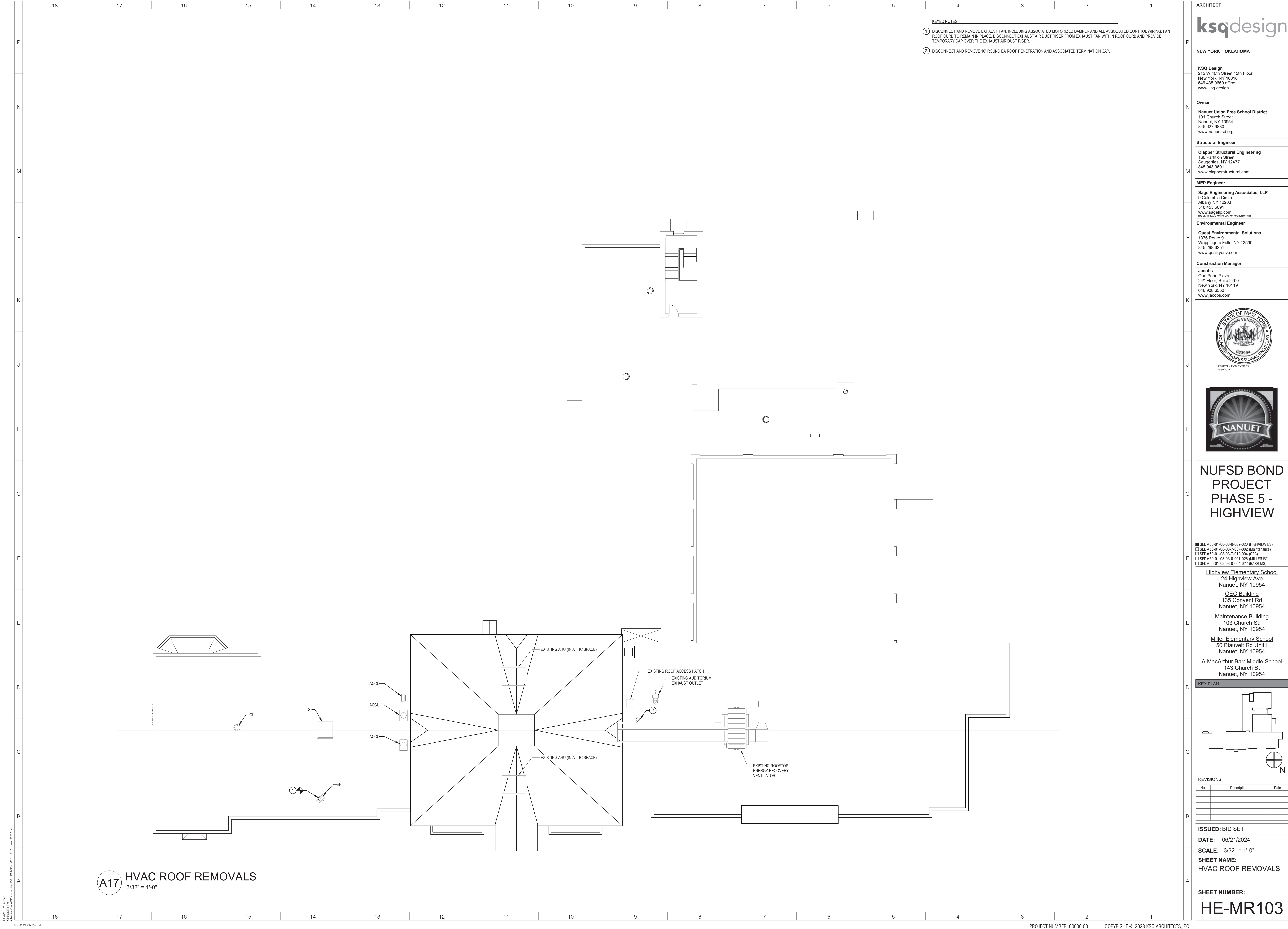




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**NUFSD BOND
PROJECT
PHASE 5 -
HIGHVIEW**

■ SED#50-01-08-03-0-002-020 (HIGHVIEW ES)
□ SED#50-01-08-03-0-001-002 (Maintenance)
□ SED#50-01-08-03-0-002-004 (OEC)
□ SED#50-01-08-03-0-001-028 (MILLER ES)
□ SED#50-01-08-03-0-004-022 (BARR MS)

Highview Elementary School
24 Highview Ave
Nanuet, NY 10954

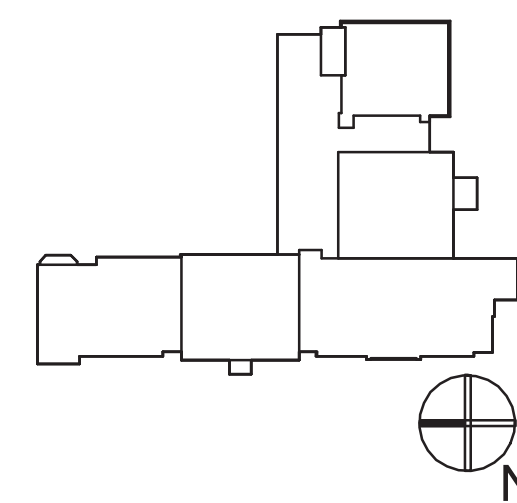
OEC Building
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Nanuet, NY 10954

Maintenance Building
103 Church St.
Nanuet, NY 10954

Miller Elementary School
50 Blauvelt Rd Unit 1
Nanuet, NY 10954

A MacArthur Barr Middle School
143 Church St
Nanuet, NY 10954

KEY PLAN



REVISIONS

No.	Description	Date

ISSUED: BID SET

DATE: 06/21/2024

SCALE: 3/32" = 1'-0"

SHEET NAME:
HVAC ROOF REMOVALS

SHEET NUMBER:

HE-MR103

ISSUE FOR BID SET

181716151413121110987654321

P

N

M

L

K

J

H

G

F

E

D

C

B

A

181716151413121110987654321

CONTROLS LEGEND

D

DIGITAL INPUT

DO

DIGITAL OUTPUT

A

ANALOG INPUT

AO

ANALOG OUTPUT

M

MOTOR OPERATOR / MOTORIZED DAMPER

DP

DIFFERENTIAL PRESSURE SENSOR

SP

STATIC PRESSURE SENSOR

SB

START/STOP

NG

NATURAL GAS DETECTOR

T

SPACE DRY BULB TEMPERATURE SENSOR

H

COMBINATION SPACE DRY BULB TEMPERATURE SENSOR WITH RELATIVE HUMIDITY SENSOR INCLUDED

C

FAN COIL UNIT REMOTE CONTROLLER

H

RELATIVE HUMIDITY SENSOR

H

WALL MOUNTED HUMIDITY SENSOR

CO2

CARBON DIOXIDE SENSOR

CO

CARBON MONOXIDE DETECTOR

M

MOTORIZED DAMPER

ST

STARTER

VFD

VARIABLE FREQUENCY DRIVE

ECM

ELECTRICALLY COMMUTATED MOTOR INTERFACE BOARD

AMS

AIR MEASURING STATION

CS

CURRENT SENSOR

ES

END SWITCH

OS

OCCUPANCY SENSOR

PS

PRESSURE SENSOR

SP

STATIC PRESSURE SENSOR

H

HUMIDITY

SD

SMOKE DETECTOR

R

RELAY

T

ELECTRIC THERMOSTAT DUCT MOUNTED

F

AIRFLOW SENSOR

A

ALARM

T

TREND

RT

RUN TIME

T

TEMPERATURE SENSOR SINGLE POINT

T

TEMPERATURE SENSOR AVERAGING SENSING ELEMENT

M

2-WAY CONTROL VALVE ELECTRIC ACTUATOR

M

3-WAY CONTROL VALVE ELECTRIC ACTUATOR

SINGLE LINE SYMBOLS LEGEND

HWS

HEATING WATER SUPPLY PIPING

HWR

HEATING WATER RETURN PIPING

COND

COOLING COIL CONDENSATE PIPING

RL

REFRIGERANT LIQUID PIPING

RS

REFRIGERANT SUCTION PIPING

90

90 DEGREE PIPE ELBOW DOWN

PIPE

PIPE RISER UP SYMBOL

MID

MID-PIPE DOWN

CAP

PIPE CAP

BREK

PIPE BREAK

GUIDE

PIPE GUIDE

UNION

UNION

FLOW

FLOW DIRECTION

REMOVALS

PIPING/DUCTWORK/EQUIPMENT REMOVALS

CHECK

CHECK VALVE

SHUTOFF

SHUTOFF BALL VALVE

2WAYMOD

2-WAY MODULATING CONTROL VALVE

2WAYCON

2-WAY CONTROL VALVE

3WAYMOD

3-WAY MODULATING CONTROL VALVE

GATE

GATE VALVE CIRCUIT SETTER BALANCING VALVE - 2'-1/2" SIZE AND UP

CALIB

CALIBRATED BALANCE VALVE CIRCUIT SETTER BALANCING VALVE - 2" SIZE AND BELOW

REDUC

PRESSURE REDUCING VALVE

3WAYCON

3-WAY CONTROL VALVE

BUTTERFLY

BUTTERFLY GRILLE

RELIEF

RELIEF VALVE

RELIEF

PRESSURE RELIEF VALVE

AUTOMATIC

AUTOMATIC AIR VENT

PUMP

PUMP

OR

OR

STRAINER

STRAINER

THERMOMETER

THERMOMETER

POINT

POINT OF CONNECTION

DISCONNECTION

POINT OF DISCONNECTION

EXPANSION

EXPANSION COMPENSATOR

DOUBLE LINE SYMBOLS LEGEND

SUPPLY

SUPPLY DIFFUSER

RETURN

RETURN DIFFUSER

SQUARE

SQUARE-THROATED ELBOW WITH TURNING VANES

DS-X

ELBOW STYLE DUCT SILENCER

DS-X

STRAIGHT DUCT STYLE DUCT SILENCER

R

DUCTWORK RADIUS ELBOW

FSD

COMBINATION FIRE/SMOKE DAMPER

F

FIRE DAMPER

S

SMOKE DAMPER

M

MOTORIZED DAMPER

FLEXIBLE

FLEXIBLE SUPPLY AIR DUCTWORK MAXIMUM 3-FOOT LENGTH

VOLUME

VOLUME DAMPER

RETURN

RETURN AIR RISE

EXHAUST

EXHAUST AIR RISE

SUPPLY

SUPPLY AIR RISE

X

KEYED NOTE DESIGNATION TAG

C

FCU CONTROLLER

T

SPACE TEMPERATURE SENSOR

ABBREVIATIONS LEGEND

AC

AIR CONDITIONER

ACCU

AIR COOLED CONDENSING UNIT

AD

ACCESS DOOR

AFF

ABOVE FINISHED FLOOR

AFG

ABOVE FINISHED GRADE

AH

AIR HANDLER

AHU

AIR HANDLING UNIT

APD

AIR PRESSURE DROP

AS

AIR SEPARATOR

ATS

AIR TRANSFER SLEEVE

AVG

AVERAGE SPACE TEMPERATURE

BHP

BRAKE HORSEPOWER

BM

BAILEY MIDDLE SCHOOL

BTU

BRITISH THERMAL UNITS/HOUR

BTUHLF

BRITISH THERMAL UNITS/HOUR LINEAR FOOT

CAP

CAPACITY

CFM

CUBIC FEET PER MINUTE

CI

CAST IRON

CO

CARBON MONOXIDE SENSOR

COND

CONDENSATE PIPING

CONT.

CONTINUATION

CP

STEAM CONDENSATE PUMP/RECEIVER SET

CUH

CABINET UNIT HEATER

CW

DOMESTIC COLD WATER

CV

CONVECTOR

CV

VALVE COEFFICIENT

D

DIFFUSER

DB

DRY BULB

DBA

A-WEIGHTED DECIBEL LEVEL

DCW

DOMESTIC COLD WATER

DDC

DIRECT DIGITAL CONTROL

DEG F

DEGREES FAHRENHEIT

DHWX

DOMESTIC HOT WATER RETURN

DIA

DIAMETER

DN

DOWN

DS

DUCT SILENCER

DWID

DUAL WIDTH DUAL INLET

DWG

DRAWING

EA

EXHAUST AIR

EAT

ENTERING AIR TEMPERATURE

E.C.

EXPANSION COMPENSATOR

EBB

ENTERING DRY BULB

EER

ENERGY EFFICIENCY RATIO

E

EXHAUST FAN TAG

EF

EXHAUST FAN

EG

EXHAUST GRILLE

EH

IN-DUCT ELECTRIC HEATING COIL

EL

EXPANSION LOOP

ER

EXHAUST REGISTER

ERV

STATIC PLATE ENERGY RECOVERY VENTILATOR

ESP

EXTERNAL STATIC PRESSURE

ET

EXPANSION TANK

EWT

ENTERING WATER TEMPERATURE

EX

EXISTING

F

FAN

F

FAHRENHEIT

FAI

FRESH AIR INTAKE

FC

FORWARD CURVED

FD

FIRE DAMPER

FCU

FAN COIL UNIT

FLA

FULL LOAD AMPS

FLR

FLOOR

FO

FLAT OVAL

FPM

FEET PER MINUTE

FSD

FIRE SMOKE DAMPER

FT

FIN TUBE

FT, OR

FEET

FTR

FIN TUBE RADIATION

G

GRILLE

GGAL

GALLON

GPH

GALLONS PER HOUR

GPM

GALLONS PER MINUTE

GV

GRAVITY RELIEF VENTILATOR

H

HOOD

HP

HORSEPOWER OR HEAT PUMP

HPSP

HEAT PUMP SEASONAL PERFORMANCE FACTOR

HS

HIGH SCHOOL

H&V

HEATING AND VENTILATION

HW

DOMESTIC HOT WATER

HWP

HOT WATER PUMP

HWR

HOT WATER RETURN

HWS

HOT WATER SUPPLY

HX

HEAT EXCHANGER

HZ

HERTZ

IEER

INTEGRATED ENERGY EFFICIENCY RATIO

IN OR

INCHES

INT

INTERNAL

KEF

KITCHEN EXHAUST FAN

KW

KILOWATT

L

LENGTH

LAT

LEAVING AIR TEMPERATURE

LBS

POUNDS

LDB

LEAVING DRY BULB

LF

LINEAR FOOT

LMTD

LOGARITHMIC MEAN TEMPERATURE DIFFERENCE

LWT

LEAVING WATER TEMPERATURE

MAX

MAXIMUM

MBH

THOUSAND BTUH

MC

MOTOR CONTROLLER

MCA

MINIMUM CIRCUIT AMPACITY

MER

MECHANICAL EQUIPMENT ROOM

MM

MOUNTING HEIGHT

MD

MOTORIZED DAMPER

MIN

MINIMUM

MOP

MAXIMUM OVERCURRENT PROTECTION

N/A

NOT APPLICABLE

NC

NORMALLY CLOSED

MFG

MANUFACTURER

OA

OUTSIDE AIR

NO

NORMALLY OPEN

NOL

NON OVER LOADING

OD

OUTSIDE AIR

OAD

OUTSIDE AIR DAMPER

OED

OPEN END DUCT

OS&Y

OPEN STEM & YOKE

P

PUMP

PC

PLUMBING CONTRACTOR

PD

PRESSURE DROP

PG

PROPYLENE GLYCOL

PH

PHASE

PPM

PARTS PER MILLION

PRV

PRESSURE REDUCING VALVE

PSIG

POUNDS PER SQUARE INCH

PSIG

POUNDS PER SQUARE INCH GAUGE

R

HEATING WATER RADIATION UNIT

RA

RETURN AIR

RD

RETURN DIFFUSER

REF

ROOF EXHAUST FAN

RF

RELIEF FAN

RH

RELATIVE HUMIDITY

RHG

REFRIGERANT HOT GAS

RL

REFRIGERANT LIQUID

RLA

RATED LOAD AMPS

RPM

REVOLUTIONS PER MINUTE

RP

HYDRONIC RADIANT HEAT PANEL

RPZ

REDUCED PRESSURE ZONE ASSEMBLY

RR

RETURN REGISTER

RS

REFRIGERANT SUCTION

RTU

ROOF TOP UNIT

S

INDOOR AIR HANDLING UNIT TAG

SA

SUPPLY AIR

SP

SQUARE FOOT

SD

SUPPLY DIFFUSER

SEER

SEASONAL ENERGY EFFICIENCY RATIO

SP

STATIC PRESSURE

SPS

STATIC PRESSURE SENSOR

SR

SHORT RADIUS

SS

STAINLESS STEEL

SWGI

SINGLE WIDTH SINGLE INLET

TEMP

TEMPERATURE

TG

TRANSFER GRILLE

TR

DUCTWORK TRANSITION

TSP

TOTAL STATIC PRESSURE

TYP

TYPICAL

UH

UNIT HEATER

VAV

VARIABLE AIR VOLUME

VEL

VELOCITY

VERT

VERTICAL

VFD

VARIABLE FREQUENCY DRIVE

VRF

VARIABLE REFRIGERANT FLOW

VRV

VARIABLE REFRIGERANT VOLUME

W

WIDTH

WB

WET BULB

WC

WATER COLUMN

WPD

WATER PRESSURE DROP

WH

WATER HEATER

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STATE OF NEW YORK

REGISTERED PROFESSIONAL ENGINEER

093994

11/30/2024

NANUET

NUFSD BOND PROJECT PHASE 5 - HIGHVIEW

SED#50-01-08-03-0-002-020 (HIGHVIEW ES)

SED#50-01-08-03-7-007-002 (Maintenance)

SED#50-01-08-03-7-012-004 (OEC)

SED#50-01-08-03-0-001-028 (MILLER ES)

SED#50-01-08-03-0-004-022 (BARR MG)

Highview Elementary School

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Miller Elementary School

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A MacArthur Barr Middle School

143 Church St
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KEY PLAN

REVISIONS

No.	Description	Date

ISSUED: BID SET

DATE: 06/21/2024

SCALE: 12" = 1'-0"

SHEET NAME: HVAC SYMBOLS, LEGENDS AND ABBREVIATIONS

SHEET NUMBER: HE-M001

PROJECT NUMBER: 00000.00

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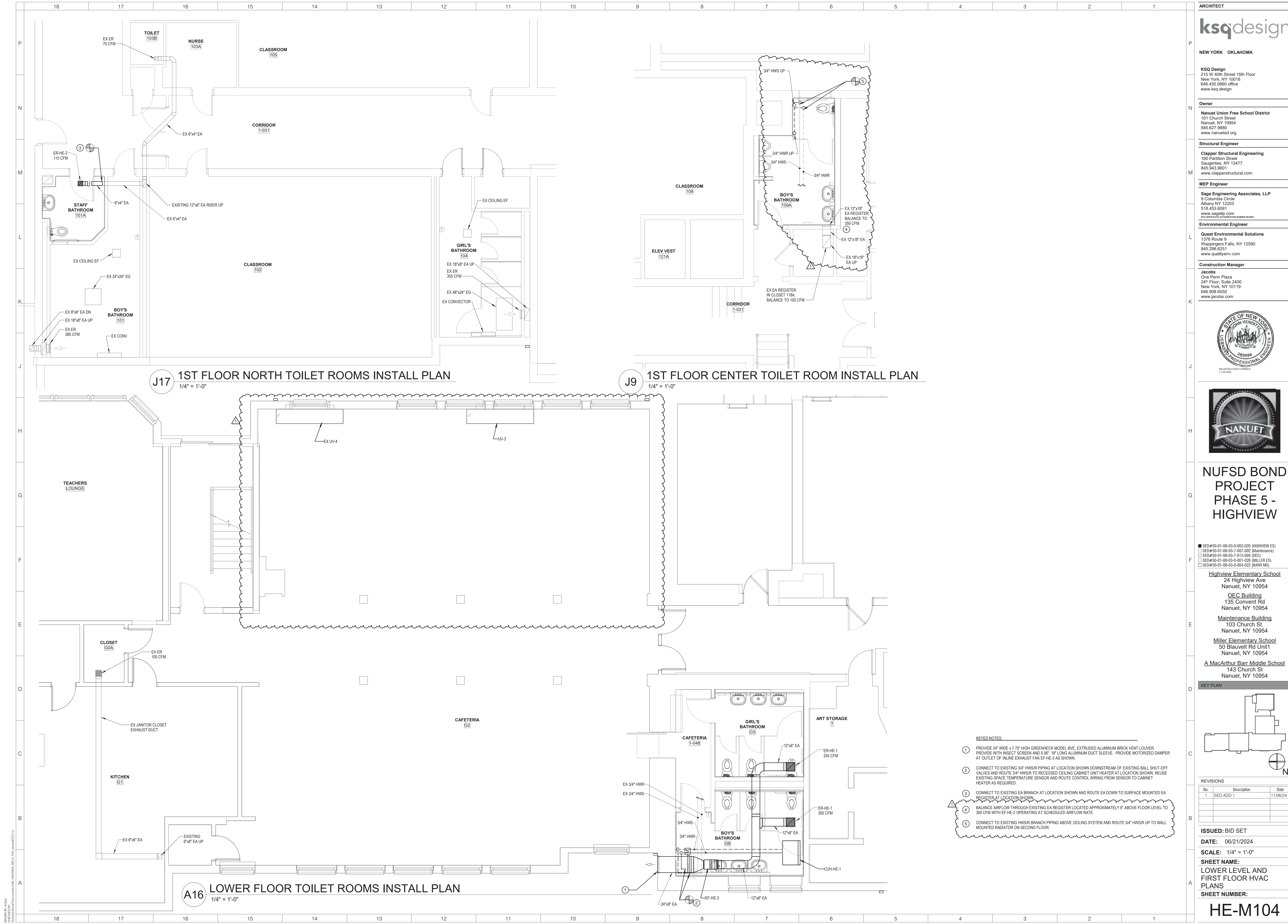
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ISSUE FOR BID SET









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NUFSD BOND PROJECT PHASE 5 - HIGHVIEW

SED#50-01-08-03-0-002-020 (HIGHVIEW ES)
SED#50-01-08-03-7-001-002 (Maintenance)
SED#50-01-08-03-7-012-004 (OEC)
SED#50-01-08-03-0-001-028 (MILLER ES)
SED#50-01-08-03-0-004-022 (BARR MG)

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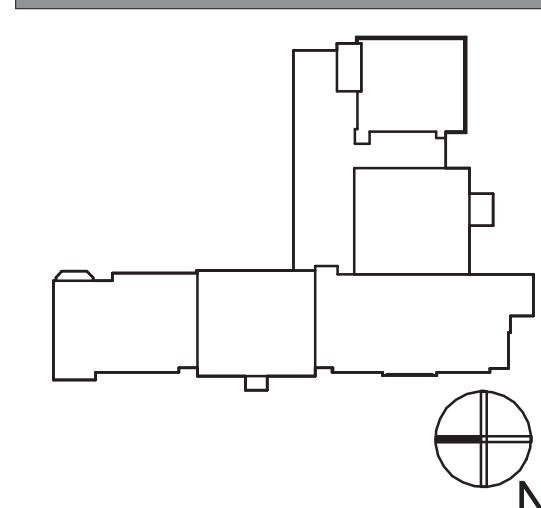
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KEY PLAN



REVISIONS

No.	Description	Date
1	SED ADD 1	11/06/24

ISSUED: BID SET

DATE: 06/21/2024

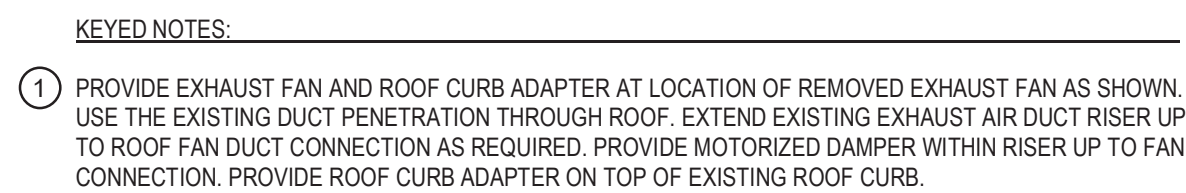
SCALE: 1/4" = 1'-0"

SHEET NAME:
LOWER LEVEL AND
FIRST FLOOR HVAC
PLANS

SHEET NUMBER:

HE-M104

ISSUE FOR BID SET


$$3/32'' = 1'-0''$$
ISSUED: BID SET

DATE: 06/21/2024

SCALE: 3/32" = 1'-0"

SHEET NAME:

HVAC ROOF PLAN

SHEET NUMBER:

HE-M106