ABBREVIATIONS NOTE: THIS IS A MASTER LIST. ALL APPREVIATIONS AND MATERIALS LISTED ARE NOT NECESSARILY PRESENT IN THIS PROJECT.

ACI	AMERICAN CONCRETE INSTITUTE	INS	INSULATION
AFF	ABOVE FINISH FLOOR	INT	INTERIOR
AISC	AMERICAN INSTITUTE OF STEEL	INV	INVERT
	CONSTRUCTION	KSI	KIPS PER S
AL		LAM	LAMINATED
		LAV	
ARCI	AKCHIECI/ AKCHIECIUKAL	LPS	POUNDS
ASIM	AMERICAN SUCIELY FOR LESTING		LONG LEG
11/6	AND WATLRIALD AMERICAN WEIDING GOCIETY		
AND B/	BOTTON OF	MAG	
レ/ お			MATERIA
PL BLDG	BUILDING	MAY	
BIKG	BL QCKING	MC	
BRG	BEARING	MIN	MINIMUM
6B	BATCH BASIN	MISC	MISCELLANE
ČĆ	CLEAR COVER	MQ	MASONRY (
CER	CERAMIC	NIC	NOT IN CON
61	CAST IRON	NO	NUMBER
CJ	CONTROL JOINT	00	ON CENTER
CL	CENTER LINE	0D	OUTSIDE DIA
CMU	CONCRETE MASONRY UNIT	OH	OVERHEAD
<i>CO</i>	CLEAN OUT	OPG	OPENING
COL	COLUMN	OWT	OILY WASTE
CONC	CONCRETE	PC	PLUMBING C
CONSI	CONDIRUCTION	PCST	PRECAST
CONI	CONTINUOUS	PERIM	PERIMETER
CONIR		PL	PLAIE
	DETAIL	PLAS	PLASTIC
		PLP9	PLUMPINO
DIM DIM		PLWD	PLYWOOD RAINDC REI
DIGP	DISPENIGOR	PSI PCI	POUNDS PEI
DW/	DRYWALL		
DWG	DRAWING	PTN	PARTITION
EC	ELECTRICAL CONTRACTOR	PVC.	
ĒJ	EXPANSION JOINT	OT OT	ALLARRY TH
EL	ELEVATION	RD	ROOF DRAIN
ENG	ENGINEER	RFC	RECESSED
EP	EPOXY PAINT	RECT	RECTANGLE
EPDM	ETHYLENE PROPYLENE DIENE	REINF	REINFORCED
	TERPOLYMER	REQD	REQUIRED
EXC	EXCAVATE/ EXCAVATION	RESIL	RESILIENT
EXP	EXPANSION	RET	RETAINING
EXISI	EXISTING	R0	ROUGH OPE
EXI		SCH	SCHEDULE
		SDI	STEEL DECK
		SECT	SECTION
	FIDE EVTINGUIGHED (ABINET	SIM	SIMILAR
FIN	FINISH	SPEC	SPECIFICATI
F	FI ///R	55	STAINLESS
FTG	FOOTING	SOK	STANDARD
GALV	GALVANIZED	SIV	STANDARD
60	GENERAL CONTRACTOR	STRIKT	STRUCTURAL
GYP	GYPSUM	SIRUCI	GIGPENDED
GWB	GYPSUM WALL BOARD	- JJ-J Т /	
H₿	HOSE BIBB		TELEDHANE
HDW	HARDWARE	TRA	
HM	HOLLOW METAL	TYP	
HORIZ	HORIZONTAL	UN/2	IN FSS NO
HRS	HOT RALLED STEEL	VCT	VINY COMF
HT		VEST	VESTIBUT
HW		WC	WATER CI C
ν	INSIVE VIAMETEK		

SYMBOLS :



INI	INTERIOR
INV	INVERT
KSI	KIPS PER SQUARE INCH
LAM	LAMINATED
LAV	LAVAT <i>O</i> RY
LBS	POUNDS
LLH	LONG LEG HORIZONTAL
	LONG LEG VERTICAL
MAN	
MAG	
MC	MECHANICAL CONTRACTOR
MIN	MINIMUM
MISC	MISCELLANEOUS
MØ	MASONRY OPENING
NIC	NOT IN CONTRACT'
NO	NUMBER
00	ON CENTER
0D	<i>O</i> UTSIDE DIAMETER
OH	OVERHEAD
OPG	OPENING
0WT	OILY WASTE TREATMENT
PG	PLIMBING CONTRACTOR
PLAT	PRECAST
PEPIN	
FLAS DLBC	
FLDO PLWD	
	RUNDO PER COUNDE EAT
P97	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PI E	PRESSURE TREATED
PIN	PARTITION
PVC	POLYVINYL CHLORIDE
QT	QUARRY TILE
RD	R <i>oo</i> f Drain
REC	RECESSED
RECT	RECTANGLE
REINF	REINFORCED
REQ'D	REQUIRED
RESIL	RESILIENT
RET	RETAINING
R0	RAUGH OPENING
SCH	SCHEDULE
SPI	STEEL DECK INSTITUTE
SECT	SECTION
SIM	SIMILAR
SPEC	SPECIFICATION
56	STAINI ESS STEEL
SS	STANDING SEAM ROOF
SUN	STANDARD
STG	
GTPLKT	
SIRUCI	SIRUCIURAL
909F	
186	I ONGUE AND GROOVE
IYP	IYHCAL
UNO	UNLESS NOTED OTHERWISE
VCT	VINYL COMPOSITION TILE
VEST	
	VESTIBULE
WC	VESTIBULE WATER CLOSET
WC WWF	VESTIBULE WATER <i>CLOS</i> ET WELDED WIRE FABRIC

MATERIAL DESIGNATIONS







BRICK



 \frown \smile \frown GYPSUM WALL BOARD DRYWALL

STEEL

W*OOD* - FINISHED



W*00*D - SHIM

*# # # CO*RK

BATT INSULATION

R*oo*f Insulation

RIGID INSULATION

CARPET

GLASS

ASPHALT

GRAUT

SUBBASE MATERIAL

PLYW <i>00</i> D	

INNOVATION CENTER

WINCHESTER, INDIANA

DECEMBER, 2023

RANDOLPH CENTRAL SCHOOL CORPORATION

> SUPERINTENDENT OF SCHOOLS ROLLAND ABRAHAM

RANDOLPH CENTRAL SCHOOL BOARD OF TRUSTEES

LISA HENDRICKSON BILL BUSH JAY HARRIS DALLAS OSTING DANIEL EDWARDS

PRESIDENT VICE PRESIDENT SECRETARY MEMBER MEMBER



S.W. 1/4Quarter

16 Section

EX. LEGEND

XXXX —	Existing	Contour	
— <i>SS</i> —	Existing	Sanitary	Sewer Line
S	Existing	Sanitary	Manhole
I <i>//_</i>	Fristing	Water Li	'nρ

- -W— Existing Water Line —G— Existing Gas Line
- —E— Existing Electric Line
- —^T— Existing Telecommunication Line
- Existing Storm Inlet

CONSTRUCTION LEGEND

- T/C PAV Proposed Elevations
- -<u>xxxx</u>- Proposed Contours
- Proposed Silt Fence
- —FM— Proposed Force Main Line
- —G— Proposed Gas Line
- —E— Proposed Electric Line
- —s— Proposed Storm Sewer Line
- —w— Proposed Water Line
- ---- Drainage Arrows
- Cleanout $oldsymbol{O}$ Storm Inlet

Project Specifications

The Standard Specifications for Construction and Materials of the State of Indiana, Department of Transportation (INDOT), in force 2023, the Indiana Department of Environmental Management (IDEM), and the City of Winchester, Planning and Zoning Regulations, including changes and supplemental specifications listed in the proposal shall govern this project.

20 North 14 East Winchester White River Randolph Indiana Civil Township County Township Range City of Winchester Waste Winchest Animal Contr er 🔾 Maul Technology Main Street Pub 😨 W Martin St OPhi **PROJECT** O LOCATION QD on O A & B Cafe 🕒 Loy Real Estate & Auction Winchester





<u>GENERAL NOTES:</u> Construction Includes, but is not limited to the following.

- A Contractor to complete all required applications, permits & pay for all associated fees for construction and utilities.
- B Contractor to complete all work in compliance with all required City/State/Federal Building codes.

Proposed construction is generally drawn in bold or darker lineweights while existing entities are generally lighter.

<u>DEMOLITION NOTES:</u> Construction Includes, but is not limited to the following.

- Contractor to remove all existing topsoil and vegetation where specified and cut/fill to subgrade as required to provide finish elevations as designed. Contractor to remove trees and stumps. Contractor to haul offsite at contractors expense. Contractor to coordinate with owner if tree is in question to be removed.
- 2 Contractor to install silt fence as shown for erosion control
- 3 Contractor is to protect existing underground utilities and is to verify location using 811 locating services. Contractor is responsible for any damages to underground utilities and must replace damages at their expense.
- (4) Contractor to saw cut and remove existing concrete/asphalt where specified and cut/fill to subgrade as required to provide finish elevations as designed. Patch existing asphalt as required.
- 5 Contractor to cap and remove existing 2" force main as required.
- 6 Contractor to cap and remove existing 18" storm sewer.
- Remove light pole and return to owner. refeed existing light pole as required.



Contractor to remove all existing topsoil and vegetation where specified and cut/fill to subgrade as required to provide finish elevations as designed.

Contractor to saw cut and remove existing concrete/asphalt where specified and cut/fill to subgrade as required to provide finish elevations as designed.



ASPHALT





ASPHALT

MALK CONC. EX.



GENERAL NOTES: Construction Includes, but is not limited to the following.

- Contractor to complete all required (A)applications, permits & pay for all associated fees for construction and utilities.
- (B)Contractor to complete all work in compliance with all required City/State/Federal Building codes.

Proposed construction is generally drawn in bold or darker lineweights while existing entities are generally lighter.

CONSTRUCTION NOTES: Construction Includes, but is not limited to the following.

- (1)Contractor to provide compacted subgrade as specified for building, concrete pads, and conc walks. Due to soil conditions, subgrade to be inspected by Geotechnical Engineer to determine if undercutting of the subgrade is required.
- 2 Contractor to construct conrete walks, pads with materials and thicknesses shown on detail sheet.
- (3) Contractor to provide slope away from walks and building, blending into surrounding grades, seed and mulch to drain.
- (4)linstall new storm sewer system as shown and connect all downspouts. Storm sewer system to have positive drainage.
- 5 Electric service will be extended by local electric company
- 6 Utility owner to extend gas to the building from existing gas line.
- O Contractor is to install new 6" sanitary lateral and connect into new manhole. Contractor to install new manhole over existing lateral as shown on southside of building. All manhole connections shall be cored and booted using a Kor-N-Seal boot or equal. Contractor to provide flow channel in bottom of manhole when taping manhole.
- (\mathcal{B}) Contractor to cap and re-route existing 2" force main around building as shown.
- (9) Contractor to abandon and cap off existing storm.
- D Contractor to provide and install Zurn Z874–12–HDP trench drain. Connect to underground strom sewer.
- (f) Contractor to provide and install ADS dual wall reducer 18"x8^{''} product code 1872AN or equal
- 2 Contractor to provide and install ADS Nyloplast inline drian basin with 8" standard grate assembly yard inlet.









GENERAL NOTES

ELEVATION DATUM INCORS GPS Geodetic Monuments NAD83/NAVD88

UTILITIES The contractor shall, at least two working days prior to starting work, notify the area Underground Utility Protection Service, and the owners of utilities having wires, poles, pipes, conduits, manholes or other structures that may be affected by this operation, including all structures which are affected and not shown on these plans, of his intent to start construction operations. After commencing construction, the Contractor shall report immediately to the owner or operator of the utility any break in its lines or any dent, gouge, groove, or other damage to the lines or their coating or cathodic protection. The Contractor must also alert the nearby occupants of any emergency he may create or discover in connection with excavation in and around the utilities.

UNDERGROUND UTILITIES The location of the underground utilities shown on these plans has been obtained by diligent field checks and searches of available records. Observations have been made from ground level and were not conducted by "confined space" entry" unless otherwise noted. It is believed that they are essentially correct, but Beals-Moore & Associates does not guarantee their accuracy or completeness. The Contractor shall be aware that, due to lack of adequate information, all existing utilities may not be reflected on these plans. It shall be the Contractor's responsibility to field verify and locate any and all existing utilities horizontally and vertically prior to construction. Any utility, including field tiles and drains, damaged during construction shall be repaired or replaced in kind at the Contractors expense.

MAINTENANCE OF TRAFFIC: All traffic maintenance to be cooridinated with the City of Winchester Engineer and/or Randolph County Highway Department

REPLACEMENT The Contractor shall replace at his own expense any item not specifically listed for removal that is damaged or destroyed by his operations.

EROSION CONTROL: Silt fence to be constructed around the perimeter of the site. Inlets to have erosion control measures placed around surface.

All graded areas shall have vegetation established as soon as practical and shall conform to the seeding and fertilizing specifications below.

<u>Seeding, Mulching, and Fertilizer</u>

The area to be seeded shall be made smooth and uniform and shall be in accordance with the finished grade and cross section shown on the plans or as otherwise designated. The seed bed, if not loose, shall be loosened to a minimum depth of 3 inches (76 mm) before fertilizer or seed is applied. In areas of excessive vehicular traffic, such as parking of construction equipment, the soil shall be loosened to a minimum depth of 6 inches (152 mm). Fertilizer with a mixture of 12-12-12 shall be spread uniformly over the area to be seeded. Fertilizer shall be spread at the rate of 800 pounds per acre (897 kilogram per hectare) unless otherwise specified. Seed may be drilled in or mixed with water, but shall not be covered more than 1/2 of an inch (12.5 mm). The mixture shall be spraved over the area to be seeded. An approved mechanical method which shall place the seed in direct contact with the soil may be used. In places inaccessible to mechanical equipment, or where the area to be seeded is small, a hand operated cyclone seeder or other approved equipment may be used. Leguminous seeds, unless otherwise specified, shall be inoculated. The culture shall be mixed with sufficient water to distribute it thoroughly. The seed shall be wetted thoroughly with the solution and allowed to dry sufficiently to be in condition for sowing. Inoculated seed shall be sown within 30 hours after the treatment. Where seeding is to be done by hydraulic methods, the inoculate may be added to the water in the spray tank.

The seed mixture shall be applied at specific locations. It shall be applied at the rate of 150 pounds per acre (168 kg/hectare). The mixture shall consist of 95 pounds (43.1 kg) of a 4-way blend of turf type tall fescues such as Tribute, Rebel II, Trailblazer, or approved equal; 20 pounds (9 kg) Jasper Red Fescue or approved equal; and 35 pounds (16 kg) certified fine bladed perennial ryegrass such as Regal, Fiesta, Blazer, or approved equal.

Mulching material shall be applied uniformly in a continuous blanket at the rate of 2 tons per acre (4.5 megagrams/hectare). Mulch shall be placed within 24 hours after seeding. Mulch shall be secured in a method approved by the engineer.

GENERAL CONCRETE NOTES

GENERAL 1. The consultant or engineer will not be responsible for means. methods. procedures. techniques. or sequences of construction that are not specified herein. The consultant or engineer will not be responsible for safety on the jobsite, or for failure by the contractor to perform work according to contract documents.

2. The contractor shall comply with all laws, ordinances, rules, orders and regulations relating to the performance of the work required by contract.

3. The contractor shall be required to maintain a set of construction record drawings on site during the project.

4. The contractor shall plan his operations so that disruption of existing facilities is at a minimum. The contractor shall be required to provide a schedule of construction, prior to the start of actual construction for owner approval.

5. The contractor shall restrict construction activities to the limits of construction on the plans.

6. The contractor shall carefully preserve benchmarks, property corners, reference points, stakes and other survey reference monuments or markers. In cases of willful or careless destruction, the contractor shall be responsible for restoration of markers. Resetting of markers shall be performed by an Indiana Professional Surveyor at the approval of the owner.

The contractor shall restore all disturbed areas, to an equal or better condition than existed prior to contstruction. Drainage ditches or water courses which are disturbed by construction shall be restored to the grades and cross-sections which existed prior to construction.

8. The contractor will be responsible for all offsite disposal activities associated with this project. It is the contractors responsibility to abide by all laws and regulations associated with hauling and disposing of excess materials from the project site.

9. The contractor and subcontractors shall be solely responsible for complying with all federal, state and local safety requirements, excerising precautions at times for the protection of persons (including employees) and property. It is also the sole responsibility of the contractor and subcontractors to initiate, maintain and supervise all safety requirements, precautions and programs in connection with the work.

GENERAL MANHOLE NOTES

- 1. For all manholes 6'-0" or less in depth provide riser with flat top in lieu of eccentric cone in accordance with astm c-478
- 2. Manhole joints to be tongue and groove joint with 1/2" extrudable gasket (kent seal or equal) between all sections including under the frame.
- 3. Precast manholes and reinforcing steel to be constructed per astm spec c-478
- 4. Adjustment risers & shims. a minimum of 12" required on unimproved streets and a minimum of 4" required on improved streets
- 6. Plastic coated reinforced manhole steps at 16"o.c.
- 8. Fill with non-shrink type grout for concrete pipe.
- 5. Outgoing invert to be a minimum of 0.1 less than incoming invert
- 6. 3000 p.s.i. concrete grouted to form channel and bench. minimum of 1/2" per foot slope
- 7. Manhole base shall be placed on a 4" minimum compacted gravel or stone.



Structure Name Structu		
Structure Name Structu		
Structure Name Structu		
Structure Name Structu		
	Structure Name	Structu
	Storm Inlet 1	Inle

Storm Inlet 2

Storm Inlet 3

*8<u>"</u>









O DEMOLITION NOTES

- . REMOVE EXISTING ALUMINUM STOREFRONT IN ITS ENTIRETY. 2. REMOVE EXISTING MAGONRY WALL BELOW WINDOWS. 3. SAW CUT EXISTING TERRAZZO FLOOR AND BASE APPROXIMATELY 5" IN FROM WALL AT JOINT LINE. PATCH AS REQUIRED TO ALLOW FOR A SMOOTH TRANSITION FOR NEW FLOOR AND WALL
- BASE FINISH. 4. EXISTING RECESSED FLOOR MATT TO REMAIN ... PROTECT AS REQUIRED. 5. EXISTING STEEL COLUMN TO REMAIN. PROTECT DURING

-(3`

DEMOLITION.

GENERAL DEMOLITION NOTES

- A. COORDINATE DEMOLITION WITH ALL NEW CONSTRUCTION AND MEP DESIGN DRAWINGS AND DETAILS.
- B. WHERE EXISTING MASONRY WALLS TO BE REMOVED EXTEND BELOW THE FLOOR SLAB, SUCH WALLS SHALL BE REMOVED TO ONE COURSE BELOW THE TOP OF THE EXISTING FLOOR SLAB. PATCH AND REPAIR SLAB TO PROVIDE A SMOOTH AND EVEN TRANSITION BETWEEN EXISTING AND NEW WORK.
- C. EXISTING FLOORS REQUIRING DEMOLITION TO RECEIVE NEW FINISH SHALL BE PATCHED BACK AND LEVELED AS REQUIRED TO PROVIDE A SMOOTH AND LEVEL SURFACE FOR NEW FLOORING. COORDINATE AND MAINTAIN A SMOOTH AND LEVEL SURFACE BETWEEN ADJACENT, DISSIMILAR MATERIALS RESULTING FROM DEMOLITION. WHERE THE JUNCTION OF DISSIMILAR MATERIALS IS UNEVEN, REMOVE THE MATERIALS COMPLETELY TO THE TOP OF EXISTING FLOOR SLAB AND PATCH BACK LEVEL TO RECEIVE NEW FINISH.
- D. PROTECT EXISTING CONSTRUCTION AT ALL TIMES. PROVIDE TEMPORARY BARRIERS FOR DUST AND WEATHER AS REQUIRED.



R.R. ELEVATI*O*N NO SCALE:

RESTR*oo*m Plan SCALE: |/4'' = |'-O''

O RESTROOM KEYNOTES

- 1. 36" GRAB BAR BOBRICK OR EQUAL
- 2. 42" HORZ. GRAB BAR & 18" VERT. GRAB BAR. BOBRICK OR EQUAL 3. PAPER TOWEL DISPENSER SUPPLIED BY
- OWNER INSTALLED BY G.C.. 4. MIRROR - 18"x30" BOBRICK OR EQUAL
- 5. SOAP DISPENSER SUPPLIED BY OWNER

INSTALLED BY G.C.

6. TOILET TISSUE DISPENSER SUPPLIED BY OWNER INSTALLED BY G.C.

HEIGHTS SHALL COMPLY WITH THE REQUIREMENTS OF THE AMERICANS WITH DISÀBILITIES ACT.

- STANDARDS.
- SEE DRAWING A6.1 FOR WINDOW ELEVATIONS AND DETAILS.

RESTROOM GENERAL NOTES ALL FIXTURES AND ACCESSORY MOUNTING

TYP. WALL FLASHING A.3/NO SCALE:

/- MASONRY WALL

(5) B A3.2 SIM. BIM. A A³.

O GENERAL NOTES I. FLASHING AND TRIM TO MATCH EXISTING PROVIDE SAMPLE FOR APPROVAL.

\bigcirc	R0
.	STAN SPEC
2.	RUBB TAPE
3.	PROV
4.	R <i>00</i> F
5.	RUBB TAPE

R*oo*f Plan SCALE: |/8'' = |'-0''

- UNDERGROUND STORM WITH OFFSET ADAPTER.
- BRONZE SIGNATURE 300

10° 0°			12'	10"			
	1		2-	D			-+
				I			1
		·					
			F	9 AST	CIAM)
$\mathbf{x} \mid \mathcal{L} \setminus \mathbf{y}$			י נ	XASEW XRAWI	10RK F NGS Fi	PROVIDE 2R OW	E SHOP NFR
			ł	APPRO	VAL.		

ROOM FINISH SCHEDULE:

ROOM #	ROOMNAME	FLOOR		CEILING			NORTH V	VALL			EAST WA	ALL			SOUTH W	ALL			WEST WA	LL			Note:
		MAT'L	FIN	MAT'L	FIN	HT.	MAT'L	FIN.	WNST	BASE													
101	ENTRY	CONC.	EPOXY FLAKE	LAY-IN		9'-0''	CMU	PAINT		VINYL	CMU	PAINT		VINYL	СМИ	PAINT		VINYL	СМИ	PAINT		VINYL	
102	WOMEN	CONC.	EPOXY FLAKE	LAY-IN		8'-0''	CMU	PAINT		VINYL													
103	MEN	CONC.	EPOXY FLAKE	LAY-IN		8'-0''	CMU	PAINT		VINYL													
104	CLASSROOM	CONC.	EPOXY FLAKE	OPEN	PAINT	OPEN	CMU	PAINT		VINYL													
105	CLASSROOM	CONC.	EPOXY FLAKE	OPEN	PAINT	OPEN	CMU	PAINT		VINYL													
106	BREAK OUT AREA	CONC.	EPOXY FLAKE	LAY-IN		9'-0"	CMU	GLASS			CMU	PAINT		VINYL	СМИ	PAINT		VINYL	CMU	PAINT		VINYL	
107	BREAK OUT AREA	CONC.	EPOXY FLAKE	LAY-IN		9'-0"	CMU	GLASS			CMU	PAINT		VINYL	СМИ	PAINT		VINYL	CMU	PAINT		VINYL	
E101	CORRIDOR	EXIST	EXISTING / EPOXY	EXISTING			EXIST				EXIST				EXIST				СМИ	PAINT		VINYL	

D <i>00</i> R	SCHEDUL	_E :
		- L ·

						WALLL	OCATION			FRAME				Notes:
DOOR #		SIZE	тнк	TYPE	MAT'L	EXT	INT	ТНК	TYPE	MAT'L	TYPE	LINTEL	FIRE LABEL	
101	A	(2) 3'-0"x7'-0"	13/4	В	ALUM	X		PLAN	MAS	ALUM	3	YES	NO	
101	В	(2) 3'-0"x7'-2"	1 3/4	А	WOOD		x	PLAN	MAS	METAL	2	YES	1 1/2 HR	
102	А	3'-0"x7'-2"	13/4	А	WOOD		Х	PLAN	MAS	METAL	2	YES	NO	
103	А	3'-0"x7'-2"	13/4	А	WOOD		Х	PLAN	MAS	METAL	2	YES	NO	
104	А	(2) 3'-0"x7'-0"	13/4	В	ALUM	X		PLAN	MAS	ALUM	3	YES	NO	
104	В	(2) 3'-0"x7'-0"	13/4	В	ALUM		Х	PLAN	MAS	ALUM	3	YES	NO	
105	Α	(2) 3'-0"x7'-0"	13/4	В	ALUM	X		PLAN	MAS	ALUM	3	YES	NO	
105	В	3'-0"x7'-2"	13/4	А	WOOD		Х	PLAN	MAS	METAL	2	YES	NO	
106	A	3'-0"x7'-0"	1 3/4	В	ALUM		X	PLAN	MAS	METAL	1	YES	NO	
107	A	3'-0"x7'-0"	13/4	В	ALUM		X	PLAN	MAS	METAL	1	YES	NO	

FRAME TYPES

NO SCALE:

<u>GLASS NOTES</u>

A. ALL EXTERIOR GLASS TO BE CLEAR TINT MATCH MIDDLE SCHOOL. B. ALL EXTERIOR GLASS TO BE LAMINATED SAFETY GLASS.

C. ALL INTERIOR GLASS TO BE CLEAR ALL GLASS TO BE IN COMPLIANCE WITH ALL APPLICABLE CODES.

|| drawing A6.| FIRE EXTINGUISHER

A. OWNER TO PROVIDE (3) SEMI-RECESSED OR SURFACE MOUNT FIRE EXTINGUISHER CABINETS, G.C. TO INSTALL CABINET AT OWNER / FIRE DEPARTMENT SPECIFIED LOCATIONS.

GENERAL NOTES

A. 4" VINYL WALL BASE ALL R*OO*MS.

O EPOXY FLOOR NOTES

FINIS	H SCHEDULE- PTECH											
DM #	NAME	WALL FINISHES					BASE	CLG	CASEWORK	THE		NOTES
KIVI. #	NAIVIE	N.	S.	E.	W.		DAJE	CLG.	CASEWORK	TILE	COUNTERTOPS	NOTES
1	CORRIDOR E101	N/A	N/A	N/A	P2	N/A	N/A	N/A	N/A	N/A	N/A	Corridor to remain as is aside from new Entrance wall- to be painted P2; Base to match existing material in existing corridor for seamless transition
2	ENTRY 101	P1	P1	P1	P2	F1/F2	B1	N/A	N/A	N/A	N/A	
3	WOMEN 102	P1	P1	P1	P3	F1	B1	N/A	N/A	N/A	N/A	
4	MEN 103	P1	P1	P3	P1	F1	B1	N/A	N/A	N/A	N/A	
5	CLASSROOM 104	P1/P3	P3	Ρ1	P1	F1/F2	B1	Ρ4	LAM-1/LAM-2	N/A	C01	Laminate Type to be specified by Maze Design INC. Laminate Finish to be Matte. Countertop Finish to be Glaze. Refer to North Interior Elevation on specific finish placement in Design Documents. All ceiling to be painted P4 including; Exposed Structural Steel, Roof Deck, & Exposed Duct Work
6	CLASSROOM 105	P2	P1/P2	P1	P1	F1/F2	B1	P4	N/A	N/A	N/A	Refer to South Interior Elevation on specific finish placement in Design Documents; All ceiling to be painted P4 including; Exposed Structural Steel, Roof Deck, & Exposed Duct Work
7	BREAK OUT AREA 106 (Orange Signage)	N/A	P1	P1	P1	F1	B1	N/A	N/A	N/A	N/A	Neon Signage to be installed on south wall; signage to be designated by PTECH team; signage finish to match as close to P2
8	BREAK OUT AREA 107 (Blue Signage)	N/A	P1	P1	P1	F1	B1	N/A	N/A	N/A	N/A	Neon Signage to be installed on south wall; signage to be designated by PTECH team; signage finish to match as close to P3

FINISHES KEY PAINT: P1 SHERWIN WILLIAMS 7014 EIDER WHITE P2 SHERWIN WILLIAMS 6892 CARNIVAL P3 SHERWIN WILLIAMS 7602 INDIGO BATIK P4 SHERWIN WILLIAMS 7005 PURE WHITE FLOORING: F1 DEX-0-TEX; 1/4" - PARK CITY F2 DEX-0-TEX; 1/4" - WHITE FISH BASE: B1 ARMSTRONG FLOORING; COMMERCIAL COVE WALL BASE- SMOKEY GRAY: R41SG COUNTERTOPS: C01 WILSON ART- SALENTINA NERO - 1864 CABINET LAMINATE FINISH: LAM1 WILSON ART- ATLANTIS- D25 LAM2 WILSON ART- LOUISIANA PECAN - Y0818 DOOR STAIN FINISH: S1 CHAPEL DOOR COMPANY- RED OAK- CLEAR DOOR FRAME FINISH: DP1 SHERWIN WILLIAMS 7069 IRON ORE

DOOR DETAILS						
Door #	MAIN FINISH	FRAME FINISH	NOTES			
103 A	S1	DP-1	and the second sec			
102 A	S1	DP-1				
105 B	S1	DP-1	the second s			

FINISHES

FINISH SCHEDULE- PTECH

RM #	NAME		WALL F	INISHES		FLOOR	BASE	CLG	CASEWORK	THE		NOTES
1.1.1.1	NAME	Ν.	S .	Ε.	W.	TEOOK	DAJE	CLU.	CASEWONK	TILL	COONTERIORS	Nones
1	CORRIDOR E101	N/A	N/A	N/A	P2	N/A	N/A	N/A	N/A	N/A	N/A	Corridor to remain as is aside from new Entrance wall- to be painted P2; Base to match existing material in existing corridor for seamless transition
2	ENTRY 101	P1	P1	P1	P2	F1/F2	B1	N/A	N/A	N/A	N/A	
3	WOMEN 102	P1	P1	P1	P3	F1	B1	N/A	N/A	N/A	N/A	
4	MEN 103	P1	P1	P3	P1	F1	B1	N/A	N/A	N/A	N/A	
5	CLASSROOM 104	P1/P3	Р3	P1	P1	F1/F2	B1	Ρ4	LAM-1/LAM-2	N/A	C01	Laminate Type to be specified by Maze Design INC. Laminate Finish to be Matte. Countertop Finish to be Glaze. Refer to North Interior Elevation on specific finish placement in Design Documents. All ceiling to be painted P4 including; Exposed Structural Steel, Roof Deck, & Exposed Duct Work
6	CLASSROOM 105	P2	P1/P2	P1	P1	F1/F2	B1	P4	N/A	N/A	N/A	Refer to South Interior Elevation on specific finish placement in Design Documents; All ceiling to be painted P4 including; Exposed Structural Steel, Roof Deck, & Exposed Duct Work
7	BREAK OUT AREA 106 (Orange Signage)	N/A	P1	P1	P1	F1	B1	N/A	N/A	N/A	N/A	Neon Signage to be installed on south wall; signage to be designated by PTECH team; signage finish to match as close to P2
8	BREAK OUT AREA 107 (Blue Signage)	N/A	P1	P1	P1	F1	B1	N/A	N/A	N/A	N/A	Neon Signage to be installed on south wall; signage to be designated by PTECH team; signage finish to match as close to P3

FINISHES KEY							
PAINT:							
P1	HERWIN WILLIAMS 7014 EIDER WHITE						
P2	HERWIN WILLIAMS 6892 CARNIVAL						
P3	SHERWIN WILLIAMS 7602 INDIGO BATIK						
P4 SHERWIN WILLIAMS 7005 PURE WHITE							
FLOORING:							
F1	DEX-O-TEX; 1/4" - PARK CITY						
F2	DEX-O-TEX; 1/4" - WHITE FISH						
BASE:							
B1	ARMSTRONG FLOORING; COMMERCIAL COVE WALL BASE- SMOKEY GRAY: R41SG						
COUNTERTO	PS;						
C01	WILSON ART- SALENTINA NERO - 1864						
CABINET LAMINATE FINISH:							
LAM1	WILSON ART- ATLANTIS- D25						
LAM2	WILSON ART- LOUISIANA PECAN - Y0818						
DOOR STAIN	FINISH:						
S1	CHAPEL DOOR COMPANY- RED OAK- CLEAR						
DOOR FRAMI	E FINISH:						
DP1	SHERWIN WILLIAMS 7069 IRON ORE						

102 A S1 DP-1	
105 B S1 DP-1	the second

FINISHES PLAN

FINIS	H SCHEDULE- PTECH											
DM #	BIADAE	WALL FINISHES				FLOOP	DACE	CIC	CASEWORK	THE	COUNTERTOPS	NOTE
KIVI. #	NAIVIE	Ν.	S.	Ε.	W.	FLOOK	DAJE	CLG.	CASEWORK	TILE	COUNTERTOPS	NOTES
1	CORRIDOR E101	N/A	N/A	N/A	P2	N/A	N/A	N/A	N/A	N/A	N/A	Corridor to remain as is aside from new Entrance wall- to be painted P2; Base to match existing material in existing corridor for seamless transition
2	ENTRY 101	P1	P1	P1	P2	F1/F2	B1	N/A	N/A	N/A	N/A	
3	WOMEN 102	P1	P1	P1	P3	F1	B1	N/A	N/A	N/A	N/A	
4	MEN 103	P1	P1	P3	P1	F1	B1	N/A	N/A	N/A	N/A	
5	CLASSROOM 104	P1/P3	Ρ3	P1	P1	F1/F2	B1	Ρ4	LAM-1/LAM-2	N/A	CO1	Laminate Type to be specified by Maze Design INC. Laminate Finish to be Matte. Countertop Finish to be Glaze. Refer to North Interior Elevation on specific finish placement in Design Documents. All ceiling to be painted P4 including; Exposed Structural Steel, Roof Deck, & Exposed Duct Work
6	CLASSROOM 105	P2	P1/P2	P1	P1	F1/F2	B1	P4	N/A	N/A	N/A	Refer to South Interior Elevation on specific finish placement in Design Documents; All ceiling to be painted P4 including; Exposed Structural Steel, Roof Deck, & Exposed Duct Work
7	BREAK OUT AREA 106 (Orange Signage)	N/A	P1	P1	P1	F1	B1	N/A	N/A	N/A	N/A	Neon Signage to be installed on south wall; signage to be designated by PTECH team; signage finish to match as close to P2
8	BREAK OUT AREA 107 (Blue Signage)	N/A	P1	P1	P1	F1	B1	N/A	N/A	N/A	N/A	Neon Signage to be installed on south wall; signage to be designated by PTECH team; signage finish to match as close to P3

FINISHES KEY						
PAINT:						
P1	HERWIN WILLIAMS 7014 EIDER WHITE					
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F1	DEX-O-TEX; 1/4" - PARK CITY					
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BASE:						
D1	ARMSTRONG FLOORING; COMMERCIAL COVE WALL					
ы	BASE- SMOKEY GRAY: R41SG					
COUNTERTOP	PS:					
C01	WILSON ART- SALENTINA NERO - 1864					
CABINET LAMINATE FINISH:						
LAM1	WILSON ART- ATLANTIS- D25					
LAM2	WILSON ART- LOUISIANA PECAN - Y0818					
DOOR STAIN	FINISH:					
S1	CHAPEL DOOR COMPANY- RED OAK- CLEAR					
DOOR FRAME	FINISH:					
DP1	SHERWIN WILLIAMS 7069 IRON ORE					

DOOR DETAILS						
Door #	MAIN FINISH	FRAME FINISH	NOTES			
103 A	S1	DP-1	And and a second se			
102 A	51	DP-1	and the second			
105 B	51	DP-1	and a second			

FINISHES ELEVATIONS

NORTH INTERIOR ELEVATION

GENERAL NOTES

- 1. ALL DIMENSIONS ON THE STRUCTURAL PRINTS MUST BE VERIFIED BY THE CONTRACTOR BEFORE PROCEEDING WITH ANY FABRICATION OR ERECTION. VERIFY ALL ELEVATIONS, AND JOB SITE CONDITIONS BEFORE PROCEEDING WITH NEW CONSTRUCTION. NOTIFY THE PROJECT ENGINEER OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK.
- 2. GENERAL CONTRACTOR SHALL COORDINATE WORK WITH SUBCONTRACTORS IN THE WORK AREA.
- 3. CONTRACTOR SHALL TAKE PROTECTIVE MEASURE TO PREVENT DAMAGE TO ANY EXISTING STRUCTURES.
- 4. CONTRACTOR IS RESPONSIBLE FOR KEEPING THE CONSTRUCTIONS SITE CLEAN. ENGINEER WILL DETERMINE THE DEFINITION OF CLEAN.
- 5. ALL MATERIAL ON SITE MUST BE PROTECTED AND STORED PER MATERIAL MANUFACTURER'S STANDARDS.
- 6. CONTRACTOR SHALL PROVIDE CONSTRUCTION FENCE AROUND THE WORK AREA TO KEEP NON-CONSTRUCTION PERSONNEL OUT OF THE WORK AREA.
- 7. CONTRACTOR SHALL CONFIRM ACTUAL UNDERGROUND UTILITIES. CONTRACTOR SHALL REROUTE EXISTING UNDERGROUND UTILITIES WHICH INTERFERE WITH THE NEW CONSTRUCTION.
- 8. CONTRACTOR TO PROVIDE AS BUILT DRAWINGS SHOWING ANY DEVIATION FROM THE DESIGN DRAWINGS AND ANY RE-ROUTED UTILITY LINES NEW LOCATIONS.
- 9. WHERE A DISCREPANCY MAY OCCUR BETWEEN THE DRAWINGS AND A GENERAL NOTE OR TYPICAL DETAIL THE DRAWINGS SHALL PREVAIL.
- 10. CONTRACTOR SHALL SHORE ANY EXISTING FOUNDATIONS AS REQUIRED FOR NEW CONSTRUCTION. ALL SHORING MUST REMAIN IN PLACE UNTIL NEW CONSTRUCTION IS COMPLETE AND THE EXISTING STRUCTURE IS TIED INTO THE NEW STRUCTURE.

CONCRETE NOTES

- 1. ALL CONCRETE MATERIALS, AND THE MIXING, HANDLING, PLACING, AND CURING OF THE CONCRETE SHALL BE IN ACCORDANCE WITH THE CURRENT BUILDING CODE REQUIREMENTS AND CURRENT ACI 301, 305, 306, AND 318
- 2. ALL CONCRETE SHALL BE NORMAL WEIGHT (150 LBS./CU.FT.) CONCRETE UNLESS NOTED OTHERWISE (U.N.O.).
- 3. SUBMIT A MIX DESIGN FOR THE CONCRETE SPECIFIED
- 4. CONCRETE MATERIALS (U.N.O.):

(2) WATER

- (1) PORTLAND CEMENT TYPE I OR TYPE III, ASTM C150 CLEAN POTABLE CRUSHED STONE, INDOT SIZE #8,ASTM C33
- (3) COARSE AGGREGATE (4) FINE AGGREGATE SAND, INDOT SIZE #23, ASTM C33 (5) AIR ENTRAINING ADMIXTURE ASTM C260 (6) AIR CONTENT 6% +/- 1 PERCENT
- (7) HIGH RANGE WATER REDUCING ADMIXTURE TYPE F, ASTM C494
- 5. CONCRETE MIX (U.N.0):
- (1) COMPRESSIVE STRENGTH AT 28 DAYS 4,000 PSI (2) MINIMUM CEMENT CONTENT OF 564 LB. /CU. YD. (3) MAXIMUM WATER TO CEMENT RATIO OF 0.40 (4) HIGH RANGE WATER REDUCER REQUIRED (5) MAXIMUM SLUMP 6" AFTER HRWR ADDMIXTURE (6) AIR CONTENT 6% +/- 1 PERCENT
- 6. FLY ASH MEETING ASTM C618 TYPE 'C' WITH MAXIMUM LOSS ON IGNITION OF 1.5 PERCENT AND THE MAXIMUM AMOUNT RETAINED WHEN WET-SIEVED ON NO. 325 SIEVE OF 30 PERCENT. FLY ASH MAY BE USED TO SUBSTITUTE FOR CEMENT WITH A MAXIMUM OF 20 PERCENT BY WEIGHT.
- . CONCRETE SHALL BE DESIGNED WITH A 2" SLUMP AND A HIGH RANGE WATER REDUCER OR SUPERPLASTICIZER ADDED ON SITE TO ACHIEVE A MAXIMUM SLUMP OF 6" FOR PLACEMENT.
- 8. ABSOLUTELY NO WATER SHALL BE ADDED TO THE CONCRETE AT THE SITE
- 9. CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER WHEN REINFORCEMENT AND EMBED PLACEMENT FOR A POUR IS NEARING COMPLETION SO THAT THE INSTALLED ITEMS MAY BE REVIEWED, ALLOW SUFFICIENT TIME FOR THE ENGINEER TO SCHEDULE FIELD TIME AND SETTER TO MAKE ADJUSTMENTS OR CORRECTIONS PRIOR TO STARTING CONCRETING OPERATIONS.
- 10. CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER PRIOR TO ALL CONCRETE POURS.
- 11. CONCRETE SHALL NOT FREE FALL FROM CONCRETE PUMP TRUNK OR CONCRETE SHOOT IN EXCESS OF THREE FEET (3').
- 12. CONTRACTOR SHALL MECHANICALLY VIBRATE ALL CONCRETE. CONTRACTOR SHALL NOT OVER VIBRATE CONCRETE AND CAUSE CONSOLIDATION OF THE COARSE AGGREGATE
- 13. CONCRETE SHALL BE CURED WITH A CURING AND SEALING COMPOUND APPROVED BY PROJECT ENGINEER.
- 14. CONCRETE SLABS ON GRADE SHALL RECEIVE A POWER TROWELED SMOOTH
- 15. CONCRETE SLABS ON GRADE SHALL BE CUT WITH IN A 12 HOUR PERIOD AFTER BEING PLACED. SAW KERFS SHALL BE ONE QUARTER THE DEPTH OF THE SLAB DEPTH AND ENCLOSE NO MORE THAN 400 SQUARE FEET AND HAVE A WIDTH TO LENGTH RATIO NOT EXCEEDING 2: 1. STRESSCAP CONTROL JOINT FORMS (BY DAYTON SUPERIOR) MAY BE INSERTED INTO THE WET CONCRETE IN LIEU OF CUTTING SAW KERFS. (UNLESS NOTED OTHERWISE)
- 16. PROVIDE ADEQUATE TESTING AND REPORTS FOR ALL CONCRETE FROM AN APPROVED TESTING LABORATORY.
- 17. ONLY NON-CHLORIDE ACCELERATOR MAY BE USED IN THE CONCRETE.
- 18.ALL CONCRETE EXPOSED TO WEATHER SHALL BE AIR ENTRAINED.
- 19.ALL SLABS ON GRADE SHALL BE REINFORCED WITH REINFORCING STEEL AS SHOWN ON PLAN.

REINFORCING STEEL NOTES

- 1. ALL REINFORCING STEEL SHALL BE ASTM A615 GRADE 60
- 2. ALL WELDED WIRE FABRIC SHALL BE EITHER ASTM A185 WITH A MINIMUM YIELD STRENGTH OF 65 KSI OR ASTM A497 WITH A MINIMUM YIELD STRENGTH OF 70 KSI.
- 3. ALL CONCRETE REINFORCEMENT MATERIALS SHALL BE NEW, FREE FROM RUST, FORM OIL, OR ANY SUBSTANCE THAT WOULD PREVENT BONDING OF THE CONCRETE TO THE STEEL.
- 4. ALL REINFORCING STEEL BENDS, HOOKS, LAP SPLICES, AND MINIMUM CONCRETE COVER SHALL CONFORM TO THE CURRENT EDITION OF ACI "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" (ACI 318) UNLESS NOTED OTHERWISE (U.N.O.).
- 5. SLAB BOLSTERS, HIGH CHAIRS, BEAM BOLSTERS, AND ALL OTHER ACCESSORIES IN CONTACT WITH THE FORMS FOR EXPOSED CONCRETE, BOTH INTERIOR AND EXTERIOR, SHALL BE PLASTIC TIPPED. SUCH ACCESSORIES SHALL HAVE TURNED UP LEGS.
- 6. ALL DETAILS OF REINFORCING STEEL FABRICATION AND PLACEMENT SHALL CONFORM TO ACI "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT" (ACI 315) AND "MANUAL OF ENGINEERING AND PLACING DRAWINGS FOR REINFORCED CONCRETE STRUCTURES" (ACI 315R) (U.N.O.).
- 7. ALL REINFORCING STEEL SHALL BE SUPPORTED AND SECURED AGAINST DISPLACEMENT IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE'S "MANUAL OF STANDARD PRACTICE". ALL EMBEDDED STEEL, BEAMS PLATES, ETC. SHALL BE ANCHORED IN SUCH A MANNER TO PREVENT DISPLACEMENT DURING THE PLACEMENT OF THE CONCRETE.
- 8. WELDING INCLUDING TACK WELDING OF THE REINFORCING STEEL IS NOT PERMITTED UNLESS SPECIFICALLY INDICATED ON THE DRAWINGS OR APPROVAL IS OBTAINED FROM THE ENGINEER.
- 9. SHOP DRAWINGS FOR REINFORCING STEEL SHALL INCLUDE 1/4" SCALE ELEVATIONS OF ALL CONCRETE WALLS AND BEAMS AND ALL SECTIONS REQUIRED TO MAKE CLEAR THE LOCATION OF THE REINFORCING STEEL. SHOW SLAB BAR SUPPORTS ON SHOP DRAWINGS. USE ONLY #5 BARS WITH INDIVIDUAL HIGH CHAIRS FOR THE SUPPORT OFF THE TOP SLAB BARS. ANCHOR ALL TOP BARS BY STANDARD EMBEDMENT OR 90 DEGREE HOOK UNLESS OTHERWISE DETAILED. OVERHANGING TAILS SHALL BE SUPPORTED POSITIVELY.
- 10.PROVIDE FOOTING DOWELS FOR ALL VERTICAL WALL REINFORCEMENT. DOWELS SHALL BE SAME SIZE AND SPACING AS THE VERTICAL WALL REINFORCEMENT, UNLESS NOTED OTHERWISE, WITH LAP SPLICES INDICATED.
- 11. POSITION DOWELS FOR VERTICAL WALL REINFORCEMENT IN COLUMN FOOTINGS AND WALL FOOTING STEPS WITH 6" MAXIMUM BOTTOM COVER.
- 12. PROVIDE CLASS "B" TENSION LAP SPLICES FOR ALL REINFORCEMENT UNLESS OTHERWISE INDICATED.

BAR SIZE	LAP LENGTH
#3	19"
#4	25"
#5	31"
#6	37"
#7	54"
#8	62"
#9	70"
#10	79"

1. ALL LAPS ARE FOR 4000 PSI CONCRETE.

- 2. PROVIDE SCHEDULED LAP LENGTHS UNLESS NOTED
- OTHERWISE ON PLANS.
- 3. INCREASE LAPS BY 30% FOR HORIZONTAL LAP SPLICES WITH MORE THAN 1'-0" OF FRESH CONCRETE PLACED BELOW THE LAPPED BARS
- 13. SPREAD REINFORCING STEEL AROUND OPENINGS AND SLEEVES IN SLABS AND WALLS WHERE POSSIBLE AND WHERE BAR SPACING WILL NOT EXCEED 1.5 TIMES THE NORMAL SPACING. DISCONTINUE BARS AT OPENINGS WHERE NECESSARY AND PROVIDE AN AREA OF REINFORCEMENT EQUAL TO THE INTERRUPTED REINFORCEMENT, IN FULL LENGTH BARS, DISTRIBUTING ONE HALF TO EACH SIDE OF THE OPENING. WHERE TEMPERATURE REINFORCEMENT IS INTERRUPTED, ADD (2) #5 X OPENING DIMENSION + 4'-0" IN THE BOTTOM ON EACH SIDE OF THE OPENING. PROVIDE (2) #5 X 4'-0" DIAGONAL BARS IN BOTH FACES AT EACH CORNER OF OPENINGS LARGER THAN 12" IN ANY DIRECTION.
- 14. CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER WHEN REINFORCEMENT AND EMBED PLACEMENT FOR A POUR IS NEARING COMPLETION SO THAT THE REINFORCING STEEL AND THE INSTALLED ITEMS MAY BE REVIEWED. ALLOW SUFFICIENT TIME FOR THE ENGINEER TO SCHEDULE FIELD TIME AND SETTER TO MAKE ADJUSTMENTS OR CORRECTIONS PRIOR TO STARTING CONCRETING OPERATIONS.
- 15 REINFORCING STEEL EXTENDING BETWEEN SEPARATE CONCRETE POURS SHALL BE CONTINUOUS, DRILLING AND USE OF EPOXY TO DOWEL THESE (CONTINUOUS) BARS IS **NOT** PERMITTED.

FOUNDATION NOTES

- 1. PREPARE ALL AREAS OF THE SITE SUPPORTING STRUCTURE BY REMOVING ALL TOP SOIL. EXISTING FILL, ORGANIC MATERIAL, AND OR FROZEN, WET, SOFT, LOOSE, OR OTHERWISE UNSUITABLE MATERIALS.
- 2. PROOFROLL THE EXPOSED SUBGRADE, WITH A MEDIUM WEIGHT ROLLER, TO DETERMINE IF ANY POCKETS OF SOFT, UNSUITABLE MATERIAL EXIST BENEATH THE EXPOSED SUBGRADE. REMOVE ANY UNSUITABLE MATERIAL ENCOUNTERED AND REPLACE WITH PROPERLY COMPACTED GRANULAR FILL MATERIAL.
- 3. PLACE ALL GRANULAR FILL MATERIAL IN LAYERS (LIFTS) NOT EXCEEDING 6 INCHES IN LOOSE THICKNESS. MECHANICALLY COMPACT EACH LAYER TO AT LEAST THE REQUIRED MINIMUM DRY DENSITY SPECIFIED IN THE SOILS REPORT.
- 4. GRANULAR FILL SHALL BE CRUSHED #53 LIMESTONE OR INDOT #53 GRAVEL
- 5. IN GENERAL PLACE ALL FOOTING IN FORMS, HOWEVER, IF TRENCH POUR OF FOOTINGS IS APPROVED CONTRACTOR MUST ADHERE TO THE FOLLOWING NOTE
- 6. TRENCH POUR FOOTING THE SAME DAY TRENCH IS DUG. IF THIS IS NOT POSSIBLE. ADEQUATELY PROTECT THE EXPOSED MATERIAL IN THE BASES AND SIDE WALLS OF THE TRENCH FROM ANY DETRIMENTAL CHANGE IN CONDITION, SUCH AS FROM DISTURBANCE RAIN, FREEZING OR EQUIPMENT. SURFACE RUNOFF SHALL NOT BE ALLOWED TO ENTER TRENCHES FOR FOOTINGS.
- 7. EXTREME CARE MUST BE TAKEN WHILE EXCAVATING ADJACENT OR CLOSE TO EXISTING FOOTINGS.
- 8. CONSULT WITH GEOTECHNICAL ENGINEER AND STRUCTURAL ENGINEER IF SOILS ARE ENCOUNTERED DURING THE EXCAVATION THAT CAN **NOT** RETAIN A (2) VERTICAL TO (1) HORIZONTAL EXCAVATION SLOPE.
- 9. CONSULT WITH GEOTECHNICAL ENGINEER AND STRUCTURAL ENGINEER IF ANY ADVERSE SOIL CONDITIONS ARE ENCOUNTERED DURING ANY EXCAVATION.
- 10. STOP ALL EXCAVATIONS IF ITEMS IN NOTES 7 AND OR 8 ARE ENCOUNTERED. DO NOT PROCEED WITH ANY FURTHER EXCAVATIONS UNTIL THESE ISSUES ARE RESOLVED.

- MASONRY NOTES
- 1. DESIGN AND CONSTRUCTION SHALL BE IN COMPLIANCE WITH ACI 530-11 BUILDING CODE REQUIREMENTS AND SPECIFICATIONS FOR MASONRY STRUCTURES.
- 2. ALL MASONRY UNITS SHALL CONFORM TO ASTM C90 SPECIFICATIONS FOR HOLLOW LOAD BEARING CONCRETE MASONRY UNITS. THESE CONCRETE MASONRY UNITS SHALL BE GRADE N TYPE 1 MOISTURE CONTROLLED UNITS.
- 3. ALL MORTAR USED SHALL BE TYPE M OR S AND SHALL CONFORM TO ASTM C270 MORTAR FOR UNIT MASONRY. TYPE M MORTAR MUST BE USED BELOW GRADE.
- 4. ALL COARSE GROUT FOR BOND BEAMS AND REINFORCED BLOCK CELLS SHALL CONFORM TO ASTM C476 MORTAR AND GROUT FOR REINFORCED MASONRY AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI AT 28 DAYS.
- 5. ALL CONCRETE MASONRY UNITS SHALL HAVE A MINIMUM PRISM STRENGTH F 'M = 1,500
- 6. ALL MASONRY SHALL BE LAID IN A RUNNING BOND PATTERN (U.N.O.)
- 7. HORIZONTAL JOINT REINFORCEMENT SHALL BE LADDER TYPE AND CONFORM TO THE SPECIFICATIONS FOR COLD-DRAWN STEEL WIRE FOR CONCRETE REINFORCEMENT ASTM
- 8. THE VERTICAL SPACING OF LADDER TYPE FOR HORIZONTAL JOINT REINFORCEMENT SHALL NOT EXCEED 16". CROSS WIRES ON PREFABRICATED JOINT REINFORCEMENT SHALL NOT BE SMALLER THAN NO. 9 GAGE AND LAP MINIMUM OF 12" AT SPLICE LOCATIONS.
- 9. ABOVE ALL LINTELS THE VERTICAL SPACING OF THE HORIZONTAL JOINT REINFORCEMENT SHALL NOT EXCEED 8" FOR (3) COURSES AND SHALL EXTEND A MINIMUM OF 16"BEYOND THE DOOR OR WINDOW JAMB.
- 10. HORIZONTAL JOINT REINFORCEMENT SHALL NOT BE CONTINUOUS THROUGH CONTROL JOINTS.
- 11. BOND BEAMS SHALL BE CONTINUOUS THROUGH CONTROL JOINTS. RAKE MORTAR JOINTS AND CAULK.
- 12. PROVIDE A CONTROL JOINT ON ONE SIDE OF OPENINGS LESS THAN 6 FEET IN WIDTH AND ON BOTH SIDES OF THE OPENINGS 6 FEET AND WIDER.
- 13. THE USE OF OPEN END MASONRY UNITS IS RECOMMENDED TO ACCOMMODATE THE INSTALLATION OF THE VERTICAL REINFORCING STEEL.
- 14.ALL DEFORMED BAR REINFORCING STEEL SHALL BE ASTM A6 15 GRADE 60.
- 15. WHERE VERTICAL BARS ARE TO BE GROUTED INTO CORES THE FOLLOWING REQUIREMENTS APPLY: VERTICAL REINFORCEMENT SHALL BE THE SIZE NOTED ON THE DRAWINGS AND THE CELLS FILLED WITH COURSE GROUT. THE FIRST CELL AT WALL CORNERS, WALL INTERSECTIONS, AND WALL OPENINGS (IE. DOOR AND WINDOW JAMBS, ETC.), BOTH SIDES OF CONTROL JOINTS, AND WALL ENDS SHALL BE REINFORCED WITH BAR(S) IN EACH CELL AND THE CELLS GROUTED FOR THE FULL HEIGHT OF THE WALL. THE NUMBER OF BARS AND BAR SIZE SHALL MATCH THE TYPICAL REINFORCING. REINFORCING BARS SHALL BE CENTERED IN BLOCK CORES (U.N.O.). PROVIDE A SINGLE ROW OF VERTICAL DOWELS FROM THE FOOTING THE SAME SIZE AND SPACING AS THE TYPICAL REINFORCEMENT. WHEN FOUNDATION DOWELS DO NOT ALIGN WITH VERTICAL CORES, THE DOWELS SHALL NOT BE SLOPED MORE THAN ONE (1) HORIZONTAL TO SIX (6) VERTICAL FOR REQUIRED ALIGNMENT.
- 16. REINFORCING BAR POSITIONERS SHALL BE USED AT 48" ON CENTER VERTICALLY TO AVOID DISPLACEMENT UNDER GROUT FLUID PRESSURE.
- 17. THE MINIMUM TENSION LAP SPLICE ON #5 DEFORMED REINFORCING BARS SHALL BE 31" AND ON #6 DEFORMED REINFORCING BARS 37".
- 18. VERTICAL REINFORCING STEEL SHALL BE CONTINUOUS THROUGH BOND BEAMS (U.N.O.)
- 19. BOND BEAMS SHALL BE PROVIDED OVER OPENINGS AND BELOW ALL JOIST BEARING ELEVATIONS (U.N.O.) TYPICAL BOND BEAMS SHALL BE REINFORCED WITH A MINIMUM OF (2) #5 BARS CONTINUOUS (U.N.O.)
- 20. PROVIDE LINTELS OVER ALL OPENINGS IN MASONRY WALLS. REFER TO STRUCTURAL ARCHITECTURAL, MECHANICAL, AND OTHER DRAWINGS LOCATION, NUMBER, AND SIZE OF OPENINGS. PROVIDE LINTEL TYPES INDICATED IN SECTIONS OR DETAILS (IE. STEEL, PRE-CAST, MASONRY).
- 21. SET ANCHORS BOTS AND/OR EMBEDS IN BOND BEAMS AFTER COARSE GROUT IS IN PLACE. BUT WHILE COARSE GROUT IS SILL PLASTIC.
- 22. GROUTING OF BOND BEAMS SHALL BE PREFORMED IN ONE CONTINUOUS OPERATION.
- 23. MASONRY CONTRACTOR SHALL FILL ALL STEEL DOOR FRAMES SOLID WITH COARSE GROUT. STEEL DOOR FRAMES SHALL BE BRACED IN SUCH A WAY THAT WILL PREVENT THE PRESSURE FROM THE GROUT FROM DEFORMING THE FRAME MEMBERS. GROUT SHALL BE MIXED TO PROVIDE A 4" MAXIMUM SLUMP CONSISTENCY AND HAND TROWELED INTO PLACE. GROUT MIXED TO A THIN "PUMPABLE" CONSISTENCY SHALL NOT BE USE.
- 24. CALCIUM CHLORIDE OR ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL NOT BE USED IN MORTAR OR GROUT.
- 25. METAL TIES AND ANCHORS SHALL BE OF CORROSION RESISTANT METAL OR SHALL BE COATED WITH CORROSION RESISTANT METAL SUCH AS ZINC OR COPPER.
- 26. MASONRY CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO NOT CRACK FLOOR SLAB WITH HEAVY EQUIPMENT OR MATERIAL STORAGE.
- 27. MASONRY CONTRACTOR SHALL PROVIDE A TEMPORARY REINFORCED POLYETHYLENE STRUCTURE IN WHICH TO HEAT THE MASONRY, TO INSURE PROPER CURING OF THE MORTAR, WHEN THE TEMPERATURE IS EXPECTED TO BE NEAR OR BELOW 32 DEGREES FAHRENHEIT DURING THE DAY OR NIGHT THE MASONRY IS LAID. ACCELERATOR ADMIXTURES SHALL NOT BE USED IN THE MORTAR.
- 28.ALL MASONRY SHALL BE THOROUGHLY CLEANED AND APPROVED BY THE PROJECT ENGINEER UPON COMPLETION.
- 29. ALL STEEL LINTELS USED TO SUPPORT MASONRY EXPOSED TO THE EXTERIOR SHALL BE HOT DIPPED GALVANIZED.

STRUCTURAL STEEL NOTES

- "STEEL CONSTRUCTION MANUAL".

- A500 GRADE B, Fy = 46 KSI.

- 9. [] INDICATES CHANGE IN STEEL ELEVATION

- HOT DIPPED GALVANIZED (NO PAINT)

STEEL JOISTS

- BEARING SEAT TO THE SUPPORTS.
- OF THE BRIDGING.
- POINT OF LOAD TO THE NEAREST PANEL POINT.
- STANDARDS.

STEEL ROOF DECK

- ROOF AND THE SDI DIAPHRAGM DESIGN MANUAL.
- IN PLACE.
- WELDING ELECTRODES MEET THIS REQUIREMENT.)
- SPECIFICATIONS.
- GAGE.

1. DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL SHALL COMPLY WITH THE FOURTEENTH EDITION OF AISC AMERICAN INSTITUTE OF STEEL CONSTRUCTION INC.

2. STRUCTURAL STEEL SHAPES, RODS, AND PLATES SHALL BE ASTM A36, FY = 36 KSI (U.N.O.). 3. ALL WIDE FLANGE MEMBERS SHALL BE ASTM A992, FY = 50 KSI ...

4. ALL SQUARE AND RECTANGULAR HSS HOLLOW STRUCTURAL SHAPES SHALL BE ASTM

WALL GIRTS "ZEE" AND "CEE" SHAPES SHALL BE ASTM A572 Fy = 50 KSI. STEEL.

6. CAST-IN-PLACE ANCHOR BOLTS SHALL BE ASTM F1554 GRADE 36 BOLTS OR ASTM A36 ROD WITH THREADS AT BOTH ENDS AND A PL 3/8" x 3" x 0'-3" WASHER AND NUT ON THE BOTTOM OF THE ROD OR BOLTS WITH OVERSIZED WASHERS OR PLATES

7. ALL SHOP AND FIELD WELDS SHALL COMPLY WITH THE CURRENT EDITION OF AWS D1.1 "STRUCTURAL WELDING CODE" AND BE PERFORMED BY CERTIFIED WELDERS. WELDERS MUST BE CERTIFIED FOR TYPE OF WELDS WHICH THEY ARE PERFORMING.

8. ELECTRODES FOR WELDING STRUCTURAL STEEL SHALL BE E7018.

10.ALL BOLTED CONNECTIONS ARE TO BE MADE IN THE FIELD UNLESS NOTED OTHERWISE

11.ALL EMBEDDED STEEL IS TO BE MILL FINISH WITH NO PRIMER PAINT UNLESS (U.N.O.)

12.ALL WELDS TO BE SHOP WELDS UNLESS INDICATED AS FIELD WELDS ON THE DRAWINGS 13. BOLTED CONNECTIONS SHALL COMPLY WITH AISC "SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS"

14.ALL HEADED STUDS USED ON EMBEDDED STEEL SHALL BE LOW CARBON STEEL AND COMPLY WITH ASTM A108 GRADES 1010 THROUGH 1020.

15.ALL STRUCTURAL STEEL TO RECEIVE ONE COAT OF RED OXIDE OR FABRICATORS STANDARD RUST INHIBITING PRIMER AND ONE COAT FINISH PAINT. TOUCH-UP PAINTING TO BE PERFORMED IN THE FIELD AFTER ERECTION IS COMPLETE. ALL PAINTING SHALL BE PERFORMED IN ACCORDANCE WITH MANUFACTURES SPECIFICATIONS.

16.ALL STEEL SHAPES USED FOR MASONRY LINTELS EXPOSED TO THE EXTERIOR SHALL BE

17. ANY EXPOSED STEEL SURFACES SCRATCHED OR DAMAGED DURING CONSTRUCTION SHALL BE TOUCHED UP UPON COMPLETION OF CONSTRUCTION.

1. THE DESIGN, FABRICATION AND ERECT OF STEEL JOISTS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS LOAD TABLES AND WEIGHT TABLES FOR STEEL JOISTS PUBLISHED BY THE STEEL JOIST INSTITUTE

2. NO CONSTRUCTION LOADS SHALL BE PLACED ON JOISTS UNTIL BRIDGING IS INSTALLED AND BEARING CONNECTIONS HAVE BEEN WELDED OR BOLTED.

3. ERECTION-TACK WELD EACH END OF THE JOISTS ON THE SAME SIDE OF THE SHOE. THEN PERFORM ANY ALIGNMENT NECESSARY DURING THE INSTALLATION OF BRIDGING. AFTER INSTALLATION OF BRIDGING COMPLETE THE WELDING OR BOLTING ATTACHMENT OF THE

4. HORIZONTAL BRIDGING 1 1/4 X 1 1/4 X 7/64 ANGLE NOTED ON PLAN AS ----------

5. BRACE JOISTS IN END BAYS TO PREVENT LATERAL DISPLACEMENT DURING INSTALLATION

PLACE TAGGED END OF JOISTS WHERE INDICATED ON PLAN BY -T-.

7. JOIST CHORDS ARE NOT DESIGNED FOR CONCENTRATED LOADS. CONCENTRATED LOADS MUST BE PLACED AT PANEL POINTS OR AN EXTRA MEMBERS FIELD WELDED FROM THE

8. ALL JOISTS ARE TO BE CAMBERED IN ACCORDANCE WITH STEEL JOISTS INSTITUTE

9. ROOF JOISTS SHALL BE SPACED AT A MAXIMUM OF 5' ON CENTER.

10.K-SERIES JOISTS SHALL START A MAXIMUM OF 4" OFF OF INSIDE WALL

11.ALL FIELD WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS.

1. THE DESIGN, FABRICATION AND ERECTION OF THE STEEL ROOF SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE SDI SPECIFICATIONS AND COMMENTARY FOR STEEL

2. THE STEEL ROOF DECK SHALL BE ERECTED WITH END LAPS OCCURRING ON JOISTS OR BEAMS. MINIMUM END LAP SHALL BE 3" FOR STEEL ROOF DECK.

3. THE STEEL ROOF DECK FUNCTIONS AS A DIAPHRAGM. HENCE, THE ROOF DECK IS A STRUCTURAL ELEMENT IN RESISTING LATERAL LOADS AND PROVIDE OVERALL STABILITY FOR THE BUILDING. THEREFORE, TEMPORARY BRACING OF STRUCTURAL STEEL FRAMES AND MASONRY WALLS IS REQUIRED UNTIL ALL STEEL ROOF DECK IS COMPLETELY WELDED

4. ALL WELDING SHALL BE DONE BY CERTIFIED WELDERS IN ACCORDANCE WITH AWD D1.3 SPECIFICATIONS. WELDING ELECTRODES SHALL BE E6022. (HOBART #1139, 5/32" DIA.

5. ALL STEEL ROOF DECK SHALL BE GALVANIZED 1 1/2" DEEP X 20 GAGE WIDE RIB DECK. ALL DECK WELDS SHALL BE PAINTED WITH ZINC RICH PAINT PRIOR TO ROOFING.

6. ALL STEEL ROOF DECK SHALL BE ATTACHED TO SUPPORTS AND ADJACENT SHEETS AS INDICATED ON DRAWINGS. IF STEEL ROOF DECK ATTACHMENT DETAILS AND OR FASTENING REQUIREMENTS ARE NOT SHOWN ON DRAWINGS THE DECK SHALL BE ANCHORED TO THE STRUCTURE TO MEET THE MINIMUM FASTENING REQUIREMENTS CALLED FOR IN THE SDI

7. DECK SUPPLIER SHALL INCLUDE ANY MISCELLANEOUS CLOSURE PIECES, STEEL SCREEDS. ROOF CURBS, SUMP PANS, REINFORCING AROUND OPENINGS, ETC. REQUIRED TO MAKE A COMPLETE JOB. ALL MISCELLANEOUS ITEMS SHALL BE GALVANIZED AND NOT LESS THAN 14

& ASSOCIATES, INC

440 ARIENS AVE. - SUITE 2 CONNERSVILLE, INDIANA 47331-1151 ph. 765-825-7454 fax. 765-825-4633 email. hphengr@gmail.com

e No. O PE60900074 ----STATE OF

REVISIONS

Winchester High School Classroom Building Addition

700 N Union Street

Winchester, Indiana 47394

General Notes

SCALE	1/8"=1'-0" (1=96)	CLIENT NO.
DATE	December 2023	HPH NO. 23-1772
COORD	ТКО	
DRAWN	ТКО	C1
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Winchester, Indiana 47394 Foundation and Masonry Plans

SCALE	1/8"=1'-0" (1=96)	CLIENT NO.
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Winchester, Indiana 47394
Structural Framing Plan

SCALE	1/8"=1'-0" (1=96)	CLIENT NO.
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Timothy K. O'Rourke

REVISIONS:

Winchester High School Classroom Building Addition

700 N Union Street

Winchester, Indiana 47394

Framing Details

SCALE	3/4"=1'-0" (1=16)	CLIENT NO.
DATE	December 2023	HPH NO. 23-1772
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SEE PLAN

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Timothy K. O'Rourke

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Winchester High School Classroom Building Addition

700 N Union Street

Winchester, Indiana 47394

Framing Details

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TYPICAL 4 " SLAB CONSTRUCTION JOINT

TYPICAL CANOPY AND PATIO TURN DOWN SLAB EDGE

TYPICAL WINDOW HEAD DETAIL SCALE : 1" = 1'-0"

SCALE : 1" = 1'-0"

440 ARIENS AVE. - SUITE 2 CONNERSVILLE, INDIANA 47331-1151 ph. 765-825-7454 fax. 765-825-4633 email. hphengr@gmail.com

K. O'R No. PE60900074 ----STATE OF ONAL

Timothy K. O'Rourke

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TYPICAL WINDOW SILL DETAIL

Winchester High School **Classroom Building** Addition

700 N Union Street

Winchester, Indiana 47394 Typical Masonry Details

SCALE	1" = 1'-0" (1=12)	CLIENT NO
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CONNERSVILLE, INDIANA 47331-1151 ph. 765-825-7454 fax. 765-825-4633 email. hphengr@gmail.com

K. O'R No. PE60900074 ----STATE OF SIONAL

Timothy K. O'Rourke

REVISIONS:

3/16 3/16 3<u>1</u>"

700 N Union Street

Winchester, Indiana 47394 Steel Lintel Details

1" = 1'-0" (1=12) SCALE CLIENT NO. December 2023 DATE HPH NO. COORD TKO DRAWN TKO CHECKED TKO

22-1772

<u>1</u>"

4" RETURN

GENERAL NOTES

- DO NOT SCALE DRAWINGS. IF DIMENSIONS CANNOT BE DETERMINED OR DOCUMENTS ARE IN CONFLICT (WITH THEMSELVES OR FIELD CONDITIONS), THE CONTRACTOR MUST OBTAIN CLARIFICATION FROM THE ARCHITECT PRIOR TO CONTINUATION OF WORK.
- CONTRACTOR(S) SHALL VISIT THE SITE TO ACQUAINT THEMSELVES WITH THE EXISTING OR NEWLY INSTALLED CONDITIONS. CONTRACTOR(S) SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS, UTILITIES, AND EXISTING OR NEWLY INSTALLED CONDITIONS PRIOR TO CONSTRUCTION.
- THE CONSTRUCTION DOCUMENTS AND DRAWING NOTES / SPECIFICATIONS ARE INTENDED TO DESCRIBE AND PROVIDE FOR A FINISHED PIECE OF WORK. THE WORK SHALL BE COMPLETED IN EVERY DETAIL EVEN THOUGH EVERY ITEM NECESSARILY INVOLVED IS NOT PARTICULARLY MENTIONED OR SPECIFIED. ALL WORK SHALL BE INSTALLED AS SHOWN ON THE DRAWINGS AND / OR MANUFACTURER'S SPECIFICATIONS AND INSTALLATION INSTRUCTIONS. IF ANY CONTRACTOR IS IN DOUBT AS TO THE TRUE MEANING OF ANY PART OF THE DOCUMENTS, OR FINDS DISCREPANCIES IN OR OMISSIONS FROM ANY PART OF THE DOCUMENTS, HE MUST CONTACT THE ARCHITECT FOR CLARIFICATION.
- ALL DIMENSIONS ARE TO FACE OF STUD, CONCRETE, MASONRY, OR CENTERLINE OF COLUMN, UNLESS NOTED OTHERWISE. WHEN EXISTING CONDITIONS ARE SHOWN, DIMENSIONS ARE TO FACE OF EXISTING FINISH, UNLESS NOTED OTHERWISE
- FINISH FLOOR ELEVATIONS ARE FOR GENERAL REFERENCE. REFER TO CIVIL SHEETS FOR ACTUAL FINISH FLOOR ELEVATIONS.
- EQUIPMENT AND FURNITURE SHOWN IS FOR REFERENCE ONLY, EQUIPMENT AND FURNITURE PROVIDED BY OWNER (UNLESS NOTED OTHERWISE). COORDINATE EQUIPMENT AND FURNITURE INSTALLATION AND UTILITY CONNECTIONS WITH OWNER AND OWNER'S SUPPLIER.
- DEFINITIONS G. NECESSARY: WORK NEEDED TO COMPLETE THE WORK TO "MAKE IT OPERATIONAL".

REQUIRED: WORK NEEDED TO BE IN COMPLIANCE WITH BUILDING CODE, GOVERNING CODE, OR JURISDICTION HAVING AUTHORITY.

PROVIDE: RESPONSIBLE FOR PURCHASE, DELIVERY, RECEIVING, INSPECTION, STORAGE, PREPARATION, AND INSTALLATION OF ITEM(S).

FURNISH: RESPONSIBLE FOR PURCHASE AND DELIVERY OF ITEM(S).

INSTALL: RESPONSIBLE FOR RECEIVING, INSPECTION, STORAGE, PREPARATION, AND INSTALLATION OF ITEM(S).

BASIS OF DESIGN: AN ACCEPTABLE MANUFACTURER OR PRODUCT. DESIGNATED BY THE DESIGN PROFESSIONAL, WHICH EXHIBITS THE INTENDED STANDARDS AND DESIGN CRITERIA THAT MUST BE MET FOR PERFORMANCE. THE ITEM(S) INDICATED MAY BE PROVIDED OR AN ITEM OF EQUIVALENT APPEARANCE, AESTHETIC, QUALITY, MATERIAL, CONSTRUCTION, AND PERFORMANCE MAY BE SUBSTITUTED SUBJECT TO THE ARCHITECT'S OR DESIGN PROFESSIONAL'S APPROVAL. (REFER TO THE "SUBSTITUTIONS" SPECIFICATION FOR ADDITIONAL INFORMATION)

OR EQUAL: MAY FOLLOW A "BASIS OF DESIGN" OR OTHER SPECIFIED MANUFACTURER OR PRODUCT AND INDICATES THAT AN ITEM OF EQUIVALENT APPEARANCE, AESTHETIC, QUALITY, MATERIAL, CONSTRUCTION, AND PERFORMANCE MAY BE SUBSTITUTED SUBJECT TO THE ARCHITECT'S OR DESIGN PROFESSIONAL'S APPROVAL. (REFER TO THE "SUBSTITUTIONS" SPECIFICATION FOR ADDITIONAL INFORMATION)

HVAC **GENERAL SPECIFICATIONS**

- UPON COMPLETION OF ALL HVAC WORK. THE CONTRACTOR SHALL SUBMIT (2) COPIES OF THE MANUFACTURER'S OPERATION AND MAINTENANCE MANUALS FOR ALL EQUIPMENT TO THE OWNER. THE CONTRACTOR SHALL PROVIDE TO THE ARCHITECT A COMPLETE SET OF RECORD DRAWINGS WITH ANY AND ALL CHANGES OR MODIFICATIONS TO THE DESIGN, CONSTRUCTION, SYSTEMS, OR EQUIPMENT CLEARLY INDICATED; SHOP DRAWINGS; INFORMATION ON THE THERMOSTATS, CONTROL WIRING DIAGRAMS, AND OTHER PERTINENT INFORMATION.
- HVAC EQUIPMENT: ALL EQUIPMENT SHALL BE COMPLETE IN EVERY RESPECT WITH ALL DEVICES, APPURTENANCES, AND ACCESSORIES PROVIDED TO MEET THE DESIGN INTENT AND OPERATION OF THE SYSTEMS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN. EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ALL AIR CONDITIONING EQUIPMENT MUST HAVE A CONDENSATE DRAIN AND BE TRAPPED IN ACCORDANCE WITH MANUFACTURER'S DATA. ALL COMPRESSORS ARE TO INCLUDE A 5-YEAR EXTENDED WARRANTY.
- GAS PIPING (IF INCLUDED IN THE PROJECT): CONTRACTOR TO COORDINATE INCLUDING VERIFICATION OF EXISTING SYSTEM EQUIPMENT, MAINS, LINE SIZES, AND REQUIREMENTS) AND SIZE GAS PIPING PER MANUFACTURER'S RECOMMENDATIONS, LOCAL CODE, AND UTILITY COMPANY REQUIREMENTS, UNLESS PROVIDED OTHERWISE IN THE CONSTRUCTION DOCUMENTS ARCHITECT/ENGINEER TO REVIEW AND APPROVE GAS PIPING SIZING PRIOR TO INSTALLATION. GAS PIPING TO BE INSTALLED PER NFPA 54. REFER TO PLUMBING GENERAL SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- **REFRIGERANT LINE SET:** HVAC CONTRACTOR TO SIZE REFRIGERANT LINE SET SIZES PER MANUFACTURER'S RECOMMENDATIONS AND FIELD CONDITIONS ARCHITECT/ENGINEER TO REVIEW AND APPROVE LINE SET SIZES PRIOR TO **INSTALLATION.** LINES EXCEEDING 150 FEET IN LENGTH REQUIRE A PUMP (SIZED AND PROVIDED BY THE HVAC CONTRACTOR).
- **NOISE AND VIBRATION:** MECHANICAL AND ELECTRICAL EQUIPMENT IS TO OPERATE WITHOUT OBJECTIONABLE NOISE OR VIBRATION. ALL MOTOR OPERATED OR ROTATING EQUIPMENT IS TO BE VIBRATION ISOLATED OR FREE FROM ALL BEAMS, COLUMNS, FLOORS, CEILINGS, JOISTS, WALLS, AND OTHER PARTS OF THE BUILDING STRUCTURE, HANGER RODS FOR ALL PIPING EQUIPMENT, AND DUCTWORK CONNECTED TO MOTOR OPERATED OR ROTATING EQUIPMENT IS TO BE PROVIDED WITH KINETICS OR APPROVED EQUAL FIBERGLASS ISOLATOR HANGERS. PROVIDE FLEXIBLE COLLARS IN ALL CONNECTIONS BETWEEN VIBRATING EQUIPMENT (FANS, ROOFTOP UNITS, ETC.) AND DUCTS. THE FLEXIBLE CONNECTION IS TO BE RATED FOR THE OPERATING PRESSURE OF THE SYSTEM.
- CURBS AND STEEL FRAMING FOR SUPPORT: PROVIDE ALL NECESSARY CURBS AND STEEL FRAMING REQUIRED TO INSTALL ALL HVAC EQUIPMENT AS DESCRIBED OR IMPLIED ON THE DRAWINGS. CURBS SHALL BE OF THE SAME MANUFACTURER OF THE EQUIPMENT SUPPORTED. INSULATE UNDER THE COMPRESSOR SECTION TO PREVENT CONDENSATION. ALL CURBS MUST BE INSTALLED SO THAT TOP OF CURBS ARE LEVEL.
- G. **DUCTWORK:** DUCTWORK IS TO BE FABRICATED WITH GALVANIZED SHEET STEEL (NO FIBERGLASS ALLOWED) IN ACCORDANCE WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS-METAL AND FLEXIBLE" AND NAIMA "FIBROUS GLASS DUCT CONSTRUCTION STANDARDS," LATEST EDITIONS; CONFORMING TO THE REQUIREMENTS IN THE REFERENCED STANDARD FOR METAL THICKNESS, REINFORCING TYPES AND INTERVALS, TIE ROD APPLICATIONS, AND JOINT TYPES AND INTERVALS. ALL JOINTS, SEAMS, AND CONNECTIONS MUST BE SECURELY FASTENED AND SEALED AIRTIGHT IN COMPLIANCE WITH THE INTERNATIONAL ENERGY CONSERVATION CODE AND OHIO MECHANICAL CODE.
- BRANCH DUCTWORK: ALL DUCT BRANCHES TO DIFFUSERS ARE TO BE RECTANGULAR OR ROUND RIGID DUCT. ALL BRANCH TAKEOFFS FROM RECTANGULAR MAINS TO BE CONNECTED TO SPIN COLLARS WITH SCOOPS AND QUADRANT DAMPERS.
- FLEXIBLE DUCTWORK: FLEX DUCTWORK IS TO BE NFPA 90 AND 90A APPROVED INDICATING NO VINYL, TESTED IN ACCORDANCE WITH UL 181, AND LISTED AND ABELED AS CLASS 0 OR CLASS 1 DUCT. NO FLEX DUCT RUN TO EXCEED 8'-0" MAXIMUM TOTAL LENGTH AT ANY ONE LOCATION. ALL FLEX CONNECTIONS TO 3E TAPED AND STRAPPED PER MANUFACTURER'S INSTRUCTIONS. FLEXIBLE AIR DUCT MAY ONLY BE USED IN VERTICAL APPLICATIONS WITH PRIOR APPROVAL FROM THE ARCHITECT. FLEXIBLE DUCTWORK IS NOT PERMITTED TO BE USED FOR RETURN DUCTWORK.
- **DUCTWORK INSULATION:** INSTALL INSULATION PRODUCTS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND IN ACCORDANCE WITH RECOGNIZED INDUSTRY PRACTICES. INSULATION MUST COMPLY WITH NFPA 90A. DUCT SIZES SHOWN ON DRAWINGS ARE INSIDE CLEAR DIMENSIONS. INSULATE DUCTWORK PER THE DUCT CONSTRUCTION SCHEDULE. PROVIDE DUCTWORK INSULATION WITHOUT INTERRUPTION THROUGH WALLS, FLOORS, AND SIMILAR PENETRATIONS. ALL INSULATION SHALL HAVE A FLAME SPREAD RATING OF NOT MORE THAN 25 AND A SMOKE DEVELOPED RATING OF NO HIGHER THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM C411, OR AS REQUIRED BY LOCAL CODES.
- WHERE ROUND DUCTWORK IS INDICATED ON PLANS, PROVIDE RECTANGULAR DUCTWORK, IF ROUND DUCTWORK CANNOT BE INSTALLED BECAUSE OF OBSTRUCTIONS, INSUFFICIENT CLEARANCES OR OTHER CAUSES DUE TO FIELD CONDITIONS. CONTRACTOR'S OPTION TO INSTALL RECTANGULAR DUCTWORK IN LIEU OF INDICATED ROUND DUCTWORK AT OTHER LOCATIONS. SIZE ALL RECTANGULAR DUCTWORK CONVERSIONS COMPARABLE TO INDICATED DUCTWORK SIZE PER SMACNA "HVAC DUCT CONSTRUCTION STANDARDS METAL AND FLEXIBLE," LATEST EDITION. SHOULD THE CONTRACTOR BE IN DOUBT OF THE REQUIREMENTS UNDER THIS SECTION, DUCTWORK SIZING, OR SHOULD ANY DISCREPANCY BE REVEALED BASED ON FIELD CONDITIONS, IMMEDIATELY CONTACT THE ARCHITECT FOR CLARIFICATION.
- PROVIDE A FLEXIBLE CONNECTION BETWEEN BONNET AND RIGID DUCT ON ALL SUPPLY AND RETURN DUCTWORK.
- DIFFUSERS, GRILLES, REGISTERS, AND DAMPERS: PROVIDE DIFFUSERS, GRILLES, AND REGISTERS AS SCHEDULED. DEVICES TO BE COMPLETE WITH BALANCING DAMPERS, FRAMES, AND ALL ACCESSORIES, FINISH AS INDICATED. PROVIDE UL LISTED (UL555) FIRE RATED DAMPERS AT ALL FIRE PARTITION OR FIRE BARRIER PENETRATIONS, WHETHER SHOWN OR NOT SHOWN ON THE PLANS. ALL GRAVITY DAMPERS REQUIRE SEALS.
- SUPPORT AND BRACING: INSTALL RIGID ROUND AND RECTANGULAR METAL DUCTWORK WITH APPROVED SUPPORT SYSTEMS INDICATED IN SMACNA STANDARDS AND STATE BUILDING CODE. SUPPORT HORIZONTAL DUCTS AT A MAXIMUM INTERVAL OF 10 FEET AND WITHIN 2 FEET OF EACH ELBOW AND WITHIN 4 FEET OF EACH BRANCH INTERSECTION USING DOUBLE STRAP HANGERS ON EACH SIDE OF FITTING. SUPPORT VERTICAL DUCTS AT A MAXIMUM INTERVAL OF 10 FEET AND AT EACH FLOOR. FLEXIBLE AND OTHER FACTORY MADE DUCTS SHALL BE SUPPORTED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. NO WOOD SHALL BE USED TO SUPPORT OR BRACE DUCTS. PROVIDE SWAY AND SEISMIC BRACING AS REQUIRED BY STATE AND LOCAL CODES. PROVIDE FIXED ANCHORS AT EACH MECHANICAL DIFFUSER OR GRILLE TO CEILING GRID. CEILING GRID CONTRACTOR TO PROVIDE SUPPORT WIRES AT OPPOSITE CORNERS OF LIGHT FIXTURES, MECHANICAL DIFFUSERS, AND GRILLES TO STRUCTURE ABOVE.

Q.

S.

W.

HVAC GENERAL SPECIFICATIONS CONT'D

CONTROLS: EACH UNIT TO BE CONTROLLED BY THERMOSTAT WITH PROPER STAGES OF HEATING AND COOLING - MOUNTED AT 54" AFF (REFER TO MECHANICAL SHEETS FOR MODEL NO. AND LOCATION). CONTROL WIRING IS TO BE FURNISHED AND INSTALLED BY THE HVAC CONTRACTOR. POWER WIRING IS TO BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.

POWER AND CONTROL WIRING: ELECTRICAL CONTRACTOR TO PROVIDE ALL NECESSARY POWER WIRING FOR HVAC EQUIPMENT FROM SUITABLE FUSED DISCONNECT SOURCE TO UNIT WITH FUSED DISCONNECT TO MEET NATIONAL ELECTRIC CODE (NEC), STATE AND LOCAL CODES. HVAC CONTRACTOR TO PROVIDE 24 VOLT OR LESS CONTROL WIRING.

STARTUP: HVAC CONTRACTOR TO PROVIDE STARTUP PER MANUFACTURER'S VRITTEN RECOMMENDATIONS.

AIRFLOW AND TESTING: ALL DUCT AS PER SMACNA GUIDELINES. THE SYSTEM O BE BALANCED AND TESTED BY AN INDEPENDENT, "NEBB" CERTIFIED, BALANCING CONTRACTOR PER "NEBB"

PROCEDURES. THE HVAC CONTRACTOR SHALL INCLUDE THE COST OF THE BALANCING AND TESTING IN HIS BID. THE BALANCING CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, TRANSPORTATION, AND EQUIPMENT NECESSARY TO COMPLETELY BALANCE THE AIR FLOW FOR THE HVAC SYSTEMS AS SHOWN ON THE DRAWINGS. HVAC CONTRACTOR SHALL INSTALL NEW FILTERS IN ALL UNITS PRIOR TO THE AIR BALANCE. THE COMPLETE AIR BALANCE SHALL TAKE PLACE WITH OUTSIDE AIR DAMPERS IN MINIMUM POSITION. BALANCE THE SYSTEM TO WITHIN +-5 PERCENT OF THE DESIGN REQUIREMENTS. THE HVAC CONTRACTOR AT NO ADDITIONAL COST SHALL PERFORM ANY REQUIRED CHANGES REQUIRED TO ACHIEVE SPECIFIED FLOW RATES. ALL CONTROL SEQUENCES SHALL BE TESTED (INTERLOCKED EQUIPMENT, SMOKE DETECTORS, SMOKE EVACUATION, ECONOMIZER, CO2 SENSORS, ETC.) AND OPERATING STATUS RECORDED IN THE REPORT. A DIGITAL OR THREE (3) PRINTED COPIES OF THE BALANCE AND TESTING REPORT SHALL BE PROVIDED TO THE OWNER, OWNER'S REPRESENTATIVE, OR ARCHITECT BEFORE PROJECT CLOSE OUT FOR REVIEW. THE BALANCING CONTRACTOR SHALL RECHECK ANY ITEMS THAT THE OWNER OR ARCHITECT DEEMS REASONABLY NECESSARY AT NO ADDITIONAL COST TO THE OWNER.

VENTILATION AND COMBUSTION AIR INTAKE: PROVIDE OUTSIDE VENTILATION AIR BY NATURAL VENTILATION OR MECHANICAL EQUIPMENT AS REQUIRED BY THE MECHANICAL CODE (REFER TO OUTSIDE AIR VENTILATION SCHEDULE). IF GAS-FIRED EQUIPMENT IS USED, VERIFY THAT THE MECHANICAL ROOM AND / OR MECHANICAL EQUIPMENT ARE PROVIDED WITH ADEQUATE COMBUSTION AND DILUTION AIR IN COMPLIANCE WITH THE MECHANICAL CODE, PROVIDE ADDITIONAL AIR AS REQUIRED. PROVIDE A VENT DESIGNED FOR THE TYPE OF APPLIANCE BEING VENTED FOR ALL GAS-FIRED EQUIPMENT TO THE EXTERIOR. PROVIDE VENTS DIRECTLY TO THE EXTERIOR FOR ALL EXHAUST FANS. ALL EXHAUST AND INTAKE OPENINGS MUST BE LOCATED A MINIMUM OF 10 FEET FROM LIT LINES OR BUILDINGS ON THE SAME LOT.

PROVIDE A SMOKE DETECTOR IN RETURN AIR SYSTEMS WITH A DESIGN CAPACITY GREATER THAN 2,000 CFM IN THE RETURN AIR DUCT OR PLENUM UPSTREAM OF ANY FILTERS, EXHAUST AIR CONNECTIONS, OUTDOOR AIR CONNECTIONS, OR DECONTAMINATION EQUIPMENT AND APPLIANCES (PER OMC SECTION 606.2.1). WHERE TWO OR MORE UNITS SHARE THE SAME RETURN, THE COMBINED AMOUNT OF CFM SHALL BE USED IN DETERMINING WHETHER A DUCT SMOKE DETECTOR IS REQUIRED. COORDINATE THESE REQUIREMENTS BETWEEN THE HVAC AND THE ELECTRICAL OR FIRE ALARM CONTRACTORS

PROVIDE ACCESS TO ALL DAMPERS, CONTROLS, AND OTHER ITEMS IN DUCTWORK THAT REQUIRE SERVICE OR INSPECTION. IF THE ACCESS PANEL LOCATION IS EXPOSED. THE OWNER OR THE ARCHITECT MUST APPROVE IT PRIOR TO INSTALLATION. ACCESS PANELS ARE NOT REQUIRED ABOVE LAY-IN GRID TYPE CEILINGS.

ALL HVAC EVAPORATORS AND COOLING COILS REQUIRE A CONDENSATE DRAIN, WHICH IS CONVEYED TO AN APPROPRIATE PLACE OF DISPOSAL (TYPICALLY INDIRECTLY INTO A FLOOR DRAIN). A SECONDARY DRAIN OR AUXILIARY DRAIN PAN (WITH A SEPARATE DRAIN OR A WATER LEVEL DETECTION DEVICE CONFORMING TO UL 508 THAT WILL SHUT OFF THE EQUIPMENT SERVED PRIOR TO OVERFLOW OF THE AUXILIARY DRAIN PAN] IS REQUIRED FOR ANY EQUIPMENT THAT PRODUCES CONDENSATE AND WHERE DAMAGE MAY OCCUR AS A RESULT OF OVERFLOW FROM THE EQUIPMENT DRAIN PAN OR STOPPAGE IN THE CONDENSATE DRAIN (PER OMC SECTION 307.2.3). COORDINATE THESE REQUIREMENTS BETWEEN THE HVAC AND PLUMBING CONTRACTORS AND THE ARCHITECT.

ALL ROOF AND/OR EXTERIOR WALL PENETRATIONS ARE TO BE SEALED AIR AND WATER TIGHT, COORDINATE WITH THE GENERAL CONTRACTOR AND OTHER SUB-CONTRACTORS. ALL EQUIPMENT, PIPES, DUCTS, ETC. ARE TO BE INSTALLED CONCEALED ABOVE THE CEILING UNLESS SHOWN OTHERWISE.

VERIFY ALL SUSPENDED MECHANICAL LOADS WITH ARCHITECT PRIOR TO ORDERING NEW MECHANICAL EQUIPMENT.

HVAC CONTRACTOR TO COORDINATE ROUTING AND LOCATION OF ALL DEVICES WITH BUILDING STRUCTURE AND OTHER CEILING MOUNTED DEVICES.

HVAC CONTRACTOR TO REVIEW DRAWINGS FOR COMPLIANCE WITH LOCAL AA. CODES AND WITH AUTHORITIES HAVING JURISDICTION OVER THIS PROJECT. CONTACT ARCHITECT WITH ANY QUESTIONS OR CONCERNS.

<u>____</u>

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_______ -RS-----

DUCTWORK SY	MBOL I	LEGEND
SUPPLY OR OUTSIDE AIR DUCT UP		RADIUS RECTANGULAR ELBOW
RETURN OR EXHAUST AIR DUCT UP		SUPPLY OR OUTSIDE AIR ROUND DUCT UP
SUPPLY OR OUTSIDE AIR DUCT DOWN		RETURN OR EXHAUST AIR ROUND DUCT UP
RETURN OR EXHAUST AIR DUCT DOWN		ROUND DUCT DOWN
SUPPLY OR OUTSIDE AIR DUCT OFFSET		ROUND OFFSET
RETURN AIR DUCT OFFSET		ROUND ELBOW
MANUAL BALANCING DAMPER		ROUND WYE
		RECTANGULAR BRANCH TAKEOFF
FIREDAMPER		RECTANGULAR DUCT TERMINATION
RECTANGULAR TO ROUND TRANSITION		ROUND DUCT TERMINATION
RECTANGULAR TRANSITION		
STANDARD RECTANGULAR ELBOW		
ANNOTATION S	YMBOL	LEGEND
THERMOSTAT OR TEMP. SENSOR		
HUMIDISTAT	4 H-100	SECTION SYMBOL
(S) SWITCH		
CONNECT TO EXISTING	RTU 12	EQUIPMENT PLAN MARK
<u>1-01</u> VAV TERMINAL UNIT MARK		
	4 H-100	DETAIL SYMBOL
<u>A-8'Ø A-24x12</u> <u>AIR DEVICE MARK - NECK SIZE</u> 250 250 AIRFLOW		
8"ø ROUND DUCT SIZE 24x12 RECTANGULAR DUCT SIZE		
AIR DEVICE AND DUC		ESS. LEGEND
RETURN AIR GRILLE		SUPPLY AIR DIFFUSER (HARD CONNECTION)
		RETURN OR EXH. GRILLE (HARD CONNECTION)
SIDEWALL DIFFUSER		14X14 TRANSFER OPENING IN WALL
SUPPLY AIR DIFFUSER (HARD CONNECTION)		TRANSFER OPENING IN WALL
RETURN OR EXH. GRILLE (HARD CONNECTION)		
PIPE SYMBOL LEGEND		
$\xrightarrow{\mathcal{L}}$ TEE DOWN		

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Date Revision: No.	12-08 Date	3-2023	
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drawin

HVAC INDEX OF DRAWINGS										
SHEET NUMBER	SHEET NAME									
H0.1	HVAC LEGEND AND GENERAL NOTES									
H0.2	HVAC SCHEDULES & DETAILS									
H1.1	HVAC FLOOR PLAN									

	VENTILATION SCHEDULE										
ROOM NUMBER	ROOM NAME	OCCUPANCY TYPE	AREA (SF)	OCCUPANT DENSITY (#/1000SF)	PEOPLE AIR RATE (CFM/PERSON)	AREA AIR RATE (CFM/SF)	NUMBER OF PEOPLE	MINIMUM OA. AIRFLOW (CFM)			
101	ENTRY	CORRIDOR	322	0	0	0.06	0	19			
102	WOMEN	-	76	0	0	0	0	0			
103	MEN	-	80	0	0	0	0	0			
104	CLASSROOM	CLASSROOM	1850	35	10	0.12	65	872			
105	CLASSROOM	CLASSROOM	1026	35	10	0.12	36	483			
106	BREAK OUT AREA	CLASSROOM	191	35	10	0.12	7	93			
107	BREAK OUT AREA	CLASSROOM	191	35	10	0.12	7	93			
								1560			

- 1 INSULATED FLEXIBLE DUCT SAME DIAMETER AS BRANCH DUCT, 6 FT. MAXIMUM TOTAL LENGTH PER AIR DEVICE. STRETCH FLEXIBLE DUCT TO AT LEAST 90% OF FULLY EXTENDED LENGTH.
- 2 SPIN-IN BRANCH TAP FITTING, STRAIGHT SIDE WITH MANUAL DAMPER. DAMPER SHAFT IN HORIZONTAL. INTEGRAL INSULATION GUARD SLEEVE REQUIRED FOR TAP FITTING TO MAIN DUCT WITH INTERNAL INSULATION, AND EXTENDED DAMPER SHAFT AND HANDLE WITH STAND-OFF TO ACCOMMODATE EXTERNAL INSULATION.
- 3 DUCT STRAP HANGER. ATTACH TO STRUCTURE.
- 4 ROUND SHEET METAL BRANCH DUCT, SAME SIZE AS DIFFUSER INLET UNLESS NOTED OTHERWISE.

D CEILING DIFFUSER DUCT CONNECTION NTS

1

2.

3.

	BASIS OF DESIGN			COOLING CAPACITY			GAS HEAT		NG AIR								
			SUPPLY AIR	OUTSIDE AIR	STATIC PRESSURE			INPUT	OUTPUT	DRY BULB	WET BULB	AMBIENT AIR	ELE	CTRICA	L		
MARK	CARRIER MODEL #	TONS	(CFM)	(CFM)	(IN. W.C.)	(MBH)	EER/SEER	MBH	MBH	(°F)	(°F)	(°F)	V/PH	MCA	MOCP	WEIGHT	ACCESSORIES
RTU-1	48HCED11B	10	4,000	1,600	0.5	127.2	12.0 / -	224	184	85	67.0	95	208/3	58	70	1090	1,2,3,4,5,6,7,8,9,10

ROOF CURBS UNIT SHIPS WITH 2" THROWAWAY FILTERS

SINGLE POINT POWER CONNECTION UNIT DISCONNECT

NON-POWERED CONVENIENCE OUTLET RETURN AIR SMOKE DETECTOR

ECONOMIZER W/ENTHALPY CONTROLS AND BAROMETRIC RELIEF COIL GUARD / HAIL GUARDS

POWERED EXHAUST. 10.

	AIR DEVICE SCHEDULE											
PLAN		BASIS	OF DESIGN									
MARK	DESCRIPTION	MFR	MODEL	MOUNTING	FINISH	MATERIAL	ACCESSORIES					
A1	SQUARE FACE CEILING DIFFUSER, 24x24 FACE	TITUS	TMS	LAY-IN	WHITE	STEEL						
B1	EGGCRATE RETURN GRILLE	TITUS	50F	LAY-IN	WHITE	ALUMN.						
B2	EGGCRATE RETURN GRILLE	TITUS	50F	SURFACE	WHITE	ALUMN.						
C1	DOUBLE DEFLECTION SUPPLY GRILLE	TITUS	272RL	SURFACE	WHITE	STEEL	OPP. BLADE DAMPER					

DUCTWORK CONSTRUCTION SCHEDULE											
DUCTSYSTEM	SUADE	PRESS.		LINER			INSULATION				NOTES
DOCT STSTEM	W.G.		THK.	TYPE	D	THK.	TYPE	D	JACKET	NOTEO	
CONCEALLED SUPPLY & RETURN RND/RECT			GS	-	-	-	1.5"	FGW	-	FFJ	1,3
CONCEALLED SUPPLY AIR DEVICE RUNOUT RND			IFD	-	-	-	1.5"	IFD	-	FFJ	2
EXPOSED SUPPLY & RETURN	RND/RECT	-/+2"	GS	-	-	-	-	-	-	-	
GENERAL NOTES: A ALL PAINTING BY GENERAL CONTRACTOR. B ALL DUCT JOINTS AND SEAMS SHALL BE SEALED PER OMC CHAPTER 5.			DULE NOTES INCLUDES THE PLENI ROUND RU INSULATEI DUCTWOF	S: DUCTW UM ARE JNOUTS D. 3K WITH	/ork inst A. To air d In 15 ft c	TALLED EVICES DF UNIT	ABOVE SHALL I SHALL E	CEILINGS BE EXTER BE INTERN	ROUTE NALLY	D WITHIN NED.	
ABBREVIATIONS: AIFD ACOUSTICAL INSULATED FLEX-DUCT ALUM ALUMINUM ABA ADHESIVE BACKED ALUMINUM ASJ ALL SERVICE JACKET CS CARBON STEEL D DENSITY (PCF) DWI DOUBLEWALL INSULATED ETPS EXTRUDED POLYSTYRENE FB FIBERGLASS BOARD			DIL FACED JA BERGLASS V RE WRAP ALVANIZED S ALVANIZED S SULATED FL ATT FACED F ERFORATED I	ACKET VRAP STEEL STEEL S EXIBLE FIBERGI FABRIC LINER	PIRAL PIP DUCT ASS DUCT	E	PGGS PVCGS RECT RND SS TH UFD	PAINT PVC (RECT ROUN STAIN THICP UNISI	IGRIP G COATED ANGUL ID ILESS S (NESS JLATED	ALVANIZE) GALVANIZ AR :TEEL FLEXIBLE	D STEEL ZED STEEL DUCT

SPIN-IN BRANCH TAP FITTING, STRAIGHT SIDE WITH MANUAL DAMPER. DAMPER SHAFT IN HORIZONTAL. INTEGRAL INSULATION GUARD SLEEVE REQUIRED FOR TAP FITTING TO MAIN DUCT WITH INTERNAL INSULATION. EXTENDED DAMPER SHAFT AND HANDLE WITH STAND-OFF REQUIRED FOR EXTERNALLY INSULATED DUCTWORK.

LEAST 90% OF FULLY EXTENDED LENGTH.

INDICATED IN ADJACENT SCHEDULE UNLESS NOTED OTHERWISE ON PLANS.

CEILING T-BAR SUPPORT (FOR LAY-IN APPLICATIONS). COORDINATE AND VERIFY T-BAR TYPE FOR COMPATIBILITY WITH GRILLE.

DLING UNIT SCHEDULE

	FAN SCHEDULE													
	MANUF.			ESP	WHEEL		MAX.	EL						
		MODEL	OT M	("WC)	SIZE	DITIVE	SONES	HP/W	VOLT	PHASE				
	GREENHECK	SQ-97-VG	200	0.25	9.5	DIRECT	-	1/15	120	1	1,2			
BLADE	GREENHECK	DC-5-10	46,700	-	-	DIRECT	-	1/4	120	1	3			
BLADE	GREENHECK	DC-5-8	29,000	-	-	DIRECT	-	1/4	120	1	3			

PROVIDE WITH INTEGRAL DISCONNECT SWITCH, BACKDRAFT DAMPER AND MOTOR SPEED SELECTOR. FAN TO BE CONTROLLED BY ADJUSTABLE TIME CLOCK. HOURS TO BE DETERMINED BY OWNER. FAN SHALL BE SECURED TO STRUCTURE PER MANUFACTURER GUIDELINES. FAN SHALL BE CONTROLLED BY WALL MOUNTED

IVAC DESIGN CRITERIA	
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GENERAL DESIGN INFORMATION LOCATION: WINCHESTER, INDIANA

APPLICABLE CODES

MECHANICAL: PLUMBING: ENERGY: VENTILATION:

2014 INDIANA MECHANICAL CODE 2012 INDANA PLUMBING CODE ASHRAE 90.1-2007 ASHRAE 62.1-2016 or 2014 INDIANA

MECHANICAL CODE

OUTDOOR DESIGN INFORMATION SUMMER DRY BULB: 90.3°F (ASHRAE 0.4%) 73.6°F (ASHRAE 0.4%) SUMMER WET BULB: WINTER DRY BULB: 0.6°F (ASHRAE 99.6%)

INDOOR DESIGN INFORMATION

INDOOR SUMMER DRY BULB: 75°F INDOOR SUMMER RELATIVE HUMIDITY: 60% MAX INDOOR WINTER DRY BULB: 70°F INDOOR WINTER RELATIVE HUMIDITY: AMBIENT

Maze Design, Inc 2601 National Road West Richmond, IN 47374 (765)962-1300 E-Mail: di@mazedesigninc.com Building_& Interior Design, Engineering, Construction Management Certified B ENGINEERING 7949 Washington Woods Dr Dayton, OH 45459 www.LtwoE.com PTECH INNOVATION CENTER RANDOLPH CENTRAL SCHOOL CORPORATION WINCHESTER, INDIANA Project No..... 2023|28 Coordinator.... JDO ... 12-08-2023 Date.....

HVAC SCHEDULES & DETAILS

Revision: No. Date

$1 \frac{\text{FIRST FLOOR HVAC PLAN}}{3/16" = 1'-0"}$

- DRAWING NOTES \bigcirc
- EXTEND EXHAUST DUCT TO EXTERIOR WALL AND TERMINATE WITH WALL VENT CAP. 1.
- PROVIDE DUCT SMOKE DETECTOR AND SHUTDOWN RELAY ON RETURN DUCTWORK. ALL WIRING SHALL BE BY THE ELECTRICAL CONTRACTOR. 2.
- NEW ROOFTOP UNIT. UNIT SHALL BE LOCATED A MINIMUM OF 10'-0" FROM EDGE OF BUILDING. BALANCE VENTILATION AIR TO VALUE INDICATED IN SCHEDULE. 3.
- PROVIDE NEW FULLY DIGITAL 7 DAY PROGRAMMABLE TYPE THERMOSTAT WITH CLEAR LOCKABLE COVER. 4.
- COORDINATE DUCTWORK WITH OVERHEAD DOOR TRACK. 5.
- PROVIDE HIGH VOLUME LOW SPEED (HVLS) FAN MOUNTED TO ROOF 6. STRUCTURE.
- 7.
- PROVIDE HVLS FAN CONTROLLER. COORDINATE FAN CONTROLLER LOCATION WITH OTHER TRADES.
- HOLD DUCTWORK TIGHT TO STRUCTURE ABOVE. 8.
- MOUNT AIR DEVICE ON BOTTOM OF DUCT. 9.

drawing

PLUMBING SPECIFICATIONS

Α.	GENER	AL CONDITIONS					G.	INSI	JLA
	1.	WORK UNDER THI	S CONTI	RACT SHALL C	ISIST OF, BUT NOT LIMITED TO; FURNISHINGS, INSTALLAT	ION, TESTING, AND		(INC FIBE	ERG
	2.	PLUMBING SHALL	UMBING	AS INDICATEL	IN THE DRAWINGS AND AS SPECIFIED HEREIN. NSED CONTRACTOR. WARRANTY SHALL BE FOR ONE YEA	AR FROM DATE OF		BE F	-AC
	2	FINAL ACCEPTANC	E.					DEV	/ICE
	3. 4.	WHERE THE WOR	DE SHA	L TO" IS USED	TO MEAN FORMISH AND INSTALL, COMPLETE, AND OPEN TE CONTRACTOR SHALL HAVE THE OPTION OF SELECTING	G BETWEEN ON		CLO FLA)SU ME
		OF THE ADDITION/ APPROVAL.	AL NAME	ES OR MANUFA	FURERS LISTED OR MAY SUBMIT PRODUCTS SUBJECT TO	ENGINEER'S		INSU	JLA
	5.	ALL PERMIT AND I		ION FEES ARE	BE INCLUDED IN CONTRACTOR'S SCOPE.			THE	JLA E FO
	6. 7.	WORK MUST CON	NER CER FORM TO	O ALL APPLICA	PPROVAL FROM INSPECTION AGENCIES. E LOCAL, STATE, AND FEDERAL LAWS; ORDINANCES; ANI	OREGULATIONS.			
В.	INSTALL	LATIONS							
	1.	INSPECT THE EXIS	TING FA	CILITY AND VE	FY LOCATIONS OF ALL EXISTING UTILITIES.				
	2.	DRAWINGS INDICA	TE THE	GENERAL ARF	NGEMENT OF SYSTEMS. HOWEVER, MAKE FIELD ADJUST	MENTS TO INSURE			
	3.	PIPING SHALL NOT	BE INS	TALLED ABOVE	LECTRICAL EQUIPMENT OR ABOVE ACCESS TO SAME PE	R "NEC"			
	4.	GUIDELINES. WORK SHALL BE F	LANNED	O AND EXECUT) TO PROVIDE REASONABLY CONTINUOUS SERVICE OF E	KISTING			
	5	FACILITIES.					Н.	PLU	MB
	Э.	ET. PANELS SHAL		VIMUM 18"x18"	A LARGER AS REQUIRED AND SHALL BE COMPATIBLE WIT	H THE AREA IN		PLA	VI. S TED
		WHICH THEY ARE THE RATING OF TH	INSTALL 1E BUILD	.ed. Panels II DING ELEMENT	FIRE RATED BUILDING ELEMENTS SHALL BE LABELED IN C	OMPLIANCE WITH		WAL AST	L, I M C
	6. 7	PROVIDE ALL CUT	TING AN		CESSARY TO INSTALL THE WORK. SAW CUT OR DRILL OP	ENINGS.			
	7.	AREAS OR OUTSIE	DE THE E	BUILDING SHAL	BE PRIME COATED.		Ι.	VAL T-58	VES 30-7
	8.	OR STEEL PIPE. FI	EVES A	T PENETRATIC PPING SHALL E	S OF BUILDING ELEMENTS. SLEEVES MAY BE GALVANIZED PROVIDED AT ALL PENETRATIONS THROUGH FIRE RATED	ASSEMBLIES.		VAL	VES
		FIRE STOPPING SH	HALL BE	UL LISTED AN	PROVIDE A FIRE RATING EQUAL TO THAT OF THE CONSTR	UCTION BEING		Cir (C	/uL
	9.	ALL WELDERS SH	ALL BE F	ULLY CERTIFIE	IN ACCORDANCE WITH ASME QUALIFICATIONS.		J.	PIPI	NG
	10.	A13.1	BELING A	AND VALVE TAG	ING USING MANUFACTURED LABELS: TAGS IN COMPLIAN	CE WITH ANSI		1.	
	11.	FLUSH NEW PIPIN			ERATION. PROVIDE SERVICES OF A FIRM REGULARLY ENG				
	12.	BALANCE DOMEST		WATER RECIR	LATION SYSTEM TO FLOW RATES INDICATED ON THE DR.	AWINGS.			
	13. 14.	PREPARE TEST AN TEST AND CERTIF	ND INSPE Y BACKF	ECTION REPOR	3. RS AND PRESSURE VACUUM BREAKERS ACCORDING TO	CODE AND		2.	
	15	STANDARD PER A		TY HAVING JUP	DICTION.				
	16.	PROVIDE ATMOSP	HERIC V	ENT DRAIN CO	NECTION ON BACKFLOW PREVENTERS AND EXTEND PIPI	NG TO FLOOR		3	
		DRAIN FOR INDIRE	CT DISC	HARGE WITH	NIMUM 2" AIR GAP.			0.	
C.	INSTALL	LATIONS							
	1.	BEFORE CONSTRU	JCTION (OR INSTALLAT	N OF MATERIALS OR EQUIPMENT; CONTRACTOR SHALL S	UBMIT AN			
	2	ELECTRONIC COP	Y OF SH SHALL II	OP DRAWINGS	O BE REVIEWED BY THE ENGINEER. JAL COMPONENTS MODEL NUMBERS AND ELECTRICAL L	NFORMATION			
	3.	SHOP DRAWINGS	FOR THE	E FOLLOWING	IALL BE SUBMITTED.				
		A. PIPE FITTI	NGS						
		B. VALVES C HEATERS						4.	
		D. PLUMBING	FIXTUR	ES					
		F. DRAINS, C	IN LEANOU	TS, AND CARF	RS				
D	TESTIN	G							
Β.									
	1.	ALL PIPING PROVI A. DOMESTIC	DED SHA WATER	ALL BE PRESSU	E TESTED. AT 125 PSI FOR 1.5 TIMES MAXIMUM OPERATING PRESSU	RE FOR 6 HOURS.			
		B. UNDERGR		ATER: HYDRO	ATIC AT 125 PSI FOR 6 HOURS AND/OR IN CONFORMANCE	E WITH AWWA			
		C. SOIL, WAS	TE, VEN	T, AND STORM	N CONFORMANCE WITH PLUMBING CODE.				
		D. INTERIOR	NATURA	L GAS: 50 PSI (MPRESSED AIR FOR 6 HOURS.				
E.	EXCAVA	ATION: EXCAVATE F	OR ALL		PIPING. BACKFILL AND COMPACT TO FINISH GRADE OR 1 ACTIVITIES PROVIDE COMPACTED BACKFILL OF GRADE	O LEVELS			
	GRADEI	D COURSE SAND, C	OR CRUS	SHED LIMESTO	(MAXIMUM 0.75" SIZE) UNDER ANY PAVED OR OTHER HAI	RD SURFACED			
	AREAS. AND LO	CAL REQUIREMEN	TS. A UT	ALL SUPPORT	SERVICE SHALL BE PROVIDED TO IDENTIFY AND/OR VERIF	THE LOCATION	1.	•	PLL WC
	OF EXIS	STING PRIVATE UTIL	LITIES W	ITHIN THE EXC	/ATION AREA.		2.		PLL
F.	HANGE	RS: ALL INTERIOR	ABOVE		HALL BE SUPPORTED BY ATTACHMENT TO THE BUILDING	STRUCTURAL	3.		WC
	SUPPRE	ESSION HANGER ROD	ND SUPF	ND HANGER/S PORT REQUIRE	PPORT SPACING SHALL BE PER THE FOLLOWING SCHEDU ENTS SHALL BE PER NFPA STANDARDS.	LES. FIRE			AC(
							4.		UN
							5.	•	GO
									DIS
					0.25				EN
				1.25"-3"	0.375"		6.	•	KE
				4"-6"	0.5"		P	IPING	NO
							1.		FIX
							2		SCI AC
									PLL
							3.		PR
			STEEL	-	BASE AND 15'				MA ARI
			COPPI	ER	BASE AND 10'		4.		PLL
			CAST	IRON	BASE AND EACH FLOOR LEVEL		5.	•	RE
			PLAST	-IC	PER MANUFACTURER		6.		DR.
					HORIZONTAL		7.		RO
			STEEL	_/ ≤ 2"	8'		8.	•	INS
			STEEL	_/ 2.5"-6"	10'				RU
			STEFI	./ > 6"	12'		1(0.	GA
					6'		1	1.	TO NA
					<u>ح</u>				FO
				EK/ ≤ 1.5"-2"	o		1:	2.	BAG
			COPPI	EK/ > 2"	10'				TIM AI C
			CAST	IRON	10' AND EACH FITTING/JOINT		1:	3.	DW
			PLAST	-IC	PER MANUFACTURER				WH
							F		1EN
									INS
							1 1		

1. 2. 3.

SULATION: PROVIDE INSULATION ON ALL NEW DOMESTIC WATER AND INTERIOR HORIZONTAL STORM DRAINAGE PIPING CLUDING HORIZONTAL OVERFLOW DRAINAGE PIPING AND THE UNDERSIDE OF ALL ROOF DRAIN SUMPS) WITH ERGLASS/TUBULAR CLOSED CELL PIPE INSULATION IN COMPLIANCE WITH ASHRAE 90.1. FIBERGLASS INSULATION SHALL FACTORY MOLDED TUBULAR FIBERGLASS WITH ALL SERVICE JACKET, INTEGRAL VAPOR BARRIER, AND FACTORY HESIVE OVERLAPPING JOINTS. PROVIDE FACTORY MOLDED PVC COVERS AND INSULATION FOR FITTINGS, VALVES, AND VICES. TUBULAR CLOSED CELL INSULATION SHALL BE FOAM PLASTIC TYPE WITH PRESSURE-SENSITIVE ADHESIVE TAPE OSURE SYSTEM AND/OR VAPOR SEALING ADHESIVE. COMPOSITE INSULATING SYSTEMS SHALL NOT EXCEED A MAXIMUM AME SPREAD OF 25 ADEN SMOKE DEVELOPMENT OF 50 AS ESTABLISHED BY NFPA TEST METHODS. FIBERGLASS SULATION MANUFACTURERS: OWENS-CORNING, JOHNS MANVILLE, MASON, OR KNAUFF. TUBULAR CLOSED CELL SULATION SHALL BE EQUAL TO ARMSTRONG ARMACELL ARMAFLEX 2000. INSULATION THICKNESS SHALL COMPLY WITH E FOLLOWING SCHEDULE:

PIPE SYSTEM	RUNOUTS <12'	≤1"	1.25"-2"	2.5"-4"	5"-6"	≥6"
DOMESTIC COLD WATER	0.5"	0.5"	0.5"	1.0"	1.0"	1.0"
DOMESTIC HOT WATER	0.5"	1.0"	1.0"	1.5"	1.5"	1.5"
DOMESTIC HOT RETURN	0.5"	1.0"	1.0"	1.5"	1.5"	1.5"
STORM (INCLUDING OVERFLOW)	-	-	-	1.0"	1.0"	1.0"

JMBING FIXTURES: PROVIDE PLUMBING FIXTURES COMPLETE WITH SUPPORTS, CARRIERS, AND SUPPLY AND WASTE IM. SUPPLIES TO EACH FIXTURE SHALL BE INDIVIDUALLY VALVED. ALL WASTE AND SUPPLY TRIM SHALL BE CHROME ATED BRASS. FIXTURES SHALL BE WHITE UNLESS OTHERWISE SPECIFIED. SEAL JOINTS AROUND EACH FIXTURE AT THE ALL, FLOOR, AND ANY ADJACENT CONSTRUCTION. JOINT SEALANT SHALL BE ONE PART, MILDEW RESISTANT SILICONE, TM C920, TYPE S, GRADE NS, CLASS 25 WITH FUNGICIDE, EQUAL TO PECORA 898.

LVES: VALVES SHALL BE TWO-PIECE, BRONZE BODY, BALL TYPE, 150 WSP, EQUAL TO NIBCO T-580-70, T-585-70, AND 80-70-66. CHECK VALVES SHALL BE BRONZE, SWING TYPE, 125 WSP, EQUAL TO NIBCO T-413-Y. BALANCING-SHUTOFF LVES SHALL BE GLOBE TYPE, POSITIVE SHUTOFF DESIGN, 125 PSI, WITH MEMORY STOP, GAUGE PORTS, AND PORTABLE UGE KIT, EQUAL TO ARMSTRONG CBV SERIES.

INTERIOR DOMESTIC WATER: PIPING SHALL BE TYPE L SEAMLESS HARD DRAWN COPPER TUBING WITH WROUGHT COPPER OR CAST BRONZE FITTINGS AND SOLDERED JOINTS. SOLDER SHALL BE LEAD-FREE TIN ALLOW, 95-5 TIN-ANTIMONY, OR SILVER BEARING TIN. UNDER FLOOR BURIED PIPING SHALL BE TYPE K SOFT COPPER TUBING WITH SILVER BRAZED JOINTS. PIPE NIPPLES EXTENDING OUT OF THE WALL TO SERVE FIXTURES SHALL BE CHROME PLATED BRASS WITH SCRWED ENDS.

INTERIOR SOIL, WASTE, AND VENT PIPING INCLUDING IN GRADE BELOW THE FLOOR SLAB, SHALL BE SCHEDULE 40 PVC, ASTM D2665, FITTING SHALL BE DRAINAGE TYPE. JOINTS SHALL BE SOLVENT WELDED. FLOOR DRAIN TRAPS SHALL BE THE SAME MATERIAL AS THE CONNECTING PIPING. PROVIDE CLEANOUTS WHERE SHOWN ON THE DRAWINGS AND WHERE REQUIRED BY THE GOVERNING PLUMBING CODE.

EXTERIOR NATURAL GAS SERVICE PIPING: PIPING SHALL BE AS APPROVED BY THE GAS COMPANY. PIPING SHALL BE POLYETHYLENE PLASTIC, PE 2306 OR 2406, TYPE II, GRADE 3, OR PE3406 OR 3408, TYPE III, GRADE 3, CONFORMING TO ASTM D2513. FITTINGS SHALL BE MOLDED POLYETHYLENE AND JOINTS SHALL BE BUTT HEAT-FUSION TYPE CONFORMING TO ASTM D2513 AND D2683. UNDERGROUND VALVES SHALL BE PLASTIC BALL VALVE, 125 PSI, EQUAL TO NORDSTROM POLYVALVE. PROVIDE A VALVE BOX AND COVER AT GRADE. ABOVE GROUND VAVLES SHALL BE IRON BODY LUBRICATED PLUG VALVE, 200 PSI, EQUAL TO NORDSRTOM #142 AND #143. PROVIDE MINIMUM 30" OF BURIAL DEPTH AND A COPPER TRACER WIRE. VERIFY WITH THE GAS COMPANY THE LOCATION OF CONNECTION TO SOURCE, AVAILABLE GAS PRESSURE, SERVICE SIZE, METER AND REGULATOR SETTING REQUIREMENTS, ETC. BEFORE INSTALLING ANY WORK. CONTRACTOR SHALL BE A FULLY QUALIFIED INSTALLER TO PERFORM COVERED TASKS AS REQUIRED BY THE DOT AND PUCO OPERATOR QUALIFICATION RULE AND SHALL BE LISTED AS A QUALIFIED CONTRACTOR OF THE SERVICING GAS COMPANY.

INTERIOR NATURAL GAS PIPING: PIPING SHALL BE SCHEDULE 40 BLACK STEEL, ASTM A53, TYPE E OR F. FITTINGS SHALL BE STEEL WELDING TYPE AND THREADED MALLEABLE IRON TYPE, CONSISTENT WITH JOINT REQUIREMENTS. JOINTS SHALL BE WELDED, EXCEPT THAT THREADED JOINTS MAY BE USED ON THREADED VALVES AND UNIONS, AT FINAL CONNECTIONS TO EQUIPMENT. VALVES, UNIONS, AND THREADED JOINTS ARE NOT PERMITTED IN INACCESSIBLE CONCEALED LOCATIONS. SHUTOFF VALVES 2" AND SMALLER SHALL BE TWO-PIECE FORGED BRASS BALL VALVE, 600 PSI NON-SHOCK WOG, SCREWED ENDS, EQUAL TO HAMMOND 8901. SHUTOFF VALVES 2.5" AND LARGER SHALL BE IRON BODY LUBRICATED PLUG VALVE, 200 PSI, FLANGED ENDS, EQUAL TO NORDSTROM #143. MATERIALS AND INSTALLATION SHALL CONFORM TO THE INTERNATIONAL FUEL GAS CODE AND NFPA 54 NATIONAL FUEL GAS CODE. VENT PIPING SHALL BE EXTENDED INDIVIDUALLY FROM EACH GAS VENTING DEVICE TO OUTSIDE THE BUILDING.

GENERAL NOTES

PLUMBING CONTRACTOR SHALL SECURE AND PAY FOR ALL FEES AND PERMITS ASSOCIATED WITH HIS PORTION OF THE WORK. PLUMBING CONTRACTOR SHALL COORDINATE ALL ASPECTS OF WORK WITH OTHER TRADES PRIOR TO AND DURING

CONSTRUCTION/INSTALLATION. WORK PLANS TO BE CONSIDERED AS DIAGRAMMATIC AND ALONG WITH THE SPECIFICATIONS, REFLECT A MINIMUM ACCEPTABLE STANDARD. ALL WORK SHALL CONFORM TO THE INDIANA PLUMBING CODE, AND THE AMERICANS WITH DISABILITIES ACT GUIDELINES.

UNLESS OTHERWISE NOTED, ALL FLOOR DRAINS SHALL BE THREE (3") INCH IN SIZE. WHEN A CONFLICT BETWEEN PLANS AND SPECIFICATIONS OR NOTES OCCURS. THE ENGINEER SHALL DECIDE WHICH GOVERNS. GENERALLY, THE MORE RESTRICTIVE, MORE SPECIFIC, OR STRICTER PROVISION SHALL GOVERN. IF ANY DISCREPANCIES ARE DISCOVERED ON THE PLANS OR BETWEEN THE PLANS AND THE SPECIFICATIONS, THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER AND OBTAIN CLARIFICATION OF THE INTENT FROM THE ENGINEER PRIOR TO CONSTRUCTION OR INSTALLATION OF PROPOSED IMPROVEMENTS. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE HEIGHTS AND ACCESSIBILITY REQUIREMENTS.

NOTES

FIXTURES TO BE COMPLETE WITH SUPPLY PIPES WITH STOPS. SUPPLIES AND STOPS TO BE CHROME PLATE W/SET SCREW ESCUTCHEONS, WHERE EXPOSED TO VIEW. ACCESSIBLE SHUTOFF VALVES SHALL BE PROVIDED FOR EACH TOILET ROOM AND EXTERIOR WALL HYDRANTS.

PLUMBING CONTRACTOR TO PROVIDE 8"x8" (MIN.) ACCESS PANELS FOR SHUTOFF VALVES WHERE REQUIRED, COORDINATE TYPE AND FINISH WITH DIV. 8 REQUIREMENTS. PROVIDE SHOCK ARRESTORS AT COLD AND HOT WATER CONNECTIONS TO WASHING MACHINE AND REFRIGERATOR ICE

MAKER. PROVIDE AIR CHAMBERS AT WATER SUPPLY CONNECTIONS TO ALL OTHER FIXTURE OR PROVIDE SHOCK ARRESTORS PER FIXTURE GROUP AS RECOMMENDED BY PDI INSTITUTE AND MANUFACTURER. PLUMBING VENTS SHALL BE A MINIMUM OF 12'-0" FROM ANY HVAC OUTDOOR AIR OPENINGS.

PROVIDE CLEANOUTS AT BASE OF ALL DWV AND STORM RISERS AND WITHIN 5'-0" (EITHER SIDE) OF EXTERIOR WALL AS REQUIRED BY CODE, WHETHER OR NOT DIRECTLY INDICATED ON PLUMBING PLAN. DRAINAGE (STORM OR SANITARY) PIPE SIZE BELOW FLOOR TO BE 2" MINIMUM. FOR SIZES REFER TO PLANS AND ISOMETRICS.

ROOF DRAIN PIPING TO BE ROUTED AT 1/8" PER FOOT PITCH UNLESS OTHERWISE NOTED ON DRAWINGS. COORDINATE PLACEMENT OF ROOF DRAINS, ROOF DRAIN OVERFLOW UNITS AND INSTALLATION OF TAPERED ROOF INSULATION. INSULATE ROOF DRAIN ASSEMBLY AND STORM WATER PIPING THE ENTIRE LENGTH OF INITIAL HORIZONTAL RUN INCLUDING ELBOW DOWN TO VERTICAL. REFER TO SCHEDULE FOR ADDITIONAL INFORMATION. ROUTE GAS AND WATER PIPING AS HIGH AS POSSIBLE, OFFSET WHERE IN CONFLICT WITH OTHER TRADES.

GAS MAIN ROUTED THROUGH CEILING SPACE SHALL BE INSTALLED IN SUCH A MANNER SO AS NOT TO SUBJECT PIPING TO POSSIBLE DAMAGE. VALVES SHALL NOT BE INSTALLED IN CEILING SPACE. NATURAL GAS EQUIPMENT CONNECTIONS SHALL BE PROVIDED WITH VALVES, UNIONS, DIRT LEGS, ETC. AS NECESSARY

FOR A COMPLETE INSTALLATION. INSTALL "AGA" APPROVED FLEXIBLE GAS SUPPLY CONNECTION WHERE SPECIFICALLY NOTED. REFER TO DETAILS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. BACKFILL AROUND UNDERGROUND PIPING WITH 3/8" CLEAN (CA-16) GRAVEL ALL AROUND. BACKFILL A MINIMUM OF TWO TIMES THE PIPE OUTSIDE DIAMETER, PRIOR TO FINAL BACKFILL. PVC PIPING SHALL BE PROPERLY SUPPORTED EVERY 4'-0"

ALONG IT'S HORIZONTAL RUN PRIOR TO BACKFILLING. DWV, SUPPLY, GAS AND STORM PIPING ROUTED THROUGH FINISHED AREAS SHALL BE CONCEALED ABOVE CEILING OR IN

FURRED-OUT WALL. DWV, SUPPLY, GAS AND STORM PIPING PIPING SHALL NOT BE EXPOSED IN FINISHED AREAS, EXCEPT WHERE NOTED ON DRAWINGS.

IENT NOTES: INSTALL AL THERMOMETERS IN ACCESSIBLE AND READABLE POSITIONS.

FINISH NOTES:

PAINT ALL PLUMBING PIPE SUPPORTS WITH A RUST INHIBITIVE PRIMER AND TWO COATS OF GLOSS GRAY OR BLACK ENAMEL OR ACRYLIC PAINT.

PAINT ALL UNINSULATED/UNJACKETED PLUMBING PIPING EXPOSED TO OUTDOORS, INCLUDING PIPING COMPONENTS, VALVES, UNIONS, & ETC., WITH ONE COAT OF RUST INHIBITIVE PRIMER AND TWO COATS OF GLOSS ENAMEL OR ACRYLIC PAINT.

THE PLUMBING CONTRACTOR SHALL PROVIDE ALL FIRESTOPPING FOR PLUMBING PIPE PENETRATIONS THROUGH SMOKE AND FIRE RATED ASSEMBLIES. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF ALL RATED ASSEMBLIES. ALL PENETRATIONS SHALL BE FIRESTOPPED TO ORIGINAL ASSEMBLY RATING AND FLOOR PENETRATIONS SEALED WATER TIGHT WITH A FLEXIBLE SEALANT.

SYMBOL DESCRIPTION ABBREVIATIONS V VENT PIPING AAF AMERICAN WITH DISABILITIES ACT SAN- SANITARY PIPING AFF ABOVE FINISHED FLOOR SW GREASE WASTE PIPING BFP BACKFLOW PREVENTER NG NATURAL GAS PIPING CO CLEANOUT DOMESTIC COLD WATER PIPING DS DOWNSPOUT DOMESTIC HOT WATER PIPING DS DOWNSPOUT DOMESTIC HOT WATER RETURN PIPING EX EXISTING		PLUMBIN	G LEGEN	D
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WH WATER HEATER WS WATER SERVICE			WCO	WALL CLEANOUT
WS WATER SERVICE			WH	WATER HEATER
			WS	WATER SERVICE
WIC WATER COOLER			WTC	WATER COOLER
YCO YARD CLEANOUT			YCO	YARD CLEANOUT

PLUMBING INDEX OF DRAWINGS									
NONDER									
P0.1	PLUMBING LEGEND AND GENERAL NOTES								
P0.2	PLUMBING SCHEDULES & DETAILS								
P1.1	PLUMBING FLOOR PLANS								

WATER H	HAMMER ARRESTOR	R SIZING CHART
FIXTURE UNIT RATING	FIXTURE UNIT RATING	PIPE SIZE (FOR 50' OF PIPE LENGTH
1-11	J.R. SMITH 5005	3/4"
12-32	J.R. SMITH 5010	1"
33-60	J.R. SMITH 5020	1"
61-113	J.R. SMITH 5030	1"
114-154	J.R. SMITH 5040	1"
155-300	J.R. SMITH 5050	1"

GENERAL NOTES PIPING WITH SEVERAL FIXTURES ON BRANCH LINE SHALL HAVE ARRESTOR MOUNTED Α. AT THE END OF THE BRANCH LINE BETWEEN THE LAST TWO FIXTURES SERVED.

В. SIZING IS BASED ON 65 PSI OR LESS. WHEN OPERATIONG PRESSURE EXCEEDS 65 PSI,

USE THE NEXT LARGER UNIT. REFER TO P.D.I. (PLUMBING DRAINAGE INSTITUTE STANDARD PDI WH-201) FOR C. ADDITIONAL SIZING PROCEDURES.

NOTE: USE TABLE 10-1 UNIFORM PLUMBING CODE FOR FIXTURES UNITS FOR SIZING WATER HAMMER ARRESTORS. TABLE APPLIES TO BOTH UPC & IPC.

RUNOUTS TO LAST FIXTURE

- PIPING TO LAST

O GAS EQUIPMENT CONNECTION

GAS PIP	PE SIZING
PIPE SIZE (BLACK STEEL)	MAX MBH
0.5"	72
0.75"	151
1"	284
ENERAL NOTES: SIZING BASED PRESSURE, 0.1 TABLE 402.4(2) TOTAL DEVELC	ON LESS THAN 2 PSIG 5 PSIG DROP PER 0 OF IFGC 2 PED LENGTH = 50 FT.

		PLUMBING FIXTURE SCHEDU	LE				
PLAN MARK	FIXTURE TYPE	DESCRIPTION	SAN.	VENT	CW	HW	ACCESSORIES
A1	WATER CLOSET	AMERICAN STANDARD MODEL #2234.001.020 "MADERA", WHITE VITREOUS CHINA; WITH OLSONITE #95 ELONGATED, WHITE, OPEN FRONT, NO COVER SEAT, 3240 STAINLESS HINGE WITH CHECK; 481310-100 BOLT CAPS; SLOAN ROYAL #111-1.6 MANUAL FLUSH VALVE.	3.0"	1.5"	1.00"		
B1	LAVATORY	AMERICAN STANDARD MODEL #0355.012 "LUCERNE", WALL MOUNT, WHITE VITREOUS CHINA, 4" CENTER FAUCET HOLES; ELKAY MODEL #LK422L4, SINGLE CONTROL CENTERSET FAUCET W/ 4" CENTER; 1/2" SUPPLY AND STOP (TWO REQUIRED); 1-1/2" CAST BRASS L.A. P-TRAP. SUPPLY AND INSTALL PLUMEX #3011 WHITE-DRAIN INSULATOR.	1.5"	1.5"	0.50"	0.5"	
B2	SINK	ELKAY MODEL #ELUHAD131650PD STAINLESS STEEL, UNDERMOUNT, ADA, 16"x18.5"x5" SINGLE BOWL, LKPD1 PERFECT DRAIN AND STRAINER INCLUDED; ELKAY MODEL #LK535GN05L2, SINGLE HOLE FAUCET WITH 5" GOOSENECK AND 2" LEVER HANDLE; 1/2" SUPPLY AND STOP (TWO REQUIRED); 1-1/2" CAST BRASS L.A. P-TRAP.	1.5"	1.5"	0.50"	0.5"	

	PLUMBING EQUIPMENT SCHEDULE									
PLAN MARK	DESCRIPTION	COLD WATER	HOT WATER (120°F)	HOT WATER (140°F)	NATURAL GAS	NON POTABLE	WASTE	INDIRECT	FLOOR DRAIN	NOTES
FPWH-1	FREEZE PROOF WALL HYDRANT-WOODFORD MODEL #65 SERIES, FREEZELESS, AUTOMATIC DRAIN, VACUUM BREAKER, BRASS FINISH, AND STAINLESS STEEL TRIM.	0.75"								
EWH-1	ELECTRIC TANKLESS WATER HEATER- EQUAL TO EEMAX LAVADVANTAGE SPEX4208T-N4X: 204V/1PH, 4.1 KW	3/8"	3/8"							
EWH-2	ELECTRIC TANKLESS WATER HEATER- EQUAL TO EEMAX LAVADVANTAGE SPEX4208T-N4X: 204V/1PH, 4.1 KW	3/8"	3/8"							
EWH-3	ELECTRIC TANKLESS WATER HEATER- EQUAL TO EEMAX LAVADVANTAGE SPEX4208T-N4X: 204V/1PH, 4.1 KW	3/8"	3/8"							

	DRAIN AND CLEANOUT SCHEDULE																																
	APPROVED SUPPLIERS -		ΤY	ΡE			BC	DY		0	UTLE	ΞT		SI	FRAIN	NER/	GRA	TE			Т	OP F	INIS	Н		AD	DITIC	DNAL	FEA	ATUF	₹ES		·
PLAN MARK	J.R. SMITH, JOSAM, WATTS, ZURN ZURN CATALOG NO.	FLOOR	ROOF	MALL	DECK	CAST IRON	BRASS	ACID RESIST.	STAINLESS STEEL	SIZE	BOTTOM	SIDE	SIZE	ADJUSTABLE	FLAT	DOME	RECESSED	FUNNEL	HINGED	1/2 GRATE	NICKEL-BRONZE	CAST IRON	POLISHED BRASS	STAINLESS STEEL	ANCHOR FLANGE	FLASHING CLAMP	DBL. DRAINAGE	SED. BUCKET	AUX. STRAINER	GRAVELSTOP	U'DECK CLAMP	TRAP PRIMER	SEE NOTE
DSN-1	JR SMITH #1775			Х					X	3"		Х	3-1/2"		Х								Х		Х								
FD-1	ZN415-BZ1	Х				Х				3"	X		7"		Х							Х				Х	X	Х					1
FCO	ZN1400-BZ1	Х				Х				6"	X		7-7/8"	Х							Х												
GCO	Z1474-VP	Х				Х							-	Х								Х											
RD-1	Z100F				X	Х				3"	X		12-5/16" DIA			Х						Х			Х	Х	X						
OD-1	Z100F W/ 3" DAM				X	Х				3"	Х		12-5/16" DIA			Х						Х			Х	Х	Х						
NOTES:	TES:																																
1.	PROVIDE TRAP SEAL PROTECTION DE	VICE E	EQUAL	. TO Z	1072.																												

NOTES \bigcirc

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- STRUCTURAL FRAMING FOR OPENING. COORDINATE REQUIRED OPENING DIMENSIONS.
- SUPPORT RING. FASTEN TO DUCTWORK AND CHANNEL. 2
- 3 CHANNEL SUPPORT FROM ADJACENT JOISTS.
- FROM EQUIPMENT. 4
- 14" HIGH CURB. EQUAL TO PATE PCA-5. 5
- CURB CAP EQUAL TO PATE PCC. 6
- 7 STORM COLLAR FASTEN TO PIPE.

PLUMBING PLAN - SANITARY 1/4" = 1'-0"

\bigcirc DRAWING NOTES

- . EXTEND 1.5" COLD WATER PIPING TO EXISTING 1.5" MAIN LOCATED IN UTILITY TUNNEL OF EXISTING BUILDING. CONTRACTOR SHALL COORDINATE EXACT TIE-IN LOCATION WITH FACILITY MANAGER PRIOR TO ROUGH-IN.
- 2. ELECTRIC POINT OF USE WATER HEATER MOUNTED BELOW SINK. SET OUTPUT TEMPERATURE TO 110°F MAX. REFER TO INSTANTANEOUS WATER HEATER DETAIL FOR ADDITIONAL INFORMATION.
- 3. REFER TO CIVIL DRAWINGS FOR CONTINUATION.
- 4. ROUTE COLD WATER PIPING IN SOFFIT. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
- 5. PROVIDE DIRT LEG, GAS ISOLATION VALVE, UNION, AND FLEXIBLE HOSE CONNECTION TO MECHANICAL EQUIPMENT. REFER TO DETAIL FOR ADDITIONAL INFORMATION.

<u>GCO</u>

∕-3" SAN

GENERAL LIGHTING/POWER NOTES

- LIGHT FIXTURES DESIGNATED AS "NIGHT LIGHTS" SHALL BE ON UNSWITCHED 1. CIRCUIT, UNLESS NOTED.
- EXIT LIGHTS SHALL BE ON UNSWITCHED CIRCUIT, UNLESS NOTED. 2.
- ALL RECESSED DOWNLIGHTS MOUNTED IN GRID CEILING SHALL BE CENTERED 3. IN CEILING TILE, UNLESS NOTED.
- IN ALL MECHANICAL ROOMS, COORDINATE EXACT LOCATION OF LIGHT 4 FIXTURES WITH HVAC DUCTWORK.
- CONDUCTORS FOR BRANCH CIRCUITRY ARE #12 AWG MINIMUM, UNLESS NOTED. DERATE PER CODE WHERE CIRCUITS ARE COMBINED.
- ALL HOMERUN CONDUCTORS BACK TO PANEL SHALL BE #10 AWG MINIMUM, UNLESS NOTED. PROVIDE A GREEN GROUND CONDUCTOR IN ALL BRANCH CIRCUITRY. DERATE PER CODE WHERE CIRCUITS ARE COMBINED.
- ALL CONDUIT DROPS FOR PLENUM RATED CABLES SHALL BE PROVIDED WITH A 7 CONDUIT BUSHING ABOVE CEILING.
- WHERE TERMINATED IN J-BOX, ALL SPARE CIRCUITRY SHALL BE LABELED WITH 8. PANEL AND CIRCUIT NUMBER.
- COORDINATE WITH MECHANICAL CONTRACTOR AND PROVIDE ALL NECESSARY 9. AUXILIARY CONTACTS, RELAY, ETC. IN MOTOR STARTERS FOR REQUIRED CONTROL OF MECHANICAL EQUIPMENT.
- DO NOT SUPPORT CONDUIT OFF OF CEILING GRID, CEILING GRID SUPPORTS, 10. MECHANICAL SUPPORTS, OR ANY OTHER TRADE'S SUPPORTS. INSTALL CONDUITS AND BOXES ON SEPARATE SUPPORTS FROM BAR JOIST OR STRUCTURE.
- NEW FIRE ALARM DEVICES SHOWN FOR REFERENCE ONLY. FINAL DESIGN AND 11. PERMIT DRAWINGS TO BE PROVIDED BY FIRE ALARM MANUFACTURERS THROUGH A DELEGATED DESIGN APPROACH. ANNUNCIATING STROBES SHALL BE SYNCHRONIZED. PROVIDE ADEQUATE POWER FOR NEW PANELS TO SUPPORT ALL NEW DEVICES PROVIDING ADDITIONAL 20% CAPACITY ON NAC CIRCUIT.

ABBREVIATIONS

А	AMPS
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
BKR	BREAKER
C	CONDUIT
CATV	CABLE TELEVISION
CUH	
CKT	CIRCUIT
Cu	COPPER
F	EXISTING
FF	EXHALIST FAN
	EMERGENCY
C C	
GEI	
GPC	
V	
V \/A\/	
UNU	UNLESS NUTED UTREKWISE

GENERAL PROJECT NOTES

1.	WORK SHALL BE DONE IN ACCORDANCE WITH LOCAL, STATE OF INDIANA, 2009 NEC AND NATIONAL CODES, RECOMMENDATIONS, REGULATIONS, AND REQUIREMENTS.
2.	COORDINATE ELECTRICAL REQUIREMENTS FOR NEW WORK WITH THE PLUMBING AND MECHANICAL CONTRACTORS. VERIFY VOLTAGE, PHASE AND ACCESSORY REQUIREMENTS, SUCH AS MOTOR STARTERS AND DISCONNECTS.
3.	CONTRACTOR SHALL PERFORM ALL CUTTING AND PATCHING AS REQUIRED FOR HIS WORK. OPENING IN WALLS, FLOORS AND CEILINGS SHALL BE FILLED IN, PATCHED, PAINTED AND FINISHED IN A MANNER TO MATCH THE QUALITY OF THE EXISTING, LIKE ADJACENT SURFACES.
4.	NEW OPENINGS IN EXISTING WALLS AND FLOORS SHALL BE CORE DRILLED OR SAW CUT. OPENINGS IN NEW WALLS AND FLOORS SHALL BE PLANNED AND COORDINATED WITH GENERAL CONTRACTOR FOR THE INSTALLATION OF APPROPRIATE SLEEVES.
5.	ALL CONDUIT SHALL BE 3/4" MINIMUM U.N.O. MC CABLE IS ALLOWED.
6.	CONDUIT SHALL BE CONCEALED IN CEILING OR WALLS WHEREVER POSSIBLE.
7.	ALL BRANCH CIRCUITS AND FEEDERS SHALL CONTAIN A GREEN INSULATED GROUND CONDUCTOR. GROUNDING BY MEANS OF RACEWAY IS NOT PERMITTED.
8.	REFER TO MECHANICAL, PLUMBING, AND ARCHITECTURAL PLANS FOR EXACT LOCATION OF EQUIPMENT.
9.	CONTRACTOR SHALL COORDINATE EXACT HEIGHT OF DEVICES DESIGNED AS OVER COUNTER WITH CASE WORK AND FURNITURE DRAWINGS.
10.	VERIFY CEILING TYPES PER THE ARCHITECTURAL REFLECTED CEILING PLAN. PROVIDE APPROPRIATE TYPE FIXTURE, LAY-IN FOR GRID, FLANGE FOR DRYWALL, ETC.
11.	VERIFY AND COORDINATE MOUNTING HEIGHTS AND LOCATIONS OF ALL DEVICES MOUNTED IN CASEWORK OR ABOVE COUNTERS WITH SPECIFIC EQUIPMENT FURNISHED.

12. NO MORE THAN 3 PHASE CONDUCTORS SHALL BE INSTALLED IN ANY ONE CIRCUIT, UNLESS NOTED OTHERWISE. EACH BRANCH CIRCUIT SHALL CONTAIN THEIR OWN NEUTRAL CONDUCTOR. NO SHARED NEUTRALS.

CONTRACTOR SHALL PROVIDE ALL FIRESTOPPING FOR CONDUIT OR CABLE 13. TRAY PENETRATIONS THAT PENETRATE ACOUSTICAL RATED OR SMOKE AND FIRE RATED ASSEMBLIES. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF ALL RATED ASSEMBLIES. ALL RATED PENETRATIONS SHALL BE FIRESTOPPED TO ORIGINAL ASSEMBLY RATING. ALL NON-RATED FLOOR PENETRATIONS SHALL BE SEALED WATER TIGHT WITH A FLEXIBLE SEALANT.

- PROVIDE ALL PULL BOXES, IN ACCESSIBLE AREA, THAT EXCEED NEC 14. NUMBER OF BENDS OR LENGTH IN FEEDER AND BRANCH CIRCUITS. INSTALL BOXES WHERE REQUIRED PER CODE.
- 15. ALL WIRING DEVICES SHALL BE OF HEAVY DUTY COMMERCIAL GRADE CONSTRUCTION. REFER TO ARCHITECTURAL SHEETS AND CODE SHEET FOR ALL FIRE-RATED PARTITION LOCATIONS AND RATINGS. COORDINATE COLORS WITH ARCHITECT.
- 16. CONTRACTOR IS RESPONSIBLE FOR ALL CORE-DRILLS REQUIRED FOR INSTALLATION OF ELECTRICAL WORK.
- ROUTING OF CIRCUITRY INSTALLED IN CASEWORK, CABINETRIES, ETC. 17. SHALL BE COORDINATED FOR PROPER CONCEALMENT AND FUNCTION OF CASEWORK, CABINETRIES, ETC.
- 18. VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION, TRENCHING, OR DRILLING.
- 19. ALL ROOF PENETRATIONS OR PATCHES SHALL BE MADE PER ROOFING MANUFACTURER WARRANTY REQUIREMENTS.
- 20. ALL EXPOSED METAL CONDUITS ARE TO BE PAINTED TO MATCH THE ADJACENT SURFACE. COORDINATION OF PAINTING OF CONDUIT IS TO BE BY THE ELECTRICAL CONTRACTOR, WITH PAINTING BY OTHERS.
- 21. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL REQUIRED JUNCTION BOXES, PULL BOXES. ETC FOR A COMPLETE INSTALLATION PER THE N.E.C. AND LOCAL CODES. ALL CONDUCTORS SHALL BE RATED FOR 90 DEGREE CELSIUS.
- 22. COORDINATE WORK WITH OTHER TRADES. COORDINATION OR SCHEDULING SHALL BE RESPONSIBILITY OF THE INVOLVED CONTRACTORS.
- 23. ALL LOW VOLTAGE CABLING INSTALLED IN SPACES WITHOUT A LAY-IN OR WITH A HARD CEILING SHALL BE INSTALLED IN CONDUIT AND BOXES.

LIGHTING LIGHTING FIXTURE. REFER TO FIXTURE SCHEDULE TYPE. EMERGENCY LIGHTING FIXTURE WITH EMERGENC "NL" INDICATES NIGHT LIGHT CIRCUIT. REFER TO F NL FOR BATTERY REQUIREMENTS. LIGHTING FIXTURE. LETTER INDICATES TYPE. EMERGENCY LIGHTING FIXTURE WITH EMERGENC CEILING MOUNTED EXIT SIGN. REFER TO FIXTURE AREA DENOTES FACE(S) OF UNIT. CONNECT TO LC LIGHTING CIRCUIT. WALL MOUNTED EXIT SIGN. REFER TO FIXTURE SC AREA DENOTES FACE(S) OF UNIT. CONNECT TO LC LIGHTING CIRCUIT. EMERGENCY EGRESS LIGHT. REFER TO FIXTURE CEILING MOUNTED OCCUPANCY SENSOR. SINGLE POLE WALL SWITCH. 120/277 VOLT, 20 AMP THREE WAY WALL SWITCH. 120/277V, 20 AMP. 44" A FOUR WAY WALL SWITCH. 120/277V, 20 AMP. 44" AF OCCUPANCY SENSOR WALL SWITCH. 120/277V, 20 OCCUPANCY SENSOR WALL SWITCH WITH 0-10V D 120/277V, 20 AMP. 44" AFF SINGLE POLE WALL SWITCH WITH PILOT LIGHT. 120 EXTERIOR LIGHT FIXTURE. ER, EXISTING TO REMA FIXTURE. REFER TO FIXTURE SCHEDULE.

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POWER

φ	DUPLEX RECEPTACLE. 120 VOLT, 20 AMP. 18" AFF L
Ψυ	DUPLEX RECEPTACLE WITH USB PLUG. 120 VOLT, 2
Ŧ	DUPLEX RECEPTACLE MOUNTED AT 46" OR ABOVE VOLT, 20 AMP.
₽	DOUBLE DUPLEX RECEPTACLE. 120 VOLT, 20 AMP.
+	120 VOLT DOUBLE DUPLEX, 20 AMP RECEPTACLE N OR 4" ABOVE BACKSPLASH.
$\Phi_{\rm GF/WP}$	DUPLEX RECEPTACLE WITH GROUND FAULT PROT AMP. 18" AFF UNO, WP-WEATHERPROOF BOX
Φ	FLUSH FLOOR DUPLEX RECEPTACLE IN FLOOR BO
φ	120 VOLT SINGLE 20 AMP RECEPTACLE.
₽ _c	DUPLEX RECEPTACLE. CEILING MOUNTED
	SPECIAL PURPOSE RECEPTACE. REFER TO FLOOR FOR NEMA CONFIGURATION.
\$ _m	FRACTIONAL HP MOTOR STARTER WITH THERMAL
<i>\lambda</i>	ELECTRICAL MOTOR.
<unnamed></unnamed>	HOMERUN TO PANELBOARD. NOTION INDICATES P. NUMBER. (ALL CONDUCTORS SHALL BE #10 UNLES OTHERWISE.)
	ELECTRICAL PANELBOARD.
J	JUNCTION BOX.
	CONDUIT STUB-OUT AND CAP BELOW GRADE. MAR GRADE LEVEL.
UE	UNDERGROUND HIGH VOLTAGE OR SECONDARY S
⊢□ _{4X}	SAFETY DISCONNECT SWITCH (NON-FUSED). 4X IN ENCLOSURE TYPE.
гD	SAFETY DISCONNECT SWITCH (FUSED).
гØ	COMBINATON MOTOR STARTER/DISCONNECT. WIT UNIT (FUSIBLE). OR (CIRCUIT BREAKER FOR ELEVA
<u>T1</u>	TRANSFORMER (NUMBER INDICATES WHICH TRAN
HD	HAND DRYER, VERIFY MOUNTING WITH SUPPLIER
	GENERAL
2 E5.0	DETAIL # DETAIL REFERENCE TAG, DRAWING DETAIL SHEETS
\bigotimes	KEYNOTE FOR DRAWING
2 E5.0	DETAIL REFERENCE TAG (SECTION)
<u>EF-1</u>	MECHANICAL EQUIPMENT TAG. REFER TO EQUIPMI SCHEDULE.
Φ	INDICATES NEW WORK.

INDICATES TO BE REMOVED. INDICATES EXISTING TO REMAIN.

ELECTRICAL LEGEND

		FIRE ALARM	
DULE. LETTER INDICATES	F	FIRE ALARM PULL STATION, 44" AFF MOUNTING HEIGHT	Maze
	ÞF	FIRE ALARM HORN/STROBE. 80" AFF MOUNTING HEIGHT	Design. Inc.
GENCY BATTERY BACKUP. TO FIXTURE SCHEDULE	P	FIRE ALARM DUCT MOUNTED SMOKE DETECTOR. S = SUPPLY, R = RETURN - COORDINATE WITH DUCTWORK. MAKE SAMPLING TUBE FULL	2601 National Road West
	-	OPERATION AND 120 VOLT POWER CONNECTION AS SHOWN ON THE	Richmond, IN 47374 (765)962-1300 E-Mail: di@mazedesigninc.com
GENCY BATTERY BACKUP.	IR	MECHANICAL CONTRACTOR. CONNECT TO ALARM SYSTEM.	Building & Interior
URE SCHEDULE, SHADED	<u> </u>	FIRE ALARM CEILING MOUNTED SMOKE DETECTOR.	Design, Engineering, Construction Management
TO LOCAL UNSWITCHED		FIRE ALARM ANNUNCIATOR PANEL.	
RE SCHEDULE. SHADED	<u> </u>	FIRE ALARM STROBE. 80" AFF MOUNTING HEIGHT.	
TO LOCAL UNSWITCHED	- JBL	BLUE EXTERIOR STROBE LIGHT FOR FIRE DEPARTMENT CONNECTION	AND ALL AND
URE SCHEDULE.	WP	WP - WEATHERPROOF	PO SISTED T
	FS	SPRINKLER SYSTEM FLOW SWITCH FURNISHED AND INSTALLED BY THE FIRE PROTECTION CONTRACTOR, CONNECTED BY ELECTRICAL CONTRACTOR.	2 No. PE11800282 =
) AMP. 44" AFF.	Т	SPRINKLER SYSTEM GATE VALVE. SUPERVISORY SWITCH FURNISHED	STATE OF STATE OF
44" AFF		BY ELECTRICAL CONTRACTOR.	All show of the
14" AFF	dF WP	FIRE ALARM STROBE. 80" AFF MOUNTING HEIGHT.	Certified By
V, 20 AMP. 44" AFF		MAGNETIC DOOR HOLD OPEN.	
10V DIMMING.	RPS	FIRE ALARM REMOTE POWER SUPPLY.	
T. 120/277V, 20 AMP. 44" AFF	Z	FIRE ALARM MONITOR MODULE.	
REMAIN, PL1 - NEW	R	FIRE ALARM CONTROL RELAY MODULE.	
	E.O.L.R.	END OF THE LINE RESISTOR.	
	KB	FIRE ALARM CONTROL RELAY MODULE.	2949 Washington Woods Dr
AFF UNO.			Dayton, OH 45459 www.LtwoE.com
OLT, 20 AMP. 18" AFF UNO.		DOOR ACCESS	
BOVE BACKSPLASH. 120	E	ELECTRIC DOOR STRIKE.	
AMP. 18" AFF UNO.		DOOR SWITCH/CONTACT.	
	CR	KEY OR KEYCARD ACTIVATED SWITCH IN TAMPER PROOF ENCLOSURE.	DIECU
CLE MOUNTED AT 46" AFF		WP - WEATHERPROOF.	
	HC	HANDICAP DOOR ACCESS BUITON IN FLUSH WALL BOX.	CENITED
PROTECTION. 120 VOLT, 20		INTRUDER DETECTION SYSTEM	
R BOX	PIR	CEILING MOUNTED MOTION SENSOR DEVICE.	PANIDOLPH
	 КР	CEILING MOUNTED MOTION SENSOR DEVICE.	CENTRAL.
		SECURITY CAMERA	SCHOOL
I OOR PLANS			CORPORATION
		DATA & COMMUNICATION	
RMAL OVERLOADS.	2	DATA /COMMUNICATION OUTLET. TWO PORTS REFER TO DETAIL FOR	WINCHESTER,
			INDIANA
	▼w	WALL PHONE. 54" AFF.	
NLESS NOTED		DATA OUTLET. 18" AFF.	
		DATA/COMMUNTICATION. FOUR PORT DATA, 18" AFF.	Project No 2023/28
MARK STUB-OUT AT	6 V	DATA/COMMUNTICATION. FOUR PORT DATA, 18" AFF.	Coordinator ATD
	WAP	WIRELESS ACCESS CONNECTION POINT WITH CEILING MOUNTED	
		CISCO WIRELESS DEVICE.	Date 12-08-2023
4X INDICATES			Revision
			No. Date
T. WITH HOA SWITCH AT			
	-		
	-		
LIER	-		
VING # REFER TO			
	-		
	-		ELECTRICAL
			LEGEND AND
			GENERAL NOTES
UIPMENT DATA	1		
			ר
		ELECTRICAL INDEX OF DRAWINGS	
	.	SHEET	
		NOIVIDER SHEE I NAME E0.1 ELECTRICAL LEGEND AND GENERAL NOTES	-
		E0.2 ELECTRICAL EQUIPMENT AND LIGHTING SCHEDULE] ,
		E1.1 ELECTRICAL POWER PLAN	
		E1.2ELECTRICAL POWER PLAN - OVERALLE2.1ELECTRICAL LIGHTING PLAN	
		E2.2 SITE LIGHTING PLAN E4.1 PANEL BOARD SCHEDULLES AND SINGLE LINE DIACRAM]
		E4.2 PANELBOARD SCHEDULES AND SINGLE LINE DIAGRAM	drawing

E5.0 ELECTRICAL DETAILS

EO

EQUIP	IENT ELECTRICAL DATA SCHEDULE																								
			LOAD CHARACTERISTICS					STARTER						DISCONNECT					CTRL DEVICE						
PLAN SYMBOL	DESCRIPTION/LOCATION	K K	머	VOLTAGE	PHASE	FLA SPEED	DRIVE	1 YPE NFMA	SIZE FURNISH BV	BY BY	AUXIL. RELAY	LOCATION	ТҮРЕ	FURNISH BY	INSTALL BY	SWITCH/ FUSE SIZE	LOCATION	TYPE FURNISH	BY	BY	PANEL	CIRCUIT	FEEDER SIZE/ RACEWAY	NOTES	PLAN SYMBOL
EF-1	EXHAUST FAN - RESTROOMS	-	1/15	120	1	1 -		-		-	-	-	-	MC	MC	20/NA	NEAR UNIT			-	С	14	(2) #12, #12G IN 3/4"C.	-	EF-1
RTU-1	PACKAGED ROOFTOP AIR HANDLING UNIT	-	-	208	3 4	6.4 -		-		-	-	-	-	MC	EC	70/NA	ON UNIT	- M		ИС	С	38,40,42	(3) #4, #8G IN 1-1/2"C.	-	RTU-1
EWH-1	ELECTRIC TANKLESS WATER HEATER	4.1	-	208	1			-		-	-	-	-	EC	EC	30/NA	NEAR UNIT			-	С	1,3	(2) #10, #10G IN 3/4"C.	-	EWH-1
EWH-2	ELECTRIC TANKLESS WATER HEATER	4.1	-	208	1			-		-	-	-	-	EC	EC	30/NA	NEAR UNIT			-	С	5,7	(2) #10, #10G IN 3/4"C.	-	EWH-2
EWH-3	ELECTRIC TANKLESS WATER HEATER	4.1	-	208	1			-		-	-	-	-	EC	EC	30/NA	NEAR UNIT			-	С	9,11	(2) #10, #10G IN 3/4"C.	-	EWH-3
HV-1	HVLS FAN - CLASSROOM 104	-	1/4	120	1	5.8 -		-		-	-	-	-	EC	EC	30/NA	NEAR UNIT	- E	S E	EC	С	33	(2) #12, #12G IN 3/4"C.	-	HV-1
HV-2	HVLS FAN - CLASSROOM 105	-	1/4	120	1	5.8 -		-		-	-	-	-	EC	EC	30/NA	NEAR UNIT	- E	S E	EC	С	35	(2) #12, #12G IN 3/4"C.	-	HV-2
-	-	-	-	-	-			-		-	-	-	-	-	-	-	-			-	-	-	-	-	-
-	-	-	-	-	-			-		-	-	-	-	-	-	-	-			-	-	-	-	-	-
ABBREVIATIO	NS:	-								•			-					· ·		-				-	
CC - CONTR CP - CORD// EC - ELECTI ES - EQUIPM	OL CONTRACTORFS- FUSED SWITCHPLUGFSC- FIRE SUPPRESSION CONTRACTORRICAL CONTRACTORFSEC- FOOD SERVICE EQUIP. CONTRACTORIENT SUPPLIERFVNR- FULL VOLTAGE NON-REVERSING	OR	GC HC PC SC	- GENE - Heat - Plun - Sprin	ERAL CON ING CON BING CO IKLER CO	NTRACTO TRACTO NTRACTO NTRACTO	or Pr Or Tor		VC TS NFS SW	- VENT - THER 6 - NON - HORS	TILATION C MOSTAT FUSED SV EPOWER	ONTRACTOR VITCH RATED SWITCH													
NOTES: 1 - XXX																									

	LI	GH1	ΓING	; FIX	TURE SCHEDULE														
								CLASSIFICATION		TF	RIM C	OLC	R	ī	MOUNTING	S	IZE (IN	l.)	
FIXTURE SYMBOL	FIXTURE VOLTAGE	FIXTURE INPUT WATTS	TEMPERATURE (K)	DELIVERED LUMENS	MANUFACTURER AND MODEL NUMBER	OTHER ACCEPTABLE MANUFACTURER	DIFFUSER MEDIA	EM - EMERGENCY N - NORMAL HAZ - HAZARDOUS HB - HIGH BAY LB - LOW BAY HM - HIGH MAST	WHITE	NICKEL	CHROME	BRUSHED NICKEL	STANDARD	SEE NOTE	S - SURFACE R - RECESSED SM - STEM MTD. WM - WALL MTD. C - CHAIN MTD. UC - UNDER CAB. CS - CEIL. SURF.	DIAMETER OR WIDTH	LENGTH	DEPTH	NOTES
A1	120	17	4000	1978	RAB #EZPAN2X2-40N/D10	SCHOOL STANDARD	FROSTED POLYSTYRENE	Ν	Х						R	24	24	1.63	2
F1	120	13	4000	1326	PRESCOLITE #LBRST-6RD-M-LS-SL-CWCS9-WH	AS PRE-APPROVED	POLYCARBONATE	Ν	Х						R	6	DIA	4.36	4
H1	120	73	4000	7865	COLUMBIA #SAV-LH-40-8-SB16-CDL-1-BL	AS PRE-APPROVED	SUSPENDED BEAD ACRYLIC	Ν						1	С	16.5	DIA	23.1	-
WP1	120	30	4000	4624	EXO #WGH2-LSCS	AS PRE-APPROVED	BOROSILICATE GLASS	Ν						3	WM	14.3	7.4	9.3	4
-	-	-	-	-	-	AS PRE-APPROVED	-	-	Х	х	х	Х	Х	X	-	-	-	-	-
-	-	-	-	-	-	AS PRE-APPROVED	-	-	Х	Х	Х	Х	Х	X	-	-	-	-	-
X1	-	-	-	-	COMPASS #CCR	AS PRE-APPROVED	EMERGENCY EGRESS	EM	Х						UNIVERSAL	19.25	8.125	1.75	-
ER	-	-	-	-	COMPASS #CORS	AS PRE-APPROVED	EMERGENCY EGRESS	EM	Х						WM-8'-0''	4.5	DIA	6.7	-
	-	-	-	-	COMPASS #CU2	AS PRE-APPROVED	EMERGENCY EGRESS	EM	X						WM-8'-0''	4	9	2.75	-
NOTES	<u> </u>																		

BLACK.
 SCHOOL STANDARD FIXTURE.
 DARK BRONZE.
 FIXTURE LUMENS AND COLOR TEMPERATURE TO BE SET BY EC DURING INSTALLATION.

ELECTRICAL SPECIFICATIONS

GENERAL PROVISIONS

A. REFERENCE

- THE GENERAL CONDITIONS AND OTHER CONTRACT DRAWINGS AS SET FORTH IN THE FOREGOING PAGES ARE HEREBY INCORPORATED INTO AND BECOME A PART OF THE SPECIFICATIONS FOR WORK UNDER THIS PROJECT, INSOFAR AS THEY APPLY HERETO.
- ALL SPECIFICATIONS UNDER THIS DIVISION TITLE ARE DIRECTED TO AND ARE THE RESPONSIBILITY OF THE 2 ELECTRICAL CONTRACTOR. UNLESS OTHER TRADES OR PERSONS ARE SPECIFICALLY MENTIONED, "ELECTRICAL CONTRACTOR" IS INFERRED AND INTENDED.

B. CONTRACT DRAWINGS

- THE DRAWINGS ACCOMPANYING THESE SPECIFICATIONS ARE COMPLEMENTARY EACH TO THE OTHER AND WHAT IS CALLED FOR BY ONE SHALL BE AS IF CALLED FOR BY BOTH.
- CONSULT ALL CONTRACT DRAWINGS WHICH MAY AFFECT THE LOCATION OF EQUIPMENT, CONDUIT AND
- 3.
- APPROVAL BEFORE PROCEEDING WITH THE WORK.

C. JOB-SITE COPY OF DOCUMENTS

- MAINTAIN AT THE SITE, ONE COPY OF ALL DRAWINGS, SPECIFICATIONS, ADDENDA APPROVED SHOP DRAWINGS, CHANGE ORDERS AND OTHER MODIFICATIONS, IN GOOD ORDER AND MARKED TO RECORD ALL CHANGES MADE DURING CONSTRUCTION. THESE SHALL BE AVAILABLE TO THE OWNER'S REPRESENTATIVE. THE DRAWINGS MARKED TO RECORD ALL CHANGES MADE DURING CONSTRUCTION SHALL BE DELIVERED TO THE OWNER'S REPRESENTATIVE FOR THE OWNER UPON COMPLETION OF THE WORK. AN ADDITIONAL SET OF DRAWINGS WILL BE FURNISHED BY THE OWNER'S REPRESENTATIVE FOR THIS PURPOSE UPON REQUEST.
- MANUFACTURER'S DRAWINGS D.
 - THE CONTRACTOR SHALL SUBMIT TO THE ARCHITECT FOR REVIEW, (4) COPIES OF MANUFACTURER'S BOLT SUPPORTS WITH SQUARE ENDS SHALL NOT BE USED AT ANY LOCATION. DRAWINGS AND WIRING DIAGRAMS (OR ELECTRONIC SUBMITTALS IN PDF FORMAT). THE ENGINEER WILL REVIEW CONTRACTOR'S SHOP DRAWINGS AND RELATED SUBMITTALS (AS INDICATED BELOW) WITH RESPECT WIRE AND CABLE TO THE ABILITY OF THE DETAILED WORK, WHEN COMPLETE, TO BE A PROPERLY FUNCTIONING INTEGRAL ELEMENT OF THE OVERALL SYSTEM DESIGNED BY THE ENGINEER. BEFORE SUBMITTING A SHOP DRAWING OR ALL CONDUCTORS SHALL BE STRANDED AND OF THE AWG SIZE AND TYPE SHOWN ON THE DRAWINGS. WHERE NO D. ANY RELATED MATERIAL TO THE ENGINEER, CONTRACTOR SHALL: REVIEW EACH SUCH SUBMISSION FOR SIZE OR TYPE IS SHOWN, CONDUCTORS SHALL NOT BE LESS THAN #12 TYPE XHHW, THHN, OR THWN. ALL CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND OPERATIONS OF CONDUCTORS SHALL BE COPPER AND HAVE 600 VOLT INSULATION; BE UL LABELED AND OF AMERICAN CONSTRUCTION. AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO, ALL OF WHICH ARE THE MANUFACTURER. SOLE RESPONSIBILITY OF CONTRACTOR; APPROVE EACH SUCH SUBMISSION BEFORE SUBMITTING IT; AND SO STAMP EACH SUCH SUBMISSION BEFORE SUBMITTING IT. THE ENGINEER SHALL ASSUME THAT NO SHOP ALL CONNECTIONS ARE TO BE MADE USING PRESSURE TYPE TERMINALS. Β. DRAWING OR RELATED SUBMITTAL COMPRISES A VARIATION UNLESS CONTRACTOR ADVISES ENGINEER THE FOLLOWING COLOR CODE SHALL BE USED: OTHERWISE VIA A WRITTEN INSTRUMENT WHICH IS ACKNOWLEDGED BY ENGINEER IN WRITING. THE ITEMS, C. TYPES OF SUBMITTALS AND RELATED MATERIAL (IF ANY) CALLED FOR ARE INDICATED BELOW

ITEMS SHOP DRAWINGS TYPE SUBMITTALS REQUIRED

LIGHTING FIXTURES

- WIRING DEVICES LIGHTING CONTROLS
- GUARANTEES Ε.
 - THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEFECTS, REPAIRS AND REPLACEMENTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR AFTER DATE OF SUBSTANTIAL COMPLETION AS DETERMINED BY THE OWNER'S REPRESENTATIVE. PRODUCT GUARANTEES GREATER THAN ONE (1) YEAR SHALL BE PASSED ALONG TO THE OWNER FOR FULL BENEFIT OF THE MANUFACTURER'S WARRANTY

WORK INCLUDED

- INSTALLATION, MATERIALS, AND WORKMANSHIP
- FURNISH AND INSTALL ALL NECESSARY ANCHORS, SUPPORTS, STRAPS, BOXES, FITTINGS AND OTHER SIMILAR APPURTENANCES NOT INDICATED ON THE DRAWINGS BUT WHICH ARE REQUIRED FOR A COMPLETE AND PROPERLY INSTALLED SYSTEM CONSISTENT WITH THE ARCHITECTURAL TREATMENT OF THE BUILDING.
- THE ELECTRICAL CONTRACTOR, INSOFAR AS THE WORK IS CONCERNED, SHALL AT ALL TIMES KEEP THE PREMISES IN A NEAT AND ORDERLY CONDITION, AND AT THE COMPLETION OF THE WORK, SHALL PROPERLY CLEAN UP AND CART AWAY DEBRIS AND EXCESS MATERIALS. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF DUMPSTER & REFUSE DISPOSAL AS REQUIRED FOR ELECTRICAL WORK.
- ALL MATERIALS SHALL BE NEW AND UNDETERIORATED AND OF A QUALITY NOT LESS THAN THE MINIMUM SPECIFIED.
- COORDINATION OF PLANS AND SPECIFICATIONS Β.
 - CONTACT THE OWNER'S REPRESENTATIVE IMMEDIATELY IF THERE IS ANY QUESTIONS REGARDING THE MEANING OR INTENT OF EITHER PLANS OR SPECIFICATIONS, OR UPON NOTICING ANY DISCREPANCIES OR OMISSIONS IN EITHER PLANS OR SPECIFICATIONS.

C. CUTTING AND PATCHING

- PATCHING SHALL MATCH EXISTING SURFACES IN KIND AND FINISH AND SHALL BE DONE BY THE GENERAL CONTRACTOR AT THE ELECTRICAL CONTRACTOR'S EXPENSE.
- REPAIR OF DAMAGES, BY THE ELECTRICAL CONTRACTOR, TO NEWLY PATCHED AND REFINISHED AREAS SHALL BE DONE BY THE GENERAL CONTRACTOR AT THE ELECTRICAL CONTRACTOR'S EXPENSE, TO MATCH EXISTING CONDITION.
- WHERE REQUIRED TO MAINTAIN FIRE RATING, OPENINGS SHALL BE SEALED UTILIZING 3M BRAND FIRE BARRIER PENETRATION SEALING SYSTEMS. FIRE BARRIER OR FIRE STOP SYSTEMS FROM CROUSE-HINDS. THOMAS & BETTS OR DOW CORNING MAY BE USED AT CONTRACTOR'S OPTION. THIS INCLUDES HOLES LEFT DUE TO REMOVAL OF EXISTING CONDUITS, BUS DUCT, ETC. OPENINGS SHALL BE TEMPORARILY FIRE STOPPED B. COORDINATE DEVICE COLOR WITH ARCHITECT. UNTIL PERMANENT FIRE STOPPING IS DONE.

D. CLEANING AND PAINTING

- ALL ELECTRICAL EQUIPMENT SHALL BE KEPT DRY AND CLEAN DURING THE CONSTRUCTION PERIOD. 1. INTERIOR OF ALL ENCLOSURES SHALL BE CLEANED OF DIRT AND DEBRIS BEFORE INSTALLING TRIM OR COVERS.
- ALL FINISHED SURFACES OF EQUIPMENT FURNISHED UNDER THIS CONTRACT SHALL BE THOROUGHLY CLEANED OF DIRT AND ALL SCRATCHED OR DAMAGED SURFACES SHALL BE TOUCHED UP WITH MATCHING MATERIALS BEFORE FINAL ACCEPTANCE OF THE WORK.
- WHEN ALL WORK IS COMPLETED AND ALL WORK HAS BEEN SATISFACTORILY TESTED AND ACCEPTED BY THE OWNER'S REPRESENTATIVE, ALL CONDUIT AND OTHER EXPOSED SURFACES SHALL BE THOROUGHLY CLEANED.

CODES AND FEES

A. CODES:

B. FEES:

- ALL WORK PERFORMED UNDER THIS SPECIFICATION SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AS PREPARED AND PUBLISHED BY THE NATIONAL FIRE PROTECTION ASSOCIATION AND ANY APPLICABLE STATE OR LOCAL CODES.
- OBTAIN AND PAY FOR ANY AND ALL PERMITS REQUIRED BY ALL LAWS AND REGULATIONS AND PUBLIC AUTHORITY HAVING SUCH JURISDICTION.

TESTS AND SPECIFICAITONS

D.

С.

D.

- WIRING AND MAKE MINOR ADJUSTMENTS IN LOCATION TO SECURE COORDINATION.
- WIRING LAYOUT IS SCHEMATIC AND EXACT LOCATIONS SHALL BE DETERMINED BY FIELD CONDITIONS.
- OTHER THAN MINOR ADJUSTMENTS SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR

- OBTAIN ALL INSPECTIONS REQUIRED BY ALL LAWS, ORDINANCES, RULES, REGULATIONS OR PUBLIC AUTHORITY HAVING JURISDICTION AND OBTAIN CERTIFICATES OF SUCH INSPECTIONS AND SUBMIT SAME TO THE OWNER'S REPRESENTATIVE. PAY ALL FEES, CHARGES AND OTHER EXPENSES IN CONNECTION THEREIN. OBTAIN OCCUPANCY PERMIT AS REQUIRED BY OWNER. FINAL PAYMENT SHALL NOT BE MADE UNTIL OCCUPANCY PERMIT IS OBTAINED. WORK SHALL BE UNACCEPTABLE WHEN FOUND TO BE DEFECTIVE OR CONTRARY TO THE PLANS SPECIFICATIONS,
- CODES SPECIFIED OR ACCEPTED STANDARDS OF GOOD WORKMANSHIP. THE CONTRACTOR SHALL PROMPTLY CORRECT ALL WORK FOUND UNACCEPTABLE BY THE OWNER'S REPRESENTATIVE WHETHER OBSERVED BEFORE OR AFTER SUBSTANTIAL COMPLETION AND WHETHER OR NOT
- FABRICATED, INSTALLED OR COMPLETED. THE CONTRACTOR SHALL BEAR ALL COSTS OF CORRECTING SUCH UNACCEPTABLE WORK, INCLUDING COMPENSATION FOR THE OWNERS REPRESENTATIVE ADDITIONAL SERVICES MADE NECESSARY THEREBY.
- THE ELECTRICAL CONTRACTOR SHALL TEST AND OBTAIN ACCEPTANCE FOR THE FOLLOWING SYSTEMS: 1. EMERGENCY LIGHTING.
- 2. RECEPTACLE AND EQUIPMENT POWER.
- 3. LIGHTING. 4. LIGHTING CONTROLS
- <u>CONDUIT</u>
- A. FURNISH AND INSTALL ALL CONDUITS, BOXES, FITTINGS, ETC., FOR A COMPLETE RACEWAY SYSTEM.
 - ALL WIRING SHALL BE RUN IN EMT CONDUIT OR MC CABLE UNLESS OTHERWISE NOTED.
 - ALL CONDUIT SIZES STATED HEREIN OR MARKED ON THE DRAWINGS ARE MINIMUM SIZE AND SHALL BE NO LESS THAN 1/2" UNLESS OTHERWISE NOTED.
- ALL CONDUIT SHALL BE SUBSTANTIALLY SUPPORTED BY PIPE STRAPS OR SUITABLE CLAMPS OR HANGERS ATTACHED TO THE ELEMENTS OF THE BUILDING STRUCTURE TO PROVIDE RIGID INSTALLATION; IN NO CASE SHALL CONDUIT BE ATTACHED OR SUPPORTED FROM ADJOINING PIPE OR INSTALLED IN SUCH A MANNER AS TO PREVENT THE READY REMOVAL OF OTHER PIPE FOR REPAIRS. "MINERALAC" TYPE SUPPORTS AND "UNISTRUT" TYPE ONE

	208 VOLT
PHASE A PHASE B PHASE C NEUTRAL FOUIPMENT GROUND	BLACK RED BLUE WHITE GREEN

- CONDUCTORS NO. 10 AWG OR SMALLER SHALL HAVE INSULATION COLORED AS NOTED ABOVE.
- CONDUCTORS NO.8 AWG OR LARGER SHALL HAVE INSULATION COLORED AS NOTED ABOVE OR COLORED TAPE MINIMUM SIZE 1/2", WRAPPED TWICE AROUND AT THE FOLLOWING POINTS:
- 1. AT EACH TERMINAL
- 2. AT EACH CONDUIT ENTRANCE. 3. AT INTERVALS NOT MORE THAN 12 INCHES APART 4. IN ALL BOXES, PANEL TUBS, SWITCHBOARDS, ETC

CORRESPONDING BRANCH-CIRCUIT NUMBERS.

- ALL BRANCH CIRCUITS SHALL BE MARKED IN THE PANELBOARD GUTTERS. MARKERS SHALL INDICATE
- EACH BRANCH CIRCUIT REQUIRING A NEUTRAL SHALL BE FURNISHED WITH A SEPARATE INDIVIDUAL NEUTRAL CONDUCTOR.
- BOXES AND PLATES
- FURNISH AND INSTALL ALL OUTLET, JUNCTION, AND PULLBOXES AS INDICATED ON THE DRAWINGS AND AS NECESSARY TO INSTALL THE REQUIRED CONDUIT AND WIRING IN A NEAT AND WORKMANLIKE MANNER.
- PULLBOXES AND JUNCTION BOXES SHALL BE GALVANIZED AND OF THE CORRECT SIZE AND SIZE AND GAUGE, IN Β. ACCORDANCE WITH CODE REQUIREMENTS AND SHALL BE UL LABELED.
- FLUSH OUTLET, JUNCTION AND PULLBOXES SHALL BE PRESSED STEEL GALVANIZED OR SHERARDIZED AND SHALL BE A MINIMUM OF 4" SQUARE OR OCTAGONAL SIMILAR TO APPLETON #40.
- D. SWITCH PLATES ON FLUSH AND CAST BOXES SHALL BE SIERRA NOS. P-1, P-2, P-3 ETC., AS REQUIRED, AND SHALL BE MADE OF IVORY PLASTIC.
- DUPLEX RECEPTACLE PLATES ON FLUSH AND CAST BOXES SHALL BE SIERRA NO. P-8 IVORY PLASTIC.
- ALL BOXES SHALL BE RIGIDLY SUPPORTED FROM BUILDING STRUCTURE INDEPENDENT OF THE CONDUIT SYSTEM. BOXES CAST INTO MASONRY OR CONCRETE ARE CONSIDERED TO BE RIGIDLY SUPPORTED.
- WIRING DEVICES
- WIRING DEVICES SHALL BE FURNISHED IN STRICT ACCORDANCE WITH THE CATALOG NUMBERS AND MANUFACTURERS LISTED IN THE SCHEDULE WHICH FOLLOWS. OTHER SPECIAL PURPOSE DEVICES SHALL BE AS SPECIFIED ON THE DRAWINGS.

IDENTIFICATION

L.

- EACH PIECE OF ELECTRICAL EQUIPMENT AND INDIVIDUAL SWITCHES, ALL DISCONNECTS, STARTERS ALL EXHAUST Н. FAN MANUAL STARTING SWITCHES, ALL POWER AND LIGHTING PANELS, ALL CABINETS AND PULL BOXES, ETC., SHALL BE IDENTIFIED ON THE FRONT COVER OR TRIM WITH ITS NAME AND/OR DESIGNATION NUMBER OR LETTER AS SHOWN ON THE DRAWINGS AND WITH THE VOLTAGE AVAILABLE WITHIN THE PANEL.
- IDENTIFICATION SHALL BE IN THE FORM OF LAMINATED PLASTIC NAMEPLATES, BLACK FACE, WITH THE LETTERS ENGRAVED INTO THE WHITE BACKGROUND, MINIMUM 1/4" HIGH. PLATES SHALL BE DRILLED ON EACH END FOR SHEETMETAL SCREW ATTACHMENT, NO "DYMO" OR SIMILAR TYPE LABELS WILL BE ALLOWED.
- THE FOLLOWING IS AN EXAMPLE OF THE NAMEPLATE LAYOUT AND WORDING:
- AC-1 DICONNECT 208V - 1 · CKT B-1,2
- PLASTIC NAMEPLATES SHALL BE ATTACHED TO FACE OF ELECTRICAL DEVICE BY SHEETMETAL SCREWS. LOCATE PLATE SO WORDING READS HORIZONTALLY AND PLATE DOES NOT OBSTRUCT OTHER IDENTIFICATION PLATES, LATCHES OR OPERATORS.
- WHERE CIRCUIT BREAKERS OR FUSES ARE APPLIED IN COMPLIANCE WITH THE SERIES COMBINATION RATINGS MARKED ON THE EQUIPMENT BY THE MANUFACTURER, THE EQUIPMENT ENCLOSURE(S) SHALL BE LEGIBLY MARKED IN THE FIELD TO INDICATE THE EQUIPMENT HAS BEEN APPLIED WITH A SERIES COMBINATION RATING. THE MARKING SHALL BE READILY VISIBLE AND STATE "CAUTION - SERIES RATED SYSTEM."

<u>GROUNDING</u>

D.

F.

R

C.

ALL FEEDERS AND BRANCH CIRCUITS OVER 100 VOLTS SHALL INCLUDE A GROUNDING CONDUCTOR SIZED IN ACCORDANCE WITH NEC TABLE 250.122, EXCEPT NOT BE SMALLER THAN #12 FOR POWER AND LIGHTING CIRCUITS AND #14 FOR CONTROL CIRCUITS. ALL GROUND CONDUCTORS SHALL BE GREEN, OR AS SPECIFIED UNDER SECTION "WIRE AND CABLE."

ALL GROUND CLAMPS SHALL BE PENN-UNION "GPL" TYPE OR SIMILAR BY O.Z. OR BURNDY.

CONDUIT FOR SOLITARY GROUND CONDUCTORS SHALL BE RIGID SCHEDULE 40 PVC NON-METALLIC ELECTRICAL CONDUIT WITH UL LABEL. SOLITARY GROUND CONDUCTORS SHALL NOT BE PLACED THROUGH METALLIC SLEEVES OR CONDUITS AND SHALL NOT BE COMPLETELY ENCIRCLED BY METALLIC HANGERS OR SUPPORTS.

THE GROUND CONDUCTOR SHALL BE CONNECTED TO THE NEUTRAL IN ONLY TWO LOCATIONS - ON THE SUPPLY SIDE OF THE SERVICE DISCONNECT MEANS PER NEC 250.24 AND ON SEPARATELY DERIVED SYSTEMS PER NEC 250.30.

AT EACH RECEPTACLE BOX, THE GROUND CONDUCTOR SHALL ENTER AND CONNECT, WITH NORMAL WIRING CONNECTOR, TO: 1) THE GROUND PIGTAIL TO RECEPTACLE; 2) THE GROUND PIGTAIL TO BOX GROUND SCREW; AND 3) THE OUTGOING GROUND CONDUCTOR TO NEXT DEVICE, IF NOT AT END OF RUN, METAL TO METAL CONTACT BETWEEN THE DEVICE YOKE AND THE OUTLET BOX IS NOT ACCEPTABLE AS A BOND FOR EITHER SURFACE MOUNTED BOXES OR FLUSH TYPE BOXES.

CONDUIT SYSTEM SHALL BE ELECTRICALLY CONTINUOUS. ALL LOCK NUTS SHALL CUT THROUGH ENAMELED OR PAINTED SURFACES ON ENCLOSURES, WHERE ENCLOSURES AND NON-CURRENT CARRYING METALS ARE ISOLATED FROM THE CONDUIT SYSTEM, USE BONDING JUMPERS WITH APPROVED CLAMPS. WHERE REDUCING WASHERS ARE USED AND WHERE CONCENTRIC OR ECCENTRIC KNOCKOUTS ARE NOT COMPLETELY REMOVED BONDING BUSHINGS SHALL BE REQUIRED.

LIGHTING FIXTURES

FLUSH FIXTURES MAY BE FURNISHED WITH PRE-WIRED FEATURE PROVIDED THEY ARE UL APPROVED FOR 75.C WIRING AND THE JUNCTION BOX CAPACITY IS SUFFICIENT FOR THE CIRCUIT WIRING REQUIREMENTS.

CLEARANCES FOR RECESSED PORTIONS OF FIXTURES FROM COMBUSTIBLE MATERIAL AND THERMAL INSULATION, SHALL BE IN ACCORDANCE WITH NEC ARTICLE 410.66.

ANY FIXTURES SCRATCHED, BENT, CRACKED OR IN ANY WAY DAMAGED BEFORE ACCEPTANCE BY OWNER SHALL BE REPLACED AT THIS CONTRACTOR'S EXPENSE.

ALL FIXTURES SHALL BE IN WORKING ORDER AT THE TIME OF FINAL ACCEPTANCE OF THE WORK BY THE OWNER. ALL LIGHTING FIXTURES ARE TO BE GROUNDED ON THE INTERIOR OF THE FIXTURE HOUSING, ON CLEAN BARE METAL (FREE OF PAINT). BY USE OF A PIGTAIL AND FASTENED BY A SCREW USED FOR NO OTHER PURPOSE.

1 POWER PLAN - NEW WORK 3/16" = 1'-0"

DRAWING NOTES \bigcirc

- EXHAUST FAN IS TO BE POWERED THROUGH LIGHTING CIRCUIT AND CONTROLLED BY SWITCH IN SPACE. 1.
- COORDINATE EXACT LOCATION OF JUNCTION BOX FOR CEILING FAN. 2.
- PROVIDE NEW 120V-20A CIRCUIT TO RECEPTACLE PROVIDED WITH 3. RTU.
- PROVIDE BOX AND CONDUIT TO ABOVE ACCESSIBLE CEILING OR TO ROOF DECK FOR FUTURE ACCESS CONTROLS BY OWNER. PROVIDE WEATHERPROOF COVER FOR EXTERIOR BOXES. 4.
- PROVIDE SINGLE-GANG BOX AND CONDUIT TO ROOF DECK FOR FUTURE EQUIPMENT BY OWNER. 5.

Construction Management
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CENTRAL SCHOOL CORPORATION WINCHESTER, INDIANA
Project No 2025/28 Coordinator Author Date
ELECTRICAL POWER PLAN
drawing

○ DRAWING NOTES

- LOCATION OF EXISTING PANELBOARD 'C' TO BE RELOCATED. 1.
- RUN NEW FEEDERS ABOVE EXISTING CEILING NEAR WALLS, AS POSSIBLE. COORDINATE WITH EXISTING UTILITIES. REFER TO SINGLE-LINE DIAGRAM FOR NEW FEEDER REQUIREMENTS. 2.
- RELOCATE PANELBOARD 'C' TO LOCATION INDICATED. PROVIDE NEW COVER FOR RECESSED MOUNTING. 3.
- 4. UTILIZE EXISTING CIRCUIT BREAKER IN DISTRIBUTION PANEL SERVING PANELBOARD 'C'.

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CORPORATION WINCHESTER, INDIANA
Project No 2023128 Coordinator Author
Date 12-08-2023 Revision: No. Date
ELECTRICAL POWER PLAN - OVERALL
drawing EL2

WALK

1 LIGHTING PLAN - NEW WORK 3/16" = 1'-0"

\bigcirc DRAWING NOTES

- 1. MOUNT FIXTURES APPROXIMATELY 12'-6" AFF TO BOTTOM OF FIXTURE. COORDINATE WITH STRUCTURAL ELEMENTS.
- 2. REFER TO LIGHTING CONTROL DETAILS, SHEET E5.0, FOR REQUIREMENTS.
- 3. PROVIDE CONNECTION FROM HVLS FAN TO FAN MANUFACTURER PROVIDED CONTROLS.

○ DRAWING NOTES

1. EXISTING LIGHTING POLE AND FIXTURE TO REMAIN.

2. EXISTING LIGHTING POLE AND FIXTURE TO BE REMOVED AND TURNED OVER TO OWNER.

3. VERIFY ROUTING OF EXISTING SITE LIGHTING CIRCUIT TO ENSURE REMAINING FIXTURES OPERATE AS BEFORE.

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PTECH INNOVATION CENTER RANDOLPH CENTRAL SCHOOL CORPORATION WINCHESTER,
INDIANA Project No 2023128 Coordinator Author Date
SITE LIGHTING PLAN
$\mathbb{E}^{2.2}$

Branch Panel: C

Location: Supply From: DP2

Mounting: Surface Enclosure: Type 1

Notes:

скт	Circuit Description	Trip	Poles
1	EWH-1	30 A	2
3			
5	EWH-2	30 A	2
7			
9	EWH-3	30 A	2
11			
13	RCPT - TELEVISION	20 A	1
15	RCPT - TELEVISION	20 A	1
17	RCPT - BREAKOUT 106	20 A	1
19	RCPT - BREAKOUT 107	20 A	1
21	RCPT - CLASSROOM 105	20 A	1
23	RCPT - CLASSROOM 105	20 A	1
25	RCPT - CLASSROOM 104	20 A	1
27	RCPT - CLASSROOM 104	20 A	1
29	RCPT - CLASSROOM 104	20 A	1
31	RCPT - CLASSROOM 104	20 A	1
33	FAN - CLASSROOM 104	20 A	1
35	FAN - CLASSROOM 105	20 A	1
37	SPARE	20 A	1
39	SPARE	20 A	1
41	SPARE	20 A	1
	1	Tot	al Load
		Tota	I Amps

Legend:

Load Classification HVAC Motor Other Receptacle Lighting

Connected Loa 29016 VA 0 VA 1056 VA 10620 VA 3056 VA

124 A

Notes:

Volts: 120/208 Wye Phases: 3 Wires: 4

ad	Demand Factor	Estimated Demand
	100.00%	29016 VA
	0.00%	0 VA
	100.00%	1056 VA
	97.08%	10310 VA
	100.00%	3056 VA

126 A

117 A

A.I.C. Rating: Mains Type: MLO Mains Rating: 225 A MCB Rating: 0 A

Trip Circuit Description	СКТ
0 A LTG - CLASSROOM 104	2
0 A LTG - CLASSROOM 104	4
0 A SPARE	6
	8
0 A SPARE	10
	12
0 A LTG - ENTRY / RESTROOMS	14
0 A LTG - EXTERIOR	16
0 A LTG - CLASS ROOM 105 / BREAKOUT ROOMS	18
0 A SPARE	20
0 A RCPT - CLASSROOM COUNTER	22
0 A RCPT - CLASSROOM COUNTER	24
0 A RCPT - CLASSROOM COUNTER	26
0 A RCPT - CLASSROOM 104 - ABOVE CABINET	28
0 A RCPT - CLASSROOM 104 - ABOVE CABINET	30
0 A RCPT - RESTROOMS / ENTRY	32
0 A RCPT - ROOFTOP	34
0 A SPARE	36
0 A RTU-1	38
	40
	42

Panel Totals

Total Conn. Load: 43748 VA Total Est. Demand: 43438 VA Total Conn.: 121 A Total Est. Demand: 121 A

Branch Panel: DP2

Location:

Supply From: Mounting: Surface Enclosure: Type 1

Notes:

СКТ	Circuit Description	Trip	Poles		4		З		C	Poles	Trip	Circuit Description	СК
1	DATA	200 A	3	0	0					3	200 A	A	2
3						0	0						4
5								0	0				6
7	С	200 A	3	14762	0					3	200 A	В	8
9						13990	0						10
11								14996	0				12
13	D	100 A	3	0	0					3	100 A	КС	14
15						0	0						16
17								0	0				18
19	SPACE		3							3		SPACE	20
21													22
23													24
	1	Tota	Total Load:		14762 VA		O VA	14996 VA			1	1	I
		Tota	I Amps:	12	4 A	11	7 A	12	6 A	_			
Legend	1:		•										

oad Classification	Connected Load	Demand Factor	
IVAC	29016 VA	100.00%	
lotor	0 VA	0.00%	T
Other	1056 VA	100.00%	
Receptacle	10620 VA	97.08%	
ighting	3056 VA	100.00%	
lotes:			

Volts: 120/208 Wye Phases: 3 Wires: 4

A.I.C. Rating: Mains Type: Mains Rating: 800 A MCB Rating: 800 A

- REMOVE AND RELOCATE PANELBOARD

120/208V KC MLO 3PH-4W 100A 42 POLE

120/208V D MLO 3PH-4W 125A 42 POLE

120/208V E MLO 3PH-4W 100A 42 POLE

Estimated Demand

29016 VA

0 VA

1056 VA

10310 VA 3056 VA

Panel Totals

Total Conn. Load: 43748 VA Total Est. Demand: 43438 VA Total Conn.: 121 A Total Est. Demand: 121 A

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Maze

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Building & Interior Design, Engineering, Construction Management

No. PE11800282

PTECH INNOVATION CENTER

RANDOLPH CENTRAL SCHOOL CORPORATION

WINCHESTER, INDIANA

Project No..... 2023|28 Coordinator.... Author

Date..... 12-08-2023

Revision: No. Date

PANELBOARD SCHEDULES AND SINGLE LINE DIAGRAM

E4.1

drawing

Branch Panel: A

Location: Supply From: DP2 Mounting: Surface Enclosure: Type 1

СКТ	Circuit Description	Trip	Poles		Α		B	(Poles	Trip	Circuit De	escription	0
1	SPARE	20 A	1	0	0					1	20 A	SPARE		
3	SPARE	20 A	1			0	0			1	20 A	SPARE		
5	SPARE	20 A	1					0	0	1	20 A	SPARE		
7	SPARE	20 A	1	0	0					1	20 A	SPARE		
}	SPARE	20 A	1			0	0			1	20 A	SPARE		
11	SPARE	20 A	1					0	0	1	20 A	SPARE		
13	SPARE	20 A	1	0	0					1	20 A	SPARE		
15	SPARE	20 A	1			0	0			1	20 A	SPARE		
17	SPARE	20 A	1					0	0	1	20 A	SPARE		
19	SPARE	20 A	1	0	0					1	20 A	SPARE		
21	SPARE	20 A	1			0	0			1	20 A	SPARE		
23	SPARE	20 A	1					0	0	1	20 A	SPARE		
25	SPARE	20 A	1	0	0	-				1	20 A	SPARE		
27	SPARE	20 A	1			0	0			1	20 A	SPARE		
29	SPARE	20 A	1					0	0	1	20 A	SPARE		
31	SPARE	20 A	1	0	0					1	20 A	SPARE		
33	SPARE	20 A	1			0	0			1	20 A	SPARE		
35	SPARE	20 A	1					0	0	1	20 A	SPARE		
37	SPARE	20 A	1	0	0					1	20 A	SPARE		
39	SPARE	20 A	1			0	0			1	20 A	SPARE		
41	SPARE	20 A	1					0	0	1	20 A	SPARE		
		Tota	al Load:	0	VA	0	VA	0 \	VA					
		Tota	I Amps:	C	A (0	A	0	A					
Legeno Load C	l: lassification	Con	nected L	.oad	Der	mand Fa	ctor	Estim	nated De	emand		Panel	Totals	
												Total Conn. Load:	0 VA	
												Total Est. Demand:	0 VA	
												Total Conn.:	0 A	
												Total Est. Demand:	0 A	

Branch Panel: B

Location: Supply From: DP2 Mounting: Surface Enclosure: Type 1

	Notes:				
СКТ	СКТ	Circuit Description	Trip	Poles	
2	1	SPARE	20 A	1	
4	3	SPARE	20 A	1	
6	5	SPARE	20 A	1	
8	7	SPARE	20 A	1	
10	9	SPARE	20 A	1	
12	11	SPARE	20 A	1	
14	13	SPARE	20 A	1	
16	15	SPARE	20 A	1	
18	17	SPARE	20 A	1	
20	19	SPARE	20 A	1	
22	21	SPARE	20 A	1	
24	23	SPARE	20 A	1	
26	25	SPARE	20 A	1	
28	27	SPARE	20 A	1	
30	29	SPARE	20 A	1	
32	31	SPARE	20 A	1	
34	33	SPARE	20 A	1	
36	35	SPARE	20 A	1	
38	37	SPARE	20 A	1	
40	39	SPARE	20 A	1	
42	41	SPARE	20 A	1	
			Tota	al Load:	
			Tota	I Amps:	
	Legenc	l:			
	Load C	lassification	Con	nected L	oa
	Notes:				

Location: Supply From: DP2 Mounting: Surface Enclosure: Type 1

скт	Circuit Description	Trip	Poles
1	VRV-1 (EXISTING)	20 A	2
3			
5	VRV-3 (EXISTING)	20 A	2
7			
9	VRV-5 (EXISTING)	20 A	2
11			
13	SPARE	20 A	2
15			
17	SPARE	20 A	1
19	SPARE	20 A	1
21	SPARE	20 A	1
23	SPARE	20 A	1
25	SPACE		1
27	SPACE		1
29	SPACE		1
		Tot	al Load:
		Tota	I Amps:
Legend	1 :	Tota	I Am
Load C	lassification	Con	nected

4	E	8		C	Poles	Trip	Circuit Description	
0					1	20 A	SPARE	+
	0	0			1	20 A	SPARE	
			0	0	1	20 A	SPARE	
0					1	20 A	SPARE	
	0	0			1	20 A	SPARE	
			0	0	1	20 A	SPARE	
0					1	20 A	SPARE	
	0	0			1	20 A	SPARE	
			0	0	1	20 A	SPARE	
0					1	20 A	SPARE	
	0	0			1	20 A	SPARE	
			0	0	1	20 A	SPARE	
0					1	20 A	SPARE	
	0	0			1	20 A	SPARE	
			0	0	1	20 A	SPARE	
0					1	20 A	SPARE	
	0	0			1	20 A	SPARE	
			0	0	1	20 A	SPARE	
0					1	20 A	SPARE	

A.I.C. Rating:

Mains Type: MLO

Mains Rating: 200 A

MCB Rating: 0 A

Volts: 120/208 Wye Phases: 3 Wires: 4

Volts: 120/208 Wye Phases: 3 Wires: 4

A.I.C. Rating: Mains Type: MLO Mains Rating: 200 A MCB Rating: 0 A

Circuit Description

СКТ

2 4 6

8

42

30

р	Poles		Α		В		с	Poles	Trip	Circuit Descript	
A	1	0	0					1	20 A	LIBRARY (EXISTING)	
А	1			0	0			1	20 A	LIBRARY (EXISTING)	
А	1					0	0	1	20 A	LIBRARY (EXISTING)	
А	1	0	0					1	20 A	COMPUTER LAB (EXISTING)	
A	1			0	0			1	20 A	COMPUTER LAB (EXISTING)	
А	1					0	0	1	20 A	COMPUTER LAB (EXISTING)	
А	1	0	0					1	20 A	COMPUTER LAB (EXISTING)	
А	1			0	0			1	20 A	COMPUTER LAB (EXISTING)	
А	1					0	0	1	20 A	COMPUTER LAB (EXISTING)	
A	1	0	0					1	20 A	COMPUTER LAB (EXISTING)	
А	1			0	0			1	20 A	COMPUTER LAB (EXISTING)	
A	1					0	0	1	20 A	COMPUTER LAB (EXISTING)	
A	1	0	0					1	20 A	COMPUTER LAB (EXISTING)	
A	1			0	0			1	20 A	SPARE	
A	1					0	0	1	20 A	SPARE	
A	1	0	0					1	20 A	SPARE	
A	1			0	0			1	20 A	SPARE	
A	1					0	0	1	20 A	SPARE	
A	1	0	0					1	20 A	SPARE	
A	1			0	0			1	20 A	SPARE	
A	1					0	0	1	20 A	SPARE	
Tota	al Load:	0	VA	0	VA	0	VA				
ota	l Amps:	C) A	0	Α	0	A	_			
Con	nected L	.oad	Den	nand Fa	ictor	Estin	nated De	emand		Panel Totals	

or	Estim	ated De	mand		
	0	А			-
۱	0 \	VA			
	0	0	1	20 A	SPARE
0			1	20 A	SPARE
			1	20 A	SPARE
	0	0	1	20 A	SPARE
0			1	20 A	SPARE
			1	20 A	SPARE
	0	0	1	20 A	SPARE

Total Est. Demand: 0 A

	A	4	E	3	(C		Poles	
	0	0					2	
			0	0				
					0	0	2	
	0	0						
			0	0			2	
					0	0		
	0	0					2	
			0	0				
					0	0	1	
	0	0					1	
			0	0			1	
					0	0	1	
							1	
							1	
							1	
:	0 \	VA	0 \	VA	0 \	0 VA		
:	: 0 A		0	Α	0			

Total Amps.	0 7	0 A	UA
Connected Load		emand Factor	Estimated Demand

A.I.C. Rating: Mains Type:	
Mains Rating:	100 A
MCB Rating:	100 A

Trip	Circuit Description
20 A	VRV-2 (EXISTING)
20 A	VRV-4 (EXISTING)
20 A	SPARE
20 A	SPARE
20 A	SPARE
	SPACE
	SPACE
	SPACE

Panel Totals

Total Conn. Load: 0 VA Total Est. Demand: 0 VA Total Conn.: 0 A Total Est. Demand: 0 A

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WINCHESTER,
INDIANA
Project No 2023/28
Coordinator Author
Date 12-08-2023
No. Date
PANELBOARD
DCHEVULED

drawing E4.2

120V CKT C-2

O O CAT5E DIGITAL DIMMER SWITCH

120V CKT C-16	1-ZONE, SWITCHING ROOM CONTROLLER - 'EXTERIOR'	CAT5E	PC)	120V	СКТ С-4
		120V	——O _{F1} ——모 _{WP1}		
SEQUENCE OF OPERATION 1. EXTERIOR LIGHTING ON/AUTOMATIC OFF. 2. AUTOMATIC CONTRO CLOCK. 3. PHOTOCELL SHALL F STORMS, ETC.	SHALL OPERATE A DLS BY INTEGRAL A PROVIDE BACKUP (S AUTOMATIC STRONOMICAL	TIME IG		<u>SEC</u> 1. 2. 3. 4. 5.
<u>BASIS OF DESIGN:</u> WATTSTOPPER DLM, CURRE	ENT NX, OR APPRO	VED EQUAL.			<u>BAS</u> WA
<u>CLASSROOM</u> <u>CON</u>	<u>/I 104 DIM</u> TROLS	<u>MING</u>			

DETAIL NOTES:

- 120V RECEPTACLE BRANCH CIRCUIT. 1.
- REFER TO POWER PLANS 3/4" CONDUIT WITH CABLES TO
- CABLETRAY/DATA/COMM. BACKBOARD. ROOF SWITCH LEG. 3.

DC DATA/COMMUNICATIONS OUTLET

00 DOUBLE DUPLEX 120V POWER OUTLET

T TELEPHONE OUTLET

0 120V POWER OUTLET

OR 4" ABOVE BACKSPLASH 4. STUB 1" CONDUIT TO ABOVE 5.

ACCESSIBLE CEILING. PROVIDE BUSHING

LEGEND

TV AV BOX

SWITCH

QUENCE OF OPERATION CLASSROOM LIGHTING SHALL OPERATE AS MANUAL

- ON/AUTOMATIC OFF. MANUAL SWITCH LOCATED AS SHOWN
- ON PLANS. AUTOMATIC OFF CONTROLS BY OCCUPANCY SENSORS.
- MANUAL SWITCHES SHALL VISUALLY INDICATE LOCATION WHILE OFF.
- MANUAL SWITCHES SHALL PROVIDE ON-RAISE-LOWER-OFF OPERATIONS.
- REFER TO PLANS FOR QUANTITIES OF SWITCHES AND SENSORS.

<u>SIS OF DESIGN:</u> ATTSTOPPER DLM, CURRENT NX, OR APPROVED EQUAL.

CLASSROOM 104 DIMMING CONTROLS

<u>BASIS OF DESIGN:</u> WATTSTOPPER DLM, CURRENT NX, OR APPROVED EQUAL.

CLASSROOM 105 AND BREAKOUT AREAS DIMMING CONTROLS

SEQUENCE OF OPERATION 1. CLASSROOM AND BREAKOUT AREA LIGHTING SHALL

LOCATED AS SHOWN ON PLANS.

WHILE OFF.

SENSORS.

OPERATIONS.

3.

4.

5.

OPERATE AS MANUAL ON/AUTOMATIC OFF. MANUAL SWITCH

AUTOMATIC OFF CONTROLS BY OCCUPANCY SENSORS.

REFER TO PLANS FOR QUANTITIES OF SWITCHES AND

MANUAL SWITCHES SHALL VISUALLY INDICATE LOCATION

MANUAL SWITCHES SHALL PROVIDE ON-RAISE-LOWER-OFF

SEQUENCE OF OPERATION 1. ENTRY LIGHTING SHALL OPERATE AS TIME CLOCK ON/TIME CLOCK OFF PER INTEGRAL TIMECLOCK. PROGRAM SHALL MATCH EXISTING SCHOOL COORIDOR

- SCHEDULE. RESTROOM LIGHTING SHALL OPERATE AS AUTOMATIC 3.
- ON/AUTOMATIC OFF.
- AUTOMATIC ON/OFF CONTROLS BY OCCUPANCY SENSORS. REFER TO PLANS FOR QUANTITIES OF SWITCHES AND SENSORS.

<u>BASIS OF DESIGN:</u> WATTSTOPPER DLM, CURRENT NX, OR APPROVED EQUAL.

ENTRY/RESTROOM SWITCHING CONTROLS

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DETAILS
E5.0