BIDDING DOCUMENTS

PREPARED FOR

EFFINGHAM COUNTY BOARD OF COMMISSIONERS

For

EFFINGHAM COUNTY ADMINISTRATION BUILDING RENOVATIONS



ITB NO. 21-005 August 2020

Effingham County Board of Commissioners County Administration Building Renovations ITB No. 21-005

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NOTICE TO CONTRACTORS

EFFINGHAM COUNTY BOARD OF COMMISIONERS

Sealed BIDS will be received by the **Effingham County Board of Commissioners** at the office of the **Purchasing Agent** until <u>11.00am</u> (Eastern Time) on <u>Monday, October 19, 2020</u> and then at said office publicly opened and read aloud.

The Work to be bid consists of furnishing all materials, labor and equipment for:

County Administration Building Annex Renovations at 802 South Laurel Street, Springfield, Georgia

The Work is generally described as follows: Provide all materials, tool, labor, supervision, and equipment for the selective interior demolition, renovations, and new interior office construction of the County's Administration annex at 802 South Laurel Street in Springfield, Georgia.

There will be a **mandatory** pre-bid meeting at <u>11:00am (Eastern Time)</u> on <u>Thursday</u>, <u>September 24</u>, <u>2020</u>. The meeting will take place in the Conference Room at 802 S. Laurel Street, Springfield, GA. 31329.

Proposals will not be accepted from any firm that isn't represented at the pre-bid meeting.

Any questions that arise after the pre-proposal conference <u>must</u> be made in writing and must be received at the office of the Purchasing Agent no later than <u>5.00pm</u> (Eastern Time) on <u>Thursday, October 1, 2020.</u> No response will be given to any questions received after <u>5.00pm</u> (Eastern Time) on <u>Thursday, October 1, 2020.</u> Questions may be faxed to 912-754-8413; emailed to <u>abruton@effinghamcounty.org</u> or mailed to the address above. If questions are mailed, please DO NOT put the bid number on the outside of the envelope.

The response to all questions will be in the form of an addendum and will be posted on the Effingham County website www.effinghamcounty.org before 5.00pm (Eastern Time) on Thursday, October 8, 2020.

All proposals shall be accompanied by a BID BOND in favor of the **Effingham County Board of Commissioners** in the amount of at least five percent (5%) of the BID for the complete work. The BID BOND shall be forfeited to the **Effingham County Board of Commissioners** as liquidated damages if the BIDDER fails to execute the CONTRACT and provide PERFORMANCE BOND and PAYMENT BOND within ten (10) calendar days after being notified that he has been awarded the Contract.

Payment will be made on a monthly basis for work performed the previous month, less retainage. Until 50% of the value of the contract (including change orders and additions), or if the Contractor fails to maintain his construction schedule to the satisfaction of the Engineer, the County will retain 10% of the gross value of the completed work as indicated by the current estimate approved by the Engineer. After the contract (including change orders and additions) is 50% complete, there shall be no additional retainage withheld unless the work is determined to be unsatisfactory or has fallen behind schedule.

The BIDDER is expected to examine the sites of the proposed work, the BIDDERS CHECKLIST, INSTRUCTIONS TO BIDDERS, GENERAL CONDITIONS, SPECIFICATIONS and AGREEMENT forms before submitting a BID.

The **Effingham County Board of Commissioners** reserves the right to reject any and all Bids and to waive any informality in the bidding. Additionally Effingham County may issue change orders altering the original scope of work to address changes or unforeseen conditions necessary for the project completion. No Bids shall be withdrawn within 60 days after the actual date of the opening thereof. Bids from noncertified Bidders will not be considered.

The CONTRACT DOCUMENTS may be examined at the following location: **Effingham County Board of Commissioners**, 601 North Laurel Street, Springfield GA, 31329.

Copies of the CONTRACT DOCUMENTS may be obtained at: http://www.effinghamcounty.org/279/Purchasing-Procurement

The Completion Date for this Contract shall be March 31, 2020.

Bids shall be submitted in a sealed envelope, marked with the Purchasing Bid Number and Title, as well as the BIDDER'S name, and shall be addressed to the **Effingham County Board of Commissioners.**

ATTENTION: Effingham County Purchasing Agent

601 N. Laurel Street Springfield, GA 31329

The BID must be submitted in duplicate and will include the following signed documents:

- DOCUMENT CHECK LIST
- 2. DRUG FREE WORKPLACE CERTIFICATION, Attachment A
- 3. PROMISE OF NON-DISCRIMINATION STATEMENT, Attachment B
- 4. DISCLOSURE OF RESPONSIBILITY STATEMENT Bidders Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion, Attachment C
- 5. NON COLLUSION AFFIDAVIT, Attachment D
- 6. GEORGIA SECURITY AND IMMIGRATION COMPLIANCE ACT AFFIDAVIT (E-VERIFY) CONTRACTOR, Attachment E
- 7. GEORGIA SECURITY AND IMMIGRATION COMPLIANCE ACT AFFIDAVIT (E-VERIFY) SUBCONTRACTOR (if applicable), Attachment F
- 8. LIST OF SUBCONTRACTORS, Attachment H
- 9. GENERAL CONDITIONS
- 10. COMPLETED BID FORM
- 11. BID BOND, CERTIFIED CHECK OR CASHIER'S CHECK
- 12. CERTIFICATE OF INSURANCE
- 13. COMPLETED W-9

EFFINGHAM COUNTY, GEORGIA DOCUMENT CHECK LIST

Company Name: _____

Please indicate	you have complete	d the following documentation; and then submit as REQUIRED.	
REQUIRED	COMPLETED	ITEM DESCRIPTION	
		INSTRUCTIONS TO BIDDERS	
		REQUEST FOR QUOTE	
X		BID/QUOTE SUBMITTAL FORM	
X		SURETY REQUIREMENTS (Certified check or other security of 5% required with BID SUBMITTAL – BID BOND FORM PROVIDED)	
X		PERFORMANCE BOND- UPON AWARD OF CONTRACT	
X		PAYMENT BOND- UPON AWARD OF CONTRACT	
X		CERTIFICATE OF INSURANCE	
X		W-9	
		LEGAL NOTICE	
X		CONTRACTOR AFFIDAVIT & AGREEMENT (E-VERIFY)	
X		SUB-CONTRACTOR AFFIDAVIT & AGREEMENT (E-VERIFY)	
X		GEORGIA PROFESSIONAL LICENCE CERTIFICATIONS	
X		LIST OF SUB-CONTRACTORS	
X		ATTACHMENTS	
X		RECEIPT OF ADDENDA IF ANY	
Authorized Sig	nature	Title	
Print Name		Date	

THIS PAGE MUST BE COMPLETED AND SUBMITTED AS PART OF YOUR PROPOSAL INSTRUCTIONS TO BIDDERS

INSTRUCTIONS TO BIDDERS

1.1 PURPOSE: The purpose of this document is to provide general and specific information for use in submitting a Bid to supply Effingham County with construction, equipment, supplies and/or services as described herein. All Bids/proposals are governed by the Code of Effingham County, and the laws of the State of Georgia.

1.2 HOW TO SUBMIT BIDS: All bids shall be:

- **A.** Submitted in sealed opaque package (envelope or box as necessary), plainly marked with the bid number and title, date and time of submission, and company name.
- **B.** Mailed or delivered in sufficient time to ensure receipt by the Purchasing Agent on or before the time and date specified above.

Hand Delivery and Mailing Address:

Effingham County Purchasing Agent, 601 North Laurel Street, Springfield, Georgia, 31329.

BIDS NOT RECEIVED BY THE TIME AND DATE SPECIFIED WILL NOT BE OPENED OR CONSIDERED.

- **HOW TO SUBMIT AN OBJECTION:** Objections from Bidders to this invitation to bid and/or these specifications should be brought to the attention of the County Purchasing Agent in writing. The objections contemplated may pertain to form and/or substance of the invitation to bid documents. Failure to object in accordance with the above procedure will constitute **a** waiver on the part of the business to protest this invitation to bid
- **1.4 QUESTIONS:** Any questions pertaining to the bid <u>must</u> be made in writing and must be received at the office of the Purchasing Agent no later than <u>5.00pm</u> (Eastern Time) on <u>Thursday, October 1, 2020</u>. Questions may be faxed to 912-754-8413; emailed to <u>abruton@effinghamcounty.org</u> or hand delivered/mailed to Effingham County Board of Commissioners, Purchasing Office, 601 N Laurel Street, Springfield, GA 31329. The response to all questions will be in the form of an addendum and will be posted on the Effingham County website <u>www.effinghamcounty.org</u> before <u>5.00pm</u> (Eastern Time) on <u>Thursday</u>, <u>October 8, 2020</u>. If hand delivering or mailing questions, please DO NOT mark the outside of the envelope with the bid number.

The only official answer or position of Effingham County will be the one stated in writing.

- **1.5 ERRORS IN BIDS:** Bidders or their authorized representatives are expected to fully inform themselves as to the conditions, requirements, and specifications before submitting Bids. Failure to do so will be at the Bidders own risk. In case of error in extension of prices in the Bid, the unit price will govern.
- 1.6 STANDARDS FOR ACCEPTANCE OF BID FOR CONTRACT AWARD: The County reserves the right to reject any or all Bids and to waive any irregularities or technicalities in Bids received whenever such rejection or waiver is in the best interest of the County. The County reserves the right to reject the Bid of a Bidder who has previously failed to perform properly or complete on time contracts of a similar nature, or a Bid from a Bidder whom investigation shows is not in a position to perform the contract. Contracts shall be awarded to the lowest responsible and responsive bidder whose combined bid meets the requirements and criteria set forth in the advertisement for bids; provided, however, that if the bid from the lowest responsible and responsive bidder exceeds funds budgeted for the contract, the county may negotiate with such apparent low bidder to obtain a contract price within the budgeted amount. Such negotiations may include changes in the scope of work and other bid requirements. Effingham County reserves the right to reject any or all bids, and to waive formalities.

- **1.7 CONFIDENTIALITY OF DOCUMENTS:** Upon receipt of a bid by the County the bid shall become the property of the County without compensation to the Contractor, for disposition or usage by the County at its discretion. The particulars of the bid documents will remain confidential until final award of the contract.
- **1.8 BIDDER:** Whenever the term "Bidder" is used it shall encompass the "person," "business," "firm," "contractor" or other party submitting a bid to Effingham County in such capacity before a contract has been entered into between such party and the County. At times throughout this Invitation to Bid the term "contractor" may be used interchangeably with the term "bidder".
- **1.9** <u>CONTRACT:</u> Whenever the term "Contract" is used it shall encompass "purchase order" and "agreement."
- **1.10 COMPLIANCE WITH LAWS:** The Proposer shall obtain and maintain all licenses, permits, liability insurance, workman's compensation insurance and comply with any and all other standards or regulations required by Federal, State or County statute, ordinances and rules during the performance of any contract between the Proposer and the County. Any such requirement specifically set forth in any contract document between the Proposer and the County shall be supplementary to this section and not in substitution thereof.
- **1.11** <u>COUNTY:</u> Whenever the term "County" or "Owner" is used it is to refer to the Effingham County Board of Commissioners.
- **1.12 DEBARRED FIRMS AND PENDING LITIGATION:** Any potential bidder/firm listed on the Federal or State of Georgia Parties Listing (barred from doing business) **will not** be considered for contract award. Bidders **shall disclose** any record of pending criminal violations (indictment) and/or convictions, pending lawsuits, etc., and any actions that may be a conflict of interest occurring within the past five (5) years.

Bids will not be accepted from any company, firm, person, party or parent subsidiary, against which Effingham County has an outstanding claim, or financial dispute relating to prior contract performance. If the County, at any time, discovers such a dispute during any point of evaluation, the bid will not be considered further. Any bidder/firm previously defaulting or terminating a contract with the County will not be considered

Bidder acknowledges that in performing contract work for the County, Bidder shall not utilize any firms that have been a party to any of the above actions. If Bidder has engaged any firm to work on this contract or project that is later debarred, Bidder shall sever its relationship with the firm with respect to County contract.

- ** All Bidders are to read and complete the Bidders certification regarding debarment, suspension, ineligibility, and voluntary exclusion enclosed as Attachment C to be returned with response. Failure to do so may result in your proposal being rejected as non-responsive.
- **1.13 IMMIGRATION:** On 1 July 2009, the Georgia Security and Immigration Compliance Act (SB 529, Section 2) became effective. All employers, contractors and subcontractors entering into a contract or performing work must sign an affidavit that he/she has used the E-Verify System. E-Verify is a no-cost federal employment verification system to insure employment eligibility. Affidavits are enclosed in this solicitation. You may download M-274 Handbook for Employers at http://www.dol.state.ga.us/spotlight/employment/rules. You may go to http://www.uscis.gov to find the E-Verify information.
 - ** All Proposers are to read and complete the E-Verify affidavit enclosed as Attachment E to be returned with response. Failure to do so may result in your solicitation response being rejected as non-responsive

- **1.14 PROTECTION OF RESIDENT WORKERS:** Effingham County Board of Commissioners actively supports the Immigration and Nationality Act (INA) which includes provisions addressing employment eligibility, employment verification, and nondiscrimination. Under the INA, employers may hire only persons who may legally work in the Unites States (i.e., citizens and nationals of the U.S.) and aliens authorized to work in the U.S. The employer must verify the identity and employment eligibility of anyone to be hired, which includes completing the Employment Eligibility Verification Form (I-9). The Contractor shall establish appropriate procedures and controls so no services or products under the Contract Documents will be performed or manufactured by any worker who is not legally eligible to perform such services or employment.
- **1.15 <u>STATEMENT OF DISCLOSURE</u>**: All Vendors must provide a statement of disclosure which will allow the County to evaluate possible conflicts of interest.(Attachment C)

Interests of Public Officials.

The vendor warrants for itself and any subcontractor that no elected or appointed official or employee of Effingham County, Georgia, has any interest in their bid or the proceeds of any contract/agreement which may result thereof. In the event that an elected or appointed official or employee acquires any interest in any contract/agreement which may result from this bid, or the proceeds thereof, the vendor agrees to disclose such interest to the BOARD immediately by written notice. For breach or violation of this clause, the BOARD may annul any contract/agreement resulting from this bid without liability, terminate any contract/agreement resulting from this bid for default, or take other remedial measures. "Interest" as used herein means direct or indirect pecuniary or material benefit accruing to a county commissioner, official or employee as a result of a matter which is or which is expected to become the subject of an official action by or with the county, except for such actions which, by their terms and by the substance of their provisions, confer the opportunity and right to realize the accrual of similar benefits to all other persons and/or property similarly situated. The term "interest" shall not include any remote interest. For purposes of this bid, a county commissioner, official or employee shall be deemed to have an interest in the affairs of: (1) his or her family; (2) any business entity in which the county commissioner, official or employee is a member, officer, director, employee, or prospective employee; and (3) any business entity as to which the stock, legal ownership, or beneficial ownership of a county commissioner, official or employee is in excess of five percent of the total stock or total legal and beneficial ownership, or which is controlled or owned directly or indirectly by the county commissioner, official or employee. Remote interest as used herein means the interest of (1) a volunteer director, officer, or employee of a nonprofit corporation; (2) a holder of less than 5 percent of the legal or beneficial ownership of the total shares of a business; (3) any person in a representative capacity, such as a receiver, trustee, or administrator. Family as used herein means the spouse, parents, children, and siblings, related by blood, marriage, or adoption, of a county official or employee.

1.16 ITB NO. 21-005 SCHEDULE:

Invitation to Bid	Date/ Time
Owner issues advertisement of ITB	Thursday, September 3, 2020
MANDATORY Pre-bid Meeting	11.00am (ET) Thursday, September 24, 2020
Deadline for submission of written questions:	5.00pm (ET) Thursday, October 1, 2020
Addendum issued to answer questions (if any) and posted online at www.effinghamcounty.org	5.00pm (ET) Thursday, October 8, 2020
Deadline for submission of Bids	11.00am (ET) Monday, October 19, 2020

ATTACHMENT A

DRUG FREE WORKPLACE CERTIFICATION

The undersigned certifies that the provisions of Code Sections 50-24-1 through 50-24-6 of the Official Code to Georgia Annotated, related to the Drug Free Workplace have been complied with full.

- 1. A drug-free workplace will be provided for the employees during the performance of the contract; and;
- 2. Each Sub-Contractor under the direction of the Contractor shall secure the following written certification:

(Contractor) certifies to Effingham County that a drug-free workplace will be provided for the employees during the performance of this contract known as **ITB No. 21-005 - County Administration Building Renovations** pursuant to paragraph (7) of subsection (B) of Code Section 50-24-3. Also, the undersigned further certifies that he/she will not engage in the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana during the performance of the contract.

CONTRACTOR	DATE	
SUBSCRIBED AND SWORN E	BEFORE ME ON THIS THE	
DAY OF	20	
Notary Public		
My Commission Expires:	, 20	

ATTACHMENT B

PROMISE OF NON-DISCRIMINATION STATEMENT

Know all men by this prese	ence, that I (We)	
Name	, (herein after "C	ompany"), Title
_	-	ffingham County Procurement titled ITB No. 21- s hereby consent, covenant, and agree as follows:
against on the basis of ra		denied the benefit of, or otherwise discriminated gender in connection with the Bid submitted to ting there from;
	herwise interested with the C	provide equal opportunity to all business persons ompany, including those companies owned and
C. That the promises of no duration of this contract wi		set forth herein shall be continuing throughout the
		set forth herein shall be and are hereby deemed to at which this Company may be awarded;
made and set forth above	may constitute a material brea	arge any of the promises of non-discrimination as ch of contract entitling the County to declare the including but not limited to termination of the
SIGNATURE		DATE:
SUBSCRIBED AND SWOR	N BEFORE ME ON THIS THE	
DAY OF	, 20	
Notary Public		
My Commission Expires:	, 2)

ATTACHMENT C

DISCLOSURE OF RESPONSIBILITY STATEMENT - Bidders Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion (page 1)

Failure to complete and return this information will result in your bid/offer/proposal being disqualified from further competition as non-responsive.

- 1. List any convictions of any person, subsidiary, or affiliate of the company, arising out of obtaining, or attempting to obtain a public or private contract or subcontract, or in the performance of such contract or subcontract.
- 2. List any indictments or convictions of any person, subsidiary, or affiliate of this company for offenses such as embezzlement, theft, fraudulent schemes, etc. or any other offenses indicating a lack of business integrity or business honesty which affects the responsibility of the contractor.
- 3. List any convictions or civil judgments under states or federal antitrust statutes.
- 4. List any violations of contract provisions such as knowingly failing (without good cause) failing to perform, or unsatisfactory performance, in accordance with the specifications of a contract.
- 5. List any prior suspensions or debarments by any governmental agency.
- 6. List any contracts not completed on time.
- 7. List any penalties imposed for time delays and/or quality of materials and workmanship.
- 8. List any documented violations of federal or any state labor laws, regulations, or standards, and any occupational safety and health rules.

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001

DISCLOSURE OF RESPONSIBILITY STATEMENT - Bidders Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion (page 2)

I hereby certify that I am the	and duly authorized
representative of	(Contractor) whose address is
and I certify that I have read and u	anderstand the attached instructions and that to the best of my knowledge statives:
voluntarily excluded from	ebarred, suspended, proposed for debarment, declared ineligible, or covered transactions by the Georgia Department of Transportation, any ency, Board of Education or local municipality.
Part 29 and that this firm misrepresentation that wo Agreement and other rem	s certification is provided pursuant to Executive Order 12549 and 49 CFR agrees to abide by the rules and conditions set forth therein for any ould render this certification erroneous, including termination of this nedies available to the Georgia Department of Transportation, Federal cation or local municipality.
transactions, solicitations, p	hat this firm will include this clause without modification in all lower tier proposals, contracts and subcontracts. Where the Bidder or any lower tier rtify to this statement, that participant shall attach an explanation to this
Ĭ	. as
Name of individual	, as Title & Authority
of Company Name	, declare under oath that the above statements,
including any supplemental respons	ses attached hereto, are true.
Signature	
State of:	
County of:	

DISCLOSURE OF RESPONSIBILITY STATEMENT (page 3)

SUBSCRIBED AND SWORN BEFO	ORE ME ON THIS TE	iE
DAY OF	, 20	
by		representing him/herself to be
		of the company named.
Notary Public		
My Commission Expires:		, 20

THIS SECTION INTENTIONALLY LEFT BLANK

ATTACHMENT D NON-COLLUSIVE AFFIDAVIT OF SUBCONTRACTOR

I,							certi	fy that purs	uant to	Effing	gham
County 1	Board of	Commiss	sioner's	policies, t	his bi	id or propos	sal is made	e without pr	ior un	derstan	ding,
agreemer	nt or conn	ection wi	ith any	corporation	, firm	or person s	submitting	a bid or pro	posal f	or the	same
work, lab	or or servi	ice to be	done or	the supplies	s, mat	erials or equi	pment to b	e furnished a	nd is in	all res	pects
fair and	without co	ollusion o	r fraud	of any type	e. I u	nderstand co	ollusive bid	ding is a vio	lation	of State	e and
								wards. I agi			
								ployer to sig			
their beha		•	•	•							
Affiant	further	states	that	pursuant	to	O.C.G.A.	Section	36-91-21	(d)	and	(e),
Contracto											-
		· with any	v others	directly or	· indir	ectly preven	ited or atte	mpted to prev	vent co	mnetiti	on in
								that (s)he ha			
								any means v			
								d/or to subm			
	bid or offe			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	. 010	01 01101 101 1		u , 01 t 0 5 u 0111			01
				ffer of							1S
								get such per			ny to
turnish th	ne material	s to the b	idder o	nly, or it tur	mished	d to other bic	lders, to do	so at a highe	r prices	S.	
Company	y's Name										
President	t / Vice Pre	esident / I	Princina	1 / Owner							
1 Testaem	i / Vice I ic	zsidelit / I	Tincipa	i / Owner							
Sworn to	and subsc	ribed bef	ore me	this	da	ay of		, 20 _			
						,					
<u> </u>	/ A : .										
Secretary	/ Assistar	it Secreta	ry								
Affix cor	porate sea	l here, if	a corpo	ration							
SUBSCR	RIBED AN	D SWOF	RN BEF	ORE ME O	N TH	IIS THE	_ day of			20	_
Notary P	ublic					-					
My Com	mission Ex	znires					20				
Triy Com	masion E	Thurs —				,	20				

NOTE: If the contractor is a partnership, all of the partners and officers, agents, or other persons who may have represented or acted on behalf of the partnership in bidding for or procuring this contract shall also make this oath. If the subcontractor is a corporation, all of the officers, agents, or other persons who may have represented or acted on behalf of the corporation in bidding for or procuring this contract shall also make this oath.

ATTACHMENT E CONTRACTOR AFFIDAVIT AND AGREEMENT (E-VERIFY)

By executing this affidavit, the undersigned contractor verifies its compliance with O.C.GA § 13-10-91, stating affirmatively that the individual, firm, or corporation that is contracting with Effingham County has registered with and is participating in a federal work authorization program* [any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603], in accordance with the applicability provisions and deadlines established in O.C.G.A. § 13-10-91, and shall agree to use this program for any newly hired employees throughout the duration of the contract.

The undersigned further agrees that, should it employ or contract with any subcontractor(s) in connection with the physical performance of services pursuant to this contract with Effingham County, contractor will secure from such subcontractors) similar verification of compliance with O.C.G.A. § 13-10-91on the Subcontractor Affidavit provided in Rule 300-10-01-.08 or a substantially similar form. The contractor further agrees to provide notice to the County of the identity of each subcontractor hired under the contract within five (5) business days of entering into a contract for hire. Such notice shall include a copy of the Subcontractor Affidavit for each subsequent subcontractor attesting to the subcontractor's name, address, user identification number, and date of authorization to use the federal work authorization program. Contractor further agrees to maintain records of such compliance and provide a copy of each such verification to the Effingham County within five (5) days of the time the subcontractor(s) is retained to perform such service.

EEV/ Basic Pilot Program* User Identific	eation Number
BY: Authorized Officer or Agent (Contra	ctor Name) Date
Title of Authorized Officer or Agent of Co	ontractor
Printed Name of Authorized Officer or Aş	gent
SUBSCRIBED AND SWORN BEFORE	ME ON THIS THE
DAY OF	20
Notary Public	
My Commission Evniras:	20

^{*} As of the effective date of O.C.G.A. § 13-10-91, the applicable federal work authorization program is the "EEV/ Basic Pilot Program" operated by the U.S. Citizenship and Immigration Services Bureau of the U.S. Department of Homeland Security, in conjunction with the Social Security Administration (SSA).

ATTACHMENT F

SUBCONTRACTOR AFFIDAVIT (E-VERIFY)

By executing this affidavit, the undersigned subcontractor verifies its compliance with O.C.G.A. § 13-10-91, stating affirmatively that the individual, firm or corporation that is engaged in the physical performance of services under a contract with (name of contractor) on behalf of Effingham County has registered with and is participating in a federal work authorization program* [any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603], in accordance with the applicability provisions and deadlines established in O.C.G.A. § 13-10-91 and will agree to use this program for any newly hired employees throughout the duration of the contract. The subcontractor further agrees to provide a copy of the executed Subcontractor Affidavit to the Contractor in order to be provided to the County within five (5) days entering into the contract for hire.

EEV / Basic Pilot Program* User Identi	ification Number	
Date of E-Verify Authorization		
Address		
BY: Authorized Officer or Agent (Subc	contractor Name) Date	
Title of Authorized Officer or Agent of	Subcontractor	
Printed Name of Authorized Officer or A	Agent	
SUBSCRIBED AND SWORN BEFOR	RE ME ON THIS THE	
DAY OF	, 20	
Notary Public		
My Commission Evniros	20	

^{*} As of the effective date of O.C.G.A. 13-10-91, the applicable federal work authorization program is the "EEV/ Basic Pilot Program" operated by the U. S. Citizenship and Immigration Services Bureau of the U.S. Department of Homeland Security, in conjunction with the Social Security Administration (SSA).

ATTACHMENT G NO-BID STATEMENT

In an effort to make the procurement of construction, goods and services for Effingham County as competitive as possible, we are soliciting information from contractors and or vendors who cannot Bid. Your "responsiveness" and "constructive" comments will be appreciated. Completion of this form will assist us in evaluating factors which relate to the competitiveness of our Bids. Please check any of the boxes below which may apply.

	Specifications - Restrictive, too "tight", unclear, specialty item, geared toward one (1) brand or manufacturer only. (Explain below)
	Manufacturing - Unique item, production time for model or item has expired, etc.
	Bid Time - Insufficient time to properly respond to Bid or proposal.
	Delivery Time - Specified delivery time cannot be met.
	Payment - Delay in payment terms. Please be specific.
	Bonding - We are unable to meet bonding requirements.
	Insurance -We are unable to meet insurance requirements.
	Removal - From Bidders list for this particular commodity or service.
	Keep - Our Company on your Bidders list for future reference.
	Project is - Too Large Too Small
	Site Location Too Distant.
	Miscellaneous - Do not wish to Bid, do not handle this type of item (s), unable to compete, contract clause (s) not acceptable, etc. Please be specific.
CONS	TRUCTION PROJECTS: Please provide reason for obtaining a Bid package. Check one below
	st in this project as a:
	rime Contractor
	ub-Contractor
S	upplier
ITB N	No. 21-005 - County Administration Building Renovations
Signat	rure: Telephone Number:
Firm I	Name:

ATTACHMENT H LIST OF SUBCONTRACTORS

I	/DO,	_/DO NOT, propose to subcontract some of the work on this project.	I propose
to subcon	tract work to the follo	wing contractors/firms:	

CONTRACTOR/FIRM NAME:	ADDRESS:	DESCRIPTION OF WORK/SERVICES TO BE PERFORMED:	CONTRACT AMOUNT

ATTACHMENT I

Legal Notice

Invitation to Bid

ITB County Administration Building Renovations

Effingham County, Georgia is seeking bids from firms interested in ITB No. 21-005 - County Administration Building Renovations

Sealed proposals are due by <u>11.00am</u> (Eastern Time) on <u>Monday, October 19, 2020</u> and must be mailed or hand delivered to the Effingham County Purchasing Office, 601 N. Laurel Street, Springfield, GA 31329.

A copy of this Invitation to Bid is available at the address listed above or online at www.effinghamcounty.org - Purchasing tab. For additional information please contact, Alison Bruton at (912) 754-2159 or via email: abruton@effinghamcounty.org

EFFINGHAM COUNTY RESERVES THE RIGHT TO REJECT ANY/AND ALL BIDS AND TO WAIVE ALL FORMALITIES. "EFFINGHAM COUNTY IS AN EQUAL OPPORTUNITY EMPLOYER, M/F/H, ALL BIDDERS ARE TO BE EQUAL OPPORTUNITY EMPLOYERS".

GENERAL CONDITIONS

- **1.1 SPECIFICATIONS:** Any obvious error or omission in the specifications shall not inure to the benefit of the Bidder but shall put the Bidder on notice to inquire of or identify the same to the County.
- **1.2 GEORGIA OPEN RECORDS ACT:** The responses will become part of the County's official files without any obligation on the County's part. Ownership of all data, materials, and documentation prepared for and submitted to Effingham County in response to a solicitation, regardless of type, shall belong exclusively to Effingham County and will be considered a record prepared, maintained or received in the course of operations of public office or agency and is subject to public inspection in accordance with the *Georgia Open Records Act. Official Code of Georgia Annotated, Section 50-18-070, et.Seq.* unless otherwise provided by law. The Georgia Open Records Act is applicable to the records of all contractors and subcontractors under contract with the County. This applies to those specific contracts currently in effect and those which have been completed or closed up to three (3) years following completion.
- **1.3 GEORGIA TRADE SECRET ACT OF 1990:** In the event that a Bidder submits secret information to the County, the information must be clearly labeled as a "Trade Secret". The County will maintain the confidentiality of such trade secrets to the extent provided by law.
- **1.4 PRICES TO BE FIRM:** The Bidder **warrants** that Bid prices, terms and conditions quoted in his Bid will be firm for acceptance for a period of sixty (60) days from Bid opening date, unless otherwise stated in the Bid.
- **1.5 COMPLETENESS:** All information required by the Invitation to Bid must be completed and submitted to constitute a proper bid. The County shall have sole discretion in evaluating qualifications and responses of Bidders. Bidder acknowledges that in performing a contract for the Board, Bidder shall not utilize any firms that have been a party to any of the actions listed in paragraph **1.12** of section 01150. If Bidder has engaged any firm to work on this contract or project that is later debarred, Bidder shall sever its relationship with that firm with respect to the Board's contract.
- **1.6** MULTIPLE PROPOSALS: No Bidder will be allowed to submit more than one offer. Any alternate proposals must be brought to the Purchasing Agent's attention during the Pre-bid Conference or submitted in writing at least five (5) days preceding the date for submission of bids.
- **1.7 PATENT INDEMNITY:** Except as otherwise provided, the successful Bidder agrees to indemnify Effingham County and its officers, agents and employees against liability.
- **1.8 QUALIFICATION OF BUSINESS (RESPONSIBLE BIDDER)**: A responsible Bidder is defined as one who meets, or by the date of the Bid acceptance can meet, all requirements for licensing, insurance, and service contained within this Invitation for Bids. Effingham County has the right to require any or all Proposers to submit documentation of their ability to perform, provide or carry out the service requested and to disqualify the proposal of any Proposer as being unresponsive or un-responsible whenever such Proposer cannot.
- **1.9** CERTIFICATION OF INDEPENDENT PRICE DETERMINATION: By submission of this bid, the Bidder certifies, and in the case of a joint bid each party thereto as to its own organization, that in connection with this procurement.
 - A. The prices in this Bid have been arrived at independently, without consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such price

- with any other bidder or with any competitor;
- B. Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly to any other competitor; and;
- C. No attempt has been made or will be made by the bidder to induce any other person or firm to submit or not to submit a bid for the purpose or restricting competition.
- **1.10 AWARD OF CONTRACT:** The contract, if awarded, shall be awarded to the lowest responsible and responsive bidder whose combined bid meets the requirements and criteria set forth in the advertisement for bids; provided, however, that if the bid from the lowest responsible and responsive bidder exceeds funds budgeted for the contract, the county may negotiate with such apparent low bidder to obtain a contract price within the budgeted amount. Such negotiations may include changes in the scope of work and other bid requirements. Effingham County reserves the right to reject any of all bids, and to waive formalities.
- **1.11 TERM OF THE CONTRACT:** The contract period will be for the period specified in the contract document UNLESS DIRECTED OTHERWISE BY THE BOARD OF COMMISSIONERS.
- 1.12 <u>INSURANCE PROVISIONS:</u> The selected Bidder shall be required to procure and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the Bidder, his agents, representatives, employees or subcontractors. The cost of such insurance shall be included in the Bid. Contract work will not proceed unless Effingham County has in their possession, a current Certificate of Insurance. Effingham County invokes the defense of sovereign immunity. The County is not to be included as an additional insured on insurance contracts.

General Information that shall appear on a Certificate of Insurance:

- A. Name of Producer (Contractor's insurance Broker/Agent).
- B. Companies affording coverage (there may be several).
- C. Name and address of the Insured (this should be the Company or Parent of the firm Effingham County is contracting with).
- D. A Summary of all current insurance for the insured (includes effective dates of coverage).
- E. A brief description of the operations to be performed, the specific job to be performed, or contract number.
- F. Certificate Holder (This is to always include Effingham County).
- **1.13 LIMITS OF INSURANCE**: Effective coverage shall have the following limits:
 - A. Commercial General Liability: Provides protection against bodily injury and property damage claims arising from operations of a Contractor or Tenant. Minimum limits: \$1,000,000 bodily injury and property damage per occurrence and annual aggregate.
 - B. Worker's Compensation and Employer's Liability: Provides statutory protection against bodily injury, sickness or disease sustained by employees of the Contractor while performing within the scope of duties. Minimum limits: \$500,000 for each accident, disease policy limit, and disease each employee and Statutory Worker's Compensation limit.
 - C. **Business Automobile Liability:** Coverage insures against liability claims arising out of the Contractor's use of automobiles. Minimum limit: \$1,000,000 combined single limit per accident for bodily injury, property damage, and should be written on an "Any Auto" basis.

1.14 SPECIAL REQUIREMENTS:

- A. Claims-Made Coverage: The limits of liability shall remain the same as the occurrence basis, however, the Retroactive date shall be prior to or coincident with the date of any contract, and the Certificate of Insurance shall state the retroactive date and the coverage is claims-made.
- B. **Extended Reporting Periods:** The Contractor shall provide the County with a notice of the election to initiate any Supplemental Extended Reporting Period and the reason(s) for invoking this option.
- C. **Reporting Provisions:** Any failure to comply with reporting provisions of the policies shall not affect coverage provided in relation to this request.
- D. Cancellation/Non-Renewal Notification: Each insurance policy supplied in response to this request shall be endorsed to state that it shall not be suspended, voided, or canceled, except after thirty (30) days prior to written notice by certified mail, return receipt requested, has been given to the County.
- E. **Proof of Insurance:** Effingham County shall be furnished with certificates of insurance and original endorsements affecting coverage required by this request. The certificates and endorsements are to be signed by a person authorized by the insurer to bind coverage on its behalf. All certificates of insurance are to be submitted prior to, and approved by, the County before services are rendered. The Proposer must ensure Certificates of Insurance are updated for the entire term of the Contract.
- F. **Insurer Acceptability:** Insurance is to be placed with an insurer having an A.M. Best's rating of A and a five (5) year average financial rating of not less than V. If an insurer does not qualify for averaging on a five year basis, the current total Best's rating will be used to evaluate insurer acceptability.
- G. **Lapse in Coverage:** A lapse in coverage shall constitute grounds for contract termination by Effingham County Board of Commissioners.
- H. **Deductible and Self-Insured Retention:** Any deductibles or self-insured retention must be declared to, and approved by, the County. At the option of the County, either: the insurer shall reduce or eliminate such deductibles or self-insured retention as related to the County, its officials, officers, employees, and volunteers; or the Proposer shall procure a bond guaranteeing payment of related suits, losses, claims and related investigation, claim administration and defense expenses

1.15 ADDITIONAL COVERAGE FOR SPECIFIC PROCUREMENT PROJECTS:

Professional Liability: Insure errors or omission on behalf of architects, engineers, attorneys, medical professionals, and consultants.

Minimum Limits: \$1,000,000 per claim/occurrence.

Coverage Requirement: If "claims made," retroactive date must precede or coincide with the contract effective date or the date of the Notice to Proceed. The professional must state if "tail" coverage has been purchased and the duration of the coverage.

Builder's Risk: (for Construction or Installation Contracts) Covers against insured perils while in the course of construction.

Minimum Limits: All-risk coverage equal 100% of contract value.

Coverage requirements: Occupancy clause – permits Effingham County Board of Commissioners to use the facility prior to issuance of Notice of Substantial Completion.

1.16 INDEMNIFICATION: The CONTRACTOR agrees to protect, defend, indemnify, and hold harmless Effingham County, Georgia, its commissioners, officers, agents, and employees from and against any and all liability, damages, claims, suits, liens, and judgments, of whatever nature, including claims for contribution and/or indemnification, for injuries to or death of any person or persons, or damage to the property or other rights of any person or persons caused by the CONTRACTOR or its subcontractors.

The CONTRACTOR'S obligation to protect, defend, indemnify, and hold harmless, as set forth herein above shall include, but not be limited to, any matter arising out of any actual or alleged infringement of any patent, trademark, copyright, or service mark, or any actual or alleged unfair competition, disparagement of product or service, or other business tort of any type whatsoever, or any actual or alleged violation of trade regulations. CONTRACTOR further agrees to investigate, handle, respond to, provide defense for, and to protect, defend, indemnify, and hold harmless Effingham County, Georgia, at his sole expense, and agrees to bear all other costs and expenses related thereto, even if such claims, suits, etc., are groundless, false, or fraudulent, including any and all claims or liability for compensation under the Worker's Compensation Act arising out of injuries sustained by any employee of the CONTRACTOR or his subcontractors or anyone directly or indirectly employed by any of them. The CONTRACTOR'S obligation to indemnify Effingham County under this Section shall not be limited in any way by the agreed-upon contract price, or to the scope and amount of coverage provided by any insurance maintained by the CONTRACTOR.

- 1.17 INTERPRETING SPECIFICATION: The specifications or scope of services contained herein are intended to be descriptive rather than restrictive. The County is soliciting a bid to provide a complete product or service package which meets all requirements. Specific equipment and system references may be included in the ITB for guidance, but they are not intended to preclude bidders from recommending alternative solutions for offering comparable or better performance or value to the County. Changes in the scope of services, specifications, or terms and conditions of the ITB will be made in writing by the County prior to the bid opening or due date. Results of informal meetings between a potential Bidder and a County official or employee may not be used as a basis for deviations from the requirements contained in this solicitation.
- **1.18 SIGNED RESPONSE CONSIDERED AN OFFER:** The signed Bid shall be considered an offer on the part of the Bidder, which offer shall be deemed accepted upon approval by the Effingham County Board of Commissioners, or their designee. In case of a default on the part of the Bidder after such acceptance, Effingham County may take such action as it deems appropriate, including legal action for damages or lack of required performance.
- **1.19 NOTICE TO PROCEED:** The successful bidder shall not commence work under this Invitation to Bid until a written contract is awarded and a Notice to Proceed is issued by the Purchasing Agent or his designee. If the successful Bidder does commence any work or deliver items prior to receiving official notification, he does so at his own risk.
- **1.20 PAYMENT TO CONTRACTORS:** Instructions for invoicing the County for services delivered to the County are specified in the contract document.
 - A. Questions regarding payment may be directed to the Effingham County Finance Department, at (912) 754-8057.
 - B. Contractors will be paid the agreed upon compensation upon satisfactory progress or completion of the work as more fully described in the contract document.
 - C. Effingham County is a tax exempt entity. Every contractor, vendor, business or person under contract with Effingham County is required by Georgia law to pay State sales or use taxes for products purchased in Georgia or transported into Georgia and sold to Effingham County by contract. Please consult the State of Georgia, Department of Revenue, Sales and Use Tax Unit in Atlanta (404) 656-4065 for additional information.

- **1.21 CONTRACT COST ADJUSTMENTS:** Prices quoted shall be firm for the contract term.
- **1.22** <u>VENDOR DEFAULT:</u> In case of vendor default, the County will provide a letter of official notice of non-performance. If the issue(s) are not remedied 30 days from receipt of said notice, the County reserves the right to procure services from other sources.
- 1.23 METHOD OF COMPENSATION: The successful Contractor will be compensated in accordance with the approved compensation schedule. Should the Project begin within any one month, the first invoice shall cover the partial period from the beginning date of the project through the last day of the month (or a mutually agreeable time). All invoices shall be submitted on a monthly basis until the project is completed. Invoices shall be itemized to reflect actual expenses for each individual task and will be accompanied by a summary progress report which outlines the work accomplished during the billing period and shall identify any problems which may be inhibiting project execution. The terms of the resulting contract are intended to supersede all provisions of the Georgia Prompt Pay Act. As long as the gross value of work is less than 50% of the total contract amount, or if the Contractor fails to maintain his construction schedule to the satisfaction of the Engineer, the County will retain 10% of the gross value of the completed work as indicated by the current estimate approved by the Engineer. After the gross value of completed work meets or exceeds 50% of the total contract amount within a time period satisfactory to the County, there shall be no additional retainage withheld unless the work is determined to be unsatisfactory or has fallen behind schedule. The contractor may submit a final invoice to the County for the remaining retainage upon the County's acceptance of the Certificate of Substantial Completion. Final payment constituting the entire unpaid balance due shall be paid by the County to the Contractor when work has been fully completed and the contract fully performed, except for the responsibilities of the Contractor which survive final payment. The making of final payment shall constitute a waiver of all claims by Effingham County except those arising from unsettled liens, faulty or defective work appearing after substantial completion, failure of the work to comply with the requirements of the contract document, or the terms of any warranties required by the contract document or items previously made in writing and identified by the County as unsettled at the time of final application for payment. Acceptance of final payment shall constitute a waiver of all claims by the Contractor, except for those previously made in writing and identified by the Contractor as unsettled at the time of final application for payment.
- **1.24 GUARANTEE:** Unless otherwise specified by County, the Bidder shall unconditionally guarantee the materials and workmanship on all material and/or services for a period of not less than one year. If, within the guarantee period any defects occur which are due to faulty material and or services, the contractor at his expense, shall repair or adjust the condition, or replace the material and/or services to the complete satisfaction of the County. These repairs, replacement or adjustments shall be made only at such time as will be signed by the County as being least detrimental to the operation of County business.

1.25 SURETY BOND REQUIREMENTS (CHECKED WHERE APPLICABLE):

- X A. Bidder shall post a Bid Bond, Certified Check, or Money Order made payable to the Effingham County Finance Department in the amount of 5% of the Bid price. Contractor(s) shall post a Payment/Performance Bond, Certified Check, or Money Order made payable to the Effingham County Board of Commissioners, in the amount of 100% of the Bid price if awarded the contract or purchase. Bond(s) are due prior to contract execution as a guarantee that goods meet specifications and will be delivered in accordance with the contract document. Bond(s) will also guarantee quality performance of services and timely payment of invoices due any subcontractors. C. Whenever a Bond is provided, it shall be executed by a surety authorized to do business in the State of Georgia and approved by Effingham County. X D. Bidder acknowledges Effingham County's right to require a Performance Bond of specific kind and origin. Forfeit in the amount of the Bid Bond as liquidated damages if he/she fails to enter into a contract with Effingham County to do and/or furnish everything necessary to provide service and/or accomplish the work stated and/or specified in this Bid Proposal for the Bid amount, and; Forfeit the amount of the Performance Bond as liquidated damages if he/she fails to execute and fulfill the terms of the contract entered. The amount of forfeiture shall be:
 - 1. The difference between his/her Bid and the next lowest, responsible Bid that has not expired or been withdrawn, or;
 - 2. The difference between his/her Bid and the lowest, responsible Bid received as a result of re-Bidding, including all costs related to re-Bidding.

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The undersigned Bidder certifies that he/she has carefully read the preceding list of instructions and all other data applicable hereto and made a part of this invitation to Bid; and, further certifies that the prices shown in his/her bid are in accordance with all documents contained in this Invitation to Bid package, and that any exception taken thereto may disqualify his/her proposal.

This is to certify that I, the undersigned Bidder, have read the instructions to Bidder and agree to be bound by the provisions of the same.

This	day of	2	00
RV.	:		
Б1.	SIGNATURE		
	PRINTED NAME AND	TITI D	
	PRINTED NAME AND	HILE	
	COMPANY		
	ADDRESS		
	PHONE NUMBER		

SUPPLEMENTAL CONDITIONS PROJECT: ITB No. 21-005 – County Administration Building Renovations

DESCRIPTION OF WORK:

The Work is generally described as follows: All tools, materials, labor, supervision, and equipment for selective interior demolition, renovations, and new interior office construction for the modifications to the County's Administration Annex Building at 802 South Laurel Street in Springfield, Georgia in Effingham County, Georgia.

All construction shall be done in accordance with the contract documents and plans. Contract administration and inspection will be performed by Effingham County and/or its Design Consultants. It is the responsibility of the bidder to carefully examine and fully understand the construction contract, scope of work and other documents hereto attached and make a personal examination of the site of the proposed work, and to satisfy himself or herself as to the actual conditions and requirements of the work.

The bidder further agrees that the cost of any work performed, materials furnished, services provided, or expenses incurred, which are not specifically delineated in the contract documents but which are incidental to the scope, intent, and completion of the contract, shall be deemed to have been included in the prices bid for the various items scheduled.

- 1. The Contractor shall have at all times, as his agent, a competent Superintendent capable of reading and thoroughly understanding the Plans and Specifications, and thoroughly experienced in the type of work being performed. The Superintendent shall notify the A/E prior to starting any Pay Item Work. The Prime Contractor shall coordinate and be responsible to the A/E for all activities of subcontractors
- 2. Bidders may be required to submit evidence setting forth qualifications, which entitle him to considerations as a responsible Contractor. A list of work of similar character successfully completed within the last two years may be required giving the location, size and listing equipment available for use on this work. Before accepting any bid, the County may require evidence of the Contractor's financial ability to successfully perform the work to be accomplished under the contract. "The County will not be responsible for Bidders' errors or misjudgment, nor for any information on local conditions or general laws and regulations
- 3. The County reserves the right to reject any and all bids, to waive technicalities, and to make an award as deemed in its best interest. It is understood that all bids are made subject to this Agreement, that the County reserves the right to award the bid to the lowest responsive and responsible Bidder, and in arriving at this decision, full consideration will be given to the reputation of the Bidder, his financial responsibility, and work of this type successfully completed. Contracts shall be awarded to the lowest responsible and responsive bidder whose combined bid meets the requirements and criteria set forth in the advertisement for bids; provided, however, that if the bid from the lowest responsible and responsive bidder exceeds funds budgeted for the contract, the county may negotiate with such apparent low bidder to obtain a contract price within the budgeted amount. Such negotiations may include changes in the scope of work and other bid requirements. Effingham County reserves the right to reject any or all bids, and to waive formalities.
- 4. The County also reserves the right to reject any and all bids from any person, firm, or corporation who is in arrears in any debt or obligation to the Effingham County, Georgia.

- 5. "No bid will be considered unless it is accompanied by a certified check or acceptable bid bond in an amount not less than five percent (5%) of the amount bid and made payable to the Board of Commissioners of Effingham County. Such Bid Bond shall be on the forms provided by the County."
- 6. Bids must be submitted in duplicate in a sealed envelope of sufficient size with the following clearly typed or printed on the outside:

Effingham County Purchasing Agent Bid for Construction Bid Number Date and Hour of Bid Opening Company Name

- 7. Bid shall be submitted on the Bid Form provided by the County.
- 8. The bid package as described in Notice to Contractors must be submitted with the bid. Failure to do so could result in the omission of pertinent documents and the rejection of the apparent low bid.
- 9. No interpretation of the meaning of the Contract Documents will be made orally to any Bidder. Any request for such interpretation should be in writing addressed to the Office of County Purchasing Agent, 601 North Laurel Street, Springfield, Georgia 31329. Each such interpretation shall be given in writing, separately numbered and dated, and furnished to each interested Bidder. Any request not received in time to accomplish such interpretation and distribution will not be accepted.
- 10. The contract, if awarded, shall be awarded to the most responsive and responsible bidder. Effingham County reserves the right to exercise exclusive discretion as to the responsibility of any bidder. Contracts shall be awarded to the lowest responsible and responsive bidder whose combined bid meets the requirements and criteria set forth in the advertisement for bids; provided, however, that if the bid from the lowest responsible and responsive bidder exceeds funds budgeted for the contract, the county may negotiate with such apparent low bidder to obtain a contract price within the budgeted amount. Such negotiations may include changes in the scope of work and other bid requirements. Effingham County reserves the right to reject any or all bids, and to waive formalities.
- 11. The contract shall be executed on the forms attached, will be subject to all requirements of the Contract Document, and shall form a binding Contract between the contracting parties.
- 12. All Bid Guaranties may be retained until the Contract and Contract Bond have been signed and approved. Early release of Bid Guaranties will be considered if a request is made in writing.
- 13. The Contract shall be signed by the successful Bidder and returned within 15 calendar days after the date of the letter transmitting the Contract to the Bidder. No Contract shall be considered as effective until it has been fully executed by all of the parties.
- 14. Failure to execute the Contract, Contract Performance and Payment Bond, or furnish satisfactory proof of carriage of the insurance required within ten days after the date of Notice of Award of the Contract may be just cause for the annulment of the award and for the forfeiture of the proposal guaranty to Effingham County, not as a penalty, but as liquidation damages sustained. At the discretion of the County, the award may then be made to the next lowest responsible Bidder, or the Work may be re-advertised or constructed by County forces.

SCOPE OF WORK

Whenever an alteration in character of work involves a substantial change in the nature of the design or in the type of construction or materially increases or decreases the cost of performance, a Supplemental Agreement acceptable to both parties shall be executed before work is started on such alternation, except that in the absence of a Supplemental Agreement acceptable to both parties, the County may direct that the work be done either by Force Account or at existing Contract prices subject to the provisions of Sub-Section 105.13.

Within 10 calendar days after the Notice to Proceed has been issued, the Contractor shall begin the work. Contract Time charges for Available Day and Calendar Day projects will begin on the date the Contractor starts to work, or 10 days after the Notice to Proceed, whichever comes first. For Completion Date Projects Contract Time charges shall begin on the day after the Notice to Proceed.

If the performance of all or any portion of the Work is suspended or delayed by the County, in writing, for an unreasonable period of time (not originally anticipated, customary, or inherent to the construction industry) and the Contractor believes that additional compensation and/or contract time is due as a result of such suspension or delay, the Contractor shall submit to the County, in writing, a request for adjustment within 7 calendar days of receipt of the notice to resume work. The request shall set forth the reasons and support for such adjustment.

Upon receipt, the County will evaluate the Contractor's request. If the County agrees that the cost and/or time required for the performance of the Contract has increased as a result of such suspension and the suspension was caused by conditions beyond the control of, and not the fault of, the Contractor, its suppliers, or subcontractors at any approved tier, and not caused by weather, the County will make an adjustment (excluding profit) and modify the Contract in writing accordingly. The County will notify the Contractor of his/her determination whether or not an adjustment of the Contract is warranted.

No contract adjustment will be allowed unless the Contractor has submitted the request for adjustment within the time prescribed.

No contract adjustment will be allowed under this clause to the extent that performance would have been suspended or delayed by any other cause, or for which an adjustment is provided for or excluded under any other term or condition of this Contract

MEASUREMENT AND PAYMENT

- 1. As long as the gross value of completed work is less than 50% of the total Contract amount, or if the Contractor is not maintaining his construction schedule to the satisfaction of the County, the Department shall retain 10% of the gross value of the completed work as indicated by the current estimate certified by the County for payment.
- b. After the gross value of completed work becomes equal to or exceeds 50% of the total Contract amount within a time period satisfactory to the County, then the total amount to be retained shall be 0% of the gross value of the completed work as indicated by current estimates, until all pay items are substantially completed. When time charges have ceased and pending final acceptance and final payment, the amount retained may be further reduced at the discretion of the County, subject to agreement by the Contractor and his Surety.

"Final Payment: Upon completion by the Contractor of the work, including the receipt of any final written submission of the Contractor and the approval thereof by the County, the County will pay the Contractor a sum equal to 100 percent (100%) of the compensation set forth herein, less the total of all previous partial payments, paid or in the process of payment.

The Contractor agrees that acceptance of this final payment shall be in full and final settlement of all claims arising against the County for work done, materials furnished, costs incurred, or otherwise arising out of this Agreement and shall release the County from any and all further claims of whatever nature, whether known or unknown for and on

account of said Agreement, and for any and all work done, and labor and materials furnished, in connection with same."

In the event the Contractor fails to execute the Final Supplemental Agreement as prepared by the County because he disputes the amount of the final payment as stated therein, the amount due the Contractor shall be deemed by the Contractor and the County to be an unliquidated sum and no interest shall accrue or be payable on the sum finally determined to be due to the Contractor for any period prior to final determination of such sum, whether such determination be by agreement of the Contractor and the County or by final judgment of the proper court in the event of litigation between the County and the Contractor. The Contractor specifically waives and renounces any and all rights it may have under Section 13-6-13 of the Official Code of Georgia and agrees that in the event suit is brought by the Contractor against the County for any sum claimed by the Contractor under the Contract, for delay damages resulting from a breach of contract, for any breach of contract or for any extra or additional work, no interest shall be awarded on any sum found to be due from the County to the Contractor in the final judgment entered in such suit. All final judgments shall draw interest at the legal rate, as specified by law. Also, the Contractor agrees that notwithstanding any provision or provisions of Chapter 11 of Title 13 of the Official Code of Georgia that the provisions of this contract control as to when and how the Contractor shall be paid for The Work. Further, the Contractor waives and renounces any and all rights it may have under Chapter 11 of Title 13 of the Official Code of Georgia.

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SCOPE OF WORK

GENERAL INFORMATION:

The purpose of this solicitation is to describe the requirements for:

All tools, materials, labor, supervision, and equipment to perform the selective interior demolition, renovations and new office interior construction for the County's Administration Annex Building at 802 South Laurel Street in Springfield, Georgia

Safety:

The Contractor shall provide all necessary barricades and signage and take necessary precautions to protect buildings, general public and Contractor personnel. The Contractor shall at all times guard against damage or loss of Effingham County property or the general public and shall be held responsible for replacing or repairing any loss or damage to the satisfaction of The Effingham County Board of Commissioners.

GENERAL CONSTRUCTION GUIDELINES

- 1. The contractor shall be required to coordinate his work schedule with the A/E and County during the course of the project
- 2. Effingham County does not commit to furnishing full-time inspection or testing of the work in progress or at material sources. Lack of inspection and/or testing by the County or A/E will in no way relieve the Contractor of his responsibility to provide quality workmanship in accordance with the Contract Documents.
- 4. The Contractor is required to submit shop drawings and material submittals to the A/E for review and approval prior to delivery and installation.

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BID FORM

ARTICLE 1 - BID RECIPIENT

1.01 This Bid is submitted to:

Effingham County Board of Commissioners

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 - BIDDER'S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 - BIDDER'S REPRESENTATIONS

- 3.01 In submitting this Bid, Bidder represents that:
 - A. Bidder has examined and carefully studied the Bidding Documents, other related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged:

Addendum No.	Addendum Date

- B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
- C. Bidder is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.
- D. Bidder has considered the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; and the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents; and (3) Bidder's safety precautions and programs.
- E. Based on the information and observations referred to in Paragraph 3.01.D above, Bidder does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.

- F. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- G. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer is acceptable to Bidder.
- H. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

ARTICLE 4 - BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid:
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
 - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;
 - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 - 3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
 - 4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

THIS SECTION INTENTIONALLY LEFT BLANK

ARTICLE 5 – CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to Paragraphs 5.01.A, below:

The following unit prices are to be used for any additions or deletions in the Base Scope of Work and shall include all tools, equipment, materials and labor for each item specified:

County Administration Building Renovations					
Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
1	SELECTIVE DEMOLITION	LS	1	\$	\$
2	INTERIOR WALLS/PARTITIONS	SF	1	\$	\$
3	CEILING FINISHES	SF	1	\$	\$
4	ELECTRICAL	LS	1	\$	\$
5	HVAC	LS	1	\$	\$
6	INTERIOR DOORS	EA	1	\$	\$
Total Bid- County Administration Building Renovations					

TOTAL BID - COUNTY ADMINISTRATION BUILDING RENOVATIONS \$_____

THIS SECTION INTENTIONALLY LEFT BLANK

ARTICLE 6 - TIME OF COMPLETION

- 6.01 Bidder agrees to commence work within ten (10) days after the Notice to Proceed is issued and to complete all Work by March 31, 2021.
- 6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 - ATTACHMENTS TO THIS BID

7.01	The following documents are submitted with and made a condition of this Bid:
	A. Required Bid security in the form of;
	B . Evidence of authority to do business in the state of the Project;
	C. Drug Free Workplace Certification (Attachment A);
	D . Promise of Non Discrimination Statement (Attachment B);
	E. Disclosure of Responsibility Statement - Bidders Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion (Attachment C);
	F. Non Collusion Affidavit - (Attachment D);
	G. Contractor Affidavit and Agreement (E-VERIFY) (Attachment E);
	H . Subcontractor Affidavit if applicable (E-VERIFY) (Attachment F);
	I. List of Proposed Subcontractors (Attachment H);
ARTI	ICLE 8 - DEFINED TERMS
8.01	The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.
ARTI	ICLE 9 - BID SUBMITTAL
9.01	This Bid is submitted by:
	If Bidder is:
	An Individual
	Name (typed or printed):
	By:
	(Individual's signature)
	Doing business as:

A Partnership Partnership Name: _____ (Signature of general partner -- attach evidence of authority to sign) Name (typed or printed): A Corporation Corporation Name: (SEAL) State of Incorporation: Type (General Business, Professional, Service, Limited Liability): (Signature -- attach evidence of authority to sign) Name (typed or printed): Title: ___ (CORPORATE SEAL) Date of Qualification to do business in Georgia is / / . A Joint Venture Name of Joint Venture: First Joint Venturer Name: ____ (SEAL) (Signature of first joint venture partner -- attach evidence of authority to sign) Name (typed or printed): Title: Second Joint Venturer Name: ______(SEAL) (Signature of second joint venture partner -- attach evidence of authority to sign) Name (typed or printed):

Title:	
` "	ner of signing for each individual, partnership, and nture should be in the manner indicated above.)
Bidder's Business Address	
Phone No	Fax No
E-mail	
SUBMITTED on	
State Contractor License No.	

THIS SECTION INTENTIONALLY LEFT BLANK

BID BOND

KNOW ALL MEN BY THESE PRESENTS THAT WE [Insert
contractor's name], as Principal, hereinafter called the Principal, and (Surety) a
corporation duly organized under the laws of the State of as Surety, hereinafter
called the Surety, and held and firmly bound unto
Effingham County Board of Commissioners 601 N. Laurel Street, Springfield, Georgia 31329
as Obligee, hereinafter called Obligee, in the sum ofDollars
(\$), or percent (5 %) of the amount bid, whichever is less, for the payment of which sum
well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.
WHEREAS, the Principal has submitted a bid for:
ITB No. 21-005 – County Administration Building Renovations
NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter
into a Contract with the Obligee in accordance with the terms of such bid and give such bonds or bond
as may be specified in the bidding or Contract Documents with good and sufficient surety for the
faithful performance of such Contract and for the prompt payment of labor and material furnished in
the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give
such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty
hereof between the amount specified in said bid and such larger amount for which the Obligee may in
good faith contract with another party to perform the Work covered by said bid, then this obligation
shall be null and void, otherwise to remain in full force and effect.
Signed and Sealed this day of, 20
(Dein einell)
(Principal)
By:
(Witness) (Title)

AGREEMENT BETWEEN OWNER AND CONTRACTOR FOR CONSTRUCTION CONTRACT

THIS AGREEMENT is by and between Effingham Cou	inty Board of Commissioners ("Owner") and
	("Contractor").
Owner and Contractor hereby agree as follows:	

ARTICLE 1 – WORK

Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

All tools, materials, labor, supervision, and equipment to perform the civil/site improvements including clearing. grubbing, paving, grading, drainage, utilities as specified on the plans for the County Administration Building Renovations in Effingham County, Georgia.

The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows: ITB No. 21-005— County Administration Building Renovations

ARTICLE 2 – ARCHITECT/ENGINEER

2.01 The Project has been designed by Effingham County Engineering Department's Consultant, Greenline Architects of Savannah, Georgia and their Sub-Consultants, which is to act as Owner's representative, assume all duties and responsibilities, and have the rights and authority assigned to A/E in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 3 – CONTRACT TIMES

3.01 *Time of the Essence*

All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

- 3.02 Days to Achieve Completion and Final Payment
- 3.03 The Work will be completed by March 31 2021.

ARTICLE 4 – LIQUIDATED DAMAGES

4.01 Contractor and Owner recognize that time is of the essence as stated in Paragraph 3.01 above and that Owner will suffer financial loss if the Work is not completed within the times specified in Paragraph 3.02 above, plus any extensions thereof allowed. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration preceding the actual loss suffered by Owner if the Work is not substantially completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not

penalty), Contractor shall pay Owner \$150 for each day that expires after the time specified in Paragraph 4.02 above for Completion until the Work is complete.

ARTICLE 5 – CONTRACT PRICE

Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to Paragraphs 5.01.A, below:

County Administration Building Renovations											
Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price						
1	SELECTIVE DEMOLITION	LS	1	\$	\$						
2	INTERIOR WALLS/PARTITIONS	SF	1	\$	\$						
3	CEILING FINISHES	SF	1	\$	\$						
4	ELECTRICAL	LS	1	\$	\$						
5	HVAC	LS	1	\$	\$						
6	INTERIOR DOORS	\$	\$								
	Total Bid- County Administration Building Renovations										

THIS SECTION INTENTIONALLY LEFT BLANK

ARTICLE 6 – PAYMENT PROCEDURES

- 6.01 Submittal and Processing of Payments
 - A. Contractor shall submit Applications for Payment in accordance with Section 1.30 of the General Conditions. Applications for Payment will be processed by A/E as provided in the General Conditions.
- 6.02 Progress Payments; Retainage
 - A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment on or about the <u>25th</u> day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below as long as the pay request is received by the <u>1st</u> of the month. All such payments will be measured based on the number of units completed times the unit price of each completed unit.
 - 1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as A/E may determine or Owner may withhold, including but not limited to liquidated damages, in accordance with Paragraph 4.01 above.
 - a. <u>90</u> percent of Work completed (with the balance being retainage). Until 50% of the value of the contract (including change orders and additions), or if the Contractor fails to maintain his construction schedule to the satisfaction of the A/E, the County will retain 10% of the gross value of the completed work as indicated by the current estimate approved by the A/E. After the contract (including change orders and additions) is 50% complete, there shall be no additional retainage withheld unless the work is determined to be unsatisfactory or has fallen behind schedule; and
 - b. <u>90</u> percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).
 - B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to <u>100</u> percent of the Work completed, less such amounts as Engineer shall determine and less <u>150</u> percent of A/E's estimate of the value of Work to be completed or corrected as shown on the tentative list of items to be completed or corrected.
- 6.03 Final Payment
 - A. Upon final completion and acceptance of the Work, Owner shall pay the remainder of the Contract Price as recommended by A/E.

ARTICLE 7 – INTEREST

7.01 All moneys not paid when due as provided in Section 1.30 of The General Conditions and Paragraph 6.02 above, shall bear interest at the rate of **1** percent per annum.

ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS

- 8.01 In order to induce Owner to enter into this Agreement, Contractor makes the following representations:
 - A. Contractor has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.
 - B. Contractor has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 - C. Contractor is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work.
 - D. Contractor has considered the information known to Contractor; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Contract Documents; and (3) Contractor's safety precautions and programs. Based on the information and observations referred to in Paragraph 8.01.D above, Contractor does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.
 - E. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
 - F. Contractor has given A/E written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by A/E is acceptable to Contractor.
 - G. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 9 – COUNTY'S RIGHT TO SUSPEND OR TERMINATE WORK

A. Termination for Convenience. County may, for its own convenience and at its sole option, without cause and without prejudice to any other right or remedy of County, elect to terminate the Contract by delivering to the Contractor, at the address listed for giving notices in this Contract, a written notice of termination specifying the effective date of termination. Such notice shall be delivered to Contractor at least seven (7) days prior to the effective date of termination.

- B. Termination for Default. If the Contractor is adjudged bankrupt or insolvent, or if he makes a general assignment for the benefit of his creditors, or if a trustee or receiver is appointed for the Contractor or for any of his property, or if he files a petition to take advantage of any debtor's act or to reorganize under the bankruptcy or applicable laws, or if he fails to supply sufficient skilled workers or suitable materials or equipment, make payments to Subcontractors or for labor, materials or equipment, or if he disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction of the Work, or if he otherwise violates any provision of the Contract, then the County may, without prejudice to any other right or remedy, and after giving the Contractor and his surety a maximum of seven (7) days from delivery of a written notice, declare the Contract in default and terminate this Contract. In that event, the County may take possession of the Project and of all materials, equipment, tools, construction equipment and machinery thereon owned by the Contractor. The County may cause the Work to be completed and corrected by whatever method it deems expedient. If called upon by the County to finish the Work, the Contractor's surety shall promptly do so. In any case, the Contractor and its surety shall be liable to the County for any and all damages and costs incurred by the County as a result of any default by the Contractor, including without limitation all costs of completion or correction of the Work, liquidated damages, attorneys' fees, expert fees, and other costs of dispute resolution. Termination of this Contract pursuant to this paragraph may result in disqualification of the Contractor from bidding on future County contracts for a period of time not to exceed five (5) years.
- C. If Contractor's services are terminated by the County pursuant to paragraph A or B above, the termination will not affect any rights or remedies of the County then existing or which may thereafter accrue against Contractor or its surety. Any retention or payment of moneys due Contractor by County will not release Contractor from liability. If it is determined that the Contractor was not in default or that the failure to perform is excusable, a termination for default will be considered to have been a termination for the convenience of the County, and the rights and obligations of the parties shall be governed accordingly.
- D. In case of termination of this Contract before completion of the Work, Contractor will be paid only for materials and equipment accepted by the County and the portion of the Work satisfactorily performed through the effective date of termination as determined by the County.
- E. Except as otherwise provided in this Contract, neither party shall be entitled to recover lost profits, special, consequential or punitive damages, attorney's fees or costs from the other party to this Contract for any reason whatsoever.
- F. The parties' obligations pursuant to this Contract shall survive any Acceptance of Work, or expiration or termination of this Contract.

ARTICLE 10 – INDEMNIFICATION

The CONTRACTOR agrees to protect, defend, indemnify, and hold harmless the County, its commissioners, officers, agents, and employees from and against any and all liability, damages, claims, suits, liens, and judgments, of whatever nature, including claims for contribution and/or

indemnification, for injuries to or death of any person or persons, or damage to the property or other rights of any person or persons caused by the negligence of the CONTRACTOR or its subcontractors.

The CONTRACTOR'S obligation to protect, defend, indemnify, and hold harmless, as set forth herein above shall include, but not be limited to, any matter arising out of any actual or alleged infringement of any patent, trademark, copyright, or service mark, or any actual or alleged unfair competition, disparagement of product or service, or other business tort of any type whatsoever, or any actual or alleged violation of trade regulations.

CONTRACTOR further agrees to investigate, handle, respond to, provide defense for, and to protect, defend, indemnify, and hold harmless County, at its sole expense, and agrees to bear all other costs and expenses related thereto, even if such claims, suits, etc., are groundless, false, or fraudulent, including any and all claims or liability for compensation under the Worker's Compensation Act arising out of injuries sustained by any employee of the CONTRACTOR or his subcontractors or anyone directly or indirectly employed by any of them.

The CONTRACTOR'S obligation to indemnify the County under this Section shall not be limited in any way by the agreed-upon contract price, or to the scope and amount of coverage provided by any insurance maintained by the CONTRACTOR.

ARTICLE 11 – INDEPENDENT CONTRACTOR

Contractor hereby covenants and declares that it is an independent business and agrees to perform the Work as an independent contractor and not as the agent or employee of the County. The Contractor agrees to be solely responsible for its own matters relating to the time and place the services are performed; the instrumentalities, tools, supplies, and/or materials necessary to complete the Work; hiring of consultants, agents, or employees to complete the Work; and the payment of employees, including compliance with Social Security, withholding, and all other regulations governing such matters. The Contractor agrees to be solely responsible for its own acts and those of its subordinates and subcontractors during the life of this Contract. Any provisions of this Contract that may appear to give the County the right to direct Contractor as to the details of the services to be performed by Contractor or to exercise control over such services will be deemed to mean that Contractor shall follow the directions of the County with regard to the results of such services.

ARTICLE 12 – CONTRACT DOCUMENTS

12.01 Contents

- A. The Contract Documents consist of the following:
 - 1. This Agreement (pages 1 to 9, inclusive).
 - 2. General Conditions (pages 1 to 7, inclusive).
 - 3. Supplemental Conditions (pages 1 to 4 inclusive).
 - 4. Specifications as listed in the table of contents of the Project Manual.
 - 5. Addenda (numbers _____ to ____, inclusive).

6. Exhibits to this Agreement (enumerated as follows):

		a. Contractor's Bid (pages_1_to 9 inclusive).
		 b. Documentation submitted by Contractor prior to Notice of Award (pages to, inclusive).
		7. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
		a. Notice to Proceed (pages <u>1</u> to <u>1</u> , inclusive).
		b. Work Change Directives.
		c. Change Orders.
	B.	The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).
	C.	There are no Contract Documents other than those listed above in this Article 9.
	D.	The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.
	E.	The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:
		A Field Order;
		1. A/E's approval of a Shop Drawing or Sample; or
		2. A/E's written interpretation or clarification.
ARTI	CLI	E 13 – MISCELLANEOUS
13.01	Te	rms
	A.	Terms used in this Agreement will have the meanings stated in the General Conditions and the Supplementary Conditions.
13.02	Ass	signment of Contract
	A.	No assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written

under

responsibility

or

consent to an assignment, no assignment will release or discharge the assignor from any duty

the

Contract

Documents.

13.03 Successors and Assigns

A. County and Contractor each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

13.04 Severability

A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon County and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

13.05 Contractor's Certifications

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 10.05:
 - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;
 - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of County, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive County of the benefits of free and open competition;
 - 3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of County, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and
 - 4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

IN WITNESS WHEREOF, County and Contractor have signed this Agreement. Counterparts have been delivered to County and Contractor. All portions of the Contract Documents have been signed or have been identified by County and Contractor or on their behalf.

This Agreement will be effective on	(which is the Effective Date of the Agreement).
COUNTY:	CONTRACTOR:
Effingham County Board of Commissioners	
By:	By:
Title: Chairman	Title:
	(If Contractor is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)
Attest:	Attest:
Title: County Clerk	Title:
Address for giving notices:	Address for giving notices:
601 N. Laurel Street	
Springfield, GA 31329	

NOTICE TO PROCEED

TO:
RE: NOTICE TO PROCEED – CONSTRUCTION
ITB No. 21-005 – County Administration Building Renovations
Please consider this your NOTICE TO PROCEED on the above referenced project. In accordance with the terms of the contract, work is to commence within ten (10) days of receipt of the Notice to Proceed and to be completed by November 30, 2020. Failure for the work to be substantially complete by this time/date will result in deductions from the monies due the contractor as "liquidated" damages in an amount equal to \$150.00 per calendar day. Requests for time extensions shall be documented and made in writing within 7 calendar days after the delay.
Dated thisday of, 2020
Effingham County Board of Commissioners
Wesley Corbitt, Chairman
ACCEPTANCE OF NOTICE:
Receipt of the above Notice to Proceed is acknowledged.
Contractor:
By:
Title:
Date of Acceptance:

ALTERATIONS/ RENOVATION TO EFFINGHAM COUNTY ADMINISTRATION BUILDING

SPRINGFIELD, GEORGIA

CODE REVIEW DATA

OCCUPANCY CLASSIFICATION (NFPA IOI)

TYPE OF CONSTRUCTION (IBC 2018 - CH. 6)

MAX. ALLOWABLE HEIGHT

OCCUPANCY LOAD (NFPA 101 - 7.3.1.2)

CONSTRUCTION REQUIREMENTS (CH. 6 - IBC)

UNIT SEPARATION WALLS

BEARING WALLS (EXTERIOR)

BEARING WALLS (INTERIOR)

FLOOR/CEILING ASSEMBLY

PER ROOM (>THAN 50 OCCUPANTS)

TRAVEL DISTANCE (DOOR TO EXIT,

MAX. NUMBER OF STORIES

INT. BUILDING CODE (TABLE 503)

MAX. ALLOWABLE AREA/ FLOOR

802 SOUTH LAUREL STREET

B (BUSINESS)/ W/ ASSEMBLY

SOUTH BUILDING (1) = 7,080 S.F., SOUTH BUILDING (2) = 4,250 S.F.; NORTH BUILDING (2) = 2,325 S

PROVIDED

2 STORY

EXISTING

38'-0" (EXISTING)

□ N/A

NET PER FLOOR × FLOORS TOTAL

(SOUTH) -SEE SHEETS =167 PER TOTA

(NORTH) 2,325 S.F./ 150 = 16 PERSONS

SEPARATION

HOURS

N/A

N/A

N/A

N/A

N/A

200' (100' FOR SINGLE EXIT)

FLOORING

PER BUILDING: (SOUTH) EXISTING, 4 PROVIDED - IST FLOOR

PER FLOOR: (NORTH) EXISTING, I PROVIDED - 2ND FLOOR

REQUIRED: .2" PER PERSON (HORIZ) -.3" PER PERSON (VERT

PROVIDED: N/A

□ N/A

EXITS ACCESS OTHER SPACES

A,B,C

EXISTING

SI*08002*5

ALLOWABLE

40'-0"

4 STORY

19,000 S.F

YES

EXISTING

HOURS

N/A

N/A

N/A

EXISTING TO REMAIN

MAXIMUM ALLOWED

MAXIMUM PROVIDED

PROVIDED:

XES

YES NO

REQUIRED: 3,000 S.F.

MAXIMUM DIST. ALLOWED | 50'

MAXIMUM DIST. PROVIDED 15'

PASSIVE MECHANICAL N/A

A,B

RESISTANCE

SQ FOOTAGE

150 S.F. PER PERSON

NO

PROPERTY ADDRESS

PARKING REQUIREMENTS

GROSS PROJECT AREA

FIRE DISTRICT PROVISIONS

OCCUPANCY REQUIREMENTS

BUILDING DESIGN WIND LOAD

FIRE SEPARATION (NFPA 101)

FIRE RATING (IBC 2018 - TABLE 601)

CORRIDOR WALLS

ROOF ASSEMBLY

EXITS REQUIRED

EXIT WIDTHS

HORIZONTAL EXITS

DEAD END CORRIDOR

FIRE PROTECTION SYSTEM (ALARM PROVIDED)

UNITS OF EGRESS

SMOKE SEPARATION / DRAFTSTOPPING

ATTIC VENTILATION REQUIRED (IBC 2018)

HIGH IMPACT GLAZING (REQ. PER CH.16 IBC)

ATTIC AREA

SEISMIC CLASSIFICATION OF SITE

EXPOSURE

INTERIOR FINISHES

STRUCTURAL BEAMS

STRUCTURAL COLUMNS

SPRINKLERED

MEANS OF EGRESS

APPLICABLE CODES

PROPERTY PIN #

ZONING DISTRICT

SYMBOLS TI.I TITLE SHEET ENLARGED DETAIL BUILDING / WALL SECTION SHT# **ELEVATIONS** ROOM NAME ROOM TAG **MINDOW TAGS** SHT# DWG+ DOOR TAG DI.I DEMOLITION FLOOR PLANS - SOUTH & NORTH BUILDINGS GENERAL NOTES

ARCHITECT OF RECORD ARE NOT LIABLE FOR THE WORK WHERE CHANGES TO THESE DOCUMENTS HAVE BEEN MADE

WORK REQUIRING MEASURING SHALL BE DONE ACCORDING TO FIGURES ON DRAWINGS AND NOT SCALED FROM DRAWINGS. THE ARCHITECT SHALL FURNISH ANY MISSING DIMENSIONS UPON

3. ALL WORK SHALL CONFORM TO PREVAILING CODES, ORDINANCES AND REQUIREMENTS. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS REQUIRED FOR CONSTRUCTION AND SHALL PAY ALL APPLICABLE FEES

ABBREVIATIONS

-	
4	
_	GREENLINE
-	ARCHITECTURE
-	\
_	
-	
_	28 E 35TH ST
	Savannah, ga 31401
	T 912 447 5665

F 912.447.8381 WWW.GREENLINEARCH.COM



RELEASED FOR CONSTRUCTION

JOB NO: 19.055 ISSUE DATE: 08/14/2020 drawn: JLE

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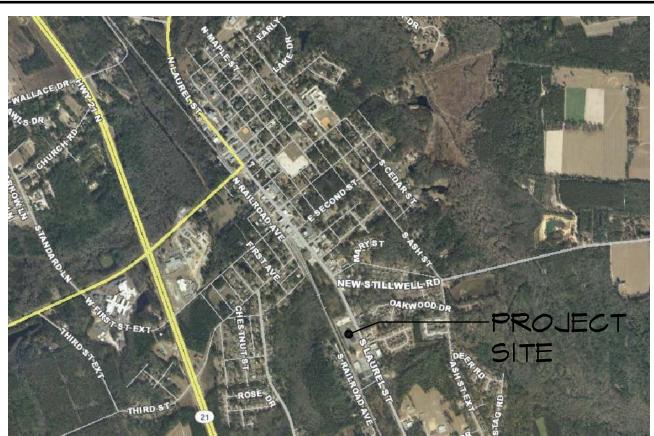
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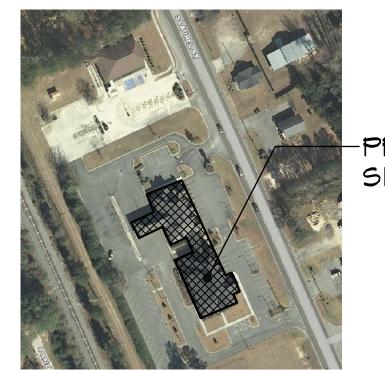


ELECTRICAL ENGINEER: 109 PARK OF COMMERCE SAVANNAH, GEORGIA 31405 (T) 912-238-2400 (F) 912-238-2412 contact: WILLIAM PARNELL email: wparnell@chathamenqineerinq.com

VICINITY MAP



STREET MAP



GALV HDMD HORIZ INCL INSUL

DR DW DWR DISHWASHER DRAWING DRAWER ELEVATION ELECTRICAL **EMBEDMENT** EQUIPMENT EXISTING TO REMAIN EXTERIOR FLOOR DRAIN FINISH FLOOR FINISH FLOOR ELEV. FIXTURE FLUORESCENT FACE OF BLOCK FOS FT FACE OF STUDS FOOTING GAUGE GALVANIZED GYPSUM HOSE BIBB HARDWARE HARDWOOD HORIZONTAL HANDRAIL HEIGHT INCLUDE INSULATION INTERIOR

NOT IN CONTRACT NOM NTS NOMINAL NOT TO SCALE ON CENTER OPENING OSB PERFORATED PLATE PARALLAM PLASTIC LAMINATE PANEL PNTD PAINTED PRESSURE TREATED PAVEMENT PLYMD PLYWOOD POWDER ROOM ROD & SHELF RETURN AIR GRILL RAG REF REFRIGERATOR REINFORCEMENT REQUIRED RM RS RV ROOM ROUGH SAWN RIDGE VENT SCHED SCHEDULE SECT SECTION SQUARE FEET SPECIFICATION SQ SQUARE STD SS STC STL STANDARD STAINLESS STEEL SOUND TRANS. CLASS STOR STORAGE STRUCT STRUCTURAL SUSPENDED SYSTEM TBD TBM TBS TDL TR TO BE DETERMINED TOP OF BENCH MARK TO BE SELECTED TRUE DIVIDED LITE TONGUE & GROOVE TELEPHONE TEMPORARY THICKNESS ILT TRUSS JOIST, I JOIST TREATED TELEVISION TYPICAL UNDER COUNTER

ACOUSTICAL PANEL CEILING SYSTEM ANCHOR BOLT JST JT ABY ADJ AFF A/O AHU _AMINATE LAVATORY ADJUSTABLE LL LT LIN ABOVE FINISH FLOOR LIVE LOAD AIR CONDITIONING LINEN AIR HANDLING UNIT ALUM ALT APPL MAXIMUM **ALTERNATE** MECHANICAL MEDIUM MEMBRANE ARCHITECT MANUFACTURER ASB0 AS SELECTED BY OWNER MICROLLAM MISC MO MSL MTD BITUM BLDG BRG BTWN BITUMINOUS BUILDING MOUNTED BYL BEVELED CANT CANTILEVER C/C CEN CENTER TO CENTER CENTER CONTROL JOINT CL CLG CMU CENTERLINE CEILING CONCRETE MASONRY UNIT CASED OPENING CONCRETE CONTINUOUS CERAMIC TILE CENTER CONDENSOR UNIT DOUBLE DEMOLISH DOUBLE HUNG DIAMETER DIM DIMENSION DISTANCE UNFINISHED

THIOL PI.3 DEMOLITION PLUMBING FLOOR PLAN - NORTH BUILDING PI.4 PLUMBING FIRST FLOOR PLAN - SOUTH BUILDING PI.5 PLUMBING SECOND FLOOR PLAN - SOUTH BUILDING PI.6 PLUMBING SECOND FLOOR PLAN - NORTH BUILDING MASONRY OPENING MEAN SEA LEVEL NOT APPLICABLE ORIENTED STRAND BD

MASHER/DRYER

MATER HEATER

MOOD

MD

MO.I HVAC - SCHEDULES & SPECIFICATIONS HVAC - FIRST FLOOR DEMOLITION PLAN - SOUTH BUILDING MI.2 HVAC - SECOND FLOOR DEMOLITION PLAN - SOUTH BUILDING MI.3 HVAC - SECOND FLOOR DEMOLITION PLAN - NORTH BUILDING MI.4 HVAC - FIRST FLOOR PLAN - SOUTH BUILDING MI.5 HVAC - SECOND FLOOR PLAN - SOUTH BUILDING MI.6 HVAC - SECOND FLOOR PLAN - NORTH BUILDING ELECTRICAL EO.I LEGENDS EO.2 GENERAL & DEMOLITION NOTES

EO.3 FIXTURE SCHEDULES & NOTES EO.4 ELECTRICAL SPECIFICATIONS EO.5 PANEL SCHEDULES & ONE-LINE DIAGRAM ELECTRICAL - FIRST FLOOR DEMOLITION PLAN - SOUTH BLDG EI.2 | ELECTRICAL - FIRST FLOOR LIGHTING PLAN - SOUTH BLDG. EI.3 | ELECTRICAL - FIRST FLOOR POWER/ COMM. PLAN - SOUTH BLDG. ELECTRICAL - SECOND FLOOR DEMOLITION PLAN - SOUTH BLDG. EI.5 ELECTRICAL - SECOND FLOOR LIGHTING PLAN - SOUTH BLDG. ELECTRICAL - SECOND FLOOR POWER/ COMM. PLAN - SOUTH BLDG. ELECTRICAL - SECOND FLOOR DEMOLITION PLAN - NORTH BLDG. EI.8 | ELECTRICAL - SECOND FLOOR LIGHTING PLAN - NORTH BLDG. EI.9 | ELECTRICAL - SECOND FLOOR POWER/ COMM. PLAN - NORTH BLDG.

SCHEDULE OF DRAWINGS • REVISED • ADDED TO SET

STRUCTURAL

SI.O STRUCTURAL NOTES

ARCHITECTURAL

FOUNDATION PLAN MODIFICATIONS

FIRST FLOOR PLAN - SOUTH BUILDING

SECOND FLOOR PLAN - NORTH BUILDING

A2.1 FINISH & DOOR SCHEDULES; DOOR & WINDOW TYPES

A3.1 PARTIAL EXTERIOR ELEVATIONS - SOUTH BUILDING

A6.I ENLARGED FLOOR PLANS; TYPICAL INTERIOR

A5.I EXTERIOR SIGNAGE - ELEVATION AND SECTION DETAILS

PO.I PLUMBING - LEGENDS, SCHEDULES, & SPECIFICATIONS

DEMOLITION PLUMBING FLOOR PLAN - SOUTH BUILDING

DEMOLITION PLUMBING FLOOR PLAN - SOUTH BUILDING

FIRST FLOOR REFLECTED CEILING PLAN - SOUTH BUILDING SECOND FLOOR REFLECTED CEILING PLAN - SOUTH BUILDING

AI.6 SECOND FLOOR REFLECTED CEILING PLAN - NORTH BUILDING

RESTROOM ELEVATION; ACCESSORY MOUNTING HEIGHTS

AI.2 SECOND FLOOR PLAN - SOUTH BUILDING

INTERIOR DOOR DETAILS

A6.2 INTERIOR ELEVATIONS

A6.3 INTERIOR ELEVATIONS A6.4 INTERIOR ELEVATIONS

PLUMBING

A6.5 INTERIOR CABINET SECTIONS

S2.I SECOND FLOOR MODIFICATIONS

STRUCTURAL NOTES

BASIS OF DESIGN:

	0041/771/ 1 0400		
<u>A.</u>	GRAVITY LOADS		
1.	2 ND FLOOR DEAD LOAD:	15	P
2.	2 ND FLOOR PARTITION LOADS:	15	P
3.	2 ND FLOOR LIVE LOADS:		
	OFFICES:	50 F	28
	CORRIDORS:	80 F	28
	LOBBIES:	100 F	28
	STAIRS:	100 F	9
	TOILETS:	40 F	25

- 1. DO NOT SCALE DRAWINGS. FOLLOW DIMENSIONS SHOWN ON PLAN OR OBTAIN ADDITIONAL INFORMATION.
- 2. CONTRACTOR SHALL COORDINATE AND VERIFY ALL DIMENSIONS AND ELEVATIONS SHOWN HEREIN WITH ARCHITECTURAL PLANS, SECTIONS, AND DETAILS PRIOR TO CONSTRUCTION OR MATERIAL PURCHASE. CONTRACTOR SHALL NOTIFY ARCHITECT IN WRITING OF ANY DISCREPANCIES NOTED. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS AND ELEVATIONS NOT SHOWN HEREIN.
- 3. WHERE DETAIL OR SECTION IS SHOWN FOR ONE CONDITION. IT SHALL APPLY TO ALL LIKE OR SIMILAR LOCATIONS.
- 4. CONTRACTORS SHALL VISIT THE SITE PRIOR TO BID TO ASCERTAIN CONDITIONS WHICH MAY ADVERSELY AFFECT THE WORK OR COST THEREOF AND SHALL NOTIFY THE ARCHITECT IN WRITING PRIOR TO SUBMITTING BIDS.
- REFERENCE TO STANDARD SPECIFICATIONS OF ANY TECHNICAL SOCIETY, ORGANIZATION, OR ASSOCIATION OR TO CODES OF LOCAL OR STATE AUTHORITIES, SHALL MEAN THE LATEST STANDARD, CODE, SPECIFICATION, OR TENTATIVE SPECIFICATION ADOPTED AT THE DATE OF TAKING BIDS, UNLESS SPECIFICALLY
- 6. NO CHANGE IN SIZE OR DIMENSION OF ANY STRUCTURAL MEMBER SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER OF RECORD. NO OPENING SHALL BE MADE IN ANY STRUCTURAL MEMBER WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER OF RECORD UNLESS SPECIFICALLY DETAILED ON THE CONTRACT DRAWINGS.
- 7. STRUCTURAL DRAWINGS ARE INTENDED TO BE USED WITH ARCHITECTURAL DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING SUCH REQUIREMENTS INTO THE SHOP DRAWINGS AND CONSTRUCTION ACTIVITIES.
- 8. THE USE OF REPRODUCTIONS OF CONTRACT DRAWINGS BY ANY CONTRACTOR, SUBCONTRACTOR, ERECTOR, FABRICATOR, OR MATERIAL SUPPLIER, IN LIEU OF PREPARATION OF SHOP DRAWINGS SIGNIFIES HIS ACCEPTANCE OF ALL INFORMATION SHOWN HEREON AS CORRECT AND OBLIGATES HIMSELF TO ANY JOB EXPENSE, REAL OR IMPLIED, ARISING DUE TO ANY ERRORS THAT MAY OCCUR HEREON.
- 9. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL SAFETY PRECAUTIONS AND REGULATIONS DURING THE WORK. THE ENGINEER WILL NOT ADVISE ON NOR ISSUE DIRECTION AS TO SAFETY PRECAUTIONS AND PROGRAMS.
- 10. CONTRACTOR HAS THE SOLE RESPONSIBILITY FOR MEANS. METHODS. SAFETY. TECHNIQUES, SEQUENCES, AND PROCEDURES OF ALL CONSTRUCTION SHOWN HEREIN. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTIBILITY, ANALYSIS, AND ERECTION PROCEDURES, INCLUDING DESIGN AND ERECTION OF FALSE WORK, TEMPORARY BRACING, ETC. CONTRACTOR HAS THE SOLE RESPONSIBILITY TO COMPLY WITH ALL OSHA REGULATIONS.
- 11. THE STRUCTURE IS STABLE ONLY IN ITS COMPLETED FORM. TEMPORARY SUPPORTS REQUIRED FOR STABILITY DURING ALL INTERMEDIATE STAGES OF CONSTRUCTION SHALL BE DESIGNED, FURNISHED, AND INSTALLED BY THE CONTRACTOR.

EXISTING CONSTRUCTION:

- 1. DIMENSIONS INDICATED RELATIVE TO EXISTING STRUCTURES ARE APPROXIMATE AND SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION OR MATERIAL PURCHASE. CONTRACTOR SHALL NOTIFY ARCHITECT IN WRITING OF DISCREPANCIES.
- 2. BEFORE PROCEEDING WITH ANY WORK WITHIN THE EXISTING STRUCTURE, THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE EXISTING STRUCTURAL AND OTHER CONDITIONS. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PROVIDE ALL NECESSARY BRACING, SHORING AND OTHER SAFEGUARDS TO MAINTAIN ALL PARTS OF THE EXISTING WORK IN A SAFE CONDITION DURING THE PROCESS OF DEMOLITION AND CONSTRUCTION AND TO PROTECT FROM DAMAGE THOSE PORTIONS OF THE EXISTING WORK WHICH ARE TO REMAIN.
- BEFORE PROCEEDING WITH ANY WORK, THE CONTRACTOR SHALL PERFORM A PRE-CONSTRUCTION SURVEY OF THE EXISTING BUILDING AT INTERIOR OF BUILDING WITHIN 10 FEET OF ALL REMODELING WHICH AFFECTS EXISTING STRUCTURAL SYSTEMS. CONTRACTOR SHALL FURNISH A REPORT TO THE ARCHITECT WHICH INCLUDES PHOTOGRAPHS WHICH DOCUMENT EXISTING BUILDING CRACKS OR OTHER COSMETIC FLAWS IN THE BUILDING. CONTRACTOR SHALL PROVIDE CRACK CONTROL MONITORS OR OTHER MONITORING DEVICES AS MAY BE WARRANTED BASED ON THE CONDITIONS
- 4. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS, ETC., NECESSARY FOR THE PROPER CONSTRUCTION AND ALIGNMENT OF THE NEW PORTIONS OF THE WORK TO THE EXISTING WORK. THE CONTRACTOR SHALL MAKE ALL FIELD MEASUREMENTS NECESSARY FOR THE COMPLETE DETAILING, FABRICATION, AND ERECTION OF ALL STRUCTURAL MEMBERS. ANY DISCREPANCY NOTED BETWEEN ASSUMPTIONS MADE ON THE DRAWINGS OF EXISTING FEATURES AND THE ACTUAL CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT / ENGINEER. ALL DIMENSIONS OBTAINED IN FIELD AND USED AS A BASIS OF DETAILING SHALL BE CLEARLY INDICATED ON THE SHOP DRAWINGS.
- 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND ERECTION OF ALL SHORING NECESSARY TO SAFEGUARD THE EXISTING STRUCTURE. ANY SHORING SHOWN HEREIN IS A PARTIAL AND SCHEMATIC REPRESENTATION OF THAT REQUIRED. THE CONTRACTOR SHALL SUBMIT A DETAILED PLAN FOR SHORING, BRACING AND PROTECTION OF THE EXISTING CONSTRUCTION. THIS PLAN SHALL INCLUDE A CONSTRUCTION SEQUENCE AND SHALL BEAR THE SEAL OF THE PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF GEORGIA AND SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER FOR REVIEW PRIOR TO BEGINNING THE WORK.

FOUNDATIONS:

- 1. FOUNDATION DESIGN IS BASED ON AN ASSUMED MAXIMUM ALLOWABLE SOIL BEARING PRESSURE OF 1500 PSF. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR SUBSURFACE CONDITIONS ENCOUNTERED IN THE FIELD DIFFERENT FROM THOSE ASSUMED OR DESIGNED.
- 2. ALLOWABLE BEARING PRESSURE SHALL BE VERIFIED BY FIELD TESTING IN ACCORDANCE WITH REQUIREMENTS OF THE PROJECT SPECIFICATIONS. IN THE ABSENCE OF SPECIFICATION REQUIREMENTS, A DYNAMIC CONE PENETROMETER TEST (ASTM STP-399) SHALL BE PROVIDED AT EACH COLUMN FOOTING EXCAVATION TO VERIFY AVAILABILITY OF THE DESIGN PRESSURE INDICATED.
- 3. ALL FOOTINGS AND SLABS SHALL BEAR ON SUBGRADE COMPACTED TO A MINIMUM 95% ASTM D-1557 UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED IN PROJECT SPECIFICATIONS. UNLESS REQUIRED OTHERWISE BY SPECIFICATIONS, PROVIDE ONE COMPACTION TEST AT EACH COLUMN FOOTING EXCAVATION TO VERIFY REQUIRED COMPACTION HAS BEEN OBTAINED.
- 4. ALL BOTTOM REINFORCING IN FOOTINGS AND THICKENED SLABS SHALL BE SUPPORTED WITH WHOLE CONCRETE BRICKS OR PREFABRICATED ALL PLASTIC CHAIR SUPPORT AT MAXIMUM 48" O.C. BAR SUPPORTS SHALL BE POSITIONED TO MAINTAIN NO LESS
- THAN 3" CLEAR TO BOTTOM OF LOWEST REINFORCING BAR. 5. ALL FOOTING REINFORCING SHALL BE TIED IN PLACE PRIOR TO POURING CONCRETE.

- 1. THE LOCATION, NUMBER, AND DIMENSIONS OF TIMBER FRAMING ARE DESIGNED TO SHOW GENERAL ARRANGEMENT ONLY. ACTUAL SPANS, SPACINGS, ETC., SHALL BE DETERMINED FROM THE ARCHITECTURAL DETAILS.
- 2. SEE ARCHITECTURAL PLANS AND DETAILS FOR EDGE, SECTIONS, HEADER AND
- LINTEL LOCATIONS AND ALL NON-STRUCTURAL FRAMING AND TRIM. 3. ALL TIMBER FRAMING MATERIAL SHALL BE SURFACE DRIED AND USED AT 19% MAXIMUM MOISTURE CONTENT.
- ALL JOIST, RAFTER AND MISCELLANEOUS FRAMING SHALL BE SYP NO. 2 GRADE OR
- 5. ALL FRAMING EXPOSED TO THE WEATHER OR IN CONTACT WITH MASONRY OR CONCRETE SHALL BE PRESSURE TREATED IN ACCORDANCE WITH AWPA SPECIFICATIONS. ALL NAILING NOT OTHERWISE INDICATED SHALL BE IN ACCORDANCE WITH TABLE
- 2304.9.1 OF THE IBC 2018 BUILDING CODE. BOLT HOLES SHALL BE CAREFULLY CENTERED AND DRILLED NOT MORE THAN 1/16" LARGER THAN THE BOLT DIAMETER. BOLTED CONNECTIONS SHALL BE SNUGGED TIGHT
- PREMANUFACTURED (MICRO-LAM OR PARALLAM) HEADERS AND BEAMS SHALL BE AS MANUFACTURED BY TRUS-JOIST CORPORATION OR APPROVED EQUAL. DO NOT CUT OR NOTCH MICRO-LAM OR PARALLAM MATERIAL WITHOUT THE ENGINEERS APPROVAL.
- HOLES AND NOTCHES DRILLED OR CUT INTO WOOD FRAMING SHALL NOT EXCEED REQUIREMENTS OF IBC 2018, SECTIONS 2308.8.2 AND 2308.9.10.
- 10. ALL PLATES, ANCHORS, NAILS, BOLTS, NUTS, WASHERS, AND OTHER MISCELLANEOUS FRAMING AND CONNECTION HARDWARE SHALL BE HOT-DIPPED

BUT NOT TO THE EXTENT OF CRUSHING WOOD UNDER WASHERS.

SPECIAL STRUCTURAL INSPECTIONS:

- A. SPECIAL INSPECTIONS
- SPECIAL STRUCTURAL TESTS AND INSPECTIONS SHALL BE PERFORMED ON THIS PROJECT IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 17 OF THE IBC 2018 BUILDING CODE.
- 2. SPECIAL STRUCTURAL TESTS AND INSPECTIONS SHALL BE PERFORMED BY AN AGENCY SELECTED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER OF RECORD (EOR) WHICH MEETS ALL OF THE REQUIREMENTS FOR APPROVAL INDICATED IN IBC 2018 SECTION 1704. SPECIAL INSPECTORS SHALL BE QUALIFIED PERSONS WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL
- 3. THE CONTRACTOR SHALL COORDINATE THE INSPECTION SERVICES IN ACCORDANCE WITH THE PROGRESS OF THE WORK. THE CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE TO THE INSPECTOR TO ALLOW PROPER SCHEDULING OF PERSONNEL.
- 4. THE COSTS OF THE SPECIAL INSPECTORS SERVICES SHALL BE PAID FOR BY THE OWNER. COSTS OF INSPECTION SERVICES WHICH ARE EXEMPTED UNDER CHAPTER 17 AND SPECIFIED IN THE PROJECT SPECIFICATIONS, SHALL BE PAID FOR BY THE CONTRACTOR.
- 1. SPECIAL INSPECTORS SHALL KEEP A RECORD OF ALL INSPECTIONS PERFORMED. COPIES OF ALL INSPECTIONS SHALL BE FURNISHED TO THE BUILDING OFFICIAL, THE ARCHITECT, AND THE EOR WITHIN 48 HOURS OF THE
 - 2. REPORTS SHALL INDICATE THAT THE WORK WAS PERFORMED AND CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. WORK WHICH DOES NOT CONFORM TO THE CONTRACT DOCUMENTS SHALL BE IDENTIFIED IN THE REPORT AND SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR
 - 3. A FINAL REPORT OF INSPECTIONS DOCUMENTING REQUIRED SPECIAL INSPECTIONS INCLUDING ANY DISCREPANCIES NOTED IN THE INSPECTIONS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL, THE ARCHITECT, AND THE EOR PRIOR TO COMPLETION OF THE STRUCTURAL SYSTEMS BUT AT A FREQUENCY
- NOT TO EXCEED 60 DAYS. REQUIRED SPECIAL INSPECTIONS

IBC		SPECIAL	INSPECTION	REQUIRED
SECTION	DESCRIPTION OF WORK	YES	NO	REMARKS
1704.2.5	INSPECTION OF FABRICATORS		Х	
1705.2	STEEL CONSTRUCTION		Χ	
1705.3	CONCRETE CONSTRUCTION	Χ		1
1705.4	MASONRY CONSTRUCTION		Χ	
1705.5	WOOD CONSTRUCTION		Χ	
1705.6	SOILS	Χ		2
1705.7	DRIVEN DEEP FOUNDATION		Χ	
1705.8	CAST-IN-PLACE DEEP FOUNDATIONS		Χ	
1705.9	HELICAL PILE FOUNDATIONS		Χ	
1705.10	WIND RESISTANCE		Χ	
1705.11	SEISMIC RESISTANCE		Χ	
1705.12	TESTING AND QUALIFICATIONS FOR			
	SEISMIC RESISTANCE		Χ	
1705.13	SPRAYED FIRE-RESISTANT MATERIALS		Χ	
1705.14	MASTIC AND INTUMESCENT COATINGS		Χ	
1705.15	EXTERIOR INSULATION AND FINISH			
	SYSTEMS (EIFS)		Χ	
REMARKS:				

CONCRETE SPECIAL INSPECTION:

- CONTINUOUS AND PERIODIC INSPECTIONS, AS DEFINED BY SECTION 202 OF THE IBC 2018 BUILDING CODE, SHALL BE PERFORMED BY THE SPECIAL INSPECTION AGENCY IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 1705.3 AND TABLE 1705.3.
- SOILS SPECIAL INSPECTION:
- INSPECTION OF THE EXISTING SITE SOIL CONDITIONS, FILL PLACEMENT AND LOAD BEARING REQUIREMENTS SHALL BE PERFORMED BY THE SPECIAL INSPECTION AGENCY IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 1705.6 AND TABLE 1705.6.

STRUCTURAL LEGEND

SYMBOLS

_____ UNREINFORCED CONCRETE MASONRY REINFORCED CONCRETE MASONRY CONCRETE BOND BEAM REINF. MASONRY PIERS DROP SLAB TO RECEIVE FLOOR FINISH THICKENED SLAB FLOOR JOINT WFJ WALL FLOOR JOINT SAWN JOINT 1" DEEP TOOLED JOINT CONCRETE SLAB TURNDOWN SLOPE (DIRECTION AND DROP) VERTICAL STEP IN WALL FOOTING TOP OF STEEL ELEVATION TOP OF FOOTING ELEVATION

ADD #4x4'-0" IN CENTERLINE OF SLAB

HIGH STRENGTH BOLT

JOIST BOTTOM CHORD STRUT

FRAME AROUND ROOF DECK OPENING BEAM TO COLUMN MOMENT CONNECTION

ABBREVIATIONS

ROOF DRAIN

DBL. DOUBLE DOUBLE JOIST SIMILAR THROUGHOUT U.N. UNLESS NOTED P.E.J. PRE-MOLDED EXPANSION JOINT GA. E.W. EACH WAY O.C. ON CENTER CLEARANCE

FLOOR DRAIN LLV LONG LEG VERTICAL SHORT LEG VERTICAL EXPANSION JOINT

METAL BUILDING MANUFACTURER METAL BUILDING PURLINS 0.H. OPPOSITE HAND PARALAM BEAM

MICROLAM BEAM ROUGH SAWN PRESSURE TREATED PRE-ENGINEERED

STRUCTURAL SHEET INDEX

S1.0 STRUCTURAL NOTES S1.1 FOUNDATION PLAN MODIFICATIONS SECOND FRAMING PLAN

MODIFICATIONS

MATERIAL SPECIFICATIONS:

CONCRETE

1 FOUNDATIONS: 3000 PSI 28 DAY COMPRESSIVE STRENGTH (NON-AIR ENTRAINED) 2. REINFORCING BARS: ASTM A615, GRADE 60, DEFORMED

TIMBER

1 FRAMING: SYP NO. 2 KD or BETTER 2 STUDS: SYP STUD GRADE OR BETTER

GREENLINE A R C H I T E C T U R 28 E 35TH ST

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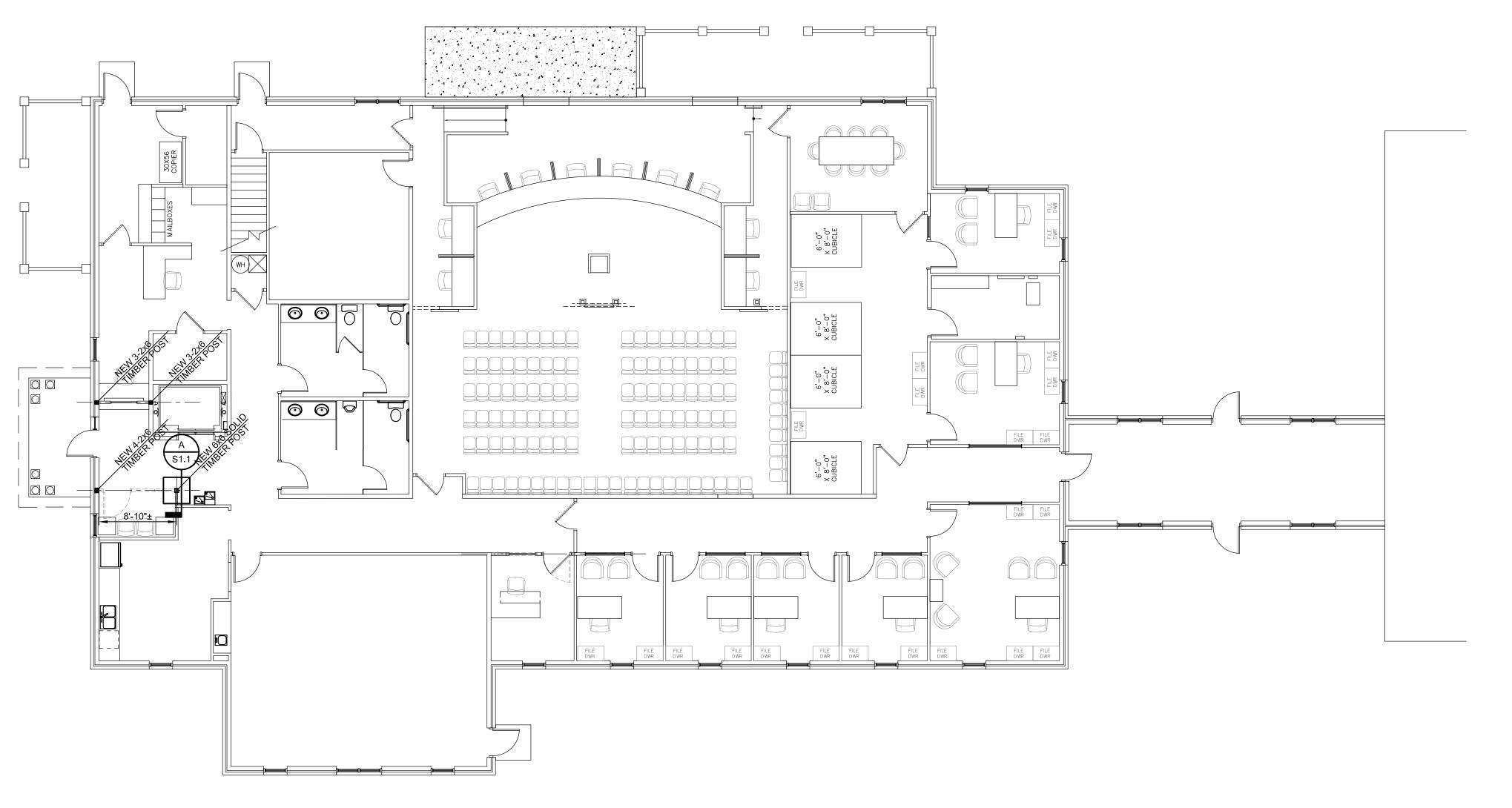


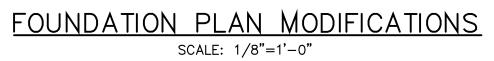
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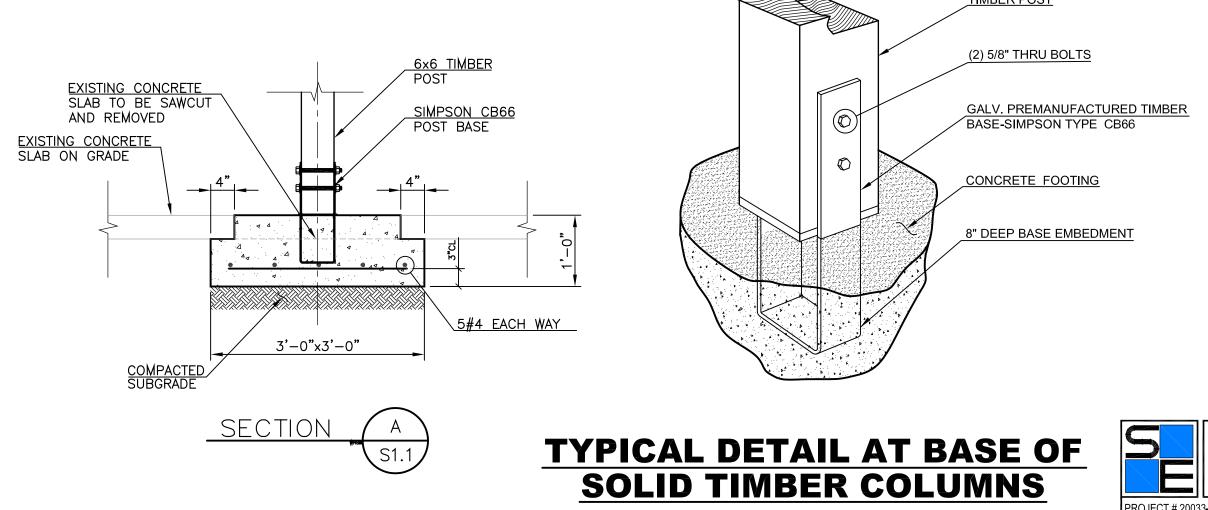
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PROJECT # 20033-PLOT DATE: S1-0.dwg 8/5/20 5:02 pm







SAUSSY ENGINEERING
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PROJECT # 20033-PLOT DATE: \$1-1.dwg 8/5/20 10:18 am



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EFFINGHAM COUNTY ADMINISTRATION BUILDING

FOUNDATION PLAN MODIFICATIONS

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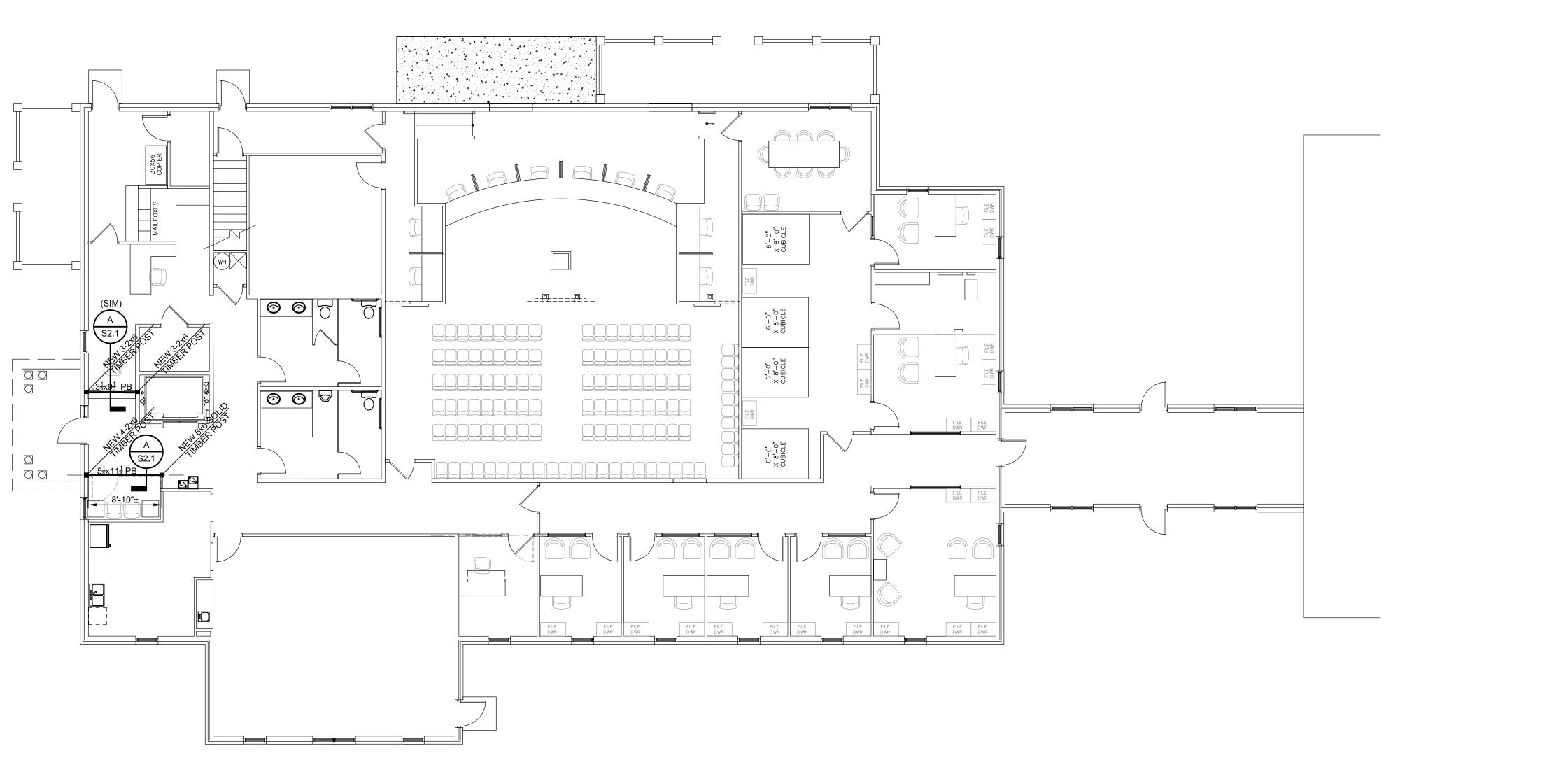
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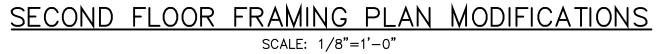
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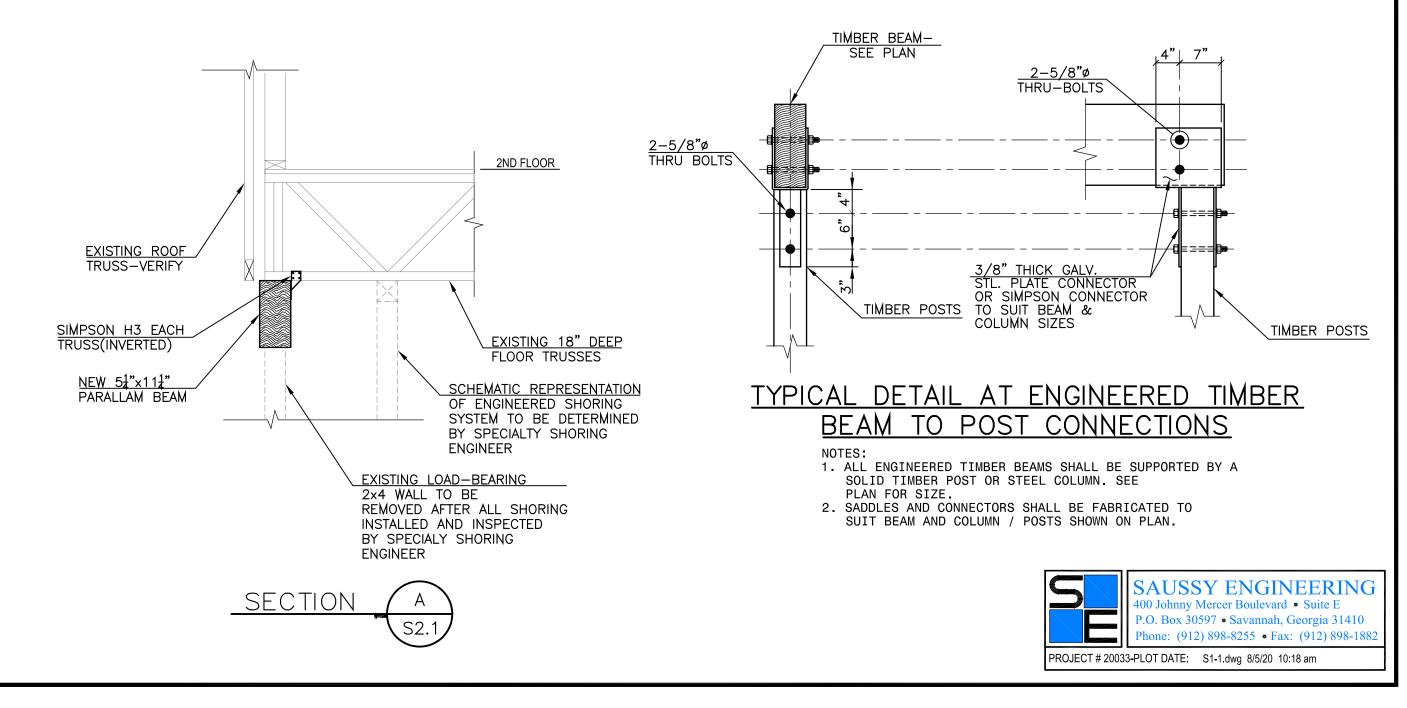
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EFFINGHAM COUNTY ADMINISTRATION BUILDING

SECOND FLOOR FRAMING PLAN MODIFICATIONS

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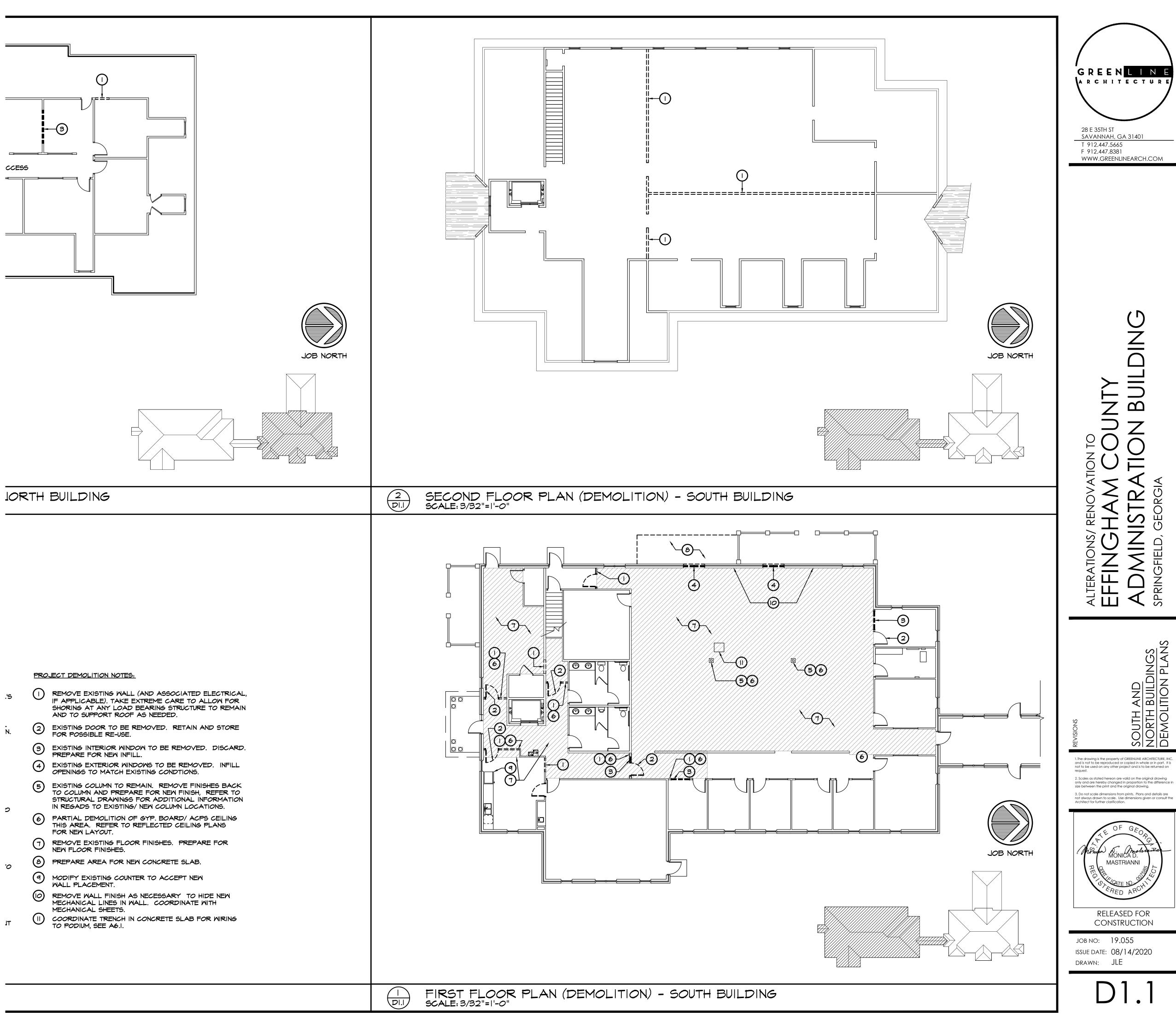
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S2.1

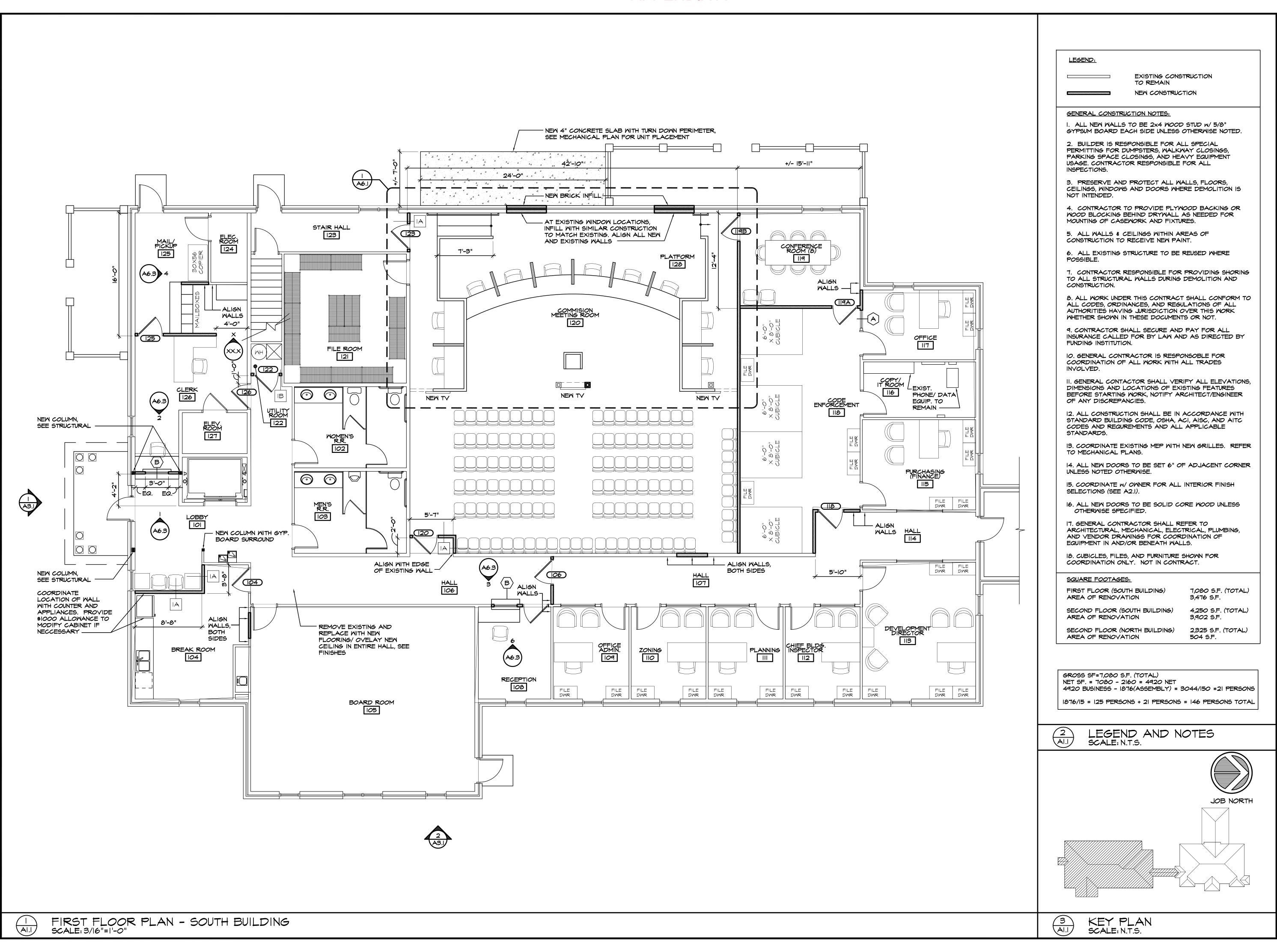


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MASTRIANNI

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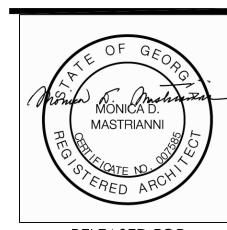
> > AM COUNTY IRATION BUILDING

FFING

SOUTH BUILDING FIRST FLOOR PLA

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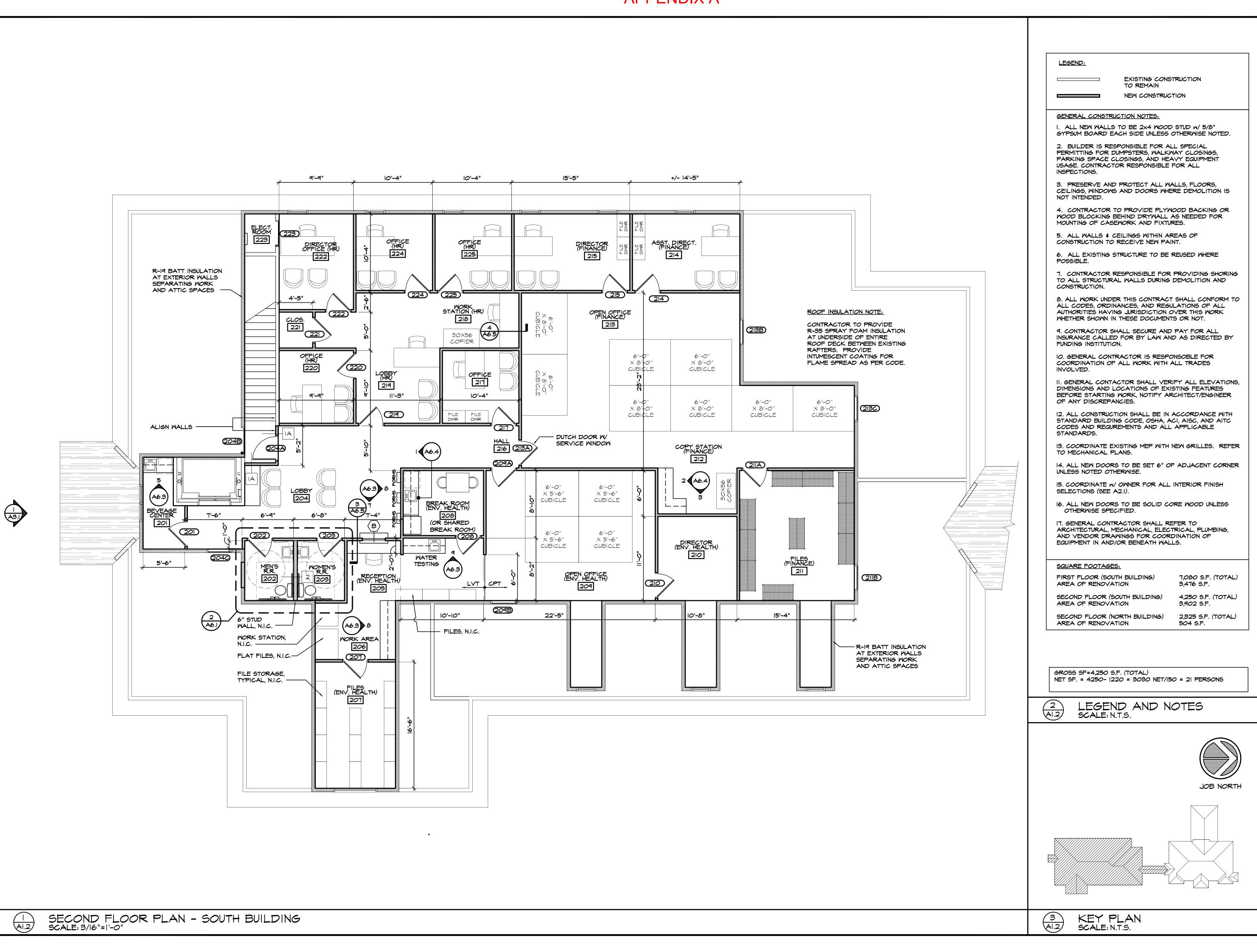
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JOB NO: 19.055

ISSUE DATE: 08/14/2020

DRAWN: JLE

A1.1



ARCHITECTURE

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MASTRIANNI

FFING

SOUTH BUILDING
SECOND FLOOR PL

JOB NO: 19.055 ISSUE DATE: 08/14/2020 DRAWN: JLE

LEGEND:

EXISTING CONSTRUCTION

TO REMAIN
NEW CONSTRUCTION

GENERAL CONSTRUCTION NOTES:

I. ALL NEW WALLS TO BE 2x4 WOOD STUD W/ 5/8" GYPSUM BOARD EACH SIDE UNLESS OTHERWISE NOTED.

2. BUILDER IS RESPONSIBLE FOR ALL SPECIAL PERMITTING FOR DUMPSTERS, WALKWAY CLOSINGS, PARKING SPACE CLOSINGS, AND HEAVY EQUIPMENT USAGE. CONTRACTOR RESPONSIBLE FOR ALL INSPECTIONS.

3. PRESERVE AND PROTECT ALL WALLS, FLOORS, CEILINGS, WINDOWS AND DOORS WHERE DEMOLITION IS NOT INTENDED.

4. CONTRACTOR TO PROVIDE PLYWOOD BACKING OR WOOD BLOCKING BEHIND DRYWALL AS NEEDED FOR MOUNTING OF CASEWORK AND FIXTURES.

5. ALL WALLS & CEILINGS WITHIN AREAS OF CONSTRUCTION TO RECEIVE NEW PAINT.

6. ALL EXISTING STRUCTURE TO BE REUSED WHERE POSSIBLE.

 CONTRACTOR RESPONSIBLE FOR PROVIDING SHORING TO ALL STRUCTURAL WALLS DURING DEMOLITION AND CONSTRUCTION.

8. ALL WORK UNDER THIS CONTRACT SHALL CONFORM TO ALL CODES, ORDINANCES, AND REGULATIONS OF ALL AUTHORITIES HAVING JURISDICTION OVER THIS WORK WHETHER SHOWN IN THESE DOCUMENTS OR NOT.

9. CONTRACTOR SHALL SECURE AND PAY FOR ALL INSURANCE CALLED FOR BY LAW AND AS DIRECTED BY FUNDING INSTITUTION.

IO. GENERAL CONTRACTOR IS RESPONSOBLE FOR COORDINATION OF ALL WORK WITH ALL TRADES INVOLVED.

II. GENERAL CONTACTOR SHALL VERIFY ALL ELEVATIONS, DIMENSIONS AND LOCATIONS OF EXISTING FEATURES BEFORE STARTING WORK, NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES.

12. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH STANDARD BUILDING CODE, OSHA, ACI, AISC, AND AITC CODES AND REQUREMENTS AND ALL APPLICABLE STANDARDS.

13. COORDINATE EXISTING MEP WITH NEW GRILLES. REFER TO MECHANICAL PLANS.

14. ALL NEW DOORS TO BE SET 6" OF ADJACENT CORNER UNLESS NOTED OTHERWISE.

15. COORDINATE W/ OWNER FOR ALL INTERIOR FINISH SELECTIONS (SEE A2.1).

16. ALL NEW DOORS TO BE SOLID CORE WOOD UNLESS OTHERWISE SPECIFIED.

IT. GENERAL CONTRACTOR SHALL REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND VENDOR DRAWINGS FOR COORDINATION OF EQUIPMENT IN AND/OR BENEATH WALLS.

18. CUBICLES, FILES, AND FURNITURE SHOWN FOR COORDINATION ONLY. NOT IN CONTRACT.

SQUARE FOOTAGES:

AREA OF RENOVATION

AREA OF RENOVATION

FIRST FLOOR (SOUTH BUILDING)

7,080 S.F. (TOTAL) 3,476 S.F.

2,325 S.F. (TOTAL)

504 S.F.

SECOND FLOOR (SOUTH BUILDING) 4,250 S.F. (TOTAL)

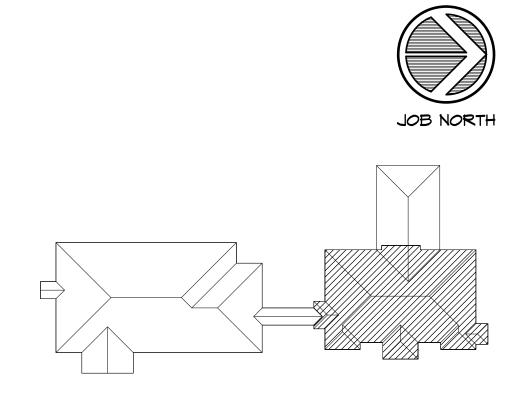
AREA OF RENOVATION 3,902 S.F.

GROSS SF=2,325 S.F. (TOTAL)

SECOND FLOOR (NORTH BUILDING)



NET SF. = 2,325/150 = 16 PERSONS



GREEN LINE ARCHITECTURE

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EFFINGHAM COUNTY
ADMINISTRATION BUILDING

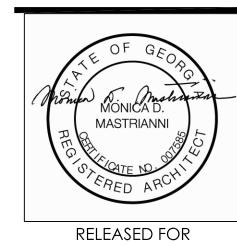
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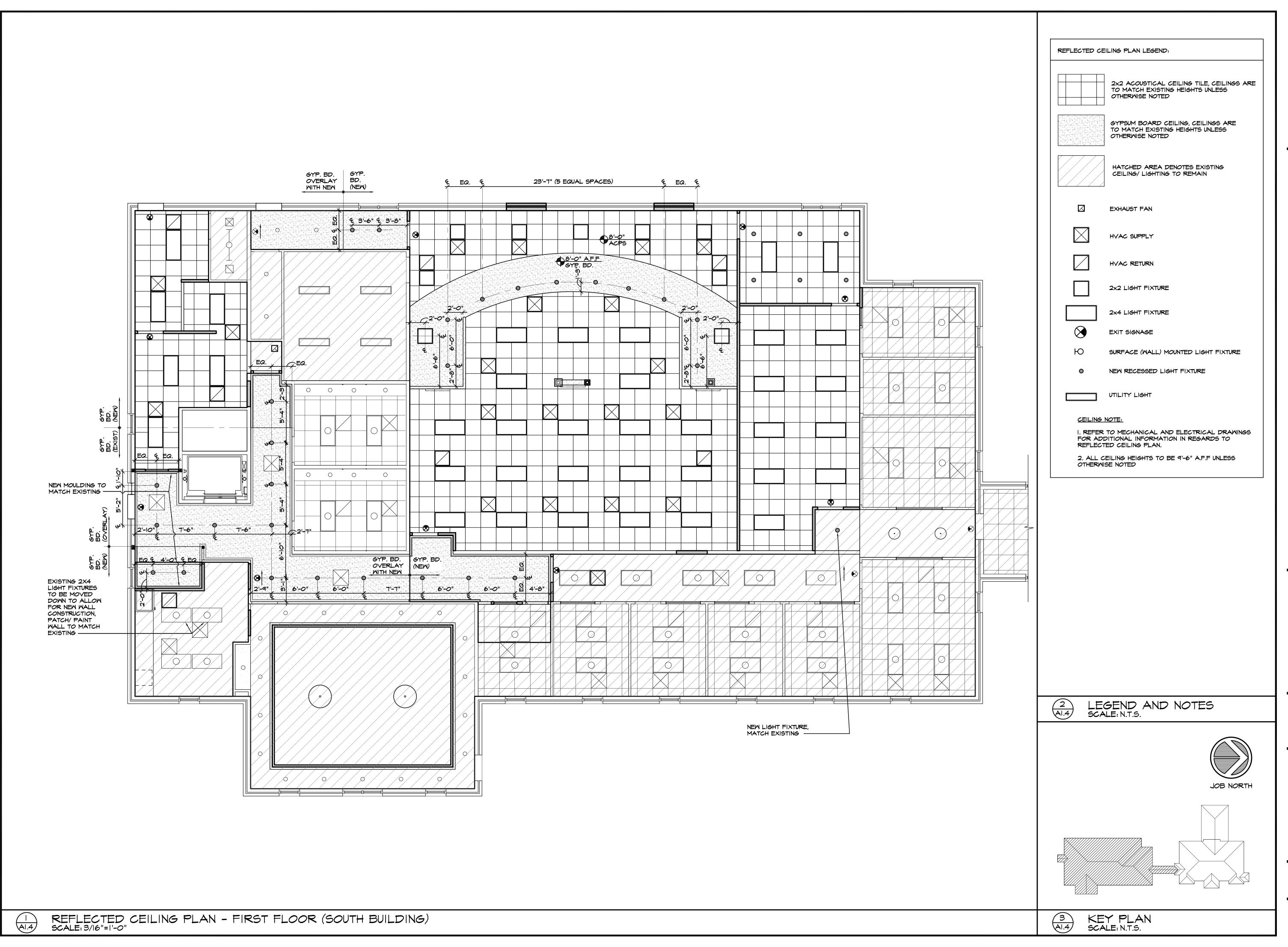
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A1.3

3 KEY PLAN SCALE: N.T.S.

AI.3





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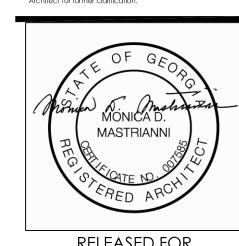
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FFINGHAM COUNTY ADMINISTRATION BUILDING

SOUTH BUILDING
REFLECTED CEILII

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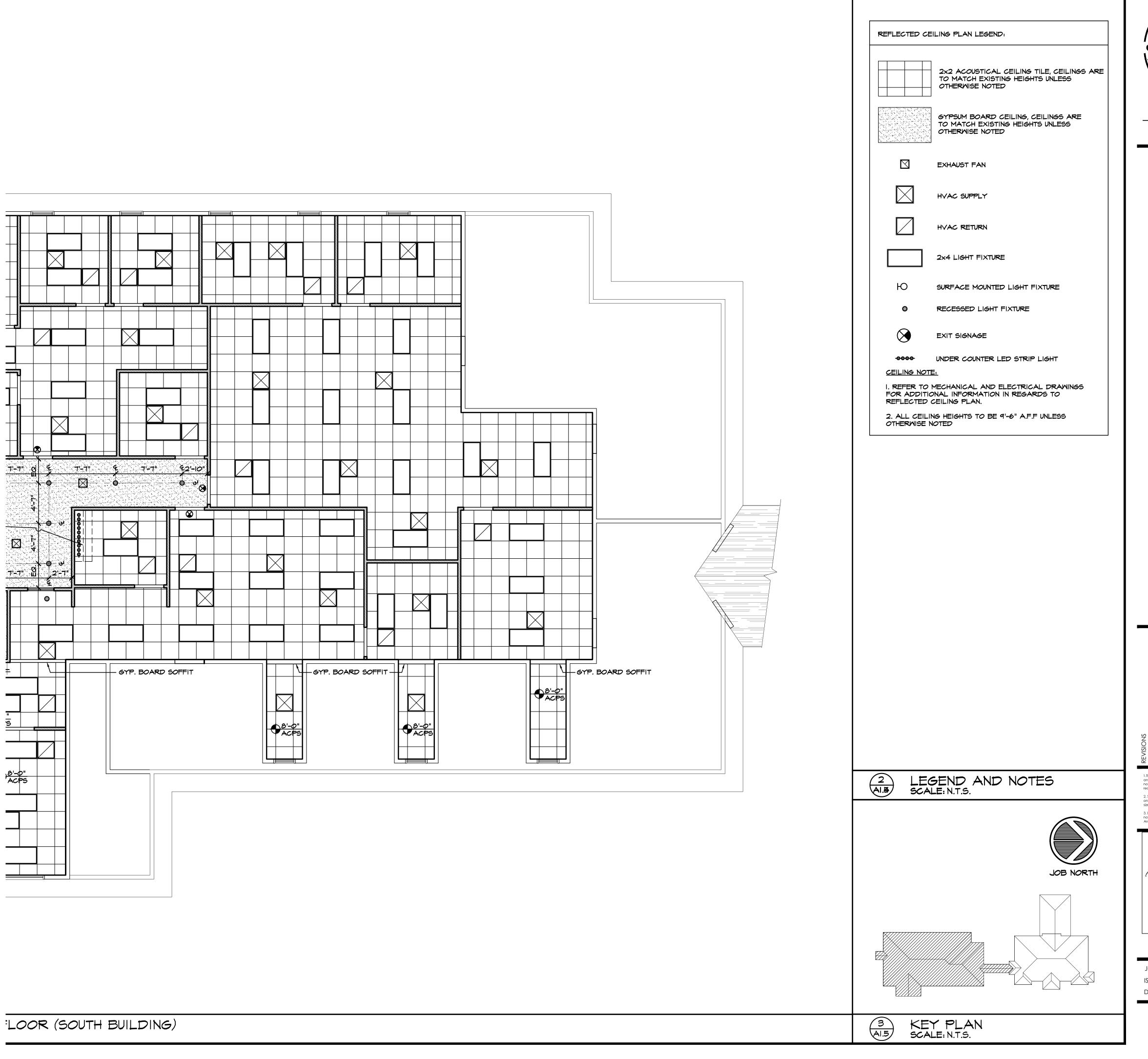
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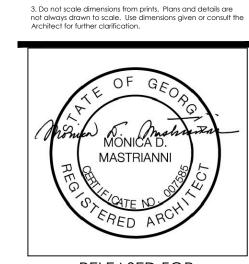
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EFFINGHAM COUNTY
ADMINISTRATION BUIL

SOUTH BUILDING
REFLECTED CEILING
PLAN (SECOND FLOOR

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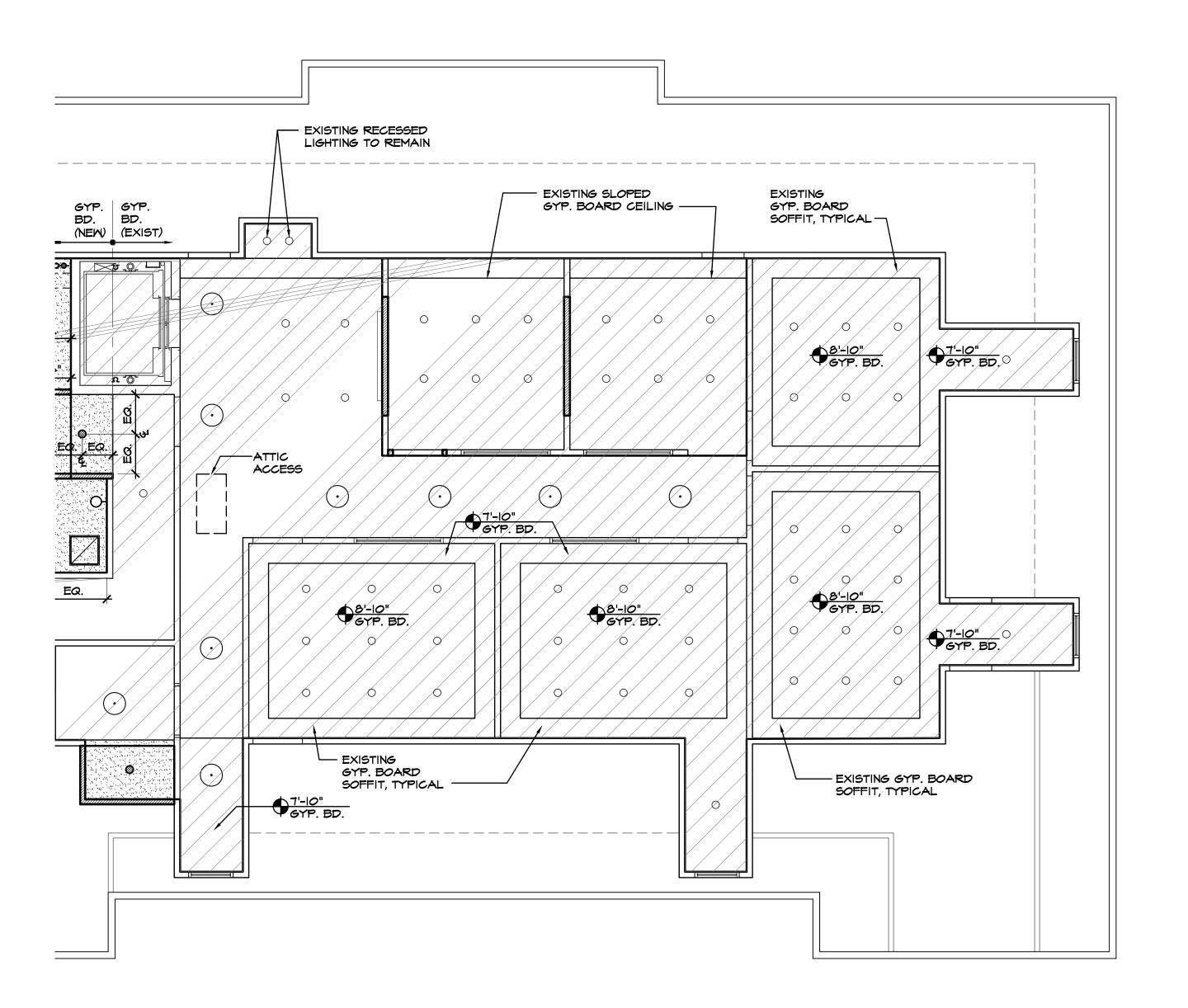
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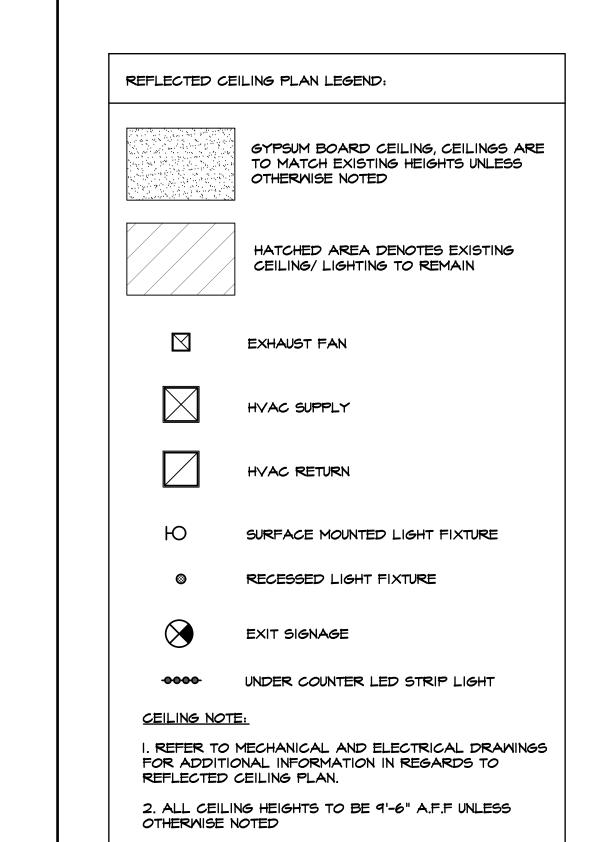
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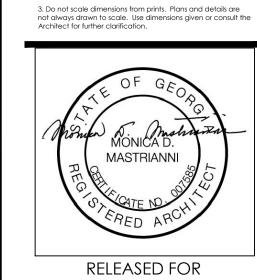
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CONSTRUCTION

JOB NO: 19.055 ISSUE DATE: 08/14/2020 drawn: JLE

LEGEND AND NOTES SCALE: N.T.S.

KEY PLAN SCALE: N.T.S.

2 Al.6

LOCKSET FINISH	SPACE FLOOR BA				 BE				MALLS			TRIM CASEWORK CEILING									
LOCK KEYSIDE DOOR FRAME FIRE RATING REMARKS	NO. NAME	MAT.	FIN.	MAT.		NOR		EA	AST FIN.	MAT.	OUTH FIN.	MAT.	MEST FIN.			MAT. F		EIGHT MA		REMARKS	
- 106 PT PT 20-MIN	SOUTH BUILDING - FIRST	T FLOOR	-	MD	_	-		GYP	PT	_	-	GYP	PT	MD		•		1'-6" GY		-	
- 106 PT PT 20-MIN	102 WOMEN'S RESTRI		-	-	<u>-</u> -	-	-	-	-	-	-	-	-	-	-		 	-	-	EXISTING TO REMAIN EXISTING TO REMAIN	
- II6 PT PT	104 BREAK ROOM	-	-	-	-	GYP	PT	-	-	-	-	GYP	PT	-	-				-	-	
- I20 PT PT - I06 PT PT 20-MIN	105 BOARD ROOM 106 HALL 107 HALL	CT	- -	MD -	<u>-</u> -	GYP	- PT -	- GYP	- - PT	-	-	- -	- -	-	-		 		-	EXISTING TO REMAIN -	
	108 RECEPTION	-	-	-	-	-	-	-	-	-	-	-	-	-	_				-	EXISTING TO REMAIN EXISTING TO REMAIN	
	IO OFFICE ADMIN. IIO ZONING	-	-	-	-	-	-	-	-	-	-	-	-	-	-		 		-	EXISTING TO REMAIN	
	III PLANNING II2 CHIEF BLDG. INS	P	-	-	-	-	-	-	-	-	-	-	-	-	-		 		-	EXISTING TO REMAIN EXISTING TO REMAIN	
204 PT PT	II3 DEV. DIRECTOR	-	-	-	-	-	-	-	-	GYP	PT	GYP	PT	-	-		 		-	EXISTING TO REMAIN	
204 PT PT	II5 PURCHASING (FIN	-	-	-	-	-	-	-	-	-	-	-	-	-	-		 		-	EXISTING TO REMAIN EXISTING TO REMAIN	
204 PT PT 204 PT PT 20-MIN -	II7 OFFICE II8 CODE ENFORCE.		-	-	-	-	-	-	-	GYP	PT	GYP	PT	MD	PT			1'-6" AC	PS -	EXISTING TO REMAIN	
204 PT PT - -	119 CONFERENCE RM	1	-	-	<u>-</u>	- GYP	PT	GYP -	PT -	GYP -	PT -	-	-	MD	PT		- VA	1'-6" ACI ARIES 6YP/	KPS -	-	
- 206 PT PT - 209 PT PT	121 FILE ROOM 122 UTILITY ROOM	- CT	-	- MD	-	-	-	- GYP	PT	-	-	-	-	-	-		 	· -		EXISTING TO REMAIN	
216 PT PT - -	123 STAIR HALL 124 ELECT. ROOM	-	-	-	-	-	-	-	-	-	-	-	-	-	-		 		-	EXISTING TO REMAIN	
209 PT PT 213 PT PT	125 MAIL/ PICKUP 126 CLERK	LVT CPT	-	MD MD	-	-		GYP GYP	PT	-	-	- GYP	PT	MD MD	PT			1'-6" GY 1'-6" ACI		-	
211 PT PT - NEW DOOR IN EXISTING OPENING	127 ELEV. ROOM	-	-	-	-	-	-	-	-	-	-	-	-	-					-	EXISTING TO REMAIN	
213 PT PT - NEW DOOR IN EXISTING OPENING	SOUTH BUILDING - SECO 201 BEVERAGE CTR.	LVT	-	MD	-	GYP		GYP	PT	GYP	PT	GYP	PT	MD				1'-6" GY		-	
2I3 PT PT - NEW DOOR IN EXISTING OPENING 2I3 PT PT - -	202 MEN'S RESTRM. 203 WOMEN'S RESTRI		-	MD MD	-	GYP GYP	PT	GYP GYP	PT PT	GYP GYP	PT PT	GYP GYP	PT PT	MD MD	PT		- 9	1'-6" GY 1'-6" GY	P PT	-	
2 3 PT PT 204 PT PT	204 LOBBY 205 RECEPTION	LVT LVT	-	MD MD	-	GYP GYP	PT	GYP GYP	PT PT	GYP GYP	PT PT	GYP GYP	PT PT	MD MD	PT PT		- 9	1'-6" GY 1'-6" ACI	PS -	-	
2 9 PT PT 2 9 PT PT	206 WORK AREA 207 FILES	LVT LVT	-	MD MD	-	GYP GYP	PT	GYP GYP	PT PT	GYP GYP	PT PT	GYP GYP	PT PT	MD MD	PT PT		- 8	3'-0" AC	-	-	
2 9 PT PT - - - - - - - -	208 BREAK ROOM 209 OPEN OFFICE	LVT	-	MD MD	-	GYP GYP	+	GYP GYP	PT PT	GYP GYP	PT PT	GYP GYP	PT PT	MD MD	PT PT		- 9	1'-6" ACI		-	
2 7 PT PT	210 DIRECTOR 211 FILES	CPT CPT	-	MD MD	-	GYP GYP		GYP GYP	PT PT	GYP GYP	PT PT	GYP GYP	PT PT	MD MD	PT PT		- 9	1'-6" AC1 1'-6" AC1	PS -	-	
	212 COPY STATION 213 OPEN OFFICE	CPT CPT	-	MD MD	-	GYP GYP	PT	GYP GYP	PT PT	GYP GYP	PT PT	GYP GYP	PT PT	MD MD	PT PT		- 9	1'-6" ACI	75 - 75 -	-	
307 PT PT	214 ASST. DIRECTOR 215 DIRECTOR		-	MD MD	-	GYP GYP	PT	GYP GYP	PT PT	GYP GYP	PT PT	GYP GYP	PT PT	MD MD	PT PT		- 9	1'-6" ACI	-	-	
3IO PT PT	216 HALL 217 OFFICE	LVT	-	MD MD	-	GYP GYP	PT	GYP GYP	PT	GYP GYP	PT PT	GYP	PT PT	MD	PT		- 9	1'-6" ACI	-	-	
3 2 PT PT 20-MIN	218 WORK STATION 219 LOBBY	CPT CPT	-	MD MD	-	GYP GYP		GYP GYP	PT PT	GYP	PT PT	GYP GYP	PT PT	MD MD	PT			1'-6" ACI		-	
DOOR LEGEND:	220 OFFICE 221 CLOSET	CPT CPT	-	MD MD	-	GYP GYP	PT	GYP GYP	PT PT	GYP	PT PT	GYP	PT PT	MD MD	PT PT		- 9	7'-6" AC1 7'-6" GY	PS -	-	
MD MOOD PT PAINT	222 DIRECTOR 223 ELECT. ROOM	CPT -	-	MD -	-	GYP	PT	GYP GYP	PT	GYP	PT	GYP	PT	MD -	PT -		- 9	1'-6" ACI	-	-	
FI FAINI	224 OFFICE 225 OFFICE	CPT CPT	-	MD MD	-	GYP GYP	PT	GYP GYP	PT	GYP	PT	GYP	PT	MD	PT PT		- 9	1'-6" ACI		-	
	NORTH BUILDING - SECO	OND FLOOR																			
SEE SCHEDULE	301 TOILET 302 STORAGE	- LVT	-	- MD	-	-	-	- GYP	PT	- GYP	- PT	-	-	-	-		 - 9		- P PT	EXISTING TO REMAIN	
	303 HALL 304 CONFERENCE RM	-	-	-	-	-	-	-	-	-	-	-	-	-	-		 		-	EXISTING TO REMAIN EXISTING TO REMAIN	
TRIM TO MATCH	305 COMM. OFFICE 306 COUNTY MNGR.	-	-	-	-	-	-	-	-	-	-	-	-	-	-		 			EXISTING TO REMAIN EXISTING TO REMAIN	
EXISTING	307 COUNTY CLERK 308 COPY/ WORK RM	-	-	-	-	-	-	-	-	-	-	-	-	-	-		 		-	EXISTING TO REMAIN EXISTING TO REMAIN	
	309 EXEC. ASSIST.	-	-	-	-	-	-	-	-	-	-	-	-	-	-		 		-	EXISTING TO REMAIN	
	3II LOBBY 3I2 STAIR HALL	-	-	-	-	-	-	-	-	-	-	-	-	-	-		- <i>-</i>		-	EXISTING TO REMAIN	
	313 TOILET 314 BREAK ROOM	LVT LVT	-	MD MD	-	- GYP	-	- GYP	- PT	-	-	GYP -	PT -	MD MD	PT		- 9	1'-6" GY 1'-6" GY	P PT		
DOOR FRAME	315 ATTIC STORAGE 316 ATTIC STORAGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	EXISTING TO REMAIN EXISTING TO REMAIN	
	315 ATTIC STORAGE 318 ATTIC STORAGE	-	-	-	<u>-</u> -	-	-		-	-	-	-	-	-	-		<u>-</u>		-	EXISTING TO REMAIN EXISTING TO REMAIN	
	319 ATTIC STORAGE		-	-	-	-	-	<u>-</u>	-	-	-	-	-	-	-					EXISTING TO REMAIN	
	NOTES:												FINIS	⊥ SH LEGI	<u> </u>						
	I. 2X2 ACPS CEILIN 2. PAINT COLORS TO				•			•	•	ACPS TO	BE ARMS	TRONG	CT MD	M	ERAMIC 00D						
	2. 1 AINT 002010			111 0. 1 All					OIV.				GYP PT	P	YP. BOA AINT		NC 944	IEL SYSTE			
													ACP LVT			INYL TILE			~ I		
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LATION, ALL		<u> </u>			_										-		7	eti eti et esi	5 _/	'8" GYP. BOARD, PAINT	
AS NOTED.			5/8"	GYP. BOAF	RD, PAINT	Г) 				5/8" GYP.	BOARD, F	PAINT		ı	(*) (*)			2	X WOOD FRAMING	
			BLOCKIN			31 42 13		$\bigvee \bigvee $		2X HEADE 1/2" PLYWO		R		ı				·			
	WOOD TRIM, MATCH CASING											-			I				7]		
DE; BATT INSULATION WOOD FR				O FRAME			K.7.3								I						
				NGLE GLAZ	ING						IAI # # ===				I			\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	M M	OOD TRIM, MATCH EXISTING	
P MALL (NEW) TO			•				4 2			7	MOOD TRI	M, MATCH	EXISTING		<u>(</u>	*	11)		4 L		
NALL (NEM) TO			<u></u>	3/611 611	(II As		4	11 []]		<u> </u>	DOOR, SEE	E FINISH S	CHEDUIF				\	$\langle \parallel \rangle \rangle \rangle \parallel $	Fo	OOR, SEE FINISH SCHEDULE OR SELECTIONS	
	<u> </u>	* JAMB/ SILL SIMILAR									FOR SELEC	CTIONS		5			/		<u> </u>	OOD FRAME, MATCH EXISTING	
NALL (NEW) TO PARD ON WET							MOOD FRAME, MATCH EXISTING														
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FINGHAM COUNTY SMINISTRATION BUILDING

FINISH SCHEDULE; DOOR SCHEDULE; DOOR AND WINDOW TYPES; DOOR DETAILS

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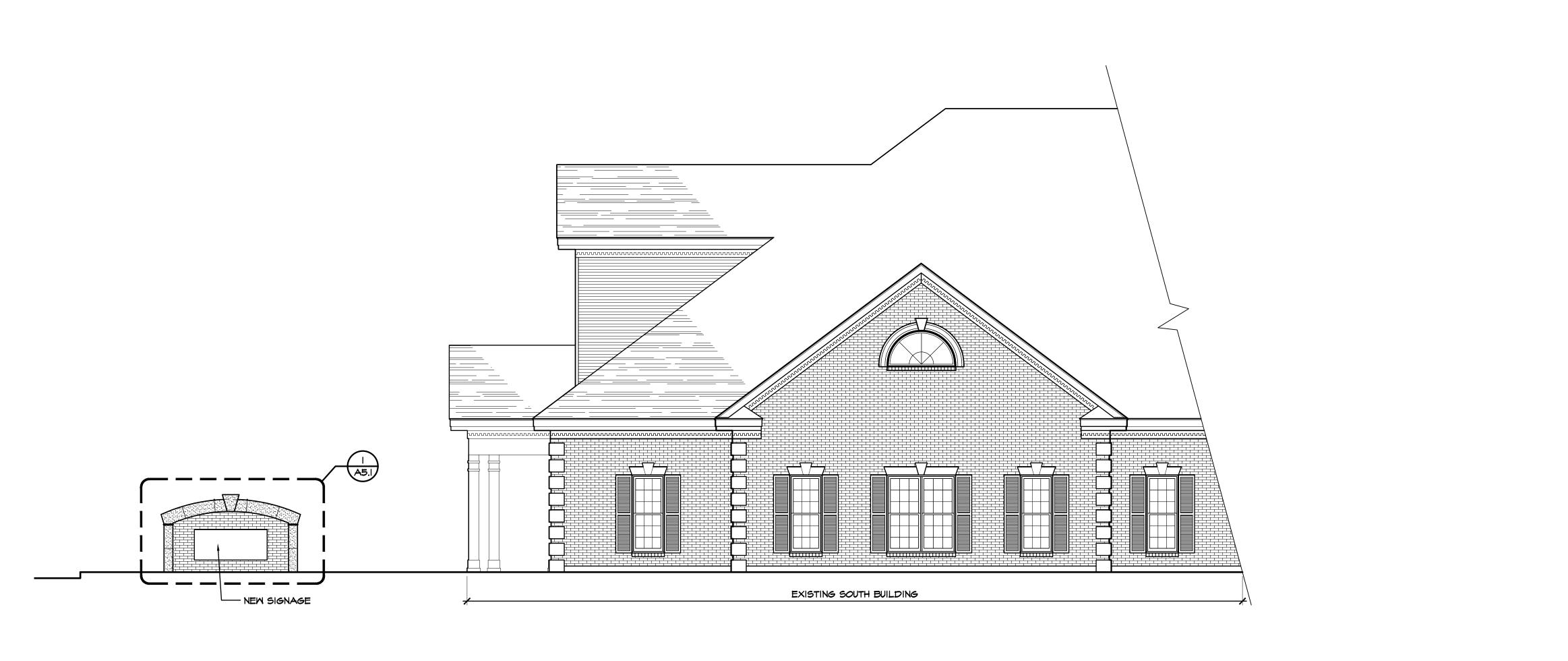
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FATIONS/ RENOVATION TO FINGHAM COUNTY OMINISTRATION BUILDING AGREED, GEORGIA

SOUTH BUILDING EXTERIOR ELEVATIONS

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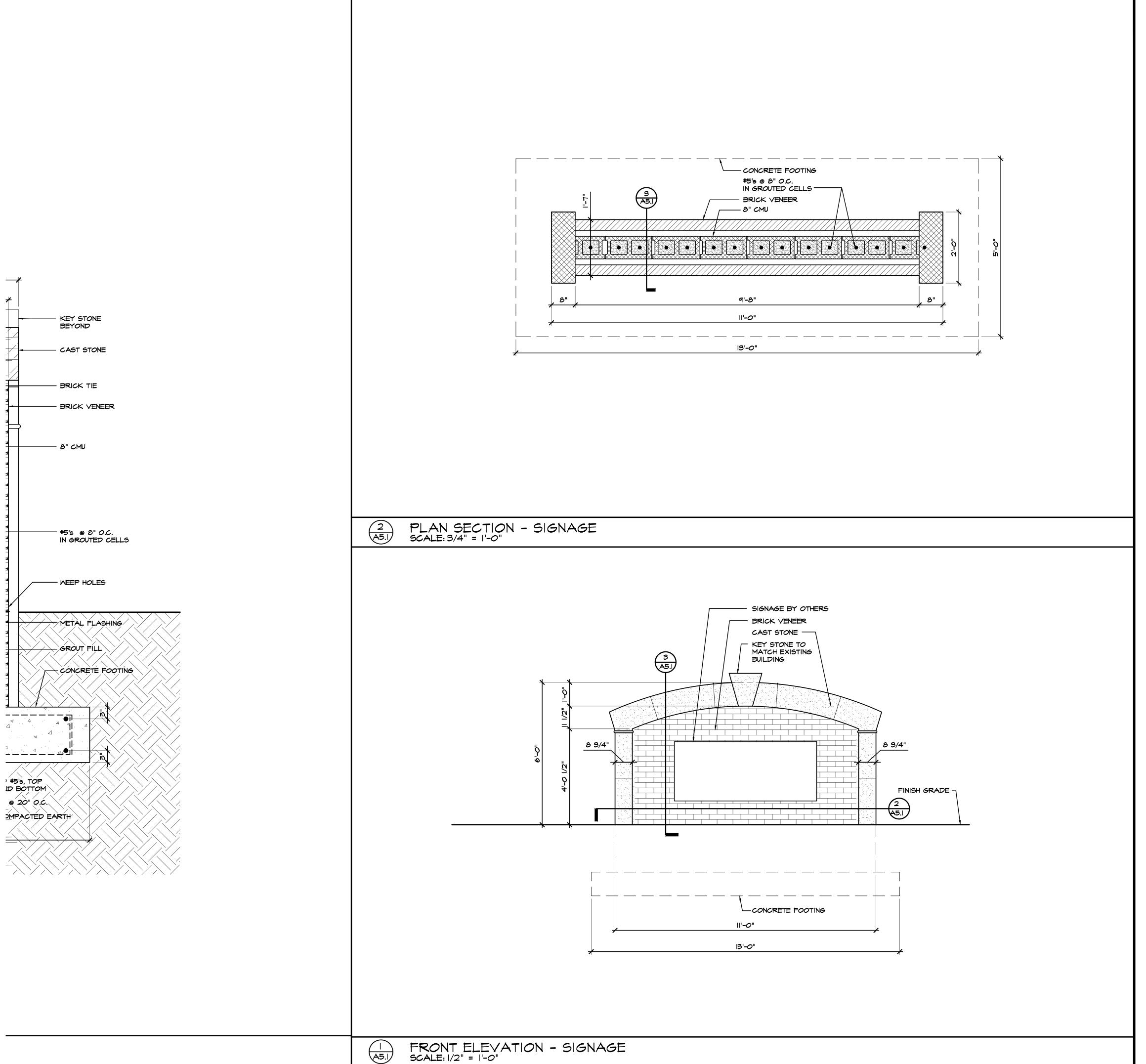
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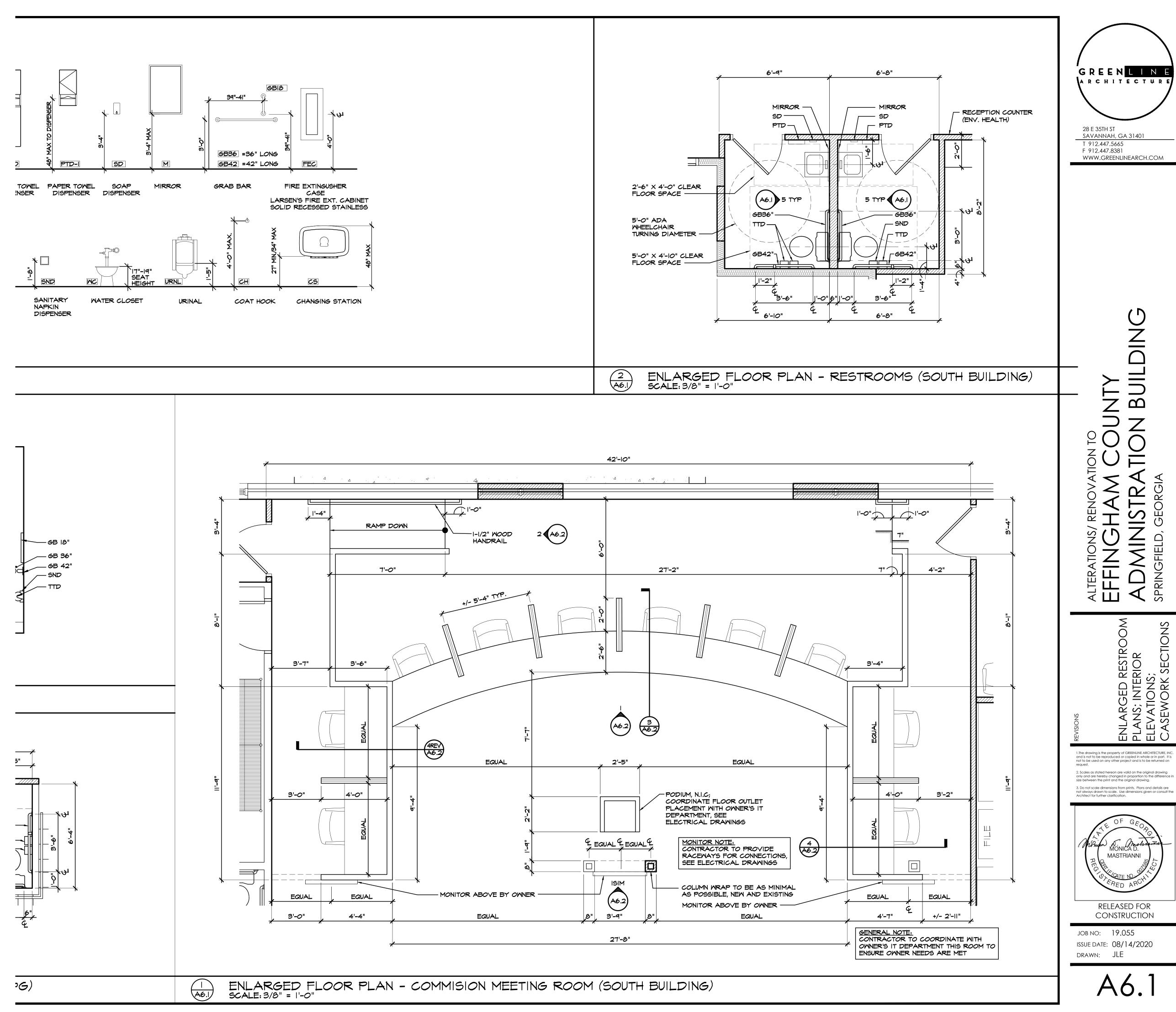
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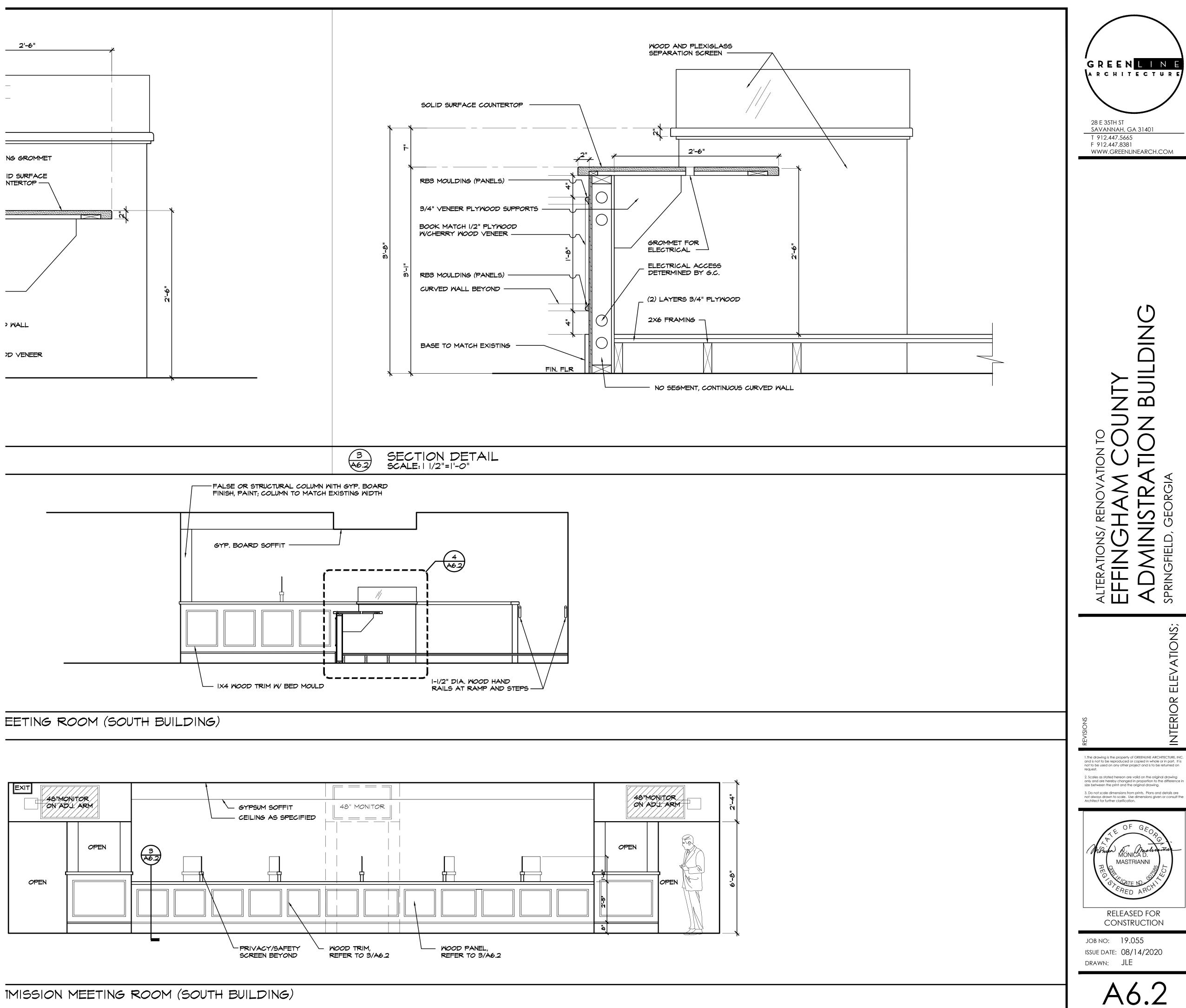
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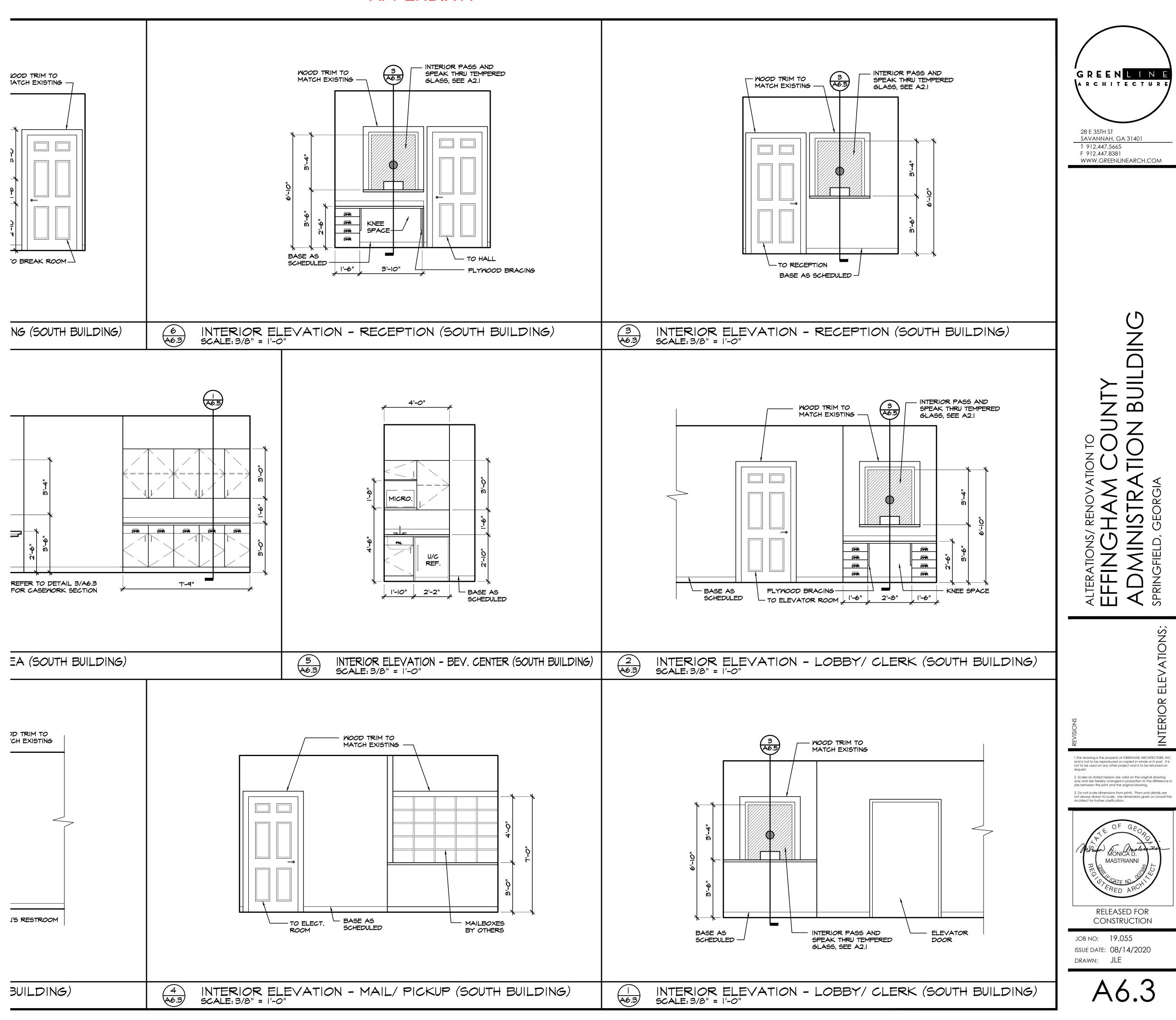


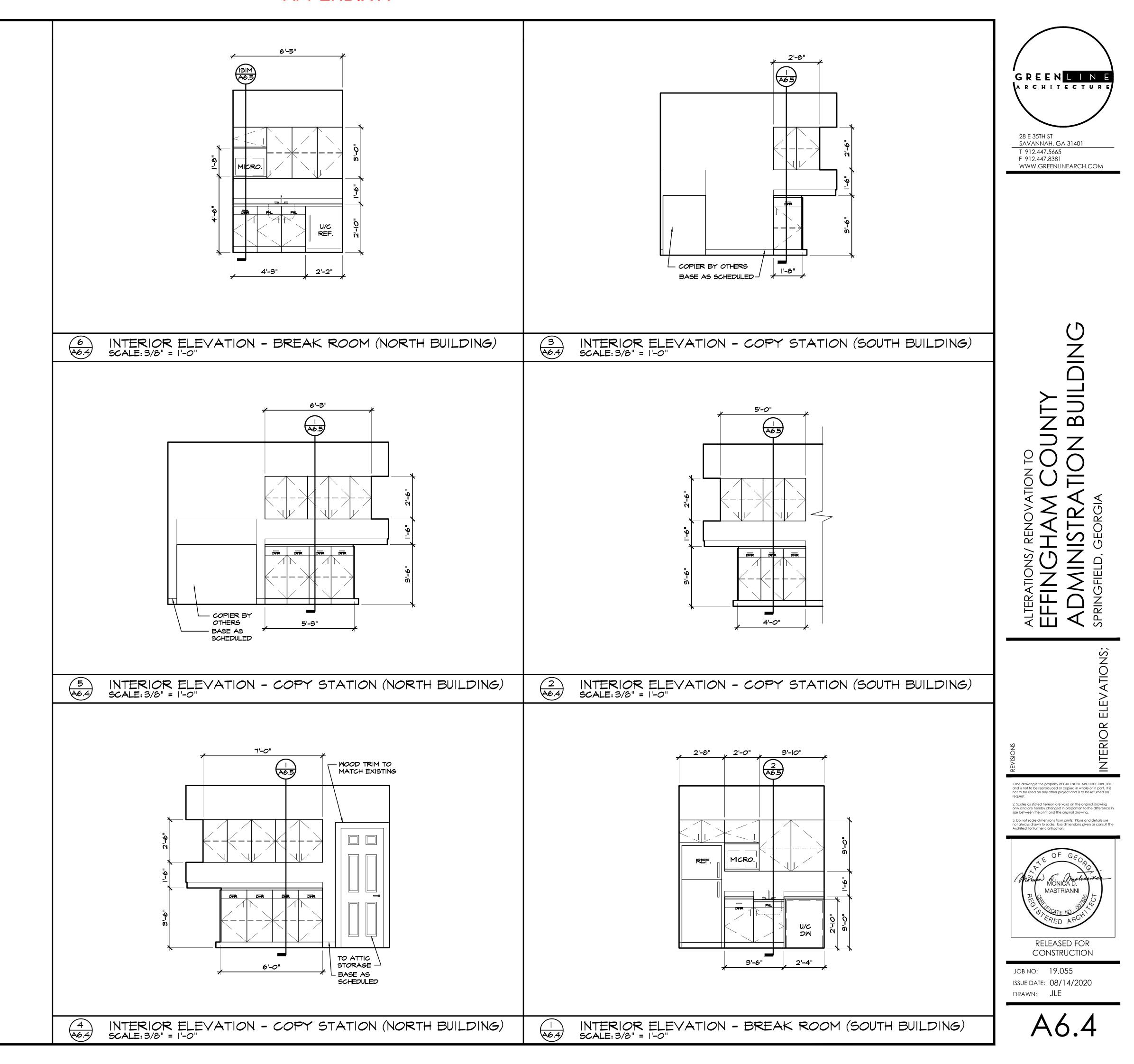


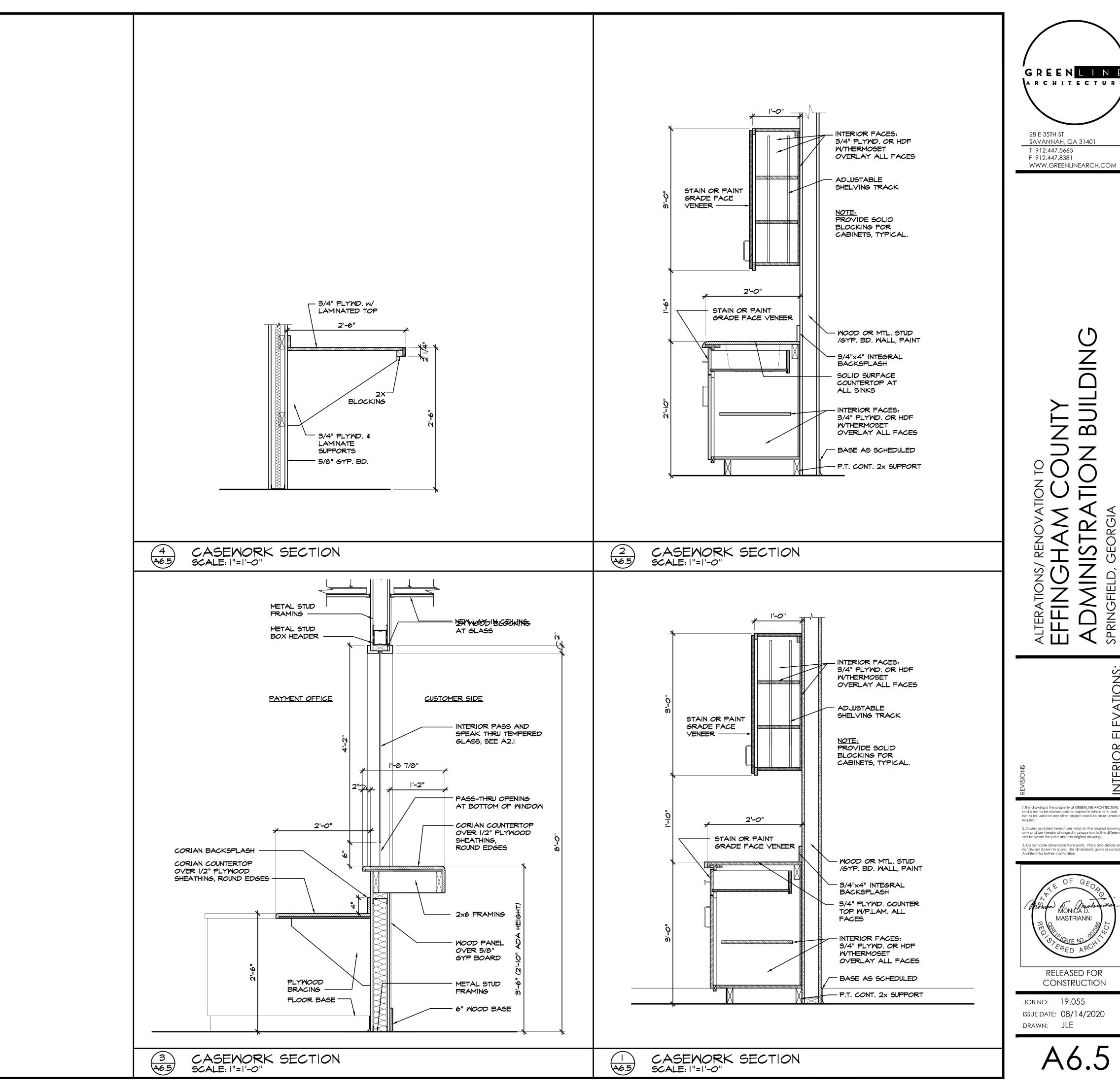
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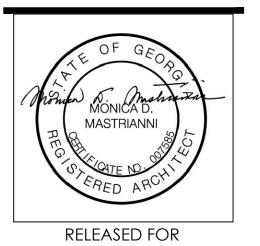






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CONSTRUCTION

ISSUE DATE: 08/14/2020 drawn: JLE

		LEGEND & ABBREV
ABBREVIATION	SYMBOL	DESCRIPTION
W,S,D —	S	SANITARY WASTE, SOIL & DRAIN
V -		VENT - SANITARY
CW -		— DOMESTIC COLD WATER
HW -		— DOMESTIC HOT WATER (120 P)
HWR -		— DOMESTIC HOT WATER RETURN
CV -		CHECK VALVE
_		— UNION
WHA _	<u></u>	WATER HAMMER ARRESTOR 'SIZE'
RV	≱	PRESSURE OR TEMPERATURE RELIEF VALVE
co –	I	CLEANOUT
FCO -	•	FLOOR CLEANOUT
GCO –	•	GRADE CLEANOUT
FD	0	FLOOR DRAIN 'TYPE'

GENERAL NOTES:

- I. ALL UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY.VERIFY EXACT LOCATION AND INVERT ELEVATION IN FIELD BEFORE BEGINNING WORK.
- 2. WALL HYDRANTS SHALL BE MOUNTED 1'-6" ABOVE GRADE, UNLESS NOTED OTHERWISE.
- 3. HOSE BIBBS SHALL BE MOUNTED 1'-6" ABOVE FINISHED FLOOR, UNLESS NOTED OTHERWISE.
- 4. COORDINATE ALL WORK WITH OTHER TRADES.

ATIONS				
ABBREVIATION	DESCRIPTION			
AB	ABOVE			
A/C	ABOVE CEILING			
AFF	ABOVE FINISHED FLOOR			
ADR	ACCESS DOOR			
AP	ACCESS PANEL			
BFP	BACKFLOW PREVENTER			
B/F	BELOW FLOOR			
CLG	CEILING			
Ę	CENTER LINE			
CONN	CONNECT(ION)			
CONT	CONTINUATION			
DN	DOWN			
DWGS	DRAWINGS			
ELEC	ELECTRICAL			
EL	ELEVATION			
EXIST	EXISTING			
EXP	EXPANSION			
FIN	FINISHED			
FL	FLOOR			
HVAC	HEATING, VENTILATION & AIR CONDITIONING			
НВ	HOSE BIBB			
IE	INVERT ELEVATION			
L	LEADER			
SAN	SANITARY			
S	SOIL			
TYP	TYPICAL			
U/G	UNDERGROUND			
VTR	VENT THRU ROOF			
NFWH	NON-FREEZE WALL HYDRANT			
W	WASTE			

PLUMBING FIXTURES							
SPEC. TYPE	FIXTURE		MUM INDIVIDUAL CONNECTION HOT VENT WASTE			REMARKS	
			-				
P-1	WATER CLOSET	1/2"			4"	18" TO RIM (1)	
P-3	LAVATORY	1/2"	1/2"		1 1/4"	34" TO RIM 1	
P-6	SINK	1/2"	1/2"		1 1/2"	COUNTERTOP (1)	
P-6A	SA SINK		1/2"		1 1/2"	COUNTERTOP (1)	
P-8	ICE MAKER CONNECTION BOX					18" AFF	

1) FIXTURE TRIM AND INSTALLATION SHALL COMPLY TO ADA REQUIREMENTS.

PUMPS				
PUMP NUMBER	HWC-1			
SPEC. TYPE				
SERVICE	HOT WATER			
LOCATION	SEE DRAWINGS			
CAPACITY, GPM	1			
DISCHARGE HEAD, FT.	10			
SUCTION PRESS., FT.				
FLUID TEMP., F°.	120°			
RPM	3600			
HP	1/12			
CONTROLLER	AQUASTAT			
ELECTRICAL CHARACTERISTICS	SEE ELEC. DWGS.			
REMARKS				

PLUMBING SPECIFICATIONS

- A. THE PLUMBING INSTALLATION AND EQUIPMENT SHALL CONFORM TO THE FOLLOWING:

 1. INTERNATIONAL PLUMBING CODE, 2018 EDITION WITH GEORGIA AMENDMENTS.

 TESTING PIPE SYSTEMS
- A. GENERAL, CONCEALED PIPING AND INSULATED PIPING SHALL BE TESTED IN PLACE BEFORE CONCEALING OR COVERING. TEST SHALL BE CONDUCTED IN THE PRESENCE OF THE ARCHITECT OR HIS DESIGNATED REPRESENTATIVE. PIPING LOCATED UNDERGROUND SHALL BE TESTED BEFORE BACKFILLING. EQUIPMENT, MATERIALS AND INSTRUMENTS FOR TESTING SHALL BE FURNISHED BY THE CONTRACTOR WITHOUT ADDITIONAL COST TO THE OWNER.
- B. PLUMBING SYSTEMS

 1. SANITARY WASTE AND VENT PIPING. THE PIPING SHALL BE TESTED WITH WATER BEFORE INSTALLING FIXTURES. WATER TESTS SHALL BE APPLIED TO THE SYSTEM EITHER IN ITS ENTIRETY OR IN SECTIONS. IF THE TEST IS APPLIED TO THE ENTIRE SYSTEM, ALL OPENINGS IN THE PIPING SHALL BE CLOSED EXCEPT THE HIGHEST OPENING, AND THE SYSTEM SHALL BE FILLED WITH WATER AND TESTED WITH AT LEAST A 10 FT. HEAD OF WATER. IN TESTING SUCCESSIVE SECTIONS, AT LEAST THE UPPER 10 FT. OF THE NEXT PRECEDING SECTION SHALL BE TESTED SO THAT EACH JOINT OR PIPE IN THE BUILDING EXCEPT THE UPPERMOST 10 FT. OF THE SYSTEM HAS BEEN SUBMITTED TO A TEST OF AT LEAST 10 FT. HEAD OF WATER. THE WATER SHALL BE KEPT IN THE SYSTEM, OR IN THE PORTION UNDER TEST FOR AT LEAST 2 HOURS BEFORE THE INSPECTION STARTS. THE SYSTEM SHALL BE TIGHT AT ALL JOINTS.
 - TIGHT AT ALL JOINTS.

 2. WATER PIPING. UPON COMPLETION OF THE ROUGH-IN AND BEFORE SETTING FIXTURES, THE ENTIRE DOMESTIC COLD WATER, HOT WATER, AND HOT WATER CIRCULATION PIPING SYSTEMS SHALL BE TESTED AT HYDROSTATIC PRESSURE OF 100 PSIG AND PROVED TIGHT AT THIS PRESSURE FOR A PERIOD OF NOT LESS THAN 2 HOURS IN ORDER TO PERMIT INSPECTION OF ALL JOINTS. WHERE A PORTION OF THE WATER PIPING SYSTEM IS TO BE CONCEALED BEFORE COMPLETION, THIS PORTION SHALL BE TESTED SEPARATELY IN A MANNER DESCRIBED FOR THE ENTIRE SYSTEM.

DOMESTIC WATER SYSTEM

CODES

- A. PROVIDE COMPLETE SYSTEMS OF COLD AND HOT WATER PIPING AND ACCESSORIES SO THAT EVERY FIXTURE AND PIECE OF WATER USING EQUIPMENT IN THIS AREA OF THE BUILDING WILL BE FURNISHED WITH A WATER SUPPLY.
- B. EXTEND THE DOMESTIC COLD AND HOT WATER PIPING AS SHOWN ON THE DRAWINGS.
- PIPING FITTINGS AND JOINTS
 1. PIPE AND FITTINGS SHALL BE AS LISTED HEREIN AND SHALL BE USED ON
- THE SERVICES INDICATED.

 2. TYPE "L" HARD COPPER TUBING, FED. SPEC. NO. WW-T-799, WITH SOLDERED JOINTS AND WROUGHT COPPER SOCKET FITTINGS FOR ALL WATER PIPING ABOVEGROUND.
- SOLDER JOINTS (FOR TYPE 'L' COPPER TUBING) SHALL BE MADE USING A 95-5 TIN-ANTIMONY SOLDER WITH A COMPATIBLE FLUX.
 UNDERGROUND WATER PIPING SHALL BE TYPE 'K' COPPER TUBING WITH SILVER SOLDER JOINTS.
- DISINFECTION

 1. ALL DOMESTIC WATER SERVICE AND SUPPLY PIPING INSTALLED UNDER THIS DIVISION SHALL BE DISINFECTED WITH CHLORINE BEFORE IT IS PLACED INTO OPERATION. THE CHLORINATING MATERIAL SHALL BE LIQUID CHLORINE CONFORMING TO FEDERAL SPECIFICATION BB-C-120 AND SHALL BE INTRODUCED TO THE SYSTEM BY EXPERIENCED OPERATORS ONLY. THE CHLORINE SOLUTION APPLIED TO THE PIPING SECTIONS OR SYSTEM SHALL CONTAIN AT LEAST FIFTY PARTS PER MILLION OF AVAILABLE CHLORINE AND SHALL REMAIN IN THE SECTIONS OR SYSTEM FOR A PERIOD OF NOT LESS THAN SIXTEEN (16) HOURS. DURING THE DISINFECTION PERIOD ALL VALVES SHALL BE OPENED AND CLOSED AT LEAST FOUR TIMES. AFTER THE DISINFECTION PERIOD THE CHLORINATED WATER SHALL BE FLUSHED FROM THE SYSTEM WITH CLEAR WATER UNTIL THE RESIDUAL CHLORINE CONTENT IS NOT GREATER THAN TWO-TENTHS (0.2) PARTS PER MILLION. THE CONTRACTOR SHALL SUBMIT TO THE ARCHITECT CERTIFICATION THAT THE SYSTEM WAS DISINFECTED.

SANITARY, WASTE, AND VENT SYSTEM

- A. PROVIDE A COMPLETE SYSTEM OF SANITARY, WASTE, AND VENT PIPING AS SHOWN ON THE DRAWINGS.
- B. PIPE FITTINGS AND JOINTS
- 1. PIPE FITTINGS SHALL BE AS LISTED HEREIN AND SHALL BE USED FOR THE SERVICES INDICATED.
- 2. SERVICE WEIGHT CAST IRON SOIL PIPE AND FITTINGS ASTM A74, WITH CLAMPED HUBLESS JOINTS FOR ALL ABOVEGROUND SANITARY AND WASTE
- 3. CLAMPED JOINTS (FOR HUBLESS CAST IRON PIPE) SHALL BE MADE WITH BOLTED STAINLESS STEEL CLAMPS AND NEOPRENE GASKET. CLAMPS SHALL BE TIGHTENED BY ALTERNATELY TIGHTENING SCREWS TO 60 IN. LB.
- TORQUE. CLAMPS SHALL MATCH EXISTING IN BUILDING.
 4. ABOVE GROUND VENT PIPING SHALL BE SCHEDULE 40 PVC WITH SOLVENT GLUED JOINTS.
- C. INSTALLATION

 1. HORIZONTAL SOIL AND WASTE PIPING 2-1/2 INCHES IN SIZE AND SMALLER SHALL BE SLOPED AT A MINIMUM OF 1/4 INCH PER FOOT. HORIZONTAL SOIL AND WASTE PIPING 3 INCHES IN SIZE AND LARGER SHALL BE SLOPED
 - AT A MINIMUM OF 1/8 INCH PER FOOT.

 2. HORIZONTAL VENT BRANCHES SHALL BE KEPT ABOVE THE HIGHEST FIXTURE SERVED BY THE VENT BRANCH IN ORDER TO PRECLUDE THE POSSIBILITY OF VENTS BEING USED AS WASTE PIPES. HORIZONTAL VENT BRANCHES SHALL
- BE SLOPED TO PREVENT THE ACCUMULATION OF WATER OR SCALE THEREIN.

 3. ON SOIL, WASTE AND VENT PIPING CHANGES IN PIPE SIZE SHALL BE MADE WITH REDUCING FITTINGS AND CHANGES IN PIPE DIRECTION SHALL BE MADE
- WITH FITTINGS. NO BUSHINGS WILL BE ALLOWED.

 4. DURING CONSTRUCTION ALL PIPE OPENINGS, NOT BEING WORKED ON, SHALL BE PLUGGED OR CAPPED TO PREVENT FOREIGN OBJECTS FROM ENTERING SYSTEM.

INSULATION

A. ALL WATER PIPING AND STORM DRAINAGE PIPING SHALL BE INSULATED WITH FIBERGLASS JACKETED PIPE INSULATION.

PLUMBING FIXTURES

- A. WATER CLOSET P-1
 FIXTURE KOHLER K-25077
 SEAT BENEKE 527 SS/CH-HPSS
 SUPPLIES BRASSCRAFT
- B. LAVATORY P-3
 FIXTURE KOHLER K-2032
 FAUCET SLOAN ETF-600-PLG-IR-0.5GPM-CP-BDT-ADA
 DRAIN KOHLER K-13885
 P-TRAP McGUIRE 8872
 SUPPLIES BRASSCRAFT
- P TRAP INSULATION TRUEBRO W102 WITH W105 CARRIER J.R.SMITH

 C. SINK P-6
- SINK JUST SL-2222-A-GR-ADA FAUCET JUST J-902 DRAIN JUST JV-35 P-TRAP McGUIRE

 D. SINK P-6A
- SINK JUST SL-2222-A-GR-ADA
 FAUCET JUST J-1174-KS
 DRAIN JUST JV-35
 P-TRAP McGUIRE
- E. ICE MAKER CONNECTION BOX P-8 FIXTURE WATERTITE 9000
- F. CIRCULATOR PUMP HWC-1
 TACO MODEL 007 WITH "00" TIMER AQUASTAT
- G. AM. STD. IS AN APPROVED EQUAL TO KOHLER, ELKAY IS AN APPROVED EQUAL TO JUST, ZURN IS AN APPROVED EQUAL TO SLOAN



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ALTERATIONS/ RENOVATION TO EFFINGHAM COUNTY ADMINISTRATION BUILDING SPRINGFIELD, GEORGIA

PLUMBING - LEGENDS SCHEDULES AND SPECIFICATIONS

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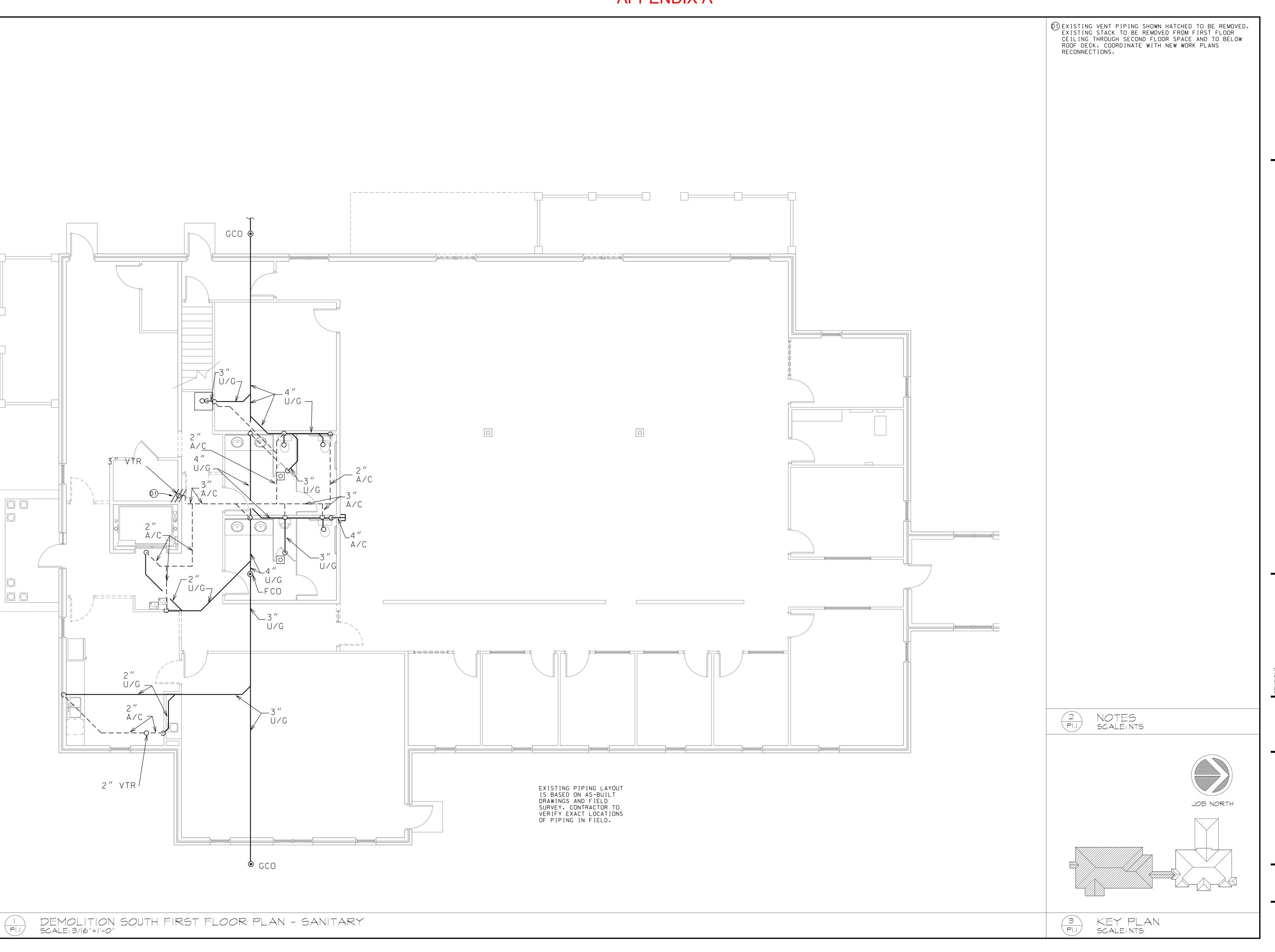
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FFINGHAM COUNTY DMINISTRATION BUILDIN

SOUTH BUILDING
DEMOLITION PLANS

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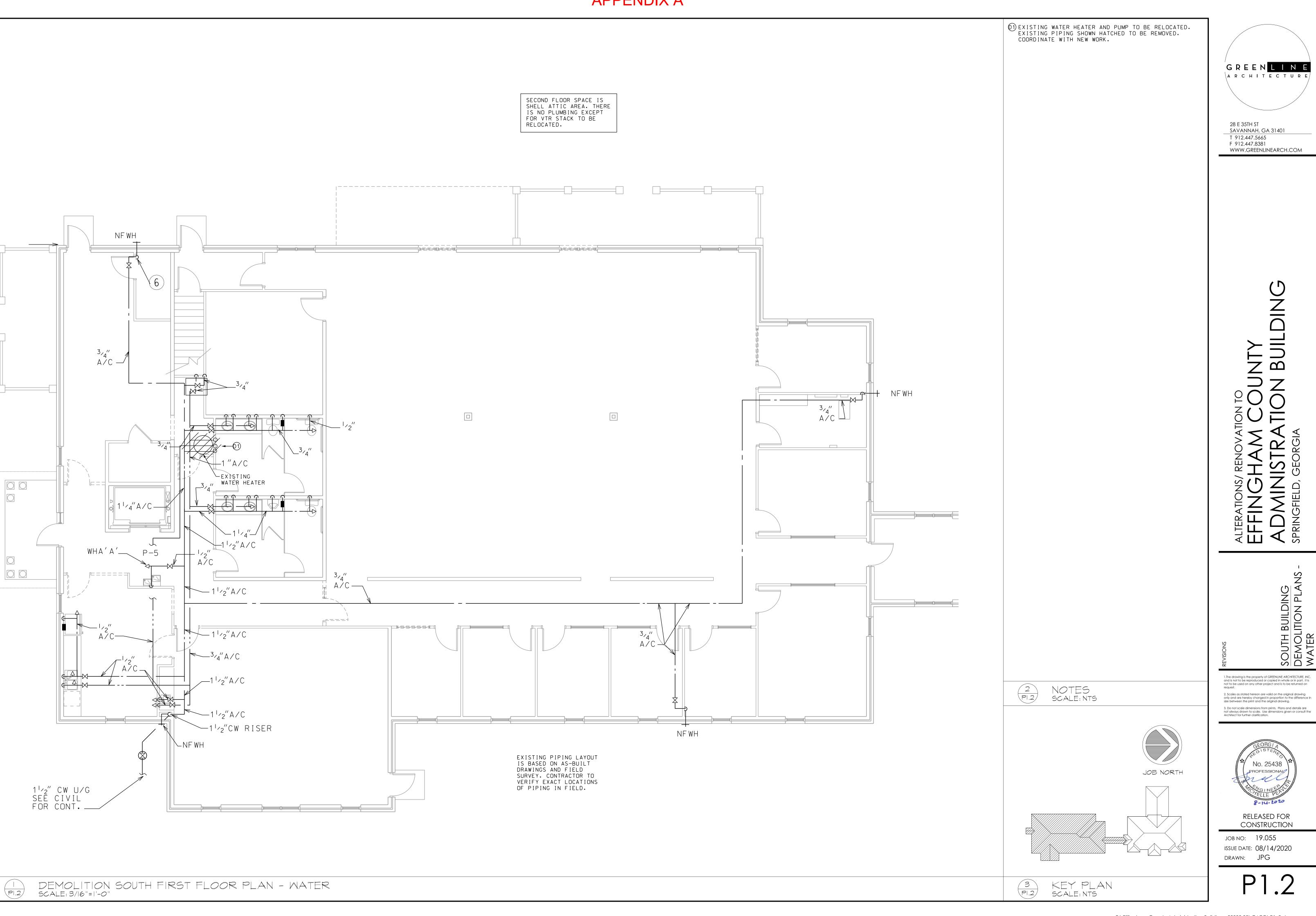
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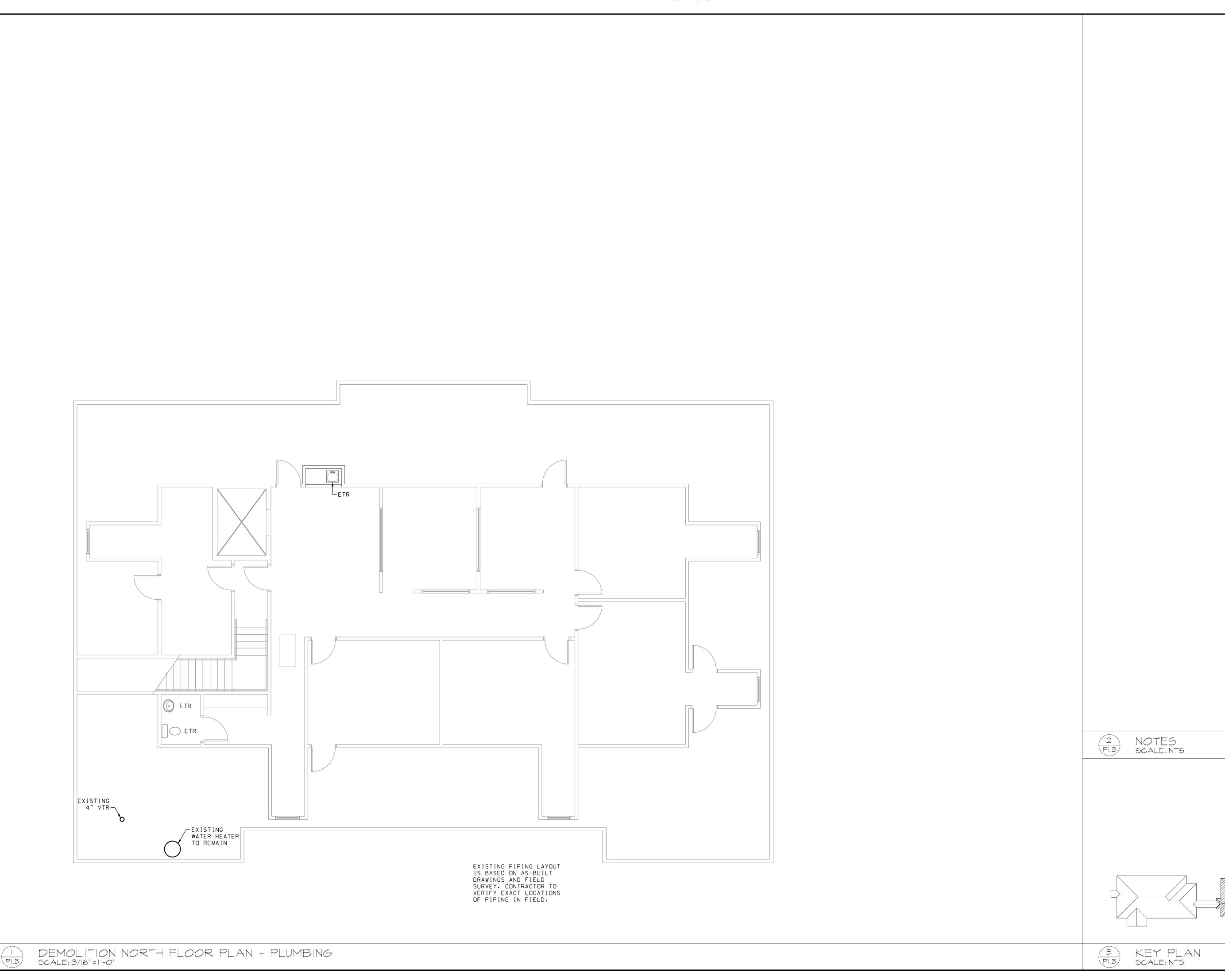
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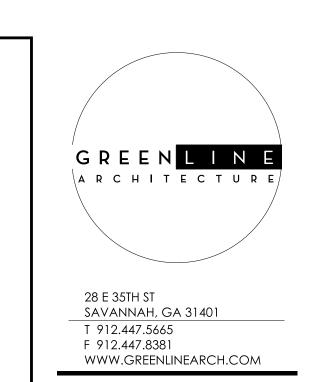
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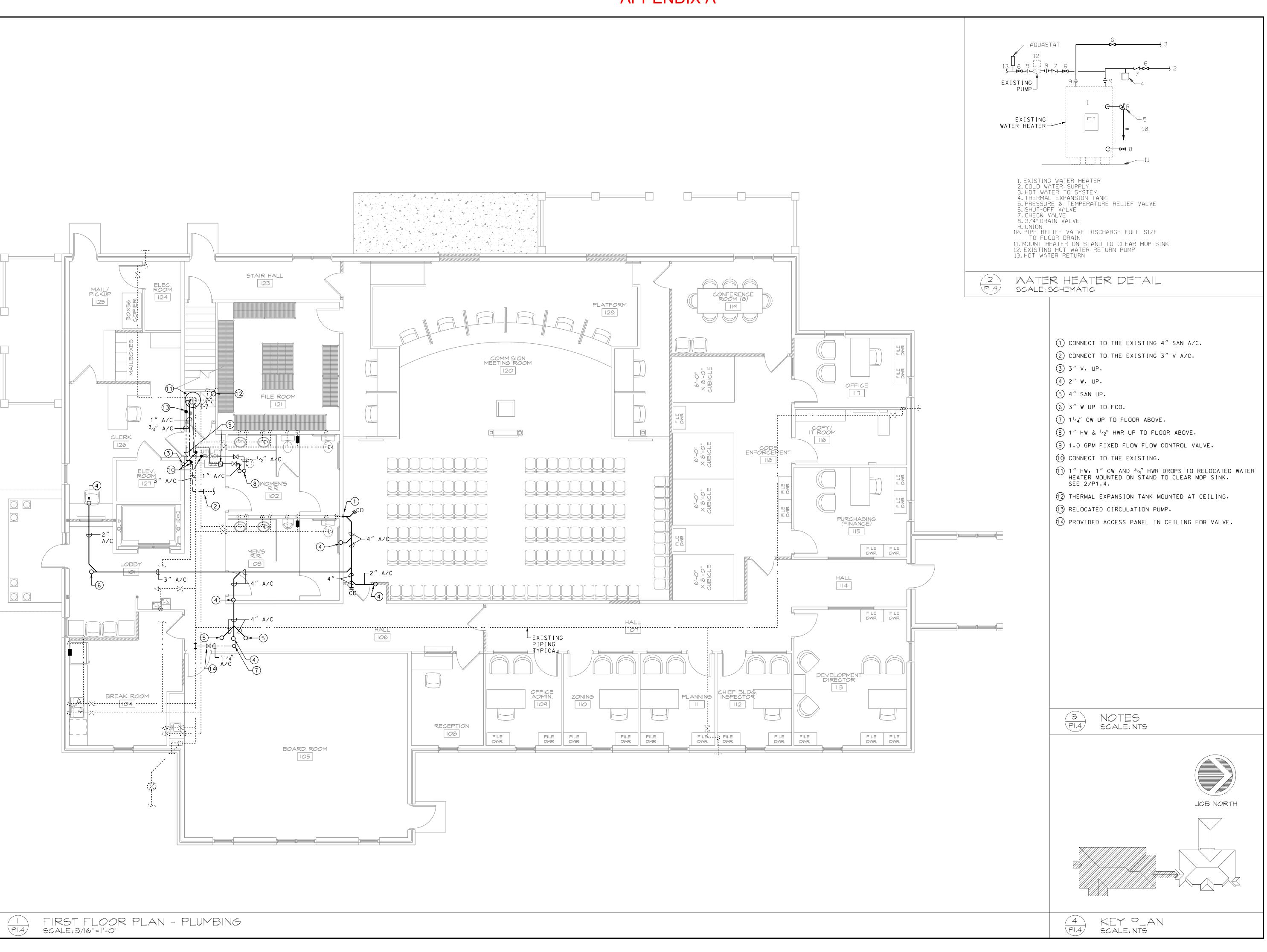


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P1.3

JOB NORTH





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SHAM COUNTY
NISTRATION BUILDING

SOUTH BUILDING FIRST FLOOR PLAN-PLUMBING

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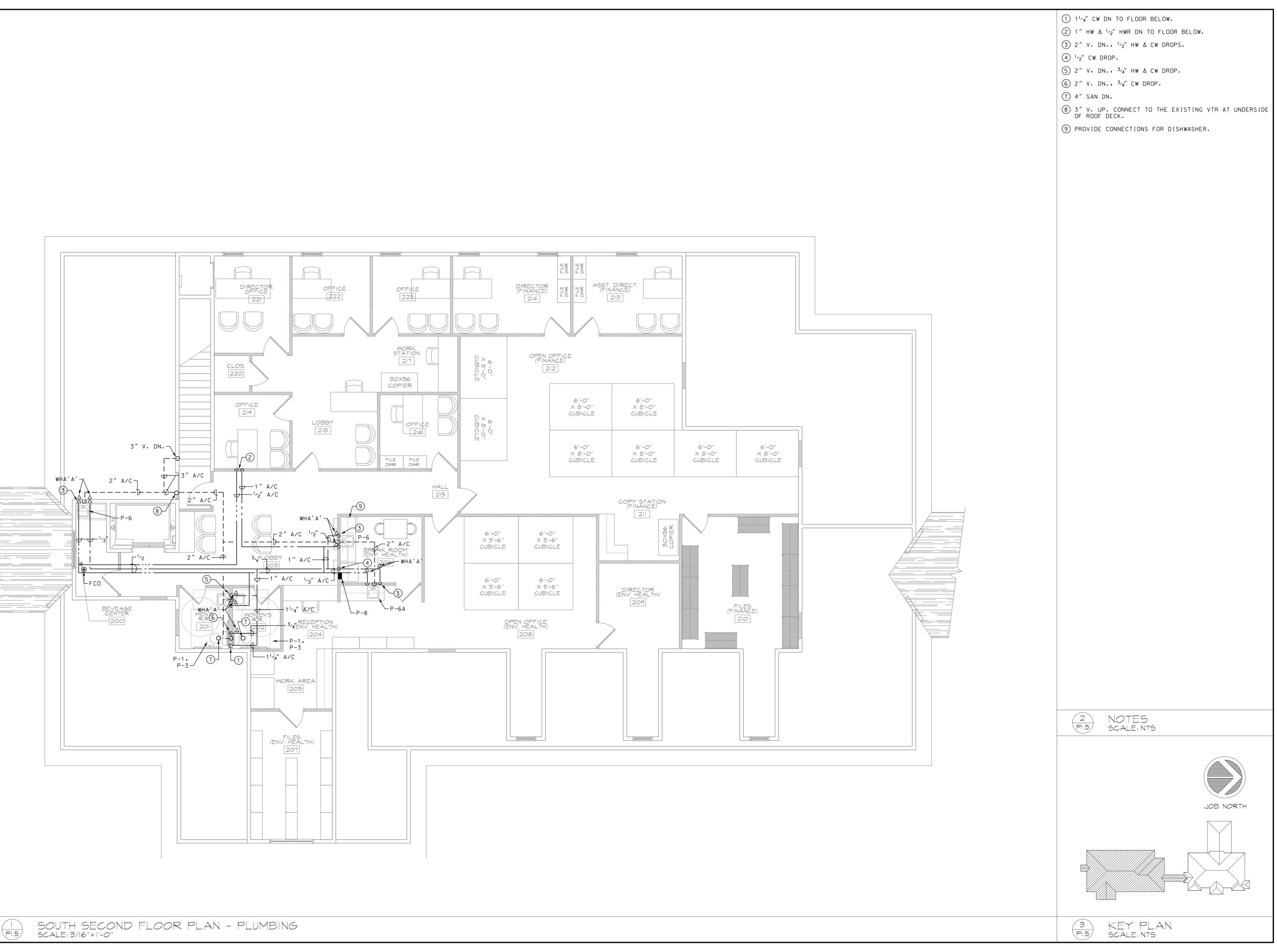
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FFINGHAM COUNTY ADMINISTRATION BUILDING

SOUTH BUILDING
SECOND FLOOR PLAN
PLUMBING

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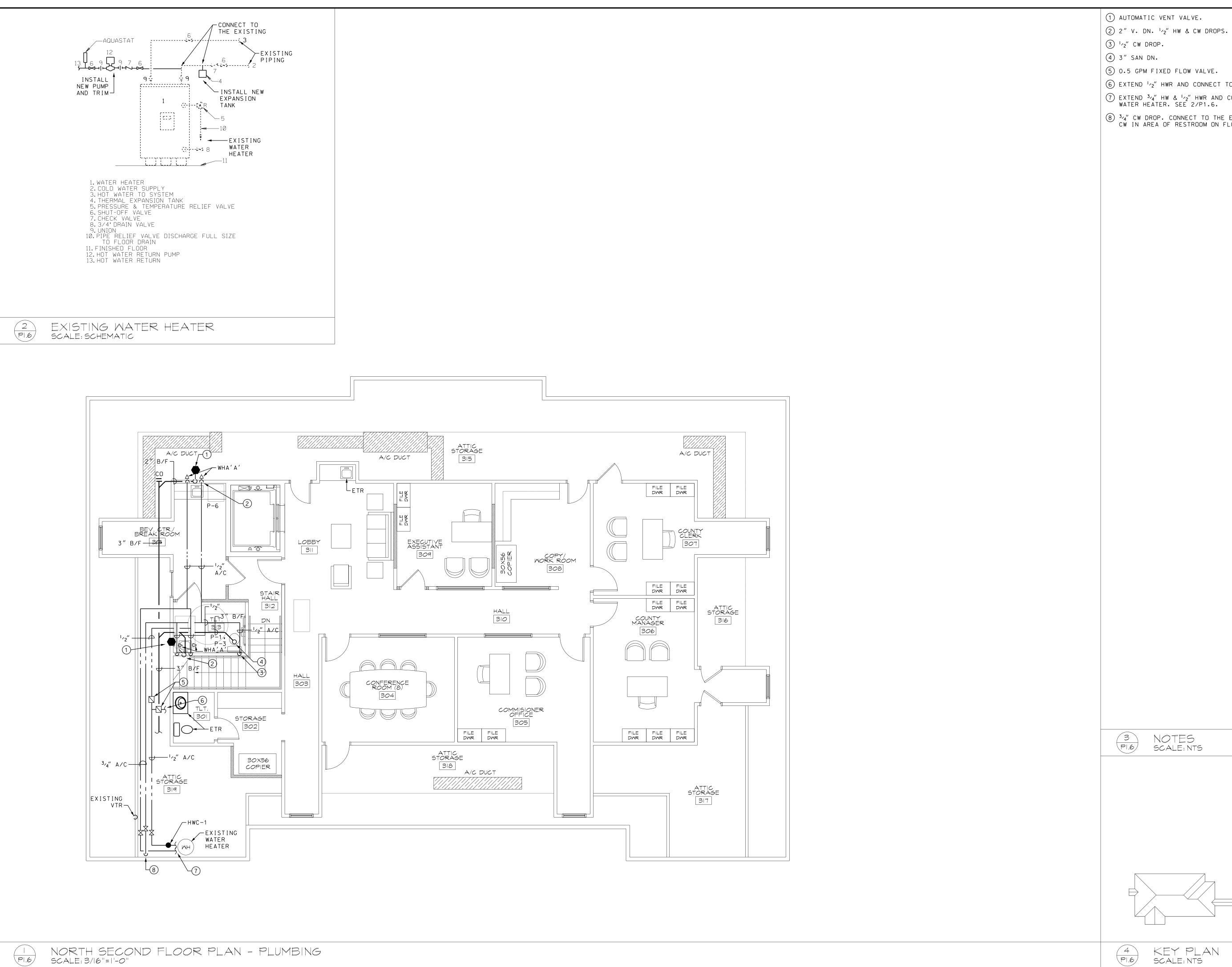
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P1.5

APPENDIX A



6 EXTEND 1/2" HWR AND CONNECT TO THE EXISTING HW.

7 EXTEND 3/4" HW & 1/2" HWR AND CONNECT TO THE EXISTING WATER HEATER. SEE 2/P1.6.

8) 3/4" CW DROP, CONNECT TO THE EXISTING 1" OR LARGER CW IN AREA OF RESTROOM ON FLOOR BELOW.



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NORTH BUILDING FLOOR PLANS -PLUMBING

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P1.6

JOB NORTH

APPENDIX A

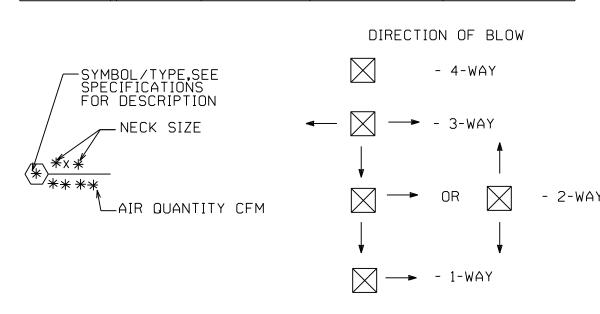
		LEGEND & ABBREVIATIONS
ABBREVIATION	SYMBOL	DESCRIPTION
		SINGLE LINE DUCT
	*	FLEXIBLE DUCT
		DUCT TRANSITION
	Ф	ROUND
	─	DIRECTION OF FLOW
MLD/MD		MANUAL DAMPER
T'STAT	(T)	THERMOSTAT

GENERAL NOTES:

- 1. COORDINATE ALL WORK WITH OTHER TRADES PRIOR TO INSTALLATION.
- 2. UNLESS OTHERWISE INDICATED, INSTALL ALL SPACE THERMOSTATS, HUMIDISTATS AND SENSORS 48 INCHES ABOVE FINISHED FLOOR.
- 3. DUCT SIZES SHOWN ARE ACTUAL INSIDE DIMENSIONS.
- 4. FLEXIBLE OR ROUND DUCT SHALL BE CONNECTED TO RECTANGULAR OR SQUARE DUCT WITH A SPIN-IN COLLAR WITH SCOOP AND DAMPER.
- 5. INSTALL TURNING VANES IN ALL 45 AND 90 DEGREE MITERED ELBOWS.
- 6. EXISTING CONDITIONS: THE DESIGN IS BASED ON BASIC FIELD INVESTIGATIONS AND EXISTING PLANS WHERE AVAILABLE. AS SUCH, THE CONTRACTOR SHALL FIELD VERIFY CONDITIONS, IF ANY DEVIATIONS ARE DISCOVERED BETWEEN THE ACTUAL CONDITIONS AND THE CONDITIONS SHOWN ON THE DESIGN DOCUMENTS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY AS MODIFICATIONS MAY BE REQUIRED. CONTRACTOR SHALL ALSO VERIFY SPACE ABOVE CEILINGS AND IN MECHANICAL ROOMS PRIOR TO FABRICATION OF DUCTWORK.

BBREVIATION	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
A/C	ABOVE CEILING
AHU	AIR HANDLING UNIT
AD	DUCT ACCESS DOOR
BTUH	BRITISH THERMAL UNITS PER HOUR
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
CTE	CONNECT TO EXISTING
DN	DOWN
DWGS	DRAWINGS
EF	EXHAUST FAN
ELEC	ELECTRIC
EXH	EXHAUST
EXIST	EXISTING
GPM	GALLONS PER MINUTE
HVAC	HEATING VENTILATING & AIR CONDITIONING
MAX	MAXIMUM
MIN	MINIMUM
TG	TRANSFER GRILLE
TYP	TYPICAL

AIR DI	STRIBUT	ION DEV		
SYMBOL	LOCATION	FUNCTION	TYPE	SURFACE TYPE
A	CEILING	SUPPLY	PERFORATED REGISTER	LAY-IN
B CEILING		RETURN	PERFORATED REGISTER	LAY-IN
(C)	CEILING	EXHAUST	LOUVERED FACE	SURFACE MNT
D	CEILING	SUPPLY	LOUVERED FACE	SURFACE MNT
E	CEILING	SUPPLY	LOUVERED FACE	SURFACE MNT
*	EXISTING	EXISTING	EXISTING	EXISTING



EXHAUST FANS	·)			
SYMBOL	EF-1	EF-2	EF-3	EF-4
TYPE	CEILING INLINE	CEILING INLINE	CEILING INLINE	CEILING INLINE
CFM	50	75	75	75
EXTERNAL STATIC PRESSURE, IN. H ₂ O	0.375	0.375	0.375	0.375
MAXIMUM SONES	0.4	0.4	0.4	0.4
MAXIMUM FAN SPEED, RPM				
MAXIMUM TIP SPEED, FPM				
MAXIMUM OUTLET VELOCITY, FPM				
MAXIMUM MOTOR WATTS	17	46	46	46
DRIVE	DIRECT	DIRECT	DIRECT	DIRECT
LOCATION	UTILITY ROOM	WOMEN	MEN	TLT
ELECTRICAL CHARACTERISTICS	SEE ELEC DWGS	SEE ELEC DWGS	SEE ELEC DWGS	SEE ELEC DWGS
REMARKS				

HE	AT PUMPS											
SYME	30L	AHU-1 HP-1	AHU-2 HP-2	AHU-3 HP-3	AHU-4 HP-4	AHU-5 HP-5	AHU-6 HP-6	AHU-7 HP-7	AHU-9 HP-9	AHU-10 HP-10	AHU-11 HP-11	AHU-12 HP-12
TYP	<u> </u>	EXISTING	EXISTING	EXISTING	EXISTING	HORIZONTAL	EXISTING	EXISTING	HORIZONTAL	HORIZONTAL	HORIZONTAL	HORIZONTAL
TOTA	AL CFM	900	525	1225	1400	1350	1900	1900	950	1100	690	1650
MIN	IMUM OUTSIDE CFM	60	0	180	145	150	180	180	85	90	60	135
	ERNAL STATIC SSURE, IN, H₂O	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
	TOTAL CAPACITY, BTU/HR	23,500	11,610	40,070	41,180	41.300	54,670	54,670	25.800	29.300	18,420	45,350
	SENSIBLE CAPACITY, BTU/HR	20,410	10,610	27,560	32,670	31,100	45,380	45,380	20,700	24,480	14.830	37,400
9	ENT. AIR DB. °F	76.3	75.0	76.1	75.7	76.3	76.8	76.8	76.1	75.6	75.0	75.7
COOL ING	ENT. AIR WB, °F	63.9	62.5	64.8	64.1	64.1	64.4	64.4	63.9	63.3	63.2	63.4
S	MINIMUM SUCTION TEMP., °F											
	COND. AMBIENT TEMP., F	95	95	95	95	95	95	95	95	95	95	95
	MINIMUM (SEASONAL) EER	EXISTING	EXISTING	EXISTING	EXISTING	14	EXISTING	EXISTING	14	14	14	14
	TOTAL CAPACITY BTU/HR	18,100	9500	24,850	24,850	29,160	41,000	41,000	19,600	22,300	14,160	33,440
9	ENT. AIR DB, °F	66.9	70	63.2	65.2	64.9	65.6	65.6	65.9	66.2	66.0	66.2
HEATING	LVG. AIR DB. °F	85.5	86.8	82.0	81.6	85.0	85.6	85.6	85.0	85.0	85.0	85.0
王	AMBIENT AIR TEMP., °F	24	24	24	24	24	EXISTING	24	24	24	24	24
	MINIMUM COP	EXISTING	EXISTING	EXISTING	EXISTING	3.7	EXISTING	EXISTING	3.7	3.7	3.7	3.7
x. AT	CAPACITY, KW	3.6	3.6	3.6	3.6	5.0	5.8	5.8	3.6	3.6	3.6	5.0
AU)	NO. OF STAGES	1	1	1	1	1	1	1	1	1	1	1
LOC	ATION	ATTIC	SECOND FLOOR	SECOND FLOOR	SECOND FLOOR	SECOND FLOOR						
ELE(CTRICAL RACTERISTICS	SEE ELEC DWGS										
REMA	ARKS	1	1)	1	1)	2	1	1	3	3	3	3

- (1) EXISTING UNIT TO REMAIN. INFORMATION SHOWN FOR REBALANCING PURPOSES ONLY.
- (2) EXISTING UNIT TO BE REPLACED.
- (3) NEW UNIT FOR SECOND FLOOR.

DESIGN C	CONDITION	S
	WINTER DESIGN DB (°F)	SUMMER DESIGN DB (°F) / WB (°F)
DESIGN WEATHER CONDITIONS	27.1 ①	95.5 / 77.3 ①
INTERIOR DESIGN CONDITIONS	70.0	75.0 / 62.5
1 PER ASHRAE WEATHER DAT	Ā	

GENERAL HVAC:

- A. THE MECHANICAL EQUIPMENT AND INSTALLATION SHALL CONFORM TO THE FOLLOWING CODES:

 1. THE INTERNATIONAL BUILDING CODE 2018 EDITION WITH GEORGIA AMENDMENTS.

 2. THE INTERNATIONAL MECHANICAL CODE 2018 EDITION WITH GEORGIA AMENDMENTS.

 3. THE INTERNATIONAL ENERGY CONSERVATION CODE 2015 EDITION WITH GEORGIA AMENDMENTS.

 B. THE MECHANICAL EQUIPMENT AND INSTALLATION SHALL CONFORM TO THE FOLLOWING STANDARDS:

 1. NFPA STANDARD 70, NATIONAL ELECTRIC CODE

 2. NFPA STANDARD 90A, INSTALLATION OF AIR CONDITIONING AND VENTILATING SYSTEMS.

 3. NFPA STANDARD 101, CODE FOR SAFETY OF LIFE FROM FIRE IN BUILDINGS AND STRUCTURES.

TEST AND BALANCE:

- THE CONTRACTOR SHALL PERFORM TEST AND BALANCE ON THE AIR AND WATER DISTRIBUTION SYSTEMS. A. INSTRUMENTS USED FOR BALANCING SHALL HAVE BEEN CALIBRATED WITHIN 6 MONTHS PRIOR TO THE BALANCING
- B. ALL INSTRUMENTS REQUIRED TO BALANCE THE SYSTEM SHALL BE PROVIDED AT THE CONTRACTOR'S EXPENSE.

 C. FINAL READINGS SHALL BE SET WITH -5% TO +10% OF DESIGN CONDITIONS.

 D. ANY DEVIATIONS FROM DESIGN DATA SHALL BE EXPLAINED IN THE REPORT POSSIBLE REASONS FOR AND SOLUTIONS TO.
- E. REPORT SHALL BE SIGNED AND DATED BY BALANCE ENGINEER. F. TEST AND BALANCE SHALL NOT BE PERFORMED UNTIL SYSTEM INSTALLATION IS COMPLETE.

HVAC PIPING:

- A. REFRIGERANT PIPING SHALL BE HARD DRAWN TYPE ACR SEAMLESS COPPER TUBING, ASTM B280, FITTINGS SHALL BE WROUGHT COPPER, ANSI 16.22, WITH WORKING PRESSURE OF NO LESS THAN 300 PSIG.
- B. CONDENSATE DRAIN PIPING AND FITTINGS SHALL BE HARD DRAWN COPPER, ASTM B88, WITH SOLDER JOINTS, ANSI B16.22.
- C. PIPE IDENTIFICATION BANDS SHALL BE SNAP-ON TYPE WITH CLEAR POLYESTER EXTERIOR SURFACE. BANDS SHALL INCLUDE DIRECTIONAL FLOW ARROWS AND LEGENDS. IDENTIFICATION BANDS ON PIPE OR COVERINGS 5.5" OR LESS IN DIAMETER SHALL BE SIZED TO FIT AROUND THE PIPE AND OVERLAP SELF. PIPE IDENTIFICATION SHALL BE SETON OR APPROVED EQUAL. BAND COLOR AND LETTERING SHALL BE AS FOLLOWS: REFRIGERANT YELLOW WITH BLACK TEXT; CONDENSATE DRAIN YELLOW WITH BLACK LETTERING.

INSULATION FOR HVAC SYSTEMS:

- A. INSULATION FOR REFRIGERANT LINES AND CONDENSATE DRAINS SHALL BE SELF SEALING, FLEXIBLE CELLULAR, ELASTOMERIC TYPE CONFORMING TO ASTM C534, DESIGNED FOR USE ON PIPES FROM -40 °F TO 220 °F (-40 °C TO 105 °C). INSULATION SHALL HAVE A MINIMUM DENSITY OF 6 LB/CU FT AND A MAXIMUM CONDUCTIVITY OF 0.28 BTU/IN/SQ FT/ °F/HR AT 75 °F MEAN TEMPERATURE, AND A MAXIMUM PERMANENCE OF 0.17 LB/SQ FT. ADHESIVES USED FOR CONNECTIONS SHALL BE MANUFACTURER'S STANDARD UV-PROTECTION, INSULATION SHALL BE CONTINUOUS TO UNIT. ALL JOINTS SHALL BE SEALED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. INSULATION SHALL BE 3/4" THICK. ALL REFRIGERANT PIPES LIQUID AND SUCTION SHALL BE INSULATED IN SEPERATE JACKETS. INSULATION SHALL BE ARMACELL AP/SS ARMAFLEX. AP/SS ARMAFLEX.
- B. FIBERGLASS BLANKET INSULATION ON SUPPLY. RETURN AND OUTSIDE AIR DUCTS SHALL BE FIBROUS GLASS BLANKET TYPE DESIGNED FOR USE ON SURFACES UP TO 250°F WITH A FACTORY APPLIED ALUMINUM FOIL AND KRAFT VAPOR BARRIER JACKET, INSULATION SHALL HAVE A MINIMUM DENSITY OF 1.0 LB/CU, FT, AND A MAXIMUM CONDUCTIVITY OF 0.26 BTU/IN, PER SQ.FT, PER DEGREE F PER HOUR AT 75°F MEAN TEMPERATURE. INSULATION SHALL BE KNAUF DUCTWRAP OR APPROVED EQUAL. INSULATION THICKNESS SHALL BE 2".

AIR DISTRIBUTION:

A. GENERAL

- 1. DUCTWORK SHALL BE CONSTRUCTED OF LOCK FORMING QUALITY GALVANIZED STEEL SHEETS. GALVANIZED COATING SHALL BE NOT LESS THAN 0.9 OUNCES (TOTAL FOR BOTH SIDES) PER SQUARE FOOT OF SHEET.

 2. DUCTWORK SHALL BE SQUARE, RECTANGULAR, ROUND, OR FLAT OVAL, AS INDICATED ON THE DRAWINGS.
- TURNING VANES SHALL BE INSTALLED IN ALL 90 DEGREE SQUARE AND RECTANGULAR ELBOWS AND AT OTHER LOCATIONS SHOWN ON THE DRAWINGS. IN ANY SUPPLY, RETURN OR EXHAUST AIR DUCTWORK WITH VELOCITIES OF 1800 FPM OR HIGHER, THE TURNING VANES SHALL BE THE DOUBLE THICKNESS TYPE, WITH VANES WELDED TO THE RUNNERS AND RUNNERS WELDED TO THE DUCT.
- 4. DUCTWORK SHALL BE CLASSIFIED AND CONSTRUCTED IN THE FOLLOWING SMACNA PRESSURE CLASSES, OR 150% OF THE SCHEDULED FAN S.P., WHICHEVER IS GREATER:

SUPPLY AIR DUCTWORK (GENERAL BUILDING) RETURN DUCTWORK (GENERAL BUILDING) EXHAUST DUCTWORK (GENERAL BUILDING)

PRESSURE CLASS

B. GALVANIZED STEEL DUCTWORK 1. EXCEPT WHERE INDICATED OTHERWISE DUCT CONSTRUCTION SHALL CONFORM TO THE RECOMMENDATIONS OF THE SMACNA HVAC DUCT CONSTRUCTION MANUAL FOR PRESSURE CLASSES SPECIFIED HEREIN BEFORE.

1. INSULATED FLEXIBLE DUCT SHALL BE CLASS 1 AIR DUCT IN ACCORDANCE WITH UL 181 AND SHALL COMPLY WITH NFPA 90A AND 90B. INSULATED FLEXIBLE DUCT SHALL CONSIST OF AN INNER FILM LAYER FOR MINIMUM WORKING PRESSURE OF 6" WG. BONDED TO A STEEL OR ALUMINUM SPRING WIRE HELIX, FIBERGLASS INSULATION, AND A VAPOR BARRIER JACKET. INSULATION SHALL HAVE A MAXIMUM C-VALUE OF 0.23 BTU/HR/SQ. FT./DEGREE F. AT 75 DEGREES F. MEAN TEMPERATURE. VAPOR BARRIER JACKET SHALL HAVE A MAXIMUM VAPOR TRANSMISSION RATE OF 0.1 GRAINS/SQ. FT./HR/INCH HG (PERM). THE ASSEMBLY SHALL HAVE A MAXIMUM FLAME AND SMOKE RATING OF PER ASTM E84 AND NEPA 255. MINIMUM WORKING PRESSURE FOR DUCT PRESSURE CLASS 4" AND BELOW SHALL BE 6" WG. INSULATED FLEXIBLE DUCT SHALL BE THERMOFLEX OR APPROVED EQUAL.

AIR DEVICES:

- A. TYPE 'A' SHALL BE TITUS PSS-AA OR APPROVED EQUAL. PROVIDE WITH OPPOSED BLADE DAMPER AND INSULATED BACK PAN. PRICE AND KRUGER ARE AN APPROVED EQUAL.
- B. TYPE 'B' SHALL BE TITUS PAR-AA OR APPROVED EQUAL. PROVIDE WITH OPPOSED BLADE DAMPER. PRICE AND KRUGER ARE AN APPROVED EQUAL.
- C. TYPE 'C' SHALL BE TITUS 350F OR APPROVED EQUAL, PROVIDE WITH OPPOSED BLADE DAMPER, PRICE AND KRUGER ARE AN APPROVED EQUAL
- D. TYPE 'D' SHALL BE TITUS 300F OR APPROVED EQUAL. PROVIDE WITH OPPOSED BLADE DAMPER, PRICE AND KRUGER ARE AN APPROVED EQUAL
- E. TYPE 'E' SHALL BE TITUS TDC OR APPROVED EQUAL. PROVIDE WITH OPPOSED BLADE DAMPER AND INSULATED BACK PAN. PRICE AND KRUGER ARE AN APPROVED EQUAL

SPLIT SYSTEM HEAT PUMP:

A. SYSTEM SHALL BE CARRIER MODEL FV4C/25HCE OR APPROVED EQUAL. AIR HANDLER SHALL BE PROVIDED WITH SINGLE POWER POINT CONNECTION, STANDARD FILTER RACK KIT, CONDENSATE DRAIN TRAP KIT, AND WALL MOUNTED PROGRAMMABLE THERMOSTAT. HEAT PUMP SHALL BE PROVIDED WITH COATED COILS FOR COASTAL AREAS.

EXHAUST FANS:

A. FANS SHALL BE GREENHECK MODEL CSP OR APPROVED EQUAL, FAN SHALL BE PROVIDED WITH DISCONNECT, GRILLE, MOUNTING BRACKETS AND EAVE VENT DISCHARGE. FANS SHALL BE INTERLOCKED WITH LIGTS IN THE ROOM. COORDINATE WITH ELECTRICAL.



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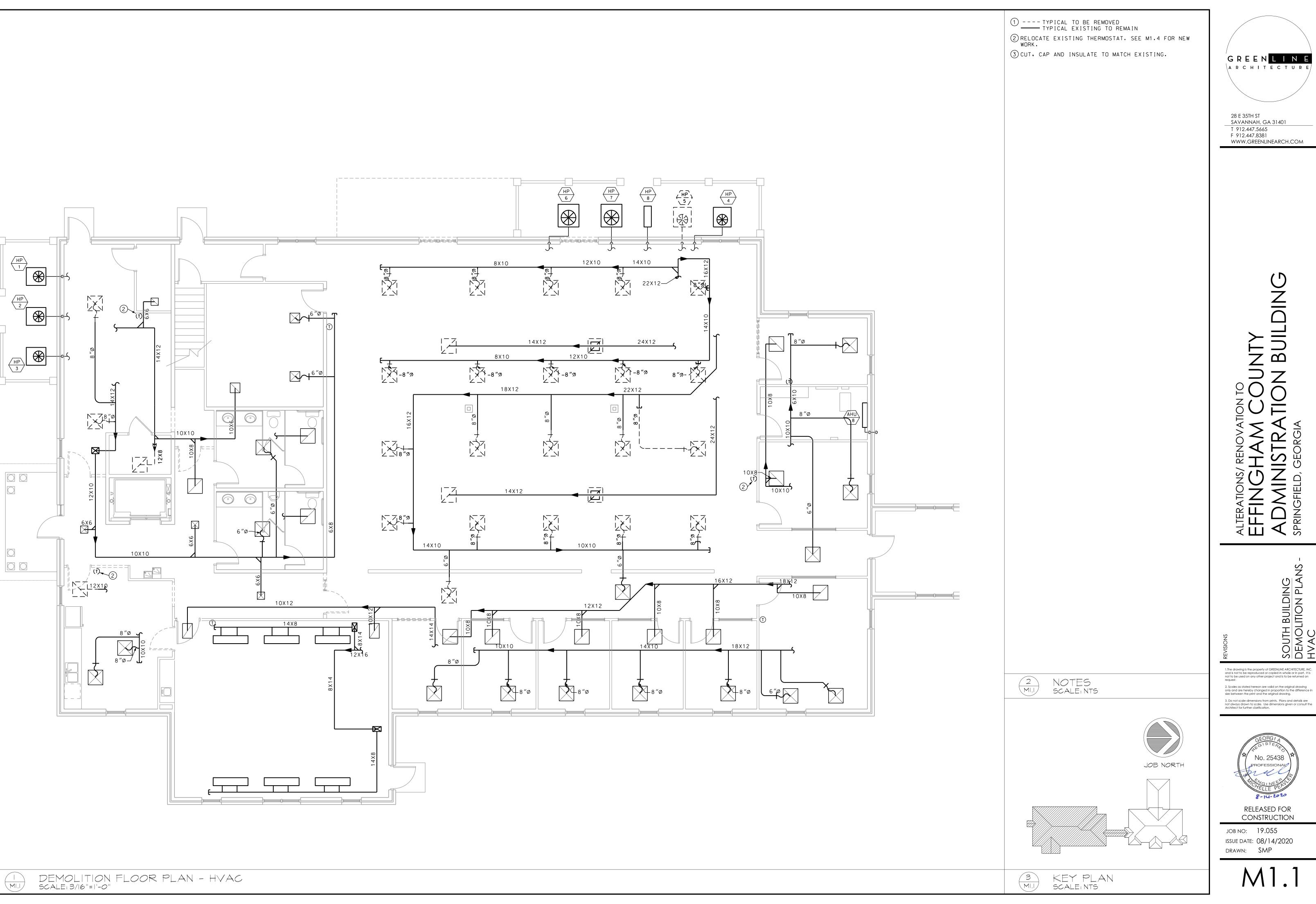
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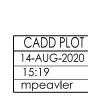


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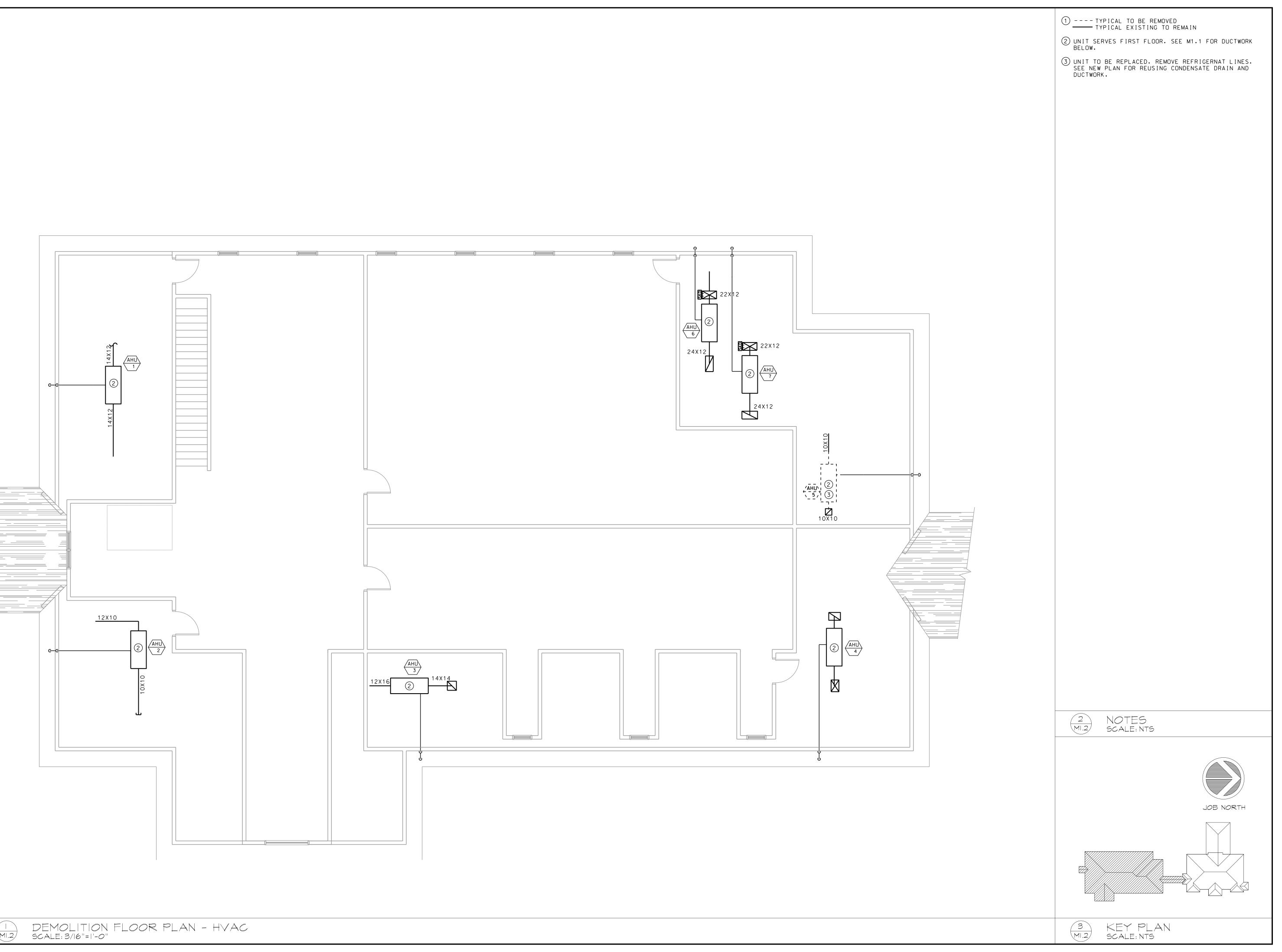
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FINGHAM COUNTY DMINISTRATION BUILDIN

SOUTH BUILDING DEMOLITION PLANS

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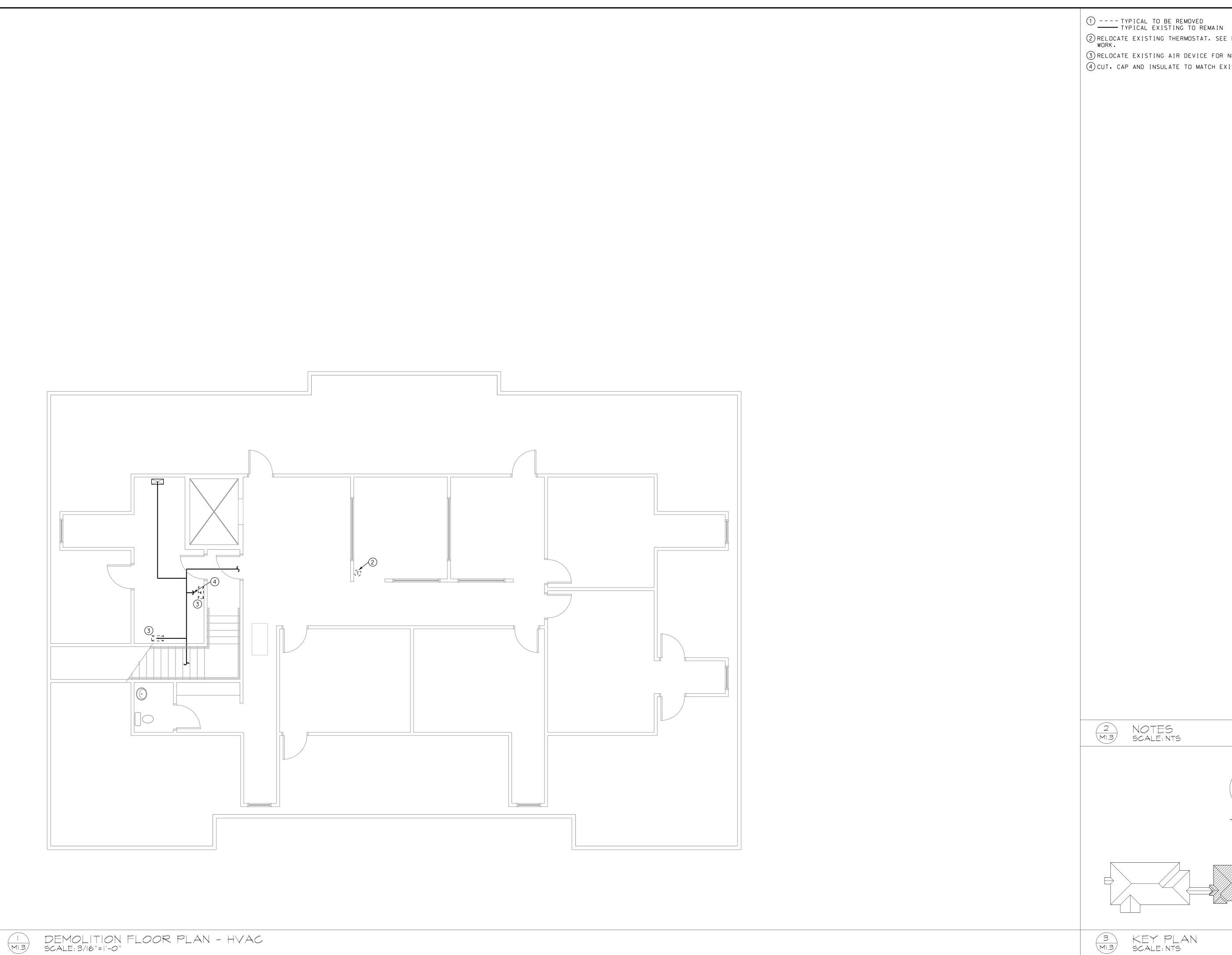
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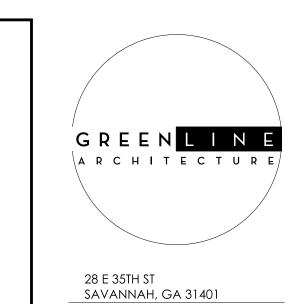
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M1.2



② RELOCATE EXISTING THERMOSTAT. SEE M1.6 FOR NEW

3 RELOCATE EXISTING AIR DEVICE FOR NEW LAYOUT. 4 CUT, CAP AND INSULATE TO MATCH EXISTING.



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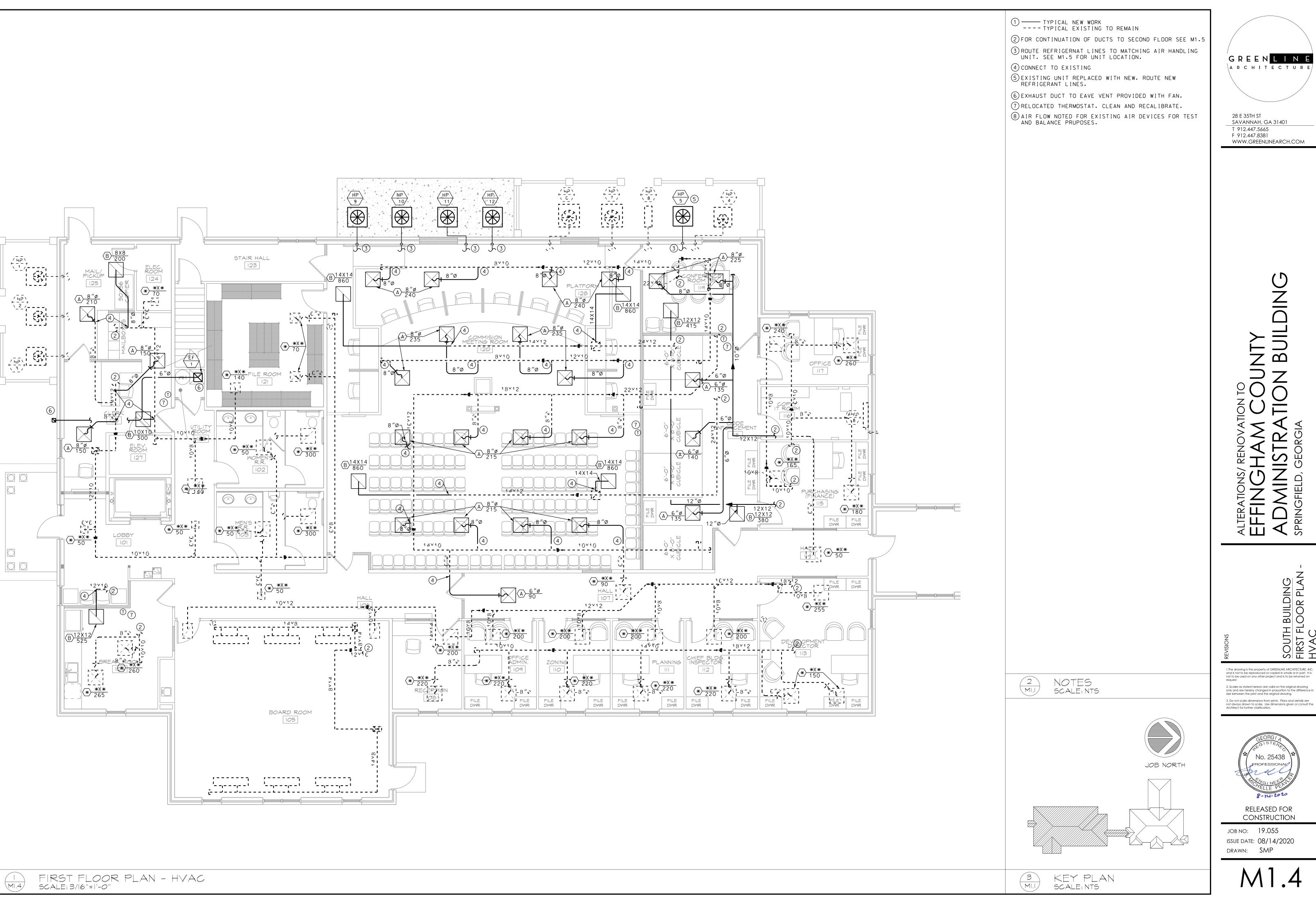
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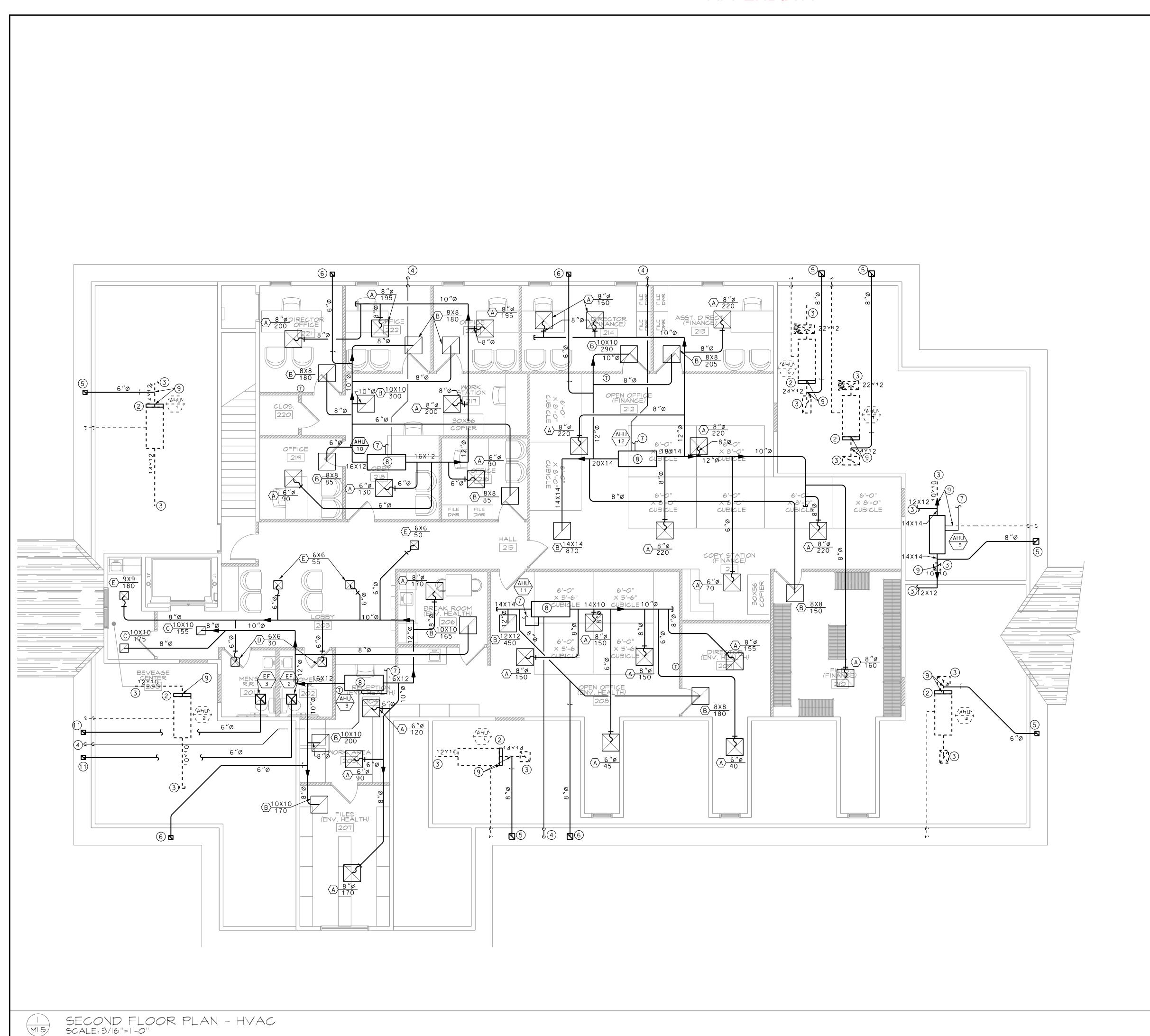
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- 1) ---- TYPICAL NEW WORK
 ---- TYPICAL EXISTING TO REMAIN
- (2) INSTALL FILTER RACKS ON THE RETURN OF ALL EXISITNG
 - 3 FOR CONTINUATION OF DUCTS TO FIRST FLOOR SEE M1.4

 4 CONDENSATE DRAIN FULL SIZE OF CONNECTION AT UNIT.
 INSTALL P-TRAP IN LINE. ROUTE LINE TO EXTERIOR OF
 BUILDING AND TURN DOWN TO DRIP ON GROUND OUTSIDE.
 - PAINT PIPE OUTSIDE TO MATCH BUILDING.

 (5) OUTSIDE AIR DUCTS ADDED TO EXISTING UNITS, PROVIDE AND INSTALL EAVE VENT TO MATCH DUCT SIZE, ROUTE OUTSIDE AIR DUCT TO RETURN DUCT AS SHOWN.

COORDINATE EXACT LOCATION OF DRAIN WITH WINDOWS.

- 6 OUTSIDE AIR DUCTS FOR NEW UNITS. PROVIDE AND INSTALL EAVE VENT TO MATCH DUCT SIZE. ROUTE OUTSIDE AIR DUCT TO RETURN DUCT AS SHOWN.
- 7 ROUTE REFRIGERNAT LINES TO MATCHING HEAT PUMP OUTSIDE. SEE M1.4 FOR UNIT LOCATION.
- 8 UNIT LOCATED ABOVE CEILING, COORDINATE EXACT LOCATION WITH STRUCTURE, MOUNT UNIT IN INSULATED AUXILLARY DRAIN PAN, ELEVATE UNIT IN PAN AS REQUIRED FOR COIL PULL CLEARANCE, PROVIDE AND INSTALL FLOAT SWITCH IN AUXILLARY DRAIN PAN AND PROVIDE PAN WITH CAPPED DRAIN CONNECTION, UPON ACTIVATION, FLOAT SWITCH SHALL DE-ENERGIZE UNIT. MOUNT AUXILLARY DRAIN PAN ON TOP OF NEOPRENE VIBRATION ISOLATION PAD, SUPPORT UNIT AND DRAIN PAN FROM STRUCTURE.
- (9) CONNECT TO EXISTING
- ① EXISTING UNIT REPLACED WITH NEW, ROUTE NEW REFRIGERANT LINES, REUSE CONDENSATE DRAIN, MODIFY DUCTS AS SHOWN.
- (1) EXHAUST DUCT TO EAVE VENT PROVIDED WITH FAN.

NOTES SCALE: NTS

KEY PLAN SCALE: NTS

3 MI.I



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EFFINGHAM COUNTY ADMINISTRATION BUILDING

SOUTH BUILDING
SECOND FLOOR PLAN
- HVAC

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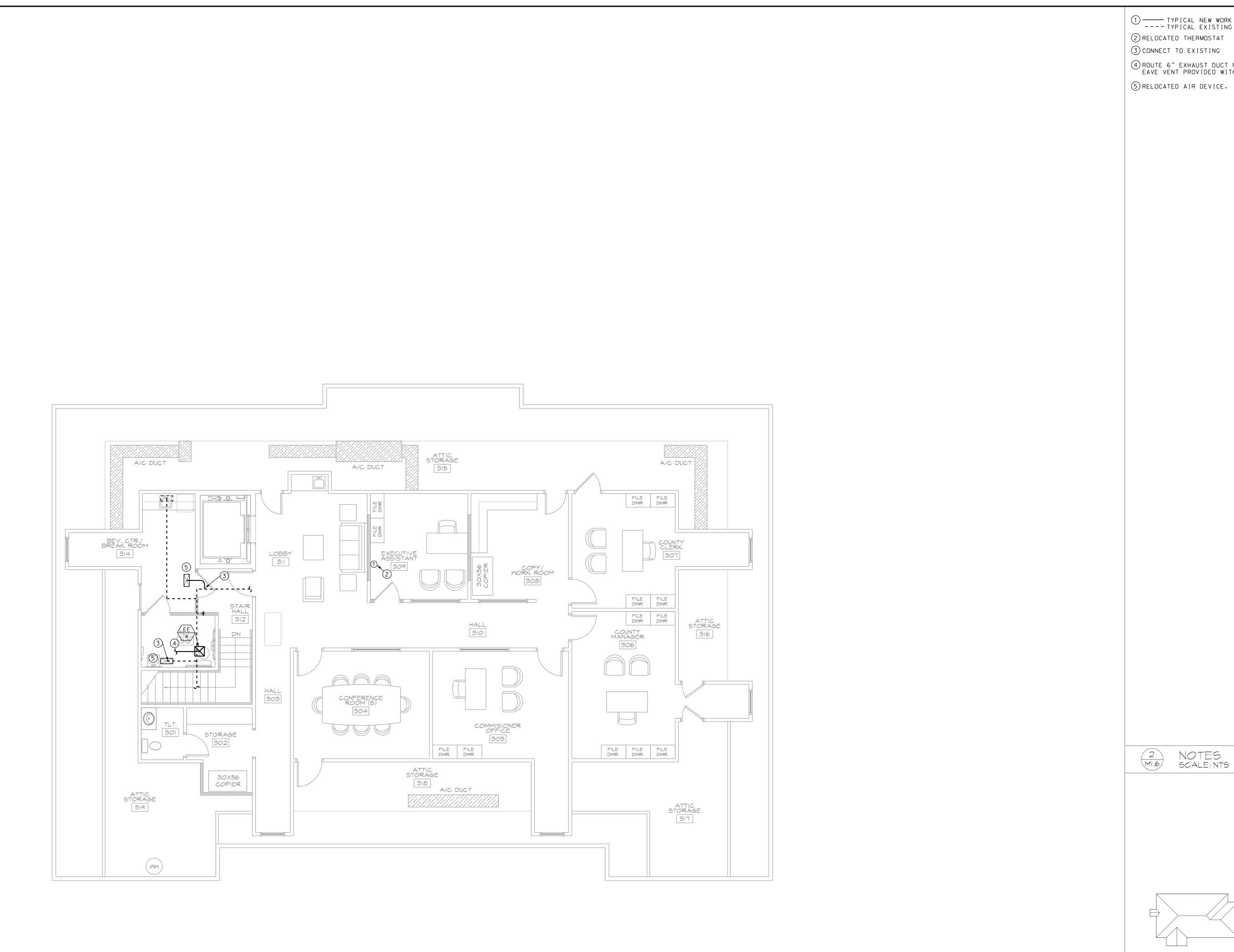
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M1.5

JOB NORTH



1) ---- TYPICAL NEW WORK
---- TYPICAL EXISTING TO REMAIN

2 RELOCATED THERMOSTAT

3 CONNECT TO EXISTING

4) ROUTE 6" EXHAUST DUCT FROM FAN TO NEARESRT EAVE. EAVE VENT PROVIDED WITH FAN.

5 RELOCATED AIR DEVICE.



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NORTH BUILDING FLOOR PLAN - HVAC

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M1.6

JOB NORTH

3 MI.6

KEY PLAN SCALE: NTS

APPENDIX A

	LEGEND		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
A-1,3,5			PANELBOARD, FLUSH MOUNTED
	A-1,3,5 ADJACENT TO ARROW INDICATES HOME-RUN OF CIRCUITS 1,3,5 TO PANEL A. 3,5 OR A-3,5 ADJACENT	_	PANELBOARD, SURFACE MOUNTED
/ 章	TO ARROW INDICATES CIRCUIT CONTINUATION. MARKS ACROSS RACEWAY RUNS INDICATE THE NUMBER OF NO. 12 CONDUCTORS. UNLESS NOTED, NO MARKS INDICATES TWO NO. 12 CONDUCTORS. EQUIPMENT GROUNDING CONDUCTORS	0000000	COMMUNICATION BACKBOARD, 3/4"X 4'X 8' UNLESS NOTED
1 д в	ARE NOT SHOWN, SEE GENERAL NOTES. IF INDICATED ADJACENT TO OUTLET, NUMERAL AND LOWER CASE LETTER		EQUIPMENT AS NOTED
	INDICATES CIRCUIT CONNECTION AND SWITCHLEG DESIGNATION RESPECTIVELY. TYPE B OR CAPITAL LETTER B	Ø	MOTOR, HORSEPOWER AS INDICATED
3,5	INDICATES LIGHT FIXTURE TYPE. UNLESS NOTED, DIMENSIONS INDICATED IN LEGEND AND ON PLANS ARE TO BOTTOM	<u> </u>	NON-FUSIBLE DISCONNECT SWITCH, RATING/POLES/ENCLOSURE AS INDICATED
	OF OUTLET OR DEVICE. ALL SYMBOLS INDICATED HEREIN MAY NOT NECESSARILY BE USED ON THE PLANS.	₽	FUSIBLE DISCONNECT SWITCH, RATING/POLES/ENCLOSURE, FUSES AS INDICATED
			RACEWAY INSTALLED CONCEALED IN WALLS AND/OR ABOVE CEILING
	CEILING OUTLET AND FIXTURE		RACEWAY INSTALLED EXPOSED
	CEILING OUTLET AND FIXTURE - EGRESS/EMERGENCY LIGHTING	٠	FLEXIBLE METALLIC RACEWAY
$\vdash \!$	OUTLET AND STRIP FIXTURE - MOUNTING AS INDICATED IN FIXTURE SCHEDULE		CONDUIT STUB-UP AND HOMERUN
οЮ	CEILING OR WALL OUTLET AND FIXTURE	o / •	CONDUIT UP/CONDUIT DOWN
• ⊢●	CEILING OR WALL OUTLET AND FIXTURE - EGRESS/EMERGENCY LIGHTING	一	CONDUIT TERMINATION, STUB-OUT
↓ ⊗ XA	OUTLET AND EXIT LIGHT - LETTERS INDICATE FIXTURE TYPE. PROVIDE ARROWS INDICATED	- IP	GROUND
ОЮ	CEILING OR WALL MOUNTED JUNCTION BOX	FACP	FIRE ALARM CONTROL PANEL
#	20 AMP DUPLEX RECEPTACLE, NEMA 5-20R - MT. 16" AFF	FAA	FIRE ALARM REMOTE ANNUNCIATOR
≠	20 AMP DUPLEX RECEPTACLE, NEMA 5-20R - MT. 48" AFF AND/OR ABOVE COUNTER TOP	WF	SPRINKLER SYSTEM WATER FLOW FIRE ALARM SWITCH
₩ P	20 AMP WEATHERPROOF DUPLEX RECEPTACLE, NEMA 5-20R - MT. 16" ABOVE FLOOR AND 36" ABOVE EARTH. NOTE G31	vs	SPRINKLER SYSTEM SUPERVISION VALVE FIRE ALARM TAMPER SWITCH
H	SPECIAL PURPOSE RECEPTACLE - REFER TO PLANS FOR NEMA CONFIGURATION	F	FIRE ALARM MANUAL PULL STATION - MT. 42" MINIMUM TO 48" MAXIMUM TO MANUAL ACTIVATED DEVICE HANDLE.
⇒ GF	20 AMP GROUND FAULT INTERRUPTER DUPLEX RECEPTACLE, NEMA 5-20R - MT. 48" AFF AND/OR ABOVE COUNTER TOP OR AS INDICATED	∑ co	FIRE ALARM AUDIBLE AND VISUAL SIGNAL DEVICE- WALL MOUNTED. CD = CANDELA RATING.
+	20 AMP DOUBLE DUPLEX RECEPTACLE, NEMA 5-20R - MT. 16" AFF	∑ ^{co}	FIRE ALARM VISUAL SIGNAL - WALL MOUNTED. CD = CANDELA RATING.
•	FLOOR OUTLET WITH 20 AMP DUPLEX RECEPTACLE, NEMA 5-20R. REFER TO NOTE G45.	X CD	FIRE ALARM VISUAL SIGNAL - CEILING MOUNTED. CD = CANDELA RATING.
◀	COMMUNICATION OUTLET - MT. 16" AFF U.N.O. EXTEND 1-1/4"C TO POINT ABOVE ACCESSIBLE CEILING. REFER TO NOTE G41	∑ CD C c	FIRE ALARM AUDIBLE AND VISUAL SIGNAL DEVICE - CEILING MOUNTED. CD = CANDELA RATING.
⋖ F	COMMUNICATION OUTLET, FLOOR MOUNTED. EXTEND 1-1/4"C TO POINT ABOVE ACCESSIBLE CEILING. REFER TO NOTE G41 & G45.	▼ cD ⊠ c	FIRE ALARM VOICE EVAC SPEAKER AND VISUAL DEVICE - CEILING MOUNTED. CD = CANDELA RATING.
■ W	COMMUNICATION OUTLET, WALL MOUNTED 48" AFF U.N.O. EXTEND 1-1/4"C TO POINT ABOVE ACCESSIBLE CEILING. REFER TO NOTE G41	▼ CD	FIRE ALARM VOICE EVAC SPEAKER AND VISUAL DEVICE - WALL MOUNTED, CD = CANDELA RATING.
✓ TV	TELEVISION SYSTEM OUTLET - MT. 16" AFF. EXTEND 1"C TO NEAREST TELEVISION CABINET OR BACKBOARD. REFER TO NOTE G34 & G41	Š	FIRE ALARM VOICE EVAC SPEAKER - WALL MOUNTED.
⊢ ®	ELECTRIC DRINKING FOUNTAIN RECEPTACLE - REFER TO GENERAL NOTES G3	s _c	FIRE ALARM VOICE EVAC SPEAKER - CEILING MOUNTED.
S	SINGLE POLE TOGGLE SWITCH - MT. 48" UP	RL	FIRE ALARM SYSTEM CONTROL RELAY
S ₃	THREE-WAY TOGGLE SWITCH - MT. 48" UP	DACT	FIRE ALARM DIGITAL ALARM COMMUNICATOR TRANSMITTER
S ₄	FOUR-WAY TOGGLE SWITCH - MT. 48" UP	MIC	FIRE ALARM REMOTE VOICE EVACUTAION MICROPHONE
S _K	CORBIN TYPE KEY SWITCH - MT. 48" UP	 F	THERMAL DETECTOR, CEILING MOUNTED
S s	MOTOR RATED SWITCH WITH OVERLOAD PROTECTION - MT. 48" UP.	S	SMOKE DETECTOR, CEILING MOUNTED
S _M	MOTOR RATED DISCONNECT SWITCH, SINGLE PHASE - MT. 48" UP.	(Ø)==-	AIR DUCT SMOKE DETECTOR
S _D	LED DIMMER SWITCH - MT. 48" UP. REFER TO NOTE G33	<u> </u>	SMOKE DAMPER
S _D ³	LED THREE-WAY DIMMER SWITCH - MT. 48" UP. REFER TO NOTE G33	<u>(S)</u>	
S°	OCCUPANCY SENSOR SWITCH - MT. 48" UP. NOTE G24	⊠ _{RTS}	SMOKE DETECTOR REMOTE STATUS DISPLAY AND TEST SWITCH
S ⁰ ₃	THREE-WAY OCCUPANCY SENSOR SWITCH - MT. 48" UP. NOTE G24	DH	MAGNETIC DOOR HOLDER, WALL MOUNTED
<u></u>	CEILING MOUNTED OCCUPANCY SENSOR SWITCH. NOTE G25	DH _F	MAGNETIC DOOR HOLDER, FLOOR MOUNTED

	ADDITEVIATIONS
A OR AMP	AMPERES
AFF	ABOVE FINISHED FLOOR
AIC	AMPERE INTERRUPTING CAPACITY
AM	AMMETER
AS	AMMETER SELECTOR SWITCH
ASYM	ASYMMETRICAL
С	CONDUIT
СВ	CIRCUIT BREAKER
CKT	CIRCUIT
CLF	CURRENT LIMITING FUSE
CNTL	CONTROL
CT	CURRENT TRANSFORMER
DISC	DEPTH DISCONNECT SWITCH
DISC SW	DISCONNECT SWITCH DISCONNECT SWITCH
ER	EXISTING RELOCATED
ETR	EXISTING REMAIN
EXP	EXPLOSION PROOF
F	FUSE
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FMPX	FIRE ALARM MULTIPLEX PANEL
G OR GND	GROUND
H	HEIGHT
HP	HORSEPOWER
JB OR J	JUNCTION BOX
KVA	KILOVOLT - AMPS
KW	KILOWATTS
L	LENGTH
LA	LIGHTNING ARRESTOR
MCB OR MB	MAIN CIRCUIT BREAKER
MH OR MTG	MOUNTING HEIGHT
MLO	MAIN LUGS ONLY
MT OR MTD	MOUNT OR MOUNTED
NEC	NATIONAL ELECTRICAL CODE
NFPA	NATIONAL FIRE PROTECTION ASSOC.
NTS	NOT TO SCALE
Р	POLE
PNL	PANELBOARD
RECEPT	RECEPTACLE
RMS	ROOT MEAN SQUARE
SW	SWITCH
SWBD	SWITCHBOARD
SYM	SYMMETRICAL
TBB	TELEPHONE BACKBOARD
TYP	TYPICAL
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORIES
UNO	UNLESS NOTED OTHERWISE
V	VOLTMETER
VM	VOLTMETER SELECTOR SWITCH
VS	VOLTMETER SELECTOR SWITCH
W	WIDTH
W/	WITH
WHDM	WATT HOUR DEMAND METER
WM	WATTHER PROOF
WP	WEATHER PROOF
XFMR	TRANSFORMER

ABBREVIATIONS



EFFINGHAM COUNTY ADMINISTRATION BUILDING

LEGEND

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EO.1

APPENDIX A

GENERAL NOTES: (APPLICABLE TO ALL DRAWINGS)

- G1. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF FIXTURES AND OTHER CEILING MOUNTED DEVICES. LIGHTS, SPRINKLER HEADS, SMOKE DETECTORS, DIFFUSERS AND CEILING SPEAKERS IN THAT ORDER TAKE PRECEDENCE OVER ONE ANOTHER. COORDINATE WITH ALL DISCIPLINES INVOLVED.
- G2. WHEN CONDUCTOR SIZE IS INDICATED FOR BRANCH CIRCUIT HOME RUN, THE CONDUCTOR SIZE INDICATED SHALL BE USED FOR THE COMPLETE CIRCUIT.
- G3. ALL WATER COOLERS SHALL BE WALL MOUNTED WITH ELECTRICAL CONNECTIONS MADE FROM JUNCTION BOX FOR ACCESSIBLIITY FROM WITHIN COOLER HOUSING. BRANCH CIRCUIT BREAKER SERVING COOLERS SHALL BE GROUND FAULT CIRCUIT INTERRUPTER TYPE.
- G4. REFER TO MECHANICAL SYSTEM DRAWINGS FOR EXACT LOCATION OF ALL MECHANICAL EQUIPMENT REQUIRING ELECTRICAL SERVICE.
- 65. WHERE FIXTURE TYPE DESIGNATION IS INDICATED ADJACENT TO ONE FIXTURE IN A CONTINUOUS ROW, ALL FIXTURES IN THE ROW ARE TO BE THE SAME TYPE, UNLESS OTHERWISE INDICATED.
- G6. ARROWHEAD OF PANELBOARD DESIGNATION ON DRAWINGS INDICATES FACE OF FLUSH MOUNTED PANELBOARD.
- G7. EQUIPMENT GROUNDING CONDUCTORS SHALL BE PROVIDED FOR ALL BRANCH AND FEEDER CIRCUITS.
- G8. JUNCTION BOXES INSTALLED WITHIN FINISHED SPACES SHALL BE FLUSH MOUNTED WITH BLANK DEVICE PLATE. IDENTIFY USE ON INSIDE OF BOX. JUNCTION BOXES SHALL NOT BE INSTALLED ABOVE NONACCESSIBLE CEILINGS.
- G9. THE LOCATION AND MOUNTING HEIGHTS OF DEVICES AND OUTLETS INDICATED ON THE ELECTRICAL PLANS ARE SCHEMATIC, INTENDED ONLY TO CONVEY THE APPROXIMATE LOCATION. THE ACTUAL LOCATION AND MOUNTING HEIGHTS SHALL BE COORDINATED WITH THE ARCHITECTURAL INTERIOR ELEVATIONS.
- G10. PROVIDE A NYLON PULL CORD IN ALL EMPTY CONDUITS 1/2" & 3/4" IN DIAMETER. PROVIDE A GALVANIZED PULL WIRE IN ALL EMPTY CONDUITS 1" AND LARGER. DEADEND RUNS SHALL BE TERMINATED WITH INSULATED BUSHINGS AND SHALL BE CAPPED. ADDITIONALLY. DEADENDS SHALL BE LABELLED TO INDICATE SYSTEM AND LOCATION OF OPPOSITE END. LABEL CONDUITS WITH THOMAS & BETTS NYLON TYPE I.D. TIES AND BLACK MARKER PEN SPECIFICALLY INTENDED FOR SUCH USE.
- G11. HOLD CONCEALED CONDUITS AS TIGHT TO THE STRUCTURE AS POSSIBLE AND ABOVE DUCTWORK AND PIPING. ALL CONDUITS SHALL BE RUN PARALLEL OR PERPENDICULAR TO THE BUILDING STRUCTURE. WHERE LB OR SIMILAR FITTINGS ARE USED FOR PULL POINTS, SUCH FITTINGS SHALL BE READILY ACCESSIBLE AND SHALL NOT CONTAIN SPLICES AND SHALL BE SIZED PER NEC. COORDINATE THE LOCATIONS OF THESE FITTINGS WITH OTHER TRADES SO THEY ARE NOT COVERED BY DUCTWORK OR PIPING.
- G12. CONDUITS ENTERING SURFACE MOUNTED PANELS SHALL BE GROUPED AND SECURED TO LIGHTWEIGHT CHANNEL WITH INDIVIDUAL CLAMPS.
- G13. ALL RACEWAY-PENETRATIONS IN RATED WALLS AND FLOORS SHALL BE MADE IN ACCORDANCE WITH THE U.L. FIRE RESISTANCE DIRECTORY FOR THROUGH-PENETRATION FIRESTOP SYSTEMS OR DEVICES. THE FIRESTOP SYSTEM OR DEVICE SELECTED SHALL BE BASED ON CONSTRUCTION TYPE, PENETRANT TYPE AND FLOOR, WALL OR CEILING RATING. ALL MATERIALS SHALL BE UL LISTED. REFER TO THE ARCHITECTURAL DRAWINGS FOR THE LOCATION OF RATED WALL AND FLOORS. ALL FIRE-STOPPING MATERIAL SHALL BE 3M TO MEET STANDARDS.
- G14. OPENINGS IN NON-RATED WALLS AND FLOORS SHALL BE ROUND, SQUARE OR RECTANGULAR. IRREGULAR OPENINGS ARE NOT ACCEPTABLE. SEAL BOTH SIDES OF OPENINGS IN A NEAT MANNER. USE JOINT COMPOUND FOR WALLS AND LIGHTWEIGHT CONCRETE FOR FLOORS. WIPE RACEWAYS CLEAN AND SMOOTH FILLER TO TROWEL
- G15. ALL F.A. VISUAL ALARM STROBES SHALL BE SYNCRONIZED.

- G16. ALL F.A. VISUAL ALARM NOTIFICATION APPLIANCES SHALL COMPLY WITH ADAAG, NFPA72, ANSI 117.1 AND UL 1971.
- G17. FURNISH AND INSTALL F.A. STROBE ILLUMINANCE REQUIRED TO COVER AREA AND SPACING IN WHICH STROBES ARE INSTALLED TO MEET WALL LOCATIONS. STROBE LOCATIONS INDICATED ON PLAN SHEETS ARE BASED ON 75 CD RATINGS. ADDITIONAL STROBES SHALL BE INSTALLED AS REQUIRED BY FIRE ALARM MANUFACTURER. LOCATIONS SHOWN ON PLANS MAY BE MODIFIED TO COVER AREAS AS RECOMMENDED BY THE FIRE ALARM MANUFACTURER. IDENTIFY CANDELA RATING OF EACH STROBE ON FLOOR PLANS SUBMITTED WITH SHOP DRAWINGS. LOCATE ADJACENT TO EACH STROBE DEVICE.
- G18. MAXIMUM SPACING BETWEEN F.A. STROBES IN CORRIDORS SHALL NOT EXCEED 100 FEET. LOCATE STROBES WITHIN 15 FEET OF THE END OF EACH CORRIDOR.
- G19. LCOATE HEAT AND SMOKE DETECTORS ON THE CEILING 12" FROM SIDEWALLS, AND WITHIN 15' OF SIDEWALLS AND WITHIN 21' OF CORNERS; AND ON THE SIDEWALLS 12" FROM THE CEILING AS A MAXIMUM AND 4" FROM THE CEILING AS A MINIMUM.
- G20. DO NOT LOCATE SMOKE DETECTORS NEAR HVAC SUPPLY OR RETURN REGISTERS. PROVIDE 3'-0" SEPARATION AS A MINIMUM.
- G21. FIRE ALARM PULL STATIONS SHALL BE RED THROUGH OUT.

G22. ALL FIRE ALARM CONDUITS SHALL BE A MINIMUM OF 3/4".

- G23. WALL MOUNT STROBES 80" MINIMUM TO BOTTOM AND 96" MAXIMUM TO TOP OF LENS AFF. WHERE LOW CEILING HEIGHTS DO NOT PERMIT WALL MOUNTING AT A MINIMUM OF 80", WALL MOUNTED VISIBLE DEVICES SHALL BE MOUNTED WITHIN 6" OF THE CEILING.
- G24. OCCUPANCY SENSOR SWITCHES SHALL CONSIST OF THE FOLLOWING TYPES:

 1) SINGLE CIRCUIT (\$^0\$) FOR SINGLE LEVEL SWITCHING HUBBELL LHMTW OR WATT STOPPER OR LEVITON EQUIVALENT.

 2) TWO CIRCUIT (\$^0\$) FOR MULTI-LEVEL SWITCHING HUBBELL LHMTD2W OR WATT STOPPER OR LEVITON EQUIVALENT.

 3) RESTROOMS AND LAVS HUBBELL LHUSRRW OR WATT STOPPER OR LEVITON EQUIVALENT.
 - REFER TO PLANS FOR TYPES REQUIRED. FURNISH AND INSTALL POWER PACKS AND SLAVE UNITS AS REQUIRED FOR CIRCUITS AND SENSORS SHOWN. INTERCONNECT AS REQUIRED. COORDINATE WITH SENSOR MANUFACTURER ALL NECESSARY COMPONENTS FOR COMPLETE INSTALLTIONS.
- G25. CEILING MOUNTED OCCUPANCY SENSORS () SHALL CONSIST OF THE FOLLOWING:

 1) ALL AREAS EXCEPT CORRIDORS HUBBELL DUAL TECH OMNIDT2000 OR WATT STOPPER OR LEVITON EQUIVALENT.
- 2) CORRIDORS HUBBELL OMNIUS2000 OR WATT STOPPER OR LEVITON EQUIVALENT. FURNISH AND INSTALL POWER PACKS AND SLAVE UNITS AS REQUIRED FOR CIRCUITS AND SENSORS SHOWN. INTERCONNECT AS REQUIRED. COORDINATE WITH SENSOR MANUFACTURER ALL NECESSARY COMPONENTS FOR COMPLETE INSTALLATION. PLACE SENSORS 4 TO 6 FEET FROM HVAC SUPPLY/RETURN REGISTERS.
- G26. WALL MOUNTED OCCUPANCY SENSORS SHALL BE HUBBELL LODT OR WATT STOPPER OR LEVITON EQUIVALENT. WALL MOUNT AT HEIGHT RECOMMENDED BY MANUFACTURER TO COVER AREAS. FURNISH AND INSTALL POWER PACKS AND SLAVE UNITS AS REQUIRED FOR CIRCUITS AND SENSORS SHOWN. INTERCONNECT AS REQUIRED. COORDINATE WITH SENSOR MANUFACTURER ALL NECESSARY COMPONENTS FOR COMPLETE INSTALLATION.
- G27. ALL EQUIPMENT SUPPORTS AND HANGERS SHALL BE COORDINATED WITH STRUCTURAL DRAWINGS TO INSURE THAT LOCATION OF SUPPORTS AND HANGERS OCCUR WITHIN 4" OF PANEL POINT.
- G28. CIRCUITS WITH GFCI RECEPTACLES SHALL HAVE A DEDICATED NEUTRAL CONDUCTOR.
- G29. SERIES A.I.C. RATING OF CIRCUIT BREAKER COMBINATIONS ARE NOT ACCEPTABLE.
- 330. REFER TO THE APPROPRIATE DRAWINGS FOR THE EXACT LOCATION OF EQUIPMENT INSTALLED UNDER OTHER DIVISIONS REQUIRING ELECTRICAL SERVICE. PROVIDE FINAL CONNECTIONS TO EQUIPMENT.

- G31. ALL WEATHERPROOF RECEPTACLES SHALL BE RATED "WEATHER RESISTANT" (WR" TYPE AND SHALL HAVE A EXTRA DUTY COVER THAT MAINTAINS THE WEATHERPROOF INTEGRITY OF THE OUTLET WITH THE ATTACHMENT PLUG GAP INSERTED OR REMOVED. COVERS SHALL BE SELF CLOSING AND SHALL HAVE A LOCKING TAB.
- G32. ALL RECEPTACLES WITHIN 6 FT OF SINKSSHALL BE GFI TYPE.
- G33. LED DIMMER SWITCHES SHALL BE COMPATIBLE WITH 1% DIMMING DRIVERS.
- G34. COORDINATE MOUNTING HEIGHT OF WALL MOUNTED TV'S WITH ARCHITECTURAL PLANS.
- G35. ALL SURFACE MOUNTED OR PENDANT MOUNTED FIXTURES LOCATED ADJACENT TO SPRINKLER HEADS SHALL BE LOCATED A MINIMUM OF 18" FROM HEADS. COORDINATE WITH SPRINKLER CONTRACTOR.
- G36. INSTALL ALL RECEPTACLES WITH GROUND ON TOP.
- G37. GROUPS OF DEVICES SHALL BE INSTALLED UNDER MULTI-GANG DEVICE PLATES UNLESS NOTED OTHERWISE.
- G38. PRIOR TO ROUGHING IN WALL MOUNTED DEVICES, REFER TO CASEWORK INTERIOR ELEVATIONS FOR DEVICE LOCATION AND ROUGH-IN ACCORDINGLY.
- G39. ROUTE ALL NEW BRANCH CIRCUITS OVERHEAD ABOVE CEILINGS AND IN WALLS. AVOID INSTALLING CONDUIT SYSTEMS IN CONCRETE FLOOR SLABS.
- G40. ALL EMPTY CONDUIT SYSTEMS SHALL BE EXTENDED TO A POINT ABOVE THE NEAREST ACCESSIBLE CEILING AND SHALL TERMINATE WITH INSULATED THROAT CONNECTOR FOR COMMUNICATION SYSTEMS.
- G41. FURNISH AND INSTALL A 4¹¹/₁₆" SQUARE BOX 2¹/₈" DEEP WITH A SINGLE GANG TILE TYPE COVER AND A 1" CONDUIT TO CEILING SPACE FOR TELEPHONE, DATA, TV AND CCTV OUTLETS, TERMINATE CONDUIT WITH INSULATED BUSHINGS.
- G42. INSTALLATION OF EQUIPMENT SHALL BE COORDINATED WITH OTHER TRADES FOR SPACE REQUIREMENTS AND CONNECTION ARRANGEMENTS. EQUIPMENT SHALL BE INSTALLED TO MAINTAIN CLEARANCES AS RECOMMENDED BY MANUFACTURER OF EQUIPMENT OR CODES AND SHALL BE INSTALLED TO MAINTAINED ACCESS TO ALL SERVICEABLE PARTS.
- G43. IF INTERIOR WALLS EXTEND TO BOTTOM OF STRUCTURE ABOVE, PROVIDE 2" CONDUIT SLEEVES THROUGH INTERIOR PARTITIONS WHERE REQUIRED FOR PASSAGE OF COMMUNICATION CABLES TO OUTLETS SHOWN.
- G44. INSTALL ALL RECEPTACLES AND COMMUNICATION OUTLETS INDICATED IN LEGEND AT 16" AFF TO BOTTOM AND/OR AT COMMON HEIGHT INDICATED UNLESS NOTED OTHERWISE. MAKE SURE THAT ALL BOTTOMS OF BOXES ARE IN LINE. SAME APPLIES TO ALL OTHER DEVICES MOUNTED AT COMMON HEIGHTS SIDE BY SIDE.
- G45. FLOOR BOXES SHALL BE HUBBELL SYSTEM ONE. FLOOR BOXES FOR FIRST FLOOR SHALL BE RECESSED CONCRETE FLOOR BOXES 2 GANG CFB2G SERIES TO ACCOMODATE DEVICES INDICATED ON PLAN SHEETS. FLOOR BOXES FOR SECOND FLOOR SHALL BE FIRE-RATED POKE-THROUGH S1R SERIES TO ACCOMODATE DEVICES INDICATED ON PLAN SHEETS. COVER FINISH SHALL BE SELECTED BY ARCHITECT. PROVIDE SEPARATE BOXES FOR POWER AND COMM.



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EFFINGHAM COUNTY ADMINISTRATION BUILDING PRINGFIELD, GEORGIA

GENERAL AND DEMOLITION NOTES

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JOB NO: 19.055

ISSUE DATE: 08/14/2020

DRAWN: LC

E0.2

DEMOLITION NOTES: (GENERAL)

- D1. REFER TO ARCHITECTURAL DRAWINGS FOR EXTENT OF DEMOLITION
- D2. VISIT SITE AND VERIFY ALL EXISTING CONDITIONS PRIOR TO SUBMITTING BID. BID SHALL INCLUDE ALL REQUIRED DEMOLITION AND/OR RELOCATION OF EQUIPMENT IN RENOVATED AREAS, WHETHER SUCH WORK IS OR IS NOT INDICATED ON THE DRAWINGS.
- D3. RELOCATED EQUIPMENT AND EXISTING EQUIPMENT TO REMAIN AFTER DEMOLITION SHALL MEET THE REQUIREMENTS OF NEW CONSTRUCTION
- DEMOLITION REQUIRES FIELD IDENTIFICATION OF PANELBOARDS, SWITCHES, ALL DEVICES ETC., BRANCH CIRCUITS AND THEN THE REMOVAL OF ALL SUCH CIRCUITS AND ASSOCIATED EQUIPMENT NOT REUSED. CONTRACTOR SHALL FIELD TRACE EACH BRANCH CIRCUIT TO REMAIN AND TO BE DEMOLITIONED WITH CIRCUIT TRACER. REMOVE ALL BRANCH CIRCUITS NOT REUSED BACK TO POINT OF ORIGINATION.
- D5. PATCH WALL PENETRATIONS FOR REMOVED AND RELOCATED EQUIPMENT AND RECONNECTED BRANCH CIRCUITS PASSING THROUGH EXISTING WALLS TO REMAIN.
- D6. REMOVE ALL EXISTING ELECTRICAL EQUIPMENT IN RENOVATED AREAS UNLESS OTHERWISE NOTED TO REMAIN OR TO BE REUSED, INCLUDING LIGHTING FIXTURES (PENDANTS, SURFACE, FLUSH, ECT.), SWITCHES, RECEPTACLES, FLOOR BOXES, CONDUIT AND WIRING SYSTEMS (EXPOSED IN WALLS AND ABOVE CEILING), SURFACE RACEWAY, SURFACE AND FLUSH DEVICE BOXES, DEVICE PLATES, TELEPHONE/DATA SYSTEMS, FIRE ALARM SYSTEMS, ETC. REMOVE ALL WIRING FROM EXISTING CONCRETE ENCASED CONDUITS NOT REUSED, CAP AND ABANDON CONDUIT IN PLACE.

- D7. MAINTAIN AND RESTORE, IF INTERRUPTED, ALL CONDUITS, FEEDERS, BRANCH CIRCUITS, ETC. PASSING THROUGH RENOVATED AREAS SERVING UNDISTURBED AREAS.
- D8. EXISTING CONDUIT IN PLACE, FOUND TO BE REUSABLE, MAY BE USED, ALL OTHER CONDUIT SYSTEMS SHALL BE REMOVED BACK TO POINT OF ORIGINATION.
- D9. EXISTING ELECTRICAL WORK REMAINING IN RENOVATED AREAS, AND INTERRUPTED BY NEW WORK, SHALL BE RESTORED TO ORGINAL CONDITION. RESTORE ALL CIRCUITS INTERRUPTED BY NEW WORK.
- D10. EXISTING TELEPHONE/DATA SYSTEMS AND OTHER COMMUNICATION SIGNALING SYSTEMS OUTSIDE RENOVATED AREA SHALL NOT BE AFFECTED BY WORK PERFORMED UNDER THIS CONTRACT.
- D11. BRANCH CIRCUITS SHALL BE REMOVED FROM POINT OF ORIGINATION TO POINT OF TERMINATION, REMOVAL SHALL INCLUDE CONDUIT, CONDUCTORS, SUPPORTS, FITTINGS, JUNCTION BOXES, ETC. WHERE FEEDER IS RENDERED INACCESSIBLE, DUE TO EXISTING STRUCTURAL CONDITIONS, REMOVE CONDUCTORS ONLY. LAY-IN TYPE CEILINGS ARE CONSIDERED ACCESSIBLE, CONCRETE FLOORS AND MASONRY WALLS ARE CONSIDERED INACCESSIBLE.
- D12. MAINTAIN BRANCH CIRCUITS OUTSIDE RENOVATED AREA IN AREAS INDICATED AS "EXISTING TO REMAIN" (ETR). RECONNECT EXISTING TO NEW CIRCUITS WHERE SHOWN.
- D13. DASHED LINES (===) AND CROSSHATCHING (////) INDICATES EXISTING TO BE REMOVED. REMOVE ALL ELECTRICAL SYSTEMS WITHIN DEMOLITION LIMITS, UNLESS NOTED OTHERWISE.

LIGHTING FIXTURE SCHEDULE STEM LENGTH FOR FIXTURES AND MOUNTING HEIGHTS FOR WALL FIXTURES ARE INDICATED IN THE LIGHTING FIXTURE NOTES. MOUNTING ABBREVIATIONS: R - RECESSED, S - SURFACE, W - WALL, P - PENDANT, C - SUSPENDED. DESCRIPTION NOTES MOUNTING LF-3, 4, 8, 9 PORTFOLIO LD6B-30-_-D010-EU6B-3050-80-35-6LB-1-L1 3000L, 28W, 3500K CREE S-DL-6-42L-35K-_-S-DL6T-W-SS-C LITHONIA LDN6-35-30-L06-AR-LS-MVOLT-EZ1 LD6B-20- -D010-EU6B-1020-80-35-6LB-1-L1 LF-3, 4, 8, PORTFOLIO 2000L, 21W, 3500K S-DL-6-34L-35K- -S-DL6T-W-SS-C CREE 9, 11 LITHONIA LDN6-35-20-L06-AR-LS-MVOLT-EZ1 LF-7, 8, 9, 2LESL4-30L-MVOLT-EZ1-LP835 (2X4) 3248L, 24W, 3500K TECHLIGHT L2PT24-35-4L-1-12-W (2X4) UTOPIA P24-36LED-35K-_-12 WHITE LOUVER-PH-_-UNV-1% DIM LITHONIA 2LESL2-33L-MVOLT-EZ1-LP835 (2X2) 3338L, 28W, 3500K LF-7, 8, 9, TECHLIGHT L2PT22-35-3L-1-6-W (2X2) P22-36LED-35K-_-9 WHITE LOUVER-PH-_-UNV-1% DIM UTOPIA 2LESL4-40L-MVOLT-EZ1-LP835 (2X4) LF-7, 8, 9, LITHONIA 4060L, 30W, 3500K TECHLIGHT L2PT24-35-4L-1-12-W (2X4) UTOPIA P24-54LED-35K-_-12 WHITE LOUVER-PH-_-UNV-1% DIM METALUX SB24CZ-LD5-55-_-UNV-L835-CD-1 5504L, 46W, 3500K LF-7, 8, 9, CREE 24-50L-835-_-1%(0-10V)-UNV 120LM/W LITHONIA 2BLT4-_-60L-ADP-MVOLT-EZ1-LP835 METALUX 2SWLED-20SL-LW-UNV-L835-CD-1-U 1947L, 21W, 3500K W - ABOVE C-LITE C-WR-A-WLIN2-24L-35-WH MIRROR LITHONIA BLWP2-20L-ADP-MVOLT-EZ1-LP835 METALUX 4SNLED-LD5-20SL-LW-UNV-L840-CD-1-U 2100L, 16W, 4000K C-LITE C-STRIP-A-LIN4-23L-40K-WH LITHONIA CLX-L48-3000LM-SEF-_-RDL-MV0LT-EZ1-40K-80CRI SURE-LITES CX-7-1 OR 2-*-SD-RED 1W UNIVERSAL EVENLITE CCDS-EM-R-10R2-*-CN-SD LITHONIA LE-S-*-10R2-R-UNV-ELN-SD - WHERE OBSTRUCTION PROHIBITS ATTACHING CHAIN TO STRUCTURE, PERPENDICULAR TO FIXTURE, PROVIDE TRAPEEZE BELOW OBSTRUCTION AND ATTACH FIXTURE TO TRAPEEZE. - STRUCTURE, TYP.

FIXTURE SCHEDULE NOTES:

- LF- 1. FIXTURES SPECIFIED ARE TO INDICATE THE QUALITY OF FIXTURES REQUIRED. PROVIDE PRODUCT LINES ASSOCIATED WITH HUBBELL LIGHTING INC (LAI), COOPER/EATON LIGHTING (ARDD/WINTER), LITHONIA LIGHTING (ASI) OR NEXTGEN LIGHTING SOUTH EQUIVALENTS TO THAT SPECIFIED. OTHER MANUFACTURERS PRODUCT LINES ARE SUBJECT TO PRIOR APPROVAL, PROVIDED THEY MEET PROJECT REQUIREMENTS AS DETERMINED BY ENGINEER, ARCHITECT AND OWNER. SUBMIT FOR PRIOR APPROVAL AT LEAST 10 DAYS PRIOR TO BID.
- LF- 2. PROVIDE DIRECTIONAL ARROWS AS SHOWN ON PLANS. PROVIDE CEILING MOUNTED (), PENDANT MOUNTED (), WALL () OR END () MOUNTED AS REQUIRED. FOR DOUBLE FACE WALL MOUNT, PROVIDE END BRACKETS NECESSARY. FOR WALL MOUNTED UNITS SHOWN ABOVE DOORS, MOUNT DIRECTLY ABOVE DOORS BETWEEN CEILING AND DOOR FRAME AS CLOSE TO DOOR FRAME AS POSSIBLE. FOR PENDANT AND WALL MOUNTED LIGHTS NOT ABOVE DOORS MOUNT 7'-6" AFF TO BOTTOM. * HOUSING FINISH TO MATCH EXISTING.
- LF- 3. ALL LED'S SHALL HAVE A COLOR TEMPERATURE OF 3500° K AND CRI OF 80 MINIMUM.
- LF- 4. FIXTURE JUNCTION BOXES AND/OR DRIVER ASSEMBLIES SHALL BE ACCESSIBLE AND SERVICEABLE THROUGH FIXTURE HOUSING FROM BELOW FINISHED CEILING.
- LF-5. PROVIDE 0°F DRIVERS FOR ALL EXTERIOR FIXTURES.
- LF- 6. PROVIDE GASKETED FIXTURE FOR WET LOCATION.

 LF- 7. PROVIDE FLANGE TRIM OR GRID TYPE TO MATCH CEILING. REFER TO RCP FOR CEILING TYPES.
- LF-8. FURNISH AND INSTALL SAFETY CHAIN BETWEEN FIXTURE AND STRUCTURE, SIMILAR TO DETAIL 1/E003.
- LF-9. WHERE DIMMER SWITCHES ARE INDICATED ON PLAN SHEETS PROVIDE 1% DIMMING DRIVERS COMPATIBLE WITH 1% LED DIMMER SWITCHES SPECIFIED.
- LF-10. REFER TO ARCHITECTURAL SECTIONS/ELEVATIONS FOR MOUNTING HEIGHTS.
- LF-11. FIXTURES DESIGNATED AS EMERGENCY (●) SHALL BE EQUIPPED WITH AN INTEGRAL BATTERY BACK WITH REMOTE TEST SWITCH AND SELF DIAGNOSTICS FEATURE. FLUSH MOUNT TEST SWITCH IN CEILING ADJACENT TO FIXTURE.

NOTES: (SENSOR WIRING)

- A. NOT ALL MANUFACTURERS' WIRING CONFIGURATIONS ARE THE SAME. REFER TO MANUFACTURER SPECIFIC WIRING DETAILS PRIOR TO INSTALLATION.
- B. THESE PLANS INDICATE AREAS TO BE CONTROLLED BY OCCUPANCY SENSORS. SINCE COVERAGES AND DEVICES VARY BETWEEN MANUFACTURERS, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE PROPER LOCATION, ORIENTATION, AND QUANTITIES WITH THE MANUFACTURER OF THE SYSTEM BEING INSTALLED TO MEET THE SPECIFIED CRITERIA.
- C. THERE ARE NO POWER PACKS SHOWN ON FLOOR PLANS. PROVIDE POWER PACKS AS REQUIRED WITH SENSORS. POWER PACKS ARE TO BE RATED 20A. PROVIDE ONE POWER PACK PER 20A LIGHTING CIRCUIT OR PER INDIVIDUAL AREA BEING CONTROLLED.
- D. CEILING SENSORS ARE TO BE MOUNTED AWAY FROM ANY STRONG AIRFLOW. COORDINATE LOCATION OF SENSORS WITH MECHANICAL AND LIGHTING PLANS.
- E. ALL SENSORS SHALL BE CEILING MOUNTED EXCEPT WHERE CEILING HEIGHTS EXCEED 15'. PROVIDE SENSOR WITH ADAPTOR PLATE FOR JUNCTION BOX MOUNTING (JUNCTION BOX SHALL BE CONCEALED ABOVE ACCESSIBLE CEILING). JUNCTION BOX SHALL BE SUPPORTED FROM STRUCTURE UTILIZING 3/8" THREADED ROD. WHERE CEILING HEIGHTS EXCEED 15', WALL MOUNT SENSORS AT MAXIMUM MOUNTING OF 10'. FOR CEILINGS 10' AND LOWER, MOUNT 6" BELOW CEILING LINE.



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S/ RENOVATION TO SHAM COUNTY VISTRATION BUILDIN CORGIA

FIXTURE SCHEDULE AND NOTES

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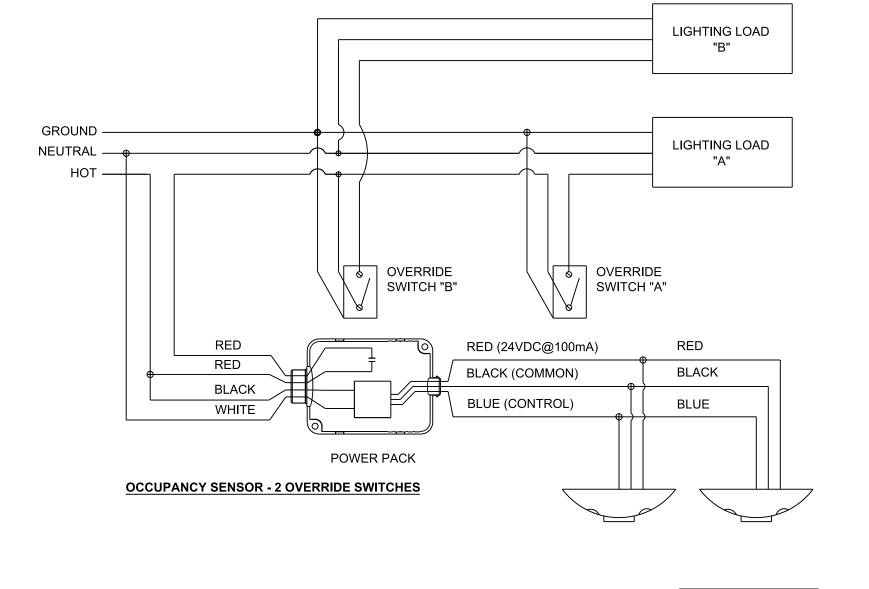


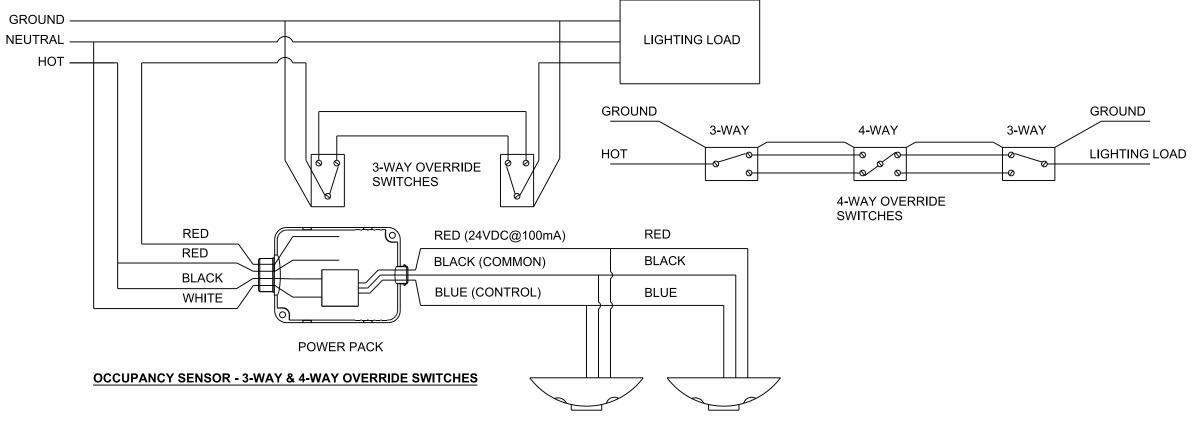
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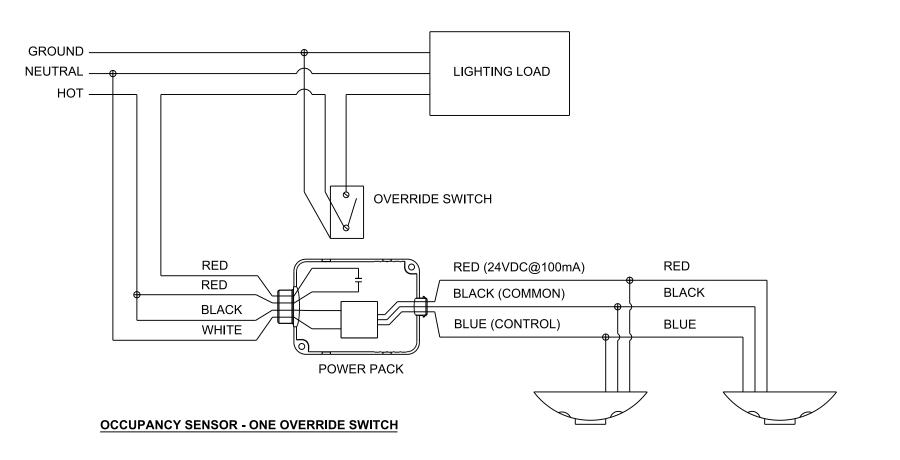
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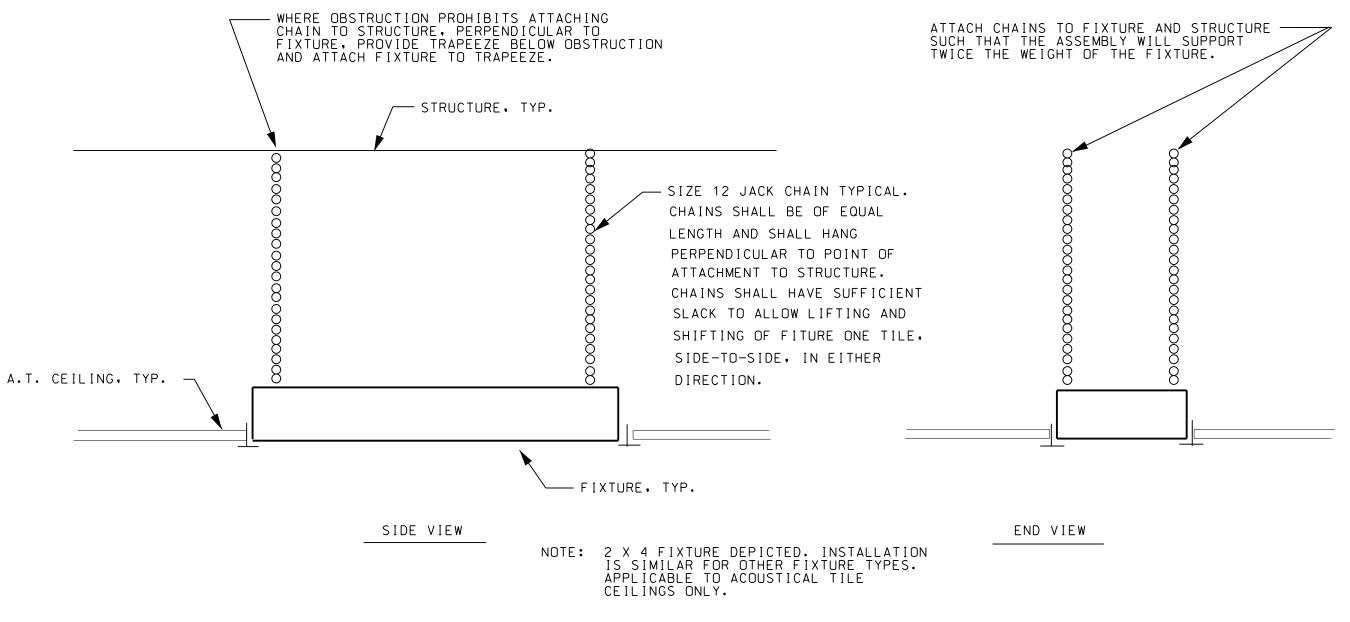
E0.3







2 DETAIL - SENSOR WIRING
E0.3 SCALE: SCHEMATIC ONLY



SCALE: SCHEMATIC ONLY

DETAIL - SAFETY CHAIN INSTALLATION

DIVISION 16 - ELECTRICAL

16010 - BASIC ELECTRICAL REQUIREMENTS

1.1 QUALITY ASSURANCE

- ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE FOLLOWING CODES AND AGENCIES: THE NATIONAL ELECTRICAL CODE (NFPA 70), 2017 EDITION WITH GEORGIA AMENDMENTS.
- THE INTERNATIONAL FIRE CODE, 2018 EDITION. THE LIFE SAFETY CODE (NFPA 101), 2018 EDITION.
 THE INTERNATIONAL BUIDLING CODE, 2018 EDITION WITH GEORGIA AMENDMENTS.

STATE AND LOCAL ORDINANCES GOVERNING ELECTRICAL

B. ALL MATERIALS SHALL BE NEW AND SHALL CONFORM TO STANDARDS WHERE SUCH HAVE BEEN ESTABLISHED FOR THE PARTICULAR MATERIAL.

1.2 PERMITS

A. OBTAIN ALL PERMITS AND INSPECTIONS REQUIRED FOR THE WORK INVOLVED.

1.3 WARRANTY

A. THE CONTRACTOR SHALL WARRANT TO THE OWNER THAT ALL WORK BE FREE FROM DEFECTS AND WILL CONFORM TO THE CONTRACT DOCUMENTS. THIS WARRANTY SHALL EXTEND NOT LESS THAN ONE YEAR FROM THE DATE OF BENEFICIAL OCCUPANCY.

1.4 DRAWINGS

- COORDINATE INSTALLATION OF EQUIPMENT WITH ALL OTHER TRADES. DO NOT SCALE DRAWINGS FOR CONNECTION LOCATIONS. BRING ALL DISCREPANCIES TO THE IMMEDIATE ATTENTION OF
- CONTRACTOR SHAL INSTALL AND CIRCUIT ALL ELECTRICAL WORK AS INDICATED ON DRAWINGS UNLESS SPECIFIC BUILDING CONSTRUCTION REQUIRES A CHANGE OR REROUTING OF THIS WORK.

1.5 EQUIPMENT REQUIRING ELECTRICAL SERVICE

- A. REVIEW ALL SPECIFICATIONS SECTIONS AND DRAWINGS FOR EQUIPMENT REQUIRING ELECTRICAL SERVICE. PROVIDE SERVICE TO AND MAKE CONNECTIONS TO ALL SUCH EQUIPMENT.
- CATALOG NUMBERS INDICATED WITH EQUIPMENT, DEVICES AND LIGHTING FIXTURES ARE FOR CONVENIENCE ONLY. ERRORS AND OBSOLESCENCE SHALL NOT RELIEVE THE FURNISHING OF ITEMS WHICH MEET THE TECHNICAL DESCRIPTION GIVEN IN SPECIFICATIONS, NOTED, OR REQUIRED BY FUNCTION DESIGNATED.

1.6 MECHANICAL SYSTEM INTERFACE

A. ALL CONTROL WIRING FOR PLUMBING AND HVAC EQUIPMENT SHALL BE INSTALLED UNDER DIVISION 15000, POWER WIRING TO ALL MOTORS AND MOTOR CONTROLLERS AND BETWEEN MOTORS AND CONTROLLERS SHALL BE PROVIDED UNDER DIVISION 16000. ALL MOTOR CONTROLLERS SHALL BE FURNISHED AND INSTALLED UNDER DIVISION 16000.

1.7 SCHEDULING OF OUTAGES

A. ELECTRICAL WORK REQUIRING INTERRUPTION OF POWER WHICH WOULD ADVERSELY AFFECT THE NORMAL OPERATION OF OTHER PORTIONS OF THE OWNER'S PROPERTY, SHALL BE DONE AT OTHER THAN NORMAL WORKING HOURS, SCHEDULE THE INTERRUPTION OF ELECTRICAL POWER THREE WORKING DAYS PRIOR TO ACTUAL SHUTDOWN.

1.8 SITE INVESTIGATION AND RENOVATION CONDITIONS

- PRIOR TO SUBMITTING BIDS FOR THE PROJECT, VISIT THE SITE TO BECOME FAMILIAR WITH EXISTING CONDITIONS. THE PROJECT SHALL BE RESTORED TO ITS EXISTING CONDITION, WITH THE EXCEPTION OF WORK UNDER THIS CONTRACT, PRIOR TO FINAL
- PROVIDE ADDITIONS AND ALTERATIONS TO EXISTING WORK REQUIRED TO PRODUCE A COMPLETE ELECTRICAL INSTALLATION. RELOCATE EXISTING ELECTRICAL WORK FOR OTHER TRADES REQUIRED TO COMPLETE THE WORK AND TO MAINTAIN BUILDING IN SERVICE. PROVIDE FOR THE REMOVAL, REINSTALLATION, RECONNECTION OR RELOCATION OF EXISTING CIRCUIT WIRING, WIRING DEVICES, LIGHTING FIXTURES, ETC., NECESSITATED BY THE NEW WORK. IF ANY PORTION OF AN EXISTING CIRCUIT IN AN AREA WHERE NO NEW WORK IS BEING DNE, BUT IS MADE ELECTRICALLY DISCONTINUOUS BY THE NEW WORK, IT SHALL BE RECIRCUITED TO MAINTAIN ELECTRICAL CONTINUITY. CUTTING, CHANNELING, CHASING, OR DRILLING OF WALL, PARTITIONS, CEILINGS, OR OTHER SURFACES AND SUPPORT, OR ANCHORAGE OF CONDUIT, OR OTHER ELECTRICAL WORK, SHALL BE DOWN WITHOUT DAMAGE TO OTHER PIPING OR BUILDING EQUIPMENT. EXISTING SURFACES SHALL THEN BE PATCHED AND PAINTED TO MATCH THE SURROUNDING AREAS.

1.9 CLEANING AND PAINTING

A. REMOVE OIL, DIRT, GREASE AND FOREIGN MATERIALS FROM ALL EQUIPMENT. TOUCH UP SCRATCHED OR MARRED SURFACES OF IGHTING FIXTURES, PANELBOARD AND CABINET TRIMS, AND EQUIPMENT ENCLOSURES WITH PAINT MANUFACTURED SPECIFICALLY FOR THAT PURPOSE.

16100 - BASIC MATERIALS

2.1 RACEWAYS

- A. RACEWAY IS REQUIRED FOR ALL WIRING, UNLESS SPECIFICALLY INDICATED OR SPECIFIED OTHERWISE. THE MINIMUM SIZE OF CONDUIT SHALL BE $^{1}/_{2}$ ", BUT SHALL BE NOT LESS THAN SIZE INDICATED ON THE DRAWINGS OR REQUIRED BY THE NEC.
- CONDUITS SHALL BE ELECTRICAL METALLIC TUBING (EMT) EXCEPT FOR THE FOLLOWING CONDITIONS: 1. CONDUITS WHICH PENETRATE THE BUIDLING ROOF OR EXTERIOR SHALL BE GALVANIZED RIGID STEEL (GRS) OR INTERMEDIATE METAL CONDUIT (IMC).
- 2. USE FLEXIBLE CONDUIT FOR CONNECTIONS TO MOTORS. FLUSH MOUNTED LIGHTING FIXTURES, AND ALL VIBRATING EQUIPMENT.
 - A. LENGTH SHALL NOT EXCEED 18", EXCEPT LENGTHS UP TO 6'-0" MAY BE USED FOR LIGHTING FIXTURES. MAINTAIN GROUND CONTINUITY THROUGH FLEXIBLE CONDUIT WITH A GREEN EQUIPMENT GROUNDING
 - CONDUCTOR. C. LIQUID TIGHT METAL FLEXIBLE CONDUIT SHALL BE USED IN MECHANICAL EQUIPMENT ROOMS AND EXTERIOR
- 3. CONDUITS INSTALLED WITHIN CONCRETE SLABS SHALL BE GRS, IMC, OR SCHEDULE 40 HEAVY WALL PVC. WHERE TRANSITION OF SLAB, MAKE TRANSITION WITH A FULLY
- TAPED RIGID GALVANIZED OR IMC ELBOW. 4. CONDUITS INSTALLED IN DIRECT CONTACT WITH EARTH SHALL BE SCHEDULE 40 HEAVY WALL PVC. WHERE TRANSITION IS MADE FROM BELOW EARTH TO ANY THPE OF RACEWAY OUT OF EARTH, MAKE TRANSITION WITH A RIGID GALVANIZED OR IMC FULLY TAPED ELBOW.
- C. EMT CONDUIT COUPLINGS AND CONNECTORS SHALL BE STEEL RAINTIGHT TYPE, COMPRESSION TYPE, ALL EMT CONNECTORS SHALL BE INSULATED THROAT TYPE. GRS AND IMC FITTINGS SHALL BE STANDARD THREADED COUPLINGS, LOCKNUTS, BUSHINGS, AND ELBOWS, ALL GRS AND IMC FITTINGS SHALL BE STEEL OR MALLEABLE IRON; SET SCREW OR NON THREADED FITTINGS ARE NOT PERMITTED, NON-METALLIC CONDUIT FITTINGS SHALL BE OF THE SAME MATERIAL AS THE CONDUIT FURNISHED AND SHALL BE THE PRODUCT OF THE SAME MANUFACTURER.

- D. ALL CONDUIT SUPPORT PARTS AND HARDWARE SHALL BE HOT DIPPED GALVANIZED. CONDUIT STRAPS SHALL BE TWO HOLE GALVANIZED OR STAINLESS STEEL METAL TYPE, WIRE OR CHAIN IS NOT ACCEPTABLE FOR CONDUIT HANGERS. INDIVIDUAL CONDUIT HANGERS SHALL BE GALVANIZED SPRING STEEL SPECIFICALLY DESIGNED FOR THE PURPOSE. INDIVIDUAL CONDUIT STRAPS ON METAL STUDS SHALL BE SPRING STEEL AND SHOULD WRAP AROUND THE ENTIRE FACE OF THE STUD; TIE WRAPS ARE NOT ACCEPTABLE.
- E. CONCEAL ALL CONDUITS EXCEPT IN UNFINISHED SPACES SUCH AS EQUIPMENT ROOMS OR WHERE INDICATED BY THE SYMBOL ON THE DRAWINGS. LEAVE ALL EMPTY CONDUITS WITH A 200 LB. TEST NYLON CORD PULL LINE, DEFORMED CONDUITS SHALL BE REPLACED, PROTECT CONDUITS AGAINST DIRT, PLASTER, AND FOREIGN DEBRIS WITH CONDUIT PLUGS.
- F. FASTEN CONDUIT SUPPORT DEVICES TO STRUCTURE WITH WOOD SCREWS ON WOOD, TOGGLE BOLTS ON HOLLOW MASONRY, EXPANSION ANCHORS ON SOLID MASONRY OR CONCRETE, AND MACHINE BOLTS OR CLAMPS ON STEEL. NAILS ARE NOT ACCEPTABLE. SEAL ALL CONDUITS PENETRATING BUILDING EXTERIOR OR REFRIGERATED SPACES WITH INSULATING ELECTRICAL PUTTY TO PREVENT ENTRANCE OF MOISTURE.
- CONDUIT SHALL BE RUN PARALLEL OR AT RIGHT ANGLES TO WALLS, CEILINGS, AND STRUCTURAL MEMBERS, SUPPORT BRANCH CIRCUIT CONDUITS AT INTERVALS NOT EXCEEDING 10 FEET, AND WITHIN 3 FEET OF EACH BOX OR CHANGE OF DIRECTION. RESTORE THE FIRE RATING OF ALL WALL AND FLOOR PENETRATIONS. PROVIDE AN EXPANSION AND DEFLECTION COUPLING WHERE CONDUITS CROSS A BUILDING EXPANSION JOINT.

2.2 WIRES AND CABLES

- A. CONDUCTOR SIZE SHALL BE MINIMUM OF NO. 12 AWG, UNLESS LARGER SIZE IS REQUIRED BY THE DRAWINGS OR THE NEC. ALL WIRE AND CABLE SHALL BEAR THE UL LABEL. FIRE ALARM CONDUCTORS ARE NOT INCLUDED IN THIS SPECIFICATION; THEY SHALL COMPLY WITH NEC REQUIREMENTS.
- B. CONDUCTORS NO. 10 AND SMALLER SHALL BE SOLID COPPER, 75°C. TYPE THW OR THWN/THHN. CONDUCTORS LARGER THAN 10 SHALL BE STRANDED COPPER, 75°C. TYPE THW, THWN/THHN, OR XHHW. FIXTURE WIRE SHALL BE NO. 16 AWG SILICONE RUBBER INSULATED, STRANDED FIXTURE WIRE TYPE SFF2 OR NO. 16 THERMOPLASTIC NYLON JACKETED STRANDED FIXTURE WIRE TYPE TFFN.
- C. COLOR CODE ALL CONDUCTORS. NO. 10 AND SMALLER SHALL HAVE SOLID COLOR COMPOUND OR COATING, NO. 8 AND LARGER SHALL HAVE SOLID COLOR COMPOUND OR COLORED PHAE TAPE; TAPE SHALL BE INSTALLED ON CONDUCTORS IN EVERY BOX, TERMINATION POINT, CABINET, OR ENCLOSURE, CODING SHALL BE AS FOLLOWS:
- 208Y/120 VOLT THREE PHASE FOUR WIRE WYE SYSTEM: PHASE A-BLACK, PHASE B-RED, PHASE C-BLUE, NEUTRAL-WHITE.
- GROUNDING CONDUCTORS SHALL BE GREEN. NEUTRAL CONDUCTORS NO. 6 AND SMALLER SHALL HAVE SOLID INSULATION OR CONTINUOUS COLOR TAPE FOR THE ENTIRE LENGTH OF CONDUCTOR, NEUTRAL CONDUCTORS NO. 4 AND LARGER SHALL HAVE COLORED PHASE TAPE. COLORED TAPE SHALL BE INSTALLED ON CONDUCTORS IN EVERY BOX, AT EACH TERMINATION POINT, CABINET OR OTHER ACCESSIBLE LOCATION.
- D. GROUP AND LACE WITH NYLON TIE STRAPS ALL CONDUCTORS WITHIN ENCLOSURES. MAKE SPLICES IN CONDUCTORS ONLY WITHIN JUNCTION BOXES, WIRING TROUGHS, OR OTHER NEC APPROVED ENCLOSURES. DO NOT SPLICE CONDUCTORS IN PANELBOARDS, SAFETY SWITCHES, PULL BOXES OR MOTOR CONTROL ENCLOSURES. IDENTIFY EACH CONDUCTOR AS TO CIRCUIT CONNECTION IN ALL BOXES AND ENCLOSURES.
- E. TERMINATE STRANDED CONDUCTORS NO. 10 AWG AND SMALLER WITH CRIMP-TYPE LUG OR STUD. CRIMP TERMINAL SHALL BE THE CONFIGURATION TYPE SUITABLE FOR TERMINAL POINT.

2.3 BOXES

- A. BOXES SHALL BE HOT-DIPPED GALVANIZED STEEL SHEET METAL, 2.7 SUPPORTING DEVICES UNLESS RUSTPROOF CAST METAL IS SPECIFIED OR REQUIRED BY THE NEC. BOXES FOR SURFACE AND PENDANT MOUNTED LIGHTING FIXTURES SHALL BE 4" OCTAGON BOXES, 21/8" DEEP. BOXES FOR FLUSH MOUNTED LIGHTING FIXTURES, SWICHES, RECEPTACLES AND WALL MOUNTED JUNCTION BOXES SHALL BE 411/16 BOXES. 21/8" DEEP. OUTLET BOXES FOR GFI RECEPTACLES SHALL BE 23/4" DEEP.
- B. OUTLET BOXES FOR SWITCHES AND RECEPTACLES IN EXPOSED WIRING SYSTEMS SHALL BE CAST FS TYPE WITH MATCHING DEVICE PLATE. PROVIDE LARGER BOXES AS REQUIRED FOR SPECIAL PURPOSE DEVICES.
- DIMENSIONS OF PULL AND JUNCTION BOXES SHALL NOT BE LESS

POSITION OF CONDUCTORS ENTERING THE BOX.

- D. ALL BOXES SHALL BE COMPLETELY ACCESSIBLE AND AS REQUIRED BY THE NEC. PROVIDE ACCESS PANELS IN ALL NON-ACCESSIBLE SPACES TO PERMIT ACCESS TO BOXES. PROVIDE AN OUTLET BOX FOR EACH LIGHTING FIXTURE AND FOR EACH DEVICE. BOX SIZES SHALL BE INCREASED FROM THOSE OUTLINED ABOVE IF REQUIRED BY ARTICLE 314 OF THE NEC.
- E. SUPPORT EVERY BOX FROM STRUCTURE. SECURE TO WOOD WITH WOOD SCREWS, HOLLOW MASONRY WITH TOGGLE BOLTS, METAL WITH SHEET METAL SCREWS, SOLID MASONRY OR CONCRETE WITH EXPANSION ANCHORS, METAL STUDS WITH SPRING STEEL CLAMP, AND STRUCTURE WITH THREADED STEEL ROD WHEN SUSPENDED.
 SET OUTLET BOXES FOR FLUSH MOUNTED DEVICES TO WITHIN 1/8" OF FINISHED WALLS; SPACERS OR SHIMS BETWEEN BOX AND DEVICE ARE NOT ACCEPTABLE.
- F. OUTLET BOXES IN THE SAME WALL SHALL NOT BE MOUNTED BACK-TO-BACK; OFFSET A MINIMUM OF 6". REMOVE ONLY KNOCKOUTS AS REQUIRED AND PLUG ALL UNUSED OPENINGS AFTER COMPLETION, USING INDELIBLE INK WIDE TIP MARKER, INIDCATE ON THE COVER OF EACH JUNCTION AND PULL BOX THE DESIGNATION OF EACH CIRCUIT CONTAINED THEREIN.

2.4 ELECTRICAL CONNECTIONS FOR EQUIPMENT

COVERING.

CONNECTORS.

- A. FOR EACH ELECTRICAL CONNECTION PROVIDE COMPLETE ASSEMBLY OF MATERIALS AND TO COMPLETE SPLICES AND TERMINATIONS.
- B. PROVIDE FITTINGS OF TYPES, GRADES, SIZES REQUIRED FOR EACH TYPE SERVICE. C. PROVIDE ELECTRICAL CONNECTORS AND TERMINALS WHICH ARE
- APPLICATIONS. D. PROVIDE ELECTRICAL INSULATING TAPE, HEAT-SHRINKABLE INSULATING TUBING AND BOOTS, WIRENUTS AND CABLE TIES AS

RECOMMENED BY EQUIPMENT MANUFACTURER FOR INTENDED

- RECOMMENDED FOR USE BY ACCESSORIES MANUFACTURERS. E. INSTALL ELECTRICAL CONNECTIONS IN ACCORDANCE WITH EQUIPMENT MANUFACTURER'S INSTRUCTIONS AND RECOGNIZED INDUSTRY PRACTICES.
- F. MATCH CONDUCTORS OF ELECTRICAL CONNECTIONS FOR PROPER INTERFACE BETWEEN ELECTRICAL POWER SUPPLIES AND INSTALLED EQUIPMENT.
- G. COVER SPLICES WITH ELECTRICAL INSULATING MATERIAL. H. PREPARE CABLES AND WIRES BY CUTTING AND STRIPPING
- I. TIGHTEN CONNECTORS AND TERMINALS, INCLUDING SCREWS AND BOLTS, IN ACCORDANCE WITH EQUIPMENT MANUFACTURERS PUBLISHED TORQUE TIGHTENING VALUES FOR EQUIPMENT

- PROVIDE LIQUID-TIGHT METAL FLEXIBLE CONDUIT FOR CONNECTION OF MOTORS AND OTHER ELECTRICAL EQUIPMENT WHERE SUBJECT TO MOVEMENT AND VIBRATION, AND ALSO WHERE CONNECTIONS ARE SUBJECT TO ONE OR MORE OF THE FOLLOWING CONDITIONS:
- EXTERIOR LOCATION. MOIST OR HUMID ATMOSPHERE WHERE CONDENSATION CAN BE EXPECTED TO ACCUMULATE. CORROSIVE ATMOSPHERE.
- WATER SPRAY. 5. DRIPPING OIL, GREASE, OR WATER.

2.5 WIRING DEVICES

- A. SINGLE POLE, 20 AMP, 277 VOLT TOGGLE SWITCHES SHALL BE HUBBELL 1221. THREEWAY, 20 AMP, 277 VOLT SWITCHES SHALL BE HUBBELL 1223. EQUIVALENT SWITCHES MANUFACTURED BY ARROW HART, GENERAL ELECTRIC, LEGRAND, OR LEVITON ARE ACCEPTABLE.
- B. TWENTY AMP, 125 VOLT GROUNDED DUPLEX RECEPTACLES (NEMA 5-20R) SHALL BE HUBBELL 5352. GROUND FAULT INTERRUPTER (GFI) RECEPTACLES SHALL BE HUBBELL GF8200. EQUIVALENT RECEPTACLES MANUFACTURED BY ARROW HART, GENERAL ELECTRIC.
- LEGRAND, OR LEVITON ARE ACCEPTABLE. DEVICE PLATES SHALL BE ONE PIECE SINGLE OR MULTIGANG TYPE SELECTED TO MATCH THE DEVICE OR COMBINATION OF DEVICES. DEVICE PLATES FOR FLUSH MOUNTED DEVICES SHALL BE SMOOTH SURFACED PLASTIC OF THE SAME FINISH AS THE
- ALL DEVICES SHALL BE PROVIDED WITH WHITE FINISH, MOUNT ALL DEVICES WITHIN OUTLET BOXES TO ALLOW DEVICE PLATES TO BE IN CONTACT WITH WALL ON ALL SIDES. INSTALL WALL SWITCHES ON THE STRIKE SIDE OF DOORS.

2.6 CIRCUIT AND MOTOR DISCONNECTS

- A. PRODUCTS OF GENERAL ELECTRIC, CUTLER-HAMMER, SQUARE D, OR SIEMENS WHICH COMPLY WITH THESE SPECIFICATIONS ARE ACCEPTABLE.
- DISCONNECT SWITCHES SHALL BE HEAVY DUTY NONFUSIBLE SAFETY SWITCH TYPE, UNLESS FUSED TYPE IS INDICATED ON THE DRAWINGS, WITH THE NUMBER OF POLES REQUIRED TO DISCONNECT ALL UNGROUNDED CONDUCTORS SERVING THE
- EQUIPMENT. 1. FURNISH AN EQUIPMENT GROUNDING CONDUCTOR LUG BONDED TO THE SWITCH ENCLOSURE. FURNISH NEMA TYPE ONE ENCLOSURE FOR ALL INTERIOR DRY LOCATIONS, AND NEMA TYPE 3R FOR ALL DAMP, WET, OR EXTERIOR LOCATIONS UNLESS OTHER TYPES ARE INDICATED ON THE DRAWINGS.
- 3. SWITCHES FOR AIR CONDITIONING EQUIPMENT SHALL BE FUSE SIZE SHALL BE AS SHOWN ON THE EQUIPMENT
- C. SWITCHES SHALL HAVE THE FOLLOWING FEATURES: 1. PERMANENT NAME PLATE INDICATING ALL RATINGS. 600 VOLT RATING FOR 250 TO 600 VOLT SYSTEMS, 250
- SWITCH IS FUSIBLE TYPE. D. DISCONNECT SWITCHES FOR THREE PHASE MOTOR RATED TWO HORSEPOWER AND ABOVE SHALL BE THREE POLE NONFUSIBLE TYPE. DISCONNECT SWITCHES FOR THREE PHASE MOTORS RATED LESS THAN TWO HORSEPOWER SHALL BE THREE POLE MANUAL MOTOR STARTER SWITCHES WITHOUT OVERLOAD PROTECTION.

DISCONNECTS FOR SINGLE PHASE MOTORS SHALL BE SINGLE OR

TWO POLE HORSEPOWER RATED SWITCHES WITHOUT OVERLOAD PROTECTION. LOCATE SWITCHES TO PROVIDE FULL ACCESSIBLITY AND WORKING CLEARANCES REQUIRED BY THE NEC. LOCATE ADJACENT TO EQUIPMENT SERVED UNLESS DRAWINGS INDICATE OTHERWISE. MOUNT SWITCH DIRECTLY TO STRUCTURE OR TO METAL CHANNEL DEPENDING UPON FIELD CONDITIONS, MOUNT SWITCH HANDLE BETWEEN 36" AND 60" ABOVE FINISHED FLOOR.

- PROVIDE AND INSTALL SUPPORTING DEVICES WHICH COMPLY WITH MANUFACTURER'S STANDARD MATERIALS, DESIGN, AND CONSTRUCTION IN ACCORDANCE WITH PUBLISHED STANDARDS AND AS REQUIRED FOR COMPLETE INSTALLATION.
- COORDINATE WITH OTHER ELECTRICAL WORK, INCLUDING RACEWAY AND WIRING WORK, AS NECESSARY TO INTERFACE INSTALLATION OF SUPPORTING DEVICES, INSTALL HANGARS, SUPPORTS, CLAMPS, AND ATTACHMENTS TO SUPPORT PIPING PROPERLY FROM BUILDING STRUCTURE ONLY. TORQUE SLEEVE SEAL NUTS, COMPLYING WITH MANUFACTURER'S RECOMMENDED VALUES. ENSURE THAT SEALING GROMMENTS EXPAND TO FORM WATERTIGHT SEAL.

THAN THOSE REQUIRED BY THE NEC FOR THE NUMBER, SIZE, AND 2.8 ELECTRICAL IDENTIFICATION

- A. INSTALL ENGRAVED PLASTIC LAMINATE SIGN ON EACH MAJOR UNIT OF ELECTRICAL EQUIPMENT. PROVIDE A SINGLE LINE OF TEXT, 1/2" HIGH LETTERING ON 11/2" HIGH SIGN (OR 2" SIGN IF 2 LINES REQUIRED). PROVIDE SIGNS FOR EACH UNIT
 - OF THE FOLLOWING: ELECTRICAL CABINETS AND ENCLOSURES.
- MOTOR CONTROLLERS. DISCONNECT SWITCHES. PANELBOARDS.
- TRANSFORMERS SWITCHBOARDS.

16400 - DISTRIBUTION EQUIPMENT

3.1 GROUNDING SYSTEMS

- A. EQUIPMENT GROUNDING SYSTEM SHALL BE ESTABLISHED WITH EQUIPMENT GROUND CONDUCTORS. THE USE OF METALLIC RACEWAYS FOR EQUIPMENT GROUNDING IS NOT ACCEPTABLE. UNLESS INDICATED OTHERWISE, PROVIDE EQUIPMENT GROUND THE SAME SIZE AS PHASE CONDUCTORS.
- B. EACH RECEPTACLE AND SWITCH DEVICE SHALL BE FURNISHED WITH A GROUNDING SCREW CONNECTED TO THE METALLIC DEVICE FRAME. PROVIDE A CONDUCTOR TERMINATION GROUNDING LUG BONDED TO THE ENCLOSURE FO EACH MOTOR CONTROLLER AND DISCONNECT SWITCH.
- C. GROUND ALL NONCURRENT CARRYING PARTS OF THE ELECTRICAL SYSTEM, I.E., WIREWAYS, EQUIPMENT ENCLOSURES AND FRAMES, JUNCTION AND OUTLET BOXES, MACHINE FRAMES, AND OTHER CONDUCTIVE ITEMS IN CLOSE PROXIMITY WITH ELECTRICAL
- GROUNDING CONDUCTORS FOR BRANCH CIRCUITS ARE NOT SHOWN ON THE DRAWINGS; HOWEVER, GROUNDING CONDUCTORS SHALL BE PROVIDED IN ALL BRANCH CIRCUIT RACEWAYS AND FLEXIBLE CONDUIT. GROUNDING CONDUCTORS SHALL BE THE SAME AWG SIZE AS BRANCH CIRCUIT CONDUCTORS.

3.2 PANELBOARDS

- A. PRODUCTS OF SIEMENS WHICH COMPLY WITH THESE SPECIFICATIONS SHALL ONLY BE ACCEPTABLE.
- B. ALL PANELS AND CIRCUIT BREAKERS SHALL BE UL LISTED AND BEAR A UL LABEL.
- C. ALL BUS BARS SHALL BE COPPER. EACH PANEL SHALL CONTAIN A FULL SIZE GROUNDING BUS AND, WHEN REQUIRED, A FULL SIZE INSULATED NEUTRAL BUS.
- D. BRANCH CIRCUIT PANEL BOARD WIDTH SHALL BE BETWEEN 20 AND 22 INCHES; DEPTH SHALL BE 53/4" MAXIMUM.

- E. CIRCUIT BREAKERS SHALL BE QUICK-MAKE, QUICK-BREAK, THERMAL MAGNETIC TYPE BOLTED TO THE BUS, MULTI-POLE BREAKERS SHALL BE COMMON TRIP AND COMMON RESET TYPE; TIE HANDLE CONNECITONS ARE NOT ACCEPTABLE. INTERRUPTING RATINGS ON 208 VOLT SYSTEMS SHALL BE 10.000 RMS SYMMETRICAL AMPS MINIMUM.
- F. MOUNT PANEL BOARDS WITH TOP CIRCUIT NOT MORE THAN 6'-6" ABOVE FINISHED FLOOR.
- G. PROVIDE IN EACH PANEL BOARD A TYPE WRITTEN CIRCUIT DIRECTORY MOUNTED UNDER CLEAR PLASTIC IN METAL HOLDER IN THE DOOR OF THE PANEL REFLECTING ALL FIELD CHANGES
- H. MODIFY EACH CIRCUIT DIRECTORY IN EACH EXISTING PANELBOARD TO REFLECT ALL FIELD CHANGES AND ADDITIONS FURNISH AND INSTALL A NEW UPDATED TYPE WRITTEN CIRCUIT DIRECTORY.
- I. INSTALL PUSH-IN KNOCK-OUT CLOSURE PLUGS IN ANY UNUSED KNOCK-OUT OPENINGS.
- J. PANELBOARDS SHALL BE DOOR IN DOOR TYPE CONSTRUCTION 3.3 FUSES
- A. PROVIDE FUSES OF TYPES, SIZES AND RATINGS RECOMMENDED BY EQUIPMENT MANUFACTURER. 16500 - LIGHTING SYSTEM

4.1 INTERIOR LIGHTING FIXTURES

- A. ALL MATERIALS SHALL BE NEW, FREE FROM DEFECTS, AND BEAR A UL LABEL. FIXTURES INSTALLED IN FIRE RATED CEILINGS SHALL PRESERVE THE FIRE RATING OF THE CEILING.
- B. LIGHTING FIXTURES SHALL NOT BE MANUFACTURED WITH LESS THAN CODE GAUGE STEEL.
- C. LIGHTING FIXTURES SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDED MOUNTING METHODS AND THE PROVISIONS OF THE DRAWINGS. IT IS THE CONTRACTORS RESPONSIBILITY TO REVIEW THE ARCHITECTURAL PLANS AND SPECIFICATONS TO VERIFY THE MOUNTING COMPATIBILITY OF THE LIGHTING FIXTURES WITH CEILING TYPE BEFORE FIXTURES ARE RELEASED FOR ORDERING, PROVIDE CEILING COMPATIBLE FIXTURES IN ALL CASES REGARDLESS OF THE CATALOG NUMBER ON THE DRAWINGS. RECESSED FIXTURES SHALL BE INSTALLED WITHOUT VISIBLE CRACKS OR LIGHT LEAKS BETWEEN CEILING AND FIXTURE TRIM.
- D. SAFETY CHAINS SHALL BE INSTALLED ON ALL SUSPENDED OR GRID CEILING TYPE FIXTURES. ALL FIXTURES SHALL BE CLEANED AND FREE OF FINGER PRINTS PRIOR TO FINAL
- E. LIGHTING FIXTURES FLUSH MOUNTED IN EXPOSED TEE CEILINGS SHALL BE ATTACHED TO THE MAIN RUNNERS AT EACH END WITH CLIPS INTENDED FOR THAT PURPOSE.

VOLT RATING FOR SYSTEMS BELOW 250 VOLTS. REJECTION CLIPS TO ACCEPT ONLY RK1 OR RK5 FUSES WHEN 4.2 EMERGENCY LIGHTING FIXTURES

- A. PRODUCTS OF BODINE, LIGHTALARMS, SURE-LITE, EMERGI-LITE, DUAL-LITE, CHLORIDE, OR EXIDE COMPLYING WITH THESE SPECIFICATONS ARE ACCEPTABLE.
- B. THE ELECTRONIC EMERGENCY POWER ASSEMBLY INSTALLED IN DESIGNATED FIXTURES SHALL OPERATE LED MODULE AT APPROXIMATELY 1300 LUMENS FOR A PERIOD OF 90 MINUTES UPON FAILURE OF THE NORMAL POWER SYSTEM. THE ASSEMBLY SHALL CONSIST OF TWO MODULES MOUNTED WITHIN THE DRIVER HOUSING COMPARTMENT OF THE FIXTURE.
- 1. ONE MODULE SHALL CONTAIN NICKEL CADMIUM CELLS CONNECTED TO PROVIDE 24 WATT HOURS OF BATTERY CAPACITY WHEN FULLY CHARGED. THE BATTERY MODULE SHALL CONTAIN AN AUTOMATIC LOW VOLTAGE CUTOUT CIRCUIT TO PROTECT THE MODULE FROM EXCESSIVE DISCHARGE
- THE OTHER MODULE SHALL CONTAIN ELECTRONIC COMPONENTS AND CIRCUITRY FOR LED OPERATION, BATTERY RECHARGING, TRANSFER MECHANISM AND SIGNAL FACILITIES TO INDICATE THE COMPLETE SYSTEM IS IN A "READY" STATE. A LIGHT EMITTING DIODE SHALL BE POSITIONED WITHIN THE FIXTURE TO PROVIDE VISUAL INDICATION THAT THE EMERGENCY POWER SYSTEM IS OPERABLE. THE OUTPUT OF THE DIODE SHALL BE A BRIGHT RED FLOW WHICH SHALL BE VISIBLE THROUGH THE FIXTURE LENS OR DIFFUSER. A REMOTE CEILING MOUNTED TEST BUTTON WITH VISUAL SHALL BE PROVIDED ADJACENT TO THE FIXTURE, TO SIMULATE A POWER FAILURE, UNLESS REMOTE WALL MOUNTED TEST SWITCH IS SHOWN. THE SYSTEM SHALL BE DESIGNATED TO TRANSFER TO THE EMERGENCY POWER OPERATION WHEN THE LINE VOLTAGE OF THE CIRCUIT DROPS TO 75% OF NORMAL. THE SYSTEM SHALL BE FOR USE ON THE VOLTAGE OF THE BRANCH CIRCUIT TO WHICH THE FIXTURES ARE CONNECTED.
- PROVIDE SELF DIAGNOSTICS MODULE. C. EXIT SIGNS SHALL BE IN COMPLIANCE WITH UL 924 DATED JANUARY 21, 1987. BATTERY OPERATED EXIT FIXTURES SHALL BE FED FROM A JUNCTION BOX AND NOT BE OF THE CORD AND PLUG TYPE. A LIGHT EMITTING DIODE SHALL BE POSITIONED ON THE FIXTURE TO PROVIDE A VISUAL INDICATION THAT THE EMERGENCY POWER SYSTEM IS OPERABLE. THE OUTPUT OF THE DIODE SHALL BE A BRIGHT RED GLOW, A TEST BUTTON SHALL BE PROVIDED ADJACENT TO THE VISUAL SIGNAL, TO SIMULATE A POWER FAILURE, BATTERY OPERATED EXIT FIXTURES SHALL HAVE NICKEL CADMIUM BATTERIES.
- D. IT IS THE CONTRACTORS RESPONSIBILITY TO REVIEW THE ARCHITECTURAL PLANS AND SPECIFICATIONS TO VERIFY THE MOUNTING COMPATIBILITY OF THE LIGHTING FIXTURES WITH THE CEILING TYPE BEFORE FIXTURES ARE RELEASED FOR ORDERING AND MANUFACTURE. 1. SAFETY CHAINS AND CLIPS SHALL BE INSTALLED ON ALL
 - BE VISIBLE UNDER NORMAL OPERATING CONDITIONS OF THE FIXTURE 3. ALL INSTALLED FIXTURES SHALL BE CLEANED AND FREE OF FINGERPRINTS PRIOR TO FINAL ACCEPTANCES.

SUSPENDED OR GRID CEILING TYPE FIXTURES.
FIXTURES SHALL BE INSTALLED SO THAT NO LABELS WILL

4. ALL BATTERY OPERATED EMERGENCY FIXTURES SHALL BE INDIVIDUALLY OPERATED AND TESTED PRIOR TO BEING TURNED OVER TO THE OWNER.

16700 - LOW VOLTAGE SYSTEMS

5.1 FIRE ALARM SYSTEM - ADDRESSIBLE

- A. THE FOLLOWING SPECIFICATIONS AND STANDARDS ARE INCORPORATED INTO AND BECOME A PART OF THIS SPECIFICATION:
- UNDERWRITER'S LABORATORIES, INC. PUBLICATIONS 38, 2. NATIONAL FIRE PROTECTION ASSOCIATION PUBLICATIONS
- B. PRODUCTS OF EDWARDS, SIMPLEX OR NOTIFIER WHICH COMPLY WITH THESE SPECIFICATIONS SHALL ONLY BE ACCEPTABLE.
- C. GENERAL: PROVIDE COMPLETE ADDRESSIBLE FIRE ALARM SYSTEM. PRODUCTS OF TYPES, SIZES AND CAPACITIES INDICATED, WHICH COMPLY WITH MANUFACTURER'S STANDARD DESIGN., MATERIALS, COMPONENTS; CONSTRUCT IN ACCORDANCE WITH PUBLISHED PRODUCT INFORMATION, AND AND AS REQUIRED FOR COMPLETE INSTALLATION, PROVIDE FIRE ALARM AND DETECTION SYSTEMS FOR APPLICATIONS INDICATED.
- DESIGN SYSTEM FOR SOUNDING CONTINUOUSLY THROUGHOUT THE FACILITY.

1. COMBINATION, NONCODED SYSTEM.

- E. SYSTEM WIRING AND SUPERVISION: PROVIDE CLASS I INITIATING AND ALARM CIRCUITS WITH ELECTRICAL SUPERVISION FOR SHORTS AND OPEN CONDITIONS. PROVIDE SYSTEM FOR OPERATION ON 120 VAC POWER SUPPLY.
 ARRANGE CONTROL SYSTEM FOR OPERATION OF PRIMARY POWER SUPPLY TO OPERATE FROM OPPSITE LEGS OF A THREE
- PROVIDE BATTERY BACK-UP AS SECONDARY POWER SUPPLY. TO TAKE OVER SUPPLY WHEN PRIMARY SYSTEM VOLTAGE IS REDUCED TO BELOW 85% OF RATING. PROVIDE BATTERY SYSTEM CAPABLE OF OPERATION FOR 24 HOURS UNDER NORMAL CONDITIONS AND THEN FOR FIVE MINUTES UNDER ALARM CONDITIONS.
- F. ADDITIONAL SYSTEM FEATURES: CONTROL OF AUXILIARY SERVICES. A. FAN SHUT DOWN RELAYS.
 - MAGNETIC DOOR RELEASE. INTERFACE WITH ELEVATORS. EQUIP AND WIRE SYSTEM SO THAT ENERGIZING FIRE ALARM AUDIBLE SIGNALING DEVICE WILL ALSO ACTIVATE THE FOLLOWING:
 - A. EXTERIOR FLASHING STROBE LIGHTS.
 B. INTERIOR FLASHING STROBE LIGHTS. FAN SHUT DOWN CIRCUITS. REMOTE ANNUNCIATORS.
 - ADDITIONAL REPORTING METHOD PER NFPA 72-26.6.4.1.4.
- G. SYSTEM MATERIALS: PROVIDE BASIC WIRING MATERIALS WHICH COMPLY WITH THE PROVISIONS OF THIS SPECIFICATION EXCEPT AS NOTED OR SPECIFIED HEREIN. PROVIDE CONDUCTORS WHICH ARE LISTED AND APPROVED FOR FIRE ALARM USAGE.
- H. SYSTEM OPERATION: ACTUATION OF ANY ALARM INITIATION DEVICE SHALL AUTOMATICALLY INITIATE THE FOLLOWING:

 A. CAUSE THE AUDIBLE ALARMS TO SOUND AND ALL VISUAL
 - ALARMS TO FLASH. IDENTIFY ADDRESS AT CONTROL PANEL AND REMOTE ANNUNCIATOR. ACTIVATE ALL CONTACTS FOR HVAC EQUIPMENT CONTROL.

 ACTIVATE A DIGITAL ALARM COMMUNICATOR (DACT) TO REPORT THE ALARM TO A REMOTE LOCATION PER NFPA 46-6.4.3 AND NFPA 72-26.6.4.1.4 (REQUIRES LEASED PHONE LINE AND ONE ADDITIONAL REPORTING METHOD).
 ANY CHARGES FOR CONNECTION TO THE REMOTE RECEIVING EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE BUILDING OWNER. COORDINATE WITH OWNER AND AUTHORITY HAVING JURISDICATION AND FIRE DEPARTMENT PREFERRED METHOD OF REPORTING TO REMOTE FIRE
- DEPARTMENT LOCATION. 2. POWER FAILURES, OPENS, GROUNDS, OR ANY SYSTEM MALFUNCTIONS SHALL INITIATE A VISUAL AND AUDIBLE TROUBLE ALARM AT THE CENTRAL CONTROL PANEL, TO REMAIN LIT UNTIL SYSTEM IS RETURNED TO NORMAL.
- CONTROL PANELS: FIRE ALARM CONTROL PANEL SHALL CONTAIN ALL DEVICES AND CIRCUITS NECESSARY TO PERFORM REQUIRED FUNCTIONS. DEVICES SHALL BE MODULAR PLUG-IN-TYPE. PANEL SHALL OPERATE ON 120 VOLT AC WITH 24 VOLT DC BATTERY.
- CONSTRUCTION, RED ENCLOSURE, MANUAL STATION, SINGLE ACTION, KEY OPERATED, FLUSH MOUNTED. AUDIBLE/VISUAL: MANUFACTURER'S STANDARD CONSTRUCTION HORN FLUSH MOUNTED WITH HORN AND WITH ALARM LIGHT

MANUAL FIRE ALARM STATIONS: MANUFACTURER'S STANDARD

VISUALS: MANUFACTURER'S STANDARD CONSTRUCTION VISUAL FLUSH MOUNTED WITH ALARM LIGHT WITH LENS LETTERED 5. AUTOMATIC FIRE DETECTORS: MANUFACTURER'S STANDARD CONSTRUCTION OF THE FOLLOWING TYPES AND TEMPERATURE

WITH LENS LETTERED "FIRE

A. HEAT DETECTORS: COMBINATION RATE OF RISE AND FIXED TEMPERATURE SPOT TYPE RESTORABLE. SMOKE DETECTORS: PHOTOELECTRIC INFRARED TYPE. RESTORABLE, CAPABLE OF OPERATION OF EITHER 2 WIRE OR 4 WIRE SYSTEMS. PROVIDE 135°F FIXED TEMPERATURE BASE AND PULSED LED WHICH WILL REMAIN STEADY

DURING ALARM CONDITION. ALSO PROVIDE PHOTOELECTRIC

- DUCT MOUNTED DETECTORS WITH SAMPLING TUBES AS SHOWN ON THE DRAWINGS. 6. DACT: MANUFACTURER'S STANDARD CONSTRUCTION.
- 1. INSTALL ALL SYSTEM WIRING IN RACEWAY. INSTALL WIRES AND CABLES WITHOUT SPLICES. MAKE CONNECTIONS AT TERMINAL STRIPS IN CABINETS OR EQUIPMENT ENCLOSURES. COMPLETE WIRING IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS, COLOR CODE WIRING AND INSTALL PER MANUFACTURER'S POINT-TO-POINT WIRING DIAGRAM.
- CONNECT EACH DEVICE WITH SUFFICIENT WIRING TO COMPLETE ITS INTENDED OPERATION. WHERE THERE ARE A NUMBER OF POWER REQUIRING DEVICES INSTALLED IN A CIRCUIT, GROUP IN NUMBERS SO POWER REQUIRED DOES NOT EXCEED 80% OF MANUFACTURER'S POWER SUPPLY RATING. PROVIDE EXTRA WIRING, OR EXTRA POWER SUPPLIES REQUIRED TO FUFILL WIRING TO ALLEVIATE VOLTAGE DROPS WHICH MAKES DEVICE OPERATE BEYOND VOLTAGE LIMITS FOR WHICH IT WAS DESIGNED. DETERMINE ABOVE WITH MANUFACTURER'S REPRESENTATIVE WHILE

DETERMINE EXACT NUMBER OF WIRES FOR EACH FIRE ALARM

ADDRESS FROM NUMBER AND TYPES OF DEVICES INSTALLED.

EQUIPMENT IS BEING INSTALLED. END OF SECTION 16000.



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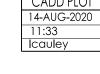
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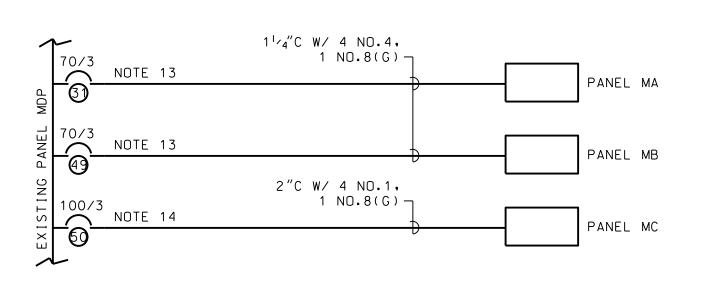
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PARTIAL ONE-LINE DIAGRAM - MDP

SCALE: SCHEMATIC

NOTES: (PANEL BOARD SCHEDULES)

- 1. GROUND BARS SHALL BE FACTORY BRAZED OR RIVETED OR INSTALLED ON STUDS BOLTED TO PANEL ENCLOSURES.
- 2. PANELBOARD DIRECTORY HOLDERS SHALL BE METAL WITH CLEAR PLASTIC DIRECTORY COVERS.
- 3. PROVIDE HANDLE LOCK-OFF (LT) DEVICES ON ALL BREAKER FOR FIRE ALARM CONTROL PANEL. SECURITY ALARM SYSTEMS, AND COMMUNICATION SYSTEMS CIRCUITS. PAINT FIRE ALARM CONTROL PANEL AND REMOTE POWER SUPPLIES CIRCUIT BREAKERS, RED. IDENTIFY AS "FIRE ALARM CIRCUIT", AS REQUIRED BY NFPA 72. THE LOCATION OF THE CIRCUIT DISCONNECTING MEANS SHALL BE PERMANENTLY IDENTIFIED AT THE FIRE ALARM CONTROL PANEL. FIELD VERIFY BRANCH CIRCUITS CONNECTIING FIRE ALARM CONTROL EQUIPMENT.
- 4. PANELS SHALL BE DOOR-IN-DOOR HINGED COVER TRIM TYPE CONSTRUCTION.
- 5. PROVIDE GROUND FAULT CIRCUIT BREAKERS FOR ALL WATER COOLERS AND VENDING EQUIPMENT.
- 6. ALL CIRCUIT BREAKERS SERVING MECHANICAL EQUIPMENT SHALL BE HACR TYPE. FIELD VERIFY BRANCH CIRCUITS SERVING MECHANICAL EQUIPMENT AND PROVIDE HACR BREAKERS ACCORDINGLY.
- 7. MULTIPLE BRANCH CIRCUITS (3 MAX) INSTALLED IN COMMON RACEWAY SHALL HAVE BRANCH CIRCUIT BREAKERS EQUIPPED WITH AN IDENTIFIED TIE HANDLE PER NEC. 210.4 (B) OR SHALL BE MULTIPLE POLE TYPE OR SHALL BE PROVIDED WITH SEPARATE NEUTRALS FOR EACH PHASE CONDUCTOR. THE UNGROUNDED AND GROUNDED CIRCUIT CONDUCTORS (NEUTRALS) SHALL BE GROUPED TOGETHER WITH TIE WRAPS INDEPENDENT OF OTHER CIRCUIT CONDUCTORS.
- 8. FOR ALL FLUSH MOUNTED PANELBOARDS, STUB OUT 4 3 / $_{4}$ " CONDUITS TO AN ACCESSIBLE CEILING SPACE.
- 9. FURNISH AND INSTALL ARC FLASH HAZARD WARNING LABELS PER NEC 110.16.
- 10. SERIES RATED CIRCUIT BREAKER COMBINATIONS ARE NOT ACCEPTABLE.
- 11. GROUNDED CONDUCTORS (NEUTRALS) WITHIN ENCLOSURES SHALL BE IDENTIFIED PER NEC 200.6 (A) & (B).
- 12. REPLACE EXISTING 15/2 BREAKER WITH 40/2 BREAKER AIC RATING OF 35K.
- 13. FURNISH AND INSTALL IN AVAILABLE SPACE A 70/3 HBL BREAKER AIC RATING OF 35K.
- 14. FURNISH AND INSTALL IN AVAILABLE SPACE A 100/3 HBL BREAKER AIC RATING OF 35K.
- 15. CIRCUIT BECOMES A SPARE.
- 16. FURNISH AND INSTALL IN AVAILABLE SPACE A 30/2 HBL BREAKER AIC RATING OF 35K.
- 17. FURNISH AND INSTALL NEW TYPED CIRCUIT DIRECTORY.

	MAINS		VOLTAGE	PHASE	WIRE		MOUNTING			
	600	МВ	120/208	3	4		SURFACE			T
	AT BO	ПОМ	TVSS AT TOP							T
CIR.	TRIP/			CONNEC	CTED LOA	AD KVA			TRIP/	C
#	POLE	KVA	DESCRIPTION	PH. A	PH. B	PH. C	DESCRIPTION	KVA	POLE	
1	<i>-</i> /1		SPACE	0.0			SPACE		-/1	
3	30/2	1.50	A/C 1		4.0		A/C 5 NOTE 12	2.50	40/2	
5	-	1.50	A/C 1			4.0	A/C 5	2.50	-	
7	40/2	2.00	A/C 3	2.0			SPACE		-/3	
9	-	2.00	A/C 3		2.0		SPACE		-	
11	-/1		SPACE			0.0	SPACE		-	
13	15/2	0.83	A/C 2	2.1			A/C 8	1.23	20/2	
15	-	0.83	A/C 2		2.1		A/C 8	1.23	-	
17	-/1		SPACE			2.3	WATER HEATER NOTE 16	2.30	30/2	
19	-/1		SPACE	2.3			WATER HEATER NOTE 16	2.30	-	
21	40/2	2.00	A/C 4		5.1		A/C 6	3.10	60/2	
23	-	2.00	A/C 4			5.1	A/C 6	3.10	-	
25	-/1		SPACE	0.0			SPACE		-/3	
27	60/2	3.10	A/C 7		3.1		SPACE		-	
29	-	3.10	A/C 7			3.1	SPACE		-	
31	70/3	5.30	PANEL MA NOTE 13	8.3				3.00	40/3	
33		6.40	PANEL MA		9.4			3.00	-	
35	-	4.10	PANEL MA			7.1		3.00	-	
37	125/3	7.50	ELEVATOR (20HP)	29.5			PANEL B 2ND FL	22.00	225/3	
39	-	7.50	ELEVATOR (20HP)		29.5		PANEL B 2ND FL	22.00	-	
41	-	7.50	ELEVATOR (20HP)			31.5	PANEL B 2ND FL	24.00	-	
43	300/3	29.00	PANEL A-1 A-2	29.0			UNUSABLE		X	
45	-	29.00	PANEL A-1 A-2		29.0		UNUSABLE		X	
47	-	29.00	PANEL A-1 A-2			29.0	UNUSABLE		X	
49	70/3	6.40	PANEL MB NOTE 13	15.8			PANEL MC NOTE 14	9.40	100/3	
51	-	6.40	PANEL MB		11.1		PANEL MC	4.70	-	
53	-	6.40	PANEL MB			11.1	PANEL MC	4.70	-	
MIN. B	REAKER	AIC:	35,000	89.0	95.3	93.2	TOTAL CONNECTED LOAD	277.42		
NOTE	S:6,9,10), 11, 17	,	65.9	71.7	69.8	TOTAL DEMAND LOAD	207.358		

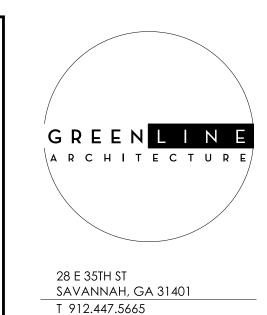
			SCHEDULE PA	ANELE	BOARD	MA N	EW SIEMENS			
	MAINS		VOLTAGE	PHASE	WIRE		MOUNTING			
	100	MLO	120/208	3	4		SURFACE			
							NEMA 3R			
CIR.	TRIP/			CONNEC	CTED LOA	AD KVA			TRIP/	CIR.
#	POLE	KVA	DESCRIPTION	PH. A	РН. В	PH. C	DESCRIPTION	KVA	POLE	#
1	30/2/	1.90	HP-9	3.8			HP-10	1.90	30/2/	2
3	LT	1.90	HP-9		3.8		HP-10	1.90	LT	4
5	20/1	0.60	RECEPTA CLE			2.1	HP-11	1.50	25/2/	6
7	-/1		SPACE	1.5			HP-11	1.50	LT	8
9	-/2		SPACE		2.6		HP-12	2.60	40/2/	10
11	-		SPACE			2.6	HP-12	2.60	LT	12
MIN. B	REAKER	AIC:	35,000	5.3	6.4	4.7	TOTAL CONNECTED LOAD	16.4		
NOTE	S: LT - LO	CKOU	ГТАВ 1 ТО 11	5.3	6.4	4.7	TOTAL DEMAND LOAD	16.4		

			SCHEDULE F	PANELE	OARD	MB N	IEW SIEMENS			
	MAINS		VOLTAGE	PHASE	WIRE		MOUNTING			
	100	MLO	120/208	3	4		FLUSH			
CIR.	TRIP/			CONNEC	TED LO	AD KVA			TRIP/	CIR.
#	POLE	KVA	DESCRIPTION	PH. A	PH. B	PH. C	DESCRIPTION	KVA	POLE	#
1	35/2	3.20	AHU-9	3.2			SPACE		-/1	2
3	-	3.20	AHU-9		3.2		SPACE		-/1	4
5	35/2	3.20	AHU-10			3.2	SPACE		-/1	6
7	-	3.20	AHU-10	3.2			SPACE		-/1	8
9	35/2	3.20	AHU-11		3.2		SPACE		-/1	10
11	-	3.20	AHU-11			3.2	SPACE		-/1	12
MIN. B	REAKER	AIC:	35,000	6.4	6.4	6.4	TOTAL CONNECTED LOAD	19.2		
NOTE	S: 1 TO 11			6.4	6.4	6.4	TOTAL DEMAND LOAD	19.2		

			SCHEDULE I	PANELE	BOARE) MC N	IEW SIEMENS			
	MAINS		VOLTAGE	PHASE	WIRE		MOUNTING			
	100	MLO	120/208	3	4		FLUSH			
CIR.	TRIP/			CONNEC	CTED LO	AD KVA			TRIP/	CIR
#	POLE	KVA	DESCRIPTION	PH. A	PH. B	PH. C	DESCRIPTION	KVA	POLE	#
1	45/2	4.70	AHU-5	4.7			SPACE		-/1	2
3	-	4.70	AHU-5		4.7		SPACE		-/1	4
5	45/2	4.70	AHU-12			4.7	SPACE		-/1	6
7	-	4.70	AHU-12	4.7			SPACE		-/1	8
9	-/2		SPACE		0.0		SPACE		-/1	10
11	-		SPACE			0.0	SPACE		-/1	12
MIN. E	REAKER	AIC:	35,000	9.4	4.7	4.7	TOTAL CONNECTED LOAD	18.8		
NOTE	S: 1 TO 11			9.4	4.7	4.7	TOTAL DEMAND LOAD	18.8		

		SCH	HEDULE PANELE	OARD	B SEC	CTION	1 EXISTING SIEME	INS		
	MAINS		VOLTAGE	PHASE	WIRE		MOUNTING			T
	250	MLO	120/208	3	4		SURFACE			
							SIEMENS P1			
CIR.	TRIP/			CONNEC	TED LO	AD KVA			TRIP/	CII
#	POLE	KVA	DESCRIPTION	PH. A	PH. B	PH. C	DESCRIPTION	KVA	20/1	#
1	20/1	1.20	LIGHTING	1.9			EF-1 1/4 HP	0.70	20/1	2
3	20/1	1.00	LIGHTING		2.4		REC (8)	1.40	20/1	
5	20/1	1.20	LIGHTING			2.6	REC (8)	1.40	20/1	6
7	20/1	1.00	AHU LIGHTING	2.3			REC (7)	1.30	20/1	8
9	20/1		EMERG. LIGHTING		0.8		SPARE NOTE 15	0.80	20/1	1
11	20/1	0.50	PANEL RM REC (1)			2.2	AHU-2	1.70	20/1	1.
13	40/2	3.30	KITCHEN RANGE	5.0			AHU-2	1.70	20/1	1
15	-	3.30	KITCHEN RANGE		5.6		SPARE NOTE 15	2.30	30/2	1
17	20/1	1.10	RECEPTACLES			3.4	SPARE NOTE 15	2.30	-	1
19	20/1	1.10	RECEPTACLES	3.0			SPARE NOTE 15	1.90	25/2	2
21	20/1	1.40	RECEPTACLES		3.3		SPARE NOTE 15	1.90	-	2
23	20/1	1.40	RECEPTACLES			3.4	AHU-1 24MCA	2.00	25/2	2
25	20/1	1.40	RECEPTACLES	3.4			AHU-1 24MCA	2.00	-	2
27	20/1	1.50	COUNTER RECEPT		3.7		AHU-3 26MCA	2.20	30/2	2
29	20/1	1.50	MW			3.7	AHU-3 26MCA	2.20	-	3
31	20/1	1.50	REF	3.7			AHU-4 26MCA	2.20	30/2	3
33	20/1	1.50	U/C REF & COUNTER RECEPT		3.7		AHU-4 26MCA	2.20	-	3
35	20/1	1.50	MW			4.7	AHU-6 39MCA	3.20	40/2	3
37	20/1	1.50	COPIER	4.7			AHU-6 39MCA	3.20	-	3
39	20/1	1.40	RECEPTACLES		4.6		AHU-7 39MCA	3.20	40/2	4
41	20/1	1.40	RECEPTACLES			4.6	AHU-7 39MCA	3.20	-	4
MIN. BREAKER AIC: 35,000			24.0	24.1	24.6	TOTAL CONNECTED LOAD	72.7			
NOTES: 6, 9, 10, 11, 17			21.1	20.9	22.3	TOTAL DEMAND LOAD	64.3			

SCHEDULE PANELBOARD B SECTION 2 NEW SIEMENS										
		3	CHEDULE PANEL	BOAK	M R 2	ECIIO	N Z NEW SIEWEN	<u> </u>		
	MAINS		VOLTAGE	PHASE	WIRE		MOUNTING			
	250	MLO	120/208	3	4		SURFACE			
							SIEMENS P1			
CIR.	TRIP/			CONNEC	TED LOA	AD KVA			TRIP/	CIR.
#	POLE	KVA	DESCRIPTION	PH. A	PH. B	PH. C	DESCRIPTION	KVA	POLE	#
43	20/1	0.72	RECEPTACLES	2.2			DISHWASHER	1.50	20/1	44
45	20/1	1.10	RECEPTACLES		1.1		SPARE		20/1	46
47	20/1	1.50	COMM. BACKBOARD			1.5	SPARE		20/1	48
49	20/1		SPARE	0.0			SPARE		20/1	50
51	20/1		SPARE		0.0		SPARE		20/1	52
53	20/1		SPARE			0.0	SPARE		20/1	54
55	-/1		SPACE	0.0			SPACE		-/1	56
57	-/1		SPACE		0.0		SPACE		-/1	58
59	<i>-</i> /1		SPACE			0.0	SPACE		-/1	60
61	<i>-</i> /1		SPACE	0.0			SPACE		-/1	62
63	-/1		SPACE		0.0		SPACE		-/1	64
65	<i>-</i> /1		SPACE			0.0	SPACE		-/1	66
67	<i>-</i> /1		SPACE	0.0			SPACE		-/1	68
69	<i>-</i> /1		SPACE		0.0		SPACE		-/1	70
71	<i>-</i> /1		SPACE			0.0	SPACE		-/1	72
73	<i>-</i> /1		SPACE	0.0			SPACE		-/1	74
75	-/1		SPACE		0.0		SPACE		-/1	76
77	<i>-</i> /1		SPACE			0.0	SPACE		-/1	78
79	<i>-</i> /1		SPACE	0.0			SPACE		-/1	80
81	-/1		SPACE		0.0		SPACE		-/1	82
83	-/1		SPACE			0.0	SPACE		-/1	84
ИIN. BI	REAKER A	AIC:	TYPE HBL 35,000	26.2	25.2	26.1	TOTAL CONNECTED LOAD	77.52		
OTES	S:1 TO 11	MATC	H EXIST. STYLE	23.1	21.7	23.8	TOTAL DEMAND LOAD	68.574		



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EFFINGHAM COUNTY ADMINISTRATION BUILDIN

PANEL SCHEDULE AND ONE-LINE DIAGRAM

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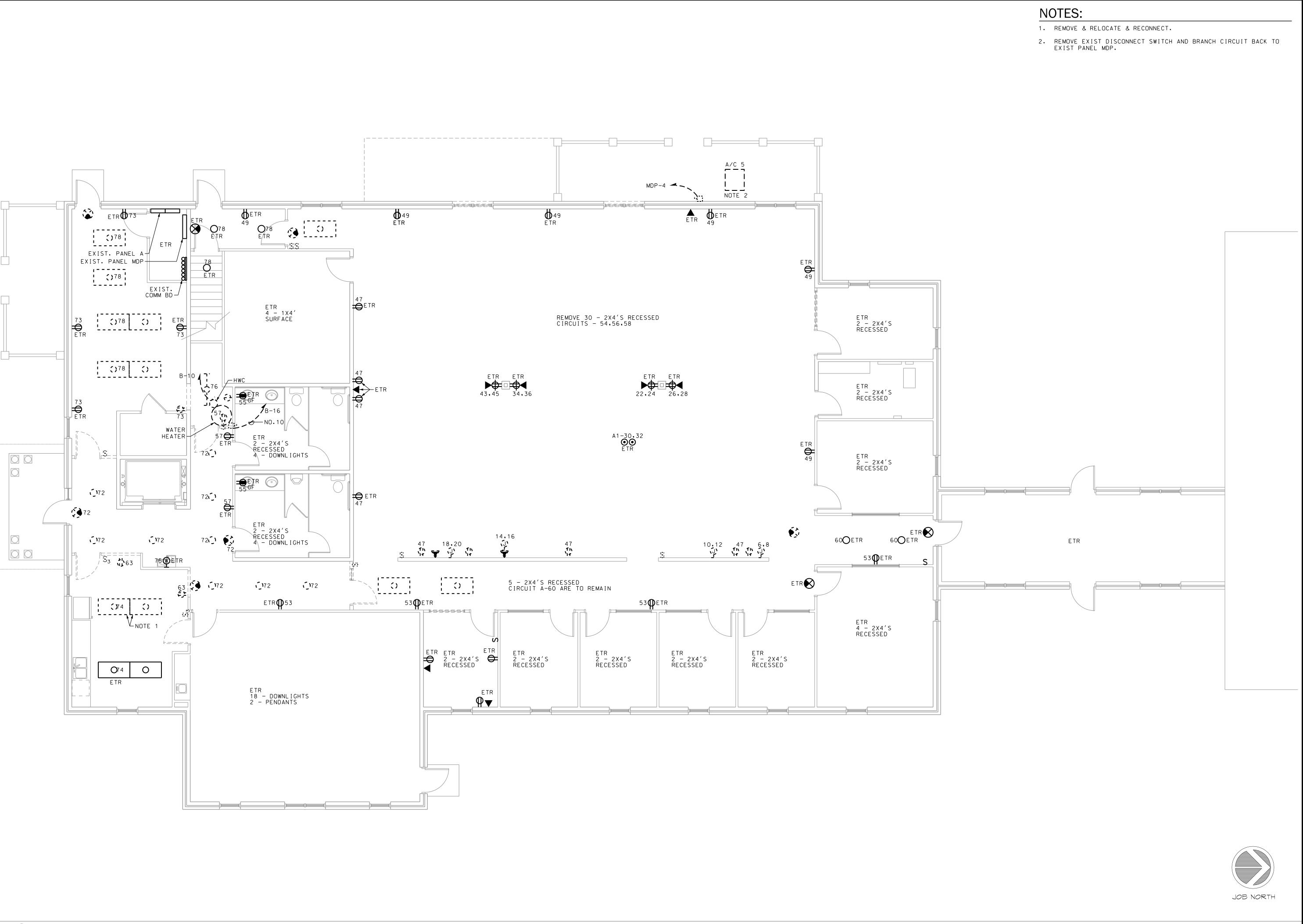


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E0.5





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INGHAM COUNTY MINISTRATION BUILDIN GEORGIA

SOUTH BUILDING FIRST FLOOR -DEMOLITION PLAN

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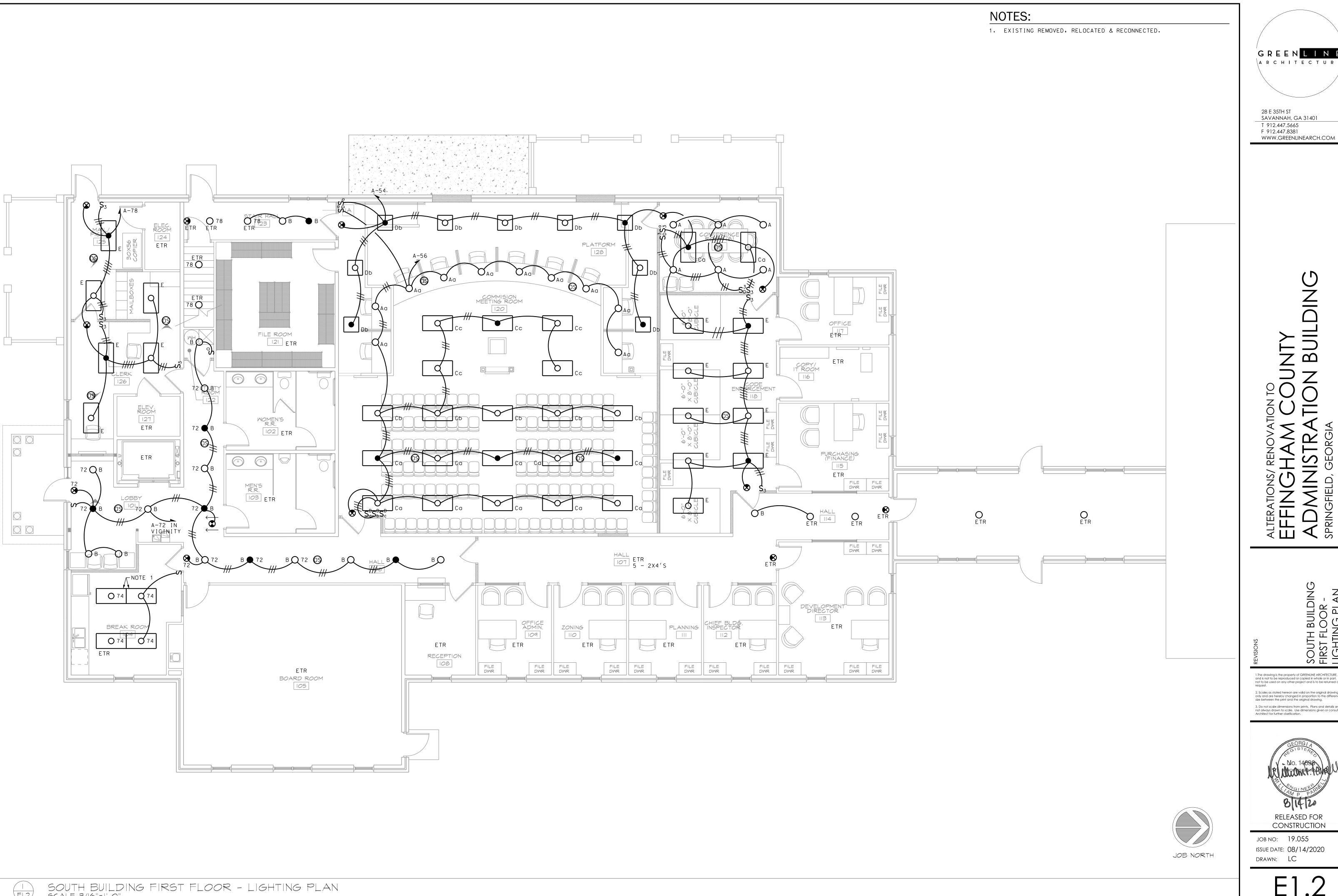


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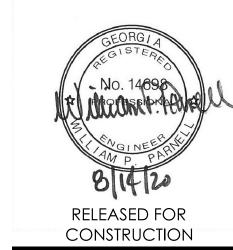
E1.1





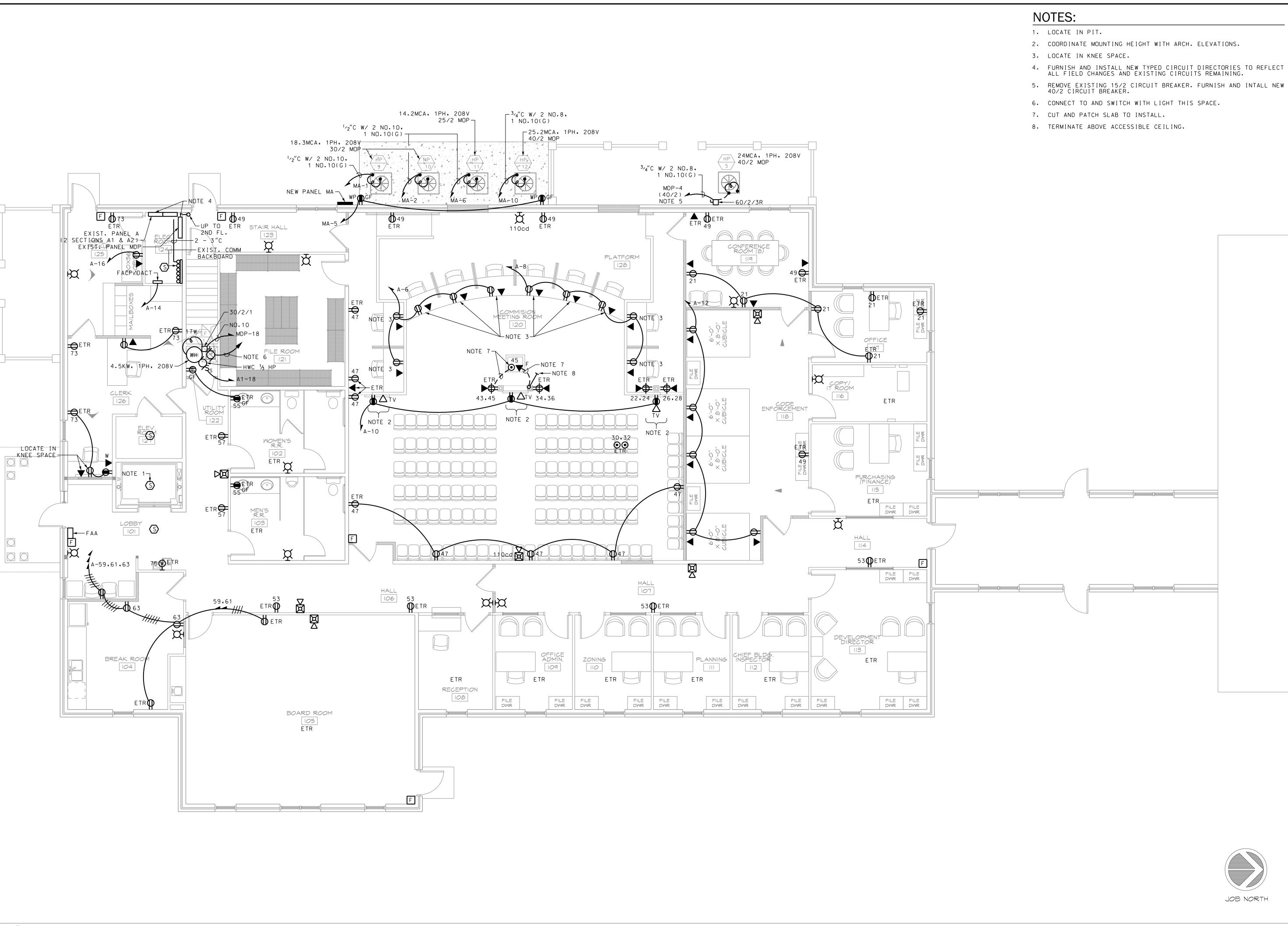
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E1





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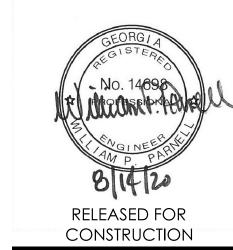
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INGHAM COUNTY
MINISTRATION BUILDIN

SOUTH BUILDING FIRST FLOOR -POWER/COMM PLAN

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E1.3

- 1. MAINTAIN LIGHTING AND MAINTENANCE RECEPTACLES AT EXISTING AHU LOCATIONS.
- 2. REMOVE EXISTING DISCONNECT SWITCH AND BRANCH CIRCUIT BACK TO EXIST. PANEL B.



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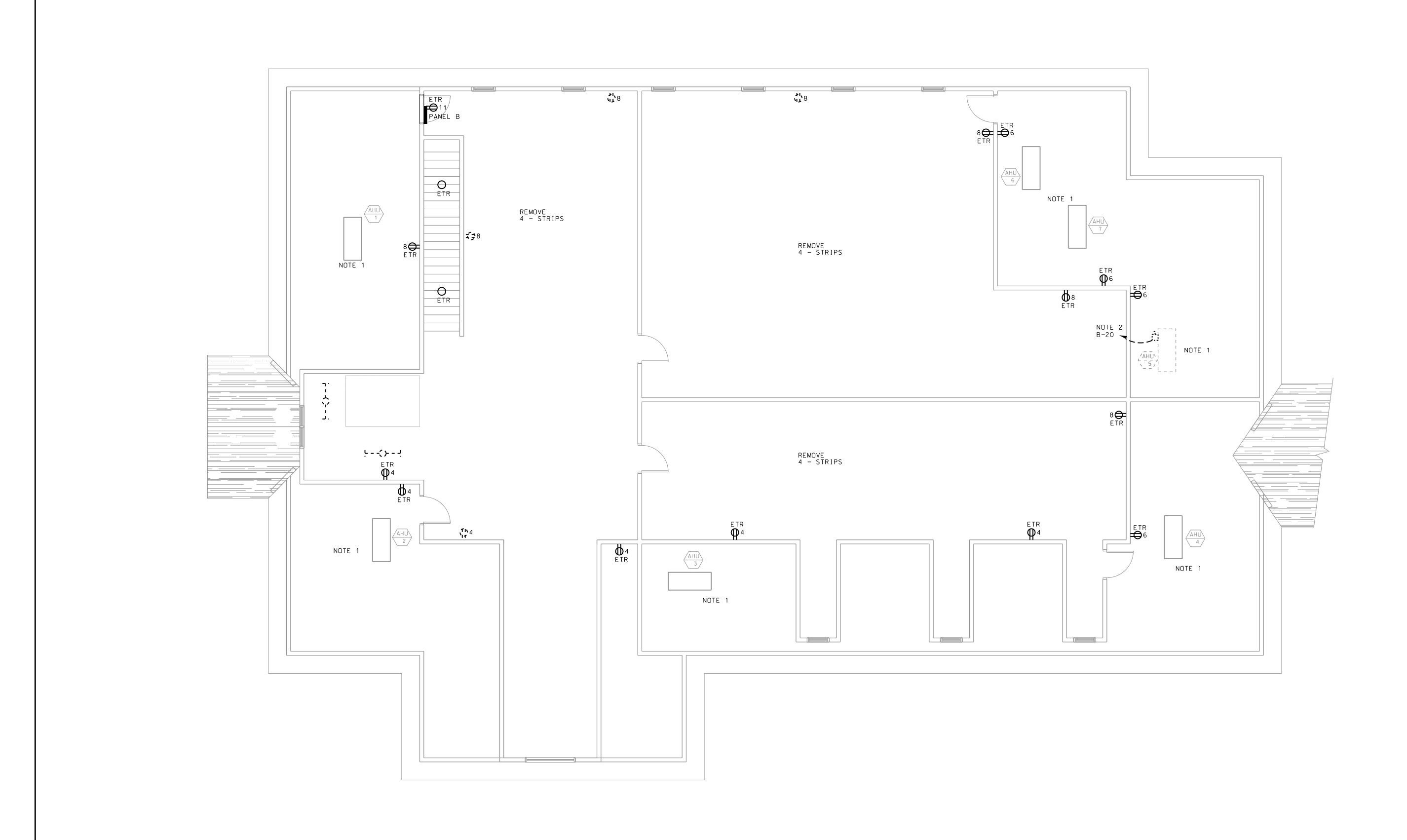
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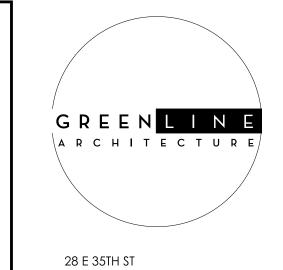






JOB NORTH

MAINTAIN EXISTING LIGHTING CIRCUIT B-7 AT AIR UNITS. REMOVE EXISTING FLUORESCENTS AND REPLACE WITH TYPE H. REPLACE 14 TOTAL APPROXIMATELY 2 LOCATED AT EACH AHU. FIELD VERIFY PRIOR TO ORDERING FIXTURES.



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SATIONS/ RENOVATION TO FINGHAM COUNTY OMINISTRATION BUILDIN GEORGIA

SOUTH BUILDING SECOND FLOOR -LIGHTING PLAN

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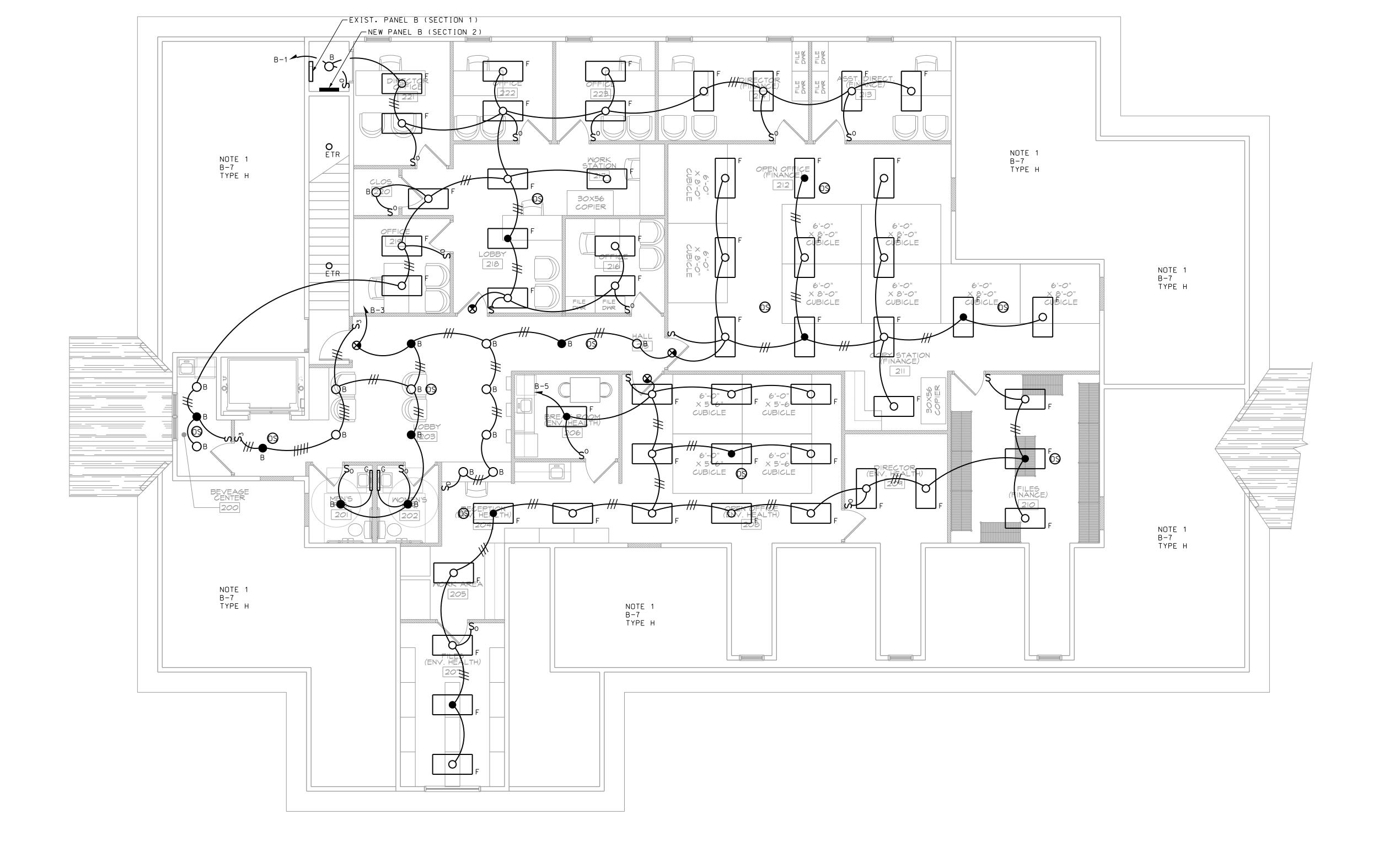


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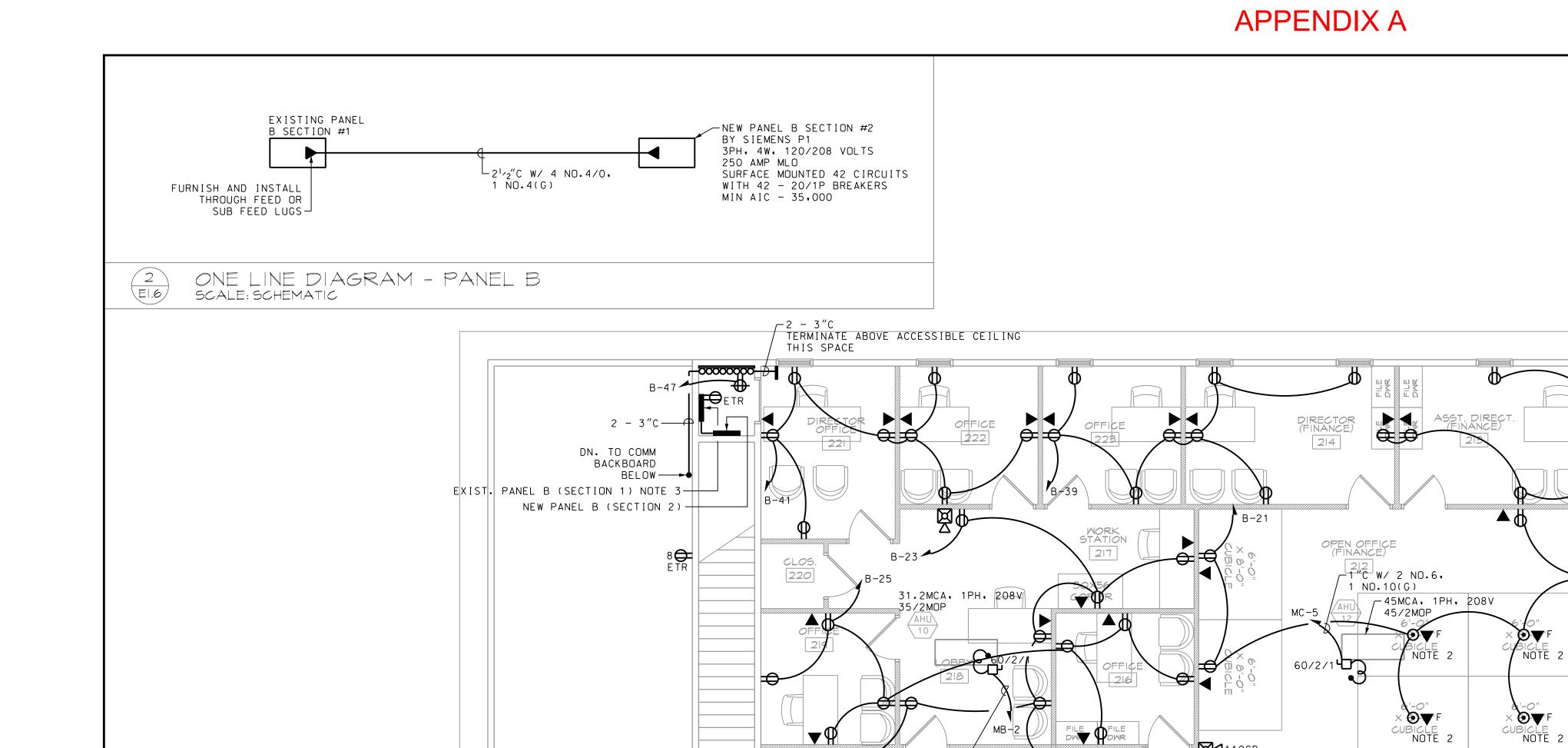
E1.5





SOUTH BUILDING SECOND FLOOR - LIGHTING PLAN SCALE: 3/16"=1'-0"

CADD PLOT 14-AUG-2020 11:36 Icauley



NOTE 5

FOR U/C

REF.

FOR MICROWAVE IN CABINET

ABOVE —

 $\frac{3}{4}$ C W/ 2 NO.8.

1 NO.10(G) —

31.2MCA, 1PH, 208V 35/2MOP

(ENV. HEALTH)

HALL 2I5

35/2MOP

-3/4"C W/ 2 NO.8.

OPEN OFFICE (ENV. HEALTH)

PANEL MC

NOTES:

DN. TERMINATE

AHU 45MCA 1PH, 208V

 $\frac{10}{5}$ 45/2 MOP

—1"C W/ 2 NO.6,

1 NO.10(G)

BELOW CEIL. LINE 1ST FLOOR—

X 8'-2"- 3"C. TERMINATE"
ABOVE ACCESSTBLE
CEILING THIS SPACE

(FINANCE)

PTR P4

1. LOCATE IN PIT.

 COORDINATE LOCATION WITH ARCH/USER & PLACEMENT OF CUBICLES FOR ACCESS.

3. FURNISH AND INSTALL A NEW TYPED WRITTEN CIRCUIT DIRECTORY.

4. CONNECT TO AND SWITCH WITH LIGHTS IN COMMON SPACE.

5. FOR INFRARED FAUCETS. CONNECT TO BRANCH CIRCUIT.

6. LOCATE IN CABINET BELOW SINK FOR ADJACENT DISHWASHER. FURNISH AND INSTALL CORD/PLUG CONNECTION ON DISHWASHER.

-EXIST. SERVER RM/RACK

1ST FLOOR

7. LOCATE IN KNEE SPACE.

8. LOCATE IN CABINET ABOVE COUNTER FOR MW.

9. CONNECT TO TOUCHLESS PTD.



EFFINGHAM COUNTY
ADMINISTRATION BUILDIN

SOUTH BUILDING SECOND FLOOR -POWER/COMM PLAI

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2. Scales as stated hereon are valid on the original drawing only and are hereby changed in proportion to the difference in size between the print and the original drawing.

3. Do not scale dimensions from prints. Plans and details are not always drawn to scale. Use dimensions given or consult the Architect for further clarification.



JOB NO: 19.055

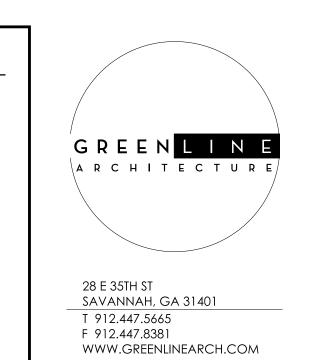
ISSUE DATE: 08/14/2020

DRAWN: LC

E1.6

JOB NORTH

1. RELOCATE COMM BACKBOARD, POWER AND COMM CONNECTIONS TO THIS LOCATION, FIELD VERIFY POWER AND COMM CONNECTIONS REQUIRED. RECONNECT ALL & MAKE SERVICEABLE AFTER RELOCATION.



TERATIONS/ RENOVATION TO FINGHAM COUNTY COMINISTRATION BUILDING RINGFIELD, GEORGIA

NORTH BUIDING SECOND FLOOR -DEMOLITION PLAN

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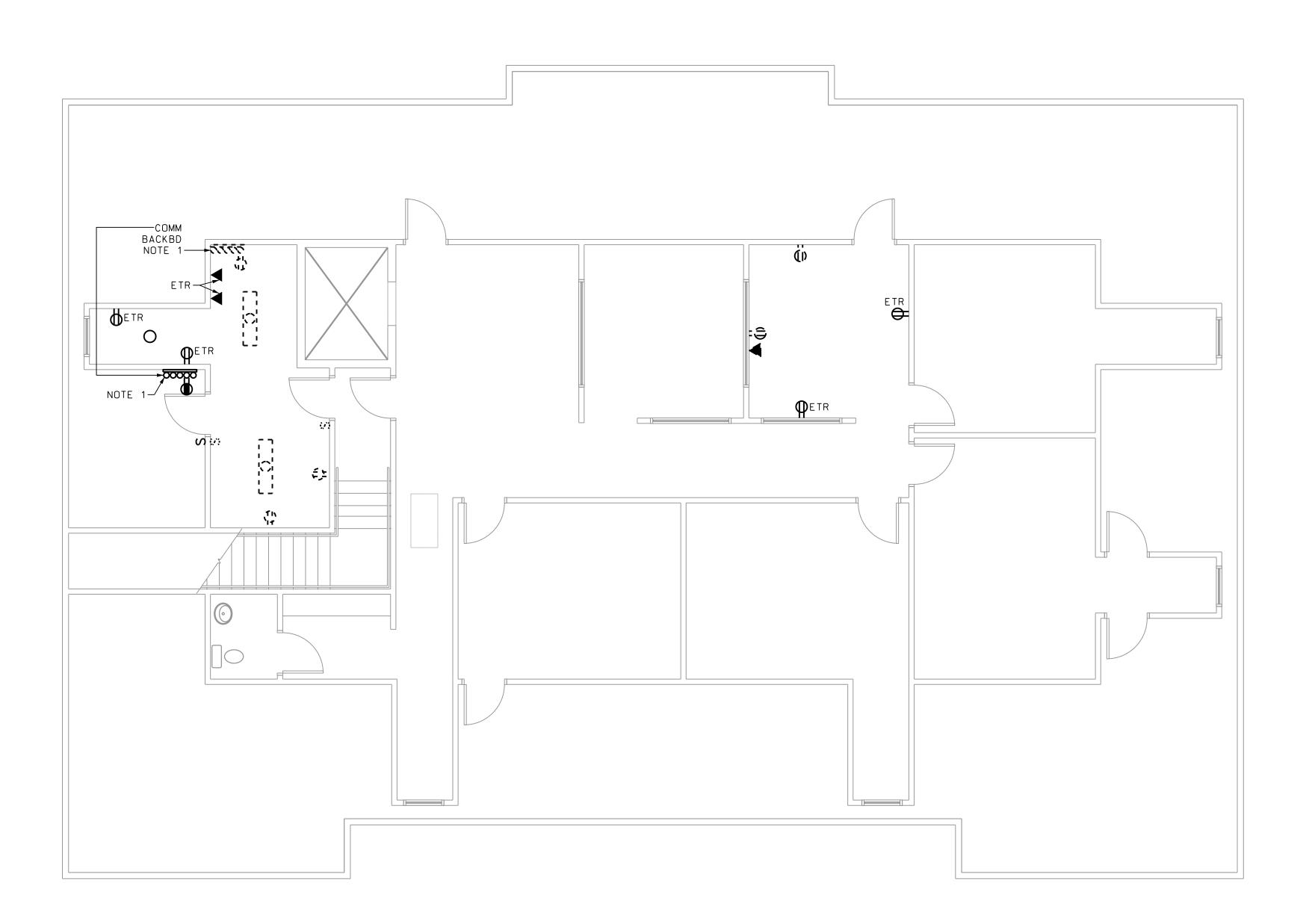
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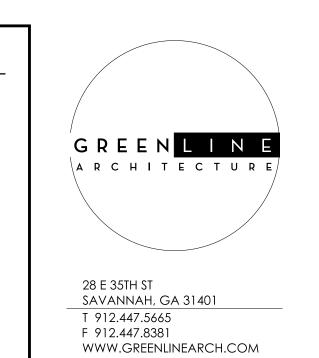
E1.7

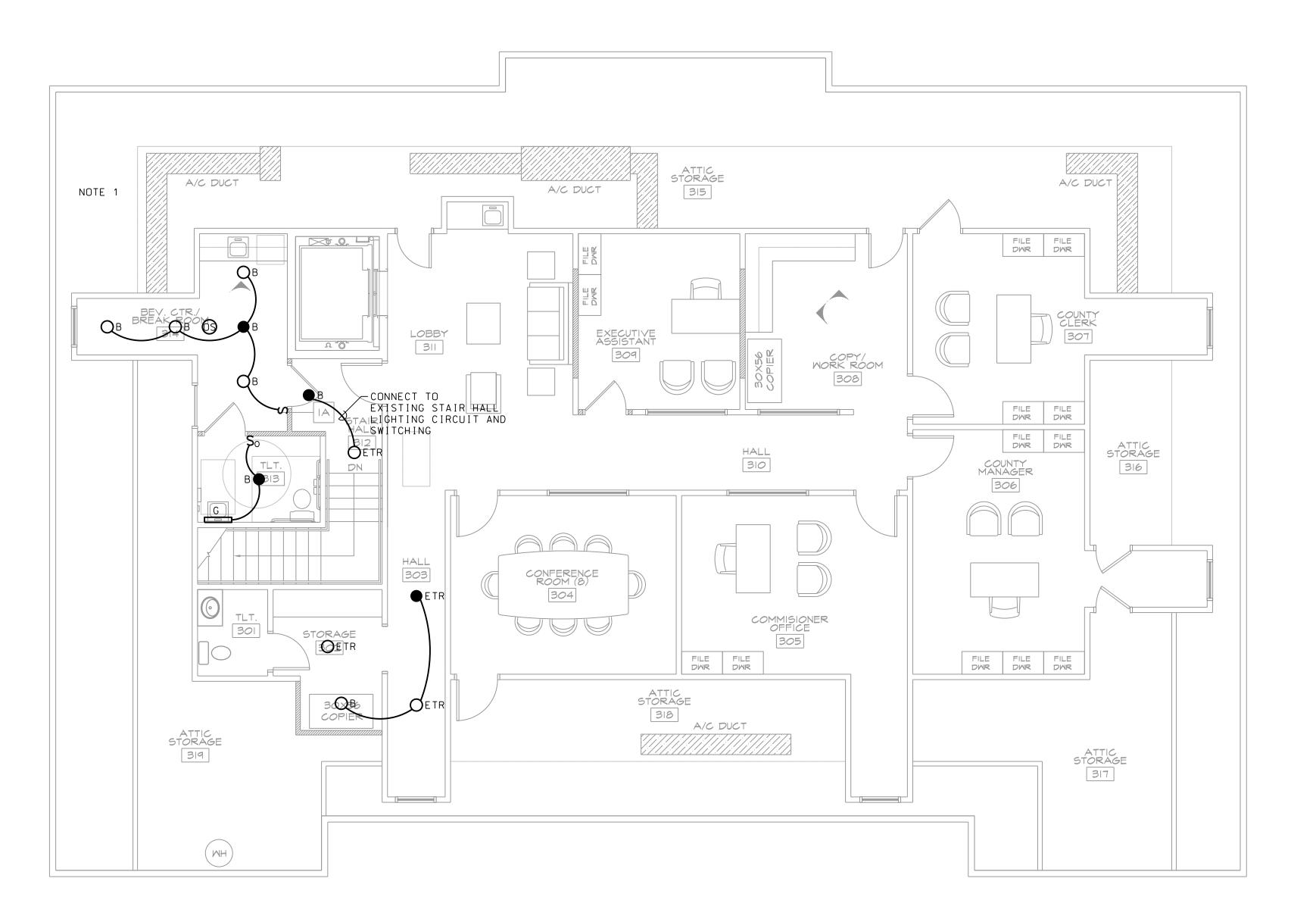






1. ELECTRICAL ROOM 1ST FLOOR THIS VICINITY. FIELD VERIFY.





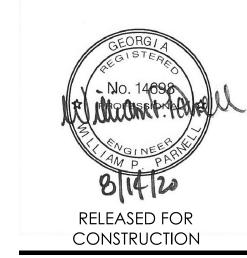


NORTH BUILDING SECOND FLOOR -LIGHTING PLAN

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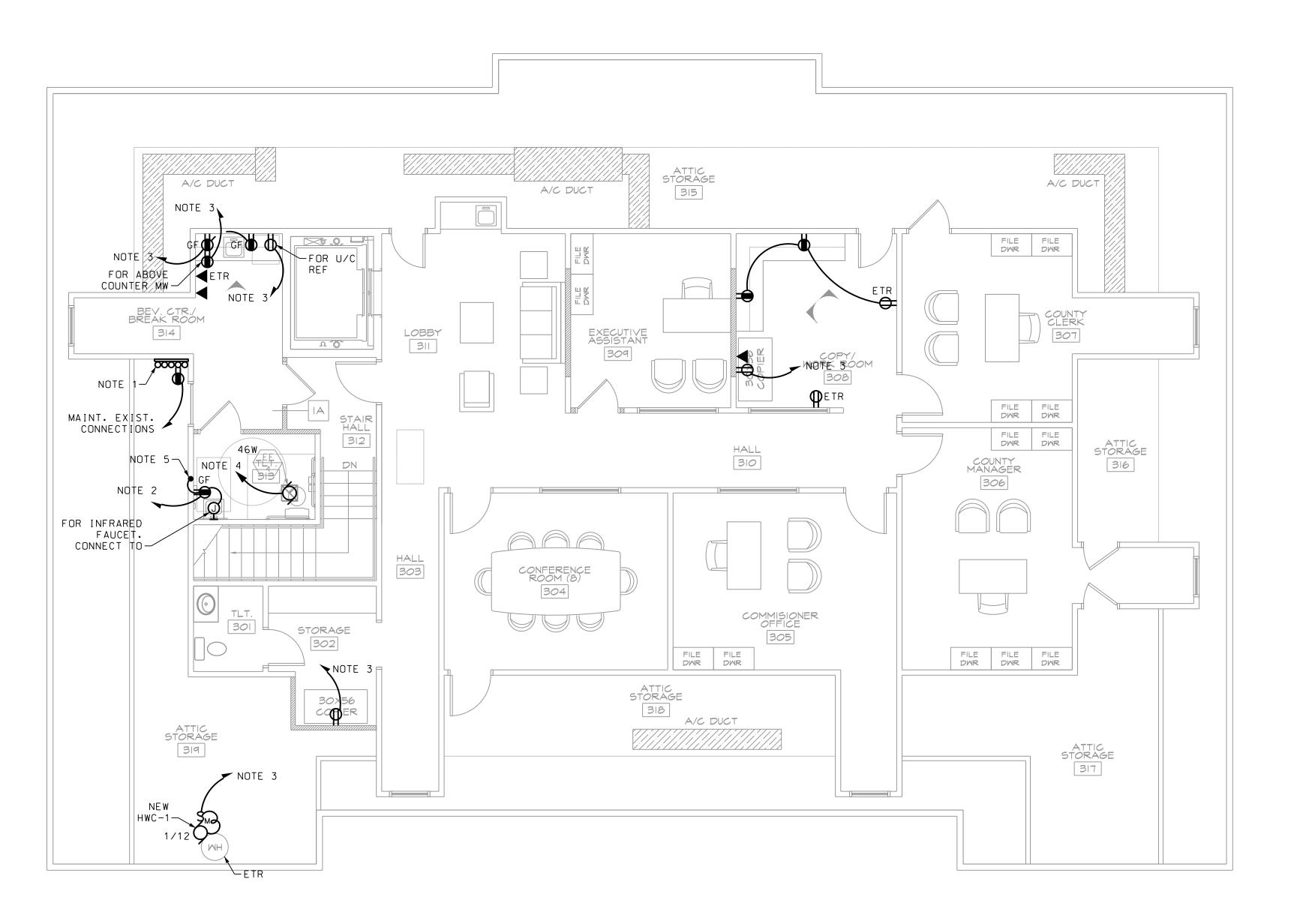
E1.8

JOB NORTH

- 1. RELOCATED COMM BACKBOARD AND CONNECTIONS.
- CONNECT TO NEAREST EXISTING BRANCH CIRCUIT IN AREA. FIELD VERIFY, TRACE AND LOCATE.
- 3. CONNECT TO EXISTING SPARE BREAKER (20A/1P) OR FURNISH AND INSTALL IN AVAILABLE SPACE A 20A/1P BREAKER IN EXISTING PANEL SERVING AREA. FIELD LOCATE AND VERIFY PANEL LOCATION WITHIN NORTH BUILDING.
- 4. CONNECT TO AND SWITCH WITH LIGHT IN SPACE.
- 5. CONNECT TO TOUCHLESS PTD.



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NORTH BUILDING SECOND FLOOR -POWER/COMM PL

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JOB NO: 19.055

ISSUE DATE: 08/14/2020

DRAWN: LC

E1.9

JOB NORTH

PROJECT MANUAL

Renovations to 802 South Laurel Street for use as the

EFFINGHAM COUNTY ADMINISTRATION BUILDING

for the EFFINGHAM COUNTY BOARD OF COMMISSIONERS

Springfield, GA

PREPARED BY
GREENLINE ARCHITECTURE
August 2020

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Renovations to 802 South Laurel Street for the EFFINGHAM COUNTY ADMINISTRATION BUILDING Springfield GA

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DIVISION 4 – MASONRY

NOT USED

DIVISION 5 - METALS

NOT USED

DIVISION 6 - WOOD AND PLASTICS

061000 ROUGH CARPENTRY

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Renovations to 802 South Laurel Street for the EFFINGHAM COUNTY ADMINISTRATION BUILDING Springfield GA

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SECTION 011000 – SUMMARY OF WORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes:

- 1. Project information.
- 2. Work covered by Contract Documents.
- 3. Phased construction.
- 4. Access to site.
- 5. Coordination with occupants.
- 6. Work restrictions.
- 7. Specification and drawing conventions.

1.3 PROJECT INFORMATION

- A. Project Identification: Renovations to 802 South Laurel Street for use as the Effingham County Administration Building, Springfield GA.
 - 1. Project Location: 802 South Laurel Street, Springfield GA, 31329, Effingham County.
- B. Client: Effingham County Board of Commissioners
 - 1. Owner's Representative: Effingham County, Charlie George, Effingham County Engineer, Phone: (912) 754-8066.
 - 2. Architect: Greenline Architecture, Inc., Keith Howington, Sr. Project Manager, Phone: (912)447-5665.

1.4 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of the Project is defined by the Contract Documents and consists of the following:
 - 1. Demolition of interior building material based on new layout of spaces.
 - 2. Rework and new construction, plumbing, HVAC and electrical work based on new offices/space layout.

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B. Type of Contract

1. Project will be constructed under a single prime contract.

1.5 PHASED CONSTRUCTION

- A. The Work shall be conducted in two (2) phases, with each phase substantially complete as indicated:
 - 1. Phase 1 shall consist of all demolition and all new work associated with the first level of the south building, with the exception of the Commission Room, Room 120. The goal is to be able to occupy the Building Department office area, restrooms, etc., as soon as is feasible.
 - 2. Phases 2 shall consist of the construction of all other portions of both buildings.
- B. Before commencing Work of each phase, submit an updated copy of the Contractor's construction schedule showing the sequence, commencement and completion dates for all phases of the Work. No work shall be commenced on any phase unless coordinated with the Owner.

1.6 ACCESS TO SITE

- A. General: Contractor shall have limited use of Project site for construction operations.
- B. Use of Site: Limit use of Project site to work in each Phase area as agreed upon at Client/Architect/GC Project Kick-Off meeting. Do not disturb portions of Project site beyond areas in which the Work is indicated.
 - 1. Limits: Confine construction operations to area defined for each phase. Lay down area for each phase shall be in the proximity of the work.
 - 2. Limits: Limit site disturbance, including earthwork and clearing of vegetation, to 15 feet beyond building perimeter; 5' beyond surface walkways, patios, surface parking, and utilities less than 12 inches in diameter; 10 feet (4.5 m) beyond primary roadway curbs and main utility branch trenches; and 25 feet (7.6 m) beyond constructed areas with permeable surfaces (such as pervious paving areas, stormwater detention facilities, and open waterways.
 - 3. Driveways, Walkways and Entrances: Keep driveways, parking garage, loading areas, and entrances serving premises clear and available to Owners, Owners' employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials
 - a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

Renovations to 802 South Laurel Street for the EFFINGHAM COUNTY ADMINISTRATION BUILDING Springfield GA

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C. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period. Repair damage caused by construction operations.

1.7 COORDINATION WITH OCCUPANTS

- A. Full Tenant Occupancy: There is an existing tenant, Renasant Bank, Springfield Branch, which must continue in full operation mode, in the north building, during this project. Renasant Bank will occupy the first floor of the north building during the entire construction period. Cooperate with Owners and Tenant during construction operations to minimize conflicts and facilitate their usage. Perform the Work so as not to interfere with their day-to-day operations. Maintain existing exits unless otherwise indicated.
 - 1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and approval of authorities having jurisdiction.
 - 2. Notify the Owner not less than 48 hours in advance of activities that will affect any normal operations.
- B. Owner Limited Occupancy of Completed Areas of Construction: Owner reserves the right to occupy and to place and install equipment in completed portions of the Work, completed in Phase 1, prior to Substantial Completion of the Work, provided such occupancy does not interfere with completion of the Work. Such placement of equipment and limited occupancy shall not constitute acceptance of the total Work.
 - 1. Architect will prepare a Certificate of Substantial Completion for each specific portion of the Work to be occupied prior to Owner acceptance of the completed Work.
 - 2. Obtain a Certificate of Occupancy from authorities having jurisdiction before limited Owner occupancy.
 - 3. On occupancy, Owner will assume responsibility for maintenance and custodial service for occupied portions of Work.

1.8 WORK RESTRICTIONS

- A. Work Restrictions, General: Comply with restrictions on construction operations.
 - 1. Comply with limitations on use of public streets and other requirements of authorities having jurisdiction.
- B. On-Site Work Hours: Limit work in the existing building to normal business working hours of 7:30 a.m. to 5:00 p.m., Monday through Friday, except as otherwise indicated.
 - 1. Weekend Hours: Saturdays between the hours of 8:00 and 12:00 noon.
 - 2. Early Morning Hours: Upon request, if necessary.
 - 3. Hours for Utility Shutdowns: Only when coordinated with Owner.
 - 4. Hours for noisy activity: Only when coordinated with Owner.

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- C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:
 - 1. Notify Owner minimum 48 hours in advance of proposed utility interruptions.
- D. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Client representative.
 - 1. Notify Owner minimum of 48 hours in advance of proposed disruptive operations.
- E. Nonsmoking Building: Smoking is not permitted within the building or within 25 feet of entrances, operable windows, or outdoor air intakes.
- F. Crude or foul language or actions will not be tolerated and will result in Owner asking the General Contractor to remove personnel from the site.
- G. Controlled Substances: Use of tobacco products and other controlled substances on the Project site is not permitted.
- H. Employee Identification: Provide identification for Contractor personnel working on the Project site. Require personnel to utilize identification tags or clothing with company logos and names at all times.
- I. Employee Screening: Provide evidence of COVID-19/temperature screening of all Contractor and Sub-contractor personnel working on the Project site. Notify Owner at once of any positive COVID-19 test cases of site personnel.

1.9 SPECIFICATION AND DRAWING CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
 - 1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
 - 2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
- B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
- C. Drawing Coordination: Requirements for materials and products identified on the Drawings are described in detail in the Specifications. One or more of the following are used on the Drawings to identify materials and products:
 - 1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.

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- 2. Abbreviations: Materials and products are identified by abbreviations scheduled on Drawings.
- 3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

1.10 MISCELLANEOUS PROVISIONS

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

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SECTION 012100 - ALLOWANCES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements governing allowances.
- B. Types of allowances include the following:
 - 1. Lump-sum allowances.
 - 2. Unit-cost allowances.
 - 3. Quantity allowances.
 - 4. Contingency allowances.
 - 5. Testing and inspecting allowances.

C. Related Sections:

- 1. Division 01 Section "Unit Prices" for procedures for using unit prices.
- 2. Division 01 Section "Quality Requirements" for procedures governing the use of allowances for testing and inspecting.

1.2 SELECTION AND PURCHASE

- A. At the earliest practical date after award of the Contract, advise Architect of the date when final selection and purchase of each product or system described by an allowance must be completed to avoid delaying the Work.
- B. At Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.
- C. Purchase products and systems selected by Architect from the designated supplier.

1.3 SUBMITTALS

- A. Submit proposals for purchase of products or systems included in allowances, in the form specified for Change Orders.
- B. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.
- C. Submit time sheets and other documentation to show labor time and cost for installation of allowance items that include installation as part of the allowance.
- D. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

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1.4 COORDINATION

A. Coordinate allowance items with other portions of the Work. Furnish templates as required to coordinate installation.

1.5 LUMP-SUM, UNIT-COST AND QUANTITY ALLOWANCES

- A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Architect under allowance and shall include taxes, freight and delivery to Project site.
- B. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by Owner under allowance shall be included as part of the Contract Sum and not part of the allowance.
- C. Unused Materials: Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.
 - 1. If requested by Architect, retain and prepare unused material for storage by Owner. Deliver unused material to Owner's storage space as directed.

1.6 CONTINGENCY ALLOWANCES

- A. Use the contingency allowance only as directed by Architect for Owner's purposes and only by Change Orders that indicate amounts to be charged to the allowance.
- B. Contractor's overhead, profit, and related costs for products and equipment ordered by Owner under the contingency allowance are included in the allowance and are not part of the Contract Sum. These costs include delivery, installation, taxes, insurance, equipment rental, and similar costs.
- C. Change Orders authorizing use of funds from the contingency allowance will include Contractor's related costs and reasonable overhead and profit margins.
- D. At Project closeout, credit unused amounts remaining in the contingency allowance to Owner by Change Order.

1.7 TESTING AND INSPECTING ALLOWANCES

- A. Testing and inspecting allowances include the cost of engaging testing agencies, actual tests and inspections, and reporting results.
- B. The allowance does not include incidental labor required to assist the testing agency or costs for retesting if previous tests and inspections result in failure. The cost for incidental labor to assist the testing agency shall be included in the Contract Sum.
- C. Costs of services not required by the Contract Documents are not included in the allowance.

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D. At Project closeout, credit unused amounts remaining in the testing and inspecting allowance to Owner by Change Order.

1.8 ADJUSTMENT OF ALLOWANCES

- A. Allowance Adjustment: To adjust allowance amounts, prepare a Change Order proposal based on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place where applicable. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, and similar margins.
 - 1. Include installation costs in purchase amount only where indicated as part of the allowance.
 - 2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other margins claimed.
 - 3. Submit substantiation of a change in scope of work, if any, claimed in Change Orders related to unit-cost allowances.
 - 4. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.
- B. Submit claims for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the purchase order amount or Contractor's handling, labor, installation, overhead, and profit.
 - 1. Do not include Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of work has changed from what could have been foreseen from information in the Contract Documents.
 - 2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

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3.3 SCHEDULE OF ALLOWANCES

- A. Allowance No. 1: Lump-Sum Allowance: Include the sum of 9,500.00: Include interior restroom and code compliant signage; and exterior signage at monumental sign, south building as shown on drawings.
 - 1. This allowance includes material cost, receiving, handling, installation and Contractor overhead and profit for lettering on exterior monument sign and interior room signs.
- B. Allowance No. 2: Include the sum of \$800.00 per exterior window for interior window shading treatment to be selected by Owner-
 - 1. This allowance includes material cost, receiving, handling, installation and Contractor overhead and profit.
- C. Allowance No. 3: Include the sum of \$42.00 per square yard for interior rolled good carpeting to match existing building first floor carpet; same cost per sq. yard for carpet tiles on second floor south building-
 - 1. This allowance includes material cost, receiving, handling, installation and Contractor overhead and profit.
- D. Allowance No. 4: Include the sum of \$24.00 per square foot porcelain tiles in Lobby 101/ Hall 106 -
 - 1. This allowance includes material cost, receiving, handling, installation and Contractor overhead and profit.
- E. Allowance No. 5: Include the sum of \$14.00 per square foot for LVT (Luxury Vinyl tile)-
 - 1. This allowance includes material cost, receiving, handling, installation and Contractor overhead and profit.
- F. Allowance No. 6: Include the sum of \$1,000 for potential modifications to cabinet in Breakroom 104, south building.
- G. Allowance No. 7: For Door Hardware provide an allowance of \$400 per typical door; and provide an allowance of \$1,000 per door for door number: 106, 120, 123; 204A; exterior main front door, door at Stair 123, exterior wall. Hardware to be ADA compliant and final selection to match existing similar.
 - 1. This allowance includes material cost, receiving, handling, installation and Contractor overhead and profit.

END OF SECTION 012100

Renovations to 802 South Laurel Street for the EFFINGHAM COUNTY ADMINISTRATION BUILDING Springfield GA

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SECTION 024119 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Demolition and removal of selected portions of building or structure.
 - 2. Demolition and removal of selected site elements.
- B. Related Sections include the following:
 - 1. Division 01 Section "Summary of Work" for use of premises.

1.3 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.
- B. Remove and Reinstall: Detach items from existing construction, prepare them for reuse, and reinstall them where indicated.
- C. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.4 QUALITY ASSURANCE

- A. Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project.
- B. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- C. Predemolition Conference: A predemolition conference will be part of the Pre-Construction Conference after Construction Contract award.

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1.5 PROJECT CONDITIONS

- A. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- B. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
 - 1. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Owner will remove hazardous materials under a separate contract.
- C. Storage or sale of removed items or materials on-site is not permitted.
- D. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
 - 1. Maintain fire-protection facilities in service during selective demolition operations.

1.6 WARRANTY

A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped.
- B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- C. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.
- D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.
- E. Engage a professional engineer to survey condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective demolition operations.

Renovations to 802 South Laurel Street for the EFFINGHAM COUNTY ADMINISTRATION BUILDING Springfield GA

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3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems: Maintain services/systems indicated to remain and protect them against damage during selective demolition operations.
 - 1. Comply with requirements for existing services/systems interruptions specified in Division 01 Section "Summary of Work."
- B. Service/System Requirements: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
 - 1. Owner will arrange to shut off indicated services/systems when requested by Contractor.
 - 2. Arrange to shut off indicated utilities with utility companies.
 - 3. If services/systems are required to be removed, relocated, or abandoned, before proceeding with selective demolition provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
 - 4. Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit after bypassing.
 - a. Where entire wall is to be removed, existing services/systems may be removed with removal of the wall.

3.3 PREPARATION

- A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 - 1. Comply with requirements for access and protection specified in Division 01 Section "Temporary Facilities and Controls."
- B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
 - 1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
 - 2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
 - 3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
 - 4. Cover and protect furniture, furnishings, and equipment that have not been removed.
- C. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.

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1. Strengthen or add new supports when required during progress of selective demolition.

3.4 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
 - 1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
 - Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
 - 3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
 - 4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
 - 5. Maintain adequate ventilation when using cutting torches.
 - 6. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
 - 7. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 - 8. Dispose of demolished items and materials promptly.

B. Removed and Reinstalled Items:

- 1. Clean and repair items to functional condition adequate for intended reuse. Paint equipment to match new equipment.
- 2. Pack or crate items after cleaning and repairing. Identify contents of containers.
- 3. Protect items from damage during transport and storage.
- 4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.
- C. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and reinstalled in their original locations after selective demolition operations are complete.

3.5 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

A. Stucco Wall System: Demolish in sections. Cut stucco full depth at junctures with construction to remain and at regular intervals, then remove stucco between cuts.

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- B. Roof Cap Flashing: Remove no more existing roof flashing, coping and roof accessory material than can be reinstalled and recovered in one day and so that building interior remains watertight and weathertight.
- C. Windows: Remove windows only in segments to be worked on in a single day, so that building interior remains watertight and weathertight. Use precautions to prevent damage to existing wall framing and window blocking that will need to remain in place.
- D. Exterior Lights: Remove, store, clean and reinstall exterior lights after wall system replacement operations have been completed and before Final Completion of project.
- E. Exterior Fans: Remove and store only those fans that have been designated by individual Homeowner to be retained for reuse. All other fans may be removed and disposed of. Contractor is to replace fan unit with rust-proof face plate at ceiling.
- F. Site Landscaping: Remove landscape material only as required for installation and safe access to building scaffolding that will be necessary for contractor's access to walls under repair. Coordinate with Client representative before the removal of material.

3.6 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.
 - 1. Do not allow demolished materials to accumulate on-site.
 - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
 - 3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
- B. Burning: Do not burn demolished materials.
- C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.7 CLEANING

A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 024119

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SECTION 061000 - ROUGH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Framing with dimension lumber
 - 2. Framing with engineered wood products
 - 3. Rooftop equipment bases and support curbs
 - 4. Wood blocking and nailers
 - 5. Wood furring
 - 6. Wood sleepers
 - 7. Plywood backing panels

1.2 SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product.
 - 1. Include data for wood-preservative and fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements.
- B. Material Certificates: For dimension lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the American Lumber Standards Committee Board of Review.
- C. Research/Evaluation Reports: For the following, showing compliance with building code in effect for Project:
 - 1. Wood-preservative-treated wood.
 - 2. Fire-retardant-treated wood.
 - 3. Engineered wood products.
 - 4. Power-driven fasteners.
 - 5. Powder-actuated fasteners.
 - 6. Expansion anchors.
 - 7. Metal framing anchors.

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PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
 - 1. Factory mark each piece of lumber with grade stamp of grading agency.
 - 2. For exposed lumber indicated to receive a stained or natural finish, mark grade stamp on end or back of each piece.
 - 3. Provide dressed lumber, S4S, unless otherwise indicated.
- B. Engineered Wood Products: Provide engineered wood products acceptable to authorities having jurisdiction and for which current model code research or evaluation reports exist that show compliance with building code in effect for Project.
 - 1. Allowable Design Stresses: Provide engineered wood products with allowable design stresses, as published by manufacturer, that meet or exceed those indicated. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.

2.2 WOOD-PRESERVATIVE-TREATED LUMBER

- A. Preservative Treatment by Pressure Process: AWPA C2, except that lumber that is not in contact with the ground and is continuously protected from liquid water may be treated according to AWPA C31 with inorganic boron (SBX).
 - 1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.
- B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent.
- C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.
- D. Application: Treat items indicated on Drawings, and the following:
 - 1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
 - 2. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.
 - 3. Wood framing and furring attached directly to the interior of below-grade exterior masonry or concrete walls.
 - 4. Wood framing members that are less than 18 inches (460 mm) above the ground in crawlspaces or unexcavated areas.

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5. Wood floor plates that are installed over concrete slabs-on-grade.

2.3 FIRE-RETARDANT-TREATED MATERIALS

- A. General: Comply with performance requirements in AWPA C20 (lumber) and AWPA C27 (plywood).
 - 1. Use Exterior type for exterior locations and where indicated.
 - 2. Use Interior Type A, High Temperature (HT) for enclosed roof framing, framing in attic spaces, and where indicated.
 - 3. Use Interior Type A, unless otherwise indicated.
- B. Identify fire-retardant-treated wood with appropriate classification marking of testing and inspecting agency acceptable to authorities having jurisdiction.
- C. Application: Treat items indicated on Drawings, and the following:
 - 1. Framing for raised platforms.
 - 2. Concealed blocking.
 - 3. Framing for non-load-bearing partitions.
 - 4. Framing for non-load-bearing exterior walls.
 - 5. Roof construction.
 - 6. Plywood backing panels.

2.4 DIMENSION LUMBER FRAMING

- A. Maximum Moisture Content: 19 percent
- B. Non-Load-Bearing Interior Partitions: Standard, Stud, or No. 3 grade of any species.
- C. Framing Other Than Non-Load-Bearing Interior Partitions: No. 2 and any of the following species:
 - 1. Hem-fir (north); NLGA.
 - 2. Southern pine; SPIB.
 - 3. Douglas fir-larch; WCLIB or WWPA.
 - 4. Mixed southern pine; SPIB.
 - 5. Spruce-pine-fir; NLGA.
 - 6. Douglas fir-south; WWPA.
 - 7. Hem-fir; WCLIB or WWPA.
 - 8. Douglas fir-larch (north); NLGA.
 - 9. Spruce-pine-fir (south); NeLMA, WCLIB, or WWPA.
- D. Exposed Interior Framing Indicated to Receive a Stained or Natural Finish: Provide material hand-selected for uniformity of appearance and freedom from characteristics, on exposed surfaces and edges, that would impair finish appearance, including decay, honeycomb, knotholes, shake, splits, torn grain, and wane.

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- 1. Species and Grade: As indicated above for load-bearing construction of same type.
- 2. Species and Grade: Hem-fir (north), No. 1 grade; NLGA.
- 3. Species and Grade: Southern pine, No. 1grade; SPIB.
- 4. Species and Grade: Douglas fir-larch; No. 1 grade; WCLIB, or WWPA.
- 5. Species and Grade: Mixed southern pine, No. 1 grade; SPIB.
- 6. Species and Grade: Spruce-pine-fir, No. 1 grade; NLGA.

ENGINEERED WOOD PRODUCTS

- E. Laminated-Veneer Lumber: Structural composite lumber made from wood veneers with grain primarily parallel to member lengths, evaluated and monitored according to ASTM D 5456 and manufactured with an exterior-type adhesive complying with ASTM D 2559 and containing no urea formaldehyde.
 - 1. Extreme Fiber Stress in Bending, Edgewise: 2900 psi (20.0 MPa) for 12-inch nominal-(286-mm actual-) depth members.
 - 2. Modulus of Elasticity, Edgewise: 1,800,000 psi (12 400 MPa)
- F. Wood I-Joists: Prefabricated units, I-shaped in cross section, made with solid or structural composite lumber flanges and wood-based structural panel webs, let into and bonded to flanges. Provide units complying with material requirements of and with structural capacities established and monitored according to ASTM D 5055.
 - 1. Provide I-joists manufactured without urea formaldehyde.
 - 2. Web Material: Either oriented strand board or plywood, complying with DOC PS 1 or DOC PS 2
 - 3. Structural Properties: Provide units with depths and design values not less than those indicated.
 - 4. Provide units complying with APA PRI-400, factory marked with APA trademark indicating nominal joist depth, joist class, span ratings, mill identification, and compliance with APA standard.
- G. Rim Boards: Product designed to be used as a load-bearing member and to brace wood I-joists at bearing ends, complying with research/evaluation report for I-joists.
 - 1. Material: glued-laminated wood or product made from any combination solid lumber, wood strands, and veneers. Provide rim boards made without urea formaldehyde.
 - 2. Thickness: 1-1/8 inches (28 mm)
 - 3. Referencing APA standard may reduce competition. See Evaluations.
 - 4. Provide performance-rated product complying with APA PRR-401, rim board grade, factory marked with APA trademark indicating thickness, grade, and compliance with APA standard.

2.5 MISCELLANEOUS LUMBER

A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:

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- 1. Blocking.
- 2. Nailers.
- 3. Rooftop equipment bases and support curbs.
- 4. Cants.
- 5. Furring.
- 6. Grounds.
- B. For items of dimension lumber size, provide Standard, Stud, or No. 3 grade lumber with 19 percent maximum moisture content of any species.
- C. For concealed boards, provide lumber with 19 percent maximum moisture content and any of the following species and grades:
 - 1. Mixed southern pine, No.2 grade; SPIB.
 - 2. Eastern softwoods, No. 2 Common grade; NeLMA.
 - 3. Northern species, No. 2 Common grade; NLGA.

2.6 PLYWOOD BACKING PANELS

A. Telephone and Electrical Equipment Backing Panels: DOC PS 1, fire-retardant treated, in thickness indicated or, if not indicated, not less than 3/4-inch (19-mm) nominal thickness.

2.7 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified.
 - 1. Where rough carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners of Type 304 stainless steel.
- B. Power-Driven Fasteners: NES NER-272.
- C. Bolts: Steel bolts complying with ASTM A 563 (ASTM A 563M) hex nuts and, where indicated, flat washers.

2.8 METAL FRAMING ANCHORS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
- C. Basis-of-Design Products: Subject to compliance with requirements, provide comparable products by one of the following:
 - 1. Alpine Engineered Products, Inc.
 - 2. Cleveland Steel Specialty Co.

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- 3. Harlen Metal Products, Inc.
- 4. KC Metals Products, Inc.
- 5. Simpson Strong-Tie Co., Inc.
- 6. Southeastern Metals Manufacturing Co., Inc.
- 7. USP Structural Connectors.
- D. Allowable Design Loads: Provide products with allowable design loads, as published by manufacturer, that meet or exceed those of products of manufacturers listed. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.
- E. Galvanized Steel Sheet: Hot-dip, zinc-coated steel sheet complying with ASTM A 653/A 653M, G60 (Z180) coating designation.

2.9 MISCELLANEOUS MATERIALS

- A. Sill-Sealer Gaskets: Glass-fiber-resilient insulation, fabricated in strip form, for use as a sill sealer; 1-inch (25-mm) nominal thickness, compressible to 1/32 inch (0.8 mm); selected from manufacturer's standard widths to suit width of sill members indicated.
- B. Flexible Flashing: Self-adhesive, rubberized-asphalt compound, bonded to a high-density, polyethylene film to produce an overall thickness of not less than 0.025 inch (0.6 mm).

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate furring, nailers, blocking, grounds, and similar supports to comply with requirements for attaching other construction.
- B. Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible flashing separator between wood and metal decking.
- C. Framing Standard: Comply with AF&PA's "Details for Conventional Wood Frame Construction," unless otherwise indicated.
- D. Framing with Engineered Wood Products: Install engineered wood products to comply with manufacturer's written instructions.
- E. Metal Framing Anchors: Install metal framing to comply with manufacturer's written instructions.
- F. Do not splice structural members between supports, unless otherwise indicated.

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- G. Comply with AWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber.
- H. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
 - 1. NES NER-272 for power-driven fasteners.
 - 2. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.

PROTECTION

I. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

END OF SECTION 061000

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SECTION 072180 - SPRAY FOAM INSULATION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Polyicynene spray insulation that is to be applied to the underside of the roof.
- B. Intumescent coating over spray insulation.

1.3 SUBMITTALS

- A. Product Data: Provide data on materials, describing insulation properties, surface burning characteristics, and other general information associated with the product
- B. Manufacturer's Installation Instructions: Indicate special procedures, perimeter conditions requiring special treatment, and other items which might affect the project.
- C. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

1.4 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing the products specified in this section with minimum three (3) years experience.

1.5 ENVIRONMENTAL REQUIREMENTS

- A. Toxicity/Hazardous Materials:
 - 1. Outgassing/Reactivity:
 - a. Formaldehyde: Products containing urea-formaldehyde will not be permitted.
 - b. Chlorofluorocarbons (CFCs)/HCFCs: Products and equipment requiring or using CFCs or HCFCs during the manufacturing process will not be permitted.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly indicating manufacturer and material.
- B. Store materials in an area protected from [freezing and overheating] damage and in accordance with manufacturer's instructions.
- C. Protect materials during handling and application to prevent damage and contamination.

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PART 2 - PRODUCTS

2.1 MANUFACTURER

Manufacturers: Subject to compliance with requirements, provide products by one of the following:

- A. Icynene Inc., 6747 Campobello Rd. Mississauga, Ontario L5N 2L7 Canada. Tel 800-758-7325. Fax 905-363-0102. Web Site: www.icynene.com.
- B. "Integrafoam" by IDI Distributors, Inc., 7667 Equitable Drive, Suite 201, Eden Prairie, MN 55344, Tel 800-678-6868, Fax 952-937-9809, Web Site; www.idimn.com.

2.2 MATERIALS

- A. Spray Foam Insulation: Polyurethane; Icynene; hydrophobic, low-density, open-cell modified polyicynene; conforming to the following:
 - 1. Thermal Resistance (R-Value/inch): ASTM C518; 3.6 hr/sq ft/degree F/BTU. In.
 - 2. Air Permeance (for 5.25 inches of material): ASTM E283; 0.0049 1/m²/second.
 - 3. Water Vapor Transmission (for 5 inches of material): ASTM E96; 10 perms.
 - 4. Corrosion: No significant corrosion when in contact with steel under 85 percent relative humidity.
 - 5. Bacterial or Fungal Growth: No growth; no material deterioration.
 - 6. Flame Spread and Smoke Developed Rating: ASTM E84; <20/<400.
 - 7. Fuel Contribution: ASTM E84; 0.
 - 8. Oxygen Index: ASTM D2863; average value 23.1 percent.
- B. Intumescent spray covering over spray foam insulation: An intumescent spray coating is to be applied over the spray foam insulation once it is in place. The product noted below is approved by Icynene, but other manufacturers are welcome pending approval of the spray foam manufacturer.
 - 1. Product: Camax 2, Shelter Shield, 12 mil thickness
 - 2. Equal as Approved by Architect

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify existing conditions before starting work.

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- B. Verify that substrate is free of any foreign material that will impede application.
- C. Verify that other work on and within spaces to be insulated is complete prior to application.
- D. Notify Architect of conditions that would adversely affect the application.
- E. Beginning of installation means applicator accepts existing conditions.

3.2 PREPARATION

- A. Comply with manufacturer's written installation instructions for preparing substrates indicated to receive insulation.
- B. Mask and protect adjacent surfaces from overspray or damage.
- C. Remove foreign materials, dirt, grease, oil, paint, laitance, efflorescence, and other substances that will affect application.

3.3 APPLICATION

- A. Apply insulation in accordance with manufacturer's written application instructions.
- B. Apply insulation to a reasonably uniform monolithic density without voids.
- C. Apply to minimum cured thickness which will provide and R-30 insulation value at the roof.
- D. Apply insulation to fill voids around accessible service and equipment penetrations.
- E. Seal plumbing stacks, electrical wiring and other penetrations into attic to control air leakage.

3.4 FIELD QUALITY CONTROL

A. Inspect application for insulation thickness and density.

3.5 PROTECTION OF FINISHED WORK

A. Do not permit subsequent work to disturb applied insulation.

END OF SECTION

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SECTION 081416 - FLUSH WOOD DOORS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

- 1. Solid-core doors with wood-veneer faces.
- 2. Factory finishing flush wood doors.
- 3. Factory fitting flush wood doors to frames and factory machining for hardware.

B. Related Requirements:

1. Section 088000 "Glazing" for glass view panels in flush wood doors.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of door. Include factory-finishing specifications.
- B. Shop Drawings: Indicate location, size, and hand of each door; elevation of each kind of door; construction details not covered in Product Data; and the following:
 - 1. Dimensions and locations of blocking.
 - 2. Dimensions and locations of mortises and holes for hardware.
 - 3. Dimensions and locations of cutouts.
 - 4. Undercuts.
 - 5. Requirements for veneer matching.
 - 6. Doors to be factory finished and finish requirements.
- C. Samples: For factory-finished doors.

1.3 INFORMATIONAL SUBMITTALS

A. Quality Standard Compliance Certificates: AWI Quality Certification Program certificates.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: A qualified manufacturer that is certified for chain of custody by an FSC-accredited certification body and is a certified participant in AWI's Quality Certification Program.

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B. Vendor Qualifications: A vendor that is certified for chain of custody by an FSC-accredited certification body.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. <u>Manufacturers</u>: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. Algoma Hardwoods, Inc.
 - 2. Ampco.
 - 3. <u>Chappell Door Co.</u>
 - 4. <u>Eggers Industries</u>.
 - 5. Graham Wood Doors; an Assa Abloy Group company.
 - 6. Marlite.
 - 7. Mohawk Doors; a Masonite company.
 - 8. VT Industries, Inc.

2.2 FLUSH WOOD DOORS, GENERAL

- A. Quality Standard: In addition to requirements specified, comply with AWI's, AWMAC's, and WI's "Architectural Woodwork Standards."
 - 1. Provide AWI Quality Certification Labels indicating that doors comply with requirements of grades specified.
- B. Regional Materials: Flush wood doors shall be manufactured within 500 miles (800 km) of Project site from materials that have been extracted, harvested, or recovered, as well as manufactured, within 500 miles (800 km) of Project site.
- C. Regional Materials: Flush wood doors shall be manufactured within 500 miles (800 km) of Project site.
- D. Low-Emitting Materials: Fabricate doors with adhesives and composite wood products that do not contain urea formaldehyde.
 - 1. Structural Composite Lumber: WDMA I.S.10.
 - a. Screw Withdrawal, Face: 700 lbf (3100 N).
 - b. Screw Withdrawal, Edge: 400 lbf (1780 N).

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2.3 VENEER-FACED DOORS FOR TRANSPARENT FINISH

A. Interior Solid-Core Doors:

- 1. Grade: Premium, with Grade A faces.
- 2. Species: Red oak or White oak.
- 3. Cut: Rotary cut
- 4. Core: Structural composite lumber
- 5. Construction: Five or seven plies. Stiles and rails are bonded to core, then entire unit is abrasive planed before veneering. Faces are bonded to core using a hot press.

2.4 FABRICATION

- A. Factory fit doors to suit frame-opening sizes indicated. Comply with clearance requirements of referenced quality standard for fitting unless otherwise indicated.
- B. Factory machine doors for hardware that is not surface applied.
- C. Openings: Factory cut and trim openings through doors.
 - 1. Light Openings: Trim openings with moldings of material and profile indicated.
 - 2. Glazing: Factory install glazing in doors indicated to be factory finished. Comply with applicable requirements in Section 088000 "Glazing."

2.5 FACTORY FINISHING

- A. General: Comply with referenced quality standard for factory finishing. Complete fabrication, including fitting doors for openings and machining for hardware that is not surface applied, before finishing.
 - 1. Finish faces, all four edges, edges of cutouts, and mortises. Stains and fillers may be omitted on top and bottom edges, edges of cutouts, and mortises.
- B. Factory finish doors that are indicated to receive transparent finish.
- C. Use only paints and coatings that comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

D. Transparent Finish:

1. Grade: Premium.

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- 2. Finish: AWI's, AWMAC's, and WI's "Architectural Woodwork Standards" System 10, UV curable, water based.
- 3. Staining: As selected by Architect from manufacturer's full range.
- 4. Effect: Filled finish
- 5. Sheen: Satin.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Hardware: For installation, see Section 087100 "Door Hardware."
- B. Installation Instructions: Install doors to comply with manufacturer's written instructions and referenced quality standard, and as indicated.
- C. Factory-Fitted Doors: Align in frames for uniform clearance at each edge.
- D. Factory-Finished Doors: Restore finish before installation if fitting or machining is required at Project site.

END OF SECTION 081416

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SECTION 092900 - GYPSUM BOARD

PART 1 - GENERAL

1.1 SUMMARY

- 1. Interior gypsum board.
- 2. Tile backing panels.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples: For the following products:
 - 1. Trim Accessories: Full-size Sample in 12-inch- (300-mm-) long length for each trim accessory indicated.

1.3 QUALITY ASSURANCE

- A. Mockups: Before beginning gypsum board installation, install mockups of at least 100 sq. ft. (9 sq. m) in surface area to demonstrate aesthetic effects and set quality standards for materials and execution.
 - 1. Install mockups for the following:
 - a. Each level of gypsum board finish indicated for use in exposed locations.
 - b. Each texture finish indicated.
 - 2. Apply or install final decoration indicated, including painting and wallcoverings, on exposed surfaces for review of mockups.
 - 3. Simulate finished lighting conditions for review of mockups.
 - 4. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

PART 2 - PRODUCTS

2.1 INTERIOR GYPSUM BOARD

A. General: Complying with ASTM C 36/C 36M or ASTM C 1396/C 1396M, as applicable to type of gypsum board indicated and whichever is more stringent.

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- 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. American Gypsum Co.
 - b. G-P Gypsum.
 - c. Lafarge North America Inc.
 - d. National Gypsum Company.
 - e. USG Corporation.
- B. Type 'X':
 - 1. Thickness: 5/8 inch.
 - 2. Long Edges: Tapered and featured (rounded or beveled) for prefilling.
- C. Ceiling Type: Manufactured to have more sag resistance than regular-type gypsum board.
 - 1. Thickness: 1/2 inch or 5/8 inch at contractor's option.
 - 2. Long Edges: Tapered.
- D. Moisture- and Mold-Resistant Type: With moisture- and mold-resistant core and surfaces.
 - 1. Core: 5/8 inch.
 - 2. Long Edges: Tapered.

2.2 TILE BACKING PANELS

- A. Water-Resistant Gypsum Backing Board: ASTM C 630/C 630M or ASTM C 1396/C 1396M.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. American Gypsum Co.
 - b. G-P Gypsum.
 - c. Lafarge North America Inc.
 - d. National Gypsum Company.
 - e. USG Corporation.
 - 2. Core: 5/8 inch.
- B. Cementitious Backer Units: ANSI A108.1.
 - 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. Custom Building Products; Wonderboard.

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- b. USG Corporation; DUROCK Cement Board.
- 2. Thickness: 1/2 inch (12.7 mm).

2.3 TRIM ACCESSORIES

- A. Interior Trim: ASTM C 1047.
 - 1. Material: Galvanized or aluminum-coated steel sheet or rolled zinc.
 - 2. Shapes:
 - a. Cornerbead.
 - b. Bullnose bead.
 - c. LC-Bead: J-shaped; exposed long flange receives joint compound.
 - d. L-Bead: L-shaped; exposed long flange receives joint compound.
 - e. U-Bead: J-shaped; exposed short flange does not receive joint compound.
 - f. Expansion (control) joint.

2.4 JOINT TREATMENT MATERIALS

- A. General: Comply with ASTM C 475/C 475M.
- B. Joint Tape:
 - 1. Interior Gypsum Wallboard: Paper.
 - 2. Tile Backing Panels: As recommended by panel manufacturer.
- C. Joint Compound for Interior Gypsum Wallboard: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.
 - 1. Prefilling: At open joints and damaged surface areas, use setting-type taping compound.
 - 2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use drying-type, all-purpose compound.
 - a. Use setting-type compound for installing paper-faced metal trim accessories.
 - 3. Fill Coat: For second coat, use drying-type, all-purpose compound.
 - 4. Finish Coat: For third coat, use drying-type, all-purpose compound.
- D. Joint Compound for Tile Backing Panels:
 - 1. Water-Resistant Gypsum Backing Board: Use setting-type taping compound and setting-type, sandable topping compound.

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2. Cementitious Backer Units: As recommended by backer unit manufacturer.

2.5 AUXILIARY MATERIALS

- A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.
- B. Laminating Adhesive: Adhesive or joint compound recommended for directly adhering gypsum panels to continuous substrate.
 - 1. Use adhesives that have a VOC content of 50 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
- C. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.
 - 1. Use screws complying with ASTM C 954 for fastening panels to steel members from 0.033 to 0.112 inch (0.84 to 2.84 mm) thick.
 - 2. For fastening cementitious backer units, use screws of type and size recommended by panel manufacturer.
- D. Sound Attenuation Blankets: ASTM C 665, Type I (blankets without membrane facing) produced by combining thermosetting resins with mineral fibers manufactured from glass, slag wool, or rock wool.
 - 1. Fire-Resistance-Rated Assemblies: Comply with mineral-fiber requirements of assembly.
 - 2. REFER TO THE DRAWINGS FOR THE LOCATIONS OF THE WALLS THAT ARE TO RECEIVE SOUND INSULATION.
- E. Thermal Insulation: As specified in Division 07 Section "Spray Foam Insulation."

PART 3 - EXECUTION

- 3.1 APPLYING AND FINISHING PANELS, GENERAL
 - A. Comply with ASTM C 840.
 - B. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.
 - C. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments, except floors. Provide 1/4- to 1/2-inch- (6.4- to 12.7-mm-) wide spaces at

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these locations, and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.

D. Wood Framing: Install gypsum panels over wood framing, with floating internal corner construction. Do not attach gypsum panels across the flat grain of wide-dimension lumber, including floor joists and headers. Float gypsum panels over these members, or provide control joints to counteract wood shrinkage.

3.2 APPLYING INTERIOR GYPSUM BOARD

- A. Install interior gypsum board in the following locations:
 - 1. Regular Type: Vertical surfaces, unless otherwise indicated.
 - 2. Ceiling Type: Ceiling surfaces.
 - 3. Moisture- and Mold-Resistant Type: In all restroom areas. Coordinate extent with installation of cement backer board.

3.3 APPLYING TILE BACKING PANELS

- A. Cementitious Backer Units: ANSI A108.1, at locations indicated to receive tile.
- B. Areas Not Subject to Wetting: Install regular-type gypsum wallboard panels to produce a flat surface except at showers, tubs, and other locations indicated to receive water-resistant panels.
- C. Where tile backing panels abut other types of panels in same plane, shim surfaces to produce a uniform plane across panel surfaces.

3.4 INSTALLING TRIM ACCESSORIES

- A. General: For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.
- B. Control Joints: Install control joints according to ASTM C 840 and in specific locations approved by Architect for visual effect.
- C. Interior Trim: Install in the following locations:
 - 1. Cornerbead: Use at outside corners, unless otherwise indicated.

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3.5 FINISHING GYPSUM BOARD

- A. General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.
- B. Prefill open joints and damaged surface areas.
- C. Apply joint tape over gypsum board joints, except those with trim having flanges not intended for tape.
- D. Gypsum Board Finish Levels: Finish panels to levels indicated below:
 - 1. Level 1: Ceiling plenum areas, concealed areas, and where indicated.
 - 2. Level 2: Panels that are substrate for tile.
 - 3. Level 4: At surfaces that will be exposed to view, unless otherwise indicated.
- E. Cementitious Backer Units: Finish according to manufacturer's written instructions.

3.6 PROTECTION

- A. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.
- B. Remove and replace panels that are wet, moisture damaged, and mold damaged.
 - 1. Indications that panels are wet or moisture-damaged include, but are not limited to, discoloration, sagging, or irregular shape.
 - 2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION 092900

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SECTION 095113 - ACOUSTICAL PANEL CEILINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes acoustical panels and exposed suspension systems for ceilings.

1.3 DEFINITIONS

- A. AC: Articulation Class.
- B. CAC: Ceiling Attenuation Class.
- C. LR: Light Reflectance coefficient.
- D. NRC: Noise Reduction Coefficient.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples for Initial Selection: For components with factory-applied color finishes.
- C. Samples for Verification: For each component indicated and for each exposed finish required, prepared on Samples of size indicated below.
 - 1. Acoustical Panel: Set of 6-inch- (150-mm-) square Samples of each type, color, pattern, and texture.
 - 2. Exposed Suspension System Members, Moldings, and Trim: Set of 12-inch-(300-mm-) long Samples of each type, finish, and color.
- D. Qualification Data: For testing agency.
- E. Field quality-control test reports.

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- F. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for each acoustical panel ceiling.
- G. Research/Evaluation Reports: For each acoustical panel ceiling and components.
- H. Maintenance Data: For finishes to include in maintenance manuals.

1.5 QUALITY ASSURANCE

A. Acoustical Testing Agency Qualifications: An independent testing laboratory, or an NVLAP-accredited laboratory, with the experience and capability to conduct the testing indicated. NVLAP-accredited laboratories must document accreditation, based on a "Certificate of Accreditation" and a "Scope of Accreditation" listing the test methods specified.

B. Source Limitations:

- 1. Acoustical Ceiling Panel: Obtain each type through one source from a single manufacturer.
- 2. Suspension System: Obtain each type through one source from a single manufacturer.
- C. Source Limitations: Obtain each type of acoustical ceiling panel and supporting suspension system through one source from a single manufacturer.
- D. Fire-Test-Response Characteristics: Provide acoustical panel ceilings that comply with the following requirements:
 - 1. Surface-Burning Characteristics: Provide acoustical panels with the following surface-burning characteristics complying with ASTM E 1264 for Class A materials as determined by testing identical products per ASTM E 84:
 - a. Smoke-Developed Index: 450 or less.
- E. Seismic Standard: Provide acoustical panel ceilings designed and installed to withstand the effects of earthquake motions according to the following:
 - 1. Standard for Ceiling Suspension Systems Requiring Seismic Restraint: Comply with ASTM E 580.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver acoustical panels, suspension system components, and accessories to Project site in original, unopened packages and store them in a fully enclosed, conditioned

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- space where they will be protected against damage from moisture, humidity, temperature extremes, direct sunlight, surface contamination, and other causes.
- B. Before installing acoustical panels, permit them to reach room temperature and a stabilized moisture content.
- C. Handle acoustical panels carefully to avoid chipping edges or damaging units in any way.

1.7 PROJECT CONDITIONS

A. Environmental Limitations: Do not install acoustical panel ceilings until spaces are enclosed and weatherproof, wet work in spaces is complete and dry, work above ceilings is complete, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.

1.8 COORDINATION

A. Coordinate layout and installation of acoustical panels and suspension system with other construction that penetrates ceilings or is supported by them, including light fixtures, HVAC equipment, fire-suppression system, and partition assemblies.

1.9 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Acoustical Ceiling Panels: Full-size panels equal to 2.0 percent of quantity installed.

PART 2 - PRODUCTS

2.1 ACOUSTICAL PANELS, GENERAL

- A. Recycled Content: Provide acoustical panels with recycled content such that postconsumer recycled content plus one-half of preconsumer recycled content constitutes a minimum of 29-44 percent by weight.
- B. Acoustical Panel Standard: Provide manufacturer's standard panels of configuration indicated that comply with ASTM E 1264 classifications as designated by types, patterns, acoustical ratings, and light reflectances, unless otherwise indicated.

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- 1. Mounting Method for Measuring NRC: Type E-400; plenum mounting in which face of test specimen is 15-3/4 inches (400 mm) away from test surface per ASTM E 795.
- C. Acoustical Panel Colors and Patterns: Match appearance characteristics indicated for each product type.
 - 1. Where appearance characteristics of acoustical panels are indicated by referencing pattern designations in ASTM E 1264 and not manufacturers' proprietary product designations, provide products selected by Architect from each manufacturer's full range that comply with requirements indicated for type, pattern, color, light reflectance, acoustical performance, edge detail, and size.
- D. Antimicrobial Fungicide Treatment: Provide acoustical panels with face and back surfaces coated with antimicrobial treatment consisting of manufacturer's standard formulation with fungicide added to inhibit growth of mold and mildew and showing no mold or mildew growth when tested according to ASTM D 3273 and evaluated according to ASTM D 3274 or ASTM G 21.

2.2 ACOUSTICAL PANELS FOR ACOUSTICAL PANEL CEILING

- A. Subject to compliance with requirements, provide the following:
 - 1. U.S. Gypsum; "Mars," ClimaPlus, Tegular
 - 2. Armstrong World Industries, Inc.; "Ultima," Beveled Tegular
 - 3. Equal only as approved by Architect.
- B. Classification: Provide fire-resistance-rated panels complying with ASTM E 1264 for type, form, and pattern as follows:
 - 1. Type and Form: Type III, mineral base with painted finish; Form 2, water felted.
 - 2. Color: White
 - 3. LR: Not less than 0.85
 - 4. NRC: Not less than 0.55
 - 5. CAC: Not less than 35
 - 6. Edge/Joint Detail: angled tegular
 - 7. Thickness: 5/8 inch
 - 8. Modular Size: 24 by 24 inches
 - 9. Antimicrobial Treatment: Broad spectrum fungicide and bactericide

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2.3 METAL SUSPENSION SYSTEMS, GENERAL

- A. Recycled Content: Provide products made from steel sheet with average recycled content such that postconsumer recycled content plus one-half of pre-consumer recycled content is not less than 25 percent.
- B. Metal Suspension System Standard: Provide manufacturer's standard direct-hung metal suspension systems of types, structural classifications, and finishes indicated that comply with applicable requirements in ASTM C 635.
- C. Finishes and Colors, General: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes. Provide manufacturer's standard factory-applied finish for type of system indicated.
- D. Attachment Devices: Size for five times the design load indicated in ASTM C 635, Table 1, "Direct Hung," unless otherwise indicated. Comply with seismic design requirements.
- E. Wire Hangers, Braces, and Ties: Provide wires complying with the following requirements:
 - 1. Zinc-Coated, Carbon-Steel Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper.
 - 2. Size: Select wire diameter so its stress at 3 times hanger design load (ASTM C 635, Table 1, "Direct Hung") will be less than yield stress of wire, but provide not less than 0.135-inch
- F. Seismic Stabilizer Bars: Manufacturer's standard perimeter stabilizers designed to accommodate seismic forces.
- G. Seismic Struts: Manufacturer's standard compression struts designed to accommodate seismic forces.
- H. Seismic Clips: Manufacturer's standard seismic clips designed and spaced to secure acoustical panels in-place.

2.4 METAL SUSPENSION SYSTEM FOR ACOUSTICAL PANEL CEILING

- A. Products: Subject to compliance with requirements, provide one of the following:
 - 1. Armstrong World Industries, Inc.
 - 2. Equal only as approved by Architect

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- B. Wide-Face, Capped, Double-Web, Steel Suspension System: Main and cross runners roll formed from cold-rolled steel sheet, prepainted, electrolytically zinc coated, or hot-dip galvanized according to ASTM A 653/A 653M, not less than G30 (Z90) coating designation, with prefinished 15/16-inch- (24-mm-) wide metal caps on flanges.
 - 1. Structural Classification: Heavy-duty system.
 - 2. End Condition of Cross Runners: Override (stepped) or butt-edge type.
 - 3. Face Design: Flat, flush.
 - 4. Cap Material: Steel or aluminum cold-rolled sheet.
 - 5. Cap Finish: Painted white

2.5 METAL EDGE MOLDINGS AND TRIM

- A. Products: Subject to compliance with requirements, provide one of the following:
 - 1. Armstrong World Industries, Inc.
- B. Roll-Formed, Sheet-Metal Edge Moldings and Trim: Type and profile indicated or, if not indicated, manufacturer's standard moldings for edges and penetrations that comply with seismic design requirements; formed from sheet metal of same material, finish, and color as that used for exposed flanges of suspension system runners.
 - 1. Provide manufacturer's standard edge moldings that fit acoustical panel edge details and suspension systems indicated and that match width and configuration of exposed runners, unless otherwise indicated.
 - 2. For lay-in panels with reveal edge details, provide stepped edge molding that forms reveal of same depth and width as that formed between edge of panel and flange at exposed suspension member.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, including structural framing to which acoustical panel ceilings attach or abut, with Installer present, for compliance with requirements specified in this and other Sections that affect ceiling installation and anchorage and with requirements for installation tolerances and other conditions affecting performance of acoustical panel ceilings.
 - 1. Proceed with installation only after unsatisfactory conditions have been corrected.

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3.2 PREPARATION

A. Measure each ceiling area and establish layout of acoustical panels to balance border widths at opposite edges of each ceiling. Avoid using less-than-half-width panels at borders and comply with layout shown on reflected ceiling plans.

3.3 INSTALLATION

- A. General: Install acoustical panel ceilings to comply with ASTM C 636 and seismic design requirements indicated, per manufacturer's written instructions and CISCA's "Ceiling Systems Handbook."
- B. Suspend ceiling hangers from building's structural members and as follows:
 - 1. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structure or of ceiling suspension system.
 - 2. Splay hangers only where required to miss obstructions; offset resulting horizontal forces by bracing, counter-splaying, or other equally effective means.
 - 3. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with location of hangers at spacings required to support standard suspension system members, install supplemental suspension members and hangers in form of trapezes or equivalent devices.
 - 4. Secure wire hangers to ceiling suspension members and to supports above with a minimum of three tight turns. Connect hangers directly either to structures or to inserts, eye screws, or other devices that are secure and appropriate for substrate and that will not deteriorate or otherwise fail due to age, corrosion, or elevated temperatures.
 - 5. When steel framing does not permit installation of hanger wires at spacing required, install carrying channels or other supplemental support for attachment of hanger wires.
 - 6. Do not attach hangers to steel deck tabs.
 - 7. Do not attach hangers to steel roof deck. Attach hangers to structural members.
 - 8. Space hangers not more than 48 inches (1200 mm) o.c. along each member supported directly from hangers, unless otherwise indicated; provide hangers not more than 8 inches (200 mm) from ends of each member.
 - 9. Size supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced standards and publications.
- C. Secure bracing wires to ceiling suspension members and to supports with a minimum of four tight turns. Suspend bracing from building's structural members as required for hangers, without attaching to permanent metal forms, steel deck, or steel deck tabs. Fasten bracing wires into concrete with cast-in-place or post-installed anchors.

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- D. Install edge moldings and trim of type indicated at perimeter of acoustical ceiling area and where necessary to conceal edges of acoustical panels.
 - 1. Screw attach moldings to substrate at intervals not more than 16 inches (400 mm) o.c. and not more than 3 inches (75 mm) from ends, leveling with ceiling suspension system to a tolerance of 1/8 inch in 12 feet (3.2 mm in 3.6 m). Miter corners accurately and connect securely.
 - 2. Do not use exposed fasteners, including pop rivets, on moldings and trim.
- E. Install suspension system runners so they are square and securely interlocked with one another. Remove and replace dented, bent, or kinked members.
- F. Install acoustical panels with undamaged edges and fit accurately into suspension system runners and edge moldings. Scribe and cut panels at borders and penetrations to provide a neat, precise fit.
 - 1. Arrange directionally patterned acoustical panels as follows:
 - a. As indicated on reflected ceiling plans.
 - b. Install panels in a basket-weave pattern.
 - 2. For reveal-edged panels on suspension system runners, install panels with bottom of reveal in firm contact with top surface of runner flanges.
 - 3. Paint cut edges of panel remaining exposed after installation; match color of exposed panel surfaces using coating recommended in writing for this purpose by acoustical panel manufacturer.
 - 4. Install hold-down clips in areas indicated, in areas required by authorities having jurisdiction, and for fire-resistance ratings; space as recommended by panel manufacturer's written instructions, unless otherwise indicated.

3.4 CLEANING

A. Clean exposed surfaces of acoustical panel ceilings, including trim, edge moldings, and suspension system members. Comply with manufacturer's written instructions for cleaning and touchup of minor finish damage. Remove and replace ceiling components that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

END OF SECTION 095113

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SECTION 096513 - RESILIENT BASE AND ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Resilient base.
 - 2. Resilient molding accessories.
- B. Related Sections:
 - 1. Division 09 Section "Resilient Tile Flooring" for resilient floor tile.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples for Initial Selection: For each type of product indicated.
- C. Samples for Verification: For each type of product indicated, in manufacturer's standard-size Samples but not less than 12 inches long, of each resilient product color, texture, and pattern required.
- D. Product Schedule: For resilient products.

1.4 QUALITY ASSURANCE

- A. Fire-Test-Response Characteristics: As determined by testing identical products according to ASTM E 648 or NFPA 253 by a qualified testing agency.
 - 1. Critical Radiant Flux Classification: Class I, not less than 0.45 W/sq. cm.
- B. Mockups: Provide resilient products with mockups specified in other Sections.

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1.5 DELIVERY, STORAGE, AND HANDLING

A. Store resilient products and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than 50 deg F or more than 90 deg F.

1.6 PROJECT CONDITIONS

- A. Maintain ambient temperatures within range recommended by manufacturer, but not less than 70 deg F or more than 95 deg F, in spaces to receive resilient products during the following time periods:
 - 1. 48 hours before installation.
 - 2. During installation.
 - 3. 48 hours after installation.
- B. Until Substantial Completion, maintain ambient temperatures within range recommended by manufacturer, but not less than 55 deg or more than 95 deg F.
- C. Install resilient products after other finishing operations, including painting, have been completed.

1.7 EXTRA MATERIALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Furnish not less than 10 linear feet for every 500 linear feet fraction thereof, of each type, color, pattern, and size of resilient product installed.

PART 2 - PRODUCTS

2.1 RESILIENT BASE

A. Resilient Base:

- 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Armstrong World Industries, Inc.
 - b. Burke Mercer Flooring Products; Division of Burke Industries, Inc.
 - c. Estrie Products International; American Biltrite (Canada) Ltd.
 - d. Flexco, Inc.

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- e. Johnsonite.
- f. Mondo Rubber International, Inc.
- g. Nora Rubber Flooring; Freudenberg Building Systems, Inc.
- h. PRF USA, Inc.
- i. Roppe Corporation, USA.
- j. VPI, LLC; Floor Products Division.
- k. Allstate Rubber
- B. Resilient Base Standard: ASTM F 1861.
 - 1. Material Requirement: Type TP rubber, thermoplastic.
 - 2. Manufacturing Method: Group I (solid, homogeneous)
 - 3. Style: Cove (base with toe)
- C. Minimum Thickness: 0.125 inch
- D. Height: 6 inches
- E. Lengths: Cut lengths 48 inches long or coils in manufacturer's standard length.
- F. Outside Corners: Preformed
- G. Inside Corners: Preformed
- H. Finish: As selected by Architect from manufacturer's full range.
- I. Colors and Patterns: As selected by Architect from full range of industry colors

2.2 RESILIENT MOLDING ACCESSORY

- A. Resilient Molding Accessory:
 - 1. Manufacturers: Match manufacturer of Resilient Base.
- B. Description: Cove cap for carpet base, Nosing for carpet, Nosing for resilient floor covering, Reducer strip for resilient floor covering, Joiner for tile and carpet, Transition strips.
- C. Material: Rubber.
- D. Profile and Dimensions: As indicated
- E. Colors and Patterns: As selected by Architect from full range of industry colors.

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2.3 INSTALLATION MATERIALS

- A. Trowelable Leveling and Patching Compounds: Latex-modified, Portland cement based or blended hydraulic-cement-based formulation provided or approved by manufacturer for applications indicated.
- B. Adhesives: Water-resistant type recommended by manufacturer to suit resilient products and substrate conditions indicated.
 - 1. Use adhesives that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
 - a. Cove Base Adhesives: Not more than 50 g/L.
 - b. Rubber Floor Adhesives: Not more than 60 g/L.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
- B. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of resilient products.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Prepare substrates according to manufacturer's written instructions to ensure adhesion of resilient products.
- B. Concrete Substrates for Resilient Stair Treads and Accessories: Prepare according to ASTM F 710.
 - 1. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
 - 2. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by manufacturer. Do not use solvents.
 - 3. Alkalinity and Adhesion Testing: Perform tests recommended by manufacturer.

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- 4. Moisture Testing: Perform tests recommended by manufacturer. Proceed with installation only after substrates pass testing.
- C. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound and remove bumps and ridges to produce a uniform and smooth substrate.
- D. Do not install resilient products until they are same temperature as the space where they are to be installed.
 - 1. Move resilient products and installation materials into spaces where they will be installed at least 48 hours in advance of installation.
- E. Clean substrates to be covered by resilient products immediately before installation.

3.3 RESILIENT BASE INSTALLATION

- A. Comply with manufacturer's written instructions for installing resilient base.
- B. Apply resilient base to walls, columns, pilasters, casework and cabinets in toe spaces, and other permanent fixtures in rooms and areas where base is required.
- C. Install resilient base in lengths as long as practicable without gaps at seams and with tops of adjacent pieces aligned.
- D. Tightly adhere resilient base to substrate throughout length of each piece, with base in continuous contact with horizontal and vertical substrates.
- E. Do not stretch resilient base during installation.
- F. On masonry surfaces or other similar irregular substrates, fill voids along top edge of resilient base with manufacturer's recommended adhesive filler material.
- G. Preformed Corners: Install preformed corners before installing straight pieces.

3.4 RESILIENT ACCESSORY INSTALLATION

- A. Comply with manufacturer's written instructions for installing resilient accessories.
- B. Resilient Molding Accessories: Butt to adjacent materials and tightly adhere to substrates throughout length of each piece. Install reducer strips at edges of floor coverings that would otherwise be exposed.

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3.5 CLEANING AND PROTECTION

- A. Comply with manufacturer's written instructions for cleaning and protection of resilient products.
- B. Perform the following operations immediately after completing resilient product installation:
 - 1. Remove adhesive and other blemishes from exposed surfaces.
 - 2. Sweep and vacuum surfaces thoroughly.
 - 3. Damp-mop surfaces to remove marks and soil.
- C. Protect resilient products from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.
- D. Cover resilient products until Substantial Completion.

END OF SECTION 096513

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SECTION 096519 - RESILIENT TILE FLOORING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

- 1. Luxury Vinyl Tile
- 2. Vinyl composition floor tile.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: For each type of floor tile. Include floor tile layouts, edges, columns, doorways, enclosing partitions, built-in furniture, cabinets, and cutouts.
- C. Samples: Full-size units of each color and pattern of floor tile required.
- D. Maintenance data.

1.3 QUALITY ASSURANCE

- A. Fire-Test-Response Characteristics: As determined by testing identical products according to ASTM E 648 or NFPA 253 by a qualified testing agency.
 - 1. Critical Radiant Flux Classification: Class I, not less than 0.45 W/sq. cm.

1.4 PROJECT CONDITIONS

- A. Maintain ambient temperatures within range recommended by manufacturer in spaces to receive floor tile.
- B. Until Substantial Completion, maintain ambient temperatures within range recommended by manufacturer.
- C. Close spaces to traffic during floor tile installation.
- D. Close spaces to traffic for 48 hours after floor tile installation.

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E. Install floor tile after other finishing operations, including painting, have been completed.

PART 2 - PRODUCTS

2.1 LUXURY VINYL TILE

- A. Products: Subject to compliance with requirements, provide the following:
 - 1. See Drawings
- B. Tile Standard: ASTM F 1700, Standard Specification for Solid Vinyl Floor Tile
- C. Wearing Surface: Smooth
- D. Thickness: 0.125 inch
- E. Size: To be Determined
- F. Colors and Patterns: As selected by Architect from full range of industry colors.

2.2 VINYL COMPOSITION FLOOR TILE

- A. Products: Subject to compliance with requirements, provide one of the following:
 - 1. Armstrong World Industries, Inc.
 - 2. Tarkett, Inc. Azrock Collection
 - 3. Approved Equal
- B. Tile Standard: ASTM F 1066, Class 2, through-pattern tile
- C. Wearing Surface: Smooth
- D. Thickness: 0.125 inch
- E. Size: 12 by 12 inches
- F. Colors and Patterns: As selected by Architect from full range of industry colors.

2.3 INSTALLATION MATERIALS

A. Trowelable Leveling and Patching Compounds: Latex-modified, Portland cement based or blended hydraulic-cement-based formulation provided or approved by manufacturer for applications indicated.

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- B. Adhesives: Water-resistant type recommended by manufacturer to suit floor tile and substrate conditions indicated.
 - 1. Use adhesives that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
 - a. VCT and Asphalt Tile Adhesives: Not more than 50 g/L.
 - b. Rubber Floor Adhesives: Not more than 60 g/L.
- C. Floor Polish: Provide protective liquid floor polish products as recommended by manufacturer.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Prepare substrates according to manufacturer's written instructions to ensure adhesion of resilient products.
- B. Concrete Substrates: Prepare according to ASTM F 710.
 - 1. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
 - 2. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by manufacturer. Do not use solvents.
 - 3. Alkalinity and Adhesion Testing: Perform tests recommended by manufacturer. Proceed with installation only after substrates pass testing.
 - 4. Moisture Testing: Perform tests recommended by floor covering manufacturer.
- C. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound and remove bumps and ridges to produce a uniform and smooth substrate.
- D. Do not install floor tiles until they are same temperature as space where they are to be installed.
 - 1. Move resilient products and installation materials into spaces where they will be installed at least 48 hours in advance of installation.
- E. Sweep and vacuum clean substrates to be covered by resilient products immediately before installation.

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3.2 FLOOR TILE INSTALLATION

- A. Comply with manufacturer's written instructions for installing floor tile.
- B. Lay out floor tiles from center marks established with principal walls, discounting minor offsets, so tiles at opposite edges of room are of equal width. Adjust as necessary to avoid using cut widths that equal less than one-half tile at perimeter. Lay tiles square with room axis.
- C. Match floor tiles for color and pattern by selecting tiles from cartons in the same sequence as manufactured and packaged, if so numbered. Discard broken, cracked, chipped, or deformed tiles. Lay tiles with grain running in one direction.
- D. Scribe, cut, and fit floor tiles to butt neatly and tightly to vertical surfaces and permanent fixtures including built-in furniture, cabinets, pipes, outlets, and door frames.
- E. Extend floor tiles into toe spaces, door reveals, closets, and similar openings. Extend floor tiles to center of door openings.
- F. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on floor tiles as marked on substrates. Use chalk or other nonpermanent, non-staining marking device.
- G. Adhere floor tiles to flooring substrates using a full spread of adhesive applied to substrate to produce a completed installation without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections.

3.3 CLEANING AND PROTECTION

- A. Comply with manufacturer's written instructions for cleaning and protection of floor tile.
- B. Floor Polish: Remove soil, visible adhesive, and surface blemishes from floor tile surfaces before applying liquid floor polish. Apply three coats.
- C. Cover floor tile until Substantial Completion.

END OF SECTION 096519

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SECTION 096813 - TILE CARPETING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes modular, tufted, textured loop carpet tile.

1.2 SUBMITTALS

- A. Product Data: For each product indicated.
- B. Shop Drawings: Show the following:
 - 1. Carpet tile type, color, and dye lot.
 - 2. Pattern of installation.
 - 3. Edge, transition, and other accessory strips.
 - 4. Transition details to other flooring materials.
- C. Samples: For each color and texture required.
 - 1. Carpet Tile: Full-size Sample.
 - 2. Exposed Edge, Transition, and other Accessory Stripping: 12-inch-long Samples.
- D. Product Schedule: For carpet tile. Use same designations indicated on Drawings.
- E. Maintenance data.

1.3 QUALITY ASSURANCE

- A. Installer Qualifications: An experienced installer who is certified by the Floor Covering Installation Board or who can demonstrate compliance with its certification program requirements.
- B. Mockups: Before installing carpet tile, build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
 - 1. Approved mockups may become part of the completed Work if undamaged at time of Substantial Completion.

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1.4 DELIVERY, STORAGE, AND HANDLING

A. Comply with CRI 104, Section 5, "Storage and Handling."

1.5 PROJECT CONDITIONS

- A. Comply with CRI 104, Section 7.2, "Site Conditions; Temperature and Humidity" and Section 7.12, "Ventilation."
- B. Environmental Limitations: Do not install carpet tiles until wet work in spaces is complete and dry, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.
- C. Do not install carpet tiles over concrete slabs until slabs have cured and are sufficiently dry to bond with adhesive and concrete slabs have pH range recommended by carpet tile manufacturer.
- D. Where demountable partitions or other items are indicated for installation on top of carpet tiles, install carpet tiles before installing these items.

1.6 WARRANTY

- A. Special Warranty for Carpet Tiles: Manufacturer's standard form in which manufacturer agrees to repair or replace components of carpet tile installation that fail in materials or workmanship within specified warranty period. Failures include, but are not limited to, more than 10 percent loss of face fiber, edge raveling, snags, runs, and delamination.
 - 1. Warranty Period: 10 years from date of Substantial Completion.

1.7 EXTRA MATERIALS

- A. Furnish extra materials described below, before installation begins, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Carpet Tile: Full-size units equal to 5 percent of amount installed for each type indicated, but not less than 10 sq. yd.

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PART 2 - PRODUCTS

2.1 CARPET TILE

- A. Products: Subject to compliance with requirements, provide one of the following:
 - 1. See Drawings
- B. Fiber Type: Nylon
- C. Pile Characteristic: Tufted Textured Loop pile.
- D. Density: 6,541
- E. Pile Thickness: .08 inches for finished carpet tile per ASTM D 6859.
- F. Gage: 1/12
- G. Total Weight: 15 oz./sq. yd. for finished carpet tile.
- H. Backing System: PVC-Free Underscore ES Cushion system
- I. Size: 39.4" x 39.4"
- J. Applied Soil-Resistance Treatment: Manufacturer's standard material.
- K. Antimicrobial Treatment: Manufacturer's standard material.

2.2 INSTALLATION ACCESSORIES

- A. Trowelable Leveling and Patching Compounds: Latex-modified, hydraulic-cement-based formulation provided or recommended by carpet tile manufacturer.
- B. Adhesives: Water-resistant, mildew-resistant, non-staining, pressure-sensitive type to suit products and subfloor conditions indicated, that complies with flammability requirements for installed carpet tile and is recommended by carpet tile manufacturer for releasable installation.

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PART 3 - EXECUTION

3.1 INSTALLATION

- A. General: Comply with CRI 104, Section 14, "Carpet Modules," and with carpet tile manufacturer's written installation instructions.
- B. Installation Method: As recommended in writing by carpet tile manufacturer.
- C. Extend carpet tile into toe spaces, door reveals, closets, open-bottomed obstructions, removable flanges, alcoves, and similar openings.
- D. Install pattern parallel to walls and borders.

END OF SECTION 096813

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SECTION 099123 - INTERIOR PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes surface preparation and the application of paint systems on the following interior substrates:
 - 1. Concrete masonry units (CMU).
 - 2. Steel.
 - 3. Wood.
 - 4. Gypsum Board
 - 5. Concrete floors

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples for Initial Selection: For each type of topcoat product indicated.
- C. Samples for Verification: For each type of paint system and in each color and gloss of topcoat indicated.
 - 1. Submit Samples on rigid backing, 8 inches (200 mm) square.
 - 2. Step coats on Samples to show each coat required for system.
 - 3. Label each coat of each Sample.
 - 4. Label each Sample for location and application area.
- D. Product List: For each product indicated, include the following:
 - 1. Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules.
 - 2. Printout of current "MPI Approved Products List" for each product category specified in Part 2, with the proposed product highlighted.

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1.4 QUALITY ASSURANCE

A. MPI Standards:

- 1. Products: Complying with MPI standards indicated and listed in "MPI Approved Products List."
- 2. Preparation and Workmanship: Comply with requirements in "MPI Architectural Painting Specification Manual" for products and paint systems indicated.
- B. Mockups: Apply benchmark samples of each paint system indicated and each color and finish selected to verify preliminary selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
 - 1. Architect will select one surface to represent surfaces and conditions for application of each paint system specified in Part 3.
 - a. Wall and Ceiling Surfaces: Provide samples of at least 100 sq. ft. (9 sq. m).
 - b. Other Items: Architect will designate items or areas required.
 - 2. Apply benchmark samples after permanent lighting and other environmental services have been activated.
 - 3. Final approval of color selections will be based on benchmark samples.
 - a. If preliminary color selections are not approved, apply additional benchmark samples of additional colors selected by Architect at no added cost to Owner.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F (7 deg C).
 - 1. Maintain containers in clean condition, free of foreign materials and residue.
 - 2. Remove rags and waste from storage areas daily.

1.6 PROJECT CONDITIONS

- A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F (10 and 35 deg C).
- B. Do not apply paints when relative humidity exceeds 85 percent; at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.

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1.7 EXTRA MATERIALS

- A. Furnish extra materials described below that are from same production run (batch mix) as materials applied and that are packaged for storage and identified with labels describing contents.
 - 1. Quantity: Furnish an additional 5 percent, but not less than 1 gal. (3.8 L) of each material and color applied.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Benjamin Moore & Co.
 - 2. ICI Paints.
 - 3. Porter Paints.
 - 4. PPG Architectural Finishes, Inc.
 - 5. Sherwin-Williams Company (The).
 - 6. Florock

2.2 PAINT, GENERAL

A. Material Compatibility:

- 1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
- 2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.
- B. VOC Content of Field-Applied Interior Paints and Coatings: Provide products that comply with the following limits for VOC content, exclusive of colorants added to a tint base, when calculated according to 40 CFR 59, Subpart D (EPA Method 24); these requirements do not apply to paints and coatings that are applied in a fabrication or finishing shop:
 - 1. Flat Paints, Coatings, and Primers: VOC content of not more than 50 g/L.
 - 2. Nonflat Paints, Coatings, and Primers: VOC content of not more than 150 g/L.
 - 3. Anti-Corrosive and Anti-Rust Paints Applied to Ferrous Metals: VOC not more than 250 g/L.

4. Shellacs, Clear: VOC not more than 730 g/L.

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- 5. Shellacs, Pigmented: VOC not more than 550 g/L.
- 6. Flat Topcoat Paints: VOC content of not more than 50 g/L.
- 7. Nonflat Topcoat Paints: VOC content of not more than 150 g/L.
- 8. Anti-Corrosive and Anti-Rust Paints Applied to Ferrous Metals: VOC not more than 250 g/L.
- 9. Shellacs, Clear: VOC not more than 730 g/L.
- 10. Shellacs, Pigmented: VOC not more than 550 g/L.
- 11. Primers, Sealers, and Undercoaters: VOC content of not more than 200 g/L.
- 12. Zinc-Rich Industrial Maintenance Primers: VOC content of not more than 340 g/L.
- 13. Pre-Treatment Wash Primers: VOC content of not more than 420 g/L.
- C. Chemical Components of Field-Applied Interior Paints and Coatings: Provide topcoat paints and anti-corrosive and anti-rust paints applied to ferrous metals that comply with the following chemical restrictions; these requirements do not apply to paints and coatings that are applied in a fabrication or finishing shop:
 - 1. Aromatic Compounds: Paints and coatings shall not contain more than 1.0 percent by weight of total aromatic compounds (hydrocarbon compounds containing one or more benzene rings).
 - 2. Restricted Components: Paints and coatings shall not contain any of the following:
 - a. Acrolein.
 - b. Acrylonitrile.
 - c. Antimony.
 - d. Benzene.
 - e. Butyl benzyl phthalate.
 - f. Cadmium.
 - g. Di (2-ethylhexyl) phthalate.
 - h. Di-n-butyl phthalate.
 - i. Di-n-octyl phthalate.
 - j. 1,2-dichlorobenzene.
 - k. Diethyl phthalate.
 - 1. Dimethyl phthalate.
 - m. Ethylbenzene.
 - n. Formaldehyde.
 - o. Hexavalent chromium.
 - p. Isophorone.
 - q. Lead.
 - r. Mercury.
 - s. Methyl ethyl ketone.
 - t. Methyl isobutyl ketone.
 - u. Methylene chloride.
 - v. Naphthalene.
 - w. Toluene (methylbenzene).

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- x. 1,1,1-trichloroethane.
- y. Vinyl chloride.
- D. Colors: As selected by Architect from manufacturer's full range

2.3 CONCRETE FLOORS

A. Interior

2.4 PRIMERS/SEALERS

- A. Interior Latex Primer/Sealer: MPI #50.
 - 1. VOC Content: E Range of E2.
 - 2. Environmental Performance Rating: EPR 2.
- B. Interior Alkyd Primer/Sealer: MPI #45.
 - 1. VOC Content: E Range of E2.

2.5 METAL PRIMERS

- A. Alkyd Anticorrosive Metal Primer: MPI #79.
 - 1. VOC Content: E Range of E2.

2.6 WOOD PRIMERS

- A. Interior Latex-Based Wood Primer: MPI #39.
 - 1. VOC Content: E Range of E2
 - 2. Environmental Performance Rating: EPR 2

2.7 LATEX PAINTS

- A. Institutional Low-Odor/VOC Latex (Eggshell): MPI #145 (Gloss Level 3).
 - 1. VOC Content: E Range of E3.
 - 2. Environmental Performance Rating: EPR 4.5.
- B. Institutional Low-Odor/VOC Latex (Semigloss): MPI #147 (Gloss Level 5).
 - 1. VOC Content: E Range of E3.

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2. Environmental Performance Rating: EPR 3.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of work.
- B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
 - 1. Masonry (Clay and CMU): 12 percent.
 - 2. Wood: 15 percent.
- C. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
- D. Begin coating application only after unsatisfactory conditions have been corrected and surfaces are dry.
 - 1. Beginning coating application constitutes Contractor's acceptance of substrates and conditions.

3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates indicated.
- B. Remove plates, machined surfaces, and similar items already in place that are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
 - 1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
 - 2. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
- C. Clean substrates of substances that could impair bond of paints, including dirt, oil, grease, and incompatible paints and encapsulants.
 - 1. Remove incompatible primers and reprime substrate with compatible primers as required to produce paint systems indicated.

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- D. Concrete Masonry Substrates: Remove efflorescence and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written instructions.
- E. Steel Substrates: Remove rust and loose mill scale. Clean using methods recommended in writing by paint manufacturer.
- F. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal fabricated from coil stock by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.

G. Wood Substrates:

- 1. Scrape and clean knots, and apply coat of knot sealer before applying primer.
- 2. Sand surfaces that will be exposed to view, and dust off.
- 3. Prime edges, ends, faces, undersides, and backsides of wood.
- 4. After priming, fill holes and imperfections in the finish surfaces with putty or plastic wood filler. Sand smooth when dried.

3.3 APPLICATION

- A. Apply paints according to manufacturer's written instructions.
 - 1. Use applicators and techniques suited for paint and substrate indicated.
 - 2. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
 - 3. Paint front and backsides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.
- B. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Tint undercoats to match color of topcoat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.
- C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
- D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.
- E. Painting Mechanical and Electrical Work: Paint items exposed in equipment rooms and occupied spaces including, but not limited to, the following:
 - 1. Mechanical Work:

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- a. Uninsulated metal piping.
- b. Uninsulated plastic piping.
- c. Pipe hangers and supports.
- d. Tanks that do not have factory-applied final finishes.
- e. Visible portions of internal surfaces of metal ducts, without liner, behind air inlets and outlets.
- f. Duct, equipment, and pipe insulation having cotton or canvas insulation covering or other paintable jacket material.
- g. Mechanical equipment that is indicated to have a factory-primed finish for field painting.

2. Electrical Work:

- a. Switchgear.
- b. Panelboards.
- c. Electrical equipment that is indicated to have a factory-primed finish for field painting.

3.4 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.5 INTERIOR PAINTING SCHEDULE

A. Concrete Substrates:

- 1. Institutional Low-Odor/VOC Latex System: MPI INT 4.2E.
 - a. Prime Coat: Interior/exterior latex block filler.
 - b. Intermediate Coat: Institutional low-odor/VOC interior latex matching topcoat.
 - c. Topcoat: Institutional low-odor/VOC interior latex (SATIN)

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B. Concrete Floors:

- 1. Epoxy floor coating
 - a. Prime Coat: Florock, "Floropoxy System 4700", epoxy primer
 - b. First Coat: Florock, "Floropoxy 4805, self-leveling, 100% solids, pigmented top coat.
 - c. Top Coat: Florock, "MC-Ultra 100", urethane, pigmented top coat, w/ glass beads for slip resistance.
 - 1) Sales Rep: Jay Bruce, 678-485-9309

C. Steel Substrates:

- 1. Latex Over Alkyd Primer System: MPI INT 5.1Q.
 - a. Prime Coat: Alkyd anticorrosive metal primer.
 - b. Intermediate Coat: Interior latex matching topcoat.
 - c. Topcoat: Interior latex (SATIN)
- 2. Institutional Low-Odor/VOC Latex System: MPI INT 5.1S.
 - a. Prime Coat: Rust-inhibitive primer (water based).
 - b. Intermediate Coat: Institutional low-odor/VOC interior latex matching topcoat.
 - c. Topcoat: Institutional low-odor/VOC interior latex (SATIN)

D. Gypsum Board Substrates:

- 1. Institutional Low-Odor/VOC Latex System: MPI INT 9.2M.
 - a. Prime Coat: Interior latex primer/sealer.
 - b. Intermediate Coat: Institutional low-odor/VOC interior latex matching topcoat.
 - c. Topcoat: Institutional low-odor/VOC interior latex (EGGSHELL)
- E. Dressed Lumber Substrates: Including architectural woodwork.
 - 1. Institutional Low-Odor/VOC Latex System: MPI INT 6.3V.
 - a. Prime Coat: Interior latex-based wood primer.
 - b. Intermediate Coat: Institutional low-odor/VOC interior latex matching topcoat.
 - c. Topcoat: Institutional low-odor/VOC interior latex (SATIN).

END OF SECTION 099123

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SECTION 101400 - SIGNAGE

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Panel signs.

1.2 DEFINITIONS

A. ADA-ABA Accessibility Guidelines: U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines."

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: Show fabrication and installation details for signs.
 - 1. Show sign mounting heights, locations of supplementary supports to be provided by others, and accessories.
 - 2. Provide message list, typestyles, graphic elements, including tactile characters and Braille, and layout for each sign.
- C. Samples: For each sign type and for each color and texture required.

1.4 QUALITY ASSURANCE

A. Regulatory Requirements: Comply with applicable provisions in ADA-ABA Accessibility Guidelines and ICC/ANSI A117.1.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Acrylic Sheet: ASTM D 4802, Category A-1 (cell-cast sheet), Type UVA (UV absorbing).

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2.2 PANEL SIGNS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
- C. Basis-of-Design Product: Subject to compliance with requirements, provide Mohawk Sign Systems M308B Changeable Message Slot Plaque at all doors, or a comparable product by one of the following:
 - 1. Advance Corporation; Braille-Tac Division.
 - 2. APCO Graphics, Inc.
 - 3. ASI-Modulex, Inc.
 - 4. Best Sign Systems Inc.
 - 5. Gemini Incorporated.
 - 6. Innerface Sign Systems, Inc.
 - 7. Mohawk Sign Systems.
- D. Interior Panel Signs: Provide smooth sign panel surfaces constructed to remain flat under installed conditions within a tolerance of plus or minus 1/16 inch measured diagonally from corner to corner, complying with the following requirements:
 - 1. Acrylic Sheet: 0.080 inch thick.
 - 2. Size: 8" wide by 8" high at offices, with 2 interchangeable slots; 8" wide by 4" high at non-interchangeable rooms
 - 3. Edge Condition: Square
 - 4. Corner Condition: ½" Radius
 - 5. Mounting: Unframed.
 - 6. Color: As selected by Architect from manufacturer's full range
 - 7. Tactile Characters: Characters and Grade 2 Braille raised 1/32 inch above surface with contrasting colors.
 - 8. Copy Style: Optima Semi-bold
 - 9. Text: Room number 1 ½", at top left, Room title 1", at left center
 - 10. Restroom Signs: 8" x 8" with 4" accessibility symbol, gender symbol and verbal description placed directly below followed by Grade 2 braille
- E. Changeable Message Inserts: Fabricate signs to allow insertion of changeable messages in the form of transparent covers with paper inserts printed by Owner.
 - 1. Furnish insert material and software for creating text and symbols for PC-Windows computers for Owner production of paper inserts.
 - 2. Furnish insert material cut-to-size for two (2) changeable message inserts at offices, and no inserts at other rooms.
- F. Tactile and Braille Sign: Manufacturer's standard process for producing text and symbols complying with ADA-ABA Accessibility Guidelines and with ICC/ANSI A117.1. Text shall be accompanied by Grade 2 Braille. Produce precisely formed characters with square-cut edges free from burrs and cut marks; Braille dots with domed or rounded shape.

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- 1. Panel Material: Opaque acrylic sheet
- 2. Raised-Copy Thickness: Not less than 1/32 inch
- G. Engraved Copy: Machine engrave letters, numbers, symbols, and other graphic devices into panel sign on face indicated to produce precisely formed copy, incised to uniform depth.
 - 1. Engraved Opaque Acrylic Sheet: Fill engraved copy with enamel.

2.3 ACRYLIC SHEET FINISHES

A. Colored Coatings for Acrylic Sheet: For copy and background and frame colors, provide colored coatings, including inks, dyes, and paints, that are recommended by acrylic manufacturers for optimum adherence to acrylic surface and that are UV and water resistant for five years for application intended.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Locate signs and accessories <u>at each door</u>, using mounting methods of types described and complying with manufacturer's written instructions.
 - 1. Install signs level, plumb, and at 60" above the floor and 2" from door frame.
 - 2. Sign surfaces free of distortion and other defects in appearance.
 - 3. Install signs on walls adjacent to latch side of door where applicable. Where not possible, such as double doors, install signs on nearest adjacent walls. Locate to allow approach within 3 inches of sign without encountering protruding objects or standing within swing of door.
- B. Wall-Mounted Signs: Comply with sign manufacturer's written instructions except where more stringent requirements apply.
 - 1. Two-Face Tape: Mount signs to smooth, nonporous surfaces. Do not use this method for vinyl-covered or rough surfaces.
 - 2. Silicone-Adhesive Mounting: Attach signs to irregular, porous, or vinyl-covered surfaces.

END OF SECTION 101400

SIGNAGE 101400 - 3

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SECTION 10 28 00 – TOILET AND BATH ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Requirements and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

- 1. Public and private-use washroom accessories.
- 2. Warm-air dryers.
- 3. Custodial accessories.

1.3 COORDINATION

- A. Coordinate accessory locations with other work to prevent interference with clearances required for access by people with disabilities, and for proper installation, adjustment, operation, cleaning, and servicing of accessories.
- B. Deliver inserts and anchoring devices set into concrete or masonry as required to prevent delaying the Work.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
 - 2. Include anchoring and mounting requirements, including requirements for cutouts in other work and substrate preparation.
 - 3. Include electrical characteristics.
- B. Product Schedule: Indicating types, quantities, sizes, and installation locations by room of each accessory required.
 - 1. Identify locations using room designations indicated.
 - 2. Identify accessories using designations indicated.

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1.5 INFORMATIONAL SUBMITTALS

A. Sample Warranty: For manufacturer's special warranty.

1.6 CLOSEOUT SUBMITTALS

A. Maintenance Data: For accessories to include in maintenance manuals.

1.7 WARRANTY

- A. Manufacturer's Special Warranty for Mirrors: Manufacturer agrees to repair or replace mirrors that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, visible silver spoilage defects.
 - 2. Warranty Period: 15 years from date of Material Completion.

PART 2 – PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

2.2 PUBLIC-USE WASHROOM ACCESSORIES

A. Grab Bars

- 1. Basis-of-Design Product: Subject to compliance with requirements, provide Bobrick Washroom Equipment, Inc.; **B-8606** series or a comparable product by one of the following:
 - a. AJW Architectural Products.
 - b. American Specialties, Inc.
 - c. Bradley Corporation.
 - d. GAMCO Specialty Accessories; a division of Bobrick.
- 2. Mounting: Flanges with concealed fasteners.
- 3. Material: Stainless steel, 0.05 inch (1.3 mm) thick.
 - a. Finish: Smooth, No. 4 finish (satin) on ends and slip-resistant texture in grip area.

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- 4. Outside Diameter: 1-1/2 inches (38 mm).
- Configuration and Length: As indicated on Drawings. 5.
- B. Toilet Tissue (Jumbo-Roll) Dispenser:
 - 1. Basis-of-Design Product: Subject to compliance with requirements, provide A&J Washroom Accessories Model U834 or comparable product by one of the following:
 - Marathon.
 - San Jamar. b.
 - **Bobrick** C
 - Description: Double-roll dispense. 2.
 - Mounting: Surface mounted. 3.
 - 4. Capacity: Up to 9 inch (228 mm) diameter rolls.
 - Material and Finish: #20 gauge stainless steel with #4 satin finish. 5.
 - Lockset: Theft resistant, special key furnished.
- C. Paper Towel (Folded) Dispenser:
 - 1. Basis-of-Design Product: Subject to compliance with requirements, provide Georgia Pacific Model No. 56620 or comparable product by one of the following:
 - AJW Architectural Products.
 - American Specialties, Inc. b.
 - Bobrick Washroom Equipment, Inc. c. d.
 - Bradley Corporation.
 - GAMCO Specialty Accessories; a division of Bobrick. e.
 - 2. Mounting: Surface mounted.
 - Minimum Capacity: 525 multi-fold towels. 3.
 - Material and Finish: Stainless steel. 4.
 - 5. Lockset: Tumbler type.
 - Refill Indicator: Pierced slots at sides or front.
- D. Semi-Recessed Convertible Paper Towel (Folded) Dispenser/Waste Receptacle:
 - 1. Basis-of-Design Product: Subject to compliance with requirements, provide Bobrick Classic Series Model No. B-3942, with Model 3944-134 LinerMate or comparable product by one of the following:
 - AJW Architectural Products. a.
 - American Specialties, Inc. b.
 - Bradley Corporation. c.

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- 2. Mounting: Surface mounted.
- 3. Minimum Capacity: 800 multi-fold towels.
- 4. Material and Finish: Stainless steel.
- 5. Lockset: Tumbler type.
- 6. Skirt for Semi-Recessing

E. Glass Mirror Unit:

- 1. Basis-of-Design Product: Subject to compliance with requirements, provide Bobrick Washroom Equipment, Inc.; **B-290** Series or a comparable product by one of the following:
 - a. AJW Architectural Products.
 - b. American Specialties, Inc.
 - c. Bradley Corporation.
 - d. GAMCO Specialty Accessories; a division of Bobrick.
- 2. Frame: Stainless-steel angle, 0.05 inch (1.3 mm) thick.
 - a. Corners: Welded and ground smooth.
- 3. Hangers: Produce rigid, tamper- and theft-resistant installation, using Manufacturer's standard method.
- 4. Size: 24 inches wide by 48 inches high.

F. Foam-Soap Dispenser:

- 1. Basis-of-Design Product: Subject to compliance with requirements, provide Matera Paper Co., Inc., Spartan Lite'n Foamy or comparable product by one of the following:
 - a. Impact.
 - b. San Jamar.
- 2. Description: Designed for dispensing soap in foam form.
- 3. Mounting: Vertically oriented, surface mounted.
- 4. Capacity: 1000 mL.
- 5. Closed System: Screw on cap pump/tank is replaceable; reservoir removable.
- 6. Materials: ABS Plastic, white finish.
- 7. Refill Indicator: Window type.

G. Robe Hook:

1. Basis-of-Design Product: Subject to compliance with requirements, provide Bobrick Washroom Equipment, Inc.: **B-6727** or a comparable product by one of the following:

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- a. AJW Architectural Products.
- b. American Specialties, Inc.
- c. Bradley Corporation.
- d. GAMCO Specialty Accessories; a division of Bobrick.
- 2. Description: Double-prong unit.
- 3. Material and Finish: Stainless steel, No. 4 finish (satin).

H. Electric Hand Dryer

- 1. Basis-of-Design Product: Subject to compliance with requirements, provide Bobrick Washroom Equipment, Inc.: **B-715** or a comparable product by one of the following:
 - a. AJW Architectural Products.
 - b. American Specialties, Inc.
 - c. Bradley Corporation.
- 2. Description: Surface Mounted
- 3. Finish: Stainless Steel Type 304 with Satin Finish

2.3 CUSTODIAL ACCESSORIES

- A. Source Limitations: Obtain custodial accessories from single source from single manufacturer.
- B. Mop and Broom Holder:
 - 1. Basis-of-Design Product: Subject to compliance with requirements, provide Bobrick Washroom Equipment, Inc.; **B-224** or a comparable product by one of the following:
 - a. AJW Architectural Products.
 - b. American Specialties, Inc.
 - c. Bradley Corporation.
 - d. GAMCO Specialty Accessories; a division of Bobrick.
 - 2. Description: Unit with shelf, hooks, and mop holders, and rod suspended beneath shelf.
 - 3. Length: 36 inches (914 mm).
 - 4. Hooks: Three.
 - 5. Mop/Broom Holders: Four, spring-loaded, rubber cam type, with anti-slip coating.
 - 6. Material and Finish: Stainless steel, No. 4 finish (satin).
 - a. Shelf: Not less than nominal 0.05-inch- (1.3-mm-) thick stainless steel, with $1\frac{1}{2}$ " return edge.
 - b. Rod: Approximately 1/4-inch- (6-mm-) diameter stainless steel.

2.4 MATERIALS

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- A. Stainless Steel: ASTM A 666, Type 304, 0.031-inch (0.8-mm) minimum nominal thickness unless otherwise indicated.
- B. Brass: ASTM B 19, flat products; ASTM B 16/B 16M, rods, shapes, forgings, and flat products with finished edges; or ASTM B 30, castings.
- C. Steel Sheet: ASTM A 1008/A 1008M, Designation CS (cold rolled, commercial steel), 0.036-inch (0.9-mm) minimum nominal thickness.
- D. Galvanized-Steel Sheet: ASTM A 653/A 653M, with G60 (Z180) hot-dip zinc coating.
- E. Galvanized-Steel Mounting Devices: ASTM A 153/A 153M, hot-dip galvanized after fabrication.
- F. Fasteners: Screws, bolts, and other devices of same material as accessory unit and tamper- and-theft resistant where exposed, and of galvanized steel where concealed.
- G. Chrome Plating: ASTM B 456, Service Condition Number SC 2 (moderate service).
- H. Mirrors: ASTM C 1503, Mirror Glazing Quality, clear-glass mirrors, nominal 6.0 mm thick.

2.5 FABRICATION

- A. General: Fabricate units with tight seams and joints, and exposed edges rolled. Hang doors and access panels with full-length, continuous hinges. Equip units for concealed anchorage and with corrosion-resistant backing plates.
- B. Keys: Provide universal keys for internal access to accessories for servicing and resupplying. Provide minimum of six keys to Owner's representative.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install accessories according to manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and at heights indicated.
- B. Grab Bars: Install to withstand a downward load of at least 250 lbf (1112 N), when tested according to ASTM F 446.

3.2 ADJUSTING AND CLEANING

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- A. Adjust accessories for unencumbered, smooth operation. Replace damaged or defective items.
 - B. Remove temporary labels and protective coatings.
 - C. Clean and polish exposed surfaces according to manufacturer's written instructions.

END OF SECTION 10 28 00

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SECTION 104413 - FIRE EXTINGUISHER CABINETS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

- 1. Fire protection cabinets for the following:
 - a. Portable fire extinguishers.

B. Related Sections:

1. Division 10 Section "Fire Extinguishers."

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for fire protection cabinets.
 - 1. Fire Protection Cabinets: Include roughing-in dimensions, details showing mounting methods, relationships of box and trim to surrounding construction, door hardware, cabinet type, trim style, and panel style.
- B. Shop Drawings: For fire protection cabinets. Include plans, elevations, sections, details, and attachments to other work.
- C. Product Schedule: For fire protection cabinets. Coordinate final fire protection cabinet schedule with fire extinguisher schedule to ensure proper fit and function.
- D. Maintenance Data: For fire protection cabinets to include in maintenance manuals.

1.4 COORDINATION

A. Coordinate size of fire protection cabinets to ensure that type and capacity of fire extinguishers indicated are accommodated.

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B. Coordinate sizes and locations of fire protection cabinets with wall depths.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B.
- B. Aluminum: Alloy and temper recommended by aluminum producer and manufacturer for type of use and finish indicated, and as follows:
 - 1. Sheet: ASTM B 209 (ASTM B 209M).
 - 2. Extruded Shapes: ASTM B 221 (ASTM B 221M).
- C. Stainless-Steel Sheet: ASTM A 666, Type 304.
- D. Clear Float Glass: ASTM C 1036, Type I, Class 1, Quality q3, 6 mm thick.
- E. Tempered Float Glass: ASTM C 1048, Kind FT, Condition A, Type I, Quality q3, 3 mm thick, Class 1 (clear).

2.2 FIRE PROTECTION CABINET (FEC)

- A. Cabinet Type: Suitable for fire extinguisher.
 - 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. J. L. Industries, Inc., a division of Activar Construction Products Group
 - b. Kidde Residential and Commercial Division, Subsidiary of Kidde plc
 - c. Larsen's Manufacturing Company
 - d. Potter Roemer LLC
- B. Cabinet Material: Stainless-steel sheet.
 - 1. Shelf: Same metal and finish as cabinet.
 - 2. Rolled-Edge Trim: 2-1/2-inch backbend depth.
 - 3. Rating: 1-hour
- C. Semi-recessed Cabinet: Cabinet box partially recessed in walls of sufficient depth to suit style of trim indicated; with one-piece combination trim and perimeter door frame overlapping surrounding wall surface with exposed trim face and wall return at outer edge (backbend). Provide where walls are of insufficient depth for recessed cabinets but are of sufficient depth to accommodate semi-recessed cabinet installation.

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- D. Cabinet Trim Material: Stainless-steel sheet
- E. Door Material: Stainless-steel sheet
- F. Door Style: Vertical duo panel with frame
- G. Door Glazing: Tempered float glass (clear)
- H. Door Hardware: Manufacturer's standard door-operating hardware of proper type for cabinet type, trim style, and door material and style indicated.
 - 1. Provide projecting door pull and friction latch
 - 2. Provide continuous hinge, of same material and finish as trim, permitting door to open 180 degrees.

I. Accessories:

- 1. Mounting Bracket: Manufacturer's standard steel, designed to secure fire extinguisher to fire protection cabinet, of sizes required for types and capacities of fire extinguishers indicated, with plated or baked-enamel finish.
- 2. Lettered Door Handle: One-piece, cast-iron door handle with the word "FIRE" embossed into face.
- 3. Identification: Lettering complying with authorities having jurisdiction for letter style, size, spacing, and location. Locate as indicated:
 - a. Identify fire extinguisher in fire protection cabinet with the words "FIRE EXTINGUISHER."
 - 1) Location: Applied to cabinet door
 - 2) Application Process: Silk-screened
 - 3) Lettering Color: Red
 - 4) Orientation: Vertical

J. Finishes:

1. Stainless Steel: Brushed finish.

2.3 GENERAL FINISH REQUIREMENTS

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical finishes on exposed surfaces of fire protection cabinets from damage by applying a strippable, temporary protective covering before shipping.

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- C. Finish fire protection cabinets after assembly.
- D. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

2.4 STAINLESS-STEEL FINISHES

- A. Surface Preparation: Remove tool and die marks and stretch lines, or blend into finish.
- B. Polished Finishes: Grind and polish surfaces to produce uniform finish, free of cross scratches.
 - 1. Dull Satin Finish: No. 6.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine walls and partitions for suitable framing depth and blocking where semirecessed cabinets will be installed.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Prepare recesses for semi-recessed fire protection cabinets as required by type and size of cabinet and trim style.

3.3 INSTALLATION

- A. General: Install fire protection cabinets in locations and at mounting heights indicated:
 - 1. Fire Protection Cabinets: 54 inches above finished floor to top of cabinet.
- B. Fire Protection Cabinets: Fasten cabinets to structure, square and plumb.
 - 1. Fasten mounting brackets to inside surface of fire protection cabinets, square and plumb.

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3.4 ADJUSTING AND CLEANING

- A. Remove temporary protective coverings and strippable films, if any, as fire protection cabinets are installed unless otherwise indicated in manufacturer's written installation instructions.
- B. Adjust fire protection cabinet doors to operate easily without binding. Verify that integral locking devices operate properly.
- C. On completion of fire protection cabinet installation, clean interior and exterior surfaces as recommended by manufacturer.
- D. Touch up marred finishes or replace fire protection cabinets that cannot be restored to factory-finished appearance. Use only materials and procedures recommended or furnished by fire protection cabinet and mounting bracket manufacturers.
- E. Replace fire protection cabinets that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

F. FIRE EXTINGUISHER SCHEDULE

1. Provide fire extinguisher cabinets and fire extinguishers at the locations indicated on the drawings. Refer to the drawings for the quantity of cabinets required.

END OF SECTION 104413

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SECTION 104416 - FIRE EXTINGUISHERS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes portable, hand-carried fire extinguishers.
- B. Related Sections:
 - 1. Division 10 Section "Fire Extinguisher Cabinets."

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated. Include rating and classification, material descriptions, dimensions of individual components and profiles, and finishes for fire extinguisher.
- B. Product Schedule: For fire extinguishers. Coordinate final fire extinguisher schedule with fire protection cabinet schedule to ensure proper fit and function.
- C. Warranty: Sample of special warranty.

1.4 QUALITY ASSURANCE

- A. NFPA Compliance: Fabricate and label fire extinguishers to comply with NFPA 10, "Portable Fire Extinguishers."
- B. Fire Extinguishers: Listed and labeled for type, rating, and classification by an independent testing agency acceptable to authorities having jurisdiction.
 - 1. Provide fire extinguishers approved, listed, and labeled by FMG.

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1.5 COORDINATION

A. Coordinate type and capacity of fire extinguishers with fire protection cabinets to ensure fit and function.

1.6 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace fire extinguishers that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Failure of hydrostatic test according to NFPA 10.
 - b. Faulty operation of valves or release levers.
 - 2. Warranty Period: Six years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PORTABLE, HAND-CARRIED FIRE EXTINGUISHERS

- A. Fire Extinguishers: Type, size, and capacity for each indicated.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Oval Fire Protection, Model 10JABC fire extinguisher
 - b. J. L. Industries, Inc.; a division of Activar Construction Products Group, Model Orbit Low Profile Extinguisher
 - c. Approved Equal
 - 2. Valves: Manufacturer's standard
 - 3. Handles and Levers: Manufacturer's standard
 - 4. Instruction Labels: Include pictorial marking system complying with NFPA 10, Appendix B.
- B. Multipurpose Dry-Chemical Type in Steel Container: UL-rated 4-A:60-B:C, 10-lb nominal capacity, with mono-ammonium phosphate-based dry chemical in enameled-steel container.

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PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine fire extinguishers for proper charging and tagging.
 - 1. Remove and replace damaged, defective, or undercharged fire extinguishers.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. General: Install fire extinguishers in locations indicated and in compliance with requirements of authorities having jurisdiction.
- B. Fire Extinguisher Schedule: Provide One (1) fire extinguisher for each fire extinguisher cabinet.

END OF SECTION 104416