDING 30 FEET (9144 MM) MEASURED HORIZONTALLY ALONG THE WALL OR PARTITION.
   2. INCLUDE LETTERING NOT LESS THAN 3 INCHES (76 MM) IN HEIGHT WITH A MINIMUM $\frac{3}{8}$-INCH (9.5 MM) STROKE IN A CONTRASTING COLOR INCORPORATING THE SUGGESTED WORDING, "FIRE AND/OR SMOKE BARRIER–PROTECT ALL OPENINGS," OR OTHER WORDING.

DRAWING NOTES:

1. LINE OF EXISTING FIRE SEPARATION.
2. LINE OF 2-HOUR FIRE BARRIER AT OCCUPANCY SEPARATION.
3. LINE OF 2-HOUR FIRE SEPARATION WALL.

Alternate #1

BASE BID

1 Composite Floor Plan
A2.10 Scale: 3/32"=1'-0"

STATE OF MICHIGAN
ELIZABETH SUE BYE
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No. 1301054283
LICENSED ARCHITECT

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Composite Floor Plan

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A2.10

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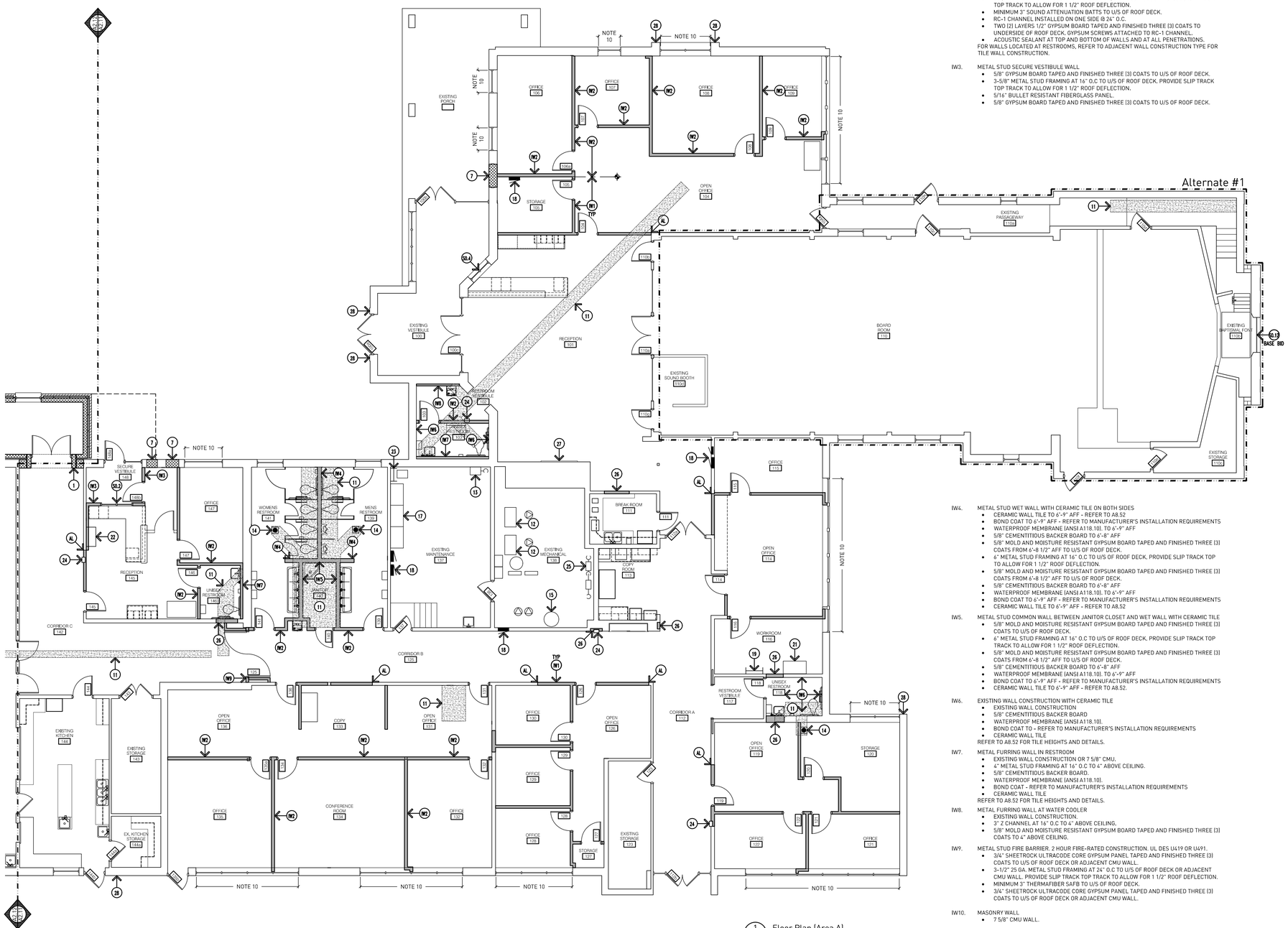


1 A2.11 Floor Plan (Area A)
Scale: 1/8"=1'-0"

INTERIOR WALL TAGS:

IW1. TYPICAL METAL STUD WALL CONSTRUCTION UNLESS NOTED OTHERWISE.
- 5/8" GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK.
- 3-5/8" METAL STUD FRAMING AT 16" O.C TO U/S OF ROOF DECK. PROVIDE SLIP TRACK TOP TRACK TO ALLOW FOR 1 1/2" ROOF DEFLECTION.
- MINIMUM 3" SOUND ATTENUATION BATTS TO U/S OF ROOF DECK.
- 5/8" GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK.

IW2. METAL STUD SOUND ACOUSTIC WALL - TEST NUMBER RAL-TL-84-136
- 1/2" GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK. GYPSUM SCREWS ATTACHED TO STUDS.
- 3-5/8" METAL STUD FRAMING AT 16" O.C TO U/S OF ROOF DECK. PROVIDE SLIP TRACK TOP TRACK TO ALLOW FOR 1 1/2" ROOF DEFLECTION.
- MINIMUM 3" SOUND ATTENUATION BATTS TO U/S OF ROOF DECK.
- RC-1 CHANNEL INSTALLED ON ONE SIDE @ 24" O.C.
- TWO (2) LAYERS 1/2" GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS TO UNDERSIDE OF ROOF DECK. GYPSUM SCREWS ATTACHED TO RC-1 CHANNEL.
- ACOUSTIC SEALANT AT TOP AND BOTTOM OF WALLS AND AT ALL PENETRATIONS.

FOR WALLS LOCATED AT RESTROOMS, REFER TO ADJACENT WALL CONSTRUCTION TYPE FOR TILE WALL CONSTRUCTION.

IW3. METAL STUD SECURE VESTIBULE WALL
- 5/8" GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK.
- 3-5/8" METAL STUD FRAMING AT 16" O.C TO U/S OF ROOF DECK. PROVIDE SLIP TRACK TOP TRACK TO ALLOW FOR 1 1/2" ROOF DEFLECTION.
- 5/16" BULLET RESISTANT FIBERGLASS PANEL.
- 5/8" GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK.

IW4. METAL STUD WET WALL WITH CERAMIC TILE ON BOTH SIDES
- CERAMIC WALL TILE TO 6'-9" AFF - REFER TO A8.52
- BOND COAT TO 6'-9" AFF - REFER TO MANUFACTURER'S INSTALLATION REQUIREMENTS
- WATERPROOF MEMBRANE (ANSI A118.10). TO 6'-9" AFF
- 5/8" CEMENTITIOUS BACKER BOARD TO 6'-8" AFF
- 5/8" MOLD AND MOISTURE RESISTANT GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS FROM 6'-8 1/2" AFF TO U/S OF ROOF DECK.
- 6" METAL STUD FRAMING AT 16" O.C TO U/S OF ROOF DECK, PROVIDE SLIP TRACK TOP TO ALLOW FOR 1 1/2" ROOF DEFLECTION.
- 5/8" MOLD AND MOISTURE RESISTANT GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS FROM 6'-8 1/2" AFF TO U/S OF ROOF DECK.
- 5/8" CEMENTITIOUS BACKER BOARD TO 6'-8" AFF
- WATERPROOF MEMBRANE (ANSI A118.10). TO 6'-9" AFF
- BOND COAT TO 6'-9" AFF - REFER TO MANUFACTURER'S INSTALLATION REQUIREMENTS
- CERAMIC WALL TILE TO 6'-9" AFF - REFER TO A8.52

IW5. METAL STUD COMMON WALL BETWEEN JANITOR CLOSET AND WET WALL WITH CERAMIC TILE
- 5/8" MOLD AND MOISTURE RESISTANT GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK.
- 6" METAL STUD FRAMING AT 16" O.C TO U/S OF ROOF DECK, PROVIDE SLIP TRACK TOP TRACK TO ALLOW FOR 1 1/2" ROOF DEFLECTION.
- 5/8" MOLD AND MOISTURE RESISTANT GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS FROM 6'-8 1/2" AFF TO U/S OF ROOF DECK.
- 5/8" CEMENTITIOUS BACKER BOARD TO 6'-8" AFF
- WATERPROOF MEMBRANE (ANSI A118.10). TO 6'-9" AFF
- BOND COAT TO 6'-9" AFF - REFER TO MANUFACTURER'S INSTALLATION REQUIREMENTS
- CERAMIC WALL TILE TO 6'-9" AFF - REFER TO A8.52.

IW6. EXISTING WALL CONSTRUCTION WITH CERAMIC TILE
- EXISTING WALL CONSTRUCTION
- 5/8" CEMENTITIOUS BACKER BOARD
- WATERPROOF MEMBRANE (ANSI A118.10).
- BOND COAT TO - REFER TO MANUFACTURER'S INSTALLATION REQUIREMENTS
- CERAMIC WALL TILE

REFER TO A8.52 FOR TILE HEIGHTS AND DETAILS.

IW7. METAL FURRING WALL IN RESTROOM
- EXISTING WALL CONSTRUCTION OR 7 5/8" CMU.
- 4" METAL STUD FRAMING AT 16" O.C TO 4" ABOVE CEILING.
- 5/8" CEMENTITIOUS BACKER BOARD.
- WATERPROOF MEMBRANE (ANSI A118.10).
- BOND COAT - REFER TO MANUFACTURER'S INSTALLATION REQUIREMENTS
- CERAMIC WALL TILE

REFER TO A8.52 FOR TILE HEIGHTS AND DETAILS.

IW8. METAL FURRING WALL AT WATER COOLER
- EXISTING WALL CONSTRUCTION.
- 3" Z CHANNEL AT 16" O.C TO 4" ABOVE CEILING.
- 5/8" MOLD AND MOISTURE RESISTANT GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS TO 4" ABOVE CEILING.

IW9. METAL STUD FIRE BARRIER. 2 HOUR FIRE-RATED CONSTRUCTION. UL DES U419 OR U491.
- 3/4" SHEETROCK ULTRACODE CORE GYPSUM PANEL TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK OR ADJACENT CMU WALL.
- 3-1/2" 25 GA. METAL STUD FRAMING AT 24" O.C TO U/S OF ROOF DECK OR ADJACENT CMU WALL. PROVIDE SLIP TRACK TOP TRACK TO ALLOW FOR 1 1/2" ROOF DEFLECTION.
- MINIMUM 3" THERMAFIBER SAFB TO U/S OF ROOF DECK.
- 3/4" SHEETROCK ULTRACODE CORE GYPSUM PANEL TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK OR ADJACENT CMU WALL.

IW10. MASONRY WALL
- 7 5/8" CMU WALL.

IW11. MASONRY WALL
- 5 5/8" CMU WALL.

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. COORDINATE THE TIMING OF WORK TO AVOID CONFLICTS WITH NORMAL SCHOOL OPERATIONS AND ACTIVITIES.

G3. CONTRACTOR TO KEEP ALL AREAS NOT AFFECTED BY CONSTRUCTION OPERATIONS OPEN, CLEAN, AND FREE FOR OWNER USE.

G4. CONTRACTOR TO VERIFY ALL EXISTING DIMENSIONS IN FIELD PRIOR TO WORK COMMENCEMENT. IF ANY DISCREPANCIES EXIST BETWEEN PLAN DIMENSIONS AND ACTUAL FIELD CONDITIONS, NOTIFY THE ARCHITECT.

G5. ALL MASONRY TO MATCH EXISTING COURSING EXACTLY. CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS PRIOR TO WORK.

G6. CONTRACTOR SHALL INSTALL HORIZONTAL JOINT REINFORCING @ 16" O.C. VERTICALLY.

G7. CONTRACTOR TO INSTALL ADJUSTABLE BRICK VENEER ANCHORS @ 16" O.C. VERTICALLY AND HORIZONTALLY. FIELD VERIFY CAVITY SIZE TO PROVIDE CORRECT ANCHOR.

G8. CONTRACTOR SHALL INSTALL A CONTINUOUS VAPOR BARRIER FROM FOUNDATION TO ROOFING. REFER TO SPECIFICATION FOR FURTHER INFORMATION.

G9. ALL OUTSIDE CORNERS OF INTERIOR CMU MASONRY TO BE BULLNOSE.

G10. ALL CORRIDOR WALLS TO BE CONSTRUCTED TO RESIST THE PASSAGE OF SMOKE.

G11. FIRE STOP ANY PENETRATIONS THROUGH FIRE WALLS AND BARRIERS.

G12. MASONRY CONTROL JOINTS SHOULD BE SPACED 25'-0" APART MAX. AND SHOULD NOT BE SPACED FURTHER THAN 1.5x THE WALL HEIGHT - REFER TO THE MASONRY INSTITUTE FOR FURTHER INFORMATION.

G13. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL DIMENSIONS. NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO COMMENCING THE WORK.

G13. ALL INTERIOR WALLS TO BE CONSTRUCTED TO UNDERSIDE OF ROOF DECK. PROVIDE COMPRESSIVE FIRE SAFE MATERIAL (FIRE-RATED TO MEET CODE, AS REQUIRED) AT TOP OF WALL TO ALLOW FOR MINIMUM 1" ROOF DEFLECTION.

G14. PROVIDE NON-COM WOOD BLOCKING AS REQUIRED TO INSTALL MISC. ACCESSORIES, IFP'S, MARKER BOARDS ETC WHETHER INDICATED OR NOT. VERIFY ALL LOCATIONS WITH OWNER AT A PRE-CONSTRUCTION MEETING.

G15. CONTRACTOR TO COORDINATE CONDUIT RUNS AND TERMINATIONS ASSOCIATED WITH LOW-VOLTAGE COMMUNICATIONS, FIRE ALARM, SECURITY, ETC, AT A PRE-CONSTRUCTION MEETING.

G16. ALL WALLS TO BE PAINTED UNLESS NOTED OTHERWISE.

G17. PATCH AND REPAIR ALL EXPOSED SURFACES, WHETHER NOTED OR NOT, AT REMOVED ITEMS, REMOVED EQUIPMENT, REMOVED WALLS, CONSTRUCTION DAMAGE, ETC.

DRAWING NOTES:

1. PORTAL WALL SYSTEM PROVIDE MINIMUM 1" GAP AT ALL SIDES.
2. UNIT VENTILATOR. REFER TO MECHANICAL DRAWINGS.
3. PLASTIC LAMINATE CUBBIES. REFER TO INTERIOR ELEVATIONS AND SPECIFICATIONS.
4. VISUAL DISPLAY BOARD. REFER TO SPECIFICATIONS.
5. INTERACTIVE FLAT PANEL. FURNISHED AND INSTALLED BY TECHNOLOGY VENDOR.
6. WALL MOUNTED ROOF LADDER.
7. INFILL EXISTING EXTERIOR WALL OPENING. TOOTH IN EXTERIOR MASONRY AS REQUIRED TO MATCH ADJACENT WALL EXACTLY. PROVIDE INTERIOR FINISH TO MATCH EXISTING.
8. INSTALL TWO FIXED AND PAINTED SHELVES IN CLOSET, @3'-6" AND 5'-0" AFF.
9. SINGLE ROLLER WINDOW SHADE, ROOM DARKENING. REFER TO MATERIAL SCHEDULE AND SPECIFICATIONS.
10. SINGLE ROLLER WINDOW SHADE, 5% OPEN - REFER TO MATERIAL SCHEDULE AND SPECIFICATIONS.
11. TRENCH INFILL, MIN 4" THICK CONCRETE FLOOR SLAB ON 15 MIL VAPOR BARRIER. TOP OF NEW CONCRETE TO BE FLUSH WITH EXISTING ADJACENT SLAB EXACTLY.
12. BOILER - REFER TO MECHANICAL.
13. WATER METER - REFER TO MECHANICAL.
14. FLOOR DRAIN - REFER TO MECHANICAL.
15. HOT WATER TANK - REFER TO MECHANICAL.
16. LOCKABLE HOSE BIB - REFER TO MECHANICAL.
17. MSB - REFER TO ELECTRICAL.
18. ELECTRICAL PANEL - REFER TO ELECTRICAL.
19. TMBD - REFER TO ELECTRICAL AND TECHNOLOGY.
20. TGB - REFER TO ELECTRICAL AND TECHNOLOGY.
21. DATA RACK - REFER TO TECHNOLOGY.
22. FIRE ALARM PANEL - REFER TO ELECTRICAL.
23. GROUNDING BAR - REFER TO ELECTRICAL.
24. SEMI-RECESSED FIRE EXTINGUISHER CABINET WITH FIRE EXTINGUISHER.
25. EXISTING GAS METER.
26. INFILL INTERIOR WALL OPENING AS REQUIRED TO PROVIDE FLUSH APPEARANCE.
27. FIREPLACE DESIGN INTENT: PATCH AND REPAIR SURFACES AFTER REMOVAL OF MARBLE SURROUND AND BRASS INSERT. PAINT SURROUND AND FIREBOX FOR FINISHED APPEARANCE.
28. CLEAN, PATCH AND REPAIR LIMESTONE/BRICK AT REMOVED OR REPLACED EXTERIOR LIGHT FIXTURES,

EXTERIOR WALL TAGS:

EW1.
- 7 5/8" CMU MASONRY (PAINT ALL SURFACES EXPOSED TO VIEW).
- 3" SPRAY FOAM BUILDING INSULATION OVER CONTINUOUS VAPOR BARRIER.
- 1 1/4" SPACE.
- 3 5/8" BRICK VENEER WITH ADJACENT BRICK TIES @ 16" O.C. VERTICALLY AND HORIZONTALLY (PROVIDE LENGTH AS REQUIRED DUE TO WALL CAVITY SIZE).

Bidding and Permits: 31 July 2023

Floor Plan (Area A)

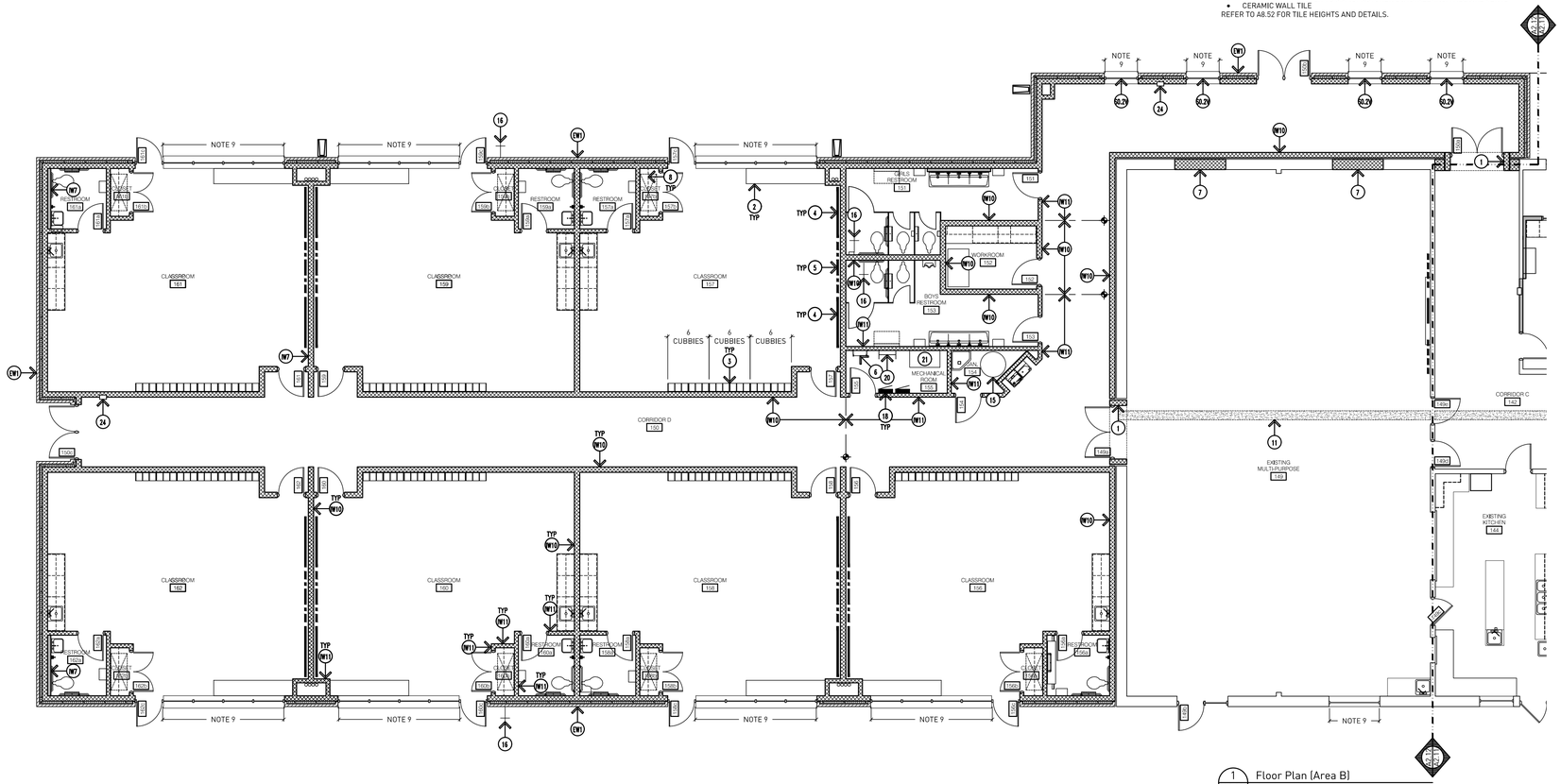
EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

A2.11

803 W. Big Beaver Road, Suite 350, Troy, MI 48084 | 248.244.9710



1 A2.12 Floor Plan (Area B)
Scale: 1/8"=1'-0"

INTERIOR WALL TAGS:

IW1. TYPICAL METAL STUD WALL CONSTRUCTION UNLESS NOTED OTHERWISE.
- 5/8" GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK.
- 3-5/8" METAL STUD FRAMING AT 16" O.C TO U/S OF ROOF DECK, PROVIDE SLIP TRACK TOP TRACK TO ALLOW FOR 1 1/2" ROOF DEFLECTION.
- MINIMUM 3" SOUND ATTENUATION BATTS TO U/S OF ROOF DECK.
- 5/8" GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK.

IW2. METAL STUD SOUND ACOUSTIC WALL - TEST NUMBER RAL-TL-84-136
- 1/2" GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK, GYPSUM SCREWS ATTACHED TO STUDS.
- 3-5/8" METAL STUD FRAMING AT 16" O.C TO U/S OF ROOF DECK, PROVIDE SLIP TRACK TOP TRACK TO ALLOW FOR 1 1/2" ROOF DEFLECTION.
- MINIMUM 3" SOUND ATTENUATION BATTS TO U/S OF ROOF DECK.
- RC-1 CHANNEL INSTALLED ON ONE SIDE @ 24" O.C.
- TWO (2) LAYERS 1/2" GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS TO UNDERSIDE OF ROOF DECK. GYPSUM SCREWS ATTACHED TO RC-1 CHANNEL.
- ACOUSTIC SEALANT AT TOP AND BOTTOM OF WALLS AND AT ALL PENETRATIONS.

FOR WALLS LOCATED AT RESTROOMS, REFER TO ADJACENT WALL CONSTRUCTION TYPE FOR TILE WALL CONSTRUCTION.

IW3. METAL STUD SECURE VESTIBULE WALL
- 5/8" GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK.
- 3-5/8" METAL STUD FRAMING AT 16" O.C TO U/S OF ROOF DECK, PROVIDE SLIP TRACK TOP TRACK TO ALLOW FOR 1 1/2" ROOF DEFLECTION.
- 5/16" BULLET RESISTANT FIBERGLASS PANEL.
- 5/8" GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK.

IW4. METAL STUD WET WALL WITH CERAMIC TILE ON BOTH SIDES
- CERAMIC WALL TILE TO 6'-9" AFF - REFER TO A8.52
- BOND COAT TO 6'-9" AFF - REFER TO MANUFACTURER'S INSTALLATION REQUIREMENTS
- WATERPROOF MEMBRANE (ANSI A118.10), TO 6'-9" AFF
- 5/8" CEMENTITIOUS BACKER BOARD TO 6'-8" AFF
- 5/8" MOLD AND MOISTURE RESISTANT GYPSUM BOARD TAPED AND FINISHED THREE (3 COATS FROM 6'-8 1/2" AFF TO U/S OF ROOF DECK.
- 6" METAL STUD FRAMING AT 16" O.C TO U/S OF ROOF DECK. PROVIDE SLIP TRACK TOP TO ALLOW FOR 1 1/2" ROOF DEFLECTION.
- 5/8" MOLD AND MOISTURE RESISTANT GYPSUM BOARD TAPED AND FINISHED THREE (3 COATS FROM 6'-8 1/2" AFF TO U/S OF ROOF DECK.
- 5/8" CEMENTITIOUS BACKER BOARD TO 6'-8" AFF
- WATERPROOF MEMBRANE (ANSI A118.10), TO 6'-9" AFF
- BOND COAT TO 6'-9" AFF - REFER TO MANUFACTURER'S INSTALLATION REQUIREMENTS
- CERAMIC WALL TILE TO 6'-9" AFF - REFER TO A8.52

IW5. METAL STUD COMMON WALL BETWEEN JANITOR CLOSET AND WET WALL WITH CERAMIC TILE
- 5/8" MOLD AND MOISTURE RESISTANT GYPSUM BOARD TAPED AND FINISHED THREE (3 COATS TO U/S OF ROOF DECK.
- 6" METAL STUD FRAMING AT 16" O.C TO U/S OF ROOF DECK. PROVIDE SLIP TRACK TOP TRACK TO ALLOW FOR 1 1/2" ROOF DEFLECTION.
- 5/8" MOLD AND MOISTURE RESISTANT GYPSUM BOARD TAPED AND FINISHED THREE (3 COATS FROM 6'-8 1/2" AFF TO U/S OF ROOF DECK.
- 5/8" CEMENTITIOUS BACKER BOARD TO 6'-8" AFF
- WATERPROOF MEMBRANE (ANSI A118.10), TO 6'-9" AFF
- BOND COAT TO 6'-9" AFF - REFER TO MANUFACTURER'S INSTALLATION REQUIREMENTS
- CERAMIC WALL TILE TO 6'-9" AFF - REFER TO A8.52.

IW6. EXISTING WALL CONSTRUCTION WITH CERAMIC TILE
- EXISTING WALL CONSTRUCTION
- 5/8" CEMENTITIOUS BACKER BOARD
- WATERPROOF MEMBRANE (ANSI A118.10).
- BOND COAT TO - REFER TO MANUFACTURER'S INSTALLATION REQUIREMENTS
- CERAMIC WALL TILE

REFER TO A8.52 FOR TILE HEIGHTS AND DETAILS.

IW7. METAL FURRING WALL IN RESTROOM
- EXISTING WALL CONSTRUCTION OR 7 5/8" CMU.
- 4" METAL STUD FRAMING AT 16" O.C TO 4" ABOVE CEILING.
- 5/8" CEMENTITIOUS BACKER BOARD.
- WATERPROOF MEMBRANE (ANSI A118.10).
- BOND COAT - REFER TO MANUFACTURER'S INSTALLATION REQUIREMENTS
- CERAMIC WALL TILE

REFER TO A8.52 FOR TILE HEIGHTS AND DETAILS.

IW8. METAL FURRING WALL AT WATER COOLER
- EXISTING WALL CONSTRUCTION.
- 3" Z CHANNEL AT 16" O.C TO 4" ABOVE CEILING.
- 5/8" MOLD AND MOISTURE RESISTANT GYPSUM BOARD TAPED AND FINISHED THREE (3 COATS TO 4" ABOVE CEILING.

IW9. METAL STUD FIRE BARRIER. 2 HOUR FIRE-RATED CONSTRUCTION. UL DES U419 OR U491.
- 3/4" SHEETROCK ULTRACODE CORE GYPSUM PANEL TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK OR ADJACENT CMU WALL.
- 3-1/2" 25 GA. METAL STUD FRAMING AT 24" O.C TO U/S OF ROOF DECK OR ADJACENT CMU WALL. PROVIDE SLIP TRACK TOP TRACK TO ALLOW FOR 1 1/2" ROOF DEFLECTION.
- MINIMUM 3" THERMAFIBER SAFB TO U/S OF ROOF DECK.
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IW10. MASONRY WALL
- 7 5/8" CMU WALL.

IW11. MASONRY WALL
- 5 5/8" CMU WALL.

GENERAL NOTES:

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G4. CONTRACTOR TO VERIFY ALL EXISTING DIMENSIONS IN FIELD PRIOR TO WORK COMMENCEMENT. IF ANY DISCREPANCIES EXIST BETWEEN PLAN DIMENSIONS AND ACTUAL FIELD CONDITIONS, NOTIFY THE ARCHITECT.

G5. ALL MASONRY TO MATCH EXISTING COURSING EXACTLY. CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS PRIOR TO WORK.

G6. CONTRACTOR SHALL INSTALL HORIZONTAL JOINT REINFORCING @ 16" O.C. VERTICALLY.

G7. CONTRACTOR TO INSTALL ADJUSTABLE BRICK VENEER ANCHORS @ 16" O.C. VERTICALLY AND HORIZONTALLY. FIELD VERIFY CAVITY SIZE TO PROVIDE CORRECT ANCHOR.

G8. CONTRACTOR SHALL INSTALL A CONTINUOUS VAPOR BARRIER FROM FOUNDATION TO ROOFING. REFER TO SPECIFICATION FOR FURTHER INFORMATION.

G9. ALL OUTSIDE CORNERS OF INTERIOR CMU MASONRY TO BE BULLNOSE.

G10. ALL CORRIDOR WALLS TO BE CONSTRUCTED TO RESIST THE PASSAGE OF SMOKE.

G11. FIRE STOP ANY PENETRATIONS THROUGH FIRE WALLS AND BARRIERS.

G12. MASONRY CONTROL JOINTS SHOULD BE SPACED 25'-0" APART MAX. AND SHOULD NOT BE SPACED FURTHER THAN 1.5x THE WALL HEIGHT - REFER TO THE MASONRY INSTITUTE FOR FURTHER INFORMATION.

G13. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL DIMENSIONS. NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO COMMENCING THE WORK.

G13. ALL INTERIOR WALLS TO BE CONSTRUCTED TO UNDERSIDE OF ROOF DECK. PROVIDE COMPRESSIVE FIRE SAFE MATERIAL (FIRE-RATED TO MEET CODE, AS REQUIRED) AT TOP OF WALL TO ALLOW FOR MINIMUM 1" ROOF DEFLECTION.

G14. PROVIDE NON-COM WOOD BLOCKING AS REQUIRED TO INSTALL MISC. ACCESSORIES, IFP'S, MARKER BOARDS ETC WHETHER INDICATED OR NOT. VERIFY ALL LOCATIONS WITH OWNER AT A PRE-CONSTRUCTION MEETING.

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G16. ALL WALLS TO BE PAINTED UNLESS NOTED OTHERWISE.

G17. PATCH AND REPAIR ALL EXPOSED SURFACES, WHETHER NOTED OR NOT, AT REMOVED ITEMS, REMOVED EQUIPMENT, REMOVED WALLS, CONSTRUCTION DAMAGE, ETC.

DRAWING NOTES:

1. PORTAL WALL SYSTEM PROVIDE MINIMUM 1" GAP AT ALL SIDES.
2. UNIT VENTILATOR. REFER TO MECHANICAL DRAWINGS.
3. PLASTIC LAMINATE CUBBIES. REFER TO INTERIOR ELEVATIONS AND SPECIFICATIONS.
4. VISUAL DISPLAY BOARD. REFER TO SPECIFICATIONS.
5. INTERACTIVE FLAT PANEL. FURNISHED AND INSTALLED BY TECHNOLOGY VENDOR.
6. WALL MOUNTED ROOF LADDER.
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8. INSTALL TWO FIXED AND PAINTED SHELVES IN CLOSET, @3'-6" AND 5'-0" AFF.
9. SINGLE ROLLER WINDOW SHADE, ROOM DARKENING. REFER TO MATERIAL SCHEDULE AND SPECIFICATIONS.
10. SINGLE ROLLER WINDOW SHADE, 5% OPEN - REFER TO MATERIAL SCHEDULE AND SPECIFICATIONS.
11. TRENCH INFILL. MIN 4" THICK CONCRETE FLOOR SLAB ON 15 MIL VAPOR BARRIER. TOP OF NEW CONCRETE TO BE FLUSH WITH EXISTING ADJACENT SLAB EXACTLY.
12. BOILER - REFER TO MECHANICAL.
13. WATER METER - REFER TO MECHANICAL.
14. FLOOR DRAIN - REFER TO MECHANICAL.
15. HOT WATER TANK - REFER TO MECHANICAL.
16. LOCKABLE HOSE BIB - REFER TO MECHANICAL.
17. MSB - REFER TO ELECTRICAL.
18. ELECTRICAL PANEL - REFER TO ELECTRICAL.
19. TMBD - REFER TO ELECTRICAL AND TECHNOLOGY.
20. TGB - REFER TO ELECTRICAL AND TECHNOLOGY.
21. DATA RACK - REFER TO TECHNOLOGY.
22. FIRE ALARM PANEL - REFER TO ELECTRICAL.
23. GROUNDING BAR - REFER TO ELECTRICAL.
24. SEMI-RECESSED FIRE EXTINGUISHER CABINET WITH FIRE EXTINGUISHER.
25. EXISTING GAS METER.
26. INFILL INTERIOR WALL OPENING AS REQUIRED TO PROVIDE FLUSH APPEARANCE.
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28. CLEAN, PATCH AND REPAIR LIMESTONE/BRICK AT REMOVED OR REPLACED EXTERIOR LIGHT FIXTURES.

EXTERIOR WALL TAGS:

EW1.
- 7 5/8" CMU MASONRY (PAINT ALL SURFACES EXPOSED TO VIEW).
- 3" SPRAY FOAM BUILDING INSULATION OVER CONTINUOUS VAPOR BARRIER.
- 1 1/4" SPACE.
- 3 5/8" BRICK VENEER WITH ADJACENT BRICK TIES @ 16" O.C. VERTICALLY AND HORIZONTALLY (PROVIDE LENGTH AS REQUIRED DUE TO WALL CAVITY SIZE).

STATE OF MICHIGAN
ELIZABETH SUE BYE
ARCHITECT
No. 1301054283
LICENSED ARCHITECT

Bidding and Permits: 31 July 2023

Floor Plan (Area B)

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

A2.12

803 W. Big Beaver Road, Suite 350, Troy, MI 48084 | 248.244.9710

GENERAL NOTES:

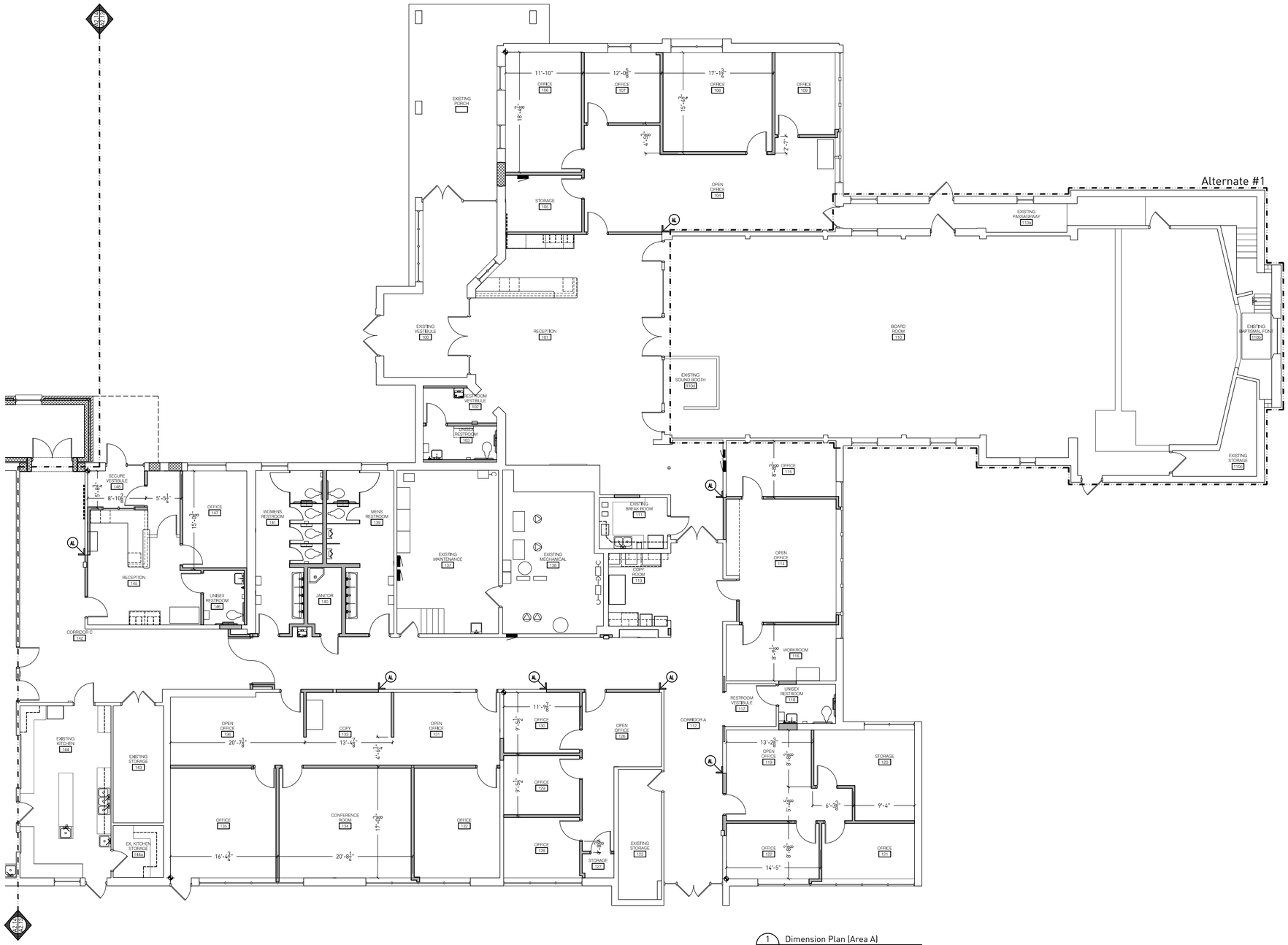
G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. ALL EXTERIOR WALLS ARE 1'-3 1/2" UNLESS DIMENSIONED OTHERWISE.

G3. ALL DOORS ARE LOCATED 4" TO HINGE SIDE FROM ADJACENT WALL UNLESS DIMENSIONED OTHERWISE.

G4. ALL MASONRY DIMENSIONS ARE TO FACE OF WALL.

G5. ALL STUD FRAMING DIMENSIONS ARE TO THE CENTER OF WALL.



1 / A2.13 Dimension Plan (Area A)
Scale: 1/8"=1'-0"

STATE OF MICHIGAN
ELIZABETH SUE BYE
ARCHITECT
No. 1301054283
LICENSED ARCHITECT

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Dimension Plan (Area A)

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Project No. 3221

A2.13

803 W. Big Beaver Road, Suite 350, Troy, MI 48084 | 248.244.9710

GENERAL NOTES:

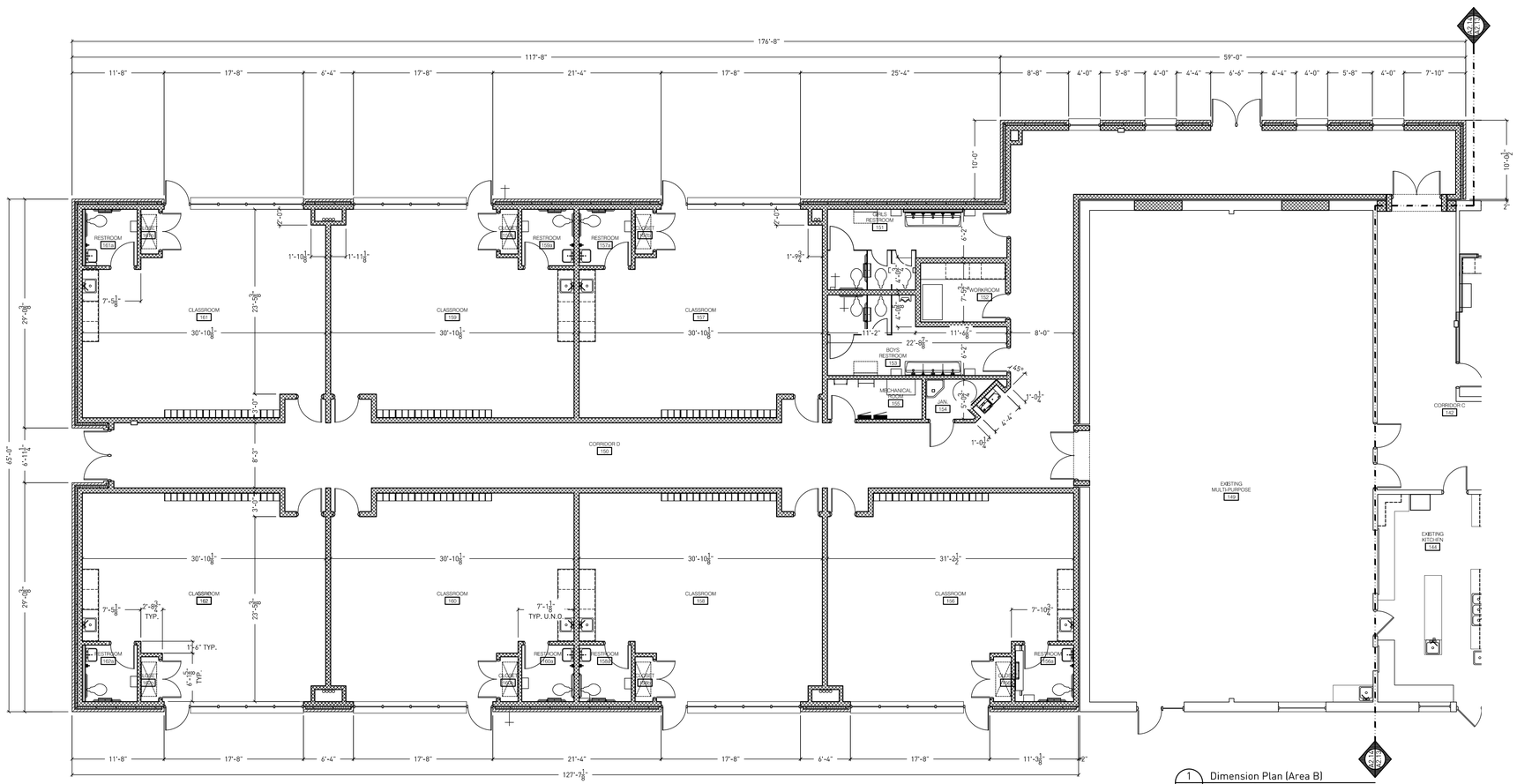
G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. ALL EXTERIOR WALLS ARE 1'-3 1/2" UNLESS DIMENSIONED OTHERWISE.

G3. ALL DOORS ARE LOCATED 4" TO HINGE SIDE FROM ADJACENT WALL UNLESS DIMENSIONED OTHERWISE.

G4. ALL MASONRY DIMENSIONS ARE TO FACE OF WALL.

G5. ALL STUD FRAMING DIMENSIONS ARE TO THE CENTER OF WALL.



1 A2.14 Dimension Plan (Area B)
Scale: 1/8"=1'-0"

STATE OF MICHIGAN
ELIZABETH SUE BYE
ARCHITECT
No. 1301054283
LICENSED ARCHITECT

Bidding and Permits: 31 July 2023

Dimension Plan (Area B)

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

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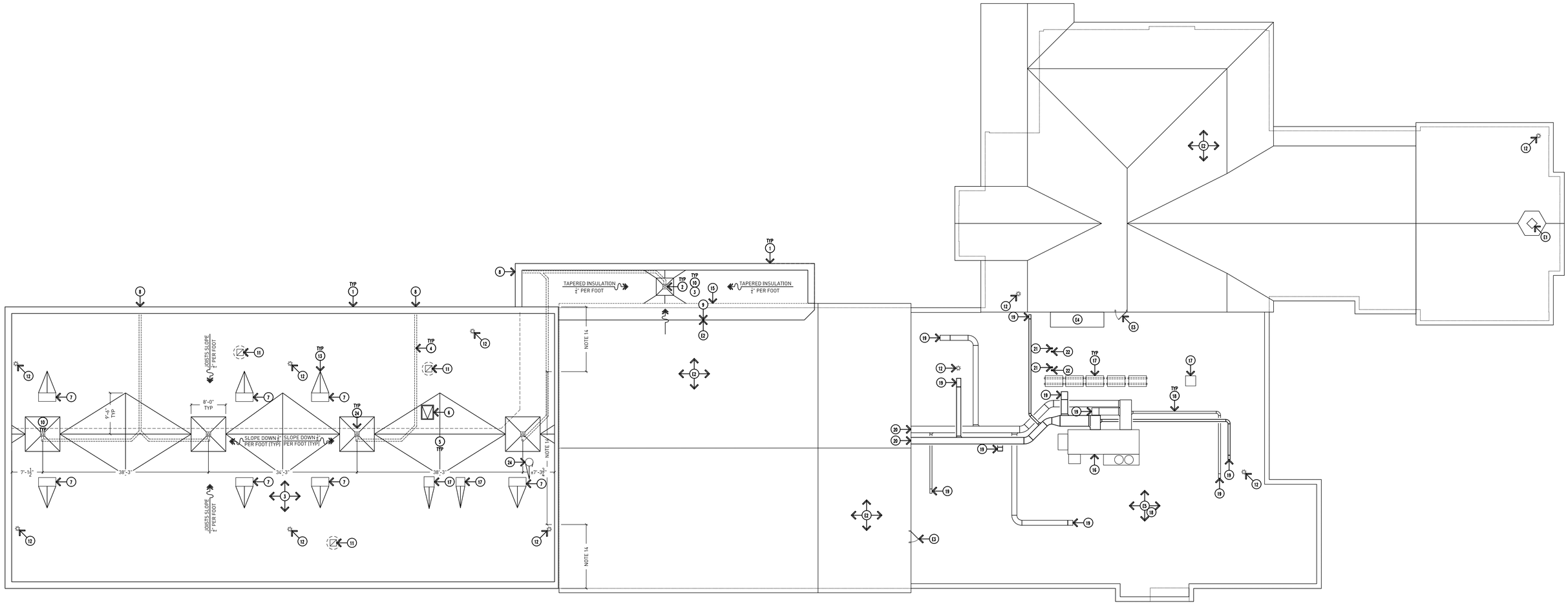

1 A2.50 Composite Roof Plan
Scale: 3/32"=1'-0"

DRAWING NOTES CONTINUE:

15. ROOF TO ROOF EXPANSION JOINT.
16. ROOF MOUNTED ERU - REFER TO MECHANICAL AND STRUCTURAL.
17. ROOF MOUNTED ACCU - REFER TO MECHANICAL.
18. ROOF TOP DUCTWORK - REFER TO MECHANICAL FOR ROUTING AND LOCATIONS.
19. ROOF CURB AT DUCT PENETRATION - REFER TO MECHANICAL AND STRUCTURAL FOR MORE INFORMATION.
20. THROUGH WALL DUCT PENETRATION - REFER TO MECHANICAL AND STRUCTURAL FOR MORE INFORMATION.
21. BOILER INTAKE - REFER TO MECHANICAL.
22. BOILER FLUE - REFER TO MECHANICAL.
23. ROOF MOUNTED IH - REFER TO MECHANICAL.
24. WALL BEARING BELOW - MAKE NOTE TO NOT SET THE ROOF DRAINS ON TOP OF THE WALL.

DRAWING NOTES:

1. PREFINISHED METAL CAP FLASHING WITH CONTINUOUS CLIP ANCHORS ON BOTH SIDES.
2. COMBINATION ROOF SUMP / OVERFLOW -- REFER TO MECHANICAL DRAWINGS.
3. SINGLE-PLY MECHANICALLY FASTENED MEMBRANE ON ROOF INSULATION.
4. APPROXIMATE LOCATION OF DRAIN AND OVERFLOW PIPING BELOW ROOF -- REFER TO MECHANICAL DRAWINGS. THE OVERFLOW AND DRAIN ARE STACKED ON TOP OF EACH OTHER WITH THE OVERFLOW ON TOP.
5. HINGED TARGET SUMP PER MANUFACTURER STANDARDS.
6. 30" x 36" ROOF HATCH -- COORDINATE WITH ROOF STRUCTURE.
7. ROOF MOUNTED GRH - REFER TO MECHANICAL.
8. TONGUE AT THRU-WALL LOCATION OF OVERFLOW DRAIN CONDUCTOR PIPING -- REFER TO MECHANICAL DRAWINGS.
9. TIE NEW ROOFING INTO EXISTING.
10. TAPERED INSULATION FOR SLOPE TO ROOF DRAIN.
11. ROOF MOUNTED EF - REFER TO MECHANICAL.
12. VENT THRU ROOF -- REFER TO MECHANICAL FOR FURTHER INFORMATION.
13. PROVIDE SADDLE TO DIRECT WATER AROUND PENETRATION.
14. WALL TO CURB BELLOWS EXPANSION JOINT.

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. REFER TO MANUFACTURER SPECIFICATIONS, REQUIREMENTS, ETC. FOR PROPER ROOFING INSTALLATION PER ARCHITECTURAL SPECIFICATIONS AND WARRANTY CONDITIONS. ROOFING MATERIAL SHALL BE INSTALLED TO MAINTAIN WARRANTY OF EXISTING ROOFING.

G3. ALL CURBS, FLASHINGS, ETC. SHALL BE FURNISHED AND INSTALLED TO BE COMPATIBLE WITH THE ROOFING SYSTEM AND AT HEIGHT REQUIRED TO MAINTAIN ROOFING WARRANTY.

G4. ROOF INSULATION TO BE INSTALLED IN MINIMUM 2 LAYERS -- REFER TO SPECIFICATIONS.

G5. ROOFING IN ALL LOCATIONS TO CARRY UP FACE OF PARAPET WALL AND OVER THE TOP -- REFER TO SECTIONS FOR FURTHER DETAIL.

G6. ALL EXISTING ITEMS ARE TO REMAIN UNLESS NOTED OTHERWISE.

G7. EXISTING CONDITIONS ARE SHOWN FOR REFERENCE ONLY .

EXISTING TO REMAIN:

E1. STEEPLE.

E2. PITCHED ASPHALT SHINGLE ROOF.

E3. ATTIC ACCESS DOOR.

E4. CHIMNEY.

E5. FLAT EPDM ROOF.

N

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DOOR SCHEDULE A

DOOR NO.	OPENING LOCATION	FIRE RATING	HARDW. HEADING	LOCK FUNCTION	FRAME INFORMATION								DOOR INFORMATION					
					HARDWARE REMARKS	OPENING WIDTH	OPENING HEIGHT	FRAME ELEV.	JAMB DEPTH	FRAME MATER.	FRAME FINISH	FRAME REMARKS	DOOR SIZE	DOOR THICK.	DOOR ELEV.	DOOR MATER.	DOOR FINISH	DOOR REMARKS
100a	TO EXTERIOR FROM EXISTING VESTIBULE 100					ETR	ETR		ETR	ETR	ETR		ETR	ETR		ETR	ETR	
100b	TO EXISTING PORCH FROM EXISTING VESTIBULE 100					ETR	ETR		ETR	ETR	ETR		ETR	ETR		ETR	ETR	
100c	TO VESTIBULE 100 FROM RECEPTION 101			EXIT		11'-8"	7'-2"	S2.4	[5-3/4"]	ALUM	PREFIN	DF3	(2) 3'-0" x 7'-0"	(1-3/4")	G	FRP	PREFIN	D1
103	TO UNISEX RESTROOM 103 FROM RESTROOM VESTIBULE 102			PRIVACY		3'-4"	7'-2"	1.0	[5-3/4"]	HM	PAINT [PT-11]		3'-0" x 7'-0"	(1-3/4")	F	WD	STAIN	
104	TO OPEN OFFICE 104 FROM RECEPTION 101			CLASSROOM		3'-4"	7'-2"	1.0	[5-3/4"]	HM	PAINT [PT-11]		3'-0" x 7'-0"	(1-3/4")	NL	WD	STAIN	
104b	TO OPEN OFFICE 104 FROM EXISTING PASSAGEWAY 110a					ETR	ETR		ETR	ETR	PAINT [PT-11]		ETR	ETR	ETR	ETR	ETR	
105	TO STORAGE 105 FROM OPEN OFFICE 104			STOREROOM		3'-4"	7'-2"	1.0	[5-3/4"]	HM	PAINT [PT-11]		3'-0" x 7'-0"	(1-3/4")	F	WD	STAIN	
106	TO OFFICE 106 FROM OPEN OFFICE 104			OFFICE		3'-4"	7'-2"	1.0	[5-3/4"]	HM	PAINT [PT-11]		3'-0" x 7'-0"	(1-3/4")	NL	WD	STAIN	
107	TO OFFICE 107 FROM OPEN OFFICE 104			OFFICE		3'-4"	7'-2"	1.0	[5-3/4"]	HM	PAINT [PT-11]		3'-0" x 7'-0"	(1-3/4")	NL	WD	STAIN	
108	TO OFFICE 108 FROM OPEN OFFICE 104			OFFICE		3'-4"	7'-2"	1.0	[5-3/4"]	HM	PAINT [PT-11]		3'-0" x 7'-0"	(1-3/4")	NL	WD	STAIN	
109	TO OFFICE 109 FROM OPEN OFFICE 104			OFFICE		3'-4"	7'-2"	1.0	[5-3/4"]	HM	PAINT [PT-11]		3'-0" x 7'-0"	(1-3/4")	NL	WD	STAIN	
110a	TO RECEPTION 101 FROM BOARD ROOM 110			PUSH/PULL		ETR	ETR		ETR	ETR	PAINT [PT-11]		3'-0" x 7'-0"	(1-3/4")		WD	STAIN	
110b	TO RECEPTION 101 FROM BOARD ROOM 110			PUSH/PULL		ETR	ETR		ETR	ETR	PAINT [PT-11]		3'-0" x 7'-0"	(1-3/4")		WD	STAIN	
110c	TO EXISTING PASSAGEWAY 110a FROM BOARD ROOM 110					ETR	ETR		ETR	ETR	ETR		ETR	ETR		ETR	ETR	
110d	TO EXISTING PASSAGEWAY 110a FROM BOARD ROOM 110					ETR	ETR		ETR	ETR	PAINT [PT-11]		ETR	ETR		ETR	PAINT	
110e	TO EXISTING STORAGE 110c FROM BOARD ROOM 110					ETR	ETR		ETR	ETR	PAINT [PT-11]		ETR	ETR		ETR	PAINT	
110f	TO EXTERIOR FROM BOARD ROOM 110					ETR	ETR		ETR	ETR	PAINT [PT-11]		ETR	ETR		ETR	PAINT	
110g	TO RECEPTION 101 FROM BOARD ROOM 110			PUSH/PULL		ETR	ETR		ETR	HM	PAINT [PT-11]		3'-0"x 7'-0"	(1-3/4")		WD	STAIN	
110h	TO EXTERIOR FROM EXISTING PASSAGEWAY 110a					ETR	ETR		ETR	ETR	PAINT [PT-11]		ETR	ETR		ETR	PAINT	
111	TO RECEPTION 101 FROM EXISTING BREAK ROOM 111			CLASSROOM 2		ETR	ETR		ETR	HM	PAINT [PT-11]		2'-10" x 7'-0"	(1-3/4")		WD	STAIN	
112a	TO RECEPTION 101 FROM CORRIDOR A 112	ETR				ETR	ETR		ETR	ETR	PAINT [PT-11]		ETR	ETR		ETR	PAINT	
112b	TO EXTERIOR FROM CORRIDOR A 112					ETR	ETR		ETR	ETR	ETR		ETR	ETR		ETR	ETR	
114	TO CORRIDOR A 112 FROM OPEN OFFICE 114			CLASSROOM		3'-4"	7'-2"	1.0		HM	PAINT [PT-11]		3'-0" x 7'-0"	(1-3/4")	NL	WD	STAIN	
115	TO OFFICE 115 FROM OPEN OFFICE 114			OFFICE		3'-4"	7'-2"	1.0	[5-3/4"]	HM	PAINT [PT-11]		3'-0" x 7'-0"	(1-3/4")	NL	WD	STAIN	
116	TO WORKROOM 116 FROM OPEN OFFICE 114			CLASSROOM 2		3'-4"	7'-2"	1.0	[5-3/4"]	HM	PAINT [PT-11]		3'-0" x 7'-0"	(1-3/4")	F	WD	STAIN	
118	TO RESTROOM VESTIBULE 117 FROM UNISEX RESTROOM 118			PRIVACY		3'-4"	7'-2"	1.0	[5-3/4"]	HM	PAINT [PT-11]		3'-0" x 7'-0"	(1-3/4")	F	WD	STAIN	
119	TO OPEN OFFICE 119 FROM CORRIDOR A 112			CLASSROOM		3'-4"	7'-2"	1.0	[5-3/4"]	HM	PAINT [PT-11]		3'-0" x 7'-0"	(1-3/4")	NL	WD	STAIN	
120	TO STORAGE 120 FROM OPEN OFFICE 119			STOREROOM		3'-4"	7'-2"	1.0	[5-3/4"]	HM	PAINT [PT-11]		3'-0" x 7'-0"	(1-3/4")	F	WD	STAIN	
121	TO OFFICE 121 FROM OPEN OFFICE 119			OFFICE		3'-4"	7'-2"	1.0	[5-3/4"]	HM	PAINT [PT-11]		3'-0" x 7'-0"	(1-3/4")	NL	WD	STAIN	
122	TO OFFICE 122 FROM OPEN OFFICE 119			OFFICE		3'-4"	7'-2"	1.0	[5-3/4"]	HM	PAINT [PT-11]		3'-0" x 7'-0"	(1-3/4")	NL	WD	STAIN	
123	TO STORAGE 123 FROM CORRIDOR A 112					ETR	ETR		ETR	ETR	ETR		ETR	ETR	ETR	ETR	PAINT	
125	TO CORRIDOR C 142 FROM CORRIDOR B 125	90 MIN.		DOUBLE EGRESS		7'-4"	7'-2"	2.1	[5-3/4"]	HM	PAINT [PT-11]	DF1	3'-6" x 7'-0"	(1-3/4")		WD	STAIN	
126	TO OPEN OFFICE 126 FROM CORRIDOR B 125			CLASSROOM		3'-4"	7'-2"	1.0	[5-3/4"]	HM	PAINT [PT-11]		3'-0" x 7'-0"	(1-3/4")	NL	WD	STAIN	
127	TO OPEN OFFICE 126 FROM STORAGE 127			STOREROOM		3'-4"	7'-2"	1.0	[5-3/4"]	HM	PAINT [PT-11]		3'-0" x 7'-0"	(1-3/4")	F	WD	STAIN	
128	TO OFFICE 128 FROM OPEN OFFICE 126			OFFICE		3'-4"	7'-2"	1.0	[5-3/4"]	HM	PAINT [PT-11]		3'-0" x 7'-0"	(1-3/4")	NL	WD	STAIN	
129	TO OFFICE 129 FROM OPEN OFFICE 126			OFFICE		3'-4"	7'-2"	1.0	[5-3/4"]	HM	PAINT [PT-11]		3'-0" x 7'-0"	(1-3/4")	NL	WD	STAIN	
130	TO OFFICE 130 FROM OPEN OFFICE 126			OFFICE		3'-4"	7'-2"	1.0	[5-3/4"]	HM	PAINT [PT-11]		3'-0" x 7'-0"	(1-3/4")	NL	WD	STAIN	
131	TO OPEN OFFICE 131 FROM CORRIDOR B 125			CLASSROOM		3'-4"	7'-2"	1.0	[5-3/4"]	HM	PAINT [PT-11]		3'-0" x 7'-0"	(1-3/4")	NL	WD	STAIN	
132	TO OFFICE 132 FROM OPEN OFFICE 131			OFFICE		3'-4"	7'-2"	1.0	[5-3/4"]	HM	PAINT [PT-11]		3'-0" x 7'-0"	(1-3/4")	NL	WD	STAIN	
134	TO CONFERENCE ROOM 134 FROM OPEN OFFICE 136			CLASSROOM		3'-4"	7'-2"	1.0	[5-3/4"]	HM	PAINT [PT-11]		3'-0" x 7'-0"	(1-3/4")	NL	WD	STAIN	
135a	TO OFFICE 135 FROM OPEN OFFICE 136			OFFICE		3'-4"	7'-2"	1.0	[5-3/4"]	HM	PAINT [PT-11]		3'-0" x 7'-0"	(1-3/4")	NL	WD	STAIN	
135b	TO EXTERIOR FROM OFFICE 135					ETR	ETR		ETR	ETR	PAINT [PT-11]		ETR	ETR		ETR	PAINT	
136	TO OPEN OFFICE 136 FROM CORRIDOR B 125			CLASSROOM		3'-4"	7'-2"	1.0	[5-3/4"]	HM	PAINT [PT-11]		3'-0" x 7'-0"	(1-3/4")	NL	WD	STAIN	
137	TO EXISTING MAINTENANCE 137 FROM CORRIDOR B 125					ETR	ETR		ETR	ETR	PAINT [PT-11]		ETR	ETR		ETR	PAINT	
138	TO EXISTING MAINTENANCE ROOM 137 FROM EXISTING MECHANICAL 138					ETR	ETR		ETR	ETR	PAINT [PT-11]		ETR	ETR		ETR	PAINT	
139	TO MENS RESTROOM 139 FROM CORRIDOR B 125			RESTROOM		3'-4"	7'-2"	1.0	[5-3/4"]	HM	PAINT [PT-11]		3'-0" x 7'-0"	(1-3/4")	F	WD	STAIN	
140	TO JANITOR 140 FROM CORRIDOR B 125			STOREROOM	H3	3'-4"	7'-2"	1.0	[5-3/4"]	HM	PAINT [PT-11]	DF2	3'-0" x 7'-0"	(1-3/4")	F	WD	STAIN	
141	TO WOMENS RESTROOM 141 FROM CORRIDOR B 125			RESTROOM		3'-4"	7'-2"	1.0	[5-3/4"]	HM	PAINT [PT-11]		3'-0" x 7'-0"	(1-3/4")	F	WD	STAIN	
143	TO CORRIDOR C 142 FROM EXISTING STORAGE 143					ETR	ETR		ETR	ETR	PAINT [PT-11]		ETR	ETR		ETR	PAINT	
144	TO CORRIDOR C 142 FROM EXISTING KITCHEN 144			CLASSROOM 2	H3	ETR	ETR		ETR	HM	PAINT [PT-11]	DF2	3'-0" X 7'-0"	(1-3/4")	NL	WD	STAIN	
144a	TO EX. KITCHEN STORAGE 144A FROM EXISTING KITCHEN 144					ETR	ETR		ETR	ETR	ETR		ETR	ETR		ETR	ETR	
144b	TO EXTERIOR FROM EXISTING KITCHEN 144					ETR	ETR		ETR	ETR	ETR		ETR	ETR		ETR	ETR	
145	TO RECEPTION 145 FROM CORRIDOR C 142			CLASSROOM		3'-4"	7'-2"	1.0	[5-3/4"]	HM	PAINT [PT-11]		3'-0" x 7'-0"	(1-3/4")	HG	WD	STAIN	
146	TO RECEPTION 145 FROM UNISEX RESTROOM 146			RESTROOM		3'-4"	7'-2"	1.0	[5-3/4"]	HM	PAINT [PT-11]		3'-0" x 7'-0"	(1-3/4")	F	WD	STAIN	
147	TO OFFICE 147 FROM FROM RECEPTION 145			OFFICE		3'-4"	7'-2"	1.0	[5-3/4"]	HM	PAINT [PT-11]		3'-0" x 7'-0"	(1-3/4")	NL	WD	STAIN	
148a	TO EXTERIOR FROM SECURE VESTIBULE 148			EXIT		3'-4"	7'-2"	S1.1	[5-3/4"]	ALUM	PREFIN		3'-0" x 7'-0"	(1-3/4")	G	FRP	PREFIN	
148b	TO RECEPTION 145 FROM SECURE VESTIBULE 148			EXIT		3'-4"	7'-2"	S1.0	[5-3/4"]	ALUM	PREFIN		3'-0" x 7'-0"	(1-3/4")	G	FRP	PREFIN	D1

LOCK FUNCTION NOTES:

CLASSROOM: SIMILAR TO SCHLAGE L9050 WITH VISUAL SECURITY INDICATOR AND ADA THUMBTURN, INDICATOR TO SAY "LOCKED/UNLOCKED, OR VON DUPRIN EXIT DEVICE WITH SECURITY INDICATOR AND ADA THUMBTURN.

CLASSROOM 2: SIMILAR TO SCHLAGE L9070.

EXIT: EXIT DEVICE WITH LEVER TRIM

OFFICE: SIMILAR TO SCHLAGE L9056.

PRIVACY: SIMILAR TO SCHLAGE L9444.

RESTROOM: SIMILAR TO SCHLAGE L463 DEADBOLT (DOOR CAN BE UNLOCKED FROM INSIDE, BUT NOT LOCKED).

STOREROOM: SIMILAR TO SCHLAGE L9080.

GENERAL HARDWARE NOTES:

GHN1. LOCK FUNCTIONS INDICATED ARE APPROXIMATE. FINAL LOCK FUNCTION, ETC. TO BE DETERMINED AT SPECIAL MEETING WITH OWNER AND HARDWARE SUPPLIER SPECIFICALLY INTENDED FOR THAT PURPOSE -REFER TO SPECIFICATIONS.

GHN2. REFER TO SPECIFICATIONS FOR FINISH DESIGNATIONS.

GHN3. RE-KEY EXISTING HARDWARE TO ALIGN WITH NEW KEYING SYSTEM.

HARDWARE NOTES

H1, PROVIDE MAGNETIC HOLD - OPEN AT FIRE DOOR.

H2. THUMBTURN FOR VISUAL INDICATOR ORIENTATION TO BE VERTICAL (UP/DOWN) FOR UNLOCKED, HORIZONTAL (LEFT/RIGHT) FOR LOCKED.

H3. PROVIDE 180 DEGREE OPEN.

GENERAL DOOR FRAME NOTES:

GDFN1. PROVIDE PERIMETER SEALANT. (INTERIOR AND EXTERIOR SIDES)

DOOR FRAME NOTES

DF1. PROVIDE DOUBLE EGRESS FRAME.

DF2. PROVIDE 180 DEGREE OPEN.

DF2. PROVIDE SGG IN SIDELITES. INSTALLED PER MANUFACTUERER'S REQUIREMENTS.

GENERAL DOOR NOTES:

GD1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

GD2. COORDINATE DIMENSIONS WITH MANUFACTURER.

GD3. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

GD4. ALL CLASSROOM DOORS TO CORRIDOR ARE TO BE FIRE RATED UNLESS NOTED OTHERWISE. REFER TO DOOR SCHEDULE FOR RATING.

DOOR NOTES:

D1. PROVIDE SGG IN DOOR, INSTALLED PER MANUFACTURER'S REQUIREMENTS.

LEGEND:

FRP	FIBERGLASS REINFORCED POLYMER
GL	GLASS
HM	HOLLOW METAL
IMP	INSULATED METAL PANEL
PREFIN	PREFINISHED
PT	PAINT
SGG	SCHOOL GUARD GLASS
TEMP	TEMPERED
WD	WOOD

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Door Schedule

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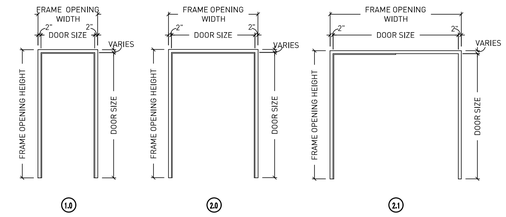
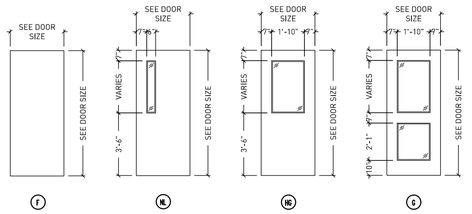
DOOR SCHEDULE B

DOOR NO.	OPENING LOCATION	FIRE RATING	HARDW. HEADING	LOCK FUNCTION	FRAME INFORMATION								DOOR INFORMATION					
					HARDWARE REMARKS	OPENING WIDTH	OPENING HEIGHT	FRAME ELEV.	JAMB DEPTH	FRAME MATER.	FRAME FINISH	FRAME REMARKS	DOOR SIZE	DOOR THICK.	DOOR ELEV.	DOOR MATER.	DOOR FINISH	DOOR REMARKS
149a	TO CORRIDOR D 150 FROM EXISTING MULTI-PURPOSE 149	90 MIN.		EXIT		3'-4"	7'-4"	2.0	(5-3/4")	HM	PAINT (PT-11)		(2) 3'-0" x 7'-0"	(1-3/4")	NL	HM	PAINT	
149b	TO EXTERIOR FROM EXISTING MULTI-PURPOSE 149					3'-4"	7'-4"	S1.1	(5-3/4")	ALUM	PREFIN		3'-0" x 7'-0"	(1-3/4")	F	FRP	PREFIN	
149c	TO EXISTING KITCHEN 144 FROM EXISTING MULTI-PURPOSE 149					ETR	ETR		ETR	ETR	PAINT (PT-11)		ETR	ETR		ETR	ETR	
149d	TO CORRIDOR C 142 FROM EXISTING MULTI-PURPOSE 149	20 MIN.		EXIT		ETR	ETR		ETR	HM	PAINT (PT-11)		3'-0" x 7'-0"	(1-3/4")	NL	WD	STAIN	
149e	TO CORRIDOR C 142 FROM EXISTING MULTI-PURPOSE 149	20 MIN.		EXIT		ETR	ETR		ETR	HM	PAINT (PT-11)		3'-0" x 7'-0"	(1-3/4")	NL	WD	STAIN	
150a	TO CORRIDOR D 150 FROM CORRIDOR C 142	90 MIN.		EXIT		6'-4"	7'-4"	S2.0	(5-3/4")	HM	PAINT (PT-11)		(2) 3'-0" x 7'-0"	(1-3/4")	NL	HM	PAINT	
150b	TO EXTERIOR FROM CORRIDOR D 150			EXIT		6'-6"	7'-4"	S2.2	(5-3/4")	ALUM	PREFIN		(2) 3'-0" x 7'-0"	(1-3/4")	G	FRP	PREFIN	
150c	TO EXTERIOR FROM CORRIDOR D 150			EXIT		6'-6"	7'-4"	S2.2	(5-3/4")	ALUM	PREFIN		(2) 3'-0" x 7'-0"	(1-3/4")	G	FRP	PREFIN	
151	TO GIRLS RESTROOMS 151 FROM CORRIDOR D 150			RESTROOM		3'-4"	7'-2"	1.0	(5-3/4")	HM	PAINT (PT-11)		3'-0" x 7'-0"	(1-3/4")	F	WD	STAIN	
152	TO WORKROOM 152 FROM CORRIDOR D 150	20 MIN.		CLASSROOM		3'-4"	7'-2"	1.0	(5-3/4")	HM	PAINT (PT-11)		3'-0" x 7'-0"	(1-3/4")	NL	WD	STAIN	
153	TO BOYS RESTROOMS 153 FROM CORRIDOR D 150			RESTROOM		3'-4"	7'-2"	1.0	(5-3/4")	HM	PAINT (PT-11)		3'-0" x 7'-0"	(1-3/4")	F	WD	STAIN	
154	TO CORRIDOR D 150 FROM JANITOR 154	45 MIN.		STOREROOM		3'-4"	7'-2"	1.0	(5-3/4")	HM	PAINT (PT-11)		3'-0" x 7'-0"	(1-3/4")	F	WD	STAIN	
155	TO MECHANICAL ROOM 155 FROM CORRIDOR D 150	45 MIN.		STOREROOM		3'-4"	7'-2"	1.0	(5-3/4")	HM	PAINT (PT-11)		3'-0" x 7'-0"	(1-3/4")	F	WD	STAIN	
156	TO CORRIDOR D 150 FROM GSRP CLASSROOM 156	20 MIN.		CLASSROOM		3'-4"	7'-2"	1.0	(5-3/4")	HM	PAINT (PT-11)		3'-0" x 7'-0"	(1-3/4")	HG	WD	STAIN	
156a	TO RESTROOM 156a FROM GSRP CLASSROOM 156			PRIVACY		3'-4"	7'-2"	1.0	(5-3/4")	HM	PAINT (PT-11)		3'-0" x 7'-0"	(1-3/4")	F	WD	STAIN	
156b	TO GSRP CLASSROOM 156 FROM CLOSET 156b			CLASSROOM 2		5'-0"	7'-2"	2.0	(5-3/4")	HM	PAINT (PT-11)		(2) 2'-4" x 7'-0"	(1-3/4")	F	WD	STAIN	
156c	TO EXTERIOR FROM GSRP CLASSROOM 156			EXIT		3'-4"	7'-4"	S1.4	(5-3/4")	ALUM	PAINT (PT-11)		3'-0" x 7'-0"	(1-3/4")	F	FRP	PREFIN	
157	TO CORRIDOR D 150 FROM GSRP CLASSROOM 157	20 MIN.		CLASSROOM		3'-4"	7'-2"	1.0	(5-3/4")	HM	PAINT (PT-11)		3'-0" x 7'-0"	(1-3/4")	HG	WD	STAIN	
157a	TO RESTROOM 157a FROM GSRP CLASSROOM 157			PRIVACY		3'-4"	7'-2"	1.0	(5-3/4")	HM	PAINT (PT-11)		3'-0" x 7'-0"	(1-3/4")	F	WD	STAIN	
157b	TO GSRP CLASSROOM 157 FROM CLOSET 157b			CLASSROOM 2		5'-0"	7'-2"	2.0	(5-3/4")	HM	PAINT (PT-11)		(2) 2'-4" x 7'-0"	(1-3/4")	F	WD	STAIN	
157c	TO EXTERIOR FROM GSRP CLASSROOM 157			EXIT		3'-4"	7'-4"	S1.4	(5-3/4")	ALUM	PREFIN		3'-0" x 7'-0"	(1-3/4")	F	FRP	PREFIN	
158	TO CORRIDOR D 150 FROM GSRP CLASSROOM 158	20 MIN.		CLASSROOM		3'-4"	7'-2"	1.0	(5-3/4")	HM	PAINT (PT-11)		3'-0" x 7'-0"	(1-3/4")	HG	WD	STAIN	
158a	TO RESTROOM 158a FROM GSRP CLASSROOM 158			PRIVACY		3'-4"	7'-2"	1.0	(5-3/4")	HM	PAINT (PT-11)		3'-0" x 7'-0"	(1-3/4")	F	WD	STAIN	
158b	TO GSRP CLASSROOM 158 FROM CLOSET 158b			CLASSROOM 2		5'-0"	7'-2"	2.0	(5-3/4")	HM	PAINT (PT-11)		(2) 2'-4" x 7'-0"	(1-3/4")	F	WD	STAIN	
158c	TO EXTERIOR FROM GSRP CLASSROOM 158			EXIT		3'-4"	7'-4"	S1.4	(5-3/4")	ALUM	PREFIN		3'-0" x 7'-0"	(1-3/4")	F	FRP	PREFIN	
159	TO CORRIDOR D 150 FROM GSRP CLASSROOM 159	20 MIN.		CLASSROOM		3'-4"	7'-2"	1.0	(5-3/4")	HM	PAINT (PT-11)		3'-0" x 7'-0"	(1-3/4")	HG	WD	STAIN	
159a	TO RESTROOM 159A FROM GSRP CLASSROOM 159			PRIVACY		3'-4"	7'-2"	1.0	(5-3/4")	HM	PAINT (PT-11)		3'-0" x 7'-0"	(1-3/4")	F	WD	STAIN	
159b	TO GSRP CLASSROOM 159 FROM CLOSET 159b			CLASSROOM 2		5'-0"	7'-2"	2.0	(5-3/4")	HM	PAINT (PT-11)		(2) 2'-4" x 7'-0"	(1-3/4")	F	WD	STAIN	
159c	TO EXTERIOR FROM GSRP CLASSROOM 159			EXIT		3'-4"	7'-4"	S1.4	(5-3/4")	ALUM	PREFIN		3'-0" x 7'-0"	(1-3/4")	F	FRP	PREFIN	
160	TO CORRIDOR D 150 FROM GSRP CLASSROOM 160	20 MIN.		CLASSROOM		3'-4"	7'-2"	1.0	(5-3/4")	HM	PAINT (PT-11)		3'-0" x 7'-0"	(1-3/4")	HG	WD	STAIN	
160a	TO RESTROOM 160a FROM GSRP CLASSROOM 160			PRIVACY		3'-4"	7'-2"	1.0	(5-3/4")	HM	PAINT (PT-11)		3'-0" x 7'-0"	(1-3/4")	F	WD	STAIN	
160b	TO GSRP CLASSROOM 160 FROM CLOSET 160b			CLASSROOM 2		5'-0"	7'-2"	2.0	(5-3/4")	HM	PAINT (PT-11)		(2) 2'-4" x 7'-0"	(1-3/4")	F	WD	STAIN	
160c	TO EXTERIOR FROM GSRP CLASSROOM 160			EXIT		3'-4"	7'-4"	S1.4	(5-3/4")	ALUM	PREFIN		3'-0" x 7'-0"	(1-3/4")	F	FRP	PREFIN	
161	TO CORRIDOR D 150 FROM GSRP CLASSROOM 161	20 MIN.		CLASSROOM		3'-4"	7'-2"	1.0	(5-3/4")	HM	PAINT (PT-11)		3'-0" x 7'-0"	(1-3/4")	HG	WD	STAIN	
161a	TO RESTROOM 161a FROM GSRP CLASSROOM 161			PRIVACY		3'-4"	7'-2"	1.0	(5-3/4")	HM	PAINT (PT-11)		3'-0" x 7'-0"	(1-3/4")	F	WD	STAIN	
161b	TO GSRP CLASSROOM 161 FROM CLOSET 161b			CLASSROOM 2		5'-0"	7'-2"	2.0	(5-3/4")	HM	PAINT (PT-11)		(2) 2'-4" x 7'-0"	(1-3/4")	F	WD	STAIN	
161c	TO EXTERIOR FROM GSRP CLASSROOM 161			EXIT		3'-4"	7'-4"	S1.4	(5-3/4")	ALUM	PREFIN		3'-0" x 7'-0"	(1-3/4")	F	FRP	PREFIN	
162	TO CORRIDOR D 150 FROM GSRP CLASSROOM 162	20 MIN.		CLASSROOM		3'-4"	7'-2"	1.0	(5-3/4")	HM	PAINT (PT-11)		3'-0" x 7'-0"	(1-3/4")	HG	WD	STAIN	
162a	TO RESTROOM 162a FROM GSRP CLASSROOM 162			PRIVACY		3'-4"	7'-2"	1.0	(5-3/4")	HM	PAINT (PT-11)		3'-0" x 7'-0"	(1-3/4")	F	WD	STAIN	
162b	TO GSRP CLASSROOM 162 FROM CLOSET 162b			CLASSROOM 2		5'-0"	7'-2"	2.0	(5-3/4")	HM	PAINT (PT-11)		(2) 2'-4" x 7'-0"	(1-3/4")	F	WD	STAIN	
162c	TO EXTERIOR FROM GSRP CLASSROOM 162			EXIT		3'-4"	7'-4"	S1.4	(5-3/4")	ALUM	PREFIN		3'-0" x 7'-0"	(1-3/4")	F	FRP	PREFIN	

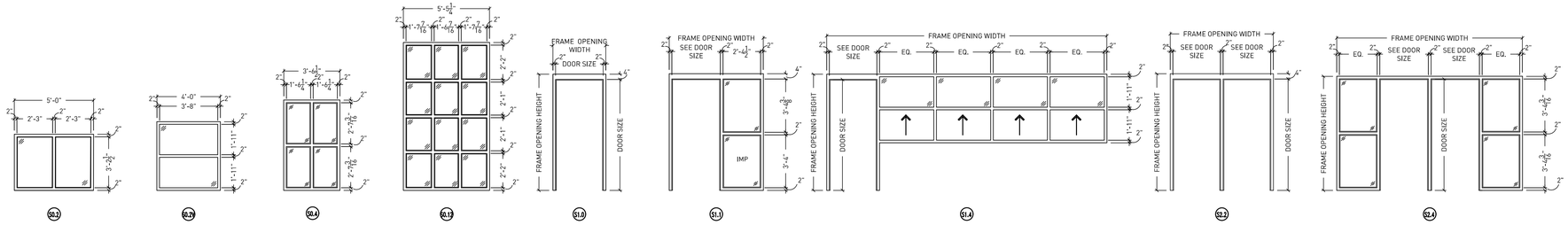
HM FRAME ELEVATIONS:



DOOR ELEVATIONS:



STOREFRONT ELEVATIONS:



LOCK FUNCTION NOTES:

CLASSROOM:	SIMILAR TO SCHLAGE L9050 WITH VISUAL SECURITY INDICATOR AND ADA THUMBTURN, INDICATOR TO SAY "LOCKED/UNLOCKED, OR VON DUPRIN EXIT DEVICE WITH SECURITY INDICATOR AND ADA THUMBTURN.
CLASSROOM 2:	SIMILAR TO SCHLAGE L9070.
EXIT:	EXIT DEVICE WITH LEVER TRIM
OFFICE:	SIMILAR TO SCHLAGE L9056.
PRIVACY:	SIMILAR TO SCHLAGE L9444,
RESTROOM:	SIMILAR TO SCHLAGE L463 DEADBOLT (DOOR CAN BE UNLOCKED FROM INSIDE, BUT NOT LOCKED).
STOREROOM:	SIMILAR TO SCHLAGE L9080.

GENERAL HARDWARE NOTES:

GHN1. LOCK FUNCTIONS INDICATED ARE APPROXIMATE. FINAL LOCK FUNCTION, ETC. TO BE DETERMINED AT SPECIAL MEETING WITH OWNER AND HARDWARE SUPPLIER SPECIFICALLY INTENDED FOR THAT PURPOSE -REFER TO SPECIFICATIONS.

GHN2. REFER TO SPECIFICATIONS FOR FINISH DESIGNATIONS.

GHN3. RE-KEY EXISTING HARDWARE TO ALIGN WITH NEW KEYING SYSTEM.

HARDWARE NOTES

H1, H2. PROVIDE MAGNETIC HOLD - OPEN AT FIRE DOOR.
THUMBTURN FOR VISUAL INDICATOR ORIENTATION TO BE VERTICAL (UP/DOWN) FOR UNLOCKED, HORIZONTAL (LEFT/RIGHT) FOR LOCKED.

H3. PROVIDE 180 DEGREE OPEN.

GENERAL DOOR FRAME NOTES:

GDFN1. PROVIDE PERIMETER SEALANT. (INTERIOR AND EXTERIOR SIDES)

DOOR FRAME NOTES

DF1. PROVIDE DOUBLE EGRESS FRAME.

DF2. PROVIDE 180 DEGREE OPEN.

DF2. PROVIDE SGG IN SIDELITES. INSTALLED PER MANUFACTUERER'S REQUIREMENTS.

GENERAL DOOR NOTES:

GD1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

GD2. COORDINATE DIMENSIONS WITH MANUFACTURER.

GD3. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

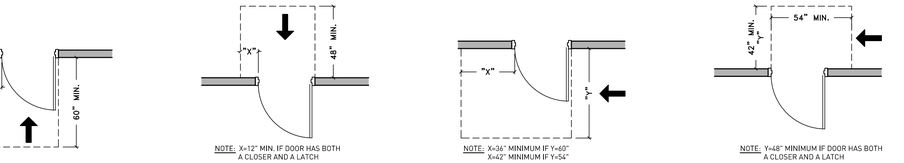
GD4. ALL CLASSROOM DOORS TO CORRIDOR ARE TO BE FIRE RATED UNLESS NOTED OTHERWISE. REFER TO DOOR SCHEDULE FOR RATING.

DOOR NOTES:

D1. PROVIDE SGG IN DOOR, INSTALLED PER MANUFACTURER'S REQUIREMENTS.

LEGEND:

FRP	FIBERGLASS REINFORCED POLYMER
GL	GLASS
HM	HOLLOW METAL
IMP	INSULATED METAL PANEL
PREFIN	PREFINISHED
PT	PAINT
SGG	SCHOOL GUARD GLASS
TEMP	TEMPERED
WD	WOOD



1.a SHT Barrier Free Latch Side Approach
Scale: 1/4"=1'-0"

1.b SHT Barrier Free Latch Side Approach
Scale: 1/4"=1'-0"

2.a SHT Barrier Free Front Approach
Scale: 1/4"=1'-0"

2.b SHT Barrier Free Front Approach
Scale: 1/4"=1'-0"

3.a SHT Barrier Free Hinge Side Approach
Scale: 1/4"=1'-0"

3.b SHT Barrier Free Hinge Side Approach
Scale: 1/4"=1'-0"

Bidding and Permits: 31 July 2023

Door Schedule

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

A2.61

803 W. Big Beaver Road, Suite 350, Troy, MI 48084 | 248.244.9710

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. COORDINATE ALL DIMENSIONS WITH MILLWORK FABRICATOR.

G3. PROVIDE FINISHED END PANELS WHEN EXPOSED TO VIEW (TO MATCH CABINET).

G4. PROVIDE WALL BASE AT ALL CABINET TOE KICKS AND FINISHED END PANELS ON BASE CABINETS.

G5. PROVIDE MINIMUM CLEARANCES PER BARRIER-FREE CODE.

G6. PROVIDE FILLER PIECES AS REQUIRED FOR CLEARANCE TO SUIT CONDITIONS.

G7. REFER TO INTERIOR ELEVATIONS AND FINISH SCHEDULE FOR CABINET FINISHES.

G8. MILLWORK CONTRACTOR TO REFER TO INTERIOR ELEVATIONS (SHEETS A5.02 - A.5.03) FOR CABINET DOOR OPERATION AND HINGE LOCATION.

G9. MODEL NUMBER INDICATED UNDER "BASIS OF DESIGN" IS FOR GENERAL INTENT ONLY. CONTRACTOR TO REFER TO SCHEDULE FOR PROJECT SIZES, CABINET NOTES FOR FURTHER INFORMATION, AND INTERIOR ELEVATIONS FOR PROJECT INTENT.

CABINET NOTES:

C1. PROVIDE FULL DEPTH ADJUSTABLE SHELF/SHELVES.

C2. FINISHED BOTTOM - TO MATCH CABINET

C3. FINISHED END PANEL WHEN EXPOSED TO VIEW - TO MATCH CABINET

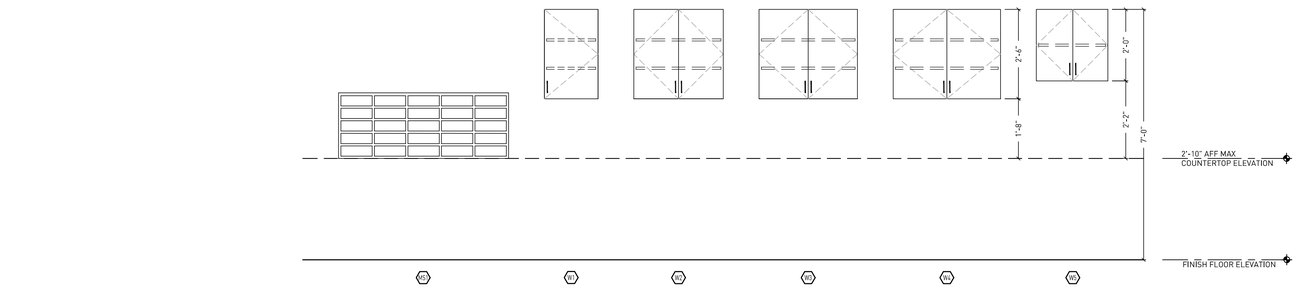
C4. PROVIDE 4" RUBBER BASE AT ALL CABINET TOE KICKS AND FINISHED END PANELS

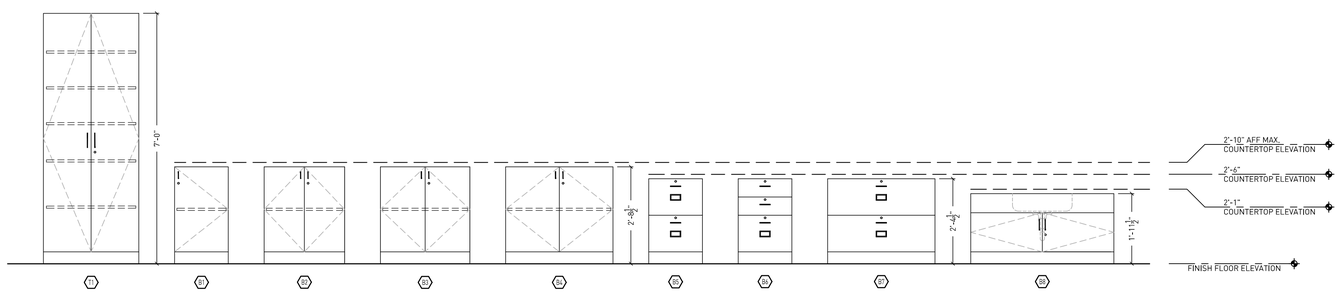
C5. PROVIDE HANGING KIT FOR FILE FOLDERS.

C6. MAIL SLOT CABINET TO HAVE MATCHING INTERIOR

CABINET SCHEDULE

NO.	DESCRIPTION	HEIGHT (IN)	DEPTH (IN)	LOCK	STEVENS MODEL NO. (BASIS OF DESIGN)	REMARKS
B1	18" BASE CABINET WITH DOOR	32-1/2"	24"	YES	10121	C1, C3, C4
B2	27" BASE CABINET WITH DOOR	32-1/2"	24"	YES	10129	C1, C3, C4
B3	30" BASE CABINET WITH DOORS	32-1/2"	24"	YES	10129	C1, C3, C4
B4	36" BASE CABINET WITH DOORS	32-1/2"	24"	YES	10129	C1, C3, C4
B5	18" BASE FILE / FILE CABINET	28-1/2"	24"	YES	10316	C1, C3, C4, C5
B6	18" BASE BOX / BOX / FILE CABINET	28-1/2"	24"	YES	10313	C1, C3, C4, C5
B7	36" BASE LATERAL FILE CABINET	28-1/2"	24"	YES	10318	C1, C3, C4, C5
B8	48" SINK BASE CABINET WITH DOORS AND FALSE FRONT	23-1/2"	24"	YES	10479	C4
MS1	47" MAIL SLOT CABINET WITH 25 SLOTS	22"	15"	NO	15252	C3, C6
W1	18" WALL CABINET WITH DOOR	30"	12"	YES	15120	C1, C2, C3
W2	30" WALL CABINET WITH DOORS	30"	12"	YES	15129	C1, C2, C3
W3	33" WALL CABINET WITH DOORS	30"	12"	YES	15129	C1, C2, C3
W4	36" WALL CABINET WITH DOORS	30"	12"	YES	15129	C1, C2, C3
W5	24" WALL CABINET WITH DOORS	24"	12"	YES	15129	C1, C2, C3
T1	32" GSRP CLASSROOM STORAGE CABINET	84"	16"	YES	25129	C1, C3, C4





Bidding and Permits: 31 July 2023

Cabinet Schedule/Details

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Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

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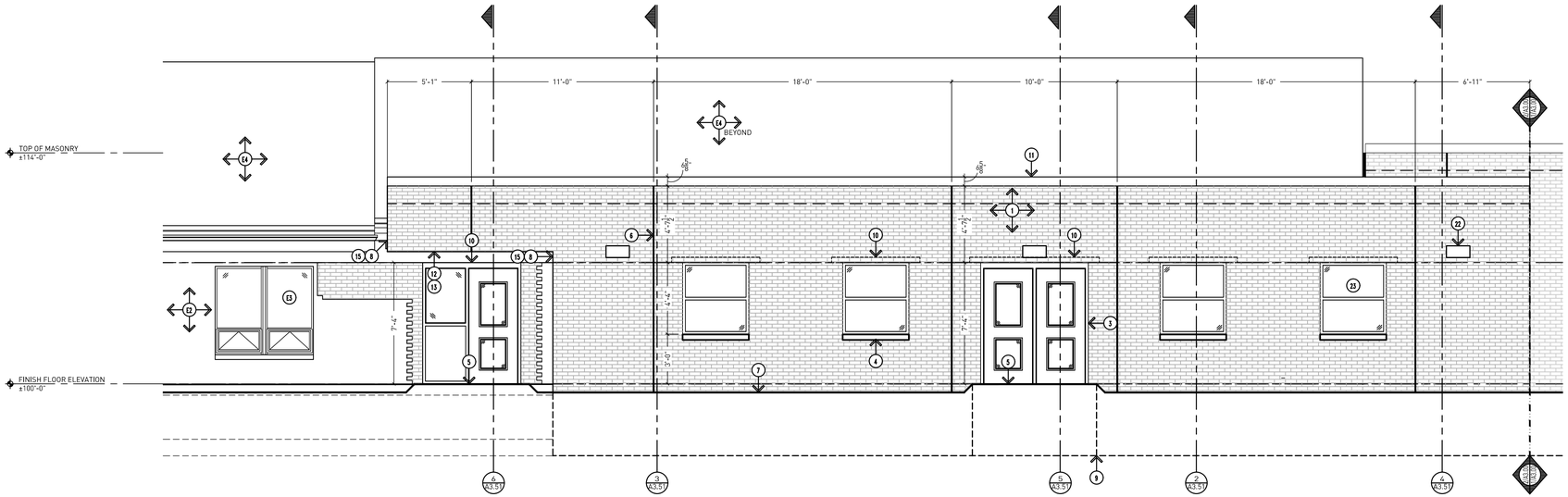
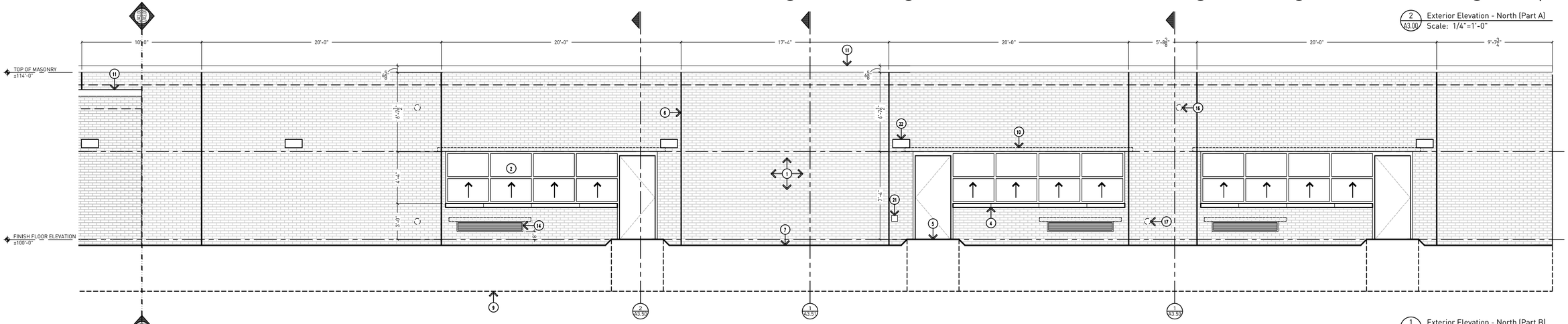


2 A3.00 Exterior Elevation - North (Part A)
Scale: 1/4"=1'-0"



1 A3.00 Exterior Elevation - North (Part B)
Scale: 1/4"=1'-0"

DRAWING NOTES CONTINUED:

15. BUILDING JOINT COVER - REFER TO DETAILS.
16. ROOF OVERFLOW PIPING THROUGH WALL WITH "COW TONGUE".
17. RAIN CONDUCTOR PIPING THROUGH WALL WITH "COW TONGUE" AND CONCRETE SPLASH BLOCK.
18. CLEAR ANODIZED INSULATED METAL PANEL WITH SMOOTH FINISH. - REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
19. FIXED INSULATED GLASS UNIT IN EXISTING FRAME: TYPE IG-1 - REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
20. FIXED INSULATED GLASS UNITS: TYPE IG-1 IN CLEAR ALUMINUM STOREFRONT FRAMING - REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
21. EXTERIOR WALL HYDRANT WITH LOCKING COVER - REFER TO MECHANICAL DRAWINGS FOR FURTHER INFORMATION.
22. WALL MOUNTED LED LIGHT FIXTURE - REFER TO ELECTRICAL DRAWINGS FOR FURTHER INFORMATION.
23. FIXED INSULATED GLASS UNITS (TYPE IG-1) IN CLEAR ALUMINUM STOREFRONT FRAMING - REFER TO DOOR SCHEDULE AND SPECIFICATIONS.
24. FIXED INSULATED GLASS UNITS (TYPE IG-1), FRP DOOR AND INSULATED METAL PANEL IN CLEAR ALUMINUM STOREFRONT FRAMING - REFER TO DOOR SCHEDULE AND SPECIFICATIONS.

DRAWING NOTES:

1. 4" BRICK VENEER TO MATCH EXISTING; COLOR, TEXTURE, PATTERN, AND COURSING. (INSTALL HEADER COURSE EVERY 6 ROWS OF BRICK - MATCH BOND COURSING EXACTLY).
2. VERTICAL LIFT INSULATED GLASS UNITS: (TYPE IG-1AND FRP DOOR) IN CLEAR ALUMINUM STOREFRONT FRAMING - REFER TO DOOR SCHEDULE AND SPECIFICATIONS.
3. DOOR, FRAME, HARDWARE, AND FINISH - REFER TO DOOR SCHEDULE AND SPECIFICATIONS FOR FURTHER INFORMATION.
4. LIMESTONE SILL.
5. FROST SLAB.
6. BRICK EXPANSION JOINT - PROVIDE JOINTS PER MIN. RECOMMENDATIONS. MAX 20 FT O.C. TYP. CORNER JOINTS TO BE 20 FT APART MAX WITH ONE OF THE JOINTS AT LEAST 4" AND NOT MORE THAN 10 FT FROM THE CORNER.
7. APPROXIMATE LINE OF GRADE.
8. CONTROL JOINT BETWEEN BUILDINGS.
9. LINE OF FOUNDATION - REFER TO STRUCTURAL DRAWINGS.
10. BRICK LINTEL - REFER TO STRUCTURAL DRAWINGS
11. PREFINISHED METAL PARAPET CAP FLASHING WITH CONTINUOUS CLEATS ON BOTH SIDES.
12. CEMENT PLASTER SOFFIT.
13. STEEL LINTEL - PAINTED. REFER TO STRUCTURAL DRAWINGS AND WALL SECTIONS.
14. LOUVER, WITH MASONRY LINTEL OVER OPENING - REFER TO MECHANICAL FOR LOUVER SIZE.

GENERAL NOTES:

G13. ALL FLEXIBLE MEMBRANE FLASHING TO BE SECURED TO SUBSTRATE WITH STAINLESS STEEL TERMINATION BAR AND SEALANT INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

G14. PROVIDE STAINLESS STEEL DRIP WITH HEMMED EDGE ABOVE ALL WINDOW AND DOOR OPENINGS. DRIP TO STOP AT WINDOW/DOOR OPENING (DO NOT EXTEND BEYOND).

G15. PROVIDE END DAMS AT ALL FLASHING ABOVE WINDOWS, DOORS, AND BELOW SILLS.

G16. AT AREAS ADJACENT TO NEW BUILDING, INSTALL GRADE 6" BELOW FINISH FLOOR AND SLOPE AWAY FROM BUILDING TO MEET CODE REQUIREMENTS. MATCH ALL EXISTING SIDEWALK AND PARKING ELEVATIONS.

G17. MATCH EXISTING COURSING EXACTLY - C.F.V.

G18. MATCH EXISTING MORTAR COLOR EXACTLY - C.F.V.

EXISTING TO REMAIN:

E1. DOOR, FRAME, AND HARDWARE.

E2. BRICK VENEER.

E3. PREFINISHED ALUMINUM WINDOW.

E4. ASPHALT SHINGLE ROOF.

E5. ATTIC VENT.

E6. DOWNSPOUT.

E7. LINE OF EXISTING BUILDING.

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. ALL NOTES MAY NOT APPLY TO THIS SHEET.

G3. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCING ON THE WORK.

G4. PROTECT ALL ITEMS TO REMAIN FORM CONSTRUCTION OPERATIONS SO AS TO NOT CAUSE DAMAGE.

G5. ALL AREAS DISTURBED OR DAMAGED BY CONSTRUCTION OPERATIONS SHALL BE PATCHED, REPAIRED, AND FINISHED BACK TO EXISTING CONDITION.

G6. PROVIDE CONTINUOUS VAPOR AND AIR BARRIER PRIOR TO INSTALLATION OF RIGID AND/OR SPRAY INSULATION. BARRIER SYSTEM SHALL BE CONTINUOUS AROUND THE BUILDING ENVELOPE AND INCLUDES ALL PROPER TECHNIQUES FOR PENETRATIONS, ETC.

G7. PROVIDE BRICK EXPANSION JOINTS WITH SEALANT AND BACKER ROD PER MASONRY INSTITUTE RECOMMENDATIONS.

G8. PROVIDE SEALANT AND FOAM BACKER ROD TO SUIT CONDITIONS AROUND ALL WINDOW AND DOOR OPENINGS/PERIMETER.

G9. REFER TO STRUCTURAL DRAWINGS FOR ANY STEPPED FOOTING LOCATION, ETC.

G10. CONTRACTOR TO COORDINATE ALL DIMENSIONS WITH APPLICABLE MANUFACTURERS.

G11. PROVIDE WEEP VENTS AT 32" O.C. AT BOTTOM AND TOP OF WALLS COMPLETE WITH 3/8"x 1 1/2" PLASTIC WEEP VENT. PROVIDE MEMBRANE FLASHING AT ALL BASE OF WALL DRAINAGE LOCATIONS, MIN 6" ABOVE FINISH GRADE.

G12. PROVIDE ADJUSTABLE BRICK ANCHORS AT 16" O.C. VERTICALLY AND HORIZONTALLY.

STATE OF MICHIGAN
ELIZABETH SUE BYE
ARCHITECT
No. 1301054283
LICENSED ARCHITECT

Bidding and Permits: 31 July 2023

Exterior Elevations

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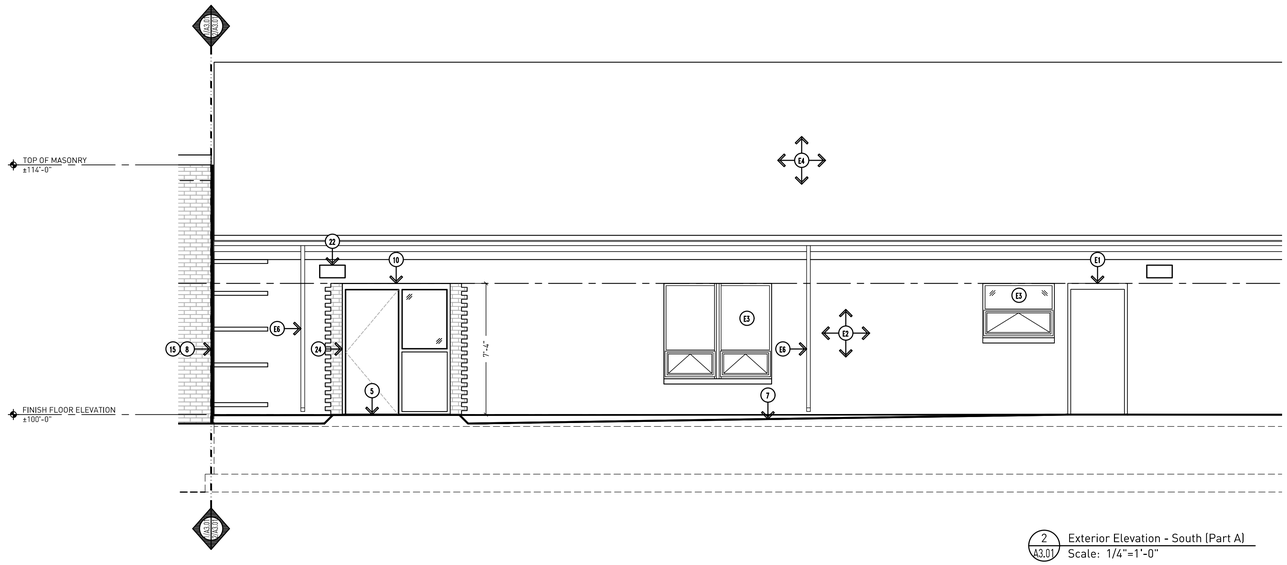
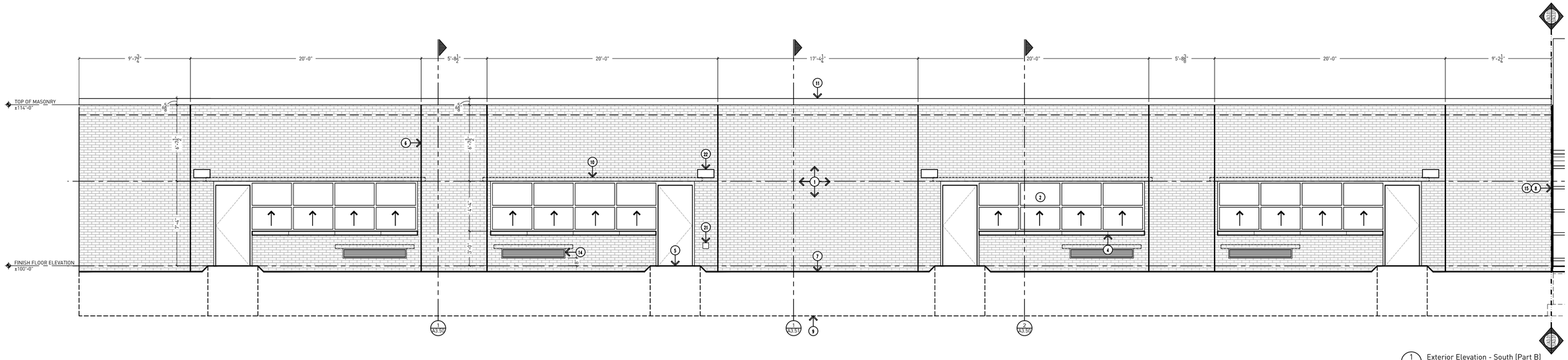


2 A3.01 Exterior Elevation - South (Part A)
Scale: 1/4"=1'-0"



1 A3.01 Exterior Elevation - South (Part B)
Scale: 1/4"=1'-0"

DRAWING NOTES CONTINUED:

15. BUILDING JOINT COVER - REFER TO DETAILS.
16. ROOF OVERFLOW PIPING THROUGH WALL WITH "COW TONGUE".
17. RAIN CONDUCTOR PIPING THROUGH WALL WITH "COW TONGUE" AND CONCRETE SPLASH BLOCK.
18. CLEAR ANODIZED INSULATED METAL PANEL WITH SMOOTH FINISH. - REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
19. FIXED INSULATED GLASS UNIT IN EXISTING FRAME: TYPE IG-1 - REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
20. FIXED INSULATED GLASS UNITS: TYPE IG-1 IN CLEAR ALUMINUM STOREFRONT FRAMING - REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
21. EXTERIOR WALL HYDRANT WITH LOCKING COVER - REFER TO MECHANICAL DRAWINGS FOR FURTHER INFORMATION.
22. WALL MOUNTED LED LIGHT FIXTURE - REFER TO ELECTRICAL DRAWINGS FOR FURTHER INFORMATION.
23. FIXED INSULATED GLASS UNITS (TYPE IG-1) IN CLEAR ALUMINUM STOREFRONT FRAMING - REFER TO DOOR SCHEDULE AND SPECIFICATIONS.
24. FIXED INSULATED GLASS UNITS (TYPE IG-1), FRP DOOR AND INSULATED METAL PANEL IN CLEAR ALUMINUM STOREFRONT FRAMING - REFER TO DOOR SCHEDULE AND SPECIFICATIONS.

DRAWING NOTES:

1. 4" BRICK VENEER TO MATCH EXISTING; COLOR, TEXTURE, PATTERN, AND COURSING. (INSTALL HEADER COURSE EVERY 6 ROWS OF BRICK - MATCH BOND COURSING EXACTLY).
2. VERTICAL LIFT INSULATED GLASS UNITS: (TYPE IG-1AND FRP DOOR) IN CLEAR ALUMINUM STOREFRONT FRAMING - REFER TO DOOR SCHEDULE AND SPECIFICATIONS.
3. DOOR, FRAME, HARDWARE, AND FINISH - REFER TO DOOR SCHEDULE AND SPECIFICATIONS FOR FURTHER INFORMATION.
4. LIMESTONE SILL.
5. FROST SLAB.
6. BRICK EXPANSION JOINT - PROVIDE JOINTS PER MIN. RECOMMENDATIONS. MAX 20 FT O.C. TYP. CORNER JOINTS TO BE 20 FT APART MAX WITH ONE OF THE JOINTS AT LEAST 4" AND NOT MORE THAN 10 FT FROM THE CORNER.
7. APPROXIMATE LINE OF GRADE.
8. CONTROL JOINT BETWEEN BUILDINGS.
9. LINE OF FOUNDATION - REFER TO STRUCTURAL DRAWINGS.
10. BRICK LINTEL - REFER TO STRUCTURAL DRAWINGS
11. PREFINISHED METAL PARAPET CAP FLASHING WITH CONTINUOUS CLEATS ON BOTH SIDES.
12. CEMENT PLASTER SOFFIT.
13. STEEL LINTEL - PAINTED. REFER TO STRUCTURAL DRAWINGS AND WALL SECTIONS.
14. LOUVER, WITH MASONRY LINTEL OVER OPENING - REFER TO MECHANICAL FOR LOUVER SIZE.

GENERAL NOTES:

G13. ALL FLEXIBLE MEMBRANE FLASHING TO BE SECURED TO SUBSTRATE WITH STAINLESS STEEL TERMINATION BAR AND SEALANT INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

G14. PROVIDE STAINLESS STEEL DRIP WITH HEMMED EDGE ABOVE ALL WINDOW AND DOOR OPENINGS. DRIP TO STOP AT WINDOW/DOOR OPENING (DO NOT EXTEND BEYOND).

G15. PROVIDE END DAMS AT ALL FLASHING ABOVE WINDOWS, DOORS, AND BELOW SILLS.

G16. AT AREAS ADJACENT TO NEW BUILDING, INSTALL GRADE 6" BELOW FINISH FLOOR AND SLOPE AWAY FROM BUILDING TO MEET CODE REQUIREMENTS. MATCH ALL EXISTING SIDEWALK AND PARKING ELEVATIONS.

G17. MATCH EXISTING COURSING EXACTLY - C.F.V.

G18. MATCH EXISTING MORTAR COLOR EXACTLY - C.F.V.

EXISTING TO REMAIN:

E1. DOOR, FRAME, AND HARDWARE.
E2. BRICK VENEER.
E3. PREFINISHED ALUMINUM WINDOW.
E4. ASPHALT SHINGLE ROOF.
E5. ATTIC VENT.
E6. DOWNSPOUT.
E7. LINE OF EXISTING BUILDING.

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G4. PROTECT ALL ITEMS TO REMAIN FORM CONSTRUCTION OPERATIONS SO AS TO NOT CAUSE DAMAGE.
G5. ALL AREAS DISTURBED OR DAMAGED BY CONSTRUCTION OPERATIONS SHALL BE PATCHED, REPAIRED, AND FINISHED BACK TO EXISTING CONDITION.
G6. PROVIDE CONTINUOUS VAPOR AND AIR BARRIER PRIOR TO INSTALLATION OF RIGID AND/OR SPRAY INSULATION. BARRIER SYSTEM SHALL BE CONTINUOUS AROUND THE BUILDING ENVELOPE AND INCLUDES ALL PROPER TECHNIQUES FOR PENETRATIONS, ETC.
G7. PROVIDE BRICK EXPANSION JOINTS WITH SEALANT AND BACKER ROD PER MASONRY INSTITUTE RECOMMENDATIONS.
G8. PROVIDE SEALANT AND FOAM BACKER ROD TO SUIT CONDITIONS AROUND ALL WINDOW AND DOOR OPENINGS/PERIMETER.
G9. REFER TO STRUCTURAL DRAWINGS FOR ANY STEPPED FOOTING LOCATION, ETC.
G10. CONTRACTOR TO COORDINATE ALL DIMENSIONS WITH APPLICABLE MANUFACTURERS.
G11. PROVIDE WEEP VENTS AT 32" O.C. AT BOTTOM AND TOP OF WALLS COMPLETE WITH 3/8"x 1 1/2" PLASTIC WEEP VENT. PROVIDE MEMBRANE FLASHING AT ALL BASE OF WALL DRAINAGE LOCATIONS, MIN 6" ABOVE FINISH GRADE.
G12. PROVIDE ADJUSTABLE BRICK ANCHORS AT 16" O.C. VERTICALLY AND HORIZONTALLY.

STATE OF MICHIGAN
ELIZABETH SUE BYE
ARCHITECT
No. 1301054283
LICENSED ARCHITECT

Bidding and Permits: 31 July 2023

Exterior Elevations

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Cherry Hill Baptist Church
Administration Relocation and Addition

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A3.01

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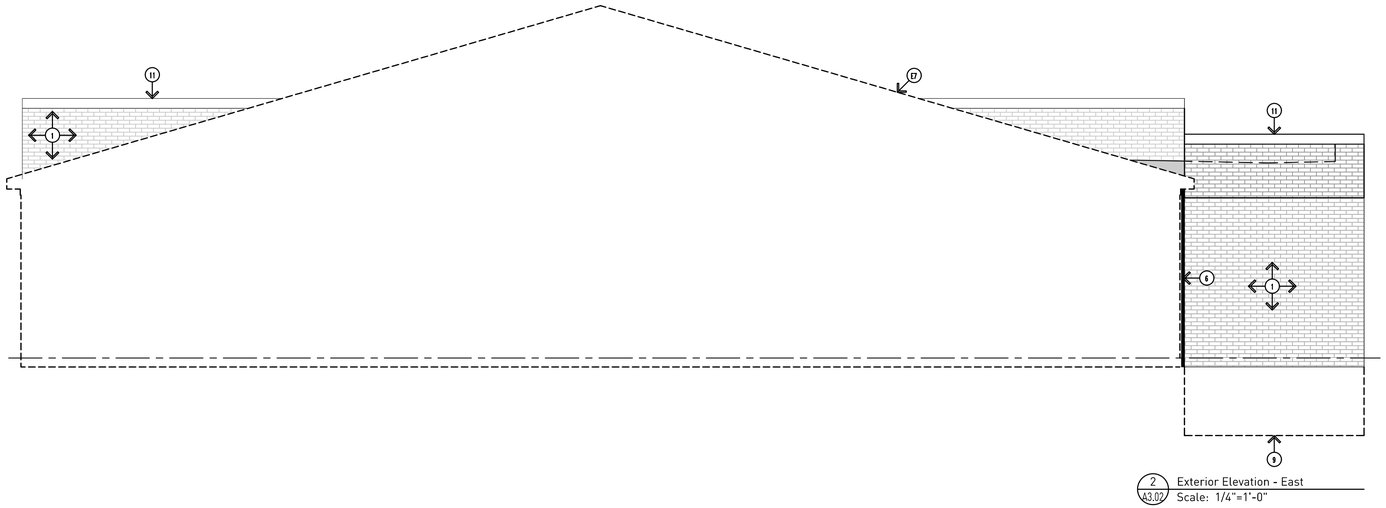

2 A3.02 Exterior Elevation - East
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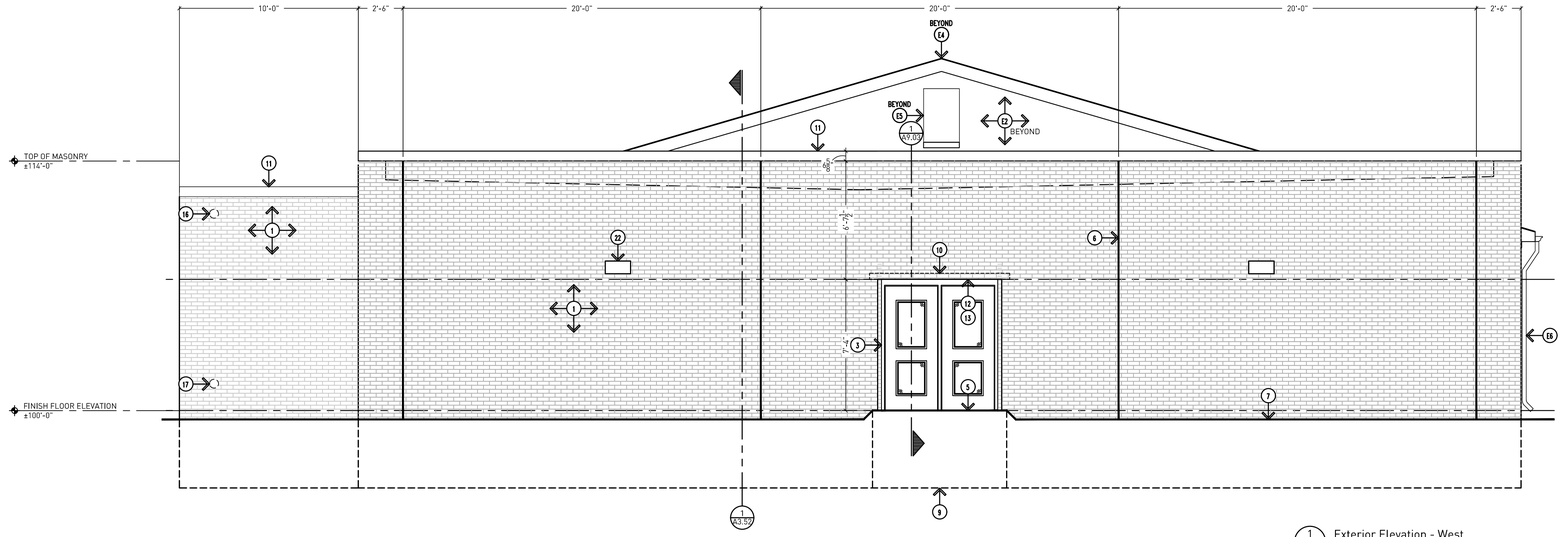

1 A3.02 Exterior Elevation - West
Scale: 1/4"=1'-0"

DRAWING NOTES CONTINUED:

15. BUILDING JOINT COVER - REFER TO DETAILS.
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24. FIXED INSULATED GLASS UNITS (TYPE IG-1), FRP DOOR AND INSULATED METAL PANEL IN CLEAR ALUMINUM STOREFRONT FRAMING - REFER TO DOOR SCHEDULE AND SPECIFICATIONS.

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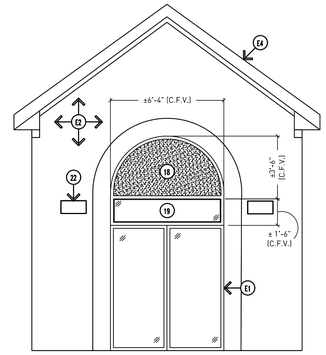

2 / A3.03 Existing Exterior Elevation - West
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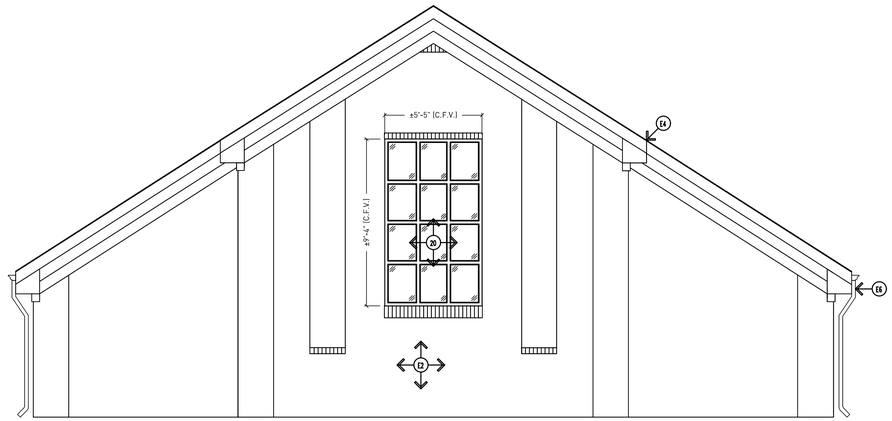

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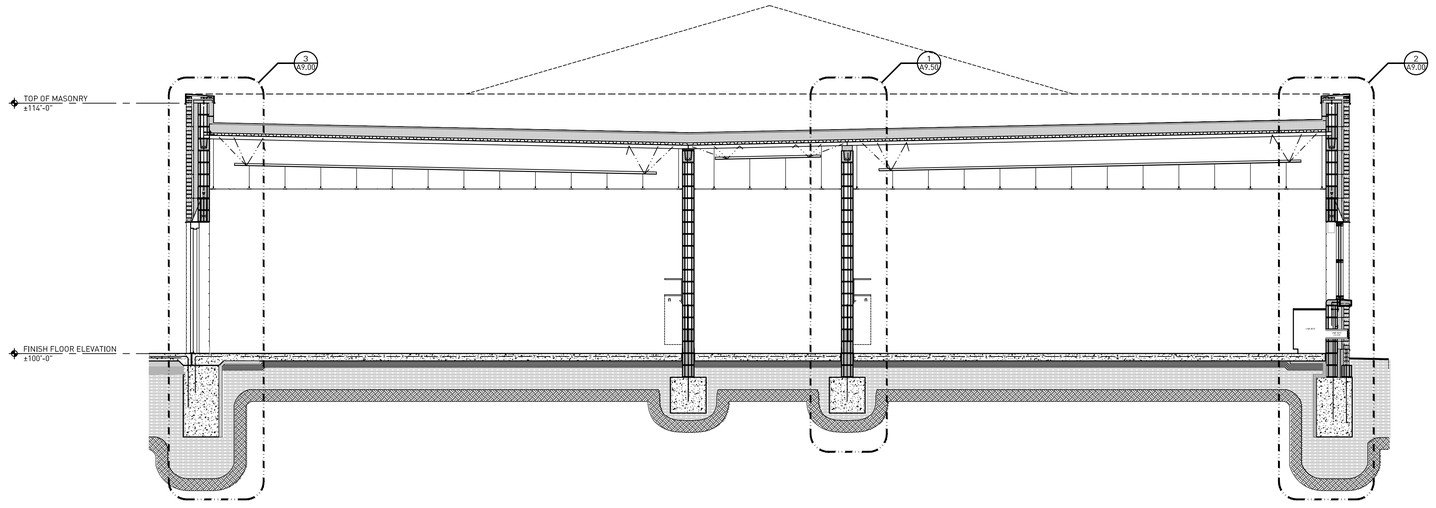

2 A3.50 Building Section B - North/South (Area B)
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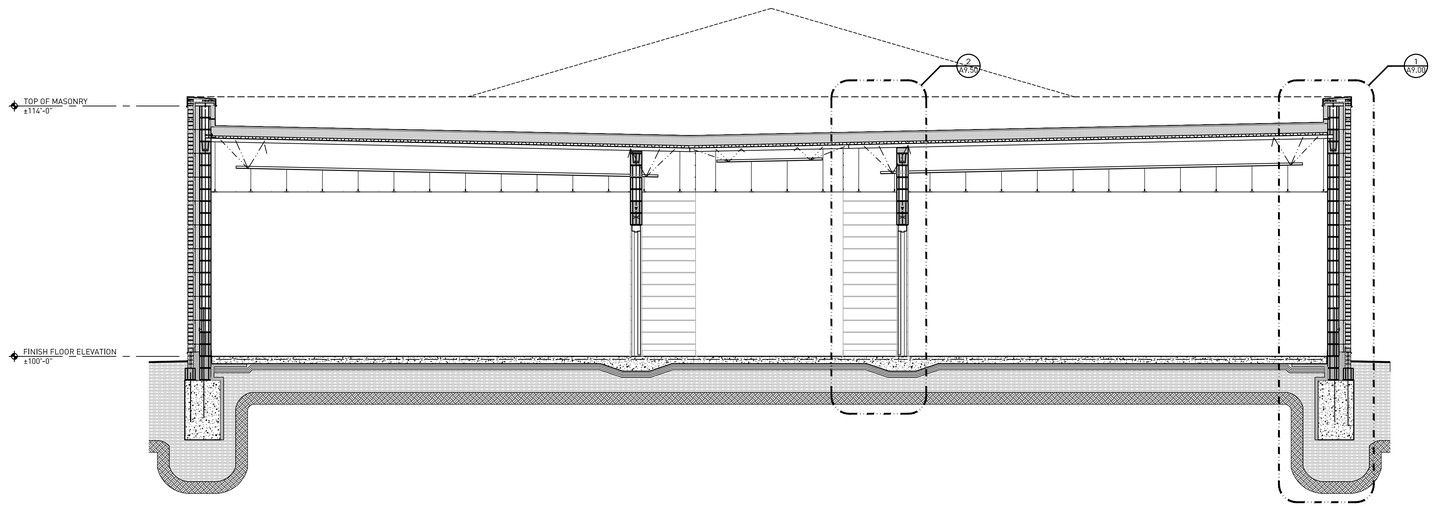

1 A3.50 Building Section A - North/South (Area B)
Scale: 1/4"=1'-0"

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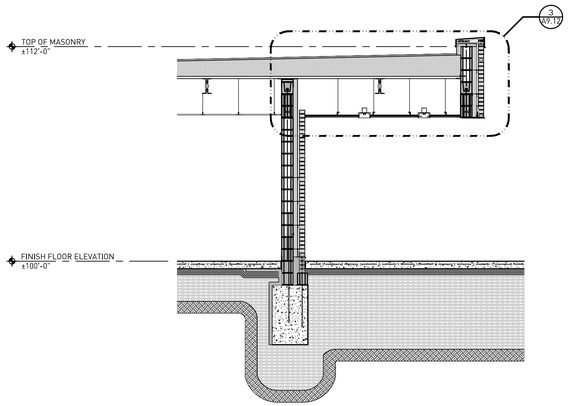
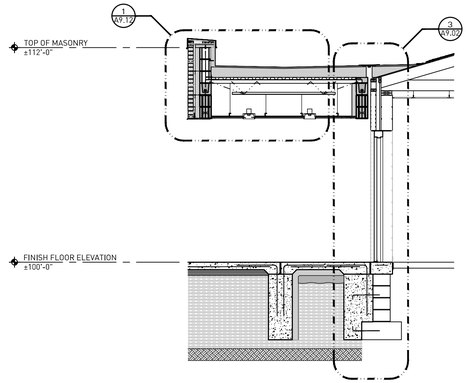
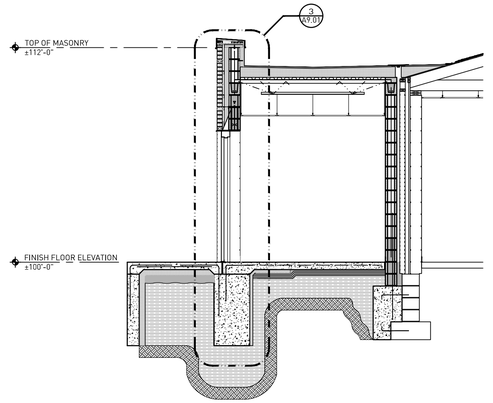


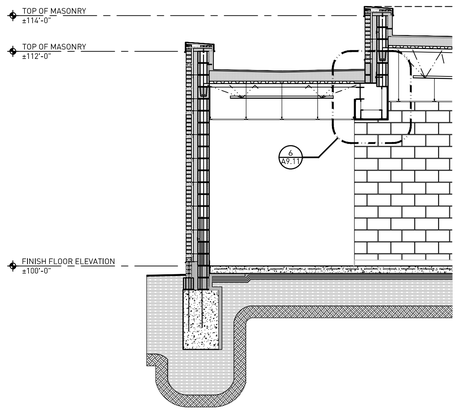
7 A3.51 Building Section I - East/West (Area A)
Scale: 1/4"=1'-0"



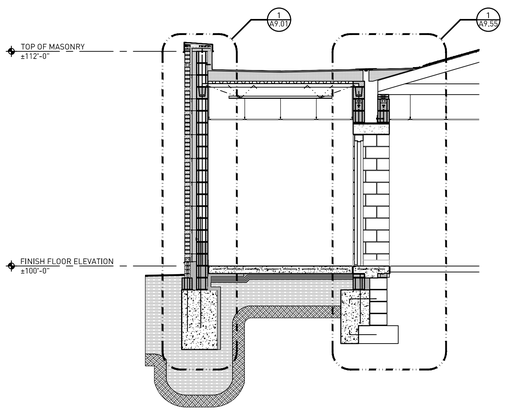
6 A3.51 Building Section H - North/South (Area A)
Scale: 1/4"=1'-0"



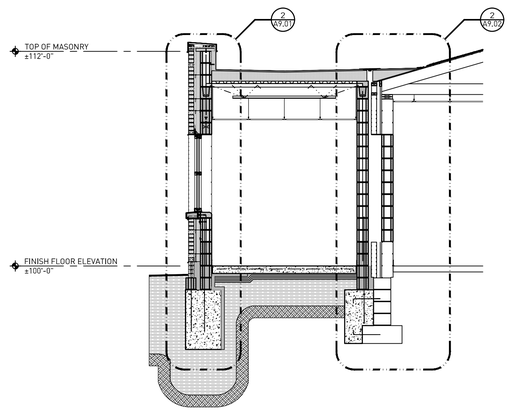
5 A3.51 Building Section G - North/South (Area B)
Scale: 1/4"=1'-0"



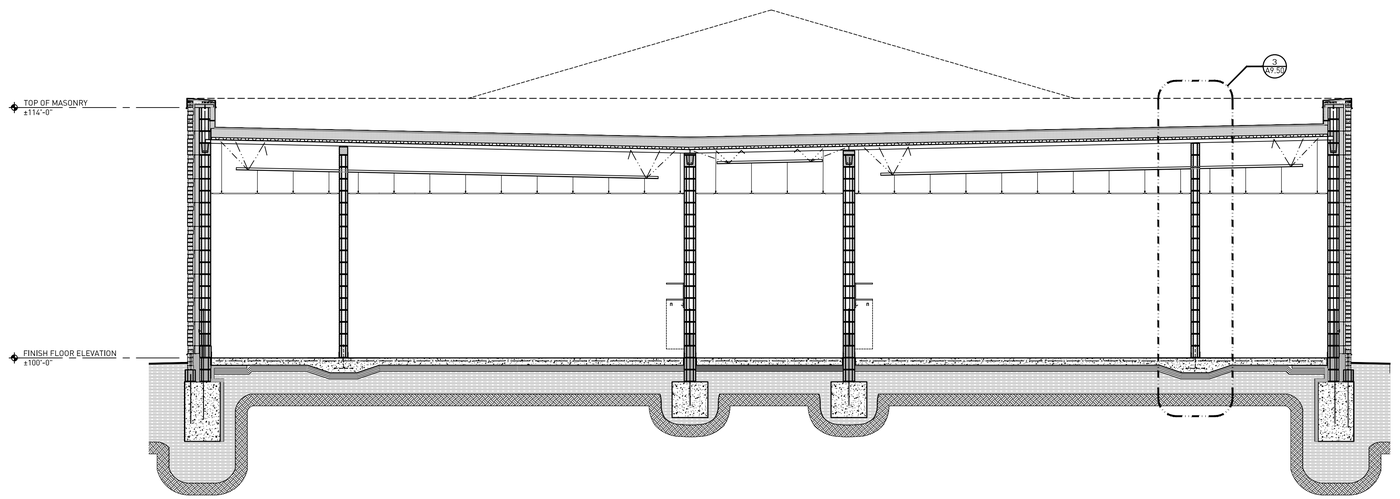
4 A3.51 Building Section F - North/South (Area B)
Scale: 1/4"=1'-0"



3 A3.51 Building Section E - North/South (Area B)
Scale: 1/4"=1'-0"



2 A3.51 Building Section D - North/South (Area B)
Scale: 1/4"=1'-0"



1 A3.51 Building Section C - North/South (Area B)
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Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

A3.51

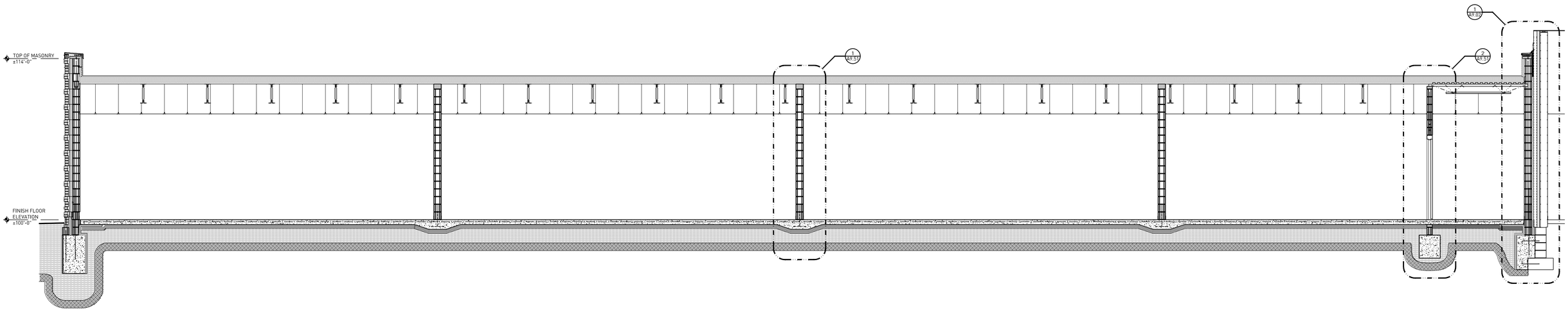
803 W. Big Beaver Road, Suite 350, Troy, MI 48084 | 248.244.9710

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. BUILDING SECTIONS SHOWN ARE FOR GENERAL REFERENCE ONLY. REFER TO FLOOR PLANS, INTERIOR AND EXTERIOR WALL SECTIONS, ETC. FOR MORE DETAILED INFORMATION, MATERIALS, DIMENSIONS, ETC.

G3. REFER TO STRUCTURAL PLANS FOR FURTHER INFORMATION REGARDING FLOOR AND ROOF FRAMING SYSTEMS.



1 / A3.52 Building Section J - East/West (Area B)
Scale: 1/4"=1'-0"

STATE OF MICHIGAN
ELIZABETH SUE BYE
ARCHITECT
No. 1301054283
LICENSED ARCHITECT

Bidding and Permits: 31 July 2023

Building Sections

EHRESMAN ARCHITECTS ehresmanarchitects.com

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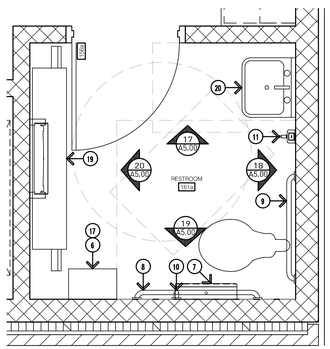
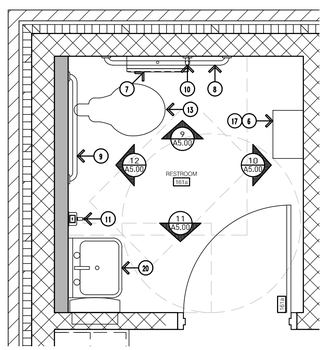
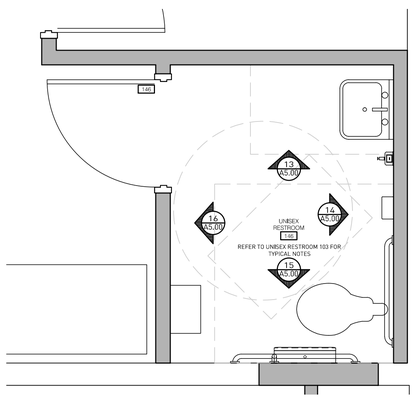


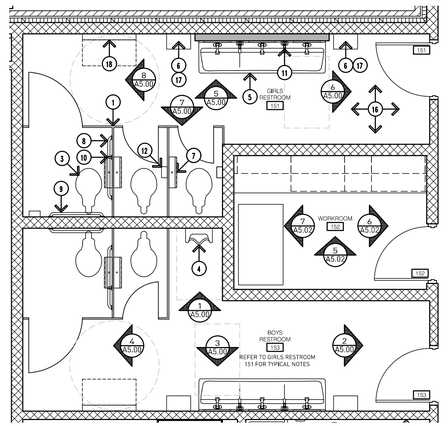
7 A4.00 GRSP Classroom Restroom - Changing Station
Scale: 1/2"=1'-0"



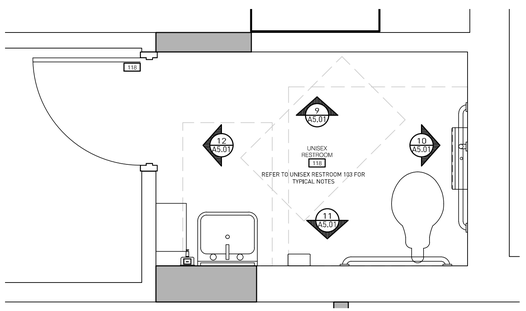
6 A4.00 GRSP Typical Classroom Restroom
Scale: 1/2"=1'-0"



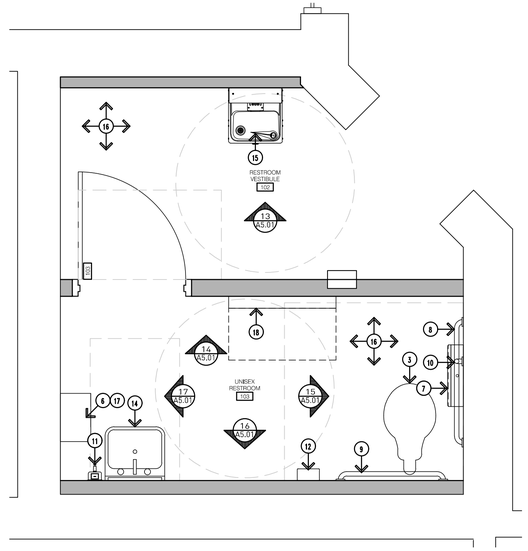
5 A4.00 GRSP Unisex Restroom 146
Scale: 1/2"=1'-0"



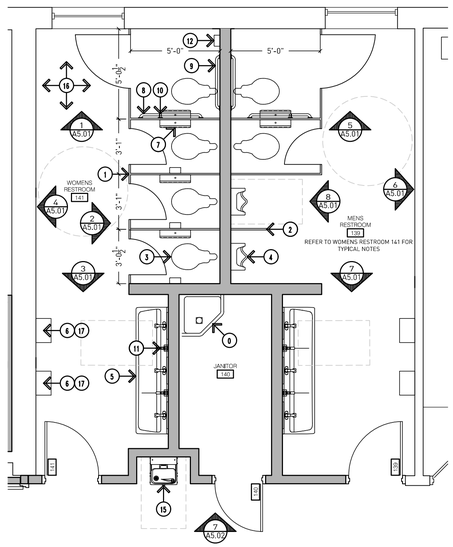
4 A4.00 GRSP Restrooms
Scale: 1/4"=1'-0"



3 A4.00 Administration Unisex Restroom 118
Scale: 1/2"=1'-0"



2 A4.00 Administration Unisex Restroom 103
Scale: 1/2"=1'-0"



1 A4.00 Administration Restrooms
Scale: 1/4"=1'-0"

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

DRAWING NOTES:

1. FLOOR MOUNTED, OVERHEAD BRACED PLASTIC TOILET COMPARTMENT WITH DOOR, HINGES, SLIDE LATCH, DOOR PULL, COAT HOOK, ETC. REFER TO SPECIFICATIONS.
2. WALL MOUNTED PLASTIC URINAL SCREEN WITH CONTINUOUS WALL BRACKET. REFER TO SPECIFICATIONS.
3. FLOOR MOUNTED WATERCLOSET PER ADA REQUIREMENTS WITH AUTOMATIC FLUSH VALVE.
4. WALL MOUNTED URINAL WITH RIM AT 17" A.F.F. MAXIMUM AND AUTOMATIC FLUSH VALVE. PROVIDE CONCEALED CARRIER WITH TUBE STEEL SUPPORT LEGS. REFER TO MECHANICAL SPECIFICATIONS.
5. WALL MOUNTED WASH FOUNTAIN. REFER TO MECHANICAL SPECIFICATIONS.
6. WALL MOUNTED PAPER TOWEL DISPENSER. REFER TO SPECIFICATIONS.
7. TOILET PAPER DISPENSER MOUNTED PER ADA REQUIREMENTS. REFER TO SPECIFICATIONS.
8. 42" STAINLESS STEEL GRAB BAR MOUNTED PER ADA REQUIREMENTS. REFER TO A00 & SPECIFICATIONS.
9. 36" STAINLESS STEEL GRAB BAR MOUNTED PER ADA REQUIREMENTS. REFER TO A00 & SPECIFICATIONS.
10. 18" STAINLESS STEEL GRAB BAR MOUNTED PER ADA REQUIREMENTS. REFER TO A00 & SPECIFICATIONS.
11. WALL MOUNTED SOAP DISPENSER. REFER TO SPECIFICATIONS.
12. SANITARY NAPKIN DISPOSAL MOUNTED PER ADA REQUIREMENTS. REFER TO SPECIFICATIONS.
13. FLOOR MOUNTED CHILD SIZE WATERCLOSET PER CHILD ADA REQUIREMENTS WITH AUTOMATIC FLUSH VALVE.
14. WALL-MOUNTED LAVATORY MOUNTED PER ADA REQUIREMENTS WITH BATTERY OPERATED FAUCET. PROVIDE CONCEALED WALL CARRIER WITH FLOOR SUPPORTS.
15. ELECTRIC WATER COOLER WITH BOTTLE FILLER.
16. CERAMIC / PORCELAIN FLOOR TILE. REFER TO FINISH SCHEDULE AND SPECIFICATIONS.
17. WASTE RECEPTACLE. REFER TO SPECIFICATIONS.
18. WALL MOUNTED DIAPER CHANGING STATION. REFER TO SPECIFICATIONS.
19. WALL MOUNTED ADJUSTABLE HEIGHT CHANGING STATION. REFER TO SPECIFICATIONS.
20. WALL-MOUNTED LAVATORY MOUNTED PER CHILD ADA REQUIREMENTS WITH BATTERY OPERATED FAUCET. PROVIDE CONCEALED WALL CARRIER WITH FLOOR SUPPORTS.

Bidding and Permits: 31 July 2023

Enlarged Floor Plans (Restrooms)

EHRESMAN ARCHITECTS ehresmanarchitects.com

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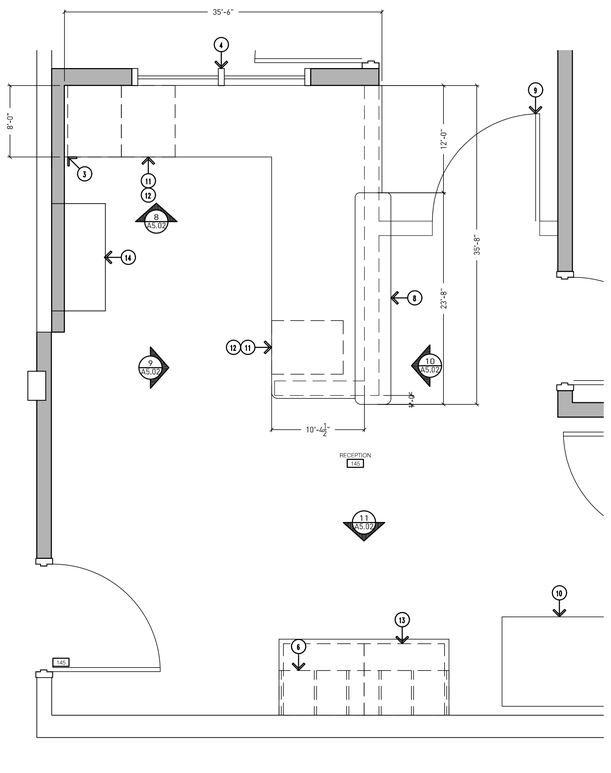
GENERAL NOTES:

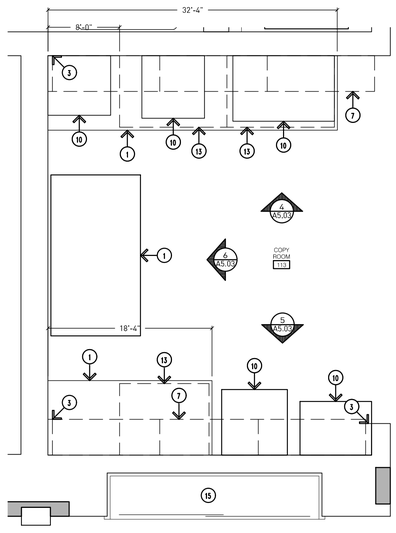
G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

DRAWING NOTES:

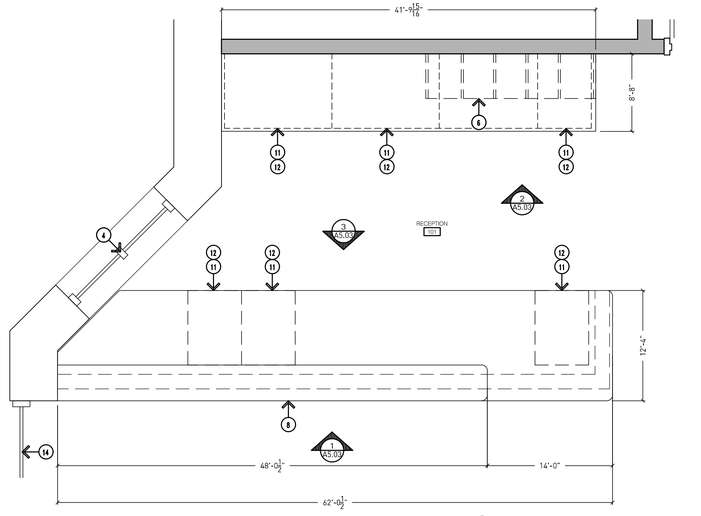
1. COUNTERTOP W/SIDE AND BACKSPLASH TO SUIT CONDITIONS. REFER TO FINISH / MATERIALS SCHEDULE.
2. BASE CABINET. REFER TO CABINET SCHEDULE.
3. FILLER PANEL AS REQUIRED.
4. LAMINATED SAFETY GLAZING IN ALUMINUM STOREFRONT. REFER TO DOOR SCHEDULE.
5. RECEPTION DESK. REFER TO CABINET SCHEDULE.
6. MAIL SLOTS. REFER TO CABINET SCHEDULE.
7. UPPER WALL CABINETS. REFER TO CABINET SCHEDULE.
8. PLASTIC LAMINATE RECEPTION DESK COUNTERTOP. REFER TO MATERIALS SCHEDULE.
9. PLASTIC LAMINATE ENTRY GATE WITH SELF-CLOSING CONTINUOUS HINGE AND SELF-LATCHING HARDWARE. REFER TO MATERIALS SCHEDULE.
10. EXISTING OFFICE EQUIPMENT.
11. PLASTIC LAMINATE FILE DRAWER. REFER TO MATERIALS SCHEDULE.
12. FINISHED END PANEL AS REQUIRED.
13. BASE CABINET. REFER TO CABINET SCHEDULE.
14. EXISTING DISPLAY CASE. CLEAN, PREP, AND PAINT FRAME (PT-11).
15. FIRE ALARM CONTROL PANEL.



3 A4.01 Reception 145
Scale: 1/2"=1'-0"



2 A4.01 Copy Room 113
Scale: 1/2"=1'-0"



1 A4.01 Reception 101
Scale: 1/2"=1'-0"

Bidding and Permits: 31 July 2023

Enlarged Floor Plans

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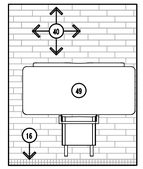
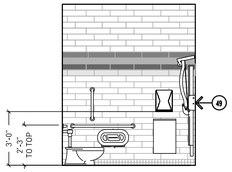
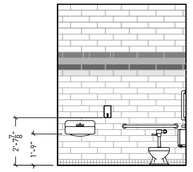


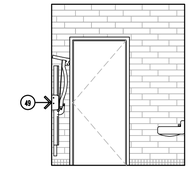
20 A5.00 GSRP Restroom 156a West Elevation
Scale: 1/4"=1'-0"



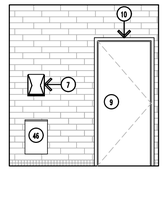
19 A5.00 GSRP Restroom 156a South Elevation
Scale: 1/4"=1'-0"
REFER TO 9/A5.00 FOR SIMILAR NOTES



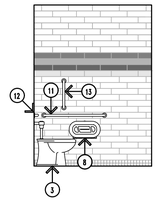
18 A5.00 GSRP Restroom 156a East Elevation
Scale: 1/4"=1'-0"
REFER TO 12/A5.00 FOR SIMILAR NOTES



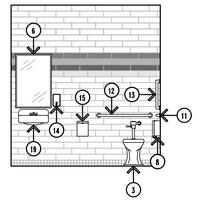
17 A5.00 GSRP Restroom 156a North Elevation
Scale: 1/4"=1'-0"
REFER TO 11/A5.00 FOR SIMILAR NOTES



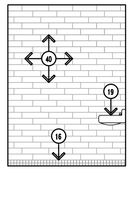
16 A5.00 Unisex Restroom 146 West Elevation
Scale: 1/4"=1'-0"



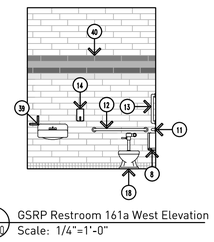
15 A5.00 Unisex Restroom 146 South Elevation
Scale: 1/4"=1'-0"



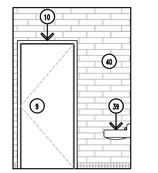
14 A5.00 Unisex Restroom 146 East Elevation
Scale: 1/4"=1'-0"



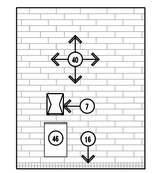
13 A5.00 Unisex Restroom 146 North Elevation
Scale: 1/4"=1'-0"



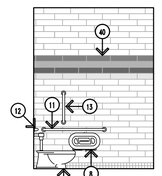
12 A5.00 GSRP Restroom 161a West Elevation
Scale: 1/4"=1'-0"
NOTE: ALL GSRP ROOMS SIMILAR



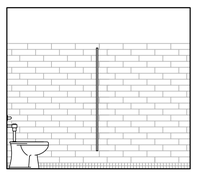
11 A5.00 GSRP Restroom 161a South Elevation
Scale: 1/4"=1'-0"
NOTE: ALL GSRP ROOMS SIMILAR



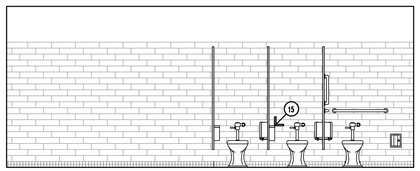
10 A5.00 GSRP Restroom 161a East Elevation
Scale: 1/4"=1'-0"
NOTE: ALL GSRP ROOMS SIMILAR



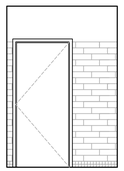
9 A5.00 GSRP Restroom 161a North Elevation
Scale: 1/4"=1'-0"
NOTE: ALL GSRP ROOMS SIMILAR



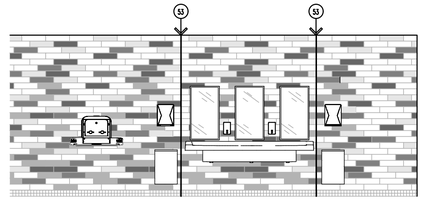
8 A5.00 Girls Restroom 151 West Elevation
Scale: 1/4"=1'-0"
REFER TO 3/A5.00 FOR SIMILAR NOTES



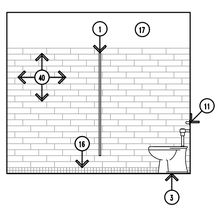
7 A5.00 Girls Restroom 151 South Elevation
Scale: 1/4"=1'-0"
REFER TO 1/A5.00 FOR SIMILAR NOTES



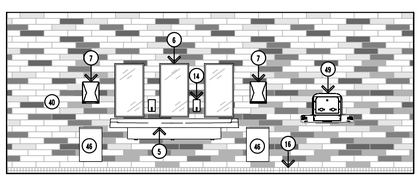
6 A5.00 Girls Restroom 151 East Elevation
Scale: 1/4"=1'-0"
REFER TO 2/A5.00 FOR SIMILAR NOTES



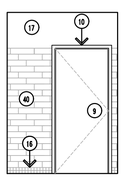
5 A5.00 Girls Restroom 151 North Elevation
Scale: 1/4"=1'-0"
REFER TO 4/A5.00 FOR SIMILAR NOTES



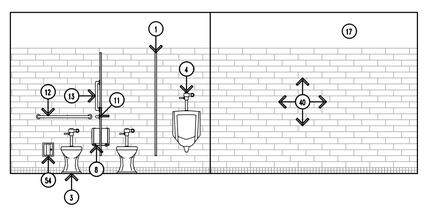
4 A5.00 Boys Restroom 153 West Elevation
Scale: 1/4"=1'-0"



3 A5.00 Boys Restroom 153 South Elevation
Scale: 1/4"=1'-0"



2 A5.00 Boys Restroom 153 East Elevation
Scale: 1/4"=1'-0"



1 A5.00 Boys Restroom 153 North Elevation
Scale: 1/4"=1'-0"

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. ALL OUTSIDE CORNERS OF TILED WALLS TO HAVE TRIM PIECE SIMILAR TO SCHLUTER 'RONDEC' SIZED APPROPRIATE FOR TILE THICKNESS (SATIN ANODIZED ALUMINUM FINISH). EXPOSED TOP EDGE TO BE FINISHED WITH COORDINATING TOP CAP.

DRAWING NOTES:

1. FLOOR MOUNTED, OVERHEAD BRACED PLASTIC TOILET COMPARTMENT WITH DOOR, HINGES, SLIDE LATCH, DOOR PULL, COAT HOOK, ETC. REFER TO SPECIFICATIONS.
2. WALL MOUNTED, PLASTIC URINAL SCREEN WITH CONTINUOUS WALL BRACKET. REFER TO SPECIFICATIONS.
3. FLOOR MOUNTED WATERCLOSET PER ADA REQUIREMENTS WITH AUTOMATIC FLUSH VALVE.
4. WALL MOUNTED URINAL WITH RIM AT 17" A.F.F. MAXIMUM AND AUTOMATIC FLUSH VALVE, PROVIDE CONCEALED CARRIER WITH TUBE STEEL SUPPORT LEGS.
5. WALL MOUNTED WASH FOUNTAIN. REFER TO MECHANICAL SPECIFICATIONS.
6. WALL MOUNTED MIRROR. REFER TO SPECIFICATIONS.
7. WALL MOUNTED PAPER TOWEL DISPENSER. REFER TO SPECIFICATIONS.
8. TOILET PAPER DISPENSER MOUNTED PER ADA REQUIREMENTS. REFER TO SPECIFICATIONS.
9. DOOR - REFER TO DOOR SCHEDULE.
10. DOOR FRAME - REFER TO DOOR SCHEDULE.
11. 42" STAINLESS STEEL GRAB BAR MOUNTED PER ADA REQUIREMENTS. REFER TO A00 & SPECIFICATIONS.
12. 36" STAINLESS STEEL GRAB BAR MOUNTED PER ADA REQUIREMENTS. REFER TO A00 & SPECIFICATIONS.
13. 18" STAINLESS STEEL GRAB BAR MOUNTED PER ADA REQUIREMENTS. REFER TO A00 & SPECIFICATIONS.
14. WALL MOUNTED SOAP DISPENSER. REFER TO SPECIFICATIONS.
15. SANITARY NAPKIN DISPOSAL MOUNTED PER ADA REQUIREMENTS. REFER TO SPECIFICATIONS.
16. CERAMIC / PORCELAIN TILE WALL BASE - REFER TO FINISH SCHEDULE AND SPECIFICATIONS.
17. PAINTED CMU WALL - REFER TO FINISH SCHEDULE.
18. FLOOR MOUNTED CHILD SIZE WATERCLOSET PER CHILD ADA REQUIREMENTS WITH AUTOMATIC FLUSH VALVE.
19. WALL-MOUNTED LAVATORY MOUNTED PER ADA REQUIREMENTS WITH BATTERY OPERATED FAUCET. PROVIDE CONCEALED WALL CARRIER WITH FLOOR SUPPORTS.
20. CUSTOM PLASTIC LAMINATE COAT CUBBIES WITH HOOKS. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
21. WHITE BOARD/ TACKBOARD (TB-3) COMBINATION. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
22. APPROXIMATE LOCATION OF INTERACTIVE FLAT PANEL, COORDINATE BETWEEN TECHNOLOGY AND ELECTRICAL CONTRACTOR PRIOR TO ROUGH-IN. FURNISHED AND INSTALLED BY TECHNOLOGY VENDOR.
23. COUNTERTOP W/SIDE AND BACKSPLASH TO SUIT CONDITIONS. REFER TO FINISH / MATERIALS SCHEDULE.
24. BASE CABINET. REFER TO CABINET SCHEDULE.
25. FILLER PANEL AS REQUIRED.
26. LAMINATED SAFETY GLAZING IN ALUMINUM STOREFRONT.
27. EXISTING WINDOW.
28. RECEPTION DESK. REFER TO CABINET SCHEDULE.
29. MAIL SLOTS. REFER TO CABINET SCHEDULE.
30. UPPER WALL CABINETS. REFER TO CABINET SCHEDULE.
31. PLASTIC LAMINATE RECEPTION DESK COUNTERTOP. REFER TO MATERIALS SCHEDULE.
32. TACKABLE SURFACE MATERIAL (TB-3). REFER TO MATERIALS SCHEDULE.
33. PLASTIC LAMINATE FILE DRAWER. REFER TO MATERIALS SCHEDULE.
34. PLASTIC LAMINATE REVEAL. REFER TO MATERIALS SCHEDULE.
35. PLASTIC LAMINATE RECEPTION DESK. REFER TO MATERIALS SCHEDULE.
36. PLASTIC LAMINATE BASE. REFER TO MATERIALS SCHEDULE.
37. PLASTIC LAMINATE ENTRY GATE WITH SELF-CLOSING CONTINUOUS HINGE AND SELF-LATCHING HARDWARE. REFER TO MATERIALS SCHEDULE.
38. EXISTING OFFICE EQUIPMENT.
39. WALL-MOUNTED LAVATORY MOUNTED PER CHILD ADA REQUIREMENTS WITH BATTERY OPERATED FAUCET. PROVIDE CONCEALED WALL CARRIER WITH FLOOR SUPPORTS.
40. CERAMIC / PORCELAIN WALL TILE. REFER TO FINISH / MATERIALS SCHEDULE.
41. PAINTED GYPSUM WALL. REFER TO FINISH / MATERIALS SCHEDULE.
42. 4" COVED RUBBER BASE. REFER TO MATERIALS SCHEDULE.
43. ELECTRIC WATER COOLER WITH BOTTLE FILLER.
44. WALL MOUNTED ADJUSTABLE HEIGHT CHANGING STATION. REFER TO SPECIFICATIONS.
45. STOREFRONT FRAMING SYSTEM WITH GLASS. REFER TO DOOR SCHEDULE.
46. WASTE RECEPTACLE. REFER TO SPECIFICATIONS.
47. WINDOW SHADES. REFER TO MATERIALS SCHEDULE.
48. TOP OF MIRROR TO ALIGN WITH TOP OF TILE; BOTTOM OF MIRROR NOT TO EXCEED 40" A.F.F. PER BARRIER FREE REQUIREMENTS.
49. WALL MOUNTED DIAPER CHANGING STATION. REFER TO SPECIFICATIONS.
50. FINISHED END PANEL AS REQUIRED.
51. TACKBOARD (TB-3) WITH ALUMINUM FRAME. REFER TO SPECIFICATIONS.
52. 3" GROMMET. REFER TO SPECIFICATIONS.
53. LINE OF FURRED OUT WALL BEHIND WASH FOUNTAIN.
54. HOSE BIBB ENCLOSURE. REFER TO SPECIFICATIONS.

STATE OF MICHIGAN
ELIZABETH SUE BYE
ARCHITECT
No. 1301054283
LICENSED ARCHITECT

Bidding and Permits: 31 July 2023

Interior Elevations

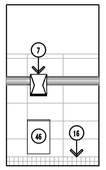
EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

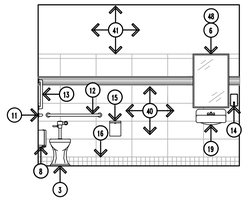
Project No. 3221

A5.00

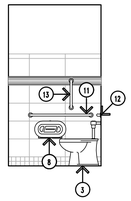
803 W. Big Beaver Road, Suite 350, Troy, MI 48084 | 248.244.9710



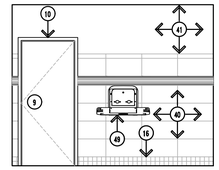
17 A5.01 Unisex Restroom 103 West Elevation
Scale: 1/4"=1'-0"



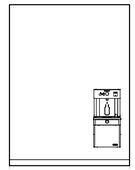
16 A5.01 Unisex Restroom 103 South Elevation
Scale: 1/4"=1'-0"



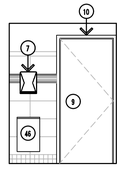
15 A5.01 Unisex Restroom 103 East Elevation
Scale: 1/4"=1'-0"



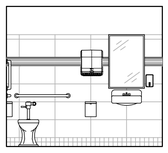
14 A5.01 Unisex Restroom 103 North Elevation
Scale: 1/4"=1'-0"



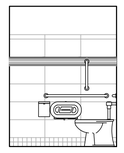
13 A5.01 Unisex Restroom Vestibule 102 North Elevation
Scale: 1/4"=1'-0"



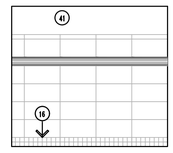
12 A5.01 Unisex Restroom 118 West Elevation
Scale: 1/4"=1'-0"



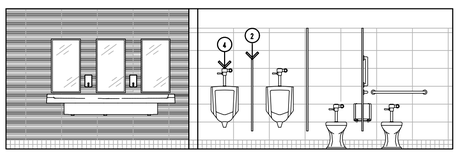
11 A5.01 Unisex Restroom 118 South Elevation
Scale: 1/4"=1'-0"
REFER TO 16/A5.01 FOR SIMILAR NOTES



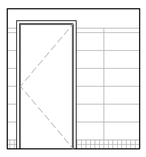
10 A5.01 Unisex Restroom 118 East Elevation
Scale: 1/4"=1'-0"
REFER TO 15/A5.01 FOR SIMILAR NOTES



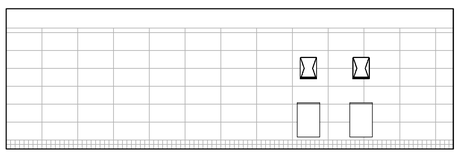
9 A5.01 Unisex Restroom 118 North Elevation
Scale: 1/4"=1'-0"



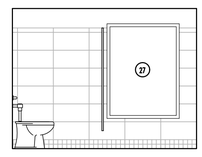
8 A5.01 Mens Restroom 139 West Elevation
Scale: 1/4"=1'-0"
REFER TO 2/A5.01 FOR SIMILAR NOTES



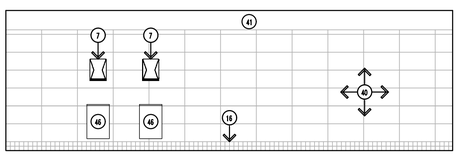
7 A5.01 Mens Restroom 139 South Elevation
Scale: 1/4"=1'-0"
REFER TO 3/A5.01 FOR SIMILAR NOTES



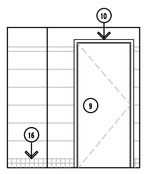
6 A5.01 Mens Restroom 139 East Elevation
Scale: 1/4"=1'-0"
REFER TO 4/A5.01 FOR SIMILAR NOTES



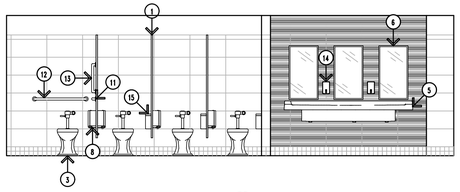
5 A5.01 Mens Restroom 139 North Elevation
Scale: 1/4"=1'-0"
REFER TO 1/A5.01 FOR SIMILAR NOTES



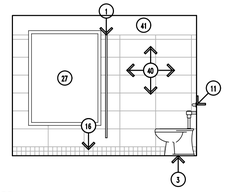
4 A5.01 Womens Restroom 141 West Elevation
Scale: 1/4"=1'-0"



3 A5.01 Womens Restroom 141 South Elevation
Scale: 1/4"=1'-0"



2 A5.01 Womens Restroom 141 East Elevation
Scale: 1/4"=1'-0"



1 A5.01 Womens Restroom 141 North Elevation
Scale: 1/4"=1'-0"

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. ALL OUTSIDE CORNERS OF TILED WALLS TO HAVE TRIM PIECE SIMILAR TO SCHLUTER 'RONDEC' SIZED APPROPRIATE FOR TILE THICKNESS (SATIN ANODIZED ALUMINUM FINISH). EXPOSED TOP EDGE TO BE FINISHED WITH COORDINATING TOP CAP.

DRAWING NOTES:

1. FLOOR MOUNTED, OVERHEAD BRACED PLASTIC TOILET COMPARTMENT WITH DOOR, HINGES, SLIDE LATCH, DOOR PULL, COAT HOOK, ETC. REFER TO SPECIFICATIONS.
2. WALL MOUNTED, PLASTIC URINAL SCREEN WITH CONTINUOUS WALL BRACKET. REFER TO SPECIFICATIONS.
3. FLOOR MOUNTED WATERCLOSET PER ADA REQUIREMENTS WITH AUTOMATIC FLUSH VALVE.
4. WALL MOUNTED URINAL WITH RIM AT 17" A.F.F. MAXIMUM AND AUTOMATIC FLUSH VALVE, PROVIDE CONCEALED CARRIER WITH TUBE STEEL SUPPORT LEGS.
5. WALL MOUNTED WASH FOUNTAIN. REFER TO MECHANICAL SPECIFICATIONS.
6. WALL MOUNTED MIRROR. REFER TO SPECIFICATIONS.
7. WALL MOUNTED PAPER TOWEL DISPENSER. REFER TO SPECIFICATIONS.
8. TOILET PAPER DISPENSER MOUNTED PER ADA REQUIREMENTS. REFER TO SPECIFICATIONS.
9. DOOR - REFER TO DOOR SCHEDULE.
10. DOOR FRAME - REFER TO DOOR SCHEDULE.
11. 42" STAINLESS STEEL GRAB BAR MOUNTED PER ADA REQUIREMENTS. REFER TO A00 & SPECIFICATIONS.
12. 36" STAINLESS STEEL GRAB BAR MOUNTED PER ADA REQUIREMENTS. REFER TO A00 & SPECIFICATIONS.
13. 18" STAINLESS STEEL GRAB BAR MOUNTED PER ADA REQUIREMENTS. REFER TO A00 & SPECIFICATIONS.
14. WALL MOUNTED SOAP DISPENSER. REFER TO SPECIFICATIONS.
15. SANITARY NAPKIN DISPOSAL MOUNTED PER ADA REQUIREMENTS. REFER TO SPECIFICATIONS.
16. CERAMIC / PORCELAIN TILE WALL BASE - REFER TO FINISH SCHEDULE AND SPECIFICATIONS.
17. PAINTED CMU WALL - REFER TO FINISH SCHEDULE.
18. FLOOR MOUNTED CHILD SIZE WATERCLOSET PER CHILD ADA REQUIREMENTS WITH AUTOMATIC FLUSH VALVE.
19. WALL-MOUNTED LAVATORY MOUNTED PER ADA REQUIREMENTS WITH BATTERY OPERATED FAUCET. PROVIDE CONCEALED WALL CARRIER WITH FLOOR SUPPORTS.
20. CUSTOM PLASTIC LAMINATE COAT CUBBIES WITH HOOKS. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
21. WHITE BOARD/ TACKBOARD (TB-3) COMBINATION. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
22. APPROXIMATE LOCATION OF INTERACTIVE FLAT PANEL. COORDINATE BETWEEN TECHNOLOGY AND ELECTRICAL CONTRACTOR PRIOR TO ROUGH-IN. FURNISHED AND INSTALLED BY TECHNOLOGY VENDOR.
23. COUNTERTOP W/SIDE AND BACKSPLASH TO SUIT CONDITIONS. REFER TO FINISH / MATERIALS SCHEDULE.
24. BASE CABINET. REFER TO CABINET SCHEDULE.
25. FILLER PANEL AS REQUIRED.
26. LAMINATED SAFETY GLAZING IN ALUMINUM STOREFRONT.
27. EXISTING WINDOW.
28. RECEPTION DESK. REFER TO CABINET SCHEDULE.
29. MAIL SLOTS. REFER TO CABINET SCHEDULE.
30. UPPER WALL CABINETS. REFER TO CABINET SCHEDULE.
31. PLASTIC LAMINATE RECEPTION DESK COUNTERTOP. REFER TO MATERIALS SCHEDULE.
32. TACKABLE SURFACE MATERIAL (TB-3). REFER TO MATERIALS SCHEDULE.
33. PLASTIC LAMINATE FILE DRAWER. REFER TO MATERIALS SCHEDULE.
34. PLASTIC LAMINATE REVEAL. REFER TO MATERIALS SCHEDULE.
35. PLASTIC LAMINATE RECEPTION DESK. REFER TO MATERIALS SCHEDULE.
36. PLASTIC LAMINATE BASE. REFER TO MATERIALS SCHEDULE.
37. PLASTIC LAMINATE ENTRY GATE WITH SELF-CLOSING CONTINUOUS HINGE AND SELF-LATCHING HARDWARE. REFER TO MATERIALS SCHEDULE.
38. EXISTING OFFICE EQUIPMENT.
39. WALL-MOUNTED LAVATORY MOUNTED PER CHILD ADA REQUIREMENTS WITH BATTERY OPERATED FAUCET. PROVIDE CONCEALED WALL CARRIER WITH FLOOR SUPPORTS.
40. CERAMIC / PORCELAIN WALL TILE. REFER TO FINISH / MATERIALS SCHEDULE.
41. PAINTED GYPSUM WALL. REFER TO FINISH / MATERIALS SCHEDULE.
42. 4" COVED RUBBER BASE. REFER TO MATERIALS SCHEDULE.
43. ELECTRIC WATER COOLER WITH BOTTLE FILLER.
44. WALL MOUNTED ADJUSTABLE HEIGHT CHANGING STATION. REFER TO SPECIFICATIONS.
45. STOREFRONT FRAMING SYSTEM WITH GLASS. REFER TO DOOR SCHEDULE.
46. WASTE RECEPTACLE. REFER TO SPECIFICATIONS.
47. WINDOW SHADES. REFER TO MATERIALS SCHEDULE.
48. TOP OF MIRROR TO ALIGN WITH TOP OF TILE; BOTTOM OF MIRROR NOT TO EXCEED 40" A.F.F. PER BARRIER FREE REQUIREMENTS.
49. WALL MOUNTED DIAPER CHANGING STATION. REFER TO SPECIFICATIONS.
50. FINISHED END PANEL AS REQUIRED.
51. TACKBOARD (TB-3) WITH ALUMINUM FRAME. REFER TO SPECIFICATIONS.
52. 3" GROMMET. REFER TO SPECIFICATIONS.
53. LINE OF FURRED OUT WALL BEHIND WASH FOUNTAIN.
54. HOSE BIBB ENCLOSURE. REFER TO SPECIFICATIONS.

Bidding and Permits: 31 July 2023

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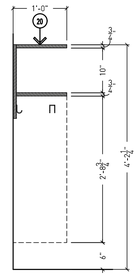
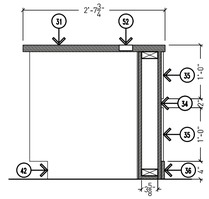
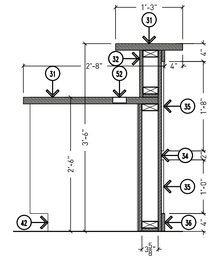


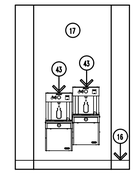
15 A5.02 GSRP Cubbie Section
Scale: 3/4"=1'-0"



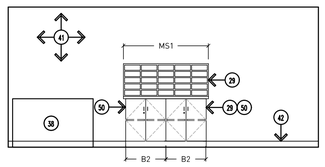
14 A5.02 Reception Desk Section
Scale: 3/4"=1'-0"



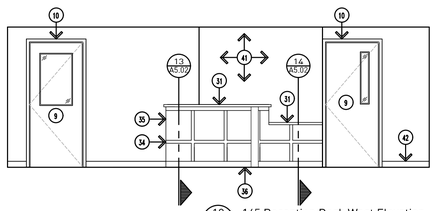
13 A5.02 Reception Desk Section
Scale: 3/4"=1'-0"



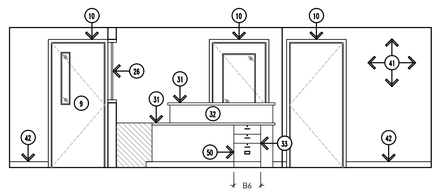
12 A5.02 Corridor D 150 Drinking Fountains
Scale: 1/4"=1'-0"



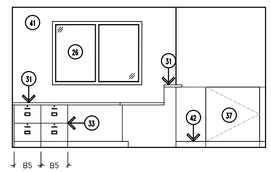
11 A5.02 145 Reception Mailbox South Elevation
Scale: 1/4"=1'-0"



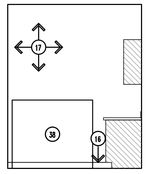
10 A5.02 145 Reception Desk West Elevation
Scale: 1/4"=1'-0"



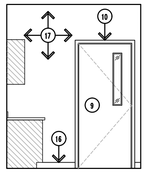
9 A5.02 145 Reception Desk East Elevation
Scale: 1/4"=1'-0"



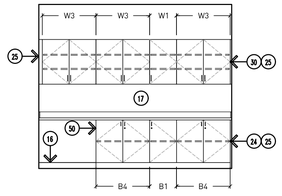
8 A5.02 145 Reception Desk North Elevation
Scale: 1/4"=1'-0"



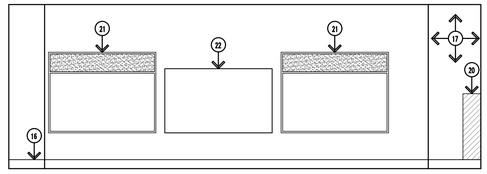
7 A5.02 152 Storage Room West Elevation
Scale: 1/4"=1'-0"



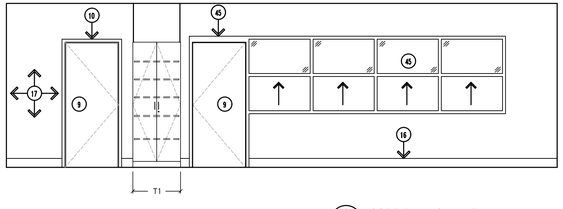
6 A5.02 152 Storage Room East Elevation
Scale: 1/4"=1'-0"



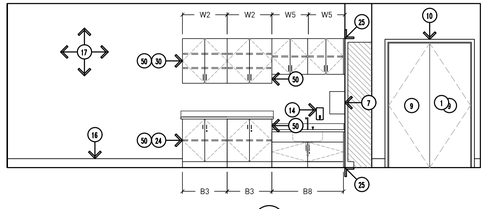
5 A5.02 152 Storage Room North Elevation
Scale: 1/4"=1'-0"



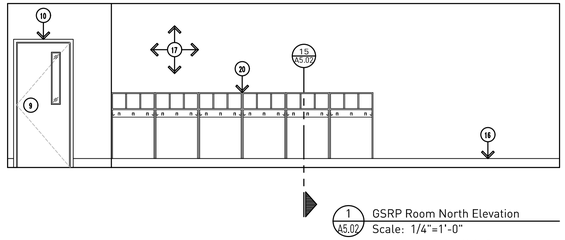
4 A5.02 GSRP Room West Elevation
Scale: 1/4"=1'-0"
NOTE: ALL GSRP ROOMS SIMILAR



3 A5.02 GSRP Room South Elevation
Scale: 1/4"=1'-0"
NOTE: ALL GSRP ROOMS SIMILAR



2 A5.02 GSRP Room East Elevation
Scale: 1/4"=1'-0"
NOTE: ALL GSRP ROOMS SIMILAR



1 A5.02 GSRP Room North Elevation
Scale: 1/4"=1'-0"
NOTE: ALL GSRP ROOMS SIMILAR

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DRAWING NOTES:

1. FLOOR MOUNTED, OVERHEAD BRACED PLASTIC TOILET COMPARTMENT WITH DOOR, HINGES, SLIDE LATCH, DOOR PULL, COAT HOOK, ETC. REFER TO SPECIFICATIONS.
2. WALL MOUNTED, PLASTIC URINAL SCREEN WITH CONTINUOUS WALL BRACKET. REFER TO SPECIFICATIONS.
3. FLOOR MOUNTED WATERCLOSET PER ADA REQUIREMENTS WITH AUTOMATIC FLUSH VALVE.
4. WALL MOUNTED URINAL WITH RIM AT 17" A.F.F. MAXIMUM AND AUTOMATIC FLUSH VALVE, PROVIDE CONCEALED CARRIER WITH TUBE STEEL SUPPORT LEGS.
5. WALL MOUNTED WASH FOUNTAIN. REFER TO MECHANICAL SPECIFICATIONS.
6. WALL MOUNTED MIRROR. REFER TO SPECIFICATIONS.
7. WALL MOUNTED PAPER TOWEL DISPENSER. REFER TO SPECIFICATIONS.
8. TOILET PAPER DISPENSER MOUNTED PER ADA REQUIREMENTS. REFER TO SPECIFICATIONS.
9. DOOR - REFER TO DOOR SCHEDULE.
10. DOOR FRAME - REFER TO DOOR SCHEDULE.
11. 42" STAINLESS STEEL GRAB BAR MOUNTED PER ADA REQUIREMENTS. REFER TO A00 & SPECIFICATIONS.
12. 36" STAINLESS STEEL GRAB BAR MOUNTED PER ADA REQUIREMENTS. REFER TO A00 & SPECIFICATIONS.
13. 18" STAINLESS STEEL GRAB BAR MOUNTED PER ADA REQUIREMENTS. REFER TO A00 & SPECIFICATIONS.
14. WALL MOUNTED SOAP DISPENSER. REFER TO SPECIFICATIONS.
15. SANITARY NAPKIN DISPOSAL MOUNTED PER ADA REQUIREMENTS. REFER TO SPECIFICATIONS.
16. CERAMIC / PORCELAIN TILE WALL BASE - REFER TO FINISH SCHEDULE AND SPECIFICATIONS.
17. PAINTED CMU WALL - REFER TO FINISH SCHEDULE.
18. FLOOR MOUNTED CHILD SIZE WATERCLOSET PER CHILD ADA REQUIREMENTS WITH AUTOMATIC FLUSH VALVE.
19. WALL-MOUNTED LAVATORY MOUNTED PER ADA REQUIREMENTS WITH BATTERY OPERATED FAUCET. PROVIDE CONCEALED WALL CARRIER WITH FLOOR SUPPORTS.
20. CUSTOM PLASTIC LAMINATE COAT CUBBIES WITH HOOKS. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
21. WHITE BOARD/ TACKBOARD (TB-3) COMBINATION. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
22. APPROXIMATE LOCATION OF INTERACTIVE FLAT PANEL. COORDINATE BETWEEN TECHNOLOGY AND ELECTRICAL CONTRACTOR PRIOR TO ROUGH-IN. FURNISHED AND INSTALLED BY TECHNOLOGY VENDOR.
23. COUNTERTOP W/SIDE AND BACKSPLASH TO SUIT CONDITIONS. REFER TO FINISH / MATERIALS SCHEDULE.
24. BASE CABINET. REFER TO CABINET SCHEDULE.
25. FILLER PANEL AS REQUIRED.
26. LAMINATED SAFETY GLAZING IN ALUMINUM STOREFRONT.
27. EXISTING WINDOW.
28. RECEPTION DESK. REFER TO CABINET SCHEDULE.
29. MAIL SLOTS. REFER TO CABINET SCHEDULE.
30. UPPER WALL CABINETS. REFER TO CABINET SCHEDULE.
31. PLASTIC LAMINATE RECEPTION DESK COUNTERTOP. REFER TO MATERIALS SCHEDULE.
32. TACKABLE SURFACE MATERIAL (TB-3). REFER TO MATERIALS SCHEDULE.
33. PLASTIC LAMINATE FILE DRAWER. REFER TO MATERIALS SCHEDULE.
34. PLASTIC LAMINATE REVEAL. REFER TO MATERIALS SCHEDULE.
35. PLASTIC LAMINATE RECEPTION DESK. REFER TO MATERIALS SCHEDULE.
36. PLASTIC LAMINATE BASE. REFER TO MATERIALS SCHEDULE.
37. PLASTIC LAMINATE ENTRY GATE WITH SELF-CLOSING CONTINUOUS HINGE AND SELF-LATCHING HARDWARE. REFER TO MATERIALS SCHEDULE.
38. EXISTING OFFICE EQUIPMENT.
39. WALL-MOUNTED LAVATORY MOUNTED PER CHILD ADA REQUIREMENTS WITH BATTERY OPERATED FAUCET. PROVIDE CONCEALED WALL CARRIER WITH FLOOR SUPPORTS.
40. CERAMIC / PORCELAIN WALL TILE. REFER TO FINISH / MATERIALS SCHEDULE.
41. PAINTED GYPSUM WALL. REFER TO FINISH / MATERIALS SCHEDULE.
42. 4" COVED RUBBER BASE. REFER TO MATERIALS SCHEDULE.
43. ELECTRIC WATER COOLER WITH BOTTLE FILLER.
44. WALL MOUNTED ADJUSTABLE HEIGHT CHANGING STATION. REFER TO SPECIFICATIONS.
45. STOREFRONT FRAMING SYSTEM WITH GLASS. REFER TO DOOR SCHEDULE.
46. WASTE RECEPTACLE. REFER TO SPECIFICATIONS.
47. WINDOW SHADES. REFER TO MATERIALS SCHEDULE.
48. TOP OF MIRROR TO ALIGN WITH TOP OF TILE; BOTTOM OF MIRROR NOT TO EXCEED 40" A.F.F. PER BARRIER FREE REQUIREMENTS.
49. WALL MOUNTED DIAPER CHANGING STATION. REFER TO SPECIFICATIONS.
50. FINISHED END PANEL AS REQUIRED.
51. TACKBOARD (TB-3) WITH ALUMINUM FRAME. REFER TO SPECIFICATIONS.
52. 3" GROMMET. REFER TO SPECIFICATIONS.
53. LINE OF FURRED OUT WALL BEHIND WASH FOUNTAIN.
54. HOSE BIBB ENCLOSURE. REFER TO SPECIFICATIONS.

Bidding and Permits: 31 July 2023

Interior Elevations

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Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

A5.02

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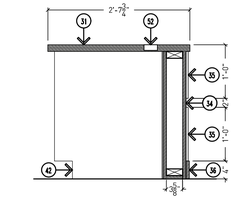
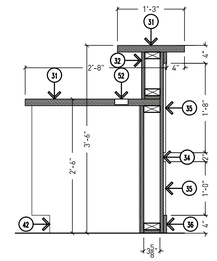
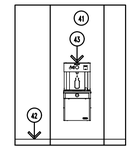


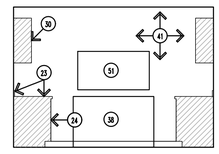
9 A5.03 Reception Desk 101 Section
Scale: 3/4"=1'-0"



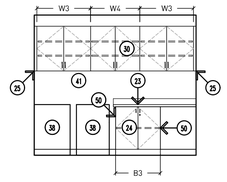
8 A5.03 Reception Desk 101 Section
Scale: 3/4"=1'-0"



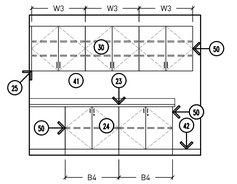
7 A5.03 Corridor B 125 Drinking Fountains
Scale: 1/4"=1'-0"



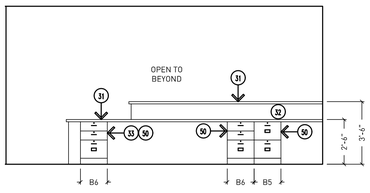
6 A5.03 133 Copy Room West Elevation
Scale: 1/4"=1'-0"



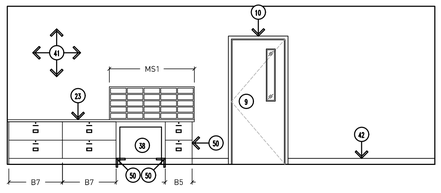
5 A5.03 133 Copy Room South Elevation
Scale: 1/4"=1'-0"



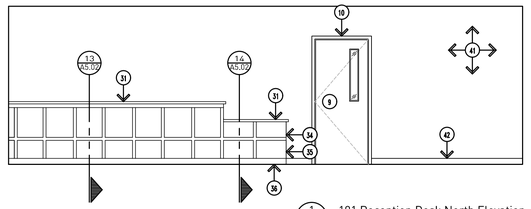
4 A5.03 133 Copy Room North Elevation
Scale: 1/4"=1'-0"



3 A5.03 101 Reception Desk South Elevation
Scale: 1/4"=1'-0"



2 A5.03 101 Reception Desk Storage North Elevation
Scale: 1/4"=1'-0"



1 A5.03 101 Reception Desk North Elevation
Scale: 1/4"=1'-0"

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. ALL OUTSIDE CORNERS OF TILED WALLS TO HAVE TRIM PIECE SIMILAR TO SCHLUTER 'RONDEC' SIZED APPROPRIATE FOR TILE THICKNESS (SATIN ANODIZED ALUMINUM FINISH). EXPOSED TOP EDGE TO BE FINISHED WITH COORDINATING TOP CAP.

DRAWING NOTES:

1. FLOOR MOUNTED, OVERHEAD BRACED PLASTIC TOILET COMPARTMENT WITH DOOR, HINGES, SLIDE LATCH, DOOR PULL, COAT HOOK, ETC. REFER TO SPECIFICATIONS.
2. WALL MOUNTED, PLASTIC URINAL SCREEN WITH CONTINUOUS WALL BRACKET. REFER TO SPECIFICATIONS.
3. FLOOR MOUNTED WATERCLOSET PER ADA REQUIREMENTS WITH AUTOMATIC FLUSH VALVE.
4. WALL MOUNTED URINAL WITH RIM AT 17" A.F.F. MAXIMUM AND AUTOMATIC FLUSH VALVE, PROVIDE CONCEALED CARRIER WITH TUBE STEEL SUPPORT LEGS.
5. WALL MOUNTED WASH FOUNTAIN. REFER TO MECHANICAL SPECIFICATIONS.
6. WALL MOUNTED MIRROR. REFER TO SPECIFICATIONS.
7. WALL MOUNTED PAPER TOWEL DISPENSER. REFER TO SPECIFICATIONS.
8. TOILET PAPER DISPENSER MOUNTED PER ADA REQUIREMENTS. REFER TO SPECIFICATIONS.
9. DOOR - REFER TO DOOR SCHEDULE.
10. DOOR FRAME - REFER TO DOOR SCHEDULE.
11. 42" STAINLESS STEEL GRAB BAR MOUNTED PER ADA REQUIREMENTS. REFER TO A00 & SPECIFICATIONS.
12. 36" STAINLESS STEEL GRAB BAR MOUNTED PER ADA REQUIREMENTS. REFER TO A00 & SPECIFICATIONS.
13. 18" STAINLESS STEEL GRAB BAR MOUNTED PER ADA REQUIREMENTS. REFER TO A00 & SPECIFICATIONS.
14. WALL MOUNTED SOAP DISPENSER. REFER TO SPECIFICATIONS.
15. SANITARY NAPKIN DISPOSAL MOUNTED PER ADA REQUIREMENTS. REFER TO SPECIFICATIONS.
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17. PAINTED CMU WALL - REFER TO FINISH SCHEDULE.
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19. WALL-MOUNTED LAVATORY MOUNTED PER ADA REQUIREMENTS WITH BATTERY OPERATED FAUCET. PROVIDE CONCEALED WALL CARRIER WITH FLOOR SUPPORTS.
20. CUSTOM PLASTIC LAMINATE COAT CUBBIES WITH HOOKS. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
21. WHITE BOARD/ TACKBOARD (TB-3) COMBINATION. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
22. APPROXIMATE LOCATION OF INTERACTIVE FLAT PANEL, COORDINATE BETWEEN TECHNOLOGY AND ELECTRICAL CONTRACTOR PRIOR TO ROUGH-IN. FURNISHED AND INSTALLED BY TECHNOLOGY VENDOR.
23. COUNTERTOP W/SIDE AND BACKSPLASH TO SUIT CONDITIONS. REFER TO FINISH / MATERIALS SCHEDULE.
24. BASE CABINET. REFER TO CABINET SCHEDULE.
25. FILLER PANEL AS REQUIRED.
26. LAMINATED SAFETY GLAZING IN ALUMINUM STOREFRONT.
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30. UPPER WALL CABINETS. REFER TO CABINET SCHEDULE.
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33. PLASTIC LAMINATE FILE DRAWER. REFER TO MATERIALS SCHEDULE.
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35. PLASTIC LAMINATE RECEPTION DESK. REFER TO MATERIALS SCHEDULE.
36. PLASTIC LAMINATE BASE. REFER TO MATERIALS SCHEDULE.
37. PLASTIC LAMINATE ENTRY GATE WITH SELF-CLOSING CONTINUOUS HINGE AND SELF-LATCHING HARDWARE. REFER TO MATERIALS SCHEDULE.
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39. WALL-MOUNTED LAVATORY MOUNTED PER CHILD ADA REQUIREMENTS WITH BATTERY OPERATED FAUCET. PROVIDE CONCEALED WALL CARRIER WITH FLOOR SUPPORTS.
40. CERAMIC / PORCELAIN WALL TILE. REFER TO FINISH / MATERIALS SCHEDULE.
41. PAINTED GYPSUM WALL. REFER TO FINISH / MATERIALS SCHEDULE.
42. 4" COVED RUBBER BASE. REFER TO MATERIALS SCHEDULE.
43. ELECTRIC WATER COOLER WITH BOTTLE FILLER.
44. WALL MOUNTED ADJUSTABLE HEIGHT CHANGING STATION. REFER TO SPECIFICATIONS.
45. STOREFRONT FRAMING SYSTEM WITH GLASS. REFER TO DOOR SCHEDULE.
46. WASTE RECEPTACLE. REFER TO SPECIFICATIONS.
47. WINDOW SHADES. REFER TO MATERIALS SCHEDULE.
48. TOP OF MIRROR TO ALIGN WITH TOP OF TILE; BOTTOM OF MIRROR NOT TO EXCEED 40" A.F.F. PER BARRIER FREE REQUIREMENTS.
49. WALL MOUNTED DIAPER CHANGING STATION. REFER TO SPECIFICATIONS.
50. FINISHED END PANEL AS REQUIRED.
51. TACKBOARD (TB-3) WITH ALUMINUM FRAME. REFER TO SPECIFICATIONS.
52. 3" GROMMET. REFER TO SPECIFICATIONS.
53. LINE OF FURRED OUT WALL BEHIND WASH FOUNTAIN.
54. HOSE BIBB ENCLOSURE. REFER TO SPECIFICATIONS.

Bidding and Permits: 31 July 2023

Interior Elevations

EHRESMAN ARCHITECTS
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Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

A5.03

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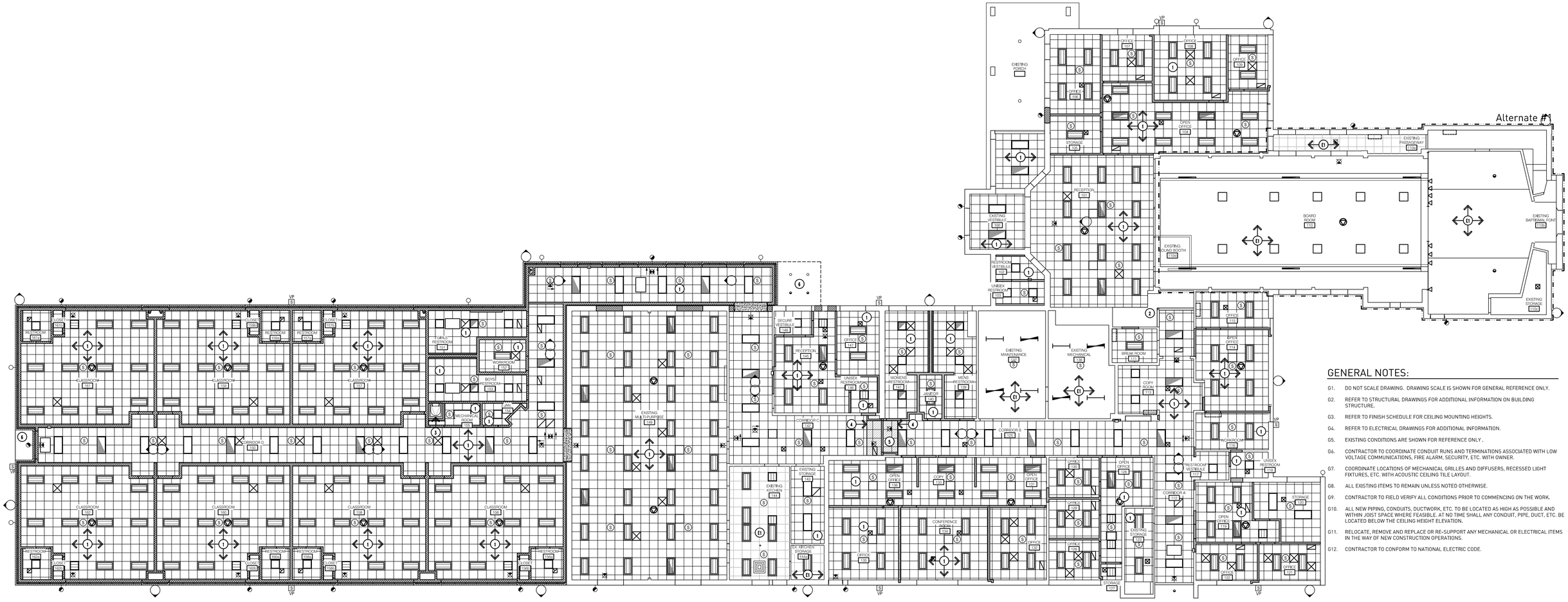

1 / A6.10 Composite RCP
Scale: 3/32"=1'-0"

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION ON BUILDING STRUCTURE.

G3. REFER TO FINISH SCHEDULE FOR CEILING MOUNTING HEIGHTS.

G4. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.

G5. EXISTING CONDITIONS ARE SHOWN FOR REFERENCE ONLY .

G6. CONTRACTOR TO COORDINATE CONDUIT RUNS AND TERMINATIONS ASSOCIATED WITH LOW VOLTAGE COMMUNICATIONS, FIRE ALARM, SECURITY, ETC. WITH OWNER.

G7. COORDINATE LOCATIONS OF MECHANICAL GRILLES AND DIFFUSERS, RECESSED LIGHT FIXTURES, ETC. WITH ACOUSTIC CEILING TILE LAYOUT.

G8. ALL EXISTING ITEMS TO REMAIN UNLESS NOTED OTHERWISE.

G9. CONTRACTOR TO FIELD VERIFY ALL CONDITIONS PRIOR TO COMMENCING ON THE WORK.

G10. ALL NEW PIPING, CONDUITS, DUCTWORK, ETC. TO BE LOCATED AS HIGH AS POSSIBLE AND WITHIN JOIST SPACE WHERE FEASIBLE. AT NO TIME SHALL ANY CONDUIT, PIPE, DUCT, ETC. BE LOCATED BELOW THE CEILING HEIGHT ELEVATION.

G11. RELOCATE, REMOVE AND REPLACE OR RE-SUPPORT ANY MECHANICAL OR ELECTRICAL ITEMS IN THE WAY OF NEW CONSTRUCTION OPERATIONS.

G12. CONTRACTOR TO CONFORM TO NATIONAL ELECTRIC CODE.

LEGEND CONTINUED:

- CEILING MOUNTED ACU - REFER TO MECHANICAL DRAWINGS
- CAMERA - REFER TO TECHNOLOGY DRAWINGS
- WAP - REFER TO TECHNOLOGY DRAWINGS
- S — CEILING MOUNTED SPEAKER - REFER TO TECHNOLOGY DRAWINGS
- S / VP — WALL MOUNTED SPEAKER - REFER TO TECHNOLOGY DRAWINGS
- WALL MOUNTED ACU. MOUNT HIGH ON THE WALL - REFER TO MECHANICAL DRAWINGS

LEGEND CONTINUED:

- SUPPLY AIR DIFFUSER - REFER TO MECHANICAL DRAWINGS
- RETURN AIR GRILLE - REFER TO MECHANICAL DRAWINGS
- EXISTING SUPPLY AIR DIFFUSER
- EXISTING RETURN AIR GRILLE
- EXISTING 1X1 LIGHT
- EXISTING RECESSED CAN LIGHT
- EXISTING TRACK LIGHT
- EXISTING CEILING FAN

LEGEND CONTINUED:

- LINEAR 4' LIGHT WITH EMERGENCY BACK UP - REFER TO ELECTRICAL DRAWINGS
- 8" ROUND RECESSED CAN LIGHT - REFER TO ELECTRICAL DRAWINGS
- 8" ROUND RECESSED CAN LIGHT WITH EMERGENCY BACK UP - REFER TO ELECTRICAL DRAWINGS
- SURFACE OR PENDANT MOUNTED LED EXIT LIGHT WITH BATTERY PACK AND DIRECTIONAL ARROWS AS INDICATED ON PLAN. - REFER TO ELECTRICAL DRAWINGS
- EXTERIOR LIGHT - REFER TO ELECTRICAL DRAWINGS
- 3"x4' LIGHT FIXTURE WITH EMERGENCY BATTERY BACKUP - REFER TO ELECTRICAL DRAWINGS
- TRACK LIGHT - REFER TO ELECTRICAL DRAWINGS
- EXTERIOR LIGHT WITH EMERGENCY BATTERY BACKUP - REFER TO ELECTRICAL DRAWINGS
- ACOUSTIC CEILING TILE

LEGEND:

- 2X4 RECESSED LED LIGHT FIXTURE WITH CENTER BASKET - REFER TO ELECTRICAL DRAWINGS
- REPRESENTS LIGHT FIXTURE WITH EMERGENCY BATTERY BACKUP - REFER TO ELECTRICAL DRAWINGS
- 2X4 RECESSED FLAT PANEL LED LIGHT FIXTURE - REFER TO ELECTRICAL DRAWINGS
- REPRESENTS LIGHT FIXTURE WITH EMERGENCY BATTERY BACKUP - REFER TO ELECTRICAL DRAWINGS
- 2X2 RECESSED LED LIGHT FIXTURE WITH CENTER BASKET - REFER TO ELECTRICAL DRAWINGS
- 2X2 RECESSED FLAT PANEL LED LIGHT FIXTURE - REFER TO ELECTRICAL DRAWINGS
- REPRESENTS LIGHT FIXTURE WITH EMERGENCY BATTERY BACKUP - REFER TO ELECTRICAL DRAWINGS
- LINEAR 4' LIGHT - REFER TO ELECTRICAL DRAWINGS

DRAWING NOTES:

1. SUSPENDED ACOUSTICAL TILE AND METAL GRID SUSPENSION SYSTEM.
2. PATCH AND REPAIR EXISTING GYPSUM BOARD/PLASTER CEILING, FINISH 3 COATS (PT-12, FLAT).
3. 30" x 36" ROOF HATCH -- COORDINATE WITH ROOF STRUCTURE.
4. AXIOM TRIM PIECE AS REQUIRED TO SUIT CONDITIONS - REFER TO SECTION 3/A9.52 FOR MORE INFORMATION.
5. LOWER CEILING TO ALLOW ELECTRICAL CONDUIT AND DATA CABLING ABOVE DOOR - REFER TO SECTION 3/A9.52 FOR MORE INFORMATION.
6. EIFS CANOPY FINISH.

EXISTING TO REMAIN:

E1. EXISTING CEILING SYSTEM TO REMAIN.

N

STATE OF MICHIGAN · ELIZABETH SUE BYE · ARCHITECT No. 1301054283 · LICENSED ARCHITECT

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Composite RCP

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Cherry Hill Baptist Church
Administration Relocation and Addition

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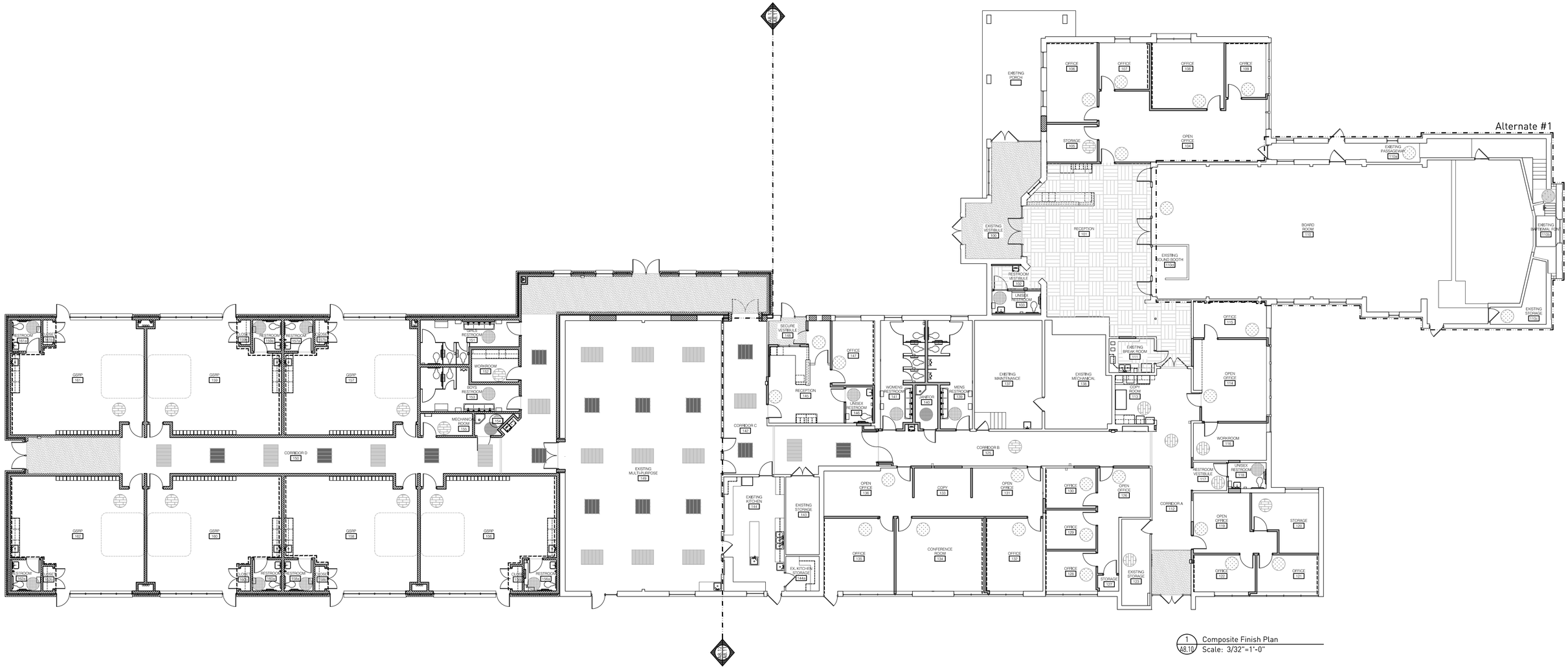

1 A8.10 Composite Finish Plan
Scale: 3/32"=1'-0"

Bidding and Permits: 31 July 2023

Composite Finish Plan

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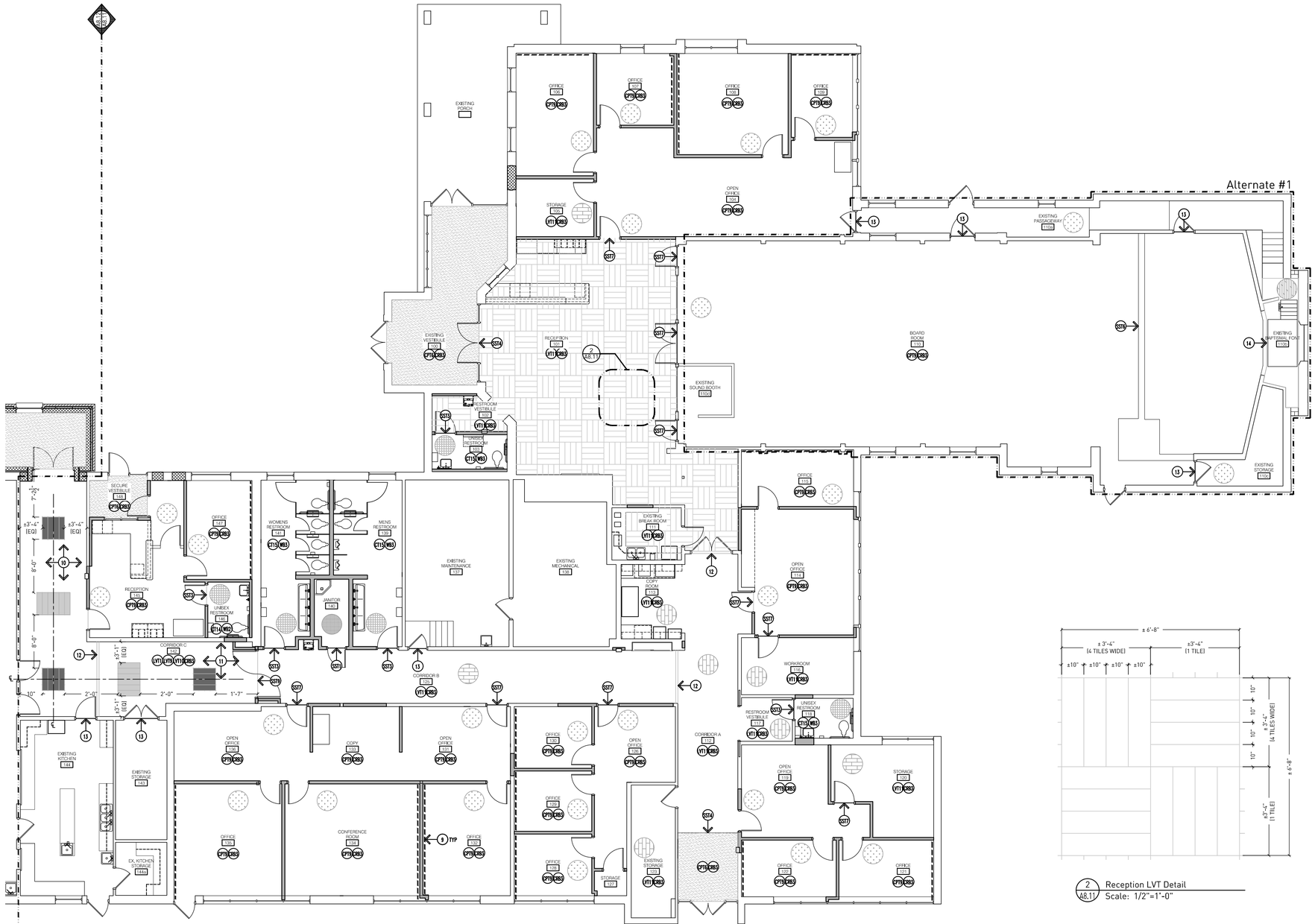


1 A8.11 Finish Plan (Area A)
Scale: 1/8"=1'-0"

2 A8.11 Reception LVT Detail
Scale: 1/2"=1'-0"

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. CONTRACTOR TO VERIFY ALL EXISTING DIMENSIONS IN FIELD PRIOR TO COMMENCING ON THE WORK . IF ANY DISCREPANCIES EXIST BETWEEN PLAN DIMENSIONS AND ACTUAL FIELD CONDITIONS, NOTIFY THE ARCHITECT FOR DIRECTION.

G3. REFER TO ROOM FINISH SCHEDULE AND/OR INTERIOR ELEVATIONS FOR FURTHER INFORMATION, MATERIALS, ETC.

G4. CONTRACTOR TO PATCH/REPAIR AND LEVEL FLOOR AS REQUIRED AT NORTH END OF CORRIDOR WHERE NEW LUXURY VINYL TILE MEETS EXISTING VINYL COMPOSITION FLOOR.

G5. PROPERLY PREPARE SUBSTRATE PRIOR TO INSTALLATION OF FLOORING MATERIALS PER MANUFACTURER'S REQUIREMENTS.

G6. ALL CARPET IS FURNISHED AN INSTALLED BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

G7. ALL LUXURY VINYL TILE IS FURNISHED AND INSTALLED BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

G8. ALL CERAMIC AND/OR PORCELAIN TILE IS FURNISHED AND INSTALLED BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

G9. ADHESIVES, TRANSITIONS, AND BASE ARE FURNISHED AND INSTALLED BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

G10. PROVIDE METAL TRANSITION AT ALL TRANSITIONS BETWEEN DISSIMILAR FLOORING MATERIALS.

G11. LUXURY VINYL TILES TO BE INSTALLED LENGTHWISE IN CORRIDORS. CONTRACTOR TO DETERMINE APPROPRIATE INSTALLATION METHOD IN CORNERS WHEN TILE DIRECTION ROTATES 90 DEGREES.

G12. LUXURY VINYL TILES TO BE INSTALLED PERPENDICULAR TO TEACHING WALL IN CLASSROOMS.

G13. CARPET TILE PLANK DIRECTION TO FOLLOW LVT CORRIDOR DIRECTION.

DRAWING NOTES:

1. LUXURY VINYL TILE INSTALLED IN RANDOM PATTERN, REFER TO ENLARGED PATTERN DETAIL FOR PERCENTAGE OF EACH COLOR TO BE USED.
2. LUXURY VINYL TILE (LVT-9); REFER TO MATERIALS SCHEDULE FOR FURTHER INFORMATION.
3. LUXURY VINYL TILE (LVT-10); REFER TO MATERIALS SCHEDULE FOR FURTHER INFORMATION.
4. WALK OFF CARPET (CPT-6); REFER TO MATERIALS SCHEDULE FOR FURTHER INFORMATION.
5. LOCATION OF CORRIDOR ACCENT SQUARES / RECTANGLES TO BE DETERMINED BASED ON DIMENSIONS INDICATED IN CORRIDOR OUTSIDE CLASSROOMS 154 - 162. ALIGN ACCENT SQUARES / RECTANGLES DOWN LENGTH OF CORRIDOR, BASED ON THESE DIMENSIONS.
6. ALIGN ACCENT SQUARES/RECTANGLES DOWN THE LENGTH OF CORRIDOR D 150, BASED ON CENTER OF ACCENT SQUARE AT END OF CORRIDOR, AS SHOWN.
7. BOUND AREA RUG (1 PER CLASSROOM) - REFER TO MATERIALS SCHEDULE FOR FURTHER INFORMATION
8. 4" H RUBBER WALL BASE (CRB-3) AT MILLWORK LOCATIONS.
9. ACCENT WALL PAINT LOCATION - REFER TO MATERIALS SCHEDULE FOR FURTHER INFORMATION.
10. LOCATION OF CORRIDOR ACCENT SQUARES / RECTANGLES TO BE DETERMINED BASED ON DIMENSIONS INDICATED IN CORRIDOR OUTSIDE OF RECEPTION 145. ALIGN ACCENT SQUARES / RECTANGLES DOWN LENGTH OF CORRIDOR, BASED ON THESE DIMENSIONS.
11. ALIGN ACCENT SQUARES/RECTANGLES DOWN THE LENGTH OF CORRIDOR B 125, BASED ON CENTER OF ACCENT SQUARE AT END OF CORRIDOR, AS SHOWN.
12. 4" TURNBOARD TO BE USED AT CHANGE OF DIRECTION IN CORRIDOR.
13. EXISTING FLOORING TO REMAIN - CFV EXISTING FLOORING MATERIAL FOR PROPER TRANSITION STRIP.
14. WOOD PLATFORM AND TRIM, STAINED TO MATCH EXISTING. SUBMIT SAMPLE OF CUSTOM MATCHED STAIN TO ARCHITECT FOR FINAL APPROVAL.

FLOORING LEGEND:

LVT - LUXURY VINYL TILE

CT - CERAMIC OR PORCELAIN TILE

CONC - SEALED CONCRETE

CPT - CARPET

WD - WOOD PLATFORM

CPT-#: CARPET
CRB-#: COVED RUBBER BASE
LVT-#: LUXURY VINYL TILE
SGT-#: STRUCTURAL GLAZED TILE (WALL BASE)
SST-#: FLOOR TRANSITION
WB-#: WALL BASE

STATE OF MICHIGAN ELIZABETH SUE BYE ARCHITECT No. 1301054283 LICENSED ARCHITECT

Bidding and Permits: 31 July 2023

Finish Plan (Area A)

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

A8.11

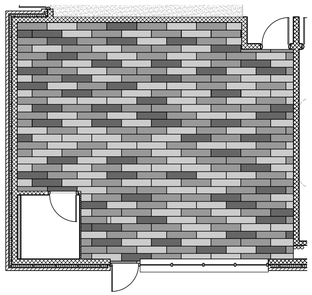
803 W. Big Beaver Road, Suite 350, Troy, MI 48084 | 248.244.9710

LEGEND:

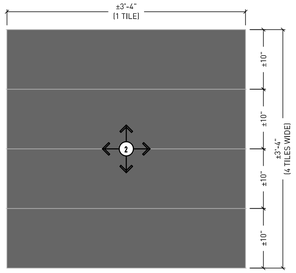
LUXURY VINYL TILE (LVT-1) - 40% OF RANDOM PATTERN IN CLASSROOM (TYP.) -REFER TO MATERIALS SCHEDULE FOR FURTHER INFORMATION.

LUXURY VINYL TILE (LVT-8) - 40% OF RANDOM PATTERN IN CLASSROOM (TYP.) -REFER TO MATERIALS SCHEDULE FOR FURTHER INFORMATION.

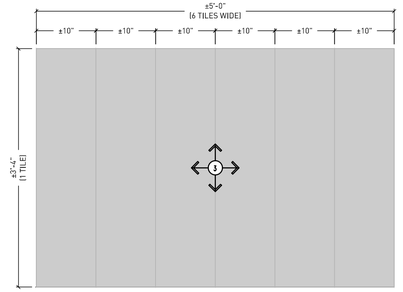
LUXURY VINYL TILE (LVT-9) - 20% OF RANDOM PATTERN IN CLASSROOM (TYP.) -REFER TO MATERIALS SCHEDULE FOR FURTHER INFORMATION.



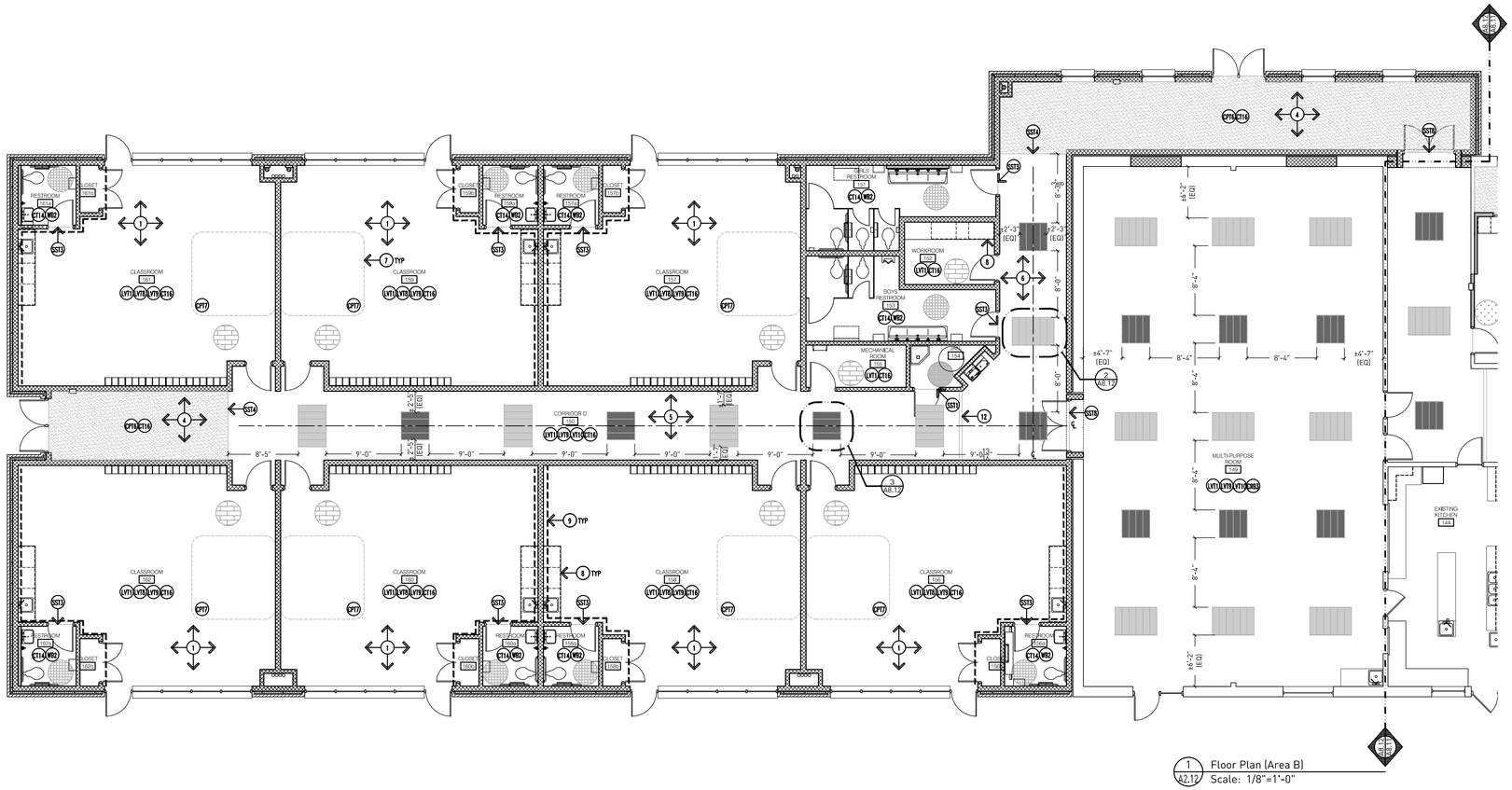
4 A8.12 Enlarged Classroom Floor Tile Plan (Typical)
Scale: 1/8"=1'-0"



3 A8.12 Typical LVT Detail
Scale: 1"=1'-0"



2 A8.12 Typical LVT Detail
Scale: 1"=1'-0"



1 A2.12 Floor Plan (Area B)
Scale: 1/8"=1'-0"

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. CONTRACTOR TO VERIFY ALL EXISTING DIMENSIONS IN FIELD PRIOR TO COMMENCING ON THE WORK . IF ANY DISCREPANCIES EXIST BETWEEN PLAN DIMENSIONS AND ACTUAL FIELD CONDITIONS, NOTIFY THE ARCHITECT FOR DIRECTION.

G3. REFER TO ROOM FINISH SCHEDULE AND/OR INTERIOR ELEVATIONS FOR FURTHER INFORMATION, MATERIALS, ETC.

G4. CONTRACTOR TO PATCH/REPAIR AND LEVEL FLOOR AS REQUIRED AT NORTH END OF CORRIDOR WHERE NEW LUXURY VINYL TILE MEETS EXISTING VINYL COMPOSITION FLOOR.

G5. PROPERLY PREPARE SUBSTRATE PRIOR TO INSTALLATION OF FLOORING MATERIALS PER MANUFACTURER'S REQUIREMENTS.

G6. ALL CARPET IS FURNISHED AN INSTALLED BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

G7. ALL LUXURY VINYL TILE IS FURNISHED AND INSTALLED BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

G8. ALL CERAMIC AND/OR PORCELAIN TILE IS FURNISHED AND INSTALLED BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

G9. ADHESIVES, TRANSITIONS, AND BASE ARE FURNISHED AND INSTALLED BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

G10. PROVIDE METAL TRANSITION AT ALL TRANSITIONS BETWEEN DISSIMILAR FLOORING MATERIALS.

G11. LUXURY VINYL TILES TO BE INSTALLED LENGTHWISE IN CORRIDORS. CONTRACTOR TO DETERMINE APPROPRIATE INSTALLATION METHOD IN CORNERS WHEN TILE DIRECTION ROTATES 90 DEGREES.

G12. LUXURY VINYL TILES TO BE INSTALLED PERPENDICULAR TO TEACHING WALL IN CLASSROOMS.

G13. CARPET TILE PLANK DIRECTION TO FOLLOW LVT CORRIDOR DIRECTION.

DRAWING NOTES:

1. LUXURY VINYL TILE INSTALLED IN RANDOM PATTERN. REFER TO ENLARGED PATTERN DETAIL FOR PERCENTAGE OF EACH COLOR TO BE USED.
2. LUXURY VINYL TILE (LVT-9); REFER TO MATERIALS SCHEDULE FOR FURTHER INFORMATION.
3. LUXURY VINYL TILE (LVT-10); REFER TO MATERIALS SCHEDULE FOR FURTHER INFORMATION.
4. WALK OFF CARPET (CPT-6); REFER TO MATERIALS SCHEDULE FOR FURTHER INFORMATION.
5. LOCATION OF CORRIDOR ACCENT SQUARES / RECTANGLES TO BE DETERMINED BASED ON DIMENSIONS INDICATED IN CORRIDOR OUTSIDE CLASSROOMS 154 - 162. ALIGN ACCENT SQUARES / RECTANGLES DOWN LENGTH OF CORRIDOR, BASED ON THESE DIMENSIONS.
6. ALIGN ACCENT SQUARES/RECTANGLES DOWN THE LENGTH OF CORRIDOR D 150, BASED ON CENTER OF ACCENT SQUARE AT END OF CORRIDOR, AS SHOWN.
7. BOUND AREA RUG (1 PER CLASSROOM) - REFER TO MATERIALS SCHEDULE FOR FURTHER INFORMATION
8. 4" H RUBBER WALL BASE (CRB-3) AT MILLWORK LOCATIONS.
9. ACCENT WALL PAINT LOCATION - REFER TO MATERIALS SCHEDULE FOR FURTHER INFORMATION.
10. LOCATION OF CORRIDOR ACCENT SQUARES / RECTANGLES TO BE DETERMINED BASED ON DIMENSIONS INDICATED IN CORRIDOR OUTSIDE OF RECEPTION 145. ALIGN ACCENT SQUARES / RECTANGLES DOWN LENGTH OF CORRIDOR, BASED ON THESE DIMENSIONS.
11. ALIGN ACCENT SQUARES/RECTANGLES DOWN THE LENGTH OF CORRIDOR B 125, BASED ON CENTER OF ACCENT SQUARE AT END OF CORRIDOR, AS SHOWN.
12. 4" TURNBOARD TO BE USED AT CHANGE OF DIRECTION IN CORRIDOR.
13. EXISTING FLOORING TO REMAIN - CFV EXISTING FLOORING MATERIAL FOR PROPER TRANSITION STRIP.
14. WOOD PLATFORM AND TRIM, STAINED TO MATCH EXISTING. SUBMIT SAMPLE OF CUSTOM MATCHED STAIN TO ARCHITECT FOR FINAL APPROVAL.

FLOORING LEGEND:

LVT - LUXURY VINYL TILE

CT - CERAMIC OR PORCELAIN TILE

CONC - SEALED CONCRETE

CPT - CARPET

WD - WOOD PLATFORM

CPT-#: CARPET
CRB-#: COVED RUBBER BASE
LVT-#: LUXURY VINYL TILE
SGT-#: STRUCTURAL GLAZED TILE (WALL BASE)
SST-#: FLOOR TRANSITION
WB-#: WALL BASE

STATE OF MICHIGAN
ELIZABETH SUE BYE
ARCHITECT
No. 1301054283
LICENSED ARCHITECT

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ROOM FINISH SCHEDULE A

ROOM NO.	ROOM DESIGNATION	FLOORING INFORMATION				WALL INFORMATION									CEILING INFORMATION			
		FLOOR MATERIAL	BASE MATERIAL	BASE HEIGHT	FLOORING REMARKS	NORTH WALL MATERIAL	NORTH WALL FINISH	EAST WALL MATERIAL	EAST WALL FINISH	SOUTH WALL MATERIAL	SOUTH WALL FINISH	WEST WALL MATERIAL	WEST WALL FINISH	WALL REMARKS	CEILING MATERIAL	CEILING FINISH	HEIGHT A.F.F.	CEILING REMARKS
100	VESTIBULE	CPT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)		ACT-2		9'-0"	
101	RECEPTION	LVT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)		ACT-2		8'-10"	
102	RESTROOM VESTIBULE	LVT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)		ACT-2		9'-0"	
103	UNISEX RESTROOM	CT	CT	6"	F1	CT/GB/CMT BD	PREFIN/PAINT (PT-6)	CT/GB/CMT BD	PREFIN/PAINT (PT-6)	CT/GB/CMT BD	PREFIN/PAINT (PT-6)	CT/GB/CMT BD	PREFIN/PAINT (PT-6)		ACT-5		9'-0"	
104	OPEN OFFICE	CPT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)		ACT-2		7'-10"	
105	STORAGE	CPT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)		ACT-2		7'-10"	
106	OFFICE	CPT	CRB	4"	F1	GB	PAINT (PT-10)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)		ACT-2		7'-10"	
107	OFFICE	CPT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-10)	GB	PAINT (PT-1)	GB	PAINT (PT-1)		ACT-2		7'-10"	
108	OFFICE	CPT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-10)		ACT-2		7'-10"	
109	OFFICE	CPT	CRB	4"	F1	GB	PAINT (PT-10)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)		ACT-2		7'-10"	
110	BOARD ROOM	CPT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)		GB / ACT-2		VARIES	
110a	EXISTING PASSAGEWAY	CPT	CRB	4"	F1	CMU / GB	PAINT (PT-1)	CMU / GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)		GB / ACT-2		VARIES	
110b	EXISTING BAPTISMAL FONT	WD	WD	4"	F5	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)		GB / ACT-2		VARIES	
110c	EXISTING STORAGE	CPT	CRB	4"	F1	GB	PAINT (PT-1)	CMU / GB	PAINT (PT-1)	CMU / GB	PAINT (PT-1)	GB	PAINT (PT-1)		GB		VARIES	
111	EXISTING BREAK ROOM	LVT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)		ACT-2		7'-10"	
112	CORRIDOR A	LVT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)		ACT-2		7'-10"	
113	COPY ROOM	LVT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)		ACT-2		7'-10"	
114	OPEN OFFICE	CPT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)		ACT-2		7'-10"	
115	OFFICE	CPT	CRB	4"	F1	GB	PAINT (PT-10)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)		ACT-2		7'-10"	
116	WORKROOM	LVT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)		ACT-2		7'-10"	
117	RESTROOM VESTIBULE	LVT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)		ACT-2		7'-10"	
118	UNISEX RESTROOM	CT	CT	6"	F1	CT/GB/CMT BD	PREFIN/PAINT (PT-6)	CT/GB/CMT BD	PREFIN/PAINT (PT-6)	CT/GB/CMT BD	PREFIN/PAINT (PT-6)	CT/GB/CMT BD	PREFIN/PAINT (PT-6)		ACT-5		7'-10"	
119	OPEN OFFICE	CPT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)		ACT-2		7'-10"	
120	STORAGE	LVT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)		ACT-2		7'-10"	
121	OFFICE	CPT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-10)	GB	PAINT (PT-1)	GB	PAINT (PT-1)		ACT-2		7'-10"	
122	OFFICE	CPT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-10)		ACT-2		7'-10"	
123	STORAGE	LVT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)		ACT-2		7'-10"	
124	NOT USED	--	--	--	--	--	--	--	--	--	--	--	--		--		--	
125	CORRIDOR B	LVT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)		ACT-2		7'-10"	
126	OPEN OFFICE	CPT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)		ACT-2		7'-10"	
127	STORAGE	CPT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)		ACT-2		7'-10"	
128	OFFICE	CPT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-10)		ACT-2		7'-10"	
129	OFFICE	CPT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-10)		ACT-2		7'-10"	
130	OFFICE	CPT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-10)		ACT-2		7'-10"	
131	OPEN OFFICE	CPT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)		ACT-2		7'-10"	
132	OFFICE	CPT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-10)		ACT-2		7'-10"	
133	COPY ROOM	CPT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)		ACT-2		7'-10"	
134	CONFERENCE ROOM	CPT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-10)	GB	PAINT (PT-1)	GB	PAINT (PT-1)		ACT-2		7'-10"	
135	OFFICE	CPT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-10)		ACT-2		7'-10"	
136	OPEN OFFICE	CPT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)		ACT-2		7'-10"	
137	EXISTING MAINTENANCE	ETR	ETR	ETR		ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR		ETR		ETR	
138	EXISTING MECHANICAL	ETR	ETR	ETR		ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR		ETR		ETR	
139	MENS RESTROOM	CT	CT	6"	F1	CT/CMT BD/ETR	PREFIN/PAINT (PT-6)	CT/GB/CMT BD	PREFIN/PAINT (PT-6)	CT/CMT BD/ETR	PREFIN/PAINT (PT-6)	CT/CMT BD/ETR	PREFIN/PAINT (PT-6)		ACT-5		7'-10"	
140	JANITOR	CONC	CRB	4"	F2	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR		ACT-2		7'-10"	
141	WOMENS RESTROOM	CT	CT	6"	F1	CT/CMT BD/ETR	PREFIN/PAINT (PT-6)	CT/CMT BD/ETR	PREFIN/PAINT (PT-6)	CT/CMT BD/ETR	PREFIN/PAINT (PT-6)	CT/GB/CMT BD	PREFIN/PAINT (PT-6)		ACT-5		7'-10"	
142	CORRIDOR C	LVT/CPT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)		ACT-2		7'-10"	
143	EXISTING STORAGE	ETR	ETR	ETR		ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR		ACT-2		8'-6"	
144	EXISTING KITCHEN	ETR	ETR	ETR		ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR		ETR		ETR	
144a	EX. KITCHEN STORAGE	ETR	ETR	ETR		ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR		ETR		ETR	
145	RECEPTION	CPT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)		ACT-2		7'-10"	
146	UNISEX RESTROOM	CT	CT	4"	F1	CT/GB	PREFIN/PAINT (PT-6)	CT/GB	PREFIN/PAINT (PT-6)	CT/GB	PREFIN/PAINT (PT-6)	CT/GB	PREFIN/PAINT (PT-6)		ACT-5		7'-10"	
147	OFFICE	CPT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-10)	GB	PAINT (PT-1)	GB	PAINT (PT-1)		ACT-2		7'-10"	
148	SECURE VESTIBULE	CPT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)		ACT-2		7'-10"	

Alternate #1

ROOM FINISH SCHEDULE AREA B

ROOM NO.	ROOM DESIGNATION	FLOORING INFORMATION				WALL INFORMATION									CEILING INFORMATION			
		FLOOR MATERIAL	BASE MATERIAL	BASE HEIGHT	FLOORING REMARKS	NORTH WALL MATERIAL	NORTH WALL FINISH	EAST WALL MATERIAL	EAST WALL FINISH	SOUTH WALL MATERIAL	SOUTH WALL FINISH	WEST WALL MATERIAL	WEST WALL FINISH	WALL REMARKS	CEILING MATERIAL	CEILING FINISH	HEIGHT A.F.F.	CEILING REMARKS
149	EXISTING MULTI-PURPOSE	LVT	CRB	4"	F1	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)	GB	PAINT (PT-1)		ACT-2	PREFIN	9'-2"	
150	CORRIDOR D	LVT/CPT	CT	6"	F1	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)		ACT-2	PREFIN	9'-2"	
151	GIRLS RESTROOM	CT	CT	4"	F1	CT/CMU	PREFIN	CT/CMU	PREFIN/PAINT (PT-6)	CT/CMU	PREFIN/PAINT (PT-6)	CT/CMU	PREFIN/PAINT (PT-6)		ACT-5	PREFIN	9'-0"	C1
152	WORKROOM	LVT	CT	6"	F1	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)		ACT-2	PREFIN	9'-2"	
153	BOYS RESTROOM	CT	CT	4"	F1	CT/CMU	PREFIN/PAINT (PT-6)	CT/CMU	PREFIN/PAINT (PT-6)	CT/CMU	PREFIN	CT/CMU	PREFIN/PAINT (PT-6)		ACT-5	PREFIN	9'-0"	C1
154	JANITOR	CONC	CT	6"	F2	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)		ACT-2	PREFIN	9'-2"	
155	MECHANICAL ROOM	LVT	CT	6"	F1	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)		ACT-2	PREFIN	9'-2"	
156	GSRP	LVT	CT / CRB	6" / 4"	F1, F3, F4	CMU	PAINT (PT-1)	CMU	PAINT (PT-9)	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)		ACT-2	PREFIN	9'-2"	
156a	RESTROOM	CT	CT	4"	F1	CT/CMU	PREFIN	CT/CMU	PREFIN	CT/CMU	PREFIN	CT/CMU	PREFIN		ACT-5	PREFIN	9'-0"	C1
156b	CLOSET	LVT	CT	6"	F1	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)		ACT-2	PREFIN	9'-0"	
157	GSRP	LVT	CT / CRB	6" / 4"	F1, F3, F4	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)	CMU	PAINT (PT-9)		ACT-2	PREFIN	9'-2"	
157a	RESTROOM	CT	CT	4"	F1	CT/CMU	PREFIN	CT/CMU	PREFIN	CT/CMU	PREFIN	CT/CMU	PREFIN		ACT-5	PREFIN	9'-0"	C1
157b	CLOSET	LVT	CT	6"	F1	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)		ACT-2	PREFIN	9'-0"	
158	GSRP	LVT	CT / CRB	6" / 4"	F1, F3, F4	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)	CMU	PAINT (PT-9)		ACT-2	PREFIN	9'-2"	
158a	RESTROOM	CT	CT	4"	F1	CT/CMU	PREFIN	CT/CMU	PREFIN	CT/CMU	PREFIN	CT/CMU	PREFIN		ACT-5	PREFIN	9'-0"	C1
158b	CLOSET	LVT	CT	6"	F1	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)	CMU	PAINT (PT-9)		ACT-2	PREFIN	9'-0"	
159	GRSP	LVT	CT / CRB	6" / 4"	F1, F3, F4	CMU	PAINT (PT-1)	CMU	PAINT (PT-9)	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)		ACT-2	PREFIN	9'-2"	
159a	RESTROOM	CT	CT	4"	F1	CT/CMU	PREFIN	CT/CMU	PREFIN	CT/CMU	PREFIN	CT/CMU	PREFIN		ACT-5	PREFIN	9'-0"	C1
159b	CLOSET	LVT	CT	6"	F1	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)		ACT-2	PREFIN	9'-0"	
160	GSRP	LVT	CT / CRB	6" / 4"	F1, F3, F4	CMU	PAINT (PT-9)	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)		ACT-2	PREFIN	9'-2"	
160a	RESTROOM	CT	CT	4"	F1	CT/CMU	PREFIN	CT/CMU	PREFIN	CT/CMU	PREFIN	CT/CMU	PREFIN		ACT-5	PREFIN	9'-0"	C1
160b	CLOSET	LVT	CT	6"	F1	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)		ACT-2	PREFIN	9'-0"	
161	GSRP	LVT	CT / CRB	6" / 4"	F1, F3, F4	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)	CMU	PAINT (PT-9)		ACT-2	PREFIN	9'-2"	
161a	RESTROOM	CT	CT	4"	F1	CT/CMU	PREFIN	CT/CMT BD	PREFIN	CT/CMU	PREFIN	CT/CMU	PREFIN		ACT-5	PREFIN	9'-0"	C1
161b	CLOSET	LVT	CT	6"	F1	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)		ACT-2	PREFIN	9'-0"	
162	GRSP	LVT	CT / CRB	6" / 4"	F1, F3, F4	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)	CMU	PAINT (PT-9)		ACT-2	PREFIN	9'-2"	
162a	RESTROOM	CT	CT	4"	F1	CT/CMU	PREFIN	CT/CMT BD	PREFIN	CT/CMU	PREFIN	CT/CMU	PREFIN		ACT-2	PREFIN	9'-0"	C1
162b	CLOSET	LVT	CT	6"	F1	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)	CMU	PAINT (PT-1)		ACT-2	PREFIN	9'-0"	

GENERAL NOTES:

G1. THIS IS A MASTER FINISH SCHEDULE, NOT ALL FINISHES MAY BE USED FOR THIS PROJECT. REFER TO ROOM FINISH SCHEDULE, FLOOR FINISH PLAN, AND INTERIOR ELEVATIONS FOR FURTHER INFORMATION.

G2. COORDINATE THE TIMING OF WORK TO AVOID CONFLICTS WITH NORMAL SCHOOL OPERATIONS AND ACTIVITIES.

G3. ALL OUTSIDE CORNERS OF INTERIOR CMU MASONRY TO BE BULLNOSE.

G4. NEW FINISH FLOOR ELEVATION TO MATCH EXISTING EXACTLY.

G5. ALL WALLS TO BE PAINTED IN AREA IDENTIFIED FOR PAINT UNLESS NOTED OTHERWISE.

G6. ALL FINISHES ARE FURNISHED AND INSTALLED BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

G7. PROVIDE METAL TRANSITION BETWEEN DISSIMILAR FLOORING MATERIALS.

GENERAL FLOORING NOTES:

GFN1. TRANSITION BETWEEN DISSIMILAR FLOORING TYPES / MATERIALS TO HAVE THE APPROPRIATE TRANSITION STRIP INSTALLED.

GFN2. CONTRACTOR TO INSTALL CONTROL JOINTS IN PORCELAIN / CERAMIC TILE FLOORING AT SPACING PER TCA RECOMMENDATIONS AND AT ALL CONTROL JOINTS IN CONCRETE FLOOR JOINTS BELOW. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS.

GFN3. ALIGN PORCELAIN / CERAMIC TILE FLOOR GROUT LINES WITH PORCELAIN / CERAMIC TILE WALL BASE GROUT LINES.

GFN4. MOISTURE TEST THE FLOOR SLAB PRIOR TO APPLYING ALL FLOOR FINISHES. COORDINATE WITH PROJECT MANAGER AS REQUIRED.

GFN5. CONTACT LOCAL MILLIKEN REPRESENTATIVE, JANNA JONES, AT (248) 804-5970 FOR FURTHER INFORMATION ABOUT THE CUSTOM CLASSROOM RUGS.

FLOORING NOTES:

F1. PROPERLY PREPARE NEW / EXISTING CONCRETE SUBSTRATE TO ACCEPT NEW FLOORING MATERIAL PER MANUFACTURER'S INSTALLATION REQUIREMENTS.

F2. PROPERLY PREPARE NEW CONCRETE SUBSTRATE FOR EXPOSED / SEALED CONCRETE FINISH PER MANUFACTURER'S INSTALLATION REQUIREMENTS.

F3. PROVIDE BOUND RUG - REFER TO MATERIAL SCHEDULE.

F4. PROVIDE 4" RUBBER BASE AT MILLWORK LOCATION ONLY.

F5. WOOD PLATFORM AND TRIM, STAINED TO MATCH EXISTING. SUBMIT SAMPLE OF CUSTOM MATCHED STAIN TO ARCHITECT FOR FINAL APPROVAL.

GENERAL WALL NOTES:

GWN1. ON ALL WALLS WITH TILE, INSTALL SEALANT (COLOR TO MATCH GROUT) IN ALL CORNERS IN LIEU OF GROUT.

GWN2. INTERIOR PAINT SHALL BE SHERWIN WILLIAMS PROMAR 200 INTERIOR LATEX; TWO (2) COATS MINIMUM.

GWN3. CONTACT ROBIN SPEER WITH VIRGINIA TILE AT (734) 765-6875 OR QUOTEDESK@VIRGINIATILE.COM FOR ANY QUESTIONS REGARDING AMERICAN OLEAN TILE.

GWN4. ALL OUTSIDE CORNERS OF TILED WALLS TO HAVE TRIM PIECE SIMILAR TO SCHLUTER 'RONDEC' SIZED APPROPRIATE FOR TILE THICKNESS (SATIN ANODIZED ALUMINUM FINISH). EXPOSED TOP EDGE TO BE FINISHED WITH COORDINATING TOP CAP.

WALL NOTES:

W1. REFER TO WALL AND FLOOR TILE DETAILS (SHEET A8.52) FOR WALL TILE PATTERN AND COLORS

W2. PAINT TO MATCH EXISTING

CEILING NOTES:

C1. COORDINATE CEILING HEIGHT WITH HARD TILE LAYOUT ON FULL HEIGHT TILE WALL IN RESTROOM.

LEGEND:

ACT-	ACOUSTICAL CEILING TILE	PL-	PLASTIC LAMINATE
CMT BD-	CEMENT BOARD	PT-	PAINT
CONC-	SEALED CONCRETE	SGT-	STRUCTURAL GLAZED TILE (WALL BASE)
CPT-	CARPET	SS-	SOLID SURFACE
CRB-	COVED RUBBER BASE	SST-	FLOORING TRANSITION
CT-	CERAMIC TILE / PORCELAIN TILE	TB-	TACK BOARD
DH-	DOOR HARDWARE	TP-	TOILET PARTITION
FRP-	FIBER REINFORCED POLYMER	WB-	WALL BASE
HM-	HOLLOW METAL	WD-	WOOD BASE
LVT-	LUXURY VINYL TILE	WF-	WASH FOUNTAIN
		WS-	WINDOW SHADE

STATE OF MICHIGAN
ELIZABETH SUE BYE
ARCHITECT
No. 1301054283
LICENSED ARCHITECT

Bidding and Permits: 31 July 2023

Room Finish Schedules

EHRESMAN ARCHITECTS
ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

A8.50

803 W. Big Beaver Road, Suite 350, Troy, MI 48084 | 248.244.9710

MATERIAL SCHEDULE

	TAG	MANUFACTURER	STYLE	COLOR	DESCRIPTION	INSTALLATION / LOCATION NOTES
FLOORING	CPT-6	MILLIKEN - OBEX CUTX	FIZZ	FZX5-27 GREY	ENTRY WALK OFF CARPET	QUARTER TURN INSTALLATION
	CPT-7	MILLIKEN	CUSTOM	CUSTOM	BROADLOOM CARPET- BOUND	ONE PER GRSP CLASSROOM (GRSP WING)
	CPT-8	MILLIKEN - STEREOVISION	LIGHT WAVE	LWV79 AUGMENT	CARPET TILE	ASHLAR INSTALLATION (GRSP WING)
	CPT-9	MILLIKEN - STEREOVISION	LIGHT WAVE	LWV72 -118 ELECTROPUNK	CARPET TILE	ASHLAR INSTALLATION (ADMINISTRATION WING)
	LVT- 1	MILLIKEN - LUMENOLOGY SERIES	LIGHT WASH	LLW257 LUSTERING	25 CM X 100 CM PLANK	FIELD TILE - ASHLAR INSTALLATION
	LVT - 8	MILLIKEN - LUMENOLOGY SERIES	LIGHT WASH	LLW265-195 OPALESCENT	25 CM X 100 CM PLANK	ACCENT TILE - ASHLAR INSTALLATION (GRSP WING)
	LVT - 9	MILLIKEN - LUMENOLOGY SERIES	LIGHT WASH	LLW191 SPARK	25 CM X 100 CM PLANK	ACCENT TILE - ASHLAR INSTALLATION (GRSP WING)
	LVT - 10	MILLIKEN - LUMENOLOGY SERIES	REFLECTIVE	LRF257-191 PARALLEL	25 CM X 100 CM PLANK	ACCENT TILE - ASHLAR INSTALLATION (GRSP WING)
	LVT - 11	MILLIKEN - CHANGE AGENT	RELIC	REL 152 ANTIQUITY	25 CM X 100 CM PLANK	ASHLAR OR BASKET WEAVE - REFER TO DRAWINGS (ADMIN. WING)
WALL BASE						
	CRB-3	JOHNSONITE		MINK WG	4" COVE BASE	(ADMINISTRATION WING)
	CT-16	CROSSVILLE	RETRO ACTIVE	LEADEN UPS	6" H	(GRSP WING)
FLOOR TRANSITIONS	SST-1	CERAMIC TOOLS COMPANY	CTC 316 REDUCER	ANODIZED ALUMINUM (CLEAR)		LVT TO CONCRETE
	SST-3	SCHLUTER	RENO-TK AETK-60	SATIN ANODIZED ALUMINUM		CERAMIC TILE TO LVT
	SST-4	CERAMIC TOOLS COMPANY	CTC ETR 38 EA	ETCHED ALUMINUM		WALK OFF CARPET TO LVT
	SST-6	TARKETT	RCN-A	MINK WG		STAIR NOSING
	SST-7	SCHLUTER	RENO-V #AEVT 80 B20	SATIN ANODIZED ALUMINUM		OFFICE CARPET TO LVT
	SST-8	MM SYSTEMS	SERIES FHFXR-EH	SATIN ANODIZED ALUMINUM		FLOOR EXPANSION JOINT BETWEEN EXISTING & NEW BUILDINGS
	SST-9	KUBERIT	KT-C-045-A1-C	ANODIZED ALUMINUM SILVER		LVT TO LVT
PAINTS	PT - 1	SHERWIN WILLIAMS	EGGSHELL	SW7008 ALABASTER		DISTRICT STANDARD WALL PAINT
	PT - 6	SHERWIN WILLIAMS	SEMI-GLOSS	SW7669 SUMMIT GRAY		RESTROOM WALL PAINT
	PT-9	SHERWIN WILLIAMS	EGGSHELL	TBD		ACCENT PAINT (GRSP WING)
	PT - 10	SHERWIN WILLIAMS	EGGSHELL	SW 9146 FADED FLAXFLOWER		ACCENT PAINT (ADMINISTRATION WING)
	PT - 11	SHERWIN WILLIAMS	SEMI-GLOSS	SW7505 MANOR HOUSE		DOOR FRAME PAINT
	PT - 12	SHERWIN WILLIAMS	FLAT	SW7757 HIGH REFLECTIVE WHITE		CEILING PAINT (INTERIOR) / EXTERIOR SOFFIT PAINT
CEILING TILE	ACT - 2	ARMSTRONG	1774 - DUNE	WHITE	2' X 2' IN 15/16" METAL GRID (HEAVY DUTY)	CLASSROOMS/OFFICE/CORRIDORS
	ACT - 5	ARMSTRONG	673 - KITCHEN ZONE	WHITE	2' X 2' IN 15/16" METAL GRID (HEAVY DUTY)	(RESTROOMS)

MATERIAL SCHEDULE

	TAG	MANUFACTURER	STYLE	COLOR	DESCRIPTION	INSTALLATION / LOCATION NOTES
RESTROOMS	CT - 1	AMERICAN OLEAN	COLOR STORY	ICE WHITE 0025	4" X 16 "	FIELD TILE - WALLS (GRSP WING)
	CT - 4	AMERICAN OLEAN	COLOR STORY	BALANCE 0014	4" X 16 "	ACCENT TILE - WALLS (GRSP WING)
	CT - 5	AMERICAN OLEAN	COLOR STORY	STORM GRAY 0040	4" X 16 "	ACCENT TILE - WALLS (GRSP WING)
	CT - 7	AMERICAN OLEAN	COLOR STORY	PASSION 0019	4" X 16 "	ACCENT TILE - WALLS (GRSP WING)
	CT - 8	AMERICAN OLEAN	COLOR STORY	SCARLET 0010	4" X 16 "	ACCENT TILE - WALLS (GRSP WING)
	CT - 12	CAESER CERAMICS USA	STYLE	PURE	12" X 24", 3" X 24" BULLNOSE	FIELD TILE - WALLS (ADMINISTRATION WING)
	CT - 13	MARAZZI	ILLUSIONIST	IL51 MYSTIFYING	1" X 24"	ACCENT TILE - WALLS (ADMINISTRATION WING)
	CT - 14	AMERICAN OLEAN	HISTORIC LIMESTONE	HS13 LEGACY	2" X 2 " MOSAIC TILE	FLOOR TILE (GRSP WING)
	CT - 15	MARAZZI	ILLUSIONIST	IL49 MYSTERIOUS	3" X 3" MOSAIC TILE	FLOOR TILE (ADMINISTRATION WING)
	WB-2	AMERICAN OLEAN	HISTORIC LIMESTONE	HS13 LEGACY	2" X 2 " MOSAIC TILE	WRAP 2 ROWS UP WALL FOR BASE (GRSP WING)
	WB-3	MARAZZI	ILLUSIONIST	IL49 MYSTERIOUS	3" X 3" MOSAIC TILE	WRAP 2 ROWS UP WALL FOR BASE (ADMINISTRATION WING)
	GROUT	TEC		931 STANDARD WHITE		WALL TILE GROUT (GRSP WING)
	GROUT	TEC		908 DOVE GRAY		WALL TILE GROUT (ADMINISTRATION WING)
	GROUT	TEC		929 CHARCOAL GRAY		FLOOR TILE / WALL BASE GROUT
	WF -1	EVERO QUARTZ	GEO SERIES	GLACIER BAY		RESTROOM WASHFOUNTAIN
	TP - 1	SCRANTON PRODUCTS	TRADITIONAL COLOR COLLECTION	SHALE	ORANGE PEEL TEXTURE	TOILET PARTITIONS
MILLWORK						
	PL - 5	NEVAMAR		SIENNA ESSENCE		COUNTERTOP (GRSP WING)
	PL - 6	NEVAMAR		YUNNAN		CASEWORK LAMINATE (GRSP WING)
	PL - 7	FORMICA		912-58 STORM		CASEWORK LAMINATE REVEAL (GRSP WING)
	PL - 8	NEVAMAR		NAVY MATRIX II		COUNTERTOP (ADMINISTRATION WING)
	PL - 9	WILSONART		BLACKBIRD		CASEWORK LAMINATE (ADMINISTRATION WING)
	PL - 10	WILSONART		BLACK		CASEWORK LAMINATE REVEAL (ADMINISTRATION WING)
DOORS AND DOOR HARDWARE	WD - 4	VT INDUSTRIES	WHITE BIRCH	CHOCOLATE, CH-18		
	FRP-4	SPECIAL - LITE (OR APPROVED EQUAL)	--	DESSERT SAND		
	DH -1	SCHLAGE		SATIN CHROMIUM - 626	DOOR HARDWARE	
MISCELLANEOUS						
	TB - 3	CLARIDGE	VIEWPOINT	KV230 OYSTER	TACKBOARD FABRIC	GSRP/ADMIN WING
	WS - 2	DRAPER	SHEER WEAVE	PW4550 - P10 GRANITE	5% OPEN	EXTERIOR WINDOWS (ADMIN WING)
	WS - 5	DRAPER	SUNBLOC SERIES	SB9040 GRAY	BLACKOUT	DOOR / SIDELITES & EXT. WINDOWS (GRSP WING)

DRAWING NOTES:

1. PORCELAIN / CERAMIC TILE FLOORING
2. TILE MORTAR / ADHESIVE.
3. NEW CONCRETE FLOOR SLAB
4. EXISTING CONCRETE FLOOR SLAB--E.C.U. (C.F.V.)
5. LVT FLOORING--REFER TO SCHEDULE FOR FURTHER INFORMATION.
6. LVT FLOORING ADHESIVE RECOMMENDED BY FLOORING MANUFACTURER.
7. WALK OFF CARPET--REFER TO SCHEDULE FOR FURTHER INFORMATION.
8. WALK OFF CARPET FLOORING ADHESIVE RECOMMENDED BY FLOORING MANUFACTURER.
9. ALIGN TOP OF FLOORING.
10. OFFICE CARPET FLOORING--REFER TO SCHEDULE FOR FURTHER INFORMATION.
11. OFFICE CARPET FLOORING ADHESIVE RECOMMENDED BY FLOORING MANUFACTURER.
12. CONCRETE FLOOR SLAB OVER 15MIL VAPOR BARRIER -- PROPERLY LAP AND SEAL JOINTS PER MANUFACTURER REQUIREMENTS.
13. 2-HOUR FIRE BARRIER
14. #10 X 1" FASTENER AND SLEEVE @ 24" O.C.

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F3. PROVIDE BOUND RUG - REFER TO MATERIAL SCHEDULE.

F4. PROVIDE 4" RUBBER BASE AT MILLWORK LOCATION ONLY.

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GENERAL WALL NOTES:

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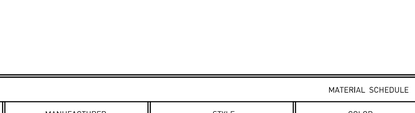
W2. PAINT TO MATCH EXISTING

CEILING NOTES:

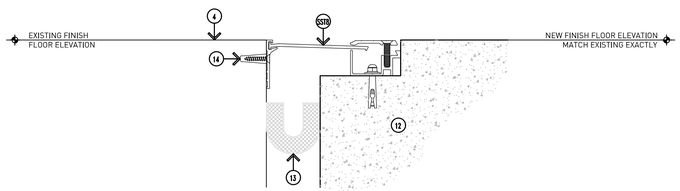
C1. COORDINATE CEILING HEIGHT WITH HARD TILE LAYOUT ON FULL HEIGHT TILE WALL IN RESTROOM.

LEGEND:

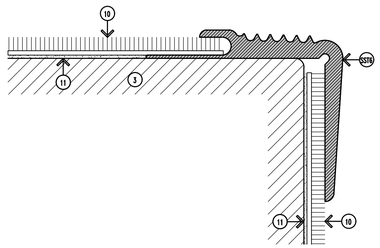
ACT-	ACOUSTICAL CEILING TILE	PL-	PLASTIC LAMINATE
CMT BD-	CEMENT BOARD	PT-	PAINT
CONC-	SEALED CONCRETE	SGT-	STRUCTURAL GLAZED TILE (WALL BASE)
CPT-	CARPET	SS-	SOLID SURFACE
CRB-	COVED RUBBER BASE	SST-	FLOORING TRANSITION
CT-	CERAMIC TILE / PORCELAIN TILE	TB-	TACK BOARD
DH-	DOOR HARDWARE	TP-	TOILET PARTITION
FRP-	FIBER REINFORCED POLYMER	WB-	WALL BASE
HM-	HOLLOW METAL	WD-	WOOD BASE
LVT-	LUXURY VINYL TILE	WF-	WASH FOUNTAIN
		WS-	WINDOW SHADE



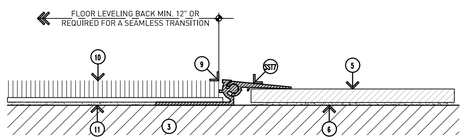
7 A8.51 LVT to LVT (SST-9)
Scale: Full Scale



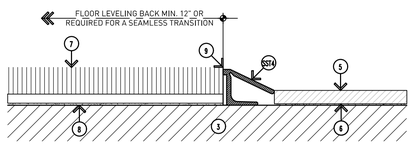
6 A8.51 Floor Expansion Joint Detail (SST-8)
Scale: 6" = 1'-0"



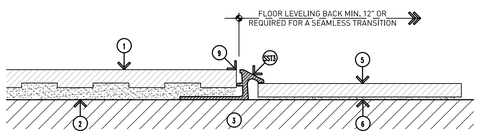
5 A8.51 Stair Nosing (SST-6)
Scale: Full Scale



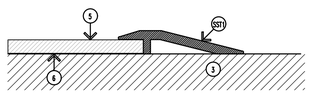
4 A8.51 Office Carpet to LVT (SST-7)
Scale: Full Scale



3 A8.51 Walk Off Carpet to LVT (SST-4)
Scale: Full Scale



2 A8.51 Ceramic Tile to LVT (SST-3)
Scale: Full Scale



1 A8.51 LVT to Concrete (SST-1)
Scale: Full Scale

Bidding and Permits: 31 July 2023

Material Schedule

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

A8.51

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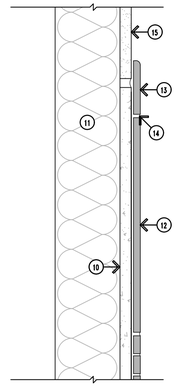
GENERAL NOTES:

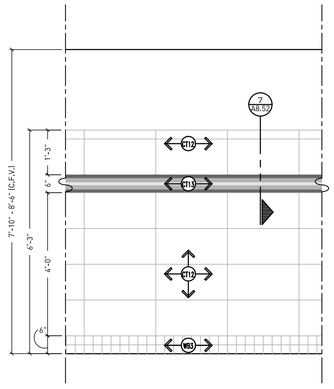
G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

DRAWING NOTES:

1. CONTROL JOINT (SEALANT JOINT) IN PORCELAIN / CERAMIC TILE FLOORING LOCATED AT THE NEAREST TILE JOINT TO THE EXISTING CONTROL JOINT IN THE CONCRETE SLAB BELOW. CONTRACTOR TO INSTALL CONTROL JOINTS (SEALANT JOINTS) AT ALL OTHER CONTROL JOINTS TO BE FOUND.
2. PORCELAIN / CERAMIC TILE FLOORING
3. EXISTING NEW CONTROL JOINT LOCATED IN CONCRETE FLOOR SLAB (OR EXISTING CRACK IN SLAB).
4. TILE MORTAR / ADHESIVE.
5. CONCRETE FLOOR SLAB.
6. CRACK ISOLATION MEMBRANE TO BE INSTALLED THE FULL WIDTH OF TILES AFFECTED BY THE CONTROL JOINT BELOW, PER TCA REQUIREMENTS.
7. CONTRACTOR TO INSTALL FLEXIBLE SEALANT WITH COMPRESSIBLE BACK-UP AS REQUIRED IN ALL JOINTS ABUTTING A PERIMETER WALL. CONTRACTOR TO ASSURE JOINT IS CLEAN AND FREE OF ALL DEBRIS.
8. BOND COAT.
9. WALL SURFACE
10. CEMENTITIOUS BACKER UNIT.
11. WALL CONDITION VARIES - REFER TO WALL TAG NOTES ON SHEETS A2.11 AND A2.12.
12. CERAMIC WALL TILE - REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
13. CERAMIC WALL TILE TRIM PIECE - REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
14. GROUT - REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
15. GYPSUM BOARD/ PLASTER, CONDITION VARIES - REFER TO WALL TAG NOTES ON SHEETS A2.11 AND A2.12.

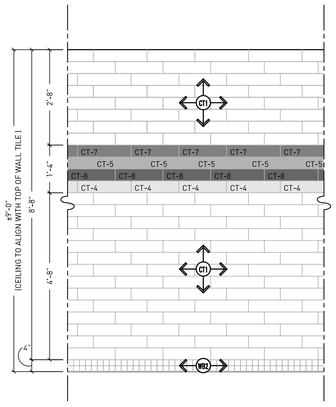


7 / A8.52 Wall Tile Top Trim Detail
Scale: 3"=1'-0" PER TCNA W244



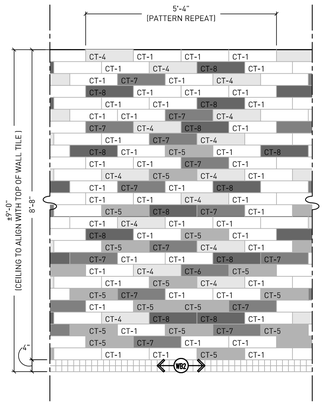
6 / A8.52 Enlarged Administration Single Occupant Restroom Wall Tile Pattern
Scale: 1/2"=1'-0"

PATTERN APPLIES TO RESTROOMS 103 AND 118
REFER TO ELEVATIONS: 9/A5.01 - 12/A5.01, AND 14/A5.01 -17/A5.01



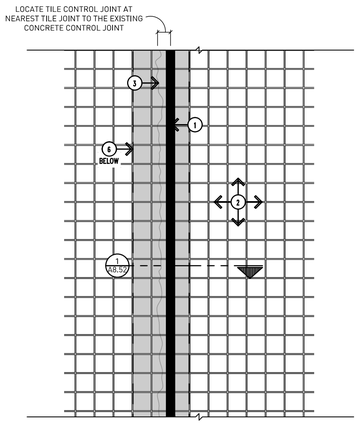
5 / A8.52 Enlarged GSRP Single Occupant Restroom Wall Tile Pattern
Scale: 1/2"=1'-0"

PATTERN APPLIES TO RESTROOMS 146, 156a, 157a, 158a, 159a, 160a, 161a, 162a.
REFER TO ELEVATIONS: 9/A5.00, 12/A5.00, 14/A5.00, 15/A5.00, 18/A5.00, &19/A5.00



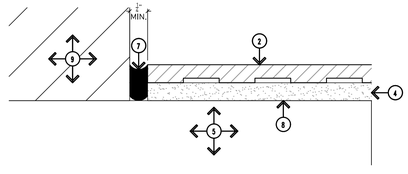
4 / A8.52 Enlarged GSRP Gang Restroom Wall Tile Pattern
Scale: 1/2"=1'-0"

REFER TO ELEVATIONS: 3/A5.00 AND 5/A5.00

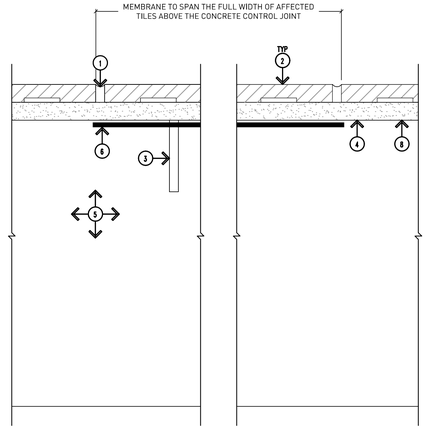


3 / A8.52 Ceramic Tile Control Joint
Scale: 1-1/2 "=1'-0"

NOTE 1: LOCATE TILE CONTROL JOINT AT THE NEAREST TILE JOINT TO EXISTING CJ IN THE CONCRETE SLAB BELOW.
NOTE 2: CRACK ISOLATION MEMBRANE TO BE INSTALLED UNDER FULL WIDTH OF AFFECTED TILES, AND PER TCA REQUIREMENTS.



2 / A8.52 Ceramic Tile at Perimeter Wall
Scale: Full Scale



1 / A8.52 Ceramic Tile Control Joint Detail
Scale: Full Scale

DRAWING EXPLODED FOR DRAWING CLARITY

STATE OF MICHIGAN
ELIZABETH SUE BYE
ARCHITECT
No. 1301054283
LICENSED ARCHITECT

Bidding and Permits: 31 July 2023

Wall and Floor Tile Details

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

A8.52

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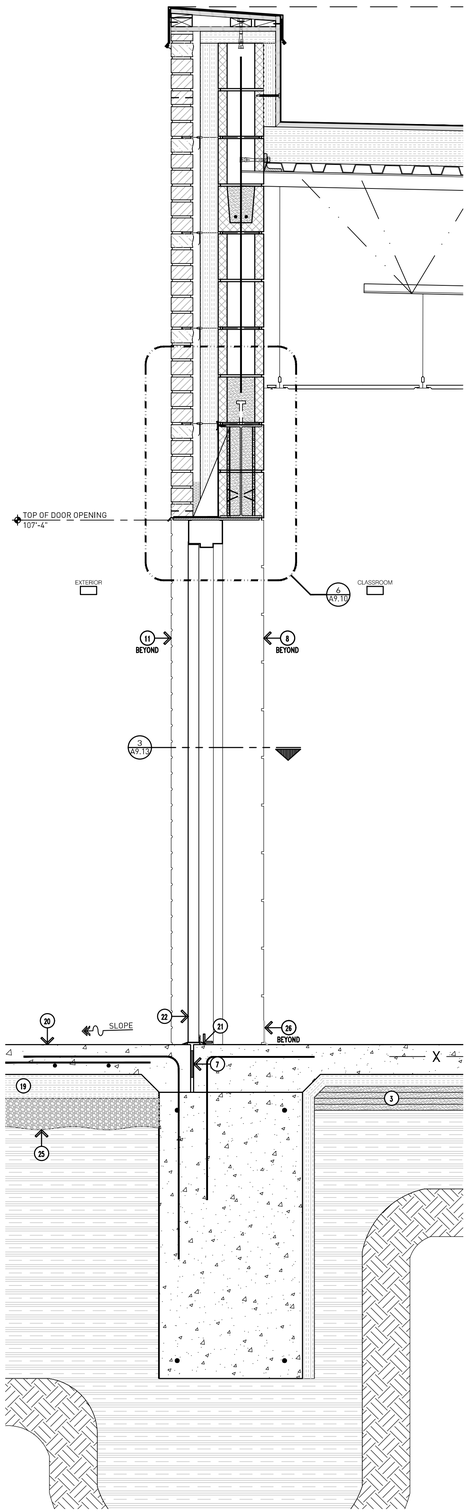
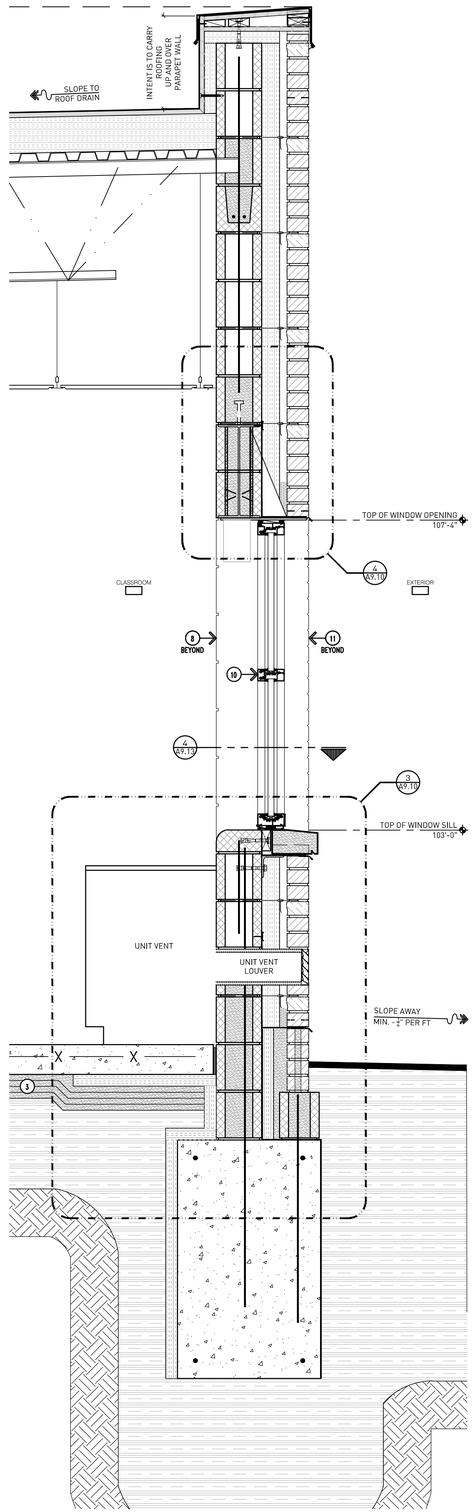


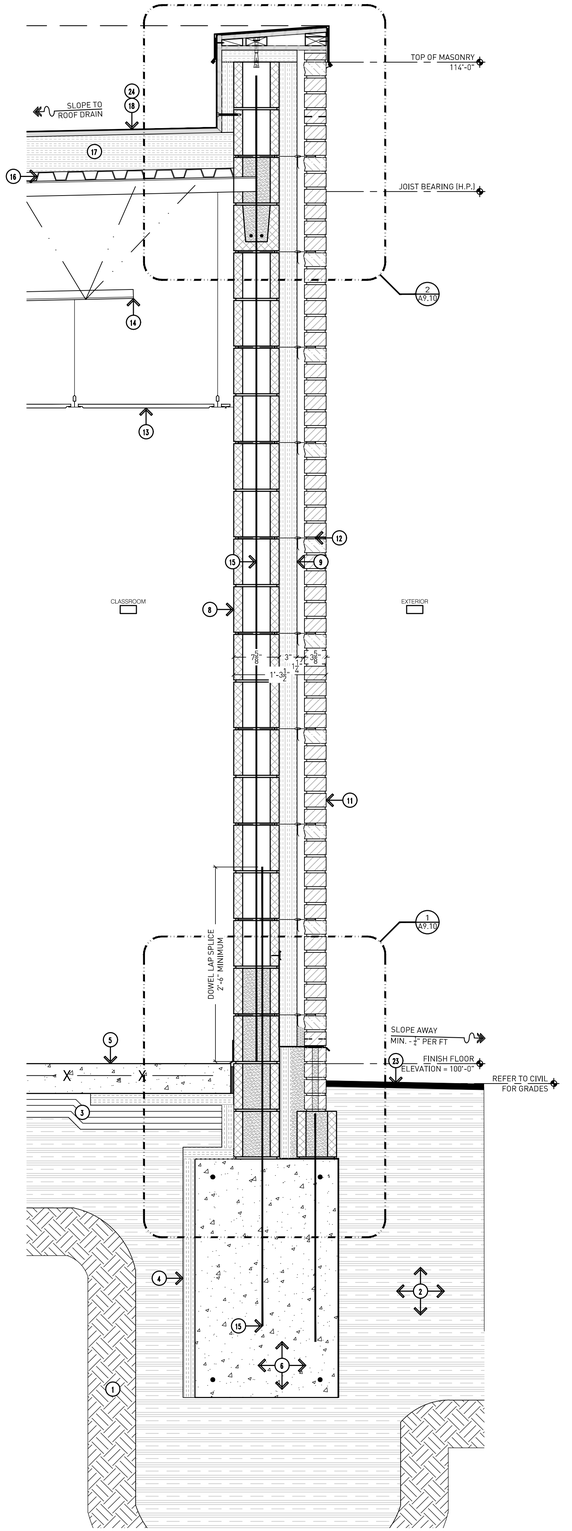
3 Ext. Wall Section C - North/South (Area B)
A9.00 Scale: 1"=1'-0"

REFER TO 1/A9.00 FOR TYPICAL NOTES



2 Ext. Wall Section B - North/South (Area B)
A9.00 Scale: 1"=1'-0"

REFER TO 1/A9.00 FOR TYPICAL NOTES



1 Ext. Wall Section A - North/South (Area B)
A9.00 Scale: 1"=1'-0"

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. PROVIDE MASONRY ANCHORS @ 16" O.C. VERTICALLY AND HORIZONTALLY.

G3. PROVIDE NON-COM WOOD BLOCKING BEHIND ALL MISCELLANEOUS TRIM LOCATIONS AND ALL OTHER ATTACHMENT LOCATIONS WHETHER PARTICULARLY SHOWN ON THE DOCUMENTS OR NOT.

G4. ALL PREFINISHED METAL COPING TO BE COMPLETE WITH CONCEALED CLIP ANCHORS ON BOTH SIDES (NO VISIBLE FASTENERS).

G5. CARRY ROOFING UP AND OVER PARAPET CAP -- TYPICAL.

G6. PROVIDE CONTINUOUS SPRAY-APPLIED VAPOR BARRIER COVERING FACE OF WALL AND UP AND OVER PARAPET WALL. TERMINATE WITH ROOFING PER MANUFACTURER'S REQUIREMENTS. BARRIER SYSTEM SHALL BE CONTINUOUS AROUND THE ENTIRE BUILDING ENVELOPE AND INCLUDE ALL PROPER TECHNIQUES FOR PENETRATIONS, ETC.

G7. ALL FLEXIBLE MEMBRANE FLASHING TO BE SECURED TO SUBSTRATE WITH TERMINATION BAR AND SEALANT -- INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

G8. FILL BRICK CORES AND COLLAR JOINTS SOLID BELOW GRADE AND BELOW ALL FLASHINGS.

G9. PROVIDE STAINLESS STEEL DRIP WITH HEMMED EDGE ABOVE ALL EXTERIOR WINDOW AND DOOR OPENINGS.

G10. PROVIDE MASONRY WEEP VENTS @ 32" O.C. HORIZONTALLY AT TOP AND BOTTOM OF WALL, COMPLETE WITH 3/8" x 1-1/2" PLASTIC WEEP VENT AND FLEXIBLE MEMBRANE FLASHING MIN. 16" UP WALL.

G11. MASONRY CONTROL JOINTS SHOULD BE SPACED 25'-0" APART MAX. AND SHOULD NOT BE SPACED FURTHER THAN 1.5x THE WALL HEIGHT - REFER TO THE MASONRY INSTITUTE FOR FURTHER INFORMATION.

DRAWING NOTES:

1. PROPERLY COMPACTED EXISTING SUBGRADE.
2. COMPACTED ENGINEERED FILL AS REQUIRED AFTER REMOVAL OF EXISTING LAWN / UNSUITABLE SOILS AS REQUIRED FOR PROPER SLAB ELEVATION.
3. COMPACTED SAND CUSHION BASE (MINIMUM 4").
4. 2" RIGID INSULATION BOARD MINIMUM 24" INSIDE BUILDING, AND VERTICALLY BEHIND FOUNDATION.
5. CONCRETE FLOOR SLAB OVER 15 MIL VAPOR BARRIER -- PROPERLY LAP AND SEAL JOINTS PER MANUFACTURER'S REQUIREMENTS - REFER TO STRUCTURAL DRAWINGS.
6. CONCRETE FOUNDATION -- REFER TO STRUCTURAL DRAWINGS.
7. ½" PREMOLDED EXPANSION JOINT WITH SEALANT.
8. CMU MASONRY BLOCK (PAINT ALL SURFACES EXPOSED TO VIEW).
9. 3" SPRAY FOAM BUILDING INSULATION SYSTEM WITH INTEGRAL CONTINUOUS VAPOR BARRIER.
10. STOREFRONT FRAMING AND GLAZING -- REFER TO DOOR SCHEDULE AND DETAILS.
11. 4" BRICK VENEER WITH ADJUSTABLE BRICK TIES @ 16" O.C. VERTICALLY AND HORIZONTALLY (PROVIDE LENGTH AS REQUIRED DUE TO WALL CAVITY SIZE).
12. HORIZONTAL JOINT REINFORCING @ 16" O.C. VERTICALLY.
13. ACOUSTICAL CEILING TILE IN PREFINISHED METAL GRID SYSTEM ATTACHED TO BUILDING STRUCTURE ABOVE.
14. STRUCTURAL STEEL ROOF FRAMING -- REFER TO STRUCTURAL DRAWINGS.
15. REINFORCING -- REFER TO STRUCTURAL DRAWINGS.
16. 1½" GALVANIZED METAL ROOF DECK.
17. RIGID ROOF INSULATION BOARD (MINIMUM 6" THICKNESS -- TWO LAYERS AND COVERBOARD).
18. FULLY ADHERED SINGLE-PLY EPDM ROOFING -- CARRY UP AND OVER FACE OF PARAPET WALL.
19. INSULATION FORM - REFER TO STRUCTURAL DRAWINGS.
20. 5" CONCRETE FROST SLAB -- SLOPE AWAY FROM BUILDING MINIMUM ¼" PER FOOT.
21. ALUMINUM THRESHOLD.
22. DOOR - REFER TO DOOR SCHEDULE.
23. LINE OF GRADE.
24. ROOFING COVERBOARD.
25. DRAINAGE MATERIAL (AGGREGATE) - REFER TO STRUCTURAL DRAWINGS.
26. WALL BASE--REFER TO FINISH SCHEDULE.

STATE OF MICHIGAN
ELIZABETH SUE BYE
ARCHITECT
No. 1301054283
LICENSED ARCHITECT

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Exterior Wall Sections

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Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

A9.00

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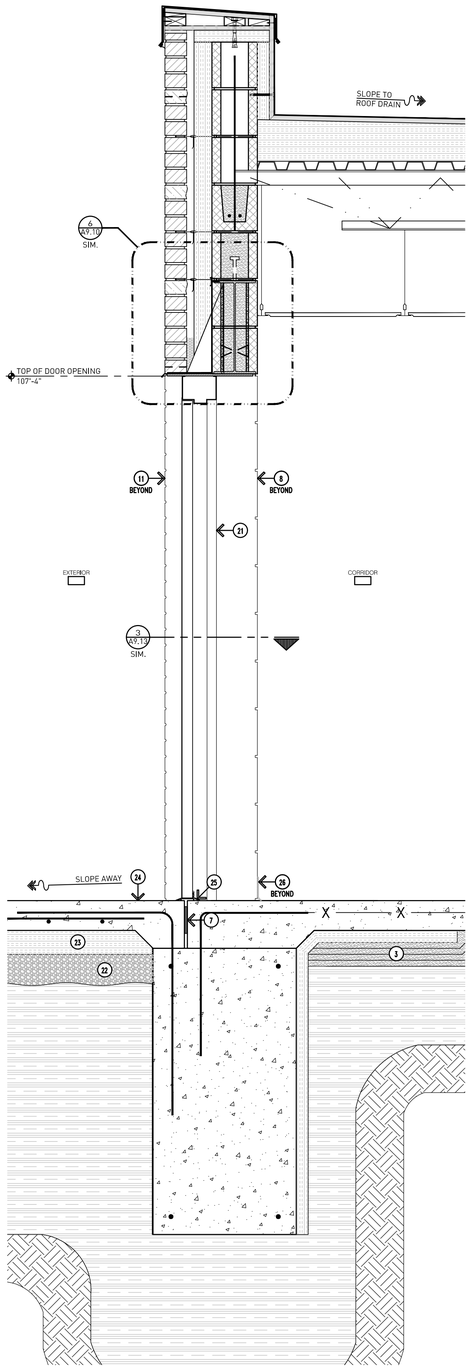
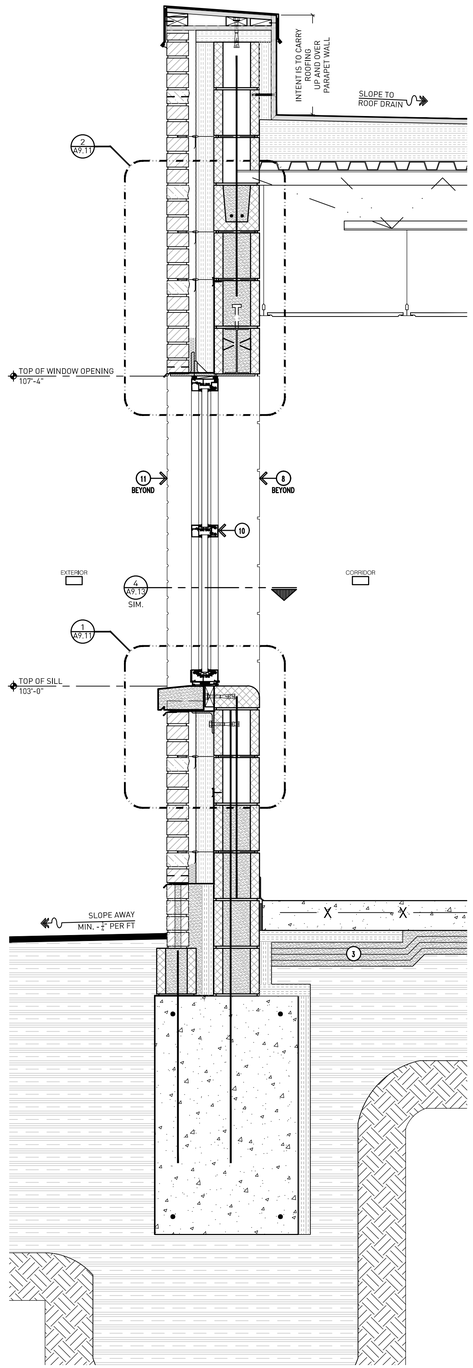
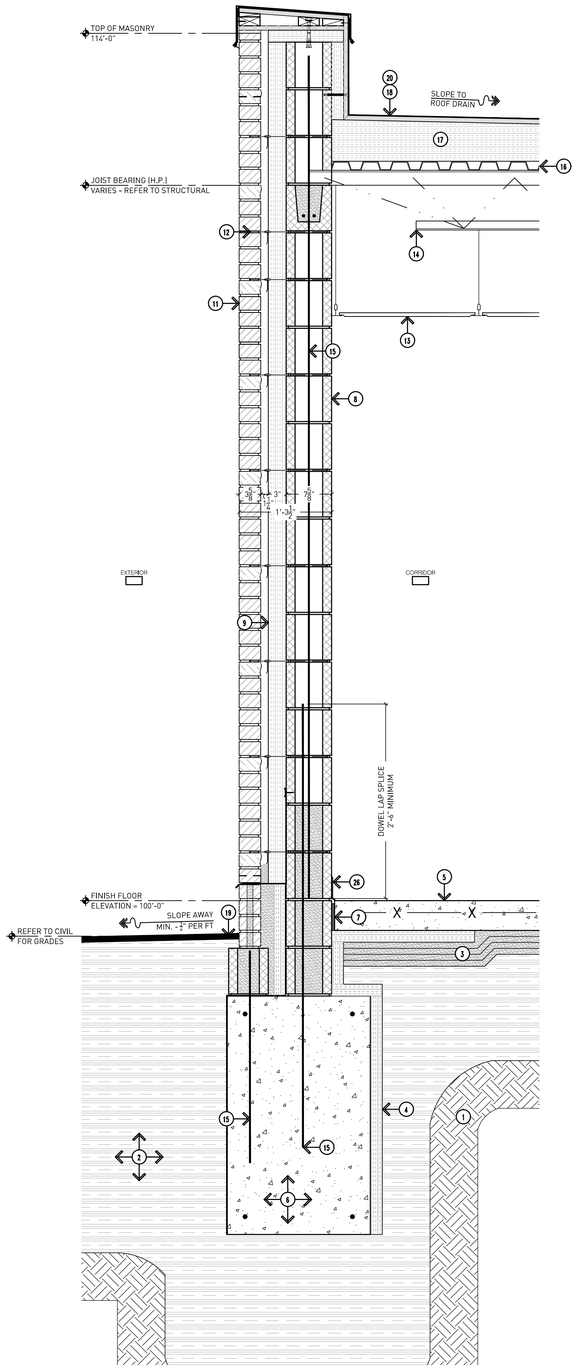


3 A9.01 Ext. Wall Section F - North/South (Area B)
Scale: 1"=1'-0"
REFER TO 1/A9.01 FOR TYPICAL NOTES



2 A9.01 Ext. Wall Section E - North/South (Area B)
Scale: 1"=1'-0"
REFER TO 1/A9.01 FOR TYPICAL NOTES



1 A9.01 Ext. Wall Section D - North/South (Area B)
Scale: 1"=1'-0"

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. PROVIDE MASONRY ANCHORS @ 16" O.C. VERTICALLY AND HORIZONTALLY.

G3. PROVIDE NON-COM WOOD BLOCKING BEHIND ALL MISCELLANEOUS TRIM LOCATIONS AND ALL OTHER ATTACHMENT LOCATIONS WHETHER PARTICULARLY SHOWN ON THE DOCUME OR NOT.

G4. ALL PREFINISHED METAL COPING TO BE COMPLETE WITH CONCEALED CLIP ANCHORS ON BOTH SIDES (NO VISIBLE FASTENERS).

G5. CARRY ROOFING UP AND OVER PARAPET CAP -- TYPICAL.

G6. PROVIDE CONTINUOUS SPRAY-APPLIED VAPOR BARRIER COVERING FACE OF WALL AND UP AND OVER PARAPET WALL. TERMINATE WITH ROOFING PER MANUFACTURER'S REQUIREMENTS. BARRIER SYSTEM SHALL BE CONTINUOUS AROUND THE ENTIRE BUILDIN ENVELOPE AND INCLUDE ALL PROPER TECHNIQUES FOR PENETRATIONS, ETC.

G7. ALL FLEXIBLE MEMBRANE FLASHING TO BE SECURED TO SUBSTRATE WITH TERMINATION BAR AND SEALANT -- INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

G8. FILL BRICK CORES AND COLLAR JOINTS SOLID BELOW GRADE AND BELOW ALL FLASHINGS

G9. PROVIDE STAINLESS STEEL DRIP WITH HEMMED EDGE ABOVE ALL EXTERIOR WINDOW AND DOOR OPENINGS.

G10. PROVIDE MASONRY WEEP VENTS @ 32" O.C. HORIZONTALLY AT TOP AND BOTTOM OF WALL COMPLETE WITH 3/8" x 1-1/2" PLASTIC WEEP VENT AND FLEXIBLE MEMBRANE FLASHING 16" UP WALL.

G11. MASONRY CONTROL JOINTS SHOULD BE SPACED 25'-0" APART MAX. AND SHOULD NOT BE SPACED FURTHER THAN 1.5x THE WALL HEIGHT - REFER TO THE MASONRY INSTITUTE FOR FURTHER INFORMATION.

DRAWING NOTES:

1. PROPERLY COMPACTED EXISTING SUBGRADE.
2. COMPACTED ENGINEERED FILL AS REQUIRED AFTER REMOVAL OF EXISTING LAWN / UNSUITABLE SOILS AS REQUIRED FOR PROPER SLAB ELEVATION.
3. COMPACTED SAND CUSHION BASE (MINIMUM 4").
4. 2" RIGID INSULATION BOARD MINIMUM 24" INSIDE BUILDING, AND VERTICALLY BEHIND FOUNDATION.
5. CONCRETE FLOOR SLAB OVER 15 MIL VAPOR BARRIER -- PROPERLY LAP AND SEAL JOINTS PER MANUFACTURER'S REQUIREMENTS - REFER TO STRUCTURAL DRAWINGS.
6. CONCRETE FOUNDATION -- REFER TO STRUCTURAL DRAWINGS.
7. ½" PREMOLDED EXPANSION JOINT WITH SEALANT.
8. CMU MASONRY BLOCK (PAINT ALL SURFACES EXPOSED TO VIEW).
9. 3" SPRAY FOAM BUILDING INSULATION SYSTEM WITH INTEGRAL CONTINUOUS VAPOR BARRIER.
10. STOREFRONT FRAMING AND GLAZING -- REFER TO DOOR SCHEDULE AND DETAILS.
11. 4" BRICK VENEER WITH ADJUSTABLE BRICK TIES @ 16" O.C. VERTICALLY AND HORIZONTAL (PROVIDE LENGTH AS REQUIRED DUE TO WALL CAVITY SIZE).
12. HORIZONTAL JOINT REINFORCING @ 16" O.C. VERTICALLY.
13. ACOUSTICAL CEILING TILE IN PREFINISHED METAL GRID SYSTEM ATTACHED TO BUILDING STRUCTURE ABOVE.
14. STRUCTURAL STEEL ROOF FRAMING -- REFER TO STRUCTURAL DRAWINGS.
15. REINFORCING -- REFER TO STRUCTURAL DRAWINGS.
16. 1½" GALVANIZED METAL ROOF DECK.
17. RIGID ROOF INSULATION BOARD (MINIMUM 6" THICKNESS -- TWO LAYERS AND COVERBOAR
18. FULLY ADHERED SINGLE-PLY EPDM ROOFING -- CARRY UP AND OVER FACE OF PARAPET WALL.
19. LINE OF GRADE.
20. ROOFING COVERBOARD.
21. DOOR - REFER TO DOOR SCHEDULE.
22. DRAINAGE MATERIAL (AGGREGATE) - REFER TO STRUCTURAL DRAWINGS.
23. INSULATION FORM - REFER TO STRUCTURAL DRAWINGS.
24. 5" CONCRETE FROST SLAB -- SLOPE AWAY FROM BUILDING MINIMUM ¼" PER FOOT.
25. ALUMINUM THRESHOLD.
26. WALL BASE--REFER TO FINISH SCHEDULE.

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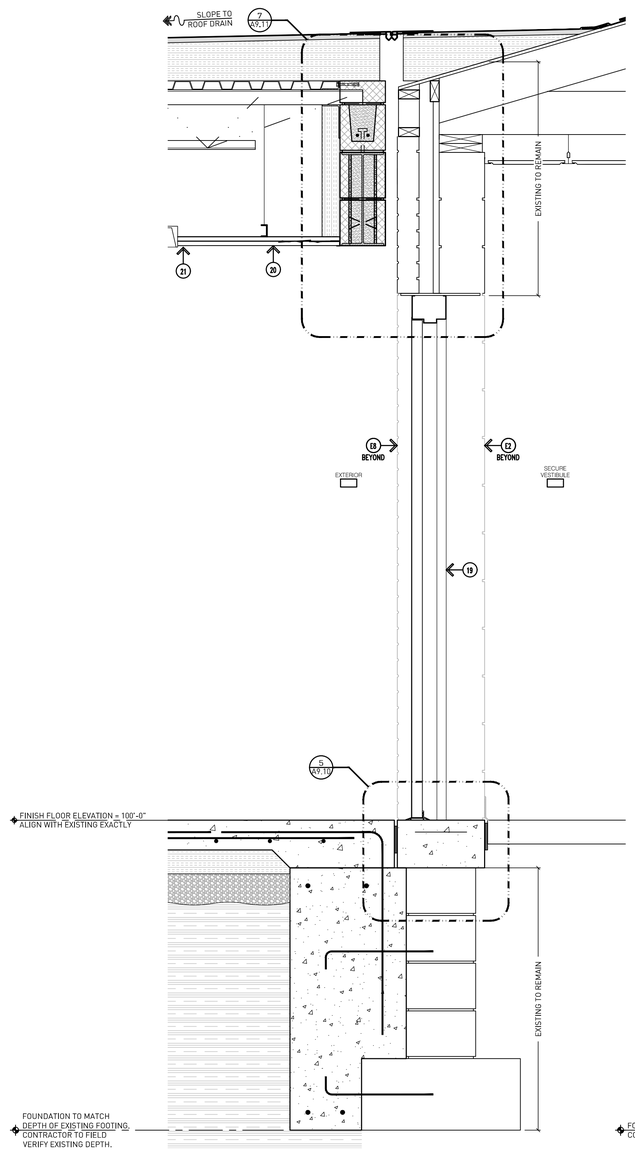
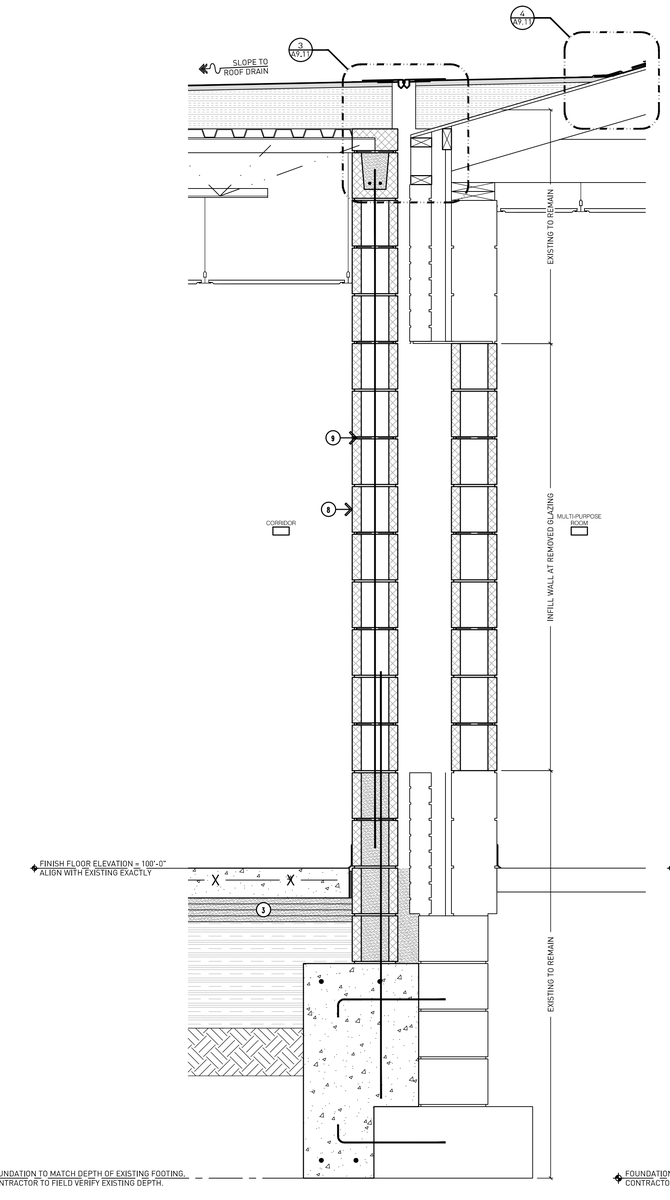
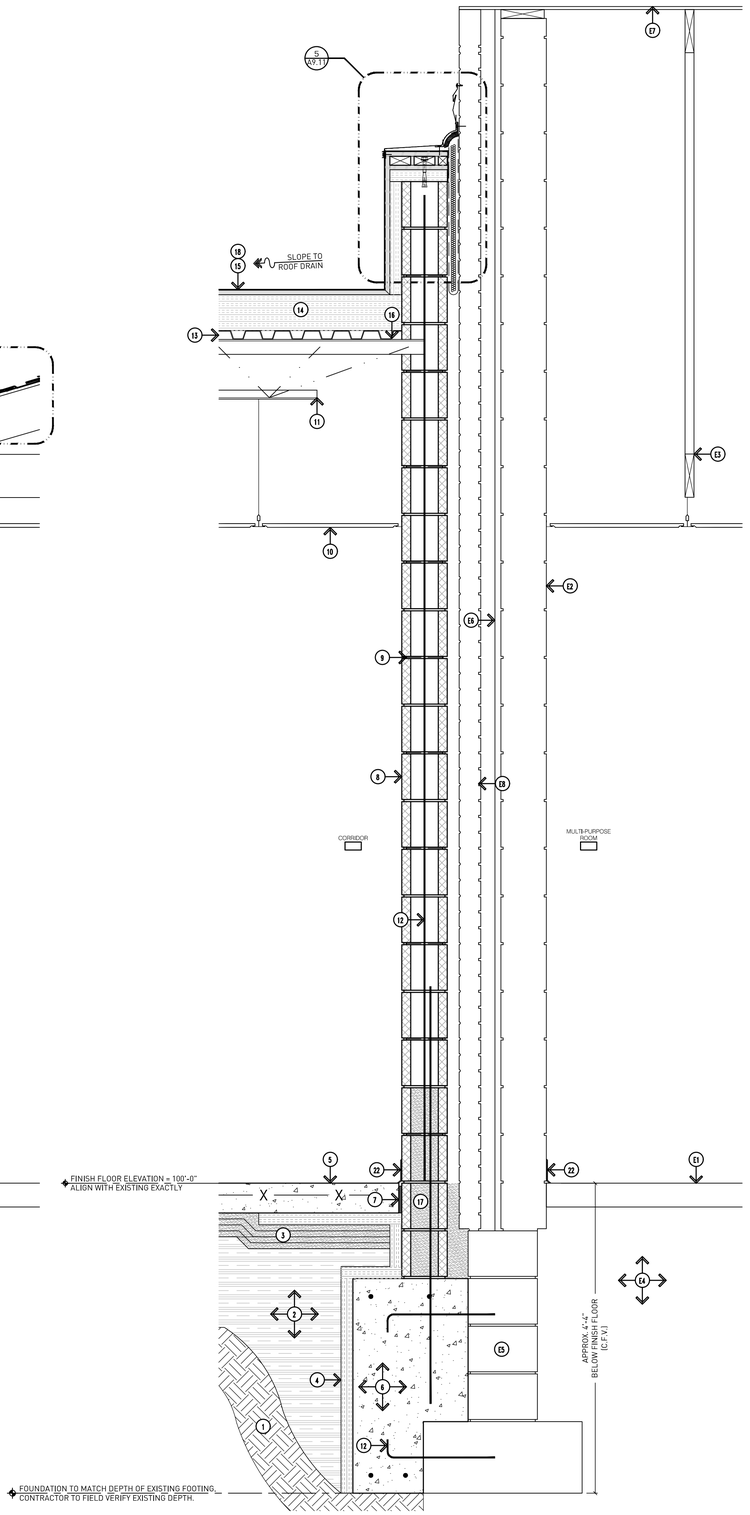


3 A9.02 Ext. Wall Section I - North/South (Area B)
Scale: 1"=1'-0"
REFER TO 1/A9.02 FOR TYPICAL NOTES



2 A9.02 Ext. Wall Section H - North/South (Area B)
Scale: 1"=1'-0"
REFER TO 1/A9.02 FOR TYPICAL NOTES



1 A9.02 Ext. Wall Section G - North/South (Area B)
Scale: 1"=1'-0"

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. PROVIDE MASONRY ANCHORS @ 16" O.C. VERTICALLY AND HORIZONTALLY.

G3. PROVIDE NON-COM WOOD BLOCKING BEHIND ALL MISCELLANEOUS TRIM LOCATIONS AND ALL OTHER ATTACHMENT LOCATIONS WHETHER PARTICULARLY SHOWN ON THE DOCUMENTS OR NOT.

G4. ALL PREFINISHED METAL COPING TO BE COMPLETE WITH CONCEALED CLIP ANCHORS ON BOTH SIDES (NO VISIBLE FASTENERS).

G5. CARRY ROOFING UP AND OVER PARAPET CAP -- TYPICAL.

G6. PROVIDE CONTINUOUS SPRAY-APPLIED VAPOR BARRIER COVERING FACE OF WALL AND UP AND OVER PARAPET WALL. TERMINATE WITH ROOFING PER MANUFACTURER'S REQUIREMENTS. BARRIER SYSTEM SHALL BE CONTINUOUS AROUND THE ENTIRE BUILDING ENVELOPE AND INCLUDE ALL PROPER TECHNIQUES FOR PENETRATIONS, ETC.

G7. ALL FLEXIBLE MEMBRANE FLASHING TO BE SECURED TO SUBSTRATE WITH TERMINATION BAR AND SEALANT -- INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

G8. FILL BRICK CORES AND COLLAR JOINTS SOLID BELOW GRADE AND BELOW ALL FLASHINGS.

G9. PROVIDE STAINLESS STEEL DRIP WITH HEMMED EDGE ABOVE ALL EXTERIOR WINDOW AND DOOR OPENINGS.

G10. PROVIDE MASONRY WEEP VENTS @ 32" O.C. HORIZONTALLY AT TOP AND BOTTOM OF WALL COMPLETE WITH 3/8" x 1-1/2" PLASTIC WEEP VENT AND FLEXIBLE MEMBRANE FLASHING MIN. 16" UP WALL.

G11. MASONRY CONTROL JOINTS SHOULD BE SPACED 25'-0" APART MAX. AND SHOULD NOT BE SPACED FURTHER THAN 1.5x THE WALL HEIGHT - REFER TO THE MASONRY INSTITUTE FOR FURTHER INFORMATION.

EXISTING TO REMAIN NOTES:

E1. CONCRETE FLOOR SLAB - EXACT CONDITIONS UNKNOWN.

E2. CMU BLOCK - EXACT CONDITIONS UNKNOWN.

E3. ROOF, ROOF STRUCTURE, AND ROOF DECK - EXACT CONDITIONS UNKNOWN.

E4. UNDISTURBED SOIL.

E5. STRUCTURAL FOOTING - EXACT CONDITIONS UNKNOWN. CONTRACTOR TO FIELD VERIFY DEPTH.

E6. WALL INSULATION - EXACT CONDITIONS UNKNOWN.

E7. ROOF INSULATION - EXACT CONDITIONS UNKNOWN. REMOVE WHERE NECESSARY FOR CONSTRUCTION OF NEW WALL.

E8. BRICK VENEER - EXACT CONDITIONS UNKNOWN.

DRAWING NOTES:

1. PROPERLY COMPACTED EXISTING SUBGRADE.
2. COMPACTED ENGINEERED FILL AS REQUIRED AFTER REMOVAL OF EXISTING LAWN / UNSUITABLE SOILS AS REQUIRED FOR PROPER SLAB ELEVATION.
3. COMPACTED SAND CUSHION BASE (MINIMUM 4").
4. 2" RIGID INSULATION BOARD MINIMUM 24" INSIDE BUILDING, AND VERTICALLY BEHIND FOUNDATION.
5. CONCRETE FLOOR SLAB OVER 15 MIL VAPOR BARRIER -- PROPERLY LAP AND SEAL JOINTS PER MANUFACTURER'S REQUIREMENTS - REFER TO STRUCTURAL DRAWINGS.
6. CONCRETE FOUNDATION -- REFER TO STRUCTURAL DRAWINGS.
7. ½" PREMOLDED EXPANSION JOINT WITH SEALANT.
8. CMU MASONRY BLOCK (PAINT ALL SURFACES EXPOSED TO VIEW).
9. HORIZONTAL JOINT REINFORCING @ 16" O.C. VERTICALLY.
10. ACOUSTICAL CEILING TILE IN PREFINISHED METAL GRID SYSTEM ATTACHED TO BUILDING STRUCTURE ABOVE.
11. STRUCTURAL STEEL ROOF FRAMING -- REFER TO STRUCTURAL DRAWINGS.
12. REINFORCING -- REFER TO STRUCTURAL DRAWINGS.
13. 1½" GALVANIZED METAL ROOF DECK.
14. RIGID ROOF INSULATION BOARD (MINIMUM 6" THICKNESS -- TWO LAYERS AND COVERBOARD).
15. FULLY ADHERED SINGLE-PLY EPDM ROOFING -- CARRY UP AND OVER FACE OF PARAPET WALL.
16. STEEL ANGLE DECK SUPPORT -- REFER TO STRUCTURAL DRAWINGS.
17. GROUT CMU SOLID.
18. ROOFING COVERBOARD.
19. DOOR - REFER TO DOOR SCHEDULE.
20. ½" CEMENT PLASTER SOFFIT ON GALVANIZED METAL LATH -- PAINT (COLOR AS SELECTED FROM MANUFACTURER'S STANDARD COLOR RANGE).
21. RECESSED LIGHT FIXTURE -- REFER TO ELECTRICAL DRAWINGS.
22. WALL BASE--REFER TO FINISH SCHEDULE.

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Exterior Wall Sections

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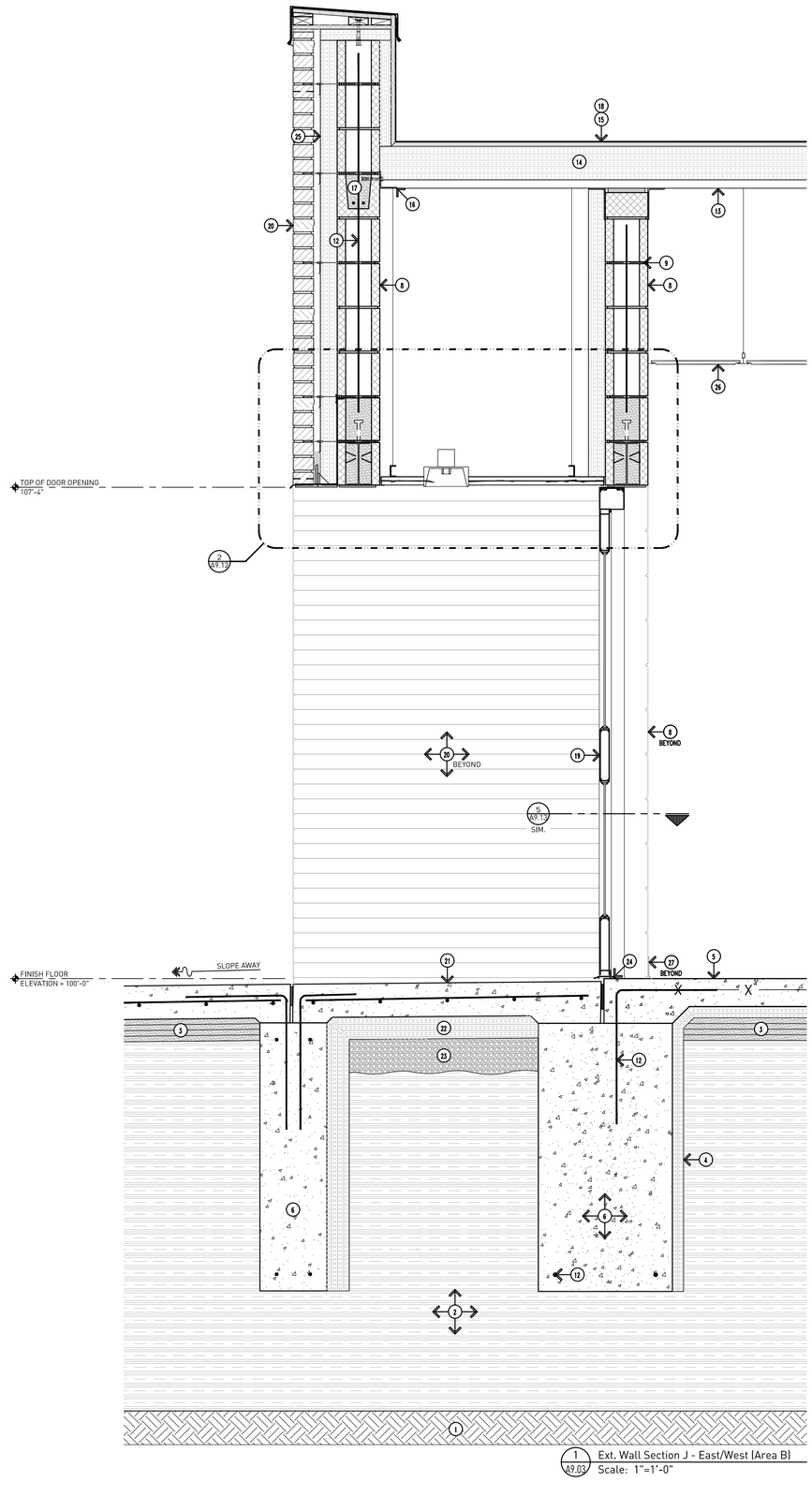

1 A9.03 Ext. Wall Section J - East/West (Area B)
Scale: 1"=1'-0"

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. PROVIDE MASONRY ANCHORS @ 16" O.C. VERTICALLY AND HORIZONTALLY.

G3. PROVIDE NON-COM WOOD BLOCKING BEHIND ALL MISCELLANEOUS TRIM LOCATIONS AND ALL OTHER ATTACHMENT LOCATIONS WHETHER PARTICULARLY SHOWN ON THE DOCUMENTS OR NOT.

G4. ALL PREFINISHED METAL COPING TO BE COMPLETE WITH CONCEALED CLIP ANCHORS ON BOTH SIDES (NO VISIBLE FASTENERS).

G5. CARRY ROOFING UP AND OVER PARAPET CAP -- TYPICAL.

G6. PROVIDE CONTINUOUS SPRAY-APPLIED VAPOR BARRIER COVERING FACE OF WALL AND UP AND OVER PARAPET WALL. TERMINATE WITH ROOFING PER MANUFACTURER'S REQUIREMENTS. BARRIER SYSTEM SHALL BE CONTINUOUS AROUND THE ENTIRE BUILDING ENVELOPE AND INCLUDE ALL PROPER TECHNIQUES FOR PENETRATIONS, ETC.

G7. ALL FLEXIBLE MEMBRANE FLASHING TO BE SECURED TO SUBSTRATE WITH TERMINATION BAR AND SEALANT -- INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

G8. FILL BRICK CORES AND COLLAR JOINTS SOLID BELOW GRADE AND BELOW ALL FLASHINGS.

G9. PROVIDE STAINLESS STEEL DRIP WITH HEMMED EDGE ABOVE ALL EXTERIOR WINDOW AND DOOR OPENINGS.

G10. PROVIDE MASONRY WEEP VENTS @ 32" O.C. HORIZONTALLY AT TOP AND BOTTOM OF WALL COMPLETE WITH 3/8" x 1-1/2" PLASTIC WEEP VENT AND FLEXIBLE MEMBRANE FLASHING MIN. 16" UP WALL.

G11. MASONRY CONTROL JOINTS SHOULD BE SPACED 25'-0" APART MAX. AND SHOULD NOT BE SPACED FURTHER THAN 1.5x THE WALL HEIGHT - REFER TO THE MASONRY INSTITUTE FOR FURTHER INFORMATION.

DRAWING NOTES:

1. PROPERLY COMPACTED EXISTING SUBGRADE.
2. COMPACTED ENGINEERED FILL AS REQUIRED AFTER REMOVAL OF EXISTING LAWN / UNSUITABLE SOILS AS REQUIRED FOR PROPER SLAB ELEVATION.
3. COMPACTED SAND CUSHION BASE (MINIMUM 4").
4. 2" RIGID INSULATION BOARD MINIMUM 24" INSIDE BUILDING, AND VERTICALLY BEHIND FOUNDATION.
5. CONCRETE FLOOR SLAB OVER 15 MIL VAPOR BARRIER -- PROPERLY LAP AND SEAL JOINTS PER MANUFACTURER'S REQUIREMENTS - REFER TO STRUCTURAL DRAWINGS.
6. CONCRETE FOUNDATION -- REFER TO STRUCTURAL DRAWINGS.
7. $\frac{1}{2}$" PREMOLDED EXPANSION JOINT WITH SEALANT.
8. CMU MASONRY BLOCK (PAINT ALL SURFACES EXPOSED TO VIEW).
9. HORIZONTAL JOINT REINFORCING @ 16" O.C. VERTICALLY.
10. ACOUSTICAL CEILING TILE IN PREFINISHED METAL GRID SYSTEM ATTACHED TO BUILDING STRUCTURE ABOVE.
11. STRUCTURAL STEEL ROOF FRAMING -- REFER TO STRUCTURAL DRAWINGS.
12. REINFORCING -- REFER TO STRUCTURAL DRAWINGS.
13. 1$\frac{1}{2}$" GALVANIZED METAL ROOF DECK.
14. RIGID ROOF INSULATION BOARD (MINIMUM 6" THICKNESS -- TWO LAYERS AND COVERBOARD).
15. FULLY ADHERED SINGLE-PLY EPDM ROOFING -- CARRY UP AND OVER FACE OF PARAPET WALL.
16. STEEL ANGLE DECK SUPPORT -- REFER TO STRUCTURAL DRAWINGS.
17. GROUT CMU SOLID.
18. ROOFING COVERBOARD.
19. DOOR - REFER TO DOOR SCHEDULE.
20. 4" BRICK VENEER WITH ADJUSTABLE BRICK TIES @ 16" O.C. VERTICALLY AND HORIZONTALLY (PROVIDE LENGTH AS REQUIRED DUE TO WALL CAVITY SIZE).
21. 5" PATIO CONCRETE SLAB -- SLOPE AWAY FROM BUILDING MINIMUM $\frac{1}{4}$" PER FOOT.
22. INSULATION FORM - REFER TO STRUCTURAL DRAWINGS.
23. DRAINAGE MATERIAL (AGGREGATE) - REFER TO STRUCTURAL DRAWINGS.
24. ALUMINUM THRESHOLD.
25. 3" SPRAY FOAM BUILDING INSULATION SYSTEM WITH INTEGRAL CONTINUOUS VAPOR BARRIER.
26. ACOUSTICAL CEILING TILE IN PREFINISHED METAL GRID SYSTEM ATTACHED TO BUILDING STRUCTURE ABOVE.
27. WALL BASE--REFER TO FINISH SCHEDULE.

STATE OF MICHIGAN
ELIZABETH SUE BYE
ARCHITECT
No. 1301054283
LICENSED ARCHITECT

Bidding and Permits: 31 July 2023

Exterior Wall Sections

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Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

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DRAWING NOTES (CONT.):

44. LINE OF GRADE.
45. WINDOW SHADE.
46. MINIMUM 4" CONCRETE PATCH ABOVE FOUNDATION AT LOCATION OF NEW WALL OPENING.
47. INSULATION FORM - REFER TO STRUCTURAL DRAWINGS.
48. DRAINAGE MATERIAL (AGGREGATE) - REFER TO STRUCTURAL DRAWINGS.
49. ALUMINUM THRESHOLD.
50. WALL BASE--REFER TO FINISH SCHEDULE.

DRAWING NOTES (CONT.):

38. GROUT CMU CORES SOLID BELOW FLASHING AT WHERE BELOW GRADE.
39. FILL BRICK/CMU CORES AND COLLAR JOINTS SOLID BELOW FLASHING AND WHERE BELOW GRADE.
40. DOOR FRAME - REFER TO DOOR SCHEDULE.
41. DOOR - REFER TO DOOR SCHEDULE.
42. JAMB ANCHOR TO SUIT CONDITIONS.
43. WATERPROOFING.

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. NOT ALL NOTES ARE APPLICABLE TO THIS SHEET.

G3. PROVIDE MASONRY ANCHORS @ 16" O.C. VERTICALLY AND HORIZONTALLY.

G4. PROVIDE NON-COM WOOD BLOCKING BEHIND ALL MISCELLANEOUS TRIM LOCATIONS AND ALL OTHER ATTACHMENT LOCATIONS WHETHER PARTICULARLY SHOWN ON THE DOCUMENTS OR NOT.

G5. ALL PREFINISHED METAL COPING TO BE COMPLETE WITH CONCEALED CLIP ANCHORS ON BOTH SIDES (NO VISIBLE FASTENERS).

G6. CARRY ROOFING UP AND OVER PARAPET CAP -- TYPICAL.

G7. PROVIDE CONTINUOUS SPRAY-APPLIED VAPOR BARRIER COVERING FACE OF WALL AND UP AND OVER PARAPET WALL. TERMINATE WITH ROOFING PER MANUFACTURER'S REQUIREMENTS. BARRIER SYSTEM SHALL BE CONTINUOUS AROUND THE ENTIRE BUILDING ENVELOPE AND INCLUDE ALL PROPER TECHNIQUES FOR PENETRATIONS, ETC.

G8. ALL FLEXIBLE MEMBRANE FLASHING TO BE SECURED TO SUBSTRATE WITH TERMINATION BAR AND SEALANT -- INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

G9. FILL BRICK CORES AND COLLAR JOINTS SOLID BELOW GRADE AND BELOW ALL FLASHINGS.

G10. PROVIDE STAINLESS STEEL DRIP WITH HEMMED EDGE ABOVE ALL EXTERIOR WINDOW AND DOOR OPENINGS.

G11. PROVIDE MASONRY WEEP VENTS @ 32" O.C. HORIZONTALLY AT TOP AND BOTTOM OF WALL COMPLETE WITH 3/8" x 1-1/2" PLASTIC WEEP VENT AND FLEXIBLE MEMBRANE FLASHING MIN. 16" UP WALL.

G12. MASONRY CONTROL JOINTS SHOULD BE SPACED 25'-0" APART MAX. AND SHOULD NOT BE SPACED FURTHER THAN 1.5x THE WALL HEIGHT - REFER TO THE MASONRY INSTITUTE FOR FURTHER INFORMATION.

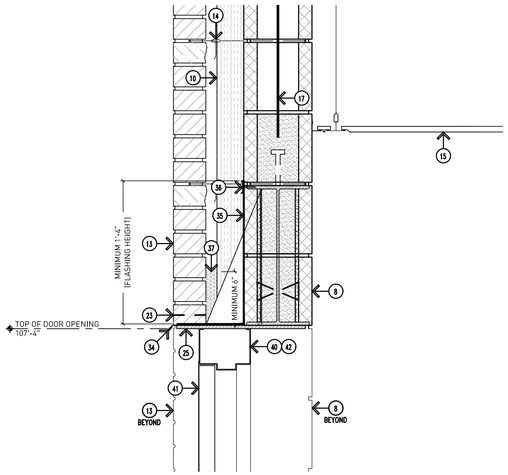
EXISTING TO REMAIN NOTES:

E1. CONCRETE FLOOR SLAB - EXACT CONDITIONS UNKNOWN.

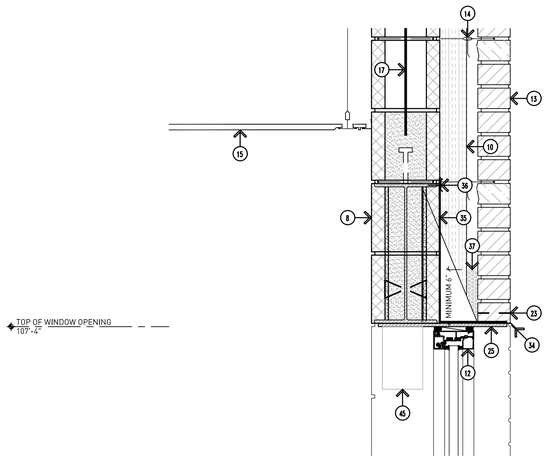
E2. STRUCTURAL FOOTING - EXACT CONDITIONS UNKNOWN. CONTRACTOR TO FIELD VERIFY DEPTH.

DRAWING NOTES:

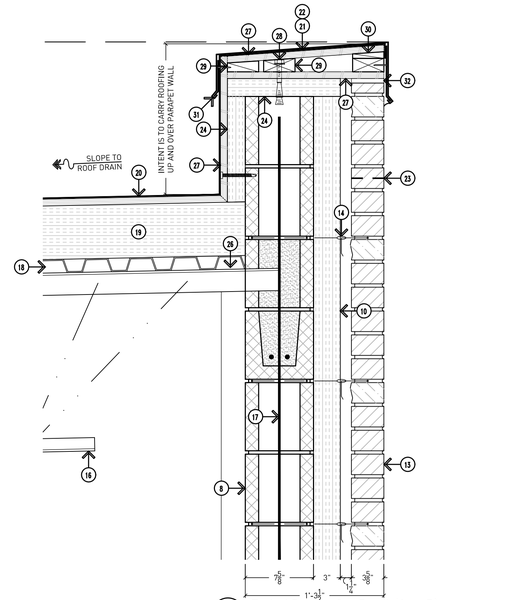
1. PROPERLY COMPACTED EXISTING SUBGRADE.
2. COMPACTED ENGINEERED FILL AS REQUIRED AFTER REMOVAL OF EXISTING LAWN / UNSUITABLE SOILS AS REQUIRED FOR PROPER SLAB ELEVATION.
3. COMPACTED SAND CUSHION BASE (MINIMUM 4").
4. 2" RIGID INSULATION BOARD MINIMUM 24" INSIDE BUILDING, AND VERTICALLY BEHIND FOUNDATION.
5. CONCRETE FLOOR SLAB OVER 15 MIL VAPOR BARRIER -- PROPERLY LAP AND SEAL JOINTS PER MANUFACTURER'S REQUIREMENTS - REFER TO STRUCTURAL DRAWINGS.
6. CONCRETE FOUNDATION -- REFER TO STRUCTURAL DRAWINGS.
7. $\frac{1}{2}$" PREMOLDED EXPANSION JOINT WITH SEALANT.
8. CMU MASONRY BLOCK (PAINT ALL SURFACES EXPOSED TO VIEW).
9. BULLNOSE CMU MASONRY BLOCK.
10. 3" SPRAY FOAM BUILDING INSULATION SYSTEM WITH INTEGRAL CONTINUOUS VAPOR BARRIER AND ACCESSORIES AS REQUIRED TO PROVIDE BARRIER FROM FOUNDATION TO ROOFING.
11. LIMESTONE WINDOW SILL AND PROFILE TO MATCH EXISTING.
12. STOREFRONT FRAMING AND GLAZING -- REFER TO WINDOW SCHEDULE AND DETAILS.
13. 4" BRICK VENEER WITH ADJUSTABLE BRICK TIES @ 16" O.C. VERTICALLY AND HORIZONTALLY (PROVIDE LENGTH AS REQUIRED DUE TO WALL CAVITY SIZE).
14. HORIZONTAL JOINT REINFORCING @ 16" O.C. VERTICALLY.
15. ACOUSTICAL CEILING TILE IN PREFINISHED METAL GRID SYSTEM ATTACHED TO BUILDING STRUCTURE ABOVE.
16. STRUCTURAL STEEL ROOF FRAMING -- REFER TO STRUCTURAL DRAWINGS.
17. REINFORCING -- REFER TO STRUCTURAL DRAWINGS.
18. 1 $\frac{1}{2}$" GALVANIZED METAL ROOF DECK.
19. RIGID ROOF INSULATION BOARD (MINIMUM 6" THICKNESS -- TWO LAYERS AND COVERBOARD).
20. FULLY ADHERED SINGLE-PLY EPDM ROOFING -- CARRY UP AND OVER FACE OF PARAPET WALL.
21. PARAPET WALL BLOCKING -- REFER TO DETAIL 9/A9.14 FOR FURTHER INFORMATION.
22. PREFINISHED METAL PARAPET CAP FLASHING WITH CONCEALED CLIP ANCHORS BOTH SIDES (NO EXPOSED FASTENERS).
23. $\frac{3}{8}$" x 1 $\frac{1}{2}$" PLASTIC WEEP VENT WITH INSECT SCREEN.
24. 2" RIGID BUILDING INSULATION OVER CONTINUOUS VAPOR BARRIER.
25. STEEL LINTEL WITH PLATE, PAINT -- REFER TO STRUCTURAL DRAWINGS.
26. STEEL ANGLE DECK SUPPORT -- REFER TO STRUCTURAL DRAWINGS.
27. $\frac{3}{4}$" PRESERVATIVE TREATED PLYWOOD SHEATHING.
28. PRESERVATIVE TREATED WOOD NAILER WITH EXPANSION ANCHORS
29. 2"x4" PRESERVATIVE TREATED WOOD NAILER.
30. 1"x4" PRESERVATIVE TREATED WOOD NAILER--CUT TO FIT PROFILE (CONTRACTOR OPTION TO UTILIZE CARLISLE SECREDGE 200 COPING INSTEAD).
31. SEALANT (WITH FOAM BACKER ROD AS NECESSARY TO SUIT CONDITIONS).
32. COMPRESSIBLE FILLER
33. 5" CONCRETE FROST SLAB - SLOPE AWAY FROM BUILDING MINIMUM $\frac{1}{4}$" PER FOOT.
34. STAINLESS STEEL METAL DRIP WITH HEMMED EDGE.
35. FULLY ADHERED FLEXIBLE MEMBRANE FLASHING WITH END DAMS.
36. TERMINATION BAR WITH TOP SEALANT--INSTALL PER MANUFACTURER'S REQUIREMENTS.
37. PEA STONE DRAINAGE MATERIAL (MINIMUM 6" HEIGHT).



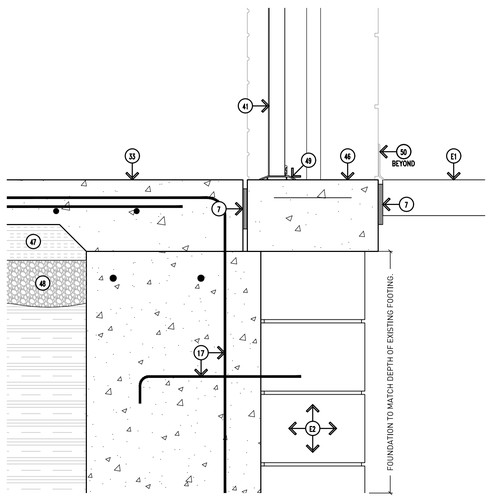
6 A9.10 Typical Egress Door Head Detail (Area B)
Scale: 1-1/2"=1'-0"



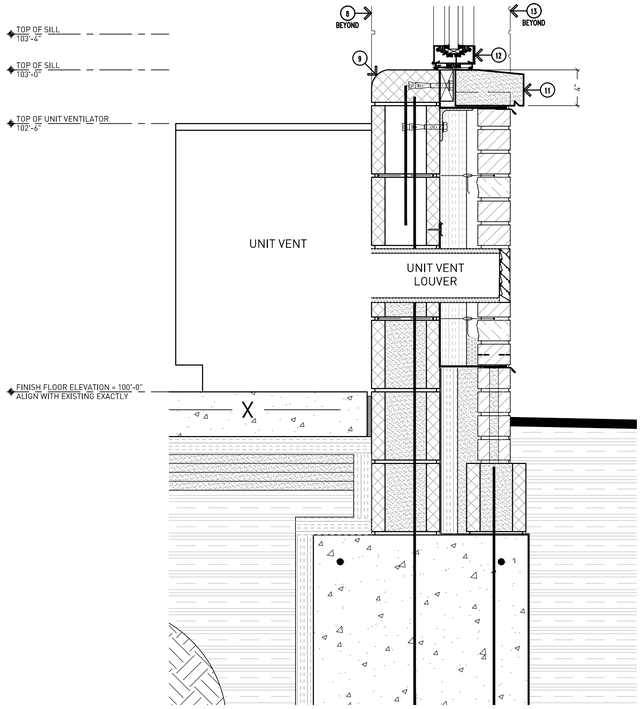
4 A9.10 Typical Classroom Window Head Detail (Area B)
Scale: 1-1/2"=1'-0"



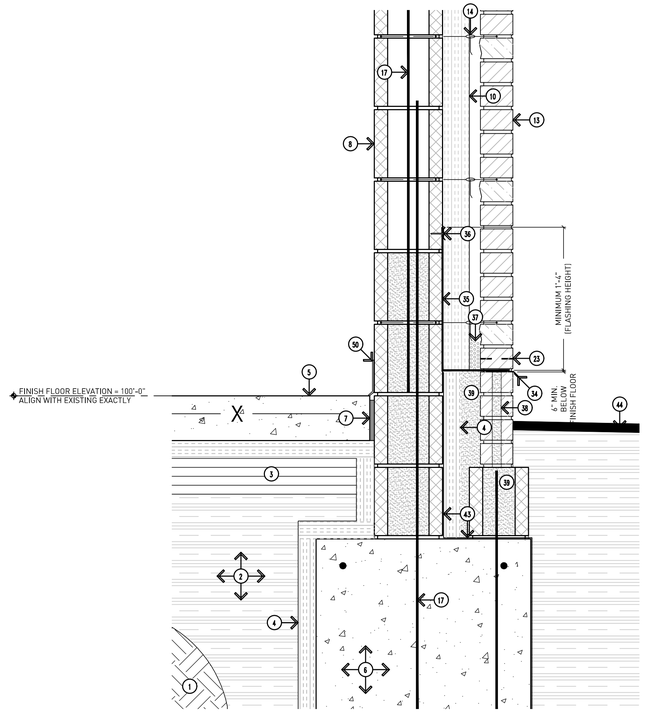
2 A9.10 Typical Parapet Cap Detail (Area B)
Scale: 1-1/2"=1'-0"



5 A9.10 Frost Slab/Floor Infill (Area A)
Scale: 1-1/2"=1'-0"
REFER TO 1/A9.10 FOR TYPICAL NOTES



3 A9.10 Typical Window Sill/Louver Detail (Area B)
Scale: 1-1/2"=1'-0"
REFER TO 1/A9.10 FOR TYPICAL NOTES



1 A9.10 Typical Base of Wall (Area B)
Scale: 1-1/2"=1'-0"

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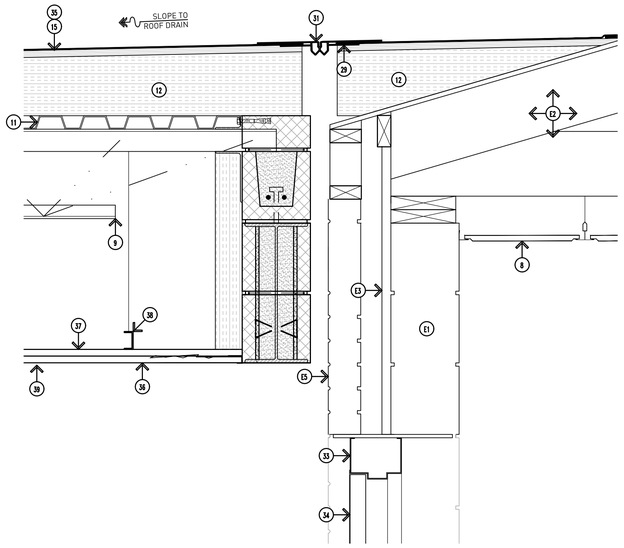
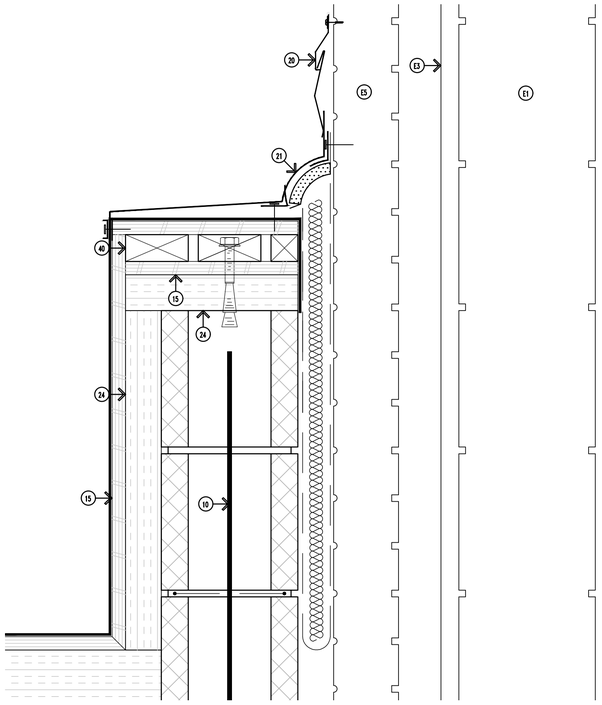
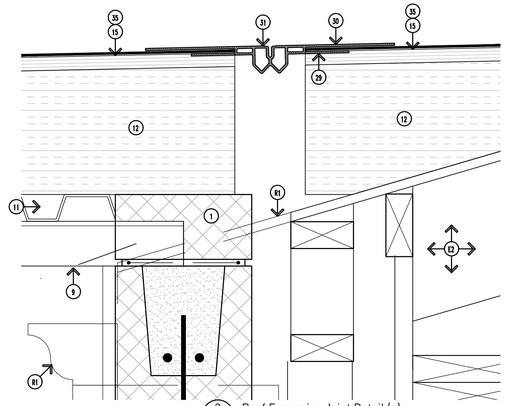


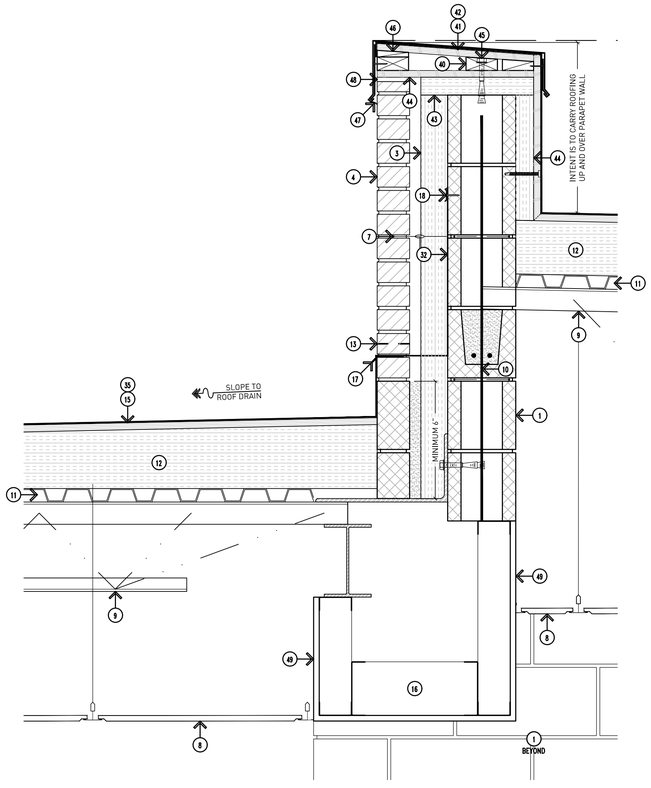
7 A9.11 Roof Expansion Joint Detail @ Canopy (North/South)
Scale: 3"=1'-0"



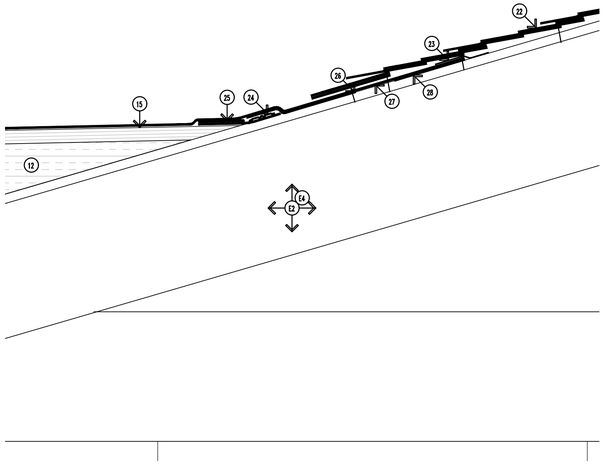
5 A9.11 Roof Expansion Joint Detail (b)
Scale: 3"=1'-0"



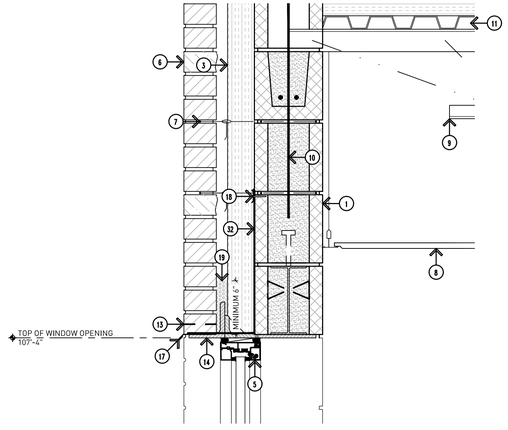
3 A9.11 Roof Expansion Joint Detail (a)
Scale: 3"=1'-0"



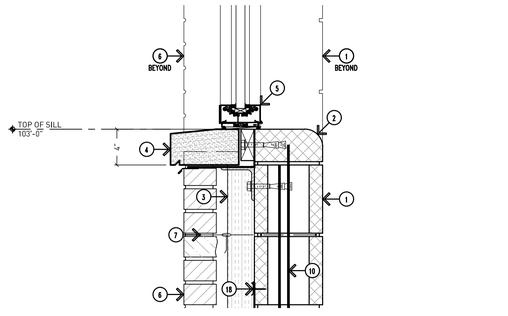
6 A9.11 Corridor D Soffit Detail
Scale: 3"=1'-0"



4 A9.11 EPDM to Asphalt Shingle Expansion Joint Detail
Scale: 3"=1'-0"



2 A9.11 Typical Corridor Window Head Detail (Area B)
Scale: 1-1/2"=1'-0"



1 A9.11 Typical Corridor Window Sill Detail (Area B)
Scale: 1-1/2"=1'-0"

DRAWING NOTES (CONT.):

46. 1"x4" PRESERVATIVE TREATED WOOD NAILER--CUT TO FIT PROFILE (CONTRACTOR OPTION TO UTILIZE CARLISLE SECREDGE 200 COPING INSTEAD).
47. SEALANT (WITH FOAM BACKER ROD AS NECESSARY TO SUIT CONDITIONS).
48. COMPRESSIBLE FILLER
49. ⅝" GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS ON 3⅝" METAL FRAMING @ 16" O.C. ATTACHED TO SUPPORT STRUCTURE ABOVE.

DRAWING NOTES (CONT.):

34. DOOR - REFER TO DOOR SCHEDULE.
35. FULLY ADHERED SINGLE-PLY EPDM ROOFING -- CARRY UP AND OVER FACE OF PARAPET WALL.
36. ⅞" CEMENT PLASTER SOFFIT ON GALVANIZED METAL LATH -- PAINT (COLOR AS SELECTED FROM MANUFACTURER'S STANDARD COLOR RANGE).
37. ⅞" CROSS FURRING SPACED PER MANUFACTURER'S RECOMMENDATIONS.
38. 2" CRC MAIN RUNNER ATTACHED TO BUILDING STRUCTURE WITH GALVANIZED TIE WIRE (SPACED PER MANUFACTURER'S RECOMMENDATIONS).
39. RECESSED LIGHT FIXTURE -- REFER TO ELECTRICAL DRAWINGS.
40. 2"x4" PRESERVATIVE TREATED WOOD NAILER.
41. PARAPET WALL BLOCKING -- REFER TO DETAIL 9/A9.14 FOR FURTHER INFORMATION.
42. PREFINISHED METAL PARAPET CAP FLASHING WITH CONCEALED CLIP ANCHORS BOTH SIDES (NO EXPOSED FASTENERS).
43. 2" RIGID BUILDING INSULATION.
44. ¾" PRESERVATIVE TREATED PLYWOOD SHEATHING.
45. PRESERVATIVE TREATED WOOD NAILER WITH EXPANSION ANCHORS

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. NOT ALL NOTES ARE APPLICABLE TO THIS SHEET.

G3. PROVIDE MASONRY ANCHORS @ 16" O.C. VERTICALLY AND HORIZONTALLY.

G4. PROVIDE NON-COM WOOD BLOCKING BEHIND ALL MISCELLANEOUS TRIM LOCATIONS AND ALL OTHER ATTACHMENT LOCATIONS WHETHER PARTICULARLY SHOWN ON THE DOCUMENTS OR NOT.

G5. ALL PREFINISHED METAL COPING TO BE COMPLETE WITH CONCEALED CLIP ANCHORS ON BOTH SIDES (NO VISIBLE FASTENERS).

G6. CARRY ROOFING UP AND OVER PARAPET CAP -- TYPICAL.

G7. PROVIDE CONTINUOUS SPRAY-APPLIED VAPOR BARRIER COVERING FACE OF WALL AND UP AND OVER PARAPET WALL. TERMINATE WITH ROOFING PER MANUFACTURER'S REQUIREMENTS. BARRIER SYSTEM SHALL BE CONTINUOUS AROUND THE ENTIRE BUILDING ENVELOPE AND INCLUDE ALL PROPER TECHNIQUES FOR PENETRATIONS, ETC.

G8. ALL FLEXIBLE MEMBRANE FLASHING TO BE SECURED TO SUBSTRATE WITH TERMINATION BAR AND SEALANT -- INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

G9. FILL BRICK CORES AND COLLAR JOINTS SOLID BELOW GRADE AND BELOW ALL FLASHINGS.

G10. PROVIDE STAINLESS STEEL DRIP WITH HEMMED EDGE ABOVE ALL EXTERIOR WINDOW AND DOOR OPENINGS.

G11. PROVIDE MASONRY WEEP VENTS @ 32" O.C. HORIZONTALLY AT TOP AND BOTTOM OF WALL COMPLETE WITH 3/8" x 1-1/2" PLASTIC WEEP VENT AND FLEXIBLE MEMBRANE FLASHING MIN. 16" UP WALL.

G12. MASONRY CONTROL JOINTS SHOULD BE SPACED 25'-0" APART MAX. AND SHOULD NOT BE SPACED FURTHER THAN 1.5x THE WALL HEIGHT - REFER TO THE MASONRY INSTITUTE FOR FURTHER INFORMATION.

REMOVAL NOTES:

R1. EXISTING ROOF, SOFFIT, GUTTER, DOWNSPOUT, ETC. AS REQUIRED. - E.C.U.

EXISTING TO REMAIN NOTES:

E1. CMU BLOCK - EXACT CONDITIONS UNKNOWN.

E2. ROOF, ROOF STRUCTURE, AND ROOF DECK - EXACT CONDITIONS UNKNOWN.

E3. WALL INSULATION - EXACT CONDITIONS UNKNOWN.

E4. ROOF INSULATION - EXACT CONDITIONS UNKNOWN. REMOVE WHERE NECESSARY FOR CONSTRUCTION OF NEW WALL.

E5. BRICK VENEER - EXACT CONDITIONS UNKNOWN.

DRAWING NOTES:

1. CMU MASONRY BLOCK (PAINT ALL SURFACES EXPOSED TO VIEW).
2. BULLNOSE CMU MASONRY BLOCK.
3. 3" SPRAY FOAM BUILDING INSULATION SYSTEM WITH INTEGRAL CONTINUOUS VAPOR BARRIER AND ACCESSORIES AS REQUIRED TO PROVIDE BARRIER FROM FOUNDATION TO ROOFING.
4. LIMESTONE WINDOW SILL AND PROFILE TO MATCH EXISTING.
5. STOREFRONT FRAMING AND GLAZING -- REFER TO WINDOW SCHEDULE AND DETAILS.
6. 4" BRICK VENEER WITH ADJUSTABLE BRICK TIES @ 16" O.C. VERTICALLY AND HORIZONTALLY (PROVIDE LENGTH AS REQUIRED DUE TO WALL CAVITY SIZE).
7. HORIZONTAL JOINT REINFORCING @ 16" O.C. VERTICALLY.
8. ACOUSTICAL CEILING TILE IN PREFINISHED METAL GRID SYSTEM ATTACHED TO BUILDING STRUCTURE ABOVE.
9. STRUCTURAL STEEL ROOF FRAMING -- REFER TO STRUCTURAL DRAWINGS.
10. REINFORCING -- REFER TO STRUCTURAL DRAWINGS.
11. 1½" GALVANIZED METAL ROOF DECK.
12. RIGID ROOF INSULATION BOARD (MINIMUM 6" THICKNESS -- TWO LAYERS AND COVERBOARD).
13. ⅜" x 1½" PLASTIC WEEP VENT WITH INSECT SCREEN.
14. STEEL LINTEL WITH PLATE, PAINT -- REFER TO STRUCTURAL DRAWINGS.
15. ¾" PRESERVATIVE TREATED PLYWOOD SHEATHING.
16. ⅝" GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS ON 6" METAL FRAMING @ 12" O.C.
17. STAINLESS STEEL METAL DRIP WITH HEMMED EDGE.
18. TERMINATION BAR WITH TOP SEALANT--INSTALL PER MANUFACTURER'S REQUIREMENTS.
19. PEA STONE DRAINAGE MATERIAL (MINIMUM 6" HEIGHT).
20. PREFINISHED TWO-PIECE COUNTER FLASHING.
21. PARAPET TO WALL JOINT COVER - BELLOWS TYPE, SIZE TO SUIT APPLICATION, INSULATED, 2 HOUR FIRE RATING.
22. SHINGLES, SHAKES, SLATE, ETC. BY OTHERS.
23. UNDERLAYMENT MAT OF WATER SHEDDING SYSTEM TO BE ABOVE CARLISLE MEMBRANE IN SHINGLE-FASHION, OVERLAP MIN. 6" [15cm].
24. CARLISLE FASTENER & SEAM PLATE, MAX. 12" [30cm] O.C.
25. 6" [15cm] WIDE PRESSURE- SENSITIVE RUSS AND EPDM PRIMER.
26. APPROVED SUBSTRATE.
27. ROOF MEMBRANE EXTENDED UNDER THE SHINGLE COURSES.
28. SURE-SEAL BONDING ADHESIVE.
29. LOWER ROOF JOINT FLAP.
30. TOP ROOF JOINT FLAP.
31. ROOF JOINT RJ-0200 (BY SIKA EMSEAL).
32. FULLY ADHERED FLEXIBLE MEMBRANE FLASHING WITH END DAMS.
33. DOOR FRAME - REFER TO DOOR SCHEDULE.

STATE OF MICHIGAN
ELIZABETH SUE BYE
ARCHITECT
No. 1301054283
LICENSED ARCHITECT

Bidding and Permits: 31 July 2023

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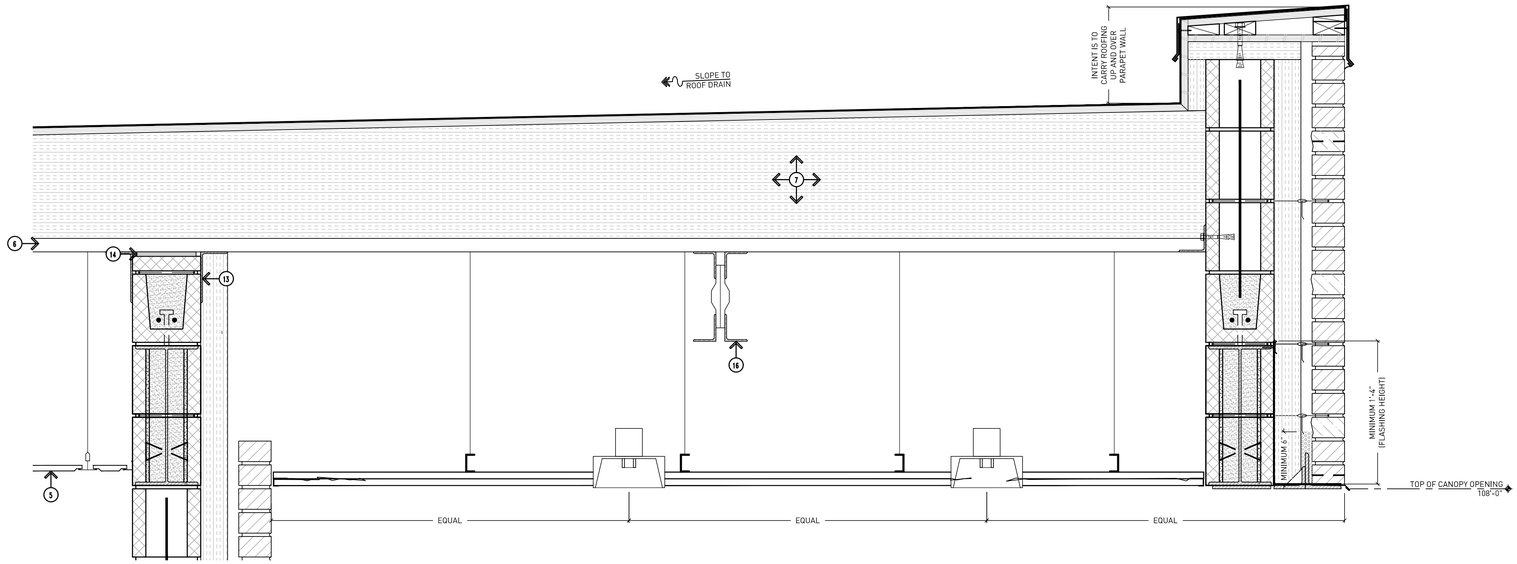
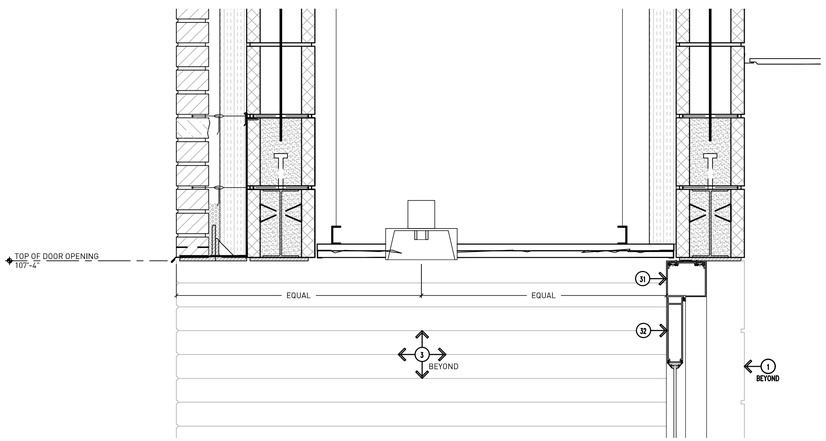
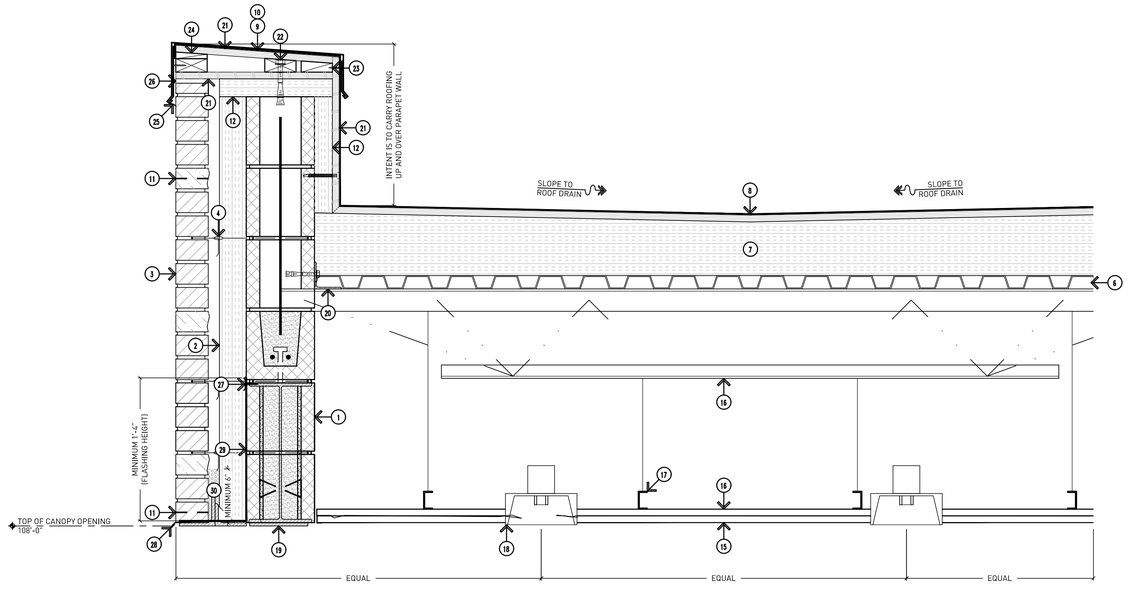


3 A9.12 Canopy Detail - East/West (Area A)
Scale: 1-1/2"=1'-0"
REFER TO 1/A9.12 FOR TYPICAL NOTES



2 A9.12 Ext. Recessed Door Head Detail - East/West (Area B)
Scale: 1-1/2"=1'-0"
REFER TO 1/A9.12 FOR TYPICAL NOTES



1 A9.12 Canopy Detail - North/South (Area A)
Scale: 1-1/2"=1'-0"

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. NOT ALL NOTES ARE APPLICABLE TO THIS SHEET.

G3. PROVIDE MASONRY ANCHORS @ 16" O.C. VERTICALLY AND HORIZONTALLY.

G4. PROVIDE NON-COM WOOD BLOCKING BEHIND ALL MISCELLANEOUS TRIM LOCATIONS AND ALL OTHER ATTACHMENT LOCATIONS WHETHER PARTICULARLY SHOWN ON THE DOCUMENTS OR NOT.

G5. ALL PREFINISHED METAL COPING TO BE COMPLETE WITH CONCEALED CLIP ANCHORS ON BOTH SIDES (NO VISIBLE FASTENERS).

G6. CARRY ROOFING UP AND OVER PARAPET CAP -- TYPICAL.

G7. PROVIDE CONTINUOUS SPRAY-APPLIED VAPOR BARRIER COVERING FACE OF WALL AND UP AND OVER PARAPET WALL. TERMINATE WITH ROOFING PER MANUFACTURER'S REQUIREMENTS. BARRIER SYSTEM SHALL BE CONTINUOUS AROUND THE ENTIRE BUILDING ENVELOPE AND INCLUDE ALL PROPER TECHNIQUES FOR PENETRATIONS, ETC.

G8. ALL FLEXIBLE MEMBRANE FLASHING TO BE SECURED TO SUBSTRATE WITH TERMINATION BAR AND SEALANT -- INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

G9. FILL BRICK CORES AND COLLAR JOINTS SOLID BELOW GRADE AND BELOW ALL FLASHINGS.

G10. PROVIDE STAINLESS STEEL DRIP WITH HEMMED EDGE ABOVE ALL EXTERIOR WINDOW AND DOOR OPENINGS.

G11. PROVIDE MASONRY WEEP VENTS @ 32" O.C. HORIZONTALLY AT TOP AND BOTTOM OF WALL COMPLETE WITH 3/8" x 1-1/2" PLASTIC WEEP VENT AND FLEXIBLE MEMBRANE FLASHING MIN. 16" UP WALL.

G12. MASONRY CONTROL JOINTS SHOULD BE SPACED 25'-0" APART MAX. AND SHOULD NOT BE SPACED FURTHER THAN 1.5x THE WALL HEIGHT - REFER TO THE MASONRY INSTITUTE FOR FURTHER INFORMATION.

DRAWING NOTES:

1. CMU MASONRY BLOCK (PAINT ALL SURFACES EXPOSED TO VIEW).
2. 3" SPRAY FOAM BUILDING INSULATION SYSTEM WITH INTEGRAL CONTINUOUS VAPOR BARRIER AND ACCESSORIES AS REQUIRED TO PROVIDE BARRIER FROM FOUNDATION TO ROOFING.
3. 4" BRICK VENEER WITH ADJUSTABLE BRICK TIES @ 16" O.C. VERTICALLY AND HORIZONTALLY (PROVIDE LENGTH AS REQUIRED DUE TO WALL CAVITY SIZE).
4. HORIZONTAL JOINT REINFORCING @ 16" O.C. VERTICALLY.
5. ACOUSTICAL CEILING TILE IN PREFINISHED METAL GRID SYSTEM ATTACHED TO BUILDING STRUCTURE ABOVE.
6. 1 1/2" GALVANIZED METAL ROOF DECK.
7. RIGID ROOF INSULATION BOARD (MINIMUM 6" THICKNESS -- TWO LAYERS AND COVERBOARD).
8. FULLY ADHERED SINGLE-PLY EPDM ROOFING -- CARRY UP AND OVER FACE OF PARAPET WALL.
9. PARAPET WALL BLOCKING -- REFER TO DETAIL 9/A9.14 FOR FURTHER INFORMATION.
10. PREFINISHED METAL PARAPET CAP FLASHING WITH CONCEALED CLIP ANCHORS BOTH SIDES (NO EXPOSED FASTENERS).
11. 3/8" x 1 1/2" PLASTIC WEEP VENT WITH INSECT SCREEN.
12. 2" RIGID BUILDING INSULATION.
13. STEEL ANGLE WALL BRACE -- REFER TO STRUCTURAL FOR FURTHER INFORMATION.
14. FILL VOID WITH COMPRESSIBLE FILLER MATERIAL FOR ALLOW FOR MINIMUM 1" ROOF DEFLECTION.
15. 7/8" CEMENT PLASTER SOFFIT ON GALVANIZED METAL LATH -- PAINT (COLOR AS SELECTED FROM MANUFACTURER'S STANDARD COLOR RANGE).
16. 1" CROSS FURRING SPACED PER MANUFACTURER'S RECOMMENDATIONS.
17. 2" CRC MAIN RUNNER ATTACHED TO BUILDING STRUCTURE WITH GALVANIZED TIE WIRE (SPACED PER MANUFACTURER'S RECOMMENDATIONS).
18. RECESSED LIGHT FIXTURE -- REFER TO ELECTRICAL DRAWINGS.
19. STEEL LINTEL WITH PLATE, PAINT -- REFER TO STRUCTURAL DRAWINGS.
20. STEEL ANGLE DECK SUPPORT -- REFER TO STRUCTURAL DRAWINGS.
21. 3/4" PRESERVATIVE TREATED PLYWOOD SHEATHING.
22. PRESERVATIVE TREATED WOOD NAILER WITH EXPANSION ANCHORS
23. 2"x4" PRESERVATIVE TREATED WOOD NAILER.
24. 1"x4" PRESERVATIVE TREATED WOOD NAILER--CUT TO FIT PROFILE (CONTRACTOR OPTION TO UTILIZE CARLISLE SECREDGE 200 COPING INSTEAD).
25. SEALANT (WITH FOAM BACKER ROD AS NECESSARY TO SUIT CONDITIONS).
26. COMPRESSIBLE FILLER
27. TERMINATION BAR WITH TOP SEALANT--INSTALL PER MANUFACTURER'S REQUIREMENTS.
28. STAINLESS STEEL METAL DRIP WITH HEMMED EDGE.
29. FULLY ADHERED FLEXIBLE MEMBRANE FLASHING WITH END DAMS.
30. PEA STONE DRAINAGE MATERIAL (MINIMUM 6" HEIGHT).
31. DOOR FRAME - REFER TO DOOR SCHEDULE.
32. DOOR - REFER TO DOOR SCHEDULE.

STATE OF MICHIGAN
ELIZABETH SUE BYE
ARCHITECT
No. 1301054283
LICENSED ARCHITECT

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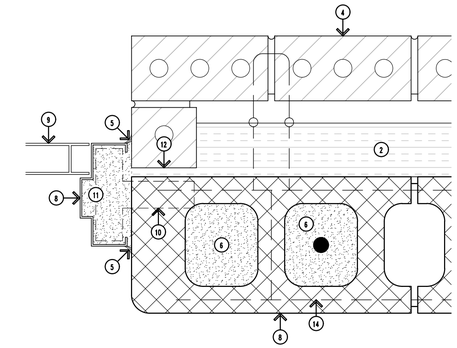
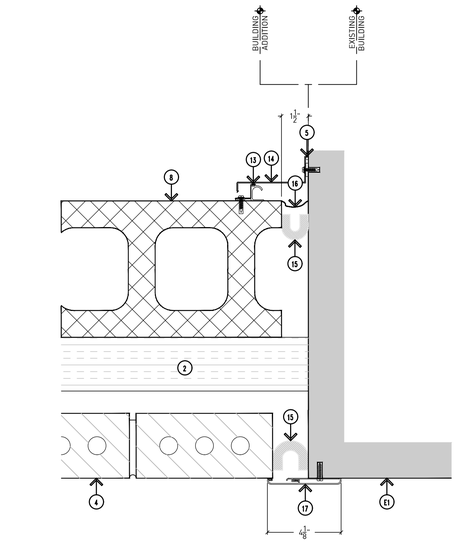
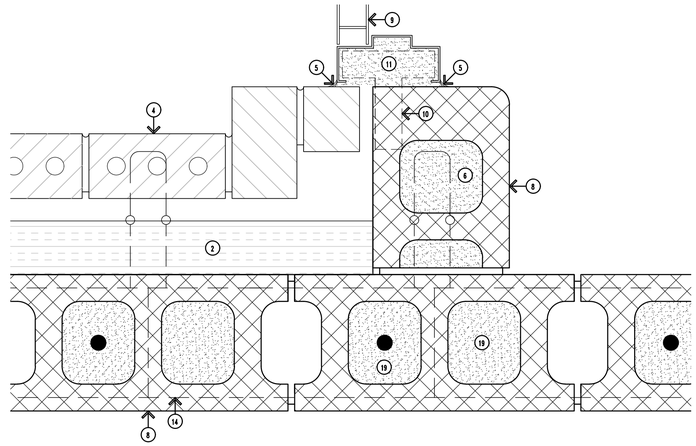


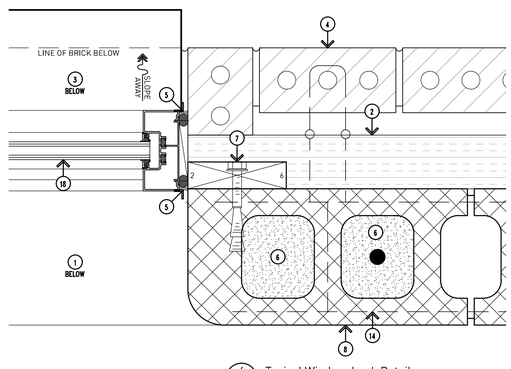
3 A9.13 Typical Exterior Door Jamb Detail
Scale: 3"=1'-0"



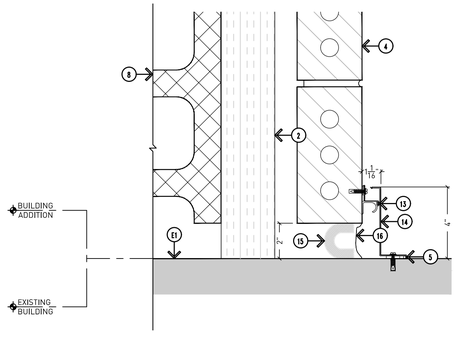
2 A9.13 Wall Expansion Joint (b)
Scale: 3"=1'-0"
REFER TO MM SYSTEMS SERIES EX-K FOR FURTHER INFORMATION ON WALL EXPANSION DETAIL.



5 A9.13 Typical Exterior Door Jamb Detail @ Recess
Scale: 3"=1'-0"



4 A9.13 Typical Window Jamb Detail
Scale: 3"=1'-0"



1 A9.13 Wall Expansion Joint Detail (a)
Scale: 3"=1'-0"
REFER TO MM SYSTEMS SERIES WJL 2-1 FOR FURTHER INFORMATION ON WALL EXPANSION DETAIL.

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. NOT ALL NOTES ARE APPLICABLE TO THIS SHEET.

G3. PROVIDE MASONRY ANCHORS @ 16" O.C. VERTICALLY AND HORIZONTALLY.

G4. PROVIDE NON-COM WOOD BLOCKING BEHIND ALL MISCELLANEOUS TRIM LOCATIONS AND ALL OTHER ATTACHMENT LOCATIONS WHETHER PARTICULARLY SHOWN ON THE DOCUMENTS OR NOT.

G5. ALL PREFINISHED METAL COPING TO BE COMPLETE WITH CONCEALED CLIP ANCHORS ON BOTH SIDES (NO VISIBLE FASTENERS).

G6. CARRY ROOFING UP AND OVER PARAPET CAP -- TYPICAL.

G7. PROVIDE CONTINUOUS SPRAY-APPLIED VAPOR BARRIER COVERING FACE OF WALL AND UP AND OVER PARAPET WALL. TERMINATE WITH ROOFING PER MANUFACTURER'S REQUIREMENTS. BARRIER SYSTEM SHALL BE CONTINUOUS AROUND THE ENTIRE BUILDING ENVELOPE AND INCLUDE ALL PROPER TECHNIQUES FOR PENETRATIONS, ETC.

G8. ALL FLEXIBLE MEMBRANE FLASHING TO BE SECURED TO SUBSTRATE WITH TERMINATION BAR AND SEALANT -- INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

G9. FILL BRICK CORES AND COLLAR JOINTS SOLID BELOW GRADE AND BELOW ALL FLASHINGS.

G10. PROVIDE STAINLESS STEEL DRIP WITH HEMMED EDGE ABOVE ALL EXTERIOR WINDOW AND DOOR OPENINGS.

G11. PROVIDE MASONRY WEEP VENTS @ 32" O.C. HORIZONTALLY AT TOP AND BOTTOM OF WALL COMPLETE WITH 3/8" x 1-1/2" PLASTIC WEEP VENT AND FLEXIBLE MEMBRANE FLASHING MIN. 16" UP WALL.

G12. MASONRY CONTROL JOINTS SHOULD BE SPACED 25'-0" APART MAX. AND SHOULD NOT BE SPACED FURTHER THAN 1.5x THE WALL HEIGHT - REFER TO THE MASONRY INSTITUTE FOR FURTHER INFORMATION.

EXISTING TO REMAIN NOTES:

E1. BRICK VENEER - EXACT CONDITIONS UNKNOWN.

DRAWING NOTES:

1. BULLNOSE CMU MASONRY BLOCK.
2. 3" SPRAY FOAM BUILDING INSULATION SYSTEM WITH INTEGRAL CONTINUOUS VAPOR BARRIER AND ACCESSORIES AS REQUIRED TO PROVIDE BARRIER FROM FOUNDATION TO ROOFING.
3. LIMESTONE WINDOW SILL AND PROFILE TO MATCH EXISTING.
4. 4" BRICK VENEER WITH ADJUSTABLE BRICK TIES @ 16" O.C. VERTICALLY AND HORIZONTALLY (PROVIDE LENGTH AS REQUIRED DUE TO WALL CAVITY SIZE).
5. SEALANT (WITH FOAM BACKER ROD AS NECESSARY TO SUIT CONDITIONS).
6. GROUT CMU CORES SOLID BELOW FLASHING AT WHERE BELOW GRADE.
7. 2"x6" PRESERVATIVE TREATED WOOD BLOCKING.
8. DOOR FRAME - REFER TO DOOR SCHEDULE.
9. DOOR - REFER TO DOOR SCHEDULE.
10. JAMB ANCHOR TO SUIT CONDITIONS.
11. GROUT FILLED DOOR FRAME.
12. ½" RIGID INSULATION BOARD.
13. ISOLATION GASKET.
14. HEAVY DUTY PREFINISHED ALUMINUM COVER PLATE.
15. 2-HOUR FIRE BARRIER.
16. MOISTURE BARRIER MEMBRANE ATTACHED TO BUILDING STRUCTURE.
17. HEAVY DUTY ALUMINUM COVER PLATE.
18. STOREFRONT FRAMING AND GLAZING -- REFER TO WINDOW SCHEDULE AND DETAILS.

STATE OF MICHIGAN
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Cherry Hill Baptist Church
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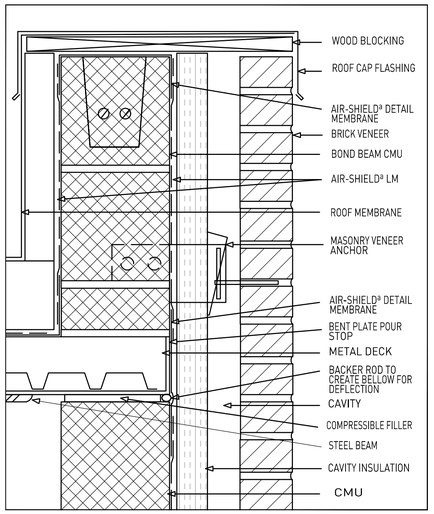
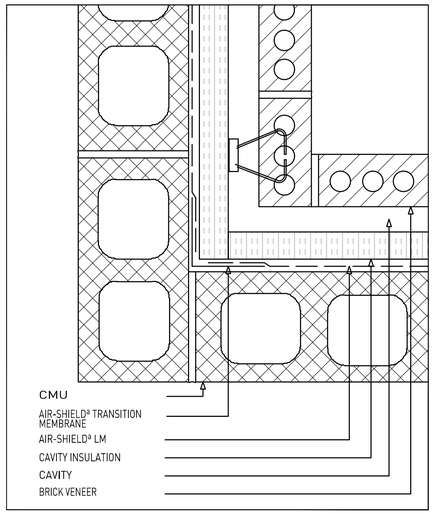
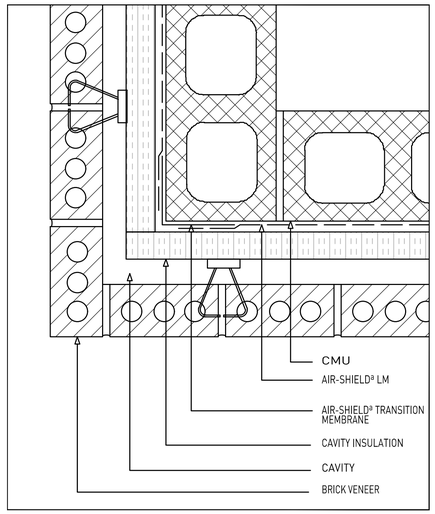


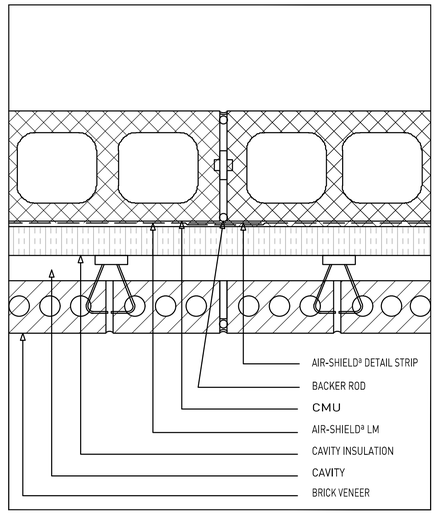
9 A9.14 Reference - Roof Detail
Scale: NTS



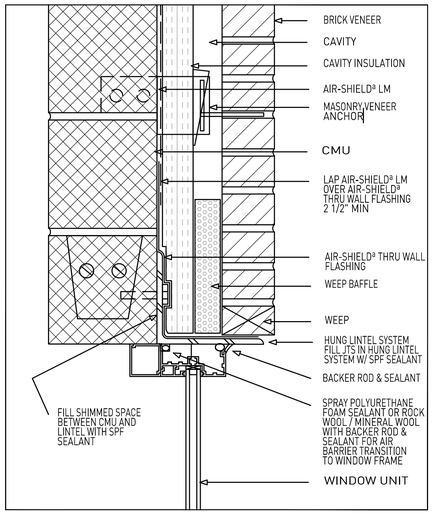
8 A9.14 Reference - Internal Corner Detail
Scale: NTS



7 A9.14 Reference - External Corner Detail
Scale: NTS



6 A9.14 Reference - Control Joint Detail
Scale: NTS



5 A9.14 Reference - Window Head B Detail
Scale: NTS

4 A9.14 Reference - Window Head A Detail
Scale: NTS

3 A9.16 Reference - Window Jamb Detail
Scale: NTS

2 A9.16 Reference - Window Sill Detail
Scale: NTS

1 A9.16 Reference - Wall Base Detail
Scale: NTS

STATE OF MICHIGAN
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GENERAL NOTES:

G1. DETAILS ISSUED FOR GENERAL CONSTRUCTION REFERENCE ONLY.

G2. DETAILS ARE NOT TO BE SCALED.

Standard Exterior Details

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Crestwood School District
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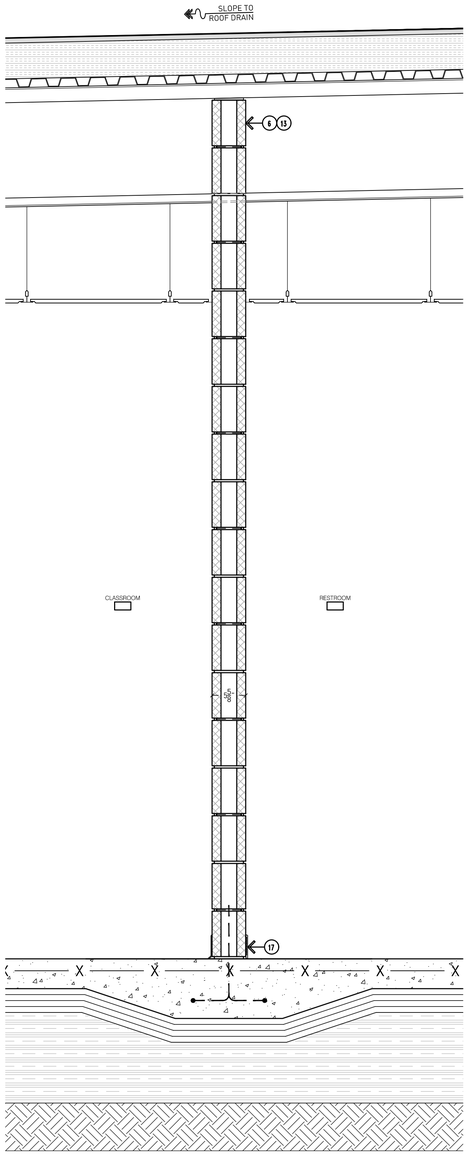
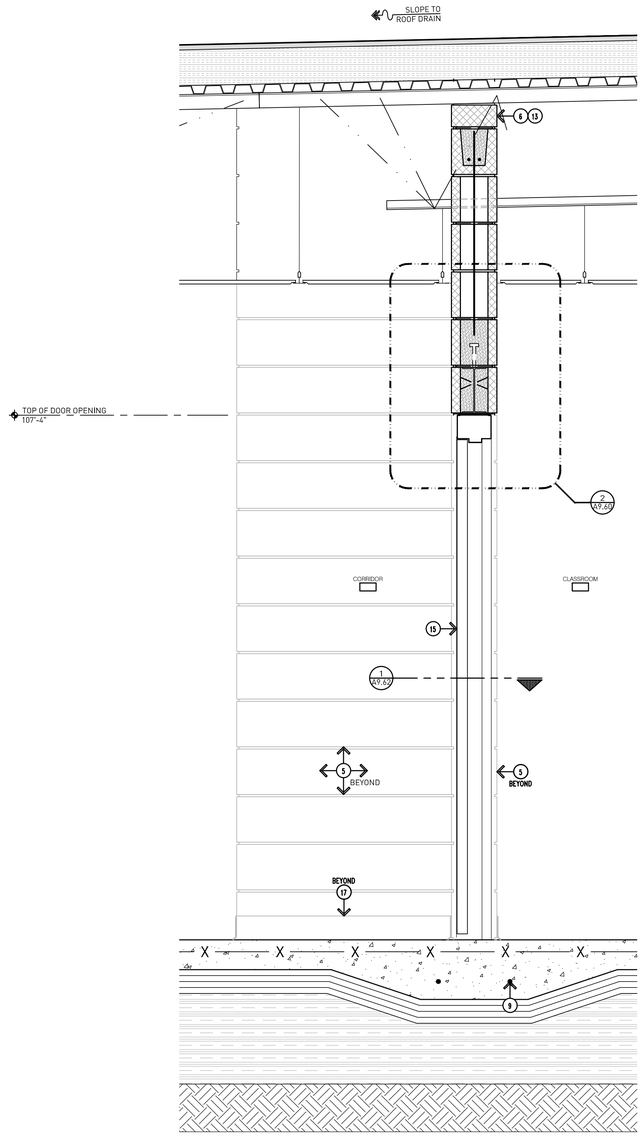
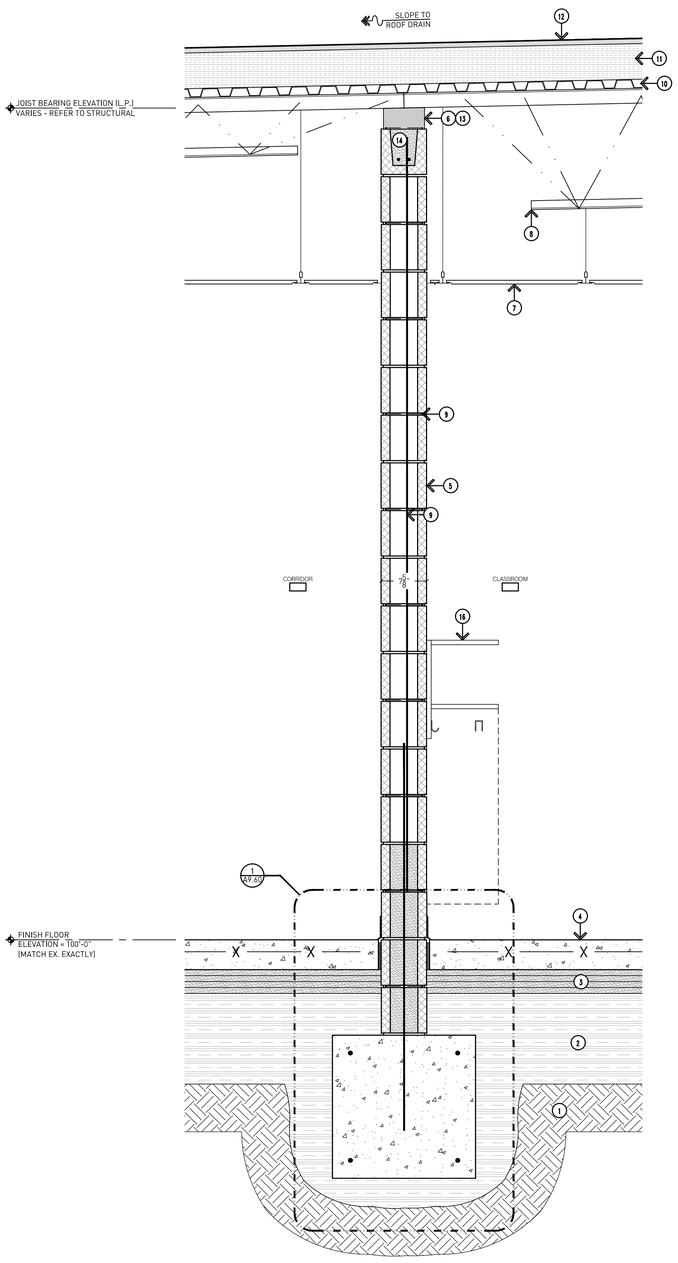


3 A9.50 Int. Wall Section C - North/South (Area B)
Scale: 1"=1'-0"
REFER TO DRAWING 1/A9.50 FOR TYPICAL NOTES



2 A9.50 Int. Wall Section B - North/South (Area B)
Scale: 1"=1'-0"
REFER TO DRAWING 1/A9.50 FOR TYPICAL NOTES



1 A9.50 Int. Wall Section A - North/South (Area B)
Scale: 1"=1'-0"

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. NOT ALL NOTES ARE APPLICABLE TO THIS SHEET.

G3. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS WHERE NEW BUILDING IS TYING INTO THE EXISTING.

EXISTING TO REMAIN NOTES:

E1. CONCRETE FLOOR SLAB - EXACT CONDITIONS UNKNOWN.

E2. CMU BLOCK - EXACT CONDITIONS UNKNOWN.

E3. BRICK VENEER - EXACT CONDITIONS UNKNOWN.

E4. ROOF, ROOF STRUCTURE, AND ROOF DECK - EXACT CONDITIONS UNKNOWN.

E5. STRUCTURAL FOOTING - EXACT CONDITIONS UNKNOWN.

E6. UNDISTURBED SOIL - EXACT CONDITIONS UNKNOWN.

E7. LIMESTONE - EXACT CONDITIONS UNKNOWN.

DRAWING NOTES:

1. PROPERLY COMPACTED EXISTING SUBGRADE.
2. COMPACTED ENGINEERED FILL AS REQUIRED AFTER REMOVAL OF EXISTING LAWN / UNSUITABLE SOILS AS REQUIRED FOR PROPER SLAB ELEVATION.
3. COMPACTED SAND CUSHION BASE (MINIMUM 4").
4. CONCRETE FLOOR SLAB OVER 15 MIL VAPOR BARRIER -- PROPERLY LAP AND SEAL JOINTS PER MANUFACTURER'S REQUIREMENTS.
5. CMU MASONRY BLOCK (PAINT ALL SURFACES EXPOSED TO VIEW).
6. FILL VOID WITH COMPRESSIBLE FILLER AND FIRE RESISTIVE COATING (1-HOUR) MATERIAL TO ALLOW FOR MINIMUM 1" ROOF DEFLECTION.
7. ACOUSTICAL CEILING TILE IN PREFINISHED METAL GRID SYSTEM ATTACHED TO BUILDING STRUCTURE ABOVE.
8. STRUCTURAL STEEL ROOF FRAMING -- REFER TO STRUCTURAL DRAWINGS.
9. REINFORCING -- REFER TO STRUCTURAL DRAWINGS.
10. 1½" GALVANIZED METAL ROOF DECK.
11. RIGID ROOF INSULATION BOARD (MINIMUM 6" THICKNESS -- TWO LAYERS AND COVERBOARD).
12. FULL ADHERED SINGLE-PLY EPDM ROOF.
13. CORRIDOR WALLS TO BE BLOCKED IN TIGHT FOR REQUIRED WALL RATING AND TO RESIST THE PASSAGE OF SMOKE.
14. GROUT CMU SOLID.
15. DOOR -- REFER TO DOOR SCHEDULE
16. CUBBIES -- REFER TO SPECIFICATIONS AND INTERIOR ELEVATIONS.
17. WALL BASE--REFER TO FINISH SCHEDULE.

STATE OF MICHIGAN
ELIZABETH SUE BYE
ARCHITECT
No. 1301054283
LICENSED ARCHITECT

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Interior Wall Sections

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Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

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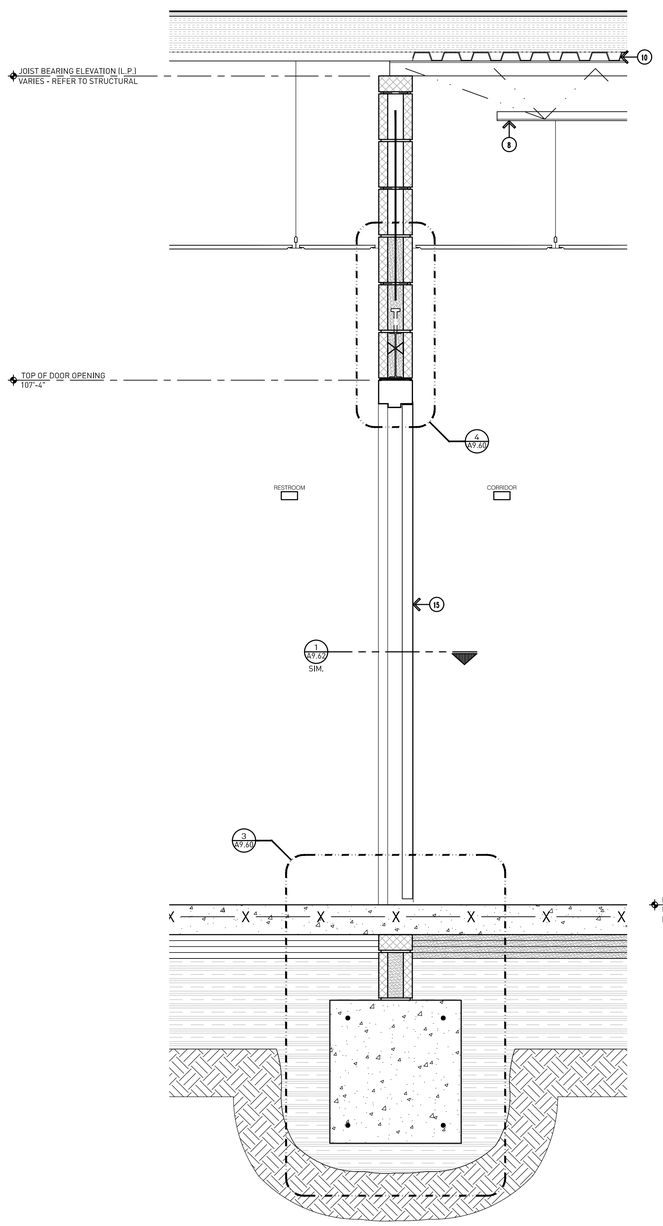
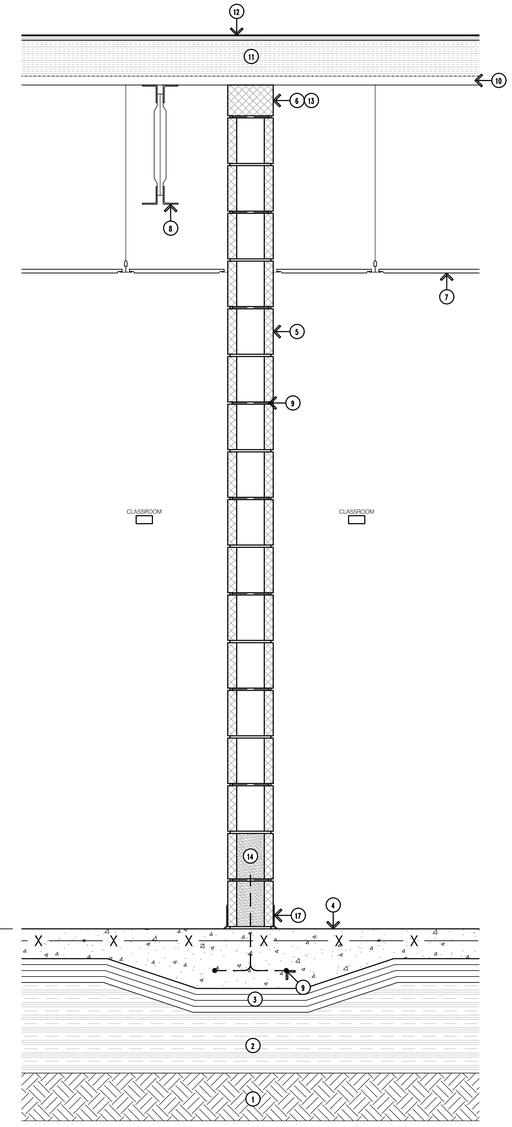


2 A9.51 Int. Wall Section E - North/South (Area B)
Scale: 1"=1'-0"
REFER TO DRAWING 1/A9.51 FOR TYPICAL NOTES



1 A9.51 Int. Wall Section D - North/South (Area B)
Scale: 1"=1'-0"

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. NOT ALL NOTES ARE APPLICABLE TO THIS SHEET.

G3. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS WHERE NEW BUILDING IS TYING INTO THE EXISTING.

EXISTING TO REMAIN NOTES:

E1. CONCRETE FLOOR SLAB - EXACT CONDITIONS UNKNOWN.

E2. CMU BLOCK - EXACT CONDITIONS UNKNOWN.

E3. BRICK VENEER - EXACT CONDITIONS UNKNOWN.

E4. ROOF, ROOF STRUCTURE, AND ROOF DECK - EXACT CONDITIONS UNKNOWN.

E5. STRUCTURAL FOOTING - EXACT CONDITIONS UNKNOWN.

E6. UNDISTURBED SOIL - EXACT CONDITIONS UNKNOWN.

E7. LIMESTONE - EXACT CONDITIONS UNKNOWN.

DRAWING NOTES:

1. PROPERLY COMPACTED EXISTING SUBGRADE.
2. COMPACTED ENGINEERED FILL AS REQUIRED AFTER REMOVAL OF EXISTING LAWN / UNSUITABLE SOILS AS REQUIRED FOR PROPER SLAB ELEVATION.
3. COMPACTED SAND CUSHION BASE (MINIMUM 4").
4. CONCRETE FLOOR SLAB OVER 15 MIL VAPOR BARRIER -- PROPERLY LAP AND SEAL JOINTS PER MANUFACTURER'S REQUIREMENTS.
5. CMU MASONRY BLOCK (PAINT ALL SURFACES EXPOSED TO VIEW).
6. FILL VOID WITH COMPRESSIBLE FILLER AND FIRE RESISTIVE COATING (1-HOUR) MATERIAL TO ALLOW FOR MINIMUM 1" ROOF DEFLECTION.
7. ACOUSTICAL CEILING TILE IN PREFINISHED METAL GRID SYSTEM ATTACHED TO BUILDING STRUCTURE ABOVE.
8. STRUCTURAL STEEL ROOF FRAMING -- REFER TO STRUCTURAL DRAWINGS.
9. REINFORCING -- REFER TO STRUCTURAL DRAWINGS.
10. 1½" GALVANIZED METAL ROOF DECK.
11. RIGID ROOF INSULATION BOARD (MINIMUM 6" THICKNESS -- TWO LAYERS AND COVERBOARD).
12. FULL ADHERED SINGLE-PLY EPDM ROOF.
13. CORRIDOR WALLS TO BE BLOCKED IN TIGHT FOR REQUIRED WALL RATING AND TO RESIST THE PASSAGE OF SMOKE.
14. GROUT CMU SOLID.
15. DOOR -- REFER TO DOOR SCHEDULE
16. CUBBIES -- REFER TO SPECIFICATIONS AND INTERIOR ELEVATIONS.
17. WALL BASE--REFER TO FINISH SCHEDULE.

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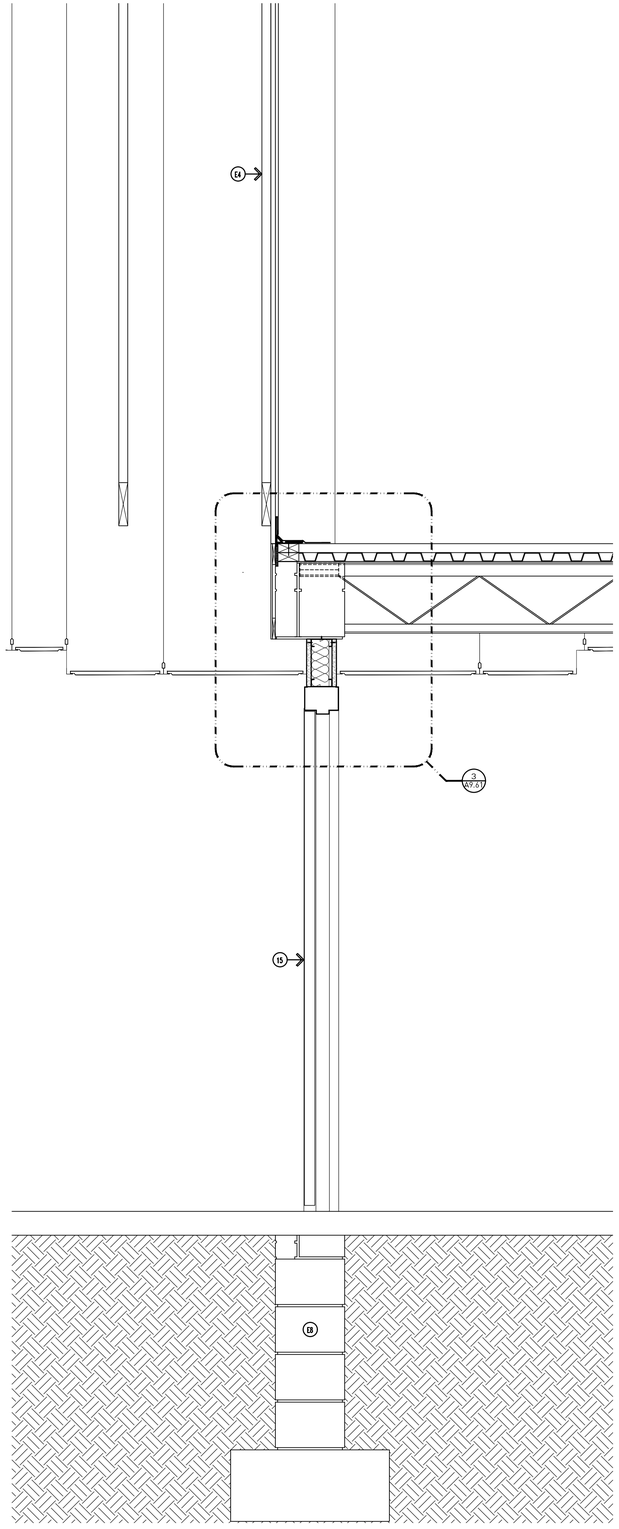
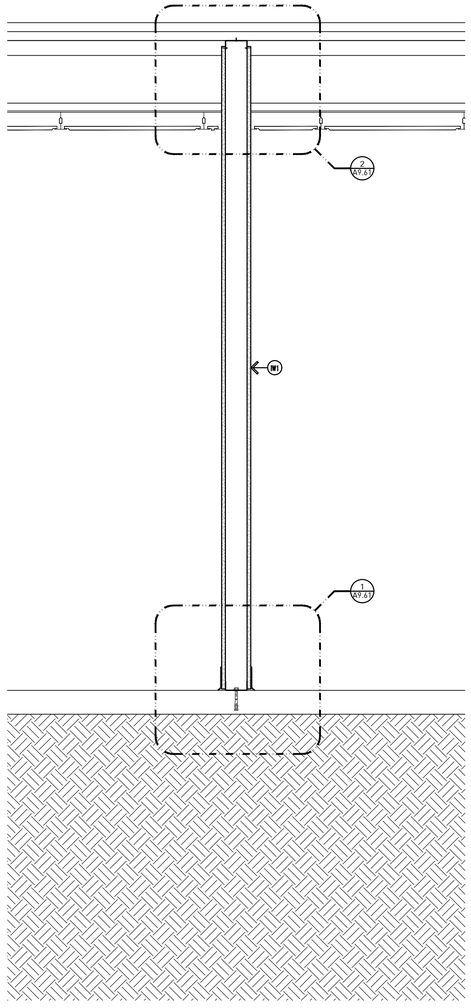
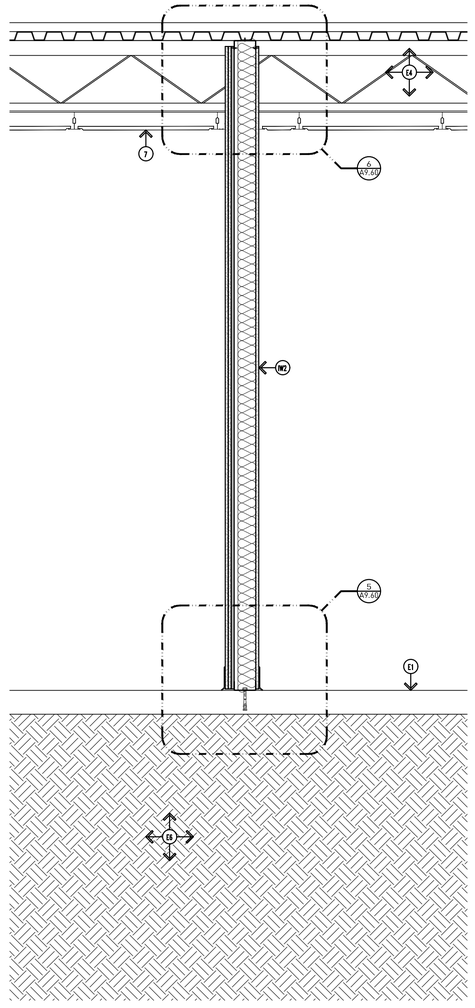


3 A9.52 Int. Wall Section H - East/West (Area A)
Scale: 1"=1'-0"
REFER TO DRAWING 1/A9.52 FOR TYPICAL NOTES



2 A9.52 Int. Wall Section G - North/South (Area A)
Scale: 1"=1'-0"
REFER TO DRAWING 1/A9.52 FOR TYPICAL NOTES



1 A9.52 Int. Wall Section F - North/South (Area A)
Scale: 1"=1'-0"

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. NOT ALL NOTES ARE APPLICABLE TO THIS SHEET.

G3. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS WHERE NEW BUILDING IS TYING INTO THE EXISTING.

EXISTING TO REMAIN NOTES:

E1. CONCRETE FLOOR SLAB - EXACT CONDITIONS UNKNOWN.

E2. CMU BLOCK - EXACT CONDITIONS UNKNOWN.

E3. BRICK VENEER - EXACT CONDITIONS UNKNOWN.

E4. ROOF, ROOF STRUCTURE, AND ROOF DECK - EXACT CONDITIONS UNKNOWN.

E5. STRUCTURAL FOOTING - EXACT CONDITIONS UNKNOWN.

E6. UNDISTURBED SOIL - EXACT CONDITIONS UNKNOWN.

E7. LIMESTONE - EXACT CONDITIONS UNKNOWN.

DRAWING NOTES:

1. PROPERLY COMPACTED EXISTING SUBGRADE.
2. COMPACTED ENGINEERED FILL AS REQUIRED AFTER REMOVAL OF EXISTING LAWN / UNSUITABLE SOILS AS REQUIRED FOR PROPER SLAB ELEVATION.
3. COMPACTED SAND CUSHION BASE (MINIMUM 4").
4. CONCRETE FLOOR SLAB OVER 15 MIL VAPOR BARRIER -- PROPERLY LAP AND SEAL JOINTS PER MANUFACTURER'S REQUIREMENTS.
5. CMU MASONRY BLOCK (PAINT ALL SURFACES EXPOSED TO VIEW).
6. FILL VOID WITH COMPRESSIBLE FILLER AND FIRE RESISTIVE COATING (1-HOUR) MATERIAL TO ALLOW FOR MINIMUM 1" ROOF DEFLECTION.
7. ACOUSTICAL CEILING TILE IN PREFINISHED METAL GRID SYSTEM ATTACHED TO BUILDING STRUCTURE ABOVE.
8. STRUCTURAL STEEL ROOF FRAMING -- REFER TO STRUCTURAL DRAWINGS.
9. REINFORCING -- REFER TO STRUCTURAL DRAWINGS.
10. 1½" GALVANIZED METAL ROOF DECK.
11. RIGID ROOF INSULATION BOARD (MINIMUM 6" THICKNESS -- TWO LAYERS AND COVERBOARD).
12. FULL ADHERED SINGLE-PLY EPDM ROOF.
13. CORRIDOR WALLS TO BE BLOCKED IN TIGHT FOR REQUIRED WALL RATING AND TO RESIST THE PASSAGE OF SMOKE.
14. GROUT CMU SOLID.
15. DOOR -- REFER TO DOOR SCHEDULE
16. CUBBIES -- REFER TO SPECIFICATIONS AND INTERIOR ELEVATIONS.
17. WALL BASE--REFER TO FINISH SCHEDULE.

INTERIOR WALL TAGS:

IW1. TYPICAL METAL STUD WALL CONSTRUCTION UNLESS NOTED OTHERWISE.
- 5/8" GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK.
- 3-5/8" METAL STUD FRAMING AT 16" O.C TO U/S OF ROOF DECK. PROVIDE SLIP TRACK TOP TRACK TO ALLOW FOR 1 1/2" ROOF DEFLECTION.
- MINIMUM 3" SOUND ATTENUATION BATTS TO U/S OF ROOF DECK.
- 5/8" GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK.

IW2. METAL STUD SOUND ACOUSTIC WALL - TEST NUMBER RAL-TL-84-136
- 1/2" GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK. GYPSUM SCREWS ATTACHED TO STUDS.
- 3-5/8" METAL STUD FRAMING AT 16" O.C TO U/S OF ROOF DECK. PROVIDE SLIP TRACK TOP TRACK TO ALLOW FOR 1 1/2" ROOF DEFLECTION.
- MINIMUM 3" SOUND ATTENUATION BATTS TO U/S OF ROOF DECK.
- RC-1 CHANNEL INSTALLED ON ONE SIDE @ 24" O.C.
- TWO (2) LAYERS 1/2" GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS TO UNDERSIDE OF ROOF DECK. GYPSUM SCREWS ATTACHED TO RC-1 CHANNEL.
- ACOUSTIC SEALANT AT TOP AND BOTTOM OF WALLS AND AT ALL PENETRATIONS.

FOR WALLS LOCATED AT RESTROOMS, REFER TO ADJACENT WALL CONSTRUCTION TYPE FOR TILE WALL CONSTRUCTION.

IW9. METAL STUD FIRE BARRIER. 2 HOUR FIRE-RATED CONSTRUCTION. UL DES U419 OR U491.
- 3/4" SHEETROCK ULTRACODE CORE GYPSUM PANEL TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK OR ADJACENT CMU WALL.
- 3-1/2" 25 GA. METAL STUD FRAMING AT 24" O.C TO U/S OF ROOF DECK OR ADJACENT CMU WALL. PROVIDE SLIP TRACK TOP TRACK TO ALLOW FOR 1 1/2" ROOF DEFLECTION.
- MINIMUM 3" THERMAFIBER SAFB TO U/S OF ROOF DECK.
- 3/4" SHEETROCK ULTRACODE CORE GYPSUM PANEL TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK OR ADJACENT CMU WALL.

STATE OF MICHIGAN
ELIZABETH SUE BYE
ARCHITECT
No. 1301054283
LICENSED ARCHITECT

Bidding and Permits: 31 July 2023

Interior Wall Sections

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Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

A9.52

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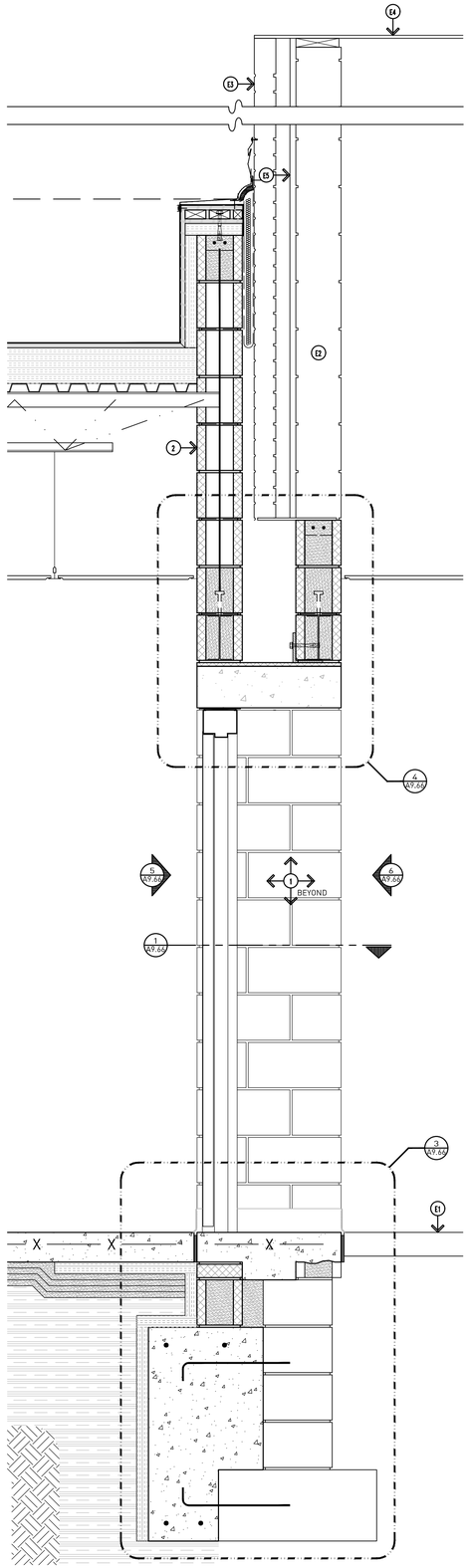
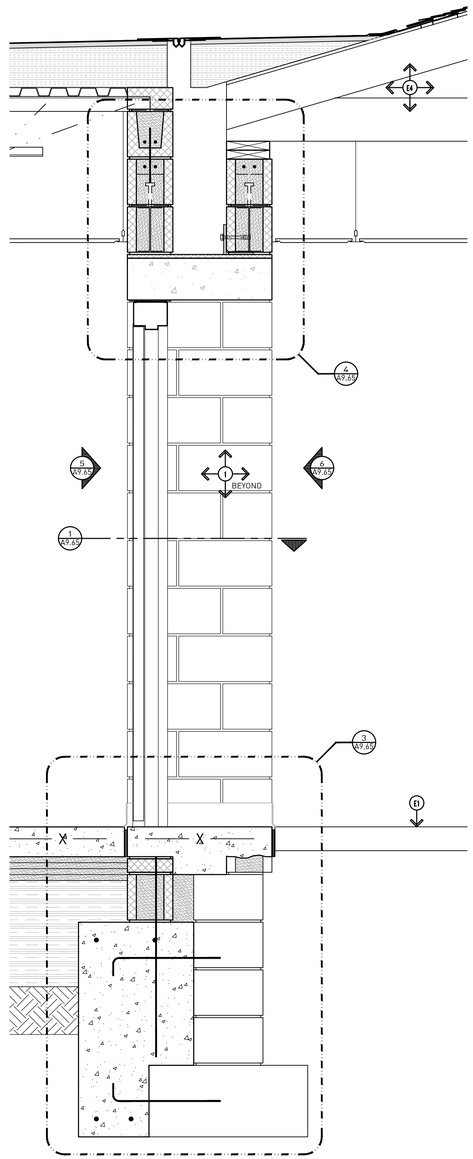


2 A9.55 Portal B Section - East/West (Area A)
Scale: 1"=1'-0"



1 A9.55 Portal A Section - North/South (Area B)
Scale: 1"=1'-0"

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

EXISTING TO REMAIN NOTES:

E1. CONCRETE FLOOR SLAB - EXACT CONDITIONS UNKNOWN.

E2. CMU BLOCK - EXACT CONDITIONS UNKNOWN.

E3. BRICK VENEER - EXACT CONDITIONS UNKNOWN.

E4. ROOF, ROOF STRUCTURE, AND ROOF DECK - EXACT CONDITIONS UNKNOWN.

E5. WALL INSULATION - EXACT CONDITIONS UNKNOWN.

DRAWING NOTES:

1. PORTAL WALL PIERS.

2. CMU MASONRY BLOCK (PAINT ALL SURFACES EXPOSED TO VIEW). - TOOTH-IN AS NECESSARY.

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Portal Wall Sections

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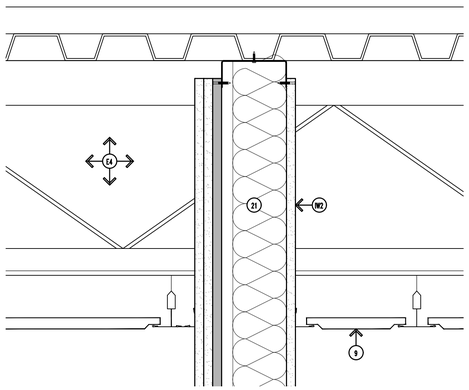
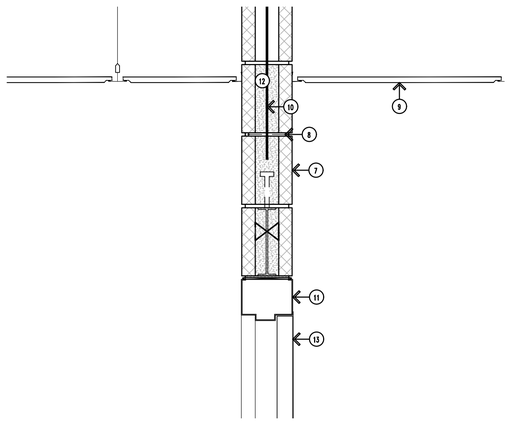
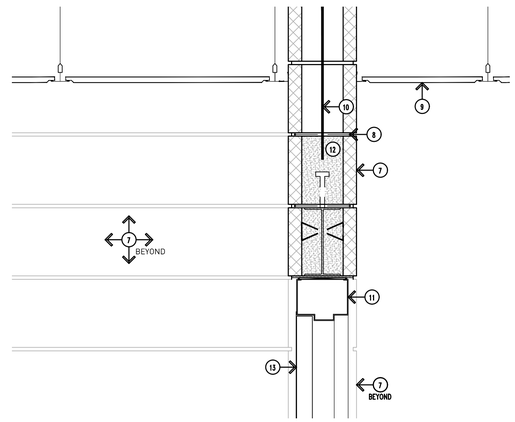


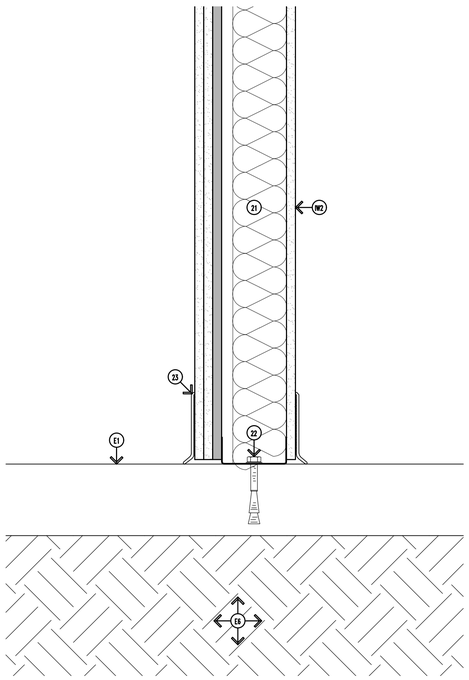
6 A9.60 Typical Sound Dampening Wall - Top of Wall
Scale: 3"=1'-0"



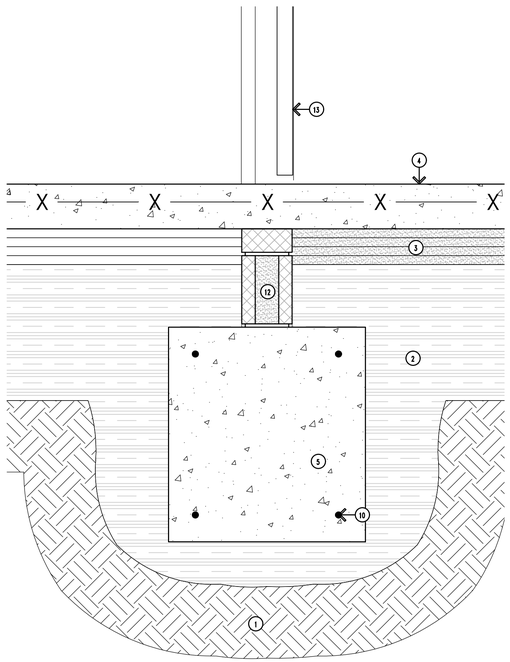
4 A9.60 Typical Door Head Detail @ 6" CMU Bearing Wall
Scale: 1-1/2"=1'-0"



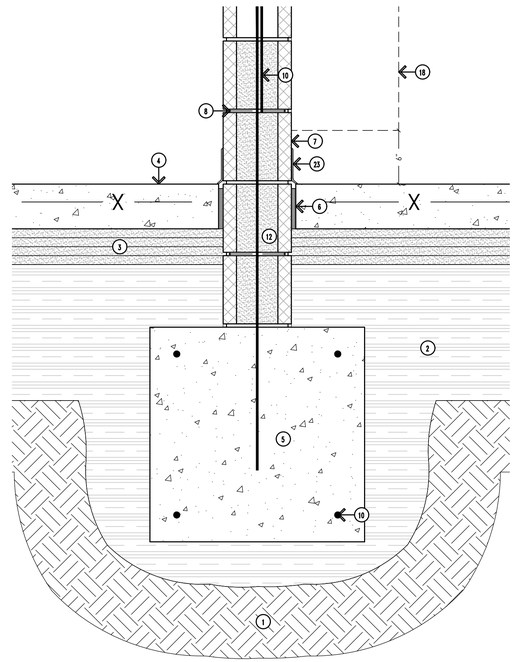
2 A9.60 Typical Door Head Detail @ Recessed Classroom Door
Scale: 1-1/2"=1'-0"



5 A9.60 Typical Sound Dampening Wall - Base of Wall
Scale: 3"=1'-0"



3 A9.60 Typical 6" CMU Bearing Wall Base of Wall @ Door
Scale: 1-1/2"=1'-0"



1 A9.60 Typical Bearing Wall Base of Wall
Scale: 1-1/2"=1'-0"

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. NOT ALL NOTES ARE APPLICABLE TO THIS SHEET.

G3. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS WHERE NEW BUILDING IS TYING INTO THE EXISTING.

EXISTING TO REMAIN NOTES:

E1. CONCRETE FLOOR SLAB - EXACT CONDITIONS UNKNOWN.

E2. CMU BLOCK - EXACT CONDITIONS UNKNOWN.

E3. BRICK VENEER - EXACT CONDITIONS UNKNOWN.

E4. ROOF, ROOF STRUCTURE, AND ROOF DECK - EXACT CONDITIONS UNKNOWN.

E5. STRUCTURAL FOOTING - EXACT CONDITIONS UNKNOWN.

E6. UNDISTURBED SOIL - EXACT CONDITIONS UNKNOWN.

E7. LIMESTONE - EXACT CONDITIONS UNKNOWN.

DRAWING NOTES:

1. PROPERLY COMPACTED EXISTING SUBGRADE.
2. COMPACTED ENGINEERED FILL AS REQUIRED AFTER REMOVAL OF EXISTING LAWN / UNSUITABLE SOILS AS REQUIRED FOR PROPER SLAB ELEVATION.
3. COMPACTED SAND CUSHION BASE (MINIMUM 4").
4. CONCRETE FLOOR SLAB OVER 15 MIL VAPOR BARRIER -- PROPERLY LAP AND SEAL JOINTS PER MANUFACTURER'S REQUIREMENTS.
5. CONCRETE FOUNDATION -- REFER TO STRUCTURAL DRAWINGS.
6. ½" PREMOLDED EXPANSION JOINT WITH SEALANT.
7. CMU MASONRY BLOCK (PAINT ALL SURFACES EXPOSED TO VIEW).
8. HORIZONTAL JOINT REINFORCING @ 16" O.C. VERTICALLY.
9. ACOUSTICAL CEILING TILE IN PREFINISHED METAL GRID SYSTEM ATTACHED TO BUILDING STRUCTURE ABOVE.
10. REINFORCING -- REFER TO STRUCTURAL DRAWINGS.
11. DOOR FRAME -- REFER TO DOOR SCHEDULE.
12. GROUT CMU SOLID.
13. DOOR -- REFER TO DOOR SCHEDULE
14. SEALANT (WITH FOAM BACKER ROD AS NECESSARY TO SUIT CONDITIONS.)
15. GROUT CMU CORES SOLID BELOW FLASHING AT WHERE BELOW GRADE.
16. JAMB ANCHOR TO SUIT CONDITIONS.
17. GROUT FILLED DOOR FRAME.
18. CUBBIES -- REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
19. OUTLINE OF PORTABLE FIRE EXTINGUISHER.
20. RECESSED FIRE EXTINGUISHER CABINET WITH 5/16" FLAT TRIM.
21. CONTINUOUS METAL STUD FRAMING--REFER TO INTERIOR WALL TAG DESIGNATIONS FOR SIZING, GAUGE, ETC.
22. 3/8" x 4" EXPANSION ANCHORS @ 48" O.C. OR EQUAL STRENGTH POWERED FASTENERS, MINIMUM 2" EMBEDMENT INTO CONCRETE FLOOR SLAB.
23. WALL BASE--REFER TO FINISH SCHEDULE.
24. 3/8" EPOXY DOWEL INTO EXISTING CONCRETE FLOOR SLAB @ 36" O.C. STAGGERED.
25. PLUMBING PIPING, REFER TO MECHANICAL DRAWINGS FOR SIZE AND MATERIAL.

INTERIOR WALL TAGS:

IW1. TYPICAL METAL STUD WALL CONSTRUCTION UNLESS NOTED OTHERWISE.
- 5/8" GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK.
- 3-5/8" METAL STUD FRAMING AT 16" O.C TO U/S OF ROOF DECK. PROVIDE SLIP TRACK TOP TRACK TO ALLOW FOR 1 1/2" ROOF DEFLECTION.
- MINIMUM 3" SOUND ATTENUATION BATTS TO U/S OF ROOF DECK.
- 5/8" GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK.

IW2. METAL STUD SOUND ACOUSTIC WALL - TEST NUMBER RAL-TL-84-136
- 1/2" GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK. GYPSUM SCREWS ATTACHED TO STUDS.
- 3-5/8" METAL STUD FRAMING AT 16" O.C TO U/S OF ROOF DECK. PROVIDE SLIP TRACK TOP TRACK TO ALLOW FOR 1 1/2" ROOF DEFLECTION.
- MINIMUM 3" SOUND ATTENUATION BATTS TO U/S OF ROOF DECK.
- RC-1 CHANNEL INSTALLED ON ONE SIDE @ 24" O.C.
- TWO (2) LAYERS 1/2" GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS TO UNDERSIDE OF ROOF DECK. GYPSUM SCREWS ATTACHED TO RC-1 CHANNEL.
- ACOUSTIC SEALANT AT TOP AND BOTTOM OF WALLS AND AT ALL PENETRATIONS.

FOR WALLS LOCATED AT RESTROOMS, REFER TO ADJACENT WALL CONSTRUCTION TYPE FOR TILE WALL CONSTRUCTION.

IW9. METAL STUD FIRE BARRIER. 2 HOUR FIRE-RATED CONSTRUCTION. UL DES U419 OR U491,
- 3/4" SHEETROCK ULTRACODE CORE GYPSUM PANEL TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK OR ADJACENT CMU WALL.
- 3-1/2" 25 GA. METAL STUD FRAMING AT 24" O.C TO U/S OF ROOF DECK OR ADJACENT CMU WALL. PROVIDE SLIP TRACK TOP TRACK TO ALLOW FOR 1 1/2" ROOF DEFLECTION.
- MINIMUM 3" THERMAFIBER SAFB TO U/S OF ROOF DECK.
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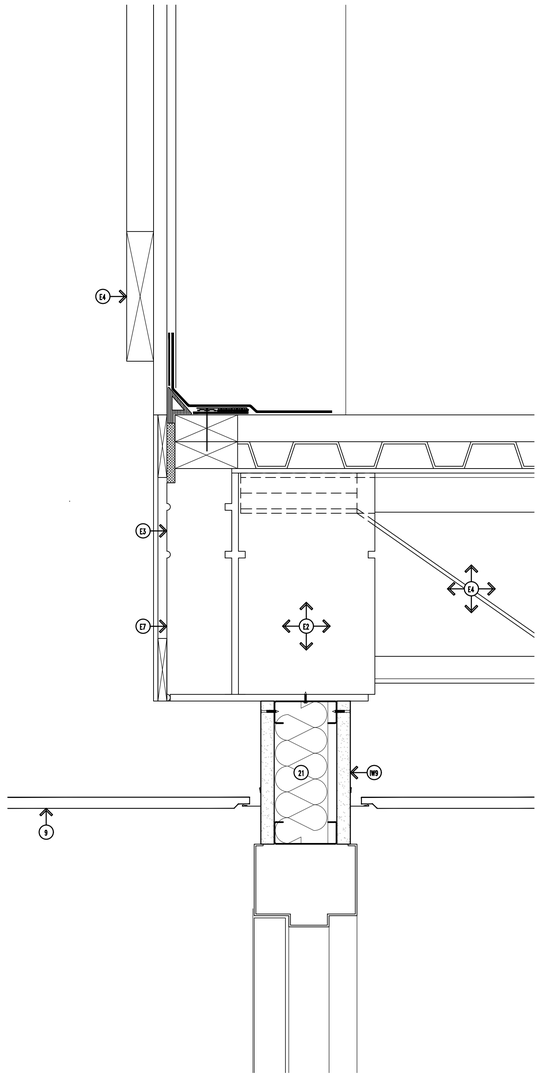
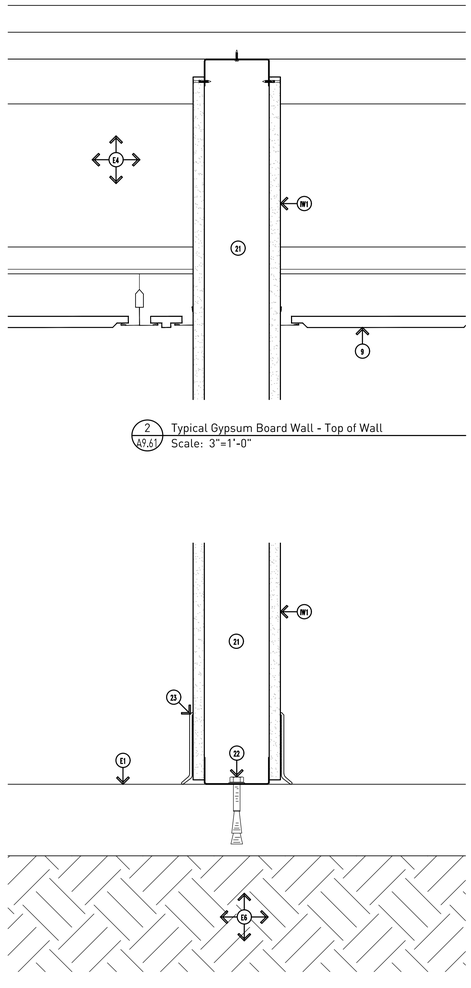


3 A9.61 Door Head Detail @ Door 125
Scale: 3"=1'-0"



2 A9.61 Typical Gypsum Board Wall - Top of Wall
Scale: 3"=1'-0"

1 A9.61 Typical Gypsum Board Wall - Base of Wall
Scale: 3"=1'-0"

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. NOT ALL NOTES ARE APPLICABLE TO THIS SHEET.

G3. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS WHERE NEW BUILDING IS TYING INTO THE EXISTING.

EXISTING TO REMAIN NOTES:

E1. CONCRETE FLOOR SLAB - EXACT CONDITIONS UNKNOWN.

E2. CMU BLOCK - EXACT CONDITIONS UNKNOWN.

E3. BRICK VENEER - EXACT CONDITIONS UNKNOWN.

E4. ROOF, ROOF STRUCTURE, AND ROOF DECK - EXACT CONDITIONS UNKNOWN.

E5. STRUCTURAL FOOTING - EXACT CONDITIONS UNKNOWN.

E6. UNDISTURBED SOIL - EXACT CONDITIONS UNKNOWN.

E7. LIMESTONE - EXACT CONDITIONS UNKNOWN.

DRAWING NOTES:

1. PROPERLY COMPACTED EXISTING SUBGRADE.
2. COMPACTED ENGINEERED FILL AS REQUIRED AFTER REMOVAL OF EXISTING LAWN / UNSUITABLE SOILS AS REQUIRED FOR PROPER SLAB ELEVATION.
3. COMPACTED SAND CUSHION BASE (MINIMUM 4").
4. CONCRETE FLOOR SLAB OVER 15 MIL VAPOR BARRIER -- PROPERLY LAP AND SEAL JOINTS PER MANUFACTURER'S REQUIREMENTS.
5. CONCRETE FOUNDATION -- REFER TO STRUCTURAL DRAWINGS.
6. ½" PREMOLDED EXPANSION JOINT WITH SEALANT.
7. CMU MASONRY BLOCK (PAINT ALL SURFACES EXPOSED TO VIEW).
8. HORIZONTAL JOINT REINFORCING @ 16" O.C. VERTICALLY.
9. ACOUSTICAL CEILING TILE IN PREFINISHED METAL GRID SYSTEM ATTACHED TO BUILDING STRUCTURE ABOVE.
10. REINFORCING -- REFER TO STRUCTURAL DRAWINGS.
11. DOOR FRAME -- REFER TO DOOR SCHEDULE.
12. GROUT CMU SOLID.
13. DOOR -- REFER TO DOOR SCHEDULE
14. SEALANT (WITH FOAM BACKER ROD AS NECESSARY TO SUIT CONDITIONS.)
15. GROUT CMU CORES SOLID BELOW FLASHING AT WHERE BELOW GRADE.
16. JAMB ANCHOR TO SUIT CONDITIONS.
17. GROUT FILLED DOOR FRAME.
18. CUBBIES -- REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
19. OUTLINE OF PORTABLE FIRE EXTINGUISHER.
20. RECESSED FIRE EXTINGUISHER CABINET WITH 5/16" FLAT TRIM.
21. CONTINUOUS METAL STUD FRAMING--REFER TO INTERIOR WALL TAG DESIGNATIONS FOR SIZING, GAUGE, ETC.
22. 3/8" x 4" EXPANSION ANCHORS @ 48" O.C. OR EQUAL STRENGTH POWERED FASTENERS, MINIMUM 2" EMBEDMENT INTO CONCRETE FLOOR SLAB.
23. WALL BASE--REFER TO FINISH SCHEDULE.
24. 3/8" EPOXY DOWEL INTO EXISTING CONCRETE FLOOR SLAB @ 36" O.C. STAGGERED.
25. PLUMBING PIPING, REFER TO MECHANICAL DRAWINGS FOR SIZE AND MATERIAL.

INTERIOR WALL TAGS:

IW1. TYPICAL METAL STUD WALL CONSTRUCTION UNLESS NOTED OTHERWISE.
- 5/8" GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK.
- 3-5/8" METAL STUD FRAMING AT 16" O.C TO U/S OF ROOF DECK. PROVIDE SLIP TRACK TOP TRACK TO ALLOW FOR 1 1/2" ROOF DEFLECTION.
- MINIMUM 3" SOUND ATTENUATION BATTS TO U/S OF ROOF DECK.
- 5/8" GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK.

IW2. METAL STUD SOUND ACOUSTIC WALL - TEST NUMBER RAL-TL-84-136
- 1/2" GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK. GYPSUM SCREWS ATTACHED TO STUDS.
- 3-5/8" METAL STUD FRAMING AT 16" O.C TO U/S OF ROOF DECK. PROVIDE SLIP TRACK TOP TRACK TO ALLOW FOR 1 1/2" ROOF DEFLECTION.
- MINIMUM 3" SOUND ATTENUATION BATTS TO U/S OF ROOF DECK.
- RC-1 CHANNEL INSTALLED ON ONE SIDE @ 24" O.C.
- TWO (2) LAYERS 1/2" GYPSUM BOARD TAPED AND FINISHED THREE (3) COATS TO UNDERSIDE OF ROOF DECK. GYPSUM SCREWS ATTACHED TO RC-1 CHANNEL.
- ACOUSTIC SEALANT AT TOP AND BOTTOM OF WALLS AND AT ALL PENETRATIONS.

FOR WALLS LOCATED AT RESTROOMS, REFER TO ADJACENT WALL CONSTRUCTION TYPE FOR TILE WALL CONSTRUCTION.

IW9. METAL STUD FIRE BARRIER. 2 HOUR FIRE-RATED CONSTRUCTION. UL DES U419 OR U491,
- 3/4" SHEETROCK ULTRACODE CORE GYPSUM PANEL TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK OR ADJACENT CMU WALL.
- 3-1/2" 25 GA. METAL STUD FRAMING AT 24" O.C TO U/S OF ROOF DECK OR ADJACENT CMU WALL. PROVIDE SLIP TRACK TOP TRACK TO ALLOW FOR 1 1/2" ROOF DEFLECTION.
- MINIMUM 3" THERMAFIBER SAFB TO U/S OF ROOF DECK.
- 3/4" SHEETROCK ULTRACODE CORE GYPSUM PANEL TAPED AND FINISHED THREE (3) COATS TO U/S OF ROOF DECK OR ADJACENT CMU WALL.

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FIRESTOPPING NOTES:

SECTION 07 8400
FIRESTOPPING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. FIREPROOF FIRESTOPPING AND FIRESAFING MATERIALS AND ACCESSORIES.

1.02 SYSTEM DESCRIPTION

A. FIRESTOPPING MATERIALS: UL TO ACHIEVE A FIRE RATING AS NOTED ON DRAWINGS. USE APPROPRIATE FORM OF MATERIAL TO SUIT APPLICATION.

B. FIRESTOP ALL INTERRUPTIONS TO FIRE RATED ASSEMBLIES, MATERIALS, AND COMPONENTS.

1.03 SUBMITTALS

A. SEE SECTION 01 3000 - ADMINISTRATIVE REQUIREMENTS FOR SUBMITTAL PROCEDURES.

B. PRODUCT DATA.

1.04 DELIVERY, STORAGE, AND HANDLING

A. SEE SECTION 01 7419 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL FOR PACKAGING WASTE REQUIREMENTS.

PART 2 PRODUCTS

2.01 FIRESTOPPING MATERIALS

A. FIRESAFING: NON-COMBUSTIBLE, MOISTURE RESISTANT, NON-CORROSIVE, NON-DETERIORATING, MILDEW-RESISTANT, AND VERMIN-RESISTANT.
1. DENSITY: 4 PCF.
2. FLAME SPREAD: 0
3. SMOKE DEVELOPED: 0
4. FIRE RATING: UP TO 4 HOURS.
5. MANUFACTURERS: THERMAFIBER, PRODUCT "THERMAFIBER SAFING".

B. FIRE BARRIER PACKING: SHALL BE NON-ASBESTOS, MOLD RESISTANT AND INORGANIC.
1. DENSITY: 4 PCF.
2. FLAME SPREAD: 0
3. SMOKE DEVELOPED: 0
4. FIRE RATING: UP TO 4 HOURS.
5. MANUFACTURERS: 3M, PRODUCT "FIRE BARRIER PACKING MATERIAL PMA".
6. SUBSTITUTIONS: SEE SECTION 01 6000 - PRODUCT REQUIREMENTS.

C. FIRE CAULKING: SHALL BE SINGLE COMPONENT FIRE RATED CAULKING FOR CONCRETE, METALS, WOOD, PLASTIC, CABLE JACKETING. PAINTABLE.
1. FLAME SPREAD: 5
2. SMOKE DEVELOPED: 0
3. SAG CHARACTERISTICS: 0
4. FIRE RATING: UP TO 4 HOURS.
5. MANUFACTURERS: 3M, PRODUCT "FIRE BARRIER CP 25WB+ CAULK".
6. SUBSTITUTIONS: SEE SECTION 01 6000 - PRODUCT REQUIREMENTS.

D. FIRE SPRAY: SHALL BE SPRAYABLE ELASTOMERIC COATING AS PART OF A FIRESTOP ASSEMBLY. PAINTABLE.
1. FLAME SPREAD: <25
2. SMOKE DEVELOPMENT: <25
3. FIRE RATING: UP TO 2 HOURS.
4. MANUFACTURERS: 3M, PRODUCT "FIRE DAM SPRAY 200".
5. SUBSTITUTIONS: SEE SECTION 01 6000 - PRODUCT REQUIREMENTS.

E. FIRE SLEEVES: SHALL BE ONE PIECE METAL ENCLOSURE WITH FIXED FIRE STOPPING INTUMESCENT MATERIAL. SLEEVE BE READILY IDENTIFIABLE AS FIRE RATED.
1. SIZE: AS NEEDED TO SUIT APPLICATION.
2. ACCESSORIES: ALL MOUNTING BRACKETS, STUD BRACKETS, SEALANT NECESSARY FOR INSTALLATION.
3. BLANKS: PROVIDE WHERE NOTED AS "FUTURE" ON DRAWINGS.
4. FIRE RATING: UP TO 3 HOURS.
5. MANUFACTURERS: 3M, PRODUCT "FIRE BARRIER PASS-THROUGH DEVICE".
6. SUBSTITUTIONS: SEE SECTION 01 6000 - PRODUCT REQUIREMENTS.

PART 3 EXECUTION

3.01 EXAMINATION

A. VERIFY OPENINGS ARE READY TO RECEIVE THE WORK OF THIS SECTION.

3.02 PREPARATION

A. CLEAN SUBSTRATE SURFACES OF MATTER WHICH MAY AFFECT BOND OF FIRESTOPPING MATERIAL.

3.03 INSTALLATION

A. APPLY FIRESTOPPING MATERIAL IN SUFFICIENT THICKNESS TO ACHIEVER RATING.

B. INSTALL MATERIAL AT WALLS OR PARTITION OPENINGS WHICH CONTAIN PENETRATING SLEEVES, PIPING, DUCT WORK, CONDUIT AND OTHER ITEMS, REQUIRING FIRESTOPPING.

END OF SECTION

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. NOT ALL NOTES ARE APPLICABLE TO THIS SHEET.

G3. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS WHERE NEW BUILDING IS TYING INTO THE EXISTING.

EXISTING TO REMAIN NOTES:

E1. CONCRETE FLOOR SLAB - EXACT CONDITIONS UNKNOWN.

E2. CMU BLOCK - EXACT CONDITIONS UNKNOWN.

E3. BRICK VENEER - EXACT CONDITIONS UNKNOWN.

E4. ROOF, ROOF STRUCTURE, AND ROOF DECK - EXACT CONDITIONS UNKNOWN.

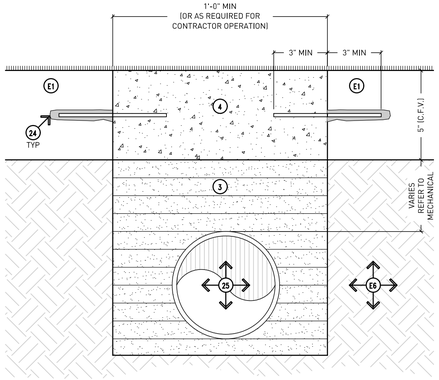
E5. STRUCTURAL FOOTING - EXACT CONDITIONS UNKNOWN.

E6. UNDISTURBED SOIL - EXACT CONDITIONS UNKNOWN.

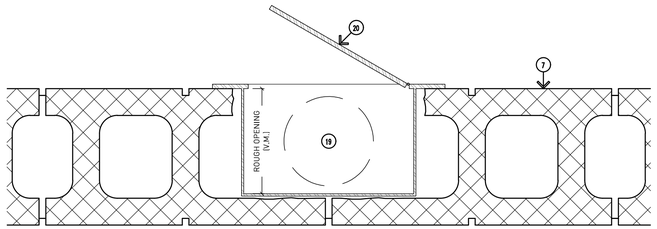
E7. LIMESTONE - EXACT CONDITIONS UNKNOWN.

DRAWING NOTES:

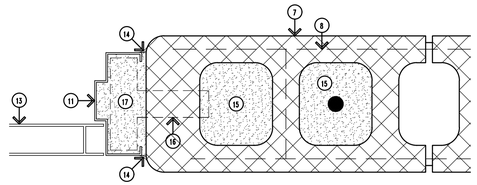
1. PROPERLY COMPACTED EXISTING SUBGRADE.
2. COMPACTED ENGINEERED FILL AS REQUIRED AFTER REMOVAL OF EXISTING LAWN / UNSUITABLE SOILS AS REQUIRED FOR PROPER SLAB ELEVATION.
3. COMPACTED SAND CUSHION BASE [MINIMUM 4"].
4. CONCRETE FLOOR SLAB OVER 15 MIL VAPOR BARRIER -- PROPERLY LAP AND SEAL JOINTS PER MANUFACTURER'S REQUIREMENTS.
5. CONCRETE FOUNDATION -- REFER TO STRUCTURAL DRAWINGS.
6. ½" PREMOLDED EXPANSION JOINT WITH SEALANT.
7. CMU MASONRY BLOCK [PAINT ALL SURFACES EXPOSED TO VIEW].
8. HORIZONTAL JOINT REINFORCING @ 16" O.C. VERTICALLY.
9. ACOUSTICAL CEILING TILE IN PREFINISHED METAL GRID SYSTEM ATTACHED TO BUILDING STRUCTURE ABOVE.
10. REINFORCING -- REFER TO STRUCTURAL DRAWINGS.
11. DOOR FRAME -- REFER TO DOOR SCHEDULE.
12. GROUT CMU SOLID.
13. DOOR -- REFER TO DOOR SCHEDULE
14. SEALANT (WITH FOAM BACKER ROD AS NECESSARY TO SUIT CONDITIONS.)
15. GROUT CMU CORES SOLID BELOW FLASHING AT WHERE BELOW GRADE.
16. JAMB ANCHOR TO SUIT CONDITIONS.
17. GROUT FILLED DOOR FRAME.
18. CUBBIES -- REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
19. OUTLINE OF PORTABLE FIRE EXTINGUISHER.
20. RECESSED FIRE EXTINGUISHER CABINET WITH 5/16" FLAT TRIM.
21. CONTINUOUS METAL STUD FRAMING--REFER TO INTERIOR WALL TAG DESIGNATIONS FOR SIZING, GAUGE, ETC.
22. 3/8" x 4" EXPANSION ANCHORS @ 48" O.C. OR EQUAL STRENGTH POWERED FASTENERS, MINIMUM 2" EMBEDMENT INTO CONCRETE FLOOR SLAB.
23. WALL BASE--REFER TO FINISH SCHEDULE.
24. 3/8" EPOXY DOWEL INTO EXISTING CONCRETE FLOOR SLAB @ 36" O.C. STAGGERED.
25. PLUMBING PIPING, REFER TO MECHANICAL DRAWINGS FOR SIZE AND MATERIAL.



3 / A9.62 Floor Trench Infill Detail - Plumbing
Scale: 3"=1'-0"



2 / A9.62 Typical Recessed Fire Ext. Cabinet
Scale: 3"=1'-0"



1 / A9.62 Typical Interior Door Jamb Detail
Scale: 3"=1'-0"

Bidding and Permits: 31 July 2023

Interior Details

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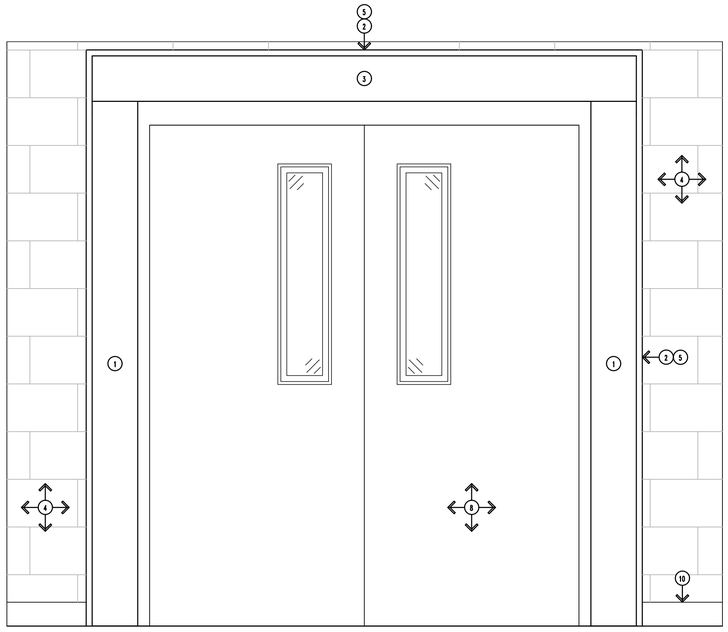
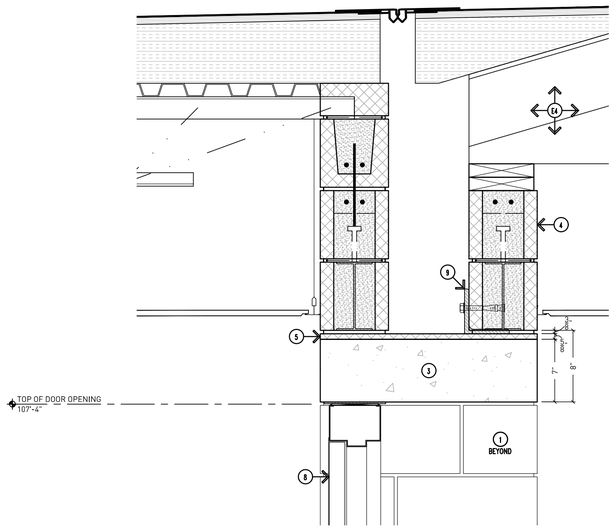
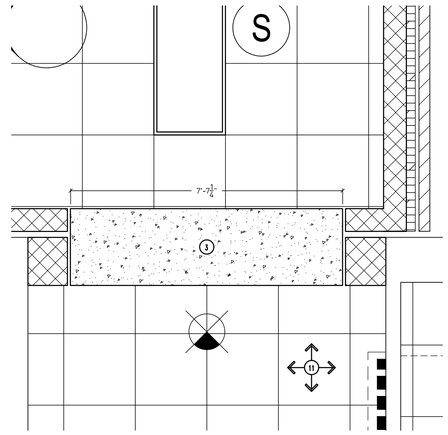


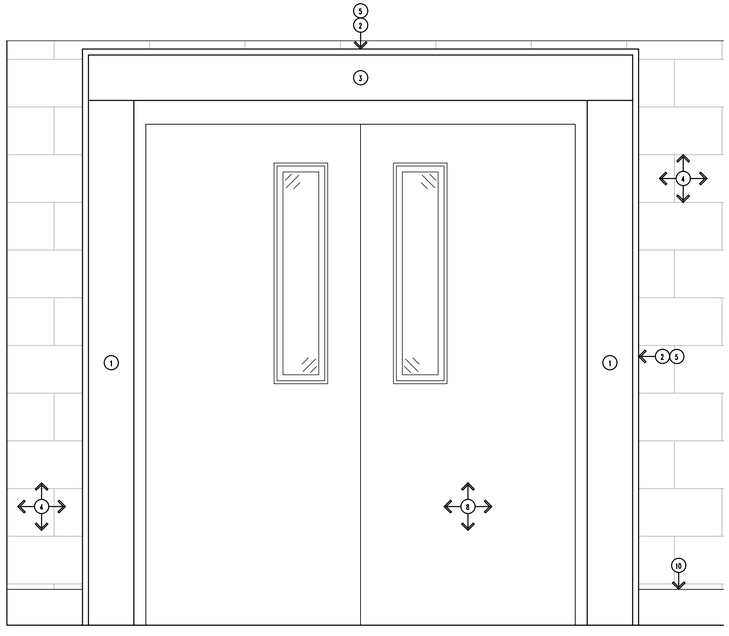
6 A9.65 Portal A - New Work Elevation (Existing Side)
Scale: 1"=1'-0"



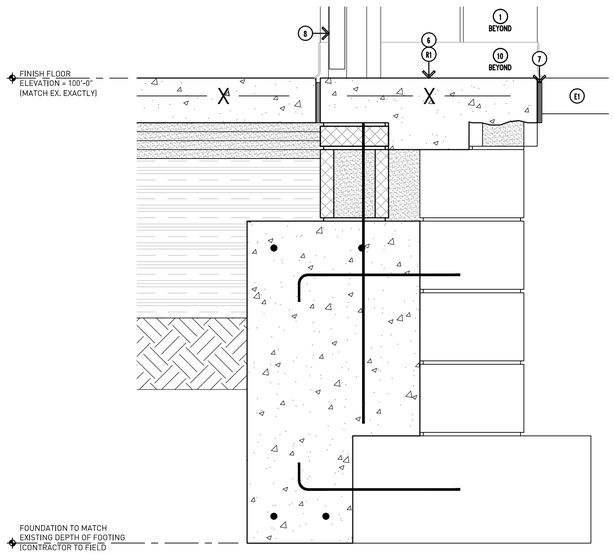
4 A9.65 Portal A - Door Head Detail
Scale: 1-1/2"=1'-0"



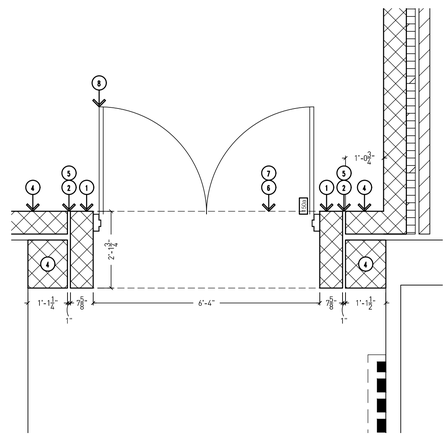
2 A9.65 Portal A - Enlarged RCP
Scale: 1/2"=1'-0"



5 A9.65 Portal A - New Work Elevation (Addition Side)
Scale: 1"=1'-0"



3 A9.65 Portal A - Base of Wall
Scale: 1-1/2"=1'-0"



1 A9.65 Portal A - Enlarged Floor Plan
Scale: 1/2"=1'-0"

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

EXISTING TO REMAIN NOTES:

E1. CONCRETE FLOOR SLAB - EXACT CONDITIONS UNKNOWN.

E2. CMU BLOCK - EXACT CONDITIONS UNKNOWN.

E3. BRICK VENEER - EXACT CONDITIONS UNKNOWN.

E4. ROOF, ROOF STRUCTURE, AND ROOF DECK - EXACT CONDITIONS UNKNOWN.

E5. WALL INSULATION - EXACT CONDITIONS UNKNOWN.

REMOVAL NOTES:

R1. EXISTING FLOOR MINIMUM 4" BELOW FINISH FLOOR AT LOCATION OF NEW WALL.

DRAWING NOTES:

1. PORTAL WALL PIERS.
2. MINIMUM 1" GAP AT ALL SIDES OF THE PORTAL WALL. REFER TO SHEET A9.62 FOR FURTHER INFORMATION ON FIRESTOPPING.
3. C.I.P. PORTAL LID ABOVE. REFER TO STRUCTURAL DRAWINGS.
4. CMU MASONRY BLOCK (PAINT ALL SURFACES EXPOSED TO VIEW). TOOTH-IN AS NECESSARY.
5. FIRE STOP - REFER TO SHEET A9.62 FOR FURTHER INFORMATION ON FIRESTOPPING.
6. MINIMUM 4" CONCRETE PATCH ABOVE FOUNDATION AT LOCATION OF NEW WALL.
7. TRANSITION STRIP.
8. DOOR, FRAME, AND HARDWARE. REFER TO DOOR SCHEDULE AND SPECIFICATIONS.
9. 5" x 5" BRICK ANGLE TO SUPPORT EXISTING TO REMAIN BRICK ABOVE PORTAL WALL.
10. WALL BASE. REFER TO FINISH SCHEDULE.
11. ACOUSTICAL CEILING TILE IN PREFINISHED METAL GRID SYSTEM ATTACHED TO BUILDING STRUCTURE ABOVE.

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Bidding and Permits: 31 July 2023

Portal A Details

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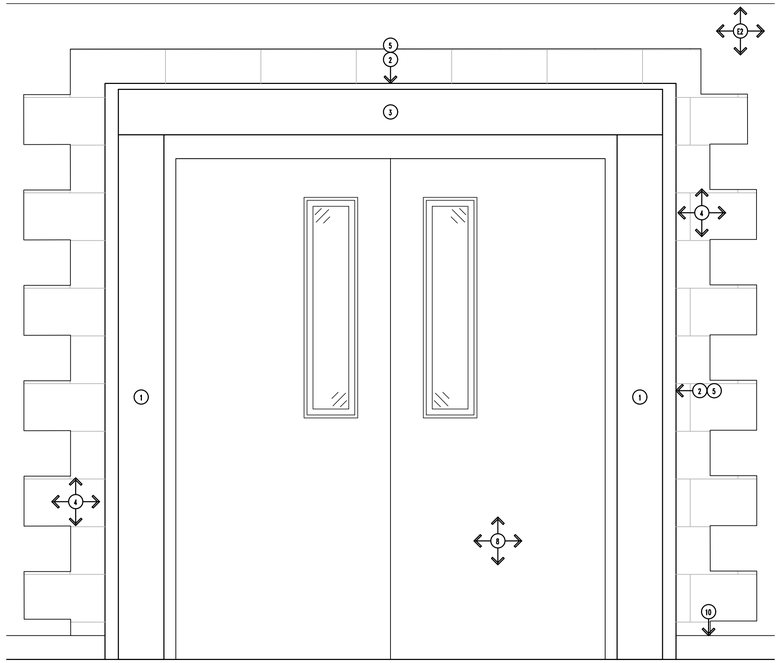
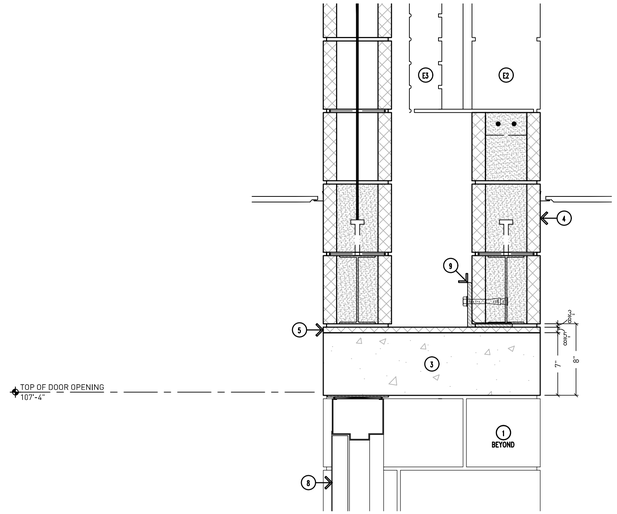
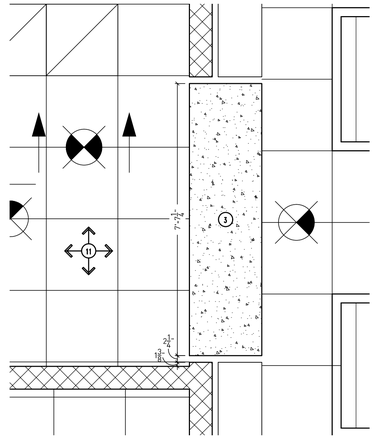


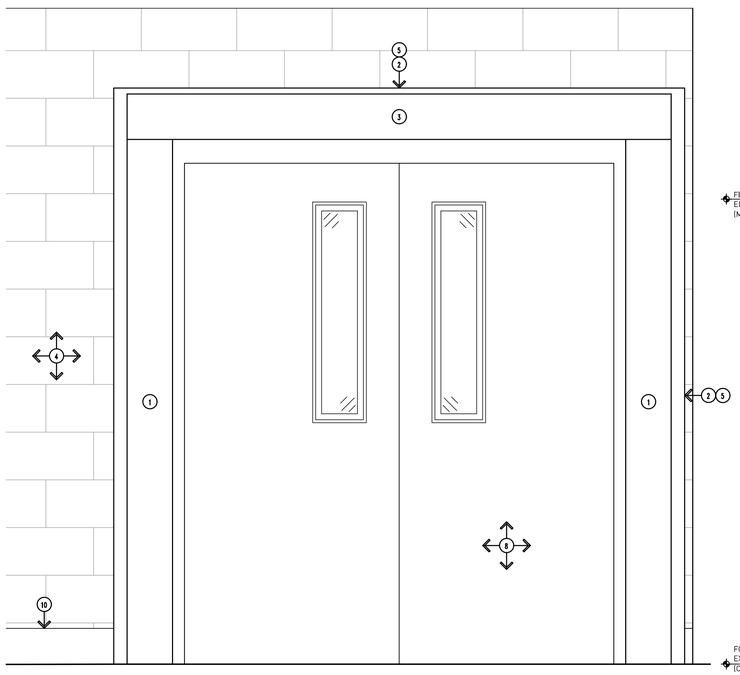
6 A9.66 Portal B - New Work Elevation (Existing Side)
Scale: 1"=1'-0"



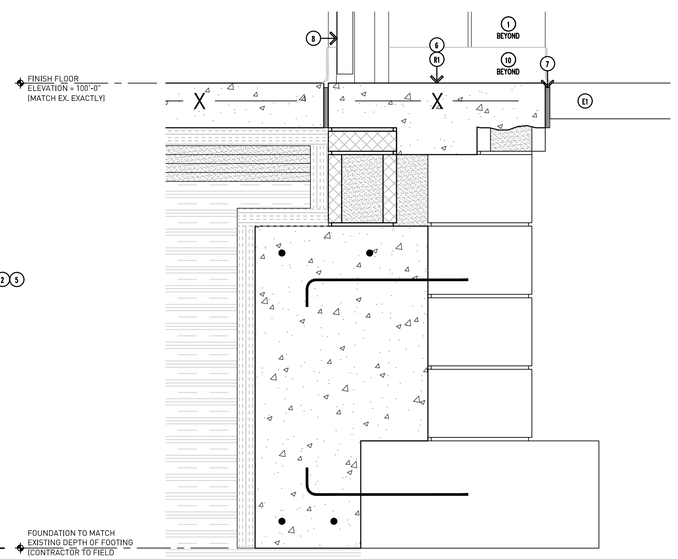
4 A9.66 Portal B - Door Head Detail
Scale: 1-1/2"=1'-0"



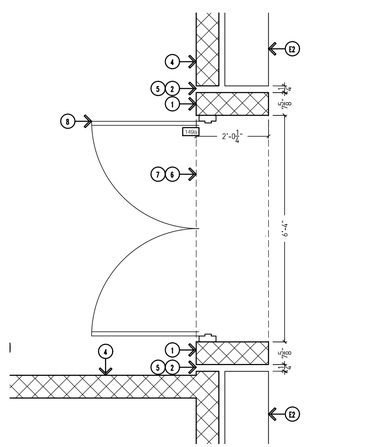
2 A9.66 Portal B - Enlarged RCP
Scale: 1/2"=1'-0"



5 A9.66 Portal B - New Work Elevation (Addition Side)
Scale: 1"=1'-0"



3 A9.66 Portal B - Base of Wall
Scale: 1-1/2"=1'-0"



1 A9.66 Portal B - Enlarged Floor Plan
Scale: 1/2"=1'-0"

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E3. BRICK VENEER - EXACT CONDITIONS UNKNOWN.

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Portal B Details

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MECHANICAL ABBREVIATION LIST

ABBREVIATION	DESCRIPTION
A	COMPRESSED AIR
A(___#)	COMPRESSED AIR (SPECIFIC PSIG)
AAV	AUTOMATIC AIR VENT
ACC	AIR COOLED CONDENSER
ACCU	AIR COOLED CONDENSING UNIT
AD	ACCESS DOOR
AD	AREA DRAIN
AE	AIR EXTRACTOR
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
ALT	ALTERNATE
AMP	AMPERE
APD	AIR PRESSURE DROP
AR	ARGON
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR-CONDITIONING ENGINEERS
ASR	AUTOMATIC SPRINKLER RISER
ATD	AIR TRANSFER DUCT
AUX	AUXILIARY
AV	ACID VENT
AVTR	ACID VENT THROUGH ROOF
AW	ACID WASTE
BAS	BUILDING AUTOMATION SYSTEM
BCU	BLOWER COIL UNIT
BDD	BACKDRAFT DAMPER
BFF	BELOW FINISHED FLOOR
BFP	BACKFLOW PREVENTER
BHP	BRAKE HORSEPOWER
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
BVC	BEVERAGE CONDUIT
BWV	BACKWATER VALVE
C	COMMON
CAP	CAPACITY
CAV	CONSTANT AIR VOLUME
CB	CATCH BASIN
CC	COOLING COIL
CD	COLD DECK
CD	CONDENSATE DRAIN
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
CHW	CHILLED WATER
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CLG	COOLING
CNDS	CONDENSATE
CNDS (___#)	CONDENSATE (SPECIFIC PSIG)
CO	CLEAN OUT
CO2	CARBON DIOXIDE
CONT	CONTINUATION OR CONTINUED
CONTR	CONTRACTOR
CONV	CONVECTOR
COP	COEFFICIENT OF PERFORMANCE
CP	CIRCULATING PUMP
CRU	CONDENSATE RETURN UNIT
CSS	CLINICAL SERVICE SINK
CT	COOLING TOWER
CUH	CABINET UNIT HEATER
CW	DOMESTIC COLD WATER
CWF	DOMESTIC COLD WATER - FILTERED
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
D&T	DRIP AND TRAP
DA	DISCHARGE AIR
DAT	DISCHARGE AIR TEMPERATURE
DB	DRY BULB
DDC	DIRECT DIGITAL CONTROL
DEG	DEGREE
DFU	DRAINAGE FIXTURE UNITS
DIA	DIAMETER
DMPR	DAMPER
D/N	DAY/NIGHT
DN	DOWN
DNZ	DOWNSPOUT NOZZLE
DS	DUCT SILENCER
DT	DRAIN TILE
DTC	DRAIN TILE CONNECTION
DWH	DOMESTIC WATER HEATER
DWG	DRAWING
(E)	EXISTING
E	EXHAUST GRILLE OR REGISTER
EA	EACH
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EC	EXPANSION COMPENSATOR
ECUH	ELECTRIC CABINET UNIT HEATER
EDB	ENTERING DRY BULB
EER	ENERGY EFFICIENCY RATIO
EES	EMERGENCY EYE WASH / SHOWER
EEW	EMERGENCY EYE WASH
EF	EXHAUST FAN
EFF	EFFICIENCY
EHC	ELECTRIC HEATING COIL
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
EMS	ENERGY MANAGEMENT SYSTEM
ERL	ENERGY RECOVERY LOOP
ERLR	ENERGY RECOVERY LOOP RETURN
ERLS	ENERGY RECOVERY LOOP SUPPLY
ERU	ENERGY RECOVERY UNIT
ESH	EMERGENCY SHOWER
ESP	EXTERNAL STATIC PRESSURE
EUH	ELECTRIC UNIT HEATER
EWB	ENTERING WET BULB
EWC	ELECTRIC WATER COOLER
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
F	FIRE PROTECTION
°F	DEGREES FAHRENHEIT
F&B	FACE AND BYPASS
F&T	FLOAT AND THERMOSTATIC
FA	FACE AREA
FCU	FAN COIL UNIT

ABBREVIATION	DESCRIPTION
FD	FLOOR DRAIN
FFD	FUNNEL FLOOR DRAIN
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FHR	FIRE HOSE RACK
FHV	FIRE HOSE VALVE
FLA	FULL LOAD AMPS
FLR	FLOOR
FM	FLOW METER
FMS	FLOW MEASURING STATION
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
FPM	FEET PER MINUTE
FP	FIRE PUMP
FPTU	FAN POWERED (AIR) TERMINAL UNIT
FS	FLOOR SINK
FSEC	FOOD SERVICE EQUIPMENT CONTRACTOR
FT	FEET
FTR	FINNED TUBE RADIATION
FV	FACE VELOCITY
G	NATURAL GAS
GA	GAUGE
GAL	GALLON
GRH	GRAVITY RELIEF HOOD
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GSAN	GREASE SANITARY WASTE
H	HYDROGEN
HB	HOSE BIBB
HC	HEATING COIL
HD	HOT DECK
HEPA	HIGH EFFICIENCY PARTICULATE ARRESTANCE
HL	HIGH LIMIT
HOA	HAND/OFF/AUTO
HP	HEAT PUMP
HP	HORSEPOWER
HPCW	HIGH PRESSURE DOMESTIC COLD WATER
HPHW	HIGH PRESSURE DOMESTIC HOT WATER
HPHWR	HIGH PRESSURE DOMESTIC HOT WATER RETURN
HPL	HEAT PUMP LOOP
HPLR	HEAT PUMP LOOP RETURN
HPLS	HEAT PUMP LOOP SUPPLY
HR	HOUR
HTG	HEATING
HV	HEATING VENTILATING
HVAC	HEATING, VENTILATING, AIR CONDITIONING
HWH	HOT WATER HEATING
HWHR	HOT WATER HEATING RETURN
HWHS	HOT WATER HEATING SUPPLY
HW	DOMESTIC HOT WATER
HW(___)	DOMESTIC HOT WATER (SPECIFIC TEMP °F)
HWR	DOMESTIC HOT WATER RETURN
HX	HEAT EXCHANGER
HZ	HERTZ
IAQ	INDOOR AIR QUALITY
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IH	INTAKE HOOD
IN	INCHES
IR	INFRARED HEATER
IW	INDIRECT WASTE
JC	JANITOR'S CLOSET
JP	JOCKEY PUMP
KA	THOUSAND AMP
KW	KILOWATT
KWH	KILOWATT-HOUR
LAT	LEAVING AIR TEMPERATURE
LAB	LABORATORY
LAV	LAVATORY
LBS	POUNDS
LDB	LEAVING DRY BULB
LL	LOW LIMIT
LPC	LOW PRESSURE CONDENSATE
LPS	LOW PRESSURE STEAM
LRA	LOCKED ROTOR AMPS
LWB	LEAVING WET BULB
LWT	LEAVING WATER TEMPERATURE
MA	MIXED AIR
MAT	MIXED AIR TEMPERATURE
MAU	MAKE-UP AIR UNIT
MAX	MAXIMUM
MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
MCA	MEDICAL COMPRESSED AIR
MCA	MINIMUM CIRCUIT AMPACITY
MCC	MOTOR CONTROL CENTER
MECH	MECHANICAL
MEZZ	MEZZANINE
MFR	MANUFACTURER
MH	MANHOLE
MIL	1/1000th INCH
MIN	MINIMUM
MISC	MISCELLANEOUS
MMBH	MILLION BRITISH THERMAL UNITS PER HOUR
MOP	MAXIMUM OVERCURRENT PROTECTION
M/S	MOTOR STARTER
MTD	MOUNTED
MTR	MOTOR
MV	MANUAL AIR VENT
MVAC	MEDICAL VACUUM
N	NITROGEN
N2O	NITROUS OXIDE
NC	NOISE CRITERIA
NC	NORMALLY CLOSED
NCTC	NORMALLY CLOSED TIMED CLOSED
NCTO	NORMALLY CLOSED TIMED OPEN
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NOTC	NORMALLY OPEN TIMED CLOSED
NOTO	NORMALLY OPEN TIMED OPEN
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NOM	NOMINAL
NPCW	NON POTABLE COLD WATER
O	OXYGEN
OA	OUTSIDE AIR
OAT	OUTSIDE AIR TEMPERATURE
OB	OUTLET BOX
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER/CENTER TO CENTER
OD	OUTSIDE DIAMETER
OED	OPEN ENDED DUCT
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
OL	OVERLOAD
ORC	OVERFLOW RAIN CONDUCTOR
ORD	OVERFLOW ROOF DRAIN
OS&Y	OUTSIDE SCREW AND YOKE
OV	OUTLET VELOCITY
OWS	OPERATOR WORKSTATION

ABBREVIATION	DESCRIPTION
PACU	PACKAGED AIR CONDITIONING UNIT
PBD	PARALLEL BLADE DAMPER
PC	PUMPED CONDENSATE
PCW	PROCESS COOLING WATER
PCWR	PROCESS COOLING WATER RETURN
PCWS	PROCESS COOLING WATER SUPPLY
PD	PRESSURE DROP (FEET OF WATER)
PH	PERIMETER HEAT
PHR	PERIMETER HEAT RETURN
PHS	PERIMETER HEAT SUPPLY
PNL	PANEL
PPM	PARTS PER MILLION
PRESS	PRESSURE
PRV	PRESSURE REDUCING VALVE
PSAN	PUMPED SANITARY
PST	PUMPED STORM
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH - ABSOLUTE
PSIG	POUNDS PER SQUARE INCH - GAUGE
PW	PURIFIED WATER
PWR	PURIFIED WATER RETURN
PWS	PURIFIED WATER SUPPLY
R	RELOCATED
R	RETURN GRILLE OR REGISTER
RA	RETURN AIR
RAT	RETURN AIR TEMPERATURE
RC	RAIN CONDUCTOR
RCP	RADIANT CEILING PANEL
RD	ROOF DRAIN
REQD	REQUIRED
REF	ROOF EXHAUST FAN
RF	RETURN FAN
RH	RELATIVE HUMIDITY
RL	REFRIGERANT LIQUID
RLFA	RELIEF AIR
RPM	REVOLUTIONS PER MINUTE
RPDA	REDUCED PRESSURE BACKFLOW PREVENTION DETECTION ASSY
RPZA	REDUCED PRESSURE BACKFLOW PREVENTION ZONE ASSY
RS	REFRIGERANT SUCTION
RTU	ROOFTOP UNIT
S	SUPPLY AIR DIFFUSER OR GRILLE
SA	SOUND ATTENUATOR
SA	SUPPLY AIR
SAN	SANITARY WASTE
SAT	SUPPLY AIR TEMPERATURE
SECT	SECTION
SCCR	SHORT CIRCUIT CURRENT RATING
SF	SUPPLY FAN
SH	SHOWER
SK	SINK
SMR	SNOW MELT RETURN
SMS	SNOW MELT SUPPLY
SP	STATIC PRESSURE
SPEC	SPECIFICATION
SPKLR	SPRINKLER
SQFT	SQUARE FOOT/SQUARE FEET
S/S	START/STOP
SS	SERVICE SINK
ST	STORM
STD	STANDARD
STK	STACK
STM	STEAM
STM(___#)	STEAM (SPECIFIC PSIG)
S/W	SUMMER/WINTER
SW	SWITCH
T	TRANSFER GRILLE
TC	TEMPERATURE CONTROL
TC	TEMPERING COIL
TCP	TEMPERATURE CONTROL PANEL
TD	TRENCH DRAIN
TEMP	TEMPERATURE
TEMP	TEMPORARY
TH	TERMINAL HEATING
THA	TOTAL HEAT ABSORBED
THR	TERMINAL HEATING RETURN
THR	TOTAL HEAT REJECTED
THS	TERMINAL HEATING SUPPLY
TMR	TIMER SWITCH
TPD	TEPID WATER
TSP	TOTAL STATIC PRESSURE
TU	(AIR) TERMINAL UNIT
TV	TURNING VANES
TW	TEMPERED WATER
TYP	TYPICAL
UH	UNIT HEATER
UL	UNDERWRITER'S LABORATORY
UON	UNLESS OTHERWISE NOTED
UR	URINAL
UV	UNIT VENTILATOR
V	VALVE
V	VENT
VAC	VACUUM
VAV	VARIABLE AIR VOLUME
VB	VACUUM BREAKER
VD	VOLUME DAMPER (MANUALLY ADJUSTABLE)
VOL	VOLUME
VFC	VARIABLE FREQUENCY CONTROLLER
VTR	VENT THROUGH ROOF
VTU	VENTURI TERMINAL UNIT
VUV	VERTICAL UNIT VENTILATOR
W	WASTE
W&V	WASTE AND VENT
WASD	WASTE ANESTHETIC GAS DISPOSAL
WB	WET BULB
WC	WATER CLOSET
WC	WATER COLUMN
WG	WATER GAUGE
WH	WALL HYDRANT
WMSD	WASHING MACHINE SUPPLY AND DRAIN BOX
WPD	WATER PRESSURE DROP
WT	WEIGHT
XFMR	TRANSFORMER
ZVB	ZONE VALVE BOX

TEMPERATURE CONTROL - PARTIAL SYMBOLS LIST

SYMBOL	DESCRIPTION
CO2	CARBON DIOXIDE SENSOR
CO	CARBON MONOXIDE SENSOR
DPT	DIFFERENTIAL PRESSURE TRANSMITTER
FM	FLOW METER
	GUARD FOR STAT OR SENSOR
H	HUMIDISTAT OR HUMIDITY SENSOR (AS DEFINED ON TC DRAWINGS)
OS	OCCUPANCY SENSOR
PT	PRESSURE TRANSMITTER
SP	STATIC PRESSURE SENSOR OR PROBE
	VALVE - 2 WAY CONTROL VALVE
	VALVE - 3 WAY CONTROL VALVE
T	THERMOSTAT OR TEMPERATURE SENSOR (AS DEFINED ON TC DRAWINGS)

NOTE: LIST OF ADDITIONAL SYMBOLS & ABBREVIATIONS ASSOCIATED WITH TEMPERATURE CONTROLS ARE IDENTIFIED ON TC DRAWINGS.

MECHANICAL SYMBOL LIST

PIPING SYMBOLS

SYMBOL	DESCRIPTION
AV	AIR VENT - AUTOMATIC
MV	AIR VENT - MANUAL
BFP	BACKFLOW PREVENTER
	CATCH BASIN
	CIRCULATING PUMP
CO	CLEAN OUT - IN FLOOR
CO	CLEAN OUT - FLANGE
	DIRECTION OF FLOW
	DIRECTION OF PITCH - DOWN
	FINNED TUBE RADIATION
	FIRE PROTECTION - SIAMESE CONNECTION - FREE STANDING
	FIRE PROTECTION - SIAMESE CONNECTION - WALL MOUNTED
	FIRE PROTECTION - SPRINKLER HEAD, CONCEALED
	FIRE PROTECTION - SPRINKLER HEAD, PENDANT
	FIRE PROTECTION - SPRINKLER HEAD, UPRIGHT
	FIRE PROTECTION - SPRINKLER HEAD, SIDEWALL
	FLOOR DRAIN
	FLOOR DRAIN - ELEVATION
	FLOOR DRAIN - FUNNEL
	FLOOR DRAIN - FUNNEL, ELEVATION
	FLOW MEASURING DEVICE (FOR TEST AND BALANCING)
FS	FLOW SWITCH
FM	FLOW METER
HB	HOSE BIBB
MH	MANHOLE
	OPEN SITE DRAIN
	PIPE - ANCHOR
	PIPE - CAP OR PLUG
	PIPE - ELBOW DOWN
	PIPE - ELBOW UP
	PIPE - EXPANSION JOINT OR COMPENSATOR
	PIPE - FLANGE
	PIPE - HOSE AND BRAID FLEXIBLE CONNECTION
	PIPE - RUBBER FLEXIBLE CONNECTION
	PIPE - GUIDE
	PIPE - TEE DOWN
	PIPE - TEE UP
	PIPE - UNION
P/T	PRESSURE AND TEMPERATURE TEST PLUG
	PRESSURE GAUGE AND COCK
	REDUCER - CONCENTRIC
	REDUCER - ECCENTRIC
	ROOF/OVERFLOW DRAIN
	STEAM TRAP - FLOAT AND THERMOSTATIC
	STEAM TRAP - BUCKET
	STRAINER
	STRAINER WITH VALVE AND BLOW-OFF
	THERMOMETER
	TRAP
	VALVE - ANGLE
	VALVE - BALL
	VALVE - BUTTERFLY
0.5	VALVE - BALANCE (i.e. BALANCE VALVE TO 0.5 GPM)
0.5	VALVE - COMBINATION BALANCE & FLOW MEASURING (i.e. BALANCE VALVE TO 0.5 GPM)
	VALVE - CHECK
	VALVE - SPRING CHECK
	VALVE - GAS (MANUAL)
	VALVE - GLOBE
	VALVE - ISOLATION
	VALVE - NEEDLE
	VALVE - OS&Y
	VALVE - PLUG
	VALVE - PRESSURE REGULATING
	VALVE - PRESSURE REDUCING
	VALVE - PRESSURE RELIEF
	VALVE - PRESSURE & TEMPERATURE RELIEF
VTR	VENT THROUGH ROOF
WH	WALL HYDRANT
WM	WATER METER
GM	GAS METER

DUCTWORK SYMBOLS

SYMBOL	DESCRIPTION
TU-101	AIR TERMINAL UNIT
TU-101	AIR TERMINAL UNIT WITH HEATING COIL
VTU-101	VENTURI AIR TERMINAL UNIT
VTU-101	VENTURI AIR TERMINAL UNIT WITH HEATING COIL
	DAMPER - HORIZONTAL FIRE (EXISTING, NEW)
	DAMPER - HORIZONTAL FIRE / SMOKE (EXISTING, NEW)
	DAMPER - SMOKE (EXISTING, NEW)
	DAMPER - VERTICAL FIRE (EXISTING, NEW)
	DAMPER - VERTICAL FIRE / SMOKE (EXISTING, NEW)
BDD	DAMPER - BACK DRAFT
M	DAMPER - MOTORIZED
	DAMPER - VOLUME (MANUALLY ADJUSTABLE)
	DIFFUSER - BLANK OFF
	DIFFUSER - LINEAR SLOT
	DIFFUSER - SQUARE OR RECTANGULAR
	DUCT CROSS SECTION - SUPPLY
	DUCT CROSS SECTION - RETURN
	DUCT CROSS SECTION - EXHAUST
	DUCT - FLEXIBLE CONNECTION
	DUCT - FLEXIBLE DUCT
	DUCT TAKE-OFF - ROUND CONICAL
	DUCT TAKE-OFF - RECTANGULAR WITH SHOE TAP
	ELBOW - RECTANGULAR WITH TURNING VANES
	ELBOW - RECTANGULAR SHORT RADIUS WITH SPLITTER VANES
	ELBOW - ROUND
	ELBOW - RECTANGULAR SMOOTH RADIUS
	ELBOW DOWN - RECTANGULAR
	ELBOW DOWN - ROUND
	ELBOW UP - RECTANGULAR
	ELBOW UP - ROUND
	HEATING COIL
D	INCLINED DROP IN DIRECTION OF AIRFLOW
R	INCLINED RISE IN DIRECTION OF AIRFLOW
	TRANSITION - CONCENTRIC
	TRANSITION - ECCENTRIC
	FAN - AXIAL
	FAN - CENTRIFUGAL (ELEVATION)
	INTAKE OR RELIEF HOOD
	REGISTER - RETURN OR EXHAUST
	REGISTER - RETURN WITH BOOT
	REGISTER - TRANSFER GRILLE
	ROOF EXHAUST FAN
	UNIT HEATER - HORIZONTAL THROW
	UNIT HEATER - VERTICAL THROW

DOUBLE LINE DUCTWORK SYMBOLS

SYMBOL	DESCRIPTION
	DUCT TAKE-OFF - RECTANGULAR WITH SHOE TAP
	DUCT TAKE-OFF - ROUND CONICAL
	ELBOW - RECTANGULAR WITH TURNING VANES
	ELBOW - RECTANGULAR SHORT RADIUS WITH SPLITTER VANES
	ELBOW - ROUND
	ELBOW - RECTANGULAR SMOOTH RADIUS
	ELBOW DOWN - RECTANGULAR
	ELBOW DOWN - ROUND
	ELBOW UP - RECTANGULAR
	ELBOW UP - ROUND
	HEATING COIL
D	INCLINED DROP IN DIRECTION OF AIRFLOW
R	INCLINED RISE IN DIRECTION OF AIRFLOW
	TRANSITION - CONCENTRIC
	TRANSITION - ECCENTRIC

DOUBLE LINE PIPING SYMBOLS

SYMBOL	DESCRIPTION
	FLANGE
	FLEX CONNECTION
	STRAINER - BASKET
	STRAINER - Y TYPE
	VALVE - 2 WAY CONTROL
	VALVE - 3 WAY CONTROL
	VALVE - BUTTERFLY
	VALVE - CHECK
	VALVE - DETECTOR CHECK
	VALVE - OS&Y HORIZONTAL STEM
	VALVE - OS&Y VERTICAL STEM

NOTE: SOME SYMBOLS AND ABBREVIATIONS SHOWN MAY NOT APPLY TO THIS PROJECT.

MECHANICAL DRAWING INDEX

STANDARD METHODS OF NOTATION

S-1
10ø
350-4
SUPPLY DIFFUSER WITH SCHEDULE TAG "1",
10" DIAMETER NECK SIZE
350 CFM TYPICAL FOR 4

R-1
22x22
640-2
RETURN REGISTER WITH SCHEDULE TAG "1",
22"x 22" NECK SIZE
640 CFM TYPICAL FOR 2
EXHAUST REGISTER E DESIGNATION SIMILAR.

TU-101
AIR TERMINAL UNIT WITH HEATING COIL NO. 101
WITH SERVICE CLEARANCE SHOWN

VTU-101
VENTURI AIR TERMINAL WITH HEATING COIL NO. 101
WITH SERVICE CLEARANCE SHOWN

(2)WC-1
FD-1
PLUMBING FIXTURE UNIT IDENTIFICATION TAG
WATER CLOSET TYPE "1"
TYPICAL FOR 2

8
PIPE DIAMETER NOTATION
ALL SIZES IN INCHES

8ø
22x10
18x14ø
DUCT SIZE NOTATION
ALL SIZES IN INCHES

OVAL DUCT
RECTANGULAR DUCT

1
CONSTRUCTION KEY NOTE (NUMBER) OR
DEMOLITION KEY NOTE (LETTER)

EF
1
EQUIPMENT DESIGNATION,
(i.e. EXHAUST FAN NUMBER 1)

HW-1
PIPING RISER DESIGNATION
(i.e. HOT WATER RISER NUMBER 1)

NEW SYSTEM COMPONENT
EXISTING SYSTEM COMPONENT TO REMAIN
POINT OF NEW CONNECTION SYMBOL

1
M5.1
SECTION OR PLAN NUMBER
SHEET WHERE SECTION IS DRAWN

AREA OF ENLARGEMENT
PLAN NUMBER
SHEET WHERE ENLARGED PLAN IS DRAWN

1
M5.1
SECTION OR PLAN NUMBER
SHEET WHERE SECTION IS CUT OR
ENLARGED PLAN IS REFERENCED

SECTION OR ENLARGED PLAN

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

SHEET M1.0
SHEET M1.1
MATCH LINE

HEAVY LINE WEIGHT INDICATES NEW WORK

LIGHT LINE WEIGHT INDICATES EXISTING EQUIPMENT OR REFERENCED INFORMATION

GRAY LINE INDICATES BACKGROUND INFORMATION

DASHED LINES INDICATE PIPING ROUTED BELOW SLAB OR GRADE

HATCH MARKS INDICATE EQUIPMENT OR MATERIALS TO BE DISCONNECTED AND REMOVED.

Bidding and Permits: 31 July 2023
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MECHANICAL STANDARDS AND DRAWING INDEX

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Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

M0.01

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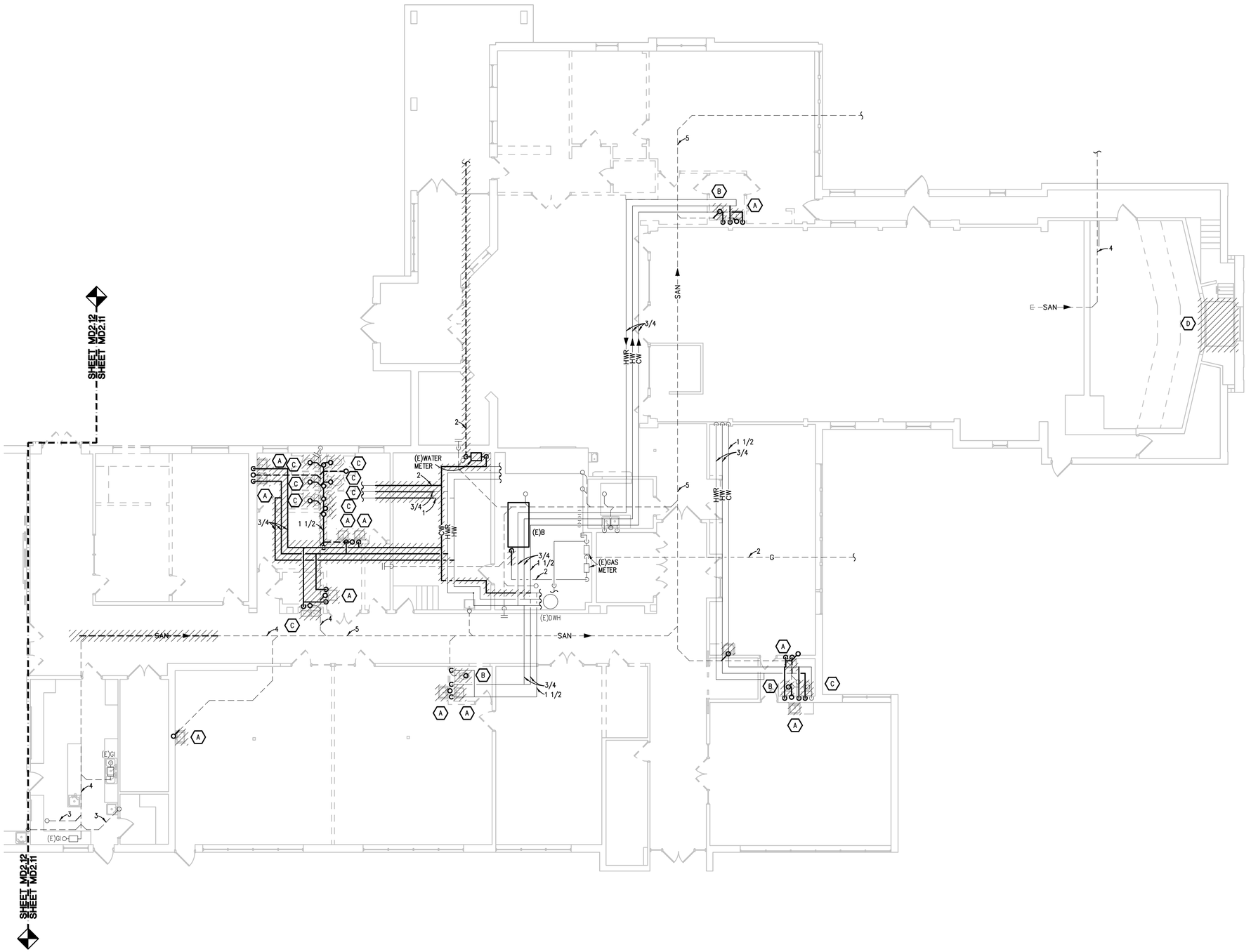
THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE. 1"



MECHANICAL DEMOLITION GENERAL NOTES:

1. ANY INTERRUPTION OF EXISTING SERVICES AND/OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY THE OWNER'S REPRESENTATIVE.
2. THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL EXTENT OF THE WORK. ACTUAL ROUTING AND SIZES OF EXISTING PIPING AND DUCTWORK MIGHT DIFFER TO A LIMITED EXTENT FROM WHAT IS SHOWN. MAJOR DISCREPANCIES BETWEEN THE DRAWINGS AND ACTUAL EXISTING CONDITIONS SHALL BE REPORTED TO THE ENGINEER.
3. THE EXACT EXTENT OF DEMOLITION SHALL BE AS REQUIRED BY THE NEW WORK.
4. ALL MECHANICAL ITEMS TO BE REMOVED SHALL BE REMOVED COMPLETE, INCLUDING ALL RELATED ITEMS SUCH AS HANGERS, SUPPORTS, CONTROLS, ETC. CAP ALL OPEN ENDED PIPES AND DUCTWORK.

(#) DEMOLITION KEY NOTES:

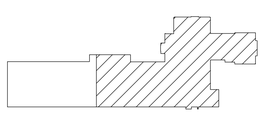
A. DEMOLISH EXISTING PLUMBING FIXTURE AND ASSOCIATED CW, HW, SAN ,AND VENT PIPING AND CAP IN A CONCEALED MANNER.

B. DEMOLISH EXISTING PLUMBING FIXTURE AND ASSOCIATED CW, SAN ,AND VENT PIPING AND CAP IN A CONCEALED MANNER.

C. DEMOLISH EXISTING PLUMBING FIXTURE AND PREPARE CW, SAN, AND VENT FOR RECONNECTION IN NEW WORK.

D. ALTERNATE NO. 1: DEMOLISH EXISTING BAPTISMAL FONT AND CAP CW, HW, SAN, AND VENT PIPING IN A CONCEALED MANNER. BASE BID: CAMERA AND DOCUMENT EXISTING UNDERGROUND SANITARY SERVING FONT.

PLUMBING DEMOLITION PLAN (PART A)
SCALE: 1/8" = 1' - 0"



KEY PLAN
NO SCALE

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PLUMBING DEMOLITION PLAN (PART A)

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Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

MD2.11

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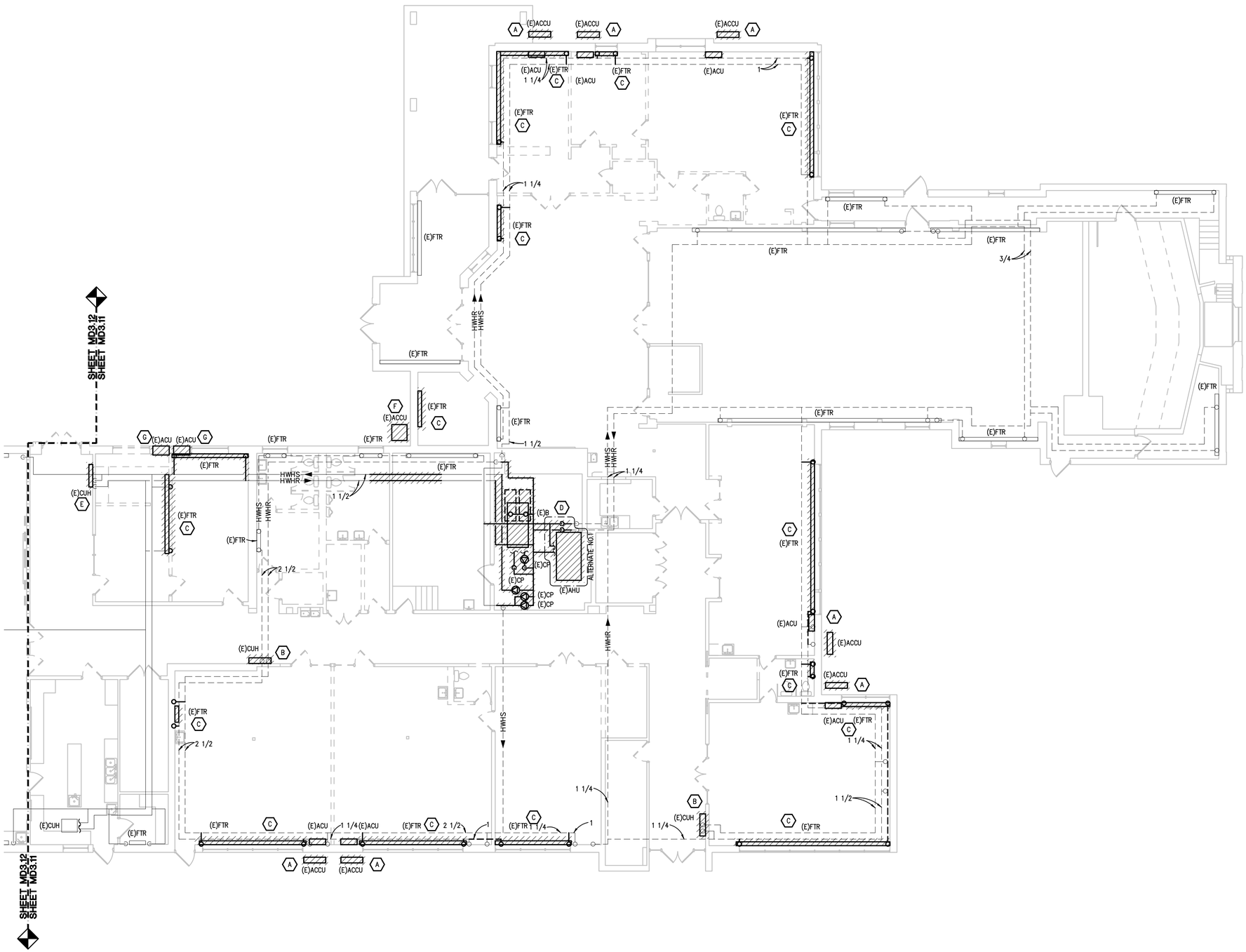
THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE. 1"



HVAC PIPING DEMOLITION PLAN (PART A)
SCALE: 1/8" = 1' - 0"

MECHANICAL DEMOLITION GENERAL NOTES:

1. ANY INTERRUPTION OF EXISTING SERVICES AND/OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY THE OWNER'S REPRESENTATIVE.
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3. THE EXACT EXTENT OF DEMOLITION SHALL BE AS REQUIRED BY THE NEW WORK.
4. ALL MECHANICAL ITEMS TO BE REMOVED SHALL BE REMOVED COMPLETE, INCLUDING ALL RELATED ITEMS SUCH AS HANGERS, SUPPORTS, CONTROLS, ETC. CAP ALL OPEN ENDED PIPES AND DUCTWORK.

(#) DEMOLITION KEY NOTES:

A. DEMOLISH EXISTING SPLIT SYSTEM ACU AND ACCU AND ASSOCIATED PIPING AND CONTROLS COMPLETE.

B. DEMOLISH EXISTING CABINET UNIT HEATER AND ASSOCIATED PIPING AND CAP IN A CONCEALED MANNER.

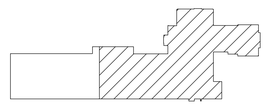
C. DEMOLISH EXISTING FINNED TUBE RADIATOR AND ASSOCIATED PIPING AND CAP IN A CONCEALED MANNER.

D. REMOVE EXISTING BOILER, HWHS/R PIPING AS INDICATED, PUMPS, EXPANSION TANKS, SHOT FEEDERS, MASTER 3-WAY VALVE, AND AIR SEPARATOR COMPLETE. REFER TO HOT WATER HEATING SYSTEM PIPING DIAGRAM FOR EXTENT OF NEW WORK.

E. DEMOLISH EXISTING CABINET UNIT HEATER AND PREPARE PIPING FOR RECONNECTION IN NEW WORK.

F. DEMOLISH EXISTING CONDENSING UNIT AND CONTROLS COMPLETE.

G. DEMOLISH EXISTING IN-WALL ACU AND CONTROLS COMPLETE.



KEY PLAN
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HVAC PIPING DEMOLITION PLAN (PART A)

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Administration Relocation and Addition

Project No. 3221

MD3.11

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE. 1"

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C. DEMOLISH EXISTING FINNED TUBE RADIATOR AND ASSOCIATED PIPING AND CAP IN A CONCEALED MANNER.

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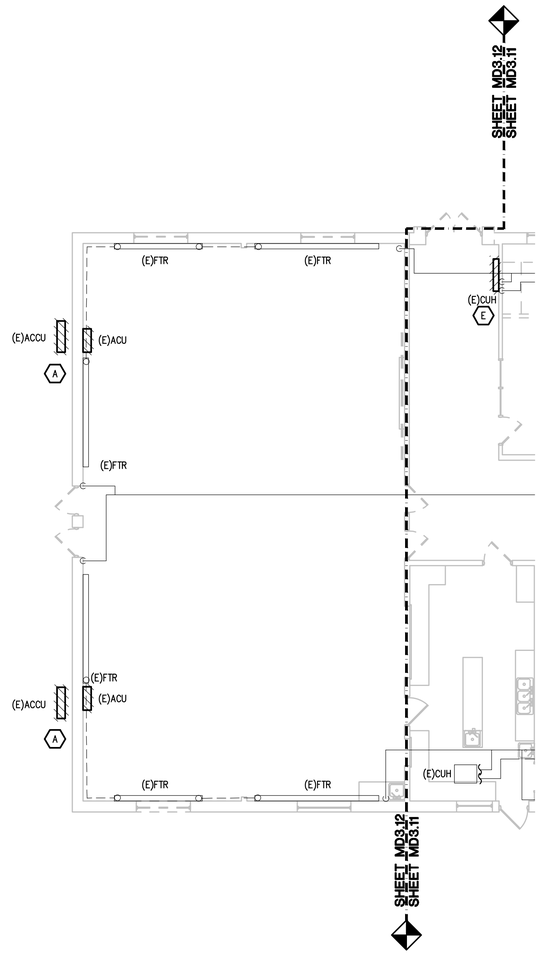
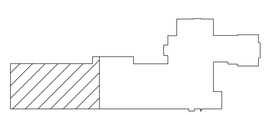
E. DEMOLISH EXISTING CABINET UNIT HEATER AND PREPARE PIPING FOR RECONNECTION IN NEW WORK.

F. DEMOLISH EXISTING CONDENSING UNIT AND CONTROLS COMPLETE.

G. DEMOLISH EXISTING IN-WALL ACU AND CONTROLS COMPLETE.



HVAC PIPING DEMOLITION PLAN (PART B)
SCALE: 1/8" = 1' - 0"



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HVAC PIPING DEMOLITION PLAN (PART B)

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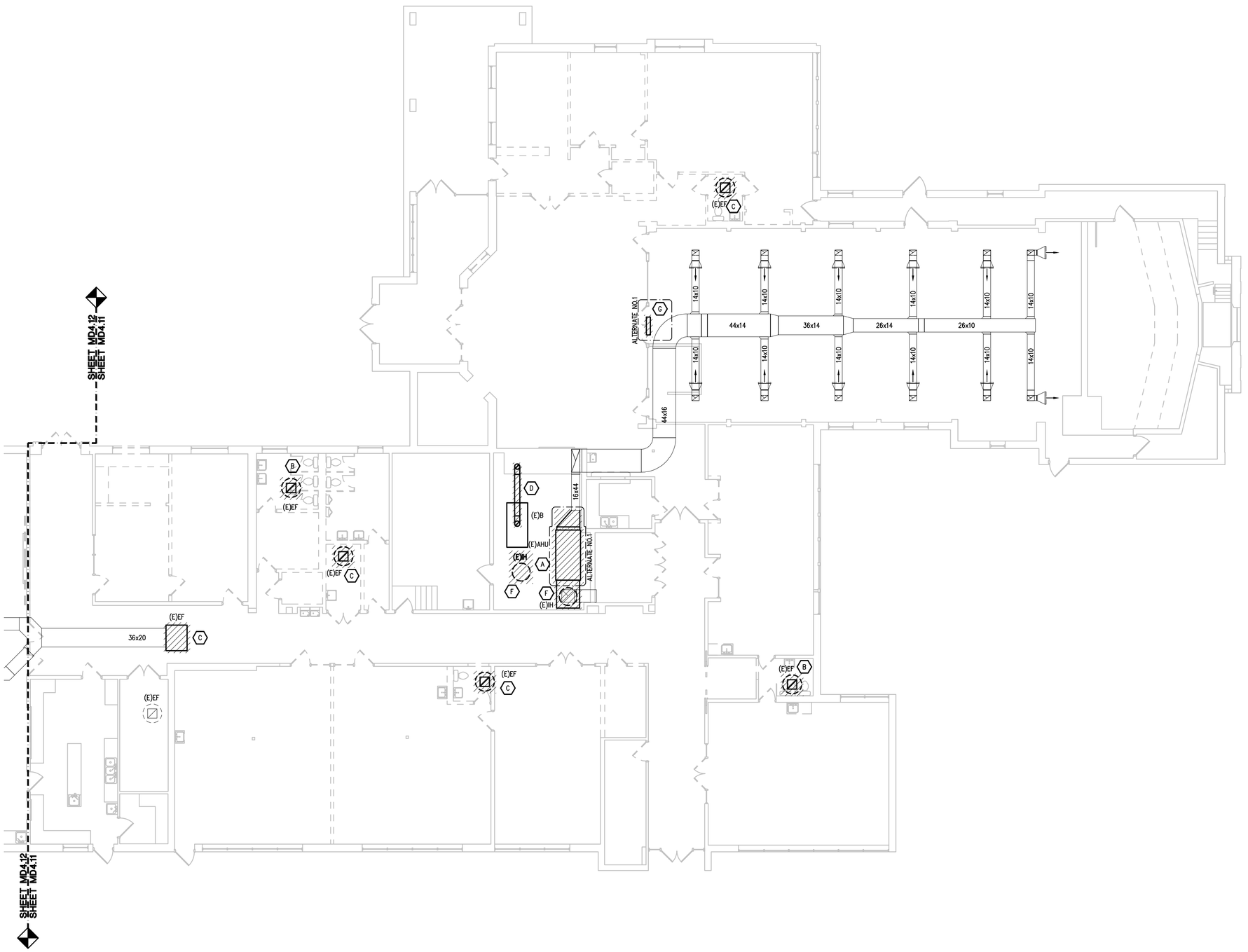

SHEET METAL DEMOLITION PLAN (PART A)
SCALE: 1/8" = 1' - 0"

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(#) DEMOLITION KEY NOTES:

A. DEMOLISH EXISTING AIR HANDLING UNIT AND CONTROLS COMPLETE AND PREPARE DUCTWORK FOR RECONNECTION IN NEW WORK.

B. DEMOLISH EXISTING EXHAUST FAN AND ASSOCIATED DUCTWORK AND CONTROLS COMPLETE AND PREPARE CURB FOR REUSE IN NEW WORK.

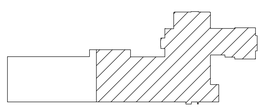
C. DEMOLISH EXISTING EXHAUST FAN AND ASSOCIATED DUCTWORK AND CONTROLS COMPLETE AND CAP CURB.

D. DEMOLISH EXISTING BOILER FLUE COMPLETE.

E. DEMOLISH EXISTING RETURN GRILLE COMPLETE AND PREPARE DUCTWORK FOR RECONNECTION IN NEW WORK.

F. DEMOLISH EXISTING INTAKE HOOD AND PREPARE ROOF CURB FOR NEW WORK.

G. CAP GRAVITY RELIEF LOUVER.



KEY PLAN
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SHEET METAL DEMOLITION PLAN (PART A)

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Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

MD4.11

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1"

MECHANICAL DEMOLITION GENERAL NOTES:

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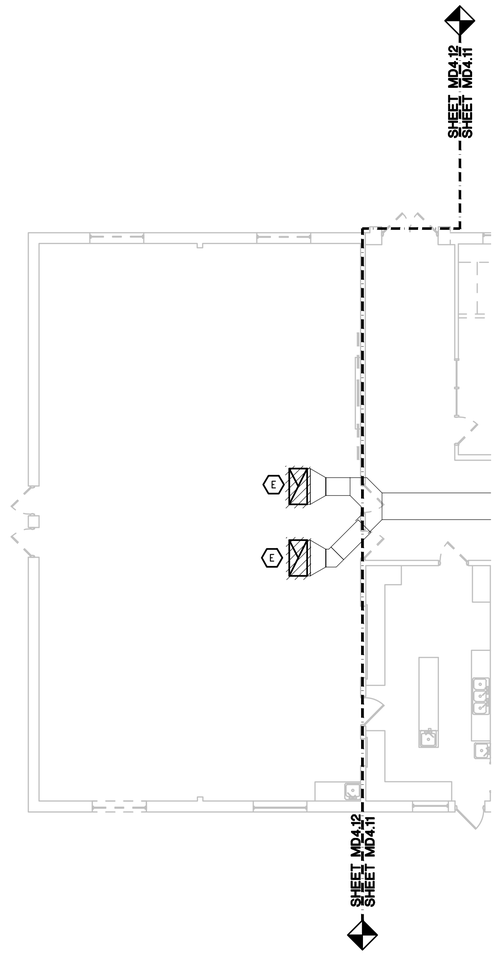
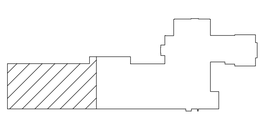
G. CAP GRAVITY RELIEF LOUVER.



SHEET METAL DEMOLITION PLAN (PART B)
SCALE: 1/8" = 1' - 0"



KEY PLAN
NO SCALE

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www.PeterBassoAssociates.com
PBA Project No.: 2022.0419

Bidding and Permits: 31 July 2023
Owner Review: 14 July 2023
Design Development: 08 May 2023

SHEET METAL DEMOLITION PLAN (PART B)

EHRESMAN ARCHITECTS ehresmanarchitects.com

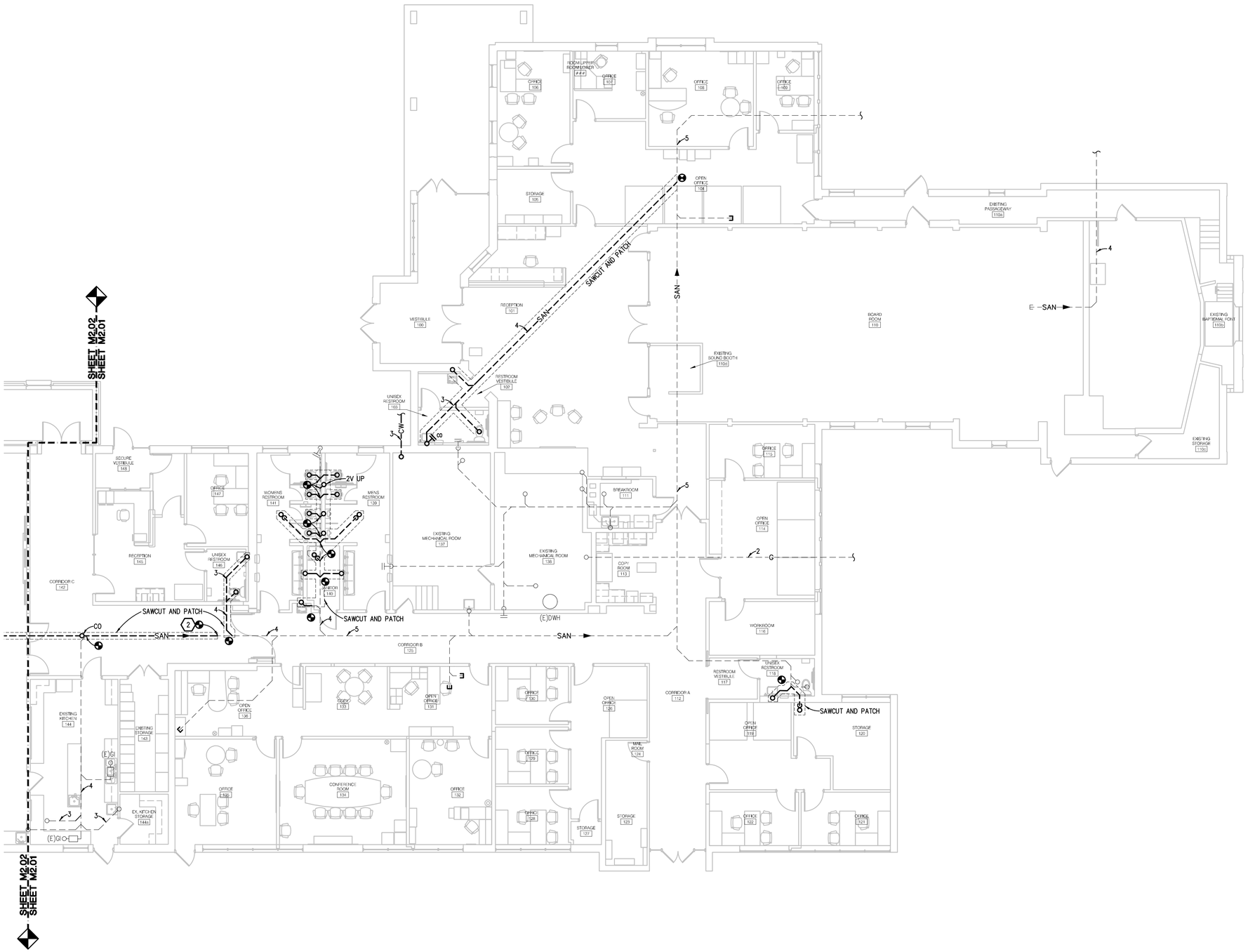
Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

MD4.12

803 W. Big Beaver Road, Suite 350, Troy, MI 48084 | 248.244.9710

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE. 1"



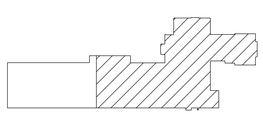
PLUMBING GENERAL NOTES:

1. THESE DRAWINGS ARE DIAGRAMMATIC, AND REPRESENT THE GENERAL INTENT AND ARRANGEMENT OF SYSTEMS. THEY ARE NOT TO BE CONSIDERED FABRICATION/COORDINATION/SHOP DRAWINGS. COORDINATION WITH OTHER TRADES IS REQUIRED. PROVIDE THE ADDITIONAL FITTINGS AND OFFSETS THAT WILL BE REQUIRED TO COMPLETE EACH SYSTEM AND TO AVOID INTERFERENCES WITH ALL OTHER SYSTEMS INCLUDING THE STRUCTURE, SHEET METAL, OTHER PIPING SYSTEMS, ELECTRICAL CONDUITS, BUS DUCTS, CABLE TRAY, LIGHT FIXTURES, ETC. AND/OR OTHER SPACE CONSTRAINTS.
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. PIPING SHALL NOT BE INSTALLED ABOVE ELECTRICAL TRANSFORMERS, SWITCHBOARDS, PANELBOARDS OR MOTOR CONTROL CENTERS.
4. 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.
5. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
6. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONED LOCATIONS OF PLUMBING FIXTURES.
7. HOT AND COLD WATER PIPING RUN-OUTS TO LAVATORIES AND SINKS SHALL BE 1/2" UNLESS OTHERWISE NOTED.
8. PLUMBING VENT PIPING THROUGH ROOF SHALL BE LOCATED A MINIMUM OF 10'-0" FROM ANY FRESH AIR INTAKE LOCATION AND A MINIMUM OF 18" CLEAR FROM THE INSIDE FACE OF PARAPET.
9. PROVIDE CODE REQUIRED CLEARANCE FOR ALL CLEANOUTS INSTALLED IN SANITARY WASTE AND VENT PIPING.
10. MINIMUM UNDERGROUND PIPE SIZE SHALL BE 3".
11. WATER SERVICE ENTRANCE PIPING SHALL BE BURIED WITH DEPTH OF COVER OVER TOP OF PIPE OF AT LEAST , OR WITH TOP OF PIPE AT LEAST 12" BELOW LEVEL OF MAXIMUM FROST PENETRATION, OR AS REQUIRED BY AUTHORITIES HAVING JURISDICTION, WHICHEVER IS DEEPEST.

⬡ CONSTRUCTION KEY NOTES:

1. 2 V UP TO 3 VTR.
2. VERIFY ADEQUATE INVERT DEPTH FOR NEW SANITARY PRIOR TO SAWCUTTING AND INSTALLATION.
3. ROUTE CONDENSATE TO FLOOR DRAIN WITHIN BOILER ROOM.
4. TERMINATE OVERFLOW ROOF CONDUCTOR DOWNSPOUT NOZZLE HIGH ON EXTERIOR WALL AND TERMINATE ROOF CONDUCTOR DOWNSPOUT NOZZLE LOW ON EXTERIOR WALL. REFER TO ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHTS.
5. PROVIDE HEAT TRACE ON ERU CONDENSATE DRAINS. REFER TO DETAIL.
6. PROVIDE AND INSTALL SHEET METAL PIPING ENCLOSURE TO CONCEAL VERTICAL CONDENSATE PIPE. REFER TO DETAIL ON M6.03.

UNDERGROUND PLUMBING PLAN (PART A)
SCALE: 1/8" = 1' - 0"



KEY PLAN
NO SCALE

Bidding and Permits: 31 July 2023
Owner Review: 14 July 2023
Design Development: 08 May 2023

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UNDERGROUND PLUMBING PLAN (PART A)

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

M2.01

803 W. Big Beaver Road, Suite 350, Troy, MI 48084 | 248.244.9710

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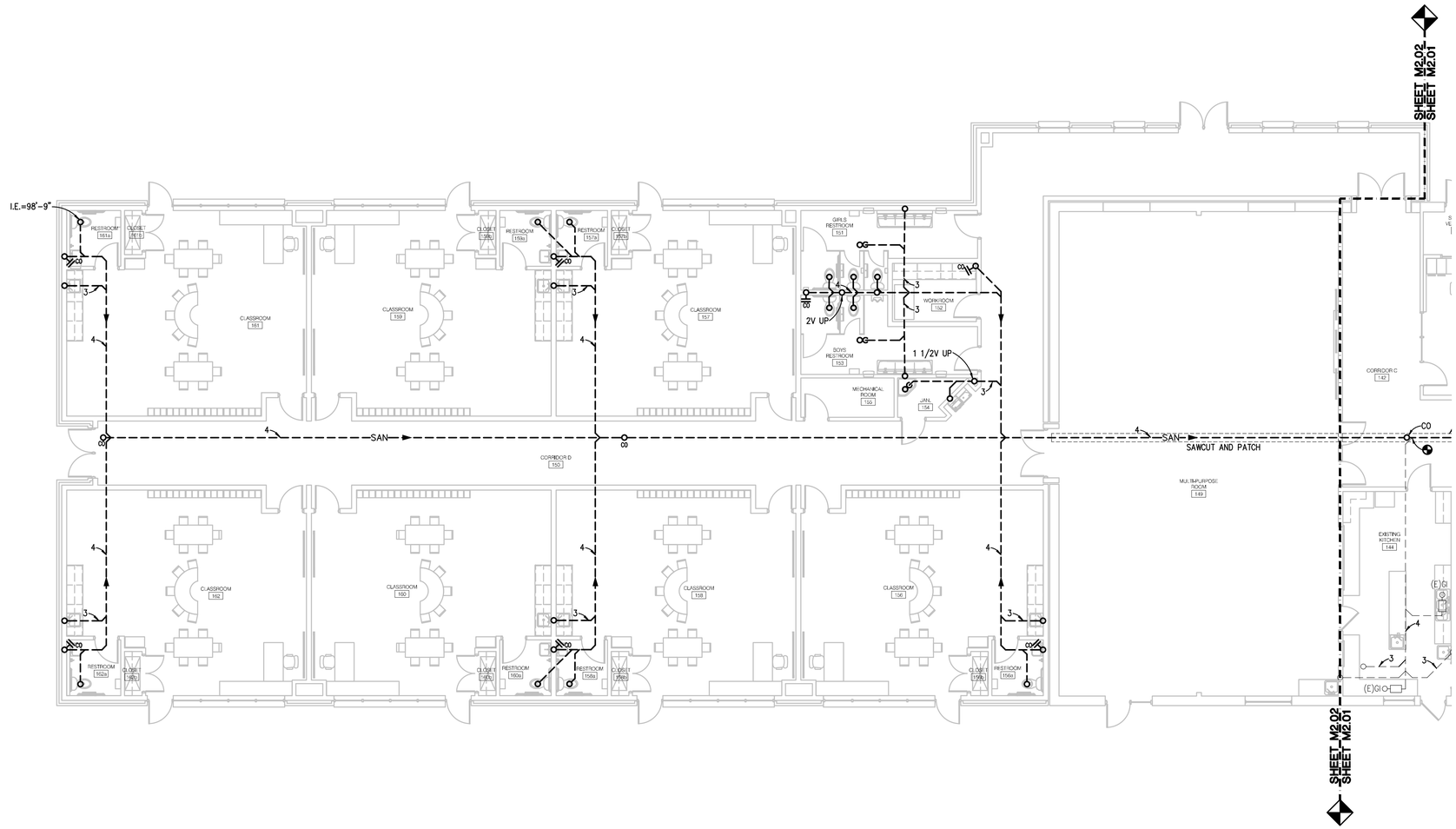
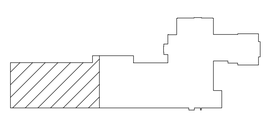


UNDERGROUND PLUMBING PLAN (PART B)
SCALE: 1/8" = 1' - 0"



KEY PLAN
NO SCALE

Bidding and Permits: 31 July 2023
Owner Review: 14 July 2023
Design Development: 08 May 2023

UNDERGROUND PLUMBING PLAN (PART B)

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PBA Project No.: 2022.0419

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

M2.02

803 W. Big Beaver Road, Suite 350, Troy, MI 48084 | 248.244.9710

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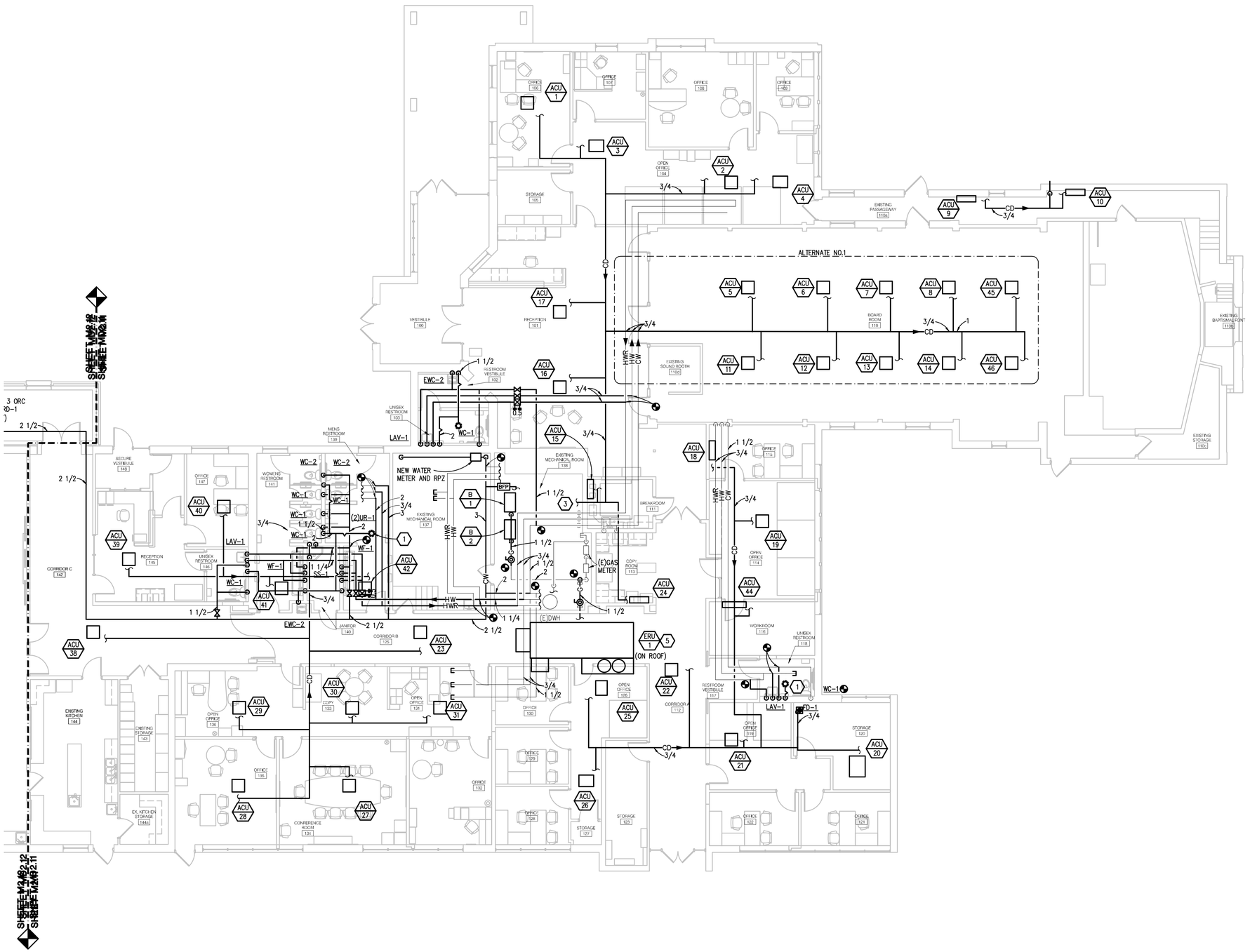

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PLUMBING PLAN (PART A)
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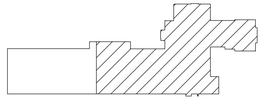

KEY PLAN
NO SCALE

Bidding and Permits: 31 July 2023
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Design Development: 08 May 2023

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PBA Project No.: 2022.0419

PLUMBING PLAN (PART A)

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

M2.11

803 W. Big Beaver Road, Suite 350, Troy, MI 48084 | 248.244.9710

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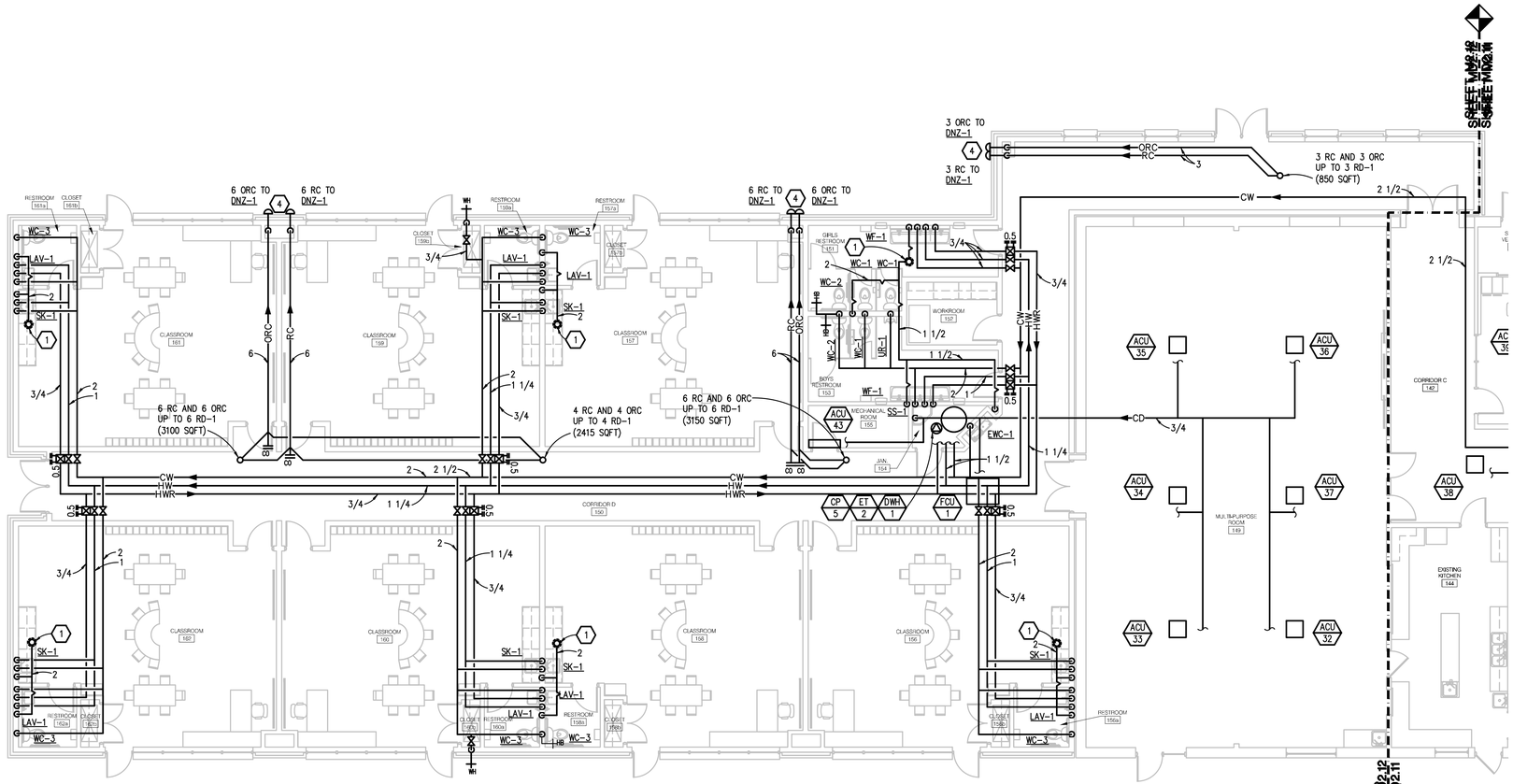
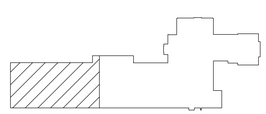


PLUMBING PLAN (PART B)
SCALE: 1/8" = 1' - 0"



KEY PLAN
NO SCALE

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PLUMBING PLAN (PART B)

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

M2.12

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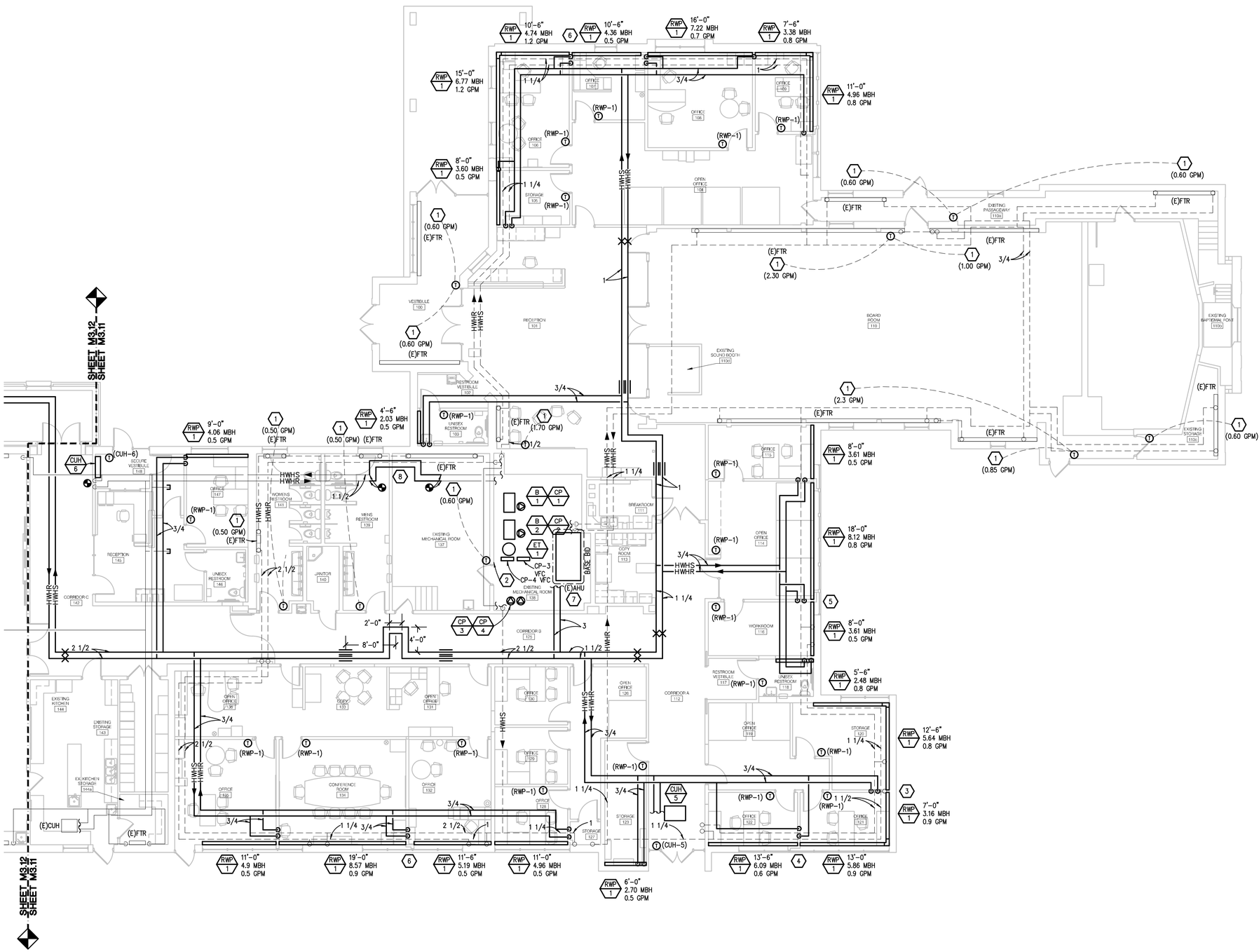

HVAC PIPING PLAN (PART A)
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HVAC PIPING GENERAL NOTES:

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5. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
6. SUBMIT PROPOSED METHODS OF ANCHORING AND GUIDING PIPING SYSTEMS TO STRUCTURAL ENGINEER FOR APPROVAL.
7. COORDINATE LOCATION OF DUCT-MOUNTED HYDRONIC DEVICES WITH SHEET METAL TRADES.
8. BRANCH PIPING SERVING TERMINAL UNIT HEATING COILS OR RADIANT CEILING PANELS SHALL BE 3/4" UNLESS OTHERWISE NOTED. BRANCH PIPING SERVING MORE THAN ONE TERMINAL UNIT HEATING COIL SHALL BE 1" UNLESS OTHERWISE NOTED. BRANCH PIPING SERVING HOT WATER UNIT HEATERS AND CABINET UNIT HEATERS SHALL BE 1" UNLESS OTHERWISE NOTED.
9. REFER TO TEMPERATURE CONTROLS STANDARD MOUNTING HEIGHTS DETAIL FOR ELEVATIONS OF WALL MOUNTED TEMPERATURE CONTROL DEVICES.

CONSTRUCTION KEY NOTES:

1. MECHANICAL CONTRACTOR TO REPLACE CONTROL VALVE. REFER TO TEMPERATURE CONTROLS DRAWINGS FOR ADDITIONAL INFORMATION.
2. EMERGENCY SHUTDOWN SWITCH.
3. ROUTE 3/4" HWHS LINE DOWN IN NEW WALL TO SERVE RADIANT WALL PANELS TO THE NORTH AND SOUTH.
4. ROUTE 3/4" HWHS LINE DOWN IN NEW WALL TO SERVE RADIANT WALL PANELS TO THE EAST AND WEST.
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7. REFER TO HOT WATER HEATING SYSTEM PIPING DIAGRAM FOR REQUIREMENTS.
8. REROUTE HWHS/R PIPING INTO CORNER, COORDINATE WITH ELECTRICAL PHASING. DO NOT ROUTE ABOVE ELECTRICAL EQUIPMENT.

Bidding and Permits: 31 July 2023
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KEY PLAN
NO SCALE

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PBA Project No: 2022.0419

HVAC PIPING PLAN (PART A)

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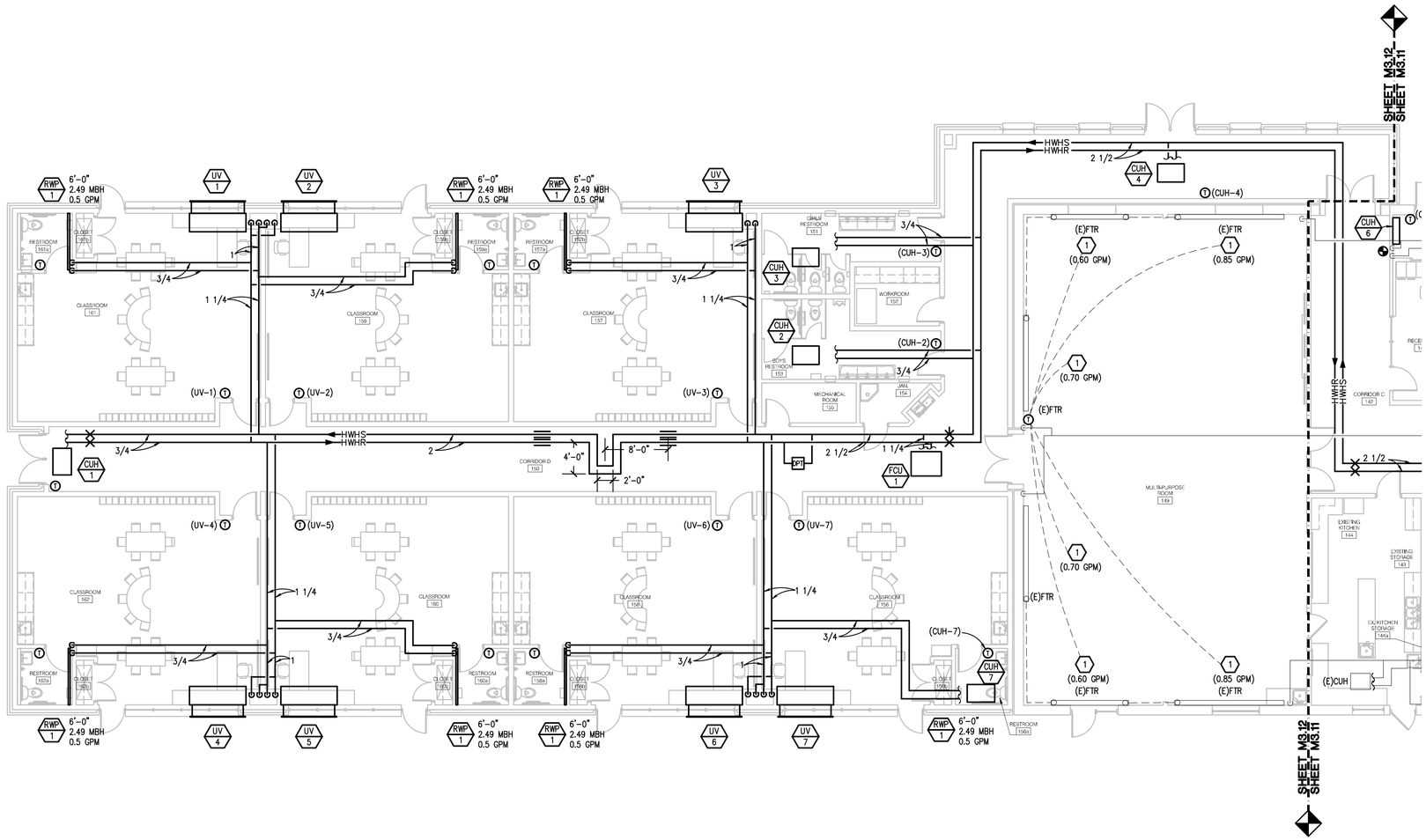
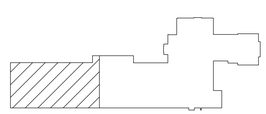


HVAC PIPING PLAN (PART B)
SCALE: 1/8" = 1' - 0"



KEY PLAN
NO SCALE

Bidding and Permits: 31 July 2023
Owner Review: 14 July 2023
Design Development: 08 May 2023

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PBA Project No.: 2022.0419

HVAC PIPING PLAN (PART B)

EHRESMAN ARCHITECTS ehresmanarchitects.com

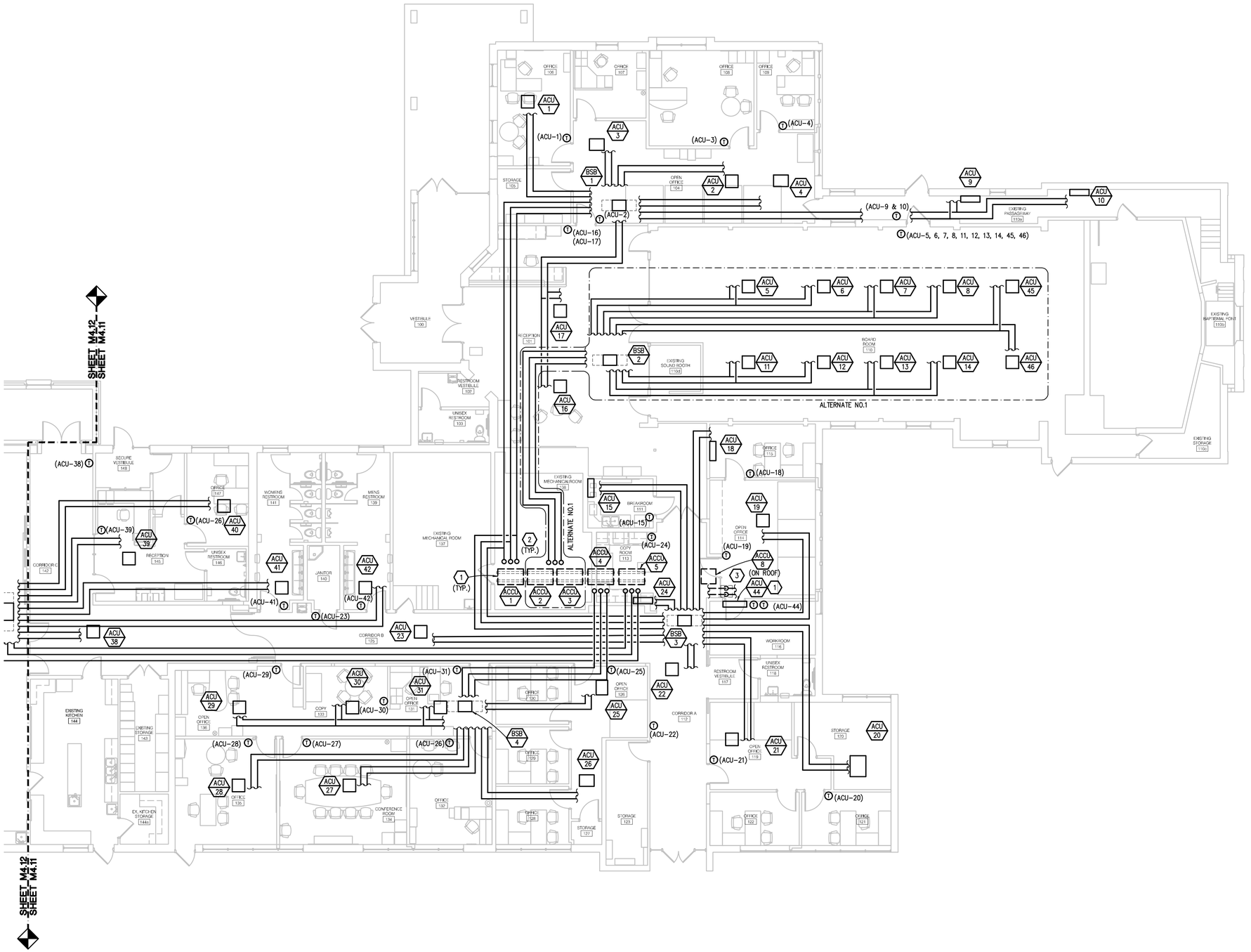
Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

M3.12

803 W. Big Beaver Road, Suite 350, Troy, MI 48084 | 248.244.9710

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE. 1"



REFRIGERANT PIPING PLAN (PART A)
SCALE: 1/8" = 1' - 0"

HVAC PIPING GENERAL NOTES:

1. THESE DRAWINGS ARE DIAGRAMMATIC, AND REPRESENT THE GENERAL INTENT AND ARRANGEMENT OF SYSTEMS. THEY ARE NOT TO BE CONSIDERED FABRICATION/COORDINATION/SHOP DRAWINGS. COORDINATION WITH OTHER TRADES IS REQUIRED. PROVIDE THE ADDITIONAL FITTINGS AND OFFSETS THAT WILL BE REQUIRED TO COMPLETE EACH SYSTEM AND TO AVOID INTERFERENCES WITH ALL OTHER SYSTEMS INCLUDING THE STRUCTURE, SHEET METAL, OTHER PIPING SYSTEMS, ELECTRICAL CONDUITS, BUS DUCTS, CABLE TRAY, LIGHT FIXTURES, ETC. AND/OR OTHER SPACE CONSTRAINTS.
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. PIPING AND DUCTWORK SHALL NOT BE INSTALLED ABOVE ELECTRICAL TRANSFORMERS, SWITCHBOARDS, PANELBOARDS OR MOTOR CONTROL CENTERS.
4. 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.
5. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
6. SUBMIT PROPOSED METHODS OF ANCHORING AND GUIDING PIPING SYSTEMS TO STRUCTURAL ENGINEER FOR APPROVAL.
7. COORDINATE LOCATION OF DUCT-MOUNTED HYDRONIC DEVICES WITH SHEET METAL TRADES.
8. BRANCH PIPING SERVING TERMINAL UNIT HEATING COILS OR RADIANT CEILING PANELS SHALL BE 3/4" UNLESS OTHERWISE NOTED. BRANCH PIPING SERVING MORE THAN ONE TERMINAL UNIT HEATING COIL SHALL BE 1" UNLESS OTHERWISE NOTED. BRANCH PIPING SERVING HOT WATER UNIT HEATERS AND CABINET UNIT HEATERS SHALL BE 1" UNLESS OTHERWISE NOTED.
9. REFER TO TEMPERATURE CONTROLS STANDARD MOUNTING HEIGHTS DETAIL FOR ELEVATIONS OF WALL MOUNTED TEMPERATURE CONTROL DEVICES.

(#) CONSTRUCTION KEY NOTES:

1. PROVIDE NEW ROOF MOUNTED EQUIPMENT RAILS FOR NEW CONDENSING UNITS.
2. ROUTE NEW REFRIGERANT PIPING UP TO CONDENSING UNITS ON ROOF. INTALL DUAL MODULE REFRIGERANT NETWORK MANIFOLD KIT (PROVIDED BY VRV MANUFACTURER). REFER TO MANUFACTURER INSTALLATION REQUIREMENTS.
3. PROVIDE PIPE PORTAL TO CONNECT INDOOR UNIT TO OUTDOOR CONDENSING UNIT THRU ROOF.

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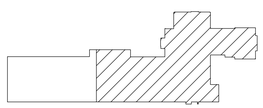

KEY PLAN
NO SCALE

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REFRIGERANT PIPING PLAN (PART A)

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Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

M4.11

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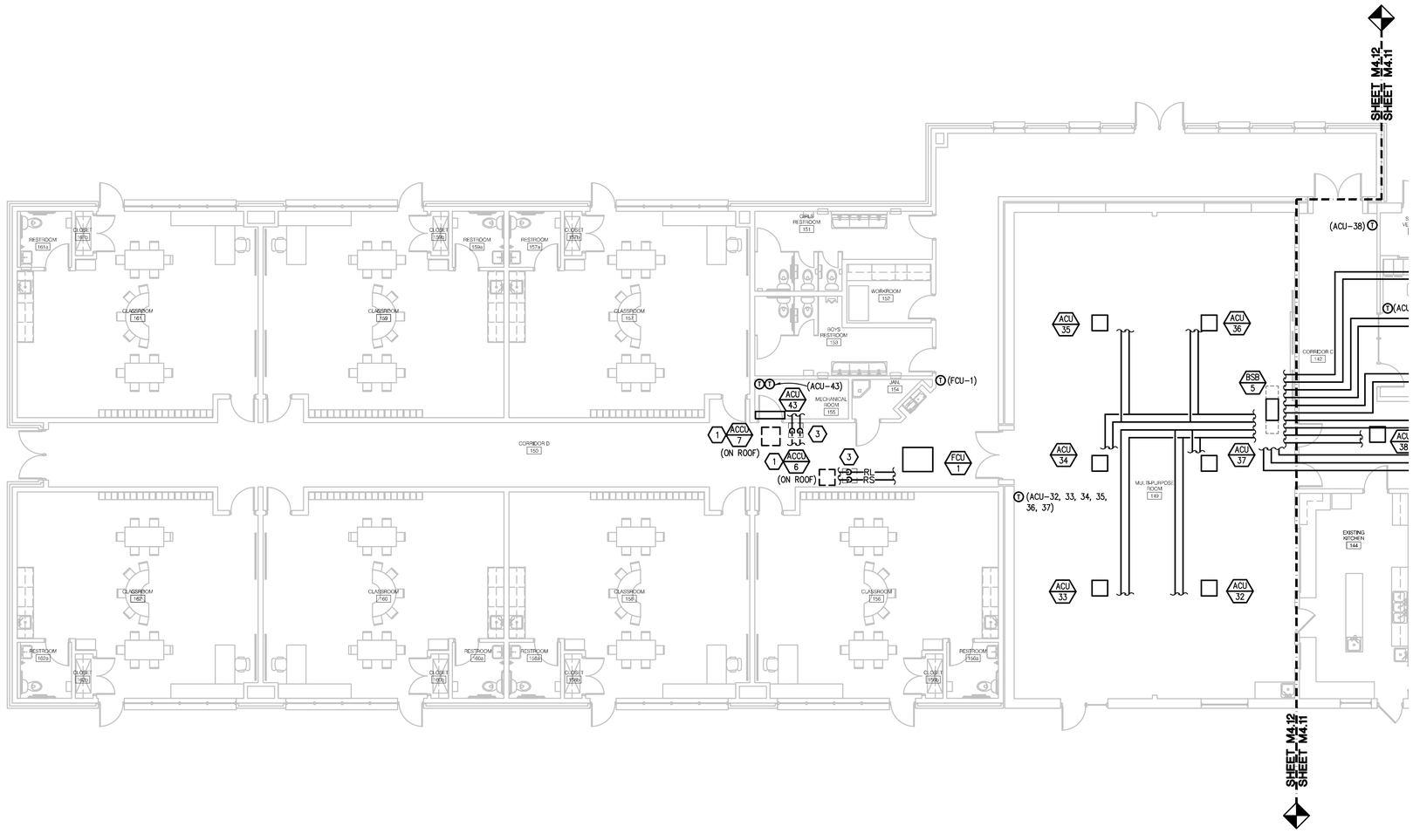

REFRIGERANT PIPING PLAN (PART B)
SCALE: 1/8" = 1' - 0"

HVAC PIPING GENERAL NOTES:

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CONSTRUCTION KEY NOTES:

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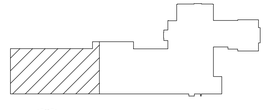

KEY PLAN
NO SCALE

Bidding and Permits: 31 July 2023
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Design Development: 08 May 2023

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REFRIGERANT PIPING PLAN (PART B)

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Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

M4.12

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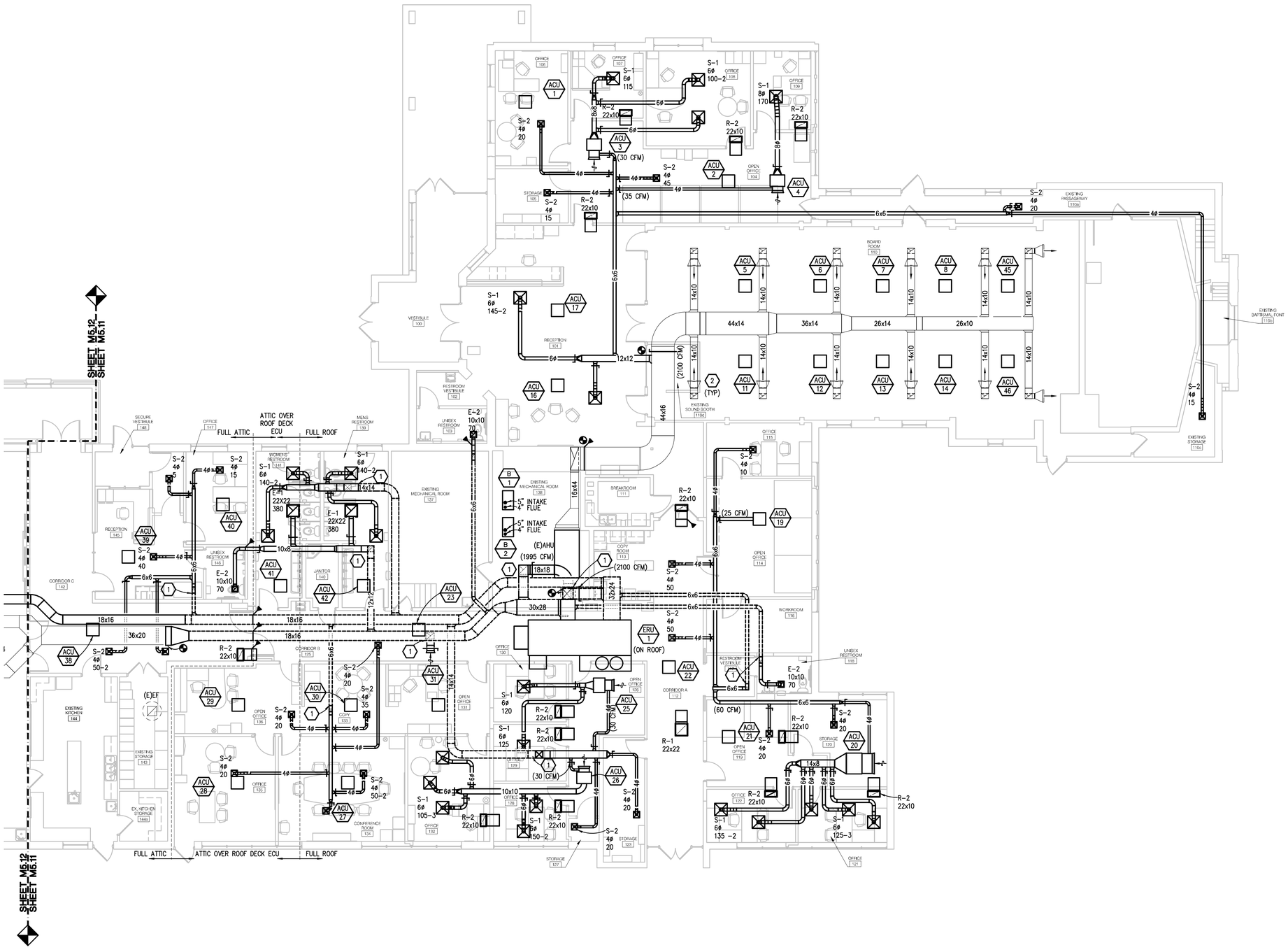

SHEET METAL GENERAL NOTES:

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7. REFER TO TEMPERATURE CONTROLS STANDARD MOUNTING HEIGHTS DETAIL FOR ELEVATIONS OF WALL MOUNTED TEMPERATURE CONTROL DEVICES.

(#) CONSTRUCTION KEY NOTES:

1. PROVIDE ROOF CURB AT DUCT PENETRATION.
2. REBALANCE EXISTING DIFFUSERS AT 175 CFM.

SHEET METAL PLAN (PART A)
SCALE: 1/8" = 1' - 0"

KEY PLAN
NO SCALE

Bidding and Permits: 31 July 2023
Owner Review: 14 July 2023
Design Development: 08 May 2023

SHEET METAL PLAN (PART A)

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Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

M5.11

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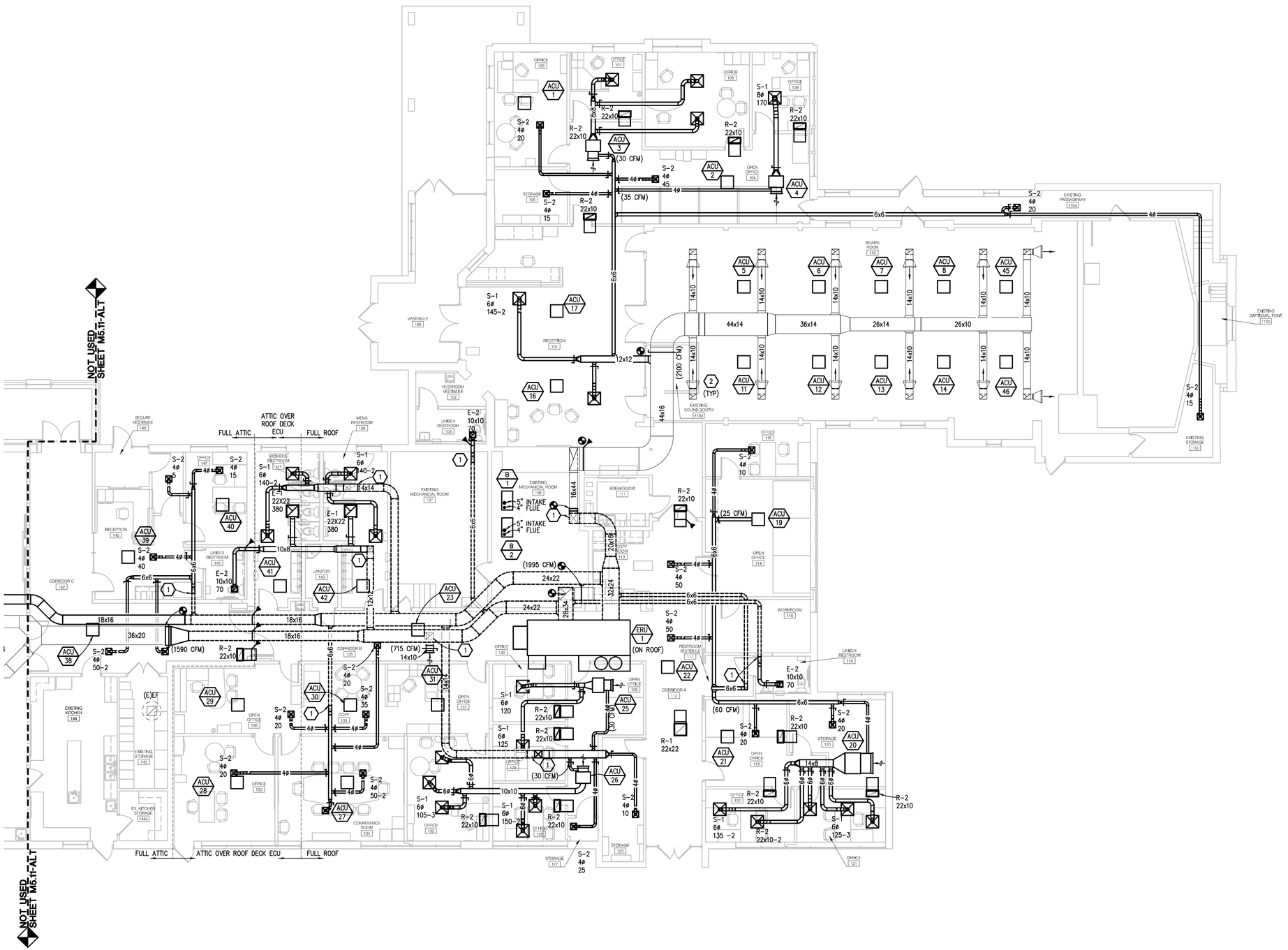

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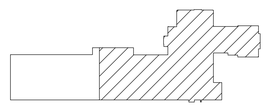
SHEET METAL PLAN (PART A) - ALTERNATE

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



KEY PLAN
NO SCALE

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SHEET METAL PLAN (PART A) - ALTERNATE

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Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

M5.11-ALT

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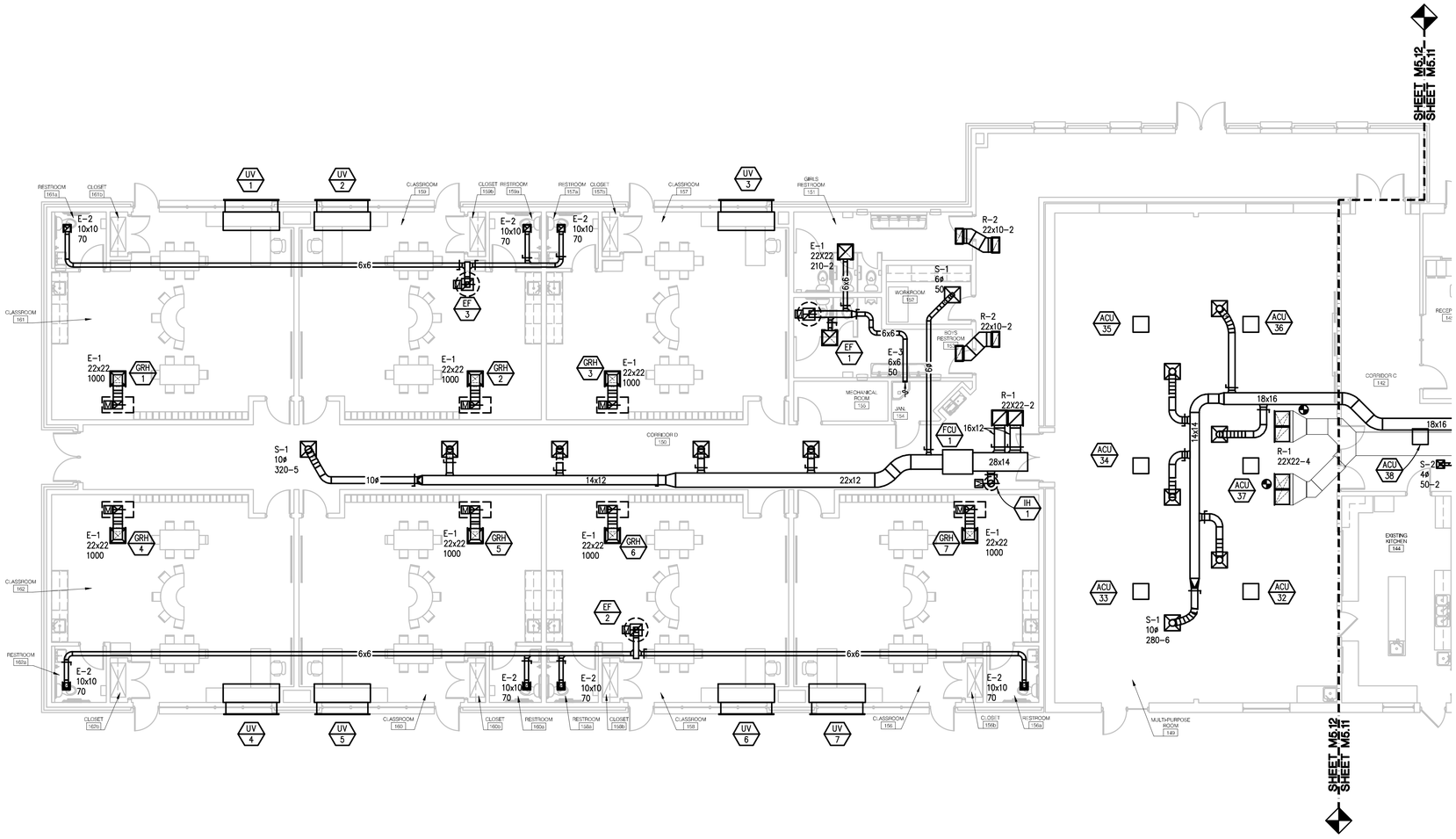
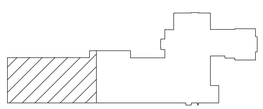


SHEET METAL PLAN (PART B)
SCALE: 1/8" = 1' - 0"



KEY PLAN
NO SCALE

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SHEET METAL PLAN (PART B)

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Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

M5.12

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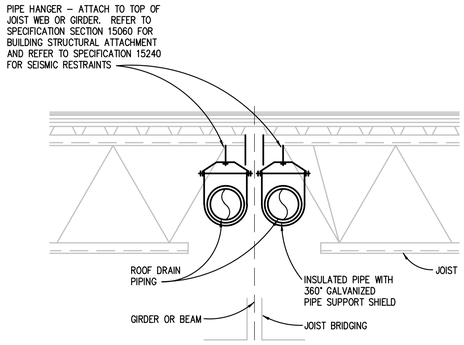
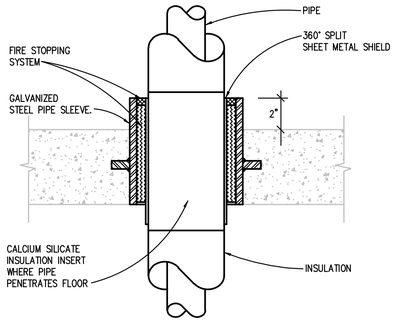
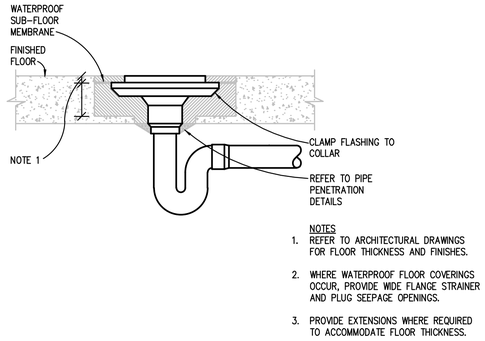


ROOF DRAIN PIPING DETAIL
NO SCALE

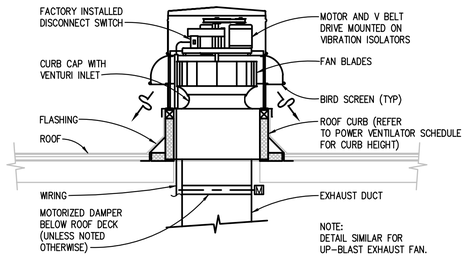


NEW FLOOR PIPE PENETRATION DETAIL
NO SCALE

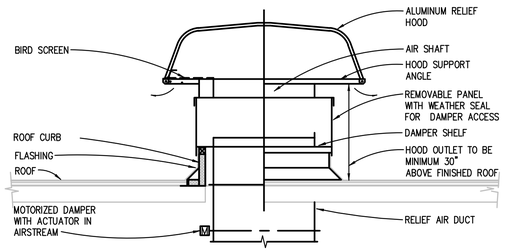


NOTES
1. REFER TO ARCHITECTURAL DRAWINGS FOR FLOOR THICKNESS AND FINISHES.
2. WHERE WATERPROOF FLOOR COVERINGS OCCUR, PROVIDE WIDE FLANGE STRAINER AND PLUG SEEPAGE OPENINGS.
3. PROVIDE EXTENSIONS WHERE REQUIRED TO ACCOMMODATE FLOOR THICKNESS.

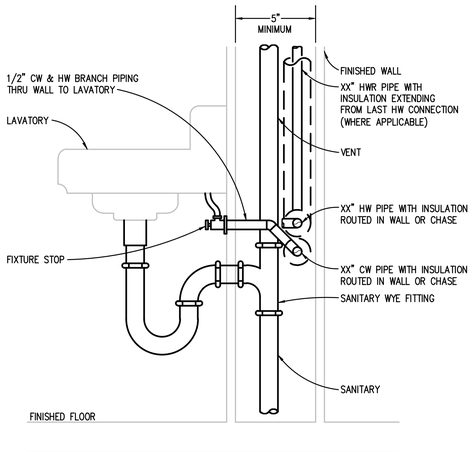
FLOOR DRAIN DETAIL (NEW FLOORS)
NO SCALE



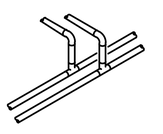
ROOF MOUNTED POWER VENTILATOR EXHAUST FAN DETAIL
NO SCALE



GRAVITY RELIEF AIR HOOD CURB DETAIL
NO SCALE

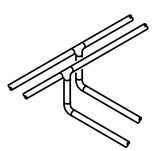


TYPICAL LAVATORY DETAIL
NO SCALE



BRANCH CONNECTION OFF TOP

APPLIES TO THE FOLLOWING SYSTEMS:
DOMESTIC WATER
NATURAL GAS

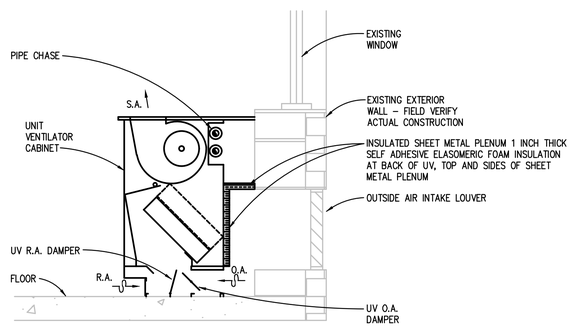


BRANCH CONNECTION OFF BOTTOM

APPLIES TO THE FOLLOWING SYSTEMS:
HOT WATER HEATING

NOTE: BOTTOM AS INDICATED OR SIDE CONNECTION IS ACCEPTABLE. CONNECTION ABOVE CENTERLINE OF MAINS IS NOT ACCEPTABLE.

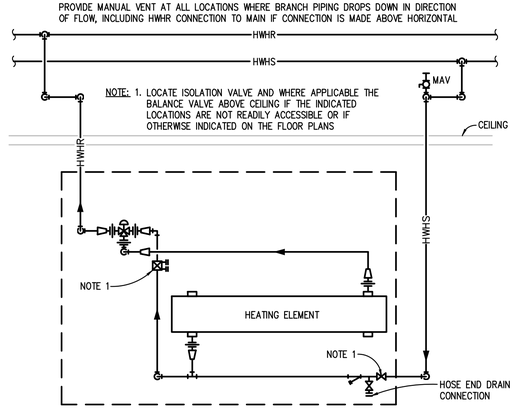
TYPICAL BRANCH TAKE-OFF CONNECTION PIPING DETAIL
NO SCALE



NOTES:
OUTSIDE AIR LOUVER AND WALL/SILL CONDITION SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL COORDINATE INSTALLATION WITH ACTUAL FIELD CONDITIONS.

UNIT VENTILATOR INSTALLATION DETAIL
NO SCALE

PROVIDE MANUAL VENT AT ALL LOCATIONS WHERE BRANCH PIPING DROPS DOWN IN DIRECTION OF FLOW, INCLUDING HWHR CONNECTION TO MAIN IF CONNECTION IS MADE ABOVE HORIZONTAL



DOWNFEED CUH WITH THREE WAY CONTROL VALVE PIPING DIAGRAM
NO SCALE

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MECHANICAL DETAILS

EHRESMAN ARCHITECTS ehresmanarchitects.com

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Project No. 3221

M6.01

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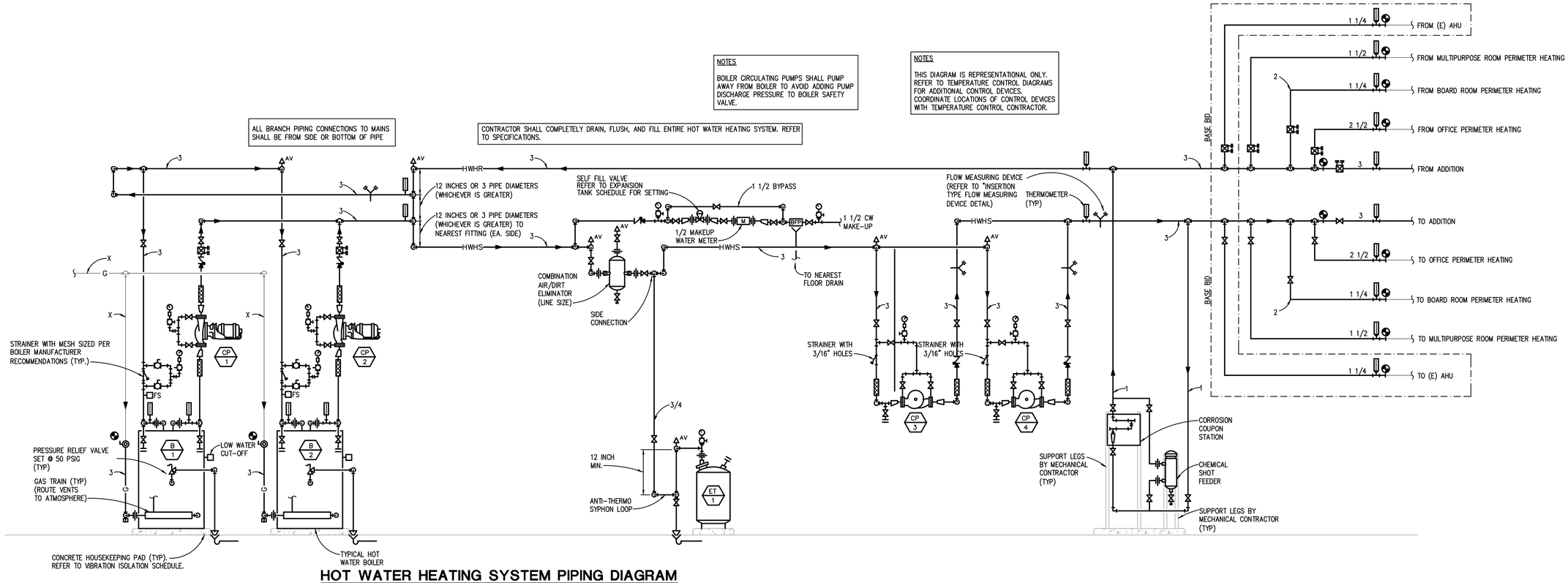
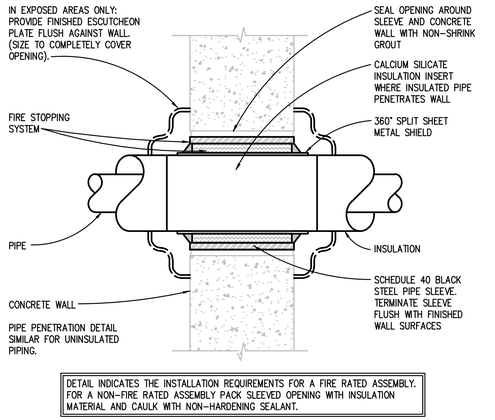


HOT WATER HEATING SYSTEM PIPING DIAGRAM

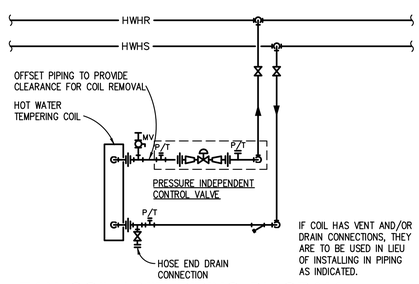
NO SCALE



DETAIL INDICATES THE INSTALLATION REQUIREMENTS FOR A FIRE RATED ASSEMBLY. FOR A NON-FIRE RATED ASSEMBLY PACK SLEEVED OPENING WITH INSULATION MATERIAL AND CAULK WITH NON-HARDENING SEALANT.

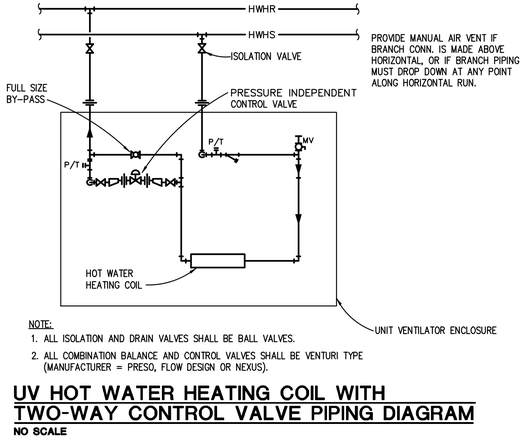
FIRE RATED AND NON-FIRE RATED POURED CONCRETE OR BLOCK WALL PIPE PENETRATION DETAIL

NO SCALE



FAN COIL UNIT PIPING DIAGRAM

NO SCALE

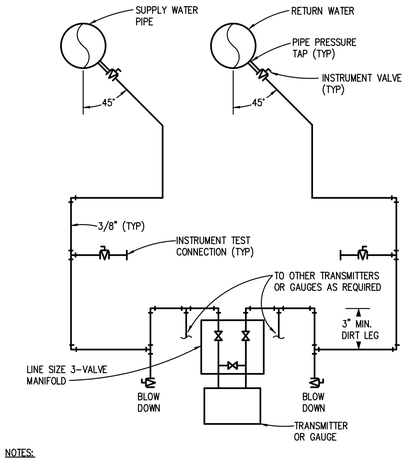


NOTE:

1. ALL ISOLATION AND DRAIN VALVES SHALL BE BALL VALVES.
2. ALL COMBINATION BALANCE AND CONTROL VALVES SHALL BE VENTURI TYPE (MANUFACTURER = PRESO, FLOW DESIGN OR NEXUS).

UV HOT WATER HEATING COIL WITH TWO-WAY CONTROL VALVE PIPING DIAGRAM

NO SCALE



NOTES:

1. ON HORIZONTAL PIPES, INSTALL PIPE PRESSURE TAP AT 45° ANGLE FROM BOTTOM OF PIPE.
2. PROVIDE LINE SIZE 3-VALVE MANIFOLD AS INDICATED FOR EACH TRANSMITTER AND GAUGE.

DIFFERENTIAL PRESSURE SENSING DEVICE DETAIL

NO SCALE

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PBA Project No: 2022.0419

Bidding and Permits: 31 July 2023
Owner Review: 14 July 2023
Design Development: 08 May 2023

MECHANICAL DETAILS

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

M6.02

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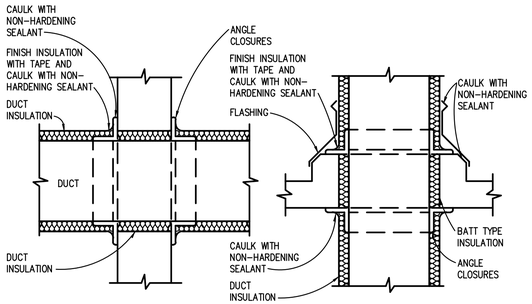
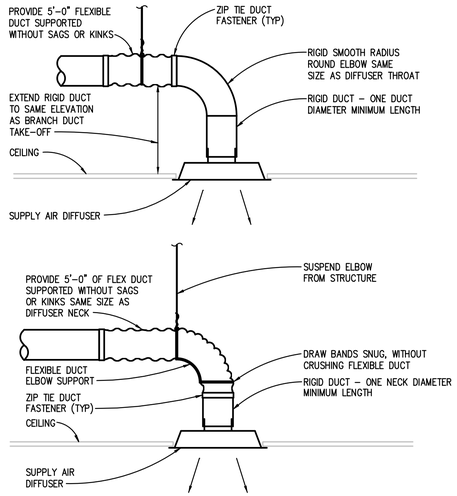


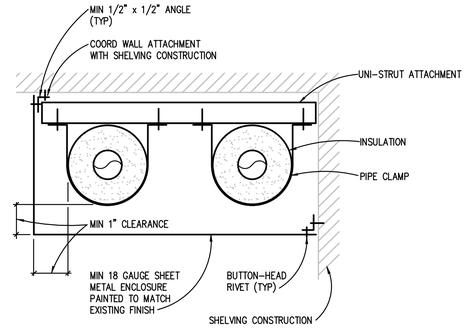
VERTICAL OR HORIZONTAL (NON FIRE RATED ASSEMBLY) DUCT PENETRATION DETAIL

NO SCALE



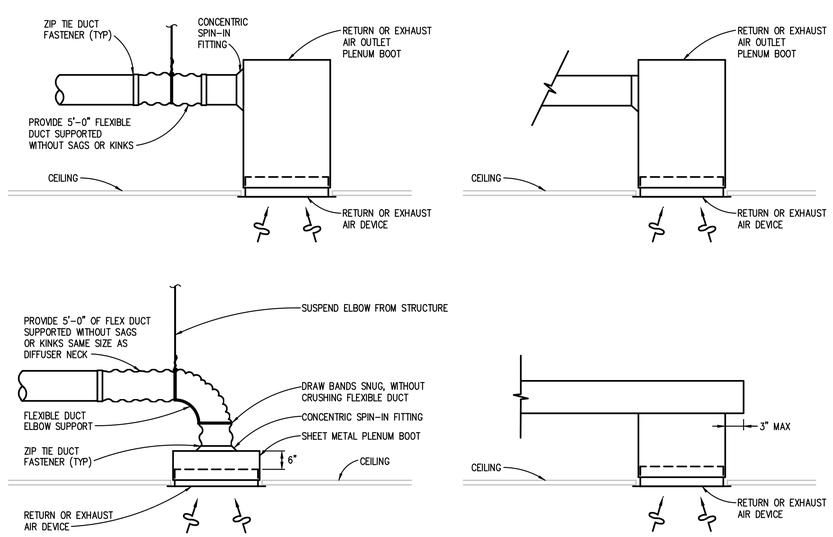
ROUND NECK SUPPLY AIR DIFFUSER DETAIL

NO SCALE



PIPE ENCLOSURE DETAIL

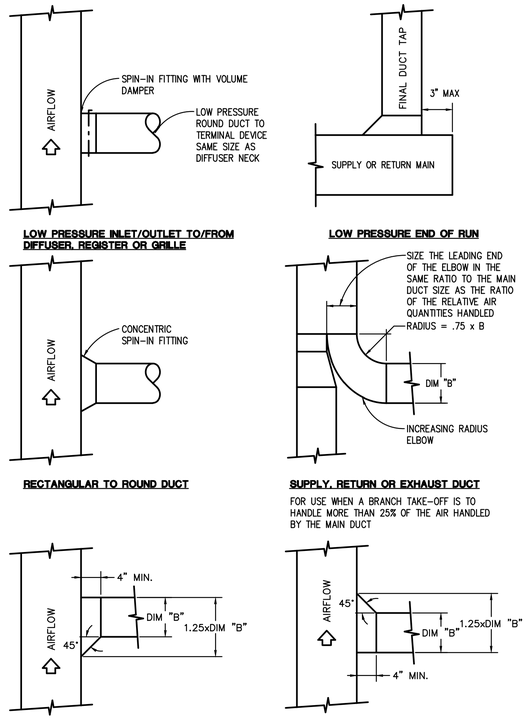
NO SCALE



RETURN OR EXHAUST AIR DEVICE INSTALLATION DETAIL

NO SCALE

NOTE: PAINT INTERIOR SURFACE OF PLENUM BOX FLAT BLACK.



RECTANGULAR DUCT BRANCH TAKE-OFF DETAILS

NO SCALE

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MECHANICAL DETAILS

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PLUMBING PIPING & VALVE APPLICATION SCHEDULE

	MATERIAL																	PRESSURE CONNECTIONS											GRAVITY DWV CONNECTIONS				ISOLATION VALVES					
PIPE SIZE (INCHES)	SOFT COPPER TYPE K	HARD COPPER TYPE L	HARD COPPER TYPE M	CARBON STEEL (SCHED. 40)	CARBON STEEL (STD.)	GALV. STEEL (SCHED. 40)	STAINLESS STEEL (SCHED. 10)	PEX	PE PIPE	PE SHEATHED CARBON STEEL PIPE	CSST	NO-HUB CISP	PVC TYPE DWV	PP DRAINAGE PIPE	COPPER TYPE DWV	DUCTILE IRON PIPE	SOLDERED	BRAZED	WELDED	THREADED	FLANGED	GROOVED	INSERT & CRIMP	FUSION	PRESSURE-SEAL	MECHANICALLY-FORMED TEE	MECHANICAL JOINT	PUSH-ON-JOINT	SOLVENT WELDED	SOLDERED	FUSION	CISP HUBLESS	HEAVY-DUTY HUBLESS	BALL	AGA BALL	GENERAL SERVICE BUTTERFLY	LUBRICATED PLUG	GATE	KEYED NOTES
ABOVEGROUND DOMESTIC WATER (POTABLE AND NON-POTABLE) ON DISTRIBUTION SIDE OF METER - MIN. WORKING PRESS. & TEMP., 125 PSIG AT 200 DEG F																																						
UP TO 4		X															X	X			X	X			X	X							X			X			A
ABOVEGROUND SANITARY WASTE & VENT - MIN. WORKING PRESS., 10-FOOT HEAD OF WATER																																						
1-1/2 TO 15												X																					X						
UNDERGROUND SANITARY WASTE & VENT - MIN. WORKING PRESS., 10-FOOT HEAD OF WATER																																						
3 TO 12												X																						X					
ABOVEGROUND COLD CONDENSATE DRAIN - MIN. WORKING PRESSURE, 10 FT. HEAD OF WATER																																						
ALL SIZES			X												X		X	X																					
ABOVEGROUND PUMPED COLD CONDENSATE DRAIN - MIN. WORKING PRESSURE, 125 PSIG																																						
UP TO 2			X															X	X															X					
2-1/2 TO 4			X																X																	X			
ABOVEGROUND STORM DRAINAGE - MIN. WORKING PRESS., 10-FOOT HEAD OF WATER																																						
2												X																					X						
3 TO 15												X																					X						
UNDERGROUND STORM DRAINAGE - MIN. WORKING PRESS., 10-FOOT HEAD OF WATER																																						
3 TO 12												X																						X					
15												X																						X					
ABOVEGROUND FUEL GAS - MIN. WORKING PRESS., 100 PSIG																																						
UP TO 2				X																X	X													X				E
2-1/2 TO 3				X																X		X												X				E
4 TO 10				X																X		X														X		E
12 AND LARGER					X															X		X														X		E
UNDERGROUND FUEL GAS - MIN. WORKING PRESS., 100 PSIG																																						
1/2 TO 12									X															X														F

GENERAL NOTES

1. 'X' INDICATES ACCEPTABLE SELECTION. IF MORE THAN ONE SELECTION IS INDICATED FOR A PIPING SYSTEM, CONTRACTOR MAY SELECT FROM THOSE INDICATED SELECTIONS.
2. DISSIMILAR-METAL PIPING JOINTS: CONSTRUCT JOINTS USING DIELECTRIC FITTINGS COMPATIBLE WITH BOTH PIPING MATERIALS.

    a. NPS 2 AND SMALLER: USE DIELECTRIC NIPPLE/WATERWAY.
    b. NPS 2-1/2 AND LARGER: USE DIELECTRIC FLANGE KITS.

3. USE UNIONS OR FLANGES AT VALVE AND EQUIPMENT CONNECTIONS.
4. PLUMBING EQUIPMENT DRAINS, VENTS, SAFETY VALVE PIPING, BLOWDOWN PIPING AND THE LIKE SHALL BE SAME PIPING MATERIAL AS ASSOCIATED PIPING SYSTEM.
5. GROOVED END VALVES MAY BE USED WITH GROOVED PIPING.

KEYED NOTES

A. GROOVED AND FLANGED FITTINGS, JOINTS, AND COUPLINGS, IF INDICATED AS AN ACCEPTABLE SELECTION, MAY BE USED IN ACCESSIBLE LOCATIONS ONLY FOR THIS PIPING SYSTEM. ACCESSIBLE LOCATIONS ARE DEFINED AS EXPOSED CONSTRUCTION OR ABOVE LAY-IN CEILINGS.
B. JOINTS ARE NOT PERMITTED ON UNDERGROUND WATER PIPING.
C. USE CAST IRON DRAINAGE PATTERN (DURHAM) FITTINGS.
D. INSTALL IN CONTAINMENT JACKET, REFER TO SPECIFICATIONS.
E. VALVES, UNIONS, AND FLANGED JOINTS MAY BE USED IN ACCESSIBLE LOCATIONS ONLY, EXCLUDING CEILINGS USED AS AIR PLENUMS. ACCESSIBLE LOCATIONS ARE DEFINED AS EXPOSED CONSTRUCTION OR ABOVE LAY-IN CEILINGS. USE ONLY STEEL WELDED FITTINGS AND WELDED JOINTS IN CEILING USED AS AIR PLENUMS.
F. NO JOINTS ALLOWED UNDERGROUND.

MECHANICAL EQUIPMENT INSULATION APPLICATION SCHEDULE

	INSULATION MATERIAL & THICKNESS (INCHES)							FIELD APPLIED JACKET MATERIAL		
	FLEXIBLE ELASTOMERIC	FIBERGLASS, LARGE DIAMETER PIPE & TANK	FIBERGLASS BOARD	POLYISOCYANURATE	PHENOLIC	CELLULAR GLASS	CALCIUM SILICATE	ALUMINUM	PVC	KEYED NOTES
HEATING WATER AIR SEPARATORS		2	2			3	3	X	X	

GENERAL NOTES

1. 'X' OR THICKNESS IN INCHES INDICATE ACCEPTABLE SELECTION. IF MORE THAN ONE SELECTION IS INDICATED FOR A SYSTEM, CONTRACTOR MAY SELECT FROM THOSE INDICATED.
2. REFER TO SPECIFICATIONS FOR FACTORY INSULATED EQUIPMENT.

KEYED NOTES

A. FIELD APPLIED JACKETS NOT REQUIRED FOR FLEXIBLE ELASTOMERIC INSULATION.
B. SELECT INSULATION THICKNESS TO PROVIDE MINIMUM R-VALUE OF 12.5.

ABOVEGROUND HVAC PIPING & VALVE APPLICATION SCHEDULE

	MATERIAL						CONNECTION								ISOLATION VALVES				
PIPE SIZE (INCHES)	SOFT COPPER TYPE K	HARD COPPER TYPE L	HARD COPPER TYPE M	CARBON STEEL (SCHED. 40)	CARBON STEEL (SCHED. 80)	CARBON STEEL (STD.)	COPPER TYPE DWV	SOLDERED	BRAZED	WELDED	THREADED	FLANGED	GROOVED	PRESSURE SEAL	MECHANICALLY FORMED TEE	BALL	GENERAL SERVICE BUTTERFLY	HI-PERF BUTTERFLY	GATE	KEYED NOTES
HEATING HOT WATER SUPPLY & RETURN - MIN. WORKING PRESS. & TEMP., 125 PSIG AT 200 DEG F																				
UP TO 2				X							X					X				
UP TO 2		X						X	X					X	X	X				
2-1/2 TO 4				X						X		X	X				X			A
2-1/2 TO 4		X							X				X	X	X		X			A
6 TO 8				X							X	X					X			A
6 TO 8		X							X				X		X		X			A
10				X						X		X	X				X			A
12						X				X		X	X				X			A
14 AND LARGER						X				X		X					X			A

GENERAL NOTES

1. 'X' INDICATES ACCEPTABLE SELECTION. IF MORE THAN ONE SELECTION IS INDICATED FOR A PIPING SYSTEM, CONTRACTOR MAY SELECT FROM THOSE INDICATED SELECTIONS.
2. DISSIMILAR-METAL PIPING JOINTS: CONSTRUCT JOINTS USING DIELECTRIC FITTINGS COMPATIBLE WITH BOTH PIPING MATERIALS. IF A BRONZE VALVE CONNECTS THE DISSIMILAR METALS NO FURTHER DIELECTRIC ISOLATION IS REQUIRED.

    a. NPS 2 AND SMALLER: USE BRASS COUPLING, NIPPLE, OR UNION.
    b. NPS 2-1/2 AND LARGER: USE DIELECTRIC FLANGE KITS.

3. USE UNIONS OR FLANGES AT VALVE AND EQUIPMENT CONNECTIONS.
4. HVAC EQUIPMENT DRAINS, VENTS, SAFETY VALVE PIPING, BLOWDOWN PIPING AND THE LIKE SHALL BE SAME PIPING MATERIAL AS ASSOCIATED PIPING SYSTEM.
5. GROOVED END VALVES MAY BE USED WITH GROOVED PIPING.

KEYED NOTES

A. GROOVED AND FLANGED FITTINGS, JOINTS, AND COUPLINGS, IF INDICATED AS AN ACCEPTABLE SELECTION, MAY BE USED IN ACCESSIBLE LOCATIONS FOR THIS PIPING SYSTEM ONLY. ACCESSIBLE LOCATIONS ARE DEFINED AS EXPOSED CONSTRUCTION OR ABOVE LAY-IN CEILINGS.
B. BALL VALVE WITH 250 PSIG STEAM TRIM.
C. BALL VALVE WITH 150 PSIG STEAM TRIM.

SCHEDULES GENERAL NOTES:

TYPICAL FOR ALL SCHEDULE SHEETS:

1. REFER TO ELECTRICAL STANDARD SCHEDULES, ONE LINE DIAGRAM AND PANEL SCHEDULES FOR ADDITIONAL ELECTRICAL INFORMATION
2. PROVIDE THE FOLLOWING FACTORY-WIRED ELECTRICAL OPTIONS/ACCESSORIES WHERE INDICATED IN SCHEDULE:
    A – NON-FUSED DISCONNECT SWITCH
    B – UNIT SHALL BE SINGLE POINT ELECTRICAL CONNECTION WITH FACTORY INSTALLED DISCONNECTING MEANS AND ALL REQUIRED STARTERS AND CONTROLS
    C – SERVICE RECEPTACLE
    D – FUSED DISCONNECT SWITCH
    E – COMBINATION STARTER
    F – UNIT SHALL HAVE (2) SINGLE POINT CONNECTIONS WITH FACTORY INSTALLED DISCONNECTING MEANS AND ALL REQUIRED STARTERS AND CONTROLS. (1) CONNECTION SHALL BE FOR CONDENSING SECTION AND (1) CONNECTION SHALL BE FOR THE REMAINDER OF THE UNIT.
3. FOR MODULATION/CONTROL TYPE COLUMN, "VFC" INDICATES VARIABLE FREQUENCY CONTROLLERS, "AUTO" INDICATES AUTOMATIC OPERATION (CONTROLLED BY TEMPERATURE CONTROLS OR SELF CONTAINED CONTROLS), "MANUAL" INDICATES HAND OPERATION.
4. IF VARIABLE FREQUENCY CONTROLLERS ARE INDICATED TO BE PROVIDED AND ARE NOT INSTALLED INTEGRAL TO THE UNIT, VARIABLE FREQUENCY CONTROLLERS SHALL BE SUPPLIED BY THE MECHANICAL CONTRACTOR (UNLESS OTHERWISE NOTED) AND INSTALLED BY THE ELECTRICAL CONTRACTOR INCLUDING THE LINE SIDE AND LOAD SIDE WIRING TO THE MOTOR AND INCLUDING MISCELLANEOUS STEEL REQUIRED FOR THE SUPPORT AND MOUNTING OF THE VFC. REFER TO FLOOR PLANS FOR LOCATION.
5. WHERE EQUIPMENT IS INDICATED TO HAVE A SINGLE POINT ELECTRICAL CONNECTION, THAT EQUIPMENT SHALL COME COMPLETE WITH FACTORY INSTALLED STARTERS, MOTOR OVERLOAD PROTECTION, CONTACTORS, FUSING AND ALL NECESSARY INTERNAL WIRING AND CONTROLS. PROVIDE A FACTORY MOUNTED UNIT DISCONNECTING MEANS WHERE THE ELECTRICAL CONTRACTOR SHALL MAKE SINGLE POINT CONNECTION. INSTALL PACKAGED EQUIPMENT SUCH THAT THE ELECTRICAL CONNECTION AND CONTROLS ARE ACCESSIBLE AND HAVE CLEARANCES MEETING THE NATIONAL ELECTRICAL CODE.
6. WHERE PACKAGED EQUIPMENT IS PROVIDED, NAMEPLATE MUST INDICATE MAXIMUM OVERCURRENT PROTECTION BY HACR RATED CIRCUIT BREAKERS OR FUSES. IF FUSE PROTECTION ONLY IS INDICATED, PROVIDE A FUSIBLE DISCONNECT AND FUSES WITH THE UNIT.
7. WHERE EQUIPMENT IS DESIGNATED BY MANUFACTURER AND MODEL NUMBER, THIS IS THE BASIS OF DESIGN. IF THE CONTRACTOR ELECTS TO PROVIDE EQUIPMENT BY OTHER SPECIFIED MANUFACTURERS OR PROPOSED ALTERNATE EQUIPMENT BY THE BASIS OF DESIGN MANUFACTURER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REVISIONS TO ELECTRICAL REQUIREMENTS, STRUCTURAL LOADING, OR ARCHITECTURAL APPURTENANCES AND SHALL INCLUDE THE COST OF SUCH REVISIONS IN HIS BID.
8. WHERE EQUIPMENT IS SCHEDULED TO INCLUDE A SERVICE RECEPTACLE, PROVIDE A FACTORY MOUNTED SERVICE RECEPTACLE WITH APPROPRIATE FUSES AND TRANSFORMERS CONNECTED ON THE LINE SIDE OF THE UNIT DISCONNECT. PROVIDE A NAMEPLATE ON THE DISCONNECT SWITCH INDICATING THE PRESENCE OF LIVE POWER TO THE SERVICE RECEPTACLE WHEN THE UNIT DISCONNECT IS IN THE OFF POSITION.
9. SIZE ALL EQUIPMENT FEEDERS BASED ON THE LISTED MOP (MAXIMUM OVERCURRENT PROTECTION). REFER TO THE FEEDER AND BRANCH CIRCUIT SIZING SCHEDULE ON THE ELECTRICAL STANDARD SCHEDULES SHEET.

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M7.01

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VIBRATION ISOLATOR APPLICATION SCHEDULE

EQUIPMENT TYPE	EQUIPMENT CATEGORY	HORSEPOWER AND OTHER	RPM	EQUIPMENT LOCATION						KEYED NOTES
				SLAB ON GRADE			UP TO 40 FT (12 M) FLOOR SPAN			
				BASE TYPE	ISOLATOR TYPE	MIN. DEFL., IN. (MM)	BASE TYPE	ISOLATOR TYPE	MIN. DEFL., IN. (MM)	
PUMPS	CLOSE COUPLED	≤7.5 ≥10	ALL ALL	B C	2 3	0.25 (6) 0.75 (19)	C C	3 3	0.75 (19) 1.50 (38)	NOTE 3
	INLINE	5 TO 25 ≥30	ALL ALL	A A	3 3	0.75 (19) 1.50 (38)	A A	3, 8a OR 8b 3, 8a OR 8b	1.50 (38) 2.50 (64)	
	END SUCTION AND DOUBLE SUCTION/SPLIT CASE	≤40 50 TO 125 ≥150	ALL ALL ALL	C C C	3 3 3	0.75 (19) 0.75 (19) 0.75 (19)	C C C	3 3 3	1.50 (38) 2.50 (64) 3.50 (89)	
	PACKAGED PUMP SYSTEMS	ALL	ALL	A	3	0.75 (19)	C	3	2.50 (64)	
BOILERS	FIRE-TUBE WATER-TUBE, COPPER FIN	ALL ALL	ALL ALL	A A	1a OR 1b 1a OR 1b	0.25 (6) 0.12 (3)	B B	4 4	2.50 (64) 0.25 (6)	NOTE 3
CENTRIFUGAL FANS	UP TO 22 IN. DIAMETER	ALL	ALL	B	2	0.25 (6)	B	3	1.50 (38)	NOTES 1, 3, 4
	24 IN. DIAMETER AND UP	≤40	UP TO 300 301 TO 500 500 AND UP	B B B	3 3 3	2.50 (64) 1.50 (38) 0.75 (19)	B B B	3 3 3	3.50 (89) 2.50 (64) 1.50 (38)	
		≥50	UP TO 300 301 TO 500 500 AND UP	C C C	3 3 3	2.50 (64) 1.50 (38) 1.00 (25)	C C C	3 3 3	3.50 (89) 2.50 (64) 2.50 (64)	
PACKAGED ROOFTOP EQUIPMENT	ALL	≥10 TONS REFRIG. OR ≥10 HP FAN	ALL				D OR E	3	1.50 (38)	NOTES 1, 3, 4, 5

GENERAL NOTES:

KEYED NOTES:

1. THRUST RESTRAINTS: PROVIDE THRUST RESTRAINTS BETWEEN FAN DISCHARGE AND DUCT (IN PAIRS, LOCATED ON THE CENTERLINE OF THE DISCHARGE OUTLET OF THE FAN, BRIDGING THE FLEXIBLE DUCT CONNECTOR) FOR ALL FAN HEADS, FOR AXIAL AND CENTRIFUGAL FANS UNITS OPERATING AT 2 INCHES OR GREATER TOTAL STATIC PRESSURE AND AS SHOWN ON DRAWINGS. SPRING DEFLECTION SHALL BE SAME AS THE SUPPORT ISOLATORS.
2. PIPING RISER ISOLATION: PROVIDE PIPE RISER RESILIENT ANCHORS, SPRING MOUNTS AND RESILIENT PIPE GUIDES CAPABLE OF DISTRIBUTING THE LOADS WITHIN THE BUILDING DESIGN LIMITS AT THE SUPPORT POINTS.
3. HORIZONTAL PIPING VIBRATION ISOLATION: PROVIDE TYPE 8a OR 8b SPRING HANGERS FOR PIPING CONNECTED TO VIBRATION ISOLATED EQUIPMENT FOR ALL PIPING IN MECHANICAL ROOMS OR THE FOLLOWING MINIMUM HORIZONTAL DISTANCES FROM THE ISOLATED EQUIPMENT: UP TO 6" – 50 FEET (1 1/2" MINIMUM DEFLECTION), 8" AND LARGER – 100 FEET (2 1/2" MINIMUM DEFLECTION), WHICHEVER IS GREATER, AND AS SHOWN ON DRAWINGS. THE FIRST 4 HANGERS FROM THE ISOLATED EQUIPMENT SHALL BE TYPE 8b.
4. DUCTWORK VIBRATION ISOLATION: PROVIDE TYPE 8a OR 8b SPRING HANGERS FOR DUCTWORK WITH A CROSS SECTION OF 2 SQUARE FEET OR GREATER CONNECTED TO AIR HANDLING UNITS, RETURN OR RELIEF FANS, AND VIBRATION ISOLATED EQUIPMENT FOR ALL SUCH DUCTWORK IN MECHANICAL ROOMS OR FOR A MINIMUM HORIZONTAL DISTANCE OF 100 FEET FROM THE ISOLATED EQUIPMENT, WHICHEVER IS GREATER, AND AS SHOWN ON DRAWINGS (3/4" MINIMUM DEFLECTION).
5. IF SPAN DOES NOT EXCEED 20 FT, SPRING DEFLECTION MAY BE 1.0 IN AND TYPE D BASE MAY BE USED. FOR SPANS GREATER THAN 20 FT, USE SPRING DEFLECTION INDICATED AND TYPE E BASE.

BASE TYPES:

BASE TYPE A – NO BASE, ISOLATORS ATTACHED DIRECTLY TO EQUIPMENT.
BASE TYPE B – STRUCTURAL, STEEL RAILS OR BASE.
BASE TYPE C – CONCRETE INERTIA BASE.
BASE TYPE D – CURB – MOUNTED ALUMINUM BASE WITH 1" DEFL. SPRING ISOLATORS
BASE TYPE E – CURB – MOUNTED STEEL BASE WITH ADJUSTABLE 1", 2" OR 3" DEFL. SPRING ISOLATORS

ISOLATOR TYPES:

ISOLATOR TYPE 1a – ELASTOMERIC ISOLATION PAD.
ISOLATOR TYPE 1b – ELASTOMERIC ISOLATION PAD WITH STEEL LOAD BEARING PLATE.
ISOLATOR TYPE 2 – ELASTOMERIC FLOOR ISOLATOR.
ISOLATOR TYPE 3 – FREE STANDING SPRING FLOOR ISOLATOR.
ISOLATOR TYPE 4 – RESTRAINED SPRING ISOLATOR.
ISOLATOR TYPE 5 – THRUST RESTRAINT.
ISOLATOR TYPE 6 – AIR SPRING.
ISOLATOR TYPE 7 – ELASTOMERIC HANGERS.
ISOLATOR TYPE 8a – SPRING HANGERS.
ISOLATOR TYPE 8b – SPRING HANGERS WITH VERTICAL-LIMIT STOP.

PRESCRIPTIVE INCENTIVES PROGRAM

THE MECHANICAL CONTRACTOR SHALL INCLUDE IN HIS BID AND BE RESPONSIBLE FOR PROVIDING AND MEETING ALL REQUIREMENTS FOR THE OWNER TO PARTICIPATE IN UTILITY PROVIDER REBATE PROGRAM. THE FOLLOWING ITEMS WILL BE REQUIRED BUT NOT LIMITED TO, FOR THE OWNER TO PARTICIPATE IN THIS PROGRAM:

1. ON BEHALF OF THE OWNER, PROVIDE ALL REQUIRED DOCUMENTATION FOR THE RESERVATION & FINAL APPLICATIONS.
2. CUSTOMER INFORMATION.
3. CONTRACTOR INFORMATION.
4. MECHANICAL INCENTIVES WORKSHEETS AS REQUIRED.
5. MANUFACTURERS' EQUIPMENT SPECIFICATIONS AND CUT-SHEETS WITH MODEL NUMBERS, QUANTITIES AND ENERGY PERFORMANCE.
6. ITEMIZED INVOICES.
7. MEASURES ARE COMPLETELY INSTALLED WITHIN 90 DAYS OF PROJECT APPROVAL.
8. THE FINAL APPLICATION MUST BE SUBMITTED WITHIN 60 DAYS OF PROJECT COMPLETION.

IT IS THE MECHANICAL CONTRACTORS RESPONSIBILITY TO CONTACT UTILITY PROVIDER REPRESENTATIVE IF A PROJECT IS DELAYED, OR SUBSTANTIALLY CHANGED.

THE MECHANICAL CONTRACTOR SHALL WORK AND COORDINATE WITH THE OWNER FOR THE FINAL APPLICATION PROCESS PRIOR TO SITE WORK BEING CONDUCTED AND POST REVIEW INSPECTION FOR REMOVAL AND INSTALLATION OF ALL EQUIPMENT RELATED TO THE INCENTIVE PROGRAM.

ABOVEGROUND HVAC PIPE & ACCESSORY INSULATION APPLICATION SCHEDULE

	INSULATION MATERIAL & THICKNESS (INCHES)							FIELD-APPLIED JACKET MATERIAL						
	FLEXIBLE ELASTOMERIC	FIBERGLASS	MINERAL WOOL	POLYISOCYANURATE	PHENOLIC	CELLULAR GLASS	CALCIUM SILICATE	ALUMINUM	STAINLESS STEEL	PVC	SELF-ADHESIVE (FOR OUTDOOR APPLICATIONS)	PVDC (INDOOR)	PVDC (OUTDOOR)	KEYED NOTES
INDOOR PIPE SYSTEM AND SIZE (INCHES)														
HEATING HOT WATER SUPPLY & RETURN 200 DEG F AND LOWER														
NPS 1-1/4 AND SMALLER		1.5						X		X				A
NPS 1-1/2 AND LARGER		2						X		X				A
REFRIGERANT SUCTION & HOT GAS (RIGID COPPER)														
NPS 6 AND SMALLER	1	1						X		X				
NPS 8 AND LARGER	1.5	1.5						X		X				
REFRIGERANT SUCTION & HOT GAS (SOFT COPPER)	1							X		X				
DUAL SERVICE HEATING & COOLING 40 TO 200 DEG F														
NPS 1-1/4 AND SMALLER		1.5						X		X				A
NPS 1-1/2 AND LARGER		2						X		X				A
HEAT RECOVERY	1	1						X	X	X				A, D

UNLESS OTHERWISE INDICATED OR SCHEDULED, THE FOLLOWING DO NOT REQUIRE INSULATION:
DIRECT BURIED COOLING SYSTEM PIPING
PIPING THAT CONVEYS FLUIDS HAVING DESIGN OPERATING TEMPERATURE RANGE BETWEEN 60 DEG F. AND 105 DEG F., INCLUSIVE.

GENERAL NOTES

1. 'X' OR THICKNESS IN INCHES INDICATES ACCEPTABLE SELECTION. IF MORE THAN ONE SELECTION IS INDICATED, CONTRACTOR MAY SELECT FROM THOSE INDICATED SELECTIONS.
2. INSULATE PIPING WITHIN AIR HANDLING EQUIPMENT THE SAME AS INDOOR PIPING. PROVIDE ALUMINUM OR STAINLESS STEEL JACKET.
3. FOR PIPING NPS 1-1/4 AND SMALLER WITHIN PARTITIONS IN CONDITIONED SPACES INSULATION MAY BE REDUCED BY ONE-INCH THICKNESS, BUT NOT TO LESS THAN ONE-INCH THICKNESS.
4. FOR PIPING NPS 1 AND SMALLER, INSULATION IS NOT REQUIRED FOR STRAINERS, CONTROL VALVES, AND BALANCING VALVES.

KEYED NOTES

A. PROVIDE FIELD APPLIED JACKET FOR PIPING EXPOSED IN EQUIPMENT ROOMS, STORAGE ROOMS, JANITORS CLOSETS, RECEIVING ROOMS, TEST AREAS, CIRCULATION AREAS AND SUCH AREAS SUBJECT TO DAMAGE WITHIN 10 FEET (3 METERS) OF FINISHED FLOOR.
B. PROVIDE MANUFACTURER'S RECOMMENDED PROTECTIVE COATING FOR FLEXIBLE ELASTOMERIC THERMAL INSULATION.
C. STEAM AND CONDENSATE PIPING JACKET SHALL BE STUCCO EMBOSSED.
D. PIPING WITHIN ENERGY RECOVERY UNITS SHALL BE TYPE 304 STAINLESS STEEL, SMOOTH; 0.010 INCH THICK. SEAMS AND JOINTS CAULKED WITH CHEMICALLY RESISTANT SEALER.

DUCT SYSTEM INSULATION APPLICATION SCHEDULE

	INSULATION MATERIAL & THICKNESS (INCHES)						FIELD APPLIED JACKET MATERIAL		
	FIBERGLASS BLANKET 0.75 LB/CU FT	FIBERGLASS BLANKET 1.0 LB/CU FT	FIBERGLASS BOARD 2.25 LB/CU FT	FIBERGLASS BOARD 6.0 LB/CU FT	FLEXIBLE ELASTOMERIC	ASTM E2336 2-HOUR FIRE RATED BLANKET	2-HOUR FIRE RATED BLANKET	ALUMINUM	SELF-ADHESIVE (FOR OUTDOOR APPLICATIONS)	KEYED NOTES
DUCT SYSTEMS LOCATED INDOORS										
SUPPLY AIR, EXCEPT AS NOTED BELOW		1.5								A, E
RECTANGULAR SUPPLY AIR IN MECHANICAL ROOMS			1.5							
OUTSIDE AIR AND MIXED AIR, EXCEPT AS NOTED BELOW		1.5								
RECTANGULAR OUTSIDE AIR AND MIXED AIR IN MECHANICAL ROOMS			1.5							
EXHAUST AND RELIEF AIR BETWEEN ISOLATION DAMPER AND PENETRATION OF BUILDING EXTERIOR, EXCEPT AS NOTED BELOW		1.5								
RECTANGULAR EXHAUST AND RELIEF AIR BETWEEN ISOLATION DAMPER AND PENETRATION OF BUILDING EXTERIOR, IN MECHANICAL ROOMS			1.5							
DUCT SYSTEMS LOCATED OUTDOORS										
RECTANGULAR DUCTS AND AIR PLENUMS, ALL TYPES				2					X	
DUCT SYSTEMS LOCATED IN ATTICS, CRAWL SPACES, OR PARKING GARAGES HAVING NATURAL OR MECHANICAL VENTILATION										
RECTANGULAR DUCTS AND AIR PLENUMS, ALL TYPES	3			2						
ROUND & FLAT OVAL SUPPLY AIR	3									
ROUND & FLAT OVAL RETURN & EXHAUST AIR	3									

PLENUMS, DUCTS, AND DUCT ACCESSORIES NOT REQUIRING INSULATION:
FIBROUS-GLASS DUCTS
DOUBLE-WALL METAL DUCTS WITH INSULATION OF SUFFICIENT THICKNESS TO COMPLY WITH ENERGY CODE AND ASHRAE/IESNA 90.1 – 2013
METAL DUCTS WITH DUCT LINER OF SUFFICIENT THICKNESS TO COMPLY WITH ENERGY CODE AND ASHRAE/IESNA 90.1 – 2013
FABRIC SUPPLY DUCTS
FACTORY-INSULATED FLEXIBLE DUCTS
FACTORY-INSULATED PLENUMS AND CASINGS
FLEXIBLE CONNECTORS
VIBRATION-CONTROL DEVICES
FACTORY-INSULATED ACCESS PANELS AND DOORS

GENERAL NOTES

1. 'X' OR THICKNESS IN INCHES INDICATE ACCEPTABLE SELECTION. IF MORE THAN ONE SELECTION IS INDICATED FOR A DUCT SYSTEM, CONTRACTOR MAY SELECT FROM THOSE INDICATED SELECTIONS.
2. REFER TO METAL DUCT SECTION OF SPECIFICATIONS FOR DUCT LINING AND DOUBLE-WALL INSULATED DUCT.
3. REFER TO HVAC CASINGS SECTION OF SPECIFICATIONS FOR DOUBLE-WALL INSULATED PLENUMS.

KEYED NOTES

A. INCLUDE INSULATION AROUND DUCT MOUNTED COILS AND AIR TERMINAL UNIT COILS.
B. NUMBER OF LAYERS AND TOTAL INSULATION THICKNESS AS RECOMMENDED BY SELECTED MANUFACTURER.
C. DOES NOT APPLY TO PREFABRICATED, ZERO-CLEARANCE GREASE DUCT.
D. PROVIDE MANUFACTURER'S RECOMMENDED PROTECTIVE COATING FOR FLEXIBLE ELASTOMERIC THERMAL DUCT INSULATION.
E. EXPOSED SUPPLY DUCTWORK LOCATED IN A CONDITIONED SPACE SERVED BY THE SAME AIR HANDLING SYSTEM IS NOT REQUIRED TO BE INSULATED.

DOMESTIC HOT WATER SYSTEM EXPANSION TANK SCHEDULE

UNIT IDENTIFICATION	SYSTEM SERVED	LOCATION	ESTIMATED TOTAL SYSTEM VOLUME GALLONS	TYPE	OPERATING PRESSURES AT EXPANSION TANK			SYSTEM OPERATING TEMPERATURES		EXPANSION VOLUME GALLONS	ACCEPTANCE FACTOR	MINIMUM TANK VOLUME GALLONS	DIMENSIONS		MODEL NUMBER	KEYED NOTES
					INITIAL PSIG	PRE-CHARGE PSIG	MAX (OPERATING) PSIG	MINIMUM °F	MAXIMUM °F				DIAMETER INCHES	HEIGHT INCHES		
ET-2	DWH-1	MECH. ROOM 155	150	DIAPHRAGM	30	29.2	50	40	140	10.3	0.3	8	15 3/8	19 1/4	PT-25V	

GENERAL NOTES:
1. MODEL NUMBERS ARE BELL & GOSSETT UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR SHALL PRE-CHARGE THE TANK TO THE VALUE INDICATED IN THE SCHEDULE. FOR TANKS THAT ARE SUPPLIED PRE-CHARGED BY THE MANUFACTURER, THE CONTRACTOR SHALL CONFIRM THE PRESSURE AND MAKE ADJUSTMENTS AS REQUIRED.

Bidding and Permits: 31 July 2023
Owner Review: 14 July 2023
Design Development: 08 May 2023

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PBA Project No.: 2022.0419

MECHANICAL SCHEDULES

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

M7.02

803 W. Big Beaver Road, Suite 350, Troy, MI 48084 | 248.244.9710

HORIZONTAL PIPING AND SUPPORT APPLICATION SCHEDULE

	HANGER OR SUPPORT TYPE						SHIELD TYPE			
METAL PIPE TYPE & SIZE	MSS TYPE 1 CLEVIS HANGER	MSS TYPE 10 SWIVEL RING BAND HANGER	MSS TYPE 41 DOUBLE ROD PIPE ROLLER	MSS TYPE 43 SINGLE ROD ROLLER HANGER	MSS TYPE 44 PIPE ROLLER & STAND	MSS TYPE 46 ADJUSTABLE PIPE ROLL STAND	MSS TYPE 39 PROTECTION SADDLE	MSS TYPE 40 INSULATION PROTECTION SHIELD	THERMAL-HANGER SHIELD	KEYED NOTES
UNINSULATED SINGLE PIPE										
UP TO 2 INCH	X	X								
2-1/2 INCH TO 4 INCH	X	X								
6 INCH TO 8 INCH	X									
INSULATED SINGLE COLD PIPES										
UP TO 2 INCH	X	X						X	X	A
2-1/2 INCH TO 4 INCH	X								X	
6 INCH TO 8 INCH	X								X	
INSULATED SINGLE HOT PIPES										
UP TO 2 INCH	X	X					X	X	X	A, C
2-1/2 INCH TO 4 INCH			X	X	X	X	X		X	B, C
6 INCH TO 8 INCH			X	X	X	X	X		X	B, C

GENERAL NOTES

1. "X" INDICATES APPROVED HANGER OR SUPPORT ELEMENTS. IF MORE THAN ONE HANGER OR SUPPORT ELEMENT IS INDICATED, SELECTION FROM APPROVED ELEMENTS IS CONTRACTOR'S OPTION.
2. REFER TO HANGER AND SUPPORT SECTION FOR APPROVED MANUFACTURERS.
3. HANGERS AND SUPPORTS USED FOR FIRE PROTECTION SERVICES SHALL BE UL LISTED OR FMG APPROVED.
4. HANGER ELEMENTS IN CONTACT WITH BARE COPPER PIPE SHALL BE COPPER PLATED, PLASTIC COATED, FELT LINED, OR USE MANUFACTURED COPPER TUBE ISOLATORS.
5. REFER TO INDIVIDUAL PIPING SPECIFICATION SECTIONS FOR HANGER SPACING.
6. MULTIPLE PARALLEL COLD PIPES MAY BE TRAPEZE SUPPORTED FROM BELOW USING U-BOLTS OR STRUT CLAMPS AND THERMAL HANGER SHIELDS. REFER TO KEYED NOTE A.
7. MULTIPLE PARALLEL COLD PIPES MAY BE TRAPEZE SUPPORTED FROM ABOVE USING STANDARD HANGER ELEMENTS INDICATED FOR SINGLE COLD PIPES.
8. MULTIPLE PARALLEL HOT PIPES MAY BE TRAPEZE SUPPORTED FROM BELOW USING ROLLER ELEMENTS AND THERMAL HANGER SHIELD OR INSULATION PROTECTION SADDLE. REFER TO KEYED NOTES B AND C.
9. MULTIPLE PARALLEL HOT PIPES MAY BE TRAPEZE SUPPORTED FROM ABOVE USING STANDARD ROLLER HANGERS INDICATED AND THERMAL HANGER SHIELD OR INSULATION PROTECTION SADDLE. REFER TO KEY NOTES B AND C.
10. REFER TO INDIVIDUAL PIPING SPECIFICATION SECTIONS FOR ADDITIONAL SYSTEM SPECIFIC HANGER APPLICATIONS.

KEYED NOTES

A. USE THERMAL HANGER SHIELD ON TRAPEZE SUPPORTED INSULATED PIPE TO PREVENT CRUSHING OF INSULATION.
B. USE THERMAL HANGER SHIELD DESIGNED FOR USE ON ROLLER SUPPORTS FOR INSULATED HOT PIPE .
C. USE TYPE 39 PROTECTION SADDLES IF INSULATION WITHOUT VAPOR BARRIER IS INDICATED. FILL INTERIOR VOIDS WITH INSULATION MATCHING ADJOINING INSULATION.

DUCT SYSTEM APPLICATION SCHEDULE

	DUCT MATERIAL																		
AIR SYSTEMS	G90 GALV. SHEET METAL	DOUBLE-WALL LINED G90 GALV. SHEET METAL (SOLID INNER WALL)	DOUBLE-WALL LINED G90 GALV. SHEET METAL (PERF. INNER WALL)	G90 GALV. SHEET METAL WITH 1-INCH LINING	GALVANNEALED SHEET METAL	ALUMINUM	TYPE 304 STAINLESS STEEL	TYPE 316 STAINLESS STEEL	PVC COATED GALV. SHEET METAL (4X1)	PVC COATED GALV. SHEET METAL (1X4)	PVC COATED GALV. SHEET METAL (4X4)	16 GA. CARBON STEEL	ZERO-CLEARANCE PREFABRICATED RANGE HOOD EXHAUST DUCT	FABRIC	DESIGN PRESSURE CLASS (INCHES WG)	SEAL CLASS	MAX. ALLOWABLE LEAKAGE RATE (PERCENT)	KEYED NOTES
SUPPLY AIR WITHOUT TERMINAL UNITS	X														+2	A	5	
RETURN AIR WITHOUT TERMINAL UNITS	X														-2	A	5	
EXHAUST AIR WITHOUT TERMINAL UNITS	X														-2	A	5	
AIR TRANSFER DUCT				X											+2	A	5	
RELIEF AIR DOWNSTREAM OF FANS	X														+6	A	5	
OUTSIDE AIR AND MIXED AIR DUCT	X														-6	A	5	

GENERAL NOTES

1. 'X' INDICATES ACCEPTABLE SELECTION. IF MORE THAN ONE SELECTION IS INDICATED FOR A DUCT SYSTEM, CONTRACTOR MAY SELECT FROM THOSE INDICATED SELECTIONS.
2. 4 X 1 PVC-COATED GALVANIZED STEEL: FACTORY-APPLIED PVC COATINGS SHALL BE 4 MILS (0.10 MM) THICK ON EXTERIOR SHEET METAL SURFACES OF DUCTS AND FITTINGS EXPOSED TO CORROSIVE CONDITIONS AND MINIMUM 1 MIL (0.025 MM) THICK ON INTERIOR SURFACES.
3. 1 X 4 (4 X 1 REVERSE COATED) PVC-COATED GALVANIZED STEEL: FACTORY-APPLIED PVC COATINGS SHALL BE 4 MILS (0.10 MM) THICK ON INTERIOR SHEET METAL SURFACES OF DUCTS AND FITTINGS EXPOSED TO CORROSIVE CONDITIONS AND MINIMUM 1 MIL (0.025 MM) THICK ON EXTERIOR SURFACES.
4. 4 X 4 PVC-COATED GALVANIZED STEEL: FACTORY-APPLIED PVC COATINGS SHALL BE 4 MILS (0.10 MM) THICK ON SHEET METAL SURFACES OF DUCTS AND FITTINGS EXPOSED TO CORROSIVE CONDITIONS AND 4 MILS (0.10 MM) THICK ON OPPOSITE SURFACES.

KEYED NOTES

A. SCREWS, DAMPERS, OR PROJECTIONS OF ANY TYPE ON INTERIOR OF DUCT SURFACE ARE PROHIBITED.
B. DUCT SHALL BE LINED WITHIN 25 FEET UPSTREAM OF FANS.
C. ALL WELDED CONSTRUCTION.

PLUMBING CONNECTION SCHEDULE

UNIT IDENTIFICATION	CW INCHES	HW INCHES	SAN INCHES	VENT INCHES	KEYED NOTES
UR-1	3/4	-	2	1 1/2	
WC-1	1 1/2	-	4	2	
LAV-1	1/2	1/2	1 1/2	1 1/2	
SK-1	3/4	3/4	1 1/2	1 1/2	
SS-1	3/4	3/4	3	-	
EWC-1	1/2	-	1 1/2	1 1/2	
SH-1	3/4	3/4	-	-	1
FD-1	-	-	3	-	
FD-2	-	-	4	-	
FS-1	-	-	6	-	
FS-2	-	-	3	-	

GENERAL NOTES:
1. INDIVIDUAL WATER LINE BRANCHES, WASTE LINES, VENTS, AND TRAPS FOR CONNECTION TO INDIVIDUAL FIXTURES, FIXTURE FITTINGS, AND SPECIALTIES SHALL BE IN ACCORDANCE WITH THE FOLLOWING SCHEDULE OR AS INDICATED ON DRAWINGS, WHICHEVER IS GREATER.

KEYED NOTES:
1. PROVIDE MIXING VALVE.

ROOF MOUNTED PIPING SUPPORT APPLICATION SCHEDULE

	SUPPORT TYPE								SHIELD TYPE			
PIPE TYPE & SIZE	LOW FIXED-HEIGHT SINGLE-BASE STAND	LOW ADJUSTABLE-HEIGHT SINGLE-BASE STAND	HIGH ADJUSTABLE-HEIGHT SINGLE-BASE STAND	LOW FIXED HEIGHT SINGLE-BASE ROLLER STAND	LOW ADJUSTABLE-HEIGHT SINGLE-BASE ROLLER STAND	HIGH MULTIPLE-BASE PIPE STAND	CUSTOM MULTIPLE BASE PIPE STAND	CURB-MOUNTING PIPE STAND	MSS TYPE 39 PROTECTION SADDLE	MSS TYPE 40 INSULATION PROTECTION SHIELD	THERMAL-HANGER SHIELD	KEYED NOTES
SINGLE PIPES												
NATURAL GAS NPS 5 AND SMALLER				X	X			X				
REFRIGERANT PIPE NPS 4 AND SMALLER				X	X			X				
CONDENSATE DRAIN PIPE ALL SIZES	X	X						X				
MULTIPLE PARALLEL PIPES												
NATURAL GAS NPS 5 AND SMALLER	X	X						X				
REFRIGERANT PIPE NPS 4 AND SMALLER	X	X						X				

GENERAL NOTES

1. "X" INDICATES APPROVED HANGER OR SUPPORT ELEMENTS. IF MORE THAN ONE HANGER OR SUPPORT ELEMENT IS INDICATED, SELECTION FROM APPROVED ELEMENTS IS CONTRACTOR'S OPTION.
2. REFER TO HANGER AND SUPPORT SECTION FOR APPROVED MANUFACTURERS.
3. SUPPORT ELEMENTS IN CONTACT WITH BARE COPPER PIPE SHALL BE COPPER PLATED, PLASTIC OR PLASTIC COATED, FELT LINED, OR USE MANUFACTURED COPPER TUBE ISOLATORS

KEYED NOTES

A. TYPE 40 SHIELD MAY BE USED ON INSULATED PIPE SIZED NPS 2 AND SMALLER.
B. CONSULT WITH SUPPORT MANUFACTURER FOR CUSTOM SUPPORT REQUIREMENTS.
C. USE THERMAL HANGER SHIELD FOR INSULATED RING.
D. TYPE 39 PROTECTION SADDLE MAY BE USED IF INSULATION WITHOUT VAPOR BARRIER IS INDICATED. FILL INTERIOR VOIDS WITH INSULATION MATCHING ADJOINING INSULATION.

ABOVEGROUND PLUMBING PIPE & ACCESSORY INSULATION APPLICATION SCHEDULE

	INSULATION MATERIAL & THICKNESS (INCHES)							FIELD-APPLIED JACKET MATERIAL						
	FLEXIBLE ELASTOMERIC	FIBERGLASS	MINERAL WOOL	POLYISOCYANURATE	PHENOLIC	CELLULAR GLASS	CALCIUM SILICATE	ALUMINUM	STAINLESS STEEL	PVC	SELF-ADHESIVE (FOR OUTDOOR APPLICATIONS)	PVDC (INDOOR)	PVDC (OUTDOOR)	KEYED NOTES
INDOOR PIPE SYSTEM AND SIZE (INCHES)														
DOMESTIC COLD WATER	1	1						X		X				A
DOMESTIC HOT WATER SUPPLY & RETURN 140 DEG F AND LESS:														
NPS 1-1/4 AND SMALLER	1	1						X		X				A
NPS 1-1/2 AND LARGER	1.5	1.5						X		X				A
STORM WATER & OVERFLOW	1	1						X		X				A
ROOF DRAIN AND OVERFLOW DRAIN BODIES	1	1												
CONDENSATE AND EQUIPMENT DRAIN PIPING BELOW 60 DEG F	0.75	1												
FLOOR DRAINS, TRAPS AND SANITARY DRAIN PIPING WITHIN 10 FEET OF DRAIN RECEIVING CONDENSATE AND EQUIPMENT DRAIN WATER BELOW 60 DEG F	0.75	1						X		X				A

UNLESS OTHERWISE INDICATED OR SCHEDULED, DO NOT INSULATE THE FOLLOWING:
- FIRE SUPPRESSION PIPING
- UNDERGROUND PIPING
- LABORATORY GAS AND VACUUM PIPING
- MEDICAL GAS AND VACUUM PIPING
- FUEL GAS PIPING
- FUEL OIL PIPING

GENERAL NOTES

1. 'X' OR THICKNESS IN INCHES INDICATES ACCEPTABLE SELECTION. IF MORE THAN ONE SELECTION IS INDICATED FOR A SYSTEM, CONTRACTOR MAY SELECT FROM THOSE INDICATED SELECTIONS.
2. INSULATE PIPING WITHIN AIR HANDLING EQUIPMENT THE SAME AS INDOOR PIPING. PROVIDE ALUMINUM OR STAINLESS STEEL JACKET.

KEYED NOTES

A. PROVIDE FIELD APPLIED JACKET FOR PIPING EXPOSED IN EQUIPMENT ROOMS, STORAGE ROOMS, JANITORS CLOSETS, RECEIVING ROOMS, TEST AREAS, CIRCULATION AREAS AND SUCH AREAS SUBJECT TO DAMAGE, WITHIN 10 FEET (3 METERS) OF FINISHED FLOOR.
B. PROVIDE MANUFACTURER'S RECOMMENDED PROTECTIVE COATING FOR FLEXIBLE ELASTOMERIC THERMAL INSULATION.

Bidding and Permits: 31 July 2023
Owner Review: 14 July 2023
Design Development: 08 May 2023

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PBA Project No: 2022.0419

MECHANICAL SCHEDULES

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

M7.03

803 W. Big Beaver Road, Suite 350, Troy, MI 48084 | 248.244.9710

ENERGY RECOVERY UNIT SCHEDULE (PRE-PURCHASED)

UNIT IDENTIFICATION	AREA/SYSTEM SERVED	SUPPLY FAN CFM	SUPPLY FAN MIN. OA CFM/%	SUPPLY FAN ESP"	SUPPLY FAN TSP"	SUPPLY FAN CONTROL TYPE	SUPPLY FAN MOTOR BHP	SUPPLY FAN MOTOR HP	EXHAUST FAN CFM	EXHAUST FAN ESP"	EXHAUST FAN TSP"	EXHAUST FAN CONTROL TYPE	EXHAUST FAN MOTOR BHP	EXHAUST FAN MOTOR HP
ERU-1	EXISTING BUILDING	5500	5500	1.0	3.472	AUTO	4.78	7.5	5500	0.75	2.341	AUTO	3.69	5.0

UNIT IDENTIFICATION	HEAT EXCHANGER (SUMMER) SUPPLY SIDE E.A.T. °F	SUPPLY SIDE L.A.T. °F	SUPPLY SIDE A.P.D. IN. WG.	EXHAUST SIDE E.A.T. °F	EXHAUST SIDE L.A.T. °F	EXHAUST SIDE A.P.D. IN. WG.	EFFIC. (%)	HEAT EXCHANGER (WINTER) SUPPLY SIDE E.A.T. °F	SUPPLY SIDE L.A.T. °F	SUPPLY SIDE A.P.D. IN. WG.	EXHAUST SIDE E.A.T. °F	EXHAUST SIDE L.A.T. °F	EXHAUST SIDE A.P.D. IN. WG.	EFFIC. (%)
ERU-1	91	80	0.79	75	85.8	0.79	67.6	-10	43.4	0.79	72	17.4	0.79	66.8

UNIT IDENTIFICATION	COOLING SECTION - DX TOTAL CAPACITY MBH	E.D.B. °F	E.W.B. °F	L.D.B °F	L.W.B. °F	TOTAL MBH	SENSIBLE MBH	REFRIG. TYPE	MAX A.P.D. IN. WG	HEATING SECTION - GAS FIRED (NATURAL GAS) TOTAL CAPACITY MBH	E.A.T. °F	L.A.T. °F	MIN/MAX MANUFACTURER REQUIRED INLET PRESSURE AT GAS TRAIN	MAXIMUM ALLOWABLE OUTPUT AT MINIMUM FIRING RATE (MBH)	MIN. NO. OF CAPACITY CONTROL STAGES
ERU-1	213.1	80	65.4	52.9	52.6	213.1	163.4	R-410A	0.302	400	43.4	97.3	6-14	8	MOD. 15:1

UNIT IDENTIFICATION	OUTSIDE AIR FILTERS MERV.	OUTSIDE AIR FILTERS AREA SQ. FT.	OUTSIDE AIR FILTERS SP" TOTAL	RETURN FILTERS MERV.	RETURN FILTERS AREA SQ. FT.	RETURN FILTERS SP" TOTAL	ELECTRICAL VOLTS	PHASE	FLA	MCA	MOP	SCCR KA	OPTIONS/ACCESSORIES	CURB TYPE STANDARD	CURB TYPE VIBRATION ISOLATION SPRING CURB	CURB HEIGHT	MODEL NUMBER	UNIT WEIGHT W/ CURB (LBS.)	SA/RA CONFIG.	EA/OA CONFIG.	KEYED NOTES
ERU-1	8	2.78	2	8	2.78	2	208	3	96.5	109.3	150	14	B	NO	YES	18	VXE-212-52 D-15I-M-D1	8150	SIDE/END	SIDE/END	

GENERAL NOTES:
1. REFER TO SCHEDULES GENERAL NOTES.
2. MODEL NUMBERS ARE VALENT UNLESS OTHERWISE NOTED.
3. FLUID TYPE: W = WATER, PGXX = PROPYLENE GLYCOL SOLUTION XX PERCENTAGE OF GLYCOL, EGXX = ETHYLENE GLYCOL SOLUTION XX PERCENTAGE OF GLYCOL.
4. FOR UNITS LOCATED OUTDOORS, INSULATE AND PROVIDE ELECTRIC HEAT TRACE FOR HEAT EXCHANGER CABINET DRAIN PIPING.

GAS FIRED BOILER SCHEDULE

UNIT IDENTIFICATION	NUMBER OF CONTROL STAGES	FUEL TYPE	FUEL INLET PRESSURE AT GAS TRAIN INCH W.C.	AGA INPUT MBH	AGA OUTPUT MBH	PRESSURE RATING PSIG	DIMENSIONS INCHES LENGTH	WIDTH	HEIGHT	WATER E.W.T. °F	L.W.T. °F	FLOW GPM	W.P.D. FT	MODULATION/CONTROL TYPE	ELECTRICAL VOLTS	PHASE	FLA	MOP	OPTIONS/ACCESSORIES	MODEL NUMBER	REMARKS
B-1	1	NATURAL GAS	3.5 – 14	399	371	80	36.5	21.25	47	130	150	45	7	AUTO	120	1	15	20	A	CM-399	MOUNTING RACK
B-2	1	NATURAL GAS	3.5 – 14	500	456	80	53	29	60	130	150	45	7	AUTO	120	1	15	20	A	CM-399	MOUNTING RACK

NOTE:
1. REFER TO SCHEDULES GENERAL NOTES.
2. MODEL NUMBERS ARE PATTERSON KELLEY UNLESS OTHERWISE NOTED.
3. PROVIDE BOILER WITH CONDENSATE NEUTRALIZATION TANK ASSEMBLY.

POWER VENTILATOR SCHEDULE

UNIT IDENTIFICATION	SYSTEM SERVED	TYPE	AIRFLOW CFM	T.S.P. IN. W.G.	TIP SPEED FPM	FAN RPM	MOTOR BHP	MOTOR HP	MOTOR RPM	MOTOR DRIVE TYPE	CURB HEIGHT INCHES	MODULATION/CONTROL TYPE	ELECTRICAL VOLTS	PHASE	SCCR KA (NOTE 3)	OPTIONS/ACCESSORIES	UNIT INLET Lw BY OCTAVE BAND 63 HZ (DB)	125 HZ (DB)	250 HZ (DB)	500 HZ (DB)	1000 HZ (DB)	2000 HZ (DB)	4000 HZ (DB)	8000 HZ (DB)	MODEL NUMBER	KEYED NOTES
EF-1	NEW BATHROOMS/ JAN CLOSET	CENTRIFUGAL	470	0.05	4395	1544	0.04	1/10	1725	DIRECT	17	AUTO	115	1	5	A	61	68	70	60	59	58	54	47	G-080-VG	
EF-2	CLASSROOM TOILETS	CENTRIFUGAL	280	0.05	2674	1257	0.01	1/15	1725	DIRECT	17	AUTO	115	1	5	A	65	63	60	49	45	43	35	30	G-070-VG	
EF-3	CLASSROOM TOILETS	CENTRIFUGAL	210	0.05	4350	1528	0.05	1/10	1725	DIRECT	17	AUTO	115	1	5	A	71	74	68	61	59	57	50	46	G-080-VG	

GENERAL NOTES:
1. REFER TO SCHEDULES GENERAL NOTES.
2. MODEL NUMBERS ARE GREENHECK UNLESS OTHERWISE NOTED.
3. CONTROLLER (E.G. VARIABLE FREQUENCY CONTROLLER, MOTOR STARTER) FOR SPECIFIED EQUIPMENT SHALL BE MANUFACTURED AND MARKED PER NEC WITH A MINIMUM SHORT CIRCUIT CURRENT RATING AS INDICATED.

AIR & DIRT SEPARATOR SCHEDULE

INLET/OUTLET PIPE SIZE (INCHES)	MAX SYSTEM FLOW (GPM)	MAX PRESSURE DROP CLEAN (FT HD)	BUNDLE REMOVAL CLEARANCE NOTE 3 (INCHES)	OPERATING WEIGHT (LBS)	TYPE	MODEL NUMBER	KEYED NOTES
2	35	0.70	12	115	STANDARD VELOCITY / AIR & DIRT	VDN 200 FA	
2 1/2	57	0.7	12	160	STANDARD VELOCITY / AIR & DIRT	VDN 250 FA	
3	110	0.85	16	210	STANDARD VELOCITY / AIR & DIRT	VDN 300 FA	
4	220	1.10	16	250	STANDARD VELOCITY / AIR & DIRT	VDN 400 FA	
6	540	1.30	25	400	STANDARD VELOCITY / AIR & DIRT	VDN 600 FA	
	650	3.75	43	400	HIGH VELOCITY / AIR & DIRT	VHN 600 FA	
8	940	1.40	33	775	STANDARD VELOCITY / AIR & DIRT	VDN 800 FA	
	1280	5.9	55	775	HIGH VELOCITY / AIR & DIRT	VHN 800 FA	
10	1470	1.60	44	1,165	STANDARD VELOCITY / AIR & DIRT	VDN 1000 FA	
	2280	8.5	68	1,165	HIGH VELOCITY / AIR & DIRT	VHN 1000 FA	
12	2090	2.00	54	1,785	STANDARD VELOCITY / AIR & DIRT	VDN 1200 FA	
	3500	11.50	80	1,785	HIGH VELOCITY / AIR & DIRT	VHN 1200 FA	

GENERAL NOTES:
1. MODEL NUMBERS ARE SPIROTHERM UNLESS OTHERWISE NOTED.
2. SEPARATOR FLANGE CONNECTION MUST BE A MINIMUM OF THE PIPE DIAMETER SIZE OF WHICH THE SEPARATOR IS INSTALLED.
3. MINIMUM BUNDLE REMOVAL CLEARANCE IS MEASURED FROM CENTERLINE OF INLET/OUTLET PIPING. PROVIDE CLEARANCE BELOW UNIT TO DIMENSION LISTED TO ALLOW REMOVAL OF HEAD AND ELEMENT BUNDLE.
4. REFER TO PUMP SCHEDULE FOR SYSTEM FLOW.

PUMP SCHEDULE

UNIT IDENTIFICATION	SYSTEM SERVED	LOCATION	TYPE	COUPLING TYPE	WATERFLOW GPM	FLUID TYPE	COLDEST SYSTEM OPERATING TEMP. °F FOR PUMP SELECTION	PUMP HEAD FT.	OVERLOAD GPM	MINIMUM EFFICIENCY %	MOTOR BHP	MOTOR HP	MOTOR RPM	MODULATION/CONTROL TYPE	ELECTRICAL VOLTS	PHASE	SCCR KA (NOTE 4)	OPTIONS/ACCESSORIES	MODEL NUMBER	KEYED NOTES
CP-1	B-1	MECHANICAL ROOM 138	INLINE	CLOSE	45	W	90	25	NON-OVERLOADING	62	0.494	3/4	1725	AUTO	208	3	5	---	e-90 1.5AB	#
CP-2	B-2	MECHANICAL ROOM 138	INLINE	CLOSE	45	W	90	25	NON-OVERLOADING	62	0.494	3/4	1725	AUTO	208	3	5	---	e-90 1.5AB	#
CP-3	HWH	MECHANICAL ROOM 138	INLINE	CLOSE	85	W	90	45	NON-OVERLOADING	70.8	1.39	2	1725	VFC	208	3	5	---	e-90 2AB	#
CP-4	HWH	MECHANICAL ROOM 138	INLINE	CLOSE	85	W	90	45	NON-OVERLOADING	70.8	1.39	2	1725	VFC	208	3	5	---	e-90 2AB	#
CP-5	DWH-1	MECHANICAL ROOM 155	INLINE	CLOSE	5	W	40	20	NON-OVERLOADING	---	---	1/6	3300	AUTO	120	1		---	PL-36B	

GENERAL NOTES:
1. REFER TO SCHEDULES GENERAL NOTES.
2. MODEL NUMBER ARE BELL & GOSSETT UNLESS OTHERWISE NOTED.
3. FLUID TYPE: W = WATER, PGXX = PROPYLENE GLYCOL SOLUTION XX PERCENTAGE OF GLYCOL, EGXX = ETHYLENE GLYCOL SOLUTION XX PERCENTAGE OF GLYCOL.
4. CONTROLLER (E.G. VARIABLE FREQUENCY CONTROLLER, MOTOR STARTER) FOR SPECIFIED EQUIPMENT SHALL BE MANUFACTURED AND MARKED PER NEC WITH A MINIMUM SHORT CIRCUIT CURRENT RATING AS INDICATED.

HVAC SYSTEM EXPANSION TANK SCHEDULE

UNIT ID	SYSTEM SERVED	LOCATION	ESTIMATED TOTAL SYSTEM VOLUME GALLONS	TYPE	FLUID TYPE	SYSTEM FILL VALVE OR GLYCOL PUMP PRESSURE SETTING PSIG	OPERATING PRESSURES AT EXPANSION TANK PRE-CHARGE PSIG	MAX (OPERATING) PSIG	SYSTEM OPERATING TEMPERATURES MINIMUM °F	MAXIMUM °F	EXPANSION VOLUME GALLONS	ACCEPTANCE FACTOR	MINIMUM TANK VOLUME GALLONS	DIMENSIONS DIAMETER INCHES	HEIGHT INCHES	MODEL NUMBER	KEYED NOTES
ET-1	HWH	MECH. ROOM 138	315	BLADDER	WATER	17	16.2	41.8	40	150	26	0.4	20	20	31	B100	#

GENERAL NOTES:
1. MODEL NUMBERS ARE BELL & GOSSETT UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR SHALL PRE-CHARGE THE TANK TO THE VALUE INDICATED IN THE SCHEDULE. FOR TANKS THAT ARE SUPPLIED PRE-CHARGED BY THE MANUFACTURER, THE CONTRACTOR SHALL CONFIRM THE PRESSURE AND MAKE ADJUSTMENTS AS REQUIRED.
3. FLUID TYPE: W = WATER, PGXX = PROPYLENE GLYCOL SOLUTION XX PERCENTAGE OF GLYCOL, EGXX = ETHYLENE GLYCOL SOLUTION XX PERCENTAGE OF GLYCOL.

HOT WATER CABINET UNIT HEATER SCHEDULE

UNIT IDENTIFICATION	CAPACITY MBH	AIR AIRFLOW CFM	AIR E.D.B. °F	AIR L.D.B. °F	FAN HP	FAN RPM	WATER FLOW GPM	FLUID TYPE	E.W.T. °F	L.W.T. °F	MAXIMUM W.P.D. FT. HEAD	CONTROL VALVE W.P.D. FT. HEAD	DIMENSIONS LENGTH INCHES	HEIGHT INCHES	DEPTH INCHES	RECESS DEPTH INCHES	FILTER TYPE	FILTER AREA SQ. FT.	MODULATION/CONTROL TYPE	ELECTRICAL VOLTS	PHASE	SCCR KA	OPTIONS/ACCESSORIES	MODEL NUMBER	KEYED NOTES
CUH-1	27.4	420	60	90	1/4	925	2.9	WATER	150	130	2.3	11.5	50.2	24	10	10	MERV 8	2.3	AUTO	120	1	5	A	RRC-440-04	
CUH-2	17.2	300	60	90	1/4	925	2.1	WATER	150	130	1.1	11.5	44.2	24	10	10	MERV 8	1.9	AUTO	120	1	5	A	RRC-440-03	
CUH-3	17.2	300	60	90	1/4	925	2.1	WATER	150	130	1.1	11.5	44.2	24	10	10	MERV 8	1.9	AUTO	120	1	5	A	RRC-440-03	
CUH-4	19.2	300	60	90	1/4	925	2.1	WATER	150	130	1.1	11.5	44.2	24	10	10	MERV 8	1.9	AUTO	120	1	5	A	RRC-440-03	
CUH-5	19.7	300	60	90	1/4	925	2.1	WATER	150	130	1.1	11.5	44.2	24	10	10	MERV 8	1.9	AUTO	120	1	5	A	RRC-440-03	
CUH-6	17.2	300	60	90	1/4	925	2.1	WATER	150	130	1.1	11.5	44.2	24	10	10	MERV 8	1.9	AUTO	120	1	5	A	RW-440-03	
CUH-7	8.8	220	60	90	1/4	925	0.9	WATER	150	130	0.1	11.5	38.2	24	10	10	MERV 8	1.5	AUTO	120	1	5	A	RRC-440-02	

GENERAL NOTES:
1. REFER TO SCHEDULES GENERAL NOTES.
2. MODEL NUMBERS ARE RITTLING UNLESS OTHERWISE NOTED.
3. FLUID TYPE: W = WATER, PGXX = PROPYLENE GLYCOL SOLUTION XX PERCENTAGE OF GLYCOL, EGXX = ETHYLENE GLYCOL SOLUTION XX PERCENTAGE OF GLYCOL.

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Bidding and Permits: 31 July 2023
Owner Review: 14 July 2023
Design Development: 08 May 2023

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MECHANICAL SCHEDULES

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

M7.04

803 W. Big Beaver Road, Suite 350, Troy, MI 48084 | 248.244.9710

SPLIT SYSTEM AIR CONDITIONING UNIT SCHEDULE

INDOOR UNIT									OUTDOOR UNIT												KEYED NOTES
UNIT IDENTIFICATION	TOTAL CAPACITY MBH	EVAPORATOR FAN			COOLING COIL			MODEL NUMBER	UNIT IDENTIFICATION	CONDENSING SECTION				MODULATION/ CONTROL TYPE	ELECTRICAL					MODEL NUMBER	
		AIRFLOW CFM	NUMBER FANS	WATTS EACH	E.D.B. °F	E.W.B. °F	MINIMUM FACE AREA SQ. FT.			NUMBER OF COMPRESSORS	NUMBER OF CONTROL STAGES	AMBIENT TEMPERTURE °F	AIRFLOW CFM	FAN WATTS		VOLTS	PHASE	FLA	MOP	SCCR KA		
ACU-43	10.9	430	1	1/12	80.0	67.0	R-410A	FTK12AXVJU	ACCU-7	1	1	95	1100	1/12	AUTO	208	1	7.8	15	5	RK12AXVJU	1,2,3
ACU-44	10.9	430	1	1/12	80.0	67.0	R-410A	FTK12AXVJU	ACCU-8	1	1	95	1100	1/12	AUTO	208	1	7.8	15	5	RK12AXVJU	1,2,3

GENERAL NOTES:
1. REFER TO SCHEDULES GENERAL NOTES.
2. MODEL NUMBERS DAIKIN UNLESS OTHERWISE NOTED.

KEYED NOTES:
1. INDOOR UNIT POWER FEED THROUGH OUTDOOR UNIT.
2. UNITS SHALL BE CAPABLE OF OPERATING DOWN TO 0 DEG. F.
3. MANUFACTURER PROVIDED CONDENSATE PUMP.

BRANCH SELECTOR BOX SCHEDULE

UNIT TAG	BRANCH SELECTOR BOX – ELECTRICAL					MODEL	REMARKS
	VOLTS	PHASE	MOP	MCA	OPTIONS/ ACCESSORIES		
BSB-1	208	1	15	0.6		BSE60S4TVJ	
BSB-2	208	1	15	0.6		BSF60S4TVJ	
BSB-3	208	1	15	0.8		BSF80S4TVJ	
BSB-4	208	1	15	0.6		BSF80S4TWJ	
BSB-5	208	1	15	0.8		BS120S4TAVJ	

NOTE:
1. REFER TO SCHEDULE GENERAL NOTES.
2. MODEL NUMBERS ARE DAIKIN UNLESS OTHERWISE NOTED.

UNIT VENTILATOR APPLICATION SCHEDULE (PRE-PURCHASED)

UNIT IDENTIFICATION	UV TYPE	LOCATION / AREA SERVED	CONTROL VALVE TYPE	ELECTRICAL SCCR KA	KEYED NOTES
UV-1	A	161 – GSRP	2-WAY	5	
UV-2	A	162 – GSRP	2-WAY	5	
UV-3	A	163 – GSRP	2-WAY	5	
UV-4	A	164 – GSRP	2-WAY	5	
UV-5	A	165 – GSRP	2-WAY	5	
UV-6	A	166 – GSRP	2-WAY	5	
UV-7	A	167 – GSRP	2-WAY	5	

AIR COOLED CONDENSING UNIT SCHEDULE

UNIT ID	SYSTEM SERVED	NOMINAL COOLING TOTAL CAPACITY MBH	NOMINAL HEATING TOTAL CAPACITY MBH	REFRIG. TYPE	NUMBER OF CONTROL STAGES	COMPRESSOR		MODULATION/ CONTROL TYPE	ELECTRICAL					MODEL NUMBER	REMARKS
						NUMBER	TYPE		VOLTS	PHASE	MCA	MOP	OPTIONS		
ACCU-1	BSB-1, BSB-3	144	84	R-410A	MODULATING	1	SCROLL	HEAT RECOVERY	208	3	58.3	70	B	REYQ144XATJB	HEATING CAPACITY @ -10F COOLING CAPACITY @ 95F
ACCU-2	BSB-2	164	89	R-410A	MODULATING	1	SCROLL	HEAT RECOVERY	208	3	61.9	70	B	REYQ168XAYDB	HEATING CAPACITY @ -10F COOLING CAPACITY @ 95F
ACCU-3	BSB-2	144	84	R-410A	MODULATING	1	SCROLL	HEAT RECOVERY	208	3	58.3	70	B	REYQ144XATJB	HEATING CAPACITY @ -10F COOLING CAPACITY @ 95F
ACCU-4	BSB-4	68	45	R-410A	MODULATING	1	SCROLL	HEAT RECOVERY	208	3	38.1	45	B	REYQ72XATJB	HEATING CAPACITY @ -10F COOLING CAPACITY @ 95F
ACCU-5	BSB-5	144	84	R-410A	MODULATING	1	SCROLL	HEAT RECOVERY	208	3	58.3	70	B	REYQ144XATJB	HEATING CAPACITY @ -10F COOLING CAPACITY @ 95F
ACCU-6	FCU-1	56.5	--	R-410A	1	1	SCROLL	AUTO	208	3	21.3	35	B	DX13SA0603	PRE-PURCHASED

ALTERNATE NO.1

NOTE:
1. REFER TO SCHEDULES GENERAL NOTES.
2. MODEL NUMBERS ARE DAIKIN UNLESS OTHERWISE NOTED.
3. PROVIDE WITH LOW AMBIANT TEMPERATURE.

GRAVITY RELIEF HOOD SCHEDULE

UNIT IDENTIFICATION	SYSTEM SERVED	CFM	THROAT SIZE FT^2	THROAT VELOCITY FPM	STATIC PRESSURE DROP IN. W.G.	HOOD SIZE			CURB HEIGHT INCHES	HOOD CONSTRUCTION	MODEL NUMBER	KEYED NOTES
						WIDTH INCHES	LENGTH INCHES	HEIGHT INCHES				
GRH-1	161 – Classroom	1000	2.22	450	0.049	26	36	16	18	AUMINUM	FGR-16X20	
GRH-2	159 – Classroom	1000	2.22	450	0.049	26	36	16	18	AUMINUM	FGR-16X20	
GRH-3	157 – Classroom	1000	2.22	450	0.049	26	36	16	18	AUMINUM	FGR-16X20	
GRH-4	162 – Classroom	1000	2.22	450	0.049	26	36	16	18	AUMINUM	FGR-16X20	
GRH-5	160 – Classroom	1000	2.22	450	0.049	26	36	16	18	AUMINUM	FGR-16X20	
GRH-6	158 – Classroom	1000	2.22	450	0.049	26	36	16	18	AUMINUM	FGR-16X20	
GRH-7	156 – Classroom	1000	2.22	450	0.049	26	36	16	18	AUMINUM	FGR-16X20	

GENERAL NOTES:
1. MODEL NUMBERS ARE GREENHECK UNLESS OTHERWISE NOTED.
2. PROVIDE WITH BIRD SCREEN.

ACU APPLICATION SCHEDULE

UNIT ID	LOCATION/ AREA SERVED	SERVED BY	TAG	REMARKS
ACU-1	106 – OFFICE	BSB-1	D	CEILING
ACU-2	104 – OPEN OFFICE	BSB-1	D	CEILING
ACU-3	108 – OFFICE	BSB-1	J	CEILING
ACU-4	104 – OPEN OFFICE	BSB-1	I	CEILING
ACU-5	110 – BOARD ROOM	BSB-2	F	CEILING
ACU-6	110 – BOARD ROOM	BSB-2	F	CEILING
ACU-7	110 – BOARD ROOM	BSB-2	F	CEILING
ACU-8	110 – BOARD ROOM	BSB-2	F	CEILING
ACU-9	110A – EXISTING PASSAGEWAY	BSB-1	G	WALL
ACU-10	110A – EXISTING PASSAGEWAY	BSB-1	G	WALL
ACU-11	110 – BOARD ROOM	BSB-2	F	CEILING
ACU-12	110 – BOARD ROOM	BSB-2	F	CEILING
ACU-13	110 – BOARD ROOM	BSB-2	F	CEILING
ACU-14	110 – BOARD ROOM	BSB-2	F	CEILING
ACU-15	111 – BREAKROOM	BSB-3	G	WALL
ACU-16	101 – RECEPTION	BSB-1	D	CEILING
ACU-17	101 – RECEPTION	BSB-1	D	CEILING
ACU-18	115 – OFFICE	BSB-3	G	WALL
ACU-19	114 – OPEN OFFICE	BSB-3	H	CEILING
ACU-20	120 – STORAGE	BSB-3	K	CEILING
ACU-21	119 – OPEN OFFICE	BSB-3	A	CEILING
ACU-22	112 – CORRIDOR A	BSB-3	C	CEILING
ACU-23	125 – CORRIDOR B	BSB-3	C	CEILING
ACU-24	113 – COPY ROOM	BSB-3	G	WALL
ACU-25	126 – OPEN OFFICE	BSB-4	I	CEILING
ACU-26	132 – OFFICE	BSB-4	K	CEILING
ACU-27	134 – CONFERENCE ROOM	BSB-4	F	CEILING
ACU-28	135 – OFFICE	BSB-4	E	CEILING
ACU-29	136 – OPEN OFFICE	BSB-4	A	CEILING
ACU-30	133 – COPY ROOM	BSB-4	A	CEILING
ACU-31	131 – OPEN OFFICE	BSB-4	A	CEILING
ACU-32	149 – MULTIPURPOSE ROOM	BSB-5	F	CEILING
ACU-33	149 – MULTIPURPOSE ROOM	BSB-5	F	CEILING
ACU-34	149 – MULTIPURPOSE ROOM	BSB-5	F	CEILING
ACU-35	149 – MULTIPURPOSE ROOM	BSB-5	F	CEILING
ACU-36	149 – MULTIPURPOSE ROOM	BSB-5	F	CEILING
ACU-37	149 – MULTIPURPOSE ROOM	BSB-5	F	CEILING
ACU-38	142 – CORRIDOR C	BSB-5	B	CEILING
ACU-39	145 – RECEPTION	BSB-5	B	CEILING
ACU-40	147 – OFFICE	BSB-5	A	CEILING
ACU-41	141 – WOMEN'S RESTROOM	BSB-5	A	CEILING
ACU-42	139 – MEN'S RESTROOM	BSB-5	A	CEILING
ACU-45	110 – BOARD ROOM	BSB-2	F	CEILING
ACU-46	110 – BOARD ROOM	BSB-2	F	CEILING

ALTERNATE NO.1

MAXIMUM SOUND POWER LEVELS								
UNIT I.D.	UNIT INLET Lw BY OCTAVE BAND							
	63 HZ (DB)	125 HZ (DB)	250 HZ (DB)	500 HZ (DB)	1000 HZ (DB)	2000 HZ (DB)	4000 HZ (DB)	8000 HZ (DB)
ERU-1	86	91	86	83	80	75	71	65

DUCTLESS AIR CONDITIONING UNIT SCHEDULE

UNIT TAG	TOTAL CAPACITY MBH	EVAPORATOR FAN	COOLING COIL		HEATING COIL		REFRIG. TYPE	ELECTRICAL						MODEL NUMBER	REMARKS
		AIRFLOW CFM	E.D.B. °F	E.W.B. °F	TOTAL CAPACITY MBH	E.A.T. °F		VOLTS	PHASE	FLA	MCA	MOP	OPTIONS/ ACCESSORIES		
ACU-A	10.5	300	80	67	6.5	70	R-410A	208	1	0.2	0.3	15		FXZQ05TBVJU	0.5 TON CEILING
ACU-B	16.0	307	80	67	8.5	70	R-410A	208	1	0.2	0.3	15		FXZQ07TBVJU	0.6 TON CEILING
ACU-C	20.0	317	80	67	10.5	70	R-410A	208	1	0.2	0.3	15		FXZQ09TBVJU	0.75 TON CEILING
ACU-D	25.5	353	80	67	13.5	70	R-410A	208	1	0.3	0.4	15		FXZQ12TBVJU	1.0 TON CEILING
ACU-E	32	405	80	67	17	70	R-410A	208	1	0.3	0.4	15		FXZQ15TBVJU	1.25 TON CEILING
ACU-F	38	511	80	67	20	70	R-410A	208	1	0.5	0.6	15		FXZQ18TBVJU	1.5 TON CEILING
ACU-G	16.0	260	80	67	8.5	70	R-410A	208	1	0.3	0.4	15		FXAQ07PVJU	0.5 TON WALL
ACU-H	25.5	512	80	67	13.5	70	R-410A	208	1	0.2	0.3	15		FXFQ12TVJU	1.0 TON CEILING, ROUND
ACU-I	15.7	317	80	67	8.5	70	R-410A	208	1	0.5	0.6	15		FXMQ07PBVJU	0.6 TON CEILING, DUCTED
ACU-J	20	317	80	67	10.5	70	R-410A	208	1	0.5	0.6	15		FXMQ09PBVJU	0.75 TON CEILING, DUCTED
ACU-K	38	635	80	67	20	70	R-410A	208	1	1.3	1.6	15		FXMQ18PBVJU	1.5 TON CEILING, DUCTED

ALTERNATE NO.1

NOTE:
1. REFER TO SCHEDULES GENERAL NOTES.
2. MODEL NUMBERS DAIKIN UNLESS OTHERWISE NOTED.

HOT WATER RADIANT WALL PANEL SCHEDULE

UNIT IDENTIFICATION	CAPACITY BTUH/ LINEAR FT.	WATER TEMP		DIMENSIONS		FINISH	CONSTRUCTION	CONTROL VALVE W.P.D. FT. HEAD	MODEL NUMBER	REMARKS
		E.W.T. °F	L.W.T. °F	LENGTH INCHES	HEIGHT INCHES					
RWP-1	412	150	120	SEE PLANS	8-5/8	BY ARCH.	STEEL	11.5	UFLT-3	

NOTE:
1. MODEL NUMBERS ARE RUNTAL UNLESS OTHERWISE NOTED.
2. PROVIDE VERTICAL PIPE TRIMS, END CAPS, AND CORNER TRIM ACCESSORIES.
3. ARCHITECT TO SELECT FINISH FROM MANUFACTURERS STANDARD COLORS.

GRILLE, REGISTER, AND DIFFUSER SCHEDULE

UNIT IDENTIFICATION	TYPE	FACE SIZE	NECK SIZE	FRAME TYPE	ACCESSORY	CONSTRUCTION	FINISH	MODEL NUMBER	KEYED NOTES
S-1	DIFFUSER	24X24	SEE PLAN	NOTE 1	--	STEEL	NOTE 1	SPD	
S-2	DIFFUSER	12X12	SEE PLAN	NOTE 1	--	STEEL	NOTE 1	SPD	
R-1	GRILLE	24X24	SEE PLAN	NOTE 1	--	STEEL	NOTE 1	PDDR	
R-2	GRILLE	24X12	SEE PLAN	NOTE 1	--	STEEL	NOTE 1	PDDR	
E-1	GRILLE	24X24	SEE PLAN	NOTE 1	--	STEEL	NOTE 1	PDDR	
E-2	GRILLE	12X12	SEE PLAN	NOTE 1	--	STEEL	NOTE 1	PDDR	
E-3	GRILLE	8X8	SEE PLAN	NOTE 1	--	STEEL	NOTE 1	500	

GENERAL NOTES:
1. MODEL NUMBERS ARE PRICE UNLESS OTHERWISE NOTED.

1. COORDINATE FINISH SELECTION AND FRAME WITH CEILING TYPE AND ARCHITECT

DOMESTIC WATER HEATER SCHEDULE (ELECTRIC)

UNIT IDENTIFICATION	STORAGE CAPACITY GALLONS	KW INPUT	RECOVERY GPH	E.W.T. °F	L.W.T. °F	MODULATION/ CONTROL TYPE	ELECTRICAL						MODEL NUMBER	KEYED NOTES
							VOLTS	PHASE	FLA	MOP	SCCR KA	OPTIONS/ ACCESSORIES		
DWH-1	119	27	120	40	140	AUTO	208	3	75	100	10	---	CE119	

GENERAL NOTES:
1. REFER TO SCHEDULES GENERAL NOTES.
2. MODEL NUMBERS ARE BOCK (ELECTRITHERM) UNLESS OTHERWISE NOTED.

UNIT VENTILATOR SCHEDULE (PRE-PURCHASED)

UNIT TYPE	FAN					COOLING COIL						HEATING COIL							ARRANGEMENT	MODULATION/ CONTROL TYPE	ELECTRICAL					MODEL NUMBER	KEYED NOTES
	CFM	MINIMUM O.A. CFM	E.S.P. IN. WG.	NUMBER FANS	H.P. EACH	MINIMUM TOTAL CAPACITY MBH	AIR			DIRECT EXPANSION			MINIMUM TOTAL CAPACITY MBH	AIR		WATER						VOLTS	PHASE	MCA	MOP	OPTIONS/ ACCESSORIES		
							E.D.B. °F	L.D.B. °F	L.W.B. °F	MAX FACE VEL. F.P.M.	REFRIG. TYPE	NO. OF STAGES		E.D.B. °F	L.D.B. °F	FLOW GPM	E.W.T. °F	L.W.T. °F	MAXIMUM W.P.D. FT. HEAD	CONTROL VALVE W.P.D. FT. HEAD								
UV-A	1000	255	0.5	3	0.25	20.7	80	65.4	60.8	500	R-410A	4	46.7	47	90.1	4	150	126.6	2.51	11.5	HORIZONTAL	AUTO	208	3	14.1	20	B	UAZU9024	

GENERAL NOTES:
1. REFER TO SCHEDULES GENERAL NOTES.
2. MANUFACTURER BASED ON DAIKIN (HORIZONTAL UNITS), AIREDALE (VERTICAL UNITS) UNLESS OTHERWISE INDICATED.

INTAKE HOOD SCHEDULE

UNIT I.D.	SYSTEM SERVED	CFM	THROAT SIZE FT^2	HOOD INTAKE VELOCITY FPM	THROAT VELOCITY FPM	STATIC PRESSURE DROP IN. W.G.	HOOD SIZE			CURB HEIGHT INCHES	HOOD CONSTRUCTION	MODEL NUMBER	KEYED NOTES
							WIDTH INCHES	LENGTH INCHES	HEIGHT INCHES				
IH-1	FCU-1	470	0.82	600	573	0.055	22	---	11.75	18	ALUMINUM	GRSI	

GENERAL NOTES:
1. MODEL NUMBERS ARE GREENHECK UNLESS OTHERWISE NOTED.
2. PROVIDE WITH BIRD SCREEN.

FAN COIL UNIT SCHEDULE (PRE-PURCHASED)

UNIT IDENTIFICATION	NOMINAL AIRFLOW CFM	MINIMUM O.A. CFM	FAN			COOLING COIL						HEATING COIL								MAXIMUM UNIT DIMENSIONS			FILTER	MODULATION/ CONTROL TYPE	ELECTRICAL						MODEL NUMBER	KEYED NOTES
			TYPE	MAXIMUM HP	RPM	SENSIBLE CAPACITY MBH	TOTAL CAPACITY MBH	AIR		REFRIG. TYPE	MIN. FACE AREA SQ. FT.	MAX. FACE VEL. F.P.M	MINIMUM TOTAL CAPACITY MBH	AIR		WATER											VOLTS	PHASE	MCA	MOP	SCCR KA	OPTIONS/ ACCESSORIES		
								E.D.B. °F	L.D.B. °F					E.D.B. °F	L.D.B. °F	FLOW GPM	FLUID TYPE	E.W.T. °F	L.W.T. °F	MAXIMUM W.P.D. FT. HEAD	CONTROL VALVE W.P.D. FT. HEAD	LENGTH INCHES	DEPTH INCHES	HEIGHT INCHES	TYPE								
FCU-1	1650	105	DIRECT	(2)3/4	1280	44.2	63.9	80	55	R-410A	4.0	409.0	69.0	47	85.3	7	WATER	150	130	16.35	11.5	46.0	54.0	18.0	MERV 8	AUTO	120	1	19.8	25	10	B	BCHD0181	

GENERAL NOTES:
1. REFER TO SCHEDULES GENERAL NOTES.
2. MODEL NUMBERS ARE DAIKIN UNLESS OTHERWISE NOTED.
3. FLUID TYPE: W = WATER, PGXX = PROPYLENE GLYCOL SOLUTION XX PERCENTAGE OF GLYCOL, EGXX = ETHYLENE GLYCOL SOLUTION XX PERCENTAGE OF GLYCOL.
4. CAPACITIES BASED ON HIGH SPEED SETTING.
5. COOLING COIL CAPACITY BASED ON 75% FBD, 62.5°FWB EAT.

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MECHANICAL SCHEDULES

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

M7.05

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TEMPERATURE CONTROL - SYMBOLS LIST

SCHEMATIC SYMBOLS

SYMBOL	DESCRIPTION
AQ	AQUASTAT, STRAP ON BULB
CO2	CARBON DIOXIDE SENSOR – WALL MOUNTED
CO2	CARBON DIOXIDE SENSOR – DUCT MOUNTED
CS	CURRENT SWITCH
CT	CURRENT TRANSDUCER
	DAMPER – OPPOSED BLADE
	DAMPER – PARALLEL BLADE
M	DAMPER MOTOR
DPS	DIFFERENTIAL PRESSURE SWITCH
DPT	DIFFERENTIAL PRESSURE TRANSMITTER
ECM	ELECTRONICALLY COMMUTATED MOTOR
CM	FIRE ALARM SYSTEM, ADDRESSABLE CONTROL MODULE
FM	FLOW METER
FS	FLOW SWITCH
FZ	FREEZESTAT
	GUARD FOR STAT OR SENSOR
	HUMIDIFIER
H	HUMIDISTAT OR HUMIDITY SENSOR (AS DEFINED ON TC DRAWINGS)
H	HUMIDITY SENSOR, DUCT MOUNTED
LVL	LEVEL SWITCH OR TRANSMITTER
LS	LIMIT SWITCH
	LINE – ELECTRIC
	LINE – INSTRUMENT AIR (PNEUMATIC)
M/S	MOTOR STARTER
OS	OCCUPANCY SENSOR
PT	PRESSURE TRANSMITTER
R	RELAY, ELECTRIC
N	SELECTOR SWITCH, (N=NUMBER OF POSITIONS)
AI	SIGNAL – DDC/BAS, ANALOG INPUT
AO	SIGNAL – DDC/BAS, ANALOG OUTPUT
DI	SIGNAL – DDC/BAS, DIGITAL INPUT
DO	SIGNAL – DDC/BAS, DIGITAL OUTPUT
AI	SIGNAL – PACKAGED EQUIPMENT, ANALOG INPUT
AO	SIGNAL – PACKAGED EQUIPMENT, ANALOG OUTPUT
DI	SIGNAL – PACKAGED EQUIPMENT, DIGITAL INPUT
DO	SIGNAL – PACKAGED EQUIPMENT, DIGITAL OUTPUT
DD	SMOKE DETECTOR – DUCT MOUNTED
S/S	START/STOP RELAY
SPT	STATIC PRESSURE TRANSMITTER
SP	STATIC PRESSURE SENSOR OR PROBE

SCHEMATIC SYMBOLS (CONT.)

SYMBOL	DESCRIPTION
SW	SWITCH
T	TEMPERATURE SENSOR – RIGID ELEMENT IN WELL
T	TEMPERATURE SENSOR – STRAP ON BULB
T	TEMP SENSOR – DUCT MOUNTED AVG ELEMENT
T	TEMP SENSOR – DUCT MOUNTED RIGID ELEMENT
T	THERMOSTAT OR TEMPERATURE SENSOR (AS DEFINED ON TC DRAWINGS)
TMR	TIMER SWITCH
XF	TRANSFORMER
	VALVE – 2 WAY CONTROL VALVE
	VALVE – 3 WAY CONTROL VALVE
VFC	VARIABLE FREQUENCY CONTROLLER
VS	VELOCITY SENSOR
VIB	VIBRATION SWITCH

WIRING SYMBOLS

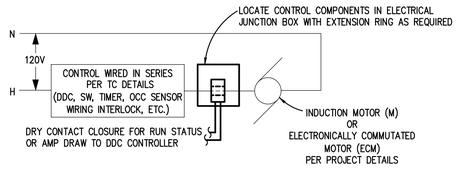
M/S	COIL – MOTOR STARTER CONTACTOR
R	COIL – RELAY
	CONTACT – INSTANT OPERATING, NO
	CONTACT – INSTANT OPERATING, NC
	GROUND
	MOTOR, SINGLE PHASE
	PUSH BUTTON – MOMENTARY, NC (MUSHROOM HEAD)
H O A	SWITCH – 3 POSITION SELECTOR HAND/OFF/AUTO
	SWITCH – FLOW (AIR, WATER, ETC.), NO
	SWITCH – LIMIT, NO
	SWITCH – PRESSURE & VACUUM, NC
	SWITCH – TEMPERATURE ACTUATED, NO
	THERMAL OVERLOAD, SINGLE PHASE
OLs	THERMAL OVERLOAD CONTACTS–3 PHASE
	TRANSFORMER
	WIRE TERMINATION AT DEVICE
	WIRE TO WIRE TERMINATION
	WIRING NOT CONNECTED

ABBREVIATIONS

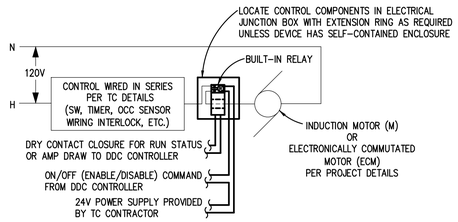
ABBREVIATION	DESCRIPTION
BAS	BUILDING AUTOMATION SYSTEM
DDC	DIRECT DIGITAL CONTROL
TC	TEMPERATURE CONTROLS
NO	NORMALLY OPEN
NC	NORMALLY CLOSED

NOTES:

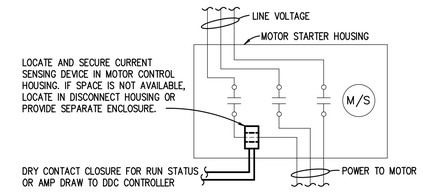
1. SOME SYMBOLS & ABBREVIATIONS SHOWN MAY NOT APPLY TO THIS PROJECT.
2. REFER TO MECHANICAL STANDARDS ON DRAWING M0.1 FOR ADDITIONAL SYMBOLS & ABBREVIATIONS THAT MAY BE USED ON TEMPERATURE CONTROL DRAWINGS.



1-PHASE POWER APPLICATION - DDC MONITORING



1-PHASE POWER APPLICATION - COMBO DDC MONITORING & CONTROL



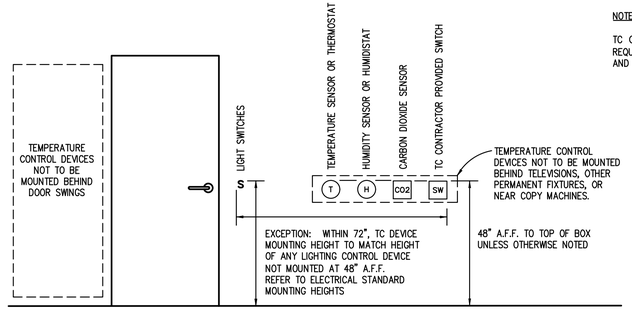
3-PHASE POWER APPLICATION - DDC MONITORING

CURRENT SWITCH INSTALLATION DETAILS

TYPICAL

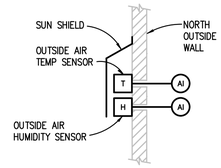
NOTES:

1. CURRENT SWITCH (CS) OR CURRENT TRANSDUCER (CT) AMP MONITORING AS APPLICABLE PER CONTROL DETAILS SHALL BE INSTALLED FOR DDC SYSTEM STATUS INDICATION OF FAN OR PUMP OPERATION. APPROPRIATE TIME DELAY FOR STATUS FEEDBACK UPON DDC START AND STOP COMMANDS SHALL BE INCLUDED WITH THE DDC LOGIC TO AVOID NUISANCE OPERATIONAL ALARMS.
2. REVIEW EQUIPMENT SHOP DRAWINGS TO DETERMINE POTENTIAL AMPERAGE RANGE OF FAN OR PUMP OPERATION FOR AMPERAGE TRIP SETTING REQUIREMENTS PRIOR TO SELECTING APPROPRIATE CURRENT SWITCH (MINIMUM SPEED AMPERAGE FOR FPTU WITH ECM CAN BE VERY LOW).
3. FOR ECM CURRENT SWITCH APPLICATIONS: PROVIDE CURRENT SWITCH RATED FOR ECM OPERATION WITH AMPERAGE TRIP SETTING HIGHER THAN TRICKLE/IDLE/STANDBY AMPERAGE ASSOCIATED WITH ECM WHEN OFF AND AMPERAGE TRIP SETTING LOWER THAN THE MINIMUM SPEED OPERATION OF FAN OR PUMP AS SET BY THE TAB CONTRACTOR.
4. FOR INDUCTION MOTOR CURRENT SWITCH APPLICATIONS (AS APPLICABLE): AMPERAGE TRIP SETTING SHALL BE ADJUSTABLE TO ACCOMMODATE VFC MINIMUM SPEED SETTING, TO DETECT FAN BELT LOSS, OR TO DETECT PUMP COUPLING DETACHMENT.
5. WHEN FAN OR PUMP IS ON AND NOT IN ALARM, DDC SYSTEM SHALL TOTALIZE RUN TIME HOURS FOR OPERATOR INFORMATION FROM BUILDING AUTOMATION SYSTEM OPERATOR INTERFACE.



TC DEVICE STANDARD MOUNTING HEIGHTS DETAIL

NO SCALE

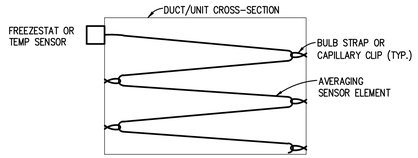


OA SENSOR INSTALLATION DETAIL

NO SCALE

NOTES:

1. TC CONTRACTOR HAS THE OPTION OF USING EXISTING OA TEMP AND HUMIDITY SENSORS AS AVAILABLE FOR BUILDING.
2. CALCULATE OA ENTHALPY OR DEW POINT TEMPERATURE AS REQUIRED PER SEQUENCE OF OPERATION REQUIREMENTS.
3. BROADCAST OUTSIDE AIR TEMPERATURE, HUMIDITY, AND CALCULATED OA ENTHALPY OR DEWPOINT TEMPERATURE, AS REQUIRED, THROUGH BAS COMMUNICATION NETWORK TO CONTROLLERS REQUIRING INFORMATION FOR DDC PROGRAMMING LOGIC.

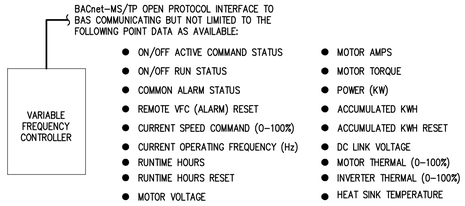


AVERAGING ELEMENT INSTALLATION DETAIL

TYPICAL

NOTES:

1. FREEZESTAT QUANTITY SHALL BE ONE PER 20 SQ. FT. OF CROSS-SECTIONAL AREA.
2. AVERAGING DDC SENSOR LENGTH SHALL BE SUFFICIENT TO COVER AND SENSE THE CROSS-SECTIONAL AREA.
3. PROVIDE REQUIRED CAPILLARY STRAP OR CLIPS TO SUPPORT SENSOR TO PREVENT VIBRATION FROM AIR MOVEMENT.
4. PROVIDE PROTECTION AT EACH CAPILLARY STRAP OR CLIP TO PREVENT ABRASION TO CAPILLARY.



VFC BACnet INTERFACE & MONITORING REQUIREMENTS

TYPICAL FOR NEW FAN & PUMP VFCs

NOTE:

TC CONTRACTOR SHALL COORDINATE BACnet-MS/TP OPEN PROTOCOL WIRE TERMINATION REQUIREMENTS AND POINT INTEGRATION CAPABILITIES WITH VFC SUPPLIER/MANUFACTURER AND PROVIDE APPROPRIATE BAS COMPONENTS FOR COMMUNICATION INTERFACE TO BAS.

TC GENERAL NOTES

1. THESE GENERAL NOTES SHALL BE APPLICABLE FOR ALL TEMPERATURE CONTROL (TC) DRAWINGS.
2. "PROVIDE" IS DEFINED AS "FURNISH AND INSTALL".
3. TEMPERATURE CONTROLS CONTRACTOR (TC CONTRACTOR) SHALL BE RESPONSIBLE TO COMPLY WITH ALL APPLICABLE CODES AND STANDARDS.
4. FOR TEMPERATURE CONTROL DRAWINGS ONLY: ALL DETAILED INFORMATION IDENTIFIED WITH HEAVY LINE WEIGHT SHALL BE PROVIDED BY TC CONTRACTOR. ALL OTHER INFORMATION IDENTIFIED WITH LIGHT LINE WEIGHT SHALL BE PROVIDED BY OTHER TRADES.
5. ALL CONTROL SCHEMATICS AND WIRING DIAGRAMS ARE FOR THE CLARIFICATION OF EQUIPMENT INTERLOCKING FUNCTIONS AND THE INTERFACE OF VARIOUS CONTRACTORS' WORK AND SHALL NOT BE MISTAKEN AS SHOP DRAWINGS FOR ACTUAL INSTALLATION.
6. TC CONTRACTOR SHALL PROVIDE DDC CONTROLLERS AS REQUIRED TO MEET INTENT OF DESIGN DOCUMENTS. REFER TO THE PLANS FOR THE DDC FUNCTIONS THAT APPLY TO EACH MECHANICAL SYSTEM.
7. ALL TC PROVIDED COMPONENTS AND ALL TC CONTRACTOR INSTALLED WIRING SHALL BE LABELED PER SPECIFICATIONS.
8. ALL WIRING AND SYSTEM CONTROL VOLTAGES SHALL BE IN ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S RECOMMENDATION AND THE ELECTRICAL SPECIFICATIONS.
9. VARIABLE FREQUENCY CONTROLLER, FAN AND PUMP MOTOR STARTERS, STARTER WIRING, CONTROL VOLTAGE TRANSFORMERS AND ASSOCIATED POWER WIRING SHALL BE PROVIDED BY OTHER TRADES.
10. DUCT SMOKE DETECTORS SHALL BE FURNISHED, INSTALLED AND WIRED TO THE FIRE ALARM SYSTEM BY THE ELECTRICAL CONTRACTOR. ELECTRICAL SHALL PROVIDE FIRE ALARM SYSTEM CONTROL MODULES FOR REQUIRED SAFETIES TO MOTOR STARTERS OR VFC'S AS INDICATED. CONTROL MODULES SHALL BE LOCATED NEAR RESPECTIVE MOTOR STARTERS OR VFCs. TC CONTRACTOR SHALL PROVIDE INTERLOCK WIRING FROM CONTROL MODULES TO MOTOR STARTERS OR VFCs.
11. ALL DDC AND CONTROL INTERLOCK WIRING SHALL BE BY TC CONTRACTOR UNLESS OTHERWISE NOTED. TC CONTRACTOR SHALL COORDINATE WITH VFC AND MOTOR STARTER SUPPLIERS TO DETERMINE EXACT WIRING REQUIREMENTS AND TERMINATION POINTS.
12. ALL DDC AND CONTROL INTERLOCK WIRING BETWEEN COMPONENTS SHALL BE INSTALLED WITHOUT INTERMEDIATE STOPS. WIRE SPLICING AT INTERMEDIATE TERMINAL STRIPS IS NOT ACCEPTABLE.
13. ALL ELECTRICAL WIRING AND RACEWAY SYSTEMS SHALL COMPLY WITH ELECTRICAL SPECIFICATION REQUIREMENTS. WHERE RACEWAY IS REQUIRED, TWO SEPARATE ELECTRICAL RACEWAY SYSTEMS SHALL BE PROVIDED: ONE FOR 120V WIRING AND THE OTHER FOR 24V WIRING.
14. TC CONTRACTOR SHALL BE RESPONSIBLE FOR ALL POWER SUPPLIES REQUIRED FOR TC SYSTEM UNLESS OTHERWISE NOTED. REFER TO ELECTRICAL PANEL SCHEDULES FOR SPARE CIRCUITS OR CIRCUITS DEDICATED TO TEMPERATURE CONTROLS. COORDINATE CIRCUIT USE WITH ELECTRICAL CONTRACTOR.
15. TC CONTRACTOR SHALL VERIFY EXACT LOCATION OF ALL FIELD MOUNTED COMPONENTS.
16. REFER TO TEMPERATURE CONTROLS STANDARD MOUNTING HEIGHTS DETAIL FOR ELEVATIONS OF WALL MOUNTED TEMPERATURE CONTROL DEVICES. PROVIDE WALL MOUNTED DEVICE GUARDS WHERE INDICATED ON TC DETAILS OR AT SPECIFIC LOCATIONS INDICATED ON MECHANICAL FLOOR PLANS.
17. TC CONTRACTOR SHALL PROVIDE AUXILIARY PANELS FOR REQUIRED PANEL MOUNTED EQUIPMENT SUCH AS RELAYS, TRANSDUCERS, CONTROL TRANSFORMERS, ETC. AUXILIARY PANELS SHALL BE LOCATED NEXT TO ASSOCIATED DDC PANEL. DEPENDING ON WIRE QUANTITY OR COMPLEXITY, PROVIDE CONDUITS BETWEEN PANELS OR WIRING THROUGH WITH CONDUIT STUBS ABOVE ALL ASSOCIATED PANELS.
18. REMOTELY MOUNTED FIELD DEVICES SUCH AS RELAYS, CONTROL TRANSFORMERS, ETC., SHALL BE HOUSED IN AN ENCLOSURE PROVIDED BY THE TC CONTRACTOR.
19. CONTROL TRANSFORMERS WHEN REQUIRED SHALL BE SIZED FOR 150% OF ACTUAL LOAD.
20. FREEZESTATS SHALL BE MOUNTED ON UPSTREAM FACE OF COOLING COILS. FREEZESTAT QUANTITY SHALL BE ONE PER 20 SQ. FT OF CROSS SECTIONAL AREA.
21. CURRENT SWITCHES USED FOR OPERATIONAL STATUS SHALL HAVE CURRENT THRESHOLD SETPOINT ADJUSTED TO INDICATE BELT OR DRIVE FAILURE.
22. ALL CONTROL VALVES, CONTROL DAMPERS AND ASSOCIATED CONTROL ACTUATORS IDENTIFIED ON TC DRAWINGS SHALL BE FURNISHED BY TC CONTRACTOR UNLESS OTHERWISE NOTED. DAMPER SIZE AND LOCATIONS ARE INDICATED ON MECHANICAL FLOOR PLAN DRAWINGS.
23. ALL CONTROL VALVES AND DAMPERS FURNISHED BY THE TC CONTRACTOR SHALL BE INSTALLED BY THE MECHANICAL CONTRACTOR. ALL PIPE PENETRATIONS AND BASIC FITTINGS REQUIRED FOR SENSOR INSTALLATIONS SHALL BE PROVIDED BY MECHANICAL CONTRACTOR.
24. DAMPER ACTUATORS SHALL BE INSTALLED BY TC CONTRACTOR WHEN FURNISHED BY TC CONTRACTOR.
25. ALL INSTRUMENTATION TUBING REQUIRED FOR DPS AND DPT COMPONENT INSTALLATIONS SHALL BE PROVIDED BY TC CONTRACTOR.
26. TC CONTRACTOR SHALL FIELD MOUNT ALL REQUIRED "SHIPPED LOOSE" PACKAGED CONTROL COMPONENTS FURNISHED BY EQUIPMENT SUPPLIERS WHERE INDICATED. ALL REQUIRED 24V AND 120V FIELD WIRING SHALL BE PROVIDED BY TC CONTRACTOR UNLESS NOTED OTHERWISE. TC CONTRACTOR SHALL COORDINATE SPECIFIC SYSTEM WIRING REQUIREMENTS WITH PACKAGED EQUIPMENT SUPPLIERS.

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TEMPERATURE CONTROL STANDARDS AND GENERAL NOTES

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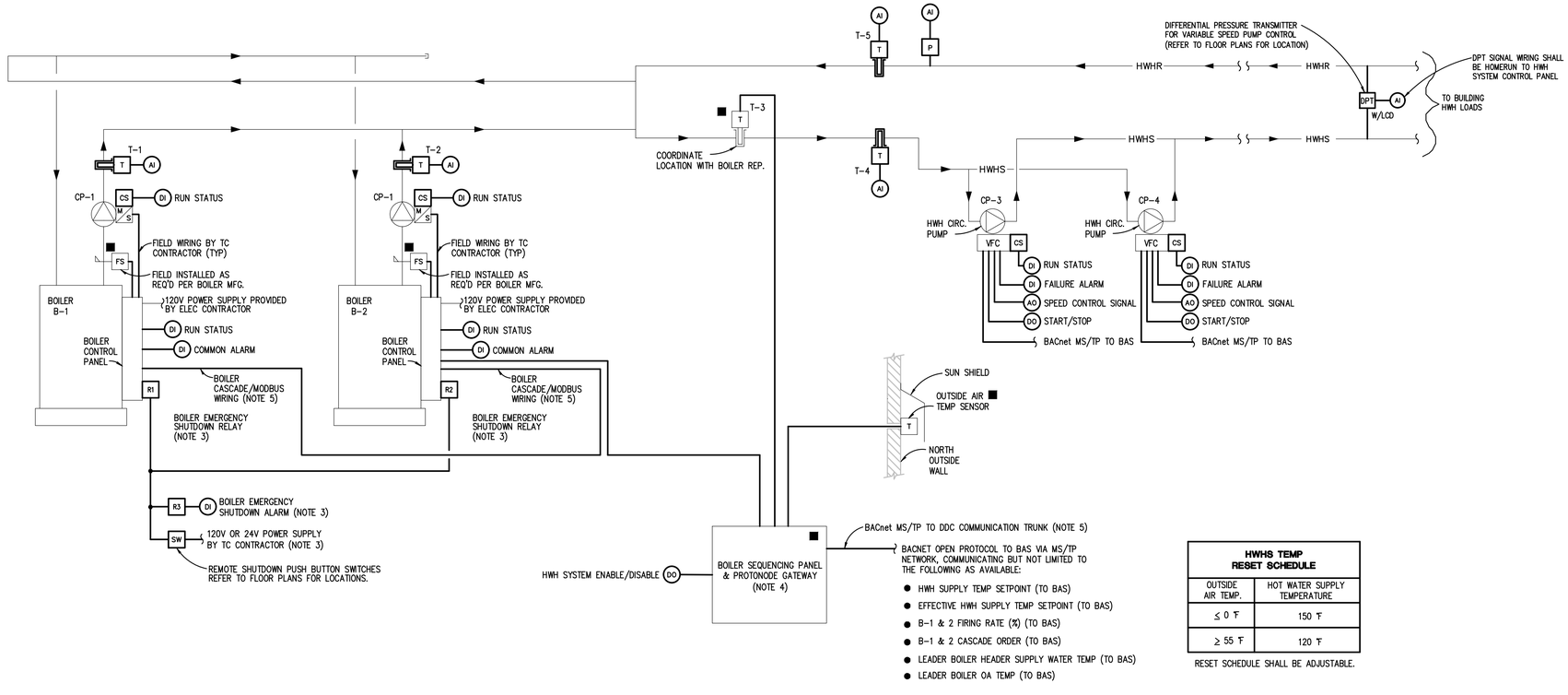


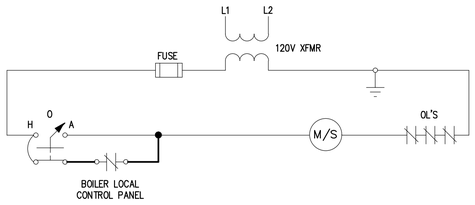
HWHS TEMP RESET SCHEDULE	
OUTSIDE AIR TEMP.	HOT WATER SUPPLY TEMPERATURE
≤ 0 °F	150 °F
≥ 55 °F	120 °F

RESET SCHEDULE SHALL BE ADJUSTABLE.

HOT WATER HEATING SYSTEM CONTROL

NOTES:

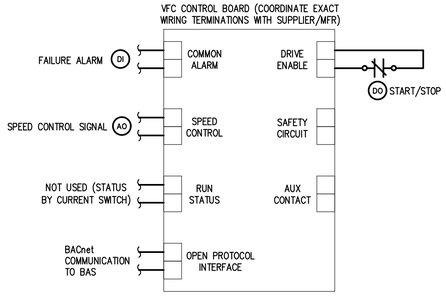
1. ■ INDICATED COMPONENT FURNISHED BY BOILER SUPPLIER AND INSTALLED BY TC CONTRACTOR.
2. COORDINATE ALL WIRING AND TERMINATIONS WITH BOILER SUPPLIER.
3. TC CONTRACTOR SHALL PROVIDE BOILER EMERGENCY SHUTDOWN COMPONENTS AND WIRING. REFER TO REMOTE BOILER SHUTDOWN WIRING DIAGRAM.
4. BOILER SEQUENCING PANEL COULD BE PROVIDED AS AN INTEGRAL FEATURE TO BOILER. VERIFY BOILER CONTROL WIRING WITH BOILER SUPPLIER.
5. TC CONTRACTOR SHALL PROVIDE BOILER MODBUS COMMUNICATION WIRING TO EACH BOILER AND BAS OPEN PROTOCOL COMMUNICATION WIRING TO BAS FOR BOILER SEQUENCING CONTROL AND MONITORING.



BOILER CP-1 & 2 M/S WIRING

NOTES:

1. PROVIDE CURRENT SWITCHES ON PUMP MOTOR LEADS.



HWH PUMPS CP-3 & 4 VFC WIRING

NOTES:

1. WIRING DETAIL IDENTIFIES INTENT AND DOES NOT INDICATE ACTUAL WIRING REQUIREMENTS. CONSULT WITH VFC SUPPLIER FOR THE ACTUAL WIRING REQUIREMENTS.
2. PROVIDE VFC MANUFACTURER'S WIRING DESIGNATIONS ON SUBMITTAL DRAWINGS.
3. PROVIDE CURRENT SWITCHES ON PUMP MOTOR LEADS.

SEQUENCE OF OPERATION

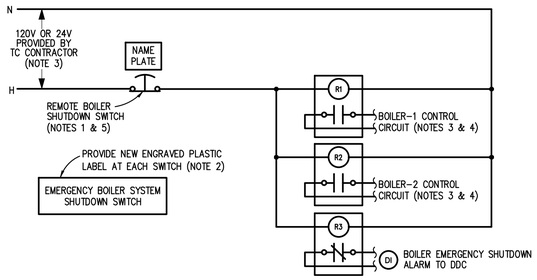
HOT WATER HEATING SYSTEM:

NOTE: ALL SETPOINTS, DEADBANDS, DELAY TIMERS, ETC., INCLUDING TIME-OF-DAY HOURS OF OPERATION DESCRIBED IN SEQUENCE SHALL BE ADJUSTABLE BY SYSTEM OPERATORS. APPROPRIATE DEADBANDS SHALL BE USED TO PREVENT SHORT CYCLING SITUATIONS. ALL MOTOR CONTROL SWITCHES SHALL BE IN THE "AUTO" POSITION. ALL CONTROL LOOPS SHALL BE ENABLED AND DISABLED BASED ON SYSTEM STATUS TO PREVENT LOOP WINDUP.

1. HWH SYSTEM SHALL BE ACTIVATED FOR CONTINUOUS OPERATION DURING SCHEDULED BUILDING OCCUPANCY OR WHEN OUTDOOR AIR TEMPERATURE IS BELOW 50°F.
2. SECONDARY HWH CIRC PUMPS CP-3 & CP-4 SHALL HAVE START/STOP CAPABILITY FROM THE DDC SYSTEM. ONE OF THE TWO PUMPS SHALL BE ACTIVATED AS "LEAD" BY DDC TO OPERATE CONTINUOUSLY. THE OTHER WILL SERVE AS "STANDBY".
3. DDC SHALL ALTERNATE "LEAD" PUMP OPERATION BASED ON WEEKLY BASIS.
4. DDC SHALL MONITOR OPERATING STATUS OF EACH SECONDARY PUMP. UPON "LEAD" PUMP FAILURE, DDC SHALL ACTIVATE FAILURE ALARM AND AUTOMATICALLY START THE "STANDBY" PUMP. DDC SHALL TOTALIZE PUMP RUN TIME HOURS OF OPERATION FOR BAS DISPLAY.
5. VFC COMMON FAILURE ALARM FOR EACH CIRC PUMP SHALL BE MONITORED BY DDC THRU AVAILABLE CONTACTS AT RESPECTIVE PUMP VFC. ADDITIONAL PUMP VFC MONITORING FOR DIAGNOSTICS SHALL BE AVAILABLE THRU BAS OPEN PROTOCOL COMMUNICATION INTERFACE.
6. DDC SHALL MODULATE VFC OF ACTIVE SECONDARY HWH PUMP TO MAINTAIN HWH LOOP DIFFERENTIAL PRESSURE INITIAL SETPOINT OF 20 FT OF HEAD (FINAL SETPOINT TO BE DETERMINED AT SYSTEM WATER BALANCING).
7. REMOTE CONTROL SHALL BE THRU BOILER SEQUENCING PANEL FURNISHED BY BOILER SUPPLIER. DDC SYSTEM SHALL ENABLE BOILER SEQUENCING PANEL CONTROL WHEN SECONDARY HWH CIRC. PUMP CP-3 OR CP-4 IS ACTIVATED. BOILER SEQUENCING PANEL SHALL CONTROL BOILERS AS REQUIRED TO MAINTAIN HWH SUPPLY TEMP (T-3) SETPOINT BASED ON OUTSIDE AIR RESET SCHEDULE.
8. THE BOILER SEQUENCING PANEL SHALL INCLUDE OPERATOR SELECTABLE BOILER LEAD/LAG OPERATION OR FIRST ON/FIRST OFF OPERATION.
9. WHENEVER A BOILER IS ACTIVATED, ITS RESPECTIVE PRIMARY CIRC. PUMP SHALL BE ACTIVATED BY FACTORY BOILER CONTROLLER TIME DELAY CONTROL RELAY. BOILER SHALL NOT FIRE UNTIL FLOW IS PROVEN BY FLOW SWITCH.
10. WHENEVER A BOILER IS DEACTIVATED, ITS RESPECTIVE BOILER CIRC. PUMP SHALL CONTINUE TO RUN BASED ON THE BOILER CONTROLLER TIME DELAY CONTROL RELAY TO DISSIPATE HEAT FROM THE DEACTIVATED BOILER.
11. DDC SHALL MONITOR OPERATING STATUS OF BOILER CIRC PUMPS CP-1 AND CP-2. DDC SHALL TOTALIZE PUMP RUN TIME HOURS OF OPERATION FOR BAS DISPLAY.
12. EACH BOILER LOCAL CONTROL PANEL SHALL INCLUDE AN OPERATOR LIMIT WITH SETPOINT OF 190°F (TO BE USED WHEN BOILER LOCAL/REMOTE SWITCH IS IN LOCAL POSITION) AND A MANUAL-RESET HI-LIMIT SAFETY WITH SETPOINT OF 200°F.
13. DDC SHALL MONITOR BOILER RUN STATUS AND COMMON ALARM FOR EACH BOILER THROUGH DRY CONTACTS AVAILABLE IN RESPECTIVE BOILER CONTROL PANEL.
14. DDC SHALL MONITOR ALL PRIMARY AND SECONDARY WATER TEMPERATURES FOR DIAGNOSTIC PURPOSES.
15. WHEN HWH SYSTEM IS ACTIVATED, DDC SHALL MONITOR SYSTEM PRESSURE AND ACTIVATE AN ALARM IF PRESSURE DROPS BELOW ITS LOW LIMIT SETPOINT (POSSIBLY INDICATING A SYSTEM WATER LEAK).
16. DDC SHALL MONITOR ALL BOILERS THROUGH BACnet MS/TP COMMUNICATION PROTONODE PROVIDED BY BOILER MFR. ALLOW FOR 20 POINTS OF INFORMATION DISPLAY AT BAS.

REMOTE BOILER EMERGENCY SHUTDOWN:

17. UNDER NORMAL OPERATING CONDITIONS, THE PUSHBUTTON CIRCUIT ENERGIZES THE RELAY'S WHICH CLOSE THE NORMALLY OPEN (NO) CONTACTS AND OPEN THE NORMALLY CLOSED (NC) CONTACTS.
18. WHEN PUSHBUTTON IS ACTIVATED, THE RELAY NO CONTACTS SHALL OPEN AND INTERRUPT ALL BOILERS' CONTROL CIRCUITS.
19. WHEN PUSHBUTTON SWITCH IS KEY-RELEASED, THE RELAYS RE-ENERGIZE AND THE CONTACTS RE-ENERGIZE THE BOILERS' CONTROL CIRCUITS.
20. WHEN PUSHBUTTON IS ACTIVATED, THE RELAY NC CONTACT SHALL CLOSE AND DDC SHALL ACTIVATE AN EMERGENCY ALARM AT THE BAS.



REMOTE BOILER EMERGENCY SHUTDOWN WIRING

NOTES:

1. LOCATE AN EMERGENCY SHUTDOWN SWITCH AT EACH ENTRANCE JUST INSIDE BOILER ROOM. REFER TO FLOOR PLANS FOR QUANTITY AND LOCATION OF ROOM ENTRANCES. COORDINATE SWITCH LOCATIONS WITH ALL OTHER TRADES.
2. TC CONTRACTOR SHALL PROVIDE SIGN (NAME PLATE) TO BE PLACED DIRECTLY ABOVE OR BELOW EACH PUSHBUTTON SWITCH THAT READS: "EMERGENCY BOILER SYSTEM SHUTDOWN".
3. TC CONTRACTOR SHALL SUPPLY POWER TO CONTROL RELAYS. REFER TO ELECTRICAL PANEL SCHEDULES AND COORDINATE WITH ELECTRICAL CONTRACTOR AS NECESSARY. COORDINATE WITH THE ELECTRICAL CONTRACTOR TO PROVIDE A LOCKOUT AT THE CIRCUIT BREAKER.
4. TC CONTRACTOR SHALL MOUNT BOILER'S SHUTDOWN CONTROL RELAYS AT RESPECTIVE BOILER CONTROL PANELS. TC CONTRACTOR SHALL WRE BOILERS' CONTROL CIRCUITS (POWER FROM SECONDARY SIDE OF CONTROL TRANSFORMERS) THRU NORMALLY OPEN RELAY CONTACTS. TC CONTRACTOR SHALL COORDINATE EXACT WIRING AND TERMINATION REQUIREMENTS WITH BOILER MANUFACTURER.
5. TC CONTRACTOR SHALL PROVIDE PUSHBUTTON SWITCHES [PUSH TO LATCH – TURN KEY TO RELEASE] WITH MUSHROOM HEAD OPERATOR AND NORMALLY CLOSED (NC) CONTACTS. PROVIDE WITH PROPER ENCLOSURE.

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TEMPERATURE CONTROLS

EHRESMAN ARCHITECTS
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Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

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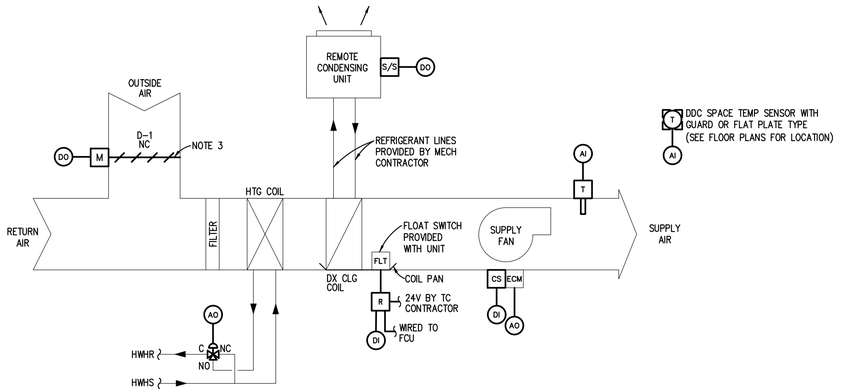


FAN COIL UNIT (FCU-1) CONTROL

SERVES HALLWAY

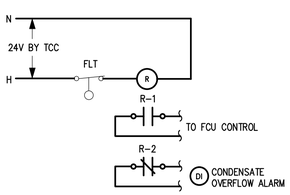
NOTES:

1. REFER TO FLOOR PLANS FOR LOCATIONS OF UNIT.
2. TC CONTRACTOR SHALL FURNISH 3-WAY CONTROL VALVE FOR HEATING ELEMENT PER MECHANICAL SCHEDULES FOR INSTALLATION BY MECHANICAL CONTRACTOR.
3. TC CONTRACTOR SHALL FURNISH MOTORIZED DAMPER FOR INSTALLATION BY SHEETMETAL CONTRACTOR. REFER TO FLOOR PLANS FOR DAMPER SIZES AND VERIFY WITH SHEETMETAL CONTRACTOR.

SEQUENCE OF OPERATION:

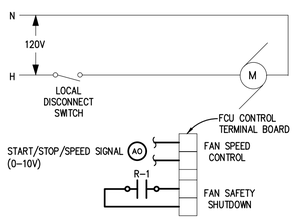
NOTE: ALL SETPOINTS DESCRIBED IN SEQUENCE SHALL BE ADJUSTABLE BY SYSTEM OPERATORS (CREATE REQUIRED VIRTUAL POINTS). APPROPRIATE DEADBANDS SHALL BE USED TO PREVENT SHORT CYCLING SITUATIONS. ALL MOTOR CONTROL SWITCHES SHALL BE IN "AUTO" POSITION. ALL CONTROL LOOPS SHALL BE ENABLED AND DISABLED BASED ON SYSTEM STATUS TO PREVENT LOOP WINDUP.

1. SUPPLY FAN SHALL HAVE START/STOP CAPABILITY FROM THE DDC SYSTEM. UNIT SHALL OPERATE BASED ON TIME SCHEDULED OCCUPIED MODE (COMPENSATED BY OPTIMUM START PROGRAM AND UNOCCUPIED CYCLE MODE.
2. FOR HEATING OCCUPIED MODE, FAN OPERATION SHALL BE CONTINUOUS, OUTSIDE AIR DAMPER SHALL BE COMMANDED OPEN AND FCU SHALL BE CONTROLLED TO MAINTAIN SPACE TEMP SETPOINT OF 70℉.
3. FOR COOLING OCCUPIED MODE, FAN OPERATION SHALL BE CONTINUOUS, OUTSIDE AIR DAMPER SHALL COMMANDED OPEN, AND FCU SHALL BE CONTROLLED TO MAINTAIN SPACE TEMP SETPOINT OF 74℉.
4. FOR HEATING UNOCCUPIED MODE, FCU SHALL CYCLE ON & OFF, OUTSIDE AIR DAMPER SHALL REMAIN CLOSED AND FCU WILL BE CONTROLLED TO MAINTAIN A SETBACK SPACE TEMP SETPOINT OF 62℉.
5. FOR COOLING UNOCCUPIED MODE, FCU SHALL REMAIN OFF AND OUTSIDE AIR DAMPER SHALL REMAIN CLOSED.
6. SUPPLY FAN STATUS SHALL BE MONITORED BY DDC THRU CURRENT SWITCH. ABNORMAL STATUS CONDITION FOR SF SHALL ACTIVATE ALARM.
7. FCU SF ECM SPEED SHALL BE MAINTAINED BY DDC AT A CONSTANT DESIGN AIRFLOW SETTING (REFER TO MECHANICAL SCHEDULE AIRFLOWS AND COORDINATE SETTING WITH AIR BALANCE CONTRACTOR DURING AIR BALANCING).
8. WHEN SPACE TEMP IS BELOW HEATING SETPOINT, DDC SHALL MODULATE HEATING COIL CONTROL VALVE TO MAINTAIN DISCHARGE AIR TEMP SETPOINT THAT SHALL BE RESET BASED ON DEVIATION FROM SPACE TEMP SETPOINT. DISCHARGE AIR TEMP SETPOINT RANGE SHALL BE 65℉ TO 90℉.
9. WHEN SPACE TEMP IS ABOVE COOLING SETPOINT, DDC SHALL CYCLE DX COOLING TO MAINTAIN SPACE TEMP SETPOINT.
10. DISCHARGE AIR LOW TEMP LIMIT OF 45℉ SHALL PROVIDE OVERRIDE OF HEATING COIL CONTROL VALVE TO FULL OPEN POSITION, CLOSE OA DAMPER AND ALARM BAS OF LOW TEMP CONDITION IF DISCHARGE AIR TEMP DOES NOT ACHIEVE SETPOINT WITHIN 600 SEC. (ADJ.).
11. FACTORY PROVIDED CONDENSATE OVERFLOW FLOAT SWITCH, MOUNTED IN COOLING COIL DRAIN PAN, SHALL BE INTERLOCKED TO SF MOTOR STARTER AND MONITORED BY DDC. SHOULD WATER LEVEL REACH HIGH LEVEL SETPOINT, FCU SHALL BE DEACTIVATED AND ALARM INITIATED AT DDC SYSTEM.
12. WHEN OA TEMP IS BELOW 40℉ AND FCU IS DEACTIVATED, HWH COIL CONTROL VALVE SHALL BE MODULATED BY DDC TO MAINTAIN LOW LIMIT FCU CABINET TEMP OF 50℉.



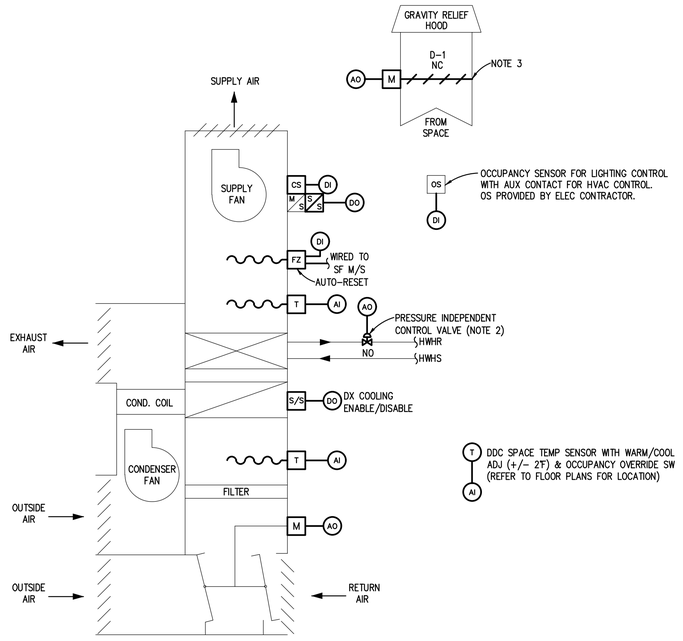
FCU-1 CONDENSATE OVERFLOW FLOW FLOAT SWITCH WIRING

CONTROL RELAY AND WIRING PROVIDED BY TC CONTRACTOR



FCU-1 M/S WIRING

WIRING DETAIL IDENTIFIES INTENT AND DOES NOT INDICATE ACTUAL WIRING REQUIREMENTS. CONSULT FCU SUPPLIER FOR ACTUAL WIRING AND TERMINATIONS REQUIREMENTS.



VERTICAL FLOOR MOUNTED UNIT VENTILATOR (UV) CONTROL

TYPICAL

NOTES:

1. REFER TO FLOOR PLANS FOR QUANTITY AND LOCATIONS OF UNITS.
2. TC CONTRACTOR SHALL FURNISH 2-WAY PRESSURE INDEPENDENT CONTROL VALVES FOR HEATING ELEMENTS PER MECHANICAL SCHEDULES FOR INSTALLATION BY MECHANICAL CONTRACTOR.
3. TC CONTRACTOR SHALL FURNISH MOTORIZED DAMPER FOR INSTALLATION BY SHEETMETAL CONTRACTOR. REFER TO FLOOR PLANS FOR DAMPER SIZES AND VERIFY WITH SHEETMETAL CONTRACTOR.

SEQUENCE OF OPERATION:

NOTE: ALL SETPOINTS DESCRIBED IN SEQUENCE SHALL BE ADJUSTABLE BY SYSTEM OPERATORS (CREATE REQUIRED VIRTUAL POINTS). APPROPRIATE DEADBANDS SHALL BE USED TO PREVENT SHORT CYCLING SITUATIONS. ALL MOTOR CONTROL SWITCHES SHALL BE IN "AUTO" POSITION. ALL CONTROL LOOPS SHALL BE ENABLED AND DISABLED BASED ON SYSTEM STATUS TO PREVENT LOOP WINDUP.

1. SUPPLY FAN SHALL HAVE START/STOP CAPABILITY FROM THE DDC SYSTEM. UNIT SHALL OPERATE BASED ON TIME SCHEDULED WARM-UP AND OCCUPIED MODES, TEMPORARY OCCUPIED MODE (SET FOR 2 HRS ENABLED FROM OVERRIDE SWITCH ON TEMPERATURE SENSOR), STANDBY MODE AND UNOCCUPIED CYCLE MODE.
2. ONE HOUR (ADJUSTABLE) PRE-OCCUPANCY PURGE MODE SHALL BE UTILIZED WITH OCCUPIED MODE TIME SCHEDULE WHEN ZONE SPACE TEMPERATURE IS GREATER THAN OCCUPIED COOLING SETPOINTS AND OA TEMP IS LESS THAN SPACE TEMP AND OUTSIDE AIR HUMIDITY IS BELOW ECONOMIZER LOCKOUT SETPOINT OF 60%RH; DAMPERS SHALL BE MODULATED OPEN TO FULL OA POSITION.
3. FOR HEATING OCCUPIED MODE, UV SHALL BE CONTROLLED TO MAINTAIN SPACE TEMP SETPOINT OF 70℉.
4. FOR COOLING OCCUPIED MODE, UV SHALL BE CONTROLLED TO MAINTAIN SPACE TEMP SETPOINT OF 75℉.
5. FOR HEATING UNOCCUPIED MODE, UV SHALL CYCLE ON & OFF TO MAINTAIN A SETBACK SPACE TEMP SETPOINT OF 62℉.
6. FOR COOLING UNOCCUPIED MODE, UV SHALL REMAIN OFF.
7. WHEN ZONE IS UNOCCUPIED DURING SCHEDULED OCCUPIED MODE AS DETERMINED BY MONITORING THE LIGHTING OCCUPANCY SENSOR AUX CONTACTS, DDC SHALL OPERATE UV IN STANDBY MODE. FOR STANDBY MODE, THE HEATING STANDBY MODE SPACE TEMP SETPOINT SHALL BE SETBACK BY 2℉ AND THE COOLING STANDBY MODE SPACE TEMP SETPOINT SHALL BE SETUP BY 2℉.
8. SUPPLY FAN STATUS SHALL BE MONITORED BY DDC THRU CURRENT SWITCH. ABNORMAL STATUS CONDITION FOR SF SHALL ACTIVATE ALARM.
9. WHEN UV IS ACTIVATED DURING OCCUPIED MODE, MIXED AIR DAMPER SHALL BE ALLOWED TO MODULATE AS DESCRIBED. WHEN UV IS DEACTIVATED OR OPERATING IN UNOCCUPIED CYCLE MODE, STANDBY MODE OR MORNING WARM-UP MODE, MIXED AIR DAMPER SHALL REMAIN CLOSED (OUTSIDE AIR DAMPER FULLY CLOSED AND RETURN AIR DAMPER FULLY OPEN).
10. SPACE RELIEF AIR DAMPER SHALL BE MODULATED IN SEQUENCE WITH OA/RA DAMPER CONTROL.
11. MIXED AIR LOW TEMP LIMIT OF 45℉ SHALL PROVIDE OVERRIDE CONTROL OF MIXED AIR DAMPERS AND ALLOW MODULATION BELOW THE MINIMUM OA DAMPER POSITION SETPOINT.
12. WHEN SPACE TEMP IS BELOW HEATING SETPOINT, DDC SHALL MODULATE OUTSIDE & RETURN AIR DAMPERS TOWARDS MINIMUM OA POSITION, IN SEQUENCE WITH HEATING COIL CONTROL VALVE MODULATION TO MAINTAIN A DISCHARGE AIR TEMPERATURE SETPOINT THAT SHALL BE RESET BASED ON DEVIATION FROM SPACE TEMP SETPOINT. HEATING MODE DISCHARGE AIR TEMP SETPOINT RANGE SHALL BE 65℉ TO 85℉.
13. WHEN SPACE TEMP IS ABOVE COOLING SETPOINT, OA TEMP IS LESS THAN SPACE TEMP AND OUTSIDE AIR DEWPOINT IS BELOW ECONOMIZER LOCKOUT SETPOINT OF 52℉, DDC SHALL CONTROL DX COOLING COIL IN SEQUENCE WITH DAMPER OA ECONOMIZER TO MAINTAIN SPACE TEMP SETPOINT.
14. WHEN SPACE TEMP IS ABOVE COOLING SETPOINT AND OA TEMP IS GREATER THAN SPACE TEMP OR OUTSIDE AIR DEWPOINT IS ABOVE ECONOMIZER LOCKOUT SETPOINT OF 52℉, DAMPERS SHALL REMAIN AT MINIMUM OA POSITION AND DDC SHALL CONTROL DX COOLING COIL TO MAINTAIN SPACE TEMP SETPOINT.
15. AUTO-RESET FREEZESTAT SHALL DEACTIVATE SF WHEN TEMP IS 35℉ OR BELOW. UPON CUT-OUT, DDC SYSTEM SHALL FULLY CLOSE OA DAMPER, FULLY OPEN HWH COIL CONTROL VALVE, BAS LOW-LIMIT FREEZESTAT ALARM SHALL BE ACTIVATED AND DDC SOFTWARE LOCKOUT SHALL HOLD UNIT OFF UNTIL IT IS RESET BY OPERATOR FROM GRAPHICAL INTERFACE FOR UNIT.
16. WHEN UV IS DEACTIVATED, DX COOLING SHALL REMAIN OFF.
17. WHEN OA TEMP IS BELOW 40℉ AND UV IS DEACTIVATED, HWH COIL CONTROL VALVE SHALL BE MODULATED BY DDC BASED ON DISCHARGE AIR TEMP TO MAINTAIN LOW LIMIT PLENUM TEMP SETPOINT OF 50℉.

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TEMPERATURE CONTROLS

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

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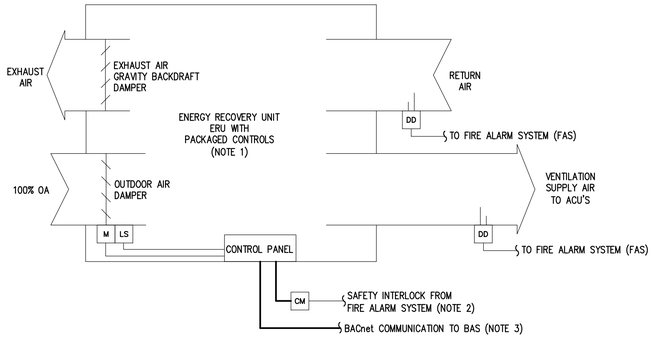


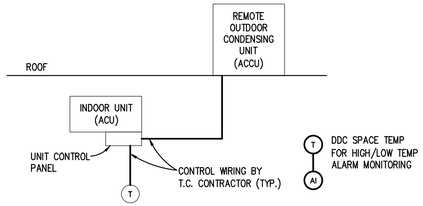
PACKAGED ERU-1 FIELD INSTALLATION & CONTROL

NOTES:

1. SINGLE ZONE ENERGY RECOVERY UNIT WITH ENERGY RECOVERY WHEEL, PACKAGED DX COOLING, AND INDIRECT GAS HEATING SHALL BE SUPPLIED FOR PROJECT WITH COMPLETE PACKAGED CONTROLS INCLUDING ALL CONTROL DAMPERS AND BACnet COMMUNICATION INTERFACE FOR BAS SCHEDULING, MORNING WARM-UP, DISCHARGE AIR TEMP CONTROL, RETURN AIR DEHUMIDIFICATION CONTROL WITH HOT GAS REHEAT AND UNIT MONITORING. SINGLE POINT POWER SUPPLY CONNECTION SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR. TC CONTRACTOR SHALL PROVIDE CONTROL FIELD WIRING FOR UNIT PLUS ANY MISCELLANEOUS FIELD CONTROL WIRING THAT MAY BE REQUIRED FOR PACKAGED UNIT THAT IS NOT SHOWN.
2. ELECTRICAL CONTRACTOR SHALL PROVIDE FIRE ALARM SYSTEM COMPONENTS AND WIRING FROM FIRE ALARM PANEL TO CONTROL MODULE. TC CONTRACTOR SHALL PROVIDE WIRING FROM CONTROL MODULE TO ERU SAFETY CUTOUT CIRCUIT.
3. TC CONTRACTOR SHALL PROVIDE BACnet COMMUNICATION INTERFACE WIRING FROM ERU CONTROL PANEL TO BAS NETWORK SUPERVISORY CONTROLLER, COMMUNICATING BUT NOT LIMITED TO THE FOLLOWING POINTS AS AVAILABLE:
   - OCCUPANCY MODE SCHEDULER (FROM BAS)
   - EFFECTIVE OCCUPANCY MODE (TO BAS)
   - SUPPLY FAN COMMAND STATUS (TO BAS)
   - SUPPLY FAN RUN STATUS (TO BAS)
   - EXHAUST FAN COMMAND STATUS (TO BAS)
   - EXHAUST FAN RUN STATUS (TO BAS)
   - OUTSIDE AIR TEMP (TO BAS)
   - DISCHARGE AIR TEMP (TO BAS)
   - RETURN AIR TEMP (TO BAS)
   - RETURN AIR HUMIDITY (TO BAS)
   - DISCHARGE AIR TEMP SETPOINT (FROM BAS)
   - RETURN AIR HUMIDITY SETPOINT (FROM BAS)
   - HEATING/COOLING MODE STATUS (TO BAS)
   - HEATING OUTPUT STATUS (TO BAS)
   - COOLING OUTPUT STATUS (TO BAS)
   - EXHAUST AIR DIRTY FILTER STATUS (TO BAS)
   - OUTSIDE AIR DIRTY FILTER STATUS (TO BAS)
   - MISC UNIT TEMPERATURE MONITORING (TO BAS)
   - TEMP SENSOR FAILURE ALARMS (TO BAS)
   - UNIT SAFETY CUTOUT ALARMS (TO BAS)
   - OTHER MISC ALARMS (TO BAS)
4. TC CONTRACTOR SHALL OBTAIN EQUIPMENT SHOP DRAWINGS FROM SELECTED ERU SUPPLIER TO DEVELOP GRAPHICS THAT REPRESENT ACTUAL UNIT CONFIGURATION WITH COMPONENTS SHOWN IN CORRECT LOCATIONS.
5. TC CONTRACTOR SHALL INCLUDE A MINIMUM OF 4 HOURS WITH BID (OR MORE AS DETERMINED BY TC CONTRACTOR THAT SHOULD BE DOCUMENTED IN THEIR SCOPE OF WORK SUMMARY) TO REVIEW UNIT SUBMITTAL TO DETERMINE FIELD INSTALLED COMPONENTS AND WIRING REQUIREMENTS AND INTEGRATION DATA AVAILABLE FROM UNIT'S PACKAGED CONTROLS FOR DEVELOPMENT OF SYSTEM GRAPHICS TO INCLUDE RELEVANT INFORMATION FOR OWNER'S CONTROL AND MONITORING OF UNIT. LABOR HOURS SHALL ALSO ACCOMMODATE TIME SPENT WITH UNIT MANUFACTURER'S TECHNICIAN TO COORDINATE ALL PACKAGED CONTROLLER POINTS TO BE INTEGRATED TO THE BAS. TC CONTRACTOR SHALL LOG ALL TIME SPENT ON EACH UNIT RELATIVE TO THIS SCOPE OF WORK TO ENSURE FAIR COMPENSATION FOR TC CONTRACTOR INVOLVEMENT TO PROPERLY CONTROL MODES OF UNIT OPERATION, SET UP DESIRED SETPOINT ADJUSTMENTS AND DIAGNOSTIC MONITOR OF UNIT.

SEQUENCE OF OPERATION:

1. FOR OCCUPIED MODE, ERU WITH PACKAGED CONTROLS SHALL MAINTAIN A DISCHARGE AIR TEMP SETPOINT OF 70°F (SETPOINT ADJ. THRU BAS) WHILE SUPPLY AND EXHAUST FANS OPERATES CONTINUOUSLY.
2. ERU SHALL INCLUDE DEHUMIDIFICATION MODE WHEN RETURN AIR HUMIDITY EXCEEDS HIGH LIMIT SETPOINT.
3. FOR UNOCCUPIED MODE, ERU SHALL REMAIN OFF.
3. BACnet OPEN PROTOCOL COMMUNICATIONS INTERFACE SHALL BE PROVIDED WITH PACKAGED CONTROLS AND CONNECTED TO OWNER'S BUILDING AUTOMATION SYSTEM THAT SHALL ALLOW UNIT SCHEDULING, FAN STATUSES, DISCHARGE AIR TEMP ADJUSTMENTS AND ADDITIONAL UNIT MONITORING AS AVAILABLE.
4. DUCT SMOKE DETECTOR(S) SHALL DEACTIVATE UNIT THRU FIRE ALARM SYSTEM CONTROL MODULE WHEN PRODUCTS OF COMBUSTION ARE DETECTED.



SPLIT SYSTEM PACKAGED ACU FIELD WIRING & CONTROL

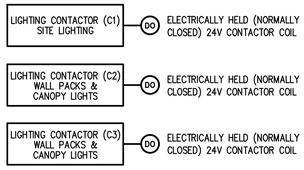
TYPICAL FOR ACU-43/ACCU-7 & ACU-44/ACCU-8

NOTES:

1. REFER TO FLOOR PLANS FOR QUANTITY AND LOCATION OF UNITS.
2. TC CONTRACTOR SHALL PROVIDE FIELD WIRING BETWEEN INDOOR UNIT CONTROLS AND THE REMOTE CONDENSER.
3. TC CONTRACTOR SHALL INSTALL THERMOSTAT PROVIDED BY ACU SUPPLIER AND PROVIDE REQUIRED FIELD WIRING.
4. TC CONTRACTOR SHALL COORDINATE WITH MANUFACTURER FOR EXACT TERMINATIONS AND WIRING REQUIREMENTS.

SEQUENCE OF OPERATION:

1. DDC SHALL MONITOR SPACE TEMP AND ACTIVATE ALARM IF HIGH OR LOW LIMIT SETPOINTS ARE REACHED.



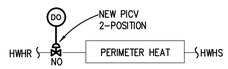
BUILDING EXTERIOR LIGHTING CONTROL

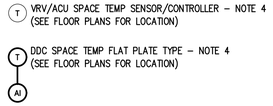
NOTES:

1. REFER TO LIGHTING PLANS FOR LOCATION OF LIGHTING CONTROL CONTACTORS.
2. COORDINATE WIRING REQUIREMENTS AND TERMINATIONS WITH ELECTRICAL CONTRACTOR.
3. TC CONTRACTOR SHALL PROVIDE PHOTOCELL, 24 POWER SUPPLY AND ASSOCIATED WIRING FOR BAS FOR MONITORING AND OVERRIDE OFF CONTROL OF EXTERIOR LIGHTING SCHEDULES.

SEQUENCE OF OPERATION:

1. DDC SHALL CONTROL OUTDOOR LIGHTING BASED ON EARLY MORNING AND NIGHT TIME SCHEDULES.
2. DDC MONITORED PHOTOCELL SHALL BE USED FOR "OFF" OVERRIDE CONTROL OF SCHEDULED OPERATION IF DURING DAYLIGHT.





PERIMETER HEATING CONTROL - SPACES WITHOUT & WITH ACU CONTROL

TYPICAL RADIANT WALL PANEL & FINNED TUBE RADIATION

NOTES:

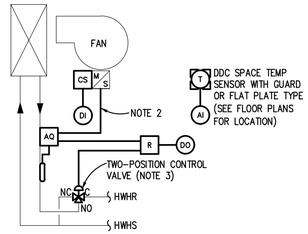
1. REFER TO PIPING PLANS FOR QUANTITY AND LOCATION OF UNITS FOR BOTH TYPES OF CONTROL; PERIMETER HEATING CONTROL WITH ACU & WITHOUT ACU.
2. FOR EXISTING FINNED TUBE RADIATION, REFER TO PIPING DRAWINGS FOR CONTROL VALVE SIZING PARAMETERS.
3. CONTROL VALVES SHALL BE FURNISHED BY TC CONTRACTOR FOR INSTALLATION BY MECHANICAL CONTRACTOR.
4. FOR SPACES WITH BOTH TYPES OF SENSORS; THE FLAT PLAT DDC SPACE TEMP SENSOR SHALL BE LOCATED JUST BELOW THE VRV SPACE TEMP SENSOR/CONTROLLER.

SEQUENCE OF OPERATION (FOR UNITS NOT SERVING SAME SPACE WITH ACU):

1. ALL SETPOINTS AND DEADBANDS SHALL BE ADJUSTABLE THROUGH DDC SYSTEM.
2. DDC SYSTEM SHALL OPEN/CLOSE PERIMETER HEATING CONTROL VALVE AS REQUIRED TO MAINTAIN SPACE TEMP SETPOINT OF 70°F DURING BLDG OCCUPANCY AND 62°F DURING BLDG UNOCCUPANCY.
3. DDC SYSTEM SHALL PROVIDE A 2°F DEADBAND AROUND SETPOINTS FOR CONTROL.

SEQUENCE OF OPERATION (FOR UNITS SERVING SAME SPACE WITH ACU):

1. ALL SETPOINTS AND DEADBANDS SHALL BE ADJUSTABLE THROUGH DDC SYSTEM.
2. FOR OCCUPIED MODE, DDC SYSTEM SHALL OPEN/CLOSE PERIMETER HEATING CONTROL VALVE FOR FIRST STAGE OF HEAT TO MAINTAIN SPACE TEMP SETPOINT AS SENSED THROUGH DDC SPACE TEMP SENSOR. IF SPACE TEMP SETPOINT CANNOT BE MAINTAIN WITH PERIMETER VALVE OPEN, VRV/ACU PACKAGED CONTROLS SHALL CYCLE HEATING ON/OFF (SECOND STAGE) AS REQUIRED TO MAINTAIN SPACE TEMP SETPOINT AS SENSED THROUGH VRV/ACU SPACE TEMP/CONTROLLER. PERIMETER HEAT CONTROL VALVE SHALL REMAIN CLOSED DURING VRV/ACU COOLING MODE.
3. FOR UNOCCUPIED MODE, DDC SYSTEM SHALL OPEN/CLOSE PERIMETER HEATING CONTROL VALVE TO MAINTAIN 62°F. FOR SPACES SERVED BY VRV/ACU, UNIT SHALL REMAIN OFF.
4. DDC SYSTEM SHALL RESET PERIMETER HEAT SPACE TEMP SETPOINT AS REQUIRED WHEN VRV/ACU SPACE TEMP/CONTROLLER HEATING SETPOINT IS RAISED/LOWERED BY LOCAL USER, TYPICALLY +/-2°F ADJUSTABLE.



HWH CABINET UNIT HEATER CONTROL

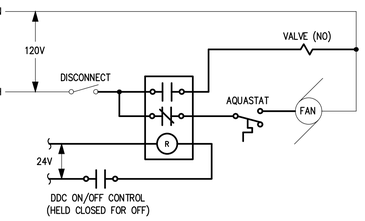
TYPICAL

NOTES:

1. REFER TO FLOOR PLANS FOR QUANTITY AND LOCATION OF UNITS.
2. AQUASTAT SHALL BE WIRED IN SERIES WITH FAN CONTROL WIRING CIRCUIT.
3. TC CONTRACTOR SHALL FURNISH 3-WAY CONTROL VALVES FOR HEATING ELEMENTS PER MECHANICAL SCHEDULES FOR INSTALLATION BY MECHANICAL CONTRACTOR.

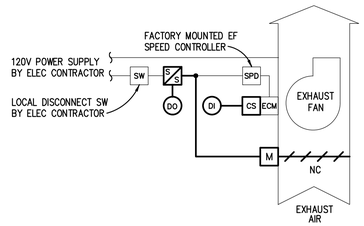
SEQUENCE OF OPERATION:

1. ASHRAE 90.1-2013 FOR VESTIBULES ONLY:
   1.1. DDC SHALL ENABLE/DISABLE CUH FAN CIRCUIT AND OPEN/CLOSE HEATING VALVE AS REQUIRED TO MAINTAIN SPACE TEMP SETPOINT OF 60°F. FAN SHALL ACTIVATE UPON PROOF OF HWHR FLOW BY AQUASTAT. AQUASTAT SHALL PROVIDE 4°F DEADBAND FOR CONTROL. DDC SHALL PROVIDE 2°F DEADBAND FOR CONTROL.
   1.2. WHEN OUTSIDE AIR TEMP INCREASES ABOVE 45°F, DDC SHALL DISABLE CONTROL OF THE CUH.
2. FOR ALL OTHER AREAS/ROOMS:
   2.1. DDC SHALL ENABLE/DISABLE CUH FAN CIRCUIT AND OPEN/CLOSE HEATING VALVE AS REQUIRED TO MAINTAIN SPACE TEMP SETPOINT OF 68°F DURING BUILDING OCCUPIED MODE AND 50°F DURING BUILDING UNOCCUPIED MODE. CUH FAN SHALL ACTIVATE UPON PROOF OF HWHR FLOW BY AQUASTAT. AQUASTAT SHALL PROVIDE 4°F DEADBAND FOR CONTROL. DDC SHALL PROVIDE 2°F DEADBAND CONTROL AROUND SETPOINTS.
   2.2. WHEN OUTSIDE AIR TEMP INCREASES ABOVE 60°F, DDC SHALL DISABLE CONTROL OF THE CUH.



HWH CABINET UNIT HEATER WIRING

TYPICAL



EXHAUST FAN (EF-1, 2 & 3) CONTROL

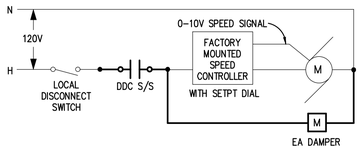
TYPICAL

NOTES:

1. REFER TO FLOOR PLANS FOR LOCATION OF UNITS.
2. TC CONTRACTOR SHALL FURNISH MOTORIZED DAMPER FOR INSTALLATION BY SHEETMETAL CONTRACTOR. REFER TO FLOOR PLANS FOR DAMPER SIZES AND VERIFY WITH SHEETMETAL CONTRACTOR.

SEQUENCE OF OPERATION:

1. EXHAUST FAN SHALL BE STARTED AND STOPPED BY DDC BASED ON TIME SCHEDULE. WIRING INTERLOCK SHALL OPEN DAMPER.
2. DDC SHALL MONITOR EF RUN STATUS THRU CURRENT SWITCH. ABNORMAL STATUS CONDITION SHALL ACTIVATE ALARM.
3. EXHAUST FAN SPEED SHALL BE MANUALLY SET VIA ON BOARD POTENTIOMETER DIAL DURING SYSTEM BALANCING.



EF-1, 2 & 3 M/S WIRING

TYPICAL

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TEMPERATURE CONTROLS

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
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Administration Relocation and Addition

Project No. 3221

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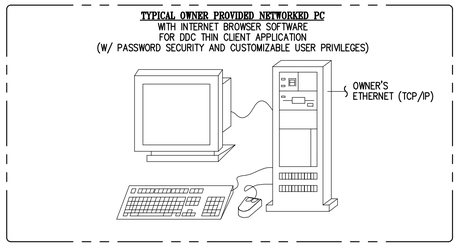
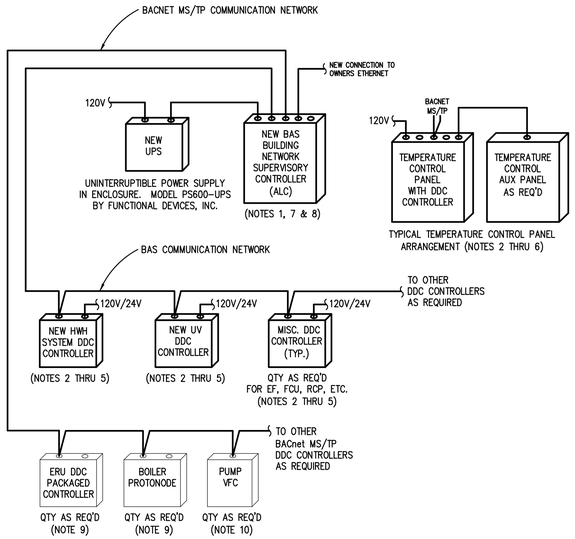


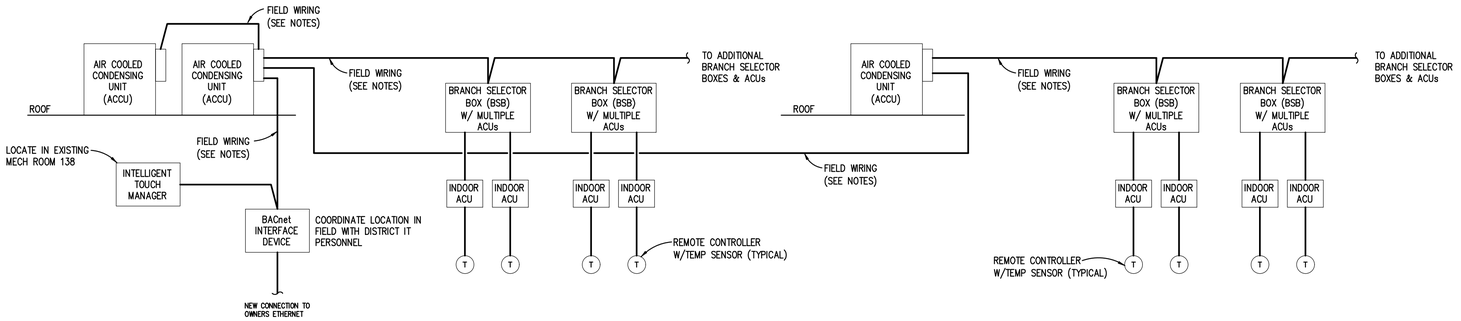


BUILDING AUTOMATION SYSTEM ARCHITECTURE

NO SCALE

NOTES:

1. BUILDING AUTOMATION SYSTEM FOR BUILDING IS TO BE COMPRISED OF AUTOMATED LOGIC CONTROLS CONNECTED TO THE LATEST HARDWARE/SOFTWARE REVISION OF AUTOMATED LOGIC SUPERVISORY CONTROLLER/OPERATOR INTERFACE PLATFORM, AS PROVIDED BY AUTOMATED CONTRACTING SERVICES, SOUTHFIELD, MI.
2. REFER TO TEMPERATURE CONTROL SCHEMATICS FOR THE REQUIRED POINTS ASSOCIATED FOR EACH NEW HVAC SYSTEM PER MECHANICAL DRAWINGS.
3. TC CONTRACTOR SHALL DETERMINE DDC CONTROLLER QUANTITY AND AUXILIARY PANEL REQUIREMENTS BASED ON POINT DENSITIES AND LOCATIONS PER AVAILABLE MOUNTING SPACE. UNLESS SPECIFICALLY NOTED IN DESIGN DRAWINGS, TC CONTRACTOR SHALL LOCATE TEMPERATURE CONTROL PANELS WITH CONTROLLERS AND AUX COMPONENTS AS REQUIRED. COORDINATE WITH OTHER TRADES.
4. TC CONTRACTOR SHALL PROVIDE REQUIRED POWER SUPPLIES AS INDICATED IN TC GENERAL NOTES.
5. TC CONTRACTOR SHALL PROVIDE 24V TRANSFORMERS REQUIRED FOR TC CONTRACTOR PROVIDED CONTROLLERS AS REQUIRED. TRANSFORMERS SHALL BE LOCATED WITHIN EQUIPMENT ENCLOSURES OR OTHER TC PROVIDED ENCLOSURES TO BE LOCATED IN MECHANICAL OR ELECTRICAL ROOMS – COORDINATE LOCATIONS. MAXIMUM TRANSFORMER SIZE SHALL BE 100VA.
6. TC CONTRACTOR SHALL PROVIDE AUXILIARY PANEL FOR GAUGES, TRANSMITTERS, RELAYS, POWER TRANSFORMERS, ETC
7. ETHERNET CABLE FROM NETWORK SWITCH TO NEW NETWORK SUPERVISOR PROVIDED BY OWNER. COORDINATE INSTALLATION AS REQUIRED WITH OWNER'S INFORMATION TECHNOLOGY PERSONNEL
8. GRAPHICS FOR OPERATOR INTERFACE OF SYSTEMS ARE TO BE BUILT ON THE EXISTING AUTOMATED LOGIC SERVER APPLICATION SOFTWARE LOCATED ON THE DISTRICT'S IT NETWORK.
9. DDC CONTROLLERS FOR PACKAGED CONTROL EQUIPMENT SHALL INCLUDE BACNET MS/TP INTERFACE CARDS FOR THIS PROJECT. TC CONTRACTOR TO PROVIDE BACNET NETWORK WIRING TO PACKAGED CONTROLLERS.
10. TC CONTRACTOR SHALL PROVIDE BACnet COMMUNICATION TO VARIABLE FREQUENCY CONTROLLERS FOR NEW EQUIPMENT WHERE APPLICABLE FOR ADDITIONAL MONITORING INFORMATION. REFER TO VFC BACnet INTERFACE & MONITORING REQUIREMENTS DETAIL.



BACnet IP INTERFACE TO DDC SYSTEM WITH THE FOLLOWING CONTROL & MONITORING POINTS PER ROOM:

- ON/OFF (SETTING)
- ON/OFF STATUS
- COMPRESSOR STATUS
- INDOOR FAN STATUS
- ALARM STATUS
- COMMUNICATION STATUS
- MEASURED ROOM TEMPERATURE
- ROOM TEMPERATURE SETPOINT
- REMOTE CONTROL OPERATION (ON/OFF)
- REMOTE CONTROL OPERATION (RM TEMP SETPOINT)

PACKAGED VRV SYSTEM FIELD WIRING & CONTROL

NOTES:

1. REFER TO FLOOR PLANS FOR LOCATIONS AND QUANTITIES OF ACUs, ASSOCIATED BRANCH SELECTOR BOXES AND ASSOCIATED ROOM CONTROLLERS.
2. TC CONTRACTOR SHALL PROVIDE FIELD WIRING BETWEEN INDOOR AC UNIT CONTROLS, BRANCH SELECTOR BOXES, REMOTE CONDENSING UNITS, THE SYSTEM INTELLIGENT TOUCH MANAGER AND BACnet INTERFACE DEVICE. TC CONTRACTOR SHALL INSTALL ACU REMOTE CONTROLLERS PROVIDED BY ACU SUPPLIER AND PROVIDE REQUIRED FIELD WIRING. COORDINATE ALL FIELD WIRING WITH VRV SUPPLIER.
3. TC CONTRACTOR SHALL COORDINATE WITH MANUFACTURER FOR EXACT WIRING AND TERMINATION REQUIREMENTS FOR ENTIRE VRV SYSTEM.
4. TC CONTRACTOR SHALL GENERATE GRAPHICAL FLOOR PLAN REPRESENTATION OF VRV ZONING SYSTEM WITH ZONE TEMPERATURES SETPOINT ADJUSTMENT CAPABILITY.

SEQUENCE OF OPERATION:

1. DDC SYSTEM SHALL COMMUNICATE WITH THE PACKAGED ACU SYSTEM THRU BACnet OPEN PROTOCOL FOR INDIVIDUAL ZONE OCCUPIED MODE CONTROL AND MONITORING.
2. DURING OCCUPIED MODE, INDIVIDUAL ACU UNIT ROOM CONTROLLERS SHALL SEQUENCE RESPECTIVE ACU AS NECESSARY TO MAINTAIN OCCUPIED COOLING SETPOINT OF 74°F (ADJUSTABLE) AND OCCUPIED HEATING SETPOINT OF 70°F (ADJUSTABLE).
3. DURING UNOCCUPIED MODE, INDIVIDUAL ACU UNIT ROOM CONTROLLER SHALL SEQUENCE RESPECTIVE ACU AS NECESSARY TO MAINTAIN UNOCCUPIED COOLING SETPOINT OF 85°F (ADJUSTABLE) AND UNOCCUPIED HEATING SETPOINT OF 62°F (ADJUSTABLE).
4. VRV SYSTEM INTELLIGENT TOUCH MANAGER PANEL OR BACnet INTERFACE TO BUILDING AUTOMATION SYSTEM SHALL BE USED TO SET/MODIFY OCCUPANCY SCHEDULE AND SETPOINTS.

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ELECTRICAL SYMBOL LIST

(NOTE: SOME SYMBOLS AND ABBREVIATIONS SHOWN MAY NOT APPLY TO THIS PROJECT)

SYMBOL	DESCRIPTION
X (NL)	X DENOTES FIXTURE TYPE (NL INDICATES NIGHT LIGHT)
	LIGHTING FIXTURE
	DIRECT/INDIRECT LIGHTING FIXTURE
	FILL DENOTES EMERGENCY FIXTURE
	LIGHTING FIXTURE
	WALL MOUNTED LIGHTING FIXTURE
	LIGHTING FIXTURE
	DIRECTIONAL LIGHTING FIXTURE
	PENDANT LIGHTING FIXTURE
	WALL SCONCE
	LIGHTING TRACK
	TRACK LIGHTING FIXTURE
	POLE MOUNTED LIGHTING FIXTURE
	POLE MOUNTED LIGHTING FIXTURE – POST TOP
	BOLLARD LIGHTING FIXTURE
	EMERGENCY LIGHTING UNIT
	EXIT LIGHTING FIXTURE WITH DIRECTIONAL ARROWS (SHADED AREA INDICATES FACE)
	EXIT LIGHTING FIXTURE WITH DIRECTIONAL ARROWS (SHADED AREA INDICATES FACE)
	EXIT LIGHTING FIXTURE – WALL MOUNTED
	EXIT/EMERGENCY LIGHTING COMBO
BCELTS	BRANCH CIRCUIT EMERGENCY LIGHTING TRANSFER SWITCH
ALCR	AUTOMATIC LOAD CONTROL RELAY
LC	LIGHTING CONTROL DEVICE – REFER TO LIGHTING CONTROL SCHEDULE
XX	ROOM CONTROL DESIGNATION – REFER TO LIGHTING CONTROL SCHEDULE
S	SINGLE POLE TOGGLE SWITCH
S2	TWO POLE TOGGLE SWITCH
S3	3 WAY TOGGLE SWITCH
S4	4 WAY TOGGLE SWITCH
K	KEY OPERATED SWITCH
K3	3 WAY KEY OPERATED SWITCH
K4	4 WAY KEY OPERATED SWITCH
D	DIMMER SWITCH
D3	3 WAY DIMMER SWITCH
DO	DIMMER OCCUPANCY SENSOR SWITCH
DL	LOW VOLTAGE DIMMER SWITCH
SP	PILOT SWITCH
PTX	
FBX	
AFX	
RX	
S^{S}	DUAL SWITCHING FOR INNER/OUTER LAMPS OF FLUORESCENT LIGHT FIXTURES
$S_{3}^{S_3}$	3-WAY DUAL SWITCHING FOR INNER/OUTER LAMPS OF FLUORESCENT LIGHT FIXTURES
$S_{4}^{S_4}$	4-WAY DUAL SWITCHING FOR INNER/OUTER LAMPS OF FLUORESCENT LIGHT FIXTURES
ST	DIGITAL TIME SWITCH
SI	ILLUMINATED TOGGLE SWITCH FOR CONTROL OF LIGHTING ON CRITICAL POWER-ILLUMINATED WHEN SWITCH IS IN "OFF" POSITION
SL	LOW VOLTAGE SWITCH
SO	OCCUPANCY SENSOR
SO2	OCCUPANCY SENSOR
OS X	OCCUPANCY SENSOR "X" INDICATES TYPE

REFER TO ELECTRICAL STANDARD SCHEDULES

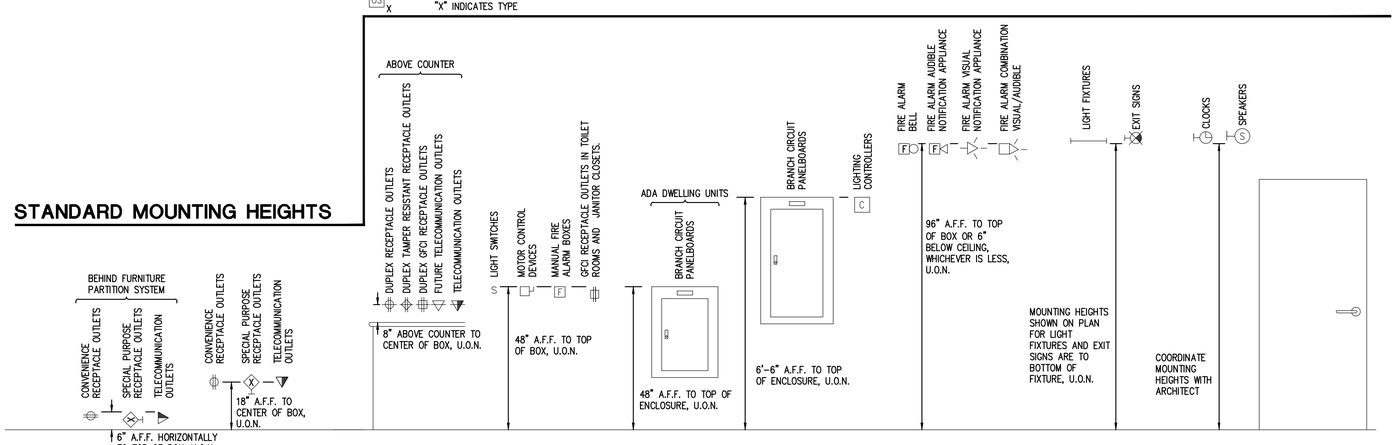
SYMBOL	DESCRIPTION
TWC	TWO-WAY COMMUNICATION SYSTEM CALL STATION
TWCD	TWO-WAY COMMUNICATION SYSTEM AUTO DIALER
TWCA	TWO-WAY COMMUNICATION SYSTEM ANNUNCIATOR & COMMUNICATION PANEL
TWCP	TWO-WAY COMMUNICATION SYSTEM POWER SUPPLY WITH BATTERY BACK-UP
TWCDP	TWO-WAY COMMUNICATION SYSTEM AUTO DIALER POWER SUPPLY WITH BATTERY BACK-UP
RGP	REMOTE GENERATOR ANNUCIATOR PANEL
ATS	AUTOMATIC TRANSFER SWITCH
UPS	UNINTERRUPTIBLE POWER SUPPLY
CSX	LOW VOLTAGE CONTROL STATION "X" INDICATES TYPE
"X"	SINGLE/DUPLEX RECEPTACLE OUTLET "X" INDICATES TYPE
	SINGLE/DUPLEX RECEPTACLE OUTLET CONTROLLED BY AUTOMATIC CONTROL DEVICE/SYSTEM
	QUAD RECEPTACLE OUTLET
	ABOVE COUNTER DUPLEX RECEPTACLE OUTLET (SIMILAR FOR TAMPER RESISTANT, QUADS, EMERGENCY, USB AND GFCI RECEPTACLE OUTLETS)
	DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE OUTLET
	DEAD FRONT GROUND FAULT CIRCUIT INTERRUPTER
	DUPLEX EMERGENCY RECEPTACLE OUTLET
	DUPLEX TAMPER RESISTANT RECEPTACLE OUTLET
	QUAD TAMPER RESISTANT RECEPTACLE OUTLET
X	ABOVE COUNTER DUPLEX TAMPER RESISTANT RECEPTACLE OUTLET
X	DUPLEX UPS RECEPTACLE OUTLET
X	DUPLEX RECEPTACLE OUTLET WITH 2 USB PORTS
	4 PORT USB CHARGING STATION
X	CEILING MOUNTED DUPLEX/QUAD RECEPTACLE OUTLET
	POWER POLE
	WALL/CEILING MOUNTED SPECIAL RECEPTACLE OUTLET – REFER TO ELECTRICAL STANDARD SCHEDULES
	MULTI-OUTLET SURFACE RACEWAY
"X"	MULTI-SERVICE DROP SEE ELECTRICAL DETAILS AND DIAGRAMS SHEET "X" INDICATES TYPE
	POKE-THROUGH ASSEMBLY "X" INDICATES TYPE
	FLOOR SERVICE FITTING "X" INDICATES TYPE
	ACCESS FLOOR SERVICE FITTING "X" INDICATES TYPE
	CORD REEL "X" INDICATES TYPE
	DUAL SWITCHING FOR INNER/OUTER LAMPS OF FLUORESCENT LIGHT FIXTURES
	3-WAY DUAL SWITCHING FOR INNER/OUTER LAMPS OF FLUORESCENT LIGHT FIXTURES
	4-WAY DUAL SWITCHING FOR INNER/OUTER LAMPS OF FLUORESCENT LIGHT FIXTURES
	DIGITAL TIME SWITCH
	ILLUMINATED TOGGLE SWITCH FOR CONTROL OF LIGHTING ON CRITICAL POWER-ILLUMINATED WHEN SWITCH IS IN "OFF" POSITION
	LOW VOLTAGE SWITCH
	OCCUPANCY SENSOR
	OCCUPANCY SENSOR
	OCCUPANCY SENSOR "X" INDICATES TYPE

SYMBOL	DESCRIPTION
CP	CONTROL PANEL
	MOTOR
VFC	VARIABLE FREQUENCY CONTROLLER.
	MANUAL CONTROLLER
	MAGNETIC CONTROLLER
	COMBINATION MAGNETIC CONTROLLER
	NON-FUSIBLE DISCONNECT SWITCH
	FUSIBLE DISCONNECT SWITCH
CB	ENCLOSED CIRCUIT BREAKER
	PUSH BUTTON STATION
	JUNCTION BOX
	HARD WIRE POWER CONNECTION
	GROUND ROD
	GROUND CONNECTION
HH	HANDHOLE
X	CONDUIT SLEEVE WITH BUSHINGS LENGTH AS REQUIRED "X" INDICATES CONDUIT SIZE
	CONDUIT UP
	CONDUIT DOWN
	EMPTY BOX FOR FUTURE TELECOMMUNICATION OUTLET
	ABOVE COUNTER EMPTY BOX FOR FUTURE TELECOMMUNICATION OUTLET
	EMPTY BOX FOR FUTURE CEILING MOUNTED TELECOMMUNICATION OUTLET
	TELECOMMUNICATION OUTLET "X" INDICATES TYPE
	ABOVE COUNTER TELECOMMUNICATION OUTLET "X" INDICATES TYPE
	TELECOMMUNICATION CEILING MOUNTED OUTLET "X" INDICATES TYPE
	TELECOMMUNICATION BACKBOARD
TGB	TELECOMMUNICATION GROUNDING BUS BAR
TMGB	TELECOMMUNICATION MAIN GROUNDING BUS BAR
IC	INTERCOM OUTLET
S	SPEAKER
S	SPEAKER – WALL MOUNTED
MIC	MICROPHONE
VC	VOLUME CONTROL/STATION SELECTOR
E	SIGNALING BELL
	DOUBLE FACE CLOCK – CEILING MOUNTED
	SINGLE FACE CLOCK – CEILING MOUNTED
	SINGLE FACE CLOCK – WALL MOUNTED
	DOUBLE FACE CLOCK – CEILING MOUNTED
S	DOUBLE FACE COMBINATION CLOCK/SPEAKER CEILING MOUNTED
	DOUBLE FACE CLOCK – WALL MOUNTED
S	DOUBLE FACE COMBINATION CLOCK/SPEAKER WALL MOUNTED
	TIME CLOCK
C	CONTACTOR
P	PHOTOCELL
TT	TWIST TIMER

SYMBOL	DESCRIPTION
	SECURITY CAMERA
MD	MOTION DETECTOR
K	SECURITY KEY SWITCH
DC	DOOR CONTACT
KP	KEY PAD
CR	CARD READER
DB	DURESS PUSH BUTTON STATION
DE	DELAYED EGRESS
REX	REQUEST TO EXIT STATION
PP	AUTOMATIC DOOR PUSH PAD OPERATOR
DO	DOOR OPERATOR
DA	DOOR ACTUATOR
AC	ACCESS CONTROL STATION
ACCP	ACCESS CONTROL CONTROL PANEL
ACPS	ACCESS CONTROL POWER SUPPLY
	CIRCUIT BREAKER
	DRAWOUT CIRCUIT BREAKER MANUALLY/ OPERATED
	DRAWOUT CIRCUIT BREAKER ELECTRICALLY/ OPERATED
	SWITCH
	AUTOMATIC OR MANUAL TRANSFER SWITCH
	FUSE
	TRANSFORMER
	CURRENT TRANSFORMER
	POTENTIAL TRANSFORMER
	LIGHTNING ARRESTOR
X	PANELBOARD "X" INDICATES PANELBOARD NAME
	GROUND
	STRESS CONE TERMINATION
K	SECURITY KEY INTERLOCK
G	ENGINE GENERATOR
M	UTILITY METER
EMU	ELECTRONIC METERING UNIT
A	AMMETER
V	VOLTMETER
AS	AMMETER SWITCH
VS	VOLTMETER SWITCH
SPD	SURGE PROTECTIVE DEVICE
CR	CONTROL RELAY
TDR	TIME DELAY RELAY
PRM	PHASE ROTATION MONITOR
	CAMLOK – MALE
	CAMLOK – FEMALE
EVSE	ELECTRICAL VEHICLE SUPPLY EQUIPMENT
DCFC	DC FAST CHARGER – STANDALONE
DCPM	DC FAST CHARGER – POWER MODULE
DCDP	DC FAST CHARGER – DISPENSER

SYMBOL	DESCRIPTION
F	MANUAL FIRE ALARM BOX
SD	SMOKE DETECTOR
DD	DUCT SMOKE DETECTOR
CO	CARBON MONOXIDE DETECTOR
RT	REMOTE TEST STATION (FOR DUCT DETECTOR)
TD	THERMAL DETECTOR
BD	PROJECTED BEAM DETECTOR
F	FIRE ALARM BELL
F	FIRE ALARM AUDIBLE NOTIFICATION APPLIANCE
XX	FIRE ALARM VISUAL NOTIFICATION APPLIANCE "XX" INDICATES CANDELA RATING IF NO RATING SHOWN, APPLIANCE IS 15cd
XX	FIRE ALARM COMBINATION VISUAL/ AUDIBLE "XX" INDICATES CANDELA RATING IF NO RATING SHOWN, APPLIANCE IS 15cd
F XX	FIRE ALARM COMBINATION VISUAL/ AUDIBLE NOTIFICATION APPLIANCE- CEILING MOUNTED "XX" INDICATES CANDELA RATING IF NO RATING SHOWN, APPLIANCE IS 15cd
XX	FIRE ALARM VISUAL NOTIFICATION APPLIANCE CEILING MOUNTED "XX" INDICATES CANDELA RATING IF NO RATING SHOWN, APPLIANCE IS 15cd
F	FIRE ALARM AUDIBLE NOTIFICATION APPLIANCE – CEILING MOUNTED
F	FIREFIGHTERS PHONE JACK
FACP	FIRE ALARM CONTROL PANEL
FAA	FIRE ALARM ANNUNCIATOR PANEL
NAC	NOTIFICATION APPLIANCE CIRCUIT EXTENDER PANEL
IM	ADDRESSABLE MONITORING MODULE
CM	ADDRESSABLE CONTROL MODULE
TS	TAMPER SWITCH
FS	FLOW SWITCH
DR	MAGNETIC DOOR RELEASE
	THERMAL OVERLOAD RELAY
	NORMALLY OPEN CONTACTS
	NORMALLY CLOSED CONTACTS
	N.O. PUSH BUTTON SINGLE CIRCUIT
	N.C. PUSH BUTTON SINGLE CIRCUIT
X-X	CABLE VAULT "X-X" INDICATES TYPE
	BRANCH CIRCUIT PANELBOARD
	LOAD CENTER
	MOTOR CONTROL CENTER
T	TRANSFORMER
	DISTRIBUTION PANEL
GB	ELECTRICAL GROUNDING BUS BAR
PB	PLUG IN BUSWAY
FB	FEEDER BUSWAY

STANDARD MOUNTING HEIGHTS

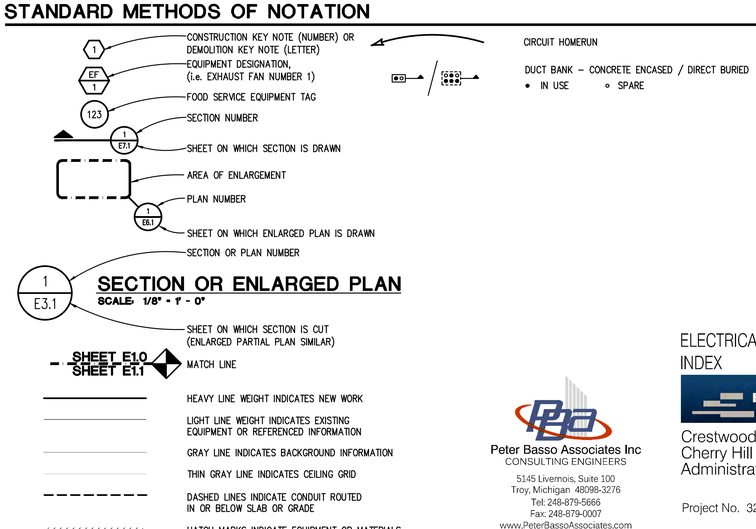


ELECTRICAL DRAWING INDEX

ELECTRICAL ABBREVIATION LIST

ABBREVIATION	DESCRIPTION
A	AMPERES
AER	ARC ENERGY REDUCTION
AF	AMPERES FRAME (BREAKER RATING)
AFCI	ARC FAULT CIRCUIT INTERRUPTER
A.F.F.	ABOVE FINISH FLOOR
AIC	AMPS INTERRUPTING CAPACITY
AL	AUDIENCE LEFT
ALCR	AUTOMATIC LOAD CONTROL RELAY
AR	AUDIENCE RIGHT
AT	AMPERES TRIP (BREAKER SETTING)
ATS	AUTOMATIC TRANSFER SWITCH
AUX	AUXILIARY
BCELTS	BRANCH CIRCUIT EMERGENCY LIGHTING TRANSFER SWITCH
BKR	BREAKER
BPS	BOLTED PRESSURE SWITCH
C	CONDUIT
CB	CIRCUIT BREAKER
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
CKT	CIRCUIT
CT	CURRENT TRANSFORMER
DEMO	DEMOLITION
DIM	DIMENSION
DISC	DISCONNECT
DP	DISTRIBUTION PANEL
DS	DOWNSTAGE
DWG	DRAWING
EBU	EMERGENCY BATTERY UNIT
EC	ELECTRICAL CONTRACTOR
ECM	ELECTRONICALLY COMMUTATED MOTOR
ELEC	ELECTRICAL
EM/ EMERG	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
EO	ELECTRICALLY OPERATED
EPO	EMERGENCY POWER OFF
EWC	ELECTRIC WATER COOLER
EXIST	EXISTING
FA	FIRE ALARM
FLA	FULL LOAD AMPS
FLR	FLOOR
FOH	FRONT OF HOUSE
FSEC	FOOD SERVICE EQUIPMENT CONTRACTOR
FU	FUSE
G/GRD/EG	GROUND
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTION
HOA	HAND-OFF-AUTO
HP	HORSEPOWER
HV	HIGH VOLTAGE
HZ	HERTZ
IG	ISOLATED GROUND
JB	JUNCTION BOX
KA	THOUSAND AMP
KV	KILOVOLT
KVA	KILOVOLT – AMPERES
KW	KILOWATT
KWH	KILOWATT – HOURS
LA	LIGHTNING ARRESTOR
LP	LIGHTING PANEL
LDP	LIGHTING DISTRIBUTION PANEL
MAX	MAXIMUM
MCA	MINIMUM CIRCUIT AMPACITY
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MDP	MAIN DISTRIBUTION PANEL
MECH	MECHANICAL
MIN	MINIMUM
MISC.	MISCELLANEOUS
MLO	MAIN LUGS ONLY
MOP	MAXIMUM OVERCURRENT PROTECTION
MTD	MOUNTED
MTG	MOUNTING
MTR	MOTOR
N	NEUTRAL
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NF	NON-FUSIBLE
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
P	POLE
PB	PUSHBUTTON STATION
PH	PHASE
PT	POTENTIAL TRANSFORMER
PDP	POWER DISTRIBUTION PANEL
RECEPT.	RECEPTACLE
RDP	RECEPTACLE DISTRIBUTION PANEL
RP	RECEPTACLE PANEL
RSC	RIGID STEEL CONDUIT
SCCR	SHORT CIRCUIT CURRENT RATING
SCHED	SCHEDULE
SPD	SURGE PROTECTION DEVICE
ST	SHUNT TRIP
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TB	TERMINAL BOX
TELECOM	TELECOMMUNICATIONS
TR	TAMPER RESISTANT
TTB	TELEPHONE TERMINAL BACKBOARD
TYP	TYPICAL
U.O.N.	UNLESS OTHERWISE NOTED
US	UPSTAGE
V	VOLTS
W	WIRE OR WATTS
WAP	WIRELESS ACCESS POINT
WG	WIRE GUARD
WP	WEATHERPROOF
WR	WEATHER RESISTANT
XFMR	TRANSFORMER
XP	EXPLOSION PROOF
(E)	EXISTING
(R)	RELOCATED

STANDARD METHODS OF NOTATION



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ELECTRICAL STANDARDS AND DRAWING INDEX

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RACEWAY / CONDUCTOR / CABLE APPLICATION SCHEDULE

		WIRE			RACEWAY														CABLE/ CORD		
		COPPER, TYPE THHN/THWN-2	COPPER, TYPE XHHW-2	ALUMINUM, TYPE XHHW-2 (100A AND ABOVE ONLY)	ELECTRICAL METALLIC TUBING (EMT)	INTERMEDIATE METAL CONDUIT (IMC)	RIGID STEEL CONDUIT (RSC)	PVC COATED RIGID STEEL CONDUIT	RIGID NON-METALLIC CONDUIT (RNC) TYPE EPC-40	HIGH DENSITY POLYETHYLENE (HDPE) SCHEDULE 40	REINFORCED THERMOSET RESIN CONDUIT (RTRC) TYPE XG	REINFORCED THERMOSET RESIN CONDUIT (RTRC) TYPE BG	FLEXIBLE METAL CONDUIT (FMC)	LIQUID TIGHT FLEXIBLE METAL CONDUIT (LFMC)	SURFACE RACEWAY	METAL CLAD TYPE CABLE WITH INSULATED GROUND WIRE (TYPE MC)	VFC CABLE	POWER LIMITED CABLE
FEEDERS – EXTERIOR	EXPOSED, SURFACE MOUNTED TO STRUCTURE		X	X		X	X	X			X							
	EXPOSED, WITH FREESTANDING SUPPORT		X	X		X	X	X			X							
	CONCEALED IN RETAINING WALL OR SIMILAR ELEMENT		X	X			X	X	X									
	BELOW PARKING LOTS AND ROADWAYS		X	X				X				X						
	BELOW GREEN SPACE		X	X				X	X	X		X						
	WITHIN 5' OF FOUNDATION WALL		X	X			X	X										
	ROOFTOPS (WHEN APPROVED BY ENGINEER)		X	X		X	X	X										
FEEDERS – INTERIOR	CONCEALED, ACCESSIBLE CEILINGS	X		X	X	X												
	CONCEALED, INACCESSIBLE CEILINGS	X		X	X	X												
	CONCEALED IN GYPSUM BOARD PARTITION WALLS	X		X	X	X												
	CONCEALED IN CMU WALLS	X		X	X	X												
	EXPOSED, BELOW 10' AFF AND SUBJECT TO DAMAGE	X		X		X	X	X										
	EXPOSED, BELOW 10' AFF AND NOT SUBJECT TO DAMAGE	X		X	X	X												
	EXPOSED, ABOVE 10' AFF UNFINISHED SPACES	X		X	X	X												
	EXPOSED, FINISHED SPACES	X		X											X			
	BELOW SLAB ON GRADE	X		X			X	X	X									
	DAMP AND WET LOCATIONS	X		X		X	X	X	X									
BRANCH CIRCUITS – EXTERIOR	EXPOSED, SURFACE MOUNTED TO STRUCTURE		X			X	X	X										
	EXPOSED, WITH FREESTANDING SUPPORT		X			X	X	X										
	CONCEALED IN RETAINING WALL OR SIMILAR ELEMENT		X				X	X	X									
	BELOW PARKING LOTS AND ROADWAYS		X				X	X	X	X								
	BELOW GREEN SPACE		X						X									
	WITHIN 5' OF FOUNDATION WALL		X				X	X										
	ROOFTOPS (WHEN APPROVED BY ENGINEER)		X			X	X	X										
BRANCH CIRCUITS – INTERIOR	CONCEALED, ACCESSIBLE CEILINGS	X			X	X										X		
	CONCEALED, INACCESSIBLE CEILINGS	X			X	X												
	CONCEALED IN GYPSUM BOARD PARTITION WALLS	X			X	X							X			X		
	CONCEALED IN CMU WALLS	X			X	X												
	EXPOSED, BELOW 10' AFF AND SUBJECT TO DAMAGE	X				X	X	X										
	EXPOSED, BELOW 10' AFF AND NOT SUBJECT TO DAMAGE	X			X	X									X			
	EXPOSED, ABOVE 10' AFF UNFINISHED SPACES	X			X	X												
	EXPOSED, FINISHED SPACES	X													X			
	BELOW SLAB ON GRADE	X							X									
	EMBEDDED IN ELEVATED CONCRETE SLAB	X							X									
	DAMP AND WET LOCATIONS	X					X	X	X	X				X				
SPECIAL APPLICATIONS	SERVICE ENTRANCE – UNDERGROUND		X	X				X	X	X								
	SERVICE ENTRANCE – ABOVE GROUND		X	X	X	X	X											
	CONNECTION BETWEEN VFC AND MOTORS (KEYED NOTE 1)																X	
	CLASS 1 CONTROL CIRCUITS	X			X	X	X											
	CLASS 2 CONTROL CIRCUITS	X			X	X	X											X
	CLASS 3 CONTROL CIRCUITS	X			X	X	X											X
	CONNECTIONS TO TRANSFORMERS, MOTORS AND VIBRATING EQUIPMENT		X											X				

GENERAL NOTES:
1. TRANSITION FROM PVC/HDPE AND PROVIDE RIGID STEEL OR RTRC SWEEPS WHERE CONDUITS PENETRATE WALLS, CONCRETE SLABS, CONCRETE BASES, AND ASPHALT.
2. REFER TO SPECIFICATIONS FOR RESTRICTIONS ON MC/AC CABLE INSTALLATION.
3. EMT SHALL NOT BE USED ON THE EXTERIOR OF A BUILDING OR IN AREAS SUBJECT TO DAMAGE BELOW 10' AFF.
4. INSTALL SURFACE RACEWAYS ONLY WHERE INDICATED ON DRAWINGS.

KEYED NOTES:
1. NON-ARMORED CABLE SHALL BE INSTALLED IN RACEWAY. ARMORED CABLE SHALL BE INSTALLED IN TRAY OR FREE-AIR AS APPLICABLE.

NOTE: SOME SYMBOLS AND ABBREVIATIONS SHOWN MAY NOT APPLY TO THIS PROJECT.

FEEDER AND BRANCH CIRCUIT SIZING SCHEDULE - GENERAL PURPOSE

OVERCURRENT DEVICE RATING (AMPERES)	COPPER CONDUCTORS						KEYED NOTES	ALUMINUM CONDUCTORS					
	WIRE SIZE (AWG OR KCMIL)		CONDUIT SIZE					WIRE SIZE (AWG OR KCMIL)		CONDUIT SIZE			
	PHASE & NEUTRAL	GROUND	SINGLE PHASE 2 WIRE+G (1PH, 1N, 1G, 2PH, 1G)	SINGLE PHASE 3 WIRE+G (2PH, 1N, 1G)	THREE PHASE 3 WIRE+G (3PH, 1G)	THREE PHASE & NEUTRAL 4 WIRE+G (3PH, 1N, 1G)		PHASE & NEUTRAL	GROUND	SINGLE PHASE 3 WIRE+G (2PH, 1N, 1G)	THREE PHASE 3 WIRE+G (3PH, 1G)	THREE PHASE & NEUTRAL 4 WIRE+G (3PH, 1N, 1G)
15–20	12	12	3/4"	3/4"	3/4"	3/4"							
25–30	10	10	3/4"	3/4"	3/4"	3/4"							
35–40	8	10	3/4"	3/4"	3/4"	3/4"							
45–50	8 (6)	10	3/4"	3/4"	3/4"	3/4"	1						
60	6 (4)	10	3/4" (1")	3/4" (1")	3/4" (1")	1" (1 1/4")	1						
70	4	8	1"	1 1/4"	1 1/4"	1 1/4"							
80	4 (3)	8	1"	1 1/4"	1 1/4"	1 1/4"	1						
90–100	3 (2)	8	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1	1	6	1 1/2"	1 1/2"	1 1/2"	
110	2 (1)	6	–	1 1/4"	1 1/4"	1 1/4" (1 1/2")	1	1/0	4	1 1/2"	1 1/2"	2"	
125	1 (1/0)	6	–	1 1/4" (1 1/2")	1 1/4" (1 1/2")	1 1/2"	1	2/0	4	1 1/2"	1 1/2"	2"	
150	1/0	6	–	1 1/2"	1 1/2"	1 1/2"		3/0	4	2"	2"	2 1/2"	
175	2/0	6	–	2"	2"	2"		4/0	4	2"	2"	2 1/2"	
200	3/0	6	–	2"	2"	2 1/2"		250	4	2"	2"	3"	
225	4/0	4	–	2"	2"	2 1/2"		300	2	2 1/2"	2 1/2"	3"	
250	250	4	–	2 1/2"	2 1/2"	2 1/2"		350	2	2 1/2"	2 1/2"	3"	
300	350	4	–	2 1/2"	2 1/2"	3"		500	2	3"	3"	3 1/2"	
350	500	3	–	3"	3"	3"		2-4/0	2-1/0	2-2"	2-2"	2-2"	
400	500	3	–	3"	3"	3"		2-250	2-1/0	2-2 1/2"	2-2 1/2"	2-2 1/2"	
450	2-4/0	2-2	–	2-2"	2-2"	2-2 1/2"		2-300	2-1/0	2-2 1/2"	2-2 1/2"	2-3"	
500	2-250	2-2	–	2-2" 1/2"	2-2 1/2"	2-2 1/2"		2-350	2-1/0	2-2 1/2"	2-2 1/2"	2-3"	
600	2-350	2-1	–	2-2" 1/2"	2-2 1/2"	2-3"		2-500	2-2/0	2-3"	2-3"	2-3 1/2"	
700	2-500	2-1/0	–	2-3"	2-3"	2-3"		2-600	2-3/0	2-3"	2-3"	2-3 1/2"	
800	2-500	2-1/0	–	2-3"	2-3"	2-3 1/2"		3-400	3-3/0	3-3"	3-3"	3-3 1/2"	
1000	3-400	3-2/0	–	3-3"	3-3"	3-3"		3-600	3-4/0	–	3-3 1/2"	3-3 1/2"	
1200	3-600	3-3/0	–	3-3 1/2"	3-3 1/2"	3-3 1/2"		4-500	4-250	–	4-3"	4-3 1/2"	
1600	4-600	4-4/0	–	4-3 1/2"	4-3 1/2"	4-3 1/2"		5-600	5-350	–	5-3 1/2"	5-4"	
2000	5-600	5-250	–	5-3 1/2"	5-3 1/2"	5-3 1/2"		6-600	6-400	–	6-3 1/2"	6-4"	

GENERAL NOTES:
1. CONTRACTOR TO SIZE FEEDERS AND BRANCH CIRCUITS BASED ON THIS SCHEDULE AND OVER CURRENT DEVICE SIZE, UNLESS NOTED OTHERWISE.
2. CONTRACTOR MAY COMBINE 20A CIRCUITS AS NOTED IN SPECIFICATION.
3. COPPER CONDUCTORS ARE BASED ON THHN/THWN UP TO AND INCLUDING #4/0. COPPER CONDUCTORS LARGER THAN #4/0 AND ALUMINUM CONDUCTORS ARE BASED ON XHHW-2.
4. CONDUIT SIZES ARE VALID FOR EMT OR RGS. CONDUIT SIZES SHALL BE ADJUSTED AS REQUIRED FOR OTHER TYPES OF CONDUIT.
5. ELECTRICAL CONTRACTOR TO COORDINATE WITH MECHANICAL CONTRACTOR AND PROVIDE REQUIRED WIRE SIZES TO ACCOMMODATE MECHANICAL EQUIPMENT LUG SIZES.
6. SIZE OF DISCONNECT SWITCH LOCATED AT EQUIPMENT SHALL BE SIZED BASED UPON OVERCURRENT PROTECTION OF THAT DEVICE.
7. OBTAIN APPROVAL FROM ENGINEER PRIOR TO INSTALLING DIFFERENT SIZE/QUANTITY OF CONDUCTORS TO OBTAIN AN EQUIVALENT AMPACITY.
8. SPLICE FROM ALUMINUM TO COPPER PRIOR TO ENTERING EQUIPMENT LISTED FOR USE WITH COPPER CONDUCTORS ONLY OR USE COPPER CONDUCTORS FOR THE ENTIRE LENGTH OF FEEDER.

KEYED NOTES:
1. CONDUCTORS ARE BASED ON 90°C, 600V. INSULATED WIRE APPLIED AT 75°C FOR TERMINATION RATED 60/75°C OR 75°C. FOR TERMINATION RATED AT 60°C, USE CONDUCTORS AND CONDUIT SIZES INDICATED IN PARENTHESES.

DTE LIGHTING INCENTIVES PROGRAM

THE ELECTRICAL CONTRACTOR SHALL INCLUDE IN HIS BID AND BE RESPONSIBLE FOR PROVIDING AND MEETING ALL REQUIREMENTS FOR THE OWNER TO PARTICIPATE IN THE CURRENT DTE ENERGY SAVINGS PROGRAM. THE FOLLOWING ITEMS WILL BE REQUIRED BUT NOT LIMITED TO, FOR THE OWNER TO PARTICIPATE IN THIS PROGRAM:

1. ON BEHALF OF THE OWNER, PROVIDE ALL REQUIRED INFORMATION FOR THE RESERVATION APPLICATION AND THE FINAL APPLICATION. REFER TO DTE ENERGY PROGRAM APPLICATION AT www.dtetradeally.com.
2. CONTRACTOR BUSINESS INFORMATION.
3. LIGHTING INCENTIVES WORKSHEET/CUSTOM INCENTIVE WORKSHEET, AS REQUIRED.
4. TYPE OF FIXTURES REMOVED, WATTAGE AND LAMP SIZE.
5. EASY TO READ ITEMIZED INVOICES WITH PART NUMBERS OF ALL LIGHT FIXTURES, BALLASTS AND LAMPS.
6. MANUFACTURERS CUT SHEETS WITH HIGHLIGHTED FIGURES, BALLAST, LAMPS, TYPE OF FIXTURE, ETC. AS REQUIRED BY DTE.
7. MEASURES ARE COMPLETELY INSTALLED WITHIN 90 DAYS OF PROJECT APPROVAL.

IT IS THE ELECTRICAL CONTRACTORS RESPONSIBILITY TO CONTACT DTE'S ENERGY SAVINGS TEAM OR ASSIGNED REPRESENTATIVE IF A PROJECT IS DELAYED, OR SUBSTANTIALLY CHANGED.

THE ELECTRICAL CONTRACTOR SHALL WORK WITH AND COORDINATE WITH THE OWNER FOR THE RESERVATION AND FINAL APPLICATION PROCESS PRIOR TO SITE WORK BEING CONDUCTED AND POST REVIEW INSPECTION FOR REMOVAL AND INSTALLATION OF ALL EQUIPMENT RELATED TO THE INCENTIVE PROGRAM.

BRANCH CIRCUIT VOLTAGE DROP WIRING SCHEDULE FOR SINGLE PHASE CIRCUITS

BRANCH CKT RATING (A)	WIRE SIZE (AWG)	MAXIMUM BRANCH CIRCUIT LENGTH (IN FEET)				
		120V	208V	240V	277V	480V
20A	12	83	143	165	191	331
	10	128	222	256	295	511
	8	201	348	402	464	804
	6	313	542	625	721	1250
30A	10	85	148	170	197	341
	8	134	232	268	309	536
	6	208	361	417	481	833
	4	313	542	625	721	1250

GENERAL NOTES:
1. THE ABOVE TABLE VALUES ARE BASED ON COPPER CONDUCTORS, IN STEEL CONDUIT, WITH A LOAD POWER FACTOR OF 0.85 PER NEC CHAPTER 9, TABLE 9.
2. PROVIDE BRANCH CIRCUIT CONDUCTORS AS INDICATED IN THE TABLE ABOVE FOR ALL LIGHTING AND RECEPTACLE BRANCH CIRCUITS. WHERE BRANCH CIRCUITS SERVE DEDICATED EQUIPMENT, THE CONTRACTOR MAY PERFORM VOLTAGE DROP CALCULATIONS BASED ON ACTUAL EQUIPMENT CONNECTED LOAD AND PROVIDE CONDUCTORS APPROPRIATELY SIZED TO LIMIT VOLTAGE DROP TO A MAXIMUM OF 3%.
3. CONDUCTOR SIZES ARE BASED ON MAXIMUM OF 9 CURRENT CARRYING CONDUCTORS IN A SINGLE CONDUIT.
4. LIMITS FOR CONDUCTOR LENGTHS SHOWN ARE BASED ON A MAXIMUM BRANCH CIRCUIT LOADING OF 64% OF THE BRANCH BREAKER RATING AND A MAXIMUM OF 3 PERCENT VOLTAGE DROP TO COMPLY WITH ASHRAE 90.1 AND THE NEC. FOR CIRCUITS LOADED GREATER THAN 64% OF BRANCH BREAKER RATING, THE CONTRACTOR SHALL PROVIDE CONDUCTORS APPROPRIATELY SIZED TO LIMIT VOLTAGE DROP TO 3%.

MOTOR CIRCUIT SIZING SCHEDULE (208V, 3 PHASE)

MOTOR HP	SWITCH/ FUSE	CIRCUIT BREAKER	STARTER SIZE/TYPE	MOTOR DISCONNECT (NOTE 3)
1/2	30/6A	15A	1	30A
3/4	30/6A	15A	1	30A
1	30/10A	15A	1	30A
1 1/2	30/10A	15A	1	30A
2	30/10A	15A	1	30A
3	30/20A	20A	1	30A
5	30/25A	35A	1	30A
7 1/2	60/40A	50A	1	60A
10	60/50A	60A	2	60A
15	60/60A	90A	3	60A
20	100/90A	100A	3	100A
25	100/100A	110A	3	100A
30	200/125A	125A	4	200A
40	200/175A	175A	4	200A
50	200/200A	200A	5	200A
60	400/250A	250A	5	400A
75	400/300A	300A	5	400A
100	400/400A	400A	6	400A
125	600/500A	600A	6	600A
150	600/600A	600A	6	600A

GENERAL NOTES:
1. BASED ON MOTOR FULL LOAD AMPERES AS PROVIDED BY THE NEC
2. BASED ON MOTOR RUNNING OVERLOAD PROTECTIONS PROVIDED BY THERMAL OVERLOAD RELAYS.
3. WHERE THE STARTER IS LOCATED REMOTE FROM THE MOTOR, PROVIDE DISCONNECT LOCATED AT THE MOTOR, SIZE AS INDICATED.

MOTOR CIRCUIT SIZING SCHEDULE (120V, SINGLE PHASE)

MOTOR HP	CIRCUIT BREAKER	MANUAL MOTOR STARTER SIZE	COMBINATION STARTER SIZE	MOTOR DISCONNECT (NOTE 3)
1/6	15A	1 HP	0	20A
1/4	15A	1 HP	0	20A
1/3	15A	1 HP	0	20A
1/2	20A	1 HP	0	20A

GENERAL NOTES:
1. BASED ON MOTOR FULL LOAD AMPERES AS PROVIDED BY THE NEC
2. BASED ON MOTOR RUNNING OVERLOAD PROTECTIONS PROVIDED BY THERMAL OVERLOAD RELAYS.
3. WHERE THE STARTER IS LOCATED REMOTE FROM THE MOTOR, PROVIDE DISCONNECT LOCATED AT THE MOTOR, SIZE AS INDICATED.

Bidding and Permits: 31 July 2023
Owner Review: 14 July 2023
Design Development: 08 May 2023

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PBA Project No: 2022.0419

ELECTRICAL STANDARD SCHEDULES

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

E0.02

803 W. Big Beaver Road, Suite 350, Troy, MI 48084 | 248.244.9710

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE. 1"

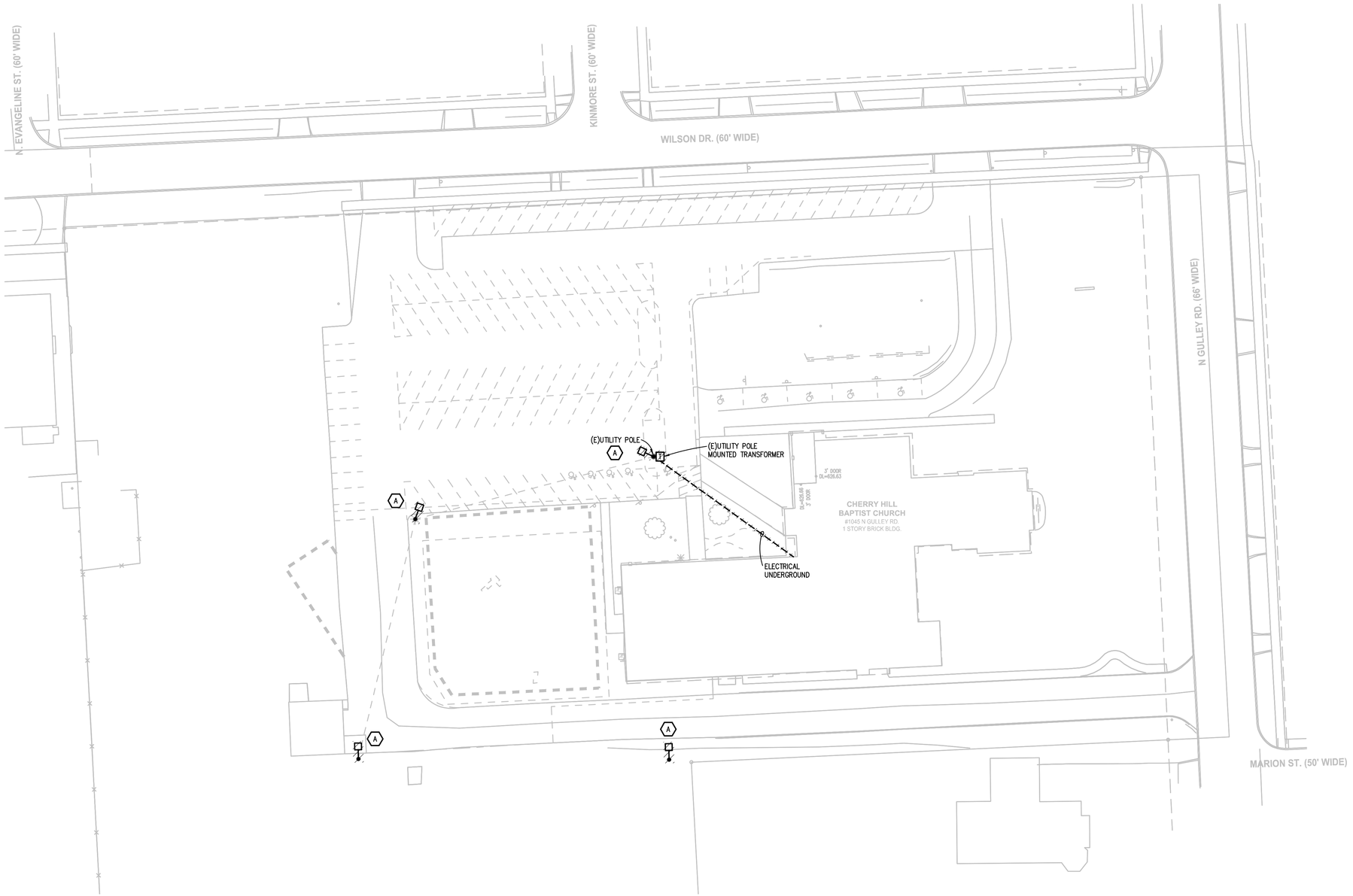
Know what's **below.**
Call before you dig.

SITE PLAN GENERAL NOTES:

1. THESE NOTES ARE GENERIC GUIDELINES ONLY. ELECTRICAL CONTRACTOR'S PERSONNEL ON SITE SHALL BE THOROUGHLY FAMILIAR WITH THE PUBLISHED SPECIFICATIONS FOR EXACT DESCRIPTIONS OF SCOPE, METHODS, AND MATERIAL.
2. THESE DRAWINGS REPRESENT THE GENERAL EXTENT AND ARRANGEMENT OF SYSTEMS. COORDINATE EXACT EQUIPMENT LOCATIONS, ELEVATIONS, AND FINAL CONNECTION REQUIREMENTS. PROVIDE EACH SYSTEM COMPLETE, INCLUDING ALL NECESSARY COMPONENTS, FITTINGS AND OFFSETS.
3. CONDUCT A SURVEY TO IDENTIFY ALL UNDERGROUND UTILITIES. CALL 811 PRIOR TO EXCAVATION.
4. UTILITIES SHOWN ON THESE DRAWINGS ARE FOR REFERENCE ONLY. COORDINATE EXACT LOCATION OF ALL EXISTING UTILITIES, AND ROUTING OF ALL NEW UNDERGROUND UTILITIES PRIOR TO EXCAVATION.
5. DEWATER TRENCHES PRIOR TO INSTALLATION OF CONDUITS. PROVIDE WATER TIGHT FITTINGS ON ALL UNDERGROUND CONDUITS.
6. COORDINATE DEMOLITION WORK, AND ELECTRICAL AND TELEPHONE SERVICES TO THE SITE, WITH THE RESPECTIVE LOCAL UTILITY COMPANY REPRESENTATIVES PRIOR TO COMMENCEMENT OF WORK. INCLUDE ALL ASSOCIATED COST/FEES BY THE UTILITY COMPANIES IN THE BID PRICE.
7. INSTALL UNDERGROUND CONDUITS 42" BELOW FINISHED GRADE, MINIMUM, UNLESS NOTED OTHERWISE.
8. COORDINATE SERVICE SHUT-DOWNS WITH ALL TRADES INVOLVED ON SITE AND OBTAIN WRITTEN AUTHORIZATION FROM OWNER 72 HOURS PRIOR TO ANY ELECTRICAL AND/OR TELEPHONE SHUT-DOWN.
9. REMOVE ALL DE-ENERGIZED CONDUCTORS FROM SITE AT COMPLETION OF THE PROJECT.
10. OUTDOOR LIGHTING BRANCH CIRCUIT WIRING SHALL BE MINIMUM #8 AWG CONDUCTORS (XHHW-2), IN MINIMUM 1" DIA. CONDUIT, UNLESS NOTED OTHERWISE.
11. SPARE CONDUITS SHALL INCLUDE PULL STRING AND SHALL BE TERMINATED WITH A CAP.
12. EXCAVATE THE ENTIRE LENGTH OF TRENCH TO PROPERLY SET DUCT ELEVATIONS.

(#) DEMOLITION KEY NOTES:

A. UTILITY TO REMOVE SITE LIGHTING FIXTURES, COORDINATE EXTENT OF DEMOLITION WITH UTILITY.



ELECTRICAL SITE DEMOLITION PLAN
SCALE: 1" = 30'

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Design Development: 08 May 2023

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ELECTRICAL SITE DEMOLITION PLAN

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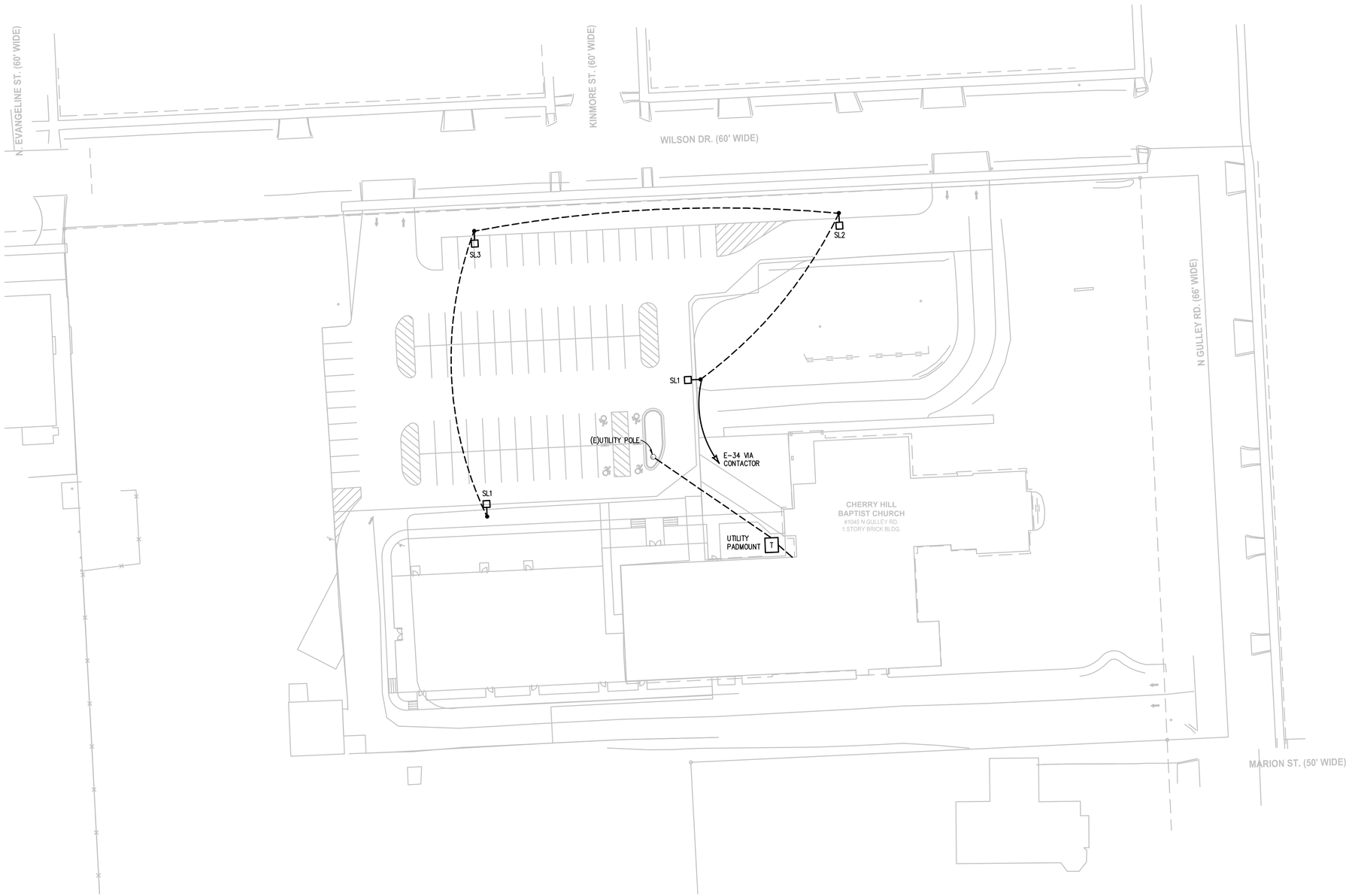
7. INSTALL UNDERGROUND CONDUITS 42" BELOW FINISHED GRADE, MINIMUM, UNLESS NOTED OTHERWISE.
8. COORDINATE SERVICE SHUT-DOWNS WITH ALL TRADES INVOLVED ON SITE AND OBTAIN WRITTEN AUTHORIZATION FROM OWNER 72 HOURS PRIOR TO ANY ELECTRICAL AND/OR TELEPHONE SHUT-DOWN.
9. REMOVE ALL DE-ENERGIZED CONDUCTORS FROM SITE AT COMPLETION OF THE PROJECT.
10. OUTDOOR LIGHTING BRANCH CIRCUIT WIRING SHALL BE MINIMUM #8 AWG CONDUCTORS (XHHW-2), IN MINIMUM 1" DIA. CONDUIT, UNLESS NOTED OTHERWISE.
11. SPARE CONDUITS SHALL INCLUDE PULL STRING AND SHALL BE TERMINATED WITH A CAP.
12. EXCAVATE THE ENTIRE LENGTH OF TRENCH TO PROPERLY SET DUCT ELEVATIONS.



ELECTRICAL SITE NEW WORK PLAN
SCALE: 1" = 30'

Bidding and Permits: 31 July 2023
Owner Review: 14 July 2023
Design Development: 08 May 2023

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ELECTRICAL SITE NEW WORK PLAN

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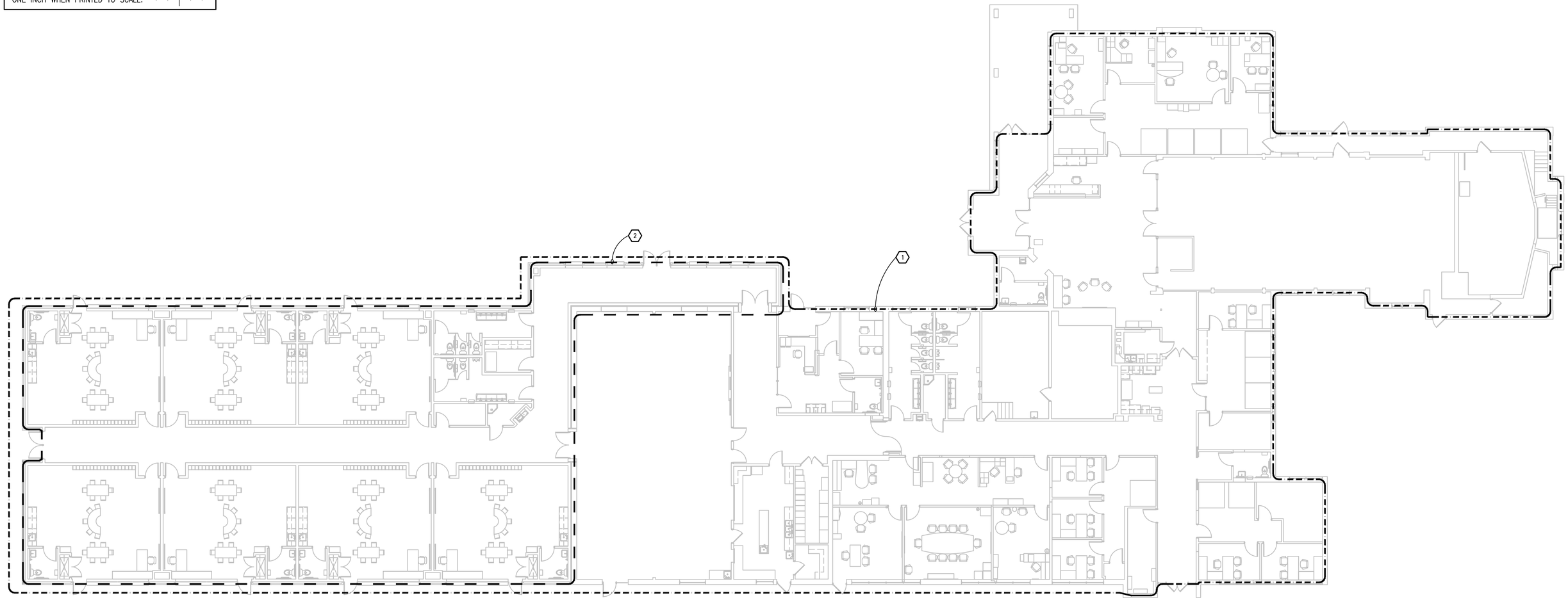

ELECTRICAL COMPOSITE PLAN
SCALE: 3/32" = 1' - 0"

ELECTRICAL GENERAL NOTES:

1. THESE DRAWINGS REPRESENT THE GENERAL EXTENT AND ARRANGEMENT OF SYSTEMS. COORDINATE EXACT EQUIPMENT LOCATIONS, ELEVATIONS, AND FINAL CONNECTION REQUIREMENTS. 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. MOTOR CIRCUIT PROTECTION SHALL BE SIZED IN ACCORDANCE WITH MOTOR CIRCUIT SIZING SCHEDULES SHOWN ON "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS OTHERWISE NOTED.
6. COORDINATE THE MOUNTING HEIGHTS OF DEVICES WITH ARCHITECTURAL ELEVATIONS AND THE TRADES INSTALLING THE WORK.
7. REFER TO MECHANICAL SCHEDULE SHEETS FOR ELECTRICAL REQUIREMENTS FOR MECHANICAL EQUIPMENT. PROVIDE ALL CONNECTIONS, STARTERS, DISCONNECTS, ETC. AS REQUIRED BY SCHEDULES AND WHERE NOTED ELSEWHERE. VERIFY REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH SHOP DRAWINGS SUBMITTALS. NOTIFY ENGINEER OF ANY CONFLICTS BETWEEN EQUIPMENT SUBMITTALS AND ELECTRICAL DRAWINGS. WHERE CIRCUIT SIZES ARE SHOWN ON THE ELECTRICAL DRAWINGS THAT DIFFER FROM WHAT IS INDICATED ON THE MECHANICAL SCHEDULES, PROVIDE THE CIRCUIT OF HIGHER AMPACITY.
8. REFER TO TEMPERATURE CONTROLS SHEETS FOR REQUIRED FIRE ALARM CONTROL MODULES, DUCT SMOKE DETECTORS, AND MOTOR CONTROLLERS. PROVIDE ALL ACCESSORIES INDICATED.
9. REFER TO LIGHTING CONTROL SCHEDULE FOR ROOM CONTROL AND EMERGENCY LIGHTING CIRCUIT CONTROL REQUIREMENTS. DESIGNATION FOR ROOM IS INDICATED AS A LETTERED OVAL SYMBOL.
10. WHERE CIRCUITS ARE EXTENDED PROVIDE GROUNDING PER THE N.E.C

(#) CONSTRUCTION KEY NOTES:

1. THE FIRE ALARM DEVICES SHOWN ON PLAN ARE A PARTIAL REPRESENTATION OF THE FIRE ALARM SYSTEM. PROVIDE THE DESIGN AND INSTALLATION OF A COMPLETE AND FUNCTIONAL FIRE ALARM SYSTEM IN ACCORDANCE WITH THE SPECIFICATIONS, DRAWINGS, AND ALL APPLICABLE CODES. THE FIRE ALARM VENDOR SHALL PROVIDE LAYOUT DRAWINGS INDICATING THE REQUIRED QUANTITIES AND LOCATIONS OF MANUAL PULL STATIONS, NOTIFICATION APPLIANCES, SMOKE AND HEAT DETECTORS, CONTROL MODULES, INTERFACE MODULES, MODULES FOR SPRINKLER FLOW AND TAMPER SWITCHES, ALL CONTROL PANELS, POWER SUPPLIES, AND ADDITIONAL DEVICES AND EQUIPMENT REQUIRED. COORDINATE LOCATIONS OF DEVICES WITH ARCHITECTURAL FINISHES AND REFLECTED CEILING PLANS, INCLUDING ADDITIONAL SMOKE AND HEAT DETECTORS REQUIRED FOR NON-SMOOTH CEILING APPLICATIONS. INCLUDE ALLOWANCES FOR ADJUSTMENT OF DEVICES BY THE ARCHITECT AT THE TIME OF SUBMITTAL TO COORDINATE WITH BUILDING FINISHES AND OTHER CEILING ELEMENTS.
2. PROVIDE SMOKE DETECTORS AND CARBON MONOXIDE DETECTORS AS REQUIRED FOR CHILDCARE OPERATION.

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PBA Project No.: 2022.0419

ELECTRICAL COMPOSITE PLAN

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

E0.04

803 W. Big Beaver Road, Suite 350, Troy, MI 48084 | 248.244.9710

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE. 1"

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 EQUIPMENT OR MATERIALS AS INDICATED ON PLAN WITH CROSS HATCHING. DEMOLITION SHALL INCLUDE, BUT NOT BE LIMITED TO, THOSE COMPONENTS 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.

(#) DEMOLITION KEY NOTES:

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B. REMOVE LIGHT FIXTURES AND CONTROLS. MAINTAIN BRANCH CIRCUIT FOR REUSE.

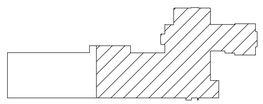
C. REMOVE EXISTING FIRE ALARM SYSTEM COMPLETE (DEVICES AND WIRING). ALL FIRE ALARM DEVICES AND WIRING INDICATED OR NOT INDICATED TO BE REMOVED.

D. REMOVE LIGHT FIXTURES. MAINTAIN CONTROLS AND BRANCH CIRCUIT FOR REUSE.

E. REMOVE PANELBOARD FOR RELOCATION. EXISTING LOADS STILL IN USE SHALL BE RELOCATED.

F. MECHANICAL EQUIPMENT BEING REPLACED. MAINTAIN BRANCH CIRCUIT FOR REUSE.

ELECTRICAL DEMOLITION PLAN (PART A)
SCALE: 1/8" = 1' - 0"



KEY PLAN
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ELECTRICAL DEMOLITION PLAN (PART A)

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Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

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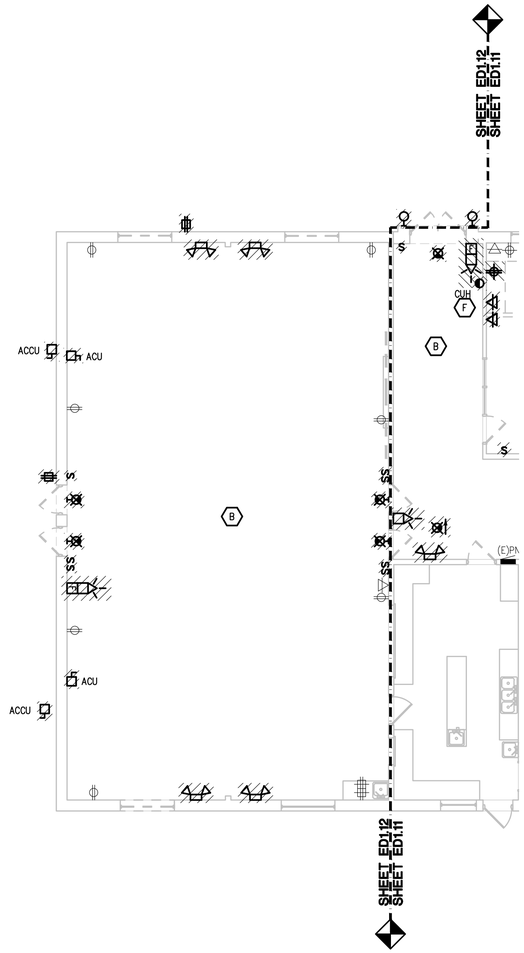

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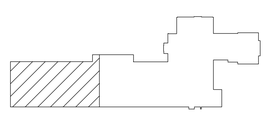
ELECTRICAL DEMOLITION PLAN (PART B)
SCALE: 1/8" = 1' - 0"



KEY PLAN
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ELECTRICAL DEMOLITION PLAN (PART B)

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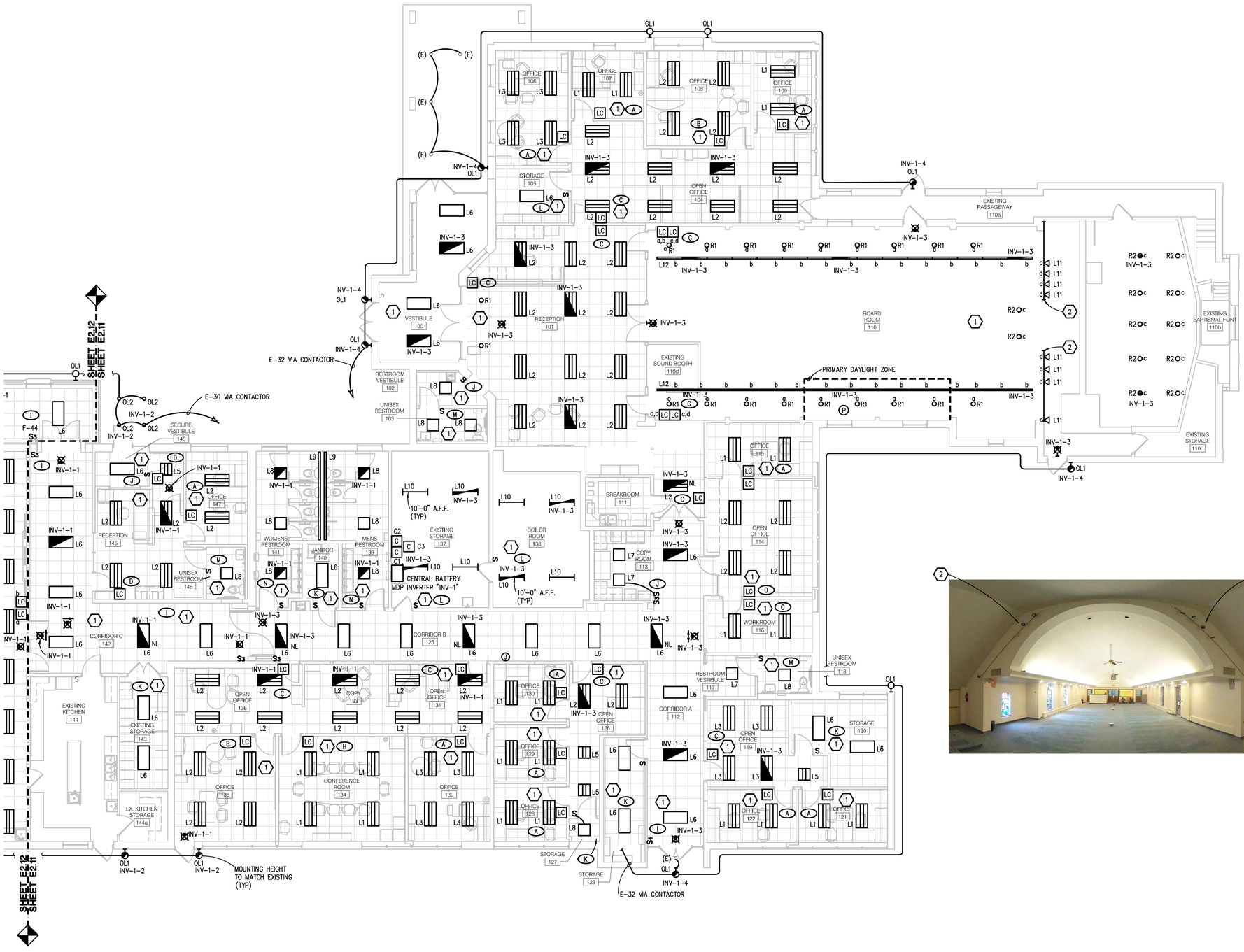

LIGHTING PLAN (PART A)
SCALE: 1/8" = 1' - 0"

KEY PLAN
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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.
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4. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
5. MOTOR CIRCUIT PROTECTION SHALL BE SIZED IN ACCORDANCE WITH MOTOR CIRCUIT SIZING SCHEDULES SHOWN ON "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS OTHERWISE NOTED.
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10. WHERE CIRCUITS ARE EXTENDED PROVIDE GROUNDING PER THE N.E.C

(#) CONSTRUCTION KEY NOTES:

1. CIRCUIT LIGHTING TO MAINTAINED BRANCH CIRCUIT. MODIFY SWITCH LEG AS REQUIRED FOR WORK INDICATED.
2. MOUNT NEW TRACK LIGHTING IN SAME LOCATION AS REMOVED.

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LIGHTING PLAN (PART A)

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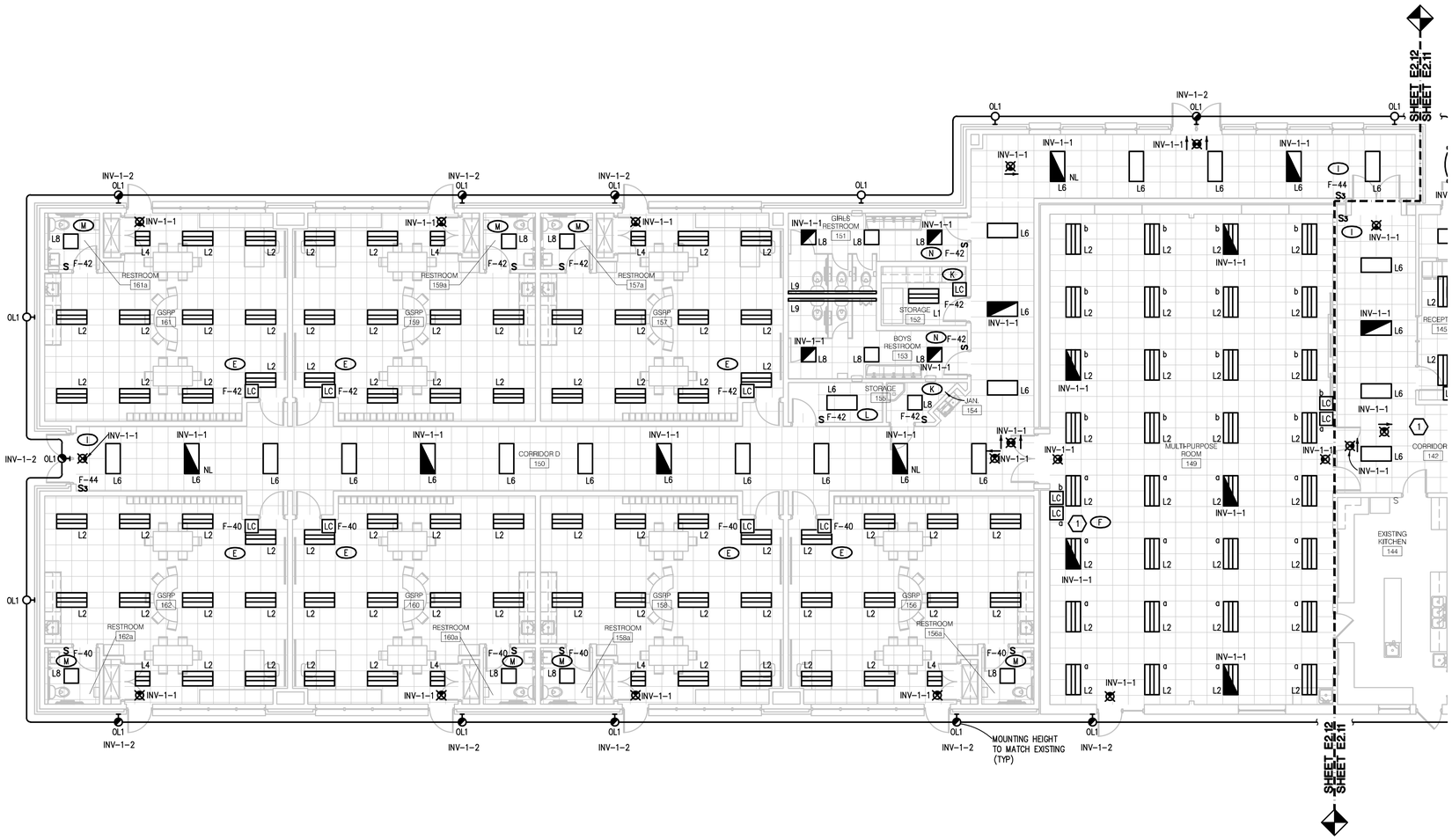
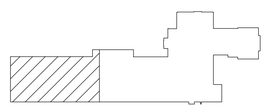


LIGHTING PLAN (PART B)
SCALE: 1/8" = 1' - 0"



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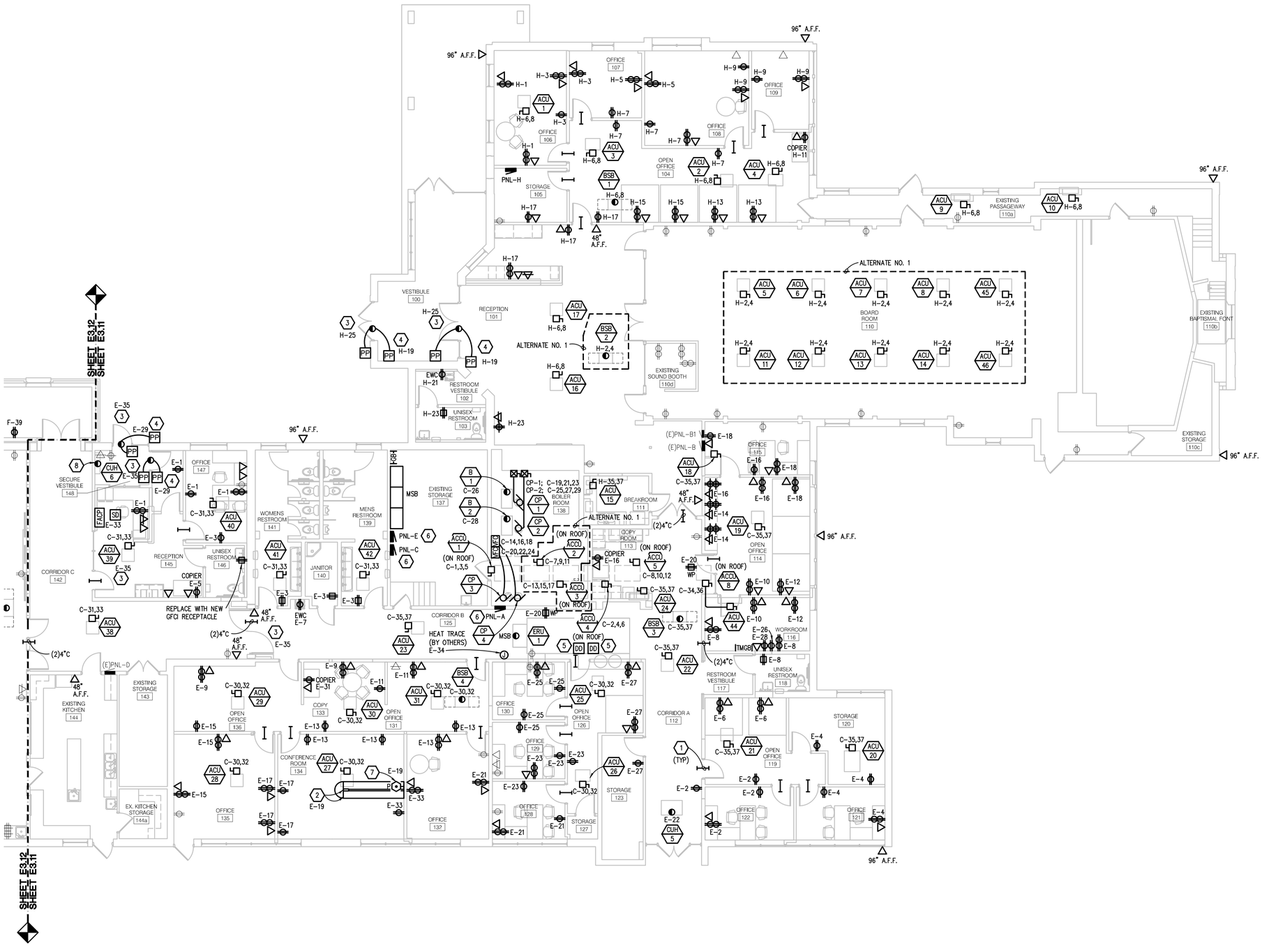

POWER PLAN (PART A)
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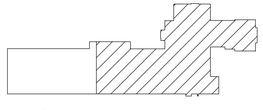

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(#) CONSTRUCTION KEY NOTES:

1. THE ELECTRICAL CONTRACTOR SHALL PROVIDE 2-2"C. U.O.N. CONDUITS FOR TECHNOLOGY AND AUXILIARY SYSTEM WIRE AS INDICATED. STUB CONDUITS FROM CEILING SPACE. PROVIDE PLASTIC BUSHINGS AT EACH END. PROVIDE REMOVABLE/RESEALABLE FIRE STOP PUTTY IN EACH CONDUIT AND FIRE STOP AROUND EACH CONDUIT. COORDINATE WITH TECHNOLOGY CONTRACTOR FOR EXACT LOCATION OF CONDUIT. PROVIDE MINIMUM OF 1" CONDUIT FOR ALL OTHER AREAS REQUIRING SLEEVES.
2. PROVIDE CONNECTRAC 2.7 UNDER-CARPET WIREWAY SYSTEM. PROVIDE (3) 48" WIREWAY SEGMENTS. FIELD VERIFY EXACT LOCATION AND FIELD CUT SEGMENTS AS REQUIRED. PROVIDE END COMPONENTS KIT. PROVIDE (2) DUPLEX RECEPTACLES AND (2) TELECOMMUNICATION FLOOR OUTLETS.
3. REFER TO ARCHITECTURAL FLOOR PLANS, DOOR HARDWARE SCHEDULE ON ARCHITECTURAL DRAWINGS, ACCESS CONTROL SYSTEM SPECIFICATION SECTION AND ACCESS CONTROL DOOR DIAGRAM(S) ON E7 SERIES FOR RACEWAY AND BACK BOX REQUIREMENTS FOR DOOR OR BANK OF DOORS INDICATED. PROVIDE ALL RACEWAYS AND BACK BOXES REQUIRED. PRIOR TO ROUGH-IN, COORDINATE ALL REQUIRED DEVICES AND LOCATIONS WITH SECURE ENTRIES DETAILS ON SHEET TY7.01.
4. PUSH PAD FOR AUTOMATIC DOORS. ALL DOOR AND PUSH PAD HARDWARE IS PROVIDED BY DOOR CONTRACTOR. ELECTRICAL CONTRACTOR SHALL INSTALL PUSH PADS AND PROVIDE CONDUIT AND WIRE FOR COMPLETE OPERATION. COORDINATE WITH DOOR CONTRACTOR. PUSH PAD BOX IS DOUBLE GANG.
5. DUCT SMOKE DETECTOR SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. COORDINATE MOUNTING LOCATION AND QUANTITY WITH THE MECHANICAL DUCTWORK CONTRACTOR. ELECTRICAL CONTRACTOR SHALL WIRE DUCT SMOKE DETECTOR/RTU SUPPLY/ RETURN FAN MOTOR STARTER SO THAT UPON DETECTION OF SMOKE, THE SUPPLY/RETURN FAN WILL SHUT DOWN. THIS SHALL BE ACCOMPLISHED VIA THE FIRE ALARM CONTROL PANEL. PROVIDE ALL REQUIRED CONTROL MODULES AND RELAYS. COORDINATE WITH WITH THE TEMPERATURE CONTROL/FIRE ALARM CONTRACTOR. PROVIDE WEATHER PROOF ENCLOSURES AS REQUIRED.
6. EXISTING LOADS STILL IN USE FROM REMOVED PANELBOARD SHALL BE RELOCATED. EXTEND CONDUIT AND WIRE AS REQUIRED.
7. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR PRIOR TO ROUGH-IN.
8. CIRCUIT MECHANICAL EQUIPMENT TO MAINTAINED BRANCH CIRCUIT. EXTEND CONDUIT AND WIRE AS REQUIRED.

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PBA Project No: 2022.0419

POWER PLAN (PART A)

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

E3.11

803 W. Big Beaver Road, Suite 350, Troy, MI 48084 | 248.244.9710

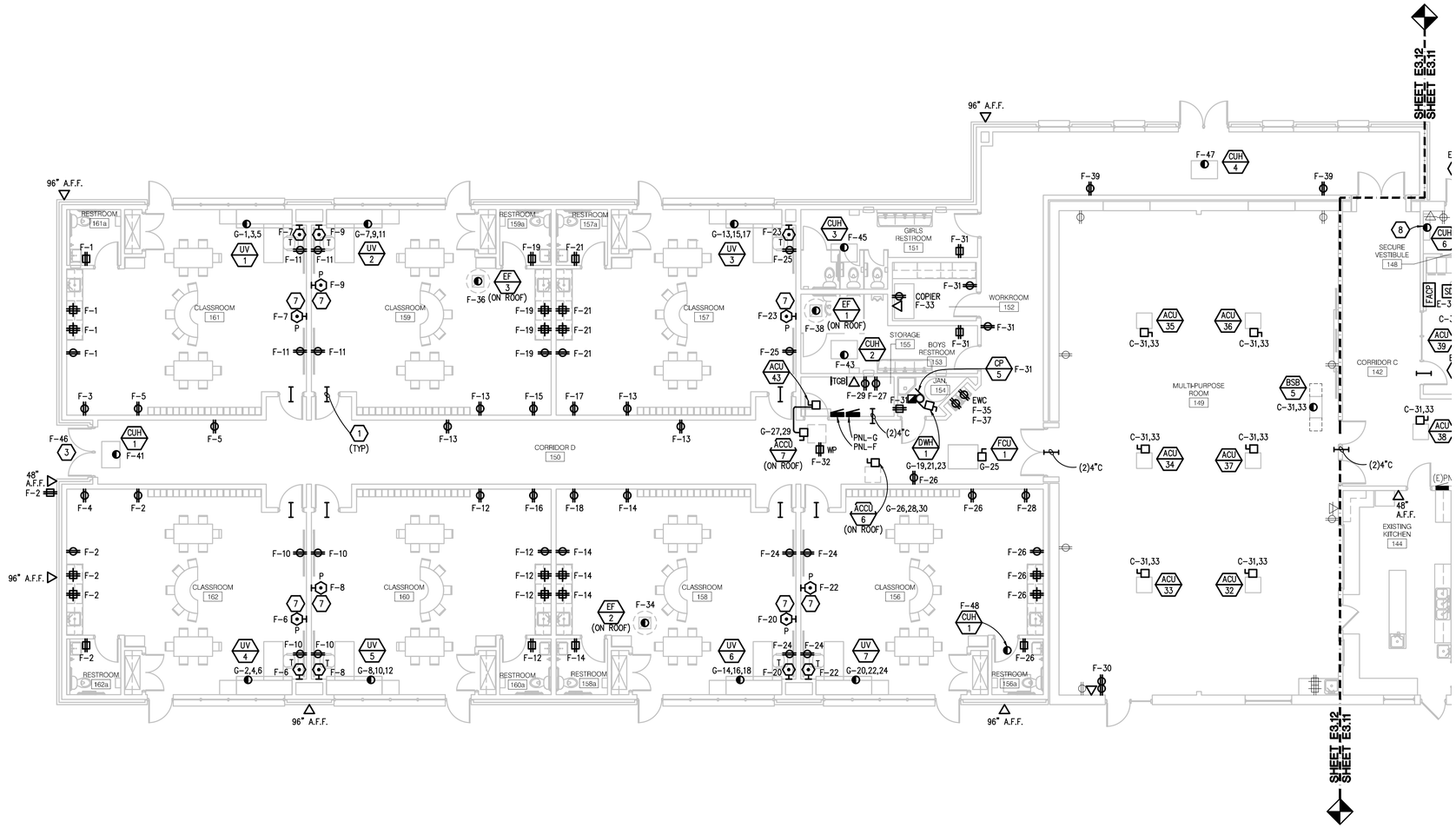
THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE. 1"

ELECTRICAL GENERAL NOTES:

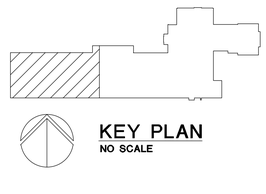
1. THESE DRAWINGS REPRESENT THE GENERAL EXTENT AND ARRANGEMENT OF SYSTEMS. COORDINATE EXACT EQUIPMENT LOCATIONS, ELEVATIONS, AND FINAL CONNECTION REQUIREMENTS. PROVIDE EACH SYSTEM COMPLETE, INCLUDING ALL NECESSARY COMPONENTS, FITTINGS AND OFFSETS.
2. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE 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. MOTOR CIRCUIT PROTECTION SHALL BE SIZED IN ACCORDANCE WITH MOTOR CIRCUIT SIZING SCHEDULES SHOWN ON "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS OTHERWISE NOTED.
6. COORDINATE THE MOUNTING HEIGHTS OF DEVICES WITH ARCHITECTURAL ELEVATIONS AND THE TRADES INSTALLING THE WORK.
7. REFER TO MECHANICAL SCHEDULE SHEETS FOR ELECTRICAL REQUIREMENTS FOR MECHANICAL EQUIPMENT. PROVIDE ALL CONNECTIONS, STARTERS, DISCONNECTS, ETC. AS REQUIRED BY SCHEDULES AND WHERE NOTED ELSEWHERE. VERIFY REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH SHOP DRAWINGS SUBMITTALS. NOTIFY ENGINEER OF ANY CONFLICTS BETWEEN EQUIPMENT SUBMITTALS AND ELECTRICAL DRAWINGS. WHERE CIRCUIT SIZES ARE SHOWN ON THE ELECTRICAL DRAWINGS THAT DIFFER FROM WHAT IS INDICATED ON THE MECHANICAL SCHEDULES, PROVIDE THE CIRCUIT OF HIGHER AMPACITY.
8. REFER TO TEMPERATURE CONTROLS SHEETS FOR REQUIRED FIRE ALARM CONTROL MODULES, DUCT SMOKE DETECTORS, AND MOTOR CONTROLLERS. PROVIDE ALL ACCESSORIES INDICATED.
9. REFER TO LIGHTING CONTROL SCHEDULE FOR ROOM CONTROL AND EMERGENCY LIGHTING CIRCUIT CONTROL REQUIREMENTS. DESIGNATION FOR ROOM IS INDICATED AS A LETTERED OVAL SYMBOL.
10. WHERE CIRCUITS ARE EXTENDED PROVIDE GROUNDING PER THE N.E.C

(#) CONSTRUCTION KEY NOTES:

1. THE ELECTRICAL CONTRACTOR SHALL PROVIDE 2-2"C. U.O.N. CONDUITS FOR TECHNOLOGY AND AUXILIARY SYSTEM WIRE AS INDICATED. STUB CONDUITS FROM CEILING SPACE. PROVIDE PLASTIC BUSHINGS AT EACH END. PROVIDE REMOVABLE/RESEALABLE FIRE STOP PUTTY IN EACH CONDUIT AND FIRE STOP AROUND EACH CONDUIT. COORDINATE WITH TECHNOLOGY CONTRACTOR FOR EXACT LOCATION OF CONDUIT. PROVIDE MINIMUM OF 1" CONDUIT FOR ALL OTHER AREAS REQUIRING SLEEVES.
2. PROVIDE CONNECTRAC 2.7 UNDER-CARPET WIREWAY SYSTEM. PROVIDE (3) 48" WIREWAY SEGMENTS. FIELD VERIFY EXACT LOCATION AND FIELD CUT SEGMENTS AS REQUIRED. PROVIDE END COMPONENTS KIT. PROVIDE (2) DUPLEX RECEPTACLES AND (2) TELECOMMUNICATION FLOOR OUTLETS.
3. REFER TO ARCHITECTURAL FLOOR PLANS, DOOR HARDWARE SCHEDULE ON ARCHITECTURAL DRAWINGS, ACCESS CONTROL SYSTEM SPECIFICATION SECTION AND ACCESS CONTROL DOOR DIAGRAM(S) ON E7 SERIES FOR RACEWAY AND BACK BOX REQUIREMENTS FOR DOOR OR BANK OF DOORS INDICATED. PROVIDE ALL RACEWAYS AND BACK BOXES REQUIRED. PRIOR TO ROUGH-IN, COORDINATE ALL REQUIRED DEVICES AND LOCATIONS WITH SECURE ENTRIES DETAILS ON SHEET TY7.01.
4. PUSH PAD FOR AUTOMATIC DOORS. ALL DOOR AND PUSH PAD HARDWARE IS PROVIDED BY DOOR CONTRACTOR. ELECTRICAL CONTRACTOR SHALL INSTALL PUSH PADS AND PROVIDE CONDUIT AND WIRE FOR COMPLETE OPERATION. COORDINATE WITH DOOR CONTRACTOR. PUSH PAD BOX IS DOUBLE GANG.
5. DUCT SMOKE DETECTOR SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. COORDINATE MOUNTING LOCATION AND QUANTITY WITH THE MECHANICAL DUCTWORK CONTRACTOR. ELECTRICAL CONTRACTOR SHALL WIRE DUCT SMOKE DETECTOR/RTU SUPPLY/ RETURN FAN MOTOR STARTER SO THAT UPON DETECTION OF SMOKE, THE SUPPLY/RETURN FAN WILL SHUT DOWN. THIS SHALL BE ACCOMPLISHED VIA THE FIRE ALARM CONTROL PANEL. PROVIDE ALL REQUIRED CONTROL MODULES AND RELAYS. COORDINATE WITH WITH THE TEMPERATURE CONTROL/FIRE ALARM CONTRACTOR. PROVIDE WEATHER PROOF ENCLOSURES AS REQUIRED.
6. EXISTING LOADS STILL IN USE FROM REMOVED PANELBOARD SHALL BE RELOCATED. EXTEND CONDUIT AND WIRE AS REQUIRED.
7. COORDINATE FINAL LOCATION WITH TECHNOLOGY CONTRACTOR PRIOR TO ROUGH-IN.
8. CIRCUIT MECHANICAL EQUIPMENT TO MAINTAINED BRANCH CIRCUIT. EXTEND CONDUIT AND WIRE AS REQUIRED.



POWER PLAN (PART B)
SCALE: 1/8" = 1' - 0"



KEY PLAN
NO SCALE

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POWER PLAN (PART B)

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Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

E3.12

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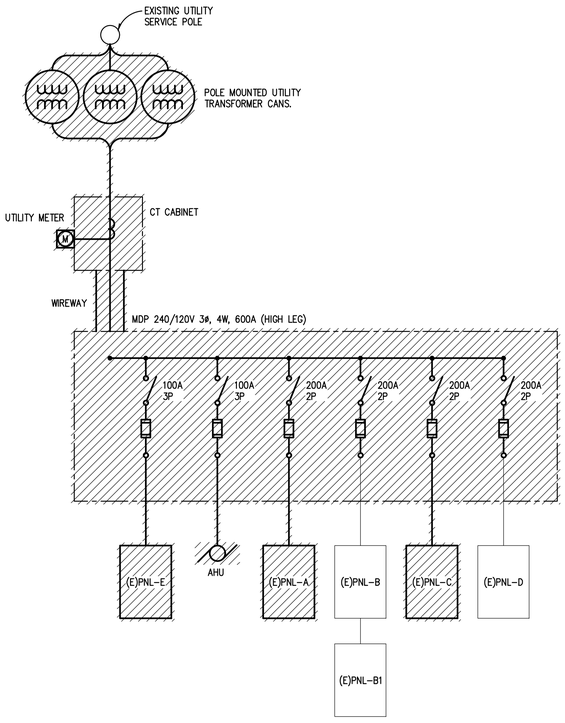
DIAGRAM GENERAL NOTES:

1. THESE DRAWINGS REPRESENT THE GENERAL EXTENT AND ARRANGEMENT OF SYSTEMS. COORDINATE EXACT EQUIPMENT LOCATIONS, ELEVATIONS, AND FINAL CONNECTION REQUIREMENTS. PROVIDE EACH SYSTEM COMPLETE, INCLUDING ALL NECESSARY COMPONENTS, FITTINGS AND OFFSETS.
2. FEEDER AND BRANCH CIRCUIT CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH THE "FEEDER AND BRANCH CIRCUIT SIZING SCHEDULE–GENERAL PURPOSE" ON THE "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS SPECIFICALLY NOTED OTHERWISE.
3. MOTOR CIRCUIT PROTECTION SHALL BE SIZED IN ACCORDANCE WITH THE MOTOR CIRCUIT SIZING SCHEDULES ON THE "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS SPECIFICALLY NOTED OTHERWISE.
4. BASIS OF DESIGN IS SQUARE D DISTRIBUTION EQUIPMENT AND ASCO TRANSFER SWITCHES. IF THE CONTRACTOR ELECTS TO PROVIDE EQUIPMENT FROM OTHER APPROVED MANUFACTURERS, THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE THE LAYOUT AND CLEARANCE REQUIREMENTS IN ALL SPACES CONTAINING ELECTRICAL EQUIPMENT AND PROVIDE EQUIPMENT MEETING THE SPECIFICATIONS AND ACHIEVING CODE REQUIRED CLEARANCES WITHIN THE SPACE PROVIDED.
5. SELECTIVE COORDINATION (PER NEC ARTICLES 700.32 AND 701.27) IS BASED ON SQUARE D DISTRIBUTION EQUIPMENT AND ASCO TRANSFER SWITCHES. ELECTRICAL CONTRACTOR SHALL SUBMIT SELECTIVE COORDINATION STUDY WITH TIME CURRENT CHARACTERISTIC CURVES (AND TABLES FOR TESTED PAIR INSTANTANEOUS COORDINATION) FOR THE EMERGENCY SYSTEMS. ELECTRICAL CONTRACTORS SHALL RECEIVE APPROVED SHOP DRAWINGS BACK FROM ENGINEER OF RECORD PRIOR TO PURCHASING OR INSTALLING ANY ELECTRICAL DISTRIBUTION EQUIPMENT. BREAKERS MUST BE COORDINATED WITH AUTOMATIC TRANSFER SWITCHES 3-CYCLE WITHSTAND RATING. ALTERNATE MANUFACTURERS SHALL MEET SELECTIVE COORDINATION CRITERIA AT NO ADDITIONAL COST TO THE PROJECT.
6. VARIABLE FREQUENCY CONTROLLERS (VFC) FURNISHED BY MECHANICAL TRADES. ELECTRICAL CONTRACTOR SHALL INSTALL VFC, PROVIDE POWER FEEDER FROM DISTRIBUTION EQUIPMENT TO VFC AND PROVIDE POWER FEEDER FROM VFC TO MOTOR. REFER TO SPECIFICATIONS FOR APPLICATION OF VFC POWER CABLE FROM VFC TO MOTOR.



DEMOLITION - ONE LINE DIAGRAM

NO SCALE

SHORT-CIRCUIT CALCULATIONS

FAULT POINT	PANEL/ TRANSFORMER	SOURCE FAULT POINT	SOURCE Isc	CONDUIT TYPE	CONDUCTOR MATERIAL	CONDUCTOR OR BUS SIZE	'C' VALUE	E (V)	L (FT)	XFMR kVA	XFMR %Z	f	M	Isc
1	UTILITY XFMR							208		300	1.6			52,046
2	MSB	1	52,046	NM	CU	3 SETS OF 600 KCML	28033	208	60.0			0.309	0.76	39,754
3	PNL-A	2	39,754	M	CU	1 SET OF 3	4774	208	60.0			4.160	0.19	7,704
4	PNL-C	2	39,754	M	CU	1 SET OF 500 KCML	22185	208	20.0			0.298	0.77	30,617
5	PNL-E	2	39,754	M	CU	1 SET OF 3/0	12844	208	20.0			0.515	0.66	26,232
6	PNL-F	2	39,754	M	CU	1 SET OF 3/0	12844	208	240.0			6.186	0.14	5,533
7	PNL-G	2	39,754	M	CU	1 SET OF 500 KCML	22185	208	240.0			3.581	0.22	8,678
8	PNL-H	2	39,754	M	CU	1 SET OF 3	4774	208	185.0			12.828	0.07	2,875
9	ERU-1	2	39,754	M	CU	1 SET OF 1/0	8925	208	75.0			2.782	0.26	10,512

THE FOLLOWING THREE PHASE CALCULATIONS ARE BASED ON THE "POINT-BY POINT" METHOD WHERE:

$Isc = Isc \times M$, $M = 1/(1+f)$

CONDUCTOR OR BUS: $f = \frac{1.732 \times L \times Isc}{C \times n \times E}$

UTILITY XFMR: $Isc = \frac{kVA \times 100{,}000}{E \times 1.732 \times \%Z}$

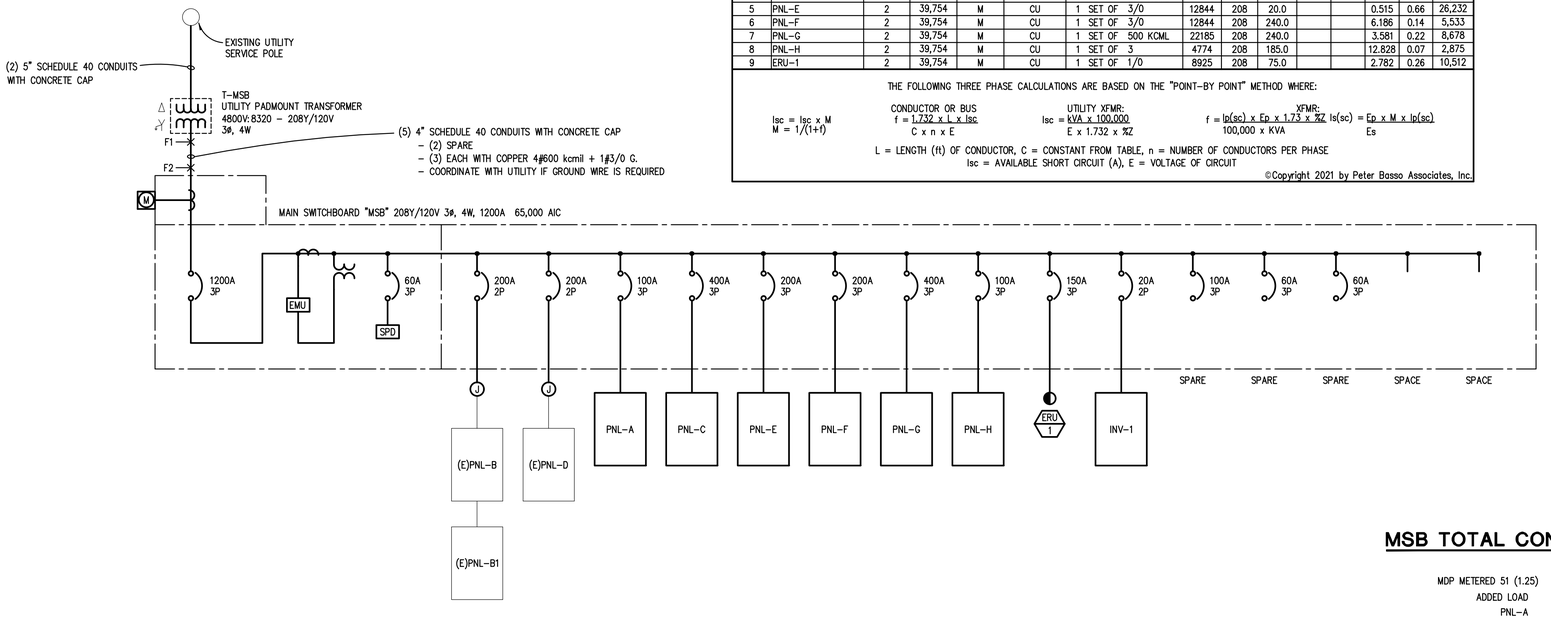
XFMR: $f = \frac{Ip(sc) \times Ep \times 1.732 \times \%Z}{100{,}000 \times kVA}$, $Is(sc) = \frac{Ep \times M \times Ip(sc)}{Es}$

L = LENGTH (ft) OF CONDUCTOR, C = CONSTANT FROM TABLE, n = NUMBER OF CONDUCTORS PER PHASE
Isc = AVAILABLE SHORT CIRCUIT (A), E = VOLTAGE OF CIRCUIT

VOLTAGE DROP

MAX VD %	2		
POWER FACTOR	0.85		
FEEDER	TOTAL LOAD (A)	WIRE IMPEDANCE	% VOLTAGE DROP
UTILITY XFMR	NA	NA	NA
MSB	877	0.0401	0.59
PNL-A	37	0.2436	0.45
PNL-C	246	0.0499	0.20
PNL-E	55	0.0945	0.09
PNL-F	76	0.0945	1.44
PNL-G	187	0.0499	1.87
PNL-H	32	0.2436	1.20
ERU-1	96.5	0.1310	0.79

TABLE CALCULATIONS BASED ON THE FOLLOWING:
* TABLE 9, 2017 NEC
* UNCOATED CU/AL WIRE, 600V, 75 DEG C
* THREE SINGLE CONDUCTORS IN CONDUIT
* 3PH VD (L-L) = Z*(FT/100)*A*√3



NEW WORK - ONE LINE DIAGRAM

NO SCALE

MSB TOTAL CONNECTED LOAD CALCULATION

MDP METERED 51 (1.25)	64 KVA
ADDED LOAD	
PNL-A	14 KVA
PNL-C	77 KVA
PNL-E	20 KVA
PNL-F	27 KVA
PNL-G	67 KVA
PNL-H	12 KVA
ERU-1	35 KVA
TOTAL CONNECTED LOAD	316 KVA

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ONE LINE DIAGRAM

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Project No. 3221

E5.01

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PNL-C

#	LOAD TYPE	DESCRIPTION	CB TYPE	CB	VA	ØA	ØB	ØC	VA	CB	CB TYPE	DESCRIPTION	LOAD TYPE	#
1	NC		NEW		6301	10419			4118		NEW		NC	2
3	NC	ACCU – 1	NEW	70	6301		10419		4118	45	NEW	ACCU – 4	NC	4
5	NC		NEW		6301			10419	4118		NEW		NC	6
7	NC		NEW		6690	12991			6301		NEW		NC	8
9	NC	ACCU – 2	NEW	70	6690		12991		6301	70	NEW	ACCU – 5	NC	10
11	NC		NEW		6690			12991	6301		NEW		NC	12
13	NC		NEW		6301	7202			901		NEW		NC	14
15	NC	ACCU – 3	NEW	70	6301		7202		901	15	NEW	CP – 3	NC	16
17	NC		NEW		6301			7202	901		NEW		NC	18
19	NC		NEW		793	1694			901		NEW		NC	20
21	NC	CP – 1	NEW	15	793		1694		901	15	NEW	CP – 4	NC	22
23	NC		NEW		793			1694	901		NEW		NC	24
25	NC		NEW		793	2593			1800	20	NEW	B – 1	NC	26
27	NC	CP – 2	NEW	15	793		2593		1800	20	NEW	B – 2	NC	28
29	NC		NEW		793			1162	369	15	NEW	BSB – 4, ACU – 25,26,27,28,29,30,31	NC	30
31	NC	BSB – 5, ACU	NEW	15	728	1097			369		NEW		NC	32
33	NC	–32,33,34,35,36,37,38,39,40,41,42	NEW		728		1982		1254	15	NEW	ACCU – 8 & ACU – 44	NC	34
35	NC		NEW		390			1644	1254		NEW		NC	36
37	NC	BSB – 3, ACU – 15,18,19,20,21,22,23,24	NEW	15	390	390				20	NEW	SPARE		38
39		SPARE	NEW	20						20	NEW	SPARE		40
41		SPARE	NEW	20						20	NEW	SPARE		42
43		SPARE	NEW	20						20	NEW	SPARE		44
45		SPARE	NEW	20						20	NEW	SPARE		46
47		SPARE	NEW	20						20	NEW	SPARE		48
49		SPARE	NEW	20						20	NEW	SPARE		50
51		SPARE	NEW	20						20	NEW	SPARE		52
53		SPARE	NEW	20						20	NEW	SPARE		54
55		SPARE	NEW	20						20	NEW	SPARE		56
57		SPARE	NEW	20						20	NEW	SPARE		58
59		SPARE	NEW	20						20	NEW	SPARE		60
						36386	36881	35112						
						ØA	ØB	ØC						

ALTERNATE NO.1

PANELBOARD INFORMATION
VOLTAGE: 208Y/120
BUS AMPACITY: 400A
MAIN TYPE: MLO
MINIMUM A.I.C.: 35,000
MOUNTING: SURFACE

☐ FEED–THROUGH LUGS
☐ DOUBLE LUGS
☐ INTEGRAL SPD

PANELBOARD LOCATION

BRANCH CIRCUIT CONNECTED LOAD		DEMAND FACTOR	CALCULATED LOAD	FEEDER AND OVERCURRENT SIZING	
CONTINUOUS LOAD (C)		100%		125%	
ELECTRIC HEAT (E)		100%		100%	
NON–CONTINUOUS LOAD (NC)	108379	100%	108379	100%	108379
KITCHEN LOAD (K)		100%		100%	
RECEPTACLE BASE LOAD (R)		100%		100%	
RECEPTACLE DEMAND LOAD (R)		50%		100%	
LIGHTING LOAD (L)		100%		125%	
ADDITIONAL TRACK LIGHTING LOAD				100%	
MOTORS, HIGHEST LOAD (MH)		125%		100%	
MOTORS, REMAINING LOAD (M)		100%		100%	
		TOTAL(KVA):	108.38		
		TOTAL (AMPS):	301	TOTAL (AMPS):	301

NOTE: DEMAND AND SIZING INFORMATION IS CALCULATED FROM CONNECTED LOAD

NOTES:

PNL-E

#	LOAD TYPE	DESCRIPTION	CB TYPE	CB	VA	ØA	ØB	ØC	VA	CB	CB TYPE	DESCRIPTION	LOAD TYPE	#
1	R	RECEPTACLE	NEW	20	1080	1980			900	20	NEW	RECEPTACLE	R	2
3	R	RECEPTACLE	NEW	20	720		1620		900	20	NEW	RECEPTACLE	R	4
5	NC	COPIER	NEW	20	1000			1720	720	20	NEW	RECEPTACLE	R	6
7	NC	EWC	GFCI	20	1000	1540			540	20	NEW	RECEPTACLE	R	8
9	R	RECEPTACLE	NEW	20	720		1440		720	20	NEW	RECEPTACLE	R	10
11	R	RECEPTACLE	NEW	20	540			1260	720	20	NEW	RECEPTACLE	R	12
13	R	RECEPTACLE	NEW	20	1080	1800			720	20	NEW	RECEPTACLE	R	14
15	R	RECEPTACLE	NEW	20	900		1800		900	20	NEW	RECEPTACLE	R	16
17	R	RECEPTACLE	NEW	20	1080			1980	900	20	NEW	RECEPTACLE	R	18
19	R	RECEPTACLE	NEW	20	900	1260			360	20	NEW	RECEPTACLE	R	20
21	R	RECEPTACLE	NEW	20	900		1428		528	15	NEW	CUH – 5	NC	22
23	R	RECEPTACLE	NEW	20	900			1260	360	20	NEW	RECEPTACLE	R	24
25	R	RECEPTACLE	NEW	20	900	2900			2000	20	NEW	UPS	R	26
27	R	RECEPTACLE	NEW	20	1080		1260		180	20	NEW	RECEPTACLE	R	28
29	NC	DOOR HARDWARE	NEW	20	250			680	430	20	NEW	EXTERIOR LIGHTING	L	30
31	NC	COPIER	NEW	20	1000	1232			232	20	NEW	EXTERIOR LIGHTING	L	32
33	C	FACP	LOD	20	500		1250		750	20	GFEP	HEAT TRACE	NC	34
35	NC	DOOR CONTROLS	NEW	20	200			200		20	NEW	SPARE		36
37		SPARE	NEW	20						20	NEW	SPARE		38
39		SPARE	NEW	20						20	NEW	SPARE		40
41		SPARE	NEW	20						20	NEW	SPARE		42
						10712	8798	7100						
						ØA	ØB	ØC						

PANELBOARD INFORMATION
VOLTAGE: 208Y/120
BUS AMPACITY: 225A
MAIN TYPE: MLO
MINIMUM A.I.C.: 35,000
MOUNTING: SURFACE

☐ FEED–THROUGH LUGS
☐ DOUBLE LUGS
☐ INTEGRAL SPD

PANELBOARD LOCATION

BRANCH CIRCUIT CONNECTED LOAD		DEMAND FACTOR	CALCULATED LOAD	FEEDER AND OVERCURRENT SIZING	
CONTINUOUS LOAD (C)	500	100%	500	125%	625
ELECTRIC HEAT (E)		100%		100%	
NON–CONTINUOUS LOAD (NC)	4728	100%	4728	100%	4728
KITCHEN LOAD (K)		100%		100%	
RECEPTACLE BASE LOAD (R)	10000	100%	10000	100%	10000
RECEPTACLE DEMAND LOAD (R)	10720	50%	5360	100%	5360
LIGHTING LOAD (L)	662	100%	662	125%	828
ADDITIONAL TRACK LIGHTING LOAD				100%	
MOTORS, HIGHEST LOAD (MH)		125%		100%	
MOTORS, REMAINING LOAD (M)		100%		100%	
		TOTAL(KVA):	21.25		
		TOTAL (AMPS):	59	TOTAL (AMPS):	60

NOTE: DEMAND AND SIZING INFORMATION IS CALCULATED FROM CONNECTED LOAD

NOTES:

PNL-A

#	LOAD TYPE	DESCRIPTION	CB TYPE	CB	VA	ØA	ØB	ØC	VA	CB	CB TYPE	DESCRIPTION	LOAD TYPE	#
1	NC	EXISTING LOAD	NEW	20	500	1000			500	20	NEW	EXISTING LOAD	NC	2
3	NC	EXISTING LOAD	NEW	20	500		1000		500	20	NEW	EXISTING LOAD	NC	4
5	NC	EXISTING LOAD	NEW	20	500			1000	500	20	NEW	EXISTING LOAD	NC	6
7	NC	EXISTING LOAD	NEW	20	500	1000			500	20	NEW	EXISTING LOAD	NC	8
9	NC	EXISTING LOAD	NEW	20	500		1000		500	20	NEW	EXISTING LOAD	NC	10
11	NC	EXISTING LOAD	NEW	20	500			1000	500	20	NEW	EXISTING LOAD	NC	12
13	NC	EXISTING LOAD	NEW	20	500	1000			500	20	NEW	EXISTING LOAD	NC	14
15	NC	EXISTING LOAD	NEW	20	500		1000		500	20	NEW	EXISTING LOAD	NC	16
17	NC	EXISTING LOAD	NEW	20	500			1000	500	20	NEW	EXISTING LOAD	NC	18
19	NC	EXISTING LOAD	NEW	20	500	1000			500	20	NEW	EXISTING LOAD	NC	20
21	NC	EXISTING LOAD	NEW	20	500		1000		500	20	NEW	EXISTING LOAD	NC	22
23	NC	EXISTING LOAD	NEW	20	500			1000	500	20	NEW	EXISTING LOAD	NC	24
25	NC	EXISTING LOAD	NEW	20	500	1000			500	20	NEW	EXISTING LOAD	NC	26
27	NC	EXISTING LOAD	NEW	20	500		500			20	NEW	SPARE		28
29		SPARE	NEW	20						20	NEW	SPARE		30
31		SPARE	NEW	20						20	NEW	SPARE		32
33		SPARE	NEW	20						20	NEW	SPARE		34
35		SPARE	NEW	20						20	NEW	SPARE		36
37		SPARE	NEW	20						20	NEW	SPARE		38
39		SPARE	NEW	20						20	NEW	SPARE		40
41		SPARE	NEW	20						20	NEW	SPARE		42
						5000	4500	4000						
						ØA	ØB	ØC						

PANELBOARD INFORMATION
VOLTAGE: 208Y/120
BUS AMPACITY: 100A
MAIN TYPE: MLO
MINIMUM A.I.C.: 10,000
MOUNTING: FLUSH

☐ FEED–THROUGH LUGS
☐ DOUBLE LUGS
☐ INTEGRAL SPD

PANELBOARD LOCATION

BRANCH CIRCUIT CONNECTED LOAD		DEMAND FACTOR	CALCULATED LOAD	FEEDER AND OVERCURRENT SIZING	
CONTINUOUS LOAD (C)		100%		125%	
ELECTRIC HEAT (E)		100%		100%	
NON–CONTINUOUS LOAD (NC)	13500	100%	13500	100%	13500
KITCHEN LOAD (K)		100%		100%	
RECEPTACLE BASE LOAD (R)		100%		100%	
RECEPTACLE DEMAND LOAD (R)		50%		100%	
LIGHTING LOAD (L)		100%		125%	
ADDITIONAL TRACK LIGHTING LOAD				100%	
MOTORS, HIGHEST LOAD (MH)		125%		100%	
MOTORS, REMAINING LOAD (M)		100%		100%	
		TOTAL(KVA):	13.50		
		TOTAL (AMPS):	37	TOTAL (AMPS):	37

NOTE: DEMAND AND SIZING INFORMATION IS CALCULATED FROM CONNECTED LOAD

NOTES:

PNL-F

#	LOAD TYPE	DESCRIPTION	CB TYPE	CB	VA	ØA	ØB	ØC	VA	CB	CB TYPE	DESCRIPTION	LOAD TYPE	#
1	R	RECEPTACLE	NEW	20	720	1800			1080	20	NEW	RECEPTACLE	R	2
3	R	RECEPTACLE	NEW	20	800		1600		800	20	NEW	RECEPTACLE	R	4
5	R	RECEPTACLE	NEW	20	360			1440	1080	20	NEW	RECEPTACLE	R	6
7	R	RECEPTACLE	NEW	20	1080	2160			1080	20	NEW	RECEPTACLE	R	8
9	R	RECEPTACLE	NEW	20	1080		1800		720	20	NEW	RECEPTACLE	R	10
11	R	RECEPTACLE	NEW	20	720			1620	900	20	NEW	RECEPTACLE	R	12
13	R	RECEPTACLE	NEW	20	720	1620			900	20	NEW	RECEPTACLE	R	14
15	R	RECEPTACLE	NEW	20	800		1600		800	20	NEW	RECEPTACLE	R	16
17	R	RECEPTACLE	NEW	20	800			1600	800	20	NEW	RECEPTACLE	R	18
19	R	RECEPTACLE	NEW	20	720	1800			1080	20	NEW	RECEPTACLE	R	20
21	R	RECEPTACLE	NEW	20	720		1800		1080	20	NEW	RECEPTACLE	R	22
23	R	RECEPTACLE	NEW	20	1080			1800	720	20	NEW	RECEPTACLE	R	24
25	R	RECEPTACLE	NEW	20	360	1440			1080	20	NEW	RECEPTACLE	R	26
27	R	RECEPTACLE	NEW	20	180		980		800	20	NEW	RECEPTACLE	R	28
29	R	UPS	NEW	20	2000			2360	360	20	NEW	RECEPTACLE	R	30
31	R	RECEPTACLE	NEW	20	900	1260			360	20	NEW	RECEPTACLE	R	32
33	R	COPIER	NEW	20	1000		1312		312	15	NEW	EF – 2	NC	34
35	NC	EWC	GFCI	20	1000			1180	180	15	NEW	EF – 3	NC	36
37	NC	EWC	GFCI	20	1000	1312			312	15	NEW	EF – 1	NC	38
39	R	RECEPTACLE	NEW	20	360		1810		1450	20	NEW	LIGHTING	L	40
41	NC	CUH – 1	NEW	15	528			1917	1389	20	NEW	LIGHTING	L	42
43	NC	CUH – 2	NEW	15	528	1006			478	20	NEW	LIGHTING	L	44
45	NC	CUH – 3	NEW	15	528		628		100	20	NEW	DOOR CONTROLS	NC	46
47	NC	CUH – 4	NEW	15	528			1056	528	15	NEW	CUH – 7	NC	48
49	NC	CP – 5	NEW	15	528	528				20	NEW	SPARE		50
51		SPARE	NEW	20						20	NEW	SPARE		52
53		SPARE	NEW	20						20	NEW	SPARE		54
55		SPARE	NEW	20						20	NEW	SPARE		56
57		SPARE	NEW	20						20	NEW	SPARE		58
59		SPARE	NEW	20						20	NEW	SPARE		60
						12926	11530	12973						
						ØA	ØB	ØC						

PANELBOARD INFORMATION
VOLTAGE: 208Y/120
BUS AMPACITY: 225A
MAIN TYPE: MLO
MINIMUM A.I.C.: 10,000
MOUNTING: SURFACE

☐ FEED–THROUGH LUGS
☐ DOUBLE LUGS
☐ INTEGRAL SPD

PANELBOARD LOCATION

BRANCH CIRCUIT CONNECTED LOAD		DEMAND FACTOR	CALCULATED LOAD	FEEDER AND OVERCURRENT SIZING	
CONTINUOUS LOAD (C)		100%		125%	
ELECTRIC HEAT (E)		100%		100%	
NON–CONTINUOUS LOAD (NC)	6072	100%	6072	100%	6072
KITCHEN LOAD (K)		100%		100%	
RECEPTACLE BASE LOAD (R)	10000	100%	10000	100%	10000
RECEPTACLE DEMAND LOAD (R)	18040	50%	9020	100%	9020
LIGHTING LOAD (L)	3317	100%	3317	125%	4146
ADDITIONAL TRACK LIGHTING LOAD				100%	
MOTORS, HIGHEST LOAD (MH)		125%		100%	
MOTORS, REMAINING LOAD (M)		100%		100%	
		TOTAL(KVA):	28.41		
		TOTAL (AMPS):	79	TOTAL (AMPS):	81

NOTE: DEMAND AND SIZING INFORMATION IS CALCULATED FROM CONNECTED LOAD

NOTES:

FINAL PANELBOARD DIRECTORY TO INCLUDE BUILDING OWNERS ROOM NAMES AND/OR NUMBERS.

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PBA Project No.: 2022.0419

Bidding and Permits: 31 July 2023
Owner Review: 14 July 2023
Design Development: 08 May 2023

PANEL SCHEDULES

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

E5.02

803 W. Big Beaver Road, Suite 350, Troy, MI 48084 | 248.244.9710

PNL-G

#	LOAD TYPE	DESCRIPTION	CB TYPE	CB	VA	ØA	ØB	ØC	VA	CB	CB TYPE	DESCRIPTION	LOAD TYPE	#
1	NC		NEW		1693	3386			1693		NEW		NC	2
3	NC	UV – 1	NEW	20	1693		3386		1693	20	NEW	UV – 4	NC	4
5	NC		NEW		1693			3386	1693		NEW		NC	6
7	NC		NEW		1693	3386			1693		NEW		NC	8
9	NC	UV – 2	NEW	20	1693		3386		1693	20	NEW	UV – 5	NC	10
11	NC		NEW		1693			3386	1693		NEW		NC	12
13	NC		NEW		1693	3386			1693		NEW		NC	14
15	NC	UV – 3	NEW	20	1693		3386		1693	20	NEW	UV – 6	NC	16
17	NC		NEW		1693			3386	1693		NEW		NC	18
19	NC		NEW		9006	10699			1693		NEW		NC	20
21	NC	DWH – 1	NEW	100	9006		10699		1693	20	NEW	UV – 7	NC	22
23	NC		NEW		9006			10699	1693		NEW		NC	24
25	NC	FCU – 1	NEW	25	2138	4696			2558		NEW		NC	26
27	NC	ACCU – 7 & ACU – 43	NEW	15	1254		3812		2558	35	NEW	ACCU – 6	NC	28
29	NC		NEW		1254			3812	2558		NEW		NC	30
31		SPARE	NEW	20						20	NEW	SPARE		32
33		SPARE	NEW	20						20	NEW	SPARE		34
35		SPARE	NEW	20						20	NEW	SPARE		36
37		SPARE	NEW	20						20	NEW	SPARE		38
39		SPARE	NEW	20						20	NEW	SPARE		40
41		SPARE	NEW	20						20	NEW	SPARE		42
43		SPARE	NEW	20						20	NEW	SPARE		44
45		SPARE	NEW	20						20	NEW	SPARE		46
47		SPARE	NEW	20						20	NEW	SPARE		48
49		SPARE	NEW	20						20	NEW	SPARE		50
51		SPARE	NEW	20						20	NEW	SPARE		52
53		SPARE	NEW	20						20	NEW	SPARE		54
55		SPARE	NEW	20						20	NEW	SPARE		56
57		SPARE	NEW	20						20	NEW	SPARE		58
59		SPARE	NEW	20						20	NEW	SPARE		60
						25553	24669	24669						
						ØA	ØB	ØC						

PANELBOARD INFORMATION
VOLTAGE: 208Y/120
BUS AMPACITY: 400A
MAIN TYPE: MLO
MINIMUM A.I.C.: 10,000
MOUNTING: SURFACE

☐ FEED–THROUGH LUGS
☐ DOUBLE LUGS
☐ INTEGRAL SPD

PANELBOARD LOCATION

BRANCH CIRCUIT CONNECTED LOAD		DEMAND FACTOR	CALCULATED LOAD	FEEDER AND OVERCURRENT SIZING	
CONTINUOUS LOAD (C)		100%		125%	
ELECTRIC HEAT (E)		100%		100%	
NON–CONTINUOUS LOAD (NC)	74891	100%	74891	100%	74891
KITCHEN LOAD (K)		100%		100%	
RECEPTACLE BASE LOAD (R)		100%		100%	
RECEPTACLE DEMAND LOAD (R)		50%		100%	
LIGHTING LOAD (L)		100%		125%	
ADDITIONAL TRACK LIGHTING LOAD				100%	
MOTORS, HIGHEST LOAD (MH)		125%		100%	
MOTORS, REMAINING LOAD (M)		100%		100%	
		TOTAL(KVA):	74.89		
		TOTAL (AMPS):	208	TOTAL (AMPS):	208

NOTE: DEMAND AND SIZING INFORMATION IS CALCULATED FROM CONNECTED LOAD

NOTES:

PNL-H

#	LOAD TYPE	DESCRIPTION	CB TYPE	CB	VA	ØA	ØB	ØC	VA	CB	CB TYPE	DESCRIPTION	LOAD TYPE	#
1	R	RECEPTACLE	NEW	20	540	1310			770	15	NEW		NC	2
3	R	RECEPTACLE	NEW	20	900		1670		770		NEW	BSB – 2, ACU–5,6,7,8,11,12,13,14,45,46	NC	4
5	R	RECEPTACLE	NEW	20	720			1048	328	15	NEW		NC	6
7	R	RECEPTACLE	NEW	20	1080	1408			328		NEW	BSB – 1, ACU – 1,2,3,4,9,10,16,17	NC	8
9	R	RECEPTACLE	NEW	20	1080		1080			20	NEW	SPARE		10
11	R	RECEPTACLE	NEW	20	1000			1000		20	NEW	SPARE		12
13	R	RECEPTACLE	NEW	20	720	720				20	NEW	SPARE		14
15	R	RECEPTACLE	NEW	20	720		720			20	NEW	SPARE		16
17	R	RECEPTACLE	NEW	20	900			900		20	NEW	SPARE		18
19	NC	DOOR HARDWARE	NEW	20	250	250				20	NEW	SPARE		20
21	NC	EWC	GFCI	20	1000		1000			20	NEW	SPARE		22
23	R	RECEPTACLE	NEW	20	360			360		20	NEW	SPARE		24
25	NC	DOOR CONTROLS	NEW	20	200	200				20	NEW	SPARE		26
27		SPARE	NEW	20						20	NEW	SPARE		28
29		SPARE	NEW	20						20	NEW	SPARE		30
31		SPARE	NEW	20						20	NEW	SPARE		32
33		SPARE	NEW	20						20	NEW	SPARE		34
35		SPARE	NEW	20						20	NEW	SPARE		36
37		SPARE	NEW	20						20	NEW	SPARE		38
39		SPARE	NEW	20						20	NEW	SPARE		40
41		SPARE	NEW	20						20	NEW	SPARE		42
						3888	4470	3308						
						ØA	ØB	ØC						

PANELBOARD INFORMATION
VOLTAGE: 208Y/120
BUS AMPACITY: 100A
MAIN TYPE: MLO
MINIMUM A.I.C.: 10,000
MOUNTING: SURFACE

☐ FEED–THROUGH LUGS
☐ DOUBLE LUGS
☐ INTEGRAL SPD

PANELBOARD LOCATION

BRANCH CIRCUIT CONNECTED LOAD		DEMAND FACTOR	CALCULATED LOAD	FEEDER AND OVERCURRENT SIZING	
CONTINUOUS LOAD (C)		100%		125%	
ELECTRIC HEAT (E)		100%		100%	
NON–CONTINUOUS LOAD (NC)	3646	100%	3646	100%	3646
KITCHEN LOAD (K)		100%		100%	
RECEPTACLE BASE LOAD (R)	8020	100%	8020	100%	8020
RECEPTACLE DEMAND LOAD (R)		50%		100%	
LIGHTING LOAD (L)		100%		125%	
ADDITIONAL TRACK LIGHTING LOAD				100%	
MOTORS, HIGHEST LOAD (MH)		125%		100%	
MOTORS, REMAINING LOAD (M)		100%		100%	
		TOTAL(KVA):	11.67		
		TOTAL (AMPS):	32	TOTAL (AMPS):	32

NOTE: DEMAND AND SIZING INFORMATION IS CALCULATED FROM CONNECTED LOAD

NOTES:

INV-1

#	LOAD TYPE	DESCRIPTION	CB TYPE	CB	VA	ØA	ØC	VA	CB	CB TYPE	DESCRIPTION	LOAD TYPE	#
1	L	LIGHTING	NEW	20	676	981		305	20	NEW	EXTERIOR LIGHTING	L	2
3	L	LIGHTING	NEW	20	666		741	75	20	NEW	EXTERIOR LIGHTING	L	4
5		SPARE	NEW	20					20	NEW	SPARE		6
7		SPARE	NEW	20					20	NEW	SPARE		8
9		SPARE	NEW	20					20	NEW	SPARE		10
						981	741						
						ØA	ØC						

PANELBOARD INFORMATION
VOLTAGE: 120/208–1Ø
BUS AMPACITY:
MAIN TYPE:
MINIMUM A.I.C.:
MOUNTING:

☐ FEED–THROUGH LUGS
☐ DOUBLE LUGS
☐ INTEGRAL SPD

PANELBOARD LOCATION

BRANCH CIRCUIT CONNECTED LOAD:		DEMAND FACTOR	CALCULATED LOAD	FEEDER AND OVERCURRENT SIZING	
CONTINUOUS LOAD (C):		100%		125%	
ELECTRIC HEAT (E)		100%		100%	
NON–CONTINUOUS LOAD (NC):		100%		100%	
KITCHEN LOAD (K):		100%		100%	
RECEPTACLE BASE LOAD (R):		100%		100%	
RECEPTACLE DEMAND LOAD (R):		50%		100%	
LIGHTING LOAD (L):	1722	100%	1722	125%	2153
ADDITIONAL TRACK LIGHTING LOAD				100%	
MOTORS, HIGHEST LOAD (MH):		125%		100%	
MOTORS, REMAINING LOAD (M):		100%		100%	
		TOTAL(KVA):	1.72		
		TOTAL (AMPS):	8	TOTAL (AMPS):	10

NOTE: DEMAND AND SIZING INFORMATION IS CALCULATED FROM CONNECTED LOAD

NOTES:
INTEGRAL TO INV–1

FINAL PANELBOARD DIRECTORY TO INCLUDE BUILDING OWNERS ROOM NAMES AND/OR NUMBERS.

Bidding and Permits: 31 July 2023
Owner Review: 14 July 2023
Design Development: 08 May 2023

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PBA Project No.: 2022.0419

PANEL SCHEDULES

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

E5.03

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INTERIOR LIGHTING FIXTURE SCHEDULE

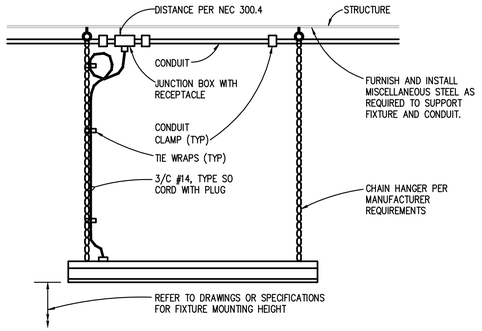
TYPE	DESCRIPTION	VOLTAGE	OUTPUT	MANUFACTURERS
L1	RECESSED 2'X4', LED TROFFER: ARCHITECTURAL STYLE CENTER BASKET, MAX 4" DEEP HOUSING WITH A POLYESTER POWDER COAT MATTE WHITE FINISH, ACRYLIC DIFFUSER WITH ROUND ACCENT STRIP, 0-10 VOLT 10% DIMMING. FOR FIXTURES INDICATED AS EMERGENCY ON PLAN, PROVIDE AUTOMATIC LOAD CONTROL RELAY.	MULTI	4,800 LUMENS 4000K 80CRI MINIMUM	1. LITHONIA BLT SERIES 2. METALUX CRUZE SERIES 3. COLUMBIA LCAT SERIES
L2	RECESSED 2'X4', LED TROFFER: ARCHITECTURAL STYLE CENTER BASKET, MAX 4" DEEP HOUSING WITH A POLYESTER POWDER COAT MATTE WHITE FINISH, ACRYLIC DIFFUSER WITH ROUND ACCENT STRIP, 0-10 VOLT 10% DIMMING. FOR FIXTURES INDICATED AS EMERGENCY ON PLAN, PROVIDE AUTOMATIC LOAD CONTROL RELAY.	MULTI	4,000 LUMENS 4000K 80CRI MINIMUM	1. LITHONIA BLT SERIES 2. METALUX CRUZE SERIES 3. COLUMBIA LCAT SERIES
L3	RECESSED 2'X4', LED TROFFER: ARCHITECTURAL STYLE CENTER BASKET, MAX 4" DEEP HOUSING WITH A POLYESTER POWDER COAT MATTE WHITE FINISH, ACRYLIC DIFFUSER WITH ROUND ACCENT STRIP, 0-10 VOLT 10% DIMMING. FOR FIXTURES INDICATED AS EMERGENCY ON PLAN, PROVIDE AUTOMATIC LOAD CONTROL RELAY.	MULTI	3,000 LUMENS 4000K 80CRI MINIMUM	1. LITHONIA BLT SERIES 2. METALUX CRUZE SERIES 3. COLUMBIA LCAT SERIES
L4	RECESSED 2'X2', LED TROFFER: ARCHITECTURAL STYLE CENTER BASKET, MAX 4" DEEP HOUSING WITH A POLYESTER POWDER COAT MATTE WHITE FINISH, ACRYLIC DIFFUSER WITH ROUND ACCENT STRIP, 0-10 VOLT 10% DIMMING. FOR FIXTURES INDICATED AS EMERGENCY ON PLAN, PROVIDE AUTOMATIC LOAD CONTROL RELAY.	MULTI	4,000 LUMENS 4000K 80CRI MINIMUM	1. LITHONIA BLT SERIES 2. METALUX CRUZE SERIES 3. COLUMBIA LCAT SERIES
L5	RECESSED 2'X2', LED TROFFER: ARCHITECTURAL STYLE CENTER BASKET, MAX 4" DEEP HOUSING WITH A POLYESTER POWDER COAT MATTE WHITE FINISH, ACRYLIC DIFFUSER WITH ROUND ACCENT STRIP, 0-10 VOLT 10% DIMMING. FOR FIXTURES INDICATED AS EMERGENCY ON PLAN, PROVIDE AUTOMATIC LOAD CONTROL RELAY.	MULTI	3,300 LUMENS 4000K 80CRI MINIMUM	1. LITHONIA BLT SERIES 2. METALUX CRUZE SERIES 3. COLUMBIA LCAT SERIES
L6	RECESSED 2'X4' LED TROFFER: ACRYLIC DIFFUSER WITH SATIN WHITE LENS. WHITE STEEL HOUSING. 0-10 VOLT 10% DIMMING. FOR FIXTURES INDICATED AS EMERGENCY ON PLAN, PROVIDE AUTOMATIC LOAD CONTROL RELAY.	MULTI	3,000 LUMENS 4000K 80CRI MINIMUM	1. LITHONIA GTL SERIES 2. METALUX GRLED SERIES 3. COLUMBIA LJT SERIES
L7	RECESSED 2'X2' LED TROFFER: ACRYLIC DIFFUSER WITH SATIN WHITE LENS. WHITE STEEL HOUSING. 0-10 VOLT 10% DIMMING. FOR FIXTURES INDICATED AS EMERGENCY ON PLAN, PROVIDE AUTOMATIC LOAD CONTROL RELAY.	MULTI	3,300 LUMENS 4000K 80CRI MINIMUM	1. LITHONIA GTL SERIES 2. METALUX GRLED SERIES 3. COLUMBIA LJT SERIES
L8	RECESSED 2'X2' LED TROFFER: ACRYLIC DIFFUSER WITH SATIN WHITE LENS. WHITE STEEL HOUSING. 0-10 VOLT 10% DIMMING. FOR FIXTURES INDICATED AS EMERGENCY ON PLAN, PROVIDE AUTOMATIC LOAD CONTROL RELAY.	MULTI	2,000 LUMENS 4000K 80CRI MINIMUM	1. LITHONIA GTL SERIES 2. METALUX GRLED SERIES 3. COLUMBIA LJT SERIES
L9	RECESSED CONTINUOUS ROW LINEAR LED FIXTURE: HIGH REFLECTANCE WITH POWDER COAT FINISH. 0-10 VOLT 10% DIMMING. FIXTURE LENGTHS AS INDICATED ON PLAN. FOR FIXTURES INDICATED AS EMERGENCY ON PLAN, PROVIDE AUTOMATIC LOAD CONTROL RELAY.	MULTI	375 MIN. LUMENS PER FOOT 4000K 80 CRI MINIMUM	1. NULITE REGOLO 4 SERIES 2. PRUDENTIAL BIONIC 4 SERIES 3. FINELITE HP4 SERIES
L10	LED 4'-0" CHAIN HUNG FIXTURE: FROSTED LENS WITH WIREGUARD. LOCATE FIXTURES TO AVOID MECHANICAL EQUIPMENT. FOR FIXTURES INDICATED AS EMERGENCY ON PLAN, PROVIDE AUTOMATIC LOAD CONTROL RELAY.	MULTI	3,000 LUMENS 4000K 80CRI	1. LITHONIA ZL1D LED SERIES 2. METALUX SNLED SERIES 3. COLUMBIA LCL LED SERIES
L11	LED TRACK FIXTURE: 60 DEG SEMI-SPECULAR REFLECTOR. ALUMINUM HOUSING. ALUMINUM DIE-CAST HEAT SINK, CLEAR LENS. LUMINAIRE ARM SHALL ALLOW FOR 90° ADJUSTMENT. TRACK SHALL BE SINGLE CIRCUIT AND 0-10V DIMMING. TRACK LENGTH AS INDICATED ON PLAN. BLACK FINISH.	120V	740 LUMENS 4000K 80CRI	1. BRUCK Z10 LED TRACK SERIES 2. INTENSE ITLP16H TRACK SERIES 3. TECH FOKIS LED TRACK SERIES
L12	4'-0" LED COVE FIXTURE: INTEGRAL SELF-LOCKING BRACKET WITH 90° ROTATION. BUILT IN MALE/FEMALE CONNECTORS, WITH JUMPER CABLES. ALUMINUM HOUSING, 0-10 VOLT 1% DIMMING. LINK FIXTURES TOGETHER FOR A SINGLE RUN, REFER TO PLANS FOR RUN LENGTHS.	MULTI	1250 LUMENS PER FOOT 4000K 80CRI	1. MODA LIGHT COVE SERIES. 2. ECOSENSE SLIM COVE SERIES 3. ACCLAIM AL COVE ECO SERIES

INTERIOR LIGHTING FIXTURE SCHEDULE

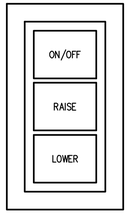
TYPE	DESCRIPTION	VOLTAGE	OUTPUT	MANUFACTURERS
R1	LED RETROFIT DOWNLIGHT: SIZE TO MATCH EXISTING 6" DIAMETER DOWNLIGHTS IN CEILING (CONTRACTOR TO VERIFY). WIDE BEAM, SEMI-SPECULAR FINISH, WHITE FLANGE AND GOOF RING SIZED AS REQUIRED. CONTRACTOR TO PROVIDE MOCK OF ONE FIXTURE UP PRIOR TO ORDERING ALL FIXTURES. FOR FIXTURES INDICATED AS EMERGENCY ON PLAN, PROVIDE AUTOMATIC LOAD CONTROL RELAY.	MULTI	1,000 LUMENS LED 4000K 80 CRI MINIMUM	1. ELITE HHJ8 SERIES 2. COOPER HALO HC8R SERIES 3. SPECTRUM INFINIUM OS SERIES
R2	LED RETROFIT DOWNLIGHT: SIZE TO MATCH EXISTING 6" DIAMETER DOWNLIGHTS IN CEILING (CONTRACTOR TO VERIFY). WIDE BEAM, SEMI-SPECULAR FINISH, WHITE FLANGE AND GOOF RING SIZED AS REQUIRED. CONTRACTOR TO PROVIDE MOCK OF ONE FIXTURE UP PRIOR TO ORDERING ALL FIXTURES. FOR FIXTURES INDICATED AS EMERGENCY ON PLAN, PROVIDE AUTOMATIC LOAD CONTROL RELAY.	MULTI	1,500 LUMENS LED 4000K 80 CRI MINIMUM	1. ELITE HHJ8 SERIES 2. COOPER HALO HC8R SERIES 3. SPECTRUM INFINIUM OS SERIES
OL1	LED ARCHITECTURAL WALL PACK LIGHT FIXTURE: FORWARD THROW, WEATHER RESISTANT ALUMINUM HOUSING WITH INTEGRAL WEATHER TIGHT LED DRIVER WITH HIGH PERFORMANCE ALUMINUM HEATSINKS. U.L. LISTED FOR WET LOCATIONS. FIXTURE SHALL BE COMPLETELY GASKETED. COLOR BY ARCHITECT. PROVIDE WITH MOTION SENSOR CONTROL. PROVIDE. FIXTURE SHALL DIM TO 50% OUTPUT WHEN NO MOTION IS DETECTED AFTER 15 MINUTES. FOR FIXTURES INDICATED AS EMERGENCY ON PLAN, PROVIDE AUTOMATIC LOAD CONTROL RELAY.	MULTI	3,000 LUMENS 4000K 80CRI	1. LITHONIA WST-LED SERIES 2. MCGRAW EDISON IST SERIES 3. SPAULDING TRP SERIES
OL2	6" ROUND RECESSED VANDAL RESISTANT LED ROUND DOWNLIGHT: LED WITH VENTILATED DIE CAST ALUMINUM HEAT SINK, DIE CAST ALUMINUM BEZEL, TAMPER RESISTANT TORX SCREWS, FULLY SEALED AND GASKETED, SELF FLANGED WHITE TRIM RING WITH CLEAR POLYCARBONATE LENS, WIDE DISTRIBUTION. IP 65 RATED. UL LISTED FOR WET LOCATIONS. FOR FIXTURES INDICATED AS EMERGENCY ON PLAN, PROVIDE AUTOMATIC LOAD CONTROL RELAY.	MULTI	LED 4000K WHITE 1000 MIN. LUMENS 80 CRI MINIMUM	1. NEW STAR MED 6 LED SEREIS 2. PORTFOLIO FFLD6A SERIES 3. GOTHAM EVO VR SERIES
SL1	LED POLE MOUNTED SITE LIGHTING FIXTURE: POLE TOP CONFIGURATION AS SHOWN ON PLAN. TYPE (41FT) DISTRIBUTION. FULLY GASKETED ALUMINUM HOUSING WITH INTEGRAL WEATHER TIGHT ELECTRONIC LED DRIVER THAT IS U.L. LISTED FOR WET LOCATIONS. FUSED AT HAND HOLE. FINISH BY ARCHITECT. POLE SHALL HAVE APPROPRIATE MOUNTING BRACKETS WITH CONFIGURATION AS SHOWN ON PLAN, 30'-0" TALL (4") SQUARE ALUMINUM, POWDER COAT FINISH WITH SQUARE BOLT COVER AND HAND HOLE. COLOR SHALL MATCH FIXTURE. POLE SHALL HAVE VIBRATION ISOLATION DAMPENER WITHIN POLE.	MULTI	LED 4000K WHITE 20,000 MIN. LUMENS 70 CRI MINIMUM	1. HUBBELL AIRO SERIES 2. COOPER GALLEON 2 SERIES 3. LITHONIA D SERIES
SL2	LED POLE MOUNTED SITE LIGHTING FIXTURE: POLE TOP CONFIGURATION AS SHOWN ON PLAN. TYPE (SL2) DISTRIBUTION. FULLY GASKETED ALUMINUM HOUSING WITH INTEGRAL WEATHER TIGHT ELECTRONIC LED DRIVER THAT IS U.L. LISTED FOR WET LOCATIONS. FUSED AT HAND HOLE. FINISH BY ARCHITECT. POLE SHALL HAVE APPROPRIATE MOUNTING BRACKETS WITH CONFIGURATION AS SHOWN ON PLAN, 30'-0" TALL (4") SQUARE ALUMINUM, POWDER COAT FINISH WITH SQUARE BOLT COVER AND HAND HOLE. COLOR SHALL MATCH FIXTURE. POLE SHALL HAVE VIBRATION ISOLATION DAMPENER WITHIN POLE.	MULTI	LED 4000K WHITE 20,000 MIN. LUMENS 70 CRI MINIMUM	1. HUBBELL AIRO SERIES 2. COOPER GALLEON 2 SERIES 3. LITHONIA D SERIES
SL3	LED POLE MOUNTED SITE LIGHTING FIXTURE: POLE TOP CONFIGURATION AS SHOWN ON PLAN. TYPE (SL4) DISTRIBUTION. FULLY GASKETED ALUMINUM HOUSING WITH INTEGRAL WEATHER TIGHT ELECTRONIC LED DRIVER THAT IS U.L. LISTED FOR WET LOCATIONS. FUSED AT HAND HOLE. FINISH DARK BRONZE. POLE SHALL HAVE APPROPRIATE MOUNTING BRACKETS WITH CONFIGURATION AS SHOWN ON PLAN, 30'-0" TALL (4") SQUARE ALUMINUM, POWDER COAT FINISH WITH SQUARE BOLT COVER AND HAND HOLE. COLOR SHALL MATCH FIXTURE. POLE SHALL HAVE VIBRATION ISOLATION DAMPENER WITHIN POLE.	MULTI	LED 4000K WHITE 20,000 MIN. LUMENS 70 CRI MINIMUM	1. HUBBELL AIRO SERIES 2. COOPER GALLEON 2 SERIES 3. LITHONIA D SERIES
EXIT SIGN	LED EXIT SIGN: THERMOPLASTIC BLACK HOUSING, RED LETTERS. MOUNTING AS INDICATED ON DRAWINGS. HIGH OUTPUT LED DIFFUSE LIGHT PANEL. SINGLE OR DOUBLE STENCIL FACE AS INDICATED ON DRAWING. REFER TO DRAWINGS FOR DIRECTIONAL ARROWS.	MULTI	HIGH OUTPUT LED LIGHT PANEL	1. SURE-LITES LPX SERIES 2. LITHONIA QUANTUM LQM SERIES 3. DUAL-LITE LX SERIES

NOTES:
FOR FIXTURES INDICATED AS MULTI-VOLT ON SCHEDULE, ELECTRICAL CONTRACTOR SHALL FIELD VERIFY AND PROVIDE PROPER VOLTAGE.
COORDINATE WITH ARCHITECTURAL PLANS FOR CEILING TYPES.
COORDINATE WITH ARCHITECTURAL PLANS FOR EXTERIOR LIGHT FIXTURE MOUNTING HEIGHTS AT NEW ADDITIONS.

ALL LED FIXTURES SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS:
MULTI-VOLT ELECTRONIC DRIVER, MINIMUM OF 50,000 HOURS OPERATION WITH GREATER THAN 70% DELIVERED LUMEN OUTPUT.
LUMENS SHALL BE DELIVERED LUMENS.
INDOOR DRIVERS SHALL BE RATED FOR A MINIMUM 65°C.
OUTDOOR DIRVERS SHALL BE RATED FOR MINIMUM -20°C.
DRIVER SHALL BE LABELED TO COMPLY WITH NEMA SSL1, AND THD OF LESS THAN 20%.
DRIVER SHALL BE SERVICEABLE FROM BELOW CEILING.
LUMINAIRE SHALL COMPLY WITH IES STANDARDS LM-79 AND LM-80.

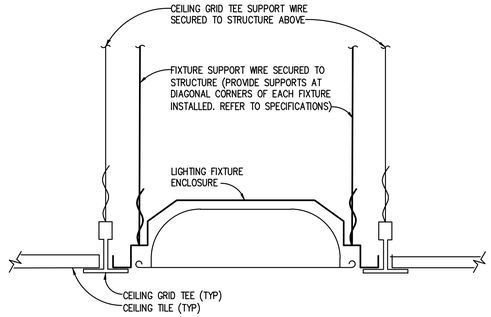


TYPICAL MOUNTING DETAIL FOR CHAIN HUNG LIGHTING FIXTURES
NO SCALE

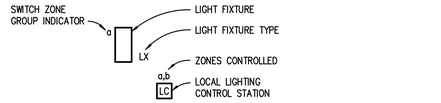


TYPICAL DIMMING LIGHTING CONTROL STATION
NO SCALE

NOTES:
1. FOR LIGHTING CONTROL DEVICES IN REMOTE LOCATIONS DEVICES SHALL HAVE PILOT LIGHT AND LABELING FOR FIXTURES BEING CONTROLLED.



RECESSED LIGHTING FIXTURE INSTALLATION DETAIL
NO SCALE



LIGHT FIXTURE CONTROLS KEY
NO SCALE

NOTES:
1. WHERE SWITCHING ZONES ARE NOT INDICATED, LOCAL LIGHTING CONTROL STATION SHALL CONTROL ALL LIGHT FIXTURES IN SPACE.
2. REFER TO LIGHTING CONTROL MATRIX FOR SWITCH TYPES REQUIRED AT LOCAL CONTROL STATION FOR EACH SPACE TYPE.

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ELECTRICAL DETAILS AND DIAGRAMS

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Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

Project No. 3221

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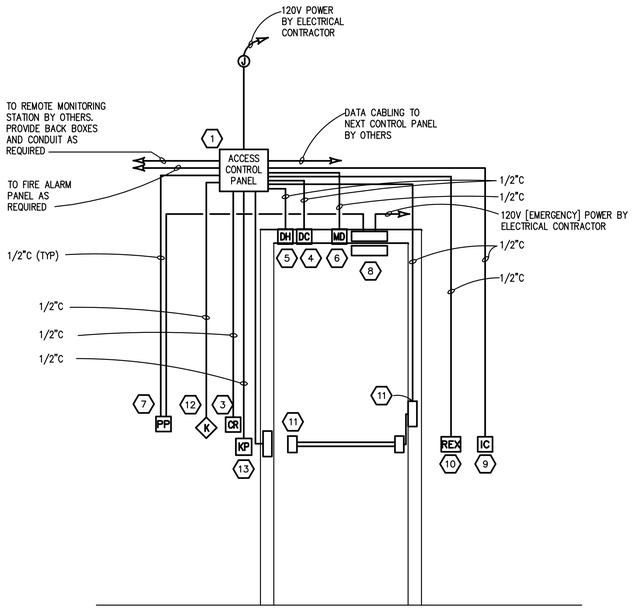


GENERAL NOTES:

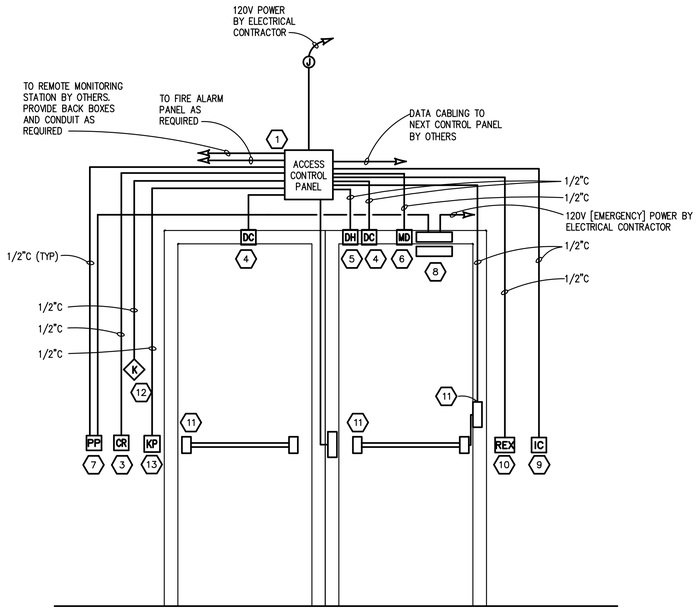
1. REFER TO ELECTRICAL FLOOR PLANS FOR DOOR LOCATIONS.
2. ELECTRICAL CONTRACTOR SHALL PROVIDE BACK BOXES, CONDUIT, 120 VOLT WIRING AND TERMINATIONS AS REQUIRED BY MANUFACTURE.
3. ACCESS CONTROL CONTRACTOR SHALL PROVIDE EQUIPMENT DEVICES AND ALL LOW VOLTAGE WIRING AND TERMINATIONS.
4. SOME DEVICES INDICATED MAY NOT APPLY REFER TO DOOR HARDWARE AND DOOR SCHEDULE. COORDINATE ALL WORK WITH HARDWARE CONTRACTOR.
5. ELECTRICAL CONTRACTOR SHALL PROVIDE INTERCONNECTION WITH FIRE ALARM PANEL TO RELEASE DOORS I.E. ELECTROMAGNETIC LOCKS UPON AN ALARM CONDITION, AS REQUIRED.

KEYED NOTES:

1. ACCESS CONTROL SYSTEM, DOOR PANEL BY OTHERS.
2. LOW VOLTAGE CABLING, BY OTHERS.
3. PROXIMITY CARD READER, BY OTHERS.
4. DOOR MONITOR CONTACT SWITCH, BY OTHERS.
5. DOOR HOLDER, BY OTHERS. ELECTROMAGNETIC SWITCH MOUNTED ON/IN DOOR AND FRAME. [FOR DELAYED OPERATION] IN LIEU OF ELECTRIC STRIKE.
6. MOTION DETECTOR, BY OTHERS. REQUEST TO EXIT MOTION DETECTOR MOUNTED TO TOP OF DOOR FRAME. COORDINATE WITH DOOR AND FRAME CONTRACTOR.
7. DOOR OPERATOR PUSH PLATE, BY OTHERS.
8. DOOR OPERATOR, BY OTHERS.
9. INTERCOM STATION, BY OTHERS.
10. REQUEST TO EXIT PUSH PAD, BY OTHERS.
11. ELECTRIC STRIKE, PANIC HARDWARE, POWER TRANSFER, BY OTHERS.
12. KEY-SWITCH, BY OTHERS.
13. KEYPAD, BY OTHERS.

TYPICAL ACCESS CONTROL SINGLE DOOR CONNECTION DIAGRAM

NO SCALE



GENERAL NOTES:

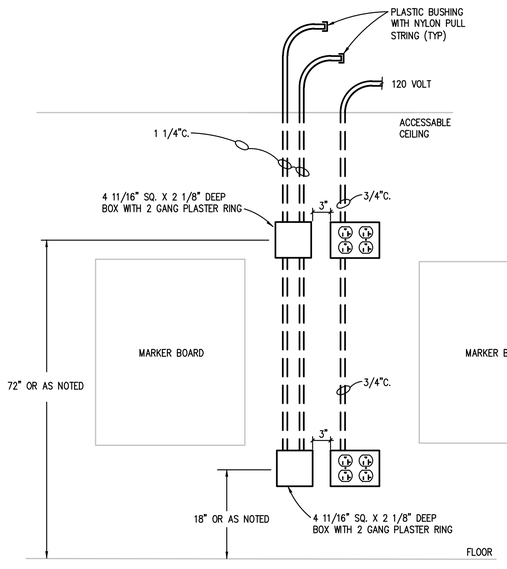
1. REFER TO ELECTRICAL FLOOR PLANS FOR DOOR LOCATIONS.
2. ELECTRICAL CONTRACTOR SHALL PROVIDE BACK BOXES, CONDUIT, 120 VOLT WIRING AND TERMINATIONS AS REQUIRED BY MANUFACTURE.
3. ACCESS CONTROL CONTRACTOR SHALL PROVIDE EQUIPMENT DEVICES AND ALL LOW VOLTAGE WIRING AND TERMINATIONS.
4. SOME DEVICES INDICATED MAY NOT APPLY REFER TO DOOR HARDWARE AND DOOR SCHEDULE. COORDINATE ALL WORK WITH HARDWARE CONTRACTOR.
5. ELECTRICAL CONTRACTOR SHALL PROVIDE INTERCONNECTION WITH FIRE ALARM PANEL TO RELEASE DOORS I.E. ELECTROMAGNETIC LOCKS UPON AN ALARM CONDITION, AS REQUIRED.

KEYED NOTES:

1. ACCESS CONTROL SYSTEM, DOOR PANEL BY OTHERS.
2. LOW VOLTAGE CABLING, BY OTHERS.
3. PROXIMITY CARD READER, BY OTHERS.
4. DOOR MONITOR CONTACT SWITCH, BY OTHERS.
5. DOOR HOLDER, BY OTHERS. ELECTROMAGNETIC SWITCH MOUNTED ON/IN DOOR AND FRAME. [FOR DELAYED OPERATION] IN LIEU OF ELECTRIC STRIKE.
6. MOTION DETECTOR, BY OTHERS. REQUEST TO EXIT MOTION DETECTOR MOUNTED TO TOP OF DOOR FRAME. COORDINATE WITH DOOR AND FRAME CONTRACTOR.
7. DOOR OPERATOR PUSH PLATE, BY OTHERS.
8. DOOR OPERATOR, BY OTHERS.
9. INTERCOM STATION, BY OTHERS.
10. REQUEST TO EXIT PUSH PAD, BY OTHERS.
11. ELECTRIC STRIKE, PANIC HARDWARE, POWER TRANSFER, BY OTHERS.
12. KEY-SWITCH, BY OTHERS.
13. KEYPAD, BY OTHERS.

TYPICAL ACCESS CONTROL DOUBLE DOOR CONNECTION DIAGRAM

NO SCALE

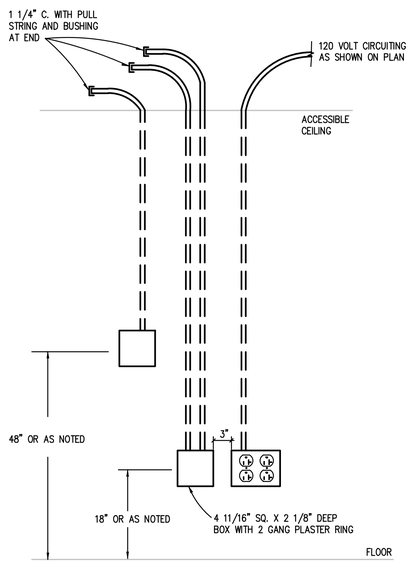


PROJECTOR DETAIL

NO SCALE

NOTES:

1. COORDINATE FINAL TECHNOLOGY OUTLET AND ASSOCIATED POWER LOCATIONS WITH TECHNOLOGY CONTRACTOR PRIOR TO ROUGH IN.
2. FOR INSTALLATION IN NEW WALLS PROVIDE CONDUITS AS INDICATED.
3. FOR INSTALLATION ON EXISTING CMU WALLS PROVIDE SURFACE RACEWAY.
4. DATA DEVICES SHALL BE PROVIDED BY TECHNOLOGY CONTRACTOR.
5. PROVIDE BLANK STAINLESS STEEL FACEPLATE FOR ALL TECHNOLOGY OUTLETS.

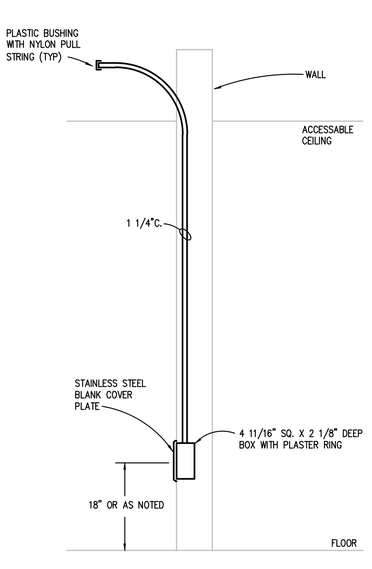


TEACHERS WORKSTATION DETAIL

NO SCALE

NOTES:

1. COORDINATE FINAL TECHNOLOGY OUTLET AND ASSOCIATED POWER LOCATIONS WITH TECHNOLOGY CONTRACTOR PRIOR TO ROUGH IN.
2. FOR INSTALLATION IN NEW WALLS PROVIDE CONDUITS AS INDICATED.
3. FOR INSTALLATION ON EXISTING CMU WALLS PROVIDE SURFACE RACEWAY.
4. DATA DEVICES SHALL BE PROVIDED BY TECHNOLOGY CONTRACTOR.
5. PROVIDE BLANK STAINLESS STEEL FACEPLATE FOR ALL TECHNOLOGY OUTLETS.

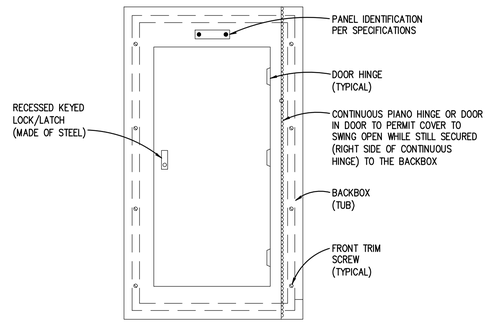


RECESSED TELECOMMUNICATION OUTLET DETAIL

NO SCALE

NOTES:

1. COORDINATE FINAL TECHNOLOGY OUTLET AND ASSOCIATED POWER LOCATIONS WITH TECHNOLOGY CONTRACTOR PRIOR TO ROUGH IN.
2. FOR INSTALLATION IN NEW WALLS PROVIDE CONDUITS AS INDICATED.
3. FOR INSTALLATION ON EXISTING CMU WALLS PROVIDE SURFACE RACEWAY.
4. DATA DEVICES SHALL BE PROVIDED BY TECHNOLOGY CONTRACTOR.
5. PROVIDE BLANK STAINLESS STEEL FACEPLATE FOR ALL TECHNOLOGY OUTLETS.



PANELBOARD FRONT COVER DETAIL

NO SCALE

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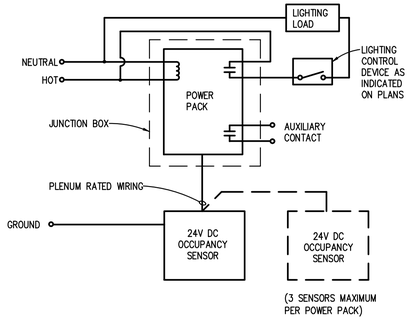
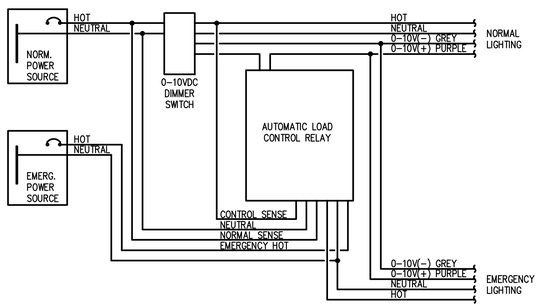


OCCUPANCY SENSOR WIRING DIAGRAM

NO SCALE

NOTES:

1. REFER TO SPECIFICATIONS FOR ACCEPTED MANUFACTURERS.
2. PROVIDE POWER PACKS AND SLAVE PACKS AS REQUIRED FOR SWITCHING AS INDICATED ON PLAN. REVISE DETAIL AS REQUIRED BY MANUFACTURER.
3. MOUNTING LOCATION PER MANUFACTURER'S RECOMMENDATION.
4. ADJUST SENSITIVITY LEVELS PER THE OWNER REQUIREMENTS.
5. PROVIDE FACTORY SUPPORT FOR AIMING/ADJUSTING OF SENSORS.
6. PLACE CEILING MOUNTED OCCUPANCY SENSORS IN CENTER OF A FULL CEILING TILE, WHERE APPLICABLE.
7. SENSOR ADJUSTMENT: BEFORE MAKING ADJUSTMENTS, MAKE SURE ROOM FURNITURE IS INSTALLED, LIGHTING CIRCUITS ARE TURNED ON, AND THE HVAC SYSTEMS ARE IN THE ON POSITION. VAV SYSTEMS SHOULD BE SET TO THEIR HIGHEST AIRFLOW. SET THE LOGIC CONFIGURATION DIP SWITCHES TO "EITHER". EITHER REQUIRES MOTION DETECTION BY ONLY ONE TECHNOLOGY. SET THE TIME DELAY PER OWNERS DIRECTION.

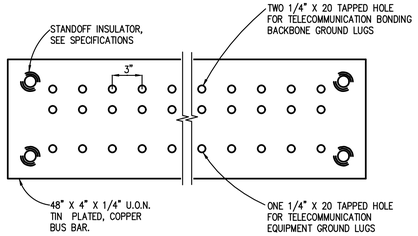


AUTOMATIC LOAD CONTROL RELAY FOR 0-10V DIMMING

NO SCALE

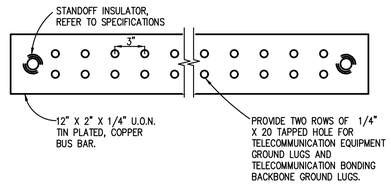
NOTES:

1. BASIS OF DESIGN IS ETC ALCR-DIN. REFER TO SPECIFICATIONS FOR APPROVED MANUFACTURERS. ADJUST WIRING AS NECESSARY FOR OTHER APPROVED MANUFACTURERS.
2. PROVIDE ONE AUTOMATIC LOAD CONTROL RELAY PER SWITCHING CIRCUIT



TELECOMMUNICATIONS MAIN GROUND BUS (TMGB) DETAIL

NO SCALE

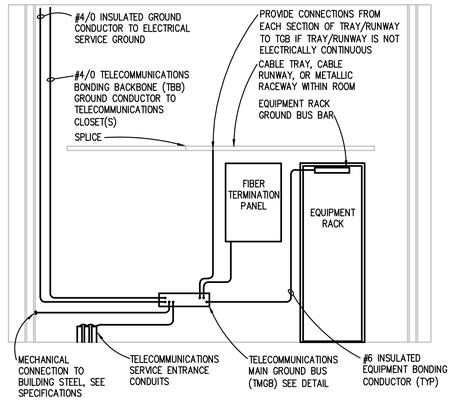


TELECOMMUNICATIONS GROUND BUS (TGB) DETAIL

NO SCALE

NOTE:

PROVIDE TWO HOLE LUGS FOR TELECOMMUNICATION BONDING BACKBONE CONNECTIONS, AND ONE HOLE LUGS FOR EQUIPMENT GROUND CONDUCTOR CONNECTIONS.

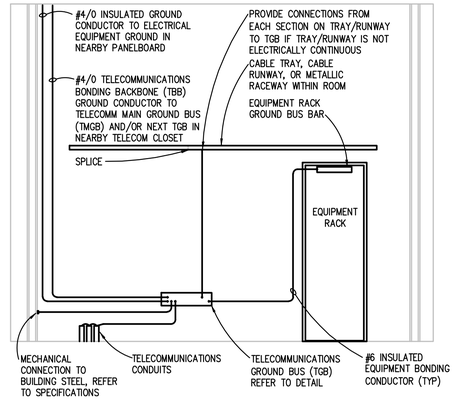


MAIN TELECOMMUNICATIONS ROOM GROUNDING DETAIL

NO SCALE

NOTES:

1. ALL GROUNDING SHALL COMPLY WITH NEC ARTICLE 250 AND TIA/EIA-607.
2. CONNECT ALL EQUIPMENT RACKS INCLUDING MAIN DISTRIBUTION FRAME (MDF) TO TMGB WITH A SEPARATE EQUIPMENT BONDING CONDUCTOR.



TELECOMMUNICATIONS ROOM GROUNDING DETAIL

NO SCALE

NOTES:

1. ALL GROUNDING SHALL COMPLY WITH N.E.C. ARTICLE 250 AND TIA/EIA-607.
2. CONNECT ALL EQUIPMENT RACKS TO TGB WITH A SEPARATE EQUIPMENT BONDING CONDUCTOR.

			SYSTEM OUTPUTS																															
			ANNUNCIATION										NOTIFICATION									FIRE SAFETY												
			INITIATE FIRE ALARM SIGNAL	INITIATE CARBON MONOXIDE ALARM SIGNAL	IDENTIFY ALARM AT FACP	IDENTIFY ALARM AT REMOTE ANNUNCIATOR(S)	ANNUNCIATE SUPERVISORY SIGNAL AT FACP	ANNUNCIATE SUPERVISORY SIGNAL AT REMOTE ANNUNCIATOR(S)	ANNUNCIATE TROUBLE SIGNAL AT FACP	ANNUNCIATE TROUBLE SIGNAL AT REMOTE ANNUNCIATOR(S)	RING TROUBLE BELL (WHEN PROVIDED)	ACTUATE ALARM SEQUENCE ON FACP	OPERATE ALARM NOTIFICATION APPLIANCES CONTINUOUSLY	ACTIVATE VOICE/ALARM COMMUNICATION SYSTEM	TRANSMIT ALARM SIGNAL TO REMOTE ALARM RECEIVING STATION	TRANSMIT SUPERVISORY SIGNAL TO REMOTE ALARM RECEIVING STATION	TRANSMIT TROUBLE SIGNAL TO REMOTE ALARM RECEIVING STATION	TRANSMIT ALARM SIGNAL TO BUILDING AUTOMATION SYSTEM	TRANSMIT TROUBLE SIGNAL TO BUILDING AUTOMATION SYSTEM	RECORD EVENTS IN THE SYSTEM MEMORY	RECORD EVENTS BY THE SYSTEM PRINTER	UNLOCK ELECTRIC DOOR LOCKS IN DESIGNATED EGRESS PATHS	DISABLE SOUND MASKING, PAGING, OR AUDIO SYSTEMS	RELEASE FIRE AND SMOKE DOORS	TURN ON EGRESS LIGHTING TO FULL BRIGHTNESS	SHUTDOWN HVAC UNIT SERVING ZONE IN ALARM VIA CONTROL MODULE (INTERLOCK)	SWITCH HVAC EQUIPMENT CONTROLS TO FIRE ALARM MODE	CLOSE SMOKE DAMPERS IN AIR DUCT SYSTEM SERVING ZONE WHERE ALARM WAS INITIATED
SYSTEM INPUTS	INITIATION	MANUAL FIRE BOX OPERATION	●		●	●						●	●	●	●			●				●	●	●	●			
		SMOKE DETECTOR OPERATION	●		●	●						●	●	●	●			●				●	●	●	●			
		CARBON MONOXIDE DETECTOR OPERATION		●								●	●	●	●			●				●	●	●	●			
		DUCT DETECTOR OPERATION	●		●	●						●	●	●	●			●				●	●	●	●	●	●	●
	EXTERNAL SYSTEM INPUT	FACP FIRE ALARM CONDITION	●		●	●						●	●	●	●			●		●	●	●	●	●	●			
		FACP TROUBLE CONDITION							●	●	●						●		●	●	●							
		TROUBLE SIGNAL FROM SUPPRESSION SYSTEM							●	●	●						●		●	●	●							
		FIRE EXTINGUISHING SYSTEM OPERATION	●		●	●						●	●	●	●			●		●	●	●	●	●	●			
	STATUS	OPEN CIRCUIT, SHORT CIRCUIT, OR GROUND FAULT ON INITIATING DEVICE, SIGNALING LINE, OR NOTIFICATION APPLIANCE CIRCUIT.							●	●	●						●		●	●	●							
		OPENING, TAMPERING, OR REMOVAL OF ALARM-INITIATING DEVICES							●	●	●						●		●	●	●							
		OPENING, TAMPERING, OR REMOVAL OF SUPERVISORY SIGNAL INITIATING DEVICES							●	●	●						●		●	●	●							
		LOSS OF PRIMARY POWER OF FACP							●	●	●						●		●	●	●							
		GROUND OR SIGNAL BREAK IN FACP INTERNAL CIRCUITS							●	●	●						●		●	●	●							
		ABNORMAL AC VOLTAGE AT THE FACP							●	●	●						●		●	●	●							
		STANDBY BATTERY CIRCUITRY BREAK							●	●	●						●		●	●	●							
		FAILURE OF BATTERY CHARGING SYSTEM							●	●	●						●		●	●	●							
		ABNORMAL POSITION OF ANY SWITCH AT THE FACP							●	●	●						●		●	●	●							
		ABNORMAL POSITION OF ANY SWITCH AT THE ANNUNCIATOR							●	●	●						●		●	●	●							
		KNOX BOX OPEN					●	●								●				●	●							

FIRE ALARM MATRIX

NO SCALE

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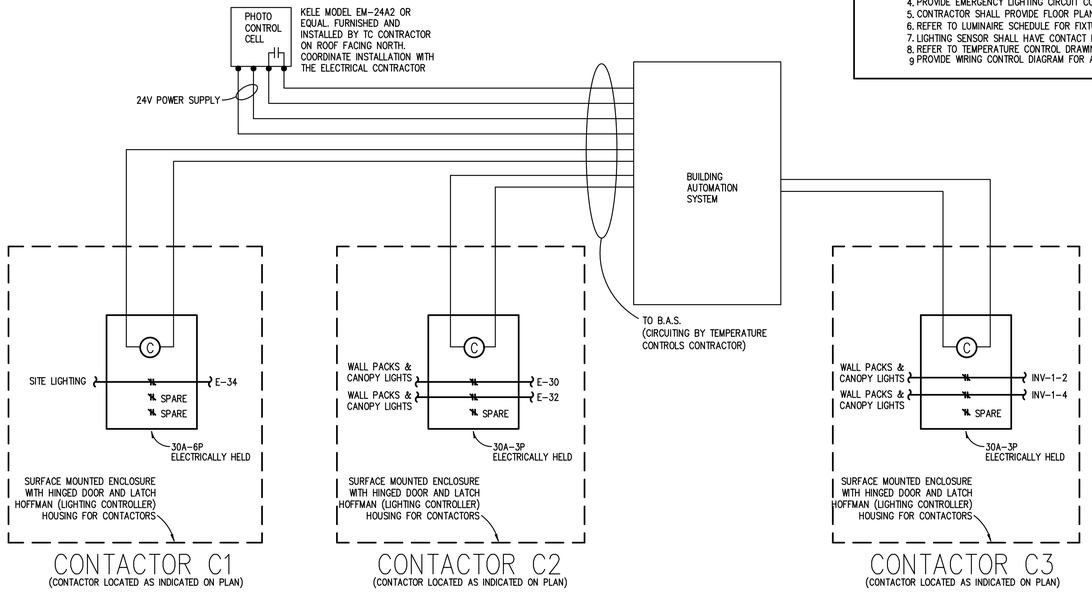
E7.03

INTERIOR LIGHTING CONTROL SCHEDULE

PLAN REFERENCE	ROOM TYPE	LOCAL CONTROL			CONTROL ON / OFF	SENSOR TYPE	TURN ON LIGHTING TO %	BI-LEVEL CONTROL	DAYLIGHT			NO DETECTION FULL OFF (MIN)	EMERGENCY LIGHTING CIRCUIT CONTROL	HVAC CONTROL	NOTES
		SWITCH TYPE	SWITCH CONTROL	SCENE CONTROL					SIDE LIGHT	TOP LIGHT	MAINTAIN FC LEVEL				
A	OFFICE (ENCLOSED AND ≤ 250 SQFT)	LOW VOLTAGE	ON-OFF-DIM	N/A	SENSOR ON / SENSOR OFF	DUAL TECHNOLOGY	PARTIAL 50%	CONTINUOUS DIM	N/A	N/A		20	N/A	N/A	
B	OFFICE (ENCLOSED AND >250 SQFT)	LOW VOLTAGE	ON-OFF-DIM	N/A	SENSOR ON / SENSOR OFF	DUAL TECHNOLOGY	PARTIAL 50%	CONTINUOUS DIM	N/A	N/A		20	N/A	N/A	
C	OFFICE (OPEN PLAN)	LOW VOLTAGE	ON-OFF-DIM	N/A	SENSOR ON / SENSOR OFF	DUAL TECHNOLOGY	PARTIAL 50%	CONTINUOUS DIM	N/A	N/A		20	ALCR	N/A	
D	OFFICE (OPEN PLAN)	LOW VOLTAGE	ON-OFF-DIM	N/A	SENSOR ON / SENSOR OFF	DUAL TECHNOLOGY	PARTIAL 50%	CONTINUOUS DIM	N/A	N/A		20	N/A	N/A	
E	CLASSROOM/LECTURE HALL/TRAINING ROOM (ALL OTHER CLASSROOMS/LECTURE HALLS/TRAINING ROOMS)	LOW VOLTAGE	ON-OFF-DIM	N/A	SENSOR ON / SENSOR OFF	DUAL TECHNOLOGY	PARTIAL 50%	CONTINUOUS DIM	N/A	N/A		20	N/A	YES	
F	CONFERENCE/MEETING/MULTIPURPOSE ROOM	LOW VOLTAGE	ON-OFF-DIM	N/A	SENSOR ON / SENSOR OFF	DUAL TECHNOLOGY	PARTIAL 50%	CONTINUOUS DIM	N/A	N/A		20	ALCR	N/A	
G	CONFERENCE/MEETING/MULTIPURPOSE ROOM	LOW VOLTAGE	ON-OFF-DIM	N/A	SENSOR ON / SENSOR OFF	DUAL TECHNOLOGY	PARTIAL 50%	CONTINUOUS DIM	YES	N/A	EQUAL TO LIGHT OUTPUT OF FIXTURES OUTSIDE OF DAYLIGHTING AREA	20	ALCR	N/A	
H	CONFERENCE/MEETING/MULTIPURPOSE ROOM	LOW VOLTAGE	ON-OFF-DIM	N/A	SENSOR ON / SENSOR OFF	DUAL TECHNOLOGY	PARTIAL 50%	CONTINUOUS DIM	N/A	N/A		20	N/A	N/A	
I	CORRIDOR (ALL OTHER CORRIDORS)	LINE VOLTAGE	ON-OFF	N/A	SENSOR ON / SENSOR OFF	DUAL TECHNOLOGY	FULL 100%	N/A	N/A	N/A		20	ALCR	N/A	
J	CORRIDOR (ALL OTHER CORRIDORS)	LINE VOLTAGE	ON-OFF	N/A	SENSOR ON / SENSOR OFF	DUAL TECHNOLOGY	FULL 100%	N/A	N/A	N/A		20	N/A	N/A	
K	STORAGE ROOM (≥50 FT2 AND ≤ 1000 SQFT)	LINE VOLTAGE	ON-OFF	N/A	MANUAL ON / SENSOR OFF	ULTRASONIC	FULL 100%	N/A	N/A	N/A		20	N/A	N/A	
L	ELECTRICAL/MECHANICAL ROOM	LINE VOLTAGE	ON-OFF	N/A	MANUAL ON / MANUAL OFF	N/A	FULL 100%	N/A	N/A	N/A		N/A	ALCR	N/A	
M	RESTROOM (ALL OTHER RESTROOMS)	LINE VOLTAGE	ON-OFF	N/A	MANUAL ON / SENSOR OFF	ULTRASONIC	FULL 100%	N/A	N/A	N/A		20	N/A	N/A	
N	RESTROOM (ALL OTHER RESTROOMS)	LINE VOLTAGE	ON-OFF	N/A	SENSOR ON / SENSOR OFF	ULTRASONIC	FULL 100%	N/A	N/A	N/A		20	ALCR	N/A	
O	CONFERENCE/MEETING/MULTIPURPOSE ROOM	LOW VOLTAGE	ON-OFF-DIM	N/A	MANUAL ON / SENSOR OFF	DUAL TECHNOLOGY	PARTIAL 50%	CONTINUOUS DIM	N/A	N/A		20	N/A	N/A	

N/A = NOT APPLICABLE

NOTE:
1. REFER TO PLANS FOR LOCATION OF LOCAL CONTROL.
2. REFER TO PLANS FOR SCENE CONTROL.
3. REFER TO PLANS FOR PRIMARY AND SECONDARY DAYLIGHT ZONES.
4. PROVIDE EMERGENCY LIGHTING CIRCUIT CONTROL (BCELTS OR ALCR) PER SWITCHING CIRCUIT AS REQUIRED.
5. CONTRACTOR SHALL PROVIDE FLOOR PLAN INDICATING SENSOR AND EQUIPMENT LOCATIONS OF CHOSEN CONTROL SYSTEM.
6. REFER TO LUMINAIRE SCHEDULE FOR FIXTURE CHARACTERISTICS.
7. LIGHTING SENSOR SHALL HAVE CONTACT FOR HVAC CONTROL WHEN A "YES" SELECTION IS MADE IN THE HVAC CONTROL COLUMN.
8. REFER TO TEMPERATURE CONTROL DRAWINGS AND DIAGRAMS FOR ADDITIONAL SENSOR REQUIREMENTS.
9. PROVIDE WIRING CONTROL DIAGRAM FOR APPLICABLE CONTROL SYSTEM(S).



LIGHTING CONTROLLER DETAIL

NO SCALE

NOTES

1. PROGRAM B.A.S. SYSTEM TIME SCHEDULE PER THE OWNER'S DIRECTION
2. PHOTO CELL SHALL CONTROL EXTERIOR LIGHTING VIA THE B.A.S. SYSTEM CONTROLS.

Bidding and Permits: 31 July 2023
Owner Review: 14 July 2023
Design Development: 08 May 2023

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PBA Project No: 2022.0419

ELECTRICAL DETAILS AND DIAGRAMS

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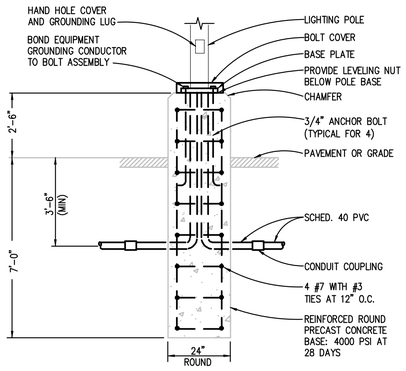
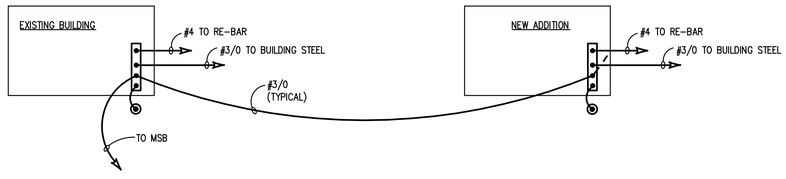


LIGHTING POLE BASE DETAIL

NO SCALE

NOTE:

1. PROVIDE PRECAST CONCRETE BASE AS MANUFACTURED BY NORTHERN CONCRETE PIPE, INC. OR APPROVED EQUAL.
2. CONCRETE REINFORCEMENTS SHALL BE BARE, ZINC GALVANIZED, OR ELECTRICALLY CONDUCTIVE COATED STEEL. BOND ALL CONCRETE REINFORCEMENTS AND ANCHOR BOLTS TOGETHER SO THAT SYSTEM IS ELECTRICALLY CONTINUOUS.

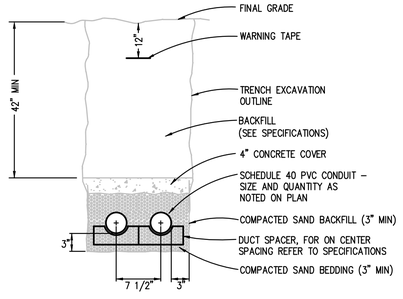


BUILDING GROUND SYSTEM DETAIL

NO SCALE

NOTES:

1. ALL CONDUCTORS SHALL BE COPPER.

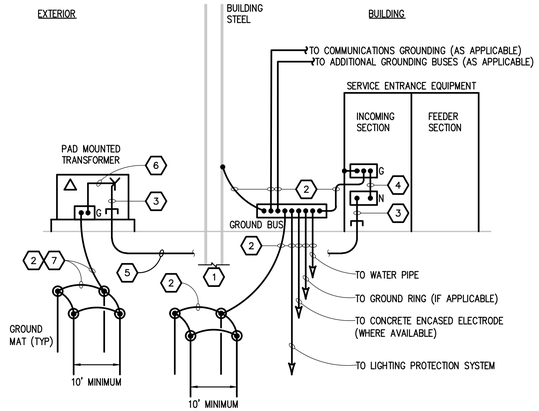


UNDERGROUND CONDUIT DETAIL

NO SCALE

NOTES:

1. QUANTITY AND CONFIGURATION OF DUCTS SHALL BE AS SHOWN ON PLAN DRAWINGS. 12" MINIMUM SEPARATION SHALL BE MAINTAINED BETWEEN ELECTRICAL AND COMMUNICATIONS DUCTS.

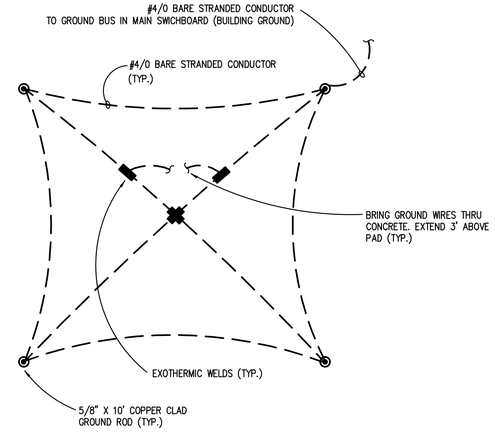


TYPICAL SECONDARY SERVICE ENTRANCE GROUNDING

NO SCALE

(#) KEYED NOTES:

1. METAL IN-GROUND SUPPORT STRUCTURE IN DIRECT CONTACT WITH EARTH VERTICALLY FOR A MINIMUM OF 10FT, WHERE AVAILABLE.
2. GROUNDING ELECTRODE CONDUCTOR, #4/0 COPPER.
3. GROUNDED CONDUCTOR (NEUTRAL), SEE ONE LINE DIAGRAM.
4. MAIN BONDING JUMPER, PROVIDED BY MANUFACTURER AS PART OF LISTED EQUIPMENT SIZED PER NEC 250.28 AND 250.102.
5. SERVICE ENTRANCE PHASE CONDUCTORS AND GROUNDED CONDUCTOR IN CONDUIT. SEE ONE LINE DIAGRAM.
6. CONNECTION FROM GROUNDED SERVICE CONDUCTOR TO GROUNDING ELECTRODE AT THE TRANSFORMER PER NEC 250.24. COORDINATE WITH UTILITY.
7. COORDINATE REQUIREMENTS WITH UTILITY COMPANY PRIOR TO INSTALLATION. PROVIDE ALL NECESSARY GROUND RODS AND CONDUCTORS TO MEET UTILITY COMPANY REQUIREMENTS.

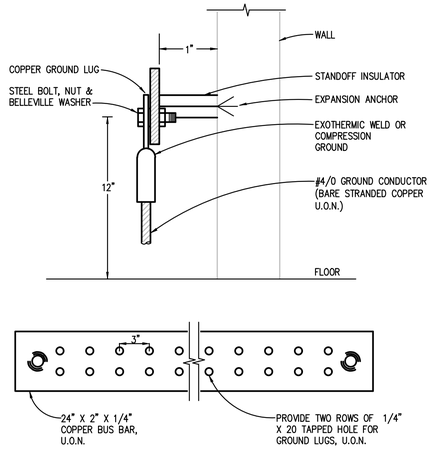


BUILDING GROUND MAT DETAIL

NO SCALE

NOTES:

1. CONTRACTOR SHALL PROVIDE ADDITIONAL GROUND RODS AS REQUIRED TO MEET DIVISON 26 SYSTEM IMPEDANCE REQUIREMENTS.



ELECTRICAL GROUND BUS DETAIL

NO SCALE

Bidding and Permits: 31 July 2023
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ELECTRICAL DETAILS AND DIAGRAMS

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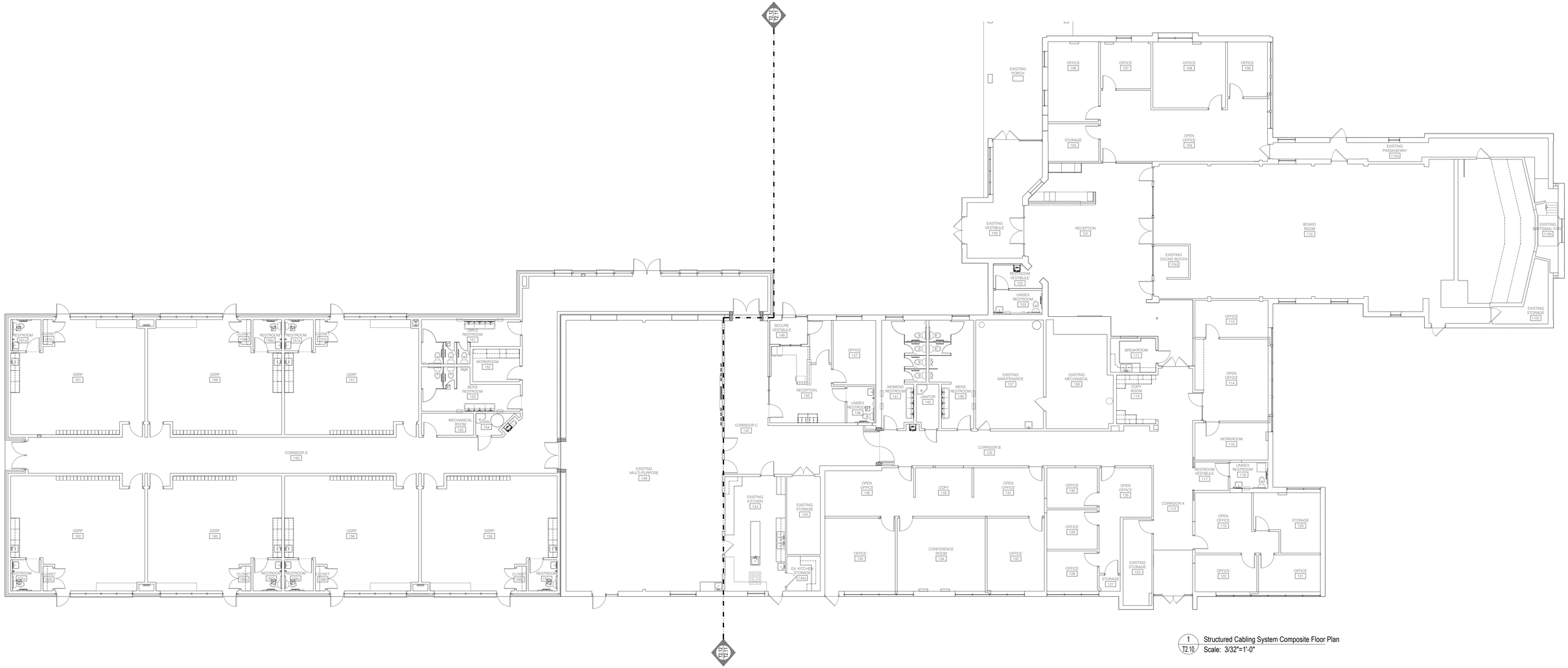
GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. COMPOSITE PLAN ISSUED FOR REFERENCE ONLY.

G3. REFER TO SHEETS T2.11 AND T2.12 FOR FURTHER INFORMATION.



1 T2.10 Structured Cabling System Composite Floor Plan
Scale: 3/32"=1'-0"

Permits & Bidding: 31 July 2023

Structured Cabling System Composite Floor Plan

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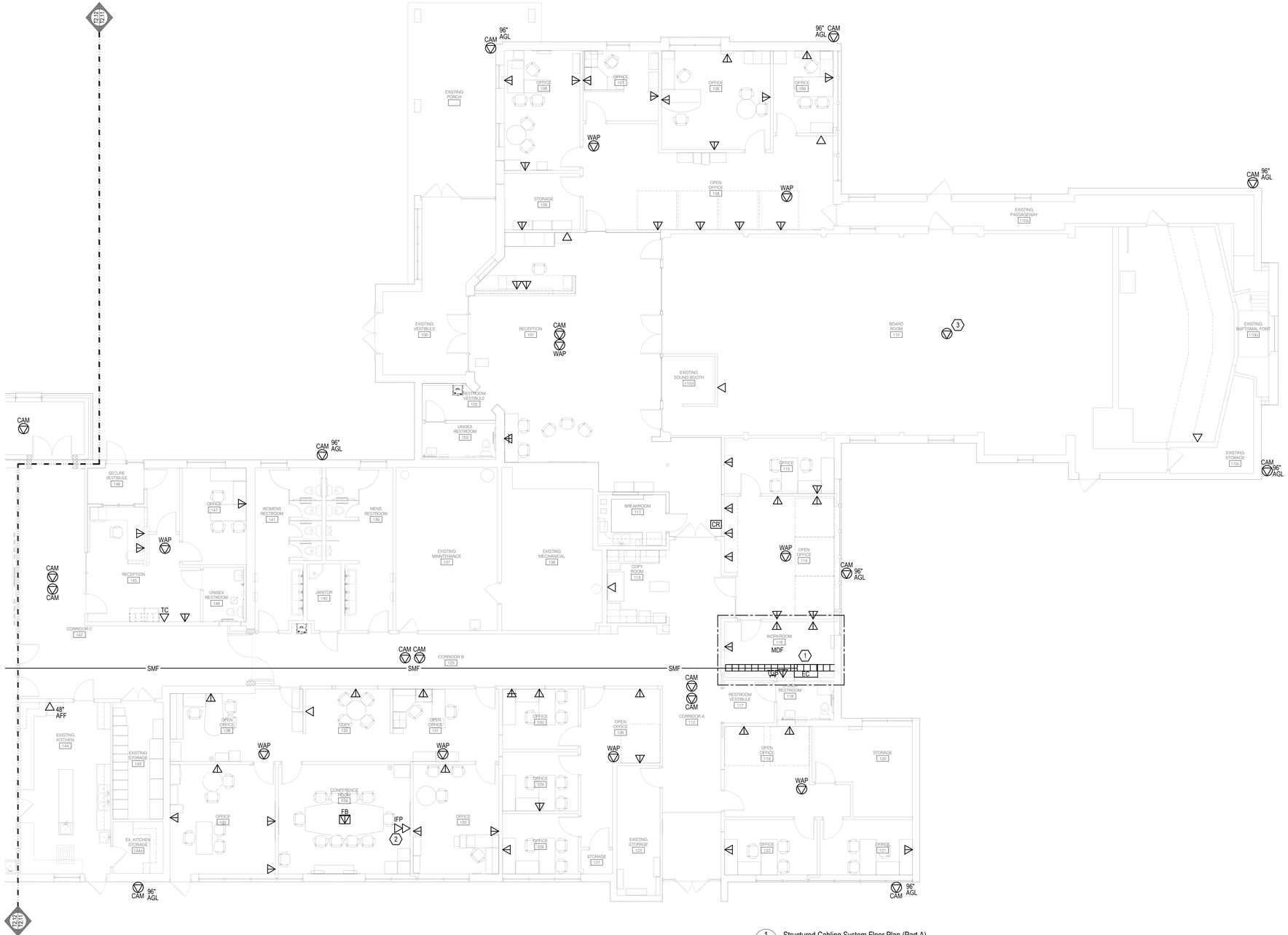

1 / T2.11 Structured Cabling System Floor Plan (Part A)
Scale: 1/8"=1'-0"

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

GENERAL STRUCTURED CABLING NOTES

1. ELECTRICAL CONTRACTOR TO PROVIDE ALL BACKBOXES, CONDUITS, AND SLEEVES FOR STRUCTURED CABLING. REFER TO ELECTRICAL PLANS.
2. STRUCTURED CABLING CONTRACTOR SHALL FIRESTOP ALL SLEEVES AND CORES PROVIDED FOR STRUCTURED CABLING.

KEYED STRUCTURED CABLING NOTES (#)

1. FIELD COORDINATE EXACT LOCATION OF EQUIPMENT CABINET AND LADDER RACK WITH OWNER PRIOR TO INSTALLATION.
2. COORDINATE FINAL LOCATION WITH ELECTRICAL CONTRACTOR PRIOR TO INSTALLATION.
3. CEILING MOUNTED DATA DROP FOR IP VIDEO STREAMING CAMERA. FIELD COORDINATE EXACT LOCATION WITH OWNER PRIOR TO INSTALLATION.

STRUCTURED CABLING ABBREVIATIONS

MDF	MAIN DISTRIBUTION FRAME
IDF	INTERMEDIATE DISTRIBUTION FRAME
A.F.F.	ABOVE FINISHED FLOOR
A.G.L.	ABOVE GROUND LEVEL
U.N.O.	UNLESS NOTED OTHERWISE

STRUCTURED CABLING SYMBOL LEGEND

▽	SINGLE DATA OUTLET - WALL MOUNTED 1-GANG ONE (1) CATEGORY 6 UTP
▽▽	DOUBLE DATA OUTLET - WALL MOUNTED 1-GANG TWO (2) CATEGORY 6 UTP
TC ▽▽	DOUBLE DATA OUTLET - WALL MOUNTED 2-GANG FOR TEACHER STATION TWO (2) CATEGORY 6 UTP
IFP ▽	SINGLE DATA OUTLET - WALL MOUNTED 2-GANG FOR INTERACTIVE FLAT PANEL ONE (1) CATEGORY 6 UTP
CAM	SINGLE DATA OUTLET - IN CEILING SURFACE MOUNTED FOR SECURITY CAMERA ONE (1) CATEGORY 6 UTP
WAP	SINGLE DATA OUTLET - IN CEILING SURFACE MOUNTED FOR WIRELESS ACCESS POINT ONE (1) CATEGORY 6 UTP
EC	EQUIPMENT CABINET
TGB	TELECOMMUNICATIONS GROUNDING BUSBAR PROVIDED BY ELECTRICAL CONTACTOR
SMF	SINGLE-MODE FIBER OPTIC BACKBONE

Permits & Bidding: 31 July 2023

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Structured Cabling System Floor Plan (Part A)

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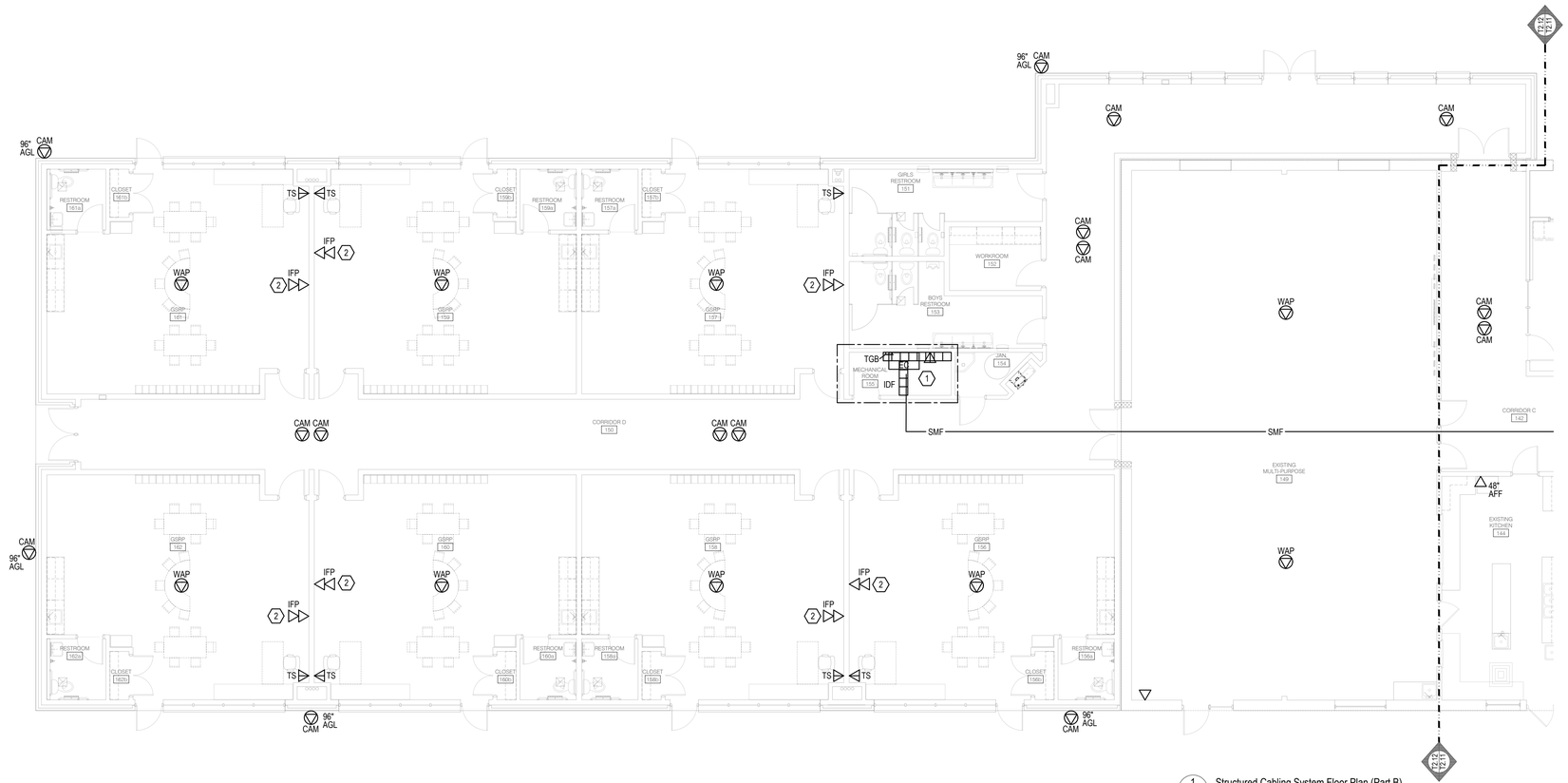

1 / T2.12 Structured Cabling System Floor Plan (Part B)
Scale: 1/8"=1'-0"

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

GENERAL STRUCTURED CABLING NOTES

1. ELECTRICAL CONTRACTOR TO PROVIDE ALL BACKBOXES, CONDUITS, AND SLEEVES FOR STRUCTURED CABLING. REFER TO ELECTRICAL PLANS.
2. STRUCTURED CABLING CONTRACTOR SHALL FIRESTOP ALL SLEEVES AND CORES PROVIDED FOR STRUCTURED CABLING.

KEYED STRUCTURED CABLING NOTES (#)

1. FIELD COORDINATE EXACT LOCATION OF EQUIPMENT CABINET AND LADDER RACK WITH OWNER PRIOR TO INSTALLATION.
2. COORDINATE FINAL LOCATION WITH ELECTRICAL CONTRACTOR PRIOR TO INSTALLATION.

STRUCTURED CABLING ABBREVIATIONS

MDF	MAIN DISTRIBUTION FRAME
IDF	INTERMEDIATE DISTRIBUTION FRAME
A.F.F.	ABOVE FINISHED FLOOR
A.G.L.	ABOVE GROUND LEVEL
U.N.O.	UNLESS NOTED OTHERWISE

STRUCTURED CABLING SYMBOL LEGEND

▽	SINGLE DATA OUTLET - WALL MOUNTED 1-GANG ONE (1) CATEGORY 6 UTP
▽▽	DOUBLE DATA OUTLET - WALL MOUNTED 1-GANG TWO (2) CATEGORY 6 UTP
TS ▽▽	DOUBLE DATA OUTLET - WALL MOUNTED 2-GANG FOR TEACHER STATION TWO (2) CATEGORY 6 UTP
IFP ▽	SINGLE DATA OUTLET - WALL MOUNTED 2-GANG FOR INTERACTIVE FLAT PANEL ONE (1) CATEGORY 6 UTP
CAM	SINGLE DATA OUTLET - IN CEILING SURFACE MOUNTED FOR SECURITY CAMERA ONE (1) CATEGORY 6 UTP
WAP	SINGLE DATA OUTLET - IN CEILING SURFACE MOUNTED FOR WIRELESS ACCESS POINT ONE (1) CATEGORY 6 UTP
EC	EQUIPMENT CABINET
TGB	TELECOMMUNICATIONS GROUNDING BUSBAR PROVIDED BY ELECTRICAL CONTACTOR
SMF	SINGLE-MODE FIBER OPTIC BACKBONE

Permits & Bidding: 31 July 2023

Structured Cabling System Floor Plan (Part B)

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GENERAL NOTES:

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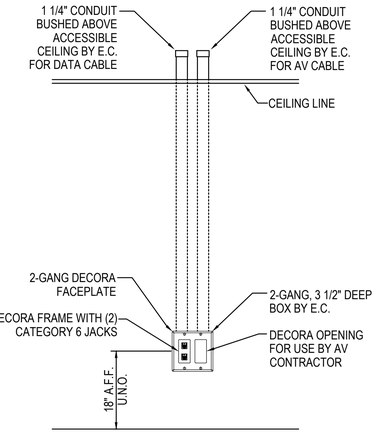
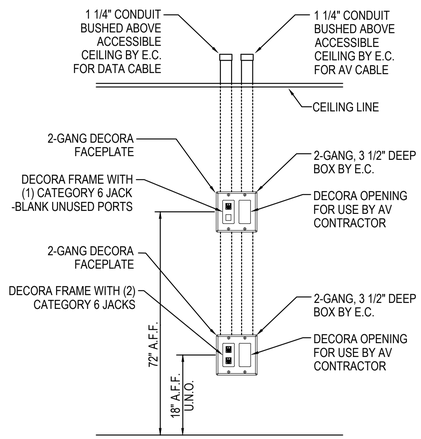


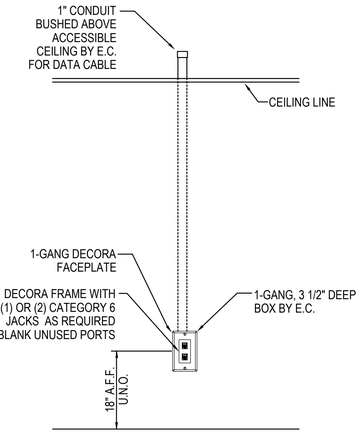
1 TEACHER STATION LOCATIONS

N.T.S. SYMBOLS: TS



2 INTERACTIVE FLAT PANEL LOCATIONS

N.T.S. SYMBOLS: IFP



3 SINGLE & DOUBLE DATA LOCATIONS

N.T.S. SYMBOLS:

1 / T7.01 Structured Cabling System Details
Scale: Not to Scale

Permits & Bidding: 31 July 2023

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Structured Cabling System Details

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GENERAL NOTES:

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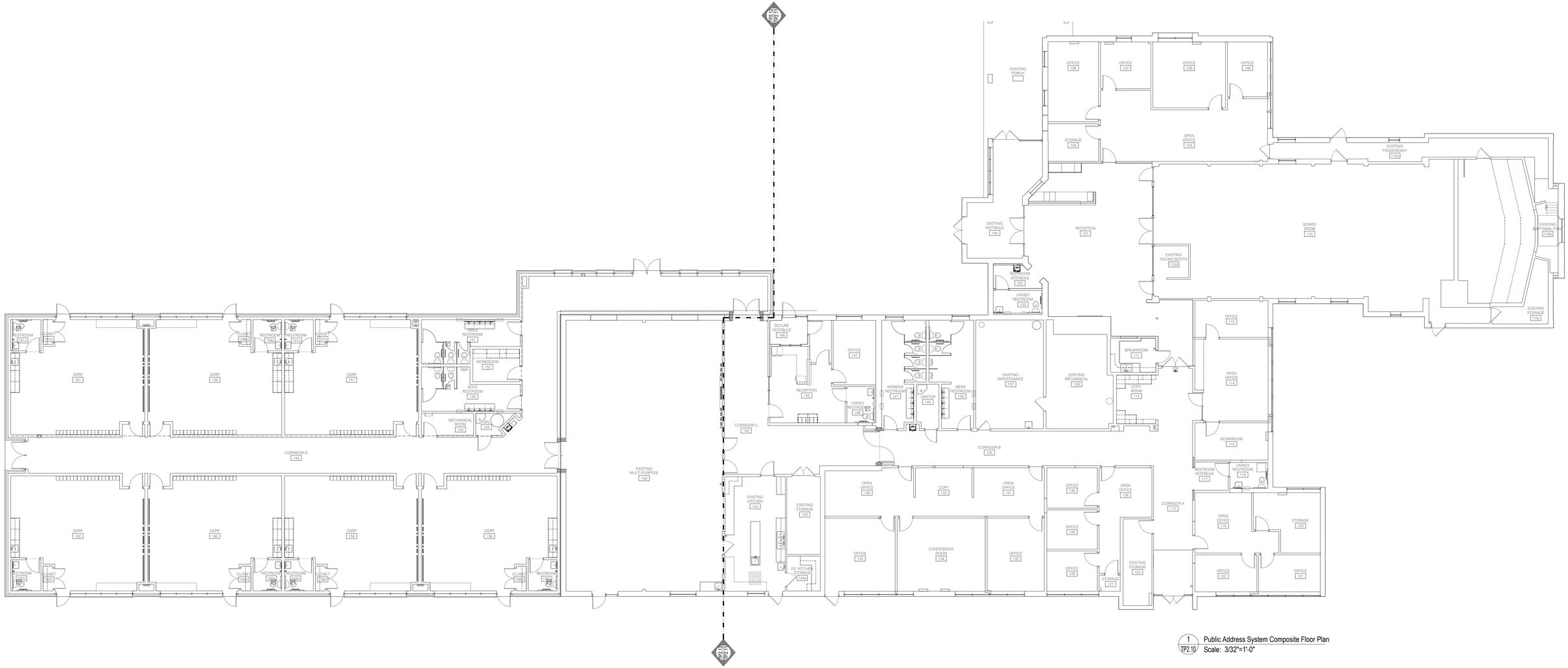
G2. COMPOSITE PLAN ISSUED FOR REFERENCE ONLY.

G3. REFER TO SHEETS TP2.11 AND TP2.12 FOR FURTHER INFORMATION.



1 TP2.10 Public Address System Composite Floor Plan
Scale: 3/32"=1'-0"

Permits & Bidding: 31 July 2023

Public Address System Composite Floor Plan

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Project No. 3221

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GENERAL NOTES:

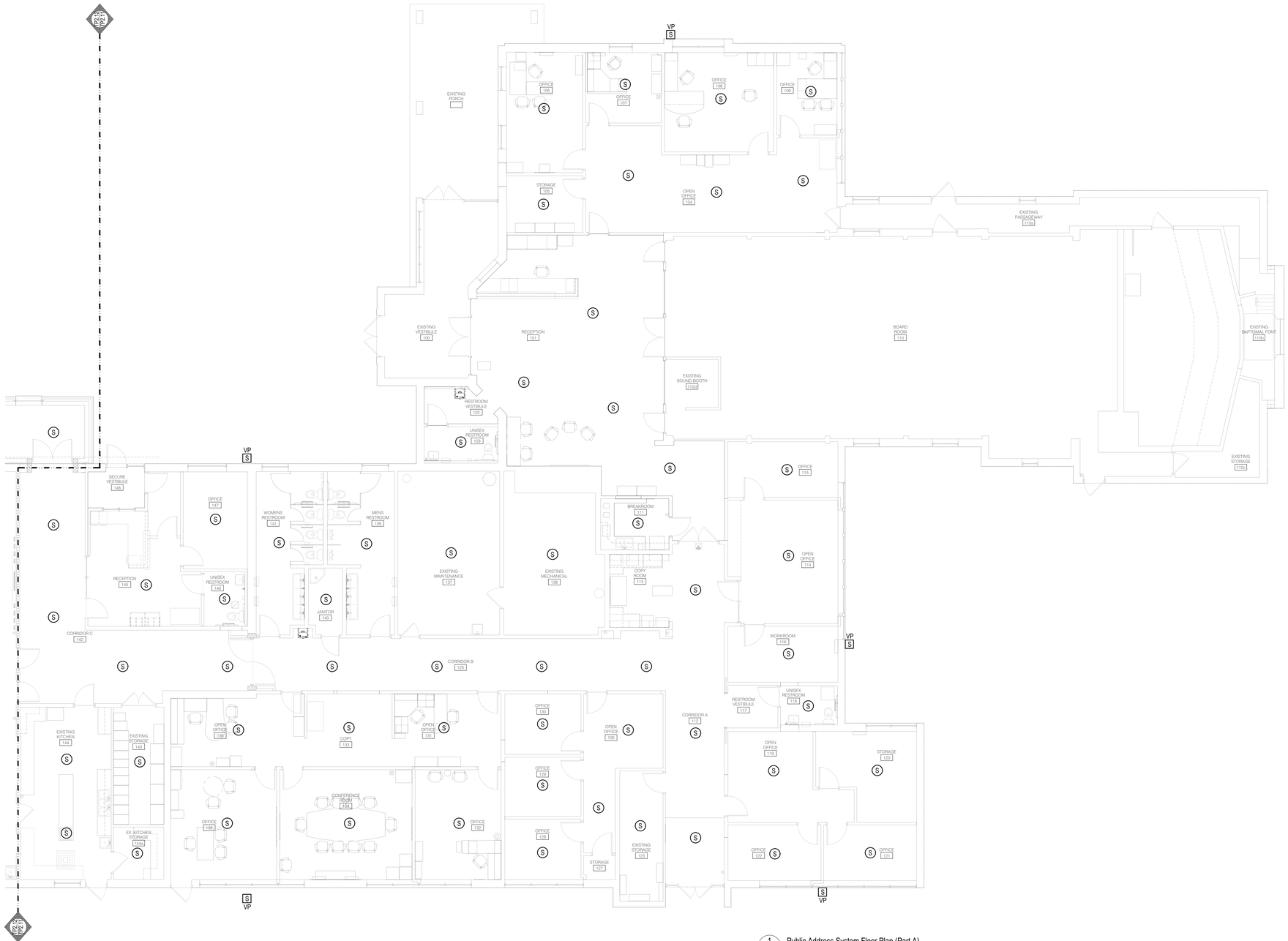
G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

PUBLIC ADDRESS SYSTEM ABBREVIATIONS

MDF	MAIN DISTRIBUTION FRAME
IDF	INTERMEDIATE DISTRIBUTION FRAME

PUBLIC ADDRESS SYSTEM SYMBOL LEGEND

- (S) CEILING SPEAKER
- [S] VP WALL MOUNTED SPEAKER - VANDAL PROOF



1 TP2.11 Public Address System Floor Plan (Part A)
Scale: 1/8"=1'-0"

Permits & Bidding: 31 July 2023

Public Address System Floor Plan (Part A)

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Project No. 3221

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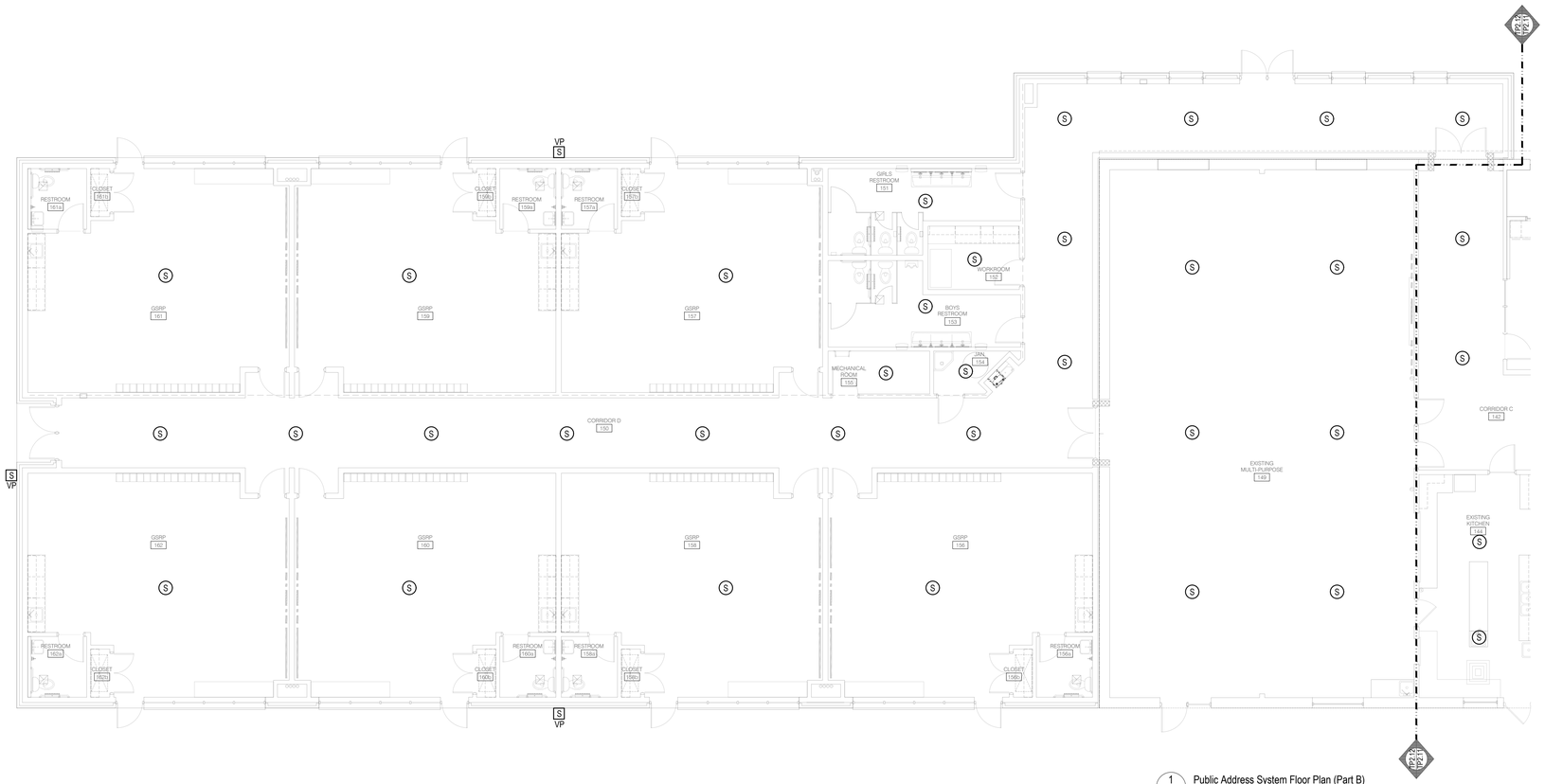
PUBLIC ADDRESS SYSTEM ABBREVIATIONS

MDF	MAIN DISTRIBUTION FRAME
IDF	INTERMEDIATE DISTRIBUTION FRAME

PUBLIC ADDRESS SYSTEM SYMBOL LEGEND

(S)	CEILING SPEAKER
S VP	WALL MOUNTED SPEAKER - VANDAL PROOF



1 TP2.12 Public Address System Floor Plan (Part B)
Scale: 1/8"=1'-0"

Permits & Bidding: 31 July 2023

Public Address System Floor Plan (Part B)

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Project No. 3221

TP2.12

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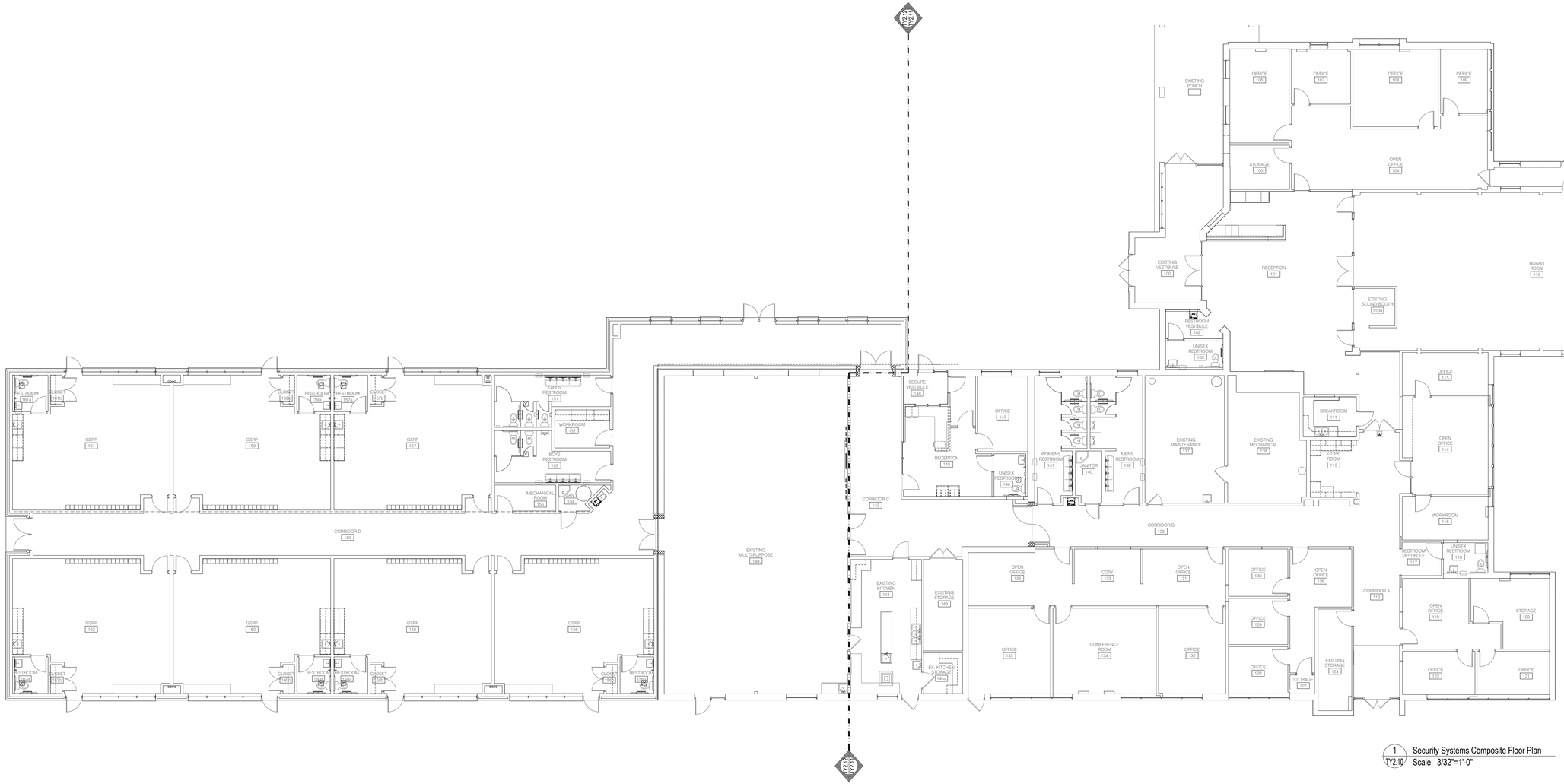
GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

G2. COMPOSITE PLAN ISSUED FOR REFERENCE ONLY.

G3. REFER TO SHEETS TY2.11 AND TY2.12 FOR FURTHER INFORMATION.



1 TY2.10 Security Systems Composite Floor Plan
Scale: 3/32"=1'-0"

Permits & Bidding: 31 July 2023

Security Systems Composite Floor Plan

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1 TY2.11 Security Systems Floor Plan (Part A)
Scale: 1/8"=1'-0"

GENERAL NOTES:

G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

GENERAL SECURITY SYSTEM NOTES

1. LENS DIRECTIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL VERIFY INTENDED VIEW WITH OWNER DURING INSTALLATION.

SECURITY SYSTEM SYMBOL LEGEND

C#	VIDEO SURVEILLANCE CAMERA - # INDICATES CAMERA NUMBER. SEE CAMERA SCHEDULE ON THIS SHEET FOR CAMERA MODEL.
VI	VIDEO INTERCOM
CR	CARD READER
PP	PUSH PLATE
DC	DOOR CONTACT
MS	MASTER STATION
RR	REMOTE RELEASE
PB	PANIC BUTTON
LD	LOCK DOWN BUTTON

Permits & Bidding: 31 July 2023

Security Systems Floor Plan (Part A)

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Project No. 3221

TY2.11

803 W. Big Beaver Road, Suite 350, Troy, MI 48084 | 248.244.9710

W&H WRIGHT HUNTER
818 West 11 Mile Road
Royal Oak, MI 48067
Tel: (248) 594-5850
Fax: (248) 594-5851
http://www.wrighthunter.com

GENERAL NOTES:

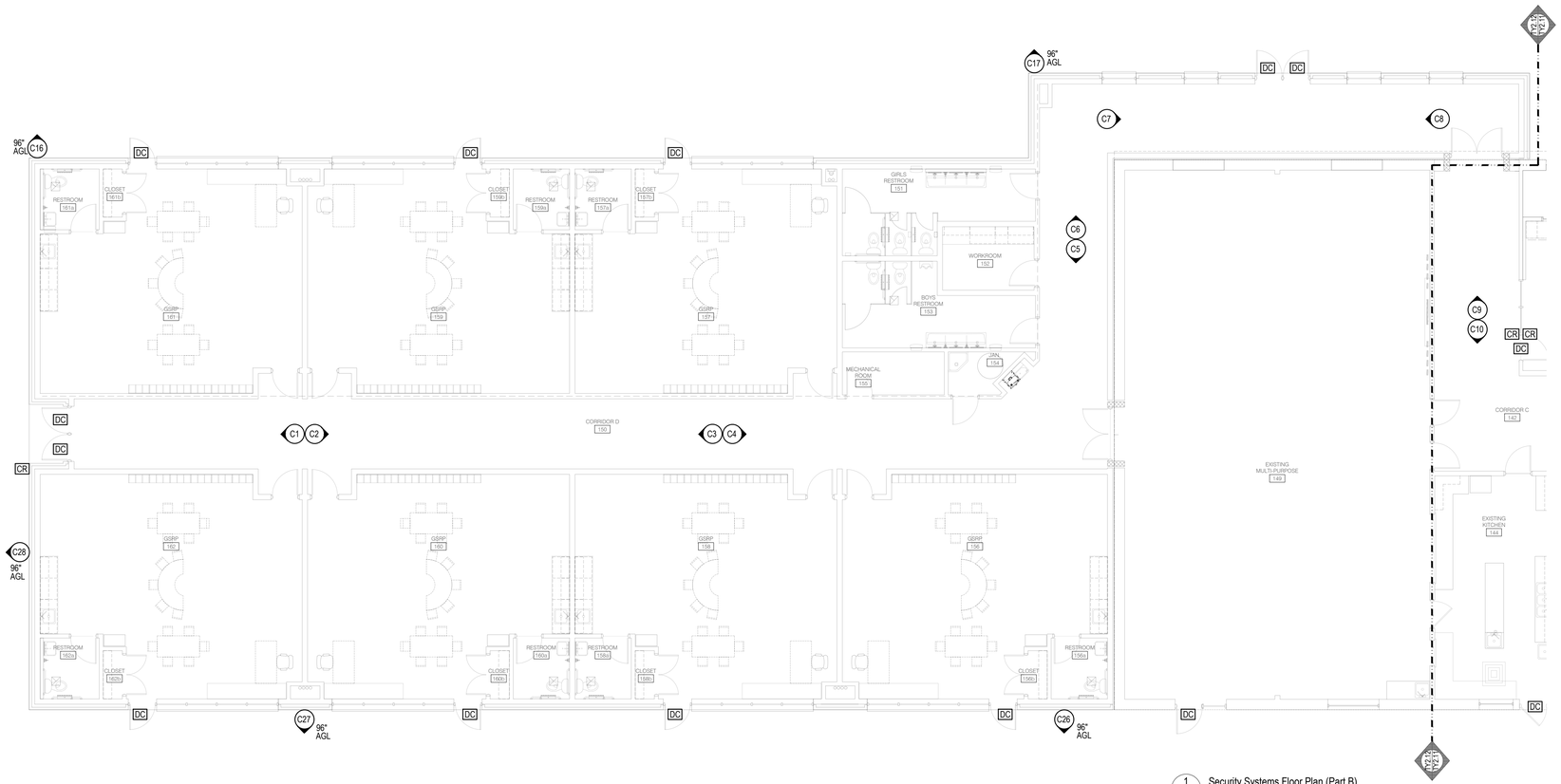
G1. DO NOT SCALE DRAWING. DRAWING SCALE IS SHOWN FOR GENERAL REFERENCE ONLY.

GENERAL SECURITY SYSTEM NOTES

1. LENS DIRECTIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL VERIFY INTENDED VIEW WITH OWNER DURING INSTALLATION.

SECURITY SYSTEM SYMBOL LEGEND

C#	VIDEO SURVEILLANCE CAMERA - # INDICATES CAMERA NUMBER. SEE CAMERA SCHEDULE ON THIS SHEET FOR CAMERA MODEL.
VI	VIDEO INTERCOM
CR	CARD READER
PP	PUSH PLATE
DC	DOOR CONTACT
MS	MASTER STATION
RR	REMOTE RELEASE
PB	PANIC BUTTON
LD	LOCK DOWN BUTTON



1 TY2.12 Security Systems Floor Plan (Part B)
Scale: 1/8"=1'-0"

Permits & Bidding: 31 July 2023

Security Systems Floor Plan (Part B)

EHRESMAN ARCHITECTS ehresmanarchitects.com

Crestwood School District
Cherry Hill Baptist Church
Administration Relocation and Addition

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N

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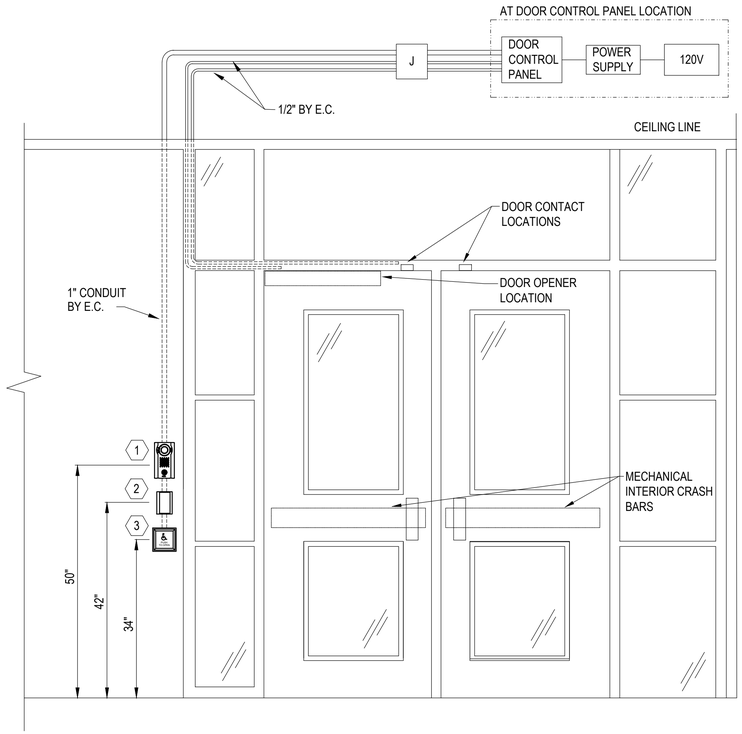
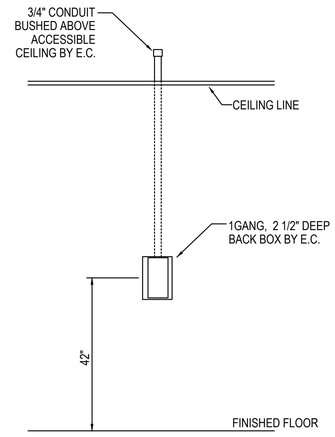


1 SECURE ENTRIES DETAIL

N.T.S. SYMBOL: VI CR PP

KEYED NOTES ⟨#⟩

1. VIDEO INTERCOM - SINGLE GANG BACKBOX PROVIDED BY E.C.
2. CARD READER - SINGLE GANG BACKBOX PROVIDED BY E.C.
3. PUSH PLATE - SINGLE GANG BACKBOX PROVIDED BY E.C.



2 SINGLE CARD READER DETAIL

N.T.S. SYMBOLS: CR

1 / TY2.11 Security Systems Details
Not to Scale

Permits & Bidding: 31 July 2023

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Security Systems Details

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TY7.01