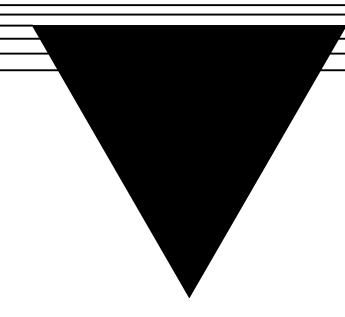
OFFICE ADDITION FOR:

ST GREGORY SCHOOL

330 SAMUELS LOOP COX CREEK, KY 40013



ARCHITECT:

KEYES ARCHITECTS AND ASSOCIATES
4717 PRESTON HIGHWAY
LOUISVILLE, KENTUCKY 40213
PH: (502) 636-5113
CONTACT: DEBORAH BIRD
EMAIL: DBIRD@KEYESARCHITECTS.COM
ARCHITECT: CHARLES J. KEYES III

MEP ENGINEER:

E.C. ENGINEERING INC
P.O. BOX 31
GOSHEN KY 40026
PH: 502-494-4219
CONTACT: ERNIE CRUSE
EMAIL: ECRUSE@ENGLTG.COM

OWNER:

ST GREGORY CATHOLIC CHURCH

330 SAMUELS LOOP

COX CREEK, KY 40013

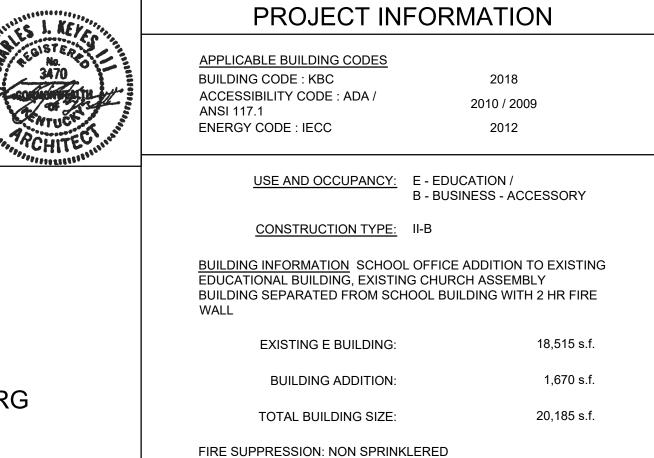
PH: (502) 348-6337

CONTACT: CAMILLE BOON

EMAIL: CAMILLE.BOONE@STGREGORYPARISH.ORG

CIVIL ENGINEER:

SPAULDING SURVEYING, LLC
895 SPAULDING LANE
SPRINGFIELD, KY 40069
PH: (859) 805-0561
CONTACT: WILLIAM SPAULDING JR
EMAIL: WILL@SPAULDINGSURVEYING.COM



OCCUPANCY ALLOWANCE								
FUNCTION OF SPACE	ALLOWANCE	AREA	OCCUPANCY					
SCHOOL OFFICES	100 GROSS	1,670 S.F	16					
TC	16							
DEVICIONS.		Λ.	NOTE					

RE	/ISIOI	NS:	1	SYMBOL

	Sheet List Table
Sheet Number	Sheet Title
T1.01	Title Sheet
Civil Plans	
C0.0	Civil Cover Sheet
C0.1	General Notes
C1.1	Demolition Plan
C2.1	Site Layout
C3.1	Grading & Drainage Plan
C4.1	Utility Plan
Life Safety Plans	
LS1.01	Life Safety Plan
LS1.02	Life Safety Plan
Demolition Plans &	Details
D1.01	Demolition Plan
Foundation Plans &	Details
F1.01	Foundation Plan
F2.01	Foundation Details
Floor Plans	
A1.01	School Office Floor Plan
A1.02	Roof Plan
Exterior Elevations	
A2.01	Exterior Elevations
Schedules and Star	ndards
A3.01	Commercial ADA-Ansi Guidelines
A3.02	Accessibility Site Details
Details & Sections	
A5.01	Wall Sections and Details
A5.02	Wall Sections and Details
A5.03	Cabinetry Details
A6.01	Door and Window Details
Mechanical	
M0.01	General Mechanical Notes
MD1.01	Mechanical Demo Plan
M1.01	Mechanical Floor Plan
M5.01	Mechanical Schedule
M8.01	Mechanical Specifications
M8.02	Mechanical Specifications

Mechanical Specifications

Plumbing		
P1.01	Plumbing Notes and Risers	
P1.02	Plumbing Floor Plan	
P1.03	Plumbing Gas Floor Plan	
Electrical		
ED1.0	Electrical Demolition Plan	
ED2.0	Demolition Panel Schedules	
E1.01	Power Plan	
E1.02	Lighting Plan	
Specifications		
SP1.01	Specifications	
SP1.02	Specifications	
SP1.03	Specifications	

ST. GREGORY SCHOOL - PHASE 1 BUILDING ADDITIONS

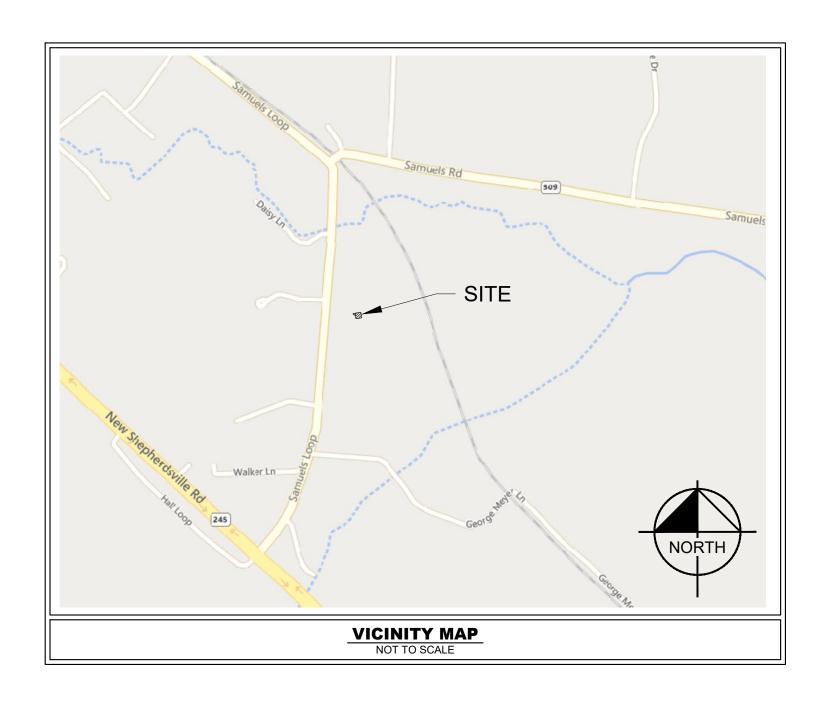
350 SAMUELS LOOP COXS CREEK, KENTUCKY

BID SET:

07/01/24

SITE DATA TABLE						
SITE ADDRESS	COXS CREE	JELS LOOP K, KENTUCKY, 0013				
TAX MAP	MAP 31SSW I	PARCEL 05-004				
OVERALL AREA	EXISTING	PROPOSED				
SITE AREA	7.27 AC	7.27 AC				
DISTURBED AREA	N/A	0.15 AC				
IMPERVIOUS AREA	3.13 AC	3.14 AC				
PERVIOUS AREA	4.14 AC	4.13 AC				
OPEN SPACE	56.9%	56.8%				

EXISTING PROPERTY SUMMARY						
PROPERTY ADDRESS:	350 SAMUELS LOOP COXS CREEK, KENTUCKY					
MAP AND PARCEL ID:	MAP 31SSW, PARCEL 05-004					
U.S. FEMA FIRM PANEL:	21179C0025E DATED 05/23/23					
EXISTING ZONING: EXISTING LAND USE:	A1 SCHOOL					



COXS CREEK NELSON COUNTY, KENTUCKY

Sheet List Table								
Sheet Number	Sheet Title							
C0.0	COVER							
C0.1	GENERAL NOTES							
C1.1	DEMOLITION PLAN							
C2.1	SITE LAYOUT							
C3.1	GRADING AND DRAINAGE PLAN							
C4.1	UTILITY PLAN							

OWNER / DEVELOPER



ST. GREGORY SCHOOL 350 SAMUELS LOOP COXS CREEK, KENTUCKY, 40013 PHONE: 502-348-9583 **CONTACT: TIM HUTCHINS**

PLANS PREPARED BY



PLAN REVISIONS

SHEET NUMBER

C0.0

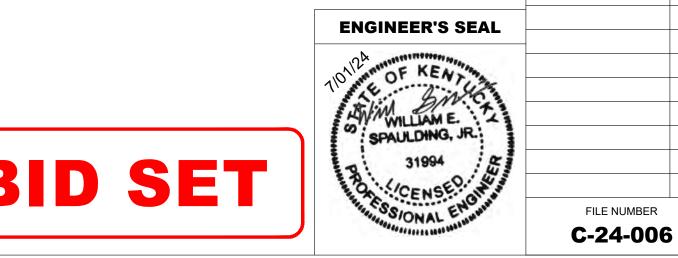
REMARKS

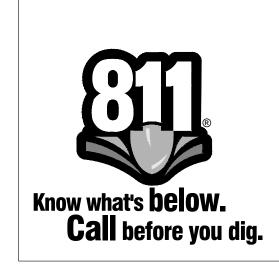
TOTAL SHEETS

895 Spaulding Lane, Springfield, KY 40069 Main: 859.805.0561 | www.spauldingsurveing.com

DATE

REVISION NO.







CONTRACTOR RESPONSIBILITIES:

- 1. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR:
 - A. THE CONTRACTOR SHALL VERIFY ALL PROPOSED AND EXISTING CONDITIONS INCLUDING UTILITIES (INVERTS, CONNECTIONS, MATERIALS, ETC.) AND DIMENSIONS WITHIN THE LIMITS OF WORK PRIOR TO THE START OF CONSTRUCTION.
 - REFER TO ARCHITECTURAL DRAWINGS FOR DETAILED BUILDING INFORMATION.
 - C. THE CONTRACTOR IS RESPONSIBLE FOR ALL NOTIFICATIONS AND LIAISONS WITH UTILITY COMPANIES DURING THE PROCESS OF LOCATING, RELOCATING, AND TYING INTO PUBLIC UTILITIES.
 - PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITY, THE LIMITS OF LAND DISTURBANCE SHALL BE CLEARLY AND ACCURATELY DEMARCATED WITH STAKES, RIBBONS, OR OTHER APPROPRIATE MEANS. THE LOCATION AND EXTENT OF ALL AUTHORIZED LAND DISTURBANCE SHALL OCCUR INSIDE THE APPROVED LIMITS INDICATED ON THE APPROVED PLANS.

2. DURING CONSTRUCTION:

- A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEVIATIONS FROM THESE PLANS AND SPECIFICATIONS WITHOUT PRIOR WRITTEN CONSENT OF THE ENGINEER MAY CAUSE THE WORK TO BE UNACCEPTABLE.
- B. THE CONTRACTOR SHALL USE MATERIALS AND EMPLOY CONSTRUCTION METHODS IN ORDER TO COMPLY WITH THE DRAWINGS AND SPECIFICATIONS. WHERE A CONFLICT OCCURS, THE STRICTEST DESIGN SHALL GOVERN. THE ENGINEER'S REVIEW OF SHOP DRAWINGS, PRODUCT DATA, ETC., DOES NOT RELIEVE THE CONTRACTOR FROM COMPLYING WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL INFORM THE ENGINEER IN WRITING OF ANY SPECIFIC DEVIATIONS AND OBTAIN ENGINEER'S WRITTEN APPROVAL OF THE SPECIFIC DEVIATION.
- C. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION.
- D. ALL CONSTRUCTION MUST CONFORM TO THE STANDARDS, SPECIFICATIONS, AND CODES OF THE GOVERNING MUNICIPALITIES.
- E. CONSTRUCTION SHALL MEET ALL CURRENT STANDARDS SET FORTH IN THE AMERICANS WITH DISABILITIES ACT.
- F. IF THE CONTRACTOR DAMAGES ANY EXISTING UTILITIES DURING CONSTRUCTION, HE SHALL, AT HIS OWN EXPENSE, REPLACE OR REPAIR THE UTILITIES TO ORIGINAL CONDITION AND QUALITY AS APPROVED BY THE OWNER AND REPRESENTATIVE OF THE APPROPRIATE UTILITY COMPANY.
- G. TRAFFIC CONTROLS AND OTHER WARNING DEVICES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY WORK ON CITY, COUNTY, OR KENTUCKY TRANSPORTATION CABINET (KYTC) ROADS. THEY SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL THE CONCLUSION OF ALL WORK.
- H. FIRE DEPARTMENT ACCESS SHALL BE MAINTAINED AT ALL TIMES.
- I. CONTRACTOR SHALL SHORE AND BRACE ALL EARTH, FORMS, CONCRETE, STEEL, WOOD, AND MASONRY TO RESIST GRAVITY, EARTH, WIND, THERMAL, CONSTRUCTION, AND MISCELLANEOUS LOADS DURING CONSTRUCTION.
- J. ON-SITE BURIAL OF DEBRIS IS PROHIBITED.
- K. IN CASE OF UNFORESEEN CONSTRUCTION COMPLICATIONS OR DISCREPANCIES, THE CONTRACTOR IS TO IMMEDIATELY NOTIFY THE ENGINEER IN WRITING.
- L. AS-BUILT DRAWINGS OF ROADWAYS, STORM DRAINS, SANITARY SEWER AND WATER LINES, FIELD APPROVAL BY THE ENGINEER, AND ALL APPLICABLE BONDS ARE REQUIRED PRIOR TO FINAL ACCEPTANCE BY THE OWNER.
- M. CONTRACTOR SHALL MAINTAIN CONTINUOUS UTILITY SERVICE TO ALL EXISTING BUILDINGS THROUGHOUT CONSTRUCTION UNLESS APPROVAL FOR SERVICE INTERRUPTION IS OBTAINED FROM THE OWNERS IN ADVANCE.
- N. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS TO ENSURE THAT THE NEW WORK SHALL FIT INTO THE EXISTING SITE IN THE MANNER INTENDED AND AS SHOWN ON THE DRAWINGS. SHOULD ANY CONDITIONS EXIST THAT ARE CONTRARY TO THOSE SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE PRIOR TO PERFORMING ANY WORK IN THE AREA INVOLVING DIFFERENCES. NOTIFICATION SHALL BE IN THE FORM OF A DRAWING OR SKETCH INDICATING FIELD MEASUREMENTS AND NOTES RELATING TO THE AREA.
- O. ANY FOREIGN ITEM FOUND DURING CONSTRUCTION IS THE PROPERTY OF THE OWNER. THIS INCLUDES, BUT IS NOT LIMITED TO, PRECIOUS METALS, COINS, PAPER CURRENCY, ARTIFACTS AND ANTIQUITIES.
- P. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DONE TO THE PREMISES OR ADJACENT PREMISES, OR INJURIES TO THE PUBLIC DURING THE CONSTRUCTION OF THE WORK, WHETHER CAUSED BY HIMSELF, HIS SUBCONTRACTORS, OR THE CARELESSNESS OF ANY OF HIS EMPLOYEES.
- Q. THE CONTRACTOR SHALL FURNISH, INSTALL AND MAINTAIN ALL NECESSARY TEMPORARY WORKS FOR THE PROTECTION OF THE WORK AND THE PUBLIC, INCLUDING BARRICADES, WARNING SIGNS, LIGHTS, ETC.
- R. THE CONTRACTOR ACKNOWLEDGES & AGREES THAT THE WORK IS ENTIRELY AT HIS RISK UNTIL SITE IS ACCEPTED, AND HE WILL BE HELD RESPONSIBLE FOR ITS SAFETY BY THE OWNER. THE CONTRACTOR WILL INDEMNIFY THE OWNER & OWNER'S REPRESENTATIVE FROM LIABILITY AT THE SITE THROUGHOUT THE CONSTRUCTION PROCESS.
- S. THE CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES AND OBTAIN ALL PERMITS AND PAY ALL LEGAL FEES. HE SHALL ALSO COMPLY WITH ALL CITY, COUNTY AND STATE BUILDING LAWS, ORDINANCES OR REGULATIONS RELATING TO BUILDING SIDEWALKS, STREETS, BLASTING, PUBLIC INFRASTRUCTURE, STORMWATER REGULATIONS, ETC.
- T. THE CONTRACTOR IS TO CHECK AND VERIFY ALL MEASUREMENTS, LEVELS, ETC. BEFORE ORDERING MATERIALS AND PROCEEDING WITH THE WORK, AND IS TO BE RESPONSIBLE FOR THE SAME.
- U. REFERENCE POINTS AND HUBS DURING THE CONSTRUCTION OF HIS WORK, AND SHALL BEAR THE COST OF REPLACING SAME.
- V. CARE SHALL BE TAKEN TO PROTECT ANY UTILITIES, TREES, ETC. WHICH ARE TO REMAIN AND NOT TO BE DISTURBED BY THE CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO SUCH PROPERTY.

DEMOLITION INFORMATION:

1. NOTIFICATIONS:

THE CONTRACTOR SHALL NOTIFY THE OWNER AND CITY INSPECTOR(S) 24 HOURS PRIOR TO ANY DEMOLITION OR CONSTRUCTION.

2. DISPOSAL GUIDELINES:

- A. ONLY ITEMS SPECIFICALLY NOTED TO BE DEMOLISHED SHALL BE REMOVED FROM THE SITE.
- REMOVE EXISTING PAVED AREAS AS SHOWN INCLUDING DRIVEWAYS, SIDEWALKS, PARKING AREAS, SERVICE AREAS, EQUIPMENT PADS, AND ALL MISCELLANEOUS PAVING.
- C. ALL DEBRIS RESULTING FROM DEMOLITION SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY BY THE CONTRACTOR IN ACCORDANCE WITH LOCAL STATE AND FEDERAL REGULATIONS. BACKFILL ALL TRENCHES AND EXCAVATIONS RESULTING FROM DEMOLITION.
- D. ALL DEMOLISHED MATERIAL BECOMES THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE NOTED.

3. UTILITIES:

- A. PRIOR TO REMOVING OR ABANDONING ANY UTILITY THE CONTRACTOR SHALL VERIFY THAT NO UPSTREAM SERVICE WILL BE TERMINATED. THE CONTRACTOR SHALL INFORM THE ENGINEER IN WRITING OF ANY TERMINATION NOT SHOWN ON THE PLANS.
- B. ALL ABANDONED WATER LINES, STORM SEWER PIPE, SANITARY SEWER PIPES, GAS LINES, OR ANY OTHER ABANDONED UNDERGROUND UTILITY SHALL BE ABANDONED IN PLACE UNLESS NOTED OTHERWISE.

SITE INFORMATION:

- 1. THE FOLLOWING ARE APPLICABLE TO ALL CIVIL DOCUMENTS:
- A. WHERE A DETAIL SECTION, TYPICAL SECTION, OR A NOTE IS SHOWN FOR ONE CONDITION, IT SHALL APPLY FOR ALL LIKE OR SIMILAR CONDITIONS, UNLESS OTHERWISE NOTED ON THE PLANS.
- B. EXISTING AND PROPOSED CONTOURS ARE AT ONE (1) FOOT INTERVALS.
- C. ALL PIPE LENGTHS SPECIFIED IN THESE PLANS ARE THE HORIZONTAL DISTANCE AND ARE SHOWN FOR REFERENE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE ACTUAL LENGTHS BASED ON PROPOSED PIPE SLOPE.
- D. PIPE LENGTHS IN PLANS ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE UNLESS OTHERWISE NOTED.

ADA COMPLIANCE:

- A. PRIVATE CURB RAMPS ON THE SITE (I.E. OUTSIDE PUBLIC STREET RIGHT-OF-WAY) SHALL CONFORM TO ADA STANDARDS AND SHALL HAVE A DETECTABLE WARNING SURFACE THAT IS FULL WIDTH AND FULL DEPTH OF THE CURB RAMP, NOT INCLUDING FLARES.
- B. ALL ACCESSIBLE ROUTES, GENERAL SITE AND BUILDING ELEMENTS, RAMPS, CURB RAMPS, STRIPING, AND PAVEMENT MARKINGS SHALL CONFORM TO ADA STANDARDS FOR ACCESSIBLE DESIGN, LATEST EDITION.
- C. BEFORE PLACING PAVEMENT, CONTRACTOR SHALL VERIFY THAT SUITABLE ACCESSIBLE PEDESTRIAN ROUTES (PER ADA AND FHA) EXIST TO AND FROM EVERY DOOR AND ALONG SIDEWALKS, ACCESSIBLE PARKING SPACES, ACCESS AISLES, AND ACCESSIBLE ROUTES. IN NO CASE SHALL AN ACCESSIBLE RAMP SLOPE EXCEED 1 VERTICAL TO 12 HORIZONTAL. IN NO CASE SHALL SIDEWALK CROSS SLOPE EXCEED 2.0 PERCENT. IN NO CASE SHALL LONGITUDINAL SIDEWALK SLOPE EXCEED 5.0 PERCENT. ACCESSIBLE PARKING SPACES AND ACCESS AISLES SHALL NOT EXCEED 2.0 PERCENT SLOPE IN ANY DIRECTION.
- D. CONTRACTOR SHALL TAKE FIELD SLOPE MEASUREMENTS ON FINISHED SUBGRADE AND FORM BOARDS PRIOR TO PLACING PAVEMENT TO VERIFY THAT ADA SLOPE REQUIREMENTS ARE PROVIDED. CONTRACTOR SHALL CONTACT ENGINEER PRIOR TO PAVING IF ANY EXCESSIVE SLOPES ARE ENCOUNTERED. NO CONTRACTOR CHANGE ORDERS WILL BE ACCEPTED FOR ADA SLOPE COMPLIANCE ISSUES.

CONCRETE INFORMATION (SITE WORK ONLY):

1. PRODUCT CRITERIA:

- A. UNLESS OTHERWISE NOTED CEMENT SHALL BE TYPE I OR III CONFORMING TO ASTM C150. AGGREGATES SHALL BE NORMAL WEIGHT CONFORMING TO ASTM C33.
- CONCRETE SHALL CONFORM TO ACI BUILDING CODE (318-89). UNLESS NOTED CONCRETE SHALL BE NORMAL WEIGHT AND HAVE A 28 DAY COMPRESSIVE STRENGTH OF 3,500 P.S.I.
- C. SLUMP SHALL BE 3" TO 5" FOR REGULAR MIX. LARGER SLUMP SHALL BE PERMITTED WITH WATER REDUCING ADMIXTURES AND WRITTEN CONSENT OF THE ENGINEER.
- D. THE RELATIONSHIP BETWEEN MAXIMUM AGGREGATE SIZE TO MINIMUM AMOUNT OF CEMENT IN CONCRETE PAVEMENT (LB. PER C.Y. OR MIX) SHALL BE AS FOLLOWS: 1" 520, 3/4" 540, 1/2" 590, 3/8" 610.

CURING CRITERIA:

- A. CONCRETE CURING SHALL COMPLY WITH ACI 308. CURING PROCESS SHALL START IMMEDIATELY FOLLOWING INITIAL SET. CURING SHALL BE BY CURING COMPOUND.
- B. CONCRETE EXPOSED TO THE WEATHER SHALL BE AIR-ENTRAINED IN ACCORDANCE WITH ACI 318-89 TABLE 4.1.1. NORMAL WEIGHT CONCRETE SLABS SHALL HAVE AIR CONTENT IN ACCORDANCE WITH ACI 302.IR-89 TABLE 5.2.7A.
- C. HOT WEATHER CONCRETING SHALL COMPLY WITH ACI 305. NO CONCRETE ABOVE 90 DEGREES FAHRENHEIT SHALL BE POURED. LOWER CONCRETE TEMPERATURE BY COOLING WATER AND AGGREGATE. FORMS, STEEL, AND SUBGRADE SHALL BE SPRINKLED WITH COLD WATER. AFTER FINISHING CONCRETE USE LIGHT FOG SPRAY UNTIL CURING COMPOUND IS USED.
- D. COLD WEATHER CONCRETING SHALL COMPLY WITH ACI 306. SPECIAL MATERIAL PROCEDURES SHALL BE PROVIDED DURING PLACING AND CURING OF CONCRETE BELOW 40 DEGREES FAHRENHEIT.
- E. E. CURING, HOT, AND COLD WEATHER CONCRETING PROCEDURES ARE ONLY GIVEN AS A GUIDE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PREVENT CONCRETE DAMAGE AND CRACKS. DAMAGED OR CRACKED CONCRETE WILL NOT BE ACCEPTED.

REINFORCING STEEL INFORMATION (SITE WORK ONLY):

- 1. PRODUCT CRITERIA:
 - A. REINFORCING STEEL SHALL CONFORM TO ASTM A-615, GRADE 60 AND GRADE 40 FOR #3 AND SMALLER BARS. MINIMUM LAP 48" DIAMETER.
 - B. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185, MINIMUM LAP SHALL BE 8".
 - C. REINFORCING THAT IS WELDED SHALL BE WELDABLE TYPE AND CONFORM TO ASTM A-706.

PAVEMENT INFORMATION:

- 1. PAVEMENT
 - A. ALL MATERIALS, EQUIPMENT, METHODS OF CONSTRUCTION, AND WORKMANSHIP SHALL CONFORM TO THE KENTUCKY TRANSPORTATION CABINET, KYTC, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.
 - B. SEE PAVEMENT DETAILS ON CONSTRUCTION DOCUMENTS FOR SPECIFIC DESIGN INFORMATION AND REQUIREMENTS.
- 2. SIGNING AND STRIPING:
 - A. SIGNING AND STRIPING TO BE PROVIDED BY THE CONTRACTOR ACCORDING TO THE DRAWINGS AND SPECIFICATIONS.
 - B. ALL PAVEMENT MARKINGS SHALL CONFORM TO CURRENT MUTCD STANDARDS. ALL PAVEMENT MARKINGS ON PRIVATE PROPERTY SHALL BE PAINT, UNLESS NOTED OTHERWISE. ALL PAVEMENT MARKINGS ON PUBLIC RIGHT-OF-WAY SHALL BE THERMOPLASTIC, UNLESS NOTED OTHERWISE.

GRADING NOTES:

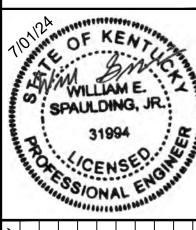
- A. TOPSOIL SHALL BE STORED ON SITE IN LOCATIONS APPROVED BY THE OWNER'S REPRESENTATIVE. DRAINAGE SHALL ROUT AROUND THESE TOPSOIL STOCKPILES FOR THE DURATION OF THE GRADING OPERATIONS. EROSION CONTROL MEASURES SHALL PREVENT THE LOSS OF TOPSOIL MATERIAL.
- B. UNSUITABLE SOILS SHALL BE UNIFORMLY SPREAD ACROSS NON-STRUCTURAL FILL AREAS AND COVERED WITH TOPSOIL AND SEEDED.
- C. FILL AREA SHALL BE PROOF-ROLLED WITH RUBBER-TIRED EQUIPMENT WITH A MINIMUM WEIGHT OF FIFTEEN TONS PRIOR TO BEGINNING FILL OPERATION. AREAS WHICH ARE SOFT OR UNSTABLE SHALL BE UNDERCUT UNTIL STABLE SOILS ARE FOUND. RE-COMPACTION OF THESE SOILS SHALL BE TO 98% MAXIMUM DRY DENSITY AS PER ASTM D698 (STANDARD PROCTOR).
- D. CUT AREA SHALL BE PROOF-ROLLED AFTER FINAL SUBGRADE IS ACHIEVED IN THE SAME MANNER AS FILLED AREAS. SOFT OR UNSTABLE SOILS SHALL BE SCARIFIED TO A DEPTH OF 12" AND RE-COMPACTED TO 98% MAXIMUM DRY DENSITY AS PER ASTM D698 (STANDARD PROCTOR).
- E. ALL GRADING SHALL BE COMPLETED TO THE LEVEL INDICATED BY THE SCOPE OF WORK LISTED IN THE BID DOCUMENTS.
- F. ELEVATIONS SHOWN ON THE PLANS IS THE FINISH GRADE ELEVATION.
- G. GRADING SHALL BE SEQUENCED SO THAT BASE STONE IS PLACED WITHIN 10 CALENDAR DAYS OF ACHIEVING OPTIMUM SUBGRADE COMPACTION.
- H. PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS AT ALL LOCATIONS UNLESS OTHERWISE NOTED.





ST. GREGORY SCHO PHASE 1 - BUILDIN ADDITIONS





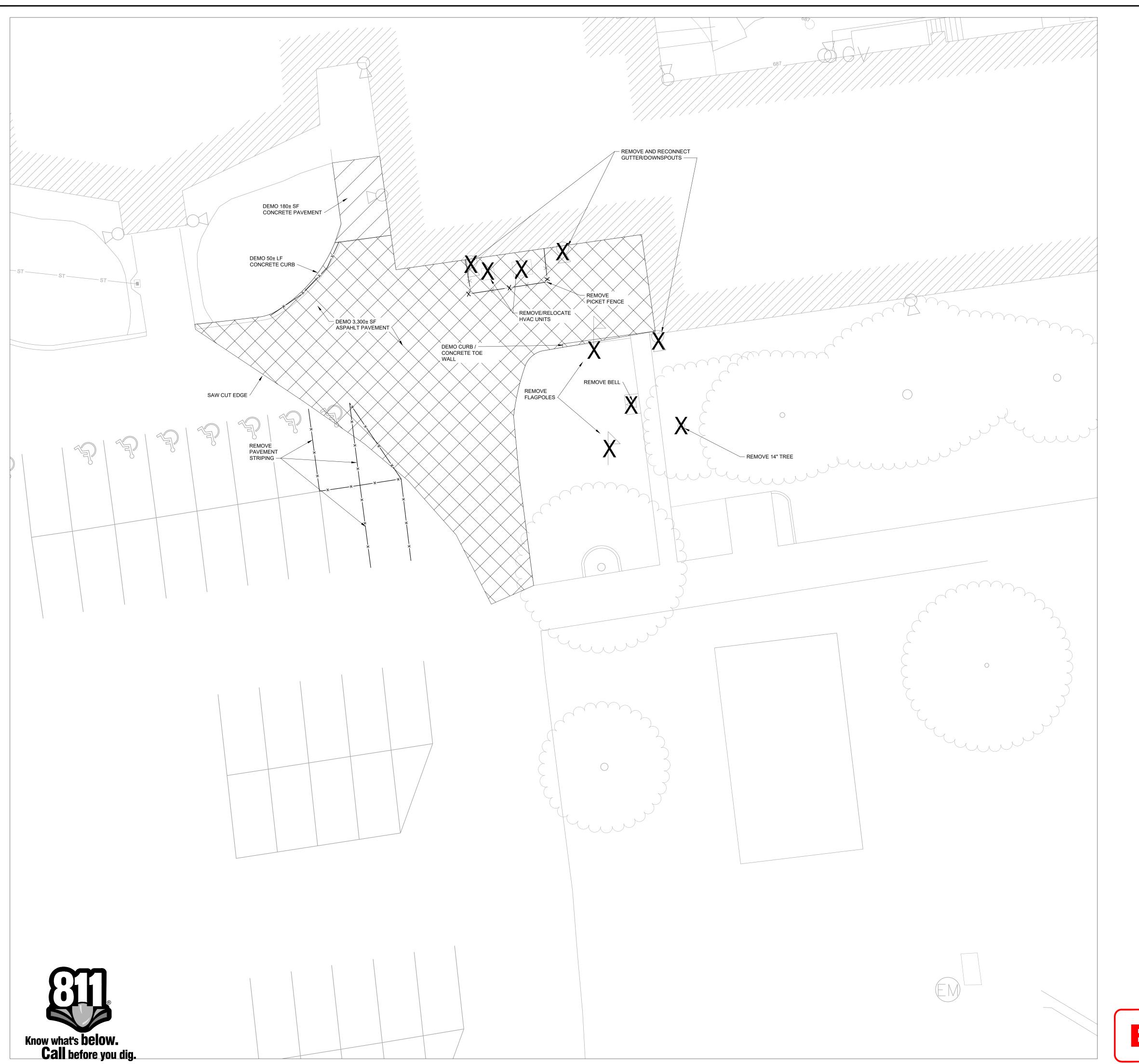
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GENERAL NOTES

SPAULDING SURVEYING PROJECT NO C-24-006

CO.1

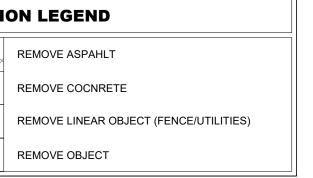
BID SET



DEMOLITION LEGEND						
	REMOVE ASPAHLT					
	REMOVE COCNRETE					
X	REMOVE LINEAR OBJECT (FENCE/UTILITIES)					
Χ	REMOVE OBJECT					

EXISTING UTILITIES NOTE

CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES AND NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES AND/OR CONFLICTS WITH EXISTING OR PROPOSED UTILITIES PRIOR TO PROCEEDING.





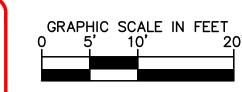


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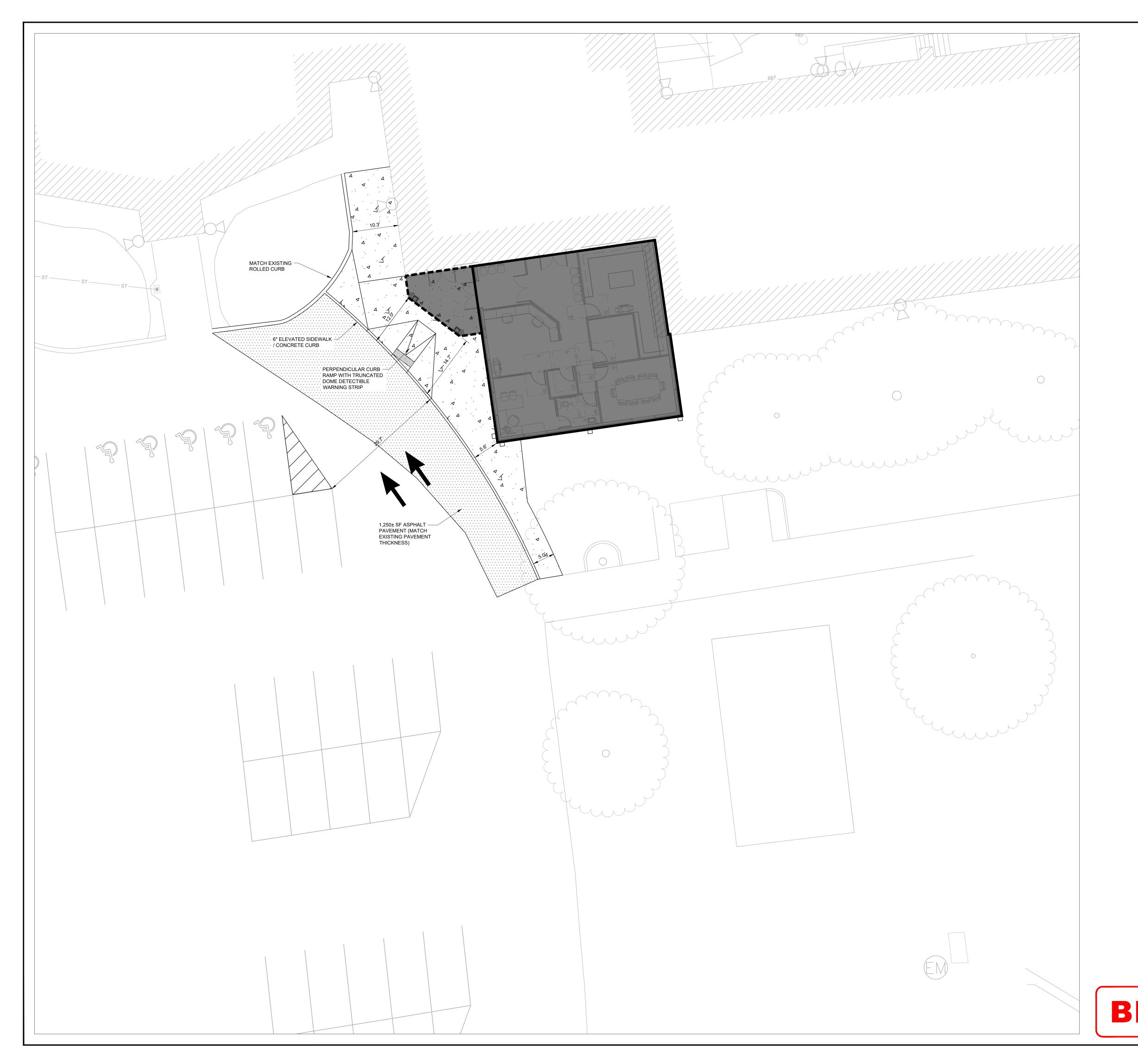
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SEE DEMOLITION NOTES, SHEET C0.1.



SHEET NUMBER



EXISTING PROPERTY SUMMARY

PROPERTY ADDRESS:

350 SAMUELS LOOP COXS CREEK, KENTUCKY

MAP AND PARCEL ID: MAP 31SSW, PARCEL 05-004

U.S. FEMA FIRM PANEL: 21179C0025E DATED 05/23/23

EXISTING ZONING: EXISTING LAND USE: SCHOOL

SITE DATA TABLE

SIIE DATA TABLE							
SITE ADDRESS	350 SAMUELS LOOP COXS CREEK, KENTUCKY, 40013						
TAX MAP	MAP 31SSW PARCEL 05-00						
OVERALL AREA	EXISTING	PROPOSED					
SITE AREA	7.27 AC	7.27 AC					
DISTURBED AREA	N/A	0.15 AC					
IMPERVIOUS AREA	3.13 AC	3.14 AC					
PERVIOUS AREA	4.14 AC	4.13 AC					
OPEN SPACE	56.9%	56.8%					
SETBACKS	EXISTING	PROPOSED					
FRONT (WEST)	175	175					
SIDE (NORTH)	124	124					
SIDE (SOUTH)	64	64					
REAR (EAST)	168	168					

HATCH AND LINETYPE LEGEND

	ASPHALT PAVEMENT
Δ Δ . Δ	CONCRETE PAVEMENT
· A · A · A · A · A · A · A · A · A · A	LIGHT DUTY CONCRETE PAVEMENT
	HEAVY DUTY CONCRETE PAVEMEN
	PROPOSED BUILDING
	REMOVE TREES/BRUSH

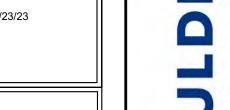
SITE NOTES

- ALL WORK AND MATERIALS SHALL COMPLY WITH ALL CITY/COUNTY/STATE REGULATIONS AND CODES AND O.S.H.A. STANDARDS. PRIOR TO CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR ENSURING ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY ALL
- EXISTING DRAINAGE AND UTILITY CONNECTIONS TO ENSURE THEY CAN BE PROPERLY CONNECTED.
- IN THE EVENT OF A CONFLICT BETWEEN THIS DRAWING AND ANY OTHER DRAWING AND/OR SPECIFICATION, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR CLARIFICATION.
- ALL RIGID AND/OR FLEXIBLE PAVEMENT AND STONE SHALL MEET THE MATERIALS, EQUIPMENT, CONSTRUCTION, & TESTING REQUIREMENTS OF THESE DRAWINGS AND/OR THE KENTUCKY TRANSPORTATION CABINET
- STANDARD SPECIFICATIONS. ALL SETBACKS SHALL BE IN ACCORDANCE WITH THE LOCAL ZONING
- ORDINANCE. ALL PAVEMENT MARKINGS WITHIN THE DEVELOPMENT SHALL BE
- SEE ARCH FOR BUILDING PLAN AND DIMENSIONS. SEE ARCH FOR CANOPY DETAIL AND DIMENSIONS.

CONSTRUCTION OF THIS PROJECT.

ADA: http://www.ada.gov/

- THE LOCATION OF THE EXISTING UTILITIES SHOWN ON THESE DRAWINGS ARE APPROXIMATE. THE EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY COORDINATING WITH THE RESPECTIVE UTILITY COMPANIES INVOLVED. PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD THE EXISTING UTILITIES FROM DAMAGE DURING THE
- ADA PARKING SPACES, GRADING, RAMPS, AND STRIPING PROVIDED MUST
- MEET ADA STANDARDS.
 ALL DEVELOPMENT WITHIN THE BOUNDARIES OF THIS PLAN SHALL MEET THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT.

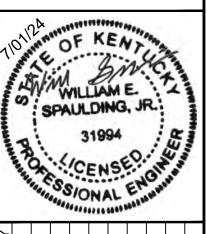


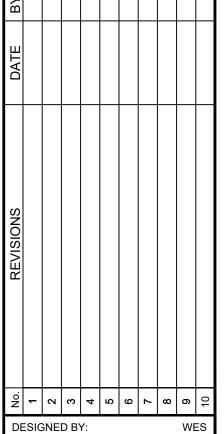




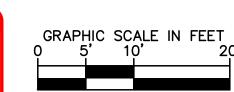
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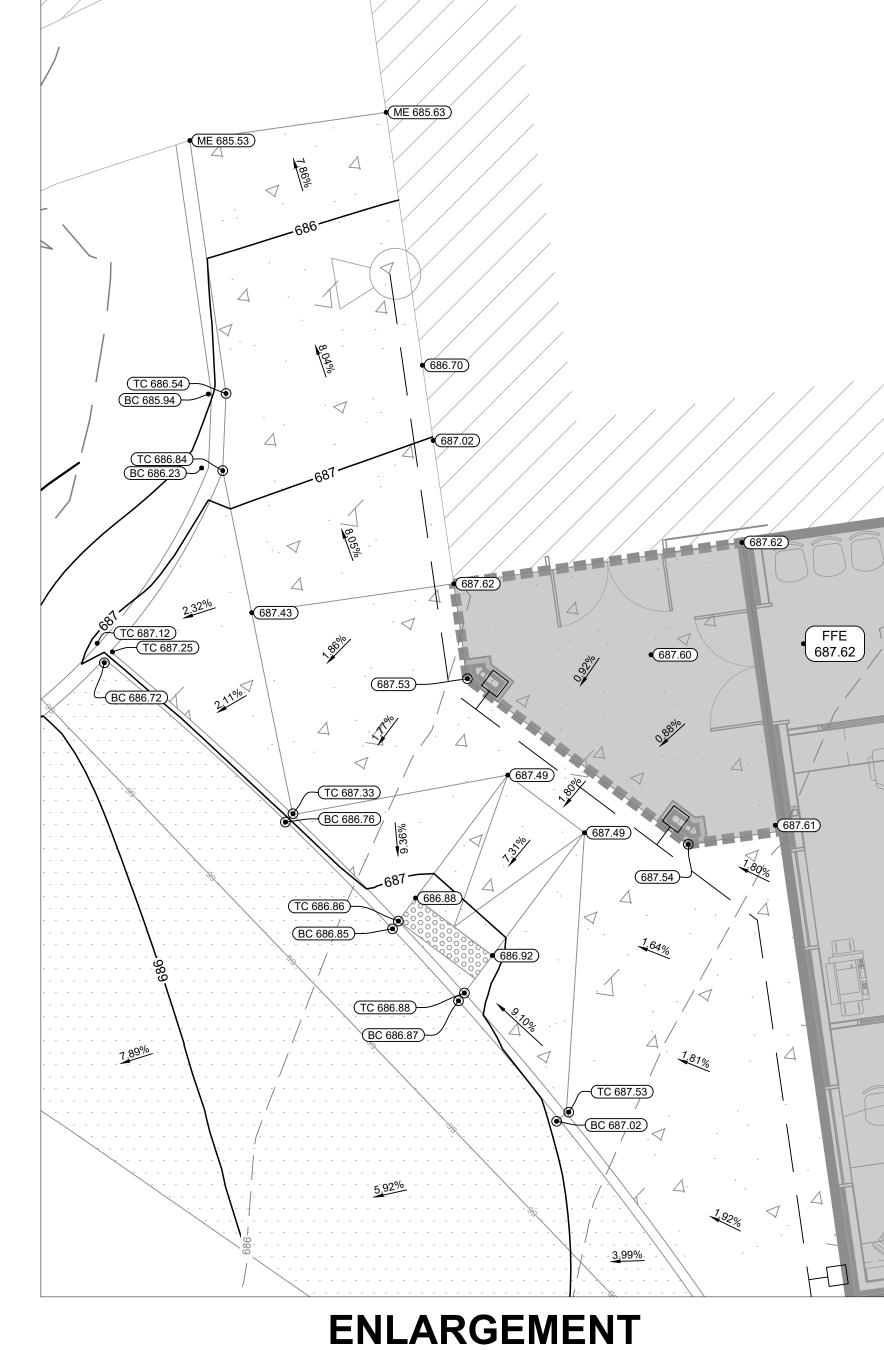
DRAWN BY: CHECKED BY:

> SHEET NUMBER C2.1

SPAULDING SURVEYING PROJECT NO C-24-006

SITE LAYOUT





1" = 5'

GRADING NOTES

- CONTRACTOR RESPONSIBLE FOR VERIFYING LOCATION, SIZE, AND ELEVATIONS OF EXISTING UTILITIES AT CONNECTION POINTS PRIOR TO GRADING OR INSTALLATION OF ANY PROPOSED UTILITIES. CONTRACTOR TO IMMEDIATELY NOTIFY OWNER'S REPRESENTATIVE IF DISCREPANCIES ARE
- DISTURBED AREAS LEFT IDLE FOR FIVE DAYS, AND NOT TO FINAL GRADE, WILL BE ESTABLISHED TO TEMPORARY VEGETATION. MULCH, TEMPORARY VEGETATION OR PERMANENT VEGETATION SHALL BE COMPLETED ON ALL EXPOSED AREAS WITHIN 14 DAYS AFTER DISTURBANCE. ALL AREAS TO FINAL GRADE WILL BE ESTABLISHED TO PERMANENT VEGETATION UPON
- COMPLETION. SEDIMENT/EROSION CONTROL DEVICES MUST BE INSPECTED ACCORDING TO LOCAL AND STATE REQUIREMENTS AND AS STIPULATED IN THE STORMWATER POLLUTION PREVENTION PLAN. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE HALF THE CAPACITY OF THE DEVICE. ADDITIONAL DEVICES MAY BE NECESSARY AS THE PROJECT PROGRESSES AND NEW CHANNELS HAVE
- DEVELOPED. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES.
- EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION CONTROL AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
- 6. CONTRACTOR SHALL REVIEW SITE GEOTECHNICAL REPORT BEFORE COMMENCING GRADING OPERATIONS.
- SEED ALL DISTURBED AREAS UNLESS OTHERWISE NOTED AS PART OF THIS CONTRACT. 8. TOPSOIL ON SITE TO BE STRIPPED AND STOCKPILED FOR REUSE IN LAWN
- ADEQUATE DRAINAGE, EROSION AND SEDIMENT CONTROL MEASURES, BEST MANAGEMENT PRACTICES, AND/OR OTHER WATER QUALITY MANAGEMENT FACILITIES SHALL BE PROVIDED AND MAINTAINED AT ALL TIMES DURING CONSTRUCTION. DAMAGES TO ADJACENT PROPERTY AND/OR THE CONSTRUCTION SITE CAUSED BY THE CONTRACTOR'S OR PROPERTY OWNER'S FAILURE TO PROVIDE AND MAINTAIN ADEQUATE DRAINAGE AND EROSION/SEDIMENT CONTROL FOR THE CONSTRUCTION AREA SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER AND/OR
- 10. UNDERGROUND UTILITIES HAVE NOT BEEN VERIFIED BY THE OWNER, DESIGNER, OR THEIR REPRESENTATIVES. BEFORE YOU DIG CALL ONE
- CALL--811 OR 1-800-752-6007 THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT RESULT FROM THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY UNDERGROUND UTILITIES TO REMAIN.

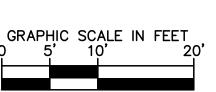
GRADING PLAN LEGEND

476.17 SPOT ELEVATION TC TOP OF CURB
BC BOTTOM OF CURB ME MATCH EXISTING

FFE 472.00 FINISH FLOOR ELEVATION —500— EXISTING CONTOUR

─500 ─ PROPOSED CONTOUR

BID SET

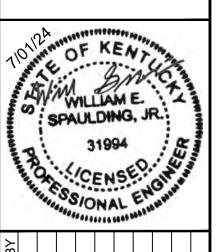










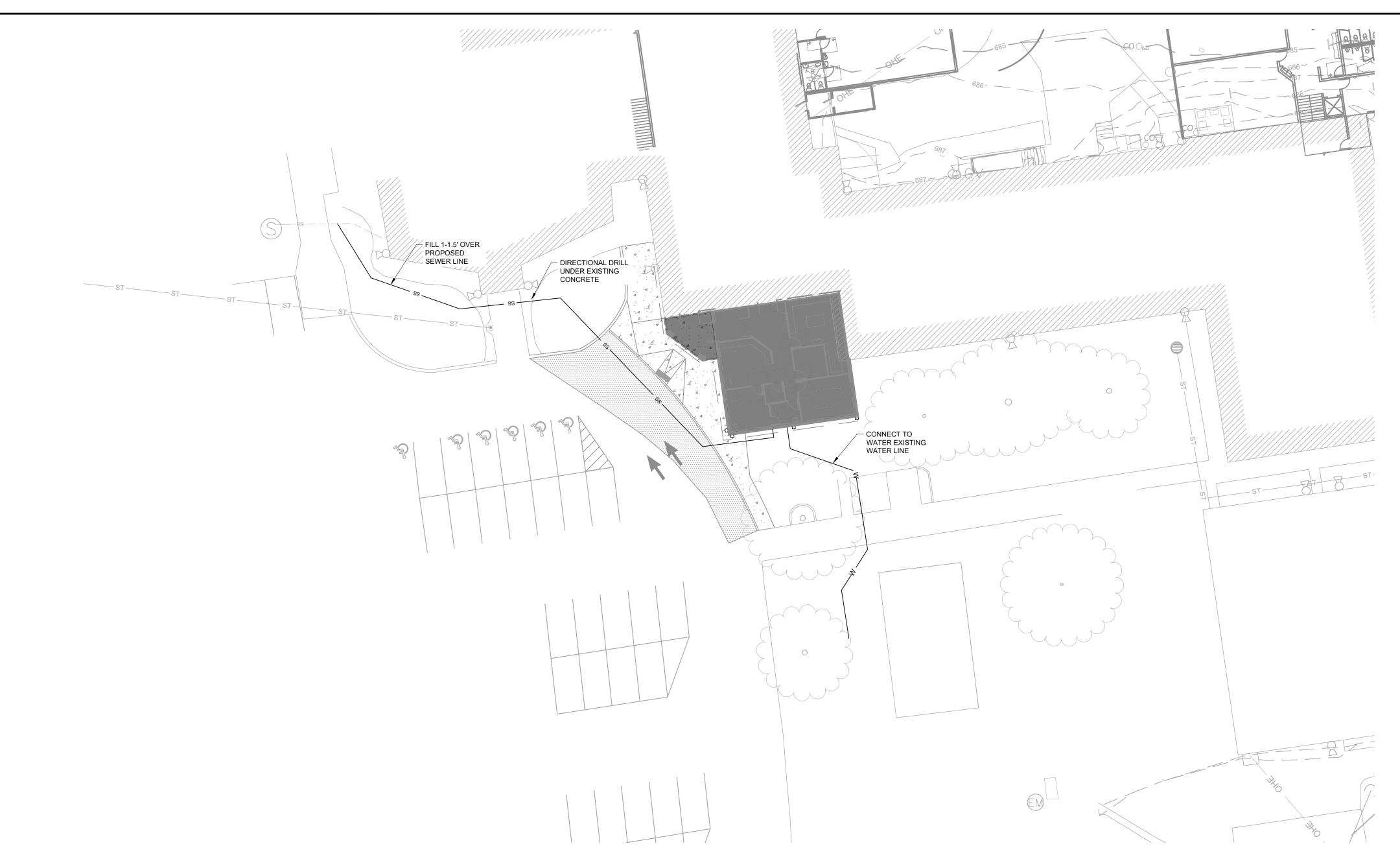


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D/	ATE: 07/01/24												
P	AUL	JLDING SURVEYING PROJECT NO. C-24-006											

GRADING AND DRAINAGE PLAN

SHEET NUMBER

C3.1

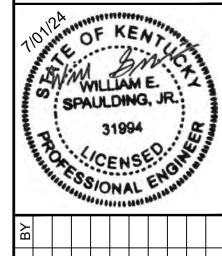


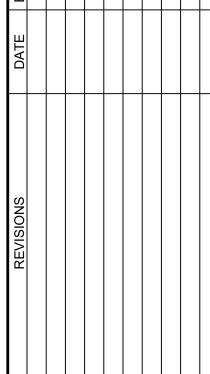
UTILITY STANDARDS AND NOTES

- 1. CONTRACTOR RESPONSIBLE FOR VERIFYING EXISTING ELEVATIONS COMPARED TO THOSE SHOWN ON PLAN PRIOR TO GRADING. NOTIFY OWNER'S REPRESENTATIVE IF DISCREPANCIES ARE
- ALL WATER AND SEWER MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH SPECIFICATIONS AND STANDARD DETAILS OF THE CITY OF BARDSTOWN.
- ALL WATER AND/OR SEWER SERVICES, ALONG WITH APPURTENANCES, SHALL BE INSTALLED IN ACCORDANCE WITH SPECIFICATIONS AND STANDARD DETAILS OF THE CITY OF BARDSTOWN. AFTER COMPLETION OF THE SANITARY SEWER AND WATER LINES, THE DEVELOPER IS RESPONSIBLE FOR THE TESTING/TELEVISING OF THE LINES PRIOR TO FINAL ACCEPTANCE.
- REFER TO CITY OF BARDSTOWN STANDARD SPECIFICATIONS FOR PIPE BEDDING REQUIREMENTS. ALL WATER VALVES TO BE LOCATED OUTSIDE OF PAVED AREAS WHERE POSSIBLE. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL CHARTED AND UNCHARTED UTILITIES.

 TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. REPAIR ANY DAMAGE ACCORDING TO LOCAL STANDARDS AND AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY.



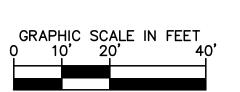




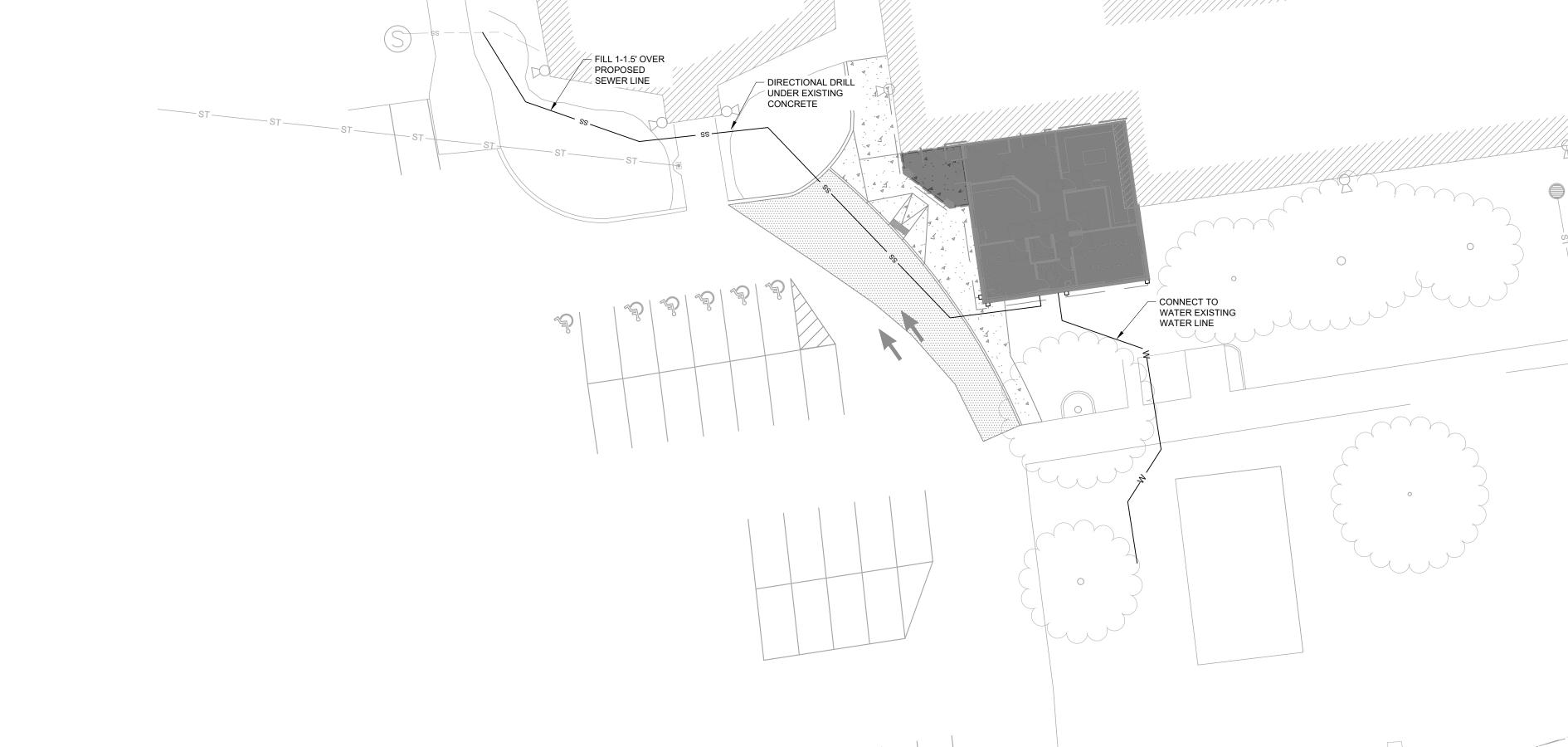
UTILITY PLAN

SHEET NUMBER C4.1

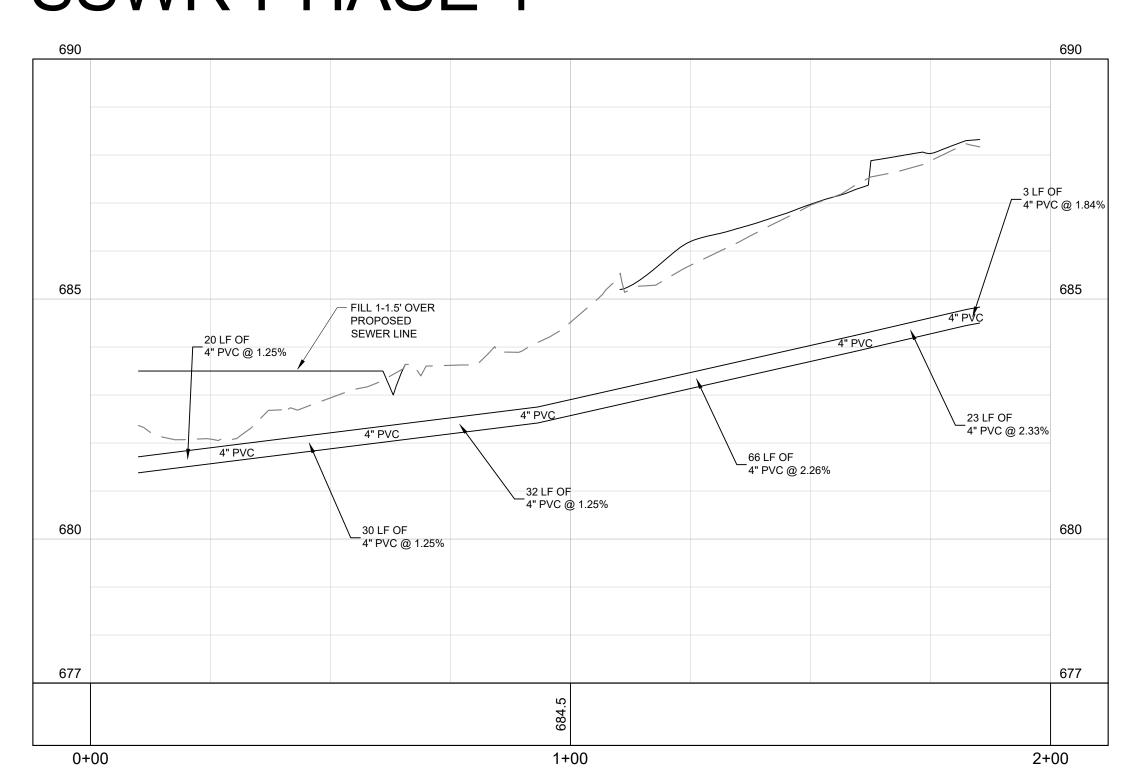
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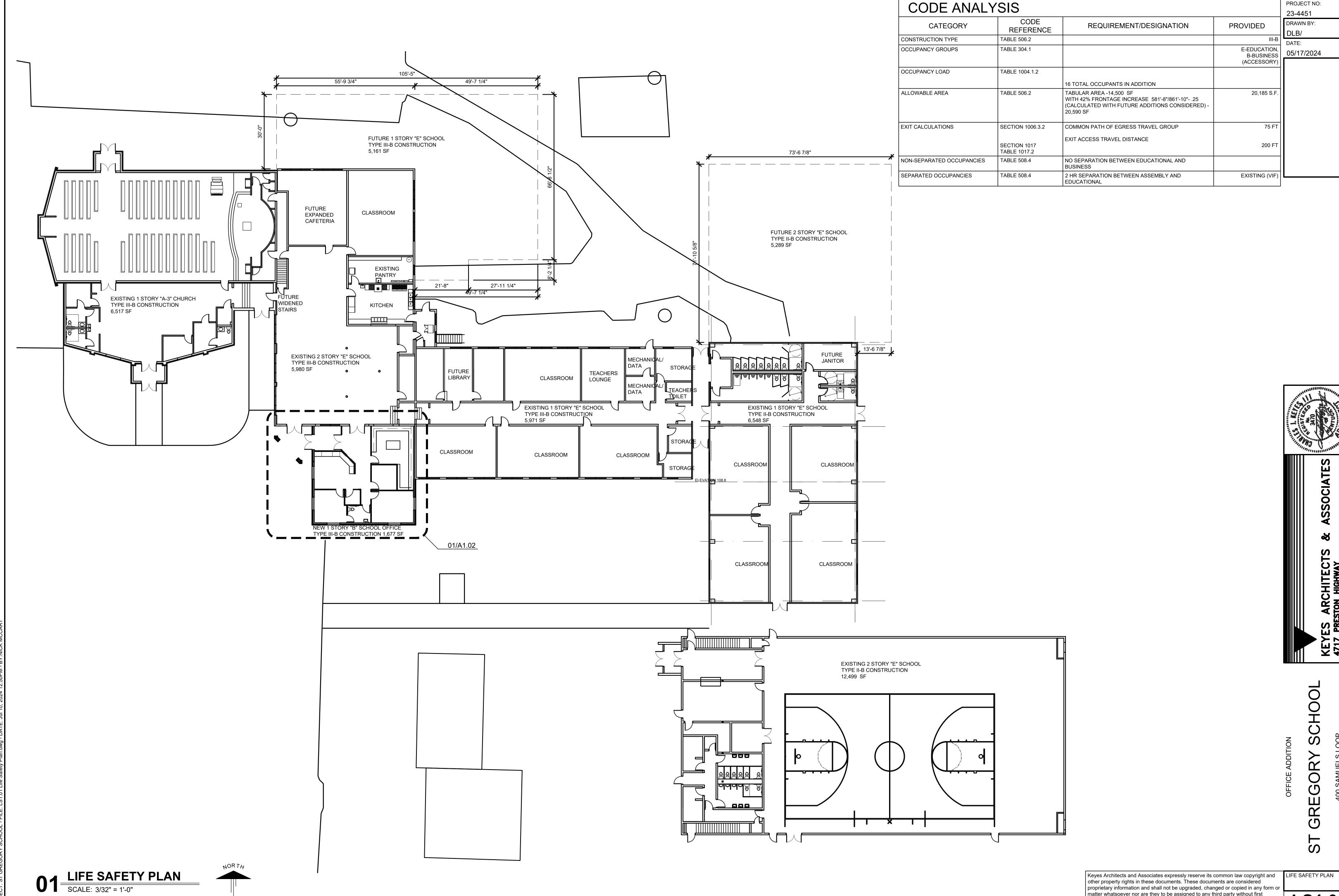




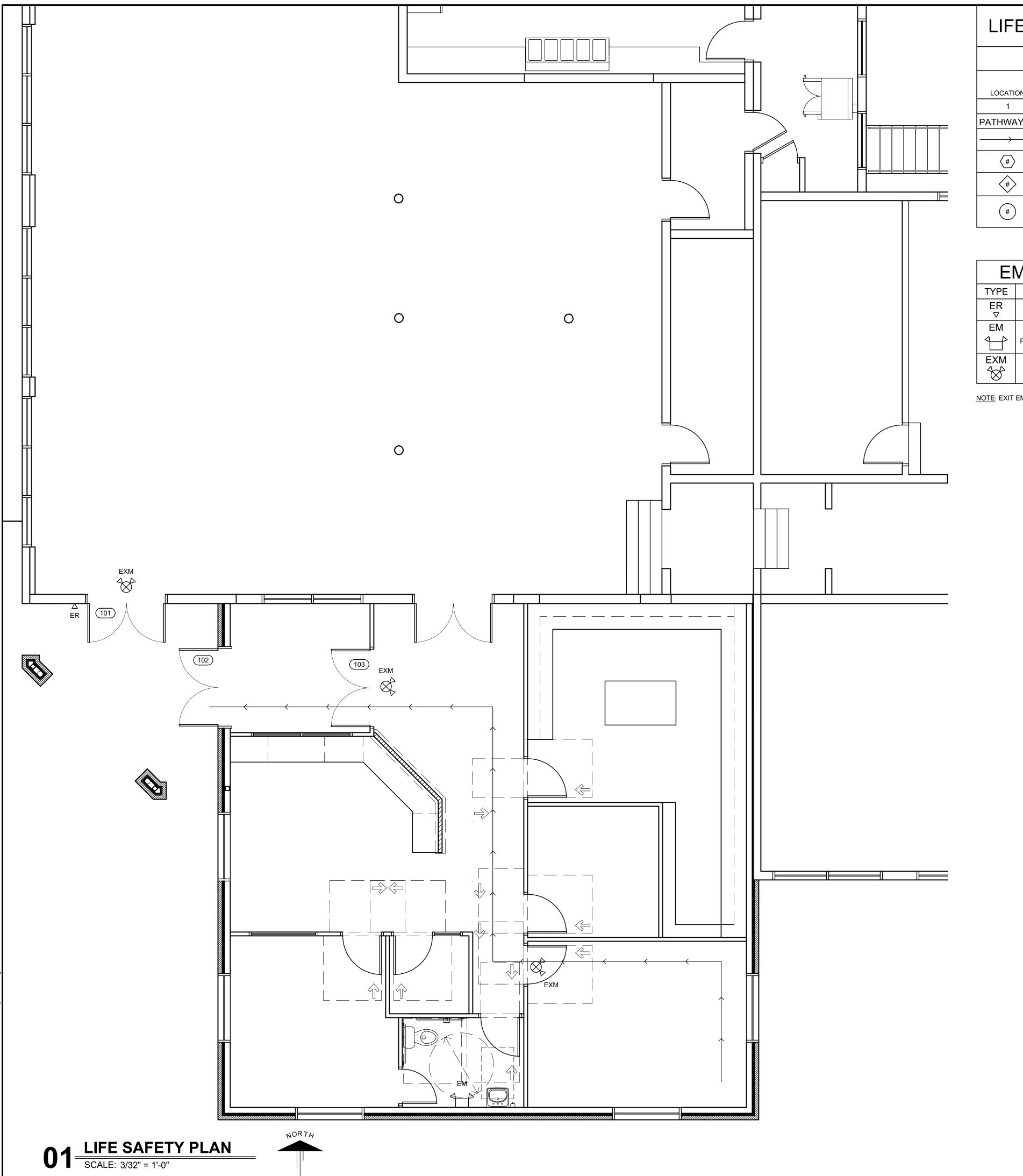


SSWR-PHASE 1





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LIFE SAFETY PATHWAYS

			TOTAL TRAVEL DISTANCE										
			DOOR NUMBER										
LOCATION	C	OMMON PATH	EXIT 102										
1	-	69'-0"											
PATHWAY KE	Y PLAN:												
	: TRAVEL PATH W/ D	RAVEL PATH W/ DIRECTION OF FLOW											
(#)	: TRAVEL PATH STA TABLE.	RTING LOCATION, WHERE "#" =	LOCATION COLUMN IN THIS										
#	: COMMON PATH LO	CATION, WHERE "#" = LOCATIO	N COLUMN IN THIS TABLE.										
#	: EXIT DOOR LOCAT SCHEDULE.	ION, WHERE "#" = DOOR IN THIS	S TABLE AND IN DOOR FINISH										

E	MERGENCY LIG	HT FIXTURE SC	HEDULE
TYPE	DESCRIPTION	MODEL#	BULBS
ER ▽	EMERGENCY REMOTE HEAD	LITHONIA #ELA-NX-H0606	INCLUDED
EM	EMERGENCY LIGHT W/ BATTERY PACK REMOTE HEAD WHERE SHOWN	LITHONIA #6ELM2P	INCLUDED
EXM	COMBINATION EXIT/EMERGENCY FIXTURE W/ BATTERY PACK	LITHONIA #LHQM-S-W-1-R-120/277-HO	INCLUDED

NOTE: EXIT EMERGENCY LIGHTING IS ON AN "NL" CIRCUIT

PROJECT NO:

05/17/2024

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LS1.02

PATCH AND REPAIR NOTES

PROMPTLY PATCH AND REPAIR HOLES AND DAMAGED SURFACES CAUSED TO ADJACENT CONSTRUCTION BY SELECTIVE DEMOLITION OPERATIONS.

WHERE REPAIRS TO EXISTING SURFACES ARE REQUIRED, PATCH TO PRODUCE SURFACES SUITABLE FOR NEW MATERIALS.

RESTORE EXPOSED FINISHES OF PATCHED AREAS AND EXTEND FINISH RESTORATION INTO ADJOINING CONSTRUCTION TO REMAIN IN A MANNER THAT ELIMINATES EVIDENCE OF PATCHING AND REFINISHING.

PATCH AND REPAIR FLOOR AND WALL SURFACES IN THE NEW SPACE WHERE DEMOLISHED WALLS OR PARTITIONS EXTEND ONE FINISHED AREA INTO ANOTHER. PROVIDE A FLUSH AND EVEN SURFACE OF UNIFORM COLOR AND APPEARANCES.

SELECTIVE DEMOLITION NOTES

REMOVE AND LEGALLY DISPOSE OF ITEMS EXCEPT THOSE INDICATED TO BE REINSTALLED SALVAGED, OR TO REMAIN THE OWNER'S PROPERTY.

REMOVE ITEMS INDICATED, CLEAN SURFACE, AND OTHERWISE REPAIR THEM FOR REUSE; STORE AND PROTECT AGAINST DAMAGE. REINSTALL ITEMS IN LOCATIONS INDICATED.

PROTECT CONSTRUCTION INDICATED TO REMAIN AGAINST DAMAGE AND SOILING DURING SELECTIVE DEMOLITION. WHEN PERMITTED BY THE ARCHITECT, ITEMS MAY BE REMOVED TO A SUITABLE, PROTECTED STORAGE LOCATION DURING SELECTED DEMOLITION AND THEN CLEANED AND REINSTALLED IN THEIR ORIGINAL LOCATIONS.

IDENTIFY AND ACCURATELY LOCATE CAPPED UTILITIES AND OTHER SUBSURFACE STRUCTURAL ELECTRICAL OR MECHANICAL CONDITIONS. DOCUMENT THESE UTILITIES ON RECORD DRAWINGS PROVIDED TO ARCHITECT UPON COMPLETION OF PROJECT.

PROTECT WALLS, CEILINGS, FLOORS, AND OTHER EXISTING FINISH WORK THAT ARE TO REMAIN AND ARE EXPOSED DURING SELECTIVE DEMOLITION OPERATIONS. REMOVE AND TRANSPORT DEBRIS IN A MANNER THAT WILL PREVENT SPILLAGE ON ADJACENT SURFACE AND AREAS.

COVER AND PROTECT FURNITURE, FURNISHINGS, AND EQUIPMENT THAT

BY SELECTIVE DEMOLITION OPERATIONS. RETURN AREAS TO CONDITION EXISTING BEFORE START OF NEW WORK.

HAVE NOT BEEN REMOVED.

DEMOLISH AND REMOVE EXISTING CONSTRUCTION ONLY TO THE EXTENT REQUIRED BY NEW CONSTRUCTION AND AS INDICATED. DISPOSAL: PROMPTLY DISPOSE OF DEMOLISHED MATERIALS. DO NOT ALLOW DEMOLISHED MATERIALS TO ACCUMULATE ON SITE. TRANSPORT DEMOLISHED MATERIALS OFF OWNER'S PROPERTY AND LEGALLY DISPOSE OF THEM. SWEEP THE AREA OF WORK BROOM CLEAN ON COMPLETION OF SELECTIVE DEMOLITION OPERATION.

PROTECTION OF PEDESTRIANS SHALL BE PROVIDED DURING CONSTRUCTION, REMODELING, AND DEMOLITION ACTIVITIES AS REQUIRED BY STATE BUILDING CODE. SIGNS SHALL BE PROVIDED TO DIRECT PEDESTRIAN TRAFFIC DURING DEMOLITION. CONSTRUCTION AND REMODELING.

IF BUSINESS WILL REMAIN OPERATIONAL DURING DEMOLITION AND CONSTRUCTION COORDINATE ACTIVITIES WITH OWNER TO MINIMIZE OR ELIMINATE DISRUPTION TO THE OPERATION OF THE BUSINESS.

SHEET NOTES:

REMOVE BRICK FROM WALL, UP TO CORNER, NEW BRICK WILL BE INSTALLED TO MATCH NEW CONSTRUCTION

2 DEMO DOOR

3 DEMO RADIATORS- SEE MECHANICAL DRAWINGS

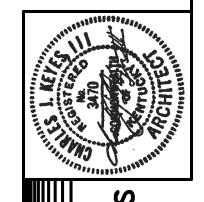
4 DEMO WINDOWS

5 DEMO MECHANICAL ENCLOSURE AND SAVE UNITS FOR RELOCATION.

6 DEMO CEILING TO ACCOMODATE NEW DUCT WORK

7 DEMO CURB, ASPHALT FOR NEW CONSTRUCTION, DEMO EXISTING SIDEWALK

8 REMOVE SCHOOL BELL AND SAVE FOR RELOCATION IN COORDINATION WITH SCHOOL



PROJECT NO: 23-4451 DRAWN BY:

05/17/2024

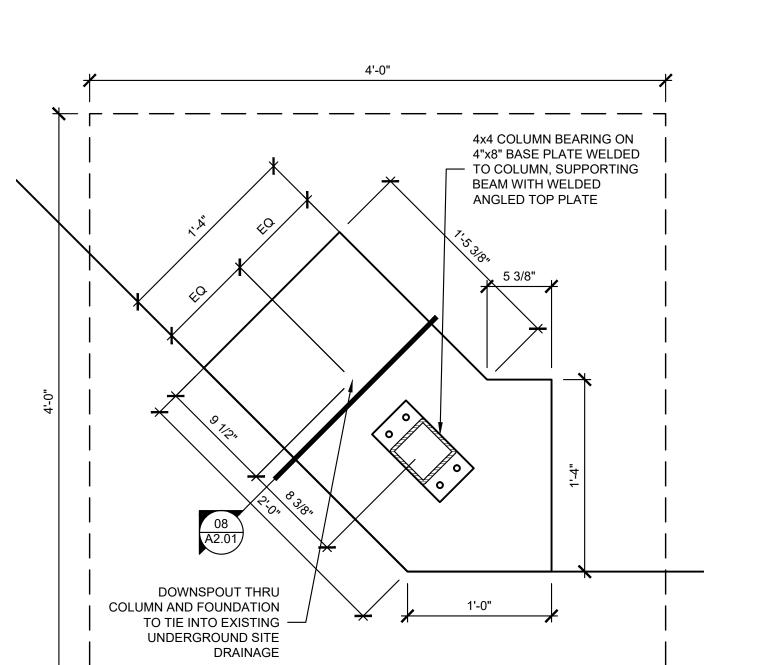
DATE:

NOTE: ALL DIMENSIONS ARE TO FACE OF STUD

NOTE: GENERAL CONTRACTOR RESPONSIBLE FOR COORDINATION OF ALL SUB TRADES AND REQUIREMENTS BY OWNER

NOTE: ELECTRICAL, HVAC AND PLUMBING TO BE RELOCATED PER FEDERAL, STATE AND LOCAL CODES. GENERAL CONTRACTOR TO COORDINATE.

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02 PIER FOUNDATION PLAN DETAIL

SCALE: 1 1/2" = 1'-0"

NOTE: GENERAL CONTRACTOR RESPONSIBLE FOR COORDINATION OF ALL SUB TRADES AND

REQUIREMENTS BY OWNER **NOTE**: ELECTRICAL, HVAC AND PLUMBING TO BE RELOCATED PER FEDERAL, STATE AND LOCAL CODES. GENERAL CONTRACTOR TO COORDINATE.

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PROJECT NO:

FOUNDATION NOTES

2) ALL FOOTINGS AND PIERS ARE TO BE CENTERED ON THE

BUILDING COLUMNS UNLESS OTHERWISE NOTED. 3) COLUMN PIERS ARE TO BE PLACED INTEGRAL WITH THE

REINFORCING TO BE CONTINUOUS THROUGH PIERS. 4) BUILDING FOUNDATIONS ARE DESIGNED FOR 1,500 P.S.F.

5) JUNCTURE OF FLOOR SLAB WITH ALL PIERS AND GRADE

6) FLOOR SLAB TO BE POURED THRU AT ALL DOORWAYS,

8) VERIFY FOUNDATION SIZE AND DEPTH OF EXISTING BUILDING BEFORE CONSTRUCTION. NOTIFY ARCHITECT

GRADE BEAM OR FOUNDATION WALLS WITH

SOIL BEARING CAPACITY. VERIFY BEFORE

TO BE 1/2" WIDE EXPANSION JOINT MATERIAL.

7) FOOTING TO REST ON UNDISTURBED SOIL.

1) ALL CONCRETE TO BE 4,000 P.S.I.

CONSTRUCTION.

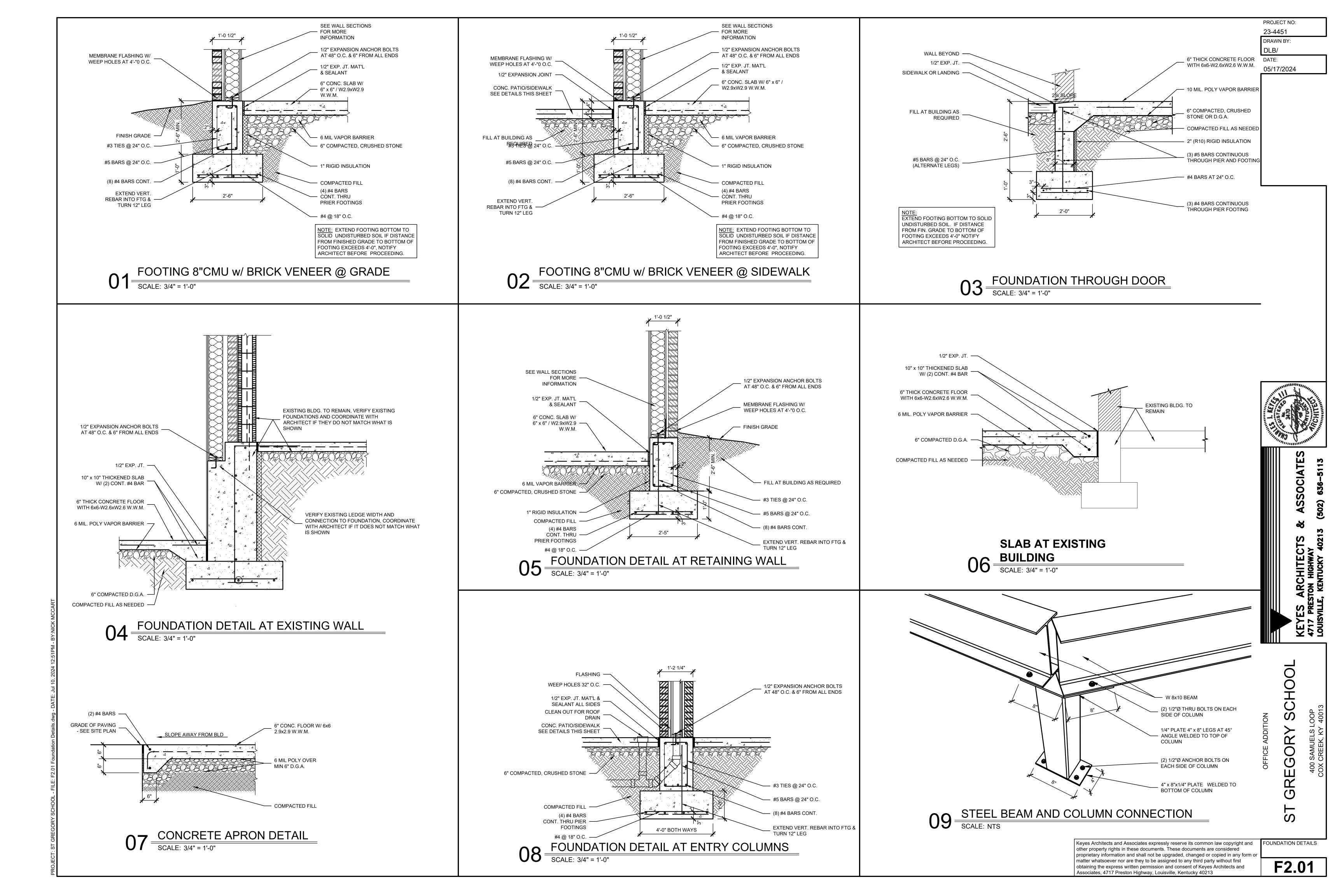
SLOPE 2% TO OUTSIDE

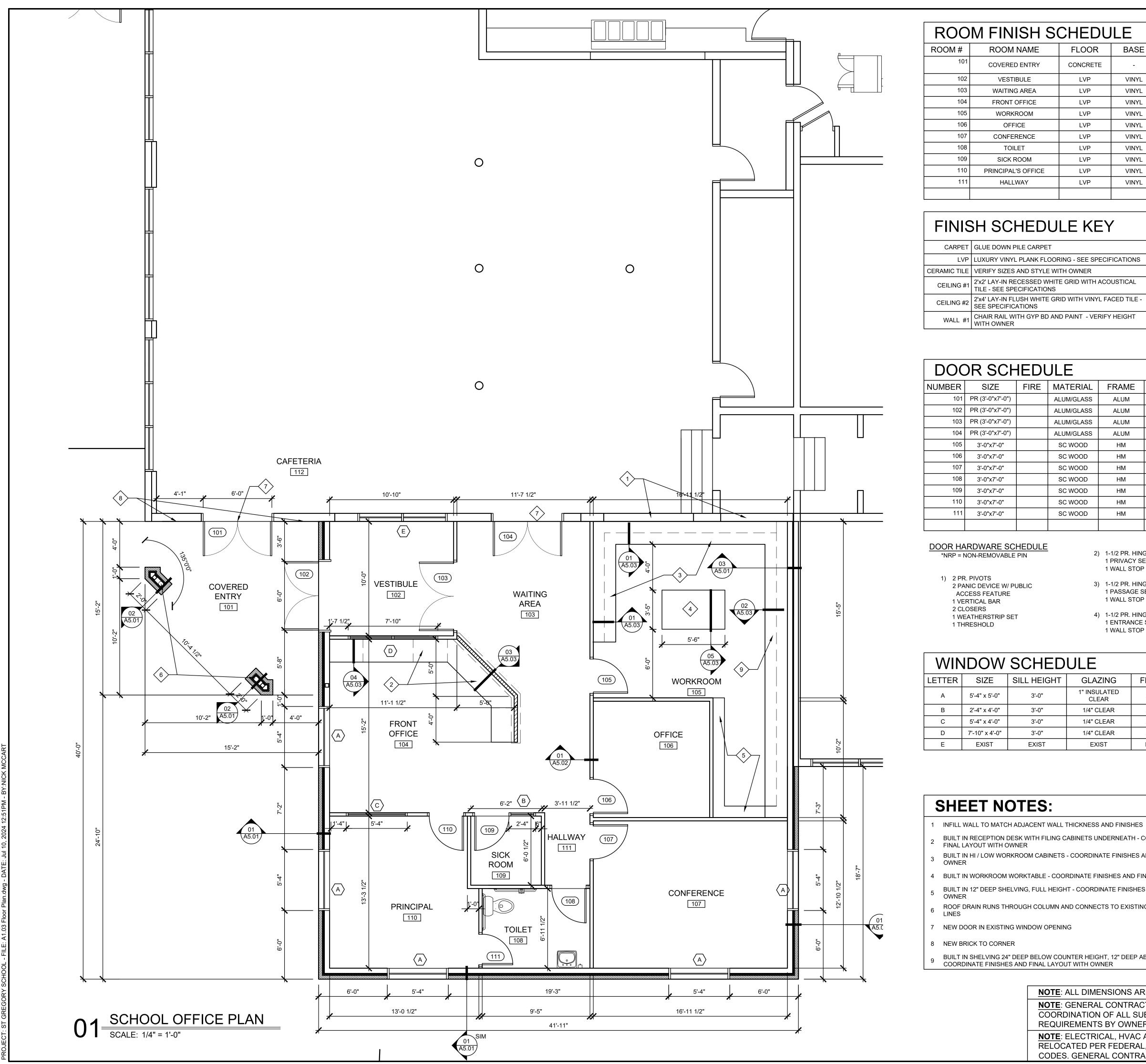
IF THEY ARE NOT AS SHOWN,

23-4451 DRAWN BY: DATE:

05/17/2024

F1.01





ROOM FINISH SCHEDULE CEILING MTL | CEILING HGT | REMARKS ROOM# **ROOM NAME FLOOR** BASE WALLS MTL. VENTED COVERED ENTRY CONCRETE SOFFIT VESTIBULE GYP-BD CEILING #1 9'-8" LVP VINYL WAITING AREA GYP-BD CEILING #1 9'-8" LVP VINYL GYP-BD CEILING #1 9'-8" FRONT OFFICE LVP VINYL WORKROOM LVP VINYL GYP-BD CEILING #1 9'-8" 9'-8" LVP GYP-BD CEILING #1 OFFICE VINYL CEILING #1 9'-8" CONFERENCE LVP VINYL WALL #1 TOILET GYP-BD CEILING #2 8'-0" LVP VINYL GYP-BD CEILING #1 8'-0" SICK ROOM LVP VINYL PRINCIPAL'S OFFICE LVP VINYL GYP-BD CEILING #1 9'-8" LVP GYP-BD CEILING #1 9'-8" HALLWAY VINYL

ROOM FINISH REMARKS

1) COORDINATE FINISHES WITH OWNER

FINISH SCHEDULE KEY CARPET | GLUE DOWN PILE CARPET LVP LUXURY VINYL PLANK FLOORING - SEE SPECIFICATIONS CERAMIC TILE VERIFY SIZES AND STYLE WITH OWNER CEILING #1 2'x2' LAY-IN RECESSED WHITE GRID WITH ACOUSTICAL TILE - SEE SPECIFICATIONS CEILING #2 2'x4' LAY-IN FLUSH WHITE GRID WITH VINYL FACED TILE - SEE SPECIFICATIONS WALL #1 CHAIR RAIL WITH GYP BD AND PAINT - VERIFY HEIGHT WITH OWNER

DOC	OR SCH	IEDU	JLE			DOOR TYF SYMBO	(7000)
NUMBER	SIZE	FIRE	MATERIAL	FRAME	HARDWARE	DETAILS	REMARKS
101	PR (3'-0"x7'-0")		ALUM/GLASS	ALUM	1	03,04/A6.01	1
102	PR (3'-0"x7'-0")		ALUM/GLASS	ALUM	1	01,02/A6.01	1
103	PR (3'-0"x7'-0")		ALUM/GLASS	ALUM	1	05,06/A6.01	1
104	PR (3'-0"x7'-0")		ALUM/GLASS	LUM/GLASS ALUM		03,04/A6.01	1
105	3'-0"x7'-0"		SC WOOD	НМ	3	05,06/A6.01	
106	3'-0"x7'-0"		SC WOOD	НМ	3	05,06/A6.01	
107	3'-0"x7'-0"		SC WOOD	НМ	3	05,06/A6.01	
108	3'-0"x7'-0"		SC WOOD	НМ	4	05,06/A6.01	
109	3'-0"x7'-0"		SC WOOD	НМ	2	05,06/A6.01	
110	3'-0"x7'-0"		SC WOOD	НМ	3	05,06/A6.01	
111	3'-0"x7'-0"		SC WOOD	НМ	4	05,06/A6.01	
						·	

2) 1-1/2 PR. HINGES 1 PRIVACY SET

1 WALL STOP

1 WALL STOP

DOOR HARDWARE SCHEDULE

1) 2 PR. PIVOTS 2 PANIC DEVICE W/ PUBLIC ACCESS FEATURE 1 VERTICAL BAR 2 CLOSERS

1 WEATHERSTRIP SET

1 THRESHOLD

3) 1-1/2 PR. HINGES 1 PASSAGE SET 1 WALL STOP 4) 1-1/2 PR. HINGES 1 ENTRANCE SET

DOOR SCHEDULE REMARKS

1) DOOR PART OF ALUMINUM STOREFRONT SYSTEM (SEE SPECIFICATIONS)

1////		CCHED	I II 🗀		WINDOW TYP				
V V I I \		SCHED		SYMBOL ————————————————————————————————————					
LETTER	SIZE	SILL HEIGHT	GLAZING	FRAME	DETAILS	REMARKS			
А	5'-4" x 5'-0"	3'-0"	1" INSULATED CLEAR	ALUM	09,10,11/A6.01				
В	2'-4" x 4'-0"	3'-0"	1/4" CLEAR	ALUM	07,08/A6.01				
С	5'-4" x 4'-0"	3'-0"	1/4" CLEAR	ALUM	07,08/A6.01				
D	7'-10" x 4'-0"	3'-0"	1/4" CLEAR	ALUM	07,08/A6.01	1			
Е	EXIST	EXIST	EXIST	EXIST	EXIST				

WINDOW SCHEDULE REMARKS

1) CENTER, VERTICAL MULLION

SHEET NOTES:

NOTE SYMBOL

BUILT IN RECEPTION DESK WITH FILING CABINETS UNDERNEATH - COORDINATE FINISHES AND

FINAL LAYOUT WITH OWNER

BUILT IN HI / LOW WORKROOM CABINETS - COORDINATE FINISHES AND FINAL LAYOUT WITH

4 BUILT IN WORKROOM WORKTABLE - COORDINATE FINISHES AND FINAL LAYOUT WITH OWNER

BUILT IN 12" DEEP SHELVING, FULL HEIGHT - COORDINATE FINISHES AND FINAL LAYOUT WITH

ROOF DRAIN RUNS THROUGH COLUMN AND CONNECTS TO EXISTING UNDERGROUND RUNOFF

NEW DOOR IN EXISTING WINDOW OPENING

8 NEW BRICK TO CORNER

BUILT IN SHELVING 24" DEEP BELOW COUNTER HEIGHT, 12" DEEP ABOVE COUNTER HEIGHT -COORDINATE FINISHES AND FINAL LAYOUT WITH OWNER

WALL LEGEND

2x4 WOOD STUD WALL

(2) LAYERS 5/8" GYPSUM WALLBOARD ON 2x6 WOOD STUD @ 16" o.c. WITH 1/2 " EXTERIOR GRADE GYPSUM

2x4 WOOD STUD KNEE WALL

*ALL MATERIALS ARE SIZES LISTED IN THIS LEGEND UNLESS OTHERWISE DIMENSIONED ON THIS PLAN OR SPECIFIED IN THE DETAILS AT A DIFFERENT SIZE

NOTE: ALL DIMENSIONS ARE TO FACE OF STUD

NOTE: GENERAL CONTRACTOR RESPONSIBLE FOR COORDINATION OF ALL SUB TRADES AND REQUIREMENTS BY OWNER

NOTE: ELECTRICAL, HVAC AND PLUMBING TO BE RELOCATED PER FEDERAL, STATE AND LOCAL CODES. GENERAL CONTRACTOR TO COORDINATE.

SHEATHING, 1" AIR GAP AND 4" CLAY FACING BRICK LAID IN MORTAR WITH 3/4" WIDE x 6 5/8" LONG 20 MSG CORRUGATED WALL TIES SPACED AT 16" o.c. EACH WAY

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SCHOOL OFFICE FLOOR

A1.01



PROJECT NO: 23-4451

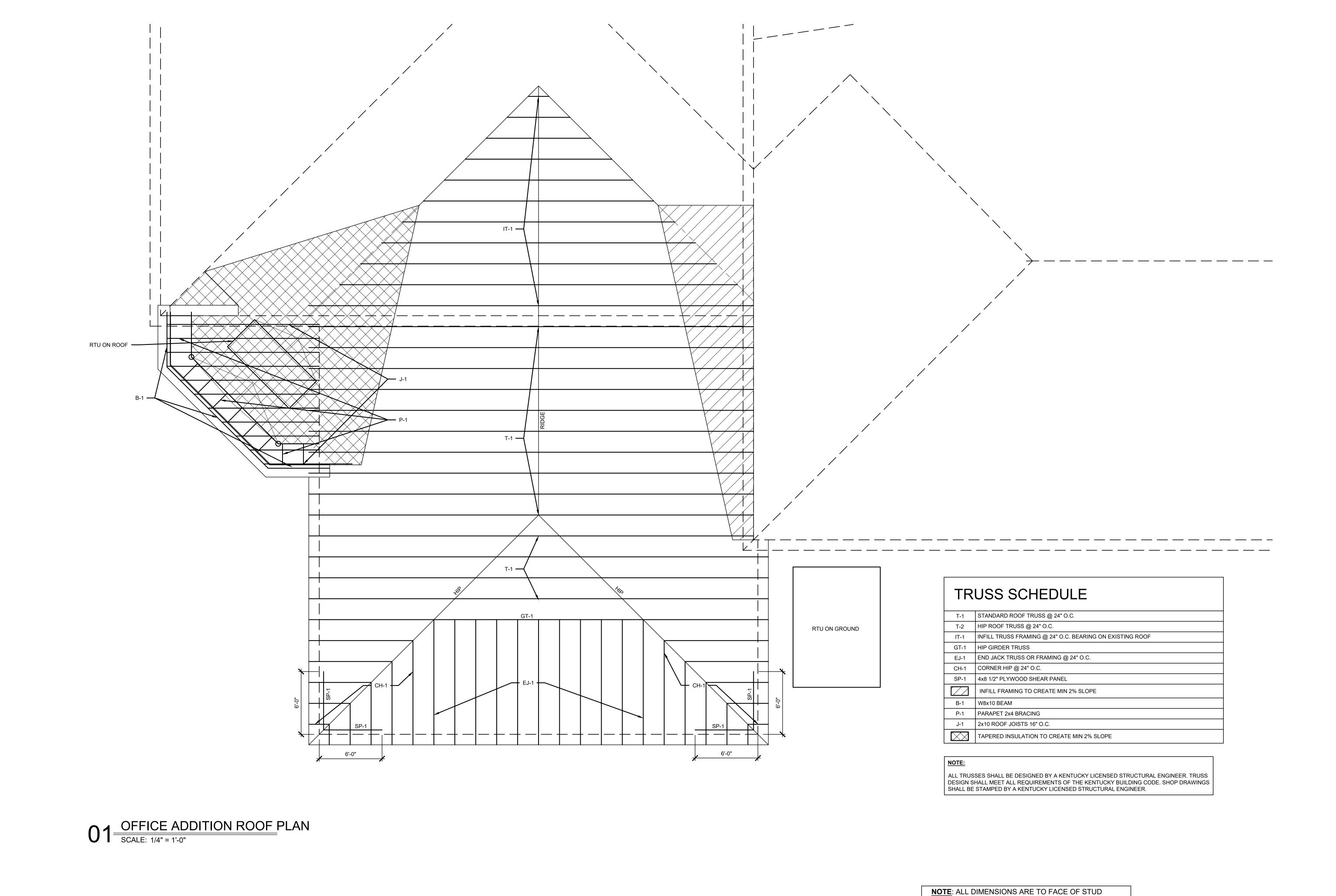
DRAWN BY:

05/17/2024

DATE:

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GR



GREGORY

NOTE: GENERAL CONTRACTOR RESPONSIBLE FOR

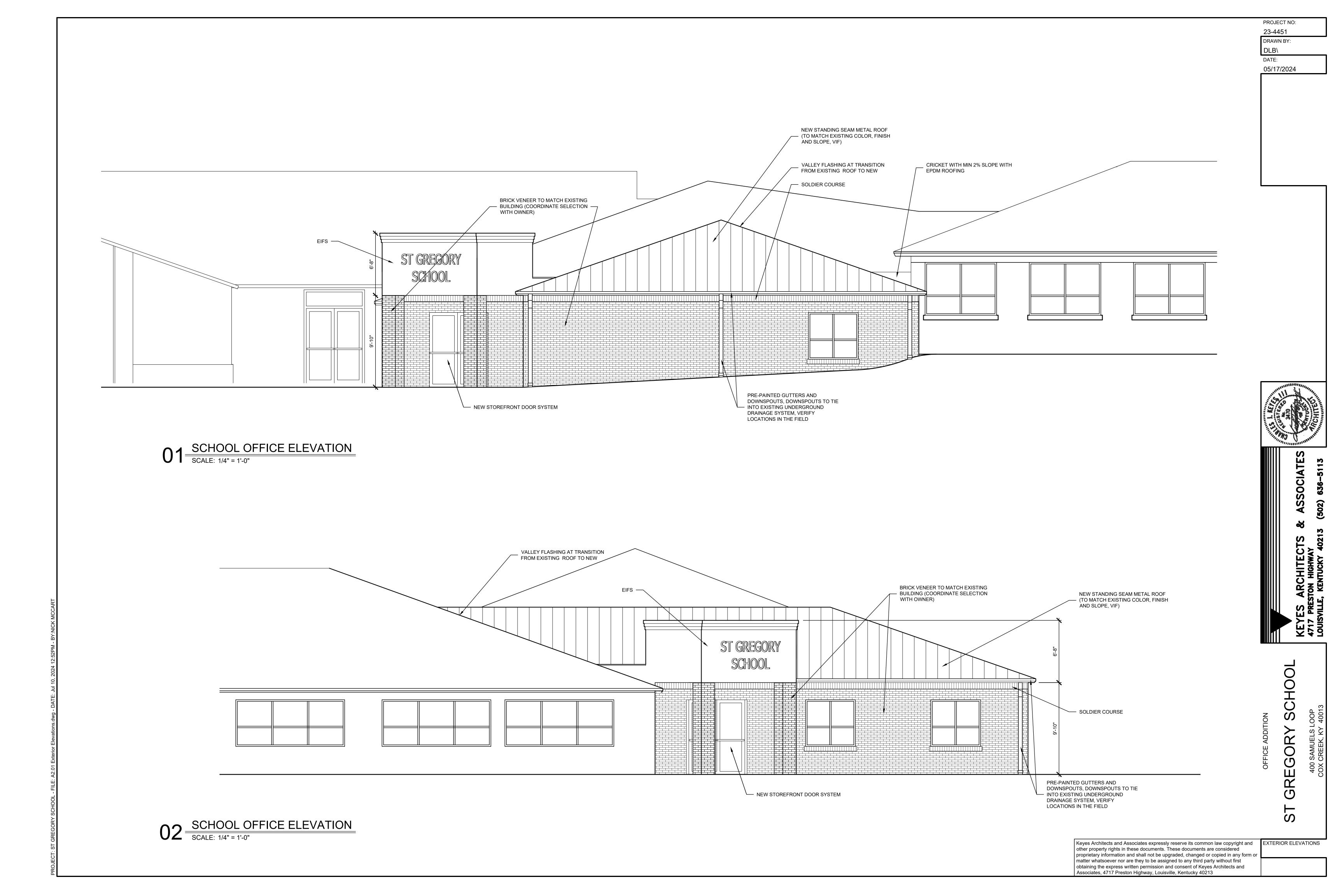
NOTE: ELECTRICAL, HVAC AND PLUMBING TO BE RELOCATED PER FEDERAL, STATE AND LOCAL

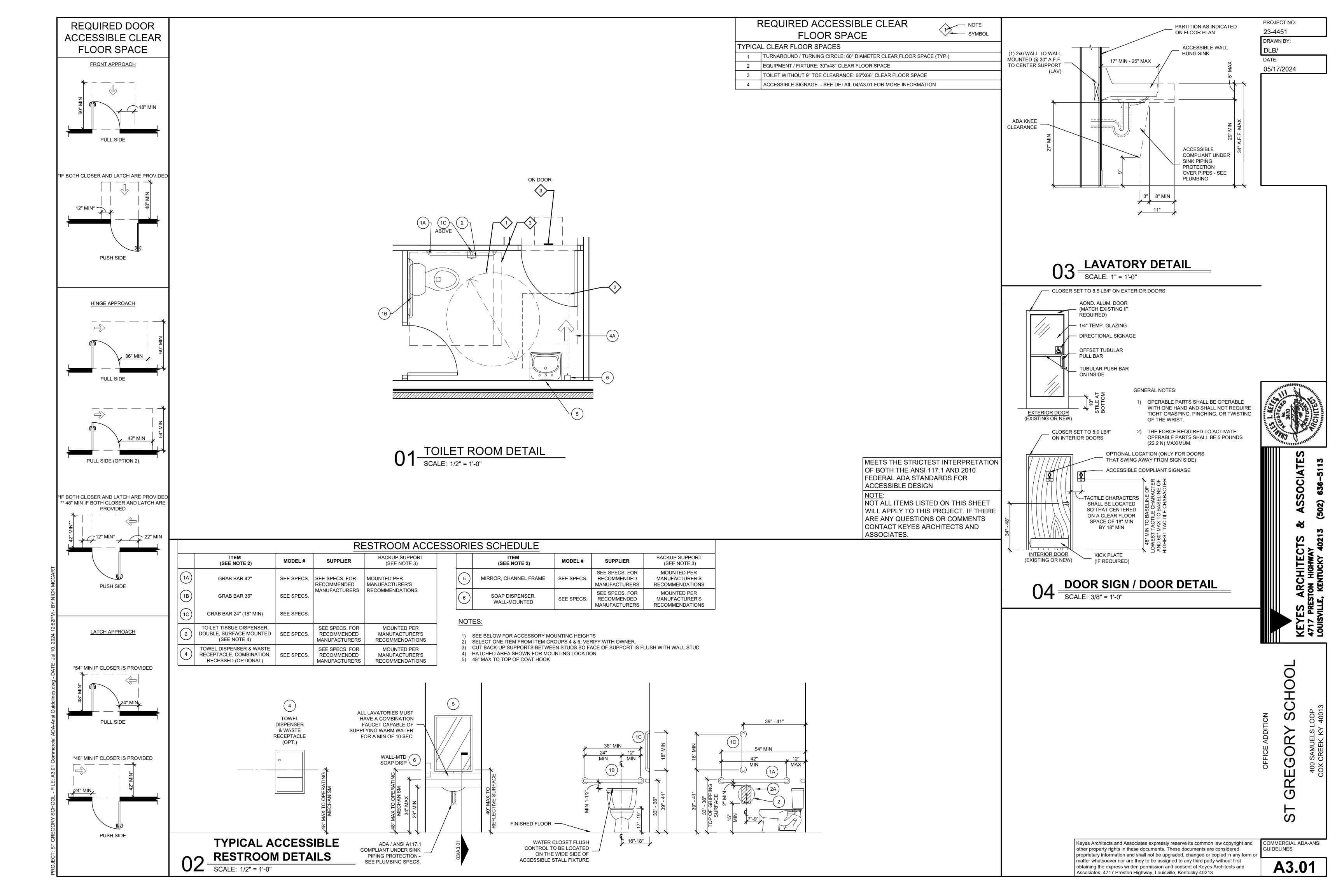
CODES. GENERAL CONTRACTOR TO COORDINATE.

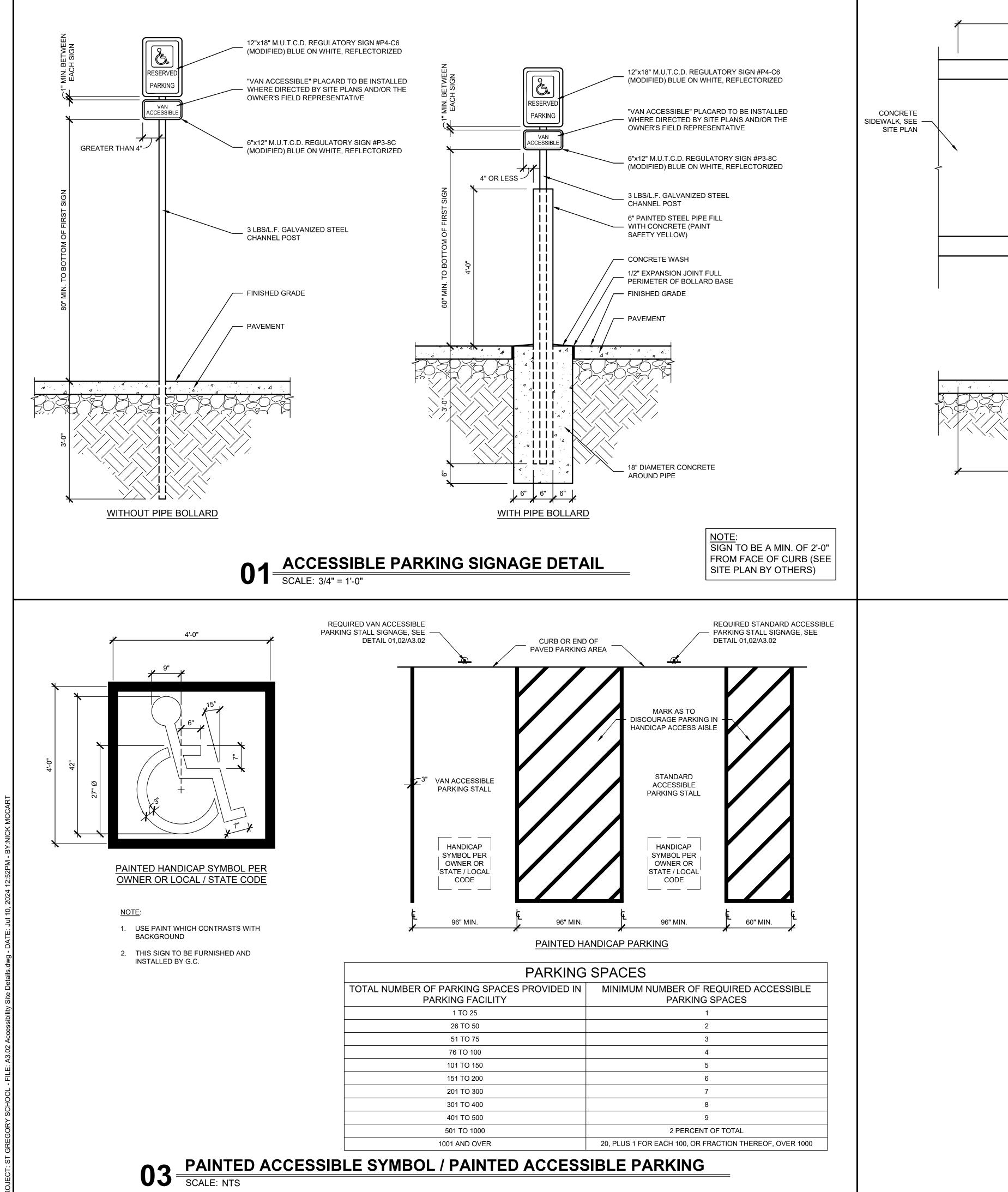
COORDINATION OF ALL SUB TRADES AND

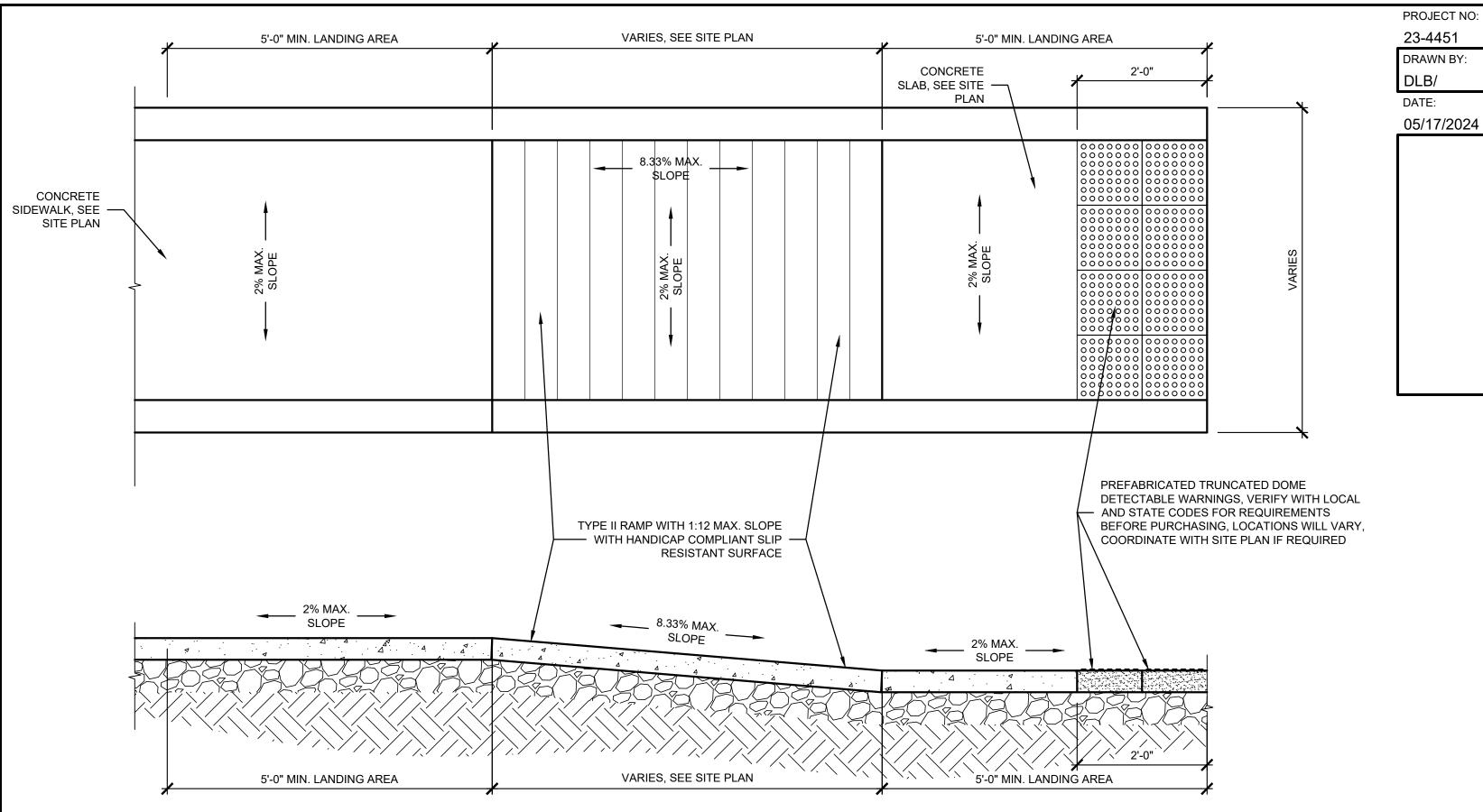
REQUIREMENTS BY OWNER

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O2 TYPE II ACCESSIBLE RAMP

SCALE: 3/4" = 1'-0"

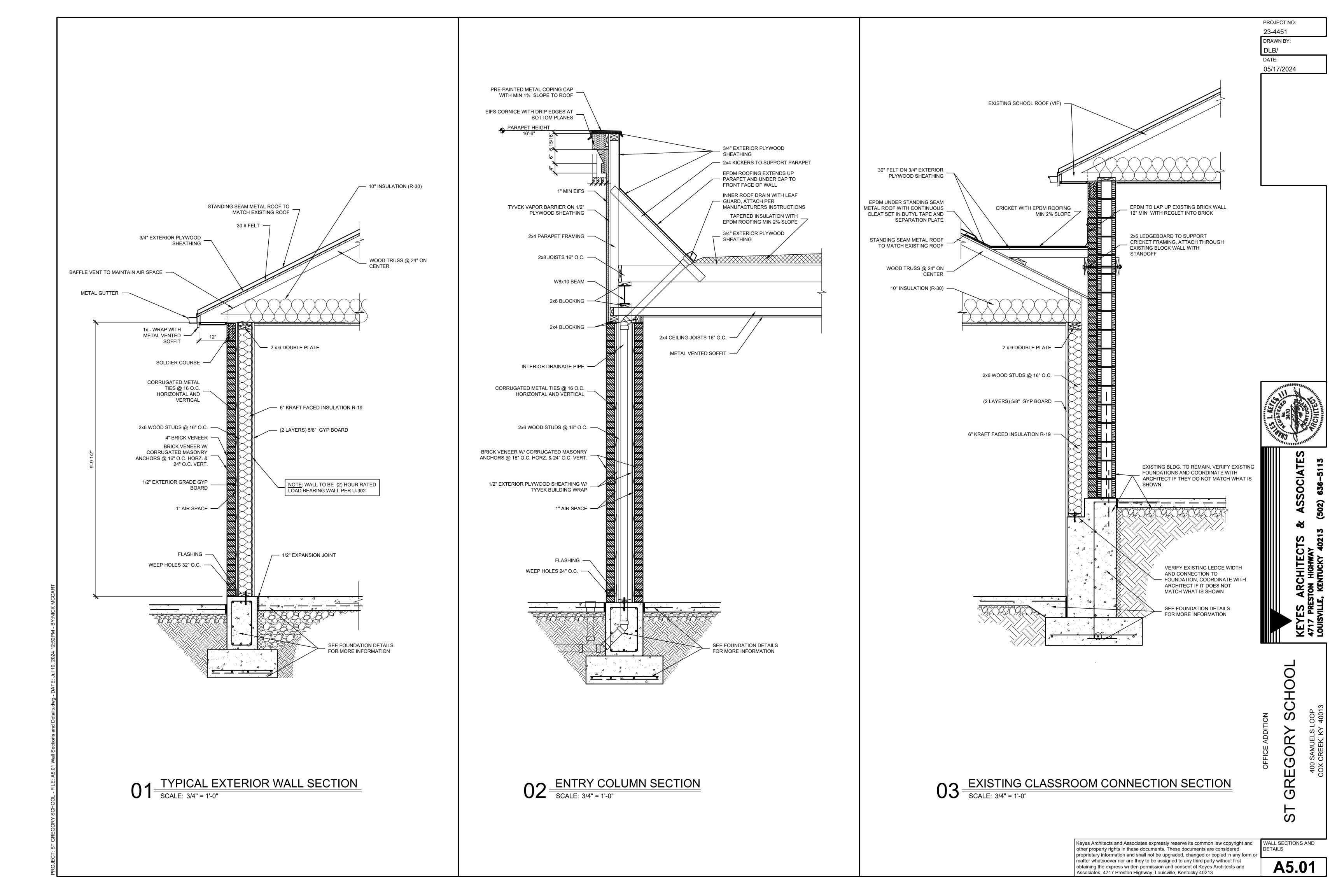


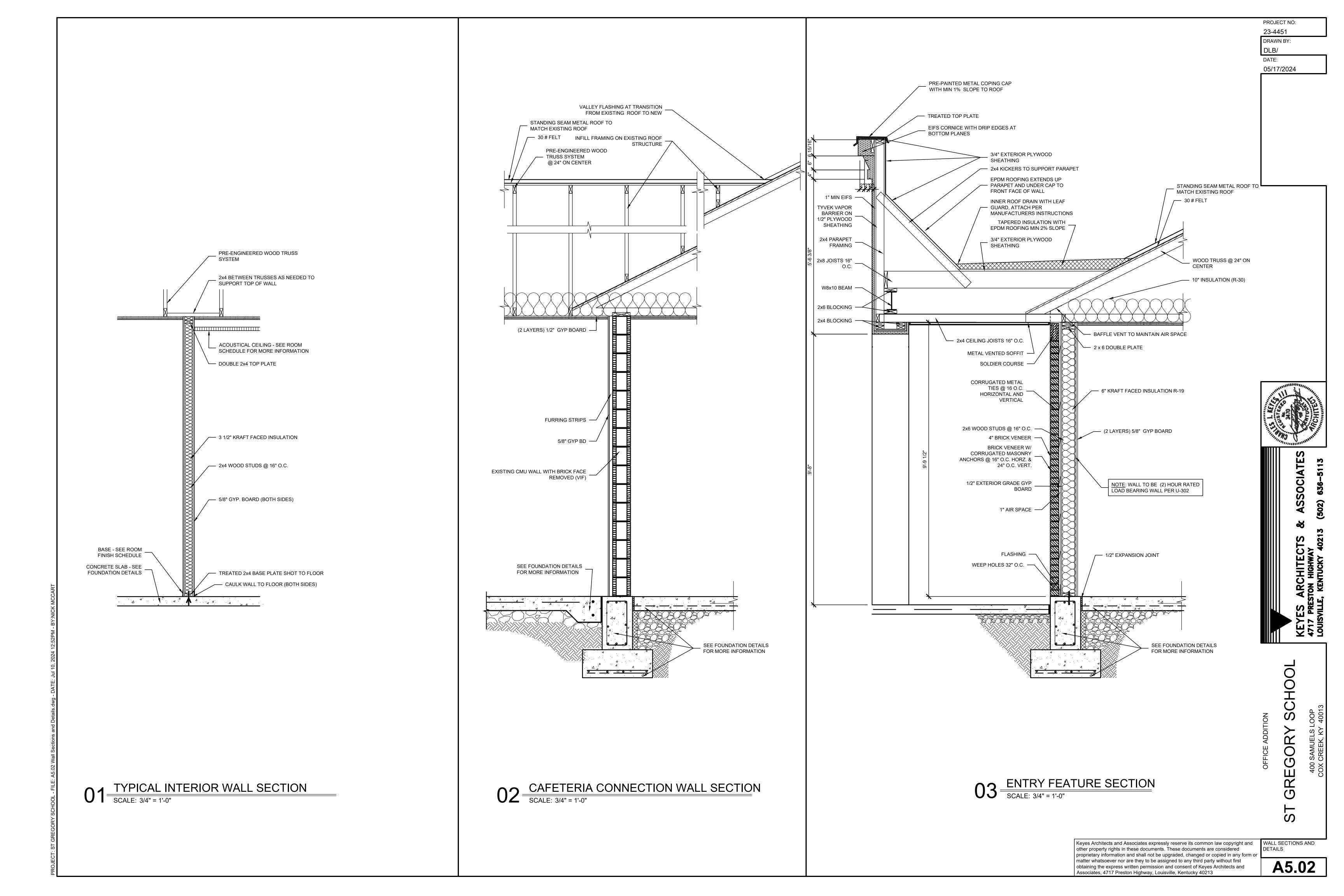
GREGORY 400 COX

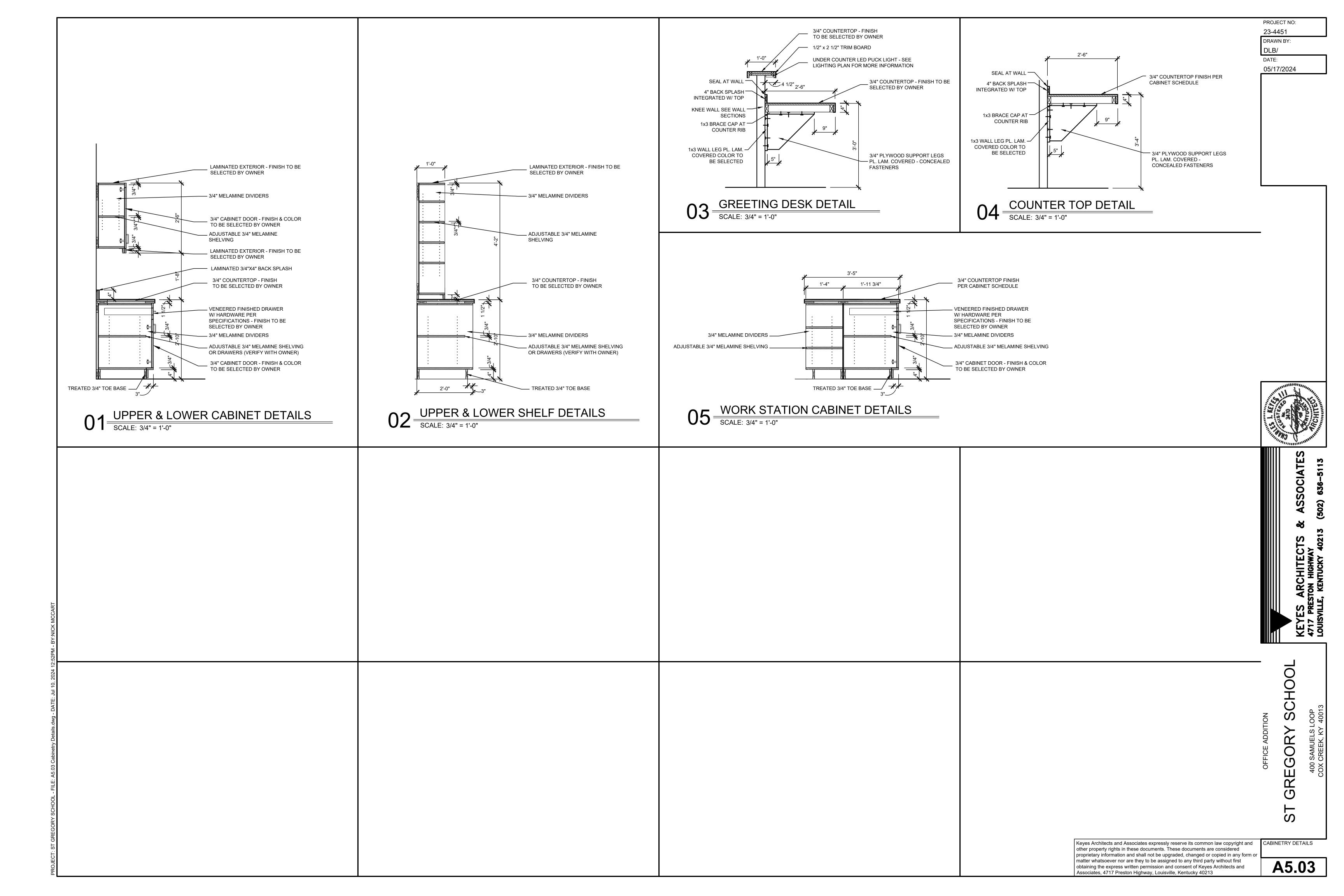
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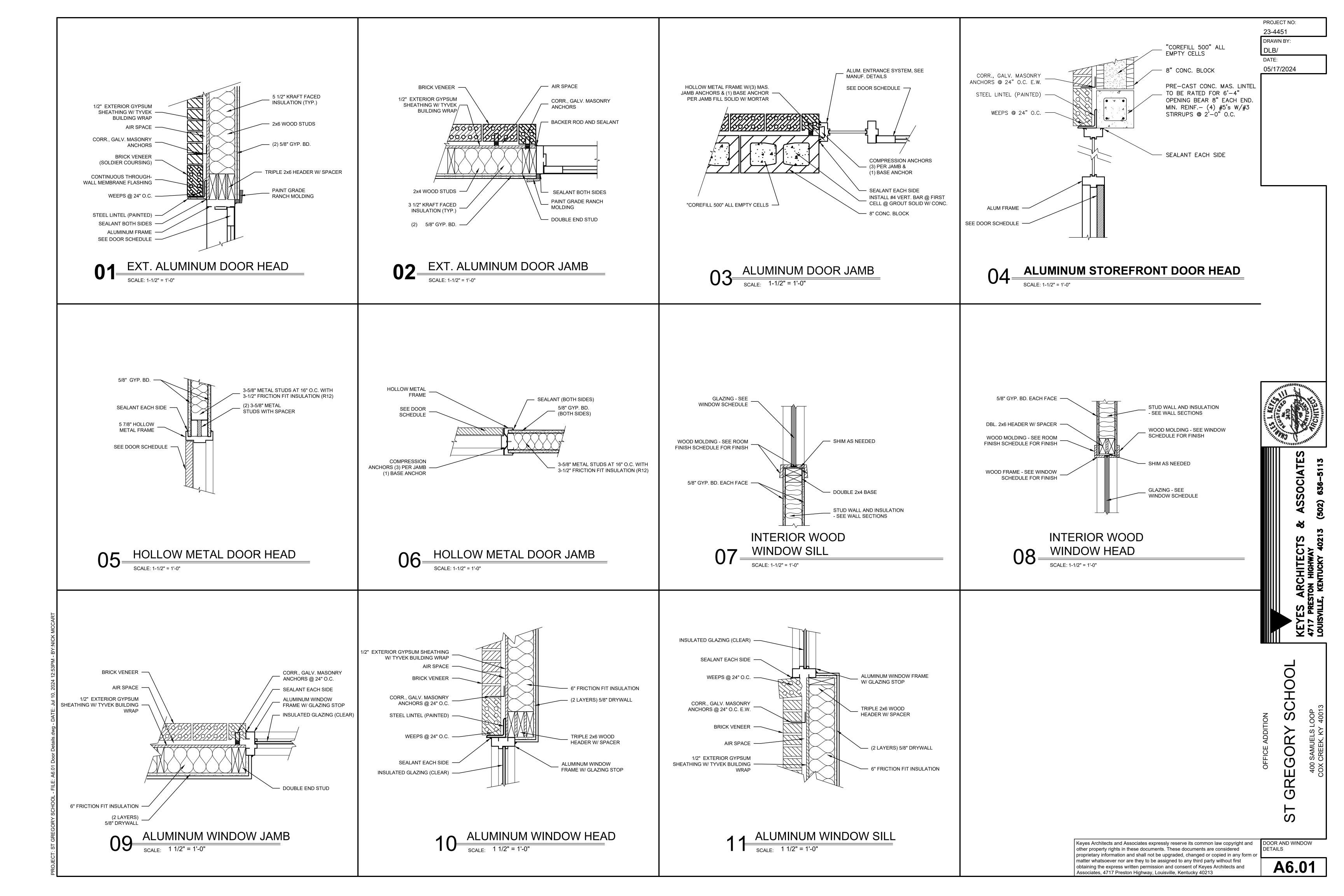
DETAILS

A3.02









B. ALL MECHANICAL WORK SHALL BE PERFORMED BY A LICENSED MECHANICAL CONTRACTOR.

ALL WORK SHALL BE COORDINATED AND SCHEDULED WITH THE CONSTRUCTION MANAGER (CM) OR GENERAL CONTRACTOR (GC), OTHER TRADES, THE OWNER, AND RELATED UTILITY COMPANIES. ALL WORK SHALL COINCIDE WITH THE CONSTRUCTION PHASING PER THE CONTRACT DOCUMENTS OR CONSTRUCTION DOCUMENTS AND/OR AS MODIFIED BY THE CM/GC AND APPROVED BY THE OWNER AND DESIGN TEAM. THE MECHANICAL CONTRACTOR SHALL COORDINATE AND DEVELOP A PHASING PLAN WHERE ONE IS NOT EXPLICITLY SHOWN AND SHALL ENSURE THAT SAID PHASING PLAN IS APPROVED PRIOR TO PROCEEDING WITH WORK. ANY AND ALL DEMOLITION SHALL NOT PERMIT INTERRUPTION OF SERVICE IN AN OCCUPIED BUILDING UNLESS COORDINATED AND APPROVED.

D. ALL DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENTS OR GEOMETRICAL RELATIONSHIPS OF DUCTWORK. PIPING, EQUIPMENT, AND SERVICES. THEY ARE NOT INTENDED TO SPECIFY OR SHOW EVERY OFFSET, SEQUENCE, DEVICE, OPTION, FITTING, VALVE, OR COMPONENT. CONTRACTOR TO PROVIDE ANY ADDITIONAL DUCT OR PIPING OFFSETS AND/OR FITTINGS, INCLUDING DIVIDED DUCTS AND FLATTENED DUCTS. REQUIRED FOR PROPER INSTALLATION AND TO MAINTAIN CLEARANCES AS ENCOUNTERED IN THE FIELD.

THE MECHANICAL CONTRACTOR SHALL OBTAIN A COPY OF THE ENTIRE SET OF CONTRACT DOCUMENTS PRIOR TO BID AND SHALL COORDINATE ROUTING AND INSTALLATION OF MECHANICAL DUCTWORK, PIPING, AND EQUIPMENT WITH ALL OTHER DISCIPLINES AND TRADES INCLUDING BUT NOT LIMITED TO CIVIL, ARCHITECTURAL, STRUCTURAL, FIRE SUPPRESSION, PLUMBING, AND ELECTRICAL.

REFER TO THE ENTIRE SET OF CONTRACT DOCUMENTS FOR DETAILS OF CONSTRUCTION AND INSTALLATION REQUIREMENTS. FURNISH ALL LABOR, MATERIAL, AND EQUIPMENT REQUIRED FOR COMPLETION AND OPERATION OF A FULLY FUNCTIONAL MECHANICAL SYSTEM AND IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS INCLUDING BUT NOT LIMITED TO BUILDING CODE, ASHRAE, IMC, IECC, SMACNA, AND NFPA.

. THE EXACT LOCATIONS OF ALL EQUIPMENT, DUCTS, DIFFUSERS, ETC. SHALL BE COORDINATED WITH ALL OTHER TRADES. CEILING MOUNTED LIGHTING AND ELECTRICAL REQUIREMENTS TAKE PRECEDENCE OVER CEILING MOUNTED MECHANICAL EQUIPMENT. SEE ARCHITECTURAL REFLECTED CEILING PLANS FOR CEILING GRID AND LIGHTING LAYOUT FOR COORDINATION OF FINAL DIFFUSER LOCATIONS.

H. THE MECHANICAL DRAWINGS REFLECT A "BASIS OF DESIGN" HVAC SYSTEM THAT HAS BEEN DESIGNED AROUND SPECIFIC PRODUCTS/MANUFACTURER'S (SEE SCHEDULES). THE SELECTION OF A "BASIS OF DESIGN" HAS INFLUENCED THE DESIGNS OF OTHER TRADES (ELECTRICAL, STRUCTURAL, ETC.). THE CONTRACTOR MAY USE "NON-BASIS OF DESIGN" PRODUCTS/MANUFACTURER'S AS PERMITTED BY THE SPECIFICATIONS AND/OR CONTRACT DOCUMENTS. COORDINATION OF ALL MODIFICATIONS TO EACH DISCIPLINE WHICH RESULT FROM THE USE OF "NON-BASIS OF DESIGN" EQUIPMENT OR MATERIALS SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR. IF "NON-BASIS OF DESIGN" MANUFACTURERS, SIZES, OR MODEL NUMBERS ARE BID, SUBMITTED, OR INSTALLED; IT IS THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR AND ALL OF HIS OR HER SUBCONTRACTORS TO COORDINATE ALL DIFFERENCES PRIOR TO BID. ALL COSTS OF ALL TRADES ASSOCIATED WITH THE USE OF "NON-BASIS OF DESIGN" EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR AND SHALL BE INCLUDED IN THE BID. SUBSEQUENTLY, ANY ADDITIONAL COST BORE BY THE ENGINEER (MECHANICAL, ELECTRICAL, ETC) TO ACCOMMODATE "NON-BASIS OF DESIGN" EQUIPMENT SHALL BE BORE BY THE CONTRACTOR AND PAID TO THE ENGINEER OF RECORD DURING SUBMITTALS.

NON-BASIS OF DESIGN EQUIPMENT OR MATERIALS AS ALLOWED BY THE SPECIFICATIONS AND/OR CONTRACT DOCUMENTS, WHICH ARE INSTALLED AND SUBSEQUENTLY VIEWED UNSATISFACTORY BY THE OWNER AND/OR ENGINEER WITHIN THE WARRANTY PERIOD. SHALL BE REMOVED COMPLETELY BY THE CONTRACTOR AND REPLACED WITH THE ORIGINAL DESIGN OR CORRECTED AS DIRECTED BY THE ENGINEER WITHOUT ADDITIONAL COST TO THE OWNER.

CONTRACTOR SHALL VISIT THE JOB SITE, FIELD VERIFY FIT, COORDINATE WITH OTHER TRADES, AND BECOME FAMILIAR WITH ALL PROJECT CONDITIONS PRIOR TO FABRICATING DUCTWORK, INSTALLING EQUIPMENT, ETC. NO ALLOWANCES WILL BE MADE FOR LACK THEREOF.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION AND COSTS FOR ALL PERMITS, TESTING, AND INSPECTIONS.

THE ENTIRE MECHANICAL INSTALLATION SHALL BE AS REQUIRED TO MAINTAIN FIRE/SMOKE RATINGS AND/OR "UL" ASSEMBLY RATINGS AS REQUIRED BY THE CONTRACT DOCUMENTS AND AS SHOWN ON THE ARCHITECTURAL. SEAL AROUND ALL PENETRATIONS THROUGH ALL FIRE/SMOKE SEPARATIONS AND/OR "UL" RATED ASSEMBLIES. COORDINATE ALL PENETRATIONS WITH THE CONSTRUCTION MANAGER AND/OR GENERAL CONTRACTOR. PROVIDE ADDITIONAL FIRE DAMPERS, SMOKE DETECTORS, AND SMOKE DAMPERS (INCLUSIVE OF WIRING) AS REQUIRED FOR A FULLY FUNCTIONAL AND CODE COMPLIANT SYSTEM.

M. ALL DUCTWORK, PIPING, AND MECHANICAL EQUIPMENT SHALL BE SUPPORTED DIRECTLY FROM THE STRUCTURE. NO OTHER TRADES, I.E. ELECTRICAL, CEILING, PLUMBING, ETC., SHALL BE SUSPENDED, HUNG, OR SUPPORTED FROM MECHANICAL DUCTWORK OR MECHANICAL PIPING.

N. ALL BUILDING PENETRATIONS MUST BE COORDINATED WITH THE ARCHITECT AND SHALL BE FLASHED AND SEALED WEATHER-TIGHT. ALL MATERIALS AND COLORS MUST BE PRE-APPROVED BY THE ARCHITECT. NEW OPENINGS AND/OR PENETRATIONS FOR MECHANICAL ITEMS SHALL BE CUT, SLEEVED, ETC. BY THE MECHANICAL CONTRACTOR. ALL OPENINGS SHALL BE CORE DRILLED OR SAW-CUT. NO "HAMMER <u>DRILLING</u>" WILL BE ALLOWED.

O. ROUTE DUCTWORK AS HIGH AS POSSIBLE TO FACILITATE ACCESS TO ABOVE CEILING SPACE. COORDINATE ROUTING WITH OTHER SERVICES AND TRADES. PROVIDE ADDITIONAL DUCTWORK, OFFSETS, ETC. TO ACCOMMODATE FIELD CONDITIONS AS REQUIRED FOR A COMPLETE AND FUNCTIONING SYSTEM AT NO ADDITIONAL COST. ADDITIONAL OFFSETS REQUIRE APPROVAL FROM THE ENGINEER. ROUTE DUCTWORK BETWEEN JOISTS WHERE POSSIBLE.

P. ALL AIR DEVICES LOCATED ABOVE GYPBOARD OR HARD CEILINGS SHALL HAVE ACCESSIBLE BALANCING DAMPERS.

Q. ALL DUCTWORK SHALL BE CONSTRUCTED AND INSTALLED PER SMACNA HVAC DUCT CONSTRUCTION STANDARDS.

R. PROVIDE AND INSTALL DUCT ACCESS DOORS FOR INSPECTION OF ALL INSTALLED FIRE DAMPERS AS DIRECTED BY SMACNA HVAC CONSTRUCTION STANDARDS.

S. MAXIMUM FLEXIBLE DUCT LENGTH SHALL BE 5'-0". ALL FLEXIBLE DUCT SHALL CONFORM TO THE REQUIREMENTS OF UL 181 FLEXIBLE AIR DUCTS. SUPPORT TO ELIMINATE SAGGING AND KINKING. INSULATED FLEXIBLE DUCTS SHALL MEET MINIMUM R-VALUES REQUIRED BY THE

T. ALL HVAC EQUIPMENT TO BE INSTALLED PER MANUFACTURER'S REQUIREMENTS. UTILIZE FACTORY FILTERS DURING CONSTRUCTION.

U. THE MECHANICAL CONTRACTOR SHALL BALANCE SYSTEM TO AIR QUANTITIES INDICATED ON PLANS AND PROVIDE OWNERS REPRESENTATIVES WITH COMPLETE NEBB/AABC BALANCE REPORT. THE MECHANICAL CONTRACTOR SHALL PROVIDE AS MANY ADDITIONAL SITE VISITS BY THE LICENSED TAB CONTRACTOR AS REQUIRED BY THE ENGINEER FOR A COMPLETE AND FUNCTIONING AND APPROVED SYSTEM IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.

V. PROVIDE A MANUAL VOLUME DAMPER AT ALL BRANCH TAKE-OFFS ON SUPPLY AND RETURN. COORDINATE ADDITIONAL MANUAL VOLUME DAMPER LOCATIONS REQUIRED FOR A FULLY FUNCTIONAL SYSTEM WITH THE ENGINEER PRIOR TO ORDER, FABRICATION, OR INSTALLATION.

W. ALL DUCT DIMENSIONS SHOWN ARE INTERIOR "CLEAR" DUCT

X. MAINTAIN 10'-0" MINIMUM CLEARANCE BETWEEN OUTDOOR AIR INTAKES AND EXHAUST, PLUMBING VENTS, ETC. AND/OR AS REQUIRED BY THE BUILDING CODE, WHICHEVER IS MORE STRINGENT.

Y. MAINTAIN 10'-0" MINIMUM CLEARANCE FROM EDGE OF ROOFTOP EQUIPMENT TO ROOF EDGE UNLESS RAILING OR PARAPET OF SUFFICIENT HEIGHT IS TO BE PROVIDED IN ACCORDANCE WITH ALL APPLICABLE CODES INCLUDING BUT NOT LIMITED TO: IBC, IMC, LOCAL CODES, OSHA GUIDELINES (WHERE APPLICABLE). REFER TO ARCHITECTURAL.

Z. ALL CONTROL WIRING AND CONDUIT SHALL COMPLY WITH NEC.

AA. MECHANICAL CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR AND DRAWINGS FOR CONNECTIONS AND LOCATION OF ALL EQUIPMENT.

AB. CONTRACTOR SHALL PROVIDE ADDITIONAL OFFSETS OR BENDS IN PIPING AS REQUIRED TO ALLOW FOR EXPANSION AND CONTRACTION DUE TO TEMPERATURE CHANGES AND DIFFERENCES IN THE AMBIENT TEMPERATURE WHEN PIPING AND EQUIPMENT IS INSTALLED.

AC. ALL ROOF PENETRATIONS SHALL BE IN COMPLIANCE WITH THE ROOFING CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE AS NECESSARY TO MAINTAIN ALL WARRANTIES.

AD. STRUCTURAL MEMBERS SHALL NOT BE CUT OR COMPROMISED IN ANY

AE. DO NOT BLOCK ACCESS TO HVAC OR ELECTRICAL EQUIPMENT. DO NOT INSTALL PIPING, DUCTWORK, OR EQUIPMENT OVER ELECTRICAL PANELS/SWITCHGEAR OR THE 30" x 42" (W x D) CLEARANCE IN FRONT OF THESE ELECTRICAL ITEMS. COORDINATE ADDITIONAL REQUIREMENTS WITH NEC.

ABBREVIATIONS

ABOVE FINISHED FLOOR AMP AMPERE ARCH ARCHITECT BHP BRAKE HORSEPOWER BTU BRITISH THERMAL UNIT BTU PER HOUR BTUH CFM CUBIC FEET PER MINUTE DRY BULB TEMPERATURE DEG DEGREE DDC DIRECT DIGITAL CONTROL DIA DIAMETER DIM DIMENSION DP DIFFERENTIAL PRESSURE EΑ EXHAUST AIR EAT ENTERING AIR TEMPERATURE ELECTRONIC COMMUTATED MOTOR ECM ELEC ELECTRICAL ESP EXTERNAL STATIC PRESSURE EX EXISTING FAHRENHEIT FLA FULL LOAD AMPS FLEX FLEXIBLE FFFT FT-HD FEET HEAD GAS GΑ GAUGE GAL GALLONS GALV GALVANIZED GENERAL CONTRACTOR GPM GALLONS PER MINUTE HEAD HP HORSEPOWER ΗZ HERTZ (FREQUENCY, CYCLES PER SECOND) ΙN INCHES KW KILOWATT LENGTH LAT LEAVING AIR TEMPERATURE MAX MAXIMUM MBH THOUSAND BTUH MCA MINIMUM CIRCUIT AMPS MECH MECHANICAL MIN MINIMUM N/A NOT APPLICABLE

NC NOISE CRITERIA NUMBER NOM NOMINAL NTS NOT TO SCALE OUTSIDE AIR OA PD PRESSURE DROP PHASE PVC POLYVINYL CHLORIDE QTY QUANTITY RA RETURN AIR RPM REVOLUTIONS PER MINUTE SEN SENSIBLE

SHC SENSIBLE HEAT CAPACITY STATIC PRESSURE SPECS **SPECIFICATIONS** SQUARE SQUARE FEET SUP SUPPLY **TEMPERATURE** TEMPERATURE

TSTAT THERMOSTAT TON 12,000 BTUH COOLING CAPACITY

VOLTS (ELECTRICAL) WET BULB TEMPERATURE

EXHAUST AIR

EXHAUST GRILLE FD FIRE DAMPER (W/ ACCESS DOOR) MD MOTOR OPERATED DAMPER MUA MAKE-UP AIR

OUTSIDE AIR OΑ OBD OPPOSED BLADE DAMPER RETURN AIR RA RETURN GRILLE SUPPLY AIR

ROOF TOP UNIT

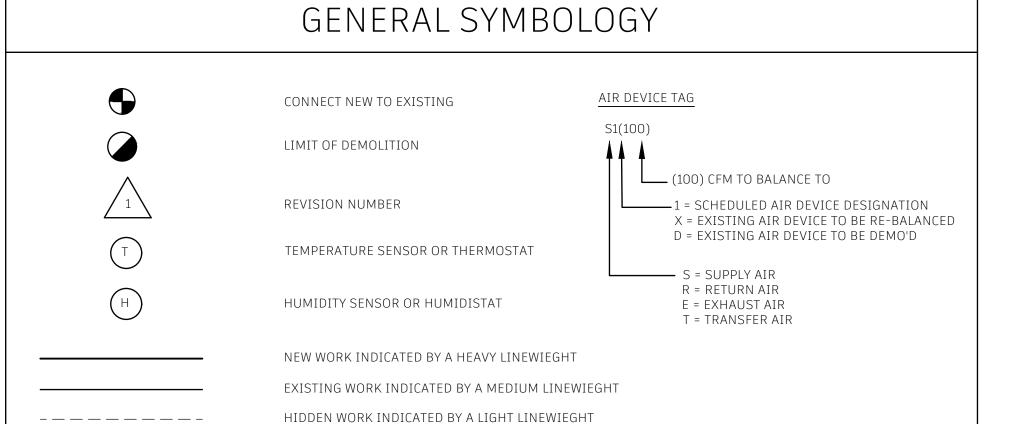
SUPPLY GRILLE TSP TOTAL STATIC PRESSURE (IN. WG) VD VOLUME DAMPER

MUA

RTU

EQUIPMENT DIRECT DIGITAL CONTROL **EXHAUST FAN** MINIMUM EFFICIENCY REPORTING VALUE MERV MAKE-UP AIR UNIT

DUCTWORK ROUND DUCT UP RECTANGULAR DUCT THROUGH ROOF W=WIDTH, D=DEPTH (INCHES UNLESS NOTED OTHERWISE) AS VIEWED ROUND DUCT DOWN RETURN/EXHAUST DUCT ROUND DUCT UP THROUGH ROOF 10''Ø (DIA=INSIDE DIAMETER) RETURN/EXHAUST DUCT DOWN RECTANGULAR SUPPLY DUCT UP THROUGH 45° TAKEOFF 45° TAKE-OFF TRANSITION TO ROUND SUPPLY DUCT DOWN STANDARD RADIUS ELBOW (R = W)SUPPLY/RETURN/EXHAUST BELLMOUTH TO ROUND CONNECTION CONNECTION **FULL LENGTH SPLITTER** VANES (R < W)SUPPLY/RETURN/ EXHAUST CONVERGE RETURN/EXHAUST W/45° TAKE-OFFS RECTANGULAR DUCT TO ROUND SUPPLY/RETURN/ EXHAUST SIDEWALL DUCT MOUNTED REGISTER/GRILLE DUCT WITH CIELING MOUNTED DIFFUSER/GRILLE BACKDRAFT DAMPER MANUAL VOLUME DAMPER SELF-CLOSING FIRE DAMPER W/ TAKE-OFF TO ACCESS DOOR DIFFUSER/GRILLE RECTANGULAR TO ROUND DUCT MOUNTED SMOKE DETECTOR ELBOW MOTORIZED DAMPER W/ACCESS DOOR STANDARD 4-WAY BLOW SUPPLY DIFFUSER | X | DIFFUSER/GRILLE UNDER DUCT-PROVIDE TAKEOFF AND RUNOUT RETURN/EXHAUST GRILLE OR REGISTER $\angle -$ WITH VOLUME DAMPER RETURN OR EXHAUST AIR FLOW $\overline{}$ SUPPLY AIR FLOW FLEXIBLE DUCT



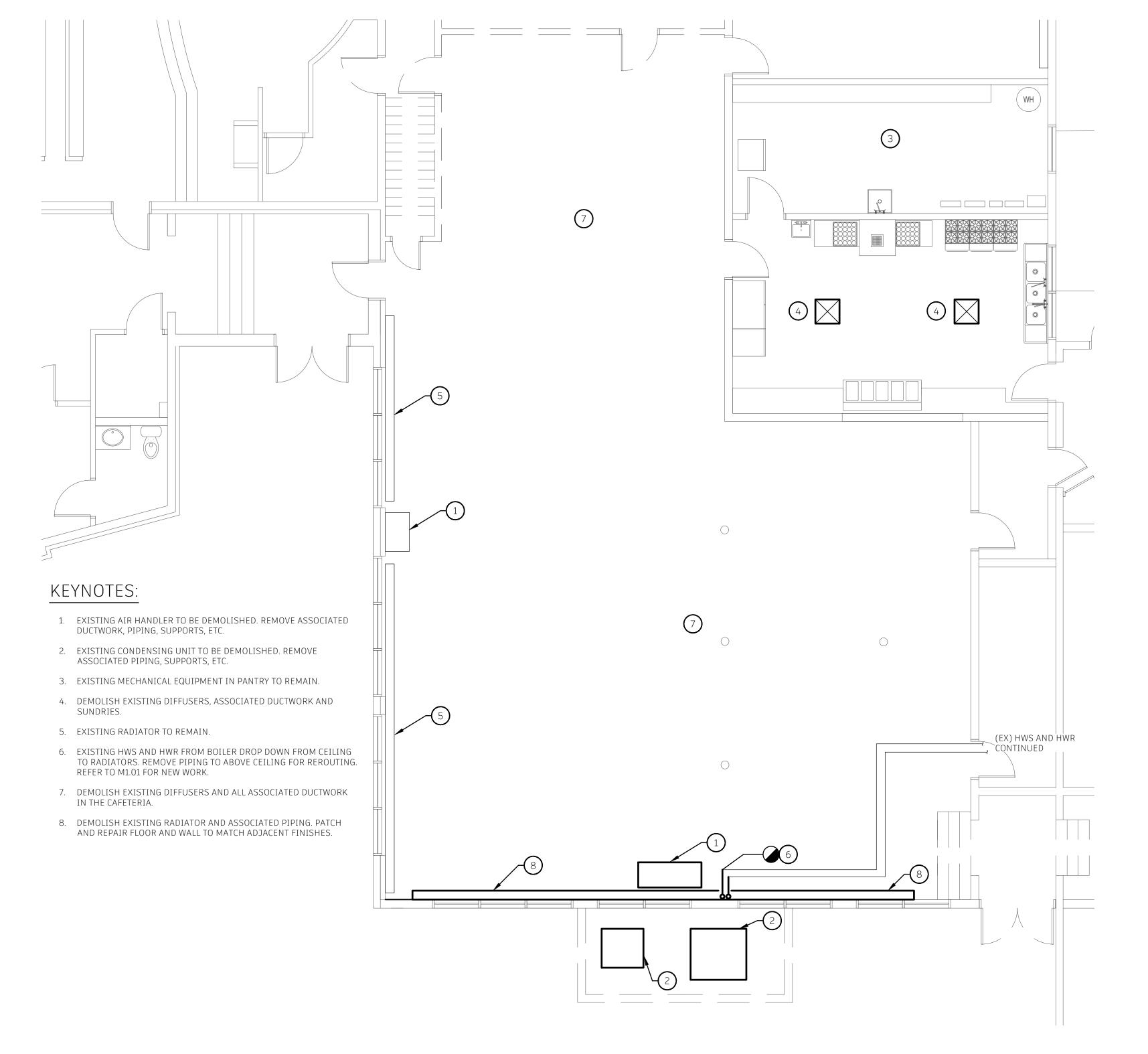
ANDERSON

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MECHANICAL GENERAL NOTES



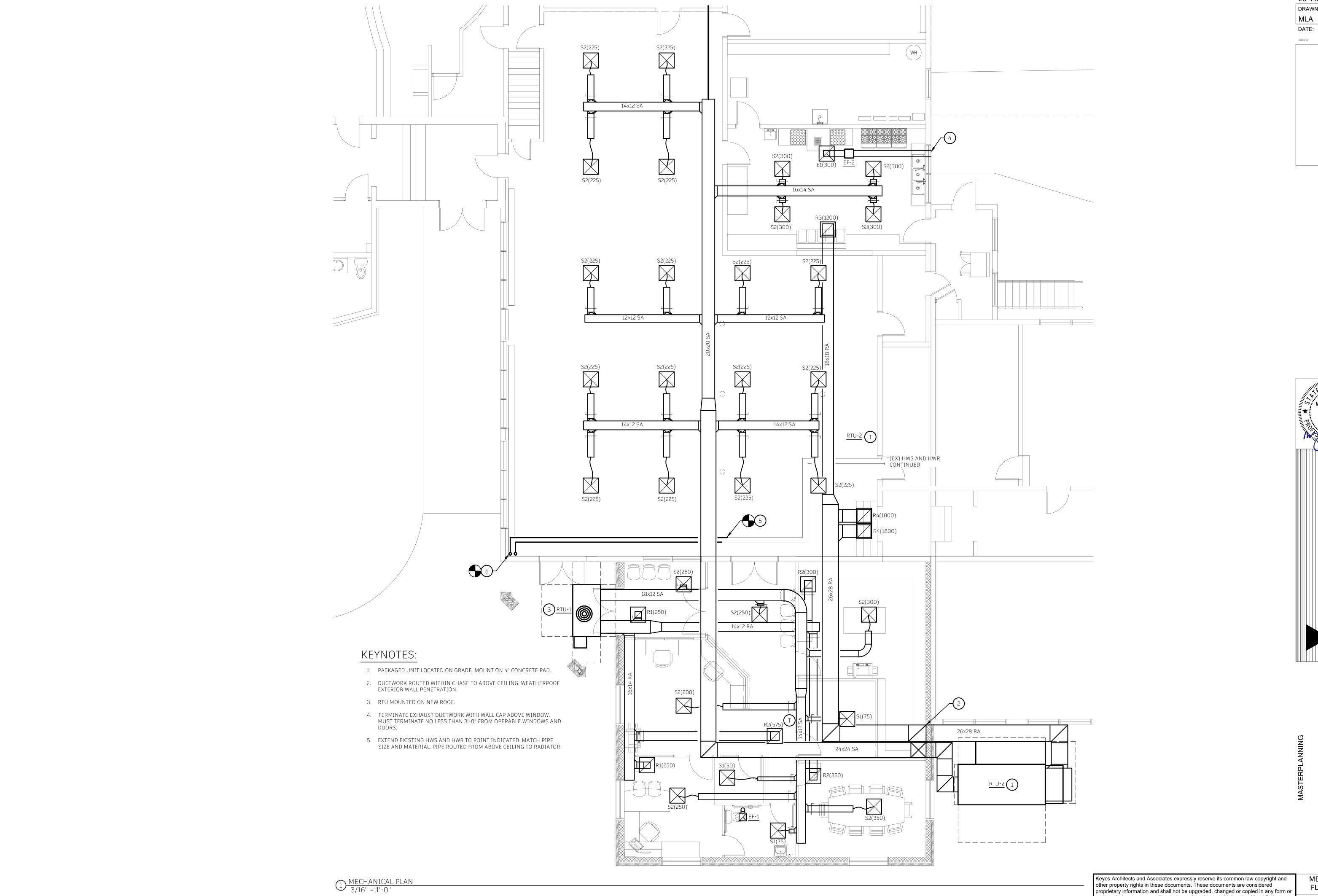
ARCHITECTS & ASSOCIA-STON HIGHWAY 5, KENTUCKY 40213 (502) 636-51

GREGORY SCHOO

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MECHANICAL SPECIFICATIONS

1 <u>MECHANICAL PLAN</u> 3/16" = 1'-0"

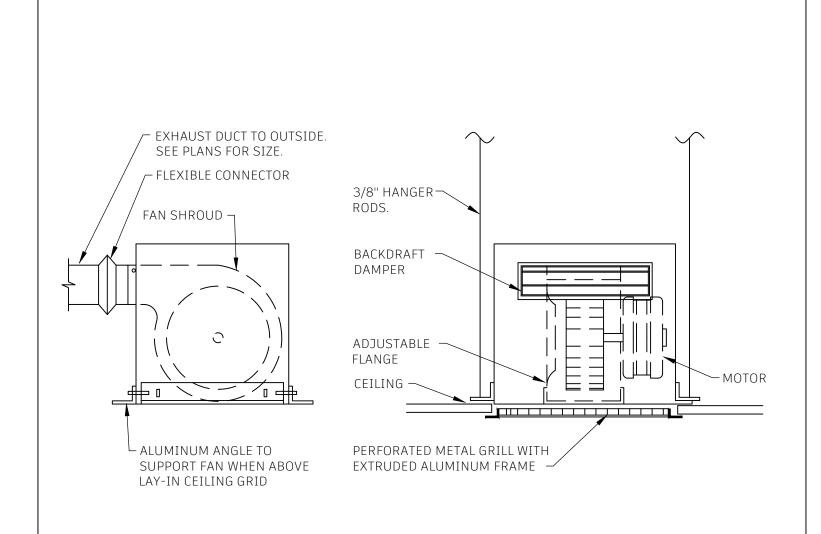


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MECHANICAL

FLOOR PLAN matter whatsoever nor are they to be assigned to any third party without first obtaining the express written permission and consent of Keyes Architects and Associates, 4717 Preston Highway, Louisville, Kentucky 40213



NOT TO SCALE

NOT TO SCALE

CEILING CABINET FAN DETAIL
NOT TO SCALE
MAIN DUCT W/4 (MIN,4") BRANCH DUCT AIR FLOW AIR FLOW
NOTES: FABRICATE PER SMACNA DUCT CONSTRUCTION STANDARDS
DUCT CONNECTION DETAIL

	EXHAUST FAN SCHEDULE													
MARK	MANUFACTURER	MODEL	CFM	ESP (IN H20)	DRIVE TYPE	RPM	V/Ø/Hz	ELECTRICAL V/Ø/Hz WATTS MCA MOCP						
EF-1	GREENHECK	SP-A90	75	0.25	DIRECT	900	115/1/60	15	0.2	15	1-6			
EF-2	GREENHECK	CSP-A390	300	0.5	DIRECT	1350	115/1/60	135	1.8	15	1-3,6,7			

REMARKS:

1. PROVIDE WITH UNIT MOUNTED DISCONNECT

2. PROVIDE WITH UNIT MOUNTED SPEED CONTROL

3. PROVIDE WITH APPROPRIATE BACKDRAFT DAMPER 4. TERMINATE WITH ROOF CAP.

5. EXHAUST FAN TO OPERATE WITH LIGHTING CONTROL.

6. SUPPORT FROM THE STRUCTURE WITH VIBRATION ISOLATION HARDWARE.

7. FAN TO OPERATE BASED ON 7-DAY PROGRAMMABLE TIME CLOCK.

OTHER ACCEPTABLE MANUFACTURERS INCLUDE: CARNES, COOK. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

REMARKS	MARK	
1-6	S-1	
1-3,6,7	S-2	
	D 1	

MARK	MANUFACTURER	MODEL	MAX CFM	MODULE	MOUNTING	DUCT RUN OUT SIZE	REMARKS
S-1	PRICE	SCD	50 - 75	24X24	LAY-IN	6"Ø	ALL
S-2	PRICE	SCD	200 - 350	24X24	LAY-IN	10"Ø	ALL
R-1	PRICE	80	250	24X24	LAY-IN	10x10	1-3,5,6
R-2	PRICE	80	300 - 575	24X24	LAY-IN	12x12	1-3,5,6
R-3	PRICE	80	1200	24X24	LAY-IN	18x18	1-3,5,6
R-4	PRICE	80	1800	24X24	LAY-IN	22x20	1-3,5,6
E-1	PRICE	80	300	24X24	LAY-IN	10x10	1-3,5,6
REMARKS.							

AIR DEVICE SCHEDULE

1. PROVIDE WITH WHITE FINISH

2. COORDINATE AIR DEVICE LOCATIONS WITH REFLECTED CEILING PLANS PRIOR TO INSTALLATION. LIGHTING HAS PRIORITY OVER HVAC.

3. PROVIDE SQUARE TO ROUND ADAPTER AS REQUIRED.

4. PROVIDE WITH INSULATED BACK.
5. N.C. SHALL NOT EXCEED 20.

6. PROVIDE WITH APPROPRIATE ACCESSORIES FOR MOUNTING TYPE INDICATED.

OTHER ACCEPTABLE MANUFACTURERS INCLUDE: PRICE, NAILOR. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

	VENTILATION SCHEDULE - 2015 IMC														
UNIT	AREA SERVED	AREA (SQ FT)	ROOM TYPE	CFM/SQ FT	NO. OF OCCUPANTS	CFM/PERSON	EXHAUST AIR (CFM)	TOTAL OUTSIDE AIR REQUIRED (CFM)	TOTAL OUTSIDE AIR PROVIDED (CFM)						
	VESTIBULE 102	109	MAIN ENTRY LOBBY	0.06	3	5	-	22	25						
	WAITING AREA 103	238	MAIN ENTRY LOBBY	0.06	4	5	-	34	35						
	FRONT OFFICE 104	234	OFFICE SPACE	0.06	2	5	-	24	25						
	WORK ROOM 105	320	OFFICE SPACE	0.06	5	5	-	44	45						
RTU-1	OFFICE 106	OFFICE 106 95		0.06	2	.5	-	16	20						
	CONFERENCE 107	240	CONFERENCE	0.06	10	5	=	64	65						
	TOILET 108	72	RESTROOM	-	-	=	75	-	-						
	SICK ROOM 109	30	OFFICE SPACE	0.06	1	5	-	7	10						
	PRINICPAL 110	188	OFFICE SPACE	0.06	3	5	-	26	30						
RTU-2	CAFETERIA	4053	MULTIPURPOSE	0.06	222	7.5		1908	1910						
K1U-Z	KITCHEN	420	KITCHEN	-	-	-	294	-	-						

	PACKAGED UNIT SCHEDULE																								
UNIT											COOLIN	G			HEAT PUM	PHEATING		LP HEAT	ING		ELECTRICAL				
						SUPPLY	/ FAN		EAT	LAT	TOTAL	SENSIBLE		COMPRES	SOR	TOTAL	TOTAL						ELECTRICAL	-	
MARK	MANUFACTURER	MODEL	WEIGHT	SEER	AIRFLOW (CFM)	OUTSIDE AIR (CFM)	ESP (inH ² ())	ВНР	EDB / EWB	LDB / LWB		CAPACITY (MBH)	TYPE	QTY	REFRIGERANT	CAPACITY @ 47° F	CAPACITY @ 17° F	INPUT (MBH)	OUTPUT (MBH)	EAT (°F)	LAT (°F)	V/Ø/Hz	MCA	МОСР	REMARKS
									(.,	(.)	()					(MBH)	(MBH)								
RTU-1	AAON	RQ-005-8-H	1000	15	1800	255	0.75	1.13	77/64	55 / 54	58	45	SCROLL	1	R-410A	52	30	60	48	65	90	208/3/60	35	50	ALL
RTU-2	AAON	RNA-013-C-A-8	3700	1-	4800	1910	0.75	2.4	83/66	55/54	149	138	SCROLL	2	R-410A	140	91	270	218	49	90	208/3/60	61	70	1,2,4-9

REMARKS:

1. COOLING DESIGN CONDITIONS: 92F DB / 75F WB AMBIENT. HEATING AMBIENT DESIGN CONDITIONS BASED ON 10F DB / 7F WB.

2. AIR SOURCE HEAT PUMP WITH SUPPLEMENTAL LP HEAT 3. PROVIDE ROOF TOP UNIT WITH ROOF CURB.

3. PROVIDE ROOF TOP UNIT WITH ROOF CURB.

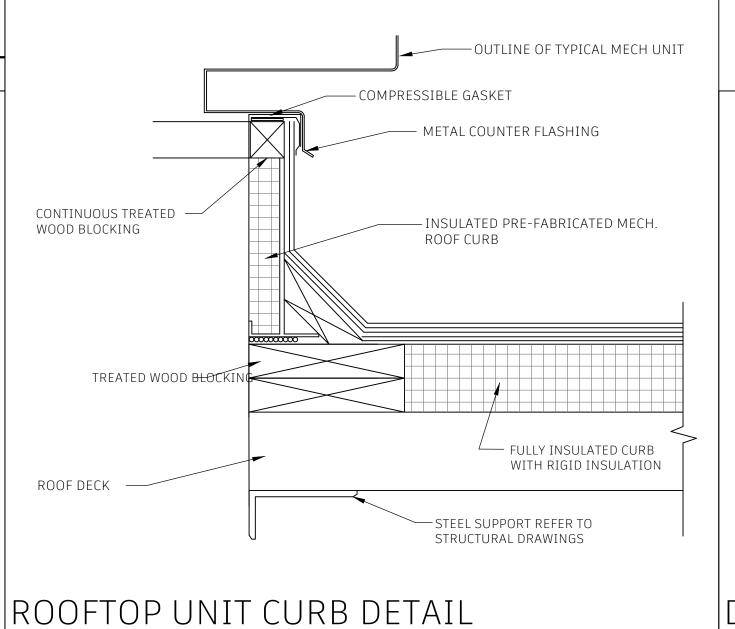
5. SINGLE POINT POWER CONNECTION WITH FACTORY INSTALLED DISCONNECT SWITCH AND 115V GFI CONVENIENCE OUTLET.

6. PROVIDE WITH PHASE PROTECTION / PHASE MOTOR KIT.7. PROVIDE UNIT WITH 2", 30% EFFICIENCY PRIMARY FILTERS.

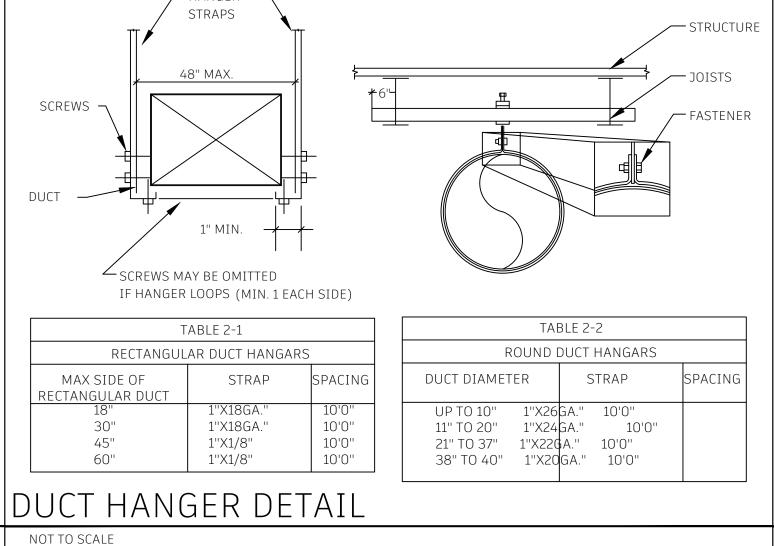
8. PROVIDE WITH HAIL GUARD.

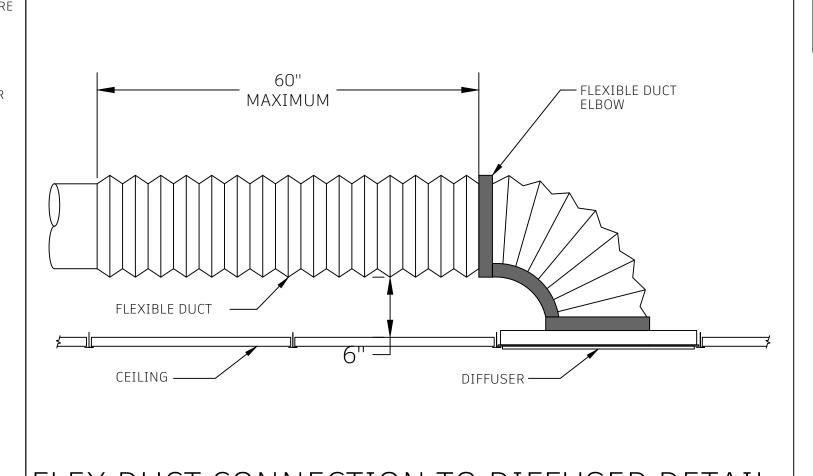
9. PROVIDE WITH REMOTE WALL MOUNT THERMOSTAT.

OTHER ACCEPTABLE MANUFACTURERS INCLUDE: JCI, CARRIER, AAON, TRANE. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.



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FLEX DUCT CONNECTION TO DIFFUSER DETAIL

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THING THE WAY

KEYES ARCHITECTS & ASSOCIATION HERMAY

PROJECT NO: 23-4451

DRAWN BY:

DATE:

T GREGORY SCHOO

MECHANICAL SCHEDULES

- A. THIS SECTION COVERS THE GENERAL ARRANGEMENT OF THE MECHANICAL SYSTEMS AND RELATED ITEMS TO COMPLETE THE WORK AS SHOWN ON THE DRAWINGS AND AS SPECIFIED HEREIN
- B. THE GENERAL AND SPECIAL CONDITIONS AND ALL OTHER CONTRACT DOCUMENTS ARE APPLICABLE TO WORK UNDER THIS SECTION OF THE SPECIFICATIONS. ALL THE WORK UNDER THIS SECTION OF THE SPECIFICATIONS SHALL BE GOVERNED BY ANY
- ALTERNATES AND UNIT PRICES CALLED FOR IN THE FORM OF PROPOSAL INSOFAR AS THEY AFFECT THIS PORTION OF THE WORK. C. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE WORK OF ALL OTHER TRADES, GENERAL TYPE CONSTRUCTION AND THE RELATIONSHIP OF HIS WORK TO OTHER SECTIONS. HE SHALL EXAMINE ALL WORKING DRAWINGS, SPECIFICATIONS AND CONDITIONS AFFECTING HIS WORK. THE CONTRACTOR SHALL VISIT THE PREMISES AND THOROUGHLY FAMILIARIZE HIMSELF WITH ALL DETAILS OF THE WORK AND WORKING CONDITIONS, VERIFY ALL DIMENSIONS IN THE FIELD AND ADVISE THE ENGINEER OF ANY DISCREPANCY BEFORE PERFORMING ANY WORK.
- D. THE WORK SHALL INCLUDE COMPLETE TESTING OF ALL EQUIPMENT AND PIPING AT THE COMPLETION OF THE WORK AND MAKING ANY MINOR CONNECTION CHANGES OR ADJUSTMENTS NECESSARY FOR THE PROPER FUNCTIONING OF THE SYSTEM AND
- E. THE CONTRACTOR SHALL PERFORM ALL NECESSARY TEMPORARY WORK DURING CONSTRUCTION.
- F. WORK UNDER THIS SECTION SHALL CONFORM TO ALL GOVERNING CODES, ORDINANCES AND REGULATIONS OF THE CITY, COUNTY
- G. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ERRORS IN FABRICATION, FOR THE CORRECT FITTING, INSTALLATION AND ERECTION OF THE VARIOUS MECHANICAL SYSTEMS AS SHOWN ON THE DRAWINGS.
- H. ANY MATERIALS, LABOR, EQUIPMENT, OR SERVICES NOT MENTIONED SPECIFICALLY HEREIN WHICH MAY BE NECESSARY TO COMPLETE ANY PART OF THE MEP/FP SYSTEMS IN A SUBSTANTIAL MANNER AND IN COMPLIANCE WITH THE REQUIREMENTS STATED, IMPLIED, OR INTENDED IN THE PLANS AND/OR SPECIFICATIONS, SHALL BE INCLUDED IN THE BID AS PART OF THIS
- THE CONTRACTOR SHALL HOLD HARMLESS AND INDEMNIFY THE ENGINEER, ARCHITECT, EMPLOYEES, OFFICERS, AGENTS AND CONSULTANTS FROM ALL CLAIMS, LOSS, DAMAGE, ACTIONS, CAUSES OF ACTIONS, EXPENSE AND/OR LIABILITY RESULTING FROM, BROUGHT FOR, OR ON ACCOUNT OF ANY PERSONAL INJURY OR PROPERTY DAMAGE RECEIVED OR SUSTAINED BY ANY PERSON, PERSONS, (INCLUDING THIRD PARTIES), OR ANY PROPERTY GROWING OUT OF, OCCURRING, OR ATTRIBUTABLE TO ANY WORK PERFORMED UNDER OR RELATED TO THIS CONTRACT, RESULTING IN WHOLE OR IN PART FROM THE NEGLIGENCE OF THE CONTRACTOR, ANY SUB-CONTRACTOR, ANY EMPLOYEE, AGENT OR REPRESENTATIVE.

- A. THIS BRANCH OF THE WORK INCLUDES COORDINATION WITH ALL UTILITY COMPANIES; AGENCY REVIEW FEES AND ALL INSPECTION FEES; ALL LABOR, MATERIALS, TOOLS, EXCAVATION AND BACKFILL AND ALL EQUIPMENT NECESSARY FOR THE INSTALLATION OF ALL HEATING VENTILATING AND AIR CONDITIONING SYSTEM AS SHOWN ON THE DRAWINGS AND SPECIFICATIONS AND/OR AS REQUIRED FOR COMPLETE AND OPERATING SYSTEMS. THE WORK SHALL INCLUDE STARTING, BALANCING, AND THE NECESSARY AND REQUIRED TESTS TO INSURE THE PROPER OPERATION OF THE COMPLETE SYSTEM.
- B. IN GENERAL (AS A MINIMUM) ALL MATERIALS AND EQUIPMENT MUST BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS; AND PROVIDED WITH ALL REQUIRED CONTROLS, INTERNAL FUSING, RELAYS, PIPING CONNECTIONS, ELECTRICAL CONNECTIONS, DUCTWORK CONNECTIONS, ETC., TO PROVIDE FOR COMPLETE AND OPERABLE
- C. THE ARCHITECT AND ENGINEER DO NOT DEFINE THE SCOPE OF INDIVIDUAL TRADES, SUB-CONTRACTORS, MATERIAL SUPPLIERS AND VENDORS. ANY SHEET NUMBERING SYSTEM OR SPECIFICATION NUMBERING SYSTEM USED WHICH IDENTIFIES DISCIPLINES IS SOLELY FOR THE ARCHITECT AND ENGINEER'S CONVENIENCE AND IS NOT INTENDED TO DEFINE A SUB-CONTRACTOR'S SCOPE OF WORK. INFORMATION REGARDING INDIVIDUAL TRADES, SUB-CONTRACTORS, MATERIAL SUPPLIERS AND VENDORS MAY BE DETAILED, DESCRIBED, AND INDICATED AT DIFFERENT LOCATIONS THROUGHOUT THE CONTRACT DOCUMENTS. NO CONSIDERATION WILL BE GIVEN TO REQUESTS FOR CHANGE ORDERS FOR FAILURE TO OBTAIN AND REVIEW THE COMPLETE SET OF CONTRACT DOCUMENTS WHEN PREPARING BIDS, PRICES, AND QUOTATIONS. UNLESS STATED OTHERWISE, THE SUBDIVISION AND ASSIGNMENT OF WORK UNDER THE VARIOUS SECTIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR HOLDING THE
- D. IT IS THE RESPONSIBILITY OF THE BIDDER TO COMPLETELY REVIEW THE CONTRACT DOCUMENTS. ANY INTERPRETATION AS TO DESIGN INTENT OR SCOPE SHALL BE PROVIDED BY THE ENGINEER / ARCHITECT. SHOULD AN INTERPRETATION BE REQUIRED, THE BIDDER SHALL REQUEST A CLARIFICATION NOT LESS THAN TEN (10) DAYS PRIOR TO THE SUBMISSION OF THE PROPOSAL SO THAT THE CONDITION MAY BE CLARIFIED BY ADDENDUM. IN THE EVENT OF ANY CONFLICT, DISCREPANCY, OR INCONSISTENCY DEVELOPS; THE INTERPRETATION OF THE ENGINEER SHALL BE FINAL.
- E. THE CONTRACTOR SHALL GIVE WRITTEN NOTICE OF ANY MATERIALS OR APPARATUS BELIEVED INADEQUATE OR UNSUITABLE; IN VIOLATION OF LAWS, ORDINANCES, CODES, RULES, OR REGULATIONS OF AUTHORITIES HAVING JURISDICTION; AND ANY NECESSARY ITEMS OF WORK OMITTED A MINIMUM OF TEN (10) DAYS PRIOR TO BID. IN THE ABSENCE OF SUCH WRITTEN NOTICE AND BY THE ACT OF SUBMITTING A BID, IT SHALL BE UNDERSTOOD THAT THE CONTRACTOR HAS INCLUDED THE COST OF ALL REQUIRED ITEMS IN THE BID, AND THAT WILL BE RESPONSIBLE FOR THE APPROVED SATISFACTORY FUNCTIONING OF THE ENTIRE SYSTEM WITHOUT EXTRA COMPENSATIONS.

1.3 DRAWINGS AND SPECIFICATIONS

- A. CONTRACT DRAWINGS FOR WORK UNDER THIS SECTION ARE IN PART DIAGRAMMATIC, INTENDED TO CONVEY THE SCOPE OF WORK AND INDICATE THE GENERAL ARRANGEMENT OF EQUIPMENT, PIPING AND THE APPROXIMATE SIZE AND LOCATION OF EQUIPMENT AND OUTLETS. THE CONTRACTOR SHALL FOLLOW THESE DRAWINGS IN LAYING OUT HIS WORK AND SHALL VERIFY SPACES IN WHICH HIS WORK WILL BE INSTALLED, INDICATING TO THE ENGINEER WHERE ANY CONFLICTS OR OVERLAPPING OF SYSTEMS OCCUR. ANY ITEM OF WORK NOT CLEARLY INCLUDED, SPECIFIED AND/OR SHOWN, ERRORS OR CONFLICT BETWEEN PLANS (MECHANICAL, ARCHITECTURAL, STRUCTURAL OR ELECTRICAL), SPECIFICATIONS, CODES AND FIELD CONDITIONS, SHALL BE CLARIFIED BY A WRITTEN REQUEST TO THE ARCHITECT BY THE BIDDER BEFORE BIDDING; OTHERWISE, THE BIDDER SHALL, AT HIS OWN EXPENSE SUPPLY THE PROPER LABOR AND MATERIALS TO INCLUDE THESE ITEMS OF WORK AND TO MAKE GOOD ANY DAMAGES OR DEFECTS IN HIS WORK CAUSED BY SUCH ERROR, OMISSION OR CONFLICT. UNDER NO CIRCUMSTANCES SHALL A CONTRACTOR SCALE THE DRAWINGS FOR THE LOCATION OF EQUIPMENT AND WORK.
- B. IN THE EVENT THERE IS A CONFLICT WITHIN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY. IF A CLARIFICATION IS NOT GIVEN, THE CONTRACTOR SHALL BID THE MORE STRINGENT OF THE TWO
- C. SHOULD CONFLICT, OVERLAP OR DUPLICATION OF WORK BETWEEN THE VARIOUS TRADES BECOME EVIDENT, THIS SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER. NEITHER TRADE SHALL ASSUME TO BE RELIEVED OF THE WORK WHICH IS SPECIFIED UNDER THEIR BRANCH UNTIL INSTRUCTIONS IN WRITING ARE RECEIVED FROM THE ENGINEER.
- D. WHERE JOB CONDITIONS REQUIRE REASONABLE CHANGES IN INDICATED LOCATIONS AND ARRANGEMENT, PROPOSED DEPARTURES SHALL BE SUBMITTED WITH DETAILED DRAWINGS TO THE ENGINEER FOR APPROVAL BEFORE ANY OF THE PROPOSED WORK IS COMMENCED. ALL APPROVED DEPARTURES SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER.
- E. THE DRAWINGS AND THE SPECIFICATIONS ARE INTENDED TO INDICATE COMPLETE AND WORKING SYSTEMS, UNLESS SPECIFICALLY INDICATED TO THE CONTRARY. THE WORK INCLUDES THE FURNISHING, INSTALLING, AND CONNECTING OF A COMPLETE WORKING INSTALLATION IN EACH CASE TO THE FULL EXTENT SET FORTH IN THE DRAWINGS AND HEREIN SPECIFIED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE FUNCTIONING SYSTEM, UNLESS SPECIFICALLY NOTED OTHERWISE.
- F. THE DRAWINGS AND SPECIFICATIONS CONSTITUTE THE CONTRACT DOCUMENTS AND SHALL BE CONSIDERED AS COOPERATIVE. WORK AND MATERIAL INCLUDED IN EITHER, THOUGH NOT MENTIONED IN BOTH, SHALL BE A PART OF THE WORK TO BE ACCOMPLISHED AND SHALL BE CARRIED OUT COMPLETELY IN AS THOROUGH MANNER AS IF COVERED BY BOTH ALL ITEMS SHOWN ON THE DRAWINGS AND/OR LISTED IN THE SPECIFICATIONS SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR UNLESS SPECIFICALLY NOTED THAT IT WILL BE PROVIDED AND/OR INSTALLED BY OTHERS. IN THE EVENT THERE IS A CONFLICT WITHIN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY. IF A CLARIFICATION IS NOT GIVEN, THE CONTRACTOR SHALL BID THE MORE STRINGENT OF THE TWO REQUIREMENTS.
- G. BECAUSE OF THE SMALL SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS AND ACCESSORIES THAT MAY BE REQUIRED. THE CONTRACTOR SHALL CAREFULLY INVESTIGATE THE STRUCTURAL AND FINISH CONDITIONS AFFECTING ALL HIS WORK AND SHALL ARRANGE SUCH WORK, ACCORDINGLY, FURNISHING SUCH FITTINGS, PIPE, TRAPS, VALVES, AND ACCESSORIES AS MAY BE REQUIRED TO MAKE A FUNCTIONAL INSTALLATION AT NO ADDITIONAL COST TO THE OWNER.
- H. MECHANICAL AS BUILT "RECORD DRAWINGS" SHALL BE KEPT UP TO DATE EACH DAY. "RECORD DRAWINGS" SHALL BE REVIEWED BY ARCHITECT/ENGINEER EACH MONTH WITH CONTRACTOR'S PAY REQUEST REVIEW.
- ANY DEVIATION IN WORK AS SHOWN ON PLANS AND SPECIFICATIONS MUST BE APPROVED IN WRITING BY ARCHITECT/ENGINEER PRIOR TO INSTALLATION. FACH CONTRACTOR SHALL REFER TO THE ARCHITECTURAL AND STRUCTURAL DRAWINGS AND SPECIFICATIONS FOR THE GENERAL
- CONSTRUCTION OF THE BUILDING, FOR FLOOR AND CEILING HEIGHTS, FOR LOCATION OF WALLS, PARTITIONS, BEAMS ETC., AND SHALL BE GUIDED ACCORDINGLY FOR THE SETTING OF ALL SLEEVES AND EQUIPMENT.
- K. UNDER NO CIRCUMSTANCES SHALL A CONTRACTOR SCALE THE DRAWINGS FOR THE LOCATIONS OF EQUIPMENT AND WORK.
- L. COORDINATION: CONFER WITH ALL OTHER TRADES RELATIVE TO LOCATION OF ALL APPARATUS AND EQUIPMENT TO BE INSTALLED AND SELECT LOCATIONS SO AS NOT TO CONFLICT WITH OR HINDER THE PROGRESS OF THE WORK OF OTHER SECTIONS. WORK INSTALLED THAT CREATES INTERFERENCE OR RESTRICTS ACCESS REQUIRED BY CODE (INCLUDING CLEARANCES TO ELECTRICAL COMPONENTS) OR TO CONDUCT MAINTENANCE AND/OR ADJUSTMENTS SHALL BE MODIFIED AT NO ADDITIONAL COST
- M. CODES, STANDARDS, AUTHORITIES AND PERMITS: CODES, LAWS AND ORDINANCES PROVIDE A BASIS FOR THE MINIMUM INSTALLATION CRITERIA. THESE DRAWINGS AND SPECIFICATIONS ILLUSTRATE THE SCOPE REQUIRED FOR THIS PROJECT, WHICH MAY FXCFFD MINIMUM CODE, IAW AND STANDARDS CRITERIA. GIVE NOTICES, FILE PLANS, OBTAIN PERMITS AND LICENSES, PAY FEES AND BACKCHARGES AND OBTAIN NECESSARY APPROVALS FROM AUTHORITIES HAVING JURISDICTION AS REQUIRED FOR THE EXECUTION OF ALL WORK ASSOCIATED WITH THIS PROJECT. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITIONS OF: 1) THE STATE BUILDING, ELECTRICAL, MECHANICAL, AND ENERGY CODES, 2) SMACNA, NFPA, ANSI/ASHRAE ASME, UL, AND NEMA STANDARDS, 3) ALL OTHER APPLICABLE CODES, REGULATIONS, STANDARDS AND LAWS OF LOCAL, STATE AND FEDERAL GOVERNMENT AND OTHER AUTHORITIES HAVING JURISDICTION, AND 4) APPLICABLE BASE BUILDING STANDARDS AND SPECIFICATIONS.

- A. BIDDERS SHALL VISIT THE SITE BEFORE SUBMITTING PROPOSALS TO SATISFY THEMSELVES AS TO THE NATURE AND SCOPE OF THE WORK AND ANY DIFFICULTIES ATTENDING TO THE EXECUTION.
- THE SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE. LATER CLAIMS FOR LABOR, EQUIPMENT, MATERIALS, ETC., REQUIRED FOR DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE, WILL NOT BE RECOGNIZED.

A. ALL CUTTING AND PATCHING REQUIRED IN CONNECTION WITH THE INSTALLATION OF THIS WORK, AND WORK DUE TO ERRORS, DEFECTIVE WORK, ILL-TIMED WORK, OR TARDINESS IN PROPERLY DESIGNATING SIZE AND LOCATION IN SUFFICIENT TIME OR BY FAILURE TO NOTIFY OTHER TRADES, SHALL BE DONE UNDER THIS SECTION, BUT ONLY IN THE MANNER DIRECTED BY THE ENGINEER SO AS TO PREVENT OR MINIMIZE DAMAGE TO INSTALLED WORK. DAMAGE AS A RESULT OF CUTTING FOR INSTALLATION, SHALL BE REPAIRED BY MECHANICS SKILLED IN THE TRADE INVOLVED, AT NO ADDITIONAL EXPENSE TO THE

- B. NO CUTTING OF STRUCTURAL MEMBERS WILL BE PERMITTED, EXCEPT WHEN PRIOR PERMISSION OF THE ENGINEER HAS BEEN OBTAINED. THIS WORK MUST CONFORM IN EVERY RESPECT TO THE SURROUNDING FINISH AND TO THE QUALITY OF WORKMANSHIP AND MATERIALS USED.
- C. PIERCING OF ANY WATERPROOFING OR ROOFING SHALL BE DONE ONLY BY THE TRADE INVOLVED. AFTER THE PART PIERCING THE WATERPROOFING HAS BEEN SET IN PLACE, THE OPENING MADE FOR THIS PURPOSE SHALL BE FILLED AND MADE ABSOLUTELY WATERTIGHT TO THE SATISFACTION OF THE ENGINEER.
- D. SEE SECTION: 230517 SLEEVING, CUTTING, PATCHING AND REPAIRING MECHANICAL

- A. FIRE-STOPPING AND SMOKE-STOPPING SHALL BE PROVIDED AROUND ALL PIPING AND DUCTWORK PENETRATIONS OF FIRE RATED AND/OR SMOKE-RATED FLOORS, WALLS, CEILINGS, OR OTHER BARRIERS.
- B. THE MATERIALS USED SHALL BE UL 263 OR UL 1479 CLASSIFIED AND MEET ASTM E814 STANDARDS AND BE RATED FOR ASSEMBLIES WHERE APPLIED.
- C. CLEAN SURFACES TO BE IN CONTACT WITH PENETRATION SEAL MATERIALS, OF DIRT, GREASE, OIL, LOOSE MATERIALS, RUST, OR OTHER SUBSTANCES THAT MAY AFFECT PROPER FITTING, ADHESION, OR THE REQUIRED FIRE RESISTANCE.
- D. INSTALL PENETRATION SEAL MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTION.
- E. SEAL HOLES OR VOIDS MAY BE PENETRATIONS TO ENSURE AN EFFECTIVE FIRE AND/OR SMOKE BARRIER.
- F. PROTECT MATERIALS FROM DAMAGE ON SURFACES SUBJECT TO TRAFFIC. G. STOP INSULATION FLUSH WITH WALL ON INSULATED PIPE AND SEAL EDGES.
- H. ALL EXPOSED PIPING PASSING THROUGH FLOORS, CEILINGS AND WALLS IN FINISHED AREAS SHALL BE FITTED WITH A CHROME PLATED ESCUTCHEON OF SUFFICIENT OUTSIDE DIAMETER TO AMPLY COVER THE SLEEVED OPENING AND AD INSIDE DIAMETER TO CLOSELY FIT THE PIPE AROUND WHICH IT IS INSTALLED.
- I. GALVANIZED SHEET METAL COLLARS SHALL BE PROVIDED AROUND ALL DUCTS, EQUIPMENT, ETC., EXPOSED IN FINISHED AREAS. WHERE SUCH OPENINGS ARE FINISHED AND THE SPACE AROUND THE UNIT IS SMALL, THE COLLAR MAY BE OMITTED WITH THE APPROVAL OF THE ARCHITECT.

1.7 ACCESS PANELS

- A. THE MECHANICAL CONTRACTOR SHALL FURNISH ALL OTHER ACCESS PANELS NEEDED FOR ACCESS TO VALVES, OPEN RECEPTACLES, VENTS, FIRE DAMPERS, MECHANICAL UNITS, ETC., IN INACCESSIBLE LOCATIONS INSTALLED UNDER THIS DIVISION
- B. ACCESS PANELS SHALL HAVE A MINIMUM SIZE OF 12" X 12" AND SHALL BE CENTERED BENEATH EQUIPMENT FOR ACCESSIBILITY AND MAINTENANCE. ACCESS PANELS MUST BE OF ADEQUATE SIZE TO SERVICE, OBSERVE, REMOVE, AND MAINTAIN EQUIPMENT
- C. ACCESS PANELS SHALL BE EQUAL TO THE TYPES SPECIFIED UNDER THE ARCHITECTURAL SPECIFICATIONS. AS A MINIMUM THE ACCESS PANELS SHALL BE EQUIVALENT TO ACUDOR PRODUCTS, CENDREX, INC., MIFAB, INC., LANE-AIRE MANUFACTURING, 14 GAUGE WITH VANDAL PROOF LOCK AND FRAME AS SELECTED BY ARCHITECT. ACCESS PANELS SHALL BE FIRE RATED WHEN INSTALLED IN FIRE RATED CONSTRUCTION.
- D. ACCESS PANELS SHALL HAVE A PRIMED WHITE FINISH.

E. CEILING TYPES

- 1. IN AREAS WITH SUSPENDED ACOUSTICAL TILE CEILINGS (INSTALLED ON EXPOSED METAL GRID SUSPENSION SYSTEM SO THAT THE TILE MAY BE READILY REMOVED), EQUIPMENT, VALVES, ETC., INSTALL ABOVE THESE CEILINGS WILL BE
- 2. ALL PLASTERED CEILINGS OR CEILINGS HAVING CONCEALED SPLINE TYPE OF SUSPENSION SYSTEM WILL BE CONSIDERED AS NOT REMOVABLE FOR ACCESSIBILITY TO EQUIPMENT; THEREFORE, ACCESS PANELS WILL BE REQUIRED.
- 3. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR THE TYPES OF CEILINGS THROUGHOUT THE BUILDING.
- F. ACCESS PANELS SHALL BE INSTALLED BY SUB-CONTRACTOR SPECIALIZED IN ACCESS PANEL INSTALLATION.

A. ALL EQUIPMENT SHALL BE WARRANTED FOR A PERIOD OF AT LEAST ONE (1) YEAR FROM THE DATE OF ACCEPTANCE, AS EVIDENCED BY DATE OF SUBSTANTIAL COMPLETION FOR THE ENTIRE PROJECT OR FOR THE LAST PHASE OF THE PROJECT, WHICHEVER OCCURS LATER, AGAINST DEFECTIVE MATERIALS, DESIGN, AND WORKMANSHIP.

- A. THE CONTRACTOR SHALL DELIVER TO THE ENGINEER AT THE COMPLETION OF THE WORK, ONE (1) PRINT OF "AS-BUILT" DRAWINGS, SHOWING LEGIBLY AND ACCURATELY, PLUMBING AND PIPING SYSTEMS WITH EQUIPMENT LOCATIONS SHOWN AS ACTUALLY INSTALLED. CHANGES IN ORIGINAL PLANS SHALL BE NEATLY SHOWN IN RED PENCIL. EACH PRINT SHALL BE SIGNED BY THE SUB-CONTRACTOR WHO HAS DONE THE WORK.
- B. DURING CONSTRUCTION, THE CONTRACTOR SHALL RETAIN A SET OF BLUE LINE DRAWINGS ON THE SITE FOR RECORDING ALL CHANGES. THESE DRAWINGS SHALL BE AVAILABLE FOR INSPECTION BY THE ENGINEER.
- C. OPERATION AND MAINTENANCE DATA: SUBMIT (3) SETS OF OPERATING AND MAINTENANCE MANUALS PRIOR TO THE COMPLETION OF THE PROJECT. PROVIDE ON-SITE DEMONSTRATION OF ALL SYSTEMS TO OWNER AFTER SYSTEMS ARE FULLY OPERATIONAL. 0&M MANUALS SHALL INCLUDE ALL COMPONENTS (DIFFUSERS, VALVES, ETC.) AS WELL AS SYSTEM DESCRIPTIONS OF ALL SYSTEMS WITH FLOW DIAGRAMS, WIRING DIAGRAMS, WRITTEN WARRANTEES, RECOMMENDED SPARE PARTS AND ROUTINE MAINTENANCE REQUIREMENTS WITH RECOMMENDED INTERVALS FOR ALL MOVING EQUIPMENT AND CONTROLS.
- 1.10 SAFETY PRECAUTIONS: LIFE SAFETY AND ACCIDENT PREVENTION SHALL BE A PRIMARY CONSIDERATION. COMPLY WITH ALL OF THE <u>SAFETY REQUIREMENT</u>S OF THE OWNER AND OSHA THROUGHOUT THE ENTIRE CONSTRUCTION PERIOD OF THE PROJECT. FURNISH, PLACE AND MAINTAIN PROPER GUARDS AND ANY OTHER NECESSARY CONSTRUCTION REQUIRED TO SECURE SAFETY OF LIFE AND

1.11 PROJECT CLOSEOUT: A CERTIFICATE OF COMPLETION SHALL BE ISSUED BY THE CONTRACTOR INDICATING THAT THE INSTALLATION IS SUBMITTALS, AS-BUILTS, 0&M MANUALS, AND BALANCING REPORTS ARE TO BE PROVIDED, FOR ENGINEER'S REVIEW, PRIOR TO REQUEST FOR COMPLETION CERTIFICATES. IN ADDITION, AND ALSO PRIOR TO REQUEST FOR COMPLETION CERTIFICATES. ALL PUNCH LIST ITEMS MUST BE COMPLETED TO THE SATISFACTION OF THE ENGINEER. THE CONTRACTOR MUST VERIFY THAT ALL SEQUENCES OF OPERATIONS AND CONTROLS HAVE BEEN INCORPORATED AND ALL SYSTEMS AND EQUIPMENT ARE WORKING PER THE SPECIFIED SEQUENCES OF OPERATIONS. A BLANK CONTRACTOR'S CERTIFICATE FORM CAN BE FURNISHED BY RDK FNGINEERS UPON REQUEST. FINAL OBSERVATION/ WALK-THROUGH BY THE ENGINEER SHALL BE CONDUCTED AFTER RECEIPT OF THE CERTIFICATE OF COMPLETION. PREMATURE REQUESTS FOR FINAL OBSERVATION/WALK-THROUGHS THAT REQUIRE REOBSERVATION OF DEFICIENT ITEMS WILL RESULT IN BACK CHARGES OF THE COSTS ASSOCIATED WITH THE REOBSERVATION.

SECTION 23 05 17 - SLEEVING, CUTTING, PATCHING AND REPAIRING FOR MECHANICAL

PART 1 - GENERAL

A. THIS SECTION INCLUDES REQUIREMENTS FOR THE MECHANICAL CONTRACTOR RELATED TO SLEEVING, CUTTING, PATCHING, AND REPAIRING ASSOCIATED WITH MECHANICAL WORK.

A. SLEEVES AND ESCUTCHEONS

- A. CAST-IRON WALL PIPES: CAST OR FABRICATED OF CAST OR DUCTILE IRON AND EQUIVALENT TO DUCTILE-IRON PRESSURE PIPE, WITH PLAIN ENDS AND INTEGRAL WATER STOP UNLESS OTHERWISE INDICATED.
- B. GALVANIZED-STEEL WALL PIPES: ASTM A 53/A 53M, SCHEDULE 40, WITH PLAIN ENDS AND WELDED STEEL COLLAR; ZINC COATED.
- C. GALVANIZED-STEEL-PIPE SLEEVES: ASTM A 53/A 53M, TYPE E, GRADE B, SCHEDULE 40, ZINC COATED, WITH PLAIN ENDS.
- D. PVC-PIPE SLEEVES: ASTM D 1785, SCHEDULE 40.
- E. GALVANIZED-STEEL-SHEET SLEEVES: 0.0239-INCH MINIMUM THICKNESS, ROUND TUBE CLOSED WITH LONGITUDINAL JOINT.

A. ESCUTCHEONS SHALL BE BEATON AND CALDWELL; CARPENTER AND PATTERSON; FEE AND MASON OR APPROVED EQUIVALENT. CHROMIUM-PLATED IRON OR CHROMIUM-PLATED BRASS, EITHER ONE PIECE OR SPLIT PATTERNS, HELD IN PLACE BY INTERNAL SPRING TENSION OR SET SCREW THAT COMPLETELY COVERS OPENING.

PART 3 - EXECUTION

- A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OPENINGS, SLEEVES, TRENCHES, ETC., THAT HE MAY REQUIRE OR CREATE BY DEMOLITION IN FLOORS, ROOFS, CEILINGS, WALLS, ETC., AND SHALL COORDINATE ALL SUCH WORK WITH THE GENERAL CONTRACTOR AND ALL OTHER TRADES. COORDINATE WITH THE GENERAL CONTRACTOR, ANY OPENINGS WHICH HE IS TO PROVIDE BEFORE SUBMITTING A BID PROPOSAL IN ORDER TO AVOID CONFLICT AND DISAGREEMENT DURING CONSTRUCTION. IMPROPERLY LOCATED OPENINGS SHALL BE REWORKED AT THE EXPENSE OF THE CONTRACTOR.
- B. THE CONTRACTOR SHALL PLAN HIS WORK AHEAD AND SHALL PLACE SLEEVES. FRAMES OR FORMS THROUGH THE WALLS. FLOORS. AND CEILINGS DURING THE INITIAL CONSTRUCTION, WHERE IT IS NECESSARY FOR PIPING, DUCTWORK, CONDUIT, ETC., TO GO THROUGHOUT; HOWEVER, WHEN THIS IS NOT DONE, THE CONTRACTOR SHALL DO ALL CUTTING AND PATCHING REQUIRED FOR THE INSTALLATION OF HIS WORK, OR HE SHALL PAY OTHER TRADES FOR DOING THIS WORK WHEN SO DIRECTED BY THE ENGINEER. ANY DAMAGE CAUSED TO THE BUILDINGS BY THE WORKMEN OF THE RESPONSIBLE CONTRACTOR MUST BE CORRECTED OR RECTIFIED BY HIM AT HIS OWN EXPENSE.
- C. THE CONTRACTOR SHALL NOTIFY OTHER TRADES IN DUE TIME WHERE HE WILL REQUIRE OPENINGS OR CHASES IN NEW CONCRETE OR MASONRY. HE SHALL SET ALL CONCRETE INSERTS AND SLEEVES FOR HIS WORK. FAILING TO DO THIS, HE SHALL CUT OPENINGS FOR HIS WORK AND PATCH SAME AS REQUIRED AT HIS OWN EXPENSE.
- D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY SHORING, BRACING, SUPPORTING, ETC., ANY EXISTING AND/OR NEW CONSTRUCTION TO GUARD AGAINST CRACKING, SETTLING, COLLAPSING, DISPLACING, OR WEAKENING WHILE OPENINGS ARE BEING MADE. ANY DAMAGE OCCURRING TO THE EXISTING AND/OR NEW STRUCTURES, DUE TO FAILURE TO EXERCISE PROPER PRECAUTIONS OR DUE TO ACTION OF THE ELEMENTS SHALL BE PROMPTLY AND PROPERLY MADE GOOD TO THE SATISFACTION OF
- E. ALL WORK IMPROPERLY DONE OR NOT DONE AT ALL AS REQUIRED BY THE MECHANICAL TRADES IN THIS SECTION, WILL BE PERFORMED BY THE CONTRACTOR AT THE DIRECTION OF THE TRADE WHOSE WORK IS AFFECTED.

A. INSTALL SLEEVES FOR PIPING PASSING THROUGH PENETRATIONS IN FLOORS, PARTITIONS, ROOFS, AND WALLS.

B. FOR SLEEVES THAT WILL HAVE SLEEVE-SEAL SYSTEM INSTALLED, SELECT SLEEVES OF SIZE LARGE ENOUGH TO PROVIDE 1-INCH ANNULAR CLEAR SPACE BETWEEN PIPING AND CONCRETE SLABS AND WALLS.

- C. INSTALL SLEEVES IN CONCRETE FLOORS, CONCRETE ROOF SLABS, AND CONCRETE WALLS AS NEW SLABS AND WALLS ARE
- 1. CUT SLEEVES TO LENGTH FOR MOUNTING FLUSH WITH BOTH SURFACES.
 - a. EXCEPTION: EXTEND SLEEVES INSTALLED IN FLOORS OF MECHANICAL EQUIPMENT AREAS OR OTHER WET AREAS 2 INCHES ABOVE FINISHED FLOOR LEVEL
 - 2. USING GROUT, SEAL THE SPACE OUTSIDE OF SLEEVES IN SLABS AND WALLS WITHOUT SLEEVE-SEAL SYSTEM.
 - D. INSTALL SLEEVES FOR PIPES PASSING THROUGH INTERIOR PARTITIONS.

SLEEVES ARE NOT REQUIRED FOR CORE-DRILLED HOLES.

- CUT SLEEVES TO LENGTH FOR MOUNTING FLUSH WITH BOTH SURFACES.
- 2. INSTALL SLEEVES THAT ARE LARGE ENOUGH TO PROVIDE 1/4-INCH (6.4-MM) ANNULAR CLEAR SPACE BETWEEN SLEEVE AND PIPE OR PIPE INSULATION.
- 3. SEAL ANNULAR SPACE BETWEEN SLEEVE AND PIPING OR PIPING INSULATION; USE JOINT SEALANTS APPROPRIATE FOR SIZE, DEPTH, AND LOCATION OF JOINT.
- E. FIRE-BARRIER PENETRATIONS: MAINTAIN INDICATED FIRE RATING OF WALLS, PARTITIONS, CEILINGS, AND FLOORS AT PIPE PENETRATIONS. SEAL PIPE PENETRATIONS WITH FIRESTOP MATERIALS.
- F. PIPES PASSING THROUGH WATERPROOFING MEMBRANES: PIPES PASSING THROUGH FLOOR WATERPROOFING MEMBRANE SHALL BE INSTALLED THROUGH A 4-POUND LEAD-FLASHING SLEEVE, OR A 0.032-INCH THICK ALUMINUM SLEEVE, EACH WITH AN INTEGRAL SKIRT OR FLANGE. FLASHING SLEEVE SHALL BE SUITABLY FORMED, AND THE SKIRT OF FLANGE SHALL EXTEND NOT LESS THAN 8 INCHES FROM THE PIPE AND SHALL SET OVER THE FLOOR MEMBRANE IN A TROWELED COATING OF BITUMINOUS CEMENT. THE FLASHING SLEEVE SHALL EXTEND UP THE PIPE A MINIMUM OF 1 INCH ABOVE THE FLOOR. THE ANNULAR SPACE BETWEEN THE FLASHING SLEEVE AND THE METAL-JACKET-COVERED INSULATION SHALL BE SEALED. AT THE CONTRACTOR'S OPTION, PIPES PASSING THROUGH FLOOR WATERPROOFING MEMBRANE MAY BE INSTALLED THROUGH A CAST IRON SLEEVE WITH CAULKING RECESS, ANCHOR LUGS, FLASHING CLAMP DEVICE, AND A PRESSURE RING WITH BRASS BOLTS. WATERPROOFING MEMBRANE SHALL BE CLAMPED INTO SPACE AND SEALANT SHALL BE PLACED IN THE CAULKING RECESS.
- G. PIPES PASSING THROUGH ROOF: PIPES PASSING THROUGH THE ROOF SHALL BE INSTALLED WHERE SHOWN ON THE DRAWINGS. ANY PENETRATION IN ROOF SHALL BE APPROVED BY THE ROOFING MANUFACTURER.
- H. OPENINGS FOR DUCTWORK, FIXTURES, EQUIPMENT, ETC. THROUGH FLOORS, WALLS, CEILING, AND ROOFS, SHALL BE LOCATED AND SIZED BY THE CONTRACTOR UNDER THIS DIVISION WHO SHALL PROVIDE AND SET NECESSARY LINTELS, SLEEVES, AND SHEET
- I. GALVANIZED SHEET METAL COLLARS SHALL BE PROVIDED AROUND ALL DUCTS, EQUIPMENT, ETC., EXPOSED IN FINISHED AREAS. WHERE SUCH OPENINGS AND FINISHED AND THE SPACE AROUND THE PENETRATION IS SMALL, THE COLLAR MAY BE OMITTED WITH THE APPROVAL OF THE ARCHITECT/ENGINEER.

A. ESCUTCHEONS SHALL BE PROVIDED AT ALL FINISHED SURFACES WHERE EXPOSED PIPING, BARE OR INSULATED, PASSES THROUGH FLOORS, WALLS, OR CEILINGS. ESCUTCHEONS SHALL BE FASTENED SECURELY TO PIPE SLEEVES OR TO EXTENSIONS OF SLEEVES WITHOUT ANY PART OF SLEEVES BEING VISIBLE. WHERE SLEEVES PROJECT SLIGHTLY FROM FLOORS, SPECIAL DEEP-TYPE ESCUTCHEONS SHALL BE USED.

- A. ALL RECTANGULAR OR SPECIAL SHAPED OPENINGS IN PLASTER, STUCCO, OR SIMILAR MATERIALS, INCLUDING GYPSUM BOARD, SHALL BE FRAMED BY MEANS OF PLASTER FRAMES, CASING BEADS, WOOD OR METAL ANGLE MEMBERS AS REQUIRED. THE INTENT OF THIS REQUIREMENT IS TO PROVIDE SMOOTH EVEN TERMINATION OF WALL, FLOOR, AND CEILING FINISHES AS WELL AS TO PROVIDE A FASTENING MEANS FOR GRILLES, DIFFUSERS, LIGHTING FIXTURES, ETC.
- B. ALL TRADES SHALL COORDINATE ALL OPENINGS IN MASONRY WALLS WITH THE GENERAL CONTRACTOR, AND, UNLESS OTHERWISE INDICATED ON THE ARCHITECTURAL DRAWINGS, SHALL PROVIDE LINTELS FOR ALL OPENINGS REQUIRED FOR THE PLUMBING WORK (PIPING, WALL BOXES, ETC.).
- C. NO CUTTING IS TO BE DONE AT POINTS OR IN A MANNER THAT WILL WEAKEN THE STRUCTURE AND UNNECESSARY CUTTING MUST BE AVOIDED. IF IN DOUBT, CONTACT THE ENGINEER.
- D. PIPE OPENINGS IN SLABS AND WALLS SHALL BE CUT WITH CORE DRILL. HAMMER DEVICES WILL NOT BE PERMITTED. EDGES OF TRENCHES AND LARGE OPENINGS SHALL BE SCRIBE CUT WITH A MASONRY SAW. E. OPENINGS IN METAL BUILDING WALLS SHALL BE MADE IN STRICT ACCORD WITH BUILDING SUPPLIERS RECOMMENDATIONS.

- A. PATCHING AND REPAIRING MADE NECESSARY BY WORK PERFORMED UNDER THIS DIVISION SHALL BE INCLUDED AS PART OF THE WORK AND SHALL BE DONE BY SKILLED MECHANICS OF THE TRADE OR TRADES FOR WORK CUT OR DAMAGED, IN STRICT ACCORDANCE WITH THE PROVISIONS HEREIN BEFORE SPECIFIED FOR WORK OF LIKE TYPE TO MATCH ADJACENT SURFACES AND IN A MANNER ACCEPTABLE TO THE ENGINEER.
- B. WHERE PORTIONS OF EXISTING LAWNS, SHRUBS, PAVING, ETC. ARE DISTURBED FOR INSTALLATION OR WORK OF THIS DIVISION, SUCH ITEMS SHALL BE REPAIRED AND/OR REPLACED TO THE SATISFACTION OF THE ENGINEER. C. WHERE THE INSTALLATION OR REMOVAL OF PIPING, ETC. REQUIRES OR CREATES THE PENETRATION OF FIRE OR SMOKED RATED
- WALLS, CEILINGS OR FLOORS, THE SPACE AROUND SUCH PIPE, ETC., SHALL BE TIGHTLY FILLED WITH AN APPROVED NON-COMBUSTIBLE FIRE INSULATING MATERIAL SATISFACTORY TO MAINTAIN THE RATING INTEGRITY OF THE WALL, FLOOR OR
- WITH CHROME PLATED BRASS ESCUTCHEONS OF SUFFICIENT OUTSIDE DIAMETER TO AMPLY COVER THE SLEEVED OPENINGS AND AN INSIDE DIAMETER TO CLOSELY FIT THE PIPE AROUND WHICH IT IS INSTALLED. E. WHERE PIPES PASS THROUGH EXTERIOR WALLS, THE WALL OPENINGS SHALL BE SEALED AIR AND WATERTIGHT. THIS SHALL

INCLUDE SEALING ON BOTH SIDES OF THE WALL TO ENSURE AIR AND WATER DOES NOT ENTER OR EXIT THE WALL CAVITY. THIS IS

D. PIPING PASSING THROUGH FLOORS, CEILINGS, AND WALLS IN FINISHED AREAS, UNLESS OTHERWISE SPECIFIED, SHALL BE FITTED

SECTION 23 05 29 - HANGERS AND SUPPORTS FOR HVAC PIPING AND EQUIPMEN'

A. PIPE AND EQUIPMENT HANGERS, SUPPORTS, AND ASSOCIATED ANCHORS

1.2 ACTION SUBMITTALS

A. SHOP DRAWINGS: FOR EACH TYPE OF PRODUCT.

A. THIS SPECIFICATION SHALL APPLY FOR THE DESIGN AND FABRICATION OF ALL HANGERS, SUPPORTS, ANCHORS AND GUIDES. WHERE PIPING DESIGN IS SUCH THAT EXCEPTIONS TO THIS SPECIFICATION ARE NECESSARY, THE SYSTEM SHALL BE IDENTIFIED, AND THE EXCEPTIONS APPROVED BY ENGINEER PRIOR TO INSTALLATION.

A. THIS SECTION IS INTENDED TO COVER THE STRUCTURAL REQUIREMENTS OF THE PIPING AND EQUIPMENT. IT IS NOT INTENDED TO IMPLY THAT THE BUILDING STRUCTURE WILL SUPPORT THE LOADS IMPOSED. THE CONTRACTOR SHALL REVIEW THE STRUCTURAL DRAWINGS FOR WHERE LOADS CAN BE APPLIED. WHAT LOAD CAN BE SUPPORTED AND WHAT STRUCTURAL

- REINFORCING IS REQUIRED. SPECIFIC QUESTIONS CAN BE DIRECTED TO THE STRUCTURAL ENGINEER PRIOR TO BIDDING. A. ALL SUPPORTS AND PARTS SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE ANSI CODE FOR PRESSURE PIPING B31.1.0, AND MSS STANDARD PRACTICE SP-58, SP-69 AND SP-89 EXCEPT AS SUPPLEMENTED OR MODIFIED BY THE REQUIREMENTS OF
- B. DESIGNS GENERALLY ACCEPTED AS EXEMPLIFYING GOOD ENGINEERING PRACTICE, USING STOCK OR PRODUCTION PARTS, SHALL BE UTILIZED WHEREVER POSSIBLE
- C. ACCURATE WEIGHT BALANCE CALCULATIONS SHALL BE MADE TO DETERMINE THE REQUIRED SUPPORTING FORCE AT EACH HANGER LOCATION AND THE PIPE WEIGHT LOAD AT EACH EQUIPMENT CONNECTION. D. PIPE HANGERS SHALL BE CAPABLE OF SUPPORTING THE PIPE IN ALL CONDITIONS OF OPERATION. THEY SHALL ALLOW FREE
- EXPANSION AND CONTRACTION OF THE PIPING, AND PREVENT EXCESSIVE STRESS RESULTING FROM TRANSFERRED WEIGHT BEING INDUCED INTO THE PIPE OR CONNECTED EQUIPMENT.
- E. WHERE POSSIBLE, STEEL STRUCTURAL ATTACHMENTS SHALL BE BEAM CLAMPS. OTHER ATTACHMENTS SHALL BE AS SCHEDULED.
- F. ALL RIGID HANGERS SHALL PROVIDE A MEANS OF VERTICAL ADJUSTMENT AFTER ERECTION. G. HANGER RODS SHALL BE SUBJECT TO TENSILE LOADING ONLY. AT HANGER LOCATIONS WHERE LATERAL OR AXIAL MOVEMENT IS
- ANTICIPATED, SUITABLE SUPPORT SHALL BE PROVIDED TO ELIMINATE SWING AND ALLOW FOR EXPANSION. H. WHERE HORIZONTAL PIPING MOVEMENTS ARE GREATER THAN 1/2 INCH. OR WHERE THE HANGER LOAD ANGULARITY FROM THE VERTICAL IS GREATER THAN 4 DEGREES FROM THE COLD TO HOT POSITION OF THE PIPE, THE HANGER ROD TO STRUCTURAL ATTACHMENT SHALL BE BY USE OF ANVIL FIG. 47 AND FIG. 299 OR THE HANGER ROD AND STRUCTURAL ATTACHMENTS SHALL BE
- OFFSET IN SUCH MANNER THAT THE ROD IS VERTICAL IN THE HOT POSITION. I. CONTRACTOR TO FABRICATE AND PROVIDE ADDITIONAL STRUCTURAL SUPPORT AS REQUIRED TO PREVENT SWAY WHERE HANGER ROD LENGTHS EXCEED 48" IN LENGTH.
- J. HANGERS SHALL BE DESIGNED SO THAT THEY CANNOT BECOME DISENGAGED BY MOVEMENTS OF THE SUPPORTED PIPE.
- K. ALL PIPING AND EQUIPMENT SHALL BE BRACED AND SECURED TO PREVENT SWAY AND MOVEMENT IN ALL AXES.
- L. HANGERS SHALL BE SPACED IN ACCORDANCE WITH ANSI B31.1.0 M. WHERE PRACTICAL, RISER PIPING SHALL BE SUPPORTED INDEPENDENTLY OF THE CONNECTED HORIZONTAL PIPING.
- 1. PIPE SUPPORT ATTACHMENTS TO THE RISER PIPING SHALL BE RISER CLAMP LUGS. WELDED ATTACHMENTS SHALL BE OF MATERIAL COMPARABLE TO THAT OF THE PIPE AND DESIGNED IN ACCORDANCE WITH ANSI B31.1 CODES. N. SUPPORTS, GUIDES AND ANCHORS SHALL BE SO DESIGNED THAT EXCESSIVE HEAT WILL NOT BE TRANSMITTED TO THE BUILDING

STEEL. THE TEMPERATURE OF SUPPORT PARTS SHALL BE BASED ON A TEMPERATURE GRADIENT OF 100 DEGREES F PER INCH

DISTANCE FROM THE OUTSIDE SURFACE OF THE PIPE. PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

STRENGTH AND VAPOR BARRIER

- A. ANVIL, ELCEN, MASON INDUSTRIES, ADVANCED THERMAL, FEE & MASON, PIPING SPECIALTIES, MIRO INDUSTRIES.
- A. INSULATION-INSERT MATERIAL FOR COLD PIPING: ASTM C552, TYPE II CELLULAR GLASS WITH 100-PSI MINIMUM COMPRESSIVE

- B. INSULATION-INSERT MATERIAL FOR HOT PIPING: WATER-REPELLENT-TREATED, ASTM C533, TYPE I CALCIUM SILICATE WITH 100-PSI MINIMUM COMPRESSIVE STRENGTH.
- C. FOR TRAPEZE OR CLAMPED SYSTEMS: INSERT AND SHIELD SHALL COVER ENTIRE CIRCUMFERENCE OF PIPE.
- D. FOR CLEVIS OR BAND HANGERS: INSERT AND SHIELD SHALL COVER LOWER 180 DEGREES OF PIPE
- E. INSERT LENGTH: EXTEND 2 INCHES BEYOND SHEET METAL SHIELD FOR PIPING OPERATING BELOW AMBIENT AIR TEMPERATURE.
- F. SHIELDS FOR COPPER PIPE SHALL UTILIZE SHEET LEAD.

A. INSERTS: MALLEABLE IRON CASE OR GALVANIZED STEEL SHELL AND EXPANDER PLUG FOR THREADED CONNECTION WITH LATERAL ADJUSTMENT, TOP SLOT FOR REINFORCING RODS, LUGS FOR ATTACHING TO FORMS; SIZE INSERTS TO SUIT THREADED HANGER

2.4 METAL PIPE HANGERS AND SUPPORTS

- A. CARBON-STEEL PIPE HANGERS AND SUPPORTS:
- DESCRIPTION: MSS SP-58, TYPES 1 THROUGH 58, FACTORY-FABRICATED COMPONENTS.
- 2. GALVANIZED METALLIC COATINGS: PRE-GALVANIZED, HOT DIP GALVANIZED, OR ELECTRO-GALVANIZED. 3. NONMETALLIC COATINGS: PLASTIC COATED, OR EPOXY POWDER COATED.
- 4. PADDED HANGERS: HANGER WITH FIBERGLASS OR OTHER PIPE INSULATION PAD OR CUSHION TO SUPPORT BEARING
- SURFACE OF PIPING. 5. HANGER RODS: CONTINUOUS-THREAD ROD, NUTS, AND WASHER MADE OF CARBON STEEL.
- B. COPPER PIPE AND TUBE HANGERS:

2. HANGER RODS: CONTINUOUS-THREAD ROD, NUTS, AND WASHER MADE OF COPPER-PLATED STEEL. 2.5 TRAPEZE PIPE HANGERS

A. DESCRIPTION: MSS SP-58, TYPE 59, SHOP- OR FIELD-FABRICATED PIPE-SUPPORT ASSEMBLY MADE FROM STRUCTURAL

1. DESCRIPTION: MSS SP-58, TYPES 1 THROUGH 58, COPPER-PLATED STEEL, FACTORY-FABRICATED COMPONENTS.

CARBON-STEEL SHAPES WITH MSS SP-58 CARBON-STEEL HANGER RODS, NUTS, SADDLES, AND U-BOLTS. 2.6 METAL FRAMING SYSTEMS

- A. MFMA MANUFACTURER METAL FRAMING SYSTEMS:
- 1. DESCRIPTION: SHOP- OR FIELD-FABRICATED, PIPE-SUPPORT ASSEMBLY MADE OF STEEL CHANNELS, ACCESSORIES, FITTINGS, AND OTHER COMPONENTS FOR SUPPORTING MULTIPLE PARALLEL PIPES.
- 2. STANDARD: COMPLY WITH MFMA-4 FACTORY-FABRICATED COMPONENTS FOR FIELD ASSEMBLY.
- 3. CHANNELS: CONTINUOUS SLOTTED CARBON-STEEL CHANNEL WITHIN TURNED LIPS.
- CHANNEL WIDTH: SELECTED FOR APPLICABLE LOAD CRITERIA.
- 5. CHANNEL NUTS: FORMED OR STAMPED NUTS OR OTHER DEVICES DESIGNED TO FIT INTO CHANNEL SLOT AND, WHEN TIGHTENED, PREVENT SLIPPING ALONG CHANNEL. 6. HANGER RODS: CONTINUOUS-THREAD ROD, NUTS, AND WASHER MADE OF GALVANIZED STEEL.

7. METALLIC COATING: PRE-GALVANIZED G90 (Z275).

- 1. BEAM CLAMPS SHALL HAVE MALLEABLE IRON JAWS, STEEL BOLT OR TIE ROD, NUTS, AND JAMB NUTS.
- 2. C-CLAMPS WILL NOT BE PERMITTED UNLESS RETAINER IS PROVIDED.

A. DESCRIPTION: WELDED, SHOP- OR FIELD-FABRICATED EQUIPMENT SUPPORT MADE FROM STRUCTURAL CARBON-STEEL SHAPES.

2.8 EQUIPMENT SUPPORTS

- SUSPENDED CEILING SPACES ARE NOT CONSIDERED EXPOSED PART 3 - EXECUTION
- A. PROVIDE INSERTS FOR SUSPENDING HANGERS FROM REINFORCED CONCRETE SLABS AND SIDES OF REINFORCED CONCRETE

B. WHERE CONCRETE SLABS FORM FINISHED CEILING, PROVIDE INSERTS TO BE FLUSH WITH SLAB SURFACE.

- A. COMPLY WITH MSS SP-58 FOR PIPE-HANGER SELECTIONS AND APPLICATIONS. B. USE HANGERS AND SUPPORTS WITH GALVANIZED METALLIC COATINGS FOR PIPING AND EQUIPMENT THAT WILL NOT HAVE
- USE NONMETALLIC COATINGS ON ATTACHMENTS FOR ELECTROLYTIC PROTECTION WHERE ATTACHMENTS ARE IN DIRECT CONTACT

A. PRIME COAT EXPOSED STEEL HANGERS AND SUPPORTS. HANGERS AND SUPPORTS LOCATED IN CRAWL SPACES, PIPE SHAFTS, AND

- WITH COPPER TUBING. D. USE CARBON-STEEL PIPE HANGERS AND SUPPORTS AND METAL FRAMING SYSTEMS AND ATTACHMENTS FOR GENERAL SERVICE
- E. USE COPPER-PLATED PIPE HANGERS AND COPPER ATTACHMENTS FOR COPPER PIPING AND TUBING.
- F. USE THERMAL-HANGER SHIELD INSERTS FOR INSULATED PIPING AND TUBING. G. INSTALL HANGERS TO PROVIDE MINIMUM 1/2 INCH SPACE BETWEEN FINISHED COVERING AND ADJACENT WORK.
- H. PLACE A HANGER WITHIN 12 INCHES OF EACH HORIZONTAL ELBOW. I. PROVIDE HANGERS WITH 1-1/2-INCH MINIMUM VERTICAL ADJUSTMENT.

PIPING3/4" & UNDER3/8"16 GAUGE6'5'2.5'1"3/8"16 GAUGE7'6'3'1 1/43/8"16 GAUGE8'8'4'1 1/23/8"16 GAUGE9'8'4'

J. PROVIDE ADDITIONAL STRUCTURAL SUPPORT WHERE REQUIRED TO PREVENT PIPE MOVEMENT AND SWAY. K. SUPPORT RISER PIPING INDEPENDENTLY OF CONNECTED HORIZONTAL PIPING

L. SUPPORT PIPING AS FOLLOWS: NOMINAL PIPE SIZESINGLE ROD DIAMETERTHICKNESS OF INSULATION SHIELDMAXIMUM SPACING FERROUS PIPINGCOPPER TUBINGHDPE

SECTION 23 05 48 - VIBRATION CONTROL FOR HVAC

- A. THIS SPECIFICATION INCLUDES VIBRATION ISOLATION, EQUIPMENT BALANCING REQUIREMENTS AND SOUND LEVEL CRITERIA
- FOR FOULPMENT SPACES AND EXTERIOR MOUNTED FOULPMENT. B. MECHANICAL AND ELECTRICAL EQUIPMENT AND ASSOCIATED PIPING AND DUCTWORK SHALL BE MOUNTED ON VIBRATION ISOLATORS AS SPECIFIED AND/OR REQUIRED TO MINIMIZE TRANSMISSION OF VIBRATION AND STRUCTURE-BORNE NOISE TO
- BUILDING STRUCTURE OR SPACES. C. ALL ROTATING EQUIPMENT SHALL BE BALANCED BOTH STATICALLY AND DYNAMICALLY. THE EQUIPMENT WHEN MOUNTED AND PLACED IN OPERATION SHALL NOT EXCEED A SELF-EXCITED VIBRATION VELOCITY OF 0.10 INCHES PER SECOND IN THE VERTICAL, HORIZONTAL, OR AXIAL DIRECTIONS WHEN MEASURED WITH A VIBRATION METER ON THE BEARING CAPS OR AT THE EQUIPMENT
- MOUNTING FEET IF THE BEARINGS ARE CONCEALED.

D. SECTION INCLUDES: ELASTOMERIC ISOLATORS, SUSPENSION TYPE ISOLATORS, FLEXIBLE CONNECTIONS

1.2 ACTION SUBMITTALS A. SHOP DRAWINGS: FOR EACH TYPE OF PRODUCT.

CRITERIA.

- A. ISOLATION SYSTEM SHALL BE STABLE DURING STARTING AND STOPPING OF EQUIPMENT WITHOUT EXCESSIVE TRANSVERSE OR
- B. THE INSTALLED VIBRATION ISOLATION SYSTEM SHALL HAVE A MAXIMUM LATERAL MOTION UNDER START-UP AND SHUT-DOWN
- CONDITIONS OF 0.25 INCH. MOTIONS IN EXCESS SHALL BE RESTRAINED BY APPROVED SPRING TYPE MOUNTINGS. C. ALL ELECTRICAL AND PIPING CONNECTIONS SHALL BE SUFFICIENTLY FLEXIBLE TO PERMIT PROPER ISOLATION.
- D. ISOLATION COMPONENTS SHALL BE SELECTED FOR THE LOWEST OPERATING SPEED OF THE EQUIPMENT E. ISOLATORS, INCLUDING SPRINGS, EXPOSED TO WEATHER SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.
- F. ISOLATORS SHALL BE SELECTED AND LOCATED TO PRODUCE UNIFORM LOADING AND DEFLECTION EVEN WHEN EQUIPMENT WEIGHT IS NOT EVENLY DISTRIBUTED. G. THE TYPE OF ISOLATION. BASE AND MINIMUM DEFLECTION SHALL BE AS REQUIRED FOR EACH SPECIFIC APPLICATION WHEN SUPPORTED ON A SOLID CONCRETE SLAB, 6 INCHES TOTAL THICK MINIMUM. VIBRATION ISOLATORS WITH A DEFLECTION

GREATER THAN THE MINIMUM SPECIFIED SHALL BE SUBMITTED FOR APPROVAL IF THEY ARE NEEDED TO MEET THE NOISE

ANDERSON 36770

PROJECT NO: 23-4451

DRAWN BY:

MLA

DATE:

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SPECIFICATION:

MECHANICAL

3. INSULATION MUST BE INSTALLED IN STRICT ACCORDANCE WITH INSULATION MANUFACTURER'S REQUIREMENTS. PROVIDE SPACERS, PINS, BANDS

6. WHERE DUCT IS SCHEDULED TO BE INSULATED (EITHER EXTERNALLY OR INTERNALLY) HEREIN AND SHOWN TO BE ROUTED IN AN AREA THAT WILL

4. INTERIOR EXHAUST DUCT SHALL NOT REQUIRE INSULATION

5. COMBUSTION AIR DUCT SHALL HAVE 11/2 INCH EXTERNAL INSULATION.

AND ADHESIVE AS REQUIRED. SPECIAL CARE MUST BE TAKEN ON LARGE DUCTWORK TO PREVENT SAGGING OF INSULATION AWAY FROM

PART 2 - PRODUCTS

SECTION 23 31 13 - DUCTWORK AND DUCTWORK INSULATION

A. LOW PRESSURE DUCTS, INSULATION, AND DUCT CLEANING

A. SHOP DRAWINGS: FOR EACH: DUCTWORK, DUCTWORK INSULATIONS, DUCTWORK HANGERS.

PART 1 - GENERAL

MALLORY L.

ANDERSON

36770

PROJECT NO: 23-4451

DRAWN BY

MLA

DATE:

BE EXPOSED BASED ON ARCHITECTURAL DRAWINGS, THE CONTRACTOR SHALL PROVIDE DOUBLE-WALL DUCT CONFORMING WITH THE

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SECTION 23 34 23 - POWER VENTILATORS

PART 1 - GENERAL

1.1 WORK INCLUDED

A. Inline Exhaust Fans

B. Ceiling Exhaust Fans

2.1 ACCEPTABLE MANUFACTURERS A. <u>Manufacturers:</u> Subject to compliance with requirements, provide products by one of the following: Carnes Company, Greenheck Fan Corporation, Loren Cook Company.

2.2 <u>GENERAL</u>

A. Provide all fans with disconnect.

B. Provide all fans with motor starters. See Section 230100 for details.

C. Integral phase relay shall be provided as a part of all three phase motor starters. Relay shall shut motor down on phase loss or phase unbalance and automatically reset when normal phasing is restored. Phase failure relay shall have adjustable restart time capabilities. Mechanical contractor shall coordinate staggered restart times as required.

D. See drawings or Specification Section 230900 - INSTRUMENTATION AND CONTROLS FOR HVAC for control of fans.

2.3 INLINE EXHAUST FAN

A. Duct mounted, exhaust fans shall be of the centrifugal belt or direct driven in-line type as specified. The fan housing shall be of the square design constructed of heavy gauge galvanized steel and shall include square duct mounting collars.

B. Fan housing shall be equipped with a hinge able service door assembly supporting the motor, drives, wheel and inlet cone. The

door assembly must swing out for cleaning, inspection or service without dismantling the fan in any way.

C. The fan wheel shall be of the aluminum backward inclined, centrifugal type. Wheels shall be dynamically and statically balanced and shall overlap the spun inlet venturi for maximum performance. D. The motor and drives shall be isolated from the air stream. Motors shall be of the heavy-duty type with permanently lubricated, sealed ball bearings. The wheel shaft shall be ground, and polished shafting mounted in heavy duty permanently sealed pillow

block bearings. Drives shall be sized for a minimum of 165% of driven horsepower. Pulleys shall be of the fully machined cast iron type, keyed and securely attached to the wheel and motor shafts. The motor pulleys shall be adjustable for final system

E. Flexible wiring leads shall be provided from the fan motor to an external mounted junction box and disconnect switch permitting access for service without disconnecting the field wiring.

F. All fans shall bear the AMCA Certified Ratings Seal for both air and sound performance.

2.4 CEILING EXHAUST FANS

A. Centrifugal Fan Unit: V-belt or direct drive as specified, with galvanized steel housing lined with 1/2-inch acoustic insulation resilient mounted motor, gravity backdraft damper in discharge.

B. Disconnect Switch: Factory wired, non-fusible, in housing for thermal overload protected motor and wall mounted multiple speed switch/solid state speed controller.

C. Grille: Molded white plastic or aluminum with baked white enamel finish.

D. Sheaves: Cast iron or steel, dynamically balanced, bored to fit shafts and keyed, variable and adjustable pitch motor sheaves selected so required rpm is obtained with sheaves set at mid-position, fan shaft with self-aligning pre-lubricated ball bearings.

3.1 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Install equipment in a manner to provide required clearances for proper operation and maintenance.

SECTION 23 37 13 - AIR DISTRIBUTION DEVICES

PART 1- GENERAL

1.1 WORK INCLUDED

A. DIFFUSERS, REGISTERS/GRILLES

1.2 ACTION SUBMITTALS

A. SHOP DRAWINGS: FOR EACH TYPE OF PRODUCT.

PART 2 - PRODUCTS

A. MANUFACTURER LISTED IN SCHEDULE IS FOR DESIGN SELECTION ONLY.

B. REGISTERS, GRILLES, AND DIFFUSERS: PRICE, NAILOR, TITUS

A. SQUARE, STAMPED, MULTICORE TYPE DIFFUSER TO DISCHARGE AIR IN FIXED 360-DEGREE PATTERN, OR ADJUSTABLE PATTERN

PROVIDE FOR SURFACE MOUNT AND INVERTED T-RAR WHERE SHOWN. IN PLASTER CEILINGS, PROVIDE PLASTER FRAME AND

CEILING FRAME. C. FABRICATE OF ALUMINUM WITH BAKED ENAMEL FINISH.

D. PROVIDE RADIAL OPPOSED BLADES DAMPER ADJUSTABLE FROM DIFFUSER FACE FOR SURFACE MOUNTED UNIT WHERE

2.3 CEILING GRID CORE EXHAUST AND RETURN REGISTERS/GRILLES

A. FIXED GRILLES OF 1/2 X 1/2 X 1-INCH LOUVERS.

B. FABRICATE MARGIN FRAME WITH COUNTERSUNK SCREW MOUNTING OR LAY-IN FRAME FOR SUSPENDED GRID CEILINGS AS SHOWN IN SCHEDULE ON DRAWINGS

C. FABRICATE OF ALUMINUM WITH FACTORY CLEAR LACQUER FINISH.

D. WHERE SCHEDULED PROVIDE INTEGRAL, GANG-OPERATED OPPOSED BLADE DAMPERS WITH REMOVABLE KEY OPERATOR, OPERABLE FROM FACE.

E. ALL LOUVER-FACED GRILLES SHALL BE PROVIDED WITH PATTERN CONTROLLER BLADES UNLESS SCHEDULED OTHERWISE ON THE

PART 3 - EXECUTION

A. FURNISH AND INSTALL WHERE SHOWN ON DRAWINGS ALL REGISTERS, GRILLES AND DIFFUSERS IN ACCORDANCE WITH THE TABULATION IN THE SCHEDULE ON DRAWINGS.

B. PROVIDE ACCESSORIES AND MODIFICATIONS AS INDICATED IN SCHEDULE NOTES.

C. INSTALL ITEMS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

E. INSTALL DIFFUSERS TO DUCTWORK WITH AIR TIGHT CONNECTION.

D. INSTALL IN LOCATIONS AS SHOWN ON DRAWINGS. ITEMS HAVE BEEN LOCATED AS SHOWN TO PROVIDE MAXIMUM PERFORMANCE. COORDINATE WITH ARCHITECTURAL FEATURES AND NOTIFY ARCHITECT/ENGINEER OF ANY CONFLICTS.

F. PROVIDE ACCESSIBLE BALANCING DAMPERS ON DUCT TAKE-OFF TO DIFFUSERS, AND GRILLES AND REGISTERS, REGARDLESS OF WHETHER DAMPERS ARE SPECIFIED AS PART OF THE DIFFUSER, OR GRILLE AND REGISTER.

SECTION 23 74 13 - PACKAGED ROOF TOP GAS/ELECTRIC AIR CONDITIONING UNITS

PART 1- GENERAL

1.1 SECTION INCLUDES

A. PACKAGED ROOF TOP UNIT

B. UNIT CONTROLS

C. ROOF MOUNTING FRAME AND BASE

1.2 RELATED DOCUMENTS

A. THE GENERAL AND SPECIAL CONDITIONS, DIVISION 01 SPECIFICATION SECTIONS, AND ALL OTHER CONTRACT DOCUMENTS (ESPECIALLY DIVISIONS 21, 22, 23 AND 26) ARE APPLICABLE TO WORK UNDER THIS SECTION OF THE SPECIFICATIONS. ALL THE WORK UNDER THIS SECTION OF THE SPECIFICATIONS SHALL BE GOVERNED BY ANY ALTERNATES AND UNIT PRICES CALLED FOR IN THE FORM OF PROPOSAL INSOFAR AS THEY AFFECT THIS PORTION OF THE WORK.

B. SECTION 220100 - GENERAL PROVISION FOR MECHANICAL WORK

1.3 ACTION SUBMITTALS

A. SHOP DRAWINGS:

1. PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED.

a. INCLUDE CONSTRUCTION DETAILS, MATERIAL DESCRIPTIONS, DIMENSIONS OF INDIVIDUAL COMPONENTS AND PROFILES, AND FINISHES, AND RELATED ROOF CURB.

b. INCLUDE RATED CAPACITIES, OPERATING CHARACTERISTICS, ELECTRICAL CHARACTERISTICS, AND FURNISHED SPECIALTIES AND ACCESSORIES.

c. INCLUDE UNIT DIMENSIONS AND WEIGHT.

d. INCLUDE CABINET MATERIAL, METAL THICKNESS, FINISHES, INSULATION, AND ACCESSORIES.

e. INCLUDE CERTIFIED FAN-PERFORMANCE CURVES WITH SYSTEM OPERATING CONDITIONS INDICATED.

f. INCLUDE CERTIFIED COIL-PERFORMANCE RATINGS WITH SYSTEM OPERATING CONDITIONS INDICATED.

g. INCLUDE FILTERS WITH PERFORMANCE CHARACTERISTICS.

h. INCLUDE DAMPERS, INCLUDING HOUSINGS, LINKAGES, AND OPERATORS.

i. WIRING DIAGRAMS: FOR POWER, SIGNAL, AND CONTROL WIRING.

1.4 CLOSEOUT SUBMITTALS

A. APPROVED SHOP DRAWINGS: FOR ALL ROOF TOP UNITS AND RELATED COMPONENTS. PROVIDE IN OPERATION AND

B. OPERATION AND MAINTENANCE DATA: FOR ROOF TOP UNITS TO INCLUDE IN OPERATION AND MAINTENANCE MANUALS.

A. PROVIDE ONE (1) YEAR MANUFACTURER'S WARRANTY ON UNIT.

B. INCLUDE FOUR (4) YEAR EXTENDED COVERAGE OF REFRIGERATION COMPRESSORS

1.6 EXTRA MATERIALS

A. PROVIDE ONE (1) EXTRA SET OF FILTERS FOR EACH UNIT

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURER

A. TRANE, CARRIER, MCQUAY, YORK.

2.2 MANUFACTURED UNITS A. PROVIDE ROOF-MOUNTED UNITS HAVING ELECTRIC REFRIGERATION.

B. UNIT SHALL BE SELF-CONTAINED, PACKAGED, FACTORY ASSEMBLED AND PREWIRED, CONSISTING OF CABINET AND FRAME, SUPPLY FAN, CONTROLS, AIR FILTERS, REFRIGERANT COOLING COIL AND COMPRESSOR, CONDENSER COIL, CONDENSER FAN, AND NATURAL GAS-FIRED BURNER SECTION.

2.3 FABRICATION

A. CABINET: GALVANIZED STEEL WITH BAKED ENAMEL FINISH, ACCESS DOORS OR REMOVABLE ACCESS PANELS WITH QUICK FASTENERS. STRUCTURAL MEMBERS SHALL BE MINIMUM 14 GAGE WITH ACCESS DOORS OR REMOVABLE PANELS OF MINIMUM

B. INSULATION: ONE INCH (1") THICK NEOPRENE COATED GLASS FIBER ON SURFACES WHERE CONDITIONED AIR IS HANDLED. PROTECT EDGES FROM EROSION.

C. SUPPLY FAN: FORWARD CURVED CENTRIFUGAL TYPE, RESILIENTLY MOUNTED WITH V-BELT DRIVE, ADJUSTABLE VARIABLE PITCH MOTOR PULLEY AND RUBBER ISOLATED HINGE MOUNTED MOTOR. ISOLATE COMPLETE FAN ASSEMBLY.

D. AIR FILTERS: TWO INCH (2") THICK GLASS FIBER DISPOSABLE FILTERS, FARR MODEL 30/30 OR EQUAL. NEW FILTERS SHALL BE

INSTALLED AT SUBSTANTIAL COMPLETION IN ADDITION TO THE EXTRA SET OF FILTERS PROVIDED. E. ROOF CURB: INSULATED, WEATHERPROOF TWELVE INCHES (12") HIGH GALVANIZED STEEL, CHANNEL FRAME WITH GASKETS,

NAILER STRIPS AND INTEGRAL SPRING ISOLATORS. FABRICATE CURB TO MATCH UNIT REQUIREMENTS AND FIT SLOPE OF ROOF. SEE SECTION 220548.

A. PROVIDE COPPER TUBE ALUMINUM FIN COIL ASSEMBLY WITH GALVANIZED DRAIN PAN AND CONNECTION.

B. PROVIDE THERMOSTATIC EXPANSION VALVES AND ALTERNATE ROW CIRCUITING.

A. PROVIDE HERMETIC COMPRESSOR, 1750 RPM RESILIENTLY MOUNTED WITH POSITIVE LUBRICATION, CRANKCASE HEATER-, HIGH-AND LOW-PRESSURE SAFETY CONTROLS, MOTOR OVERLOAD PROTECTION, SUCTION AND DISCHARGE SERVICE VALVES AND GAGE PORTS AND FILTER DRIFR.

B. PROVIDE STEP CAPACITY CONTROL BY CYCLING COMPRESSORS AND CYLINDER UNLOADING WHERE SCHEDULED.

2.6 CONDENSER

A. PROVIDE COPPER TUBE ALUMINUM FIN COIL ASSEMBLY WITH SUBCOOLING ROWS.

OPERATE WITH COMPRESSOR. 2.7 SUPPLY/RETURN CASING

QUANTITY. OUTSIDE AIR DAMPER SHALL FALL TO CLOSED POSITION. RELIEF DAMPERS MAY BE GRAVITY BALANCED.

B. PROVIDE DIRECT DRIVE PROPELLER FANS, RESILIENTLY MOUNTED WITH FAN GUARD, MOTOR OVERLOAD PROTECTION, WIRED TO

A. DAMPERS ECONOMIZER: PROVIDE LOW LEAKAGE OUTSIDE, RETURN AND RELIEF DAMPERS, NOT TO EXCEED 3% LEAKAGE AT 1 IN. W.G. PRESSURE DIFFERENTIAL WITH DAMPER OPERATOR AND CONTROL PACKAGE TO AUTOMATICALLY VARY OUTSIDE AIR

B. GASKETS: PROVIDE TIGHT FITTING DAMPERS WITH EDGE GASKETS, MAXIMUM LEAKAGE 3% AT PRESSURE DIFFERENTIAL.

A. TIME DELAY RELAY SHALL PROVIDE A FOUR-MINUTE TIME DELAY BETWEEN STARTING OF THE FIRST AND SECOND COMPRESSOR.

B. ANTISHORT CYCLE: A LOCKOUT TIME SHALL PROVIDE A MINIMUM OFF TIME OF FIVE MINUTES BETWEEN COMPRESSOR CYCLING. C. AUTOMATICALLY MODULATING OUTDOOR AND RETURN AIR DAMPERS MAINTAIN PROPER ROOM TEMPERATURE INTO THE CONDITIONED SPACE. ADJUSTABLE MINIMUM POSITION CONTROL SHALL BE STANDARD. SPRING RETURN MOTOR, UPON LOSS OF POWER, DAMPERS WILL CLOSE SHUT. ECONOMIZERS SHALL OFFER THE ENERGY SAVING LOW-LEAK ECONOMIZER DAMPERS. THESE DAMPERS SHALL REDUCE DAMPER LEAKAGE DOWN TO 10 CFM/FT AT 1" WG DIFFERENTIAL STATIC PRESSURE OR LESS

IN ACCORDANCE WITH AMCA STANDARD 575. D. CENTRAL CONTROL PANEL: PROVIDE COMBINED STANDARD THERMOSTAT SUBBASE WITH HEAT, COOL, OFF, FAN-AUTO-AND-ON POSITION WITH 3 STAGES OF COOLING AND 1 STAGE OF HEATING. FOUR SIGNAL LIGHTS INDICATE POWER, PILOT OUTAGE, OGGED FILTERS AND RESET RELAY POWER SIGNALS SHOWS GREEN INDICATING POWER AVAILABLE TO LINIT POWER SIGNAL SHOW RED INDICATING POWER OUTAGE. PILOT SIGNAL SHOWS RED WHEN THERE IS A HEATING MALFUNCTION. FILTER SIGNAL SHALL SHOW RED WHEN FILTERS CLOG AND NEED REPLACEMENT. RESET SIGNALS SHALL SHOW RED IF SYSTEM IS OUT ON ANY

THAN 1% OF NOMINAL UNIT AIR FLOW ACCORDING TO THE AIR MOVEMENT AND CONTROL ASSOCIATION (AMCA) LABORATORIES

COOLING SAFETY CONTROLS. ECONOMIZER SHALL PROVIDE FIRST STAGE OF COOLING. E. CONTROL COOLING BY CYCLING COMPRESSORS AND CYLINDER UNLOADING.

2.9 GAS HEATING SECTION

A. INDUCED-DRAFT COMBUSTION TYPE WITH ENERGY SAVING DIRECT-SPARK IGNITION SYSTEM AND REDUNDANT MAIN GAS

B. THE HEAT EXCHANGER SHALL BE OF THE TUBULAR-SECTION TYPE CONSTRUCTED OF A MINIMUM OF 20-GAUGE STEEL COATED WITH A NOMINAL 1.2 MIL ALUMINUM-SILICONE ALLOY FOR CORROSION RESISTANCE.

C. BURNERS SHALL BE OF THE IN-SHOT TYPE CONSTRUCTED OF ALUMINUM-COATED STEEL

PART 3 - EXECUTION

A. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

B. MOUNT UNITS ON FACTORY-BUILT ROOF MOUNTING FRAME PROVIDING WATERTIGHT ENCLOSURE TO PROTECT DUCTWORK AND UTILITY SERVICES. INSTALL ROOF MOUNTING FRAME LEVEL.

C. INSTALL UNITS IN A MANNER TO PROVIDE THE REQUIRED CLEARANCES FOR OPERATION, SERVICE, AND MAINTENANCE OF UNITS. A. PROVIDE OWNER'S MAINTENANCE PERSONNEL TRAINING AS REQUIRED TO ADJUST, OPERATE, AND MAINTAIN UNITS.

PROJECT NO:

23-4451

MLA

DATE:

DRAWN BY:

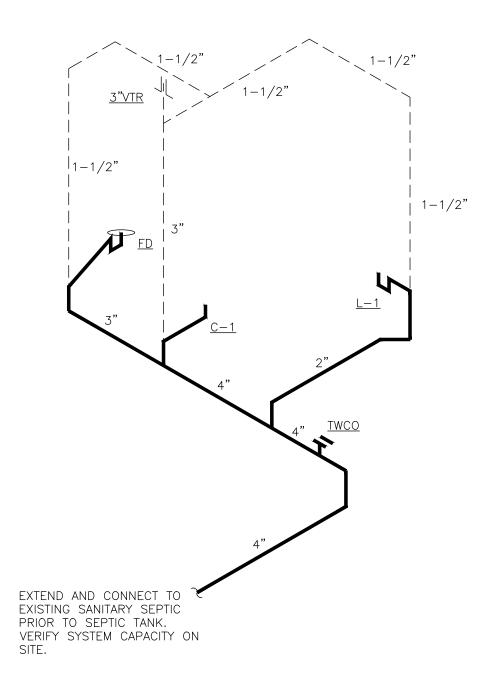
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MECHANICAL **SPECIFICATIONS**

DOMESTIC WATER RISER DIAGRAM



WASTE AND VENT RISER DIAGRAM
NO SCALE

TO RANGE NOTE: ROUTING OF LP CAS TO BE FILED COORDINATED WITH GENERAL CONTRACTOR EXISTING LP REGULATOR TO EXISTING TANK, VERIFY SUPPLY IS ADEQUATE FOR 330,000 BTU ADDED LOAD WIT LP SUPPLIER RTU—1 60,000 BTU

GAS RISER DIAGRAM

PLUMBING FIXTURE SCHEDULE:

FIXTURES AND EQUIPMENT SHALL BE EQUAL TO ITEMS DESCRIBED BELOW:

- RPZ

 3/4" REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTOR WITH STRAINER—
 PROVIDE ADEQUATE DRAIN TO PREVENT FLOODING, IN THE EVENT DEVICE
 WERE TO DISCHARGE.
- TWCO

 4" PVC TWO WAY CLEANOUT IF THIS OCCURS IN GRASS AREA, THERE
 SHALL BE A 18"X18"X6" THICK CONCRETE PAD INSTALLED AT GRADE BY
 GENERAL CONTRACTOR.
- CO 4" PVC BODY CLEANOUT WITH ADJUSTABLE METAL TOP
- WHITE ADA HEIGHT ELONGATED TOILET WITH WHITE OPEN FRONT, LESS COVER SEAT— WAX RING SEAL— BRASS CLOSET BOLTS, NUTS AND WASHERS—LOOSE KEY CHROME ANGLE COMPRESSION STOP— CHROME ESCUTCHEON—BRAIDED CLOSET SUPPLY—FLUSH MECHANISM ON "WIDE SIDE" OF ADA
- L-1

 19"X17" CHINA WALL HUNG CONCEALED ARM LAVATORY- 1-1/4" GRID DRAIN

 ADA SINGLE LEVER CHROME LAVATORY FAUCET TEMPERING VALVE STOP AND TRAP PROTECTOR KIT PVC P TRAP LOOSE KEY CHROME
 ANGLE COMPRESSION STOPS FLOOR MOUNTED, CONCEALED ARM
 LAVATORY CARRIER WALL HANGER ALSO
- HWH

 6 GALLON ELECTRIC WATER HEATER THERMAL EXPANSION TANK RELIEF VALVE AND CODE APPROVED DISCHARGE— METAL PAN WITH DRAIN MANUFACTURED WATER HEATER SHELF SECURED TO STRUCTURE FOR SUPPORTING 100 #.
- TP PRIME RITE OR EQUAL TRAP PRIMER VALVE WITH LOCKING 8"X8" STAINLESS STEEL ACCESS PANEL FOR MAINTENANCE. EXTEND 1/2" PIPING BELOW FLOOR, TO CONNECT TO FLOOR DRAIN WITH WATER TIGHT CONNECTION.
- O 3" OR 4" PVC BODY FLOOR DRAIN WITH ADJUSTABLE METAL TOP

PLUMBING SHEET NOTES:

- 1. ALL WORK SHALL BE PERFORMED UNDER CURRENT LAWS, RULES AND REGULATIONS IN PLACE AT TIME OF CONSTRUCTION. CONSIDER OSHA REGULATIONS AND ALL CODES FOR PROJECT CONSTRUCTION.
- 2. ALL PERSONNEL SHALL BE LICENSED, IN JURISDICTION OF THE PROJECT, THIS INCLUDES CONTRACTOR'S LICENSING AND REGISTRATION.
- 3. DRAWINGS FOR THE PROJECT ARE DIAGRAMMATIC IN NATURE, AND MAY NOT SHOW EVERY BEND, OFFSET OR FITTING REQUIRED FOR A COMPLETED PROJECT. CONTRACTOR SHALL INCLUDE ALL THESE ITEMS IN PROJECT PRICING.
- 4. DO NOT SCALE DRAWINGS FOR ROUGH-INS. REFER TO DIMENSIONED DRAWINGS AND EQUIPMENT SPECIFICATION SHEETS FOR REVIEWING THOSE REQUIREMENTS.
- 5. CONSULT PROJECT DOCUMENTS FOR EXACT LOCATIONS OF UTILITIES, EQUIPMENT AND DRAINS, SHOWN ON DRAWING.
- 6. DURING THE COURSE OF THE PROJECT, ADVISE GENERAL CONTRACTOR AND ARCHITECT

OF ANY FOUND DISCREPANCIES IN PROJECT PLANS, UTILITIES OR CONDITIONS.

- 7. RESPECT THE INSTALLATION AND EQUIPMENT OF OTHER TRADES AND COORDINATE WITH THOSE PERSONS, TO ENSURE THAT THE NEEDS OF ALL TRADES ARE CONSIDERED DURING CONSTRUCTION.
- 8. "RECORD DRAWINGS" REFLECTING ANY CHANGES IN THE PROJECT, SHALL BE
 DOCUMENTED AND "RED LINED" ON A SET OF DOCUMENTS, THAT SHALL BE KEPT ON
 SITE, FOR ALL CONCERNED PARTIES TO REVIEW AND COMMENT ON ANY CHANGES.
 AT THE END OF THE PROJECT, RECORD DRAWINGS OR AN ELECTRONIC COPY OF SAME,
 SHALL BE TURNED OVER TO OWNER FOR FUTURE REFERENCE.
- 9. PROVIDE DEPARTMENT CERTIFICATE OR CONFIRMATION ON CORPORATE STATIONERY, OF FINAL PLUMBING INSPECTION, WITH DATE OF SAME AFFIXED.
- 10. STANDARD MANUFACTURER'S WARRANTY SHALL APPLY, ALONG WITH CONTRACTOR'S WARRANTY OF LABOR AND MATERIALS SUPPLIED FOR THE PROJECT, FOR A PERIOD OF ONE YEAR, FROM DATE OF FINAL PLUMBING INSPECTION.
- 11. ALL MATERIALS FOR PROJECT SHALL BE NEW AND OF BEST QUALITY, AS SPECIFIED.
- 12. THERE SHALL BE NO PIPING OR SYSTEMS COVERED OR INSULATED, UNTIL SUCH TIME THAT THE SYSTEM IS PROVEN TO BE SOUND, LEAK-FREE AND INSPECTED, AS REQUIRED BY CODES.
- 13. PLANS, COPIES, REVIEW FEES AND SUBMITTAL FOR GOVERNMENT APPROVALS, SHALL BE PERFORMED AND PAID FOR BY OTHERS OR GENERAL CONTRACTOR, AS IS APPLICABLE.
- 14. PLUMBING CONTRACTOR SHALL PROVIDE REQUIRED PLUMBING PERMITS AND INSPECTIONS.
- 15. FURNISH AND INSTALL, PER ALL CODES, ALL FIRE STOPPING OR SMOKE CAULKING OF ANY PENETRATIONS THAT OCCUR IN RATED STRUCTURES. PROVIDE SLEEVES AND INSTALLATION OF SAME AS NEEDED FOR THIS OPERATION TO MEET CODES.
- 16. INSTALL ALL PIPING SYSTEMS, SO AS TO BE PROTECTED FROM FREEZING.17. ALL EXCAVATIONS FOR PROJECT PLUMBING SHALL BE DENATURED AS NECESSARY. DO

NOT BACKFILLL WITH FROZEN MATERIALS. EXCAVATIONS SHALL BE KEPT TO A MINIMUM,

18. BENEATH PAVED OR CONCRETE AREAS, EXCAVATIONS SHALL BE BACKFILLED PROPERLY TO SUBGRADE, AND MECHANICALLY TAMPED, AS NECESSARY.

YET SHALL HAVE PROPER GRILLAGE FOR SUPPORT AND BACKFILLED SO AS TO

PREVENT FUTURE SETTLEMENT OF THE AREA.

- 19. RESTORATION OF AREAS DISTURBED FOR PLUMBING CONSTRUCTION SHALL BE EQUAL TO OR BETTER, THAN CONDITIONS OF EXISTING, UPON ONSET OF CONSTRUCTION. COORDINATE THE EXTENT OF THIS RESTORATION, WITH GENERAL CONTRACTOR, AS TO ACTUAL LIMITS REQUIRED TO BE PERFORMED BY PLUMBING CONTRACTOR.
- 20. CONTRACTOR REQUIRING SAME, SHALL SCRIBE CUT, BREAK AND REMOVE CONCRETE OR PAVEMENT FOR INSTALLATION OF NEW PIPING OR SYSTEMS. MINIMIZE CROSS CUTS IN TRENCH AREA.
- 21. COORDINATE SCRIBE CUT WITH GENERAL CONTRACTOR TO ALLOW FOR POSSIBILITY OF OTHER TRADE SHARING CUTS, AND/OR EXCAVATIONS FOR UTILITIES.
- 22. PERSONNEL SHALL CONDUCT THEMSELVES PROFESSIONALLY AT ALL TIMES, AS THE PROJECT IS LOCATED IN VIEW AND IN CONTACT WITH THE PUBLIC AT A RELIGIOUS SCHOOL. CONSTRUCTION PERSONNEL SHALL LIMIT THEIR PRESENCE TO THE AREA
- 23. COORDINATE ANY UTILITIES INTERRUPTIONS WITH SCHOOL MAINTENANCE PERSONNEL. BE AWARE AND ADVISED OF LOCATIONS AND CONDITIONS OF ALL VALVES THAT ARE PERTINENT TO THE SYSTEMS YOU ARE CONNECTING TO FOR NEW UTILITIES FOR THE

UNDER CONSTRUCTION AND AVOID S DISRUPTION OF DAY TO DAY SCHOOL ACTIVITIES.

- 24. IF ROCK MAY BE ENCOUNTERED DURING EXCAVATIONS, CONSULT WITH GENERAL CONTRACTOR AS TO THE METHOD AND COSTS OF REMOVAL AND DISPOSAL OF SAME.
- 25. SPOILS FROM EXCAVATIONS SHALL BE STOCKPILED ON SITE IN AREA DESIGNATED FOR THE DISPOSAL OF THE SPOILS, OR PLACED IN DUMPSTER ON SITE FOR HANDLING AND DISPOSAL BY OTHERS.
- 26. THERE SHALL BE NO CUTTING OR ALTERATIONS TO STRUCTURAL MEMBERS, WITH OUT PRIOR CONSULTATION WITH AND WRITTEN CONSENT OF THE ARCHITECT/ENGINEER.
 27. CORE DRILLING OF OPENINGS SHALL BE AT A MINIMUM, SO AS TO ALLOW FOR PROPER FIRE CAULK, SMOKE CAULK OR FIRE STOPPING OPERATIONS.
- 28. CONTRACTOR IS TO DISPOSE OF HIS GENERATED WASTE, IN THE PROVIDED DUMPSTER, AS ACCUMULATED AND/OR AT THE END OF THE DAY.
- 29. PROVIDE LOCKING ACCESS PANELS, FOR VALVES OR MAINTENANCE, MATCHING FIRE RATING OF STRUCTURE IN WHICH THEY ARE PROPOSED TO BE INSTALLED.
- 30. PROVIDE HANGERS AND SUPPORTS TO ADHERE TO MANUFACTURER'S RECOMMENDATIONS AND CODES, COMPATIBLE WITH THE MATERIAL THAT IS TO BE SUPPORTED.
- 31. ALL PIPING SHALL BE INSTALLED AND SUPPORTED, SO THAT THERE IS NO STRAIN ON SAME, AND SHALL BE PLUMB, TRUE AND STRAIGHT. CONCEAL PIPING WHERE POSSIBLE, UNLESS OTHERWISE NOTED.
- 32. GENERAL CONTRACTOR SHALL PROVIDE ANY ADDITIONAL CHASES, SOFFITS OR COVERS AS REQUIRED.

- 33. PROVIDE DIELECTRIC UNIONS FOR CONNECTIONS OF DISSIMILAR METALS.
- 34. SUPPORT BLOCKING FOR FIXTURE HANGERS SHALL BE INSTALLED BY GENERAL
- CONTRACTOR, WITH DIRECTIONS AND COORDINATION OF PLUMBING CONTRACTOR.

 35. VERIFY CONDITIONS, LOCATION AND INVERT OF EXISTING PIPING THAT IS PROPOSED TO RECEIVE WASTE FROM THE NEW SYSTEMS, PRIOR TO ANY CONSTRUCTION.LOCATE AND KNOW VALUING OF EXISTING WATER SYSTEM, PRIOR TO COMMENCEMENT OF CONNECTION OF NEW WATER SERVICE PIPING. ADVISE GENERAL CONTRACTOR AND ARCHITECT OF ANY UNFORESEEN OR UNKNOWN PROBLEMS THAT MAY BE FOUND.
- 36. SYSTEM VALVES SHALL BE COMPATIBLE WITH SELECTED WATER PIPING SYSTEM, AND INSTALLED IN ACCESSIBLE LOCATIONS. PROVIDE 1" BRASS VALVE TAGS WITH BEADED CHAIN TO ATTACH SAME. CREATE VALVE LOCATION CHART FOR OWNER, AS A PART OF RECORD DRAWINGS PACKAGE, UPON COMPLETION.
- 37. WATER PIPE AND FTGS, SHALL MEET DESIGN CRITERIA AND ADHERE TO ALL CODES AND REGULATIONS.
- 38. FIELD VERIFY POINT OF CONNECTION, PRIOR TO CONSTRUCTION.
- 39. NON-METALLIC DOMESTIC WATER SERVICE SHALL HAVE 16 AWG TRACER WIRE INTO METER VAULT AND 2 FT. COILED ABOVE GRADE AT WATER SERVICE ENTRY, TO ALLOW FOR UTILITY TRACING. RECOMMENDED COVER FOR EXTERIOR WATER PIPING IS 36"
- 40. FOR THE PURPOSE OF THIS PROJECT, DOMESTIC WATER PIPING BELOW GRADE SHALL BE SCHEDULE 80 CPVC SOLVENT WELD PEX AQUA PEX WIRSBO ZURN PEX —OR HDPE, ALL ADHERING TO APPLICABLE CODES.
- 41. VALVES AND ANY SOLDER ON PROJECT, SHALL BE "LEAD -FREE", PER ALL

REGULATIONS.

- 42. PERFORM HYDOROSTATIC TESTING OF DOMESTIC WATER SYSTEMS, PRIOR TO COVERING OR INSULATING SAME.
- 43. SANITIZE WATER PIPING SYSTEMS, PRIOR TO COMMISSIONING TO SERVICE. ENSURE THAT SANITIZING AGENTS ARE PROPERLY FLUSHED FROM THE SYSTEMS AFTER USE.
- 44. ALL WATER PIPING SHALL HAVE HOT WATER ON THE LEFT AND COLD WATER ON THE RIGHT.
- 45. WATER PIPING SHALL BE INSULATED WITH 1" FLEXIBLE WALL INSULATION, WITH MAXIMUM FLAME SPREAD OF 25, MEETING ALL CODES AND SPECIFICATIONS.
- 46. IF PEX PIPING IS USED FOR WATER, PROVIDE COPPER PRE-FORMED SUPPLY 90 DEGREE BEND, TO PROJECT THROUGH WALL, FOR FUTURE STOP CONNECTION. SECURE TO PREVENT MOVEMENT OF SUPPLY STUB OUT.
- 47. PEX PIPING SHALL BE 36" MAXIMUM FOR FIXTURE BRANCHES ONLY, WHEN UTILIZING 1/2" PIPING AND FITTINGS.
- 48. DO NOT INSTALL ANY WATER OR WASTE PIPING OVERHEAD OF ANY ELECTRICAL EQUIPMENT IF POSSIBLE TO AVOID THAT ROUTING.
- 49. SANITARY WASTE AND VENT SYSTEM SHALL BE CONSTRUCTED AND INSTALLED, PER ALL CODES AND REGULATIONS AND DESIGN CRITERIA. BASIS OF DESIGN FOR THIS PROJECT IS SCH. 40, DWV, SOLVENT WELD PVC PIPE AND FITTINGS SYSTEM, ADHERING TO ALL CODES, RULES AND REGULATIONS. VERIFY INVERT AT POINTS OF CONNECTIONS, PRIOR TO STARTING CONSTRUCTION.
- 50. NO NON-METALLIC PIPING SHALL BE LOCATED WITHIN PLENUM RATED SPACES. IF THIS SHOULD OCCUR, THERE SHALL BE THE NEED TO INSTALL FIRE RATED INSULATION AND WRAP, TO MEET ALL CODES.
- 51. NEW HVAC EQUIPMENT SHALL REQUIRE ADDITIONAL LP GAS PIPING. CONTRACTOR MUST BE CERTIFIED AND LICENSED FOR THAT SYSTEM INSTALLATION, FOLLOWING ALL RULES AND REGULATIONS.
- 52. CONFIRM WITH CURRENT LP SUPPLIER, THAT EXISTING PIPING AND LP REGULATOR FROM TANK TO BUILDING, IN AREA OF THE KITCHEN IS ADEQUATE TO SUPPORT ADDED LP GAS LOAD OF 3330,000 BTU FOR NEW HVAC EQUIPMENT. IF FOUND TO BE INADEQUATE, COORDINATE WITH LP SUPPLIER FOR INSTALLATION OF A NEW SUPPLY LINE FROM TANK TO THE BUILDING AT CURRENT OR NEW REGULATOR LOCATION.
- 53. INTERIOR LP GAS PIPING SHALL BE COORDINATED WITH GENERAL CONTRACTOR AS TO ACTUAL ROUTING.
- 54. POINT OF CONNECTION FOR NEW LP GAS PIPING SHALL BE ON THE OUTLET SIDE OF THE REGULATOR THAT IS IN PLACE AT THIS TIME NEAR KITCHEN. INTENTIONS OF NEW LP GAS PIPING IS TO BE OUNCES DELIVERY PRESSURE, TO THE NEW HVAC
- 55. ALL GAS CONNECTIONS SHALL BE PROVIDED WITH A LINE SIZE DRIP LEG AT POINT OF CONNECTION AND ANAGA APPROVED GAS VALVE.
- 56. ALL EXPOSED GAS PIPING SHALL BE PAINTED FOR CORROSION PROTECTION PER ALL CODES AND REGULATIONS.
- 57. THERE SHALL BE NO UNIONS, IN ANY PIPING SYSTEMS, THAT ARE INSTALLED IN A CONCEALED MANNER.
- 58. ALL GAS PIPING TO TESTED TO BE PROVEN SOUND AND LEAK FREE.
- 59. LP GAS PIPING SHALL BE SCHEDULE 40 BLACK PIPE WITH 125 # BLACK IRON MALLEABLE FITTINGS.
- 60. USE A NON-HARDENED THREAD SEALANT, FOR ALL THREADED CONNECTIONS.
- 61. SUPPORT PIPING AS IS REQUIRED BY MANUFACTURER'S AND ALL CODES.
- 62. PROVIDE PVC SLEEVES, WITH SILICONE SEALED ENDS, AT ALL LP GAS PIPING WALL PENETRATIONS, SO AS TO BE SEALED WATER TIGHT.
- 63. NEW 6" SANITARY SEWER ON EXTERIOR SHALL CONNECT TO EXISTING SEPTIC SYSTEM. LOCATE INVERT OF PROPOSED POINT OF CONNECTION, PRIOR TO CONSTRUCTION. THIS PIPING MAY BE PVC SDR 35 PIPE AND FITTINGS, AS LONG AS THE INSTALLATION ADHERES TO ALL CODES.
- 64. EXACT ROUTING TO AVOID UNNECESSARY RESTORATIONS IS TO BE CONSIDERED, IN PLANNING ROUTE TO EXISTING.
- 65. VERIFY WITH FACILITIES SEPTIC SYSTEM MAINTENANCE PERSONNEL, THAT EXISTING SEPTIC SYSTEM IN PLACE, IS ADEQUATE TO ACCEPT ADDITIONAL WASTE, FROM PROPOSED NEW PLUMBING. ADVISE GENERAL CONTRACTOR AND ARCHITECT, OF ANY INEFFICIENCIES ENCOUNTERED OR DISCOVERED IN EXISTING SYSTEMS PROPOSED TO SERVE NEW ADDITION PLUMBING.

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PROJECT NO:

23-4451 DRAWN BY:

JMK

DATE:

05-09-2024

TS & ASSOCIATE

YES ARCHITECTS

PRESTON HIGHWAY

MASTER PLANNING
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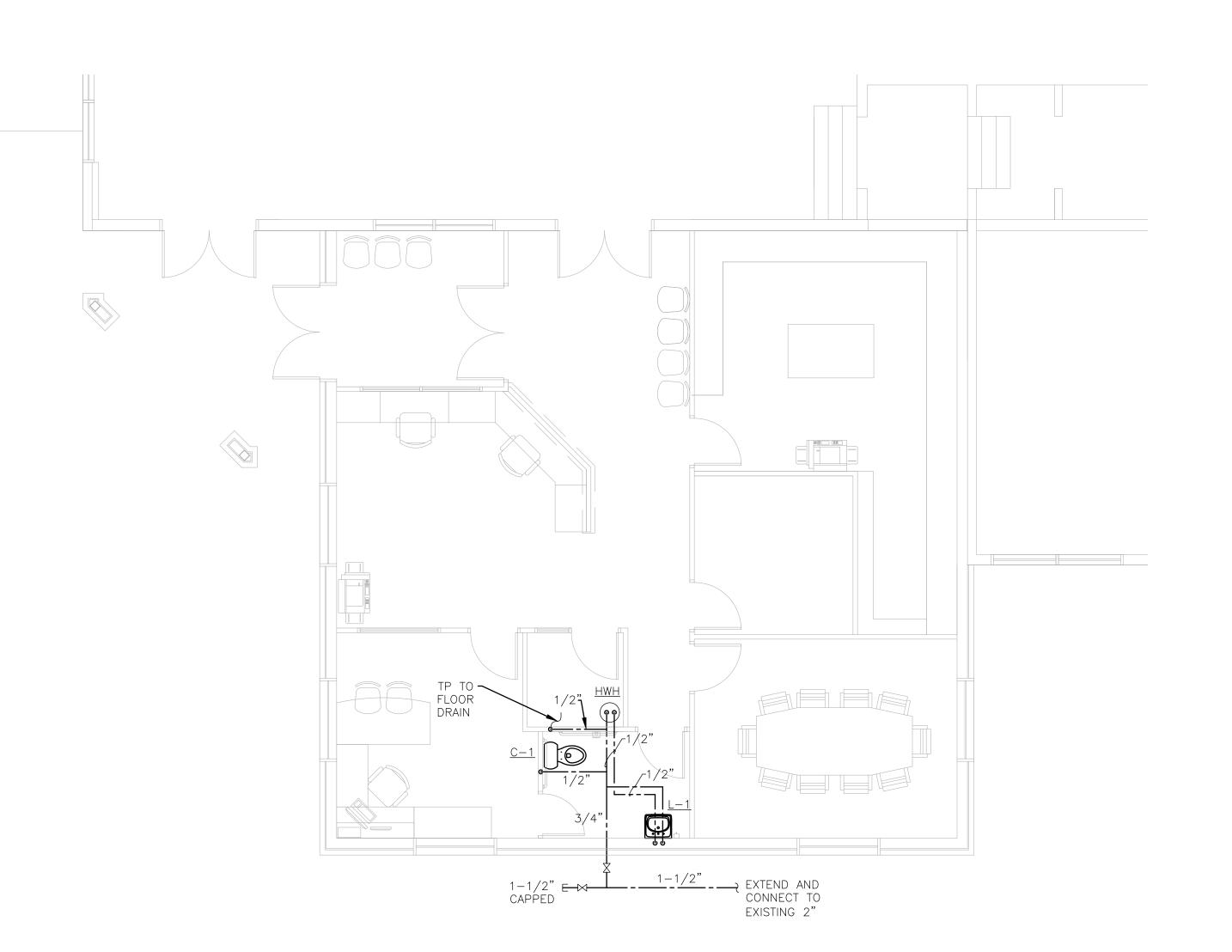
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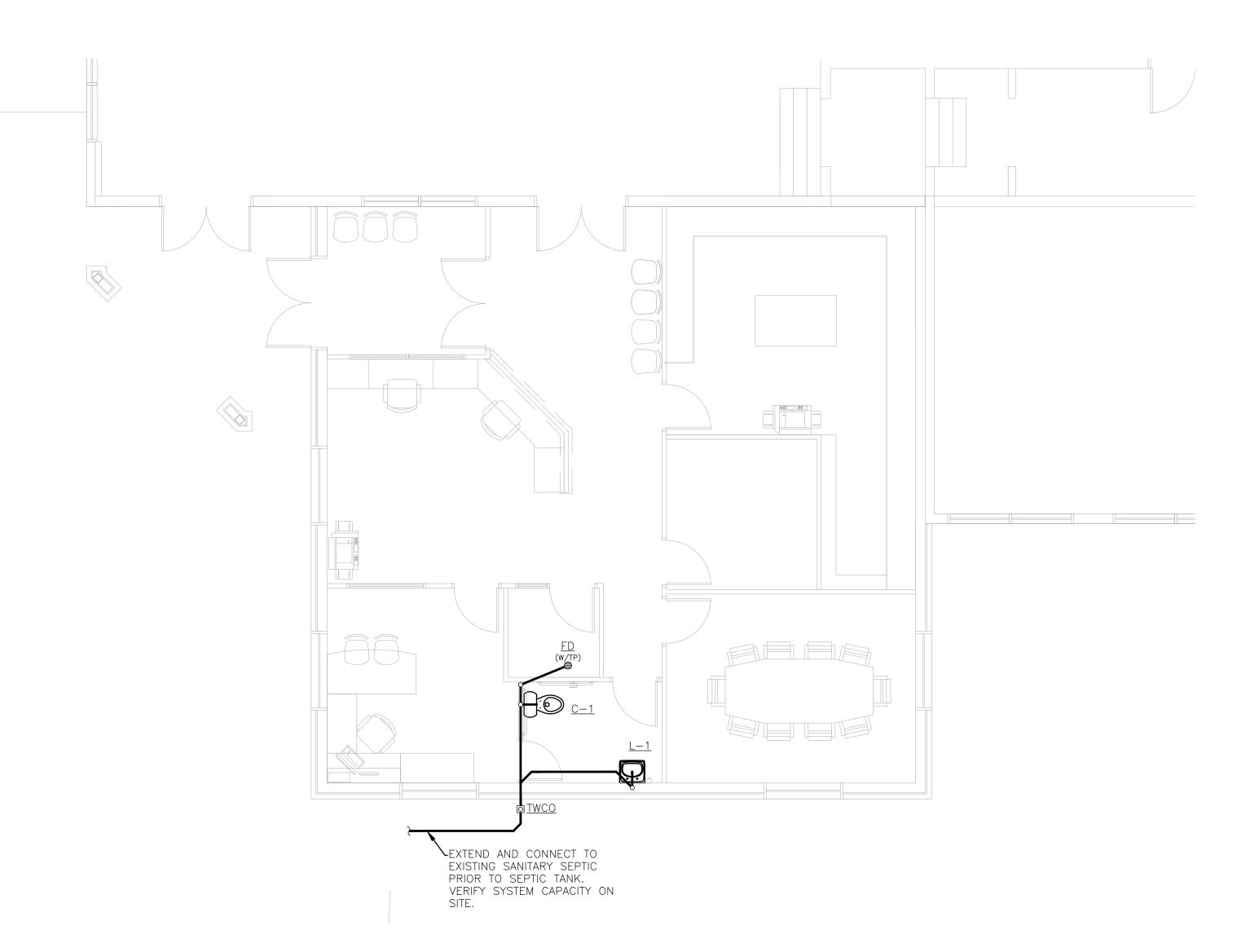
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PLUMBING NOTES AND RISERS

P1.01

05-09-2024





PLUMBING DOMESTIC WATER FLOOR PLAN

SCALE: 3/16" = 1'-0"

01 PLUMBING WASTE AND VENT FLOOR PLAN

SCALE: 3/16" = 1'-0"

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PLUMBING FLOOR
PLANS

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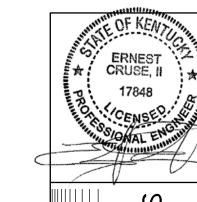
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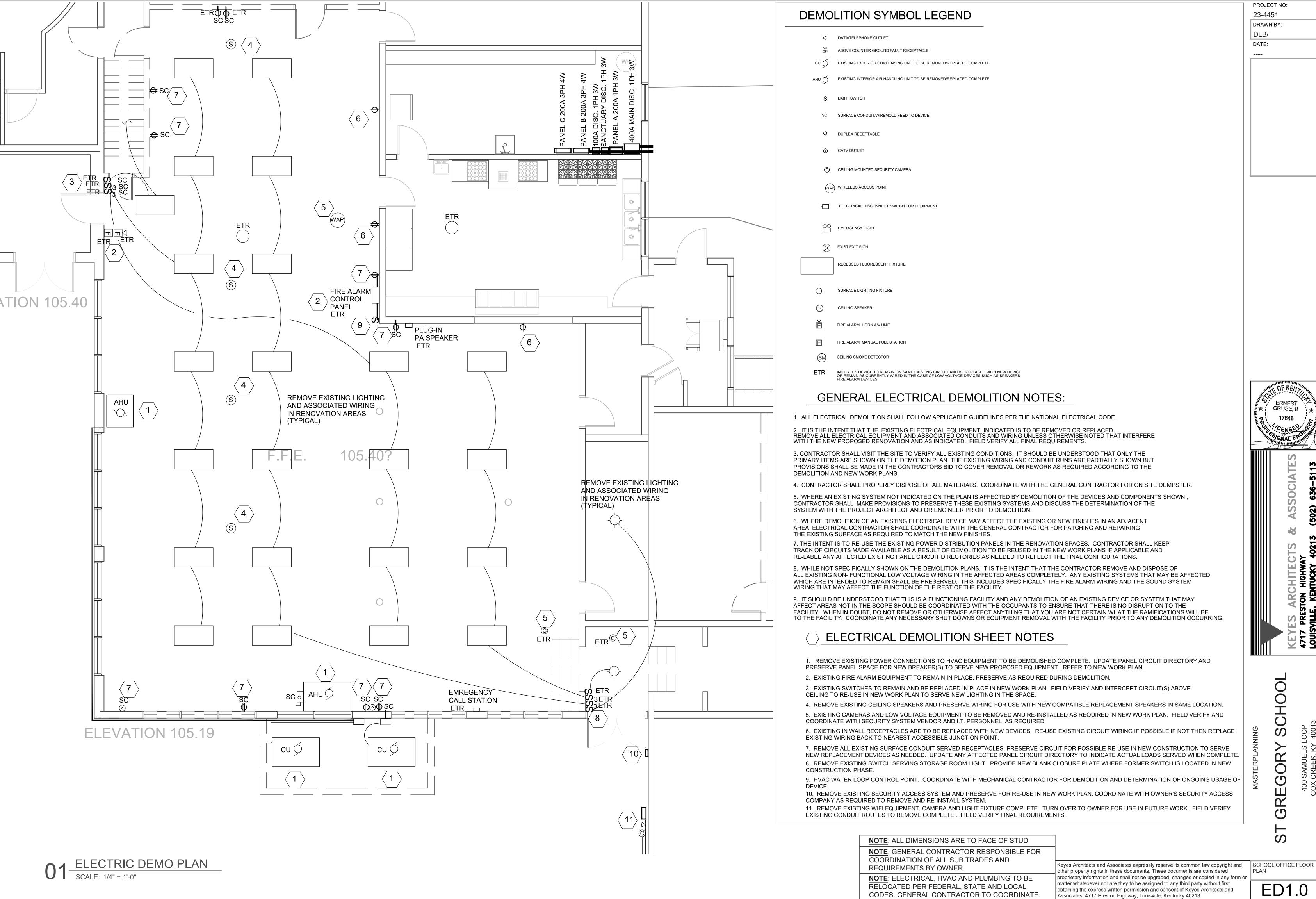
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PLUMBING GAS FLOOR PLAN



ED1.0

20A 1P - CONFESSIONAL LIGHTS 50A 2P - COND. UNIT FRONT OF SCHOOL 20A 1P- SANCTUARY LIGHTS 20A 1P - KITCHEN COUNTER RECEPTS 20A 1P - CHURCH PLUGS 20A 1P - CONF. EXH FAN 20A 1P - ATTIC FANS 20A 1P - UNKNOWN 20A 1P - ALTER LIGHTS 20A 1P - UNKNOWN 20A 1P - UNKNOWN 20A 1P - CHURCH LIGHTS 20A 1P - 7TH AND 8TH GRADE LIGHTS 20A 1P - UNKNOWN 20A 1P - FREEZER 20A 1P - ORGAN POWER 20A 2P - LIGHTS IN CHURCH WINDOW 20A 1P - CONVENT 20A 1P - UPSTAIRS BATHROOM 20A 1P - HALLWAY LIGHTS 20A 1P - KITCHEN LIGHTS 20A 1P - 1ST GRADE PLUGS 20A 1P - STAINLESS STEEL FREEZER 20A 1P - FIRE ALARM PANEL 20A 1P - 2ND GRADE PLUGS 20A 1P - UNKNOWN 20A 1P - UNKNOWN 20A 2P - UNKNOWN 20A 1P - CONVENT ROOM LIGHTS 20A 1P - UNKNOWN 20A 1P - CAFETERIA LIGHTING 20A 1P - PLUGS 20A 1P - UNKNOWN 20A 1P - FRIGERATOR 20A 1P - PRESCHOOL RECEPTACLES 20A 1P - DISHWASHER 20A 1P - DORIS OFFICE 20A 1P - UNKNOWN 20A 1P - CONVENT PLUGS 20A 1P - STOVE FAN 20A 1P - CONVENT WASHER 20A 1P - ICE MACHINE/POPCORN 20A 1P - AHU IN FRONT OF SCHOOL 20A 1P - UNKNOWN 30A 2P - TRUCK 40A 2P - A/C PRESCHOOL 50A 2P - DISHWASHER BOOSTER HTR

EXISTING PANEL SCHEDULE FOR PANEL "B" 120/240V 3 PH 4W 200 AMP

50A 2P - COND UNIT 1ST GRADE	15A 1P - UNKNOWN
20A 2P - COND UNIT 7TH AND 8TH GRADE	20A 1P - UNKNOWN
20A 1P - POPCORN POPPER	20A 1P - UNKNOWN
40A 2P - COND UNIT PRE K	20A 1P - UNKNOWN
50A 2P - UNKNOWN	100A 3P - UNIT #1 10 TON A/C AH
SPACE	20A 1P - UNKNOWN
SPACE	20A 2P - UNKNOWN
SPACE	30A 2P - EXPRESSO MACHINE
SPACE	20A 1P - HAND DRYER
SPACE	SPACE
	SPACE

EXISTING PANEL SCHEDULE FOR PANEL "C" 120/240V 3 PH 4W 200 AMP

20A 3P - AIR HANDLING UNIT	70A 3P - AIR CONDITIONING UNIT
20A 2P - 3RD AND 4TH GRADE A/C UNIT	20A 1P - SIDE DOOR FREEZER
20A 2P - 5TH AND 6TH GRADE A/C UNIT	20A 2P - A/C UNIT KINDERGARTEN ROOM
20A 1P - COFFEE MACH. NEXT TO STEPS	100A 3P - 10 TON A/C AHU UNIT #2
30A 2P - FURNACE FOR PRE-K	20A 1P - FREEZER RECEPTACLE
60A 2P - UNKNOWN	20A 2P - NEW 3 DOOR FREEZER
30A 1P - UNKNOWN	20A 1P - PLUG BY PANEL
SPACE	30A 2P - FURNACE FOR PRE-K
SPACE	SPACE
	SPACE

EXISTING PANEL SCHEDULES NOTE:

EXISTING PANEL SCHEDULES ARE PRESENTED HERE AS DETERMINED IN THE FIELD. ACCURACY OF THE SCHEDULES CAN NOT BE DETERMINED BUT ARE REPRESENTATIVE OF WHAT IS CURRENTLY IN PLACE. CONTRACTOR SHALL FIELD VERIFY ANY EXISTING CIRCUITS AND DEVICES AFFECTED BY DEMOLITION AS TO THE ACTUAL SOURCE AND BREAKER SERVING THE CIRCUITS. CONTRACTOR SHALL UPDATE ANY AFFECTED PANEL SCHEDULE WITH A NEW CIRCUIT DIRECTORY INCORPORATING ANY FINAL REVISIONS AS A RESULT OF DEMOLITION AND NEW WORK IN THE AFFECTED AREAS.

PROJECT NO: 23-4451 DRAWN BY:

NOTE: ALL DIMENSIONS ARE TO FACE OF STUD

NOTE: GENERAL CONTRACTOR RESPONSIBLE FOR COORDINATION OF ALL SUB TRADES AND REQUIREMENTS BY OWNER

NOTE: ELECTRICAL, HVAC AND PLUMBING TO BE RELOCATED PER FEDERAL, STATE AND LOCAL CODES. GENERAL CONTRACTOR TO COORDINATE.

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SCHOOL OFFICE FLOOR

ED2.0

POWER SYMBOL LEGEND

- SPECIFICATION GRADE NEMA 5-15 DUPLEX RECEPTACLE
 - SINGLE GANG DATA OUTLET WITH CONDUIT STUB TO ACCESSIBLE POINT ABOVE LAY-IN CEILING FOR FUTURE LOW VOLTAGE WIRING
 - GROUND FAULT TYPE RECEPTACLE
 - ABOVE COUNTER MOUNTING OF DEVICE
- WEATHER PROOF IN-USE COVER FOR RECEPTACLE
- NEMA 3R DISCONNECT SIZED PER LOAD SERVED
- COMBINATION POWER/DATA FLOOR BOX EQUAL TO LEGRAND 880CS2-1 2 GANG FLOOR BOX WITH COVER PLATE
- CIRCUIT HOMERUN TO POWER PANEL
- 3-#12 IN MC CABLE UNLESS OTHERWISE INDICATED
- SURFACE WIREMOLD PAINTED TO MATCH WALL SURFACE ROUTED FROM CEILING SPACE TO NEW SURFACE WIREMOLD MOUNTED DEVICE
- DUCT TYPE SMOKE DETECTOR WITH REMOTE TEST SWITCH TIED INTO EXISTING FIRE ALARM SYSTEM - COORDINATE WITH FA SYSTEM VENDOR
 - NEW FIRE ALARM AUDIO VISUAL UNIT (95 CANDELLA) WIRED INTO EXISTING FIRE ALARM SYSTEM - COORDINATE WITH FA SYSTEM VENDOR FOR ALL FINAL REQUIREMENTS TO TIE INTO EXISTING SIGNAL LOOP IN BUILDING
 - NEW FIRE ALARM MANUAL PULL STATION WIRED INTO EXISTING FIRE ALARM SYSTEM COORDINATE WITH FA SYSTEM VENDOR FOR ALL FINAL REQUIREMENTS TO TIE INTO EXISTING SIGNAL LOOP IN BUILDING

GENERAL POWER NOTES

- 1. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE.
- 2. MINIMUM WIRE SIZE SHALL BE #12 COPPER. COORDINATE WITH EQUIPMENT ACTUAL WIRE SIZES BASED ON EQUIPMENT" NAME PLATE RATINGS.
- 3. ALL EXPOSED CONDUIT BELOW 10' SHALL BE EMT TYPE. MC CABLE ALLOWED ABOVE CEILINGS AND IN STRUCTURAL AREA OF CEILINGS. SCHEDULE 40 PVC FOR U.G. CONDUIT.
- 4. COORDINATE WITH MECHANICAL CONTRACTOR FOR REQUIRED CONTROL WIRING ASSOCIATED WITH HVAC EQUIPMENT.
- 5. PROVIDE PANELBOARD CIRCUIT DIRECTORIES WHICH MATCH FIELD WIRING/CIRCUITING FOR EACH POWER DISTRIBUTION PANEL.
- 6. UPDATE ALL EXISTING PANEL SCHEDULES AFFECTED BY MODIFICATION OF EXISTING OR ADDITION OF NEW CIRCUITS AS REQUIRED.
- 7. ALL EXISTING FIRE ALARM DEVICES ARE TO REMAIN. VERIFY EXISTING FIRE ALARM SYSTEM SERVICER AND COORDINATE THE NECESSARY MODIFICATIONS TO THE EXISTING SYSTEM AS REQUIRED TO ACCOMODATE THE NEW ADDED FIRE ALARM EQUIPMENT AND COMPONENTS.

O POWER SHEET NOTES

- 1. REPLACE EXISTING IN-WALL RECEPTACLE WITH NEW DEVICE. RE-USE EXISTING CIRCUIT WIRING TO SERVE NEW DEVICE.
- 2. RE-USE EXISTING CIRCUIT SERVING DEMOLISHED RECEPTACLES IN THIS AREA TO SERVE NEW DEVICES
- 3. ROUTE MC CABLE ABOVE CEILING TO SERVE WIREMOLD DROPS TO NEW DEVICES IN LOCATIONS INDICATED.
- 4. PROVIDE NEW CIRCUIT HOMERUN ABOVE CEILING TO EXISTING PANEL "B". PROVIDE NEW COMPATIBLE 20 AMP SINGLE POLE CIRCUIT BREAKER IN AVAILABLE SPACE TO SERVE THIS CIRCUIT. UPDATE PANEL SCHEDULE WITH NEW LOADS SERVED.
- 5. PROVIDE NEW CIRCUIT HOMERUN ABOVE CEILING TO EXISTING PANEL "C". PROVIDE NEW COMPATIBLE 20 AMP SINGLE POLE CIRCUIT BREAKER IN AVAILABLE SPACE TO SERVE THIS CIRCUIT. UPDATE PANEL SCHEDULE WITH NEW LOADS SERVED.
- 6. REPLACE EXISTING BREAKER FORMERLY SERVING THE DEMOLISHED HVAC EQUIPMENT SERVING THIS AREA WITH NEW COMPATIBLE 50 AMP 3 POLE BREAKER TO SERVE NEW EQUIPMENT INDICATED.
- 7. REPLACE EXISTING BREAKER FORMERLY SERVING THE DEMOLISHED HVAC EQUIPMENT SERVING THIS AREA
- WITH NEW COMPATIBLE 70 AMP 3 POLE AMP BREAKER TO SERVE NEW EQUIPMENT INDICATED.
- 8. PROVIDE NEW WHITE CEILING SPEAKER COMPATIBLE WITH EXISTING SOUND SYSTEM TO REPLACE DEMOLISHED ORIGINAL SPEAKERS. RE-USE EXISTING SOUND SYSTEM WIRING TO SERVE NEW SPEAKERS.
- 9. PROVIDE NEW DUCT TYPE SMOKE DETECTOR FOR RTU-2. TIE NEW SMOKE DETECTOR INTO EXISTING FIRE ALARM SYSTEM AT MAIN FIRE ALARM CONTROL PANEL. COORDINATE WITH FIRE ALARM PANEL SERVICER/MANUFACTURER FOR FINAL REQUIREMENTS NEEDED TO ADD A NEW ZONE IN THE EXISTING FIRE ALARM SYSTEM.
- 10. PROVIDE NEW FIRE ALARM DEVICES AS INDICATED. TIE INTO EXISTING FIRE ALARM SYSTEM AT MAIN FIRE ALARM CONTROL PANEL. COORDINATE WITH FIRE ALARM PANEL SERVICER/MANUFACTURER FOR FINAL REQUIREMENTS NEEDED TO ADD A NEW COMPATIBLE EQUIPMENT TO THE EXISTING SYSTEM.
- 11. PROVIDE ROUGH-IN FOR SECURITY ACCESS SYSTEM TO BE PROVIDED BY OWNER. COORDINATE WITH OWNER FOR FINAL DETAILS AND REQUIREMENTS WITH DOOR HARDWARE SUPPLIER AND OWNER.

NOTE: ALL DIMENSIONS ARE TO FACE OF STUD

NOTE: GENERAL CONTRACTOR RESPONSIBLE FOR COORDINATION OF ALL SUB TRADES AND REQUIREMENTS BY OWNER

CODES. GENERAL CONTRACTOR TO COORDINATE.

NOTE: ELECTRICAL, HVAC AND PLUMBING TO BE RELOCATED PER FEDERAL, STATE AND LOCAL

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PROJECT NO: 23-4451

DRAWN BY:

DLB/

DATE:

E1.01

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MODEL	LUMENS COLOR TEMP	REMARKS	VOLT
Α	LED 2X4 FLAT PANEL COLOR TEMP AND LUMEN SELECTABLE	METALUX # 24GTCS-L3C3 CREE # EQUAL	5200 LUMENS 4000 KELVIN	PROVIDE HOLD DOWN CLIPS FOR FIXTURE TO SECURE TO CEILING GRID	120
В	LED 2X2 FLAT PANEL COLOR TEMP AND LUMEN SELECTABLE	WILLIAMS # EQUAL METALUX # 22GTCS-L3C3 CREE # EQUAL WILLIAMS # EQUAL	3890 LUMENS 4000 KELVIN	PROVIDE HOLD DOWN CLIPS FOR FIXTURE TO SECURE TO CEILING GRID	120
С	6" RECESSED LED DOWN LIGHT WITH HAZE FINISH TRIM	HALO #HC6-20-D010-HB128APK/HM6- 05250840-61MD-H CREE # EQUAL PRESCOLITE # EQUAL	2000 LUMENS 4000 KELVIN	MOUNT IN CENTER OF CEILING GRID TILE TO MATCH PLAN LAYOUT	12
D	SURFACE LED DECORATIVE CLOSE TO CEILING LIGHT	BROWNLEE # 2080-16-FINISH-R22-FINISH-40K OCL # EQUAL G LIGHTING # EQUAL	1900 LUMENS 4000 KELVIN	MOUNT IN FORMER FIXTURE LOCATION	12
F	SURFACE LED LENSED STRIP LIGHT	METALUX #4ST2L4040R CREE # EQUAL WILLIAMS # EQUAL	4600 LUMENS 4000 KELVIN	MOUNT IN FORMER FIXTURE LOCATION HOLD AS HIGH AS POSSIBLE	12
E	COMBINATION EXIT EMERGENCY LIGHT WITH ADDITIONAL CAPACITY TO DRIVE FIXTURE TYPE "ER" IN EMERGENCY MODE	COOPER # APCH70 EMERGILITE # EQUAL CHLORIDE# EQUAL	INCLUDED	PROVIDE UN-SWITCHED HOT CONDUCTOR TO SERVE UNIT WIRE AHEAD OF ANY LOCAL CONTROL	12
EM	SELF CONTAINED SURFACE LED EMERGENCY FIXTURE WITH 2 HEADS	COOPER # SEL25 EMERGILITE # EQUAL CHLORIDE# EQUAL	LAMPS INCLUDED	PROVIDE UN-SWITCHED HOT CONDUCTOR TO SERVE UNIT WIRE AHEAD OF ANY LOCAL CONTROL	12
ER	EXTERIOR WET LOCATION LINE VOLTAGE REMOTE EMERGENCY EGRESS LIGHT WITH INTEGRAL BATTERY	COOPER # SELW25 EMERGILITE # EQUAL CHLORIDE# EQUAL	LAMPS INCLUDED	PROVIDE UN-SWITCHED HOT CONDUCTOR TO SERVE UNIT WIRE AHEAD OF ANY LOCAL CONTROL- FINISH TO BE SELECTED BY ARCHITECT	12
OL1	SURFACE SMALL PROFILE LED CANOPY LIGHT	ILP# CP-5L-U-40-FINISH RAB # EQUAL HUBBLE # EQUAL	5000 LUMENS 4000 KELVIN	SURFACE MOUNT TO BOTTOM OF ENTRY CANOPY	12
OL2	15" SURFACE DECORATIVE EXTERIOR WALL BRACKET LIGHT FIXTURE	BROWNLEE # 7110-15-FINISH-H16-40K OCL # EQUAL VISA # EQUAL	1370 LUMENS 4000 KELVIN	PROVIDE ROUGH-IN IN CANOPY COLUMN AT HEIGHT AS SPECIFIED BY ARCHITECT- ARCHITECT TO SELECT FINISH	12

LIGHTING SYMBOL LEGEND

- ω LINE VOLTAGE SPECIFICATION GRADE SWITCH
- ဟု_{os} I/R TYPE LINE VOLTAGE VACANCY SENSOR SWITCH
- S₃ THREE WAY SWITCH
- COMBINATION VACANCY SENSOR/0-10 VOLT DIMMER LINE VOLTAGE SWITCH
- © LINE VOLTAGE PHOTO CELL
- CIRCUIT HOMERUN TO ELECTRICAL PANEL
- MC CABLE WITH 3-#12 UNLESS OTHERWISE INDICATED

GENERAL LIGHTING NOTES

- 1. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE.
- 2. WIRE ALL EMERGENCY LIGHTING FIXTURES AHEAD OF LOCAL AREA SWITCHING.
- 3. COORDINATE EXACT FIXTURE PLACEMENT WITH OTHER EQUIPMENT IN THE CEILING SPACE.
- 4. MINIMUM WIRE SIZE SHALL BE #12 COPPER. UTILIZE MC CABLE FOR LIGHTING CIRCUITS.
- 5. UPDATE ANY AFFECTED PANEL SCHEDULES FOR NEW OR MODIFIED EXISTING CIRCUITS AS NEEDED.

NOTE: ALL DIMENSIONS ARE TO FACE OF STUD NOTE: GENERAL CONTRACTOR RESPONSIBLE FOR COORDINATION OF ALL SUB TRADES AND REQUIREMENTS BY OWNER NOTE: ELECTRICAL, HVAC AND PLUMBING TO BE

CODES. GENERAL CONTRACTOR TO COORDINATE.

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SCHOOL OFFICE FLOOR E1.02

PROJECT NO: 23-4451 DRAWN BY:

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

RELOCATED PER FEDERAL, STATE AND LOCAL

GENERAL NOTES AND SPECIFICATIONS

01000 GENERAL

- A. These drawings and specifications are for general guidance, with the understanding that the Owner will negotiate directly with a contractor for proper execution of work to assure completeness and code compliance.
- B. All contractors are to guarantee their work for a minimum of one year from date of acceptance and turnover of a completed project. Longer guarantees are required where specified elsewhere in these documents.
- C. Contractor to verify the information contained in these plans in field (V.I.F.) and immediately notify the Architect of any discrepancies.
- D. The Contractor shall carefully study and compare these contract documents and shall at once report and discovered items to the Owner and Architect any errors, inconsistency, or omissions that cannot be resolved by standard industry practices. Do not proceed with work until clarifications have been made by the Architect and notification has been given to proceed.
- E. Keyes Architects & Associates has a set number of drawing sets that we have guaranteed the owner / client by contract. These documents are the owner's / client's to use as they see fit but it was intended for their use to create additional documents and for permitting purposes. In addition, Keyes will supply at no additional charge a PDF set of the supplied paper set of drawings to the owner / client. Any additional sets beyond the sets supplied will be considered extras and will be billed accordingly by Keyes Architects & Associates current rates table. It is the responsibility of the General Contractor to acquire this PDF set from the owner for the purposes of making additional sets and to pay for all needed construction sets.
- F. Before bidding, General Contractor and all Subcontractors are responsible for obtaining all bid documents including but not limited to construction documents and specifications. Contractor is responsible for reviewing other trades work that directly affects their trade, to ensure that no conflict is present. Should a conflict arise as a result of design difference with other trades, subcontractor should use industry standard practices to bid and create a product to accomplish the design intent of the construction documents and include it as part of their bid. Then the General Contractor shall be notified of the intended changes in order that these changes can be discussed with the architect and coordinated with other trades that are affected.
- G. Where drawings do not specifically show how work is to be executed, the subcontractor responsible for the work will be responsible for figuring out and bidding an acceptable industry standard method of completing the work.
- H. Where plans and specifications conflict, specifications shall supersede plans. Where plans and details conflict, the more detailed (larger scaled) item will take precedence. If it is unclear as to the intent of the work due to the conflict, notify the Architect immediately before proceeding.
- Contractors are not to scale the plans for missing or unclear information. Where plans are unclear, verify with architect before proceeding.
- J. Contractor's bids are to be complete and to include all material, labor , and facilities required to complete the work shown on drawings and specified herein.
- K. All Subcontractor questions concerning bidding, the drawings, or site visits shall be directed to the General Contractor.
- L. All Subcontractors shall obtain any specific permits and code review for their trade. General Contractor will obtain overall construction permit.
- M. The Owners may have other contractors, workers and suppliers engaged on this project. Verify exact limits of responsibility during bidding and coordinate with all work being conducted under other contracts
- N. Payment of Monthly Draws for work completed to date is based upon receipt of lien releases and site inspections. Items listed as complete on the draw but not completed to the owner's and architect's satisfaction, must be completed or removed from the draw before payment will be made. All outstanding invoices for this project from all subcontractors and suppliers will be paid and a lien release issued from the general contractor in charge before payment will be made.
- O. Final Payment of all portions of this project is based upon receipt of lien releases, warranties and maintenance/operations manuals for all items.
- P. For all sections in these documents where multiple colors, finishes, and/or material choices occur and where the owner can only make these choices after the contract has been awarded, this contract is to include the most restrictive and/or expensive of the choices given so the owner can make a choice at a later time without change orders. Should the owner make a choice that is less expensive than what were bid, then the owner is to be credited back the difference between what was specified and what was selected.
- Q. Value engineered items and/or approved equals are to be submitted as part of the bid package for approval by the owner and architect. Due to limited bidding time, owner and architect cannot/will not review products during bidding for equality or equivalency to these documents. Owner and architect will approve these items as part of the bid review and may ask for proof of product equality, product specification and clarification, resubmittal of original items, or other requirements as a condition of acceptance of any and all bids. Items not listed on bid forms and submitted as part of bid package are assumed to be as specified in these documents and any item not meeting these documents can be asked to be replaced or a change order applied to the project in the amount of the difference of the original item specified at the owner's and architect's discretion.

01001 TAX EXEMPT PROJECT

- A. This project is being bid to a Tax Exempt Organization, here forward known as the "Client", with federal and/or state approved tax exempt status. The following shall apply to the entirety of this project, unless otherwise stated herein:
- All labor and materials necessary to complete this project are to be included as part of this bid package.
- 2. The tax exemption status of the Client will only apply to material purchases made through a wholesaler or retailer for the use on this project. Materials directly purchased by the General Contractor or Subs through their offices for use on this project will not qualify for exemption.
- 3. The awarded General Contractor and their Subs will be responsible for setting up the Client's tax exempt information with all material suppliers.
- 4. All materials are to be invoiced to the Client, care of the General Contractor or Subs.
- 5. General Contractor or Subs to be responsible for the shipping, handling, storage and installation of all materials for the duration of the project, until the final project is turned over to the Client.
- 6. Any deliveries made to anywhere other than to the project site, to the General Contractor or the Sub-contractor responsible for the materials, will be returned to the shipper at the General Contractor's expense.
- 7. All material invoices are to be routed through the General Contractor and any invoices sent directly to the Client will be returned to the issuer. The General Contractor shall be responsible for any late fees or penalties that should be incurred as a result of these returned invoices.
- As part of their monthly pay application / monthly draw, the General Contractor will submit materials invoices to be paid along with their draw.

Issued as part of this monthly draw shall be a list of how much money is to be paid to the General

- Contractor as well as a list of all invoices to be paid, including Name of the Payee, any Purchase Order #s and the amount to be paid. A single check will be issued to Suppliers with multiple PO submitted as a part of this draw.
- A Change Order will also be issued reducing the amount of the General Contractor's project cost by the dollar amount of the material invoices being paid as part of the current draw.
- 9. Monthly draws will be approved by the Client and all issued material supplier checks will be given to the care of the General Contractor.
- It will be the responsibility of the General Contractor to make sure payment is delivered to the material suppliers in an expedient and timely manner.
- Any late fees or penalties that occur as a result to deliver these checks, will be the responsibility of the General Contractor, unless these fees can be documented as not being incurred as a fault of General Contractor or Subs.

01500 DEMOLITIONS

- A. General contractor shall be responsible for all demolition work unless otherwise noted. Sub-contractors shall be responsible for all demolition that pertains to their trade and not covered by the General Contractor. All demolition shall conform to O.S.H.A., state and local permit and safety codes.
- B. Verify structural integrity before & during construction. Provide temporary support as required.
- C. Contractors shall provide for dust/debris control, cleanup and protection of other personnel and visitors as needed. Dust control to include but is not limited to creating a temporary structure between any spaces to remain occupied and work space, covering doors/vents/windows as needed to prevent the passage of dust, and cleaning up any accumulation of dust.
- D. The site is to be left "broom" clean and secure from intruders at the end of each day.
- E. Contractor to properly remove and properly dispose of all debris and demolished items except items specifically listed to be delivered to owner.
- F. All items or utilities "capped" after demolition shall be in a neat manner, paint to match adjoining or conceal behind finished area. All "capped" items to meet applicable codes and industry standard practices.
- G.Remove and properly dispose of all unused (or no longer used) brackets, supports, misc. items, and equipment from the project areas. This includes all electrical, HVAC and plumbing items. As directed herein, turn over specific items to owner and dispose of all others.

02000 SITE-WORK/FOUNDATIONS

- B. Perform all excavations, backfilling and grading, as well as paving, required to complete work shown. Contractors shall take this data and submit in their bid any changes necessary for completion of the project. Provide positive drainage throughout the site from the parking areas and away from the building.
- C. Protect against damage to any lawns, shrubs, trees, roads, walks, signs, underground tanks, etc., and other work that is to remain in place.
- D. Materials to be excavated are assumed to be earth or other materials that can be removed by power shovel or other normal excavating equipment, but not requiring the use of explosives or drills. If other conditions are encountered within the limits of the excavation, notify Architect immediately.
- E. All building and column footings shall bear directly on undisturbed soil, unless specifically designed otherwise herein to bear on other subsurface.
- F. Assumed bearing capacity as indicated by Owner is 2,000 lbs. s.f., unless otherwise note on the plans or by Geotechnical reporting. If this bearing capacity is not encountered at the depth shown on drawings, the site contractor shall notify the general contractor. The general contractor, architect, engineer, and other parties will then establish an additional volume of excavation.
- G. Building slab areas, drives, walks and parking areas that require undercutting or fill are to be backfilled with lean clay or granular fill, uniformly compacted to at least 95% standard proctor (ASTM D698). Periodic field density testing to be performed during construction if required and paid for by the Owner.
- H. General Contractor to include additional cost breakout in their initial bid for either the trench excavation or mass excavation of rock if it is determined to be necessary. Bids are to include all markup, overhead, disposal, and grading at lower areas of this site.
- I. Furnish and install all site items as shown on the drawings or list herein .
- J. Furnish and install sod within 3' of all concrete walks and building areas. Seed and straw all other disturbed earth areas.
- K. Contractor to include all erosion control measures necessary. Erosion control measures are to follow those policies, standards and practices as set forth by the civil plan and/or all federal, state, and local requirements. The contractor will be responsible for maintaining all erosion control measures and maintaining all documentation as required. Any penalties occurred as a result of failure to maintain these controls shall be the responsibility of the contractor and the owner shall bare no responsibility for these penalties unless there is documented proof that these penalties were as a result of neglect from the
- L. If a landscaping plan has not been provided as part of these documents and a cost determination cannot be made, an allowance of \$5,000.00 is to be included in the bid to furnish and install landscaping as to be determined by the owner.
- M. All existing excavated material that cannot be used as fill will be wasted on site in areas as directed by owner. The material will be spread, compacted, smoothed and disced. The excavated material will then be seed and straw as indicated above.
- N. Foundation excavation
- Follow OSHA and local requirements for determining the angle of repose. No angle of repose can be assumed when soil is under adverse moisture conditions. Use forms where concrete surfaces are shown vertical or steeper than the angle of repose.
- 2. Cut earth neatly for grade beams and footings, excavate by hand if necessary, to remove all loose material and disturbed earth.
- 3. Replace disturbed earth and over-excavated locations with fill concrete.
- 4. Keep excavations constantly shored and dewatered.
- 5. Pour footings only after excavations have been individually inspected and approved.
- After inspection and approval, place concrete promptly before any change in excavation conditions occur.
- O. Trenching and backfilling for drain pipes

02741 ASPHALT PAVING

- 1. Commence from low point so excavation and pipe can be kept drained at all times.
- 2. Width to be sufficient to make joints and compact backfill under pipe.
- 3. Final excavation to be done by hand so pipe rests continuously on solid earth except where backfilled with cement stabilized sand.
- 4. After placing pipe, immediately place some backfill to hold the pipe; compact sufficient backfill under the pipe to hold it securely against any possible movement: do not cover until inspected.

- A. If paving details are not specified on the site plan, then new paved areas shall have a minimum 6" thick DGA with a minimum 2" layer of asphalt binder course and 1" layer of asphalt surface course rolled separately. All new paving heights to be adjusted as required in order to match the existing pavement height.
- B. Existing paved areas to be repaved, shall have all damaged areas removed and then be reconstructed to match the above. Install minimum 1" thick topping over existing paved areas to remain.
- C. All paving shall conform to State Highway specifications for material and installation.
- D. If Paving is anticipated in winter, the surface coat may have to wait until spring. Cost of paving to be completed may be held by the owner (if necessary) until final completion.

03000 CONCRETE

- A. Concrete to be dimensions shown on drawings and reinforced as detailed.
- B. Concrete shall develop a minimum compressive strength of 4000 psi at 28 days.
- C. Contractor to make (3) concrete cylinder samples for every 150 cubic yards (or fraction thereof) of concrete placed per day. Concrete cylinders are to follow the practices set forth in ASTM C31 for Standard Practice for Making and Curing Concrete Test Specimens in the Field and ASTM C172 for Standard Practices for Sampling Freshly Mixed Concrete. Samples are to be taken from the middle of a truck load and not the beginning or ending portions. All cylinders are to be labeled, dated and stored on site in the same environment as the concrete placed. Owner, architect or construction manager may call for testing of these samples at any time. Owner will pay for testing as needed.
- D. Interior floor slabs are to receive smooth trowel finish.
- E. Exterior concrete drives, walks and stoops are to be light broom finished in the direction of water flow, unless noted otherwise.
- F. Concrete Curing and Sealing Compounds are to be surface applied solvent which cures, seals, hardens, and dustproofs.
- Unfinished Exposed Interior Concrete Floors are to receive "Intraseal" by Comspec or approved equal Verify existing conditions before starting work. Apply product per manufacturer's requirements and recommendations.
- 2. All other concrete slabs to receive "Cure 'N Seal" by Sakrete, "Seal Cure-25" by W. R. Meadows or approved equal. Verify existing conditions before starting work. Apply product per manufacturer's requirements and recommendations. Before starting work, verify that selected cure and seal product is compatible with the anticipated finished floor and sub finishes.
- G. All concrete floors are to have a vapor retarder installed before the concrete is placed. Vapor retarder is to be as specified in the latest ASTM E 1745 and have the following properties: a minimum of 0.03 permeability, 5lb puncture resistance, and 45.0 lb./in tensile strength. Retarder to be installed per manufacturer's recommendations and specifications.
- H. Materials and construction methods shall conform to the latest requirements of ACI 318-83.
- I. All exposed 90-degree edges of vertical and horizontal corners of concrete shall have tooled edges, unless indicated otherwise.
- J. Reinforcing steel shall be A615-83 Grade 60. Contractor may use Fibermesh equivalent reinforcing in 4" slabs on grade, but elevated slabs must have wire reinforcing as shown.
- K. Welding of or to reinforcing bars without prior approval of engineer is prohibited except where specified on the drawings.
- L. All reinforcing bars are to be supported in the form and spaced with wire bars supports meeting the requirements of the ACI "Manual of Standard Practice for Detailing Reinforced Concrete Structures" (ACI 315-latest edition).
- M. All detailing, fabrication and erection of reinforcing bars, unless otherwise noted, must follow the ACI "Manual of Standard Practice for Detailing Reinforced Concrete Structures" (ACI 315-latest edition).

N. Concrete walks shall have molded expansion joint material as shown. Final joint layout to be approved

- O. Control joints (C.J.) shall be saw-cut a minimum of 1/4 of slab thickness and with a maximum spacing as shown on the drawings.
- P. Isolation joints (I.J.) if required shall receive 1/2" thick expansion joint filler extending from bottom of slab to 1/2" below top of slab and the top 1/2" filled with Polyurethane joint sealant, unless otherwise noted.
- Q. Construction joints (Const. J.), if required, shall be formed using "Key-Loc Joint System" manufactured by Form-A-Key.
- R. All dimensions and grades shall be verified in the field (V.I.F.) by the contractor and any discrepancies or interferences shall be reported to the Architect before proceeding with affected work.

S. Where shown, all junctions of walls, piers and floors to have 1/2" wide expansion joints, filled with elastic

- T. Exposed piers and foundation walls to have rubbed finish. Any honeycombing that occurs that is less than 4" in diameter is to be filled and finished with a non-expanding grout. Contact the architect
- immediately for any honeycombing that is 4" or greater in diameter, for review of the concrete and resolution of the issue.
- U. Concrete Contractor to place all exterior equipment pads unless otherwise directed during bidding. Coordinate final size, details and locations with the applicable sub-trades.

04000 MASONRY

- A. Mortar to be type "M or S" complying with ASTM C-90-97. If Concrete block or veneer contains an integral water repellent, then the mortar is to receive a water repellent additive as approved by the block / veneer manufacturer.
- B. Provide 3/8" thick mortar joints between units with full mortar coverage on the vertical and horizontal face shells only, except for this first bed course shall be laid in a full mortar bed.
- C. Concrete block to be standard common light weight concrete masonry units (C.M.U.) in 4", 6", and 8" thicknesses. Unless noted on the plans otherwise, all blocks to include an integral water repellent. See architectural plans and details for selected size and finishes.
- D. Provide manufactured smooth face corner block , toothed in at front corners as required.
- E. All concrete masonry units to have galvanized #9 wire reinforcing, Hohmann & Barnard's Lox All Truss-Mesh, at every second course and every course below floor line.
- F. All self-supporting and load bearing concrete masonry walls to have vertical reinforced cells at 5'-0" on center and 16" from each end. Vertical reinforcing to be (1) continuous #5 bar centered in cell. Cell to be slush full.
- G. Unless otherwise noted on these plans, all self-supporting or load bearing concrete masonry walls are to have a 8" high bond beam at the top coarse and all walls over 15' tall are to have an intermediate 8" high bond beam at 10'-0" on center. Bond beam to have (2) #5 bars continuous and slush full.
- H. Unless otherwise noted on these plans, all concrete masonry opening heads are to receive a precast concrete masonry lintel with minimum (4) #5 bars and #3 stirrups @ 12" on center. Lintel to be sized so to have a minimum 8" bearing each end.
- I. Brick materials allowance to be \$600.00 per 1000, delivered. Color and style to be selected by owner.

- J. In veneer walls, furnish and install galvanized, corrugated masonry anchors at 16" on center horizontally, 24" on center vertically and on each side of masonry control joint at 24" on center vertical.
- K. In all veneer walls, provide weep holes at 24" on center and continuous 8" high membrane flashing along
- L. Masonry subcontractor to be responsible for water-tightness of his work.

bottom row, at or above grade.

- M. Workmanship, including joint reinforcement and cold weather installation shall comply with National Masonry Associations applicable recommendations.
- N. Masonry contractor to brush clean final surfaces and prepare exterior faces for paint or sealer as called out.
- O. Provide control joints as indicated on elevations, with backer rod and paintable elastomeric caulk.

05000 METALS

- A. Provide structural and miscellaneous metal items as shown on drawings, and as required to complete
- B. Furnish shop drawings to satisfy local code requirements, fabricate materials and install all metal work as needed. This shall include structural steel and miscellaneous steel items.
- C. Take field measurements prior to fabrication. Subcontractor shall be responsible for the accuracy of all such measurements and the precise fitting and assembly of the finished products.
- D. Use materials of size and thickness indicated or, if not indicated, as required to develop the maximum loads in the member. Weld corners and seams continuously, complying with AWS recommendations. Provide for anchorage of type shown, coordinated with supporting structure. Fabricate and space anchoring devices to provide adequate support for intended use.
- E. Clean and Shop paint miscellaneous metal work, except members or portions of members to be embedded in concrete or masonry, surfaces and edges to be field welded unless otherwise indicated.
- F. Furnish bent or otherwise custom fabricated, plates, anchors, hangers, dowels and other miscellaneous steel shapes as required.
- G. Provide loose bearing and leveling plates for steel items bearing on masonry, concrete construction, or other portions of the structure as indicated.

H. Provide miscellaneous steel elements, framing and supports that are not a part of structural steel

- framework, as required to complete work.

 I. Provide anchorage devices and fasteners where necessary for securing miscellaneous metal fabrications to in-place construction; including, threaded fasteners for concrete and masonry inserts, toggle bolts,
- J. Provide A-325 bolts as shown on the plans or as required to develop the maximum capacity of the connection shown.
- K. Perform cutting, drilling and fitting required for installation of miscellaneous metal fabrications.

through-bolts, lag bolts, wood screws and other connectors as required.

- L. Field Welding shall comply with AWS Code for procedures of manual shielded metal-arc welding, appearance and quality of welds made, and methods used in correcting welding work.
- M. Set loose leveling and bearing plates on wedges, or other adjustable devices. After the bearing members have been positioned and plumbed, tighten anchor bolts. Do not remove wedges or shims, but if protruding, cut-off flush with the edge of the bearing plate before packing with grout. Use metallic non-shrink grout in concealed locations where not exposed to moisture; use non-metallic non-shrink grout in exposed locations, unless otherwise indicated. Pack grout solidly between bearing surfaces and plates to ensure that no voids remain.
- N. Touch-Up Painting immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with same material used for shop painting. Apply by brush or spray to provide a minimum dry film thickness of 2.0 mils.
- O.Miscellaneous Items:
- 1. Steel Plates, Shapes and Bars: ASTM A-36
- 2. Cold formed Steel Tubing use ASTM A-500
- 3. Hot-rolled Steel Tubing use ASTM A- 501

manufacturer for interior and exterior applications.

4. Hot-rolled Structural Steel Sheet use ASTM A-570. Class 1 or grade required for design loading.

5. Cold-rolled Structural Steel Sheet use ASTM A-611. Class 1 or grade required for design loading.

- 6. Non-Shrink Metallic Grout to be pre-mixed, factory-packaged, non- staining, non-corrosive, non-gaseous grout complying with CE CRD-C588. Provide grout specifically recommended by
- 7. Zinc-coated fasteners for exterior use or where built into exterior walls. Select fasteners for the type, grade and class required.

06000 CARPENTRY

- A. All wood in contact with concrete or masonry or to be exposed on the exterior to be pressure treated against decay and insects.
- B. Carpenter shall furnish all necessary blocking and grounds for all tops, cabinetry items, handrails, casework and other miscellaneous items as needed.
- C. Provide small areas of wood framing where shown for shelves or equipment by owner.
- D. Carpenter to furnish & install all moldings, trim work and finish hardware (at windows, doors, handrails, and platform areas). Also, shelving, brackets, rods and hangers as shown. Exposed wood trim and moldings to be paint grade spruce or fir, (finger joints allowed).
- E. Furnish and install all rough & finish carpentry including rough hardware, form work indicated and required to complete the project.
- F. Wood framing is to follow good practice and code requirements for fire blocking and wood blocking. Verify fire blocking requirements with the building inspector before completing the frame work.
- G. Provide bridging at all exterior walls and interior load bearing walls, at midpoint of walls for walls up to 9'-4" high, at 1/3 points for walls 9' 12' high, and at 1/4 points for walls up to 13'-4" high. The bridging shall be 2 x 6 or 2 x 4 as appropriate, matching the studs used in the remainder of the wall.
- H. Framing contractor is responsible for bracing required to resist seismic, wind, and live loads specified and required by I.B.C. Provide let-in and G.W.B. bracing as noted on Sheet Set.I. Remove all wood including form lumber, scrap lumber, shavings, and sawdust in contact with the ground.
- Leave no wood buried in any fill.

 J. All lumber and plywood shall be graded and marked in accordance with the latest grading rules of the Manufacturer's Association having jurisdiction. Plywood decking shall be tongue and groove or to be blocked at all joints, and to be glued to all supporting members.
- K. All materials shall be delivered and stored to insure proper protection from damage. All material shall be well seasoned.
- L. Framing lumber to be stress graded lumber (1250 f. Minimum) #2 yellow pine or approved equal of other species of the following minimum unit strengths in #'s per SQ. IN: FB = 1,200; H = 105; C (perpendicular) = 390; (compression parallel to grain) C= 900; and E = 1,760,000.

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PROJECT NO:

23-4451

DRAWN BY:

05/17/2024

DATE:

& ASSOCIATES

KEYES ARCHITECTS (1717 PRESTON HIGHWAY

GORY SCHOOL

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SPECIFICATIONS

SP1.01

N. Double top plates to have (2) 16d through at each stud through plate. Secure upper member of top plate with (2) 10d at each end and 16d at 16" o.c. staggered. Double members secured with 16d at 12" o.c.

O.Exterior O.S.B. sheathing to be nailed to stude at 12" o.c. staggered.

- P. Install all joists with crown up. Double jousts at openings, unless noted to be greater. Double members secured with 16 d at 6" on center, staggered. Laps over supports secured with a minimum of (4) 10d, (3) 20d through header into joists ends. Block solidly at plywood joints.
- Q. Header beams for openings in wood framed walls are to be double members with 1/2" plywood between as follows: (2) 2 x 4's for openings 30" wide or smaller, (2) 2 x 6's from 30" up to 48" wide, (2) 2 x 8's from 48" up to 72" wide, and (2) 2 x 10's from 72" up to 96" wide. Framing for openings wider than 96" must be coordinated with the architects.
- R. On exterior framing use galvanized, electroplated 16d nails. Interior nails are to be common coated 16d nails unless otherwise notes.

06175 PRE-ENGINEERED WOOD TRUSSES AND PRE-ENGINEERED JOISTS

- A. Before bidding, supplier / designer of the trusses and joists is responsible for obtaining all bid documents including but not limited to construction documents and specifications. Supplier / designer is responsible for coordinating final design of this product with all other trades, including but not limited to all roof top loads, spacing for ductwork and other miscellaneous design loads. Should a conflict arise as a result of design difference with other trades, this designer should use industry standard practices to bid and create a product to accomplish the design intent of the construction documents and as part of this bid, then notify General Contractor of the intended changes.
- B. Trusses or pre-engineered joists are to be of profile shown on building sections and details.

C. Number of panels points, member sizing, grade, and species as designed by the truss manufacturer.

- D. The design is to be the responsibility of the manufacturer, who is responsible for meeting all requirements of I.B.C. This includes the truss girders required at spans as shown on Sheet Set.
- E. The scissors trusses shall be designed with a pinned connection at one end of the trusses and a roller connection at the other end support condition.
- F. Proper installation and anchoring of all members and anchoring of the trusses for adequate strength are the responsibility of the framing contractor. Anchoring to be an appropriate strap or tie as recommended by manufacturer, and federal, state and local code requirements. System to be by Simpson Strong-Tie

G. Design of all trusses and joists are to be based on maximum deflection of L/360.

- H. Bearing web members of floor trusses are to be designed to carry the axial load of the stud wall above.
- I. The manufacturer is to provide shop drawings and structural calculations stamped by a state registered structural engineer of the state work to be performed in, before fabricating the trusses.
- J. Design of trusses and handling and erection of trusses, including temporary and permanent bracing, is to follow the latest edition of the specifications of the Truss Plate Institute. Refer to Section 1000 item B of these specifications with regards to inconsistencies.

K. Design is to include sizing and spacing of bracing members.

L. Trusses are to be designed to the following minimum loads:

(NOTE: Greater snow loads required at valleys, roof level changes, etc. per I.B.C. Code requirements supersedes these loads.)

Roof Trusses

Wind Load

Snow Load 20 psf plus snow load build-up at valleys and roof level changes per I.B.C. plus roof top equipment as directed by the Contractor.

Top Chord D.L. 10 psf

Bottom Chord D.L. 5 psf

12 psf (9 in excess of D.L.)

06410 WOOD CASEWORK

- A. Furnish and install a complete system for cabinets and casework following the standards set forth by AWI and millwork best practices.
- B. Cabinets to be oak finish MDF board with overlay doors, wire pulls and fully adjustable plywood shelves, by "Merillat" or approved equal.
- C. Tops to be square edge, plastic laminate covered with 4" splash at all walls, scribe fit. Colors to be selected by owner from standard lines.
- D. Provide elevations and shop drawings for review by owner.

07000 MOISTURE PROTECTION

A. Insulation:

- 1. Roll glass fiber insulation to be thickness and type shown on drawings for specific uses, to be "Fiberglass" or "Celotex".
- 2. Blown-In Fiberglass Insulation:
- a) Insulation to be thickness shown on drawings for the specified uses. Product to meet ASTM C764. Mineral Fiber Loose-Fill Thermal Insulation Type 1 or better standards. Product to be by CertainTeed, Owens Corning or Approved Equal.
- b) At all eave vents, vertically install a 2x6 insulation dam between all trusses, on top of the wall bearing plates.
- c) At all eave vents, install a 24" wide by 48" long rafter baffle, made of extruded polystyrene foam. Product to be by Owens Corning or approved equal.
- 3. Rigid below grade insulation at foundation and basement walls to be extruded, expanded polystyrene 2" thick (R-value: 5), unless otherwise noted on the plans.
- 4. Exterior concrete masonry units to receive "Core-fill 500" foamed in place system or approved equal.

B. Caulking:

- 1. Use Sherwin Williams 950A siliconized acrylic latex caulk, GE Silicone II or approved equal. Color to match surrounding area being caulked. Caulk all exterior joints and both sides of all door and window frames.
- 2. All Equipment, Mechanical, Plumbing and Electrical Contractors shall supply all flashings and curbs for roof or wall penetrations to the building erector. Building erector shall install and flash all building penetrations as part of their bid project.
- 3. All exterior basement walls to receive exterior rubberized asphaltic damp proofing system. Acceptable systems to be by Hydrotech, Hydro-Shur, Grace, Mar-Flex or approved equal. Entire system to be

installed per manufacturers recommendations.

- 4. Where called out on the drawings, fire caulk to meet all ASTM requirements for fire and smoke barrier. Product to be 3M Fire Barrier Sealant CP 25WB+ or approved equal.
- C. All exterior masonry to receive stain or sealer and paint as per finishes in section 9,000.

07240 - EXTERIOR INSULATION & FINISH SYSTEM (E.I.F.S. - Class PB)

- A. Exterior Insulation and Finish System (E.I.F.S.) to be a Drainage EIFS system, consisting of a water resistant barrier, drainage plane, expanded polystyrene insulation (EPS) board, adhesive, cementitious base coat with embedded reinforcing fabric mesh, primer (optional), and finish coat, to be by Parex, STO, Dryvit, or approved equal.
- B. Water Resistant Barrier to be a building vapor barrier as specified in Section 07250 or a liquid applied system as specified by manufacturer.
- C. Drainage plane to be either a surface applied material approved by manufacturer or a EPS board with integral drainage plane.
- D. Flashing shall be continuous and watertight. Flashing shall be designed and installed to prevent water infiltration behind E.I.F.S.
- E. E.I.F.S. standard system shall be classified in accordance with EIMA for E.I.F.S. classification and impact ranges of 25-49 inch-lbs.
- F. Continuous expansion joints shall be installed at locations as shown and in accordance with manufacturer's recommendations.
- G. Substrate systems shall be engineered to withstand applicable design loads.
- H. Maximum deflection under positive or negative design loads of substrate system shall not exceed 1/240 of span except as otherwise approved in writing by architect before installation.
- I. Substrate dimensional tolerances to be flat with 1/4 inch within any 4-foot radius
- J. Substrate movement and any expansion or contraction of E.I.F.S. and adjacent materials shall be taken into account in design of expansion joints. Proper consideration should be given to sealant properties, installation conditions, temperature range, coefficients of material expansion, joint width to depth ratios, and other material factors. Minimum width of expansion joints shall be as recommended by E.I.F.S. manufacturer.
- K. Entire system shall be acceptable for use on this project by the building code department that has
- L. Comply with manufacturer's instructions and recommendations for installation of exterior insulation and finish system.

07250 WEATHER BARRIER - VAPOR BARRIER

- A. Building vapor barrier to be commercial grade weather barrier Tyvek CommercialWrap by DuPont or approved equal.
- B. All joints are to be lapped minimum 3" and taped as specified by manufacturer.
- C. All penetrations are to be taped around entire perimeter.
- D. Tape to be 3" wide Tyvek Tape for commercial applications by DuPont or approved equal.
- E. Barrier to be anchored in wood with 1" plastic caps fasteners with min 5/8" penetration.
- F. Barrier to be anchored in metal with 1-5/8" rust resistant screw with 2" plastic cap.

07530 ELASTOMERIC SHEET ROOFING (EPDM)

- A. Contractors shall field verify all conditions and submit shop drawings for all details and material before ordering the roof components.
- B. System to be Versico talc-free black 50-mil EPDM Membrane System installed over 1/2" recovery board and metal batten strips as required, or approved equal.
- C. System and application shall exceed all State Building Codes, local ordinances and these construction
- D. Provide written 10-year manufacturer and installer's warranties/guarantees from the date of the Owner's written final acceptance of the installation.
- E. Install additional blocking and nailers as required, Grade #2 or better lumber, pressure-treated for fire and rot resistance with a salt-based preservative (Wolmanized). Creosote and asphaltic-based preservatives are not acceptable.
- F. Non-skid white molded rubber walk pads, 3/8" x 36" x 44" and 3/8" x 36" x 22", for roof protection are to be provided from the roof access to all roof top units.
- G. Install roof top curbs supplied by the HVAC contractor.
- H. Install flashing as required by the manufacturer's details and contract drawing details.

07610 METAL ROOFING - STANDING SEAM (OVER DECK)

- A. Metal roofing to be a pre-painted standing seam roof system over 15lb felt with a plywood substrate and to include all closure strips, trim and flashing as needed to create a water tight system.
- B. System to be Snap-Loc 24ga by Metal Sales Manufacturing or approved equal. System to be installed per manufacturer's specifications, recommendations and industry standard best practices.

08000 DOORS AND WINDOWS

as required. See door schedule.

- A. Doors, frames, windows and glazing to be as shown on drawings. Finish hardware to comply with
- B. All door and window glazing to conform to section 08800 Glazing.
- C. Egress doors shall be able to be opened from inside without a key or special knowledge.
- D. All exterior outward swinging hinged doors are to have Non-Removable Pin (NRP) hinges, unless otherwise specified on the drawings.
- E. Hollow metal frames shall be standard profile, 16ga. shop primed. Three (3) anchors each side, one (1) at head. Use wrap around frames at Gypsum board partitions.
- F. Hollow metal doors shall be flush, 18 GA., 1 3/4" thick, exterior doors to be insulated with rigid bd. insulation. Head of doors to be solid and flush. Doors to be shop primed.

G. Wood doors shall be 1 3/4" solid core (particle bd. core) as indicated with flush stain grade veneer.

- Doors to be job stained and sealed, color as selected. H. Finish hardware shall be medium grade commercial products by Stanley, Schlage, Von Duprin, Yale or
- I. Exterior clad windows to be fixed, double hung or double casement units as shown on plans. Windows to be by Anderson, Pella, Marvin, or approved equal. All units to have clear insulated glazing with Low-E coating. Install per manufacturer's instructions and recommendations.

an approved equal. Finish to be selected by owner. U.L. rated and Handicapped accessible hardware

08410 ALUMINUM STOREFRONT SYSTEM

- A. Exterior frame are to be thermally broken aluminum frames.
- B. Frames to be black, bronze, white or clear anodized (as selected by owner).
- C. Aluminum storefront system to be "Kawneer 451T" or approved equal.
- D. Glazing contractor shall be responsible to securely anchor units to framing or masonry as needed to transfer loads to the building.
- E. All glazing to conform to section 08800 Glazing.

08520 SLIDING / GLIDING VINYL WINDOW

- A. Overall product frame depth to be a minimum 3-1/4".
- B. Interior and Exterior surfaces are to be extruded rigid uPVC, with sashes having a foam insulation.
- C. Members are to have mitered and heat fused fully welded corners.
- D. Sill to be fitted with weeps.
- E. Frame to have a setback nail fin appropriate for wall depth.
- F. Glazing to be dual pane Low-E coated insulated glass per section "08800 Glazing" below.

H. Units are to include factory installed locks and insect screen in a finish to match window.

- G. Unless specified otherwise elsewhere interior and exterior finish to be white.
- I. Where shown on elevations, windows to have 3/4" wide grills-between-the-glass, in a finish to match
- J. Window to be Pella 250 Series Sliding Window, Sierra Pacific 8000 Series Horizontal Slider, Jeld-Wen V-2500 Series Sliding Window, or approved equal.

08800 GLAZING

- A. Unless specified herein, all glazing is per door and window schedules located on the construction
- B. All glazing to comply with safety glazing laws. Installer to verify requirements before ordering and installing all glazing.
- C. All insulated glazing units, Low-E finishing and glaze tinting are to carry a minimum of a 10 year warranty from date of acceptance of project.
- D. Where glazing is specified to be Low-E and Tinted, glazing is to be tempered as per glazing types below.
- E. All glazing to follow Standard Specifications for ASTM C 1036, ASTM C 1048 and ASTM E 774.
- F. Glazing to be by PPG, LOF, Guardian Industries, Ford Glass, Hordis Brothers Inc., or equal. Provide all tinted and Low-E glass from the same manufacturer for the entire project.

G. Glazing:

- 1. Exterior glazing to be 1", double layer insulated glazing
- 2. Interior glazing to be 1/4", single layer.

H. Glazing Types:

- 1. Annealed: Clear float glass conforming to ASTM C 1036, Type I, Class 1, quality q3.
- 2. Tempered: As specified for clear annealed except fully tempered to conform to ASTM C 1048, Kind FT.
- 3. Clear Wire: 1/4 inch (6 mm) thick, clear rolled glass conforming to ASTM C-1036, Type II (flat), Class I, Form 1 (wired and polished both faces), wired with welded polished wires, 1/2 inch (13 mm) x 1/2 inch (13 mm) square pattern, smooth wires vertical, manufactured by Hordis Bros., Sierracin/Transtech, or equal.

I. Glazing Finish Types:

- 1. Obscure: Conforming to ASTM C 1036, Type II, Class I, Form 3, Finish 1, pattern p3 "hammered"
- 2. Low-E: PPG "Sungate 500(2)" or equal, clear float glass with transparent reflective coating on inboard (No. 2) surface, conforming to glass type.
- 3. Low-E Tinted: PPG "Sungate 1000(2)" or equal, tinted float glass with transparent reflective coating on inboard (No. 2) surface, conforming to tempered glass type.
- 4. Spandrel: Tempered spandrel glass conforming to DD-G-1403, Grade B, Style II, color as shown or
- J. Tint Finish Types Glare reducing float glass to be: PPG "Solargray", gray color, PPG "Solarbronze", bronze color, or equal.
- K. Configuration to be per Window Schedule located in the Construction Documents.
- L. Glazing materials and accessories shall be fully compatible with the materials and finishes with which they are in contact. Neoprene and EPDM materials shall not come in contact with silicone sealant materials. Silicone rubber spacers, setting and edge blocks and gaskets shall be either Type I (designed to prevent adhesion) or Type II (designed for adhesion) as per glazing system manufacturer's recommendations for each condition of use.

09000 FINISHES

- A. All finishes shall be as called for and specified on drawings.
- B. Inspection of finished surfaces for blemishes and defect at the end of the project shall follow the generally accepted standard - PDCA (P1-09) Industry Standards for reviewing finished surfaces. "Viewing and inspection of finished surfaces shall be at a distance of thirty-nine (39) inches from the surface under finished lighting or natural lighting without the use of any optic magnifications or enhanced lighting. Any blemishes or defects detected at this range shall be removed or repaired and patched to match the surrounding."
- C. Fiberglass Reinforced Plastic (FRP) Panels are to be by Marlite, Duralite by Kemlite, or approved equal. Furnish and install complete system, include panels, trim, and adhesive system.

D. Gypsum Board:

- 1. All gypsum board to be 5/8" thick and installed per U.S. Gypsum association standards and best industry practices.
- 2. Use mold / moisture-resistant gypsum board ("Green" Board or equal) in all toilet rooms and within 4'-0" of all plumbing fixtures such as sinks, drinking fountains, washing machines or any other equipment not listed here in.

3. Where indicated on plans all fire rated assemblies are to use 5/8" Type 'X' gypsum board, installed per

details and best industry practices. 4. Furnish and install metal or plastic corner bead at all outside corners and "J" mold at all exposed

- 5. Control Joints: All walls are to follow the latest ASTM C840-08 and GA-216 as it pertains to control joint placement. Unless shown on the plans differently, all walls and ceilings greater than (30) linear feet in any direction are to have a control joint every 30'-0" O.C. All control joints are to receive a metal or plastic control joint strip, installed per manufacturer's recommendations.
- E. Ceramic wall tile to be 4"x4" ceramic mosaic tiles by American Olean or approved equal. Install thin set over cement board substrate. Use C-Cure grout, 100% epoxy additive. Tile and grout colors to be selected by owner from standard architectural line (maximum of three tile colors).
- F. Ceramic floor tile to be 12"x12"x5/16" thin set tile by StonePeak or approved equal, with cap tile along edges and base. Install with C-Cure grout, 100% epoxy additive. Install per manufacturer's recommendations and installation instructions. Tile and grout colors to be selected by owner from standard architectural line (maximum three tile colors).
- G. VCT or VET (Vinyl Enhanced Tile) Floor Tile to be 12"x12"x1/8" Azrock by Tarkett, or approved equal. Owner to select maximum of three colors from full architectural line.
- H. Vinyl plank flooring is to be nominal 0.125" thick vinyl with a minimum 0.02" wear layer. Tile to be 48" in length, 6" to 9" in width, and shall be laid in a straight pattern. Owner to select final product from a standard list of manufacturer's product in a minimum of (2) colors. Product to be I.D. Freedom by Tarkett, Classics V5000 by J+J Flooring or approved equal. Product to be glued down using a standard adhesive recommended by manufacturer.
- I. Carpet to be commercial grade \$15.00/sq. yd. (installed). This allowance cost is to be independent of the special pads shown for commercial glue down.
- J. Vinyl base to be 4" high, 1/8" thick by Tarkett, Roppe, or approved equal. Use coved at vinyl floor tile and coveless at carpet. Stairs shall receive Vinyl treads and backs, treads shall have replaceable slip resistant strip at nosing. Colors as selected by Owner from standard architectural line. Installed per manufacturer's instructions.
- K. Floor transitions shall be vinyl as recommended for the specific material transitions. Material shall be by Tarkett, Roppe or approved equal selected from full architectural color lines.
- L. Coating Schedule:
- 1. Surfaces not to be painted are floor coverings, items with factory applied final finish, concealed ducts, pipes and conduit, acoustical ceiling tiles, items with pre-finished surfaces, aluminum windows and door frames, and all items called not to be painted on plans.
- 2. Surfaces to be painted:

Note: consult with Owner for final colors and finishes.

a) Exposed interior Drywall:

1st coat: Latex Wall Primer. 2nd coat: Latex eggshell or Alkyd based enamel as called for. 3rd coat: Latex eggshell or Alkyd based enamel as called for.

b) Interior Drywall Ceilings:

1st coat: Latex Wall Primer 2nd coat: Alkyd Flat Ceiling Paint

c) Interior Wood or Masonite (Painted):

1st coat: Wall and Wood Primer 2nd coat: Semi-Gloss Alkyd Enamel

3rd coat: Semi-Gloss Alkyd Enamel d) Interior Wood (Stained):

1st coat: Interior Wood Stain 2nd coat: Gloss Polyurethane (sand between coats) 3rd coat: Gloss Polyurethane

1st coat: Metal Primer

e) Interior Metal:

3rd coat: Semi-Gloss Alkyd Enamel f) Exterior Metal:

2nd coat: Semi-Gloss Alkyd Enamel

2nd coat: Semi-Gloss Alkyd Enamel

3rd coat: Semi-Gloss Alkyd Enamel g) Asphalt Striping:

1st coat: Metal Primer

Install 4" wide Bright White stripes at all shown parking spaces. Install 4" wide Safety Yellow stripes at Handicapped parking and loading areas. Directional arrows where shown, to be Safety Yellow.

09511 ACOUSTICAL CEILING TILES

A. Ceiling grids to be standard 2'x4' or 2'x2' by Donn, Armstrong, or approved equal.

All Striping and marking to be straight, perpendicular and uniform.

B. Ceiling tiles to be 2'x2' or 2'x4' vinyl faced square edge, standard fissured square edge, or standard fissured tegular panels by Armstrong, U.S.G., or approved equal.

C. Acoustical sound panels to be 2'x2' colored Acoustone panels by U.S.G. or approved equal.

scratch resistant, and anti-microbial acoustical tile. Tile to be Kitchen Zone - 672 by Armstrong or approved equal.

E. Grid and panels are to be white unless otherwise noted on the finish schedule.

10000 SPECIALTIES

A. Storage shelving, where shown on drawings shall be plastic coated wire systems by ClosetMaid, Schulte, K&V, or approved equal. Each location shall have a fully adjustable track system with a minimum of six shelves. Final styles of the supplied shelves to be selected (Some areas may receive only a rod and

D. Wet areas such as kitchens, restrooms, and wash rooms are to receive a smooth texture 2'x4' washable,

- B. Fire extinguisher and cabinets to be by owner as required by code and by the fire inspector.
- C. Toilet accessories: The following list of new items shall be furnished and installed:
- (1) Fixed standard mirror(s) 24"x36" Bobrick B-165 B 2436 (1) 18" vertical grab bar(s) - Bobrick B-6806x18 (1) 36" horizontal grab bar(s) - Bobrick B-6806x36 (1) 42" horizontal grab bar(s) - Bobrick B-6806x42

(1) Fixed standard mirror(s) 30"x36" - Bobrick B-165 B 3036

(1) Paper towel dispenser(s) - Bobrick B-262

(1) Toilet paper holder(s) - Bobrick B-2888

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DRAWN BY:

05/17/2024

PROJECT NO:

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SPECIFICATIONS

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ABBREVIATIONS

END OF SPECIFICATIONS

These are abbreviations used on the plans and in these specifications. Not all items may be use and are for reference only.

ACT - Acoustical Ceiling Tile

AFF - Above Finished Floor

CJ - Control Joint

E.I.F.S. - Exterior Insulation and Finish System

10440 FIRE AND/OR SMOKE BARRIER PROTECTION SIGNAGE

building code.

concealed space.

rating being applied to.

smooth surface.

11000 EQUIPMENT

12000 FURNISHINGS

SPECIAL NOTE:

suppliers during bidding.

14000 CONVEYING EQUIPMENT - Not Used

immediately before work begins for guidance.

A. This project will require a "Fire Wall", "Fire Barrier", and/or "Smoke Barrier" as part of the scope of work. Per the building code, signage will be required on these walls identifying these walls as needing to be

C. Where Required: Where there is an accessible concealed floor, floor-ceiling or attic space, fire walls, fire

B. Signage will be required as listed below unless otherwise specified by these drawings or by a local

barriers, fire partitions, smoke barrier and smoke partitions, or any wall required to have protected openings or penetrations shall be effectively and permanently identified with signs or stenciling in the

D. Signage Location: Signs will be located within 15 feet of the end of each wall and at intervals not

in a contrasting color incorporating the suggested wording, "FIRE AND/OR SMOKE BARRIER -PROTECT ALL OPENINGS," or other wording. Signs to be worded with the identification of the wall

F. Where stenciling is allowed by local codes and owners, lettering to be concise and clear applied to a

G. Where signage is required by local code and owners, signage to be made of high durability vinyl or sheet

A. General contractor to install all equipment so listed on drawings, verify and coordinate requirements with

A. Final detailed layout of Steel Structures, Plumbing, Mechanical, Fire Suppression and Electrical systems are by separate Engineers or installers, it is the responsibility of the owner and General Contractor to

B. It is the responsibility of the General Contractor and the Mechanical, Electrical, and Plumbing Contractors to ensure that all parts of their work is to be accessible as per Federal ADAAG Guidelines and all State / Local Guidelines. This includes but is not limited to Electrical Controls such as Thermostats or Lighting Controls, Light Switches, Outlet Plugs, Hand Dryers, and Faucet Controls. If there are concerns about how to determine reach ranges, equipment clearance or other accessibility items, contact the architect

coordinate all work with affected other trades to assure completeness and code compliance.

B. Owner to supply and install all equipment not required or listed herein. See equipment schedules.

E. Signage Requirement: Include lettering not less than 3 inches in height with a minimum 3/8 inch stroke

exceeding 30 feet on center measured horizontally along the wall or partition.

metal with a permanent adhesive or a minimum of (4) screws.

A. Owner to furnish and install all furnishings not required or listed herein.

FRP - Fiberglass Reinforced Panels

Gyp. Bd. - Gypsum Board

I.B.C. - International Building Code

MAX - Maximum MIN - Minimum

NRP - Non-Removable Pin

O.C. - On Center

VCT - Vinyl Composite Tile

VET - Vinyl Enhanced Tile

V.I.F. - Verify In Field

SPECIFICATIONS