Date Due: June 17<sup>th</sup>, 2021 DUE NO LATER THAN 12:00 P.M. LOCAL TIME IN HOUSTON, TEXAS *Proposals received later than the above date and time will not be considered.*  YES Prep Public Schools REQUEST FOR PROPOSAL Cover Sheet

REQUEST FOR PROPOSAL: FY21\_West Campus Legacy Clinic REBID

NOTE TO PROPOSERS!!! Carefully read all instructions, requirements, and specifications. Fill out all forms properly and completely. Submit your proposal with all appropriate supplements and/or samples and return as instructed in Special Requirements/Instructions.

> RETURN PROPOSAL TO: Richard Lilavois Construction Project Manager 5515 S Loop E, Suite B Houston, Texas 77033

For additional information, contact Richard Lilavois, Richard.Lilavois@yesprep.org or 832-528-4467.

You must sign below in INK; failure to sign WILL disqualify the proposal. All prices must be typewritten or printed in ink.

Vendor Name:		
Vendor Address:		
City, State, Zip Code:		
Taxpayer Identification Number (T.I.N.):		
Telephone No.:	Fax No.:	
Email:		
Print Name:	Signature:	

[Your signature attests to your proposal to provide the goods and/or services in this proposal according to the published provisions of this Request for Proposal unless modifications or

#### TENTATIVE RFP SCHEDULE

YES Prep anticipates following the following time table for this RFP:

- Newspaper Ads:
- Bid Walk (Optional):
- Inquiry Deadline for Proposal Questions:
- Respond to Questions:
- Deadline for submission of proposals & Opening: June 17<sup>th</sup>, 2021 12pm CST
- Proposal evaluation:
- Contract Award:

June 1<sup>st</sup>, 2021& June 8<sup>th</sup>, 2021 June 3<sup>rd</sup>, 2021 8am CST June 4<sup>th</sup>, 2021 10am CST June 7<sup>th</sup>, 2021 10am CST June 17<sup>th</sup>, 2021 12pm CST June 17<sup>th</sup>, 2021 – June 18<sup>th</sup>, 2021 TBA - Subject to Board Approval

#### TABLE OF CONTENTS – REQUEST FOR PROPOSAL PACKAGE

The items below represent components which comprise this Request for Proposal (hereinafter "RFP") package. Suppliers are asked to review the package to be sure that all applicable parts are included. If any portion of the package is missing, please notify Richard Lilavois, Construction Project Manager immediately at <u>Richard Lilavois@yesprep.org</u> or 832-528-4467.

It is the Vendor's responsibility to be thoroughly familiar with all Requirements and Specifications. Be sure you understand the following before you return your proposal packet.

#### 1. Cover Sheet

Your company name, address, and your signature (IN INK) should appear on this page.

2. Table of Contents

This page is the Table of Contents.

#### 3. General Requirements

You should be familiar with all of the General Requirements.

#### 4. Special Requirements/Instructions

This section provides information you must know in order to make a complete and proper proposal.

#### 5. Specifications

This section contains the detailed description of the products/services sought.

#### 6. Attachments

- A. Submittals 1 4
- B. Questionnaire
- C. Workers' Compensation Certification
- D. Insurance Coverage Requirements
- E. Proposed Exceptions, Alterations, Additions, or Modifications to RFP (if any)
- F. Scoring Rubric

#### INTRODUCTION

YES Prep Public Schools is a free, open-enrollment public school system that serves 15,000

students across nineteen (19) schools in the Houston area. YES Prep has been ranked as among the top 100 public high schools in the nation by Newsweek and U.S. News & World Report. Every year, 100 percent of YES Prep's graduating seniors have been accepted into four-year colleges, including Harvard, Yale, Columbia, Rice, and Stanford. YES Prep combines a highly successful 6th-12th grade model along with high standards for student achievement.

#### **GENERAL REQUIREMENTS**

Proposals will be accepted by Yes Prep Public Schools no later than 12:00 p.m. (local time), **June 17<sup>th</sup>, 2021**. Every proposal must be enclosed in an envelope clearly marked "FY21\_Yes Prep West Campus Legacy Clinic REBID" and shall include one (1) hard copy and a USB Drive containing a digital PDF version.

All questions, requests, responses, and proposals shall be submitted to: **Richard Lilavois - Construction Project Manager YES Prep Public Schools 5515 S Loop E, Suite B Houston, TX 77033** Richard.Lilavois@yesprep.org

Questions and responses regarding this RFP will be posted to the YES Prep Public Schools web site during the RFP phase so all interested parties will have access to the same information. Web site is located at: <u>http://www.yesprep.org/notices</u>

The appropriate committee shall review all timely responses, and if necessary, the full Board of Trustees prior to acceptance/bid award. Responses may be hand delivered. Any response or proposal received after the above deadline shall be considered late, and will not be opened or considered.

#### **Time Frame**

The timeframe for all responses must be complete and in possession of YES Prep Public Schools by 12:00 p.m. (local time) on **June 17<sup>th</sup>, 2021.** Each submission/proposal must be complete. Any incomplete responses may be rejected. All respondents will comply with this RFP as a basis for the award of the proposal.

Bid-Walk: One-time bid walk will be offered on Thursday, June 3<sup>rd</sup> 2021 starting at 8AM. We will meet at West Campus. – 10535 Harwin Dr, Houston, TX 77036. This bid walk is not mandatory. Mask will be required.

All questions are due by 10:00 a.m. (local time) on June 4<sup>th</sup>, 2021 and shall be submitted to: Richard.Lilavois@yesprep.org

#### Approval

The actual acceptance of any proposal may be delayed. Therefore, all responses must remain valid for a period of no less than one hundred and twenty (120) days. It is intended that proposals will be recommended to the Board of Trustees at an upcoming board meeting. The Board of Trustees reserves the right to reject any and all proposals.

#### ACCESS TO RECORDS

Proposer (hereinafter "Vendor") may be required to allow duly authorized representatives of YES Prep Public Schools (hereinafter "YES"), and local, state, and federal governments, access to contracts, books, documents, and records necessary to verify the nature, extent, and cost of services provided by the Vendor.

#### AWARD

YES reserves the right to reject any and all proposals, and reserves the sole right at its discretion to accept any proposal(s) it considers most favorable to the interest of YES and waive any and all minor irregularities in any proposal(s). YES further reserves the right to reject any proposal(s) and seek new proposals through the issuance of a new or amended Request for Proposal (hereinafter "RFP") if such action is deemed in the best interest of YES.

#### **OFFER COMPLETION**

Fill out and return to Richard Lilavois, Construction Project Manager, one complete proposal form, and two copies, as instructed under the Special Requirements section of this document. An authorized Vendor representative should sign the Cover Sheet. Completion of these forms is intended to verify that the Vendor has submitted the proposal, is familiar with its contents, and has submitted the material in accordance with all requirements.

The submission of a response shall be prima facie evidence that the Vendor has full knowledge of the scope, nature, quantity, and quality of work to be performed, the detailed requirements of the project, and the conditions under which the work is to be performed. All terms, conditions, specifications, stipulations, and Vendor requirements stated in the RFP, any attached Appendices to the RFP, and any and all Addenda issued shall become part of the contract entered into between YES and the Vendor.

#### **OFFER RETURNS**

Vendors must return all completed proposals to the office of Richard Lilavois as indicated on the Cover Sheet of this package. Late proposals will not be accepted. It is the responsibility of the responding Vendor to assure that the response is received prior to the date and time indicated on the Cover Sheet of this package.

#### **DIGITAL FORMAT**

If Vendor obtained the proposal specifications in digital format in order to prepare a response, *the proposal must be submitted in hard copy* according to the instructions contained in this package. If, in its response, Vendor makes any changes whatsoever to the YES published RFP specifications, the RFP specifications *as published* by YES shall control. Furthermore, if an alteration of any kind to the RFP specifications as published is discovered after the contract is executed, the contract is subject to immediate cancellation at the sole option of YES.

#### **DISQUALIFICATION OF VENDOR**

Upon signing this RFP, Vendor certifies that the proposal has not violated the antitrust laws of this state codified in §15.01, *et seq.*, Business & Commerce Code, or the federal antitrust laws, and has not communicated directly or indirectly the proposal made to any competitor or any other person engaged in such line of business. Any or all proposals may be rejected if YES believes that collusion exists among the Vendors. Proposals in which the prices are obviously unbalanced may be rejected.

#### **EVALUATION**

In evaluating the proposals submitted, YES will apply the "Best Value" process in selecting the Vendor to be awarded a contract for this project. **Purchase price is not the only criteria that will be used in the evaluation process**. The selection process will include, but not be limited to, the following considerations:

- 1. The quality and range of goods and/or services the Vendor proposes to provide;
- 2. The extent to which the goods and/or services meet YES needs;
- 3. The Vendor's overall experience, reputation, expertise, stability, and financial responsibility;
- 4. The Vendor's past relationship, if any, with YES;
- 5. The experience and qualifications of the Vendor staff (i.e. drivers, supervisors, dispatchers, mechanics, etc.) that will be assigned to service the YES account;
- 6. The ability to provide service in a safe, reliable, expedient, and efficient manner;
- 7. Facilities and business processes and practices (computerized information systems, access to industry facilities, quality and range of management reports, etc.) that will be used in servicing the YES account;
- 8. The Vendor's financial terms offered to YES;
- 9. The total long-term cost to YES to acquire the Vendor's goods or services; and/or
- 10. Any other relevant factor(s) specifically listed in the RFP.

YES reserves the right to contact references from the Vendor's client list, or any other persons considered relevant by YES. YES reserves the right to conduct personal interviews of any or all potential Vendors prior to selection.

YES will not be liable for any costs incurred by the Vendor in connection with such interviews or with the submission of any response.

#### DOCUMENT INTERPRETATION

In the event of any conflict of interpretation of any part of this overall document, the interpretation of YES shall govern.

#### **GOVERNING LAW**

Any agreements resulting from this RFP shall be governed by, construed, and enforced in accordance with the laws of the State of Texas applicable to contracts made and wholly performed within such state (without regard to the conflicts or choice of law principles thereof). The parties irrevocably consent to the jurisdiction of the State of Texas, and agree that any

court of competent jurisdiction sitting in the County of Harris, State of Texas, shall be an appropriate and convenient place of venue, and shall be the sole and exclusive place of venue, to resolve any dispute with respect to any such agreements.

#### HOLD HARMLESS AGREEMENT

The successful Vendor(s) shall indemnify, hold harmless, and defend YES, its directors, officers, and employees (paid or volunteer) from and against any and all claims, demands, and causes of action of whatever kind or nature arising out of error, omission, misrepresentation, negligent act, conduct, or misconduct of the Vendor and its subcontractors, agents, and employees (paid or volunteer) in the provision of goods or the performance of services arising out of the preparation of this proposal and execution and performance of any contracts resulting therefrom. Such indemnification shall also include reasonable attorneys' fees, court costs, and expenses.

#### INSPECTIONS

YES reserves the right to inspect any item(s) or service location for compliance with specifications, requirements, and needs of YES. If a Vendor cannot furnish a sample of a proposed item, where applicable, for review, or fails to satisfactorily show an ability to perform, YES can reject the Vendor as inadequate.

#### TESTING

YES reserves the right to test equipment, supplies, materials, and goods proposed for quality, compliance with specifications, and ability to meet the needs of YES. Demonstration units must be available for review. Should the goods or services fail to meet requirements and/or be unavailable for evaluation, the proposal is subject to rejection.

#### INVOICES AND PAYMENTS

YES standard payment terms are Net 30 days after receipt of invoice.

Invoices should be provided to YES in a timely manner. Vendors are requested to invoice YES within 30 days of providing goods and/or services to YES. Vendors who continuously invoice YES in a manner that is outside of generally accepted business practices may affect their continuing relationship with YES.

In the event a Vendor presents YES with invoices, statements, reports, etc. that are incomplete or inaccurate, YES may be required to perform substantial research which could result in delay of payment. YES will not be responsible for any interest charges and/or late fees as a result of delayed payment due to time delays caused by inadequate, incomplete, or inaccurate information provided in invoices by Vendor.

#### PRICING

Prices for all goods and/or services shall be negotiated to a firm amount for the duration of this contract or as agreed to in terms of time frame and/or method of determining price escalations, if any, by Vendor. All prices and methods of determining prices must be written in ink or typewritten. Where unit pricing and extended pricing differ, unit pricing prevails.

#### SCANNED OR RE-TYPED RESPONSE

If in its response, Vendor either electronically scans, re-types, or in some way reproduces the YES-published RFP package, then in the event of any conflict between the terms and provisions of the published RFP package, or any portion thereof, and the terms and provisions of the

response made by the Vendor, the RFP package *as published* by YES shall control. Furthermore, if an alteration of any kind to the YES-published RFP package is only discovered after the contract is executed, the contract is subject to immediate cancellation at the sole option of YES.

#### SEVERABILITY

If any section, subsection, paragraph, sentence, clause, phrase, or word of these requirements or the specifications shall be held invalid, such holding shall not affect the remaining portions of these requirements and the specifications, and it is hereby declared that such remaining portions would have been included in these requirements and the specifications as though the invalid portion had been omitted.

#### SUPPLEMENTAL MATERIALS

Vendors are responsible for including all pertinent product data in the returned offer package. Literature, brochures, data sheets, specification information, completed forms requested as part of the offer package, and any other facts which may affect the evaluation and subsequent contract award should be included. Materials such as legal documents and contractual agreements, which the Vendor wishes to include as a condition of the proposal, must also be in the returned proposal package. Failure to include all necessary and proper supplemental materials may be cause to reject the entire proposal.

#### TAXES

YES is exempt from federal, state, and local taxes. In the event that taxes are imposed on the goods or services purchased, YES will not be responsible for payment of the taxes. The Vendor shall absorb the taxes entirely. Texas Limited Sales Tax Exemption Certificates will be furnished to Vendors upon written request to YES.

#### **TERM CONTRACTS**

The successful Vendor, as determined by YES, shall be required to execute a contract to furnish all goods and/or services and other deliverables required for successful completion of the proposed project. No Vendor shall obtain any interest or right in any award until YES has executed a contract, and any such interest and rights shall be subject to the terms and conditions as contained in such contract.

The successful Vendor may not assign, sell, or otherwise transfer its interest in the contract award, or any part thereof, without prior written consent from the YES.

#### QUANTITY

There is no guaranteed amount of business, expressed or implied, to be purchased or contracted for by YES. However, the Vendor(s) awarded the contract shall furnish all required goods and/or services to YES at the stated price, when and if required.

#### CONTRACT TYPE

The preferred contract type to be awarded is a fixed fee contract. However, if a Vendor has reason to believe a better (more cost effective) method is practical, then the Vendor is encouraged to offer that better pricing option as an alternative in its submitted proposal. YES will consider that type of contract as it compares with other recommended contract options.

#### TERMINATION

YES reserves the right to terminate the contract without cause with 60 days prior written notice for convenience and with 30 days prior written notice for cause if Vendor breaches any of the terms therein, including warranties of Vendor or if the Vendor becomes insolvent or commits acts of bankruptcy. Such right of termination is in addition to and not in lieu of any other remedies which YES may have in law or equity. Cause may be construed as, but not limited to, failure to deliver the proper goods and/or services within the proper amount of time, and/or to properly perform any and all services required to YES's satisfaction, and/or to meet all other obligations and requirements.

If the Vendor breaches any provision of the proposal stipulations, becomes insolvent, enters voluntary or involuntary bankruptcy, or receivership proceedings, or makes an assignment for the benefit of creditors, YES will have the right (without limiting any other rights or remedies that it may have in the contract or by law) to terminate any contract with 30 days prior written notice to the Vendor.

YES will then be relieved of all obligations, except to pay the reasonable value of the Vendor's prior performance (at a cost not exceeding the contract rate). The Vendor will be liable to YES for all costs exceeding the contract price that YES incurs in completing or procuring the service as described in the proposal. YES's right to require strict performance of any obligation in this contract will not be affected by any previous waiver, forbearance, or course of dealing.

#### FUNDING OUT OPTION

Any contract resulting from this RFP is contingent upon the continued availability of budget appropriations and is subject to cancellation, without penalty to YES, either in whole or in part, if funds are not appropriated by the YES Board of Directors or otherwise not made available to YES.

#### WARRANTIES

Vendors shall furnish all data pertinent to warranties or guarantees which may apply to items in the proposal. Vendors may not limit or exclude any implied warranties.

#### ASSOCIATION

Vendors may not use the YES official logo(s), or any phrase associated with YES, without written permission from YES.

#### DISCLOSURE

All information and documentation related to this RFP submitted by Vendors may be subject to public disclosure under the Texas Public Information Act (Texas Government Code Section 552.001, et seq.).

#### **EXCEPTIONS, ALTERATIONS, ADDITIONS, and MODIFICATIONS**

If any exceptions, alterations, additions, or modifications are submitted by Vendor to any portion of this RFP, the Vendor must clearly indicate the exceptions, alterations, additions, and modifications and include a full explanation as a separate attachment to the proposal. The failure to identify exceptions, alterations, additions, or modifications will constitute acceptance by the Vendor of the RFP as proposed by YES. YES reserves the right to reject a proposal containing exceptions, alterations, additions, or modifications.

#### **PROPOSAL PREPARATION COSTS**

All costs related to the preparation and submission of this proposal shall be paid by the Vendor. Issuance of this RFP does not commit YES, in any way, to pay any costs in the preparation and submission of the proposal, nor does the issuance of the RFP obligate YES to award a contract or purchase any goods and services stated in the RFP.

#### **RETENTION OF PROPOSAL DOCUMENTATION**

All proposal materials and supporting documentation that is submitted in response to this proposal becomes the permanent property of YES.

#### MODIFICATION/WITHDRAWL OF PROPOSAL

Proposals may be modified in writing at any time prior to the due date. Proposals may be withdrawn in writing, by facsimile written transmission or in person, before the response date.

#### PAYMENT TERMS

Invoices that are submitted by the awarded contractor are required to provide accurate and current addresses including any discounts for early payment. Payment of undisputed invoices will be paid monthly provided that the invoices are received by dates provided to the winning bid. Disputed portions of invoices will be held until the dispute is resolved.

#### **PROPOSAL REQUIREMENTS**

- Vendor is required to provide evidence of a valid State of Texas Business License
- Vendor is required to provide an insurance certificate with YES Prep named as an additional insured.

## The entity legally responsible for fulfilling this agreement shall be identified in the proposal response.

#### Right to Seek a New Proposal

## YES Prep Public Schools reserves the right to receive, accept, or reject any and all proposals for any or all reasons.

Proposals will be awarded to the best overall respondent as determined to be in the best interests of Yes Prep. In comparing the responses to this RFP and making awards, Yes Prep may consider such factors as quality and thoroughness of a proposal, the record of experience, the references of the respondents, and the integrity, performance and assurances in the proposal in addition to that of the proposal price.

It is the responsibility of the vendor to ensure that the equipment proposed is fully functional with existing two-way radio equipment: handheld radios, base stations and school bus radios.

#### Applicable Law

The successful Contractor(s) agrees that they shall comply with all local, state and federal laws, statutes, rules, and regulations including, but not limited to, the Rehabilitation Act of 1973 and the Americans with Disabilities Act. In the event that any claims should arise with regards to this contract, for a violation of any such local, state, or federal law, statues, rules, or regulations, the provider will indemnify and hold Huntington County Community School Corporation harmless for any damages, including court costs or attorney fees which might be incurred.

#### **Dispute resolution**

It is expected that any conflicts or disagreements can be settled through face-to-face meetings. Unresolved disputes will require mediation before filing litigation. Both parties will split the cost of mediation.

#### SPECIAL REQUIREMENTS/INSTRUCTIONS

#### EVALUATION AND AWARD

This RFP in no manner obligates YES to the eventual rental, lease, or purchase of any equipment or service described, implied, or which may be proposed, until confirmed by a written contract. Progress toward this end is solely at the discretion of YES and may be terminated at any time prior to the signing of the contract.

YES may initiate discussions with Vendor personnel authorized to contractually obligate the Vendor. Discussions will develop into negotiating sessions with the successful Vendor(s). If YES is unable to agree to contract terms, YES reserves the right to terminate contract negotiations with a Vendor and initiate negotiations with another Vendor. YES reserves the right to select services and products from any number of Vendors if, in its sole discretion, it is in the best interest of YES to do so.

Evaluation will consider the Vendor(s) best meeting the needs and requirements of YES and such evaluation and determination of best value shall be solely at the discretion of YES. **Purchase price is not the only criteria that will be used in the evaluation process.** 

Submission of qualifications implies the Vendor's acceptance of the evaluation criteria and Vendor's recognition that subjective judgments can and will be made by those individuals evaluating qualifications.

References, site visits, and product inspections may be used to make judgments directly affecting the award of this contract.

#### NON-PERFORMANCE BY VENDOR

Performance, before and during the contract term, will be a major consideration of current contract award, renewals, and future award considerations. Failure to perform, in any sense relative to this contract, may result in the probation and/or termination of this agreement by YES on the basis of nonperformance. Non-performance shall be determined as follows:

- 1. Failure to meet and maintain all qualifications required in this RFQ/RFP;
- 2. Failure to meet required personnel standards and operating performance standards;
- Failure to maintain appropriate and/or necessary personnel licenses and certifications;
- 4. Failure to meet all vehicle inspections and certifications which are needed to comply with federal, state, and/or local requirements;
- 5. Failure to keep and maintain all required insurance coverage; and/or

6. Failure to cure deficiencies within a reasonable amount of time as stated herein.

#### INSURANCE

All Vendors must provide evidence of insurance or insurability and a Workers' Compensation Certificate (see Attachments C and D).

#### **GOVERNMENT VIOLATIONS**

Vendor shall notify YES of all health and safety violations, OSHA violations, wage and hour violations, or labor violations assessed by any city, state, or federal government department or agency.

#### NON-COMPLIANCE NOTIFICATION

In the event a Vendor is determined by YES to have failed to perform services in accordance with the requirements listed herein, YES will forward a written notification specifying the violation or the area of non-compliance to the Vendor. The Vendor in non-compliance shall immediately remedy all violations as determined by YES. Any violations not so remedied shall be grounds for termination of the contract, in whole or in part.

#### OWNERSHIP

YES shall retain ownership rights to all materials or any other product produced in conjunction with the work described herein.

#### SPECIAL CONDITIONS AND PROJECT INFORMATION

YES Prep Public Schools is a free, open-enrollment public school system that currently serves 15,000 students across nineteen (19) schools in the Houston area. In August 2020, YES Prep will open 2 new elementary schools in the Houston area. YES Prep has been ranked as among the top 100 public high schools in the nation by Newsweek and U.S. News & World Report. Every year, 100 percent of YES Prep's graduating seniors have been accepted into four-year colleges, including Harvard, Yale, Columbia, Rice, and Stanford. YES Prep combines a highly successful 6th-12th grade model along with high standards for student achievement.

YES Prep Public Schools is seeking proposals for demolition and renovation services to be rendered at the West Campus. The work occurs in two (2) locations in the building.

- <u>First Floor</u>: YES Prep is looking to convert an existing area into an onsite medical clinic. The existing project area includes teachers lounge, large conference room, Nurse's office and large classroom totaling approx. 1700 sq. ft, Renovation of area calls for the demolition of existing elements and the addition of eight (8) rooms and an extension to the adjacent corridor.
- <u>Second Floor:</u> YES Prep is looking to convert three (3) existing and adjacent spaces into one classroom. Renovation of area calls for the demolition of partition walls and door openings the space will then be converted to one (1) classroom to be used for instructional use.

Please find an index of the construction documents as follows:

- CS100 Cover Sheet, Site Plan & Code Analysis
- D101 Demolition Plan
- > A101 Floor Plans & Interior Elevations
- A201 Reflected Ceiling Plans
- A301 Schedule & Details
- M101 Mechanical Plan
- M201 Mechanical Schedules
- > M301 Mechanical Specifications
- P101 Plumbing Plan
- P201 Plumbing Schedules
- E000 Electrical Notes
- E101 Lighting Plan
- E111 Power Plan
- > E201 Electrical Rider Diagram
- E202 Electrical Schedules
- This will be an active campus. Students and staff will be on-site daily.
- Contractor is responsible for keeping corridors clear of debris and all construction related materials.
- Work will be performed during school operating hours. Owner reserves right to dictate procedure of loud construction processes such as saw cutting.

- All work on the exterior can be performed during school hours with coordination done in advance with the Construction Manager or Construction Project Manager.
- Contractor is responsible for all drawings included with this RFP.
- Questions are due by **10AM**, June 4<sup>th</sup>, 2021
- YES Prep holds the right to not approve or move forward with project.

#### CONTRACTOR TO PROVIDE THE FOLLOWING:

- Work-area Utilization Plan
- Contractor will provide port-a-can for work crews.
- Contractor will be responsible for workers remaining in appropriate areas while on campus. Anyone caught outside of approved work area will be removed from the campus and not allowed to return.
- All bids should be turn-key per scope and specs on construction documents.
- Contractor is responsible for trash removal from the building and property.
- Contractor is responsible to clean the work area each night to ensure the building is ready for school the next morning. This includes disinfecting door knobs touched, sweeping and mopping floors.
- Contractor will be required to coordinate with Owner contractor for data installation and pathways, as needed.

## A schedule duration MUST be included with RFP response.

#### Cost breakout as listed below is REQUIRED.

Division	Cost
Final Cleaning	\$
Field Requirements & Mobilization	\$
Demolition	\$
Concrete/Cutting	\$
Millwork	\$
Door Frames & Hardware	\$
Drywall	\$
Ceramic Tile	\$
Acoustical	\$
Flooring & Base	\$
Window Blinds	\$
Marker-boards/Visual Display	\$
Painting & Wallcoverings	\$
Toilet Partitions & Access	\$
Fire Protection/Sprinkler	\$
Plumbing	\$
Mechanical	\$
Electrical	\$
Fire Alarm	\$
General Requirements	\$
Temporary Facilities/Dumpster	\$
Gen. Conditions, Ins. & Fee	\$
Payment & Performance Bond	\$
Schedule Duration	Days
Base Bid:	\$
Payment Bond (If not included in Base Bid)	\$
Alternates :	
	\$

\$

#### REQUIRED SUBMITTALS (Attachment A)

#### Submittal 1

Experience in Electrical Vendor shall provide a statement of its qualifications to provide the specific materials and services requested herein.

#### Submittal 2

Staffing Plan

Vendor shall submit a staffing plan that provides the qualifications of your employees.

#### Submittal 3

References

Vendor shall supply a list of three (3) references for which Vendor has experience in the scope of work that the proposal is submitted for.

#### Submittal 4

#### Customer Feedback

Vendor shall provide a description of its formal customer feedback system, provide sample tools used to gather data, and describe how results were shared with customers and used to improve service.

All submittals must be included in the RFP package returned on June 17<sup>th</sup>, 2021 by 12:00 PM. It is recommended that each submittal be typed on a separate sheet of paper with the heading "Response to Submittal #\_\_\_\_ for YES RFP" at the top and the name of the Vendor underneath.

#### QUESTIONNAIRE (Attachment B)

All Vendor must provide answers to the following questions, typed on 8  $\frac{1}{2}$  x 11 inch paper, in the order below. Attachments to the questionnaire answers should reference the question number.

- 1. Provide the full name and address of your organization.
- 2. Provide contact person(s) for information concerning this offer: name, title, phone, fax, email address.
- 3. What form of business is your organization (e.g. proprietorship, partnership, corporation) and is your organization local only, statewide, or nationwide?
- 4. List all the names under which this Vendor has operated in the last ten (10) years in the State of Texas.
- 5. Provide a copy of your insurance coverage.
- 6. Multi-part question:
  - a. Do you currently have any investigations pending by or on behalf of a government entity or other licensing entity?
  - b. Have you had investigations by or on behalf of a government entity or other licensing entity in the past?
    - 1. If the answer to either question is yes, please provide copies of relevant paperwork.
- 7. Do you have any relevant experience or projects in the past with education institutions? If so, please provide a high-level overview of these projects.

#### WORKERS' COMPENSATION CERTIFICATE (Attachment C)

YES requires Vendor to provide workers' compensation as per state law requirements. The Vendor shall sign and submit the following certificate with the written proposal:

- Minimum Workers' Compensation and Employer's Liability Limits
  - o Each Accident \$1,000,000
  - Disease Each Employee \$1,000,000
  - Disease Policy Limit \$1,000,000

Vendor Name

Signature of Authorized Agent

Date Signed

Note: Vendor may attach current certificate of coverage with a signed statement that if awarded the contract, they will obtain said aforementioned coverage if the current coverage does not meet the stated minimum requirements.

#### INSURANCE COVERAGE REQUIREMENTS (Attachment D)

#### General and Excess Liability Minimum Coverages

- General Liability: \$2,000,000
- Umbrella Liability: \$1,000,000

Vendor Name

Signature of Authorized Agent

Date Signed

YES will be named as Additional Insured on the Certificate of Insurance if the Vendor is awarded a contract.

#### Proposed Exceptions, Alterations, Additions, or Modifications to RFP (Attachment E)

Vendor should submit as Attachment E, any and all proposed exceptions, alterations, additions, or modifications to the FY21\_YES Prep RFP for West Campus Legacy Clinic

#### SCORING RUBRIC (ATTACHMENT F)

YES will utilize the following RFP Evaluation Rubric for evaluation of all YES Prep FY21 West Campus Legacy Clinic

#### 1. Charges/Cost to YES PREP: 40 Points.

- a. Favorable = 40 Points. Unfavorable = 0 points.
- b. Evaluate the Overall Value of proposed materials and services to be provided.

#### 2. Technical and Education Experience: 15 Points.

- a. Favorable = 15 Points. Unfavorable = 0 points.
- b. Proposal demonstrates the Vendor's ability to deliver quality services to schools.
- c. Includes references, Vendor staff, and/or Vendor's or certifications, qualifications, experience, expertise, and resumes.

#### 3. Proposed Operational Delivery: 20 Points.

- a. Favorable = 20 Points. Unfavorable = 0 points.
- b. Proposal defines services and scope in enough detail that YES can confidently determine that the proposed services will be met.

#### 4. Project Understanding and Methodology: 25 Points.

- a. Favorable = 25 Points. Unfavorable = 0 points.
- b. Proposal addresses the project in terms of the scope of work and substantive issues essential to proper service and care of YES facilities. Proposal includes a detailed description of services to be provided and any constraints as to procedure, time, personnel, or equipment that needs to be communicated to YES for use during contract negotiations.

# END OF YES RFP PACKAGE FOR FY21\_West Campus Legacy Clinic

# YES PREP PUBLIC SCHOOLS WEST CAMPUS LEGACY CLINIC 10535 HARWIN STREET - HOUSTON, TX. 77036

## **INDEX OF DRAWINGS**

## ARCHITECTURAL

CS100 COVER SHEET, SITE PLAN & CODE ANALYSIS D101 DEMOLITION PLAN **FLOOR PLANS & INTERIOR ELEVATIONS REFLECTED CEILING PLANS** A301 SCHEDULES AND DETAILS

## MECHANICAL

M101 MECHANICAL PLAN M201 MECHANICAL SCHEDULES M301 MECHANICAL SPECIFICATIONS

PLUMBING

P101 PLUMBING PLAN P201 PLUMBING SCHEDULES

## ELECTRICAL

E000 ELECTRICAL NOTES E101 LIGHTING PLAN E111 POWER PLAN E201 E202 ELECTRICAL SCHEDULES

ELECTRICAL RISER DIAGRAM

## **PROJECT DESCRIPTION AND CODE INFORMATION**

SUMMARY OF IMPROVEMENTS: 1ST FLOOR: DEMO CONFERENCE AND CLASSROOM, ADD IN NEW OFFICES AND LEGACY CLINIC 2ND FLOOR: DEMO EXISTNG OFFICES - MAKE LARGE CLASSROON

ADDRESS:

10535 HARWIN ST., HOUSTON, TX 77036

CODES: 2012 International Building Code with City of Houston Amendments 2012 International Fire Code

2015 International Energy Conservation Code 2012 Uniform Plumbing Code

2012 Uniform Mechanical Code 2020 National Electrical Code

2012 Texas Accessibility Standards CONSTRUCTION TYPE: II-B, 100% FULLY SPRINKLERED

OCCUPANCY TYPE: E

OWNER

YES PREP PUBLIC SCHOOLS 5515 SOUTH LOOP EAST, SUITE HOUSTON, TX 77033 (713)967-9000

ARCHITECT ELEMENT ARCHITECTS

1250 WOOD BRANCH PARK DR HOUSTON, TX 77079 (713)874-0775 **ATTN: PATRICK HELEMANN** 

MEP ENGINEEF

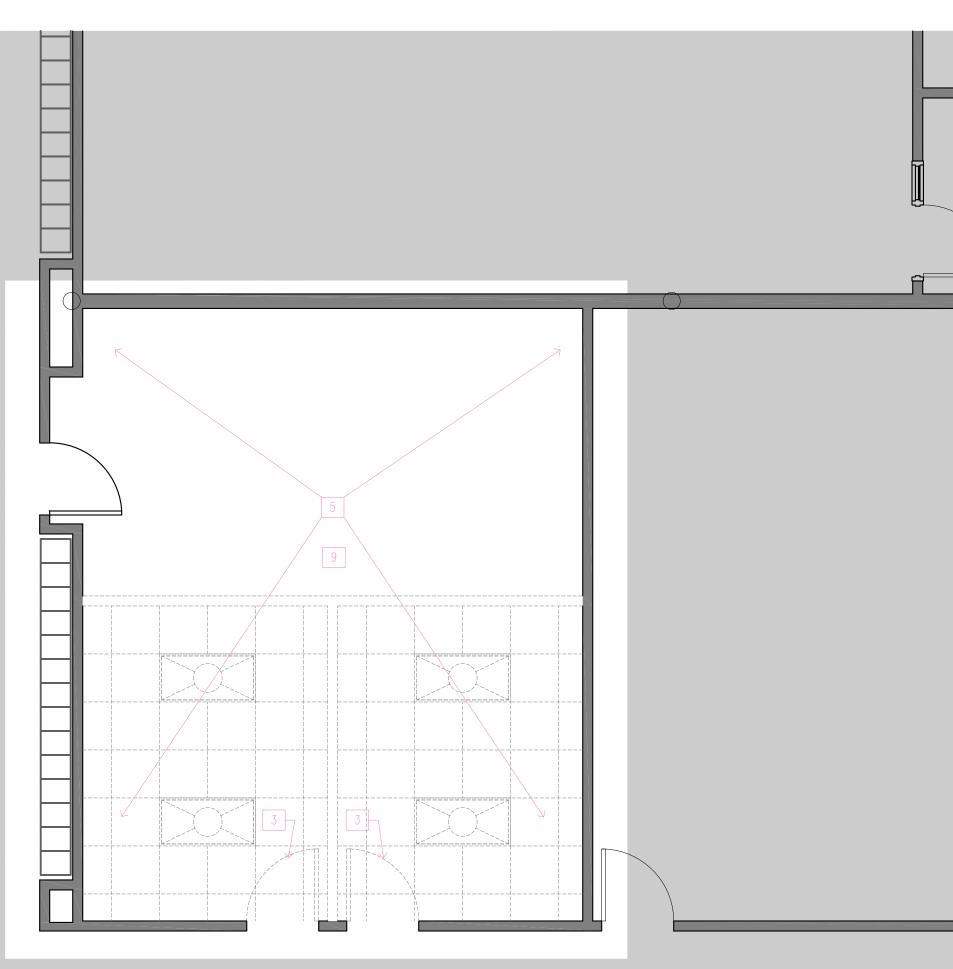
H4 ENGINEERS 25215 OAKHURST DRIVE SPRING, TX 77386 (281)528-8584 **ATTN: SHERIE HENSLEY** 

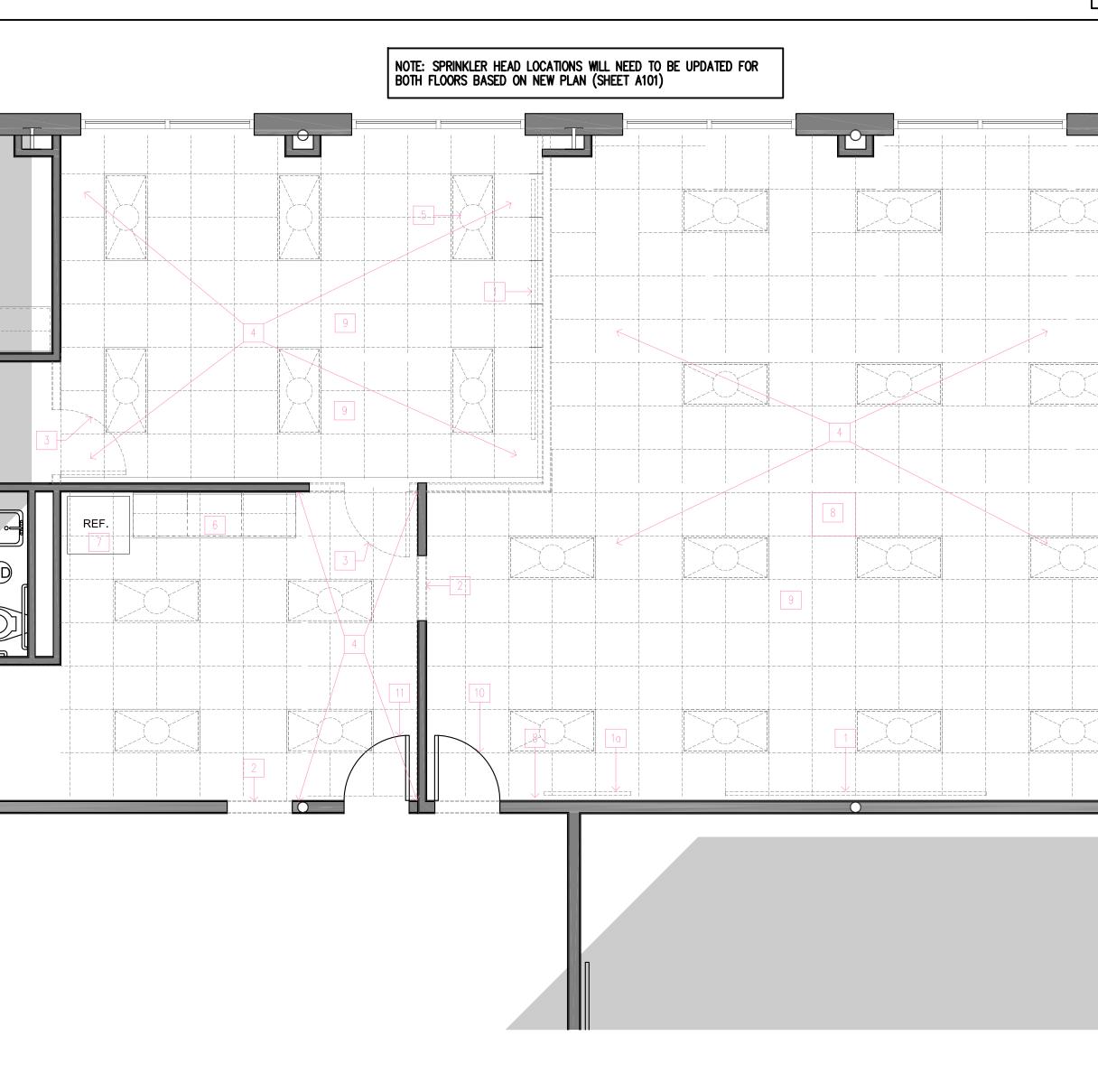
3	
E, SUITE 480	

	ye
	PUE
	ELE
	T
No.	ISSUED FOR
	YES
	WES
	1053
	HOUS
	(
Projec Date	t Number
Drawn Check	
	C
Scale	

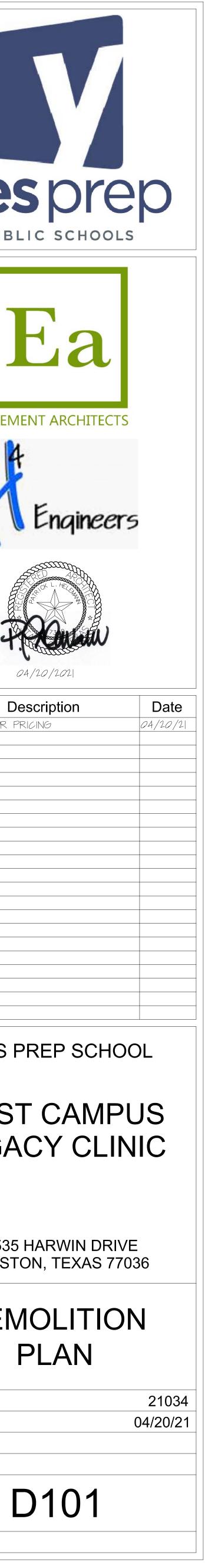


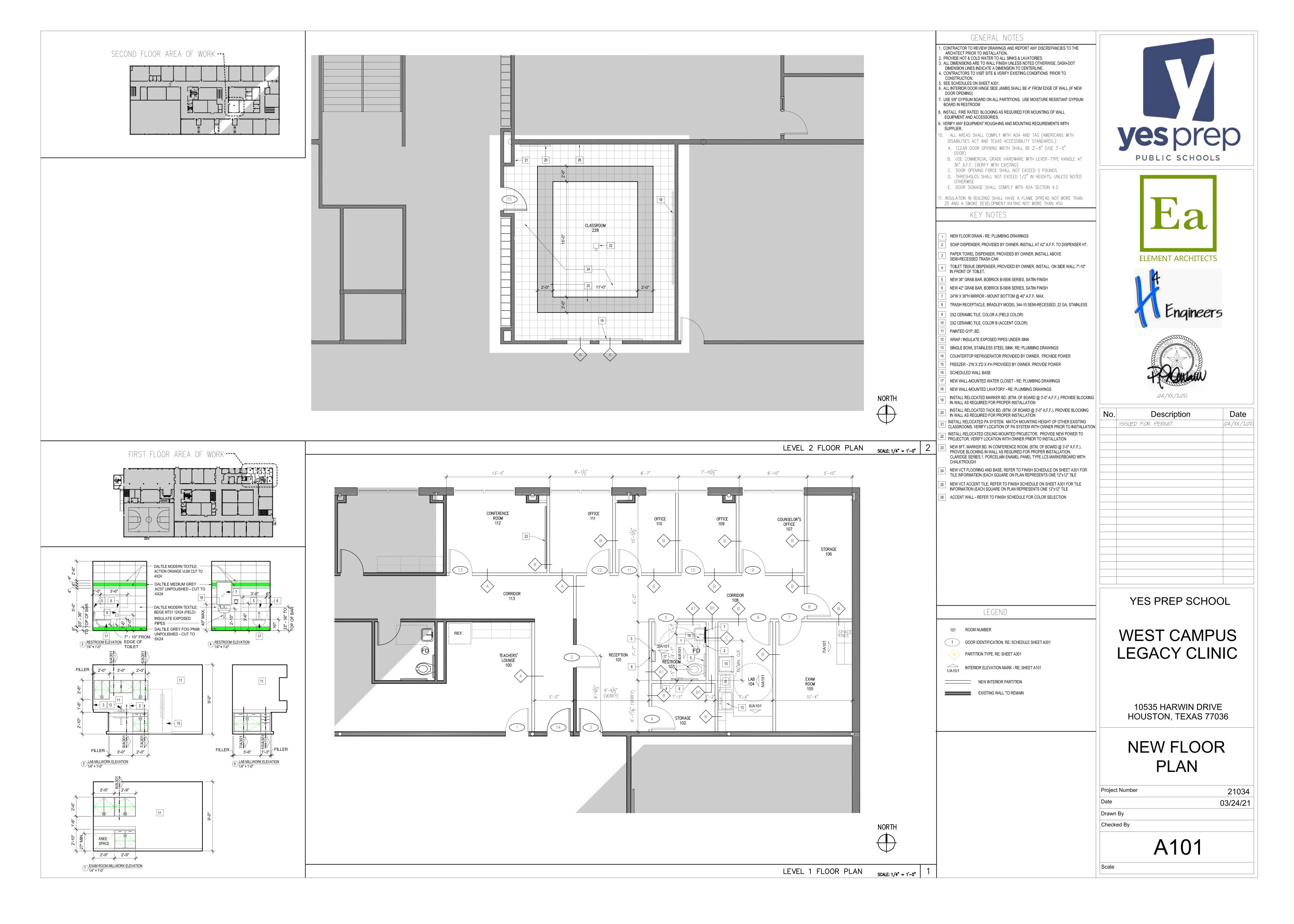
AREA OF WORK -         Image: Area of the second s	
AREA OF WOR	

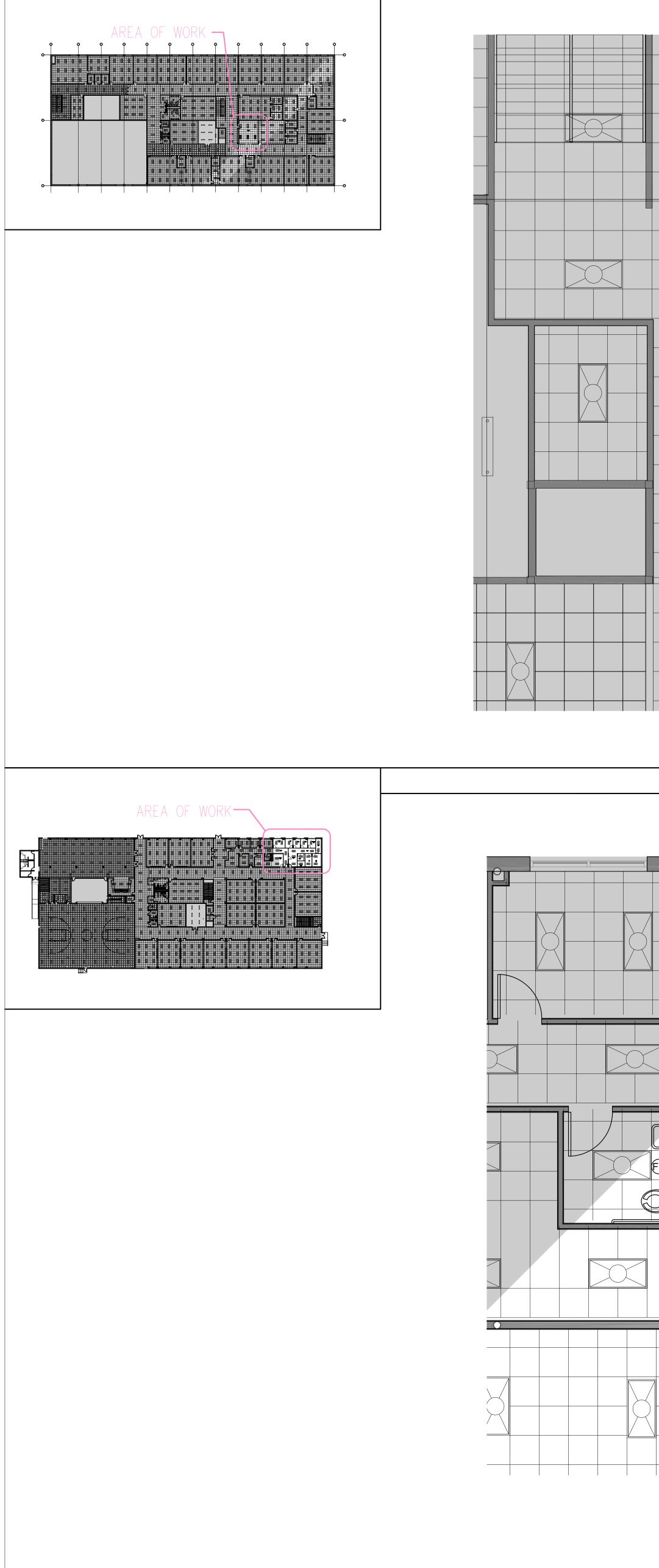




		I	
		GENERAL DEMOLITION NOTES	
		<ol> <li>THE ARCHITECT AND ARCHITECT'S CONSULTANTS SHALL HAVE NO RESPONSIBILTY FOR THE DISCOVERY, PRESENCE, HANDLING, REMOVAL, OR DISPOSAL OF, OR EXPOSURE OF PERSONS TO, HAZADOUS MATERIALS IN ANY FORM AT THE PROJECT SITE, INCLUDING BUT NOT LIMITED TO ASBESTOS PRODUCT, POLCHLORNATED BOPHEMYL (PLB) OR OTHER SUBSTANCES.</li> </ol>	
		<ol> <li>THE ARCHITECT AND ARCHITECT'S CONSULTANTS SHALL NOT HAVE CONTROL OVER OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR DEMOLITION OR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTIONS WITH THE WORK PERFORMED BY THE CONTRACTOR. THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S SCHEDULES OR FAILURE TO CARRY OUT HIS WORK IN ACCORDANCE WITH THE SCOPE OF WORK AS DEFINED WITHIN THE CONSTRUCTION DOCUMENTS</li> </ol>	
		3. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS NECESSARY TO PERFORM DEMOLITION WORK WITHIN THE PROPERTY LINE AND IN THE	Ve
		STREET RIGHT-OF-WAY. 4. ANY DAMAGE TO EXISTING SITE IMPROVEMENTS OR SURROUNDING IMPROVEMENTS, PUBLIC OR PRIVATE, BY THE CONTRACTOR SHALL BE	PUB
		<ul> <li>REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.</li> <li>5. WHERE EXISTING CONCRETE PAVING IS TO BE REMOVED SAW CUT EXISTING PAVEMENT TO LIMITS INDICATED ON THIS PLAN AND ON CIVIL DRAWINGS, TO A DEPTH OF NOT LESS THAN 2 INCHES. BREAK-OUT REMAINING CONCRETE. EXPOSE 18-INCHES OF EXISITING REINFORCING. CUT REINFORCING CLEANLY, SUCH THAT THE REINFORCING IS LEFT IN PLACE</li> </ul>	
		WITH THE PAVEMENT TO REMAIN. BEND STEEL OUT OF THE WAY. AND REMOVE AND DISPOSE OF THE EXISTING PAVEMENT INDICATED.	
		<ol> <li>ANY REMOVAL OF ASBESTOS CONTAINING MATERIALS NEEDS TO BE CONDUCTED BY A LICENSED ASBESTOS CONSULTANT.</li> <li>CONTRACTOR TO INVESTIGATE ALL EXISTING CONDITIONS PRIOR TO</li> </ol>	-
		REMOVAL OF ANY EXISTING CONSTRUCTION AND PROVIDE ADDEQUATE SUPPORT OR BRACING AS REQUIRED FOR CONSTRUCTION TO REMAIN.	
		<ul><li>8. WHERE THE SLAB HAS BEEN REMOVED FOR INSTALLATION OF NEW SEWER LINES, REPLACE SLAB TO MATCH EXISTING.</li><li>9. ALL DEMOLITION WORK AND TEMPORARY CONSTRUCTION SHALL BE DONE IN</li></ul>	ELEN
		THE SAFEST POSSIBLE MANNER AND IN CONFORMANCE WITH ALL GOVERNMENTAL AUTHORITIES REGULATIONS FOR HEALTH AND SAFETY.	
		10. CONTRACTOR TO GRIND SMOOTH ANY IMPERFECTIONS IN CONCRETE SLAB AS A RESULT OF PREVIOUS OR NEW DEMO WORK TO BRING SLAB INTO TOLERANCES AS PER SPECIFICATIONS.	
		11. REFER TO MEP DRAWINGS FOR INFORMATION RELATED TO DEMOLITION OR RELOCATION OF ANY MECHANICAL, ELECTRICAL AND PLUMBING ITEMS NOT FULLY ADDRESSED THIS SHEET INCLUDING, BUT NOT LIMITED TO, LIGHTING, PLUMB. FIXTURES AND DUCTWORK. CONTRACTOR TO REMOVE ALL MECHANICAL, ELECTRICAL AND PLUMBING ITEMS UNLESS OTHERWISE NOTED ON MEP DRAWINGS.	
		12. WHERE EXISTING FLOORS ARE REQUIRED TO BE SAWCUT FOR NEW TRENCHES FOR ELECTRICAL, PLUMBING, ETC., FLOORS ARE REQUIRED TO MATCH EXISTING	
		13.CUT OFF ANY EXISTING, UNUSED PIPE PENETRATIONS AND/OR BOLTS STICKING OUT OF SLAB. INFILL ANY PITS AND DEPRESSIONS IN SLAB AS REQUIRED TO PROVIDE A SMOOTH SURFACE. PATCH ANY MINOR CONCRETE CRACKS.	4
			No. E
LEVEL 2 DEMOLITION PLAN	SCALE: 1/4" = 1'-0" 2	DEMOLITION KEY NOTES REMOVE EXISTING 12' LONG MARKER BOARD AND RETAIN FOR RE-INSTALLATION IN NEW CLASSROOM ON SECOND FLOOR	
		10       REMOVE EXISTING 4' TACK BOARD AND RETAIN FOR RE-INSTALLATION ON SECOND FLOOR CLASSROOM         2       CREATE NEW OPENING IN EXISTING WALL AND PREP. FOR FUTURE DOOR	
		3 REMOVE EXISTING DOOR, DOOR FRAME AND DOOR HARDWARE AND RETAIN FOR RE-USE.	
		EXISTING CEILING GRID TO REMAIN WHERE POSSIBLE. MODIFY GRID AS NECESSARY AT NEW PARTITIONS THAT GO TO DECK (TYPE A/A1/C) AND WHERE WALLS WERE REMOVED. RE-USE EXISTING LIGHT FIXTURES AND RE-POSITION IN NEW SPACE AS SHOWN ON NEW REFLECTED	
		CEILING PLAN A201. 5 EXISTING CEILING GRID TO REMAIN IN FORMER CONFERENCE ROOM. REMOVE CEILING GRID IN OFFICES BEING DEMOLISHED AND EXTEND	
		EXISTING CEILING GRID THROUGHOUT NEW SPACE. REPOSITION EXISTING LIGHTS AS SHOWN ON A201.	
		7       EXISTING REFRIGERATOR TO REMAIN.         8       REMOVE AND RELOCATE EXISTING CEILING MOUNTED PROJECTOR AND	
		PA SYSTEM. RE-INSTALL IN NEW SECOND LEVEL CLASSROOM REMOVE EXISTING VCT FLOOR TILE AND BASE AND PREP. FLOOR FOR NEW TILE INSTALLATION IN ALL ROOMS EXCEPT EXISTING TEACHERS'	
		LOUNGE 10 EXISTING DOOR FRAME TO REMAIN. RE-USE DOOR PANEL ON 2ND LEVEL CLASSROOM	YES
		11 EXISTING DOOR AND FRAME TO REMAIN	WES
		LEGEND	LEGA
		EXISTING WALL TO REMAIN	
			1053 HOUS
			DEN
			Project Number
			Date Drawn By
	NORTH		Checked By
	$\bigoplus$		
	1		Scale
LEVEL 1 DEMOLITION PLAN	SCALE: 1/4" = 1'-0"		

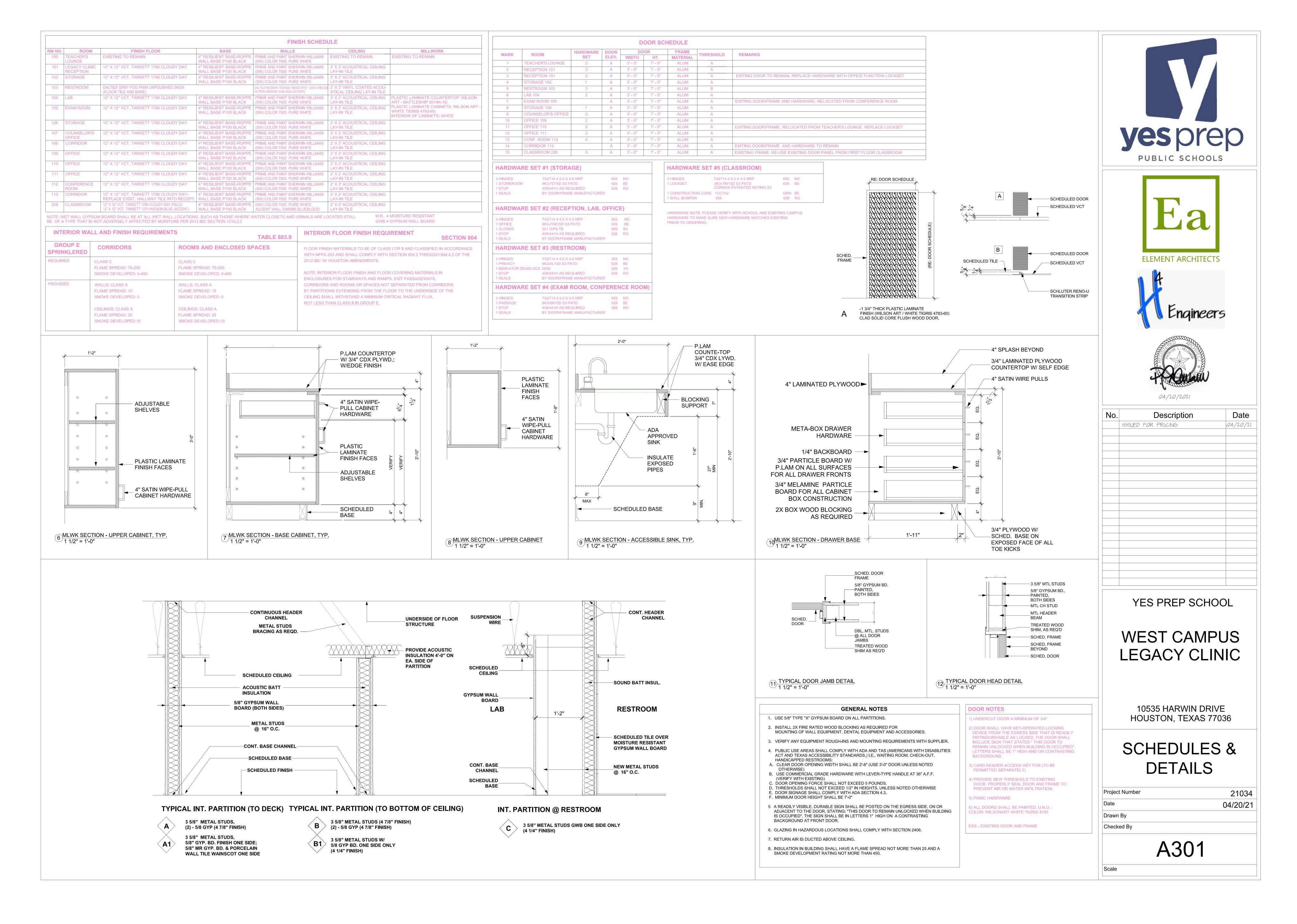


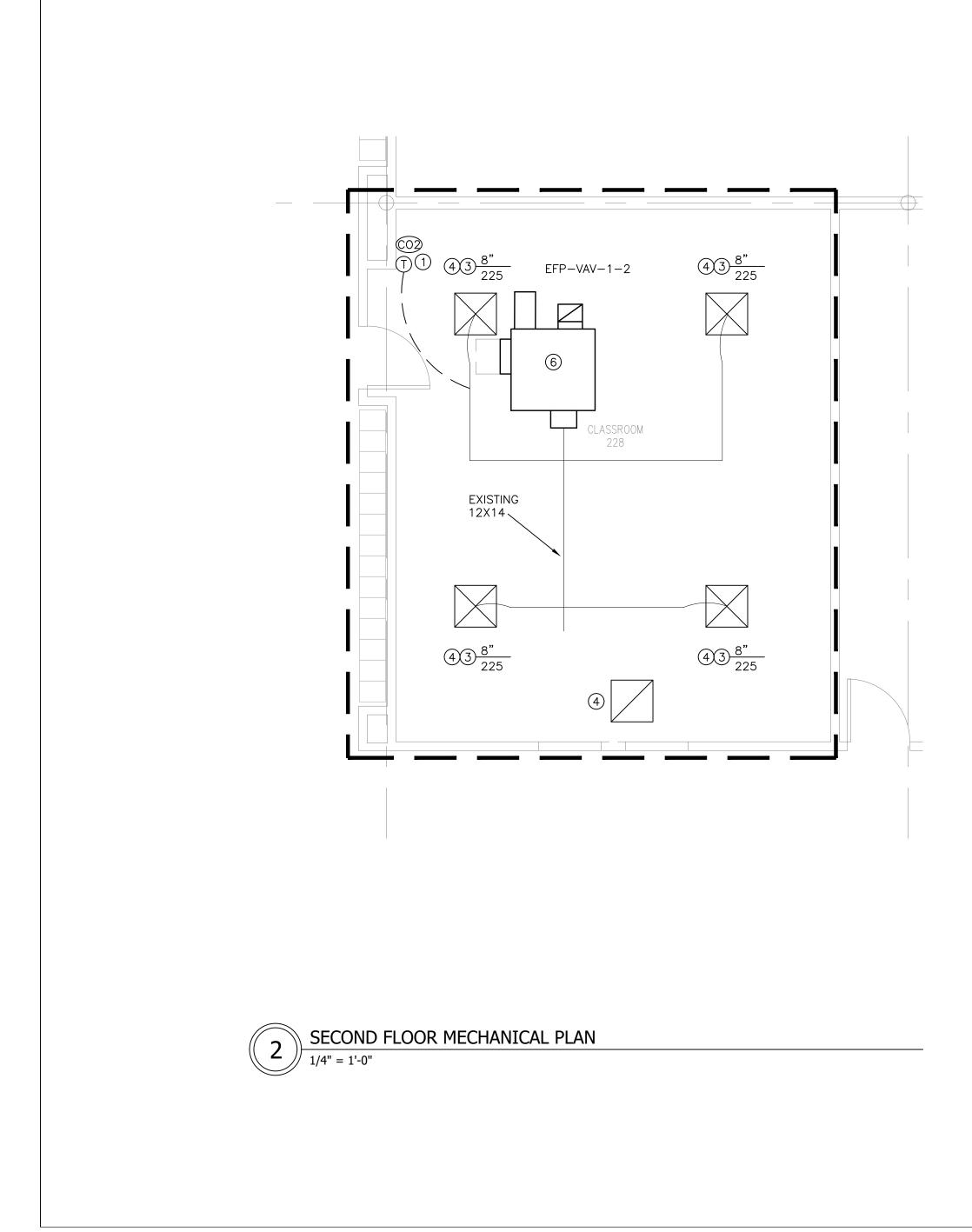




CONFERENCE ROOM 112 3 CORRIDOR 113		OFFICE 110			COUNSELOR'S OFFICE 107
		Festroo 103	OM OM STORAGE 102	108	EXAM ROOM 105







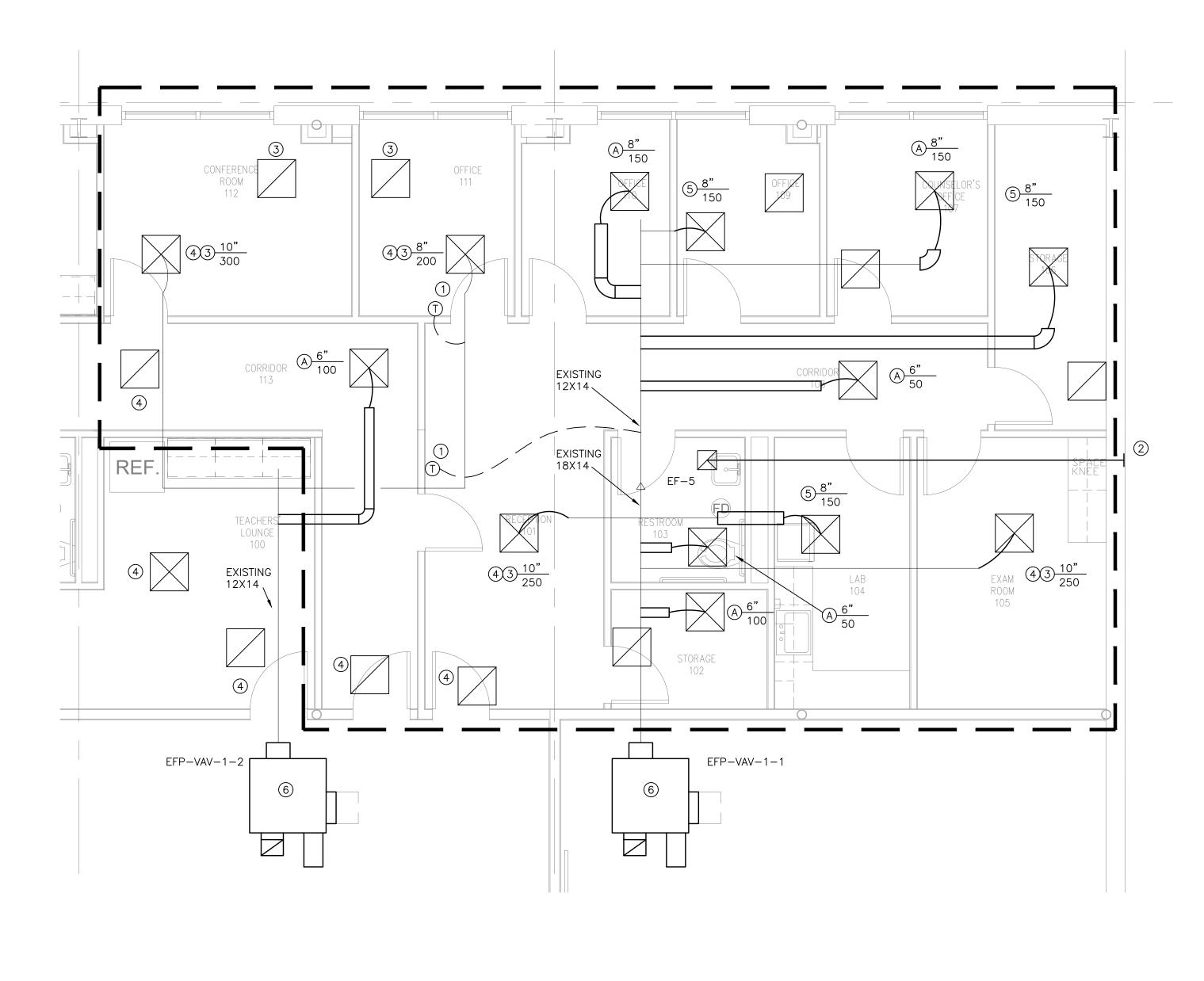
NEW WORK IS SHOWN BOLD. ALL EXISTING TO REMAIN WORK IS SCREENED.

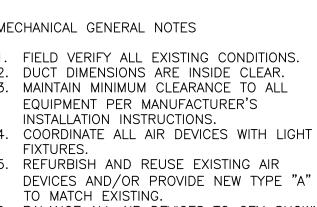
MECHANICAL GENERAL NOTES 1. FIELD VERIFY ALL EXISTING CONDITIONS.

- 3. MAINTAIN MINIMUM CLEARANCE TO ALL EQUIPMENT PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. 4. COORDINATE ALL AIR DEVICES WITH LIGHT
- FIXTURES. 5. REFURBISH AND REUSE EXISTING AIR DEVICES AND/OR PROVIDE NEW TYPE "A"
- TO MATCH EXISTING. 6. BALANCE ALL AIR DEVICES TO CFM SHOWN.

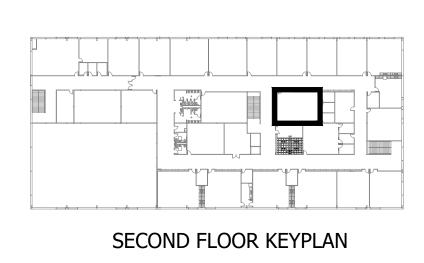
MECHANICAL KEY NOTES

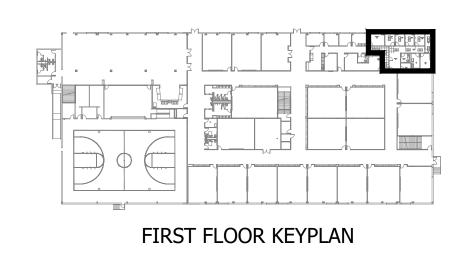
- CONTROLS). COORDINATE EXACT LOCATION WITH OWNER. 2. EXTEND EXHAUST THROUGH WALL. TERMINATE WITH WALL CAP. REFER TO
- MANUFACTURER'S INSTALLATION INSTRUCTIONS. 3. REUSE EXISTING AIR DEVICE OR PROVIDE NEW TO MATCH EXISTING. NECK SIZE AS INDICATED OR LARGER. RUN-OUT TO MATCH AIR DEVICE NECK SIZE.
- 4. EXISTING TO REMAIN. 5. RELOCATED EXISTING AIR DEVICE OR PROVIDE NEW TO MATCH EXISTING. NECK SIZE AS INDICATED OR LARGER. RUN-OUT TO MATCH AIR DEVICE NECK SIZE.
- 6. REBALANCE EXISTING FAN POWERED VAV PARALLEL BOX TO CFM SCHEDULED.



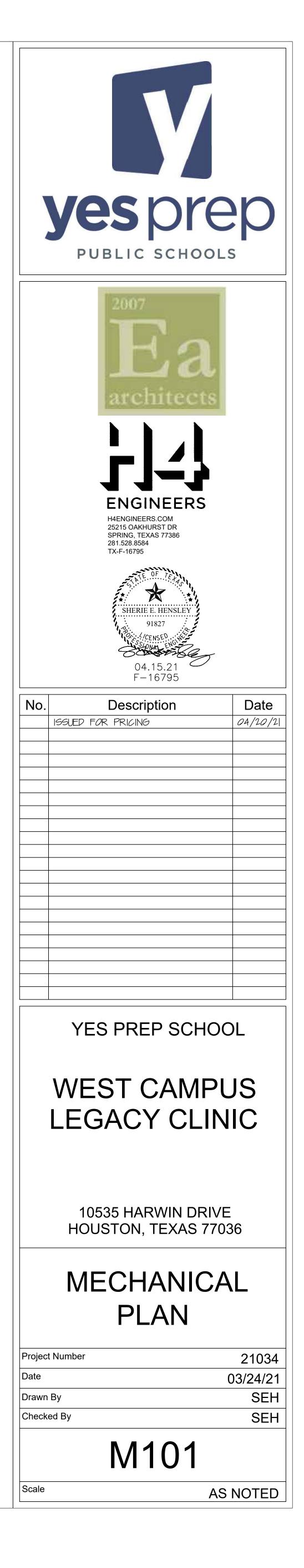


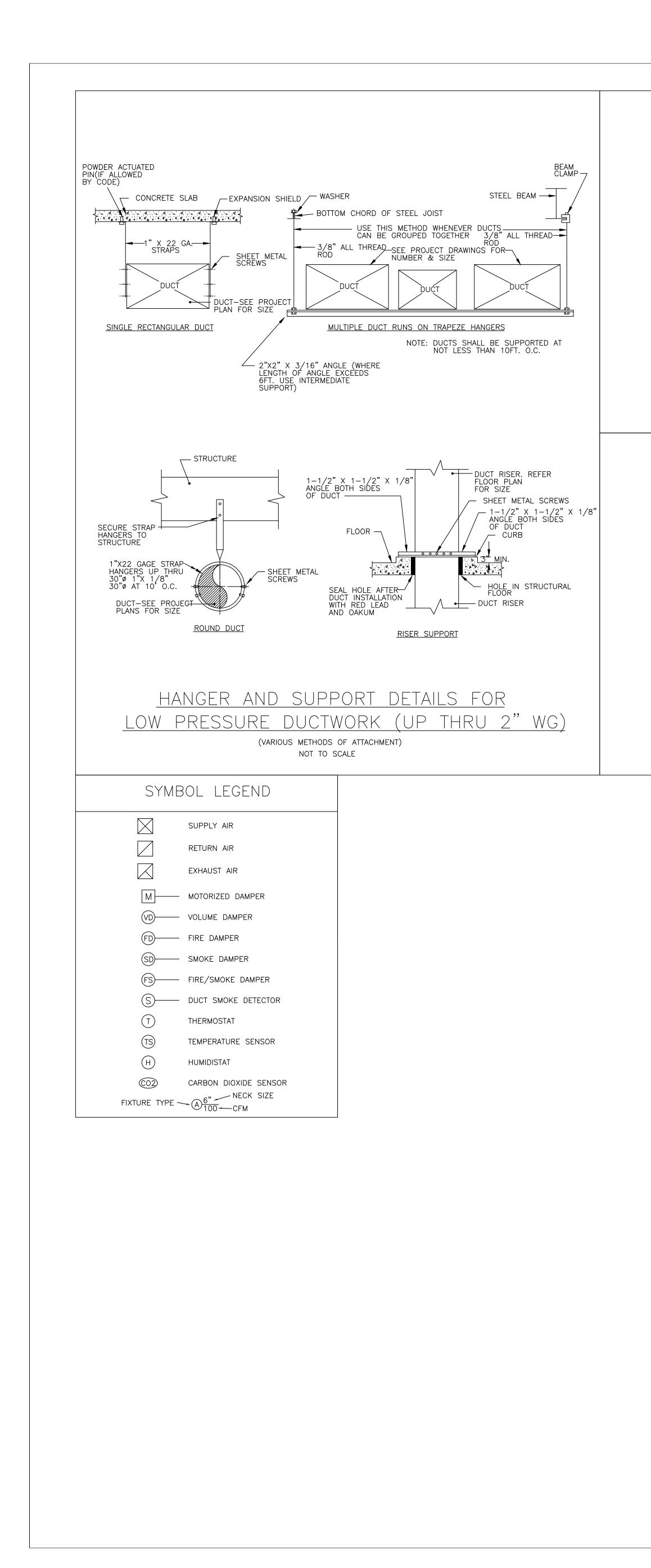
1. RELOCATE EXISTING THERMOSTAT (DDC

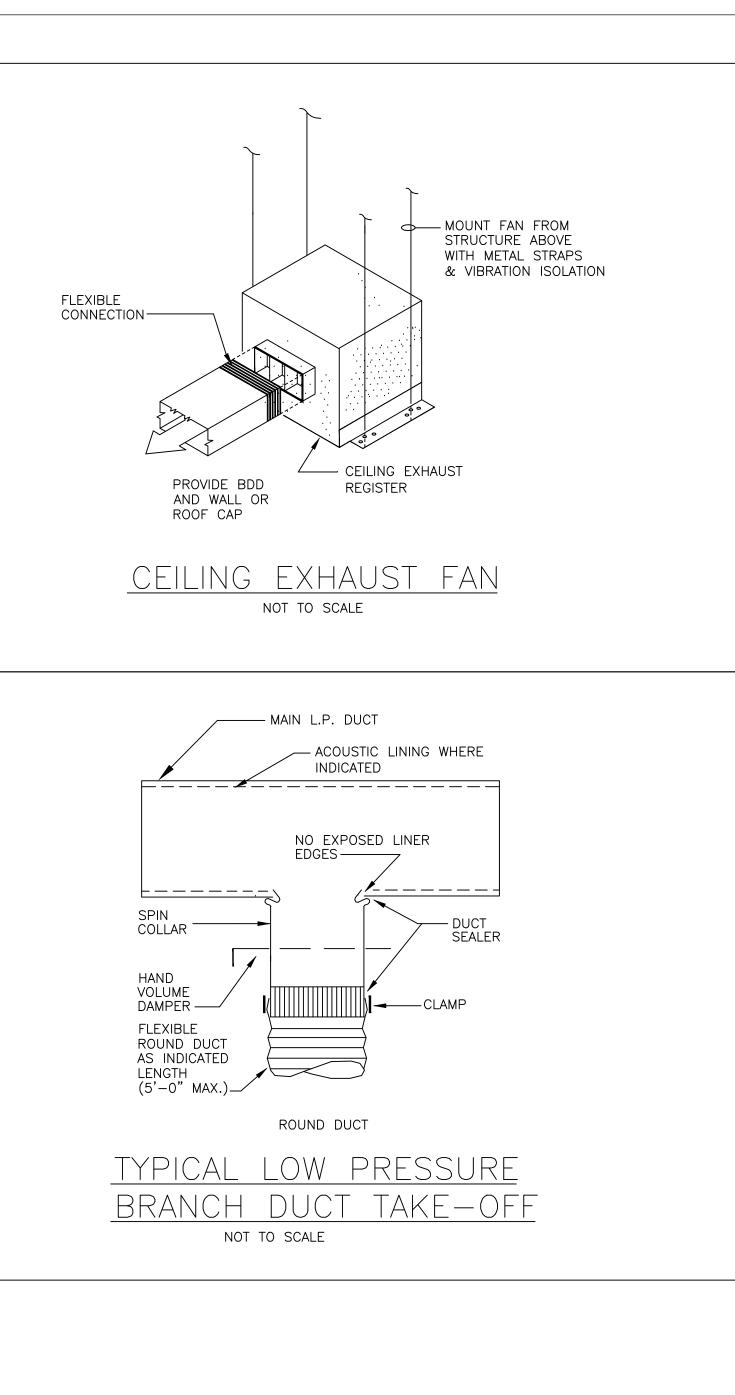








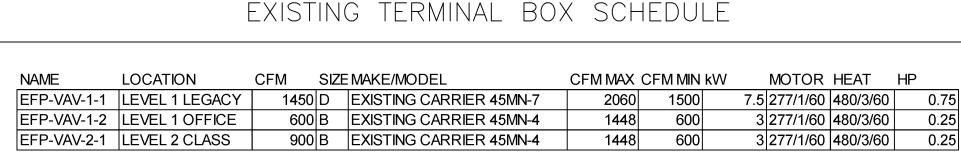




			DUC	Т СС	)		
	MAXIN	IUM SI	ZE (INCHES)				
		THROU	JGH 12				
	1.	3 THR	DUGH 30				
	3	1 THR	DUGH 54				
	MAXIN	IUM SI	ZE (INCHES)				
		THROU	JGH 12				
	1.	3 THR	DUGH 18				
	19	9 THR	DUGH 28				
			Dl	JCT	(		
		SYS	STEM				
SUPPLY	& RE	TURN	DUCT (RECTAN	GULAR)			
SUPPLY & RETURN DUCT (SPIRAL/ROUND)							
	E	EXHAUS	ST DUCT		Ģ		
	FLEXI	BLE S	UPPLY DUCT				
<u>NOTE:</u> 1. [		ND PL	ENUMS SHALL	BE SEAI	_E		
				GF	2		
NO.	SIZ	ZE	TYPE				
А	24>	<24	CEILING SUPPLY				
В	24>	〈24	CEILING RETURN				
NOTES: 1. COORDINATE MOUNTING FRAME WITH CEI 2. ALL RETURN AIR DEVICES TYPE "B" UNL							
EQUIPM NO			SERVICE	LC	)C		
EF-	5	TOIL	LET LEVEL 1	C	E		
	<u>tes</u> : Provid	)e moe	DEL SPECIFIED	OR APP	R		
			0	UTSI			

			People Outdoor Air	Zone	Area Outdoor Air		-	Zone Air Distribution Effectivenes	Zone Outdoor	1	
	Occupancy	Area	Rate	Population*			Outdoor Air Flow	S		Intake Flow	Provided
Room	Category		Rp (cfm/ppl)	Pz (ppl)	Ra (cfm/ft2)		√bz = RpPz+RaAz		Voz = Vbz/Ez		(cfm)
Corridor 108	Corridor	164	0	0	0.06	164			10		
corridor 113	Corridor	167	0	0	0.06	167			10		
ounselors Office	Office Space	86	5	1	0.06	86			10		
xam Room	Office Space	140	5	2	0.06	140			18		
ab	Office Space	101	5	1	0.06	101	11		11		
Office 109	Office Space	74	5	1	0.06	74			9		
Office 110	Office Space	77	5	1	0.06	77			10		
Office 111	Office Space	83	5	1	0.06	83			10		
Reception	Reception Area	139	5	1	0.06	139			13		
itorage 102	Storage	50	5	0	0.06	50		-	3		
torage 106	Storage	95	5	0	0.06	95			6		
Conference Room	Conference	129	5	2	0.06	129			18		
Restroom	Restroom	54	0	0	0	0	0	0	0		
									128		173 via AHU
									Ev =	0.743	
Classroom 228	Classroom	541	10	19	0.12	541	255	1	Ev = 255	0.743	
Classroom 228	Classroom	541	10	19	0.12	541	255	1	Ev = 255 255	0.743	360 via AHU
<u>Classroom 228</u> <u>NOTE</u> : OUTDOOR AIR REQUIR	Classroom			19			termin/		Ev = 255 255 Ev =	0.743	
			ANSFER AIR		EXI	STING	TERMINA		Ev = 255 255 Ev =	0.743 360 0.708	360 via AHU
			ANSFER AIR	LOCATION	EXI	STING size m		AL BO>	Ev = 255 255 Ev =	0.743	

Room Corridor 108	Occupancy Category Corridor	Area (sf) 164	People Outdoor Air Rate Rp (cfm/ppl) 0		Ra (cfm/ft2)	Zone Area Az	Outdoor Air Flow √bz = RpPz+RaAz	s	Zone Outdoor	Intake Flow Vot	Provided (cfm)
Corridor 113 Counselors Office Exam Room	Corridor Office Space Office Space	167 86 140	0 5 5	1	0.06	167 86 140	10 10 18	1 1	10 10 18		
_ab Office 109 Office 110	Office Space Office Space	101 74 77	5	1	0.06 0.06 0.06	74	9	1 1 1	11 9 10		
Office 111 Reception	Office Space Office Space Reception Area	83 139	5		0.06	83 139	10	1	10	1	
Storage 102 Storage 106	Storage Storage	50 95	5 5	0		50 95	3	1	3	]	
Conference Room Restroom	Conference Restroom	129 54		2 0	0.06	129 0			18 0 128		173 via AHU
	Oleasaam	544	10	10	0.42	544	055		Ev =		
NOTE: OUTDOOR AIR REQUIF	Classroom	<b>541</b>		19	0.12	541	255	1	255 255 Ev =	360	360 via AHU
					EXI	STING	TERMINA	AL BO>	( SCHE	DULE	
			IAME	LOCATION	CFM		AKE/MODEL		CFM MAX CFI		MOTOR HEAT HP



# ONSTRUCTION MINIMUM SHEET METAL THICKNESS

	RECTANGULAR DUCTS										
	STEEL (MINIMUM THICKNESS, NORMAL)										
		0.028 INCH (24 GAGE, GALV.)									
ROUND DUCTS											
	SPIRAL SEAM DUCT	LONGITUDINAL SEAM DUCT	FITTINGS								
	STEEL (MINIMUM THICKNESS, NORMAL)	STEEL (MINIMUM THICKNESS, NORMAL)	STEEL (MINIMUM THICKNESS, NORMAL)								
	0.019 INCH (28 GAGE, GALV.)	0.022 INCH (26 GAGE, GALV.)	0.022 INCH (26 GAGE, GALV.)								
	0.022 INCH (26 GAGE, GALV.)	0.028 INCH (24 GAGE, GALV.)	0.028 INCH (24 GAGE, GALV.)								
	0.028 INCH (24 GAGE, GALV.)	0.034 INCH (22 GAGE, GALV.)	0.034 INCH (22 GAGE, GALV.)								

	& PIPING MATERIAL & INSULATION SCHEDULE				
	DUCT/PIPING MATERIAL	INSULATION MATERIAL			
	GALVANIZED SHEET METAL LINER	JOHNS MANVILLE PERMACOTE LINACOUSTIC OR EQUAL, 1–1/2 LB/CU FT, NFPA 25/50 FLAME SPREAD AND SMOKE DEVELOPED RATING. MINIMUM INSTALLED R–6 INSIDE AND R–8 OUTSIDE BUILDING ENVELOPE.			
,	SPIRAL/ROUND DUCT LINER INSULATION	CERTAINTEED TOUGHGUARD ULTRA*ROUND SPIRAL DUCT LINER, NFPA 25/50 FLAME SPREAD AND SMOKE DEVELOPED RATING. MINIMUM INSTALLED R-6 INSIDE AND R-8 OUTSIDE BUILDING ENVELOPE.			
	GALVANIZED SHEET METAL, UNLINED	NONE			
	UL 181, CLASS 1, INTERLOCKING SPIRAL OF ALUMINUM FOIL	THERMAFLEX M-KE, FIBERGLASS INSULATION, FIBERGLASS REINFORCED VAPOR-BARRIER FILM. MINIMUM INSTALLED R-6 INSIDE AND R-8 OUTSIDE BUILDING ENVELOPE.			

LED IN ACCORDANCE WITH THE MECHANICAL CODE AND SMACNA METHOD A.

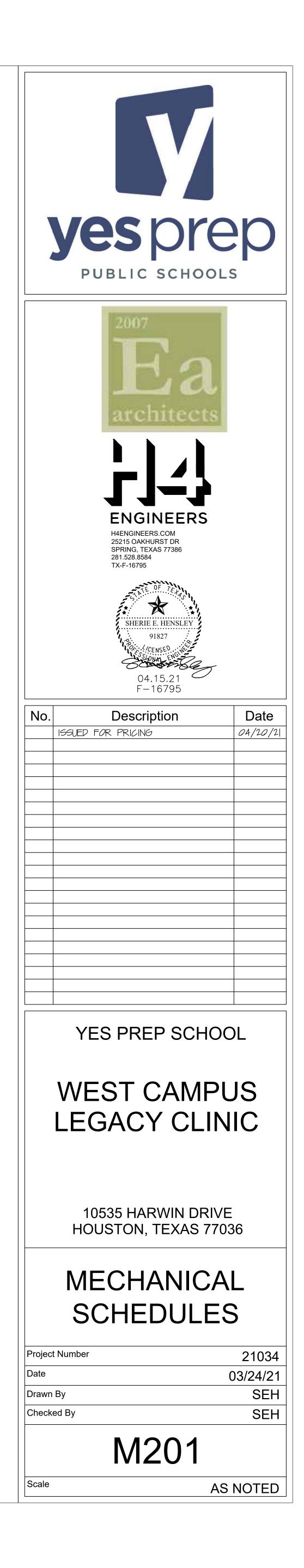
21	RILLE – REGISTER – DIFFUSER SCHEDULE					
	MANUFACTURER AND MODEL	FINISH	DESCRIPTION	NOTES		
	TITUS OMNI	WHITE	PLAQUE FACE, NECK SIZE PER PLANS, SQ TO RND TRANSITION, STEEL CONSTRUCTION	1		
	TITUS PAR	WHITE	PERFORATED FACE RETURN, NECK SIZE PER PLANS, ALUMINUM CONSTRUCTION	1,2		

EILING TYPE. ILESS NOTED OTHERWISE

FAN SCHEDULE STATIC PRESSURE ELECTRICAL V/Ø/Hz (IN WC) ELECTRICAL MANUFACTURER AND WEIGHT HP/RPM MODEL (LBS) CFM CATION NOTES 120/1/60 EILING 80 0.10 43.1 WATTS BROAN A80 10 

ROVED EQUAL.

## 



- DIVISION 23 HEATING VENTILATING AND AIR CONDITIONING
- 230000 HVAC BASIC REQUIREMENTS
  - A. MINIMUM STANDARDS FOR ALL WORK SHALL BE CITY OF HOUSTON AMENDMENTS TO 2012 INTERNATIONAL BUILDING CODE, 2012 UNIFORM MECHANICAL CODE, AND 2015 INTERNATIONAL ENERGY CONSERVATION CODE.
  - B. REFERENCES: THE STANDARDS MENTIONED HEREIN WILL BE REFERRED TO IN THE DESIGN OF MECHANICAL SYSTEMS. THE ENGINEER WILL SELECT APPROPRIATE SECTIONS OF THE STANDARD TO BE APPLIED IN ACCORDANCE WITH ESTABLISHED ENGINEERING PRINCIPLES AND PRACTICES.
  - 1. APPLICABLE SECTIONS OF NFPA
  - 2. AMERICANS WITH DISABILITIES ACT (ADA)

  - 3. TEXAS ACCESSIBILITY STANDARDS (TAS)
  - C. SITE CONDITIONS: BEFORE SUBMITTING ANY PROPOSAL, EXAMINE THE PROPOSED SITE AND DETERMINE ANY CONDITIONS THAT MAY AFFECT THE WORK. NO ALLOWANCE SHALL BE MADE FOR FAILURE
  - TO MAKE SURE EXAMINATIONS. D. THE CONTRACTOR IS RESPONSIBLE FOR ALL WORK, MATERIALS, AND
  - LABOR TO SATISFY A COMPLETE WORKING SYSTEM WHETHER SPECIFIED OR IMPLIED.
  - E. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH ALL OTHER TRADES INCLUDING ARCHITECT, STRUCTURAL, CIVIL, PLUMBING,
  - AND ELECTRICAL
  - F. DO NOT SCALE FROM THE ENGINEERED DRAWINGS. REFER TO THE DIMENSIONED DRAWINGS OF THE ARCHITECT FOR EXACT LOCATIONS OF FIXTURES, EQUIPMENT, ETC.
  - G. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND
  - INSPECTIONS REQUIRED FOR THE INSTALLATION OF WORK AND PAY ALL INCIDENTAL CHARGES.
  - H. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING ALL TESTS NECESSARY TO PREVENT CONCEALMENT OF DEFECTIVE OR IMPROPER WORK. UPON COMPLETION OF WORK, TEST INSTALLATION THOROUGHLY AND RENDER IT FROM LEAKS OR IMPROPER CONNECTIONS.
  - I. PROTECT EQUIPMENT AND WORK FROM DAMAGE DURING HANDLING AND INSTALLATION UNTIL COMPLETION OF CONSTRUCTION. REMOVE ALL EXCESS DEBRIS AND CLEAN ALL EQUIPMENT UPON COMPLETION OF WORK. TOUCH UP WITH PAINT WHERE REQUIRED.
- 230513 COMMON MOTOR REQUIREMENTS FOR HVAC EQUIPMENT
- A. PROVIDE HIGH EFFICIENCY MOTORS IN ACCORDANCE WITH INTERNATIONAL ENERGY CONSERVATION CODE.
- 230548 VIBRATION ISOLATION
  - A. VIBRATION ISOLATION WILL BE PROVIDED AS REQUIRED TO MINIMIZE TRANSMISSION TO STRUCTURE. EQUIPMENT AND PIPING SHALL HAVE ISOLATORS INSTALLED AT POINTS OF SUPPORT. APPROVED MANUFACTURERS: AMBER/BOOTH, MASON, KINETICS NOISE CONTROL, VIBRO-ACOUSTICS.
- 230593 TESTING, ADJUSTING, AND BALANCING FOR HVAC
  - A. ADJUST ALL AIR SYSTEM DAMPERS AND VOLUME CONTROLLERS TO OBTAIN PROPER AIR BALANCE THROUGHOUT THE CONDITIONED AREA. THE AIR QUANTITIES SHOWN ON THE DRAWINGS FOR INDIVIDUAL OUTLETS MAY BE CHANGED TO OBTAIN UNIFORM TEMPERATURE WITHIN EACH ZONE, BUT THE TOTAL AIR QUANTITY SHOWN FOR EACH ZONE MUST BE OBTAINED WITHIN +/- 10%. MAXIMUM TEMPERATURE
  - VARIATION WITHIN A ZONE SHALL BE 2°F. B. ADJUST ALL BLOWER DRIVES TO OBTAIN PROPER TOTAL AMOUNTS
  - OF AIR, INCLUDING EXHAUST AND OUTSIDE AIR SUPPLY. C. CALIBRATE, SET, AND ADJUST ALL AUTOMATIC TEMPERATURE
  - CONTROLS. D. PROVIDE A WRITTEN REPORT TO THE OWNER AND ENGINEER IN ACCORDANCE WITH AABC, NEBB, OR ASHRAE 111.
- 230713 DUCT INSULATION
  - A. ACOUSTICAL LINER: JOHNS MANVILLE PERMACOTE LINACOUSTIC OR APPROVED EQUAL; DENSITY 1-1/2 LB PER CUBIC FOOT OR GREATER, "K" VALUE NOT MORE THAN 0.28 AT 75°F MEAN TEMPERATURE DIFFERENCE. INTERIOR FACE OF LINER SHALL BE COATED WITH A SMOOTH, POLYMER BASED SUBSTANCE THAT INHIBITS MICROBIOLOGICAL GROWTH, DOES NOT HAVE CAVITIES FOR COLLECTION OF DIRT AND DEBRIS, AND MEETS NFPA 25/50 STANDARDS FOR FLAME SPEED AND SMOKE DEVELOPED RATINGS. THE MANUFACTURER SHALL CERTIFY THAT THE SURFACE COATING IS CLEANABLE WITH INDUSTRY STANDARD DUCT CLEANING EQUIPMENT AND SHOW TYPE OF EQUIPMENT.
  - B. ALL INSULATION THICKNESS SHALL MEET THE MINIMUM REQUIREMENTS OF INTERNATIONAL ENERGY CONSERVATION CODE.

- 230993 SEQUENCE OF OPERATIONS FOR HVAC CONTROLS
  - A. AIR TERMINALS PARALLEL FAN POWERED
  - 1. FAN TURNS ON/OFF WHEN ASSOCIATED AHU TURNS ON/OFF.
  - 2. ZONE REHEAT 3. DEMAND CONTROL VENTILATION (CO2 SENSOR)
  - a. ZONE CONTROLLER MONITORS CO2 SENSOR AND CAN
  - OVERRIDE TEMPERATURE CONTROL TO RESPOND TO INCREASING CO2 LEVELS WHEN THE ZONE IS OCCUPIED. b. WHEN ZONE IS UNOCCUPIED, MINIMUM AIRFLOW PROVIDES
  - BASE VENTILATION. c. AUXILIARY HEAT - THE CONTROLLER WILL MAINTAIN ZONE'S
  - TEMPERATURE AT A HEATING SETPOINT THAT IS TEMPORARILY INCREASED TO HALFWAY BETWEEN THE HEATING AND COOLING SETPOINTS WHENEVER DCV IS ACTIVE.
  - B. PRESSURE RELIEF VIA EXISTING BAROMETRIC RELIEF HOOD. C. EXHAUST FAN TO BE INTERLOCKED WITH OCCUPANCY SENSOR.

233113 METAL DUCTS

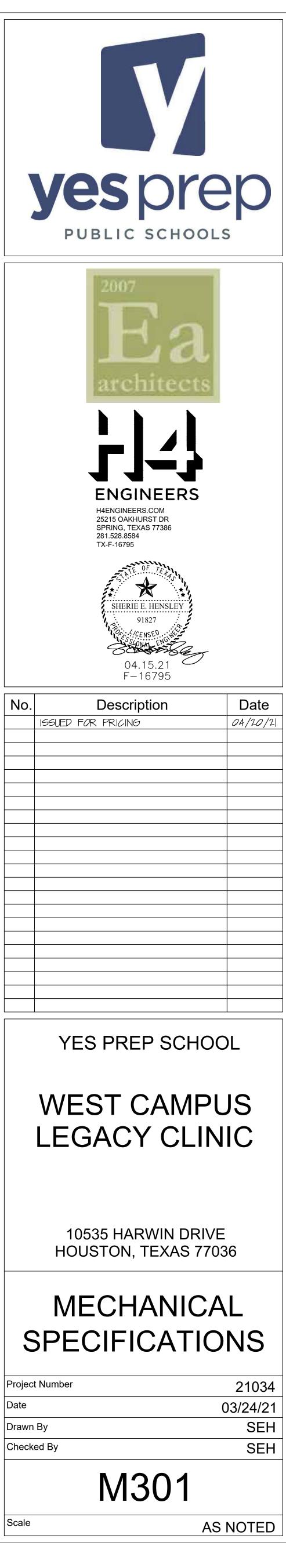
- A. DRAWING PLANS, SCHEMATICS, AND DIAGRAMS INDICATE GENERAL LOCATION AND ARRANGEMENT OF DUCT SYSTEM. INDICATED DUCT LOCATIONS, CONFIGURATIONS, AND ARRANGEMENTS WERE USED TO SIZE DUCTS AND CALCULATE FRICTION LOSS FOR AIR-HANDLING EQUIPMENT SIZING AND FOR OTHER DESIGN CONSIDERATIONS. INSTALL DUCT SYSTEMS AS INDICATED UNLESS DEVIATIONS TO LAYOUT ARE APPROVED ON SHOP DRAWINGS.
- B. GENERAL MATERIAL REQUIREMENTS: COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS – METAL AND FLEXIBLE" FOR ACCEPTABLE MATERIALS, MATERIAL THICKNESS, AND DUCT CONSTRUCTION METHODS UNLESS OTHERWISE INDICATED. SHEET METAL MATERIALS SHALL BE FREE OF PITTING, SEAM MARKS, ROLLER MARKS, STAINS, DISCOLORATIONS, AND OTHER IMPERFECTIONS.
- 1. DUCTS CONNECTED TO AIR HANDLING EQUIPMENT: GALVANIZED SHEET STEEL: COMPLY WITH ASTM A 653/A 653M. a. GALVANIZED COATING DESIGNATION: G60.
- C. HANGER SPACING: COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE," TABLE 5-1, "RECTANGULAR DUCT HANGERS MINIMUM SIZE," AND TABLE 5-2, "MINIMUM HANGER SIZES FOR ROUND DUCT," FOR MAXIMUM HANGER SPACING; INSTALL HANGERS AND SUPPORTS WITHIN 24 INCHES OF EACH ELBOW AND WITHIN 48 INCHES OF EACH BRANCH INTERSECTION.

233300 AIR DUCT ACCESSORIES

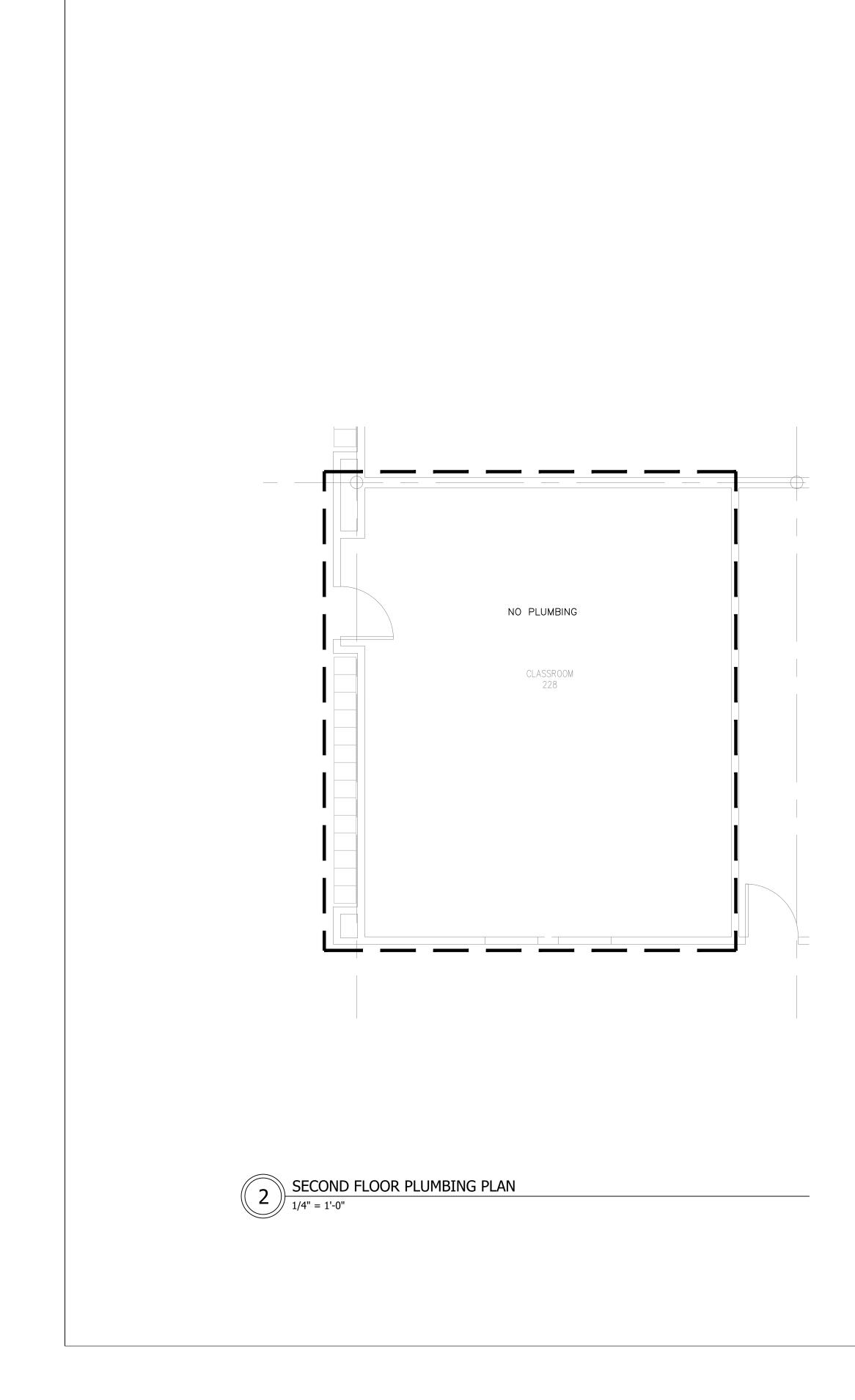
- A. VOLUME DAMPERS: PROVIDE VOLUME DAMPERS IN BRANCH DUCTWORK AS REQUIRED FOR PROPER BALANCING OF THE SUPPLY AND RETURN AIR SYSTEMS.
- B. FLEXIBLE DUCTWORK 1. INSULATED, FLEXIBLE DUCT: UL 181, CLASS 1, INTERLOCKING SPIRAL OF ALUMINUM FOIL; FIBERGLASS INSULATION; FIBERGLASS REINFORCED VAPOR-BARRIER FILM WITH A FLAME SPREAD LESS THAN 25; SMOKE DEVELOPED LESS THAN 50 SIMILAR TO THERMAFLEX M-KE, MINIMUM R-6 INSIDE AND R-8 OUTSIDE
- BUILDING ENVELOPE. 2. CONNECT FLEXIBLE DUCT TO METAL DUCT WITH ADHESIVE AND SHEET METAL SCREWS.
- 3. CONNECT AIR DEVICES WITH A MAXIMUM 6 FT LENGTH OF FLEXIBLE DUCT CLAMPED OR STRAPPED IN PLACE. C. FLEXIBLE CONNECTORS: PROVIDE FLEXIBLE CONNECTORS AT ALL
- AIR HANDLING EQUIPMENT. 1. INDOOR FLEXIBLE CONNECTOR FABRIC: GLASS FABRIC DOUBLE COATED WITH NEOPRENE.
- a. MINIMUM WEIGHT: 26 OZ./SQ.YD.
- b. TENSILE STRENGTH: 480 LBF/INCH N THE WARP AND 360 LBF/INCH IN THE FILLING.
- c. SERVICE TEMPERATURE: MINUS 40 TO PLUS 200 DEG F.

ENERGY CODE COMPLIANCE REQUIREMENTS	
COMMISSIONING PLAN	
A. AIR SYSTEM BALANCE 1. ADJUST ALL AIR SYSTEM DAMPERS AND VOLUME CONTROLLERS TO OBTAIN PROPER AIR	
BALANCE THROUGHOUT THE CONDITIONED AREA. THE AIR QUANTITIES SHOWN ON THE	
DRAWINGS FOR INDIVIDUAL OUTLETS MAY BE CHANGED TO OBTAIN UNIFORM	
TEMPERATURE WITHIN EACH ZONE AND SHALL BE WITHIN +/- 10% OF SCHEDULED VALUES AND THE TOTAL AIR QUANTITY SHOWN FOR EACH ZONE MUST BE OBTAINED	
WITHIN $+/-$ 10%. MAXIMUM TEMPERATURE VARIATION WITHIN A ZONE SHALL BE 2°F.	
2. ADJUST ALL BLOWER DRIVES TO OBTAIN PROPER TOTAL AMOUNTS OF AIR, INCLUDING EXHAUST AND OUTSIDE AIR SUPPLY.	
3. CALIBRATE, SET, AND ADJUST ALL AUTOMATIC TEMPERATURE CONTROLS.	
4. PROVIDE A WRITTEN REPORT TO THE OWNER IN ACCORDANCE WITH AABC, NEBB, OR	
ASHRAE 111. B. FUNCTIONAL PERFORMANCE TESTING	
1. EQUIPMENT FUNCTIONAL PERFORMANCE TESTING SHALL DEMONSTRATE THE INSTALLATION	
AND OPERATION OF COMPONENTS, SYSTEMS, AND SYSTEM—TO—SYSTEM INTERFACING RELATIONSHIPS IN ACCORDANCE WITH APPROVED PLANS AND SPECIFICATIONS SUCH THAT	
OPERATION, FUNCTION, AND MAINTENANCE SERVICEABILITY FOR EACH OF THE	
COMMISSIONED SYSTEMS IS CONFIRMED. TESTING SHALL INCLUDE ALL MODES AND	
SEQUENCE OF OPERATION, INCLUDING UNDER FULL-LOAD, PART-LOAD, AND THE FOLLOWING EMERGENCY CONDITIONS:	
a. ALL MODES AS DESCRIBED IN SEQUENCE OF OPERATION.	
<ul> <li>b. REDUNDANT OR AUTOMATIC BACK-UP MODE.</li> <li>c. PERFORMANCE OF ALARMS.</li> </ul>	
d. MODE OF OPERATION UPON A LOSS OF POWER AND RESTORATION OF POWER.	
e. EXCEPTION: UNITARY OR PACKAGED HVAC EQUIPMENT LISTED IN TABLES C403.2.3(1)	
THROUGH C403.2.3(3) THAT DO NOT REQUIRE SUPPLY AIR ECONOMIZERS. C. CONTROLS	
1. HVAC CONTROL SYSTEMS SHALL BE TESTED TO DOCUMENT THAT CONTROL DEVICES,	
COMPONENTS, EQUIPMENT, AND SYSTEMS ARE CALIBRATED AND ADJUSTED AND OPERATE	
IN ACCORDANCE WITH APPROVED PLANS AND SPECIFICATIONS. 2. SEQUENCES OF OPERATION SHALL BE FUNCTIONALLY TESTED TO DOCUMENT THEY	
OPERATE IN ACCORDANCE WITH APPROVED PLANS AND SPECIFICATIONS.	
D. ECONOMIZERS 1. AIR ECONOMIZERS SHALL BE FUNCTIONALLY TESTED TO DOCUMENT THAT THEY OPERATE	
IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.	
E. COMMISSIONING REPORT	
1. MECHANICAL CONTRACTOR SHALL PROVIDE A REPORT OF THE ABOVE COMMISSIONING TEST PROCEDURES AND RESULTS AND PROVIDE TO GENERAL CONTRACTOR TO COMPILE	
WITH ELECTRICAL AND PLUMBING REPORTS.	
2. REPORT SHALL IDENTIFY ANY DEFICIENCIES THAT HAVE NOT YET BEEN CORRECTED, DEFERRED TESTS THAT CANNOT BE PERFORMED AT THE TIME OF REPORT PREPARATION	
BECAUSE OF CLIMATIC CONDITIONS, AND CLIMATIC CONDITIONS REQUIRED FOR	
PERFORMANCE OF THE DEFERRED TESTS. 3. GENERAL CONTRACTOR SHALL PROVIDE COMPILED REPORT TO OWNER/REPRESENTATIVE.	
J. GENERAL CONTRACTOR SHALL PROVIDE COMPILED REPORT TO OWNER/REPRESENTATIVE.	
DOCUMENTATION REQUIREMENTS A. WITHIN 90 DAYS AFTER THE DATE OF SYSTEM ACCEPTANCE THE FOLLOWING DOCUMENTS	
SHALL BE PROVIDED TO THE OWNER:	
1. MANUALS: OPERATING AND MAINTENANCE MANUALS SHALL BE PROVIDED AND INCLUDE THE FOLLOWING:	
a. SUBMITTAL DATA STATING EQUIPMENT SIZE AND SELECTED OPTIONS FOR EACH PIECE	
OF EQUIPMENT REQUIRING MAINTENANCE. b. OPERATION MANUALS AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT	
REQUIRING MAINTENANCE, EXCEPT EQUIPMENT NOT FURNISHED AS PART OF THE	
PROJECT. REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTIFIED.	
c. NAMES AND ADDRESSES OF AT LEAST ONE SERVICE AGENCY. d. HVAC CONTROLS SYSTEM MAINTENANCE AND CALIBRATION INFORMATION, INCLUDING	
WIRING DIAGRAMS, SCHEMATICS, AND CONTROL SEQUENCE DESCRIPTIONS. DESIRED OR	Pro
FIELD-DETERMINED SET-POINTS SHALL BE PERMANENTLY RECORDED ON CONTROL	
DRAWINGS AT CONTROL DEVICES OR FOR DIGITAL CONTROL SYSTEMS IN PROGRAMMING COMMENTS.	Da
e. A COMPLETE NARRATIVE OF HOW EACH SYSTEM IS INTENDED TO OPERATE, INCLUDING	
SUGGESTED SET-POINTS.	Dr

No.



Drawn By Checked By



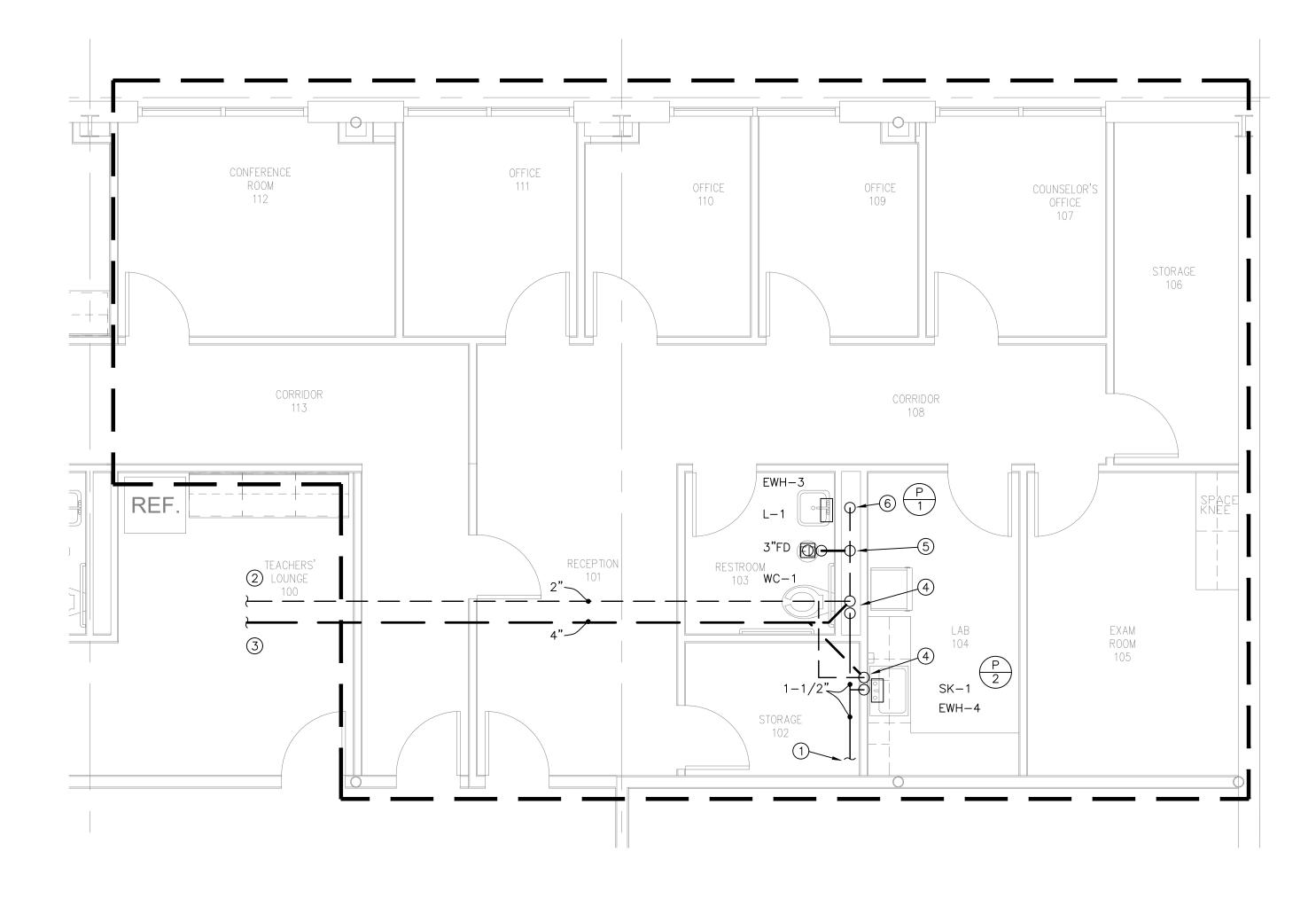
NEW WORK IS SHOWN BOLD. ALL
EXISTING TO REMAIN WORK IS
SCREENED.

PLUMBING GENERAL NOTES

- 1. FIELD VERIFY ALL EXISTING CONDITIONS. 2. ALL PLUMBING EXISTING TO REMAIN UNLESS NOTED OTHERWISE.
- 4. LOCATE SHUT-OFF VALVES ABOVE ACCESSIBLE CEILING AT ACCESSIBLE HEIGHT AT EACH FIXTURE GROUP.

PLUMBING KEY NOTES

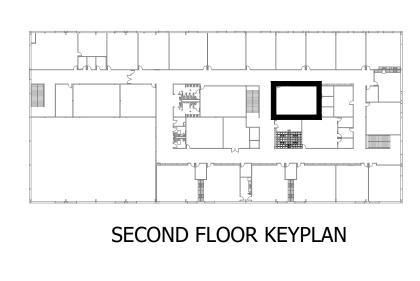
- 1. CONNECT NEW COLD WATER TO EXISTING. 2. CONNECT NEW VENT TO EXISTING.
- 3. CONNECT NEW SANITARY TO EXISTING. 4. WASTE DOWN, VENT UP, COLD WATER DOWN.
- 5. VENT UP FROM BELOW. 6. WASTE DOWN, VENT UP.

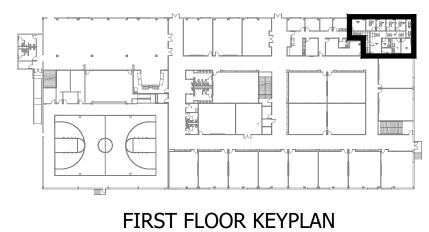


FIRE PROTECTION GENERAL NOTES

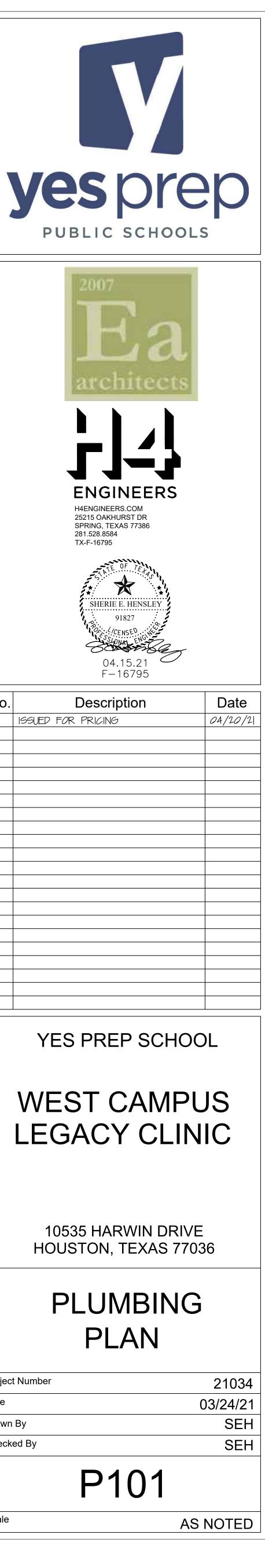
1. EXISTING BUILDING IS SPRINKLERED. RELOCATE AND/OR ADD ADDITIONAL SPRINKLER HEADS TO MATCH EXISTING, INCLUDING PIPE, FITTINGS, HANGERS, ACCESSORIES AS REQUIRED TO PROVIDE COMPLETE AUTOMATIC SPRINKLER PROTECTION AND COVERAGE REQUIRED BY LOCAL JURISDICTION, NFPA, AND FIRE CODES FOR REMODELED SPACE AND SPACES IMMEDIATELY OUTSIDE OF REMODELED SPACE. COORDINATE EXACT LOCATIONS OF NEW SPRINKLER HEADS AND EXISTING PIPING WITH ARCHITECT. 2. PENETRATIONS THROUGH WALLS AND FLOORS WHERE FIRE RATING IS

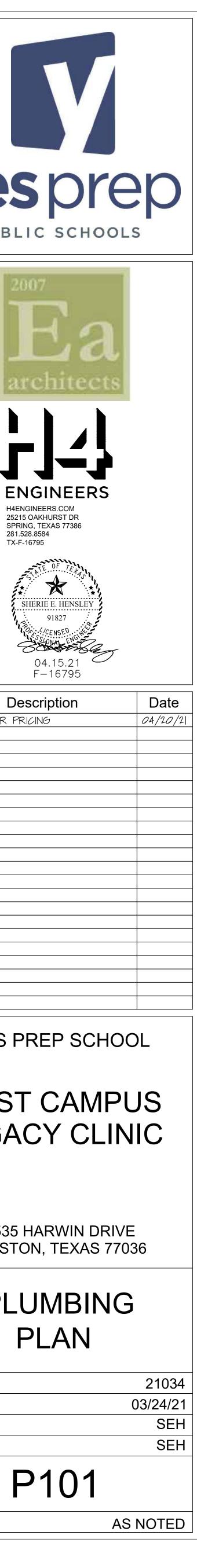
REQUIRED SHALL BE PROVIDED WITH U.L. LISTED, LOCAL JURISDICTION APPROVED SYSTEM. 3. ALL WORK ASSOCIATED WITH AND DONE TO THE BUILDING FIRE PROTECTION SYSTEM SHALL BE PERFORMED BY A STATE OF TEXAS LICENSED FIRE SPRINKLER CONTRACTOR. 4. CONTRACTOR SHALL SUBMIT SPRINKLER SHOP DRAWINGS FOR APPROVAL PRIOR TO CONSTRUCTION.

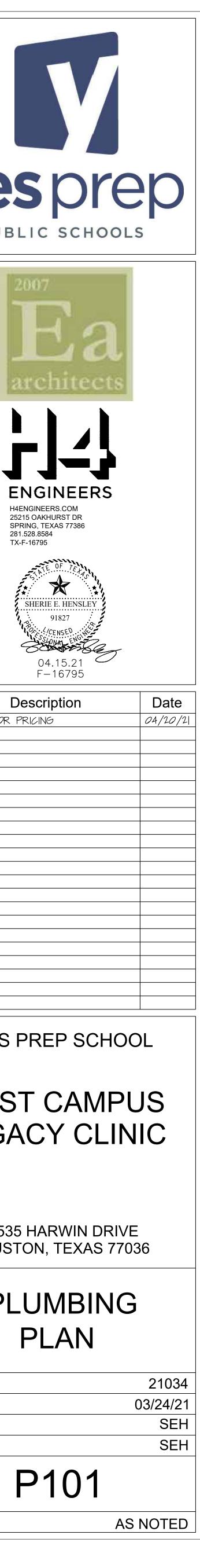




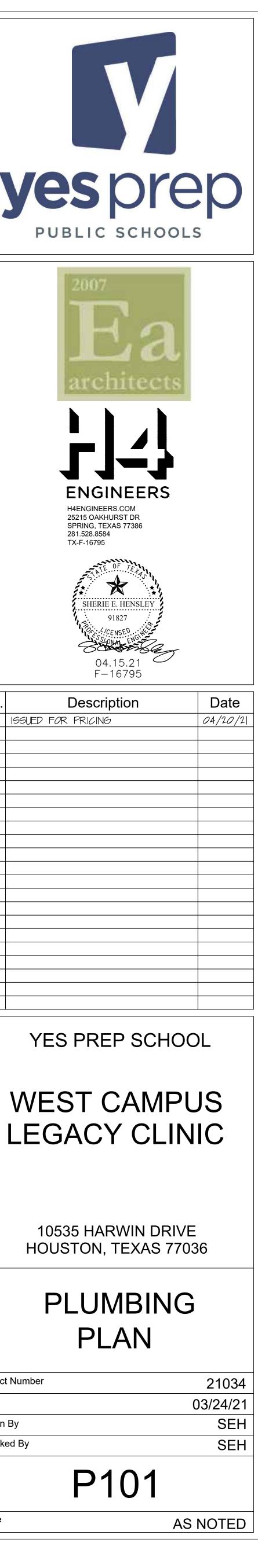


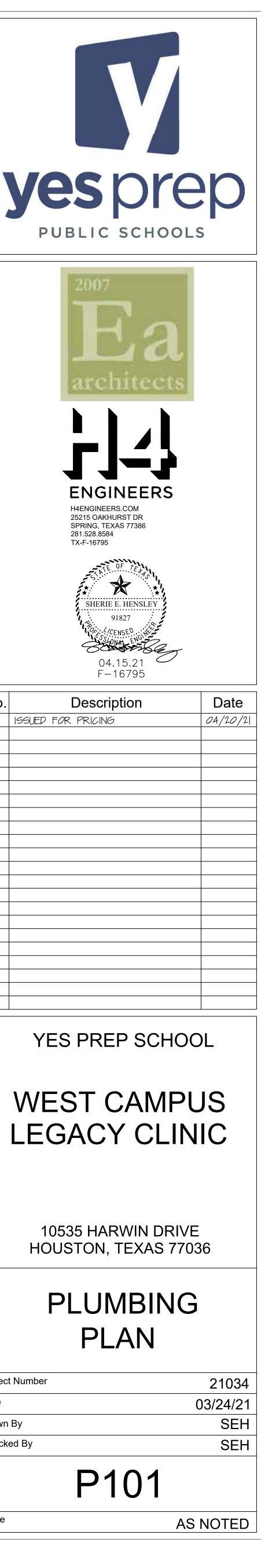


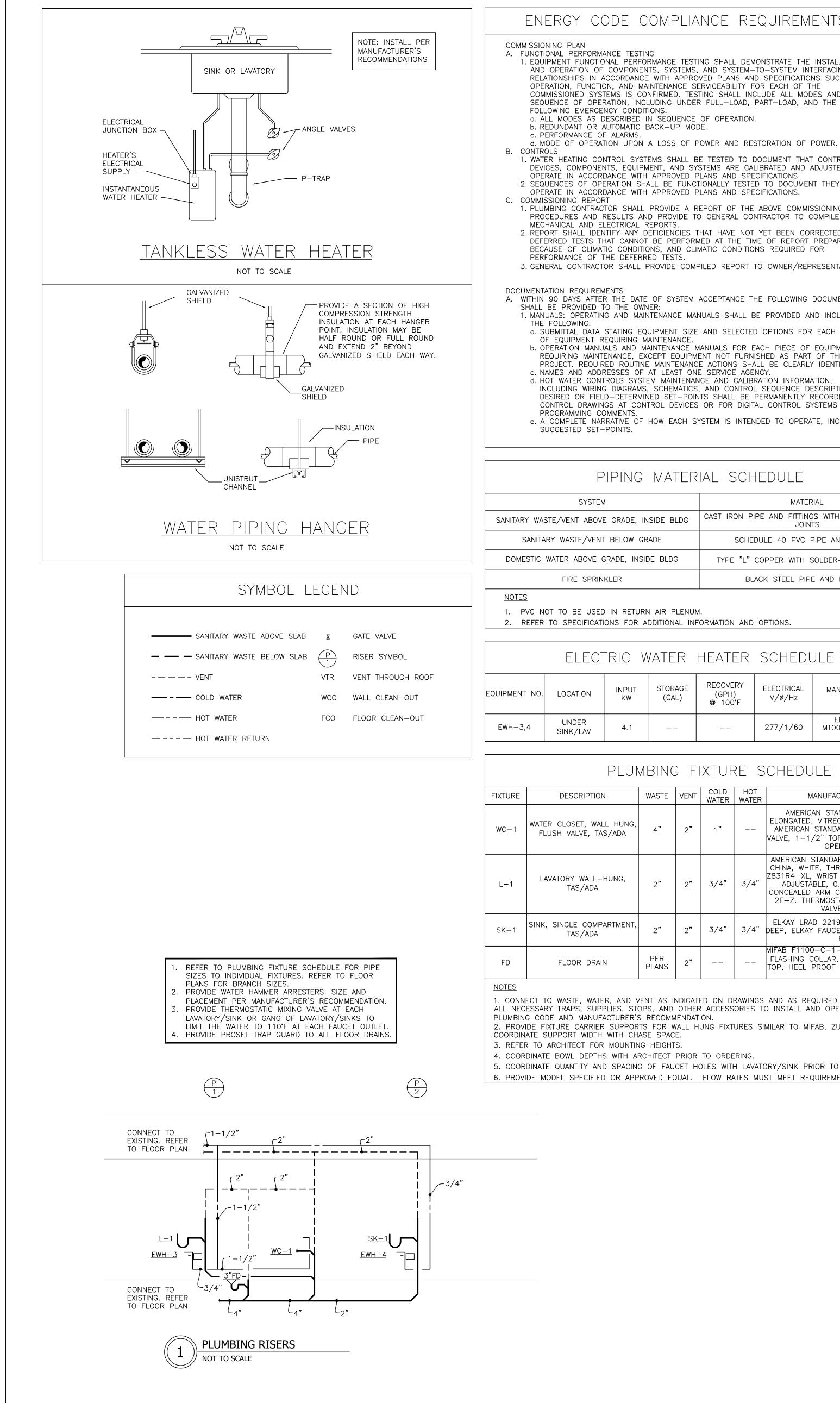












## ENERGY CODE COMPLIANCE REQUIREMENTS

1. EQUIPMENT FUNCTIONAL PERFORMANCE TESTING SHALL DEMONSTRATE THE INSTALLATION AND OPERATION OF COMPONENTS, SYSTEMS, AND SYSTEM-TO-SYSTEM INTERFACING RELATIONSHIPS IN ACCORDANCE WITH APPROVED PLANS AND SPECIFICATIONS SUCH THAT OPERATION, FUNCTION, AND MAINTENANCE SERVICEABILITY FOR EACH OF THE COMMISSIONED SYSTEMS IS CONFIRMED. TESTING SHALL INCLUDE ALL MODES AND SEQUENCE OF OPERATION, INCLUDING UNDER FULL-LOAD, PART-LOAD, AND THE FOLLOWING EMERGENCY CONDITIONS: a. ALL MODES AS DESCRIBED IN SEQUENCE OF OPERATION. b. REDUNDANT OR AUTOMATIC BACK-UP MODE.

1. WATER HEATING CONTROL SYSTEMS SHALL BE TESTED TO DOCUMENT THAT CONTROL DEVICES, COMPONENTS, EQUIPMENT, AND SYSTEMS ARE CALIBRATED AND ADJUSTED AND OPERATE IN ACCORDANCE WITH APPROVED PLANS AND SPECIFICATIONS. 2. SEQUENCES OF OPERATION SHALL BE FUNCTIONALLY TESTED TO DOCUMENT THEY OPERATE IN ACCORDANCE WITH APPROVED PLANS AND SPECIFICATIONS.

1. PLUMBING CONTRACTOR SHALL PROVIDE A REPORT OF THE ABOVE COMMISSIONING TEST PROCEDURES AND RESULTS AND PROVIDE TO GENERAL CONTRACTOR TO COMPILE WITH MECHANICAL AND ELECTRICAL REPORTS. 2. REPORT SHALL IDENTIFY ANY DEFICIENCIES THAT HAVE NOT YET BEEN CORRECTED, DEFERRED TESTS THAT CANNOT BE PERFORMED AT THE TIME OF REPORT PREPARATION BECAUSE OF CLIMATIC CONDITIONS, AND CLIMATIC CONDITIONS REQUIRED FOR PERFORMANCE OF THE DEFERRED TESTS. 3. GENERAL CONTRACTOR SHALL PROVIDE COMPILED REPORT TO OWNER/REPRESENTATIVE.

A. WITHIN 90 DAYS AFTER THE DATE OF SYSTEM ACCEPTANCE THE FOLLOWING DOCUMENTS 1. MANUALS: OPERATING AND MAINTENANCE MANUALS SHALL BE PROVIDED AND INCLUDE a. SUBMITTAL DATA STATING EQUIPMENT SIZE AND SELECTED OPTIONS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE. b. OPERATION MANUALS AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE, EXCEPT EQUIPMENT NOT FURNISHED AS PART OF THE PROJECT. REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTIFIED. c. NAMES AND ADDRESSES OF AT LEAST ONE SERVICE AGENCY. d. HOT WATER CONTROLS SYSTEM MAINTENANCE AND CALIBRATION INFORMATION, INCLUDING WIRING DIAGRAMS, SCHEMATICS, AND CONTROL SEQUENCE DESCRIPTIONS. DESIRED OR FIELD-DETERMINED SET-POINTS SHALL BE PERMANENTLY RECORDED ON CONTROL DRAWINGS AT CONTROL DEVICES OR FOR DIGITAL CONTROL SYSTEMS IN e. A COMPLETE NARRATIVE OF HOW EACH SYSTEM IS INTENDED TO OPERATE, INCLUDING

PIPING MATERIAL SCHEDULE

STEM	MATERIAL
BOVE GRADE, INSIDE BLDG	CAST IRON PIPE AND FITTINGS WITH HUB OR NO-HUB JOINTS
VENT BELOW GRADE	SCHEDULE 40 PVC PIPE AND FITTINGS
VE GRADE, INSIDE BLDG	TYPE "L" COPPER WITH SOLDER-JOINT FITTINGS
PRINKLER	BLACK STEEL PIPE AND FITTINGS

2. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND OPTIONS.

#### ELECTRIC WATER HEATER SCHEDULE RECOVERY STORAGE ELECTRICAL INPUT MANUFACTURER AND (GPH) © 100°F (GAL) V/ø/Hz KW MODEL

/	4.1	 	277/1/60	EEMAX ACCUMIX MT004277T, TANKLESS ELECTRIC

## PLUMBING FIXTURE SCHEDULE

PTION	WASTE	VENT	COLD WATER	HOT WATER	MANUFACTURER AND MODEL
WALL HUNG, , TAS/ADA	4"	2"	1"		AMERICAN STANDARD AFWALL 2856.128, ELONGATED, VITREOUS CHINA, WHITE, 1.28 GPF, AMERICAN STANDARD FLOWISE MANUAL FLUSH VALVE, 1–1/2" TOP SPUD, EVERCLEAN SURFACE, OPEN FRONT SEAT.
ALL—HUNG, ADA	2"	2"	3/4"	3/4"	AMERICAN STANDARD LUCERNE 0356, VITREOUS CHINA, WHITE, THREE HOLE WITH ZURN FAUCET Z831R4-XL, WRIST BLADE HANDLES, WIDESPREAD ADJUSTABLE, 0.5 GPM FLOW RESTRICTOR, CONCEALED ARM CARRIER, TRUEBRO LAV GUARD 2E-Z. THERMOSTATIC MIXING VALVE LEONARD VALVE MODEL 170LF.
OMPARTMENT, ADA	2"	2"	3/4"	3/4"	ELKAY LRAD 2219, STAINLESS STEEL, 6–1/2" DEEP, ELKAY FAUCET LKD2437BH, 2.2 GPM FLOW RESTRICTOR
DRAIN	PER PLANS	2"			MIFAB F1100-C-1-6-HP, CAST IRON BODY WITH FLASHING COLLAR, 6" ROUND STAINLESS STEEL TOP, HEEL PROOF AND VANDAL PROOF SECURED GRATE

I. CONNECT TO WASTE, WATER, AND VENT AS INDICATED ON DRAWINGS AND AS REQUIRED BY PLUMBING CODE. PROVIDE ALL NECESSARY TRAPS, SUPPLIES, STOPS, AND OTHER ACCESSORIES TO INSTALL AND OPERATE PLUMBING FIXTURES PER PLUMBING CODE AND MANUFACTURER'S RECOMMENDATION. 2. PROVIDE FIXTURE CARRIER SUPPORTS FOR WALL HUNG FIXTURES SIMILAR TO MIFAB, ZURN, OR JR SMITH.

4. COORDINATE BOWL DEPTHS WITH ARCHITECT PRIOR TO ORDERING.

5. COORDINATE QUANTITY AND SPACING OF FAUCET HOLES WITH LAVATORY/SINK PRIOR TO ORDERING. 6. PROVIDE MODEL SPECIFIED OR APPROVED EQUAL. FLOW RATES MUST MEET REQUIREMENTS AS SPECIFIED. DIVISION 22 - PLUMBING 220000 PLUMBING BASIC REQUIREMENTS A. MINIMUM STANDARDS FOR ALL WORK SHALL BE CITY OF HOUSTON AMI INTERNATIONAL BUILDING CODE, 2012 UNIFORM PLUMBING CODE, AND ENERGY CONSERVATION CODE. B. THE PLUMBING SYSTEMS SHALL INCLUDE DOMESTIC COLD WATER, DOMI SANITARY WASTE AND VENT. C. REFERENCES: THE STANDARDS MENTIONED HEREIN WILL BE REFERRED PLUMBING SYSTEMS. THE ENGINEER WILL SELECT APPROPRIATE SECTION

- TO BE APPLIED IN ACCORDANCE WITH ESTABLISHED ENGINEERING PRIN 1. APPLICABLE SECTIONS OF NFPA AMERICANS WITH DISABILITIES ACT (ADA)
- TEXAS ACCESSIBILITY STANDARDS (TAS) D. SITE CONDITIONS: BEFORE SUBMITTING ANY PROPOSAL, EXAMINE THE
- DETERMINE ANY CONDITIONS THAT MAY AFFECT THE WORK. NO ALLOW FOR FAILURE TO MAKE SURE EXAMINATIONS. E. THE CONTRACTOR IS RESPONSIBLE FOR ALL WORK, MATERIALS, AND LA
- COMPLETE WORKING SYSTEM WHETHER SPECIFIED OR IMPLIED. F. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH ALL OTHE
- ARCHITECT, STRUCTURAL, CIVIL, MECHANICAL, AND ELECTRICAL. G. DO NOT SCALE FROM THE ENGINEERED DRAWINGS. REFER TO THE DI
- OF THE ARCHITECT FOR EXACT LOCATIONS OF FIXTURES, EQUIPMENT, H. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND INSPEC
- THE INSTALLATION OF WORK AND PAY ALL INCIDENTAL CHARGES. I. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING ALL TEST
- PREVENT CONCEALMENT OF DEFECTIVE OR IMPROPER WORK. UPON ( TEST INSTALLATION THOROUGHLY AND RENDER IT FROM LEAKS OR IMP
- J. PROTECT EQUIPMENT AND WORK FROM DAMAGE DURING HANDLING AND COMPLETION OF CONSTRUCTION. REMOVE ALL EXCESS DEBRIS AND CLE UPON COMPLETION OF WORK. TOUCH UP WITH PAINT WHERE REQUIRE

220517 SLEEVES AND SLEEVE SEAL SYSTEMS FOR PLUMBING PIPING

- A. PROVIDE U.L. LISTED FIRESTOP SEALING SYSTEMS AT ALL PIPING PENE FLOORS AND WALLS.
- B. INSTALL SLEEVES FOR PIPING PASSING THROUGH PENETRATIONS IN FLO ROOFS, AND WALLS.
- C. INSTALL SLEEVE-SEAL SYSTEMS IN SLEEVES FOR ALL PENETRATIONS I SLABS-ON-GRADE.
- D. WALL AND FLOOR SLEEVES SHALL COMPLY WITH THE FOLLOWING: 1. STEEL PIPE SLEEVES SHALL COMPLY WITH ASTM A53/A53M, TYPE ZINC COATED, PLAIN ENDS.
- 2. CAST-IRON PIPE SLEEVES SHALL BE CAST OR FABRICATED "WALL DUCTILE-IRON PRESSURE PIPE, WITH PLAIN ENDS AND INTEGRAL
- 3. PVC PIPE SLEEVES SHALL COMPLY WITH ASTM 1785, SCHEDULED E. WALL AND FLOOR SLEEVE-SEAL SYSTEMS SHALL COMPLY WITH THE FC
- 1. SEALING ELEMENTS SHALL BE EPDM-RUBBER INTERLOCKING LINKS SURFACE OF PIPE.
- 2. ACCEPTABLE MANUFACTURERS: ADVANCE PRODUCTS & SYSTEMS, COMPANY, PIPELINE SEAL AND INSULATOR, PROCO PRODUCTS.

220719 PLUMBING PIPING INSULATION

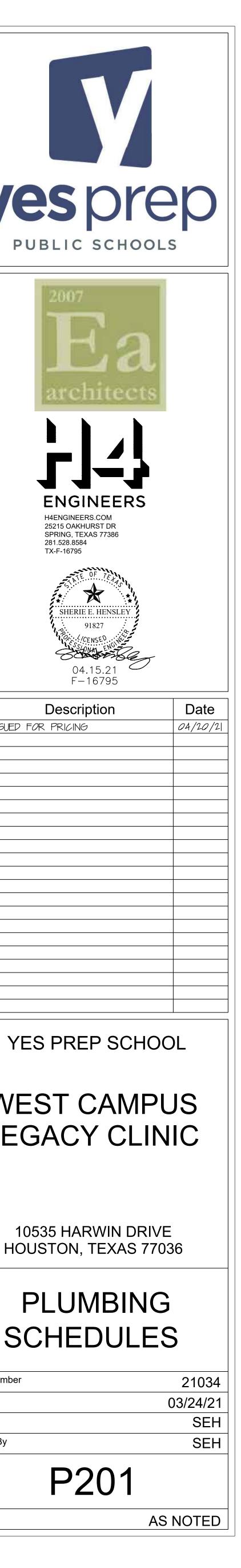
A. MINERAL FIBER, PREFORMED, TYPE AND THICKNESS PER SCHEDULE. B. INSTALLATION

- 1. CLEAN AND DRY SURFACES TO RECEIVE INSULATION.
- 2. INSTALL INSULATION WITH LONGITUDINAL AT TOP AND BOTTOM OF 3. INSTALL MULTIPLE LAYERS OF INSULATION WITH LONGITUDINAL AND
- STAGGERED. 4. KEEP INSULATION MATERIALS DRY DURING APPLICATION AND FINISH
- 5. INSTALL INSULATION WITH TIGHT AND LONGITUDINAL SEAMS AND E SEAMS AND JOINTS WITH ADHESIVE RECOMMENDED BY INSULATION MANUFACTURER.
- 6. CUT INSULATION IN MANNER TO AVOID COMPRESSING INSULATION
- PERCENT OF ITS NOMINAL THICKNESS. 7. FINISH INSTALLATION WITH SYSTEMS AT OPERATING CONDITIONS. R
- SEPARATIONS AND CRACKING DUE TO THERMAL MOVEMENT. 8. REPAIR DAMAGED INSULATION FACINGS BY APPLYING SAME FACING DAMAGED AREAS. EXTEND PATCHES AT LEAST 4 INCHES BEYOND ADHERE, STAPLE, AND SEAL PATCHES SIMILAR TO BUTT JOINTS.

221116 DOMESTIC WATER PIPING

- A. PIPING MATERIAL PER SCHEDULE. 1. PIPE, PIPE FITTINGS, JOINTS, VALVES, FAUCETS AND FIXTURE FITTI
- SUPPLY WATER FOR DRINKING OR COOKING PURPOSES SHALL CO AND NSF 372 AND SHALL HAVE A WEIGHTED AVERAGE LEAD CON OR LESS.
- B. INSTALLATION 1. INSTALL PIPING LEVEL WITHOUT PITCH AND PLUMB.
- INSTALL PIPING CONCEALED FROM VIEW AND PROTECTED FROM PH BUILDING OCCUPANTS UNLESS OTHERWISE INDICATED AND EXCEPT AND SERVICE AREAS.
- INSTALL PIPING ABOVE ACCESSIBLE CEILINGS TO ALLOW SUFFICIEN PANEL REMOVAL AND COORDINATE WITH OTHER SERVICES OCCUPY
- 4. INSTALL PIPING TO PERMIT VALVE SERVICING.
- 5. INSTALL PIPING FREE OF SAGS AND BENDS.
- 6. INSTALL FITTINGS FOR CHANGES IN DIRECTION AND BRANCH CONI 7. PROVIDE SHUT-OFF VALVE AT EACH MAJOR BRANCH LINE.
- 8. EACH WATER SUPPLIED FIXTURE AND PIECE OF EQUIPMENT SHALL ITS OWN INDIVIDUAL AND ACCESSIBLE SHUT-OFF/STOP VALVE.
- 9. INSTALL DIELECTRIC FITTINGS IN PIPING AT CONNECTIONS OF DISS AND TUBING.
- C. HANGER AND SUPPORT INSTALLATION 1. PIPE HANGERS
- a. VERTICAL PIPING: MSS TYPE 8 OR 42, CLAMPS
- b. INDIVIDUAL, STRAIGHT, HORIZONTAL PIPING RUNS
- i. 100 FEET AND LESS: MSS TYPE 1, ADJUSTABLE, STEEL CLE ii. LONGER THAN 100 FEET: MSS TYPE 43, ADJUSTABLE ROLI c. MULTIPLE, STRAIGHT, HORIZONTAL PIPING RUNS 100 FEET OR
- PIPE ROLLS. SUPPORT PIPE ROLLS ON TRAPEZE. d. BASE OF VERTICAL PIPING: MSS TYPE 52, SPRING HANGERS
- 2. SUPPORT VERTICAL PIPING AND TUBING AT BASE AND AT EACH F 3. ROD DIAMETER MAY BE REDUCED ONE SIZE FOR DOUBLE-ROD H
- OF 3/8 INCH. 4. INSTALL HANGERS FOR COPPER TUBING WITH THE FOLLOWING MAX
- SPACING AND MINIMUM DIAMETERS: a. NPS 3/4 AND SMALLER: 60 INCHES WITH 3/8-INCH ROD
- b. NPS 1 AND NPS 1-1/4: 72 INCHES WITH 3/8-INCH ROD
- c. NPS 1-1/2 AND NPS 2: 96 INCHES WITH 3/8-INCH ROD
- d. NPS 2-1/2: 108 INCHES WITH 1/2-INCH ROD
- 5. INSTALL SUPPORTS FOR VERTICAL COPPER TUBING EVERY 10 FEET D. PIPING INSPECTIONS
- 1. DO NOT ENCLOSE, COVER, OR PUT PIPING INTO OPERATION UNTIL INSPECTED AND APPROVED BY AUTHORITY HAVING JURISDICTION (A
- 2. IF AHJ FINDS THAT PIPING WILL NOT PASS TEST OR INSPECTIONS CORRECTIONS AND ARRANGE FOR REINSPECTION. 3. PREPARE INSPECTION REPORTS AND HAVE THEM SIGNED BY AHJ.
- E. PIPING TESTS 1. FILL DOMESTIC WATER PIPING. CHECK COMPONENTS TO DETERMIN
- AIR BOUND AND THAT PIPING IS FULL OF WATER. 2. TEST FOR LEAKS AND DEFECTS IN NEW PIPING AND PARTS OF E HAVE BEEN ALTERED, EXTENDED, OR REPAIRED, IF TESTING IS PE SUBMIT A SEPARATE REPORT FOR EACH TEST, COMPLETE WITH DIA
- PIPING TESTED. 3. LEAVE NEW, ALTERED, EXTENDED, OR REPLACED DOMESTIC WATER AND UNCONCEALED UNTIL IT HAS BEEN TESTED AND APPROVED.
- 4. CAP AND SUBJECT PIPING TO STATIC WATER PRESSURE OF 50 P PRESSURE, WITHOUT EXCEEDING PRESSURE RATING OF PIPING S'
- ISOLATE TEST SOURCE AND ALLOW IT TO STAND FOR FOUR HOUF TEST PRESSURE CONSTITUTE DEFECTS THAT MUST BE REPAIRED. 5. REPAIR LEAKS AND DEFECTS WITH NEW MATERIALS, RETEST PIPING OR PORTION THEREOF UNTIL SATISFACTORY RESULTS ARE OBTAINED.
- 6. PREPARE REPORTS FOR TESTS AND FOR CORRECTIVE ACTION REQUIRED. F. CLEAN AND DISINFECT POTABLE DOMESTIC WATER PIPING.

A. PIPING MATERIAL PER SCHEDULE.	
MENDMENTS TO 2012       B. PIPING INSTALLATION         D 2015 INTERNATIONAL       1. INSTALL PIPING IN CONCEALED LOCATIONS UNLESS OTHERWISE INDICATED AND EXCEPT IN EQUIPMENT ROOMS AND SERVICE AREAS.         DMESTIC HOT WATER,       2. INSTALL PIPING ABOVE CEILINGS TO ALLOW SUFFICIENT SPACE FOR CEILING PANEL	
ED TO IN THE DESIGN OF TIONS OF THE STANDARDREMOVAL.3. INSTALL PIPING AT MINIMUM SLOPES. INCIPLES AND PRACTICES.3. INSTALL PIPING AT MINIMUM SLOPES. i. HORIZONTAL SANITARY: 1/4" PER FOOT IN DIRECTION OF FLOW. NPS 4 AND 	
OF AUTHORITY HAVING JURISDICTION (AHJ). E PROPOSED SITE AND ii. VENT PIPING: 1/8" PER FOOT DOWN TOWARD VERTICAL FIXTURE VENT OR TOWARD	
DWANCE SHALL BE MADEVENT STACK.LABOR TO SATISFY A4. INSTALL PIPING FREE OF SAGS AND BENDS.	ve
HER TRADES INCLUDING5. INSTALL FITTINGS FOR CHANGES IN DIRECTION AND BRANCH CONNECTIONS.DIMENSIONED DRAWINGS , ETC.6. DO NOT ENCLOSE, COVER, OR PUT PIPING INTO OPERATION UNTIL IT IS INSPECTED AND APPROVED BY AHJ.C. HANGERS AND SUPPORT INSTALLATION	PUB
ECTIONS REQUIRED FOR       1. INSTALL HANGERS FOR CAST IRON PIPING WITH THE FOLLOWING MAXIMUM HORIZONTAL         STS NECESSARY TO       a. NPS 1–1/2 AND NPS 2: 60 INCHES WITH 3/8–INCH ROD	- 11
MPROPER CONNECTIONS. b. NPS 4: 60 INCHES WITH 5/8-INCH ROD	
2. INSTALL SUPPORTS FOR VERTICAL CAST IRON PIPING EVER 15 FT.         IRED.         3. INSTALL HANGERS FOR PVC PIPING WITH THE FOLLOWING MAXIMUM HORIZONTAL SPACING AND MINIMUM ROD DIAMETERS:         a. NPS 1-1/2 AND NPS 2: 48 INCHES WITH 3/8-INCH ROD	
NETRATIONS OF RATEDb. NPS 4: 48 INCHES WITH 5/8-INCH ROD4. INSTALL SUPPORTS FOR VERTICAL PVC PIPING EVERY 48 INCHES.	
FLOORS, PARTITIONS,       D. TEST SANITARY DRAINAGE AND VENT PIPING         IN EXTERIOR WALLS AND       E. PREPARE REPORTS FOR TESTS AND REQUIRED CORRECTIVE ACTION.	1
F. CLEANING 1. CLEAN INTERIOR OF PIPING.	
2. PROTECT DRAINS DURING REMAINDER OF CONSTRUCTION PERIOD TO AVOID CLOGGING         LL PIPE," EQUIVALENT TO         L WATERSTOP U.O.N.	
ED 40. 3. PLACE PLUGS IN ENDS OF UNCOMPLETED PIPING AT END OF DAY AND WHEN WORK FOLLOWING: STOPS.	
IKS SHAPED TO FIT       4. EXPOSED PVC PIPING: PROTECT PLUMBING VENTS EXPOSED TO SUNLIGHT WITH TWO COATS OF WATER-BASED LATEX PAINT.         , CALPICO, METRAFLEX       4. EXPOSED PVC PIPING: PROTECT PLUMBING VENTS EXPOSED TO SUNLIGHT WITH TWO	
221319 SANITARY WASTE PIPING SPECIALTIES	<b>Е</b> н
A. ALL FLOOR DRAINS SHALL BE PROVIDED WITH PROSET TRAP GUARD. COORDINATE LOCATION OF ALL FLOOR DRAINS WITH ALL OTHER TRADES PRIOR TO INSTALLATION. B. INSTALL CLEANOUTS IN ABOVE GROUND PIPING AND BUILDING DRAIN PIPING ACCORDING TO THE FOLLOWING UNLESS OTHERWISE NOTED:	25 SI 28 T2
DF HORIZONTAL RUNS. ND END SEAMS 1. SIZE SAME AS DRAINAGE PIPING UP TO 4". USE 4" FOR LARGER DRAINAGE PIPING UNLESS LARGER CLEANOUT IS INDICATED.	
2. LOCATE AT EACH CHANGE IN DIRECTION OF PIPING GREATER THAN 45 DEGREES.         3. LOCATE AT MINIMUM OF 90 FEET INTERVALS.	
END JOINTS. BOND ON MATERIAL D. FOR CLEANOUTS LOCATED IN CONCEALED PIPING, INSTALL CLEANOUT WALL ACCESS COVERS	
N MORE THAN 75 WITH FRAME AND COVER FLUSH WITH FINISHED WALL. E. INSTALL FLOOR DRAINS AT LOW POINTS OF SURFACE AREAS TO BE DRAINED. SET GRATES OF DRAINS FLUSH WITH FINISHED FLOOR.	
REPAIR JOINT       DRAINS FLOSH WITH FINISHED FLOOR.         1. POSITION FLOOR DRAINS FOR EASY ACCESS AND MAINTENANCE.         NG MATERIAL OVER       2. SET FLOOR DRAINS BELOW ELEVATION OF SURROUNDING FINISHED FLOOR TO ALLOW	
D DAMAGED AREAS. FLOOR DRAINAGE. 3. INSTALL FLOOR DRAIN FLASHING COLLAR OR FLANGE SO NO LEAKAGE OCCURS BETWEEN	<u>р</u>
DRAIN AND ADJOINING FLOORING. MAINTAIN INTEGRITY OF WATERPROOF MEMBRANES WHERE PENETRATED. 4. INSTALL INDIVIDUAL TRAPS FOR FLOOR DRAINS CONNECTED TO SANITARY BUILDING DRAIN, UNLESS OTHERWISE INDICATED.	ISSUED FOR
TTINGS UTILIZED TO COMPLY WITH NSF 61 DITENT OF 0.25 DEPOCENT G. INSTALL VENT CAPS ON EACH VENT PIPE PASSING THROUGH ROOF.	
DNTENT OF 0.25 PERCENT G. INSTALL VENT CAPS ON EACH VENT PIPE PASSING THROUGH ROOF. H. PROTECTION 1. PROTECT DRAINS DURING REMAINDER OF CONSTRUCTION PERIOD TO AVOID CLOGGING	
PHYSICAL CONTACT BY       WITH DIRT OR DEBRIS AND PREVENT DAMAGE FROM TRAFFIC OR CONSTRUCTION WORK.         PHYSICAL CONTACT BY       2. PLACE PLUGS IN ENDS OF UNCOMPLETED PIPING AT END OF DAY OR WHEN WORK         PT IN EQUIPMENT ROOMS       STOPS.	
ENT SPACE FOR CEILING 223300 DOMESTIC WATER HEATERS	
A. PROVIDE WATER HEATER IN ACCORDANCE WITH SCHEDULE ON DRAWINGS.	
NNECTIONS.       1. INSTALL PER MANUFACTURER'S RECOMMENDATION.         2. PROVIDE WITH INTEGRAL HEAT TRAPS.	
ALL BE PROVIDED WITH       3. PROVIDE THERMOSTATIC MIXING VALVE TO LIMIT WATER TEMPERATURE.         SSIMILAR METAL PIPING       4. PROVIDE EXPANSION TANK.	
5. DRAIN PAN: CORROSION-RESISTANT METAL WITH RAISED EDGE. 6. INSTALL SHUT-OFF VALVES ON DOMESTIC COLD AND HOT WATER.	
7. FILL WATER HEATER WITH WATER. 8. CHARGE EXPANSION TANKS WITH AIR. 9. WHERE INSTALLING PIPING ADJACENT TO WATER HEATER, ALLOW SPACE FOR SERVICE	
CLEVIS HANGERS AND MAINTENANCE OF WATER HEATER. ARRANGE PIPING FOR EASY REMOVAL OF WATER HEATER.	
C. TESTS AND INSPECTIONS C. TESTS AND INSPECTIONS	
2. AFTER ELECTRICAL CIRCUITRY HAS BEEN ENERGIZED, START UNITS TO CONFIRM PROPER OPERATION.	YES
FLOOR.       3. TEST AND ADJUST CONTROLS AND SAFETIES. REPLACE DAMAGED AND MALFUNCTIONING         HANGERS, TO A MINIMUM       CONTROLS AND EQUIPMENT.         D. PREPARE TEST AND INSPECTION REPORTS.	
AXIMUM HORIZONTAL 224000 PLUMBING FIXTURES	
A. PROVIDE LOW WATER CONSUMPTION FIXTURES COMPLYING WITH TAS/ADA IN ACCORDANCE WITH	WES LEGA
SCHEDULE ON DRAWINGS. B. INSTALL LEVEL AND PLUMB. C. PROVIDE FIXTURE CARRIER SUPPORT FOR WALL-HUNG FIXTURES.	LEGA
EET. D. INSTALL TOILET SEATS ON WATER CLOSETS. E. WHERE INSTALLING PIPING ADJACENT TO FIXTURES, ALLOW SPACE FOR SERVICE AND	
TIL IT HAS BEEN     MAINTENANCE.       (AHJ).     F. ADJUSTING	
NS, MAKE REQUIRED       1. OPERATE AND ADJUST FIXTURES AND CONTROLS.         2. ADJUST WATER PRESSURE TO FLUSHOMETER VALVES TO PRODUCE PROPER FLOW.         J.       G. CLEANING AND PROTECTION	1050
INE THAT THEY ARE NOT CLEANING AND PROTECTION INE THAT THEY ARE NOT I. CLEAN FIXTURES AND FITTINGS WITH MANUFACTURER'S RECOMMENDED CLEANING METHODS AND MATERIALS.	1053: HOUS <sup>-</sup>
EXISTING PIPING THAT       2. INSTALL PROTECTIVE COVERING FOR INSTALLED FIXTURES AND FITTINGS.         PERFORMED IN SEGMENTS,       3. DO NOT ALLOW USE OF FIXTURES FOR TEMPORARY FACILITIES.	
DIAGRAM OF PORTION OF	DI
ER PIPING UNCOVERED PSIG ABOVE OPERATING	
SYSTEM MATERIALS. URS. LEAKS AND LOSS IN ).	SCł



Project Number

Date

Scale

Drawn By

Checked By

<ol> <li>PROVIDE CONTROLS C</li> <li>CLASSROOMS PROVIDE CLASSROOMS SHALL I</li> </ol>	ED WITH
INDEPENDENTLY. MANU 3. EMERGENCY FIXTURES EMERGENCY FIXTURES	JAL ON
ENERGY	СО
COMMISSIONING PLAN A. FUNCTIONAL PERFORMA EVIDENCE THAT THE LI HARDWARE AND SOFTW CONDITION IN ACCORD INSTRUCTIONS. 1. OCCUPANT SENSOR a. CERTIFY THAT THI WITH MANUFACTUI b. FOR PROJECTS W C. FOR ADUQUE CO EACH UNIQUE CO EACH UNIQUE CO LESS THAN 10%, WHERE 30% OR I COMBINATIONS SH d. FOR OCCUPANT S d.a. WHERE 0CCUI OPERATION. d.b. THE CONTROL REQUIRED TIM d.c. FOR AUTO-ON LEVEL WHEN d.d. FOR MANUAL- MANUALLY AC d.e. THE LIGHTS A HVAC OPERAT 2. TIME SWITCH CONTR a. CONFIRM THAT TH WEEKEND, AND H b. PROVIDE DOCUME WEEKDAY, WEEKEI C. VERIFY THAT ANY e. VERIFY THAT ANY e. VERIFY THAT ANY e. VERIFY THAT THE f. SIMULATE OCCUPI f.a. ALL LIGHTS C f.b. THE SWITCH CONTR d. CONTROL DEVICES SETPOINTS AND T b. DAYLIGHT RESPONSIN a. CONTROL DEVICES SETPOINTS AND T b. DAYLIGHT RESPONSIN a. CONTROL DEVICES SETPOINTS AND T b. DAYLIGHT CONTROL AVAILABLE DAYLIG c. THE LOCATIONS C AUTHORIZED PERS B. COMMISSIONING REPOR 1. ELECTRICAL CONTRAL PROCEDURES AND F MECHANICAL AND PL 2. REPORT SHALL IDEN TESTS THAT CANNOT CONDITIONS, AND CL 3. GENERAL CONTRACTOR 1. MANUALS: OPERATINI FOLLOWING: a. SUBMITTAL DATA AND LIGHTING CO b. OPERATION MANU, REQUIRED ROUTIN C. A SCHEDULE FOR d. NAMES AND ADDR e. A COMPLETE NAR SUGGESTED SET-	ANCE TE GHT CO GARE AR ANCE W CONTRO FARE AR ANCE W CONTRO FARE AR ANCE W CONTRO FARE AR ANCE W CONTRO FARE AR MOLE INTER FOR DE CONTRO FARE AN AND OCCU AN OCU AN OCU AN OCU AN OCU AN OCU AN
-	TYPI
THE CONTRACTOR SHALL C WITH ARCHITECTURAL PLANS SHALL TAKE PRECEDENCE TO CENTERLINE OF DEVICE, LIGHT FIXTURES, INTERIOR	S AND OVER TI
	WALL WALL WALL LANDIN
LIGHT FIXTURES, EXTERIOR	WALL STEP WALL WALL
SWITCHES	WALL WALL MANUA
RECEPTACLES	WALL ABOVE ABOVE WALL
TELEPHONE	CLOCK DESK/ WALL ABOVE
ΠΔΤΔ	ABOVE

DATA

ELECTRICAL EQUIPMENT

## LIGHTING CONTROLS

TIBLE WITH EXISTING. TH CEILING MOUNT OCCUPANCY SENSORS AND KEYPAD/MANUAL CONTROL. OGRAMMED TO ALLOW FOR TEACHING ROW TO BE SWITCHED N, AUTOMATIC OFF. ECTED TO NORMAL POWER AND SWITCHED WITH CORRESPONDING NON TTERY BACKUP UPON FAILURE OF NORMAL POWER.

## DE COMPLIANCE REQUIREMENTS

#### FESTING: EQUIPMENT FUNCTIONAL PERFORMANCE TESTING SHALL PROVIDE ONTROL SYSTEMS HAVE BEEN TESTED TO ENSURE THAT THE CONTROL RE CALIBRATED, ADJUSTED, PROGRAMMED AND IN PROPER WORKING WITH THE CONSTRUCTION DOCUMENTS AND MANUFACTURER'S

ROLS: THE FOLLOWING PROCEDURES SHALL BE PERFORMED: UPANT SENSOR HAS BEEN LOCATED AND AIMED IN ACCORDANCE ECOMMENDATIONS. EVEN OR FEWER OCCUPANT SENSORS, EACH SENSOR SHALL BE TESTED. ORE THAN SEVEN OCCUPANT SENSORS, TESTING SHALL BE DONE FOR TION OF SENSOR TYPE AND SPACE GEOMETRY. WHERE MULTIPLES OF TION OF SENSOR TYPE AND SPACE GEOMETRY ARE PROVIDED, NOT IN NO CASE LESS THAN 1%, OF EACH COMBINATION SHALL BE TESTED. OF THE TESTED CONTROLS FAIL, ALL REMAINING IDENTICAL E TESTED.

CONTROLS TO BE TESTED, VERIFY THE FOLLOWING: SENSOR CONTROLS INCLUDE STATUS INDICATORS, VERIFY CORRECT IGHTS TURN OFF OR DOWN TO THE PERMITTED LEVEL WITHIN THE UPANT SENSOR CONTROLS, THE LIGHTS TURN ON TO THE PERMITTED CUPANT ENTERS THE SPACE. CCUPANT SENSOR CONTROLS, THE LIGHTS TURN ON ONLY WHEN

OT INCORRECTLY TURNED ON BY MOVEMENT IN ADJACENT AREAS OR BY THE FOLLOWING PROCEDURES SHALL BE PERFORMED:

SWITCH CONTROL IS PROGRAMMED WITH ACCURATE WEEKDAY, SCHEDULES. ON TO THE OWNER OF TIME SWITCH CONTROLS PROGRAMMING INCLUDING OLIDAY SCHEDULES, AND SETUP AND PREFERENCE PROGRAM SETTINGS.

IME AND DATE IN THE TIME SWITCH. ERY BACK-UP IS INSTALLED AND ENERGIZED. RIDE TIME LIMIT IS SET TO NOT MORE THAN 2 HOURS

NDITION. VERIFY AND DOCUMENT THE FOLLOWING: TURNED ON AND OFF BY THEIR RESPECTIVE AREA CONTROL SWITCH. OPERATES LIGHTING IN THE ENCLOSED SPACE IN WHICH THE SWITCH IS CONDITION. VERIFY AND DOCUMENT THE FOLLOWING:

IG TURNS OFF. SWITCH ALLOWS ONLY THE LIGHTS IN THE ENCLOSED SPACE WHERE THE IS LOCATED TO TURN ON OR REMAIN ON UNTIL THE NEXT SCHEDULED NTROLS: THE FOLLOWING PROCEDURES SHALL BE PERFORMED:

BEEN PROPERLY LOCATED, FIELD CALIBRATED, AND SET FOR ACCURATE IOLD LIGHT LEVELS. LIGHTING LOADS ADJUST TO LIGHT LEVEL SET POINTS IN RESPONSE TO IBRATION ADJUSTMENT EQUIPMENT ARE READILY ACCESSIBLE ONLY TO

SHALL PROVIDE A REPORT OF THE ABOVE COMMISSIONING TEST TS AND PROVIDE TO GENERAL CONTRACTOR TO COMPILE WITH IG REPORTS NY DEFICIENCIES THAT HAVE NOT YET BEEN CORRECTED, DEFERRED PERFORMED AT THE TIME OF REPORT PREPARATION BECAUSE OF CLIMATIC CONDITIONS REQUIRED FOR PERFORMANCE OF THE DEFERRED TESTS.

ALL PROVIDE COMPILED REPORT TO OWNER/REPRESENTATIVE. DATE OF SYSTEM ACCEPTANCE THE FOLLOWING DOCUMENTS SHALL BE MAINTENANCE MANUALS SHALL BE PROVIDED AND INCLUDE THE TING ALL SELECTED OPTIONS FOR EACH PIECE OF LIGHTING EQUIPMENT

ID MAINTENANCE MANUALS FOR EACH PIECE OF LIGHTING EQUIPMENT. NTENANCE ACTIONS, CLEANING, AND RECOMMENDED RELAMPING SHALL BE ECTING AND RECALIBRATING ALL LIGHTING CONTROLS. OF AT LEAST ONE SERVICE AGENCY. OF HOW EACH SYSTEM IS INTENDED TO OPERATE, INCLUDING

## ICAL MOUNTING HEIGHTS

NATE THE MOUNTING HEIGHTS OF ALL FIXTURES, DEVICES, AND OUTLETS
ELEVATIONS. SPECIAL MOUNTING HEIGHTS ARE SHOWN ON THE PLANS
THOSE GIVEN BELOW. ALL MOUNTING HEIGHTS ARE FROM FINISHED FLOOR
ISS NOTED OTHERWISE.

6'-6"		
0'-8" ABOVE TOP OF COUNTER		
CENTER BETWEEN FRAME & CEILING		
7'0" (SEE ARCH DETAIL)		
6'0" (SEE ARCH DETAIL)		
6'-0" (SEE ARCH DETAIL)		
6'0" (SEE ARCH DETAIL)		
2'-6" BELOW PARAPET		
3'-10"		
3'-10"		
1'-6"		
0'-8" ABOVE TOP OF COUNTER		
0'-4" ABOVE TOP OF BACKSPLASH		
3'-6"		
1'-0" BELOW CEILING		
1'-6"		
3'-10"		
0'-8" ABOVE TOP OF COUNTER		
0'-4" ABOVE TOP OF BACKSPLASH		
1'-6"		
0'-8" ABOVE TOP OF COUNTER		
0'-4" ABOVE TOP OF BACKSPLASH		
6'-6" TO TOP OF ENCLOSURE		
6'-6" TO TOP OF ENCLOSURE		
6'-6" TO TOP OF ENCLOSURE		
6'-6" TO TOP OF ENCLOSURE		

DIVISION 26 - ELECTRICAL

260000 ELECTRICAL BASIC REQUIREMENTS A. MINIMUM STANDARDS FOR ALL WORK SHALL BE CITY OF HOUSTON AMENDMENTS TO THE 2020 NATIONAL ELECTRICAL CODE, 2015 INTERNATIONAL ENERGY CONSERVATION CODE, AND 2012 INTERNATIONAL BUILDING CODE.

B. REFERENCES: THE STANDARDS MENTIONED HEREIN WILL BE REFERRED TO IN THE DESIGN OF ELECTRICAL SYSTEMS. THE ENGINEER WILL SELECT APPROPRIATE SECTIONS OF THE STANDARD TO BE APPLIED IN ACCORDANCE WITH ESTABLISHED ENGINEERING PRINCIPLES AND PRACTICES. 1. APPLICABLE SECTIONS OF NFPA

- 2. AMERICANS WITH DISABILITIES ACT (ADA) 3. TEXAS ACCESSIBILITY STANDARDS (TAS)
- C. CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID DATE AND THOROUGHLY FAMILIARIZE HIMSELF WITH ALL EXISTING INSTALLATIONS. DETERMINE THE EXTENT OF THE NEW WORK TO PERFORM THIS CONTRACT. NO ALLOWANCES WILL BE MADE FOR FAILURE TO COMPLY WITH THIS REQUIREMENT OR LACK OF FAMILIARIZATION WITH EXISTING INSTALLATIONS.
- D. THE CONTRACTOR IS RESPONSIBLE FOR ALL WORK, MATERIALS, AND LABOR TO SATISFY A COMPLETE WORKING SYSTEM WHETHER SPECIFIED OR IMPLIED. E. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING
- WITH ALL OTHER TRADES INCLUDING ARCHITECTURAL, STRUCTURAL, CIVIL, MECHANICAL, AND PLUMBING. F. DO NOT SCALE FROM THE ENGINEERED DRAWINGS. REFER TO THE DIMENSIONED DRAWINGS OF THE ARCHITECT FOR EXACT LOCATIONS OF FIXTURES,
- EQUIPMENT, ETC. G. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND INSPECTIONS REQUIRED FOR THE INSTALLATION OF WORK AND PAY ALL INCIDENTAL
- CHARGES. H. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING ALL TESTS NECESSARY TO PREVENT CONCEALMENT OF DEFECTIVE OR IMPROPER WORK. UPON COMPLETION OF WORK, TEST INSTALLATION THOROUGHLY AND RENDER IT FROM MALFUNCTIONS.
- SAFETY ISSUES, AND IMPROPER CONNECTIONS. PROTECT EQUIPMENT AND WORK FROM DAMAGE DURING HANDLING AND INSTALLATION UNTIL COMPLETION OF CONSTRUCTION. REMOVE ALL EXCESS DEBRIS AND CLEAN ALL EQUIPMENT UPON COMPLETION OF WORK. TOUCH UP WITH PAINT WHERE REQUIRED. J. ALL MATERIAL SHALL BE NEW, UNDAMAGED, AND
- UNBLEMISHED AND UL LISTED EXACT AS NOTED. K. ALL WORK SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE TIME OF OWNER ACCEPTANCE. WORK OR EQUIPMENT FOUND TO BE SUB-STANDARD OR FAULTY SHALL BE CORRECTED DURING THESE PERIODS AT NO COST TO OWNER.
- PROVIDE TEMPORARY SERVICE AS REQUIRED FOR CONSTRUCTION POWER AND REMOVE SUCH TEMPORARY SERVICE WHEN WORK IS COMPLETE. M. ELECTRICAL CONTRACTOR TO PROVIDE A COMPLETE F.A. SYSTEM TO MEET LOCAL FIRE MARSHALL REQUIREMENTS AND OBTAIN ALL LOCAL PERMITS. RELOCATE AND MATCH EXISTING FIRE ALARM

EQUIPMENT AS REQUIRED. 260519 LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND

- A. ALL WIRE SHALL BE COPPER COMPLYING WITH ASTM B3 FOR BARE ANNEALED TYPE AND ASTM B8 FOR STRANDED CONDUCTORS. MINIMUM SIZE NO. 12 AWG TYPE THHN OR SIMILAR.
- B. ALL WIRING SHALL BE LISTED AND LABELED AS DEFINED IN NFPA (NEC) 70. BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND C. NO WIRE SMALLER THAN #12 FEEDER WIRE SHALL BE
- THW OR THWN INSULATED. FIXTURE WIRE SHALL BE TYPE PF.
- E. CONDUCTOR INSULATION:

CABLES

- 1. TYPE NM: COMPLY WITH UL 83 AND UL 719. 2. TYPES RHH AND RHW-2: COMPLY WITH UL 44.
- 3. TYPES USE-2 AND SE: COMPLY WITH UL 854. 4. TYPES THHN AND THWN-2: COMPLY WITH UL 83.
- 5. TYPES THW AND THW-2: COMPLY WITH NEMA WC-70/ICEA S-95-658 AND UL 83.
- 6. TYPE XHHW-2: COMPLY WITH UL 44. F. CONNECTORS AND SPLICES: FACTORY-FABRICATED CONNECTORS, SPLICES AND LUGS OF SIZE, AMPACITY RATING, MATERIAL, TYPE, AND CLASS FOR APPLICATION AND SERVICE INDICATED. LISTED AND LABELED AS DEFINED IN NFPA (NEC) 70, BY A QUALIFIED TESTING
- AGENCY, AND MARKED FOR INTENDED LOCATION AND G. JACKETED CABLE CONNECTORS: FOR STEEL AND ALUMINUM JACKETED CABLES, ZINC DIE-CAST WITH SET SCREWS, DESIGNED TO CONNECT CONDUCTORS
- SPECIFIED IN THIS SECTION. H. LUGS: ONE PIECE, SEAMLESS, COPPER, DESIGNED TO TERMINATE CONDUCTORS SPECIFIED IN THIS SECTION. FEEDERS AND BRANCH CIRCUITS: SOLID FOR NO. 10
- AWG AND SMALLER; STRANDED FOR NO. 8 AWG AND **I ARGER** . SERVICE ENTRANCE: TYPE THHN/THWN-2, SINGLE CONDUCTORS IN RACEWAY; TYPE XHHW-2, SINGLE
- CONDUCTORS IN RACEWAY; TYPE USE, SINGLE CONDUCTOR IN RACEWAY; TYPE SE, MULTICONDUCTOR K. EXPOSED FEEDERS: TYPE THHN/THWN-2, SINGLE
- CONDUCTORS IN RACEWAY; TYPE XHHW-2, SINGLE CONDUCTORS IN RACEWAY; TYPE AC, ARMORED CABLE; TYPE MC, METAL—CLAD CABLE; TYPE NM, NONMETALLIC-SHEATHED CABLE.
- FEEDERS CONCEALED IN CEILINGS, WALLS, AND PARTITIONS: TYPE THHN/THWN-2, SINGLE CONDUCTORS IN RACEWAY; TYPE AC, ARMORED CABLE; TYPE MC, METAL-CLAD CABLE; TYPE NM, NONMETALLIC-SHEATHED CABLE.
- M. EXPOSED BRANCH CIRCUITS: REFER TO "FEEDERS CONCEALED IN CEILINGS, WALLS, AND PARTITIONS.'
- N. BRANCH CIRCUITS CONCEALED IN CEILINGS, WALLS, AND PARTITIONS: REFER TO "FEEDERS CONCEALED IN CEILINGS, WALLS, AND PARTITIONS.' O. CORD DROPS AND PORTABLE APPLIANCE
- CONNECTIONS: TYPE SO, HARD SERVICE CORD WITH STAINLESS-STEEL, WIRE MESH, STRAIN RELIEF DEVICE AT TERMINATIONS TO SUIT APPLICATION. P. PERFORM TESTING IN ACCORDANCE WITH APPLICABLE NATIONAL ELECTRICAL TESTING ASSOCIATION STANDARDS TO ENSURE A SAFE INSTALLATION THAT OPERATES AS DESIGNED.

260526 GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS A. ALL WORK SHALL BE GROUNDED TO COMPLY WITHOUT EXCEPTION WITH ALL PROVISIONS OF ARTICLE 250 OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE. ALL CIRCUITS SHALL CONTAIN INSULATED GROUNDING CONDUCTOR. ALL RECEPTACIES SHALL HAVE AN INSULATED GREEN GROUNDING CONDUCTOR TERMINATED ON THE DEVICE GROUND SCREW.

- B. COMPLY WITH IEEE C2 GROUNDING REQUIREMENTS FOR UNDERGROUND DISTRIBUTION SYSTEM COMPONENTS. C. COMPLY WITH UL 467 FOR GROUNDING AND BONDING MATERIALS AND EQUIPMENT.
- D. INSULATED CONDUCTORS: COPPER WIRE OR CABLE INSULATED FOR 600 V UNLESS OTHERWISE REQUIRED BY APPLICABLE CODE OR AUTHORITIES HAVING JURISDICTION.
- E. BARE COPPER CONDUCTORS: 1. SOLID CONDUCTORS: ASTM B3.
- 2. STRANDED CONDUCTORS: ASTM B8. 3. TINNED CONDUCTORS: ASTM B33.
- 4. BONDING CABLE: 28 KCMIL, 14 STRANDS OF NO. 17 AWG CONDUCTOR, 1-1/4" IN DIAMETER.
- 5. BONDING CONDUCTOR: NO. 4 OR NO. 6 AWG.

- STRANDED CONDUCTOR.
- 6. BONDING JUMPER: COPPER TAPE, BRAIDED CONDUCTORS TERMINATED WITH COPPER FERRULES; 1-5/8" WIDE AND 1/16" THICK.
- 7. TINNED BONDING JUMPER: TINNED-COPPER TAPE, BRAIDED CONDUCTORS TERMINATED WITH COPPER FERRULES; 1-5/8" WIDE AND 1/16" THICK. CONNECTORS: LISTED AND LABELED BY A
- NATIONALLY-RECOGNIZED TESTING LABORATORY AND IN COMPLIANCE WITH THE FOLLOWING: 1. BOLTED CONNECTORS (CONDUCTORS AND PIPES): COPPER OR COPPER ALLOY.
- 2. WELDED CONNECTORS: EXOTHERMIC-WELDING KITS OF TYPES RECOMMENDED BY KIT MANUFACTURER FOR MATERIALS BEING JOINED AND INSTALLATION CONDITIONS.
- 3. BUS-BAR CONNECTORS: MECHANICAL TYPE, CAST SILICON BRONZE, SOLDERLESS COMPRESSION TYPE WIRE TERMINALS, AND LONG-BARREL, TWO-BOLT CONNECTION TO GROUND BUS BAR. F. GROUNDING ELECTRODES: COPPER-CLAD STEEL RODS,
- 3/4" X 10'. G. GROUNDING AND BONDING FOR PIPING: 1. METAL WATER SERVICE PIPE: INSTALL INSULATED COPPER GROUNDING CONDUCTORS, IN CONDUIT, FROM BUILDING'S MAIN SERVICE EQUIPMENT, OR GROUNDING BUS, TO MAIN METAL WATER SERVICE ENTRANCES TO BUILDING. CONNECT GROUNDING CONDUCTORS TO MAIN METAL WATER SERVICE PIPES; USE A BOLTED CLAMP CONNECTOR OR BOLT A LUG-TYPE CONNECTOR TO A PIPE FLANGE BY USING ONE OF THE LUG BOLTS OF THE FLANGE. WHERE A DIELECTRIC MAIN WATER FITTING IS INSTALLED, CONNECT GROUNDING CONDUCTOR ON STREET SIDE OF FITTING. BOND METAL GROUNDING CONDUCTOR CONDUIT OR SLEEVE TO
- CONDUCTOR AT EACH END. 2. WATER METER PIPING: USE BRAIDED-TYPE BONDING JUMPERS TO ELECTRICALLY BYPASS WATER METERS. CONNECT TO PIPE WITH A BOLTED CONNECTOR.
- 3. BOND EACH ABOVE GROUND PORTION OF GAS PIPING SYSTEM DOWNSTREAM FROM EQUIPMENT SHUTOFF VALVE. 4. PERFORM TESTS AND INSPECTIONS. INSPECT
- PHYSICAL AND MECHANICAL CONDITION. VERIFY TIGHTNESS OF ACCESSIBLE, BOLTED, ELECTRICAL CONNECTIONS WITH A CALIBRATED TORQUE WRENCH ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.
- 260529 HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS A. STEEL SLOTTED SUPPORT SYSTEMS: COMPLY WITH
  - MFMA-4 FACTORY-FABRICATED COMPONENTS FOR FIELD ASSEMBLY. B. CONDUIT AND CABLE SUPPORT DEVICES: STEEL
  - HANGERS, CLAMPS, AND ASSOCIATED FITTINGS, DESIGNED FOR TYPES AND SIZES OF RACEWAY OR CABLE TO BE SUPPORTED.
  - C. SUPPORT FOR CONDUCTORS IN VERTICAL CONDUIT: FACTORY-FABRICATED ASSEMBLY CONSISTING OF THREADED BODY AND INSULATING WEDGING PLUGS OR PLUGS FOR NONARMORED ELECTRICAL CONDUCTOR OR CABLES IN RISER CONDUITS. PLUGS SHALL HAVE NUMBER, SIZE, AND SHAPE OF CONDUCTOR GRIPPING PIECES AS REQUIRED TO SUIT INDIVIDUAL CONDUCTORS OR CABLES SUPPORTED. BODY SHALL
  - BE MADE OF MALLEABLE IRON. D. STRUCTURAL STEEL FOR FABRICATED SUPPORTS AND RESTRAINTS: ASTM A36/A36M STEEL PLATES, SHAPES, AND BARS; BLACK AND GALVANIZED.
  - E. MOUNTING, ANCHORING, AND ATTACHMENT COMPONENTS: ITEMS FOR FASTENING ELECTRICAL ITEMS OR THEIR SUPPORTS TO BUILDING SURFACES INCLUDE THE FOLLOWING:
  - 1. POWDER-ACTUATED FASTENERS: THREADED-STEEL STUD, FOR USE IN HARDENED PORTLAND CEMENT CONCRETE, STEEL, OR WOOD, WITH TENSION, SHEAR, AND PULLOUT CAPACITIES APPROPRIATE FOR SUPPORTED LOADS AND BUILDING MATERIALS WHERE USED.
  - MECHANICAL EXPANSION ANCHORS: INSERT-WEDGE-TYPE, STAINLESS STEEL, FOR USE IN HARDENED PORTLAND CEMENT CONCRETE, WITH TENSION, SHEAR, AND PULLOUT CAPACITIES APPROPRIATE FOR SUPPORTED LOADS AND
  - BUILDING MATERIALS WHERE USED. 3. CONCRETE INSERTS: STEEL OR MALLEABLE IRON, SLOTTED SUPPORT SYSTEM UNITS ARE SIMILAR TO MSS TYPE 18 UNITS AND COMPLY WITH MFMA-4 OR MSS SP-58.
  - 4. CLAMPS FOR ATTACHMENT TO STEEL STRUCTURAL ELEMENTS: MSS SP-58 UNITS ARE SUITABLE FOR ATTACHED STRUCTURAL ELEMENT.
  - 5. THROUGH BOLTS: STRUCTURAL TYPE, HEX HEAD, AND HIGH STRENGTH. COMPLY WITH ASTM A325. 6. TOGGLE BOLTS: STAINLESS STEEL SPRINGHEAD
  - 7. HANGER RODS: THREADED STEEL. F. FABRICATED METAL EQUIPMENT SUPPORT ASSEMBLIES: WELDED OR BOLTED STRUCTURAL STEEL SHAPES, SHOP OR FIELD FABRICATED TO FIT DIMENSIONS OF SUPPORTED EQUIPMENT. COMPLY WITH INDUSTRY-ACCEPTED STANDARDS FOR STEEL SHAPES AND PLATES.
- 260533 RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS
  - A. METAL CONDUITS, TUBING, AND FITTINGS SHALL BE LISTED AND LABELED AS DEFINED IN NFPA (NEC) 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION. B. APPLY RACEWAY PRODUCTS (MINIMUM 3/4" TRADE SIZE) AS SPECIFIED BELOW U.O.N. 1. OUTDOORS
  - 1.1. EXPOSED: RNC, EPC-80-PVC. 1.2. CONCEALED ABOVEGROUND: EPC-80-PVC.
  - 1.3. UNDERGROUND: RNC, EPC-80-PVC, DIRECT BURIFD 1.4. CONNECTION TO VIBRATING EQUIPMENT
  - (INCLUDING TRANSFORMERS AND HYDRAULIC, PNEUMATIC, SOLENOID, OR MOTOR-DRIVEN EQUIPMENT): LFMC. 1.5. BOXES AND ENCLOSURES, ABOVEGROUND:
  - NEMA 250, TYPE 3R. 2. INDOORS: 2.1. EXPOSED, NOT SUBJECT TO DAMAGE: EMT.
  - 2.2. EXPOSED, SUBJECT TO DAMAGE: GRC. 2.3. CONCEALED IN CEILINGS, WALLS, AND PARTITIONS: EMT OR MC.
  - 2.4. CONNECTION TO VIBRATING EQUIPMENT (INCLUDING TRANSFORMERS AND HYDRAULIC, PNEUMATIC, SOLENOID, OR MOTOR-DRIVEN
  - EQUIPMENT): FMC, EXCEPT USE LFMC IN DAMP OR WET LOCATIONS. C. IN ADDITION TO NFPA (NEC) 70 COMPLIANCE, COMPLY WITH NECA 1 AND NECA 101 FOR INSTALLATION
  - REQUIREMENTS. D. SEAL ALL CONDUIT PENETRATIONS THROUGH WALLS WITH UL LISTED FIRE RETARDANT SEALANT. E. KEEP RACEWAYS AT LEAST 6" AWAY FROM PARALLEL RUNS OF HOT-WATER PIPES. INSTALL HORIZONTAL
  - RACEWAY RUNS ABOVE WATER PIPING. F. BOXES, ENCLOSURES, AND CABINETS INSTALLED IN WET LOCATIONS SHALL BE LISTED FOR USE IN WET LOCATIONS.
  - G. SHEET METAL OUTLET AND DEVICE BOXES: COMPLY WITH NEMA OS1 AND UL 514A. H. CAST-METAL OUTLET AND DEVICE BOXES: COMPLY WITH NEMA FB1, FERROUS ALLOY, TYPE FD, WITH
  - GASKETED COVER. I. NONMETALLIC OUTLET AND DEVICE BOXES: COMPLY WITH NEMA OS2 AND UL 514C. J. METAL FLOOR BOXES: CAST METAL, FULLY
  - ADJUSTABLE, LISTED AND LABELED AS DEFINED IN

- NFPA (NEC) 70.
- K. NONMETALLIC FLOOR BOXES: NONADJUSTABLE, ROUND, LISTED AND LABELED AS DEFINED IN NFPA (NEC) 70. L. LUMINAIRE OUTLET BOXES: NONADJUSTABLE, DESIGNED
- FOR ATTACHMENT OF LUMINAIRE WEIGHING 50 LB. OUTLET BOXES DESIGNED FOR ATTACHMENT OF LUMINAIRES WEIGHING MORE THAN 50 LB. SHALL BE LISTED AND MARKED FOR THE MAXIMUM ALLOWABLE WEIGHT.
- M. PADDLE FAN OUTLET BOXES: NONADJUSTABLE. DESIGNED FOR ATTACHMENT OF PADDLE FAN WEIGHING 70 LB, LISTED AND LABELED AS DEFINED IN NFPA (NEC) 70.
- N. SMALL SHEET METAL PULL AND JUNCTION BOXES: COMPLY WITH NEMA OS1 O. CAST-METAL, ACCESS, PULL, AND JUNCTION BOXES:
- COMPLY WITH NEMA FB1 AND UL 1773, GALVANIZED, CAST IRON WITH GASKETED COVER. P. HINGED-COVER ENCLOSURES: COMPLY WITH UL 50
- AND NEMA 250, TYPE 1 OR TYPE 3R WITH CONTINUOUS HINGE COVER WITH FLUSH LATCH U.O.N. Q. CABINETS:
- 1. NEMA 250, TYPE 1 OR TYPE 3R, GALVANIZED STEEL BOX WITH REMOVABLE INTERIOR PANEL AND REMOVABLE FRONT, FINISHED INSIDE AND OUT WITH MANUFACTURER'S STANDARD ENAMEL.
- 2. HINGED DOOR IN FRONT COVER WITH FLUSH LATCH AND CONCEALED HINGE.
- 3. KEY LATCH TO MATCH PANELBOARDS. 4. METAL BARRIERS TO SEPARATE WIRING OF
- DIFFERENT SYSTEMS AND VOLTAGE. 5. ACCESSORY FEET WHERE REQUIRED FOR
- FREESTANDING EQUIPMENT. 6. NONMETALLIC CABINETS SHALL BE LISTED AND LABELED AS DEFINED IN NFPA (NEC) 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
- 260544 SLEEVES AND SLEEVE SEALS FOR ELECTRICAL RACEWAYS AND CABLING

#### A. PROVIDE U.L. LISTED FIRESTOP SEALING SYSTEMS AT ALL ELECTRICAL PENETRATIONS OF RATED FLOORS AND

- WALLS B. WALL SLEEVES SHALL COMPLY WITH THE FOLLOWING: 1. STEEL PIPE SLEEVES SHALL COMPLY WITH ASTM A53/A53M, TYPE E, GRADE B, SCH. 40, ZINC COATED, PLAIN ENDS.
- 2. CAST-IRON PIPE SLEEVES SHALL BE CAST OR FABRICATED "WALL PIPE," EQUIVALENT TO DUCTILE-IRON PRESSURE PIPE, WITH PLAIN ENDS AND INTEGRAL WATERSTOP U.O.N.

260553 IDENTIFICATION FOR ELECTRICAL SYSTEMS

- A. COMPLY WITH ASME A13.1, IEEE C2, NFPA (NEC) 70, 29 CFR 1910.144, 29 CFR 1910.145, ANSI Z535.4 (SAFETY SIGNS AND LABELS). B. ADHESIVE-ATTACHED LABELING MATERIALS, INCLUDING
- LABEL STOCKS, LAMINATING ADHESIVES, AND INKS USED BY LABEL PRINTERS, SHALL COMPLY WITH UL
- C. ACCESSIBLE RACEWAYS AND METAL-CLAD CABLES. 600 V OR LESS, FOR SERVICE, FEEDER, AND BRANCH CIRCUITS, MORE THAN 30 A AND 120 V TO GROUND: IDENTIFY WITH SELF-ADHESIVE VINYL LABELS AT 30' MAXIMUM INTERVALS.
- D. ACCESSIBLE RACEWAYS AND CABLES WITHIN BUILDINGS: IDENTIFY THE COVERS OF EACH JUNCTION AND PULL BOX WITH SELF-ADHESIVE VINYL LABELS CONTAINING THE WORD "POWER" AND SYSTEM VOLTAGE.
- E. POWER-CIRCUIT CONDUCTOR IDENTIFICATION, 600 V OR LESS: WITHIN VAULTS, PULL AND JUNCTION BOXES, MANHOLES, AND HANDHOLES, USE COLOR-CODING CONDUCTOR TAPE TO IDENTIFY THE PHASE. USE INDUSTRY STANDARD COLORS FOR UNGROUNDED
- SERVICE FEEDER AND BRANCH-CIRCUIT CONDUCTORS. F. CONTROL-CIRCUIT CONDUCTOR IDENTIFICATION: FOR CONDUCTORS AND CABLES IN PULL AND JUNCTION BOXES, MANHOLES, AND HANDHOLES, USE WRITE-ON TAGS WITH THE CONDUCTOR OR CABLE DESIGNATION,
- ORIGIN, AND DESTINATION. G. CONTROL-CIRCUIT CONDUCTOR TERMINATION IDENTIFICATION: PROVIDE HEAT-SHRINK PREPRINTED
- TUBES WITH THE CONDUCTOR DESIGNATION. H. CONDUCTORS TO BE EXTENDED IN THE FUTURE:
- ATTACH WRITE-ON TAGS MARKER TAPE TO CONDUCTORS AND LIST SOURCE. I. AUXILIARY ELECTRICAL SYSTEMS CONDUCTOR
- IDENTIFICATION: IDENTIFY FIELD-INSTALLED ALARM, CONTROL, AND SIGNAL CONNECTIONS.
- J. LOCATIONS OF UNDERGROUND LINES: IDENTIFY WITH UNDERGROUND-LINE WARNING TAPE FOR POWER, LIGHTING, COMMUNICATION, CONTROL WIRING, AND OPTICAL-FIBER CABLE.
- K. WORKSPACE INDICATION: INSTALL FLOOR MARKING TAPE TO SHOW WORKING CLEARANCES IN THE DIRECTION OF ACCESS TO LIVE PARTS. WORKSPACE SHALL COMPLY WITH NFPA (NEC) 70 AND 29 CFR 1926.403 U.O.N. WARNING LABELS FOR INDOOR CABINETS, BOXES, AND
- ENCLOSURES FOR POWER AND LIGHTING: SELF-ADHESIVE WARNING LABELS.
- M. ARC FLASH WARNING LABELING: SELF-ADHESIVE THERMAL TRANSFER VINYL LABELS. COMPLY WITH NFPA 70E AND ANSI Z535.4. N. OPERATING INSTRUCTION SIGNS: INSTALL INSTRUCTION
- SIGNS TO FACILITATE PROPER OPERATION AND MAINTENANCE OF ELECTRICAL SYSTEMS AND ITEMS TO WHICH THEY CONNECT O. EMERGENCY OPERATING INSTRUCTION SIGNS: INSTALL
- INSTRUCTION SIGNS WITH WHITE LEGEND ON A RED BACKGROUND WITH MINIMUM 3/8" HIGH LETTERS FOR EMERGENCY INSTRUCTIONS AT EQUIPMENT USED FOR POWER TRANSFER.
- P. EQUIPMENT IDENTIFICATION LABEL: ON EACH UNIT OF EQUIPMENT, INSTALL A UNIQUE DESIGNATION LABEL THAT IS CONSISTENT WITH WIRING DIAGRAMS, SCHEDULES, AND OPERATION AND MAINTENANCE MANUAL.

260923 LIGHTING CONTROL DEVICES

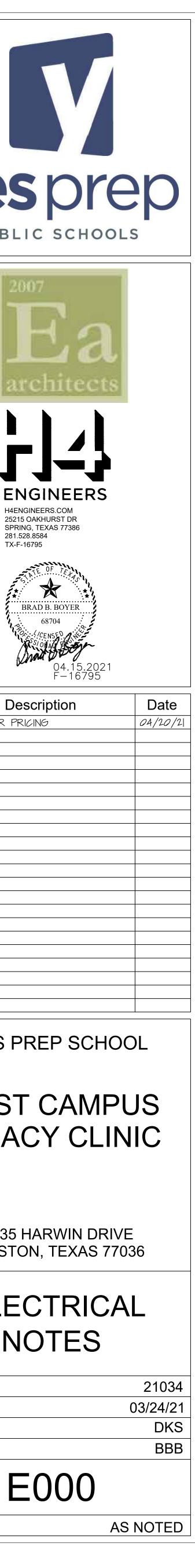
- A. OCCUPANCY SENSOR SIMILAR TO ACUITY SENSOR SWITCH CM10-PDT CEILING MOUNT (DUAL TECHNOLOGY), POWER PACK PP20 AND SPODM (3X-MULTI-WAY) MANUAL WALL SWITCH.
- B. OCCUPANCY SENSOR SIMILAR TO ACUITY SENSOR SWITCH WSX-PDT (DUAL TECHNOLOGY) WALL MOUNT WITH MANUAL OVERRIDE SWITCH.
- C. LIGHTING CONTROL PANEL SIMILAR TO ACUITY BLUE BOX LT GR14XX. ALLOW MINIMUM OF TWO FUTURE CIRCUITS.
- D. AREAS WITHOUT OCCUPANCY SENSORS SHALL BE ON TIME SWITCH CONTROL (LIGHTING CONTROL PANEL) WITH LIGHTING REDUCTION CONTROLS (DUAL SWITCHING).
- E. DUAL SWITCHING: MANUAL WALL SWITCH CONNECTED TO LIGHTING CONTROL PANEL. LIGHT REDUCTION CONTROLS WITH MULTIPLE SWITCHES REDUCING THE CONNECTED LOAD BY AT LEAST 50%. H. INSTALLATION
- 1. OCCUPANCY SENSORS AND POWER PACKS: INSTALL PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. MULTIPLE SENSORS CAN BE CONNECTED TO A SINGLE POWER PACK.
- 2. ADJUST OCCUPANCY SENSORS FOR COMPLETE COVERAGE.
- 3. OCCUPANCY SENSORS TO BE MANUAL ON AND AUTOMATIC OFF WITHIN 30 MINUTES OF ALL OCCUPANTS LEAVING THE SPACE. FULL AUTOMATIC ON IS PERMITTED IN PUBLIC CORRIDORS. STAIRWAYS, RESTROOMS, PRIMARY BUILDING ENTRANCES AND LOBBIES.

	yes
	EN H4EN 2521 SPRI 281.6 TX-F
No.	DE ISSUED FOR PF
	YES P
	WEST LEGA
	10535 HOUST(

E	L	E N
Project Number		

Date
Drawn By
Checked By

Scale



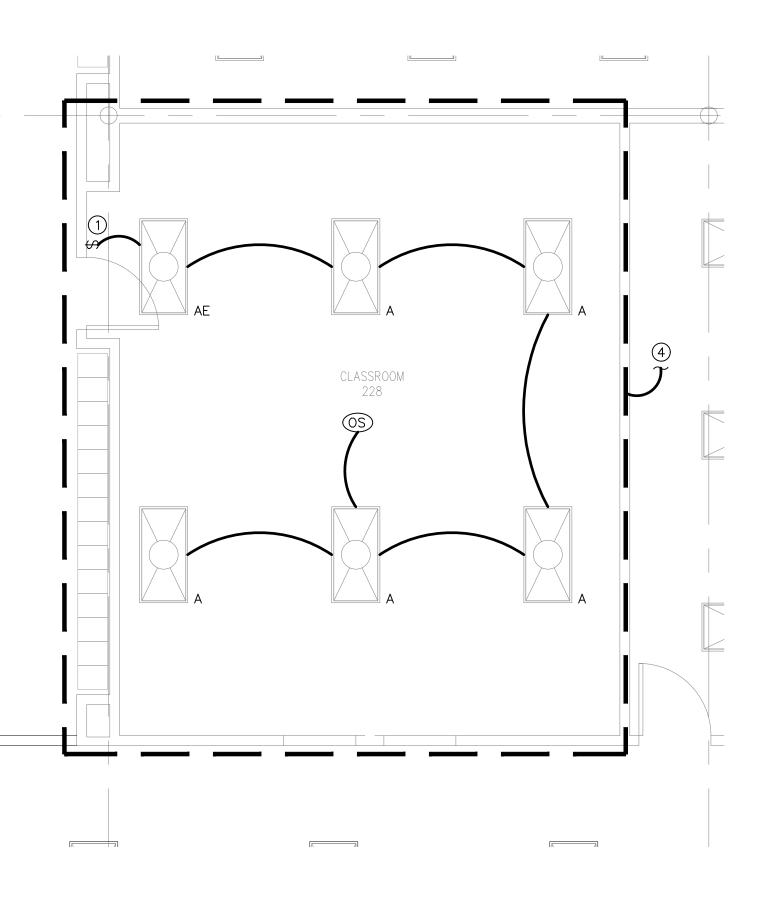
LIGHTING GENERAL NOTES

- FIELD VERIFY ALL EXISTING CONDITIONS.
   CONNECT ALL EXIT AND EMERGENCY LIGHTS TO NEAREST LIGHTING CIRCUITS.
- 3. COORDINATE LOCATIONS OF ALL LIGHT SWITCHES WITH ARCHITECT. 4. PROVIDE EMERGENCY LIGHTING TO PROVIDE MINIMUM 1
- FC ALONG ALL EGRESS PATHS.
- 5. EXISTING DESIGNATED WITH (E). RELOCATED DESIGNATED WITH (R).

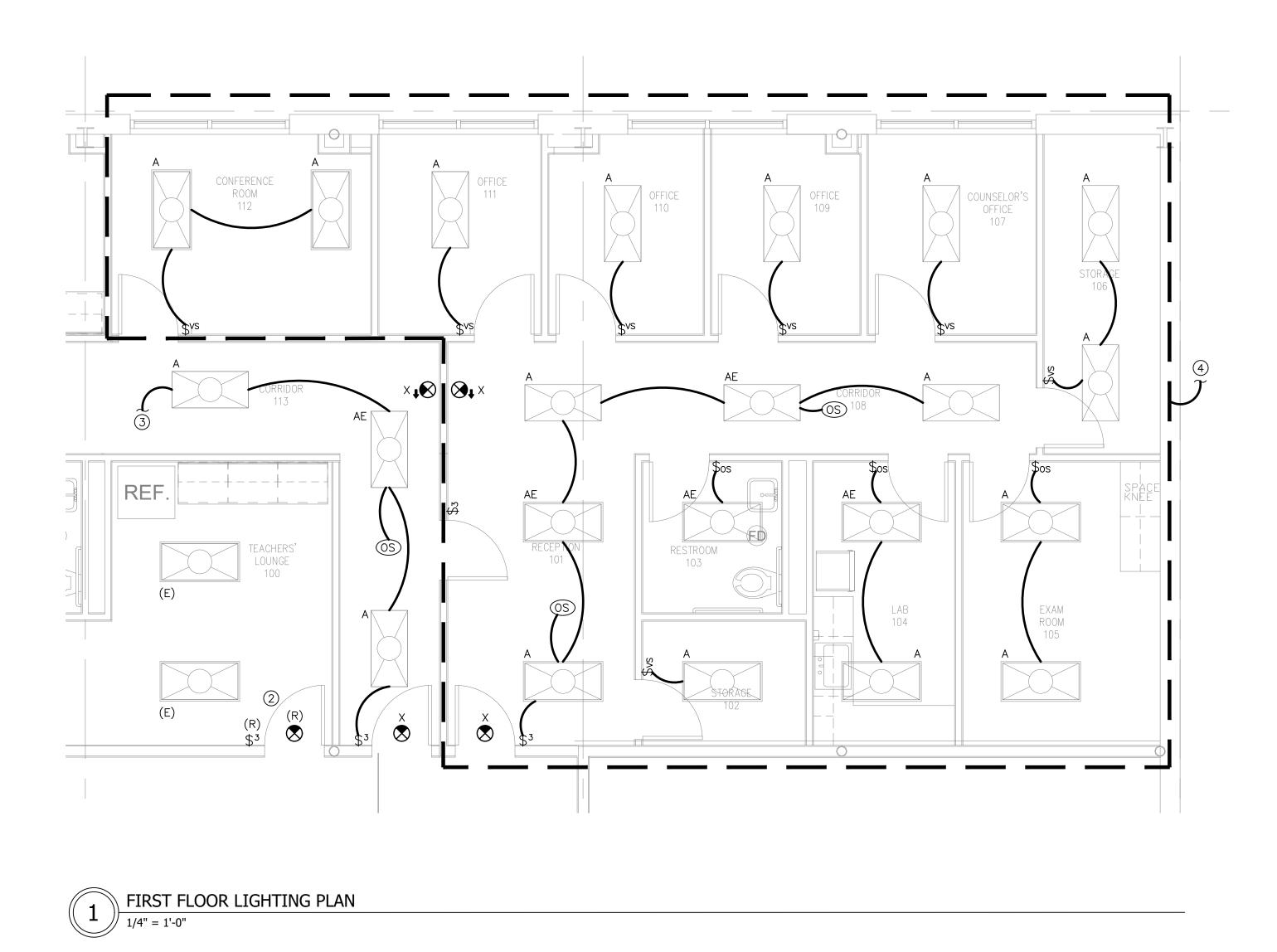
LIGHTING KEY NOTES

- 1. OCCUPANCY SENSOR CEILING MOUNT WITH WALL SWITCH.
- 2. RELOCATE EXISTING SWITCH AND EXIT SIGN IN TEACHER'S LOUNGE TO COORDINATE WITH NEW DOOR
- LOCATION. 3. PROVIDE NEW LIGHTING CONTROLS AS SHOWN. CONNECT TO EXISTING CORRIDOR CONTROLS. REUSE
- EXISTING LIGHTING CIRCUIT. DO NOT EXCEED 16 AMPS ON ANY 20A/1P CIRCUIT. 4. PROVIDE NEW LIGHTING CONTROLS AS SHOWN FOR
- SCOPE INSIDE DASHED BOX. REUSE EXISTING LIGHTING CIRCUIT. DO NOT EXCEED 16 AMPS ON ANY 20A/1P CIRCUIT.

TYPE A/AE: REUSE EXISTING LIGHTS OR PRÓVIDE NEW TO MATCH EXISTING.



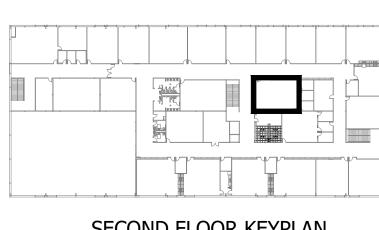


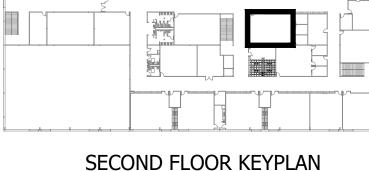






FIRST FLOOR KEYPLAN









NORTH





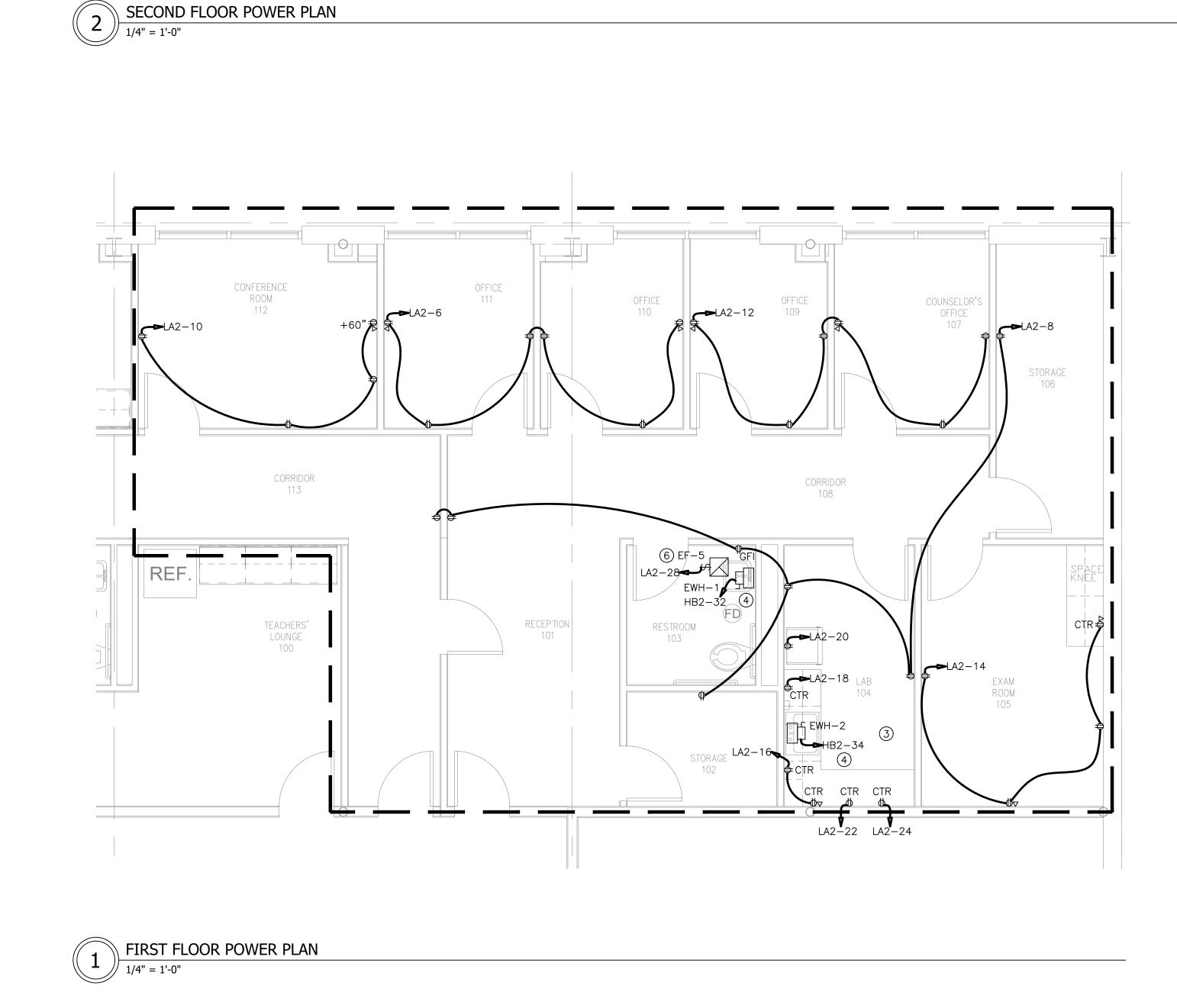


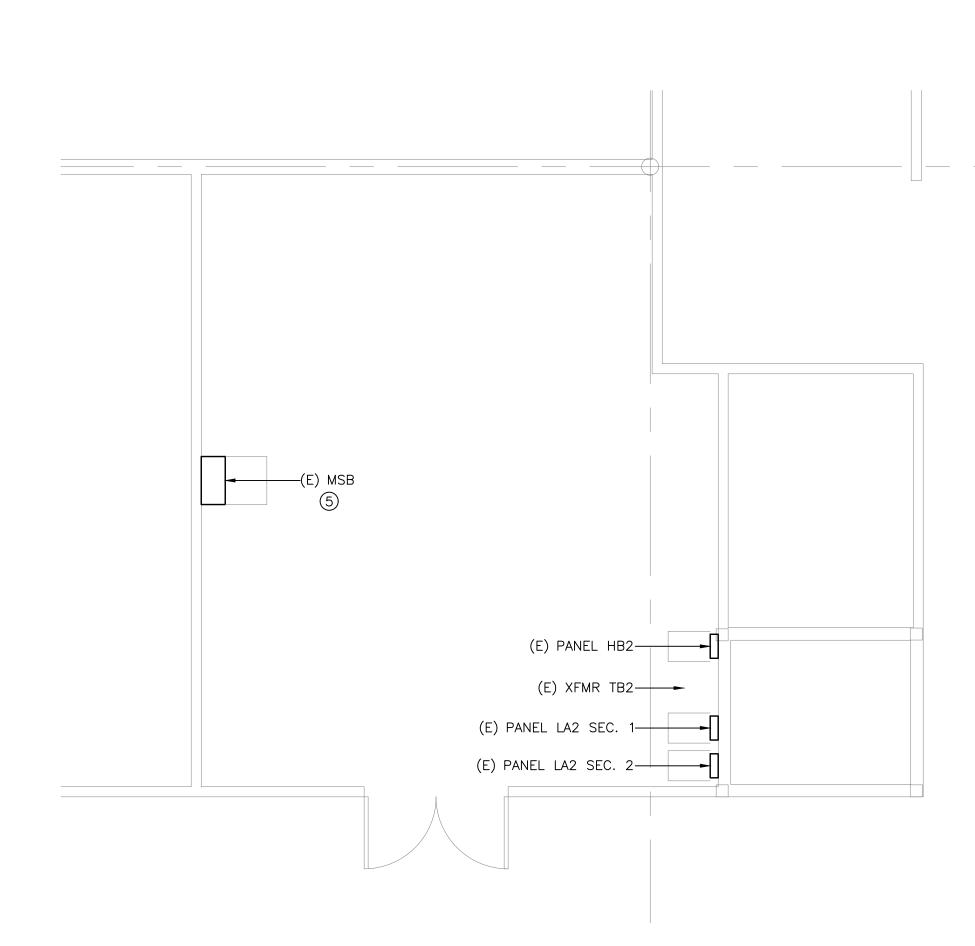
## POWER GENERAL NOTES

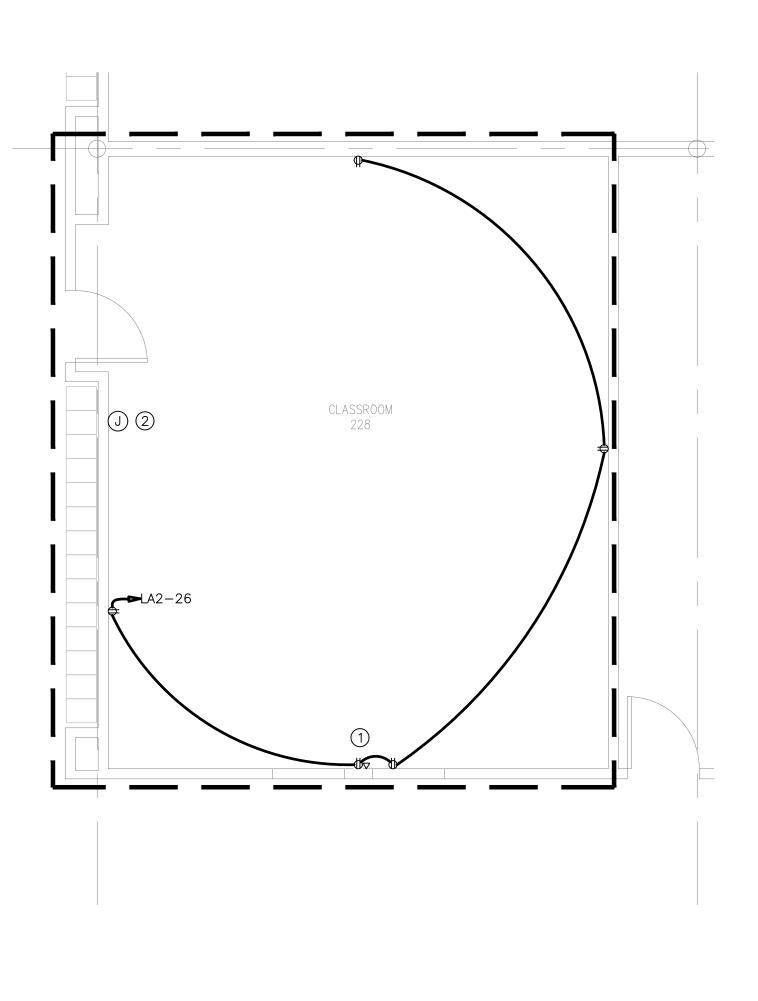
- 1. FIELD VERIFY ALL EXISTING CONDITIONS. 2. ALL EXISTING POWER AND DATA DESIGNATED WITH (E). 3. ALL RECEPTACLES AT RESTROOMS AND WITHIN 6FT OF
- SINKS SHALL BE GFI. 4. ALL RECEPTACLES SHALL BE 20 AMP UNLESS NOTED OTHERWISE. PLUG AS INDICATED IN SCHEDULE OR AS
- PROVIDED BY MANUFACTURER. 5. ALL EQUIPMENT SHALL BE LISTED FOR ITS INTENDED USE.
- 6. CONFIRM ALL DATA LOCATIONS WITH OWNER. 7. REMOVE ALL ABANDONED CABLING AND CONDUIT IN SPACE. TURN OFF UNUSED BREAKERS. UPDATE PANEL
- SCHEDULE AND LABELING. 8. REUSE BREAKERS THAT ARE NOT CURRENTLY BEING USED OR BECOME AVAILABLE DUE TO DEMO. CIRCUIT NUMBERS SHOWN ARE DIAGRAMMATIC AND MAY NEED TO BE MODIFIED FOR FIELD CONDITIONS.

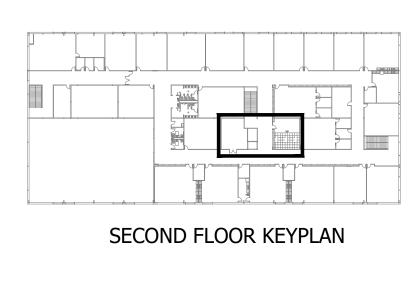
POWER KEY NOTES

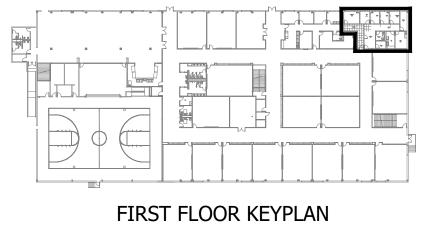
- 1. RECEPTACLE AND DATA TO BE LOCATED 4" BELOW CEILING. COORDINATE EXACT LOCATION WITH WALL MOUNTED PROJECTOR WITH ARCHITECT. 2. DATA FOR WALL MOUNT BELL AND PA. COORDINATE
- EXACT LOCATION WITH ARCHITECT. CONFIRM EXACT REQUIREMENTS WITH OWNER. 3. ALL SINGLE-PHASE RECEPTACLES RATED 150 VOLTS TO GROUND OR LESS, 50 AMPERES OR LESS AND THREE-PHASE RECEPTACLES RATED 150 VOLTS TO
- GROUND OR LESS, 100 AMPERES OR LESS INSTALLED WITHIN 6FT. OF THE TOP INSIDE EDGE OF THE SINK SHALL HAVE GROUND-FAULT INTERRUPTER PROTECTION FOR PERSONNEL IN ACCORDANCE WITH 2017 NEC, ARTICLE 210.8(B)(5). 4. DISCONNECT SHALL BE 30A/600V/1P/N1/NF.
- 5. APPROXIMATE LOCATION OF MSB ON LEVEL 1. FIELD VERIFY EXACT LOCATION. 6. INTERLOCK EXHAUST FANS WITH LIGHTING CIRCUIT
- SERVING RESTROOM FOR SIMULTANEOUS OPERATION. PROVIDE RELAY AND ACCESSORIES AS NECESSARY FOR COMPLETE AND OPERATING SYSTEM.

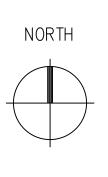


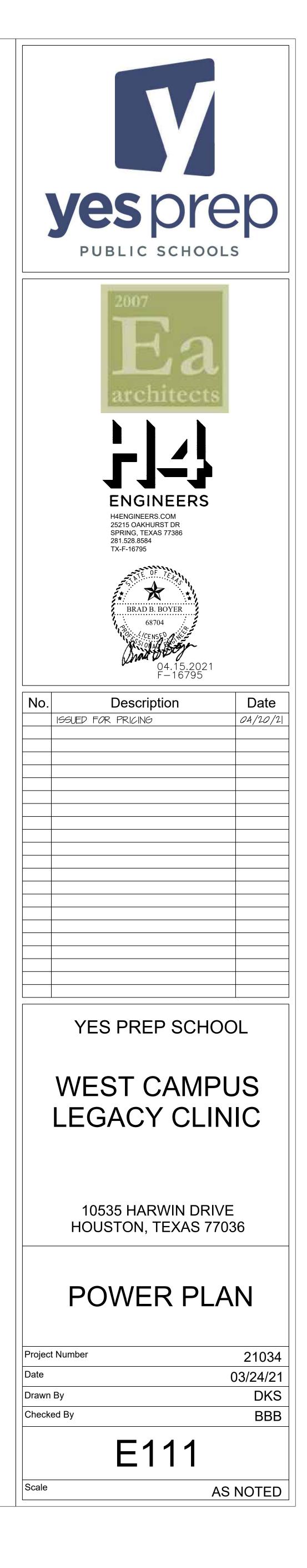












SYMBOL	DESCRIPTION
\$°	OCCUPANCY SENSOR SWITCH
\$	SINGLE POLE SWITCH
\$3	THREE WAY SWITCH
\$*	MANUAL MOTOR STARTER
$\square$	NEMA 5–20R DUPLEX RECEPTACLE
	NEMA 5–20R DUPLEX RECEPTACLE (ABOVE COUNTER)
GFI	NEMA 5–20R GFI RECEPTACLE
$\oplus$	NEMA 5–20R QUADRAPLEX RECEPTACLE
FLR	FLUSH FLOOR RECEPTACLE
B	PEDESTAL MOUNTED NEMA 5–15R DUPLEX RECEPTACLE
$\bigtriangledown$	DATA OUTLET 1" CONDUIT TO ABOVE CEILING
▼	VOICE OUTLET
$\checkmark$	COMBINATION DATA/VOICE OUTLET
$\bigcirc$	FLUSH FLOOR DATA OUTLET
	CIRCUIT HOMERUN-ARROWHEADS INDICATE QUANTITY OF CIRCUITS
	CONCEALED CONDUIT
/>	EXTERIOR CONDUIT BELOW GRADE
	CONCEALED CONDUIT BELOW SLAB
$\wedge$	MOTOR
TV	TV CABLE OUTLET
$\otimes$	EXIT LIGHT
F	POLE-MOUNTED SITE LAMP
J	JUNCTION BOX
S	SMOKE DETECTOR
FA	FIRE ALARM – HORN/STROBE
F	EMERGENCY LIGHT – WALL PACK
	DISCONNECT

ELECTRICAL SYMBOLS

NUMBER	CONDUCTORS	COND	W/O NEUTRAL
02	4#12, 1#12 GND	3/4"	3/4"
03	4#10, 1#10 GND	3/4"	3/4"
05	4#8, 1#10 GND	1"	3/4"
06	4#6, 1#8 GND	1 1/4"	1"
08	4#4, 1#8 GND	1 1/4"	1 1/4"
10	4#3, 1#8 GND	1 1/4"	1 1/4"
11	4#2, 1#6 GND	1 1/2"	1 1/4"
13	4#1, 1#6 GND	2"	1 1/2"
15	4#1/0, 1#6 GND	2"	1 1/2"
17	4#2/0, 1#6 GND	2"	2"
20	4#3/0, 1#6 GND	2-1/2"	2"
23	4#4/0, 1#4 GND	2-1/2"	2"
25	4#250 KCMIL, 1#4 GND	3"	2 1/2"
28	4#300 KCMIL, 1#4 GND	3"	2 1/2"
31	4#350 KCMIL, 1#3 GND	3"	3"
33	4#400 KCMIL, 1#3 GND	3"	3"
1 ( 2. 51	HERE THE FEEDER SYMBO MV = MEDIUM VOLTAGE CO N = NO NEUTRAL CONDU G = NO EQUIPMENT GRO E = EXISTING CONDUCTO (V MEDIUM VOLTAGE CABL L CONDUIT CALCULATIONS	DPPER CON JCTOR DUNDING CO RS E CALCULA	NDUCTOR ONDUCTOR ITED IN SCHEDULE

MATCH EXISTING MATCH EXISTING Х NOTES 1. LIGHTING CONTROLS TO CONTROL FIXTURE WITH 0-10V DIMMING. ALL COMPONENTS OF LIGHTING CONTROL SYSTEM SHALL BE BY SAME MANUFACTURER. 2. COORDINATE WITH CEILING TYPE.

TYPE MANUFACTURER MODEL EPANL-2X4-4000LMF -40K-MIN10 LITHONIA А EPANL-2X4-4000LMH -40K-MIN10-E10W AE LITHONIA

## , 4/15/2021 11:33:47 AM, DakotaS

## SCHEDULE 40 PVC. ALL OTHERS IN RMC. COPPER CONDUCTORS. 4. AMPACITIES BASED ON 75°C TEMPERATURE RATING OF CONDUCTORS.

#### COPPER FEEDER SCHEDULE COND W/O NEUTRAL NUMBER CONDUCTORS " " 3 1/2" 38 4#500 KCMIL, 1#3 GND 3" 4" 3 1/2" 4#600 KCMIL, 1#2 GND 42 2 1/2" (2 SETS) 4#4/0, 1#2 GND 2" 46 3" 2 1/2" (2 SETS) 4#250 KCMIL, 1#2 GND 51 (2 SETS) 4#350 KCMIL, 1#1 GND 3" 62 3' (2 SETS) 4#500 KCMIL, 1#1/0 GND 3 1/2" 3 1/2" 76 3 1/2" (3 SETS) 4#300 KCMIL, 1#1/0 GND 3" 85 (3 SETS) 4#350 KCMIL, 1#2/0 GND 3" 3" 93 3 1/2" (3 SETS) 4#400 KCMIL, 1#2/0 GND 3" 100 4" 3 1/2" (3 SETS) 4#600 KCMIL, 1#3/0 GND 126 (3 SETS) 4#700 KCMIL, 1#3/0 GND 5" 4" 138 4" 3 1/2" (4 SETS) 4#600 KCMIL, 1#4/0 GND 168 210 (5 SETS) 4#600 KCMIL, 1#250 KCMIL GND 3 1/2" 4" /2" 3" 20ми 3#3/0, 1#6 GND 3" 30ми 3#250 KCMIL, 1#2 GND 3" 3" 3" (2 SETS) 3#3/0, 1#6 GND 3" 40<sub>mv</sub>

3. CONFIRM FIXTURE COLOR AND STYLE WITH ARCHITECT PRIOR TO ORDERING. 4. PROVIDE MODEL SPECIFIED OR APPROVED EQUAL. WATTAGES MUST BE EQUAL OR LESS THAN THOSE SPECIFIED.

	VOLTS	LAMP	DESCRIPTION	NOTES
HE-80	277	39	2X4 LED	ALL
HE-80 WCP	277	39	2X4 LED WITH 1.5 HR BATTERY BACKUP	ALL
G	277	5	EXIT LIGHT WITH 1.5 HR BATTERY BACKUP	2,3

LIGHT FIXTURE SCHEDULE

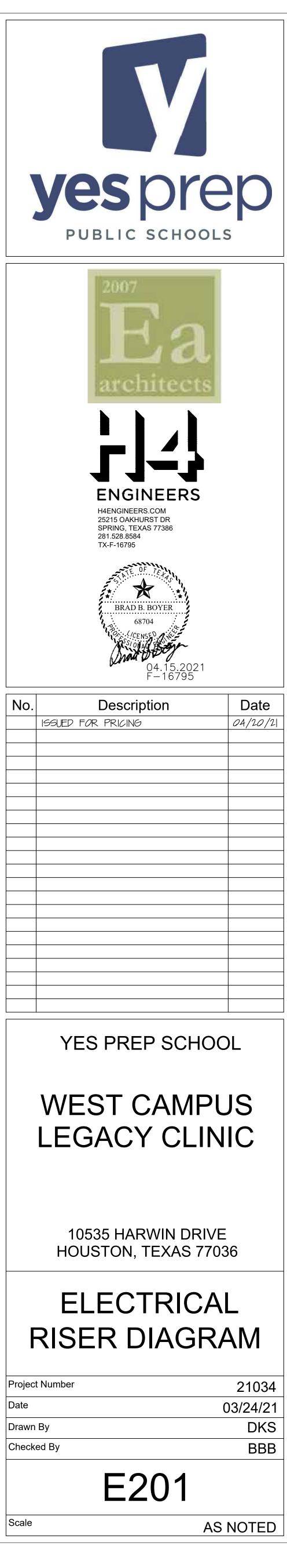
# ALL GROUNDING AND BONDING AS PER NEC, ART 250

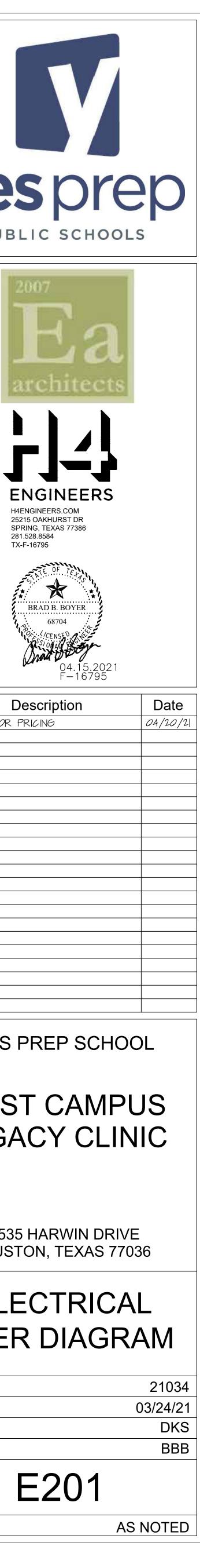
NOTE: ALL ELECTRICAL EQUIPMENT IS EXISTING TO REMAIN. SHOWN FOR REFERENCE ONLY.

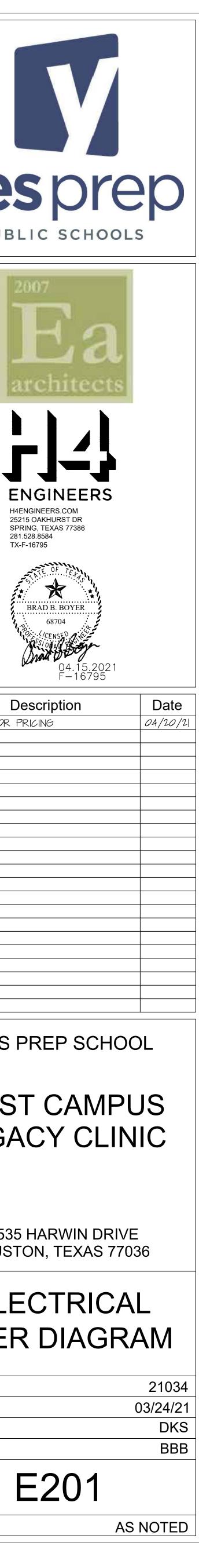
FIELD VERIFY EXISTING PERMANENTLY AFFIXED LABEL WITH DATE, FAULT CURRENT, AND CALCULATION. THE LABEL SHALL BE 2"X3" IN SIZE AND SHALL BE BLUE LETTERING ON A CONTRASTING BACKGROUND. ALL DISTRIBUTION IS EXISTING TO REMAIN. NO CHANGES TO FAULT CURRENT OR EQUIPMENT RATINGS.

1

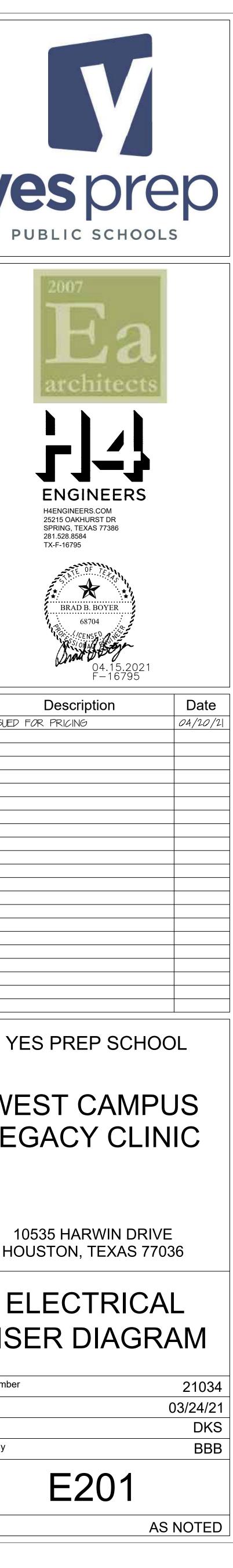
ELECTRICAL RISER DIAGRAM // NO SCALE

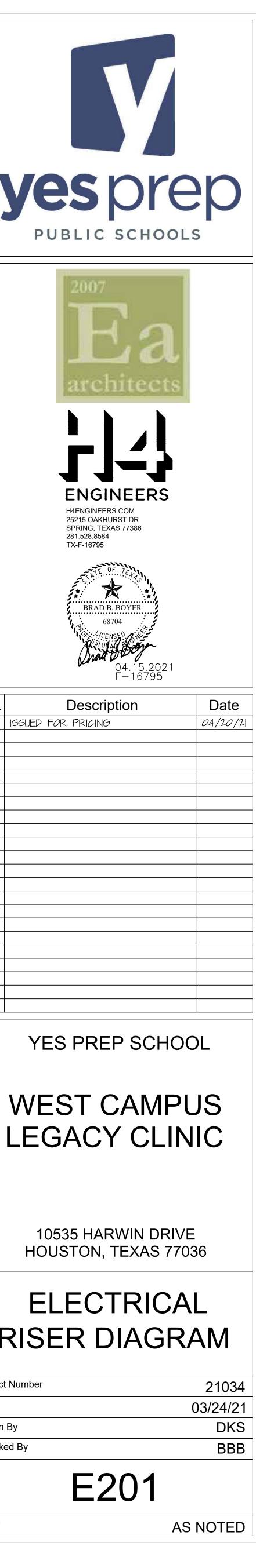


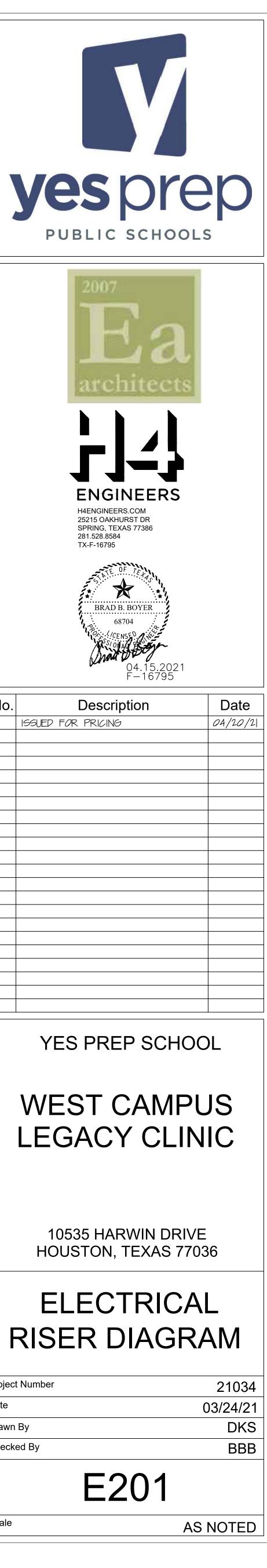




No.		D
	ISSUED	FOR P





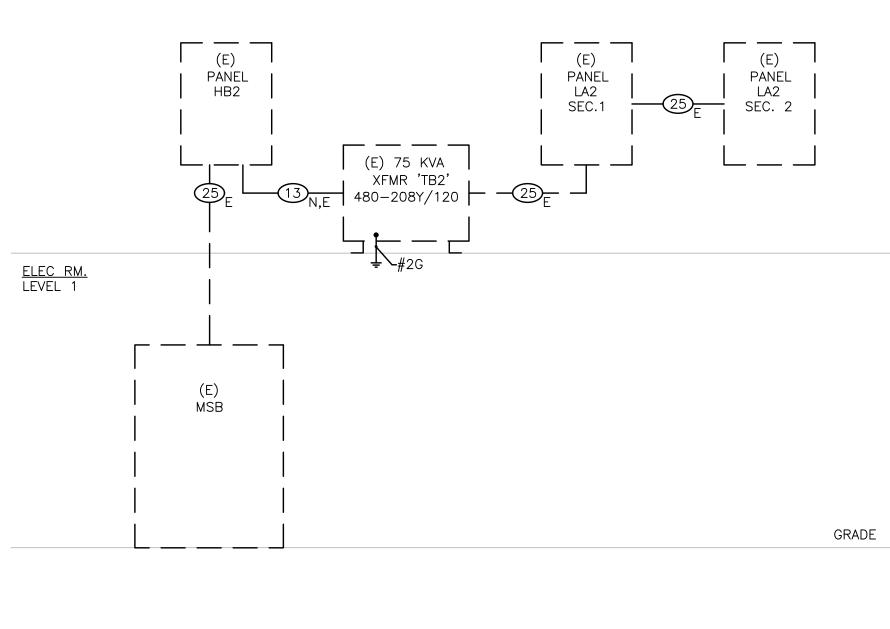


Drawn By	
Checked By	

OVERALL	ELECTRICA	۱L	LOAD
	ANALYSIS		
LOAD			VA
EXISTING PEAK LOAD	715,000 X 1.25	=	893,750
NEW LOAD AT 100%		=	22,521
	TOTAL :	=	916,271
AT 4	80V, 3ø = 1103 AM	1PS	
EXISTING PA	ANEL CAPACITY IS 20	000	AMPS
*PEAK LOAD IS FROM L CENTERPOINT ENERGY O		NFI	RMED WITH

	LOAD ANA	ALYSIS - NEW LOA	4D		
Code Reference					
	Lighting	Greater			
per NEC Table 220.12	School	531sf x 3	1,593	=	1,593
	Office	1265sf x 3.5	4,428	=	4,428
	Actual		858	omit	
per NEC 220.60/220.51	HVAC	at 100%		=	0
	Fridge / Freezer (3 Total)	at 100%		=	2000
	Water Heater (2 Total)	at 100%		=	8200
per NEC 220.14(I)	Receptacles	180 x 35 =	6300	=	6300
per Table 220.44	Recept Demand Factor	10,000		=	0
		50% Remainder		=	0
			TOTAL	=	22521
		V	Phase		Amps
	At			=	27
		REFER TO OV	ERALL ELECTRIC	CAL LOAD A	NALYSIS

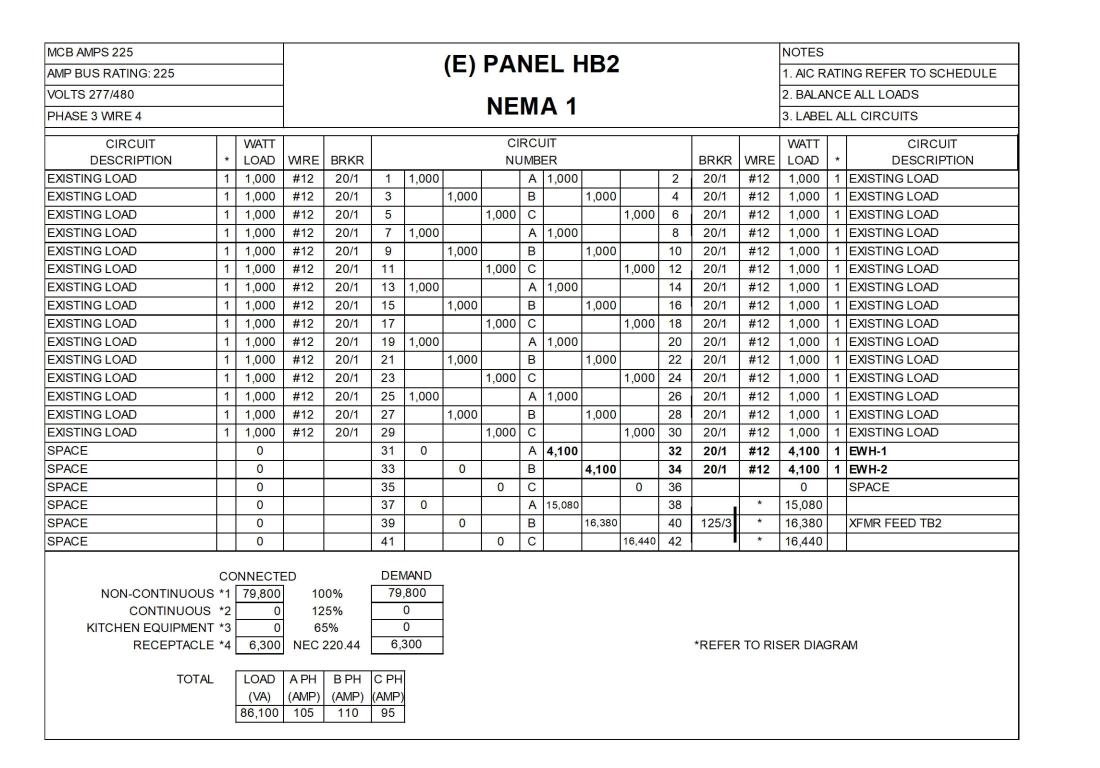




\\H4-dc-01\h4\Engineers\Projects\2021\2021417 Yes Prep West Remodel\E\2021417 E201.dwg, 4/15/2021 11:34:01 AM, DakotaS

PANEL KEY NOTES 1. CONTRACTOR TO FIELD VERIFY WHICH 250 AMP BREAKER FEEDS PANEL HB2. NEW LOAD ADDED TO HB2 BREAKER.

MLO AMPS 200																		
AMP BUS RATING: 225		(E) PANEL LA2 SEC. 2 1. AIC RATING REFER TO SCHEDULE																
VOLTS 120/208		2. BALANCE ALL LOADS																
PHASE 3 WRE 4			NEMA 1     3. LABEL ALL CIRCUITS															
CIRCUIT		WATT							RCL							WATT		CIRCUIT
DESCRIPTION	*	LOAD	WRE	BRKR				NU	JMB	ER				BRKR	WRE	LOAD	*	DESCRIPTION
EXISTING LOAD	1	500	#12	20/1	43	500			Α	500			44	20/1	#12	500	1	EXISTING LOAD
EXISTING LOAD	1	500	#12	20/1	45		500		В		500		46	20/1	#12	500	1	EXISTING LOAD
EXISTING LOAD	1	500	#12	20/1	47			500	С			500	<mark>4</mark> 8	20/1	#12	500	1	EXISTING LOAD
EXISTING LOAD	1	500	#12	20/1	49	500			Α	500			50	20/1	#12	500	1	EXISTING LOAD
EXISTING LOAD	1	500	#12	20/1	51		500		В		500		52	20/1	#12	500	1	EXISTING LOAD
EXISTING LOAD	1	500	#12	20/1	53			500	С			500	54	20/1	#12	500		EXISTING LOAD
EXISTING LOAD	1	500	#12	20/1	55	500			Α	500			<mark>56</mark>	20/1	#12	500	1	EXISTING LOAD
EXISTING LOAD	1	500	#12	20/1	57		500		В		500		58	20/1	#12	500	1	EXISTING LOAD
EXISTING LOAD	1	500	#12	20/1	59			500	С			500	60	20/1	#12	500	1	EXISTING LOAD
EXISTING LOAD	1	500	#12	20/1	61	500			Α	500			62	20/1	#12	500	1	EXISTING LOAD
EXISTING LOAD	1	500	#12	20/1	63		500		В		500		64	20/1	#12	500	1	EXISTING LOAD
EXISTING LOAD	1	500	#12	20/1	65			500	С			500	66	20/1	#12	500	1	EXISTING LOAD
EXISTING LOAD	1	500	#12	20/1	67	500			Α	500			68	20/1	#12	500	1	EXISTING LOAD
EXISTING LOAD	1	500	#12	20/1	69		500		В		500		70	20/1	#12	500	1	EXISTING LOAD
EXISTING LOAD	1	500	#12	20/1	71			500	С			500	72	20/1	#12	500	1	EXISTING LOAD
SPARE		0			73	0			Α	1,200			74	20/2	#12	1,200	1	EXISTING LOAD
EXISTING LOAD	1	1,200	#12	20/2	75		1,200		В		1,200		76		#12	1,200	1	
	1	1,200	#12		77			1,200	С			500	78	20/1	#12	500	1	EXISTING LOAD
SPARE		0			79	0			Α	500			80	20/1	#12	500	1	EXISTING LOAD
EXISTING LOAD	1	1,200	#12	20/2	81		1,200		В		1,200		82	20/2	#12	1,200	1	EXISTING LOAD
	1	1,200	#12		83			1,200	С			1,200	84		#12	1,200	1	
		NNECTE		0.01		1AND	ſ											
NON-CONTINUOUS *1 25,600			0%		600													
			25%		0													
		0		5%		-												
RECEPTACLE *4 0 NEC 220.44 0																		
TOTAL LOAD A PH B PH C PH																		
(VA) (AMP) (AMP) (AMP)																		



MCB AMPS 200 W/ FTL TO LA2 SEC. 2

AMP BUS RATING: 225

VOLTS 120/208

PHASE 3 WRE 4

EXISTING L EXISTING L

NO KITC

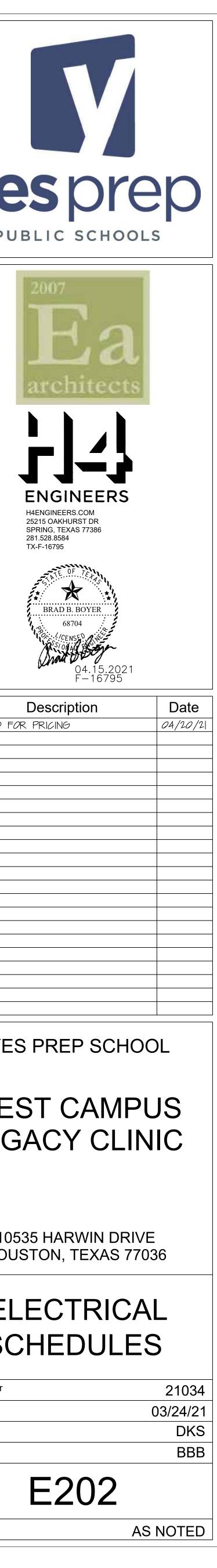
MLO AMPS
AMP BUS F
VOLTS 277
PHASE 3 V
(
DE
SPACE
SPACE
SPACE
SPACE
EXISTING L

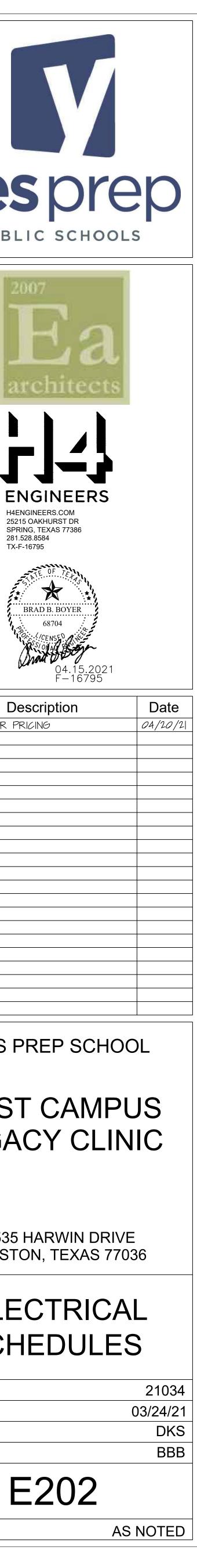
SPACE SPACE SPACE SPACE SPACE

EXISTING L 

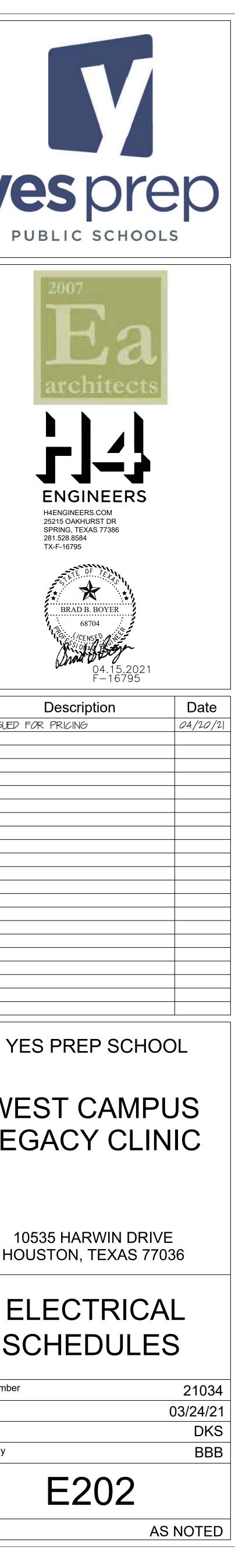
\_\_\_\_\_ EXISTING L 

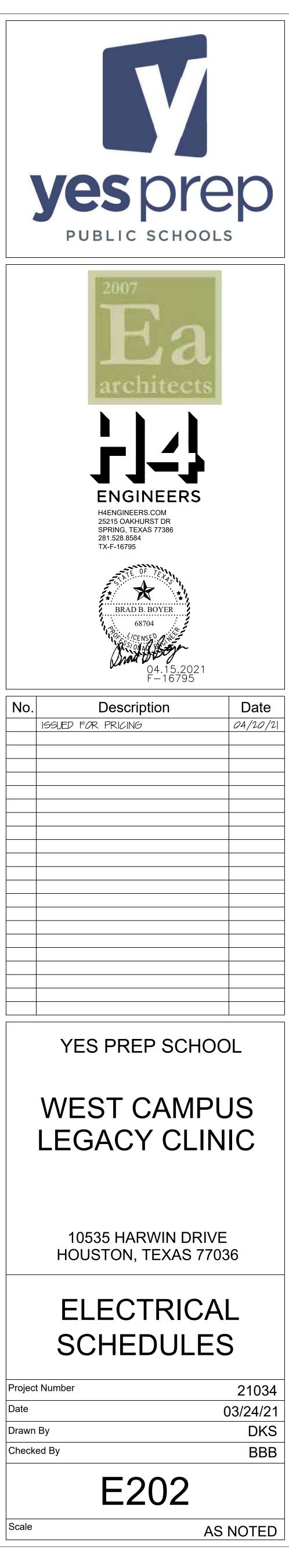
KITC

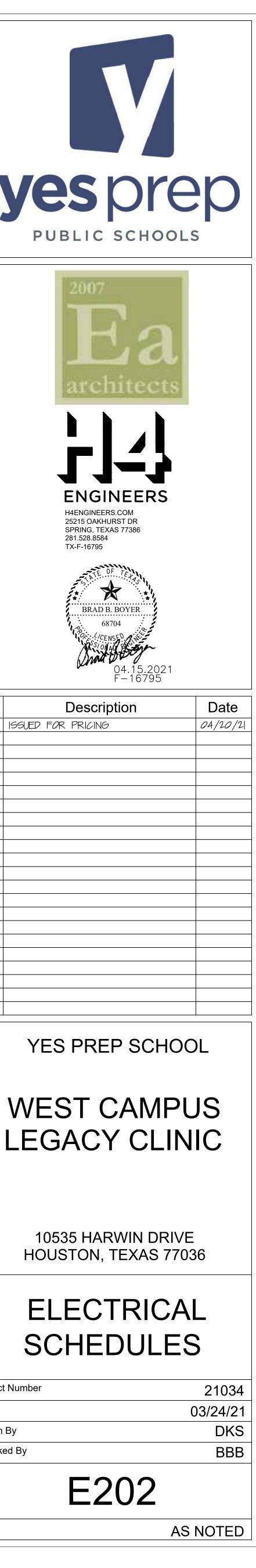




No.				De
	155	UED	F <i>O</i> R	_р.







roject Number
Date
)rawn By
Checked By
_

GLADD       1       500       #1       500       F       2       001       #12       500       1       2007       12       500       1       2007       12       500       1       2007       12       500       1       2007       12       500       1       2007       12       500       1       2007       12       500       1       2007       12       500       1       2007       12       500       1       2007       12       2007<	DECOMPON         I         LONGE         UNDER         UNDER         UNDER         Mare         LOAD         I         DESCRIPTION           SELOAD         I         500         I         201         I         500         I         I         200         I         200         I         DESCRIPTION           SELOAD         I         500         I         201         I         500         I         I         200         I         200         I         DESCRIPTION           SELOAD         I         500         I         I         500         I         I         200         I         DESCRIPTION         I         200         I         DESCRIPTION         I         200         I         DESCRIPTION         I         200         I         DESCRIPTION         I         DESCRIPTION         I         200         I         DESCRIPTION         I         I         DESCRIPTION         I         DESCRIP	DESCRIPTION																		•
GLADD       1       500       #1       500       F       2       001       #12       500       1       2007       12       500       1       2007       12       500       1       2007       12       500       1       2007       12       500       1       2007       12       500       1       2007       12       500       1       2007       12       500       1       2007       12       500       1       2007       12       2007<	63: CADD       1       500       P2       201       P72       200       P72       200       1       500       1       500       1       2       201       P72       200       1       500       1       500       1       2       201       P72       200       1       500       1       500       1       1       100<																			
G (Am)         I         S00         # 1         S00         M 1         S00         M 1         S00         M 1         S00 <td>GLOND         1         90         12         201         3         900         4         001         4         800         1         800         1         800         1         800         1         800         1         800         1         800         1         2001         6         600         6         1         1486         8         801         812         300         1         2000         2000         2000         2000</td> <td></td> <td>*</td> <td></td> <td></td> <td>BRKR</td> <td></td> <td></td> <td></td> <td>NU</td> <td>JMB</td> <td>ER</td> <td></td> <td></td> <td></td> <td>BRKR</td> <td>WRE</td> <td>LOAD</td> <td>*</td> <td>DESCRIPTION</td>	GLOND         1         90         12         201         3         900         4         001         4         800         1         800         1         800         1         800         1         800         1         800         1         800         1         2001         6         600         6         1         1486         8         801         812         300         1         2000         2000         2000         2000		*			BRKR				NU	JMB	ER				BRKR	WRE	LOAD	*	DESCRIPTION
G. (AP)       1       500       #12       700       5       5       5       6       1,200       6       201       #12       700       41       200       #12       700       41       200       #12       700       41       200       #12       720       41       201       #12       720       41       200       #12       720       41       200       #12       720       41       200       #12       720       41       200       #12       720       41       200       #12       720       41       200       #12       720       41       200       #12       720       41       200       #12       720       41       200       #12       720       41       200       #12       720       41       200       #12       720       41       200       #12       720       41       200       #12       720       41       200       #12       720       41       200       #12       720       41       200       #12       720       41       720       41       720       41       720       41       720       41       720       41       720       41       720	Signed         1         100         P12         201         5         100         100         11         100 <th11< th="">         100         <th100< th=""></th100<></th11<>	ING LOAD	1	500			1	500			Α	500			2	20/1	#12	500	1	EXISTING LOAD
6 LANO     1     90     #12     201     7     500     A     1 240     8     201     #12     200     4     DUPLEX       6 LANO     1     500     #12     201     11     500     60     8     770     1030     12     201     11     500     60     1     201     11     500     60     1     1030     12     201     11     500     60     1     1030     12     201     11     201     11     500     60     1     100     12     201     11     1000     1     1000     1     201     11     201     11     500     1     100     1     201     11     201     11     100     1     1000 <td< td=""><td>GLOAD         1         500         P12         201         7         500         1         <th1< th="">         1         1         <!--</td--><td>ING LOAD</td><td>1</td><td>500</td><td>#12</td><td>20/1</td><td>3</td><td></td><td>500</td><td></td><td>В</td><td></td><td>500</td><td></td><td>4</td><td>20/1</td><td>#12</td><td>500</td><td>1</td><td>EXISTING LOAD</td></th1<></td></td<>	GLOAD         1         500         P12         201         7         500         1 <th1< th="">         1         1         <!--</td--><td>ING LOAD</td><td>1</td><td>500</td><td>#12</td><td>20/1</td><td>3</td><td></td><td>500</td><td></td><td>В</td><td></td><td>500</td><td></td><td>4</td><td>20/1</td><td>#12</td><td>500</td><td>1</td><td>EXISTING LOAD</td></th1<>	ING LOAD	1	500	#12	20/1	3		500		В		500		4	20/1	#12	500	1	EXISTING LOAD
BLADO         I         BOO         FI         Prob         Io         BOI         FIZ         Prob         Io         BOI         Prob         FIZ         Prob         Prob<         Prob         Prob <td>GLOAD       1       800       #2       201       1       500       1       778       10       201       12       720       1000       12       720       1000       12       720       1000       12       720       1000       12       720       1000       12       720       1000       12       720       1000</td> <td>ING LOAD</td> <td>1</td> <td>500</td> <td>#12</td> <td>20/1</td> <td>5</td> <td></td> <td></td> <td>500</td> <td>С</td> <td></td> <td></td> <td>1,080</td> <td>6</td> <td>20/1</td> <td>#12</td> <td>1,080</td> <td>4</td> <td>6 DUPLEX</td>	GLOAD       1       800       #2       201       1       500       1       778       10       201       12       720       1000       12       720       1000       12       720       1000       12       720       1000       12       720       1000       12       720       1000       12       720       1000	ING LOAD	1	500	#12	20/1	5			500	С			1,080	6	20/1	#12	1,080	4	6 DUPLEX
61 OAO       1       00       11       0       500       C       1000       12       201       12       2001       14       200       14       200       14       200       14       200       14       200       14       200       17       200       14       200       17       200       14       200       17       200       14       200       17       200       14       200       17       200       14       200       17       200       14       200       17       200       14       200       14       200       17       200       14 <t< td=""><td>Si CADA         I         SO         P1         SO         P1         <th< td=""><td>NG LOAD</td><td>1</td><td>500</td><td>#12</td><td>20/1</td><td>7</td><td>500</td><td></td><td></td><td>Α</td><td>1,260</td><td></td><td></td><td>8</td><td>20/1</td><td>#12</td><td>1,260</td><td>4</td><td>7 DUPLEX</td></th<></td></t<>	Si CADA         I         SO         P1         SO         P1         P1 <th< td=""><td>NG LOAD</td><td>1</td><td>500</td><td>#12</td><td>20/1</td><td>7</td><td>500</td><td></td><td></td><td>Α</td><td>1,260</td><td></td><td></td><td>8</td><td>20/1</td><td>#12</td><td>1,260</td><td>4</td><td>7 DUPLEX</td></th<>	NG LOAD	1	500	#12	20/1	7	500			Α	1,260			8	20/1	#12	1,260	4	7 DUPLEX
G (A)0       1       0       50       C       100       12       201       12       201       12       201       12       201       12       201       13       500       6       100       12       201       13       800       6       500       2       201       12       201       17       18       800       1       900       12       201       12       201       17       18       90       18       90       24       201       11       90       17       200       1       18       90       18       90       24       201       17       200       18       18       90       24       201       11       16       16       18	Si CADA         I         SO         P1         SO         P1         P1 <th< td=""><td>NG LOAD</td><td>1</td><td>500</td><td>#12</td><td>20/1</td><td>9</td><td></td><td>500</td><td></td><td>В</td><td></td><td>720</td><td></td><td>10</td><td>20/1</td><td>#12</td><td>720</td><td>4</td><td>4 DUPLEX</td></th<>	NG LOAD	1	500	#12	20/1	9		500		В		720		10	20/1	#12	720	4	4 DUPLEX
GLAND         1         900         F12         201         11         500         A         7         7         14         201         F12         720         450         F12         720         73         500         F12         201         71         500         F1         200         F12         500         F1         200         F1         200         F1         F10         F11         F10         F10 <td>Si LOAD       1       500       1       700       1       14       201       14       <t< td=""><td></td><td>1</td><td>500</td><td>#12</td><td>20/1</td><td>11</td><td></td><td></td><td>500</td><td>С</td><td></td><td></td><td>1 080</td><td></td><td></td><td></td><td></td><td>4</td><td>6 DUPLEX</td></t<></td>	Si LOAD       1       500       1       700       1       14       201       14 <t< td=""><td></td><td>1</td><td>500</td><td>#12</td><td>20/1</td><td>11</td><td></td><td></td><td>500</td><td>С</td><td></td><td></td><td>1 080</td><td></td><td></td><td></td><td></td><td>4</td><td>6 DUPLEX</td></t<>		1	500	#12	20/1	11			500	С			1 080					4	6 DUPLEX
GLOAD         1         SOD         15         SOD         16         300         16         201         472         360         4         2000LEX           GLOAD         1         500         472         201         47         300         4         2000         472         100         4         2000         472         100         4         2000         472         100         4         2000         472         300         4         2000         472         300	Sit LOAD       I       Soo       Fit       Soo       So       Soo       Soo <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>500</td><td></td><td></td><td></td><td>720</td><td></td><td>.,</td><td></td><td></td><td></td><td></td><td>_</td><td></td></th<>							500				720		.,					_	
GLOAD         1         500         1         2         1         1         500         C         1         100         14         200         14         1000         14         1000         14         1000         14         1000         14         1000         14         1000         14         1000         14         1000         14         1000         14         1000         14         1000         14         1000         14         1000         14         1000         14         1000         14         1000         14         100         14         100         14         100         14         100         14         100         14         100         14         100         14         100         14         100         14         100         14         100         14         100         14         100	Sic CAD         1         900         #12         201         #12         100         112         201         113         201         113         201         113         201         113         201         113         201         113         201         113         201         113         201         113         201         113         201         113         201         113         201         113         201         113         201         113         201         113         201         113         201         113         201         113         201         213         213         213         213         213         213         213         213 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>000</td> <td>500</td> <td></td> <td></td> <td>120</td> <td>260</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							000	500			120	260							
GLAAD         1         500         #12         200         #12         100         #12         100         #12         100         1         PRODE           GLAAD         1         500         #12         201         21         500         6         500         24         201         #12         500         1         PRODE*           GLAAD         1         500         #12         500         6         50         24         201         #12         500         1         PRODE*           GLAAD         1         500         #1         900         8         90         28         201         #12         500         1         PRE         1         PRE         1         1         PRE         1         1         1         1         1         PRE         1 </td <td>GLOAD       1       500       1/2       201       1/2       200       1/2       1</td> <td></td> <td>10</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>500</td> <td>500</td> <td>the state</td> <td></td> <td>360</td> <td>400</td> <td>and to be a</td> <td></td> <td></td> <td></td> <td></td> <td></td>	GLOAD       1       500       1/2       201       1/2       200       1/2       1		10						500	500	the state		360	400	and to be a					
GLOAD         1         500         1         200         1         200         1         200         1         200         1         200         1         200         1         200         1         200         1         200         1         200         1         200         1         200         1         201         22         201         22         201         22         201         22         201         22         201         22         201         20         200         6         8         80         28         201         41         800         4         201         20         0         56         500         34         201         41         800         4         0         32         0         1         550         34         201         41         550         1         550         34         201         1 <th1< th="">         1         1         <th1< td=""><td>Si Cuadu       1       Bool       F1       200       F1       200       F2       201       F1       500       F<!--</td--><td></td><td></td><td></td><td></td><td></td><td>10.00</td><td></td><td></td><td>500</td><td>С</td><td></td><td></td><td>180</td><td>11.10</td><td></td><td></td><td></td><td></td><td></td></td></th1<></th1<>	Si Cuadu       1       Bool       F1       200       F1       200       F2       201       F1       500       F </td <td></td> <td></td> <td></td> <td></td> <td></td> <td>10.00</td> <td></td> <td></td> <td>500</td> <td>С</td> <td></td> <td></td> <td>180</td> <td>11.10</td> <td></td> <td></td> <td></td> <td></td> <td></td>						10.00			500	С			180	11.10					
GLAAD         1         BO0         #72         200         23         600         C         500         84         201         #72         900         4         1         Person         4         201         25         201         25         201         25         201         27         200         27         800         4         900         80         28         201         472         900         4         900         28         201         472         900         4         900         28         201         472         900         1         850         1         80         172         200         1         850         1         80         172         800         1         800         172         800         1         800         172         800         1         800         1         800         172         800         1         800         1         800         172         800         1         800         172         800         1         800         1         800         1         800         1         800         1         800         1         800         1         800         1         800         1	GLOAD       1       Stop       1       200       12       20       500       2       500       2       200       12       500       12       200       12	NG LOAD	1	500	#12	20/1	19	500			A	1,000			20	20/1	#12	1,000	1	FRIDGE
GLOAD         1         500         #12         201         25         500         A         900         E         201         #12         900         4         500PLEX           GLOAD         1         500         #12         201         20         500         60         8         800         #12         500         1         500         60         8         800         #12         500         1         550         60         33         201         #12         500         1         557APE         500         1         550         1         557APE         500         1         557APE	00.0AD       1       500       FI2       201       22       500       A       900       26       201       712       990       4       900       80       30       26       201       712       990       4       900       100       71       200       17       200       17       200       17       200       17       200       17       200       18       200       17       200       18       200       17       200       18       200       17       200       18       200       200       200       200	NG LOAD	1	500	#12	20/1	21		500		В		500		22	20/1	#12	500	1	FRIDGE *
GLAAD       1       500       #12       201       212       201       212       201       212       201       212       201       212       201       212       201       212       201       212       201       212       201       212       201       212       201       213       500       0<	Si GAD       1       500       12       201       22       500       A       900       26       201       17       900       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1	NG LOAD	1	500	#12	20/1	23			500	С			500	24	20/1	#12	500	1	FREEZER *
GLOAD         1         500         12         201         27         500         8         60         28         201         12         201         201         27         500         1         12         201         201         201         201         201         201         201         201         31         500         12         201         31         500         13         201         41         20         13         500         13         201         31         201         41         200         15         500         14         12         500         12         201         33         500         14         15         500         14         12         500         15         500         34         201         471         500         15         500         14         12         100         15         100         15         100         15         100         15         100         16         100         16         100         16         100         16         100         16         100         16         100         16         100         16         100         16         100         10         100         100	90 0.00       1       500       1       200       1		1	500	#12	20/1	25	500			Α	900			26			900	_	
GLOAD         1         500         #12         201         20         500         C         0         33         0         0         SPARE           GLOAD         1         500         #12         201         31         500         B         500         4         0         532         1         0         SPARE           GLOAD         1         500         #12         201         31         500         B         500         44         201         #12         500         1         EMSTING LOAD           GLOAD         1         500         #12         201         37         500         60         60         40         201         #12         500         1         EMSTING LOAD           GLOAD         1         500         #12         201         #12         500         1         EMSTING LOAD           GLOAD         1         1500         #12         201         #12         14         150         150         42         201         #12         500         1         EMSTING LOAD           GLOAD         1         1250         11250         1         1255         1250         1         1250	GLOAD       1       BOD       FIZ       201       20       500       C       0       30       0       0       SPARE         GLOAD       1       900       FIZ       201       33       500       0       0       30       0       1       500       1       SPARE         GLOAD       1       900       FIZ       201       33       500       0       34       201       FIZ       500       1       EXENTING LOAD         GLOAD       1       900       FIZ       201       35       500       1       500       1       2500       1       EXENTING LOAD         GLOAD       1       900       FIZ       201       35       500       1       500       1       2500       1       EXENTING LOAD         GLOAD       1       900       FIZ       201       141       500       1       EXENTING LOAD       1       1       1       1       1       1       1       1       1       1       0       1       1       1       0       1       1       0       1       1       1       1       1       1       1       1       1		1.2					000	500			300	50			a constant a	1000 00000			Contract de la casa de la
G LAAD         1         500         #12         201         31         500         A         0         1         32         0         0         SPARE           G LAAD         1         500         #12         201         35         500         A         500         42         201         #12         500         1         EXSTING LAAD           G LAAD         1         500         #12         201         35         500         A         500         42         201         #12         500         1         EXSTING LAAD           G LAAD         1         500         #12         201         41         500         1         EXSTING LAAD           G LAAD         1         500         #12         201         41         500         1         EXSTING LAAD           G LAAD         1         500         #12         201         41         500         1         EXSTING LAAD           CONTINUOUS         1         41650         100         4         500         1         EXSTING LAAD         1         EXS	IS LOAD       1       500       #1       200       1       500       #1       200       84       201       #12       500       1       EXEMPTION LOAD         IG LOAD       1       500       #12       201       33       500       500       50       50       50       50       50       50       50       50       50       50       50       50       50       50       12       500       1       EXEMPTION LOAD         IG LOAD       1       500       #12       201       31       500       500       50       50       40       201       #12       500       1       EXEMPTION LOAD         IG LOAD       1       500       #12       201       41       500       60       500       40       201       #12       500       1       EXEMPTION LOAD         IG LOAD       1       500       #1       500       60       500       60       40       201       #12       500       1       EXEMPTION LOAD         IG LOAD       1       500       60       80       60       80       40       40       40       40       40       40       40       40 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>500</td> <td></td> <td></td> <td></td> <td>50</td> <td></td> <td></td> <td>20/1</td> <td>#12</td> <td></td> <td>1</td> <td></td>								500				50			20/1	#12		1	
GLOAD         1         500         HIZ         201         412         201         412         800         1         800	Si CADU         1         BOO         91         200         BI         SOO         SOO <td></td> <td>1</td> <td>500</td> <td></td> <td></td> <td>29</td> <td></td> <td></td> <td>500</td> <td>С</td> <td></td> <td></td> <td>0</td> <td>30</td> <td></td> <td></td> <td>0</td> <td></td> <td></td>		1	500			29			500	С			0	30			0		
GLOAD         1         500         #12         201         35         600         C         500         30         201         #12         800         1         Exercise           GLOAD         1         500         #12         201         30         500         A         500         40         201         #12         800         1         Exercise         1	GLOAD       1       500       912       200       14       500       610       38       207       472       500       1       Example         SGLOAD       1       500       1       500       1       500       1       500       1       500       1       200       1       Example       200       1	NG LOAD	1	500	#12	20/1	31	500			Α	0			32			0		SPARE
GLOAD         I         500         H2         201         37         500         A         500         38         201         4712         500         I         EXENTING LOAD           GLOAD         1         500         412         201         4712         500         1         EXENTING LOAD           GLOAD         1         500         412         201         4712         500         1         EXENTING LOAD           GLOAD         1         500         41         201         4712         500         1         EXENTING LOAD           GLOAD         1         500         41         500         6         500         42         201         #712         500         1         EXENTING LOAD           CONTINUOUS ?         1         100%         41         500         6         0         .         ?         LOAD         A         30.0         .         *         LOCKED         .         LOCKED         .<	NG LOAD       1       Stop       47       200       1       207       472       200       1       200       1       200       1       200       1       200       1       200       1       200       1       200       1       200       1       200       41       1       0       500       C       600       20       0       1       412       500       1       200       1       200       1       200       1       200       1       200       1       200       1       200       1       200       1       200       1       200       1       200       1       200       1       200       1       200       1       200       200       1       200       1       200       200       200       1       200	NG LOAD	1	500	#12	20/1	33		500		В		500		34	20/1	#12	500	1	EXISTING LOAD
GLOAD         I         500         P12         201         912         500         A         500         38         201         912         500         I         EASTING LOAD           GLOAD         1         500         412         201         912         201         912         500         1         EASTING LOAD           GLOAD         1         500         412         201         912         500         1         EASTING LOAD           GLOAD         1         500         412         201         912         500         1         EASTING LOAD           GLOAD         1         500         41         500         6         500         42         201         912         500         1         EASTING LOAD           CONTINUOUS ?         0         128         30         418         500         0         0         1         EASTING LOAD           CONTINUOUS ?         0         128         0         1	IG LOAD       1       500       1       200       1       21       200       1       21       200       1       22       21       21       200       1       22       21       21       200       1       22       21       21       200       1       22       21       21       200       1       22       200       1       22       200       1       22       200       1       22       200       1       22       200       1       22       200       1       22       200       1       22       200       1       22       200       1       22       200       1       22       200       1       22       200       1       22       200       1       22       200       1       22       200       1       22       200       1       22       200       1       22       200 </td <td>NG LOAD</td> <td>1</td> <td>500</td> <td>#12</td> <td>20/1</td> <td>35</td> <td></td> <td></td> <td>500</td> <td>С</td> <td></td> <td></td> <td>500</td> <td>36</td> <td>20/1</td> <td>#12</td> <td>500</td> <td>1</td> <td>EXISTING LOAD</td>	NG LOAD	1	500	#12	20/1	35			500	С			500	36	20/1	#12	500	1	EXISTING LOAD
GLOAD         1         500         #12         2011         38         500         B         500         40         2011         #12         500         1         EXENTING LOAD           GLOAD         1         500         #12         2011         #11         500         C         500         40         2011         #12         500         1         EXENTING LOAD           CONNECTED CONTINUOUS *1         41,650         100%         41,850         0         41,850         0         1         EXENTING LOAD         *LOCKED ON           CONNECTED CONTINUOUS *2         0         65%         0         63,00         41,850         0         1         EXENTING LOAD         *LOCKED ON           TOTAL         CAR         APH         BPH         CPH         64,80         0         1         1         EXENTING         *LOCKED ON           STATIG         300         NECES         NEMA         1         0         1         2         1 </td <td>NG LOAD       1       500       H2       201       41       500       8       500       40       201       H2       500       FILE         NG LOAD       1       500       H12       201       141       500       6       500       42       201       H12       500       1       EXEMPTION         NON-CONTINUOUS *1       11       11       500       6       0       500       42       201       H12       500       1       EXEMPTION         CONNECTED       DEMAND       6.300       0       55%       0       0       41       80       0       1       EXEMPTION       1       0       1       1       0       1       1       0       1       1       0       1       1       0       1       1       0       1       1       0       1       0       1       0       1       0       1       0       1       0       1       0       1       0       1       0       1       0       1       0       1       0       1       0       1       0       1       1       0       1       0       1       0       1       <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>500</td><td></td><td></td><td></td><td>500</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<></td>	NG LOAD       1       500       H2       201       41       500       8       500       40       201       H2       500       FILE         NG LOAD       1       500       H12       201       141       500       6       500       42       201       H12       500       1       EXEMPTION         NON-CONTINUOUS *1       11       11       500       6       0       500       42       201       H12       500       1       EXEMPTION         CONNECTED       DEMAND       6.300       0       55%       0       0       41       80       0       1       EXEMPTION       1       0       1       1       0       1       1       0       1       1       0       1       1       0       1       1       0       1       1       0       1       0       1       0       1       0       1       0       1       0       1       0       1       0       1       0       1       0       1       0       1       0       1       0       1       0       1       1       0       1       0       1       0       1 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>500</td><td></td><td></td><td></td><td>500</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>							500				500								
GLOAD         1         500         #12         2011         41         500         C         500         42         2011         #12         500         1         ENSTING LOAD           NON-CONTINUOUS 11         41.650         100%         61.650         0         61.650         0         41.650         0         0         50.0         42         2011         #12         500         1         ENSTING LOAD           CONTINUOUS 12         0         0         63.00         0         61.650         0         0         50.0         42         2011         #12         500         1         ENSTING LOAD           RECEPTACLE 4         63.00         NC220.44         63.00         0         8         0         0         1         0	NGLOAD         1         500         P12         201         41         500         C         500         42         201         #12         500         T         ESSETTING LOAD           CONNECTED OCONTINUOUS '2 CONTINUOUS '2 CONTINUOUS '2 ECED TALE '4 ESSETTING LOAD         DEMAND 0 55%         DEMAND 0 55%         DEMAND 0 55%         DEMAND         *LOCKED ON         *LOCKED ON           TOTAL         COAD         APH         B FN CPH (VA) (APH)         EARL         6.300         T         T         T         SATURE 4         0.300         T         T         T         SATURE 4         0.500         T         T         SATURE 4         0.000         T         T         SATURE 4         S							500	500			500	500							
CONNECTED         DEMAND           NON-CONTINUOUS 11 11500         CONNECTED         DEMAND           NON-CONTINUOUS 11 11500         CONTINUOUS 12 11500         CONTINUOUS 11 11000          CONTINUOUS 110000 <td>CONNECTED         DEMAND           NON CONTINUOUS *1 (1560)         125%        </td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>500</td> <td></td> <td></td> <td></td> <td>500</td> <td></td> <td>10.00</td> <td></td> <td></td> <td></td> <td></td> <td></td>	CONNECTED         DEMAND           NON CONTINUOUS *1 (1560)         125%		1						500				500		10.00					
NON-CONTINUOUS 1/2         11/25%         125%         0         125%         0 <th0< td=""><td>NON-CONTINUOUS *1       1125%       107%       14750         CONINUOUS *1       125%       0       0       0       0       0         NECHEN COUPACIE *4       0.300       NEC 220.44       0.300       NEC 220.44       0.300       NEC 220.44       0.300         MECHEN COUPACIE *4       0.300       NEC 220.44       NEM 200       <th< td=""><td>NG LOAD</td><td>1</td><td>500</td><td>#12</td><td>20/1</td><td>41</td><td></td><td></td><td>500</td><td>С</td><td></td><td></td><td>500</td><td>42</td><td>20/1</td><td>#12</td><td>500</td><td>1</td><td>EXISTING LOAD</td></th<></td></th0<>	NON-CONTINUOUS *1       1125%       107%       14750         CONINUOUS *1       125%       0       0       0       0       0         NECHEN COUPACIE *4       0.300       NEC 220.44       0.300       NEC 220.44       0.300       NEC 220.44       0.300         MECHEN COUPACIE *4       0.300       NEC 220.44       NEM 200       NEM 200 <th< td=""><td>NG LOAD</td><td>1</td><td>500</td><td>#12</td><td>20/1</td><td>41</td><td></td><td></td><td>500</td><td>С</td><td></td><td></td><td>500</td><td>42</td><td>20/1</td><td>#12</td><td>500</td><td>1</td><td>EXISTING LOAD</td></th<>	NG LOAD	1	500	#12	20/1	41			500	С			500	42	20/1	#12	500	1	EXISTING LOAD
(E) PANEL MSB         1. AC RATING REFER TO SCHEDULE         277/480         SMING: 2000         277/480         SMINE A         SINTEMA 1         CIRCUIT       NEMA 1         CIRCUIT       NUMBER       I.AC RATING REFER TO SCHEDULE         CIRCUIT       NUMBER       BRKR       VART       CIRCUIT         CIRCUIT       NUMBER       BRKR       VART       CIRCUIT         DO       A       0       A       O       SPACE         CIRCUIT       NUMBER       WART       CIRCUIT         DO       B       O       A       O       SPACE         O       O       A       O       O       SPACE         O       SPACE       O       O       O       O       SPACE         O <th>IS RATING : 2000       (E) PANEL MSB       1. AC RATING REFER TO SCHEDULE         277/480       3. WREA       1. AC RATING REFER TO SCHEDULE         2. BALANCE ALL LOADS         3. WREA       DEFENDIN       V WATT       CIRCUIT         CIRCUT       VANT       CIRCUIT         DESCRIPTION       V       VANT       CIRCUIT         DESCRIPTION       VANT       </th>	IS RATING : 2000       (E) PANEL MSB       1. AC RATING REFER TO SCHEDULE         277/480       3. WREA       1. AC RATING REFER TO SCHEDULE         2. BALANCE ALL LOADS         3. WREA       DEFENDIN       V WATT       CIRCUIT         CIRCUT       VANT       CIRCUIT         DESCRIPTION       V       VANT       CIRCUIT         DESCRIPTION       VANT																			

(E) PANEL LA2 SEC. 1

NEMA 1

NOTES

1. AIC RATING REFER TO SCHEDULE

2. BALANCE ALL LOADS

3. LABEL ALL CIRCUITS