

# DUNELAND SCHOOL CORPORATION

## ALTERNATIVE CLASSROOM RENOVATION AT: CHESTERTON MIDDLE SCHOOL

651 W. MORGAN AVENUE, CHESTERTON, INDIANA 46304  
TRIA PROJECT#: 21-019

### GENERAL BUILDING CODE REQUIREMENTS

**BUILDING CODES REFERENCED:**  
2012 INTERNATIONAL BUILDING CODE WITH 2014 INDIANA AMENDMENTS  
2006 INTERNATIONAL PLUMBING CODE 2ND EDITION AMENDED INDIANA 2012  
2008 NATIONAL ELECTRICAL CODE WITH 2009 INDIANA AMENDMENTS  
2012 INTERNATIONAL MECHANICAL CODE WITH 2014 INDIANA AMENDMENTS  
INDIANA ENERGY CONSERVATION CODE 2010  
2012 INTERNATIONAL FIRE CODE WITH 2014 INDIANA AMENDMENTS  
2012 INTERNATIONAL FUEL GAS CODE 2ND EDITION WITH 2014 INDIANA AMENDMENTS

**OCCUPANCY CLASSIFICATION:**  
EDUCATIONAL GROUP E

**TYPE OF CONSTRUCTION:**  
EXISTING: II-B

**DESIGN FIRM REGISTRATION:**  
THOMAS R. SZURGOT  
INDIANA LICENSE NUMBER: AR10800173

### SCHOOL BOARD

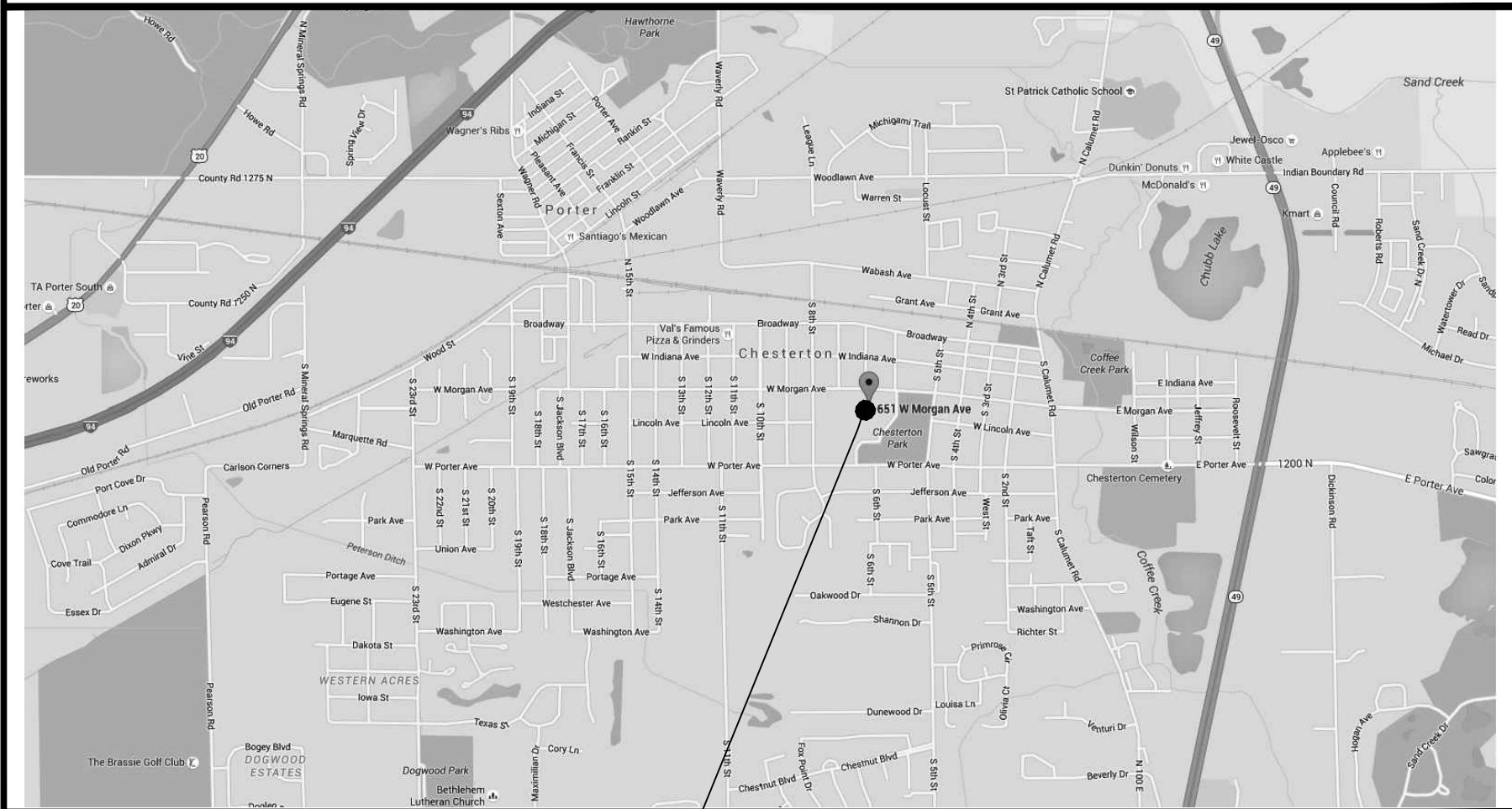
**PRESIDENT**  
**VICE PRESIDENT**  
**BOARD SECRETARY**  
**BOARD MEMBER**  
**BOARD MEMBER**

**BRANDON KROFT**  
**ALAYNA LIGHTFOOT FOL**  
**TOM SCHNABEL**  
**RONALD STONE**  
**TIM MCGINTY**

**SUPERINTENDENT**

**DR. CHIP PETTIT**

### SITE LOCATION MAP



SITE LOCATION

### DRAWING INDEX

**T1.00** TITLE SHEET, SITE LOCATION MAP, INDEX, AND GENERAL BUILDING CODE REQUIREMENTS

#### ARCHITECTURAL

**AG00.00** SYMBOLS AND ABBREVIATIONS AND TYPICAL MOUNTING HEIGHTS  
**A01.0** PARTIAL EXISTING FLOOR PLAN  
**A01.1** PARTIAL EXISTING REFLECTED CEILING PLAN  
**A1.10** PARTIAL FLOOR PLAN  
**A2.00** DOOR AND FRAME SCHEDULE, DOOR TYPES, DETAILS, WALL TYPES, AND NOTES  
**A7.10** PARTIAL REFLECTED CEILING PLAN  
**A8.10** PARTIAL ROOF PLAN AND DETAILS  
**A9.10** PARTIAL FLOOR FINISH PLAN, ROOM FINISH SCHEDULE, AND NOTES

#### MECHANICAL

**M0.10** EXISTING PARTIAL FLOOR PLAN - MECHANICAL  
**M0.20** EXISTING PARTIAL ROOF PLAN - MECHANICAL  
**M1.10** PARTIAL FLOOR PLAN - VENTILATION  
**M1.20** PARTIAL FLOOR PLAN - PIPING  
**M2.10** PARTIAL FLOOR PLAN - MECHANICAL  
**M3.00** SCHEDULES - VENTILATION  
**M3.10** SCHEDULES - MECHANICAL  
**M4.00** DETAILS - MECHANICAL  
**M4.10** DETAILS - MECHANICAL  
**M4.20** DETAILS - MECHANICAL  
**M5.00** NOTES - MECHANICAL  
**M6.00** ABBREVIATIONS - MECHANICAL

#### ELECTRICAL

**E0.10** EXISTING PARTIAL FLOOR PLAN - ELECTRICAL  
**E1.10** PARTIAL FLOOR PLAN - ELECTRICAL - LIGHTING  
**E2.10** PARTIAL FLOOR PLAN - ELECTRICAL - POWER  
**E3.00** NOTES AND SCHEDULES - ELECTRICAL

### CONTRACTOR SCOPE OF WORK

CONTRACTOR RESPONSIBLE FOR INSTALLATION OF MECHANICAL SYSTEMS ONLY. ALL OTHER WORK IS BY OTHERS.

ARCHITECT:

### TRIA ARCHITECTURE, INC.

West Suburban Office: 901 McClintock Drive, Suite 100  
Burr Ridge, Illinois 60521

South Suburban Office: 1820 Ridge Road, Suite 209  
Homewood, Illinois 60430

Indiana Office: 436 Sand Creek Drive N, Suite 105  
Chesterton, Indiana 46304

Company Main: 630.455.4500 Fax: 630.455.4040  
www.TriaArchitecture.com

M.E.P. CONSULTANT:

### OAS, LLC.

769 Heartland Dr., Unit A  
Sugar Grove, Illinois 60554

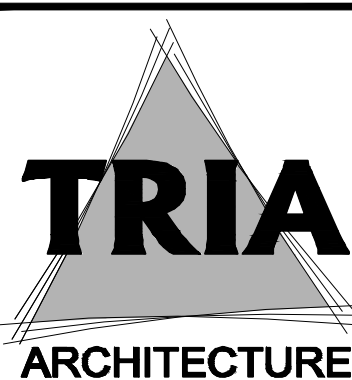
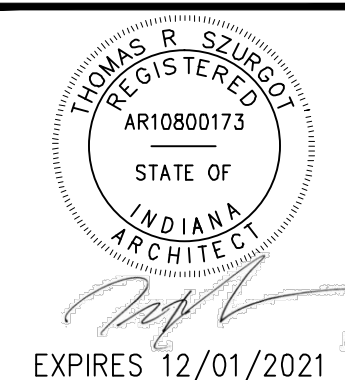
Phone: 630.538.1996  
www.oasllc.net

### ISSUED FOR CONSTRUCTION:

JUNE 15, 2021

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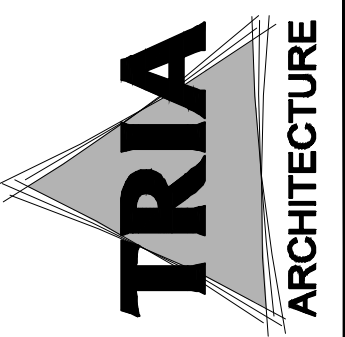
REVISIONS:

T1.00

	SAFETY REFERENCE ROOM INFORMATION TAG		2'x4' RECESSED FLUORESCENT FIXTURE	CJ	CONTROL JOINT	PTD	PAPER TOWEL DISPENSER
	EXIT X		RECESSED DOWNLIGHT	CT	CERAMIC TILE	PTTD	PAPER TOWEL TRASH DISPOSAL
	SAFETY REFERENCE EXIT INFORMATION TAG		HVAC SUPPLY	CMU	CONCRETE MASONRY UNIT	RBR	RUBBER
	SAFETY REFERENCE EGRESS PATH		HVAC RETURN	CP	CONDENSATE PIPE	RBB	RUBBER BASE
	BREAK LINE		S.A.T. CEILING	CPT	CARPET	RBT	RUBBER TILE FLOORING
	WINDOW TAG		PLASTER OR GYP. BD.	CU	CONDENSING UNIT	RD	ROOF DRAIN
	DOOR TAG			DF	DRINKING FOUNTAIN	RH	ROOF HATCH
	NORTH ARROW			DS	DOWNSPOUT	RTU	ROOFTOP UNIT
	SECTION TAG			EF	EXHAUST FAN	RST	RUBBER STAIR TREADS AND RISERS
	ELEVATION TAG			EP	ELECTRICAL PENETRATION	REF	REFRIGERATOR
	DETAIL TAG / DRAWING TITLE			EQ	EQUAL	SAT	SUSPENDED ACOUSTICAL TILE
	WALL TYPE TAG			ETR	EXISTING TO REMAIN	SD	SOAP DISPENSER
	COLUMN LINE TAG			EWC	ELECTRIC WATER CHILLER	SGT	STRUCTURAL GLAZED TILE
				EX	EXISTING	SIM	SIMILAR
				EXP	EXPOSED	SND	SANITARY NAPKIN DISPOSAL
				FD	FLOOR DRAIN	SNP	SANITARY NAPKIN DISPENSER
				F.E.	FIRE EXTINGUISHER	STL	STEEL
				F.E.C.	FIRE EXTINGUISHER CABINET	TDU	TRASH DISPOSAL UNIT
				FP	FIRE PROTECTION	TRZ	TERRAZZO
				GB	GRAB BAR	TTD	TOILET TISSUE DISPENSER
				GP	GAS PIPING	TV	TELEVISION
				GYP.	GYP SUM BOARD	TYP	TYPICAL
				HC	HANDICAPPED ACCESSIBLE	UR	URNAL
				HM	HOLLOW METAL	VCT	VINYL COMPOSITE TILE
				LAV	LAVATORY	V.I.F.	VERIFY IN FIELD
				M.E.	MATCH EXISTING	VP	VENT PIPE
				M	MIRROR	WC	WATER CLOSET
				MO	MASONRY OPENING	WD	WOOD
				MTL	METAL	WF	WASH FOUNTAIN
				MUA	MAKE-UP AIR		
				N.I.C.	NOT IN CONTRACT		
				OH	OPPOSITE HAND		
				PL	PLASTER		
				FRT	FORCELAIN TILE		
				PT	PAINT		

Diagram illustrating the minimum clearances for various wall-mounted equipment:

- FIRE EXTINGUISHER:** 4'-0" TO CENTERLINE OF MOUNTING BRACKET
- WALL OUTLET:** 1'-4" TO TOP OF OUTLET COVER
- WALL OUTLET:** 4'-0" TO TOP OF OUTLET COVER
- WALL SWITCH:** 4'-0" TO TOP OF WALL SWITCH COVER
- A/V DEVICE:** 6'-6" MIN. CENTER OF A/V DEVICE
- AUTOMATIC ELECTRIC HAND DRYER:** 4'-0" TO TOP OF INT.
- COAT HOOK:** 4'-6"
- SANITARY NAPKIN DISPENSER:** 5'-0" TO TOP OF DISPENSER
- TRASH DISPOSAL UNIT:** 4'-0" TO TOP OF DISPOSAL UNIT
- ROOM SIGNAGE:** 5'-0" AFF. CENTER OF SIGN
- FIRE EXTINGUISHER CABINET:** 4'-0" TO CENTERLINE OF MOUNTING BRACKET



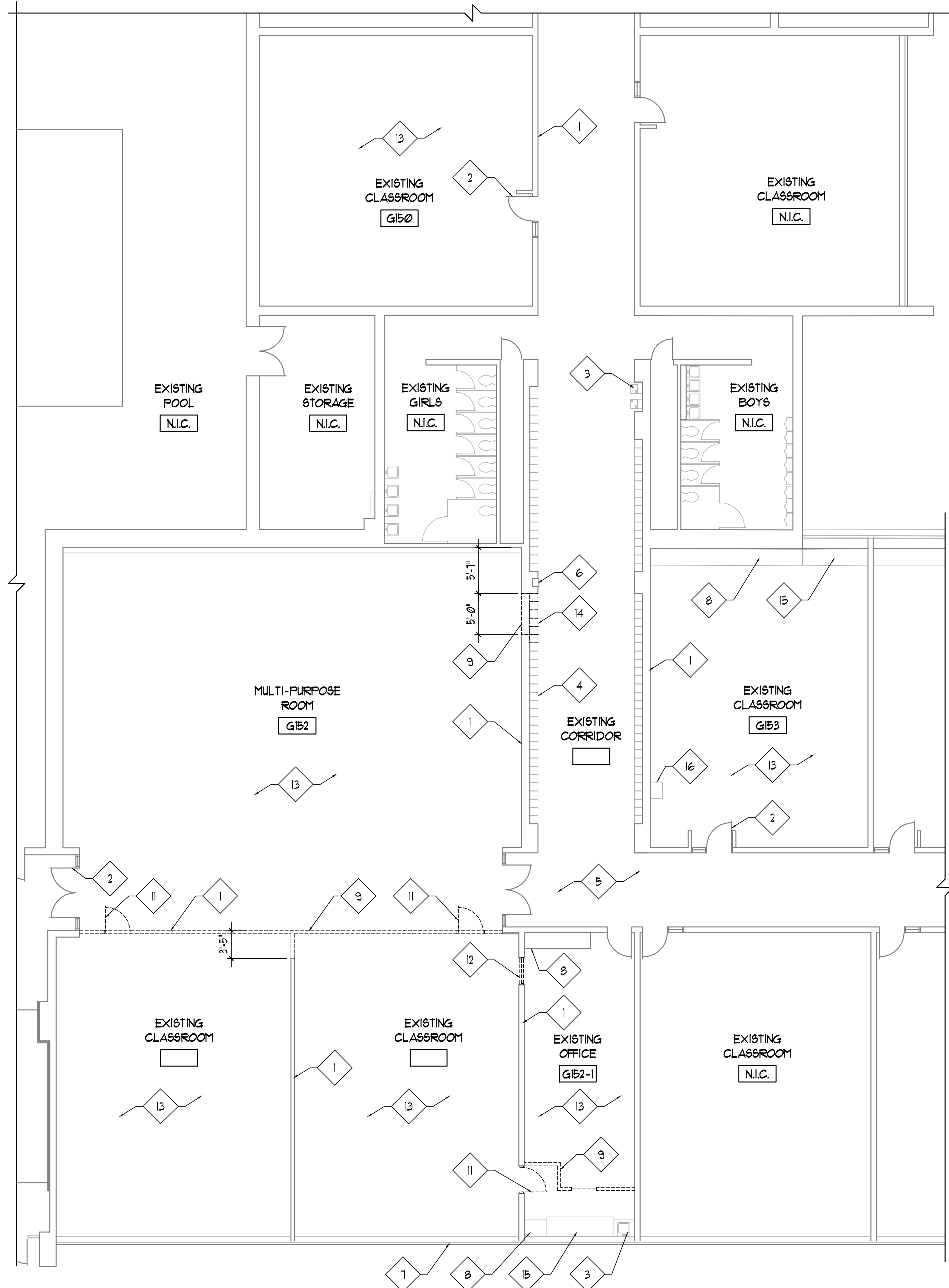
**QAS**  
Griffing & Arnold  
Sustainability, LLC  
769 HEARTLAND DR., UNIT A SUGAR GROVE, ILLINOIS 60054 (630) 538-1996  
HELP.P.P. CONSULTANTS

**DUNELAND SCHOOL CORPORATION**  
**ALTERNATIVE CLASSROOM RENOVATION AT:**  
**CHESTERTON MIDDLE SCHOOL**  
**651 W MORGAN AVE, CHESTERTON, IN. 46304**

PROJECT MANAGER: TRS	<u>1</u>
DRAWN BY:	<u>1</u>
	<u>3</u>
ISSUED FOR CONSTRUCTION:	<u>4</u>
6/15/21	<u>5</u>

# SYMBOLS AND ABBREVIATIONS AND TYPICAL MOUNTING HEIGHTS

AG0.00



1 PARTIAL EXISTING FLOOR PLAN  
1/4" = 1'-0"

### EXISTING PLAN GENERAL NOTES

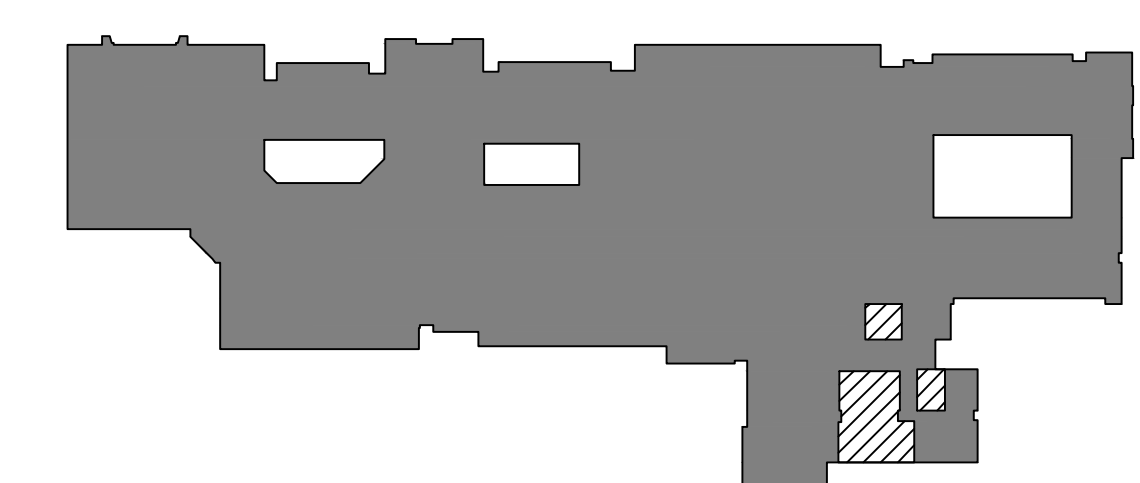
1. REFER TO FLOOR PLANS FOR SCOPE OF NEW WORK.
2. FIELD VERIFY ALL EXISTING CONDITIONS. IN THE EVENT THAT AN ITEM NOT SHOWN ON THE DRAWINGS CONFLICTS WITH WORK UNDER THIS CONTRACT, CONTACT THE ARCHITECT PRIOR TO REMOVAL OF THAT ITEM. ITEMS SHOWN ARE INDICATED TO GIVE A GENERAL SCOPE OF WORK. ANY ITEMS REQUIRING REMOVAL/DEMOLITION TO PROPERLY PERFORM CONTRACT WORK BUT NOT SPECIFICALLY SHOWN, SHALL BE REMOVED BY THE CONTRACTOR AT NO ADDITIONAL COST, PROVIDING THE CONDITION WAS VISIBLE DURING BIDDING.
3. SHORE OR BRACE ALL EXISTING CONSTRUCTION AS REQUIRED TO PERFORM WORK.
4. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CORING, CUTTING, PATCHING, INFILLING, REPAIRING, REFINISHING, AND REMOVAL/REPLACEMENT OF BUILDING CONSTRUCTION REQUIRED TO ACCOMMODATE THE INSTALLATION OR REMOVAL OF THEIR WORK. ALL PATCHING, REPAIRING, AND REFINISHING SHALL BE PERFORMED BY THOSE REGULARLY INVOLVED IN THAT TRADE AND SHALL MATCH THE ADJACENT CONSTRUCTION.
5. REMOVE ALL EQUIPMENT LOCATED ON OR WITHIN WALL CONSTRUCTION SCHEDULED TO BE REMOVED, SO AS TO NOT DISRUPT EXISTING BUILDING OPERATIONS. DISCONNECT ALL ELECTRICAL WIRING, PULL WIRE BACK TO NEAREST JUNCTION BOX OR TO SERVICE.
6. PROTECT ALL EXISTING FINISHES, EQUIPMENT, AND ADJACENT WORK NOT SCHEDULED TO BE REMOVED FROM DAMAGE DURING CONSTRUCTION. ANY DAMAGED FINISHES, EQUIPMENT, OR ADJACENT SURFACES SHALL BE REPAIRED OR REPLACED BY CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
7. THE OWNER HAS FIRST RIGHT OF REFUSAL FOR ANY MATERIAL, EQUIPMENT OR FIXTURE TO BE REMOVED.
8. WHERE POSSIBLE - RUN NEW ELECTRICAL WORK INSIDE WALL AND CEILING CONSTRUCTION (NEW AND EXISTING) - REMOVE EXISTING WALL/CEILING CONSTRUCTION SCHEDULED TO REMAIN AS REQUIRED TO PERFORM WORK INDICATED - PATCH ALL CONSTRUCTION TO PROVIDE A FINISHED CONDITION.
9. REMOVE/RELOCATE ALL ACCESSORIES ON WALL CONSTRUCTION TO BE REMOVED.
10. GENERAL CONTRACTOR TO COORDINATE ALL ARCHITECTURAL WORK WITH INDICATED MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION WORK - NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO PERFORMING WORK.
11. PATCH ALL EXISTING OPENINGS AT ALL EQUIPMENT SCHEDULED TO BE REMOVED, INCLUDING ABOVE CEILING- MATCH EXISTING WALL CONSTRUCTION IN MATERIAL THICKNESS, SIZE AND COLOR, UNLESS NOTED OTHERWISE - REFER TO MECHANICAL, ELECTRICAL, AND FIRE PROTECTION DRAWINGS.
12. ALL EXISTING FLOOR FINISH SCHEDULED TO REMAIN SHALL BE PROTECTED DURING CONSTRUCTION - CONTRACTOR TO PROVIDE FLYWOOD, MDF AND/OR PLASTIC AS REQUIRED TO PROTECT FLOORING FROM DAMAGE DURING CONSTRUCTION - ANY DAMAGE TO BE REPAIRED BY CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
13. OWNER TO REMOVE AND REINSTALL ALL LOOSE FURNITURE AND ELECTRONIC EQUIPMENT UNLESS OTHERWISE NOTED - CONTRACTOR TO COORDINATE MOVING SCOPE AND STORAGE LOCATIONS WITH OWNER PRIOR TO BEGINNING ANY WORK.

### EXISTING PLAN REFERENCED NOTES

1. EXISTING WALL CONSTRUCTION TO REMAIN - PROTECT DURING CONSTRUCTION.
2. EXISTING DOOR AND FRAME TO REMAIN - PROTECT DURING CONSTRUCTION.
3. EXISTING PLUMBING FIXTURE TO REMAIN - PROTECT DURING CONSTRUCTION.
4. EXISTING LOCKERS TO REMAIN - PROTECT DURING CONSTRUCTION.
5. EXISTING FLOOR FINISH TO REMAIN - PROTECT DURING CONSTRUCTION.
6. EXISTING FIRE EXTINGUISHER CABINET TO REMAIN - PROTECT DURING CONSTRUCTION.
7. EXISTING WINDOW SYSTEM TO REMAIN - PROTECT DURING CONSTRUCTION.
8. EXISTING CASEWORK TO REMAIN - PROTECT DURING CONSTRUCTION.
9. EXISTING WALL TO BE REMOVED.
10. EXISTING DOOR AND FRAME TO BE REMOVED.
11. EXISTING WINDOW TO BE REMOVED.
12. EXISTING FLOOR FINISH AND ASSOCIATED WALL BASE TO BE REMOVED.
13. EXISTING LOCKERS TO BE REMOVED.
14. EXISTING MECHANICAL TO REMAIN - PROTECT DURING CONSTRUCTION.
15. EXISTING IT EQUIPMENT TO REMAIN - PROTECT DURING CONSTRUCTION.

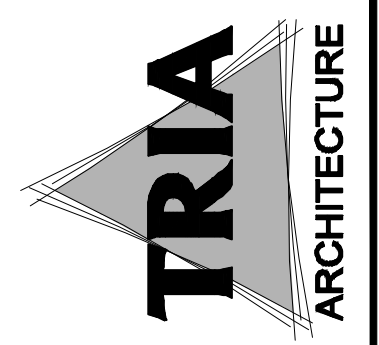
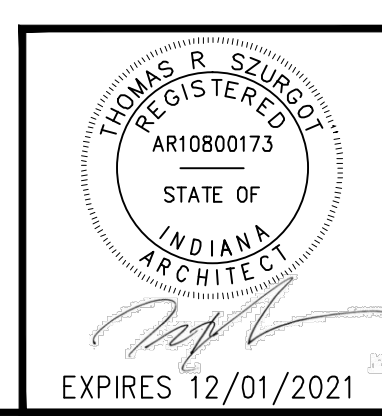
### LEGEND

- EXISTING CONSTRUCTION TO BE REMOVED.
- EXISTING CONSTRUCTION TO REMAIN.
- N.I.C. NOT IN CONTRACT



KEYPLAN  
NOT TO SCALE

- AREA OF WORK
- NOT IN SCOPE OF WORK



TRIA ARCHITECTURE  
7610 FERRIS BLVD., SUITE 100, ELLETTSBURG, MD 21734  
(410) 339-1996

DUNELAND SCHOOL CORPORATION  
ALTERNATIVE CLASSROOM RENOVATION AT:  
CHESTERTON MIDDLE SCHOOL  
651 W MORGAN AVE, CHESTERTON, IN. 46304

PROJECT NUMBER: 21-003	DATE: 6/1/21
PROJECT MANAGER: TBS	DATE: 6/1/21
DRAWN BY: TBS	DATE: 6/1/21
ISSUED FOR CONSTRUCTION: 6/1/21	DATE: 6/1/21
PARTIAL EXISTING FLOOR PLAN	

A0.10





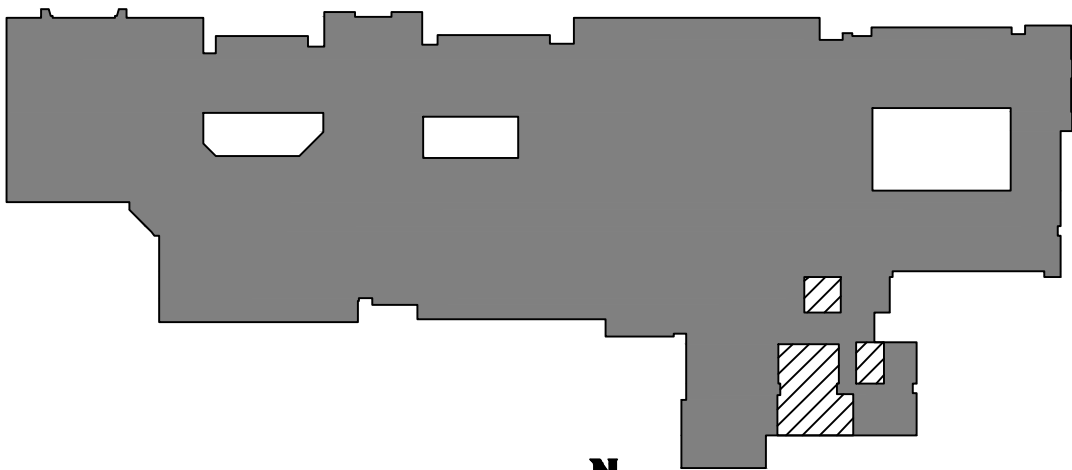
1 PARTIAL EXISTING REFLECTED CEILING PLAN  
1/8" = 1'-0"

LEGEND

- SUSPENDED ACOUSTICAL TILE CEILING TO BE REMOVED IN ITS ENTIRETY. REMOVE ALL LIGHTS, LOUVERS, AND OTHER DEVICES.
- LIGHT FIXTURE TO BE REMOVED - REFER TO ELECTRICAL DRAWINGS
- MECHANICAL SUPPLY DIFFUSER TO BE REMOVED - REFER TO MECHANICAL DRAWINGS
- EXISTING CONSTRUCTION TO BE REMOVED
- EXISTING CONSTRUCTION TO REMAIN
- N.I.C. NOT IN CONTRACT
- AREA OF EXISTING SUSPENDED CEILING SYSTEM TO BE REMOVED AND REINSTALLED AS REQUIRED FOR NEW CONSTRUCTION.

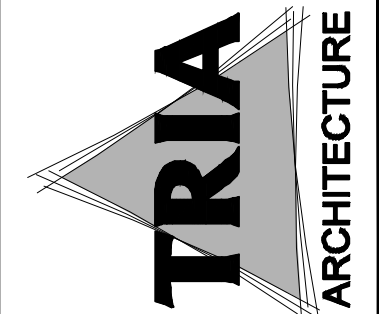
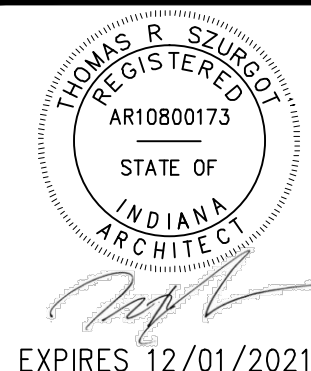
EXISTING REFLECTED CEILING PLAN  
GENERAL NOTES

- ALL EXISTING CEILING SYSTEMS, LIGHTS, EQUIPMENT AND CEILING MOUNTED SPEAKERS TO BE REMOVED IN THEIR ENTIRETY WHERE INDICATED - REFER TO MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION DRAWINGS.
- REFER TO ELECTRICAL PLANS FOR ADDITIONAL CEILING MOUNTED DEVICES AND EQUIPMENT TO BE REMOVED.
- CONTRACTOR TO VERIFY ALL EXISTING CEILING HEIGHTS PRIOR TO BEGINNING WORK ON ANY CEILING SCHEDULED TO RECEIVE WORK.
- FIELD VERIFY ALL EXISTING CONDITIONS. IN THE EVENT THAT AN ITEM NOT SHOWN ON THE DRAWINGS CONFLICTS WITH WORK UNDER THIS CONTRACT, CONTACT THE ARCHITECT PRIOR TO REMOVAL OF THAT ITEM. ITEMS SHOWN ARE INDICATED TO GIVE A GENERAL SCOPE OF WORK. ANY ITEMS REQUIRING REMOVAL/DEMOLITION TO PROPERLY PERFORM CONTRACT WORK BUT NOT SPECIFICALLY SHOWN, SHALL BE REMOVED BY THE CONTRACTOR AT NO ADDITIONAL COST, PROVIDING THE CONDITION WAS VISIBLE DURING BIDDING.
- SHORE OR BRACE ALL EXISTING CONSTRUCTION AS REQUIRED TO PERFORM DEMOLITION WORK.
- EACH CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CORING, CUTTING, PATCHING, INFILLING, REPAIRING, REFINISHING, AND REMOVAL/ REPLACEMENT OF BUILDING CONSTRUCTION REQUIRED TO ACCOMMODATE THE INSTALLATION OR REMOVAL OF THEIR WORK. ALL PATCHING, REPAIRING, AND REFINISHING SHALL BE PERFORMED BY THOSE REGULARLY INVOLVED IN THAT TRADE AND SHALL MATCH THE ADJACENT CONSTRUCTION.
- PROTECT ALL EXISTING FINISHES, EQUIPMENT, AND ADJACENT WORK NOT SCHEDULED TO BE REMOVED FROM DAMAGE DURING CONSTRUCTION. ANY DAMAGED FINISHES, EQUIPMENT, OR ADJACENT SURFACES SHALL BE REPAIRED OR REPLACED BY CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
- THE OWNER HAS FIRST RIGHT OF REFUSAL FOR ANY MATERIAL OR EQUIPMENT REMOVED.



KEYPLAN  
NOT TO SCALE

- AREA OF WORK
- NOT IN SCOPE OF WORK



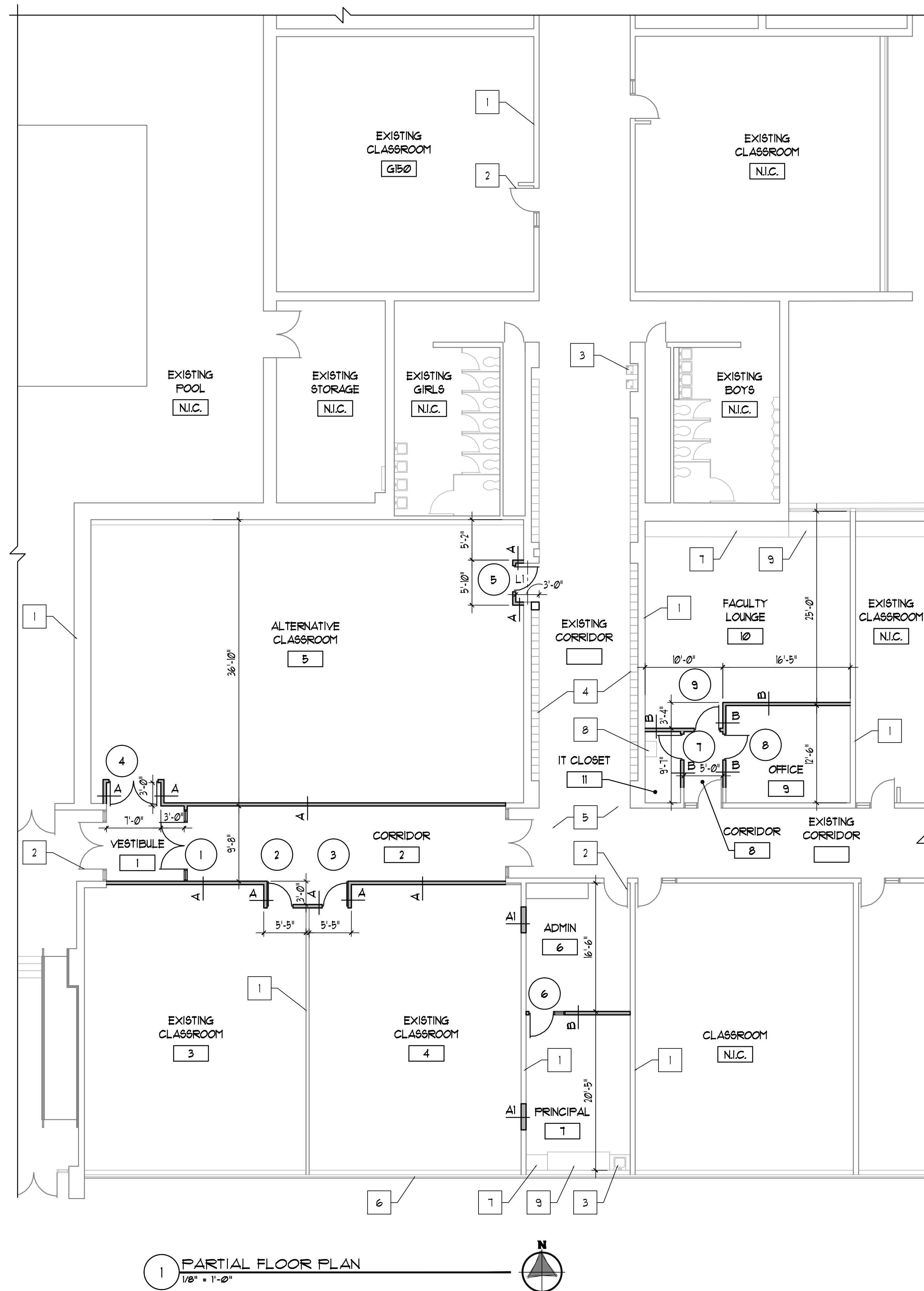
NEEPE CONSULTANT:  
DAS  
760 FERRIS DR., UNIT A, ELGIN, ILLINOIS 60120 (815) 539-1996

DUNELAND SCHOOL CORPORATION  
ALTERNATIVE CLASSROOM RENOVATION AT:  
CHESTERTON MIDDLE SCHOOL  
651 W MORGAN AVE, CHESTERTON, IN. 46304

PROJECT NUMBER: 21-003  
PROJECT MANAGER: TFS  
DRAWN BY: JFT  
ISSUED FOR CONSTRUCTION: 6/15/21  
PARTIAL EXISTING REFLECTED CEILING PLAN

A0.11





## FLOOR PLAN GENERAL NOTES

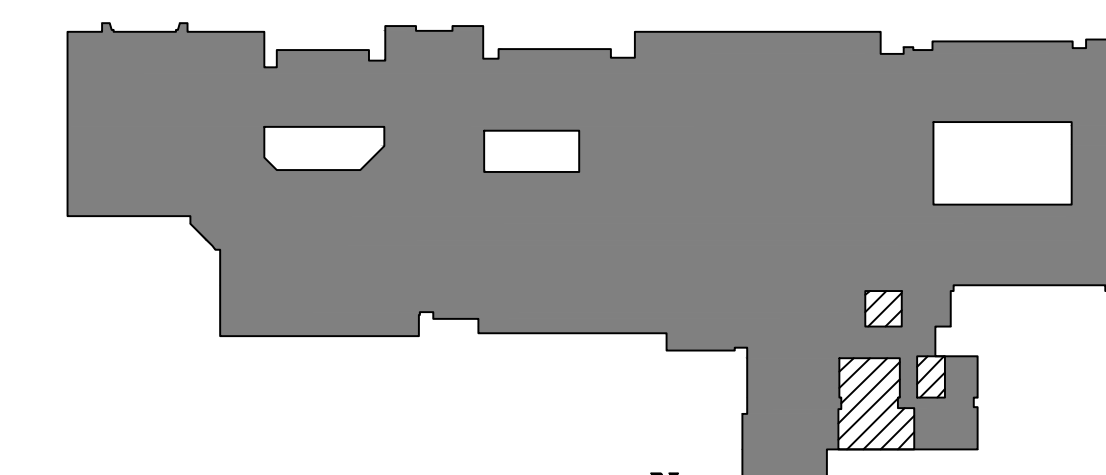
1. VERIFY EXACT DIMENSIONS OF ALL EXISTING CONDITIONS IN FIELD. GENERAL CONTRACTOR TO VERIFY AND COORDINATE ALL LAY OUTS AMONG ALL TRADES AFFECTED - NOTIFY ARCHITECT OF ANY CONFLICTS PRIOR TO INSTALLATION BY ANY TRADE.
2. REFER TO PROJECT MANUAL FOR PRODUCTS, MATERIALS, PROCEDURES AND ADDITIONAL INFORMATION NOT COVERED IN DRAWINGS.
3. PROTECT ALL EXISTING FINISHES, EQUIPMENT, AND ADJACENT WORK FROM DAMAGE DURING CONSTRUCTION. ANY DAMAGED FINISHES, EQUIPMENT, OR ADJACENT SURFACES SHALL BE REPAIRED OR REPLACED BY CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
4. PATCH EXISTING CONSTRUCTION AT ALL LOCATIONS OF ITEMS SCHEDULED TO BE REMOVED. FINISH TO MATCH ADJACENT SURFACES IN MATERIAL AND TEXTURE. TOOTH-IN ALL MASONRY IN WHOLE UNITS.
5. PATCH AND SMOOTH EXISTING FLOOR TO MATCH ADJACENT SURFACES AS REQUIRED TO INSTALL NEW FLOOR FINISH.
6. AT ALL FLOOR SLABS TO RECEIVE FLOOR FINISH, CONTRACTOR SHALL GRIND HIGH SPOTS, FILL DEPRESSIONS AND INFILL ANY UNUSED PENETRATIONS IN THE FLOOR SLAB WITH A MATERIAL SUITABLE TO THE FLOORING MANUFACTURER. ALL CRACKS LARGER THAN 1/8" ARE TO BE GROUND OUT AND FILLED AS PER THE MANUFACTURER'S RECOMMENDATIONS.
7. PROVIDE LINTELS ABOVE ALL DOORS, PENETRATIONS, LOUVERS, ETC. IN MASONRY WALLS - REFER TO LINTEL SCHEDULE ON STRUCTURAL DRAWINGS - REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL LINTEL LOCATIONS REQUIRED DUE TO DUCT PENETRATIONS, ETC.
8. PATCH, PAINT, AND CLEAN EXISTING WALLS, FLOORS, AND CEILINGS AT ITEMS SCHEDULED TO BE REMOVED.
9. REFER TO MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
10. REMOVE EXISTING WALL CONSTRUCTION AS REQUIRED TO INSTALL MECHANICAL, PLUMBING, AND ELECTRICAL WORK - PATCH WALLS AT REMOVED MECHANICAL, ELECTRICAL AND PLUMBING EQUIPMENT TO BE REMOVED.
11. CUT, CORE, AND PATCH CONCRETE SLABS AS REQUIRED TO INSTALL PLUMBING, MECHANICAL, AND ELECTRICAL WORK.
12. OWNER TO REMOVE AND REINSTALL ALL LOOSE FURNITURE AND ELECTRONIC EQUIPMENT UNLESS OTHERWISE NOTED - CONTRACTOR TO COORDINATE MOVING SCOPE AND STORAGE LOCATIONS WITH OWNER PRIOR TO BEGINNING ANY WORK.
13. REFER TO SHEET A2.00 FOR WALL TYPES.

## FLOOR PLAN REFERENCED NOTES

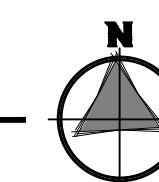
1. EXISTING WALL CONSTRUCTION - PROTECT DURING CONSTRUCTION.
2. EXISTING DOOR AND FRAME - PROTECT DURING CONSTRUCTION.
3. EXISTING PLUMBING FIXTURE - PROTECT DURING CONSTRUCTION.
4. EXISTING LOCKERS - PROTECT DURING CONSTRUCTION.
5. EXISTING FLOOR FINISH - PROTECT DURING CONSTRUCTION.
6. EXISTING WINDOW SYSTEM - PROTECT DURING CONSTRUCTION.
7. EXISTING CASEWORK - PROTECT DURING CONSTRUCTION.
8. EXISTING IT EQUIPMENT - PROTECT DURING CONSTRUCTION.
9. EXISTING MECHANICAL EQUIPMENT - PROTECT DURING CONSTRUCTION.

## LEGEND

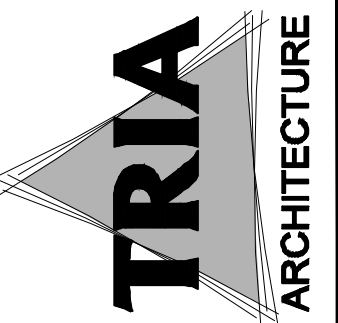
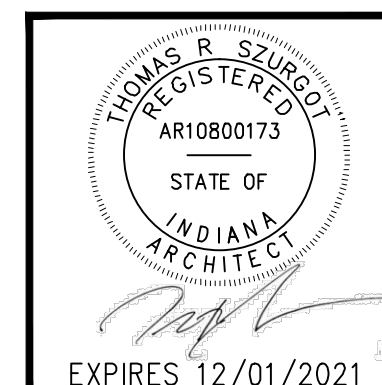
---	EXISTING CONSTRUCTION
---	NEW CONSTRUCTION
N.I.C.	NOT IN CONTRACT
LI	LINTEL - REFER TO A2.00



KEYPLAN  
NOT TO SCALE



AREA OF WORK  
NOT IN SCOPE OF WORK



TRIA ARCHITECTURE  
760 FERRIS BLVD., SUITE 100, ELLETTSBURG, MD 21734  
(410) 339-1996

DUNELAND SCHOOL CORPORATION  
ALTERNATIVE CLASSROOM RENOVATION AT:  
CHESTERTON MIDDLE SCHOOL  
651 W MORGAN AVE, CHESTERTON, IN. 46304

PROJECT NUMBER: 31-003  
PROJECT MANAGER: TKS  
DESIGN BY: TKS  
ISSUED FOR CONSTRUCTION: 6/16/21  
PARTIAL FLOOR PLAN

A1.10

DOOR AND FRAME SCHEDULE																	
OP'NG NO.	DOOR						FRAME					FRAME DETAILS				ROOM	
	SIZE		TYPE	MAT'L	HDWR SET	PROT. RATING HOURS	SIZE		TYPE	MAT'L	PROT. RATING HOURS	REF. NOTES	HEAD	JAMB	JAMB		SILL
	WIDTH	HEIGHT					WIDTH	HEIGHT									
1	PAIR 3'-0"	7'-0"	FG	WOOD	Ø3	-	9'-8"	7'-2"	C	HM	-	1	1/A2.00	2/A2.00	2/A2.00	-	CORRIDOR
2	3'-0"	7'-0"	N	WOOD	Ø1	3/4	3'-4"	7'-2"	A	HM	-		1/A2.00	2/A2.00	2/A2.00	-	CLASSROOM
3	3'-0"	7'-0"	N	WOOD	Ø1	3/4	3'-4"	7'-2"	A	HM	-		1/A2.00	2/A2.00	2/A2.00	-	CLASSROOM
4	PAIR 3'-0"	7'-0"	N	WOOD	Ø2	3/4	6'-4"	7'-2"	A	HM	-	1, 2	1/A2.00	2/A2.00	2/A2.00	-	CLASSROOM
5	3'-0"	7'-0"	N	WOOD	Ø1	3/4	3'-4"	7'-2"	A	HM	-		1/A2.00	2/A2.00	2/A2.00	-	CLASSROOM
6	3'-0"	7'-0"	F	WOOD	Ø4	-	4'-8"	7'-2"	B	HM	-		1/A2.00	2/A2.00	2/A2.00	-	OFFICE
7	3'-0"	7'-0"	F	WOOD	Ø5	-	3'-4"	7'-2"	A	HM	-		1/A2.00	2/A2.00	2/A2.00	-	IT
8	3'-0"	7'-0"	N	WOOD	Ø4	-	3'-4"	7'-2"	A	HM	-		1/A2.00	2/A2.00	2/A2.00	-	OFFICE
9	3'-0"	7'-0"	N	WOOD	Ø4	-	3'-4"	7'-2"	A	HM	-		1/A2.00	2/A2.00	2/A2.00	-	LOUNGE

DOOR AND FRAME ABBREVIATIONS	
HM	HOLLOW METAL
TYP	TYPICAL

DOOR AND FRAME REFERENCED NOTES	
1.	REMOVABLE MULLION.
2.	OPERATIONAL DESCRIPTION: ENTRANCE BY CREDENTIAL READER, SECURITY SYSTEM OR MANUAL KEY OVER-RIDE. ALWAYS FREE EGRESS. FAIL SECURE.

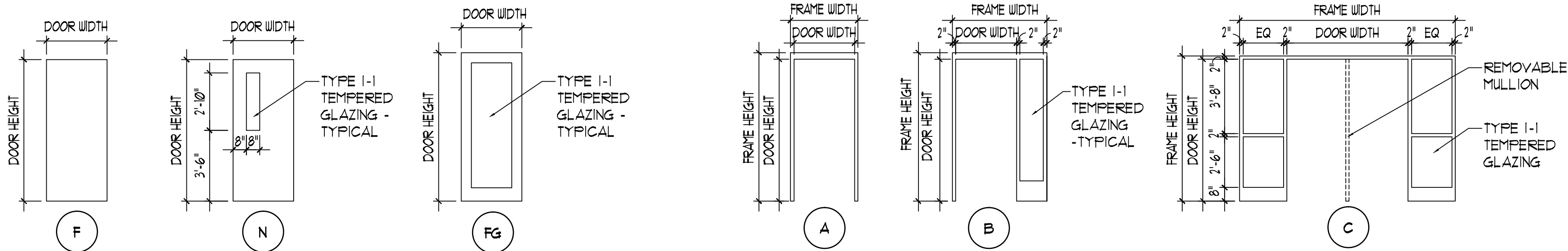
DOOR AND FRAME GENERAL NOTES	
1.	CONTRACTOR TO VERIFY DIMENSIONS, QUANTITIES AND CONDITIONS OF ALL ROUGH OPENINGS IN FIELD.
2.	GROUT JAMBS SOLID AT ALL FRAMES INSTALLED IN MASONRY OPENINGS.
3.	REFER TO WALL TYPES FOR WALL CONSTRUCTION AT DOOR LOCATIONS.
4.	REFER TO SPECIFICATIONS FOR DESCRIPTIONS OF HARDWARE SETS.
5.	ALL EXPOSED ANCHORS ON HOLLOW METAL FRAMES ARE TO BE COUNTERSUNK INTO FRAMES, COVERED IN BONDO, SANDED SMOOTH, AND PAINTED TO MATCH FRAME.
6.	HEIGHT OF DOOR OPERATING HARDWARE SHALL BE NO LESS THAN 34" AND NO MORE THAN 48" ABOVE FINISHED FLOOR. COORDINATE EXACT HEIGHT WITH OWNER AND ARCHITECT.
7.	DOOR HARDWARE SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST TO OPERATE.
8.	DOOR OPERATING FORCE SHALL NOT EXCEED: EXTERIOR HINGED DOORS: 85 LB INTERIOR HINGED DOORS: 5 LB
9.	ALL EGRESS DOORS ARE TO UTILIZE KEYLESS LOCKETS ON THE EGRESS SIDE. NO FLUSH BOLTS, DEAD OR DRAW BOLTS, ETC. WILL BE ALLOWED.
10.	REFER TO MECHANICAL DRAWINGS FOR ANY 1" DOOR UNDERCUTS OR DOOR VENTILATION LOUVERS REQUIRED.

LOOSE LINTEL SCHEDULE				
MARK	SIZE	END BEARING	SHAPE	REMARKS
L1	L3-1/2"x3-1/2"x5/16"	8" MIN		---
L2	L5"x3-1/2"x5/16"	8" MIN		---

NOTES:

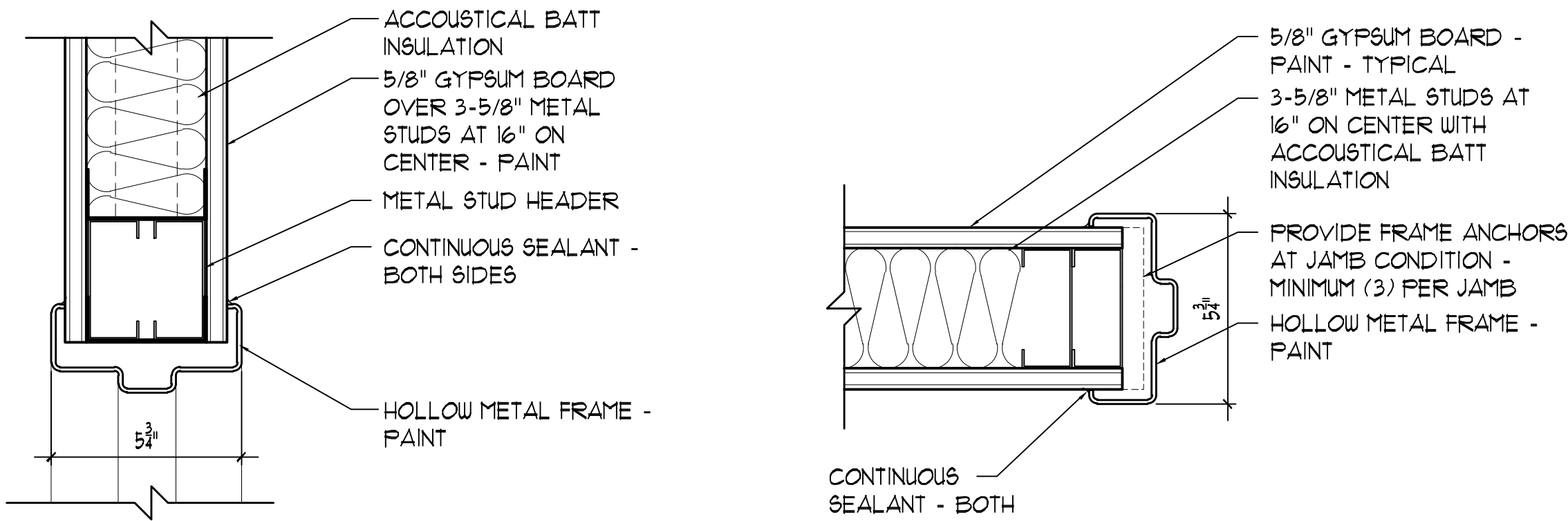
- PROVIDE 1 ANGLE FOR EACH 4" OF WALL THICKNESS
- PLATES ON LINTELS SHALL BE SHOP WELDED TO MEMBER W/ 1/4"x2" FILLET WELDS AT 12" O.C. STAGGERED. PLATES TO BE 1/2" LESS THAN NOMINAL WIDTH OF WALL.
- WELD TOGETHER ALL BACK-TO-BACK ANGLES.
- CONTRACTOR TO FIELD VERIFY EXISTING WALL CONSTRUCTION PRIOR TO FABRICATING LINTELS.

WALL TYPE GENERAL NOTES	
1.	PROVIDE HORIZONTAL JOINT REINFORCING AT FIRST TWO COURSES AT TOP AND BOTTOM OF MASONRY WALLS AND ABOVE AND BELOW MASONRY OPENINGS.
2.	WALL TYPES TO EXTEND ABOVE AND BELOW OPENINGS AND PENETRATIONS.
3.	WALL TYPES TO EXTEND UP AND AROUND ALL INTERFERENCES TO UNDERSIDE OF DECK ABOVE.
4.	TOOTH-IN MASONRY INTO EXISTING WALLS IN WHOLE UNITS.



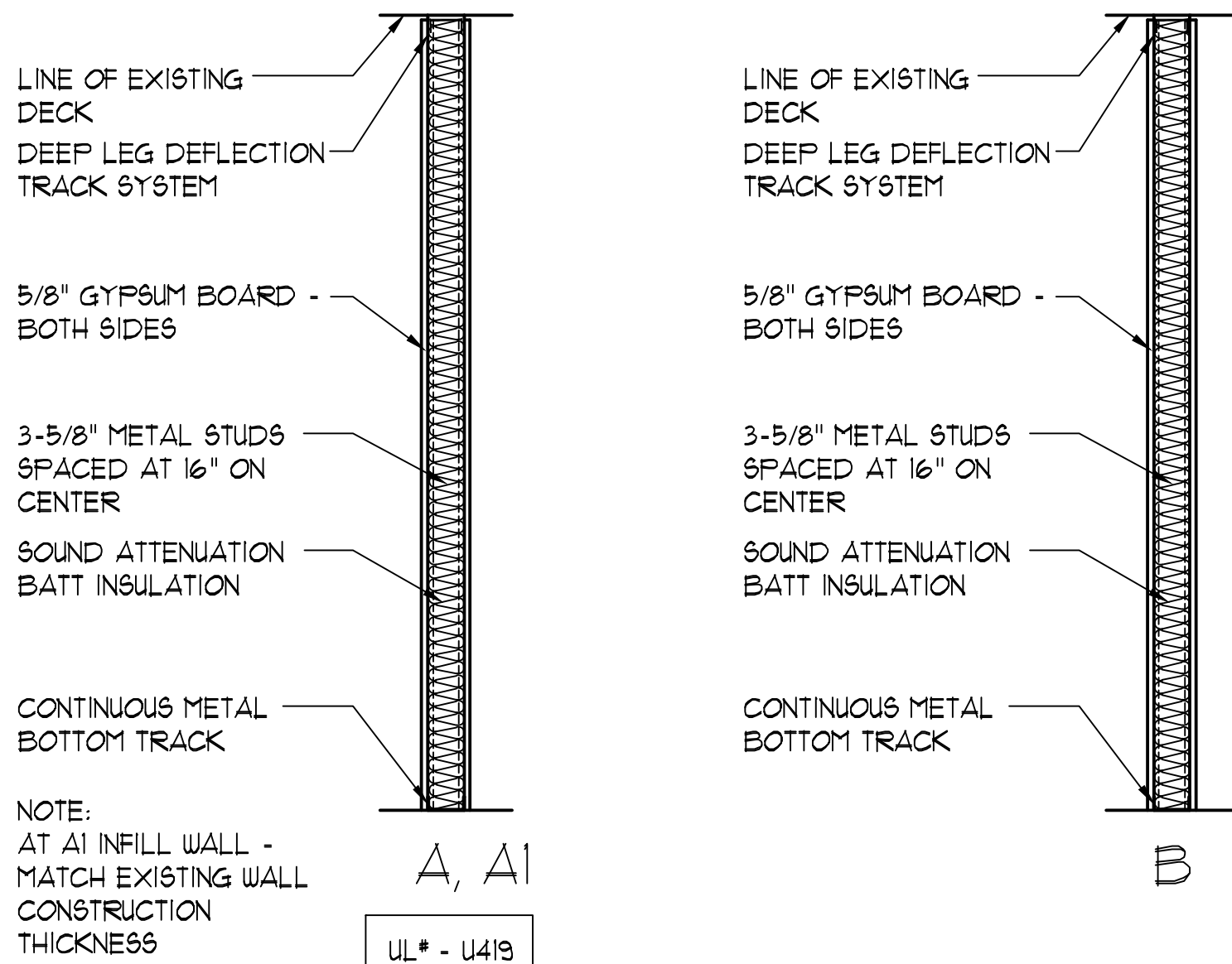
DOOR TYPES  
NOT TO SCALE

FRAME TYPES  
NOT TO SCALE



1 HEAD DETAIL  
3" = 1'-0"

2 JAMB DETAIL  
3" = 1'-0"



WALL TYPES  
NOT TO SCALE

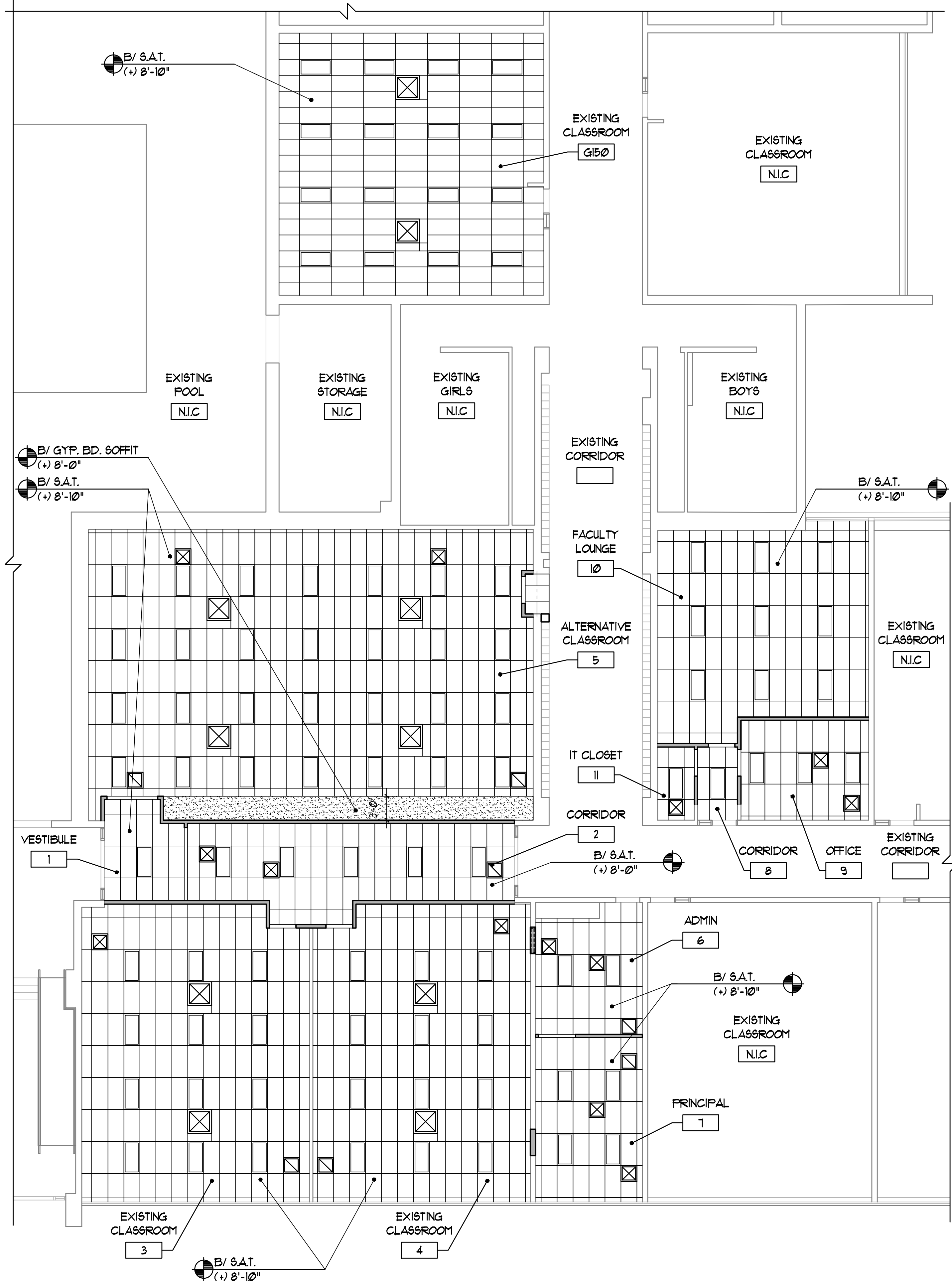
DUNELAND SCHOOL CORPORATION  
ALTERNATIVE CLASSROOM RENOVATION AT:  
CHESTERTON MIDDLE SCHOOL  
651 W MORGAN AVE, CHESTERTON, IN. 46304

PROJECT NUMBER: 31-03	DATE: 05/16/2020
PROJECT MANAGER: TBS	PROJECT MANAGER: TBS
DRAWN BY: TBS	DRAWN BY: TBS
ISSUED FOR CONSTRUCTION: 6/16/21	ISSUED FOR CONSTRUCTION: 6/16/21

DOOR AND FRAME SCHEDULE, DOOR TYPES, DETAILS, WALL TYPES, AND NOTES



A2.00



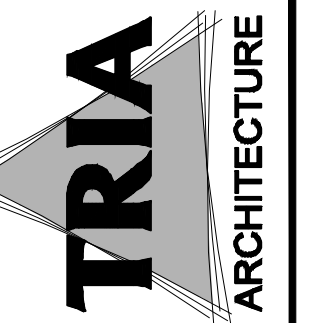
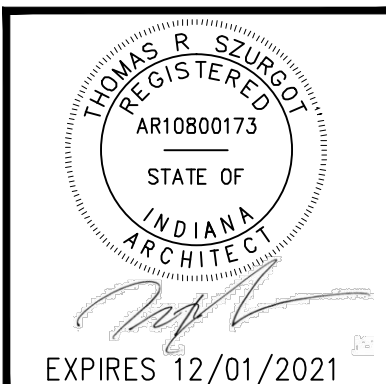
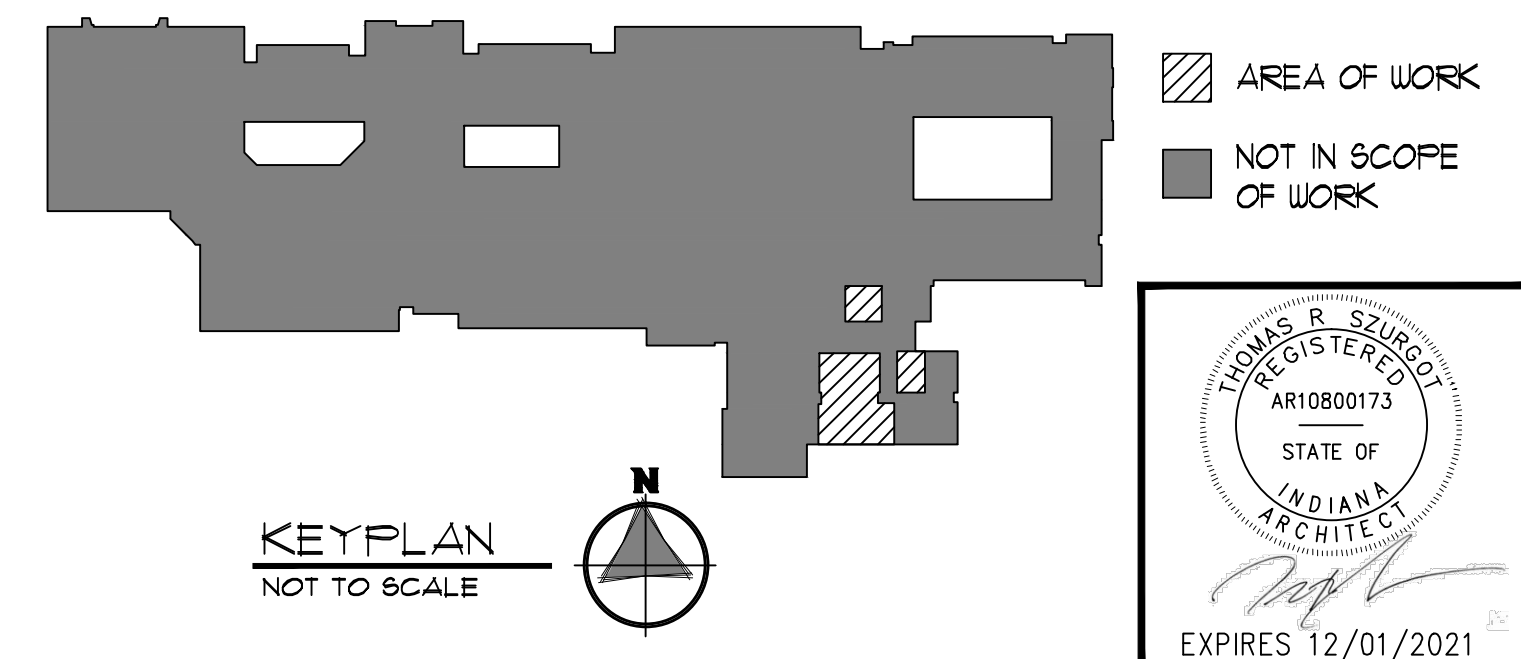
1 PARTIAL REFLECTED CEILING PLAN  
1/8" = 1'-0"

### LEGEND

- SUSPENDED ACOUSTICAL TILE CEILING TO REMAIN - PROTECT DURING CONSTRUCTION.
- 2'x4' SUSPENDED ACOUSTICAL TILE CEILING SYSTEM
- GYP. BOARD SOFFIT - 5/8" GYP. BOARD OVER 3-5/8" METAL STUD FRAMING AT 16" ON CENTER
- 2' x 4' EXISTING RECESSED LIGHT FIXTURE - REFER TO ELECTRICAL DRAWINGS
- 2' x 4' RECESSED LIGHT FIXTURE - REFER TO ELECTRICAL DRAWINGS
- EXISTING MECHANICAL SUPPLY DIFFUSER - REFER TO MECHANICAL DRAWINGS
- EXISTING MECHANICAL RETURN/EXHAUST GRILLE - REFER TO MECHANICAL DRAWINGS
- MECHANICAL VRF UNIT / SUPPLY DIFFUSER - REFER TO MECHANICAL DRAWINGS
- MECHANICAL RETURN/EXHAUST GRILLE - REFER TO MECHANICAL DRAWINGS

### REFLECTED CEILING PLAN GENERAL NOTES

- REFER TO MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS FOR ADDITIONAL AREAS OF ABOVE CEILING WORK. REMOVE AND PATCH OR REINSTALL EXISTING CEILINGS IN THESE LOCATIONS ONLY AS REQUIRED TO PROVIDE WORK INDICATED.
- CONTRACTOR TO VERIFY ALL EXISTING CEILING HEIGHTS PRIOR TO BEGINNING WORK ON ANY CEILING SCHEDULED TO RECEIVE WORK.
- FIELD VERIFY ALL EXISTING CONDITIONS. IN THE EVENT THAT AN ITEM NOT SHOWN ON THE DRAWINGS CONFLICTS WITH WORK UNDER THIS CONTRACT, CONTACT THE ARCHITECT PRIOR TO REMOVAL OF THAT ITEM. ITEMS SHOWN ARE INDICATED TO INDICATE THE SCOPE OF WORK. ANY ITEMS REQUIRING REMOVAL TO PROPERLY PERFORM CONTRACT WORK, BUT NOT SPECIFICALLY SHOWN, SHALL BE REMOVED BY THE CONTRACTOR AT NO ADDITIONAL COST, PROVIDING THE CONDITION WAS VISIBLE DURING BIDDING.
- SHORE OR BRACE ALL EXISTING CONSTRUCTION AS REQUIRED TO PERFORM WORK.
- EACH CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CORING, CUTTING, PATCHING, INFILLING, REPAIRING, REFINISHING, AND REMOVAL/REPLACEMENT OF BUILDING CONSTRUCTION REQUIRED TO ACCOMMODATE THE INSTALLATION OR REMOVAL OF THEIR WORK. ALL PATCHING, REPAIRING, AND REFINISHING SHALL BE PERFORMED BY THOSE REGULARLY INVOLVED IN THAT TRADE AND SHALL MATCH THE ADJACENT CONSTRUCTION.
- PROTECT ALL EXISTING FINISHES, EQUIPMENT, AND ADJACENT WORK NOT SCHEDULED TO BE REMOVED FROM DAMAGE DURING CONSTRUCTION. ANY DAMAGED FINISHES, EQUIPMENT, OR ADJACENT SURFACES SHALL BE REPAIRED OR REPLACED BY CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
- THE OWNER HAS FIRST RIGHT OF REFUSAL FOR ANY MATERIAL OR EQUIPMENT REMOVED.



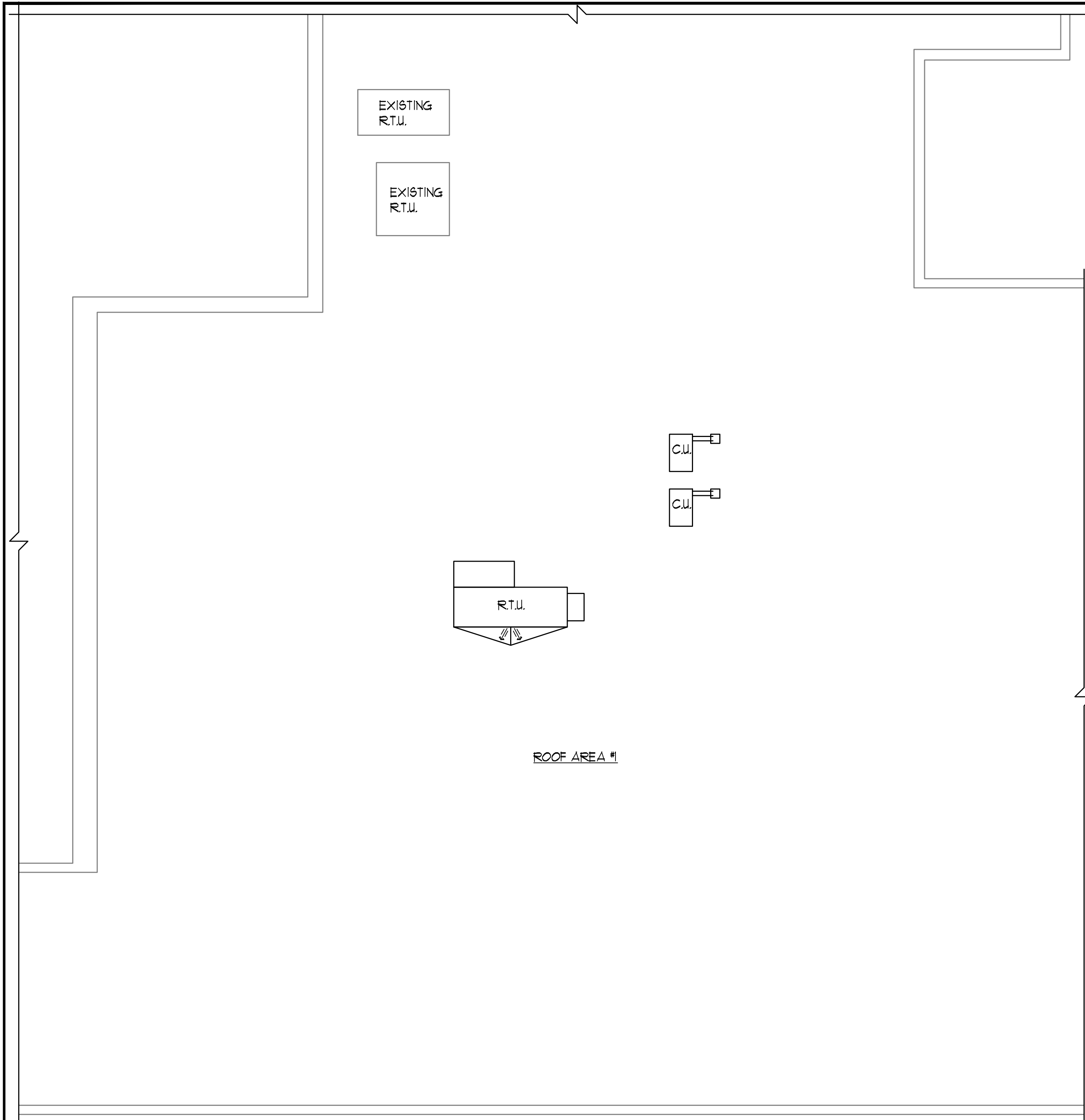
NEEPE CONSULTANT:  
DAS  
760 FERRIS DR., SUITE 100, ELK GROVE, ILLINOIS 60120 (630) 539-1996

DUNELAND SCHOOL CORPORATION  
ALTERNATIVE CLASSROOM RENOVATION AT:  
CHESTERTON MIDDLE SCHOOL  
651 W MORGAN AVE, CHESTERTON, IN. 46304

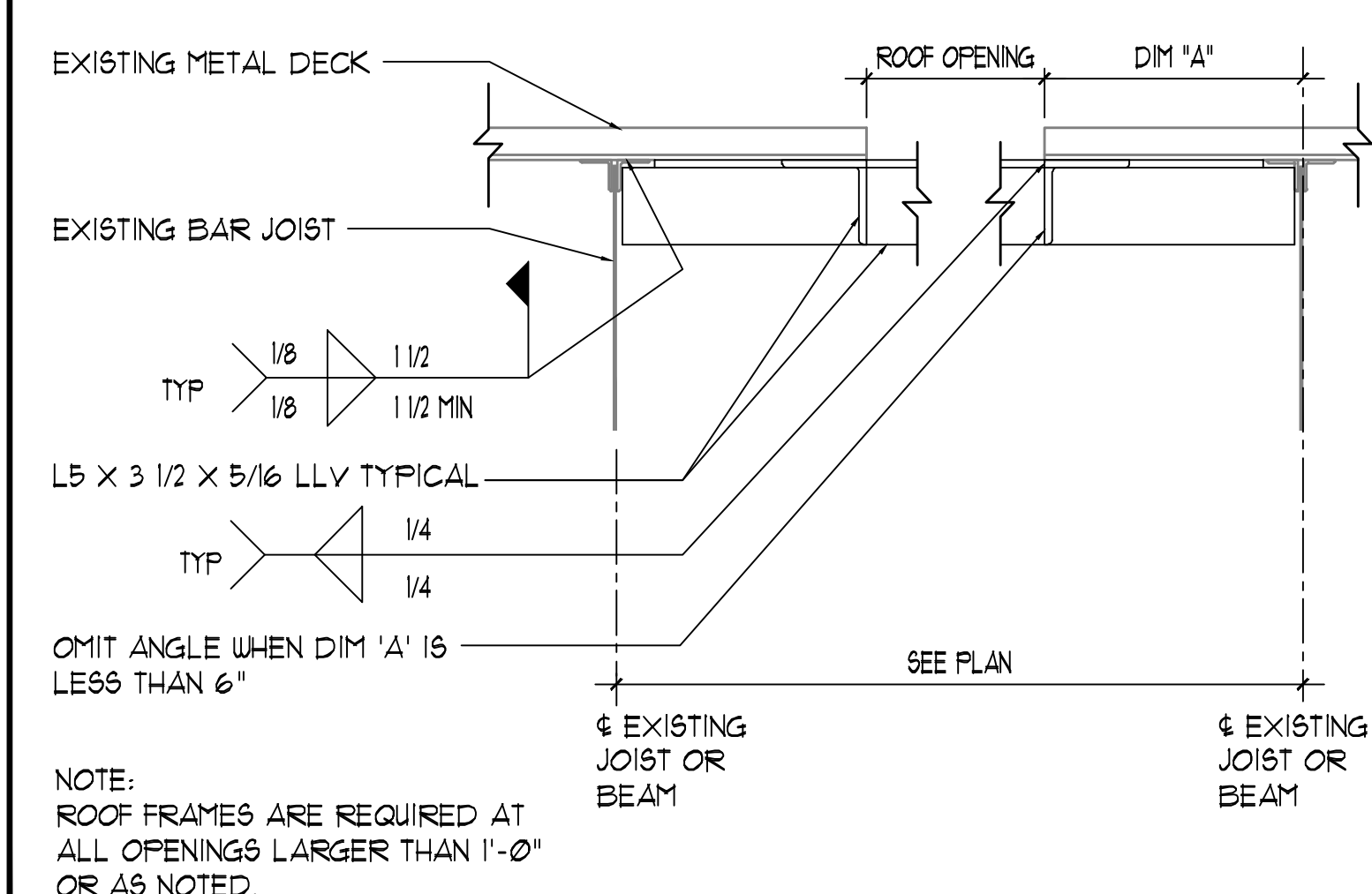
PROJECT NUMBER: 31-003  
PROJECT MANAGER: TBS  
DRAWN BY: TBS  
ISSUED FOR CONSTRUCTION: 6/16/21  
PARTIAL REFLECTED CEILING PLAN

A7.10

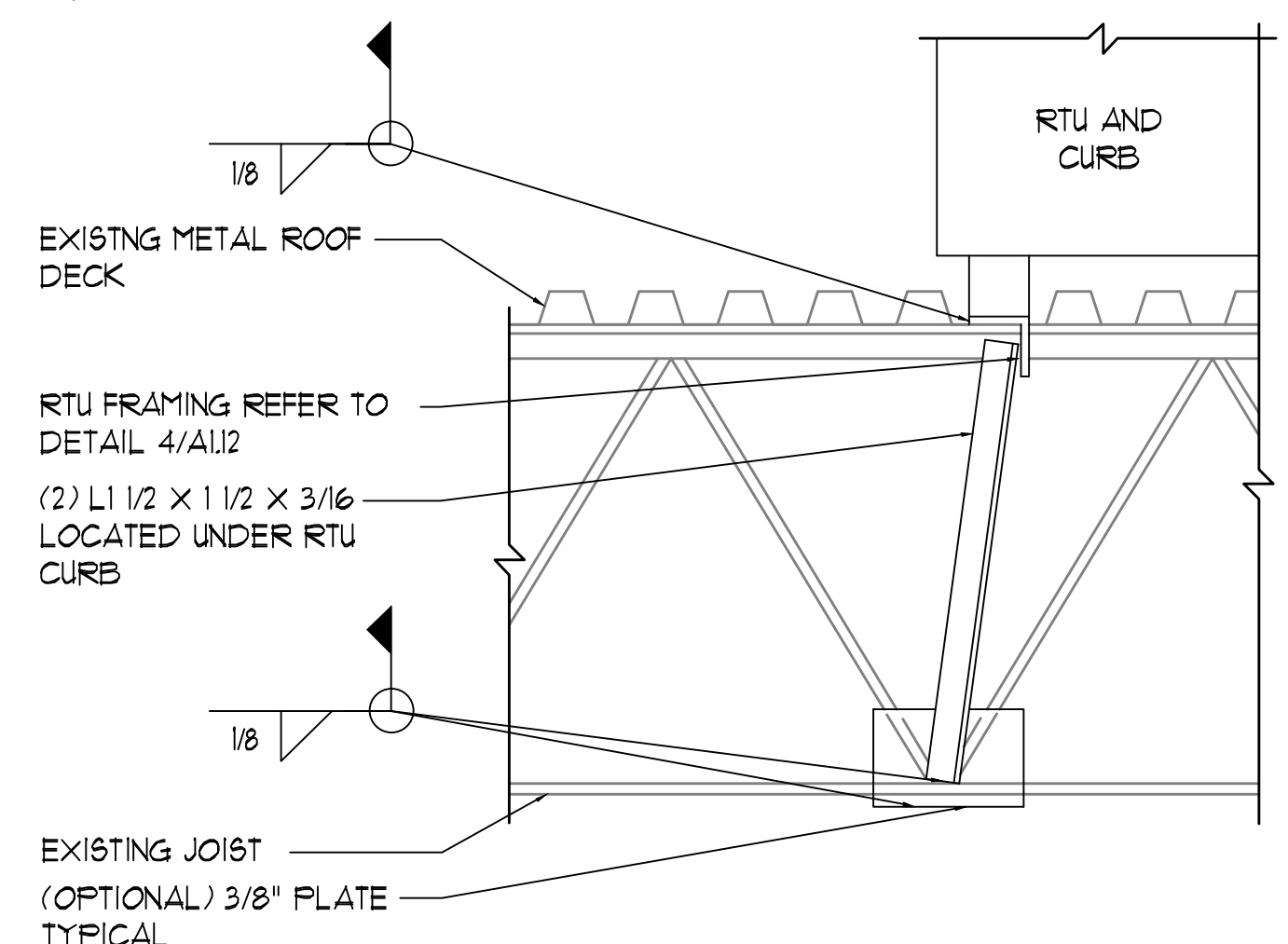




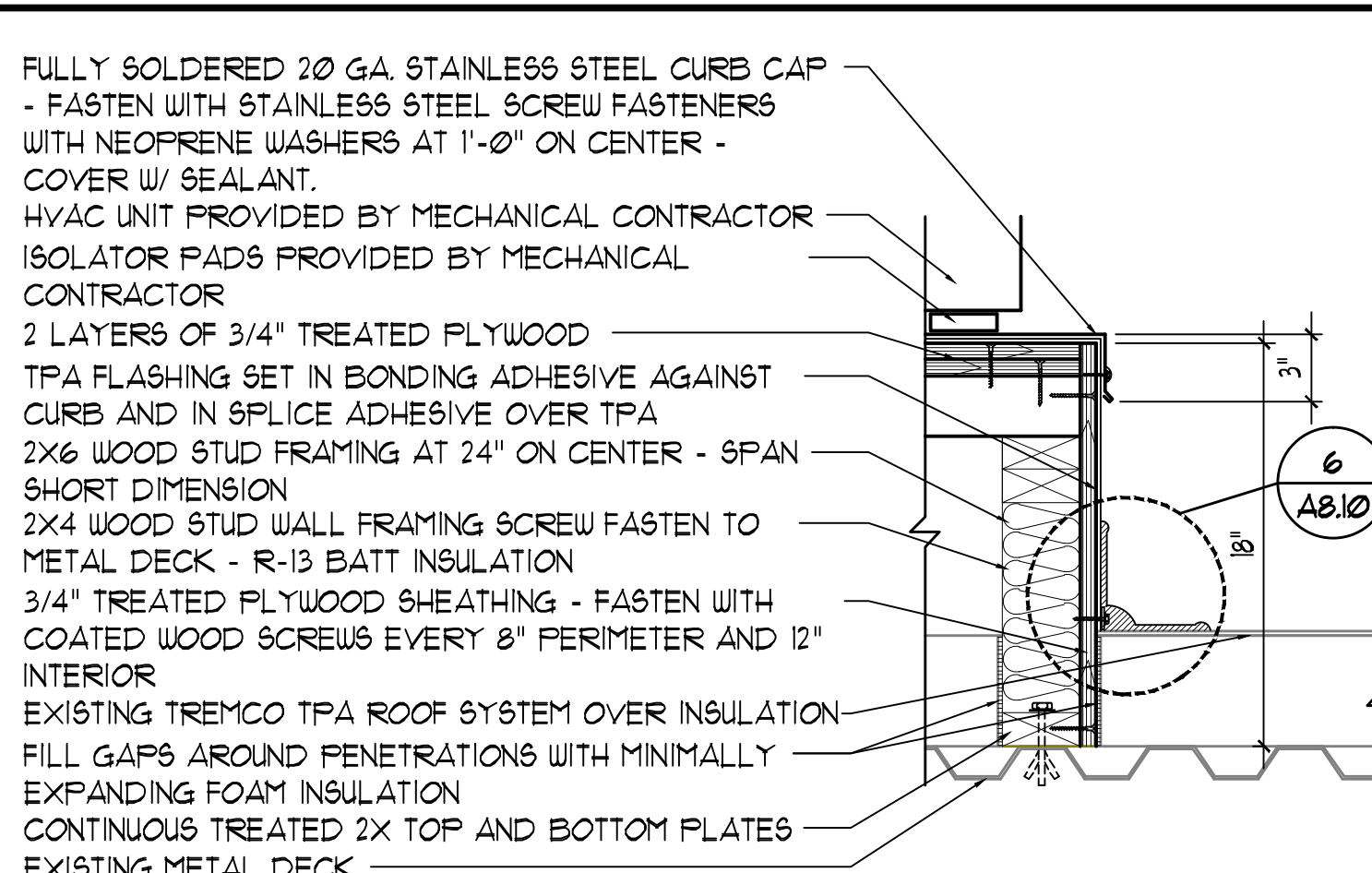
1 PARTIAL ROOF PLAN  
1/8" = 1'-0"



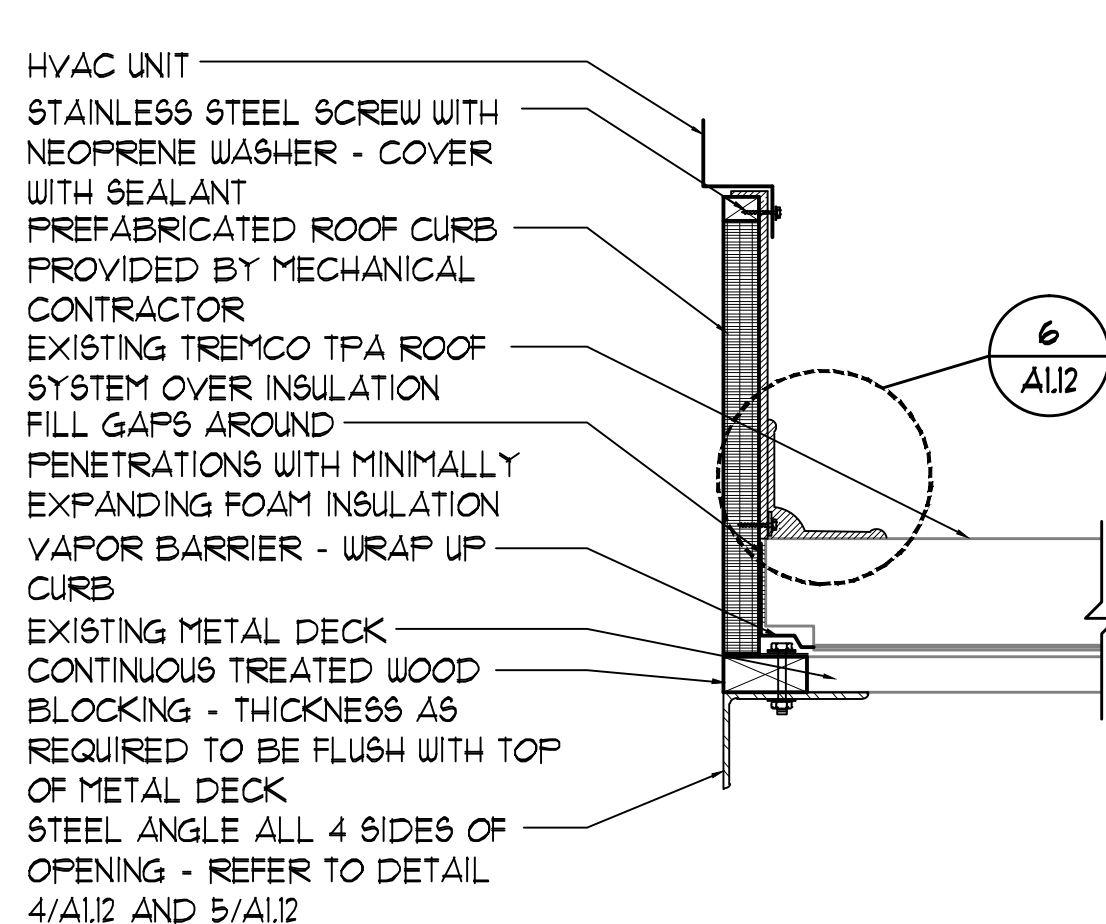
4 TYPICAL OPENING IN EXISTING ROOF DETAIL  
1 1/2" = 1'-0"



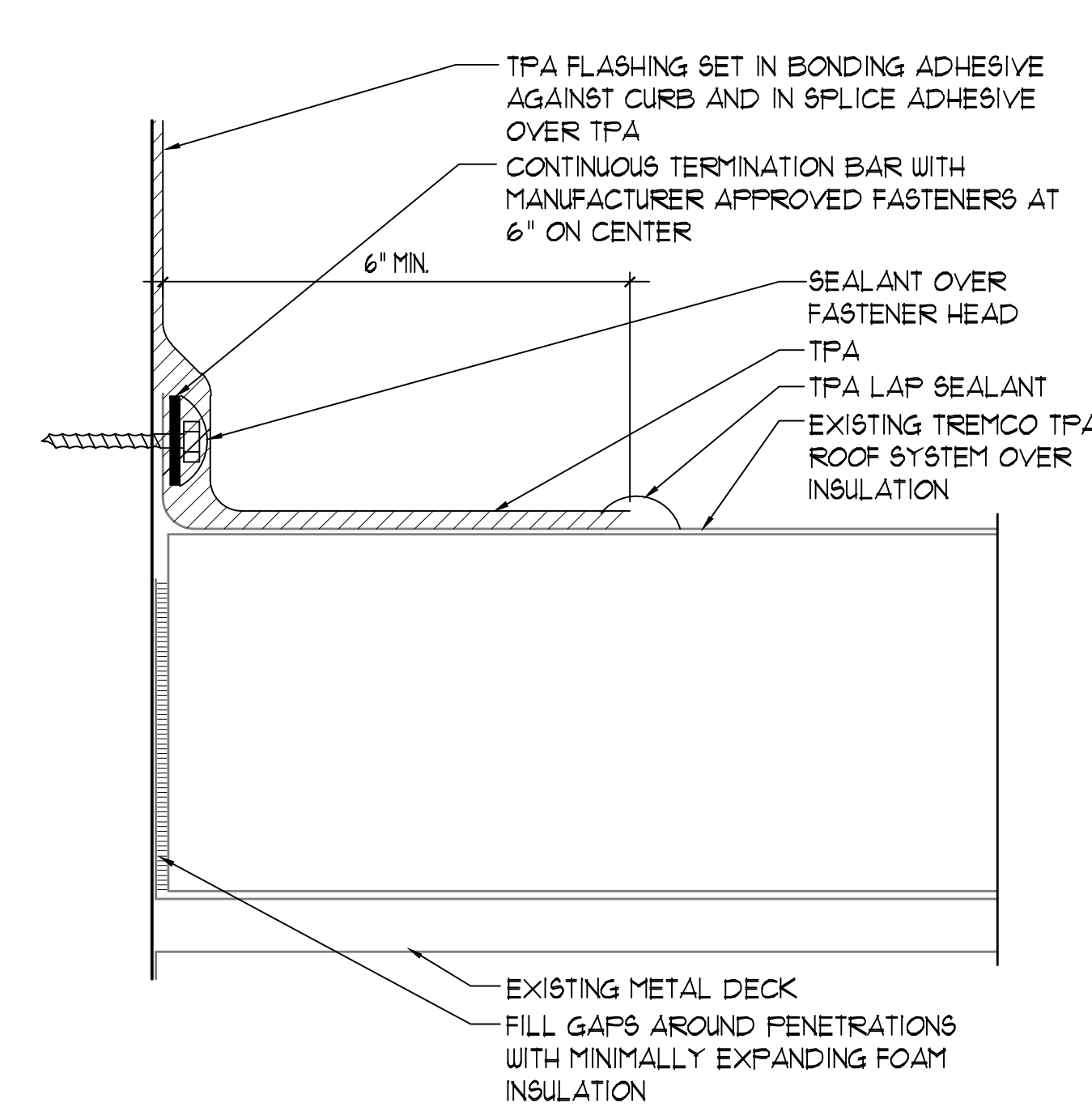
5 TYPICAL JOIST REINFORCEMENT UNDER RTU CURB  
1 1/2" = 1'-0"



2 PLATFORM CURB DETAIL  
1 1/2" = 1'-0"



3 HVAC UNIT CURB DETAIL  
1 1/2" = 1'-0"



6 TYPICAL SPM ANCHOR STRIP DETAIL  
6" = 1'-0"

## GENERAL NOTES

- ALL INSULATION JOINTS ARE TO BE STAGGERED.
- ALL GAPS IN INSULATION JOINTS GREATER THAN 1/4" ARE TO BE FILLED WITH INSULATION STRIPS.
- FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO SUBMITTING SHOP DRAWINGS.
- ALL COUNTER FLASHING, COPING, AND MISCELLANEOUS METAL FLASHING PIECES ARE TO HAVE SEALANT APPLIED AT THEIR END CONDITIONS.
- ALL EXPOSED FASTENERS TO BE CORROSION RESISTIVE, HAVE NEOPRENE WASHERS, AND BE COVERED WITH SEALANT.
- ALL AREAS OF EXISTING SITE USED TO ACCESS AREA OF WORK SHALL BE PROTECTED AND REPAIRED BACK TO ORIGINAL CONDITION PRIOR TO SUBSTANTIAL COMPLETION DATE - AT ALL GRASS AREAS DAMAGED DURING CONSTRUCTION, PROVIDE NEW SOD TO MATCH EXISTING SPECIES.
- EXTEND ALL PIPE PENETRATIONS AS REQUIRED TO PROVIDE WORK INDICATED.
- PROVIDE TAPERED INSULATION SADDLES AT ALL ROOF CURBS.
- AT ALL ROOF PENETRATIONS TO BE REMOVED - PATCH DECK, FILL OPENING WITH INSULATION TO MATCH EXISTING AND PATCH MEMBRANE PER MANUFACTURER'S REQUIREMENTS TO MAINTAIN EXISTING ROOF WARRANTY.

## FLASHING NOTES

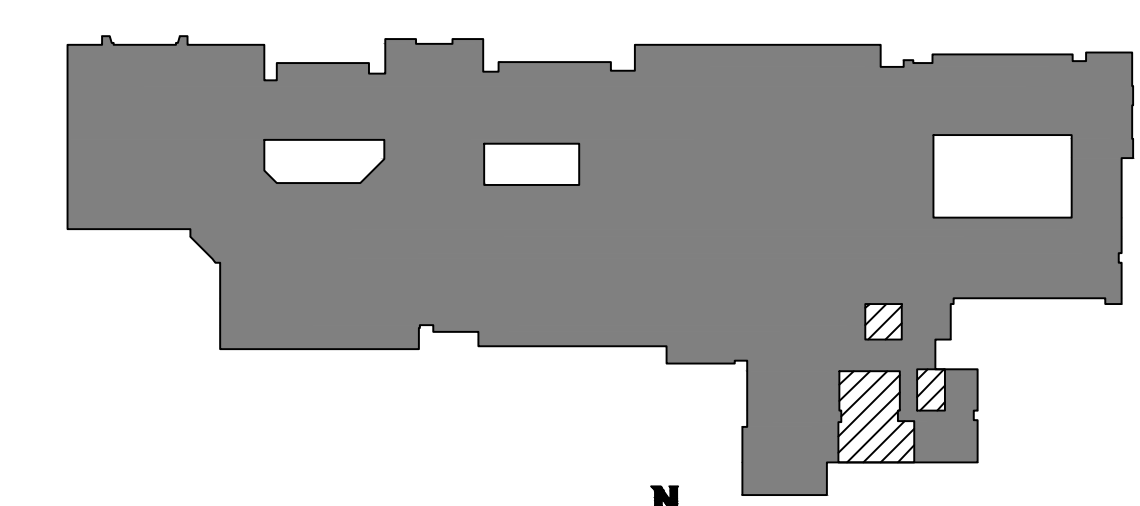
- ALL FLASHING FLANGES ARE TO BE SET IN SEALANT.
- FIELD VERIFY ALL CONDITIONS PRIOR TO SUBMITTING SHOP DRAWINGS.
- FOLLOWING INSTALLATION OF THE FLASHING, APPLY SEALANT TO ALL EXPOSED LEADING EDGES.
- ALL SCREW ANCHOR LOCATIONS TO HAVE PRE-DRILLED 5/16" PILOT HOLES.
- NON-EXPOSED NAIL FASTENERS TO BE 1-1/2" RING SHANK GALVANIZED ROOFING NAILS.
- NON-EXPOSED SCREW ANCHORS INTO WOOD TO BE 1-1/4" X 3/16" HHA ATLAS TYPE #A' POINT SCREWS.
- EXPOSED SCREW ANCHORS INTO WOOD ARE TO BE 1-1/4" X 3/16" HHA ATLAS TYPE #A' POINT 304 SERIES.
- NON-EXPOSED SCREW ANCHORS INTO MASONRY ARE TO BE 1-1/4" X 3/16" TAPCONS.
- EXPOSED SCREW ANCHORS INTO MASONRY ARE TO BE 1-1/4" X 3/16" TAPCONS WITH CLIMASEAL CORROSION RESISTIVE COATING AND NEOPRENE WASHERS.
- EXPOSED SCREW FASTENERS INTO SHEET METAL TO BE 3/4" X 1/4" TEK'S WITH NEOPRENE WASHERS.
- ALL EXPOSED SCREW FASTENERS ARE TO BE COVERED WITH SEALANT.

## ROOF CONSTRUCTION NOTES

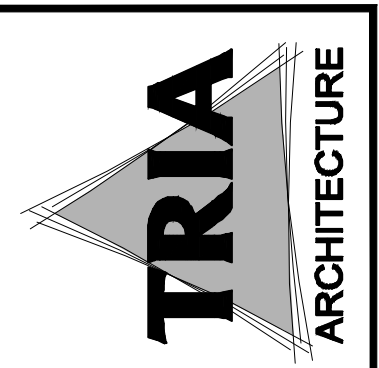
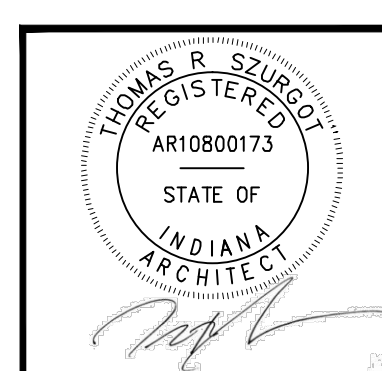
ROOF AREA #1:  
EXISTING ROOF AREA - METAL DECK, INSULATION AND TREMCO TPA ROOF SYSTEM - AT AREAS TO PATCH, MATCH EXISTING ADJACENT CONSTRUCTION.  
CONTACT GLUTH BROTHERS ROOFING COMPANY (219-844-5536) OR THE SCHOOL'S TREMCO ROOFING REPRESENTATIVE, DOUG COFFEY (260-312-0483). TREMCO CERTIFIES ALL ROOFING FOR THE DUNELAND SCHOOL CORPORATION.

## LEGEND

C.U.	CONDENSING UNIT AND PLATFORM CURB - REFER TO DETAIL 2/A8.10 AND MECHANICAL DRAWINGS.
RT.U.	ROOF TOP UNIT - REFER TO DETAIL 3/A8.10 AND MECHANICAL DRAWINGS.



KEYPLAN  
NOT TO SCALE



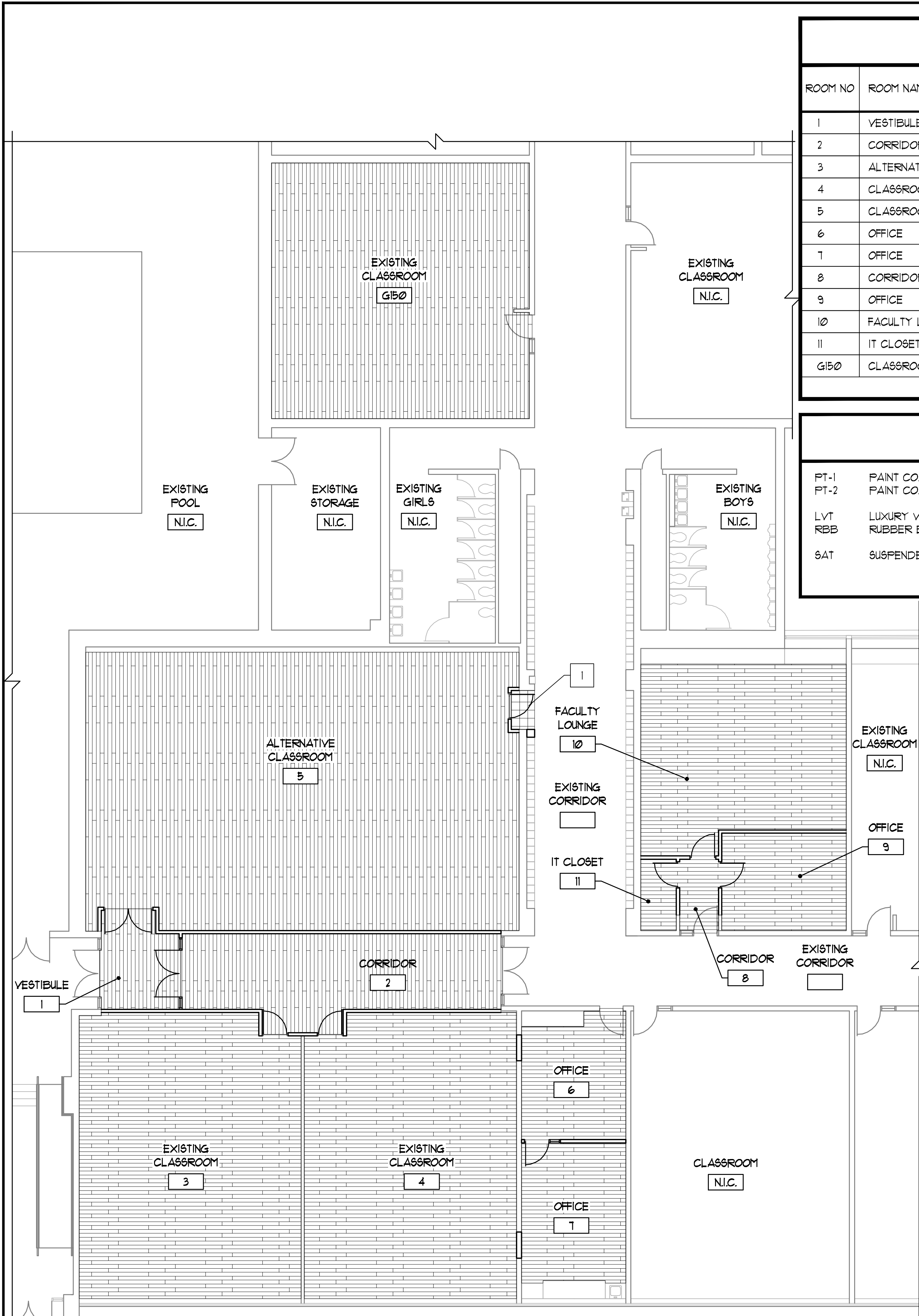
TRIA  
ARCHITECTURE  
760 FERRIS BLVD., SUITE 100, ELKHART, IN 46516  
(317) 534-1996

DUNELAND SCHOOL CORPORATION  
ALTERNATIVE CLASSROOM RENOVATION AT:  
CHESTERTON MIDDLE SCHOOL  
651 W MORGAN AVE, CHESTERTON, IN. 46304

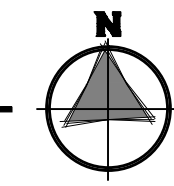
PROJECT NUMBER	31-003
PROJECT MANAGER	TPS
DRAWN BY	ITP
ISSUED FOR CONSTRUCTION	6/1/21
PARTIAL ROOF PLAN AND DETAILS	



A8.10

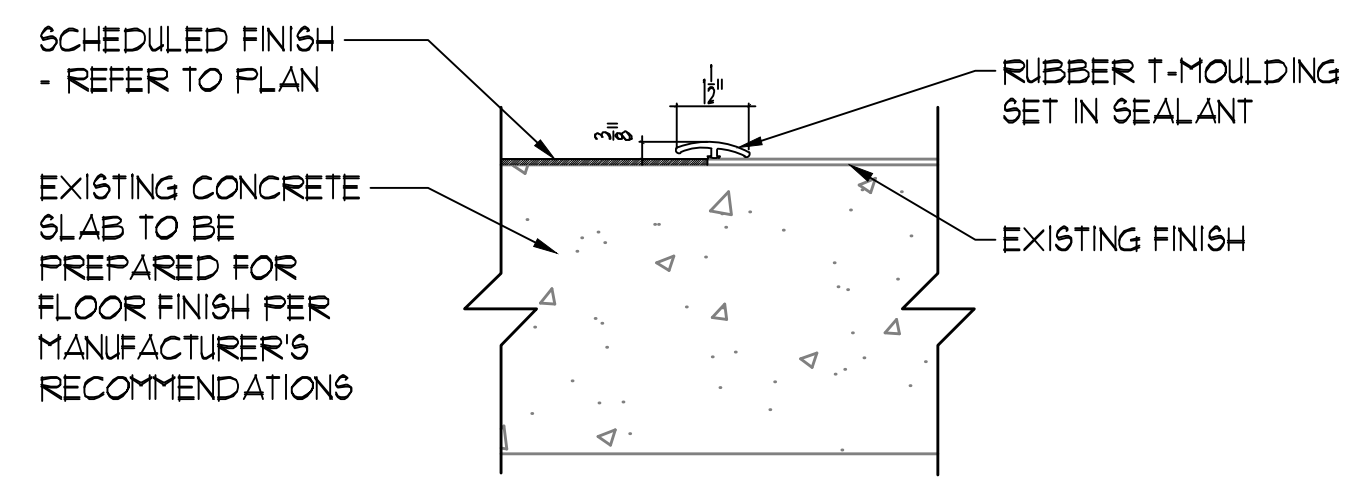


1 PARTIAL FLOOR FINISH PLAN  
1/8" = 1'-0"



ROOM FINISH SCHEDULE												
ROOM NO	ROOM NAME	NORTH WALL		EAST WALL		SOUTH WALL		WEST WALL		CEILING	FLOORING	REF. NOTES
		WALL FINISH	WALL BASE	WALL FINISH	WALL BASE	WALL FINISH	WALL BASE	WALL FINISH	WALL BASE			
1	VESTIBULE	PT-1	RBB	PT-1	RBB	PT-1	RBB	PRT-1	RBB	SAT	LVT	-
2	CORRIDOR	PT-1	RBB	PT-1	RBB	PT-1	RBB	PRT-1	RBB	SAT	LVT	-
3	ALTERNATIVE CLASSROOM	PT-1	RBB	PT-1	RBB	PT-1	RBB	PRT-1	RBB	SAT	LVT	-
4	CLASSROOM	PT-1	RBB	PT-1	RBB	PT-1	RBB	PRT-1	RBB	SAT	LVT	-
5	CLASSROOM	PT-1	RBB	PT-1	RBB	PT-1	RBB	PRT-1	RBB	SAT	LVT	-
6	OFFICE	PT-1	RBB	PT-1	RBB	PT-1	RBB	PRT-1	RBB	SAT	LVT	-
7	OFFICE	PT-1	RBB	PT-1	RBB	PT-1	RBB	PRT-1	RBB	SAT	LVT	-
8	CORRIDOR	PT-1	RBB	PT-1	RBB	PT-1	RBB	PRT-1	RBB	SAT	LVT	-
9	OFFICE	PT-1	RBB	PT-1	RBB	PT-1	RBB	PRT-1	RBB	SAT	LVT	-
10	FACULTY LOUNGE	PT-1	RBB	PT-1	RBB	PT-1	RBB	PRT-1	RBB	SAT	LVT	-
11	IT CLOSET	PT-1	RBB	PT-1	RBB	PT-1	RBB	PRT-1	RBB	SAT	LVT	-
G150	CLASSROOM	PT-1	RBB	PT-1	RBB	PT-1	RBB	PRT-1	RBB	SAT	LVT	-

ROOM FINISH SCHEDULE LEGEND	
PT-1	PAINT COLOR 1 - GENERAL FIELD COLOR
PT-2	PAINT COLOR 2 - INTERIOR METAL FRAMES
LVT	LUXURY VINYL TILE - REFER TO SPECIFICATIONS
RBB	RUBBER BASE - REFER TO SPECIFICATIONS
SAT	SUSPENDED ACOUSTICAL TILE CEILING - REFER TO SPECIFICATIONS

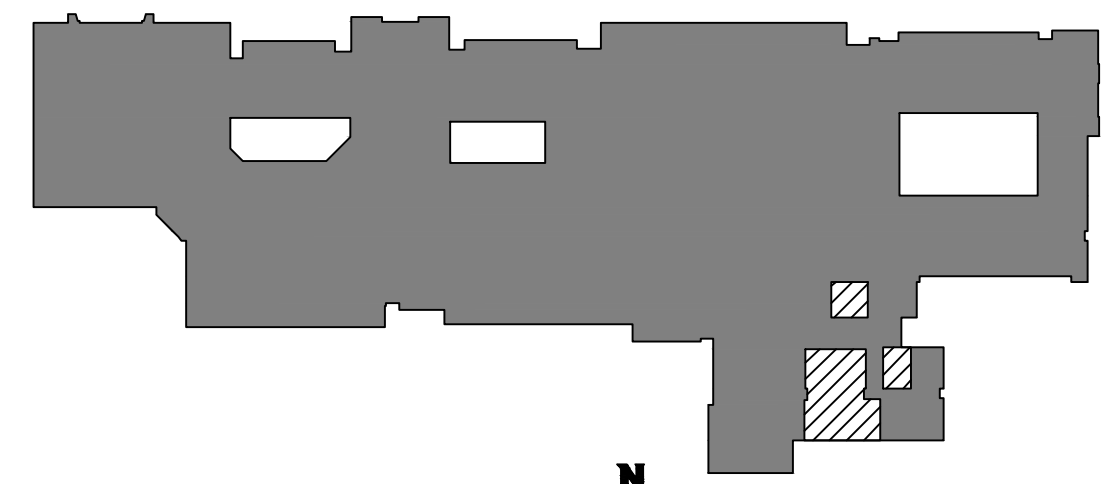


2 TRANSITION DETAIL  
3" = 1'-0"

- ### FLOOR FINISH PLAN GENERAL NOTES
- REFER TO SPECIFICATIONS FOR ADDITIONAL PRODUCT INFORMATION.
  - MAKE EXISTING FLOOR SLAB SMOOTH AND FLAT TO FLOOR FINISH MANUFACTURER'S TOLERANCE WITH MATERIAL SUITABLE TO FLOOR FINISH MANUFACTURER PRIOR TO INSTALLATION.
  - ALL TRANSITIONS BETWEEN DISSIMILAR FLOORING MATERIALS ARE TO RECEIVE A NEW TRANSITION STRIP.
  - PROVIDE WALL BASE AT LOCATIONS OF NEW FLOORING OR NEW WALL CONSTRUCTION.
  - AREAS OF RESILIENT FLOORING ARE TO RECEIVE RUBBER COVERED BASE - VERIFY WITH BUILDING STANDARD.
  - AT AREAS WHERE PATCHING OF WALL BASE IS REQUIRED - FINISH TO MATCH ADJACENT IN MATERIAL, COLOR, HEIGHT, FINISH AND PROFILE.
  - DO NOT PAINT PREFINISHED ITEMS.
  - FLOOR DRAINS AND CLEANOUT COVERS ARE TO BE FLUSH WITH FINISHED FLOORING.
  - AT AREAS WHERE MECHANICAL EQUIPMENT HAS BEEN REMOVED - PATCH AND PAINT EXISTING EXPOSED CONSTRUCTION - MATCH ADJACENT EXISTING CONSTRUCTION IN MATERIAL, TEXTURE, SIZE, FINISH AND COLOR.
  - FLOORING SHALL BE STABLE, FIRM AND SLIP-RESISTANT.
  - TRANSITIONS IN FLOOR FINISHES, COLORS, OR PATTERNS ARE TO OCCUR AT THE CENTER OF DOORS UNLESS NOTED OTHERWISE.
  - CONTRACTOR TO VERIFY CONDITIONS AT EACH TRANSITION AND SIZE REDUCERS ACCORDINGLY.
  - PAINT NEW WALL CONSTRUCTION WHERE EXPOSED TO VIEW.

- ### FLOOR FINISH REFERENCED NOTES
- PATCH FLOORING IN WHOLE UNITS TO MATCH EXISTING FLOOR FINISH.

- ### FLOOR FINISH PLAN LEGEND
- EXISTING TO REMAIN - PROTECT DURING CONSTRUCTION - CONTRACTOR TO REPAIR ANY AFFECTED AREAS - MATCH ADJACENT FINISH IN MATERIAL, COLOR, TEXTURE, AND SIZE.
  - LUXURY VINYL TILE - REFER TO SPECIFICATIONS



KEYPLAN  
NOT TO SCALE

AREA OF WORK  
NOT IN SCOPE OF WORK

THOMAS R. SZUDOWSKI  
REGISTERED ARCHITECT  
STATE OF INDIANA  
ARCHITECT  
EXPIRES 12/01/2021

TRIA ARCHITECTURE

NEE/FEE CONSULTANT:  
DAS  
765 FERRIS BLVD., SUITE 100, ELLETTSBURG, MD 20624 (410) 534-1996

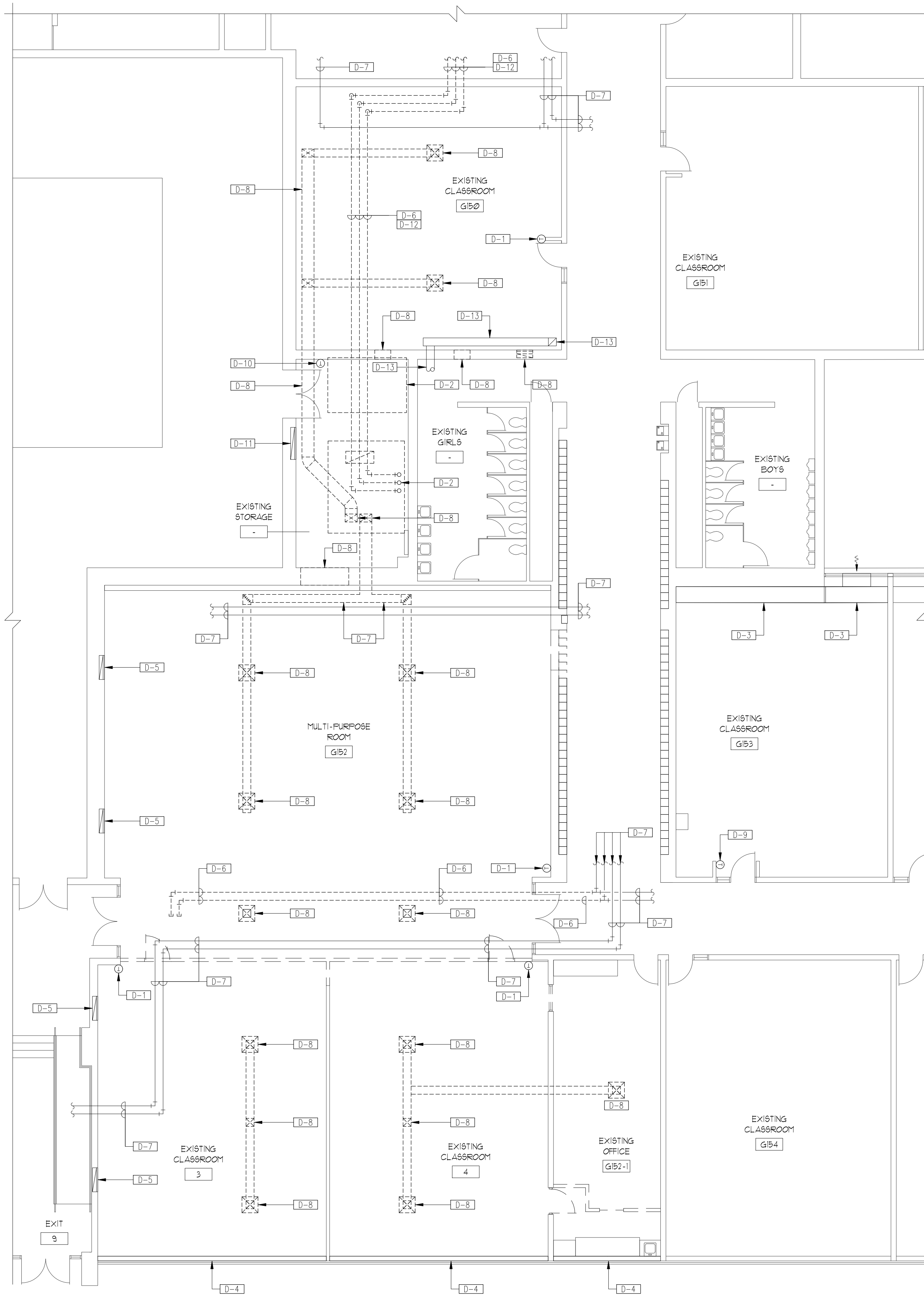
DUNELAND SCHOOL CORPORATION  
ALTERNATIVE CLASSROOM RENOVATION AT:  
CHESTERTON MIDDLE SCHOOL  
651 W MORGAN AVE, CHESTERTON, IN. 46304

PROJECT NUMBER: 21-003  
PROJECT MANAGER: TBS  
DESIGN BY: JTB  
ISSUED FOR CONSTRUCTION: 6/16/21  
PARTIAL FLOOR FINISH PLAN ROOM FINISH SCHEDULE, AND NOTES

A9.10



DATE PLOTTED: 6/15/2021 6:23 AM FILE PATH AND NAME: P:\139-A-8 Duneland SC - CMS Alternative School (Chesterton, IN)\MA139-A-8 MO10 Existing First Floor.dgn PLOTTED BY: LARRY ARNOLO



1 EXISTING PARTIAL FLOOR PLAN - PIPING - MECHANICAL  
1/8" = 1'-0"



MECHANICAL (HVAC) DEMOLITION NOTES

I. REFERENCED DEMOLITION NOTES - DRAWINGS

D-1

THERMOSTAT/SENSOR TO BE COMPLETELY REMOVED INCLUDING ALL CONTROL WIRING AND/OR PNEUMATIC CONTROL AIR PIPING TO/FROM UNIT IT SERVES. PROVIDE STAINLESS STEEL BLANK COVER PLATE OVER OPENING IF LOCATION IS NOT REUSED FOR NEW THERMOSTAT/SENSOR UNDER THE INSTALLMENT OF THE NEW EQUIPMENT AND CONTROLS.

D-2

REMOVE ROOFTOP UNIT AND CONDENSING UNIT COMPLETELY INCLUDING ALL DUCTWORK, ROOF CURB, HOT WATER PIPING, CONDENSATE PIPING, REFRIGERANT PIPING, INSULATION, CONTROLS, CONTROL WIRING, CONTROL AIR PIPING, SUPPORTS, VALVES, ETC. COORDINATE ALL DISCONNECT REQUIREMENTS WITH ELECTRICAL CONTRACTOR. PATCH ROOF/WALL AS STATED UNDER GENERAL DEMOLITION NOTES. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.

D-3

EXISTING UNIT VENTILATOR AND SHELVING TO REMAIN.

D-4

EXISTING FINNED TUBE RADIATION AND/OR PIPE COVERING TO REMAIN. SEE NEW WORK DRAWINGS FOR ADDITIONAL REQUIREMENTS.

D-5

EXISTING ABANDONED WALL CONVECTOR TO REMAIN.

D-6

REMOVE CONDENSATE, HOT WATER AND/OR HOT/CHILLED WATER SUPPLY/RETURN PIPING COMPLETELY INCLUDING VALVES, CONTROLS, HANGERS, INSULATION, EXPANSION JOINTS, PIPE GUIDES, SLEEVES, ANCHORS, ETC. PATCH WALLS AS STATED UNDER GENERAL DEMOLITION NOTES. SEE NEW WORK DRAWINGS FOR ADDITIONAL REQUIREMENTS.

D-7

EXISTING HOT WATER AND/OR HOT/CHILLED WATER PIPING TO REMAIN. SEE NEW WORK DRAWINGS FOR ADDITIONAL REQUIREMENTS.

D-8

REMOVE SUPPLY/RETURN/EXHAUST/OUTDOOR AIR DUCTWORK, TRANSFER DUCTWORK AND GRILLES/REGISTERS COMPLETELY INCLUDING ALL RELATED SUPPORTS, ACCESSORIES, DAMPERS, ETC. PATCH WALLS/ROOF AS STATED UNDER GENERAL DEMOLITION NOTES. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.

D-9

EXISTING THERMOSTAT/SENSOR TO BE RELOCATED. SEE NEW WORK PLANS. VERIFY OPERATION WITH EXISTING HVAC EQUIPMENT.

D-10

EXISTING THERMOSTAT/SENSOR TO REMAIN. VERIFY OPERATION WITH EXISTING HVAC EQUIPMENT.

D-11

EXISTING CONVECTOR TO REMAIN.

D-12

VERIFY SERVICE OF EXISTING PIPING AND REMOVE IF ABANDONED.

D-13

EXISTING EXHAUST DUCTWORK AND EXHAUST FAN TO REMAIN.

II. GENERAL DEMOLITION NOTES

A.

ALL DEMOLITION OF THE HVAC SYSTEM AS CALLED FOR ON THE DEMOLITION DRAWINGS SHALL BE UNDER THIS CONTRACTOR'S WORK.

B.

CONTRACTOR SHALL VISIT SCHOOL BUILDING, BEFORE SUBMITTING HIS BID, TO VERIFY THE EXISTING CONDITIONS WHICH WILL AFFECT HIS WORK.

C.

CONTRACTOR SHALL REMOVE ALL EQUIPMENT, GRILLES, REGISTERS, ETC. SUPPORTED BY THE CEILING IN AREAS WHERE CEILING DEMOLITION IS TAKING PLACE BEFORE THE CEILING DEMOLITION CONTRACTOR STARTS HIS WORK. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING CEILING TILES AS REQUIRED TO PERFORM HIS WORK WHERE CEILINGS ARE NOT BEING REMOVED. CONTRACTOR SHALL REINSTALL TILES WHEN WORK HAS BEEN COMPLETED AND REPLACE ANY TILES THAT HAVE BEEN DAMAGED AT NO COST TO THE OWNER.

D.

BEFORE STARTING ANY DEMOLITION ON HVAC EQUIPMENT WHICH HAS AN ELECTRICAL CONNECTION, THE MECHANICAL CONTRACTOR SHALL MEET WITH THE ELECTRICAL CONTRACTOR TO IDENTIFY ALL SUCH EQUIPMENT. THE ELECTRICAL CONTRACTOR WILL DISCONNECT THE POWER TO EACH UNIT, REMOVE CONDUIT, WIRING, DISCONNECT SWITCHES, AND STARTERS UNDER HIS CONTRACT. MECHANICAL CONTRACTOR WILL REMOVE ALL EQUIPMENT AND ELECTRIC TEMPERATURE CONTROL WIRING AND CONDUIT UNDER THIS CONTRACT.

E.

CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN CLEAN-UP THROUGHOUT THE COURSE OF THE DEMOLITION WORK. IN THE EVENT HE FAILS TO PROVIDE SUCH CLEAN-UP THE ARCHITECT/ENGINEER WILL DIRECT THE CLEAN-UP TO BE PERFORMED BY ANOTHER CONTRACTOR, AND THE CONTRACTOR WILL BE BACK-CHARGED AS DEEMED APPROPRIATE BY ARCHITECT/ENGINEER.

F.

ALL EQUIPMENT, MATERIAL, ETC. THAT IS BEING DEMOLISHED OWNER SHALL HAVE FIRST RIGHT OF REFUSAL. THE REMAINING DEMOLISHED ITEMS WILL BECOME THE PROPERTY OF THE CONTRACTOR. ALL SUCH ITEMS WILL BE REMOVED FROM THE BUILDING SITE BY THE CONTRACTOR. NO ITEM WHICH IS BEING REMOVED UNDER THE DEMOLITION CONTRACT MAY BE REUSED UNDER THE NEW WORK CONTRACT. THE OWNER HAS FIRST RIGHT OF REFUSAL FOR ANY MATERIAL OR EQUIPMENT REMOVED.

G.

SEQUENCE OF ALL DEMOLITION WORK SHALL BE IN STRICT ACCORDANCE WITH THE SPECIFICATIONS, DRAWINGS, AND/OR AS DIRECTED BY ARCHITECT/ENGINEER.

H.

THE CONTRACTOR PERFORMING THE DEMOLITION WORK SHALL REMOVE NO MORE THAN 8" OF BUILDING MATERIAL AROUND EACH DEVICE BEING DEMOLISHED.

I.

THIS CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL LABOR AND MATERIAL REQUIRED TO PATCH ALL OPENINGS IN EXISTING ROOF/WALL/FLOOR AND FIRE SEPARATIONS CREATED BY THE REMOVAL OF THIS TRADES MATERIAL AND EQUIPMENT WHERE THESE OPENINGS ARE NOT TO BE REUSED. PATCHING OF ALL EXISTING WALL, FLOOR AND ROOF OPENINGS IS THE RESPONSIBILITY OF THIS CONTRACTOR.



KEYPLAN  
NOT TO SCALE



AREA OF WORK  
NOT IN SCOPE OF WORK



MO.10

PROJECT NUMBER: 139-A-8  
PROJECT NAME: CMS Alternative School (Chesterton, IN)  
DRAWN BY: JAS/LLC  
DESIGNED FOR CONSTRUCTION: 06/15/21  
EXISTING PARTIAL FLOOR PLAN  
MECHANICAL

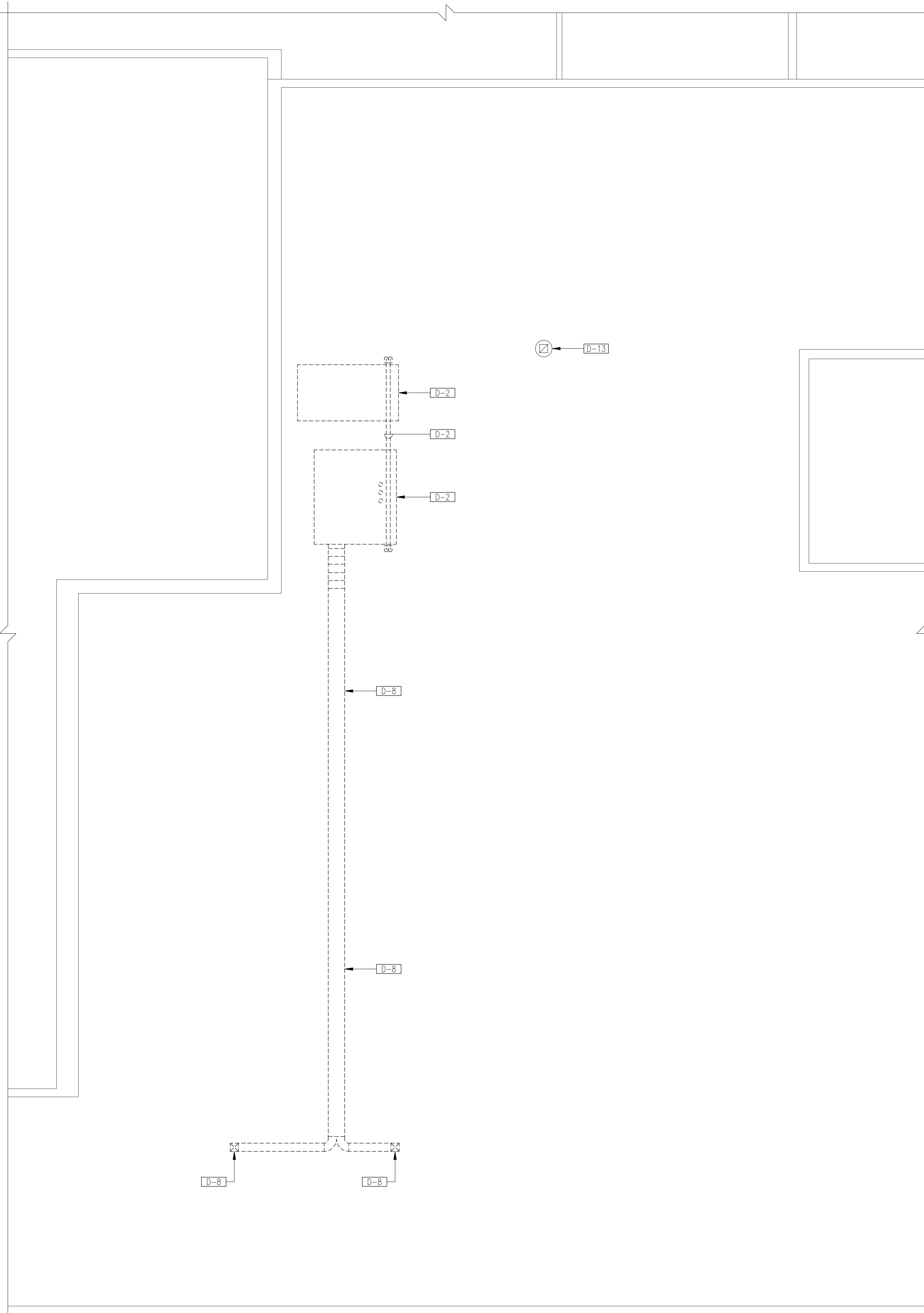
DUNELAND SCHOOL CORPORATION  
ALTERNATIVE CLASSROOM RENOVATION AT:  
CHESTERTON MIDDLE SCHOOL  
651 W MORGAN AVE, CHESTERTON, IN. 46304



TRIA  
ARCHITECTURE



PLOTTED BY: LARRY ARNOLO  
 DATE PLOTTED: 6/15/2021 6:23 AM  
 FILE PATH AND NAME: P:\139-A-8 Duneland SC - CMS Alternative School (Chesterton, IN)\MA139-A-8 MO.20 Existing Roof plan



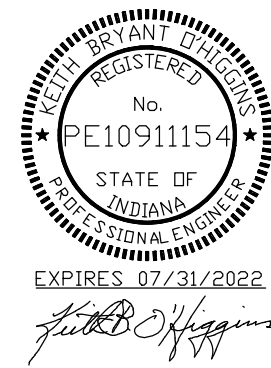
1  
 1/8" = 1'-0"  
 EXISTING PARTIAL ROOF PLAN - MECHANICAL



KEYPLAN  
 NOT TO SCALE



AREA OF WORK  
 NOT IN SCOPE OF WORK



MO.20

MECHANICAL (HVAC) DEMOLITION NOTES

I. REFERENCED DEMOLITION NOTES - DRAWINGS

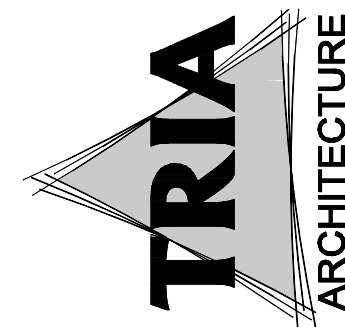
- D-1 THERMOSTAT/SENSOR TO BE COMPLETELY REMOVED INCLUDING ALL CONTROL WIRING AND/OR PNEUMATIC CONTROL AIR PIPING TO/FROM UNIT IT SERVES. PROVIDE STAINLESS STEEL BLANK COVER PLATE OVER OPENING IF LOCATION IS NOT REUSED FOR NEW THERMOSTAT/SENSOR UNDER THE INSTALLMENT OF THE NEW EQUIPMENT AND CONTROLS.
- D-2 REMOVE ROOFTOP UNIT AND CONDENSING UNIT COMPLETELY INCLUDING ALL DUCTWORK, ROOF CURB, HOT WATER PIPING, CONDENSATE PIPING, REFRIGERANT PIPING, INSULATION, CONTROLS, CONTROL WIRING, CONTROL AIR PIPING, SUPPORTS, VALVES, ETC. COORDINATE ALL DISCONNECT REQUIREMENTS WITH ELECTRICAL CONTRACTOR. PATCH ROOF/WALL AS STATED UNDER GENERAL DEMOLITION NOTES. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
- D-3 EXISTING UNIT VENTILATOR AND SHELVING TO REMAIN.
- D-4 EXISTING FINNED TUBE RADIATION AND/OR PIPE COVERING TO REMAIN. SEE NEW WORK DRAWINGS FOR ADDITIONAL REQUIREMENTS.
- D-5 EXISTING ABANDONED WALL CONVECTOR TO REMAIN.
- D-6 REMOVE CONDENSATE, HOT WATER AND/OR HOT/CHILLED WATER SUPPLY/RETURN PIPING COMPLETELY INCLUDING VALVES, CONTROLS, HANGERS, INSULATION, EXPANSION JOINTS, PIPE GUIDES, SLEEVES, ANCHORS, ETC. PATCH WALLS AS STATED UNDER GENERAL DEMOLITION NOTES. SEE NEW WORK DRAWINGS FOR ADDITIONAL REQUIREMENTS.
- D-7 EXISTING HOT WATER AND/OR HOT/CHILLED WATER PIPING TO REMAIN. SEE NEW WORK DRAWINGS FOR ADDITIONAL REQUIREMENTS.
- D-8 REMOVE SUPPLY/RETURN/EXHAUST/OUTDOOR AIR DUCTWORK, TRANSFER DUCTWORK AND GRILLES/REGISTERS COMPLETELY INCLUDING ALL RELATED SUPPORTS, ACCESSORIES, DAMPERS, ETC. PATCH WALLS/ROOF AS STATED UNDER GENERAL DEMOLITION NOTES. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
- D-9 EXISTING THERMOSTAT/SENSOR TO BE RELOCATED. SEE NEW WORK PLANS. VERIFY OPERATION WITH EXISTING HVAC EQUIPMENT.
- D-10 EXISTING THERMOSTAT/SENSOR TO REMAIN. VERIFY OPERATION WITH EXISTING HVAC EQUIPMENT.
- D-11 EXISTING CONVECTOR TO REMAIN.
- D-12 VERIFY SERVICE OF EXISTING PIPING AND REMOVE IF ABANDONED.
- D-13 EXISTING EXHAUST DUCTWORK AND EXHAUST FAN TO REMAIN.

II. GENERAL DEMOLITION NOTES

- A. ALL DEMOLITION OF THE HVAC SYSTEM AS CALLED FOR ON THE DEMOLITION DRAWINGS SHALL BE UNDER THIS CONTRACTOR'S WORK.
- B. CONTRACTOR SHALL VISIT SCHOOL BUILDING, BEFORE SUBMITTING HIS BID, TO VERIFY THE EXISTING CONDITIONS WHICH WILL AFFECT HIS WORK.
- C. CONTRACTOR SHALL REMOVE ALL EQUIPMENT, GRILLES, REGISTERS, ETC. SUPPORTED BY THE CEILING IN AREAS WHERE CEILING DEMOLITION IS TAKING PLACE BEFORE THE CEILING DEMOLITION CONTRACTOR STARTS HIS WORK. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING CEILING TILES AS REQUIRED TO PERFORM HIS WORK WHERE CEILINGS ARE NOT BEING REMOVED. CONTRACTOR SHALL REINSTALL TILES WHEN WORK HAS BEEN COMPLETED AND REPLACE ANY TILES THAT HAVE BEEN DAMAGED AT NO COST TO THE OWNER.
- D. BEFORE STARTING ANY DEMOLITION ON HVAC EQUIPMENT WHICH HAS AN ELECTRICAL CONNECTION, THE MECHANICAL CONTRACTOR SHALL MEET WITH THE ELECTRICAL CONTRACTOR TO IDENTIFY ALL SUCH EQUIPMENT. THE ELECTRICAL CONTRACTOR WILL DISCONNECT THE POWER TO EACH UNIT, REMOVE CONDUIT, WIRING, DISCONNECT SWITCHES, AND STARTERS UNDER HIS CONTRACT. MECHANICAL CONTRACTOR WILL REMOVE ALL EQUIPMENT AND ELECTRIC TEMPERATURE CONTROL WIRING AND CONDUIT UNDER THIS CONTRACT.
- E. CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN CLEAN-UP THROUGHOUT THE COURSE OF THE DEMOLITION WORK. IN THE EVENT HE FAILS TO PROVIDE SUCH CLEAN-UP THE ARCHITECT/ENGINEER WILL DIRECT THE CLEAN-UP TO BE PERFORMED BY ANOTHER CONTRACTOR, AND THE CONTRACTOR WILL BE BACK-CHARGED AS DEEMED APPROPRIATE BY ARCHITECT/ENGINEER.
- F. ALL EQUIPMENT, MATERIAL, ETC. THAT IS BEING DEMOLISHED OWNER SHALL HAVE FIRST RIGHT OF REFUSAL. THE REMAINING DEMOLISHED ITEMS WILL BECOME THE PROPERTY OF THE CONTRACTOR. ALL SUCH ITEMS WILL BE REMOVED FROM THE BUILDING SITE BY THE CONTRACTOR. NO ITEM WHICH IS BEING REMOVED UNDER THE DEMOLITION CONTRACT MAY BE REUSED UNDER THE NEW WORK CONTRACT. THE OWNER HAS FIRST RIGHT OF REFUSAL FOR ANY MATERIAL OR EQUIPMENT REMOVED.
- G. SEQUENCE OF ALL DEMOLITION WORK SHALL BE IN STRICT ACCORDANCE WITH THE SPECIFICATIONS, DRAWINGS, AND/OR AS DIRECTED BY ARCHITECT/ENGINEER.
- H. THE CONTRACTOR PERFORMING THE DEMOLITION WORK SHALL REMOVE NO MORE THAN 8" OF BUILDING MATERIAL AROUND EACH DEVICE BEING DEMOLISHED.
- I. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL LABOR AND MATERIAL REQUIRED TO PATCH ALL OPENINGS IN EXISTING ROOF/WALL/FLOOR AND FIRE SEPARATIONS CREATED BY THE REMOVAL OF THIS TRADES MATERIAL AND EQUIPMENT WHERE THESE OPENINGS ARE NOT TO BE REUSED. PATCHING OF ALL EXISTING WALL, FLOOR AND ROOF OPENINGS IS THE RESPONSIBILITY OF THIS CONTRACTOR.

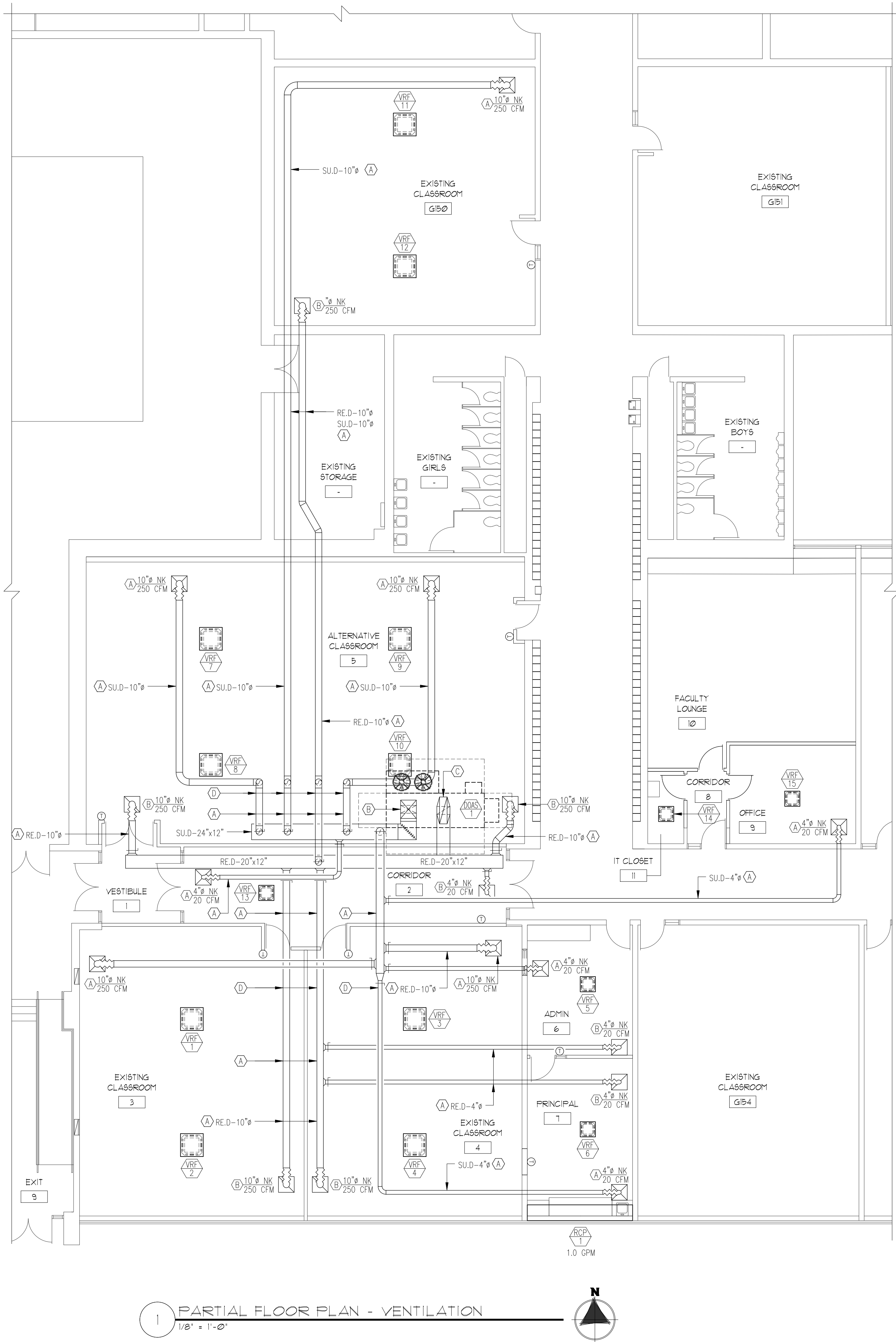
DUNELAND SCHOOL CORPORATION  
 ALTERNATIVE CLASSROOM RENOVATION AT:  
 CHESTERTON MIDDLE SCHOOL  
 651 W MORGAN AVE, CHESTERTON, IN. 46304

PROJECT NUMBER: 17-09	06/15/20
PROJECT MANAGER: TBS	06/15/20
DRAWN BY: 026 LLC	06/15/20
DESIGNED FOR CONSTRUCTION: 06/15/20	06/15/20
EXISTING PARTIAL ROOF PLAN MECHANICAL	



MEP/FF CONSULTANT:  
 IDAS  
 780 HILARIO DR., UNIT A, ELK GROVE, ILLINOIS 60124 (847) 539-1996

PLOTTED BY: LARRY ARNOLO  
 DATE PLOTTED: 6/15/2021 6:23 AM  
 FILE PATH AND NAME: P:\139-A-8 Duneland SC - CMS Alternative School (Chesterton, IN)\MA 139-A-8 M1.10 Mechanical Ventilation First Floor



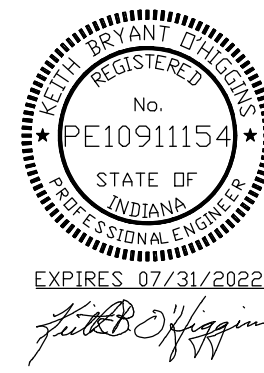
### MECHANICAL VENTILATION NEW WORK NOTES

- (A) COORDINATE NEW DUCTWORK ROUTING WITH CEILING REMOVAL/REPLACEMENT. RUN ALL DUCTWORK THROUGH EXISTING JOIST WEBS AND WITHIN JOIST SPACE. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
- (B) SUPPLY/OUTDOOR AIR DUCT DROP INTO SPACE. PROVIDE FLEX CONNECTION TO UNIT - MATCH UNIT OUTLET SIZE. TRANSITION TO DUCT SIZE SHOWN ON DRAWINGS. PROVIDE INSULATION PER SPECIFICATIONS. PROVIDE ALL NECESSARY FITTINGS AND OFFSETS.
- (C) RETURN/EXHAUST AIR DUCT DROP INTO SPACE. PROVIDE FLEX CONNECTION TO UNIT - MATCH UNIT INLET SIZE. TRANSITION TO DUCT SIZE SHOWN ON DRAWINGS. DUCT PROVIDE INSULATION PER SPECIFICATIONS. PROVIDE ALL NECESSARY FITTINGS AND OFFSETS.
- (D) TRANSITION DUCTWORK AT EXISTING STRUCTURE. PROVIDE OFFSETS/TRANSITIONS AS REQUIRED TO RUN DUCTWORK THROUGH EXISTING GRIDER JOIST. FIELD VERIFY REQUIREMENTS.



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AREA OF WORK  
NOT IN SCOPE OF WORK



M1.10

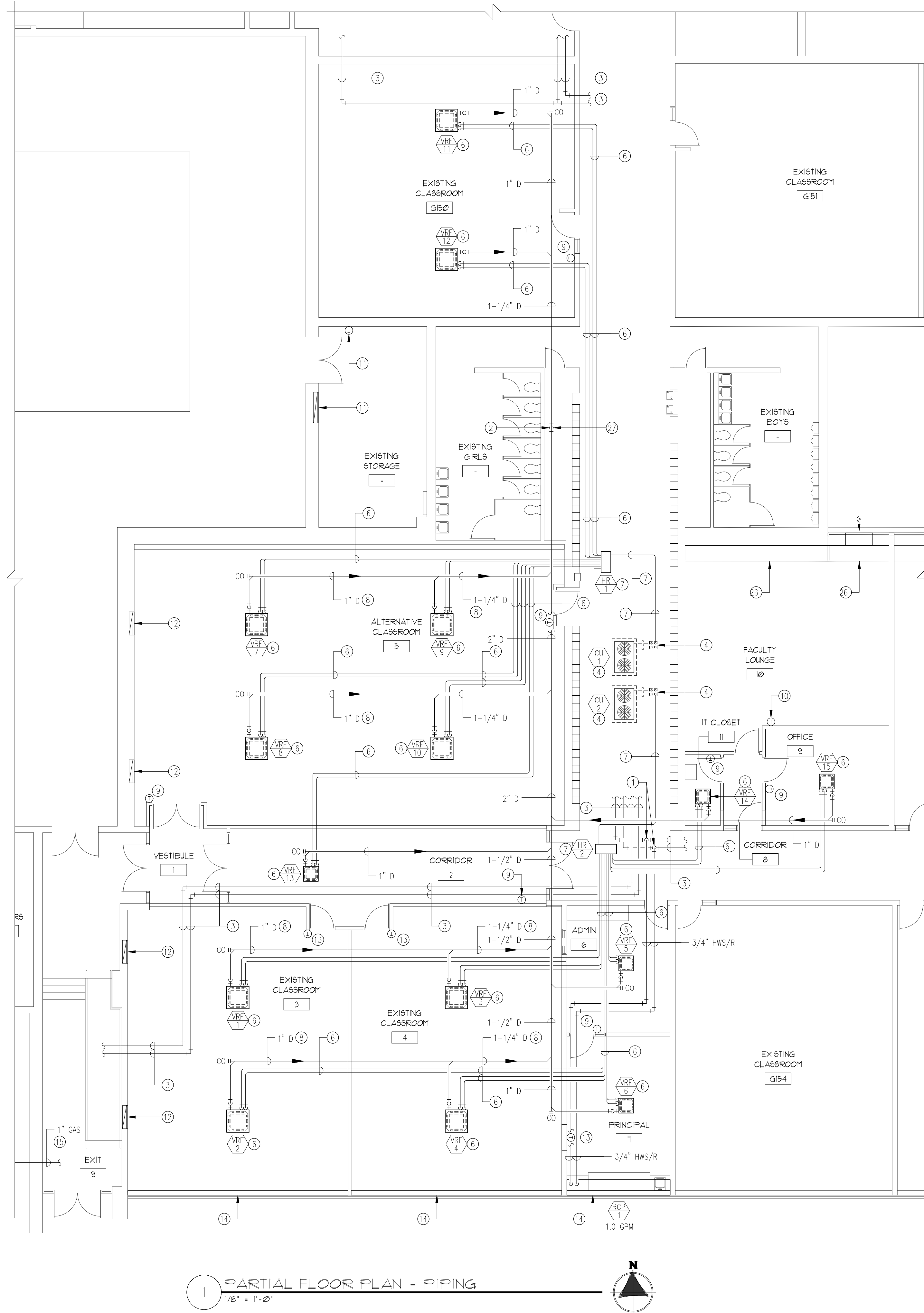
DUNELAND SCHOOL CORPORATION  
ALTERNATIVE CLASSROOM RENOVATION AT:  
CHESTERTON MIDDLE SCHOOL  
651 W MORGAN AVE, CHESTERTON, IN. 46304

PROJECT NUMBER	17-093
PROJECT NAME	TRIS
DRAWN BY	006 ILC
DESIGNED FOR CONSTRUCTION	00/0/01
PARTIAL FLOOR PLAN	VENTILATION

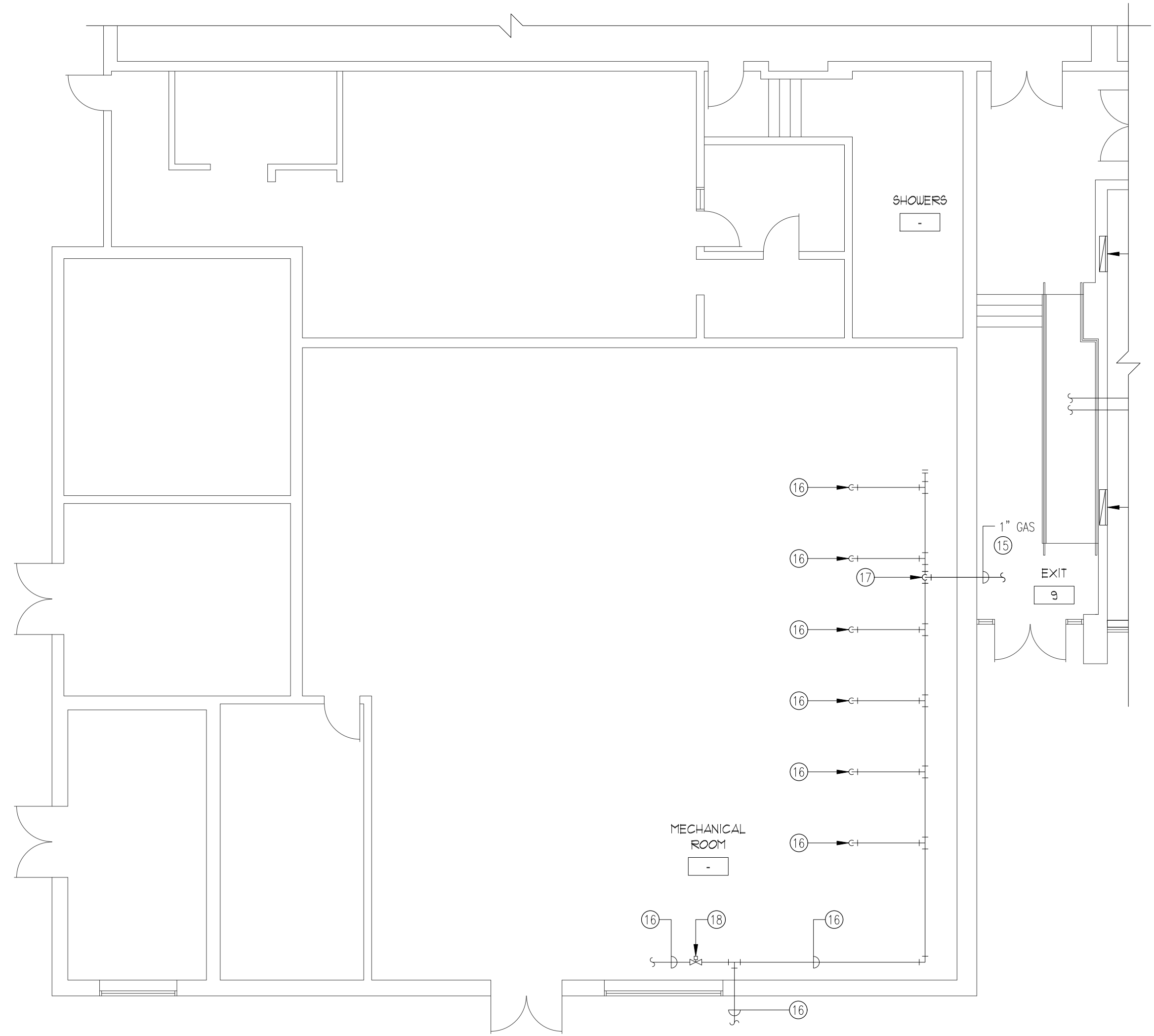


TRIA  
ARCHITECTURE

FILE PATH AND NAME: P:\139-A-8 Duneland SC - CMS Alternative School (Chesterton, IN)\M1.20 Mechanical Piping First Floor.dgn  
DATE PLOTTED: 6/15/2021 6:22 AM  
PLOTTED BY: LARRY ARNOLO



1 PARTIAL FLOOR PLAN - PIPING  
1/8" = 1'-0"

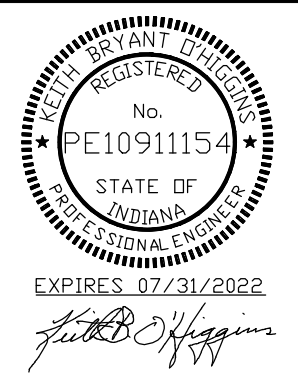


2 PARTIAL FLOOR PLAN - PIPING  
1/8" = 1'-0"

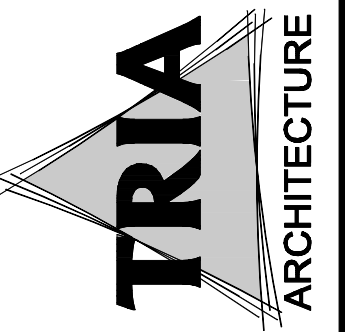
REFER TO SHEET M2.10 FOR MECHANICAL PIPING NEW WORK NOTES



AREA OF WORK  
NOT IN SCOPE OF WORK



M1.20



MEP/PE CONSULTANT:  
IDAS  
INDIANA DESIGN AND  
ARCHITECTURE, LLC  
7801 HILARIO DR., SUITE A-200B, INDIANAPOLIS, IN 46254  
(317) 539-1996

DUNELAND SCHOOL CORPORATION  
ALTERNATIVE CLASSROOM RENOVATION AT:  
CHESTERTON MIDDLE SCHOOL  
651 W MORGAN AVE, CHESTERTON, IN. 46304

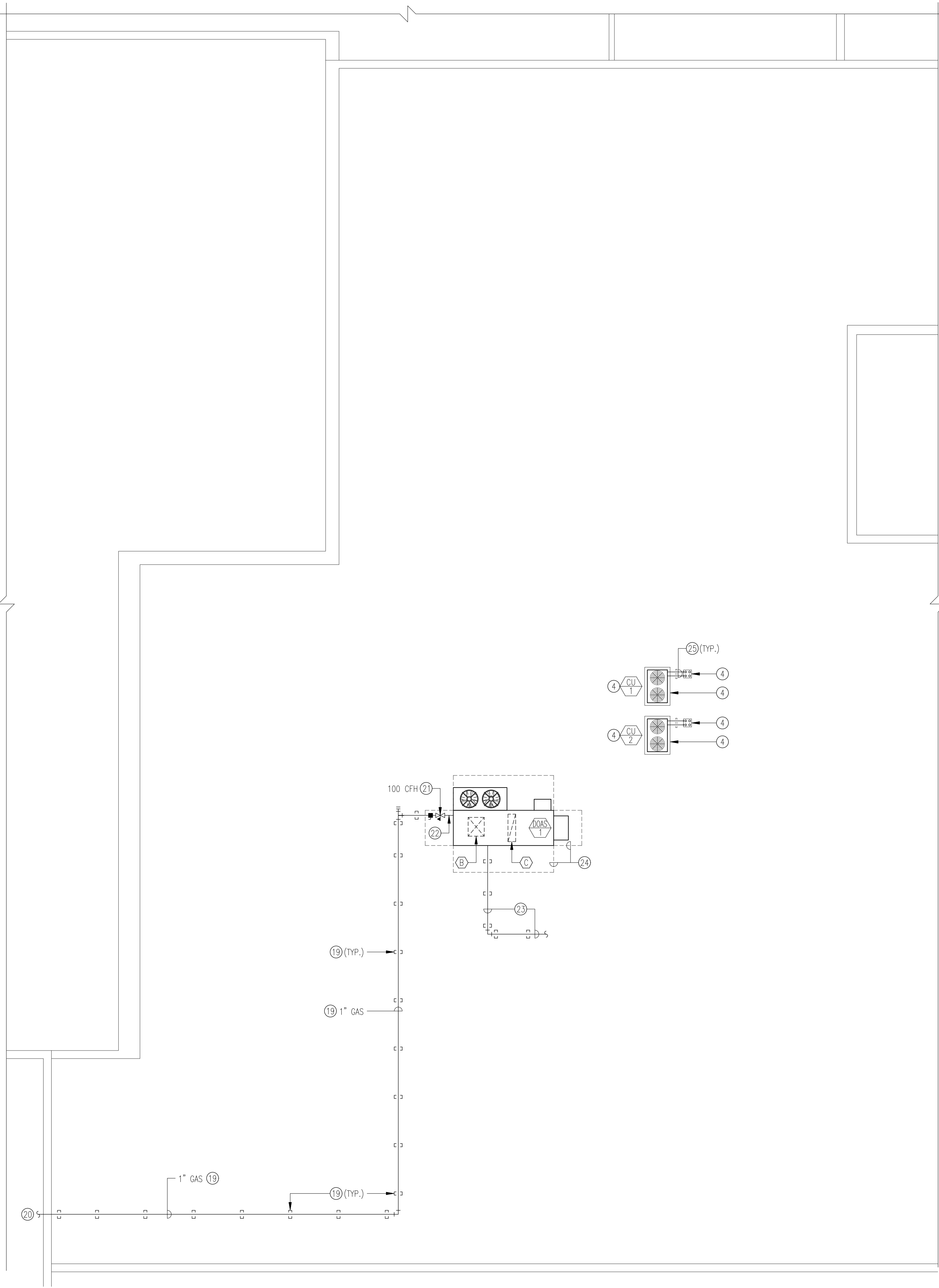
PROJECT NUMBER: 139-A-8	DATE: 7/20/21
PROJECT NAME: TRS	
DRAWN BY: DAS/LLC	
DESIGNED FOR CONSTRUCTION	
DATE: 06/05/21	
PARTIAL FLOOR PLANS	
PIPING	



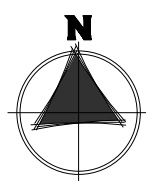
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DATE PLOTTED: 6/15/2021 6:26 AM

PLOTTED BY: LARRY ARNOLO



1 PARTIAL ROOF PLAN - MECHANICAL  
1/8" = 1'-0"



### MECHANICAL PIPING NEW WORK NOTES

- 1 PROVIDE NEW CONNECTION TO EXISTING HOT WATER SUPPLY/RETURN PIPING. FIELD VERIFY SIZE/LOCATION. EXTEND AS SHOWN ON DRAWINGS.
- 2 DROP 2" INSULATED CONDENSATE DRAIN IN PIPE CHASE TO NEW OPEN SITE DRAIN.
- 3 EXISTING HOT, CHILLED AND/OR HOT/CHILLED WATER SUPPLY/RETURN PIPING.
- 4 PROVIDE AND INSTALL ROOF MOUNTED CONDENSING UNIT ON PLATFORM CURB WITH ISOLATORS. PLATFORM CURB TO BE PROVIDED WITH THREE LAYERS OF HIGH DENSITY INSULATION. PROVIDE PIPE CURB. PLATFORM CURB TO BE 6" LARGER IN ALL DIRECTIONS THAN EQUIPMENT. PROVIDE NEW REFRIGERANT PIPING TO RUN TO/FROM AIR COOLED CONDENSER AND INDOOR VRF UNITS/HEAT RECOVERY BOXES. PROVIDE ROOF PIPE SUPPORTS 4'-0" O.C. EXTERIOR PIPING TO BE INSULATED AND PROVIDED WITH AN ALUMINUM JACKET PER THE SPECIFICATIONS. SEE LARGE SCALE DETAILS FOR ADDITIONAL REQUIREMENTS. FIELD VERIFY ROUTING AND PIPE SIZE WITH VRF UNIT MANUFACTURER.
- 5 PROVIDE 3/4" HOT WATER SUPPLY/RETURN PIPES TO/FROM RADIANT CEILING PANEL. SEE LARGE SCALE DETAIL 2/M3.20 FOR ADDITIONAL REQUIREMENTS.
- 6 VRF UNIT: PROVIDE REFRIGERANT PIPING TO RUN TO/FROM HR UNITS AND INDOOR VRF UNITS. PROVIDE 1" INSULATED CONDENSATE PIPE WITH TRAP FROM VRF UNIT. RISE 1" INSULATED CONDENSATE OFF OF VRF UNIT AND RUN CONDENSATE PIPE IN JOIST SPACE AS HIGH AS POSSIBLE. COORDINATE LOCATION OF VRF UNITS WITH CEILING GRID AND EXISTING BUILDING STRUCTURE. HANG VRF UNIT FROM EXISTING STRUCTURE (BEAM/JOIST) WITH ISOLATORS. PROVIDE ADDITIONAL SUPPORTS AS REQUIRED BY FIELD CONDITIONS. REMOVE/REINSTALL JOIST BRIDGING AS REQUIRED TO INSTALL VRF UNITS. FIELD VERIFY REQUIREMENTS. FIELD VERIFY PIPE ROUTING AND PIPE SIZE WITH VRF UNIT MANUFACTURER. COORDINATE PIPE RUNS WITH CEILING REMOVAL/REPLACEMENT. PIPING TO RUN IN/THRU EXISTING JOIST WEBBING AND JOIST SPACE. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
- 7 HR UNIT: PROVIDE REFRIGERANT PIPING TO RUN TO/FROM AIR COOLED CONDENSER AND/OR INDOOR VRF UNITS. COORDINATE LOCATION OF HR UNITS ABOVE NEW/EXISTING CEILING GRID AND EXISTING BUILDING STRUCTURE. HANG HR UNIT FROM EXISTING STRUCTURE (BEAM/JOIST). PROVIDE ADDITIONAL SUPPORTS AS REQUIRED BY FIELD CONDITIONS. COORDINATE HR UNITS WITH EXISTING BUILDING STRUCTURE. REMOVE/REINSTALL JOIST BRIDGING AS REQUIRED TO INSTALL HR UNITS. FIELD VERIFY REQUIREMENTS. FIELD VERIFY PIPE ROUTING AND PIPE SIZE WITH VRF UNIT MANUFACTURER. COORDINATE PIPE RUNS WITH CEILING REMOVAL/REPLACEMENT. PIPING TO RUN IN/THRU EXISTING JOIST WEBBING AND JOIST SPACE. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
- 8 RUN INSULATED CONDENSATE AS HIGH AS POSSIBLE THROUGH EXISTING JOISTS AND JOIST WEBBING. SEE PLANS FOR PIPE SIZES.
- 9 THERMOSTAT/SENSOR. CUT/PATCH NEW/EXISTING WALL AS REQUIRED TO INSTALL. PAINT WALL TO MATCH EXISTING.
- 10 RELOCATED THERMOSTAT/SENSOR. CUT/PATCH NEW/EXISTING WALL AS REQUIRED TO INSTALL. PAINT WALL TO MATCH EXISTING. VERIFY OPERATION WITH EXISTING HVAC UNIT.
- 11 EXISTING RECESSED CONVECTOR UNIT HEATER. VERIFY OPERATION OF UNIT WITH EXISTING THERMOSTAT/SENSOR.
- 12 EXISTING ABANDONED CONVECTOR.
- 13 THERMOSTAT/SENSOR. SEQUENCE WITH VRF UNIT AND EXISTING FINNED TUBE RADIATION. CUT/PATCH NEW/EXISTING WALL AS REQUIRED TO INSTALL. PAINT WALL TO MATCH EXISTING.
- 14 EXISTING FINNED TUBE RADIATION. SEQUENCE WITH NEW VRF UNIT.
- 15 SEE ROOF PLAN FOR CONTINUATION.
- 16 EXISTING GAS MAIN AND DROPS.
- 17 PROVIDE NEW CONNECTION TO EXISTING GAS HEADER.
- 18 EXISTING GAS PRESSURE REDUCING VALVE.
- 19 PROVIDE GAS SUPPORTS MAX. 6'-0" O.C. SEE LARGE SCALE DETAILS.
- 20 SEE PARTIAL NEW WORK FLOOR PLAN FOR CONTINUATION.
- 21 PRESSURE REDUCING VALVE. SEE LARGE SCALE DETAILS.
- 22 FLEXIBLE CONNECTION. SEE LARGE SCALE DETAILS.
- 23 PROVIDE FULL SIZE CONDENSATE DRAIN AND TRAP. EXTEND TO NEAREST ROOF DRAIN. FIELD VERIFY ROUTING.
- 24 SERVICE AREA.
- 25 PROVIDE REFRIGERANT PIPING TO RUN TO/FROM AIR COOLED CONDENSER UNIT AND/OR HR UNITS. INSULATE AND PROVIDE ALUMINUM JACKET PER THE SPECIFICATIONS. FIELD VERIFY PIPE ROUTING AND PIPE SIZE WITH VRF UNIT MANUFACTURER.
- 26 EXISTING CLASSROOM UNIT VENTILATOR AND SHELVING.
- 27 MECHANICAL CONTRACTOR TO PROVIDE 3" OPEN-SITE DRAIN. TIE INTO EXISTING WASTE LINE IN PLUMBING CHASE FOR VRF CONDENSATE. PROVIDE TRAP PRIMER AND TIE INTO CW IN CHASE. PROVIDE BACKFLOW PREVENTER. FIELD VERIFY.

### MECHANICAL VENTILATION NEW WORK NOTES

- A COORDINATE NEW DUCTWORK ROUTING WITH CEILING REMOVAL/REPLACEMENT. RUN ALL DUCTWORK THROUGH EXISTING JOIST WEBS AND WITHIN JOIST SPACE. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
- B SUPPLY/OUTDOOR AIR DUCT DROP INTO SPACE. PROVIDE FLEX CONNECTION TO UNIT - MATCH UNIT OUTLET SIZE. TRANSITION TO DUCT SIZE SHOWN ON DRAWINGS. PROVIDE INSULATION PER SPECIFICATIONS. PROVIDE ALL NECESSARY FITTINGS AND OFFSETS.
- C RETURN/EXHAUST AIR DUCT DROP INTO SPACE. PROVIDE FLEX CONNECTION TO UNIT - MATCH UNIT INLET SIZE. TRANSITION TO DUCT SIZE SHOWN ON DRAWINGS. DUCT. PROVIDE INSULATION PER SPECIFICATIONS. PROVIDE ALL NECESSARY FITTINGS AND OFFSETS.
- D TRANSITION DUCTWORK AT EXISTING STRUCTURE. PROVIDE OFFSETS/TRANSITIONS AS REQUIRED TO RUN DUCTWORK THROUGH EXISTING GRIDER JOIST. FIELD VERIFY REQUIREMENTS.



KEYPLAN  
NOT TO SCALE



MEP/PE CONSULTANT:  
**IDAS**  
MECHANICAL ENGINEERING  
780 HILARIO DR., UNIT A, ELKHART, IN 46534 (847) 538-1996



**DUNELAND SCHOOL CORPORATION**  
**ALTERNATIVE CLASSROOM RENOVATION AT:**  
**CHESTERTON MIDDLE SCHOOL**  
**651 W MORGAN AVE, CHESTERTON, IN. 46304**



PROJECT NUMBER: 17-09	REV: 001
PROJECT MANAGER: TRS	
DRAWN BY: 002 LLC	
DESIGNED FOR CONSTRUCTION: 06/01	
PARTIAL ROOF PLAN	
MECHANICAL	






M2.10

FILE PATH AND NAME: P:\139-A-8 Duneland SC - CMS Alternative School (Chesterton, IN)\MA 139-A-8 M3.00 Mechanical Schedules  
DATE PLOTTED: 6/15/2021 7:20 AM  
PLOTTED BY: LARRY ARNOLD

VARIABLE REFRIGERANT FLOW UNIT SCHEDULE - OWNER PURCHASED																																
TAG	LOCATION	AREA SERVED	MANUFACTURER	MODEL NUMBER	TYPE	CORRECTED COOLING (BTUH)	CORRECTED SENSIBLE COOLING (BTUH)	CORRECTED HEATING (BTUH)	CFM	EAT D.B. (°F)	EAT W.B. (°F)	HTG EAT DB (°F)	FILTER TYPE	RLA	VOLT/PH	DIMENSIONS LxWxH (IN.)	OUTDOOR SECTION	TAG	MANF.	MODEL NUMBER	WEIGHT (LB.S)	DIMENSIONS LxWxH (IN.)	TOTAL COOLING (MBH)	TOTAL HEATING (MBH)	CORRECTED TOTAL COOLING (MBH)	CORRECTED TOTAL HEATING (MBH)	AMBIENT AIR (°F)	IEER	MCA	MOCP	VOLTS/ PHASE	NOTES
VRF 1	EXISTING CLASSROOM 3	EXISTING CLASSROOM 3	LG	ARNU283TMA4	4-WAY CASSETTE	23,645	18,148	25,801	812	75	63	70	WASHABLE	1.3	208/1	36x36x10		CU 1	LG	ARUM19DTE5	688	49x30x67	192.0	216.0	159.6	156.0	95.0/75.0 -10.0	25.9	35.7	50	480/3	1,2,3,4,5,6,7,8
VRF 2	EXISTING CLASSROOM 3	EXISTING CLASSROOM 3	LG	ARNU283TMA4	4-WAY CASSETTE	23,645	18,148	25,801	812	75	63	70	WASHABLE	1.3	208/1	36x36x10		CU 2	LG	ARUM19DTE5	688	49x30x67	192.0	216.0	142.2	155.2	95.0/75.0 -10.0	25.9	35.7	50	480/3	1,2,3,4,5,6,7,8
VRF 3	EXISTING CLASSROOM 4	EXISTING CLASSROOM 4	LG	ARNU283TMA4	4-WAY CASSETTE	23,645	18,148	25,801	812	75	63	70	WASHABLE	1.3	208/1	36x36x10																1,2,3,4,5,6,7,8
VRF 4	EXISTING CLASSROOM 4	EXISTING CLASSROOM 4	LG	ARNU283TMA4	4-WAY CASSETTE	23,645	18,148	25,801	812	75	63	70	WASHABLE	1.3	208/1	36x36x10																1,2,3,4,5,6,7,8
VRF 5	ADMIN 6	ADMIN 6	LG	ARNU153TQD4	4-WAY CASSETTE	13,005	9,940	14,191	388	75	63	70	WASHABLE	0.2	208/1	24x24x10																1,2,3,4,5,6,7,8
VRF 6	PRINCIPAL 7	PRINCIPAL 7	LG	ARNU183TQD4	4-WAY CASSETTE	16,129	12,379	17,600	396	75	63	70	WASHABLE	0.2	208/1	24x24x10																1,2,3,4,5,6,7,8
VRF 7	ALTERNATIVE CLASSROOM 5	ALTERNATIVE CLASSROOM 5	LG	ARNU283TMA4	4-WAY CASSETTE	23,888	18,335	23,344	812	75	63	70	WASHABLE	1.3	208/1	36x36x10																1,2,3,4,5,6,7,8
VRF 8	ALTERNATIVE CLASSROOM 5	ALTERNATIVE CLASSROOM 5	LG	ARNU283TMA4	4-WAY CASSETTE	23,888	18,335	23,344	812	75	63	70	WASHABLE	1.3	208/1	36x36x10																1,2,3,4,5,6,7,8
VRF 9	ALTERNATIVE CLASSROOM 5	ALTERNATIVE CLASSROOM 5	LG	ARNU283TMA4	4-WAY CASSETTE	23,888	18,335	23,344	812	75	63	70	WASHABLE	1.3	208/1	36x36x10																1,2,3,4,5,6,7,8
VRF 10	ALTERNATIVE CLASSROOM 5	ALTERNATIVE CLASSROOM 5	LG	ARNU283TMA4	4-WAY CASSETTE	23,888	18,335	23,344	812	75	63	70	WASHABLE	1.3	208/1	36x36x10																1,2,3,4,5,6,7,8
VRF 11	CLASSROOM G150	CLASSROOM G150	LG	ARNU283TMA4	4-WAY CASSETTE	23,888	18,335	23,344	812	75	63	70	WASHABLE	1.3	208/1	36x36x10																1,2,3,4,5,6,7,8
VRF 12	CLASSROOM G150	CLASSROOM G150	LG	ARNU283TMA4	4-WAY CASSETTE	23,888	18,335	23,344	812	75	63	70	WASHABLE	1.3	208/1	36x36x10																1,2,3,4,5,6,7,8
VRF 13	CORRIDOR 2	CORRIDOR 2	LG	ARNU183TQD4	4-WAY CASSETTE	16,295	12,506	15,924	396	75	63	70	WASHABLE	0.2	208/1	24x24x10																1,2,3,4,5,6,7,8
VRF 14	IT CLOSET 11	IT CLOSET 11	LG	ARNU093TRD4	4-WAY CASSETTE	8,107	6,226	8,846	307	75	63	70	WASHABLE	0.2	208/1	24x24x10																1,2,3,4,5,6,7,8
VRF 15	OFFICE 9	OFFICE 9	LG	ARNU123TRD4	4-WAY CASSETTE	10,387	7,933	11,334	307	75	63	70	WASHABLE	0.2	208/1	24x24x10															1,2,3,4,5,6,7,8	
NOTES: 1. PROVIDE CONDENSATE PUMP. 2. DISCONNECT BY ELEC. CONTRACTOR. 3. REFRIGERANT LINE KITS BY MECHANICAL CONTRACTOR. 4. SIMULTANEOUS HEATING/COOLING 5. PROVIDE REMOTE THERMOSTAT. 6. MECHANICAL CONTRACTOR TO PROVIDE ALL MOUNTING AND ISOLATION HARDWARE FOR CEILING CASSETTE UNITS. 7. MECHANICAL CONTRACTOR TO PROVIDE PLATFORM CURB FOR CONDENSING UNIT(S) ON ROOF. VERIFY REQUIREMENTS WITH MANUFACTURER. 8. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.																																

DEDICATED OUTDOOR AIR SYSTEM UNIT SCHEDULE - OWNER PURCHASED 																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
GENERAL DATA					DIMENSIONAL DATA (IN.)			SUPPLY FAN DATA								EXHAUST FAN DATA						HEATING CAPACITY DATA (GAS)						COOLING CAPACITY DATA										ENERGY WHEEL								RATING																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
TAG	LOCATION	MANUFACTURER	MODEL NUMBER	TYPE	OPERATING WEIGHT (LB.)	LENGTH	WIDTH	HEIGHT	CFM	MIN ODA	FAN RPM	ESP (IN.)	DRIVE	MOTOR HP	MOTOR VOLT/ PH	MOTOR BHP	CFM	FAN RPM	ESP (IN.)	DRIVE	MOTOR HP	MOTOR VOLT/ PH	MOTOR BHP	MBH INPUT/ OUTPUT	AIR PD (IN. WC)	CONTROL	EAT (°F)	LAT (°F)	MAX. VELOCITY (FPM)	MAX. FPF	COOLING MBH TOTAL/ SENSIBLE	AIR PD (IN. WC)	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	LAT WB (°F)	COOLING OA (DB/WB)	COOLING PRE-TREATED OA (DB/WB)	COOLING RA (DB/WB)	COOLING EA (DB/WB)	TOTAL CLG CAPACITY (MBH)	HEATING OA (DB/WB)	HEATING PRE-TREATED OA (DB/WB)	HEATING RA (DB/WB)	HEATING EA (DB/WB)	TOTAL HTG CAPACITY (MBH)	EER	IEER																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
 1	ROOF	VALENT	VXE-112-41-40H-51-C	GAS HEATING/ ELECTRIC COOLING	2,950	145	48	66	1,330	1,330	1,114	0.5	VFD	1.0	480/3	0.44	1,330	1,077	0.5	VFD	1.0	480/3	0.41	100/80	0.149	16:1	53.3	109.0	107	144	66.1/45.5	0.046	79.6	65.3	48.4	48.2	95.0/75.0	79.6/65.7	75.0/62.4	90.4/72.4	50.3	-10.0/-11.0	53.3/44.9	72.0/55.7	8.7/8.7	90.9	12.8	23.2																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									

DEDICATED OUTDOOR AIR SYSTEM UNIT SCHEDULE - CONTINUED												
GENERAL DATA				ELECTRICAL DATA (UNIT)				FILTERS			NOTES	
TAG	LOCATION	MANUFACTURER	MODEL NUMBER	MCA	MOCP	VOLT	PH	SUPPLY AIR	RETURN AIR	OUTDOOR AIR		
 1	ROOF	VALENT	VXE-112-41-40H-51-C	15.9	20.0	480	3	4" MERV 14	2" MERV 8	2" MERV 8	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16	
NOTES: SEE ABOVE.												

VRF REFRIGERANT BOXES - OWNER PURCHASED									
GENERAL DATA					ELECTRICAL DATA			NOTE	
TAG	LOCATION	MODEL NO.	MANUFACTURER	SYSTEM	VOLT	PH	RLA		
 1	CORRIDOR	PRHR083A	LG		208	1	0.2	1,2	
 2	ORRIDOR	PRHR083A	LG		208	1	0.2	1,2	
NOTES:									
1. PROVIDE ISOLATION VALVES AT EACH CONNECTION.									
2. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.									

MECHANICAL / ELECTRICAL COORDINATION SCHEDULE

NOTES:





1. EQUIPMENT FURNISHED BY THE ELECTRICAL CONTRACTOR (MARK 'E'), HEATING CONTRACTOR (MARK 'H'), VENTILATING CONTRACTOR (MARK 'V').

2. ALL CONDUIT AND WIRING FOR TEMPERATURE CONTROL AND EQUIPMENT INTERLOCK SHALL BE BY BAS CONTRACTOR. OTHER CONTROLS AND CONTROL CONDUITS/WIRING BY TRADE FURNISHING RESPECTIVE EQUIPMENT.

3. E.C. SHALL COORD. & REVIEW THE ELECTRICAL CHARACTERISTICS, AMPACITY & OTHER REQUIREMENTS OF COMPONENTS BEFORE INSTALLATION OF WORK. ALL OTHER CONTRACTORS SHALL ADVISE E.C. OF ANY MOTOR/DEVICE CHANGES.

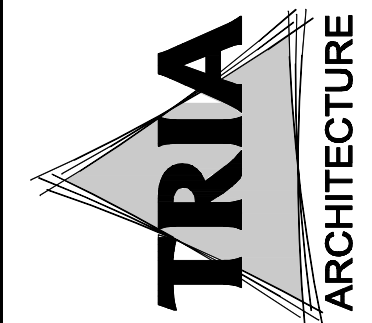
4. ALL LOOSE STARTERS SHALL INCLUDE HOA SWITCH, PILOT LIGHT MOUNTED IN COVER, CONTROL TRANSFORMER, AND ONE N.O. AND ONE N.C. AUXILIARY CONTACTS.


5. SEE SPECIFICATIONS AND DRAWINGS FOR TYPES AND LOCATIONS OF DEVICES SCHEDULED BELOW.

TAG	EQUIPMENT DESCRIPTION	UNIT MOUNTED DEVICES				LOOSE DEVICES			REMARKS
		STARTER	DISCONNECT	OVERCURRENT PROTECTION	SINGLE POINT CONNECTION	STARTER	DISCONNECT	OVERCURRENT PROTECTION	
	VARIABLE REFRIGERANT FLOW UNIT	–	–	–	YES	–	E	E	
	CONDENSING UNIT	–	–	–	YES	–	E	E	
	VRF REFRIGERANT BOX	–	–	–	YES	–	E	E	
	DEDICATED OUTSIDE AIR UNIT	–	–	–	YES	–	E	E	

NOTES:

1. VERIFY FINAL LOADS AND REQUIREMENTS WITH FINAL MECHANICAL DRAWINGS.








MEP/EFF CONSULTANT:  
  
CDAS CONSULTING LLC  
780 HARTLAND DR., SUITE 1000, ELK GROVE, ILLINOIS 60124 (847) 539-1096

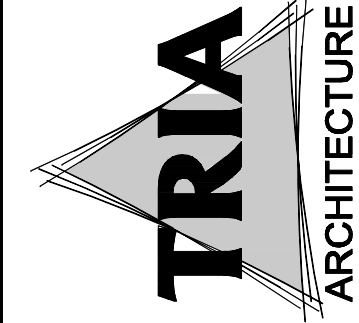
DUNELAND SCHOOL CORPORATION  
ALTERNATIVE CLASSROOM RENOVATION AT:  
CHESTERTON MIDDLE SCHOOL  
651 W MORGAN AVE, CHESTERTON, IN. 46304

PROJECT NUMBER: 17-093	PROJECT MANAGER: TBS	DRAWN BY: OAG/LLC	DESIGNED FOR CONSTRUCTION: 06/05/21	SCHEDULES: MECHANICAL
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M3.00

RADIANT CEILING PANEL SCHEDULE - OWNER PROVIDED													
TAG	LOCATION	MANUFACTURER	MODEL NUMBER	PANEL LENGTH (FT.)	PANEL WIDTH (FT.)	AWT (°F)	EWI (°F)	LWT (°F)	CAPACITY (BTUH/LIN. FT.)	NUMBER OF TUBES	TOTAL MBH	GPM	NOTES
	PRINCIPAL 7	AERO TECH	AXO	13'-5"	24"	170	180	160	456	8	6.2	1.0	1,2,3,4
NOTES: 1. FIELD MEASURE ALL LENGTHS PRIOR TO FABRICATION. PANELS ARE WALL TO WALL. FIELD CUT PANELS TO MATCH WALLS. COLOR TO BE SELECTED BY ARCHITECT 2. ALL PANELS ARE TO BE MADE OF MULTIPLES OF 6" EXTRUSIONS. LONG RUNS OF PANELS TO BE MADE OF MULTIPLE MAXIMUM 12'-0" LENGTHS. 3. PROVIDE PANEL SUPPORTS, EDGE SUPPORTS, ETC. FOR LAY-IN CEILING. LAY-IN CEILING BY GENERAL CONTRACTOR. 4. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.													

DIFFUSER, GRILLE AND REGISTER  <small>NECK SIZE OR QTY. (CFM)</small>							
TAG	MANUFACTURER	MODEL NUMBER	TYPE	SERVICE	MATERIAL	MAXIMUM NC	NOTES
	TITUS	TMS-AA	24"x24" LOUVER FACE DIFFUSER	SUPPLY	ALUMINUM	25	1,2,3
	TITUS	350RL	35" BLADE	TRANSFER/EXHAUST/RETURN	ALUMINUM	30	1,2,3,4
NOTES: 1. OFF-WHITE BAKED ENAMEL FINISH. 2. LAY-IN FRAME. 3. PROVIDE 2x2 FRAME COMPATIBLE WITH CEILING. FIELD VERIFY. 4. PROVIDE INSULATED PLENUM.							



MEP/FF CONSULTANT:





**CDAS**  
 CONSULTING DESIGN ARCHITECTS & ENGINEERS, LLC  
 705 HIGHLAND DR., SUITE 1000, CHICAGO, ILLINOIS 60654 (847) 539-1996

**DUNELAND SCHOOL CORPORATION**

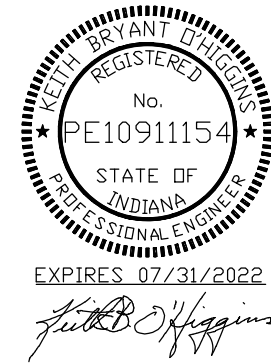
**ALTERNATIVE CLASSROOM RENOVATION AT:**

**CHESTERTON MIDDLE SCHOOL**

**651 W MORGAN AVE, CHESTERTON, IN. 46304**

PROJECT NUMBER: 17-093	06/15/21
PROJECT MANAGER: TBS	
DRAWN BY: CDS LLC	
DESIGNED FOR CONSTRUCTION:	
06/15/21	

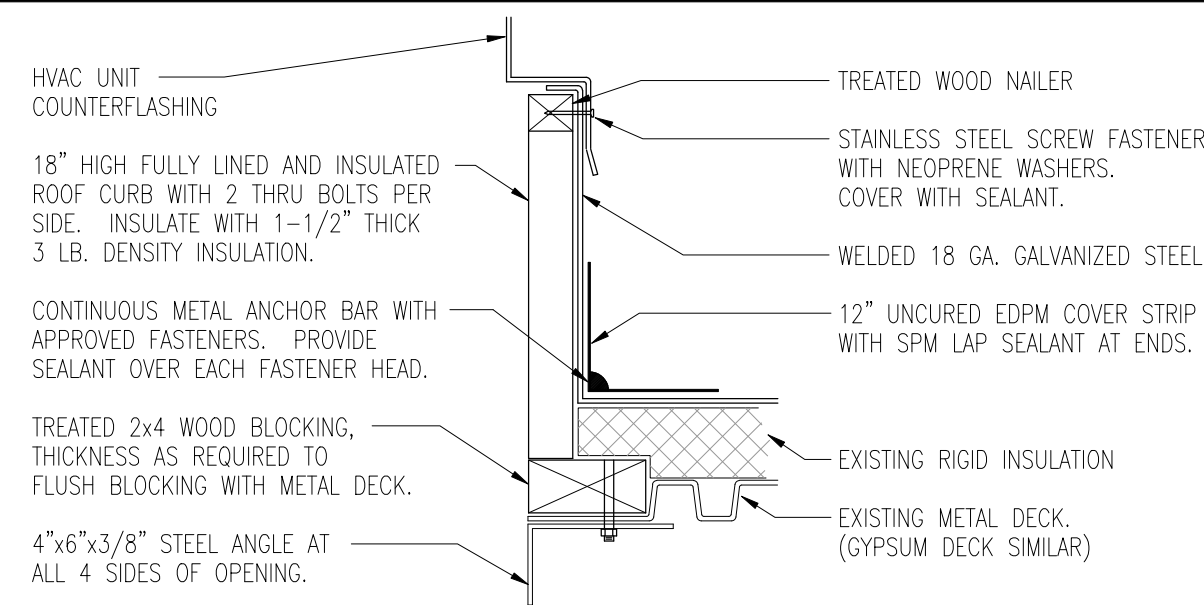
SCHEDULES  
MECHANICAL



M3.10

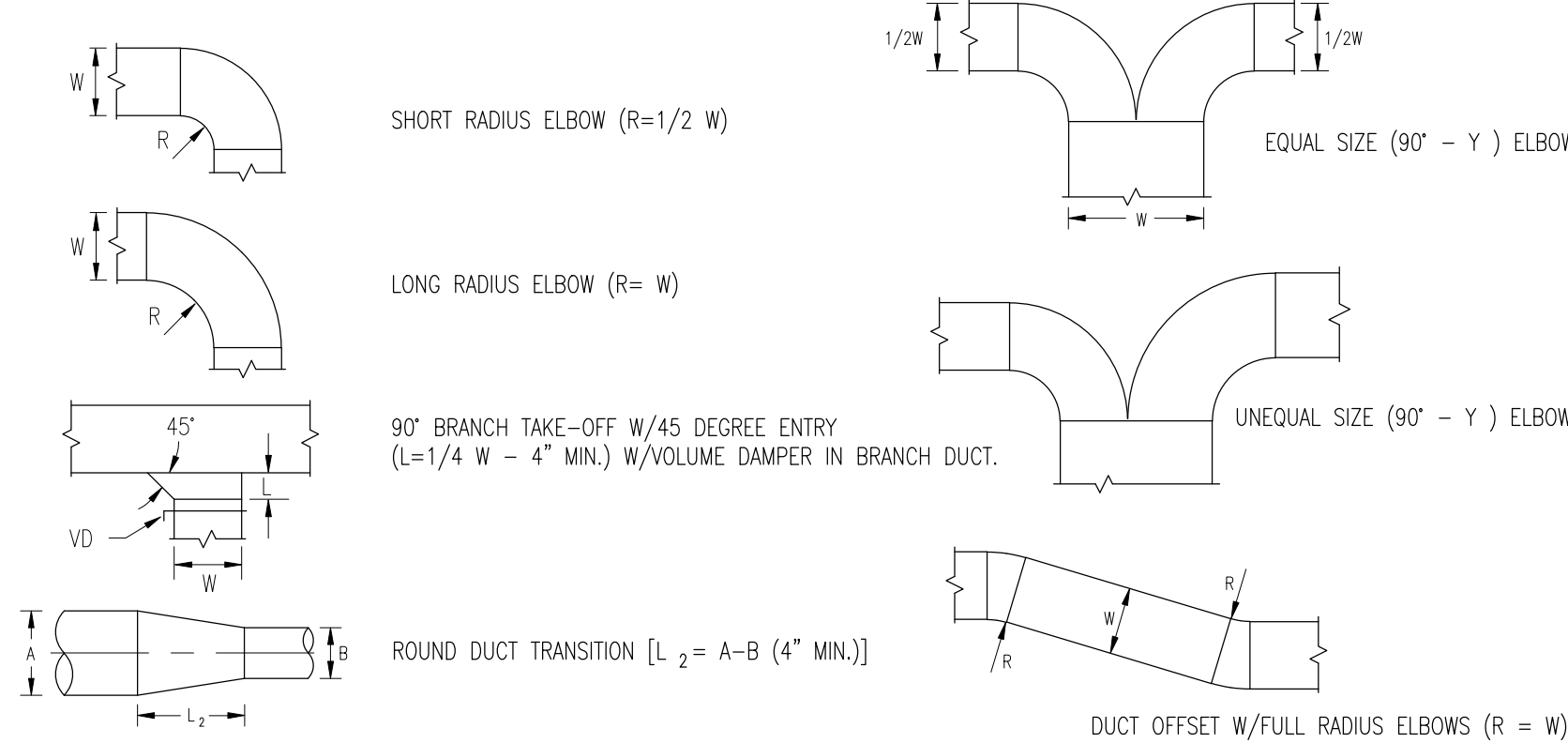


FILE PATH AND NAME: P:\139-A-B Duneland SC - CMS Alternative School (Chesterton, IN)\MVA.139-A-B-M4.00 Mechanical Details  
DATE PLOTTED: 6/15/2021 6:21 AM  
PLOTTED BY: LARRY ARNOLO

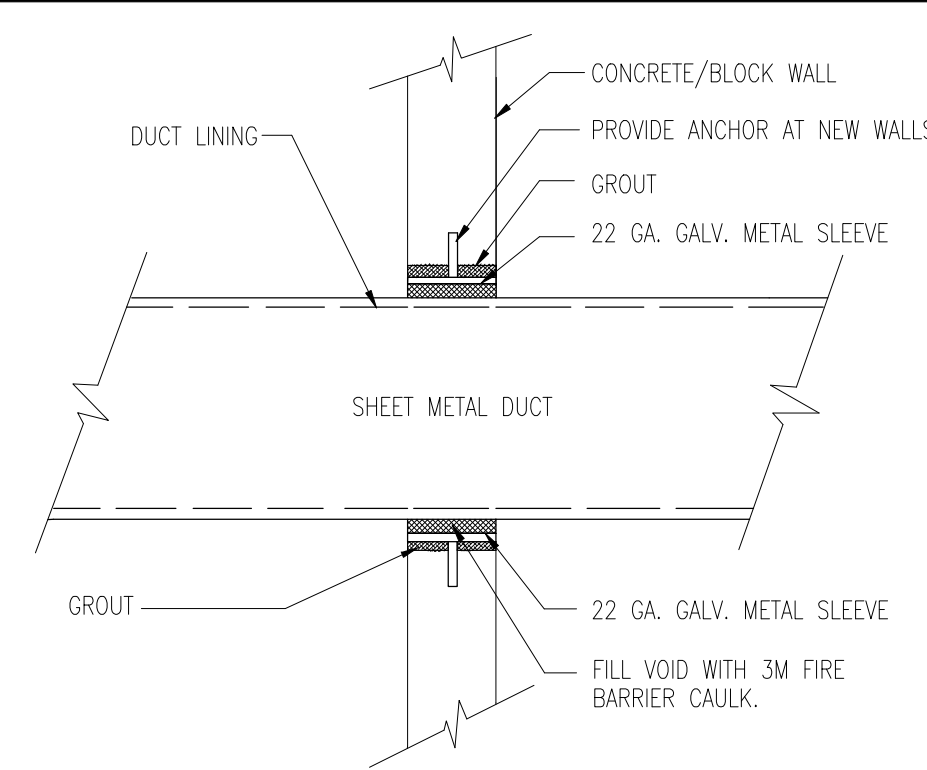


NOTE:  
THIS DETAIL TYPICAL FOR ALL ROOF EXHAUSTERS, INTAKE/RELIEF HOODS, EQUIPMENT SUPPORT, AND PIPE PENETRATION CURBS.

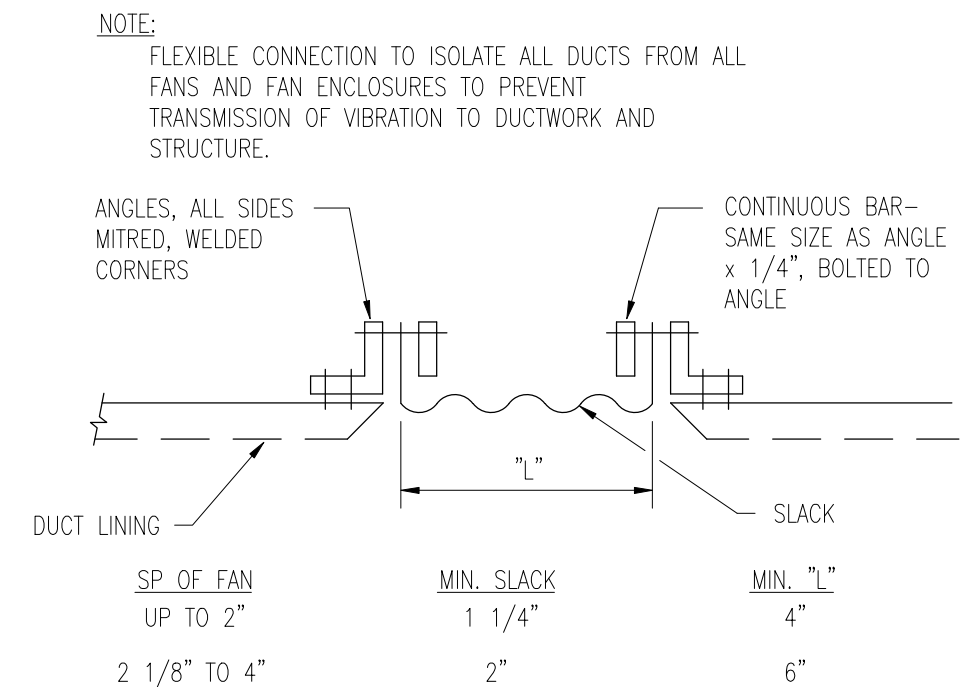
1 VENTILATION EQUIPMENT ROOF CURB DETAIL  
M4.00 NO SCALE



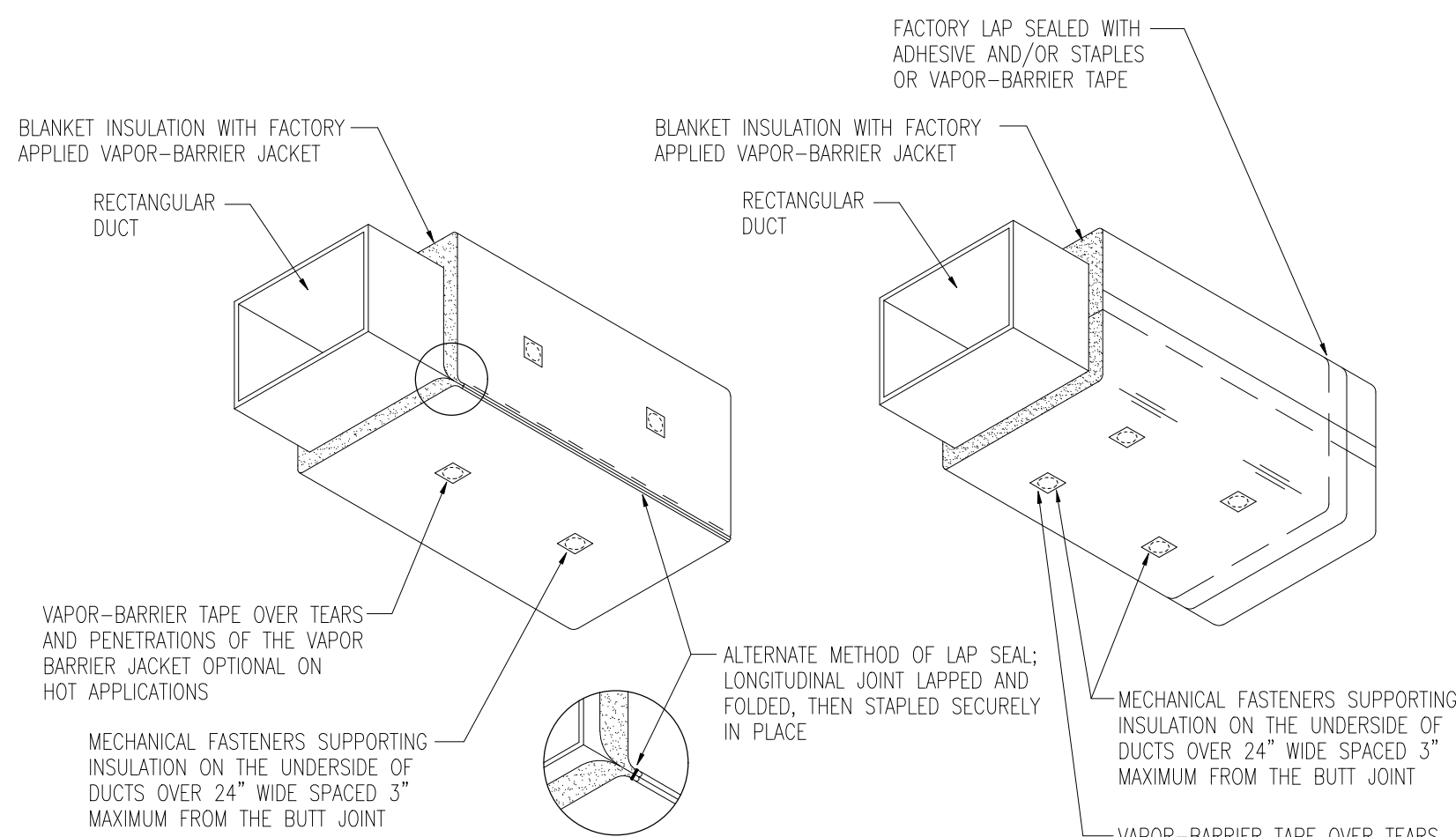
2 TYPICAL DUCTWORK CONNECTIONS  
M4.00 NO SCALE



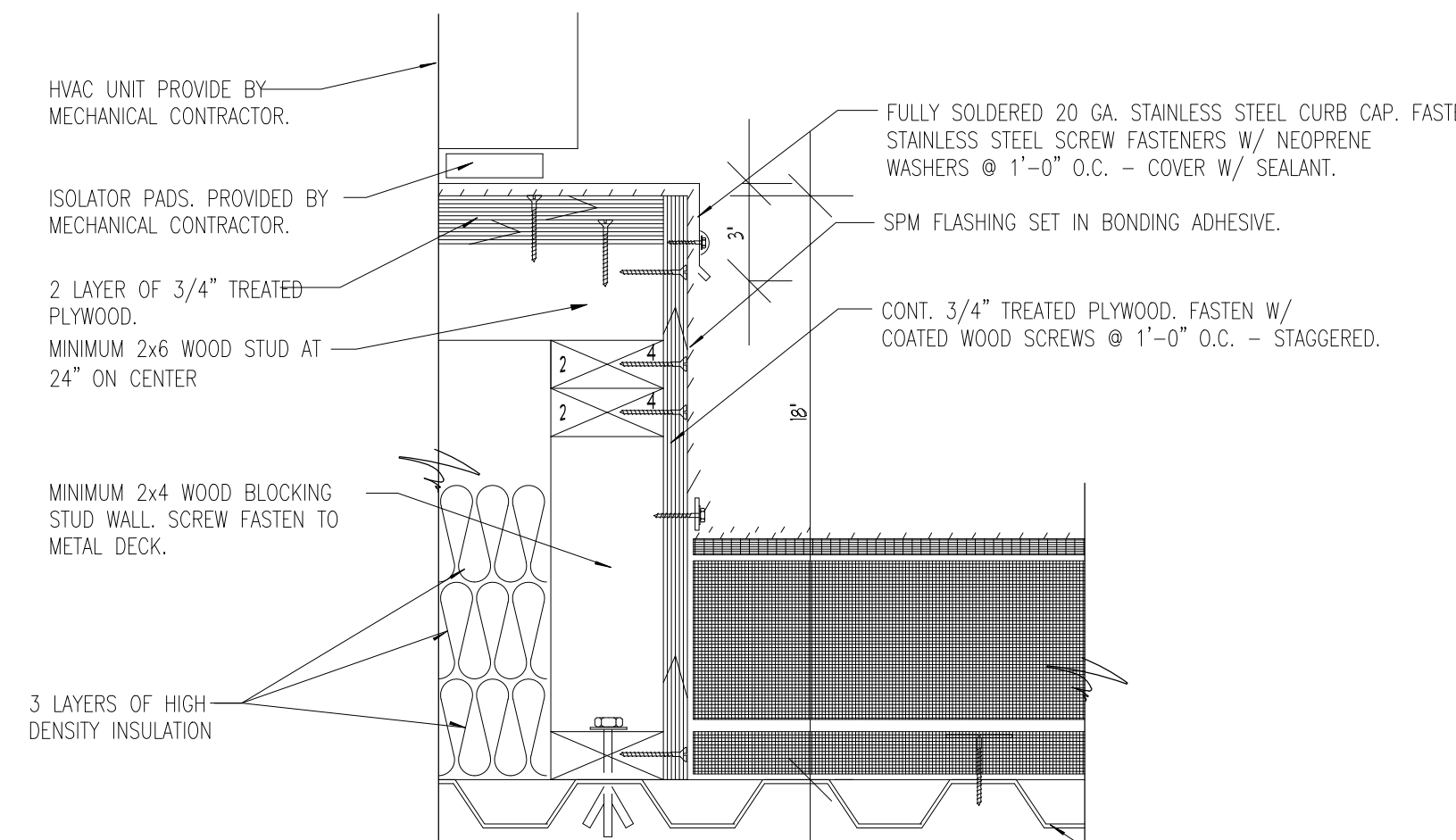
3 DUCT PASSING THROUGH WALL DETAIL  
M4.00 NO SCALE



4 FLEXIBLE CONNECTION  
M4.00 NO SCALE



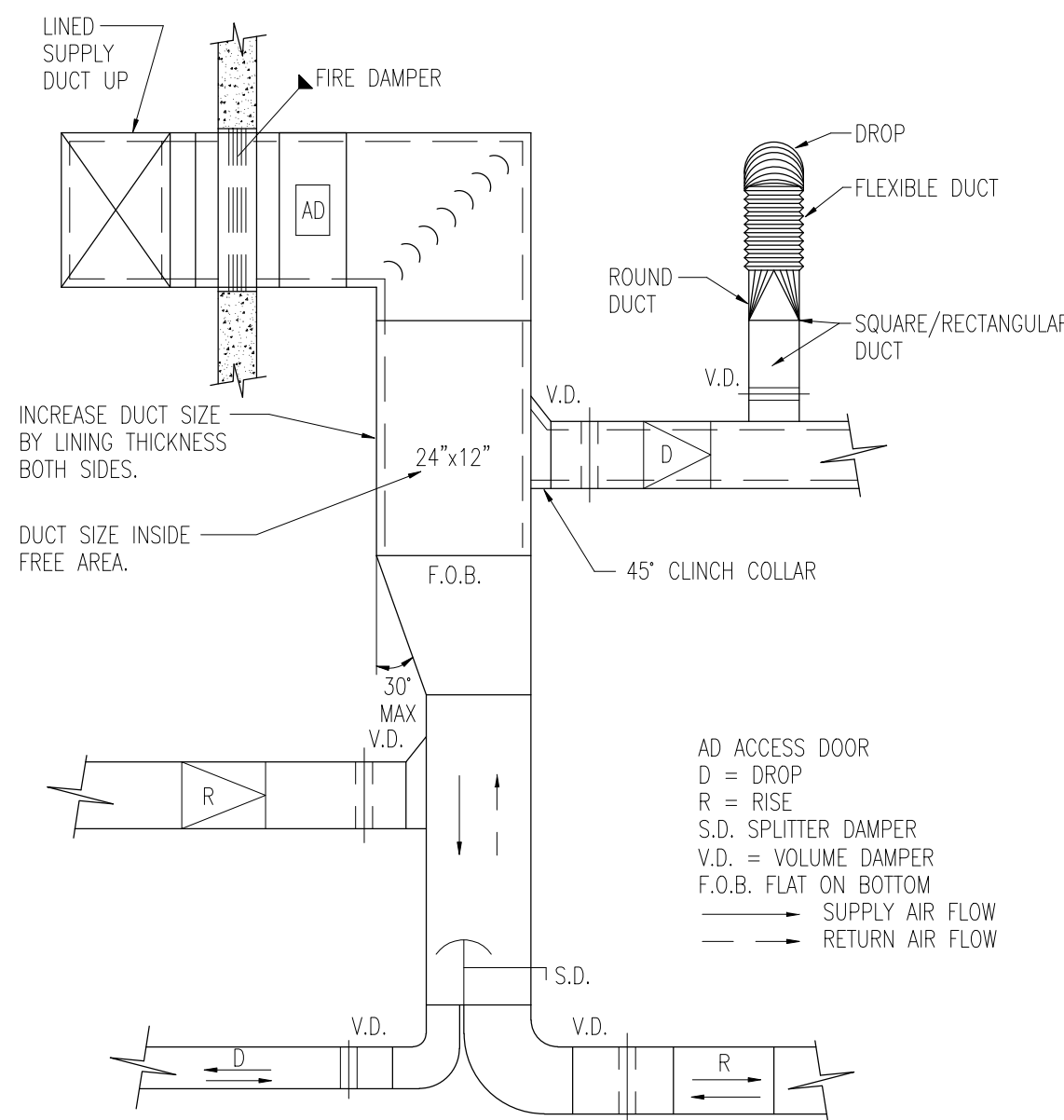
5 FLEXIBLE FIBROUS RECTANGULAR/ EXPOSED DUCT INSULATION DETAIL  
M4.00 NO SCALE



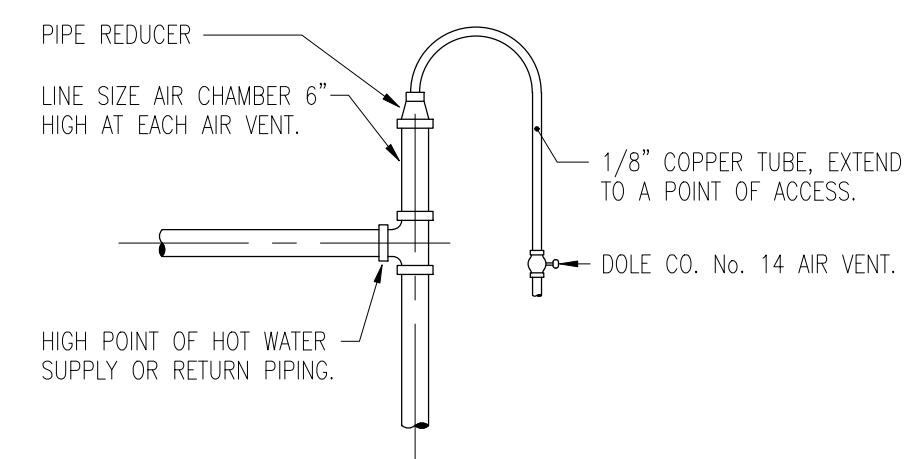
- NOTES:  
1. ALL WOOD BLOCKING TO BE TREATED WITH JOINTS STAGGERED, MITERED, AND SCREWED TIGHT  
2. CURB TO BE EQUAL TO THYCURB MODEL TC-3 WITH INSULATED PLATFORM STYLE BASE. CURB TO HAVE FLAT TOP, MINIMUM 14 GAUGE GALVANIZED STEEL CONSTRUCTION, BOTTOM FLOOR AND REMOVABLE PLYWOOD TOP (2 LAYERS AT 3/4") WITH 20 GAUGE COVER. CONTRACTOR TO FIELD PROVIDE AND INSTALL 3 LAYERS OF HIGH DENSITY SOUND INSULATION IN CURB CAVITY FOR SOUND BREAK. CURB TO BE FACTORY ENGINEERED TO MATCH HVAC UNIT BEING SUPPORTED AND SUBMITTED TO ENGINEER FOR APPROVAL.

6 HVAC PLATFORM CURB DETAIL  
M4.00 NO SCALE

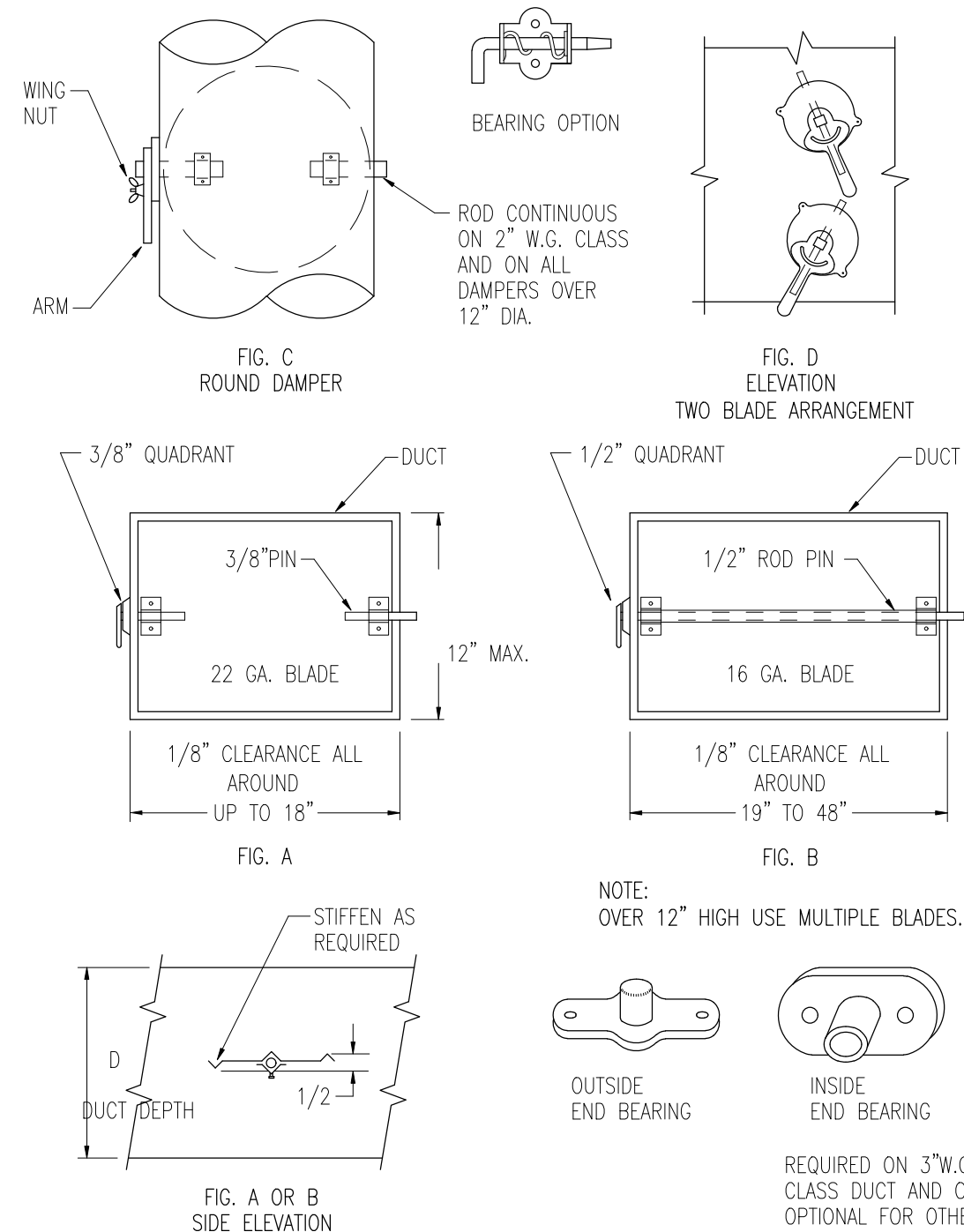
SEE ARCHITECTURAL DETAILS FOR ROOFING REQUIREMENTS.



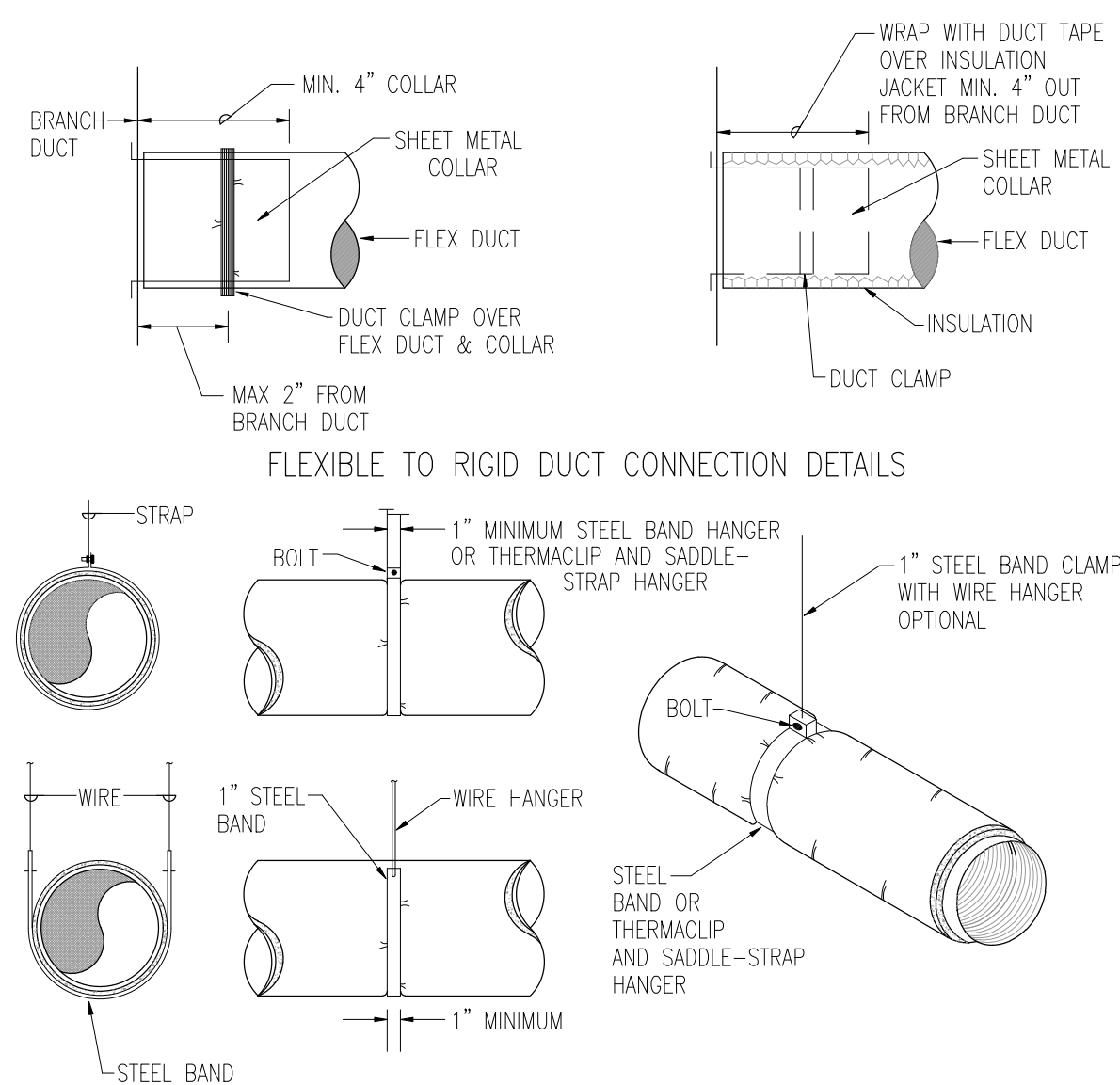
7 TYPICAL FITTINGS & VOLUME DAMPER LOCATION IN SUPPLY OR RETURN DUCT SYSTEM  
M4.00 NO SCALE



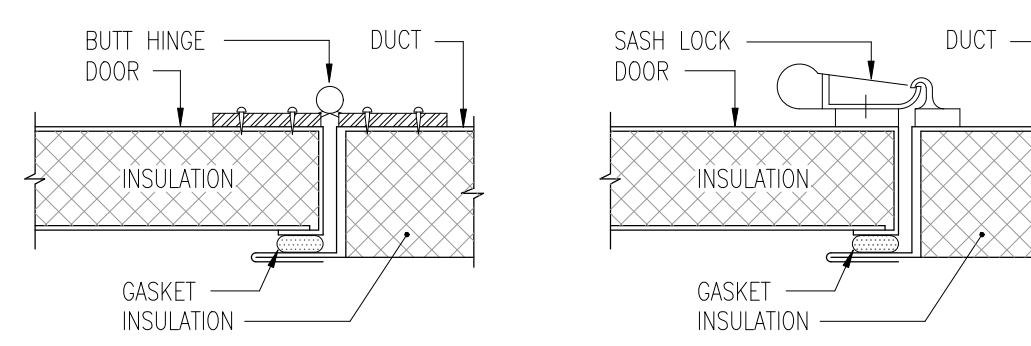
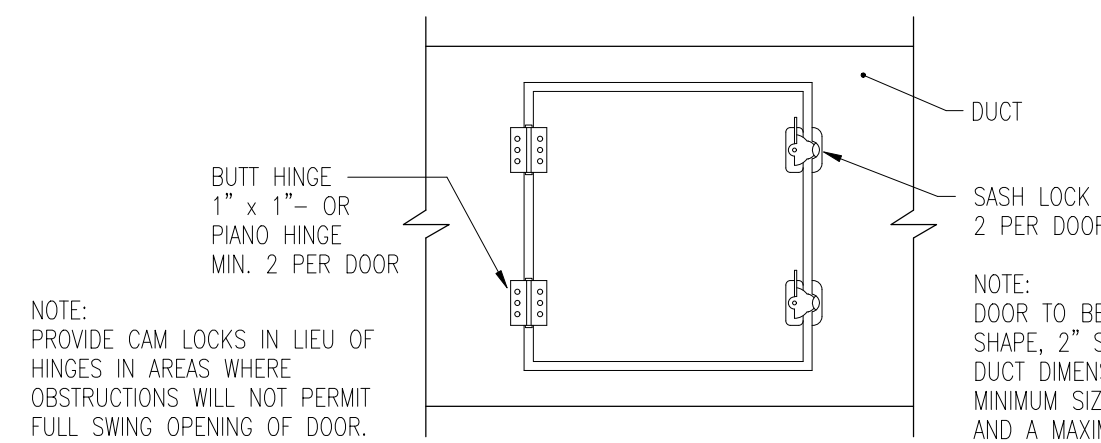
8 MANUAL AIR VENT DETAIL  
M4.00 NO SCALE



9 VOLUME DAMPERS - SINGLE BLADE TYPE  
M4.00 NO SCALE



10 FLEXIBLE DUCT HANGER & CONNECTION DETAILS  
M4.00 NO SCALE

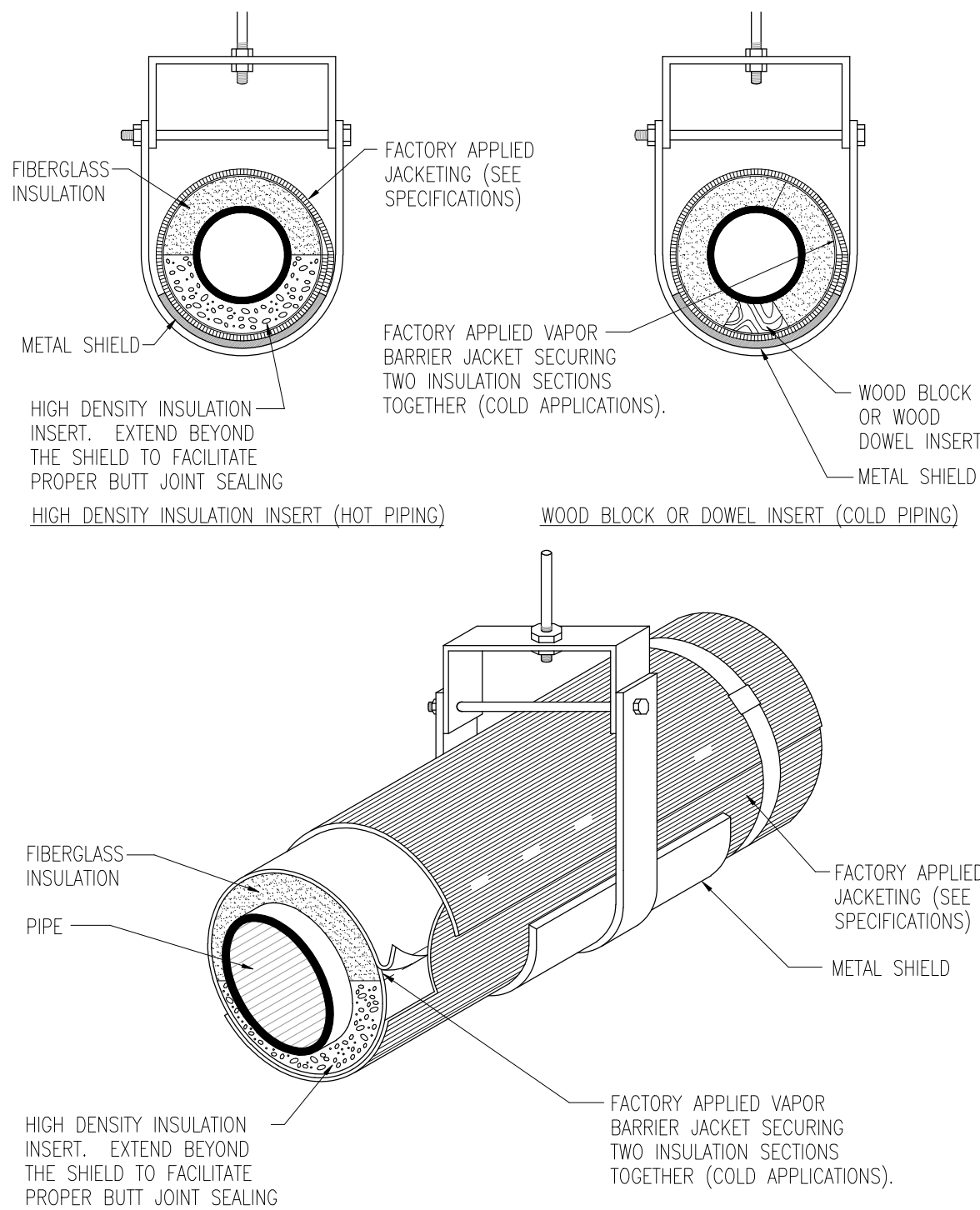


STATIC IN DUCT	DOOR SIZE	NO. HINGES	NO. LOCKS	METAL GAGE		
				FRAME	DOOR	BACK
2" W.G. STATIC AND LESS	12" x 12"	2	2-S	24	26	26
	18" x 18"	2	2-S	22	24	26
	24" x 24"	3	2-S	22	22	26
3" W.G. STATIC	12" x 12"	2	2-S	24	26	26
	18" x 18"	2	2-S, 1-T, 1-B	22	24	26
	24" x 24"	3	2-S, 1-T, 1-B	22	22	26
4" W.G. TO 10" W.G.	12" x 12"	2	2-S	24	26	26
	18" x 18"	2	2-S, 1-T, 1-B	22	24	26
	24" x 24"	3	2-S, 1-T, 1-B	22	22	26

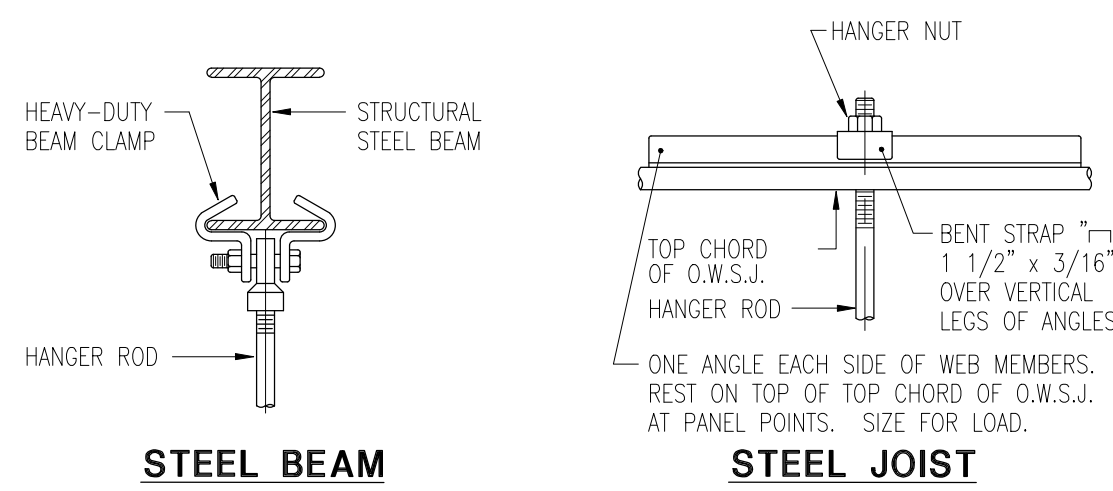
S = SIDE OPPOSITE HINGES, T = TOP, B = BOTTOM  
NOTE: TYPICAL LOCATIONS FOR ACCESS DOORS - FIRE DAMPERS, AUTO DAMPERS, REHEAT COILS, SMOKE DAMPERS & DEVICES MOUNTED INSIDE DUCT.

11 TYPICAL DUCT ACCESS DOOR  
M4.00 NO SCALE

FILE PATH AND NAME: P:\139-A-8 Duneland SC - CMS Alternative School (Chesterton, IN)\M4.10-Mechanical Details  
DATE PLOTTED: 6/15/2021 6:21 AM  
PLOTTED BY: LARRY ARNOLD



**1 CLEVIS HANGER HIGH DENSITY INSERT DETAIL**  
M4.10 NO SCALE



**PIPE HANGERS AND SUPPORTS**

SUPPORT HORIZONTAL STEEL AND COPPER PIPING AS FOLLOWS:

NOMINAL PIPE SIZE	DISTANCE BETWEEN SUPPORTS	HANGER ROD DIAMETERS
1/2"	6'	3/8"
3/4" TO 1-1/2"	6'	1/2"
2" TO 2-1/2"	10'	1/2"
3" AND 4"	12'	5/8"
6" TO 10"	14'	7/8"
14" TO 18"	20'	1"

PLACE HANGER WITHIN 1 FOOT OF EACH HORIZ. ELBOW.

PIPING 4 INCHES AND SMALLER (WITH INSULATION) TO BE MOUNTED TO NEW AND EXISTING CONCRETE/STRUCTURE WITH C-CLAMPS/STRAPS.

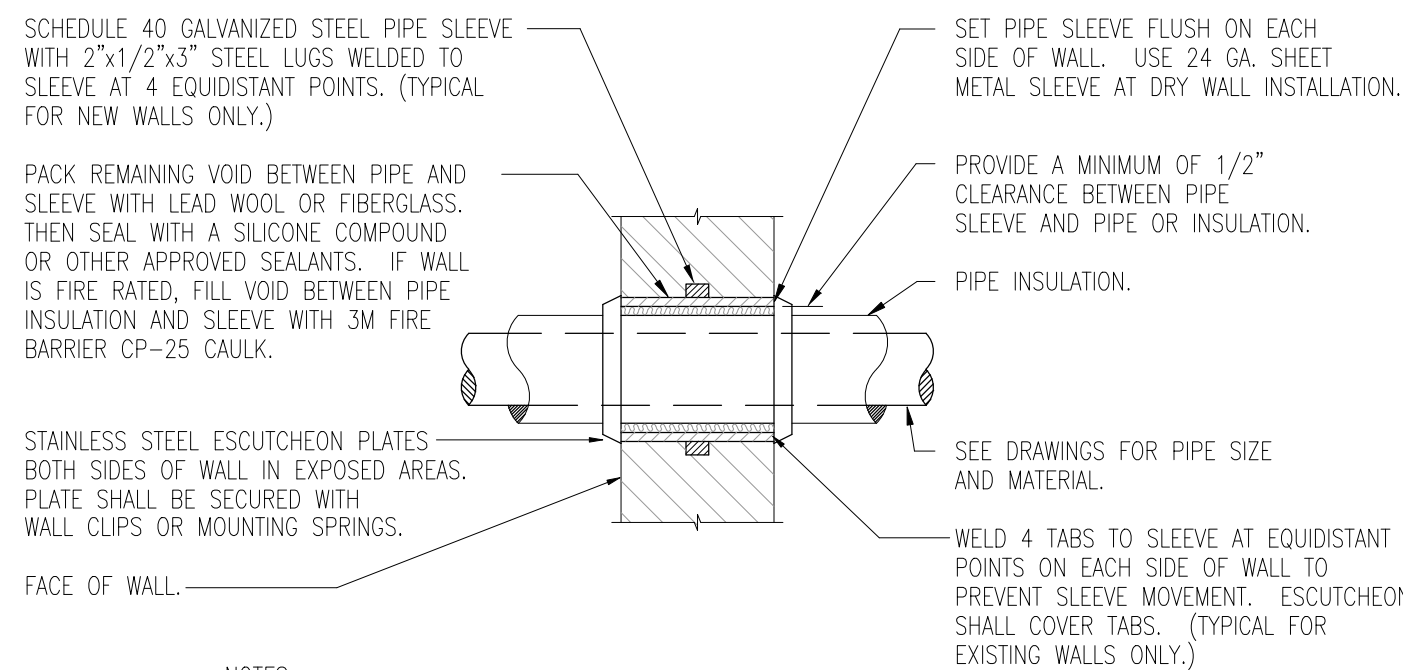
**VERTICAL PIPING:**

- SUPPORT VERTICAL WATER PIPING AT EVERY FLOOR.

WHERE SEVERAL PIPES CAN BE INSTALLED IN PARALLEL AND AT SAME ELEVATION PROVIDE MULTIPLE OR TRAPEZE HANGERS.

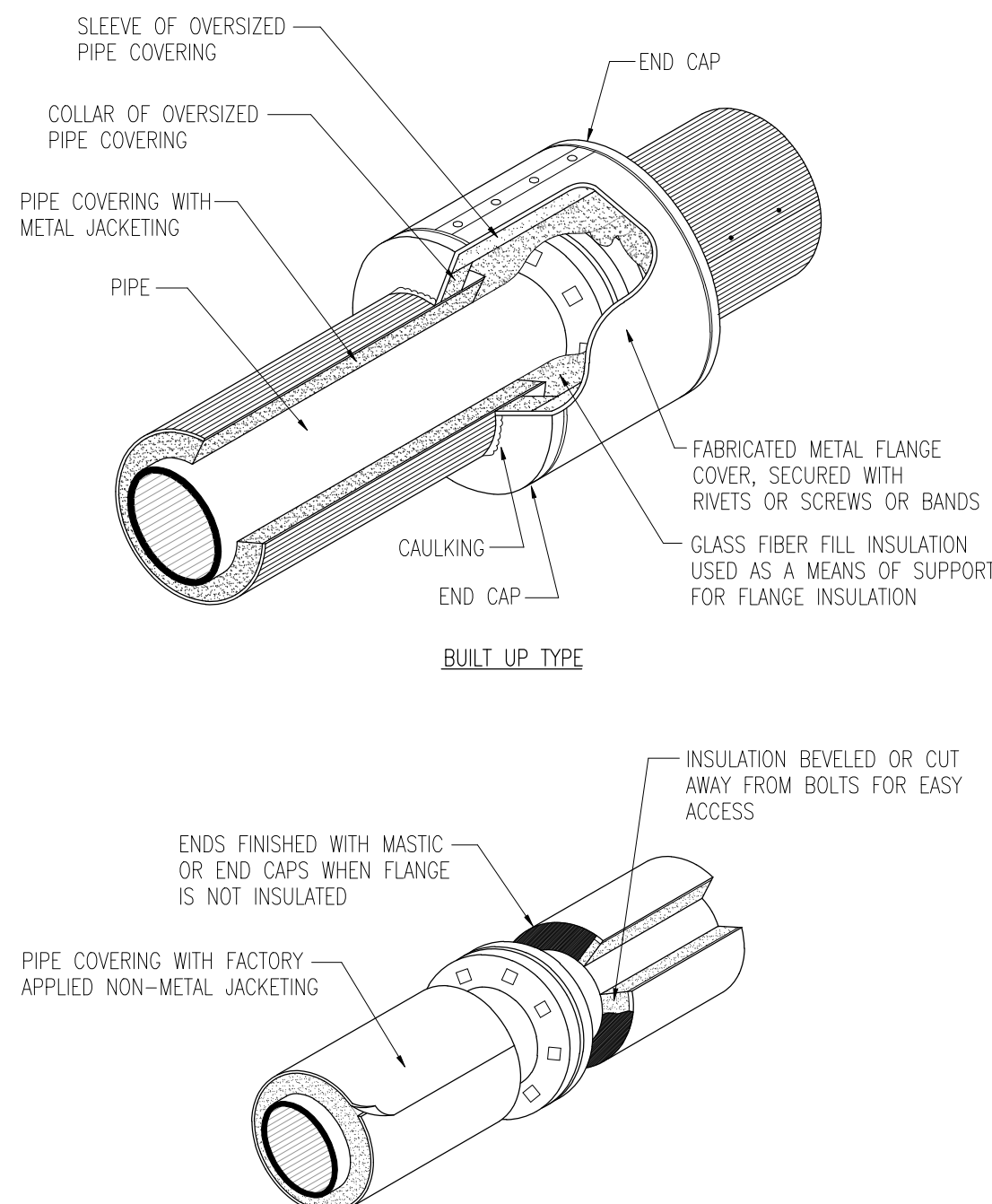
WHERE PRACTICAL, SUPPORT RISER PIPING INDEPENDENTLY OF CONNECTED HORIZ. PIPING.

**5 PIPE HANGER DETAILS**  
M4.10 NO SCALE

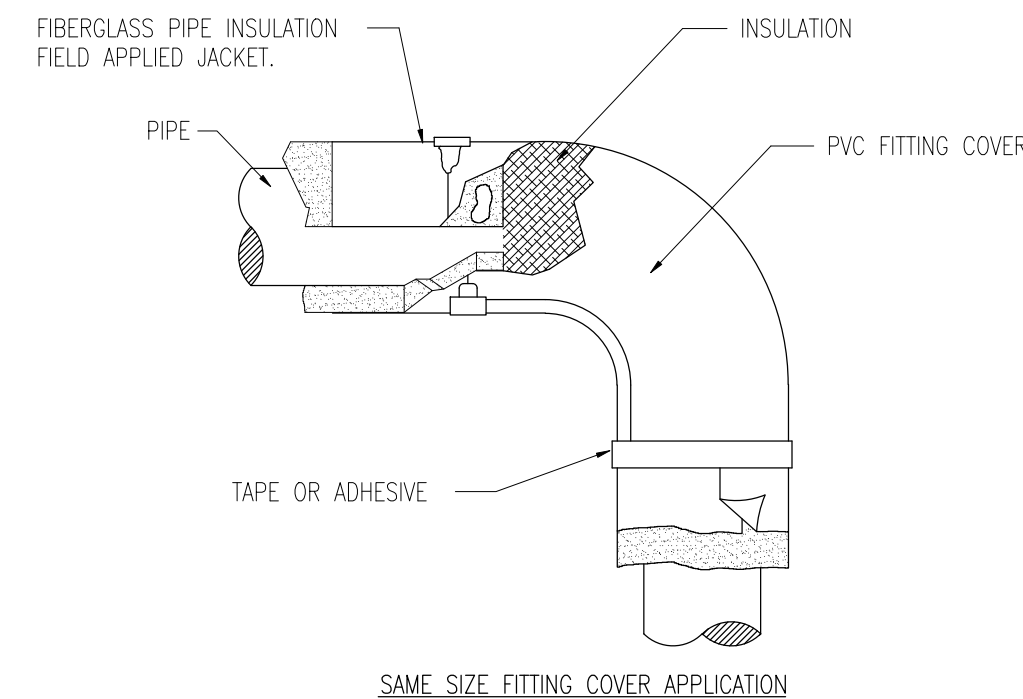


- NOTES:
- I.D. OF PIPE SLEEVE TO BE A MIN. OF 1/2" LARGER THAN O.D. OF PIPE OR INSULATION PASSING THROUGH WALL.
  - CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF THEIR SLEEVES WITH OTHER TRADES AND/OR CONTRACTORS.
  - PIPE SLEEVES THRU SMOKE OR FIRE WALLS SHALL BE IN COMPLIANCE WITH NFPA-90A.

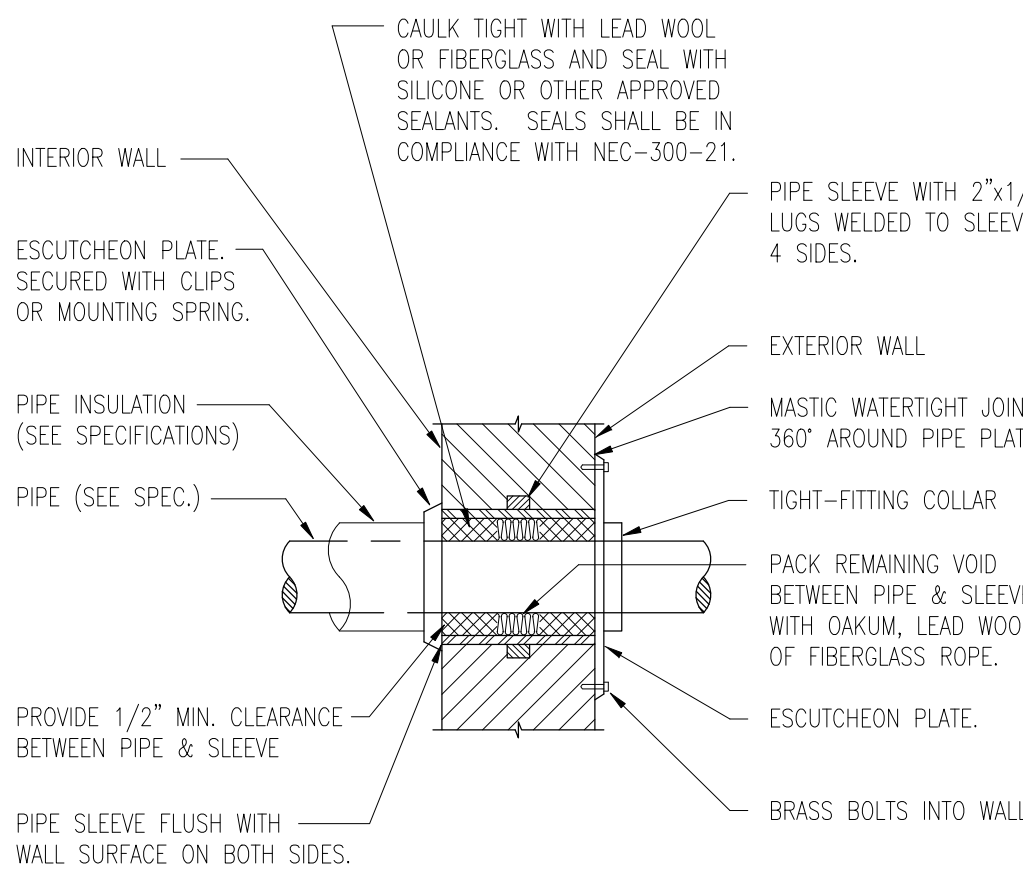
**9 PIPE SLEEVE THRU INTERIOR RATED WALL DETAIL**  
M4.10 NO SCALE



**2 IN-LINE FLANGE INSULATION**  
M4.10 NO SCALE

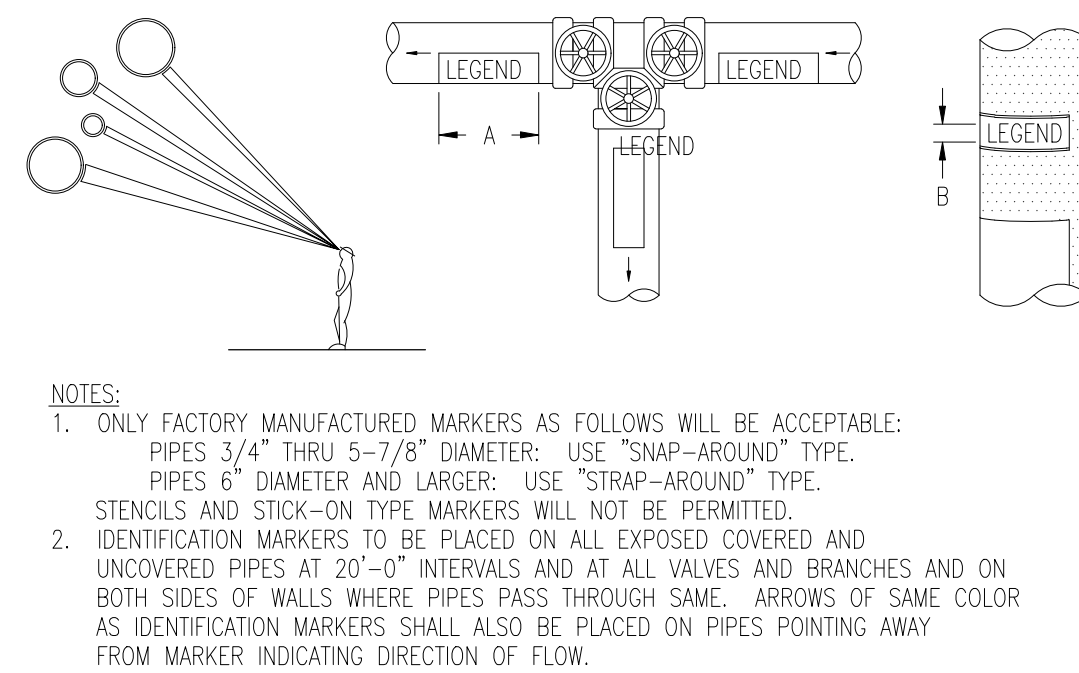


**6 PVC/GLASS FIBER ELBOW INSULATION SYSTEM DETAIL**  
M4.10 NO SCALE



- NOTES:
- CONTRACTOR SHALL ISOLATE ALL PIPES FROM CONSTRUCTION WHICH VIBRATE IN ORDER TO AVOID TRANSMISSION TO STRUCTURE.
  - CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF THEIR SLEEVES WITH OTHER TRADES AND/OR CONTRACTORS.
  - PIPE SLEEVES THRU SMOKE OR FIRE WALLS SHALL BE IN COMPLIANCE WITH NFPA-90A.

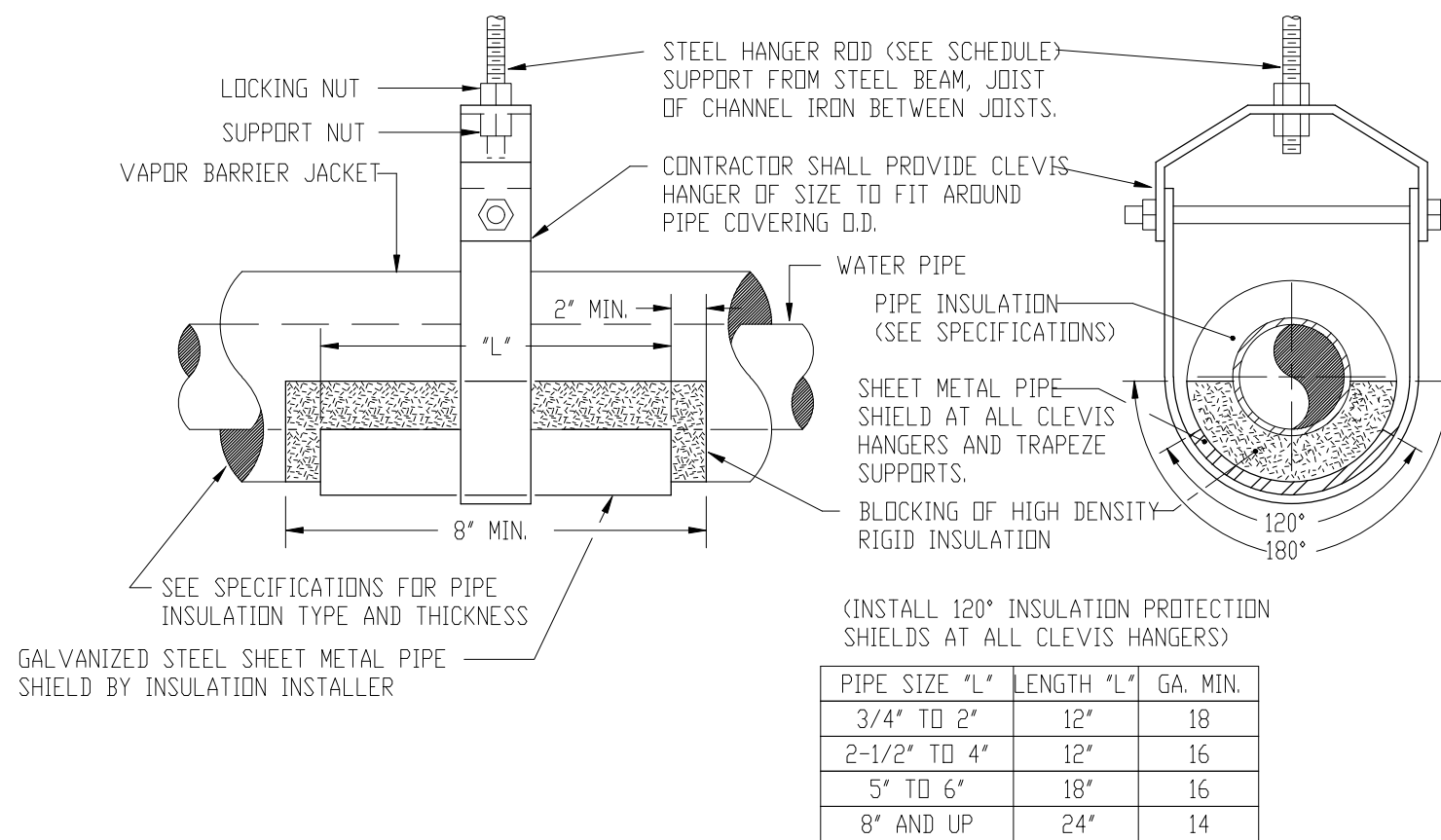
**10 PIPE SLEEVE THRU EXTERIOR WALL**  
M4.10



SIZE OF LEGEND LETTERS		
OUTSIDE DIAMETER OF PIPE OR COVERING	LENGTH OF COLOR FIELD A	SIZE OF LETTERS B
3/4" TO 1-1/4"	8"	1/2"
1-1/2" TO 2"	8"	3/4"
2-1/2" TO 6"	12"	1-1/4"

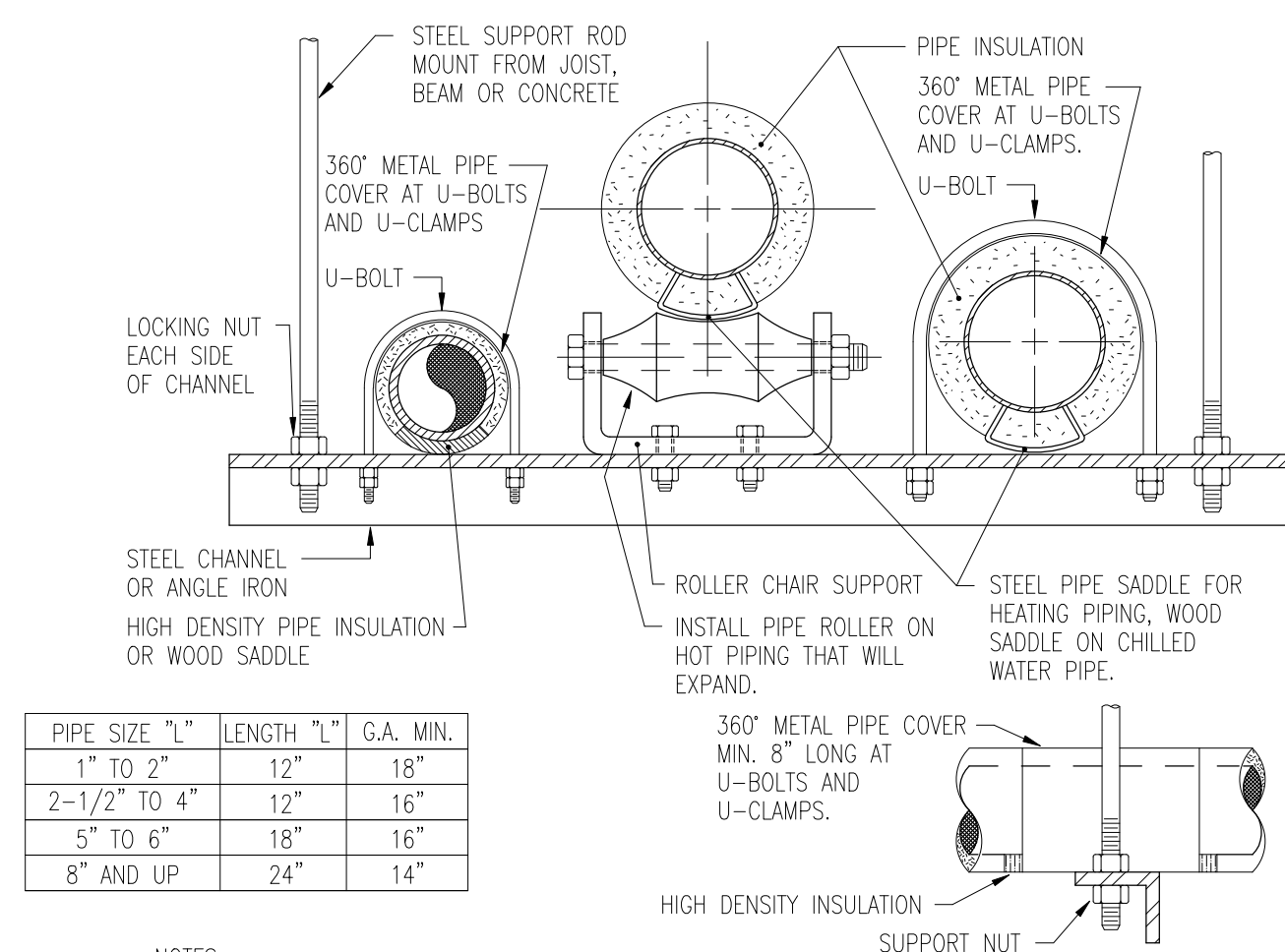
PLAN TAG	SERVICE	IDENTIFICATION MARKER
BWS	BOILER WATER SUPPLY	BLACK LETTERING ON YELLOW BACKGROUND
BWR	BOILER WATER RETURN	BLACK LETTERING ON YELLOW BACKGROUND
HWS	HOT WATER HEATING SUPPLY	BLACK LETTERING ON YELLOW BACKGROUND
HWR	HOT WATER HEATING RETURN	BLACK LETTERING ON YELLOW BACKGROUND
G	NATURAL GAS	BLACK LETTERING ON YELLOW BACKGROUND
MU	MAKE-UP WATER (H.W. TANK)	WHITE LETTERING ON GREEN BACKGROUND
RS	REFRIGERANT SUCTION	BLACK LETTERING ON YELLOW BACKGROUND
RL	REFRIGERANT LIQUID	BLACK LETTERING ON YELLOW BACKGROUND
CHWS	CHILLED WATER SUPPLY	WHITE LETTERING ON GREEN BACKGROUND
CHWR	CHILLED WATER RETURN	WHITE LETTERING ON GREEN BACKGROUND
C	CONDENSATE	BLACK LETTERING ON YELLOW BACKGROUND

**3 TYPICAL PIPE IDENTIFICATION MARKERS**  
M4.10 NO SCALE



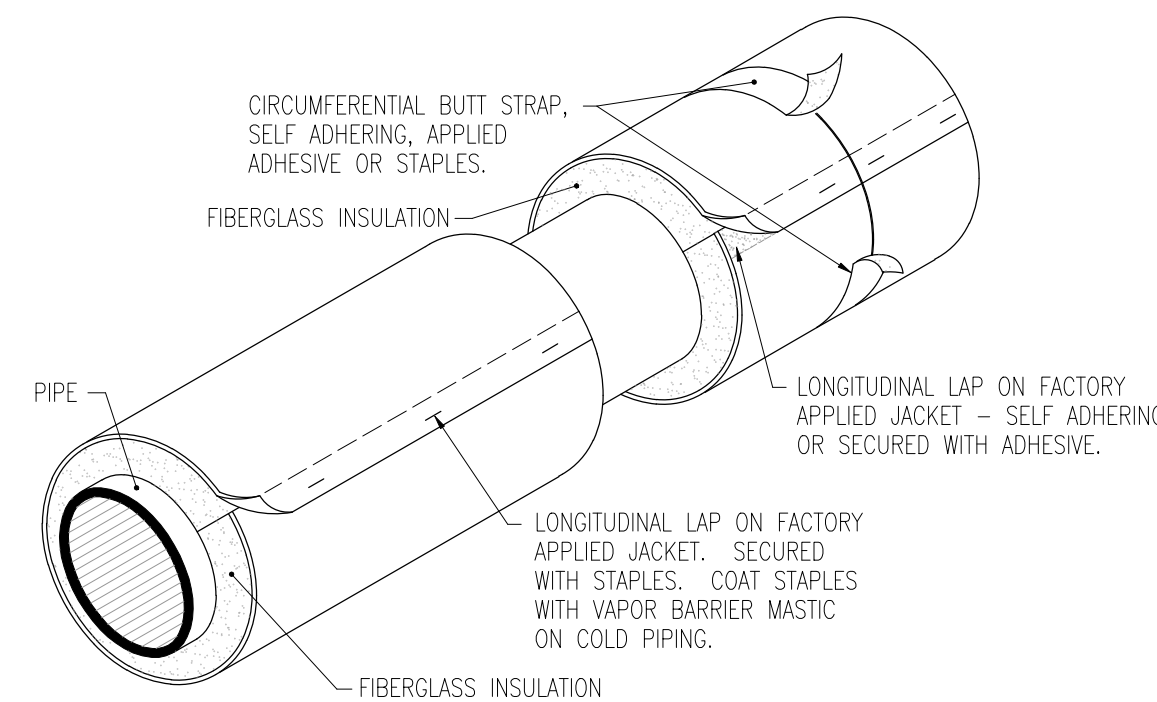
INSTALL 360" INSULATION PROTECTION SHIELDS AT ALL PIPING SECURED WITH U-BOLTS AND U-CLAMPS. PROVIDE HIGH DENSITY INSULATION SUPPORTS AT ALL CLEVIS HANGERS, SUPPORTS AND TRAPEZE HANGERS. PROVIDE STEEL PIPE INSULATION SADDLES ON ALL PIPES SUPPORTED BY ROLLERS.

**7 PIPE COVERING PROTECTION SHIELDS & PIPE SADDLES**  
M4.10 NO SCALE

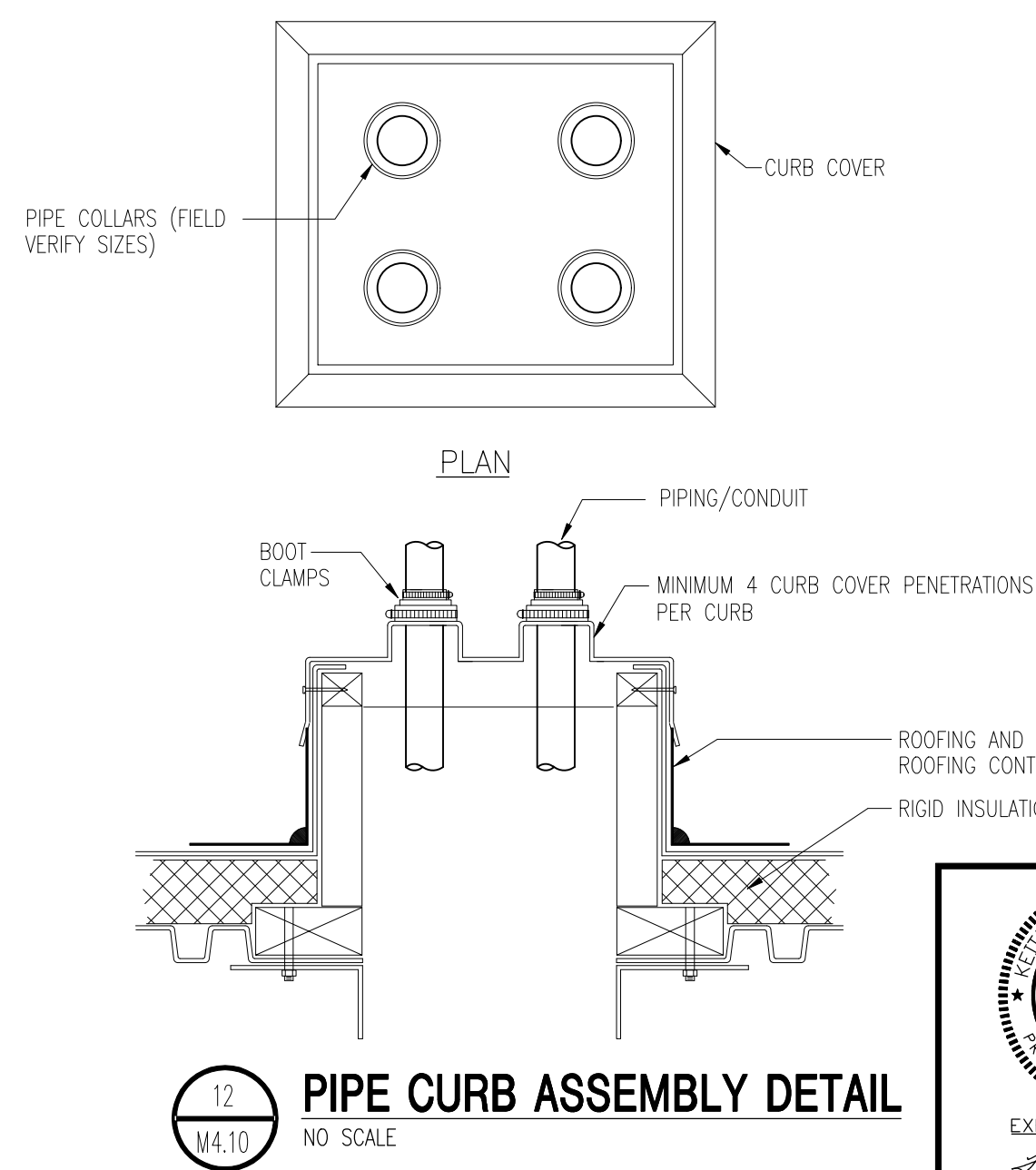


- NOTES:
- INSTALL 360" INSULATION PROTECTION SHIELDS AT ALL PIPING SECURED WITH U-BOLTS AND U-CLAMPS. PROVIDE HIGH DENSITY INSULATION SUPPORTS AT ALL CLEVIS HANGERS, SUPPORTS AND TRAPEZE HANGERS. PROVIDE STEEL PIPE INSULATION SADDLES ON ALL PIPES SUPPORTED BY ROLLERS.
  - INSTALLATION FOR PIPES SUPPORTED VERTICALLY ALONG WALLS SHALL BE SIMILAR TO U-BOLT INSTALLATIONS SHOWN ABOVE.

**4 TYPICAL TRAPEZE PIPE HANGER DETAIL**  
M4.10 NO SCALE



**8 FACTORY-APPLIED NON-METAL JACKETING**  
M4.10 NO SCALE



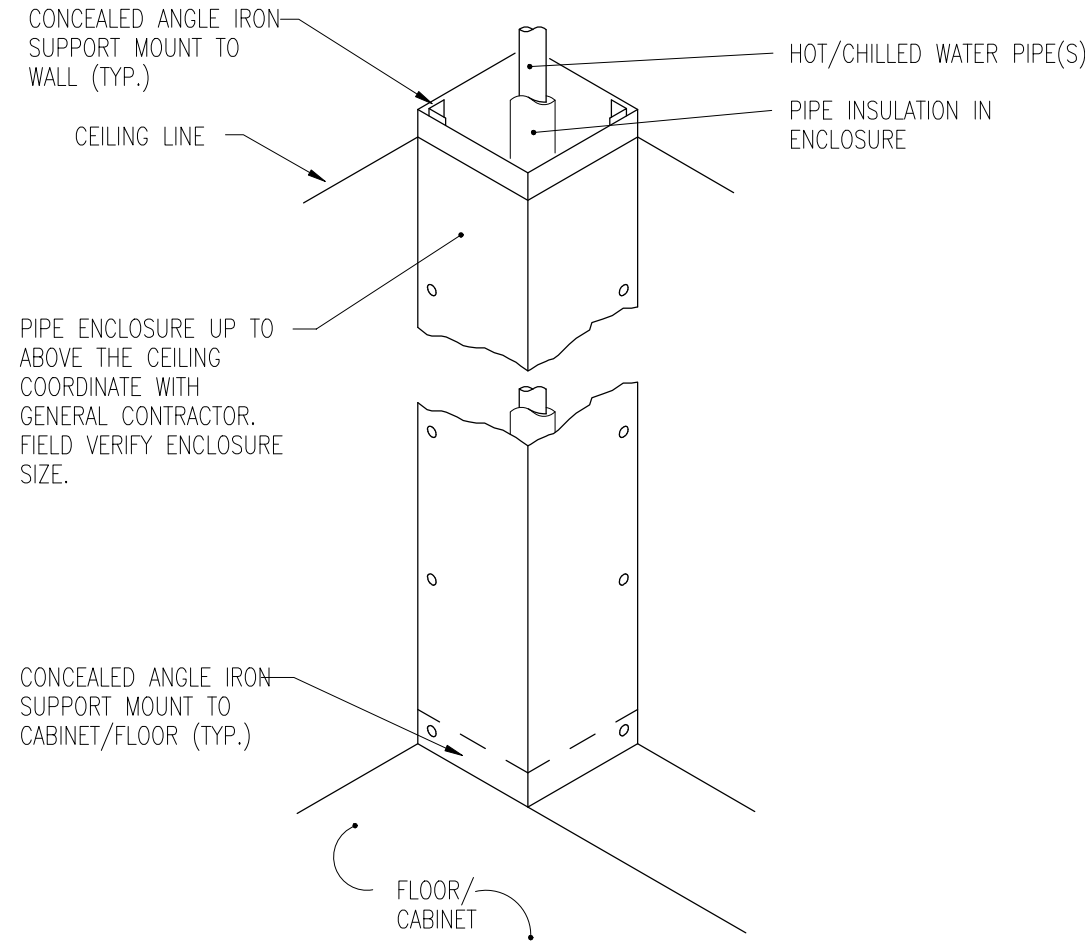
**12 PIPE CURB ASSEMBLY DETAIL**  
M4.10 NO SCALE

**11 ROOF PIPE MOUNTING PEDESTAL**  
M4.10 NO SCALE

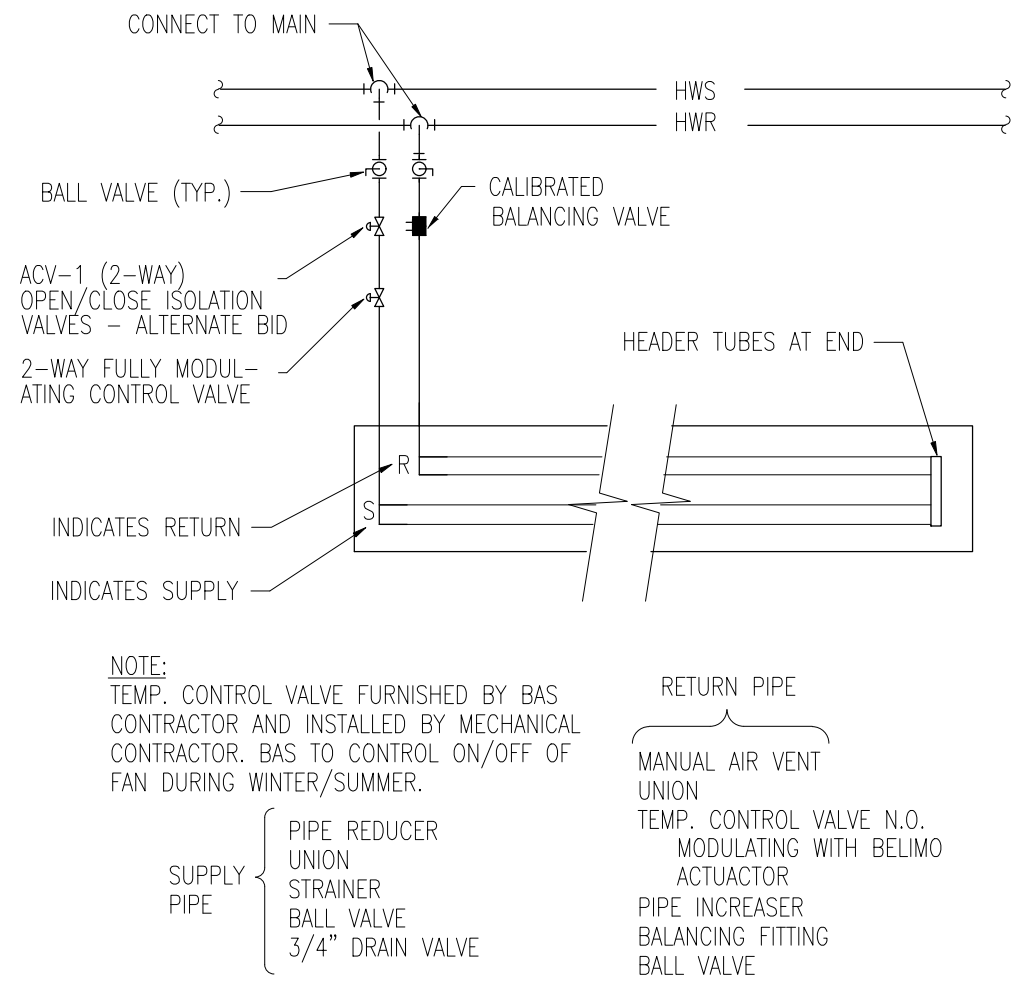
FILE PATH AND NAME: P:\139-A-8 Duneland SC - CMS Alternative School (Chesterton, IN)\A139-A-8 M4.20 Mechanical Details

DATE PLOTTED: 6/15/2021 6:20 AM

PLOTTED BY: LARRY ARNOLO

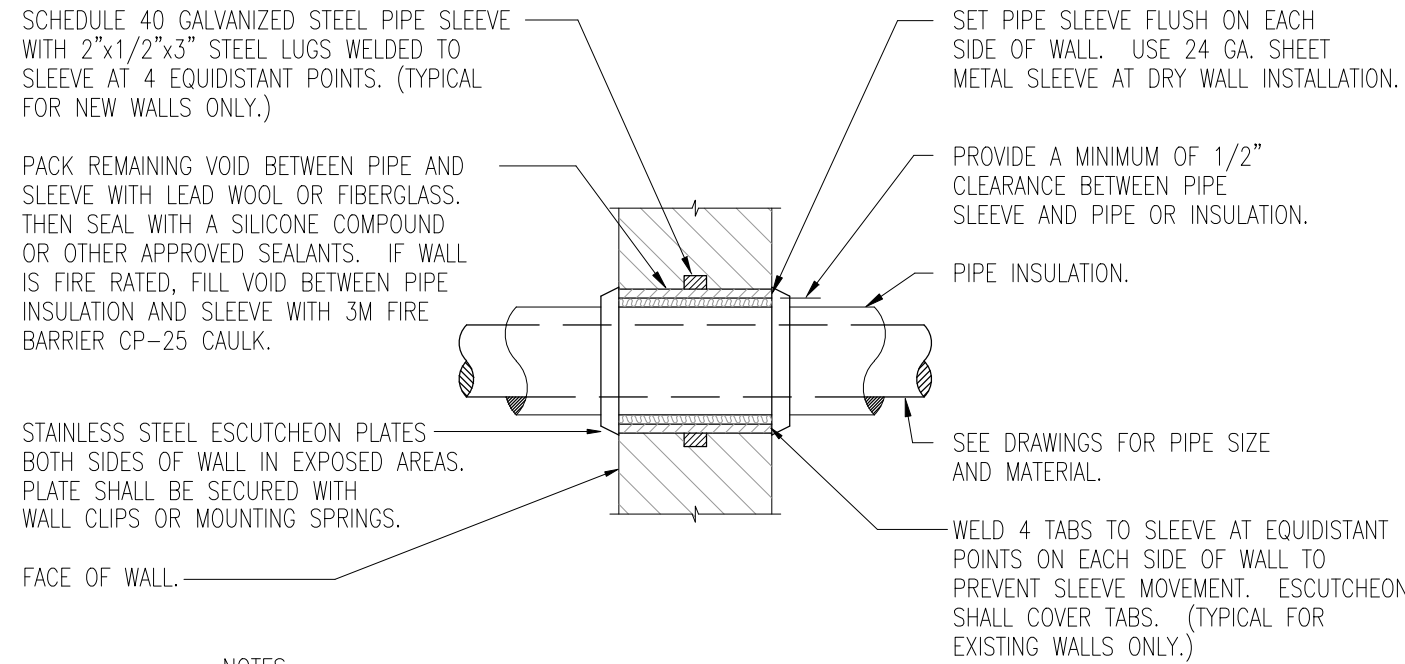


1. DETAIL OF PIPE DROP ENCLOSURE  
M4.20 NO SCALE



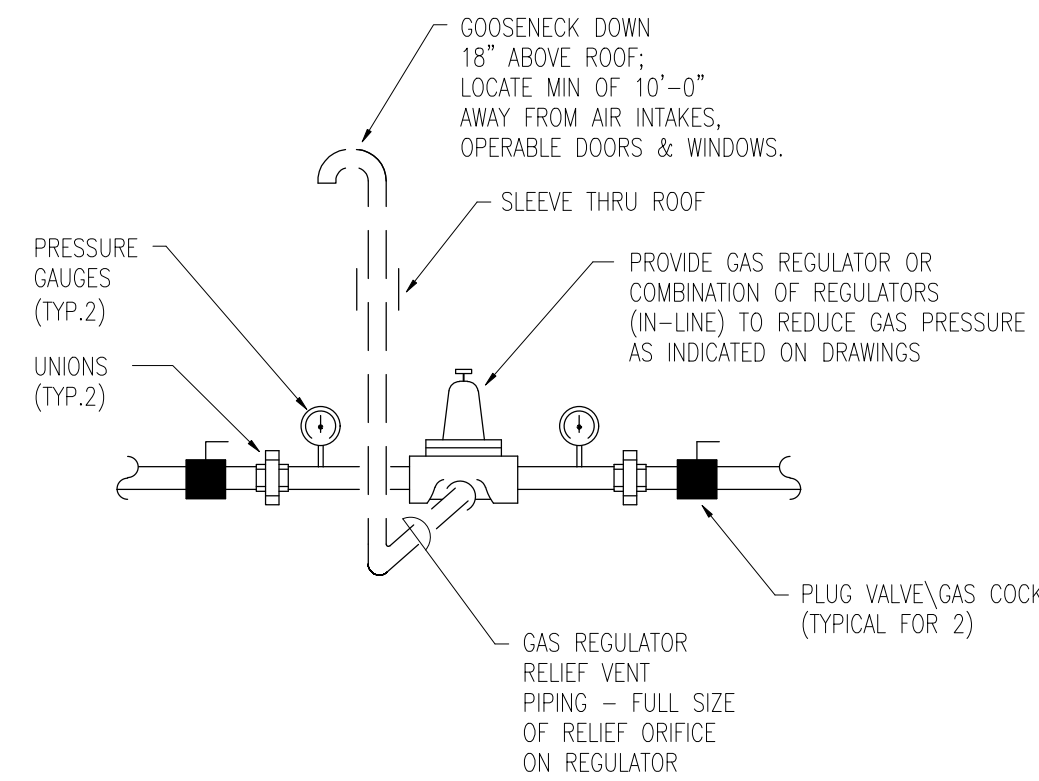
2. TYPICAL RCP CONNECTION DETAIL  
M4.20 NO SCALE

NOTES:  
1. PROVIDE VALVE EQUIPMENT/COIL PIPE VALVE PACKAGE EQUAL TO BELIMO/NEXUS OR OTHER ENGINEER/OWNER APPROVED MANUFACTURER.

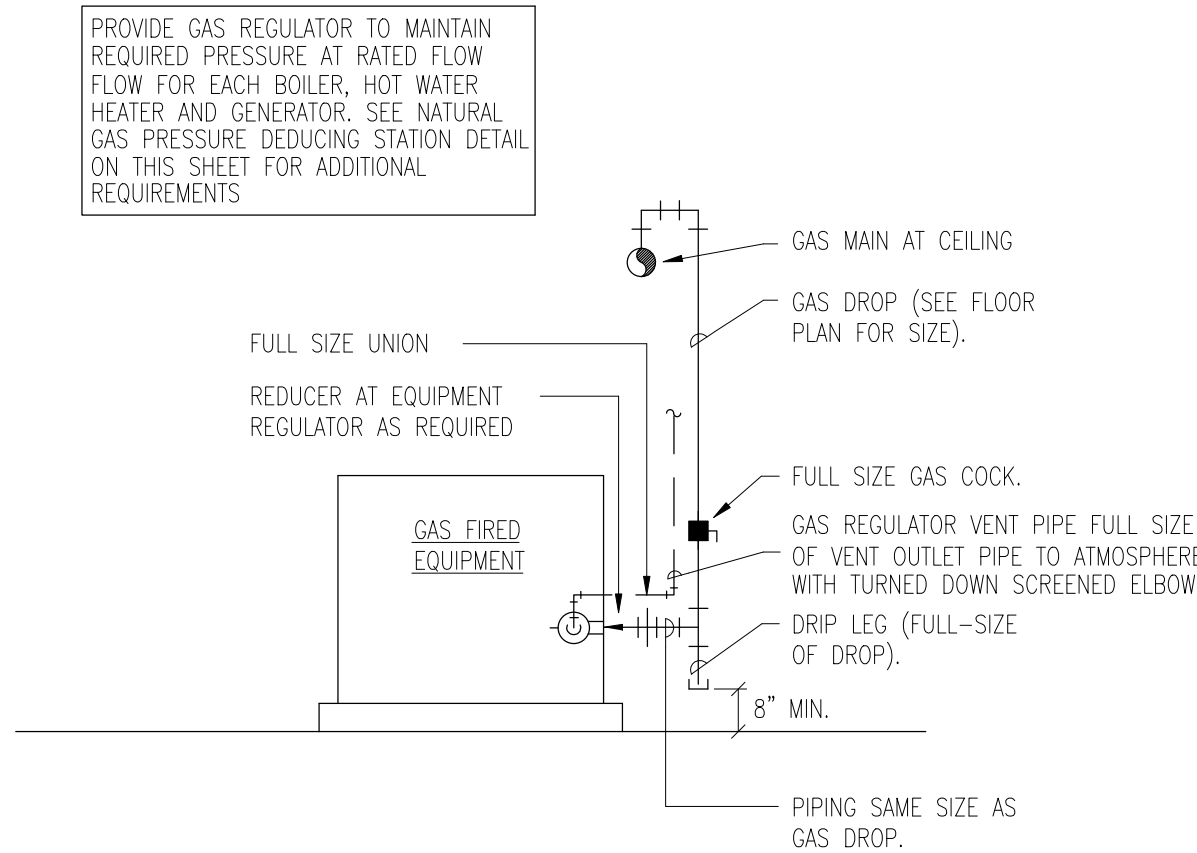


- NOTES:
1. I.D. OF OF PIPE SLEEVE TO BE A MIN. OF 1/2" LARGER THAN O.D. OF PIPE OR INSULATION PASSING THROUGH WALL.
  2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF THEIR SLEEVES WITH OTHER TRADES AND/OR CONTRACTORS.
  3. PIPE SLEEVES THRU SMOKE OR FIRE WALLS SHALL BE IN COMPLIANCE WITH NFPA-90A.

3. PIPE SLEEVE THRU INTERIOR RATED WALL DETAIL  
M4.20 NO SCALE



4. NATURAL GAS PRESSURE REDUCING STATION DETAIL  
M4.20 NO SCALE



5. GAS CONNECTION DETAIL  
M4.20 NO SCALE

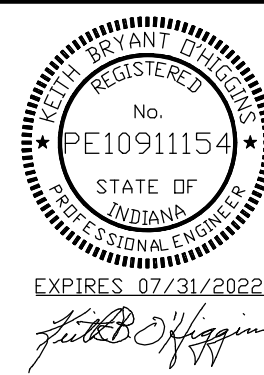


MEP/PE CONSULTANT:



DUNELAND SCHOOL CORPORATION  
ALTERNATIVE CLASSROOM RENOVATION AT:  
CHESTERTON MIDDLE SCHOOL  
651 W MORGAN AVE, CHESTERTON, IN. 46304

PROJECT NUMBER	17-003
PROJECT MANAGER	TRB
DRAWN BY	006 LLC
DESIGNED FOR CONSTRUCTION	
DATE	06/15/21
DETAILS	
MECHANICAL	



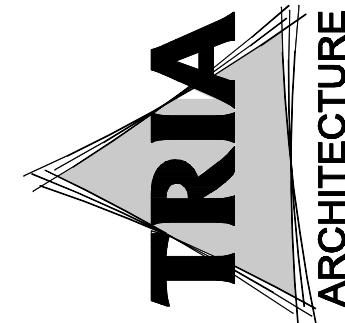
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FILE PATH AND NAME: P:\139-A-8-Duneland SC - CMS Alternative School (Chesterton, IN)\A.139-A-8-M5.00-Mechanical Notes DATE PLOTTED: 6/15/2021 6:20 AM PLOTTED BY: LARRY ARNOLD

GENERAL NOTES FOR MECHANICAL WORK	
1. DRAWINGS ARE GENERALLY DIAGRAMMATIC. ROUTING OF PIPING AND DUCTWORK AS SHOWN, DOES NOT INTEND TO SHOW EVERY RISE, DROP, OFFSET, FITTING NOR EVERY STRUCTURAL ELEMENT THAT MAY BE ENCOUNTERED DURING THE INSTALLATION OF THIS WORK. EACH CONTRACTOR SHALL MAKE ANY REQUIRED CHANGES FROM THE GENERAL ROUTING SHOWN ON THESE DRAWINGS, SUCH AS OFFSETS, BENDS OR CHANGES IN ELEVATION DUE TO COORDINATION WITH THE WORK OF OTHER TRADES AND BUILDING CONSTRUCTION. ALL CHANGES SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER OR DELAY IN COMPLETION DATE OF THE PROJECT.	24. INSTALL A MINIMUM 12" X 12" ACCESS DOOR (INLET SIDE) AT EACH MOTORIZED DAMPER, FIRE DAMPER, SMOKE DAMPER, INLINE FAN, INTAKE AND EXHAUST PLENUMS AND AN ACCESS DOOR AT AIR SUPPLY UNIT FILTER SECTION.
2. IT IS INTENDED THAT EQUIPMENT SHALL BE LOCATED SYMMETRICALLY WITH THE ARCHITECTURAL ELEMENTS OF THE BUILDING. NOTWITHSTANDING THE FACT THAT LOCATIONS INDICATED BY THESE DRAWINGS MAY BE DISTORTED FOR CLARNESS OF PRESENTATION.	25. THE LOCATIONS SHOWN FOR ALL DIFFUSERS, REGISTERS AND GRILLES, ETC. ARE DIAGRAMMATIC. EXACT LOCATION SHALL BE DETERMINED FROM THE REFLECTED CEILING PLANS AND/OR ON THE JOB SITE BY THE ARCHITECT/ENGINEER REPRESENTATIVES.
3. CONTRACTOR SHALL CHECK DRAWINGS OF OTHER TRADES TO VERIFY THAT SPACES IN WHICH THEIR WORK WILL BE INSTALLED ARE CLEAR OF OBSTRUCTIONS. WORK SHALL BE INSTALLED TO MAINTAIN MAXIMUM HEADROOM AND SPACE CONDITION AT ALL POINTS IN THE BUILDING. WHERE HEADROOM OR SPACE CONDITIONS APPEAR INADEQUATE, CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE INSTALLATION OF THEIR WORK.	26. INSTALL CODE APPROVED FUSIBLE LINK FIRE DAMPERS IN ALL DUCTS WHICH PASS THROUGH FAN ROOM WALL, BOILER ROOM WALL, MECHANICAL ROOM WALL, AND ALL FLOORS OR AS INDICATED ON DRAWINGS. WHERE FIRE DAMPERS CANNOT BE CHECKED FROM A REGISTER OR GRILLE, INSTALL AN ACCESS DOOR IN THE DUCT NEXT TO THE DAMPER AND ACCESS PANEL IN ALL NEW ACCESSIBLE CEILINGS.
4. CONTRACTOR SHALL FURNISH OTHER TRADES ADVANCE INFORMATION AND/OR SHOP DRAWINGS ON LOCATIONS AND SIZES OF PIPING, DUCTWORK, EQUIPMENT, FRAMES, BOXES, SLEEVES AND OPENINGS, ETC. NEEDED FOR THEIR WORK TO PERMIT OTHER TRADES AFFECTED TO INSTALL THEIR WORK PROPERLY AND WITHOUT DELAY.	27. UNLESS INDICATED OTHERWISE, THE ARCHITECT/ENGINEER MAKES NO REPRESENTATION AS TO WHETHER OR NOT ANY HAZARDOUS OR CONTAMINATED MATERIALS (INCLUDING BUT NOT LIMITED TO ASBESTOS, PCB'S, CONTAMINATED SOILS, ETC.) ARE PRESENT WITHIN THE EXISTING BUILDING OR ON THE SITE. WORK SHOWN ON THE DRAWINGS AND/OR INDICATED IN THE SPECIFICATIONS SHALL NOT BE CONSTRUED TO CALL FOR CONTACT WITH ANY OF THESE MATERIALS. IF THESE MATERIALS ARE ENCOUNTERED OR SUSPECTED, THE CONTRACTOR SHALL NOT DISTURB THEM AND SHALL CONTACT THE ARCHITECT/ENGINEER IMMEDIATELY.
5. WHERE THERE IS EVIDENCE THAT WORK OF ONE TRADE WILL INTERFERE WITH WORK OF OTHER TRADES, ALL TRADES SHALL MEET ON JOB SITE TO WORK OUT SPACE CONDITIONS AND MAKE SATISFACTORY ADJUSTMENTS TO INSTALLATION OF THE NEW WORK. CONTRACTOR SHALL BE RESPONSIBLE, AT THEIR OWN EXPENSE, FOR THE REMOVAL AND REINSTALLATION OF ANY PART OF THEIR WORK IF SAME WAS INSTALLED WITHOUT CONSULTING WITH OTHER TRADES BEFORE INSTALLING THEIR WORK.	28. CONTRACTOR SHALL STORE ALL MATERIALS AND EQUIPMENT SHIPPED TO THE SITE IN A PROTECTED AREA. IF MATERIAL IS STORED OUTSIDE OF THE BUILDING, IT MUST BE STORED OFF THE GROUND A MINIMUM OF SIX INCHES (6") SET ON 6 X 6 PLANKS AND/OR WOOD PALLETES. ALL MATERIAL AND EQUIPMENT MUST BE COMPLETELY COVERED WITH WATERPROOF TAPPS OR VISQUIN. ALL PIPING AND DUCTWORK WILL HAVE THE ENDS CLOSED TO KEEP OUT DIRT AND OTHER DEBRIS. NO EQUIPMENT WILL BE ALLOWED TO BE STORED ON THE SITE UNLESS IT IS SITTING ON WOOD PLANKS AND COMPLETELY PROTECTED WITH WEATHERPROOF COVERS.
6. CONTRACTOR SHALL PROVIDE SLEEVES IN FLOORS AND WALLS AS SHOWN ON THE DRAWINGS, AS REQUIRED BY JOB SITE CONDITIONS, AND/OR AS SPECIFIED, WHEN INSTALLING THEIR WORK.	29. SEE LARGE SCALE DRAWINGS (DETAILS) FOR ALL REQUIRED VALVES, FITTINGS, GAUGES, VENTS, THERMOMETERS WHICH ARE CONNECTED TO FINNED TUBE RADIATION (FTR), AIR HANDLING UNITS (AHU), CABINET UNIT HEATERS (CUH), SUSPENDED UNIT HEATERS (SUH), HOT AND CHILLED WATER COILS, EXPANSION TANKS (ET), AIR SEPARATORS (AS), PUMPS, ETC. ALL WORK SHOWN ON DETAILS SHALL BE BY INSTALLING CONTRACTOR UNLESS OTHERWISE NOTED.
7. THE SEQUENCE FOR THE INSTALLATION OF ALL WORK SHALL BE COORDINATED BETWEEN ALL CONTRACTORS ON THE PROJECT AND IN STRICT ACCORDANCE WITH ARCHITECT/ENGINEER AND OWNERS STIPULATION AS CALLED FOR IN THE SPECIFICATION AND/OR AS DIRECTED.	30. ALL AUTOMATIC MOTORIZED DAMPERS SHALL BE FURNISHED BY BAS CONTRACTOR (EXCEPT FOR DAMPERS FURNISHED WITH PACKAGED AIR HANDLING UNITS AND PROVIDED WITH POWER ROOF EXHAUST FANS) AND INSTALLED BY MECHANICAL CONTRACTOR. ALL DAMPER MOTORS FURNISHED AND INSTALLED BY BAS CONTRACTOR
8. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL AND STRUCTURAL CONTRACT DRAWINGS (BEFORE SUBMITTING THEIR BIDS) TO FAMILIARIZE THEMSELVES WITH THE EXTENT OF THE OTHER TRADES CONTRACTORS WORK, CEILING HEIGHTS AND CLEARANCE FOR INSTALLING THEIR WORK.	31. MECHANICAL CONTRACTOR SHALL PROVIDE ON SITE SCHOOLING OF OWNERS OPERATING PERSONNEL FOR ALL SYSTEMS AND EQUIPMENT INSTALLED UNDER HIS CONTRACT.
9. CONTRACTOR SHALL BE RESPONSIBLE AND PAY FOR ALL CORING, CUTTING, PATCHING, REPAIRING AND REFINISHING OF BUILDING CONSTRUCTION REQUIRED TO ACCOMMODATE THE INSTALLATION OF THEIR WORK. ALL PATCHING, REPAIRING AND REFINISHING WORK SHALL BE PERFORMED BY THOSE REGULARLY INVOLVED IN THAT TRADE AND SHALL MATCH THE NEW CONSTRUCTION AS CLOSELY AS POSSIBLE. CARE SHALL BE TAKEN SO AS NOT TO DAMAGE ANY EXISTING BUILDING CONSTRUCTION OR ITEMS THAT ARE TO REMAIN. ANY EXISTING FINISHES THAT ARE DAMAGED DURING THE INSTALLATION OF NEW WORK SHALL BE REPAIRED, REPLACED AND PAID FOR BY THE INSTALLING CONTRACTOR, TO THE SATISFACTION OF THE ARCHITECT AND OWNER. REFER TO ARCHITECTURAL DRAWINGS FOR EXISTING BUILDING CONSTRUCTION THAT IS TO REMAIN AND, THEREFORE, SUBJECT TO PATCHING, REPAIRING, AND REFINISHING.	32. BEFORE STARTING ANY SYSTEM INSTALLING CONTRACTOR SHALL CONTACT EQUIPMENT MANUFACTURER TO VERIFY THAT EACH PIECE OF EQUIPMENT OR SYSTEM HAS BEEN CHECKED FOR PROPER LUBRICATION, DRIVE ROTATION, BELT TENSION, CONTROL SEQUENCE OR OTHER CONDITIONS WHICH MAY CAUSE DAMAGE TO THE EQUIPMENT OR SYSTEM.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR OWN CLEAN-UP DURING CONSTRUCTION. IF CONTRACTOR FAILS TO PROVIDE SUCH CLEAN-UP, THE ARCHITECT/ENGINEER WILL DIRECT ANOTHER CONTRACTOR TO PERFORM THE CLEAN-UP AND THE NEGLIGENT CONTRACTOR SHALL PAY THE ASSOCIATED BACK-CHARGES AS DEEMED APPROPRIATE BY THE ARCHITECT/ENGINEER.	33. MECHANICAL CONTRACTOR TO FURNISH AND INSTALL ALL GAS REGULATORS ON THE LEAVING SIDE OF THE GAS METER. EACH GAS REGULATORS WILL HAVE A VENT PIPE WHICH TERMINATES 18" ABOVE THE ROOF WITH A GOOSENECK.
11. CONTRACTOR SHALL INSTALL ALL AUXILIARY SUPPORTING STEEL AS REQUIRED FOR THE SUPPORTING OF THEIR PIPING, DUCTWORK, CONDUIT, TANKS, EQUIPMENT, ETC. ALL SUPPORTING STEEL FOR ITEMS ABOVE A SUSPENDED CEILING SHALL BE FROM BUILDING STRUCTURAL MEMBERS ONLY.	34. MECHANICAL CONTRACTOR SHALL INSTALL ALL WELLS IN PIPING FOR MOUNTING OF BUILDING AUTOMATION SYSTEM CONTROLS AND MECHANICAL CONTRACTOR'S THERMOMETERS AND GAUGES. MECHANICAL CONTRACTOR WILL COORDINATE THE EXACT LOCATION OF BUILDING AUTOMATION SYSTEM CONTRACTOR'S CONTROLS WITH HIM PRIOR TO INSTALLING WELLS.
12. ALL PIPING SHALL BE SUSPENDED WITH CLEVIS AND/OR TRAPEZE PIPE HANGERS. INSULATED PIPING SHALL REST ON STEEL OR WOOD (CHILLED WATER PIPING) PIPE COVERING PROTECTION SADDLES OR SHEET METAL INSULATION SHIELDS AS CALLED FOR IN THE SPECIFICATIONS AND/OR DETAILED ON THE DRAWINGS.	35. MECHANICAL CONTRACTOR SHALL RUN INSULATED DRAIN PIPES FROM ALL HEATING/COOLING FAN COIL UNITS AND UNIT VENTILATORS. SEE DRAWINGS AND DETAILS FOR LOCATION OF TERMINATION OF DRAIN PIPING. ALL CONDENSATE DRAIN PIPES MUST BE PITCHED AWAY FROM THE DRAIN PAN. ALL CONDENSATE DRAIN PIPES WILL BE INSULATED FROM UNIT TO TERMINATION POINT.
13. ALL WATER SUPPLY AND RETURN PIPING SHALL BE INSULATED, INCLUDING ALL PIPING ABOVE CEILINGS, INSIDE EQUIPMENT, CABINETS, PIPE CHASES AND IN WALLS. SEE SPECIFICATIONS FOR TYPE AND THICKNESS OF INSULATION.	36. MECHANICAL CONTRACTOR SHALL INSTALL DRAIN PIPING FROM ALL BUILT-UP AIR HANDLING UNITS. DRAIN PIPE WILL BE RUN FROM UNIT DRAIN PAN TO NEAREST FLOOR DRAIN.
14. ALL HOT WATER SUPPLY/RETURNS PIPING SHALL BE INSTALLED TO COMPENSATE FOR EXPANSION OF THE PIPE BY INSTALLING PIPE ANCHORS, GUIDES, EXPANSION JOINTS OR LOOPS AND PIPE OFFSETS AS REQUIRED BY FIELD CONDITIONS OR AS SHOWN ON THE DRAWINGS.	37. THE MECHANICAL CONTRACTOR TO PROVIDE 1/4 INCH SCALE PIPING AND DUCTWORK DRAWINGS FOR COORDINATION WITH OTHER TRADES. DRAWINGS TO INDICATE DIMENSIONS AND ELEVATIONS OF ALL PIPING AND DUCTWORK. DRAWINGS TO ALSO INCLUDE ALL WALL/FLOOR/ROOF OPENINGS.
15. PITCH ALL SUPPLY AND RETURN WATER LINES TO DRAIN COMPLETELY THROUGH LOWER EQUIPMENT, UNIONS, OR DRAIN VALVES. INSTALL A 1/2" DRAIN VALVE WITH 3/4" HOSE THREAD OUTLET IN ALL MAIN PIPING RUNS WHICH WOULD NOT BE ABLE TO DRAIN THRU A LOWER PIECE OF EQUIPMENT. ALL DRAIN VALVES TO BE BALL VALVES.	38. MECHANICAL CONTRACTOR TO PROVIDE SCHEDULE OF CURB INSTALLATION/REMOVAL ON EXISTING ROOF AREAS TO CONTRACTOR FIVE (5) WORKING DAYS IN ADVANCE. ANY REVISIONS TO THIS SCHEDULE RESULTING IN UN-PATCHED ROOF TIE-INS AND DAMAGE TO EXISTING CONDITIONS SHALL BE REPAIRED BY MECHANICAL CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
16. INSTALL A MANUAL SHUT OFF COCK AND DIRT LEG ON EACH BRANCH GAS LINE CONNECTED TO GAS FIRED EQUIPMENT. ALL VENT LINES FROM EACH GAS REGULATOR SHALL BE GROUPED INTO A COMMON HEADER AND RUN UP THRU ROOF TO A TURNED DOWN ELBOW WITH GALVANIZED INSECT SCREEN OVER OPENING.	39. ALL PIPE PASSING THRU WALLS SHALL HAVE A GALVANIZED SHEET METAL OR SCHEDULE 40 STEEL PIPE SLEEVE INSTALLED AROUND THE PIPE AND PIPE INSULATION. SEE SLEEVE DETAILS THESE DRAWINGS.
17. RECESSED AND/OR SEMI-RECESSED CABINET UNIT HEATERS (CUH) SHALL BE MOUNTED A MINIMUM OF 8" ABOVE THE FLOOR AND HAVE A FOUR (4) SIDE FLANGED OVERLAP WALL GUARD FRAME.	40. INSTALL A SHEET METAL SLEEVE AROUND ANY DUCTWORK WHICH GOES THROUGH WALL CONSTRUCTION, PACK FIBERGLAS INSULATION AROUND SLEEVE AND DUCT AND CAULK WITH FIRE SEAL CAULKING.
18. ALL ROOF MOUNTED EXHAUST FANS SHALL HAVE A BUILT IN DISCONNECT SWITCH, ALUMINUM BIRD SCREEN, MOTORIZED DAMPER OR MANUAL BACKDRAFT DAMPER (REFER TO SCHEDULE) AND SHALL BE MOUNTED ON AN ALUMINUM PREFABRICATED CURB WITH SOUND INSULATION ON THE INSIDE OF THE CURB. CURB HEIGHT SHALL BE A MINIMUM OF 18 INCHES ABOVE ROOF DECK.	41. WHEN INSTALLING EXPANSION JOINTS, CONTRACTOR SHALL INSTALL A PIPE ANCHOR AT EACH END OF RUN AND PIPE GUIDES A MINIMUM OF EVERY TWENTY-FIVE (25) FEET OR AS CALLED FOR ON THE DRAWINGS. MOUNT THE FIRST PIPE GUIDE LOCKED ON EACH SIDE OF THE EXPANSION JOINT A MINIMUM OF FOUR (4) PIPE DIAMETERS FROM THE EXPANSION JOINT.
19. ALL DUCTWORK SIZES SHOWN ON THE DRAWINGS ARE INSIDE DIMENSIONS. WHERE DUCT LINING IS CALLED FOR CONTRACTOR SHALL INCREASE THE SIZE OF THE DUCT TO MAINTAIN THE MINIMUM INSIDE DIMENSIONS CALLED FOR ON THE DRAWINGS.	42. THE DRAWINGS, SCHEDULES AND SPECIFICATIONS HAVE BEEN PREPARED USING ONE MANUFACTURER FOR EACH PIECE OF EQUIPMENT AS THE BASIS FOR DIMENSIONAL DESIGN. IF THE CONTRACTOR PURCHASES EQUIPMENT LISTED AS A SPECIFIED ACCEPTABLE MANUFACTURER BUT IS NOT THE SCHEDULED MANUFACTURER USED FOR THE BASE DESIGN, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING ALL THE DIMENSIONS OF THE EQUIPMENT TO VERIFY THAT IT WILL FIT IN THE SPACE SHOWN ON THE DRAWINGS. MINOR DEVIATIONS IN DIMENSIONS WILL BE PERMITTED, PROVIDED THE RATINGS MEET THOSE SHOWN ON THE DRAWINGS AND EQUIPMENT WILL PHYSICALLY FIT INTO THE SPACE ALLOCATED WITH SUITABLE ACCESS AROUND EQUIPMENT FOR OPERATION AND MAINTENANCE ON THE EQUIPMENT.
20. MECHANICAL CONTRACTOR SHALL COORDINATE ALL SERVICE POINTS ON VAV BOXES WITH THE INSTALLATION OF NEW WORK IN THIS PROJECT AND NEW BUILDING CHARACTERISTICS TO MAKE SURE ACCESSIBILITY IS MAINTAINED.	43. CONTRACTOR AND/OR MANUFACTURER SHALL VERIFY THAT THE CHARACTERISTICS OF THE EQUIPMENT HE SUBMITS FOR REVIEW MEETS THE CAPACITY AND DUTY SPECIFIED.
21. ALL DUCTWORK CONNECTIONS TO AIR MOVING EQUIPMENT SHALL BE MADE WITH FLEXIBLE DUCT CONNECTIONS ON THE INLET AND DISCHARGE OF ALL SUPPLY, RETURN AND EXHAUST FANS (EXCEPT ROOF MOUNTED EXHAUST FANS).	44. WHEN EQUIPMENT IS SUBMITTED FOR REVIEW AND DOES NOT MEET THE PHYSICAL SIZE OR ARRANGEMENT OF THAT SCHEDULED AND SPECIFIED, CONTRACTOR SHALL PAY FOR ALL ALTERATIONS REQUIRED TO ACCOMMODATE SUCH EQUIPMENT AT NO ADDITIONAL COST TO OWNER. CONTRACTOR WILL ALSO PAY ALL COSTS FOR ADDITIONAL WORK REQUIRED BY OTHER CONTRACTORS, OWNER, ARCHITECT OR ENGINEER TO MAKE CHANGES WHICH WOULD ALLOW THE EQUIPMENT TO FIT IN THE SPACE AND FUNCTION AS INTENDED.
22. ALL BUILT UP UNITS SHALL HAVE INTERNAL SPRING VIBRATION ISOLATORS. ALL SUSPENDED EXHAUST AND EXHAUST/RETURN FANS SHALL BE HUNG WITH OR SET ON SPRING VIBRATION ISOLATORS.	
23. INSTALL TURNING VANES IN ALL SQUARE DUCT ELBOWS. INSTALL MANUAL VOLUME DAMPERS IN EACH BRANCH DUCT AT CONNECTION TO MAIN DUCT AND IN EACH DUCT AFTER A BRANCH DUCT SPLIT.	

GENERAL NOTES - BUILDING AUTOMATION SYSTEM	
I. GENERAL	IV. AUTOMATIC CONTROL DAMPERS
THE CONTROLS CONTRACTOR SHALL BE THE CONTROLS ENGINEER FOR THIS PROJECT; RESPONSIBLE FOR DESIGN AND ENGINEERING OF ALL CONTROL SYSTEMS TO OPERATE AS DESCRIBED IN THE SEQUENCE OF OPERATION, TO CONFORM WITH THE GOVERNING BUILDING CODES AND OPERATE IN A MANNER CONSISTENT WITH KNOWN GOOD CONTROLS ENGINEERING PRACTICE.	ALL CONTROL DAMPERS SHALL BE EXTRUDED ALUMINUM, LOW LEAKAGE AIR FOIL BLADE TYPE WITH ELASTOMER BLADE EDGE SEALS AND STAINLESS STEEL OR ELASTOMER BLADE END SEALS.
THE CONTROLS CONTRACTOR/ENGINEER SHALL IDENTIFY ANY POTENTIAL CONDITIONS THAT COULD BE CONSTRUED TO DEVIATE FROM GOOD CONTROLS ENGINEERING PRACTICE PRIOR TO BIDDING AND INCLUDE ALL ENGINEERING AND INSTALLATION WORK REQUIRED TO MAKE ALL HVAC SYSTEMS COMPLETE AND OPERATIONAL, IN CONFORMANCE WITH GOOD CONTROLS ENGINEERING PRACTICE; PRIOR TO SUBMITTING HIS BID.	ALL CONTROL DAMPERS SHALL SPRING RETURN TO A FAIL SAFE POSITION FOR FREEZE PREVENTION BY SPRING RETURN. FACE AND BYPASS DAMPER SHALL FAIL OPEN, OUTDOOR AIR DAMPERS SHALL FAIL CLOSED, EXHAUST AIR DAMPERS SHALL FAIL CLOSED, AND RETURN AIR DAMPER SHALL FAIL OPEN.
THE BAS CONTRACTOR SHALL PROVIDE ALL CONTROL COMPONENTS, WIRING, INTERLOCKS, ELECTRICAL POWER AND ALL OTHER DEVICES REQUIRED TO MAKE ALL HVAC EQUIPMENT INSTALLED UNDER THIS PROJECT COMPLETE AND FULLY OPERATIONAL PER THE SEQUENCE OF OPERATION AND AS REQUIRED FOR SAFE AND ACCURATE CONTROL.	V. THERMOSTAT
THE BAS CONTRACTOR SHALL PROVIDE ALL CONTROL VALVES AND ACTUATORS TO THE MECHANICAL CONTRACTOR FOR INSTALLATION. THE BAS CONTRACTOR SHALL DIRECT THE MECHANICAL CONTRACTOR AS TO THE PROPER LOCATION AND ORIENTATION OF ALL DEVICES TO ACHIEVE A PROPER AND CORRECT CONTROL SEQUENCE.	THE BAS CONTRACTOR SHALL PROVIDE THERMOSTATS FOR ALL CONTROLLED EQUIPMENT TO OPERATE AS DESCRIBED IN THE SEQUENCE OF OPERATION AND/OR PER MANUFACTURER'S REQUIREMENTS AND KNOWN STANDARDS OF GOOD CONTROL PRACTICE. INCLUDE ALL THERMOSTATS AS REQUIRED FOR EQUIPMENT TO BE COMPLETE AND FULLY OPERATIONAL WHETHER SHOWN SPECIFICALLY ON THE PLANS OR NOT.
THE BAS CONTRACTOR SHALL INCLUDE ADEQUATE TIME IN HIS BID FOR COMPLETE COMMISSIONING OF THE MECHANICAL SYSTEMS, ON SITE IN COORDINATION WITH THE MECHANICAL CONTRACTOR AND OTHER TRADES AS REQUIRED TO MAKE ALL EQUIPMENT COMPLETE AND FULLY OPERATIONAL.	ALL TEMPERATURE SENSORS IN DUCTWORK, AIR HANDLING UNITS AND PLENUMS SHALL BE OF AVERAGING TYPE. PROPERLY SUPPORT AVERAGING ELEMENT (MINIMUM TWENTY FEET LENGTH) ACROSS A REPRESENTATIVE AREA TO ACHIEVE A TRUE AVERAGE READING. SUPPORT USING HEAVY CABLE AND/OR HALF INCH CONDUIT WITH NYLON WIRE TIES.
IN THE EVENT THAT ANY PART OF THE MECHANICAL DRAWINGS, SPECIFICATIONS OR NOTES CONFLICT WITH ANY OTHER, THE MOST STRINGENT REQUIREMENT SHALL APPLY, PROVIDING THE GREATEST SAFETY AND/OR AT THE HIGHEST COST OF THE CONFLICTING OPTIONS.	BUILDING/SPACE STATIC PRESSURE SENSORS SHALL BE INSTALLED IN THE CEILING IN A MAIN BUILDING CORRIDOR OPEN TO THE MAIN ENTRANCE OF THE BUILDING. STATIC PRESSURE SENSING TIP SHALL HAVE COVER PLATE TO MATCH CEILING AND AN EMBOSSED LABEL STATING "PRESSURE CONTROL SENSOR - DO NOT PAIN".
II. ELECTRICAL	THE CONTROLS CONTRACTOR/ENGINEER SHALL SELECT ALL PRESSURE AND TEMPERATURE SENSORS WITH AN APPROPRIATE SPAN AND RANGE FOR THE APPLICATION.
THE BAS CONTRACTOR SHALL PROVIDE EMERGENCY POWER FOR ALL ELECTRICAL POWER AND CONTROL WIRING; CONDUIT, JUNCTION BOXES, RACEWAY, TRANSFORMERS, RELAYS AND ALL OTHER ELECTRICAL APPURTENANCES REQUIRED FOR A COMPLETE AND FULLY OPERATIONAL CONTROL SYSTEM. THIS INCLUDES ALL POWER WIRING FROM SPARE CIRCUIT BREAKERS PROVIDED IN BUILDING EMERGENCY POWER PANELS (EM120A-GMA) FOR POWERING OF CONTROLS AND CONTROL PANELS AND ALL OTHER CONTROL SYSTEM COMPONENTS. ALL HVAC EQUIPMENT, I.E. AIR HANDLING UNITS, EXHAUST FANS, PUMPS, BOILERS, ETC. ARE TO HAVE THEIR CONTROLS POWERED FROM EMERGENCY POWER PANELS. SEE ELECTRICAL DRAWINGS FOR PANEL LOCATION.	ALL OUTDOOR AIR SENSORS SHALL BE INSTALLED WITH SUN SHIELD AND IN A LOCATION WHERE THEY CANNOT BE WASHED BY EXHAUST AIR OR OTHER SOURCES OF FALSE READINGS.
ALL ELECTRICAL WORK SHALL BE IN CONFORMANCE WITH THE CURRENT NATIONAL ELECTRICAL CODE AND APPLICABLE STATE AND LOCAL AMENDMENTS.	ALL TEMPERATURE AND PRESSURE SENSORS SHALL BE INSTALLED IN LOCATIONS SUCH THAT THEY DO NOT MAKE FALSE READINGS. BAS CONTRACTOR/ENGINEER SHALL REVIEW THE PLANS AND IDENTIFY ANY SUCH POTENTIAL CAUSES FOR FALSE READINGS AND NOTIFY THE ENGINEER IN WRITING THAT THESE SHOULD BE RELOCATED PRIOR TO ROUGH IN AND CONTROLS INSTALLATION. THE BAS CONTROLS CONTRACTOR SHALL RELOCATE ANY SENSORS INSTALLED IN IMPROPER LOCATIONS AND GIVING FALSE READINGS AT HIS OWN EXPENSE. CONDITIONS TO BE AWARE OF SHALL INCLUDE BUT ARE NOT LIMITED TO LOCATIONS OF THERMOSTATS BEHIND DOORS, OUTDOOR AIR SENSORS NEAR EXHAUST OPENINGS, STATIC PRESSURE SENSORS IN TURBULENT LOCATIONS, THERMOSTATS INSTALLED ADJACENT TO HEAT SOURCES SUCH AS COFFEE POTS, COMPUTERS, VENDING MACHINES AND OTHER APPLIANCES, ETC.
THE BAS CONTRACTOR SHALL PROVIDE AND INSTALL ALL HARDWIRED INTERLOCKS BETWEEN STARTERS AS REQUIRED TO ACHIEVE THE SEQUENCE OF OPERATION AND PROPER SYSTEM CONTROLS. PROVIDE RELAYS AS REQUIRED FOR AUTOMATIC START/STOP OF ALL SINGLE PHASE EXHAUST FANS AND INTERLOCK OF AUTOMATIC DAMPERS.	VI. SAFETY DEVICES
III. CONTROL VALVES	THE BAS CONTRACTOR/ENGINEER SHALL FURNISH AND INSTALL MANUAL RESET SAFETY DEVICES FOR ANY AND ALL CONDITIONS THAT COULD DAMAGE THE EQUIPMENT AND/OR REPRESENT A THREAT TO HUMAN SAFETY. ALL WATER COILS SHALL BE PROTECTED BY AN AVERAGING ELEMENT FREEZE-STAT WITH A NON-ADJUSTABLE 40°F SET POINT, MANUAL RESET, AND HARDWIRED INTERLOCK TO SHUT DOWN THE ASSOCIATED FAN ANY TIME THE TEMPERATURE ACROSS ANY 12" LENGTH OF THE AVERAGING ELEMENT FALLS BELOW 40°F. FREEZE STATS SHALL BE INSTALLED DOWNSTREAM OF ALL WATER COILS.
ALL CONTROL VALVES SHALL SPRING RETURN TO A FAIL SAFE POSITION. ALL HEATING CONTROL VALVES SHALL FAIL OPEN BY SPRING RETURN TO HEATING AND ALL COOLING CONTROL VALVES SHALL FAIL CLOSED BY SPRING RETURN.	INSTALL A FLOAT SWITCH IN THE DRAIN PAN OF ALL VRF UNITS SHALL BE TO SHUT DOWN THE ASSOCIATED SYSTEM.
ALL CONTROL VALVES USED FOR POSITIVE SHUT-OFF ISOLATION, SUCH AS HOT/CHILLED WATER ISOLATION OR CHANGEOVER IN A TWO-PIPE SYSTEM, SHALL BE QUARTER TURN TYPE BUTTERFLY OR BALL VALVES RATED FOR 300 PSI, BUBBLE TIGHT SHUT-OFF SERVICE.	VII. RELAYS
THE CONTROLS CONTRACTOR/ENGINEER SHALL SIZE ALL MODULATING TEMPERATURE CONTROL VALVES WITH A CV AND PRESSURE DROP SUCH THAT THERE IS LINEAR CONTROL OF WATER FLOW THROUGHOUT THE ENTIRE STROKE OF THE VALVE. COORDINATE WITH THE MECHANICAL CONTRACTOR TO PROVIDE REDUCERS AS REQUIRED FOR MODULATING VALVES THAT ARE NOT LINE SIZE.	ALL RELAYS ARE TO BE INSTALLED IN CONTROL PANELS. RELAYS IN BOX (RIB'S) ARE NOT ACCEPTABLE. CONTROL RELAYS SHALL BE UL LISTED PLUG-IN TYPE WITH DUST COVER. RELAYS TO BE IDEC RR2P-UL AC24V WITH SR2P-06 BASE.
	PROVIDE ALL RELAYS AS REQUIRED BY SITE CONDITIONS TO CONTROL ALL PUMPS, FANS, ETC. PROVIDE DEFINITE PURPOSE CONTRACTOR IF POWER REQUIREMENTS EXCEED RELAY CAPACITY.
	VII. TAGGING
	SEE EQUIPMENT SCHEDULES FOR EQUIPMENT TAGGING. ALL EQUIPMENT TO BE LABELED AND/OR REFERENCED ON BAS WITH THE DESIGNATION PER THE EQUIPMENT SCHEDULES.

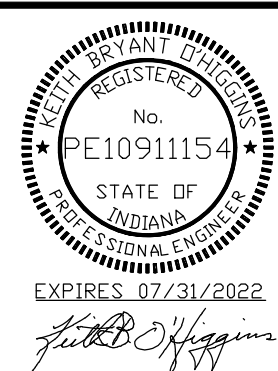


MEP/CB CONSULTANT:  
PE10911154



DUNELAND SCHOOL CORPORATION  
ALTERNATIVE CLASSROOM RENOVATION AT:  
CHESTERTON MIDDLE SCHOOL  
651 W MORGAN AVE, CHESTERTON, IN. 46304

PROJECT NUMBER: 17-029	REV: 00/05
PROJECT MANAGER: TBS	
DRAWN BY: DAB/LLC	
DESIGNED FOR CONSTRUCTION: 06/05/21	
NOTES	
MECHANICAL	



M5.00

## MECHANICAL SYSTEM (HVAC) SYMBOLS

	NEW PIPING
	EXISTING TO REMAIN PIPING
	EXISTING TO BE REMOVED PIPING
	MAKE-UP WATER
	NATURAL GAS
	REFRIGERANT DISCHARGE
	REFRIGERANT SUCTION
	REFRIGERANT LIQUID
	HOT/CHILLED WATER SUPPLY
	HOT/CHILLED WATER RETURN
	HOT WATER SUPPLY
	HOT WATER RETURN
	DRAIN LINE
	LINE ARROW INDICATES DIRECTION OF FLOW OR PITCH
	PIPE ELBOW (TURNED UP)
	PIPE ELBOW (TURNED DOWN)
	PIPE TEE DOWN (DROP)
	PIPE TEE UP
	PIPE TEE UP OR ANGLE
	PIPE TEE DOWN OR ANGLE
	PIPE TEE HORIZONTAL
	90° ELBOW IN HORIZONTAL PIPE RUN
	ANGLE ELBOW IN HORIZONTAL PIPE RUN
	NEW CONNECTION
	GATE VALVE
	CHECK VALVE
	BUTTERFLY VALVE
	BALL VALVE
	3 WAY CONTROL VALVE
	2 WAY CONTROL VALVE
	TRIPLE DUTY VALVE
	CIRCUIT BALANCING VALVE W/BALANCING PORTS
	AUTOMATIC FLOW DEVICE
	SQUARE HEAD COCK
	SOLENOID VALVE
	PRESSURE REDUCING VALVE
	DRAIN VALVE WITH 3/4" HOSE THREADED OUTLET
	PRESSURE RELIEF VALVE (PIPE TO FLOOR DRAIN)
	BACKFLOW PREVENTER
	NEEDLE VALVE
	STRAINER
	AUTOMATIC BUTTERFLY VALVE
	PIPE EXPANSION JOINT
	PIPE ANCHOR
	PIPE FLEXIBLE CONNECTION
	PIPE ALIGNMENT GUIDE
	PIPE SLEEVE
	PIPE UNION (OR FLANGES IF 2 1/2" OR LARGER PIPE)
	PRESSURE SWITCH (WITH THREAD OR WELD-O-LET)
	PRESSURE GAUGE AND NEEDLE VALVE
	FLOW SWITCH (WITH THREAD OR WELD-O-LET)
	THERMOMETER (WITH PIPE WELL)
	SENSOR WELL

	HUMIDISTAT
	WALL MOUNTED THERMOSTAT/SENSOR
	REVERSE ACTING THERMOSTAT/SENSOR
	SWITCH
	NEW DUCTWORK
	EXISTING TO REMAIN DUCTWORK
	EXISTING TO BE REMOVED DUCTWORK
	FLEXIBLE DUCT CONNECTION
	ACCESS DOOR ON TOP, BOTTOM OR SIDE OF DUCT
	SINGLE BLADE OR OPPOSED BLADE MANUAL VOLUME DAMPER.
	AUTOMATIC CONTROL DAMPER
	EXHAUST DUCT UP TO ROOF MOUNTED EXHAUST FAN OR VENTILATOR.
	SQUARE NECK DROP TO SQUARE DIFFUSER (ARROW SHOWS DIRECTION OF THROW)
	ROUND NECK DROP TO ROUND DIFFUSER (ARROW SHOWS DIRECTION OF THROW)
	ROUND NECK DROP TO SQUARE DIFFUSER (ARROW SHOWS DIRECTION OF THROW)
	VERTICAL FIRE DAMPER OR SMOKE DAMPER (IN HORIZONTAL DUCT AT WALL) WITH ACCESS DOOR.
	AIR SUPPLY FLOW
	EXHAUST OR RETURN AIR FLOW
	WALL OR DUCT MOUNTED SUPPLY REGISTER OR GRILLE (TOP NO. = SIZE OF FACE OR NECK, BOTTOM NO. = AMOUNT OF AIR, LETTER INDICATES TYPE).
	BOTTOM MOUNTED REGISTER OR GRILLE.
	DUCT SIZE FREE AREA (1ST NUMBER IS DUCT WIDTH ON PLAN VIEW, 2ND NUMBER IS DUCT DEPTH IN PLAN VIEW.)
	SUPPLY OR FRESH AIR DUCT UP
	RETURN OR EXHAUST AIR DUCT UP
	SUPPLY OR FRESH AIR DUCT DOWN
	RETURN OR EXHAUST AIR DUCT DOWN

	RISE OR DROP IN SUPPLY DUCT (TOP VIEW) ARROW DIRECTION OF FLOW
	INCLINED RISE (R) OR DROP (D), ARROW IN DIRECTION OF AIR FLOW
	90° ELBOW WITH TURNING VANES
	SHORT RADIUS ELBOW (R=1/2 W)
	LONG RADIUS ELBOW (R= W)
	90° BRANCH TAKE-OFF W/45 DEGREE ENTRY (L=1/4 W - 4" MIN.) W/VOLUME DAMPER IN BRANCH DUCT.
	HEATING COIL WITH ACCESS DOOR IN DUCT
	ROUND FLEXIBLE DUCT
	ROUND OR OVAL DUCT ( ——— INDICATES CENTER LINE OF DUCT)
	ROUND DUCT TRANSITION [L <sub>2</sub> = A-B (4" MIN.)]
	ROUND DUCT UP
	ROUND DUCT DOWN
	CROSS-SECTION OF ROUND DUCT
	UNEQUAL SIZE (90° - Y ) ELBOW
	EQUAL SIZE (90° - Y ) ELBOW
	90° BRANCH TAKE-OFF FROM MAIN
	SQUARE OR RECTANGLE DUCT TRANSITION
	UNEQUAL SIZE (90° - T) ELBOW

	SQUARE OR RECTANGLE TO ROUND DUCT TRANSITION
	DUCT OFFSET W/FULL RADIUS ELBOWS (R = W)
	EQUIPMENT TYPE EQUIPMENT #
	DEMOLITION NOTE REFERENCE NUMBER
	PLAN NOTE REFERENCE NUMBER

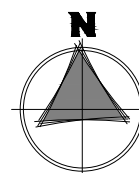
MECHANICAL ABBREVIATIONS LIST			
ACV	AUTOMATIC CONTROL VALVE	EUH	ELECTRIC UNIT HEATER
AFD	AUTOMATIC FLOW DEVICE	EW	ENTERING WATER TEMPERATURE
AHU	AIR HANDLING UNIT	EXD	EXHAUST DUCT
AS	AIR SEPARATOR	F	FAHRENHEIT
BOP	BOILER CIRCULATING PUMP	FC	FLEXIBLE CONNECTION
BWP	BUILDING WATER PUMP	FCU	FAN COIL UNIT
BHP	BRAKE HORSE POWER	FID	FIRE DAMPER
BTU	BRITISH THERMAL UNIT	FPF	FINS PER FOOT
BTUH	BRITISH THERMAL UNIT PER HOUR	FFM	FEET PER MINUTE
BV	BALL VALVE	FTR	FINNED TUBE RADIATION
CBP	COIL BOOSTER PUMP	FV	FACE VELOCITY
CC	COOLING COIL	G	GAS PIPING
CFM	CUBIC FEET PER MINUTE	GPM	GALLONS PER MINUTE
CH	CHILLER	GV	GATE VALVE
CKV	CHECK VALVE	HC	HEATING COIL
CU	CONDENSING UNIT	HCWP	HOT/CHILLED WATER PUMP
CUH	CABINET UNIT HEATER	HCWR	HOT/CHILLED WATER RETURN
CUV	CLASSROOM UNIT VENTILATOR	HCWS	HOT/CHILLED WATER SUPPLY
CWP	CHILLED WATER PUMP	HP	HORSEPOWER
CHWR	CHILLED WATER RETURN	HWP	HOT WATER BOILER
CHWS	CHILLED WATER SUPPLY	HWP	HOT WATER CIRCULATING PUMP
D	DRAIN LINE	HWR	HOT WATER RETURN
DB	DRY BULB	HWS	HOT WATER SUPPLY
EAD	EXHAUST AIR DAMPER	IN	INTAKE HOOD
EAT	ENTERING AIR TEMPERATURE	LAT	LEAVING AIR TEMPERATURE
EF	EXHAUST FAN	LWT	LEAVING WATER TEMPERATURE
EH	EXHAUST HOOD	MOD	MOTOR OPERATED DAMPER
ET	EXPANSION TANK	NC	NEW CONNECTION
		NK	NECK
		N.C.	NORMALLY CLOSED
		N.I.C.	NOT IN CONTRACT
		N.O.	NORMALLY OPEN
		OAD	OUTDOOR AIR DAMPER
		OD	OUTSIDE AIR DUCT
		PD	PRESSURE DROP
		PG	PIPE GUIDE
		PH	PHASE
		PS	PIPE SLEEVE
		PSI	POUNDS PER SQUARE INCH
		RAD	RETURN AIR DAMPER
		RED	RETURN AIR DUCT
		RF	RETURN AIR FAN
		RH	RELIEF HOOD
		RPM	REVOLUTIONS PER MINUTE
		RTU	ROOF TOP UNIT
		SF	SUPPLY FAN
		SP	STATIC PRESSURE
		STR	STRAINER
		SUD	SUPPLY DUCT
		SUH	SUSPENDED UNIT HEATER
		TSP	TOTAL STATIC PRESSURE
		WB	WET BULB
		WC	WATER COLUMN
		WG	WATER GAUGE
		WLS	WALL LOUVER AND SCREEN



DATE PLOTTED: 07/15/2021 8:12 AM FILE PATH AND NAME: P:\139-A-8 Duneland SC - CMS Alternative School (Chesterton, IN)\E\139-A-8 E0.10 Existing Electrical First Floor.dgn

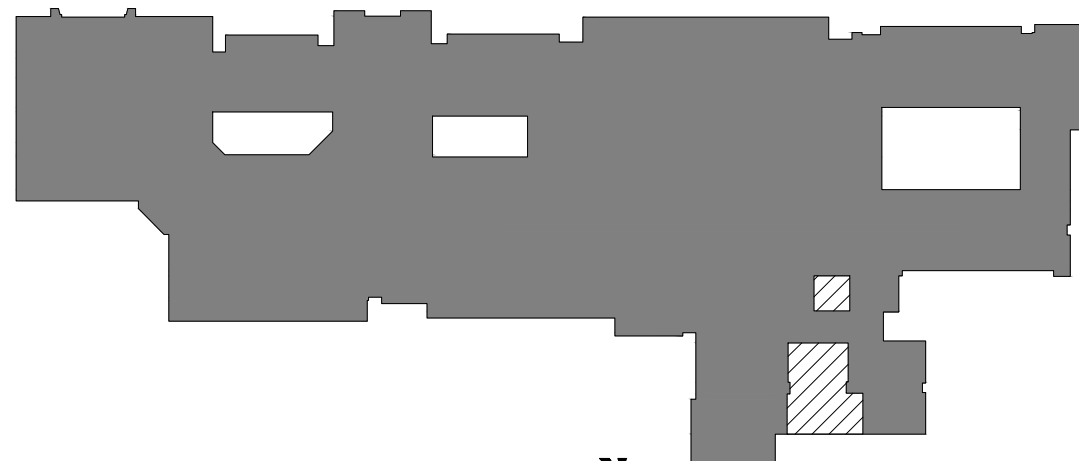


1 EXISTING PARTIAL FLOOR PLAN - PIPING - ELECTRICAL  
1/8" = 1'-0"

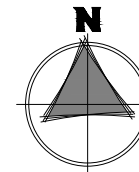


ELECTRICAL DEMOLITION SYMBOLS	
SYM BOL	DESCRIPTION
R	EXISTING ELECTRICAL EQUIPMENT OR OUTLET TO BE REMOVED.
X	EXISTING ELECTRICAL EQUIPMENT OR OUTLET TO REMAIN.
XN	EXISTING ELECTRICAL EQUIPMENT OR OUTLET RELOCATED (NEW LOCATION).
XRR	EXISTING ELECTRICAL EQUIPMENT OR OUTLET TO BE REMOVED, RELOCATED AND JUNCTION BOX REMOVED OR CAPPED AS REQUIRED

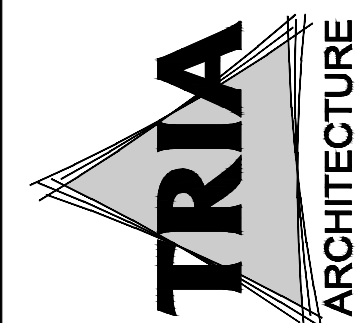
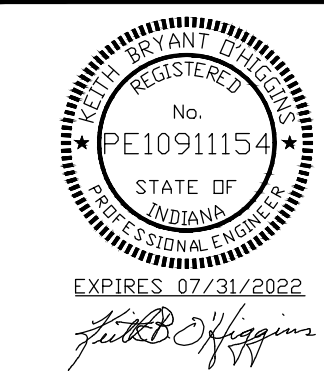
ELECTRICAL KEY NOTES:	
①	REMOVE ALL LIGHTING AND SWITCHING. ELECTRICAL CIRCUITS TO LIGHTING TO REMAIN AND SHALL BE REUSED FOR NEW LIGHTING LAYOUT.
②	DISCONNECT UNIT VENTILATOR. REMOVE CONDUIT AND WIRE BACK TO PANEL.
③	DISCONNECT RTU POWER AND REMOVE CONDUIT AND WIRE BACK TO PANEL.



KEYPLAN  
NOT TO SCALE



AREA OF WORK  
NOT IN SCOPE OF WORK



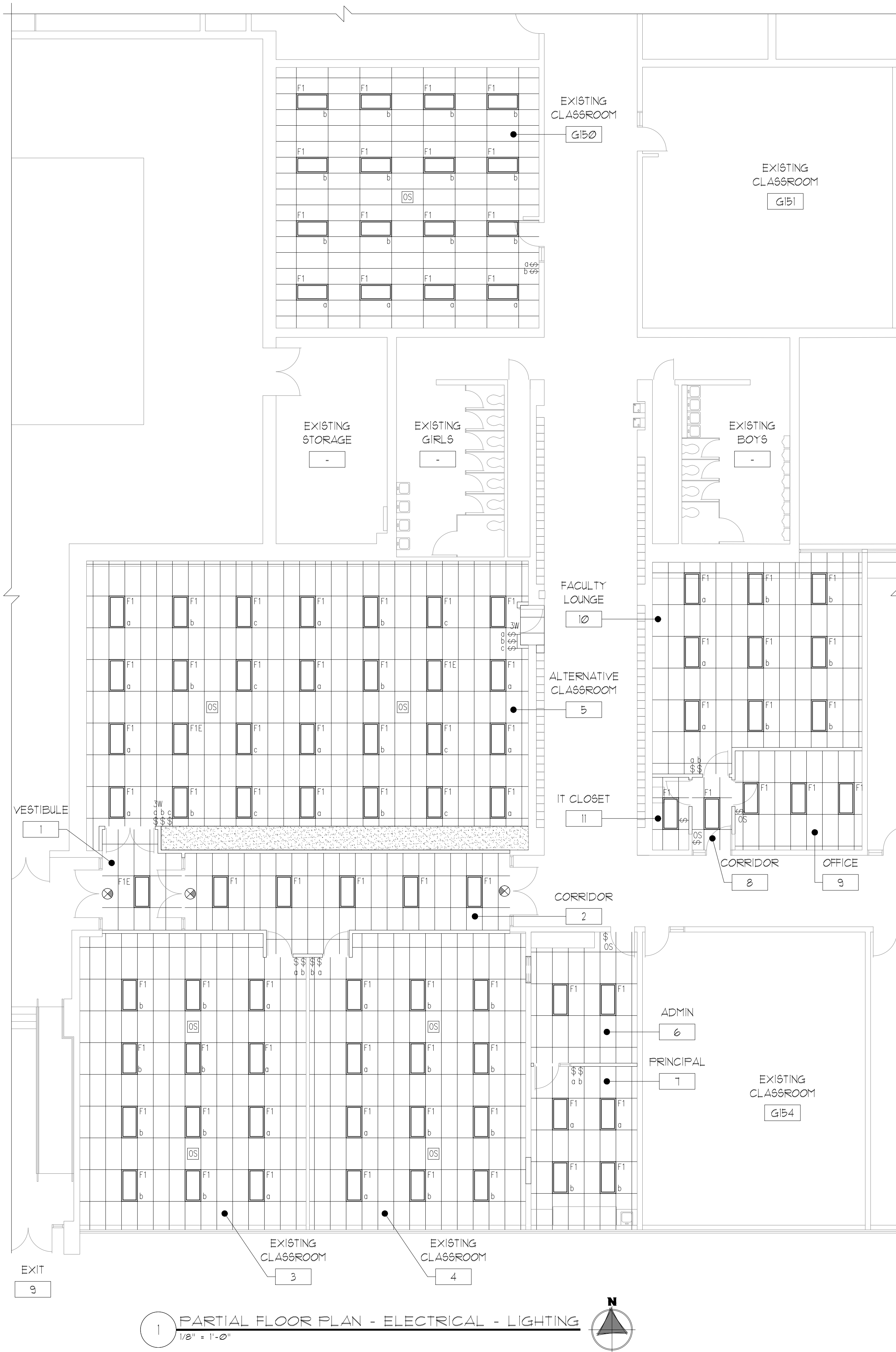
MEP/PE CONSULTANT:  
**IDAS**  
INDIANA DESIGN & ARCHITECTURE, LLC  
760 HARTLAND DR., SUITE 100, ELKHART, IN 46514 (831) 539-1996

DUNELAND SCHOOL CORPORATION  
ALTERNATIVE CLASSROOM RENOVATION AT:  
CHESTERTON MIDDLE SCHOOL  
651 W MORGAN AVE, CHESTERTON, IN. 46304

PROJECT NUMBER: 17-003	DATE: 07/15/2021
PROJECT MANAGER: TRS	
DRAWN BY: OAS LLC	
ISSUED FOR CONSTRUCTION: 06/15/21	
EXISTING PARTIAL FLOOR PLAN ELECTRICAL	

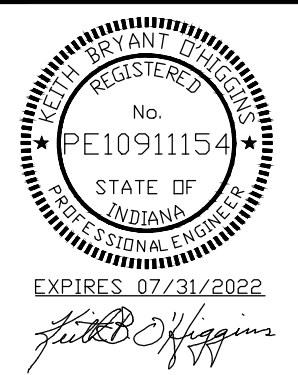
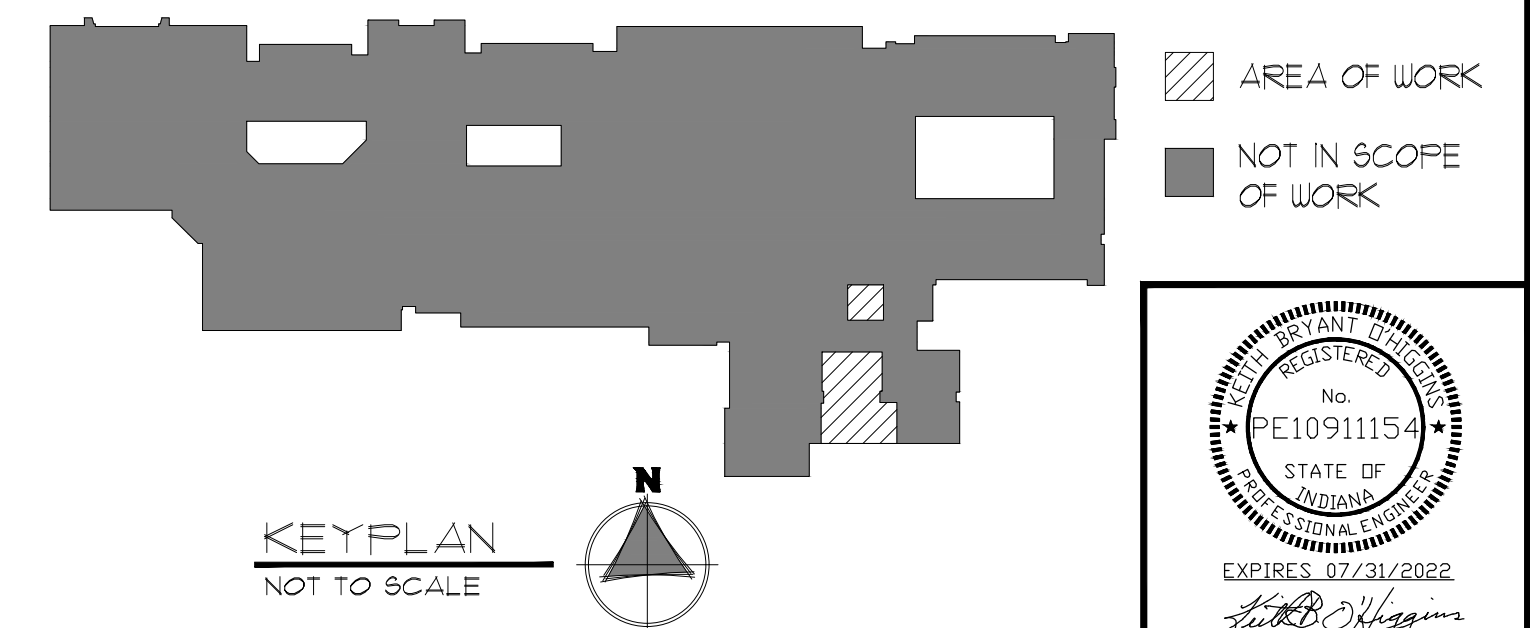
E0.10

DATE PLOTTED: 07/15/2021 7:55 AM FILE PATH AND NAME: P:\139-A-B Duneland SS - CMS Alternative School (Chesterton, IN)\139-A-B E1.10 Electrical Lighting First Floor plan

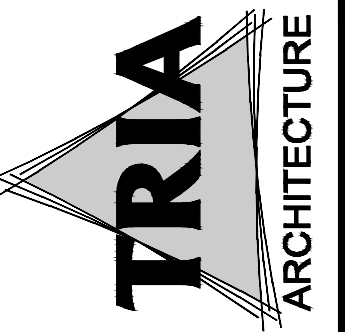


#### GENERAL NOTES:

1. EXISTING LIGHTING CIRCUITS IN NEW WORK AREA - BASE BID - TO BE REUSED FOR NEW LIGHTING.
2. CONNECT ALL NEW LIGHTING TO EXISTING CIRCUITS. PROVIDE NEW SWITCH LEGS AS SHOWN AND OCCUPANCY SENSOR CONTROL.
3. CONNECT EXIST SIGNS AND EMERGENCY LIGHTS TO UNSWITCHED LEG OF LOCAL LIGHTING CIRCUIT.



E1.10



MEP/EE CONSULTANT:  
**QAS**  
CONSULTANTS  
765 HARTLAND DR., UNIT A, ELKHART, IN 46524 (800) 538-1996

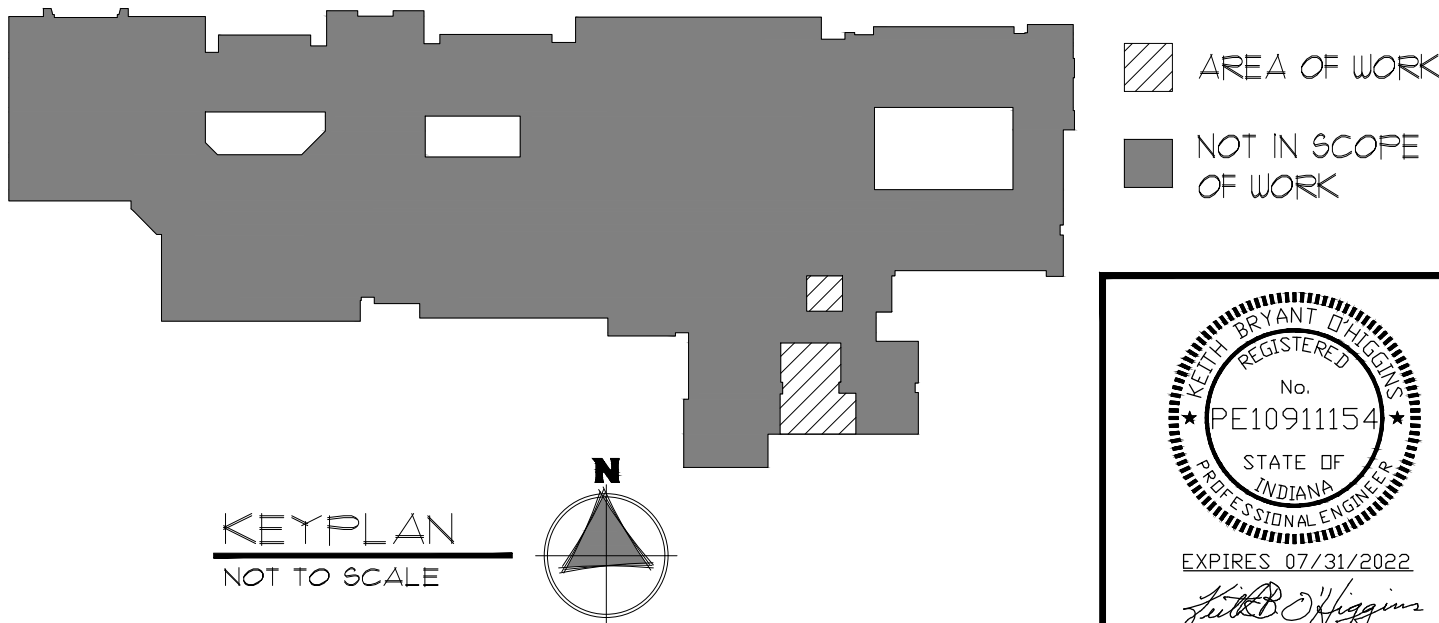
**DUNELAND SCHOOL CORPORATION**  
**ALTERNATIVE CLASSROOM RENOVATION AT:**  
**CHESTERTON MIDDLE SCHOOL**  
**651 W MORGAN AVE, CHESTERTON, IN. 46304**

PROJECT NUMBER: 139-A-B	07/15/2021
PROJECT MANAGER: TRS	TR
DRAWN BY: QAS LLC	QAS
ISSUED FOR CONSTRUCTION:	08/01/21
PARTIAL FLOOR PLAN - ELECTRICAL - LIGHTING	1/3

DATE PLOTTED: 07/15/2021 8:13 AM FILE PATH AND NAME: P:\139-A-8 Duneland SC - CMS Alternative School (Chesterton, IN)\E2.10 Electrical Power First Floor plan




- GENERAL NOTES:**
- REFER TO SHEET E3.00 FOR POWER REQUIREMENTS OF MECHANICAL EQUIPMENT.
  - EXTEND EXISTING FIRE ALARM SYSTEM TO NEW DEVICES. EQUIPMENT TO MATCH EXISTING SYSTEM. PROVIDE ALL TESTING AND PROGRAMMING OF SYSTEM.
- ELECTRICAL KEYED NOTES:**
- A) REPLACE 20A, 3P SPARE BREAKER WITH 50A, 3P BREAKER. (GIVE OWNER 20A, 3P BREAKER.)  
B) REPLACE 100A, 3P SPARE BREAKER WITH 50A, 3P BREAKER. (GIVE OWNER 100A, 3P BREAKER.)
  - FURNISH AND INSTALL TWO (2) NEW 20A, 3P BREAKERS.







PROJECT NUMBER: 139-A-8	DATE: 07/15/2021
PROJECT MANAGER: TRS	
DESIGN BY: IDAS LLC	
ISSUED FOR CONSTRUCTION:	
08/15/21	1/3
PARTIAL FLOOR PLAN - ELECTRICAL - POWER	

GENERAL ELECTRICAL NOTES	
1. REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ADDITIONAL GENERAL NOTES WHICH WILL APPLY HERE.	37. WHETHER SPECIFICALLY INDICATED OR NOT, PROVIDE MINIMUM OF ONE DUCT SMOKE DETECTOR FOR AIR SUPPLY SYSTEM HAVING A CAPACITY GREATER THAN 2,000 CFM AND TWO DUCT SMOKE DETECTORS FOR AIR SUPPLY SYSTEM HAVING A CAPACITY GREATER THAN 15,000 CFM.
2. DO NOT SCALE DRAWINGS.	38. PERFORM COORDINATION STUDY OF ELECTRICAL DISTRIBUTION SYSTEM AS INDICATED IN POWER SYSTEM STUDY SPECIFICATION. IT SHALL BE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO PROVIDE EQUIPMENT WITH PROPER INTERRUPTING RATINGS OF EQUIPMENT BASED UPON COORDINATION STUDY. A/C (AVAILABLE INTERRUPTING CAPACITY) OF ALL PANELS AND SWITCHBOARD SHOWN IN DRAWINGS ARE FOR GENERAL INFORMATION ONLY. THE FINAL A/C OF ELECTRICAL EQUIPMENT SHALL BE BASED UPON WORST CONDITION COMED FAULT CURRENT AND THE RECOMMENDATIONS MADE IN COORDINATION STUDY. THE COST TO PROVIDE ALL ELECTRICAL DISTRIBUTION EQUIPMENT WITH PROPER FAULT INTERRUPTING RATING (REGARDELESS OF WHAT IS SHOWN ON DRAWINGS) SHALL BE INCLUDED IN THE BID.
3. NOTES ON DRAWINGS SHALL APPLY TO ALL SIMILAR CONDITIONS WHETHER THEY ARE REPEATED OR NOT.	39. PROVIDE DEEPER BACK BOX AS REQUIRED FOR EACH DEVICE; FOR EXAMPLE MINIMUM OF 2.5" DEEP FOR WALL BOX TYPE OCCUPANCY SENSOR.
4. BOXES LOCATED ON OPPOSITE SIDES OF NON-FIRE RATED WALLS SHALL BE OFFSET A MINIMUM OF 6" HORIZONTALLY. BOXES ON OPPOSITE SIDES OF FIRE RATED WALL SHALL BE OFFSET A MINIMUM OF 24" HORIZONTALLY. "THRU THE WALL" BOXES SHALL NOT BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL OF THE ARCHITECT/ENGINEER.	40. PROVIDE WEATHERPROOF TYPE WHILE-IN-USE COVER FOR ALL 15 AMP AND 20 AMP 120V. RECEPTACLES LOCATED IN OUTDOOR LOCATIONS WHETHER SPECIFICALLY INDICATED OR NOT.
5. ELECTRICAL CONTRACTOR SHALL VERIFY TOTAL CONNECTED LOAD/HP WITH ALL OTHER TRADES PRIOR TO WIRING OF ALL OTHER TRADES' EQUIPMENT. MAKE ANY CHANGES TO OVERCURRENT DEVICES AND FEEDER SIZE PER ELECTRICAL CODE AS REQUIRED.	41. PROVIDE SLEEVES THRU FLOOR AND WALLS AS REQUIRED FOR LOW VOLTAGE CABLES. COORDINATE ALL REQUIREMENTS WITH LOW VOLTAGE CONTRACTORS.
6. ELECTRICAL CONTRACTOR SHALL VERIFY ALL FURNITURE, MODULAR FURNITURE AND EQUIPMENT LOCATIONS WITH ARCHITECTURAL PLANS, ELEVATIONS AND REVIEWED SHOP DRAWINGS. PRIOR TO MAKING THE ACTUAL ELECTRICAL INSTALLATION, THIS CONTRACTOR SHALL ADJUST RECEPTABLES, OUTLETS OR CONNECTION LOCATIONS TO ACCOMMODATE FURNITURE AND/OR EQUIPMENT.	42. THE PANEL DIRECTORY SHALL HAVE SPECIFIC LIST OF LOAD SERVED. THE GENERIC OR BROAD LIST IS NOT ACCEPTABLE. FOR EXAMPLE LISTING "LIGHTS IN CLASSROOM" IS NOT ADEQUATE. PROVIDE MORE SPECIFIC LIST SUCH AS "LIGHTS IN CLASSROOM 231, 234 AND STORAGE 239" SHALL BE PROVIDED TO REFLECT THE SPECIFIC LOAD SERVED.
7. ALL EXPOSED CABLES IN PLENUM CEILING SHALL BE APPROVED FOR PLENUM APPLICATION.	43. UNLESS NOTED OTHERWISE, ALL WIRING SHALL BE IN CONDUIT EXCEPT LOW VOLTAGE WIRING ABOVE ACCESSIBLE CEILING SPACE. LOW VOLTAGE WIRING EXCEPT FIRE ALARM SYSTEM WIRING ABOVE ACCESSIBLE CEILING SPACE MAY BE EXPOSED. ALL FIRE ALARM SYSTEM WIRING SHALL BE IN CONDUIT.
8. PROVIDE SLEEVES/CONDUITS FOR LOW VOLTAGE CABLES WHEN THEY TRAVERSE ABOVE NON ACCESSIBLE CEILING SPACE. ALSO, PROVIDE SLEEVES THROUGH MASONRY WALLS FOR LOW VOLTAGE CABLES. VERIFY SLEEVE/CONDUIT SIZE REQUIREMENTS AND LOCATION WITH THE CONTRACTOR INSTALLING LOW VOLTAGE SYSTEM.	44. LOCATE THE OUTLETS FOR LCD PROJECTORS AS DIRECTED BY OWNER'S LCD PROJECTOR VENDOR TO PROVIDE OPTIMUM COVERAGE OF THE PROJECTOR.
9. UNLESS NOTED OTHERWISE, THE CONDUITS AND BACK BOXES SHALL BE CONCEALED WITHIN ALL EXISTING AND NEW MASONRY WALLS. SURFACE METAL RACEWAY SHALL ONLY BE USED IF SPECIFICALLY INDICATED. THE SURFACE METAL RACEWAY SHALL BE ROUTED IN THE CORNER AND/OR ADJACENT TO WINDOW, DOOR FRAMEWORK ETC. SO IT IS AS INCONSPICUOUS AS POSSIBLE. CONDUIT IN UTILITY AREAS MAY BE SURFACE MOUNTED, BUT MUST BE APPROVED PRIOR TO INSTALLATION. ANY SURFACE CONDUIT INSTALLED BY THIS CONTRACTOR THAT IS DEEMED UNSIGHTLY MUST BE HIDDEN WITH THAT WALL ON WHICH IT IS MOUNTED AT NO COST TO THE OWNER.	45. UNLESS SPECIFICALLY INDICATED, ALL CONDUITS OTHER THAN IN ELECTRICAL/ MECHANICAL EQUIPMENT ROOMS AND AUTO/WOOD SHOPS SHALL BE CONCEALED. POWER POLES OR CONDUIT FED FROM CEILING IS STRICTLY PROHIBITED.
10. WHERE POWER AND LOW VOLTAGE OUTLETS (SUCH AS DATA OUTLETS) ARE SHOWN TOGETHER ON DRAWINGS, PROVIDE THEM ADJACENT TO EACH OTHER.	46. ALL FLOOR MOUNTED RECEPTABLES SHALL BE FLUSH WITH FLOOR AND SHALL HAVE HINGED COVER PLATES. PEDESTAL TYPE RECEPTABLES ARE NOT ALLOWED.
11. PROVIDE CONCRETE PAD FOR ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT. (SUCH AS SWITCHBOARDS, PANELS, TRANSFORMER, ETC.)	47. ALL CONDUITS FOR TELEPHONE AND DATA OUTLETS SHALL BE 1.25" UNLESS NOTED OTHERWISE. ALL BACKBOXES FOR TELEPHONE AND DATA OUTLETS SHALL BE 2 GANG AND SHALL BE MINIMUM OF 2.75" DEEP.
12. IF A NEW RECEPTACLE IS INDICATED WITHOUT A CIRCUIT NUMBER, PROVIDE A CIRCUIT. COORDINATE SPECIFIC REQUIREMENTS IN FIELD PRIOR TO INSTALLATION.	48. LOW VOLTAGE SYSTEMS, INCLUDING TELECOMMUNICATIONS, SECURITY, FIRE ALARM, ETC. SHALL BE BY THIS CONTRACTOR, INCLUDING WIRING, CONDUIT, TERMINATIONS, POWER REQUIREMENTS, PROGRAMMING, ETC., UNLESS SPECIFICALLY NOTED OTHERWISE. SMART BOARDS AND VIDEO PROJECTORS SHALL BE FURNISHED BY OWNER, BUT ALL ASSOCIATED POWER AND WIRING REQUIREMENTS SHALL BE BY THIS CONTRACTOR.
13. CIRCUIT NUMBERS SHOWN FOR EXISTING PANELS ARE FOR REFERENCE ONLY. USE NEXT AVAILABLE CIRCUITS AND PROVIDE APPROPRIATE SIZE BREAKERS.	49. THE CONTRACTOR MUST VISIT THE SITE TO FAMILIARIZE HIMSELF WITH THE EXISTING SITE AND BUILDING CONDITIONS WHICH WILL BE AFFECTED DURING CONSTRUCTION PRIOR TO SUBMITTING HIS BID. PROPOSAL. CONTRACTOR IS CAUTIONED THAT THE PROJECT IS A REMODELING JOB AND IT IS ASSUMED THAT HE HAS INCLUDED FUNDS IN HIS BID TO COVER UNFORESEEN ITEMS WHICH MUST BE MOVED, RELOCATED OR ADJUSTED TO FIT HIS WORK. NO EXTRA COMPENSATION WILL BE ALLOWED FOR ANY EXTRA WORK CAUSED BY FAILURE TO VISIT, EXAMINE OR VERIFY.
14. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF ELECTRICAL EQUIPMENT & DEVICES. THE ELECTRICAL DRAWINGS ARE FOR CONCEPT ONLY.	50. ALL EXISTING EQUIPMENT IS TO REMAIN OPERATIONAL DURING CONSTRUCTION PERIOD. ALL TEMPORARY WIRING OR REROUTING OF CIRCUITRY TO ACHIEVE THIS IS BY THE ELECTRICAL CONTRACTOR. SHUTDOWN OF EXISTING SERVICES SHALL ONLY BE PERMITTED UPON WRITTEN APPROVAL FROM THE OWNER AND THEN ONLY FOR THAT DATE AND DURATION AGREED UPON. INCLUDE ALL PREMIUM TIME CHARGES IN THE BASE BID.
15. EACH 120V CIRCUIT SHALL HAVE ITS OWN NEUTRAL. SHARING OF NEUTRALS IS NOT ALLOWED.	51. EXISTING CONDUITS IN GOOD CONDITION MAY BE REUSED WHERE POSSIBLE. PULL NEW WIRE AS REQUIRED. ALL UNUSED CONDUIT, WIRE, JUNCTION BOXES, ETC. WILL BE REMOVED. ALL JUNCTION BOXES MUST HAVE COVERS. VERIFY REQUIREMENTS IN FIELD.
16. IN GENERAL, DASHED LINES INDICATE EXISTING ITEMS TO BE REMOVED, LIGHT OR HALF-TONE SOLID LINES INDICATE ITEMS TO REMAIN AND DARK SOLID LINES INDICATE NEW ITEMS.	52. FOR THE AREA TO BE DEMOLISHED, THE DEMOLITION OF LIGHT FIXTURES, OUTLETS OR ANY OTHER ELECTRICAL EQUIPMENT/DEVICES SHALL BE PERFORMED AS REQUIRED. SEE ARCHITECTURAL DRAWINGS AND THE RESPECTIVE FLOOR PLANS IN ELECTRICAL DRAWINGS FOR DEMOLITION. ELECTRICAL CONTRACTOR SHALL REMOVE ALL ASSOCIATED RACEWAYS AND WIRING AS REQUIRED. ELECTRICAL CONTRACTOR SHALL DE-ENERGIZE AND DISCONNECT APPLICABLE WIRING TO FACILITATE SAFE DEMOLITION.
17. THE SYSTEMS PROVIDED BY THIS CONTRACTOR SHALL BE COMPLETELY OPERATIONAL REGARDLESS OF OMISSION OF MINOR ITEMS, SUCH AS CIRCUIT NUMBER FOR RELAY, A CIRCUIT NUMBER NEXT TO A LIGHTING FIXTURE, POWER FOR CONTROL EQUIPMENT, ETC.	53. THE EXISTING EQUIPMENT IS SHOWN BASED UPON THE INFORMATION OBTAINED THROUGH BRIEF SURVEY OF THE FACILITY. CONTRACTOR IS TO SURVEY THE EXISTING FACILITY IN ORDER TO DETERMINE THE FULL EXTENT OF WORK AND BE COMPLETELY FAMILIAR WITH ALL THE EXISTING CONDITIONS INCLUDING PLUMBING, HVAC, ELECTRICAL, ETC. THE ARCHITECT/ENGINEER AND OWNER ASSUME NO RESPONSIBILITY IN RESPECT TO THE ACCURACY OF SUCH INFORMATION SHOWN ON THE DRAWINGS. CONTRACTOR SHALL MAKE ADEQUATE ALLOWANCE IN HIS BID FOR SOME DEVIATIONS TO SUCH INFORMATION.
18. ALL OUTDOOR DEVICES SUCH AS RECEPTABLES, DISCONNECTS, SPEAKERS, LIGHTING FIXTURES, JUNCTION BOXES, ETC. SHALL BE OUTDOOR TYPE.	54. WHERE EXISTING CONDITIONS PREVENT PROPER INSTALLATION OF PROPOSED WORK, REROUTE, EXTEND OR ALTER EXISTING WORK SO AS TO ACCOMMODATE PROPOSED WORK REQUIREMENTS.
19. THE EXIT SIGNS ARE PROVIDED FOR BIDDING PURPOSES. FINAL LOCATION SHALL BE AS DETERMINED BY LOCAL FIRE MARSHAL. IF REQUIRED BY FIRE MARSHAL, PROVIDE ADDITIONAL EXIT SIGNS WITHOUT ADDITIONAL COST TO OWNER.	55. WHERE A NEW WALL IS TO BE BUILT PERPENDICULAR TO EXISTING WALL AND IF THERE IS AN INTERFERING EXISTING RECEPTACLE ON THE EXISTING WALL, RELOCATE THIS RECEPTACLE AS REQUIRED.
20. PROVIDE LOCKING CLIPS ON CIRCUIT BREAKERS SERVING EMERGENCY LIGHTING, FIRE ALARM SYSTEM, PA/INTERCOMM, TELEPHONE SYSTEM AND SECURITY SYSTEM LOAD.	56. AS REQUIRED EXTEND EXISTING RECEPTABLES WHERE EXISTING WALLS ARE FURRED OUT. REFER TO ARCHITECTURAL DRAWINGS FOR EXTENT OF THIS WORK.
21. IN CERTAIN CASES LARGER SIZE CABLES ARE SPECIFIED IN ORDER TO COMPENSATE FOR VOLTAGE DROP. PROVIDE OVERSIZE AND/OR MULTIPLE LUGS AT THE LINE AND LOAD SIDE OF EQUIPMENT TO INCORPORATE LARGER AND ADDITIONAL CABLES. IF REQUIRED, PROVIDE SPLICE BOXES AT EITHER END OF CABLE TO INTERCEPT CHANGE IN THE CABLES.	57. IN ORDER TO FACILITATE THE REPLACEMENT OF EXISTING OR INSTALLATION OF NEW DUCTWORK AND/OR PIPING, REMOVE EXISTING LIGHTING FIXTURE AND/OR SMOKE/HEAT DETECTORS AS REQUIRED, WHETHER SHOWN ON DRAWINGS OR NOT. THIS NOTE IS GENERALLY APPLICABLE, BUT NOT LIMITED TO, WHERE THERE IS NO DROPPED CEILING (IN EXPOSED CEILING AREA). ONCE THE INSTALLATION OF DUCTWORK, PIPING ETC IS COMPLETED, REINSTALL ELECTRICAL EQUIPMENT/DEVICES. PROVIDE ADEQUATE ALLOWANCE IN THE BID FOR THIS WORK.
22. UNO, ALL OVERCURRENT PROTECTION DEVICES 800 AMP AND LARGER SHALL BE 100% RATED.	58. ELECTRICAL CONTRACTOR SHALL VERIFY SIZE OF ALL EXISTING OPENINGS, DOORS, ETC., FOR REMOVING EQUIPMENT AND MATERIAL OUT OF BUILDING. ELECTRICAL CONTRACTOR SHALL PROVIDE ANY NEW OR ENLARGED OPENINGS IN EXISTING BUILDING CONSTRUCTION REQUIRED TO FACILITATE EXITING OF HIS EQUIPMENT/MATERIAL AND RESTORE SUCH OPENINGS TO THEIR ORIGINAL STATE AFTER COMPLETION.
23. DUE TO THE SMALL SCALE AND INTERFERENCE OF EXISTING EQUIPMENT, EACH AND EVERY ITEM IS NOT SHOWN. SHOWN INFORMATION IS INTENDED AS A GUIDE. CONTRACTOR SHALL VERIFY INFORMATION AND CONDITIONS IN THE FIELD.	59. THE ELECTRICAL DRAWINGS SHOW DIRECT PRINCIPLE WORK WHICH MUST BE ACCOMPLISHED UNDER THIS CONTRACT. INDIRECT AND INCIDENTAL WORK WILL ALSO BE NECESSARY DUE TO CHANGES AFFECTING EXISTING ARCHITECTURAL, MECHANICAL, PLUMBING OR OTHER SYSTEMS. SUCH INCIDENTAL WORK IS ALSO PART OF THIS CONTRACT. INSPECT THOSE AREA AND ASCERAIN WORK NEEDED AND DO THAT WORK IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS, AT NO ADDITIONAL COST.
24. RECONFIGURE LIGHTING FIXTURES AND OUTLETS IN MECHANICAL ROOMS TO BE COMPATIBLE WITH EQUIPMENT LAYOUT AS REQUIRED.	60. WHERE LIGHTING FIXTURES ARE TO BE REUSED, CLEAN FIXTURES THOROUGHLY.
25. COORDINATE THE FINAL LOCATION OF RECEPTABLES IN TELECOMMUNICATION CLOSETS WITH TELECOMMUNICATION EQUIPMENT VENDOR.	61. ALL SWITCHBOARDS, DISTRIBUTION PANELS AND PANEL BOARDS SHALL BE FURNISHED WITH FULL RATED COPPER BUS NO BE BRACED FOR AVAILABLE FAULT CURRENT WITH MINIMUM RATINGS AS FOLLOWS: SWITCHBOARDS - 100,000 AIC DISTRIBUTION PANELS - 55,000 AIC PANELBOARDS - 10,000 AIC (120/240V)
26. ALL RECEPTABLES LOCATED WITHIN 6' OF SOURCE OF WATER (SUCH AS SINK) AND ALL OUTDOOR RECEPTABLES SHALL BE GFI TYPE, WHETHER SPECIFICALLY INDICATED OR NOT.	62. ALL CIRCUIT BREAKERS FOR PANEL BOARDS SHALL BE THE BOLT-ON TYPE, RATED FOR SWITCHING DUTY AND RATED FOR THE AVAILABLE FAULT CURRENT WITH MINIMUM RATING OF 10,000 AIC FOR 120/240V PANELS.
27. WHERE THE OUTLETS ARE SHOWN ON FURNITURE/DESK THEY SHALL BE PROVIDED EITHER UNDER THE DESK OR AS A PART OF MILLWORK AS INDICATED ON ARCHITECTURAL DRAWINGS. PROVIDE CONDUITS AND WIRING UNDER OR WITHIN THE FURNITURE/DESK. THE QUANTITY AND LOCATION OF INDICATED OUTLETS IS APPROXIMATE. COORDINATE EXACT REQUIREMENTS WITH ARCHITECT AND MILLWORK VENDOR. IF FURNITURE/DESK IS NEXT TO WALL, THE ROUGH-IN SHALL BE PROVIDED FROM WALLS. IF FURNITURE/DESK IS FREE STANDING, THE ROUGH-IN SHALL BE PROVIDED FROM FLOOR. THE POWER POLE IS NOT ALLOWED UNLESS SPECIFICALLY INDICATED.	63. ALL CIRCUIT BREAKER SIZES AND QUANTITIES INDICATED ON SCHEDULE(S) ARE FOR THE CONVENIENCE OF THE BIDDERS ONLY. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND SUPPLYING ALL REQUIRED BRANCH BREAKERS.
28. PROVIDE EXPANSION FITTINGS FOR ALL ELECTRICAL RACEWAYS AT EVERY EXPANSION JOINT. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR LOCATION OF EXPANSION JOINTS.	64. ALL PANELS RECESSED IN WALLS SHALL HAVE 3-1" CONDUITS STUBBED INTO CEILING CAVITY OR STUBBED OUT OF WALL 12"-0" ABOVE SLAB.
29. COORDINATE THE INSTALLATION OF ELECTRICAL PANELS, SWITCHBOARD, ETC. WITH OTHER TRADES SUCH THAT NO DUCTWORK, PIPING ETC. IS LOCATED ABOVE THEM.	
30. VERIFY QUANTITY AND SIZE OF LUGS PROVIDED IN OTHER TRADE'S EQUIPMENT (FOR EXAMPLE, CHILLER, ELEVATOR, FIRE PUMP ETC.) BEFORE STARTING ANY WORK ASSOCIATED WITH SUCH EQUIPMENT. IF THEIR LUGS CANNOT ACCOMMODATE THE CABLES INDICATED IN ELECTRICAL DOCUMENT, PROVIDE LUG FITTINGS TO ACCOMMODATE CHANGE IN THE CABLES. PROVIDE SUCH FITTINGS IN A JUNCTION BOX AS CLOSE AS POSSIBLE TO THEIR EQUIPMENT. IF ALLOWED BY THE EQUIPMENT MANUFACTURER, SUCH FITTINGS MAY BE INSTALLED IN THEIR EQUIPMENT RATHER THAN IN A SEPARATE JUNCTION BOX.	
31. MAIN SERVICE ENTRANCE EQUIPMENT SHALL HAVE LABEL FOR SERVICE ENTRANCE TYPE, AND SHALL BE GROUNDED PER ELECTRICAL CODE.	
32. PROVIDE SEPARATE DEDICATED GROUNDING CONDUCTOR IN EACH FEEDER AND BRANCH CIRCUIT WIRING CIRCUIT.	
33. PROVIDE REMOTE TEST AND INDICATING STATION IN A READILY ACCESSIBLE AND VISIBLE SPACE FOR EACH DUCT SMOKE DETECTOR.	
34. PROVIDE RED PLASTIC SIGN AT MAIN WATER SERVICE METER INDICATING "MAIN GROUND LOCATION."	
35. ALL RECEPTABLES FOR VENDING MACHINES, ICE MACHINES AND REFRIGERATORS SHALL BE GFCI TYPE WHETHER SPECIFICALLY INDICATED OR NOT.	
36. PROVIDE ONE WEATHERPROOF, GFI RECEPTACLE WITHIN 25' OF ROOF MOUNTED OR GRADE MOUNTED HVAC EQUIPMENT, WHETHER SPECIFICALLY INDICATED OR NOT AND FEED FROM NEAREST UNLOADED RECEPTACLE CIRCUIT.	

LIGHTING FIXTURE SCHEDULE								
TYPE	LAMP TYPE	MOUNTING	ACCEPTABLE MANUFACTURER AND CATALOG NUMBER	VOLTS	INPUT WATTS	DESCRIPTION	REMARKS	
F1	LED	LAY-IN	LITHONIA	120	31	2x4 LAY-IN		
			2BLT440LADPMVOLTG210LP840					
F1E	LED	LAY-IN	LITHONIA	120	31	2x4 LAY-IN	1400 LUMEN BATTERY PAK W/ SELF DIAGNOSTICS	
			2BLT440LADPMVOLTG210LP840					
			EL141LSD					
	LED	SURFACE	LITHONIA		3	LED EXIT SIGN, RED LETTERS, NiCad BATTERIES.		
			#LOM-S-W-3-R-120/277-ELN					

LIGHTING FIXTURE SCHEDULE NOTES	
1. ALL LIGHTING FIXTURES SHALL BE RATED FOR BUILDING SYSTEM VOLTAGE. CONTRACTOR MUST VERIFY ALL CONDITIONS. 2. ELECTRICAL CONTRACTOR SHALL PROVIDE EACH LIGHTING FIXTURE COMPLETE WITH PLASTER FRAMES AND ALL OTHER INSTALLATION AND HANGING HARDWARE AS REQUIRED FOR A COMPLETE AND FINISHED INSTALLATION AT EACH FIXTURE LOCATION. 3. VERIFY ALL LIGHTING FIXTURE LOCATIONS, FINISHES, VOLTAGE AND CEILING TYPES WITH ARCHITECT PRIOR TO ORDERING. 4. ELECTRICAL CONTRACTOR SHALL CHECK AND COORDINATE ALL LIGHTING FIXTURE CATALOG NUMBERS WITH THE INTENT OF FIXTURE DESCRIPTIONS, LISTED ACCESSORIES AND TYPE OF INSTALLATION. 5. ALL FIXTURES SHALL BE "U.L." LABELED. ALL LIGHTING FIXTURES EXPOSED TO WEATHER OR MOISTURE SHALL BEAR U.L. "WET LOCATION" LABEL AND LIGHTING FIXTURES EXPOSED TO DAMPNESS SHALL BEAR U.L. "DAMP LOCATION" LABEL. 6. EXIT/DIRECTIONAL SIGNS SHALL BE CEILING OR WALL MOUNTED AS PER FIELD CONDITION, REGARDLESS OF HOW THEY ARE SHOWN ON FLOOR PLANS. THEY SHALL BE INSTALLED COMPLETE WITH ALL INSTALLATION AND HANGING ACCESSORIES TO PROVIDE AN UNOBSTRUCTED VIEW OF EACH SIGN FACE AS REQUIRED. SIGNS SHALL BE ADJUSTED AS NECESSARY WITHOUT ADDITIONAL COST. 7. SIGNS TO READ "EXIT". SIGNS SHALL BE SINGLE OR DOUBLE FACED WITH OR WITHOUT DIRECTIONAL ARROWS, ALL AS SHOWN ON PLANS. SIGNS IN GENERAL SHALL BE CEILING MOUNTED, LOCATED AND ADJUSTED FOR BEST VIEW. ALL EXIT SIGNS IN HIGH CEILING AREAS TO BE MOUNTED ON WALL AT MAXIMUM OF +8'-0" ABOVE FLOOR. NO PENDANTS SHALL BE USED. SHADED PORTION DENOTES ILLUMINATION FACE. 8. ALL EXIT SIGNS AND BATTERY EMERGENCY UNITS MUST BE APPROVED BY LOCAL CODE.	

MOTOR AND EQUIPMENT SCHEDULE																
EQUIP. TAG	DESIGNATED TAG	LOCATIONS	LOAD					CONDUIT AND WIRE SIZE	SOURCE OF POWER		PROTECT (AMPERES)	STARTER		DISCONNECT		REMARKS
			VOLTS	PHASE	H.P.	AMP	KVA		PANEL	CCT. NO.		SIZE	TYPE	SIZE	TYPE	
	CONDENSING UNIT	ROOF	480	3	-	35.7	29.68	3#8, 1#10G, 3/4"	HD-1	8,10,12	50A, 3P	-	-	50A, 3P	NEMA 3R	
	CONDENSING UNIT	ROOF	480	3	-	35.7	29.68	3#8, 1#10G, 3/4"	HD-1	14,16,18	50A, 3P	-	-	50A, 3P	NEMA 3R	
	DEDICATED OUTDOOR AIR	ROOF	480	3	-	15.9	13.22	2#12, 1#12G, 3/4"	HD-1	1,3,5	20A, 3P	-	-	50A, 3P	NEMA 3R	
	VRF REFRIGERANT BOX	ABOVE CORRIDOR CEILING	208	1	-	0.2	0.1	2#12, 1#12G, 3/4"	MHB	14,16	20A, 3P	-	-	TOGGLE		
	VRF REFRIGERANT BOX	ABOVE CORRIDOR CEILING	208	1	-	0.2	0.1	2#12, 1#12G, 3/4"	MHB	14,16	20A, 3P	-	-	TOGGLE		
	VARIABLE REFRIGERANT FLOW	CLASSROOM 5	208	1	-	1.3	.27	2#12, 1#12G, 3/4"	MHB	14,16	20A, 3P	-	-	TOGGLE		
	VARIABLE REFRIGERANT FLOW	CLASSROOM 5	208	1	-	1.3	.27	2#12, 1#12G, 3/4"	MHB	14,16	20A, 3P	-	-	TOGGLE		
	VARIABLE REFRIGERANT FLOW	CLASSROOM 4	208	1	-	1.3	.27	2#12, 1#12G, 3/4"	MHB	14,16	20A, 3P	-	-	TOGGLE		
	VARIABLE REFRIGERANT FLOW	CLASSROOM 4	208	1	-	1.3	.27	2#12, 1#12G, 3/4"	MHB	14,16	20A, 3P	-	-	TOGGLE		
	VARIABLE REFRIGERANT FLOW	ADMIN 6	208	1	-	0.2	0.1	2#12, 1#12G, 3/4"	MHB	14,16	20A, 3P	-	-	TOGGLE		
	VARIABLE REFRIGERANT FLOW	PRICIPAL 7	208	1	-	0.2	0.1	2#12, 1#12G, 3/4"	MHB	14,16	20A, 3P	-	-	TOGGLE		
	VARIABLE REFRIGERANT FLOW	CLASSROOM 5	208	1	-	1.3	.27	2#12, 1#12G, 3/4"	MHB	18,20	20A, 3P	-	-	TOGGLE		
	VARIABLE REFRIGERANT FLOW	CLASSROOM 5	208	1	-	1.3	.27	2#12, 1#12G, 3/4"	MHB	18,20	20A, 3P	-	-	TOGGLE		
	VARIABLE REFRIGERANT FLOW	CLASSROOM 5	208	1	-	1.3	.27	2#12, 1#12G, 3/4"	MHB	18,20	20A, 3P	-	-	TOGGLE		
	VARIABLE REFRIGERANT FLOW	CLASSROOM 5	208	1	-	1.3	.27	2#12, 1#12G, 3/4"	MHB	18,20	20A, 3P	-	-	TOGGLE		
	VARIABLE REFRIGERANT FLOW	CLASSROOM G150	208	1	-	1.3	.27	2#12, 1#12G, 3/4"	MHB	18,20	20A, 3P	-	-	TOGGLE		
	VARIABLE REFRIGERANT FLOW	CLASSROOM G150	208	1	-	1.3	.27	2#12, 1#12G, 3/4"	MHB	18,20	20A, 3P	-	-	TOGGLE		
	VARIABLE REFRIGERANT FLOW	CORRIDOR 2	208	1	-	0.2	0.1	2#12, 1#12G, 3/4"	MHB	18,20	20A, 3P	-	-	TOGGLE		
	VARIABLE REFRIGERANT FLOW	IT CLOSET 11	208	1	-	0.2	0.1	2#12, 1#12G, 3/4"	MHB	18,20	20A, 3P	-	-	TOGGLE		
	VARIABLE REFRIGERANT FLOW	OFFICE 9	208	1	-	0.2	0.1	2#12, 1#12G, 3/4"	MHB	18,20	20A, 3P	-	-	TOGGLE		

MECHANICAL / ELECTRICAL COORDINATION SCHEDULE									
NOTES: 1. EQUIPMENT FURNISHED BY THE ELECTRICAL CONTRACTOR (MARK 'E'), HEATING CONTRACTOR (MARK 'H'), VENTILATING CONTRACTOR (MARK 'V'). 2. ALL CONDUIT AND WIRING FOR TEMPERATURE CONTROL AND EQUIPMENT INTERLOCK SHALL BE BY BAS CONTRACTOR. OTHER CONTROLS AND CONTROL CONDUITS/WIRING BY TRADE FURNISHING RESPECTIVE EQUIPMENT. 3. E.C. SHALL COORD & REVIEW THE ELECTRICAL CHARACTERISTICS, AMPACITY & OTHER REQUIREMENTS OF COMPONENTS BEFORE INSTALLATION OF WORK. ALL OTHER CONTRACTORS SHALL ADVISE E.C. OF ANY MOTOR/DEVICE CHANGES. 4. ALL LOOSE STARTERS SHALL INCLUDE HOA SWITCH, PILOT LIGHT MOUNTED IN COVER, CONTROL TRANSFORMER, AND ONE N.O. AND ONE N.C. AUXILIARY CONTACTS. 5. SEE SPECIFICATIONS AND DRAWINGS FOR TYPES AND LOCATIONS OF DEVICES SCHEDULED BELOW.									
TAG	EQUIPMENT DESCRIPTION	UNIT MOUNTED DEVICES				LOOSE DEVICES			REMARKS
		STARTER	DISCONNECT	OVERCURRENT PROTECTION	SINGLE POINT CONNECTION	STARTER	DISCONNECT	OVERCURRENT PROTECTION	
	VARIABLE REFRIGERANT FLOW UNIT	-	-	-	YES	-	E	E	
	CONDENSING UNIT	-	-	-	YES	-	E	E	
	VRF REFRIGERANT BOX	-	-	-	YES	-	E	E	
	DEDICATED OUTSIDE AIR UNIT	-	-	-	YES	-	E	E	
NOTES: 1. VERIFY FINAL LOADS AND REQUIREMENTS WITH FINAL MECHANICAL DRAWINGS.									



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REF: 6503

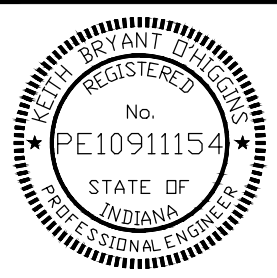
PROJECT NUMBER: 31-03

PROJECT MANAGER: TBS

DRAWN BY: OMS LLC

ISSUED FOR CONSTRUCTION: 06/15/21

NOTES AND SCHEDULES - ELECTRICAL



E3.00