Hamtramck Public Schools

Kosciuszko Middle School

2333 Burger St., Hamtramck, MI 48212

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LOCATION MAP

NORTH

OWNER

Hamtramck
Public Schools

PROJECT NAME

Kosciuszko Middle
School
Structural Repairs

2333 Burger St.
Hamtramck, MI 48212

PROJECT NO.

21-167

ISSUES / REVISIONS

Bidding / Construction 11/17/2022

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DRM

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MAM

SHEET NAME

COVER SHEET

SHEET NO.

A0-00

Abbreviations

A

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

B

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

C

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

D

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

E

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

F

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

G

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

H

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

I

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

J

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

K

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

L

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

M

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

N

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

O

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

P

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

Q

QT	QUARRY TILE
QB	QUARRY TILE BASE
QTR	QUARTER

R

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

R (CONT.)

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

S

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

T

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

U

UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
UR	URINAL

V

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

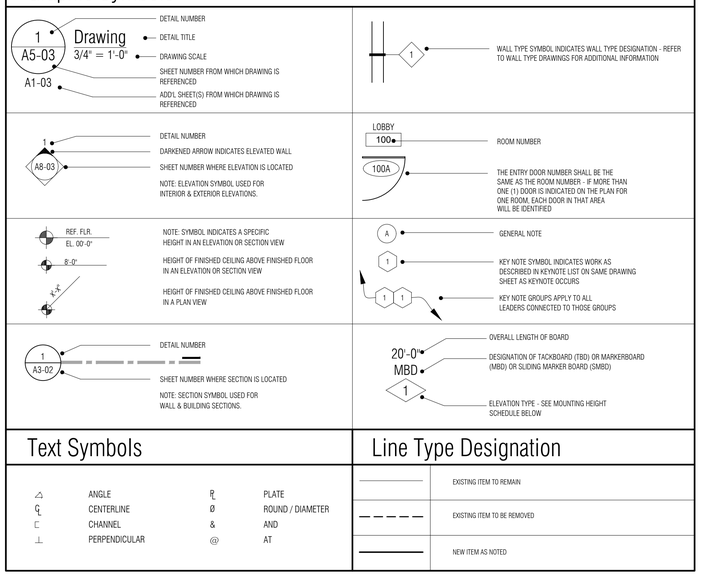
W

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

Y

YD	YARD

Graphic Symbols



Text Symbols

∠	ANGLE	P$_L$	PLATE
℄	CENTERLINE	Ø	ROUND / DIAMETER
⊏	CHANNEL	&	AND
⊥	PERPENDICULAR	@	AT

Line Type Designation

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

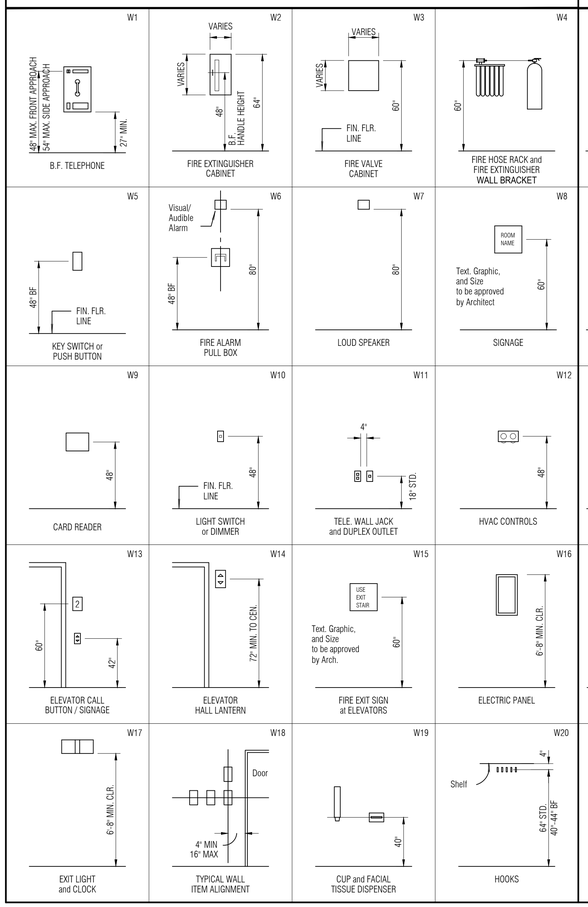
Material Poche Indications

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

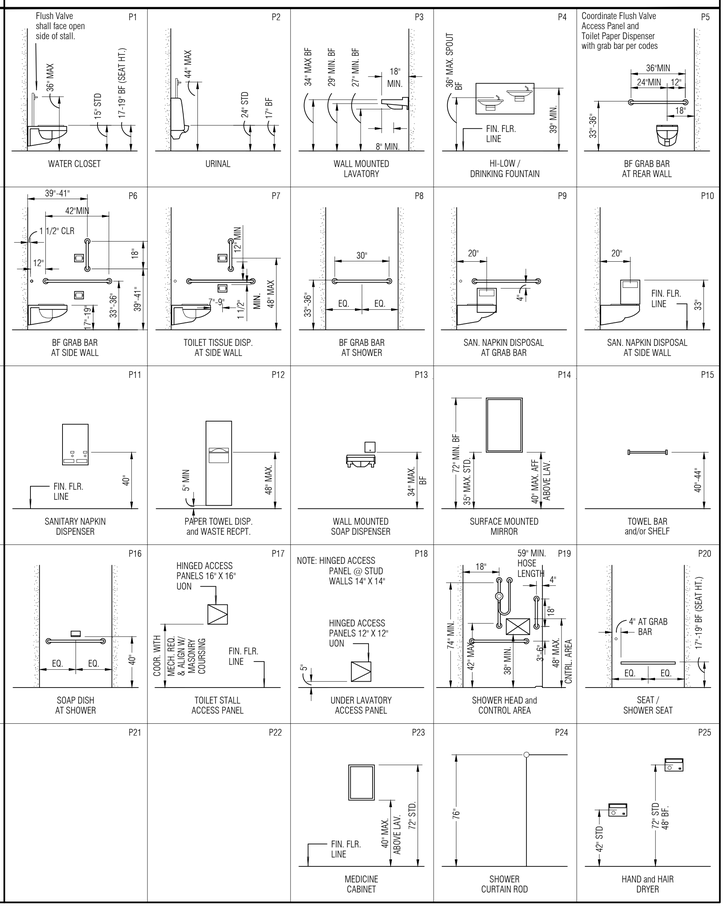
Mounting Height Schedule

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

WALL MOUNTED ACCESSORIES



PLUMBING FIXTURES and TOILET ACCESSORIES



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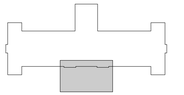
CONSULTANT

KEY PLAN



OWNER

Hamtramck Public Schools

PROJECT NAME

Kosciuszko Middle School
Structural Repairs

2333 Burger St.
Hamtramck, MI 48212

PROJECT NO.

21-167

ISSUES / REVISIONS

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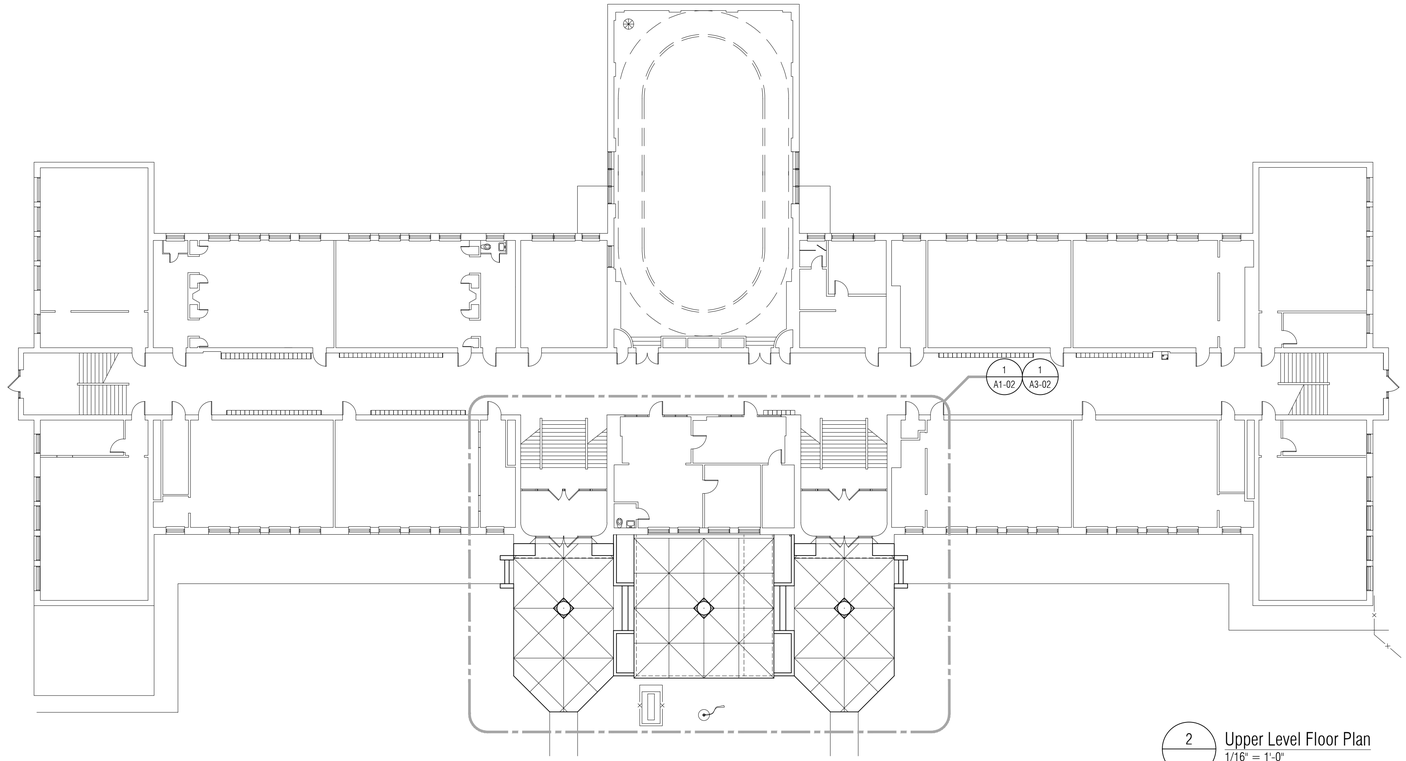
SHEET NAME

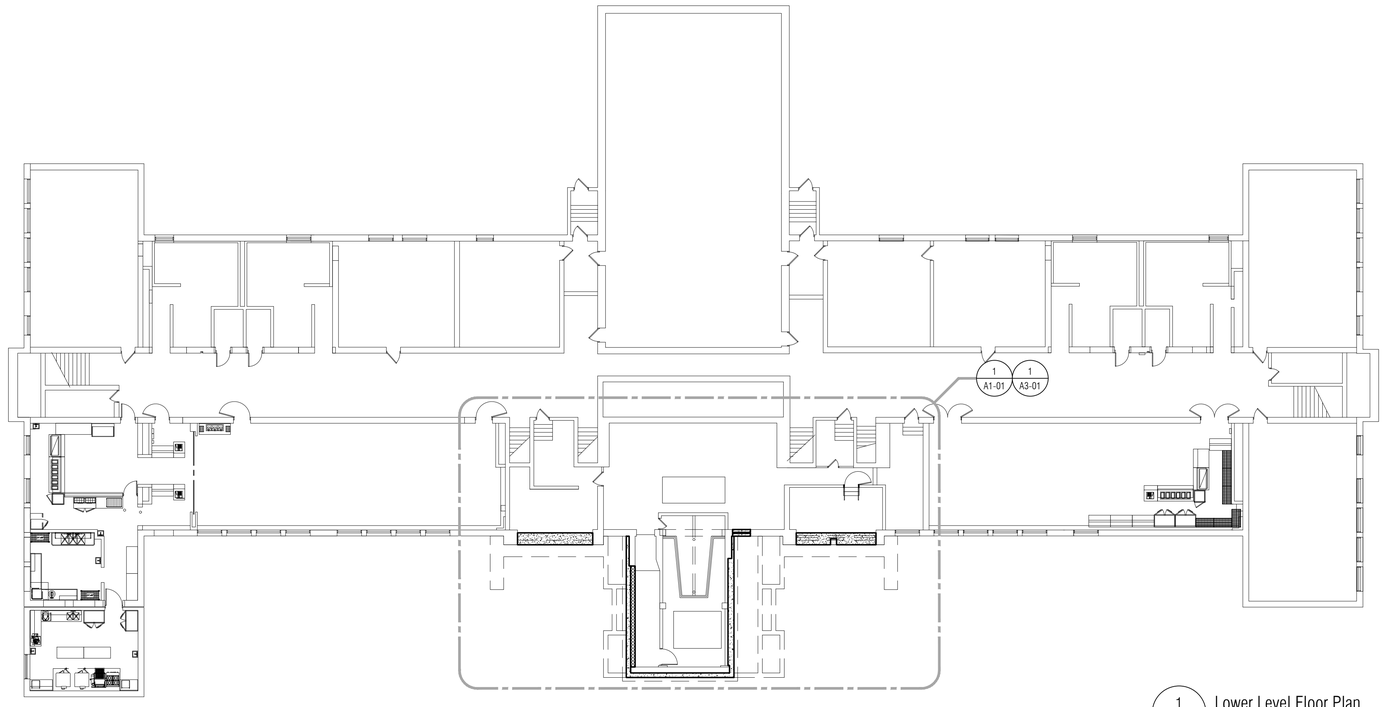
GENERAL INFORMATION

SHEET NO.

A0-01



2 Upper Level Floor Plan
1/16" = 1'-0"



1 Lower Level Floor Plan
1/16" = 1'-0"

P:\2021\21-167-HPS KMS Basement Ceiling Emergency Repair\02_CAD\A0-02 Compostie Plans.dwg - 11/21/2022 10:55:54 AM - Pam Elderkin

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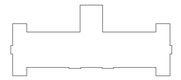
KEY PLAN



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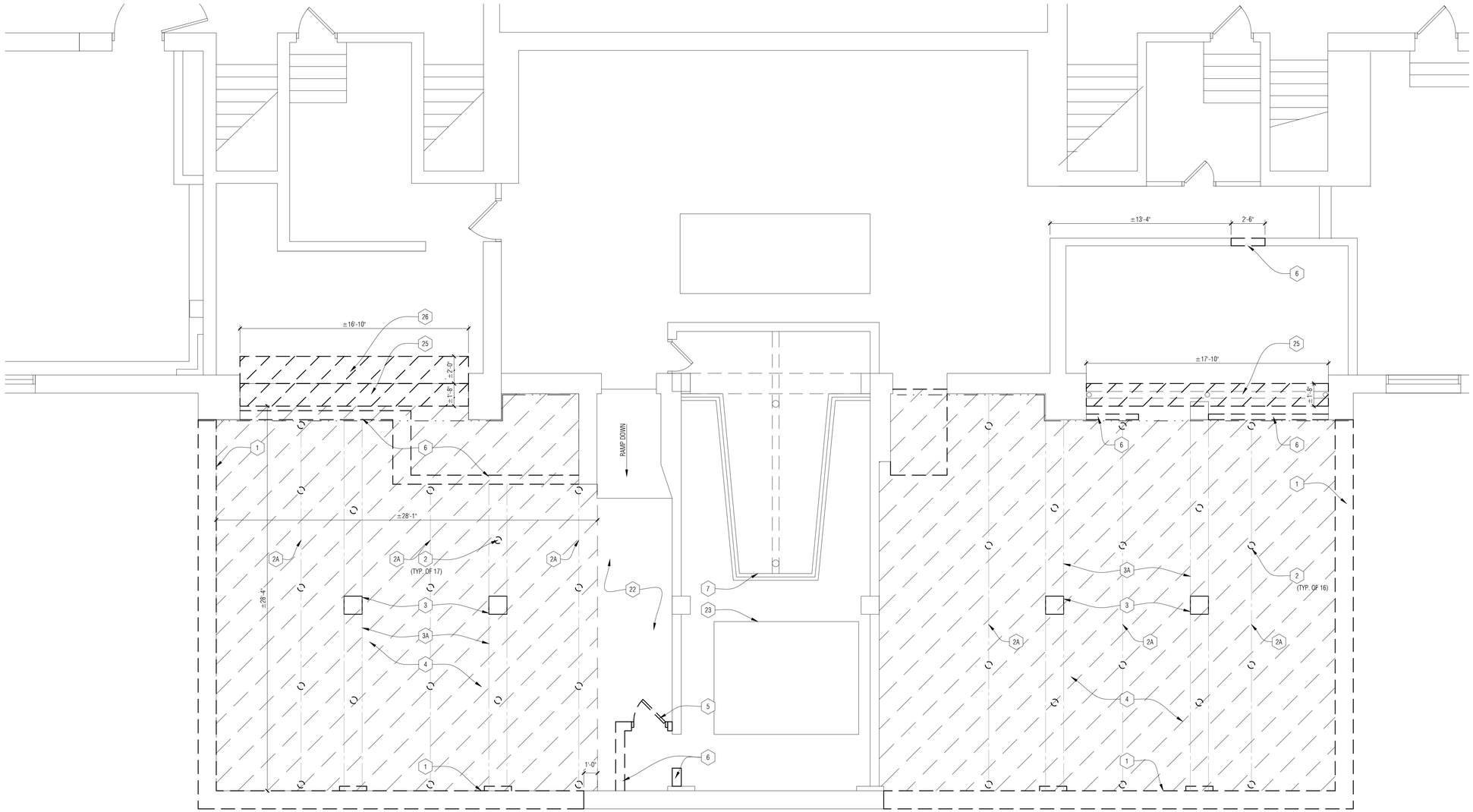
SHEET NAME

COMPOSITE
FLOOR PLANS

SHEET NO.

A0-02



DEMO FLOOR PLAN GENERAL NOTES:

A. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING AND UNDERSTANDING EXISTING CONDITIONS PRIOR TO STARTING WORK.

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

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

D. NOTIFY ARCHITECT OF ANY DISCREPANCIES AND/OR CONFLICTS WITH FLOOR PLANS OR EXISTING CONDITIONS PRIOR TO STARTING WORK.

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

F. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING BUILDING ELEMENTS AND SITE FROM DAMAGE CAUSED BY CONSTRUCTION OR CONSTRUCTION TRADES, AND SHALL REPAIR ANY DAMAGED AREAS AT NO ADDITIONAL COST TO THE OWNER.

G. DEMOLITION DRAWINGS AND DETAILS ARE PROVIDED TO SHOW THE GENERAL SCOPE OF THE DEMOLITION WORK. IT IS THE CONTRACTORS RESPONSIBILITY TO PERFORM ALL DEMOLITION WORK NECESSARY TO ACCOMPLISH THE NEW WORK. COORDINATE WITH ALL TRADES

H. DISPOSE OF ALL DEMOLITION MATERIALS LEGALLY OFF SITE.

I. PREP ALL NEW MASONRY OPENINGS TO RECEIVE NEW TOOTHED-IN MASONRY FOR LIKE NEW APPEARANCE WHERE DEMOLITION OCCURS AND WALL IS VISIBLE. COORDINATE WITH MASON.

DEMO FLOOR PLAN KEY NOTES:

1. EXISTING FOUNDATION WALL TO BE REMOVED. SHORE EXISTING TO REMAIN WALLS AS REQUIRED.
2. EXISTING STEEL TUBE COLUMN TO BE REMOVED.
2A. EXISTING STEEL BEAM TO BE REMOVED.
3. EXISTING CONCRETE PIER TO BE REMOVED.
3A. EXISTING CONCRETE BEAM TO BE REMOVED.
4. SAW CUT AND REMOVE EXISTING FLOOR SLAB (POCHE'D AREA)
5. EXISTING DOOR AND FRAME TO BE REMOVED.
6. EXISTING CMU WALL CONSTRUCTION TO BE REMOVED - COORDINATE LOCATION SO HEIGHT OF NEW DOOR DOES NOT DISTURB EXISTING WALL MOUNTED PIPES.
7. AIR FILTER ENCLOSURE TO REMAIN. PROTECT DURING DEMOLITION & CONSTRUCTION
8. ASPHALT PAVING ON CONC DECK TO BE REMOVED - REFER TO NOTES 9 & 10.
9. EXISTING CONCRETE DECK BELOW ASPHALT PAVING TO BE REMOVED.
10. EXISTING CONCRETE DECK BELOW ASPHALT PAVING TO REMAIN.
11. EXISTING CONCRETE WALK TO BE REMOVED TO NEAREST JOINT.
12. EXISTING FLAG POLE TO REMAIN.
13. EXISTING CONCRETE STEPS AND END CAPS TO BE REMOVED.
14. EXISTING GAS METERING EQUIPMENT TO REMAIN - PROTECT DURING DEMOLITION AND CONSTRUCTION - REFER TO MECHANICAL FOR GAS LINE REWORK.
14A. APPROXIMATE AREA OF TRENCH FOR NEW GAS LINE - COORDINATE W/ MECHANICAL.
15. EXISTING LOUVER TO BE REMOVED.
16. REMOVE EXISTING MASONRY TO EXTEND EXISTING LOUVER OPENING WIDTH. SHORE EXISTING WALL AS REQUIRED FOR LINTEL INSTALLATION. COORDINATE WITH MECH FOR FINAL OPENING SIZE REQUIRED.
17. EXISTING CONCRETE WALL & METAL ROOF ENCLOSURE TO BE REMOVED.
18. EXISTING FACE BRICK TO BE REMOVED. REMOVE MIN. OF 8" BEYOND NEW MASONRY OPENINGS OF FURTHEST APART LOUVERS.
19. EXISTING LIMESTONE END CAPS TO BE REMOVED AND SALVAGED FOR REUSE. CONTRACTOR TO MARK CAPS TO ALLOW REINSTALLATION AT SAME LOCATION.
20. REMOVE BRICK IN SAW TOOTH FASHION TO ALLOW FOR INSTALLATION OF NEW BRICK.
21. EXISTING LIMESTONE STEP TO REMAIN - PROTECT DURING DEMOLITION AND CONSTRUCTION.
22. EXISTING CONC TO REMAIN - PROTECT DURING DEMOLITION AND CONSTRUCTION.
23. EXISTING MECHANICAL TO REMAIN - PROTECT DURING DEMOLITION AND CONSTRUCTION.
24. EXISTING CONC TO BE REMOVED AS REQUIRED TO COMPLETE NEW SITE WORK.
25. CLEAN STEEL AND/OR REBAR AND PAINT W/ EPOXY PAINT. PREP CRACKED AND SPALDING CONCRETE TO RECEIVE NEW WORK.
26. REMOVE PORTION OF CRACKED PLASTER CEILING AND PREP AREA TO RECEIVE NEW PAINT.

N

1 / A0-02 Lower Level Demolition Plan
1/4" = 1'-0"

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P 586.469.3600

CONSULTANT

KEY PLAN

OWNER

Hamtramck
Public Schools

PROJECT NAME

Kosciuszko Middle
School
Structural Repairs

2333 Burger St.
Hamtramck, MI 48212

PROJECT NO.

21-167

ISSUES / REVISIONS

Bidding / Construction 11/17/2022

DRAWN BY

CWP

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DRM

APPROVED BY

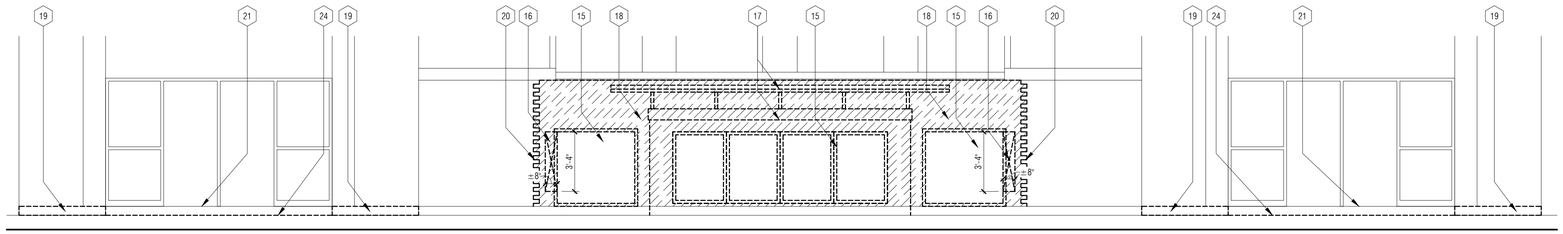
MAM

SHEET NAME

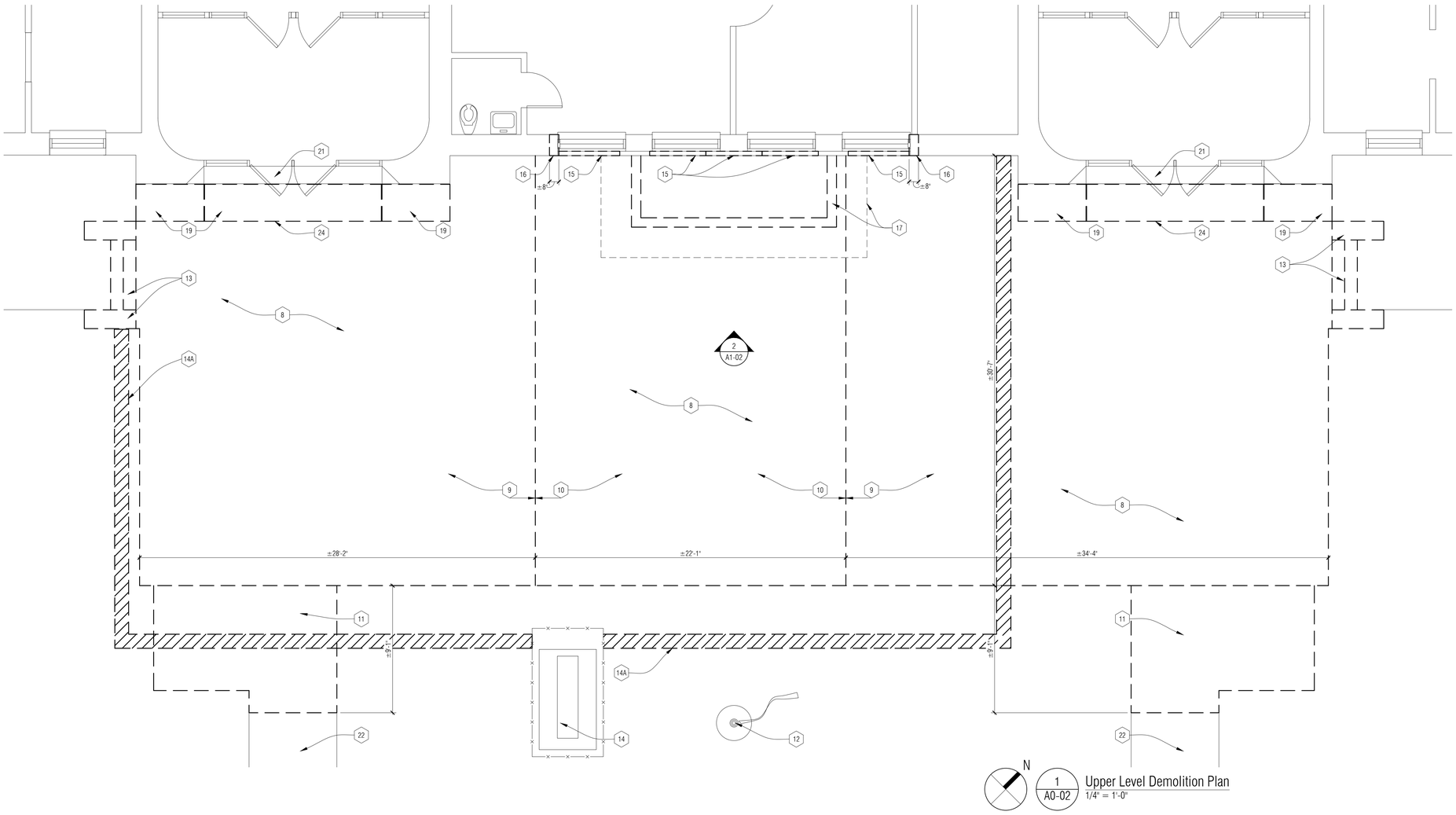
LOWER LEVEL
DEMOLITION PLAN

SHEET NO.

A1-01



2 / A1-02 Partial Demolition Elevation
1/4" = 1'-0"



1 / A0-02 Upper Level Demolition Plan
1/4" = 1'-0"

DEMO FLOOR PLAN GENERAL NOTES:

A. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING AND UNDERSTANDING EXISTING CONDITIONS PRIOR TO STARTING WORK.

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

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

D. NOTIFY ARCHITECT OF ANY DISCREPANCIES AND/OR CONFLICTS WITH FLOOR PLANS OR EXISTING CONDITIONS PRIOR TO STARTING WORK.

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

F. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING BUILDING ELEMENTS AND SITE FROM DAMAGE CAUSED BY CONSTRUCTION OR CONSTRUCTION TRADES, AND SHALL REPAIR ANY DAMAGED AREAS AT NO ADDITIONAL COST TO THE OWNER.

G. DEMOLITION DRAWINGS AND DETAILS ARE PROVIDED TO SHOW THE GENERAL SCOPE OF THE DEMOLITION WORK. IT IS THE CONTRACTORS RESPONSIBILITY TO PERFORM ALL DEMOLITION WORK NECESSARY TO ACCOMPLISH THE NEW WORK. COORDINATE WITH ALL TRADES

H. DISPOSE OF ALL DEMOLITION MATERIALS LEGALLY OFF SITE.

I. PREP ALL NEW MASONRY OPENINGS TO RECEIVE NEW TOOTHED-IN MASONRY FOR LIKE NEW APPEARANCE WHERE DEMOLITION OCCURS AND WALL IS VISIBLE. COORDINATE WITH MASON.

DEMO FLOOR PLAN KEY NOTES:

1. EXISTING FOUNDATION WALL TO BE REMOVED. SHORE EXISTING TO REMAIN WALLS AS REQUIRED.
2. EXISTING STEEL TUBE COLUMN TO BE REMOVED.
2A. EXISTING STEEL BEAM TO BE REMOVED.
3. EXISTING CONCRETE PIER TO BE REMOVED.
3A. EXISTING CONCRETE BEAM TO BE REMOVED.
4. SAW CUT AND REMOVE EXISTING FLOOR SLAB (POCHE'D AREA)
5. EXISTING DOOR AND FRAME TO BE REMOVED.
6. EXISTING CMU WALL CONSTRUCTION TO BE REMOVED - COORDINATE LOCATION SO HEIGHT OF NEW DOOR DOES NOT DISTURB EXISTING WALL MOUNTED PIPES.
7. AIR FILTER ENCLOSURE TO REMAIN. PROTECT DURING DEMOLITION & CONSTRUCTION
8. ASPHALT PAVING ON CONC DECK TO BE REMOVED - REFER TO NOTES 9 & 10.
9. EXISTING CONCRETE DECK BELOW ASPHALT PAVING TO BE REMOVED.
10. EXISTING CONCRETE DECK BELOW ASPHALT PAVING TO REMAIN.
11. EXISTING CONCRETE WALK TO BE REMOVED TO NEAREST JOINT.
12. EXISTING FLAG POLE TO REMAIN.
13. EXISTING CONCRETE STEPS AND END CAPS TO BE REMOVED.
14. EXISTING GAS METERING EQUIPMENT TO REMAIN - PROTECT DURING DEMOLITION AND CONSTRUCTION - REFER TO MECHANICAL FOR GAS LINE REWORK.
14A. APPROXIMATE AREA OF TRENCH FOR NEW GAS LINE - COORDINATE W/ MECHANICAL.
15. EXISTING LOUVER TO BE REMOVED.
16. REMOVE EXISTING MASONRY TO EXTEND EXISTING LOUVER OPENING WIDTH. SHORE EXISTING WALL AS REQUIRED FOR LINTEL INSTALLATION. COORDINATE WITH MECH FOR FINAL OPENING SIZE REQUIRED.
17. EXISTING CONCRETE WALL & METAL ROOF ENCLOSURE TO BE REMOVED.
18. EXISTING FACE BRICK TO BE REMOVED. REMOVE MIN. OF 8" BEYOND NEW MASONRY OPENINGS OF FURTHEST APART LOUVERS.
19. EXISTING LIMESTONE END CAPS TO BE REMOVED AND SALVAGED FOR REUSE. CONTRACTOR TO MARK CAPS TO ALLOW REINSTALLATION AT SAME LOCATION.
20. REMOVE BRICK IN SAW TOOTH FASHION TO ALLOW FOR INSTALLATION OF NEW BRICK.
21. EXISTING LIMESTONE STEP TO REMAIN - PROTECT DURING DEMOLITION AND CONSTRUCTION.
22. EXISTING CONC TO REMAIN - PROTECT DURING DEMOLITION AND CONSTRUCTION.
23. EXISTING MECHANICAL TO REMAIN - PROTECT DURING DEMOLITION AND CONSTRUCTION.
24. EXISTING CONC TO BE REMOVED AS REQUIRED TO COMPLETE NEW SITE WORK.
25. CLEAN STEEL AND/OR REBAR AND PAINT W/ EPOXY PAINT. PREP CRACKED AND SPALDING CONCRETE TO RECEIVE NEW WORK.
26. REMOVE PORTION OF CRACKED PLASTER CEILING AND PREP AREA TO RECEIVE NEW PAINT.

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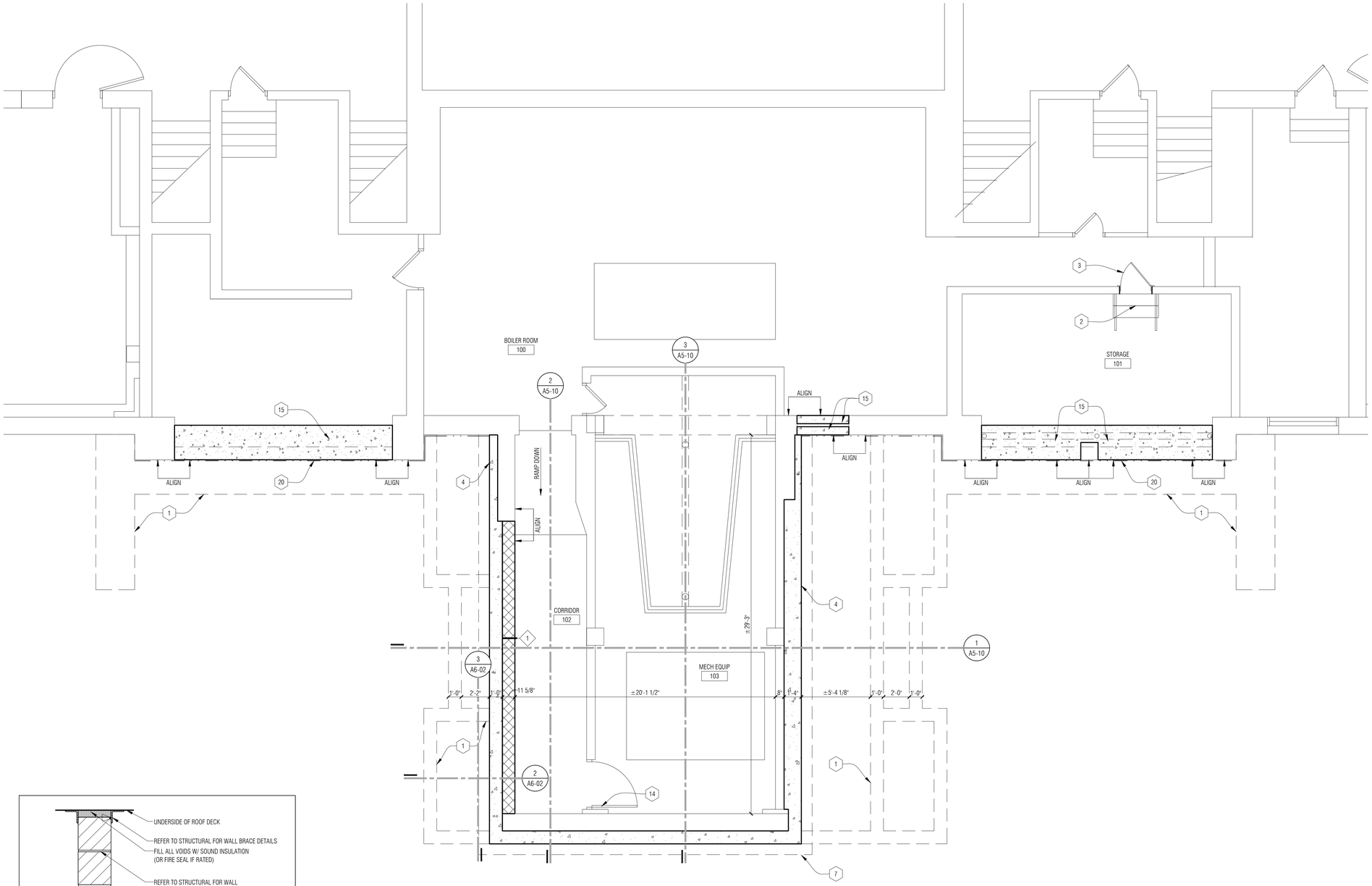
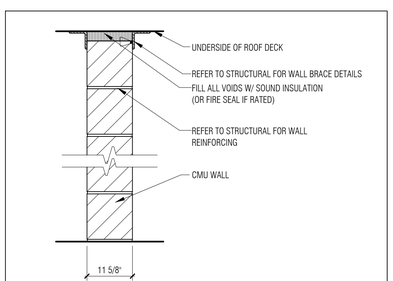
SHEET NAME

UPPER LEVEL
DEMOLITION PLAN
& ELEVATION

SHEET NO.

A1-02





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

N

1 / A3-00 Lower Level Floor Plan
1/4" = 1'-0"

FLOOR PLAN GENERAL NOTES:

A. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING AND UNDERSTANDING EXISTING CONDITIONS PRIOR TO STARTING WORK.

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

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

D. NOTIFY ARCHITECT OF ANY DISCREPANCIES AND/OR CONFLICTS WITH FLOOR PLANS OR EXISTING CONDITIONS PRIOR TO STARTING WORK.

E. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING BUILDING ELEMENTS AND SITE FROM DAMAGE CAUSED BY CONSTRUCTION OR CONSTRUCTION TRADES, AND SHALL REPAIR ANDY DAMAGED AREAS AT NO ADDITIONAL COST TO THE OWNER.

F. DISPOSE OF ALL CONSTRUCTION MATERIALS LEGALLY OFF SITE.

G. MAINTAIN EXISTING FIRE RATINGS IN EXISTING BUILDING DURING CONSTRUCTION. REFER TO LIFE SAFETY SHEETS FOR MORE INFORMATION, AS WELL AS CONSTRUCTION MANAGERS INSTRUCTIONS.

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

FLOOR PLAN KEY NOTES:

1. LINE OF REINFORCED CONCRETE FOOTINGS ABOVE. REFER TO SECTIONS AND STRUCTURAL DRAWINGS FOR MORE INFORMATION.
2. PRE-MANUFACTURED METAL STAIRS DOWN TO LOWER FLOOR LEVEL - REFER TO SPECIFICATIONS. COORDINATE HEIGHT OF STAIRS WITH NEW WALL OPENING.
3. NEW 30"w X 30"h ACCESS DOOR IN MODIFIED EXISTING MASONRY WALL - COORDINATE EXISTING CLEAR HEIGHT AVAILABLE FOR DOOR WITH EXISTING WALL MOUNTED PIPING PRIOR TO ORDERING. INFORM ARCHITECT IF CALLED OUT DOOR SIZE WILL NOT FIT IN EXISTING CONDITIONS.
4. NEW REINFORCED CONCRETE WALL AROUND EXISTING WALL CONSTRUCTION. REFER TO STRUCTURAL.
5. ALTERNATE #1: PRE-CAST CONCRETE SPHERICAL BOLLARD - REFER TO SPECIFICATIONS.
6. EXISTING CONCRETE WALK TO REMAIN - PROTECT DURING CONSTRUCITON.
7. LINE OF NEW FOUNDATION BELOW - REFER TO STRUCTURAL.
8. SUPPORTED SLAB - REFER TO STRUCTURAL DRAWINGS.
9. EXISTING GAS METERING EQUIPMENT TO REMAIN - COORDINATE NEW GAS LINE INSTALLATION WITH MECHANICAL. PROTECT DURING CONSTRUCTION.
10. APPROXIMATE LOCATION OF RELOCATED GAS LINE TO ENTER BUILDING - COORDINATE WITH EXISTING EQUIPMENT, NEW PLANTER LOCATION AND MECHANICAL DRAWINGS. PAINT EXPOSED CONDUIT AND SEAL AT BUILDING.
11. EXISTING LIMESTONE STEP REINSTALLED IN SAME LOCATION ON NEW CONCRETE FOOTING. REFER TO STRUCTURAL.
12. NEW 6" CONCRETE PAVING ON COMPACTED GRANULAR FILL ON ENGINEERED FILL TO FILL VOID - JOINT LINE PATTERN TO BE COORDINATED W/ALTERNATE - CONTRACTOR TO PROVIDE SHOP DRAWING LAYOUT PRIOR TO CONSTRUCTION.
13. NEW POURED CONCRETE ON RIGID INSULATION & CONCRETE DECK. REFER TO WALL SECTIONS AND STRUCTURAL DRAWINGS.
14. NEW 3'-6"w X 6'-6"h HOLLOW METAL DOOR AND FRAME- REFER TO SPECIFICATIONS AND DOOR HARDWARE SECTION - DOOR TO BE 60 MIN RATED. SECURE FRAME TO EXISTING CMU/CONCRETE JAMBS. & HEAD. INFILL HEADER AS REQUIRED TO ACHIEVE COMPLETE SEAL OF FAN ROOM. VERIFY SIZE OF OPENING PRIOR TO ORDERING NEW DOOR.
15. INFILL EXISTING OPENING WITH REINFORCED CONCRETE. REFER TO STRUCTURAL DRAWINGS FOR REINFORCING INFORMATION. INTENT OF INFILL IS TO SUPPORT EXISTING CONC FOUNDATION BEAM. COORDINATE LOCATION AND VERIFY THICKNESS IN FIELD.
16. ALTERNATE #1: CURVED PRE-CAST CONCRETE BENCH - REFER TO SPECIFICATIONS.
17. NEW CONCRETE STEPS - REFER TO SECTIONS AND STRUCTURAL DRAWINGS.
18. CONCRETE PLANTERS - REFER TO SECTIONS AND STRUCTURAL DRAWINGS.
19. RESTORE ALL LAWN AREAS DISTURBED DUE TO CONSTRUCTION - REFER TO SPECIFICATIONS.
20. APPLY WATERPROOFING TO EXISTING BUILDING WALL PRIOR TO INFILL - COORDINATE W/ STRUCTURAL.

PARTNERS

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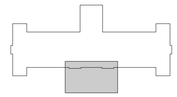
CONSULTANT

KEY PLAN



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Structural Repairs

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PROJECT NO.

21-167

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CWP

CHECKED BY

DRM

APPROVED BY

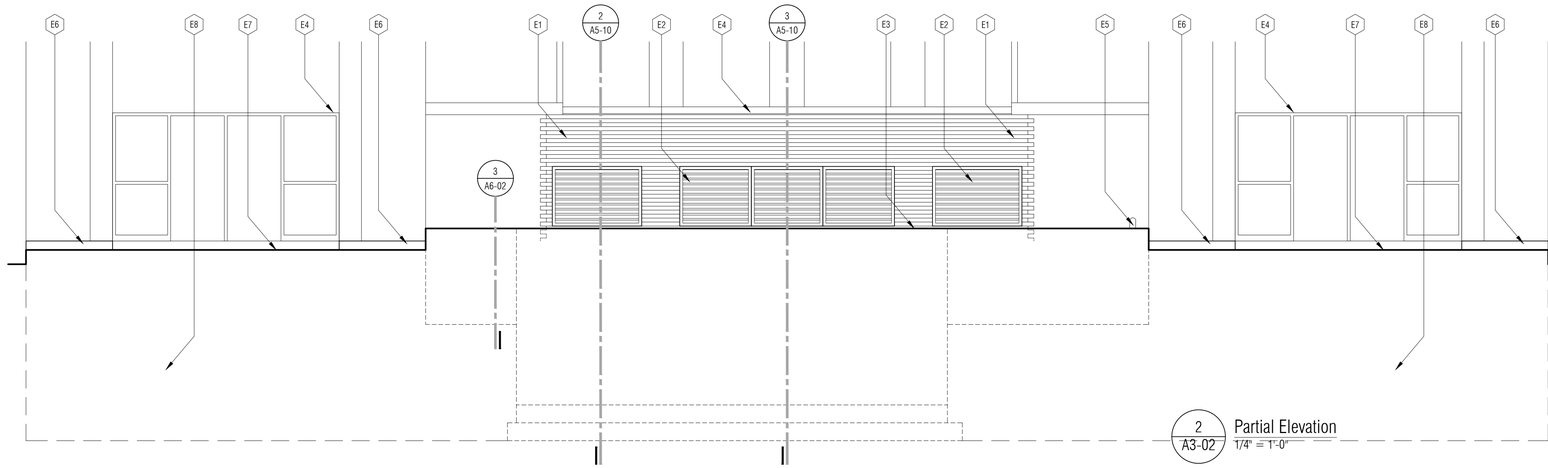
MAM

SHEET NAME

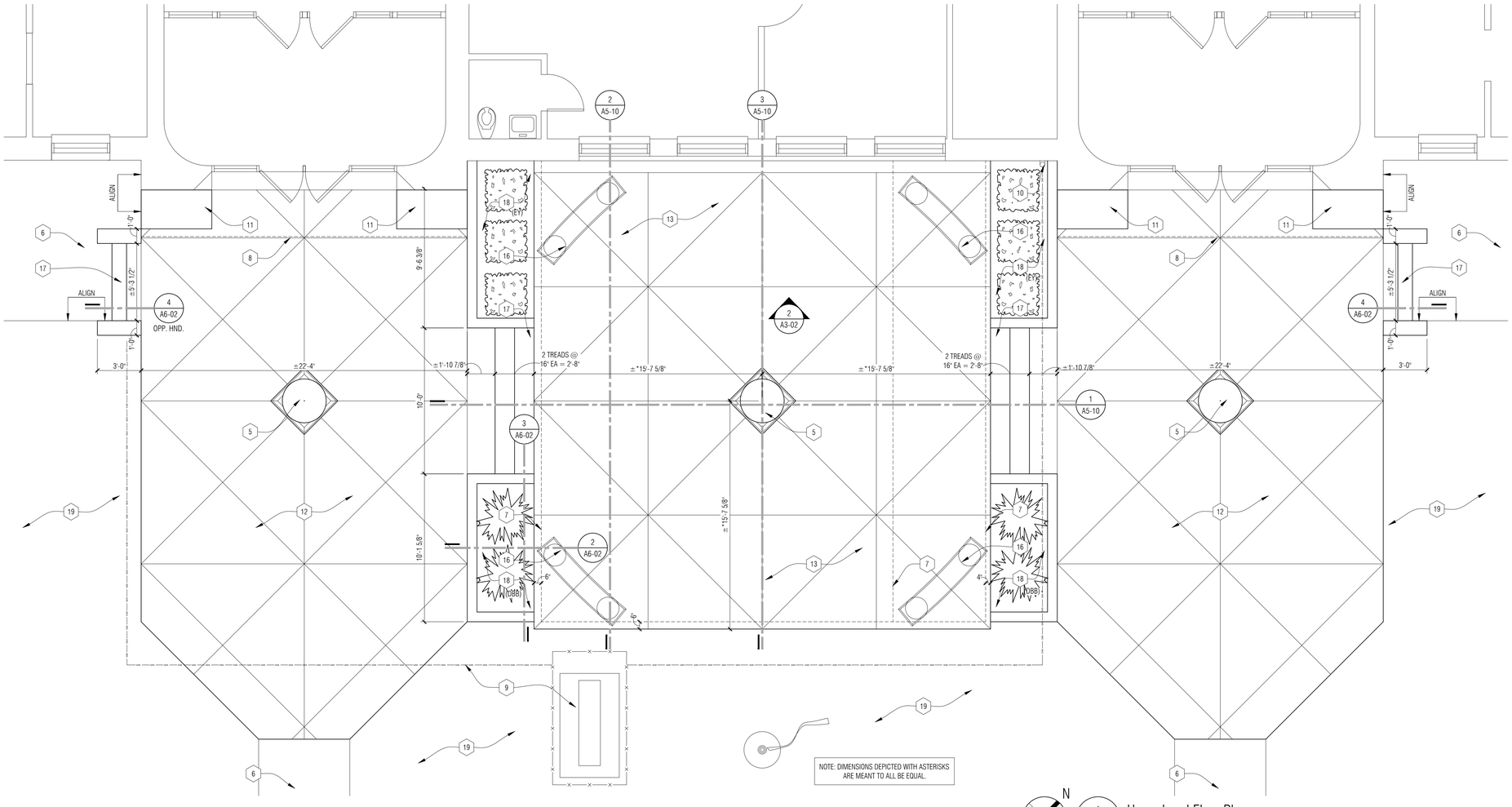
LOWER LEVEL FLOOR PLAN

SHEET NO.

A3-01



2 A3-02 Partial Elevation
1/4" = 1'-0"



NOTE: DIMENSIONS DEPICTED WITH ASTERISKS ARE MEANT TO ALL BE EQUAL.

N

1 A0-02 Upper Level Floor Plan
1/4" = 1'-0"

FLOOR PLAN GENERAL NOTES:

A. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING AND UNDERSTANDING EXISTING CONDITIONS PRIOR TO STARTING WORK.

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FLOOR PLAN KEY NOTES:

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4. NEW REINFORCED CONCRETE WALL AROUND EXISTING WALL CONSTRUCTION. REFER TO STRUCTURAL.
5. ALTERNATE #1: PRE-CAST CONCRETE SPHERICAL BOLLARD - REFER TO SPECIFICATIONS.
6. EXISTING CONCRETE WALK TO REMAIN - PROTECT DURING CONSTRUCITON.
7. LINE OF NEW FOUNDATION BELOW - REFER TO STRUCTURAL.
8. SUPPORTED SLAB - REFER TO STRUCTURAL DRAWINGS.
9. EXISTING GAS METERING EQUIPMENT TO REMAIN - COORDINATE NEW GAS LINE INSTALLATION WITH MECHANICAL. PROTECT DURING CONSTRUCTION.
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17. NEW CONCRETE STEPS - REFER TO SECTIONS AND STRUCTURAL DRAWINGS.
18. CONCRETE PLANTERS - REFER TO SECTIONS AND STRUCTURAL DRAWINGS.
19. RESTORE ALL LAWN AREAS DISTURBED DUE TO CONSTRUCTION - REFER TO SPECIFICATIONS.
20. APPLY WATERPROOFING TO EXISTING BUILDING WALL PRIOR TO BACKFILL - REFER TO STRUCTURAL.

ELEVATION KEY NOTES:

- E1 NEW RUNNING BOND FACE BRICK TO MATCH EXISTING - REFER TO SPECIFICATIONS. TOOTH NEW BRICK INTO EXISTING.
- E2 PRE-FINISHED MECHANICAL LOUVER - REFER TO MECH.
- E3 LINE OF NEW CONCRETE DECK.
- E4 EXISTING BUILDING ELEMENTS TO REMAIN.
- E5 RELOCATED GAS LINE - REFER TO MECHANICAL DRAWINGS.
- E6 EXISTING LIMESTONE STEP REINSTALLED IN SAME LOCATION ON NEW CONCRETE FOOTING - REFER TO STRUCT.
- E7 LINE OF NEW CONCRETE PAVING.
- E8 AREA OF VOID TO BE FILLED.

PLANTING SCHEDULE

QTY.	DESCRIPTION	SIZE / ROOT
6	(EY) EVERLOW YEW	30"-36"
4	(DBB)DWARF BURNING BUSH	30"-36"

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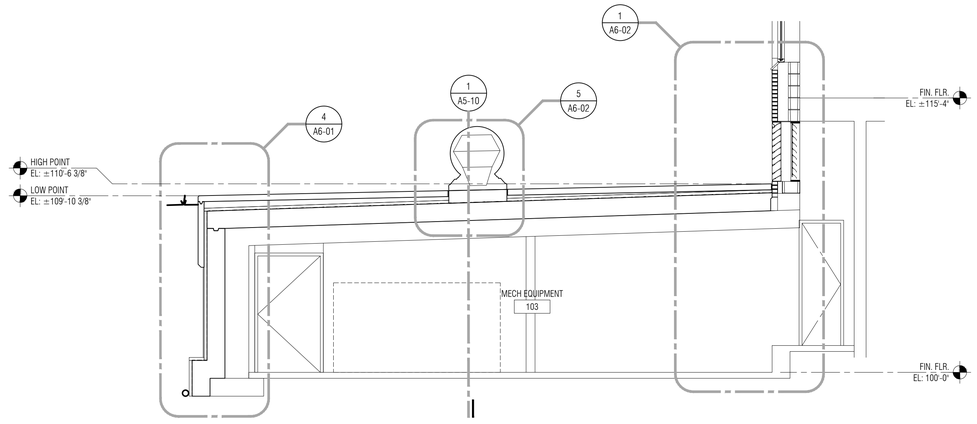
SHEET NAME

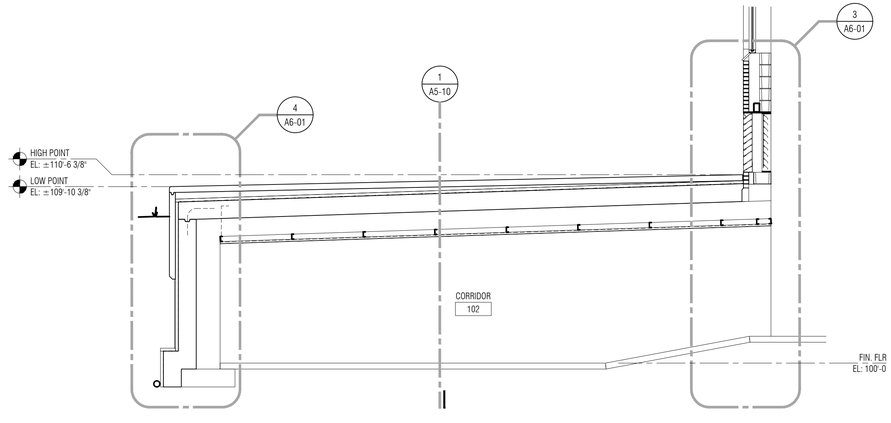
UPPER LEVEL FLOOR PLAN & ELEVATION

SHEET NO.

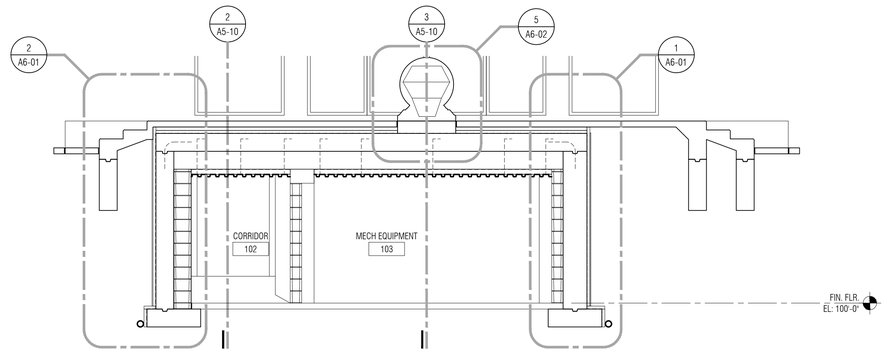
A3-02



3 A3-01 Building Section
1/4" = 1'-0"
A3-02



2 A3-01 Building Section
1/4" = 1'-0"
A3-02



1 A3-01 Building Section
1/4" = 1'-0"
A3-02

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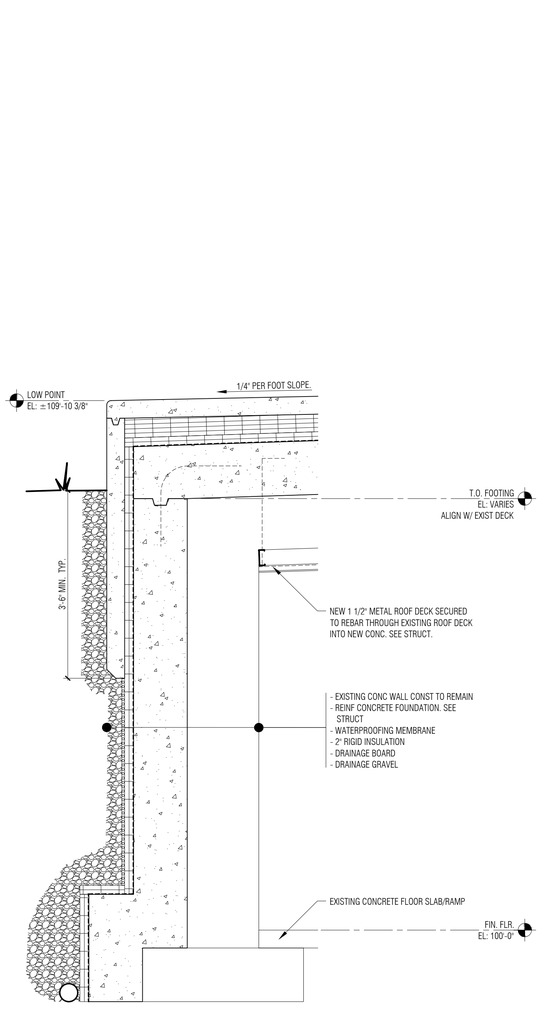
SHEET NAME

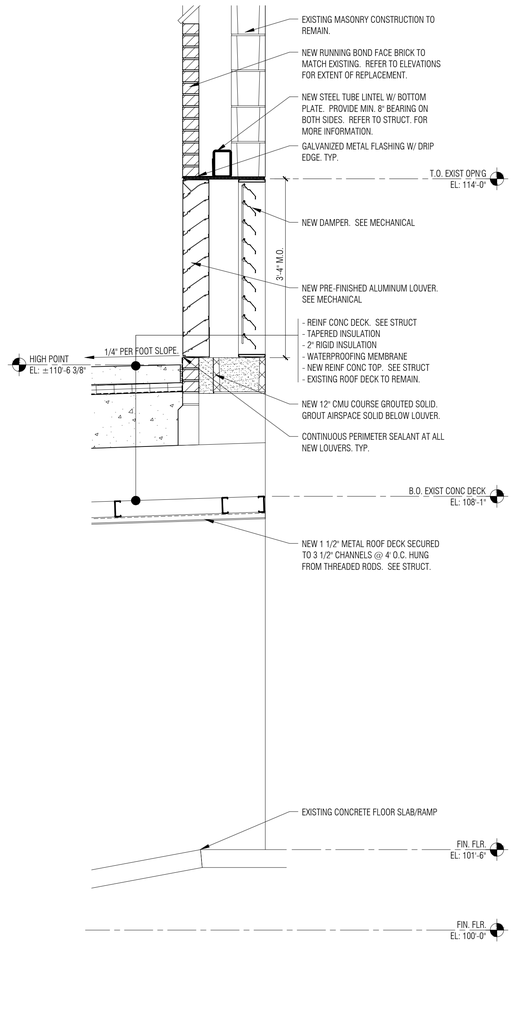
BUILDING
SECTIONS

SHEET NO.

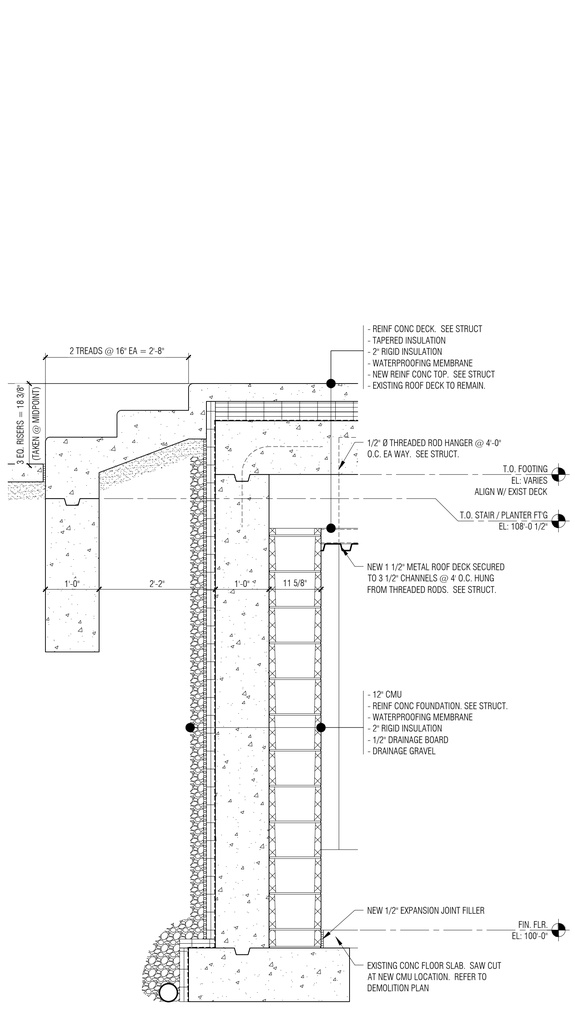
A5-10



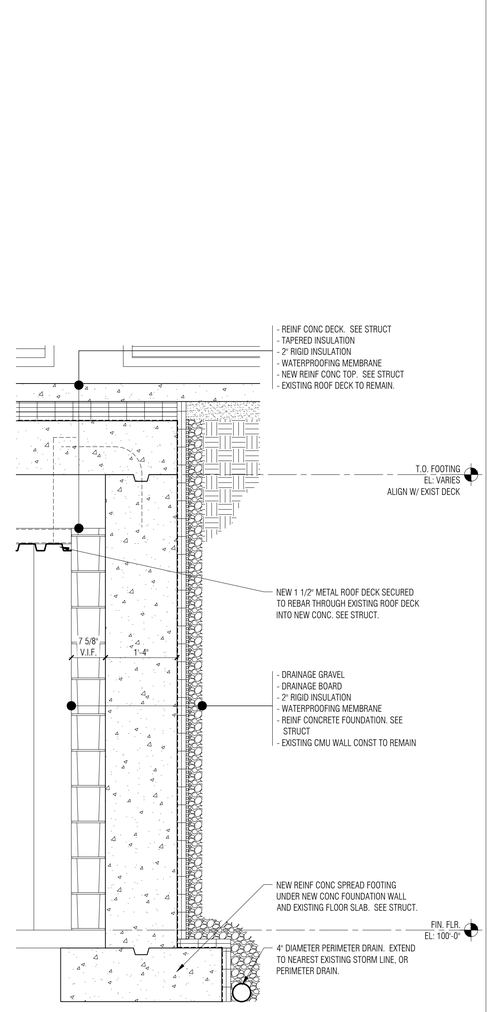
4 / A5-10 Wall Section
3/4" = 1'-0"



3 / A5-10 Wall Section
3/4" = 1'-0"



2 / A5-10 Wall Section
3/4" = 1'-0"



1 / A5-10 Wall Section
3/4" = 1'-0"

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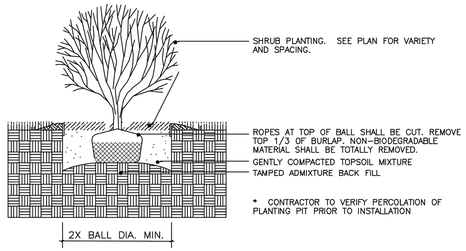
SHEET NAME

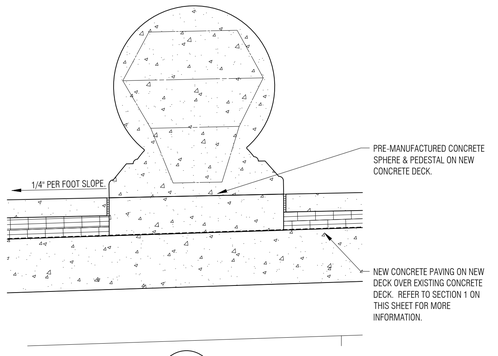
WALL SECTIONS

SHEET NO.

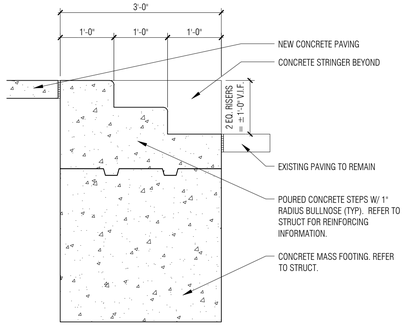
A6-01



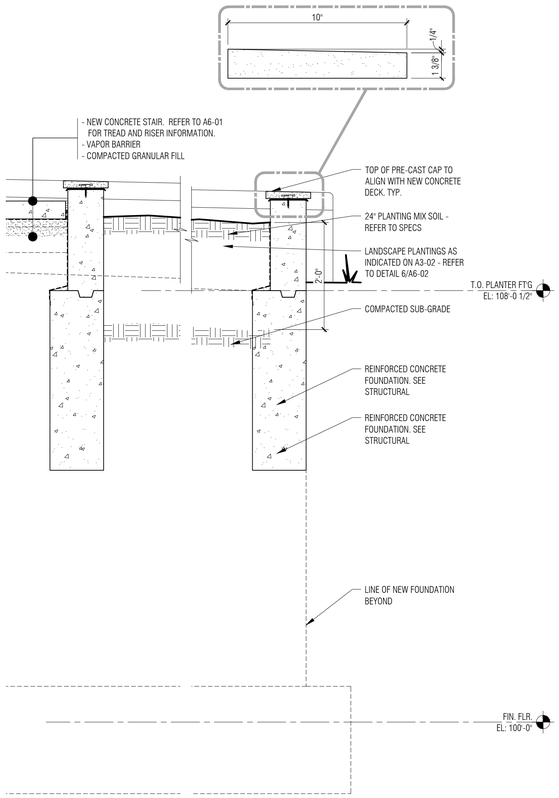
6 / PR-01 Typical Shrub Planting Detail at Concrete Planters
N.T.S.



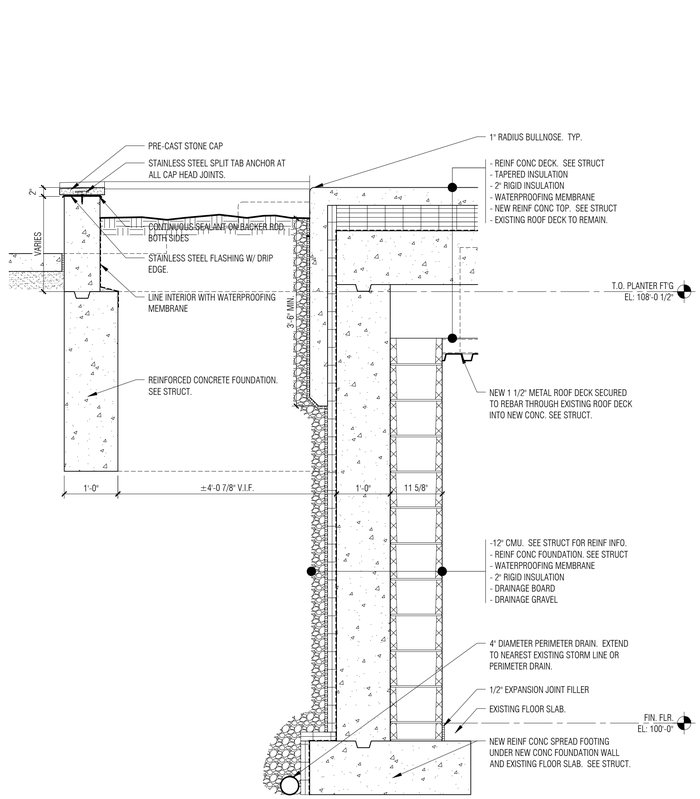
5 / A5-10 Concrete Sphere Detail
3/4" = 1'-0"



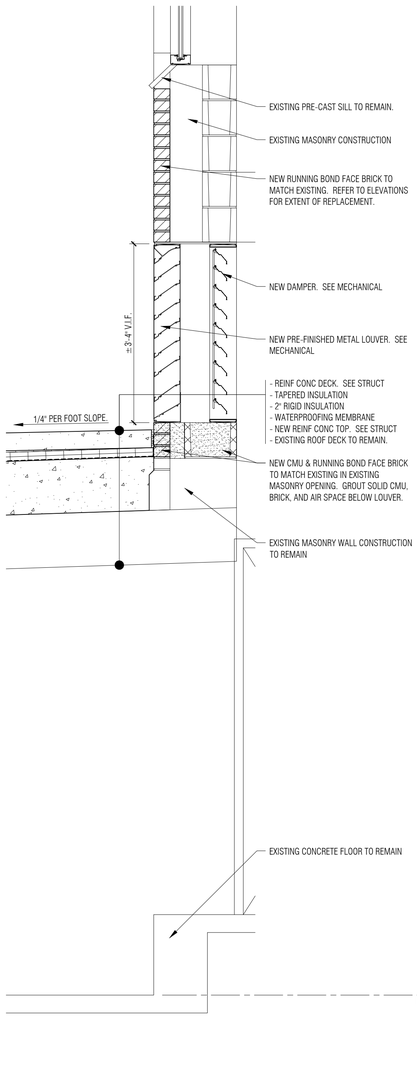
4 / A3-02 Concrete Stair Detail
3/4" = 1'-0"



3 / A3-01 Wall Section
3/4" = 1'-0"
A3-02



2 / A3-01 Wall Section
3/4" = 1'-0"
A3-02



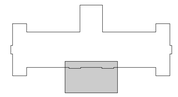
1 / A5-10 Wall Section
3/4" = 1'-0"

PARTNERS

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

CONSULTANT

KEY PLAN



OWNER

Hamtramck
Public Schools

PROJECT NAME

Kosciuszko Middle
School
Structural Repairs

2333 Burger St.
Hamtramck, MI 48212

PROJECT NO.

21-167

ISSUES / REVISIONS

Bidding / Construction 11/17/2022

DRAWN BY

CWP

CHECKED BY

DRM

APPROVED BY

MAM

SHEET NAME

WALL SECTIONS

SHEET NO.

A6-02

DESIGN CRITERIA AND LOADS

1. STRUCTURE HAS BEEN DESIGNED TO COMPLY WITH:
   IBC 2018
   ASCE/SEI 7-16
   ACI 318-14
   ACI 530-13
   AISC 360-16
   AWS D1.1
2. RISK CATEGORY III
3. LIVE LOADS:

PUBLIC AREAS	100 PSF
HANDRAILS	MAX SIMULTANEOUS VERT AND HORIZ THRUST 50 PLF APPLIED AT THE TOP OF THE RAILING OR 200 LBS IN ANY DIRECTION

4. SNOW:

GROUND SNOW	25 PSF
SNOW EXPOSURE FACTOR	1.0
THERMAL FACTOR	1.0
IMPORTANCE FACTOR	1.1

GENERAL

1. NEITHER THE PROFESSIONAL ACTIVITIES OF THE ENGINEER, NOR THE PRESENCE OF THE ENGINEER OR THEIR EMPLOYEES AND SUBCONSULTANTS AT THE CONSTRUCTION SITE, SHALL RELIEVE THE CONTRACTOR AND ANY OTHER ENTITY OF THEIR OBLIGATIONS, DUTIES AND RESPONSIBILITIES INCLUDING BUT NOT LIMITED TO, CONSTRUCTION MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES NECESSARY FOR PERFORMING, SUPERINTENDING OR COORDINATING ALL PORTIONS OF THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND ANY HEALTH OR SAFETY PRECAUTIONS REQUIRED BY ANY REGULATORY AGENCIES. THE ENGINEER AND THEIR PERSONNEL HAVE NO AUTHORITY TO EXERCISE ANY CONTROL OVER ANY CONSTRUCTION CONTRACTOR OR OTHER ENTITY OR THEIR EMPLOYEES IN CONNECTION WITH THEIR WORK OR ANY HEALTH OR SAFETY PRECAUTIONS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE JOBSITE SAFETY. THE ENGINEER AND THE ENGINEER'S CONSULTANTS SHALL BE MADE ADDITIONAL INSUREDS UNDER THE CONTRACTOR'S GENERAL LIABILITY INSURANCE POLICY.
2. ALL DRAWINGS AND SPECIFICATIONS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS AND SPECIFICATIONS 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. 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.
4. 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.
5. 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.
6. 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.
7. 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.
8. 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.
9. THE CONTRACT DOCUMENTS AND SPECIFICATIONS 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 DOES NOT IN ANY WAY RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITIES FOR THE ABOVE.
10. 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.
11. 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.
12. NO HOLES, NOTCHES, BLOCKOUTS, ETC. ARE ALLOWED IN STRUCTURAL ELEMENTS UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER.
13. BEFORE SUBMITTING A PROPOSAL FOR THIS WORK, EACH BIDDER SHALL VISIT THE PREMISES AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS, TEMPORARY CONSTRUCTION REQUIRED, QUANTITIES AND TYPE OF EQUIPMENT, ETC. THE BID SHALL INCLUDE ALL SUMS REQUIRED TO DO THE WORK WITHIN THE EXISTING CONDITIONS.
14. SHOP DRAWINGS 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.
15. SHOP DRAWINGS SHALL BE REVIEWED BY THE ARCHITECT/STRUCTURAL ENGINEER OR GENERAL CONFORMANCE WITH DESIGN CONCEPT ONLY. NOTATIONS MADE BY THE ARCHITECT/STRUCTURAL ENGINEER ON THE SHOP DRAWINGS DO NOT RELIEVE THE CONTRACTOR FROM COMPLYING WITH THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS.
16. EXISTING CONDITIONS:
    A. EXISTING STRUCTURAL INFORMATION SHOWN WAS OBTAINED FROM FIELD TAKE-OFF BY IMEG AS PERMITTED BY ACCESS RESTRICTIONS DURING DESIGN.
    B. ALL INFORMATION SHOWN ON THE DRAWINGS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS THE BEST PRESENT KNOWLEDGE. CONTRACTOR TO VERIFY EXISTING INFORMATION, DIMENSIONS AND SIZES AS REQUIRED TO COMPLETE THEIR WORK. WHERE ACTUAL CONDITIONS CONFLICT WITH THE DRAWINGS, THEY SHALL BE REPORTED TO THE AOR OR SEOR SO PROPER CLARIFICATION MAY BE MADE. MODIFICATION OF CONSTRUCTION DETAILS SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF THE ARCHITECT OR STRUCTURAL ENGINEER.

DEMOLITION

1. ALL DEMOLITION SHALL BE CARRIED OUT IN SUCH A WAY AS TO NOT DAMAGE EXISTING ELEMENTS WHICH ARE TO REMAIN.
2. ALL ELEMENTS WHICH ARE TO REMAIN AND WHICH ARE DAMAGED DURING DEMOLITION WORK SHALL BE REPLACED AT NO ADDED COST. EXISTING ELEMENTS ARE TO BE PROTECTED TO THE FULLEST EXTENT POSSIBLE TO REDUCE SUCH DAMAGE TO A MINIMUM.

SHORING

1. WHERE THERE IS NOT SUFFICIENT SPACE FOR SLOPED EMBANKMENTS, SHORING WILL BE REQUIRED. REFER TO CONTRACT DOCUMENTS.
2. REFER TO 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.

EARTHWORK

1. SOIL PROPERTIES (ASSUMED - TO BE VERIFIED DURING CONSTRUCTION):
   ALLOWABLE NET SOIL BEARING PRESSURE:
   FOOTINGS 2,000 PSF (NATIVE SOIL OR ENGINEERED FILL)
   ANTICIPATED DEPTH TO ALLOWABLE:
   FROST DEPTH 3.5 FT (MIN)

   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.
2. EXTREME CARE SHALL BE EXERCISED WHEN EXCAVATING OR GRADING ADJACENT TO EXISTING STRUCTURES OR IMPROVEMENTS TO NOT DAMAGE OR UNDERMINE FOUNDATIONS, WALLS, SLABS, UTILITIES, ETC.
3. THE MOISTURE CONTENT OF ONSITE CLAYEY SOILS AT THE TIME OF COMPACTION SHALL BE BETWEEN 2-3% ABOVE OPTIMUM MOISTURE CONTENT.
4. ANY IMPORT FILL SOIL REQUIRED SHALL HAVE A LOW POTENTIAL FOR EXPANSION AND SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER OF RECORD PRIOR TO IMPORTING.
5. ALL SITE WORK SHALL BE PERFORMED UNDER THE INSPECTION OF THE SPECIAL INSPECTION AGENCY. VARIATIONS IN SITE CONDITIONS AND THE GEOTECHNICAL REPORT SHALL BE REPORTED TO THE ARCHITECT/STRUCTURAL ENGINEER FOR CLARIFICATIONS PRIOR TO PROCEEDING.
6. WHERE DEEP EXCAVATION IS REQUIRED, AND THE NECESSARY SPACE IS AVAILABLE, TEMPORARY UNSURCHARGED EXCAVATIONS MAY BE SLOPED BACK IN LIEU OF SHORING. EXCAVATIONS SHALL NOT BE STEEPER THAN 1 HORIZONTAL TO 1 VERTICAL PER RECOMMENDATIONS OF THE GEOTECHNICAL REPORT. THE TOP OF EXCAVATIONS SHALL BE PROTECTED BY BARRICADES, ETC., TO PREVENT SURCHARGING AND BERMED TO PREVENT WATER RUN-OFF FROM ENTERING AND ERODING THE EXCAVATION. ADJACENT TO EXISTING BUILDINGS OR IMPROVEMENT, THE EXCAVATION SHALL BE RESTRICTED TO 1.5:1 (HORIZONTAL TO VERTICAL) DOWNWARD FROM THE TOE OF THE EXISTING FOOTING, ETC. UNLESS SPECIAL PROCEDURES ARE IMPLEMENTED AND APPROVED BY THE ARCHITECT. ALL APPLICABLE REQUIREMENTS OF THE CALIFORNIA CONSTRUCTION AND GENERAL INDUSTRY SAFETY ORDERS, THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, AND THE CONSTRUCTION SAFETY ACT SHALL BE MET. IF AMPLE SPACE IS NOT AVAILABLE FOR THE REQUIRED EXCAVATION SLOPE, OR AS A CONSTRUCTION OPTION, SHORING MAY BE A POSSIBLE ALTERNATE.
7. ADEQUATE DRAINAGE SHALL BE PROVIDED BY MEANS OF EITHER WEEP HOLES WITH PERMEABLE MATERIAL INSTALLED BEHIND THE WALL OR BY MEANS OF A SYSTEM OF SUBDRAINS. FOR THE SUBDRAIN SYSTEM, THE TOP OF THE PERFORATED PIPE SHOULD BE BELOW THE BOTTOM OF THE ADJACENT SLAB OR GRADE AT THE TOE OF THE WALL. DRAINS SHOULD CONSIST OF A DRAIN ROCK LAYER AT LEAST 12 INCHES THICK THAT EXTENDS TO WITHIN 2 FEET OF THE GROUND SURFACE. FOUR-INCH-DIAMETER PERFORATED PLASTIC PIPE SHOULD BE INSTALLED, WITH PERFORATIONS DOWN, ALONG THE BASE OF THE WALL ON A 2-INCH-THICK BED OF DRAIN ROCK. THE PIPE SHOULD BE SLOPED TO DRAIN BY GRAVITY TO A SUITABLE DRAINAGE FACILITY. DRAIN ROCK SHOULD CONFORM TO CALTRANS SPECIFICATIONS FOR CLASS 2 PERMEABLE MATERIAL. A MORE OPEN-GRADED MATERIAL, SUCH AS 3/4" CRUSHED ROCK, COULD BE USED PROVIDED THE ROCK IS WRAPPED IN A GEOTEXTILE FILTER FABRIC (MIRAFI 140 N OR EQUIVALENT) TO REDUCE THE MIGRATION OF FINE-GRADED SOILS INTO THE DRAIN ROCK. PAVING OR A TWO-FOOT-THICK CAP OF CLAYEY SOIL SHOULD BE PLACED OVER THE DRAIN ROCK TO INHIBIT SURFACE WATER INFILTRATION. DRAINPIPES SHOULD OUTLET TO AN APPROPRIATE DRAINAGE FACILITY. ALTERNATIVELY, WALL BACK-DRAINAGE CAN BE PROVIDED BY PERFORATED DRAINAGE MATERIAL, SUCH AS MIRADRAIN 6000 OR AN APPROVED EQUIVALENT. THE DRAINAGE MATERIAL CAN BE INSTALLED ON THE SOIL FACE OF THE BASEMENT WALL AND SHOULD TERMINATE AT A 4-INCH-DIAMETER PERFORATED PLASTIC PIPE SURROUNDED BY AT LEAST 6 INCHES OF DRAIN ROCK AS DEFINED ABOVE.
8. FOR TRENCHES OR EXCAVATIONS FIVE FEET OR MORE IN DEPTH INTO WHICH A PERSON IS REQUIRED TO DESCEND, THE CONTRACTOR IS TO OBTAIN THE NECESSARY PERMITS FROM THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, PRIOR TO THE START OF EXCAVATION.

REINFORCING STEEL

1. CONCRETE REINFORCING STEEL SHALL BE HIGH STRENGTH NEW BILLET STEEL CONFORMING TO THE FOLLOWING STANDARDS:

DEFORMED BARS	ASTM A615, GR60	Fy = 60 KSI
DEFORMED BARS IN SFRS	ASTM A706, GR 60	Fy = 60 KSI
WELDED WIRE REINFORCING	ASTM A1064	Fy = 65 KSI
EPOXY-COATED BARS	ASTM A775	Fy = 60 KSI
GALVANIZED-COATED BARS	ASTM A767	Fy = 60 KSI
STEEL WIRE	ASTM A1064	Fy = 60 KSI

2. 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, JOISTS 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"

3. BAR SPLICES SHALL BE PROVIDED WHERE INDICATED ON THE DRAWINGS. ALL SPLICES SHALL BE CLASS 'B' AS DEFINED IN ACI 318. IF SPLICE LENGTH IS NOT GIVEN ON THE DRAWINGS, PROVIDE LAP LENGTH (IN INCHES) AS FOLLOWS:

	3000 PSI CONCRETE		4000 PSI CONCRETE		5000 PSI CONCRETE	
BAR SIZE	OTHER	TOP	OTHER	TOP	OTHER	TOP
#3	22	28	19	25	17	22
#4	29	38	25	33	23	29
#5	36	47	31	41	28	36
#6	43	56	37	49	34	44

   LAP LENGTHS ASSUME CLEAR SPACING BETWEEN BARS OF 2 BAR DIAMETERS, AND A MINIMUM COVER OF 1 BAR DIAMETER. FOR DEVELOPMENT LENGTHS, DIVIDE BY 1.3. TOP BARS ARE DEFINED AS HORIZONTAL BARS WITH MORE THAN 1'-0" OF FRESH CONCRETE BELOW.
4. ALL REINFORCING IN CONCRETE USED FOR THE CONTAINMENT OF WATER SHALL BE HOT-DIP GALVANIZED OR EPOXY-COATED.
5. USE LOW HYDROGEN ELECTRODES, GRADE E-90, FOR WELDING OF REINFORCING BARS.

MASONRY

1. MINIMUM 28-DAY COMPRESSIVE STRENGTHS FOR MASONRY CONSTRUCTION SHALL BE:

DESIGN ASSEMBLY STRENGTH, f'm	2000 PSI
INDIVIDUAL CONCRETE MASONRY UNITS	2800 PSI
MORTAR	1800 PSI
GROUT	2000 PSI

2. MASONRY MATERIALS SHALL CONFORM TO THE FOLLOWING STANDARDS:

CONCRETE MASONRY UNITS (CMU)	ASTM C90, GRADE N-1
MORTAR	ASTM C270, TYPE S
GROUT	ASTM C476
REINFORCING STEEL	ASTM A615, GR 60
PLATE AND BENT BAR ANCHORS	ASTM A36
SHEET METAL ANCHORS AND TIES	ASTM A1008
WIRE MESH TIES	ASTM A1064
WIRE TIES AND ANCHORS	ASTM A951
ANCHOR BOLTS	ASTM A307, GRADE A

3. BAR SPLICES SHALL BE PROVIDED WHERE INDICATED ON THE DRAWINGS. IF SPLICE LENGTH IS NOT GIVEN ON THE DRAWINGS, PROVIDE LAP LENGTHS (IN INCHES) AS FOLLOWS (ASD):
4. LOAD BEARING MASONRY SHALL HAVE FULL HEIGHT 9 GAUGE MINIMUM HORIZONTAL REINFORCEMENT NOT TO EXCEED 16" OC VERTICALLY.
5. ALL LOAD BEARING MASONRY WALLS TO HAVE FULL BED, HEAD AND COLLAR JOINTS.
6. PROVIDE A MINIMUM OF 1 INCH GROUT BETWEEN MAIN REINFORCING AND/OR BOLTS AND MASONRY UNIT FACE. VERTICAL REINFORCEMENT SHALL BE CENTERED IN WALL, UNO.
7. CELLS SHALL BE IN VERTICAL ALIGNMENT. DOWELS IN FOOTINGS SHALL BE SET TO ALIGN WITH CORES CONTAINING REINFORCING STEEL.
8. ALL CELLS CONTAINING REINFORCING SHALL BE FILLED SOLID WITH GROUT, AND ALSO WHERE NOTED ON THE DRAWINGS.
9. THE MASONRY CONTRACTOR SHALL FURNISH SHOP DRAWINGS OF PRODUCT DATA, REINFORCEMENT DETAILS, AND MIX DESIGNS FOR ARCHITECT/STRUCTURAL ENGINEER'S REVIEW BEFORE FABRICATION.

MASONRY

1. MINIMUM 28-DAY COMPRESSIVE STRENGTHS FOR MASONRY CONSTRUCTION SHALL BE:

DESIGN ASSEMBLY STRENGTH, f'm	2000 PSI
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8. ALL CELLS CONTAINING REINFORCING SHALL BE FILLED SOLID WITH GROUT, AND ALSO WHERE NOTED ON THE DRAWINGS.
9. THE MASONRY CONTRACTOR SHALL FURNISH SHOP DRAWINGS OF PRODUCT DATA, REINFORCEMENT DETAILS, AND MIX DESIGNS FOR ARCHITECT/STRUCTURAL ENGINEER'S REVIEW BEFORE FABRICATION.

STEEL

1. 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 SECTIONS, SQ/RECT	ASTM A500, GR B	Fy = 46 KSI
BASE AND CONNECTION PLATES	ASTM A572	Fy = 50 KSI
ANCHOR RODS	ASTM F1554, GR 36	Fy = 36 KSI
HIGH STRENGTH BOLTS	ASTM F3125, GR A325	Fv = 120 KSI
HEAVY HEX NUTS	ASTM A563	
WASHERS	ASTM F436	
HEADED STUDS	ASTM A108, TYPE B	
ELECTRODES FOR ARC WELDING	AWS 5.1, E70XX	

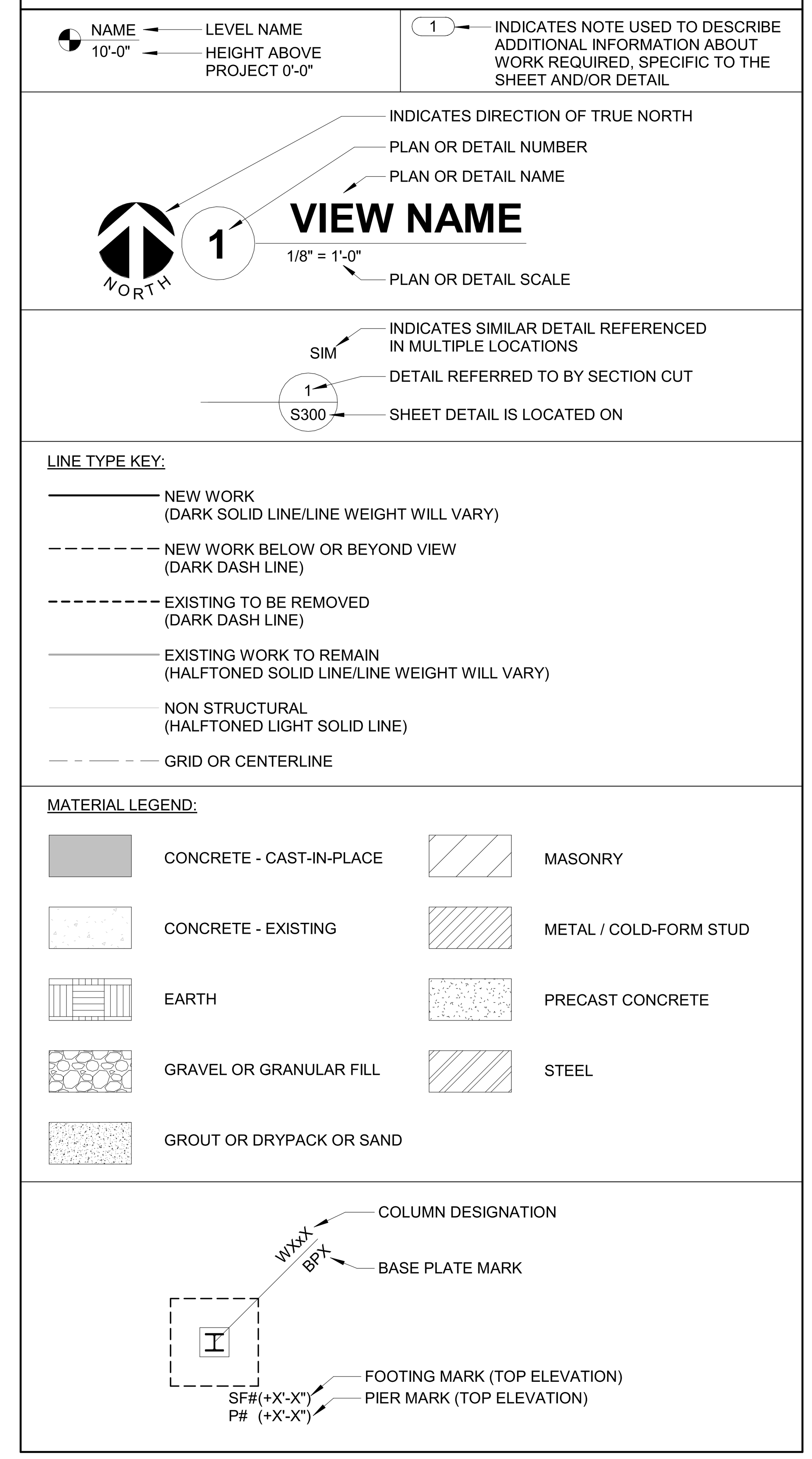
2. HIGH STRENGTH BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH AISC "SPECIFICATIONS FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS". REFER TO DETAILS FOR BOLT SIZE AND MATERIAL ASTM DESIGNATION.
3. USE TENSION-CONTROL, "TWIST-OFF", BOLTS FOR ALL HIGH STRENGTH BOLTS REQUIRING FULL TENSION AS INDICATED ON THE DRAWINGS.
4. ALL HIGH STRENGTH BOLTS SHALL CONFORM TO ASTM F3125, GRADE A325N, UNO. FOR ALL DRAG STRUT BOLTS, HIGH STRENGTH BOLTS SHALL CONFORM TO ASTM F3125, GRADE A490SC.
5. STANDARD BOLT HOLES IN STEEL SHALL BE 1/16 INCH LARGER IN DIAMETER THAN NOMINAL SIZE OF BOLT USED, UNO.
6. FIELD CONNECTIONS SHALL BE WELDED OR BOLTED. SHOP CONNECTIONS SHALL BE WELDED, UNO. WELDS INDICATED WITH A SHOP WELD SYMBOL MAY BE MADE IN THE FIELD WITH THE APPROVAL OF THE STRUCTURAL ENGINEER. LOCATIONS OF ALL FIELD WELDS SHALL BE CLEARLY SHOWN ON THE SHOP DRAWINGS. WELDS SHALL BE DESIGNED TO BE FULLY EQUIVALENT IN STRENGTH TO BOLTED CONNECTIONS DETAILED TO MINIMIZE BENDING IN THE CONNECTION.
7. HEADED STUDS:
   A. STUDS SHALL BE AUTOMATICALLY END WELDED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS IN SUCH A MANNER AS TO PROVIDE COMPLETE FUSION BETWEEN THE END OF THE STUD AND THE PLATE. THERE SHOULD BE NO POROSITY OR EVIDENCE OF LACK OF FUSION BETWEEN THE WELDED END OF THE STUD AND THE PLATE. THE STUD SHALL DECREASE IN LENGTH DURING WELDING APPROXIMATELY 1/8" FOR 5/8"ø AND SMALLER AND 3/16" FOR LARGER THAN 5/8"ø. WELDING SHALL BE DONE ONLY BY QUALIFIED WELDERS APPROVED BY THE INSPECTION AGENCY.

STEEL DECK

1. DECK SIZE AND GAUGE INDICATED ON THE DRAWINGS ARE BASED ON THE FOLLOWING:
   A. VULCRAFT 2015 VERCO VR4 AND VR5 CATALOG FOR GRAVITY DESIGN LOADS AND UNSHORED CONSTRUCTION SPANS.
   B. STEEL DECK INSTITUTE (SDI) DIAPHRAGM DESIGN MANUAL 3RD EDITION FOR DIAPHRAGM LOADS.
2. STEEL DECK GALVANIZING SHALL CONFORM TO ASTM A653 WITH A MINIMUM COATING OF G60 ASTM A924 WITH A MINIMUM COATING OF G90.
3. PAINTED STEEL ROOF DECK SHALL CONFORM TO ASTM A1008, GRADE C.
4. ALL DECK SHALL MEET THE MINIMUM TYPE AND GAUGE INDICATED ON THE DRAWINGS, AND AS FOLLOWS:

TYPE	GAUGE	Ix	Sx	Fy
1.5" B (ROOF)	22	0.155	0.186	33
	20	0.201	0.234	33
	18	0.289	0.318	33
	16	0.373	0.408	33
2" VLI	22	0.314	0.244	50
	20	0.403	0.326	50
	18	0.558	0.485	50
	16	0.704	0.653	40
3" VLI	22	0.710	0.387	50
	20	0.907	0.512	50
	18	1.252	0.761	50
	16	1.582	1.013	40

VIEW KEY



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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REF. SCALE IN INCHES PROJECT #22002867.01

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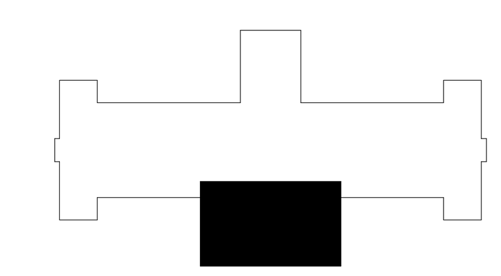
KEY PLAN



OWNER
Hamtramck Public Schools

PROJECT NAME
HPS-Hamtramck-MI-Kosciuszko MS

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PROJECT NO.
22002867.01

ISSUES / REVISIONS
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AN

SHEET NAME
GENERAL STRUCTURAL NOTES

SHEET NO.
S000

STRUCTURAL COMPONENT TESTING AND INSPECTION

1. THE FOLLOWING TESTING AND INSPECTION OF STRUCTURAL COMPONENTS IS REQUIRED AS DETAILED IN CHAPTER 17 OF THE 2018 INTERNATIONAL BUILDING CODE (IBC) AND PROJECT SPECIFICATIONS.

2. SEE ARCHITECTURAL, CIVIL, MECHANICAL, PLUMBING AND ELECTRICAL SPECIFICATIONS FOR TESTING AND INSPECTION REQUIREMENTS OF NON-STRUCTURAL COMPONENTS.

3. WORK PERFORMED ON THE PREMISES OF A FABRICATOR APPROVED BY THE BUILDING OFFICIAL PER SECTION 1704.2.5.1 OF CHAPTER 17 OF THE 2015 INTERNATIONAL BUILDING CODE NEED NOT BE TESTED AND INSPECTED PER THE TABLE BELOW. THE FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE THAT THE WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS TO THE BUILDING OFFICIAL AND THE ARCHITECT AND ENGINEER OF RECORD.

DUTIES OF THE SPECIAL INSPECTION AGENCY (IBC CHAPTER 17):

A. SUBMIT A PROPOSED TESTING AND INSPECTION PROGRAM TO THE OWNER, THE ARCHITECT AND THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL AT LEAST TWO WEEKS PRIOR TO COMMENCEMENT OF WORK. THE TABLE BELOW SHALL SERVE AS A GUIDELINE FOR THE SCOPE OF THE TESTING AND INSPECTION PROGRAM.

B. PERFORM ALL TESTING AND INSPECTION REQUIRED PER APPROVED TESTING AND INSPECTION PROGRAM.

C. FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, THE OWNER, THE ARCHITECT, THE ENGINEER OF RECORD 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.

	CONTINUOUS	PERIODIC	REFERENCED STANDARD	IBC REFERENCE
FOUNDATION PREPARATION				
VERIFY MATERIALS BELOW SHALLOW FOOTINGS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.		X		
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.		X		
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.		X		
VERIFY USE OF PROPER MATERIALS, DENSITIES, AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X			
PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT THE SITE HAS BEEN PROPERLY PREPARED.		X		
CONCRETE PIER FOUNDATIONS				
INSPECT DRILLING OPERATIONS AND MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH ELEMENT.	X			
VERIFY PLACEMENT LOCATIONS AND PLUMBNESS, CONFIRM ELEMENT DIAMETERS, BELL DIAMETERS, LENGTHS, EMBEDMENT INTO BEDROCK, AND ADEQUATE END BEARING STRATA CAPACITY. RECORD CONCRETE OR GROUT VOLUMES.	X			
FOR CONCRETE ELEMENTS, PERFORM ADDITIONAL INSPECTIONS PER 03200 03 20 00 AND 03300 03 30 00.				
CONCRETE AND CONCRETE PLACEMENT				
INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.		X	ACI 318: 26.11.1.2(b)	
INSPECTION OF FABRICATORS AND DURING FABRICATION.		X		1704.2
INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT.		X	ACI 318: Ch. 20, 25.2, 25.3, 26.6.1 - 26.6.3	1908.4
REINFORCING BAR WELDING: A. VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A706. B. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16". C. INSPECT ALL OTHER WELDS.	X	X X	AWS D1.4, ACI318: 26.6.4	
REVIEW OF PROPOSED MIX DESIGN AND SUPPORTING TEST RESULTS.		X		
INSPECT ANCHORS CAST IN CONCRETE.	X		ACI 318: 17.8.2	
INSPECTION ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS. A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS. B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN ROW ABOVE.	X	 X	ACI 318: 17.8.2.4 ACI 318: 17.8.2	
VERIFYING USE OF REQUIRED DESIGN MIX.		X	ACI 318: CH. 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
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: 26.4, 26.12	1908.10
INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X		ACI 318: 26.5	1908.6, 1908.7, 1908.8
INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.		X	ACI 318: 26.5.3 - 26.5.5	1908.9
VERIFICATION OF 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	
F_F AND F_L SLAB ON GRADE FLATNESS TESTING			ASTM E1155	
WET UNIT WEIGHT TESTING				

STRUCTURAL PRECAST CONCRETE				
INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT.		X	ACI 318: Ch. 20, 25.2, 25.3, 26.6.1 - 26.6.3	
REINFORCING BAR WELDING: A. VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A706. B. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16". C. INSPECT ALL OTHER WELDS.	X	X X	AWS D1.4, ACI 318: 26.6.4	
INSPECT ANCHORS CAST IN CONCRETE.		X	ACI 318: 17.8.2	
INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS: A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS. B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN ROW ABOVE.	X	 X	ACI 318: 17.8.2.4 ACI 318: 17.8.2	
VERIFYING USE OF REQUIRED DESIGN MIX.		X	ACI 318: CH. 19, 26.4.3, 26.4.4	1904.1, 1904.2
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: 26.4, 26.12	
INSPECTION OF CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X		ACI 318: 26.5	
INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.		X	ACI 318: 26.5.3 - 26.5.5	
INSPECTION OF PRESTRESSED CONCRETE: A. APPLICATION OF PRESTRESSING FORCES. B. GROUTING OF BONDED PRESTRESSING TENDONS	 X X		 ACI 318: 26.10 ACI 318: 26.10	
INSPECT ERECTION OF PRECAST CONCRETE MEMBERS		X	ACI 318: 26.9	
VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF FORMS.	X		ACI 318: 26.11.2	
INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.		X	ACI 318: 26.11.1.2(b)	

STRUCTURAL MASONRY (LEVEL B)

MINIMUM TESTS

VERIFICATION OF SLUMP FLOW AND VISUAL STABILITY INDEX (VSI) AS DELIVERED TO THE PROJECT SITE IN ACCORDANCE WITH SPECIFICATION ARTICLE 1.5 B.1.b.3 FOR SELF-CONSOLIDATING GROUT.

VERIFICATION OF f'_m AND f'_{AAC} IN ACCORDANCE WITH SPECIFICATION ARTICLE 1.4 B PRIOR TO CONSTRUCTION, EXCEPT WHERE SPECIFICALLY EXEMPTED BY THIS CODE.

MINIMUM SPECIAL INSPECTIONS

STRUCTURAL MASONRY (LEVEL B)

INSPECTION TASK	CONTINUOUS	PERIODIC	REFERENCE FOR CRITERIA: ACI 530/ ASCE 5/ TMS 402	REFERENCE FOR CRITERIA: ACI 530.1/ ASCE 6/ TMS 602	
1. VERIFY COMPLIANCE WITH THE APPROVED SUBMITTALS		X		ART. 1.5	
2. AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:					
A. PROPORTIONS OF SITE-PREPARED MORTAR.		X		ART. 2.1, 2.6A	
B. CONSTRUCTION OF MORTAR JOINTS.		X		ART. 3.3B	
C. GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGES.				ART. 2.4B, 2.4H	
D. LOCATION OF REINFORCEMENT, CONNECTORS, AND PRESTRESSING TENDONS AND ANCHORAGES.		X		ART. 3.4, 3.6A	
E. PRESTRESSING TECHNIQUE.		X		ART. 3.6B	
F. PROPERTIES OF THIN-BED MORTAR FOR ACC MASONRY.		X		ART. 2.1C	
3. PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:					
A. GROUT SPACE.		X		ART. 3.2D, 3.2F	
B. GRADE, TYPE, AND SIZE OF REINFORCEMENT AND ANCHOR BOLTS, AND PRESTRESSING TENDONS AND ANCHORAGES.		X	SEC. 6.1	ART. 2.4, 3.4	
C. PLACEMENT OF REINFORCEMENT, CONNECTORS, AND PRESTRESSING TENDONS AND ANCHORAGES.		X	SEC. 6.1, 6.2.1, 6.2.6, 6.2.7	ART. 3.2E, 3.4, 3.6A	
D. PROPORTIONS OF SITE-PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS.		X		ART. 2.6B, 2.4 G.1.b	
E. CONSTRUCTION OF MORTAR JOINTS.		X		ART. 3.3B	
4. VERIFY DURING CONSTRUCTION:					
A. SIZE AND LOCATION OF STRUCTURAL ELEMENTS.		X		ART. 3.3F	
B. 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), 6.1.4.3, 6.2.1		
C. WELDING OF REINFORCEMENT.	X		SEC. 8.1.6.7.2, 9.3.3.4(c), 11.3.3.4(b)		
D. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F OR HOT WEATHER (TEMPERATURE ABOVE 90°F).		X		ART. 1.8C, 1.8D	
E. APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE.	X			ART. 3.6 B	
F. PLACEMENT OF GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS IN COMPLIANCE.	X			ART. 3.5, 3.6C	
G. PLACEMENT OF AAC MASONRY UNITS AND CONSTRUCTION OF THIN-BED MORTAR JOINTS.		X		ART. 3.3 B.9, 3.3 F.1.b	
5. OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND /OR PRISMS.		X		ART. 1.4B.2.a.3, 1.4 B.2.b.3, 1.4 B.2.c.3, 1.4 B.3, 1.4 B.4	

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REF. SCALE IN INCHES PROJECT #22002867.01

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MI-Kosciuszko MS

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ISSUES / REVISIONS

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AN

SHEET NAME

STRUCTURAL INSPECTION SCHEDULES

SHEET NO.

S001

AISC 360 - CHAPTER N: STRUCTURAL STEEL QUALITY ASSURANCE
O - OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.
P - PERFORM THESE TASKS FOR EACH WELDED JOINT MEMBER.

INSPECTION TASKS PRIOR TO WELDING			
WELDING PROCEDURE SPECIFICATIONS (WPSS) AVAILABLE	P		
MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	P		
MATERIAL IDENTIFICATION (TYPE / GRADE)	O		
FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY) • JOINT PREPARATION • DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL) • CLEANLINESS (CONDITION OF STEEL SURFACES) • TACKING (TACK WELD QUALITY AND LOCATION) • BACKING TYPE AND FIT (IF APPLICABLE)	O		
CONFIGURATION AND FINISH OF ACCESS HOLES	O		
FIT-UP OF FILLET WELDS • DIMENSIONS (ALIGNMENT, GAPS AT ROOT) • CLEANLINESS (CONDITION OF STEEL SURFACES) • TACKING (TACK WELD QUALITY AND LOCATION)	O		
INSPECTION TASKS DURING WELDING			
USE OF QUALIFIED WELDERS	O		
CONTROL AND HANDLING OF WELDING CONSUMABLES • PACKAGING • EXPOSURE CONTROL	O		
NO WELDING OVER CRACKED TACK WELDS	O		
ENVIRONMENTAL CONDITIONS • WIND SPEED WITHIN LIMITS • PRECIPITATION AND TEMPERATURE	O		
WPS FOLLOWED • SETTINGS ON WELDING EQUIPMENT • TRAVEL SPEED • SELECTED WELDING MATERIALS • SHIELDING GAS TYPE / FLOW RATE • PREHEAT APPLIED • INTERPASS TEMPERATURE MAINTAINED (MIN. / MAX.) • PROPER POSITION (F,V,H,OH)	O		
WELDING TECHNIQUES • INTERPASS AND FINAL CLEANING • EACH PASS WITHIN PROFILE LIMITATIONS • EACH PASS MEETS QUALITY REQUIREMENTS	O		
INSPECTION TASKS AFTER WELDING			
WELDS CLEANED	O		
SIZE, LENGTH, AND LOCATION OF WELDS	P		
WELDS MEETS VISUAL ACCEPTANCE CRITERIA • CRACK PROHIBITION • WELD / BASE-METAL FUSION • CRATER CROSS SECTION • WELD PROFILES • WELD SIZE • UNDERCUT • POROSITY	P		
ARC STRIKES	P		
K-AREA: 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 INCHES OF THE WELD	P		
BACKING REMOVED AND WELD TABS REMOVED AND FINISHED (IF REQUIRED)	P		
REPAIR ACTIVITIES	P		
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	P		
NONDESTRUCTIVE TESTING OF WELDED JOINTS			
FOR STRUCTURES IN RISK CATEGORY III OR IV, ULTRASONIC TESTING SHALL BE PERFORMED ON ALL CJP GROOVE WELDS SUBJECT TO TRANSVERSELY APPLIED TENSION LOADING IN BUTT, T- AND CORNER JOINTS, IN MATERIALS 5/16 IN. THICK OR GREATER. REFER TO AISC 360-10, SECTION N.5E FOR REDUCTION OF RATE OF ULTRASONIC TESTING.			
FOR STRUCTURES IN RISK CATEGORY II, ULTRASONIC TESTING SHALL BE PERFORMED ON 10% OF CJP GROOVE WELDS SUBJECT TO TRANSVERSELY APPLIED TENSION LOADING IN BUTT, T- AND CORNER JOINTS, IN MATERIALS 5/16 IN. THICK OR GREATER. REFER TO AISC 360-10, SECTION N.5F FOR INCREASE IN THE RATE OF ULTRASONIC TESTING.			
THERMALLY CUT SURFACES OF ACCESS HOLES SHALL BE TESTED USING MAGNETIC PARTICLE TESTING OR PENETRANT TESTING, WHEN THE FLANGE THICKNESS EXCEEDS 2 INCHES FOR ROLLED SHAPES OR WHEN THE WEB THICKNESS EXCEEDS 2 INCHES FOR BUILT-UP SHAPES. ANY CRACK SHALL BE DEEMED UNACCEPTABLE.			
WELDED JOINT SUBJECTED TO FATIGUE SHALL BE TESTED BY RADIOGRAPHIC OR ULTRASONIC INSPECTION. THE REDUCTION RATE OF ULTRASONIC TESTING IS PROHIBITED.			
INSPECTION TASKS PRIOR TO BOLTING			
MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS.	P		
FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS.	O		
PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE).	O		
PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL.	O		
CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS.	O		
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED.	O		
PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS.	O		
INSPECTION TASKS DURING BOLTING			
FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED.	O		
JOINT BROUGHT TO THE SNUG CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED.	O		
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING.	O		
FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGE.	O		
INSPECTION TASKS AFTER BOLTING			
DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS.	P		
OTHER INSPECTION TASKS			
INSPECTION DURING THE PLACEMENT OF ANCHOR RODS AND OTHER EMBEDMENTS SUPPORTING STRUCTURAL STEEL. AS A MINIMUM, THE DIAMETER, GRADE, TYPE AND LENGTH OF ANCHOR ROD OR EMBEDDED ITEM, AND THE EXTENT OR DEPTH OF EMBEDMENT INTO THE CONCRETE SHALL BE VERIFIED	P		
INSPECT THE FABRICATED STEEL OR ERECTED STEEL FRAME TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE CONSTRUCTION DOCUMENTS, SUCH AS BRACES, STIFFENERS, MEMBER LOCATIONS AND PROPER APPLICATION OF JOINT DETAILS AT EACH CONNECTION.	O		
INSPECTION OF STEEL ELEMENTS OF COMPOSITE CONSTRUCTION PRIOR TO CONCRETE PLACEMENT			
PLACEMENT AND INSTALLATION OF STEEL DECK.	P		
PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS.	P		
DOCUMENT ACCEPTANCE OR REJECTION OF STEEL ELEMENTS.	P		
AISC 341 – APPENDIX Q: ADDITIONAL QUALITY ASSURANCE ITEMS FOR SEISMIC RESISTANCE			
INSPECTION TASKS DURING WELDING			
WPS FOLLOWED – INTERMIX OF FILLER METALS AVOIDED UNLESS APPROVED.	O		
INSPECTION TASKS AFTER WELDING			
WELDER IDENTIFICATION LEGIBLE	O		
PLACEMENT OF REINFORCEMENT FILLETS.	P		
OTHER INSPECTION TASK			
REDUCED BEAM SECTION (RBS) REQUIREMENTS, IF APPLICABLE • CONTOUR AND FINISH • DIMENSIONAL TOLERANCES.	P		
PROTECTED ZONE – NO HOLES AND UNAPPROVED ATTACHMENTS MADE BY CONTRACTOR.	P		

OPEN-WEB STEEL JOISTS AND JOIST GIRDERS	CONTINUOUS	PERIODIC	REFERENCED STANDARD	IBC REFERENCE
INSTALLATION OF OPEN-WEB STEEL JOISTS AND JOIST GIRDERS				
END CONNECTION - WELDING OR BOLTED		X		SJI SPECIFICATIONS LISTED IN SECTION 2207.1
BRIDGING - HORIZONTAL OR DIAGONAL				
A. STANDARD BRIDGING		X		SJI SPECIFICATIONS LISTED IN SECTION 2207.1
B. BRIDGING THAT DIFFERS FROM THE SJI SPECIFICATIONS LISTED IN SECTION 2207.1		X		
SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE	X			1705.12

STEEL DECK			
SDI - QA / QC STANDARD FOR STEEL DECK INSTALLATION O - OBSERVE THESE ITEMS ON AN INTERMITTENT BASIS P - PERFORM THESE TASKS PRIOR TO FINAL ACCEPTANCE FOR EACH ITEM OR ELEMENT.			
INSPECTION TASKS PRIOR TO DECK PLACEMENT			
VERIFY COMPLIANCE OF MATERIALS (DECK AND ALL DECK ACCESSORIES) WITH CONSTRUCTION DOCUMENTS, INCLUDING PROFILES, MATERIAL PROPERTIES, AND BASE METAL THICKNESS	P		
DOCUMENT ACCEPTANCE OR REJECTION OF DECK AND DECK ACCESSORIES	P		
INSPECTION TASKS AFTER DECK PLACEMENT			
VERIFY COMPLIANCE OF DECK AND ALL DECK ACCESSORIES INSTALLATION WITH CONSTRUCTION DOCUMENTS	P		
VERIFY COMPLIANCE OF DECK MATERIALS ARE REPRESENTED BY THE MILL CERTIFICATIONS THAT COMPLY WITH THE CONSTRUCTION DOCUMENTS	P		
DOCUMENTS ACCEPTANCE OR REJECTION OF INSTALLATION OF DECK AND DECK ACCESSORIES	P		
INSPECTION TASKS PRIOR TO WELDING			
WELDING PROCEDURE SPECIFICATIONS (WPS) AVAILABLE	O		
MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	O		
MATERIAL IDENTIFICATION (TYPE / GRADE)	O		
CHECK WELDING EQUIPMENT	O		
INSPECTION TASKS DURING WELDING			
USE OF QUALIFIED WELDERS	O		
CONTROL OF HANDLING OF WELDING CONSUMABLES	O		
ENVIRONMENTAL CONDITIONS (WIND SPEED, MOISTURE, TEMPERATURE)	O		
WPS FOLLOWED	O		
INSPECTION TASKS AFTER WELDING			
VERIFY SIZE AND LOCATION OF WELDS, INCLUDING SUPPORT, SIDELAP, AND PERIMETER WELDS	P		
WELDS MEET VISUAL ACCEPTANCE CRITERIA	P		
VERIFY REPAIR ACTIVITIES	P		
DOCUMENT ACCEPTANCE OR REJECTION OF WELDS	P		
INSPECTION TASKS PRIOR TO MECHANICAL FASTENING			
MANUFACTURER INSTALLATION INSTRUCTIONS ARE AVAILABLE FOR MECHANICAL FASTENERS	O		
PROPER TOOLS ARE AVAILABLE FOR FASTENERS INSTALLATION	O		
PROPER STORAGE FOR MECHANICAL FASTENERS	O		
INSPECTION TASKS DURING MECHANICAL FASTENING			
FASTENERS ARE POSITIONED AS REQUIRED	O		
FASTENERS ARE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS	O		
INSPECTION TASKS AFTER MECHANICAL FASTENING			
CHECKING SPACING, TYPE, AND INSTALLATION OF SUPPORT FASTENERS	P		
CHECK SPACING, TYPE, AND INSTALLATION OF SIDELAP FASTENERS	P		
CHECK SPACING, TYPE, AND INSTALLATION OF PERIMETER FASTENERS	P		
VERIFY REPAIR ACTIVITIES	P		
DOCUMENTS ACCEPTANCE OR REJECTION OF MECHANICAL FASTENERS	P		
INSPECTION TASKS FOR SEISMIC RESISTANCE			
FOR STRUCTURES IN SEISMIC DESIGN CATEGORY C, D, E, OR F, INSPECT DIAPHRAGMS THAT ARE PART OF THE SEISMIC LOAD RESISTING SYSTEM	P		

0 1 2 3
REF. SCALE IN INCHES

PROJECT #22002867.01

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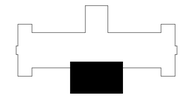
KEY PLAN



OWNER

Hamtramck
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PROJECT NAME

HPS-Hamtramck-
MI-Kosciuszko MS

2333 Burger St.
Hamtramck, MI 48212

PROJECT NO.

22002867.01

ISSUES / REVISIONS

Bidding / Construction	11/17/2022

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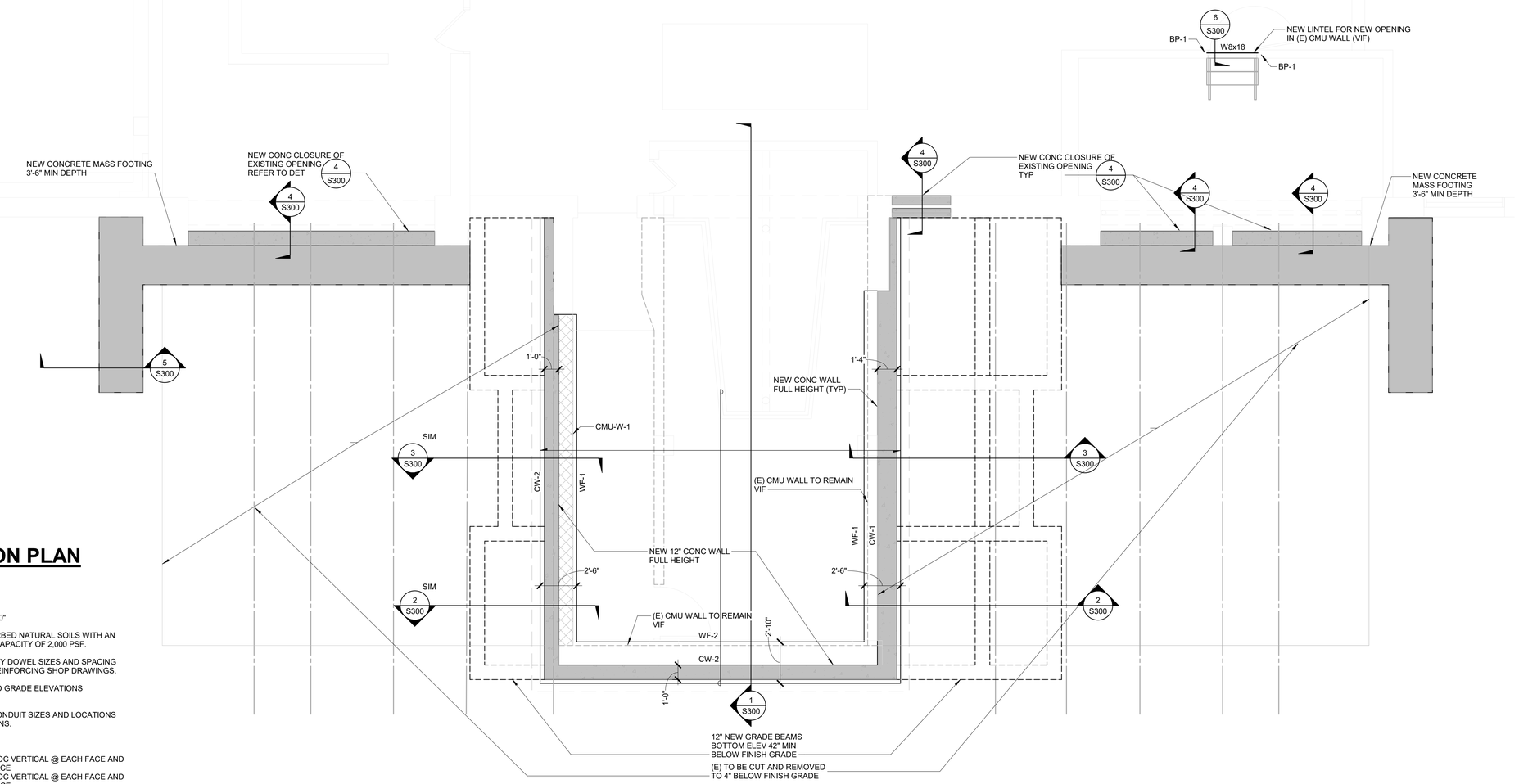
SHEET NAME

STRUCTURAL INSPECTION SCHEDULES

SHEET NO.

S002

P:\2021\21-167-HPS KMS Basement Ceiling Emergency Repair\02_CAD\x-tb-24x36-KMS.dwg - 5/1/2020 11:22:18 AM - Chris Prieb



NORTH 1

PARTIAL FOUNDATION PLAN

1/4" = 1'-0"

FOUNDATION NOTES:

1. REFERENCE FINISHED FLOOR ELEVATION = 100'-0"
2. FOOTING ARE DESIGNED TO BEAR ON UNDISTURBED NATURAL SOILS WITH AN ASSUMED MINIMUM NET ALLOWABLE BEARING CAPACITY OF 2,000 PSF.
3. CONTRACTOR SHALL COORDINATE ALL MASONRY DOWEL SIZES AND SPACING TO BE CAST INTO CONCRETE WITH MASONRY REINFORCING SHOP DRAWINGS.
4. REFER TO CIVIL/SITE DRAWINGS FOR PROPOSED GRADE ELEVATIONS AROUND THE PERIMETER OF THE BUILDING.
5. REFER TO MEP DRAWINGS FOR ALL PIPE AND CONDUIT SIZES AND LOCATIONS PASSING THROUGH AND/OR UNDER FOUNDATIONS.
6. DESIGNATIONS:

CW-1:	16" WIDE CONC WALL WITH #5 @ 12" OC VERTICAL @ EACH FACE AND #4 @ 12" OC HORIZONTAL @ EACH FACE
CW-2:	12" WIDE CONC WALL WITH #5 @ 12" OC VERTICAL @ EACH FACE AND #4 @ 12" OC HORIZONTAL @ EACH FACE
WF-1:	2'-6" (MIN.) WIDE x 1'-0" THICK WALL FOOTING WITH (3) #5 EW T&B CONT
WF-2:	2'-10" (MIN.) WIDE x 1'-0" THICK WALL FOOTING WITH (3) #5 EW T&B CONT
CMU-W-1:	12" CMU WALL FULLY GROUTED W/ #5 VERT REIN @ 24" OC

7. REFERENCE DRAWINGS:

S000	GENERAL STRUCTURAL NOTES
S001, S002	SPECIAL INSPECTION SCHEDULES
S300	GENERAL SECTIONS AND DETAILS
S301	TYPICAL CONCRETE DETAILS

0 1 2 3
REF. SCALE IN INCHES

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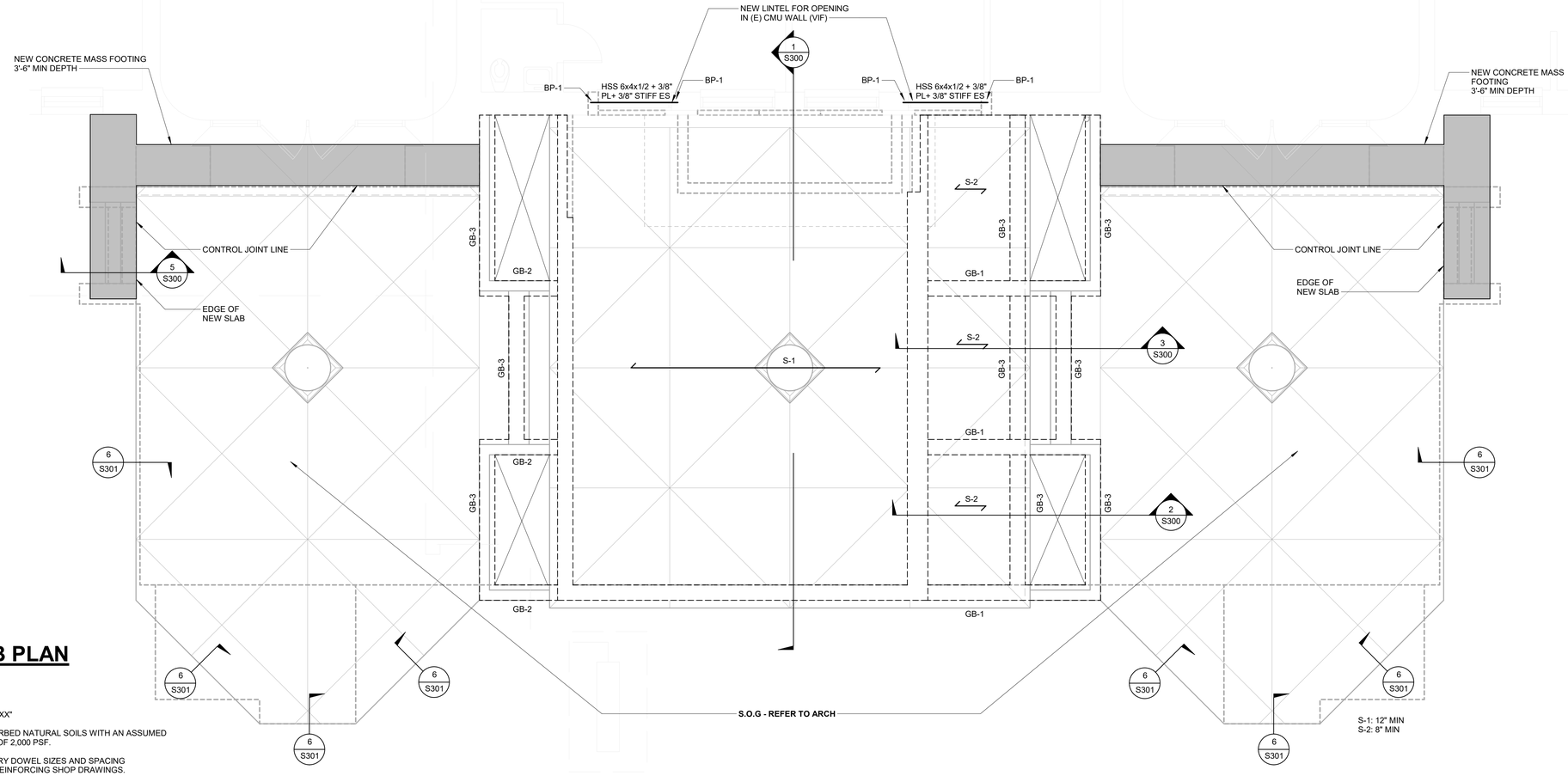
PARTIAL FOUNDATION PLAN

SHEET NO.

S201



1 PARTIAL TOP SLAB PLAN

1/4" = 1'-0"

NORTH

FOUNDATION NOTES:

1. REFERENCE FINISHED FLOOR ELEVATION = XX'-XX"
2. FOOTING ARE DESIGNED TO BEAR ON UNDISTURBED NATURAL SOILS WITH AN ASSUMED MINIMUM NET ALLOWABLE BEARING CAPACITY OF 2,000 PSF.
3. CONTRACTOR SHALL COORDINATE ALL MASONRY DOWEL SIZES AND SPACING TO BE CAST INTO CONCRETE WITH MASONRY REINFORCING SHOP DRAWINGS.
4. REFER TO CIVIL/SITE DRAWINGS FOR PROPOSED GRADE ELEVATIONS AROUND THE PERIMETER OF THE BUILDING.
5. REFER TO MEP DRAWINGS FOR ALL PIPE AND CONDUIT SIZES AND LOCATIONS PASSING THROUGH AND/OR UNDER FOUNDATIONS.
6. DESIGNATIONS:

   S-1 12" THICK WITH #6 @ 12" OC BOTTOM AND #4 @ 12" OC TOP AND #7 @12" OC TOP & BOTT DOWEL TO EACH END

   S-2 8" THICK WITH #4 @ 12" EACH WAY BOTTOM AND 6X6- W2.1 XW2.1 WWF

   GB-1 (3) #6 TOP AND (3) #5 BOTTOM REIN - DOWEL TO CONCRETE WALL

   GB-2 (2) #6 TOP AND (2) #5 BOTTOM REIN - DOWEL TO CONCRETE WALL

   GB-3 (2) #5 TOP AND BOTTOM

   BP-1 8"x8"x1/2" BEARING PLATE W/ (2) 3/4" HEADED STUDS INTO FULLY GROUTED (E) CMU

7. REFERENCE DRAWINGS:

S000	GENERAL STRUCTURAL NOTES
S001, S002	SPECIAL INSPECTION SCHEDULES
S300	GENERAL SECTIONS AND DETAILS
S301	TYPICAL CONCRETE DETAILS

0 1 2 3

REF. SCALE IN INCHES PROJECT #22002867.01

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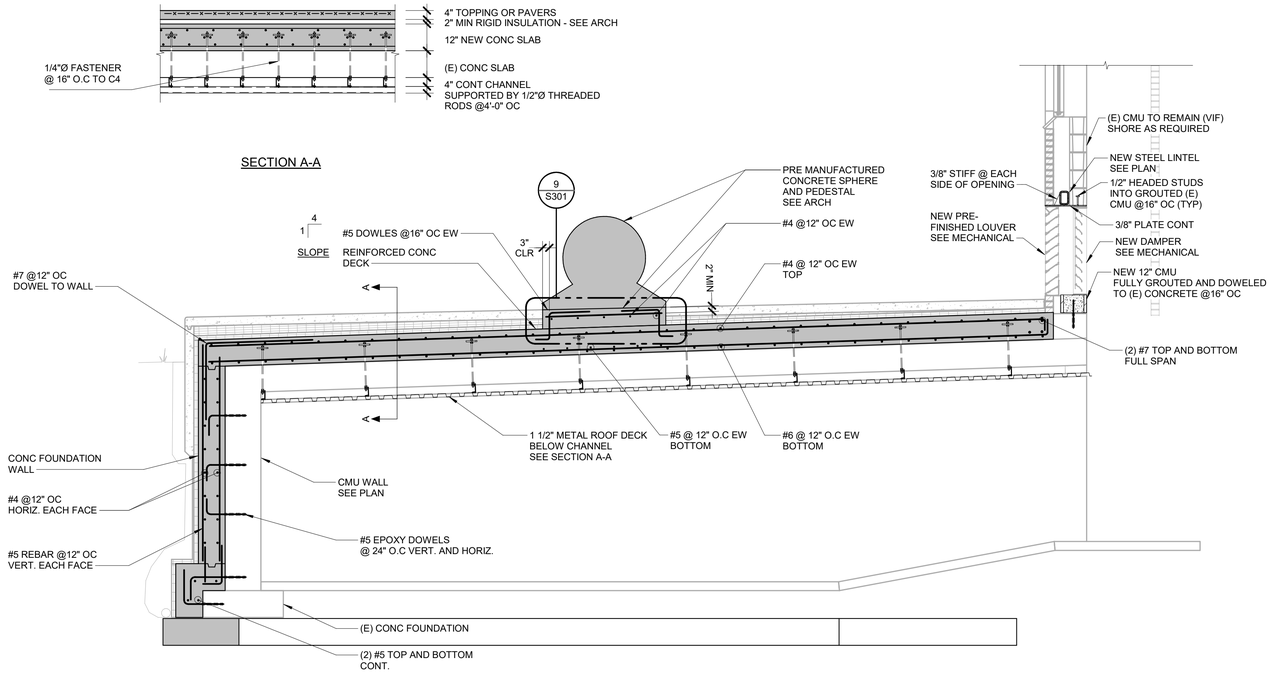
SHEET NAME

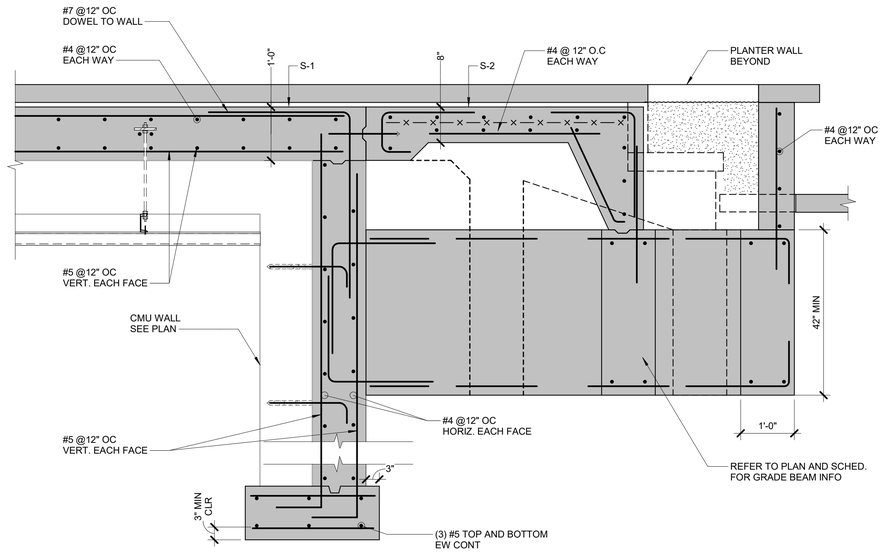
PARTIAL TOP
SLAB PLAN

SHEET NO.

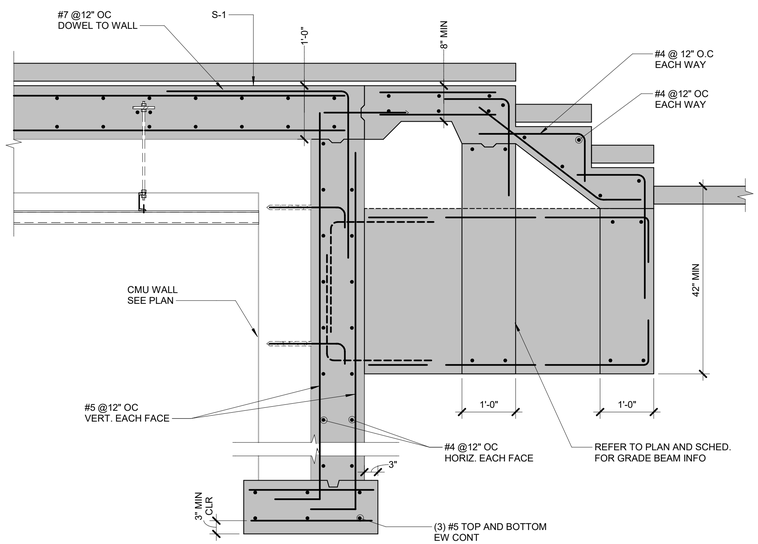
S202



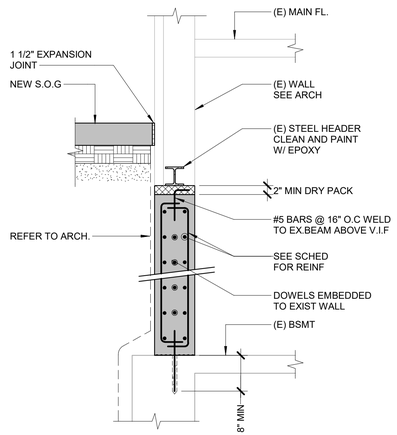
1 SECTION
3/8" = 1'-0"



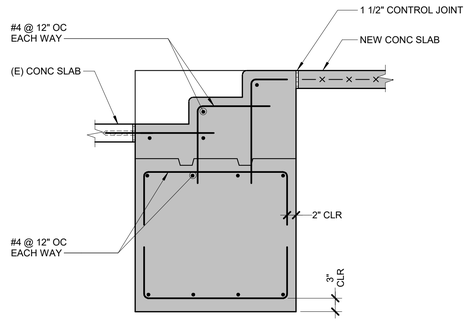
2 SECTION
3/4" = 1'-0"



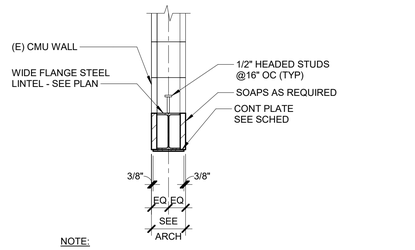
3 SECTION
3/4" = 1'-0"



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



5 SECTION AT STAIR STEPS
3/4" = 1'-0"



NOTE:

1. (E) WALL TO BE SHORED AS REQUIRED FOR INSTALLATION OF NEW LINTEL.

6 WIDE FLANGE LINTEL DETAIL AT EXISTING
3/4" = 1'-0"

0 1 2 3
REF. SCALE IN INCHES

PROJECT #22002867.01

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22002867.01

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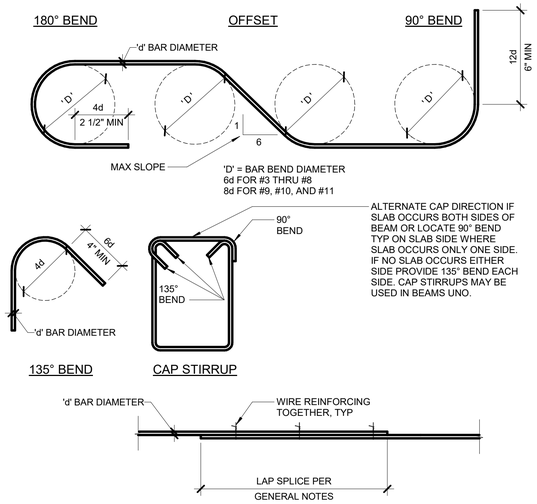
SHEET NAME
GENERAL SECTIONS AND DETAILS

SHEET NO.
S300

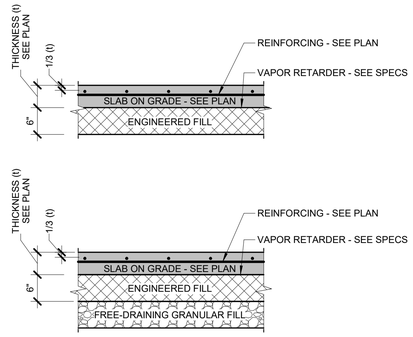


NOTE:

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"

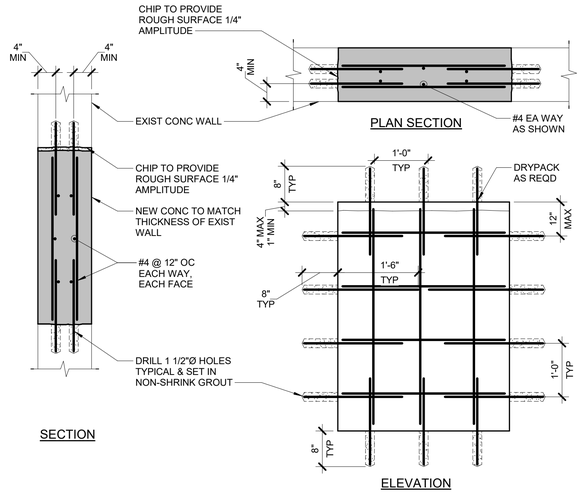


NOTES:

1. REFERENCE SPECIFICATIONS FOR MATERIAL AND COMPACTION REQUIREMENTS.
2. COMPACT ALL FILL MATERIAL TO 95% OF THE MAXIMUM DRY DENSITY PER ASTM D1557.
3. VAPOR RETARDER TO MEET ASTM E1745, CLASS A AND BE NOT LESS THAN 15 MILS THICK.

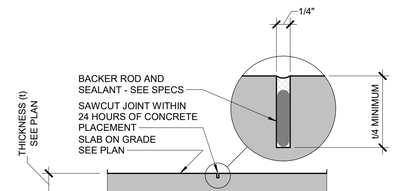
2 TYPICAL SLAB SECTION

3/4" = 1'-0"



3 INFILL OF EXISTING OPENING

3/4" = 1'-0"

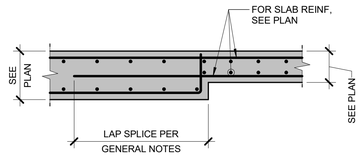


NOTES:

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.

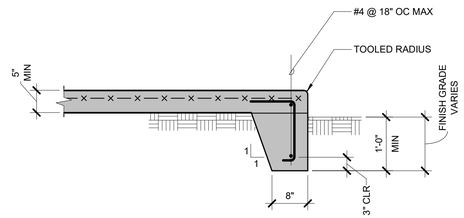
4 TYPICAL CONTROL JOINT

3/4" = 1'-0"



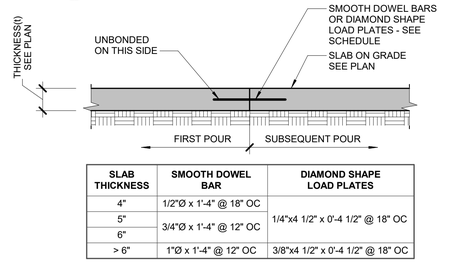
5 CHANGE IN SLAB THICKNESS DETAIL

3/4" = 1'-0"



6 TYPICAL EDGE OF SLAB DETAIL

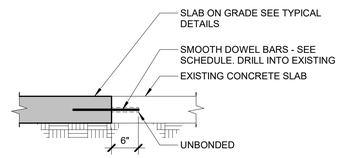
3/4" = 1'-0"



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"		
> 6"	1"Ø x 1'-4" @ 12" OC	3/8"x4 1/2" x 0'-4 1/2" @ 18" OC

7 TYPICAL CONSTRUCTION JOINT

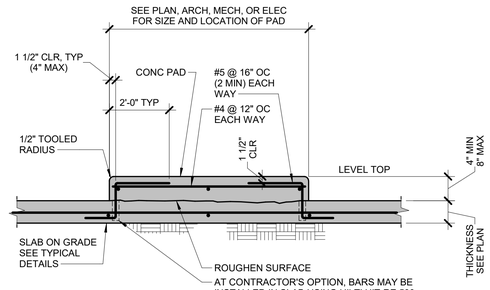
3/4" = 1'-0"



SLAB THICKNESS	SMOOTH DOWEL BAR
4"	1/2"Ø x 1'-4" @ 18" OC
5"	3/4"Ø x 1'-4" @ 12" OC
6"	
> 6"	1"Ø x 1'-4" @ 12" OC

8 NEW TO EXISTING SLAB DETAIL

3/4" = 1'-0"



NOTE:

1. SEE ARCHITECTURAL DWGS FOR THE FOLLOWING:
   A. LOCATION AND DIMENSIONS OF PADS.
   B. LOCATION AND SIZE OF ANCHOR BOLTS.
   C. DETAILS OF SUPPORTS, ISOLATORS AND OTHERS.

9 TYPICAL CONCRETE EQUIPMENT PAD DETAIL

3/4" = 1'-0"

0 1 2 3
REF. SCALE IN INCHES
PROJECT #22002867.01

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SHEET NAME
TYPICAL CONCRETE DETAILS

SHEET NO.
S301

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 PERFORMACE
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
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
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
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
WAGD	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

- AIR VENT – AUTOMATIC
- AIR VENT – MANUAL
- BACKFLOW PREVENTER
- CATCH BASIN
- CIRCULATING PUMP
- CLEAN OUT – IN FLOOR
- 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)
- FLOW SWITCH
- FLOW METER
- HOSE BIBB
- 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
- 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
- VALVE – BALANCE (i.e. BALANCE VALVE TO 0.5 GPM)
- 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
- VENT THROUGH ROOF
- WALL HYDRANT

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

DUCTWORK SYMBOLS

SYMBOL / DESCRIPTION

- AIR TERMINAL UNIT
- AIR TERMINAL UNIT WITH HEATING COIL
- VENTURI AIR TERMINAL UNIT
- 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)
- DAMPER – BACK DRAFT
- 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/ ROUND SMOOTH RADIUS
- ELBOW DOWN – RECTANGULAR
- ELBOW DOWN – ROUND
- ELBOW UP – RECTANGULAR
- ELBOW UP – ROUND
- FAN – AXIAL
- FAN – CENTRIFUGAL (ELEVATION)
- HEATING COIL
- INCLINED DROP IN DIRECTION OF AIRFLOW
- INCLINED RISE IN DIRECTION OF AIRFLOW
- INTAKE OR RELIEF HOOD
- REGISTER – RETURN OR EXHAUST
- REGISTER – RETURN WITH BOOT
- REGISTER – TRANSFER GRILLE
- ROOF EXHAUST FAN
- TRANSITION – CONCENTRIC
- TRANSITION – ECCENTRIC
- 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
- INCLINED DROP IN DIRECTION OF AIRFLOW
- INCLINED RISE IN DIRECTION OF AIRFLOW
- TRANSITION – CONCENTRIC
- TRANSITION – ECCENTRIC

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

SECTION OR PLAN NUMBER

SHEET WHERE SECTION IS DRAWN

AREA OF ENLARGEMENT

PLAN NUMBER

SHEET WHERE ENLARGED PLAN IS DRAWN

SECTION OR PLAN NUMBER

1 / M5.1 — **SECTION OR ENLARGED PLAN**
SCALE: 1/8" = 1' - 0"

SHEET WHERE SECTION IS CUT OR ENLARGED PLAN IS REFERENCED

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.

NOTE: SOME SYMBOLS AND ABBREVIATIONS SHOWN MAY NOT APPLY TO THIS PROJECT.

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PBA Project No.: 2022.0160

KEY PLAN

OWNER
Hamtramck Public Schools

PROJECT NAME
Kosciuszko Middle School Structural Repairs

2333 Burger St.
Hamtramck, MI 48212

PROJECT NO.
21-167

ISSUES / REVISIONS
Bidding / Construction 11/17/2022

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SHEET NAME
MECHANICAL STANDARDS AND DRAWING INDEX

SHEET NO.
M0-01

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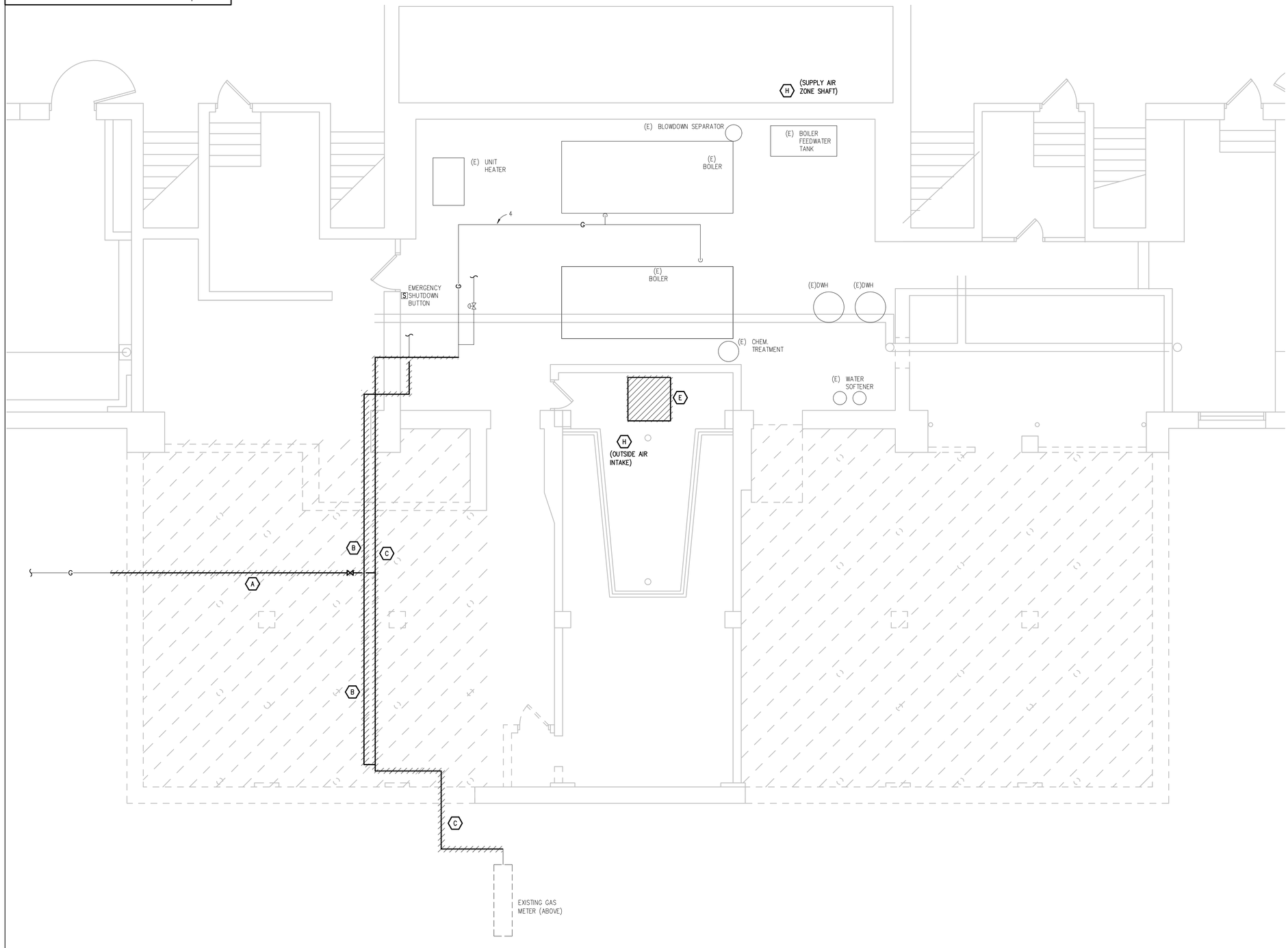
THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE. 1"



LOWER LEVEL MECHANICAL DEMOLITION PLAN

SCALE: 1/4" = 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.
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. REMOVE SECTION OF 2 GAS PIPE IN ROOM TO BE INFILLED. PREPARE EACH END OF PIPING FOR NEW WORK.

B. REMOVE SECTION OF 1 GAS PIPING IN ROOM TO BE INFILLED. PREPARE EACH END OF PIPING FOR NEW WORK.

C. REMOVE SECTION OF 4 GAS PIPING IN ROOM TO BE INFILLED. PREPARE EACH END OF PIPING FOR NEW WORK.

D. TRENCH AREA FOR INSTALLATION OF NEW GAS LINES.

E. REMOVE ABANDONED DUCTWORK.

F. REMOVE 48 x 55 LOUVER, DAMPER AND ASSOCIATED LINKAGE. SALVAGE ACTUATOR FOR RE-INSTALLATION. PREPARE CONTROL SIGNAL FOR NEW WORK. PREPARE CONDUIT FOR RELOCATION/NEW WORK. PREPARE OPENING FOR NEW WORK.

G. REMOVE (4) 36 x 55 LOUVERS, DAMPERS, LINKAGE AND ACTUATORS COMPLETE. PREPARE CONTROL SIGNAL FOR NEW WORK. PREPARE OPENING FOR NEW WORK.

H. PROVIDE PRE-DEMOLITION SUPPLY AND OUTSIDE AIR FLOW READING FOR MAIN AIR HANDLING UNIT. REPORT FINDINGS BACK TO ENGINEER.

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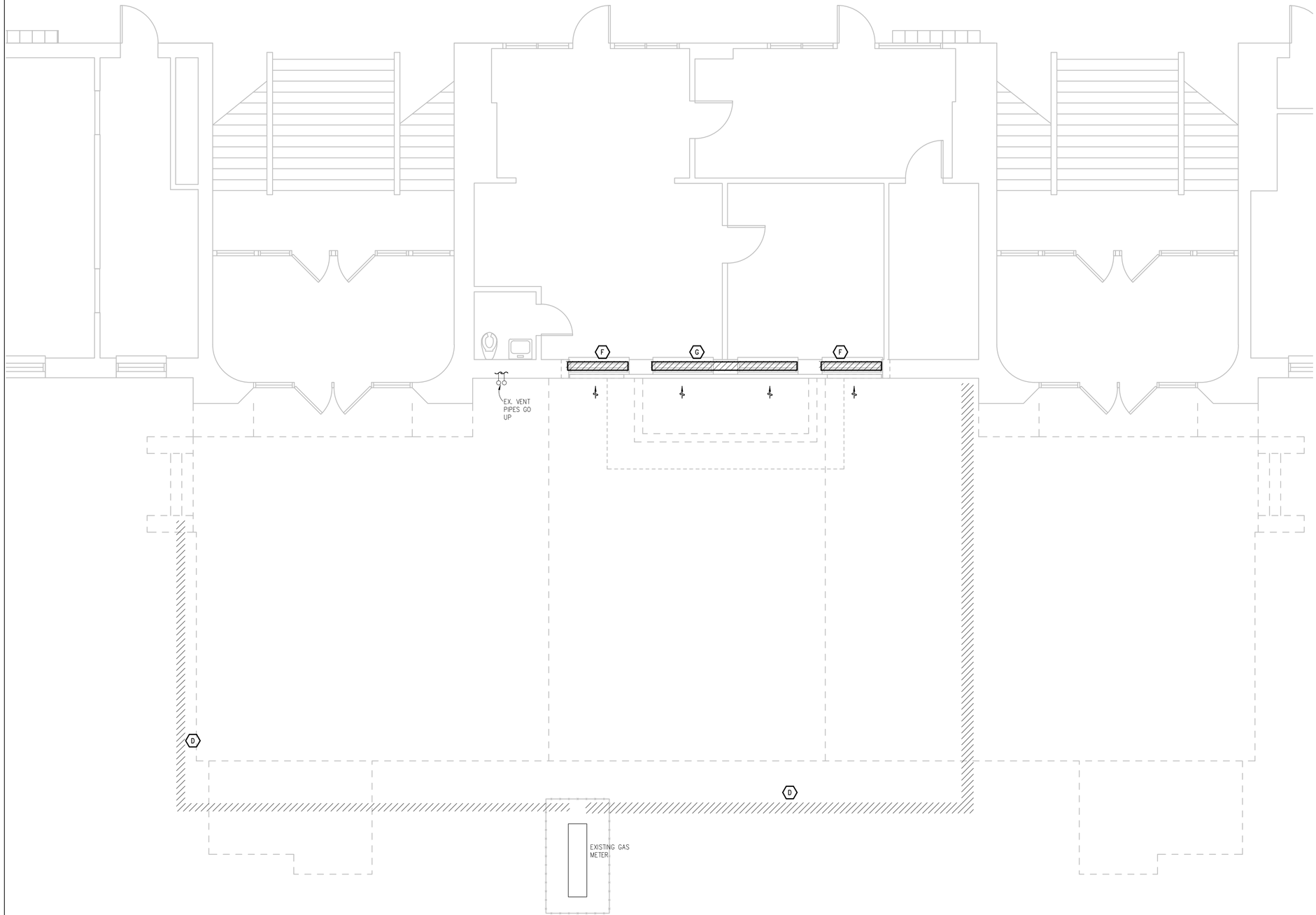
SHEET NAME

LOWER LEVEL MECHANICAL DEMOLITION PLAN

SHEET NO.

MD2-01

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE. 1"



FIRST LEVEL MECHANICAL DEMOLITION PLAN
SCALE: 1/4" = 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.
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. REMOVE SECTION OF 2 GAS PIPE IN ROOM TO BE INFILLED. PREPARE EACH END OF PIPING FOR NEW WORK.

B. REMOVE SECTION OF 1 GAS PIPING IN ROOM TO BE INFILLED. PREPARE EACH END OF PIPING FOR NEW WORK.

C. REMOVE SECTION OF 4 GAS PIPING IN ROOM TO BE INFILLED. PREPARE EACH END OF PIPING FOR NEW WORK.

D. TRENCH AREA FOR INSTALLATION OF NEW GAS LINES.

E. REMOVE ABANDONED DUCTWORK.

F. REMOVE 48 x 55 LOUVER, DAMPER AND ASSOCIATED LINKAGE. SALVAGE ACTUATOR FOR RE-INSTALLATION. PREPARE CONTROL SIGNAL FOR NEW WORK. PREPARE CONDUIT FOR RELOCATION/NEW WORK. PREPARE OPENING FOR NEW WORK.

G. REMOVE (4) 36 x 55 LOUVERS, DAMPERS, LINKAGE AND ACTUATORS COMPLETE. PREPARE CONTROL SIGNAL FOR NEW WORK. PREPARE OPENING FOR NEW WORK.

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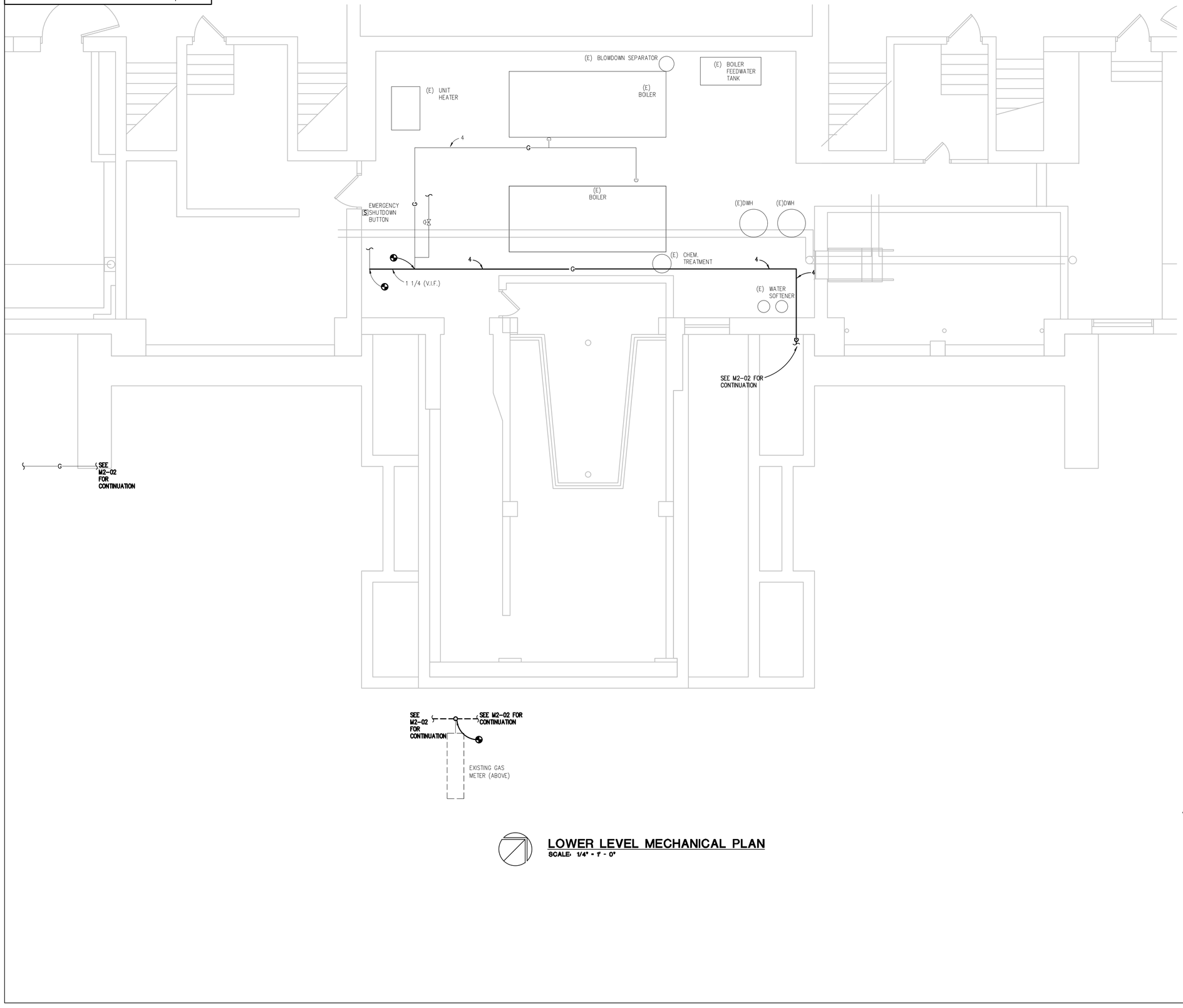
SHEET NAME

FIRST LEVEL MECHANICAL DEMOLITION PLAN

SHEET NO.

MD2-02

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE. 1"



LOWER LEVEL MECHANICAL PLAN

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

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.

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.

SHEET METAL GENERAL NOTES:

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5. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
6. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR DIMENSIONED LOCATION OF GRILLES, REGISTERS, AND DIFFUSERS.
7. REFER TO TEMPERATURE CONTROLS STANDARD MOUNTING HEIGHTS DETAIL FOR ELEVATIONS OF WALL MOUNTED TEMPERATURE CONTROL DEVICES.

(#) CONSTRUCTION KEY NOTES:

1. PIPE RISES TO PENETRATE BUILDING ABOVE GRADE. SEE LOWER LEVEL PLAN M2-01 FOR CONTINUATION.
2. GAS PIPE BURIED BELOW GRADE.
3. PROVIDE 60w x 40h LOUVER AND DAMPER INTERLOCKED TO BOILER No 1. RECONNECT SALVAGED DAMPER ACTUATOR AND EXISTING ELECTRIC CONTROL SIGNAL.
4. PROVIDE 60wx40h LOUVER AND DAMPER INTERLOCKED TO BOILER No. 2. RECONNECT SALVAGED DAMPER ACTUATOR AND EXISTING ELECTRIC CONTROL SIGNAL.
5. PROVIDE 48wx40h LOUVER AND DAMPER INTERLOCKED TO AHU. PROVIDE NEW PNEUMATIC ACTUATOR AND RECONNECT INTO EXISTING PNEUMATIC CONTROL SIGNAL.
6. ISOLATION VALVES TO BE JUST ABOVE GRADE.
7. RELOCATE CONDUIT SERVING ACTUATOR.

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KEY PLAN

OWNER

Hamtramck Public Schools

PROJECT NAME

Kosciuszko Middle School
Structural Repairs

2333 Burger St.
Hamtramck, MI 48212

PROJECT NO.

21-167

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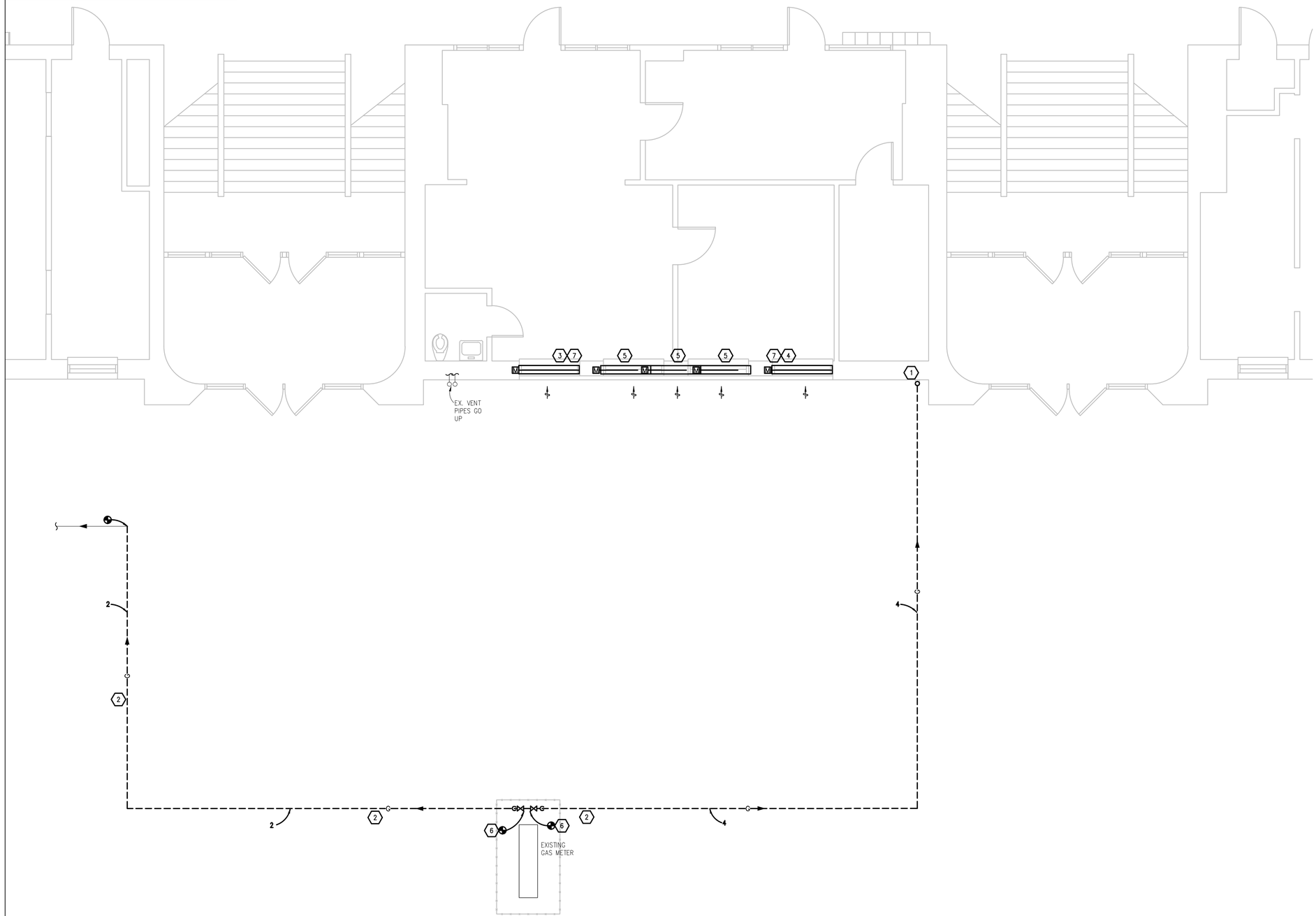
SHEET NAME

LOWER LEVEL MECHANICAL PLAN

SHEET NO.

M2-01

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE. 1"



FIRST LEVEL MECHANICAL PLAN
SCALE: 1/4" = 1' - 0"

PLUMBING GENERAL NOTES:

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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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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.

SHEET METAL GENERAL NOTES:

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(#) CONSTRUCTION KEY NOTES:

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5. PROVIDE 48wx40h LOUVER AND DAMPER INTERLOCKED TO AHU. PROVIDE NEW PNEUMATIC ACTUATOR AND RECONNECT INTO EXISTING PNEUMATIC CONTROL SIGNAL.
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SHEET NAME

FIRST LEVEL MECHANICAL PLAN

SHEET NO.

M2-02

PLUMBING PIPING & VALVE APPLICATION SCHEDULE

PIPE SIZE (INCHES)	MATERIAL: 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	PRESSURE CONNECTIONS: SOLDERED	BRAZED	WELDED	THREADED	FLANGED	GROOVED	INSERT & CRIMP	FUSION	PRESSURE-SEAL	MECHANICALLY-FORMED TEE	MECHANICAL JOINT	PUSH-ON-JOINT	GRAVITY DWV CONNECTIONS: SOLVENT WELDED	SOLDERED	FUSION	CISP HUBLESS	HEAVY-DUTY HUBLESS	ISOLATION VALVES: BALL	AGA BALL	GENERAL SERVICE BUTTERFLY	LUBRICATED PLUG	GATE	KEYED NOTES
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
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 FITTINGS (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.

HORIZONTAL PIPING AND SUPPORT APPLICATION SCHEDULE

METAL PIPE TYPE & SIZE	HANGER OR SUPPORT TYPE: 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	SHIELD TYPE: 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									
10 INCH	X									
12 INCH			X							
14 INCH AND LARGER			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. 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.

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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