List of Drawings

Cover

ARCHITECTURAL

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- Life Safety Plan and Building Code Information LS.0
- A1.1 First Floor Demolition Plan
- First Floor New Work Plan A2.1 A3.1 First Floor Reflected Ceiling Plan
- Interior Elevations A8.1
- Room Finish Schedule A9.1
- A9.2 Door Schedule and Details
- Partition Types A9.3 A9.4 Sections and Details
- A10.1 First Floor Finish Plan
- First Floor Furniture Plan F2.1

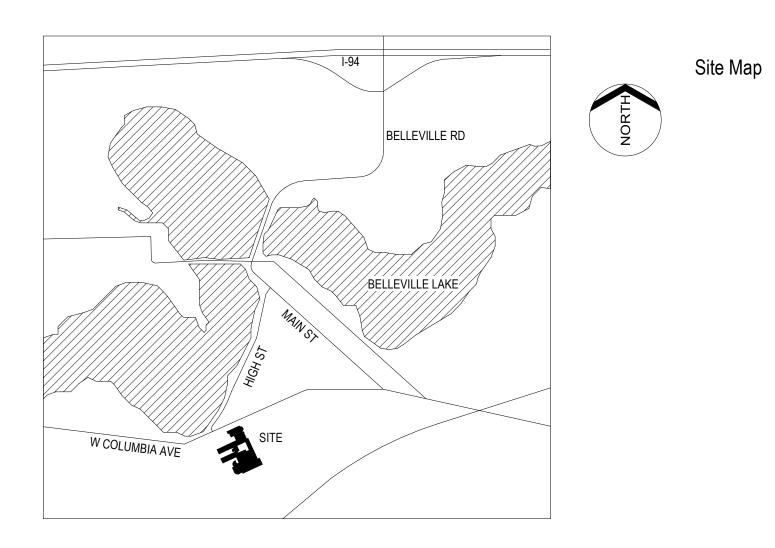
MECHANICAL

MR.0	Mechanical Reference Information
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M1.1	First Floor Demolition Plan
M2.1	First Floor Sheet Metal Plan
M4.1U	First Floor Underground Plumbing Plan
M4.1	First Floor Plumbing and HVAC Piping Plan
M6.1	Details
M7 1	Schedules & Controls

- M7.1 Schedules & Controls FPR.0 Fire Protection Reference Information
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- ER.0 Electrical Reference Information
- E4.1 Enlarged Plan E4.2 Enlarged Plans
- E5.1 One Line Diagram
- E5.2 Fire Alarm Diagram, Detail and Panel Schedules





Van Buren Public Schools **RAHS Belleville High School**

501 W Columbia Ave Belleville, MI 48111

REFER TO DRAWING LS.0 FOR LIFE SAFETY AND CODE INFORMATION

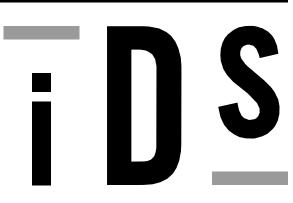
Code Information

Registration Seal

Signature Date

Signature Date

Signature Date

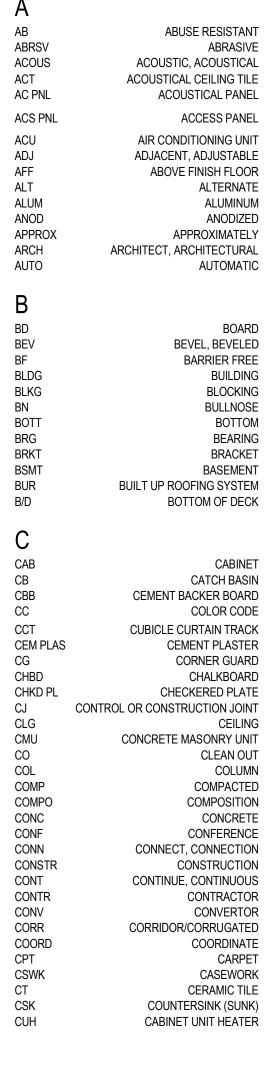


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	Issued for	Issue Date
	Design Development	07-03-2024
Qu	ality Management Review	01-09-2025
	Bids	01-31-2025
	© 2025 INTEGRATED design	SOLUTIONS, LLC
		oject Number
	2416	7-1000

Autodesk Docs://Van Buren Public Schools (2023)/VBPS HS 2/17/2025 10:51:17 AM Clinic-A23.rvt

ABBREVIATIONS



EPT

EQ

EQUIP

EW

EWC

EXIST

EXP

EXT

FAC

FACP

FDC

FDTN

FEB

FEC

FIN FLR

FE

FD

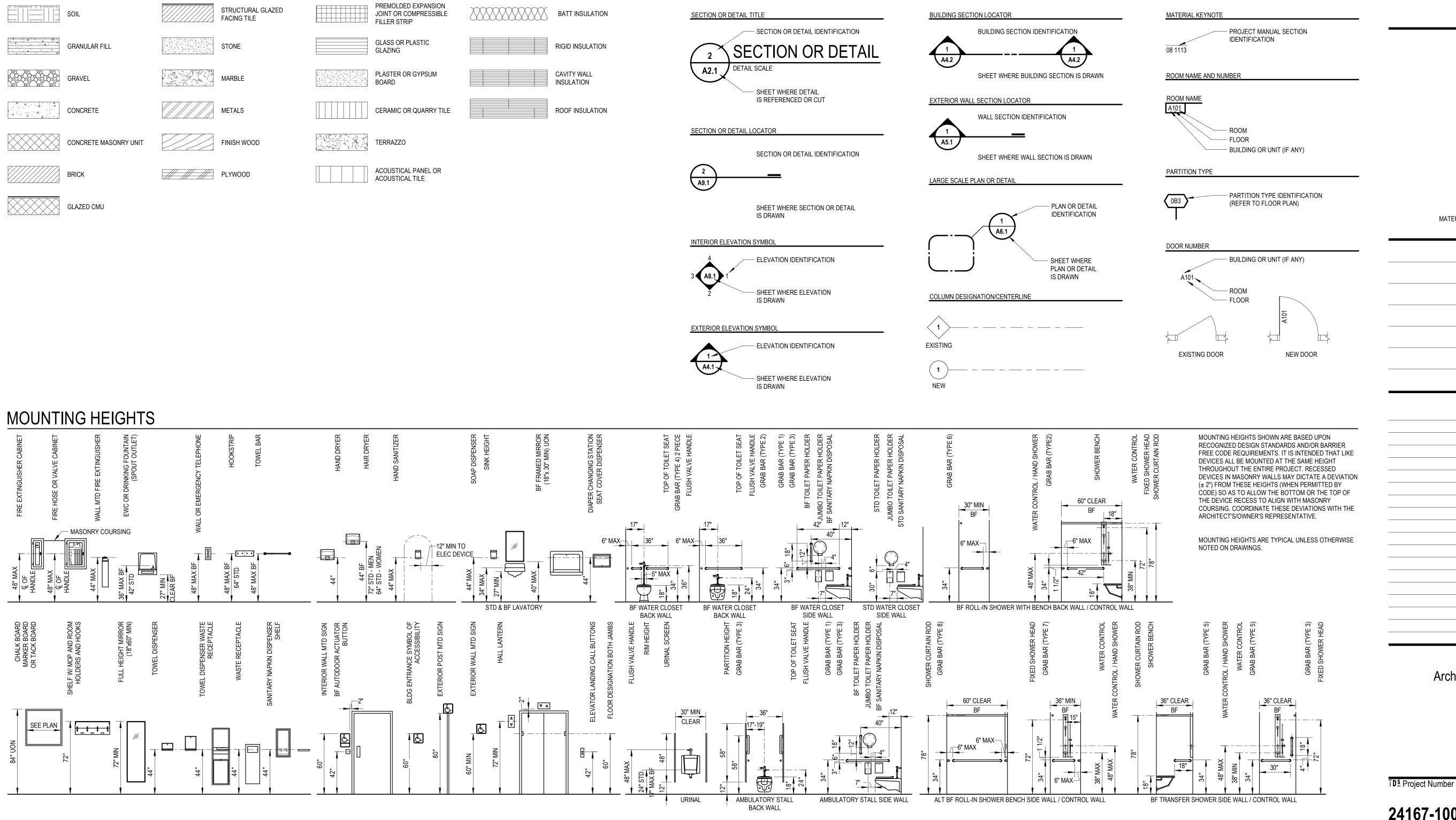
EXP BT

EXP CONST

(E)

MATERIAL LEGEND

SOIL
GRANULAR FILL
GRAVEL
CONCRETE
CONCRETE MAS
BRICK
GLAZED CMU



			F (CONT)		D
	J	FIRE HYDRANT	FH	DEPTH	D
JANITOR CLOSE	JC	FIRE HOSE CABINET	FHC	DOUBLE	DBL
JOIN	JT	FIRE HOSE RACK	FHR	DUMBWAITER	DWTR
JOIS	JST	FINISH, FINISHED	FIN	DUTCH DOOR	DT DR
		FLASHING	FLASH	DEMOLISH, DEMOLITION	DEMO
	K				
		FLOOR	FLR	DEPRESSED	DEPR
KNOCK DOWN	KD	FIREPROOFING	FPRFG	DEPARTMENT	DEPT
		FRAME	FR	DETAIL	DET
		FIRE RATED GLAZING MARKINGS	FRGM	DRINKING FOUNTAIN	DF
	L	FIBERGLASS REINFORCED PANEL	FRP	DIAMETER	DIA
LONG, LENGTH	L	FEET, FOOT	FT	DIAGONAL	DIAG
LABORATOR	LAB	FOOTING	FTG	DIFFUSER	DIFF
LAMINATE, LAMINATE	LAM	FIN TUBE RADIATION	FTR	DIMENSION	DIM
LAVATOR	LAV	FIRE VALVE CABINET	FVC	DIRECTORY	DIR
LABEI	LBL	FABRIC WALL COVERING	FWC	DIRECT APPLIED EXT FINISH SYSTEM	DEFS
POUNDS	LBS			DAMPPROOFING SYSTEM	DMPF
LINEAR FOO	LF		G	DEMOUNTABLE	DMT
LEFT HAND	LH			DOWN	DN
LEFT HAND REVERSE	LHR	GAGE, GAUGE	GA	DOOR OPENING	DR OPNG
LIMESTONE	LIMEST	GALVANIZED	GALV	DOOR	DR
LINOLEUN	LINO	GROUND FACE CONCRETE MASONRY	GF CMU	DRAWING	DWG
LOCKEF	LKR	GLASS FIBER REINFORCED CONCRETE	GRFC	DRAIN TILE	DT
LONG LEG HORIZONTAI	LLH	GLASS FIBER REINFORCED GYPSUM	GRFG	DOWEL	DWL
LONG LEG VERTICA	LLV	GALVANIZED IRON	GI	DRAWER	DWR
LOUVER OPENING	LO	GLASS/GLAZED	GL		
LOW POIN	LP	GLAZED CONCRETE MASONRY UNIT	GL CMU		
LIGHT PROOF	LPRF	GRADE	GR		
LIGHT WEIGH	LT WT	GLASS REINFORCED GYPSUM	GRG		
LUXURY VINYL TILE	LVT				E
				EACH	EA
	N /	GRILLE	GRL	EXHAUST FAN	EF
	Μ	GYPSUM BOARD	GYP BD	EXTERIOR INSULATION FINISH SYSTEM	EIFS
MAINTENANCE	MAINT			EXPANSION JOINT	EJ
MATERIAI	MATL			ELEVATION	EL
MAXIMUN	MAX		Н	ELECTRIC, ELECTRICAL	ELEC
MULTI COLOR COATING	MCC	HIGH, HEIGHT	Н	ELEVATOR	ELEV
METAL DIVING STRIF	MDS	HOSE BIBB	HB	ENCLOSURE	ENCL
MECHANICA	MECH	HOLLOW CORE	HC	ENTRANCE, ENTRY	ENTR
MEZZANINE	MEZZ	HARDWOOD	HDWD	ENTRY MAT SYSTEM	ENTER MAT
MANUFACTUREF	MFR	HARDWARE	HDWE	ELECTRICAL PANEL	EP
ΜΑΝΗΟΙ Ρ	MH	HARDENER SEALER	HD/SI R	ΕΡΩΧΥ ΡΔΙΝΤ	FPT

HD/SLR HM

HORIZB

HORIZ

HP

HPC

HR

ID

INCL

INFO

INSUL

INT

IR

IN

HARDENER SEALER

HORIZONTAL BLINDS

HORIZONTAL, HORIZONTALLY

HIGH PERFORMANCE COATING

HOLLOW METAL

HIGH POINT

INSIDE DIAMETER

INVERT ELEVATION

INFORMATION

INCH, INCHES

INTERIOR

INCLUDE, INCLUDING

INSULATE, INSULATION

IR GYP BD IMPACT RESISTANT GYPSUM BOARD

IMPACT RESISTANT

HOUR

EPOXY PAINT

EQUAL

EQUIPMENT

EACH WAY

EXISTING

EXPOSED

EXTERIOR

FACTORY

FLOOR DRAIN

FOUNDATION

FINISH FLOOR

FIRE EXTINGUISHER

EXPANSION BOLT

ELECTRICAL WATER COOLER

EXPOSED CONSTRUCTION

FIRE ALARM CONTROL PANEL

FIRE DEPARTMENT CONNECTION

FIRE EXTINGUISHER AND BRACKET

FIRE EXTINGUISHER CABINET

EXISTING FINISH/DOOR (PER SCHEDULE)

MTD	MOUNTED
MTL	METAL OR METALLIC
MT	METAL THRESHOLD
MTL PNL	METAL PANEL
MULL	MULLION
Ν	
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NRC	NOICE REDUCTION COEFFICIENT
NTS	NOT TO SCALE

MH

MIN

MISC

MKBD MLDG MO

MRT

SYMBOL LEGEND

MANHOLE

MINIMUM

MISCELLANEOUS

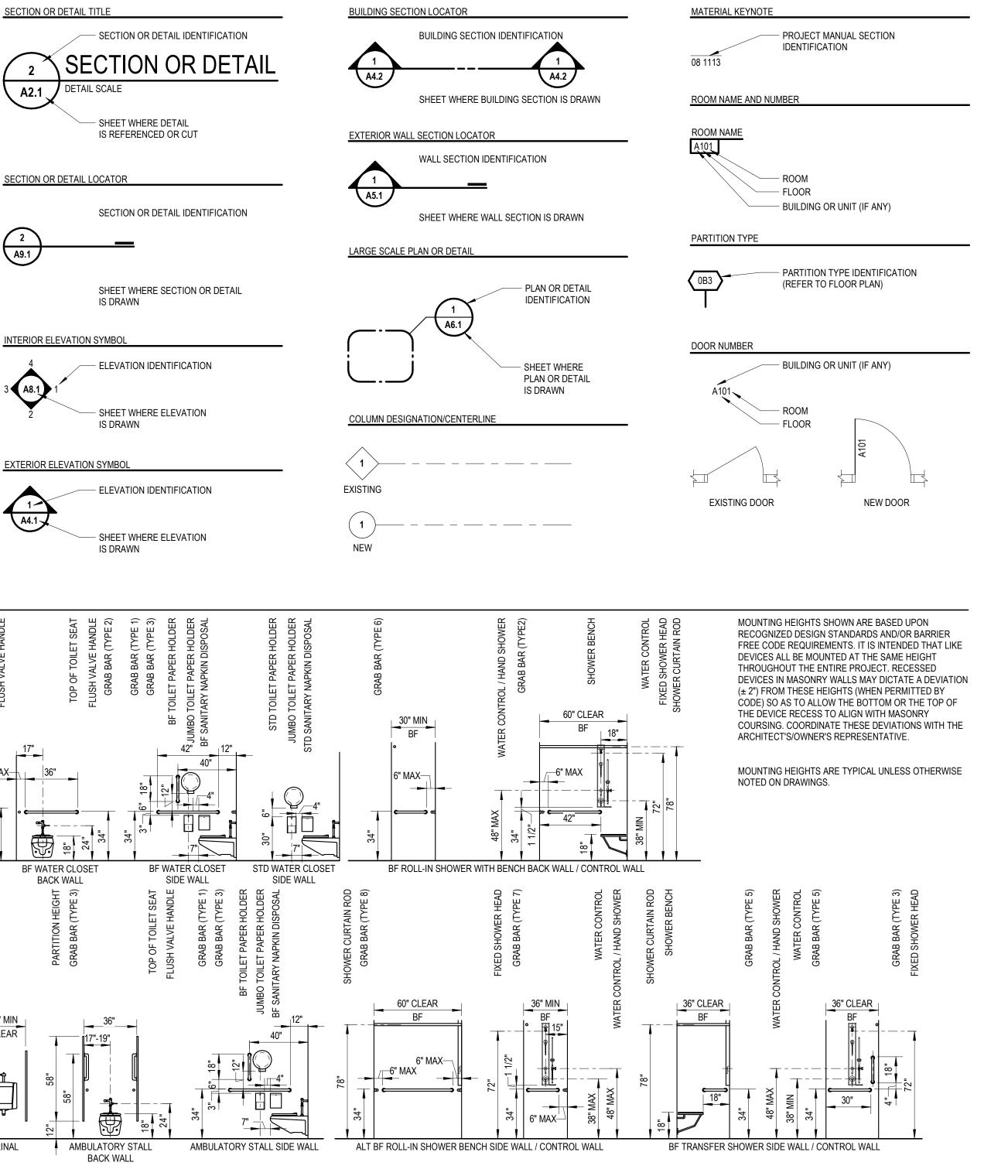
MASONRY OPENING

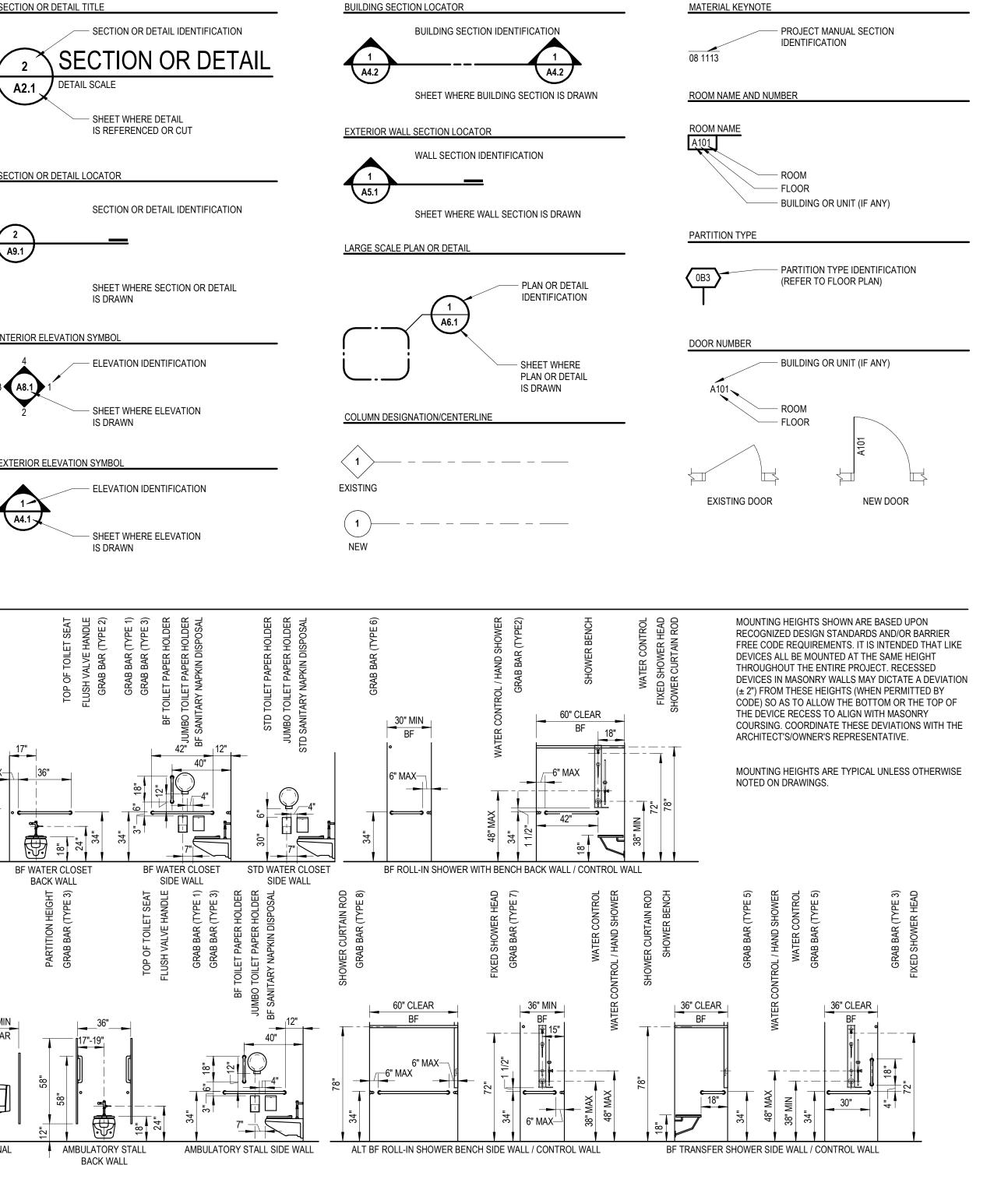
MARBLE THRESHOLD

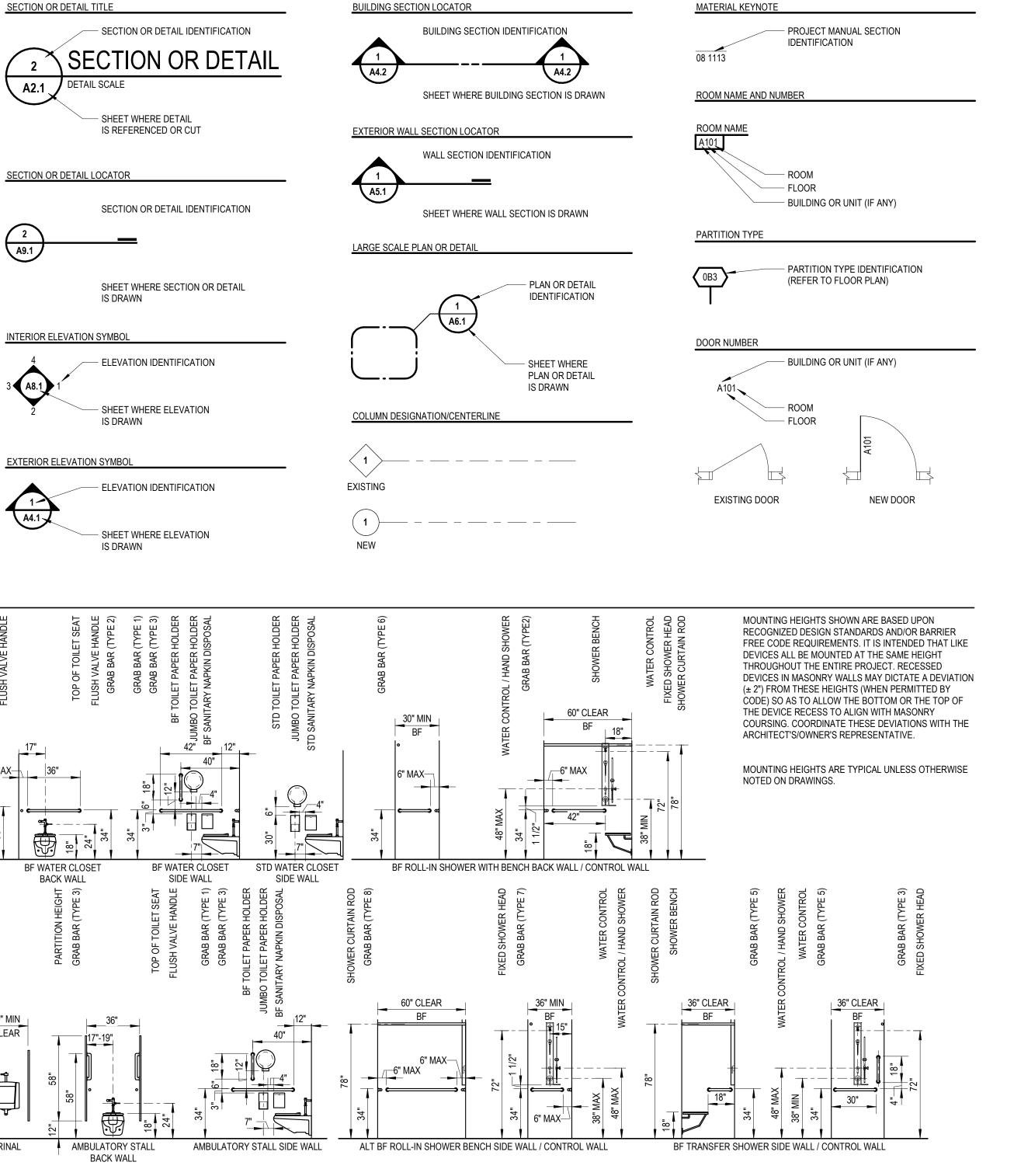
MARKERBOARD

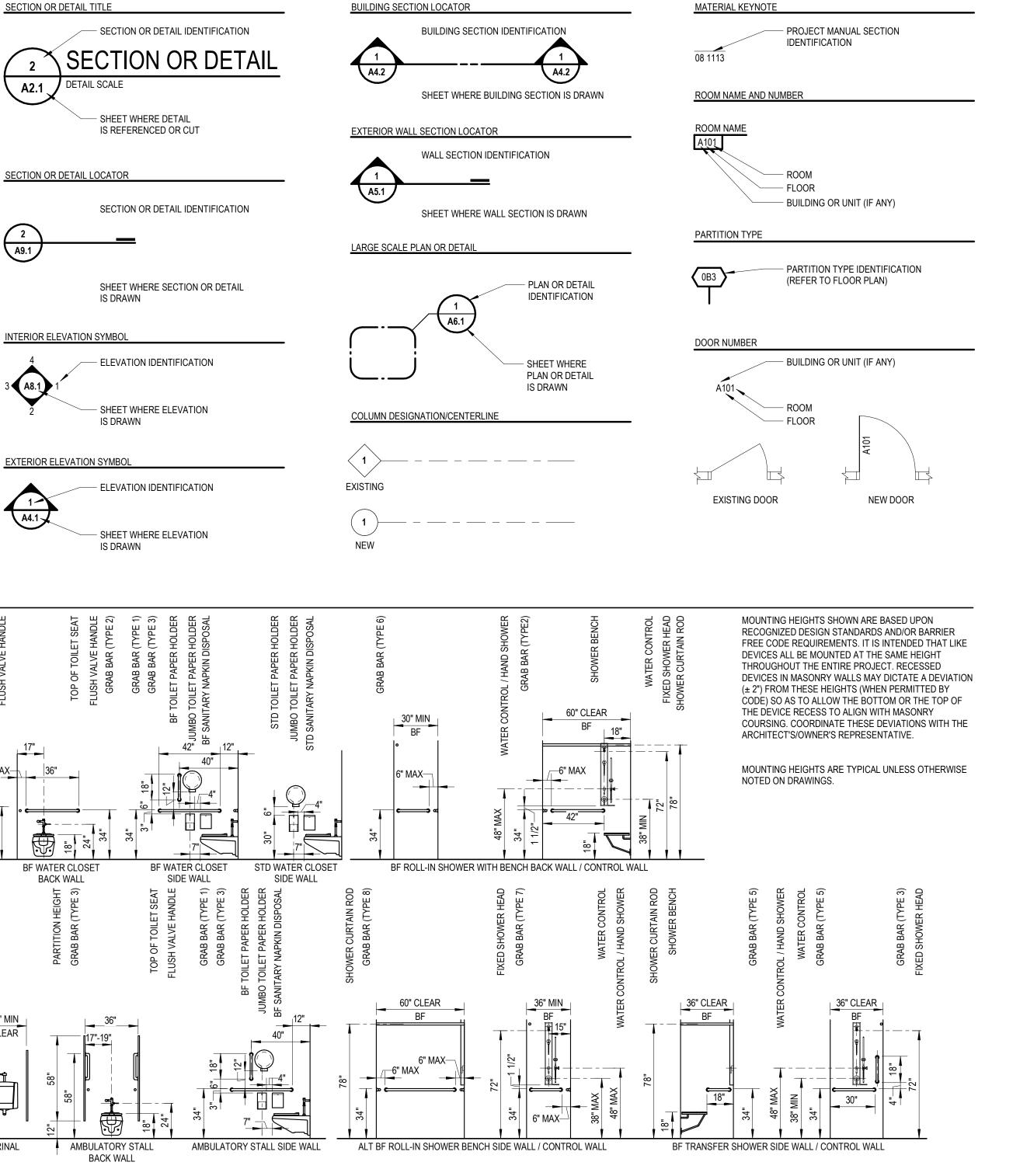
MOULDING

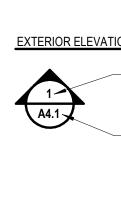
MOUNTED

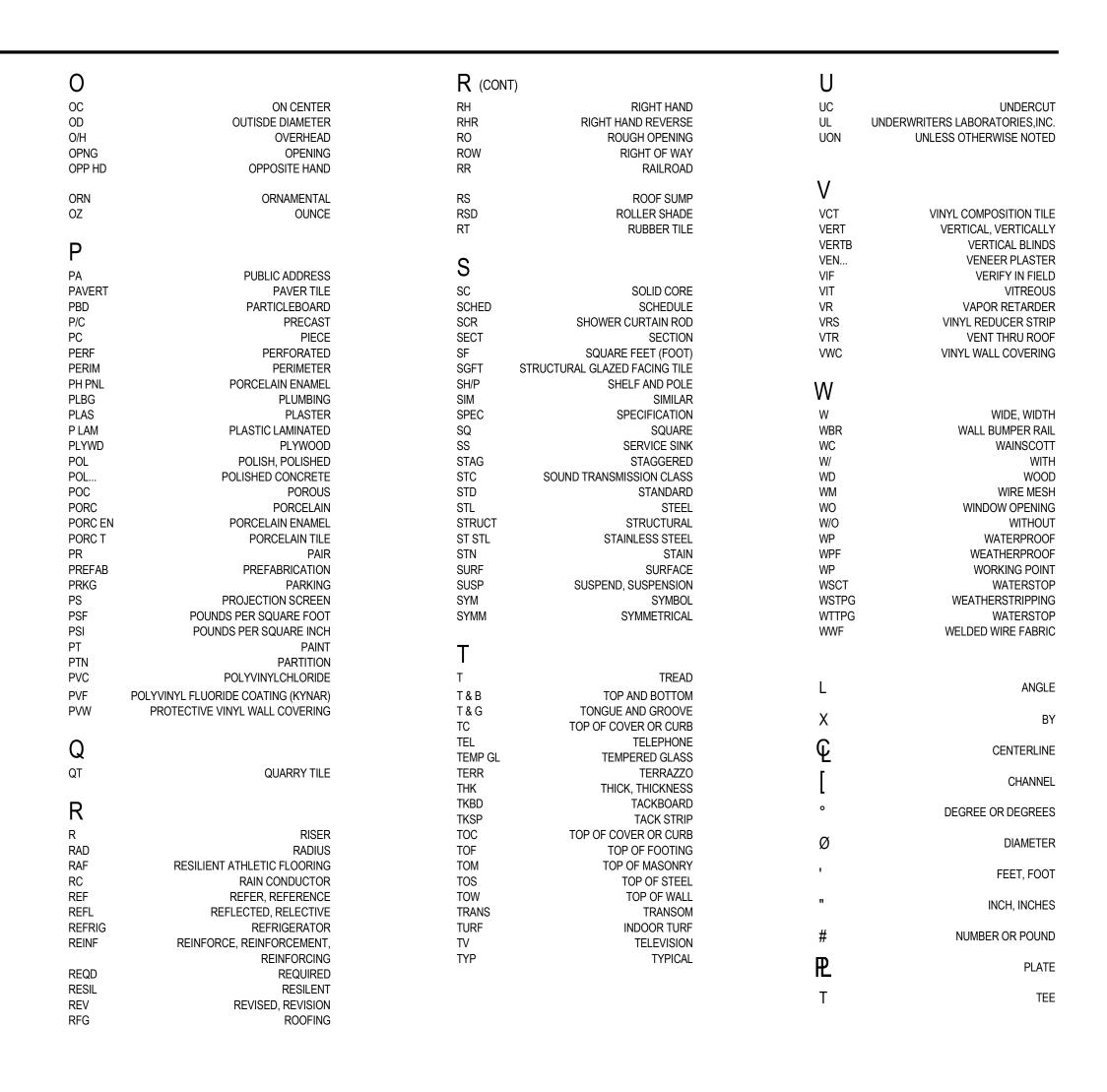














Drawing Number

AR.0

Architectural Reference Information

IDS Drawing Tit

 \circ 2025 Integrated $ext{design}$ solutions, L

	Project Designer A. Pelfrey
Project A	rchitect / Engineer C. King
	Drawn By C. King
	Q.M. Review
	N. LaForest
	Approved B. Sundberg
	Drawing Scale
	No Scale
Issued for	Issue Date
Design Development	07-03-2024
Quality Management Review	01-09-2025
Bids	01-31-2025

THIS PROJECT MAY NOT UTILIZE ALL THE SYMBOLS, MATERIALS, ABBREVIATIONS AND STANDARD INFORMATION SHOWN ON THIS SHEET



Van Buren Public Schools

RAHS Belleville High School



501 W Columbia Ave

Belleville, MI 48111

Key Plan

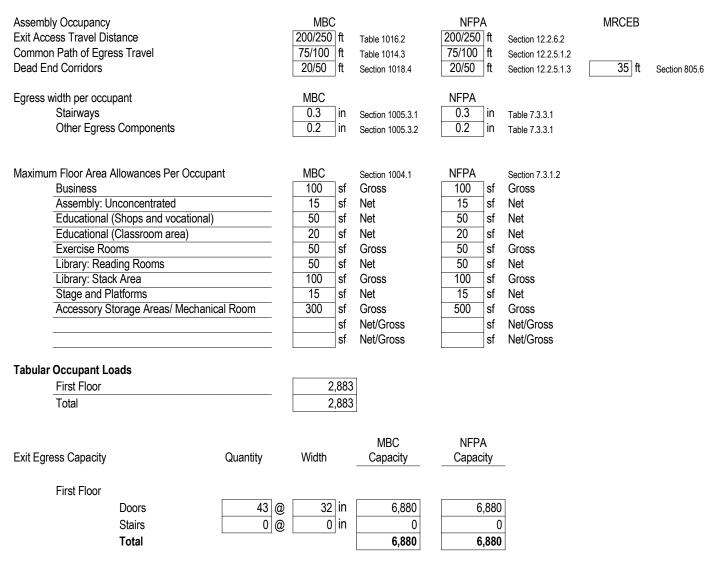
Project Administrator A. Maurer



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MEANS OF EGRESS



LIFE SAFETY SYSTEMS

High-Rise Buildings Applicability

MBC Section 403.1 Fire Protection System Requirements Automatic Sprinkler Systems MBC Section 903 NFPA - See Occupancy Chapters & 9.7.1 Standpipe Systems

MBC Section 905 NFPA - See Occupancy... NFPA 45

Fire Pumps

Fire Hazard Occupancy

Portable Fire Extinguishers MBC Section 906 IFC Section 906 NFPA See Occupancy Chapters & 9.7.4

Fire Alarm and Detection System Requirements Manual Fire Alarm System MBC Section 907 NFPA See Occupancy Chapters & 9.6

Emergency Voice/Alarm Communication System MBC Section 907.2.1.1 MBC Section 907.5.2.2

Elevator Requirements Ambulance Strecther Compliance

MBC Section 3002.4 Accessible Means of Egress

MBC Section 1007.2.1 Emergency and Standby Power System

MBC Section 2702

Yes No

Full Partial None

Required Not Required

Required Not Required Light (Low) Ordinary (Moderate) Extra (High)

Required Not Required Special Hazard Areas Only

Required Not Required

Required
Not Required Per MRCEB Section 804.4.1, Exception #1

Yes No Yes No

Required Emergency Lighting and Exit Signs Not Required

FIRE RATINGS AND SEPARATIONS

Primary Structural Frame Bearing Walls Exterior Interior Nonbearing Walls and Partitions >10 feet Fire Separation Distance Exterior Interior Floor Construction and Associated Secondary Members Roof Construction and Associated Secondary Members Separation of Occupancies Allowable Area Separations (Fire Walls) Fire Area Separations (Fire Barriers) Corridors (Fire Partitions) Smoke Tight Shaft Enclosures Smoke Compartments (Smoke Barriers) Incidental Use Areas Furnace Room Boiler Room

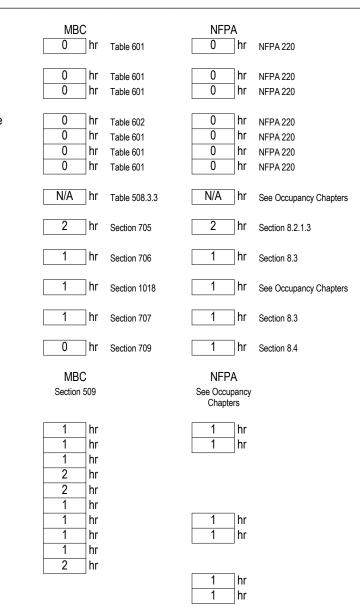
Refrigerant Machinery Room Hydrogen Cutoff Room Incinerator Room Paint Shops Laboratories and Vocational Shops Laundry Room >100sf Waste and Linen Collection Room Stationary storage batter systems Storage and Janitor... Maintenance Shops

INTERIOR FINISH REQUIREMENTS

Interior Wall and Ceiling Finish Requirements Interior exit stairways, ramps and passageways Corridors and exit access stairways and ramps Rooms and Enclosed Spaces

Interior Floor Finish Requirements





NFPA

See Occupancy Chapters A

B

NFPA

See Occupancy

Chapters N/A

MBC

Table 803.11 A

B C

MBC

Section 804.4

CODE INFORMATION APPLICABLE CONSTRUCTION CODES AND STANDARDS

APPLICABLE CONSTRUCTION CODES AND STANDARDS			
Building:	Michigan Department of Licensing and Regulatory Affairs, Bureau of Construction Codes, 2015 Michigan Building Code, Incorporating the 2015 Edition of the International Building Code		
	Michigan Department of Licensing and Regulatory Affairs, Bureau of Construction Codes, 2015 Michigan Rehabilitation Code for Existing Buildings, Incorporating the 2015 Edition of the International Existing Building Code		
	Michigan Department of Licensing and Regulatory Affairs, Bureau of Fire Services, 2016 Fire Safety Rules for Schools, Colleges and Universities, Incorporating the 2012 Edition of the NFPA 101 Life Safety Code		
Barrier Free:	Michigan Department of Licensing and Regulatory Affairs, Bureau of Construction Codes, 2015 Michigan Building Code, Incorporating the 2015 Edition of the International Building Code		
	Michigan Department of Licensing and Regulatory Affairs, Bureau of Construction Codes, 2009 ICC A117.1 - Accessible and Usable Buildings and Facilities		
	U.S. Department of Justice and Architecture and Transportation Barriers Compliance Board, American with Disabilities Act (ADA) 2010 - Standards for Accessible Design		
Structural:	Michigan Department of Licensing and Regulatory Affairs, Bureau of Construction Codes, 2015 Michigan Building Code, Incorporating the 2015 Edition of the International Building Code		
Mechanical:	Michigan Department of Licensing and Regulatory Affairs, Bureau of Construction Codes, Mechanical Division, 2021 Michigan Mechanical Code, Incorporating the 2021 Edition of the International Mechanical Code		
Plumbing:	Michigan Department of Licensing and Regulatory Affairs, Bureau of Construction Codes, Plumbing Division, 2021 Michigan Plumbing Code, Incorporating the 2021 Edition of the International Plumbing Code		
Electrical:	Michigan Department of Licensing and Regulatory Affairs, Bureau of Construction Codes, Electrical Division, 2023 Michigan Electrical Code, Incorporating the 2023 Edition of the National Electrical Code		
Fire Alarm:	Michigan Department of Licensing and Regulatory Affairs, Bureau of Construction Codes, Electrical Division, Incorporating the 2013 Edition of NFPA 72 - National Fire Alarm and Signaling Code		

BUILDING INFORMATION

SINGLE USE AND OCCUPANCY MBC IIB NFPA II(000) Type of Construction В В Occupancy Group 14,500 SF/story Tabular Building Area (MBC Table 506.2) (At) NS 58,000 SF/story S (1 or M) 0.75 Frontage Increase (MBC Section 506.3) (If) Building Perimeter that fronts a public way or open 1,043 feet space 1,043 feet Perimeter of entire building 30 feet Width of public way or open space 25,375 SF/story Allowable Area (Aa) Non-sprinklered Fully Sprinklered 68,875 SF/story Existing 174,237 SF Project Floor Area Renovated Total Proposed 50,429 SF 0 SF 2,218 SF 4% First Floor 174,237 SF 0 SF 2,218 SF 50,429 SF Sub-total 4% MBC 55 Feet Tabular Allowable Building Height (MBC Table 504.3) Tabular Story Limitations (MBC Table 504.4) 2 Stories above grade plane Project Building Height 24 Feet 1 Stories above grade plane Project Number of Stories above grade plane

LEGEND LIFE SAFETY NOTE: NOT ALL SYMBOLS	S MAY BE USED
EMERC	GENCY RESCUE/VENTILATION WINDOW OPENING
	XISTING FIRE-RESISTANT-RATED FIRE BARRIER. IEW PENETRATIONS OR OPENING PROTECTIVES WILL COMPLY WITH 1-HOUR FIRE-RESISTANCE- RATED FIRE BARRIER REQUIREMENTS
<u> </u>	1-HR FIRE-RATED PARTITION
<u> </u>	2-HR FIRE-RATED PARTITION
— · · · —	3-HR FIRE-RATED PARTITION
	SMOKE TIGHT PARTITION

LIMITS OF INCIDENTAL WORK ASSOCIATED WITH LEVEL 2 ALTERATION PER DEFINITION OF WORK AREA IN MRCEB

LIMITS OF LEVEL 2 ALTERATION



iD^s Project Number

Drawing Number

B. Sundberg Drawing Scale

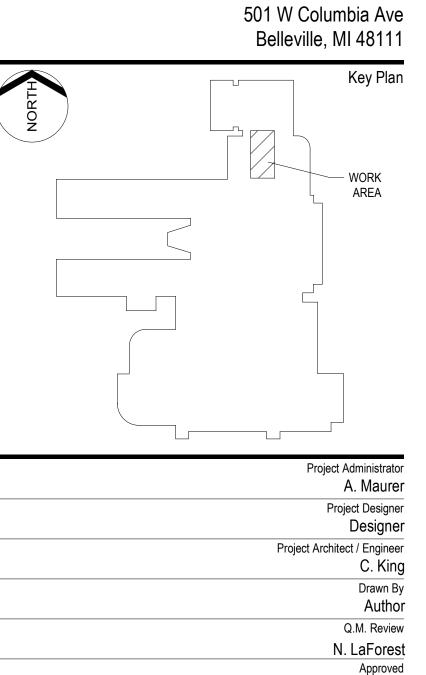
Issue Date

Bids 01-31-2025



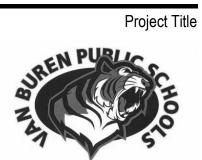
$^{\circ}$ 2025 integrated $ ext{design}$ solutions, LLC
IDS Drawing Title
Life Safety Plan and Building Code
Information
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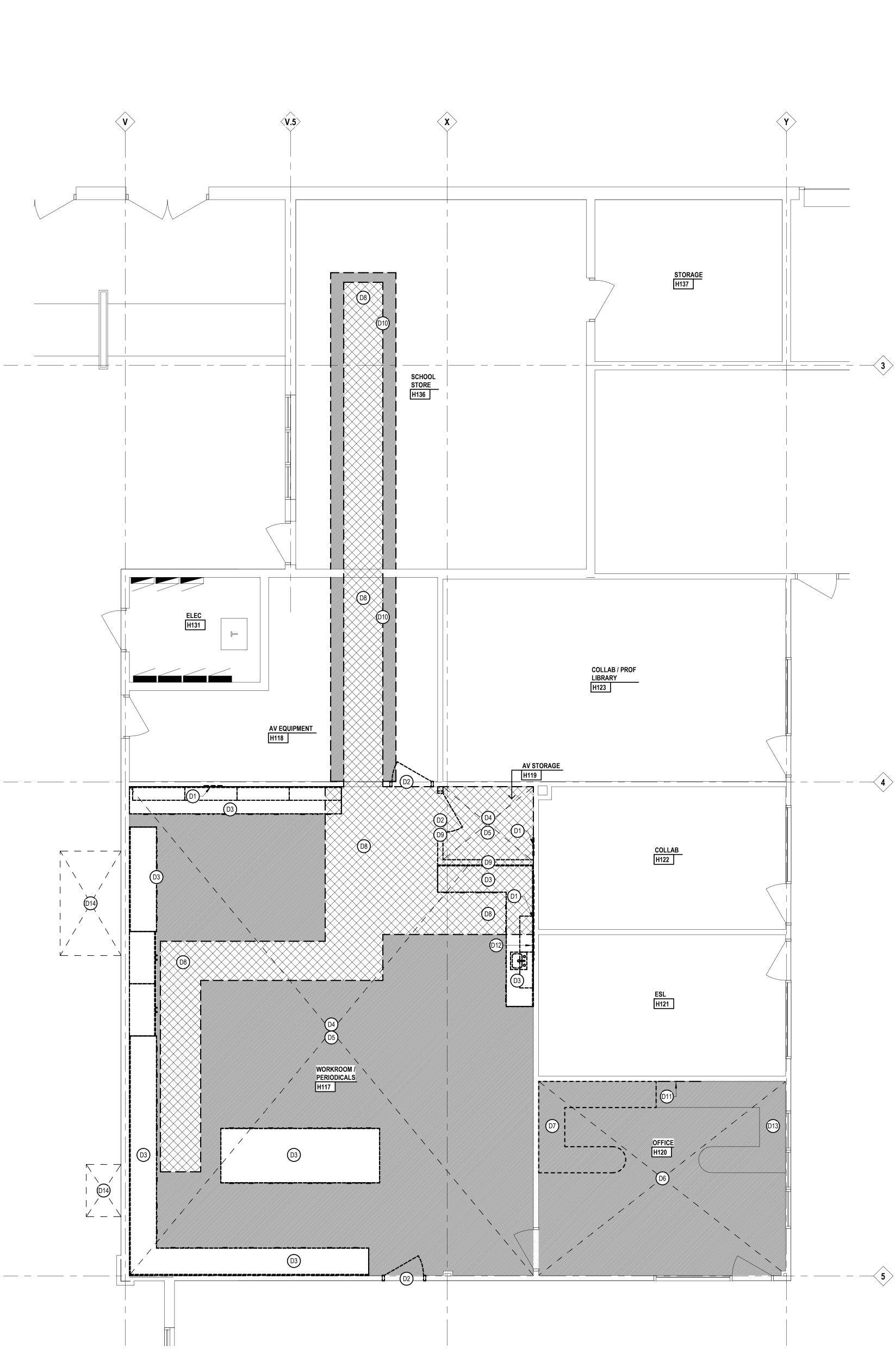
RAHS Belleville High School

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GENERAL NOTES

- DEMOLITION PLAN A. ALL DEMOLITION WORK REQUIRED IS NOT NECESSARILY LIMITED TO WHAT IS SHOWN ON THE DEMOLITION PLAN. THE INTENT IS TO REMOVE ALL MECHANICAL, ELECTRICAL, AND ARCHITECTURAL ITEMS AS REQUIRED TO FACILITATE NEW CONSTRUCTION.
- B. CONTRACTOR SHALL PROVIDE TEMPORARY DUSTPROOF PARTITIONS WITH DOORS AT LOCATIONS INDICATED AND/OR AS REQUIRED TO ADEQUATELY SEPARATE OCCUPIED AREAS FROM CONSTRUCTION HAZARDS, NOISE AND/OR DUST. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. COORDINATE ALL LOCATIONS WITH ARCHITECT'S/OWNER'S REPRESENTATIVE.
- C. CONTRACTOR SHALL PROVIDE DUST MATS AT ALL CONSTRUCTION AREA ENTRANCES AND EXIT LOCATIONS. COORDINATE ALL LOCATION'S WITH ARCHITECT'S/OWNER'S REPRESENTATIVES.
- D. CONTRACTOR SHALL CONTINUOUSLY MAINTAIN ALL MEANS OF EGRESS AND ALL FIRE PROTECTION FEATURES FOR PORTIONS OF THE BUILDING THAT REMAIN OCCUPIED DURING CONSTRUCTION.
- E. COORDINATE SCOPE AND EXTENT OF DEMOLITION WITH NEW WORK PLANS AND DETAILS.
- F. REFER TO MECHANICAL AND ELECTRICAL DEMOLITION SHEETS FOR ADDITIONAL INFORMATION.

LEGEND

DEMOLITION PLAN NOTE: NOT ALL SYMBOLS MAY BE USED

NOTE: NOT ALL STMBULS MAT BE USED				
	EXISTING TO BE REMOVED			
	EXISTING TO REMAIN			
	EXISTING CEILING TO BE REMOVED AS NOTED BY KEYNOTE			
	EXISTING FLOOR/FINISH TO BE REMOVED AS NOTED BY KEYNOTE			
	SAWCUT AND REMOVE PORTION OF CONC SLAB AS NOTED BY KEYNOTE			

KEYNOTES

DEMOLITION PLAN SHADED ITEMS HAVE BEEN REVISED FROM PREVIOUS

NOTE: NOT ALL KEYNOTES MAY BE USED

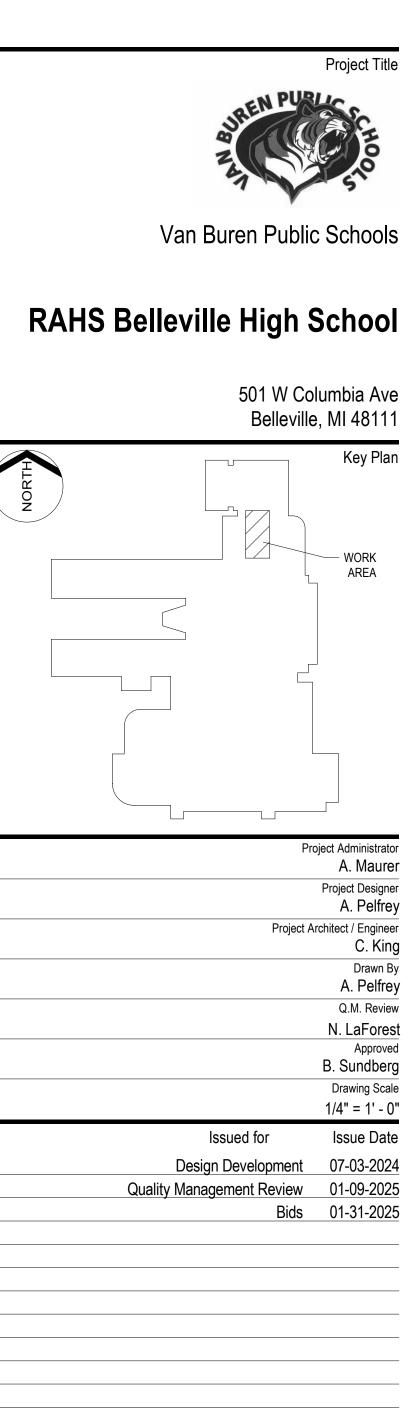
- # LEGEND SYMBOL INDICATOR D1 REMOVE PORTION OF GYPSUM BOARD. COORDINATE WITH NEW WORK PLANS.
- D2 REMOVE DOOR, FRAME, AND SILL IN ITS ENTIRETY
- D3 REMOVE BASE CABINETS, COUNTERTOP, BACKSPLASH AND/OR WALL MOUNTED CABINETS IN THEIR ENTIRETY
- D4 REMOVE ACOUSTIC CEILING TILES, GRID, AND SUSPENSION SYSTEM IN ITS ENTIRETY
- D5 REMOVE VCT / LINOLEUM FLOORING, BASE, AND ADHESIVE DOWN TO STRUCTURAL SLAB
- D6 REMOVE CARPET, WALL BASE, AND ADHESIVE DOWN TO STRUCTURAL SLAB
- D7 REMOVE FURNITURE AND RETURN TO OWNER
- D8 SAW CUT AND REMOVE PORTION OF CONCRETE FLOOR SLAB. COORDINATE WITH NEW WORK PLANS.

D9 REMOVE GYPSUM BOARD / METAL STUD PARTITION. COORDINATE WITH NEW WORK PLANS.

- D10 REMOVE CARPET AS REQUIRED FOR FLOOR TRENCHING SALVAGE, PROTECT AND STORE CARPET FOR REINSTALLATION
- D11 REMOVE MARKERBOARD / TACKBOARD / WHITEBOARD IN ITS ENTIRETY. RETURN TO OWNER.
- D12 REMOVE AND SALVAGE WALL MOUNTED PAPER TOWEL DISPENSER AND SOAP DISPENSER AND RETURN TO OWNER.
- D13 TEMPORARILY REMOVE FURNITURE PIECE, PROTECT, AND STORE FOR REINSTALLATION
- D14 REMOVE, SALVAGE, PROTECT & STORE ACOUSTICAL CEILING PANELS AS REQUIRED FOR OVERHEAD MECHANICAL WORK EXISTING SUSPENSION SYSTEM TO REMAIN



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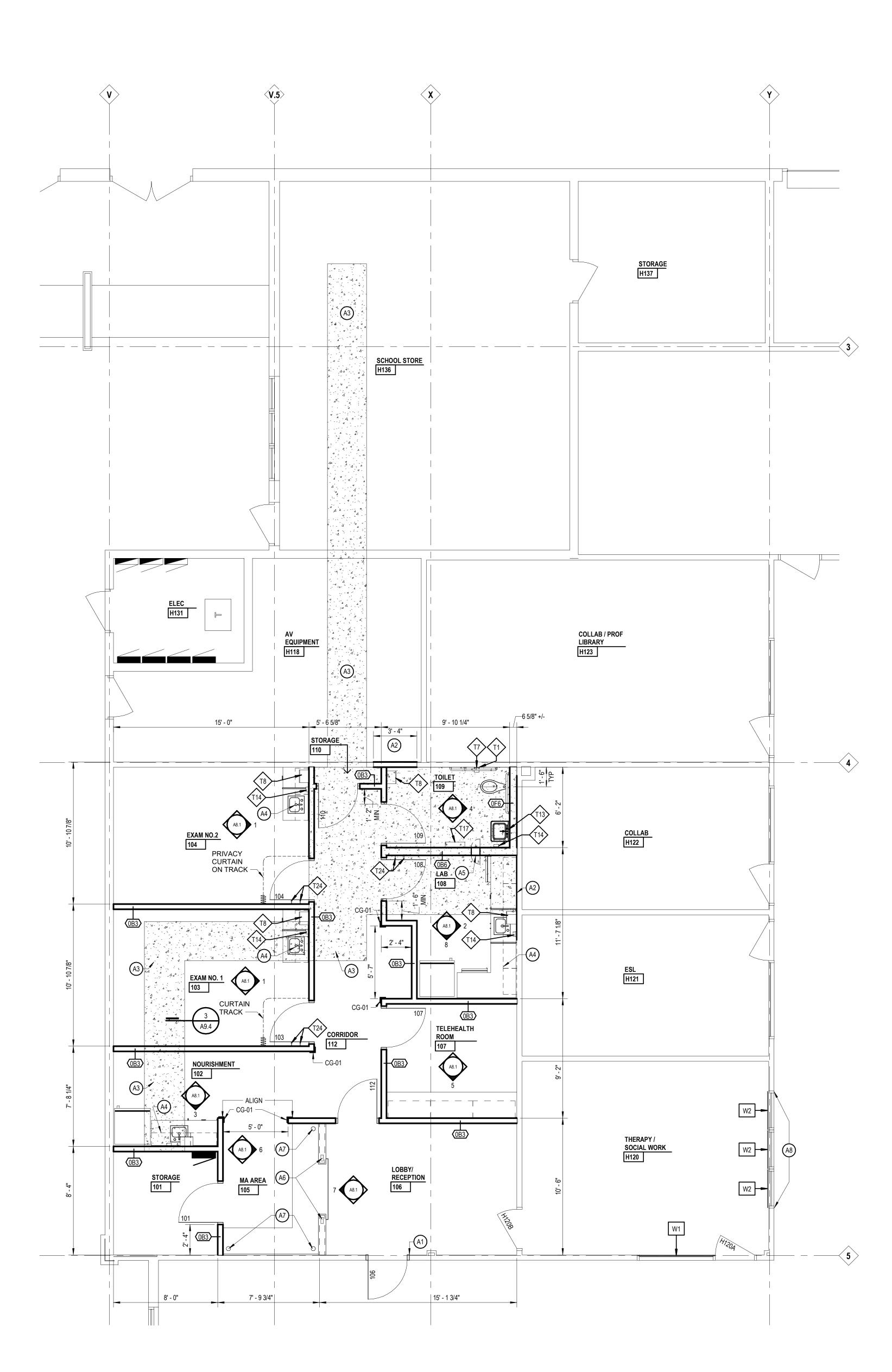
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First Floor Demolition Plan

Drawing Number

A1.1

ī**D**≗ Project Number



GENERAL NOTES NEW WORK PLAN

- A. REFER TO SHEET A9.2 FOR DOOR SCHEDULE AND COLORS.
- B. REFER TO SHEET A9.1 FOR FINISH SCHEDULE AND COLORS.
- C. REFER TO LIFE SAFETY PLANS FOR PARTITION RATINGS.
- D. PARTIAL WALL POCHEING IS SHOWN THROUGHOUT THIS PLAN AND THE TERMINATION OF SAME SHALL NOT BE CONSTRUED TO REPRESENT A CHANGE IN WALL MATERIAL. VERIFY WALL MATERIALS WITH PARTITION TYPES AND SCHEDULES.
- E. PATCH AND/OR REPAIR ALL EXISTING FLOOR, WALL AND OR CEILING FINISHES AS REQUIRED TO MATCH EXISTING OR TO ACCEPT NEW FINISHES AS SCHEDULED AT ALL AREAS AFFECTED BY THE DEMOLITION WORK. REFER TO MECHANICAL AND ELECTRICAL SHEETS FOR ADDITIONAL SCOPE OF WORK.
- F. INFILL ALL OPENINGS IN EXISTING WALLS ABOVE CEILINGS THAT ARE THE RESULT OF MECHANICAL OR ELECTRICAL DEMOLITION. OPENINGS IN MASONRY WALLS SHALL BE FILLED WITH MASONRY OF SIMILAR TYPES AND THICKNESS AS EXISTING. OPENINGS IN OTHER TYPES OF WALL CONSTRUCTION SHALL MATCH EXISTING MATERIALS, FINISHES AND WALL THICKNESS. REFER TO MECHANICAL AND ELECTRICAL SHEETS FOR SCOPE OF WORK.
- G. PROVIDE POSITIVE SLOPE TO ALL FLOOR DRAINS WHILE KEEPING FLOOR LEVEL AT WALL BASE. H. COORDINATE SIZE AND LOCATION OF ALL ACCESS DOORS WITH
- TRADES REQUIRING SAME. QUANTITIES SHOWN DO NOT NECESSARILY REPRESENT ALL ACCESS DOORS REQUIRED FOR ACCESSIBILITY.

LEGEND

NEW WORK PLAN NOTE: NOT ALL SYMBOLS MAY BE USED

NOTE: NOT ALL SYMBOLS MAY BE USED			
	EXISTING CONSTRUCTION		
	NEW CONSTRUCTION		
	PARTITION TYPE - REFER TO PARTITION DETAILS SHEET A9.3		
G	SHALL COMPLY WITH BARRIER FREE REQUIREMENTS		
XXXX	CASEWORK/ MILLWORK TAG		
XXXX	10 1100 VISUAL DISPLAY SURFACE MK= MARKERBOARD, TK=TACKBOARD XXXX INDICATES BOARD SIZE		
W1.1	12 2413 ROLLER WINDOW SHADE		
L	CORNER GUARD		

KEYNOTES

NEW WORK FLOOR PLAN SHADED ITEMS HAVE BEEN REVISED FROM PREVIOUS NOTE: NOT ALL KEYNOTES MAY BE USED

LEGEND SYMBOL INDICATOR

- A1 AT BOTH SIDES OF DOOR PATCH & REPAIR 09 2900 GYPSUM BOARD JAMBS TO MATCH ADJACENT CONSTRUCTION REINSTALL EXISTING WALL BASE AS REQUIRED.
- A2 PATCH/REPAIR GYPSUM BOARD/ PARTITION TO MATCH ADJACENT CONSTRUCTION.
- A3 03 3000 PATCH AND REPAIR CONCRETE FLOOR SLAB AT LOCATION OF REMOVED WALL OR SLAB PORTION. REFER TO TYPICAL DETAIL 5/A9.4
- A4 REINFORCE PARTITION WITH 06 1000 WOOD BLOCKING AS REQUIRED TO ACCOMODATE MILLWORK, TELEVISIONS, AND ACCESSORIES. REFER TO TYPICAL DETAIL 6/A9.4
- A5 10 2800 SAMPLE PASS THRU WINDOW
- A6 09 2216 PONY WALL SUPPORT CONCEALED WITHIN WALL
- A7 06 4023 GROMMET HOLE
- A8 09 9100 PAINT (PT-05) FULL EXTENTS OF EXISTING FRAME TYPICAL FOR BOTH SIDES

LEGEND

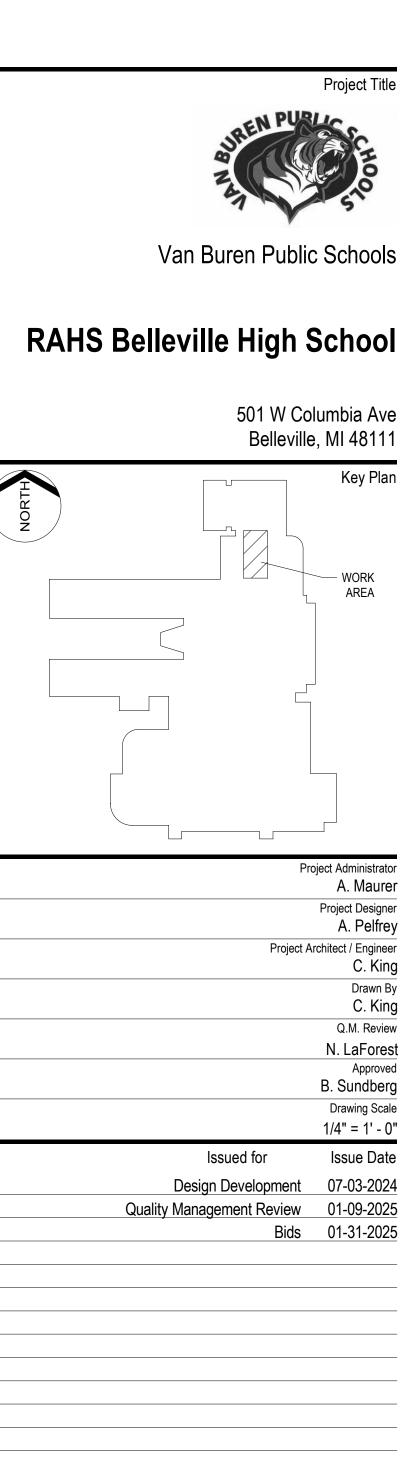
TOILET ACCESSORIES SHADED ITEMS HAVE BEEN REVISED FROM PREVIOUS

NOTE: NOT ALL KEYNOTES MAY BE USED

- REFER TO SPECIFICATION SECTION 10 2800 FOR ADDITIONAL INFORMATION ALL TOILET ACCESSORIES ARE CONTRACTOR FURNISHED AND INSTALLED UON
- (OF/OI): OWNER FURNISHED/OWNER INSTALLED (OF/CI): OWNER FURNISHED/CONTRACTOR INSTALLED REFER TO DRAWING AR.0 FOR TYPICAL MOUNTING HEIGHTS
- LEGEND SYMBOL INDICATOR
- T1 GRAB BAR SET 1 (1) GRAB BAR TYPE 1, (1) GRAB BAR TYPE 2, (1) GRAB BAR TYPE 3 (CF/CI) T7 TOILET PAPER DISPENSER (OF/CI)
- T8 PAPER TOWEL DISPENSER (OF/CI)
- T13 MIRROR (CF/CI) T14 SOAP DISPENSER (OF/CI)
- T17 SHELF (CF/CI) T24 COAT HOOK



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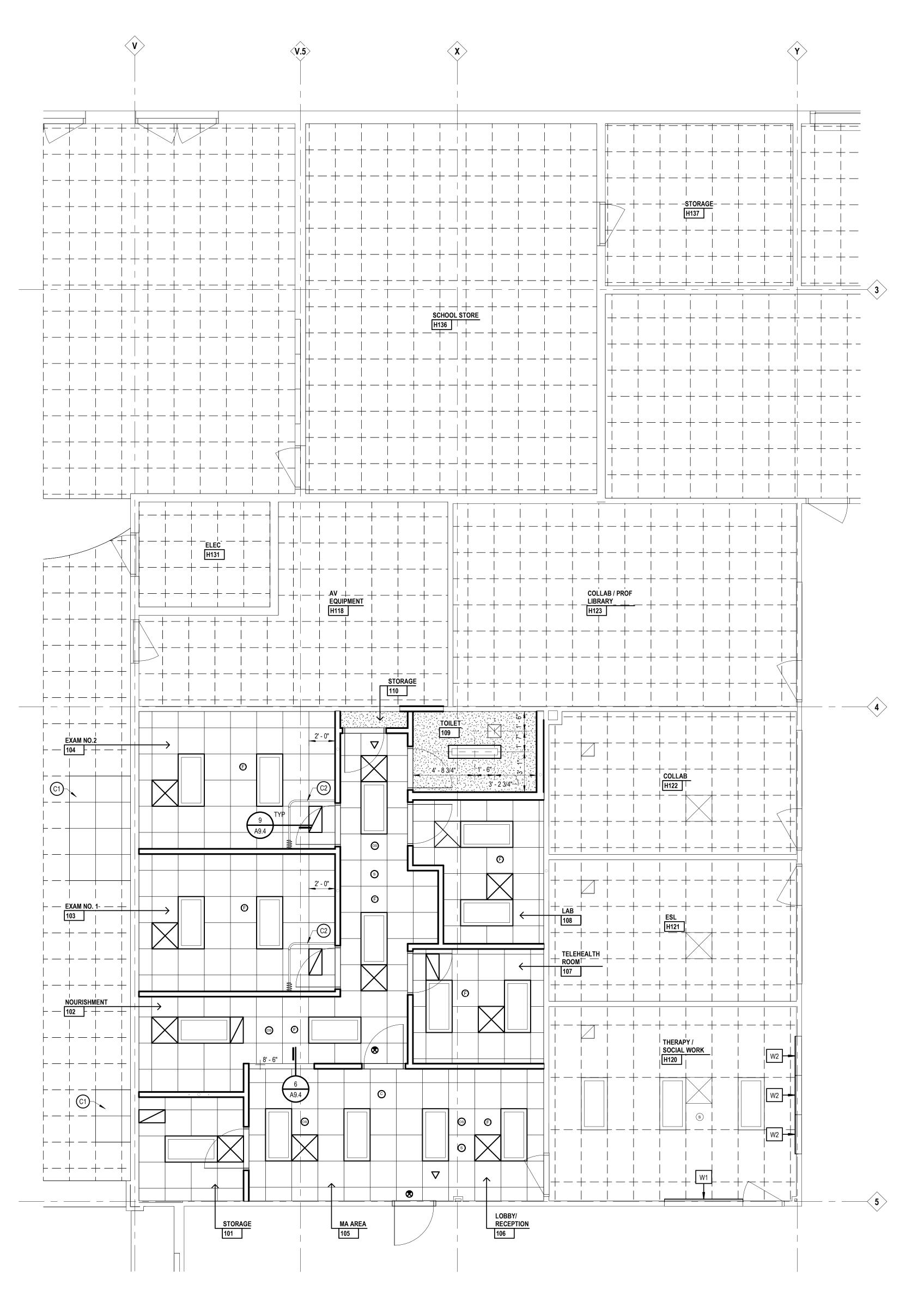
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First Floor New Work Plan

Drawing Number

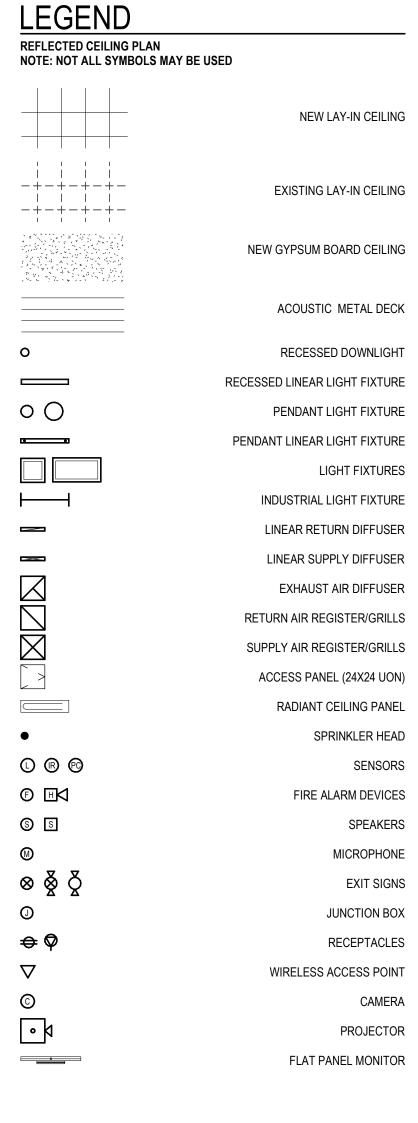
A2.1

24167-1000



GENERAL NOTES

- REFLECTED CEILING PLAN A. CEILING HEIGHT 9'-0" AFF UNLESS OTHERWISE NOTED.
- B. ACOUSTICAL CEILING PANELS AND/OR TILES SHALL BE CENTERED
- WITHIN THE ROOM OR BORDER UNLESS OTHERWISE NOTED. C. REFER TO FLOOR PLANS FOR PARTITION TYPE DESIGNATION.
- D. COORDINATE CEILING SUSPENSION SYSTEMS WITH OTHER CEILING SPACE EQUIPMENT SUPPORTING DEVICES.
- E. UNLESS OTHERWISE NOTED LOCATION OF ITEMS SHOWN IN AREAS WITHOUT FINISH CEILINGS IS APPROXIMATE. COORDINATE EXACT LOCATION BETWEEN TRADES.
- F. COORDINATE SIZE AND LOCATION OF ALL ACCESS DOORS WITH TRADES REQUIRING SAME. QUANTITIES SHOWN DO NOT NECESSARILY REPRESENT ALL ACCESS DOORS REQUIRED FOR ACCESSIBILITY.



KEYNOTES REFLECTED CEILING PLAN

SHADED ITEMS HAVE BEEN REVISED FROM PREVIOUS NOTE: NOT ALL KEYNOTES MAY BE USED (#) LEGEND SYMBOL INDICATOR C1 REINSTALL SALVAGED CEILNG TILE INTO EXISTING GRID - REPLACE ANY DAMAGED TILES WITH SIMILAR PRODUCT. COORD WITH EXTENTS SHOWN ON DEMO PLANS

C2 10 2123 CUBICLE CURTAIN TRACK

ī**D**^s Project Number



INTEGRATED design SOLUTIONS architecture engineering interiors & technology 1441 west long lake, suite 200 troy, michigan 48098 5211 cascade road SE, suite 300 grand rapids, michigan 49546 248.823.2100 www.ids-michigan.com

Project Title

Van Buren Public Schools RAHS Belleville High School 501 W Columbia Ave Belleville, MI 48111 Key Plan - WORK AREA Project Administrator A. Maurer Project Designer A. Pelfrey Project Architect / Engineer C. King Drawn By A. Pelfrey Q.M. Review N. LaForest Approved B. Sundberg Drawing Scale 1/4" = 1' - 0" Issue Date Issued for Design Development 07-03-2024 Quality Management Review 01-09-2025 Bids 01-31-2025

24167-1000

Drawing Number

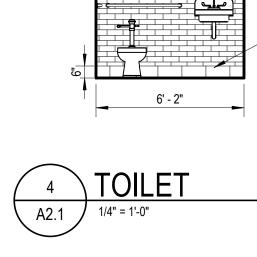
A3.1

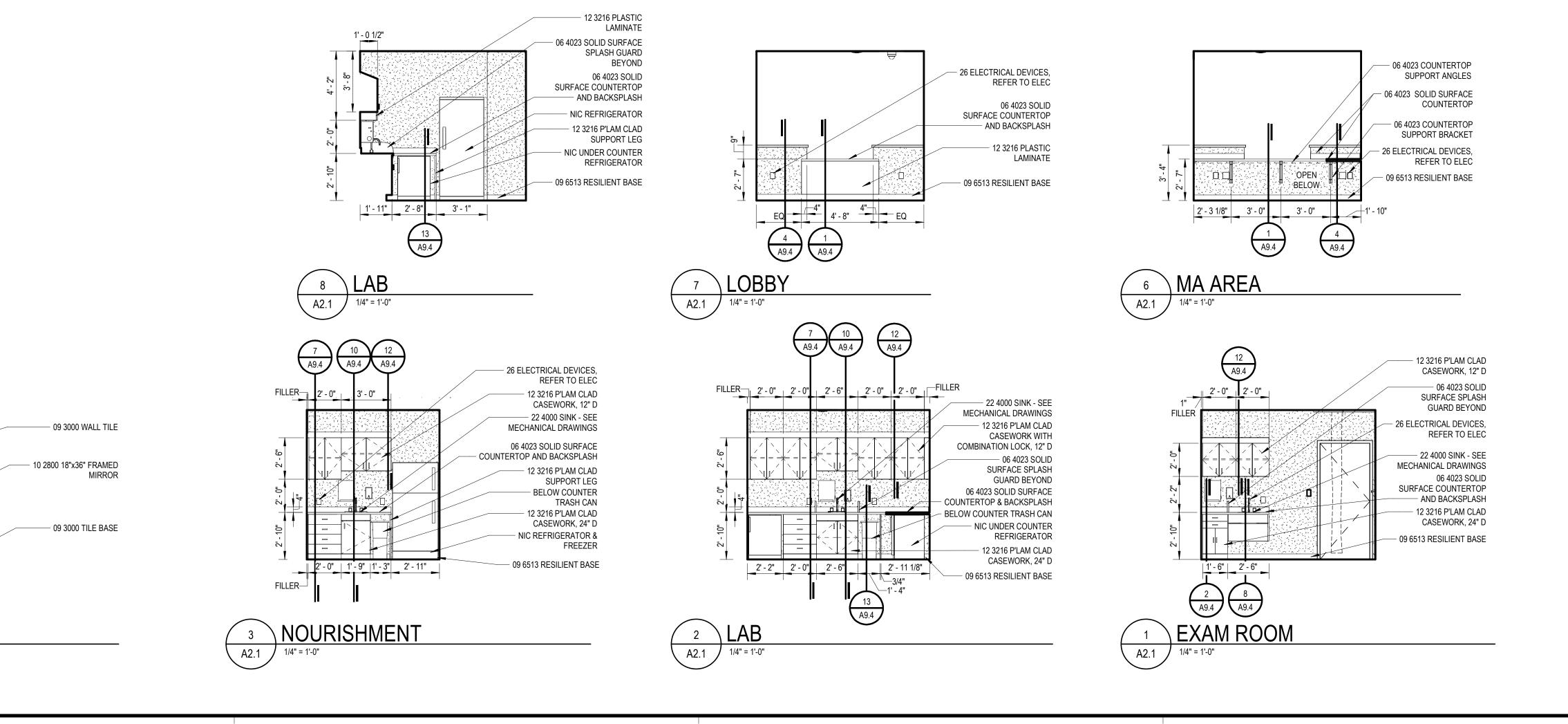
IDS Drawing Title

 \circ 2025 integrated $ext{design}$ solutions, LLC

First Floor Reflected Ceiling Plan

FURNITURE PROVIDED _ BY OTHERS		
06 4023 SOLID SURFACE _ COUNTERTOP		
06 4023 COUNTERTOP SUPPORT ANGLES		
06 4023 COUNTERTOP		1 - 8" MN
26 ELECTRICAL DEVICES, REFER TO ELEC		<u>ق</u>
09 6513 RESILIENT BASE —		2'-
	1' - 10" EQ EQ 1' - 10"	
	13 A9.4	
5 A2.1 1/4" = 1'-	EHEALTH EXAM ROO	<u>M</u>
\smile		





GENERAL NOTES

INTERIOR ELEVATIONS

- A. ALL DIMENSIONS ARE TO FACE OF GYP BOARD UON.
- B. COORDINATE THE INTERFACING OF ALL TRADES WITH RESPECT TO DELIVERY AND INSTALLATION OF ALL FIXTURES AND EQUIPMENT
- C. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS BEFORE INSTALLATION. CONSULT ARCHITECT WHEN ACTUAL FIELD CONDITIONS VARY FROM THOSE SHOWN ON CONSTRUCTION DOCUMENTS.
- D. COORDINATE LOCATIONS OF ALL REQUIRED UTILITIES WITH THE TRADE PROVIDING THE SAME. REFER TO MECHANICAL AND ELECTRICAL SHEETS FOR ADDITIONAL INFORMATION.
- E. FASTEN ALL TALL CASES TO THE ADJOINING WALL THROUGH THE BACK OR SIDE OF THE UNIT.
- F. ALL COUNTERTOPS INSTALLED ALONG A WALL OR EQUIPMENT ARE TO HAVE 4" BACKSPLASH AND SIDE SPLASH UON.
- G. FINISH ALL EXPOSED ENDS AND BACKS OF FREESTANDING CASEWORK/ MILLWORK.
- H. PROVIDE LOCKS ON ALL CABINET DOORS AND DRAWERS UON. ALL LOCKS SHOULD BE KEYED ALIKE BY ROOM, PROVIDE MASTER KEYING.
- I. REFER TO A9.1 ROOM FINISH SCHEDULE FOR COLORS AND FINISHES OF MATERIALS
- J. REFER TO PLANS, SECTIONS AND DETAILS FOR CASEWORK DEPTH.
- K. PROVIDE CABINET FILLERS AS NEEDED.
- L. FURNITURE AND SPECIALTY EQUIPMENT BY OTHERS SHOWN FOR
- REFERENCE ONLY M. FURNITURE SHOWN AT HALFTONE BY OWNER
- N. PROVIDE PARTITION REINFORCEMENT AT LOCATIONS OF WALL MOUNTED EQUIPMENT. REFER TO DETAIL X/AX.X FOR TYPICAL REQUIREMENTS AT NEW CONSTRUCTION. CONDITIONS MAY VARY AT EXISTING PARTITIONS.
- O. NOT ALL SIGN LOCATIONS ARE ELEVATED
- P. COORDINATE LOCATIONS OF ALL REQUIRED UTILITY CONNECTIONS AND/OR REQUIREMENTS WITH THE TRADE PROVIDING THE SAME

LEGEND

INTERIOR ELEV NOTE: NOT ALL	ATIONS SYMBOLS MAY BE USED
XXXX	06 4023 CASEWORK / MILLWORK TAG
XXXX	10 1100 VISUAL DISPLAY SURFACE MK= MARKERBOARD, TK=TACKBOARD XXXX INDICATES BOARD SIZE

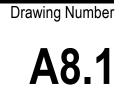
XXXX	SPECIALTY EQUIPMENT BY OTHERS REFER TO FF&E OR TECHNOLOGY PACKAGES
(XX-XX)	ACCENT MATERIAL, REFER TO COLOR CODES



ELEVATION MATERIALS NOTE: NOT ALL SYMBOLS MAY BE USED

09 2900 GYP BOARD

09 3000 WALL TILE



ī **D**^s Project Number

Interior Elevations

IDS Drawing Title

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$^{\circ}$ 2025 Integrated $ ext{design}$ solutio	NS, LLC

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Pi	roject Administrator
	A. Maurer
	Project Designer
	A. Pelfrey
Project A	Architect / Engineer
	C. King
	Drawn By
	D. Sandle
	Q.M. Review
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	B. Sundberg
	Drawing Scale
	As Noted
Issued for	Issue Date
Design Development	07-03-2024
Quality Management Review	01-09-2025
Bids	01-31-2025

501 W Columbia Ave Belleville, MI 48111 Key Plan

RAHS Belleville High School

Van Buren Public Schools



Project Title

INTEGRATED design SOLUTIONS architecture engineering interiors & technology 1441 west long lake, suite 200 troy, michigan 48098 5211 cascade road SE, suite 300 grand rapids, michigan 49546

248.823.2100



(E) AC-01	EXISTING FINISH	MANUFACTURER	PRODUCT NAME / NUMBER	COLOR NAME / NUMBER	SIZE	FINISH	NOTES
AC-01							
	ACOUSTICAL PANEL	USG	ECLIPSE 76575	WHITE	24" X 24" SQUARE EDGE		
B-01	RESILIENT BASE	ROPPE	PINNACLE RUBBER COVE BASE	BLACK 100	4"		
B-02	TILE BASE	AMERICAN OLEAN	THEORETICAL	CREATIVE GRAY	6" X 12" COVE BASE		
B-03	RESILIENT BASE			MATCH EXISTING			
CG-01	CORNER GUARD	CONSTRUCTION SPECIALITIES	VA200N	FOG 265			SURFACE MOUNTED; .040 THICKNESS
CPT-01	CARPET TILE	INTERFACE	DIFTWOOD	ELM 04861	25CM X 1M		ASHLAR INSTALLATION METHOD
CPT-02	CARPET (TILE/ BROADLOOM)			MATCH EXISTING			
FT-01	FLOOR TILE	AMERICAN OLEAN	THEORETICAL	CREATIVE GRAY	12" X 24"		1/3 OFFSET INSTALLATION
GYP-01	GYPSUM BOARD						
LN-01	LINOLEUM	FORBO	MARMOLEUM MARBLED REAL	EIGER 2629		TOPSHEILD PRO	
PL-01	PLASTIC LAMINATE	WILSONART		LOFT OAK 7968			
PT-01	PAINT	SHERWIN WILLIAMS		FROSTY WHITE SW6196			FIELD
PT-02	PAINT	SHERWIN WILLIAMS		CASCADE GREEN SW0066			ACCENT
PT-03	PAINT	SHERWIN WILLIAMS		MATCH EXISTING			
PT-04	PAINT	SHERWIN WILLIAMS		HIGH REFLECTIVE WHITE SW7757		FLAT	CEILING
PT-05	PAINT	SHERWIN WILLIAMS		PORTICO SW7548			ACCENT
SC-01	SHADE CLOTH	DRAPER	FLOCKE	BLANC 00600			
SS-01	SOLID SURFACE MATERIAL	CORIAN		ARTISTA CANVAS			
WD-01	WOOD	VT INDUSTRIES		WHITE OAK			
WT-01	WALL TILE	AMERICAN OLEAN	COLOR STORY WALL	BALANCE 14	3" X 6"		1/3RD OFFSET INSTALLATION

4' - 0" 3' - 0" W2 W2: 3

NUMBER	Т
101	9
102	1
103	E
104	E
105	ſ
106	Ī
107	ŀ
108	Ī
109	1
110	9
111	F
112	(
H118	1
H120	-
H136	

MANUAL- SINGLE ROLLER DRAPER SC-01 OUTSIDE TOP MOUNT, FASCIA WITH ENDCAPS

SCHEDULE - ROOM FINISH

301				Л	
NAME	FLOOR	BASE	WALL	CEILING	REMARKS
TORAGE	LN-01	B-01	PT-01	AC-01	4
OURISHMENT	LN-01	B-01	PT-01	AC-01	1,4
XAM NO. 1	LN-01	B-01	PT-01,PT-02	AC-01	1,4
XAM NO.2	LN-01	B-01	PT-01,PT-02	AC-01	1,4
A AREA	LN-01	B-01	PT-01	AC-01	1,4,8
OBBY/ RECEPTION	LN-01	B-01	PT-01	AC-01	3,4,5
ELEHEALTH ROOM	LN-01	B-01	PT-01,PT-05	AC-01	1,4
AB	LN-01	B-01	PT-01,PT-05	AC-01	1,4
OILET	FT-01	B-02	WT-01	GYP-01,PT-04	4,6
TORAGE	LN-01	B-01	PT-01	GYP-01	1
ATIENT INTAKE	LN-01	B-01	PT-01,PT-05	AC-01	8
ORRIDOR	LN-01	B-01	PT-01	AC-01	1,8
V EQUIPMENT	CPT-02,(E)	B-03,(E)	PT-03	(E)	2,9
HERAPY / SOCIAL WORK	CPT-01	B-01	PT-01,PT-05	(E)	4,5
CHOOL STORE	CPT-02,(E)	(E)	(E)	(E)	2

ABBREVIATIONS

ROOM FINISH SCHEDULE	
AC PANEL	ACOUSTICAL PANEL
ACT	ACOUSTICAL CEILING TILE
CC	COLOR CODE
CG	CORNER GUARD
CMU	CONCRETE MASONRY UNIT
СТ	CERAMIC TILE
CEM PLAS	CEMENT PLASTER
CONC	CONCRETE
DEFS	DIRECT APPLIED EXTERIOR FINISH SYSTEM
(E)	EXISTING FINISH
EIFS	EXTERIOR INSULATION FINISH SYSTEM
EPT	EPOXY PAINT
E TERR	EPOXY TERRAZZO
ENTR MAT	ENTRY MAT SYSTEM
EXP CONST FWC	EXPOSED CONSTRUCTION FABRIC WALL COVERING
GF CMU	GROUND FACE CONCRETE MASONRY UNIT
GL CMU	GLAZED CONCRETE MASONRY UNIT
GYP BD	GLAZED CONCRETE MASONRT UNIT GYPSUM BOARD
HD/SLR	HARDENER/ SEALER
IR GYP BD	IMPACT RESISTANT GYPSUM BOARD
LIMEST	LIMESTONE
LINO	LINOLEUM
MCC	MULTI-COLORED COATING
MTL	METAL
MTL PNL	METAL PANEL
P LAM	PLASTIC LAMINATE
PAVER T	PAVER TILE
PLAS	PLASTER
POL CONC	POLISHED CONCRETE
PORC T	PORCELAIN TILE
PT	PAINT
QT	QUARRY TILE
RAF	RAISED ACCESS FLOORING
RT	RUBBER TILE
RESIN FLR	RESINOUS FLOORING
RESIL	RESILIENT
SGFT	STRUCTURAL GLAZED FACING TILE
SHT V	
SSM	SOLID SURFACE MATERIAL
ST STL	STAINLESS STEEL
STN	
TC TERR	TRAFFIC COATING TERRAZZO
VCT	VINYL COMPOSITION TILE
VWC	VINYL COMPOSITION TILE VINYL WALLCOVERING
VEN PLAS	VINTE WALLCOVERING VENEER PLASTER
WD	WOOD
	WOOD

GENERAL NOTES

- ROOM FINISH SCHEDULE * REFER TO ABBREVIATIONS LIST FOR MATERIAL CODE DESCRIPTIONS
- A. "ROOM NUMBER AND ROOM NAME" CORRESPOND TO THE NUMBER
- AND NAMES INDICATED ON THE SHEETS. B. "MATERIAL/FINISH" INDICATE THE SPECIFIC MATERIALS AND FINISHES
- TO BE USED TO CONSTRUCT AND FINISH THE FLOORS, BASE, WALLS AND CEILINGS. C. "CC" INDICATES THE COLOR CODE FOR EACH MATERIAL AND/OR FINISH, REFER TO "COLOR CODES".
- D. "REMARKS" INDICATES ANY SPECIAL REQUIREMENTS FOR THE MATERIAL AND FINISH IN A ROOM - SEE "ROOM FINISH SCHEDULE REMARKS".
- E. "CEILING" IS THE MATERIAL AND FINISH AT THE UNDERSIDE OF THE FLOOR OR ROOF ABOVE. "SOFFIT" IS THE MATERIAL AND FINISH AT THE UNDERSIDE OF THE STAIR RUN.
- F. REFER TO A10 SERIES FOR FLOOR TILE PATTERNS AND MATERIALS.
- G. REFER TO A8 SERIES FOR INTERIOR ELEVATIONS.
- H. "E" PREFIX TO THE "PT" CODE REFER TO EPOXY PAINT MATERIAL (E PT-XX).

REMARKS

- ROOM FINISH SCHEDULE
- 1. PL-01 PLASTIC LAMINATE, SS-01 SOLID SURFACE 2. CPT-02 AT AREAS EFFECTED BY FLOOR TRENCHING
- 3. PT-03 AT DOOR INFILL LOCATIONS
- 4. TOUCH UP PAINT REQUIRED. PATCH/REPAIR/PAINT ALL LOCATIONS WHERE WALL MOUNTED ITEMS ARE REMOVED, INCLUDING BUT NOT LIMITED TO CLOCKS, ALARMS, WIREWAYS, ETC. OR WHERE SELECTIVE DEMOLITION OCCURS - COORDINATE EXTENTS WITH DEMO AND NEW WORK.
- 5. TRANSITION AT CARPET TO LINOLEUM OR CARPET TO EXISTING TO BE SCHLUTER RENO U AEU 100 IN SATIN ANODIZED ALUMINUM
- 6. GROUT AT FLOOR TILE TO BE TEC ACCUCOLOR EFX, COLOR; 939 MIST. GROUT AT WALL TILE TO BE TEC ACCUCOLOR EFX, COLOR: 949 SILVERADO. TRANSITION AT CERAMIC FLOOR TILE TO BE MARBLE THRESHOLD.
- 7. NOTE USED
- 8. CG-01, CORNER GUARDS. REFER TO ARCHITECTURAL PLANS
- 9. PT-03 AND B-03 AT NEW WALL CONSTRUCTION ONLY



Drawing Number

A9.1

Room Finish Schedule

IDS Drawing Title

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Q.M. Review N. LaForest Approved B. Sundberg Drawing Scale As Noted Issue Date Issued for Design Development 07-03-2024 Quality Management Review 01-09-2025 Bids 01-31-2025

Belleville, MI 48111 Key Plan

> Project Administrator A. Maurer

Project Architect / Engineer

Project Designer

A. Pelfrey

C. King Drawn By D. Sandle

501 W Columbia Ave

RAHS Belleville High School

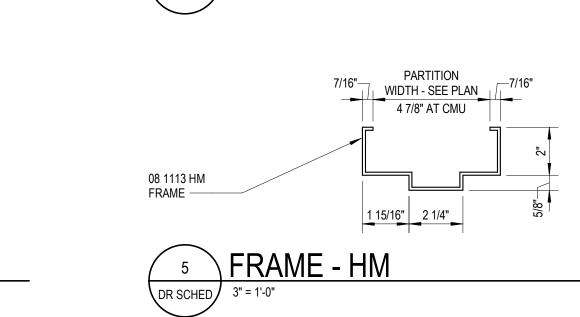
Van Buren Public Schools

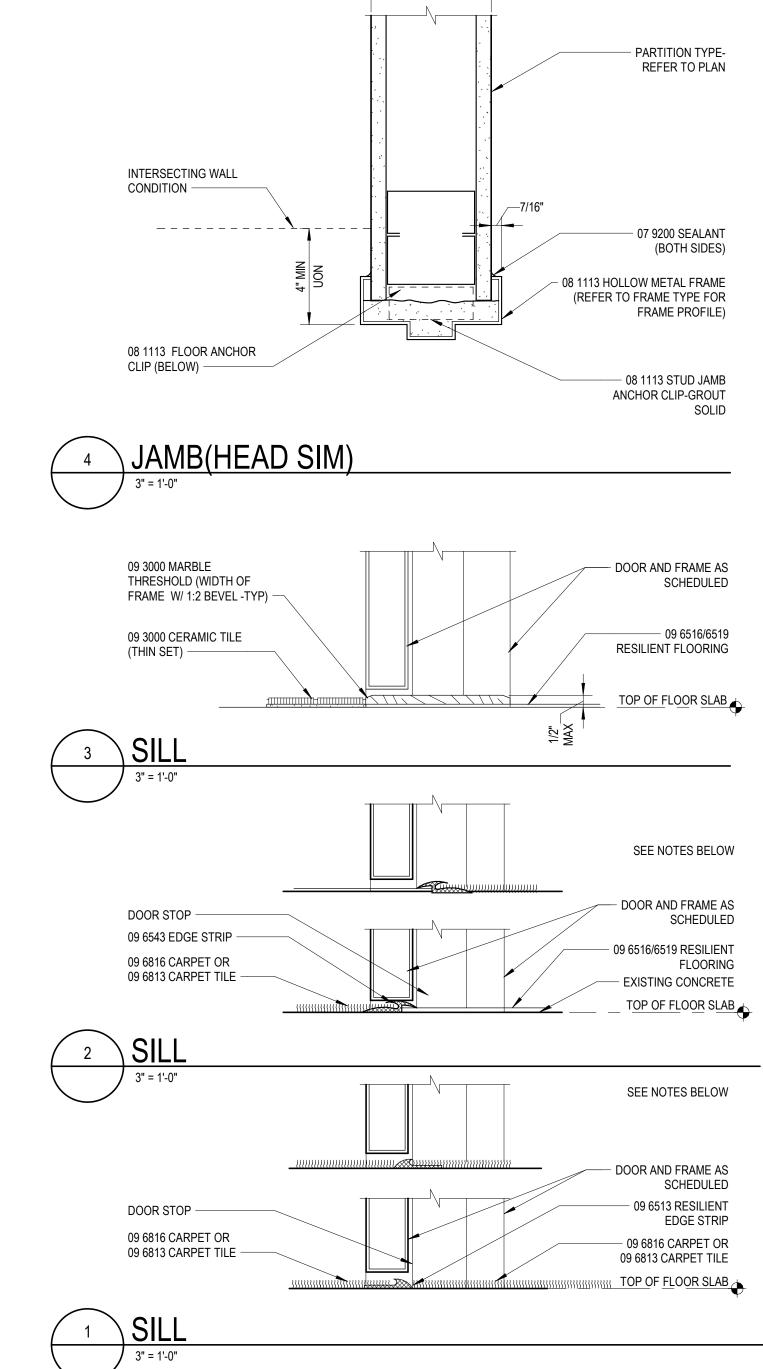


Project Title

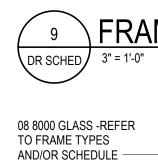
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WIDTH - SEE PLAN



08 1113 HM GLASS STOP —

8

STOP -----

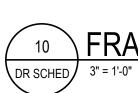
08 1113 HM

FRAME -

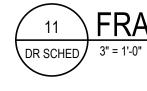
NOTE: LOCATE GLASS ON THE SIDE OF THE FRAME

08 1113 HM GLASS

STOP —

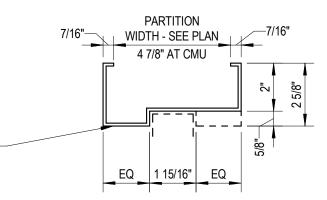


08 1113 HM FRAME -

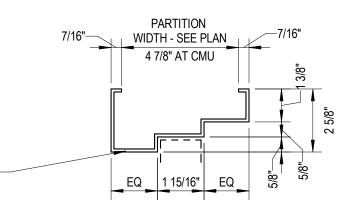


08 1113 HM FRAME

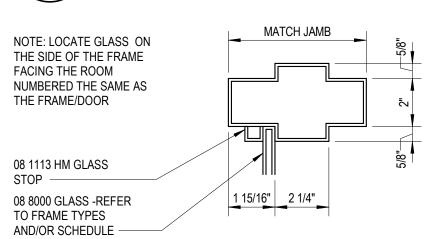
								C	OOR	SCHE	DULE							
	DOOR FRAME DETAILS										DOOR							
DOOR		SIZE													HARDWARE		WALL	
NUMBER	WIDTH LEAF 1	LEAF 2	HEIGHT	TYPE	MATERIAL	FINISH/ CC	FRGM	TYPE	MATERIAL	FINISH / CC	FRGM	HEAD	JAMB	SILL	SET	RATING	RATING	REMARKS
101	3' - 0" 3' - 0"		7' - 0"	F	WD	-	-	Α	HM	PT-05	-	4/A9.2	4/A9.2	-	3.00	-	-	1
103	3' - 0" 3' - 0"		7' - 0"	F	WD	-	-	A	HM	PT-05	-	4/A9.2	4/A9.2	-	2.01	-	-	1
104	3' - 0" 3' - 0"		7' - 0"	F	WD	-	-	A	HM	PT-05	-	4/A9.2	4/A9.2	-	2.01	-	-	1
106	3' - 0" 3' - 0"		7' - 0"	G	WD	-	-	A	HM	PT-05	-	4/A9.2	4/A9.2	3/A9.2	1.01	-	-	1, 2
107	3' - 0" 3' - 0"		7' - 0"	Ν	WD	-	-	A	HM	PT-05	-	4/A9.2	4/A9.2	-	2.01	-	-	1
108	3' - 0" 3' - 0"		7' - 0"	Ν	WD	-	-	Α	HM	PT-05	-	4/A9.2	4/A9.2	-	2.02	-	-	1
109	3' - 0" 3' - 0"		7' - 0"	F	WD	-	-	Α	HM	PT-05	-	4/A9.2	4/A9.2	3/A9.2	2.03	-	-	1
110	3' - 0" 3' - 0"		7' - 0"	F	WD	-	-	Α	HM	PT-05	-	4/A9.2	4/A9.2	-	3.00	-	-	1
112	3' - 0" 3' - 0"		7' - 0"	G	WD	-	-	A	HM	PT-05	-	4/A9.2	4/A9.2	-	2.02	-	-	1
H120A	3' - 0" 3' - 0"		7' - 0"	-	(E)	-	-	-	(E)	PT-05	-	-	-	1/A9.2	1.00	-	-	1, 2
H120B	3' - 0" 3' - 0"		7' - 0"	-	(E)	-	-	-	(E)	PT-05	-	-	-	2/A9.2	2.00	-	-	1



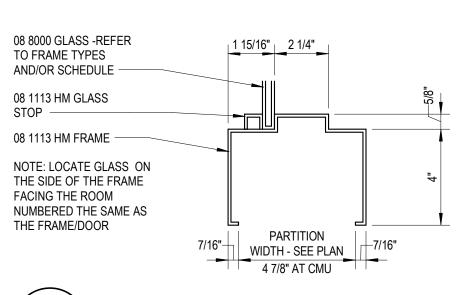
FRAME - DOUBLE EGRESS HEAD



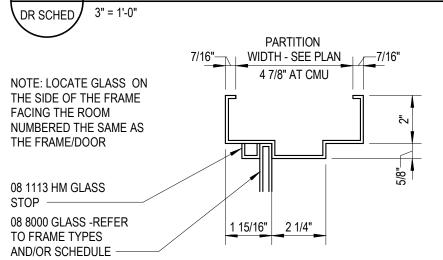
FRAME - DOUBLE EGRESS JAMB



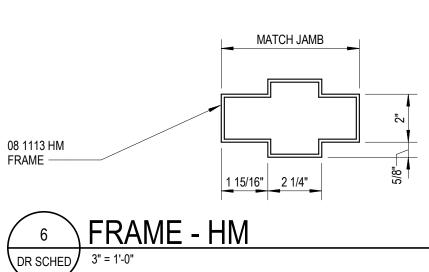
FRAME - HM W/ GLASS

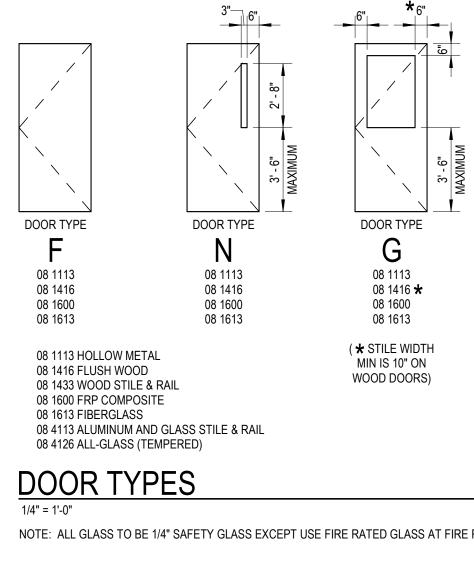


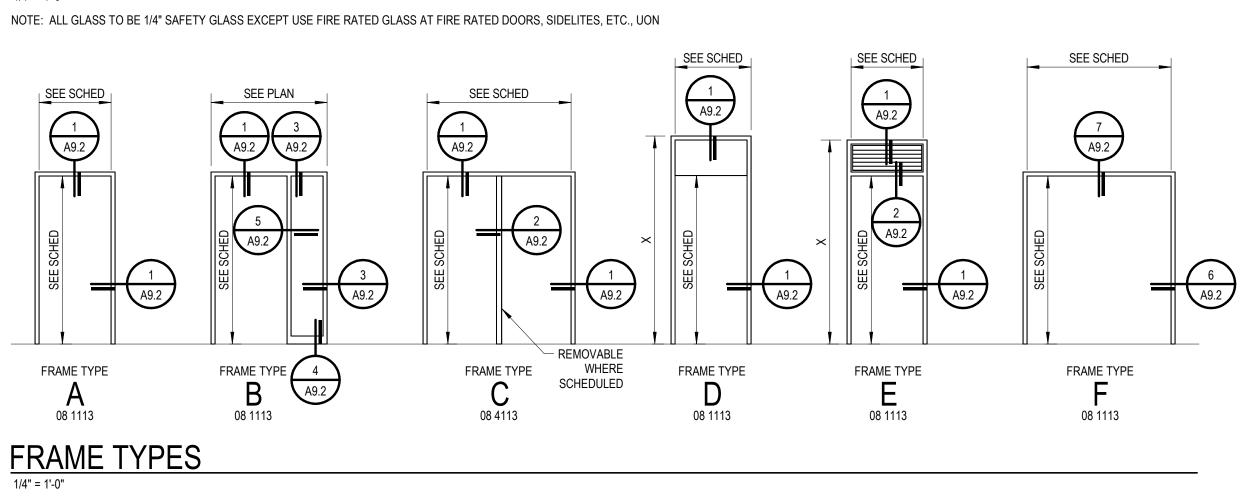
FRAME - HM W/ GLASS



FRAME - HM W/ GLASS DR SCHED 3" = 1'-0"







NOTE: ALL GLASS TO BE 1/4" SAFETY GLASS EXCEPT USE FIRE RATED GLASS AT FIRE RATED DOORS, SIDELITES, ETC., UON

GENERAL NOTES

DOOR SCHEDULE

- A. REFER TO THE DRAWINGS FOR DOOR LOCATIONS B. "DOOR NUMBER" CORRESPONDS TO THE DOOR NUMBER INDICATED ON THE DRAWINGS. NOTE: AT EXISTING WALL OPENINGS, FIELD VERIFY SIZE OF DOORS AND FRAMES.
- C. (DOOR) "SIZE" INDICATES THE NOMINAL WIDTH AND HEIGHT OF THE DOOR IN FEET AND INCHES. ALL DOORS ARE 1 3/4" THICK UNLESS OTHERWISE NOTED.
- D. "DOOR AND FRAME TYPE/MATL/FINISH" INDICATES THE CODES FOR TYPE (INDICATED ON THE DRAWINGS), MATERIAL AND FINISH.
- E. "CC" INDICATES THE COLOR CODE FOR FINISHES OF DOORS AND FRAMES, SEE "SCHEDULE - COLOR CODES".
- F. "DETAILS HEAD- JAMB-SILL" INDICATES THE DETAIL NUMBER INDICATED ON THE DRAWINGS.
- G. "HARDWARE SET" INDICATES HARDWARE SET NUMBERS SPECIFIED IN 08 7100 - DOOR HARDWARE.
- H. "DOOR ASSEMBLY RATING" INDICATES THE MINIMUM FIRE RESISTANCE RATING FOR FIRE DOORS AND/OR SIDELITES.
- I. "WALL RATING" INDICATES THE FIRE RESISTANCE RATING OF THE
- WALL CONTAINING THE DOOR. J. "FRGM" INDICATES FIRE-RATED GLAZING MARKINGS.
- K. "REMARKS" INDICATES ANY SPECIAL REQUIREMENTS FOR A DOOR AND FRAME - SEE "DOOR SCHEDULE - REMARKS".
- L. REFER TO HARDWARE SET #04.00 WITHIN SPECIFICATION SECTION 08 7100 FOR REQUIRED ADDITIONAL MISC EQUIPMENT.

REMARKS DOOR SCHEDULE

1. ACCESS CONTROL SYSTEM 2. LOCKDOWN BUTTON INTEGRATION

FIRE-RATED GLAZING ASSEMBLIES MARKING W MEETS WALL ASSEMBLY CRITERIA

- OH MEETS FIRE WINDOW ASSEMBLY CRITERIA INCLUDING THE HOSE STREAM TEST
- MEETS FIRE DOOR ASSEMBLY CRITERIA MEETS FIRE DOOR ASSEMBLY "HOSE STREAM" TEST MEETS 450 DEG F TEMPERATURE RISE CRITERIA FOR 30 MINUTES
- NT DOES NOT MEET 450 DEG F TEMPERATURE RISE CRITERIA FOR 30 MINUTES
- XXX TIME IN MINUTES OF THE FIRE RESISTANCE OR FIRE PROTECTION RATING OF THE GLAZING ASSEMBLY

ABBREVIATIONS



24167-1000

īDs Project Number

Drawing Number

A9.2

Door Schedule and Details

IDS Drawing Tit

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Pi	roject Administrator A. Maurer
	Project Designer A. Pelfrey
Project /	Architect / Engineer C. King
	Drawn By A. Pelfrey
	Q.M. Review
	N. LaForest
	Approved B. Sundberg
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Design Development	07-03-2024
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INTEGRATED design SOLUTIONS architecture engineering interiors & technology



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5211 cascade road SE, suite 300

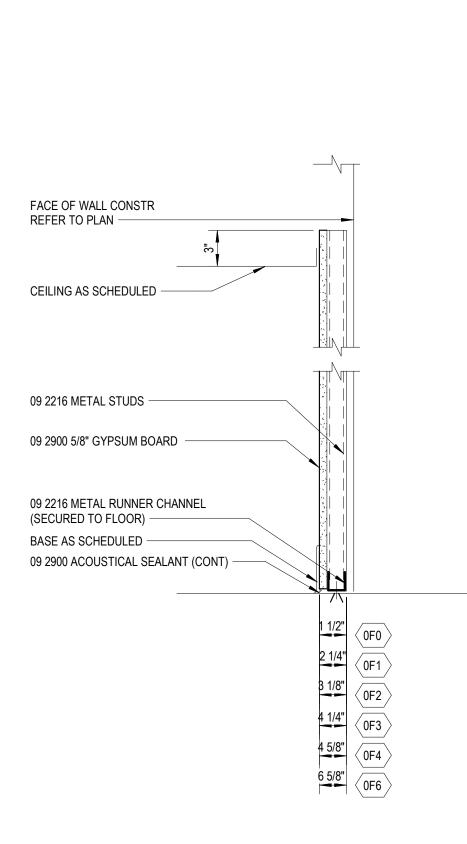
grand rapids, michigan 49546

troy, michigan 48098

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PARTITION SERIES 'F'



07 8413 HEAD OF WALL FIRE RESISTIVE JOINT SYSTEM AT RATED PARTITIONS -

CONSTRUCTION AT VOIDS OF STEEL DECK ONLY -----09 2216 SLOTTED DEFLECTION TRACK (SECURED TO DECK) —

09 2216 METAL STUDS -09 2900 5/8" GYPSUM BOARD (2 LAYERS @ 2-HR FIRE RATED PARTITION)

09 2900 ACOUSTICAL SEALANT (CONT BOTH SIDES - OMIT WHEN CARPET RUNS UNDER PARTITION) —

PARTITION SERIES 'B'

GENERAL NOTES

- INTERIOR PARTITIONS "WALL" AND "PARTITION" ARE USED TO DENOTE EITHER WALLS OR PARTITIONS INTERCHANGEABLY.
- 2. REFER TO SHEET AR.0 ARCHITECTURAL REFERENCE INFORMATION
- FOR ABBREVIATIONS, SYMBOLS, AND GRAPHIC INDICATIONS.
- 3. REFER TO COMPOSITE LIFE SAFETY PLANS FOR PARTITION FIRE RATINGS.
- 4. REFER TO ROOM FINISH SCHEDULE FOR WALL FINISHES AND WALL BASE.

PARTITION TYPE GRAPHIC TAG

ASSEMBLY RATING -S = SMOKE PARTITION

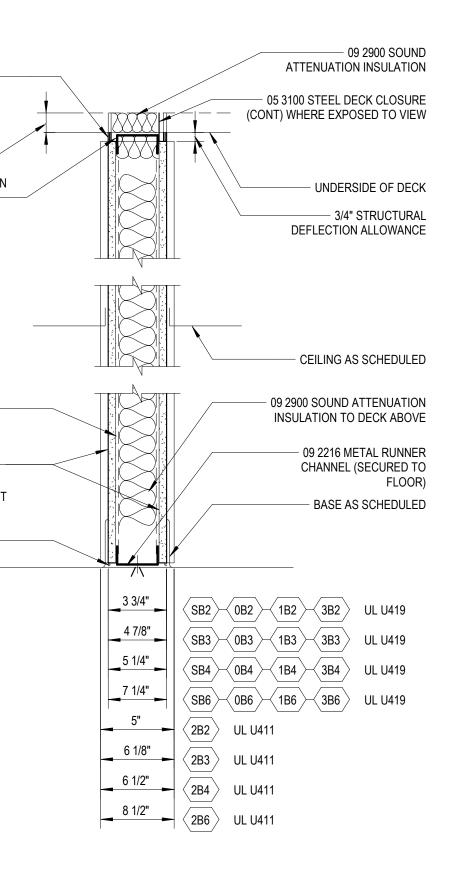
0 = NON-RATED 1 = 1-HR FIRE RATED 2 = 2-HR FIRE RATED

- SIZE DESIGNATOR (SEE TABLE BELOW)

- PARTITION SERIES

3 = 30 MIN FIRE RATED				
MATERIAL	DESIGNATION SIZE	ACTUAL SIZE	SPACING	
MASONRY	4 6 8 12	3 5/8 " 5 5/8 " 7 5/8 " 11 5/8 "	N/A	
STEEL STUDS	1 2 3 4 6	1 5/8 " 2 1/2 " 3 5/8 " 4" 6"	16" OC	
FURRING	0 1 2 3	7/8 " 1 5/8 " 2 1/2 " 3 5/8 "	16" OC	
SHAFTWALL C-H STUDS	2 4 6	2 1/2 " 4" 6"	24" OC	

- SUBSTITUTE 09 2900 TILE BACKING BOARD AT LOCATIONS TO RECEIVE A TILE WALL FINISH.
- 6. ALL NON-LOAD BEARING METAL WALL FRAMING SHALL BE BASED ON TOTAL STUD HEIGHT. REFER TO SPECIFICATION SECTIONS 05 4000 -COLD-FORMED METAL FRAMING, 09 2116 - GYPSUM BOARD SHAFT WALL ASSEMBLIES AND 09 2216 - NON-STRUCTURAL METAL FRAMING FOR ADDITIONAL REQUIREMENTS.
- 7. WHERE ROOMS WITH DIFFERENT PARTITION REQUIREMENTS ARE ADJACENT, THE PARTITION WITH THE GREATER FIRE-RATING AND/OR STC SHALL BE USED BETWEEN THEM.
- 8. AT INTERSECTIONS OF DIS-SIMILAR PARTITON TYPES, THE HIGHEST RATED PARTITION IS TO RUN THROUGH THE INTERSECTION TO MAINTAIN ENCLOSURE. MAINTAIN RATING OF RATED PARTITION AT INTERSECTION WITH COLUMN ENCLOSURES BY EXTENDING RATED CLOSURE AS REQUIRED.
- 9. FIRE-RATED PARTITIONS SHALL BE CONSTRUCTED ACCORDING TO THE FIRE TEST INDICATED. NO SUBSTITUTIONS OF MATERIALS OR DEVIATIONS FROM CONSTRUCTION ARE ALLOWED. ADDITIONAL LAYERS MAY BE REQUIRED FOR ACOUSTICAL OR OTHER REASONS AND MUST BE EXECUTED AS SHOWN.
- 10. STC RATINGS ARE MINIMUM ACOUSTICAL PERFORMANCE REQUIREMENT. SPECIFIC ACOUSTICAL TESTS ARE GIVEN FOR REFERENCE ONLY. SOUND ATTENUATION BLANKET THICKNESS SHALL BE AS FOLLOWS:
- A. 1 1/2 " FOR PARTITIONS WITH 1 5/8 " AND 2 1/2 " STUDS (INCLUDING SHAFTWALLS).
- B. 3" FOR PARTITIONS WITH 3 5/8 ", 4" OR 6" STUDS. C. 3" FOR SHAFTWALLS WITH 4" OR 6" STUDS UNO. D. AS REQUIRED FOR FIRE RATING.
- 11. DETAILS ARE DIAGRAMMATIC PRECISE REQUIREMENTS OF TESTS ASSEMBLIES SHALL GOVERN.







Partition Types

IDS Drawing Title

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-		

Pr	oject Administrator
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Project A	Architect / Engineer
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	Approved
	B. Sundberg
	Drawing Scale
	As Noted
Issued for	Issue Date
Design Development	07-03-2024
Quality Management Review	01-09-2025
Bids	01-31-2025

501 W Columbia Ave Belleville, MI 48111 Key Plan

RAHS Belleville High School

Van Buren Public Schools

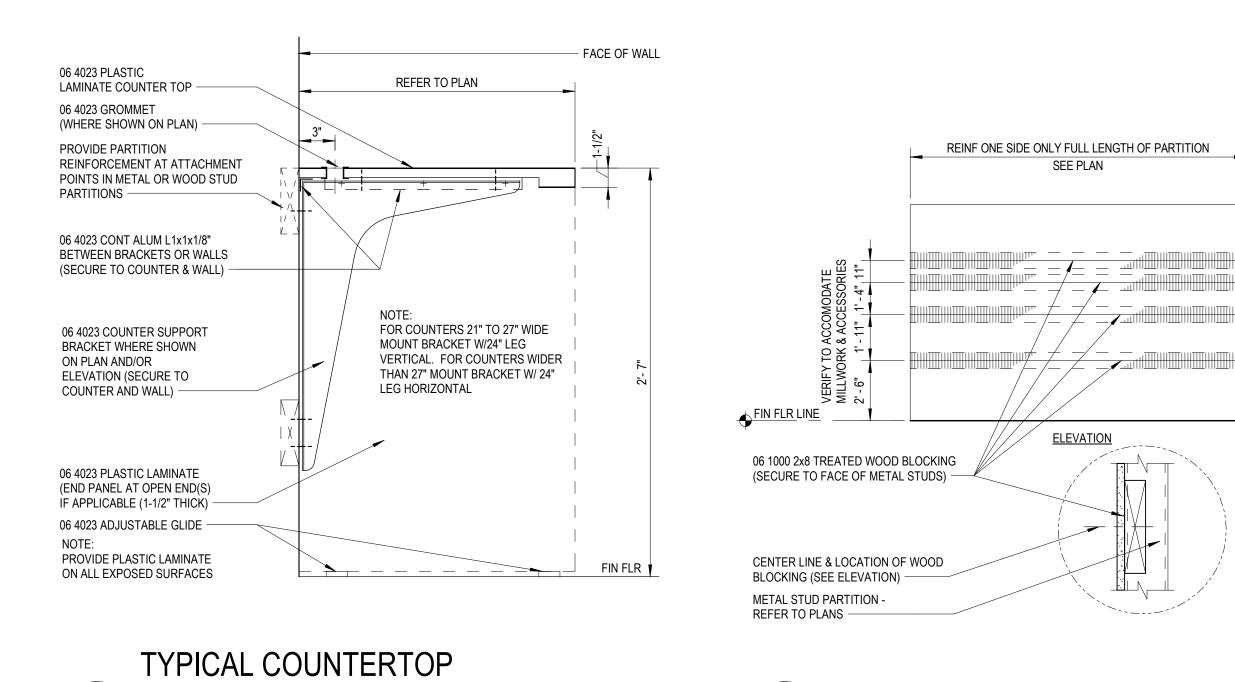


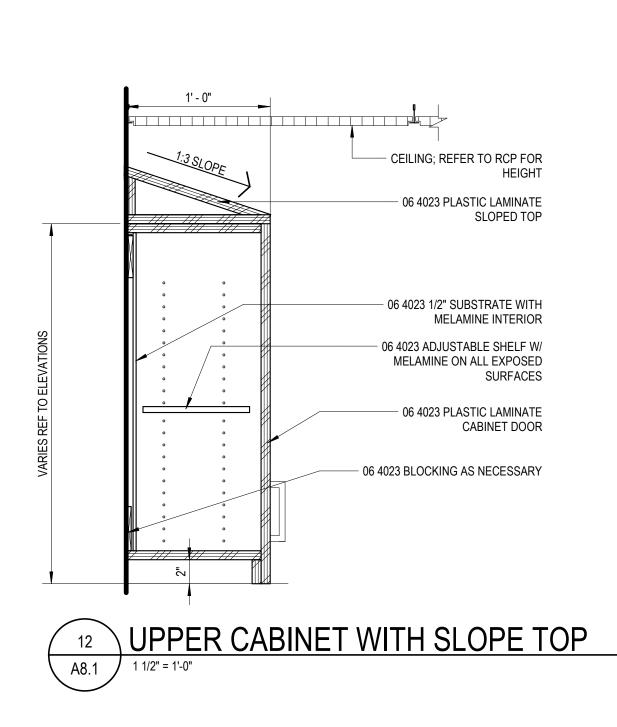
Project Title

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248.823.2100

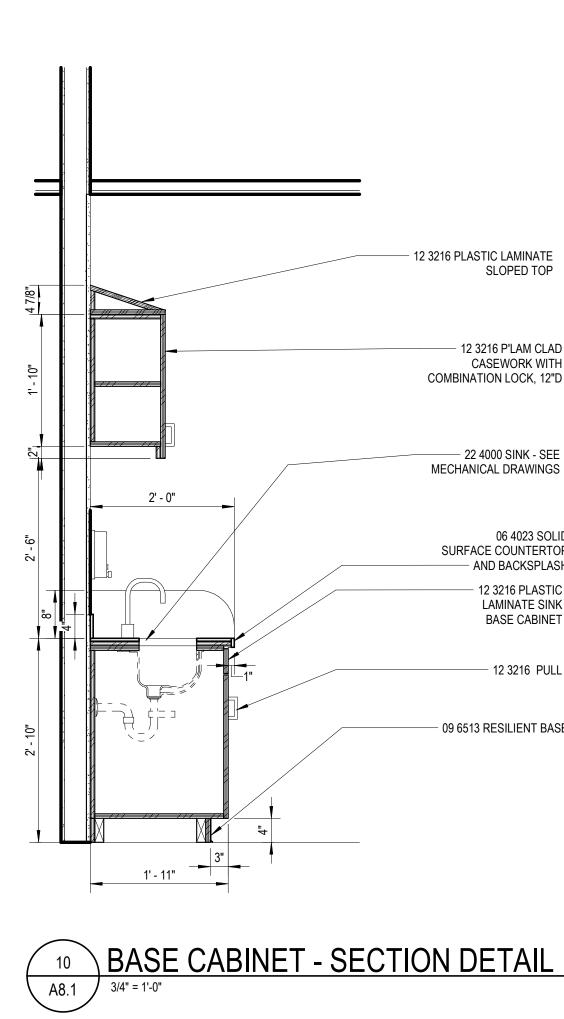




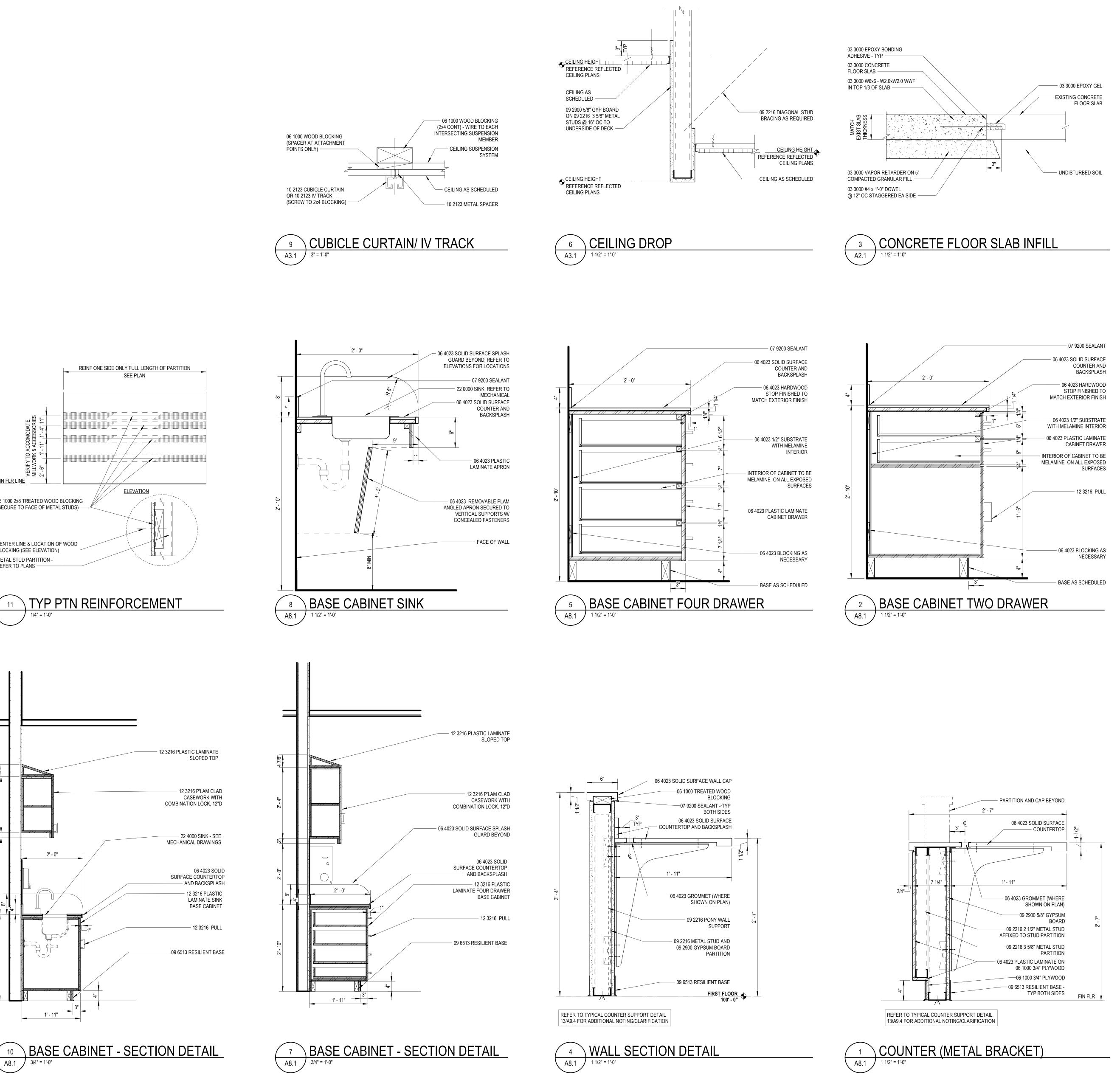


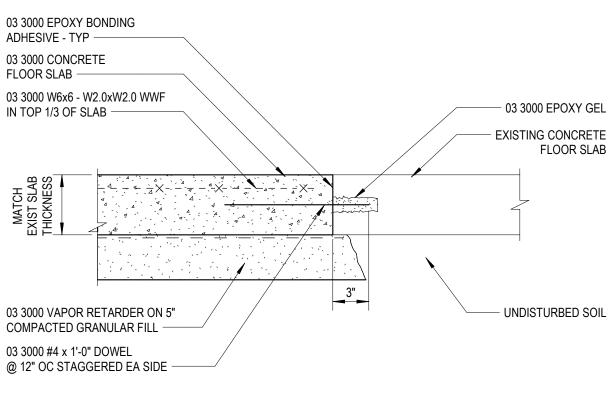
13 SUPPORT DETAIL

A8.1 1 1/2" = 1'-0"

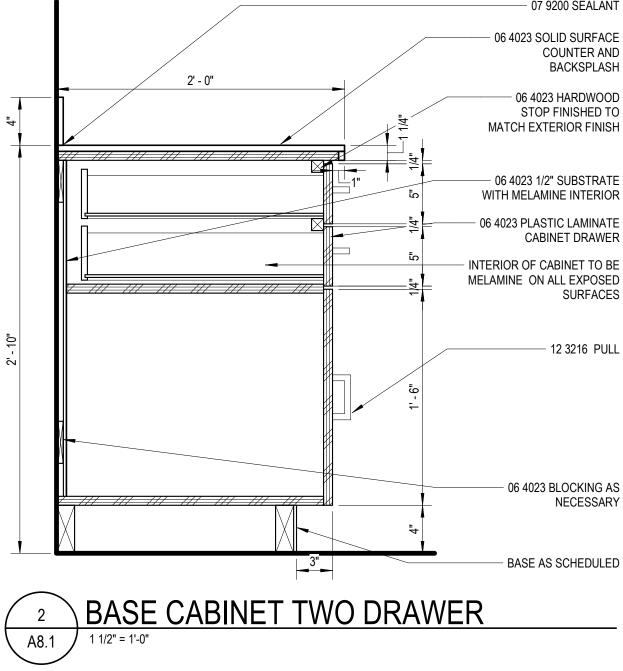


1/4" = 1'-0"









24167-1000

Drawing Number



Sections and Details

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	Approved
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Project Title

1441 west long lake, suite 200

grand rapids, michigan 49546

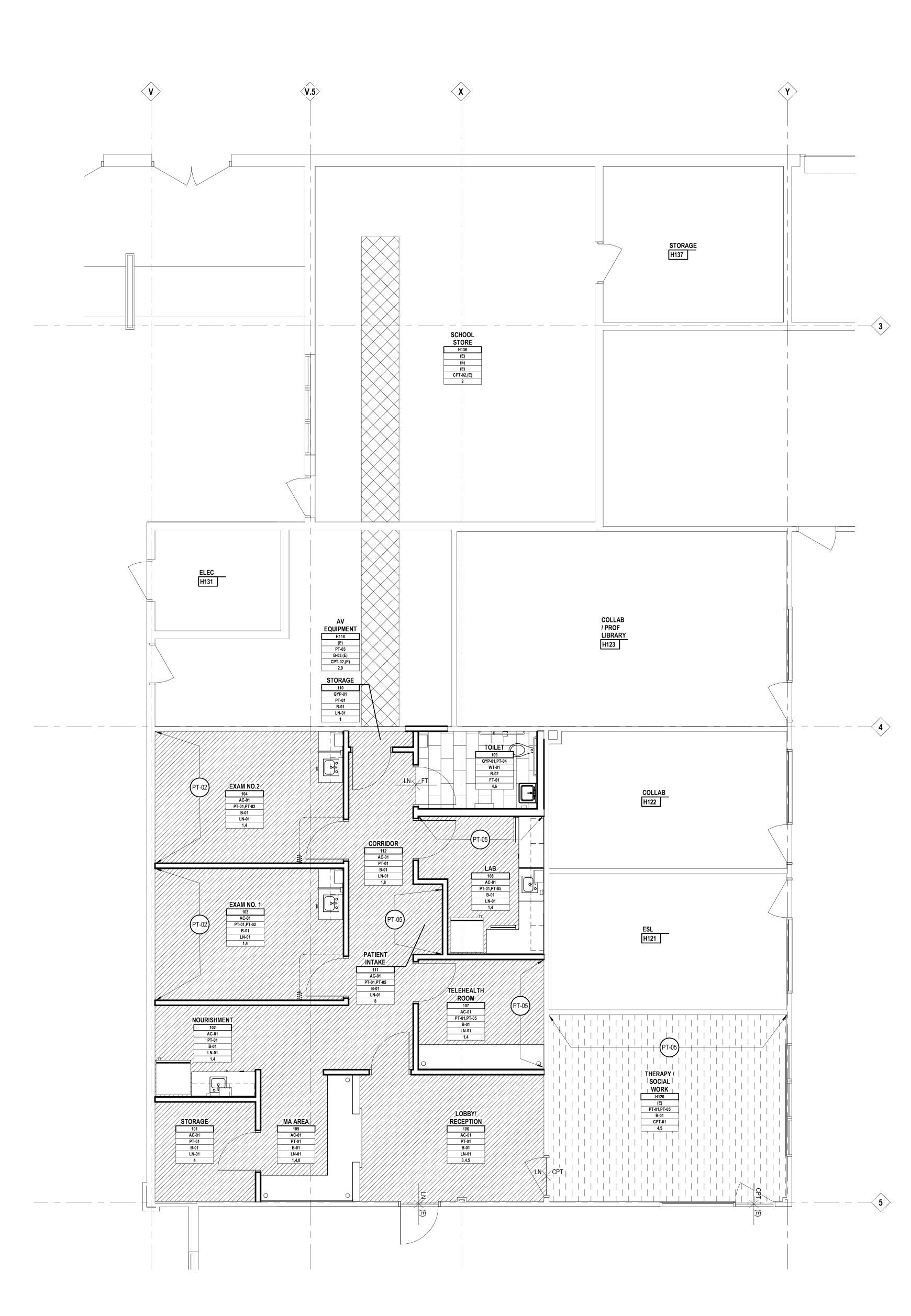
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INTEGRATED design SOLUTIONS architecture engineering interiors & technology



GENERAL NOTES FINISH PLAN

- A. REFER TO ROOM FINISH SCHEDULE AND COLOR CODES FOR MORE INFORMATION.
- B. XXXXX- COPY IN ROOM FINISH SCHEDULE REMARKS FOR EASY REFERENCE

LEGEND
FINISH PLAN

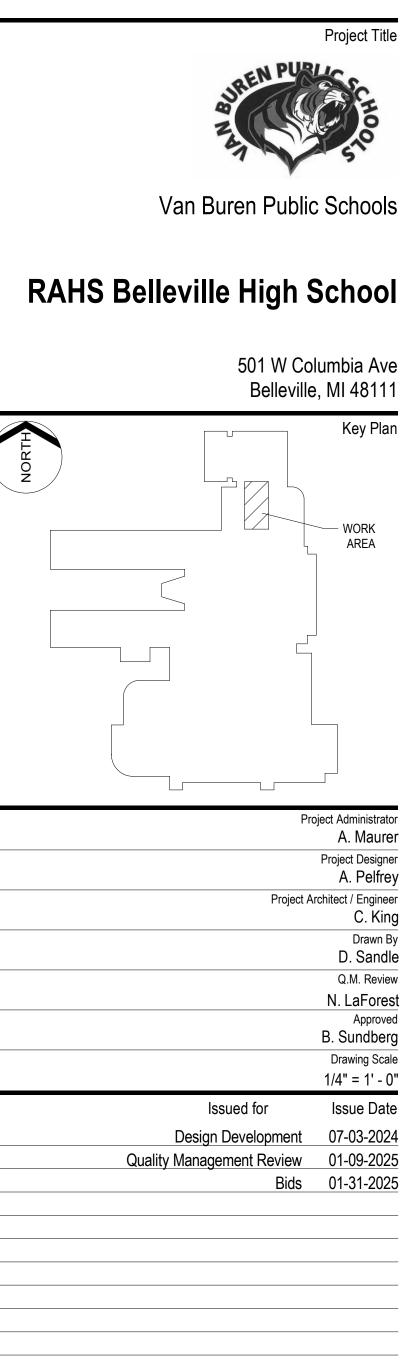
FINISH PLAN
NOTE: NOT ALL SYMBOLS MAY BE USED

	09 3000 PORC FLOOR TILE FT-01
	09 6813 CARPET TILE CPT-01
	09 6813 CARPET TILE CPT-02
	09 6516/6519 RESILIENT TILE LVT-01
×××	FLOOR MATERIAL TRANSITION TAG REFER TO A.9.2 FOR TRANSITION/ SILL DETAILS
XX-XX FLOO	R COLOR CODE TAG - REFER TO ROOM FINISH SCHEDULE SHEET A9.1
4	FLOORING INSTALLATION DIRECTION
(XX-XX)	ACCENT MATERIAL, REFER TO COLOR CODES
	FLOORING INSTALLATION METHOD - ASHLAR
$\begin{array}{c c} \uparrow & \uparrow \\ \hline \uparrow & \uparrow \end{array}$	FLOORING INSTALLATION METHOD - MONOLITHIC
$ \begin{array}{c c} \uparrow & \rightarrow \\ \hline \leftarrow & \downarrow \end{array} $	FLOORING INSTALLATION METHOD - QUARTER TURN
$\begin{array}{c} \uparrow \\ \neg \\ \neg \\ \downarrow \end{array} \rightarrow$	FLOORING INSTALLATION METHOD - NON-DIRECTIONAL
	FLOORING INSTALLATION METHOD - HERINGBONE
ROOM NAME ROOM # Ceiling Finish Wall Finish Base Finish Floor Finish	NOTE: FINISHES INDICATED IN ROOM FINISH TAGS ARE GENERAL OVERALL FINISHES FOR ROOM UNLESS OTHERWISE INDICATED BY NOTE, REMARK, DETAIL AND/OR ELEVATION
Comments	ROOM SPECIFIC FINISH REMARKS, REFER TO

ROOM SPECIFIC FINISH REMARKS, REFER TO REMARKS LEGEND FOR ADDITIONAL INFORMATION



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IDS Drawing Title

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First Floor Finish Plan

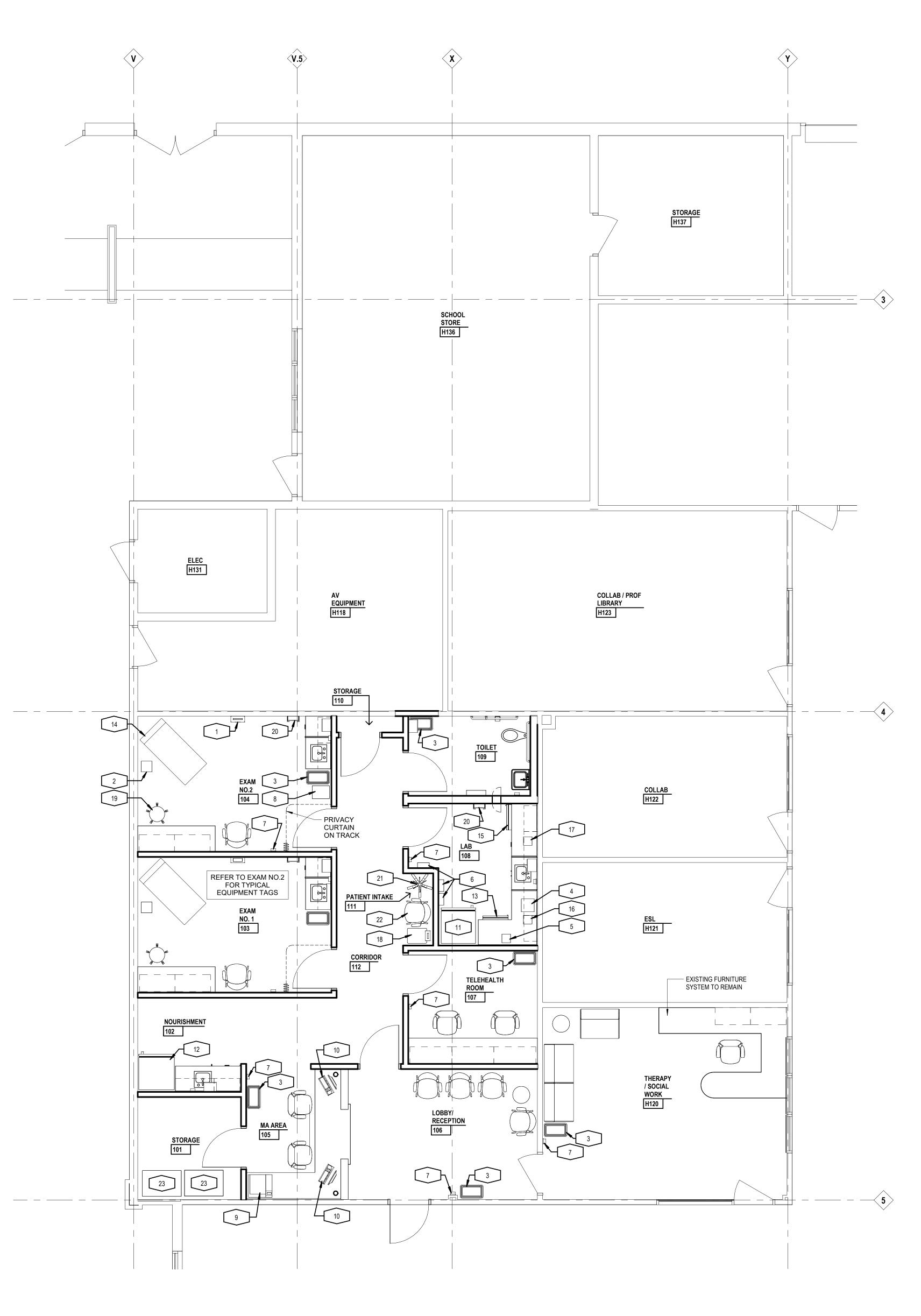
Drawing Number

A10.1

ī**0**≗ Project Number

 SClin
23)/VBPS H
 Public Schools (2)
Autodesk Docs://Van Buren
Ξ.

	Medical Equ	ipment Sch	nedule
TYPE			
MARK	EQUIPMENT DESCRIPTION	RESPONSIBILITY	(
1	Sharps Container	<varies></varies>	
2	Oto/Ophthalmoscope	OF/CI	
3	Medical Waste Receptacle	<varies></varies>	
4	Centerfuge	OF/OI	
5	Glucometer	OF/OI	
6	Wall Bin	OF/CI	
7	Hand Sanitizer	<varies></varies>	
8	Step Stool	OF/OI	
9	Printer/Scanner Countertop	OF/OI	
10	Desktop Computer Station	OF/OI	
11	Refrigerator with Top Freezer	OF/OI	
12	Pharmaceutical Refrigerator	OF/CI	
13	Undercounter Freezer	OF/OI	
14	Barrier Free Exam Table	OF/OI	
15	Specimen Refrigerator	OF/CI	
16	Thermometer	OF/OI	
17	Strep Test	OF/OI	
18	Medical Scale	OF/OI	
19	Rolling Stool	OF/OI	
20	Medical Gloves Box	OF/CI	
21	IV Stand/Manometer/Monitor	OF/OI	
22	Blood Draw Chair	OF/OI	
23	Storage Cart	OF/OI	





GENERAL NOTES FURNITURE FIXTURE AND EQUIPMENT PLAN

- A. ITEMS SHOWN IN GRAYSCALE ARE FOR REFERENCE ONLY.
- B. COORDINATE THE INTERFACING OF ALL TRADES WITH RESPECT TO DELIVERY AND INSTALLATION OF ALL FURNITURE, FIXTURES AND EQUIPMENT
- C. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS BEFORE INSTALLATION. CONSULT ARCHITECT WHEN ACTUAL FIELD CONDITIONS VARY FROM THOSE SHOWN ON CONSTRUCTION DOCUMENTS.
- D. COORDINATE LOCATIONS OF ALL REQUIRED UTILITIES WITH THE TRADE PROVIDING THE SAME. REFER TO MECHANICAL AND ELECTRICAL SHEETS FOR ADDITIONAL INFORMATION.



ī**D**≗ Project Number

Drawing Number F2.1

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For Reference Only

Pr	oject Administrator A. Maurer
	Project Designer A. Pelfrey
Project A	rchitect / Engineer C. King
	Drawn By D. Sandle
	Q.M. Review N. LaForest
	Approved B. Sundberg Drawing Scale
	1/4" = 1' - 0"
Issued for	Issue Date
Design Development	07-03-2024
Quality Management Review Bids	01-09-2025

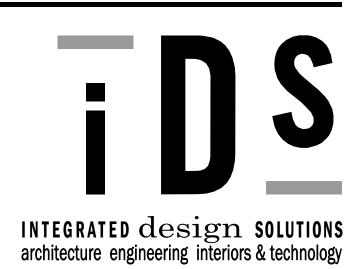
501 W Columbia Ave Belleville, MI 48111

Key Plan

- WORK AREA

Van Buren Public Schools RAHS Belleville High School





1441 west long lake, suite 200 troy, michigan 48098

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C (CONT) CUH CABINET UNIT HEATER CONTROL VALVE CV COLD WATER CW DRY BULB DOMESTIC WATER PRESSURE BOOSTER PUMP DBP DIRECT DIGITAL CONTROL DDC DEGREE DEG DOWNSPOUT NOZZLE DN DAY/NIGHT D/N DOAS DEDICATED OUTDOOR AIR SYSTEM DPR DAMPER D&T DRIP & TRAP DTC DRAIN TILE CONNECTION DWH DOMESTIC WATER HEATER DIRECT EXPANSION DX EXHAUST AIR ENTERING AIR TEMPERATURE EAT ECUH ELECTRIC CABINET UNIT HEATER EDB ENTERING DRY BULB EEW EMERGENCY EYE WASH EEWS EMERGENCY EYE WASH AND SHOWER EXHAUST FAN EXHAUST GRILLE ELECTRICAL HEATING COIL ELECTRICAL INFRARED HEATER EXPANSION JOINT ELEVATION ELEV ELEC ELECTRICAL EMCS ENERGY MONITORING AND CONTROL SYSTEM ENT ENTERING ENERGY RECOVERY UNIT ERU EMERGENCY SHOWER ESP EXTERNAL STATIC PRESSURE EXPANSION TANK ELECTRIC UNIT HEATER EUH EWB ENTERING WET BULB EWC ELECTRICAL WATER COOLER EWT ENTERING WATER TEMPERATURE EXH EXHAUST EXP EXPANSION EXISTING

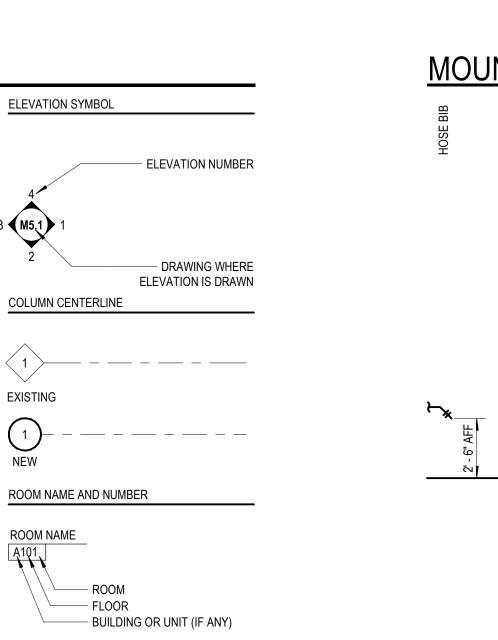
	AIR ADMITTANCE VALVE AIR COMPRESSOR AIR CONDITIONER AIR COOLED CONDENSING UNIT
) F T IU PD	ACCESS DOOR ABOVE FINISHED FLOOR AIR FLOW TRANSMITTED AIR HANDLING UNIT AIR PRESSURE DROP ACTIVE LENGTH
PPROX RCH S SR	APPROXIMATELY ARCHITECTURAL AIR/DIRT SEPARATOR AUTOMATIC SPRINKLER RISER
NS BD CU	BOILER BUILDING AUTOMATION SYSTEM BOILER BLOWDOWN BLOWER COIL UNIT BARRIER FREE
፡ የ -	BOILER FEEDWATER PUMP BRAKE HORSEPOWER BACKFLOW PREVENTER BUFFER TANK
U W	BRITISH THERMAL UNIT BACKWATER VALVE
N.	
5 2) FH FM 1	COOLING COIL COLD DECK CUBIC FEET PER HOUR CUBIC FEET PER MINUTE CHILLER
.g) DND DNN DNT	CAST IRON CEILING CLEANOUT CONDENSATE (COOLING) CONNECTION CONTINUATION
DNTR DNV PU R	CONTRACTOR CONVECTOR CENTRAL PROCESSING UNIT CONDENSATE RETURN (STEAM) COOLING TOWER

ABBREVIATIONS

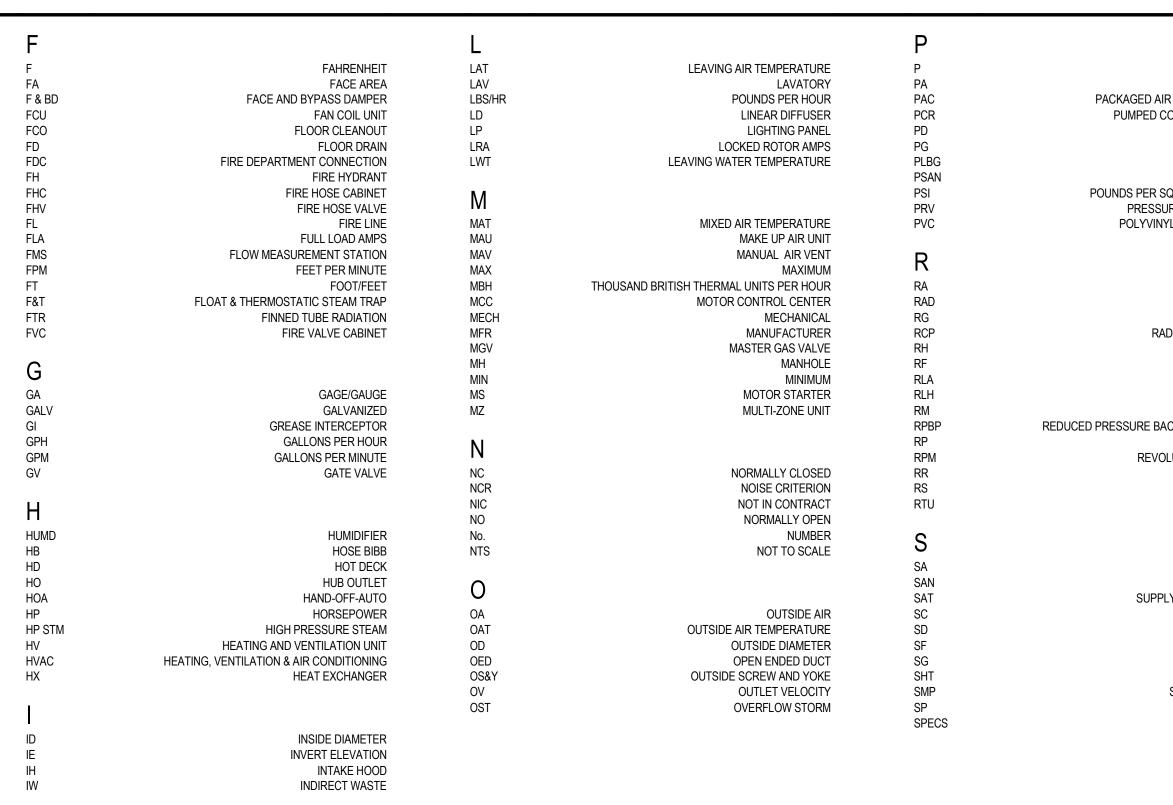
FLOOR CLEANC	o	FCO (
WALL CLEANC		WCO
WATER MET	M	C
MANHC		(
FLOOR DR/	D FD	e
CATCH BA	СВ	Ш
PENDANT SP HD (FLUSH MOUNTED TY	•	•
SIAMESE CONNECTI	-¢	_
PRESSURE INDICAT	r>∙ ₽	Q
TEMPERATURE INDICAT	φ	Ċ
THERMOMET	φ	[
MANUAL AIR VE	Q	[
FLOW MEASURING DEVI		C
FLOW ELEMENT (ORIFICE PLA	卓	
POINT OF NEW CONNECTI	9	€
TO BE DEMOLISHED AND REMOV		
PLUMBING RISER T	\supset	\subset
MASTER GAS SHUT-OFF VAL	IGS	M
PRESSURE REDUCING STATI	RV	PF
REDUCED PRESSURE BACKFLOW PREVENT	PBP	RP
FIRE PROTECTION PIPI	F ——	I
DOMESTIC COLD WATER PIPI	cw <u>—</u>	— c
DOMESTIC SOFTENED COLD WAT	cw —	— sc
HIGH PRESSURE COLD WAT	PCW —	— HP
DOMESTIC HOT WATER PIPI	HW ——	— н
DOMESTIC HOT WATER RETURN PIPI	WR —	— ну
NON-POTABLE WATER PIPI	PW 	<u> </u>
DISTILLED WAT		<u> </u>

	FIRE DAMPER
À	SMOKE DAMPER
A	SMOKE DAMPER AND FIRE DAMPER
ь Г	VOLUME DAMPER WITH REMOTE OPERATOR
r M	FLEXIBLE DUCT
	CUH OR CONVECTOR (SURFACE)
പ്ര	FINNED TUBE RADIATION
	TERMINAL VOLUME BOX (W/O HEATING COIL)
	TERMINAL VOLUME BOX (W/ HEATING COIL)
	FLEXIBLE PIPE CONNECTION
#" / #"	INDICATES FLAT OVAL DUCT SIZE
#" x #"	INDICATES RECTANGULAR DUCT SIZE
#"Ø	INDICATES ROUND DUCT SIZE
R	ANGLE RELIEF VALVE
¥	ANGLED STOP CHECK VALVE
	BALANCE VALVE
ıļi	BUTTERFLY VALVE (SEE SPECIFICATION FOR TYPE)
X	BALL, GAS, GATE, GLOBE, PLUG VALVE (SEE SPECIFICATION FOR TYPE)
Ŕ	CHECK VALVE W/ ARROW INDICATING FLOW
伭	LINEAR STOP CHECK VALVE
X	PRESSURE REDUCING VALVE
送	PRESSURE RELIEF VALVE
Å	STRAINER
— 	UNION
— × —	PIPE ANCHOR
— — —	PIPE GUIDE / SLEEVE
	EXPANSION COMPENSATOR/EXPANSION JOINT
••• _{SH}	SPRING HANGER

<u>SYMBOLS</u>



SYMBOL LEGEND
DETAIL SYMBOL
M2.1 DETAIL SCALE
DRAWING WHERE DETAIL IS REFERENCED OR CUT
PLAN OR DETAIL ENLARGEMENT
PLAN OR DETAIL IDENTIFICATION
DRAWING WHERE PLAN OR DETAILS IS DRAWN
SECTION LOCATOR
SECTION IDENTIFICATION
2 M5.1
DRAWING WHERE PLAN OR DETAILS IS DRAWN



PIPING (GRAVITY)	н	HUMIDITY SENSOR - DUCT MOUNTED
G WATER SUPPLY		THERMOSTAT WITH GUARD
G WATER RETURN	⊡	TEMPERATURE SENSOR - DUCT MOUNTED AVERAGING ELEMENT
PIPING (COOLING)		TEMPERATURE SENSOR W/ SUNSHIELD
E RETURN PIPING	_ []	TEMPERATURE SENSOR - DUCT MOUNTED
ig supply piping	⊡╞	RIGID ELEMENT TEMPERATURE SENSOR - IMMERSION TYPE ELEMENT
G RETURN PIPING		AREA SMOKE DETECTOR
P WATER SUPPLY		DUCT SMOKE DETECTOR
P WATER RETURN	F	FIRE STAT - DUCT MOUNTED
BH TEMPERATURE R SUPPLY PIPING	FZ	FREEZE STAT - DUCT MOUNTED
GH TEMPERATURE R RETURN PIPING	FM	FLOW METER
Y RETURN PIPING	AQ	AQUASTAT (STRAP ON)
RY SUPPLY PIPING	AFS	AIR FLOW SENSOR
PRESSURE STEAM	LPI	LOOP POWER INDICATOR
SSURE INDICATED		DAY/NIGHT MAIN AIR SWITCH
EAM RELIEF VENT	0	MANOMETER
RIGERANT PIPING	CR	CONTROL RELAY
TOR GAUGE TYPE	CS	CURRENT SWITCH
RESSURE GAUGE	M	MOTORIZED DAMPER MOTOR
MIDISTAT (ROOM)	66666	DAMPER (PARALLEL BLADE)
ONOXIDE SENSOR	8888	DAMPER (OPPOSED BLADE)
HUMIDISTAT	EP	ELECTRIC - PNEUMATIC RELAY
THERMOSTAT	S/S	START STOP (MOTOR CONTROL)
EILING MOUNTED	R	RELAY (ELECTRICAL)
- WALL MOUNTED	Ξ	TWIST TIMER
EILING MOUNTED	VC	VELOCITY CONTROLLER
- WALL MOUNTED		MOTOR DISCONNECT SWITCH
RESSURE SENSOR		MOTOR STARTER, W/O HOA SWITCH
- DUCT MOUNTED	\boxtimes	MOTOR STARTER, W/ HOA SWITCH

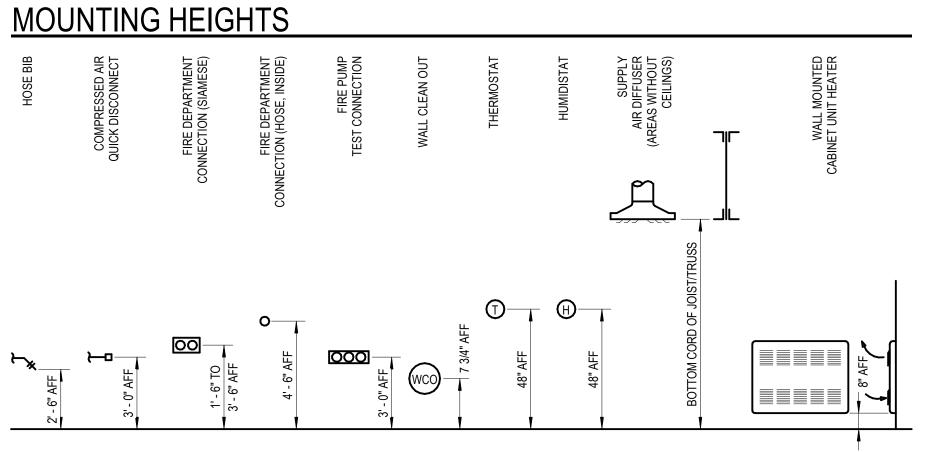
— CR —	CONDENSATE RETURN PIPING (G
- PCWS -	PROCESS COOLING WATER
- PCWR -	PROCESS COOLING WATER
- COND -	CONDENSATE DRAIN PIPING (CO
— HPCR —	HIGH PRESSURE CONDENSATE RETURN
— HWHS —	HOT WATER HEATING SUPPLY
— HWHR —	HOT WATER HEATING RETURN
— HPWS —	HEAT PUMP WATER
— HPWR —	HEAT PUMP WATER
– HTHWS –	HIGH TEMPE HOT WATER SUPPLY
– HTHWR –	HIGH TEMPE HOT WATER RETURN
— HRR —	HEAT RECOVERY RETURN
— HRS —	HEAT RECOVERY SUPPLY
— STM —	LOW PRESSURE
- STM(#) -	STEAM PIPING PRESSURE INE
— STM V —	STEAM RELI
	VRF SYSTEM REFRIGERANT
\bigcirc	TEMPERATURE INDICATOR GAUC
DPI	DIFFERNTIAL PRESSURE
(H)	HUMIDISTAT
Ø	CARBON MONOXIDE
H	HUM
\bigcirc	THERI
L	OCCUPANCY SENSOR - CEILING M
HL	OCCUPANCY SENSOR - WALL MO
PC	PHOTOELECTRIC SWITCH - CEILING MO
HPC	PHOTOELECTRIC SWITCH - WALL M
SP	STATIC PRESSURE S
С	CARBON DIOXIDE SENSOR - DUCT M

— RS/RL —	REFRIGERANT SUCTION/LIQUID LINE SET	
— RO —	REVERSE OSMOSIS WATER	
— DI —	DEIONIZED WATER SUPPLY	
<u> </u>	TEMPERED WATER	
— G —	NATURAL GAS PIPING	
— G(EPS) —	NATURAL GAS PIPING (EMERGENCY POWER SUPPLY)	
— NIT-OX —	NITROUS OXIDE PIPING	
<u> </u>	OXYGEN PIPING	
CA	COMPRESSED AIR	
— CA(#)—	COMPRESSED AIR PIPING PRESSURE INDICATED	
— MA —	MEDICAL AIR	
— CO2 —	CARBON DIOXIDE GAS	
—FOR—	FUEL OIL RETURN	
—FOS—	FUEL OIL SUPPLY	
— SAN —	SANITARY SEWER	
— PSAN —	PUMPED SANITARY SEWER	
<u> </u>	VENT PIPING	
— AV	ACID VENT PIPING	
— VAC —	VACUUM PIPING	
— AW —	ACID WASTE	
<u> </u>	STORM SEWER	
<u> </u>	OVERFLOW STORM	
<u> </u>	PUMPED STORM WATER	
DT	DRAIN TILE	
— CHWS —	CHILLED WATER SUPPLY PIPING	
— CHWR —	CHILLED WATER RETURN PIPING	
—cws—	CONDENSER WATER SUPPLY PIPING	
— CWR—	CONDENSER WATER RETURN PIPING	
- PCR -	PUMPED CONDENSATE RETURN PIPING	

GENERAL NOTES

- AND ACTUAL FIELD CONDITIONS.
- 2. COORDINATE ALL WORK WITH APPROPRIATE TRADES.

- 8. MAXIMUM LENGTH ON FLEXIBLE DUCT SHALL BE 5'-0".



NOTATION METHODS

SD-A 10"Ø 350 CFM	SUPPLY DIFFUSER, TYPE 'A', 10" NECK, 350 CFM
SD-A 10"Ø 350 CFM	SUPPLY DIFFUSER (3-WAY)
RG-A _"x_" _350 CFM	RETURN GRILLE, TYPE 'A', 350 CFM
EG-A _"x_" 350 CFM	EXHAUST GRILLE, TYPE 'A', 350 CFM
SG-A 10"X10" 350 CFM	SUPPLY GRILLE, TYPE 'A', 350 CFM
LD-A/LD-R 10" Ø 350 CFM	LINEAR DIFFUSER, TYPE 'A' WITH FLEXIBLE DUCT CONNECTION (SEE PLANS FOR ARROWS INDICATING FLOW DIRECTION)
~ ~	BELL MOUTH AIR INLET AREA SHALL BE EQUAL TO '2' TIMES DUCT AREA

AHU $\overline{1}$ - $\begin{bmatrix} EF \\ 1 \end{bmatrix}$

5' - 0" AL

<u>∖</u> ∧

/CONV

5.7 MBH 0.6 GPM

VAV 2.1100.A

VAV 2.1100.A

FHA

1000.A

Ť

VARIABLE AIR VOLUME VOLUME DAMPER VIBRATION ISOLATOR VARIABLE REFRIGERANT FLOW VENT STACK VARIABLE SPEED DRIVE **□** VENT THROUGH ROOF

WASTE
WASTE AND VENT
WET BULB
WATER CLOSET
WALL CLEANOUT
WATER GAUGE
WALL HYDRANT
WATER SOFTENER

SPRINKLER HEAD

SIDE STREAM FILTER

SOLENOID VALVE

TRENCH DRAIN

TURNING VANES

UNIT HEATER

UNIT VENTILATOR

TYPICAL

URINAL

VENT

TEMPERATURE CONTROL

TEMPERATURE WATER

UNDERWRITERS LABORATORY

SPRINKLER

STORM

STEAM

SERVICE SINK

PIPE ANCHOR
R CONDITIONING UNIT
ONDENSATE RETURN
PRESSURE DROP
PIPE GUIDE
PLUMBING
PUMPED SANITARY
QUARE INCH - GAUGE
JRE REDUCING VALVE
YL CHLORIDE PLASTIC
RETURN AIR
RADIATOR
RETURN AIR GRILLE
DIANT CEILING PANEL

PUMP

S (CONT)

SP HD

SPKR

SS

ST

SV

SSF

STM

TYP

UH

UL

UR

UV

VAV

VSD

VTR

W

W

W&V

WB

WC

WCO

WG

WH

WS

RELATIVE HUMIDITY RETURN FAN **RELIEF AIR** RELIEF HOOD ROOM REDUCED PRESSURE BACKFLOW PREVENTER RADIANT PANEL **REVOLUTIONS PER MINUTE** RETURN REGISTER ROOF SUMP ROOF TOP UNIT

> SANITARY SUPPLY AIR TEMPERATURE STEAM COIL SUPPLY DIFFUSER SUPPLY FAN SUPPLY AIR GRILLE SHEET SNOW MELT SYSTEM SUMP PUMP SPECIFICATIONS

SUPPLY AIR

EMERGENCY GAS SHUT-OFF
END SWITCH
FLOW SWITCH - INLINE
DIFFERENTIAL PRESSURE SWITCH
PRESSURE SWITCH
MAIN AIR SUPPLY (MECHANICAL CONTROLS)
PNEUMATIC LINE
SOLENOID VALVE
PRESSURE GAUGE
VALVE - TWO WAY PNEUMATIC CONTROLLED
VALVE - THREE WAY PNEUMATIC CONTROLLED
TWO WAY MOTORIZED VALVE
THREE WAY MOTORIZED VALVE
ANALOG INPUT
ANALOG OUTPUT
DIGITAL INPUT
DIGITAL OUTPUT
DIFFERENTIAL PRESSURE TRANSMITTER
PRESSURE TRANSMITTER
ELECTRICAL LINE DESIGNATION ON CONTROL DIAGRAMS AND FLOOR PLANS
ELECTRICAL LINE DESIGNATION ON WIRING DIAGRAMS (VOLTAGE AS NOTED)

	DIAGRAMS (VOLTAGE AS NOTED)
00	SWITCH
	FUSE
1 m	TRANSFORMER
S	THERMAL OVERLOAD
$\dashv \vdash$	RELAY CONTACT
-0-	RELAY COIL
÷	SYSTEM OR EQUIPMENT GROUND

E SENSOR - DUCT MOUNTED AVERAGING ELEMENT
URE SENSOR W/ SUNSHIELD
E SENSOR - DUCT MOUNTED RIGID ELEMENT
ATURE SENSOR - IMMERSION TYPE ELEMENT
AREA SMOKE DETECTOR
DUCT SMOKE DETECTOR
FIRE STAT - DUCT MOUNTED
EEZE STAT - DUCT MOUNTED
FLOW METER
AQUASTAT (STRAP ON)
AIR FLOW SENSOR
LOOP POWER INDICATOR
DAY/NIGHT MAIN AIR SWITCH
MANOMETER
CONTROL RELAY
CURRENT SWITCH
MOTORIZED DAMPER MOTOR
DAMPER (PARALLEL BLADE)
DAMPER (OPPOSED BLADE)
ECTRIC - PNEUMATIC RELAY
RT STOP (MOTOR CONTROL)
RELAY (ELECTRICAL)
TWIST TIMER

1. VERIFY ALL CONDITIONS IN FIELD BEFORE START OF CONSTRUCTION. NOTIFY ARCHITECT/ENGINEER OF DISCREPANCIES BETWEEN DRAWINGS

3. COORDINATE ANY REQUIRED SHUTDOWN OF SERVICES OR EQUIPMENT WITH OWNER'S REPRESENTATIVE.

4. PROVIDE ALL MISC. STEEL AND ITEMS REQUIRED FOR THE PROPER INSTALLATION OF ALL PIPE, SHEET METAL AND EQUIPMENT.

5. COORDINATE FLOOR, WALL & ROOF PENETRATIONS ETC. WITH ARCHITECTURAL TRADES.

6. INSTALL ALL DUCTWORK AS HIGH AS POSSIBLE IN AREA WITHOUT A CEILING UNLESS INDICATED OTHERWISE. 7. DUCT CONNECTED TO EQUIPMENT SHALL EQUAL EQUIPMENT CONNECTION SIZE UNLESS NOTED OTHERWISE.

9. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT DIFFUSER LOCATIONS IN AREAS WITH A CEILING.

10. ALL HOT WATER FIN TUBE RADIATION COVERS SHALL RUN WALL TO WALL (OR COLUMN).

11. DO NOT RUN ANY PIPING OR DUCTWORK INTO AN ELECTRICAL ROOM THAT DOES NOT SERVE THAT ROOM.

FINNED TUBE RADIATION TYPE 'A', 5'-0" ELEMENT, 5.7 TOTAL MBH (REFER TO EQUIPMENT SCHEDULES) CABINET UNIT HEATER, TYPE 'A'

SUPPLY AIR BRANCH CONNECTION

RETURN AIR/EXHAUST AIR BRANCH

CONNECTION WITH VOLUME DAMPER

SPIN-IN FITTING WITH VOLUME DAMPER

AIR HANDLING UNIT No. 1

EXHAUST FAN No. 1

SOUND ATTENUATOR

CONVECTOR, TYPE 'A' TERMINAL VARIABLE OR CONSTANT VOLUME BOX AHU OR RTU SERVIING THE VAV OR CAV. ROOM NUMBER. A,B,C, ETC. IF MULTIPLE COILS SERVE THE SAME SPACE

(HEATING COIL, REFER TO EQUIPMENT SCHEDULES) TERMINAL VARIABLE OR CONSTANT VOLUME BOX AHU OR RTU SERVIING THE VAV OR CAV. ROOM NUMBER. A,B,C, ETC. IF MULTIPLE COILS SERVE THE SAME SPACE (NO HEATING COIL, REFER TO EQUIPMENT SCHEDULES)

REHEAT COIL, ROOM NUMBER A,B,C, ETC. IF MULTIPLE COILS SERVE THE SAME SPACE (REFER TO EQUIPMENT SCHEDULES)

POINT WHERE DEMOLITION ENDS/POINT OF NEW CONSTRUCTION

NEW MECHANICAL

EXISTING MECHANICAL

MECHANICAL DRAWING INDEX

Mechanical Reference Information MR.0 First Floor Underground Demolition Plan M1.1U

- First Floor Demolition Plan M1.1
- First Floor Sheet Metal Plan M2.1 First Floor Underground Plumbing Plan
- First Floor Plumbing and HVAC Piping Plan M4.1

M6.1 Details M7.1 Schedules & Controls



24167-1000

Mechanical Reference Information

IDS Drawing Ti

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A. Maurer Project Designer N. Moeggenborg Project Architect / Engineer N. Moeggenborg Drawn By N. Moeggenborg Q.M. Review T. Vercruysse Approved J. Schwartz Drawing Scale No Scale Issue Date Issued for Design Development 07-03-2024 Quality Managment Review 01-09-2025 BIDS 01-31-2025

THIS PROJECT MAY NOT UTILIZE ALL THE SYMBOLS, MATERIALS, ABBREVIATIONS AND STANDARD INFORMATION SHOWN ON THIS SHEET.

501 W Columbia Ave Belleville, MI 48111 Key Plan

Project Administrato

RAHS Belleville High School

Van Buren Public Schools



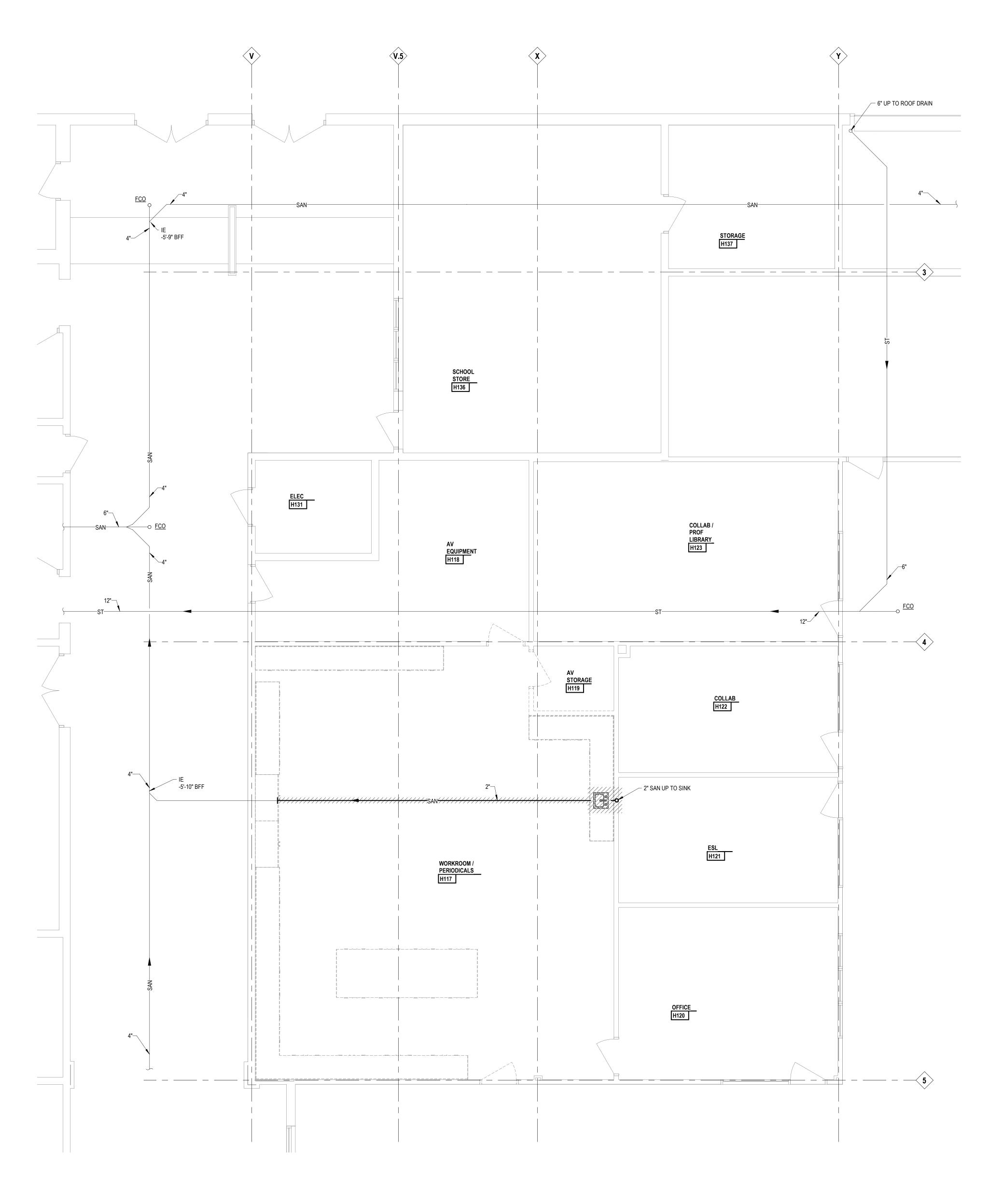
Project Title

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INTEGRATED design SOLUTIONS

architecture engineering interiors & technology



KEYNOTES Demolition

NOTE: NOT ALL KEYNOTES MAY BE USED

LEGEND SYMBOL INDICATOR

D1 REMOVE SINK, COLD WATER, HOT WATER, HOT WATER RETURN, SANITARY, AND VENT PIPING. CAP HOT WATER, COLD WATER, AN DHOT WATER RETURN AT MAIN.

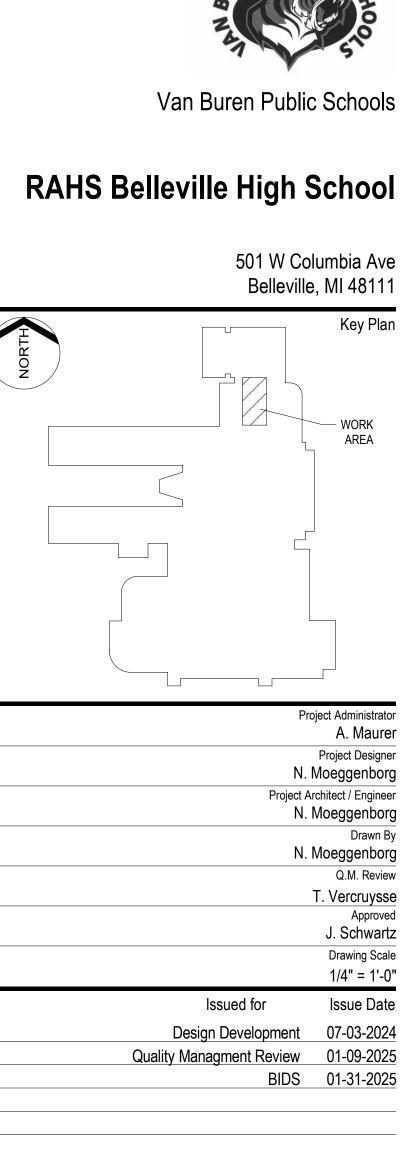
D2 REMOVE EXISTING FAN POWERED BOX AND ALL ASSOCIATED HVAC PIPING, DUCTWORK, CONTROLS, HANGERS, ETC. COMPLETE.

ī**D**≗ Project Number



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Project Title



24167-1000

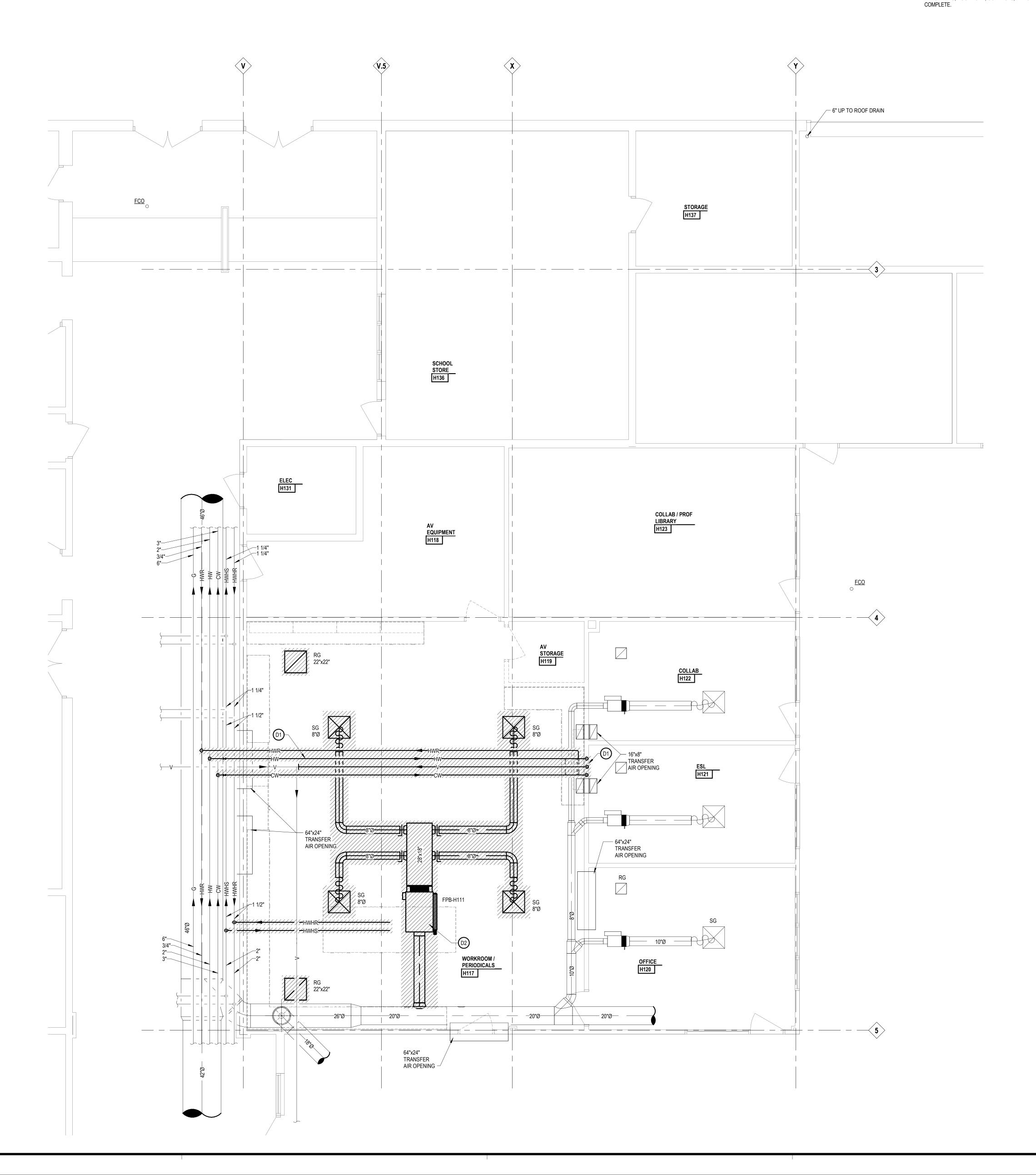
Drawing Number

IDS Drawing Title



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First Floor Underground Demolition Plan



KEYNOTES DEMOLITION

NOTE: NOT ALL KEYNOTES MAY BE USED

LEGEND SYMBOL INDICATOR

D1 REMOVE SINK, COLD WATER, HOT WATER, HOT WATER RETURN, SANITARY, AND VENT PIPING. CAP HOT WATER, COLD WATER, AN DHOT WATER RETURN AT MAIN.

D2 REMOVE EXISTING FAN POWERED BOX AND ALL ASSOCIATED HVAC PIPING, DUCTWORK, CONTROLS, HANGERS, ETC. COMPLETE.



ī**D**≗ Project Number

Drawing Number

M1.1



First Floor Demolition Plan

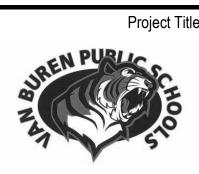
IDS Drawing Title

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Project Administrator A. Maurer Project Designer N. Moeggenborg Project Architect / Engineer N. Moeggenborg Drawn By N. Moeggenborg Q.M. Review T. Vercruysse Approved J. Schwartz Drawing Scale 1/4" = 1'-0" Issue Date Issued for Design Development07-03-2024Quality Managment Review01-09-2025BIDS01-31-2025

501 W Columbia Ave Belleville, MI 48111 Key Plan - WORK AREA

RAHS Belleville High School



Van Buren Public Schools

Project Title

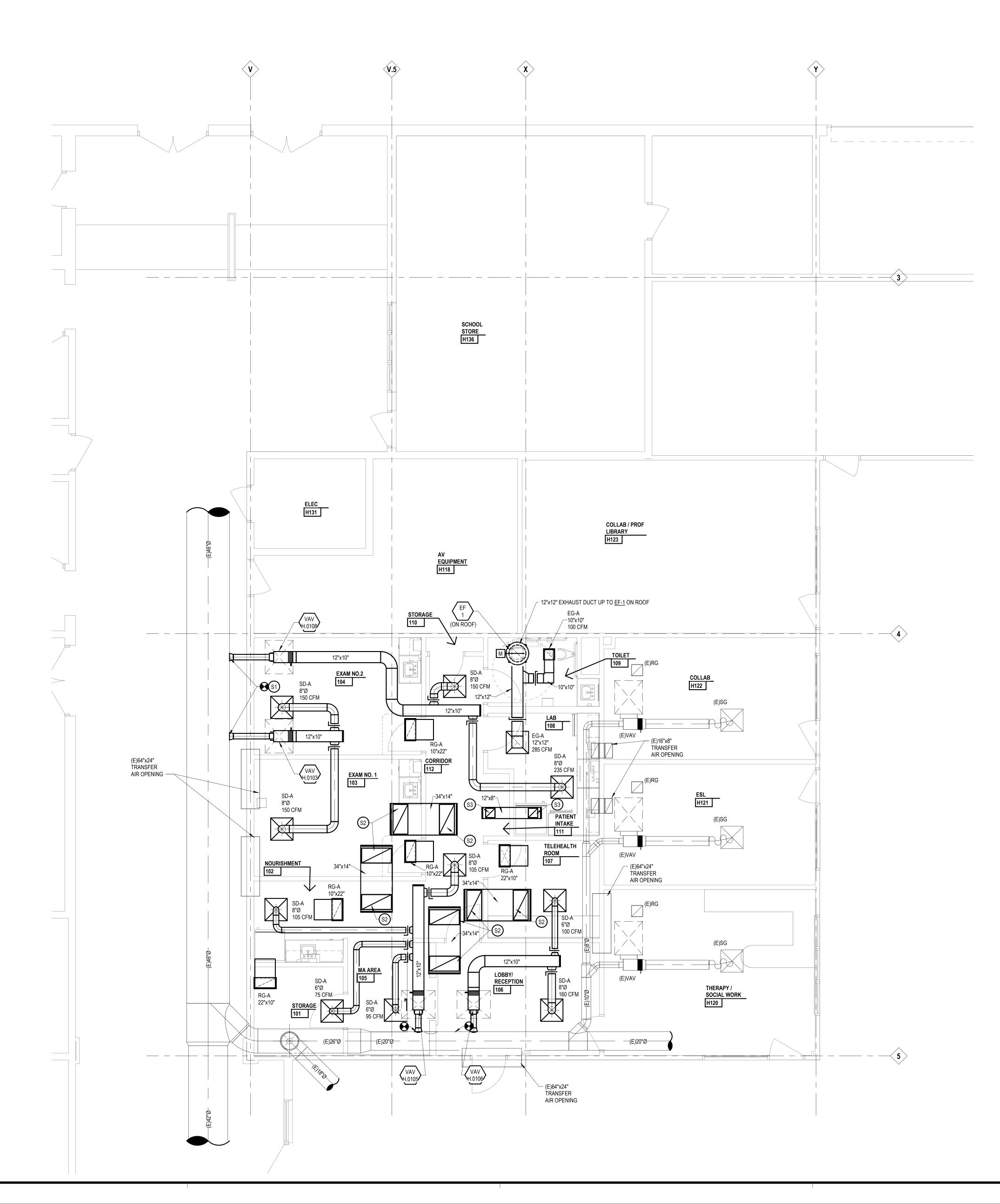


INTEGRATED design SOLUTIONS architecture engineering interiors & technology

1441 west long lake, suite 200 troy, michigan 48098

5211 cascade road SE, suite 300 grand rapids, michigan 49546

248.823.2100



KEYNOTES SHEET METAL NOTE: NOT ALL KEYNOTES MAY BE USED # LEGEND SYMBOL INDICATOR S1 REFER TO ARCHITECTURAL PLAN FOR CEILING REMOVAL. S2 36"x14" OPENING AT TRANSFER DUCT TOP. S3 10"x10" OPENING AT TRANSFER DUCT TOP.

ī**D**≗ Project Number



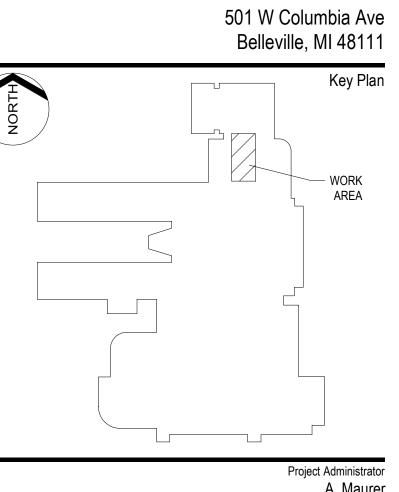
Drawing Number



First Floor Sheet Metal Plan

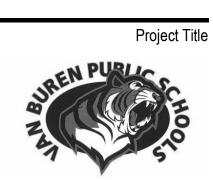
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Project Administrator A. Maurer Project Designer N. Moeggenborg Project Architect / Engineer N. Moeggenborg Drawn By N. Moeggenborg Q.M. Review T. Vercruysse Approved J. Schwartz Drawing Scale 1/4" = 1'-0" Issue Date Issued for Design Development07-03-2024Quality Managment Review01-09-2025BIDS01-31-2025



RAHS Belleville High School

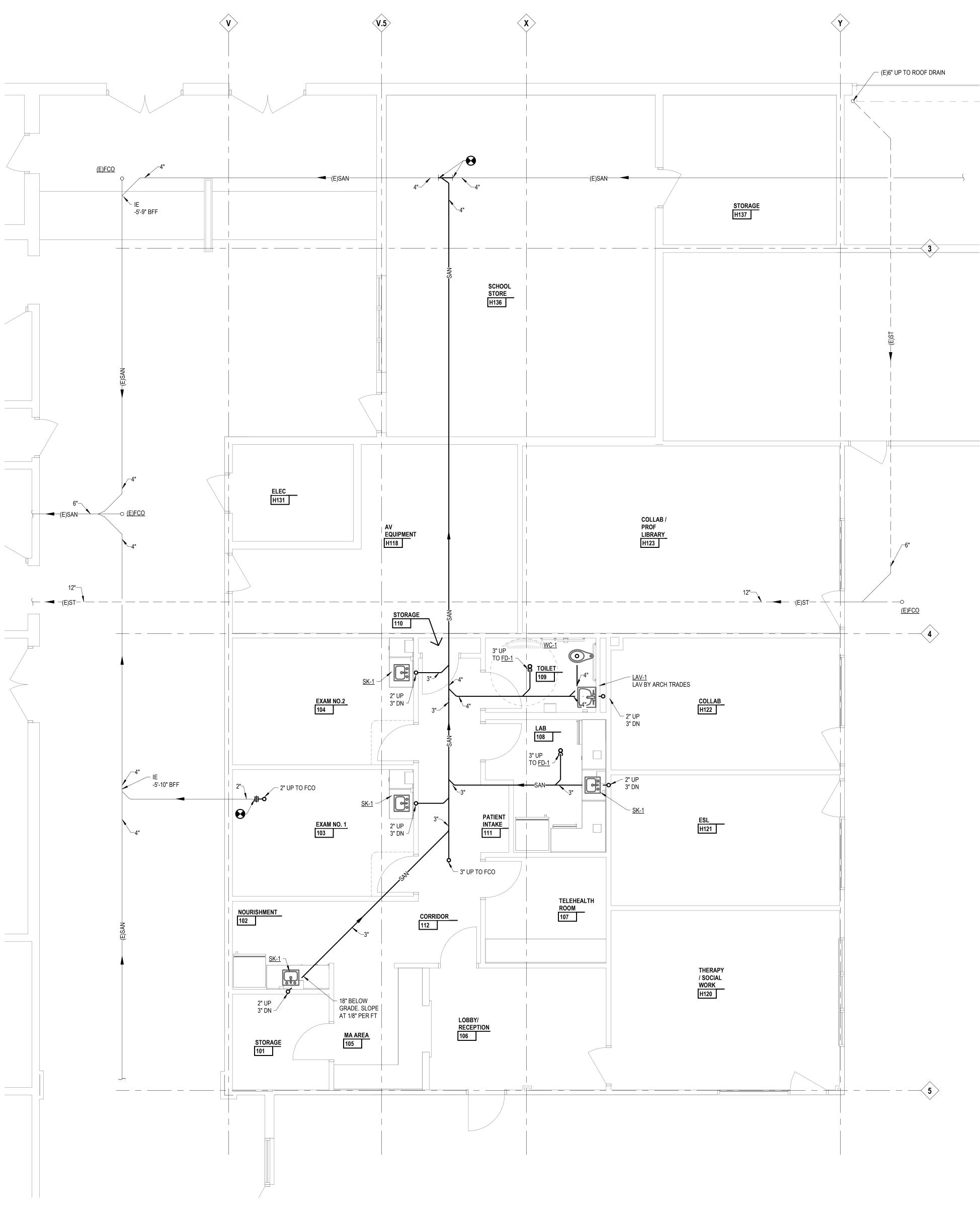
Van Buren Public Schools





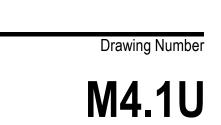
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Ρ	roject Administrator A. Maurer
N.	Project Designer Moeggenborg
•	Architect / Engineer Moeggenborg
N.	Drawn By Moeggenborg
	Q.M. Review T. Vercruysse
	Approved J. Schwartz
	Drawing Scale 1/4" = 1'-0"
Issued for	Issue Date
Design Development	07-03-2024
Quality Managment Review	01-09-2025
BIDS	01-31-2025

501 W Columbia Ave Belleville, MI 48111 Key Plan

RAHS Belleville High School



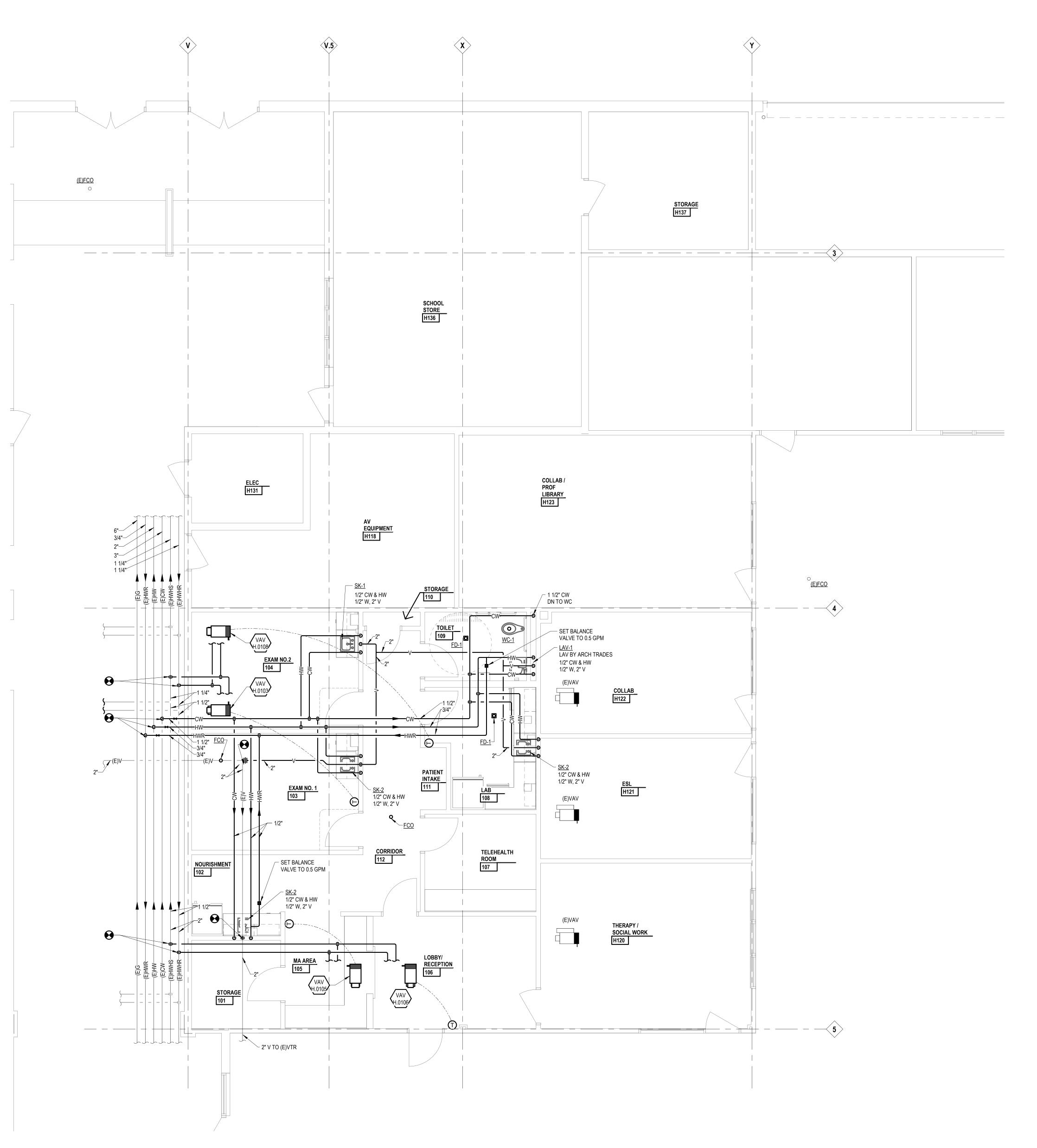
Project Title

- WORK AREA

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Drawing Number M4.1

First Floor Plumbing and HVAC Piping Plan

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	Drawing Scale
	1/4" = 1'-0"
	174 - 1 0
Issued for	Issue Date
Design Development	07-03-2024
Quality Managment Review	01-09-2025
BIDS	01-31-2025

	AREA
I	Project Administrator
	A. Maurer
Ν	Project Designer
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	I. Moeggenborg
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Ν	I. Moeggenborg
	Q.M. Review
	T. Vercruysse
	Approved J. Schwartz
	Drawing Scale
	1/4" = 1'-0"
Issued for	Issue Date
Design Development	07-03-2024

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Key Plan

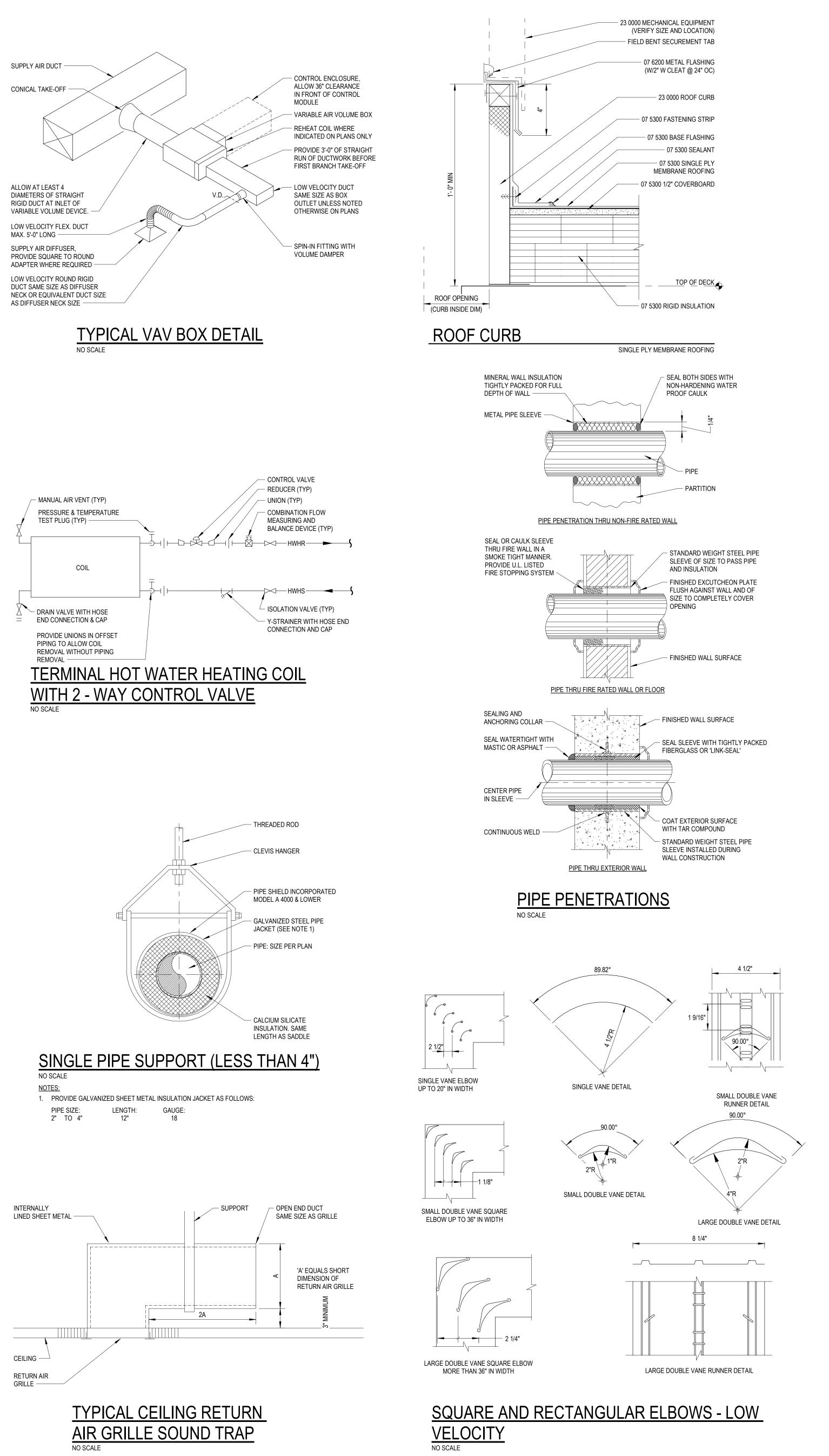
RAHS Belleville High School

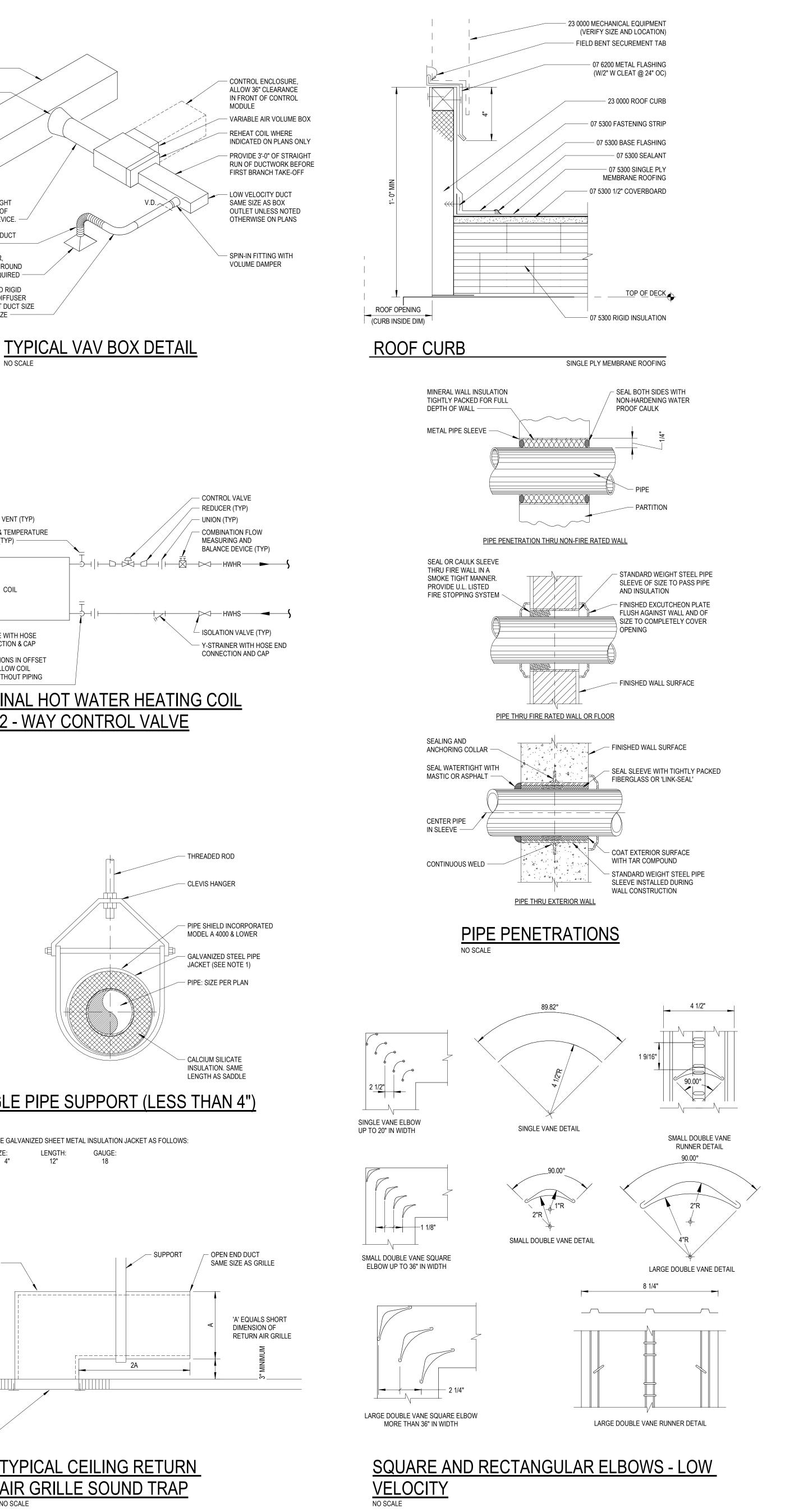


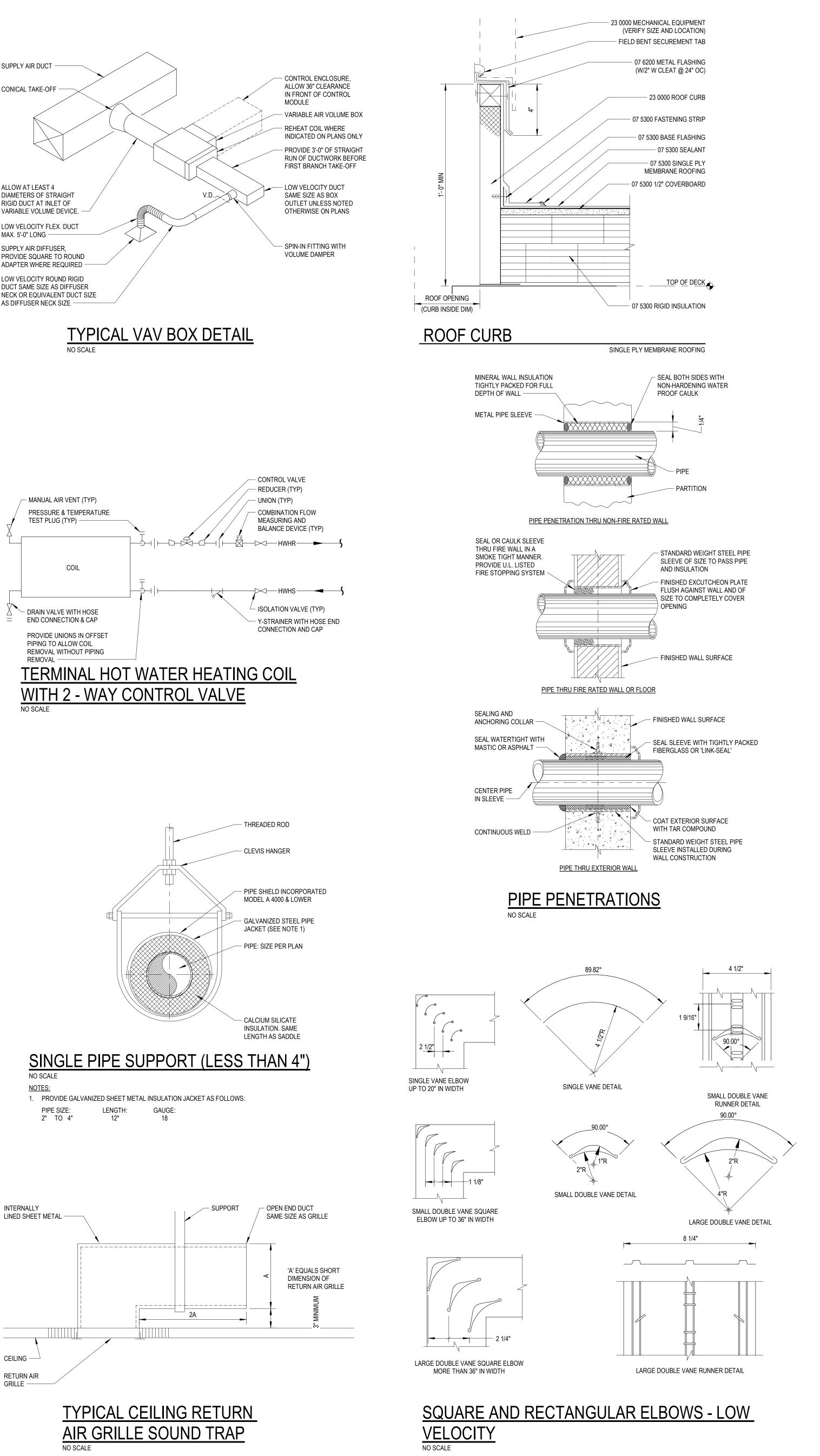
Project Title

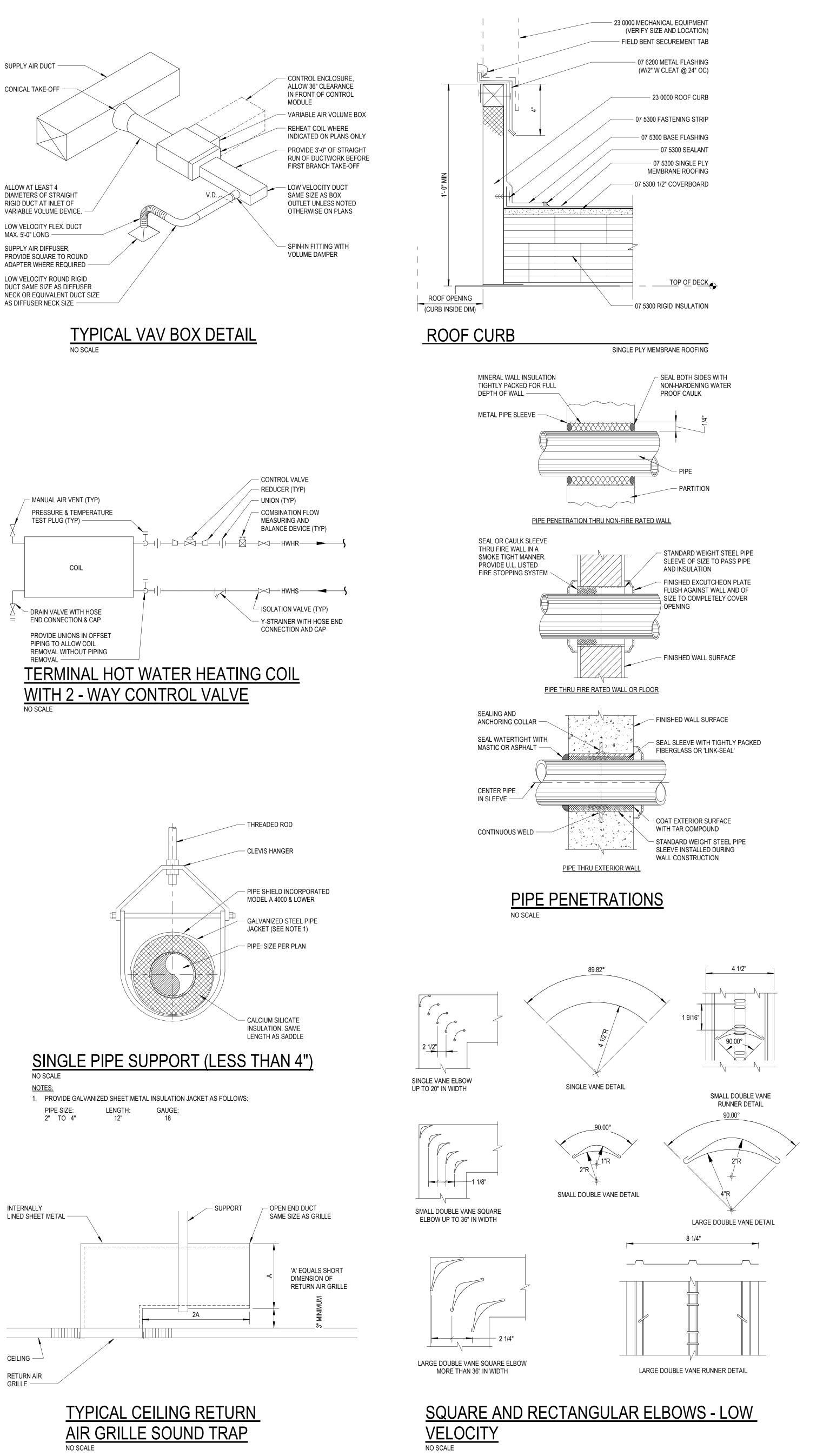
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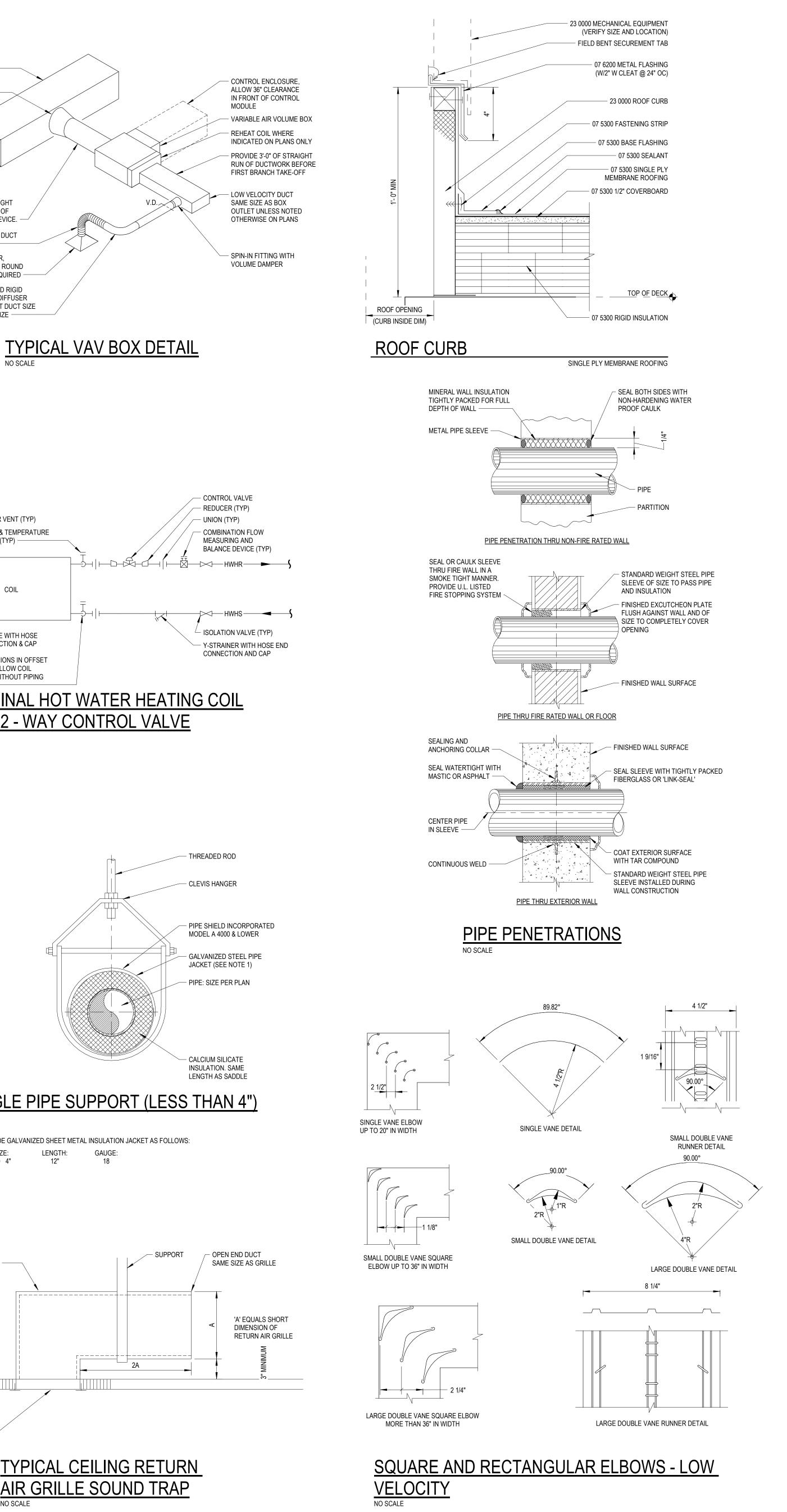


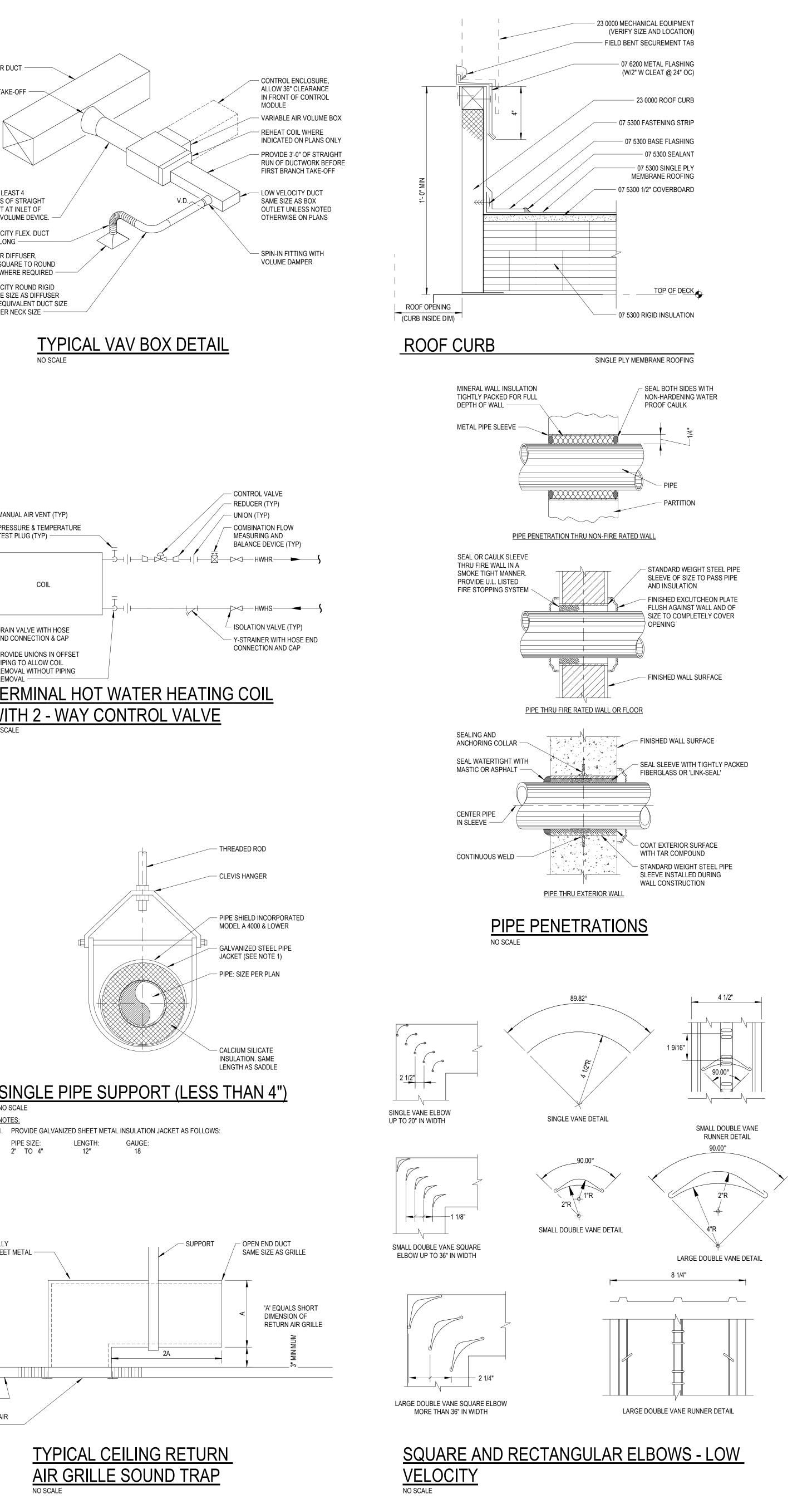


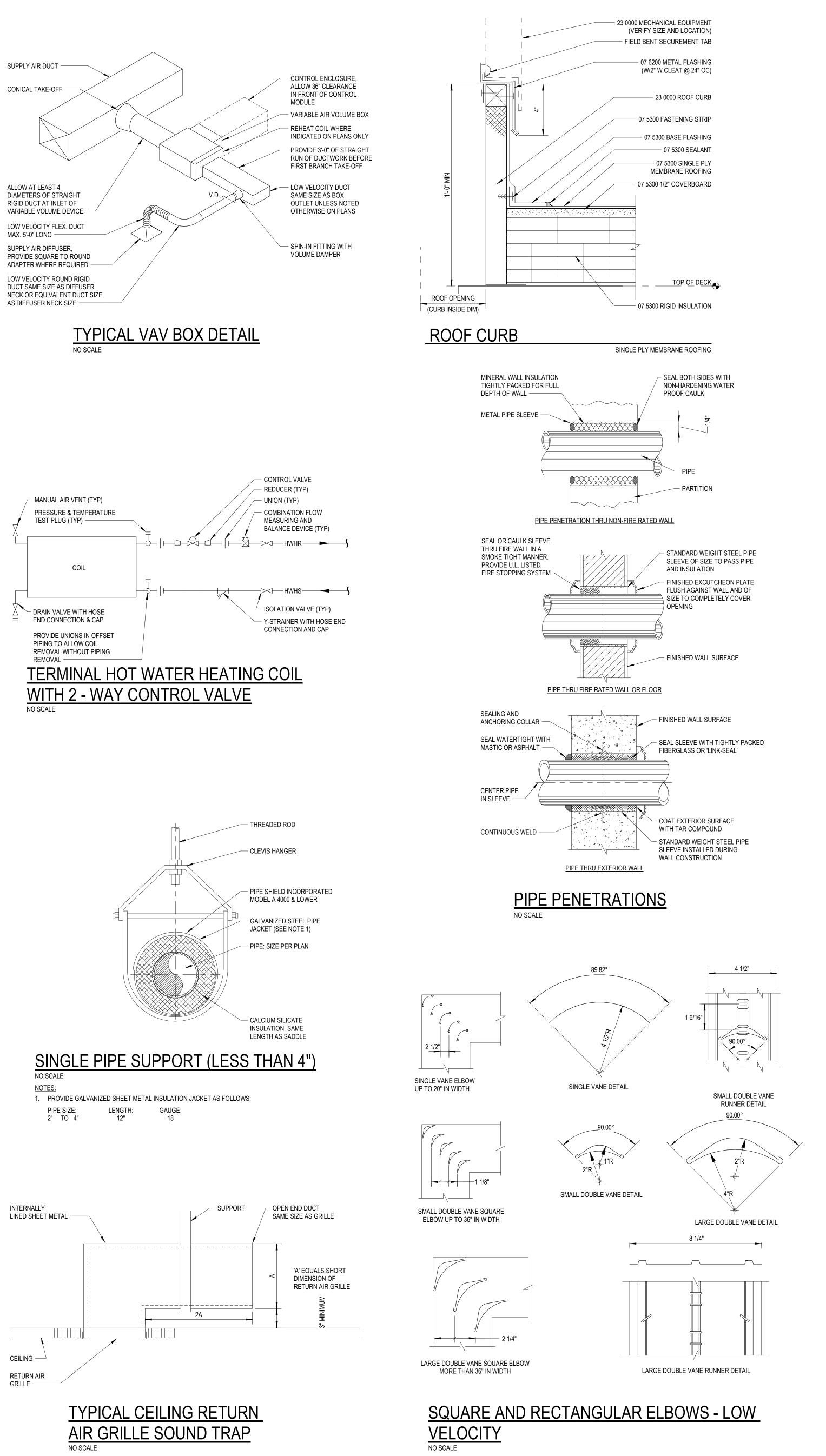


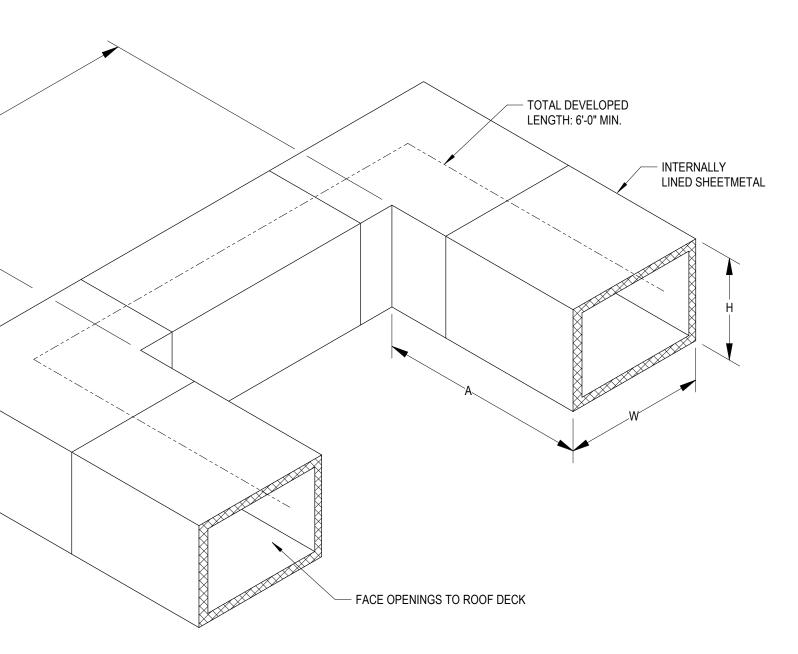


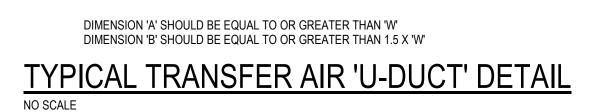


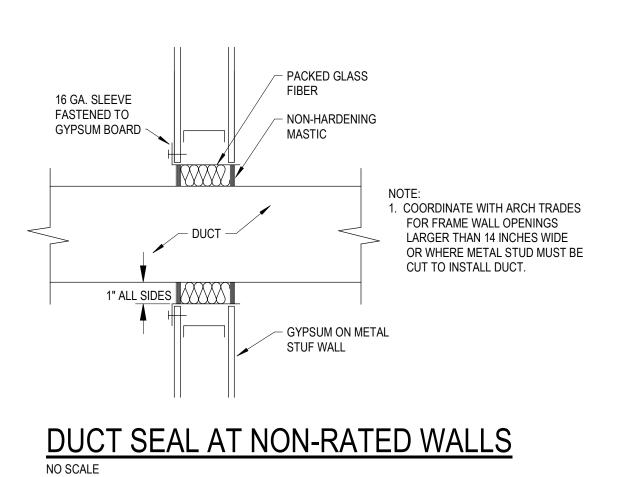


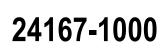












ī Ds Project Number

M6.1

Drawing Number

Details

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Pr	oject Administrator
	A. Maurer
	Project Designer
N.	Moeggenborg
Project A	rchitect / Engineer
N.	Moeggenborg
	Drawn By
Ν.	Moeggenborg
	Q.M. Review
	T. Vercruysse
	Approved
	J. Schwartz
	Drawing Scale
	No Scale
Issued for	Issue Date
Design Development	07-03-2024
Quality Managment Review	01-09-2025
BIDS	01-31-2025

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VARIABLE VOLUME 1

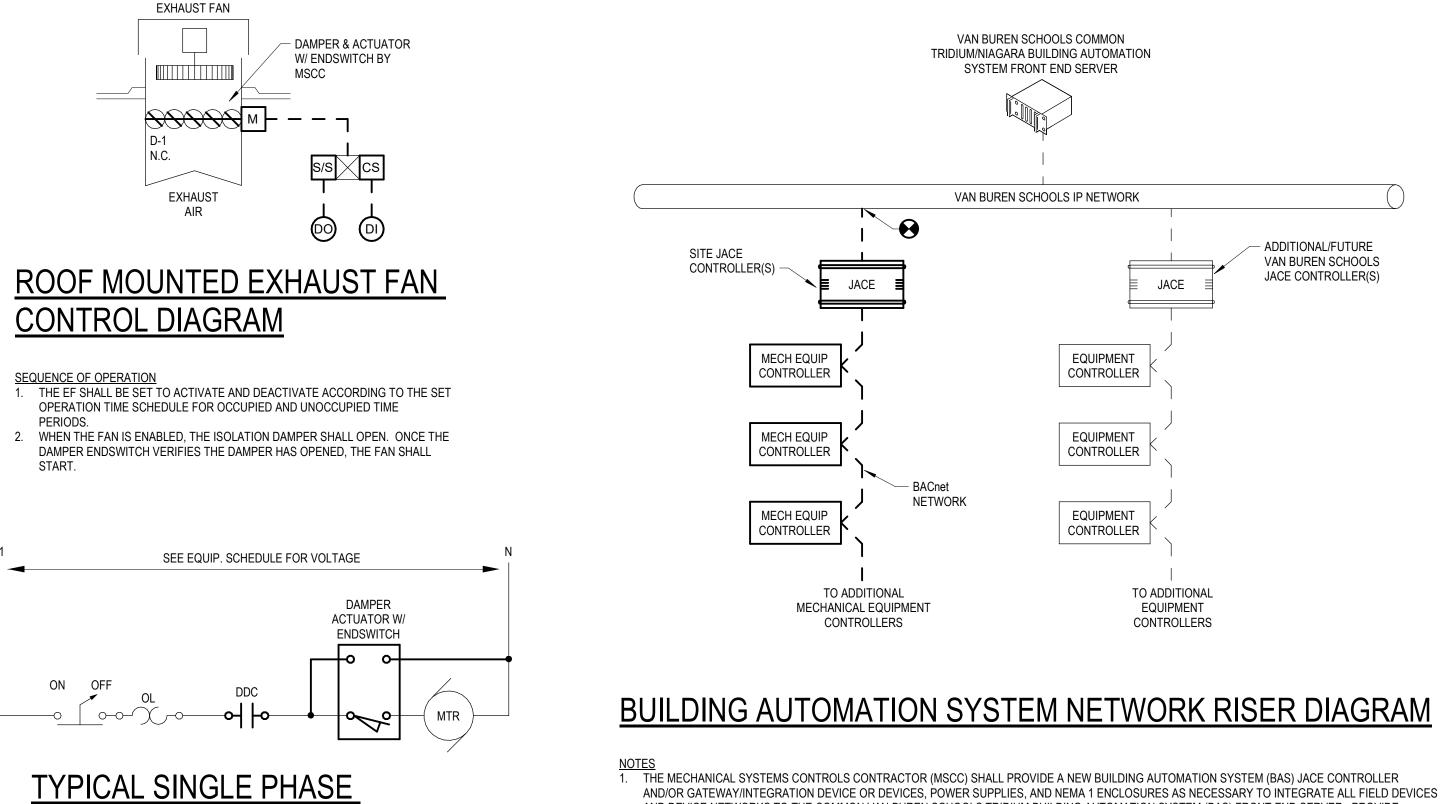
			ROOM	MAX	MAX	MIN		OUTLET	MIN SP		HOT WATER TEMPERING COIL									
MARK	HVAC SYSTEM	No.	NAME	COOLING AIRFLOW (CFM)	HEATING AIRFLOW (CFM)	AIRFLOW (CFM)	INLET SIZE	DUCT	TO OPER. BOX	MAX NC	FLOW (GPM)	CAPACITY (MBH)	EWT (°F)	LWT (°F)	EAT (°F)	LAT (°F)	MAX PD (FT HD)	COIL RUNOUT (IN.)	"PRICE" MODEL NO.	REMARKS
VAV - H.0103	(E)RTU-H101	103	EXAM NO. 1	300	210	210	6"	12"x8"	0.25	25	0.5	6.8	140	102	55	85	5	1/2	SDV	
VAV - H.0105	(E)RTU-H101	105	MA AREA	380	260	260	8"	12"x10"	0.25	27	0.5	8.5	140	100	55	85	5	1/2	SDV	
VAV - H.0106	(E)RTU-H101	106	LOBBY / RECEPTION	260	120	120	6"	12"x8"	0.25	25	0.5	3.9	140	97	55	85	5	1/2	SDV	
VAV - H.0108	(E)RTU-H101	108	LAB	385	385	385	8"	12"x10"	0.25	27	0.8	12.5	140	107	55	85	5	1/2	SDV	

NOTES:

1. MAX NC LEVEL BASED ON 1.5" INLET SP WITH NO ALLOWANCE FOR EXTERNAL ATTENUATION. 2. PROVIDE A 24"x24" CEILING MOUNTED ACCESS DOOR FOR ALL VARIABLE BOXES MOUNTED ABOVE INACCESSIBLE CEILINGS.

					FA	N SC	HEDL	JLE					
MARK	LOCATION	AREA SERVED	DESIGN AIRFLOW (CFM)	EXTERNAL STATIC PRESSURE	ТҮРЕ	FAN DATA	FAN	HP	MOTOR DATA	RPM	ELECTRICAL V/PH/HZ	"GREENHECK" MODEL No.	REMARKS
EF-1	ROOF	LAB & TOILET	385	(IN. WG.) 0.25	DOWNBLAST	DIRECT	RPM 1,373	1/6	0.08	1,725	208/1/60	G-095-VG	

NOTES: 1. PROVIDE ALL FANS WITH FACTORY MOUNTED AND WIRED DISCONNECT.



EXHAUST FAN WIRING DETAIL

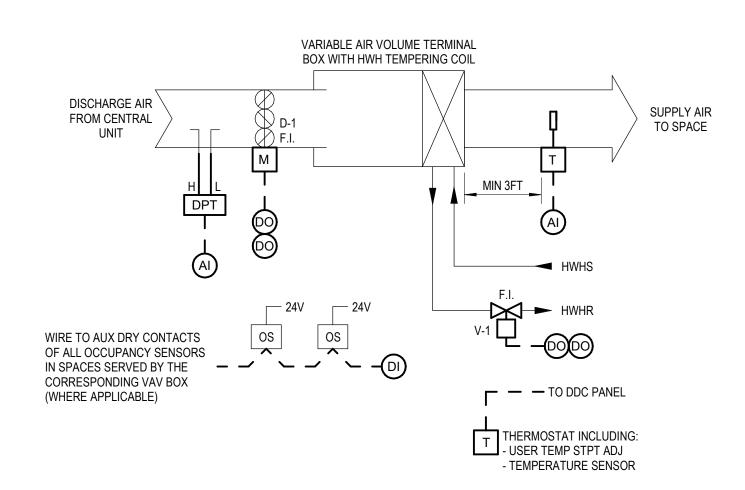
T	ERMI	NAL V	VITH 1	ГЕМРЕ	ERING	i COIL	SCH	EDUL	E	
						I	HOT WATER TE	MPERING COIL	L	
	OUTLET	MIN SP	ΜΔΧ							

3. HOT WATER TEMPERING COILS SHALL BE MINIMUM 2-ROW.

		GRILLE	E, REGI	STER /	AND DIF	FUSER S	SCHEDULE	
MARK	CORE STYLE	BORDER FRAME TYPE	MODULE SIZE	FINISH	ACCESSORY	CONSTRUCTION	"PRICE" MODEL No.	REMARKS
SD-A	PANEL	NOTE 1	24"x24"	WHITE	NONE	STEEL	SPD	
RG-A	PERFORATED	NOTE 1	24"x12"	WHITE	NONE	STEEL	PDDR	
EG-A	PERFORATED	NOTE 1	24"x24"	WHITE	NONE	STEEL	PDDR	
EG-B	PERFORATED	NOTE 1	24"x24"	WHITE	NONE	STEEL	PDDR	

NOTES:

1. COORDINATE MOUNTING FRAMES WITH REFLECTED CEILING PLANS. 2. ALL WALL AND DUCT MOUNTED GRILLES SHALL HAVE COUNTER-SUNK SCREWS.



VAV TERMINAL WITH HWH TEMPERING COIL CONTROL DIAGRAM

- ADDITIONAL/FUTURE VAN BUREN SCHOOLS JACE CONTROLLER(S)

NOTES 1. WHERE APPLICABLE, OCCUPANCY SENSORS TO BE INSTALLED, POWERED, AND CONNECTED TO LIGHTING CONTROLS BY THE ELECTRICAL CONTRACTOR. THE MECHANICAL SYSTEMS CONTROLS CONTRACTOR (MSCC) SHALL CONNECT ALL OCCUPANCY SENSORS IN SPACES SERVED BY THE CORRESPONDING VAV BOX TO THE VAV CONTROLLER SUCH THAT ALL SPACES MUST BE SIMULTANEOUSLY UNOCCUPIED IN ORDER TO INDICATE UNOCCUPIED STATUS IN THE VAV CONTROLLER.

SEQUENCE OF OPERATION

- GENERAL 1. THE OPERATING MODE OF THE TERMINAL UNIT SHALL BE AUTOMATICALLY CYCLED BETWEEN OCCUPIED AND UNOCCUPIED MODE TO MATCH THE OCCUPANCY MODE OF THE ASSOCIATED
- CENTRAL UNIT. 2. WHERE APPLICABLE, WHEN THE TIME SCHEDULE INDICATES OCCUPIED AND CONNECTED OCCUPANCY SENSORS INDICATE THE SPACE IS UNOCCUPIED, THE UNIT SHALL OPERATE IN
- STANDBY MODE. 3. UPON NO DEMAND FOR HEATING OR COOLING, THE DAMPER SHALL CONTROL AIRFLOW TO
- THE MINIMUM AIRFLOW CFM SETPOINT. 4. UPON A RISING DEMAND FOR COOLING, THE DAMPER SHALL CONTROL TOWARDS THE
- MAXIMUM COOLING AIRFLOW CFM SETPOINT. 5. UPON A RISING DEMAND FOR HEATING, FIRST THE HEATING CONTROL VALVE SHALL INCREASE HEATING TOWARDS MAXIMUM. UPON A FURTHER DEMAND FOR HEATING, THE DAMPER SHALL CONTROL AIRFLOW TOWARDS THE MAXIMUM HEATING AIRFLOW CFM SETPOINT.

OCCUPIED MODE OPERATION 1. THE UNIT SHALL CONTROL TO MAINTAIN THE OCCUPIED SPACE TEMPERATURE RANGE (70°F TO 75°F). LOCAL TEMPERATURE SETPOINT ADJUSTMENT SHALL BE DISABLED. 2. UNITS SERVING PRIVATE OFFICES SHALL PERMIT LOCAL OCCUPIED SPACE TEMPERATURE SETPOINT ADJUSTMENT AND SHALL CONTROL TO MAINTAIN THE SET THERMOSTAT

TEMPERATURE SETPOINT. UNOCCUPIED MODE OPERATION 1. THE UNIT SHALL CONTROL TO MAINTAIN THE UNOCCUPIED SPACE TEMPERATURE RANGE (60°

F TO 85°F).

STANDBY MODE OPERATION THE UNIT SHALL CONTROL TO MAINTAIN THE STANDBY SPACE TEMPERATURE RANGE (65°F TO 80°F).

AND DEVICE NETWORKS TO THE COMMON VAN BUREN SCHOOLS TRIDIUM BUILDING AUTOMATION SYSTEM (BAS) FRONT END SERVER. PROVIDE ETHERNET IP DATA CONNECTION(S) AND LOCATE DEVICE(S) AS NECESSARY IN COORDINATION WITH THE ELECTRICAL/TECHNOLOGY CONTRACTOR AND THE OWNER.



ī**D**≗ Project Number

Drawing Number

M7.1

Schedules & Controls

IDS Drawing Title

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, N.	Moeggenborg
N	Drawn By Moeggenborg
	Q.M. Review
	T. Vercruysse
	Approved
	J. Schwartz
	Drawing Scale
	No Scale
Issued for	Issue Date
Design Development	07-03-2024
Quality Managment Review	01-09-2025
BIDS	01-31-2025

501 W Columbia Ave Belleville, MI 48111 Key Plan

Project Administrator

N. Moeggenborg

Project Architect / Engineer

A. Maurer

Project Designer

RAHS Belleville High School

Van Buren Public Schools

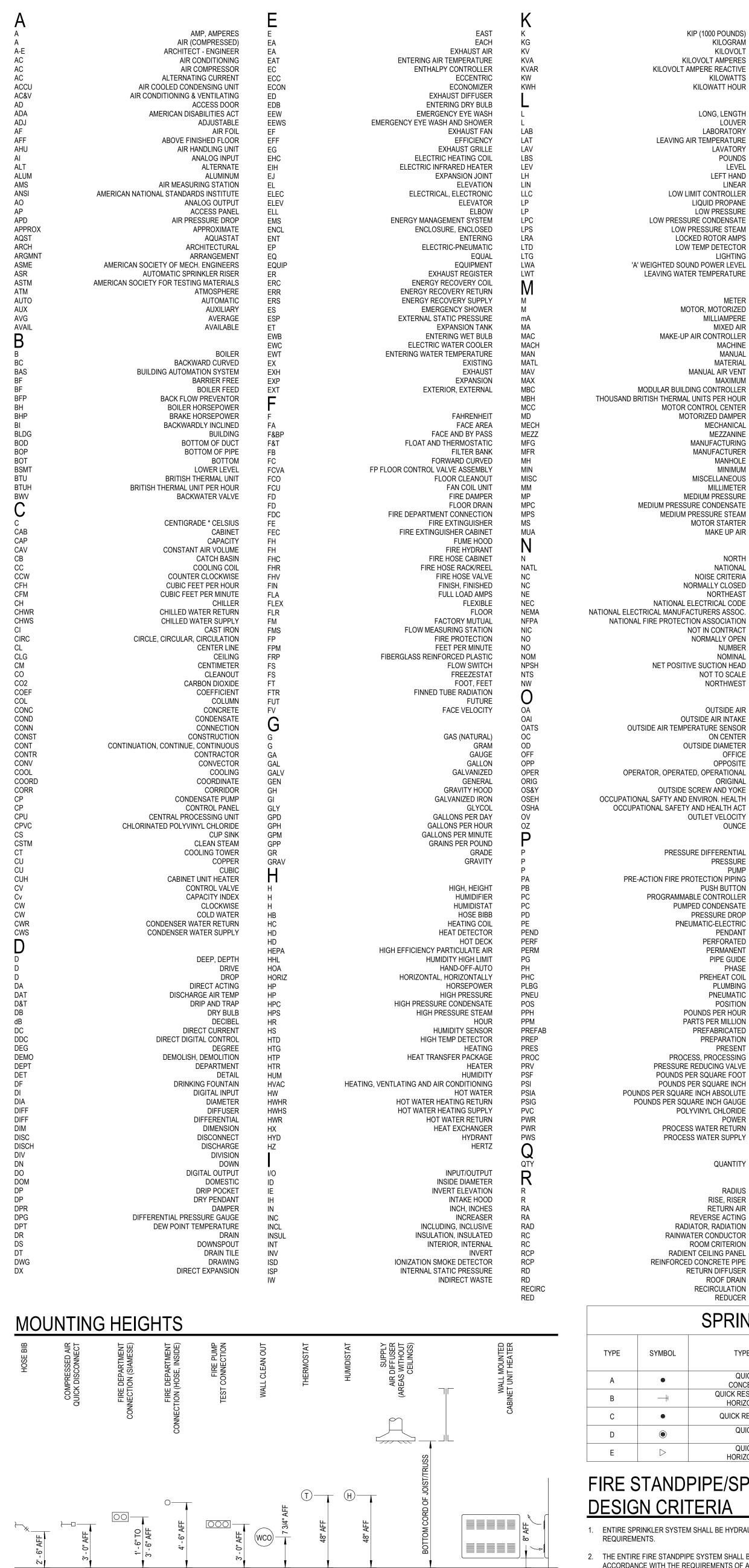


Project Title

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	PROTECTION WATER SUPPLY PIPING
	DRY PIPE FIRE PROTECTION PIPING
<u> </u>	IRE PROTECTION SPRINKLER PIPING
	PIPE FIRE PROTECTION PIPING WITH 50% GLYCOL PRE-MIXED SOLUTION RE-ACTION FIRE PROTECTION PIPING
	COMPRESSED AIR
¢-[]-⊃	FUEL OIL RETURN
r∠ı	FUEL OIL SUPPLY
	NATURAL GAS PIPING
φ	NATURAL GAS PIPING (EMERGENCY POWER SUPPLY)
R	VENT PIPING
$\overline{\mathbb{A}}$	VACUUM PIPING
48	SANITARY SEWER
MGS	DRAIN TILE
FCO ^O	PUMPED STORM WATER
C0 ^{II}	RAIN CONDUCTOR
	STORM SEWER
困	DOMESTIC COLD WATER PIPING
—— — —	HIGH PRESSURE COLD WATER
— × —	CHILLED WATER RETURN PIPING
	CHILLED WATER SUPPLY PIPING
斑 回	MESTIC HOT WATER RETURN PIPING
Y	DOMESTIC HOT WATER PIPING
BFP	IOT WATER HEATING RETURN PIPING
]	HOT WATER HEATING SUPPLY PIPING
	GY RECOVERY LOOP RETURN PIPING
	GY RECOVERY LOOP SUPPLY PIPING
	TE DRAIN PIPING (AIR CONDITIONER)
	SURE CONDENSATE RETURN PIPING
	IMPED CONDENSATE RETURN PIPING
	IMPED CONDENSATE RETURN PIPING
	W PRESSURE STEAM (15 PSI) PIPING SSURE CONDENSATE (15 PSI) PIPING
\boxtimes	JM PRESSURE STEAM (15 PSI) PIPING
Å	SSURE CONDENSATE (15 PSI) PIPING
Hard	FIRE DAMPER
	SMOKE DAMPER
+[]+	SMOKE DAMPER AND FIRE DAMPER
FCVA	FLOW DIRECTION
	TEE UP

PS —	LOW PRESSURE STEAM (15 PS
рс —	LOW PRESSURE CONDENSATE (15 PS
PS	MEDIUM PRESSURE STEAM (15 PS
	MEDIUM PRESSURE CONDENSATE (15 PS
	FIRE
2	SMOKE
•	SMOKE DAMPER AND FIRE
-	FLOW D
) L (W) 	LINE TH

NOTATION ME	THODS
SD-A 10" DIA 350 CFM	SUPPLY DIFFUSER, TYPE 'A', 10" NECK, 350 CFM
SD-A 10" DIA	SUPPLY DIFFUSER (3-WAY)
350 CFM RR-A 350 CFM	RETURN OR EXHAUST REGISTER, TYPE 'A', 350 CFM
ER-A 350 CFM	EXHAUST REGISTER, TYPE 'A', 350 CFM
SD <u>-A</u> 350 CFM	SIDEWALL SUPPLY REGISTER, TYPE 'A', 350 CFM
SD-A ∫350 CFM	SUPPLY AIR DIFFUSER, TYPE 'A' WITH FLEXIBLE DUCT CONNECTION (TWO WAY THROW)
	BELL MOUTH AIR INLET AREA SHALL BE EQUAL TO '2' TIMES DUCT AREA
	AIR HANDLING UNIT No. 1
EF 1	EXHAUST FAN No. 1

LINE THRU WALL

VIIIA

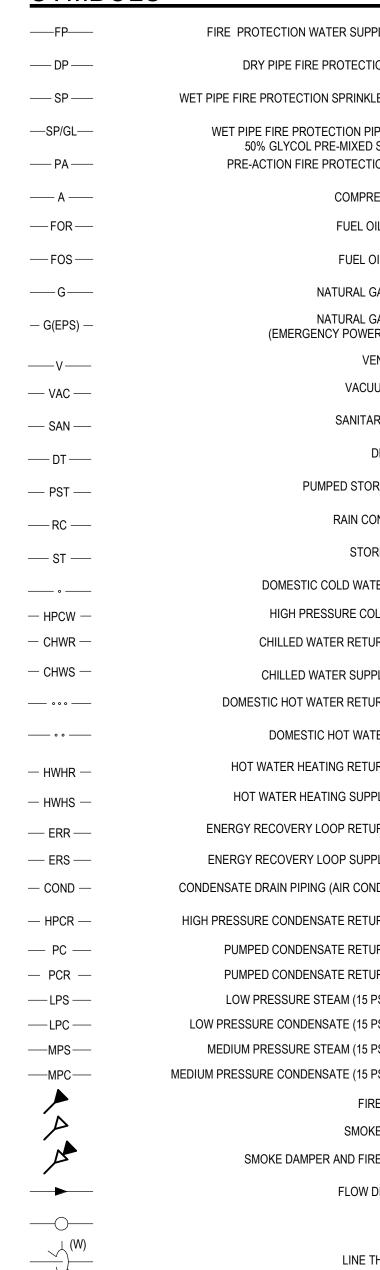
SUPPLY AIR BRANCH CONNECTION SPIN-IN FITTING WITH VOLUME DAMPER

RETURN AIR/EXHAUST AIR BRANCH CONNECTION WITH VOLUME DAMPER

FIRE PROTECTION GENERAL NOTES

- ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO ALL LOCAL CODES AND REGULATIONS. 2. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED. VERIFY ALL CONDITIONS. NOTIFY ARCHITECT/ENGINEER OF DISCREPANCIES BETWEEN DRAWINGS AND ACTUAL FIELD CONDITIONS. COORDINATE ALL WORK WITH APPROPRIATE TRADES.
- 3. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE EQUIPMENT MANUFACTURE'S RECOMMENDATIONS AND APPLICABLE CODES. PROVIDE ALL FITTINGS, TRANSITIONS, VALVES, MISC STEEL AND OTHER DEVICES REQUIRED FOR A COMPLETE WORKABLE INSTALLATION.
- 4. MAINTENANCE LABEL SHALL BE AFFIXED TO ALL FIRE PROTECTION EQUIPMENT AND A MAINTENANCE MANUAL SHALL BE PROVIDED TO OWNER.
- 5. PROVIDE FLUSH TYPE ACCESS DOORS OR PANEL NO SMALLER THAN 12"X12" AND NO LARGER THEN 30"x30" FOR ALL VALVES OR APPARATUS LOCATED IN CHASES, WALLS AND ABOVE NON ACCESSIBLE CEILINGS.
- 6. PROVIDE ACCESS LADDER TO ALL SPRINKLER FLOOR CONTROL ASSEMBLIES LOCATED MORE THEN 7'-0" ABOVE FLOOR.
- 7. ALL PIPE SIZES SHOWN ON DRAWINGS ARE APPROXIMATE AND ARE SHOWN ONLY TO ASSIST THE DESIGN.
- 8. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- 9. SPRINKLER HEAD TYPES TO BE USED: REFER TO SPRINKLER HEAD SCHEDULE
- 10. PENDENT TYP SPRINKLER HEADS LOCATED IN SUSPENDED CEILING TILES, SHALL BE CENTERED IN CEILING TILE.
- 11. PROVIDE SPRINKLER PROTECTION INSIDE ELEVATOR MACHINE ROOMS AND PITS WITH SHUT-OFF AND TAMPER SWITCH VALVE IN BOX
- WITH GLASS DOOR. 12. PROVIDE SPRINKLER HEAD CAGES AT ALL ELECTRIC AND MECHANICAL EQUIPMENT ROOMS.
- 13. COORDINATE ANY REQUIRED SHUTDOWN OF SERVICES OR EQUIPMENT WITH OWNER'S REPRESENTATIVE.

SY	ME	<u>30</u>	LS



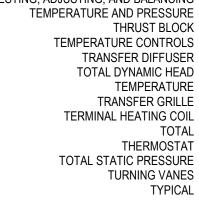
R (CC	NTINUED)
REF REFRIG REG REM REQ REQD RET REV RF RG RH RH RH RH RH RH RH RH RH RH RH RH RH	REFERENCE REFRIGERANT, REFRIGERATION, REFRIGERATOR REGISTER REMARKS REQUIREMENT REQUIRED RETURN REVISION RETURN FAN RETURN FAN RETURN GRILLE RELATIVE HUMIDITY RELIEF HOOD RIGHT HAND REHEAT COIL ROOM REDUCED PRESSURE BACKFLOW PREVENTER ROOM PRESSURE CONTROLLER REVOLUTIONS PER MINUTE RETURN REGISTER RESISTANCE TEMPERATURE DETECTOR
RTD S S S&T SA SA SA SA SCFM SCHED SCU SCW SD SCW SD SCW SD SCW SD SE SE SE SE SE SE SE SE SE SE SE SE SE	RESISTANCE TEMPERATURE DETECTOR SOUTH SHELL AND TUBE SOUND ATTENUATOR SUPPLY AIR SANITARY SEWER WASTE STANDARD CUBIC FEET PER MINUTE SCHEDULE STAND ALONE COMPUTER UNIT SOFTENED COLD WATER SMOKE DETECTOR SUPPLY DIFFUSER SOUTHEAST STATIC EFFICIENCY SECOND SECTION SELECTOR SENSIBLE SEPARATOR SUPPLY FAN STEAM GENERATOR SUPPLY GRILLE SHOWER SHEET SIMILAR

STANDPIPE STATIC PRESSURE SPECIFICATION SPRINKLER STATIC PRESSURE SENSOR SQUARE SUPPLY REGISTER SERVICE SINK STAINLESS STEEL CHECK VALVE STAINLESS STEEL

STORM SEWER STORAGE TANK STATION STANDARD STEEL STEAM

STRAINER STRUCTURAL SUPPLY SOUTHWEST SWITCH SYMMETRICAL SYSTEM TRAF TESTING, ADJUSTING, AND BALANCING

STORAGE

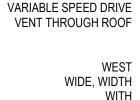


UNDERGROUND UNIT HEATER

UNDERWRITERS LABORATORIES UNINTERRUPTABLE POWER SYSTEM URINAL UNITED STATES GEOLOGICAL SURVEY UNIT VENTILATOR

VENT VALVE

VACUUM VARIABLE VARIABLE AIR VOLUME VACUUM BREAKER VOLUME DAMPER VELOCITY VENTILATING, VENTILATION VERTICAL VERIFY IN FIELD VOLUME VOLTAGE



WITHOUT WASTE AND VENT WET BULB WET BULB TEMPERATURE WATER CLOSET WALL CLEANOUT WATER GAUGE WALL HYDRANT WATER HEATER WATER PRESSURE DROP WEIGHT

TRANSFORMER

SPRINKLER HEAD SCHEDULE

YD

SYMBOL	TYPE & MODEL NO.	FINISH	LOCATION
۲	QUICK RESPONSE CONCEALED PENDENT	WHITE	ROOMS WITH FINISHED CEILINGS, CLOSETS
	QUICK RESPONSE CONCEALED HORIZONTAL SIDEWALL	WHITE	SEE PLANS
۲	QUICK RESPONSE PENDENT	CHROME	PUBLIC AREAS W/FINISHED CEILINGS
۲	QUICK RESPONSE UPRIGHT	BRASS(UNFINISHED AREAS) CHROME(FINISHED AREAS)	AREAS W/O CEILINGS
\triangleright	QUICK RESPONSE HORIZONTAL SIDEWALL	WHITE	SEE DRAWINGS, HI-TEMP STANDARD IN ELEV. PITS

FIRE STANDPIPE/SPRINKLER **DESIGN CRITERIA**

1. ENTIRE SPRINKLER SYSTEM SHALL BE HYDRAULICALLY CALCULATED. REFER TO THE SPECIFICATIONS FOR HAZARD AND SYSTEM TYPE REQUIREMENTS.

THE ENTIRE FIRE STANDPIPE SYSTEM SHALL BE SIZED, LOCATED, INSTALLED AND MAINTAINED THROUGHOUT THE BUILDING IN ACCORDANCE WITH THE REQUIREMENTS OF ALL LOCAL CODES AND AUTHORITY HAVING JURISDICTION.

3. HOSE VALVE STATION SHALL BE UNOBSTRUCTED AND INSTALLED BETWEEN 3 FEET AND NOT MORE THAN 5 FEET ABOVE THE FINISHED FLOOR. PROVIDE VALVE CABINET WHERE INDICATED.

4. HOSE VALVE STATION SHALL BE EQUIPPED WITH 2-1/2" FIRE DEPARTMENT VALVE.

5. FIRE DEPARTMENT CONNECTIONS SHALL BE PROVIDED AND LOCATED IN ACCORDANCE WITH ALL LOCAL CODES, REQUIREMENTS AND AUTHORITY HAVING JURISDICTION.

EXTRA HEAVY EXPLOSION PROOF YARD YARD HYDRANT

> REFER TO SPECIFICATIONS FOR MANUFACTURERS

VO POUNDS PER HOUR VOLT PARTS PER MILLION VSD PREFABRICATED VTR PREPARATION PRESENT W/O W& POLYVINYL CHLORIDE POWER WCO WG QUANTITY RADIUS RISE, RISER XFMF

REINFORCED CONCRETE PIPE ROOF DRAIN RECIRCULATION REDUCER

TYPE

PUMPED CONDENSATE PRESSURE DROP PNEUMATIC-ELECTRIC VAC PENDANT VAF PERFORATED \/A\ PERMANENT PIPE GUIDE PHASE VFI PREHEAT COIL VENT PLUMBING VFR1 PNEUMATIC POSITION PROCESS, PROCESSING

KIP (1000 POUNDS)

KILOVOLT AMPERES

KILOVOLT AMPERE REACTIVE

LEAVING AIR TEMPERATURE

LOW LIMIT CONTROLLER

LOW PRESSURE STEAM

LOCKED ROTOR AMPS

MOTOR, MOTORIZED

MAKE-UP AIR CONTROLLER

MODULAR BUILDING CONTROLLER

MOTOR CONTROL CENTER

MOTORIZED DAMPER

MANUFACTURING

MANUFACTURER

MISCELLANEOUS

MEDIUM PRESSURE

MOTOR STARTER

MAKE UP AIR

NORTH

NATIONAL

NOISE CRITERIA

NORTHEAST

NORMALLY CLOSED

NOT IN CONTRACT

NORMALLY OPEN

NOT TO SCALE

NORTHWEST

OUTSIDE AIR

ON CENTER

OFFICE

OPPOSITE

ORIGINAL

OUNCE

PRESSURE

PUSH BUTTON

PUMP

OUTSIDE AIR INTAKE

OUTSIDE DIAMETER

OUTLET VELOCITY

PRESSURE DIFFERENTIAL

NUMBER

NOMINAL

NATIONAL ELECTRICAL CODE

NET POSITIVE SUCTION HEAD

OUTSIDE AIR TEMPERATURE SENSOR

OPERATOR, OPERATED, OPERATIONAL

OCCUPATIONAL SAFTY AND ENVIRON. HEALTH

OCCUPATIONAL SAFETY AND HEALTH ACT

PRE-ACTION FIRE PROTECTION PIPING

PROGRAMMABLE CONTROLLER

OUTSIDE SCREW AND YOKE

NATIONAL FIRE PROTECTION ASSOCIATION

MEDIUM PRESSURE STEAM

MEDIUM PRESSURE CONDENSATE

MECHANICAL

MEZZANINE

MANHOLE

MILLIMETER

MINIMUM

MILLIAMPERE

MIXED AIR

MACHINE

MANUAL

MATERIAL

MAXIMUM

MANUAL AIR VENT

LOW TEMP DETECTOR

LOW PRESSURE CONDENSATE

'A' WEIGHTED SOUND POWER LEVEL

LEAVING WATER TEMPERATURE

LIQUID PROPANE

LOW PRESSURE

KILOGRAŃ

KILOVOLT

KILOWATTS

KILOWATT HOUR

LONG, LENGTH

LABORATORY

LOUVER

LAVATORY

LEFT HAND

LIGHTING

METER

POUNDS

LEVEL

LINEAR

SPEC

SPR

SPS

SQ

SS

SSCV

SSTL

STD

STL

STM

STOR

SUP

SW

SW

SYM

SYS

TDF

TFMF

TSTAT

TSP

TYF

UPS

USGS

STRUCT

STR

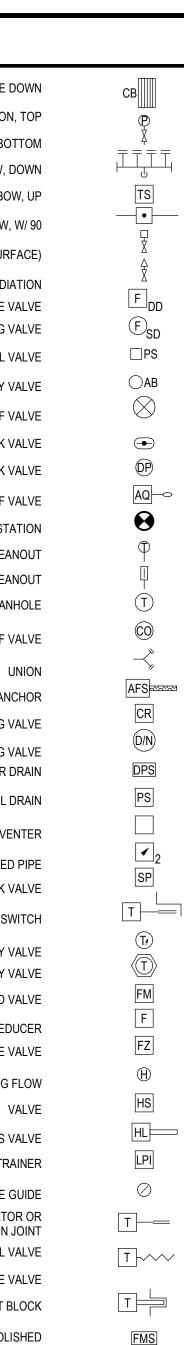
PRESSURE REDUCING VALVE POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH POUNDS PER SQUARE INCH ABSOLUTE POUNDS PER SQUARE INCH GAUGE

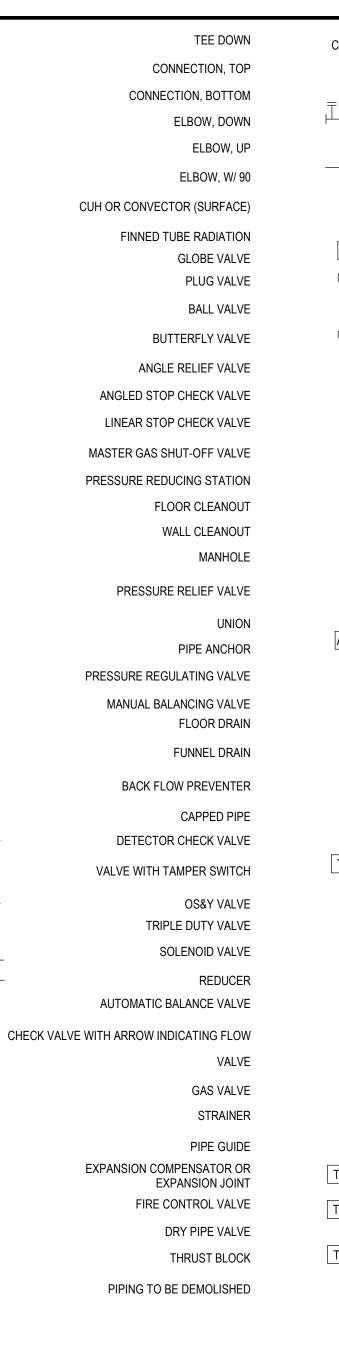
> PROCESS WATER RETURN PROCESS WATER SUPPLY

RETURN AIR **REVERSE ACTING** RADIATOR, RADIATION RAINWATER CONDUCTOR ROOM CRITERION RADIENT CEILING PANEL RETURN DIFFUSER

A	ANALOG INPUT
ÂÒ	ANALOG OUTPUT
CS	CURRENT SWITCH
DM	DAMPER MOTOR
0000	DAMPER (PARALLEL BLADE)
	DAMPER (OPPOSED BLADE)
D	DIGITAL INPUT
00	DIGITAL OUTPUT
PT	PRESSURE TRANSMITTER
[†]	PNEUMATIC LINE
	RECEIVER CONTROLLER
R	RELAY (ELECTRICAL)
S/S	START/STOP (MOTOR CONTROL)
ST	STATUS
\otimes	SWITCHED AIR LINE
X	VALVE - TWO WAY ELECTRIC OPERATOR
	2-WAY MOTORIZED VALVE
Reference in the second	3-WAY MOTORIZED VALVE
EP	ELECTRIC - PNEUMATIC RELAY
ES	END SWITCH
FS	FLOW SWITCH - INLINE
M	MAIN AIR SUPPLY (TEMPERATURE CONTROL)
	MOTOR DISCONNECT SWITCH
□PEI≈	PNEUMATIC - ELECTRIC RELAY
PS	PNEUMATIC SWITCHING RELAY
	PNEUMATIC REVERSING RELAY
(P/)	PRESSURE GAUGE
Ŕ	VALVE - TWO WAY PNEUMATIC CONTROLLED
R	VALVE - THREE WAY PNEUMATIC CONTROLLED
	ELECTRICAL LINE - 24v DC (DDC WIRING)
— — — ⊠	ELECTRICAL LINE - 120v AC VALVE - TWO WAY GATE
	MOTOR STARTER, WITHOUT HAND-OFF-AUTO SWITCH
	MOTOR STARTER, WITH HAND-OFF-AUTO SWITCH
	PILOT POSITIONER MOUNTED ON
	DEVICE WITH POSITIVE FEEDBACK
	ELECTRICAL LINE DESIGNATION ON WIRING DIAGRAMS (VOLTAGE AS NOTED)
	EXISTING MOTOR STARTER - PROVIDE HAND-OFF-AUTO SWITCH
	MOTOR STARTER - PROVIDE HAND-OFF-AUTO SWITCH, TRANSFORMER AND CONTROL ROOM
FM	FLOW METER - INLINE
- S	SOLENOID VALVE
	DIFFERENTIAL PRESSURE TRANSMITTER

CATCH BASIN	
PRESSURE GAUGE	
FIRE PUMP TEST HEADER	
TAMPER SWITCH	
PRESSURE/TEMPERATURE PLUG	
MANUAL AIR VENT	
AUTOMATIC AIR VENT	
DUCT SMOKE DETECTOR	
AREA SMOKE DETECTOR	
FIRE PULL STATION	
FIRE ALARM BELL	
ROAD BOX	
ROOM PRESSURIZATION INDICATOR (FLOW TUBE) DIFFERENTIAL PRESSURE SWITCH	
AQUASTAT (STRAP ON)	
POINT OF NEW CONNECTION	
TEMPERATURE INDICATOR	
THERMOMETER	
THERMOSTAT	
CARBON MONOXIDE SENSOR	
SIAMESE CONNECTION	
AIR FLOW SENSOR	
CONTROL RELAY	
DAY/NIGHT MAIN AIR SWITCH	
DIFFERENTIAL PRESSURE GAUGE	
PRESSURE SWITCH	
PNEUMATIC GRADUAL POSITION SWITCH	
PNEUMATIC 2-POSITION SELECTOR SWITCH	
STATIC PRESSURE SENSOR	
TEMPERATURE SENSOR (RTU) WITH SUNSHIELD]
TEMPERATURE INDICATOR GAUGE TYPE	
THERMOSTAT WITH GUARD	
FLOW METER	
FIRE STAT - DUCT MOUNTED	
FREEZE STAT - DUCT MOUNTED	
HUMIDISTAT (ROOM)	
HUMIDIDTY SENSOR (DDC)	
HUMIDITY HIGH LIMIT SENSOR (DDC)	
LOOP POWER INDICATOR	
TEMPERATURE SENSOR (RTD) DUCT MOUNTED RIGID ELEMENT	
TEMPERATURE SENSOR (RTD) DUCT MOUNTED AVERAGING ELEMENT	
TEMPERATURE SENSOR (RTD) IMMERSION TYPE ELEMENT	
FLOW MEASURING DEVICE	





ST 1	SOUNT TRAP (ATTENUATO
FTR-A 5'-0" 5.7 MBH	FINNED TUBE RADIATION, TYPE 'A', 5'-0" ELEMENT, 5.7 TOTAL ME (REFER TO EQUIPMENT SCHEDULE)
	CABINET UNIT HEATER, TYPE '
	CONVECTOR, TYPE '
A-1 6.5 MBH 0.6 GPM	TERMINAL VARIABLE VOLUME BOX, TYPE 'A', SIZE ' (HEATING COIL, REFER TO EQUIPMENT SCHEDULES
B-1	TERMINAL VARIABLE VOLUME BOX, TYPE 'B', SIZE ' (NO HEATING COIL, REFER TO EQUIPMENT SCHEDULES)
[A3]	DUAL DUCT CONSTANT VOLUME MIXING BO (REFER TO EQUIPMENT SCHEDULES
HC-A	HEATING COIL, TYPE '
ſſ	POINT WHERE CHANGE IN DUCT SIZE OR PIPE PITCH TAKES PLAC
<i>5////</i>	POINT WHERE DEMOLITION ENDS/POINT OF NEW CONSTRUCTIO
	NEW MECHANICA

EXISTING MECHANICAL

FIRE PROTECTION DRAWING INDEX

Fire Protection Reference Information FPR.0 FP2.1 First Floor Fire Protection Plan



iD[§] Project Number

Drawing Number

FPR.0

Fire Protection Reference Informatio

DS Drawing

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	Drawing Scale
	No Scale
Issued for	Issue Date
BIDS	01-31-2025

THIS PROJECT MAY NOT UTILIZE ALL THE SYMBOLS, MATERIALS, ABBREVIATIONS AND STANDARD INFORMATION SHOWN ON THIS

SHEET.

501 W Columbia Ave Belleville, MI 48111 Key Plan

Project Administrator

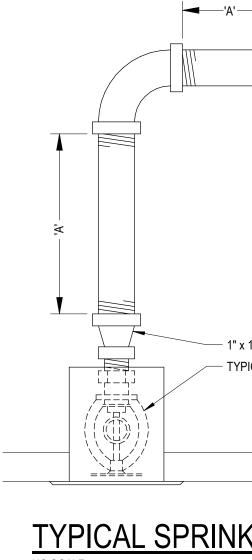
RAHS Belleville High School

Van Buren Public Schools

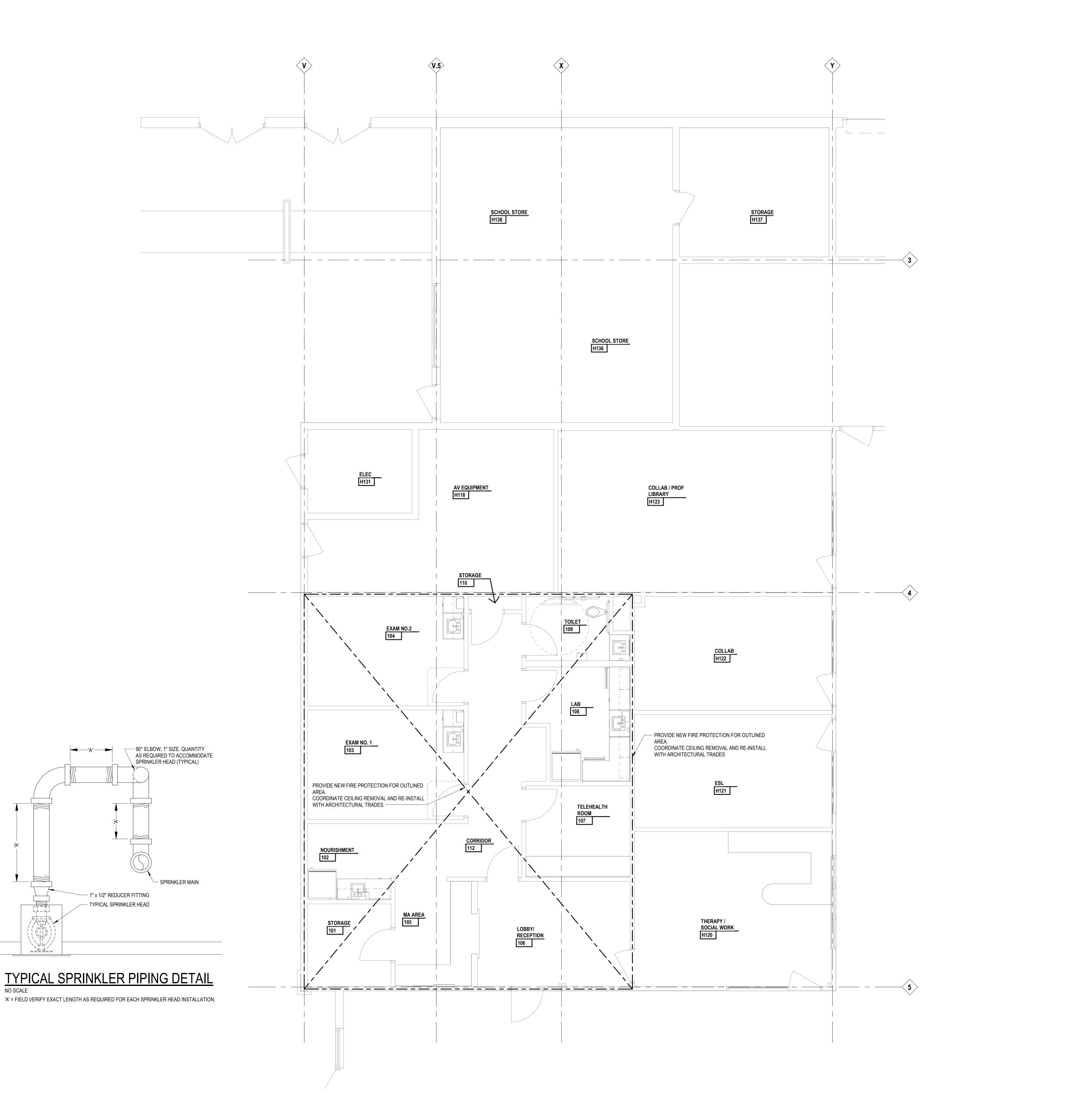


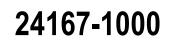
INTEGRATED design SOLUTIONS architecture engineering interiors & technology 1441 west long lake, suite 200 troy, michigan 48098 5211 cascade road SE, suite 300 grand rapids, michigan 49546 248.823.2100 www.ids-michigan.com





NO SCALE





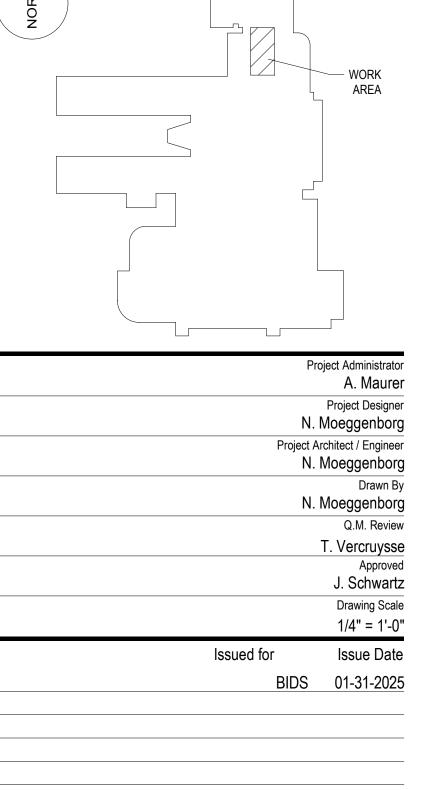
ī**D**≗ Project Number

Drawing Number

FP2.1

First Floor Fire Protection Plan

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501 W Columbia Ave Belleville, MI 48111

Key Plan

RAHS Belleville High School

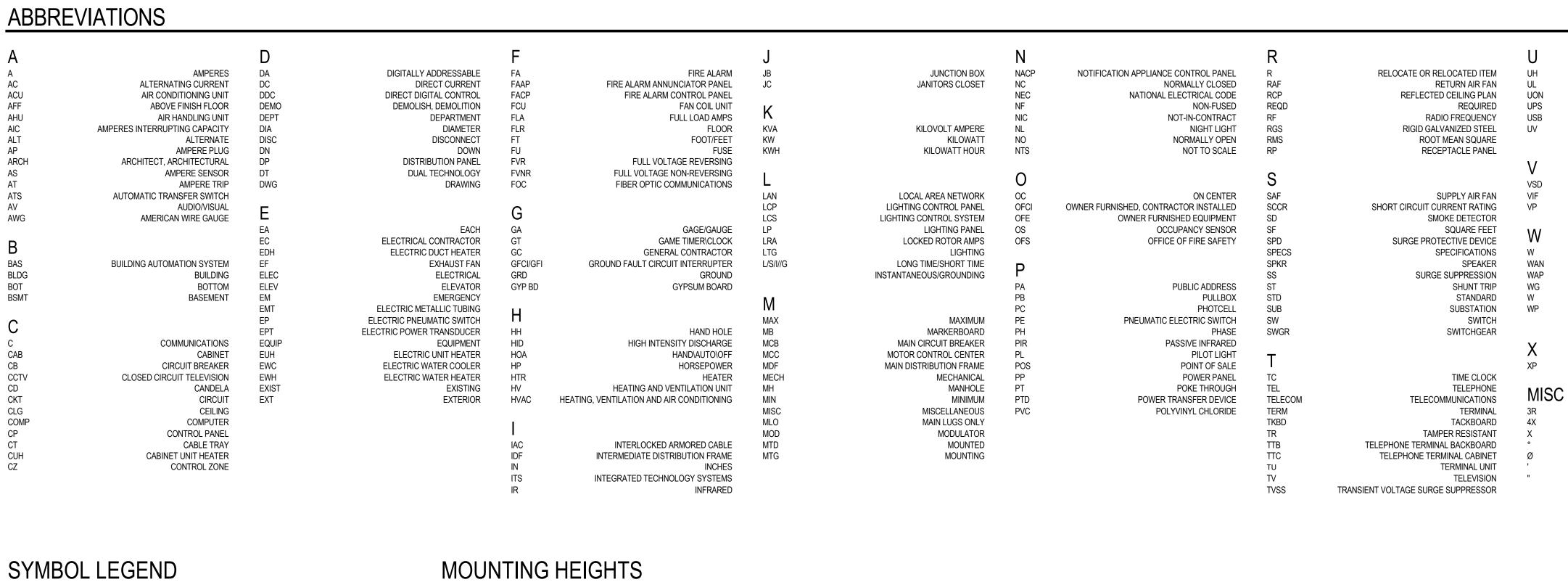


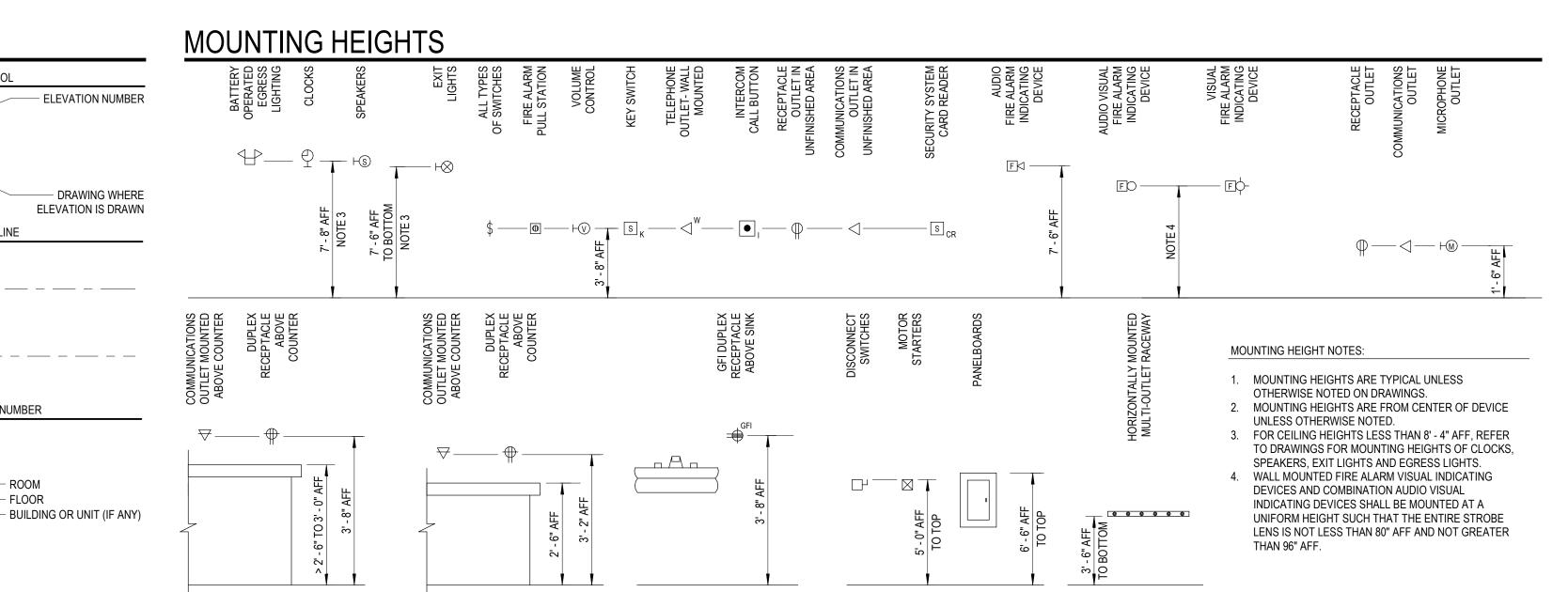
Van Buren Public Schools

Project Title



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DETAIL SYMBOL	ELEVATION SYMBOL
DETAIL IDENTIFICATION	ELEVATION NUMBER
	4
E2.1 DETAIL SCALE	3 E9.1 1
DRAWING WHERE DETAIL IS REFERENCED OR CUT	2 DRAWING WHERE ELEVATION IS DRAWN
PLAN OR DETAIL ENLARGEMENT	COLUMN CENTERLINE
PLAN OR DETAIL IDENTIFICATION E9.1	
DRAWING WHERE PLAN OR DETAILS IS DRAWN	EXISTING
SECTION LOCATOR	ROOM NAME AND NUMBER
SECTION IDENTIFICATION	ROOM NAME
E9.1 DRAWING WHERE PLAN OR DETAIL IS DRAWN	ROOM FLOOR BUILDING OR UNIT (IF ANY)

\$	LINE VOLTAGE SINGLE POLE SWITCH	Ð×	POWER FLOOR BOX
\$ ₂	LINE VOLTAGE DOUBLE POLE SWITCH	-	DUPLEX RECEPTACLE OUTLET MOUNTED
\$ 3	LINE VOLTAGE THREE WAY SWITCH	•	ABOVE COUNTER
\$ 4	LINE VOLTAGE FOUR WAY SWITCH	= GFI	DUPLEX RECEPTACLE OUTLET WITH INTEGRAL GROUND FAULT CIRCUIT INTERRUPTER PROTECTION
к	LINE VOLTAGE KEY OPERATED SWITCH		DUPLEX RECEPTACLE OUTLET CONNECTED TO
D	LINE VOLTAGE WALL BOX' DIMMER SWITCH		UPSTREAM GROUND FAULT CIRCUIT INTERRUPTER PROTECTION DEVICE
L	LINE VOLTAGE WALL SWITCH OCCUPANCY SENSOR WITH ON/OFF PUSHBUTTONS	= SS	DUPLEX RECEPTACLE OUTLET WITH INTEGRAL SURGE SUPPRESSION
LD	LINE VOLTAGE WALL SWITCH OCCUPANCY SENSOR WITH ON/OFF & DIMMING PUSHBUTTONS	= \$\$\$	DUPLEX RECEPTACLE OUTLET CONNECTED TO UPSTREAM SURGE SUPPRESSION DEVICE
L2	LINE VOLTAGE WALL SWITCH OCCUPANCY SENSOR WITH 2 ZONE ON/OFF PUSHBUTTONS	+	
р _Р	LINE VOLTAGE SWITCH WITH PILOT LIGHT	-Э к 	DUPLEX RECEPTACLE OUTLET WITH ISOLATED GROUND
г	LINE VOLTAGE SWITCH WITH TIMER	-000 -000	
a \$ b	LINE VOLTAGE SINGLE POLE SWITCHES	- \$\$	QUAD RECEPTACLE OUTLET MOUNTED ABOVE COUNTER
^{3a} \$ ^{3b}	FOR DUAL LEVEL LIGHTING CONTROL LINE VOLTAGE THREE WAY SWITCHES FOR DUAL LEVEL LIGHTING CONTROL	SS SS	QUAD RECEPTACLE OUTLET WITH ONE (1) INTEGRAL SURGE SUPPRESSION TYPE RECEPTACLE AND ONE (1) SURGE SUPPRESSION PROTECTED RECEPTACLE
LVX	LOW VOLTAGE PUSHBUTTON STATION	-0 _x	SPECIAL RECEPTACLE AS INDICATED
_VX	LV - 1 ZONE ON/OFF	□x	POWER/COMMUNICATIONS POLE
	LVD - 1 ZONE ON/OFF & DIMMING LV2 - 2 ZONE ON/OFF	•	SPECIAL POWER CONNECTION
	LV2D - 2 ZONE ON/OFF & DIMMING		CORD DROP
	W - LOW VOLTAGE WIRELESS		CORD REEL
) x	CEILING MOUNTED OCCUPANCY SENSOR WALL MOUNTED OCCUPANCY SENSOR	\mathbf{O}_{PT}^{X}	POKE THROUGH ASSEMBLY
33 _x	CEILING MOUNTED LINE VOLTAGE OCCUPANCY SENSOR	Ū	JUNCTION BOX - CEILING MOUNTED
	WALL MOUNTED LINE VOLTAGE OCCUPANCY SENSOR	J	JUNCTION BOX - CEILING MOUNTED
ଞ _{⊾vx} ଅ			PUSHBUTTON STATION - EMERGENCY
C S	TIME SWITCH	● _E	POSIBUTION STATION - EMERGENCE POWER SHUTDOWN
	LIGHTING CONTROL PANEL		HORIZONTALLY MOUNTED MULTI-OUTLET RACEWAY
Э Р	HOTOELECTRIC SWITCH \ PHOTOCELL - CEILING MOUNTED		VERTICALLY MOUNTED MULTI-OUTLET RACEWAY
PC	PHOTOELECTRIC SWITCH \ PHOTOCELL - WALL MOUNTED		BUS DUCT
008 BF	RANCH CIRCUIT EMERGENCY LIGHTING TRANSFER SWITCH	******	EQUIPMENT MOUNTING BACKBOARD
• _{TS-X}	LIGHTING CONTROL PRESET STATION OR TOUCHSCREEN		PANELBOARD (250V AND LESS)
_ 10-X		4	PANELBOARD (GREATER THAN 250V)
	POWER		DISTRIBUTION OR POWER PANELBOARD
∋ _x	SINGLE RECEPTACLE OUTLET	5	SINGLE PHASE MOTOR
Ĵ,	DUPLEX RECEPTACLE OUTLET	Ò.	THREE PHASE MOTOR
€	DUPLEX RECEPTACLE OUTLET FLUSH MOUNTED IN CEILING	\boxtimes	
-C GFI	DEAD-FRONT GROUND FAULT CIRCUIT INTERRUPTER (PROTECTION OF DOWNSTREAM CONNECTED DEVICES)	XJ _{30/30}	A COMBINATION MAGNETIC MOTOR STARTER & FUSED DISCONNECT SWITCH - SWITCH SIZE / FUSE SIZE
- ф GFI	DEAD-FRONT GROUND FAULT CIRCUIT INTERRUPTER MOUNTED ABOVE COUNTER (PROTECTION OF DOWNSTREAM CONNECTED DEVICES)		

DOWNSTREAM CONNECTED DEVICES)

SYM	IBOLS (LETTERS (X) INDICATE TYPE , TYPICAL)
	LIGHTING
×	LIGHTING FIXTURE; RECESSED OR SURFACE MOUNTED
XX NI	LIGHTING FIXTURE; RECESSED OR SURFACE MOUNTED ON NIGHT LIGHT OR EMERGENCY CIRCUIT
• • ^{X>}	LIGHTING FIXTURE; PENDANT MOUNTED
• • • NL	LIGHTING FIXTURE; PENDANT MOUNTED ON NIGHT LIGHT OR EMERGENCY CIRCUIT
⊢––−I ^{×>}	STRIP LIGHTING FIXTURE
	STRIP LIGHTING FIXTURE ON NIGHT LIGHT OR EMERGENCY CIRCUIT LIGHTING FIXTURE; RECESSED AIMABLE OR WALL
×× ◆ 台 [×]	WASH
×× o □ ×	LIGHTING FIXTURE; RECESSED OR PENDANT MTD
	LIGHTING FIXTURE; RECESSED OR PENDANT MTD ON NIGHT LIGHT OR EMERGENCY CIRCUIT
¤××	LIGHTING FIXTURE; SURFACE MOUNTED
	LIGHTING FIXTURE; SURFACE MOUNTED ON NIGHT LIGHT OR EMERGENCY CIRCUIT
	TRACK LIGHTING
^{xx}	LIGHTING FIXTURE; WALL MOUNTED
	LIGHTING FIXTURE; WALL MOUNTED
XX XX	LIGHTING FIXTURE; UNDERCABINET MOUNTED
⊷ — ⊣	
 0	EXIT SIGN LIGHTING FIXTURE; FACES INDICATED BY SHADING, DIRECTIONAL ARROWS AS INDICATED - CEILING OR PENDANT MOUNTED
H Ø	EXIT SIGN LIGHTING FIXTURE; FACES INDICATED BY SHADING, DIRECTIONAL ARROWS AS INDICATED - WALL MOUNTED, END OR BACK
ł⊠ł	COMBO EXIT SIGN LIGHTING FIXTURE AND EMERGENCY LIGHTING UNIT; FACES INDICATED BY SHADING, DIRECTIONAL ARROWS AS INDICATED - CEILING OR PENDANT MOUNTED
⊦⊗t	COMBO EXIT SIGN LIGHTING FIXTURE AND EMERGENCY LIGHTING UNIT; FACES INDICATED BY SHADING, DIRECTIONAL ARROWS AS INDICATED - WALL MOUNTED, END OR BACK
	CEILING MOUNTED SELF-CONTAINED EMERGENCY LIGHTING UNIT
	WALL MOUNTED SELF-CONTAINED EMERGENCY LIGHTING UNIT
	POLE MOUNTED AREA LIGHTING FIXTURE; QUANTITY OF LUMINARIES AS INDICATED
¤	SITE LIGHTING; BOLLARD
₩	POST TOP POLE MOUNTED AREA LIGHTING FIXTURE
\sim	SITE LIGHTING FIXTURE; ADJUSTABLE FLOOD

BATHROOM STATION - NURSE CALL	KER N	CEILING MOUNTED HORN SPEAKER	Ð	(
BATHROOM STATION PULL CORD - NURSE CALL		SECURITY SYSTEM CARD READER	s _{CR}	Ľ
CODE BLUE PUSHBUTTON - NURSE CALL		SECURITY SYSTEM DOOR CONTACT	s _C	Ľ
NURSE CALL DUTY STATION		SECURITY SYSTEM ELECTRIC STRIKE	s _{es}	٢
NURSE CALL EMERGENCY STATION		SECURITY SYSTEM ELECTRIFIED HARDWARE	s _{EH}	Ľ
NURSE CALL MASTER STATION		SECURITY SYSTEM LOCKDOWN READER\BUTTON	s _{LD}	٢
NURSE CALL POWER SUPPLY		SECURITY SYSTEM KEY SWITCH	s _K	٢
NURSE CALL STAFF STATION		SECURITY SYSTEM MOTION DETECTOR	s _{MD}	٢
NURSE CALL WALL MOUNTED DOME LIGHT		CEILING MOUNTED SECURITY CAMERA	D	(
NURSE CALL CEILING MOUNTED DOME LIGHT	era 🕁	WALL MOUNTED SECURITY CAMERA	C	F
JRSE CALL WALL MOUNTED DOME LIGHT WITH CODE		FIRE ALARM PULL STATION	-	
BLUE NURSE CALL CEILING MOUNTED DOME LIGHT WITH		WALL MOUNTED A/V FIRE ALARM INDICATING DEVICE	р	E
CODE BLUE	/ICE	CEILING MOUNTED A/V FIRE ALARM INDICATING DEVICE	Ð _{av}	(
WALL MOUNTED COMMUNICATIONS OUTLET		WALL MOUNTED VISUAL FIRE ALARM INDICATING DEVICE	ф-	
WALL MOUNTED COMMUNICATIONS OUTLET MOUNTED ABOVE COUNTER		CEILING MOUNTED VISUAL FIRE ALARM INDICATING DEVICE	$\mathbf{D}_{\mathbf{v}}$	¢
CEILING MOUNTED COMMUNICATIONS OUTLET		WALL MOUNTED AUDIO FIRE ALARM INDICATING DEVICE		E
COMMUNICATIONS FLOOR BOX		CEILING MOUNTED AUDIO FIRE ALARM INDICATING DEVICE	Ð,	(
POWER & COMMUNICATIONS FLOOR BOX		WALL MOUNTED VISUAL EMERGENCY MASS NOTIFICATION	ф-	
INTERCOM CALL BUTTON			•	
INTERCOM CALL BUTTON WITH PRIVACY		CEILING MOUNTED VISUAL EMERGENCY MASS NOTIFICATION INDICATING DEVICE	Ð, ⁽	(
<u>ONE-LINE</u>	FOR	WALL MOUNTED AREA SMOKE DETECTOR	E _{SD}	E
ANALOG AMPERE\VOLT METER	FOR	CEILING MOUNTED AREA SMOKE DETECTOR	Ð _{sd}	(
ANALOG ENERGY USAGE METER		CEILING MOUNTED COMBINATION AREA SMOKE &	D _{CD}	(
DIGITAL MULTI-FUNCTION METER	TOR	CARBON MONOXIDE DETECTOR		
KIRK KEY INTERLOCK		WALL MOUNTED TEMPERATURE DETECTOR		Ľ
		CEILING MOUNTED TEMPERATURE DETECTOR		U r
SWITCH				Ľ
FUSE	 rr	WALL MOUNTED MAGNETIC DOOR HOLDER/RELEASE		Ľ
TRANSFORMER	u u	WATER FLOW SWITCH		Ľ
TRANSFER SWITCH	•	TAMPER SWITCH	TS	Ľ
THERMAL OVERLOAD	-		E MM	Ľ
CONTACTS	_		Э_{см}	
INDICATES WIRE SIZE AND CONDUIT SIZE	G C		₹ ACP	F
DRAWOUT CIRCUIT BREAKER			ACP	
AIR-MAG / VACUUM CIRCUIT BREAKER		FIRE SUPPRESSION SYSTEM CONTROL PANEL		
ENGINE GENERATOR	•	SINGLE BED STATION - NURSE CALL DOUBLE BED STATION - NURSE CALL	N 2B	

- NON-FUSED DISCONNECT SWITCH -SWITCH SIZE S
- FUSED DISCONNECT SWITCH -SWITCH SIZE/FUSE SIZE ENCLOSED CIRCUIT BREAKER
- -CB RATING S _{EH}
- MAGNETIC CONTACTOR MANUAL MOTOR STARTER
- HORSEPOWER RATED SWITCH

- PACKAGED EQUIPMENT WITH INTEGRALLY MOUNTED PREWIRED CONTROL PANEL FURNISHED AS INTEGRAL PART OF
- EQUIPMENT, OR AS INDICATED
- GROUND ROD LIGHTNING PROTECTION AIR TERMINAL

AUXILIARY SYSTEMS

- CEILING MOUNTED SINGLE FACED CLOCK CEILING MOUNTED DOUBLE FACED CLOCK
- WALL MOUNTED SINGLE FACED CLOCK
- WALL MOUNTED DOUBLE FACED CLOCK COMBINATION WALL MOUNTED SPEAKER/CLOCK
- CEILING MOUNTED COMBINATION SPEAKER/CLOCK WALL MOUNTED DIGITAL CLOCK
 - CEILING MOUNTED SPEAKER
 - WALL MOUNTED SPEAKER
 - CEILING MOUNTED MICROPHONE OUTLET
 - WALL MOUNTED MICROPHONE OUTLET
 - WALL MOUNTED AUXILIARY OUTLET
 - WALL MOUNTED VOLUME CONTROL
 - WALL MOUNTED BELL WALL MOUNTED CHIME
 - WALL MOUNTED HORN SPEAKER

STREAM SURGE SUPPRESSION DEVICE PLEX RECEPTACLE OUTLET SPLIT WIRED FACLE OUTLET WITH ISOLATED GROUND QUAD RECEPTACLE OUTLET LE OUTLET MOUNTED ABOVE COUNTER PTACLE OUTLET WITH ONE (1) INTEGRAL ESSION TYPE RECEPTACLE AND ONE (1)

- CORD DROP 🕒 CORD REEL 😶 POKE THROUGH ASSEMBLY
- JUNCTION BOX CEILING MOUNTED JUNCTION BOX - WALL MOUNTED PUSHBUTTON STATION - EMERGENCY
- POWER SHUTDOWN DIG LLY MOUNTED MULTI-OUTLET RACEWAY
- BUS DUCT HS EQUIPMENT MOUNTING BACKBOARD
- PANELBOARD (250V AND LESS) PANELBOARD (GREATER THAN 250V) DISTRIBUTION OR POWER PANELBOARD SINGLE PHASE MOTOR
 - THREE PHASE MOTOR MAGNETIC MOTOR STARTER
- MAGNETIC MOTOR STARTER & FUSED NECT SWITCH - SWITCH SIZE / FUSE SIZE

ELECTRICAL DRAWING INDEX

Electrical Reference Information ER.0 E4.1 Enlarged Plan E4.2 Enlarged Plans E5.1

One Line Diagram E5.2 Fire Alarm Diagram, Detail and Panel Schedules

PROJECT GENERAL NOTES

- 1. ALL ITEMS SHOWN HATCHED SHALL BE DISCONNECTED AND REMOVED. LIGHT LINE WEIGHT INDICATES EXISTING ITEMS TO REMAIN. HEAVY LINE WEIGHT INDICATES NEW ITEMS.
- 2. ITEMS DENOTED BY THE LETTER "R" INDICATE EXISTING ITEMS TO BE RELOCATED. THESE ITEMS SHALL BE DISCONNECTED, REMOVED AND STORED FOR REINSTALLATION IN NEW LOCATIONS AS INDICATED ON NEW WORK PLANS.
- 3. WHERE APPLICABLE AND NOT SPECIFICALLY INDICATED OTHERWISE, EXISTING IN PLACE CONDUITS, JUNCTION BOXES, PULL BOXES AND HANGERS MAY BE REUSED FOR NEW WORK PROVIDING THAT THE INSTALLATION IS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND THE EXISTING ITEMS DO NOT INTERFERE WITH DEMOLITION OR NEW WORK OF ANY TRADES.
- 4. WHERE CONDUITS ARE ROUTED CONCEALED IN WALL CAVITIES FOR ELECTRICAL ITEMS INDICATED TO BE REMOVED, ABANDON THE CONDUIT CONCEALED IN THE WALL CAVITY. REMOVE THE CONDUIT EXITING THE WALL CAVITY INTO THE CEILING SPACE BEYOND THE FIRST FITTING OR JUNCTION BOX. REMOVE ALL SURFACE MOUNTED OUTLET BOXES ASSOCIATED WITH THE CONDUIT SYSTEM. ABANDON ALL FLUSH MOUNTED OUTLET BOXES ASSOCIATED WITH THE CONDUIT SYSTEM IN PLACE AND PROVIDE NEW BLANK COVER PLATES.
- 5. DISCONNECT AND REMOVE ALL ELECTRICAL EQUIPMENT AS INDICATED INCLUDING HANGERS, PULL BOXES, JUNCTION BOXES, CONDUIT AND WIRING FROM THE POWER SOURCE TO THE UTILIZATION EQUIPMENT.
- 6. WHERE REMOVAL OF CONDUIT AND WIRING AFFECTS THE OPERATION OF "UPSTREAM" AND/OR "DOWNSTREAM" UTILIZATION EQUIPMENT WHICH WAS NOT INDICATED TO BE REMOVED, PROVIDE ADDITIONAL CONDUIT AND WIRING TO RESTORE THE "UPSTREAM" AND "DOWNSTREAM" UTILIZATION EQUIPMENT TO ITS NORMAL OPERATION.
- 7. FURNISH ALL LABOR, MATERIALS, EQUIPMENT, AND SUPERVISION REQUIRED TO COMPLETE ALL DEMOLITION OF EXISTING ELECTRICAL EQUIPMENT AS SPECIFIED OR INDICATED. DISCONNECT, REMOVE AND RELOCATE ALL ITEMS AS REQUIRED TO FACILITATE THE NEW CONSTRUCTION. COORDINATE THE DEMOLITION REQUIREMENTS WITH ALL OTHER TRADES AND THE NEW WORK PLANS.
- 8. NEW FIRE ALARM DEVICES SHALL BE COMPATIBLE WITH EXISTING FIRE ALARM SYSTEM. EXISTING FIRE ALARM SYSTEM IS MANUFACTURED BY NATIONAL TIME & SIGNAL. COORDINATE ALL SYSTEM REQUIREMENTS WITH MANUFACTURER.
- 9. PROVIDE A DEDICATED NEUTRAL CONDUCTOR WITHIN THE RACEWAY ALONG WITH THE PHASE CONDUCTORS FOR ALL FEEDERS AND BRANCH CIRCUITS. 10. PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR WITHIN THE RACEWAY
- ALONG WITH THE PHASE CONDUCTORS FOR ALL FEEDERS AND BRANCH CIRCUITS.
- 11. ALL 120 VOLT, 20 AMPERE BRANCH CIRCUITS EXCEEDING 100'-0" IN LENGTH SHALL BE INSTALLED USING #10 AWG CONDUCTORS UNLESS OTHERWISE NOTED.
- 12. ALL ELECTRICAL DEVICES AND ASSOCIATED OUTLET BOXES SHALL BE FLUSH MOUNTED UNLESS NOTED OTHERWISE. ALL CONDUIT AND WIRING SHALL BE CONCEALED. SURFACE METAL RACEWAY SHALL BE PERMITTED ONLY WHERE NOTED.
- 13. MOUNTING HEIGHT OF RECESSED JUNCTION OR OUTLET BOXES IN BLOCK OR BRICK MAY BE ADJUSTED TO THE NEAREST HORIZONTAL COURSING AS LONG AS THE SPECIFIED MOUNTING HEIGHT IS NOT EXCEEDED. COVER PLATE TO CONCEAL GROUT LINE.
- 14. ALL WORK AND EQUIPMENT SHALL COMPLY WITH THE NEC INCLUDING ANY MODIFICATIONS BY THE LOCAL JURISDICTION. THE MEANS AND METHODS USED BY THIS CONTRACTOR SHALL CONFORM TO NEC SECTION 110.3.
- 15. FIRE ALARM SHOP DRAWINGS SHALL BE SUBMITTED TO THE FIRE MARSHAL FOR APPROVAL PRIOR TO SUBMITTING FOR ENGINEER APPROVAL.

UNIT HEATER UNDERWRITERS LABORATORIES, INC. UNLESS OTHERWISE NOTED UNINTERRUPTIBLE POWER SUPPLY UNIVERSAL SERIAL BUS ULTRAVIOLET

VARIABLE SPEED DRIVE VERIFY IN FIELD VAPOR PROOF

WIRELESS WIDE AREA NETWORK WIRELESS ACCESS POINT WIRE GUARD WIRELESS WEATHER PROOF

EXPLOSION PROOF



SYSTEM OR EQUIPMENT GROUND
MISC
EXOTHERMIC WELD OR BRAZED CONNECTION
CONDUIT IN OR BELOW FLOOR SLAB OR BELOW GRADE
RACEWAY TURNED UP
RACEWAY TURNED DOWN
AZARDOUS LOCATION CONDUIT SEALING FITTING
CABLE TRAY
UNDERFLOOR DUCT - POWER UNDERFLOOR HEADER DUCT - POWER UNDERFLOOR DUCT - COMM UNDERFLOOR HEADER DUCT - COMM
SITE
FLUSH IN-GRADE HAND HOLE
UNDERGROUND ELECTRICAL
UNDERGROUND COMMUNICATIONS
UNDERGROUND FIBER OPTIC COMMUNICATIONS
UNDERGROUND LIGHTING
EMERGENCY "CODE BLUE" BOLLARD

STATION	_
STATION	
R STATION	
R SUPPLY	0
STATION	
ME LIGHT	
ME LIGHT	
/ITH CODE BI UF	
GHT WITH ODE BLUE	— P —
S OUTLET	—HP—
S OUTLET COUNTER	—с— —нс—
IS OUTLET	
LOOR BOX	
LOOR BOX	
L BUTTON	HHX
I PRIVACY	— E —
	—c—
	—F0—

GE METER
ON METER
NTERLOCK
BREAKER
SWITCH
FUSE
SFORMER

— L —

CB

i D^s Project Number



Drawing Number

ER.0

Electrical Reference Information

DS Drawing Tit

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Bids	01-31-2025

Project Administrator	
A. Maurer	
Project Designer	
T. Morgan	
Project Architect / Engineer	Projec
T. Morgan	
Drawn By	
T. Morgan	
Q.M. Review	
T. Carron	
Approved	
M. Nowicki	
Drawing Scale	
No Scale	
Issue Date	Issued for
nent 07-03-2024	Design Development
view 01-09-2025	Quality Management Review
Bids 01-31-2025	· · ·

THIS PROJECT MAY NOT UTILIZE ALL THE SYMBOLS, MATERIALS, ABBREVIATIONS AND STANDARDS INFORMATION SHOWN ON THIS SHEET

501 W Columbia Ave Belleville, MI 48111 Key Plan

RAHS Belleville High School

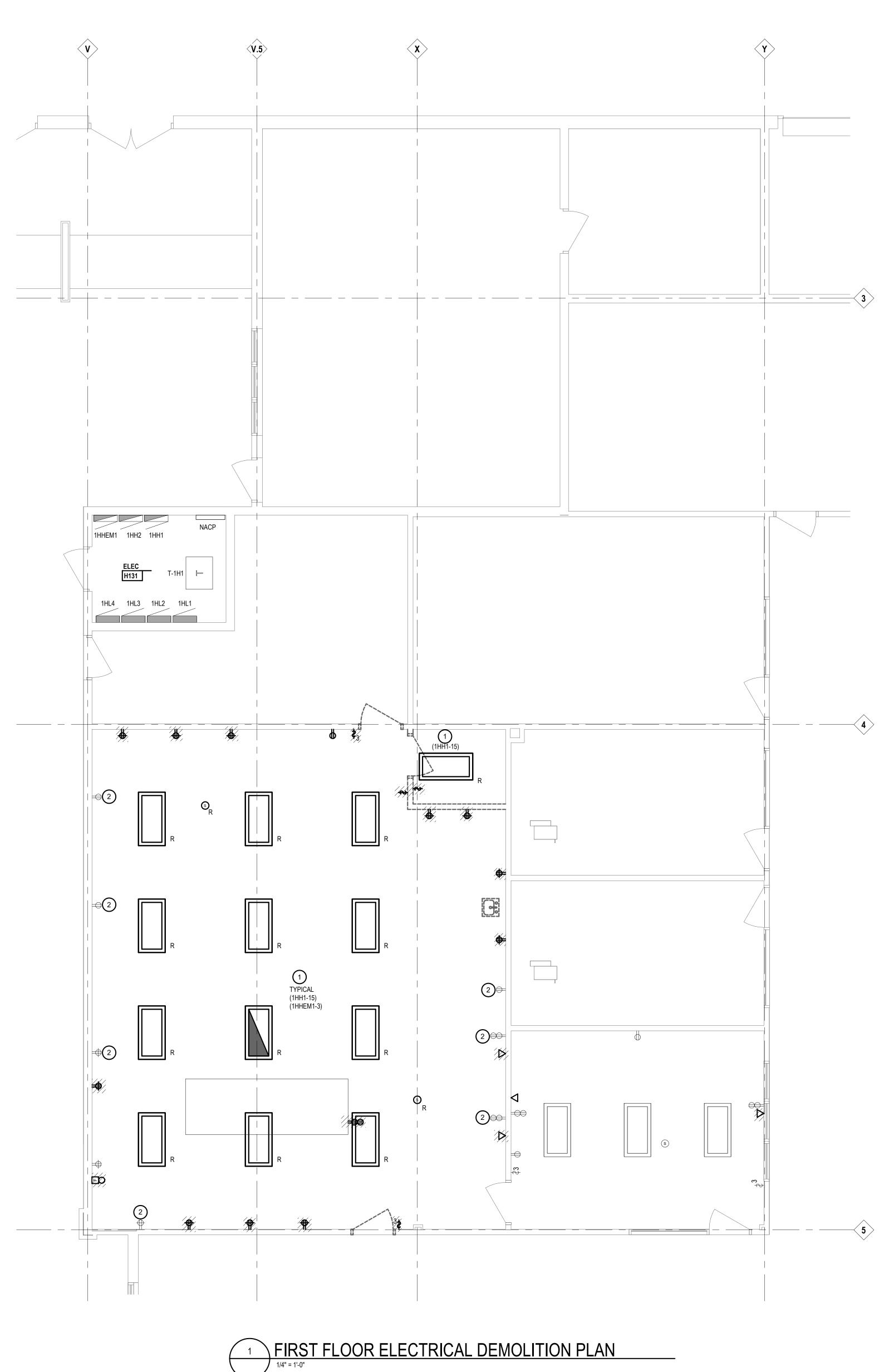
Van Buren Public Schools



Project Title

INTEGRATED design SOLUTIONS architecture engineering interiors & technology 1441 west long lake, suite 200 troy, michigan 48098 5211 cascade road SE, suite 300 grand rapids, michigan 49546 248.823.2100 www.ids-michigan.com





KEY NOTES

DISCONNECT AND REMOVE LIGHTING BRANCH CIRCUITS TO ALLOW FOR REMOVAL OF EXISTING MECHANICAL PIPING AND DUCTWORK, AND INSTALLATION OF NEW MECHANICAL PIPING AND DUCTWORK. REMOVE AND STORE LIGHTING FIXTURES FOR REUSE.

2 REPLACE EXISTING RECEPTACLES WITH TAMPER PROOF TYPE RECEPTACLES. EXISTING BRANCH CIRCUIT TO REMAIN. PROVIDE NEW STAINLESS STEEL COVERPLATE.

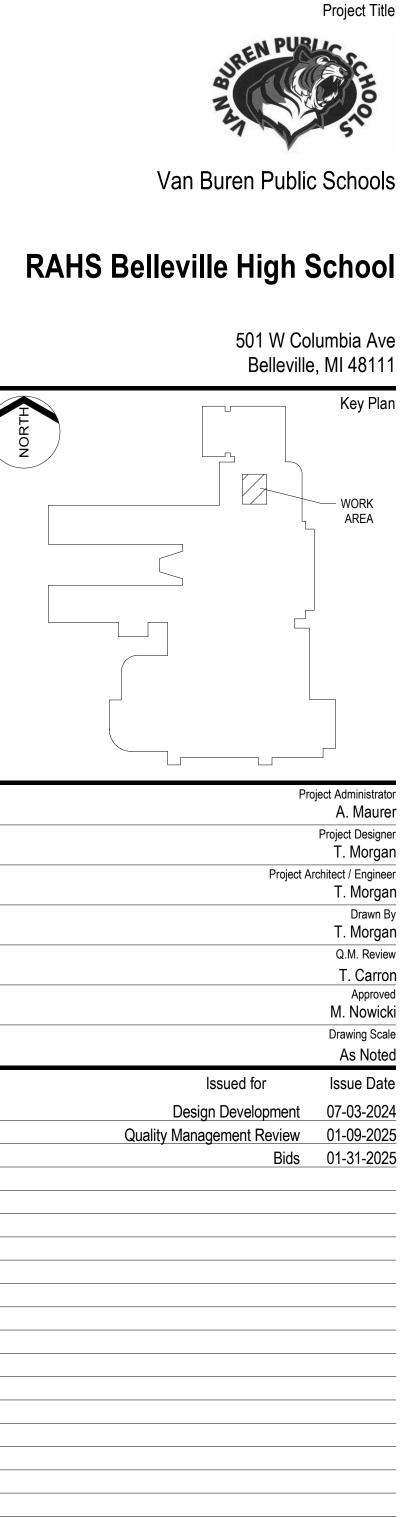
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24167-1000



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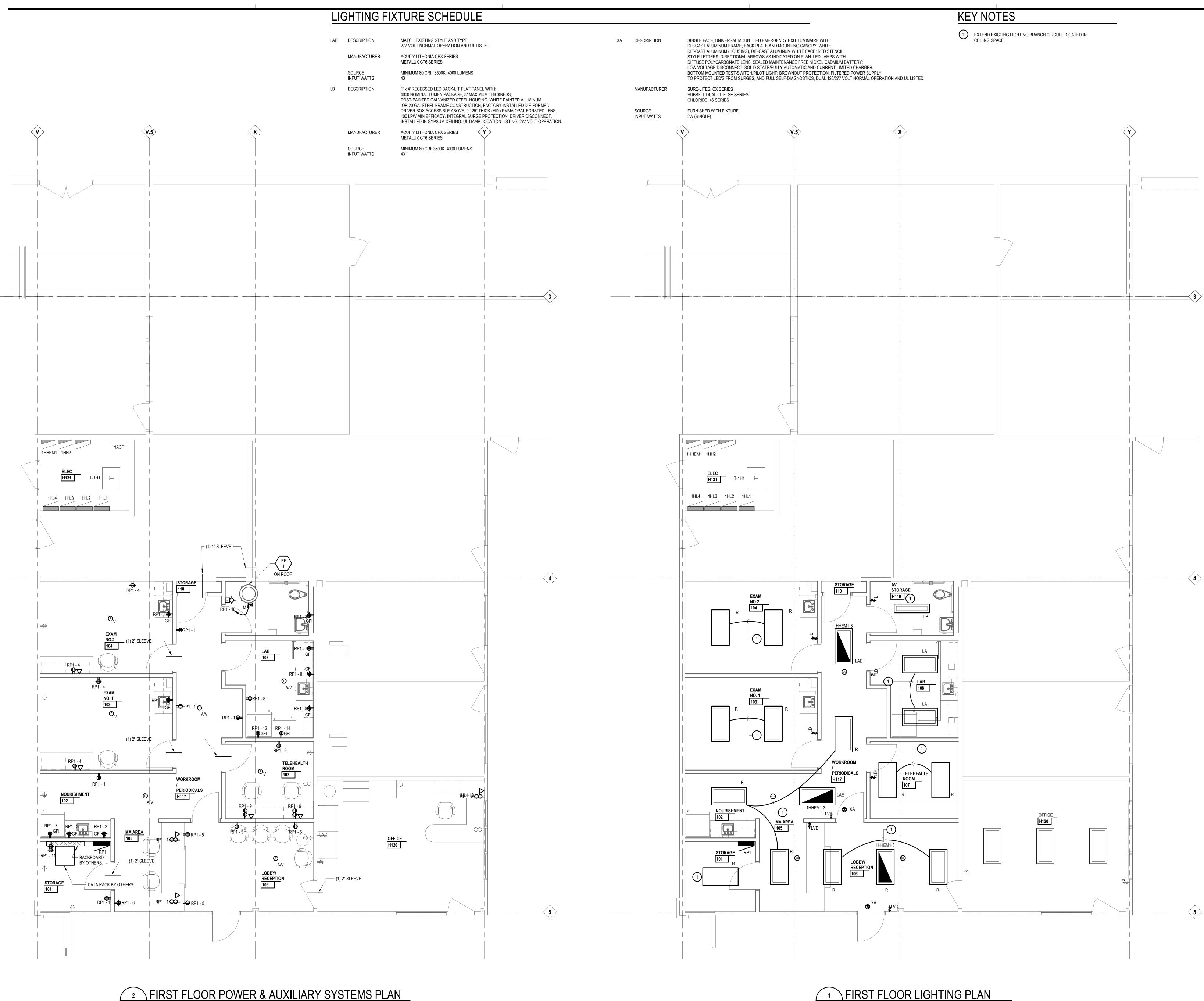
 $^{\circ}$ 2025 Integrated $ext{design}$ solutions, LL IDS Drawing Title

Enlarged Plan



Drawing Number

SOURCE



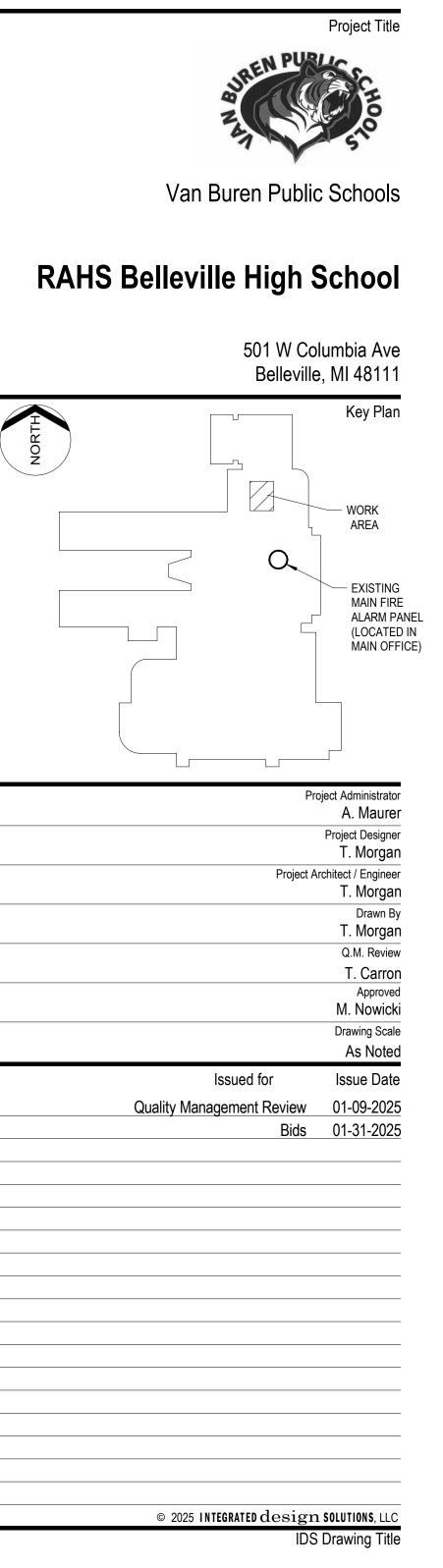
1/4" = 1'-0"

) FIRST FLOOR LIGHTING PLAN



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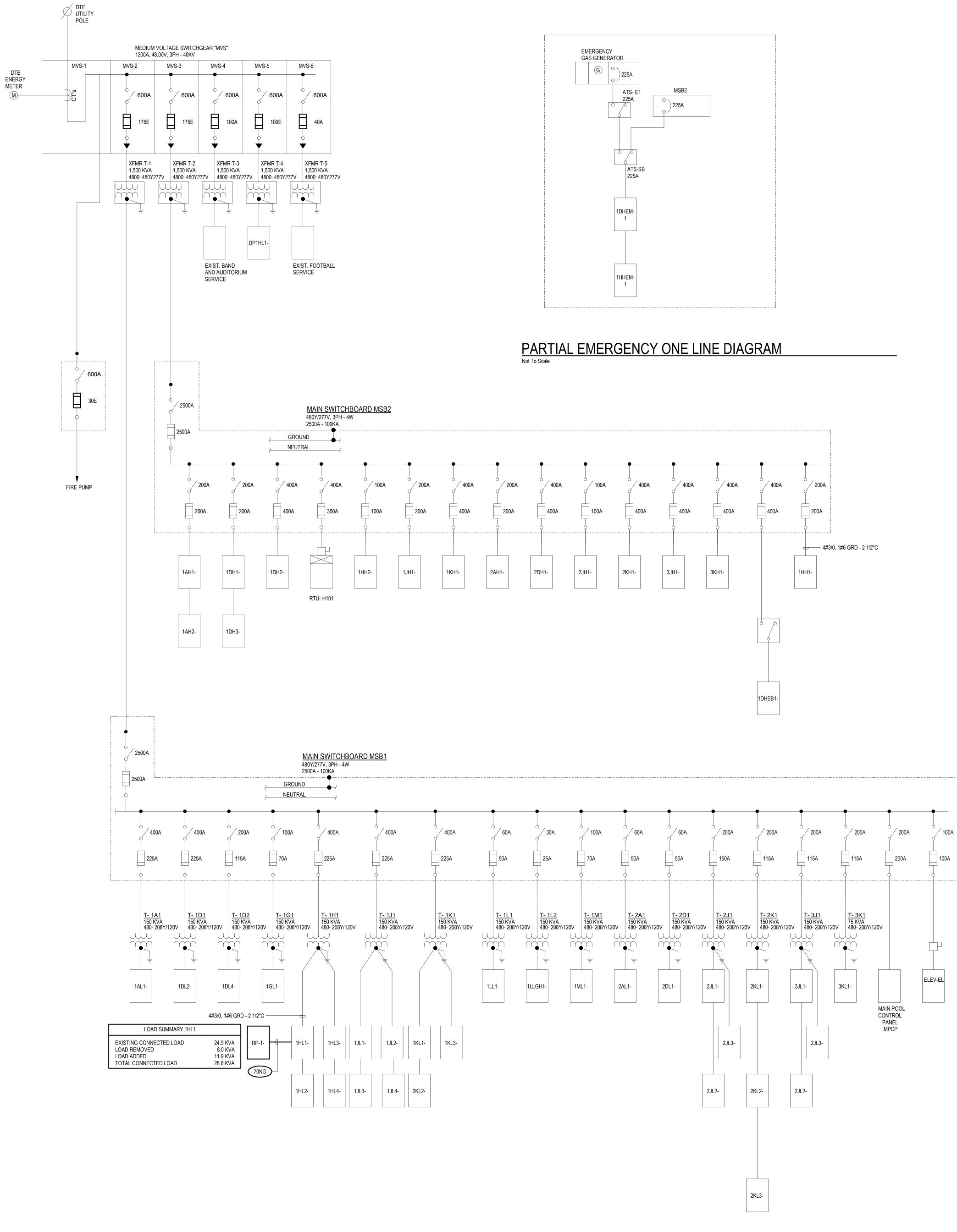
Enlarged Plans

ī **D**^s Project Number

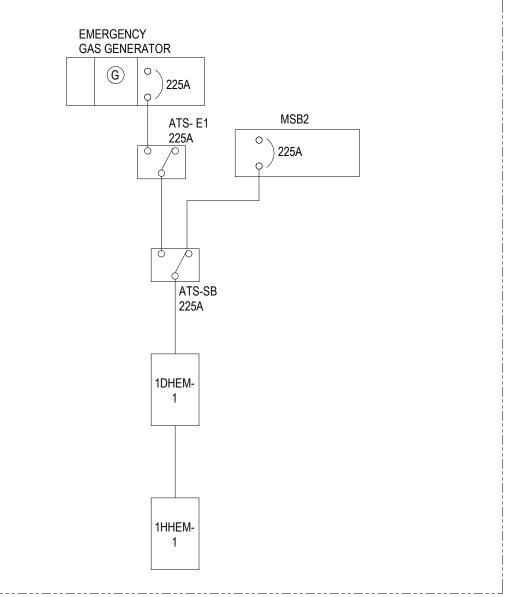
E4.2

Drawing Number

24167-1000



(M)-



CONDUIT AND WIRE SCHEDULE

COPPER CONDUCTORS

WIRE		COPPI	ER CONDUCTORS	
TEMP.		3 PHASE, 3 WIRE WITH GROUND		3 PHASE, 4 WIRE WITH GROUND
	TAG	FILL	TAG	FILL
	20G	3#12, 1#12 GRD - 3/4"C	20NG	4#12, 1#12 GRD - 3/4"C
	30G	3#10, 1#10 GRD - 3/4"C	30NG	4#10, 1#10 GRD - 3/4"C
	40G	3#8, 1#10 GRD - 3/4"C*	40NG	4#8, 1#10 GRD - 3/4"C*
60°C	55G	3#6, 1#10 GRD - 1"C	55NG	4#6, 1#10 GRD - 1"C
00 0	70G	3#4, 1#8 GRD - 1 1/4"C	70NG	4#4, 1#8 GRD - 1 1/4"C
	85G	3#3, 1#8 GRD - 1 1/4"C	85NG	4#3, 1#8 GRD - 1 1/4"C
	95G	3#2, 1#8 GRD - 1 1/4"C	95NG	4#2, 1#8 GRD - 1 1/4"C*
	110G	3#1, 1#6 GRD - 1 1/2"C	110NG	4#1, 1#6 GRD - 1 1/2"C
	150G	3#1/0, 1#6 GRD - 2"C	150NG	4#1/0, 1#6 GRD - 2"C
	175G	3#2/0, 1#6 GRD - 2"C	175NG	4#2/0, 1#6 GRD - 2"C
	200G	3#3/0, 1#6 GRD - 2"C	200NG	4#3/0, 1#6 GRD - 2"C
	230G	3#4/0, 1#4 GRD - 2 1/2"C	230NG	4#4/0, 1#4 GRD - 2 1/2"C
	255G	3#250 KCMIL, 1#4 GRD - 2 1/2"C	255NG	4#250 KCMIL, 1#4 GRD - 2 1/2"C*
-	310G	3#350 KCMIL, 1#3 GRD - 3"C	310NG	4#350 KCMIL, 1#3 GRD - 3"C
	380G	3#500 KCMIL, 1#3 GRD - 3 1/2"C	380NG	4#500 KCMIL, 1#3 GRD - 3 1/2"C
	420G	3#600 KCMIL, 1#3 GRD - 3 1/2"C*	420NG	4#600 KCMIL, 1#3 GRD - 3 1/2"C*
75°C	460G	2@[3#4/0, 1#2 GRD - 2 1/2"C]	460NG	2@[4#4/0, 1#2 GRD - 2 1/2"C]
	510G	2@[3#250 KCMIL, 1#2 GRD - 2 1/2"C]	510NG	2@[4#250 KCMIL, 1#2 GRD - 2 1/2"C]*
	620G	2@[3#350 KCMIL, 1#1 GRD - 3"C]	620NG	2@[4#350 KCMIL, 1#1 GRD - 3"C]
	760G	2@[3#500 KCMIL, 1#1/0 GRD - 3 1/2"C]	760NG	2@[4#500 KCMIL, 1#1/0 GRD - 3 1/2"C]
	800G	2@[3#600 KCMIL, 1#1/0 GRD - 3 1/2"C]*	800NG	2@[4#600 KCMIL, 1#1/0 GRD - 3 1/2"C]*
	1000G	3@[3#500 KCMIL, 1#2/0 GRD - 3 1/2"C]	1000NG	3@[4#500 KCMIL, 1#2/0 GRD - 3 1/2"C]
-	1200G	3@[3#600 KCMIL, 1#3/0 GRD - 3 1/2"C]*	1200NG	3@[4#600 KCMIL, 1#3/0 GRD - 3 1/2"C]*
	1600G	4@[3#600 KCMIL, 1#4/0 GRD - 3 1/2"C]*	1600NG	4@[4#600 KCMIL, 1#4/0 GRD - 3 1/2"C]*
	2000G	5@[3#600 KCMIL, 1#250 KCMIL GRD - 3 1/2"C]*	2000NG	5@[4#600 KCMIL, 1#250 KCMIL GRD - 4"C]

NOTES:

1. GROUND WIRES SHOWN IN CONDUIT AND WIRE SCHEDULE ARE EQUIPMENT GROUNDING CONDUCTORS SIZED PER 2023 NEC 250.122, AND GROUND WIRES SHOWN IN TRANSFORMER SECONDARY WIRE SCHEDULE ARE SUPPLY-SIDE BONDING JUMPERS SIZED PER 2023 NEC 250.30(A)(2); ALL OTHER GROUND WIRES, INCLUDING GROUNDING ELECTRODE CONDUCTORS, MAIN BONDING JUMPERS, AND SYSTEM BONDING JUMPERS, SHALL BE SIZED PER 2023 NEC.

2. CONDUIT FILL IS BASED ON THHN, THWN, THWN-2, XHHW, AND XHHW-2 CONDUCTOR INSULATION TYPES AND EMT, IMC, RMC, FMC, LFMC, PVC SCHEDULE 40, PVC SCHEDULE 80 (UNLESS OTHERWISE NOTED), HDPE SCHEDULE 40, AND RTRC (SW, HW, & XW) CONDUIT TYPES; ALL OTHER CONDUCTORS AND CONDUIT TYPES SHALL BE SIZED PER 2023 NEC.

3. CONDUCTOR AMPACITY IS BASED ON TEMPERATURE RATING INDICATED AND 2023 NEC TABLE 310.16.

4. INCREASE CONDUIT BY ONE TRADE SIZE FOR PVC SCHEDULE 80 WHERE INDICATED BY ASTERISK (*).



E5.1

24167-1000

One Line Diagram

IDS Drawing Title

 \circ 2025 integrated $ext{design}$ solutions, LLC

	T. Morgan
	Q.M. Review
	T. Carron
	Approved
	M. Nowicki
	Drawing Scale
	No Scale
Issued for	Issue Date
Design Development	07-03-2024
Quality Management Review	01-09-2025
Bids	01-31-2025

Projec	t Administrator
	A. Maurer
Pi	roject Designer
	T. Morgan
Project Archi	itect / Engineer
	T. Morgan
	Drawn By
	T. Morgan
	Q.M. Review
	T. Carron
	Approved
	M. Nowicki
	Drawing Scale
	No Scale
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Design Development	07-03-2024
	01-09-2025

501 W Columbia Ave Belleville, MI 48111 Key Plan

RAHS Belleville High School

Van Buren Public Schools



Project Title



troy, michigan 48098

www.ids-michigan.com

248.823.2100

5211 cascade road SE, suite 300 grand rapids, michigan 49546

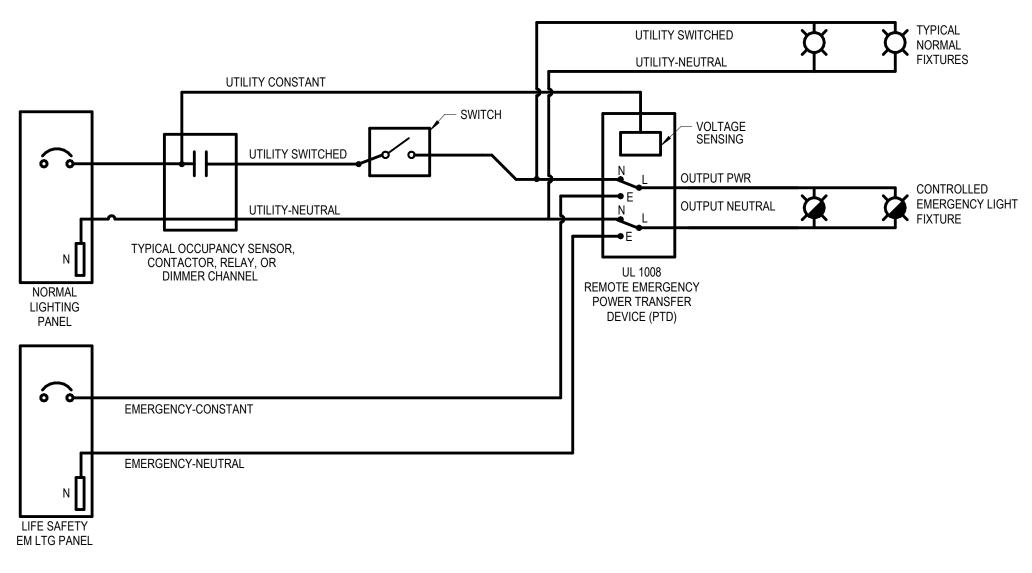
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31 Space 33 Space 35 Space 37 Space 39 Space 41 Space 41 Space 41 Space Volts: 208/120 Wye Mounting: Surface A.I.C. (RMS Symmetrical): 10000 Phase: 3 Wire: 4 Hertz: 60 PHASE A CONNECTED LOAD: PHASE A CONNECTED LOAD: PHASE C CONNECTED LOAD: PHASE C CONNECTED LOAD: PHASE C CONNECTED LOAD: TOTAL CONNECTED LOAD: TOTAL ESTIMATED DEMAND LOAD: TOTAL ESTIMATED DEMAND AMPS:								1080
33 Space 35 Space 37 Space 39 Space 41 Space 41 Space 41 Space 41 Space Volts: 208/120 Wye Mounting: Surface A.I.C. (RMS Symmetrical): 10000 Phase: 3 Wire: 4 Hertz: 60 PHASE A CONNECTED LOAD: PHASE A CONNECTED LOAD: PHASE C CONNECTED LOAD: PHASE C CONNECTED LOAD: PHASE C CONNECTED LOAD: TOTAL CONNECTED LOAD: TOTAL ESTIMATED DEMAND LOAD: TOTAL ESTIMATED DEMAND AMPS:								1000
35 Space 37 Space 39 Space 41 Space 41 Space Symbols Volts: 208/120 Wye Mounting: Surface A.I.C. (RMS Symmetrical): 10000 # PROVIDE LOCK ON ATTACHI Phase: 3 @ PROVIDE SWD RATED BREAK Wire: 4 Hertz: 60 PHASE A CONNECTED LOAD: PHASE A CONNECTED LOAD: PHASE C CONNECTED LOAD: PHASE C CONNECTED LOAD: PHASE C CONNECTED LOAD: TOTAL CONNECTED LOAD: TOTAL ESTIMATED DEMAND LOAD: TOTAL ESTIMATED DEMAND AMPS:		· · ·						
37 Space 39 Space 41 Space 41 Space 41 Space 41 Space Volts: 208/120 Wye Mounting: Surface A.I.C. (RMS Symmetrical): 10000 Phase: 3 @ PROVIDE LOCK ON ATTACHI Phase: 3 @ PROVIDE SWD RATED BREAK Wire: 4 + PROVIDE GFCI TYPE BREAK Hertz: 60 PHASE A CONNECTED LOAD: PHASE A CONNECTED LOAD: PHASE B CONNECTED LOAD: PHASE C CONNECTED LOAD: TOTAL ESTIMATED DEMAND LOAD: TOTAL ESTIMATED DEMAND LOAD: TOTAL ESTIMATED DEMAND AMPS:		· · ·						
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A.I.C. (RMS Symmetrical): 10000 # PROVIDE SWD RATED BREA Phase: 3 @ PROVIDE AFCI TYPE BREAK Wire: 4 + PROVIDE GFCI TYPE BREAK Hertz: 60 PHASE A CONNECTED LOAD: PHASE B CONNECTED LOAD: PHASE C CONNECTED LOAD: PHASE C CONNECTED LOAD: TOTAL ESTIMATED DEMAND LOAD: TOTAL ESTIMATED DEMAND AMPS:								
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Wire: 4 Hertz: 60 PHASE A CONNECTED LOAD: PHASE B CONNECTED LOAD: PHASE C CONNECTED LOAD: PHASE C CONNECTED LOAD: TOTAL CONNECTED LOAD: TOTAL ESTIMATED DEMAND LOAD: TOTAL ESTIMATED DEMAND AMPS:								
Hertz: 60 PHASE A CONNECTED LOAD: PHASE B CONNECTED LOAD: PHASE C CONNECTED LOAD: TOTAL CONNECTED LOAD: TOTAL ESTIMATED DEMAND LOAD: TOTAL ESTIMATED DEMAND AMPS:								
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TOTAL ESTIMATED DEMAND LOAD: TOTAL ESTIMATED DEMAND AMPS:		7074	001115					
TOTAL ESTIMATED DEMAND AMPS:								
IOTE: THET IS SHOWN FOR REFERENCE ONLY. NO LOAD ADDED OR REMOVED FROM PANEL.								
	IOTE: 11	ALT IS SHOWN FOR REFERENCE ONLY. NO L	JAD ADDEL	OR REIN	IOVED F	ROM PA	NEL.	
60 AMPS MCB			P	ANEL				

						ARD S							
СКТ	LOAD		СВ		4	E	3	C	;	СВ	LOAD		CKT.
1	Receptacle Room 101,102,105	5,H117	20	1620	360					20	Receptacles - Room 102		2
3	Undercounter Refrig - Room 1	02	20			1200	1080			20	Receptacles - Room 103,104		4
5	Receptacle - Room 106, H120		20					1080	500	20	Printer - Room 106		6
7	Receptacle - Room 108		20	1200	720					20	Receptacles - Room 108, Toilet F	Room	8
9	Receptacles - Room 107		20			900	506			15	EF-1		10
11	Technology Cabinet		20					360	1200	20	Undercounter Refrig - Room 108		12
13	Spare		20	0	1200					20	Undercounter Refrig - Room 108		14
15	Spare		20			0	0			20	Spare		16
17	Spare		20					0	0	20	Spare		18
19	Space										Space		20
21	Space										Space		
23	Space										Space		24
	Panel Information					Sym	bols				Load Classification	Total Conne	ected Loa
Volts	:	208/120 Wye			Note	e: All Sy	mbols N	/lay Not	Be Use	d	Equipment	506 VA	
Mou	nting:	Surface		*	PRO	OVIDE L	ОСК О	Ν ΑΤΤΑ	CHME	NТ	Kitchen Equipment	0 VA	
A.I.C	. (RMS Symmetrical):	10,000	# PROVIDE SWD RATED BREAKER					TED BF	REAKE	R	Lighting	0 VA	
Phas	se:	3	@ PROVIDE AFCI TYPE BREAKER						EAKER		Receptacle	11420 VA	
Wire		4		+	PRO		FCI TY	PE BRE	EAKER				
Hert	<u>Z:</u>	60											
		DH			ECTER				51				
		PH	ASE C	CONN	ECTED) LOAD:			31	40 VA			
		Space 20 Space 22 Space 22 Space 24 Space 24 208/120 Wye Note: All Symbols May Not Be Used Equipment 506 VA Surface * PROVIDE LOCK ON ATTACHMENT Kitchen Equipment 0 VA 10,000 # PROVIDE SWD RATED BREAKER Lighting 0 VA 4 +											
		TOTAL ES	STIMA	TED DE	MAND LOAD:				112	16 VA			
			STIMA.										

			P/	ANE	LBOA	RD S	CHEDULE		1HH1	
				200	AM	IPS	MLO			
	.OAD	CB	A		E	3	С	CB	LOAD	СКТ
1 Lighting		20	4432	4432				20	Lighting	2
3 Lighting		20			4432	4432		20	Lighting	4
5 Lighting		20					4432 4432	20	Lighting	6
7 Lighting		20	4432	4432				20	Lighting	8
9 Lighting		20			4432	4432		20	Lighting	10
11 Lighting		20					4432 4432	20	Lighting	12
13 Lighting		20	4432	4432				20	Lighting	14
15 Lighting		20			4432			20	Spare	16
17 Lighting		20						20	Spare	18
19 Lighting		20	4432					20	Spare	20
21 Lighting		20			4432			20	Spare	22
23 Lighting		20					4432	20	Spare	24
25 Lighting		20	4432					20	Spare	26
27 Lighting		20			4432			20	Spare	28
29 Lighting		20					4432	20	Spare	30
31 Space									Space	32
33 Space									Space	34
35 Space									Space	36
37 Space									Space	38
39 Space									Space	40
41 Space									Space	42
Panel Informa	tion				Svm	bols			Load Classification Total C	onnected Loa
Volts:	480/277 Wye		Note	e: All :			Not Be Used		Receptacle 0 VA	
Mounting:	Surface	*					ACHMENT		Equipment 0 VA	
A.I.C. (RMS Symmetrica	I): 14000	#					BREAKER		Lighting 93072 VA	
Phase:	3		PROVI						Kitchen 0 VA	
Wire:	4		PROVI							
Hertz:	60									
	PHASE A C		CTEDI	ΩΔΟ·			35,456	VA		
	PHASE B C						31,024			
	PHASE C C						26,592			
	TOTAL C			חער			93,072	V۵		
	TOTAL ESTIMATE						93,072			
	TOTAL ESTIMATE						111.9			

NOTE: 1HH1 IS SHOWN FOR REFERENCE ONLY. NO LOAD ADDED OR REMOVED FROM PANEL.

	СВ	LOAD	CKT
	20	Exist.Recept	2
	20	Exist.Recept	4
360	20	Exist.Recept	6
	20	Exist.Recept	8
	20	Exist.Recept	10
920			12
	60	New Panel RP-1	14
			16
	20	Spare	18
	20	Spare	20
	20	Exist. Floor Box Recept	22
900	20	Exist. Floor Box Recept	24
	20	Exist. Floor Box Recept	26
	20	Spare	28
	20	Spare	30
		Space	32
		Space	34
		Space	36
		Space	38
		Space	40
		Space	42
lsed IT R		Load ClassificationTotal ContReceptacle28847 VAEquipment0 VALighting0 VAKitchen0 VA	nected Load
),967),280),600),847), 424 53.9	VA VA VA		



TO NEXT RECEPTACLE

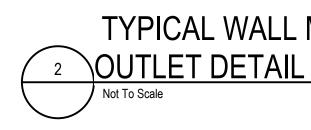
FINISH CEILING

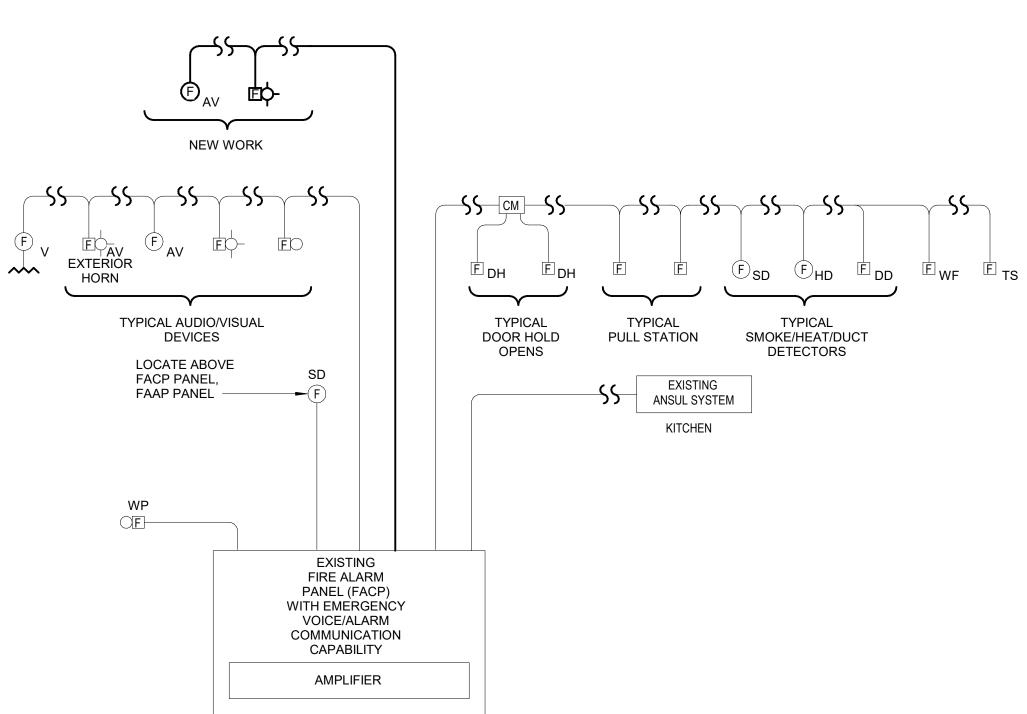
3/4" CONDUIT -

4" SQUARE x 2-1/8" DEEP BOX WITH SINGLE GANG REDUCING RING —

STAINLESS STEEL SINGLE GANG COVER WITH RECTANGULAR OPENING -

FINISH FLOOR -

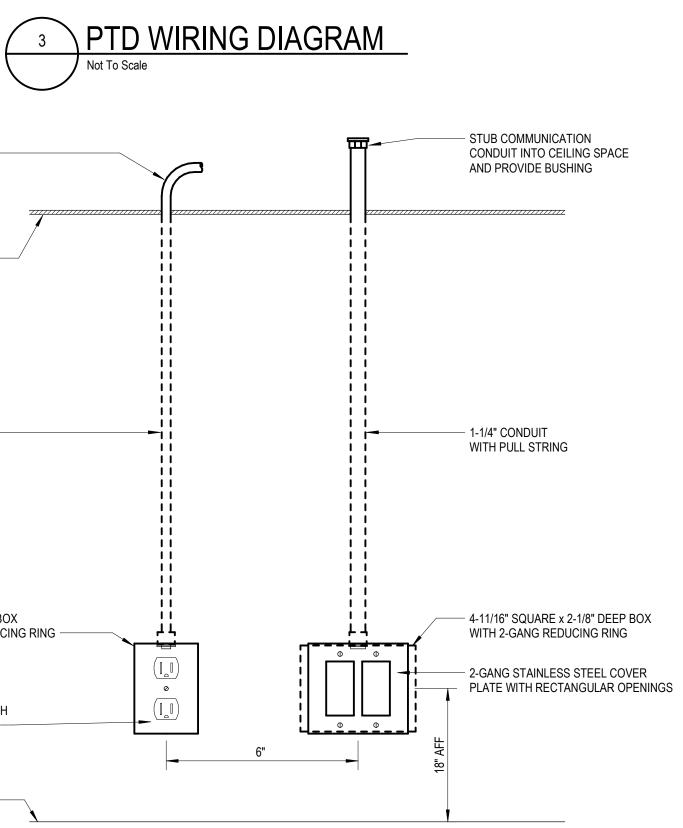




NOTES:

- TAGGED.
- REQUIREMENTS.
- ALARM CONTROL PANEL.





TYPICAL WALL MOUNTED POWER AND COMMUNICATION

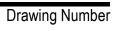
1. ELECTRICAL CONTRACTOR SHALL VERIFY ALL REQUIRED WIRE SIZES AND QUANTITIES WITH THE FIRE ALARM SYSTEM MANUFACTURER. ALL WIRING SHALL BE COLOR CODED AND CLEARLY

2. ALL WIRING INSULATION SHALL BE TYPE AS APPROVED PER THE FIRE ALARM CODE

3. SCHEMATIC DIAGRAM INDICATES GENERAL LAYOUT & INTENT OF SYSTEM DESIGN. REFER TO POWER & AUXILLIARY SYSTEMS PLANS FOR EXACT QUANTITIES AND LOCATIONS OF DEVICES. 4. NEW FIRE ALARM DEVICES CONNECTED TO EXISTING FIRE ALARM SYSTEM. EXISTING SYSTEM IS NATIONAL TIME AND SIGNAL. REFER TO KEYPLAN ON DRAWING E4.1 FOR LOCATION ON FIRE

5. ALL SURFACE MOUNTED FIRE ALARM DEVICES SHALL BE INSTALLED IN WIREMOLD.

FIRE ALARM DIAGRAM



E5.2

ī Ds Project Number 24167-1000

Schedules

IDS Drawing Title Fire Alarm Diagram, Detail and Panel

 \circ 2025 integrated $ext{design}$ solutions, LLC

	Project Designer
	T. Morgan
Project A	Architect / Engineer
	T. Morgan
	Drawn By
	T. Morgan
	Q.M. Review
	T. Carron
	Approved
	M. Nowicki
	Drawing Scale
	No Scale
Issued for	Issue Date
Quality Management Review	01-09-2025
Bids	01-31-2025

501 W Columbia Ave Belleville, MI 48111 Key Plan

Project Administrator

A. Maurer

RAHS Belleville High School

Van Buren Public Schools



Project Title

INTEGRATED design SOLUTIONS architecture engineering interiors & technology 1441 west long lake, suite 200 troy, michigan 48098 5211 cascade road SE, suite 300 grand rapids, michigan 49546

248.823.2100

